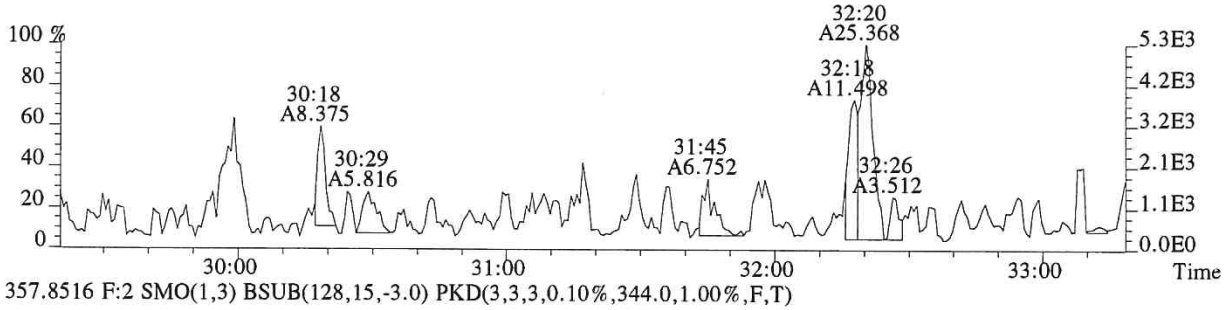
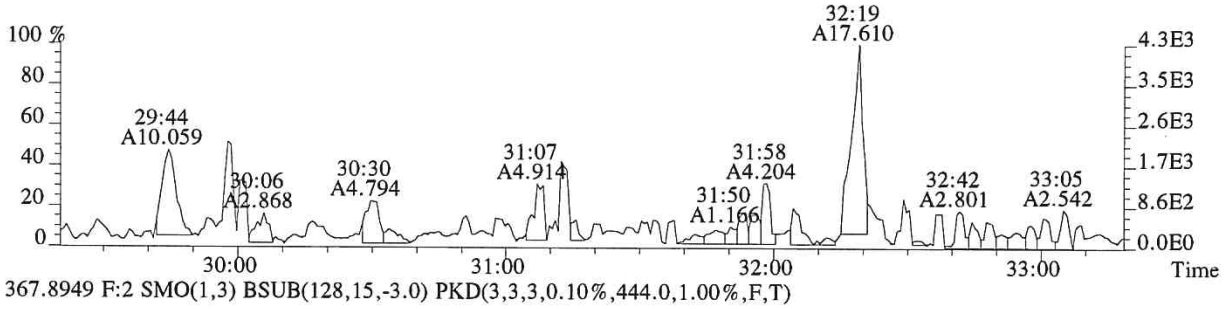
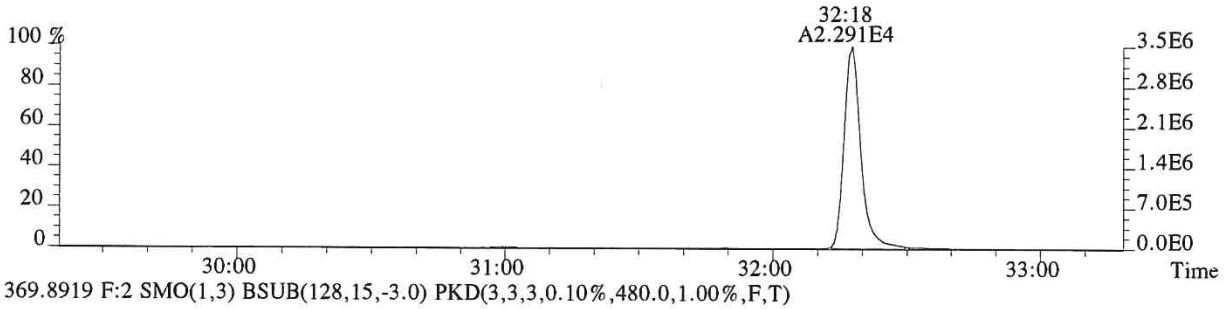
File:P519770 #1-358 Acq: 4-JAN-2019 07:29:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-007DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,824.0,1.00%,F,T)



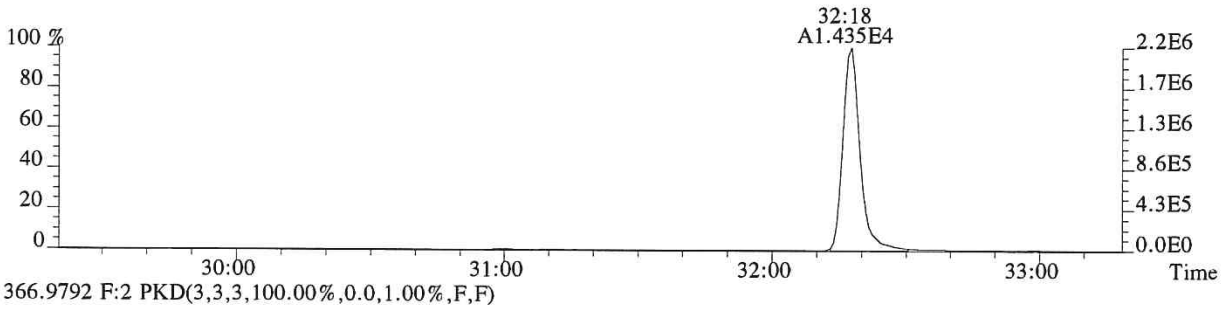
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,344.0,1.00%,F,T)



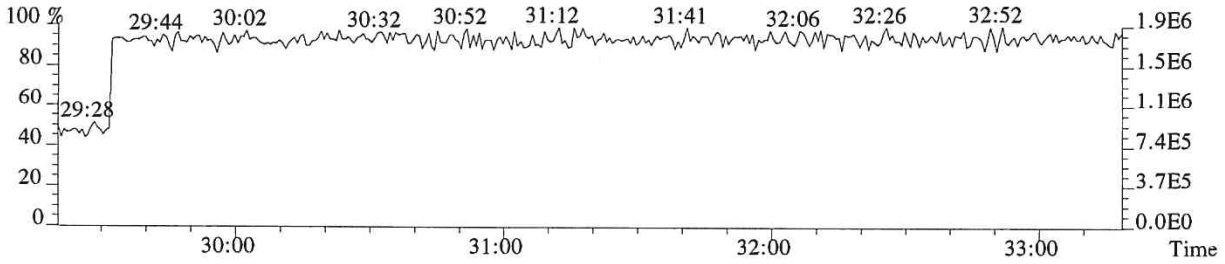
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,444.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,480.0,1.00%,F,T)



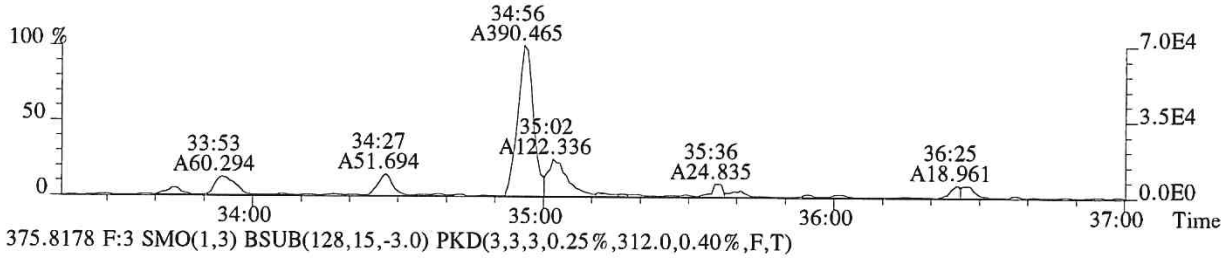
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



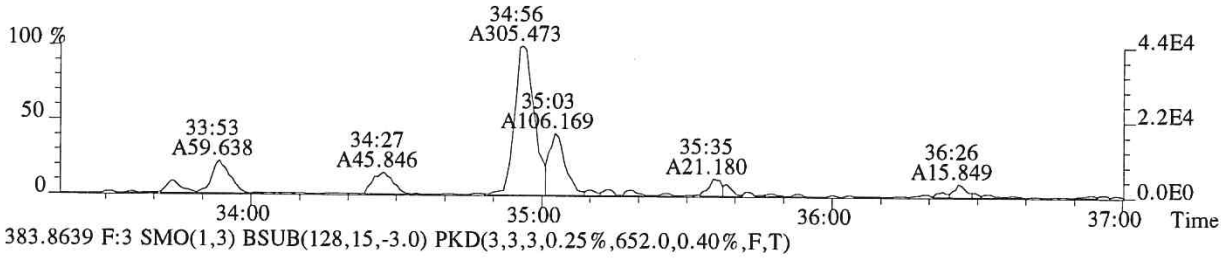
90054676

016089

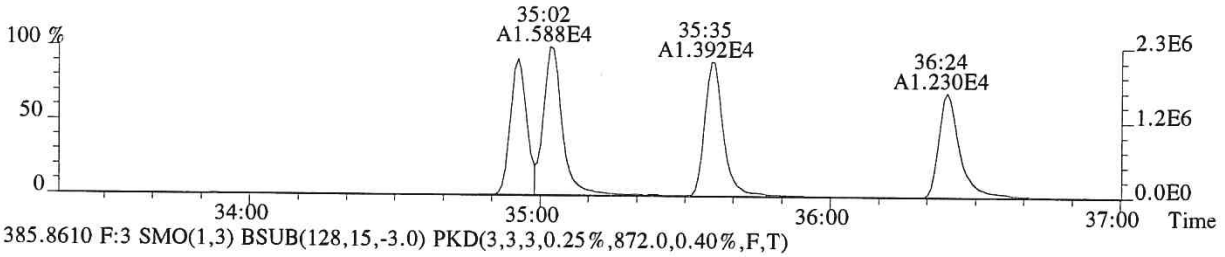
File:P519770 #1-330 Acq: 4-JAN-2019 07:29:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-007DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,272.0,0.40%,F,T)



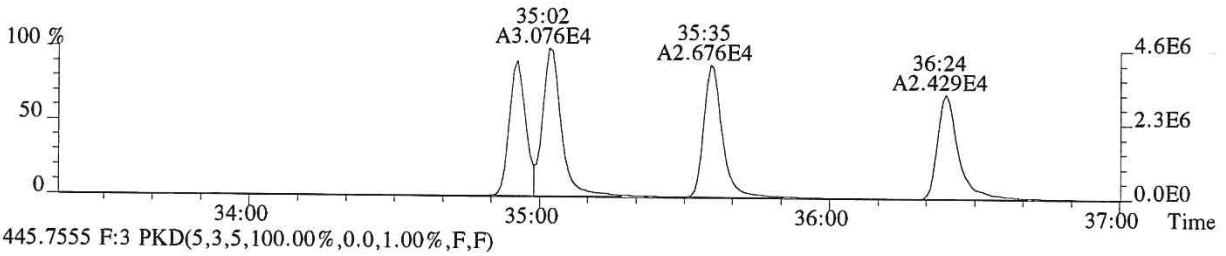
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,312.0,0.40%,F,T)



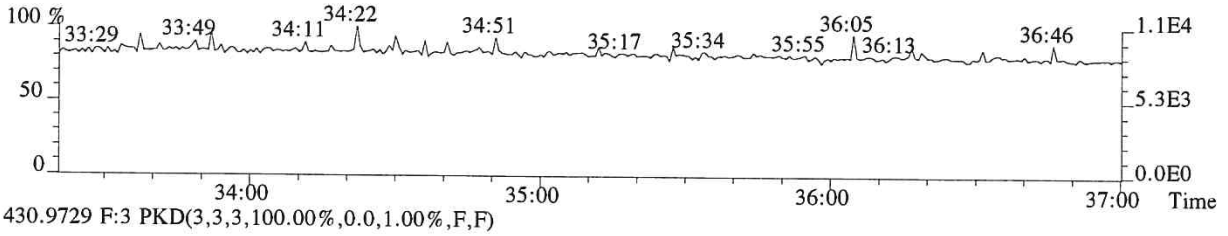
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,652.0,0.40%,F,T)



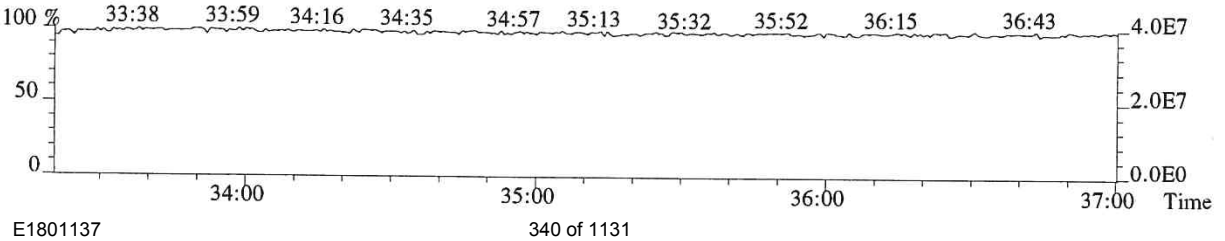
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,872.0,0.40%,F,T)



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

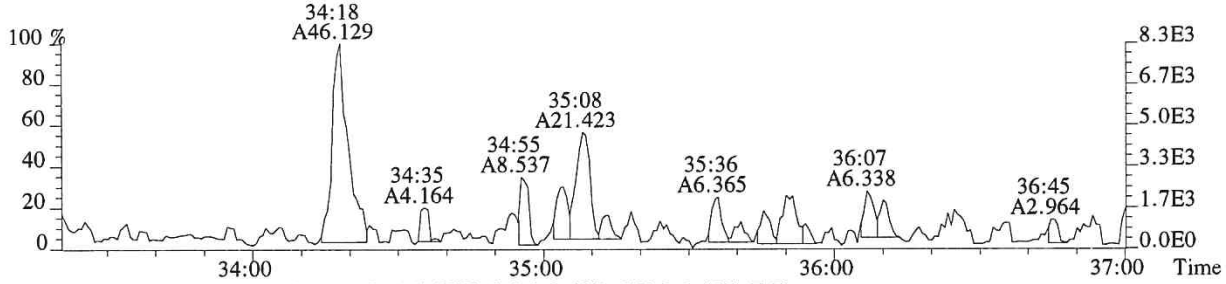


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

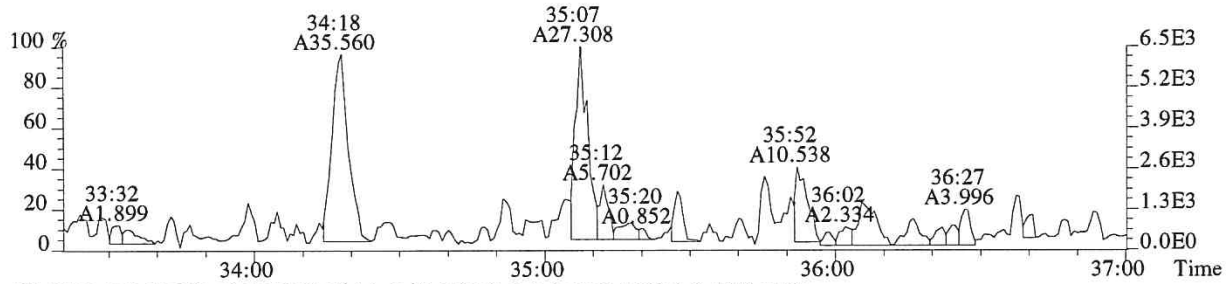


016090

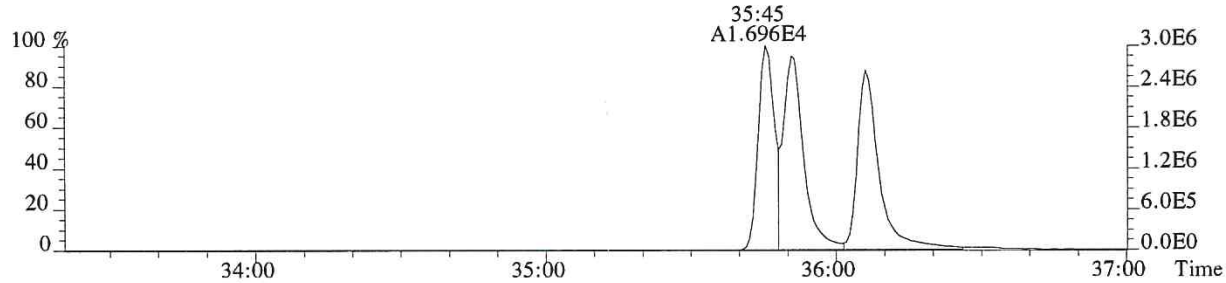
File:P519770 #1-330 Acq: 4-JAN-2019 07:29:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-007DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,608.0,0.40%,F,T)



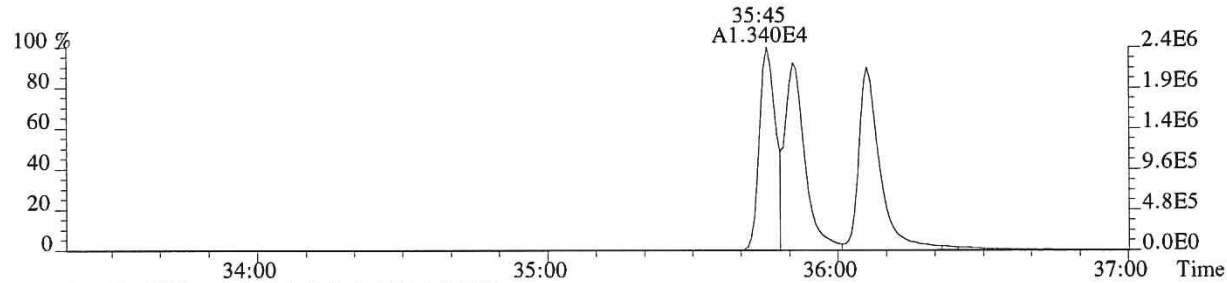
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,608.0,0.40%,F,T)



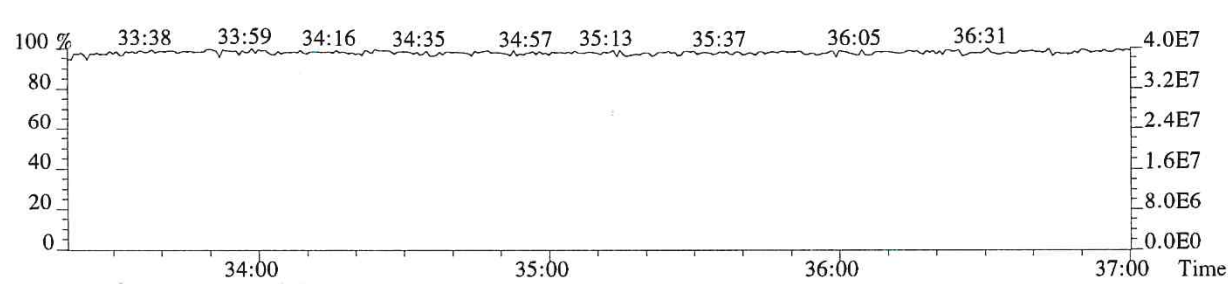
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1168.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,416.0,0.40%,F,T)

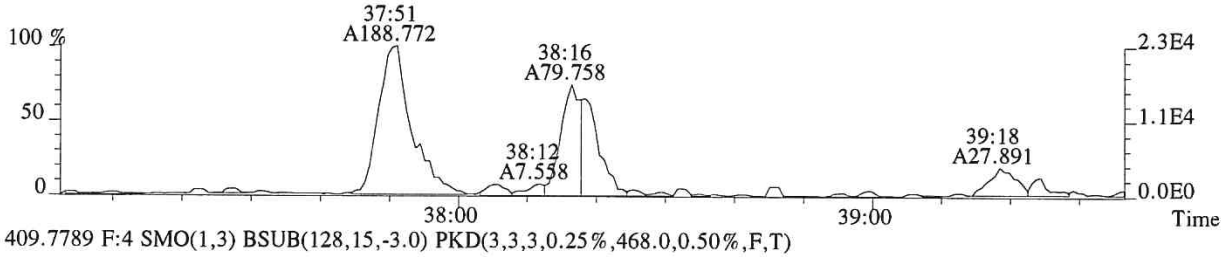


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

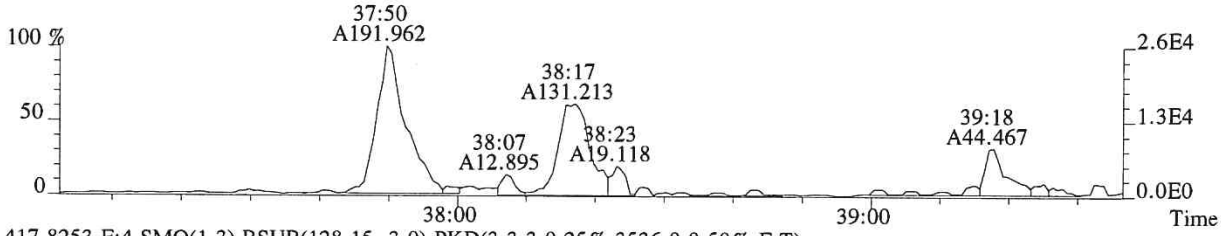


016091

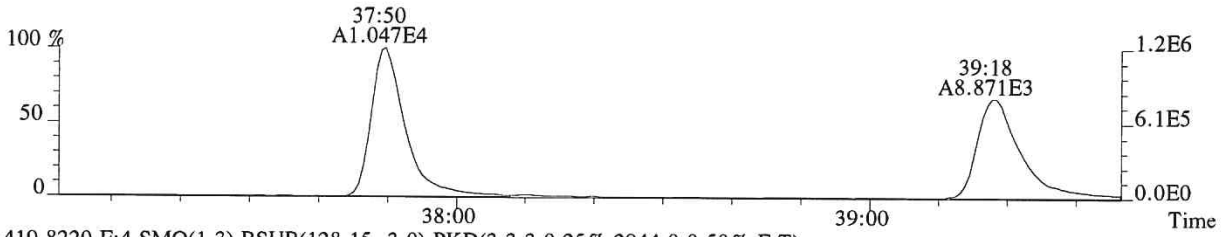
File:P519770 #1-232 Acq: 4-JAN-2019 07:29:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-007DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,328.0,0.50%,F,T)



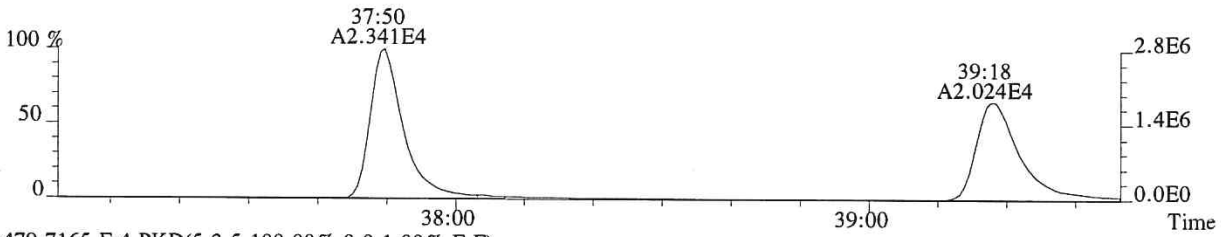
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,468.0,0.50%,F,T)



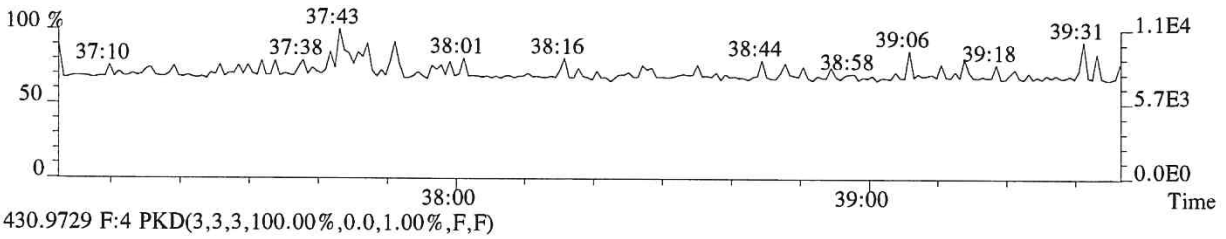
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3536.0,0.50%,F,T)



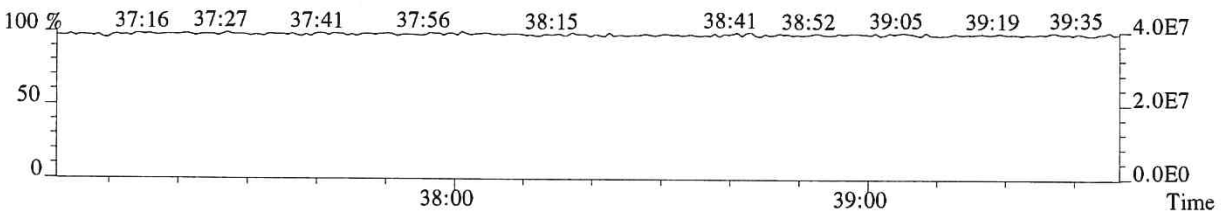
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2944.0,0.50%,F,T)



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

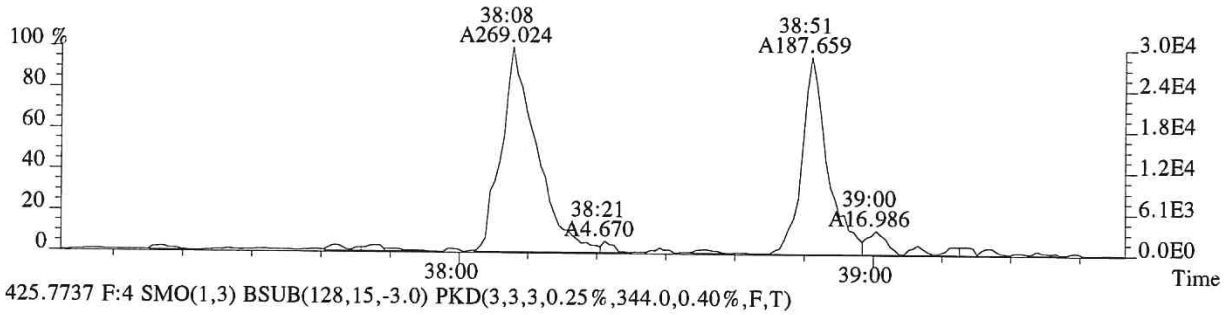


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

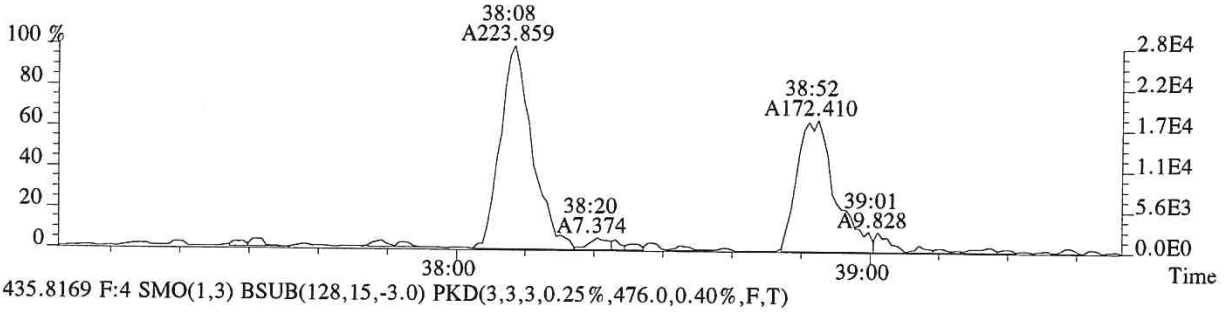


016092

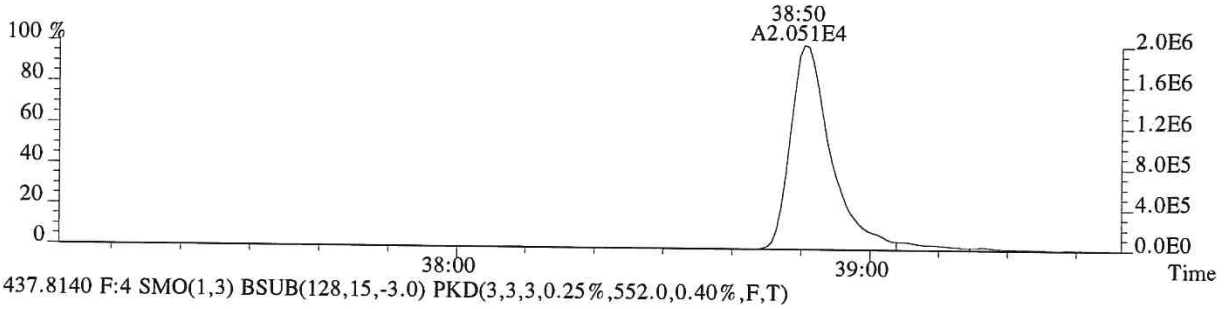
File:P519770 #1-232 Acq: 4-JAN-2019 07:29:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-007DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,208.0,0.40%,F,T)



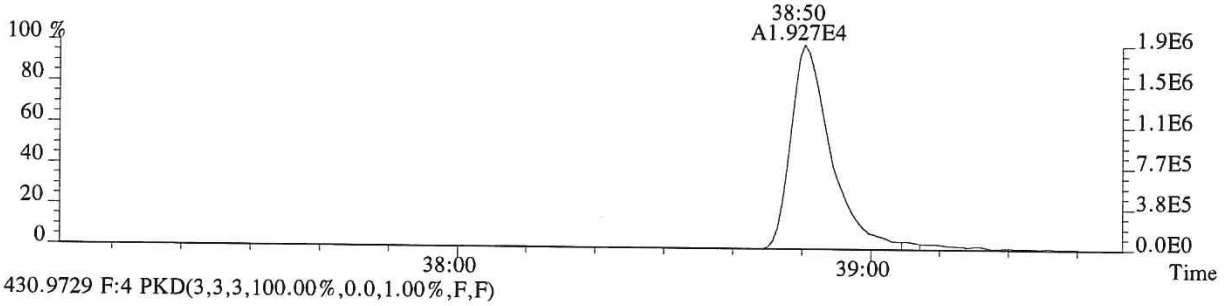
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,344.0,0.40%,F,T)



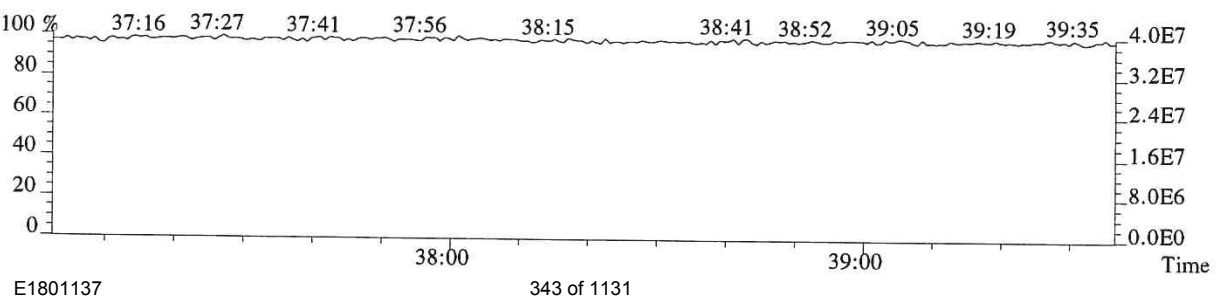
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,476.0,0.40%,F,T)



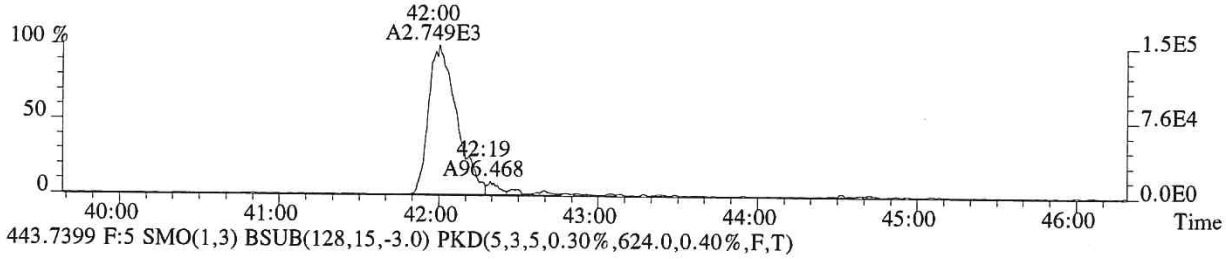
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,552.0,0.40%,F,T)



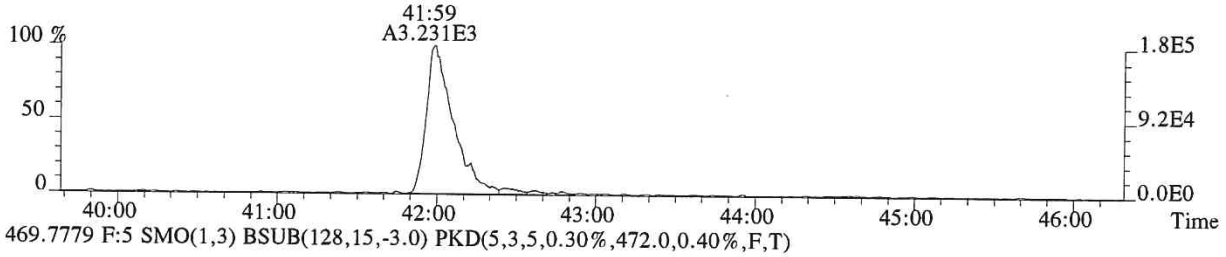
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



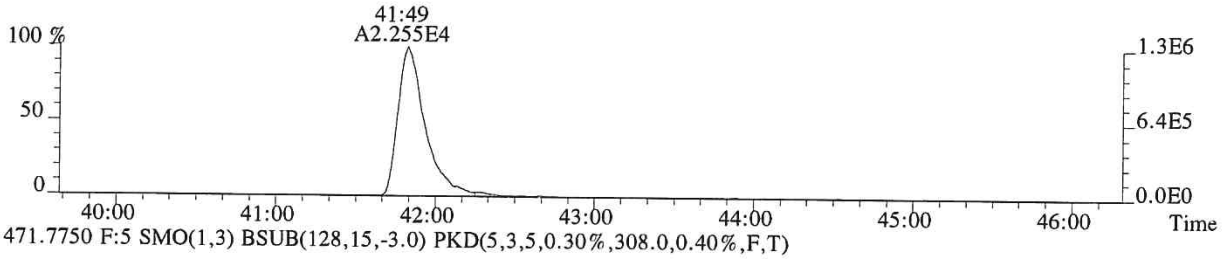
File:P519770 #1-601 Acq: 4-JAN-2019 07:29:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-007DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,348.0,0.40%,F,T)



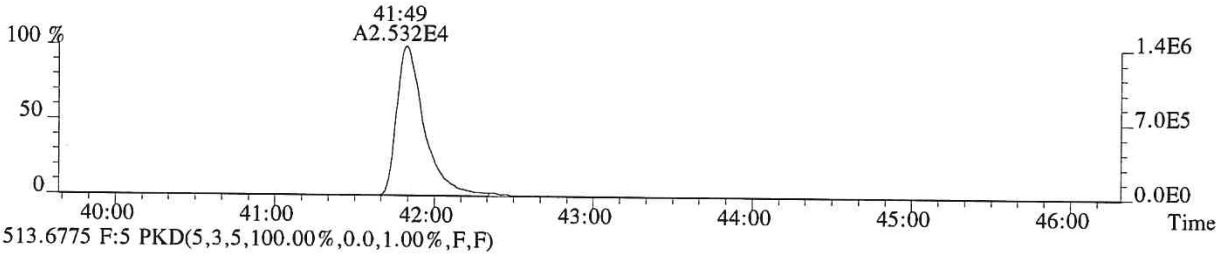
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,624.0,0.40%,F,T)



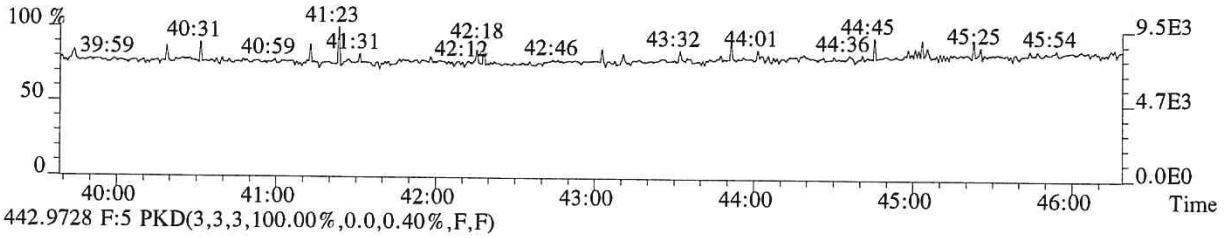
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,472.0,0.40%,F,T)



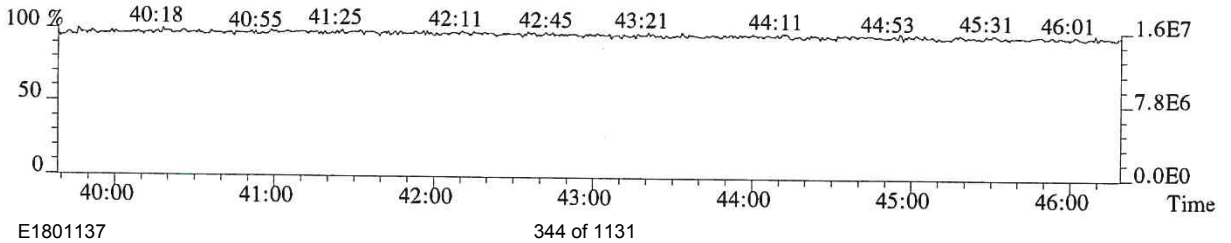
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,308.0,0.40%,F,T)



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

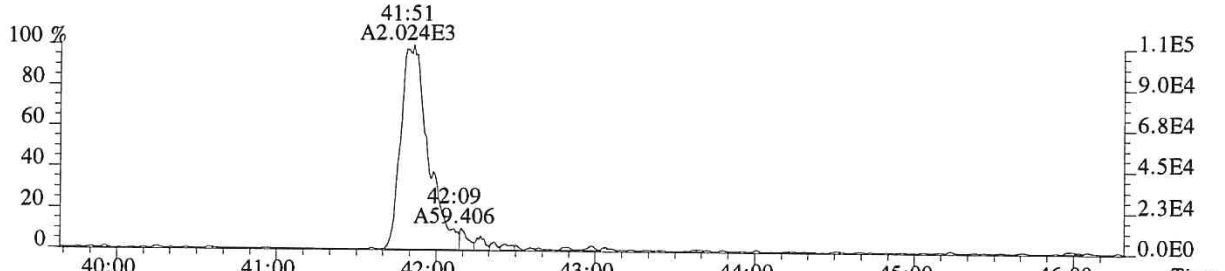


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

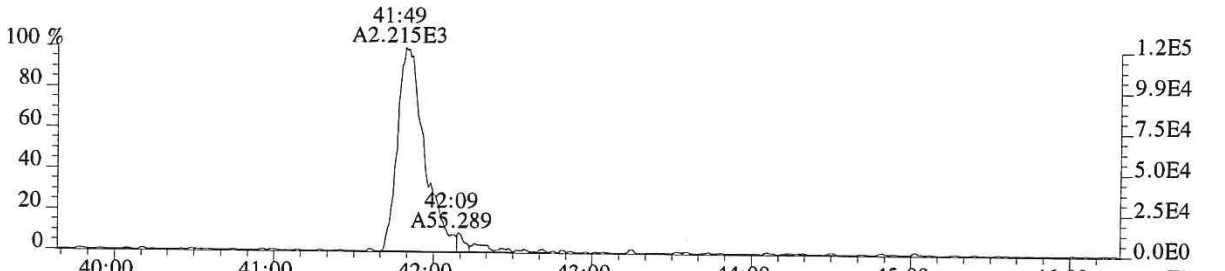


016094

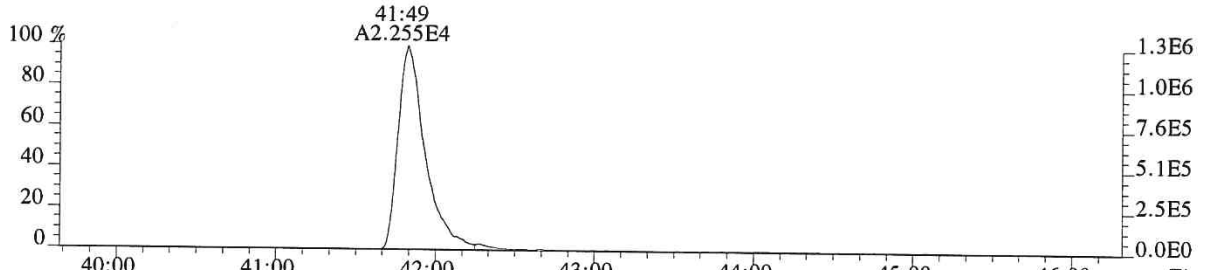
File:P519770 #1-601 Acq: 4-JAN-2019 07:29:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-007DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,428.0,0.40%,F,T)



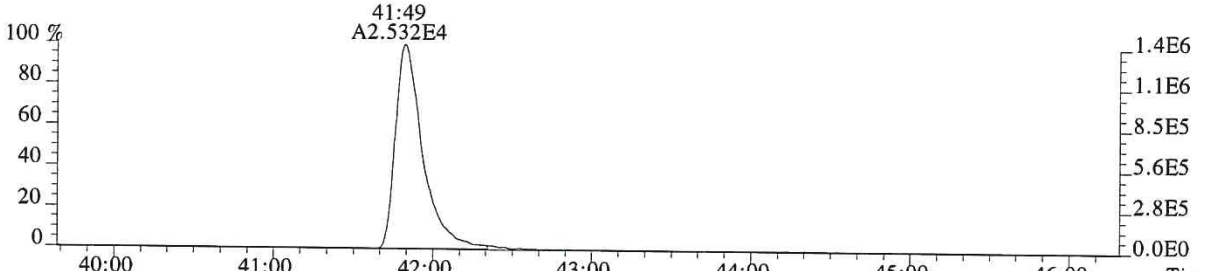
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,424.0,0.40%,F,T)



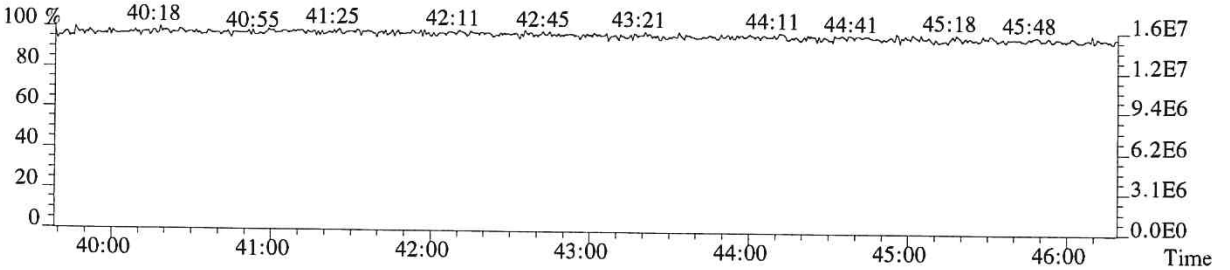
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,472.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,308.0,0.40%,F,T)



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



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0131

Run #12 Filename P519765 Samp: 1 Inj: 1 Acquired: 4-JAN-19 03:26:04
Processed: 4-JAN-19 15:57:10 Sample ID: E1801137-008

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:06	1.451e+02	1.874e+02	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	NotFnd	*	*	*	no	yes	1.012
3	Unk	2,3,4,7,8-PeCDF	32:00	2.380e+01	2.415e+01	0.99	no	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:55	2.210e+01	8.481e+00	2.61	no	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:01	2.135e+01	2.383e+01	0.90	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:37	2.341e+01	2.181e+01	1.07	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:24	2.603e+01	2.099e+01	1.24	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:49	6.774e+01	5.836e+01	1.16	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	no	1.258
10	Unk	OCDF	NotFnd	*	*	*	no	no	1.359
11	Unk	2,3,7,8-TCDD	27:04	8.125e+01	1.036e+02	0.78	yes	yes	1.085
12	Unk	1,2,3,7,8-PeCDD	32:18	1.071e+02	4.328e+01	2.47	no	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:45	9.360e+01	1.031e+02	0.91	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:50	1.502e+02	1.363e+02	1.10	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:05	1.943e+02	1.423e+02	1.36	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:48	8.445e+03	8.141e+03	1.04	yes	no	1.025
17	Unk	OCDD	41:47	1.387e+06	1.556e+06	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	1.613e+04	2.090e+04	0.77	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:58	3.002e+04	1.898e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:58	2.762e+04	1.749e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:55	1.172e+04	2.303e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:01	1.537e+04	2.955e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:35	1.342e+04	2.573e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:23	1.126e+04	2.277e+04	0.49	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:48	9.278e+03	2.153e+04	0.43	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:15	7.999e+03	1.822e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:02	8.510e+03	1.085e+04	0.78	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:17	2.131e+04	1.347e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:45	1.694e+04	1.351e+04	1.25	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:49	1.932e+04	1.524e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:47	1.920e+04	1.827e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	41:47	1.981e+04	2.194e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	3.693e+04	4.655e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:05	4.674e+04	3.727e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:04	1.593e+04				no	1.014

$$\text{OCDD} = \frac{(1.387e+06 + 1.556e+06) \times 4000\ \text{pg} \times 1}{(1.981e+04 + 2.194e+04) \times 10.14\ \text{g} \times 76 / 100 \times 1.118} = 32726.5249\ \text{ng/kg}$$

LG 1/7/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0131

Run #12 Filename P519765 Samp: 1 Inj: 1 Acquired: 4-JAN-19 03:26:04
Processed: 4-JAN-19 15:57:10 LAB. ID: E1801137-008

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.16e+04	5.64e+02	3.8e+01	3.05e+04	1.66e+03	1.8e+01
2	1,2,3,7,8-PeCDF	*	8.04e+02	*	*	1.48e+03	*
3	2,3,4,7,8-PeCDF	4.67e+03	8.04e+02	5.8e+00	6.04e+03	1.48e+03	4.1e+00
4	1,2,3,4,7,8-HxCDF	4.36e+03	6.40e+02	6.8e+00	2.07e+03	5.48e+02	3.8e+00
5	1,2,3,6,7,8-HxCDF	4.55e+03	6.40e+02	7.1e+00	5.17e+03	5.48e+02	9.4e+00
6	2,3,4,6,7,8-HxCDF	5.23e+03	6.40e+02	8.2e+00	5.15e+03	5.48e+02	9.4e+00
7	1,2,3,7,8,9-HxCDF	4.08e+03	6.40e+02	6.4e+00	3.23e+03	5.48e+02	5.9e+00
8	1,2,3,4,6,7,8-HpCDF	9.52e+03	7.52e+02	1.3e+01	8.65e+03	4.44e+02	1.9e+01
9	1,2,3,4,7,8,9-HpCDF	*	7.52e+02	*	*	4.44e+02	*
10	OCDF	*	5.24e+02	*	*	6.48e+02	*
11	2,3,7,8-TCDD	1.08e+04	1.27e+03	8.5e+00	1.73e+04	1.15e+03	1.5e+01
12	1,2,3,7,8-PeCDD	1.81e+04	6.56e+02	2.8e+01	8.12e+03	2.72e+02	3.0e+01
13	1,2,3,4,7,8-HxCDD	2.00e+04	4.36e+02	4.6e+01	1.83e+04	9.68e+02	1.9e+01
14	1,2,3,6,7,8-HxCDD	2.71e+04	4.36e+02	6.2e+01	2.35e+04	9.68e+02	2.4e+01
15	1,2,3,7,8,9-HxCDD	3.17e+04	4.36e+02	7.3e+01	1.85e+04	9.68e+02	1.9e+01
16	1,2,3,4,6,7,8-HpCDD	8.52e+05	3.92e+02	2.2e+03	8.34e+05	3.36e+02	2.5e+03
17	OCDD	8.43e+07	4.28e+02	2.0e+05	9.43e+07	3.36e+02	2.8e+05
18	13C-2,3,7,8-TCDF	2.39e+06	3.32e+03	7.2e+02	3.06e+06	2.35e+03	1.3e+03
19	13C-1,2,3,7,8-PeCDF	4.90e+06	8.88e+02	5.5e+03	3.09e+06	6.64e+02	4.7e+03
20	13C-2,3,4,7,8-PeCDF	4.45e+06	8.88e+02	5.0e+03	2.79e+06	6.64e+02	4.2e+03
21	13C-1,2,3,4,7,8-HxCDF	2.15e+06	3.32e+02	6.5e+03	4.11e+06	1.08e+03	3.8e+03
22	13C-1,2,3,6,7,8-HxCDF	2.46e+06	3.32e+02	7.4e+03	4.66e+06	1.08e+03	4.3e+03
23	13C-2,3,4,6,7,8-HxCDF	2.06e+06	3.32e+02	6.2e+03	3.93e+06	1.08e+03	3.6e+03
24	13C-1,2,3,7,8,9-HxCDF	1.53e+06	3.32e+02	4.6e+03	2.99e+06	1.08e+03	2.8e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.12e+06	2.52e+03	4.4e+02	2.57e+06	3.62e+03	7.1e+02
26	13C-1,2,3,4,7,8,9-HpCDF	8.13e+05	2.52e+03	3.2e+02	1.81e+06	3.62e+03	5.0e+02
27	13C-2,3,7,8-TCDD	1.30e+06	4.58e+03	2.8e+02	1.66e+06	1.54e+03	1.1e+03
28	13C-1,2,3,7,8-PeCDD	3.48e+06	6.48e+02	5.4e+03	2.19e+06	9.40e+02	2.3e+03
29	13C-1,2,3,4,7,8-HxCDD	3.07e+06	7.72e+02	4.0e+03	2.41e+06	6.36e+02	3.8e+03
30	13C-1,2,3,6,7,8-HxCDD	3.12e+06	7.72e+02	4.0e+03	2.45e+06	6.36e+02	3.9e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.93e+06	6.60e+02	2.9e+03	1.81e+06	5.00e+02	3.6e+03
32	13C-OCDD	1.22e+06	6.44e+02	1.9e+03	1.32e+06	3.36e+02	3.9e+03
33	13C-1,2,3,4-TCDD	5.62e+06	4.58e+03	1.2e+03	7.04e+06	1.54e+03	4.6e+03
34	13C-1,2,3,7,8,9-HxCDD	6.13e+06	7.72e+02	7.9e+03	4.86e+06	6.36e+02	7.6e+03
35	37Cl-2,3,7,8-TCDD	2.42e+06	1.07e+03	2.3e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0131

Entry: 36 Totals Name: Total Tetra-Furans

Run: 12 File: P519765 Sample:1 Injection:1 Function:1

Acquired: 4-JAN-19 03:26:04 Processed: 4-JAN-19 15:57:10

Mass: 303.9020 305.8990 Tot Response: 8.69e+02 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:25	1.72e+02	2.09e+02	0.82	yes	3.81e+02		n	n
2	25:05	6.74e+01	8.80e+01	0.77	yes	1.55e+02		n	n
3	26:06	1.45e+02	1.87e+02	0.77	yes	3.32e+02	2,3,7,8-TCDF	n	n

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Peak List Summary

CLIENT ID.
SL0131

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 12 File: P519765 Sample:1 Injection:1 Function:1

Acquired: 4-JAN-19 03:26:04 Processed: 4-JAN-19 15:57:10

Mass: 319.8970 321.8940 Tot Response: 1.85e+02 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:04	8.12e+01	1.04e+02 0.78	yes	1.85e+02	2,3,7,8-TCDD	y	n

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Peak List Summary

CLIENT ID.
SL0131

Entry: 38 Totals Name: Total Penta-Furans1

Run: 12 File: P519765 Sample:1 Injection:1 Function:1

Acquired: 4-JAN-19 03:26:04 Processed: 4-JAN-19 15:57:10

Mass: 339.8600 341.8570 Tot Response: 3.15e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:16	1.87e+02	1.28e+02 1.46	yes	3.15e+02		n	n

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Entry: 39 Totals Name: Total Penta-Furans2

Run: 12 File: P519765 Sample:1 Injection:1 Function:2

Acquired: 4-JAN-19 03:26:04 Processed: 4-JAN-19 15:57:10

Mass: 339.8600 341.8570 Tot Response: 1.89e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:56	9.44e+01	6.09e+01 1.55	yes	1.55e+02		n	n
2	32:02	1.89e+01	1.43e+01 1.33	yes	3.32e+01		n	n

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Peak List Summary

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Entry: 40 Totals Name: Total Penta-Dioxins

Run: 12 File: P519765 Sample:1 Injection:1 Function:2

Acquired: 4-JAN-19 03:26:04 Processed: 4-JAN-19 15:57:10

Mass: 355.8550 357.8520 Tot Response: 3.08e+02 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:00	8.32e+01	5.87e+01	1.42	yes	1.42e+02		y	n
2	30:30	4.01e+01	2.49e+01	1.61	yes	6.49e+01		n	n
3	31:16	3.34e+01	2.10e+01	1.59	yes	5.44e+01		n	n
4	32:42	2.94e+01	1.71e+01	1.72	yes	4.65e+01		n	n

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Peak List Summary

CLIENT ID.
SL0131

Entry: 41 Totals Name: Total Hexa-Furans

Run: 12 File: P519765 Sample:1 Injection:1 Function:3

Acquired: 4-JAN-19 03:26:04 Processed: 4-JAN-19 15:57:10

Mass: 373.8210 375.8180 Tot Response: 4.22e+02 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:54	9.49e+01	8.37e+01	1.13	yes	1.79e+02		n	n
2	34:27	7.89e+01	7.18e+01	1.10	yes	1.51e+02		n	n
3	35:37	2.34e+01	2.18e+01	1.07	yes	4.52e+01	2,3,4,6,7,8-HxCDF	n	n
4	36:24	2.60e+01	2.10e+01	1.24	yes	4.70e+01	1,2,3,7,8,9-HxCDF	n	n

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Peak List Summary

CLIENT ID.
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Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 12 File: P519765 Sample:1 Injection:1 Function:3

Acquired: 4-JAN-19 03:26:04 Processed: 4-JAN-19 15:57:10

Mass: 389.8160 391.8130 Tot Response: 3.42e+03 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:17	7.53e+02	1.32	yes	1.32e+03		n	n
2	34:53	1.34e+02	1.42	yes	2.29e+02		n	n
3	35:06	6.07e+02	1.24	yes	1.10e+03		n	y
4	35:50	1.50e+02	1.10	yes	2.87e+02	1,2,3,6,7,8-HxCDD	n	n
5	36:00	8.02e+01	1.20	yes	1.47e+02		n	n
6	36:05	1.94e+02	1.36	yes	3.37e+02	1,2,3,7,8,9-HxCDD	n	n

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Peak List Summary

CLIENT ID.
SL0131

Entry: 43 Totals Name: Total Hepta-Furans

Run: 12 File: P519765 Sample:1 Injection:1 Function:4

Acquired: 4-JAN-19 03:26:04 Processed: 4-JAN-19 15:57:10

Mass: 407.7820 409.7790 Tot Response: 1.26e+02 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:49	6.77e+01	5.84e+01 1.16	yes	1.26e+02	1,2,3,4,6,7,8-HpCDF	n	n

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Peak List Summary

CLIENT ID.
SL0131

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 12 File: P519765 Sample:1 Injection:1 Function:4

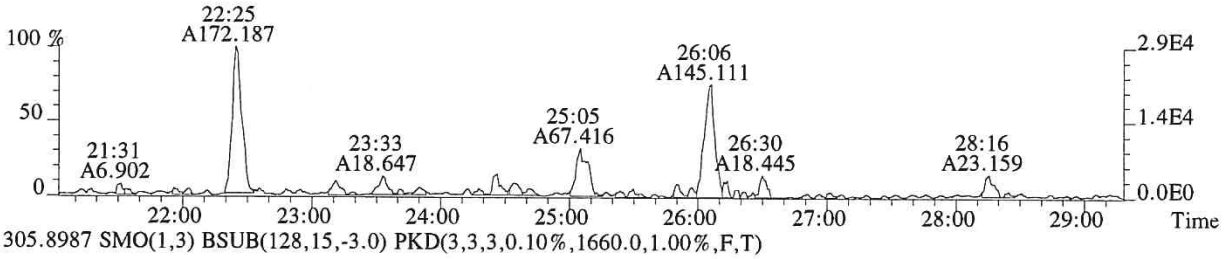
Acquired: 4-JAN-19 03:26:04 Processed: 4-JAN-19 15:57:10

Mass: 423.7770 425.7740 Tot Response: 4.08e+04 RRF: 1.025

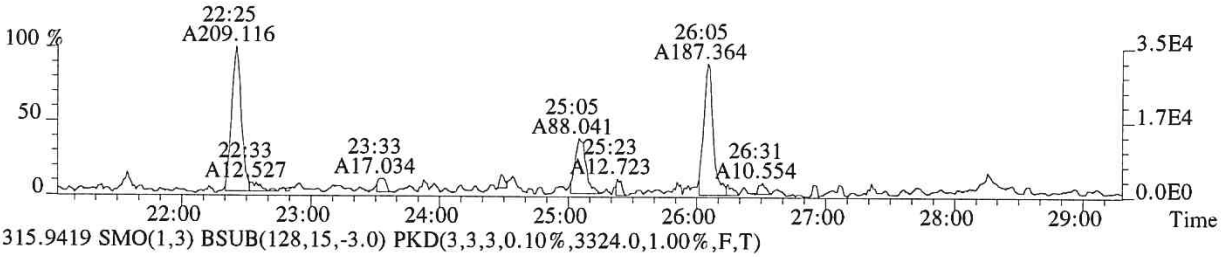
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:04	1.25e+04	1.17e+04 1.06	yes	2.42e+04		n	n
2	38:48	8.45e+03	8.14e+03 1.04	yes	1.66e+04	1,2,3,4,6,7,8-HpCDD	n	n

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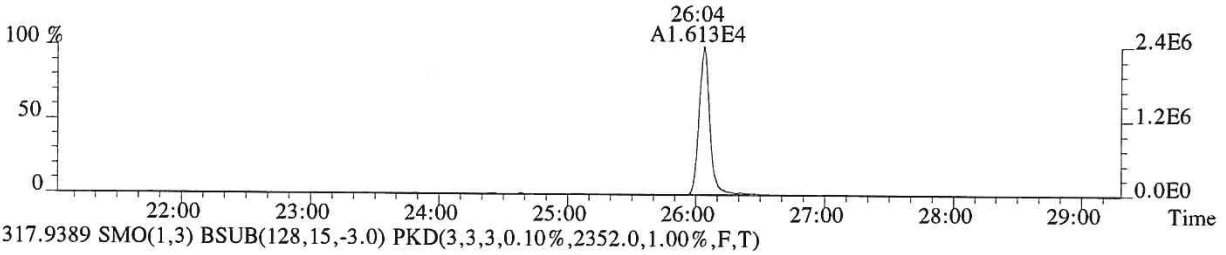
File:P519765 #1-587 Acq: 4-JAN-2019 03:26:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-008
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,564.0,1.00%,F,T)



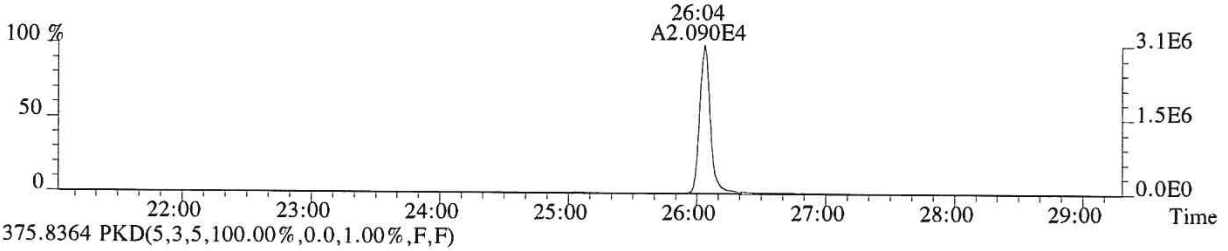
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1660.0,1.00%,F,T)



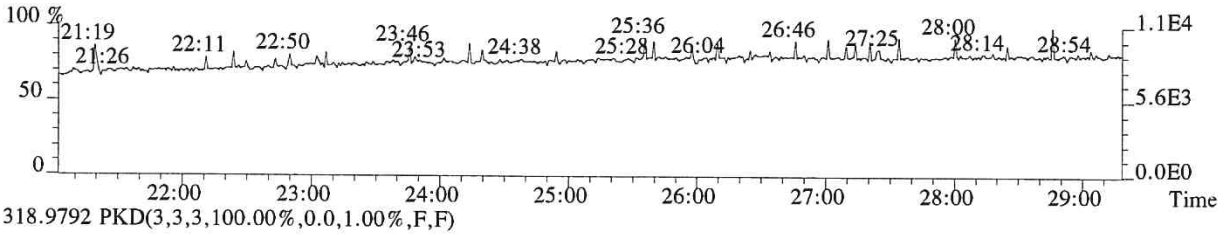
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3324.0,1.00%,F,T)



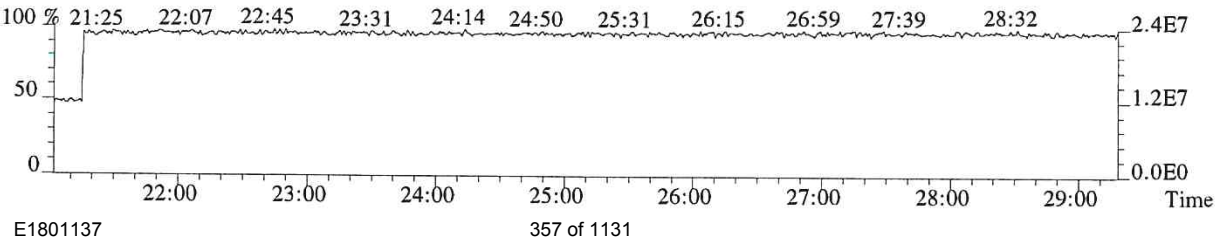
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2352.0,1.00%,F,T)



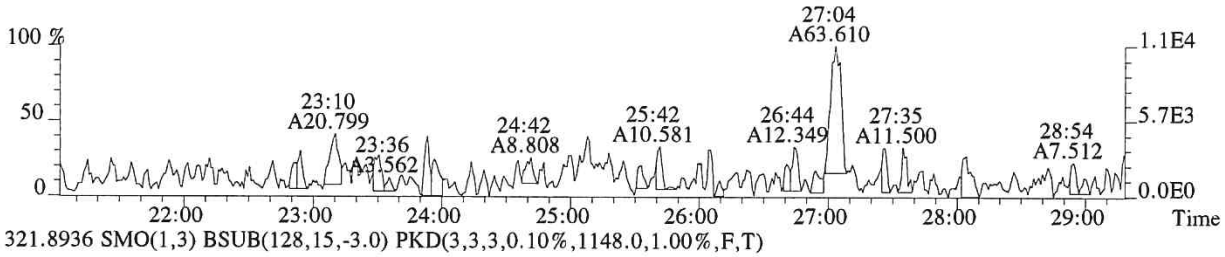
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



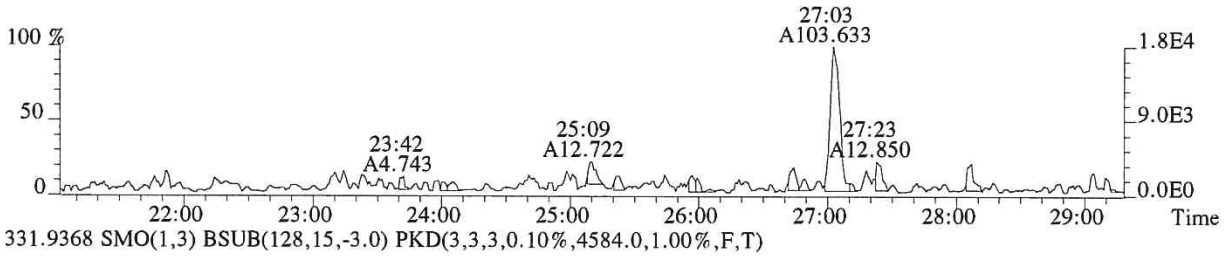
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



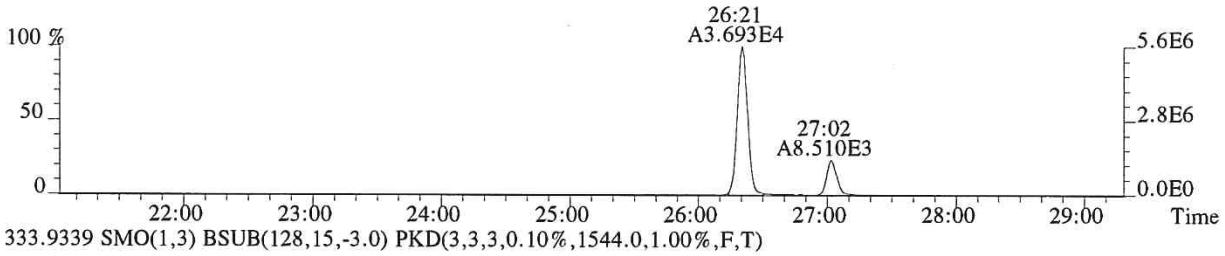
File:P519765 #1-587 Acq: 4-JAN-2019 03:26:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-008
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1272.0,1.00%,F,T)



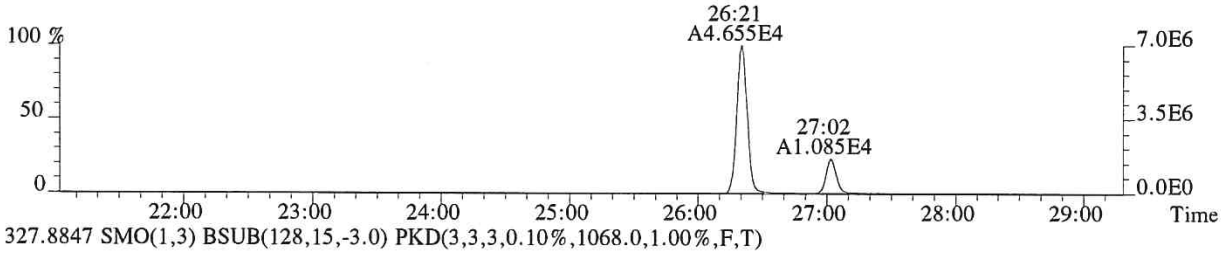
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1148.0,1.00%,F,T)



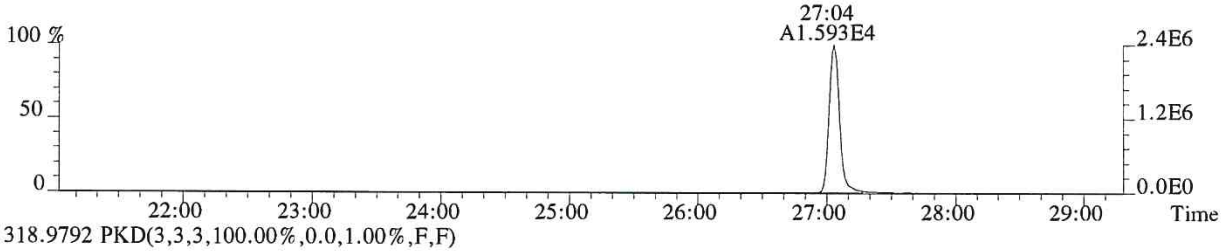
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4584.0,1.00%,F,T)



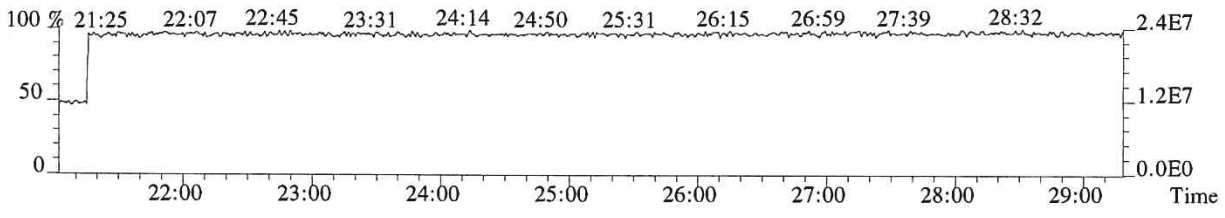
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1544.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1068.0,1.00%,F,T)

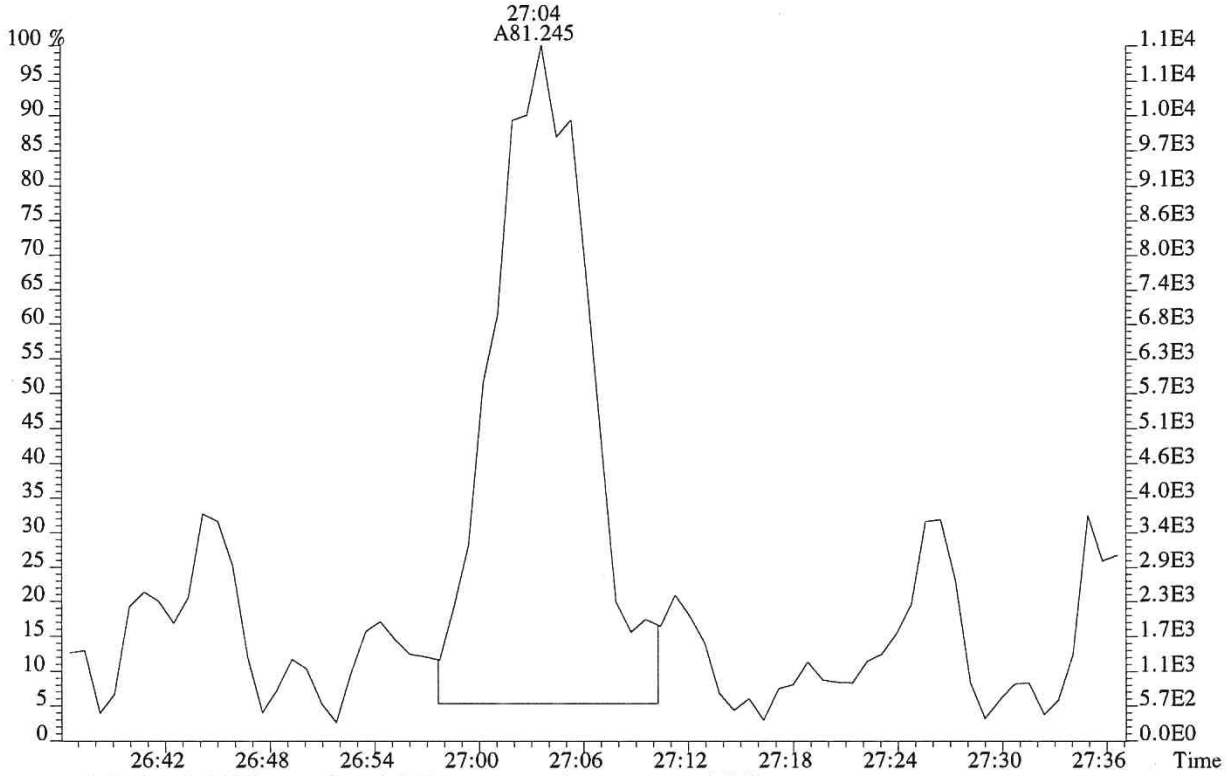


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

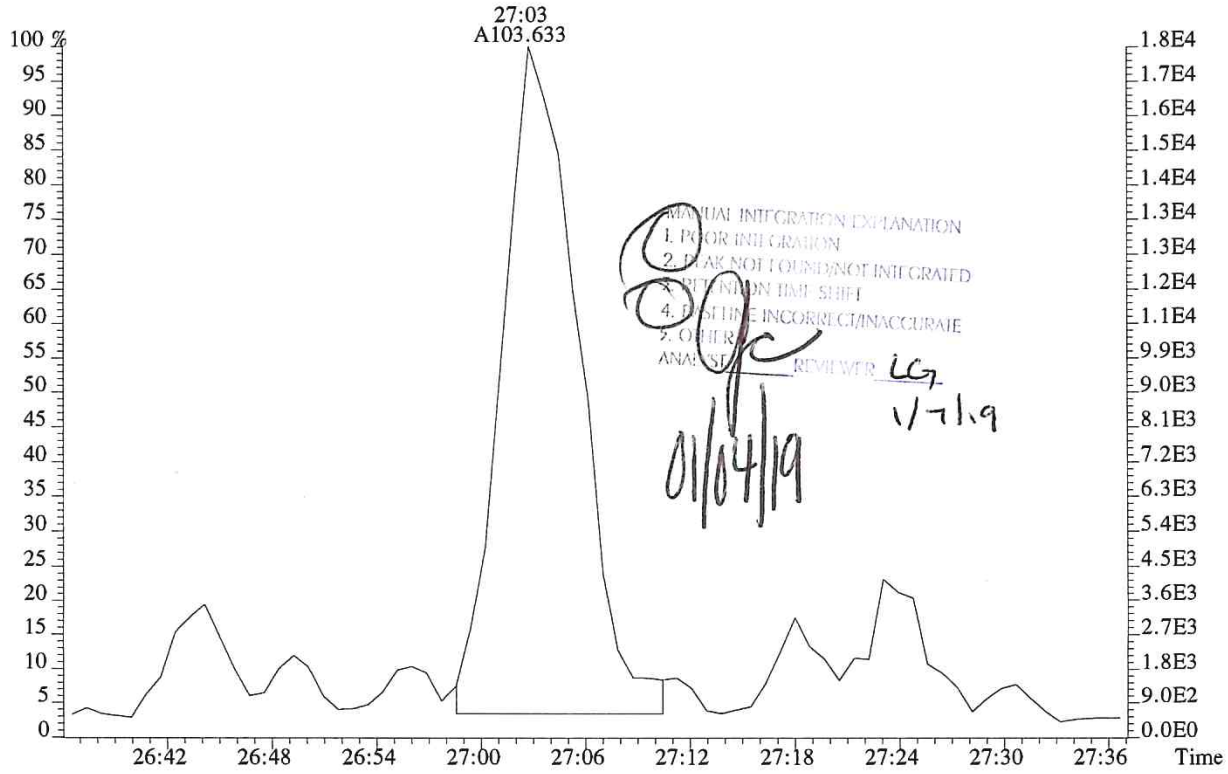


016108

File:P519765 #1-587 Acq: 4-JAN-2019 03:26:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-008
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1272.0,1.00%,F,T)

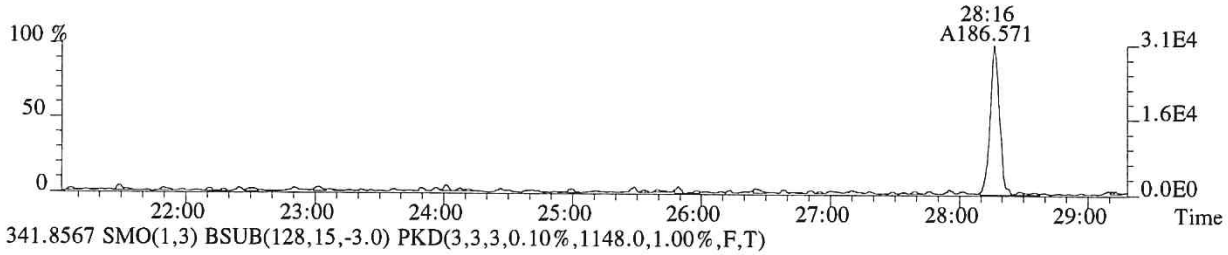


321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1148.0,1.00%,F,T)

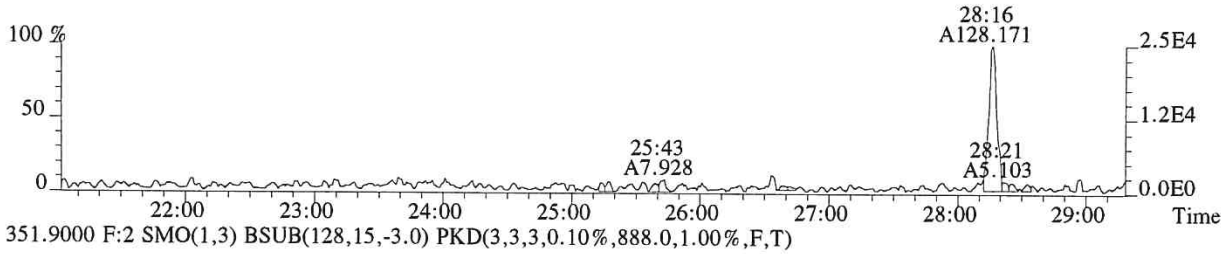


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. PEAK SHAPE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LG
01/04/19
1/7/19

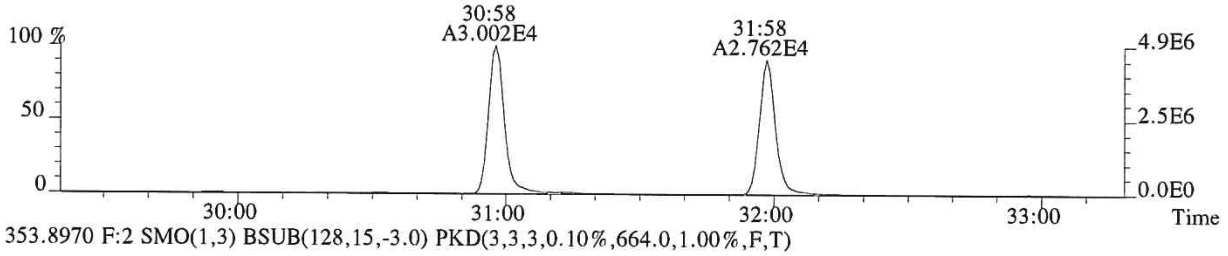
File:P519765 #1-587 Acq: 4-JAN-2019 03:26:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-008
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,412.0,1.00%,F,T)



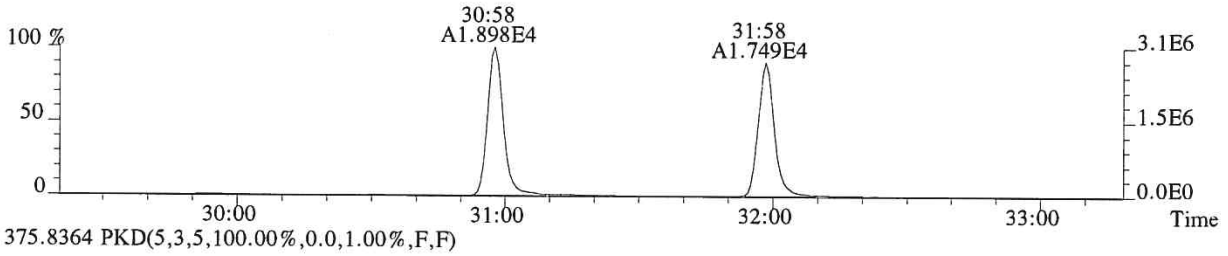
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1148.0,1.00%,F,T)



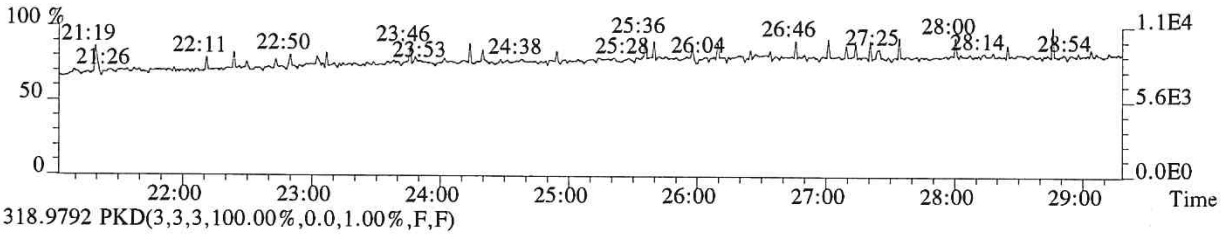
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,888.0,1.00%,F,T)



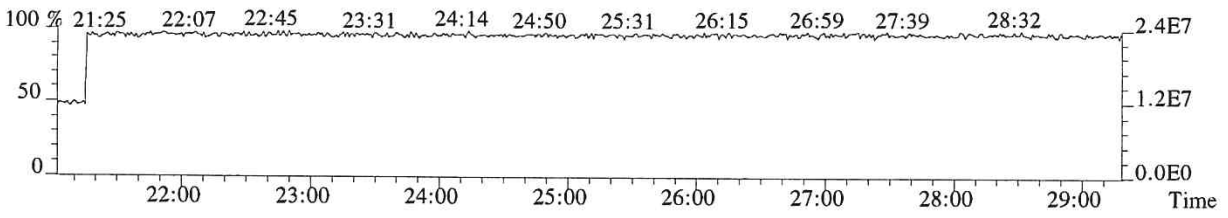
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,664.0,1.00%,F,T)



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

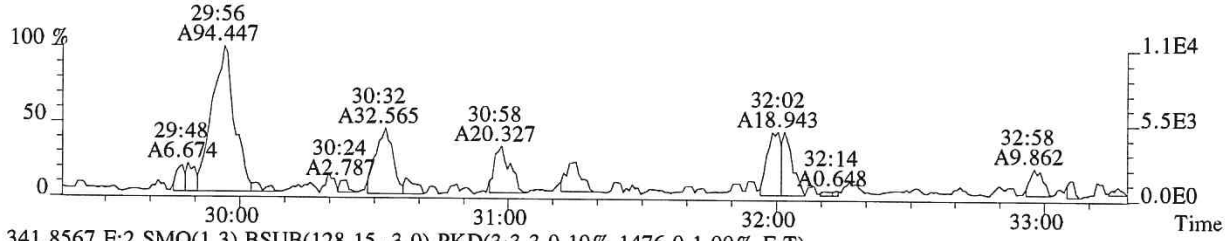


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

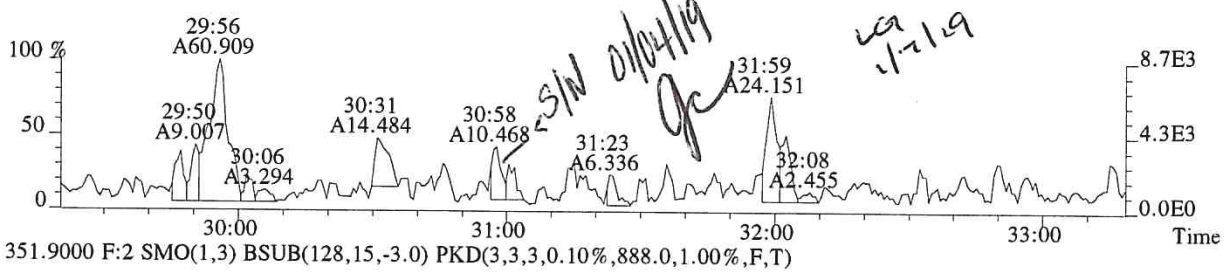


016110

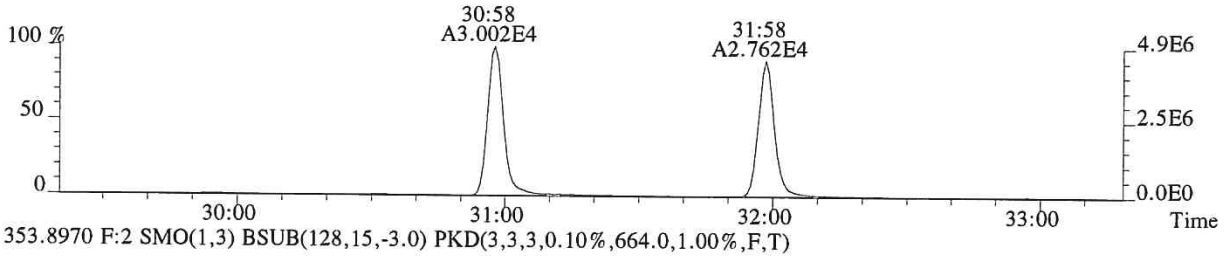
File:P519765 #1-358 Acq: 4-JAN-2019 03:26:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-008
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,804.0,1.00%,F,T)



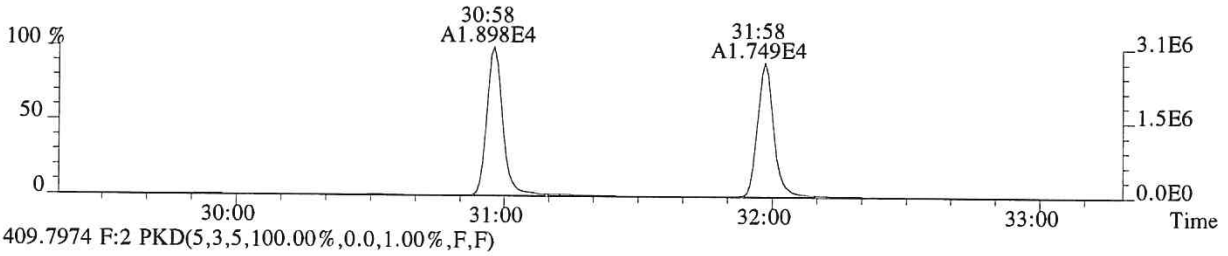
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1476.0,1.00%,F,T)



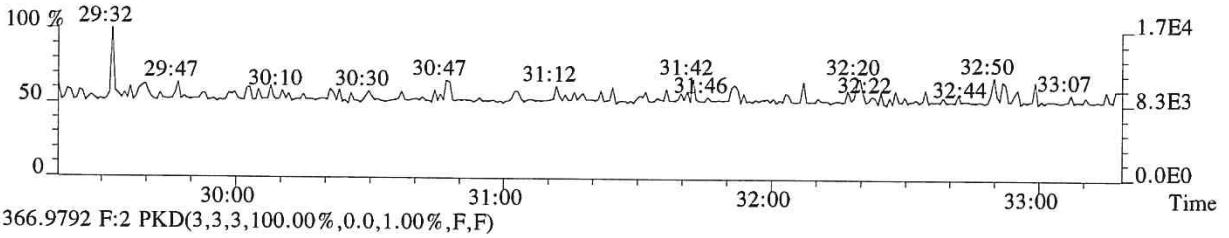
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,888.0,1.00%,F,T)



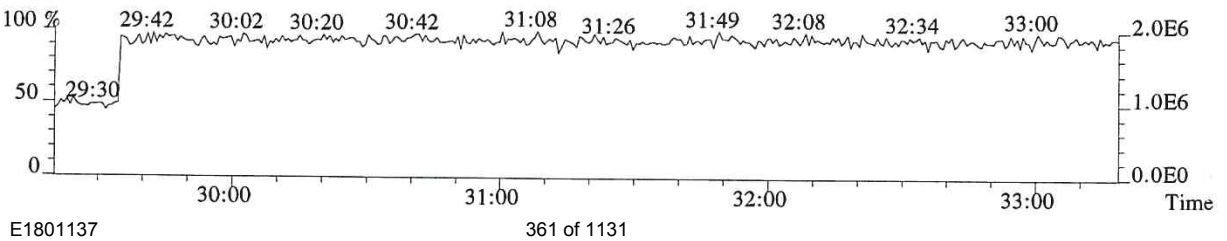
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,664.0,1.00%,F,T)



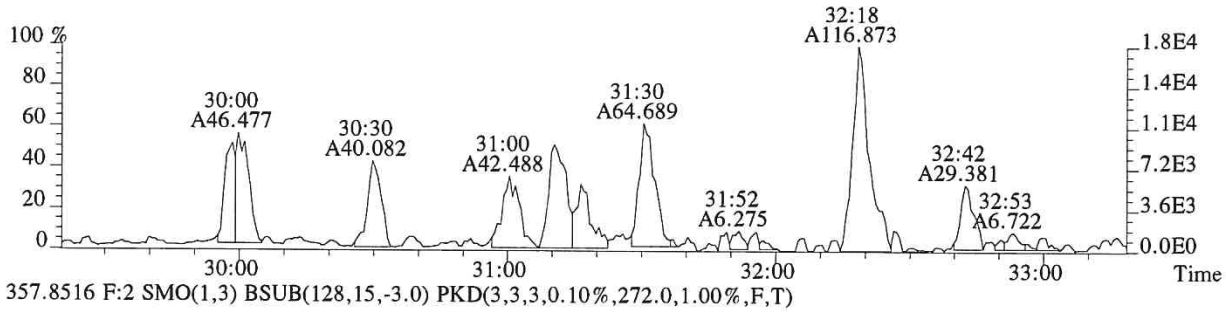
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



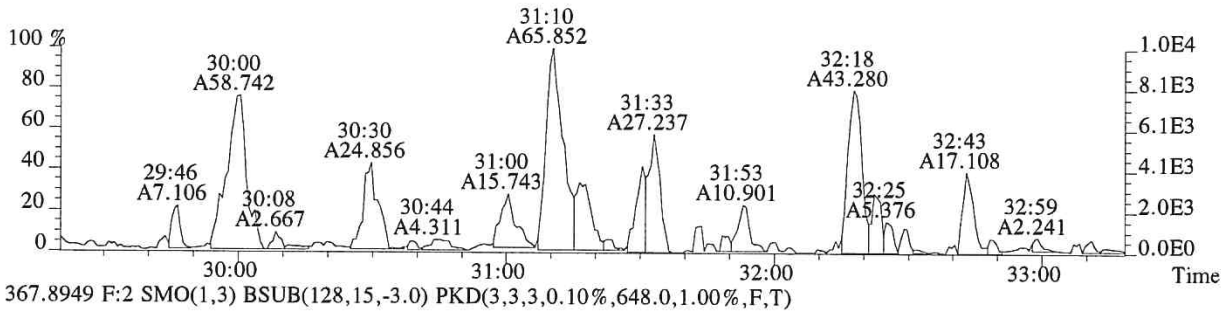
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



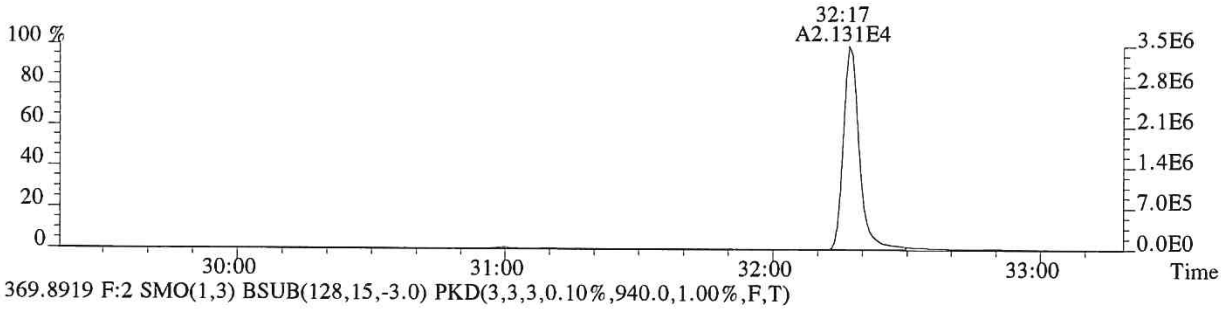
File:P519765 #1-358 Acq: 4-JAN-2019 03:26:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-008
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,656.0,1.00%,F,T)



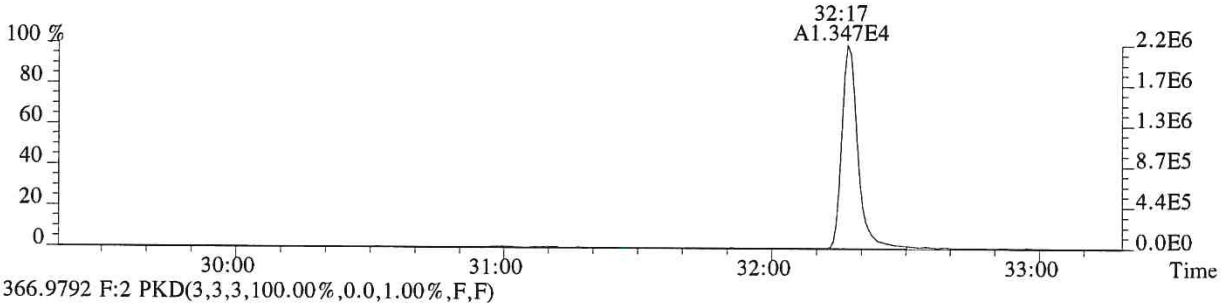
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,272.0,1.00%,F,T)



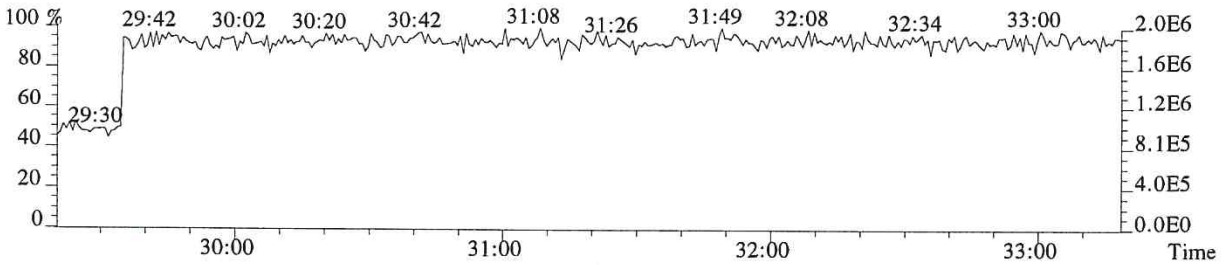
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,648.0,1.00%,F,T)



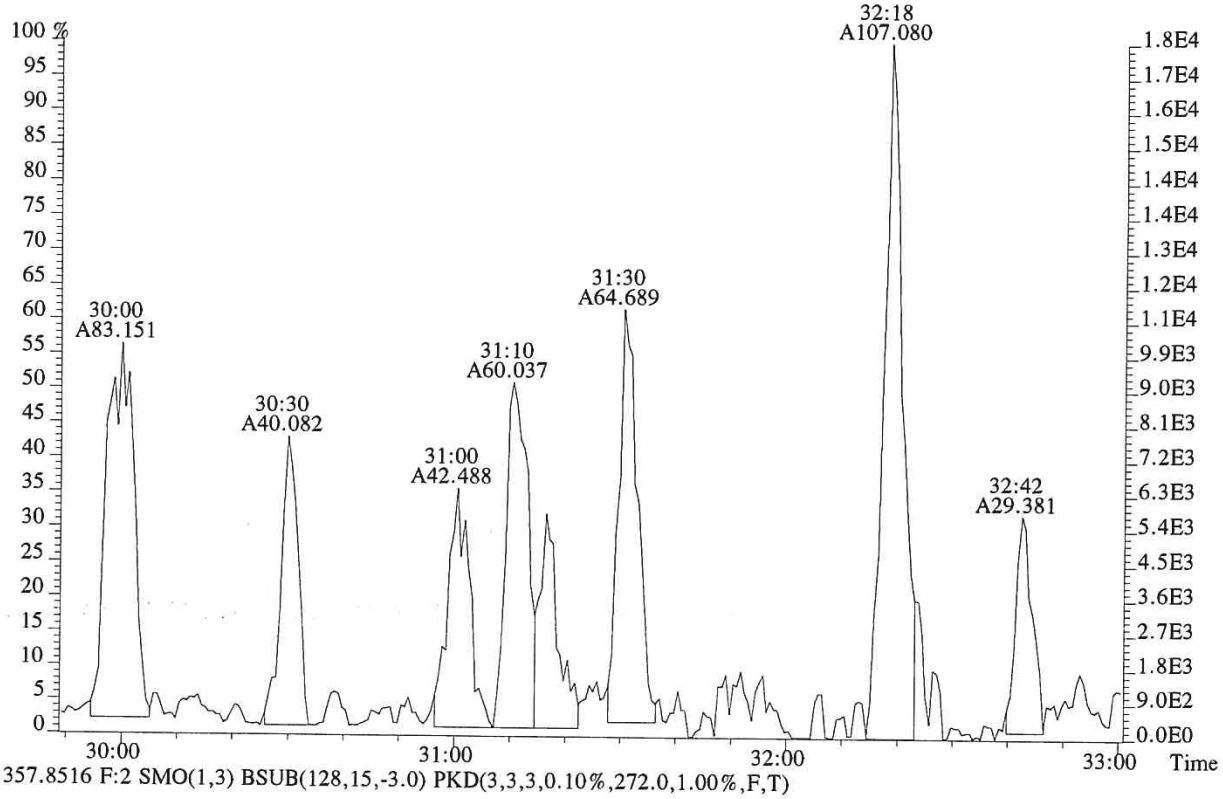
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,940.0,1.00%,F,T)



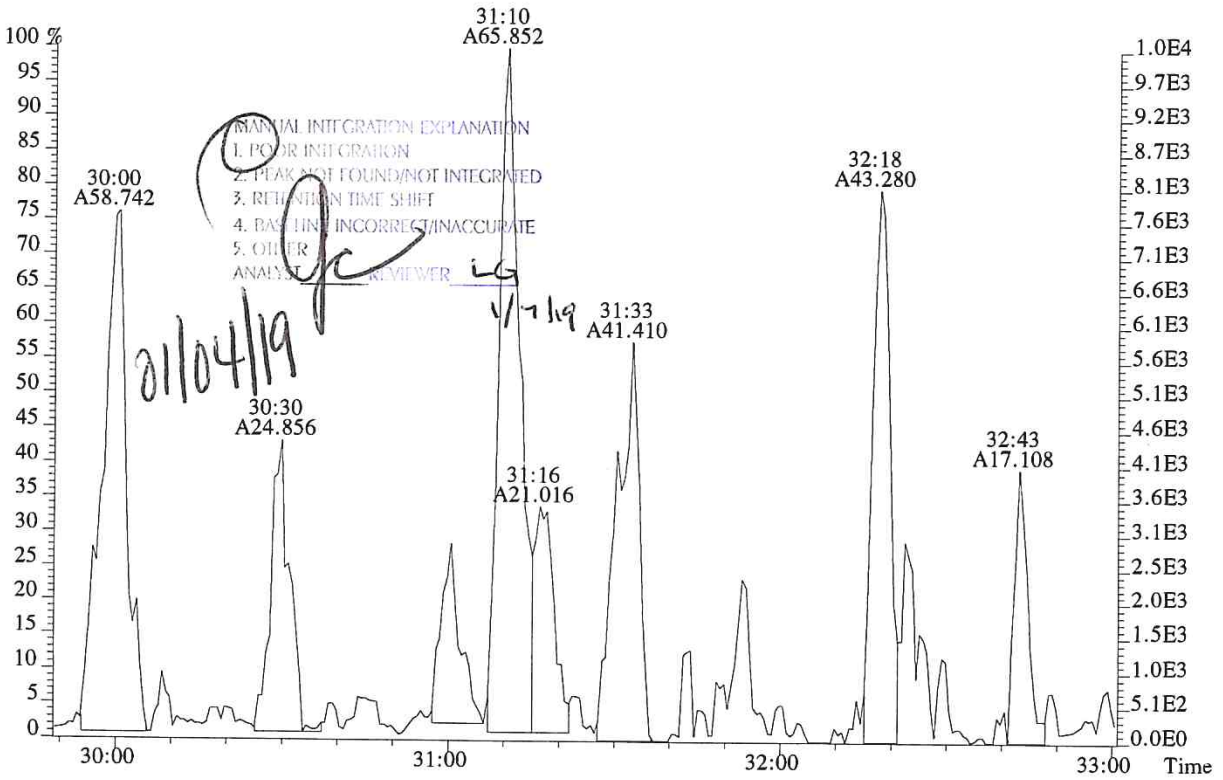
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



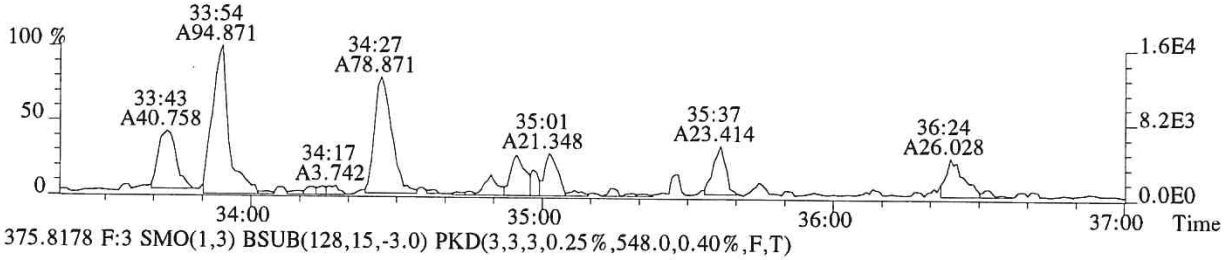
File:P519765 #1-358 Acq: 4-JAN-2019 03:26:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-008
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,656.0,1.00%,F,T)



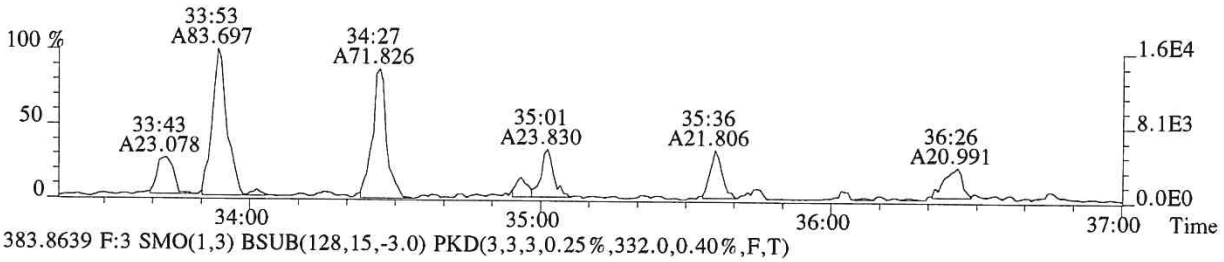
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,272.0,1.00%,F,T)



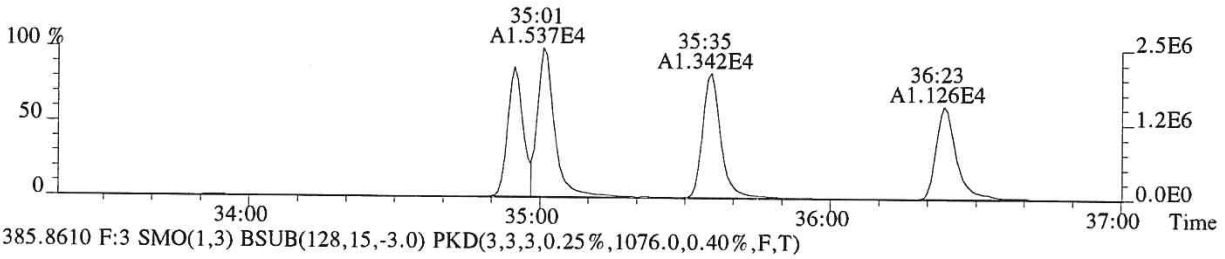
File:P519765 #1-330 Acq: 4-JAN-2019 03:26:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-008
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,640.0,0.40%,F,T)



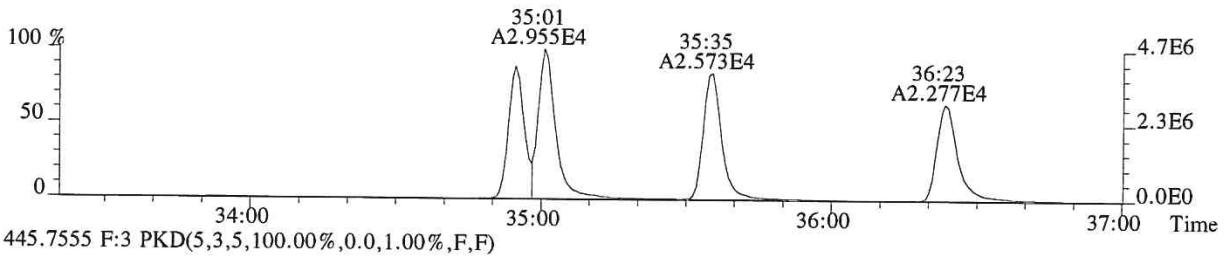
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,548.0,0.40%,F,T)



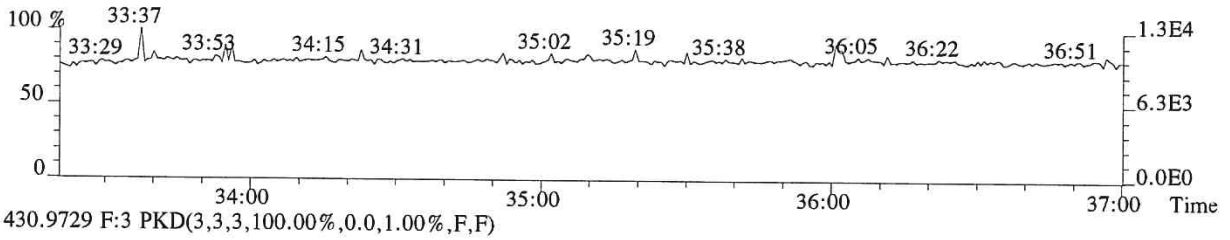
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,332.0,0.40%,F,T)



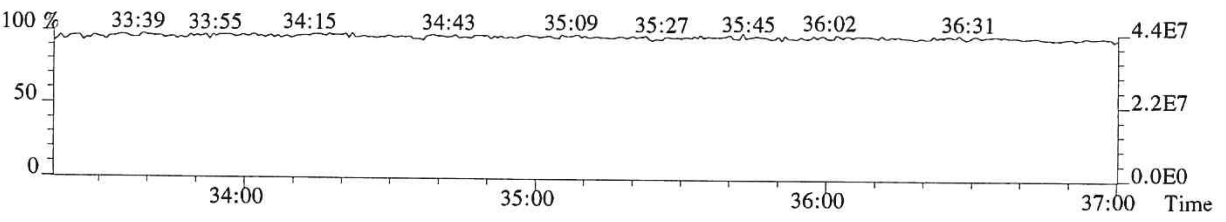
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1076.0,0.40%,F,T)



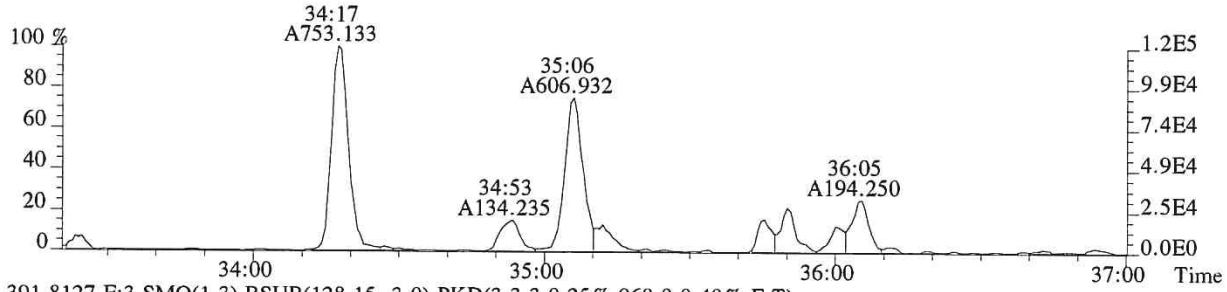
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



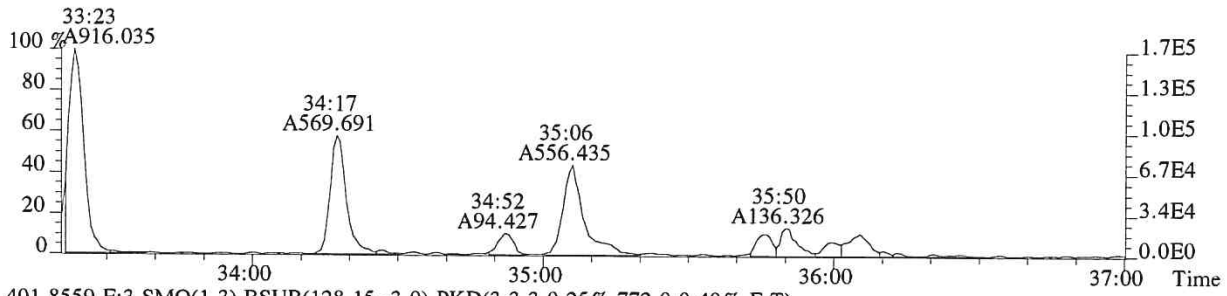
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



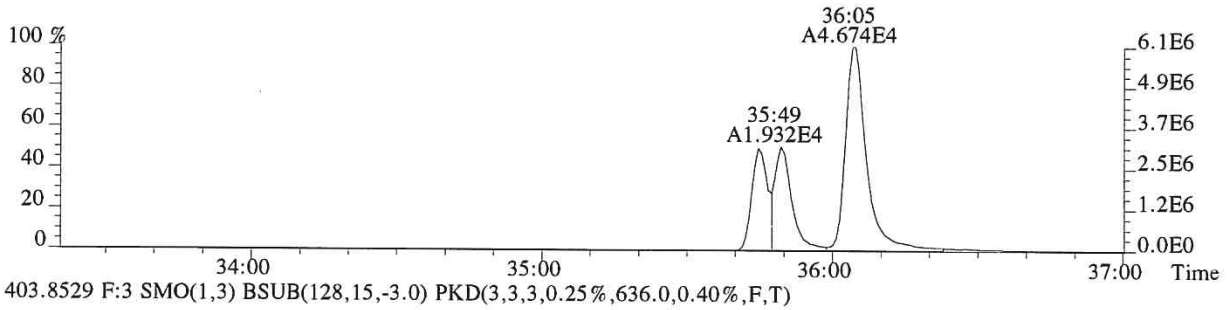
File:P519765 #1-330 Acq: 4-JAN-2019 03:26:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-008
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,436.0,0.40%,F,T)



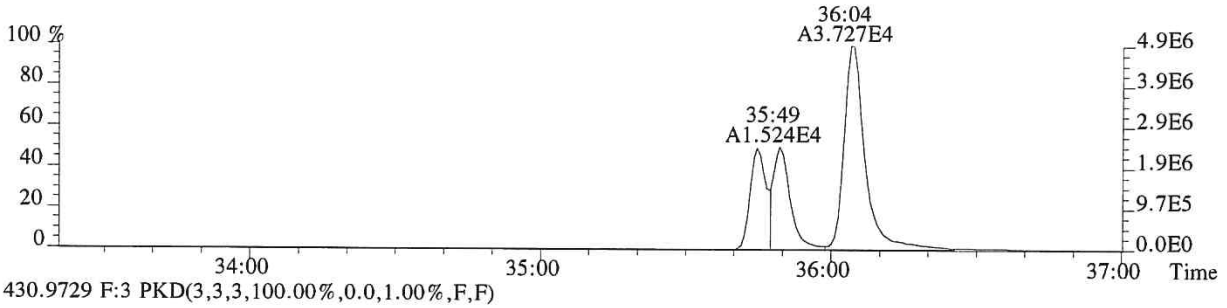
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,968.0,0.40%,F,T)



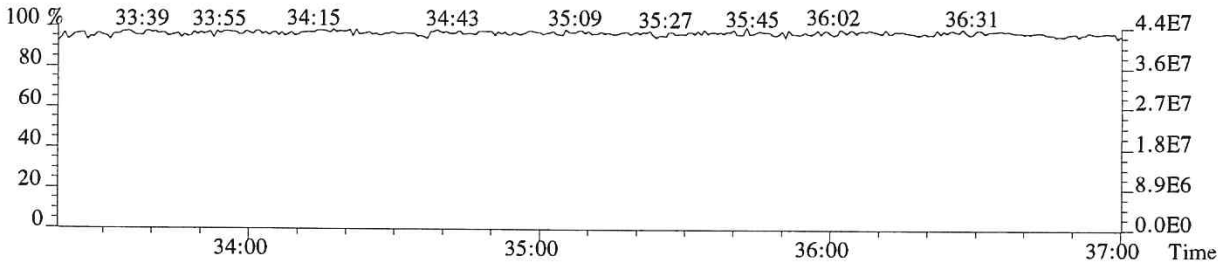
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,772.0,0.40%,F,T)



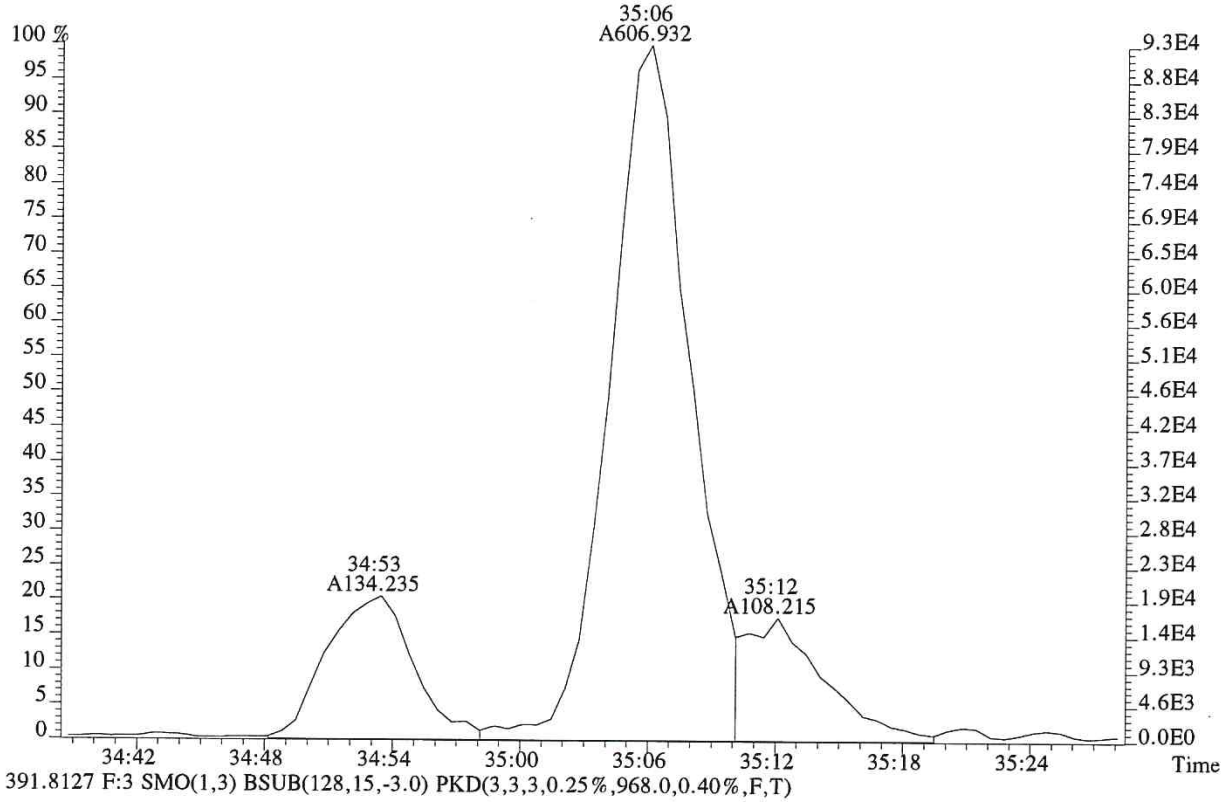
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,636.0,0.40%,F,T)



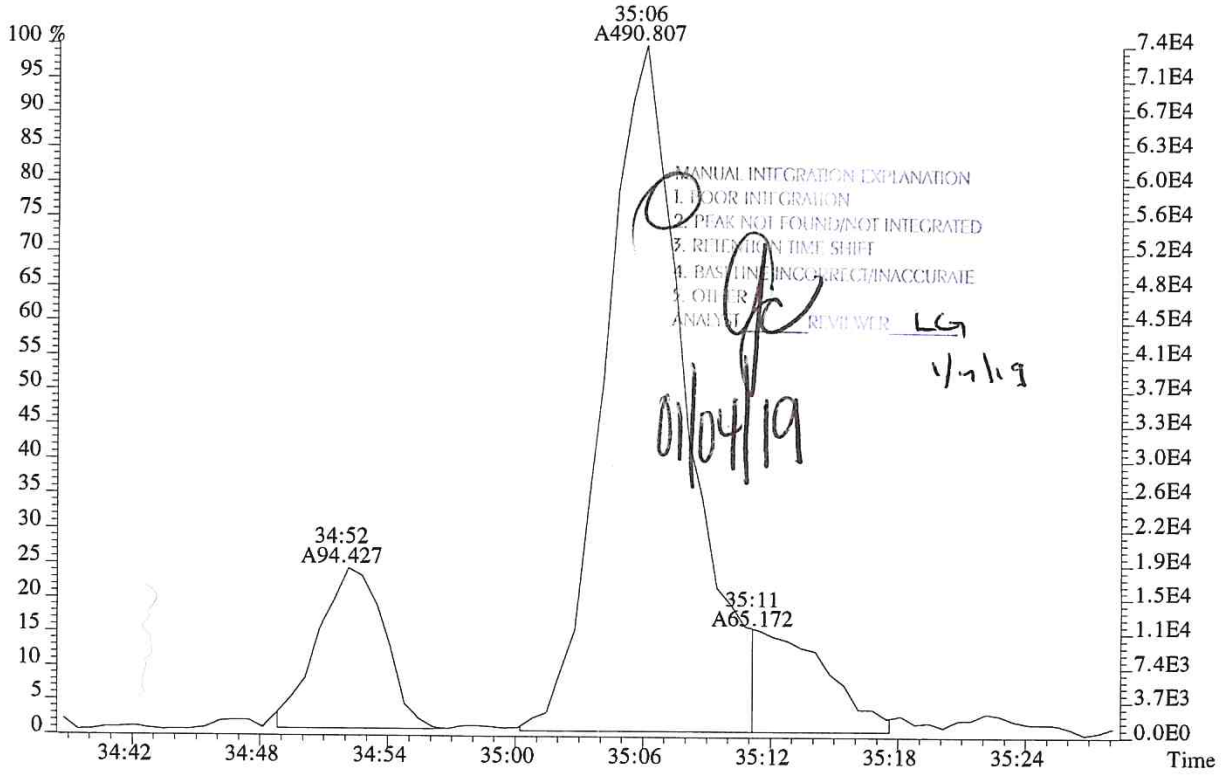
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



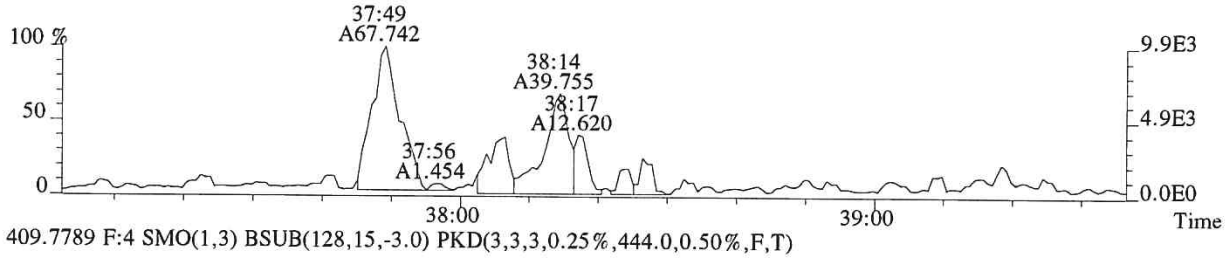
File:P519765 #1-330 Acq: 4-JAN-2019 03:26:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-008
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,436.0,0.40%,F,T)



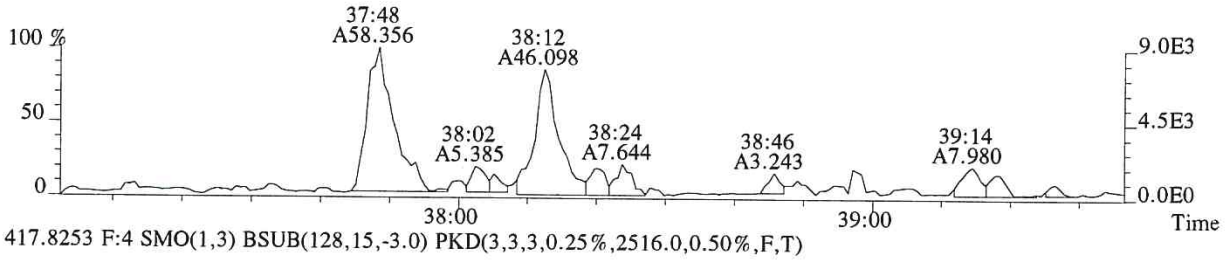
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,968.0,0.40%,F,T)



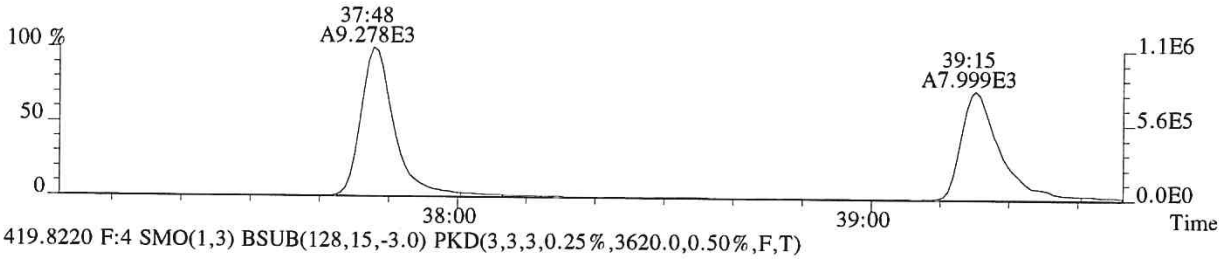
File:P519765 #1-232 Acq: 4-JAN-2019 03:26:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-008
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,752.0,0.50%,F,T)



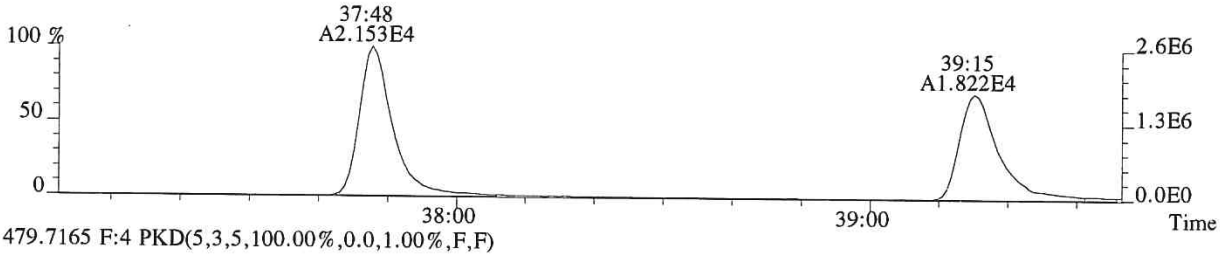
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,444.0,0.50%,F,T)



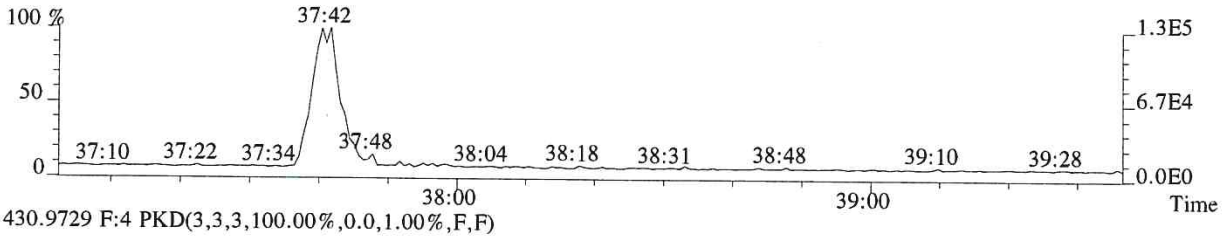
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2516.0,0.50%,F,T)



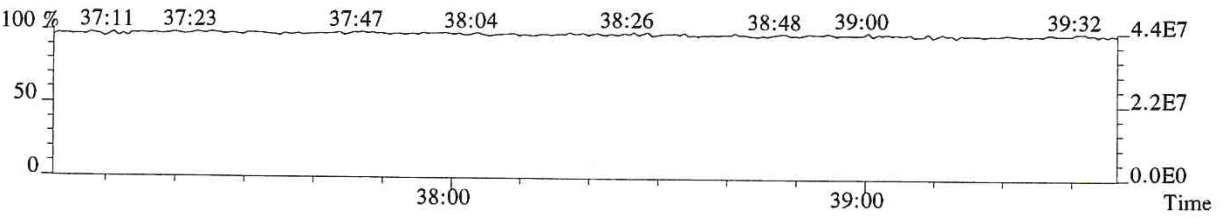
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3620.0,0.50%,F,T)



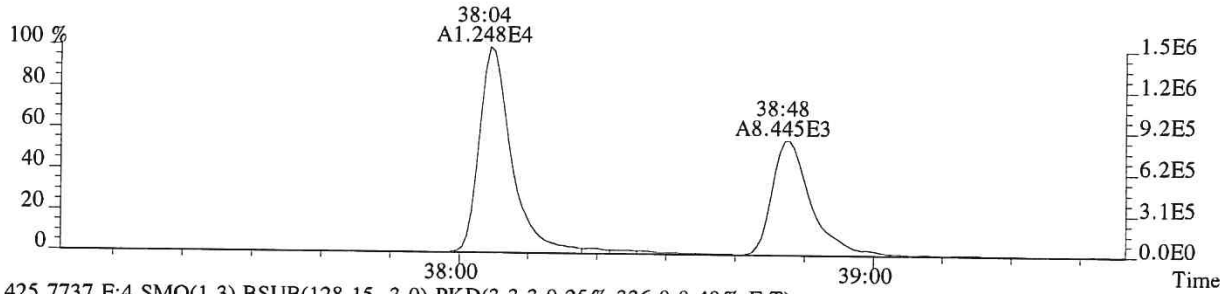
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



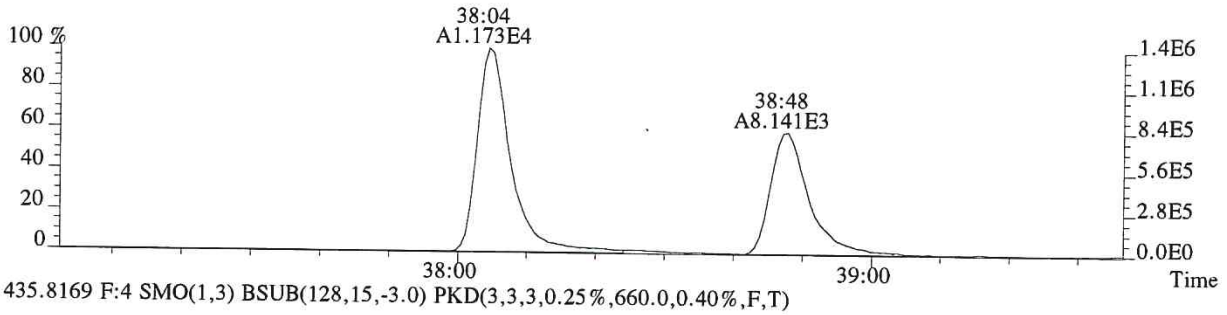
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



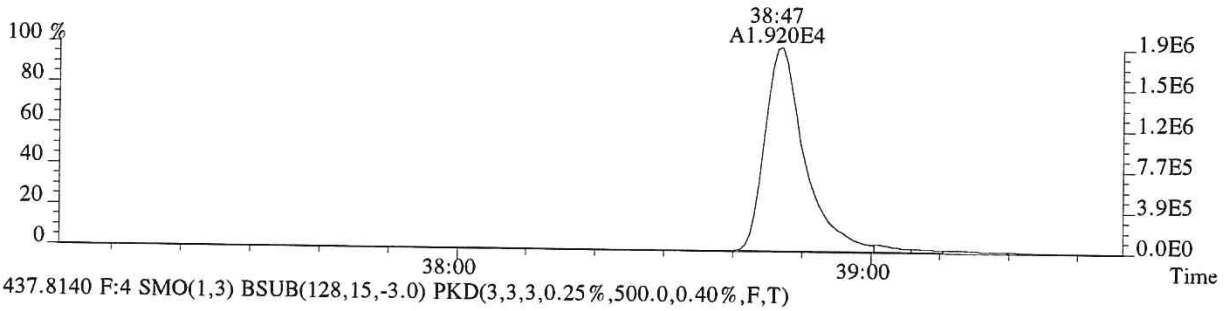
File:P519765 #1-232 Acq: 4-JAN-2019 03:26:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-008
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,392.0,0.40%,F,T)



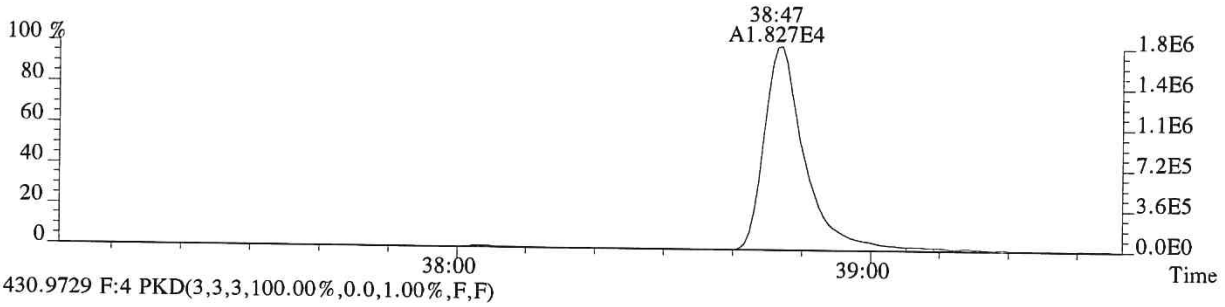
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,336.0,0.40%,F,T)



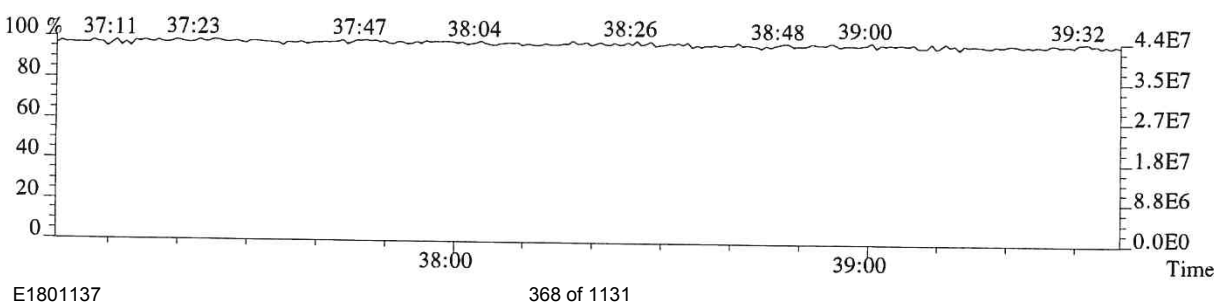
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,660.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,500.0,0.40%,F,T)

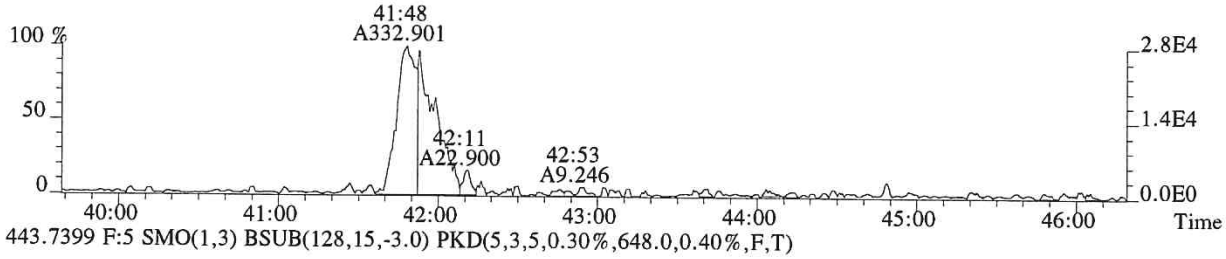


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

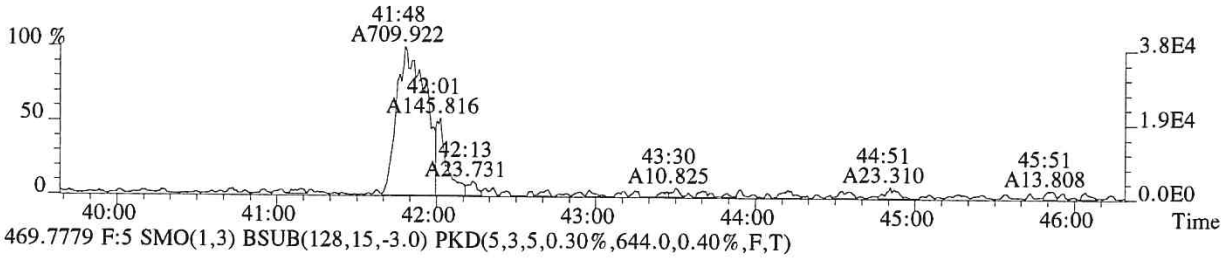


016118

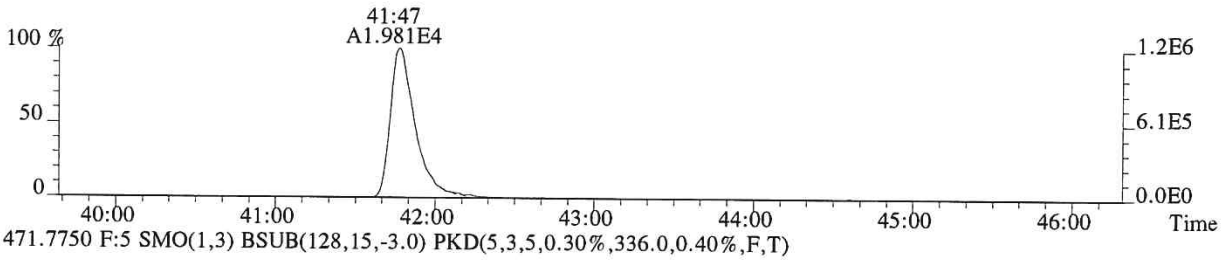
File:P519765 #1-601 Acq: 4-JAN-2019 03:26:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-008
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,524.0,0.40%,F,T)



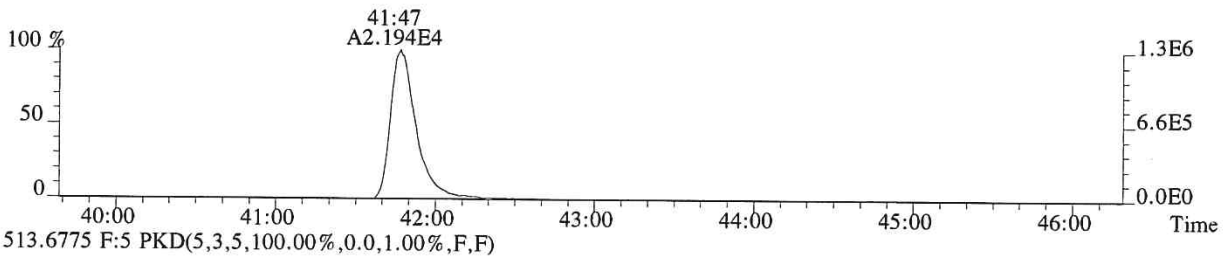
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,648.0,0.40%,F,T)



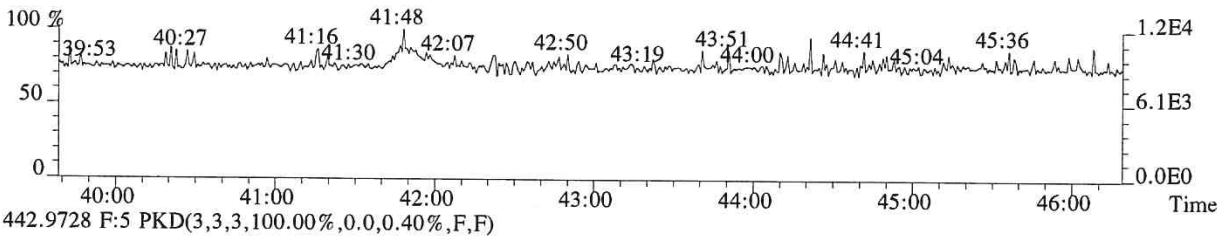
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,644.0,0.40%,F,T)



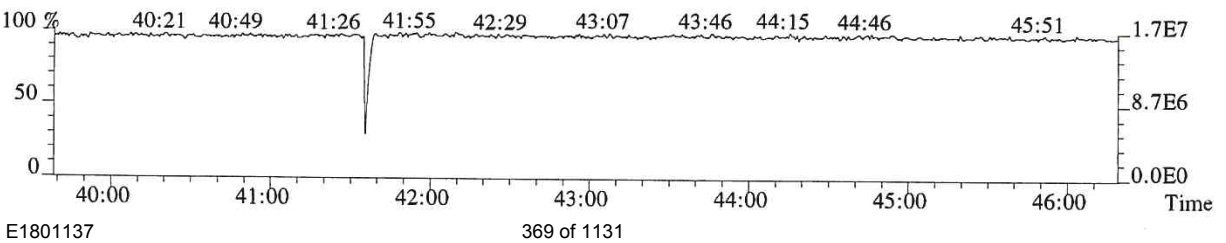
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,336.0,0.40%,F,T)



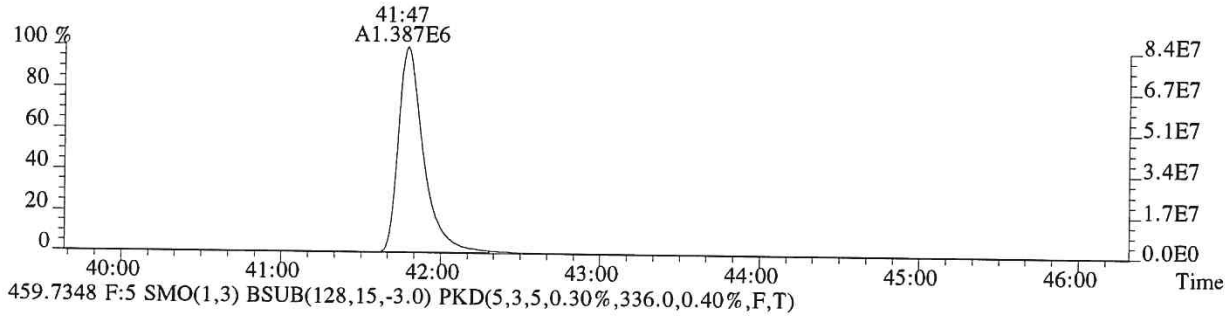
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



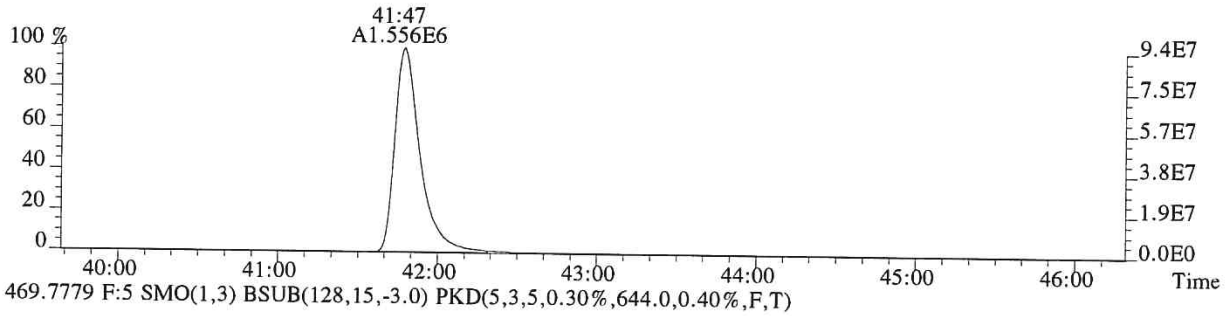
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



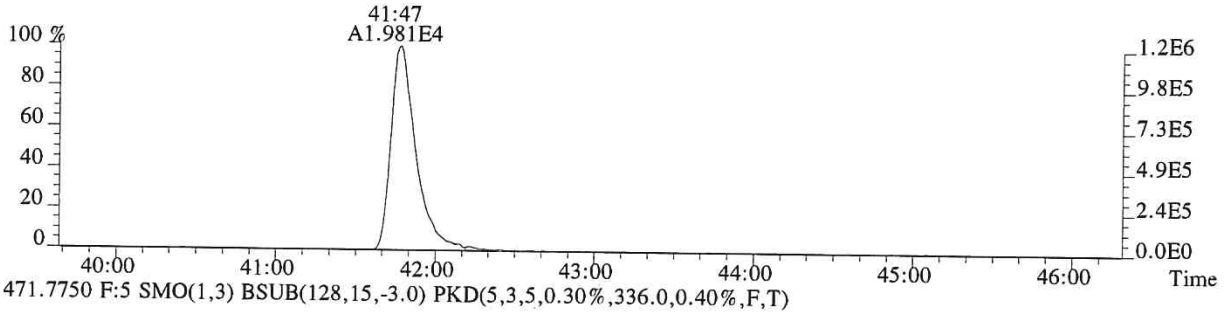
File:P519765 #1-601 Acq: 4-JAN-2019 03:26:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-008
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,428.0,0.40%,F,T)



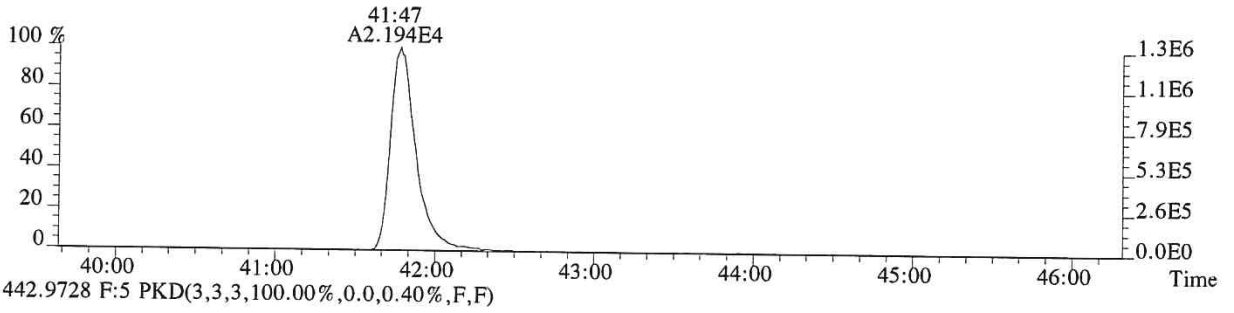
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,336.0,0.40%,F,T)



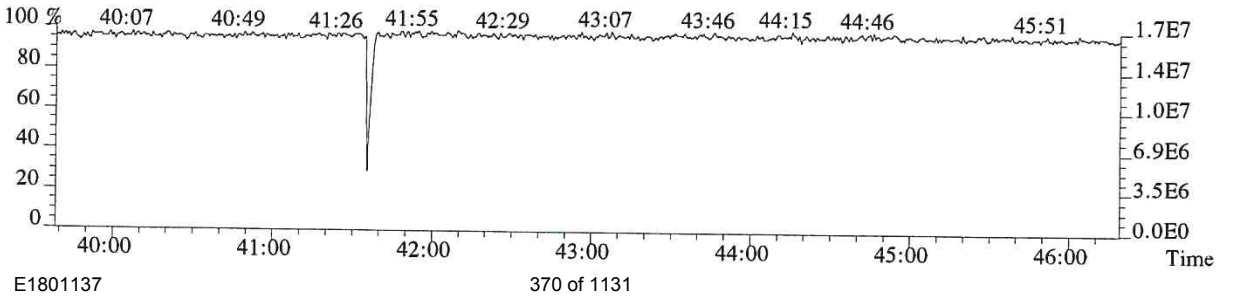
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,644.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,336.0,0.40%,F,T)



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



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Sample Response Summary

CLIENT ID.
SL0132

Run #11 Filename P520000 Samp: 1 Inj: 1 Acquired: 16-JAN-19 15:22:42
Processed: 17-JAN-19 11:27:59 Sample ID: E1801137-009RE

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:16	2.534e+02	3.791e+02	0.67	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:28	1.096e+02	6.314e+01	1.74	yes	yes	1.012
3	Unk	2,3,4,7,8-PeCDF	33:22	1.681e+02	1.240e+02	1.36	yes	yes	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:01	1.292e+02	1.067e+02	1.21	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:08	6.649e+01	9.629e+01	0.69	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:38	1.116e+02	8.542e+01	1.31	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:24	4.587e+01	4.283e+01	1.07	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:38	8.365e+02	8.623e+02	0.97	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:03	6.508e+01	5.982e+01	1.09	yes	no	1.258
10	Unk	OCDF	42:35	1.911e+03	2.050e+03	0.93	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:03	6.949e+01	1.078e+02	0.64	no	yes	1.085
12	Unk	1,2,3,7,8-PeCDD	33:38	6.131e+01	7.541e+01	0.81	no	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:46	9.469e+01	6.417e+01	1.48	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:51	2.346e+02	1.917e+02	1.22	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:05	1.320e+02	1.007e+02	1.31	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:34	6.138e+03	6.236e+03	0.98	yes	no	1.025
17	Unk	OCDD	42:23	3.902e+05	4.356e+05	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:16	4.051e+04	5.136e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:26	7.296e+04	4.634e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:20	6.971e+04	4.441e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	3.118e+04	6.120e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:07	3.585e+04	6.805e+04	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:37	3.254e+04	6.347e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:23	2.975e+04	5.815e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	2.206e+04	4.888e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:02	2.084e+04	4.622e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:02	2.094e+04	2.663e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:38	5.516e+04	3.416e+04	1.61	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:45	4.794e+04	3.742e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:51	4.609e+04	3.601e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:33	4.614e+04	4.309e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	42:22	4.044e+04	4.470e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:29	5.408e+04	6.843e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	7.091e+04	5.440e+04	1.30	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:04	3.109e+04				no	1.014

$$\text{OCDD} = \frac{(3.902e{+}05 + 4.356e{+}05) \times 4000\ \text{pg} \times 1}{(4.044e{+}04 + 4.470e{+}04) \times 10.108\ \text{g} \times 76.7 / 100 \times 1.118} = 4476\ \text{mg/kg}$$

LMc 1/17/19

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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0132

Run #11 Filename P520000 Samp: 1 Inj: 1 Acquired: 16-JAN-19 15:22:42
Processed: 17-JAN-19 11:27:59 LAB. ID: E1801137-009RE

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.36e+04	1.24e+03	4.3e+01	6.88e+04	1.69e+03	4.1e+01
2	1,2,3,7,8-PeCDF	2.29e+04	7.72e+02	3.0e+01	1.22e+04	3.84e+03	3.2e+00
3	2,3,4,7,8-PeCDF	2.77e+04	7.72e+02	3.6e+01	1.86e+04	3.84e+03	4.9e+00
4	1,2,3,4,7,8-HxCDF	3.02e+04	2.85e+03	1.1e+01	2.42e+04	1.07e+03	2.3e+01
5	1,2,3,6,7,8-HxCDF	1.70e+04	2.85e+03	6.0e+00	2.19e+04	1.07e+03	2.0e+01
6	2,3,4,6,7,8-HxCDF	2.69e+04	2.85e+03	9.4e+00	1.74e+04	1.07e+03	1.6e+01
7	1,2,3,7,8,9-HxCDF	9.16e+03	2.85e+03	3.2e+00	7.23e+03	1.07e+03	6.8e+00
8	1,2,3,4,6,7,8-HpCDF	1.84e+05	2.64e+03	6.9e+01	1.87e+05	1.20e+03	1.6e+02
9	1,2,3,4,7,8,9-HpCDF	1.54e+04	2.64e+03	5.8e+00	1.12e+04	1.20e+03	9.3e+00
10	OCDF	3.17e+05	6.84e+02	4.6e+02	3.27e+05	1.20e+03	2.7e+02
11	2,3,7,8-TCDD	1.09e+04	3.66e+03	3.0e+00	2.25e+04	1.68e+03	1.3e+01
12	1,2,3,7,8-PeCDD	1.27e+04	1.13e+03	1.1e+01	9.93e+03	7.24e+02	1.4e+01
13	1,2,3,4,7,8-HxCDD	2.37e+04	8.36e+02	2.8e+01	1.62e+04	1.16e+03	1.4e+01
14	1,2,3,6,7,8-HxCDD	5.08e+04	8.36e+02	6.1e+01	4.10e+04	1.16e+03	3.5e+01
15	1,2,3,7,8,9-HxCDD	2.73e+04	8.36e+02	3.3e+01	2.06e+04	1.16e+03	1.8e+01
16	1,2,3,4,6,7,8-HpCDD	1.23e+06	2.91e+03	4.2e+02	1.26e+06	1.90e+03	6.6e+02
17	OCDD	6.54e+07	4.16e+02	1.6e+05	7.26e+07	9.48e+02	7.7e+04
18	13C-2,3,7,8-TCDF	7.62e+06	7.96e+03	9.6e+02	9.73e+06	6.16e+03	1.6e+03
19	13C-1,2,3,7,8-PeCDF	1.44e+07	4.96e+02	2.9e+04	9.15e+06	7.72e+02	1.2e+04
20	13C-2,3,4,7,8-PeCDF	1.43e+07	4.96e+02	2.9e+04	9.08e+06	7.72e+02	1.2e+04
21	13C-1,2,3,4,7,8-HxCDF	6.79e+06	1.08e+03	6.3e+03	1.32e+07	1.39e+03	9.5e+03
22	13C-1,2,3,6,7,8-HxCDF	7.52e+06	1.08e+03	6.9e+03	1.43e+07	1.39e+03	1.0e+04
23	13C-2,3,4,6,7,8-HxCDF	7.08e+06	1.08e+03	6.5e+03	1.36e+07	1.39e+03	9.8e+03
24	13C-1,2,3,7,8,9-HxCDF	6.37e+06	1.08e+03	5.9e+03	1.23e+07	1.39e+03	8.9e+03
25	13C-1,2,3,4,6,7,8-HpCDF	4.73e+06	2.84e+03	1.7e+03	1.06e+07	5.62e+03	1.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	3.92e+06	2.84e+03	1.4e+03	8.78e+06	5.62e+03	1.6e+03
27	13C-2,3,7,8-TCDD	4.22e+06	8.21e+03	5.1e+02	5.39e+06	2.84e+03	1.9e+03
28	13C-1,2,3,7,8-PeCDD	1.12e+07	1.06e+03	1.1e+04	6.94e+06	1.40e+03	4.9e+03
29	13C-1,2,3,4,7,8-HxCDD	1.10e+07	1.97e+03	5.6e+03	8.58e+06	8.68e+02	9.9e+03
30	13C-1,2,3,6,7,8-HxCDD	9.52e+06	1.97e+03	4.8e+03	7.52e+06	8.68e+02	8.7e+03
31	13C-1,2,3,4,6,7,8-HpCDD	9.14e+06	1.05e+03	8.7e+03	8.68e+06	3.96e+02	2.2e+04
32	13C-OCDD	6.77e+06	5.04e+02	1.3e+04	7.54e+06	7.24e+02	1.0e+04
33	13C-1,2,3,4-TCDD	1.07e+07	8.21e+03	1.3e+03	1.34e+07	2.84e+03	4.7e+03
34	13C-1,2,3,7,8,9-HxCDD	1.42e+07	1.97e+03	7.2e+03	1.14e+07	8.68e+02	1.3e+04
35	37Cl-2,3,7,8-TCDD	6.26e+06	1.86e+03	3.4e+03			

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Peak List Summary

CLIENT ID.
SL0132

Entry: 36 Totals Name: Total Tetra-Furans

Run: 11 File: P520000 Sample:1 Injection:1 Function:1

Acquired: 16-JAN-19 15:22:42 Processed: 17-JAN-19 11:27:59

Mass: 303.9020 305.8990 Tot Response: 1.37e+03 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:48	1.12e+02	1.44e+02	0.77	yes	2.56e+02		n	n
2	27:05	3.51e+01	4.97e+01	0.71	yes	8.48e+01		n	n
3	28:06	3.51e+01	4.93e+01	0.71	yes	8.44e+01		n	n
4	28:16	2.53e+02	3.79e+02	0.67	yes	6.33e+02	2,3,7,8-TCDF	n	n
5	28:36	1.39e+02	1.70e+02	0.82	yes	3.08e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0132

Entry: 39 Totals Name: Total Penta-Furans2

Run: 11 File: P520000 Sample:1 Injection:1 Function:2

Acquired: 16-JAN-19 15:22:42 Processed: 17-JAN-19 11:27:59

Mass: 339.8600 341.8570 Tot Response: 1.34e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	31:31	3.72e+02	2.43e+02 1.54	yes	6.15e+02		n	y
2	32:03	1.57e+02	1.07e+02 1.47	yes	2.64e+02		n	y
3	32:28	1.10e+02	6.31e+01 1.74	yes	1.73e+02	1,2,3,7,8-PeCDF	n	y
4	33:22	1.68e+02	1.24e+02 1.36	yes	2.92e+02	2,3,4,7,8-PeCDF	n	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0132

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 11 File: P520000 Sample:1 Injection:1 Function:2

Acquired: 16-JAN-19 15:22:42 Processed: 17-JAN-19 11:27:59

Mass: 355.8550 357.8520 Tot Response: 6.22e+02 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	31:34	1.33e+02	9.19e+01	1.45	yes	2.25e+02		n	n
2	32:01	6.54e+01	4.73e+01	1.38	yes	1.13e+02		n	n
3	32:28	6.27e+01	4.41e+01	1.42	yes	1.07e+02		y	n
4	32:36	4.84e+01	3.52e+01	1.37	yes	8.36e+01		n	n
5	33:16	3.31e+01	2.44e+01	1.36	yes	5.75e+01		n	n
6	33:42	2.07e+01	1.57e+01	1.32	yes	3.64e+01		y	n

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Peak List Summary

CLIENT ID.
SL0132

Entry: 41 Totals Name: Total Hexa-Furans

Run: 11 File: P520000 Sample:1 Injection:1 Function:3

Acquired: 16-JAN-19 15:22:42 Processed: 17-JAN-19 11:27:59

Mass: 373.8210 375.8180 Tot Response: 2.53e+03 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	35:05	5.60e+02	4.44e+02	1.26	yes	1.00e+03		n	n
2	35:35	4.76e+02	4.04e+02	1.18	yes	8.80e+02		n	n
3	35:56	7.49e+01	5.35e+01	1.40	yes	1.28e+02		n	n
4	36:01	1.29e+02	1.07e+02	1.21	yes	2.36e+02	1,2,3,4,7,8-HxCDF	n	n
5	36:38	1.12e+02	8.54e+01	1.31	yes	1.97e+02	2,3,4,6,7,8-HxCDF	n	n
6	37:24	4.59e+01	4.28e+01	1.07	yes	8.87e+01	1,2,3,7,8,9-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0132

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 11 File: P520000 Sample:1 Injection:1 Function:3

Acquired: 16-JAN-19 15:22:42 Processed: 17-JAN-19 11:27:59

Mass: 389.8160 391.8130 Tot Response: 4.06e+03 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	35:26	8.99e+02	6.97e+02	1.29	yes	1.60e+03		n	n
2	36:11	9.07e+02	6.37e+02	1.42	yes	1.54e+03		n	n
3	36:17	1.45e+02	1.12e+02	1.30	yes	2.57e+02		n	n
4	36:51	2.35e+02	1.92e+02	1.22	yes	4.26e+02	1,2,3,6,7,8-HxCDD	n	n
5	37:05	1.32e+02	1.01e+02	1.31	yes	2.33e+02	1,2,3,7,8,9-HxCDD	n	n

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Peak List Summary

CLIENT ID.
SL0132

Entry: 43 Totals Name: Total Hepta-Furans

Run: 11 File: P520000 Sample:1 Injection:1 Function:4

Acquired: 16-JAN-19 15:22:42 Processed: 17-JAN-19 11:27:59

Mass: 407.7820 409.7790 Tot Response: 4.84e+03 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:38	8.37e+02	8.62e+02	0.97	yes	1.70e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	39:02	1.50e+03	1.46e+03	1.03	yes	2.96e+03		n	n
3	39:10	3.20e+01	2.91e+01	1.10	yes	6.10e+01		n	n
4	40:03	6.51e+01	5.98e+01	1.09	yes	1.25e+02	1,2,3,4,7,8,9-HpCDF	n	n

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Peak List Summary

CLIENT ID.
SL0132

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 11 File: P520000 Sample:1 Injection:1 Function:4

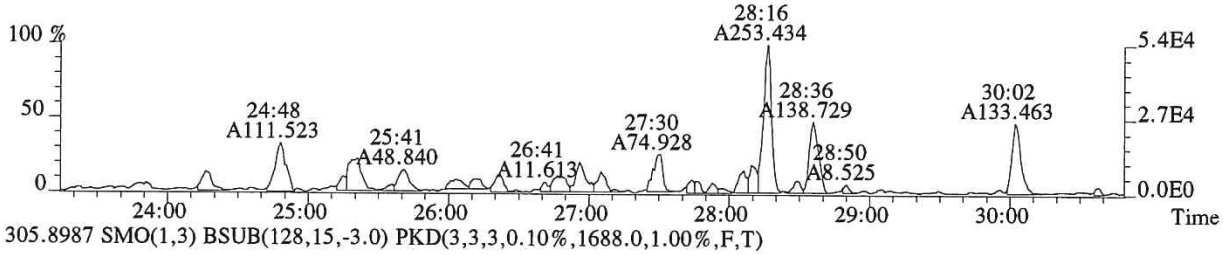
Acquired: 16-JAN-19 15:22:42 Processed: 17-JAN-19 11:27:59

Mass: 423.7770 425.7740 Tot Response: 3.31e+04 RRF: 1.025

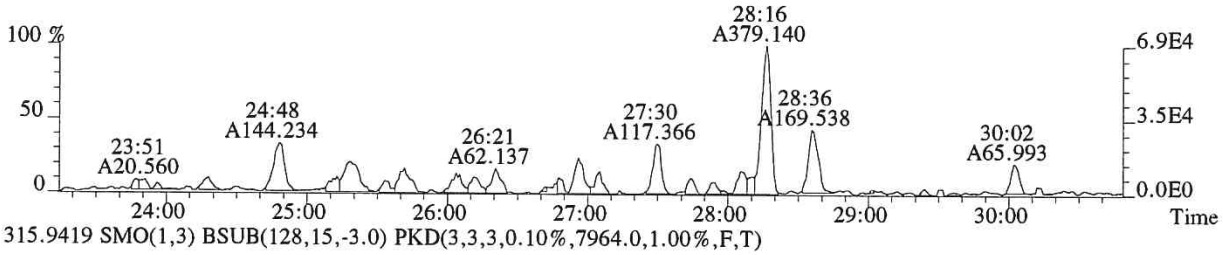
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:53	1.07e+04	1.07	yes	2.07e+04		n	n
2	39:34	6.14e+03	0.98	yes	1.24e+04	1,2,3,4,6,7,8-HpCDD	n	n

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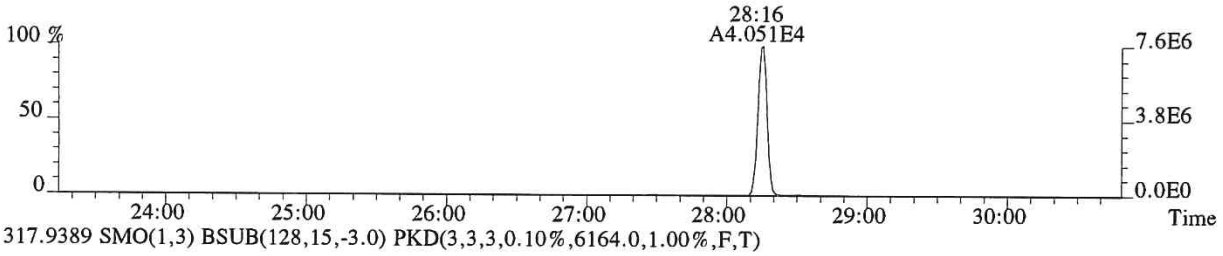
File:P520000 #1-538 Acq:16-JAN-2019 15:22:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-009RE
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1236.0,1.00%,F,T)



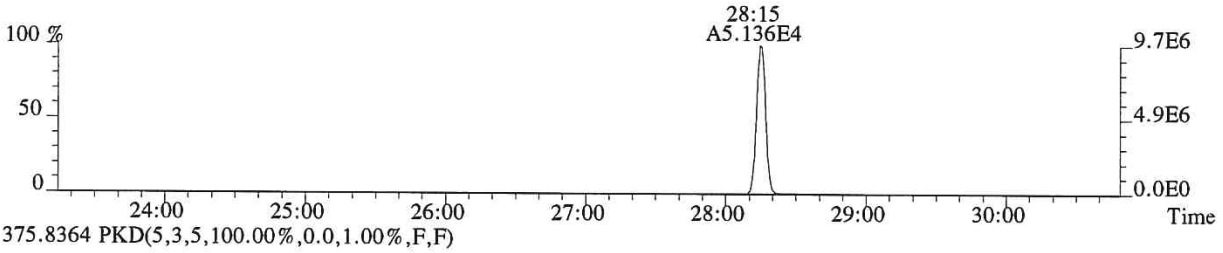
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1688.0,1.00%,F,T)



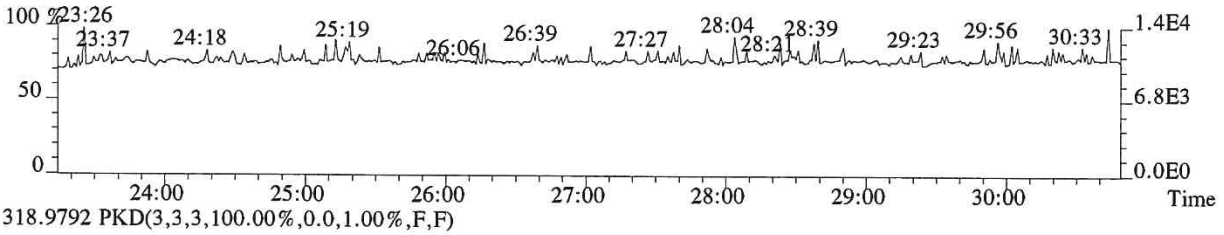
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7964.0,1.00%,F,T)



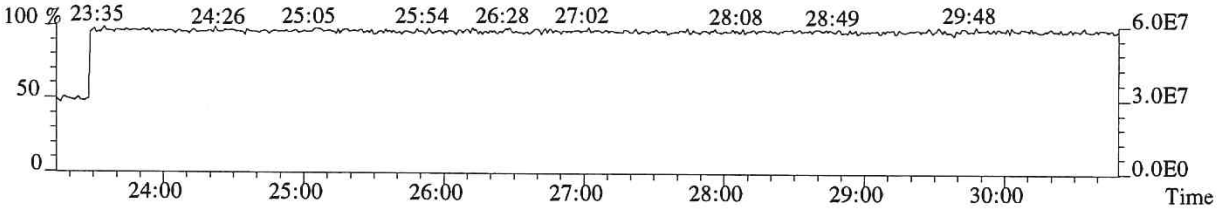
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6164.0,1.00%,F,T)



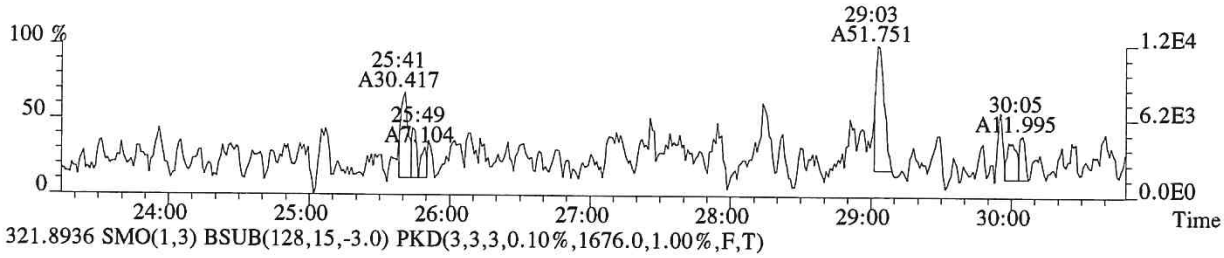
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



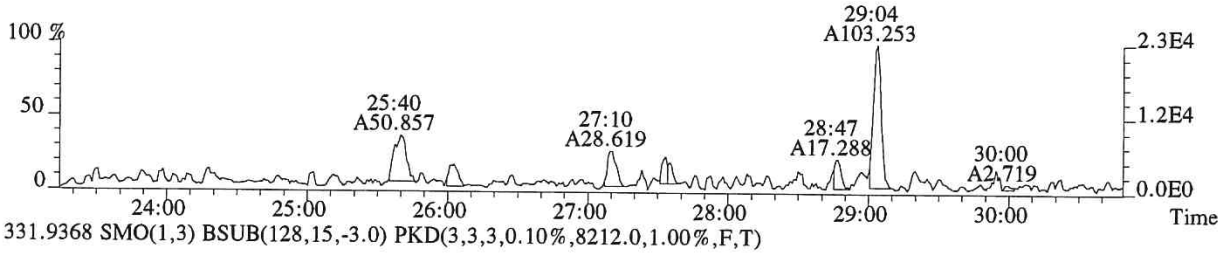
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



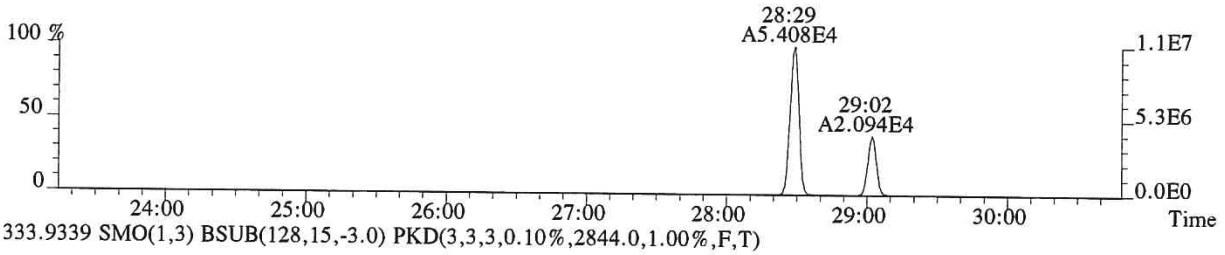
File:P520000 #1-538 Acq:16-JAN-2019 15:22:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-009RE
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3656.0,1.00%,F,T)



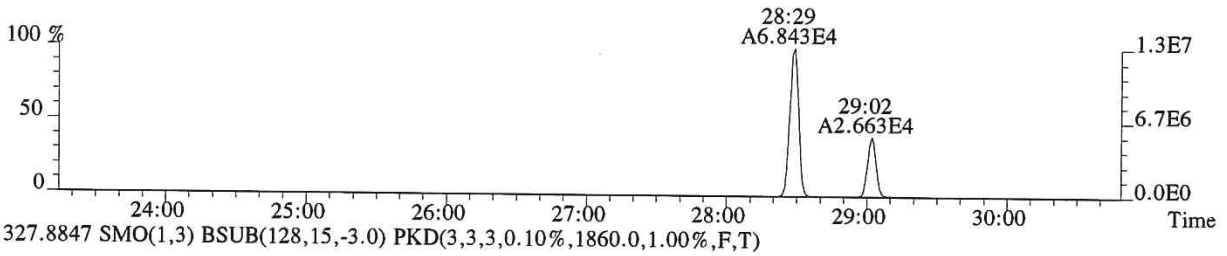
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1676.0,1.00%,F,T)



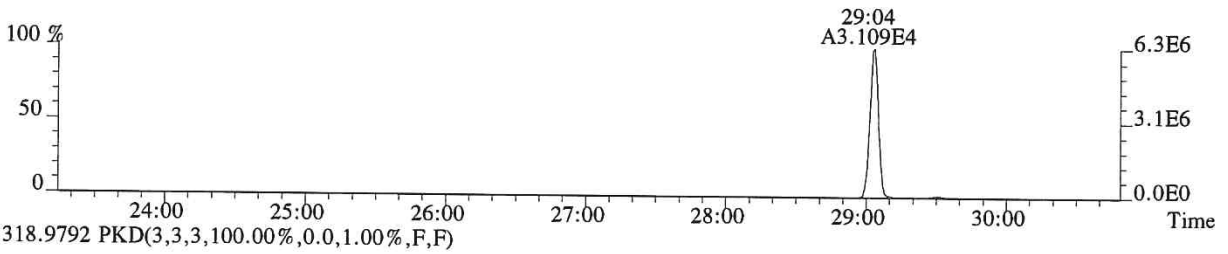
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8212.0,1.00%,F,T)



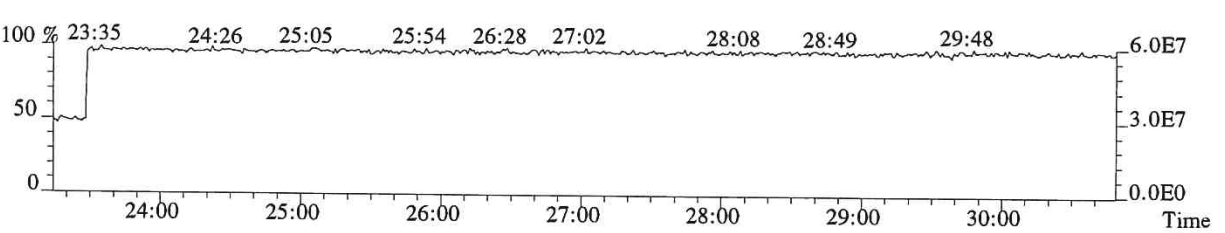
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2844.0,1.00%,F,T)



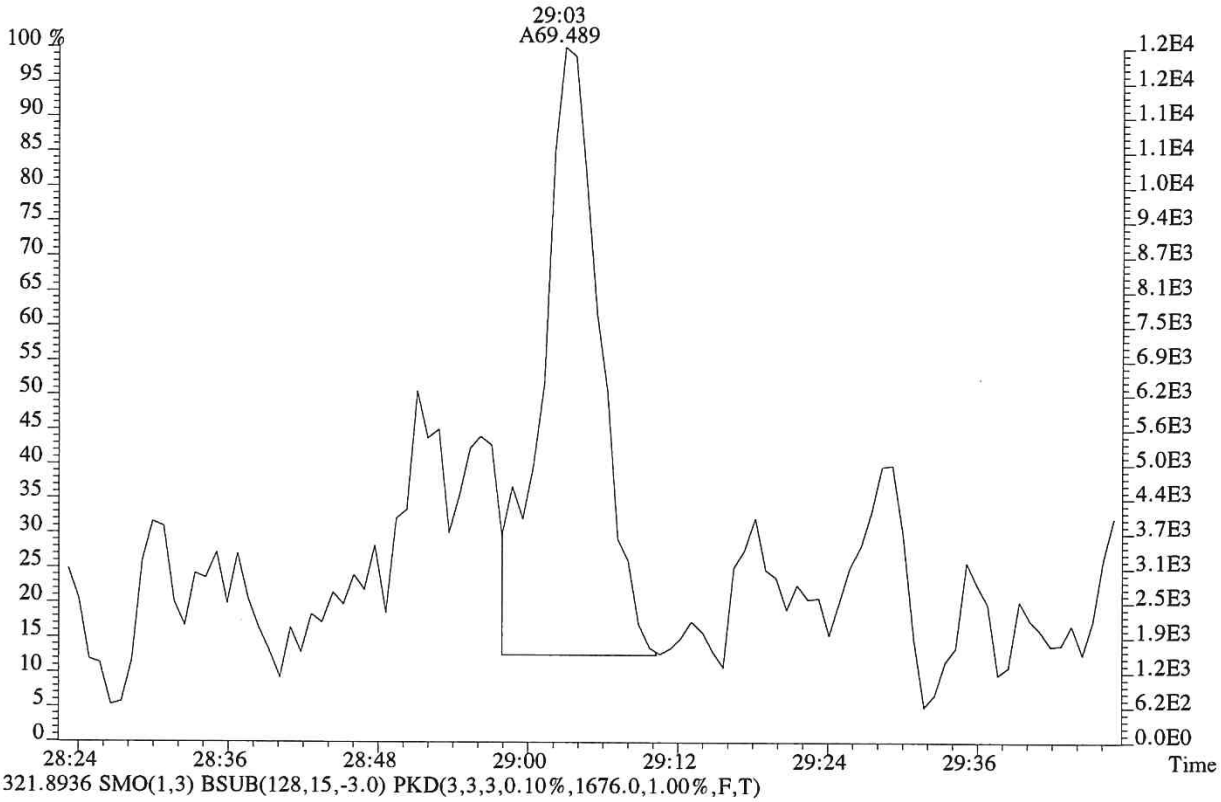
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1860.0,1.00%,F,T)



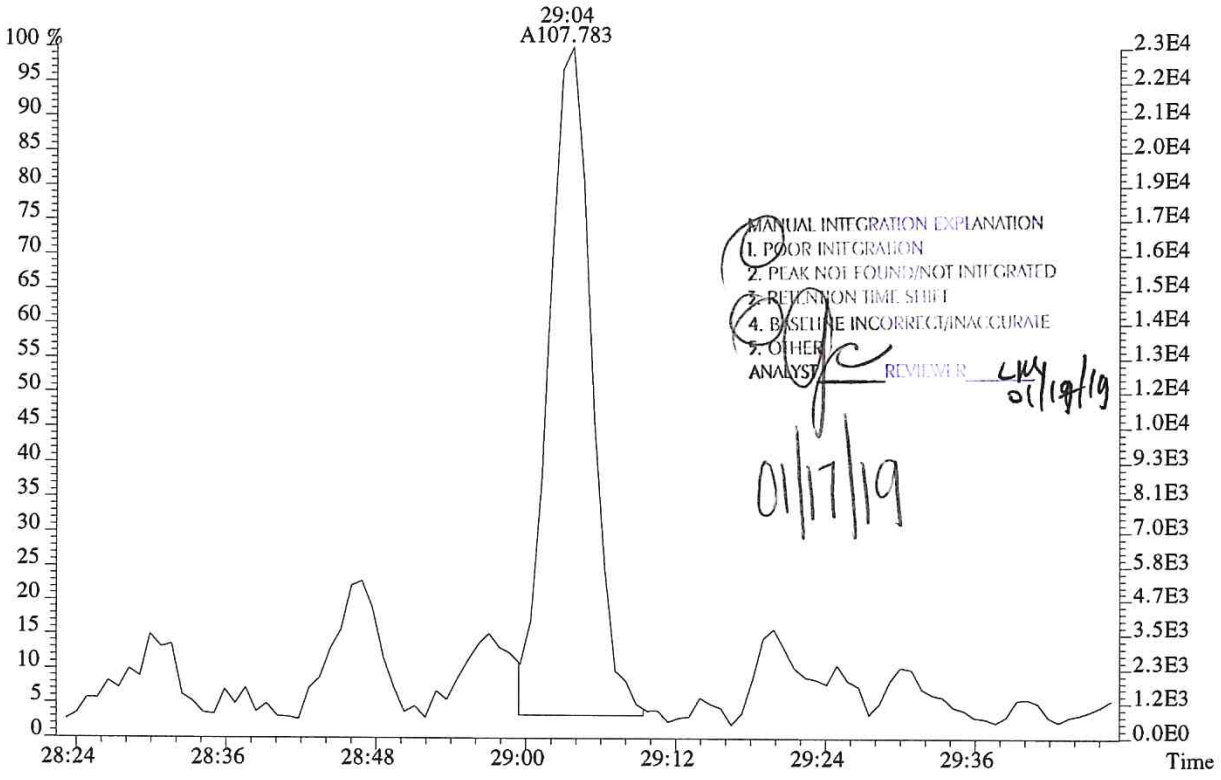
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P520000 #1-538 Acq:16-JAN-2019 15:22:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-009RE
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3656.0,1.00%,F,T)

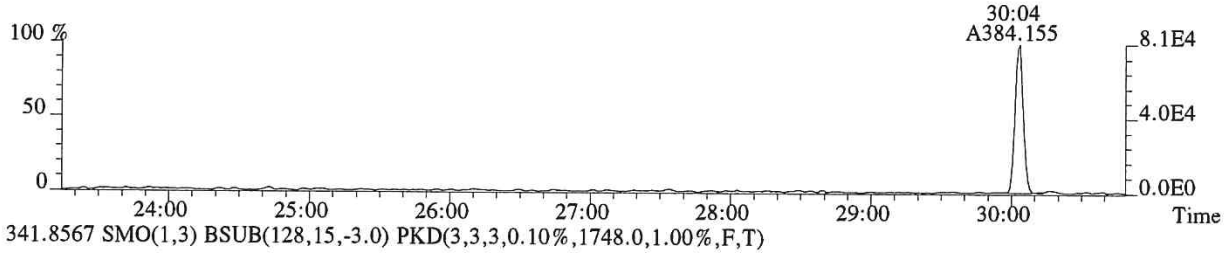


321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1676.0,1.00%,F,T)

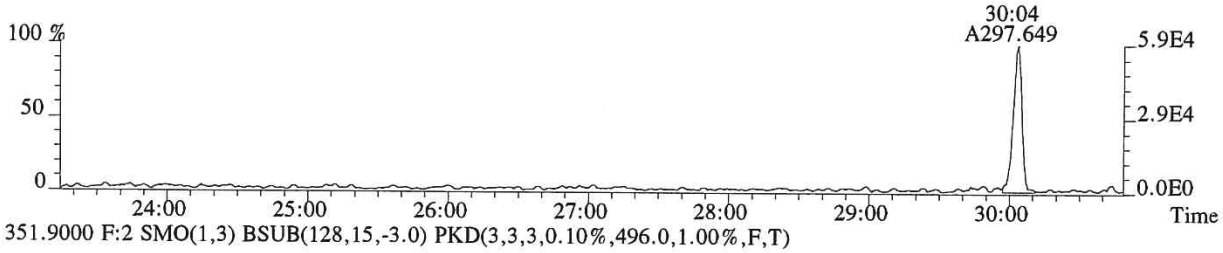


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER CMY 01/18/19
01/17/19

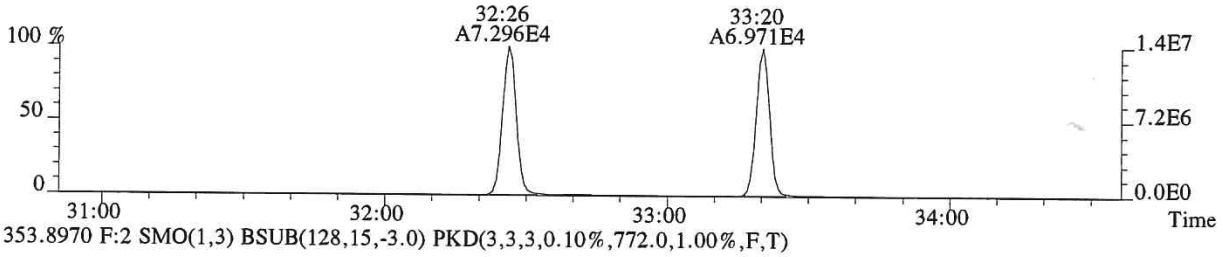
File:P520000 #1-538 Acq:16-JAN-2019 15:22:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-009RE
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1084.0,1.00%,F,T)



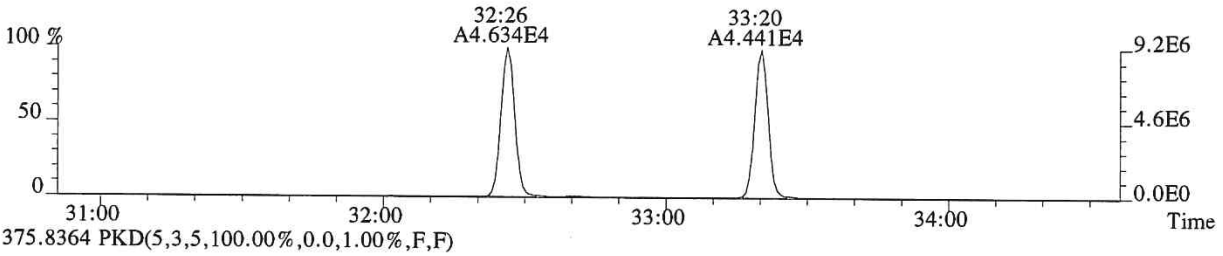
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1748.0,1.00%,F,T)



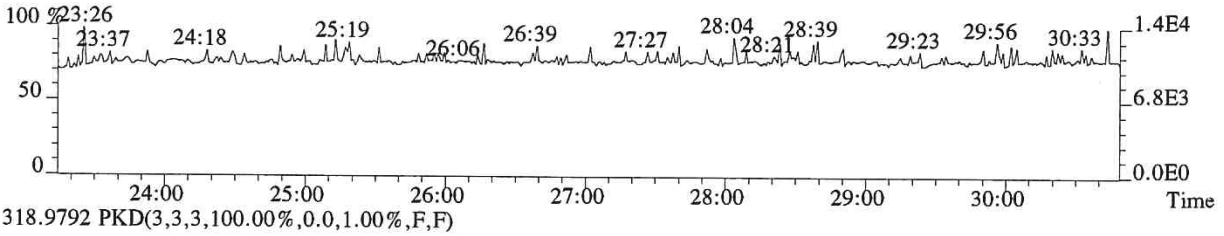
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,496.0,1.00%,F,T)



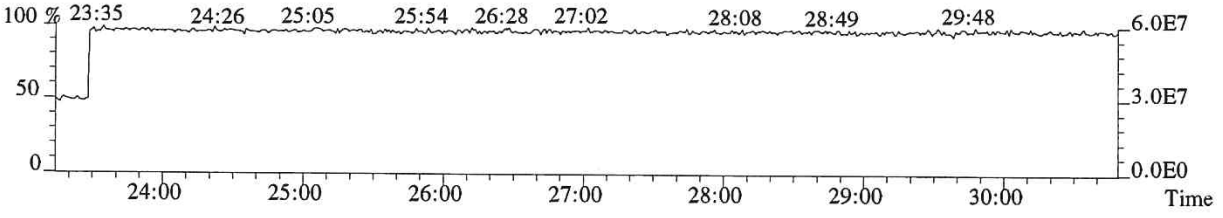
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,772.0,1.00%,F,T)



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

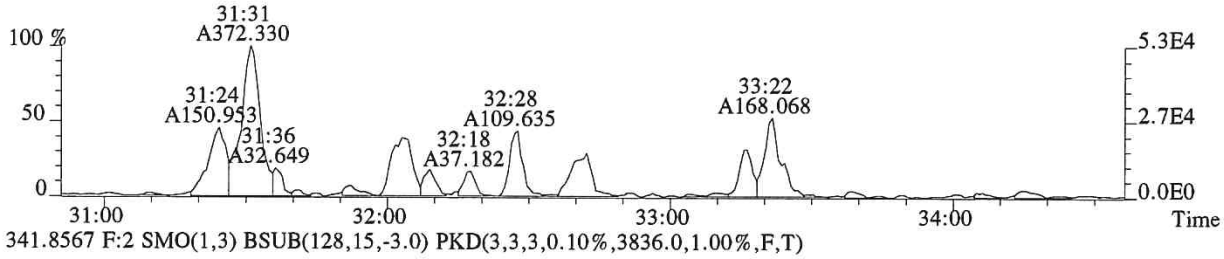


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

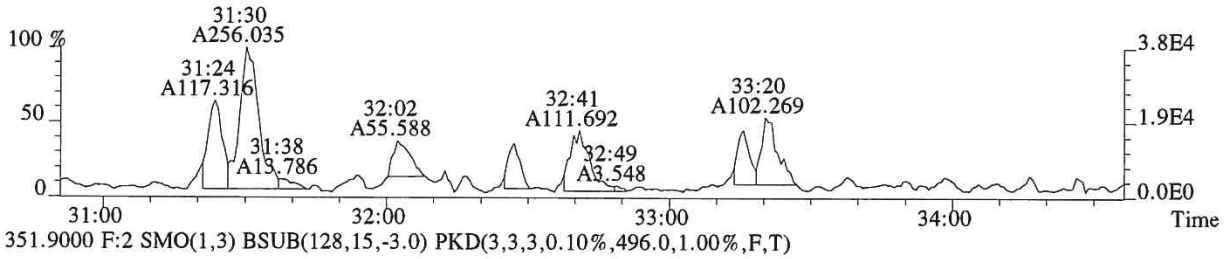


016133

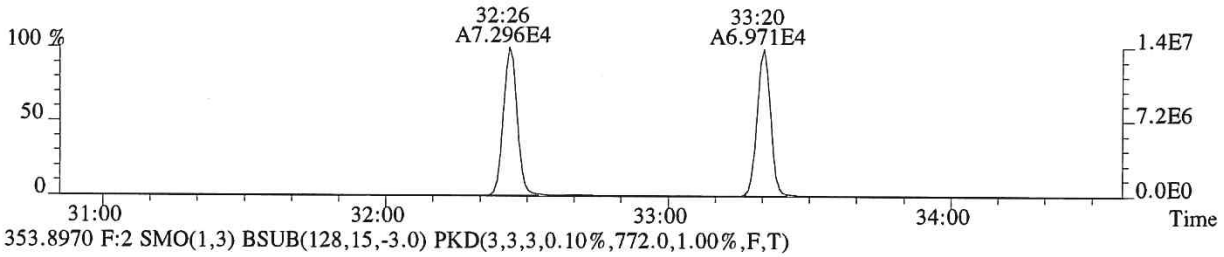
File:P520000 #1-339 Acq:16-JAN-2019 15:22:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-009RE
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,772.0,1.00%,F,T)



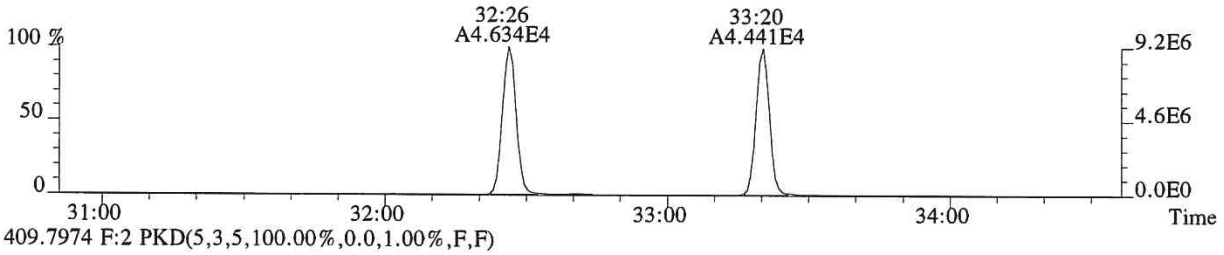
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3836.0,1.00%,F,T)



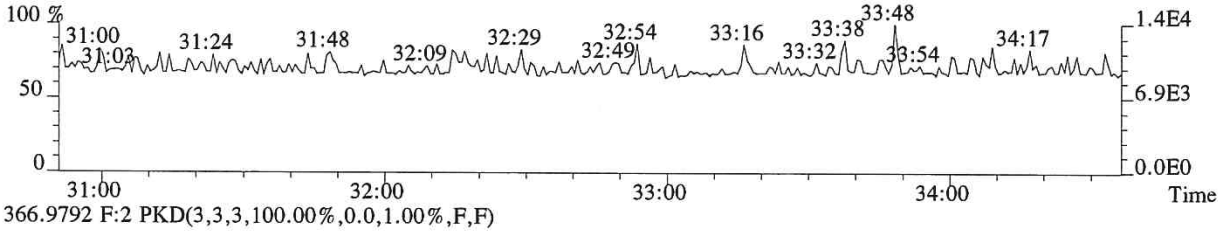
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,496.0,1.00%,F,T)



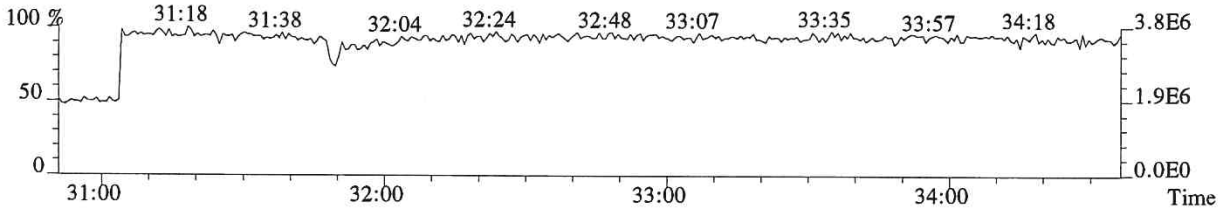
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,772.0,1.00%,F,T)



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

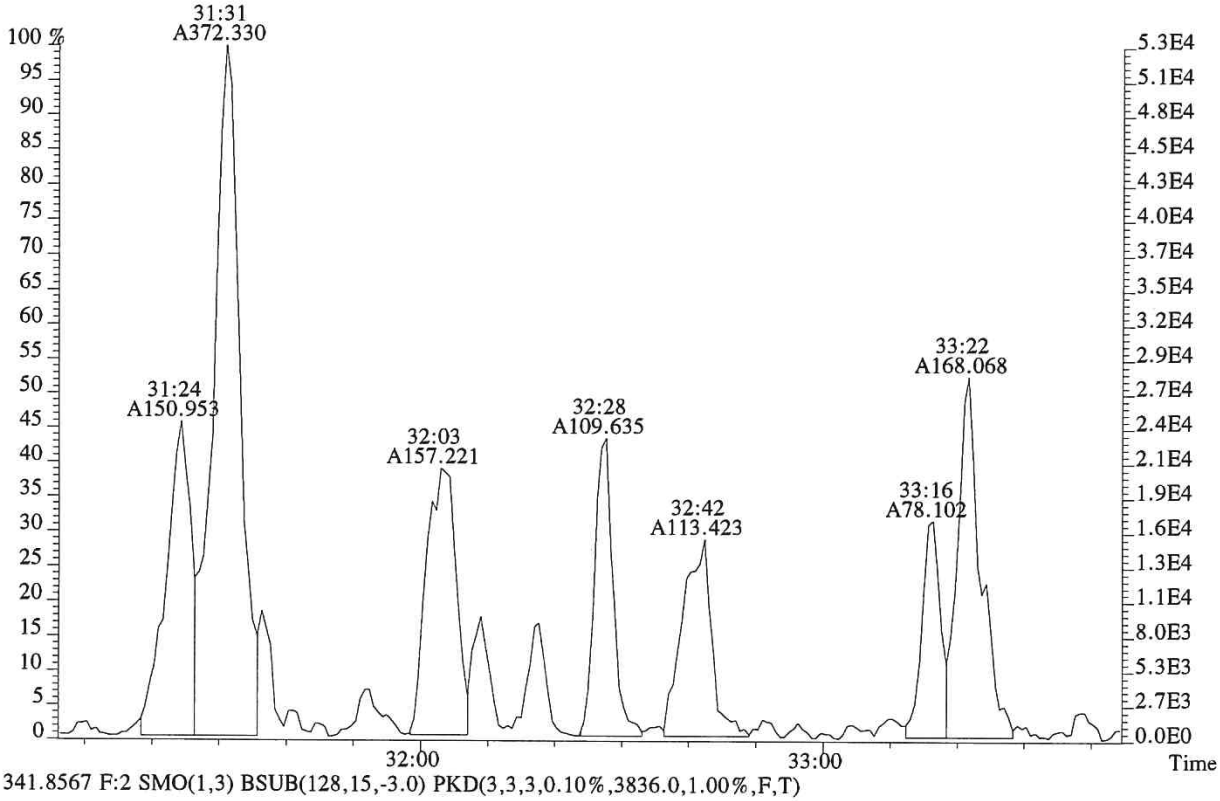


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

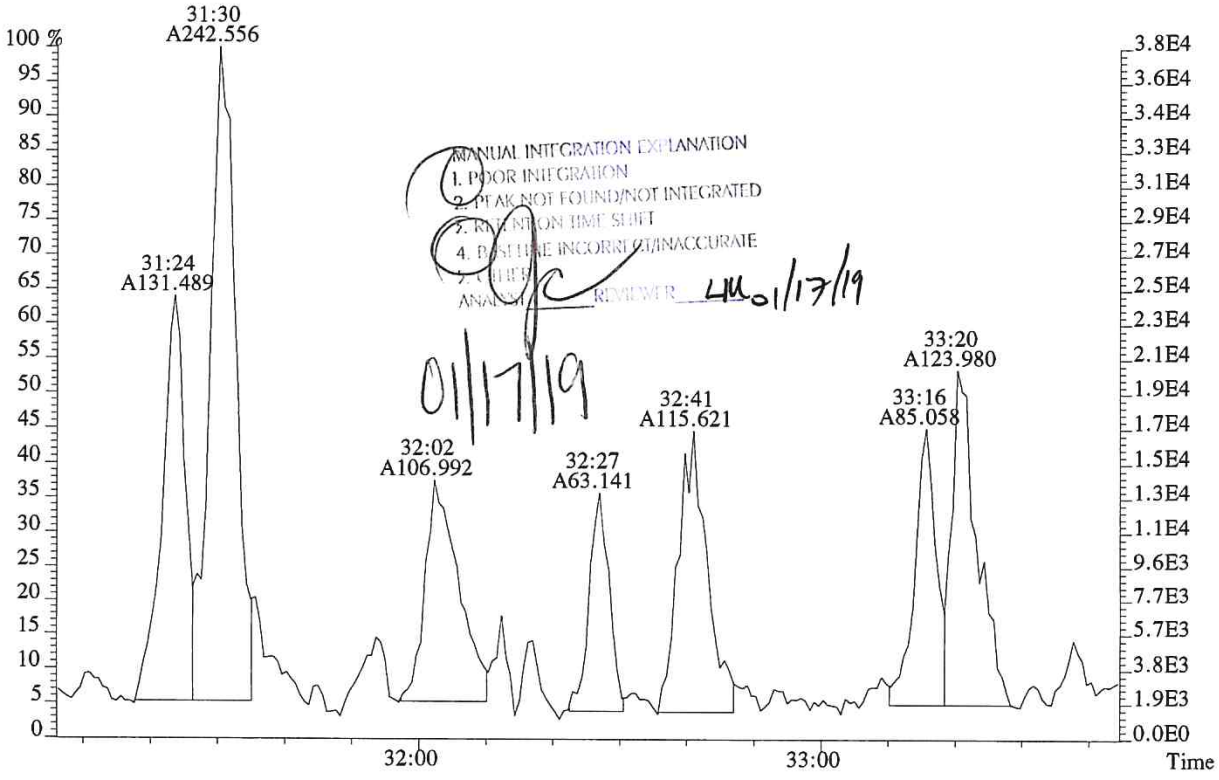


016134

File:P520000 #1-339 Acq:16-JAN-2019 15:22:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-009RE
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,772.0,1.00%,F,T)

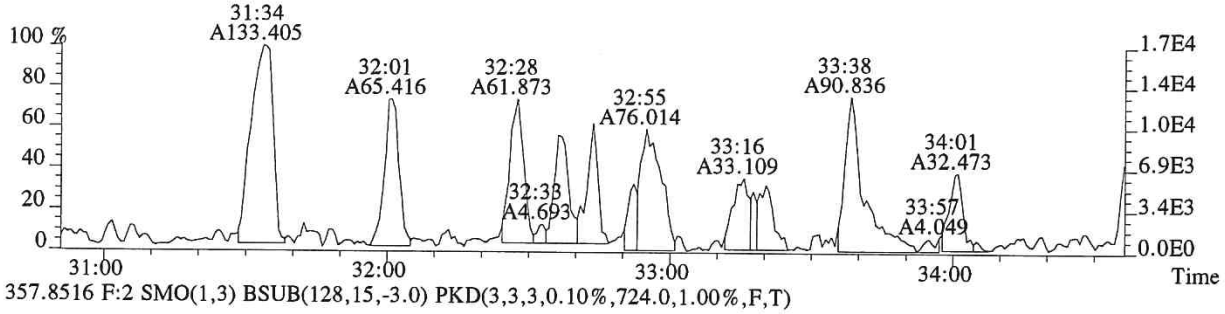


341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3836.0,1.00%,F,T)

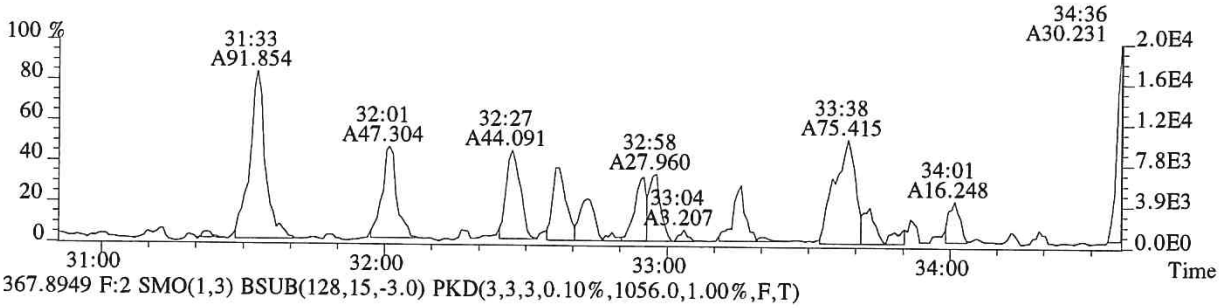


016135

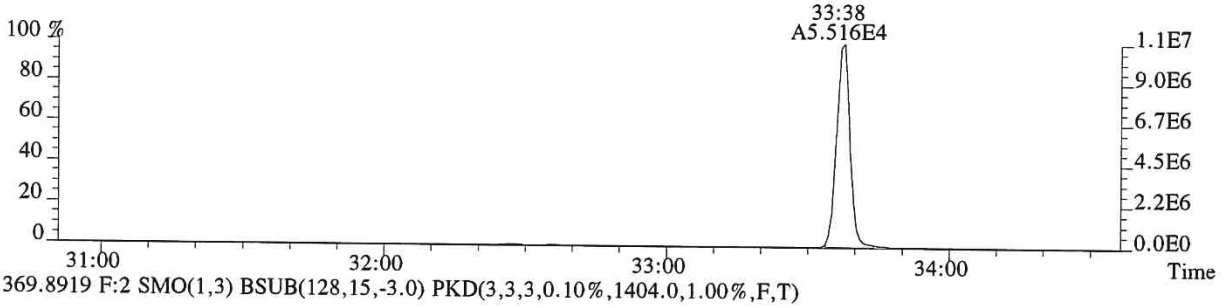
File:P520000 #1-339 Acq:16-JAN-2019 15:22:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-009RE
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1128.0,1.00%,F,T)



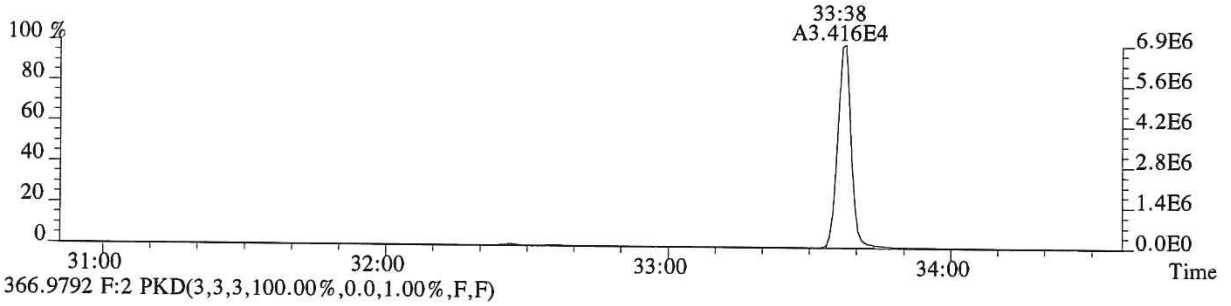
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,724.0,1.00%,F,T)



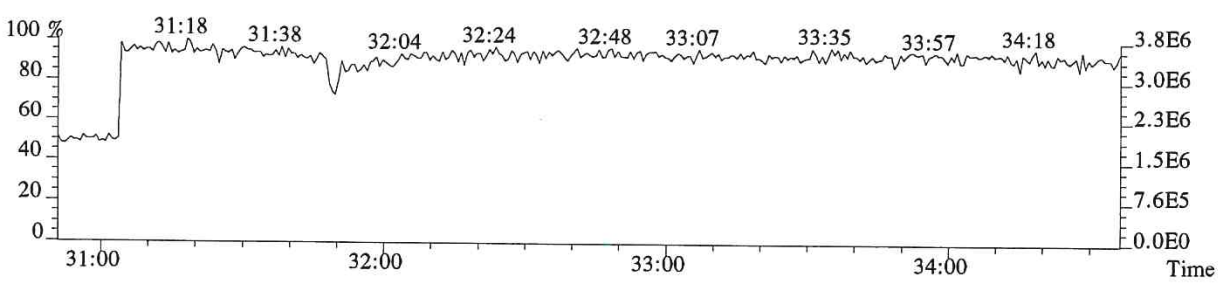
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1056.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1404.0,1.00%,F,T)

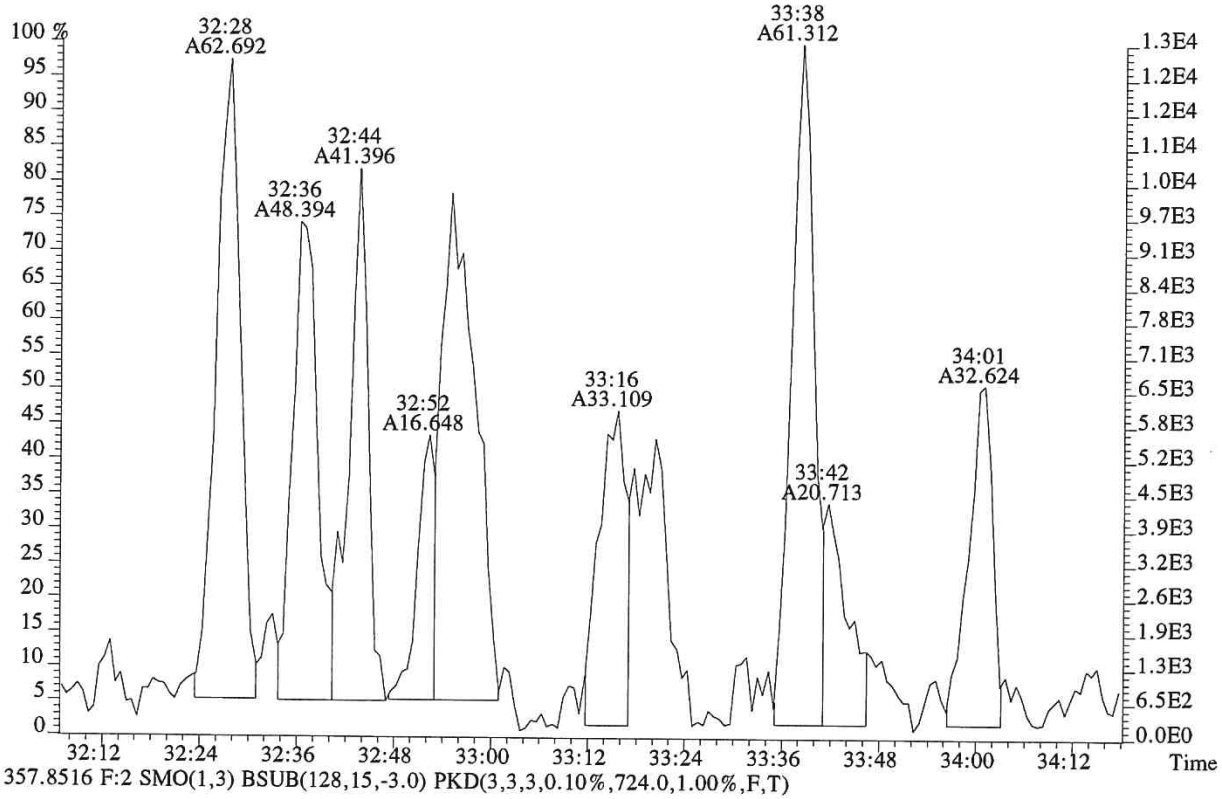


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

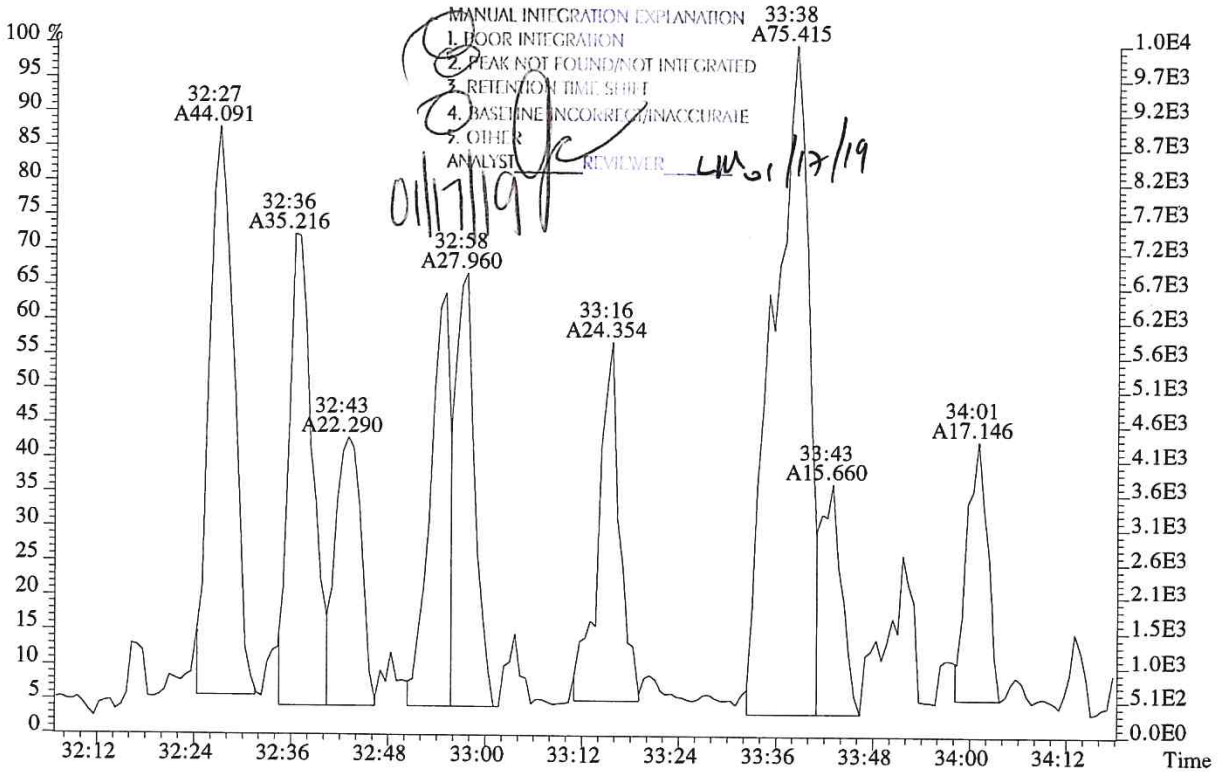


016136

File:P520000 #1-339 Acq:16-JAN-2019 15:22:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-009RE
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1128.0,1.00%,F,T)

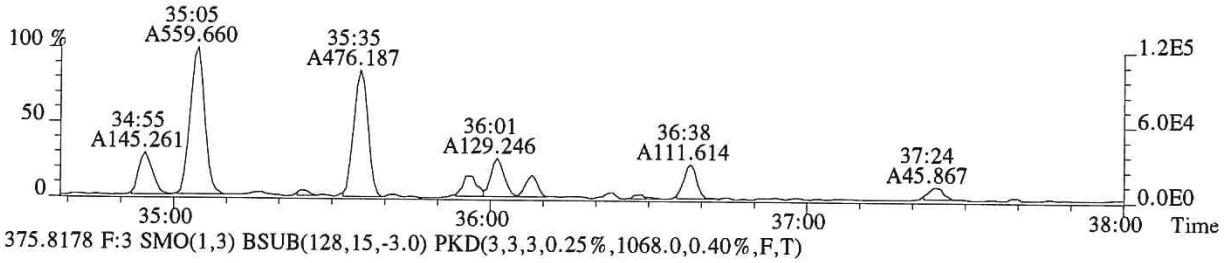


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,724.0,1.00%,F,T)

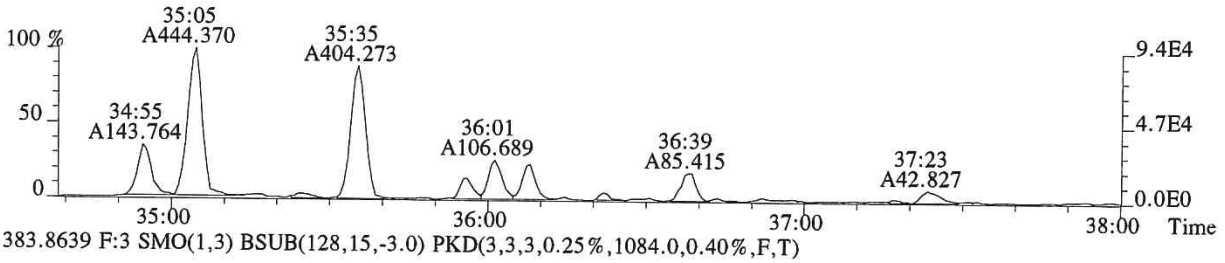


016137

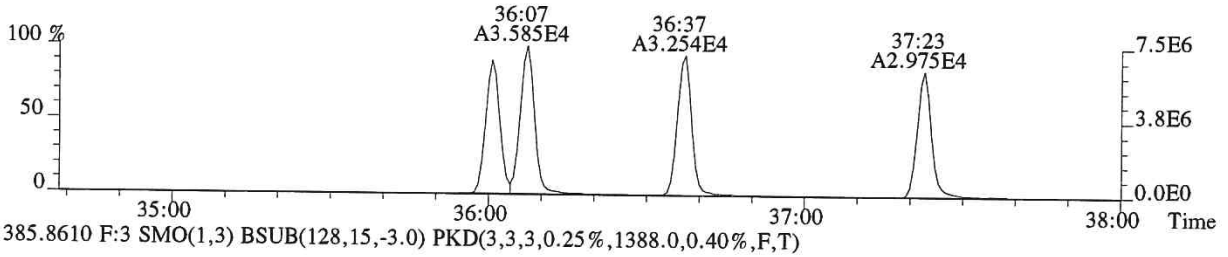
File:P520000 #1-303 Acq:16-JAN-2019 15:22:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-009RE
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2852.0,0.40%,F,T)



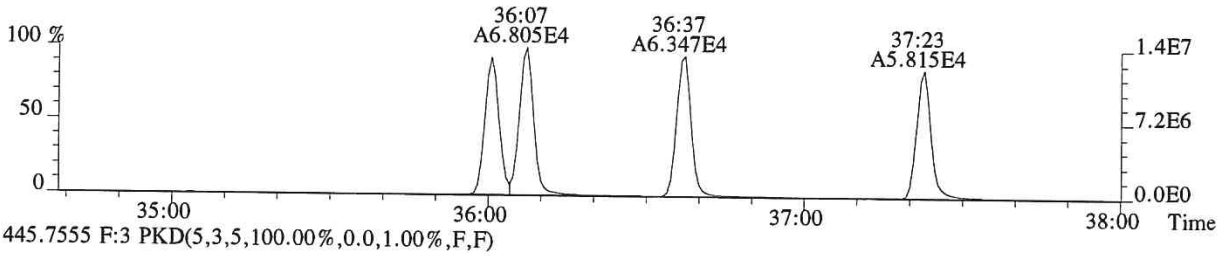
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1068.0,0.40%,F,T)



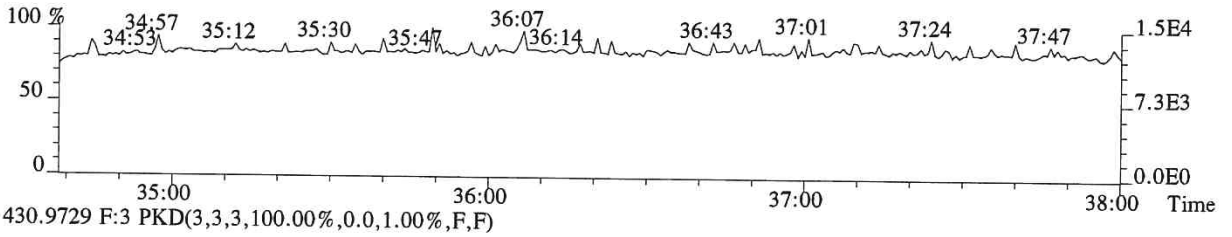
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1084.0,0.40%,F,T)



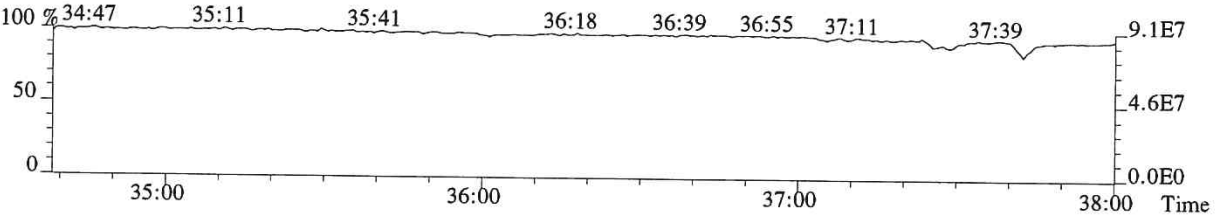
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1388.0,0.40%,F,T)



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

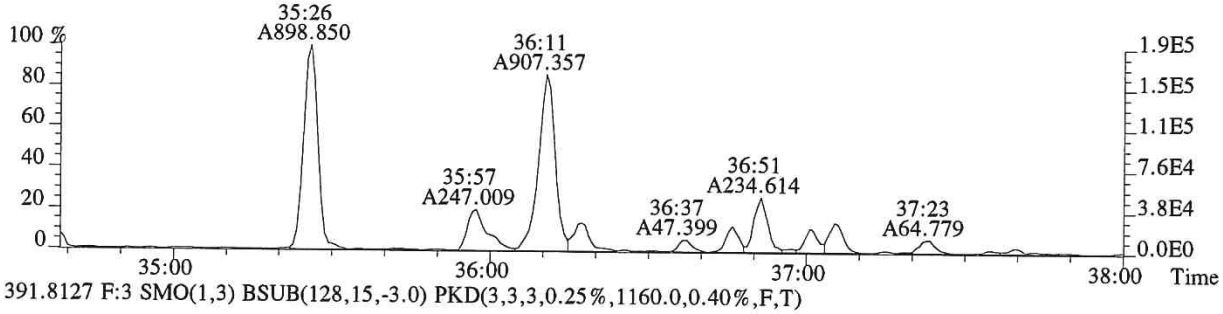


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

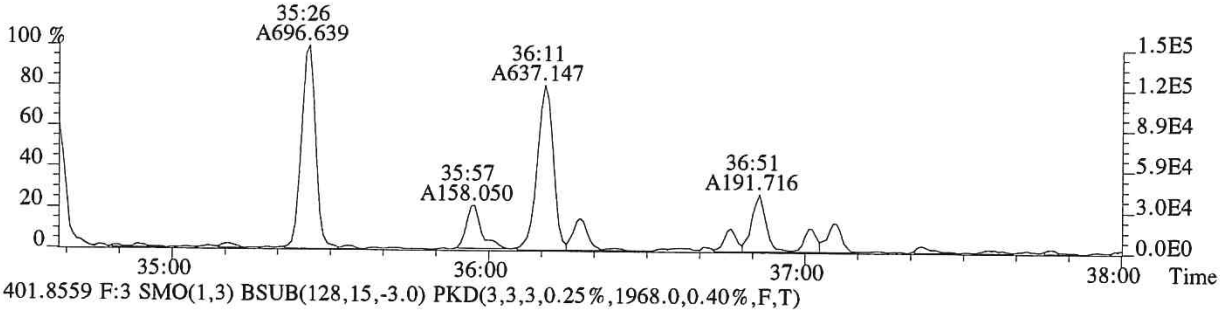


016138

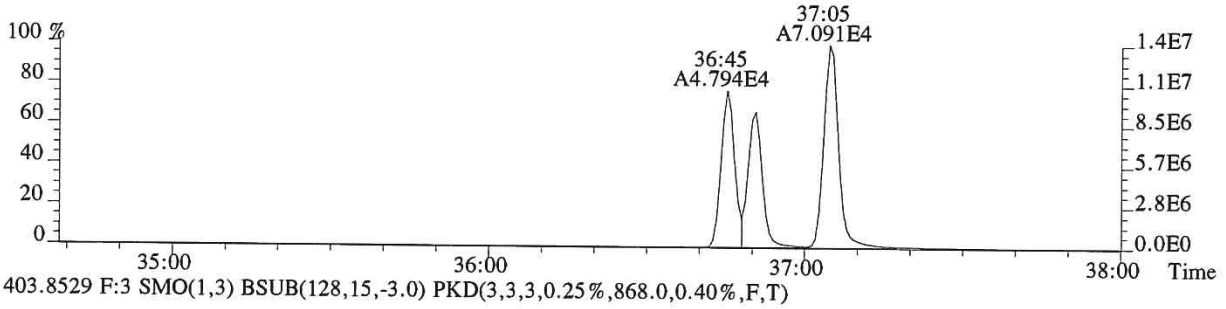
File:P520000 #1-303 Acq:16-JAN-2019 15:22:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-009RE
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,836.0,0.40%,F,T)



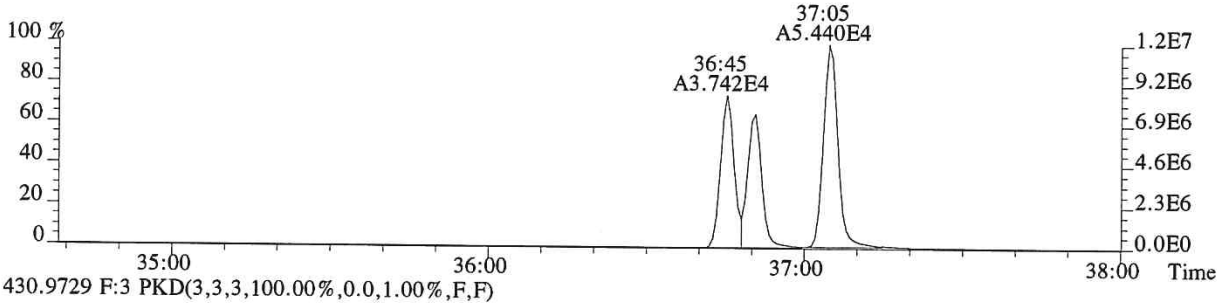
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1160.0,0.40%,F,T)



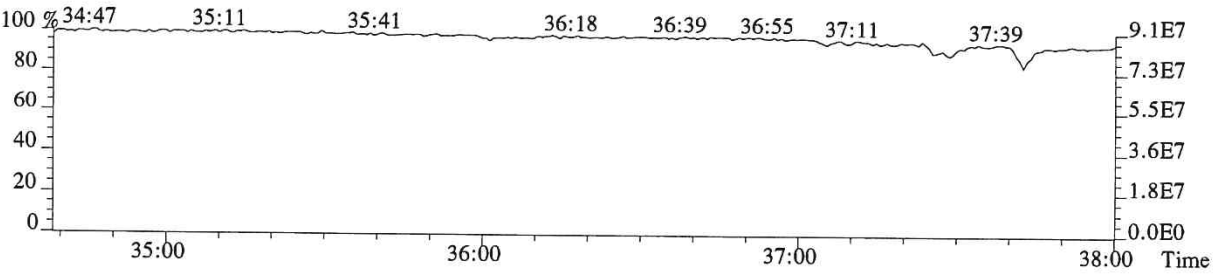
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1968.0,0.40%,F,T)



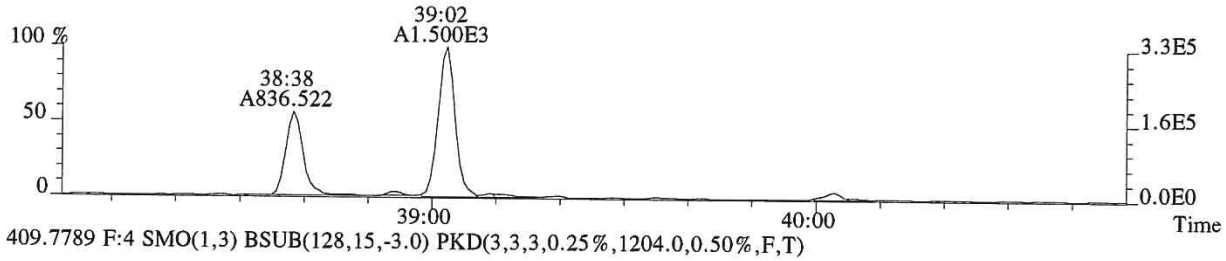
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,868.0,0.40%,F,T)



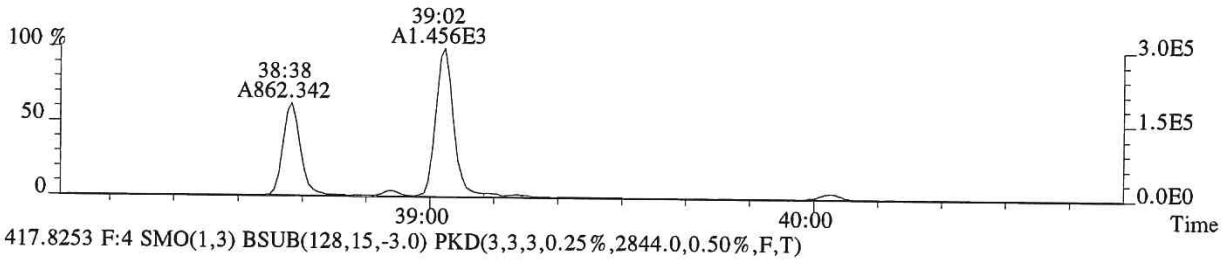
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



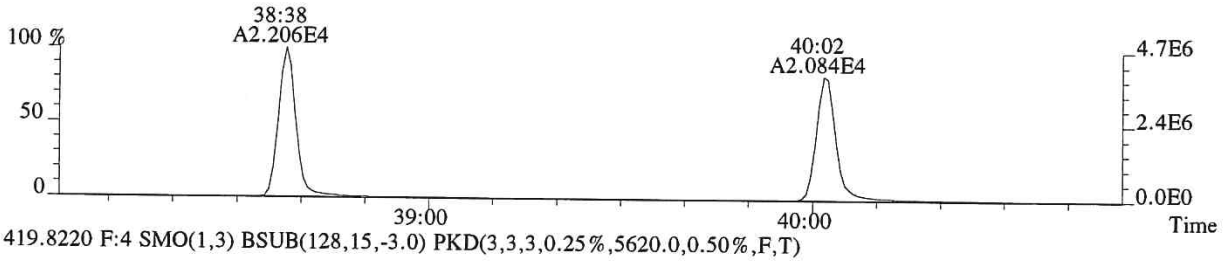
File:P520000 #1-250 Acq:16-JAN-2019 15:22:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-009RE
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2644.0,0.50%,F,T)



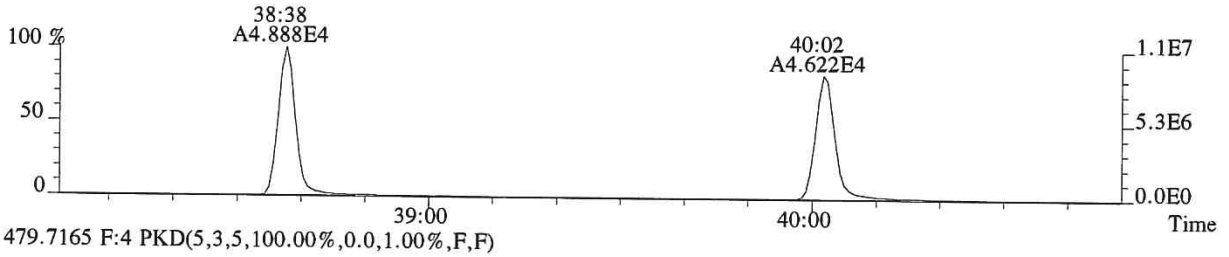
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1204.0,0.50%,F,T)



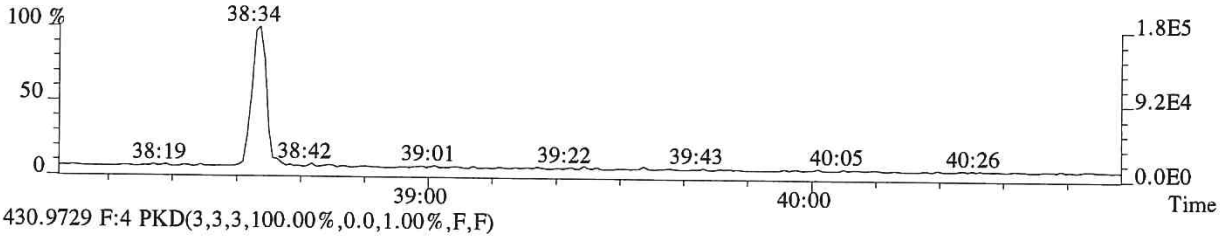
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2844.0,0.50%,F,T)



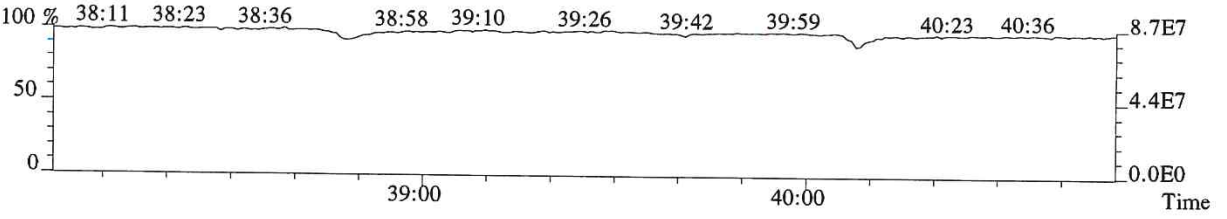
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5620.0,0.50%,F,T)



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

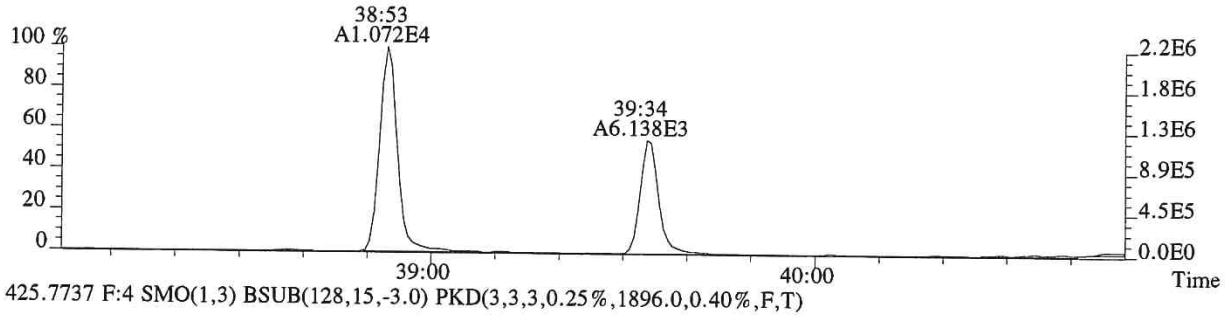


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

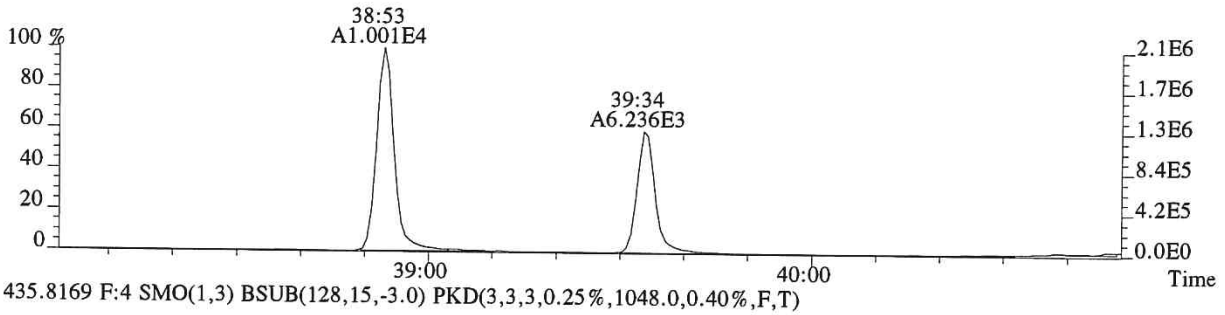


016140

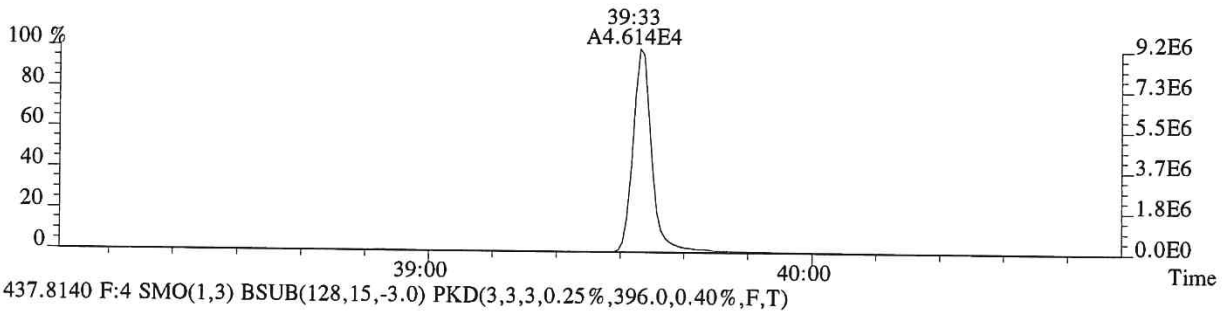
File:P520000 #1-250 Acq:16-JAN-2019 15:22:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-009RE
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2912.0,0.40%,F,T)



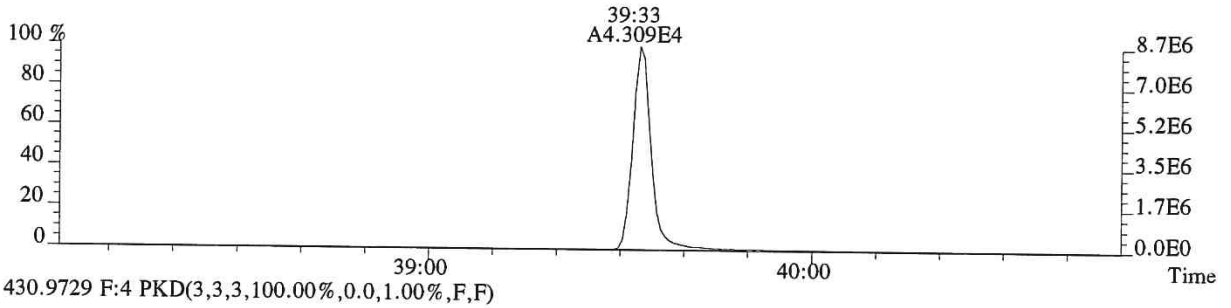
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1896.0,0.40%,F,T)



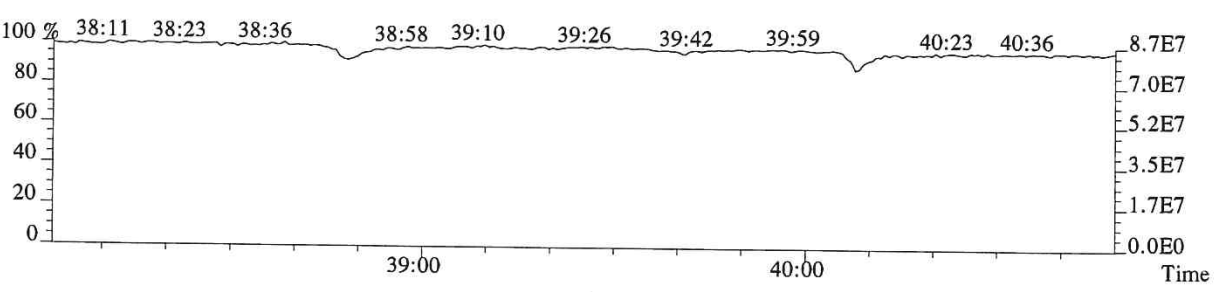
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1048.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,396.0,0.40%,F,T)

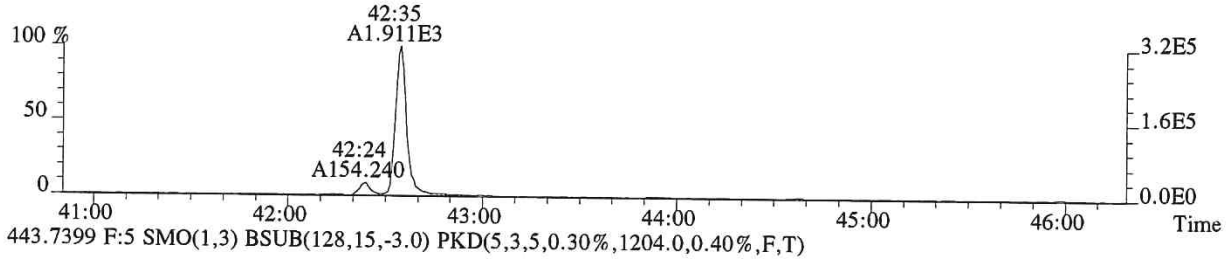


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

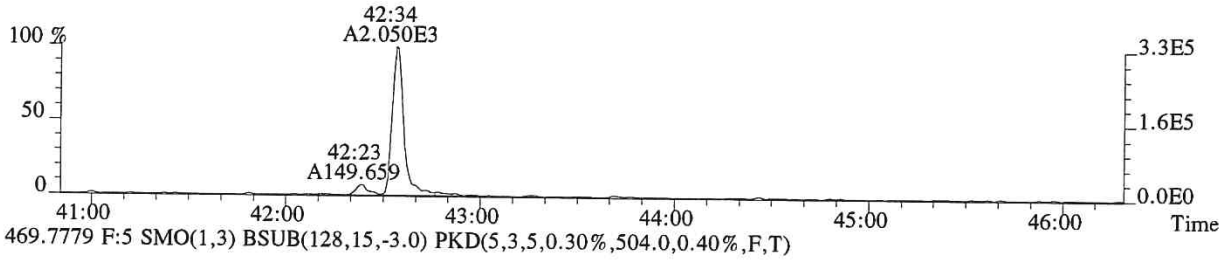


016141

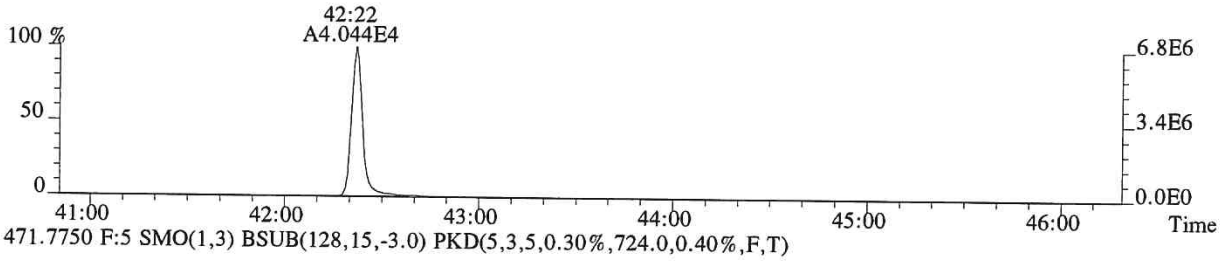
File:P520000 #1-493 Acq:16-JAN-2019 15:22:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-009RE
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,684.0,0.40%,F,T)



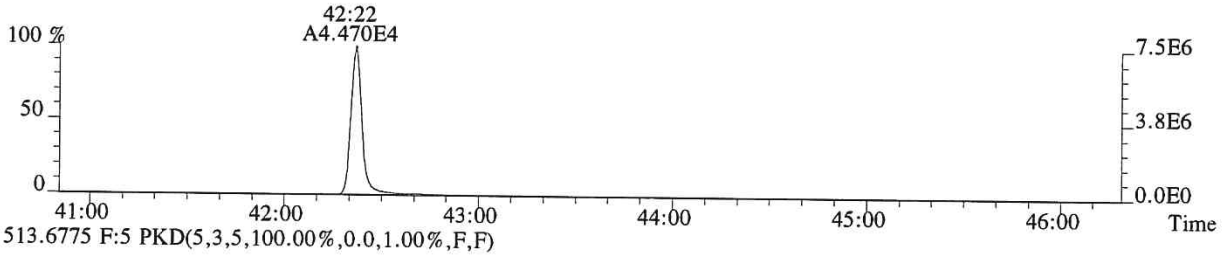
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1204.0,0.40%,F,T)



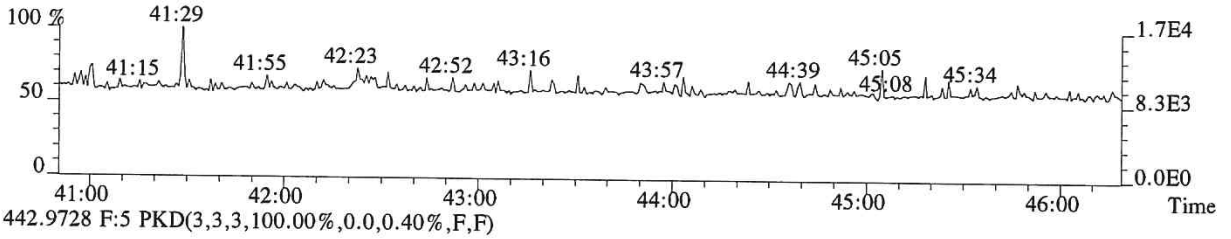
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,504.0,0.40%,F,T)



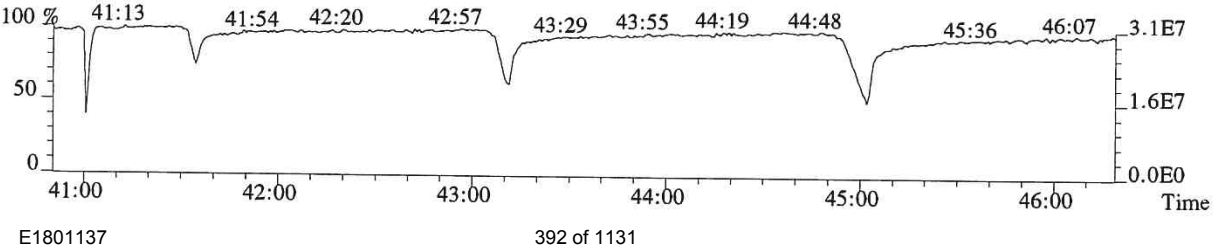
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,724.0,0.40%,F,T)



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

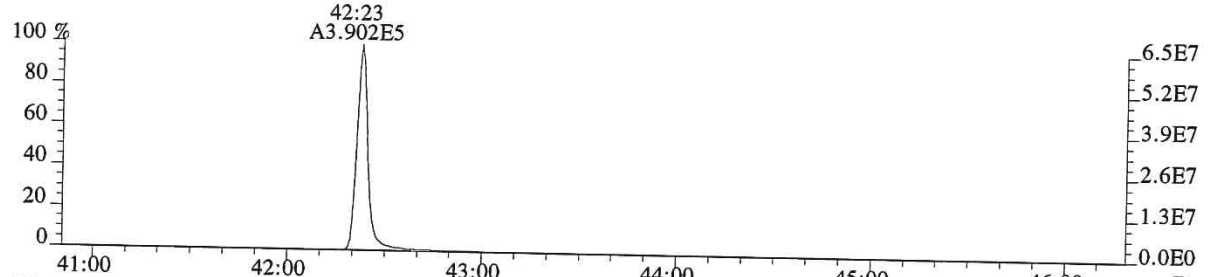


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

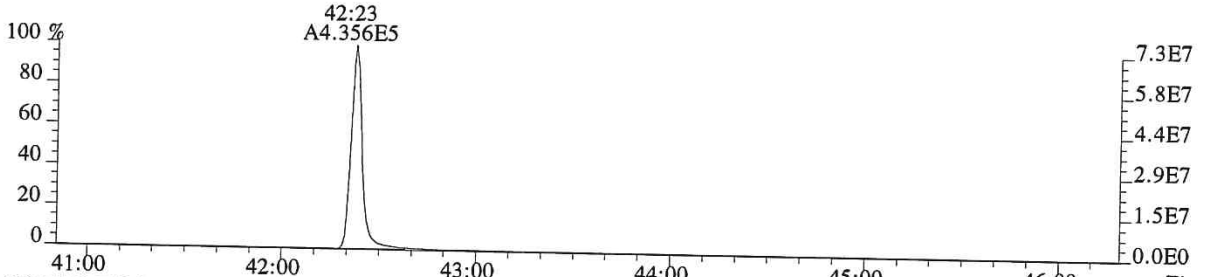


016142

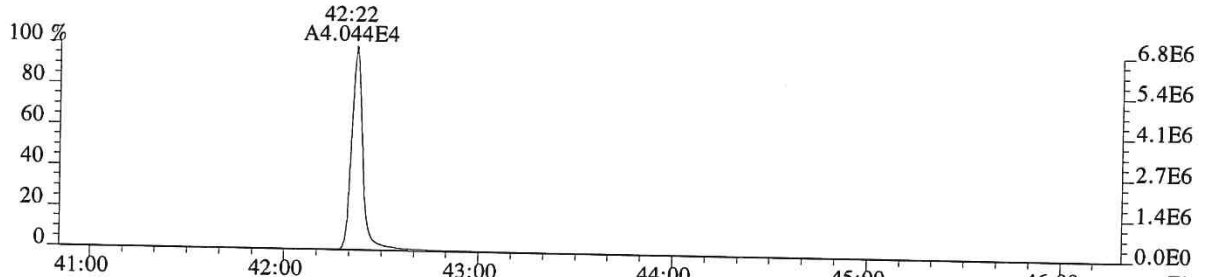
File:P520000 #1-493 Acq:16-JAN-2019 15:22:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-009RE
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,416.0,0.40%,F,T)



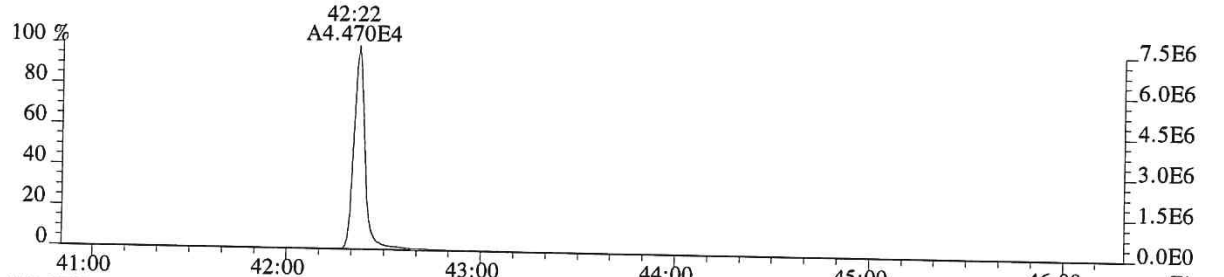
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,948.0,0.40%,F,T)



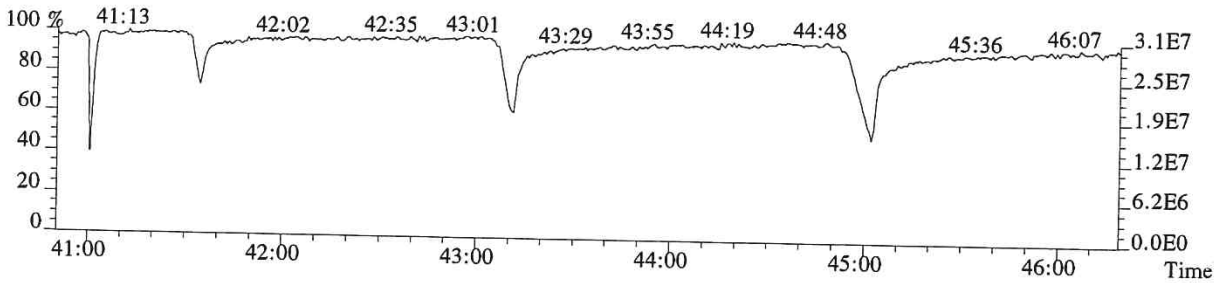
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,504.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,724.0,0.40%,F,T)



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



016143

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0133

Run #10 Filename P519734 Samp: 1 Inj: 1 Acquired: 2-JAN-19 16:58:52
Processed: 3-JAN-19 09:14:23 Sample ID: E1801137-010

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:10	1.703e+06	2.169e+06	0.79	yes	yes	0.942
2	Unk	1,2,3,7,8-PeCDF	31:01	8.804e+04	5.793e+04	1.52	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	32:02	7.010e+04	4.562e+04	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:56	1.112e+05	9.285e+04	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:03	3.285e+04	2.700e+04	1.22	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:36	6.008e+03	4.717e+03	1.27	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:25	7.094e+03	5.819e+03	1.22	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:48	3.787e+04	3.697e+04	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:16	7.419e+03	7.536e+03	0.98	yes	no	1.258
10	Unk	OCDF	41:55	2.275e+05	2.596e+05	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:07	5.199e+05	6.634e+05	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:20	7.951e+03	4.948e+03	1.61	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:45	3.776e+02	3.517e+02	1.07	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:51	2.227e+03	1.881e+03	1.18	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:06	1.089e+03	8.516e+02	1.28	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:48	5.360e+04	5.179e+04	1.03	yes	no	1.025
17	Unk	OCDD	41:45	3.841e+05	4.342e+05	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:08	2.866e+04	3.665e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	31:00	4.501e+04	2.823e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	32:00	4.108e+04	2.618e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:55	1.702e+04	3.370e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:02	2.044e+04	4.020e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:35	1.843e+04	3.625e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:23	1.652e+04	3.249e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:48	1.206e+04	2.706e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:15	1.050e+04	2.385e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:05	1.414e+04	1.788e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:19	3.334e+04	2.113e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:45	2.537e+04	2.010e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:50	2.801e+04	2.207e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:48	2.533e+04	2.372e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	41:45	2.018e+04	2.200e+04	0.92	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:26	3.715e+04	4.694e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:05	4.900e+04	3.865e+04	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:07	2.485e+04				no	1.014

$$\text{OCDD} = \frac{(3.841e+05 + 4.342e+05) \times 4000\ \text{pg} \times 1}{(2.018e+04 + 2.200e+04) \times 10.240\ \text{g} \times 55.7 / 100 \times 1.118} = 12169.39\ \text{ng/kg}$$

LM 01/04/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0133

Run #10 Filename P519734 Samp: 1 Inj: 1 Acquired: 2-JAN-19 16:58:52
Processed: 3-JAN-19 09:14:23 LAB. ID: E1801137-010

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.50e+08	1.42e+03	1.8e+05	3.17e+08	2.82e+03	1.1e+05
2	1,2,3,7,8-PeCDF	1.46e+07	2.15e+04	6.8e+02	9.71e+06	1.50e+04	6.5e+02
3	2,3,4,7,8-PeCDF	1.00e+07	2.15e+04	4.7e+02	6.66e+06	1.50e+04	4.4e+02
4	1,2,3,4,7,8-HxCDF	1.98e+07	9.73e+03	2.0e+03	1.65e+07	6.57e+03	2.5e+03
5	1,2,3,6,7,8-HxCDF	5.11e+06	9.73e+03	5.3e+02	4.26e+06	6.57e+03	6.5e+02
6	2,3,4,6,7,8-HxCDF	1.05e+06	9.73e+03	1.1e+02	8.41e+05	6.57e+03	1.3e+02
7	1,2,3,7,8,9-HxCDF	1.14e+06	9.73e+03	1.2e+02	8.94e+05	6.57e+03	1.4e+02
8	1,2,3,4,6,7,8-HpCDF	5.10e+06	7.57e+03	6.7e+02	4.95e+06	7.68e+03	6.4e+02
9	1,2,3,4,7,8,9-HpCDF	7.92e+05	7.57e+03	1.0e+02	7.95e+05	7.68e+03	1.0e+02
10	OCDF	1.45e+07	5.36e+02	2.7e+04	1.61e+07	1.31e+03	1.2e+04
11	2,3,7,8-TCDD	8.95e+07	1.72e+03	5.2e+04	1.14e+08	1.78e+03	6.4e+04
12	1,2,3,7,8-PeCDD	1.20e+06	1.66e+03	7.2e+02	7.82e+05	5.08e+03	1.5e+02
13	1,2,3,4,7,8-HxCDD	7.78e+04	3.00e+03	2.6e+01	6.73e+04	2.26e+03	3.0e+01
14	1,2,3,6,7,8-HxCDD	3.70e+05	3.00e+03	1.2e+02	3.01e+05	2.26e+03	1.3e+02
15	1,2,3,7,8,9-HxCDD	1.80e+05	3.00e+03	6.0e+01	1.25e+05	2.26e+03	5.5e+01
16	1,2,3,4,6,7,8-HpCDD	5.88e+06	9.48e+02	6.2e+03	5.61e+06	3.78e+03	1.5e+03
17	OCDD	2.42e+07	3.92e+02	6.2e+04	2.71e+07	7.52e+02	3.6e+04
18	13C-2,3,7,8-TCDF	4.28e+06	7.58e+03	5.6e+02	5.44e+06	7.54e+03	7.2e+02
19	13C-1,2,3,7,8-PeCDF	7.56e+06	1.00e+04	7.5e+02	4.77e+06	1.48e+04	3.2e+02
20	13C-2,3,4,7,8-PeCDF	7.25e+06	1.00e+04	7.2e+02	4.58e+06	1.48e+04	3.1e+02
21	13C-1,2,3,4,7,8-HxCDF	3.07e+06	2.55e+03	1.2e+03	6.02e+06	6.96e+03	8.7e+02
22	13C-1,2,3,6,7,8-HxCDF	3.37e+06	2.55e+03	1.3e+03	6.61e+06	6.96e+03	9.5e+02
23	13C-2,3,4,6,7,8-HxCDF	3.05e+06	2.55e+03	1.2e+03	6.02e+06	6.96e+03	8.7e+02
24	13C-1,2,3,7,8,9-HxCDF	2.41e+06	2.55e+03	9.5e+02	4.78e+06	6.96e+03	6.9e+02
25	13C-1,2,3,4,6,7,8-HpCDF	1.64e+06	3.72e+03	4.4e+02	3.60e+06	7.34e+03	4.9e+02
26	13C-1,2,3,4,7,8,9-HpCDF	1.05e+06	3.72e+03	2.8e+02	2.46e+06	7.34e+03	3.4e+02
27	13C-2,3,7,8-TCDD	2.53e+06	5.10e+03	5.0e+02	3.15e+06	2.84e+03	1.1e+03
28	13C-1,2,3,7,8-PeCDD	5.69e+06	1.18e+03	4.8e+03	3.59e+06	1.53e+03	2.3e+03
29	13C-1,2,3,4,7,8-HxCDD	4.67e+06	1.68e+03	2.8e+03	3.68e+06	6.52e+02	5.6e+03
30	13C-1,2,3,6,7,8-HxCDD	4.25e+06	1.68e+03	2.5e+03	3.35e+06	6.52e+02	5.1e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.72e+06	7.84e+02	3.5e+03	2.59e+06	6.44e+02	4.0e+03
32	13C-OCDD	1.27e+06	1.24e+03	1.0e+03	1.35e+06	5.24e+02	2.6e+03
33	13C-1,2,3,4-TCDD	5.71e+06	5.10e+03	1.1e+03	7.19e+06	2.84e+03	2.5e+03
34	13C-1,2,3,7,8,9-HxCDD	7.41e+06	1.68e+03	4.4e+03	5.81e+06	6.52e+02	8.9e+03
35	37Cl-2,3,7,8-TCDD	4.27e+06	2.54e+03	1.7e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0133

Entry: 36 Totals Name: Total Tetra-Furans

Run: 10 File: P519734 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 16:58:52 Processed: 3-JAN-19 09:14:23

Mass: 303.9020 305.8990 Tot Response: 7.01e+06 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:58	1.45e+04	1.94e+04	0.75	yes	3.39e+04		n	n
2	23:15	7.32e+04	9.62e+04	0.76	yes	1.69e+05		n	n
3	23:36	2.45e+04	3.06e+04	0.80	yes	5.51e+04		n	n
4	23:54	6.41e+04	8.09e+04	0.79	yes	1.45e+05		n	n
5	24:32	4.41e+04	5.48e+04	0.81	yes	9.89e+04		n	n
6	24:39	7.84e+04	9.70e+04	0.81	yes	1.75e+05		n	n
7	25:09	7.91e+05	1.02e+06	0.78	yes	1.81e+06		n	n
8	25:27	3.78e+04	4.48e+04	0.84	yes	8.26e+04		n	n
9	26:03	1.01e+05	1.31e+05	0.77	yes	2.32e+05		y	y
10	26:10	1.70e+06	2.17e+06	0.79	yes	3.87e+06	2,3,7,8-TCDF	y	y
11	26:50	1.82e+04	2.38e+04	0.77	yes	4.20e+04		n	n
12	28:19	1.30e+05	1.66e+05	0.78	yes	2.96e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0133

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 10 File: P519734 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 16:58:52 Processed: 3-JAN-19 09:14:23

Mass: 319.8970 321.8940 Tot Response: 1.31e+06 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:48	6.40e+03	8.38e+03	0.76	yes	1.48e+04		n	n
2	27:07	5.20e+05	6.63e+05	0.78	yes	1.18e+06	2,3,7,8-TCDD	n	n
3	27:27	4.79e+04	5.98e+04	0.80	yes	1.08e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0133

Entry: 38 Totals Name: Total Penta-Furans1

Run: 10 File: P519734 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 16:58:52 Processed: 3-JAN-19 09:14:23

Mass: 339.8600 341.8570 Tot Response: 1.11e+04 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:21	6.84e+03	4.27e+03 1.60	yes	1.11e+04		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0133

Entry: 39 Totals Name: Total Penta-Furans2

Run: 10 File: P519734 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 16:58:52 Processed: 3-JAN-19 09:14:23

Mass: 339.8600 341.8570 Tot Response: 3.66e+05 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:51	1.81e+03	1.06e+03	1.71	yes	2.86e+03		n	n
2	30:00	4.49e+04	2.98e+04	1.51	yes	7.47e+04		n	n
3	30:36	2.79e+03	1.68e+03	1.66	yes	4.47e+03		n	n
4	30:50	9.18e+03	6.00e+03	1.53	yes	1.52e+04		n	n
5	31:01	8.80e+04	5.79e+04	1.52	yes	1.46e+05	1,2,3,7,8-PeCDF	n	n
6	31:55	8.61e+02	6.51e+02	1.32	yes	1.51e+03		n	n
7	32:02	7.01e+04	4.56e+04	1.54	yes	1.16e+05	2,3,4,7,8-PeCDF	n	n
8	33:00	3.39e+03	2.45e+03	1.38	yes	5.84e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0133

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 10 File: P519734 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 16:58:52 Processed: 3-JAN-19 09:14:23

Mass: 355.8550 357.8520 Tot Response: 2.45e+04 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:02	3.06e+03	1.93e+03	1.59	yes	4.99e+03		n	n
2	30:34	5.08e+02	3.50e+02	1.45	yes	8.58e+02		n	n
3	31:03	1.76e+03	1.13e+03	1.55	yes	2.89e+03		n	n
4	31:14	6.68e+02	3.91e+02	1.71	yes	1.06e+03		n	n
5	31:20	5.81e+02	3.27e+02	1.77	yes	9.08e+02		n	n
6	31:33	5.81e+02	3.35e+02	1.73	yes	9.16e+02		n	n
7	32:20	7.95e+03	4.95e+03	1.61	yes	1.29e+04	1,2,3,7,8-PeCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0133

Entry: 41 Totals Name: Total Hexa-Furans

Run: 10 File: P519734 Sample:1 Injection:1 Function:3

Acquired: 2-JAN-19 16:58:52 Processed: 3-JAN-19 09:14:23

Mass: 373.8210 375.8180 Tot Response: 3.34e+05 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:45	2.54e+03	2.10e+03	1.21	yes	4.64e+03		n	n
2	33:55	1.34e+04	1.07e+04	1.25	yes	2.41e+04		n	n
3	34:29	9.40e+03	7.93e+03	1.19	yes	1.73e+04		n	n
4	34:50	2.48e+02	2.12e+02	1.17	yes	4.59e+02		n	n
5	34:56	1.11e+05	9.29e+04	1.20	yes	2.04e+05	1,2,3,4,7,8-HxCDF	n	n
6	35:03	3.28e+04	2.70e+04	1.22	yes	5.98e+04	1,2,3,6,7,8-HxCDF	n	n
7	35:36	6.01e+03	4.72e+03	1.27	yes	1.07e+04	2,3,4,6,7,8-HxCDF	n	n
8	36:25	7.09e+03	5.82e+03	1.22	yes	1.29e+04	1,2,3,7,8,9-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0133

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 10 File: P519734 Sample:1 Injection:1 Function:3

Acquired: 2-JAN-19 16:58:52 Processed: 3-JAN-19 09:14:23

Mass: 389.8160 391.8130 Tot Response: 6.26e+04 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:19	1.93e+04	1.57e+04	1.23	yes	3.50e+04		n	n
2	34:53	1.15e+03	9.48e+02	1.22	yes	2.10e+03		n	n
3	35:07	1.02e+04	8.01e+03	1.27	yes	1.82e+04		n	n
4	35:45	3.78e+02	3.52e+02	1.07	yes	7.29e+02	1,2,3,4,7,8-HxCDD	n	n
5	35:51	2.23e+03	1.88e+03	1.18	yes	4.11e+03	1,2,3,6,7,8-HxCDD	n	n
6	36:01	2.51e+02	1.94e+02	1.29	yes	4.46e+02		n	n
7	36:06	1.09e+03	8.52e+02	1.28	yes	1.94e+03	1,2,3,7,8,9-HxCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0133

Entry: 43 Totals Name: Total Hepta-Furans

Run: 10 File: P519734 Sample:1 Injection:1 Function:4

Acquired: 2-JAN-19 16:58:52 Processed: 3-JAN-19 09:14:23

Mass: 407.7820 409.7790 Tot Response: 1.40e+05 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:48	3.79e+04	3.70e+04	1.02	yes	7.48e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	38:06	9.97e+02	9.35e+02	1.07	yes	1.93e+03		n	n
3	38:14	2.42e+04	2.38e+04	1.02	yes	4.81e+04		n	n
4	39:16	7.42e+03	7.54e+03	0.98	yes	1.50e+04	1,2,3,4,7,8,9-HpCDF	n	n

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

ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0133

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 10 File: P519734 Sample:1 Injection:1 Function:4

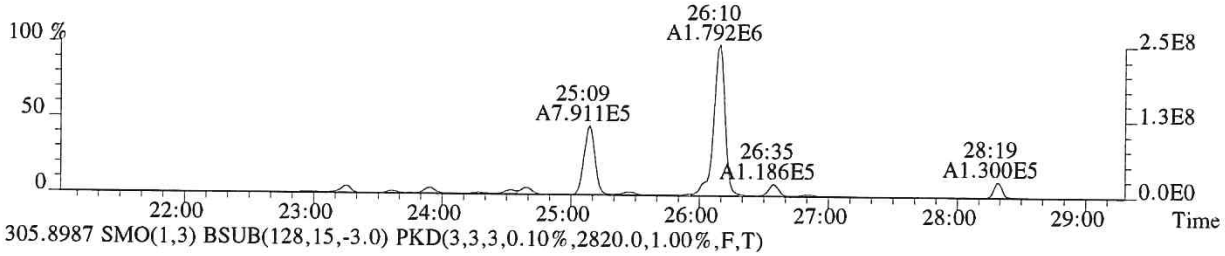
Acquired: 2-JAN-19 16:58:52 Processed: 3-JAN-19 09:14:23

Mass: 423.7770 425.7740 Tot Response: 2.32e+05 RRF: 1.025

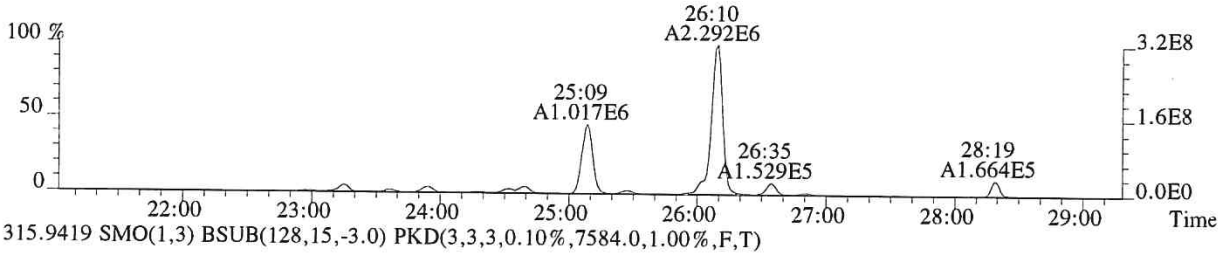
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:06	6.45e+04	6.25e+04	1.03	yes	1.27e+05		n	n
2	38:48	5.36e+04	5.18e+04	1.03	yes	1.05e+05	1,2,3,4,6,7,8-HpCDD	n	n

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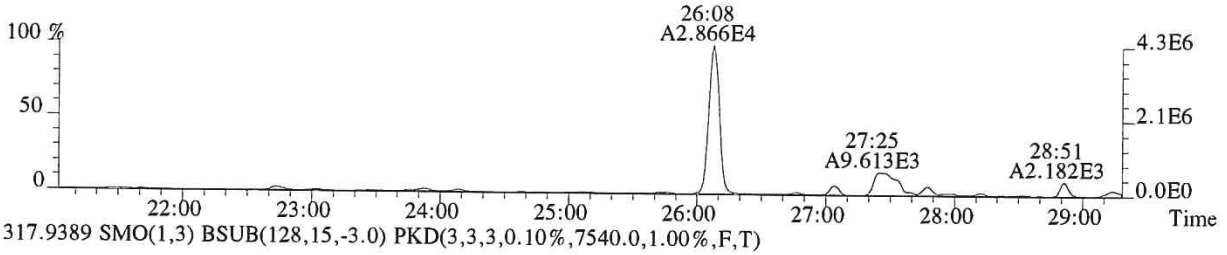
File:P519734 #1-587 Acq: 2-JAN-2019 16:58:52 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1416.0,1.00%,F,T)



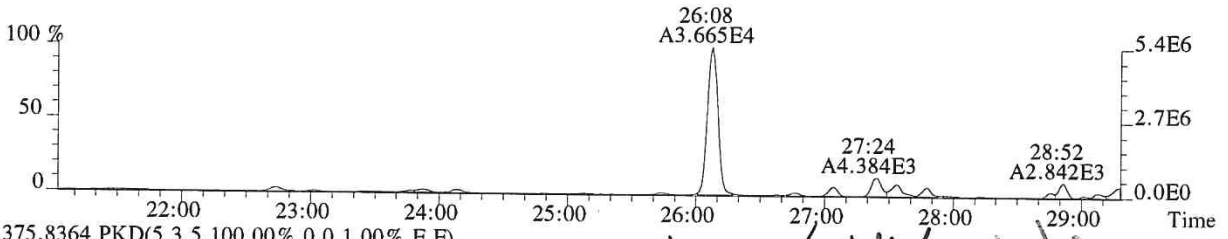
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2820.0,1.00%,F,T)



315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7584.0,1.00%,F,T)

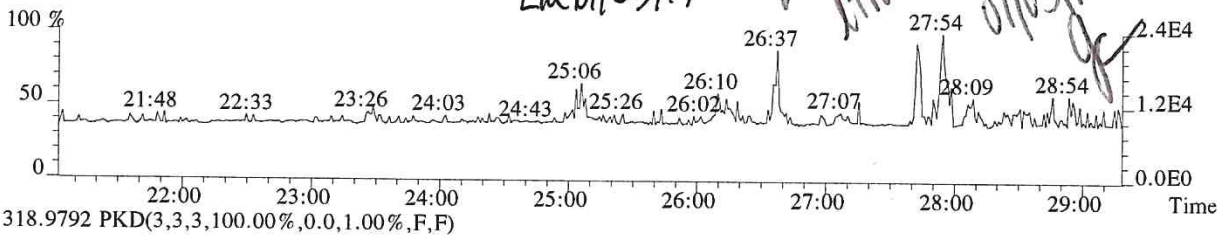


317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7540.0,1.00%,F,T)

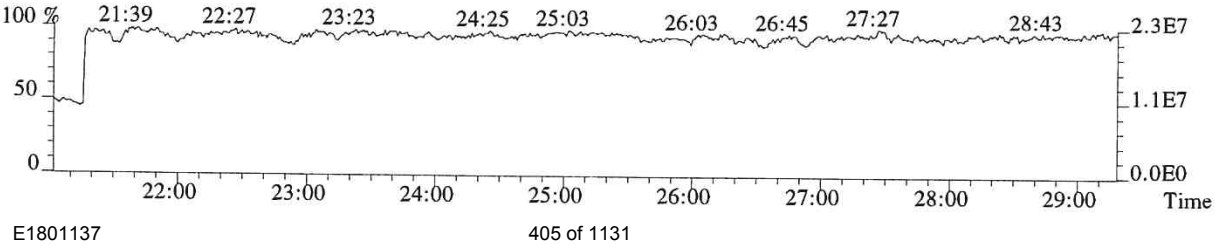


375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

LMD 01/03/19

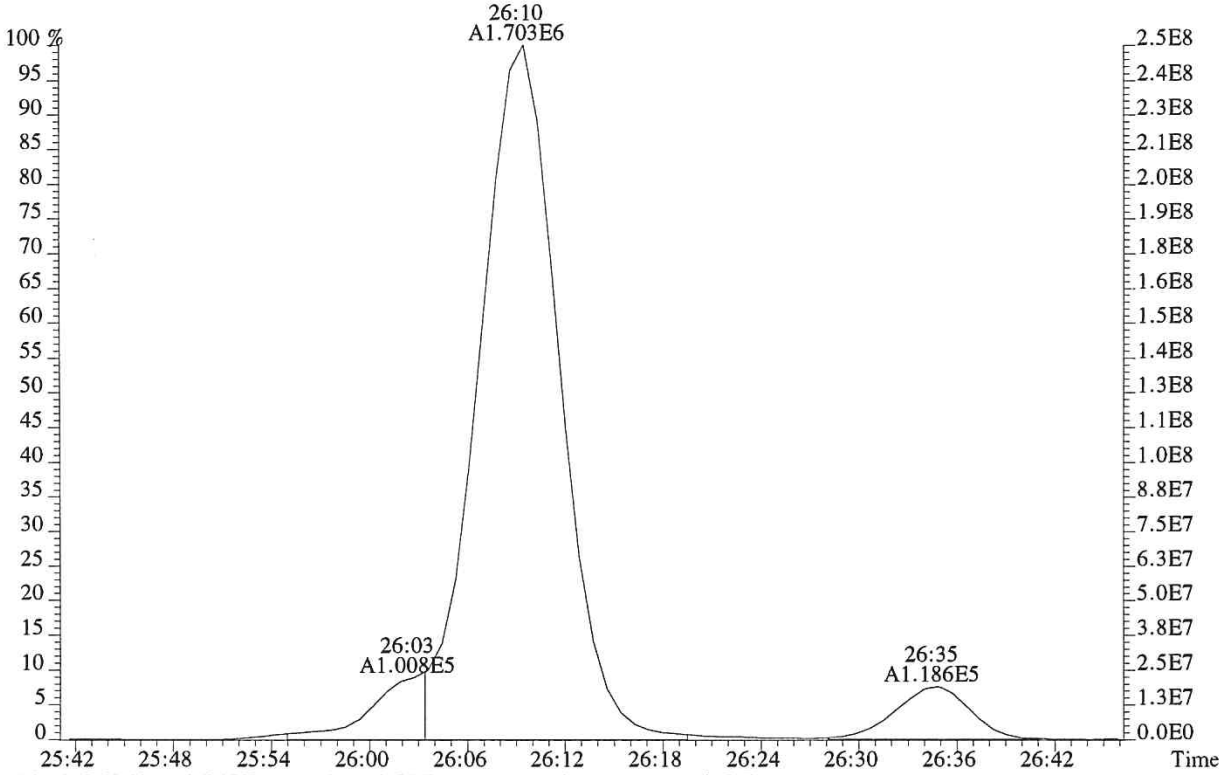


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

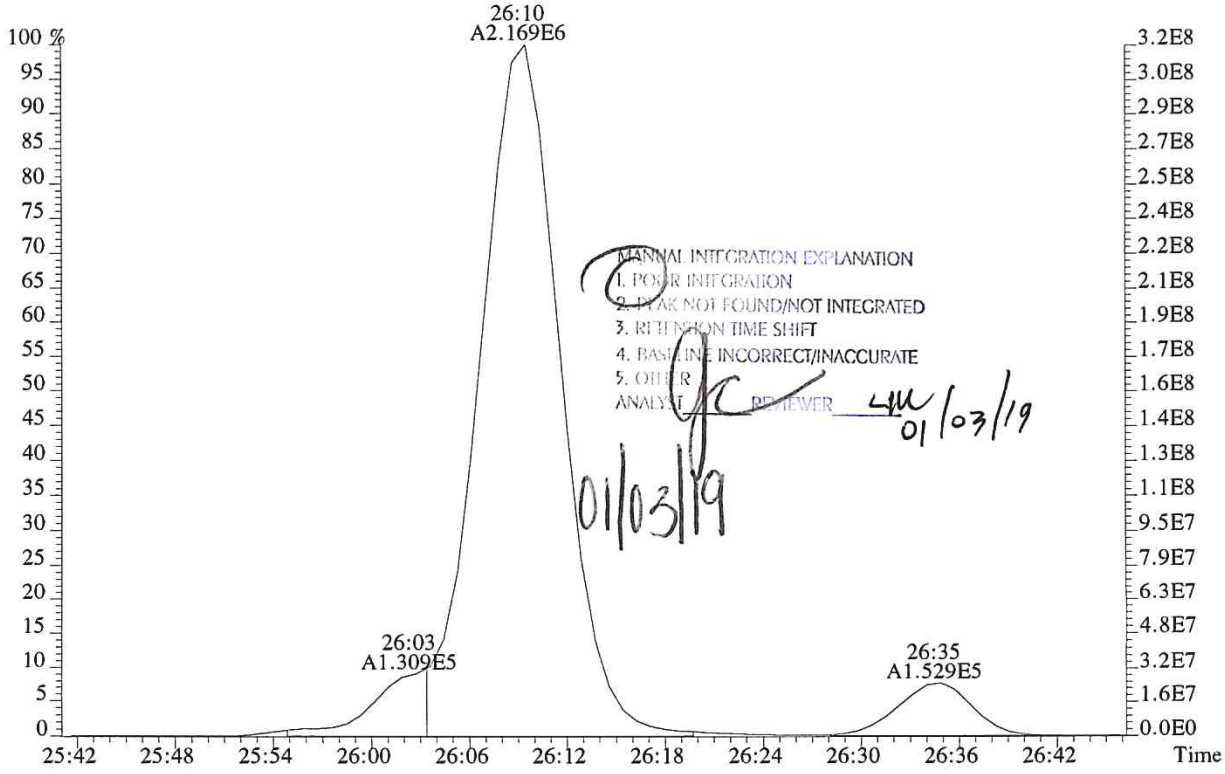


016155

File:P519734 #1-587 Acq: 2-JAN-2019 16:58:52 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1416.0,1.00%,F,T)

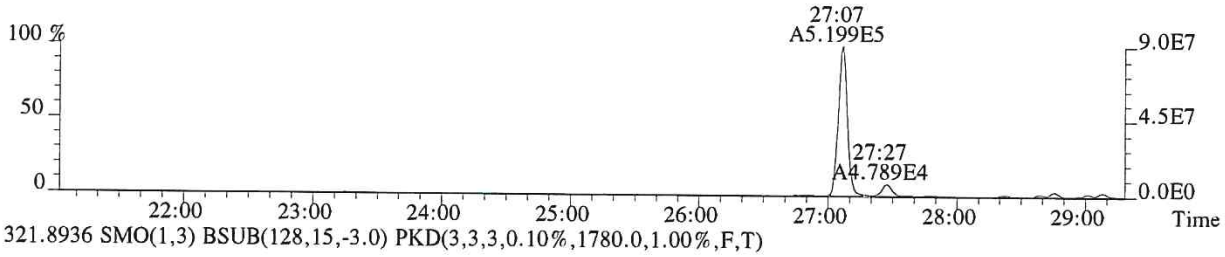


305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2820.0,1.00%,F,T)

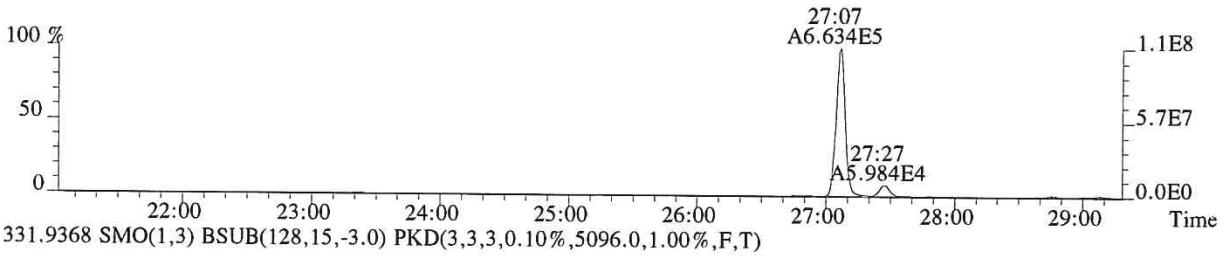


MANNAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER 01/03/19
01/03/19

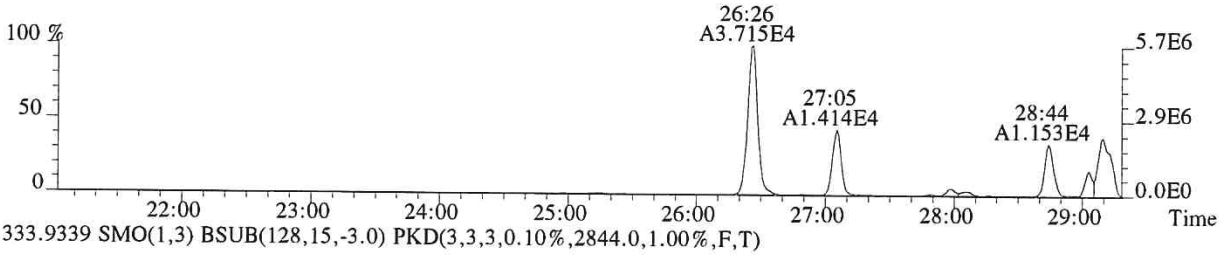
File:P519734 #1-587 Acq: 2-JAN-2019 16:58:52 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1724.0,1.00%,F,T)



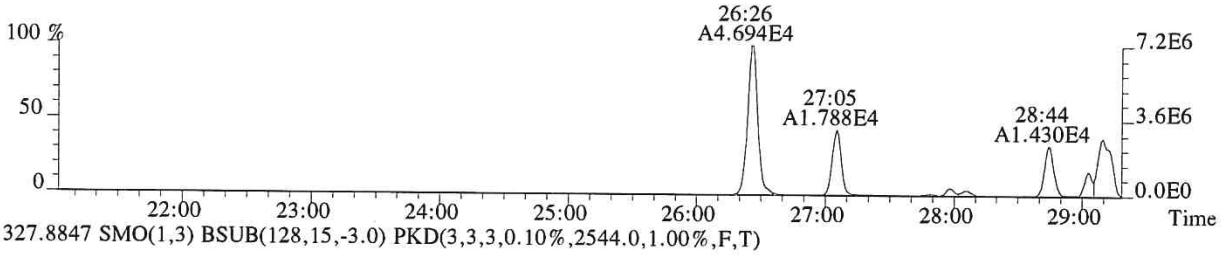
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1780.0,1.00%,F,T)



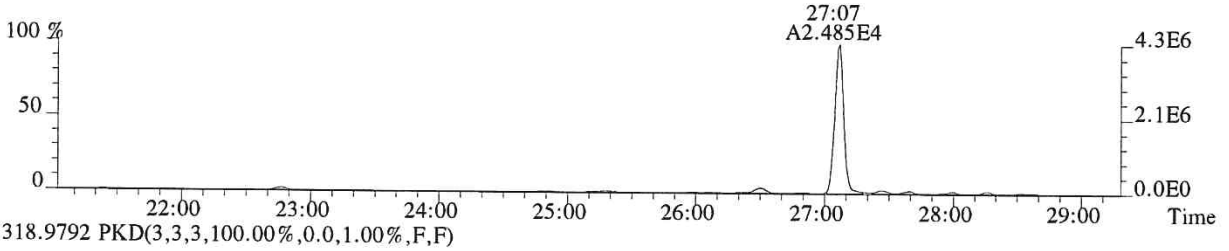
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5096.0,1.00%,F,T)



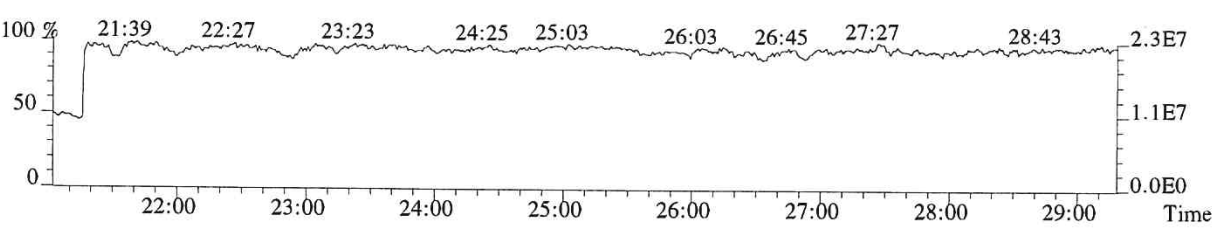
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2844.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2544.0,1.00%,F,T)

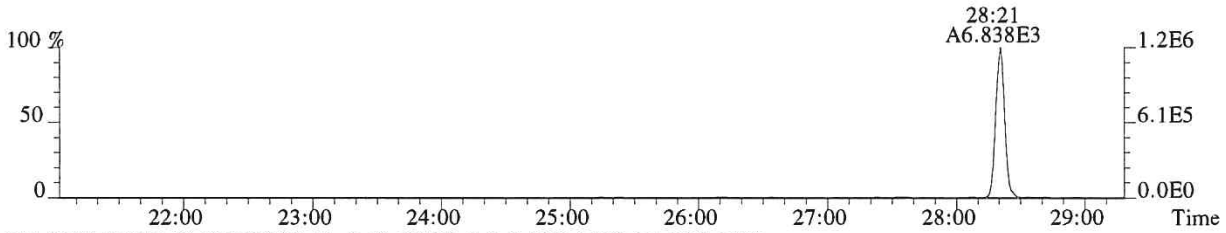


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

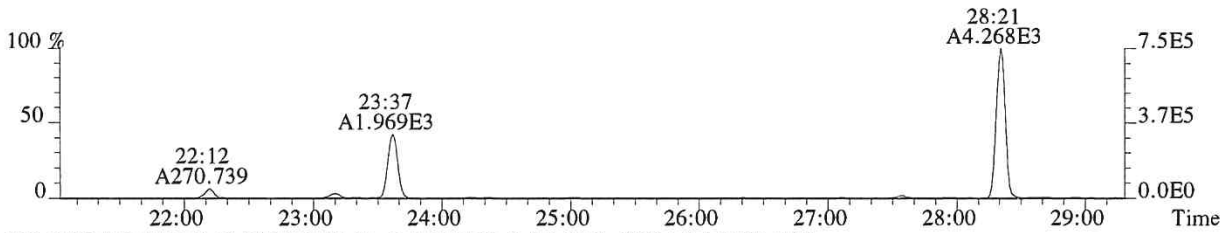


016157

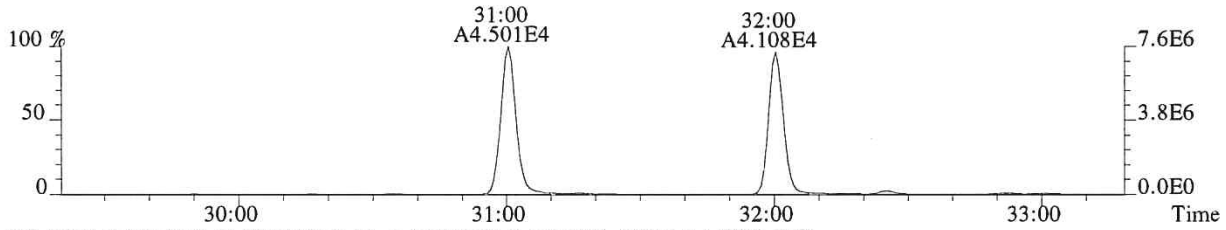
File:P519734 #1-587 Acq: 2-JAN-2019 16:58:52 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1072.0,1.00%,F,T)



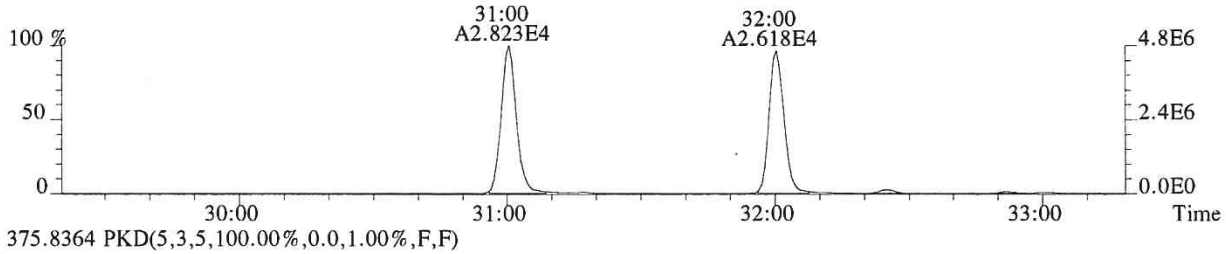
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1168.0,1.00%,F,T)



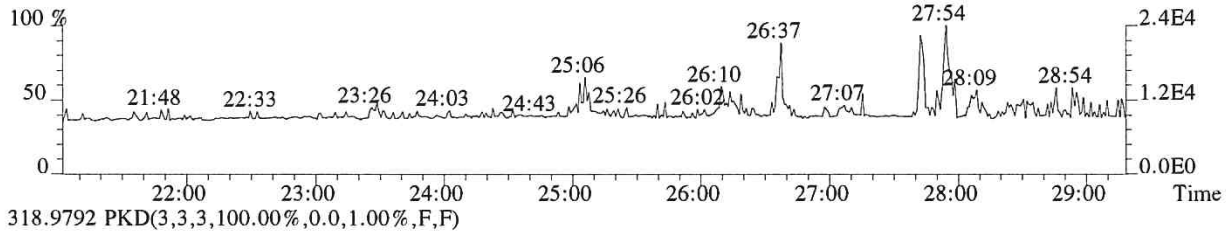
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10044.0,1.00%,F,T)



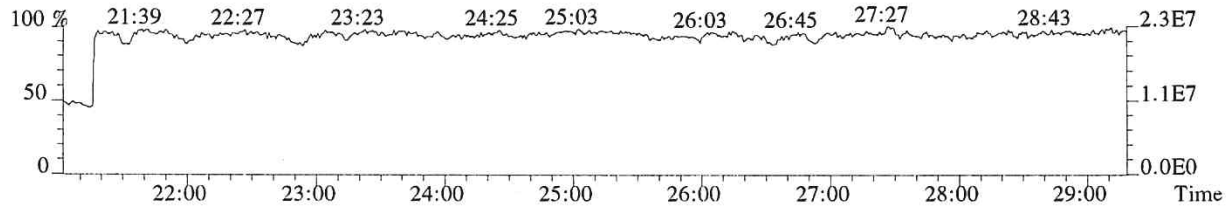
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,14780.0,1.00%,F,T)



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

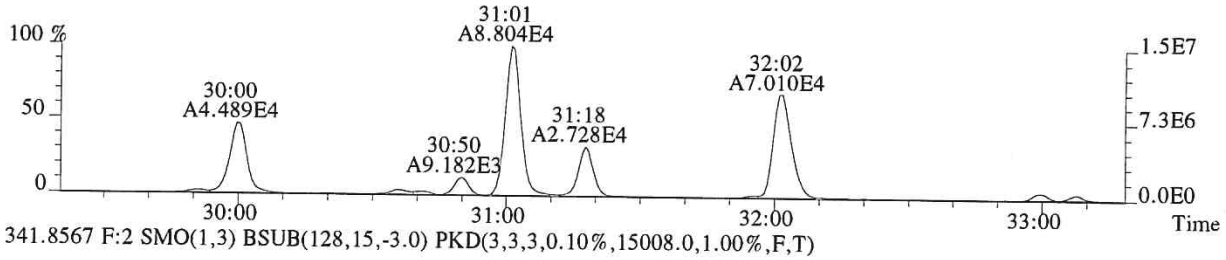


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

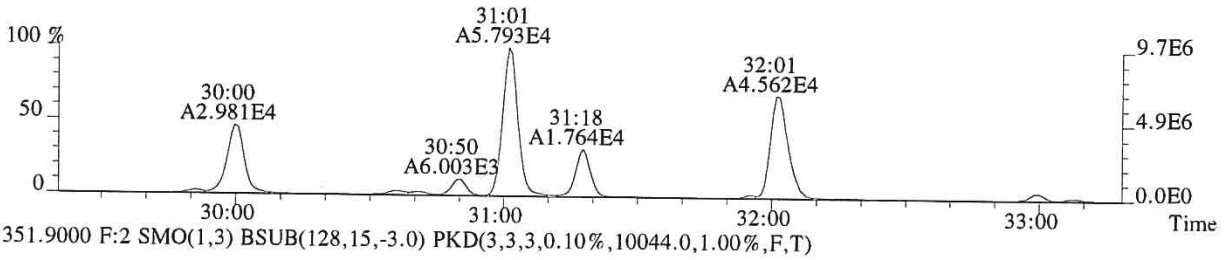


016158

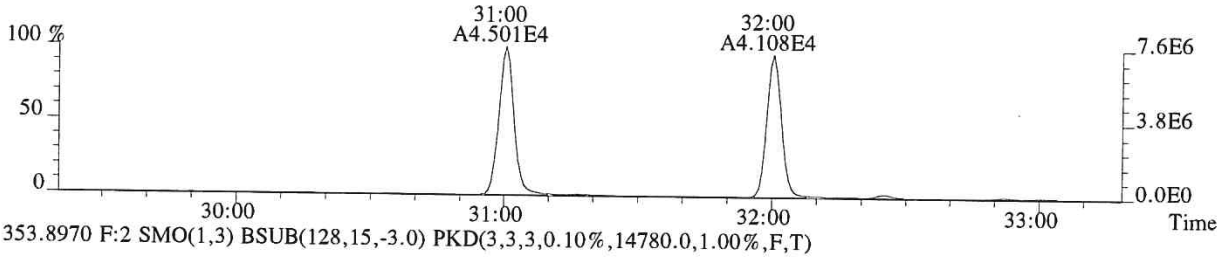
File:P519734 #1-358 Acq: 2-JAN-2019 16:58:52 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,21480.0,1.00%,F,T)



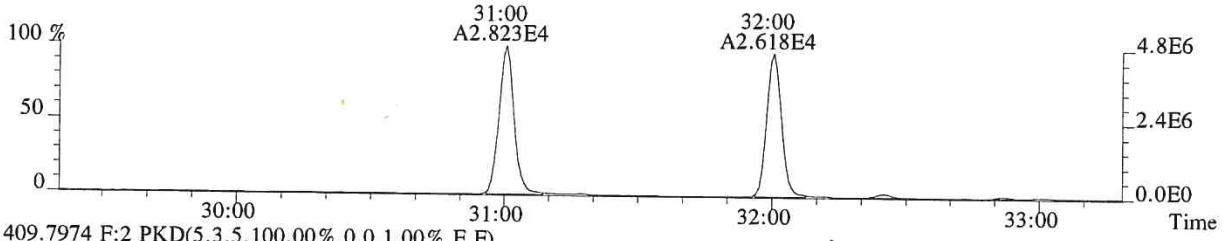
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15008.0,1.00%,F,T)



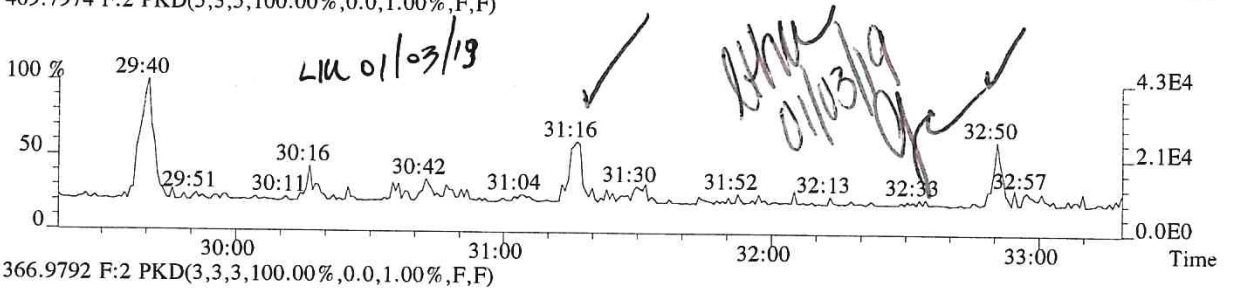
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10044.0,1.00%,F,T)



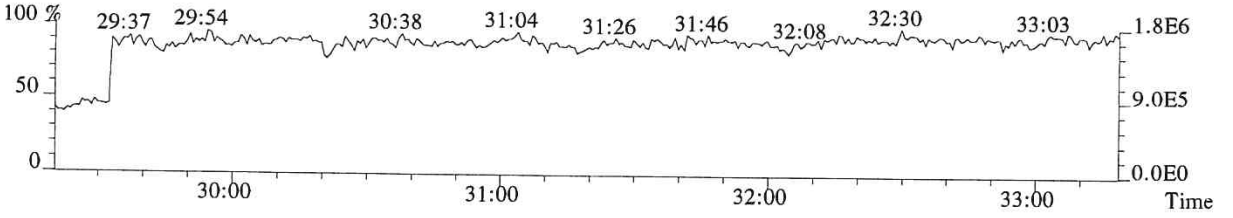
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,14780.0,1.00%,F,T)



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

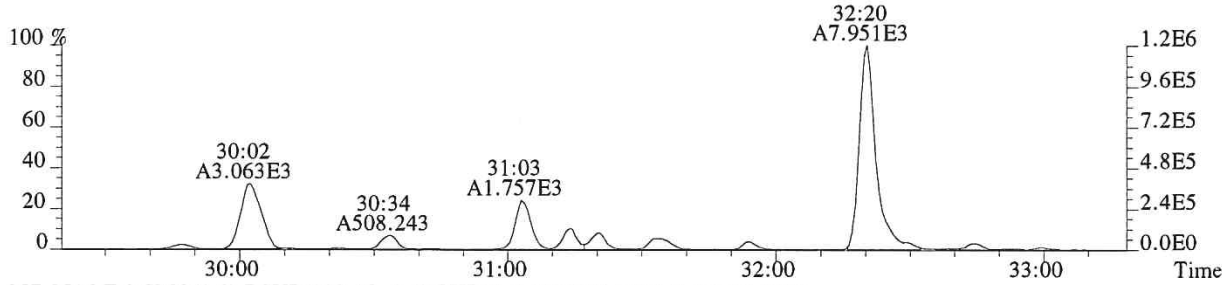


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

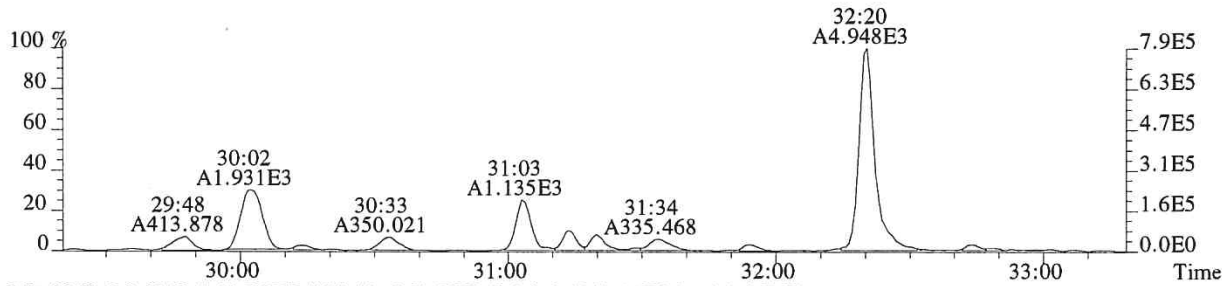


016159

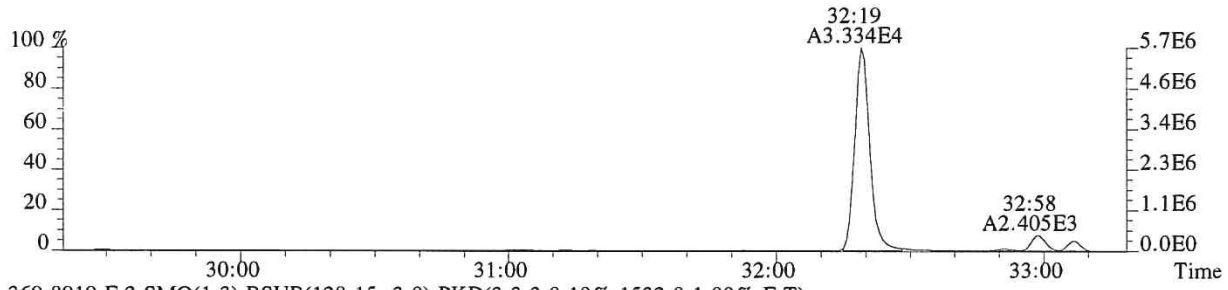
File:P519734 #1-358 Acq: 2-JAN-2019 16:58:52 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1660.0,1.00%,F,T)



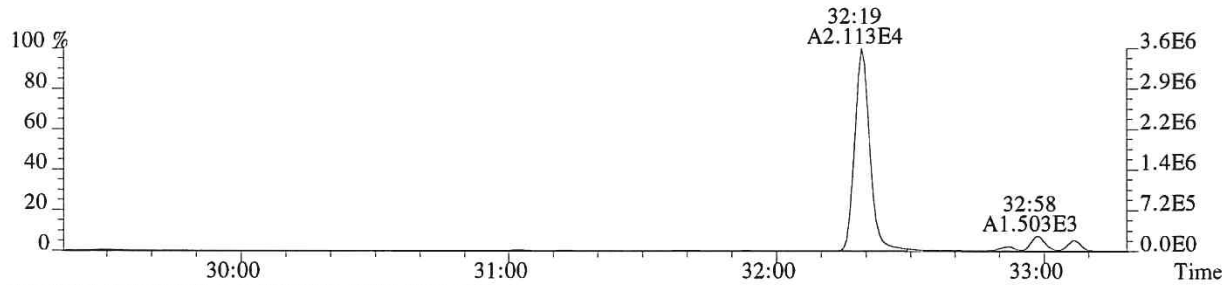
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5084.0,1.00%,F,T)



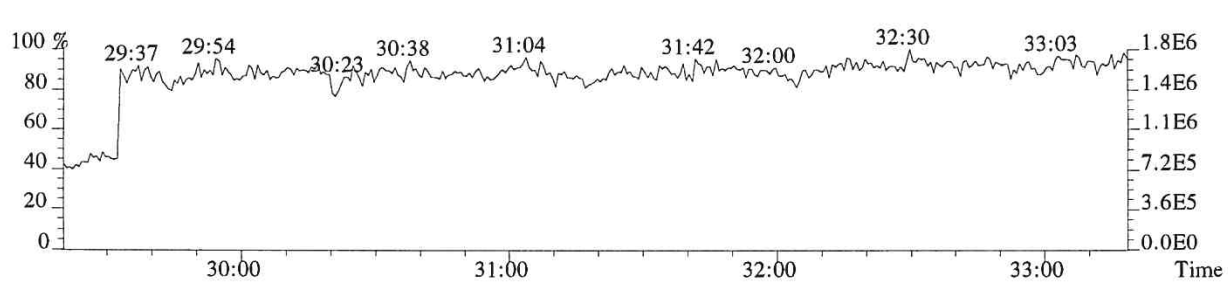
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1176.0,1.00%,F,T)



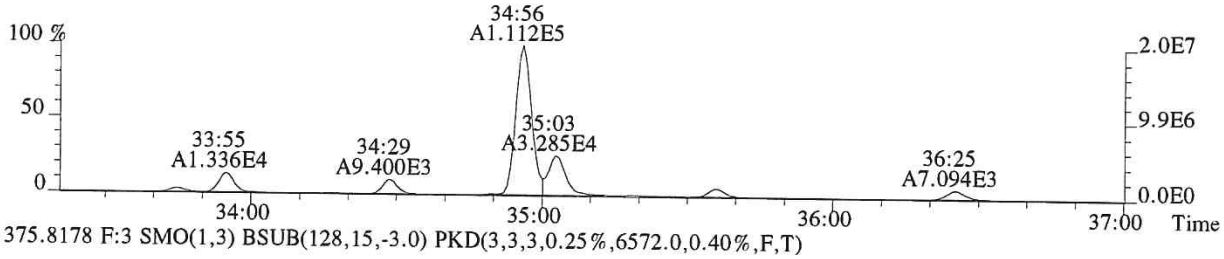
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1532.0,1.00%,F,T)



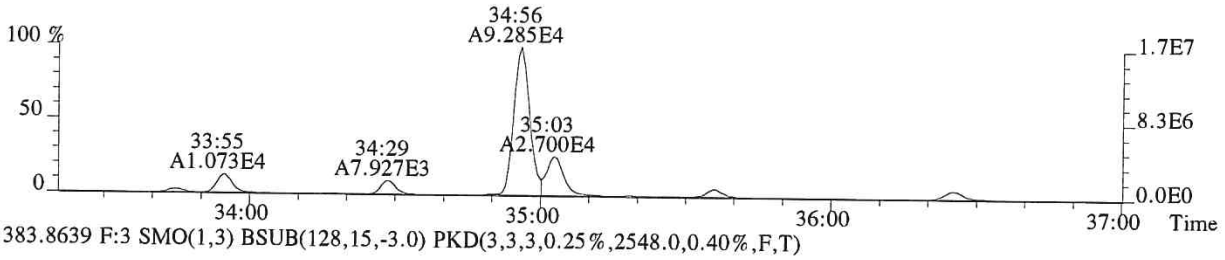
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



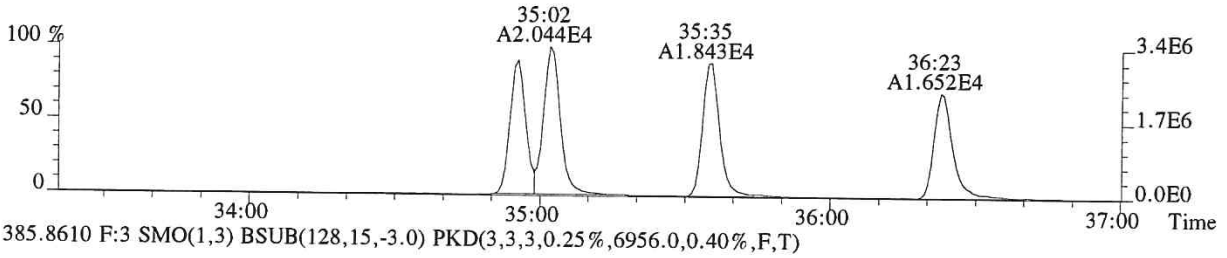
File:P519734 #1-330 Acq: 2-JAN-2019 16:58:52 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:E1801137-010
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,9728.0,0.40%,F,T)



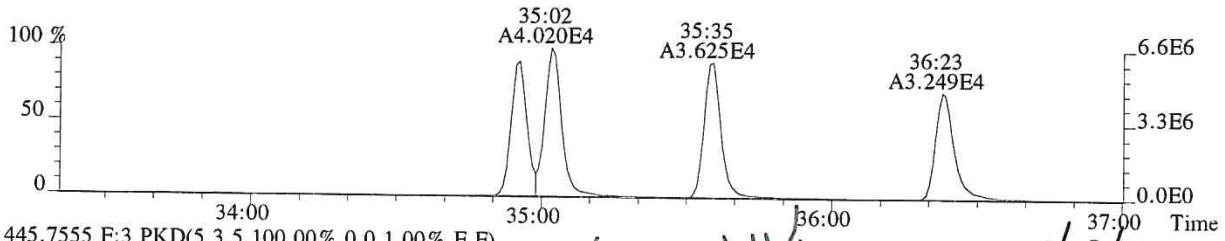
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6572.0,0.40%,F,T)



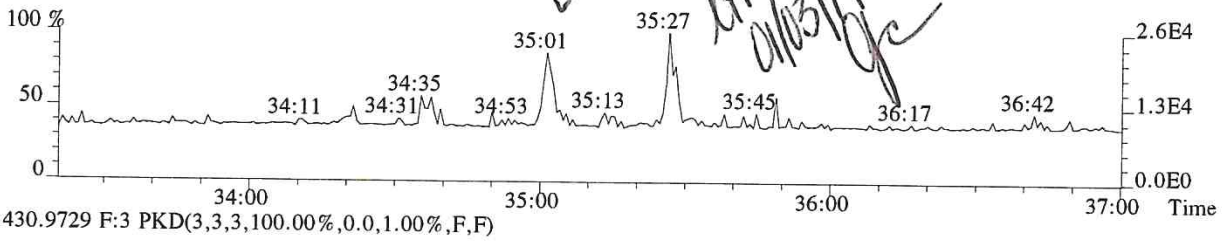
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2548.0,0.40%,F,T)



385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6956.0,0.40%,F,T)

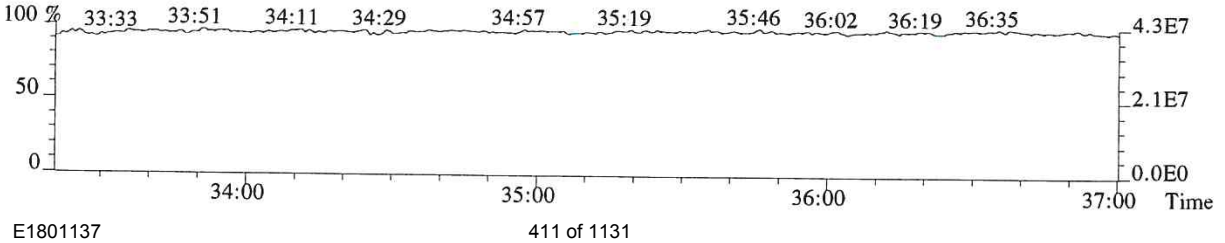


445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

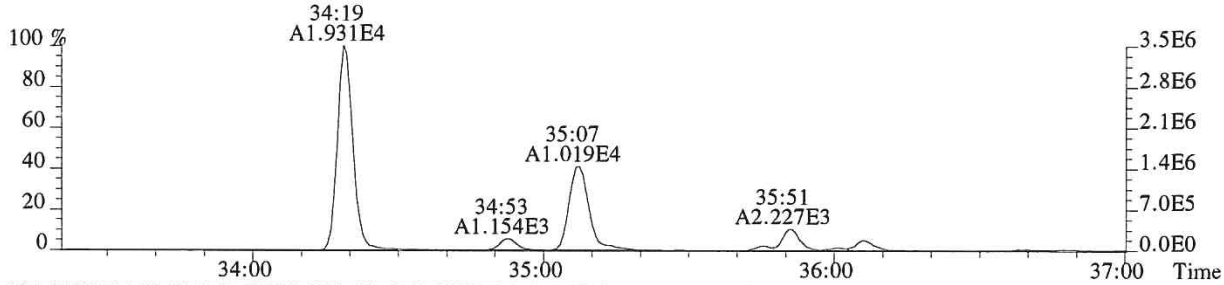


LM 01/03/19

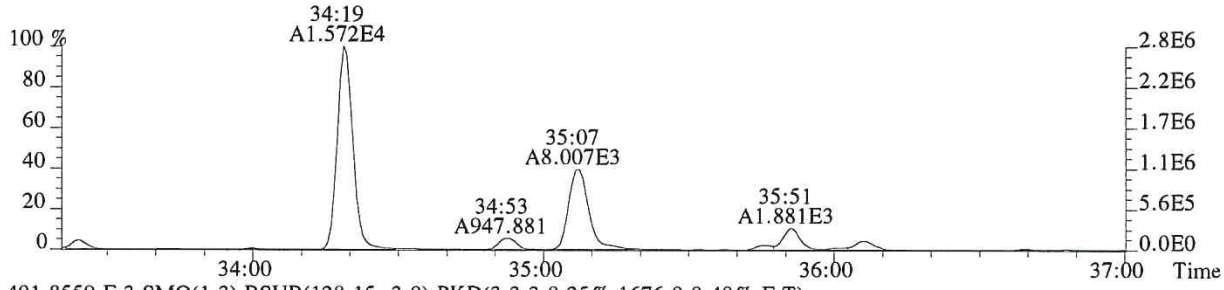
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



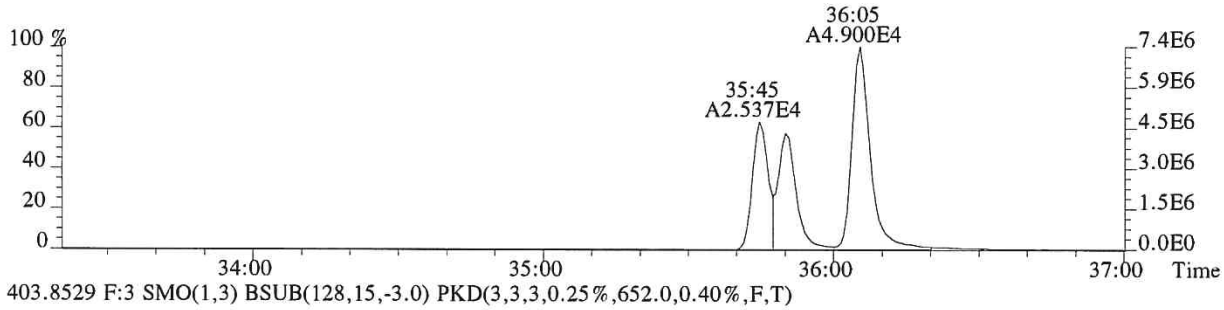
File:P519734 #1-330 Acq: 2-JAN-2019 16:58:52 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3004.0,0.40%,F,T)



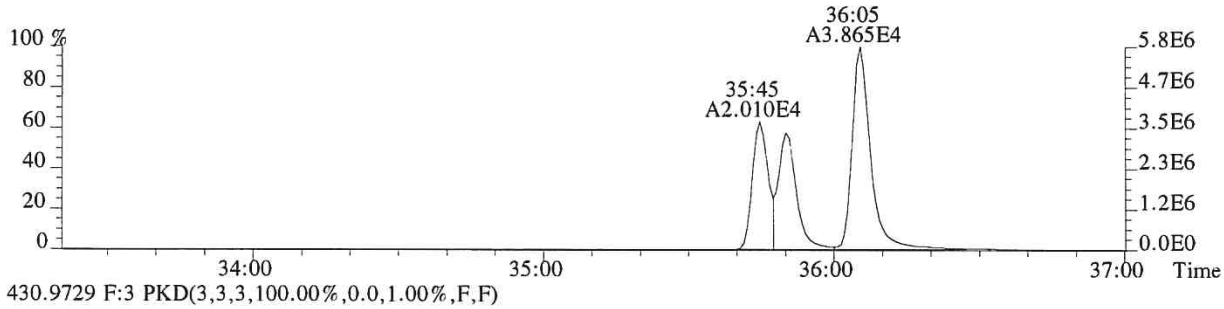
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2264.0,0.40%,F,T)



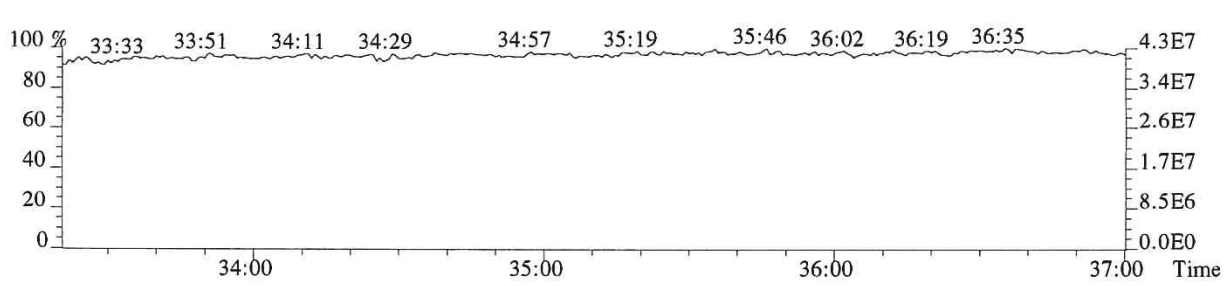
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1676.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,652.0,0.40%,F,T)

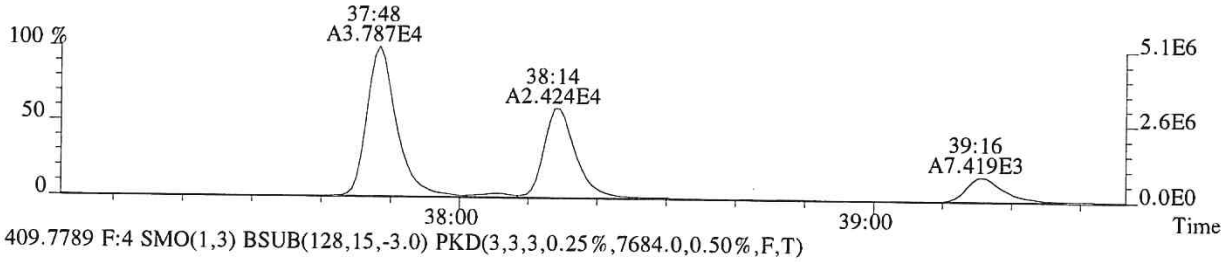


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

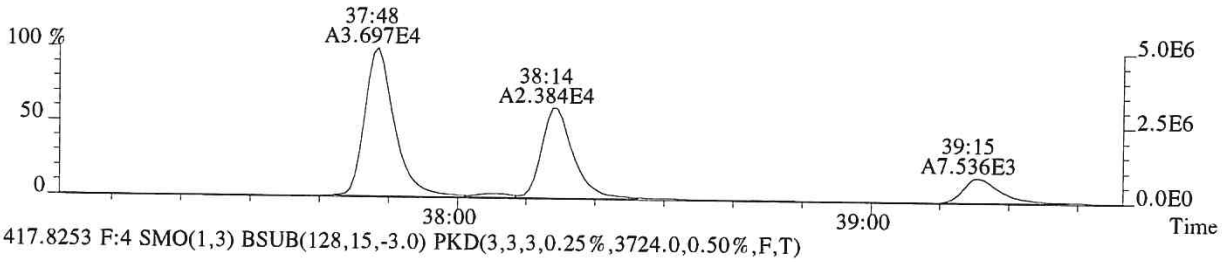


016162

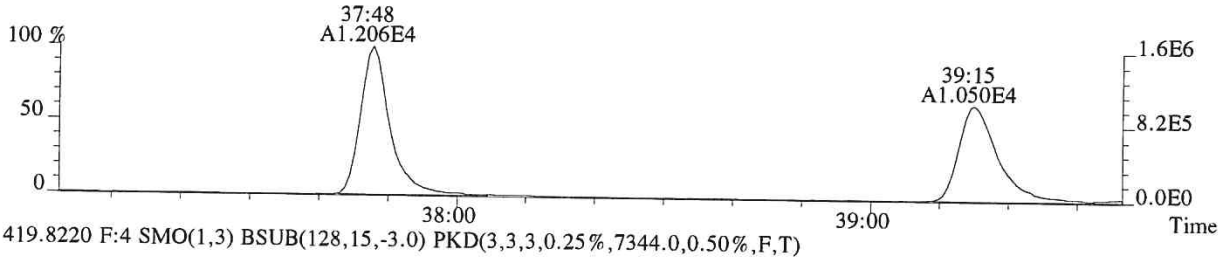
File:P519734 #1-232 Acq: 2-JAN-2019 16:58:52 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7572.0,0.50%,F,T)



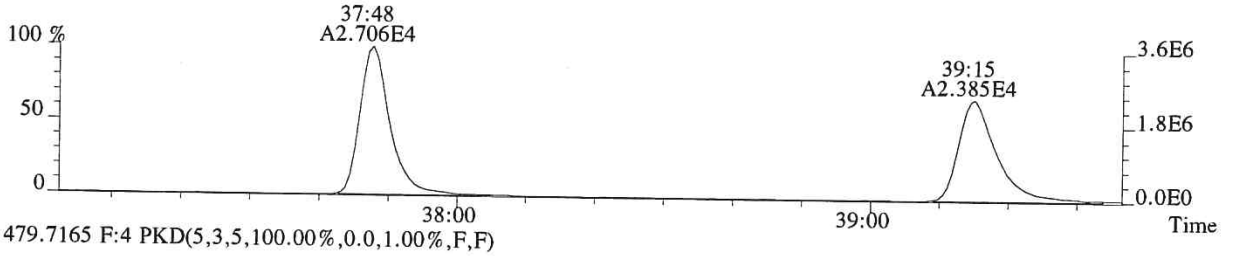
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7684.0,0.50%,F,T)



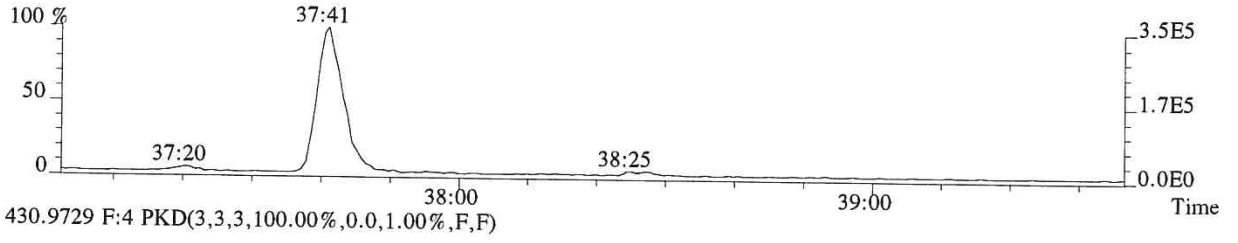
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3724.0,0.50%,F,T)



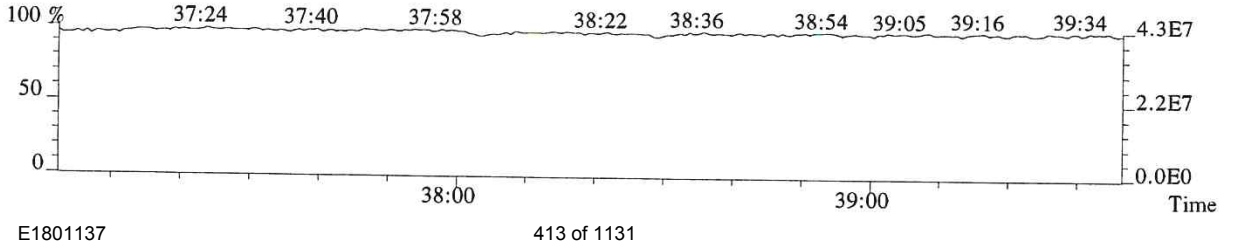
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7344.0,0.50%,F,T)



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

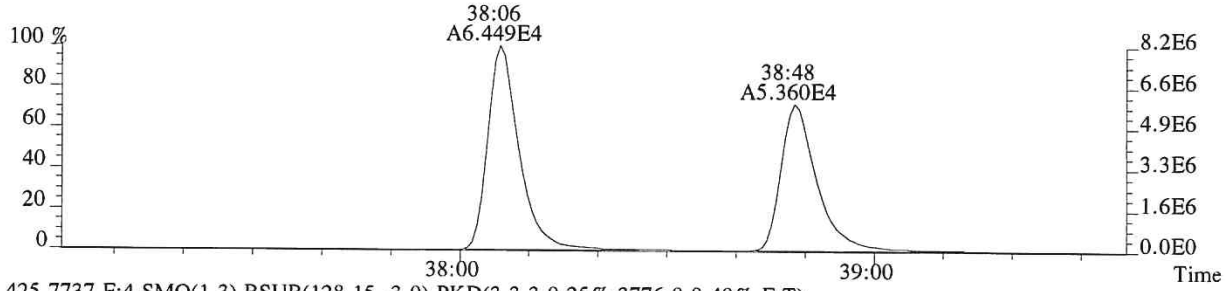


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

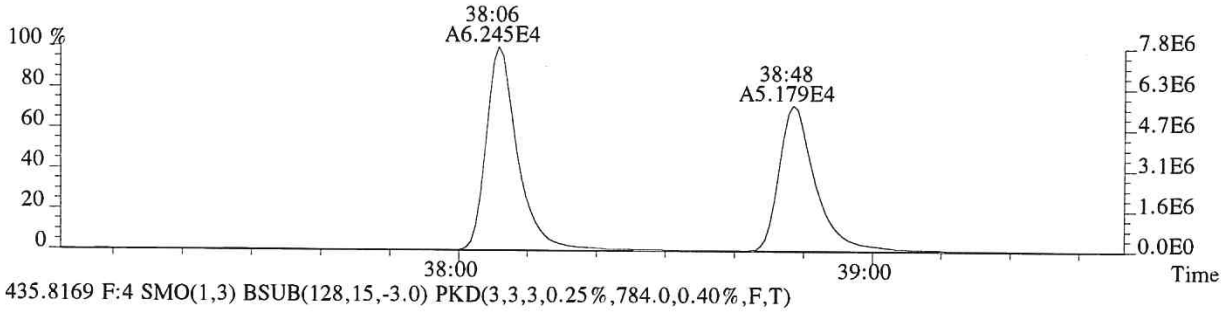


016163

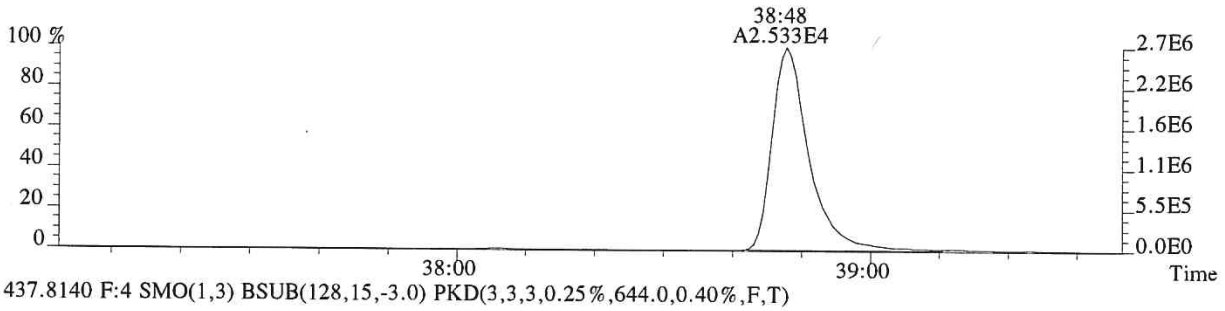
File:P519734 #1-232 Acq: 2-JAN-2019 16:58:52 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,948.0,0.40%,F,T)



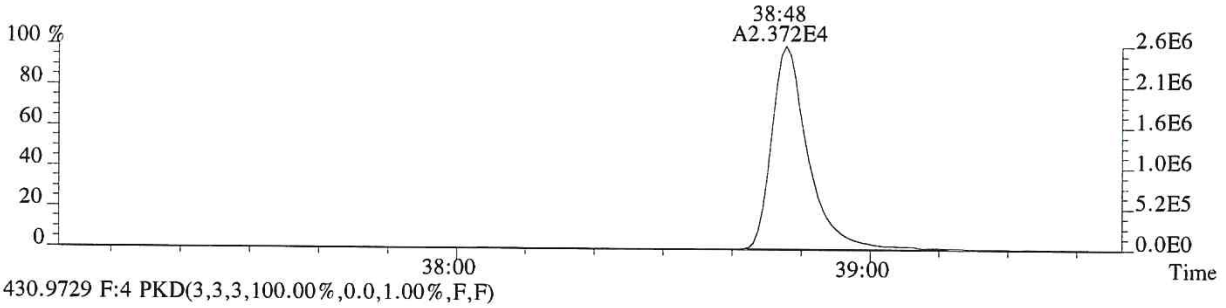
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3776.0,0.40%,F,T)



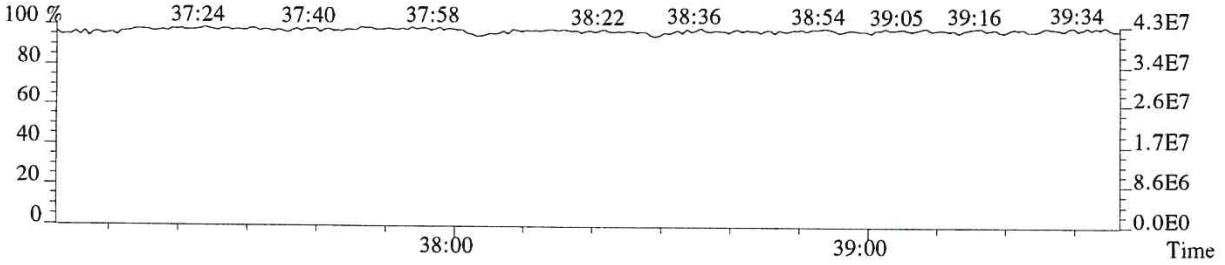
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,784.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,644.0,0.40%,F,T)

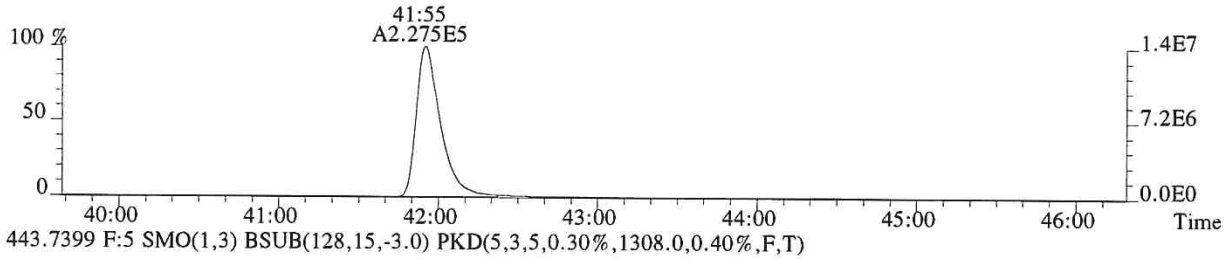


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

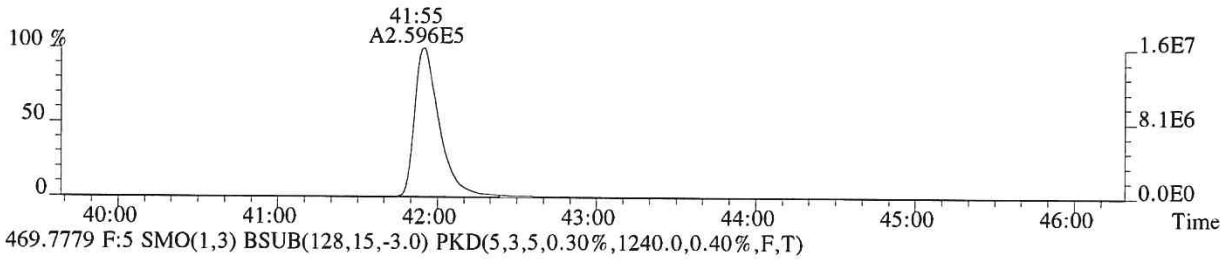


016164

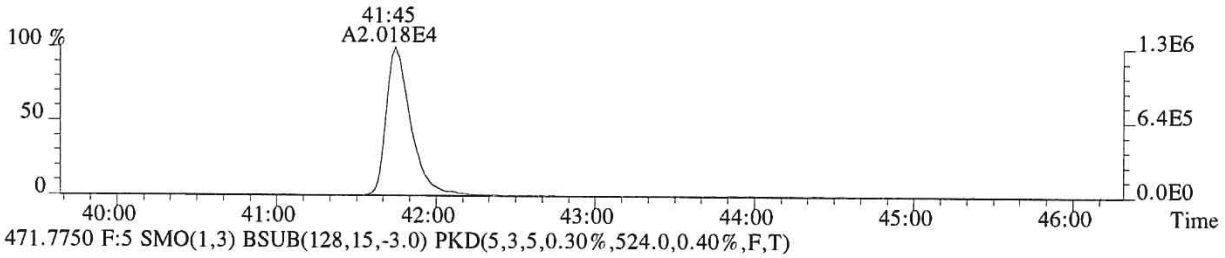
File:P519734 #1-601 Acq: 2-JAN-2019 16:58:52 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,536.0,0.40%,F,T)



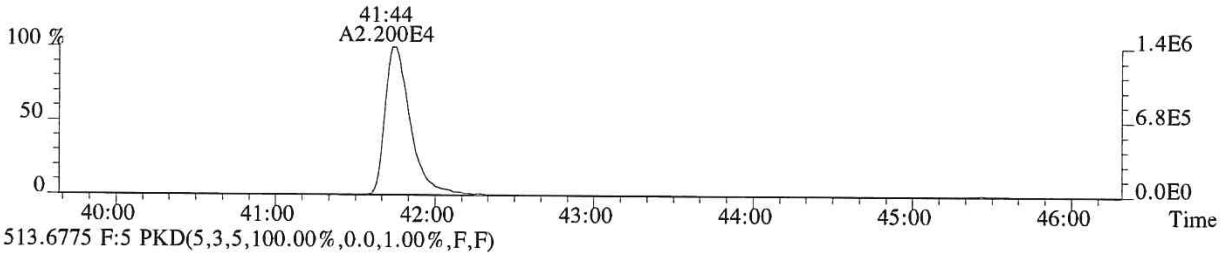
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1308.0,0.40%,F,T)



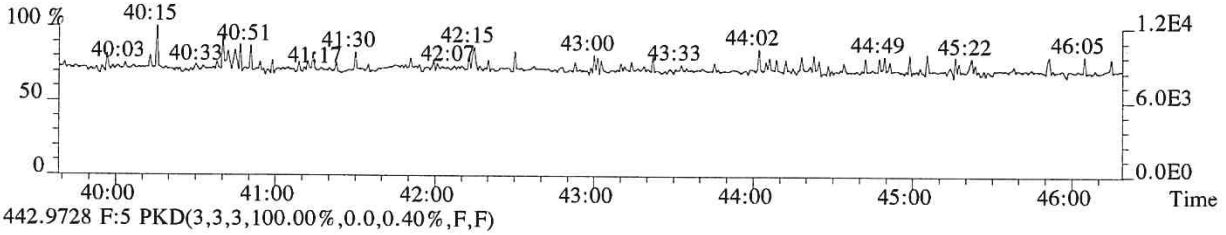
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1240.0,0.40%,F,T)



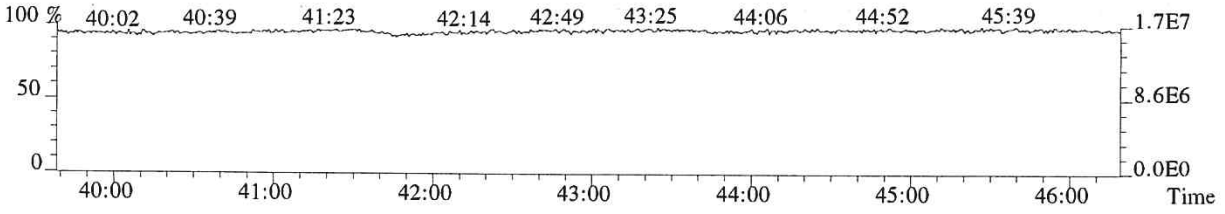
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,524.0,0.40%,F,T)



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

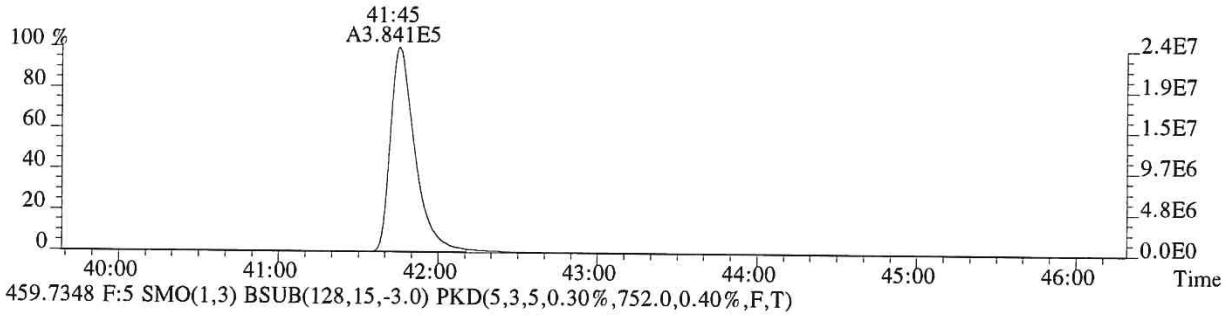


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

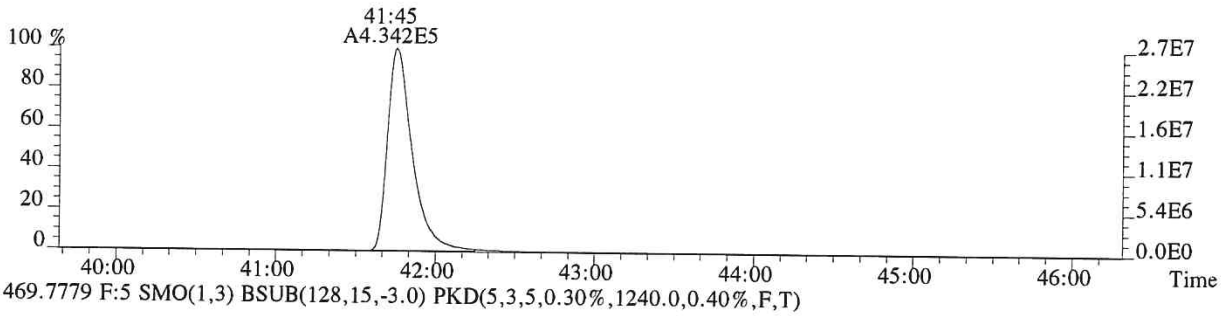


016165

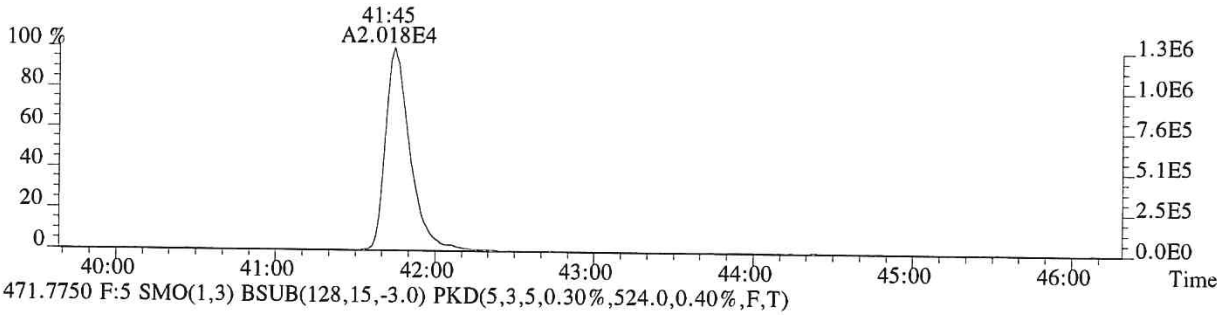
File:P519734 #1-601 Acq: 2-JAN-2019 16:58:52 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,392.0,0.40%,F,T)



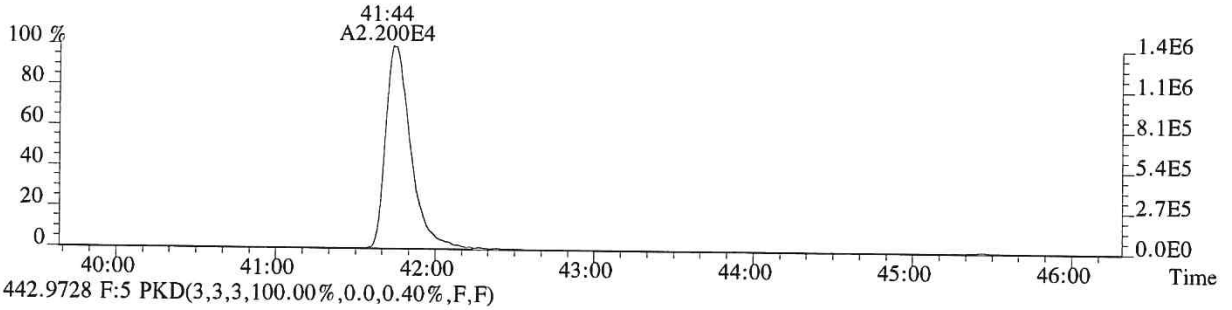
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,752.0,0.40%,F,T)



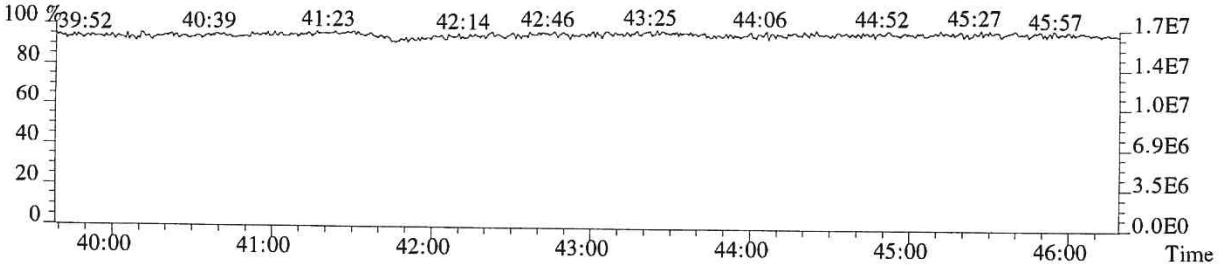
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1240.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,524.0,0.40%,F,T)



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



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0133

Run #18 Filename P519771 Samp: 1 Inj: 1 Acquired: 4-JAN-19 08:17:48
Processed: 4-JAN-19 15:57:15 Sample ID: E1801137-010DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:05	6.960e+03	9.644e+03	0.72	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:58	3.120e+02	2.238e+02	1.39	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	32:00	2.915e+02	1.786e+02	1.63	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:55	3.883e+02	4.030e+02	0.96	no	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:03	1.279e+02	1.195e+02	1.07	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:35	2.045e+01	1.921e+01	1.06	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:25	2.483e+01	3.168e+01	0.78	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:49	1.317e+02	1.557e+02	0.85	no	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:18	2.832e+01	1.344e+01	2.11	no	no	1.258
10	Unk	OCDF	41:55	9.860e+02	1.210e+03	0.82	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:04	1.972e+03	2.615e+03	0.75	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:19	1.962e+01	2.134e+01	0.92	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:45	3.197e+00	5.797e+00	0.55	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:52	8.856e+00	1.574e+01	0.56	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:05	7.024e+00	2.970e+00	2.36	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:48	1.902e+02	1.013e+02	1.88	no	no	1.025
17	Unk	OCDD	41:46	1.570e+03	1.793e+03	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	2.206e+04	2.812e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:58	3.328e+04	2.130e+04	1.56	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:58	3.123e+04	1.970e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:54	1.247e+04	2.430e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:01	1.547e+04	3.034e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:34	1.370e+04	2.671e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:23	1.190e+04	2.291e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:48	9.671e+03	2.290e+04	0.42	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:16	8.147e+03	1.817e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:02	1.061e+04	1.333e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:18	2.370e+04	1.472e+04	1.61	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:45	1.722e+04	1.342e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:50	2.030e+04	1.580e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:49	1.930e+04	1.843e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	41:43	2.056e+04	2.257e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	1.711e+04	2.138e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:05	2.078e+04	1.585e+04	1.31	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:04	1.063e+02				no	1.014

$$\text{OCDD} = \frac{(1.570e+03 + 1.793e+03) \times 4000\ \text{pg} \times 100}{(2.056e+04 + 2.257e+04) \times 10.24\ \text{g} \times 55.7/100 \times 1.118} = 11929.6194\ \text{pg/g}$$

LG 1/7/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0133

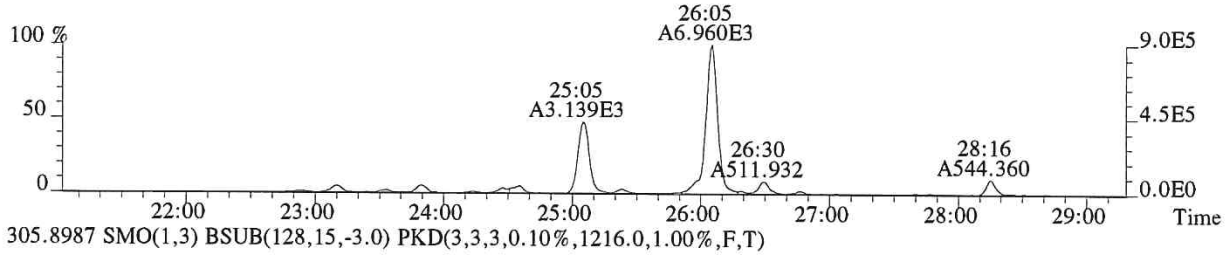
Run #18 Filename P519771 Samp: 1 Inj: 1 Acquired: 4-JAN-19 08:17:48
Processed: 4-JAN-19 15:57:15 LAB. ID: E1801137-010DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	9.00e+05	7.24e+02	1.2e+03	1.23e+06	1.22e+03	1.0e+03
2	1,2,3,7,8-PeCDF	4.70e+04	7.72e+02	6.1e+01	4.06e+04	1.53e+03	2.6e+01
3	2,3,4,7,8-PeCDF	3.98e+04	7.72e+02	5.2e+01	2.68e+04	1.53e+03	1.7e+01
4	1,2,3,4,7,8-HxCDF	5.79e+04	7.60e+02	7.6e+01	5.77e+04	3.36e+02	1.7e+02
5	1,2,3,6,7,8-HxCDF	1.93e+04	7.60e+02	2.5e+01	1.80e+04	3.36e+02	5.4e+01
6	2,3,4,6,7,8-HxCDF	3.42e+03	7.60e+02	4.5e+00	2.65e+03	3.36e+02	7.9e+00
7	1,2,3,7,8,9-HxCDF	5.74e+03	7.60e+02	7.6e+00	5.39e+03	3.36e+02	1.6e+01
8	1,2,3,4,6,7,8-HpCDF	1.82e+04	6.16e+02	2.9e+01	2.02e+04	7.44e+02	2.7e+01
9	1,2,3,4,7,8,9-HpCDF	2.88e+03	6.16e+02	4.7e+00	3.76e+03	7.44e+02	5.0e+00
10	OCDF	6.11e+04	2.96e+02	2.1e+02	7.69e+04	5.04e+02	1.5e+02
11	2,3,7,8-TCDD	2.96e+05	1.93e+03	1.5e+02	3.83e+05	9.52e+02	4.0e+02
12	1,2,3,7,8-PeCDD	3.83e+03	5.92e+02	6.5e+00	4.31e+03	4.36e+02	9.9e+00
13	1,2,3,4,7,8-HxCDD	1.01e+03	4.72e+02	2.1e+00	1.83e+03	4.16e+02	4.4e+00
14	1,2,3,6,7,8-HxCDD	1.49e+03	4.72e+02	3.2e+00	2.79e+03	4.16e+02	6.7e+00
15	1,2,3,7,8,9-HxCDD	1.40e+03	4.72e+02	3.0e+00	9.39e+02	4.16e+02	2.3e+00
16	1,2,3,4,6,7,8-HpCDD	1.81e+04	4.24e+02	4.3e+01	2.34e+04	4.52e+02	5.2e+01
17	OCDD	9.79e+04	2.36e+02	4.1e+02	1.04e+05	3.76e+02	2.8e+02
18	13C-2,3,7,8-TCDF	2.98e+06	4.46e+03	6.7e+02	3.94e+06	1.92e+03	2.1e+03
19	13C-1,2,3,7,8-PeCDF	5.54e+06	7.32e+02	7.6e+03	3.52e+06	7.68e+02	4.6e+03
20	13C-2,3,4,7,8-PeCDF	4.81e+06	7.32e+02	6.6e+03	3.01e+06	7.68e+02	3.9e+03
21	13C-1,2,3,4,7,8-HxCDF	2.08e+06	4.60e+02	4.5e+03	3.96e+06	4.16e+02	9.5e+03
22	13C-1,2,3,6,7,8-HxCDF	2.28e+06	4.60e+02	4.9e+03	4.47e+06	4.16e+02	1.1e+04
23	13C-2,3,4,6,7,8-HxCDF	2.05e+06	4.60e+02	4.5e+03	4.04e+06	4.16e+02	9.7e+03
24	13C-1,2,3,7,8,9-HxCDF	1.59e+06	4.60e+02	3.5e+03	2.98e+06	4.16e+02	7.2e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.21e+06	5.16e+03	2.3e+02	2.76e+06	3.18e+03	8.7e+02
26	13C-1,2,3,4,7,8,9-HpCDF	7.37e+05	5.16e+03	1.4e+02	1.66e+06	3.18e+03	5.2e+02
27	13C-2,3,7,8-TCDD	1.55e+06	5.06e+03	3.1e+02	1.97e+06	1.73e+03	1.1e+03
28	13C-1,2,3,7,8-PeCDD	3.93e+06	5.88e+02	6.7e+03	2.46e+06	9.28e+02	2.6e+03
29	13C-1,2,3,4,7,8-HxCDD	2.96e+06	1.16e+03	2.5e+03	2.29e+06	5.28e+02	4.3e+03
30	13C-1,2,3,6,7,8-HxCDD	2.85e+06	1.16e+03	2.4e+03	2.22e+06	5.28e+02	4.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.90e+06	3.56e+02	5.3e+03	1.79e+06	3.48e+02	5.1e+03
32	13C-OCDD	1.14e+06	5.96e+02	1.9e+03	1.27e+06	2.76e+02	4.6e+03
33	13C-1,2,3,4-TCDD	2.68e+06	5.06e+03	5.3e+02	3.32e+06	1.73e+03	1.9e+03
34	13C-1,2,3,7,8,9-HxCDD	2.71e+06	1.16e+03	2.3e+03	2.16e+06	5.28e+02	4.1e+03
35	37Cl-2,3,7,8-TCDD	2.07e+04	1.28e+03	1.6e+01			

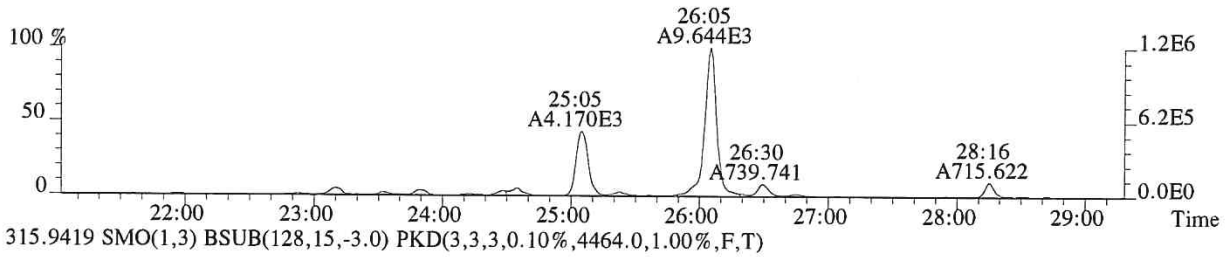
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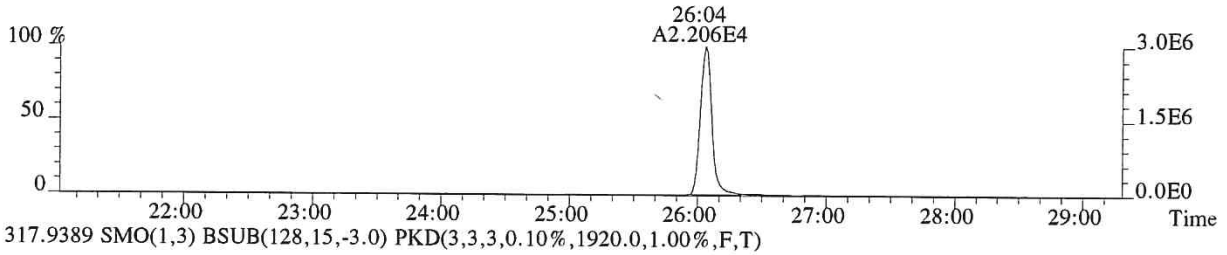
File:P519771 #1-587 Acq: 4-JAN-2019 08:17:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,724.0,1.00%,F,T)



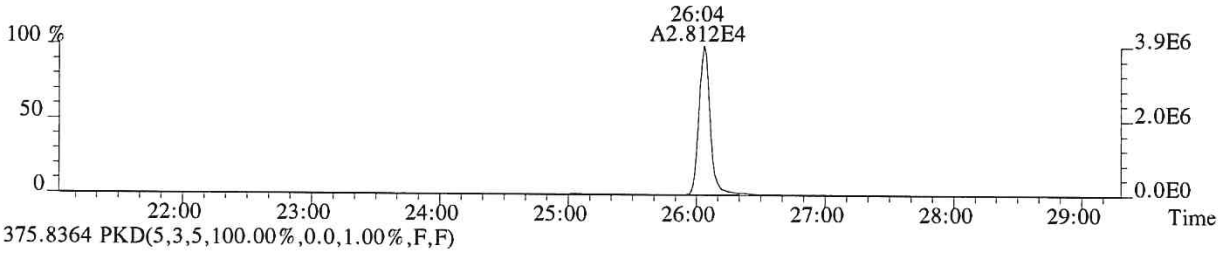
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1216.0,1.00%,F,T)



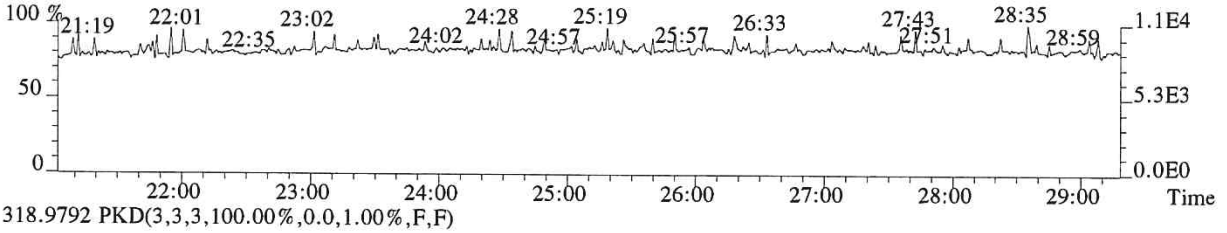
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4464.0,1.00%,F,T)



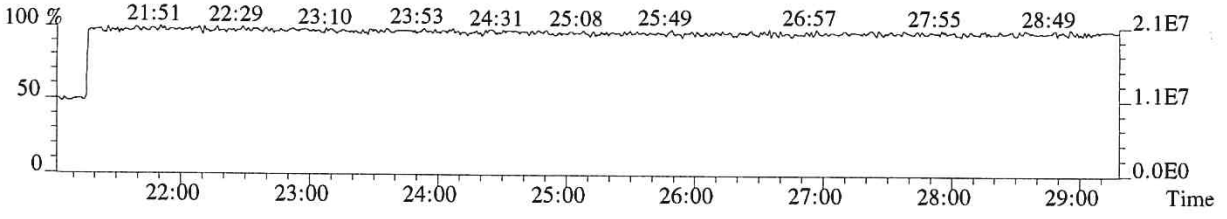
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1920.0,1.00%,F,T)



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

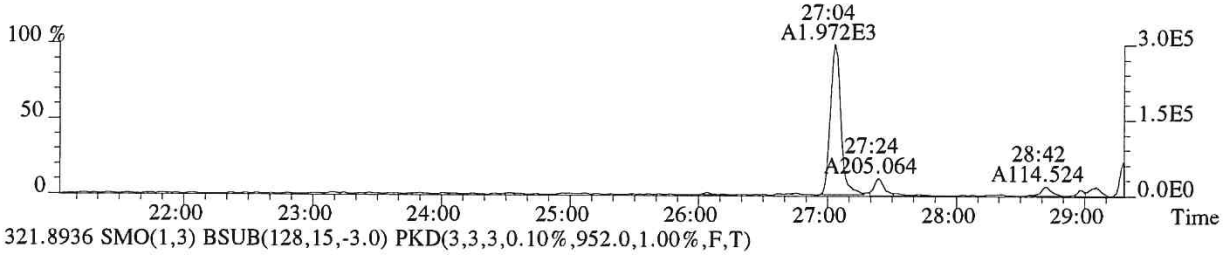


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

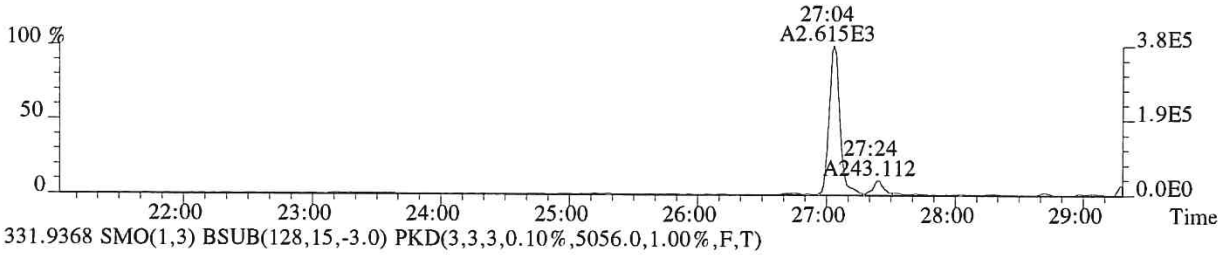


016169

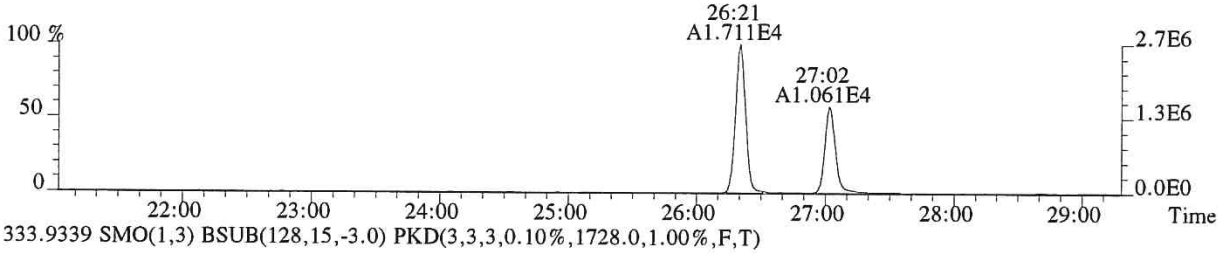
File:P519771 #1-587 Acq: 4-JAN-2019 08:17:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1932.0,1.00%,F,T)



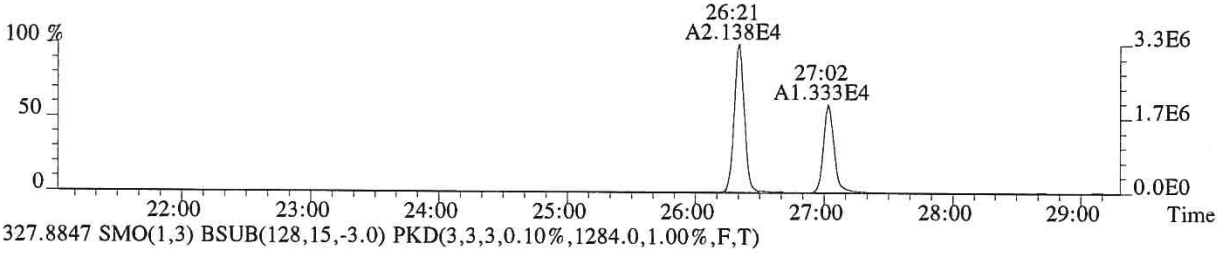
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,952.0,1.00%,F,T)



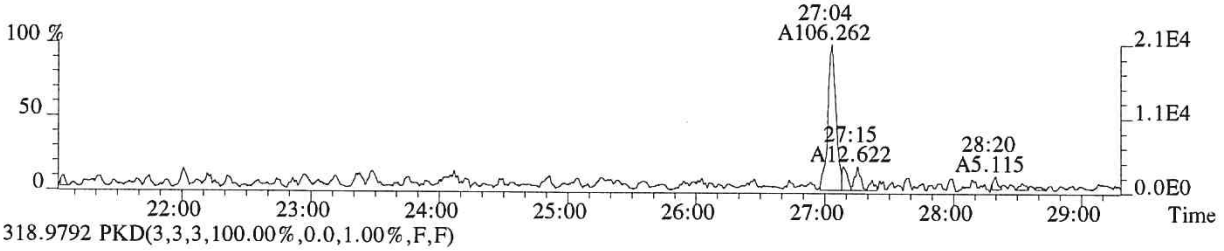
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5056.0,1.00%,F,T)



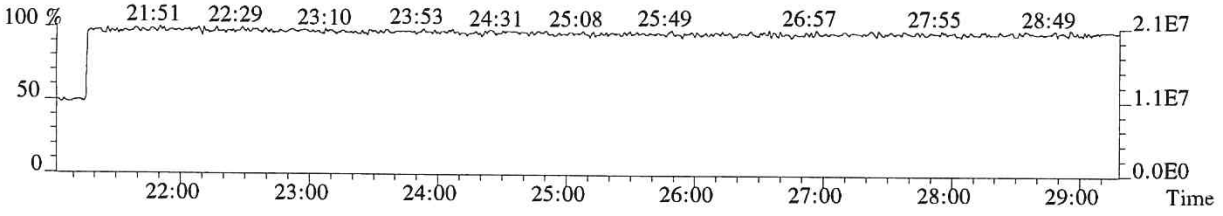
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1728.0,1.00%,F,T)



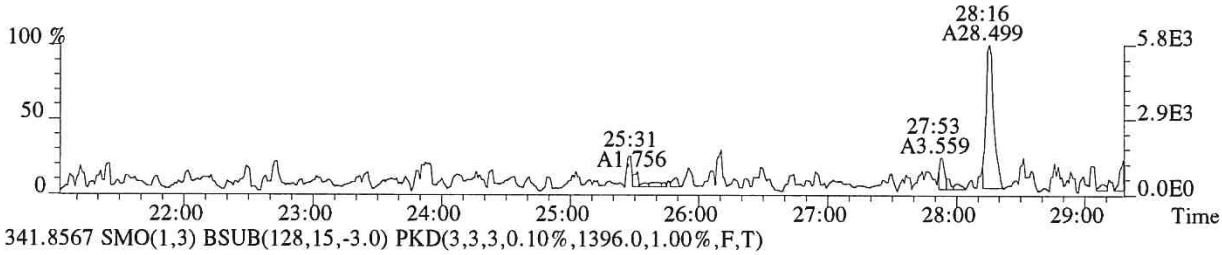
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1284.0,1.00%,F,T)



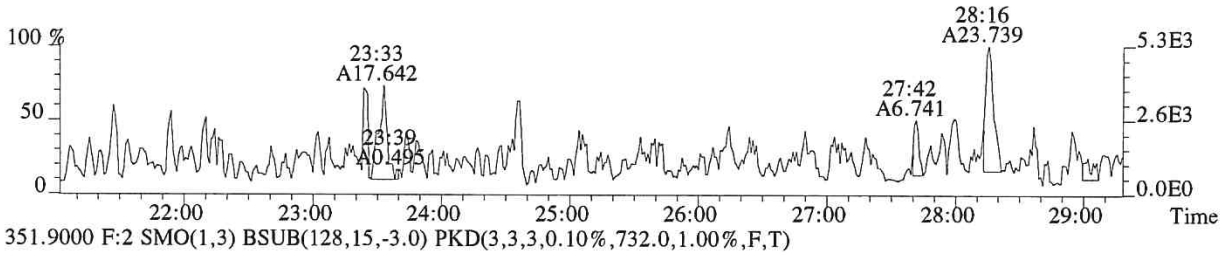
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



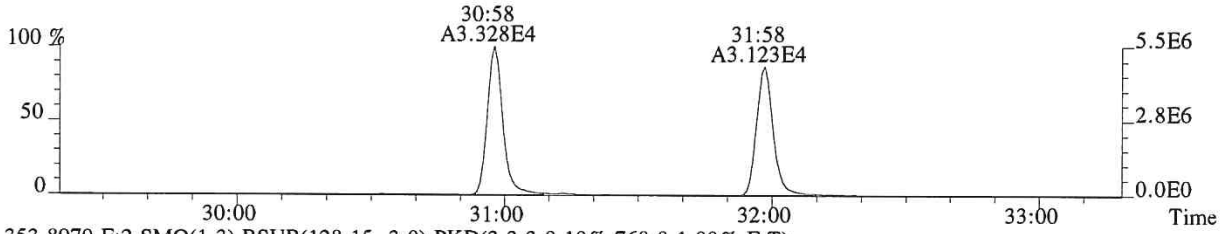
File:P519771 #1-587 Acq: 4-JAN-2019 08:17:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,584.0,1.00%,F,T)



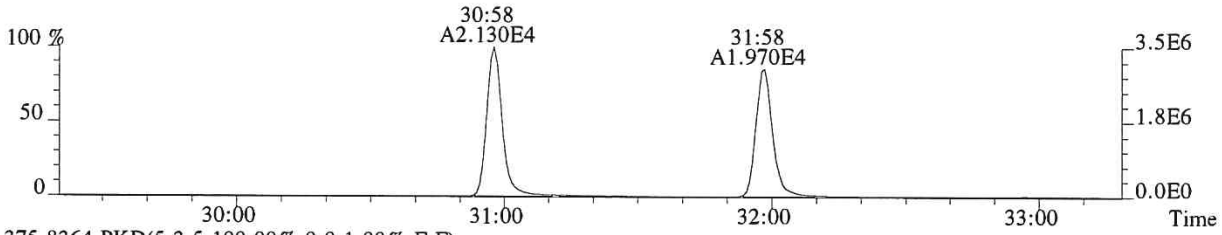
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1396.0,1.00%,F,T)



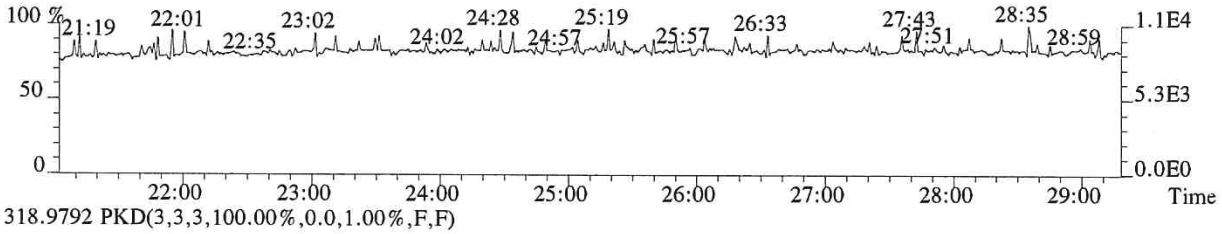
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,732.0,1.00%,F,T)



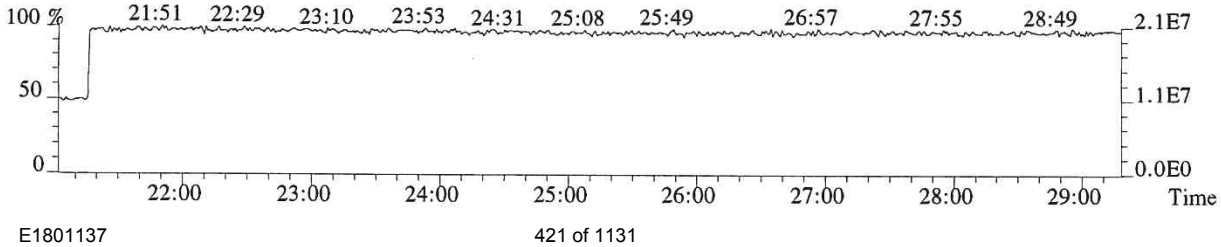
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,768.0,1.00%,F,T)



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

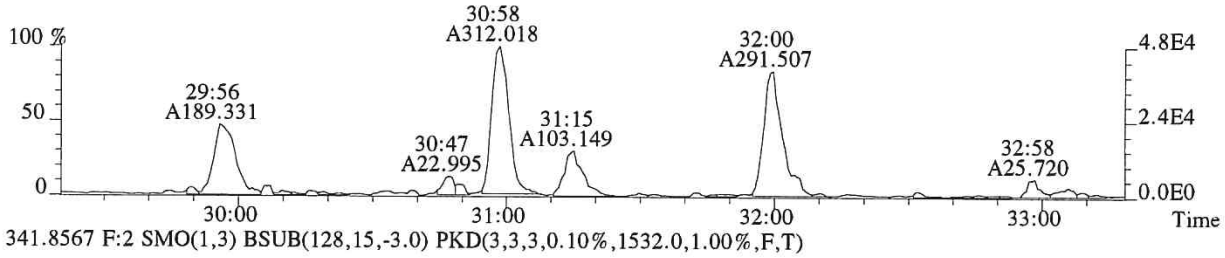


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

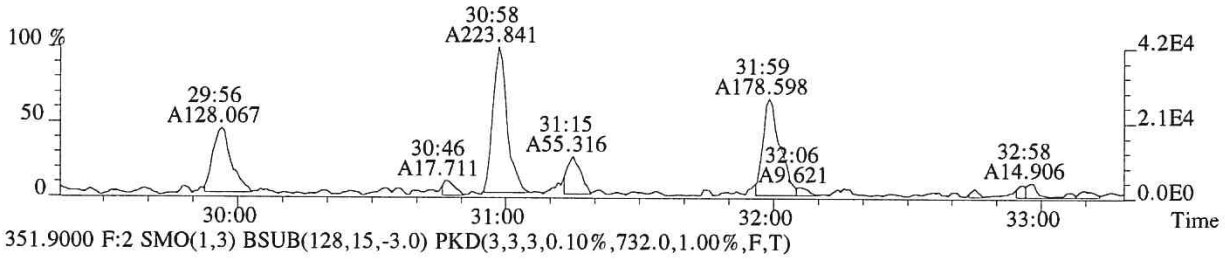


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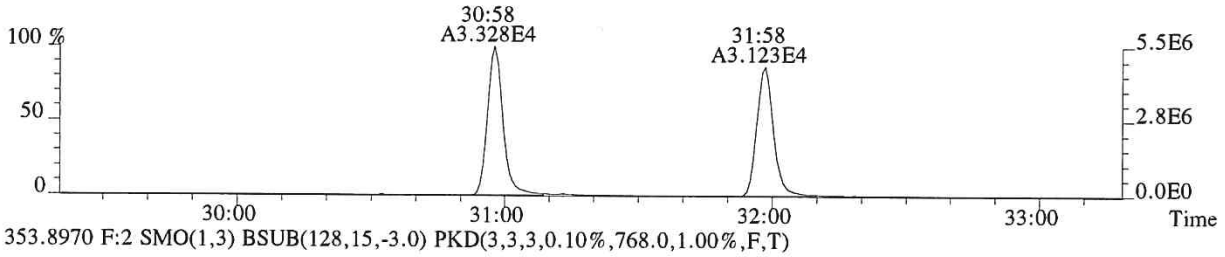
File:P519771 #1-358 Acq: 4-JAN-2019 08:17:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,772.0,1.00%,F,T)



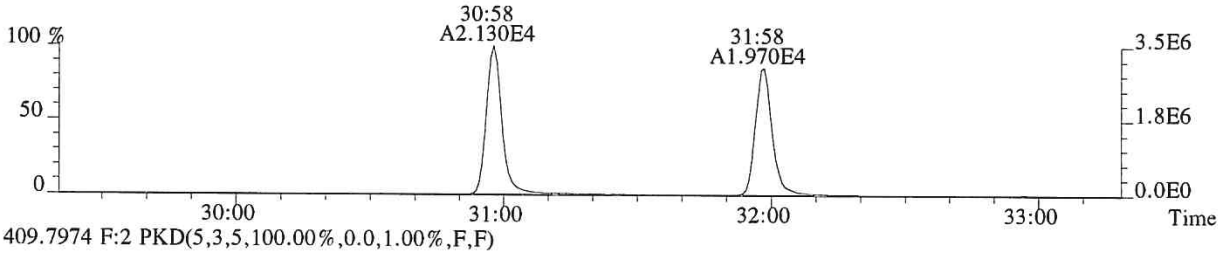
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1532.0,1.00%,F,T)



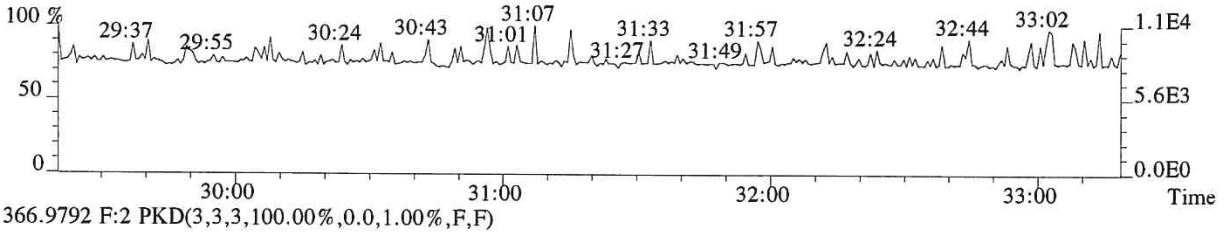
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,732.0,1.00%,F,T)



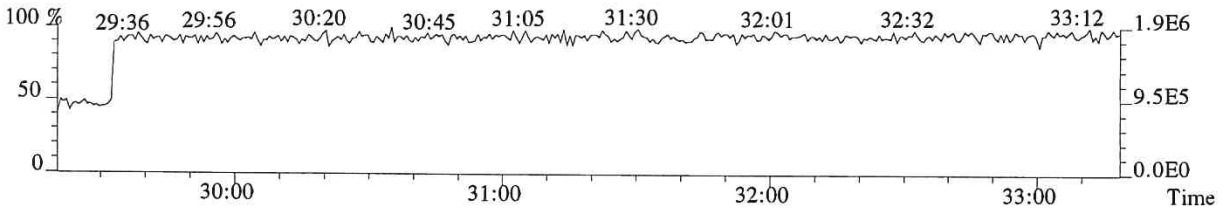
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,768.0,1.00%,F,T)



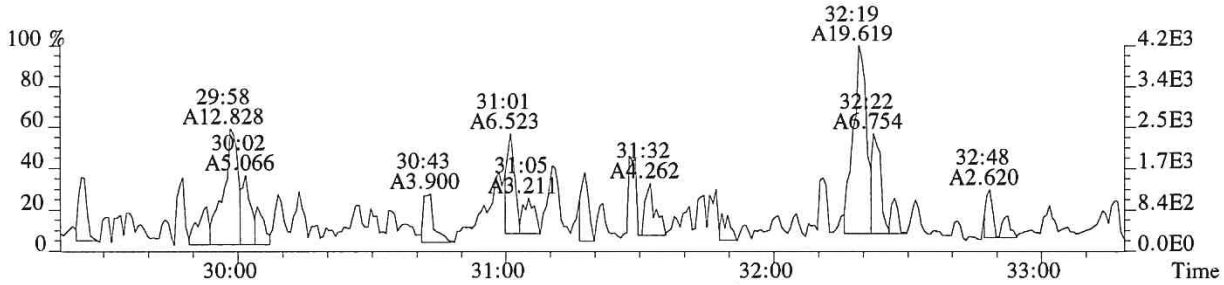
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



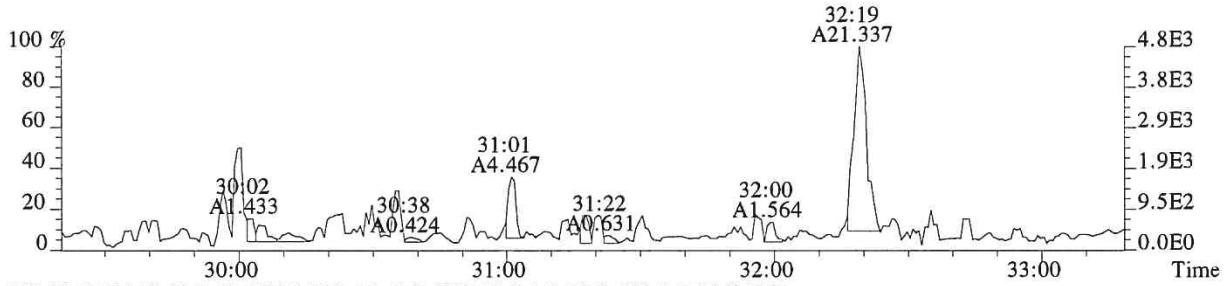
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



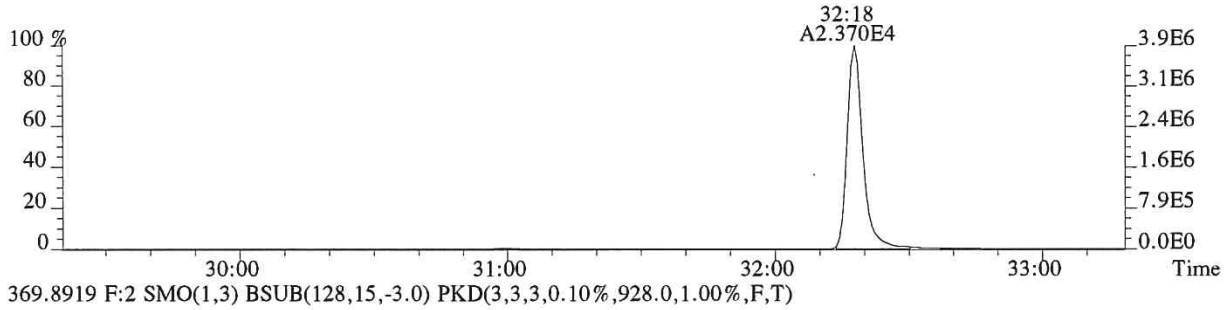
File:P519771 #1-358 Acq: 4-JAN-2019 08:17:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,592.0,1.00%,F,T)



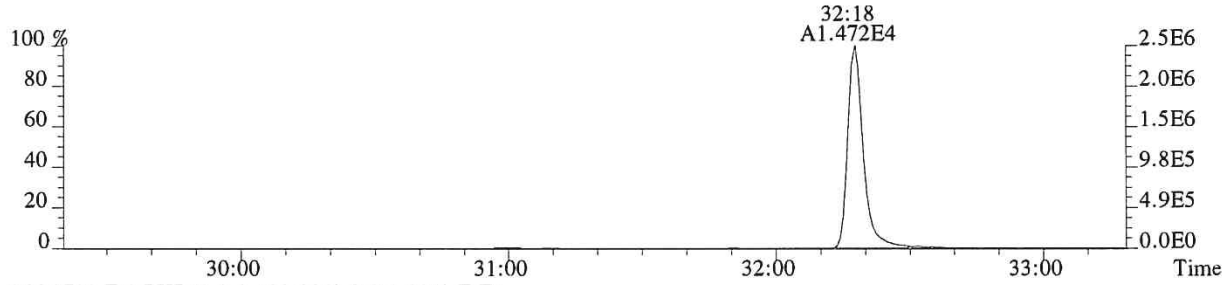
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,436.0,1.00%,F,T)



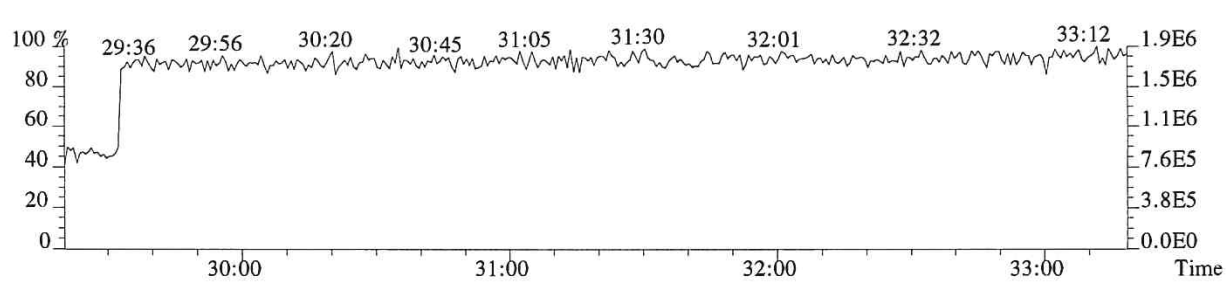
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,588.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,928.0,1.00%,F,T)

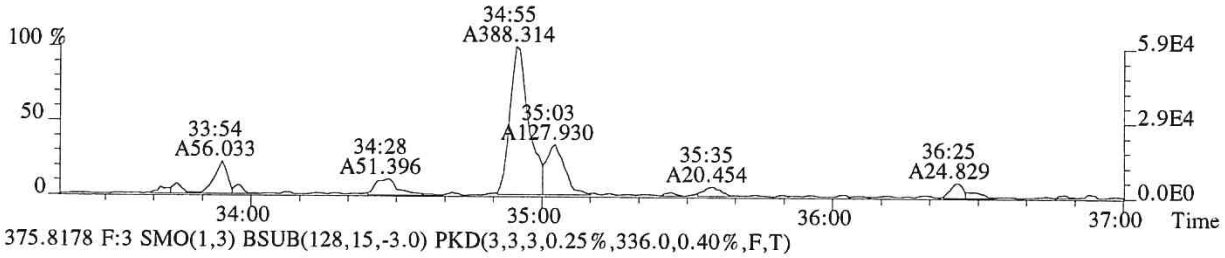


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

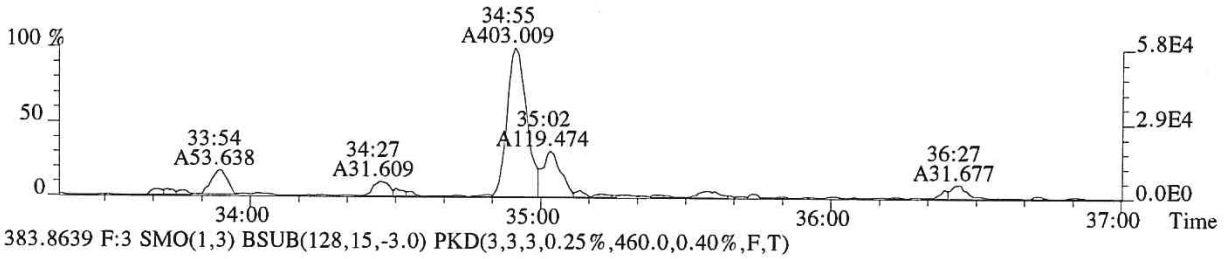


016173

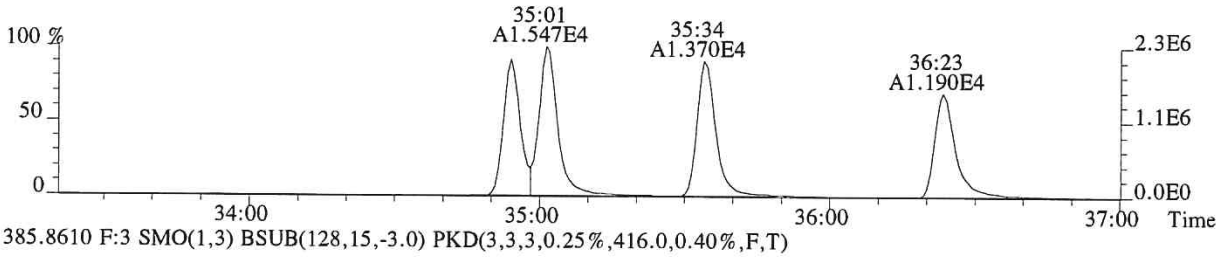
File:P519771 #1-330 Acq: 4-JAN-2019 08:17:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,760.0,0.40%,F,T)



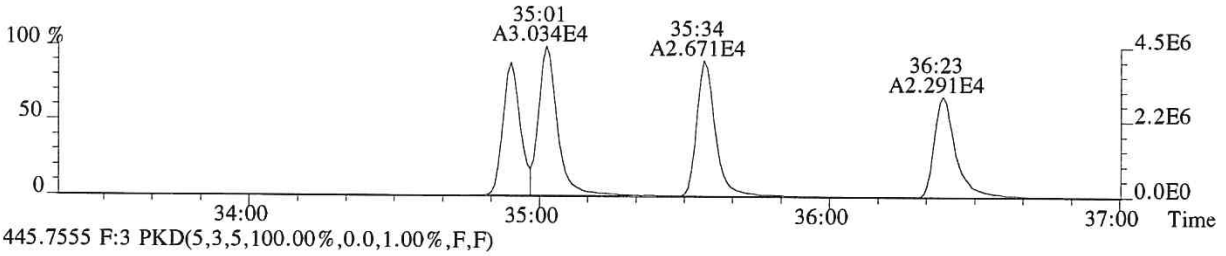
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,336.0,0.40%,F,T)



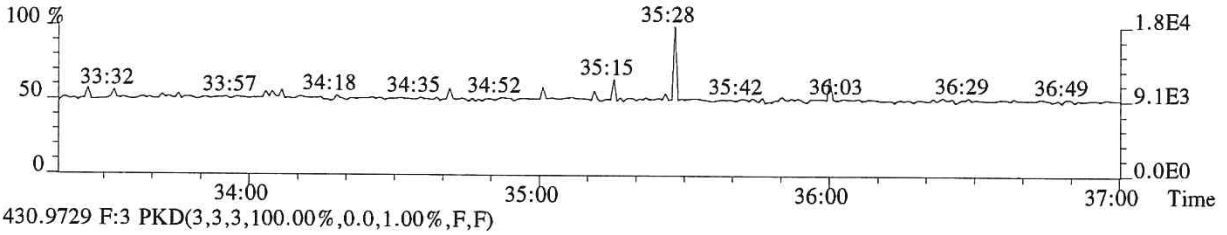
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,460.0,0.40%,F,T)



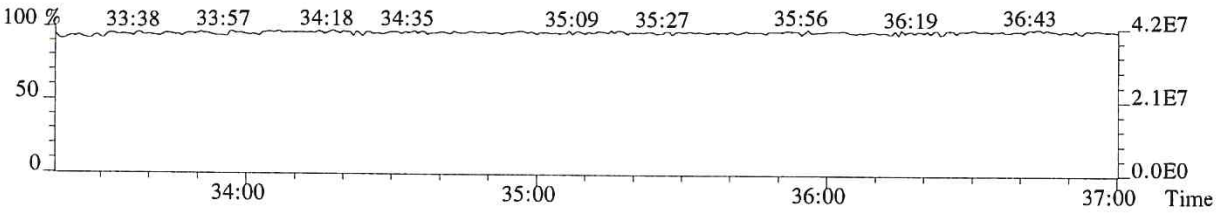
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,416.0,0.40%,F,T)



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

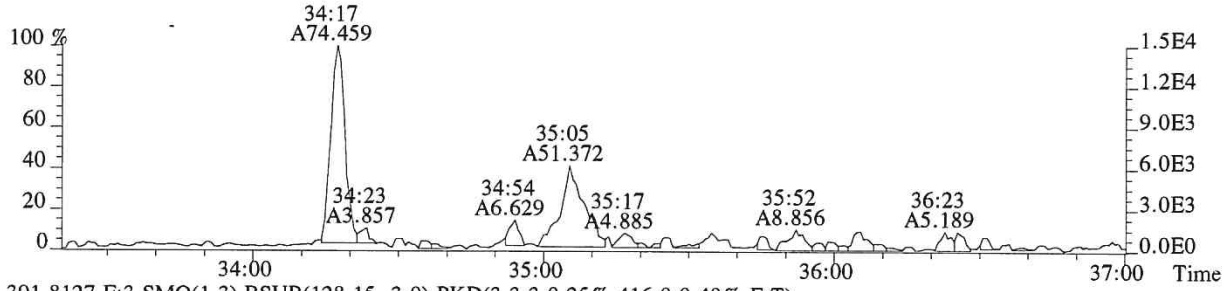


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

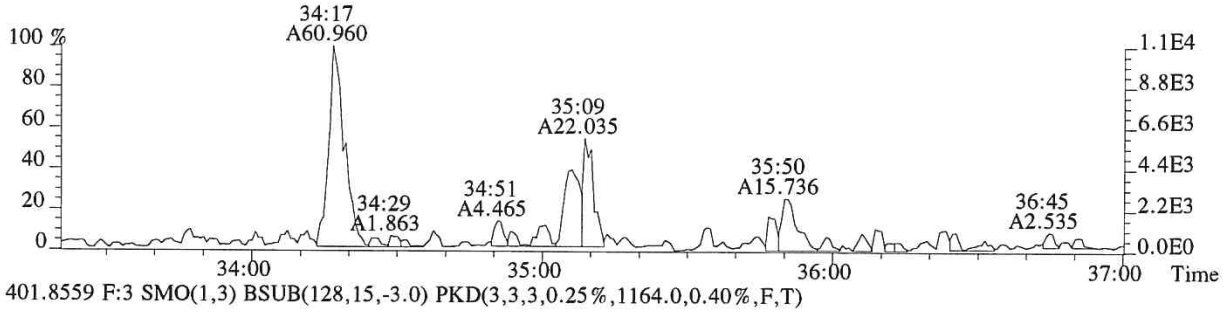


016174

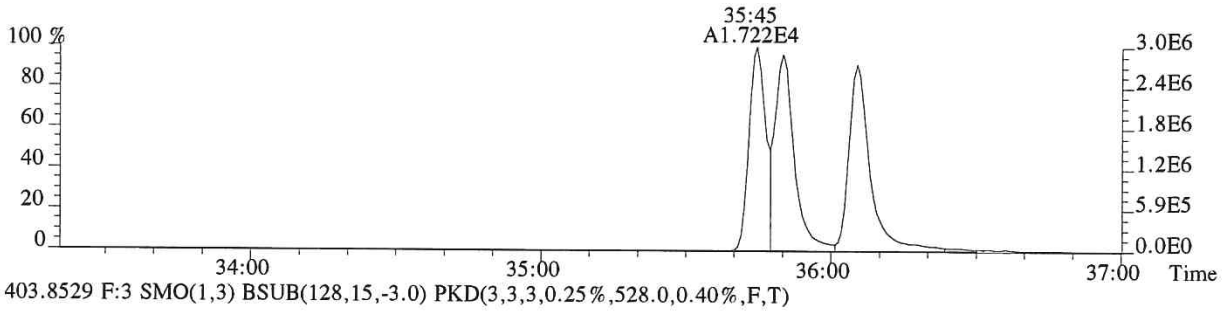
File:P519771 #1-330 Acq: 4-JAN-2019 08:17:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,472.0,0.40%,F,T)



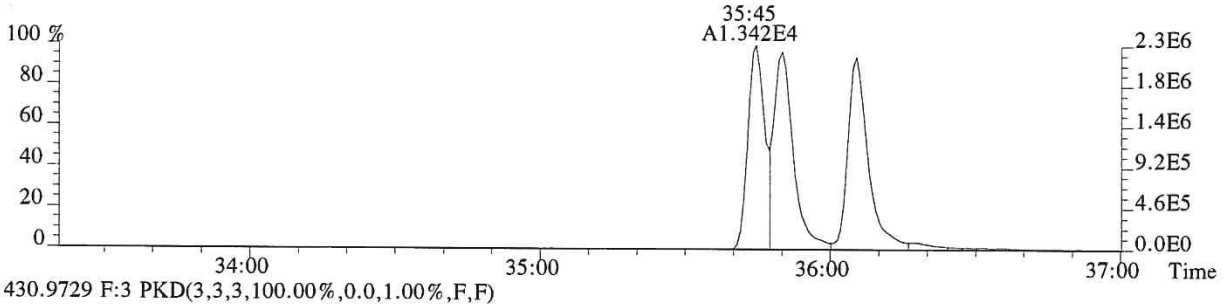
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,416.0,0.40%,F,T)



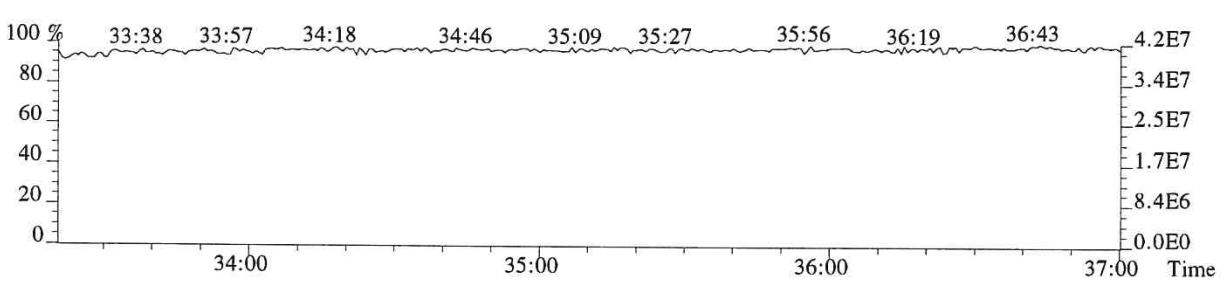
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1164.0,0.40%,F,T)



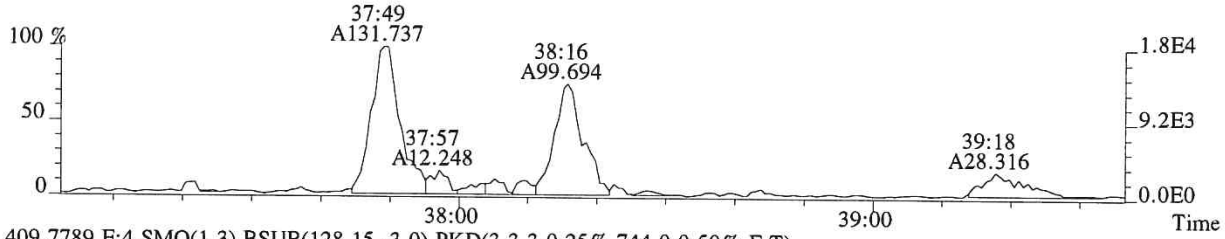
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,528.0,0.40%,F,T)



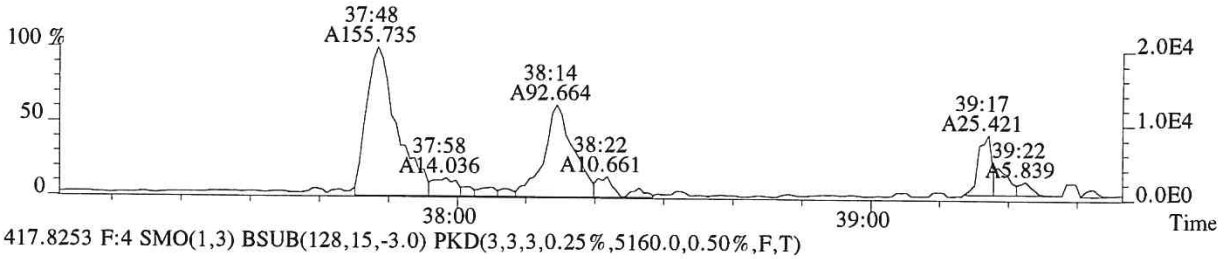
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



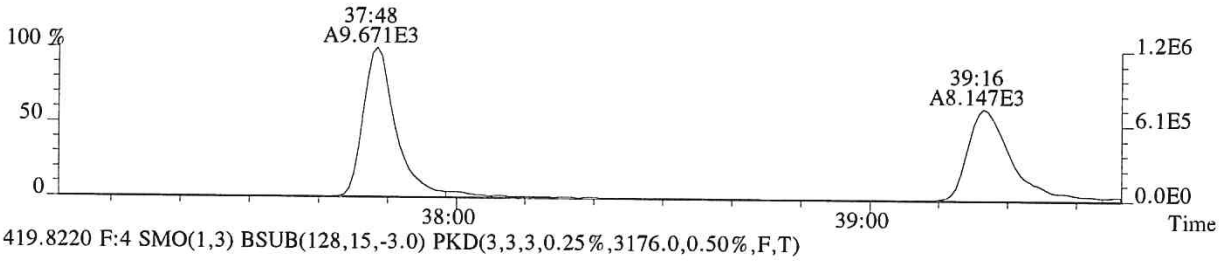
File:P519771 #1-232 Acq: 4-JAN-2019 08:17:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,616.0,0.50%,F,T)



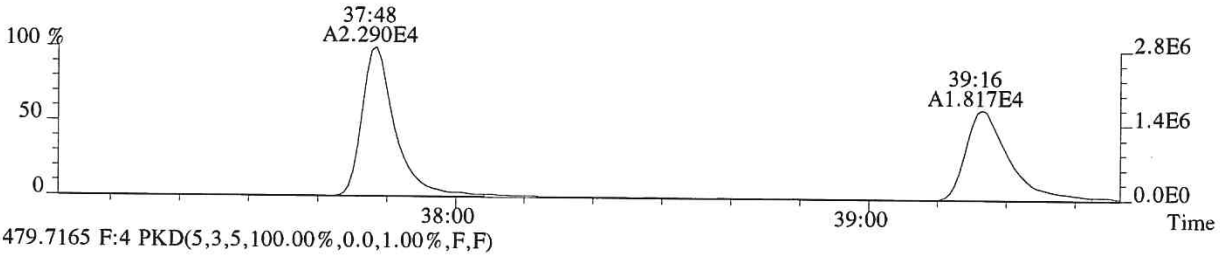
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,744.0,0.50%,F,T)



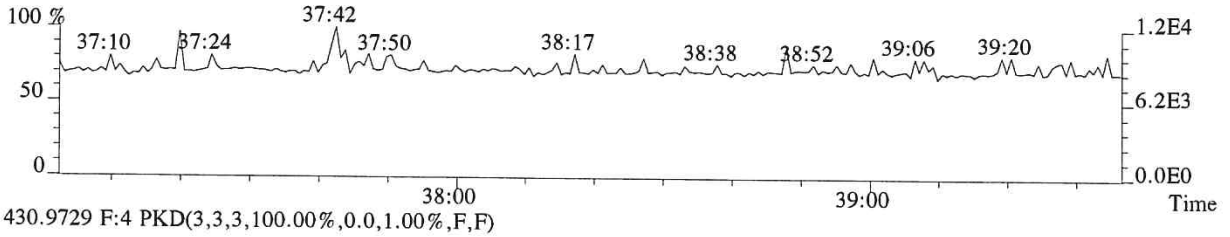
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5160.0,0.50%,F,T)



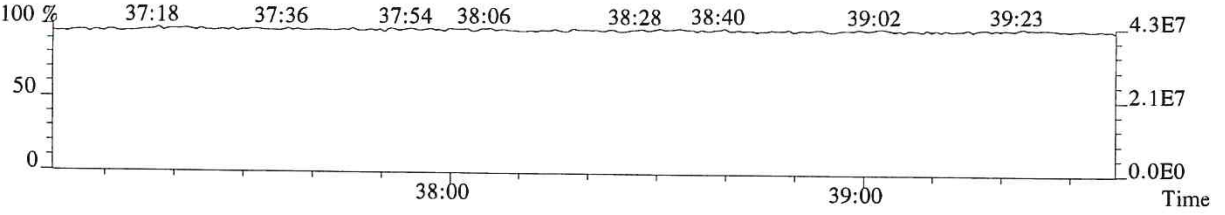
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3176.0,0.50%,F,T)



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

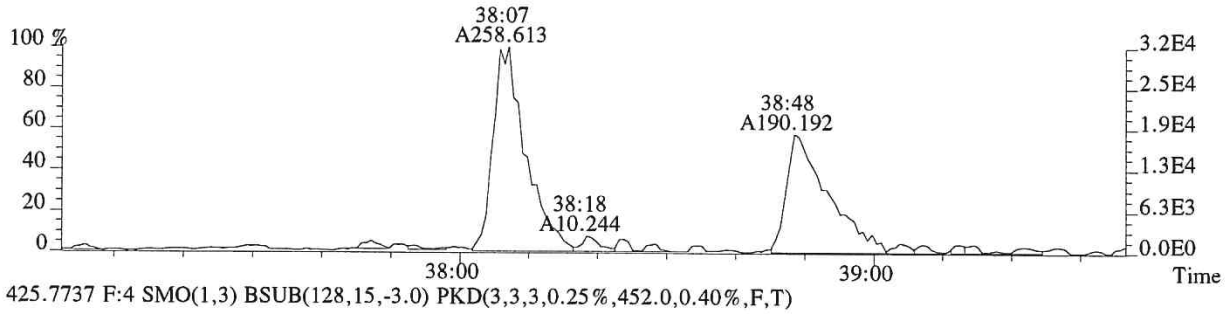


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

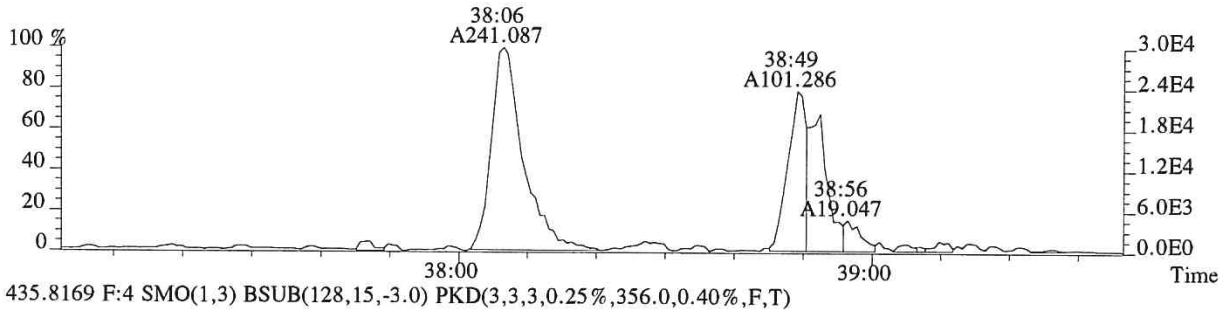


016176

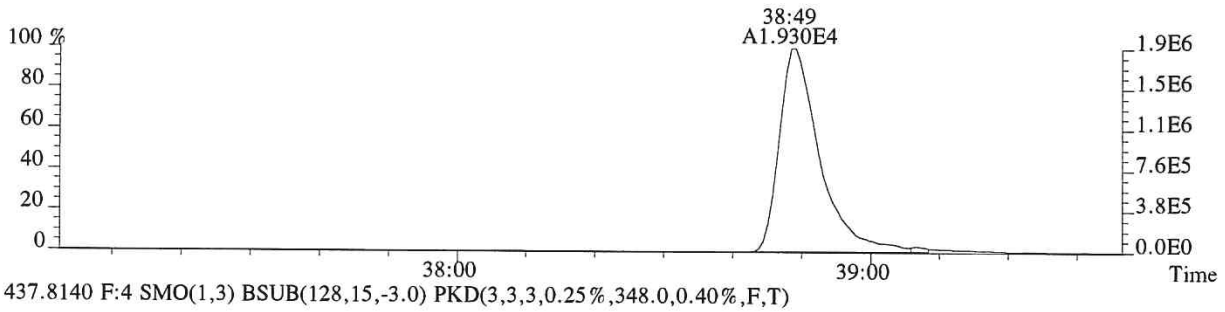
File:P519771 #1-232 Acq: 4-JAN-2019 08:17:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,424.0,0.40%,F,T)



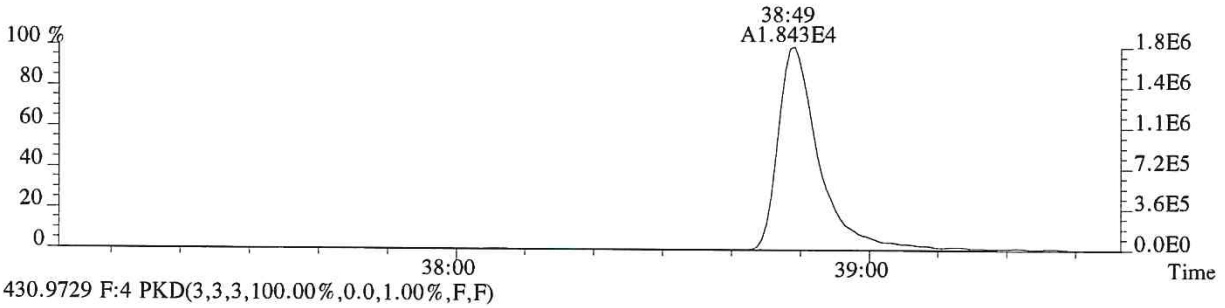
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,452.0,0.40%,F,T)



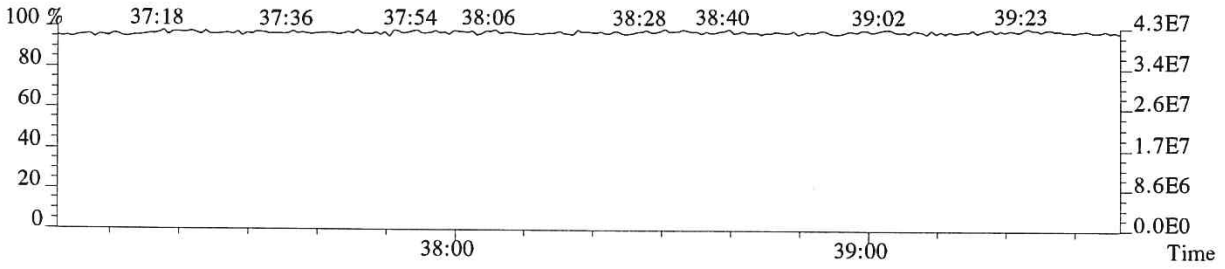
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,356.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,348.0,0.40%,F,T)

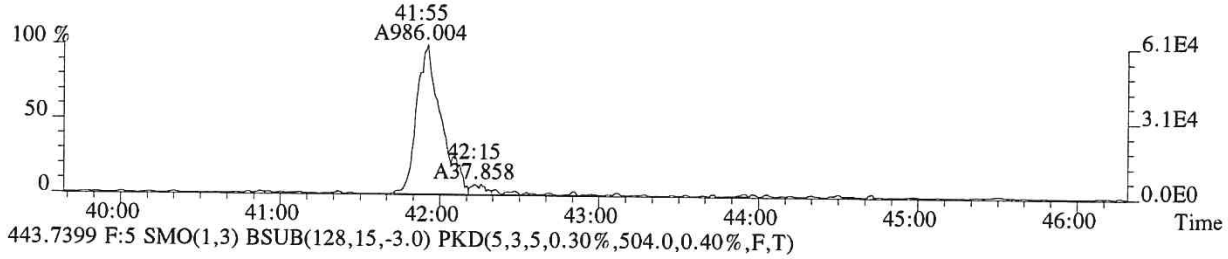


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

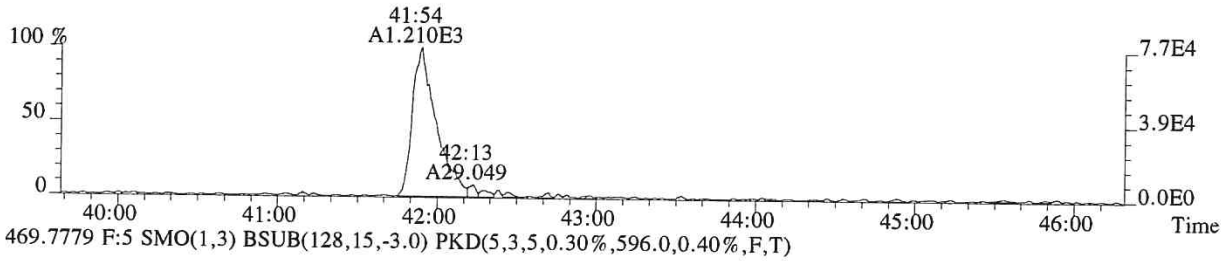


016177

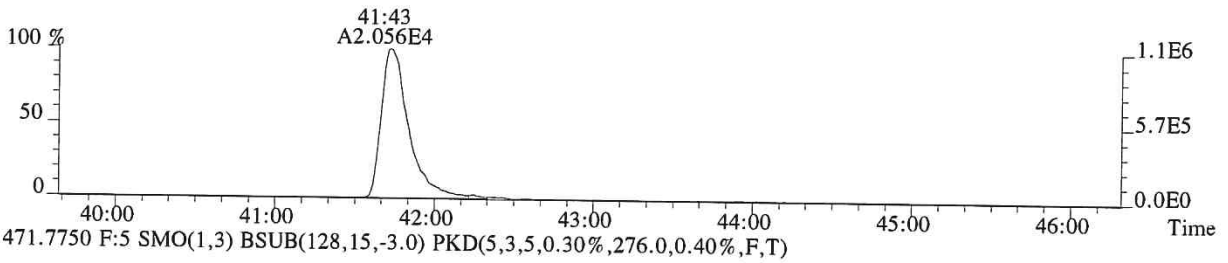
File:P519771 #1-601 Acq: 4-JAN-2019 08:17:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,296.0,0.40%,F,T)



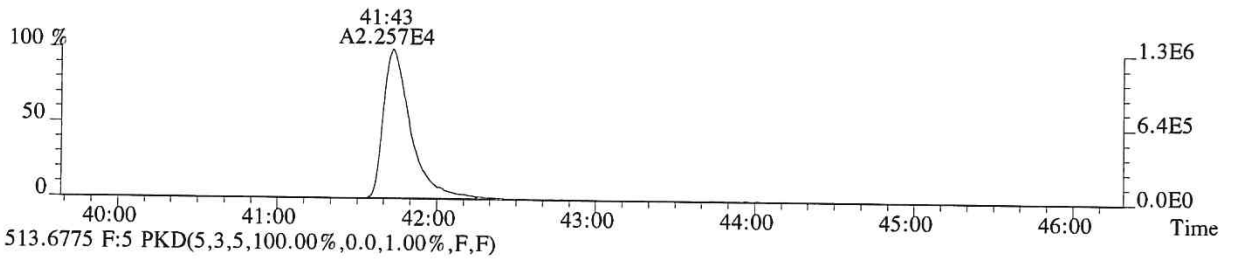
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,504.0,0.40%,F,T)



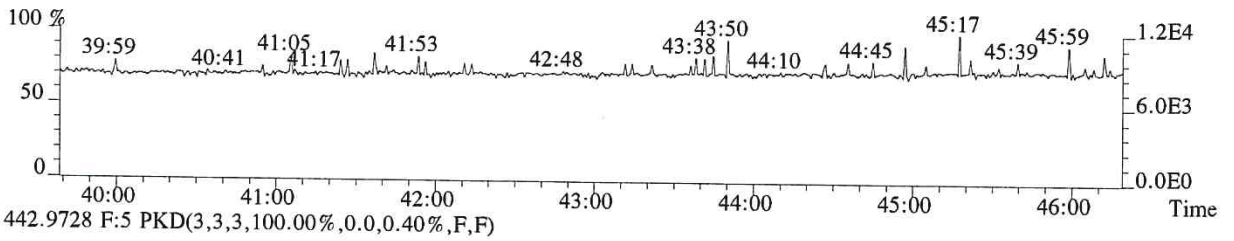
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,596.0,0.40%,F,T)



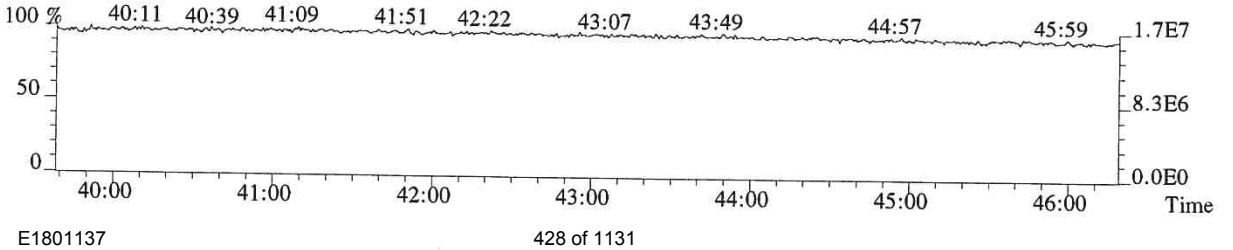
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,276.0,0.40%,F,T)



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

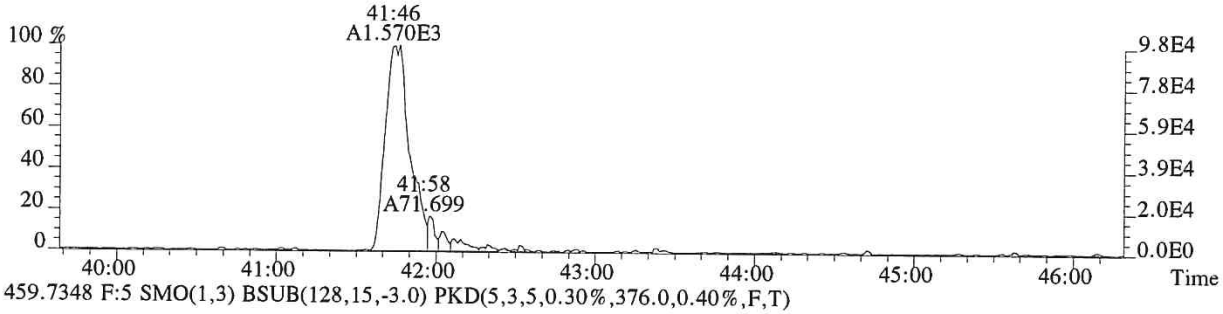


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

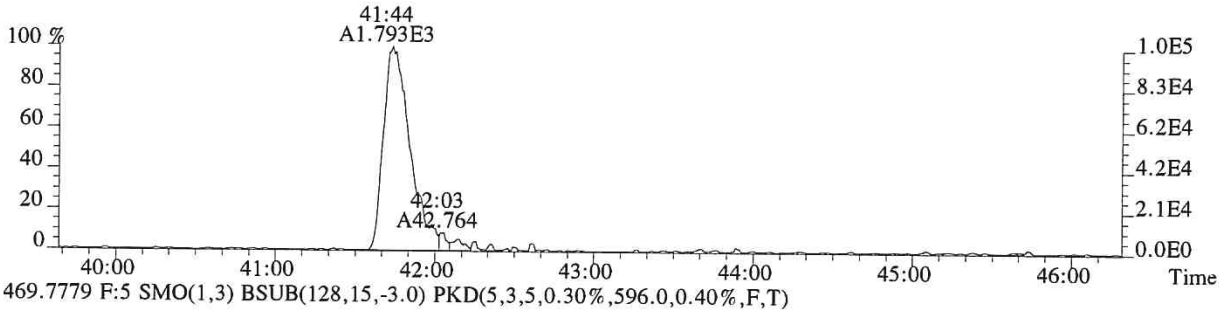


016178

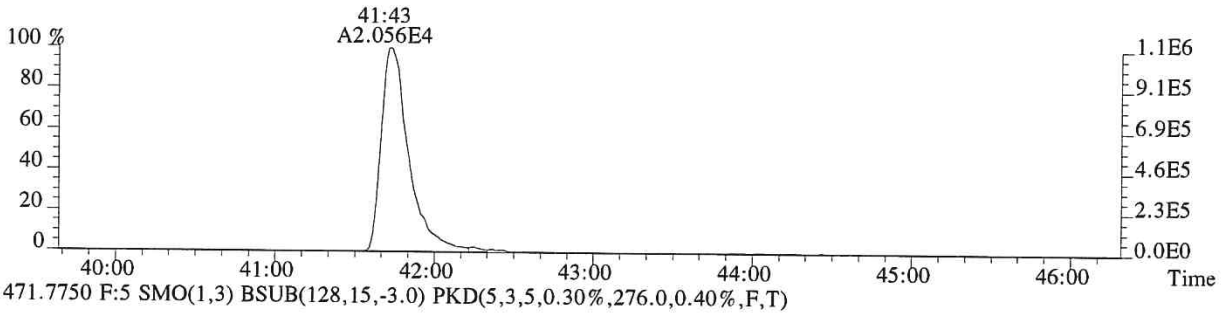
File:P519771 #1-601 Acq: 4-JAN-2019 08:17:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-010DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,236.0,0.40%,F,T)



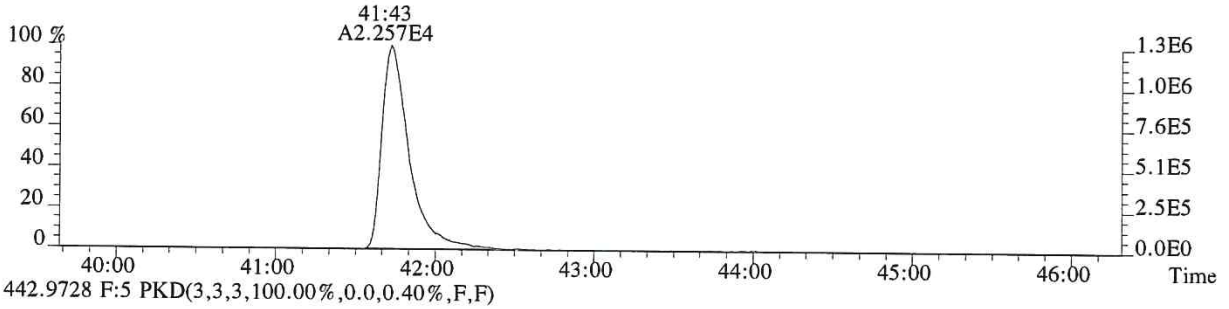
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,376.0,0.40%,F,T)



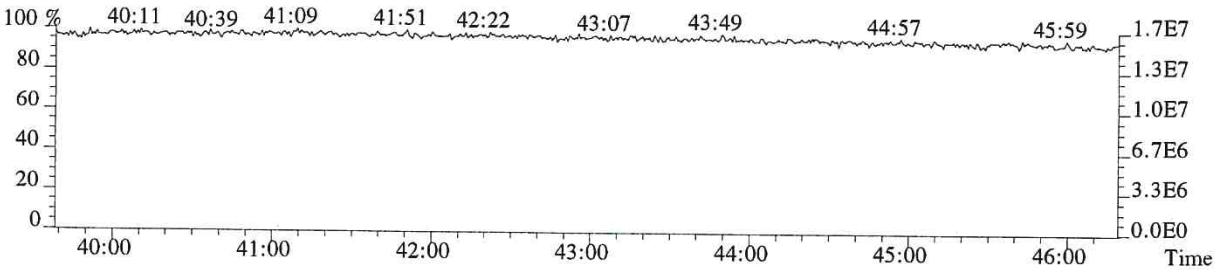
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,596.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,276.0,0.40%,F,T)



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



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0134

Run #11 Filename P519735 Samp: 1 Inj: 1 Acquired: 2-JAN-19 17:47:29
Processed: 3-JAN-19 09:14:24 Sample ID: E1801137-011

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:05	1.302e+03	1.666e+03	0.78	yes	yes	0.942
2	Unk	1,2,3,7,8-PeCDF	30:58	1.254e+02	7.442e+01	1.68	yes	yes	1.012
3	Unk	2,3,4,7,8-PeCDF	31:59	1.062e+02	7.699e+01	1.38	yes	yes	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:54	1.148e+02	8.753e+01	1.31	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:02	7.395e+01	6.020e+01	1.23	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:35	4.876e+01	3.891e+01	1.25	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:23	4.856e+01	5.606e+01	0.87	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:48	1.906e+02	1.783e+02	1.07	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:16	4.112e+01	3.780e+01	1.09	yes	yes	1.258
10	Unk	OCDF	41:55	8.235e+02	1.059e+03	0.78	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:04	3.689e+02	5.275e+02	0.70	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:18	5.979e+01	4.184e+01	1.43	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:45	3.043e+01	1.833e+01	1.66	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:50	5.184e+01	5.474e+01	0.95	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:05	1.027e+02	4.438e+01	2.31	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:48	9.231e+02	8.098e+02	1.14	yes	no	1.025
17	Unk	OCDD	41:45	1.310e+04	1.507e+04	0.87	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	1.454e+04	1.887e+04	0.77	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:57	3.177e+04	2.009e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:58	3.095e+04	1.981e+04	1.56	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:54	1.398e+04	2.709e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:01	1.686e+04	3.340e+04	0.50	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:34	1.575e+04	3.003e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:22	1.374e+04	2.679e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:47	1.165e+04	2.694e+04	0.43	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:14	1.023e+04	2.324e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:02	7.844e+03	9.975e+03	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:17	2.481e+04	1.549e+04	1.60	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:44	2.188e+04	1.741e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:49	2.423e+04	1.942e+04	1.25	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:48	2.511e+04	2.392e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	41:45	2.266e+04	2.542e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	3.373e+04	4.243e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:05	4.472e+04	3.522e+04	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:04	1.158e+04				no	1.014

$$\text{OCDD} = \frac{(1.310e+04 + 1.507e+04) \times 4000\ \text{pg} \times 1}{(2.266e+04 + 2.542e+04) \times 10.0\ \text{g} \times 77.6 / 100 \times 1.118} = 270\ \text{ng/kg}$$

LM 01/04/19

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Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0134

Run #11 Filename P519735 Samp: 1 Inj: 1 Acquired: 2-JAN-19 17:47:29
Processed: 3-JAN-19 09:14:24 LAB. ID: E1801137-011

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.74e+05	8.80e+02	2.0e+02	2.30e+05	1.71e+03	1.3e+02
2	1,2,3,7,8-PeCDF	2.01e+04	6.96e+02	2.9e+01	1.04e+04	1.49e+03	7.0e+00
3	2,3,4,7,8-PeCDF	1.62e+04	6.96e+02	2.3e+01	9.89e+03	1.49e+03	6.6e+00
4	1,2,3,4,7,8-HxCDF	1.93e+04	5.00e+02	3.9e+01	1.49e+04	6.24e+02	2.4e+01
5	1,2,3,6,7,8-HxCDF	1.22e+04	5.00e+02	2.4e+01	1.01e+04	6.24e+02	1.6e+01
6	2,3,4,6,7,8-HxCDF	8.87e+03	5.00e+02	1.8e+01	6.26e+03	6.24e+02	1.0e+01
7	1,2,3,7,8,9-HxCDF	8.27e+03	5.00e+02	1.7e+01	6.53e+03	6.24e+02	1.0e+01
8	1,2,3,4,6,7,8-HpCDF	2.74e+04	1.01e+03	2.7e+01	2.62e+04	1.18e+03	2.2e+01
9	1,2,3,4,7,8,9-HpCDF	5.17e+03	1.01e+03	5.1e+00	6.24e+03	1.18e+03	5.3e+00
10	OCDF	5.31e+04	3.36e+02	1.6e+02	7.34e+04	1.00e+03	7.3e+01
11	2,3,7,8-TCDD	6.71e+04	2.13e+03	3.2e+01	8.27e+04	1.31e+03	6.3e+01
12	1,2,3,7,8-PeCDD	1.13e+04	1.04e+03	1.1e+01	7.28e+03	4.68e+02	1.6e+01
13	1,2,3,4,7,8-HxCDD	6.90e+03	1.08e+03	6.4e+00	4.90e+03	1.20e+03	4.1e+00
14	1,2,3,6,7,8-HxCDD	8.79e+03	1.08e+03	8.1e+00	8.49e+03	1.20e+03	7.1e+00
15	1,2,3,7,8,9-HxCDD	1.33e+04	1.08e+03	1.2e+01	6.31e+03	1.20e+03	5.3e+00
16	1,2,3,4,6,7,8-HpCDD	9.69e+04	7.80e+02	1.2e+02	8.78e+04	1.32e+03	6.6e+01
17	OCDD	7.78e+05	3.68e+02	2.1e+03	9.27e+05	5.92e+02	1.6e+03
18	13C-2,3,7,8-TCDF	2.15e+06	5.68e+03	3.8e+02	2.74e+06	2.93e+03	9.4e+02
19	13C-1,2,3,7,8-PeCDF	4.98e+06	7.92e+02	6.3e+03	3.17e+06	4.60e+02	6.9e+03
20	13C-2,3,4,7,8-PeCDF	5.13e+06	7.92e+02	6.5e+03	3.35e+06	4.60e+02	7.3e+03
21	13C-1,2,3,4,7,8-HxCDF	2.55e+06	9.64e+02	2.6e+03	4.87e+06	7.56e+02	6.4e+03
22	13C-1,2,3,6,7,8-HxCDF	2.66e+06	9.64e+02	2.8e+03	5.30e+06	7.56e+02	7.0e+03
23	13C-2,3,4,6,7,8-HxCDF	2.57e+06	9.64e+02	2.7e+03	4.96e+06	7.56e+02	6.6e+03
24	13C-1,2,3,7,8,9-HxCDF	1.95e+06	9.64e+02	2.0e+03	3.75e+06	7.56e+02	5.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.52e+06	3.46e+03	4.4e+02	3.51e+06	2.82e+03	1.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	9.87e+05	3.46e+03	2.8e+02	2.34e+06	2.82e+03	8.3e+02
27	13C-2,3,7,8-TCDD	1.25e+06	6.82e+03	1.8e+02	1.57e+06	5.06e+03	3.1e+02
28	13C-1,2,3,7,8-PeCDD	4.08e+06	1.01e+03	4.0e+03	2.56e+06	1.32e+03	1.9e+03
29	13C-1,2,3,4,7,8-HxCDD	3.85e+06	1.14e+03	3.4e+03	3.06e+06	6.76e+02	4.5e+03
30	13C-1,2,3,6,7,8-HxCDD	3.63e+06	1.14e+03	3.2e+03	2.94e+06	6.76e+02	4.4e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.68e+06	5.80e+02	4.6e+03	2.53e+06	6.84e+02	3.7e+03
32	13C-OCDD	1.42e+06	5.48e+02	2.6e+03	1.55e+06	3.72e+02	4.2e+03
33	13C-1,2,3,4-TCDD	5.39e+06	6.82e+03	7.9e+02	6.78e+06	5.06e+03	1.3e+03
34	13C-1,2,3,7,8,9-HxCDD	6.45e+06	1.14e+03	5.7e+03	5.02e+06	6.76e+02	7.4e+03
35	37Cl-2,3,7,8-TCDD	1.79e+06	1.20e+03	1.5e+03			

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Peak List Summary

CLIENT ID.
SL0134

Entry: 36 Totals Name: Total Tetra-Furans

Run: 11 File: P519735 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 17:47:29 Processed: 3-JAN-19 09:14:24

Mass: 303.9020 305.8990 Tot Response: 4.99e+03 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	23:11	4.93e+01	5.65e+01	0.87	yes	1.06e+02		n	n
2	23:51	3.94e+01	4.63e+01	0.85	yes	8.57e+01		n	n
3	24:27	2.40e+01	2.79e+01	0.86	yes	5.19e+01		n	n
4	25:05	5.20e+02	6.66e+02	0.78	yes	1.19e+03		n	n
5	25:59	6.71e+01	7.70e+01	0.87	yes	1.44e+02		y	y
6	26:05	1.30e+03	1.67e+03	0.78	yes	2.97e+03	2,3,7,8-TCDF	y	n
7	26:29	1.03e+02	1.24e+02	0.83	yes	2.27e+02		n	n
8	28:15	9.48e+01	1.24e+02	0.77	yes	2.18e+02		n	n

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Peak List Summary

CLIENT ID.
SL0134

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 11 File: P519735 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 17:47:29 Processed: 3-JAN-19 09:14:24

Mass: 319.8970 321.8940 Tot Response: 1.19e+03 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:42	1.13e+02	1.60e+02	0.71	yes	2.73e+02		n	n
2	26:45	6.67e+00	9.44e+00	0.71	yes	1.61e+01		n	n
3	27:04	3.69e+02	5.27e+02	0.70	yes	8.96e+02	2,3,7,8-TCDD	n	n

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Peak List Summary

CLIENT ID.
SL0134

Entry: 39 Totals Name: Total Penta-Furans2

Run: 11 File: P519735 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 17:47:29 Processed: 3-JAN-19 09:14:24

Mass: 339.8600 341.8570 Tot Response: 3.83e+02 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:58	1.25e+02	7.44e+01	1.68	yes	2.00e+02	1,2,3,7,8-PeCDF	y	y
2	31:59	1.06e+02	7.70e+01	1.38	yes	1.83e+02	2,3,4,7,8-PeCDF	y	y

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Peak List Summary

CLIENT ID.
SL0134

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 11 File: P519735 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 17:47:29 Processed: 3-JAN-19 09:14:24

Mass: 355.8550 357.8520 Tot Response: 2.59e+02 RRF: 0.9565

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:30	9.96e+01	5.77e+01 1.73	yes	1.57e+02		n	n
2	32:18	5.98e+01	4.18e+01 1.43	yes	1.02e+02	1,2,3,7,8-PeCDD	n	n

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Peak List Summary

CLIENT ID.
SL0134

Entry: 41 Totals Name: Total Hexa-Furans

Run: 11 File: P519735 Sample:1 Injection:1 Function:3

Acquired: 2-JAN-19 17:47:29 Processed: 3-JAN-19 09:14:24

Mass: 373.8210 375.8180 Tot Response: 5.03e+02 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:27	4.58e+01	3.34e+01	1.37	yes	7.92e+01		n	n
2	34:54	1.15e+02	8.75e+01	1.31	yes	2.02e+02	1,2,3,4,7,8-HxCDF	n	n
3	35:02	7.40e+01	6.02e+01	1.23	yes	1.34e+02	1,2,3,6,7,8-HxCDF	n	n
4	35:35	4.88e+01	3.89e+01	1.25	yes	8.77e+01	2,3,4,6,7,8-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0134

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 11 File: P519735 Sample:1 Injection:1 Function:3

Acquired: 2-JAN-19 17:47:29 Processed: 3-JAN-19 09:14:24

Mass: 389.8160 391.8130 Tot Response: 1.66e+03 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:17	7.03e+02	5.97e+02 1.18	yes	1.30e+03		n	n
2	35:06	2.03e+02	1.55e+02 1.31	yes	3.58e+02		n	n

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Peak List Summary

CLIENT ID.
SL0134

Entry: 43 Totals Name: Total Hepta-Furans

Run: 11 File: P519735 Sample:1 Injection:1 Function:4

Acquired: 2-JAN-19 17:47:29 Processed: 3-JAN-19 09:14:24

Mass: 407.7820 409.7790 Tot Response: 7.41e+02 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:48	1.91e+02	1.78e+02 1.07	yes	3.69e+02	1,2,3,4,6,7,8-HpCDF	n	n
2	38:13	1.51e+02	1.42e+02 1.06	yes	2.94e+02		n	n
3	39:16	4.11e+01	3.78e+01 1.09	yes	7.89e+01	1,2,3,4,7,8,9-HpCDF	y	y

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Peak List Summary

CLIENT ID.
SL0134

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 11 File: P519735 Sample:1 Injection:1 Function:4

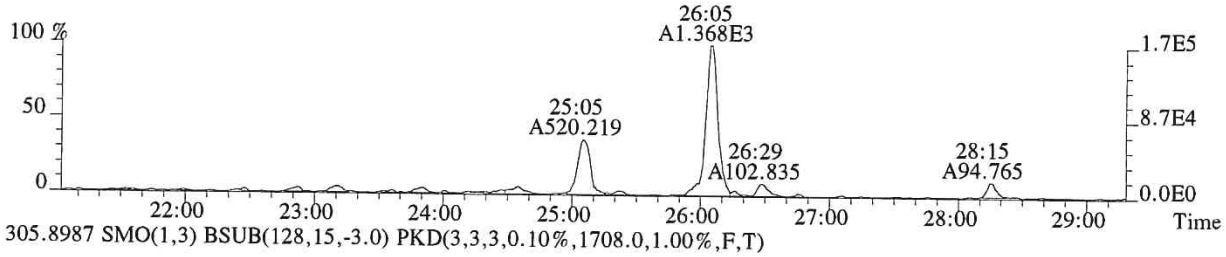
Acquired: 2-JAN-19 17:47:29 Processed: 3-JAN-19 09:14:24

Mass: 423.7770 425.7740 Tot Response: 5.61e+03 RRF: 1.025

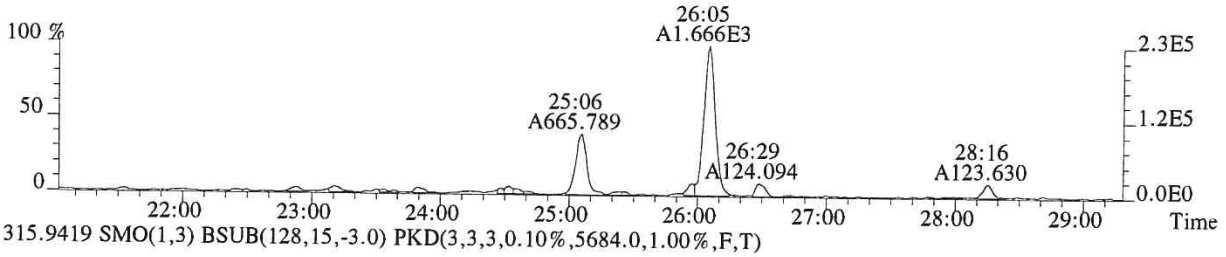
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:06	1.92e+03	1.96e+03 0.98	yes	3.88e+03		n	n
2	38:48	9.23e+02	8.10e+02 1.14	yes	1.73e+03	1,2,3,4,6,7,8-HpCDD	n	n

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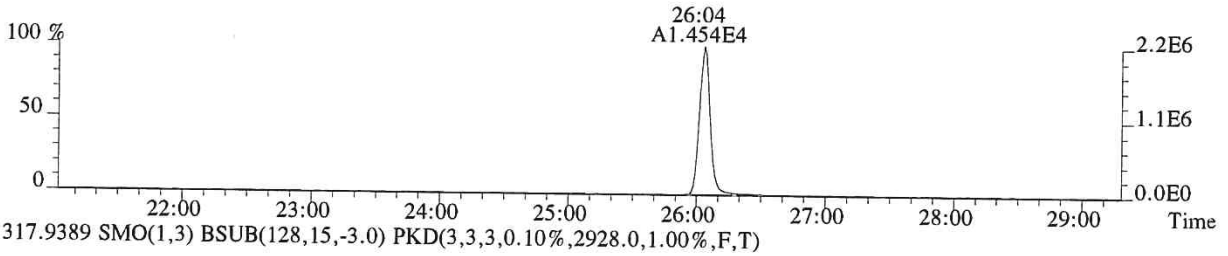
File:P519735 #1-587 Acq: 2-JAN-2019 17:47:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-011
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,880.0,1.00%,F,T)



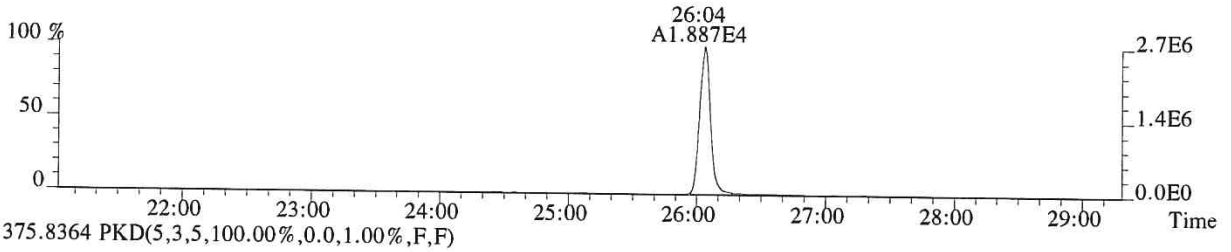
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1708.0,1.00%,F,T)



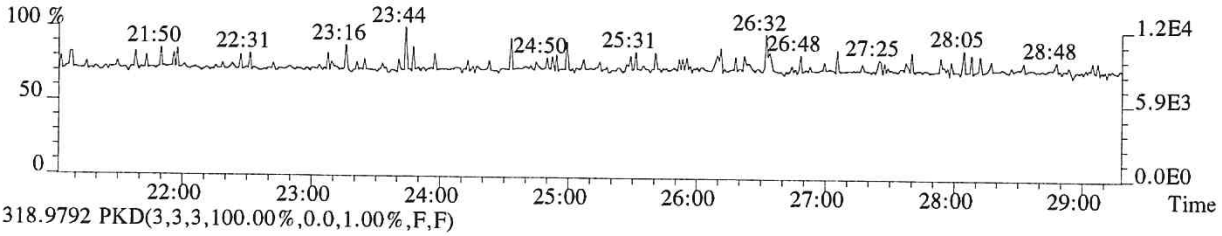
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5684.0,1.00%,F,T)



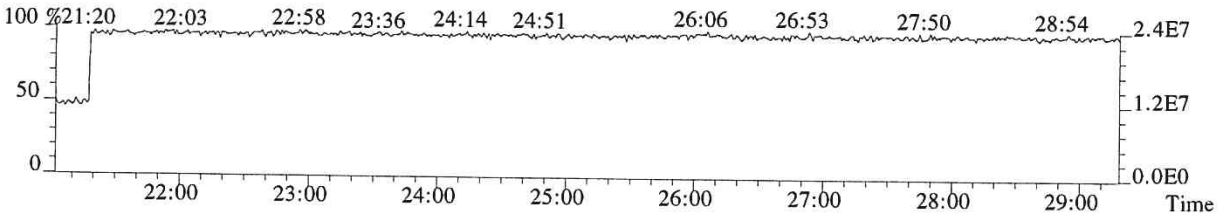
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2928.0,1.00%,F,T)



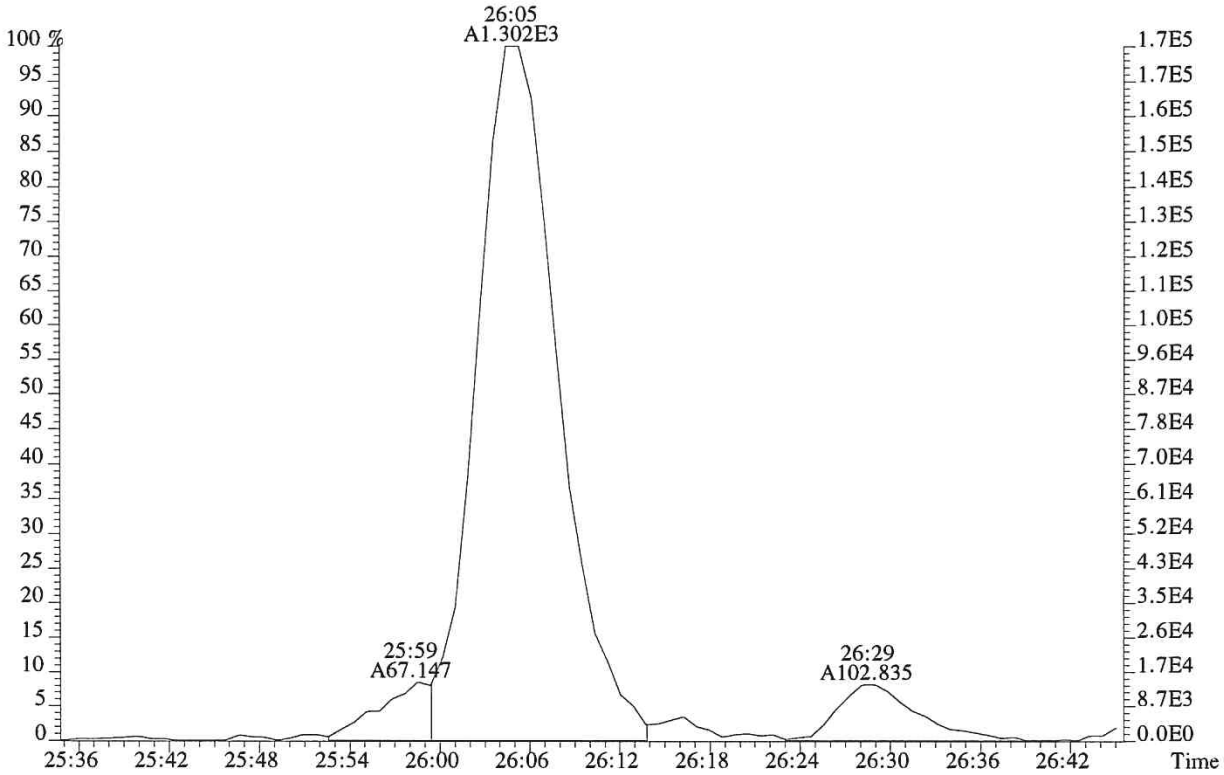
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



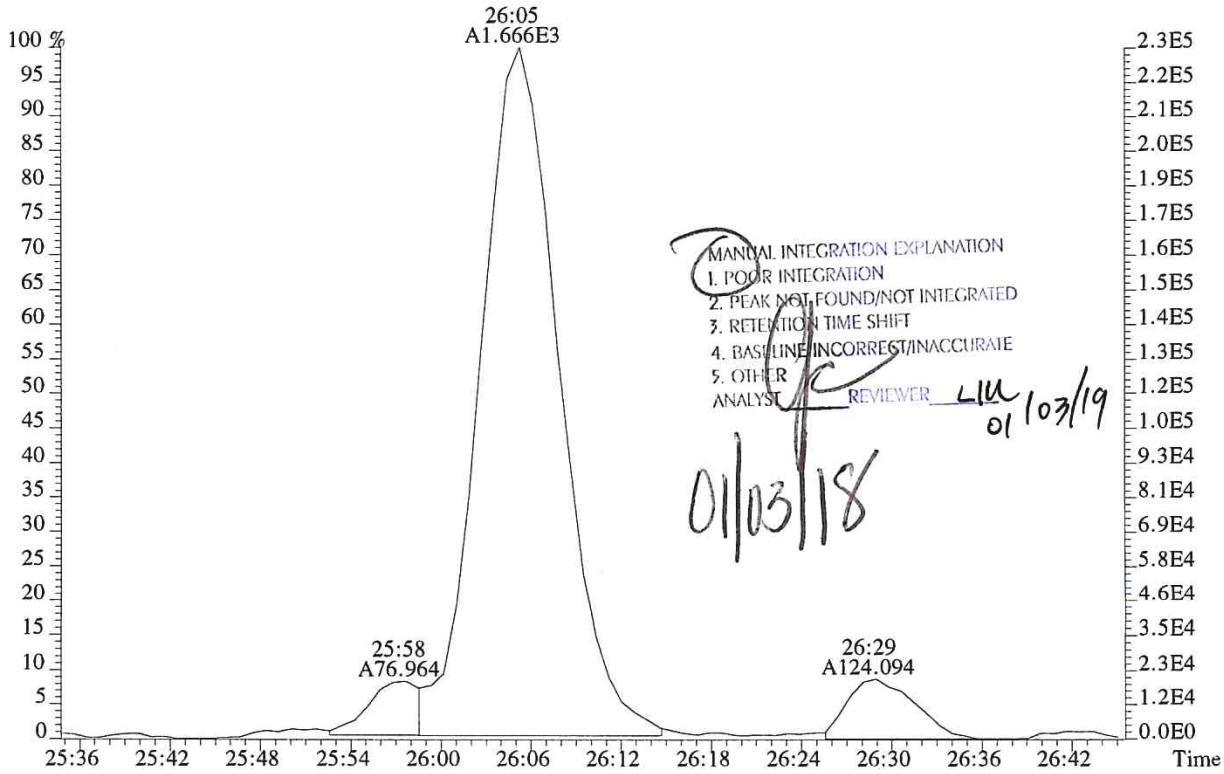
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519735 #1-587 Acq: 2-JAN-2019 17:47:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-011
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,880.0,1.00%,F,T)



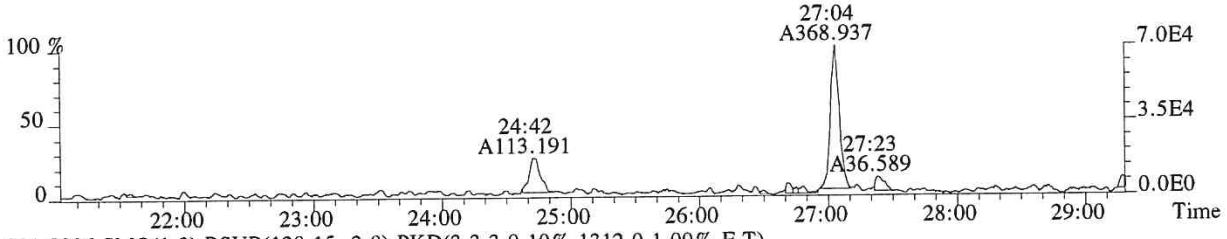
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1708.0,1.00%,F,T)



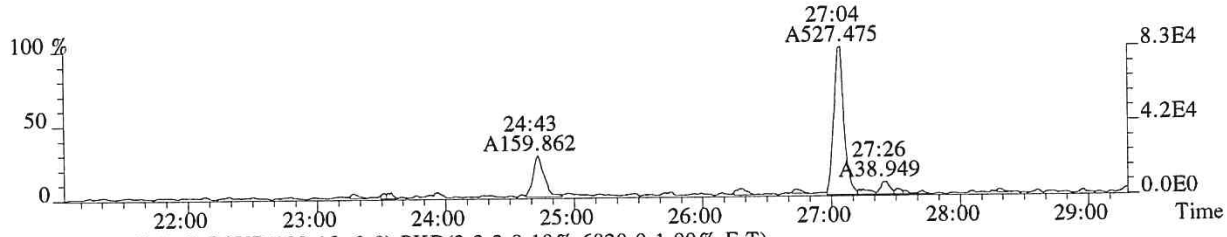
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST 2 REVIEWER LLW 01 1/03/19

01/03/18

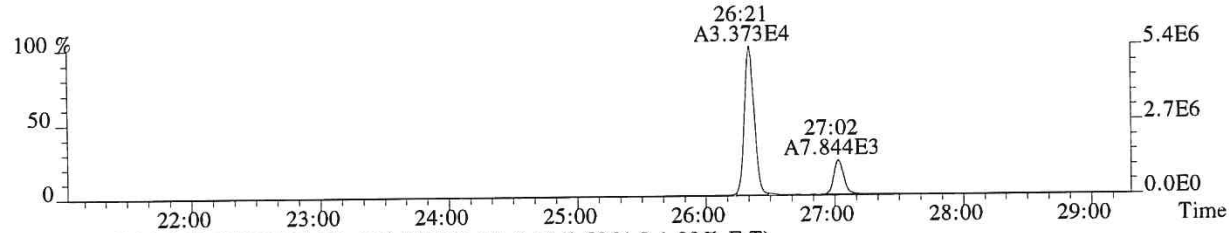
File:P519735 #1-587 Acq: 2-JAN-2019 17:47:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-011
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2128.0,1.00%,F,T)



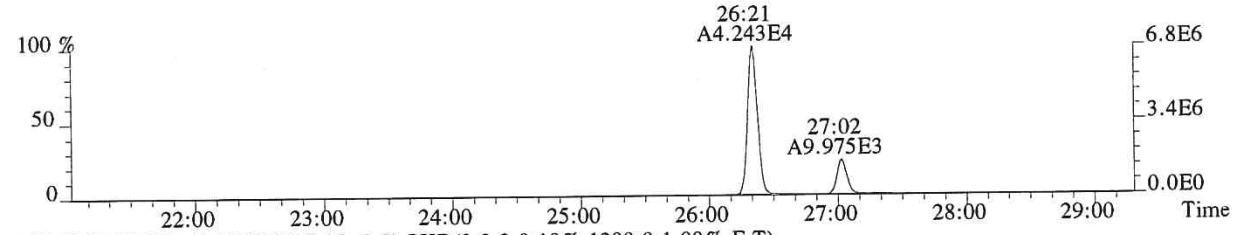
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1312.0,1.00%,F,T)



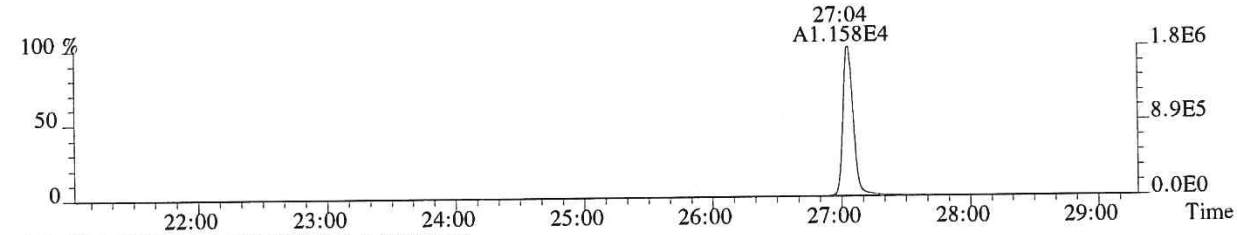
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6820.0,1.00%,F,T)



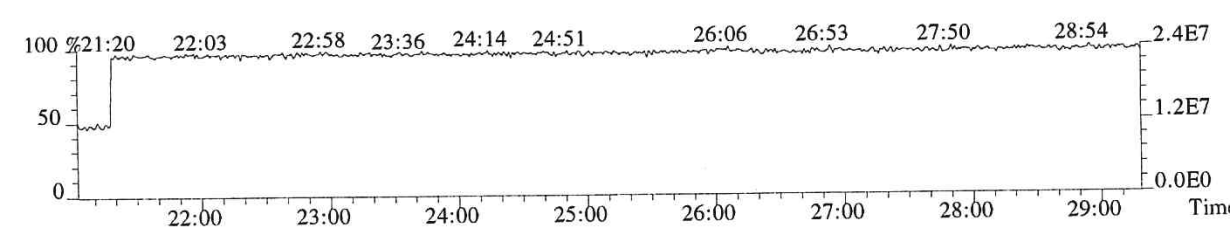
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5064.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1200.0,1.00%,F,T)

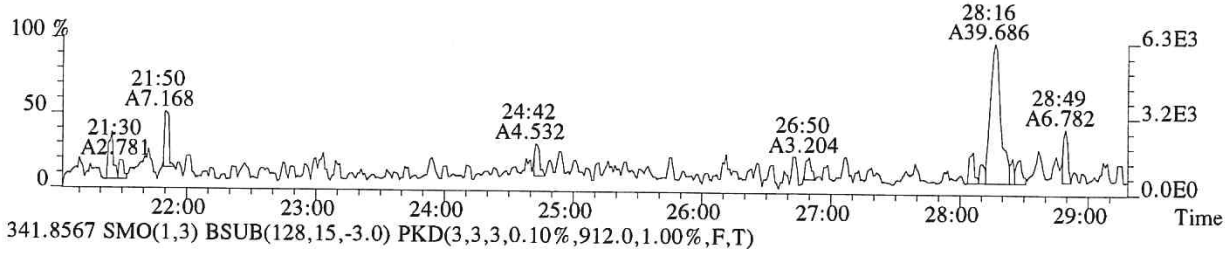


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

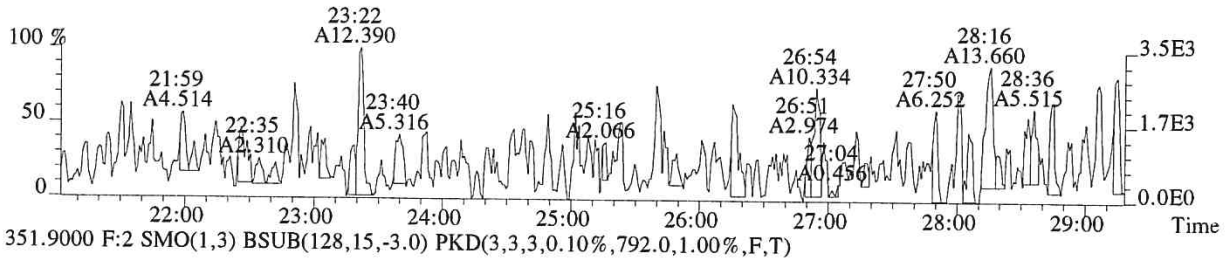


016192

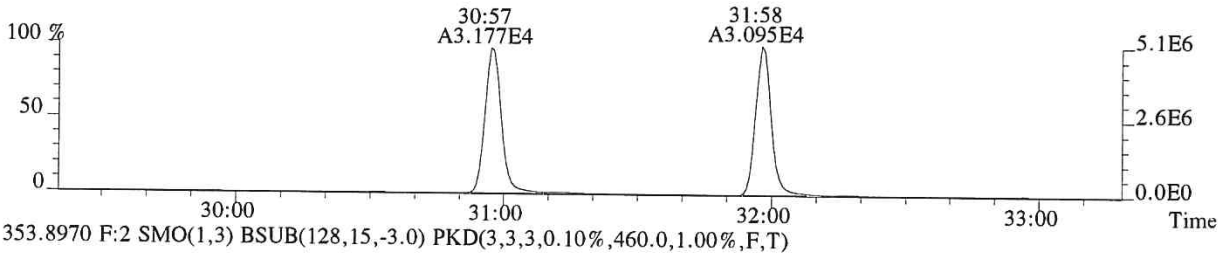
File:P519735 #1-587 Acq: 2-JAN-2019 17:47:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-011
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,936.0,1.00%,F,T)



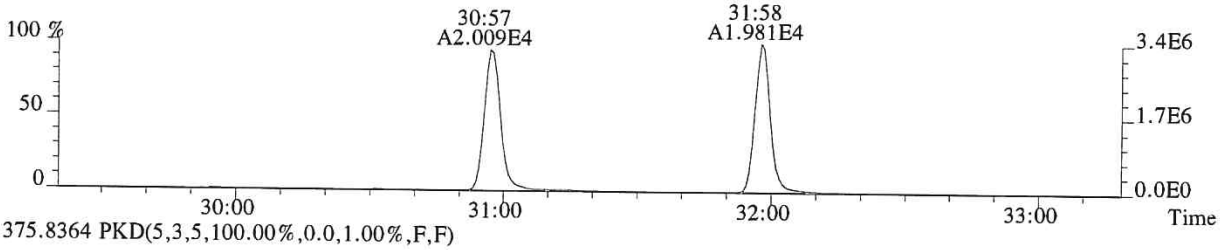
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,912.0,1.00%,F,T)



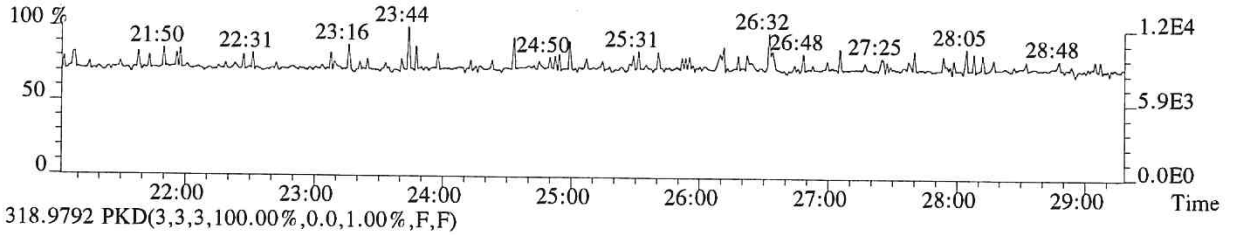
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,792.0,1.00%,F,T)



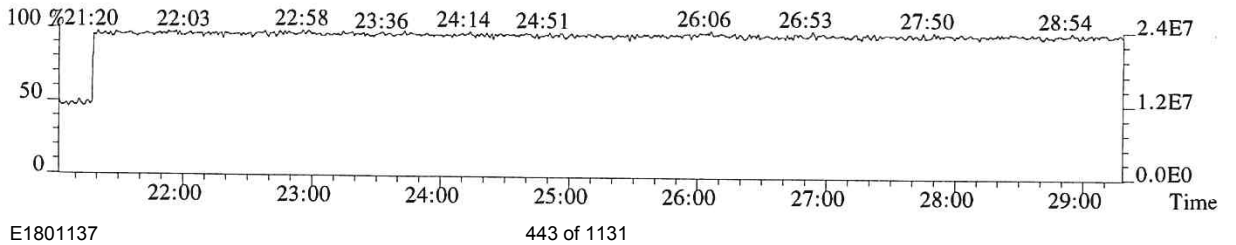
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,460.0,1.00%,F,T)



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

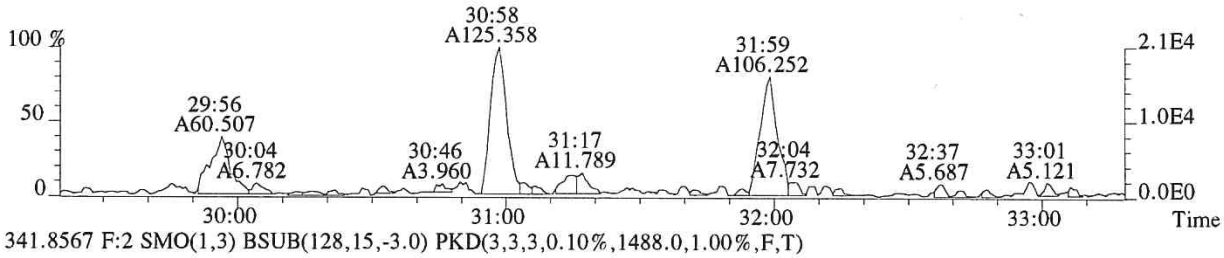


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

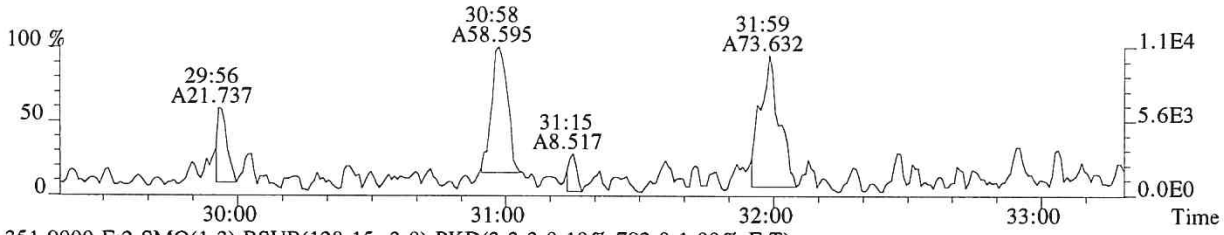


016193

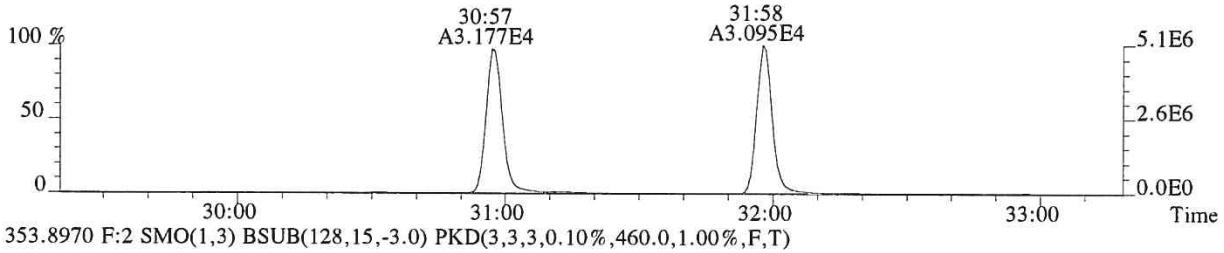
File:P519735 #1-358 Acq: 2-JAN-2019 17:47:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-011
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,696.0,1.00%,F,T)



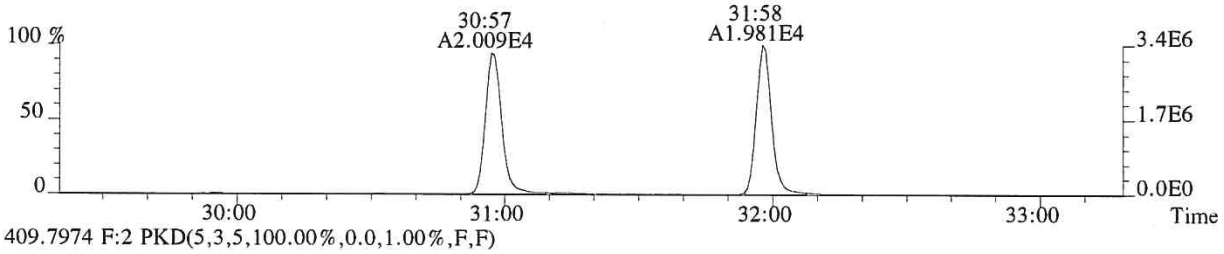
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1488.0,1.00%,F,T)



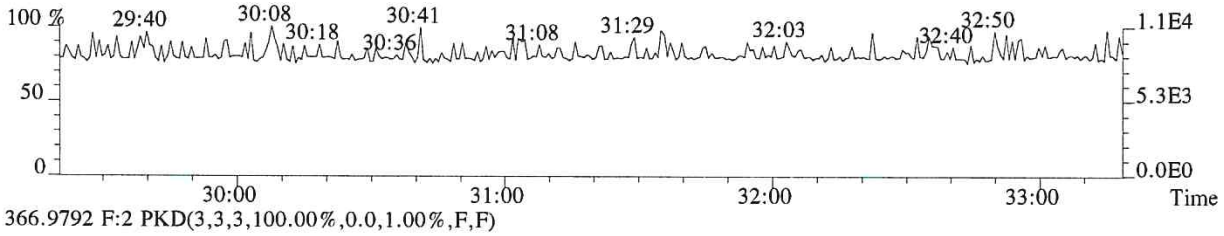
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,792.0,1.00%,F,T)



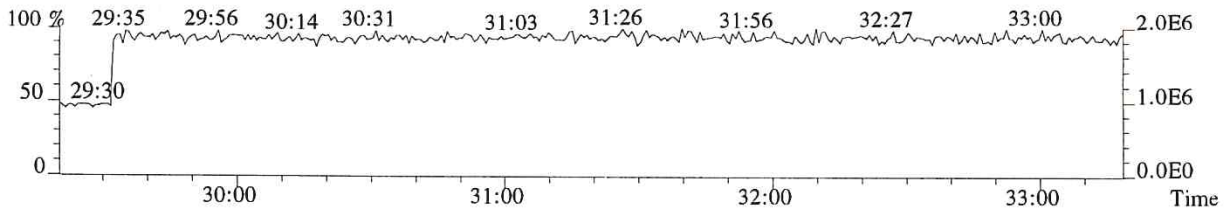
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,460.0,1.00%,F,T)



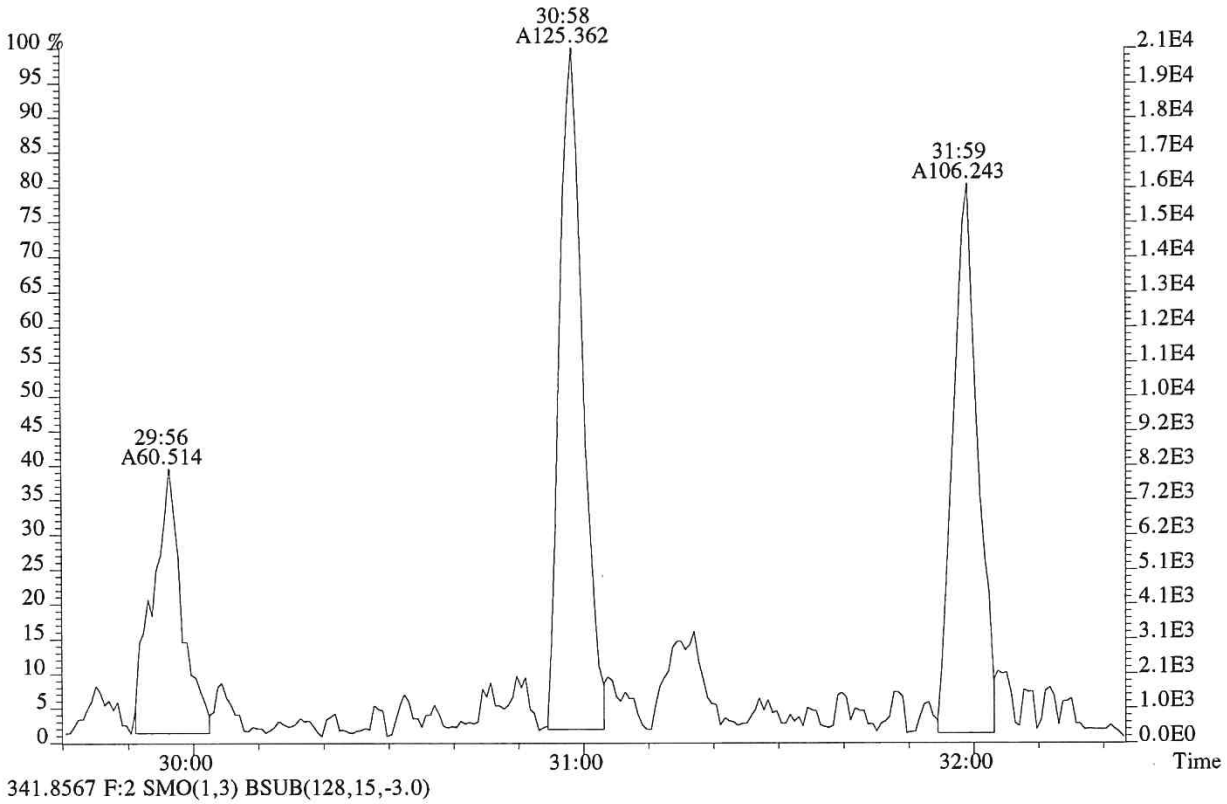
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



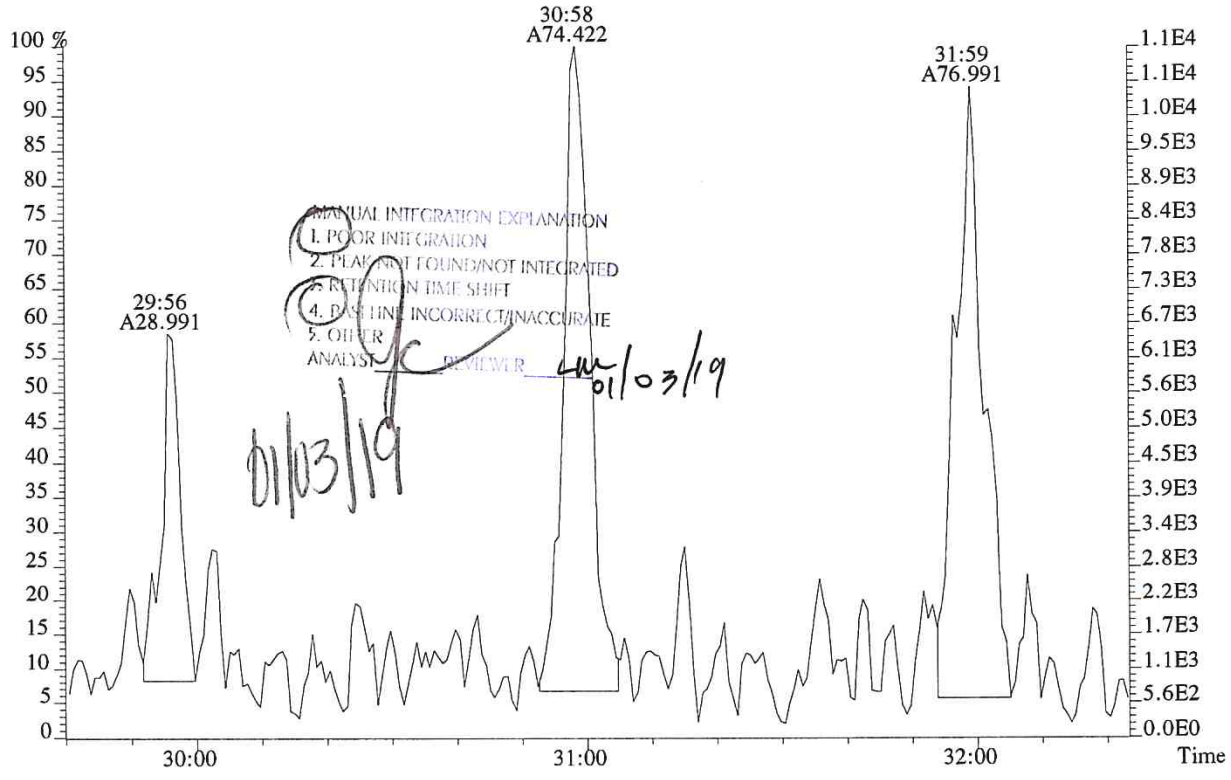
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519735 #1-358 Acq: 2-JAN-2019 17:47:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-011
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0)



341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0)



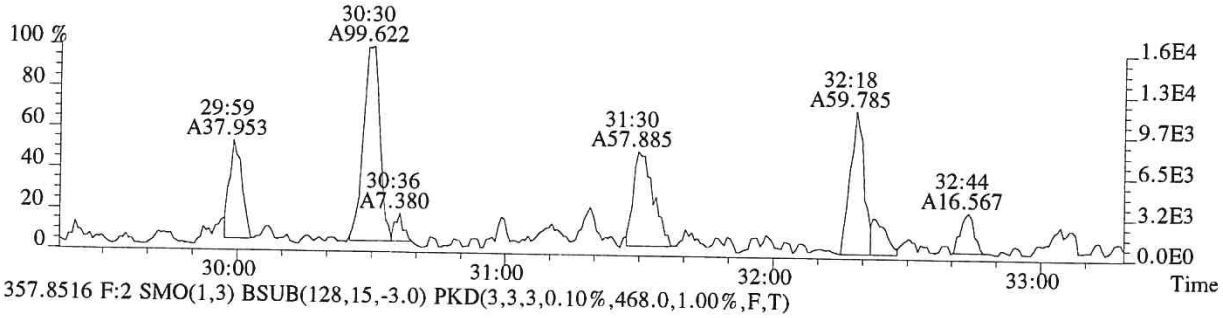
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER

01/03/19

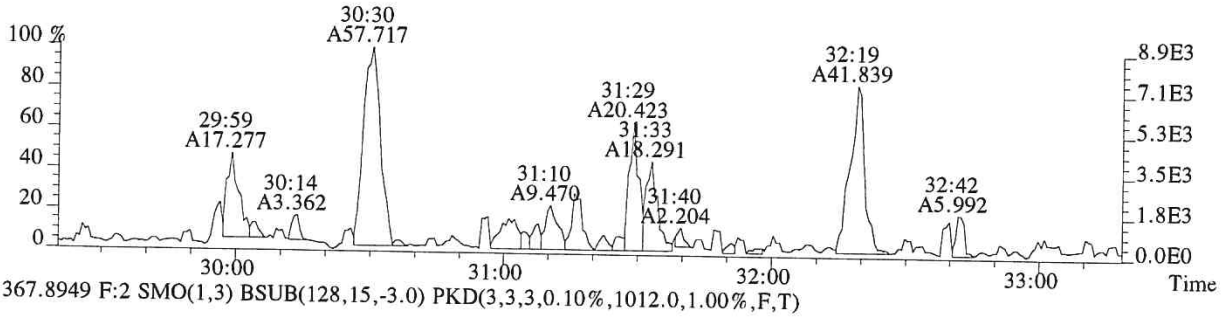
01/03/19

016195

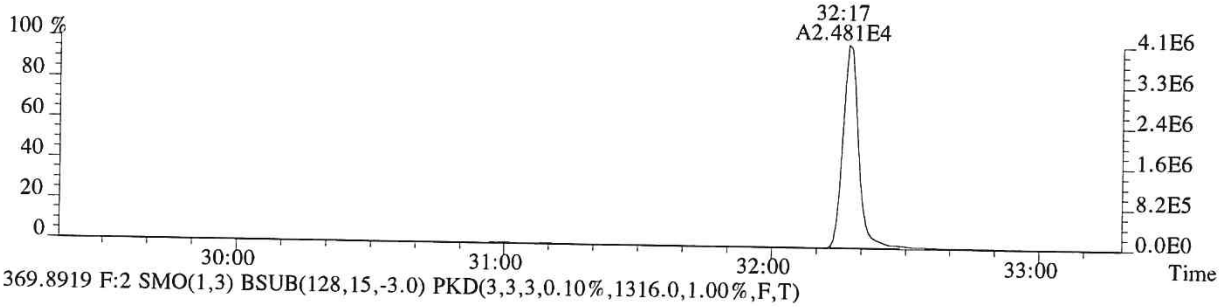
File:P519735 #1-358 Acq: 2-JAN-2019 17:47:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-011
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1040.0,1.00%,F,T)



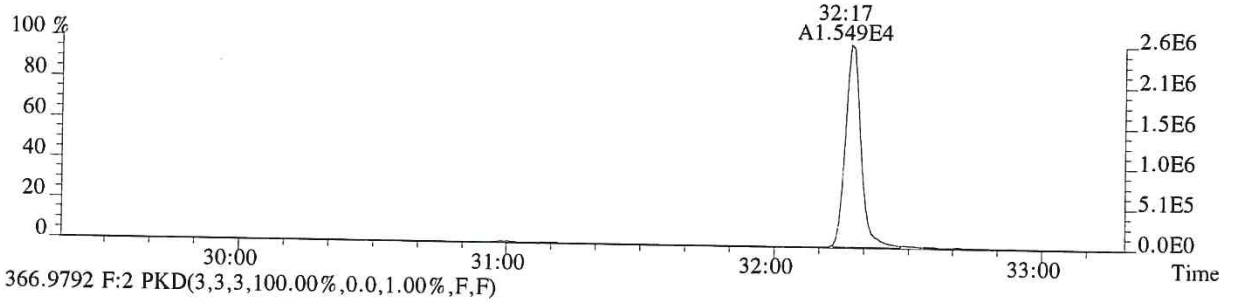
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,468.0,1.00%,F,T)



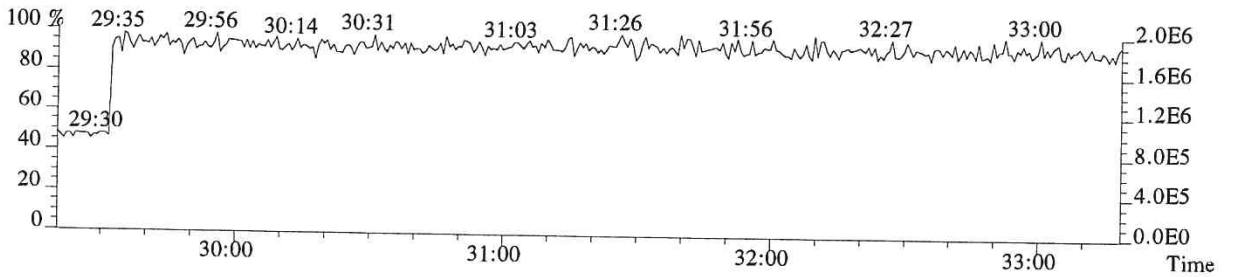
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1012.0,1.00%,F,T)



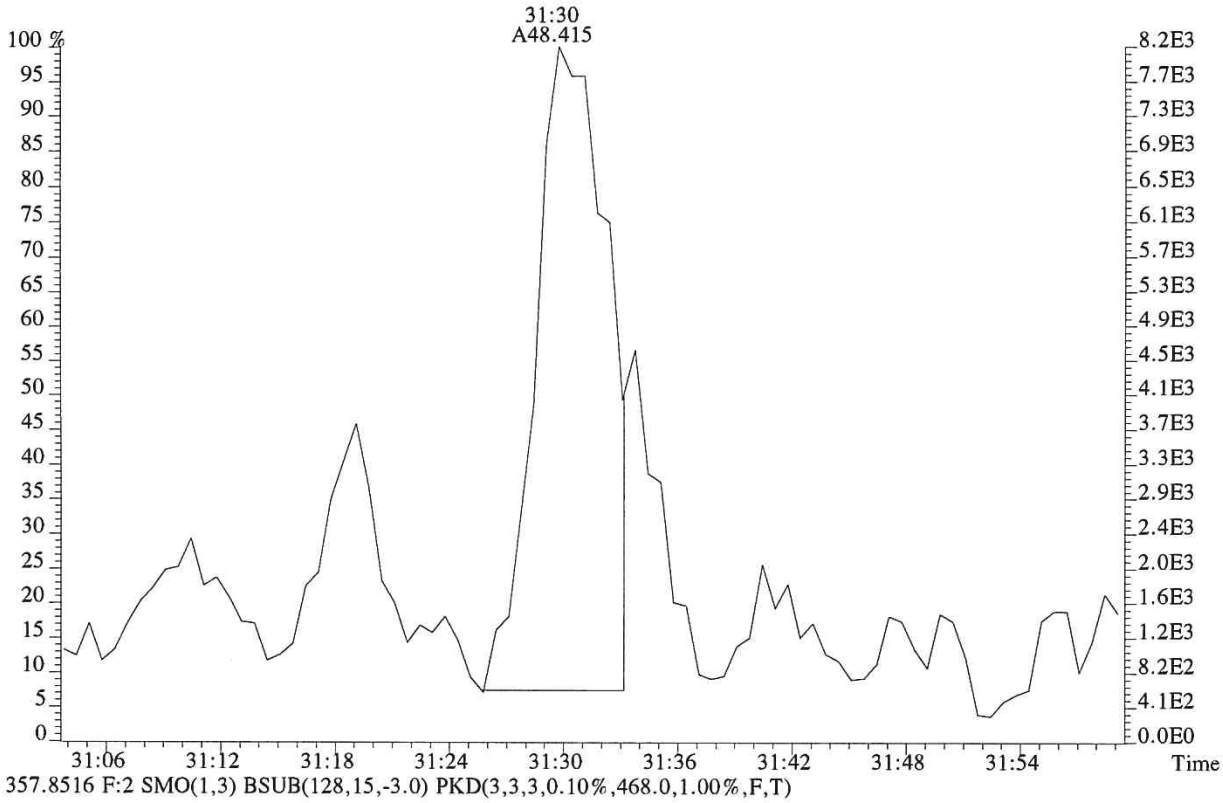
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1316.0,1.00%,F,T)



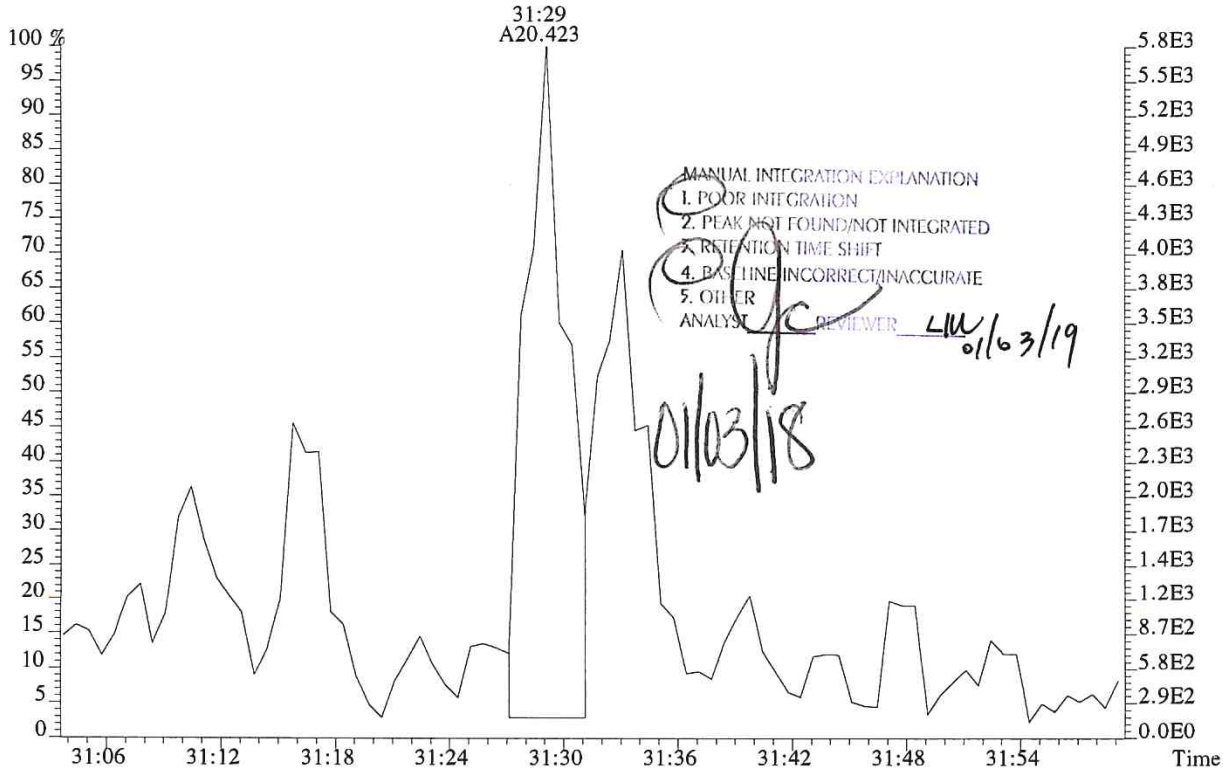
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519735 #1-358 Acq: 2-JAN-2019 17:47:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-011
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1040.0,1.00%,F,T)

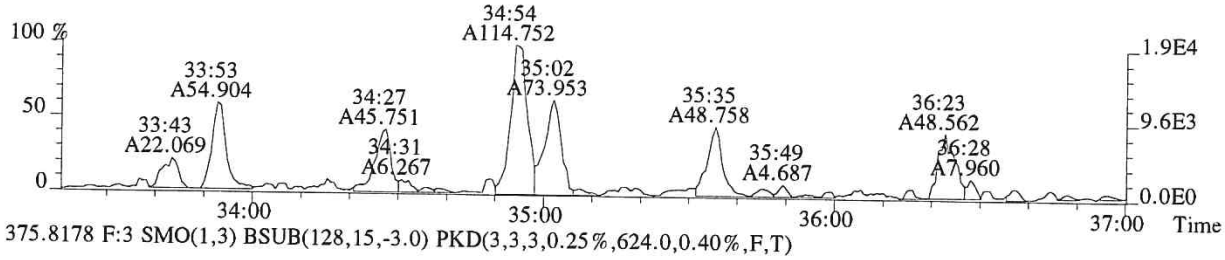


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,468.0,1.00%,F,T)

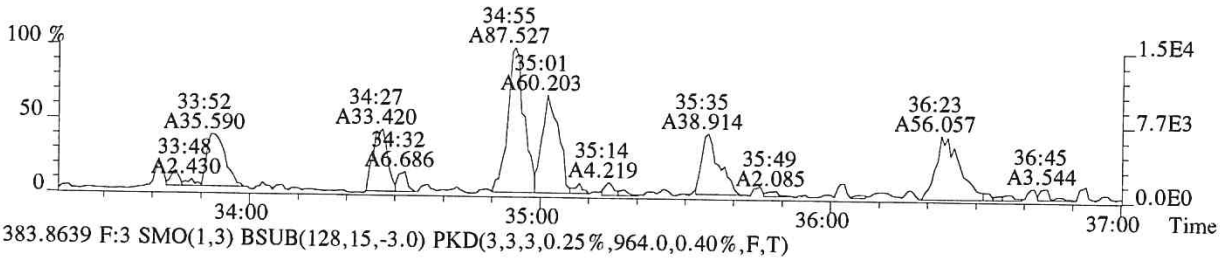


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST JC REVIEWER LW 01/03/19
01/03/18

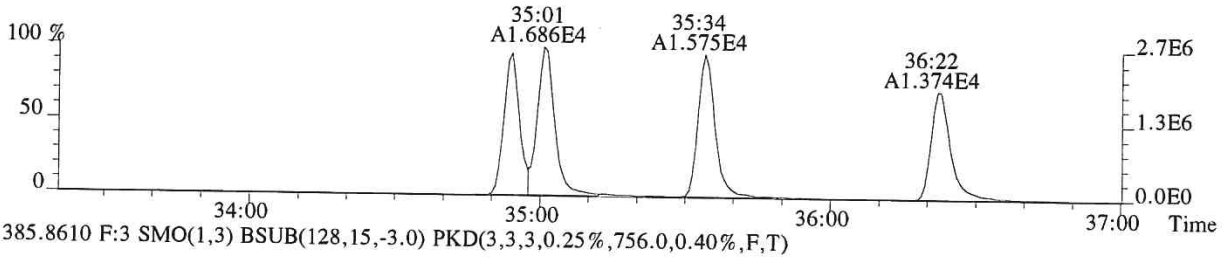
File:P519735 #1-330 Acq: 2-JAN-2019 17:47:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-011
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,500.0,0.40%,F,T)



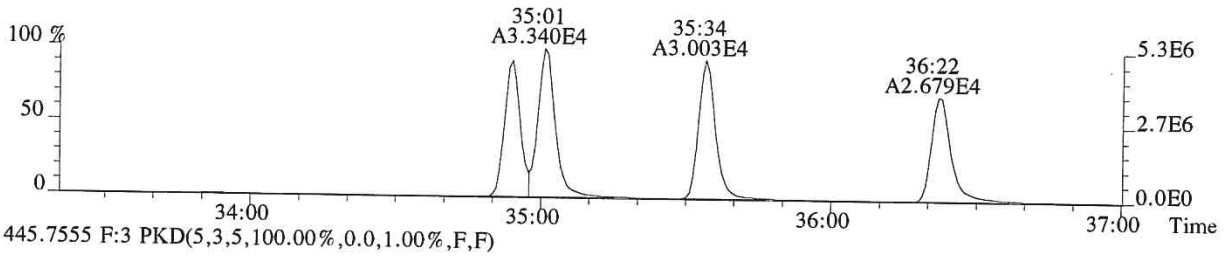
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,624.0,0.40%,F,T)



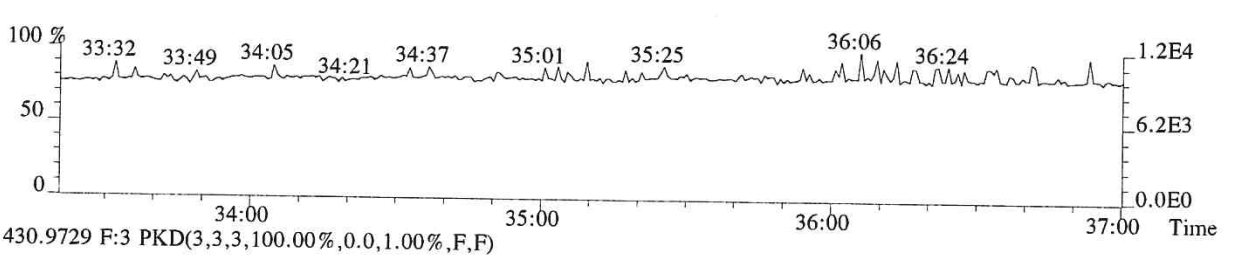
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,964.0,0.40%,F,T)



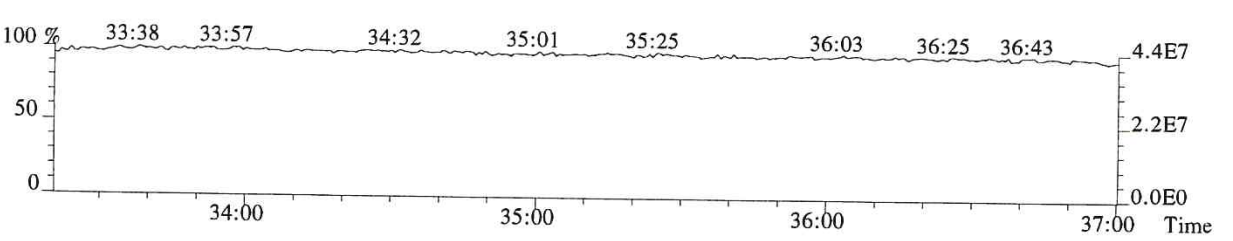
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,756.0,0.40%,F,T)



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

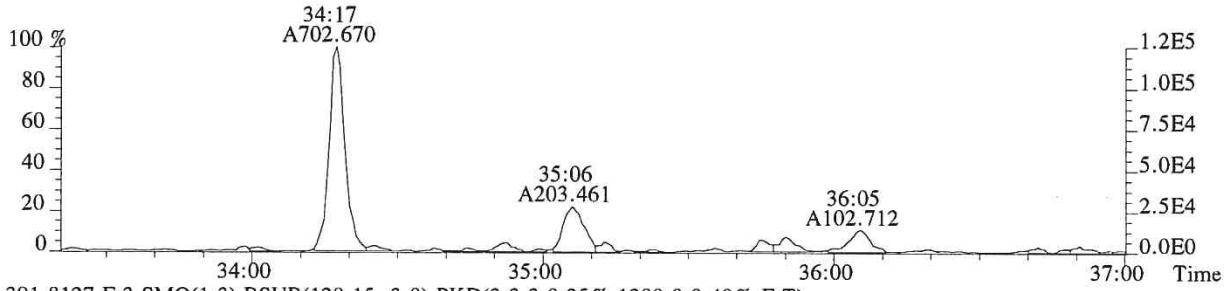


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

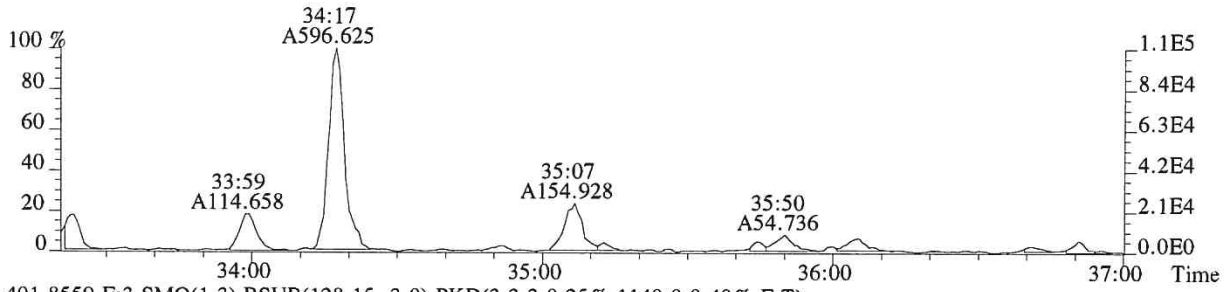


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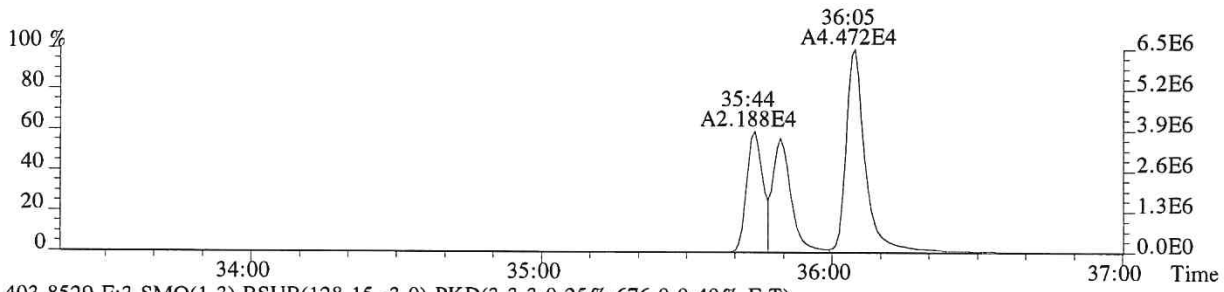
File:P519735 #1-330 Acq: 2-JAN-2019 17:47:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-011
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1084.0,0.40%,F,T)



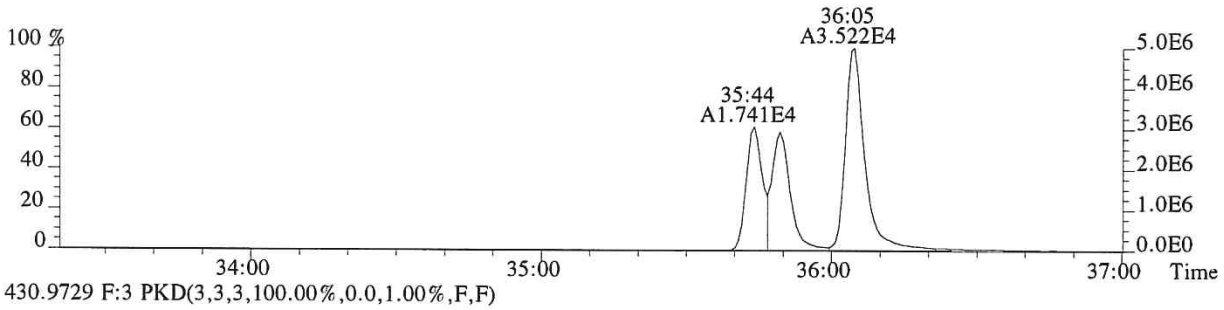
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1200.0,0.40%,F,T)



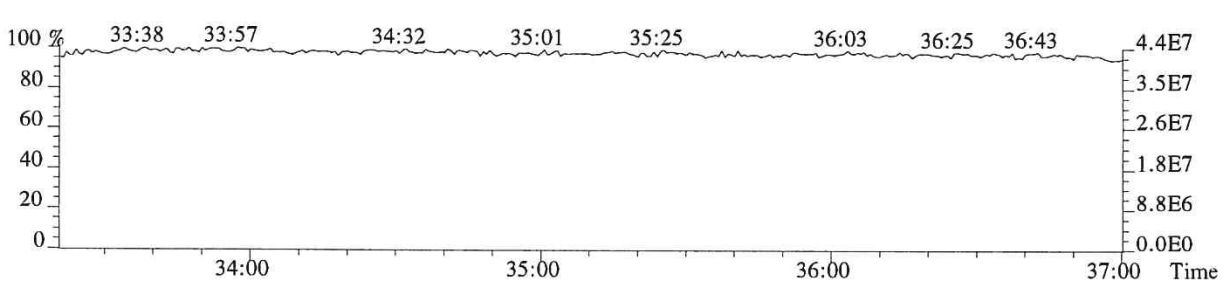
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1140.0,0.40%,F,T)



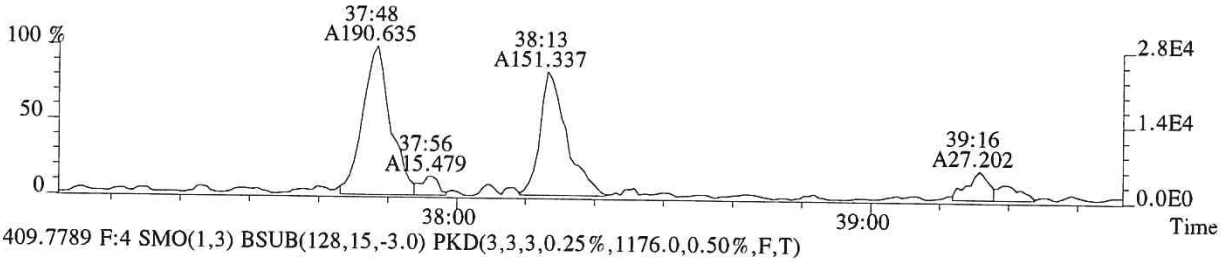
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,676.0,0.40%,F,T)



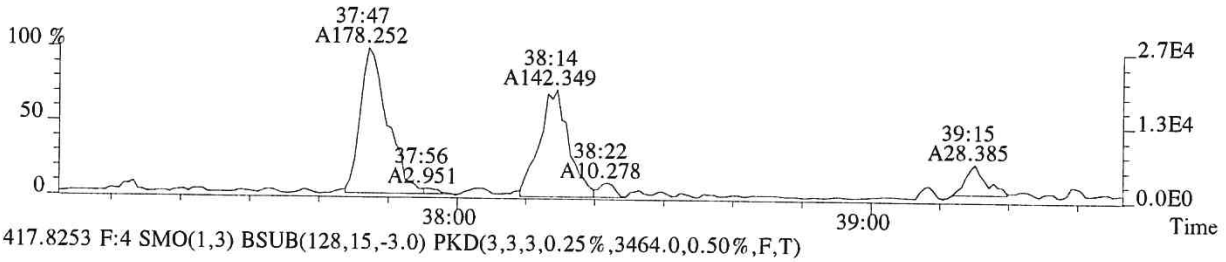
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



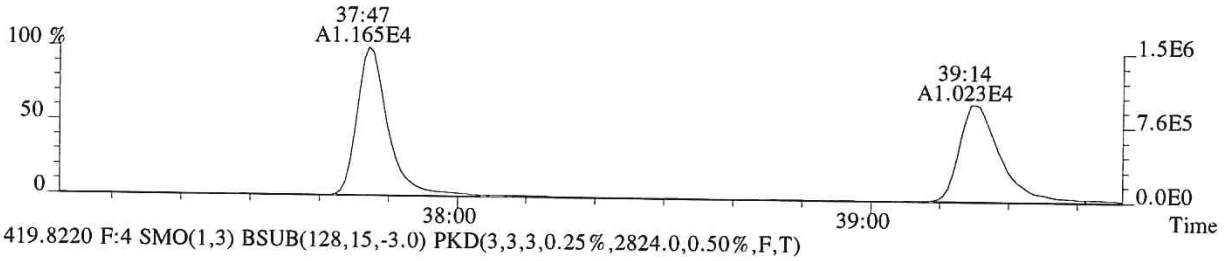
File:P519735 #1-232 Acq: 2-JAN-2019 17:47:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-011
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1012.0,0.50%,F,T)



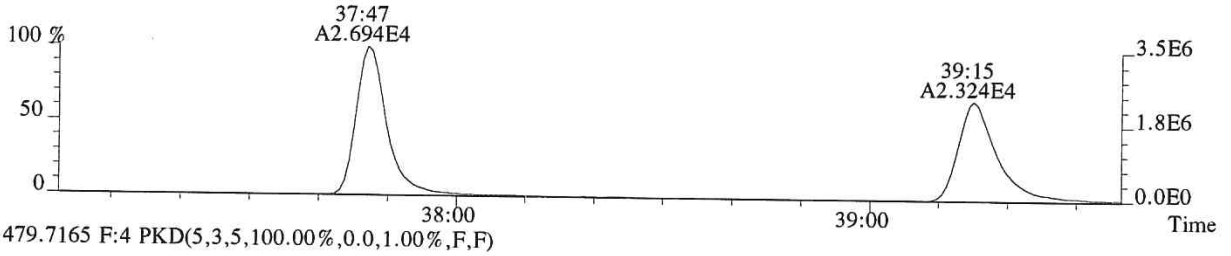
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1176.0,0.50%,F,T)



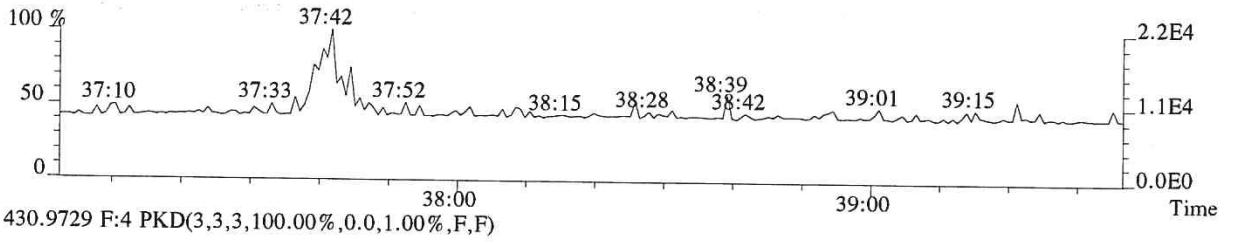
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3464.0,0.50%,F,T)



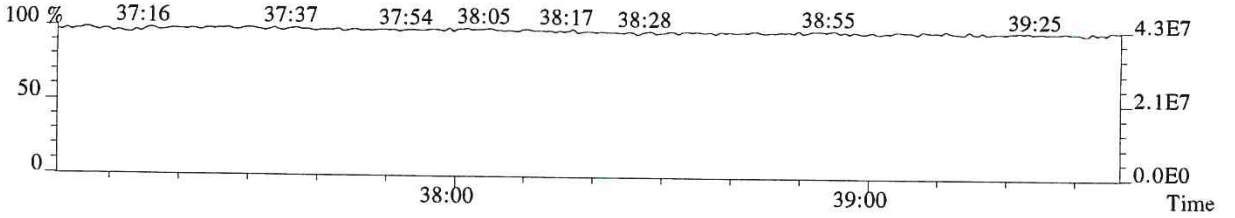
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2824.0,0.50%,F,T)



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

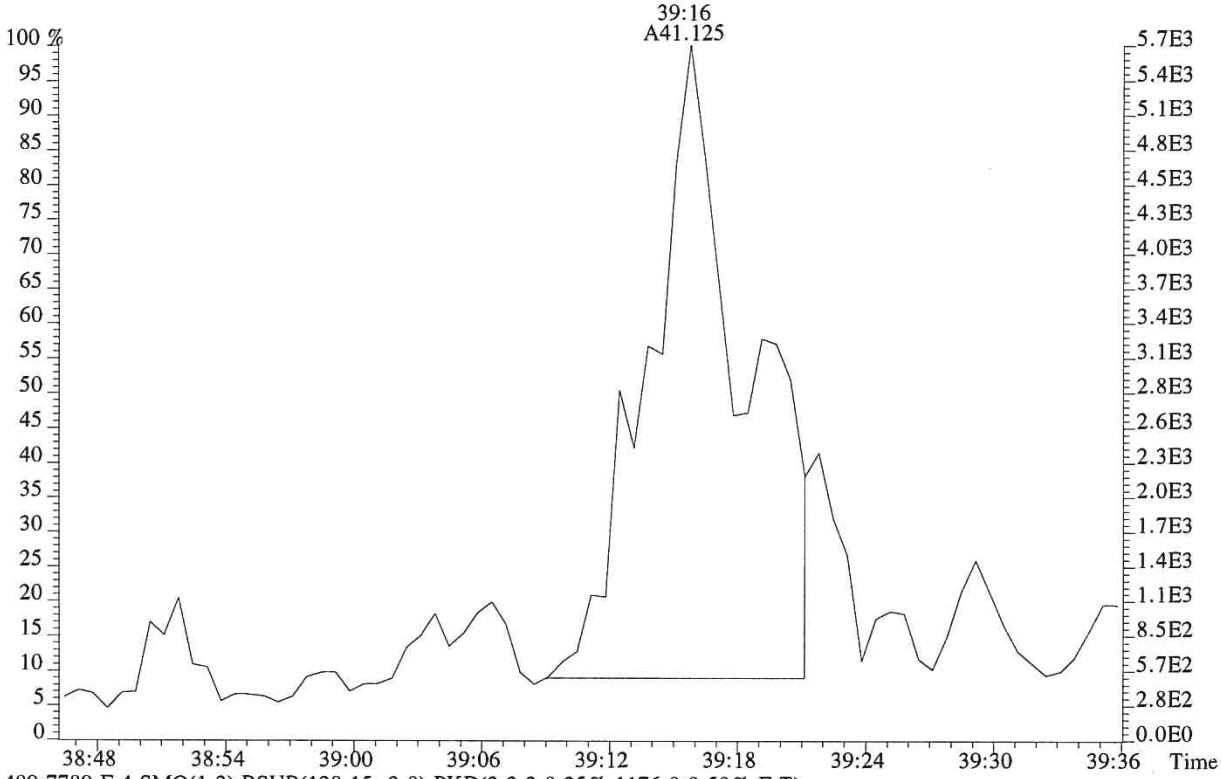


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

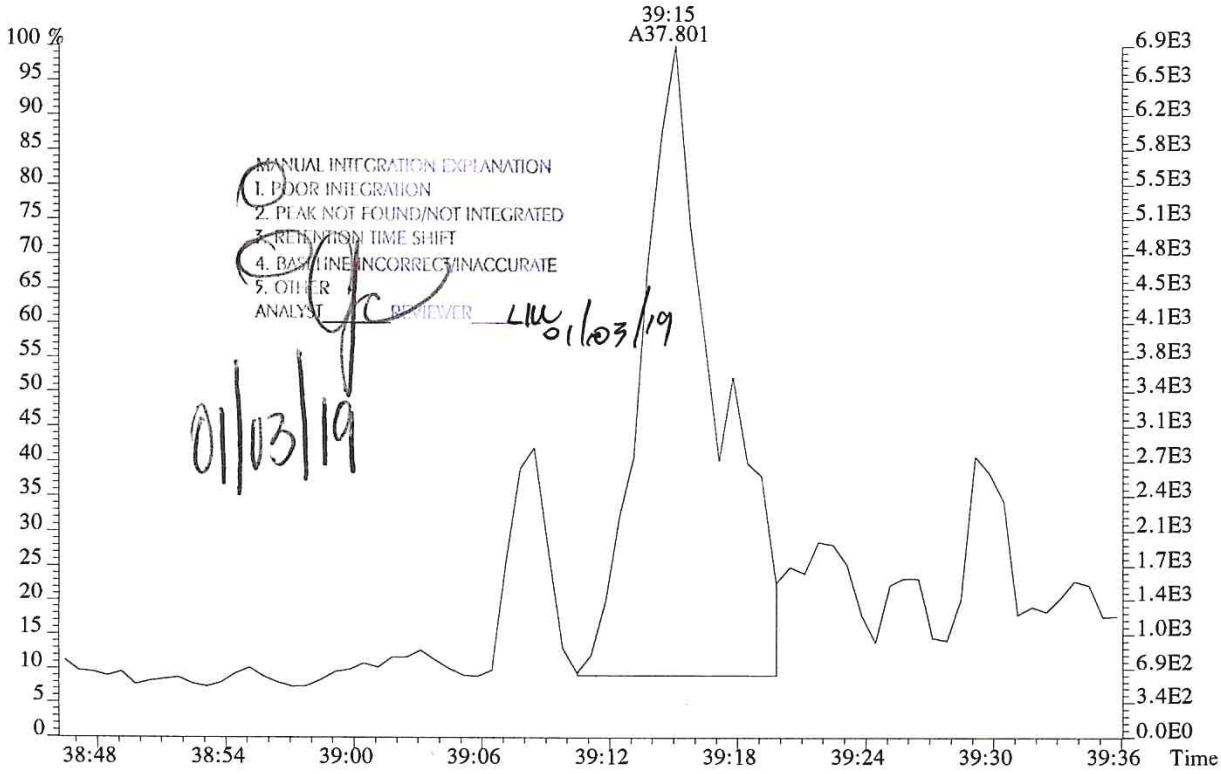


016200

File:P519735 #1-232 Acq: 2-JAN-2019 17:47:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-011
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1012.0,0.50%,F,T)



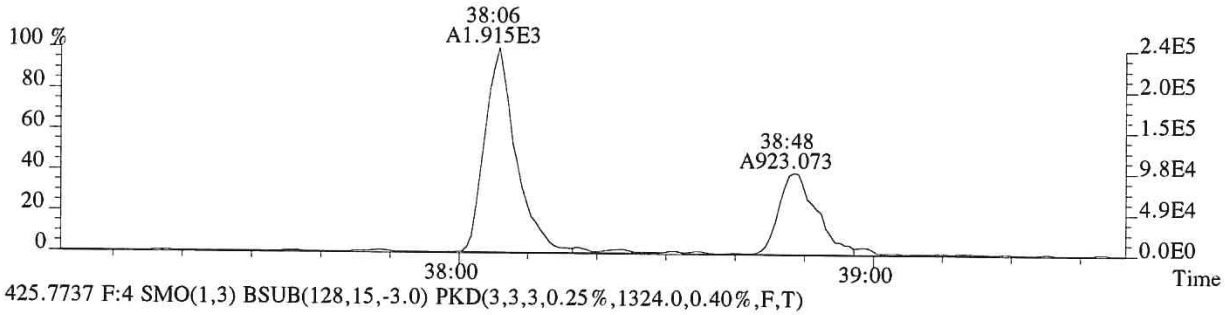
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1176.0,0.50%,F,T)



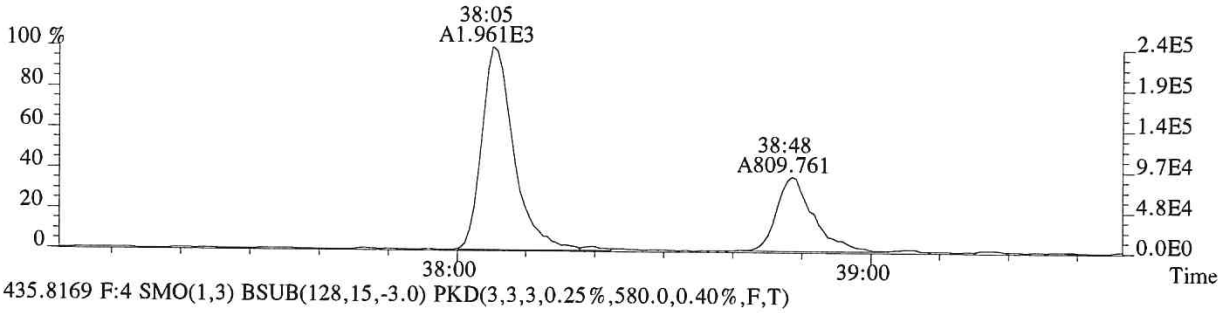
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST JC REVIEWER LW 01/03/19

01/03/19

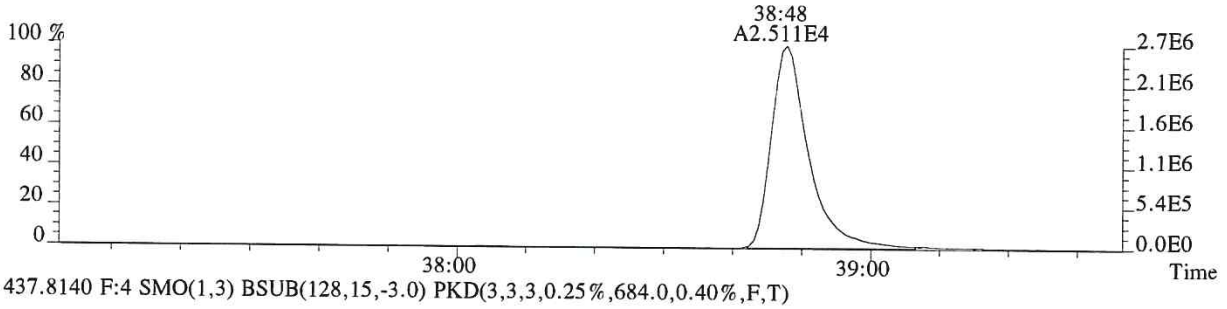
File:P519735 #1-232 Acq: 2-JAN-2019 17:47:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-011
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,780.0,0.40%,F,T)



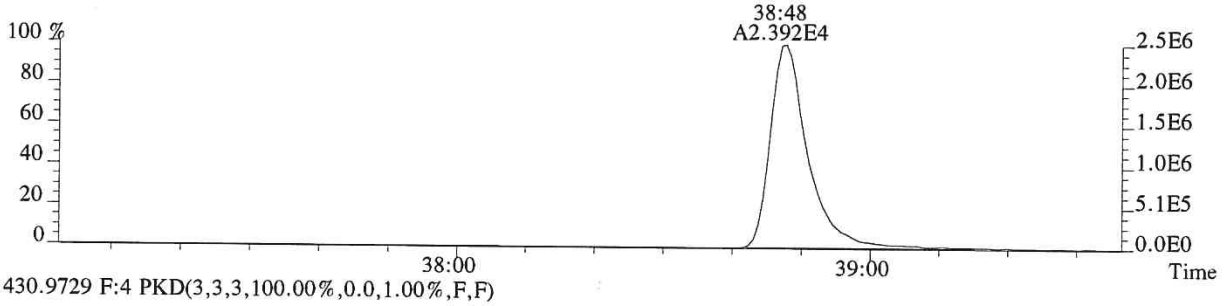
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1324.0,0.40%,F,T)



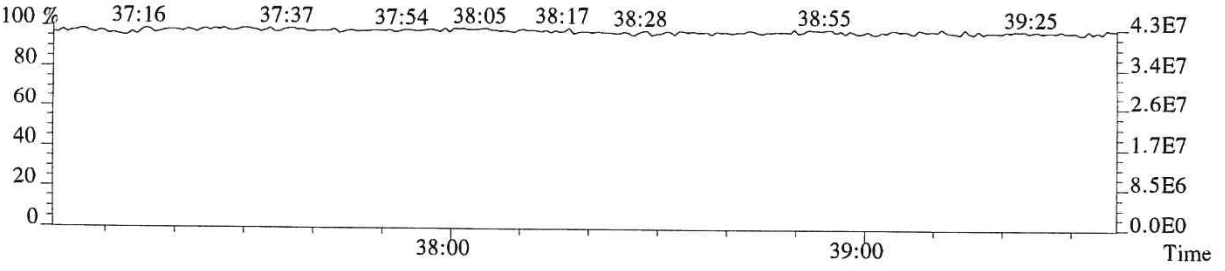
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,580.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,684.0,0.40%,F,T)

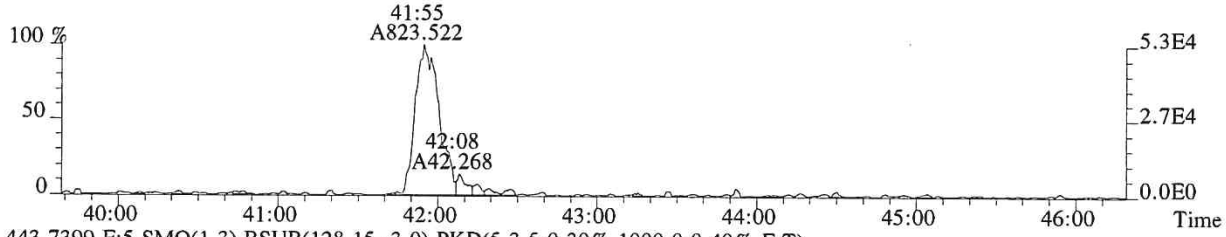


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

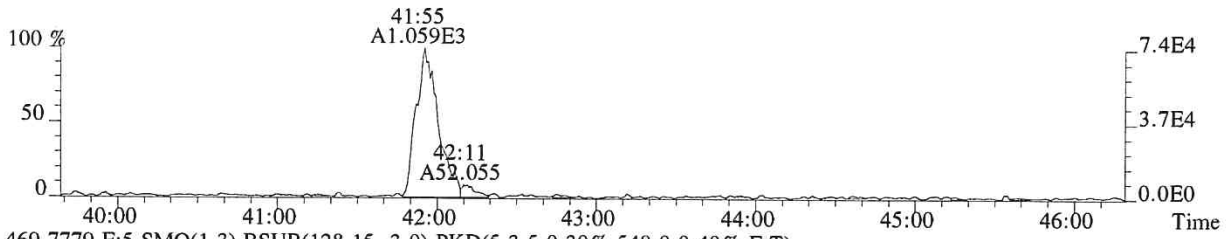


016202

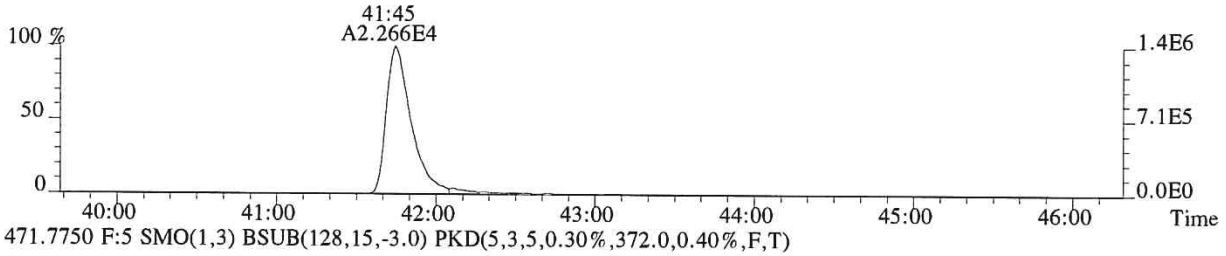
File:P519735 #1-601 Acq: 2-JAN-2019 17:47:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-011
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,336.0,0.40%,F,T)



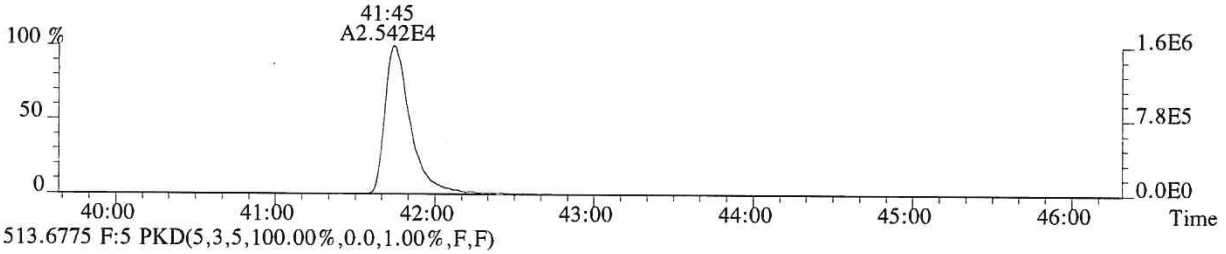
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1000.0,0.40%,F,T)



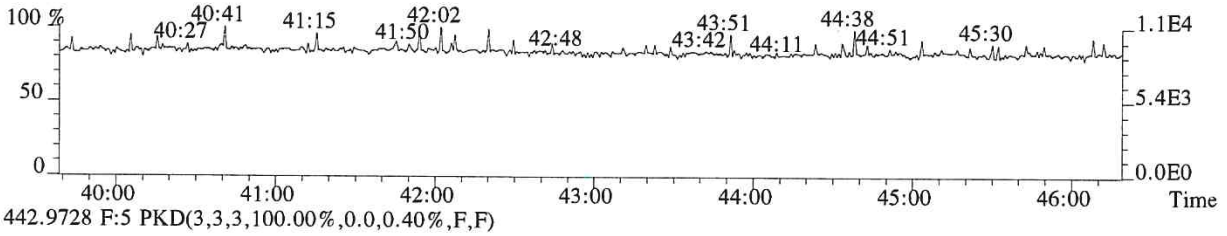
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,548.0,0.40%,F,T)



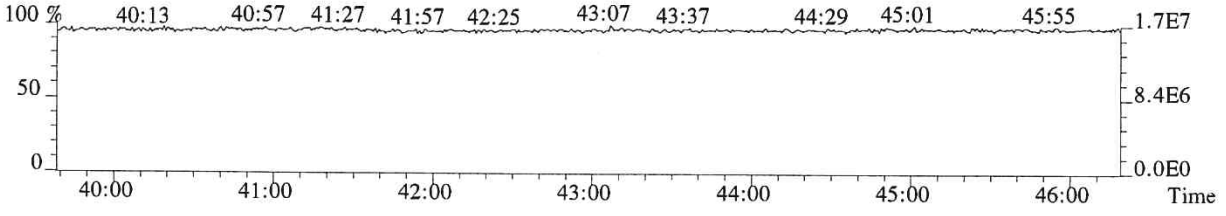
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,372.0,0.40%,F,T)



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

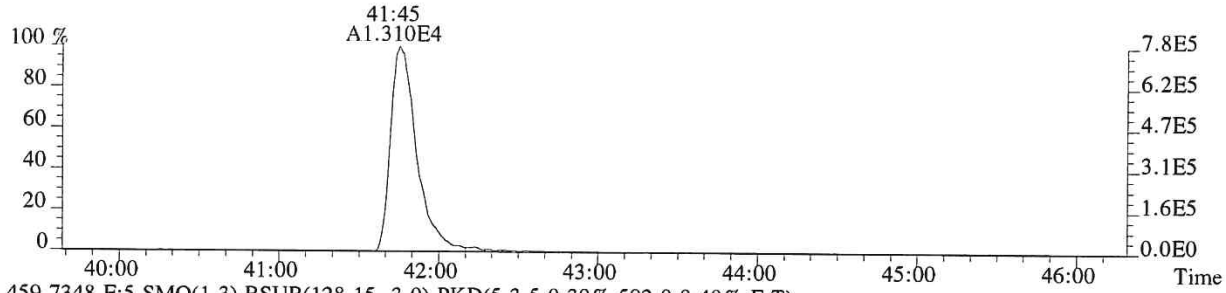


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

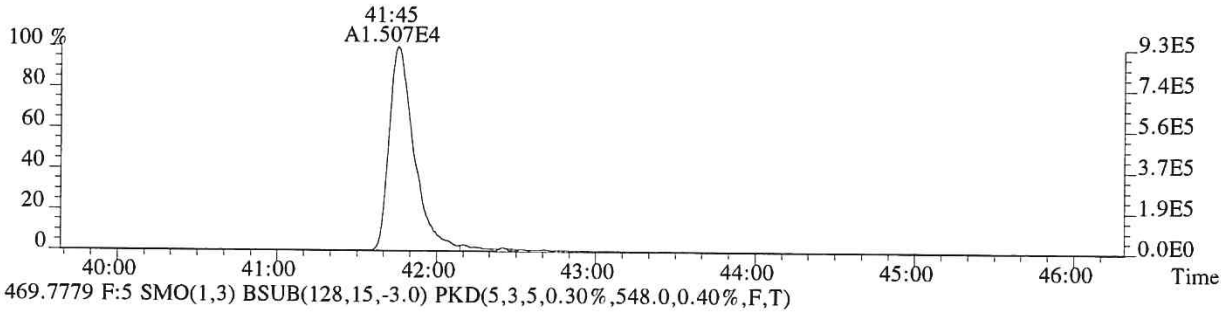


016203

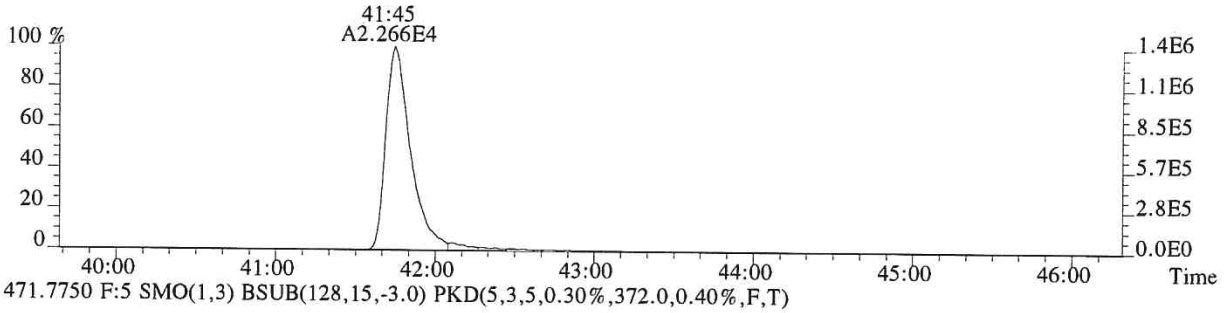
File:P519735 #1-601 Acq: 2-JAN-2019 17:47:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-011
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,368.0,0.40%,F,T)



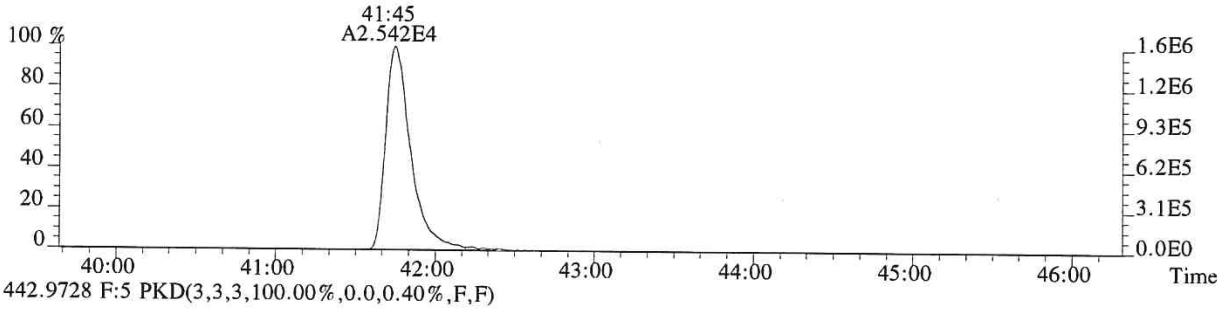
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,592.0,0.40%,F,T)



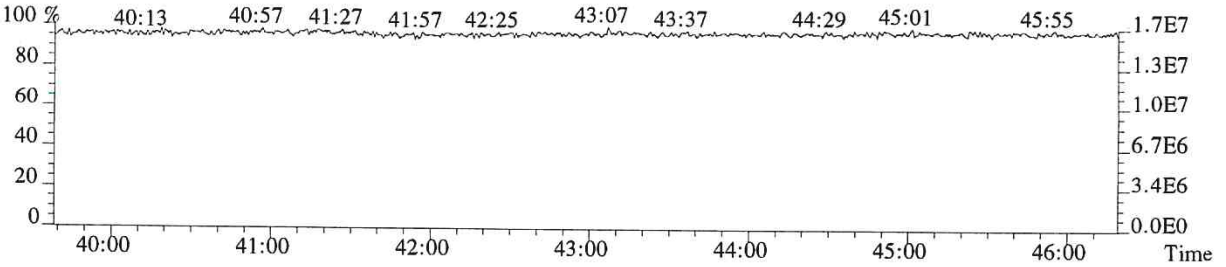
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,548.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,372.0,0.40%,F,T)



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



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0135

Run #12 Filename P519736 Samp: 1 Inj: 1 Acquired: 2-JAN-19 18:36:06
Processed: 3-JAN-19 09:14:25 Sample ID: E1801137-012

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:06	3.392e+02	4.491e+02	0.76	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:58	5.093e+01	5.202e+01	0.98	no	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:59	6.424e+01	3.664e+01	1.75	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:54	5.565e+01	3.323e+01	1.67	no	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:01	4.995e+01	4.712e+01	1.06	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:35	3.164e+01	3.907e+01	0.81	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:24	4.068e+01	4.081e+01	1.00	no	yes	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:48	5.385e+02	5.309e+02	1.01	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	yes	1.258
10	Unk	OCDF	41:56	1.589e+02	1.929e+02	0.82	yes	yes	1.359
11	Unk	2,3,7,8-TCDD	27:04	1.301e+02	1.903e+02	0.68	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:18	5.746e+01	4.211e+01	1.36	yes	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:43	2.900e+01	2.941e+01	0.99	no	yes	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:50	7.091e+01	3.653e+01	1.94	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:05	5.405e+01	6.625e+01	0.82	no	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:48	7.315e+02	7.955e+02	0.92	yes	no	1.025
17	Unk	OCDD	41:45	1.925e+04	2.163e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	1.743e+04	2.215e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:57	3.428e+04	2.154e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:58	3.523e+04	2.216e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:54	1.520e+04	2.968e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:01	1.896e+04	3.581e+04	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:34	1.681e+04	3.345e+04	0.50	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:22	1.427e+04	2.730e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:47	1.218e+04	2.710e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:15	1.036e+04	2.327e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:02	8.664e+03	1.076e+04	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:17	2.736e+04	1.733e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:44	2.503e+04	1.931e+04	1.30	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:49	2.552e+04	2.010e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:48	2.613e+04	2.459e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	41:45	2.293e+04	2.596e+04	0.88	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	3.487e+04	4.395e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:04	4.630e+04	3.666e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:04	1.334e+04				no	1.014

$$OCDD = \frac{(1.925e+04 + 2.163e+04) \times 4000\ pg \times 1}{(2.293e+04 + 2.596e+04) \times 10.088g \times 69.5/100 \times 1.118} = 426.7\ ng/kg$$

LM 01/04/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0135

Run #12 Filename P519736 Samp: 1 Inj: 1 Acquired: 2-JAN-19 18:36:06
Processed: 3-JAN-19 09:14:25 LAB. ID: E1801137-012

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	4.99e+04	7.36e+02	6.8e+01	6.75e+04	1.15e+03	5.9e+01
2	1,2,3,7,8-PeCDF	9.24e+03	1.08e+03	8.6e+00	9.64e+03	1.35e+03	7.1e+00
3	2,3,4,7,8-PeCDF	1.01e+04	1.08e+03	9.4e+00	6.76e+03	1.35e+03	5.0e+00
4	1,2,3,4,7,8-HxCDF	9.66e+03	5.72e+02	1.7e+01	5.33e+03	5.60e+02	9.5e+00
5	1,2,3,6,7,8-HxCDF	1.01e+04	5.72e+02	1.8e+01	7.05e+03	5.60e+02	1.3e+01
6	2,3,4,6,7,8-HxCDF	5.76e+03	5.72e+02	1.0e+01	8.09e+03	5.60e+02	1.4e+01
7	1,2,3,7,8,9-HxCDF	7.20e+03	5.72e+02	1.3e+01	8.16e+03	5.60e+02	1.5e+01
8	1,2,3,4,6,7,8-HpCDF	6.43e+04	4.16e+02	1.5e+02	7.58e+04	6.72e+02	1.1e+02
9	1,2,3,4,7,8,9-HpCDF	*	4.16e+02	*	*	6.72e+02	*
10	OCDF	1.27e+04	3.04e+02	4.2e+01	1.50e+04	8.84e+02	1.7e+01
11	2,3,7,8-TCDD	2.10e+04	1.66e+03	1.3e+01	2.94e+04	1.10e+03	2.7e+01
12	1,2,3,7,8-PeCDD	9.86e+03	8.72e+02	1.1e+01	8.54e+03	5.56e+02	1.5e+01
13	1,2,3,4,7,8-HxCDD	4.67e+03	7.64e+02	6.1e+00	6.82e+03	1.20e+03	5.7e+00
14	1,2,3,6,7,8-HxCDD	1.11e+04	7.64e+02	1.4e+01	5.54e+03	1.20e+03	4.6e+00
15	1,2,3,7,8,9-HxCDD	6.24e+03	7.64e+02	8.2e+00	9.09e+03	1.20e+03	7.5e+00
16	1,2,3,4,6,7,8-HpCDD	7.77e+04	9.60e+02	8.1e+01	7.96e+04	9.20e+02	8.7e+01
17	OCDD	1.18e+06	4.08e+02	2.9e+03	1.30e+06	6.32e+02	2.1e+03
18	13C-2,3,7,8-TCDF	2.51e+06	4.64e+03	5.4e+02	3.24e+06	2.41e+03	1.3e+03
19	13C-1,2,3,7,8-PeCDF	5.40e+06	1.35e+03	4.0e+03	3.42e+06	8.92e+02	3.8e+03
20	13C-2,3,4,7,8-PeCDF	6.05e+06	1.35e+03	4.5e+03	3.80e+06	8.92e+02	4.3e+03
21	13C-1,2,3,4,7,8-HxCDF	2.70e+06	4.80e+02	5.6e+03	5.22e+06	4.44e+02	1.2e+04
22	13C-1,2,3,6,7,8-HxCDF	3.06e+06	4.80e+02	6.4e+03	5.82e+06	4.44e+02	1.3e+04
23	13C-2,3,4,6,7,8-HxCDF	2.88e+06	4.80e+02	6.0e+03	5.62e+06	4.44e+02	1.3e+04
24	13C-1,2,3,7,8,9-HxCDF	2.02e+06	4.80e+02	4.2e+03	4.00e+06	4.44e+02	9.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.60e+06	1.25e+03	1.3e+03	3.60e+06	2.27e+03	1.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.03e+06	1.25e+03	8.3e+02	2.38e+06	2.27e+03	1.0e+03
27	13C-2,3,7,8-TCDD	1.37e+06	5.75e+03	2.4e+02	1.71e+06	2.42e+03	7.0e+02
28	13C-1,2,3,7,8-PeCDD	4.55e+06	9.76e+02	4.7e+03	2.94e+06	8.96e+02	3.3e+03
29	13C-1,2,3,4,7,8-HxCDD	4.28e+06	7.96e+02	5.4e+03	3.31e+06	8.36e+02	4.0e+03
30	13C-1,2,3,6,7,8-HxCDD	3.89e+06	7.96e+02	4.9e+03	3.10e+06	8.36e+02	3.7e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.84e+06	4.76e+02	6.0e+03	2.63e+06	3.48e+02	7.6e+03
32	13C-OCDD	1.38e+06	3.72e+02	3.7e+03	1.57e+06	4.40e+02	3.6e+03
33	13C-1,2,3,4-TCDD	5.46e+06	5.75e+03	9.5e+02	6.98e+06	2.42e+03	2.9e+03
34	13C-1,2,3,7,8,9-HxCDD	6.69e+06	7.96e+02	8.4e+03	5.32e+06	8.36e+02	6.4e+03
35	37Cl-2,3,7,8-TCDD	2.06e+06	9.84e+02	2.1e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0135

Entry: 36 Totals Name: Total Tetra-Furans

Run: 12 File: P519736 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 18:36:06 Processed: 3-JAN-19 09:14:25

Mass: 303.9020 305.8990 Tot Response: 1.17e+03 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	25:06	1.10e+02	1.42e+02	0.77	yes	2.52e+02	2,3,7,8-TCDF	n	n
2	26:06	3.39e+02	4.49e+02	0.76	yes	7.88e+02		n	n
3	26:30	2.83e+01	3.66e+01	0.77	yes	6.49e+01		n	n
4	28:16	2.54e+01	3.75e+01	0.68	yes	6.29e+01		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0135

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 12 File: P519736 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 18:36:06 Processed: 3-JAN-19 09:14:25

Mass: 319.8970 321.8940 Tot Response: 3.20e+02 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:04	1.30e+02	1.90e+02	0.68	yes	3.20e+02	2,3,7,8-TCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0135

Entry: 39 Totals Name: Total Penta-Furans2

Run: 12 File: P519736 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 18:36:06 Processed: 3-JAN-19 09:14:25

Mass: 339.8600 341.8570 Tot Response: 1.01e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	31:59	6.42e+01	3.66e+01	1.75	yes	1.01e+02	2,3,4,7,8-PeCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0135

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 12 File: P519736 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 18:36:06 Processed: 3-JAN-19 09:14:25

Mass: 355.8550 357.8520 Tot Response: 2.14e+02 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:30	5.76e+01	4.07e+01	1.41	yes	9.83e+01		n	n
2	31:28	1.04e+01	5.89e+00	1.77	yes	1.63e+01		y	n
3	32:18	5.75e+01	4.21e+01	1.36	yes	9.96e+01	1,2,3,7,8-PeCDD	y	y

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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

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Peak List Summary

CLIENT ID.
SL0135

Entry: 41 Totals Name: Total Hexa-Furans

Run: 12 File: P519736 Sample:1 Injection:1 Function:3

Acquired: 2-JAN-19 18:36:06 Processed: 3-JAN-19 09:14:25

Mass: 373.8210 375.8180 Tot Response: 2.68e+02 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
								n	n
1	34:27	9.70e+01	7.39e+01	1.31	yes	1.71e+02			
2	35:01	4.99e+01	4.71e+01	1.06	yes	9.71e+01	1,2,3,6,7,8-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0135

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 12 File: P519736 Sample:1 Injection:1 Function:3

Acquired: 2-JAN-19 18:36:06 Processed: 3-JAN-19 09:14:25

Mass: 389.8160 391.8130 Tot Response: 1.62e+03 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:17	6.56e+02	5.12e+02	1.28	yes	1.17e+03		n	n
2	35:06	2.52e+02	1.98e+02	1.27	yes	4.50e+02		n	n

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Peak List Summary

CLIENT ID.
SL0135

Entry: 43 Totals Name: Total Hepta-Furans

Run: 12 File: P519736 Sample:1 Injection:1 Function:4

Acquired: 2-JAN-19 18:36:06 Processed: 3-JAN-19 09:14:25

Mass: 407.7820 409.7790 Tot Response: 1.59e+03 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:48	5.38e+02	5.31e+02	1.01	yes	1.07e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	38:14	2.77e+02	2.46e+02	1.12	yes	5.23e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0135

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 12 File: P519736 Sample:1 Injection:1 Function:4

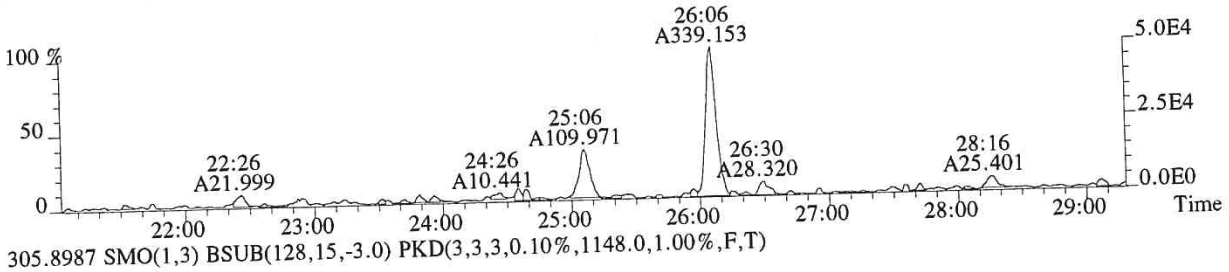
Acquired: 2-JAN-19 18:36:06 Processed: 3-JAN-19 09:14:25

Mass: 423.7770 425.7740 Tot Response: 5.51e+03 RRF: 1.025

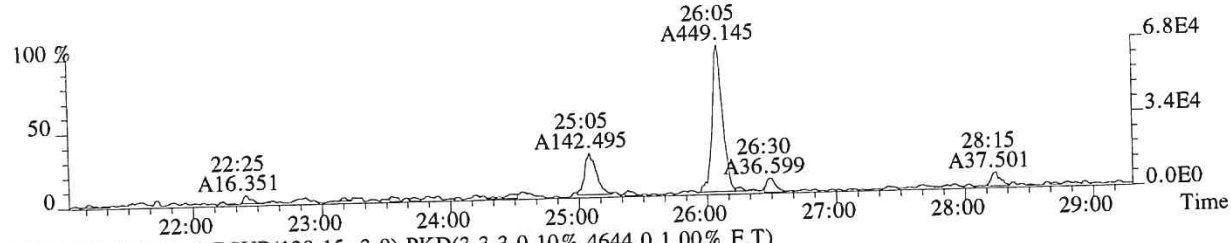
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:05	2.07e+03	1.92e+03	1.08	yes	3.98e+03		n	n
2	38:48	7.31e+02	7.95e+02	0.92	yes	1.53e+03	1,2,3,4,6,7,8-HpCDD	n	n

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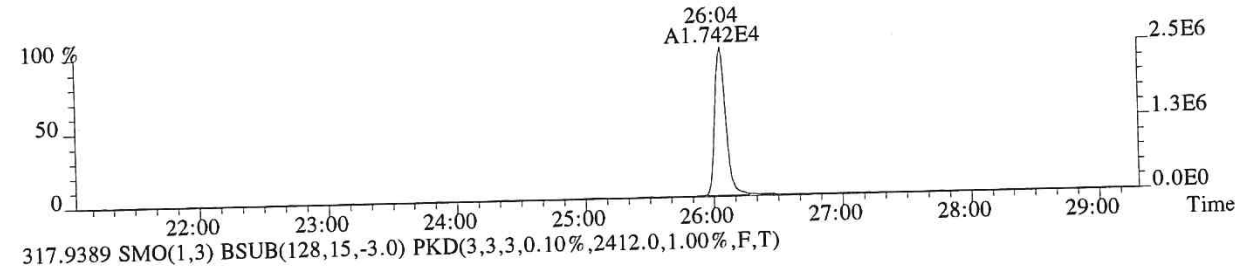
File:P519736 #1-587 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-012
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,736.0,1.00%,F,T)



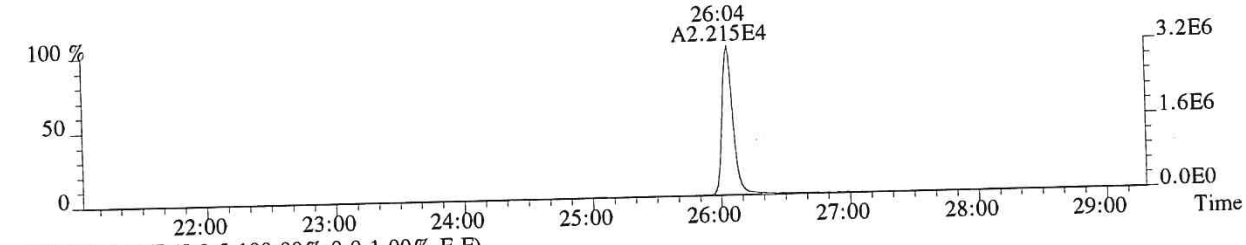
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1148.0,1.00%,F,T)



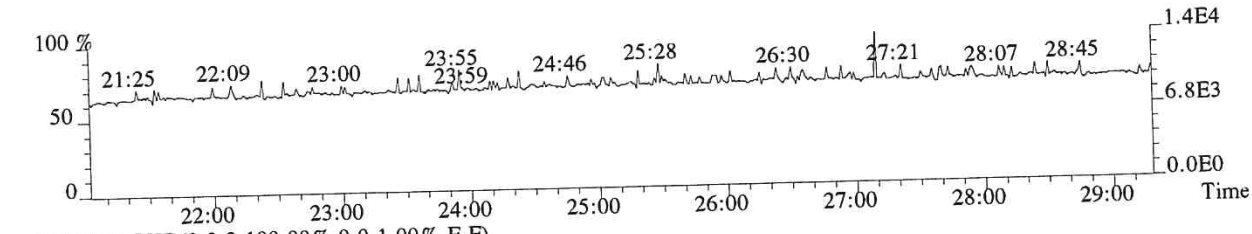
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4644.0,1.00%,F,T)



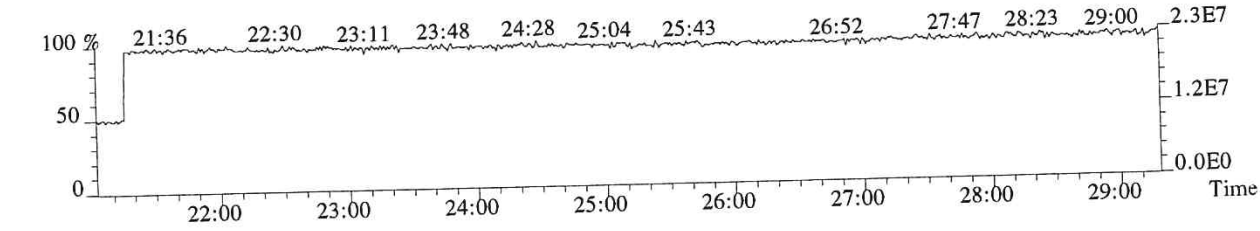
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2412.0,1.00%,F,T)



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

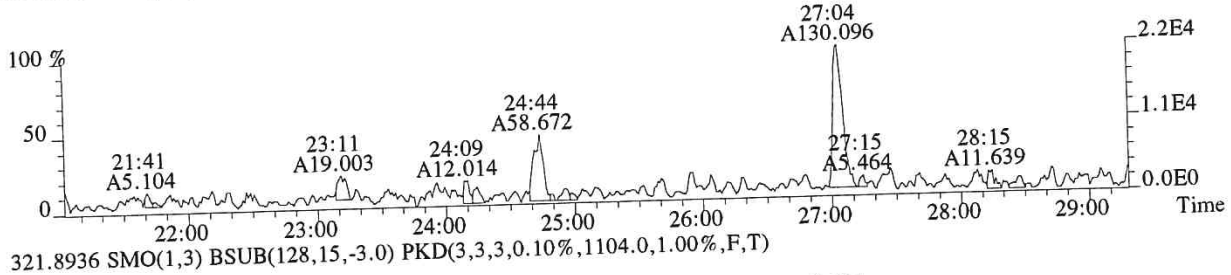


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

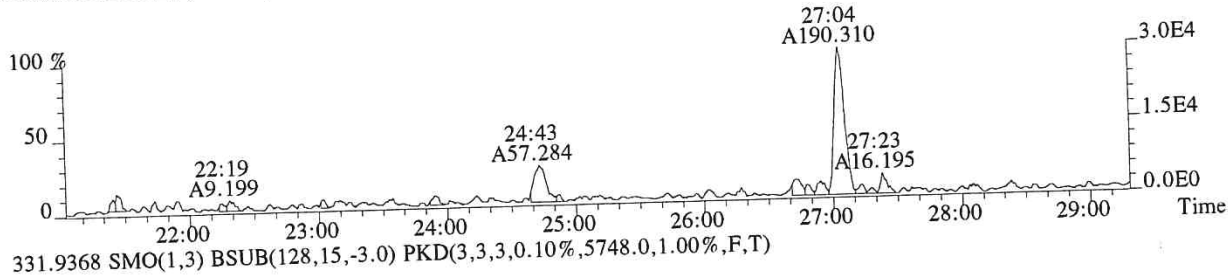


016215

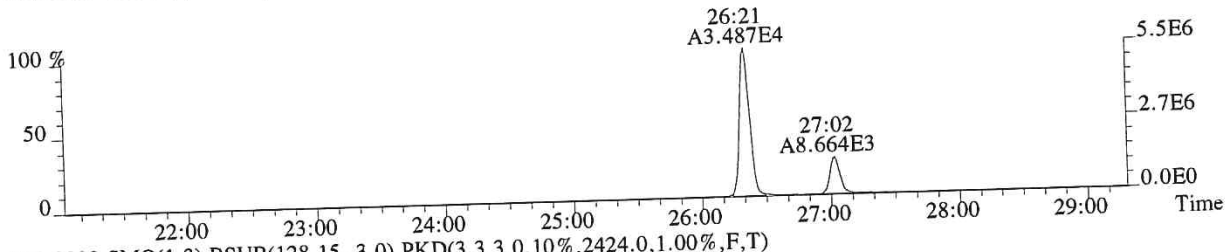
File:P519736 #1-587 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-012
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1656.0,1.00%,F,T)



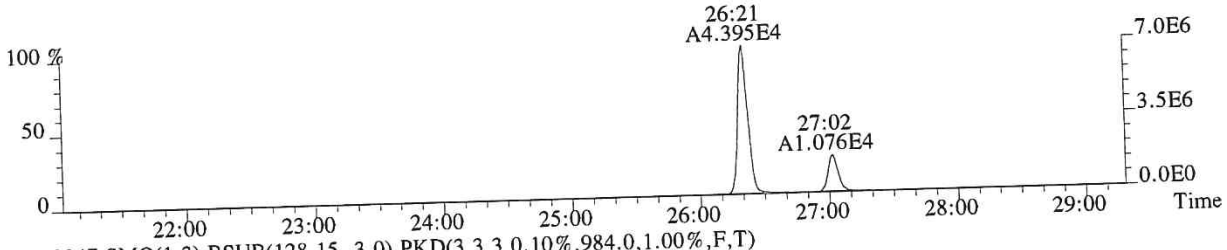
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1104.0,1.00%,F,T)



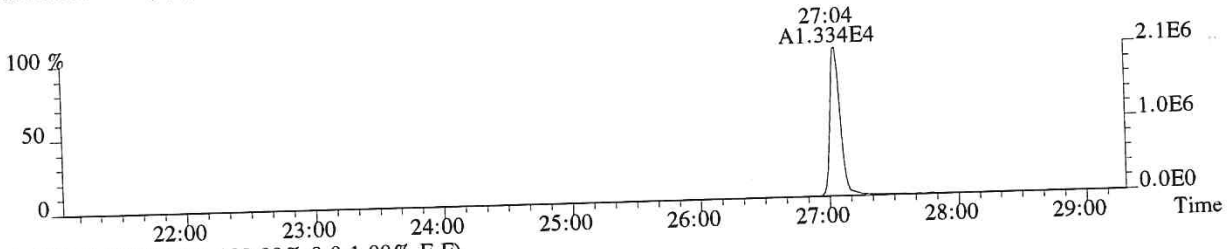
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5748.0,1.00%,F,T)



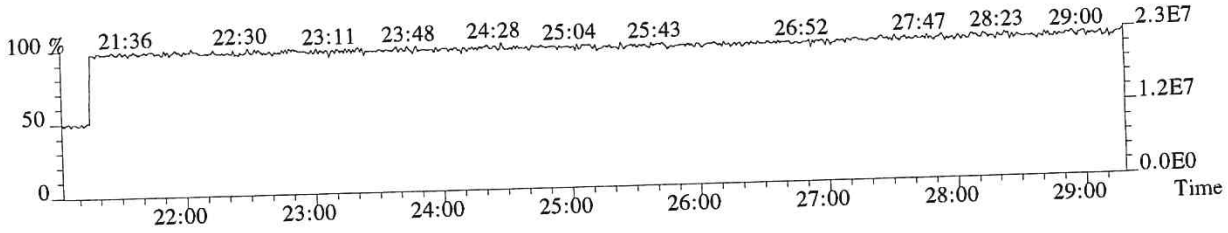
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2424.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,984.0,1.00%,F,T)

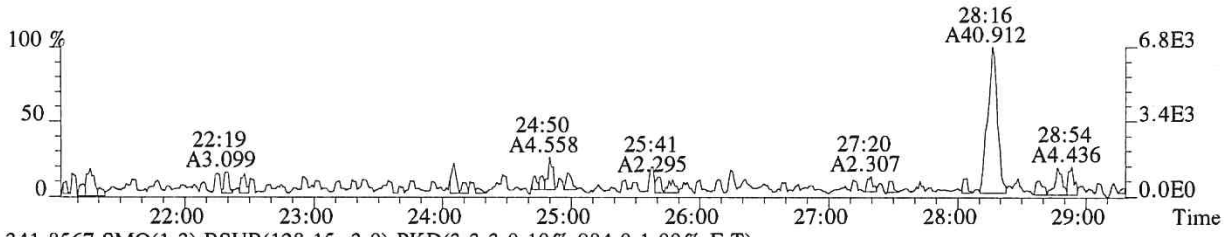


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

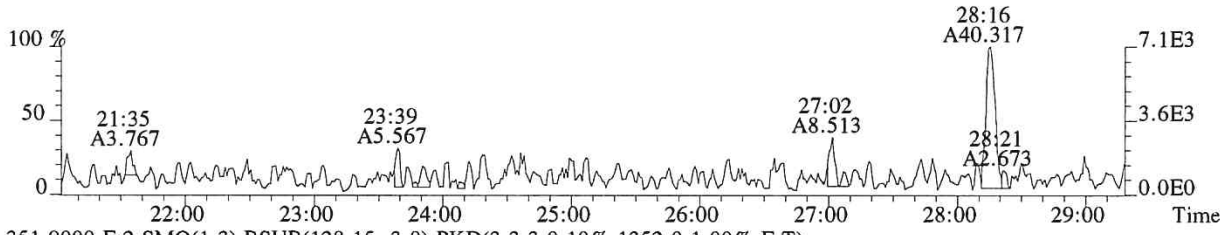


016216

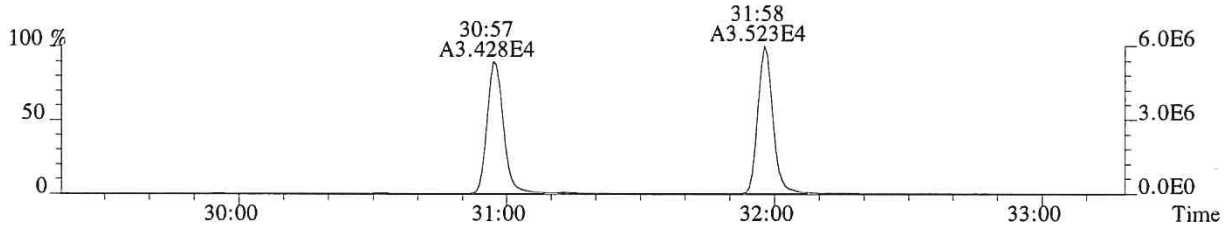
File:P519736 #1-587 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-012
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,472.0,1.00%,F,T)



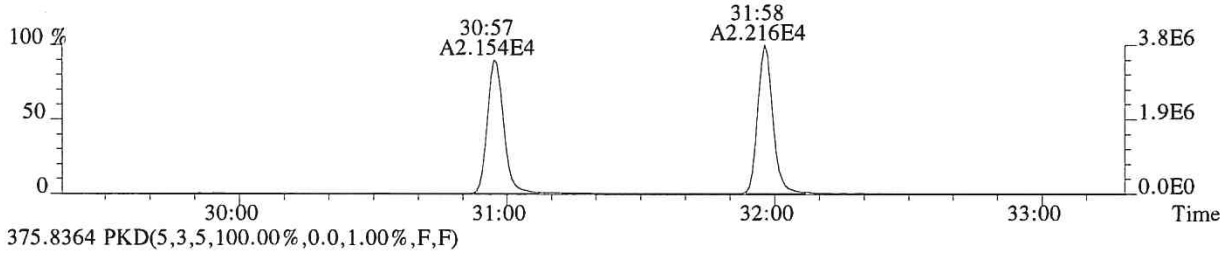
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,984.0,1.00%,F,T)



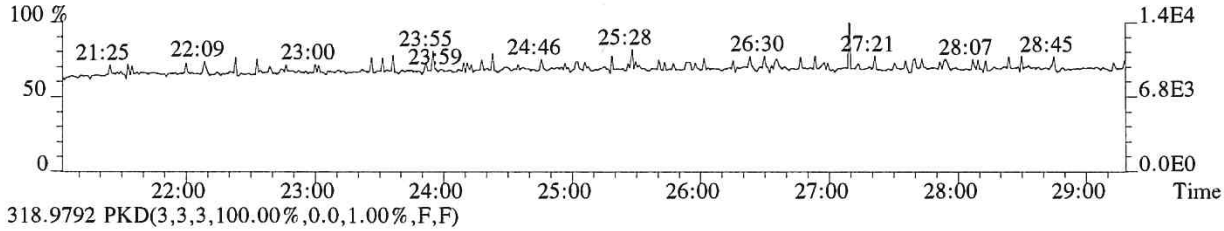
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1352.0,1.00%,F,T)



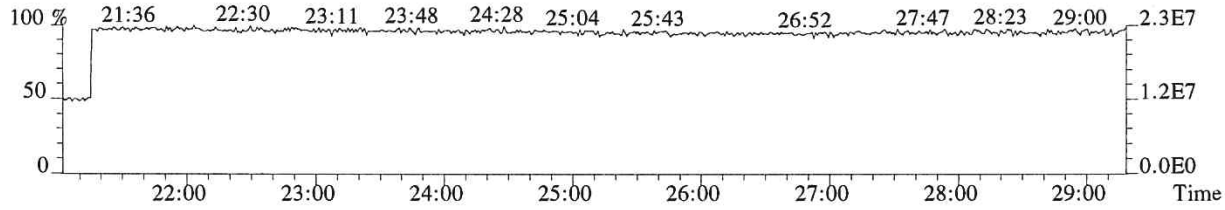
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,892.0,1.00%,F,T)



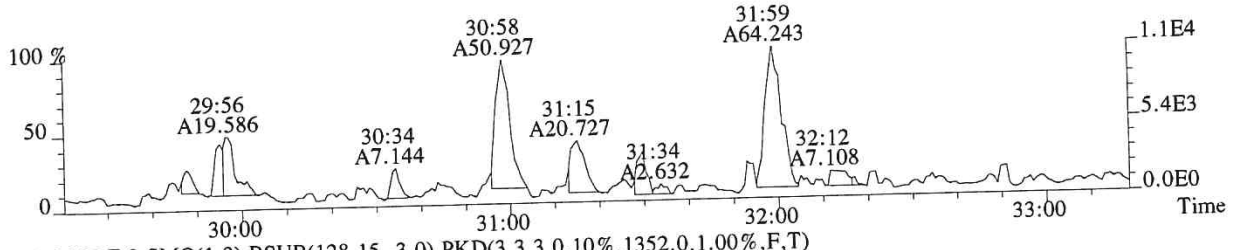
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



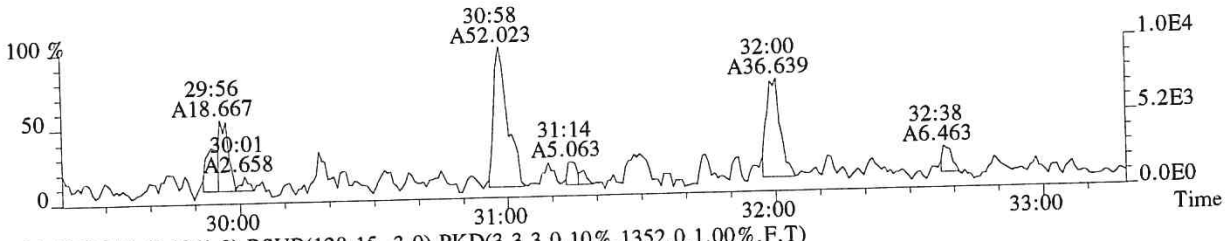
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



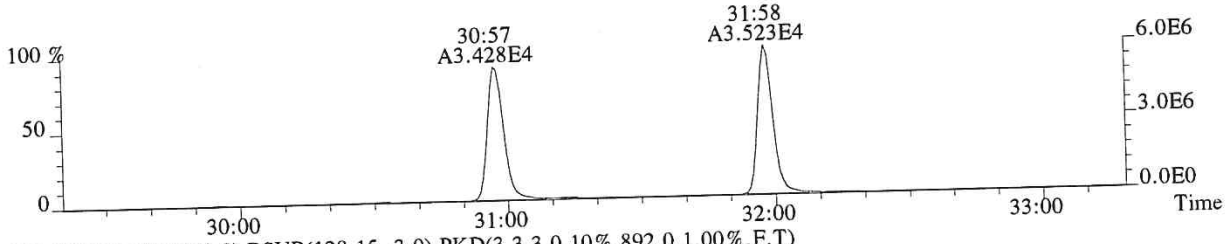
File:P519736 #1-358 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-012
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1080.0,1.00%,F,T)



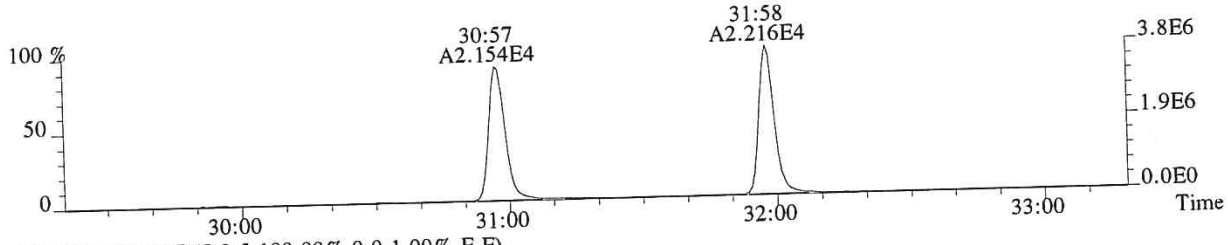
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1352.0,1.00%,F,T)



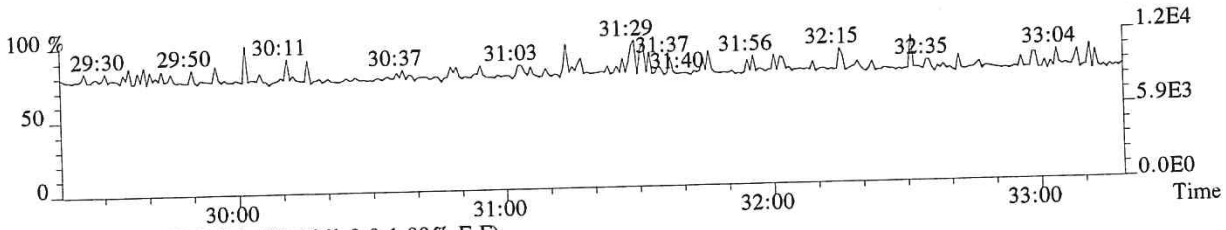
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1352.0,1.00%,F,T)



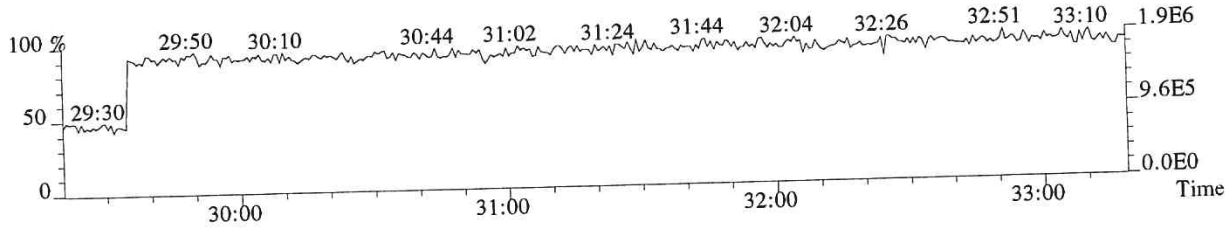
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,892.0,1.00%,F,T)



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

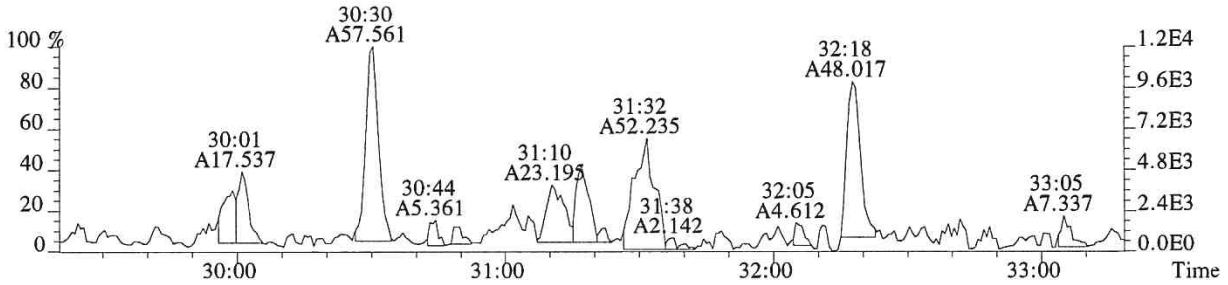


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

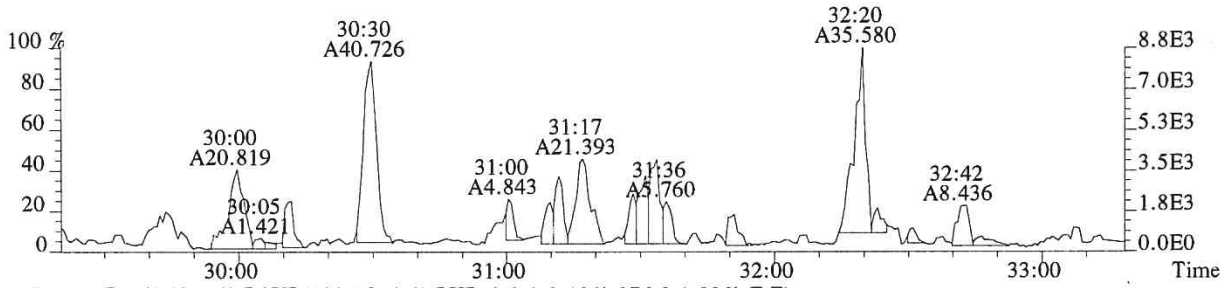


016218

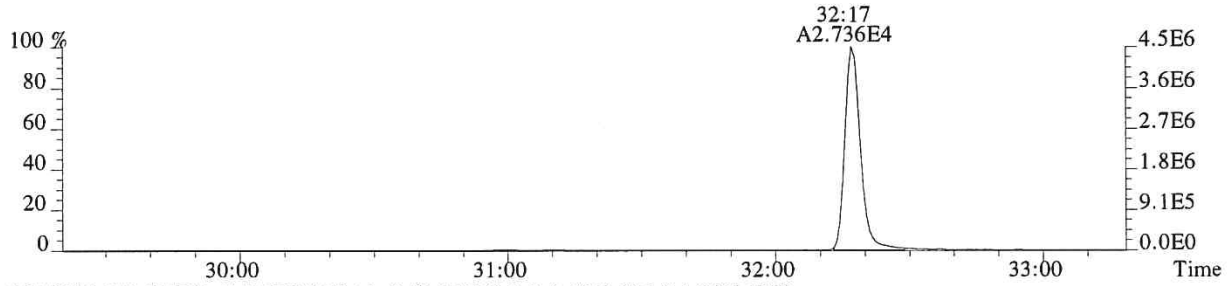
File:P519736 #1-358 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-012
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,872.0,1.00%,F,T)



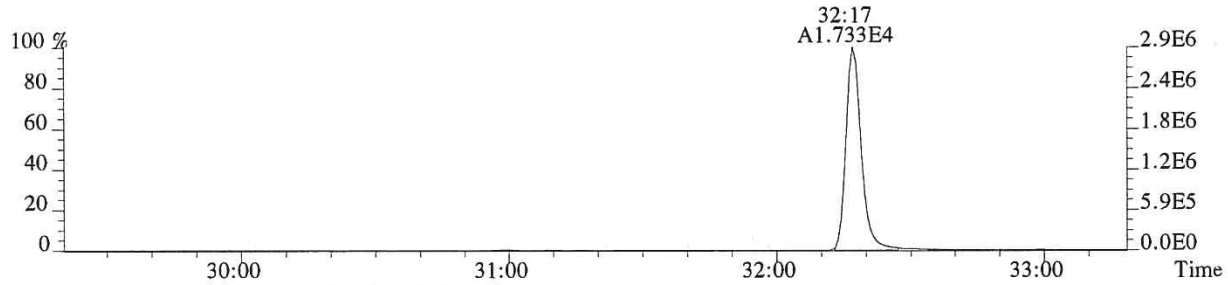
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,556.0,1.00%,F,T)



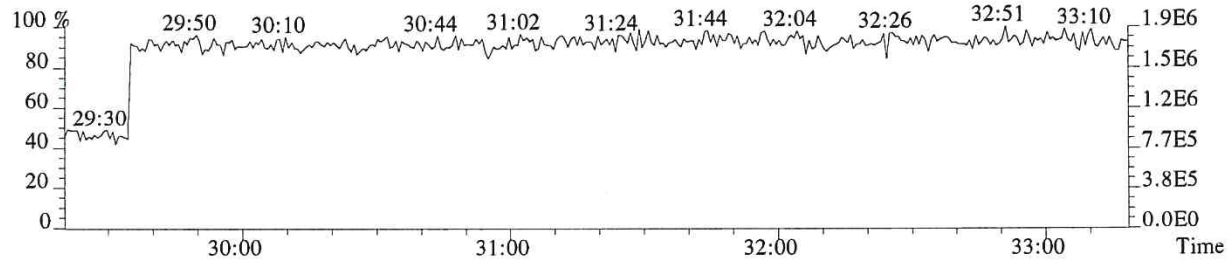
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,976.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,896.0,1.00%,F,T)

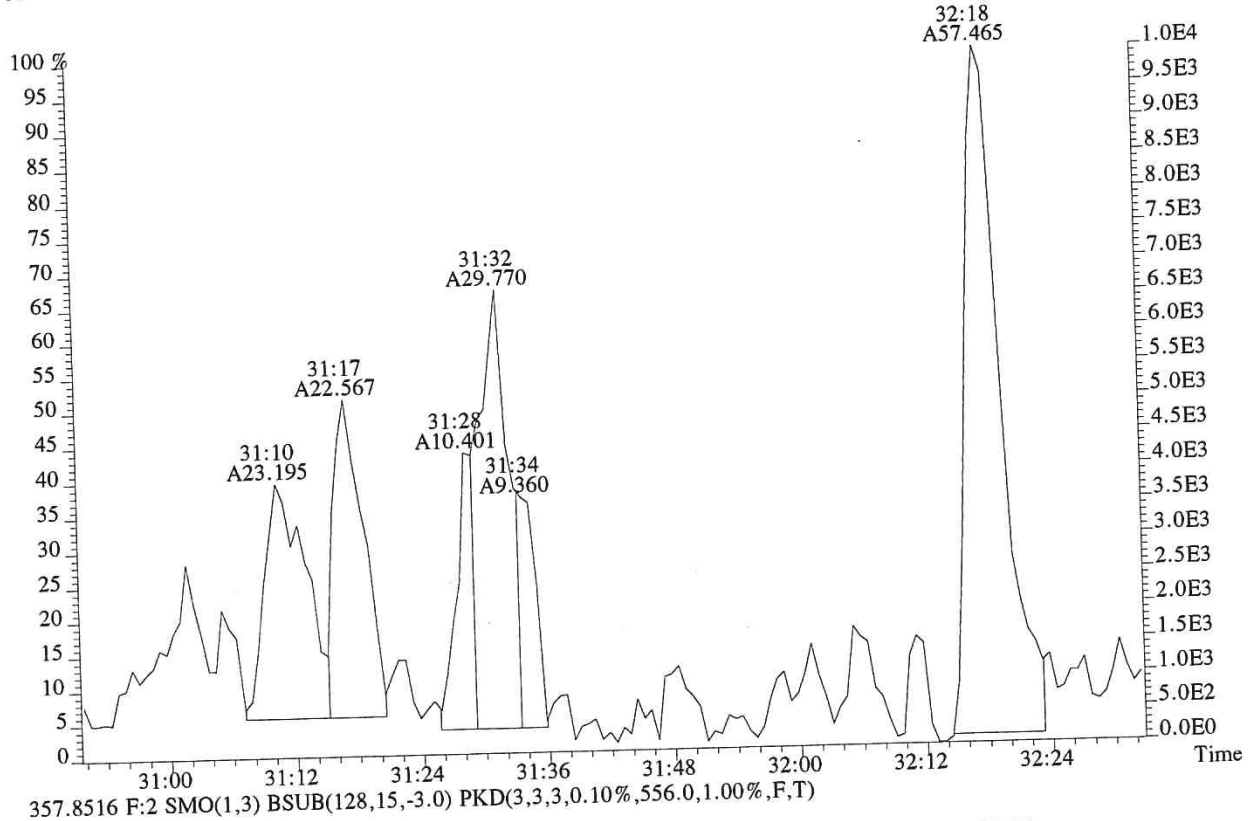


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

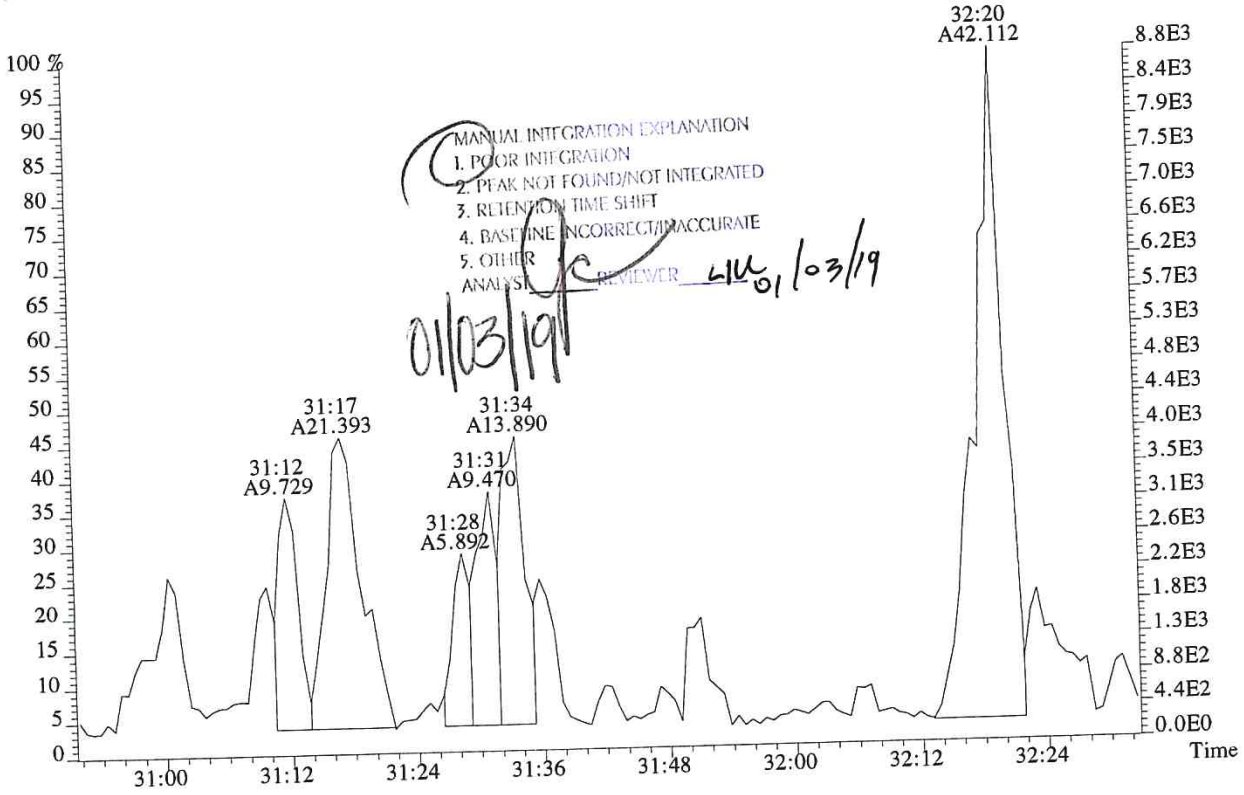


016219

File:P519736 #1-358 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-012
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,872.0,1.00%,F,T)

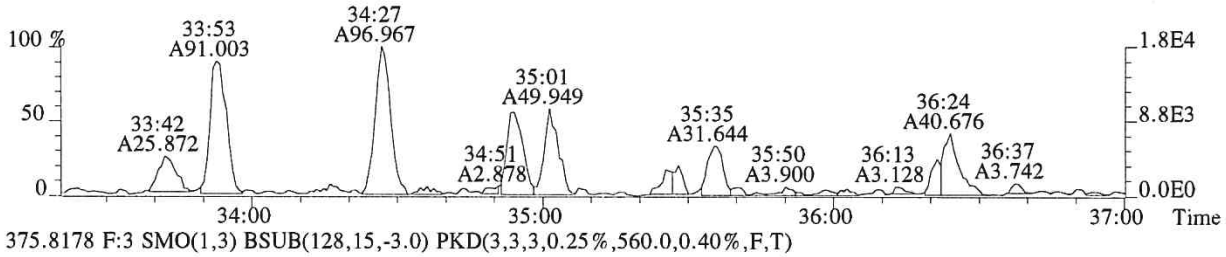


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,556.0,1.00%,F,T)

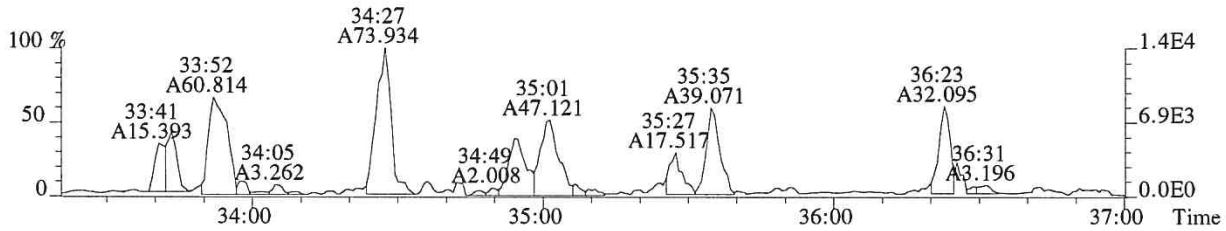


016220

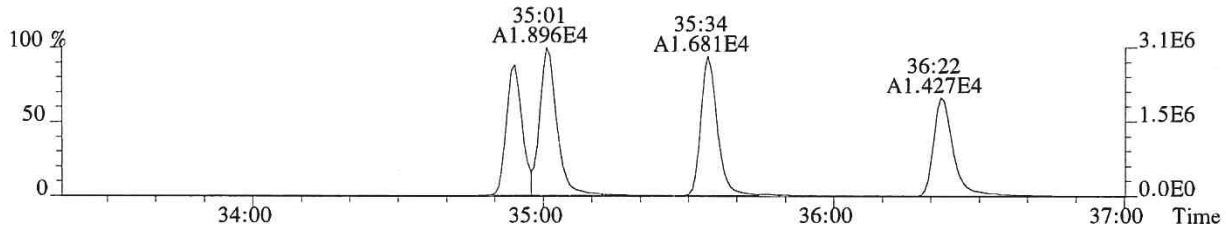
File:P519736 #1-330 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-012
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,572.0,0.40%,F,T)



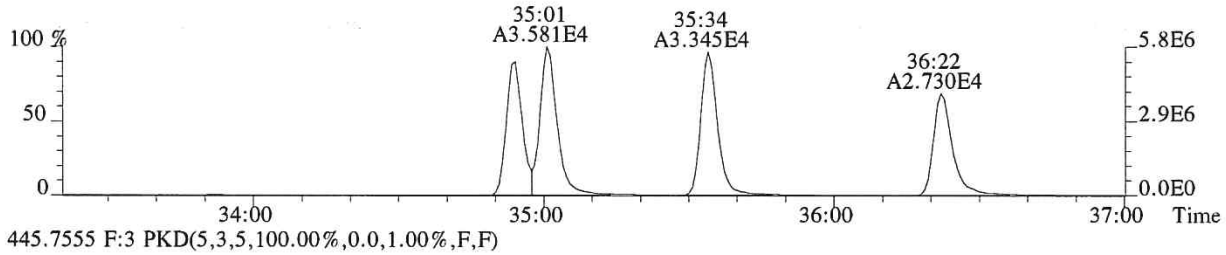
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,560.0,0.40%,F,T)



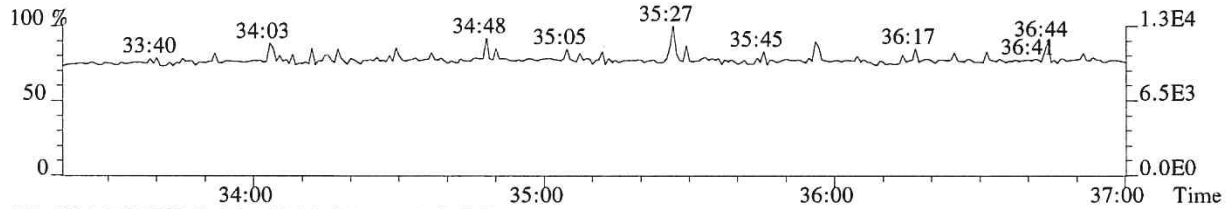
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,480.0,0.40%,F,T)



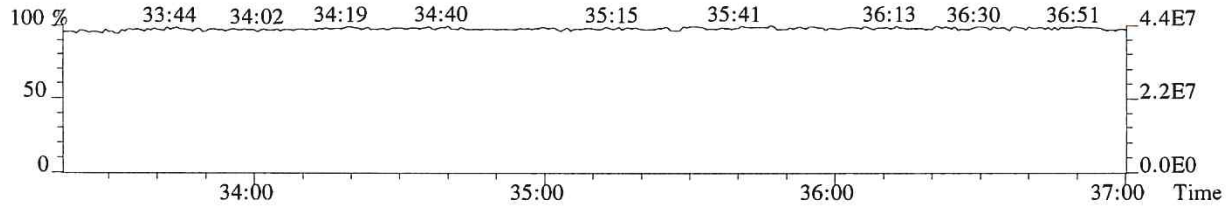
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,444.0,0.40%,F,T)



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

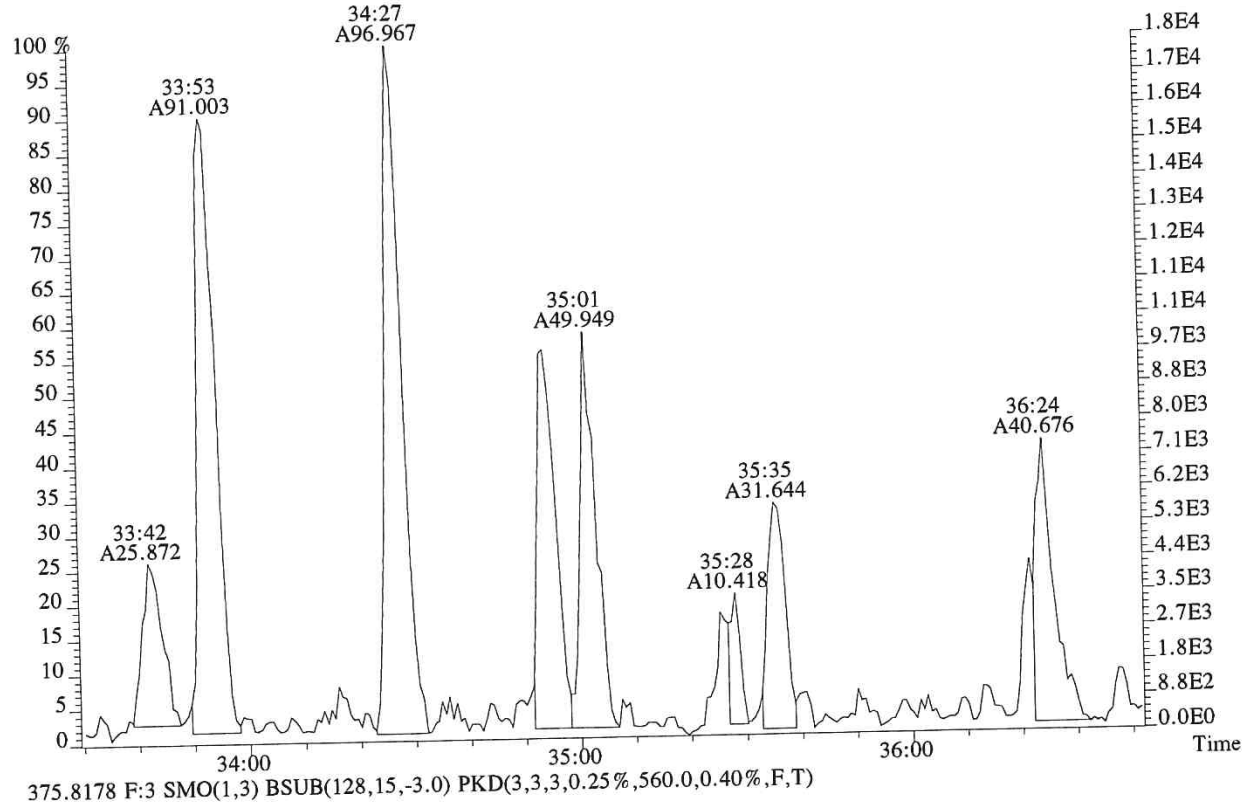


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

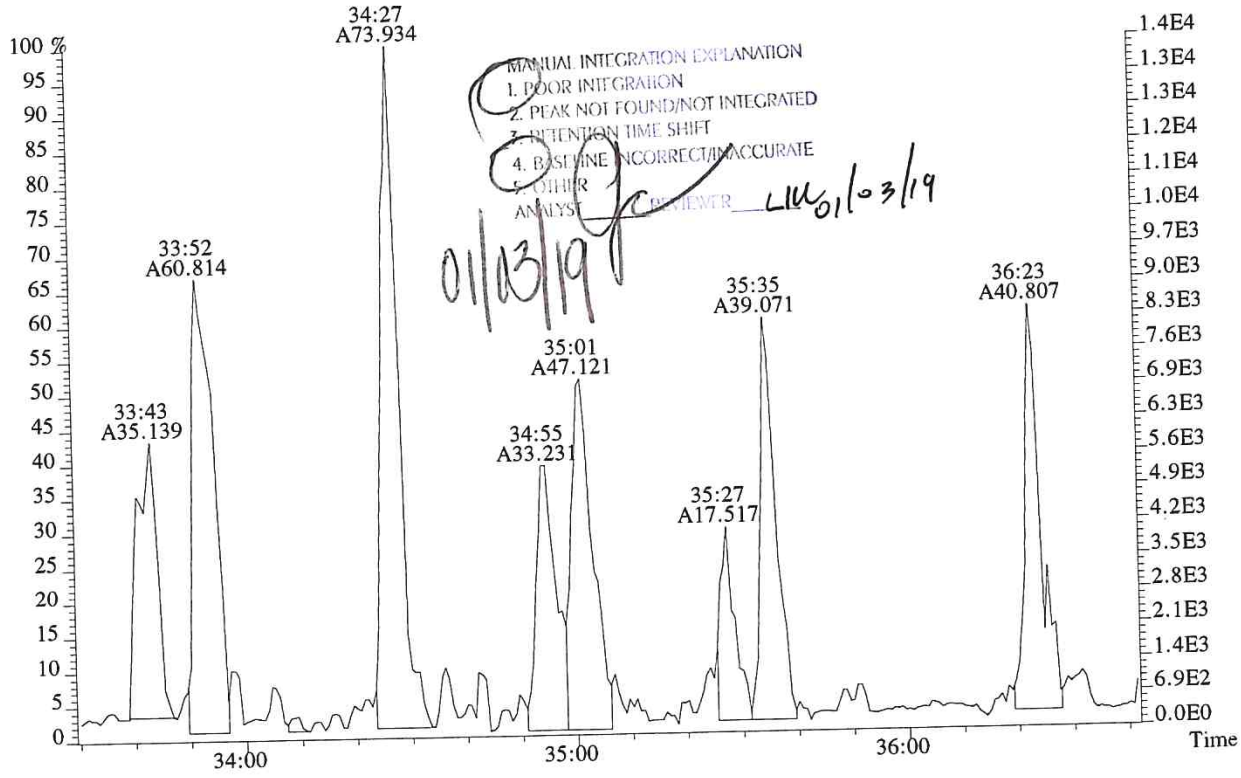


016221

File:P519736 #1-330 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-012
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,572.0,0.40%,F,T)

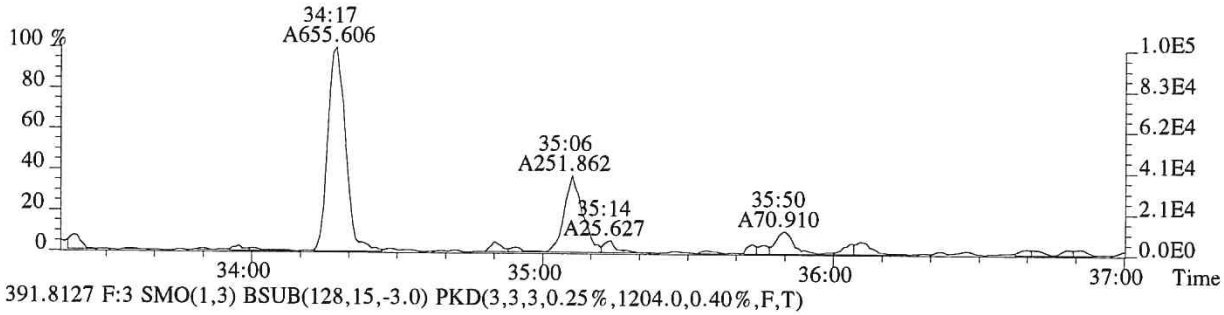


375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,560.0,0.40%,F,T)

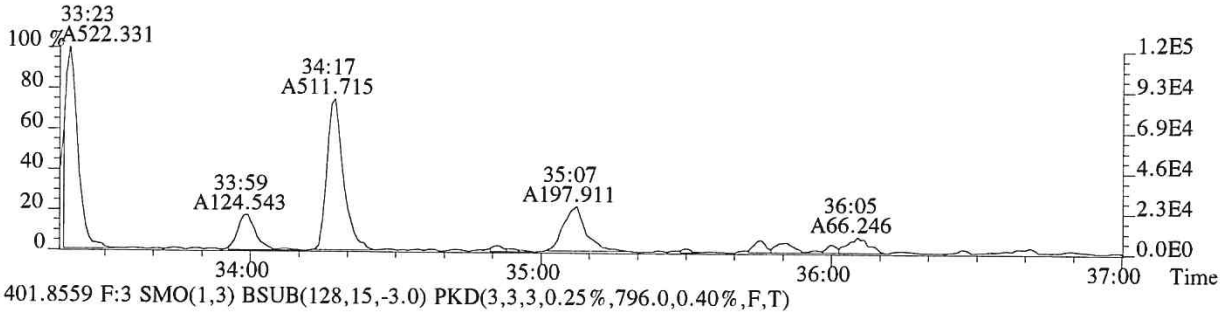


016222

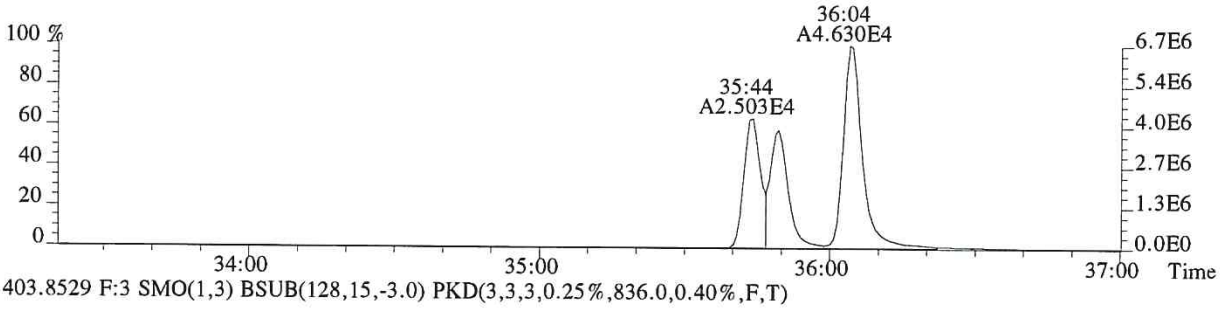
File:P519736 #1-330 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-012
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,764.0,0.40%,F,T)



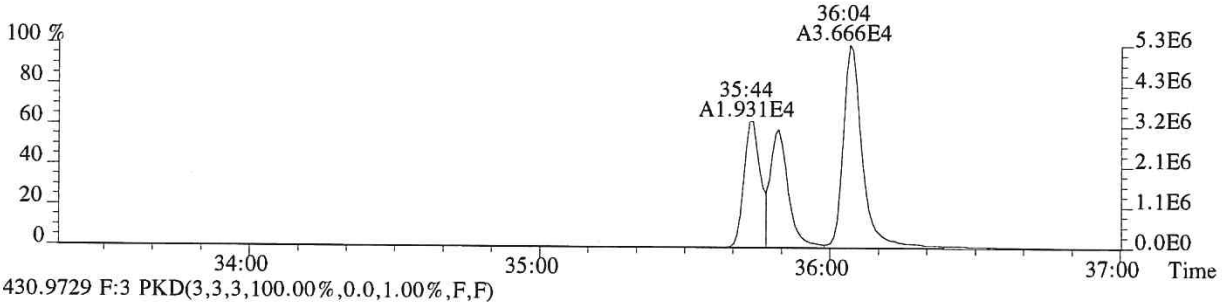
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1204.0,0.40%,F,T)



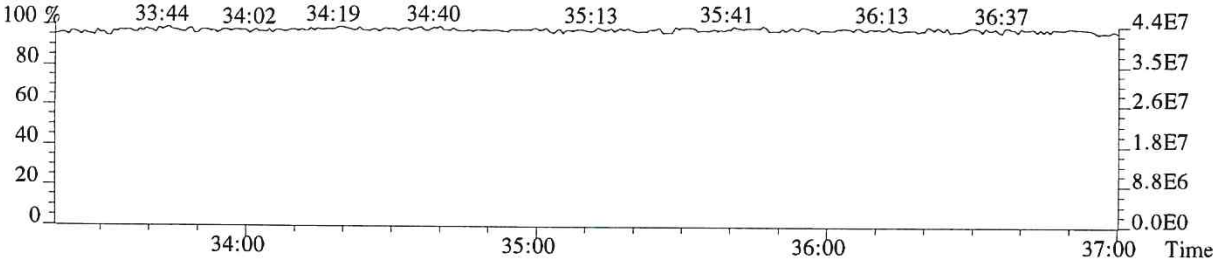
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,796.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,836.0,0.40%,F,T)

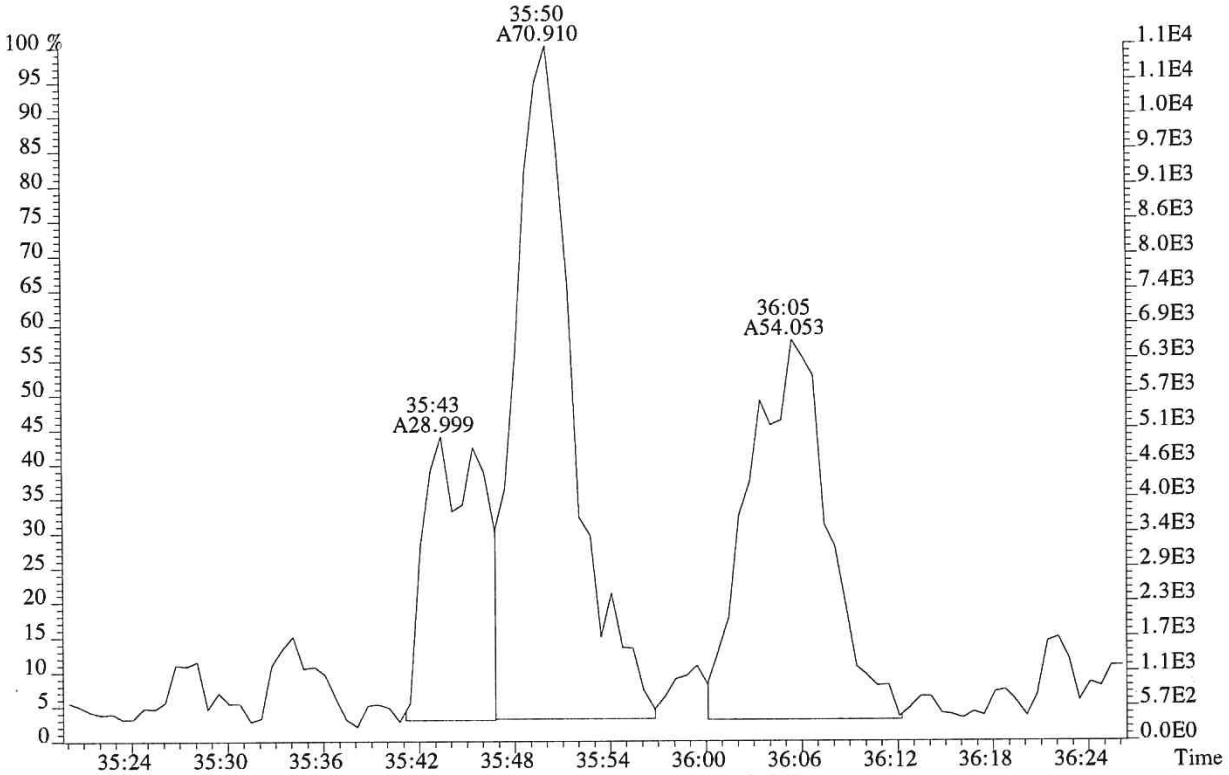


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

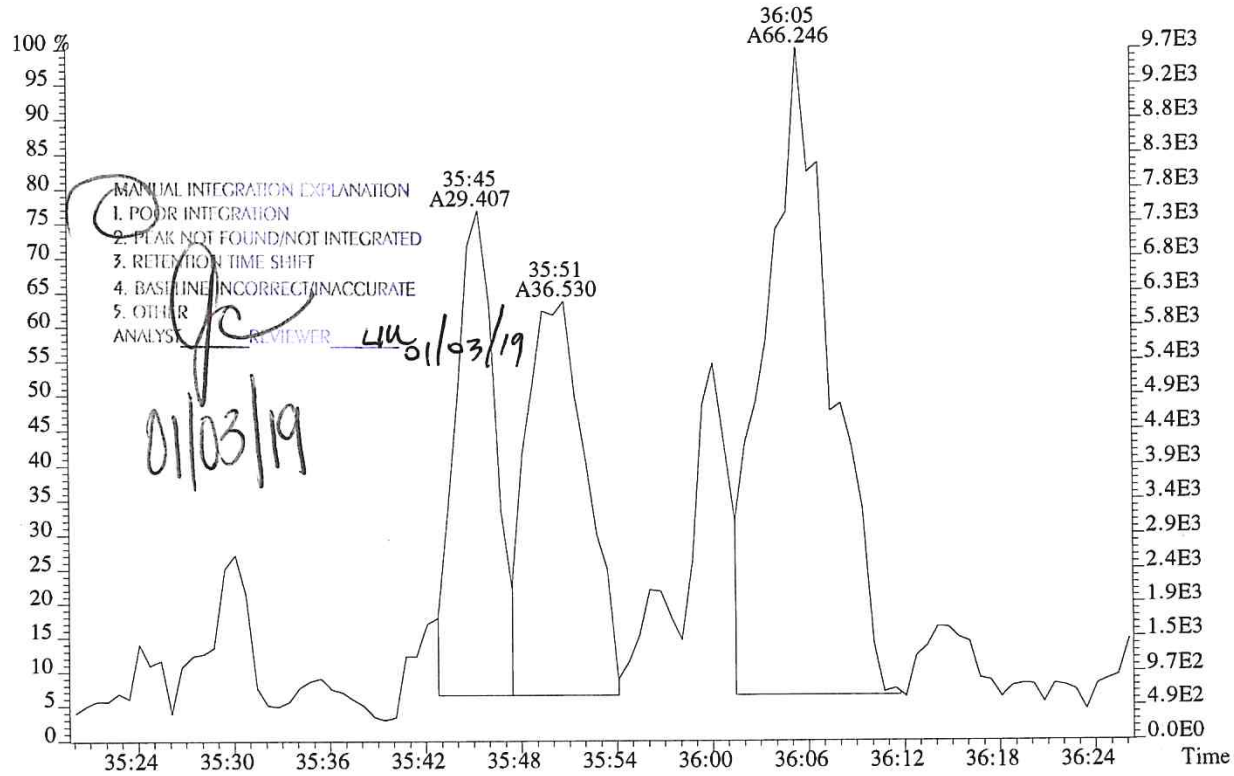


016223

File:P519736 #1-330 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-012
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,764.0,0.40%,F,T)

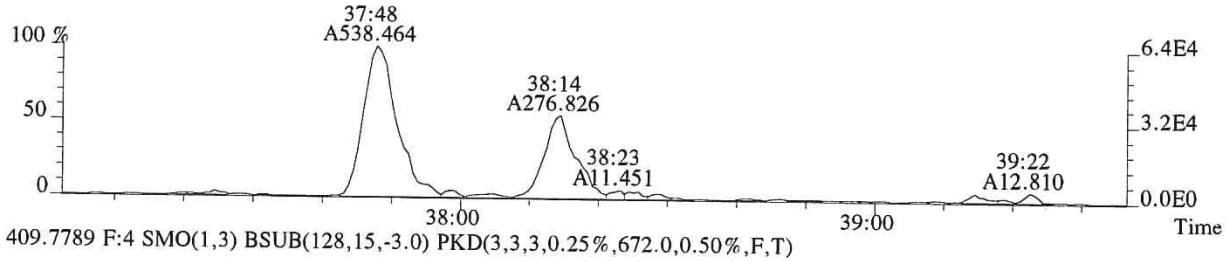


391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1204.0,0.40%,F,T)

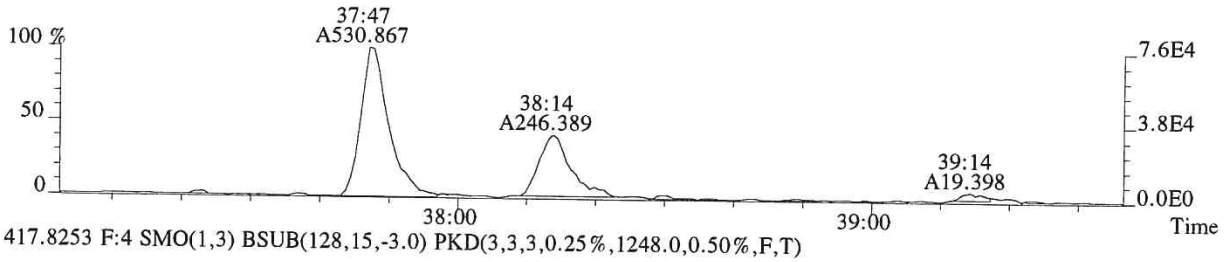


016224

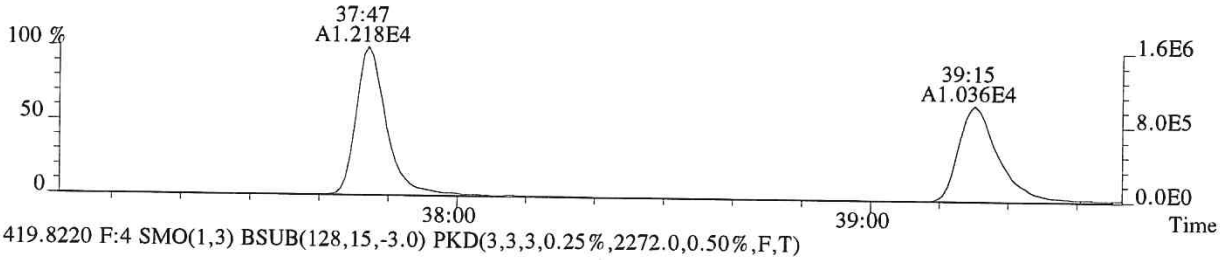
File:P519736 #1-232 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-012
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,416.0,0.50%,F,T)



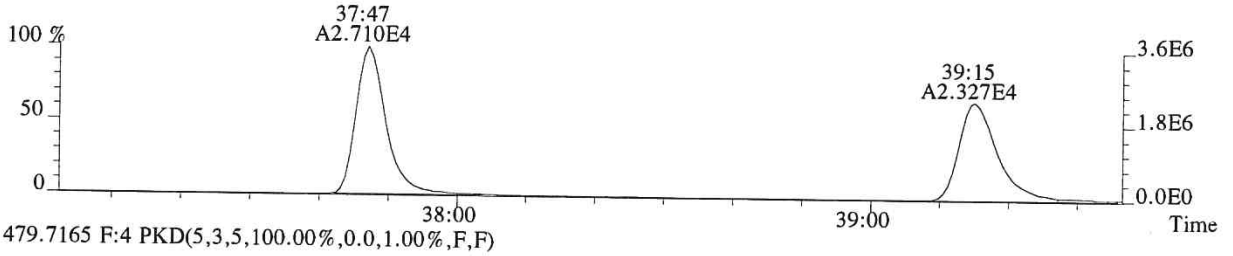
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,672.0,0.50%,F,T)



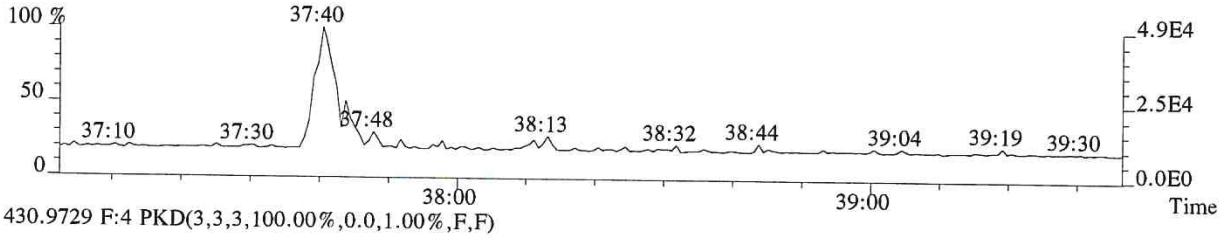
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1248.0,0.50%,F,T)



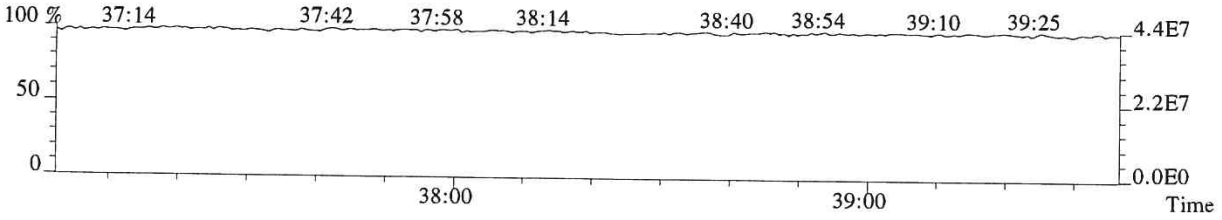
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2272.0,0.50%,F,T)



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

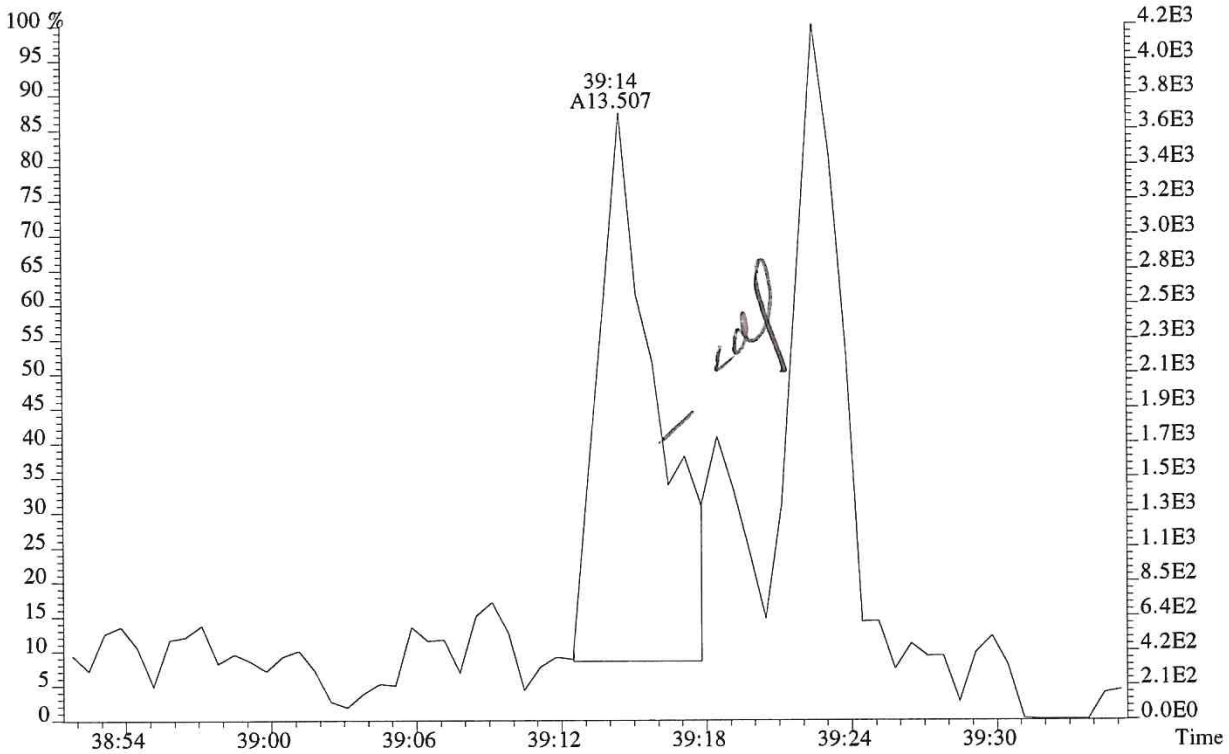


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

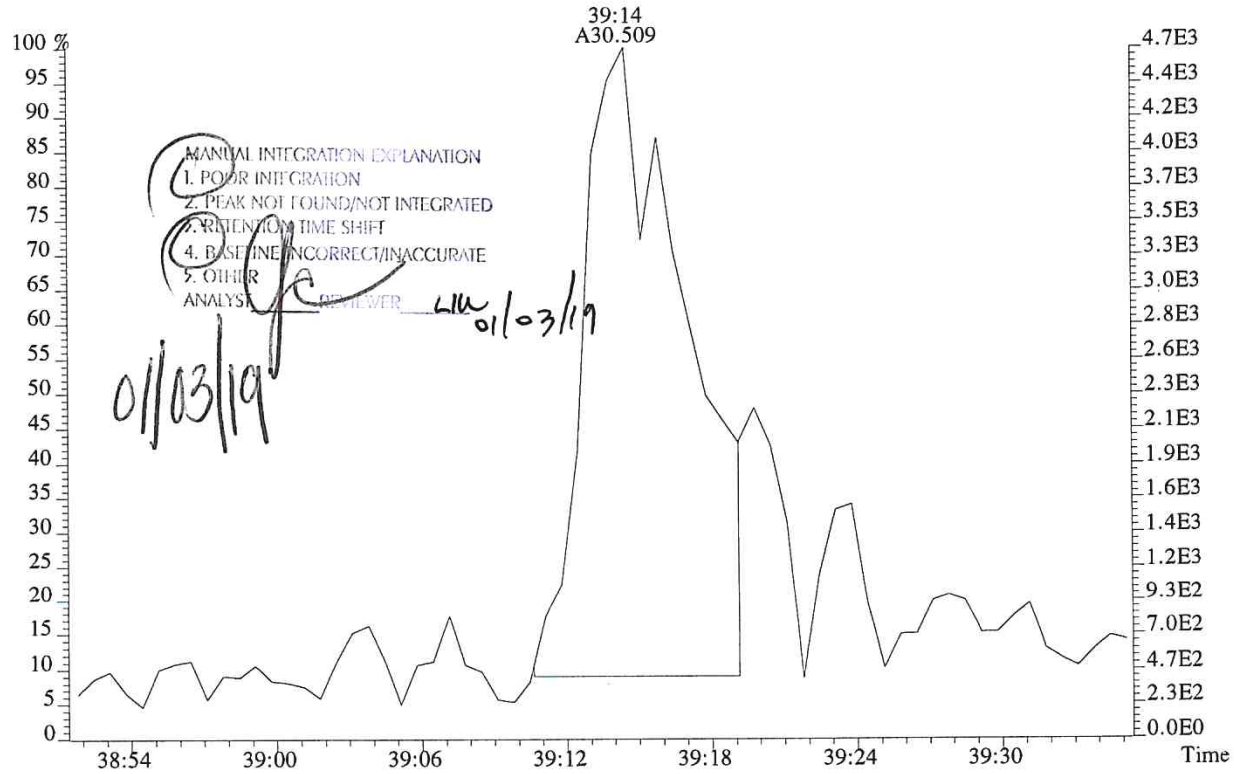


016225

File:P519736 #1-232 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:E1801137-012
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,416.0,0.50%,F,T)

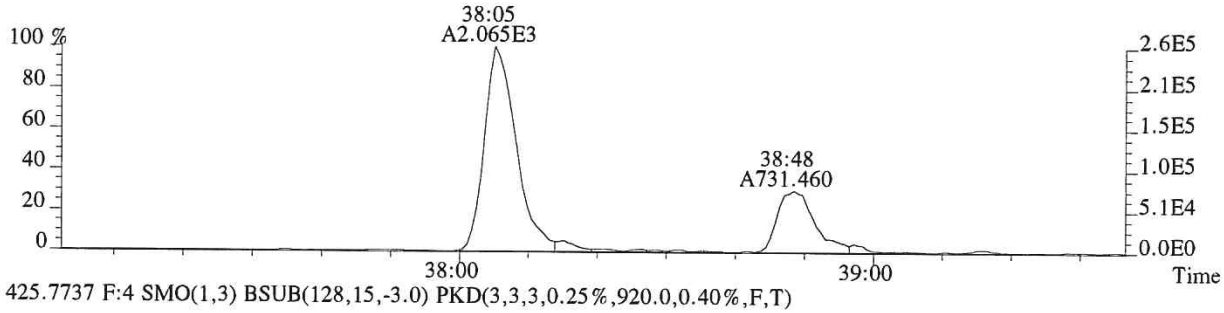


409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,672.0,0.50%,F,T)

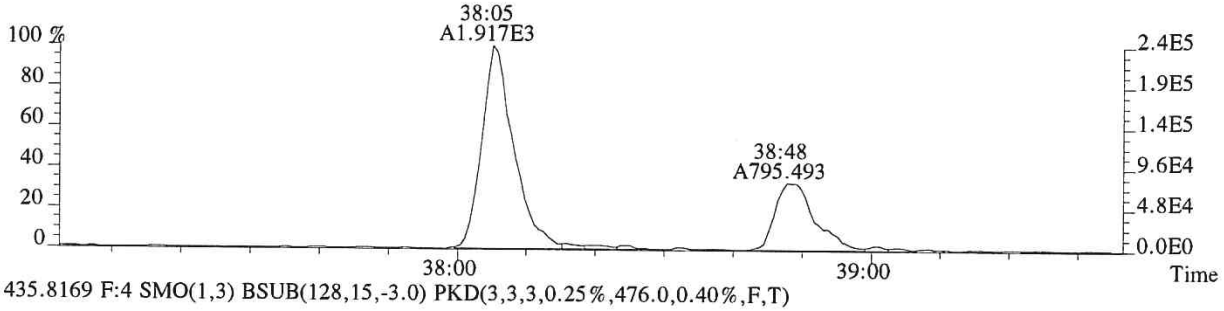


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER 01/03/19
01/03/19

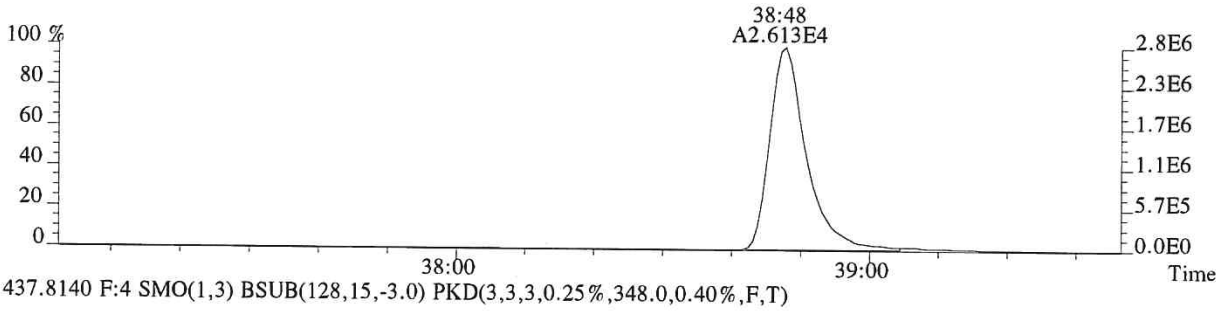
File:P519736 #1-232 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-012
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,960.0,0.40%,F,T)



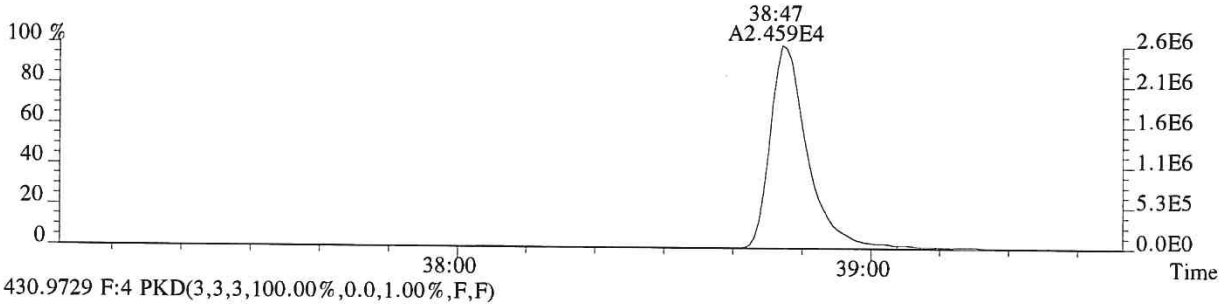
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,920.0,0.40%,F,T)



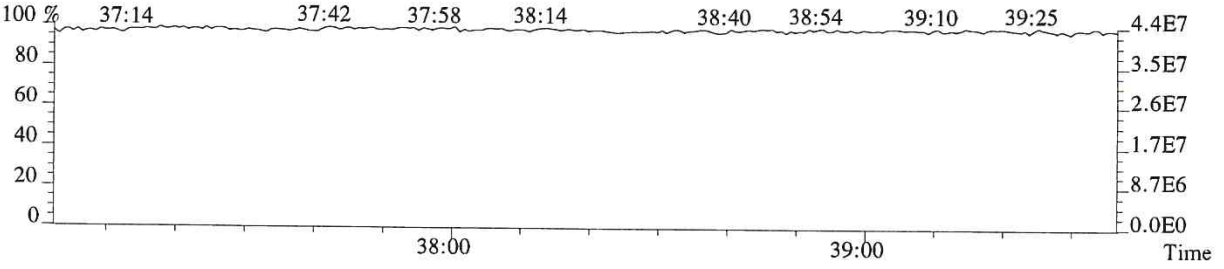
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,476.0,0.40%,F,T)



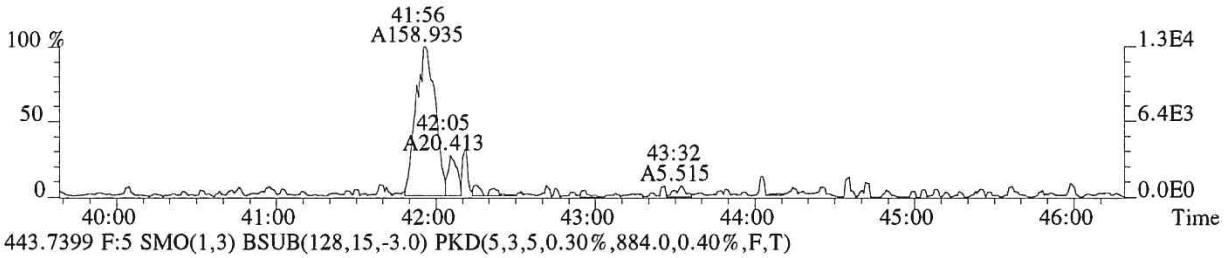
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,348.0,0.40%,F,T)



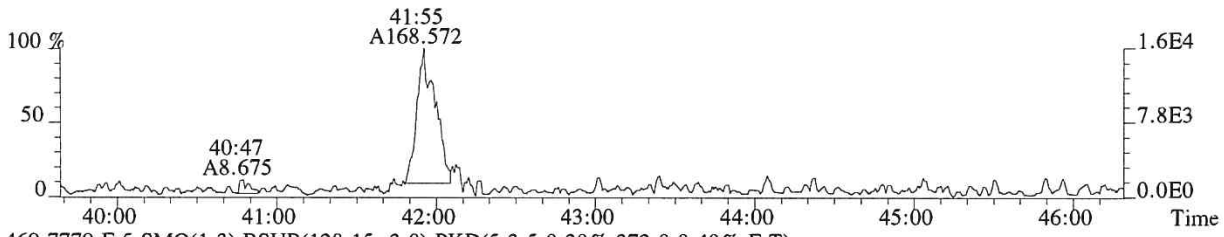
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



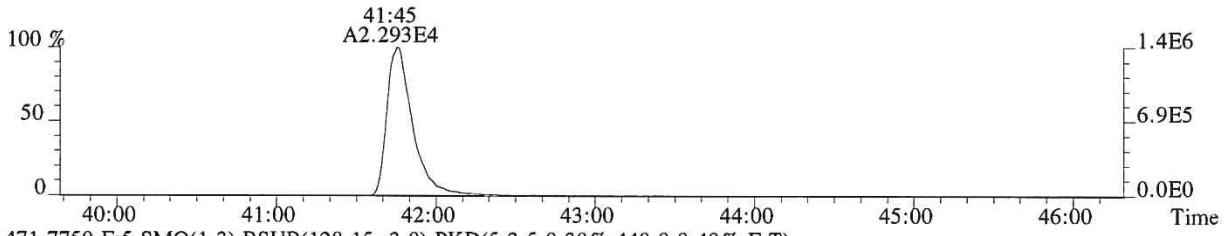
File:P519736 #1-601 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-012
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,304.0,0.40%,F,T)



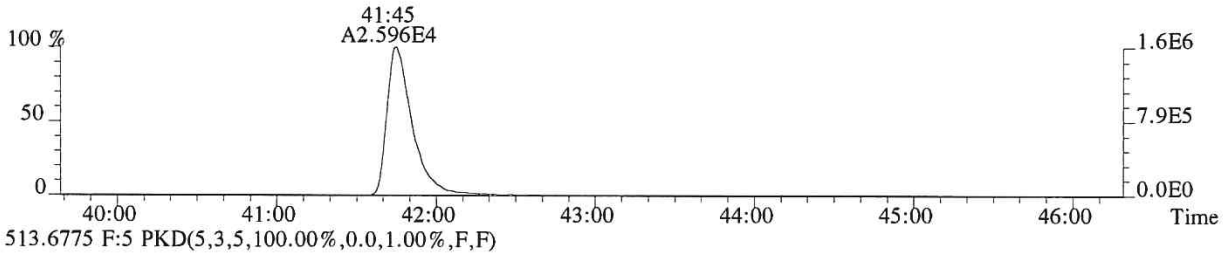
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,884.0,0.40%,F,T)



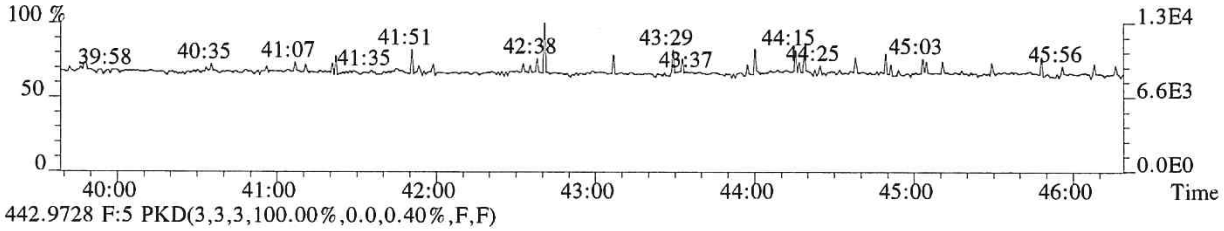
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,372.0,0.40%,F,T)



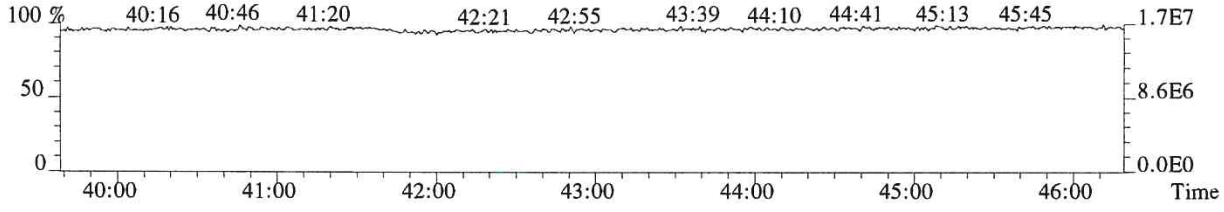
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,440.0,0.40%,F,T)



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

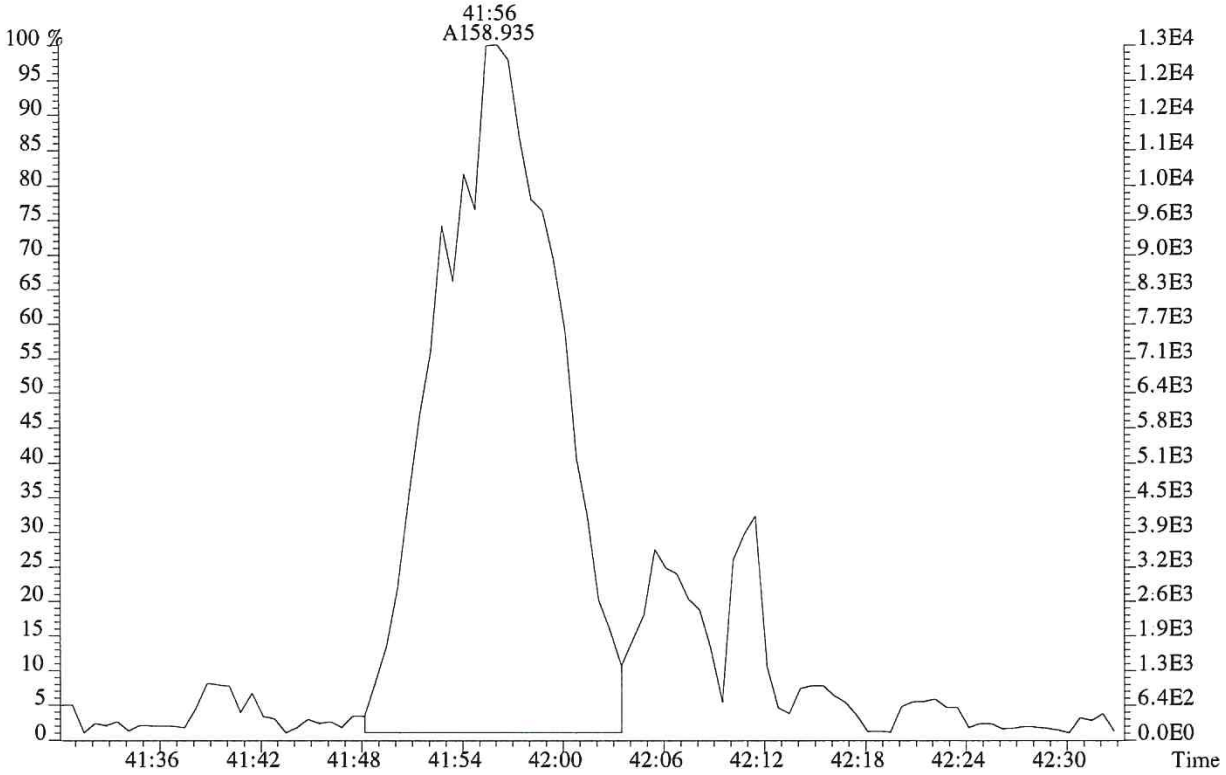


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

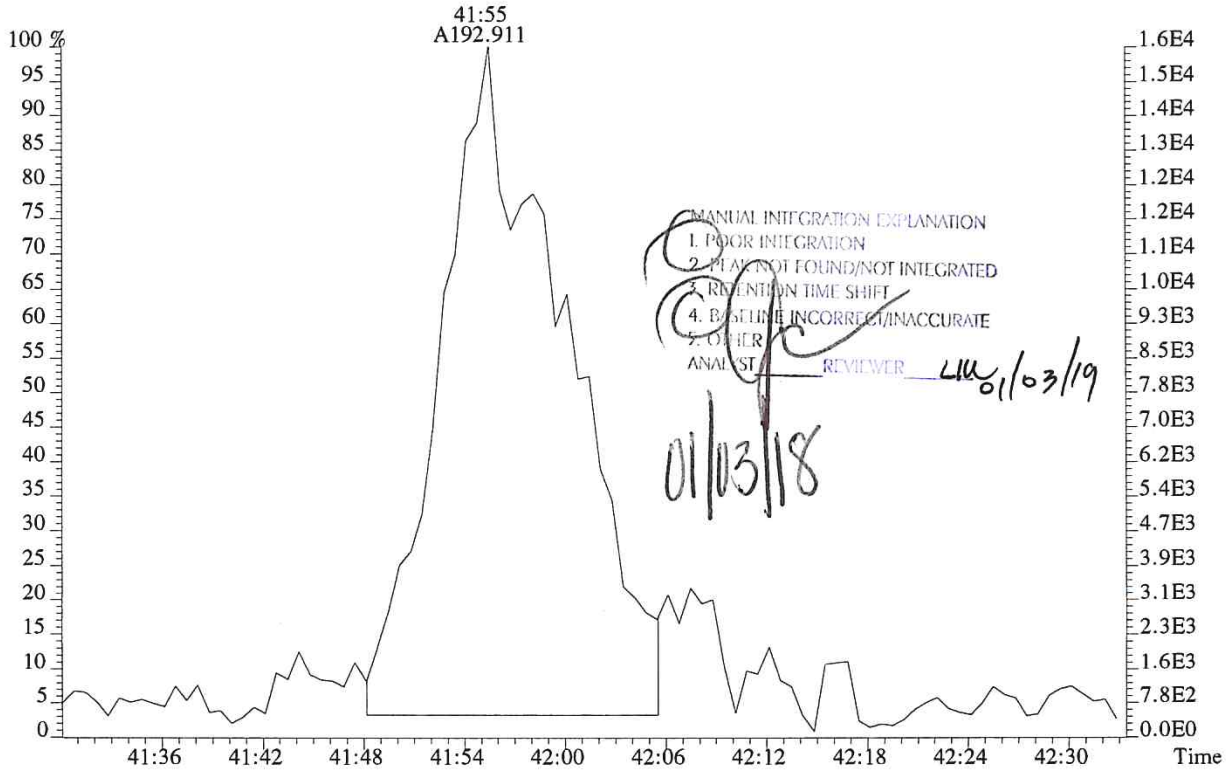


016228

File:P519736 #1-601 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-012
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,304.0,0.40%,F,T)

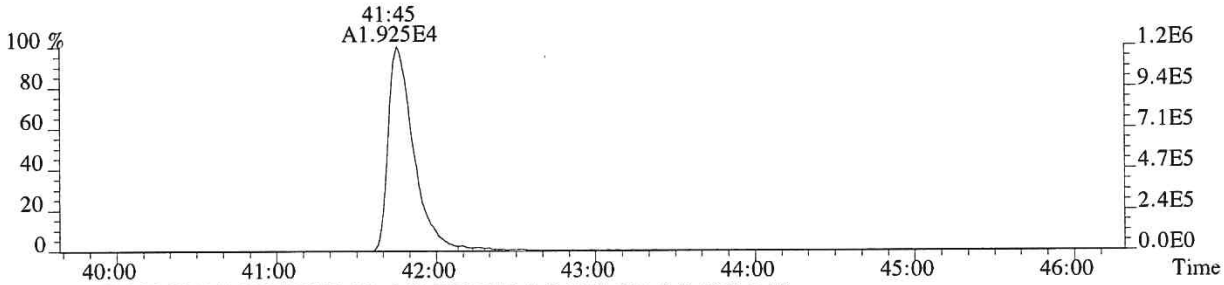


443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,884.0,0.40%,F,T)

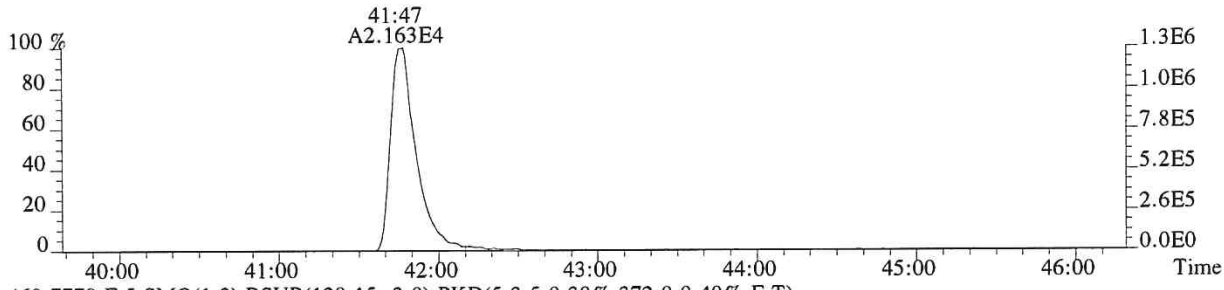


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LHW 01/03/19
01/03/18

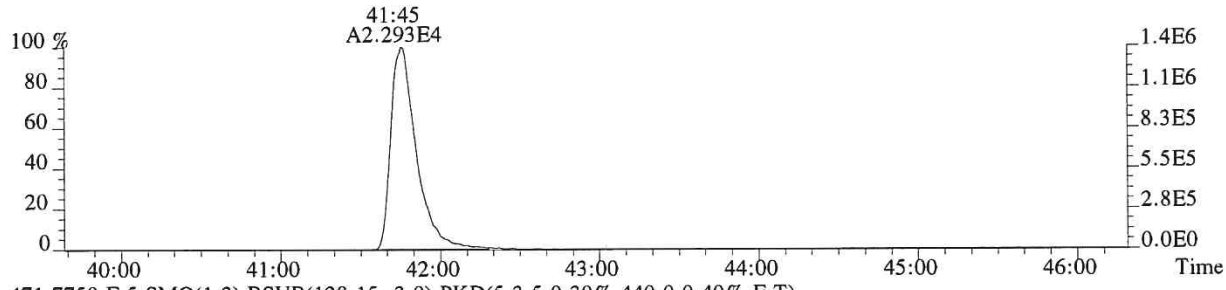
File:P519736 #1-601 Acq: 2-JAN-2019 18:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-012
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,408.0,0.40%,F,T)



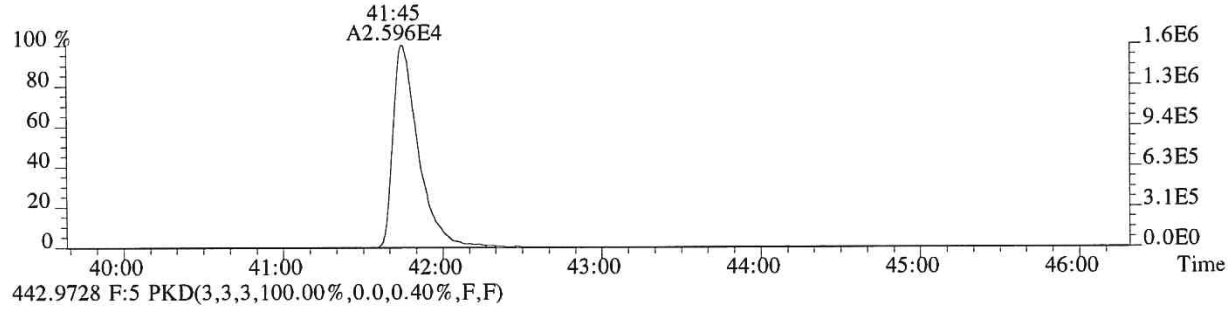
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,632.0,0.40%,F,T)



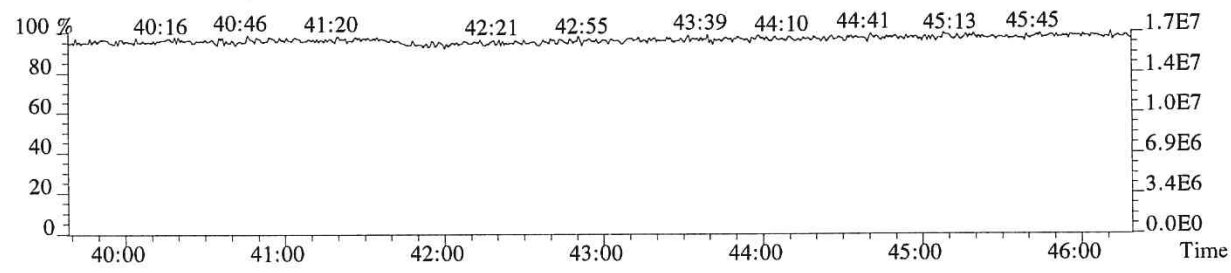
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,372.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,440.0,0.40%,F,T)



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



016230

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0186

Run #13 Filename P519737 Samp: 1 Inj: 1 Acquired: 2-JAN-19 19:24:44
Processed: 3-JAN-19 09:14:25 Sample ID: E1801137-013

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:05	1.965e+03	2.673e+03	0.73	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:58	2.160e+02	1.492e+02	1.45	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:58	2.019e+02	1.280e+02	1.58	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:55	3.137e+02	2.803e+02	1.12	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:03	1.489e+02	1.092e+02	1.36	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:35	9.278e+01	1.145e+02	0.81	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:25	6.409e+01	5.025e+01	1.28	yes	yes	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:48	1.137e+03	1.105e+03	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:15	7.179e+01	9.458e+01	0.76	no	no	1.258
10	Unk	OCDF	41:55	2.171e+03	2.567e+03	0.85	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:04	4.571e+02	6.208e+02	0.74	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:19	8.270e+01	4.635e+01	1.78	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:45	5.099e+01	4.508e+01	1.13	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:50	2.457e+02	1.868e+02	1.32	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:05	1.415e+02	1.178e+02	1.20	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:48	4.950e+03	4.489e+03	1.10	yes	no	1.025
17	Unk	OCDD	41:45	3.925e+04	4.440e+04	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	1.869e+04	2.411e+04	0.77	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:58	3.378e+04	2.146e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:58	3.151e+04	1.989e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:54	1.369e+04	2.679e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:01	1.595e+04	3.111e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:34	1.335e+04	2.571e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:22	1.285e+04	2.508e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:47	1.000e+04	2.281e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:15	8.847e+03	2.019e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:02	9.845e+03	1.224e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:17	2.574e+04	1.633e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:44	2.140e+04	1.694e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:49	2.162e+04	1.708e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:47	2.125e+04	2.008e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	41:45	1.747e+04	1.966e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	3.758e+04	4.813e+04	0.78	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:04	5.010e+04	3.809e+04	1.32	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:04	1.466e+04				no	1.014

$$\text{OCDD} = \frac{(3.925e+04 + 4.440e+04) \times 4000\ \text{pg} \times 1}{(1.747e+04 + 1.966e+04) \times 10.053\ \text{g} \times 81.5 / 100 \times 1.118} = 983.8\ \text{ng/kg}$$

LW 01/04/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0186

Run #13 Filename P519737 Samp: 1 Inj: 1 Acquired: 2-JAN-19 19:24:44
Processed: 3-JAN-19 09:14:25 LAB. ID: E1801137-013

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.81e+05	7.76e+02	3.6e+02	3.75e+05	7.24e+02	5.2e+02
2	1,2,3,7,8-PeCDF	3.43e+04	9.32e+02	3.7e+01	2.28e+04	1.55e+03	1.5e+01
3	2,3,4,7,8-PeCDF	2.87e+04	9.32e+02	3.1e+01	1.75e+04	1.55e+03	1.1e+01
4	1,2,3,4,7,8-HxCDF	6.25e+04	1.58e+03	3.9e+01	4.21e+04	9.12e+02	4.6e+01
5	1,2,3,6,7,8-HxCDF	1.92e+04	1.58e+03	1.2e+01	2.08e+04	9.12e+02	2.3e+01
6	2,3,4,6,7,8-HxCDF	1.76e+04	1.58e+03	1.1e+01	1.80e+04	9.12e+02	2.0e+01
7	1,2,3,7,8,9-HxCDF	1.14e+04	1.58e+03	7.2e+00	1.01e+04	9.12e+02	1.1e+01
8	1,2,3,4,6,7,8-HpCDF	1.56e+05	2.17e+03	7.2e+01	1.44e+05	1.07e+03	1.3e+02
9	1,2,3,4,7,8,9-HpCDF	1.13e+04	2.17e+03	5.2e+00	1.33e+04	1.07e+03	1.2e+01
10	OCDF	1.48e+05	5.16e+02	2.9e+02	1.68e+05	9.44e+02	1.8e+02
11	2,3,7,8-TCDD	7.37e+04	1.86e+03	4.0e+01	1.04e+05	8.60e+02	1.2e+02
12	1,2,3,7,8-PeCDD	1.20e+04	9.44e+02	1.3e+01	8.29e+03	8.04e+02	1.0e+01
13	1,2,3,4,7,8-HxCDD	1.14e+04	1.24e+03	9.2e+00	8.69e+03	1.04e+03	8.4e+00
14	1,2,3,6,7,8-HxCDD	4.59e+04	1.24e+03	3.7e+01	3.29e+04	1.04e+03	3.2e+01
15	1,2,3,7,8,9-HxCDD	2.23e+04	1.24e+03	1.8e+01	1.72e+04	1.04e+03	1.7e+01
16	1,2,3,4,6,7,8-HpCDD	5.40e+05	7.92e+02	6.8e+02	5.25e+05	3.72e+02	1.4e+03
17	OCDD	2.47e+06	4.40e+02	5.6e+03	2.81e+06	5.00e+02	5.6e+03
18	13C-2,3,7,8-TCDF	2.82e+06	4.98e+03	5.7e+02	3.60e+06	2.06e+03	1.8e+03
19	13C-1,2,3,7,8-PeCDF	5.55e+06	8.04e+02	6.9e+03	3.46e+06	7.84e+02	4.4e+03
20	13C-2,3,4,7,8-PeCDF	5.45e+06	8.04e+02	6.8e+03	3.44e+06	7.84e+02	4.4e+03
21	13C-1,2,3,4,7,8-HxCDF	2.44e+06	9.32e+02	2.6e+03	4.82e+06	1.18e+03	4.1e+03
22	13C-1,2,3,6,7,8-HxCDF	2.71e+06	9.32e+02	2.9e+03	5.26e+06	1.18e+03	4.5e+03
23	13C-2,3,4,6,7,8-HxCDF	2.34e+06	9.32e+02	2.5e+03	4.43e+06	1.18e+03	3.8e+03
24	13C-1,2,3,7,8,9-HxCDF	1.92e+06	9.32e+02	2.1e+03	3.81e+06	1.18e+03	3.2e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.37e+06	3.04e+03	4.5e+02	3.11e+06	2.62e+03	1.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	9.19e+05	3.04e+03	3.0e+02	2.10e+06	2.62e+03	8.0e+02
27	13C-2,3,7,8-TCDD	1.59e+06	5.06e+03	3.1e+02	2.00e+06	1.93e+03	1.0e+03
28	13C-1,2,3,7,8-PeCDD	4.40e+06	8.48e+02	5.2e+03	2.79e+06	1.11e+03	2.5e+03
29	13C-1,2,3,4,7,8-HxCDD	3.73e+06	1.04e+03	3.6e+03	2.93e+06	8.60e+02	3.4e+03
30	13C-1,2,3,6,7,8-HxCDD	3.41e+06	1.04e+03	3.3e+03	2.76e+06	8.60e+02	3.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.35e+06	4.48e+02	5.2e+03	2.26e+06	2.84e+02	8.0e+03
32	13C-OCDD	1.09e+06	5.32e+02	2.1e+03	1.20e+06	5.80e+02	2.1e+03
33	13C-1,2,3,4-TCDD	6.01e+06	5.06e+03	1.2e+03	7.64e+06	1.93e+03	4.0e+03
34	13C-1,2,3,7,8,9-HxCDD	7.63e+06	1.04e+03	7.4e+03	6.09e+06	8.60e+02	7.1e+03
35	37Cl-2,3,7,8-TCDD	2.38e+06	1.23e+03	1.9e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0186

Entry: 36 Totals Name: Total Tetra-Furans

Run: 13 File: P519737 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 19:24:44 Processed: 3-JAN-19 09:14:25

Mass: 303.9020 305.8990 Tot Response: 7.83e+03 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:26	5.04e+01	6.66e+01	0.76	yes	1.17e+02		n	n
2	23:10	1.13e+02	1.54e+02	0.73	yes	2.67e+02		n	n
3	23:49	9.25e+01	1.16e+02	0.79	yes	2.09e+02		n	n
4	24:35	8.46e+01	1.04e+02	0.81	yes	1.89e+02		n	n
5	25:06	6.91e+02	9.40e+02	0.73	yes	1.63e+03		n	n
6	26:05	1.96e+03	2.67e+03	0.73	yes	4.64e+03	2,3,7,8-TCDF	n	n
7	26:30	1.95e+02	2.55e+02	0.77	yes	4.50e+02		n	n
8	28:15	1.43e+02	1.89e+02	0.76	yes	3.32e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0186

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 13 File: P519737 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 19:24:44 Processed: 3-JAN-19 09:14:25

Mass: 319.8970 321.8940 Tot Response: 1.13e+03 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:44	2.46e+01	2.85e+01	0.86	yes	5.31e+01		n	n
2	27:04	4.57e+02	6.21e+02	0.74	yes	1.08e+03	2,3,7,8-TCDD	n	n

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Peak List Summary

CLIENT ID.
SL0186

Entry: 38 Totals Name: Total Penta-Furans1

Run: 13 File: P519737 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 19:24:44 Processed: 3-JAN-19 09:14:25

Mass: 339.8600 341.8570 Tot Response: 4.98e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:16	3.04e+02	1.94e+02 1.57	yes	4.98e+02		n	n

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Peak List Summary

CLIENT ID.
SL0186

Entry: 39 Totals Name: Total Penta-Furans2

Run: 13 File: P519737 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 19:24:44 Processed: 3-JAN-19 09:14:25

Mass: 339.8600 341.8570 Tot Response: 1.62e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:47	1.15e+02	7.09e+01	1.62	yes	1.86e+02		n	n
2	29:56	3.42e+02	2.09e+02	1.64	yes	5.51e+02		n	n
3	30:58	2.16e+02	1.49e+02	1.45	yes	3.65e+02	1,2,3,7,8-PeCDF	n	n
4	31:15	1.12e+02	7.52e+01	1.49	yes	1.87e+02		n	n
5	31:58	2.02e+02	1.28e+02	1.58	yes	3.30e+02	2,3,4,7,8-PeCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0186

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 13 File: P519737 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 19:24:44 Processed: 3-JAN-19 09:14:25

Mass: 355.8550 357.8520 Tot Response: 1.84e+02 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	31:01	4.55e+01	3.05e+01	1.50	yes	7.60e+01		n	n
2	31:11	4.26e+01	2.49e+01	1.71	yes	6.75e+01		n	n
3	31:17	2.42e+01	1.65e+01	1.47	yes	4.06e+01		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0186

Entry: 41 Totals Name: Total Hexa-Furans

Run: 13 File: P519737 Sample:1 Injection:1 Function:3

Acquired: 2-JAN-19 19:24:44 Processed: 3-JAN-19 09:14:25

Mass: 373.8210 375.8180 Tot Response: 3.33e+03 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:43	1.54e+02	1.37e+02	1.12	yes	2.92e+02		n	n
2	33:53	5.50e+02	4.85e+02	1.13	yes	1.04e+03		n	n
3	34:27	5.68e+02	4.73e+02	1.20	yes	1.04e+03		n	n
4	34:55	3.14e+02	2.80e+02	1.12	yes	5.94e+02	1,2,3,4,7,8-HxCDF	n	n
5	35:03	1.49e+02	1.09e+02	1.36	yes	2.58e+02	1,2,3,6,7,8-HxCDF	n	n
6	36:25	6.41e+01	5.03e+01	1.28	yes	1.14e+02	1,2,3,7,8,9-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0186

ntry: 42 Totals Name: Total Hexa-Dioxins

un: 13 File: P519737 Sample:1 Injection:1 Function:3

cquired: 2-JAN-19 19:24:44 Processed: 3-JAN-19 09:14:25

lass: 389.8160 391.8130 Tot Response: 4.63e+03 RRF: 1.047

	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
	34:17	1.14e+03	8.71e+02	1.31	yes	2.01e+03		n n
2	34:51	1.52e+02	1.10e+02	1.39	yes	2.62e+02		n n
3	35:06	7.43e+02	6.47e+02	1.15	yes	1.39e+03		n n
4	35:13	8.94e+01	8.18e+01	1.09	yes	1.71e+02		n n
5	35:45	5.10e+01	4.51e+01	1.13	yes	9.61e+01	1,2,3,4,7,8-HxCDD	n n
6	35:50	2.46e+02	1.87e+02	1.32	yes	4.33e+02	1,2,3,6,7,8-HxCDD	n n
7	36:05	1.42e+02	1.18e+02	1.20	yes	2.59e+02	1,2,3,7,8,9-HxCDD	n n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
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ntry: 43 Totals Name: Total Hepta-Furans

un: 13 File: P519737 Sample:1 Injection:1 Function:4

cquired: 2-JAN-19 19:24:44 Processed: 3-JAN-19 09:14:25

lass: 407.7820 409.7790 Tot Response: 5.62e+03 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:48	1.14e+03	1.03	yes	2.24e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	38:13	1.69e+03	1.00	yes	3.38e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0186

ntry: 44 Totals Name: Total Hepta-Dioxins

un: 13 File: P519737 Sample:1 Injection:1 Function:4

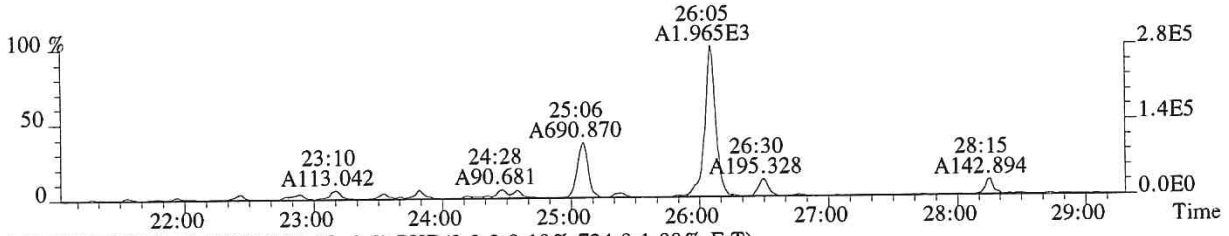
cquired: 2-JAN-19 19:24:44 Processed: 3-JAN-19 09:14:25

lass: 423.7770 425.7740 Tot Response: 2.39e+04 RRF: 1.025

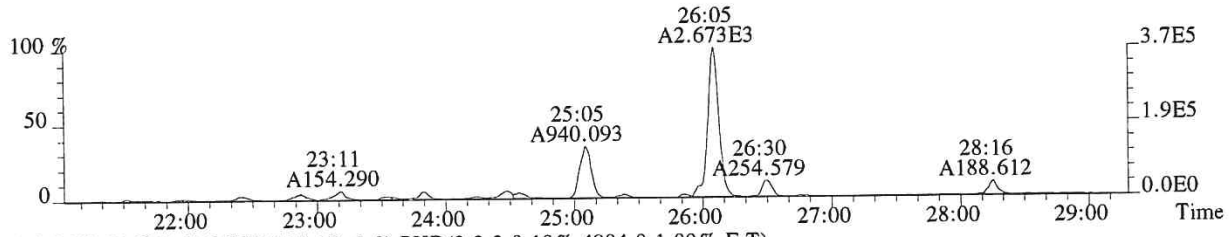
	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
	38:05	7.38e+03	7.06e+03 1.05	yes	1.44e+04		n	n
	38:48	4.95e+03	4.49e+03 1.10	yes	9.44e+03	1,2,3,4,6,7,8-HpCDD	n	n

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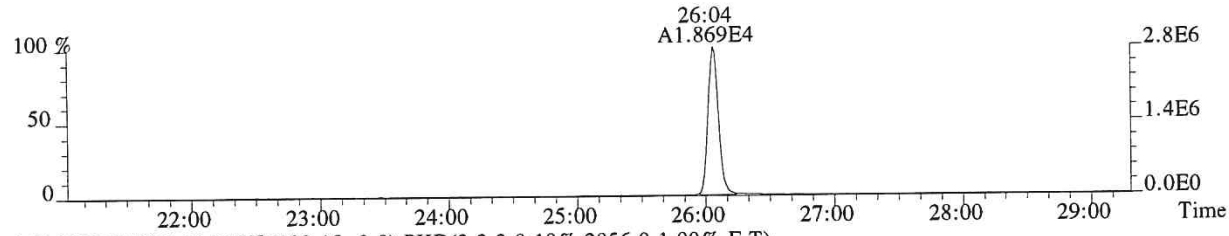
File:P519737 #1-587 Acq: 2-JAN-2019 19:24:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-013
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,776.0,1.00%,F,T)



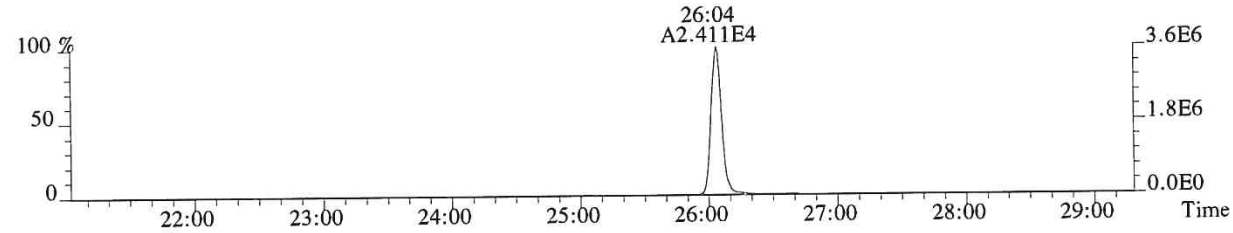
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,724.0,1.00%,F,T)



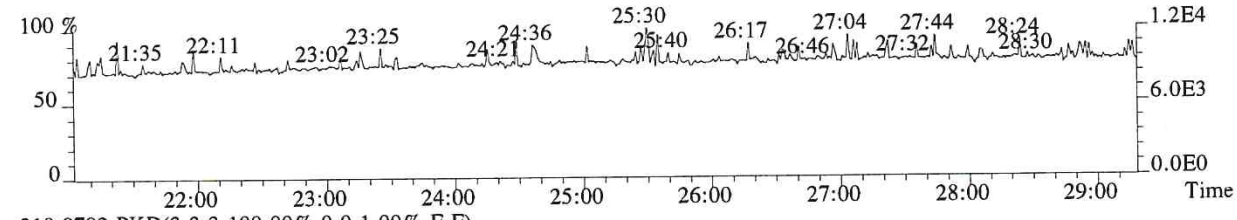
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4984.0,1.00%,F,T)



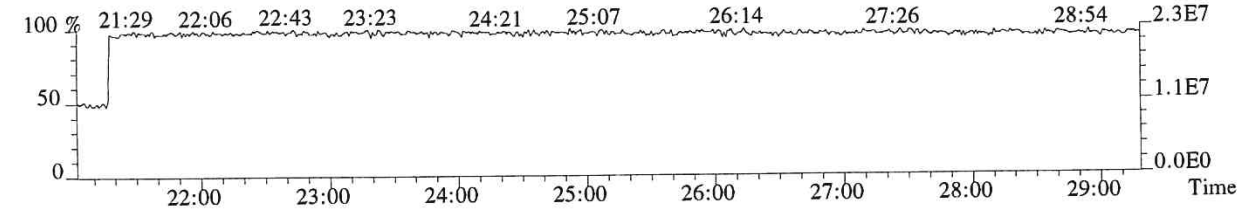
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2056.0,1.00%,F,T)



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

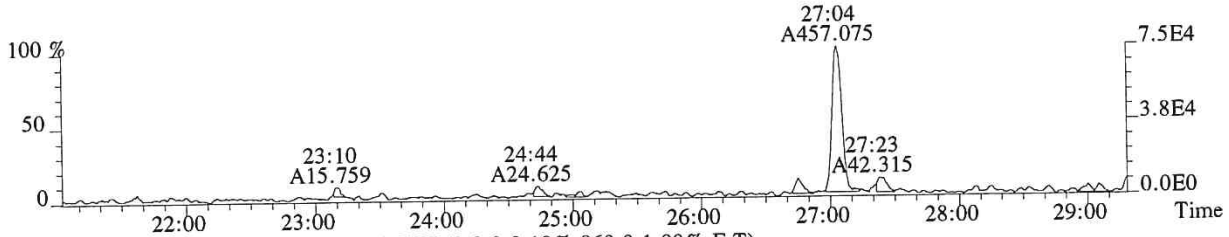


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

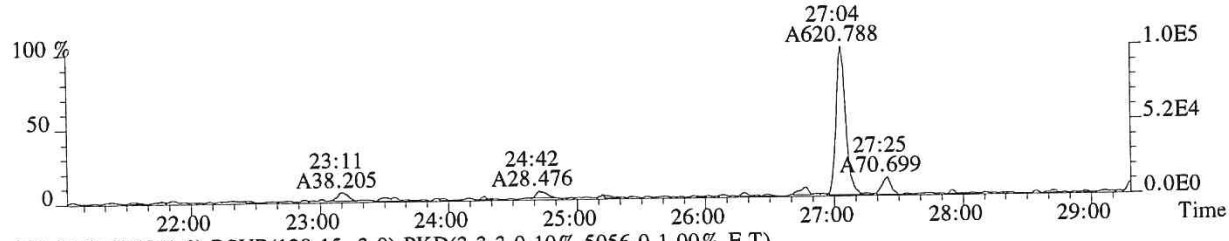


016242

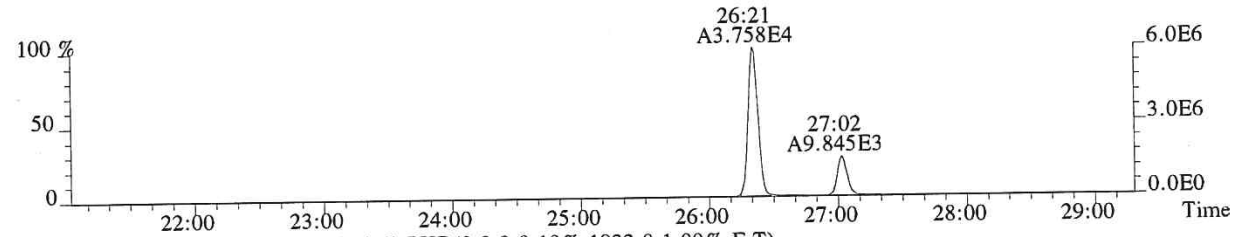
File:P519737 #1-587 Acq: 2-JAN-2019 19:24:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-013
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1856.0,1.00%,F,T)



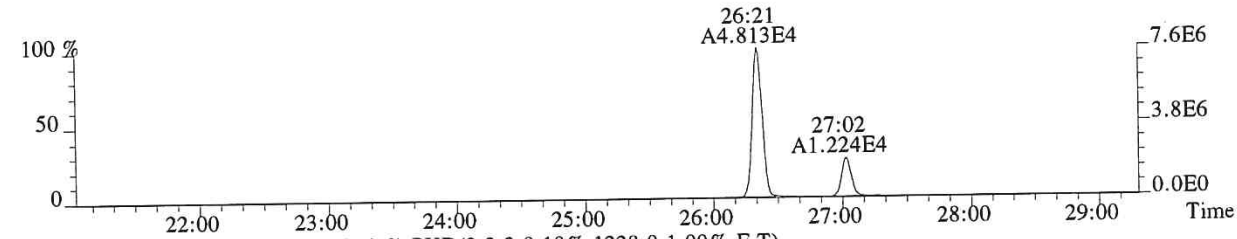
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,860.0,1.00%,F,T)



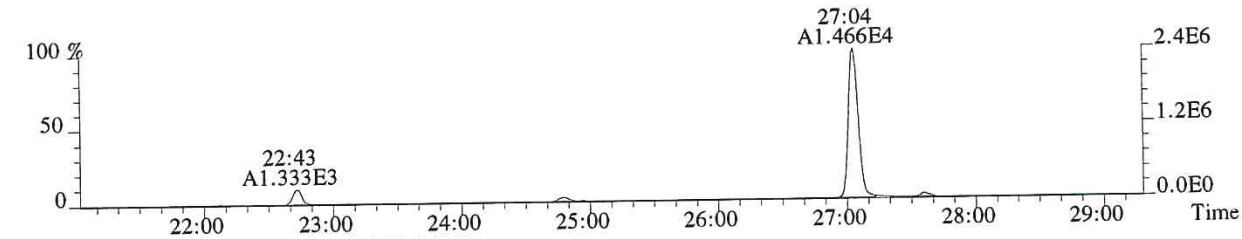
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5056.0,1.00%,F,T)



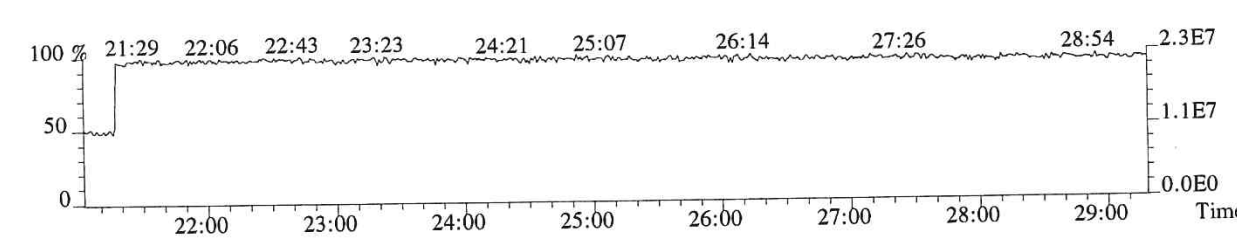
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1932.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1228.0,1.00%,F,T)

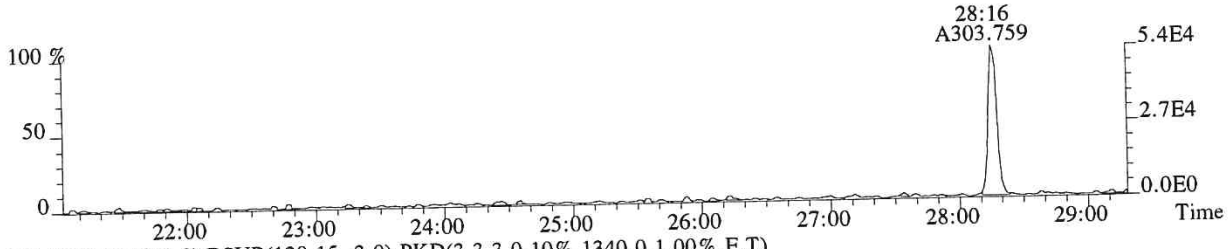


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

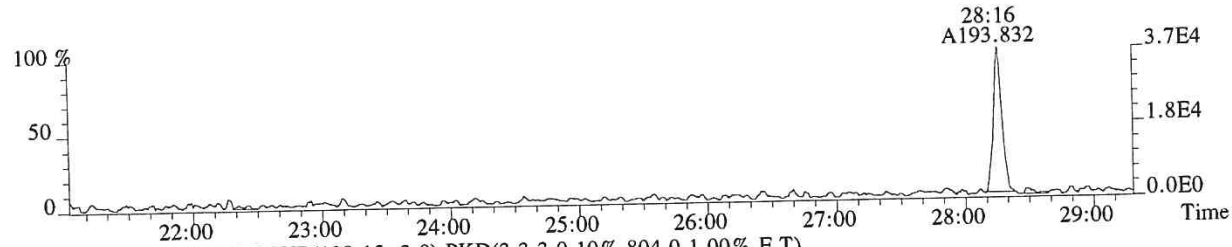


016243

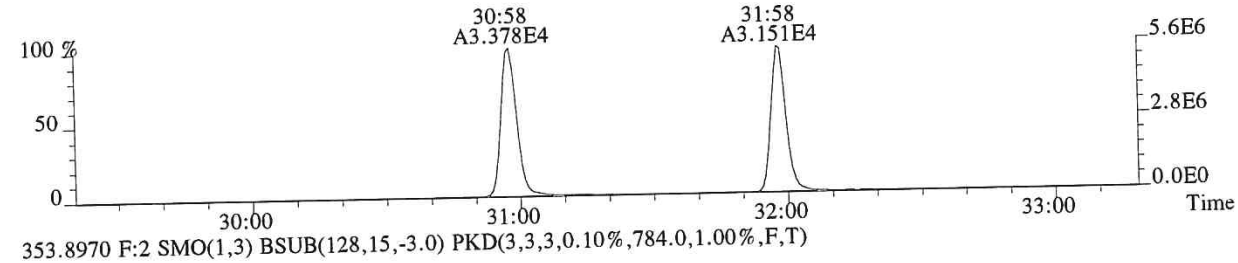
File:P519737 #1-587 Acq: 2-JAN-2019 19:24:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-013
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,580.0,1.00%,F,T)



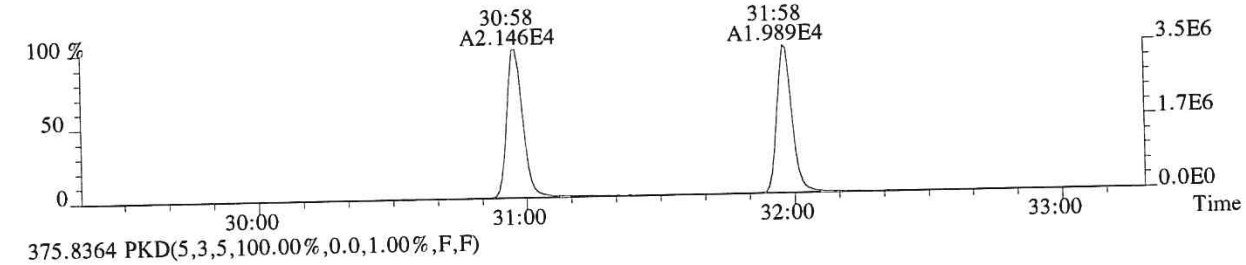
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1340.0,1.00%,F,T)



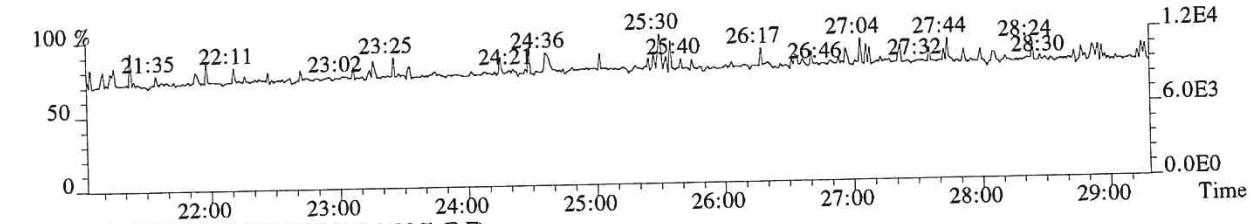
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,804.0,1.00%,F,T)



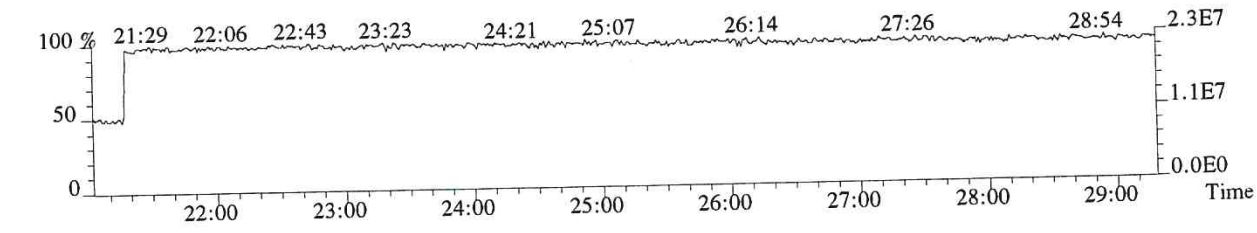
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,784.0,1.00%,F,T)



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

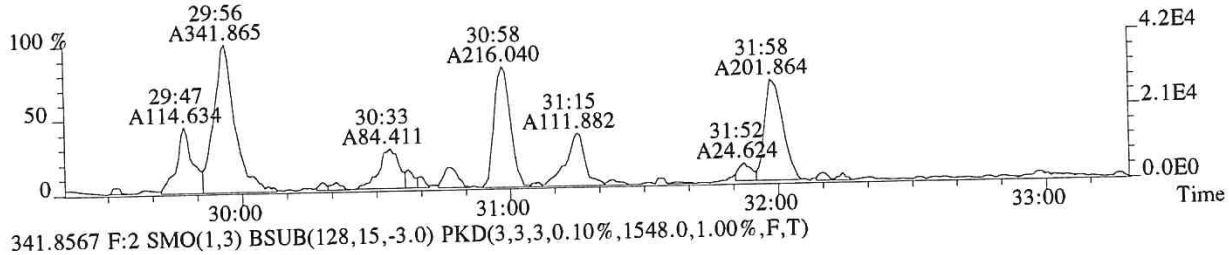


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

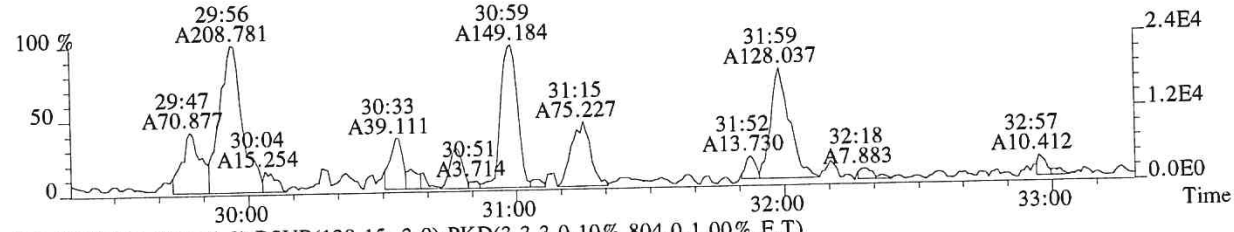


016244

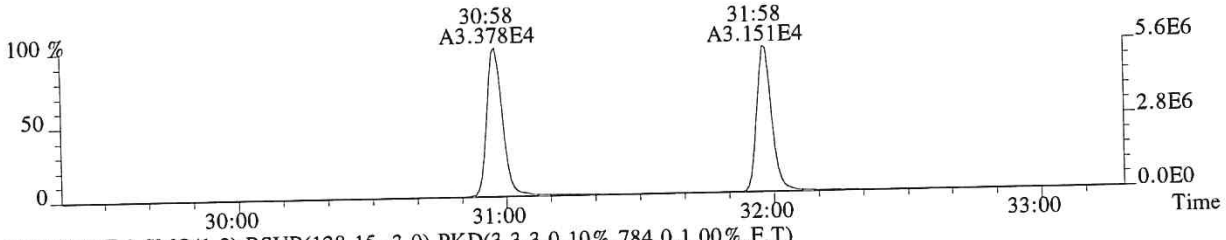
File:P519737 #1-358 Acq: 2-JAN-2019 19:24:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-013
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,932.0,1.00%,F,T)



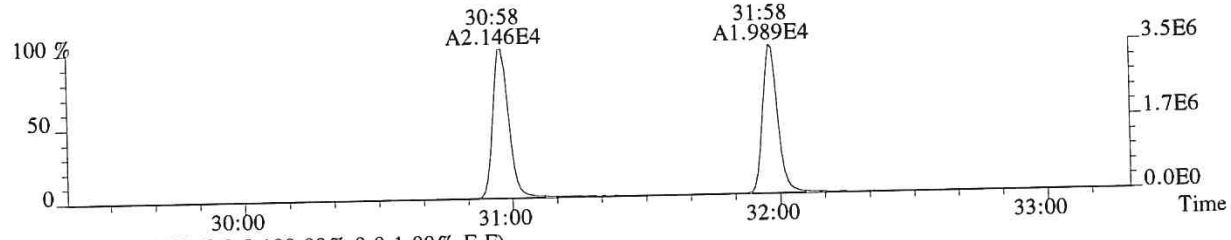
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1548.0,1.00%,F,T)



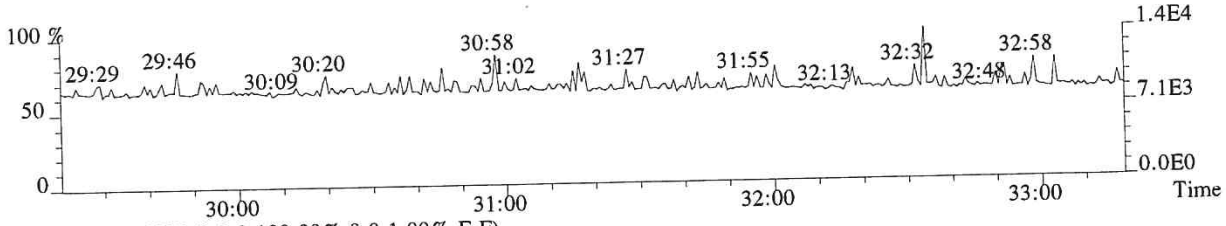
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,804.0,1.00%,F,T)



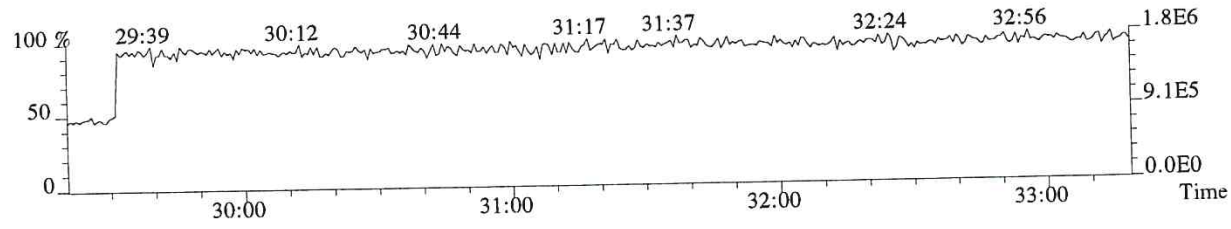
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,784.0,1.00%,F,T)



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

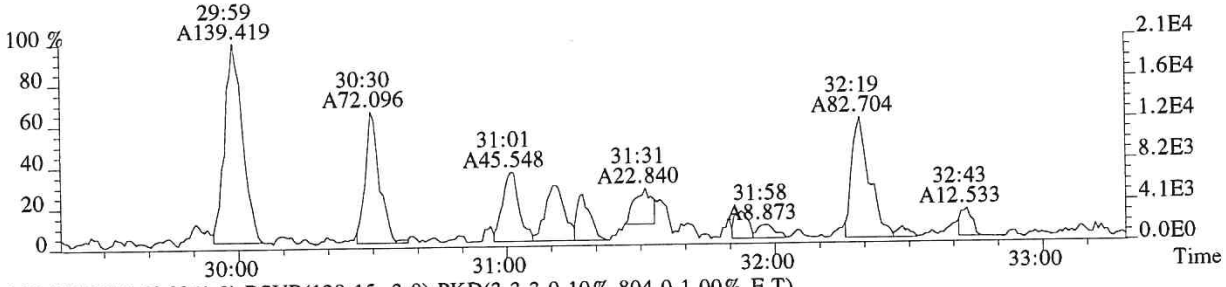


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

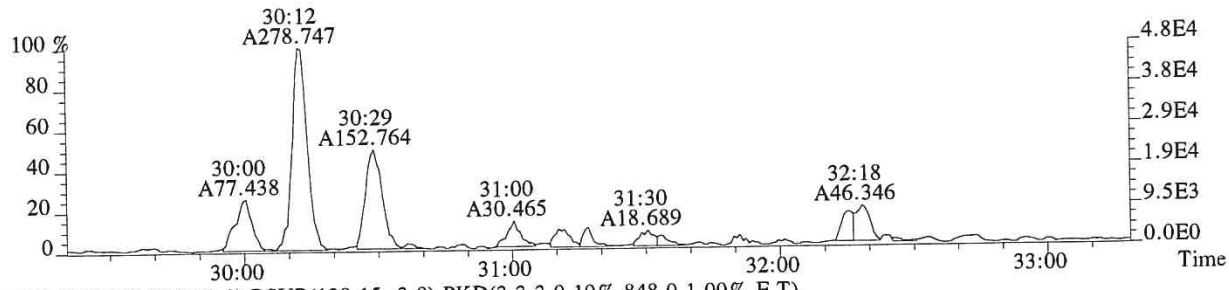


016245

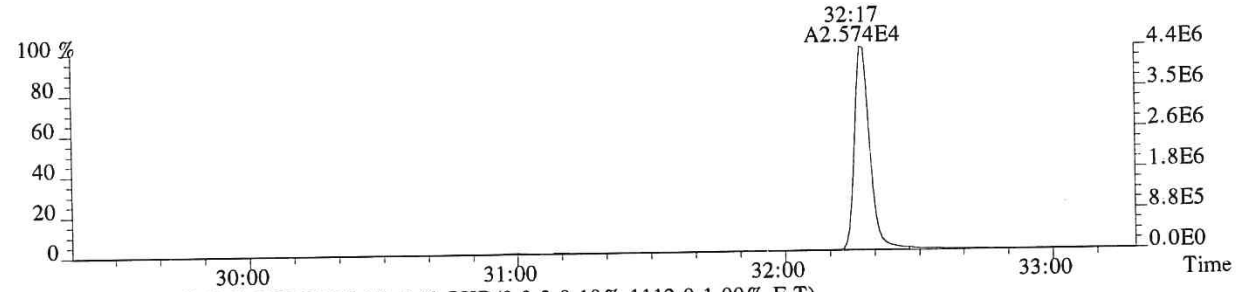
File:P519737 #1-358 Acq: 2-JAN-2019 19:24:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-013
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



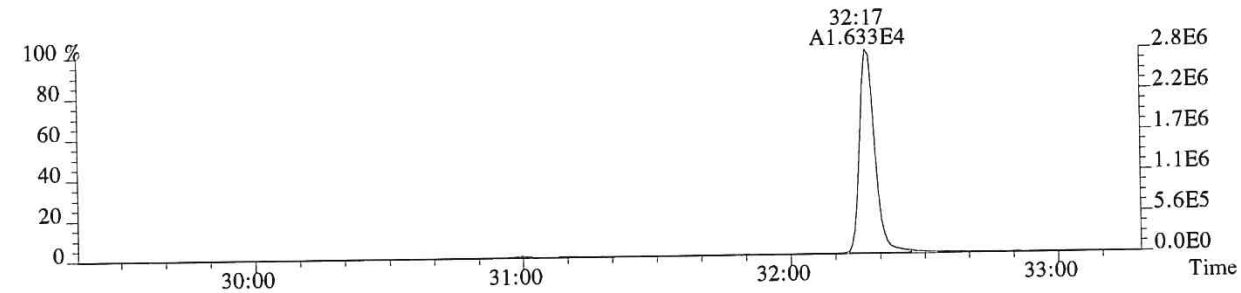
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,804.0,1.00%,F,T)



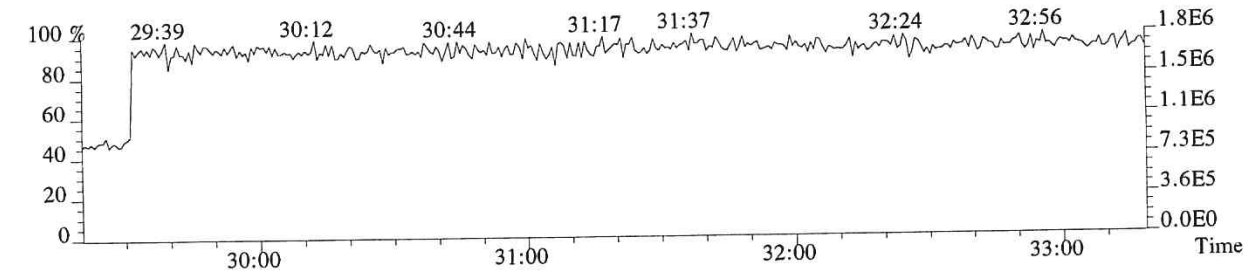
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,848.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1112.0,1.00%,F,T)

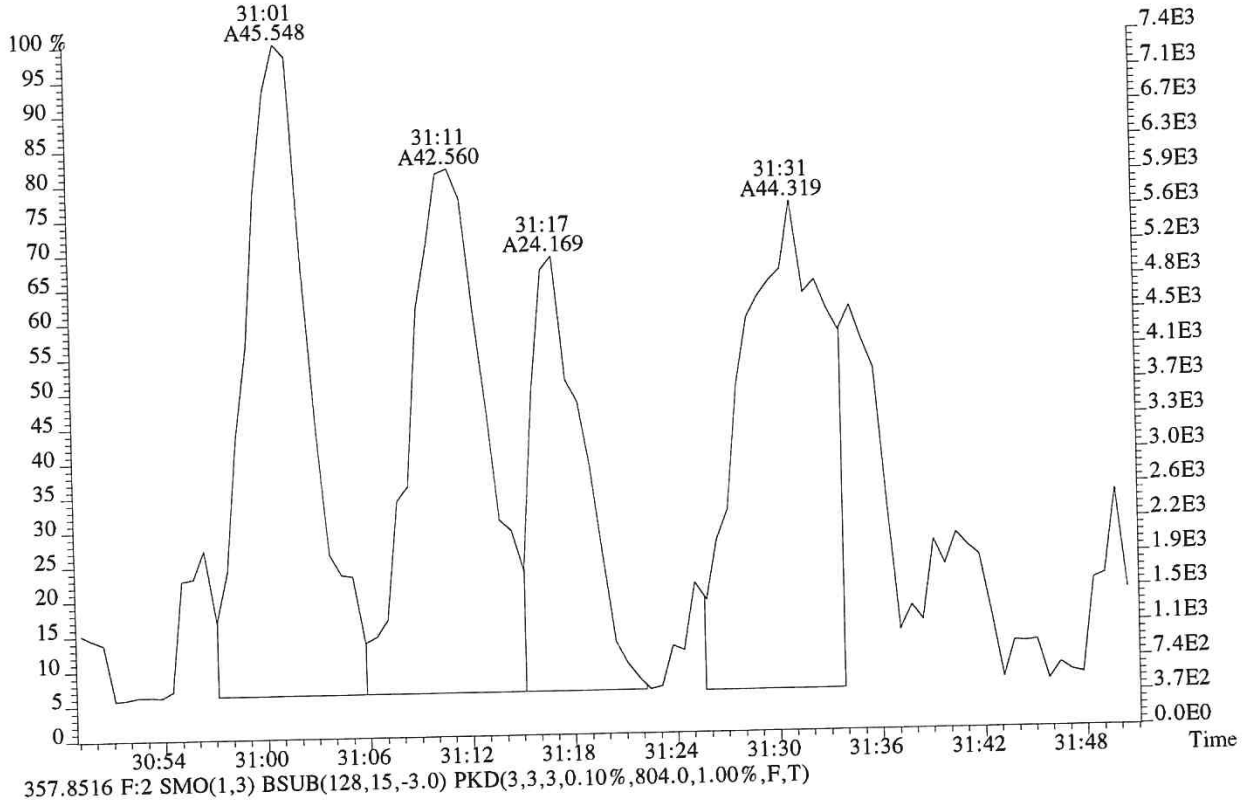


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

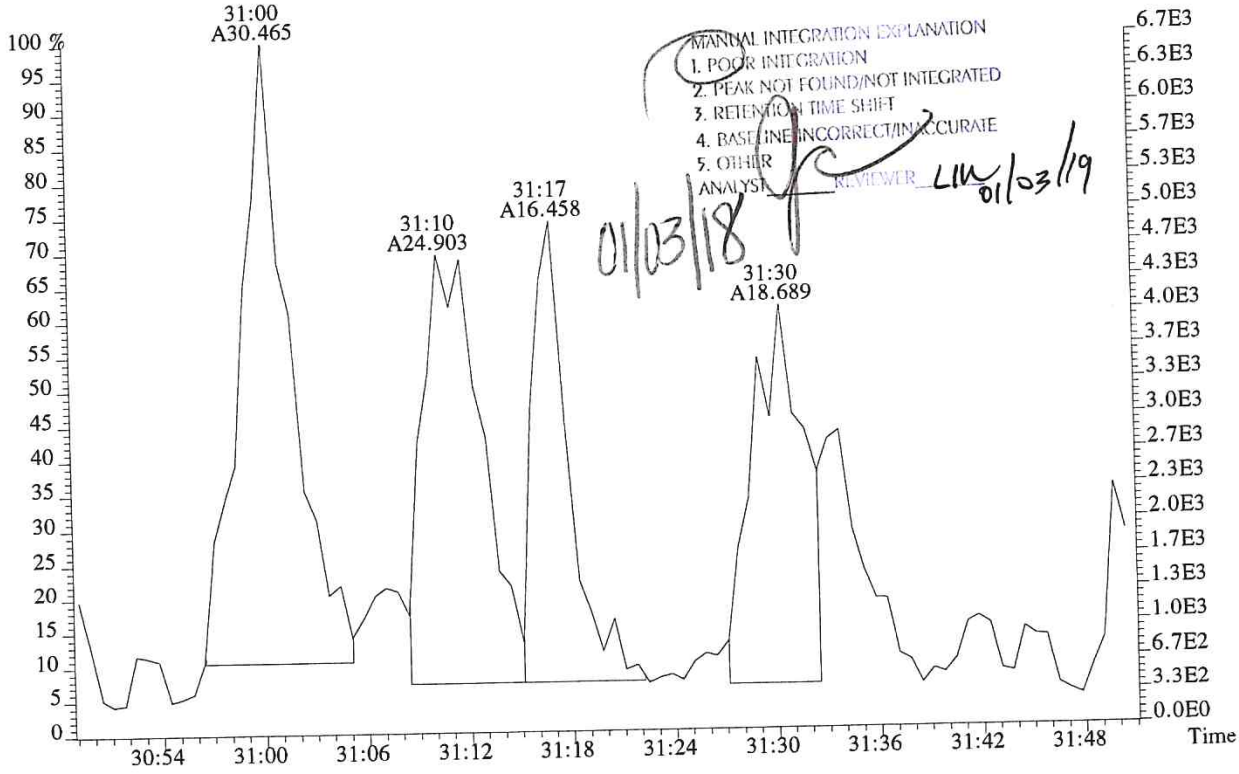


016246

File:P519737 #1-358 Acq: 2-JAN-2019 19:24:44 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:E1801137-013
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)

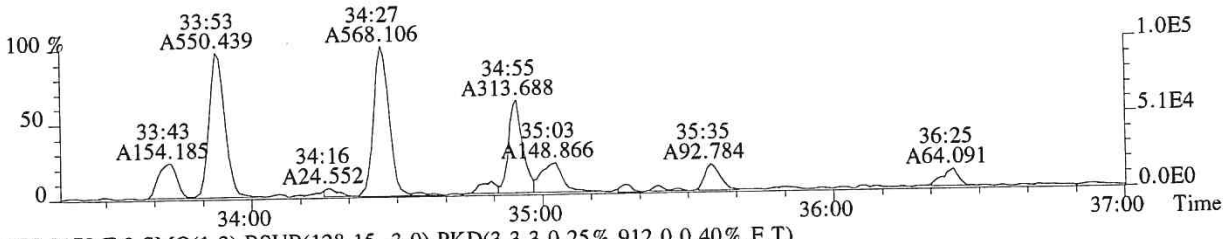


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,804.0,1.00%,F,T)

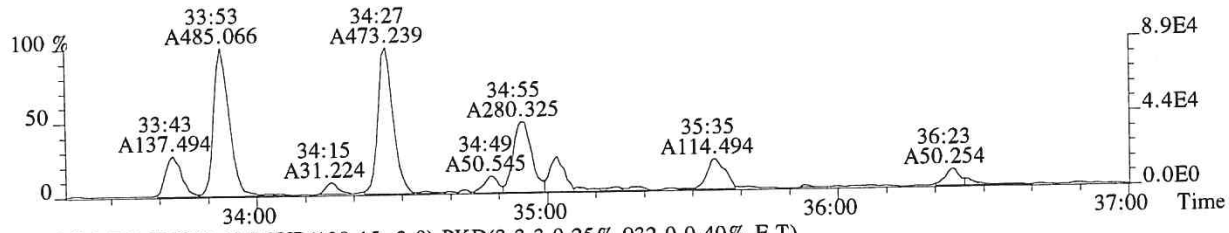


016247

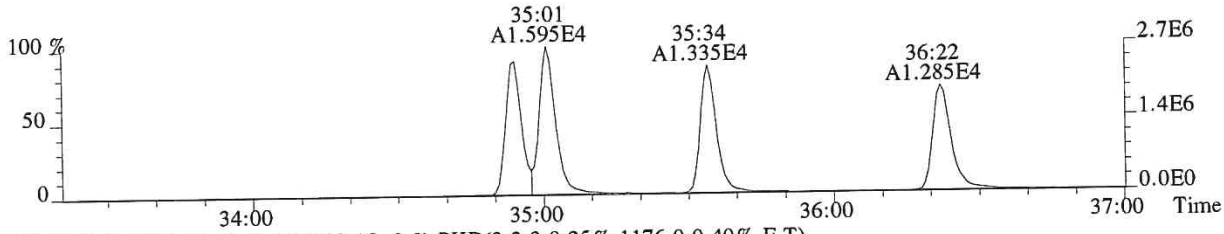
File:P519737 #1-330 Acq: 2-JAN-2019 19:24:44 Probe EI+ Magnet SIR VG BioTech Mass spectℓ
Sample#1 Exp:E1801137-013
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1584.0,0.40%,F,T)



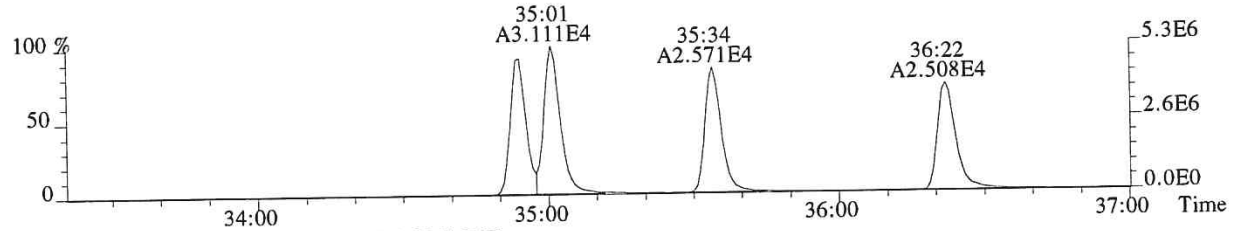
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,912.0,0.40%,F,T)



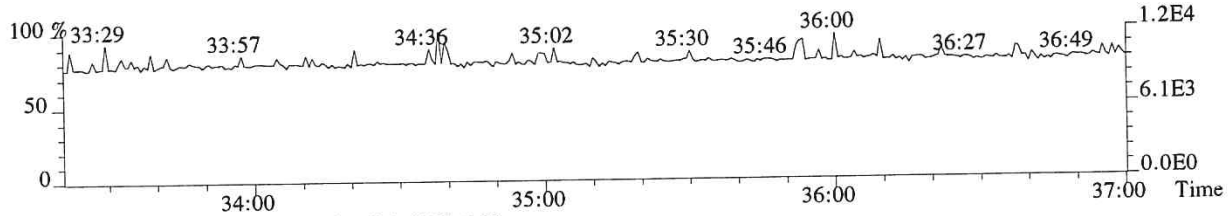
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,932.0,0.40%,F,T)



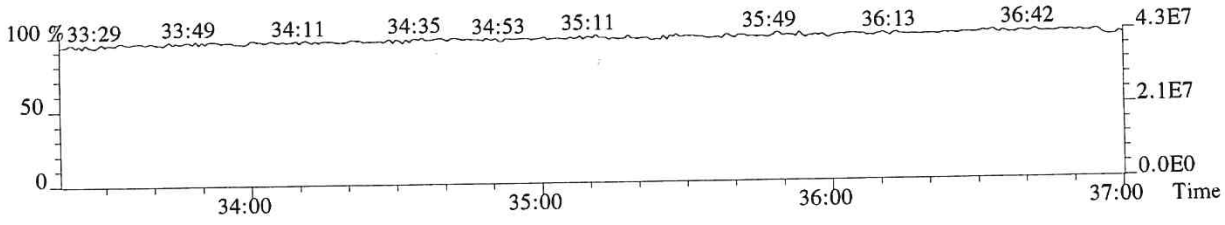
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1176.0,0.40%,F,T)



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

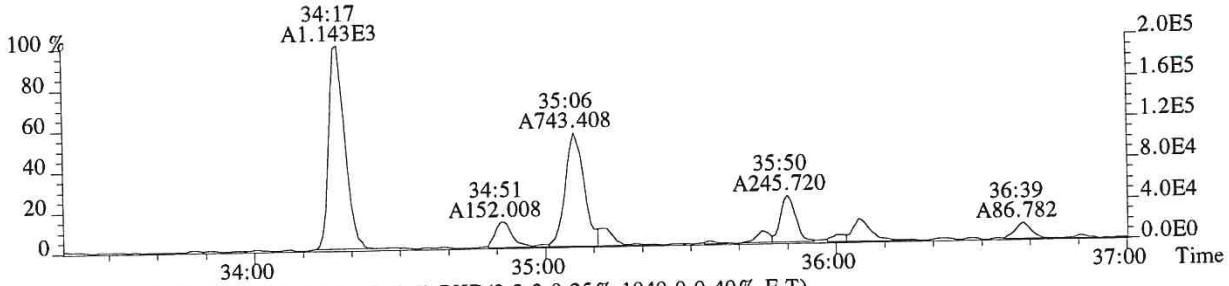


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

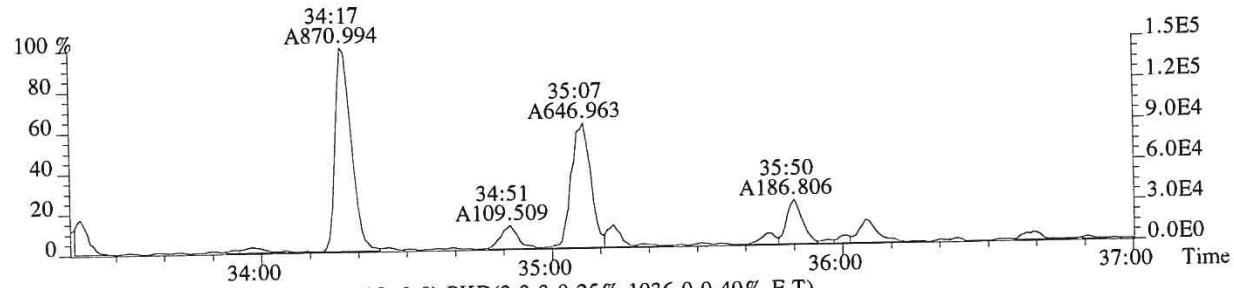


016248

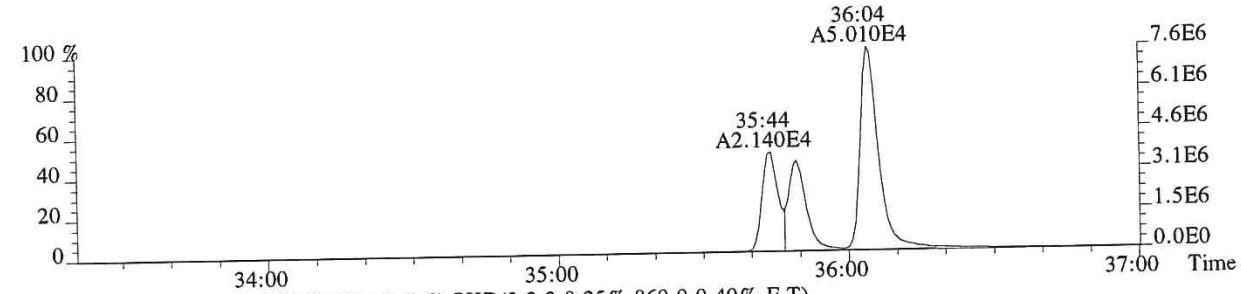
File:P519737 #1-330 Acq: 2-JAN-2019 19:24:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-013
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1240.0,0.40%,F,T)



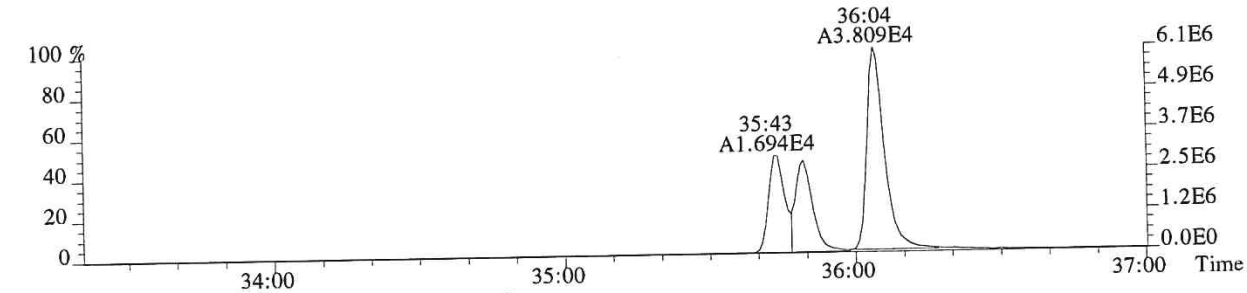
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1040.0,0.40%,F,T)



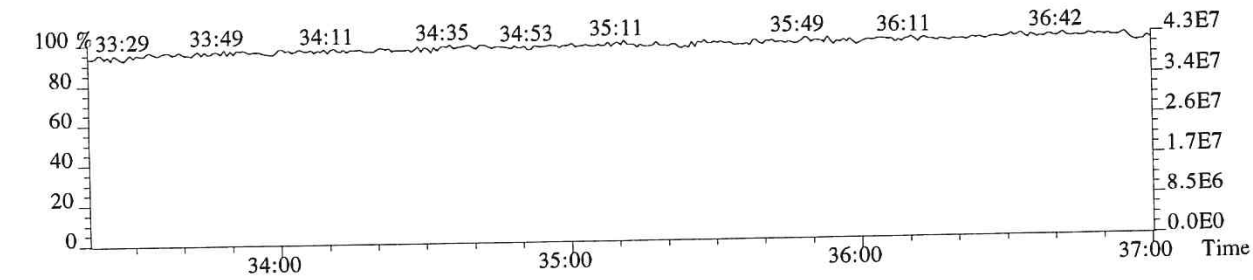
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1036.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,860.0,0.40%,F,T)

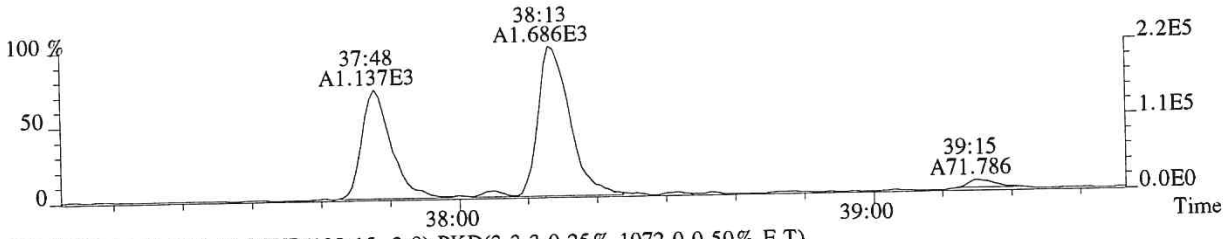


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

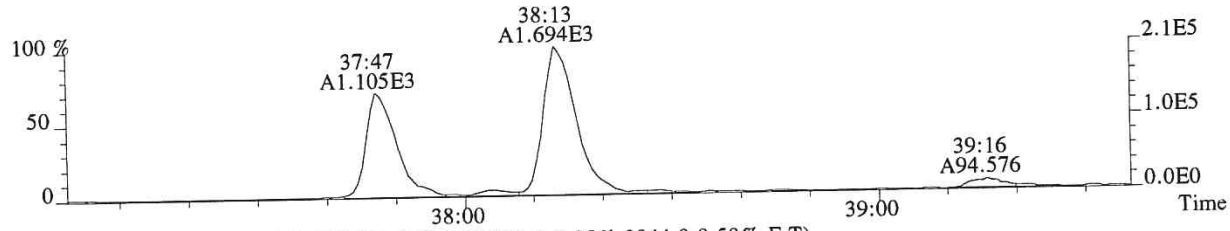


016249

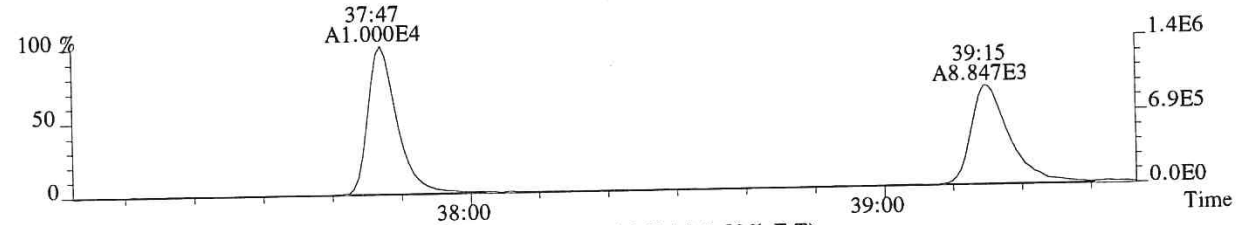
File:P519737 #1-232 Acq: 2-JAN-2019 19:24:44 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:E1801137-013
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2172.0,0.50%,F,T)



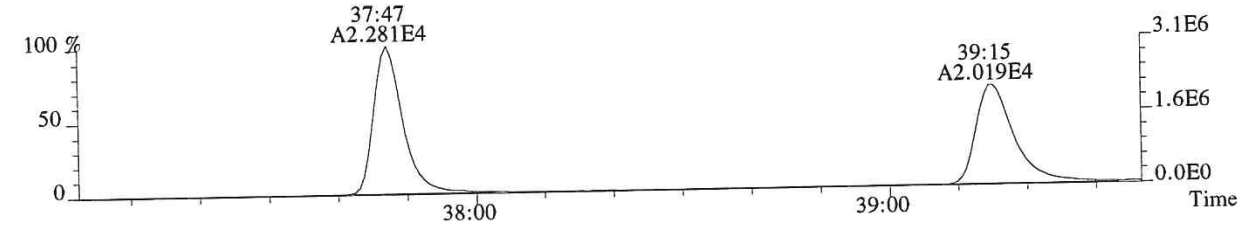
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1072.0,0.50%,F,T)



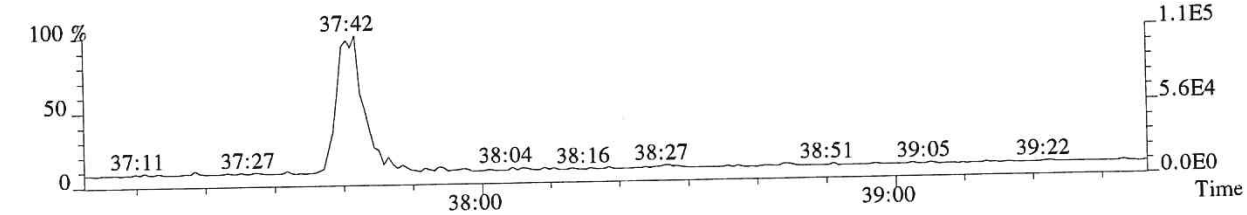
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3044.0,0.50%,F,T)



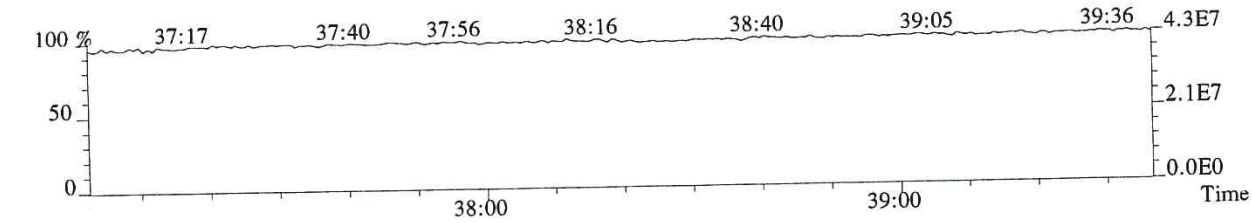
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2624.0,0.50%,F,T)



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

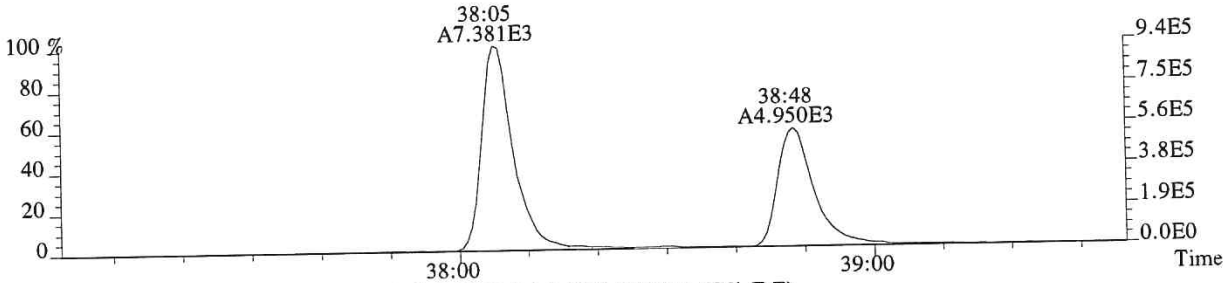


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

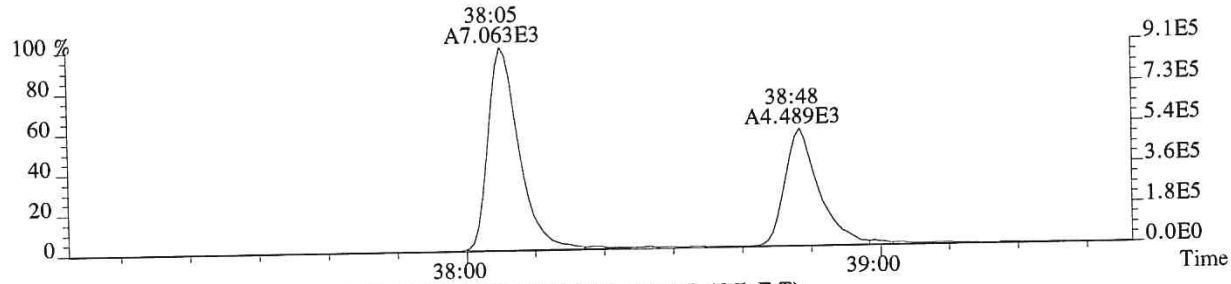


016250

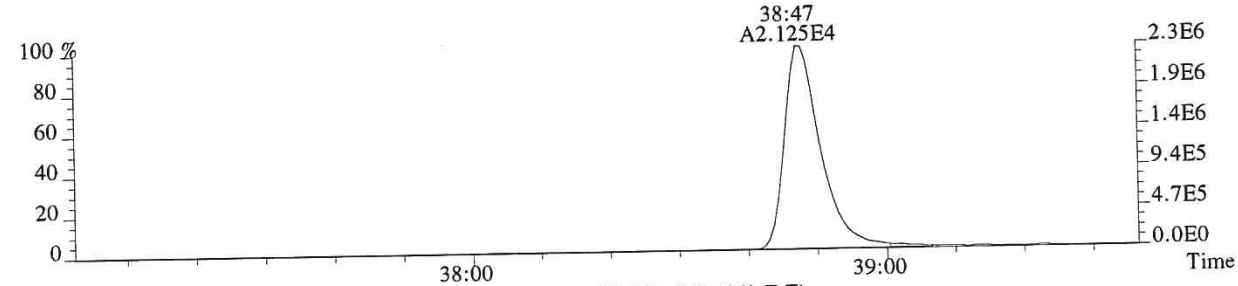
File:P519737 #1-232 Acq: 2-JAN-2019 19:24:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-013
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,792.0,0.40%,F,T)



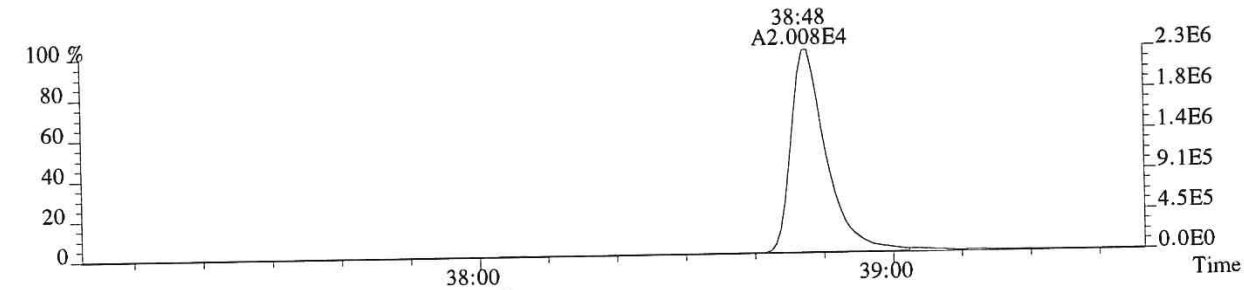
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,372.0,0.40%,F,T)



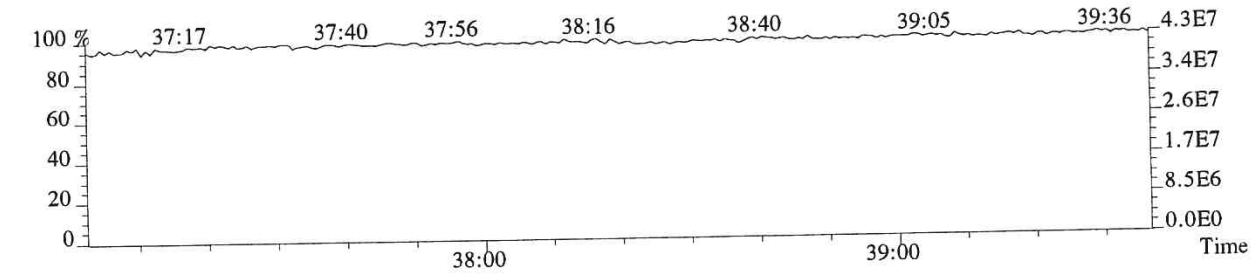
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,448.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,284.0,0.40%,F,T)

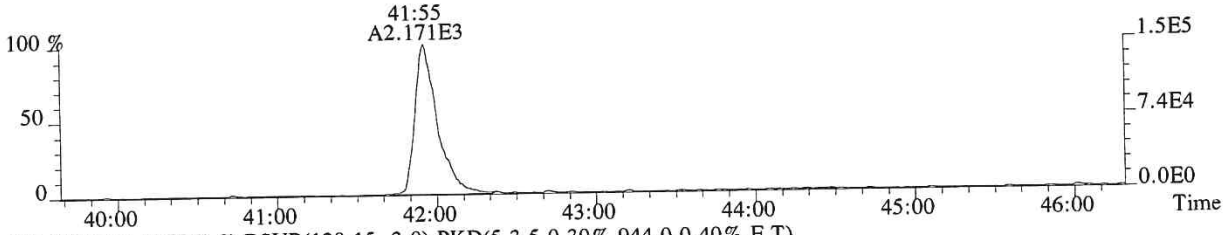


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

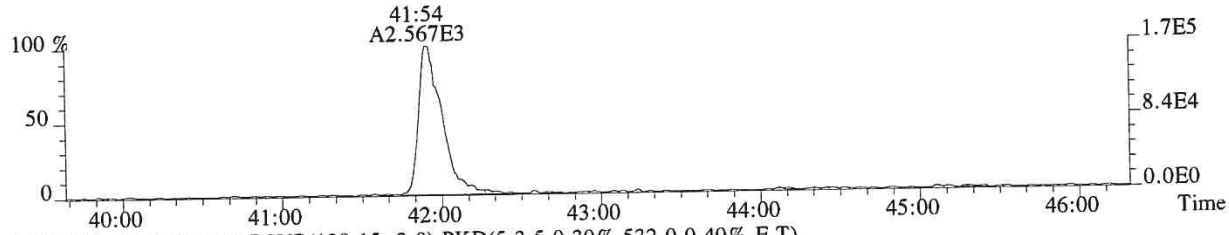


016251

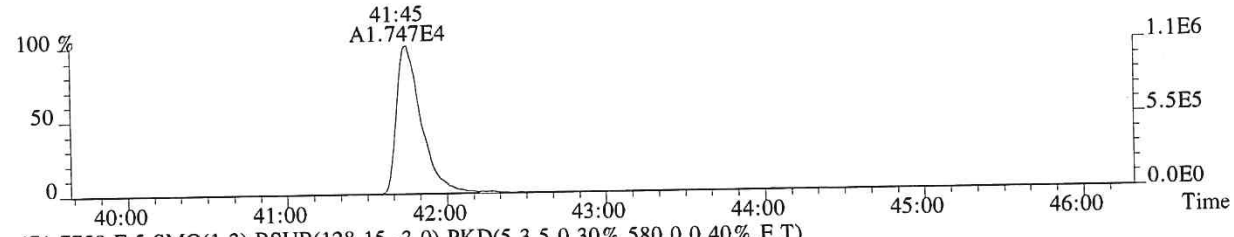
File:P519737 #1-601 Acq: 2-JAN-2019 19:24:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-013
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,516.0,0.40%,F,T)



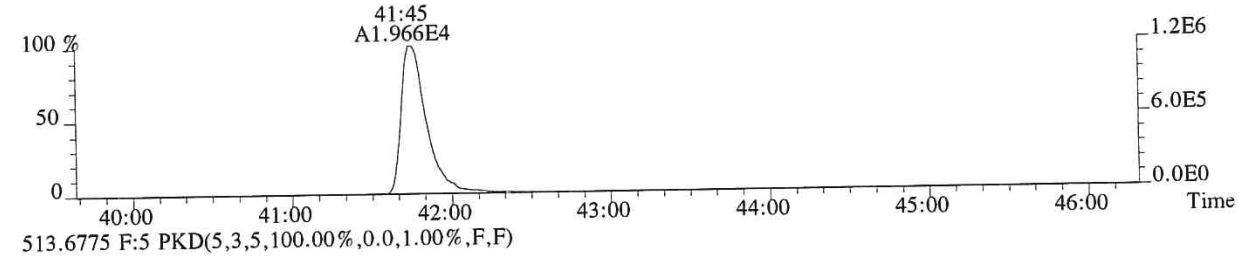
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,944.0,0.40%,F,T)



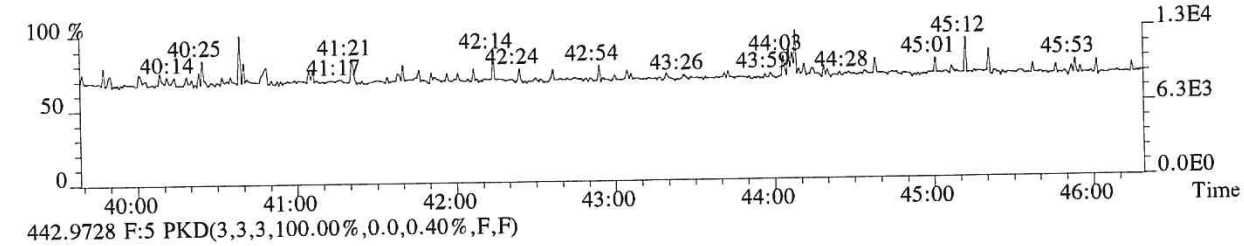
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,532.0,0.40%,F,T)



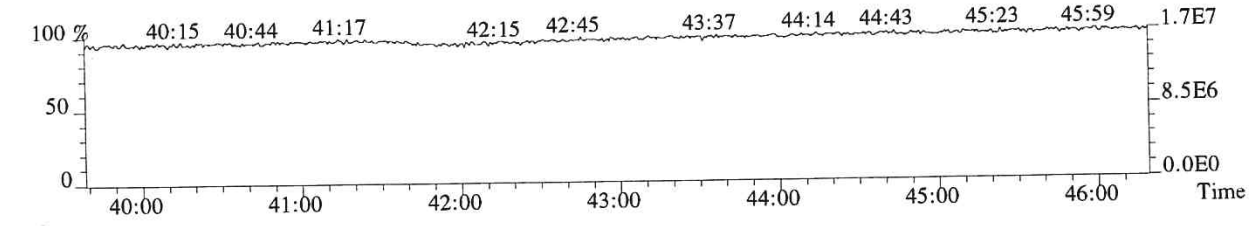
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,580.0,0.40%,F,T)



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

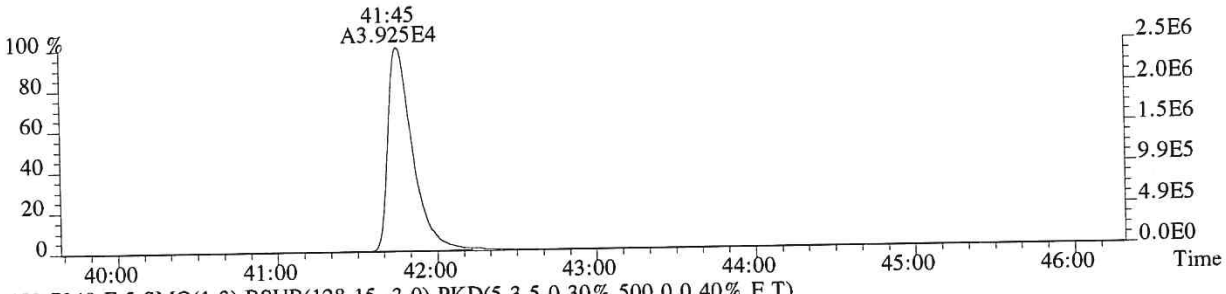


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

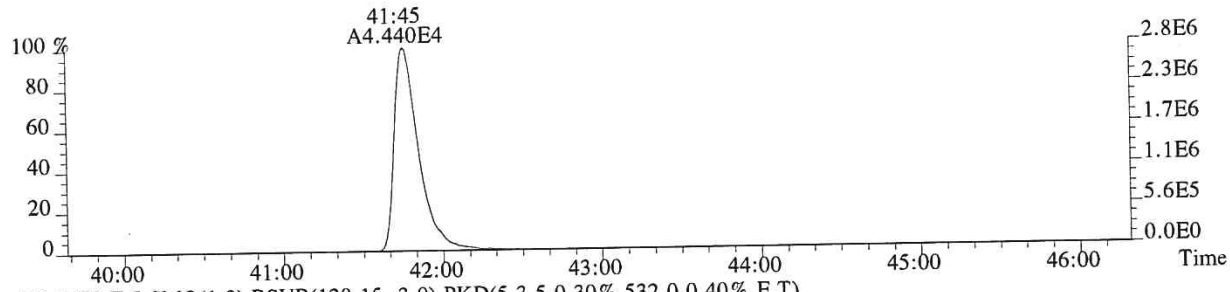


016252

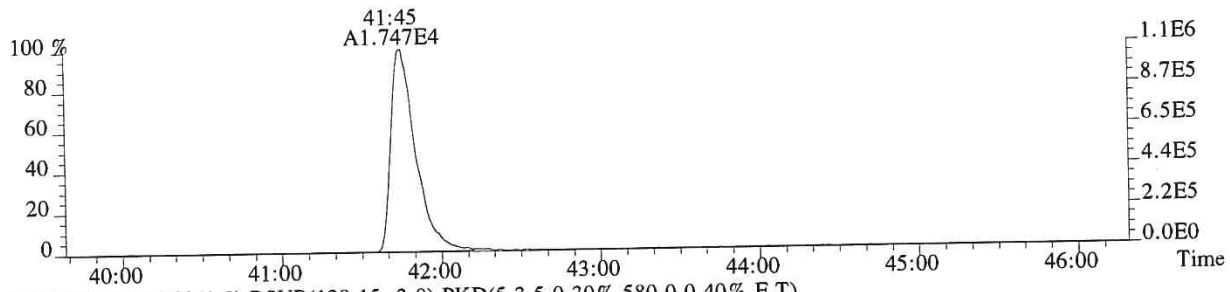
File:P519737 #1-601 Acq: 2-JAN-2019 19:24:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-013
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,440.0,0.40%,F,T)



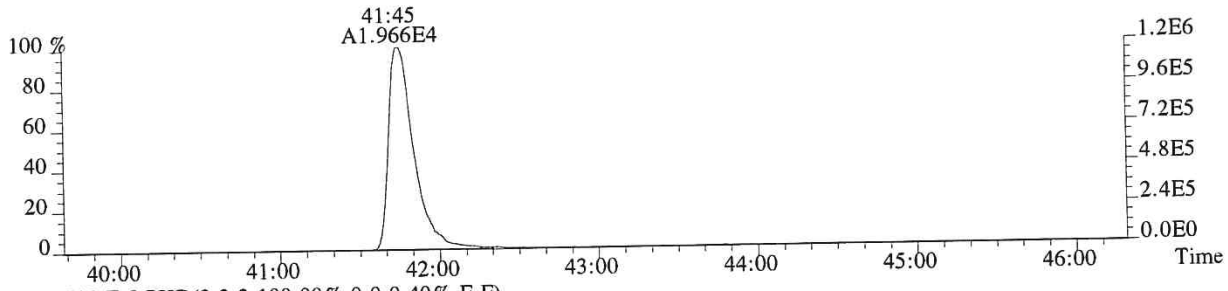
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,500.0,0.40%,F,T)



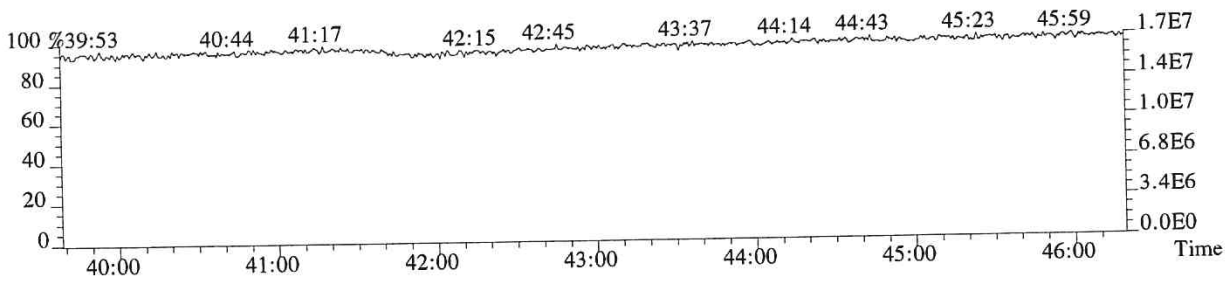
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,532.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,580.0,0.40%,F,T)



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



016253

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0187

Run #14 Filename P519738 Samp: 1 Inj: 1 Acquired: 2-JAN-19 20:13:21
Processed: 3-JAN-19 09:14:26 Sample ID: E1801137-014

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:04	3.176e+03	4.296e+03	0.74	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:58	2.742e+02	1.878e+02	1.46	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:59	2.544e+02	1.684e+02	1.51	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:54	4.091e+02	3.280e+02	1.25	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:02	1.704e+02	1.684e+02	1.01	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:35	1.389e+02	1.064e+02	1.31	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:23	7.595e+01	4.732e+01	1.61	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:46	1.610e+03	1.621e+03	0.99	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:14	1.082e+02	9.478e+01	1.14	yes	no	1.258
10	Unk	OCDF	41:53	5.490e+03	6.095e+03	0.90	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:03	8.655e+02	1.085e+03	0.80	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:18	9.921e+01	1.028e+02	0.97	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:43	9.654e+01	7.521e+01	1.28	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:49	2.915e+02	2.591e+02	1.12	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:05	2.339e+02	1.774e+02	1.32	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:47	8.225e+03	8.032e+03	1.02	yes	no	1.025
17	Unk	OCDD	41:44	1.016e+05	1.152e+05	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	2.493e+04	3.179e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:57	4.248e+04	2.686e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:58	3.984e+04	2.541e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:53	1.802e+04	3.454e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:01	2.031e+04	4.020e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:34	1.883e+04	3.671e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:21	1.697e+04	3.323e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:46	1.362e+04	3.039e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:14	1.196e+04	2.718e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:01	1.291e+04	1.637e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:17	3.171e+04	2.012e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:43	2.565e+04	2.070e+04	1.24	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:48	2.843e+04	2.219e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:46	2.928e+04	2.790e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	41:43	2.874e+04	3.221e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	3.711e+04	4.679e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:05	5.087e+04	3.934e+04	1.29	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:03	1.857e+04				no	1.014

$$\text{OCDD} = \frac{(1.016e+05 + 1.152e+05) \times 4000\ \text{pg} \times 1}{(2.874e+04 + 3.221e+04) \times 10.092\ \text{g} \times 82.2 / 100 \times 1.118} = 1534\ \text{ng/Kg}$$

LW 01/04/19

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

CLIENT ID.
SL0187

Run #14 Filename P519738 Samp: 1 Inj: 1 Acquired: 2-JAN-19 20:13:21
Processed: 3-JAN-19 09:14:26 LAB. ID: E1801137-014

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	4.56e+05	1.06e+03	4.3e+02	6.13e+05	1.31e+03	4.7e+02
2	1,2,3,7,8-PeCDF	4.84e+04	1.70e+03	2.9e+01	2.75e+04	1.53e+03	1.8e+01
3	2,3,4,7,8-PeCDF	4.08e+04	1.70e+03	2.4e+01	2.45e+04	1.53e+03	1.6e+01
4	1,2,3,4,7,8-HxCDF	6.23e+04	1.18e+03	5.3e+01	4.99e+04	7.88e+02	6.3e+01
5	1,2,3,6,7,8-HxCDF	2.80e+04	1.18e+03	2.4e+01	2.55e+04	7.88e+02	3.2e+01
6	2,3,4,6,7,8-HxCDF	2.65e+04	1.18e+03	2.3e+01	2.14e+04	7.88e+02	2.7e+01
7	1,2,3,7,8,9-HxCDF	9.21e+03	1.18e+03	7.8e+00	8.25e+03	7.88e+02	1.0e+01
8	1,2,3,4,6,7,8-HpCDF	2.40e+05	1.57e+03	1.5e+02	2.17e+05	3.47e+03	6.3e+01
9	1,2,3,4,7,8,9-HpCDF	1.77e+04	1.57e+03	1.1e+01	1.38e+04	3.47e+03	4.0e+00
10	OCDF	3.45e+05	3.92e+02	8.8e+02	3.99e+05	8.72e+02	4.6e+02
11	2,3,7,8-TCDD	1.39e+05	1.99e+03	7.0e+01	1.73e+05	1.29e+03	1.3e+02
12	1,2,3,7,8-PeCDD	2.18e+04	6.04e+02	3.6e+01	1.28e+04	4.36e+02	2.9e+01
13	1,2,3,4,7,8-HxCDD	1.59e+04	8.04e+02	2.0e+01	1.59e+04	8.16e+02	2.0e+01
14	1,2,3,6,7,8-HxCDD	4.67e+04	8.04e+02	5.8e+01	4.09e+04	8.16e+02	5.0e+01
15	1,2,3,7,8,9-HxCDD	3.59e+04	8.04e+02	4.5e+01	2.88e+04	8.16e+02	3.5e+01
16	1,2,3,4,6,7,8-HpCDD	9.75e+05	7.28e+02	1.3e+03	9.34e+05	4.72e+02	2.0e+03
17	OCDD	6.50e+06	3.16e+02	2.1e+04	7.31e+06	3.12e+02	2.3e+04
18	13C-2,3,7,8-TCDF	3.70e+06	4.56e+03	8.1e+02	4.73e+06	2.52e+03	1.9e+03
19	13C-1,2,3,7,8-PeCDF	7.00e+06	1.53e+03	4.6e+03	4.37e+06	8.88e+02	4.9e+03
20	13C-2,3,4,7,8-PeCDF	6.98e+06	1.53e+03	4.6e+03	4.45e+06	8.88e+02	5.0e+03
21	13C-1,2,3,4,7,8-HxCDF	3.11e+06	2.36e+02	1.3e+04	5.91e+06	1.10e+03	5.4e+03
22	13C-1,2,3,6,7,8-HxCDF	3.35e+06	2.36e+02	1.4e+04	6.60e+06	1.10e+03	6.0e+03
23	13C-2,3,4,6,7,8-HxCDF	3.33e+06	2.36e+02	1.4e+04	6.60e+06	1.10e+03	6.0e+03
24	13C-1,2,3,7,8,9-HxCDF	2.46e+06	2.36e+02	1.0e+04	4.79e+06	1.10e+03	4.4e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.87e+06	4.10e+03	4.6e+02	4.17e+06	3.00e+03	1.4e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.25e+06	4.10e+03	3.0e+02	2.88e+06	3.00e+03	9.6e+02
27	13C-2,3,7,8-TCDD	2.05e+06	5.05e+03	4.1e+02	2.60e+06	2.61e+03	1.0e+03
28	13C-1,2,3,7,8-PeCDD	5.49e+06	8.16e+02	6.7e+03	3.51e+06	1.02e+03	3.5e+03
29	13C-1,2,3,4,7,8-HxCDD	4.80e+06	1.06e+03	4.5e+03	3.87e+06	6.16e+02	6.3e+03
30	13C-1,2,3,6,7,8-HxCDD	4.15e+06	1.06e+03	3.9e+03	3.25e+06	6.16e+02	5.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	3.45e+06	8.12e+02	4.2e+03	3.23e+06	4.08e+02	7.9e+03
32	13C-OCDD	1.83e+06	5.36e+02	3.4e+03	2.05e+06	3.08e+02	6.7e+03
33	13C-1,2,3,4-TCDD	5.88e+06	5.05e+03	1.2e+03	7.43e+06	2.61e+03	2.8e+03
34	13C-1,2,3,7,8,9-HxCDD	7.78e+06	1.06e+03	7.3e+03	6.13e+06	6.16e+02	1.0e+04
35	37Cl-2,3,7,8-TCDD	3.02e+06	1.34e+03	2.2e+03			

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Peak List Summary

CLIENT ID.
SL0187

Entry: 36 Totals Name: Total Tetra-Furans

Run: 14 File: P519738 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 20:13:21 Processed: 3-JAN-19 09:14:26

Mass: 303.9020 305.8990 Tot Response: 1.13e+04 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:57	2.70e+01	3.67e+01	0.74	yes	6.37e+01		n	n
2	22:25	7.52e+01	9.97e+01	0.75	yes	1.75e+02		n	n
3	22:48	3.14e+01	4.60e+01	0.68	yes	7.74e+01		n	n
4	22:52	9.58e+01	1.16e+02	0.82	yes	2.12e+02		n	n
5	23:49	1.03e+02	1.36e+02	0.75	yes	2.38e+02		n	n
6	24:28	1.82e+02	2.22e+02	0.82	yes	4.04e+02		n	n
7	24:35	9.52e+01	1.16e+02	0.82	yes	2.12e+02		n	n
8	25:04	5.86e+02	8.27e+02	0.71	yes	1.41e+03		n	n
9	26:04	3.18e+03	4.30e+03	0.74	yes	7.47e+03	2,3,7,8-TCDF	n	n
10	26:30	4.46e+02	6.32e+02	0.71	yes	1.08e+03		n	n

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Peak List Summary

CLIENT ID.
SL0187

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 14 File: P519738 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 20:13:21 Processed: 3-JAN-19 09:14:26

Mass: 319.8970 321.8940 Tot Response: 2.41e+03 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:43	1.27e+02	1.58e+02 0.80	yes	2.84e+02		n	n
2	27:03	8.66e+02	1.08e+03 0.80	yes	1.95e+03	2,3,7,8-TCDD	n	n
3	27:25	7.07e+01	1.06e+02 0.67	yes	1.77e+02		n	n

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Peak List Summary

CLIENT ID.
SL0187

Entry: 39 Totals Name: Total Penta-Furans2

Run: 14 File: P519738 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 20:13:21 Processed: 3-JAN-19 09:14:26

Mass: 339.8600 341.8570 Tot Response: 1.85e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:48	1.14e+02	7.86e+01	1.45	yes	1.93e+02		n n
2	29:56	3.46e+02	2.49e+02	1.39	yes	5.95e+02		n n
3	30:58	2.74e+02	1.88e+02	1.46	yes	4.62e+02	1,2,3,7,8-PeCDF	n n
4	31:14	1.12e+02	6.95e+01	1.61	yes	1.81e+02		n n
5	31:59	2.54e+02	1.68e+02	1.51	yes	4.23e+02	2,3,4,7,8-PeCDF	n n

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Peak List Summary

CLIENT ID.
SL0187

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 14 File: P519738 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 20:13:21 Processed: 3-JAN-19 09:14:26

Mass: 355.8550 357.8520 Tot Response: 8.42e+02 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:58	1.51e+02	1.02e+02	1.49	yes	2.53e+02		n	n
2	30:30	1.70e+02	1.16e+02	1.47	yes	2.87e+02		n	n
3	31:11	7.20e+01	5.16e+01	1.40	yes	1.24e+02		n	n
4	31:31	1.11e+02	6.80e+01	1.63	yes	1.79e+02		y	n

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Peak List Summary

CLIENT ID.
SL0187

Entry: 41 Totals Name: Total Hexa-Furans

Run: 14 File: P519738 Sample:1 Injection:1 Function:3

Acquired: 2-JAN-19 20:13:21 Processed: 3-JAN-19 09:14:26

Mass: 373.8210 375.8180 Tot Response: 3.87e+03 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:42	1.86e+02	1.62e+02	1.15	yes	3.48e+02		n	n
2	33:52	6.34e+02	5.59e+02	1.13	yes	1.19e+03		n	n
3	34:27	7.10e+02	6.35e+02	1.12	yes	1.34e+03		n	n
4	34:54	4.09e+02	3.28e+02	1.25	yes	7.37e+02	1,2,3,4,7,8-HxCDF	n	n
5	35:35	1.39e+02	1.06e+02	1.31	yes	2.45e+02	2,3,4,6,7,8-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0187

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 14 File: P519738 Sample:1 Injection:1 Function:3

Acquired: 2-JAN-19 20:13:21 Processed: 3-JAN-19 09:14:26

Mass: 389.8160 391.8130 Tot Response: 6.54e+03 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:17	1.76e+03	1.41e+03	1.25	yes	3.18e+03	n	n
2	35:06	1.17e+03	9.22e+02	1.27	yes	2.10e+03	n	n
3	35:43	9.65e+01	7.52e+01	1.28	yes	1.72e+02	1,2,3,4,7,8-HxCDD	n	n
4	35:49	2.91e+02	2.59e+02	1.12	yes	5.51e+02	1,2,3,6,7,8-HxCDD	n	n
5	36:00	7.02e+01	6.10e+01	1.15	yes	1.31e+02		n	n
6	36:05	2.34e+02	1.77e+02	1.32	yes	4.11e+02	1,2,3,7,8,9-HxCDD	n	n

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Peak List Summary

CLIENT ID.
SL0187

Entry: 43 Totals Name: Total Hepta-Furans

Run: 14 File: P519738 Sample:1 Injection:1 Function:4

Acquired: 2-JAN-19 20:13:21 Processed: 3-JAN-19 09:14:26

Mass: 407.7820 409.7790 Tot Response: 9.17e+03 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:46	1.61e+03	1.62e+03	0.99	yes	3.23e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	38:13	2.87e+03	2.87e+03	1.00	yes	5.73e+03		n	n
3	39:14	1.08e+02	9.48e+01	1.14	yes	2.03e+02	1,2,3,4,7,8,9-HpCDF	n	n

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Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 14 File: P519738 Sample:1 Injection:1 Function:4

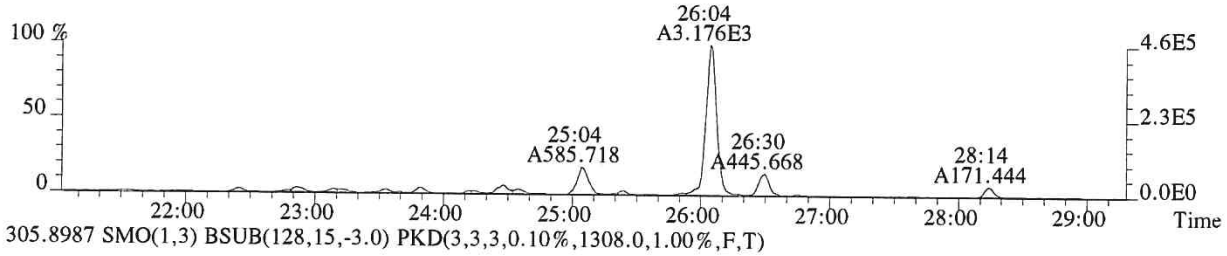
Acquired: 2-JAN-19 20:13:21 Processed: 3-JAN-19 09:14:26

Mass: 423.7770 425.7740 Tot Response: 5.36e+04 RRF: 1.025

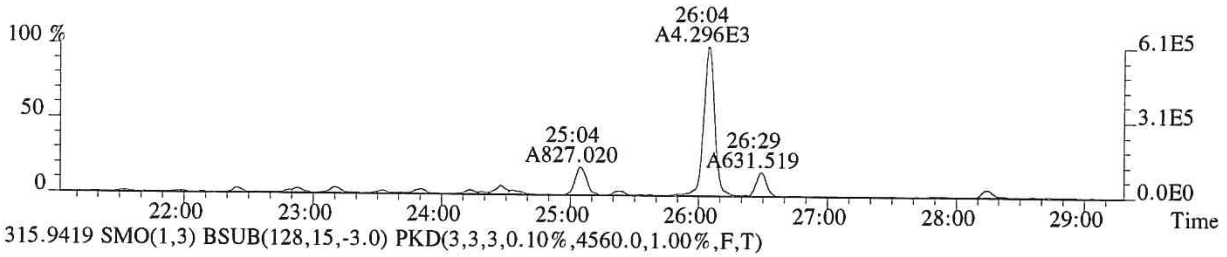
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:05	1.92e+04	1.81e+04 1.06	yes	3.73e+04		n	n
2	38:47	8.23e+03	8.03e+03 1.02	yes	1.63e+04	1,2,3,4,6,7,8-HpCDD	n	n

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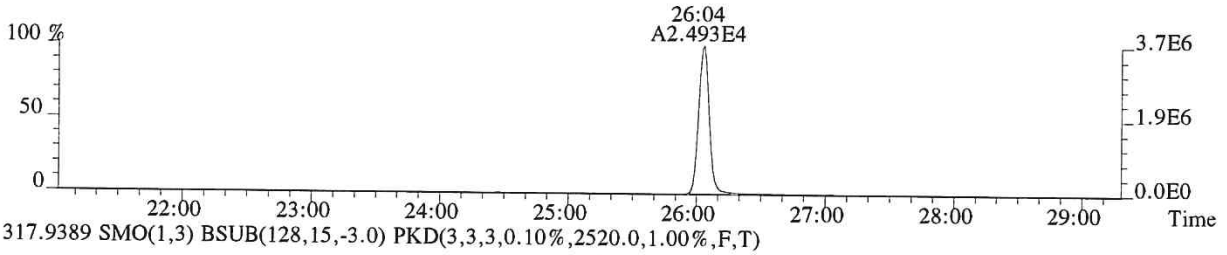
File:P519738 #1-587 Acq: 2-JAN-2019 20:13:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-014
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1064.0,1.00%,F,T)



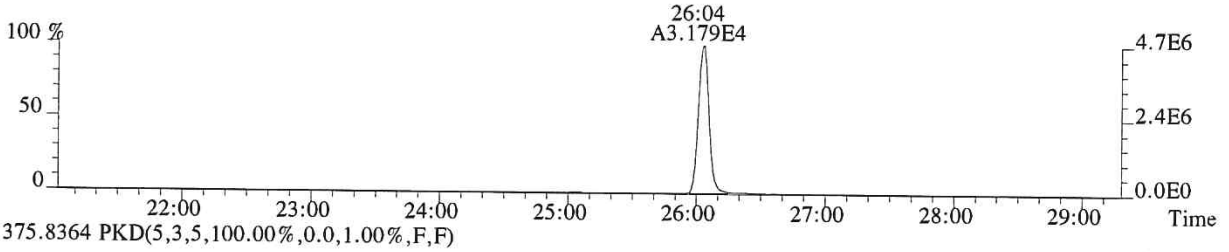
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1308.0,1.00%,F,T)



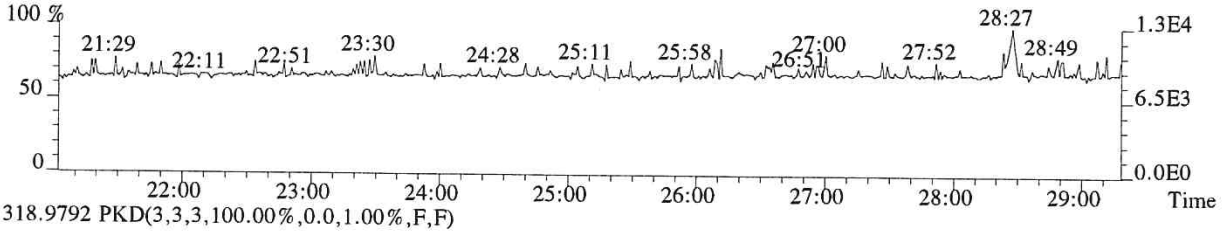
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4560.0,1.00%,F,T)



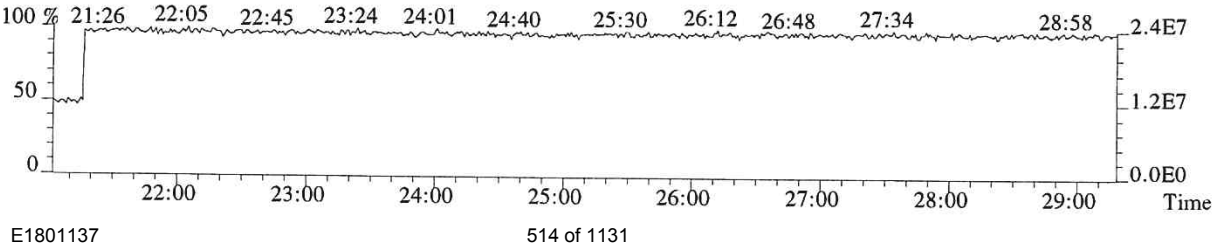
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2520.0,1.00%,F,T)



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

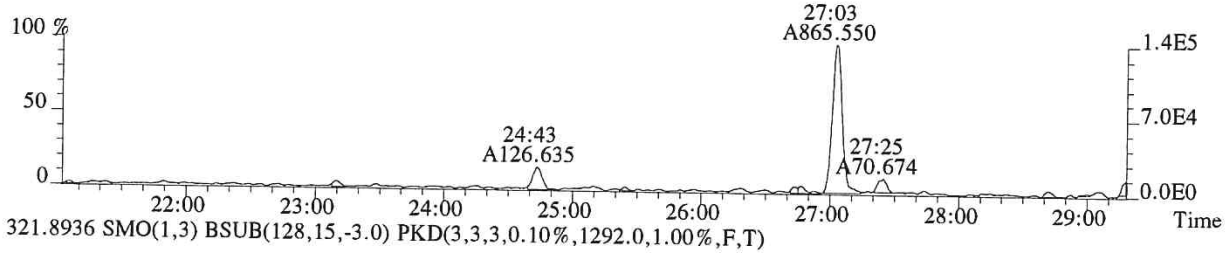


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

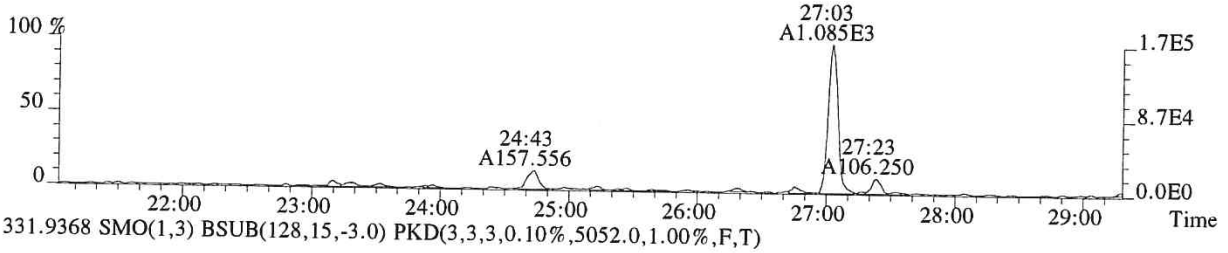


016264

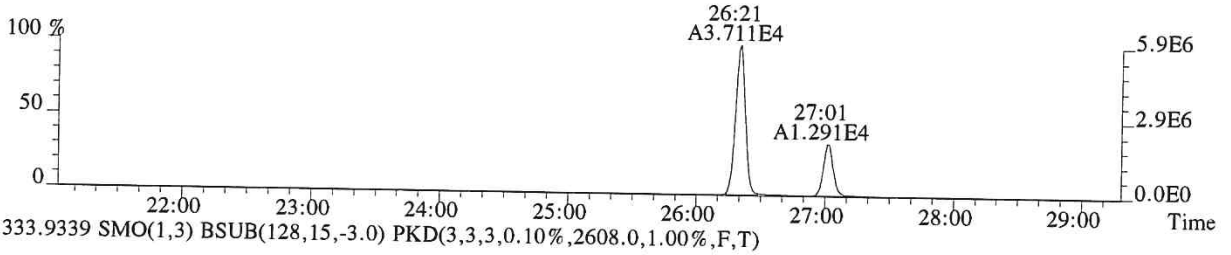
File:P519738 #1-587 Acq: 2-JAN-2019 20:13:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-014
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1988.0,1.00%,F,T)



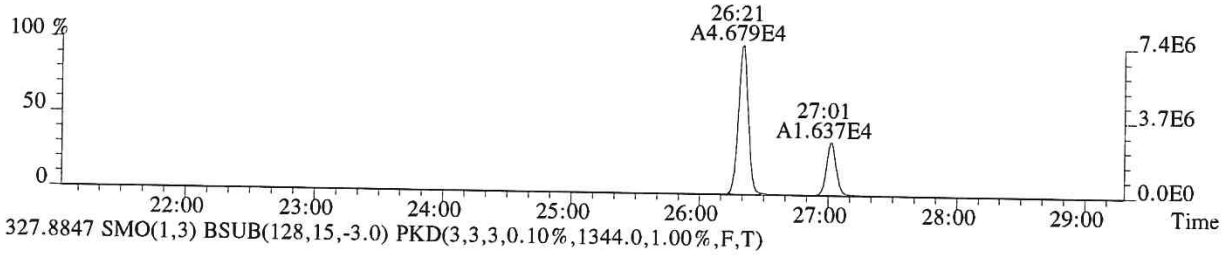
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1292.0,1.00%,F,T)



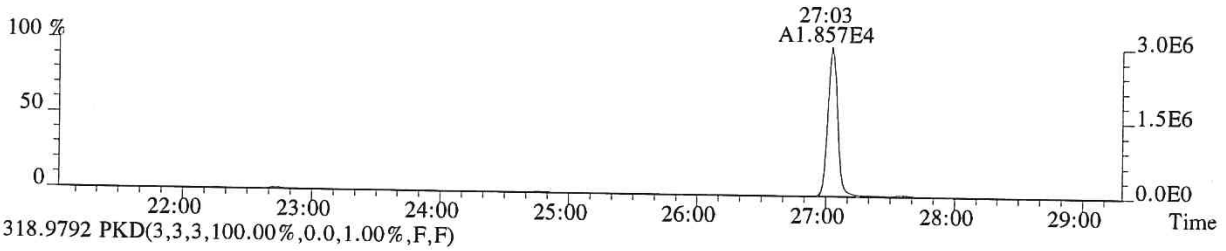
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5052.0,1.00%,F,T)



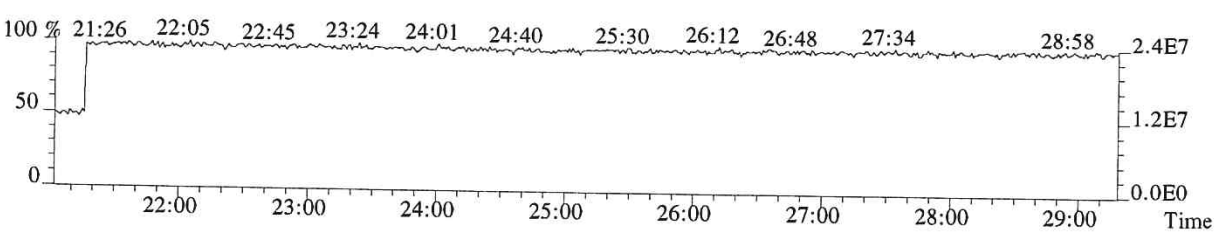
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2608.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1344.0,1.00%,F,T)

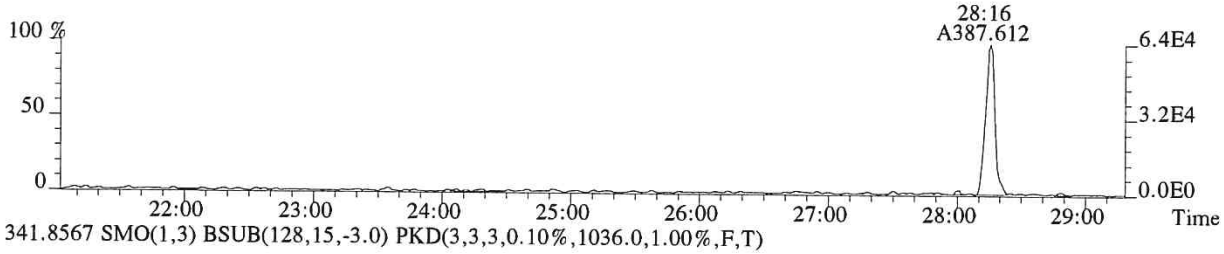


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

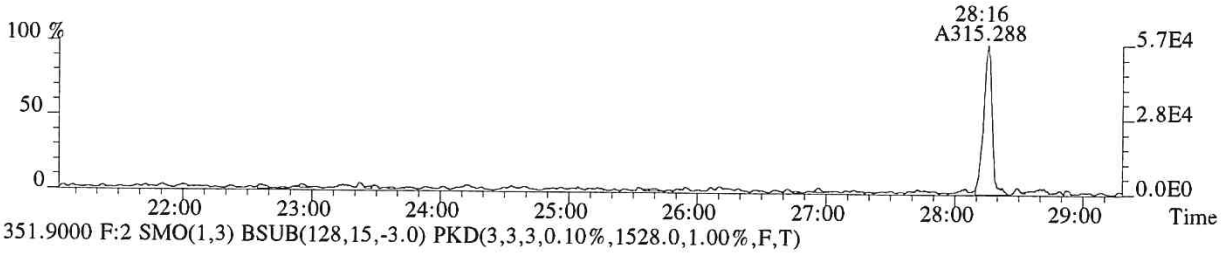


016265

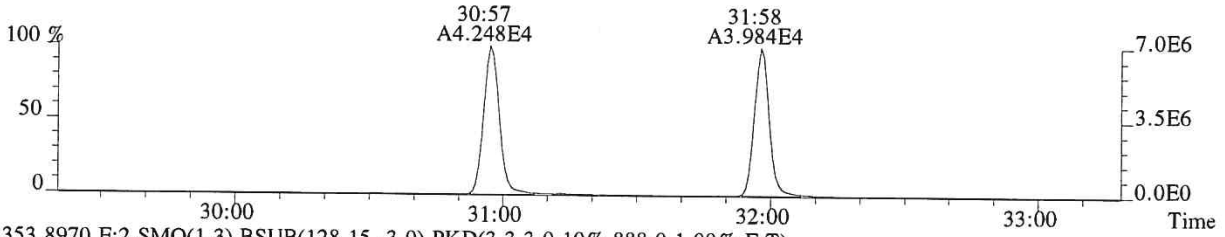
File:P519738 #1-587 Acq: 2-JAN-2019 20:13:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-014
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,768.0,1.00%,F,T)



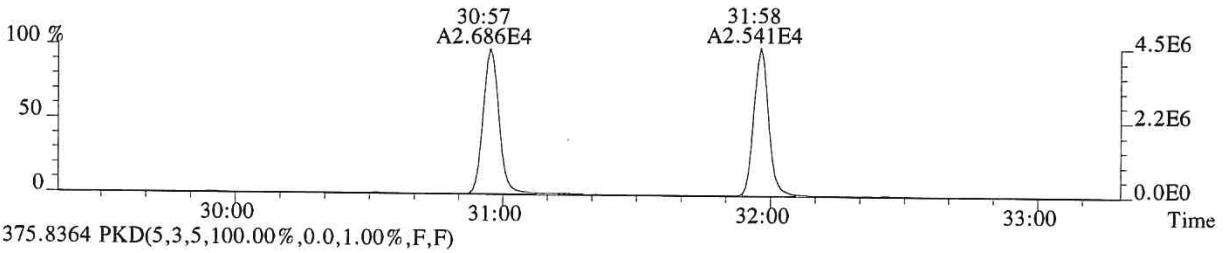
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1036.0,1.00%,F,T)



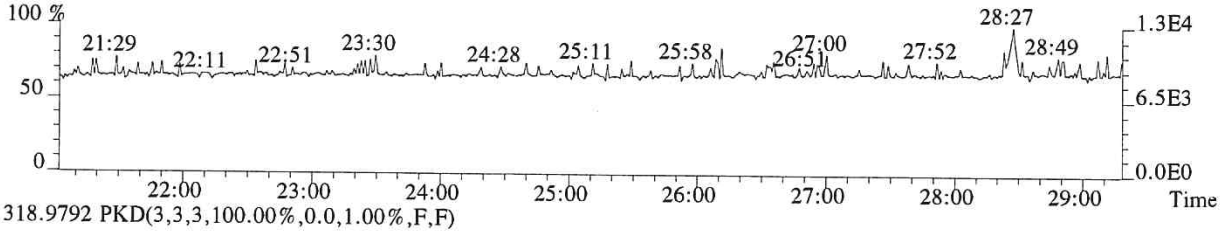
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1528.0,1.00%,F,T)



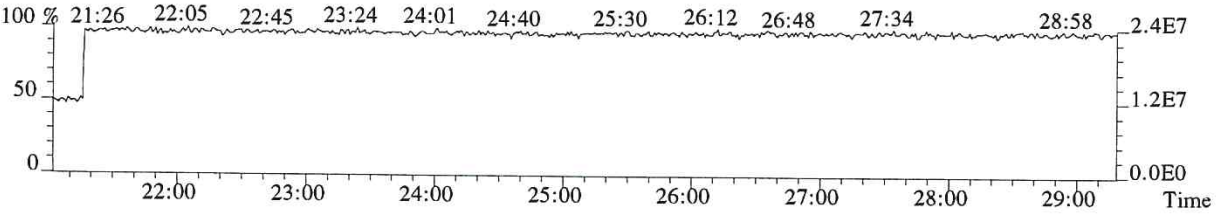
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,888.0,1.00%,F,T)



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

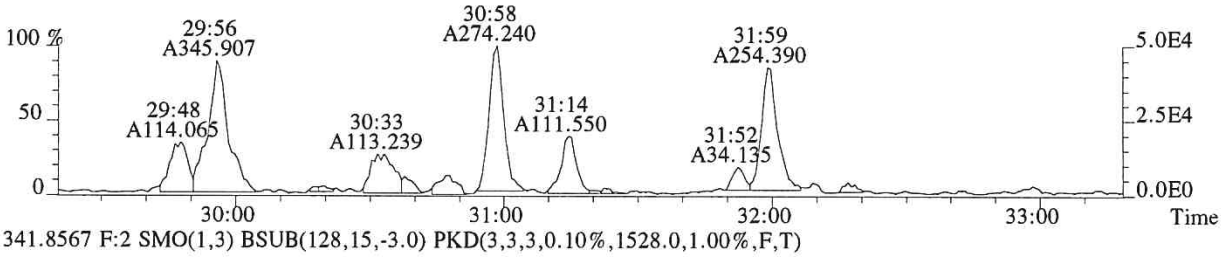


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

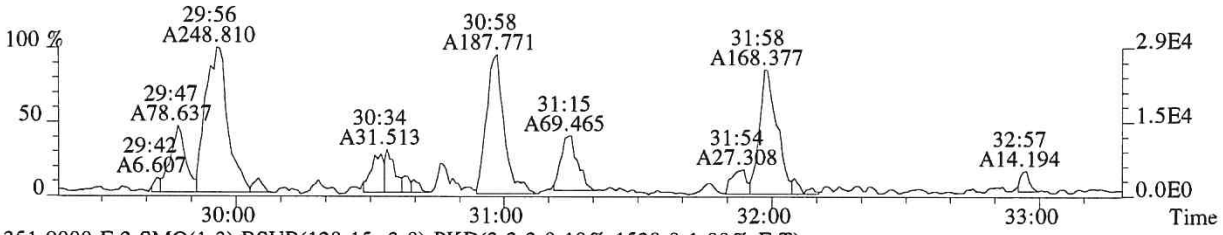


016266

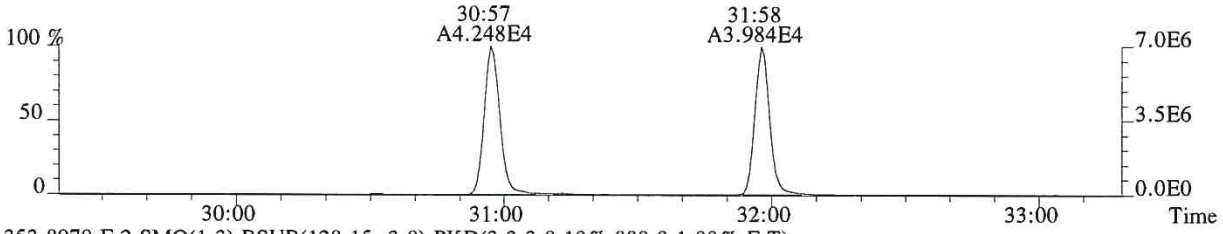
File:P519738 #1-358 Acq: 2-JAN-2019 20:13:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-014
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1696.0,1.00%,F,T)



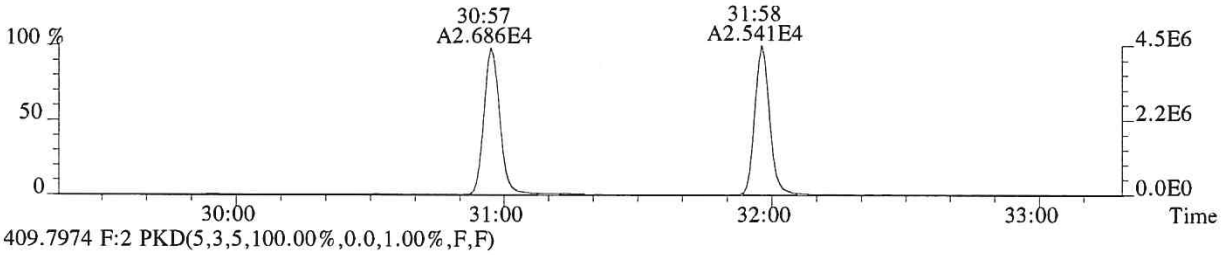
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1528.0,1.00%,F,T)



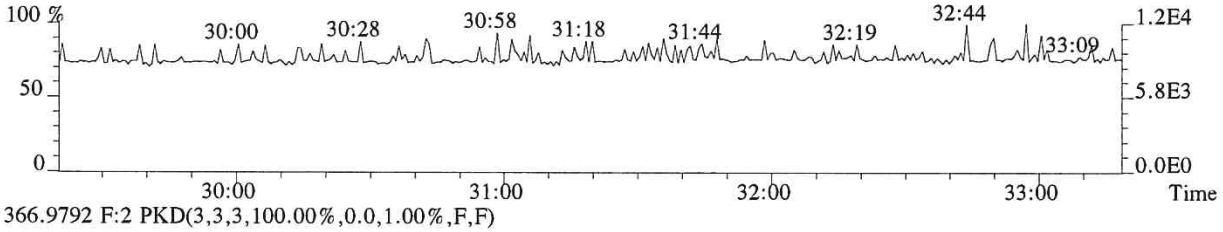
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1528.0,1.00%,F,T)



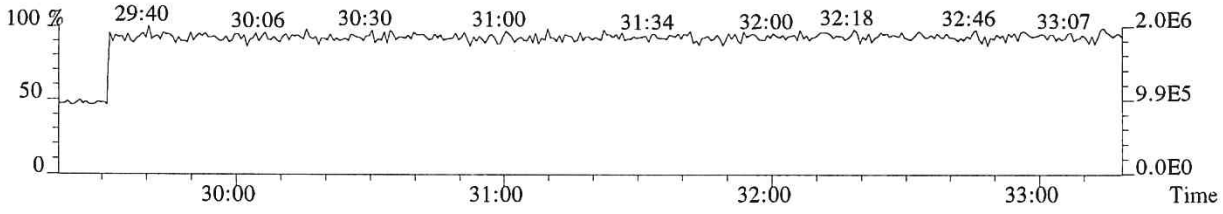
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,888.0,1.00%,F,T)



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

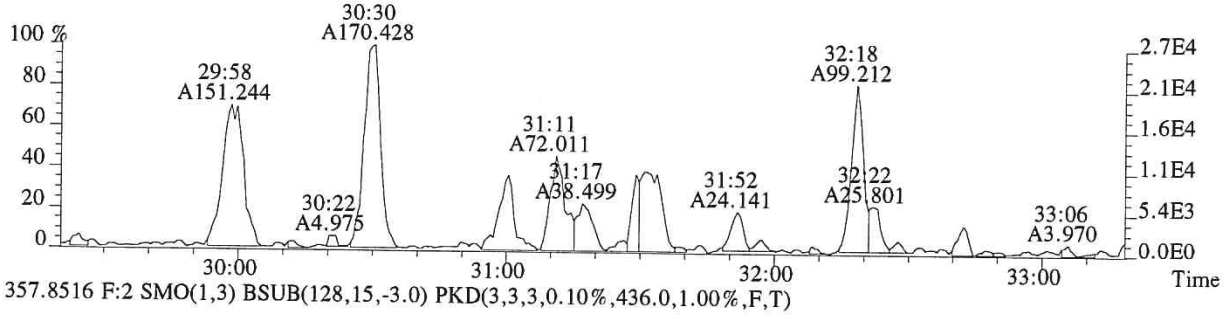


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

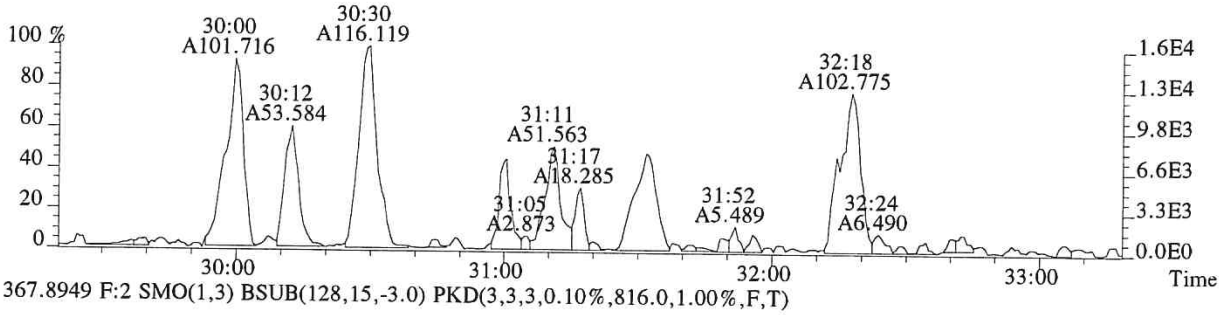


016267

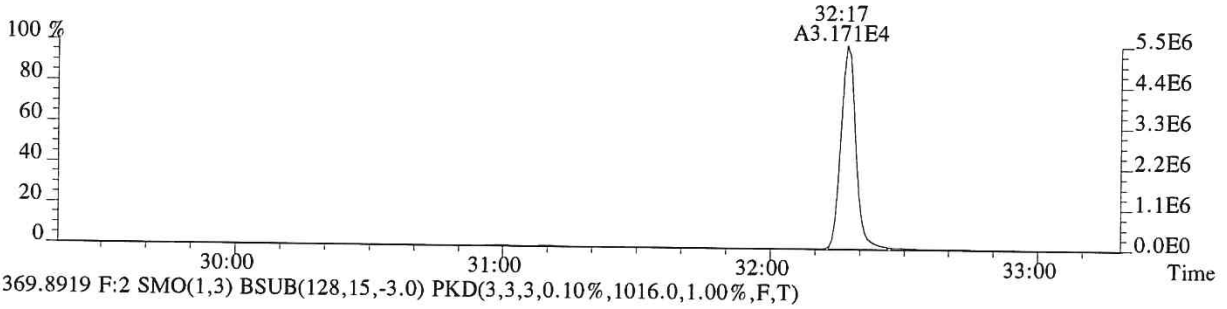
File:P519738 #1-358 Acq: 2-JAN-2019 20:13:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-014
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,604.0,1.00%,F,T)



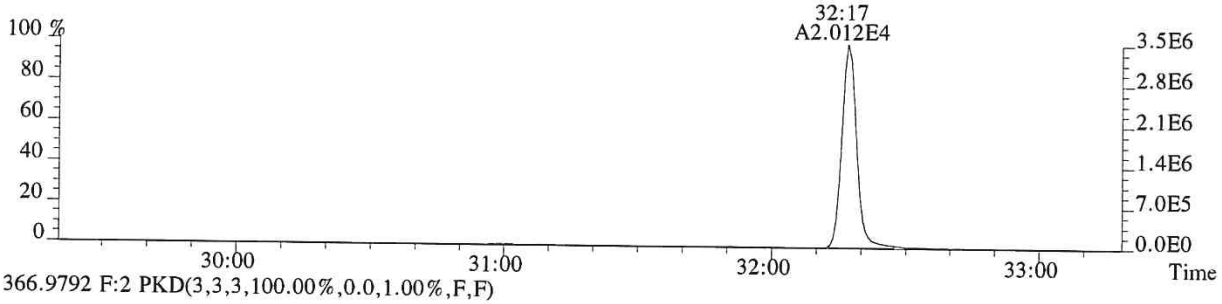
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,436.0,1.00%,F,T)



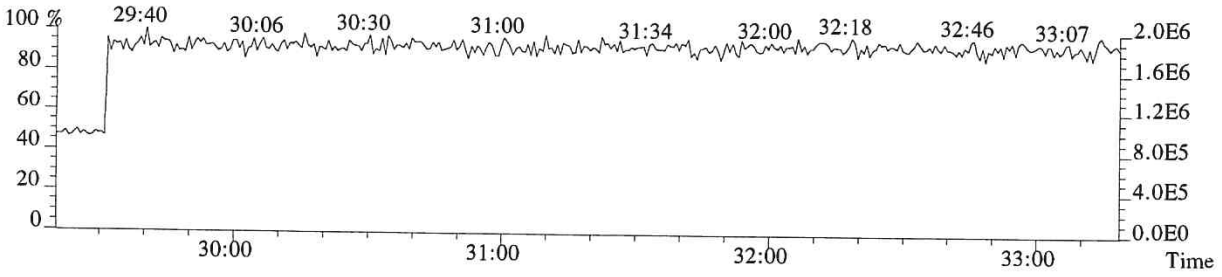
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,816.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1016.0,1.00%,F,T)

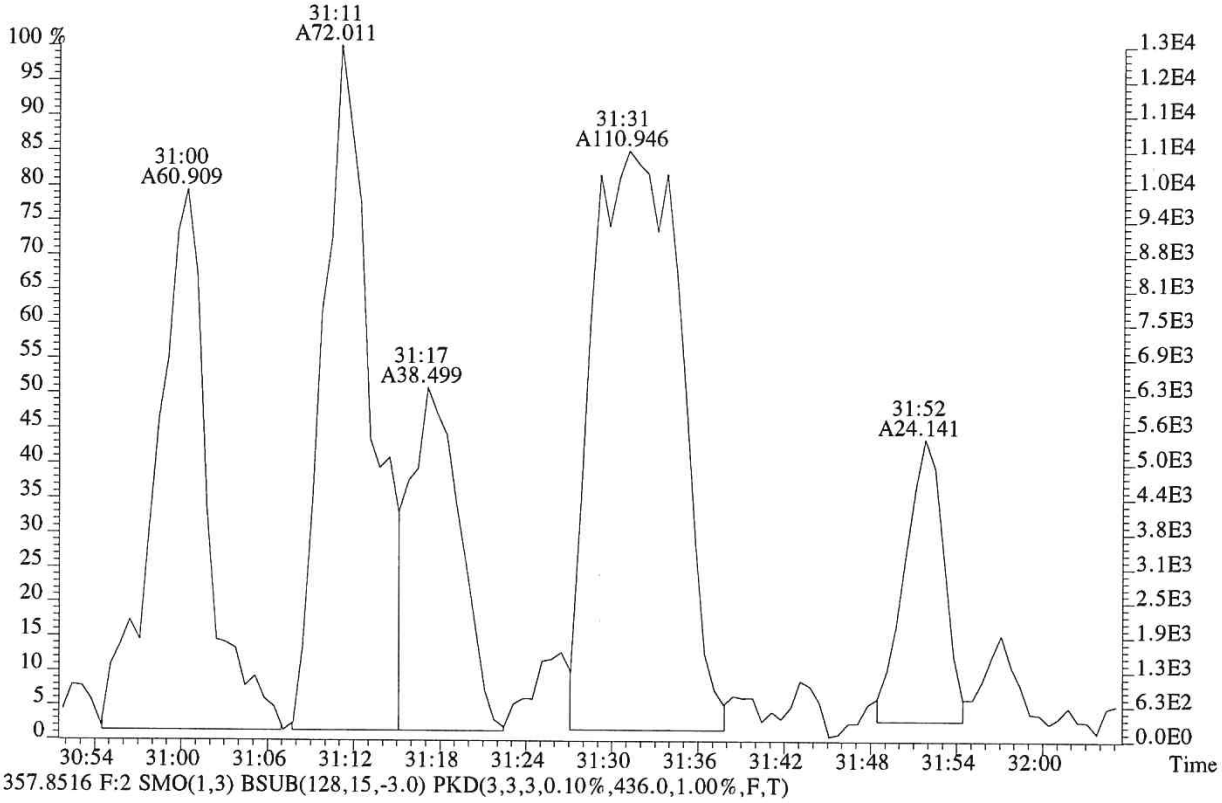


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

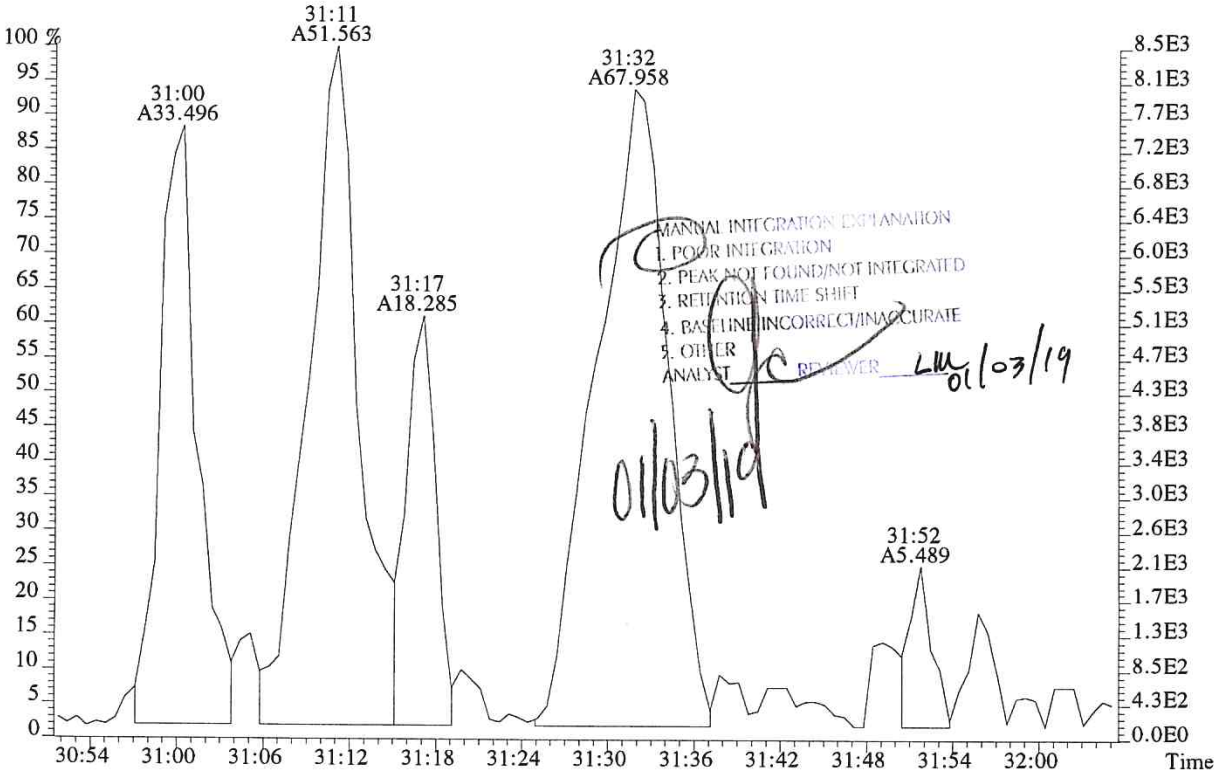


016268

File:P519738 #1-358 Acq: 2-JAN-2019 20:13:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-014
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,604.0,1.00%,F,T)

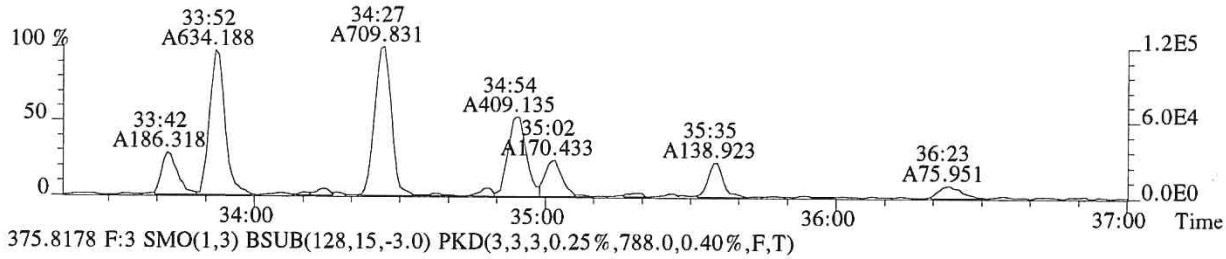


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,436.0,1.00%,F,T)

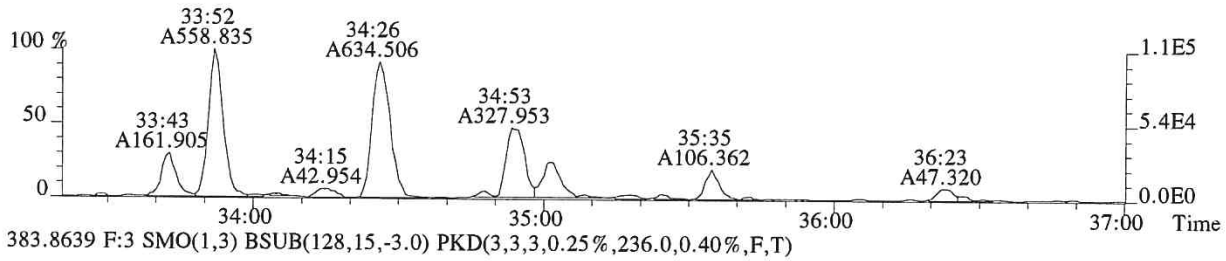


016269

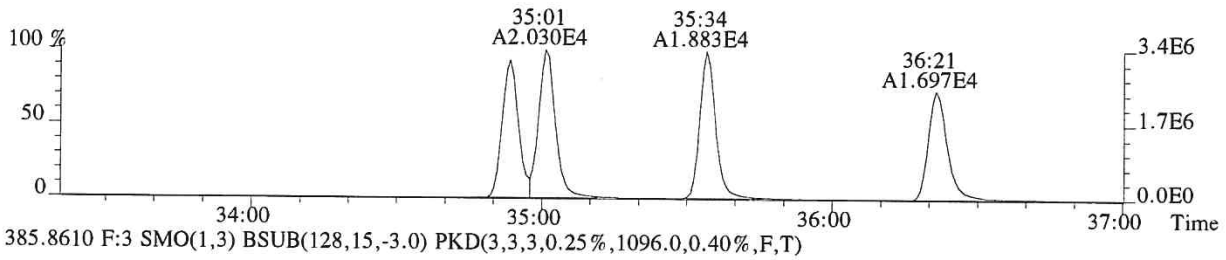
File:P519738 #1-330 Acq: 2-JAN-2019 20:13:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-014
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1176.0,0.40%,F,T)



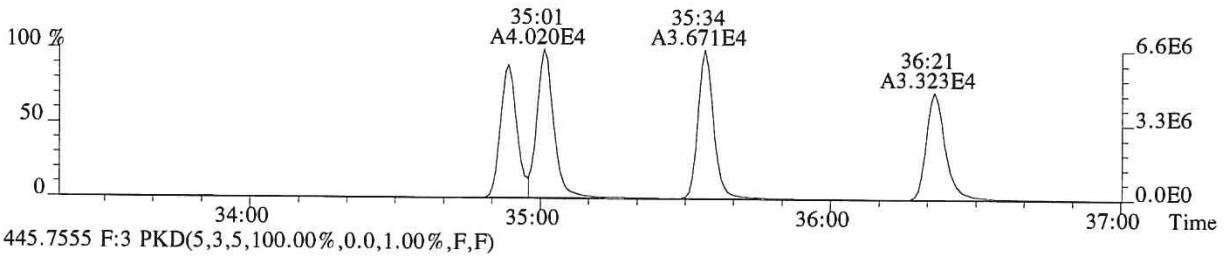
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,788.0,0.40%,F,T)



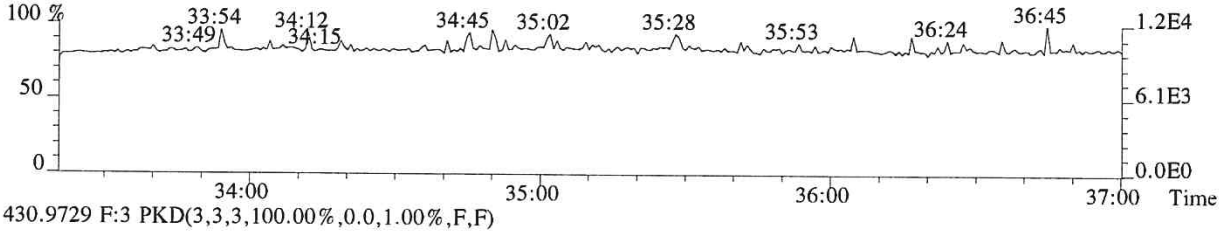
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,236.0,0.40%,F,T)



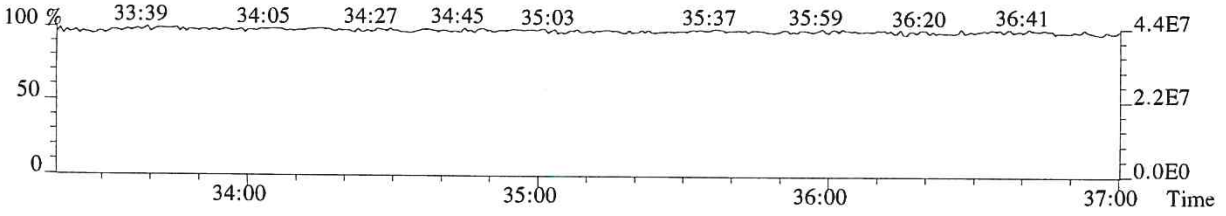
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1096.0,0.40%,F,T)



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

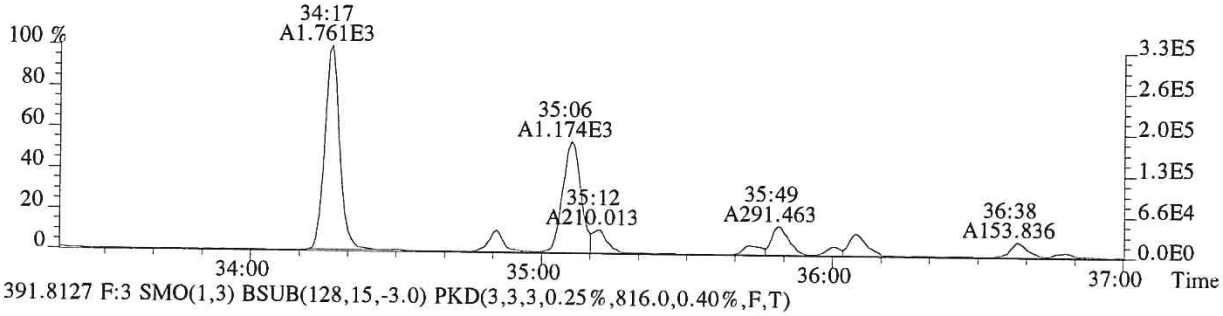


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

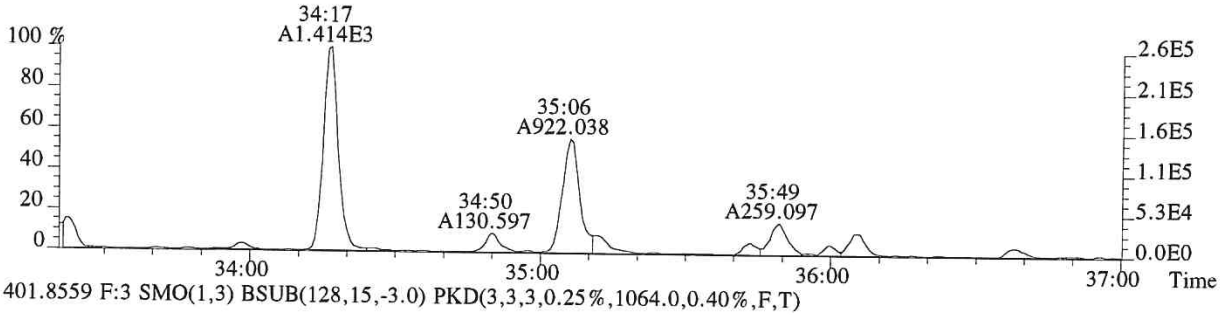


016270

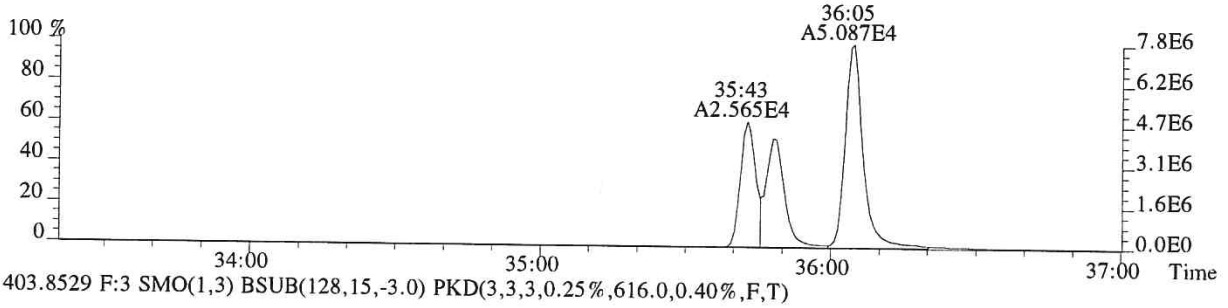
File:P519738 #1-330 Acq: 2-JAN-2019 20:13:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-014
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,804.0,0.40%,F,T)



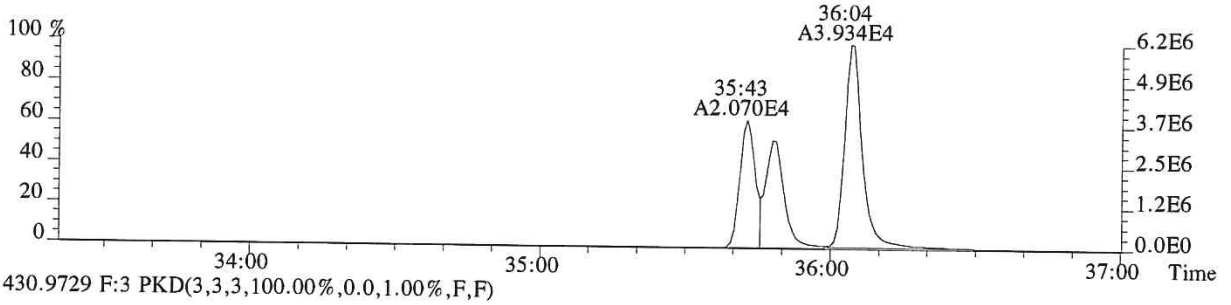
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,816.0,0.40%,F,T)



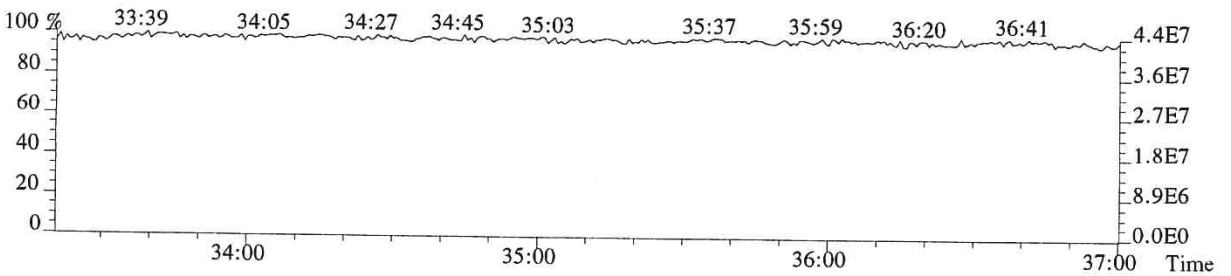
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1064.0,0.40%,F,T)



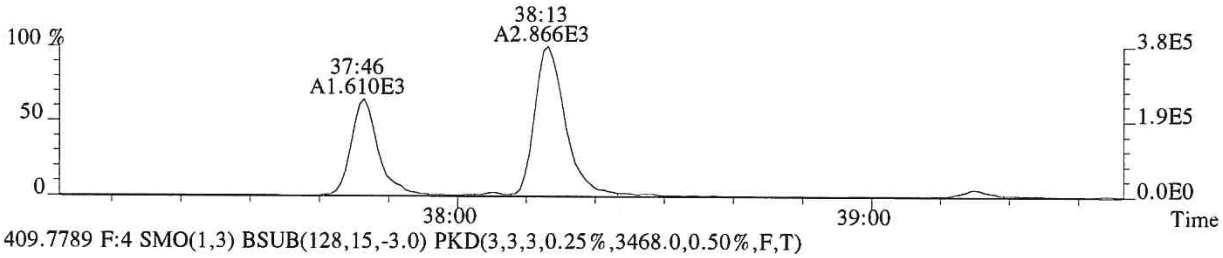
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,616.0,0.40%,F,T)



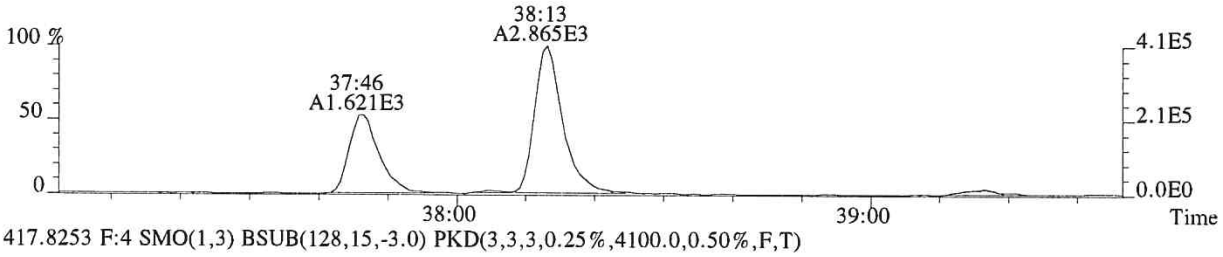
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



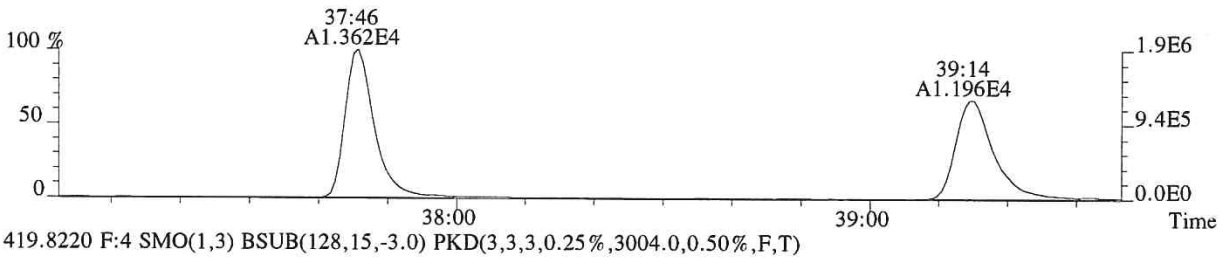
File:P519738 #1-232 Acq: 2-JAN-2019 20:13:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-014
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1568.0,0.50%,F,T)



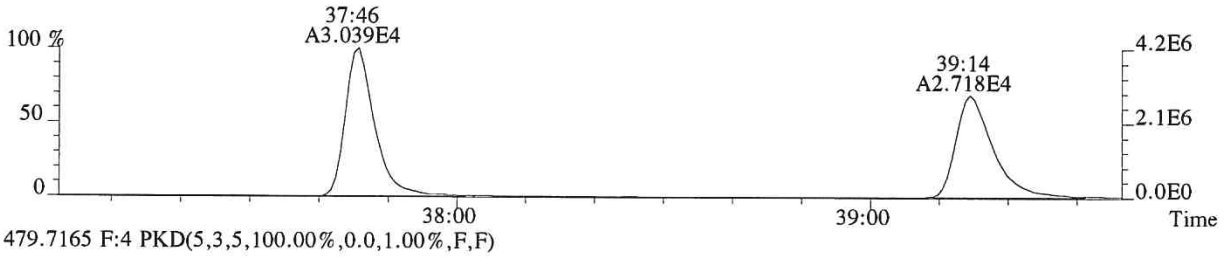
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3468.0,0.50%,F,T)



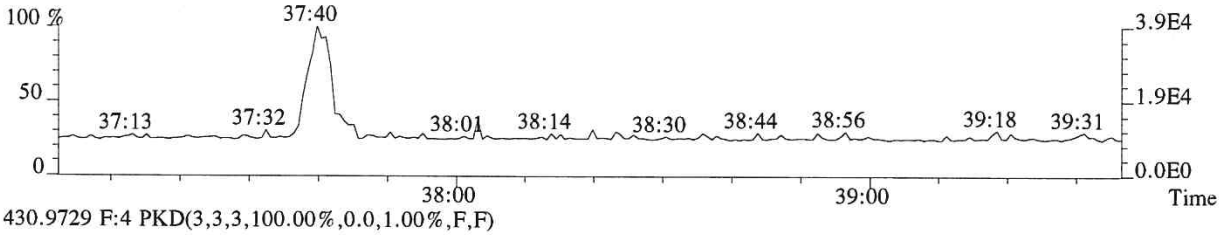
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4100.0,0.50%,F,T)



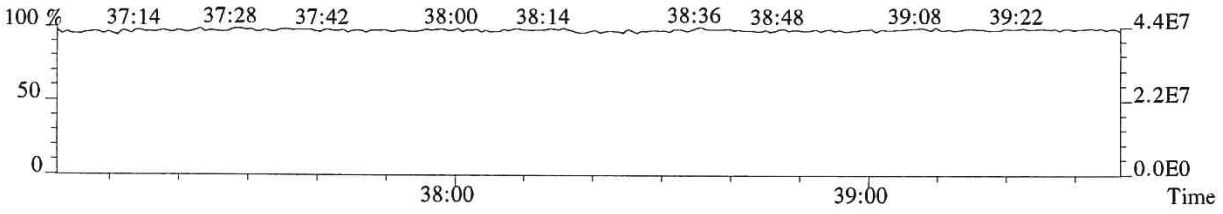
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3004.0,0.50%,F,T)



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

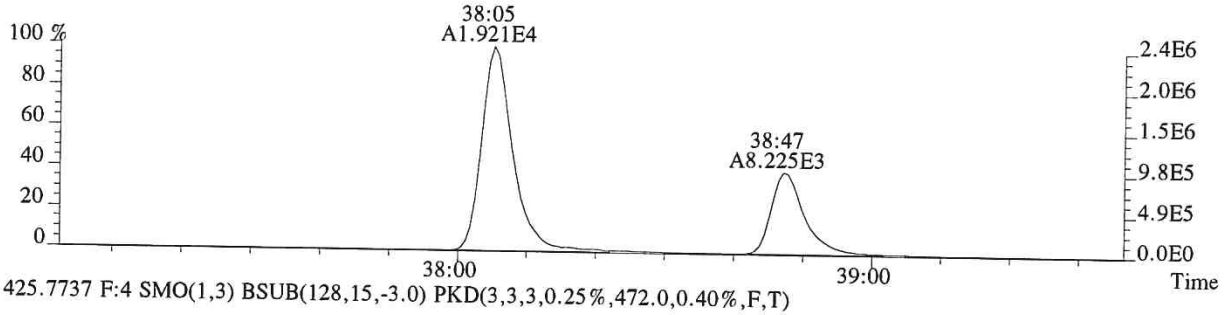


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

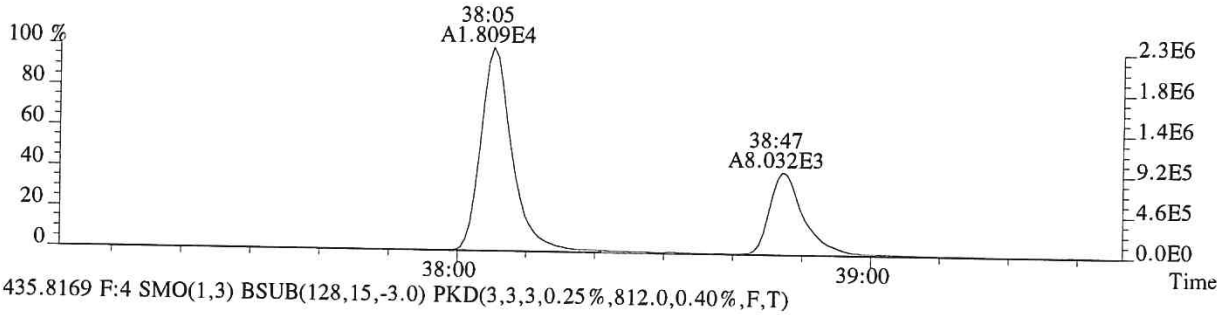


016272

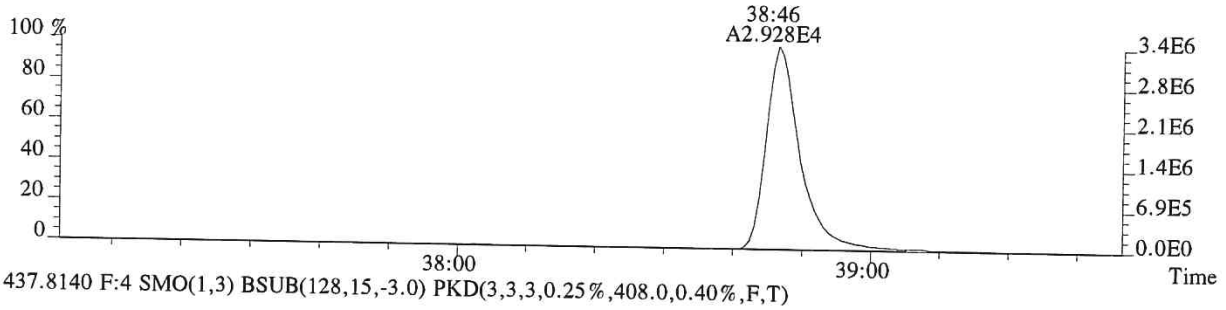
File:P519738 #1-232 Acq: 2-JAN-2019 20:13:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-014
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,728.0,0.40%,F,T)



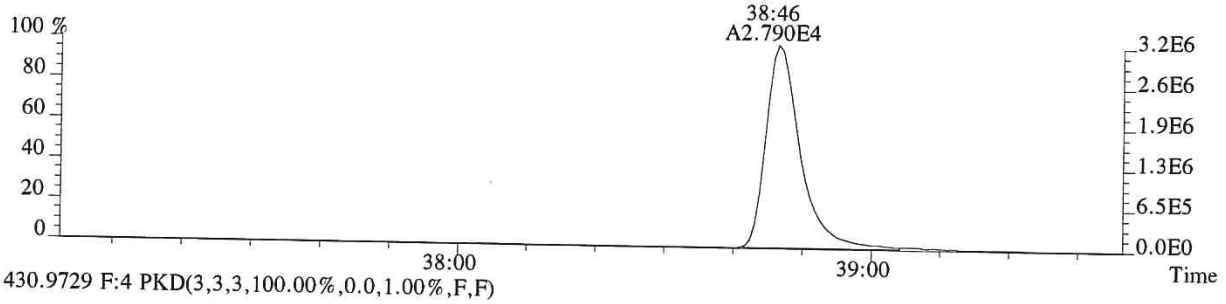
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,472.0,0.40%,F,T)



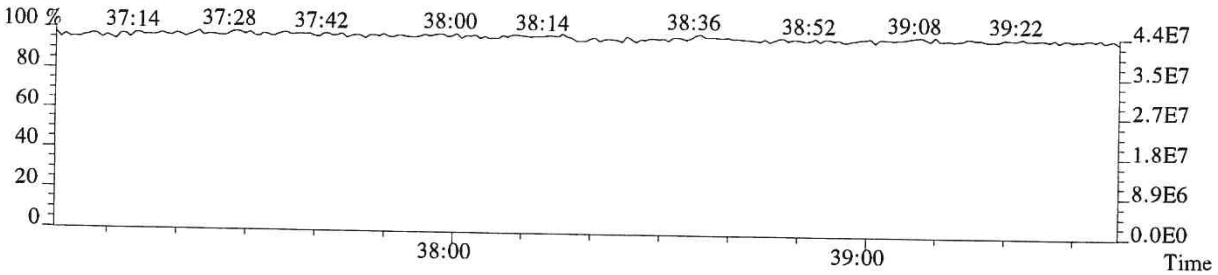
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,812.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,408.0,0.40%,F,T)

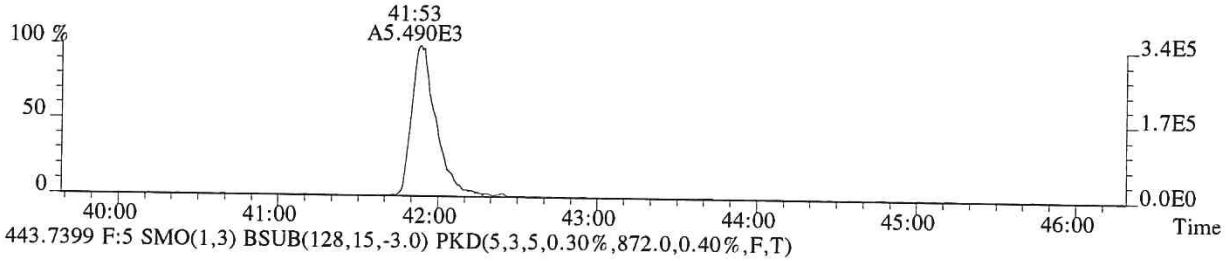


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

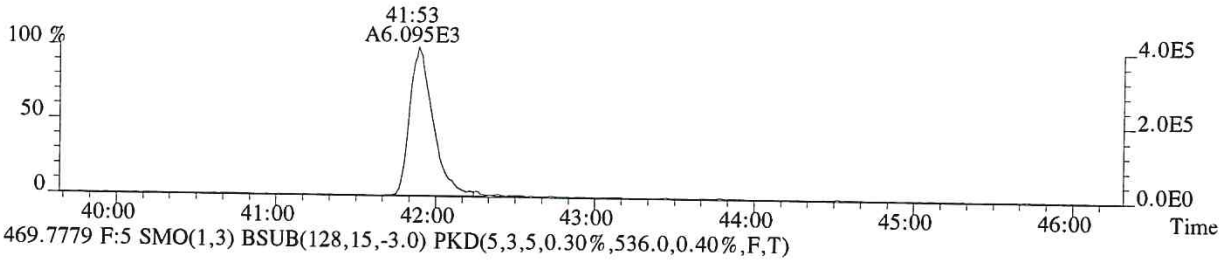


016273

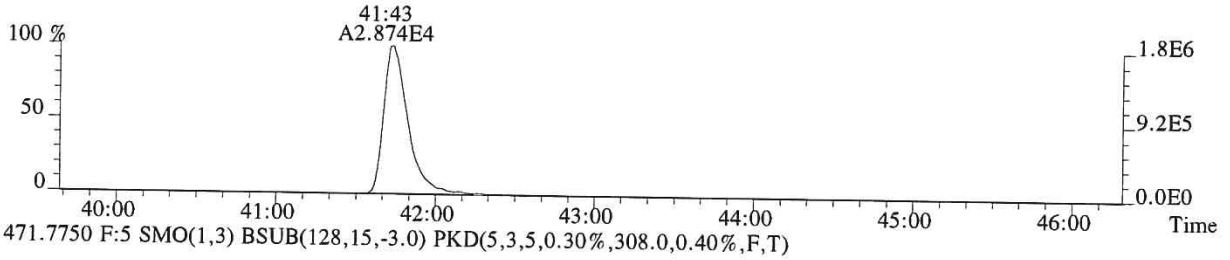
File:P519738 #1-601 Acq: 2-JAN-2019 20:13:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-014
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,392.0,0.40%,F,T)



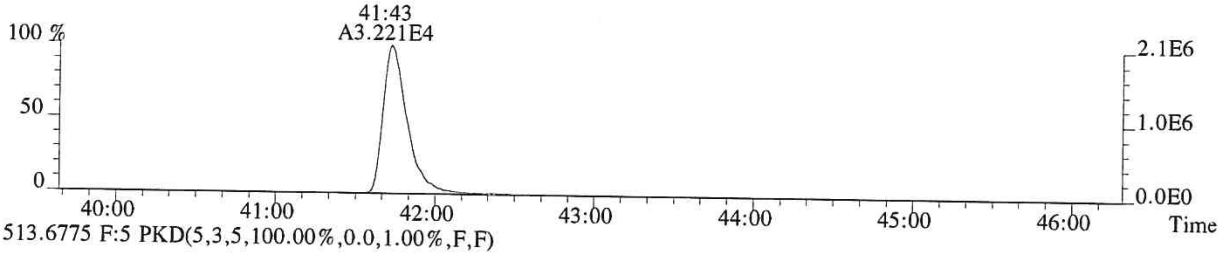
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,872.0,0.40%,F,T)



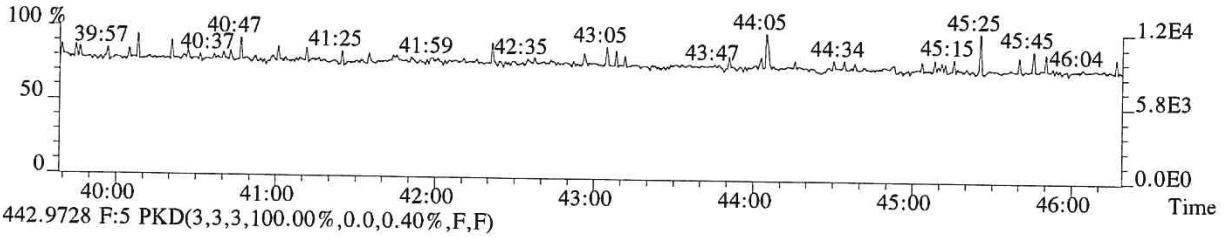
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,536.0,0.40%,F,T)



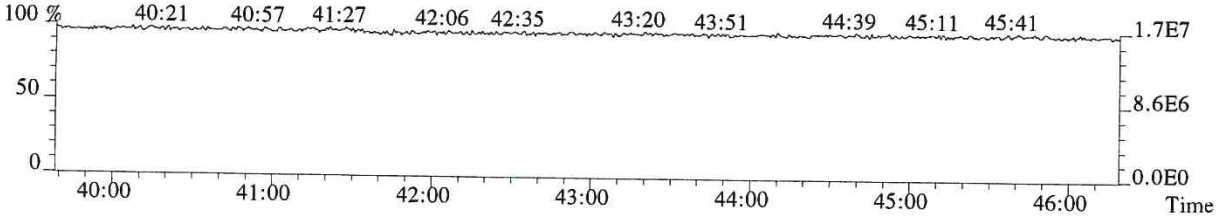
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,308.0,0.40%,F,T)



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

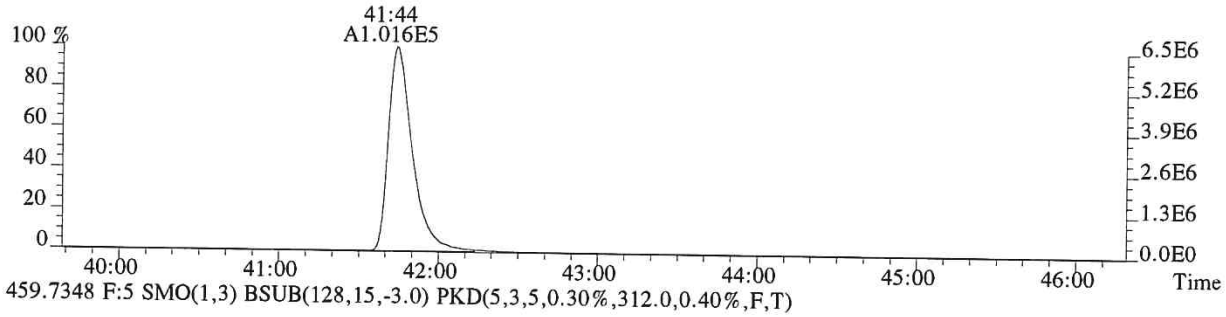


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

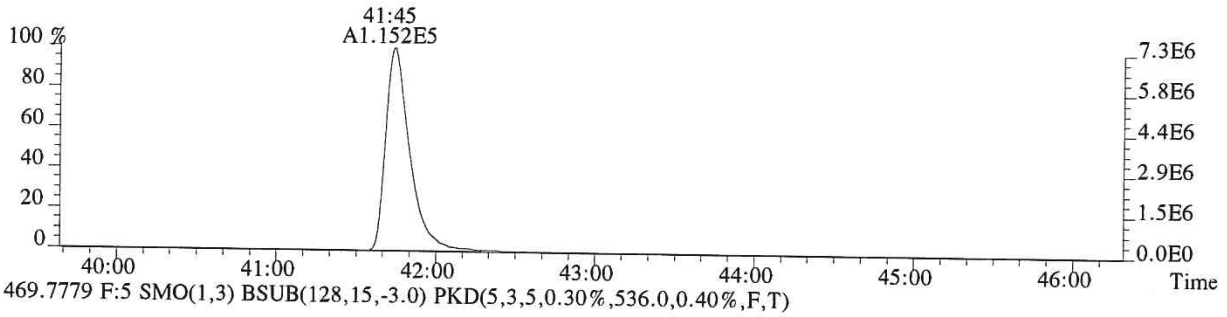


016274

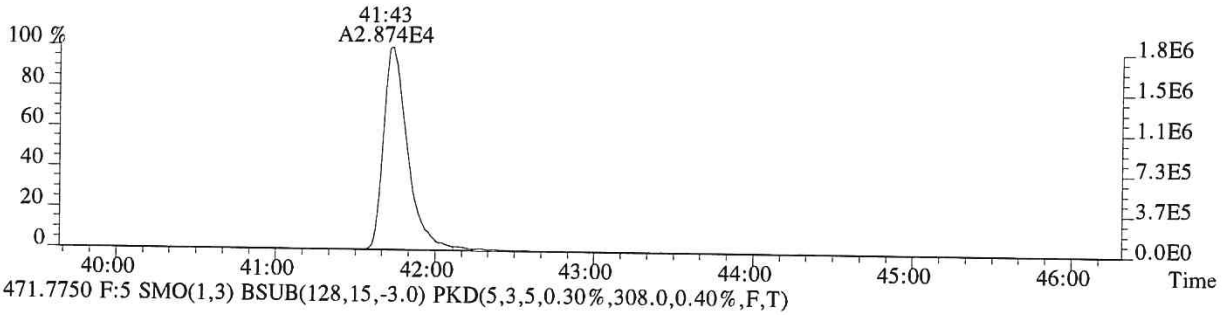
File:P519738 #1-601 Acq: 2-JAN-2019 20:13:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-014
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,316.0,0.40%,F,T)



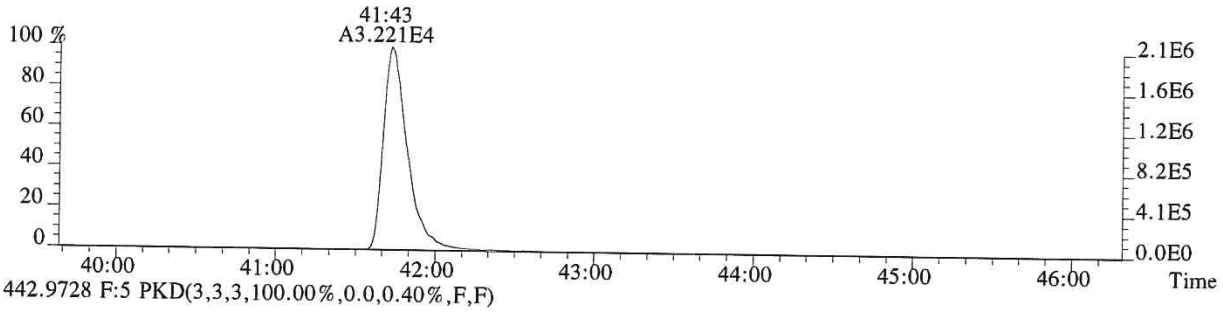
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,312.0,0.40%,F,T)



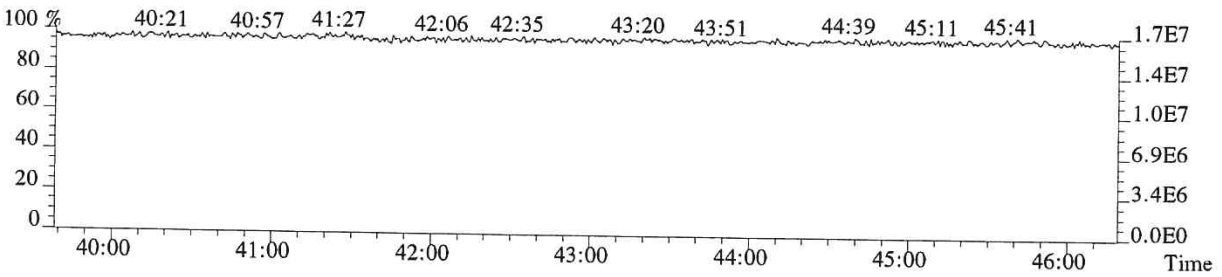
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,536.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,308.0,0.40%,F,T)



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



016275

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0188

Run #15 Filename P519739 Samp: 1 Inj: 1 Acquired: 2-JAN-19 21:01:58
Processed: 3-JAN-19 09:14:27 Sample ID: E1801137-015

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:04	9.840e+04	1.294e+05	0.76	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:58	7.419e+03	4.936e+03	1.50	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:59	4.513e+03	2.988e+03	1.51	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:54	1.068e+04	8.654e+03	1.23	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:01	2.798e+03	2.220e+03	1.26	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:35	7.068e+02	5.459e+02	1.29	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:25	8.117e+02	6.263e+02	1.30	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:48	5.462e+03	5.514e+03	0.99	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:16	9.984e+02	9.372e+02	1.07	yes	no	1.258
10	Unk	OCDF	41:55	7.937e+03	9.072e+03	0.87	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:03	2.824e+04	3.624e+04	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:18	5.749e+02	3.564e+02	1.61	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:45	1.780e+02	1.240e+02	1.44	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:50	6.657e+02	5.657e+02	1.18	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:05	3.717e+02	3.407e+02	1.09	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:48	1.601e+04	1.514e+04	1.06	yes	no	1.025
17	Unk	OCDD	41:46	1.237e+05	1.391e+05	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	2.356e+04	2.983e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:57	3.761e+04	2.379e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:58	3.325e+04	2.124e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:53	1.341e+04	2.613e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:01	1.565e+04	2.993e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:34	1.357e+04	2.620e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:22	1.336e+04	2.623e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:47	8.138e+03	1.860e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:15	7.832e+03	1.808e+04	0.43	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:01	1.210e+04	1.531e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:17	2.794e+04	1.763e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:43	2.047e+04	1.597e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:49	2.043e+04	1.641e+04	1.25	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:48	1.768e+04	1.672e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	41:46	1.217e+04	1.332e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	4.126e+04	5.201e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:04	5.569e+04	4.313e+04	1.29	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:03	1.865e+04				no	1.014

$$\text{OCDD} = \frac{(1.237e+05 + 1.391e+05) \times 4000 \text{ pg} \times 1}{(1.217e+04 + 1.332e+04) \times 10.314 \text{ g} \times 81.2 / 100 \times 1.118} = 4404 \text{ ng/kg}$$

LM 01/04/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0188

Run #15 Filename P519739 Samp: 1 Inj: 1 Acquired: 2-JAN-19 21:01:58
Processed: 3-JAN-19 09:14:27 LAB. ID: E1801137-015

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.40e+07	1.06e+03	1.3e+04	1.82e+07	1.02e+03	1.8e+04
2	1,2,3,7,8-PeCDF	1.22e+06	8.31e+03	1.5e+02	8.16e+05	2.86e+03	2.9e+02
3	2,3,4,7,8-PeCDF	6.75e+05	8.31e+03	8.1e+01	4.47e+05	2.86e+03	1.6e+02
4	1,2,3,4,7,8-HxCDF	1.88e+06	1.20e+03	1.6e+03	1.51e+06	5.38e+03	2.8e+02
5	1,2,3,6,7,8-HxCDF	4.65e+05	1.20e+03	3.9e+02	3.60e+05	5.38e+03	6.7e+01
6	2,3,4,6,7,8-HxCDF	1.22e+05	1.20e+03	1.0e+02	9.01e+04	5.38e+03	1.7e+01
7	1,2,3,7,8,9-HxCDF	1.16e+05	1.20e+03	9.6e+01	8.41e+04	5.38e+03	1.6e+01
8	1,2,3,4,6,7,8-HpCDF	7.44e+05	3.03e+03	2.5e+02	7.38e+05	9.36e+02	7.9e+02
9	1,2,3,4,7,8,9-HpCDF	1.06e+05	3.03e+03	3.5e+01	9.66e+04	9.36e+02	1.0e+02
10	OCDF	5.03e+05	7.48e+02	6.7e+02	5.70e+05	1.19e+03	4.8e+02
11	2,3,7,8-TCDD	4.75e+06	1.99e+03	2.4e+03	5.99e+06	8.56e+02	7.0e+03
12	1,2,3,7,8-PeCDD	9.44e+04	9.24e+02	1.0e+02	5.02e+04	1.46e+03	3.4e+01
13	1,2,3,4,7,8-HxCDD	3.48e+04	6.28e+02	5.5e+01	2.64e+04	1.29e+03	2.0e+01
14	1,2,3,6,7,8-HxCDD	1.08e+05	6.28e+02	1.7e+02	9.33e+04	1.29e+03	7.2e+01
15	1,2,3,7,8,9-HxCDD	5.97e+04	6.28e+02	9.5e+01	5.16e+04	1.29e+03	4.0e+01
16	1,2,3,4,6,7,8-HpCDD	1.68e+06	5.92e+02	2.8e+03	1.67e+06	8.12e+02	2.1e+03
17	OCDD	7.80e+06	6.64e+02	1.2e+04	8.78e+06	7.64e+02	1.1e+04
18	13C-2,3,7,8-TCDF	3.55e+06	4.52e+03	7.8e+02	4.49e+06	3.23e+03	1.4e+03
19	13C-1,2,3,7,8-PeCDF	6.30e+06	1.57e+03	4.0e+03	4.03e+06	1.77e+03	2.3e+03
20	13C-2,3,4,7,8-PeCDF	5.86e+06	1.57e+03	3.7e+03	3.78e+06	1.77e+03	2.1e+03
21	13C-1,2,3,4,7,8-HxCDF	2.36e+06	7.36e+02	3.2e+03	4.70e+06	1.38e+03	3.4e+03
22	13C-1,2,3,6,7,8-HxCDF	2.63e+06	7.36e+02	3.6e+03	4.93e+06	1.38e+03	3.6e+03
23	13C-2,3,4,6,7,8-HxCDF	2.28e+06	7.36e+02	3.1e+03	4.45e+06	1.38e+03	3.2e+03
24	13C-1,2,3,7,8,9-HxCDF	1.97e+06	7.36e+02	2.7e+03	3.91e+06	1.38e+03	2.8e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.08e+06	1.42e+03	7.6e+02	2.49e+06	4.29e+03	5.8e+02
26	13C-1,2,3,4,7,8,9-HpCDF	7.99e+05	1.42e+03	5.6e+02	1.89e+06	4.29e+03	4.4e+02
27	13C-2,3,7,8-TCDD	1.96e+06	6.61e+03	3.0e+02	2.51e+06	3.04e+03	8.3e+02
28	13C-1,2,3,7,8-PeCDD	4.79e+06	5.00e+02	9.6e+03	3.00e+06	1.06e+03	2.8e+03
29	13C-1,2,3,4,7,8-HxCDD	3.47e+06	8.28e+02	4.2e+03	2.72e+06	3.88e+02	7.0e+03
30	13C-1,2,3,6,7,8-HxCDD	3.20e+06	8.28e+02	3.9e+03	2.56e+06	3.88e+02	6.6e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.97e+06	7.20e+02	2.7e+03	1.83e+06	5.40e+02	3.4e+03
32	13C-OCDD	7.68e+05	5.64e+02	1.4e+03	8.28e+05	6.72e+02	1.2e+03
33	13C-1,2,3,4-TCDD	6.61e+06	6.61e+03	1.0e+03	8.37e+06	3.04e+03	2.8e+03
34	13C-1,2,3,7,8,9-HxCDD	8.20e+06	8.28e+02	9.9e+03	6.53e+06	3.88e+02	1.7e+04
35	37Cl-2,3,7,8-TCDD	3.09e+06	1.72e+03	1.8e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0188

Entry: 36 Totals Name: Total Tetra-Furans

Run: 15 File: P519739 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 21:01:58 Processed: 3-JAN-19 09:14:27

Mass: 303.9020 305.8990 Tot Response: 3.81e+05 RRF: 0.9417

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:25	1.40e+02	0.81	yes	3.12e+02		n	n
2	22:52	8.85e+02	0.82	yes	1.97e+03		n	n
3	23:10	3.09e+03	0.72	yes	7.39e+03		n	n
4	23:42	1.40e+02	0.86	yes	3.03e+02		n	n
5	23:49	2.68e+03	0.75	yes	6.26e+03		n	n
6	24:13	8.59e+02	0.81	yes	1.92e+03		n	n
7	24:28	2.15e+03	0.72	yes	5.16e+03		n	n
8	24:35	3.65e+03	0.77	yes	8.40e+03		n	n
9	25:04	3.60e+04	0.76	yes	8.32e+04		n	n
10	25:23	1.90e+03	0.73	yes	4.49e+03		n	n
11	26:04	9.84e+04	0.76	yes	2.28e+05	2,3,7,8-TCDF	n	n
12	26:29	7.58e+03	0.73	yes	1.80e+04		n	n
13	26:46	8.41e+02	0.69	yes	2.06e+03		n	n
14	28:15	5.99e+03	0.76	yes	1.39e+04		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0188

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 15 File: P519739 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 21:01:58 Processed: 3-JAN-19 09:14:27

Mass: 319.8970 321.8940 Tot Response: 7.12e+04 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	23:10	6.07e+01	8.62e+01	0.70	yes	1.47e+02		n	n
2	26:45	4.34e+02	5.88e+02	0.74	yes	1.02e+03		n	n
3	27:03	2.82e+04	3.62e+04	0.78	yes	6.45e+04	2,3,7,8-TCDD	n	n
4	27:24	2.48e+03	3.07e+03	0.81	yes	5.56e+03		n	n

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Peak List Summary

CLIENT ID.
SL0188

Entry: 38 Totals Name: Total Penta-Furans1

Run: 15 File: P519739 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 21:01:58 Processed: 3-JAN-19 09:14:27

Mass: 339.8600 341.8570 Tot Response: 1.56e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:16	9.36e+02	6.24e+02 1.50	yes	1.56e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0188

Entry: 39 Totals Name: Total Penta-Furans2

Run: 15 File: P519739 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 21:01:58 Processed: 3-JAN-19 09:14:27

Mass: 339.8600 341.8570 Tot Response: 2.63e+04 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:56	3.15e+03	2.08e+03	1.52	yes	5.23e+03		n	n
2	30:46	4.88e+02	3.41e+02	1.43	yes	8.29e+02		n	n
3	30:58	7.42e+03	4.94e+03	1.50	yes	1.24e+04	1,2,3,7,8-PeCDF	n	n
4	31:59	4.51e+03	2.99e+03	1.51	yes	7.50e+03	2,3,4,7,8-PeCDF	n	n
5	32:57	2.55e+02	1.64e+02	1.55	yes	4.19e+02		n	n

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Peak List Summary

CLIENT ID.
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Entry: 40 Totals Name: Total Penta-Dioxins

Run: 15 File: P519739 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 21:01:58 Processed: 3-JAN-19 09:14:27

Mass: 355.8550 357.8520 Tot Response: 2.00e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:00	2.55e+02	1.53e+02	1.67	yes	4.08e+02		n	n
2	31:00	1.22e+02	7.85e+01	1.55	yes	2.01e+02		n	n
3	31:11	1.27e+02	9.38e+01	1.35	yes	2.21e+02		n	n
4	31:30	1.52e+02	9.17e+01	1.66	yes	2.44e+02		n	n
5	32:18	5.75e+02	3.56e+02	1.61	yes	9.31e+02	1,2,3,7,8-PeCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0188

Entry: 41 Totals Name: Total Hexa-Furans

Run: 15 File: P519739 Sample:1 Injection:1 Function:3

Acquired: 2-JAN-19 21:01:58 Processed: 3-JAN-19 09:14:27

Mass: 373.8210 375.8180 Tot Response: 3.67e+04 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:42	4.54e+02	3.95e+02	1.15	yes	8.49e+02		n	n
2	33:53	2.27e+03	1.82e+03	1.24	yes	4.09e+03		n	n
3	34:27	2.55e+03	2.14e+03	1.19	yes	4.69e+03		n	n
4	34:54	1.07e+04	8.65e+03	1.23	yes	1.93e+04	1,2,3,4,7,8-HxCDF	n	n
5	35:01	2.80e+03	2.22e+03	1.26	yes	5.02e+03	1,2,3,6,7,8-HxCDF	n	n
6	35:35	7.07e+02	5.46e+02	1.29	yes	1.25e+03	2,3,4,6,7,8-HxCDF	n	n
7	36:25	8.12e+02	6.26e+02	1.30	yes	1.44e+03	1,2,3,7,8,9-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0188

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 15 File: P519739 Sample:1 Injection:1 Function:3

Acquired: 2-JAN-19 21:01:58 Processed: 3-JAN-19 09:14:27

Mass: 389.8160 391.8130 Tot Response: 1.21e+04 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:17	3.01e+03	2.39e+03	1.26	yes	5.40e+03		n	n
2	34:51	3.75e+02	2.95e+02	1.27	yes	6.70e+02		n	n
3	35:06	2.20e+03	1.93e+03	1.14	yes	4.13e+03		n	n
4	35:50	6.66e+02	5.66e+02	1.18	yes	1.23e+03	1,2,3,6,7,8-HxCDD	n	n
5	36:05	3.72e+02	3.41e+02	1.09	yes	7.12e+02	1,2,3,7,8,9-HxCDD	n	n

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Peak List Summary

CLIENT ID.
SL0188

Entry: 43 Totals Name: Total Hepta-Furans

Run: 15 File: P519739 Sample:1 Injection:1 Function:4

Acquired: 2-JAN-19 21:01:58 Processed: 3-JAN-19 09:14:27

Mass: 407.7820 409.7790 Tot Response: 3.04e+04 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:48	5.46e+03	5.51e+03	0.99	yes	1.10e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	38:14	8.73e+03	8.81e+03	0.99	yes	1.75e+04		n	n
3	39:16	9.98e+02	9.37e+02	1.07	yes	1.94e+03	1,2,3,4,7,8,9-HpCDF	n	n

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Peak List Summary

CLIENT ID.
SL0188

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 15 File: P519739 Sample:1 Injection:1 Function:4

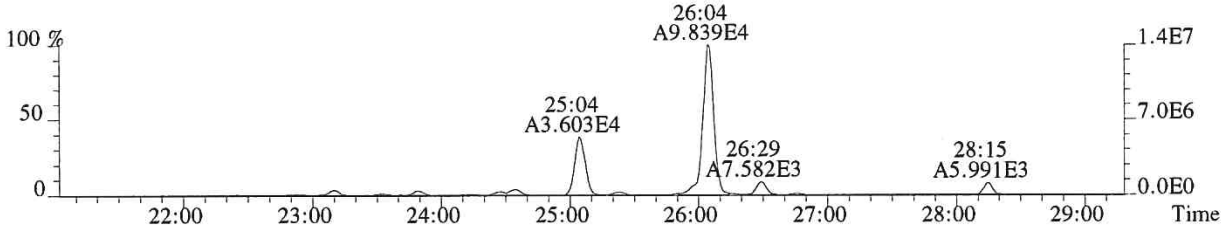
Acquired: 2-JAN-19 21:01:58 Processed: 3-JAN-19 09:14:27

Mass: 423.7770 425.7740 Tot Response: 8.98e+04 RRF: 1.025

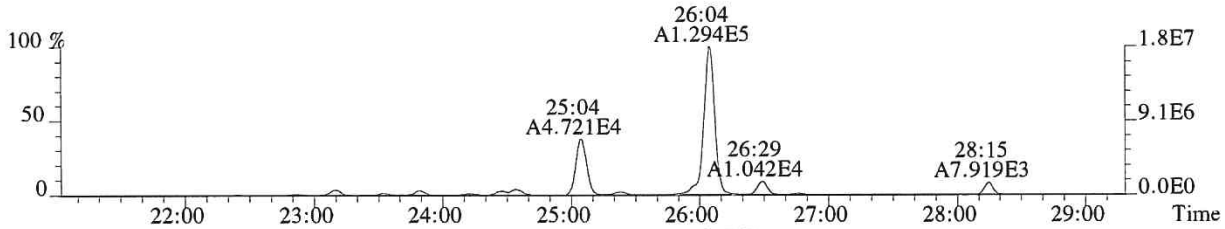
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:06	3.00e+04	2.87e+04 1.04	yes	5.87e+04		n	n
2	38:48	1.60e+04	1.51e+04 1.06	yes	3.11e+04	1,2,3,4,6,7,8-HpCDD	n	n

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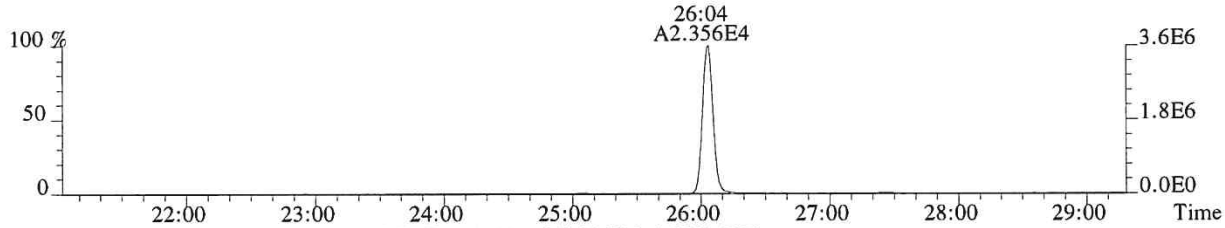
File:P519739 #1-587 Acq: 2-JAN-2019 21:01:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1056.0,1.00%,F,T)



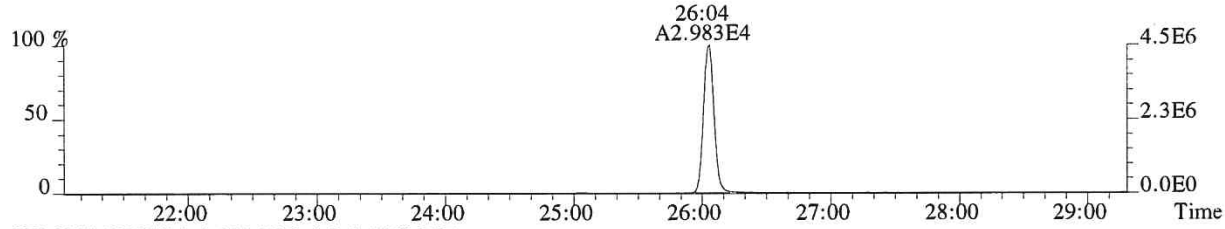
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



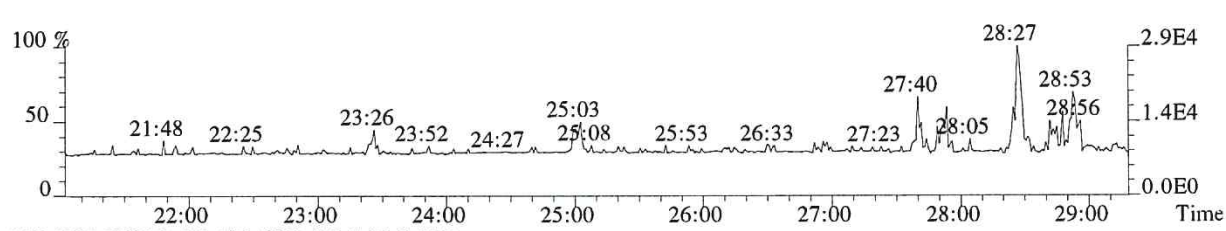
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4524.0,1.00%,F,T)



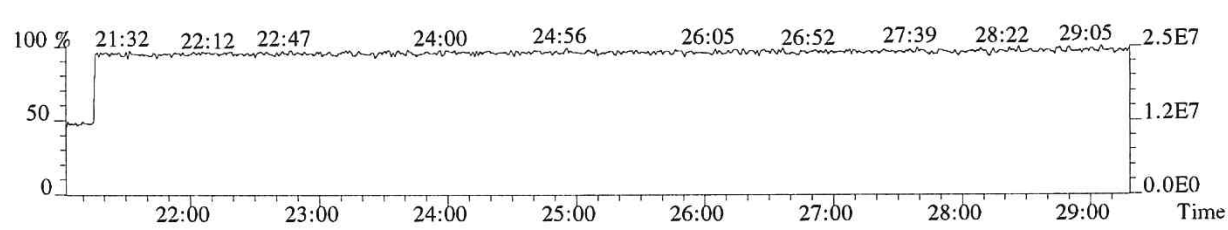
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3228.0,1.00%,F,T)



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

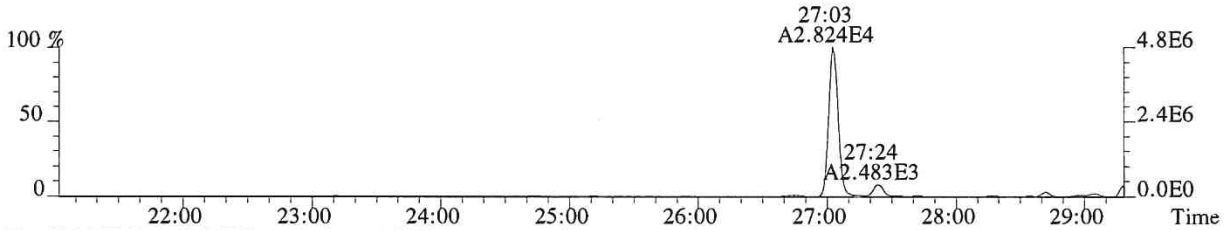


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

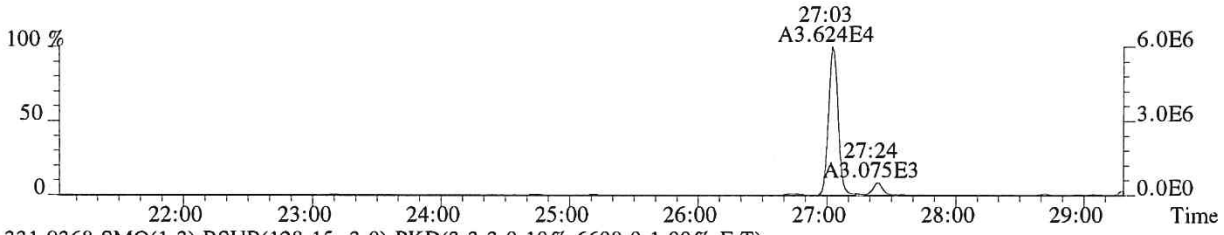


016287

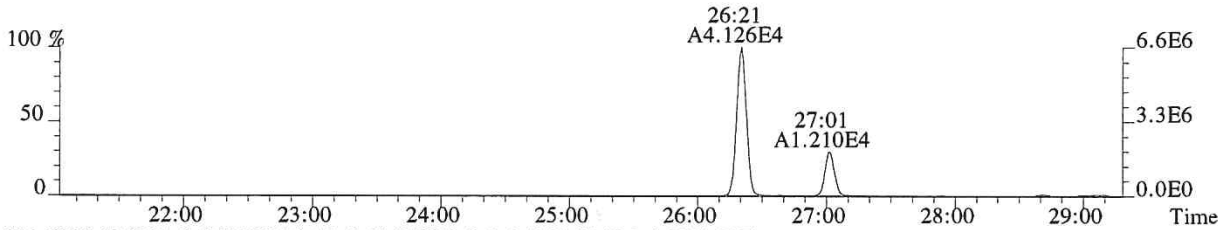
File:P519739 #1-587 Acq: 2-JAN-2019 21:01:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1992.0,1.00%,F,T)



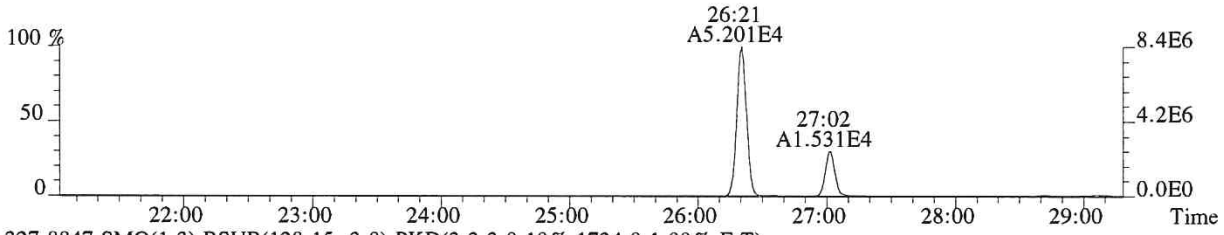
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,856.0,1.00%,F,T)



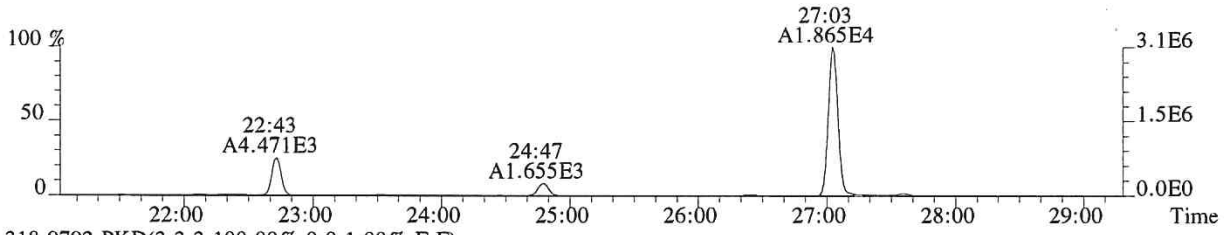
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6608.0,1.00%,F,T)



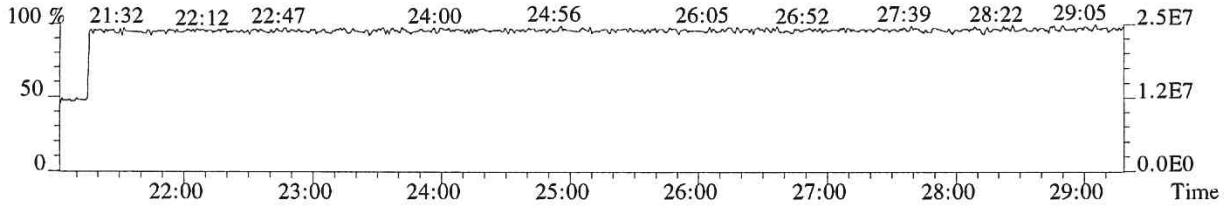
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3040.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1724.0,1.00%,F,T)

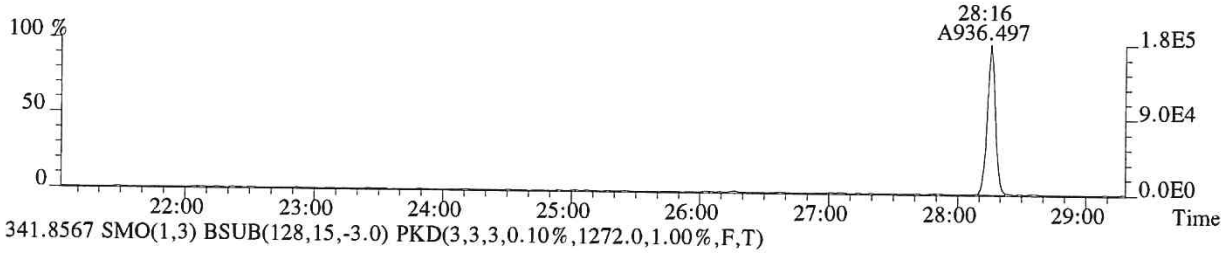


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

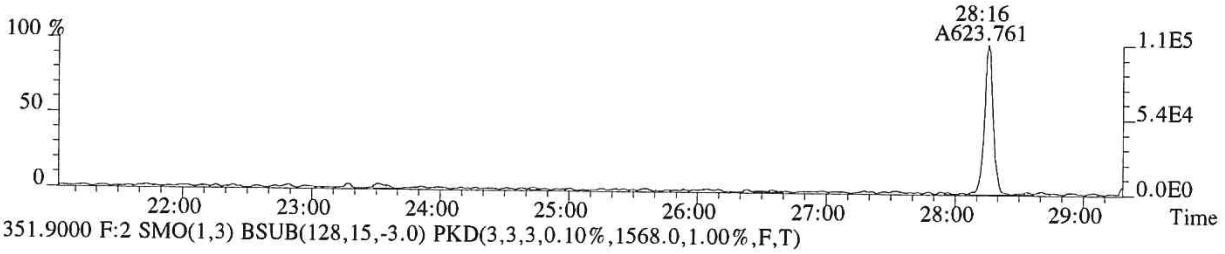


016288

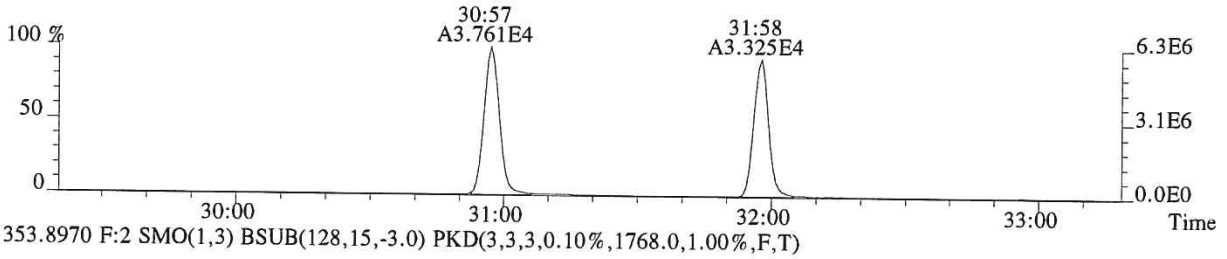
File:P519739 #1-587 Acq: 2-JAN-2019 21:01:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,808.0,1.00%,F,T)



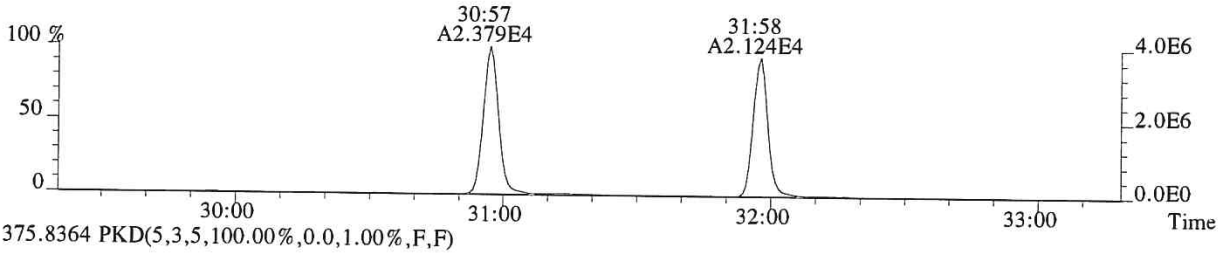
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1272.0,1.00%,F,T)



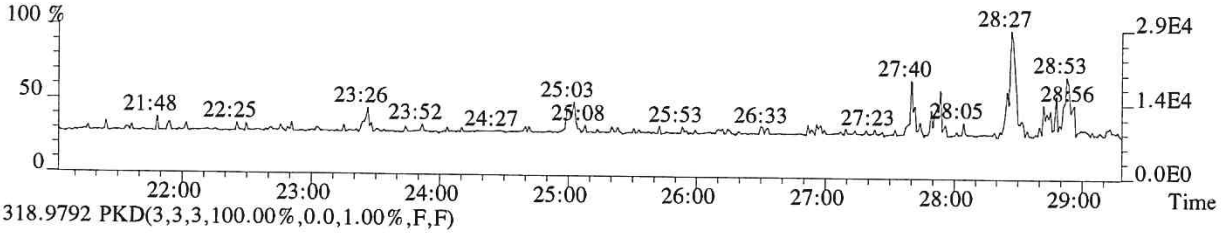
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1568.0,1.00%,F,T)



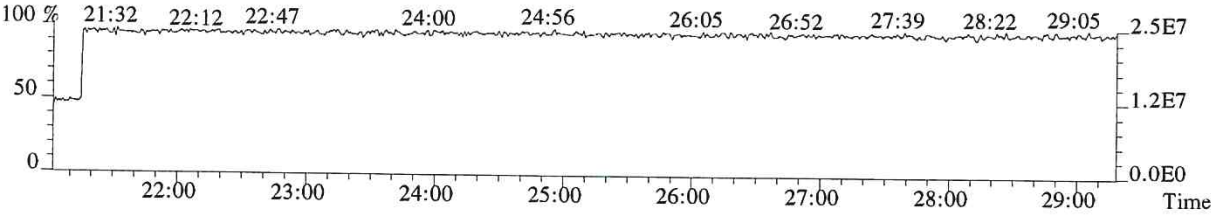
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1768.0,1.00%,F,T)



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

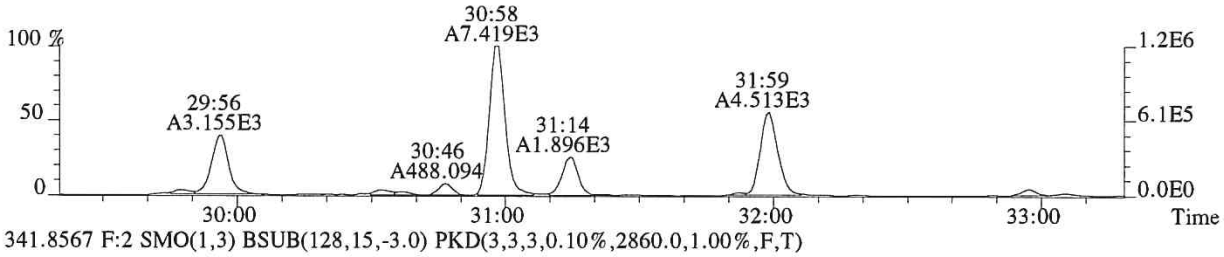


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

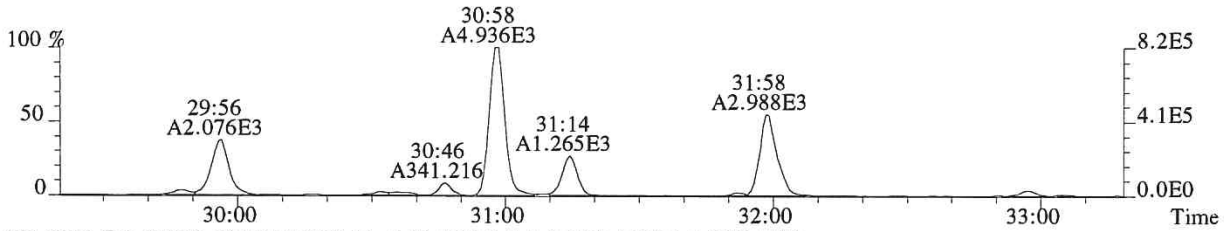


016289

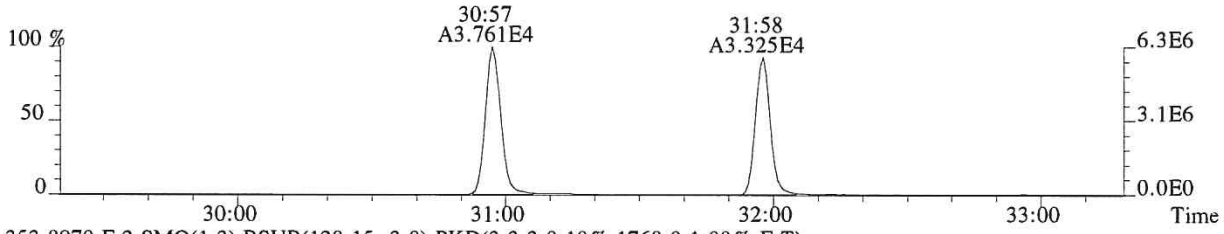
File:P519739 #1-358 Acq: 2-JAN-2019 21:01:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8312.0,1.00%,F,T)



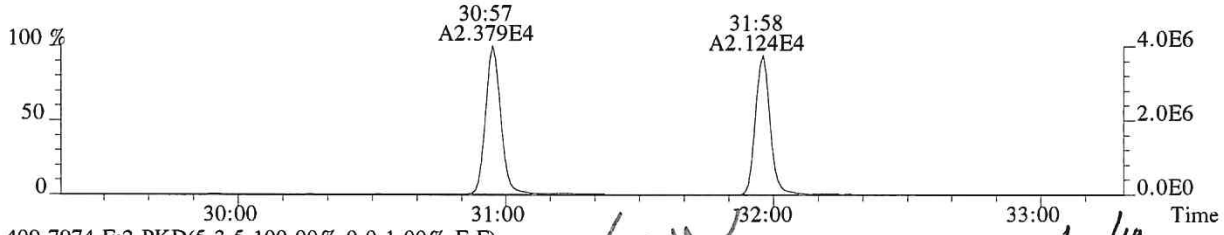
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2860.0,1.00%,F,T)



351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1568.0,1.00%,F,T)

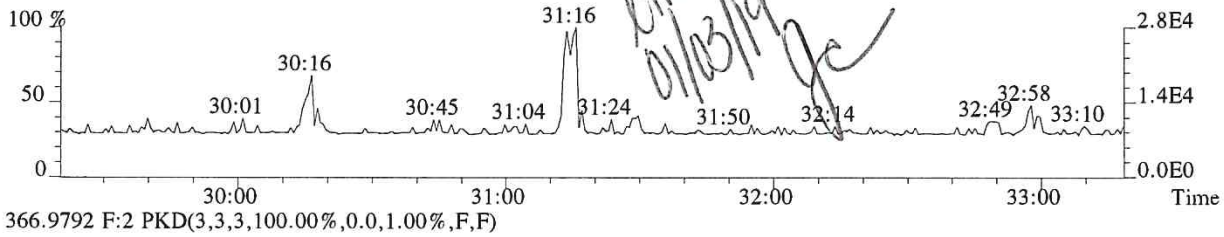


353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1768.0,1.00%,F,T)

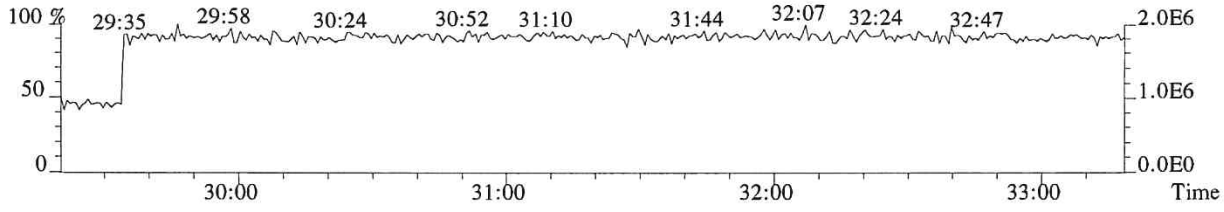


409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

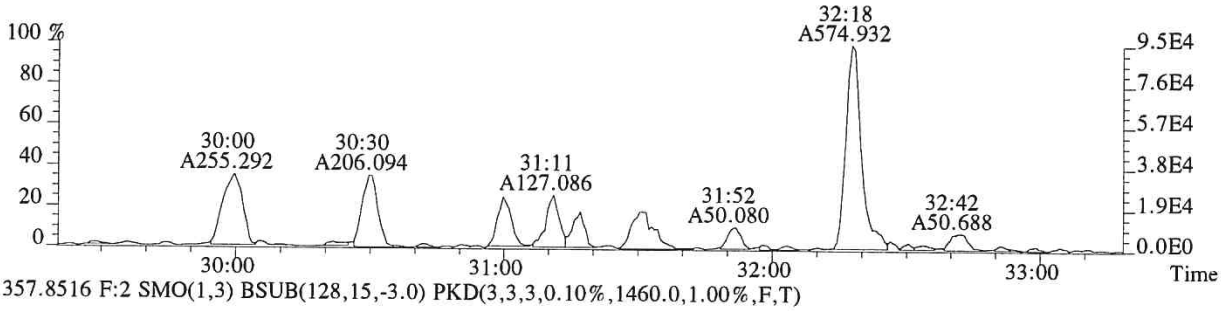
LM 01/03/19



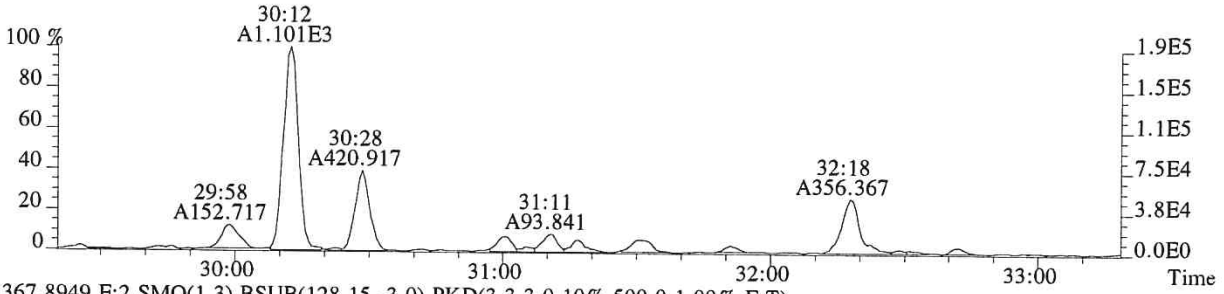
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



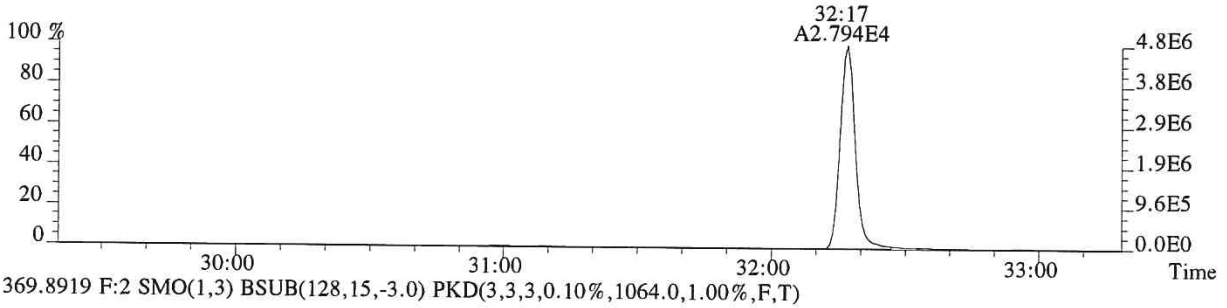
File:P519739 #1-358 Acq: 2-JAN-2019 21:01:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,924.0,1.00%,F,T)



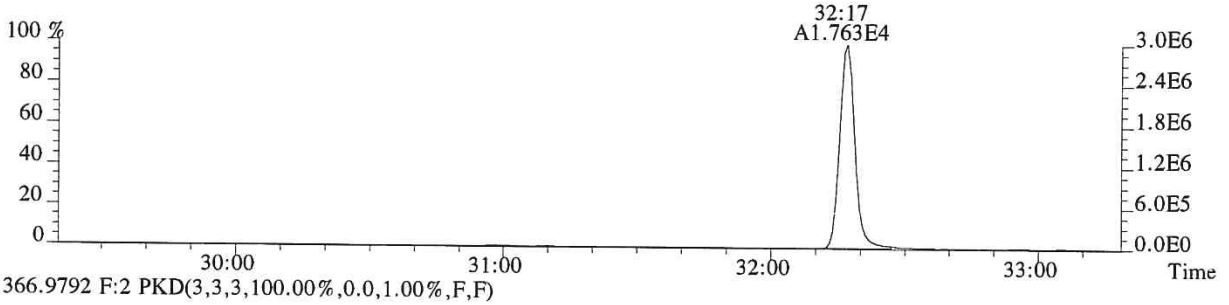
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1460.0,1.00%,F,T)



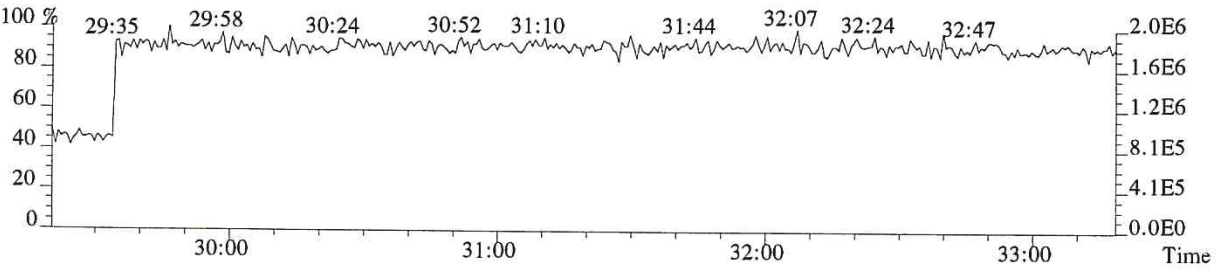
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,500.0,1.00%,F,T)



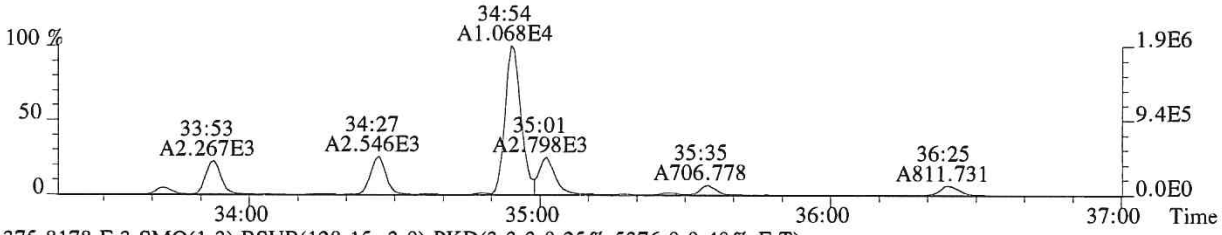
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1064.0,1.00%,F,T)



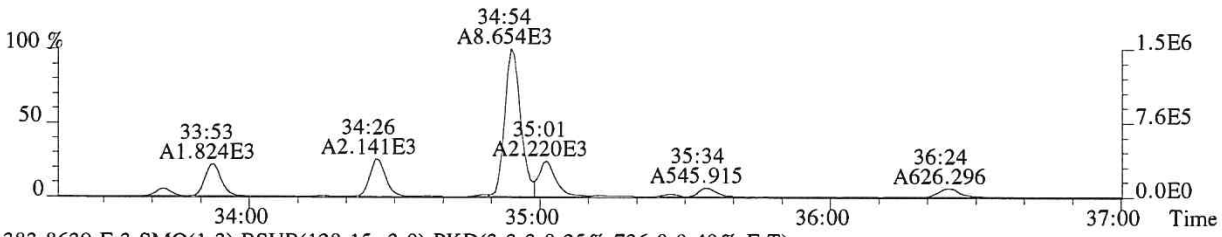
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



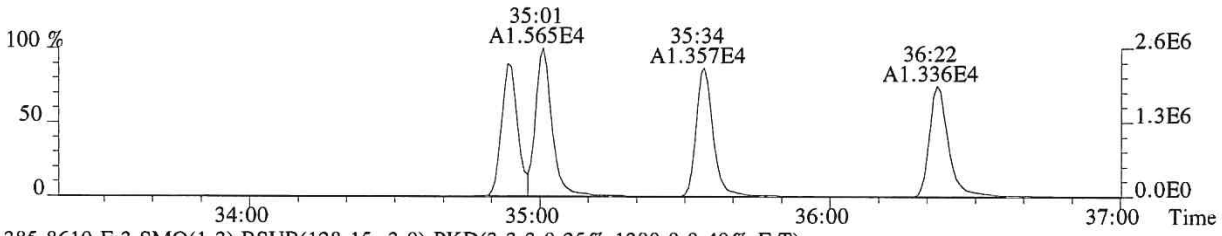
File:P519739 #1-330 Acq: 2-JAN-2019 21:01:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1204.0,0.40%,F,T)



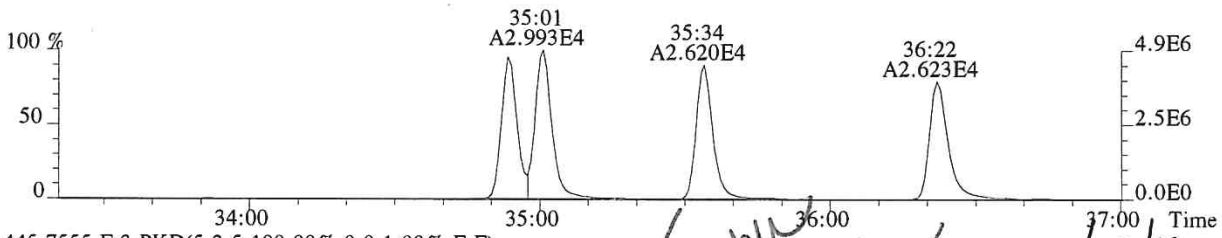
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5376.0,0.40%,F,T)



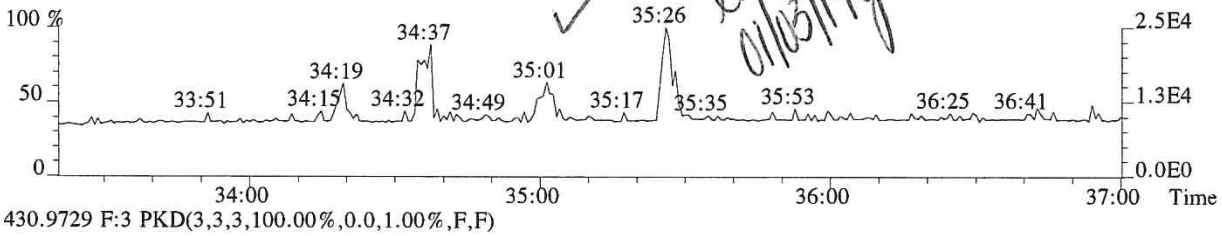
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,736.0,0.40%,F,T)



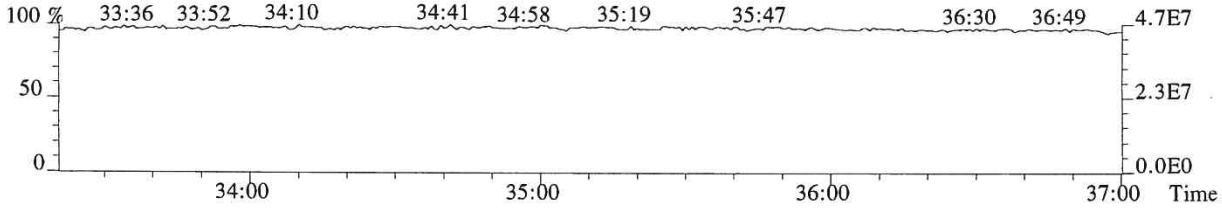
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1380.0,0.40%,F,T)



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

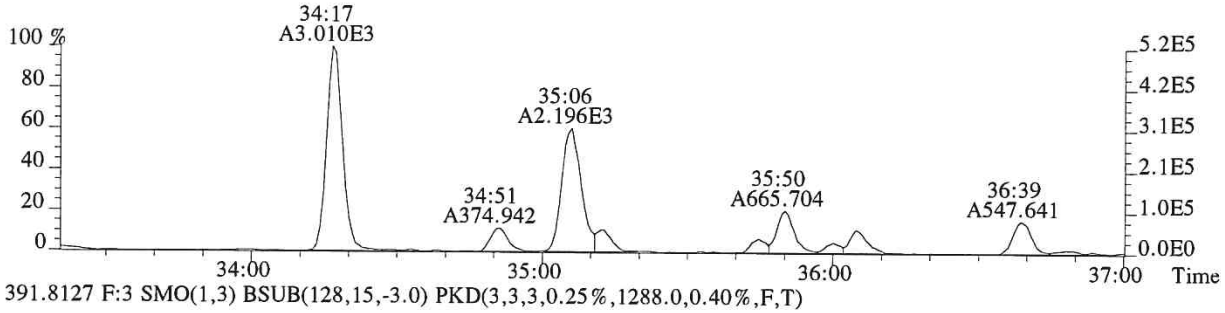


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

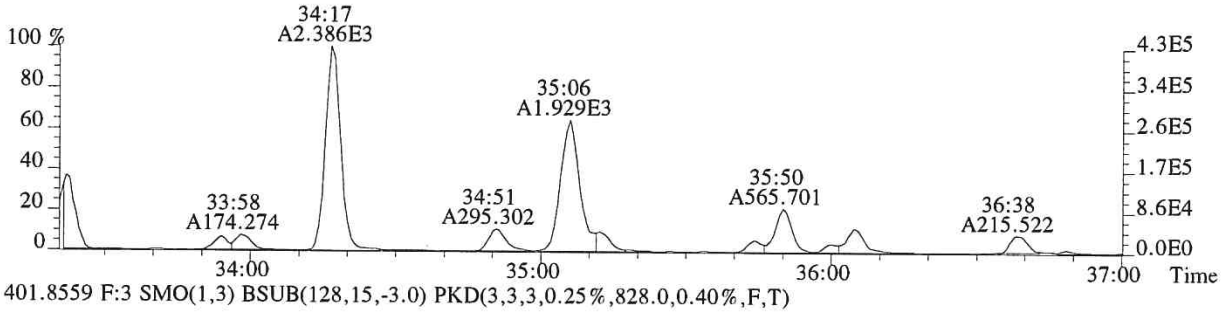


LLM 01/03/19

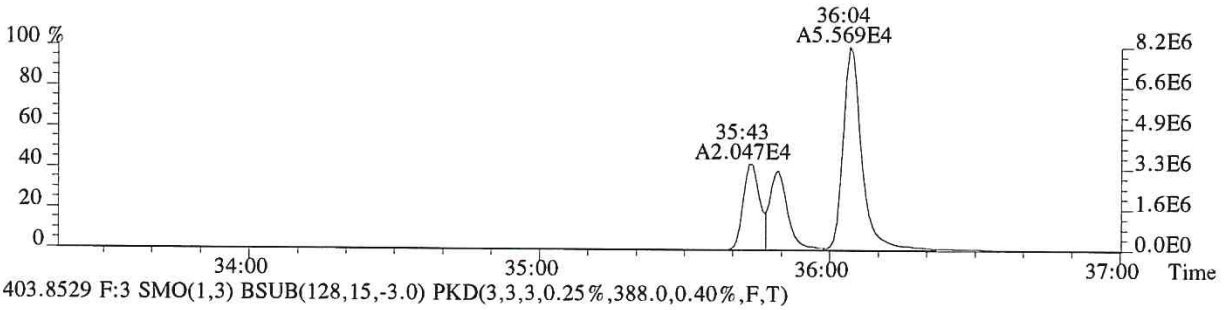
File:P519739 #1-330 Acq: 2-JAN-2019 21:01:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,628.0,0.40%,F,T)



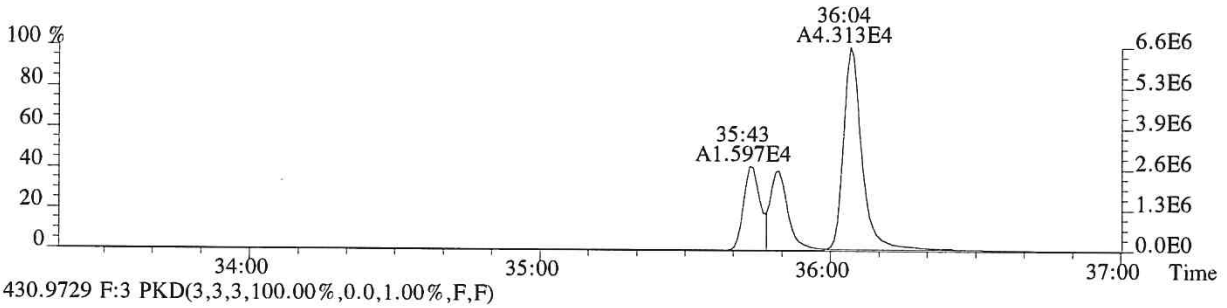
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1288.0,0.40%,F,T)



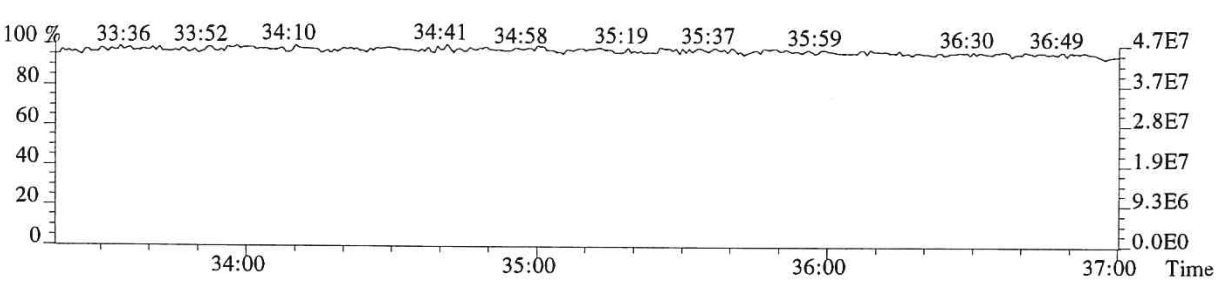
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,828.0,0.40%,F,T)



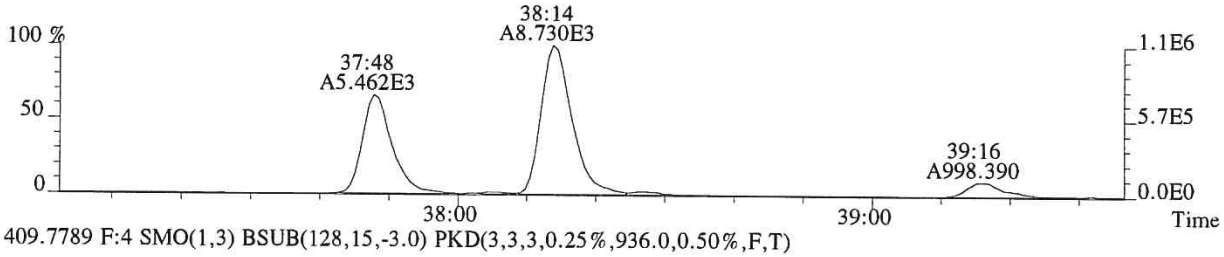
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,388.0,0.40%,F,T)



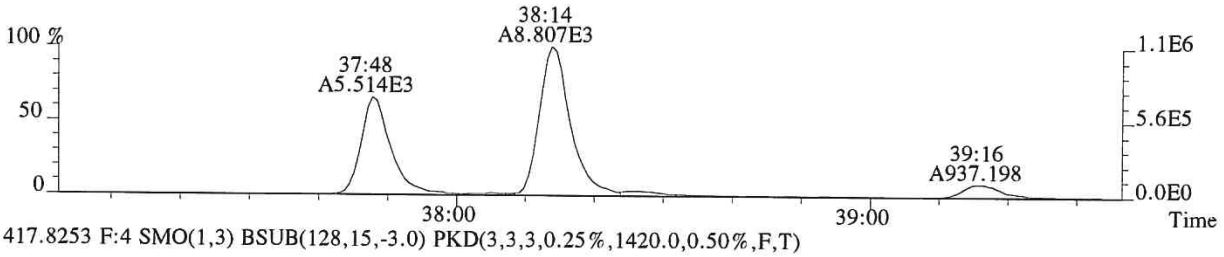
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



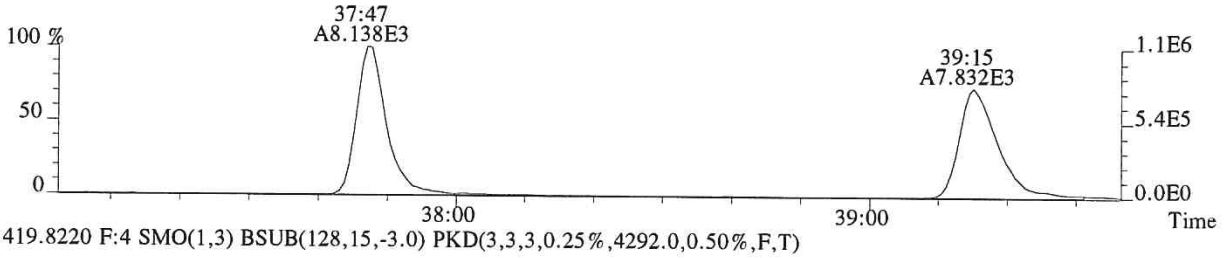
File:P519739 #1-232 Acq: 2-JAN-2019 21:01:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3032.0,0.50%,F,T)



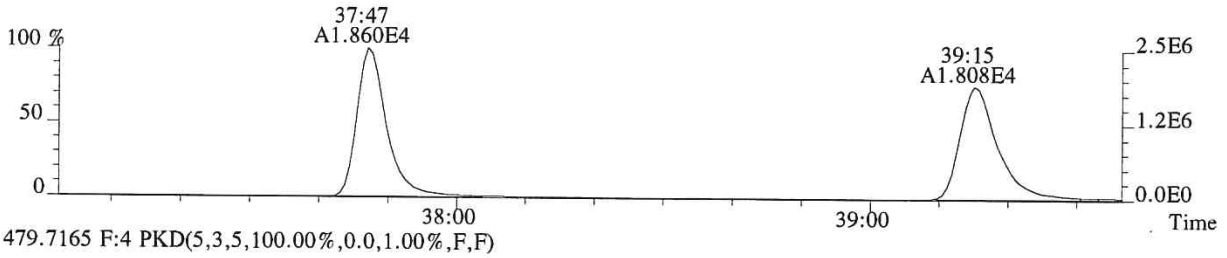
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,936.0,0.50%,F,T)



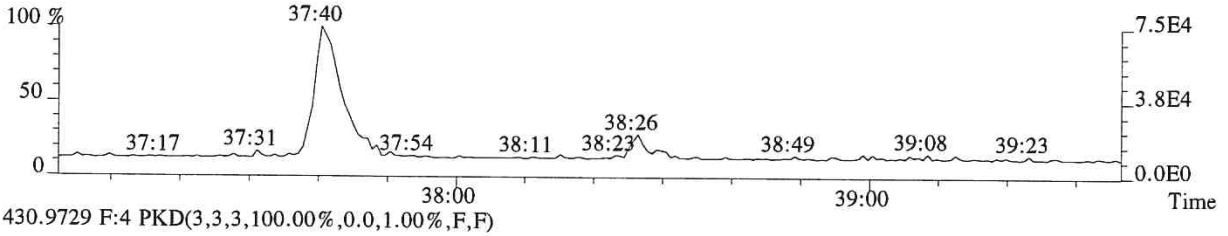
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1420.0,0.50%,F,T)



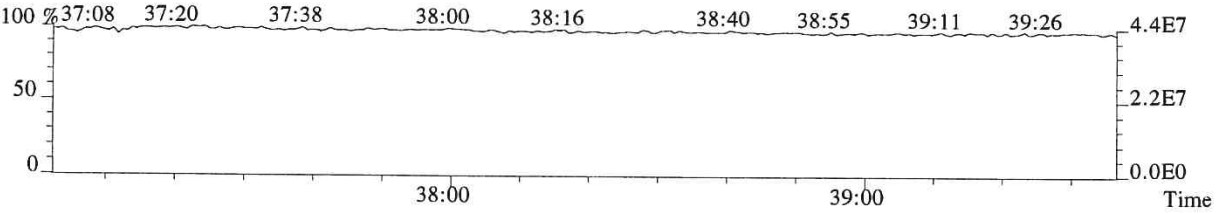
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4292.0,0.50%,F,T)



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

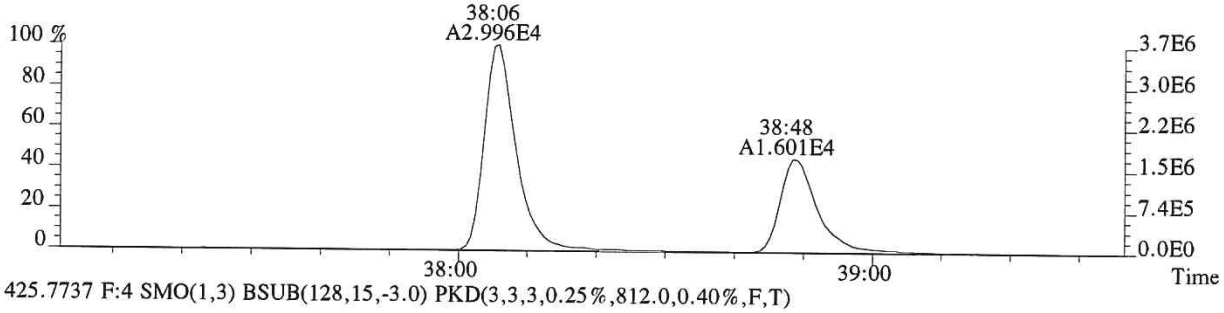


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

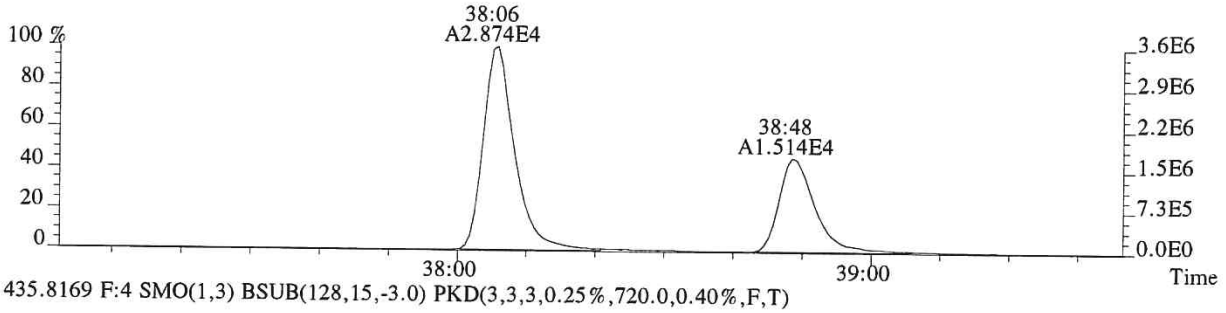


016294

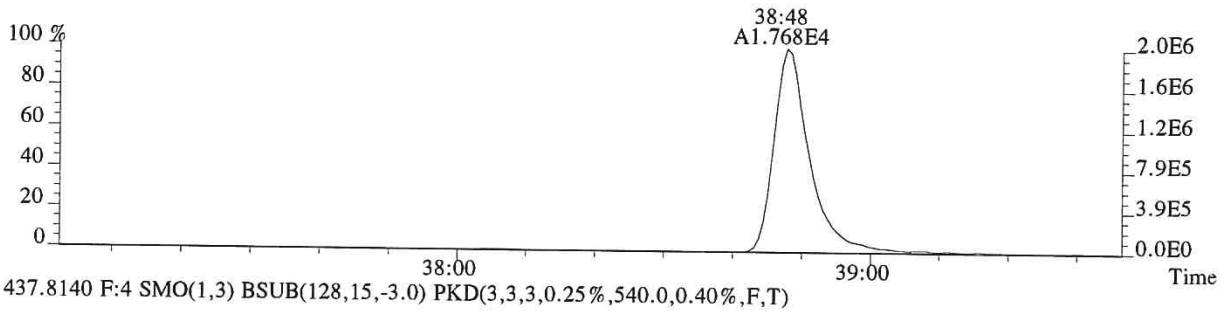
File:P519739 #1-232 Acq: 2-JAN-2019 21:01:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,592.0,0.40%,F,T)



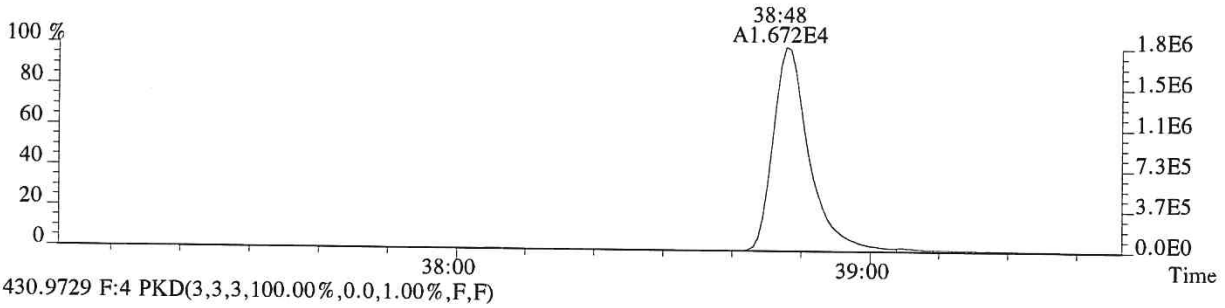
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,812.0,0.40%,F,T)



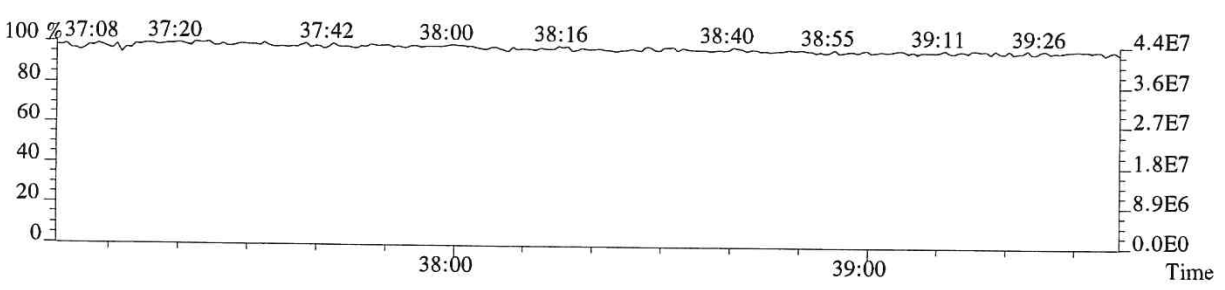
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,720.0,0.40%,F,T)



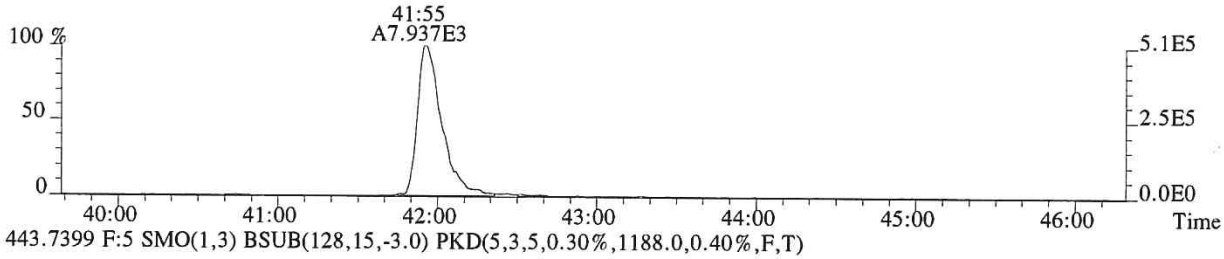
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,540.0,0.40%,F,T)



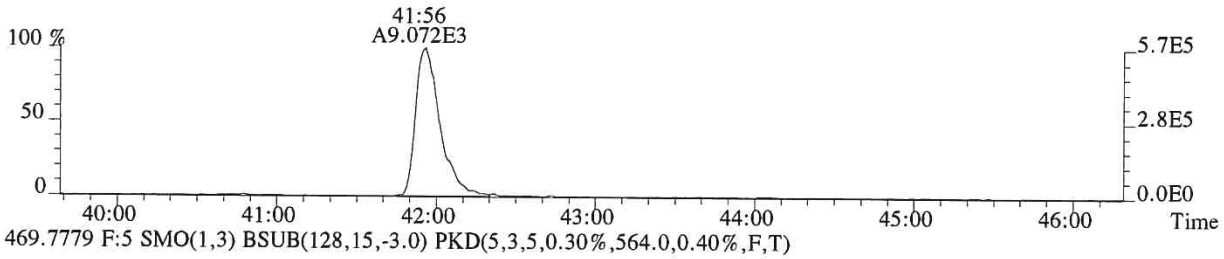
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



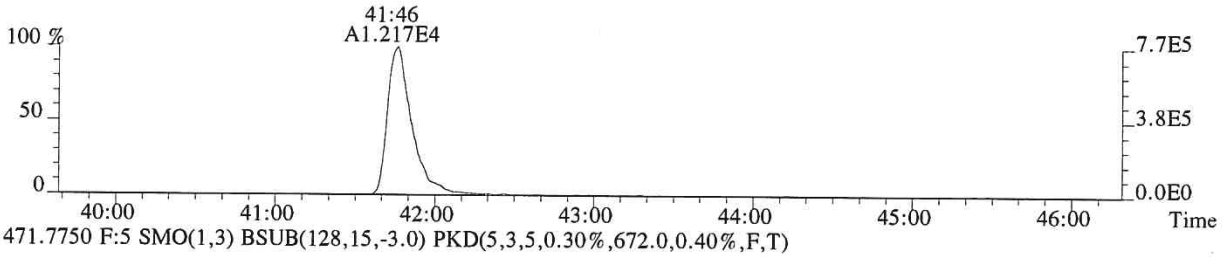
File:P519739 #1-601 Acq: 2-JAN-2019 21:01:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,748.0,0.40%,F,T)



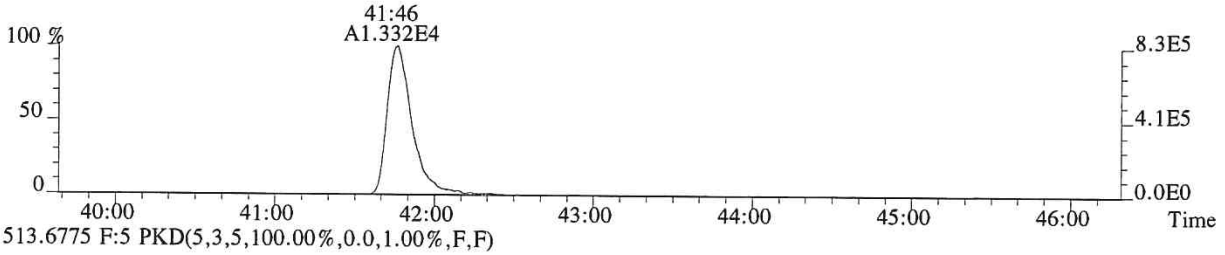
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1188.0,0.40%,F,T)



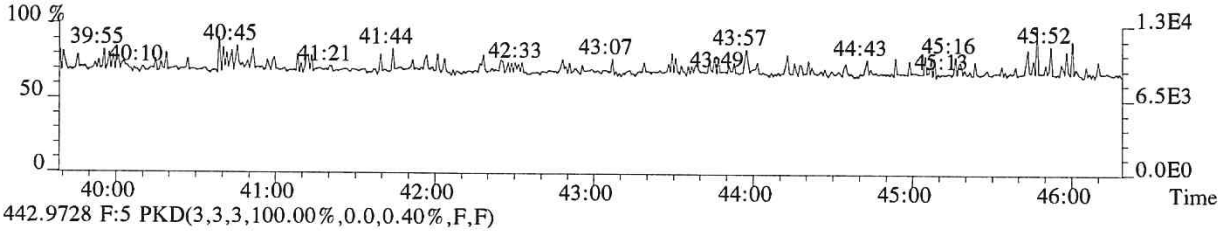
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,564.0,0.40%,F,T)



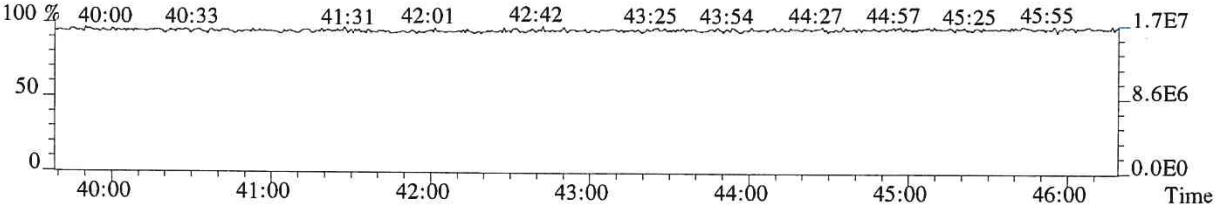
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,672.0,0.40%,F,T)



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

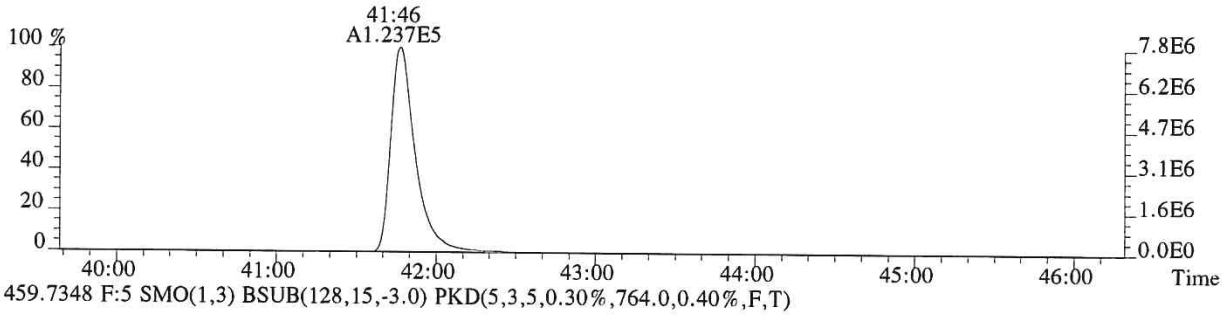


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

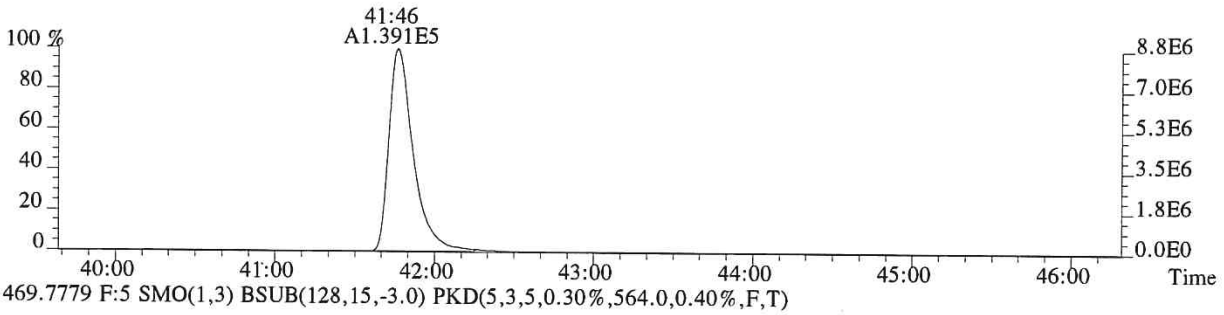


016296

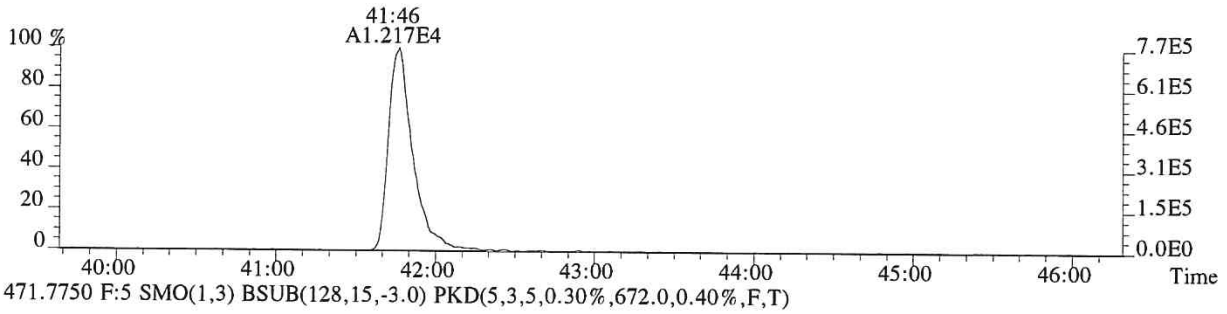
File:P519739 #1-601 Acq: 2-JAN-2019 21:01:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,664.0,0.40%,F,T)



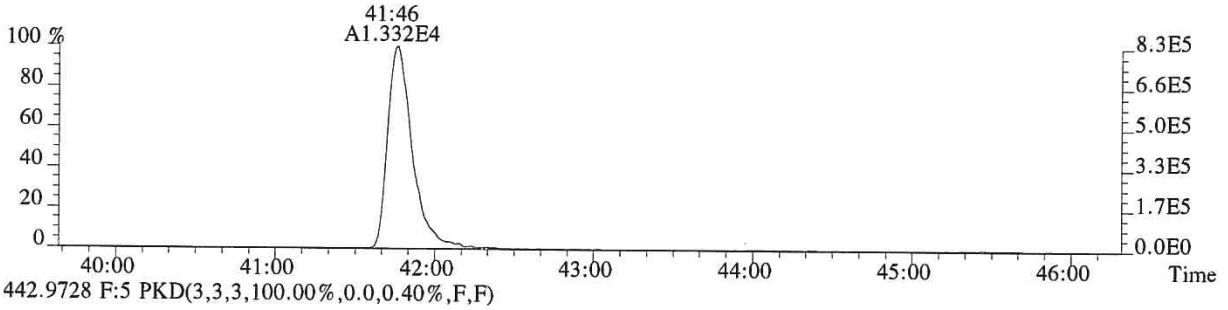
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,764.0,0.40%,F,T)



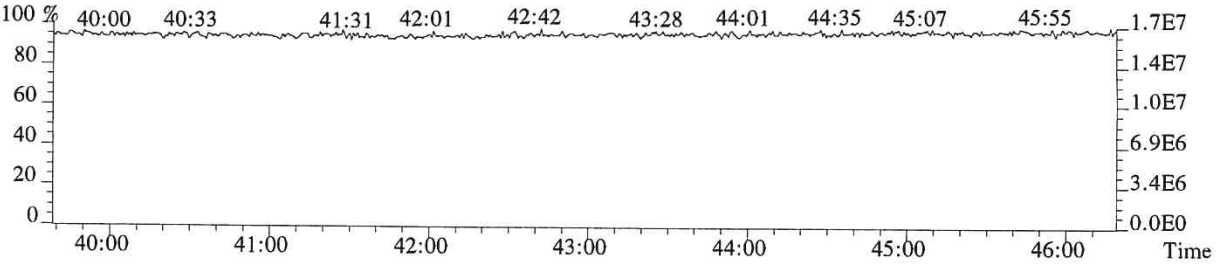
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,564.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,672.0,0.40%,F,T)



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



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0188

Run #19 Filename P519772 Samp: 1 Inj: 1 Acquired: 4-JAN-19 09:06:33
Processed: 4-JAN-19 15:57:16 Sample ID: E1801137-015DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:05	3.148e+03	4.297e+03	0.73	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:58	2.707e+02	1.815e+02	1.49	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:58	1.570e+02	1.164e+02	1.35	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:54	3.735e+02	3.171e+02	1.18	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:01	1.031e+02	8.390e+01	1.23	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:35	3.940e+01	1.185e+01	3.32	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:25	3.161e+01	1.571e+01	2.01	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:47	2.132e+02	1.846e+02	1.15	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	no	1.258
10	Unk	OCDF	41:54	3.183e+02	4.011e+02	0.79	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:04	9.323e+02	1.118e+03	0.83	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:19	2.907e+01	1.192e+01	2.44	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:50	3.132e+01	1.348e+01	2.32	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:05	1.649e+01	1.118e+01	1.48	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:48	6.054e+02	5.514e+02	1.10	yes	no	1.025
17	Unk	OCDD	41:45	5.033e+03	5.719e+03	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	1.826e+04	2.325e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:57	2.879e+04	1.818e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:58	2.731e+04	1.695e+04	1.61	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:53	1.155e+04	2.197e+04	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:01	1.423e+04	2.825e+04	0.50	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:34	1.251e+04	2.449e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:23	1.149e+04	2.211e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:46	9.792e+03	2.138e+04	0.46	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:14	8.167e+03	1.881e+04	0.43	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:02	8.446e+03	1.142e+04	0.74	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:18	2.058e+04	1.294e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:44	1.510e+04	1.209e+04	1.25	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:49	1.948e+04	1.580e+04	1.23	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:48	1.921e+04	1.830e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	41:44	2.100e+04	2.414e+04	0.87	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	1.604e+04	1.985e+04	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:04	2.147e+04	1.716e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:04	6.087e+02				no	1.014

$$\text{OCDD} = \frac{(5.033e+03 + 5.719e+03) \times 4000 \text{ pg} \times 10}{(2.100e+04 + 2.414e+04) \times 10.34 \text{ g} \times 81.2/100 \times 1.118} = 4625.3015 \text{ ng/kg}$$

LG 1/7/19

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

CLIENT ID.
SL0188

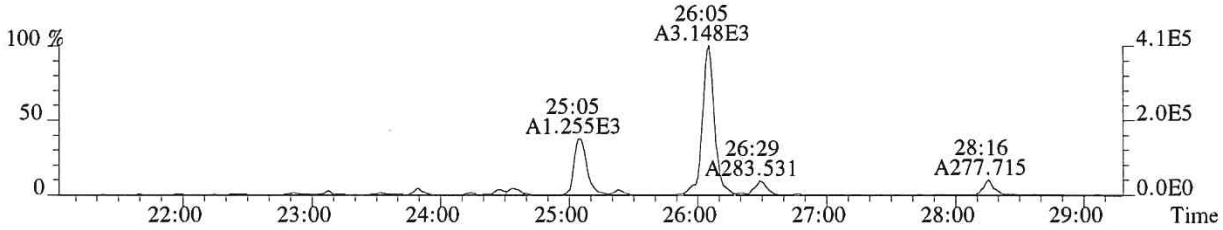
Run #19 Filename P519772 Samp: 1 Inj: 1 Acquired: 4-JAN-19 09:06:33
Processed: 4-JAN-19 15:57:16 LAB. ID: E1801137-015DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	4.09e+05	4.12e+02	9.9e+02	5.58e+05	1.06e+03	5.2e+02
2	1,2,3,7,8-PeCDF	3.53e+04	4.48e+02	7.9e+01	2.97e+04	1.24e+03	2.4e+01
3	2,3,4,7,8-PeCDF	2.27e+04	4.48e+02	5.1e+01	1.60e+04	1.24e+03	1.3e+01
4	1,2,3,4,7,8-HxCDF	6.09e+04	4.16e+02	1.5e+02	4.64e+04	6.12e+02	7.6e+01
5	1,2,3,6,7,8-HxCDF	1.31e+04	4.16e+02	3.2e+01	1.59e+04	6.12e+02	2.6e+01
6	2,3,4,6,7,8-HxCDF	5.92e+03	4.16e+02	1.4e+01	3.17e+03	6.12e+02	5.2e+00
7	1,2,3,7,8,9-HxCDF	5.07e+03	4.16e+02	1.2e+01	3.47e+03	6.12e+02	5.7e+00
8	1,2,3,4,6,7,8-HpCDF	2.68e+04	1.71e+03	1.6e+01	2.64e+04	1.24e+03	2.1e+01
9	1,2,3,4,7,8,9-HpCDF	*	1.71e+03	*	*	1.24e+03	*
10	OCDF	2.04e+04	3.84e+02	5.3e+01	2.67e+04	8.80e+02	3.0e+01
11	2,3,7,8-TCDD	1.35e+05	2.06e+03	6.6e+01	1.80e+05	1.18e+03	1.5e+02
12	1,2,3,7,8-PeCDD	5.25e+03	6.48e+02	8.1e+00	2.35e+03	2.68e+02	8.8e+00
13	1,2,3,4,7,8-HxCDD	*	4.84e+02	*	*	9.24e+02	*
14	1,2,3,6,7,8-HxCDD	3.47e+03	4.84e+02	7.2e+00	3.62e+03	9.24e+02	3.9e+00
15	1,2,3,7,8,9-HxCDD	2.56e+03	4.84e+02	5.3e+00	2.22e+03	9.24e+02	2.4e+00
16	1,2,3,4,6,7,8-HpCDD	5.66e+04	5.88e+02	9.6e+01	6.03e+04	6.76e+02	8.9e+01
17	OCDD	3.06e+05	2.92e+02	1.0e+03	3.41e+05	3.96e+02	8.6e+02
18	13C-2,3,7,8-TCDF	2.41e+06	3.58e+03	6.7e+02	3.11e+06	2.51e+03	1.2e+03
19	13C-1,2,3,7,8-PeCDF	4.19e+06	4.20e+02	1.0e+04	2.62e+06	4.28e+02	6.1e+03
20	13C-2,3,4,7,8-PeCDF	4.22e+06	4.20e+02	1.0e+04	2.62e+06	4.28e+02	6.1e+03
21	13C-1,2,3,4,7,8-HxCDF	1.88e+06	5.24e+02	3.6e+03	3.70e+06	4.60e+02	8.0e+03
22	13C-1,2,3,6,7,8-HxCDF	2.00e+06	5.24e+02	3.8e+03	3.95e+06	4.60e+02	8.6e+03
23	13C-2,3,4,6,7,8-HxCDF	1.83e+06	5.24e+02	3.5e+03	3.63e+06	4.60e+02	7.9e+03
24	13C-1,2,3,7,8,9-HxCDF	1.52e+06	5.24e+02	2.9e+03	2.96e+06	4.60e+02	6.4e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.22e+06	1.84e+03	6.6e+02	2.79e+06	2.57e+03	1.1e+03
26	13C-1,2,3,4,7,8,9-HpCDF	7.33e+05	1.84e+03	4.0e+02	1.66e+06	2.57e+03	6.5e+02
27	13C-2,3,7,8-TCDD	1.28e+06	3.90e+03	3.3e+02	1.69e+06	2.06e+03	8.2e+02
28	13C-1,2,3,7,8-PeCDD	3.27e+06	7.36e+02	4.4e+03	2.08e+06	6.76e+02	3.1e+03
29	13C-1,2,3,4,7,8-HxCDD	2.86e+06	1.09e+03	2.6e+03	2.31e+06	5.40e+02	4.3e+03
30	13C-1,2,3,6,7,8-HxCDD	2.84e+06	1.09e+03	2.6e+03	2.32e+06	5.40e+02	4.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.91e+06	6.84e+02	2.8e+03	1.82e+06	3.16e+02	5.8e+03
32	13C-OCDD	1.17e+06	7.96e+02	1.5e+03	1.33e+06	3.16e+02	4.2e+03
33	13C-1,2,3,4-TCDD	2.36e+06	3.90e+03	6.1e+02	2.92e+06	2.06e+03	1.4e+03
34	13C-1,2,3,7,8,9-HxCDD	2.72e+06	1.09e+03	2.5e+03	2.15e+06	5.40e+02	4.0e+03
35	37Cl-2,3,7,8-TCDD	9.05e+04	1.54e+03	5.9e+01			

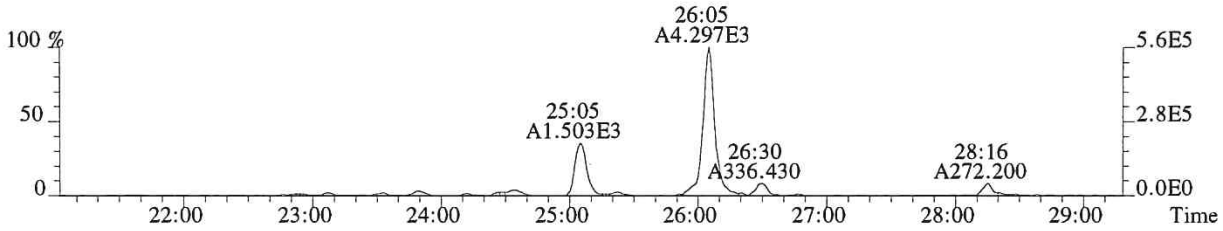
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10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office:(713)266-1599. Fax:(713)266-0130

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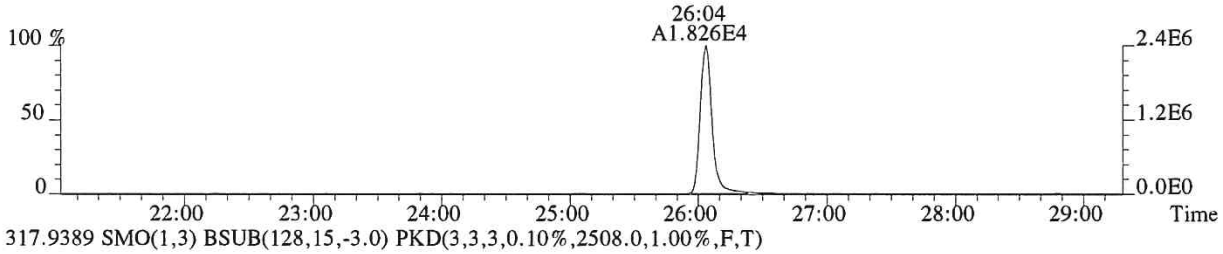
File:P519772 #1-587 Acq: 4-JAN-2019 09:06:33 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,412.0,1.00%,F,T)



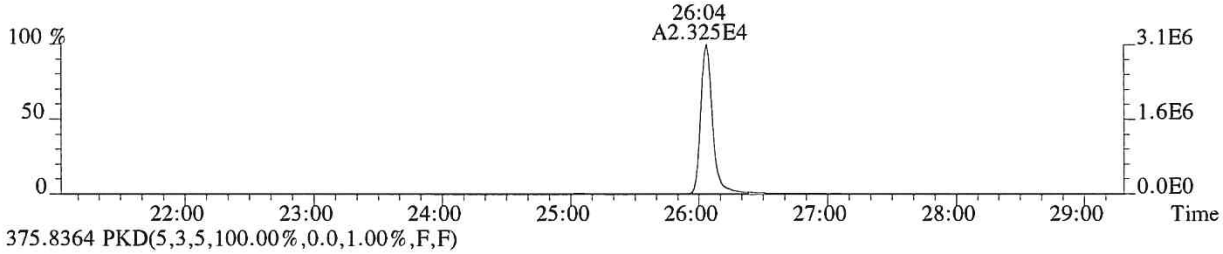
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1064.0,1.00%,F,T)



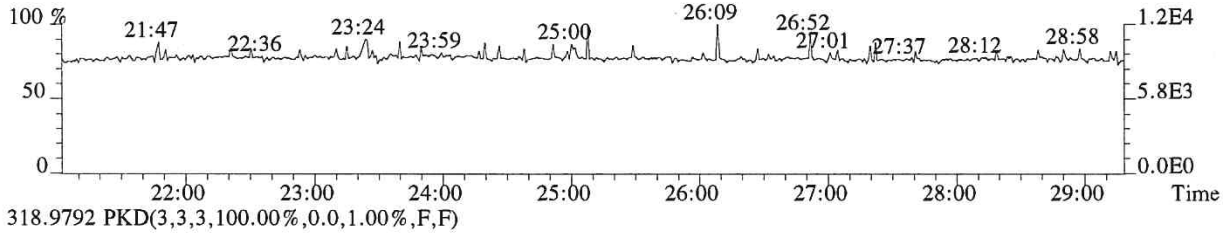
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3584.0,1.00%,F,T)



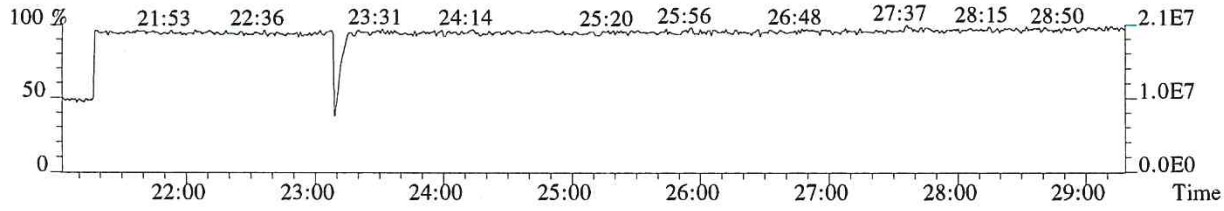
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2508.0,1.00%,F,T)



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

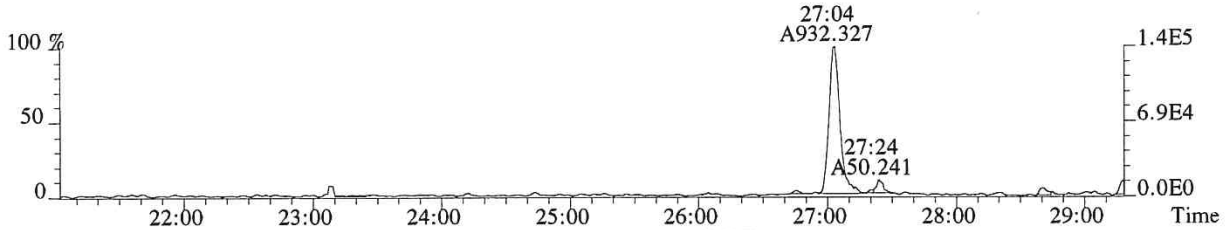


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

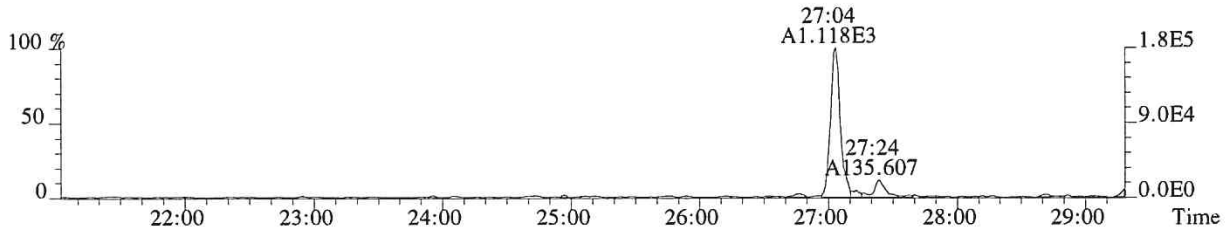


016300

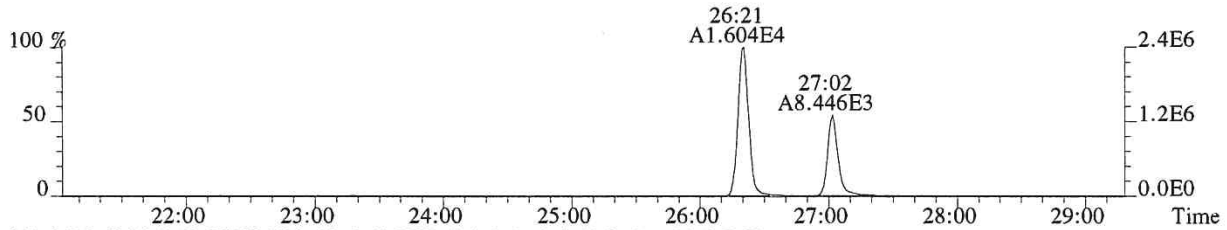
File:P519772 #1-587 Acq: 4-JAN-2019 09:06:33 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2056.0,1.00%,F,T)



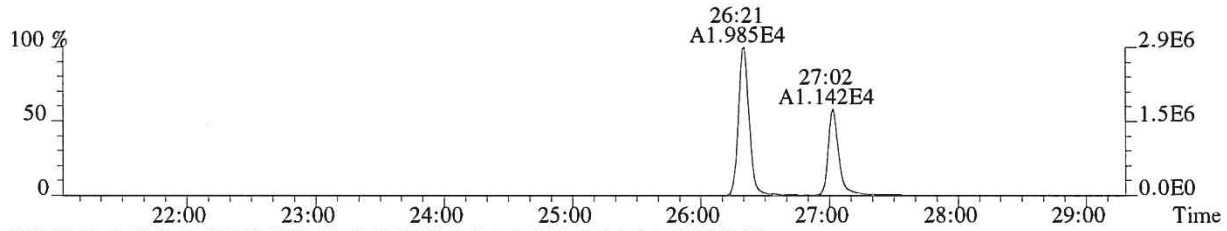
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1180.0,1.00%,F,T)



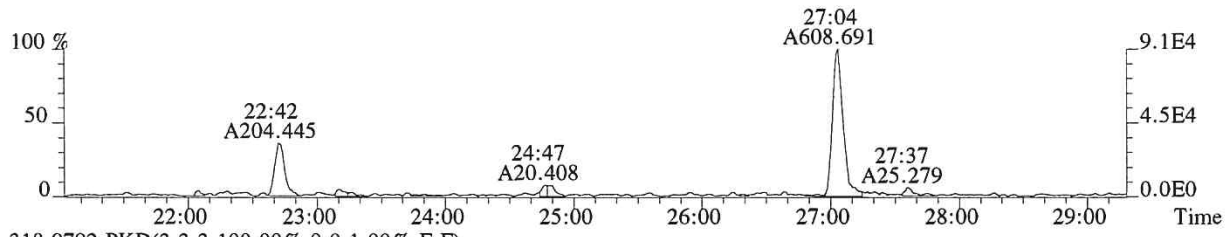
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3900.0,1.00%,F,T)



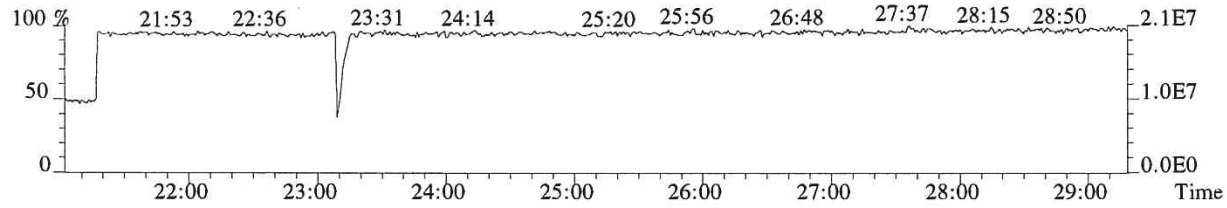
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2064.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1536.0,1.00%,F,T)

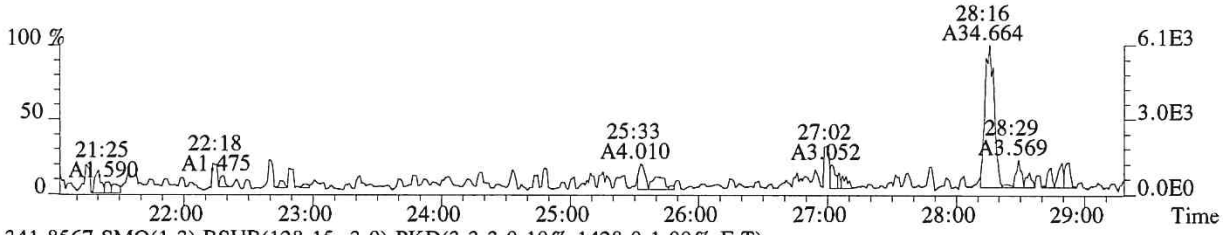


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

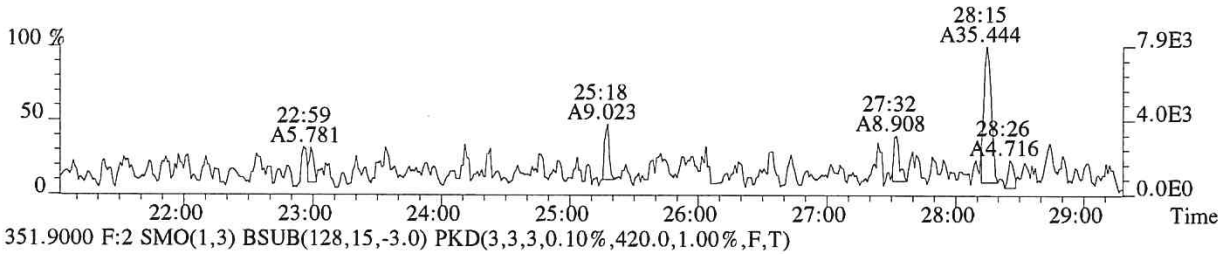


016301

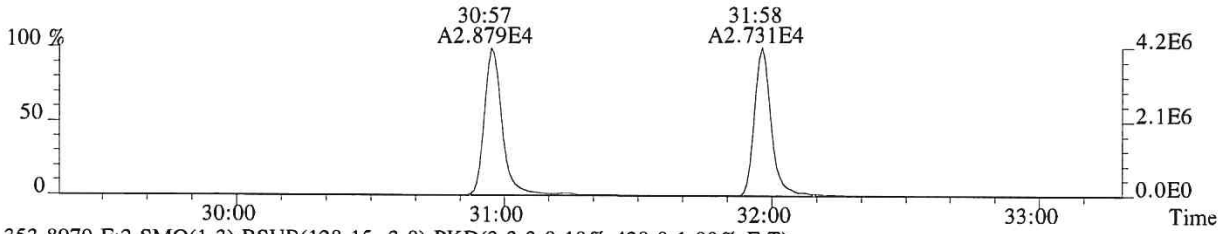
File:P519772 #1-587 Acq: 4-JAN-2019 09:06:33 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,488.0,1.00%,F,T)



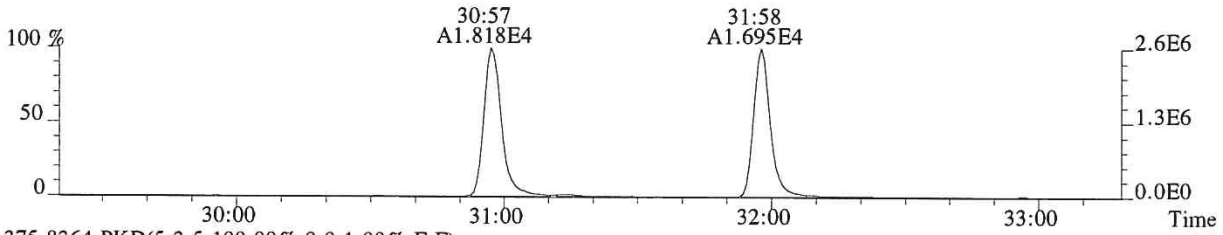
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1428.0,1.00%,F,T)



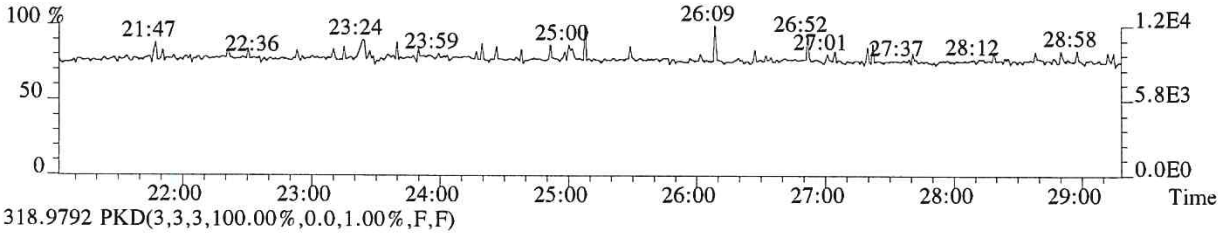
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,420.0,1.00%,F,T)



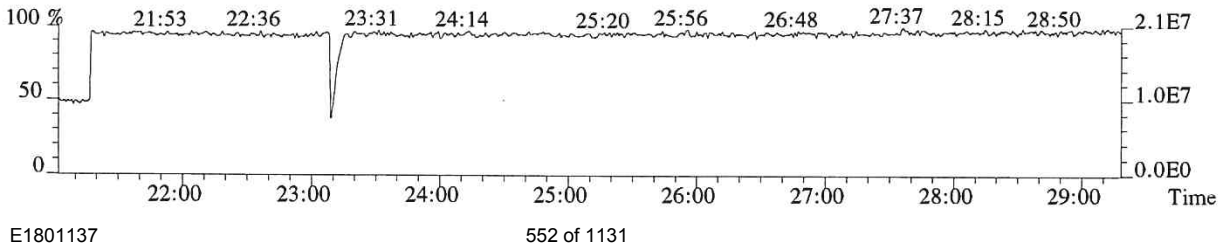
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,428.0,1.00%,F,T)



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

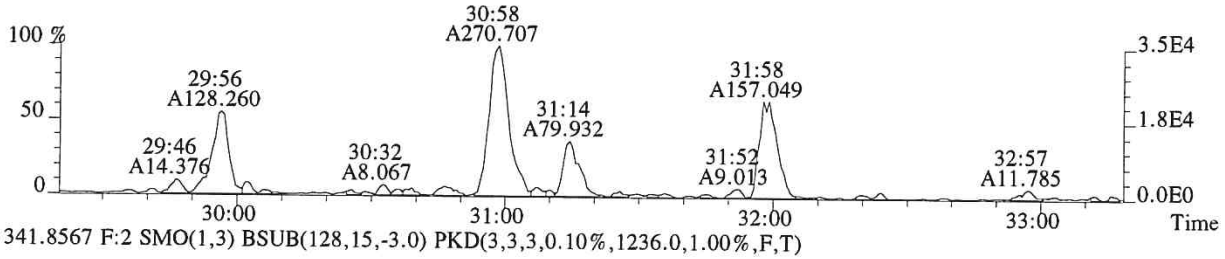


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

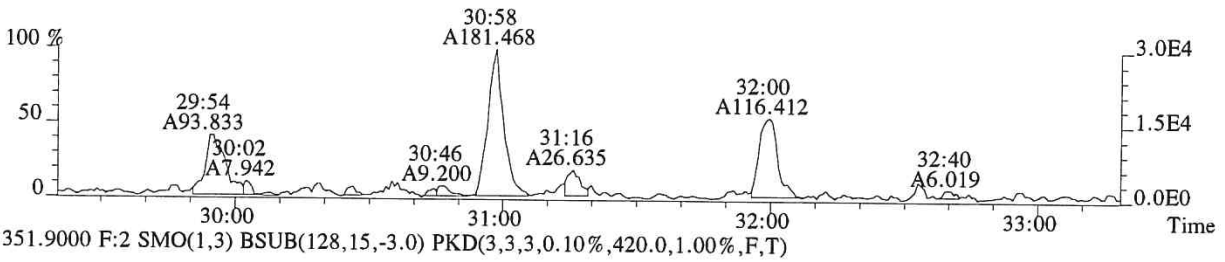


016302

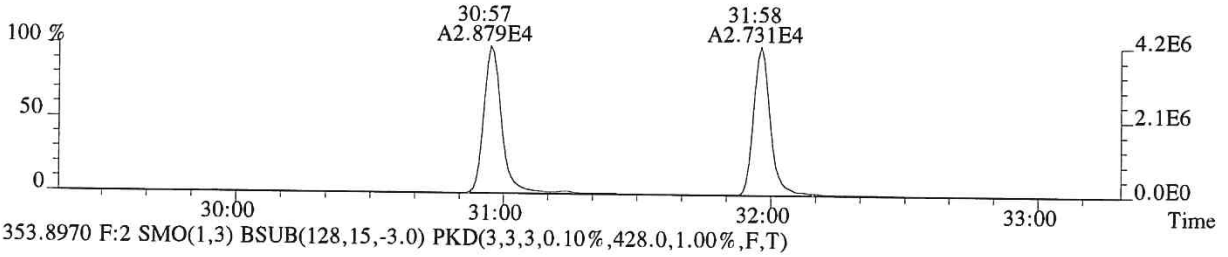
File:P519772 #1-358 Acq: 4-JAN-2019 09:06:33 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,448.0,1.00%,F,T)



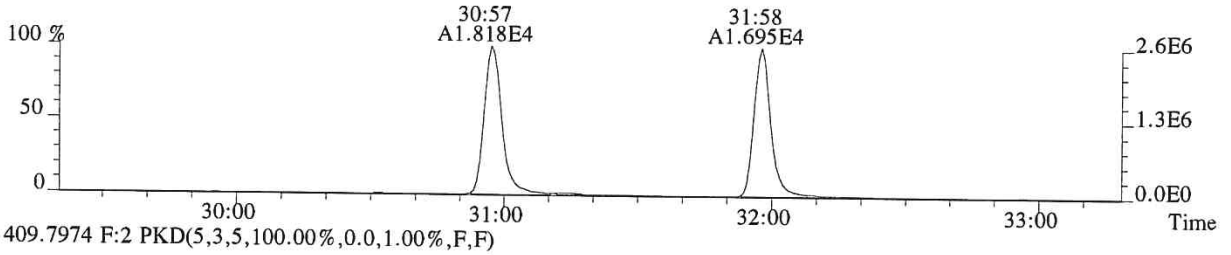
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1236.0,1.00%,F,T)



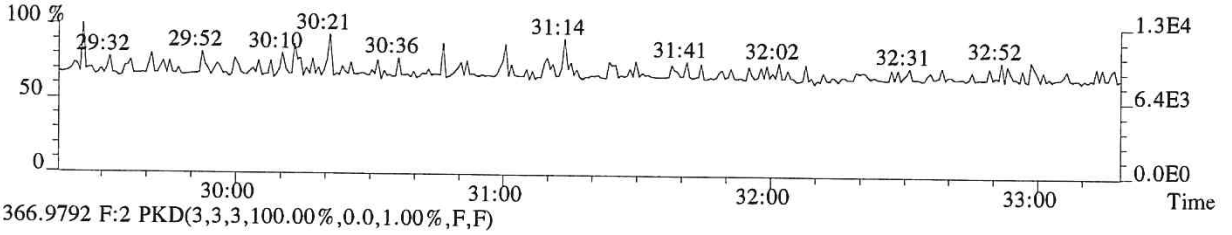
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,420.0,1.00%,F,T)



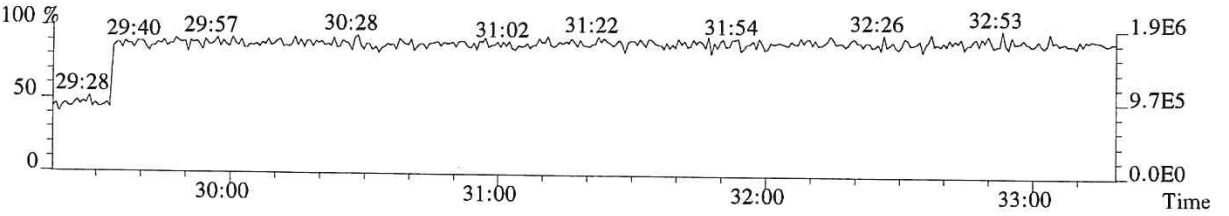
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,428.0,1.00%,F,T)



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

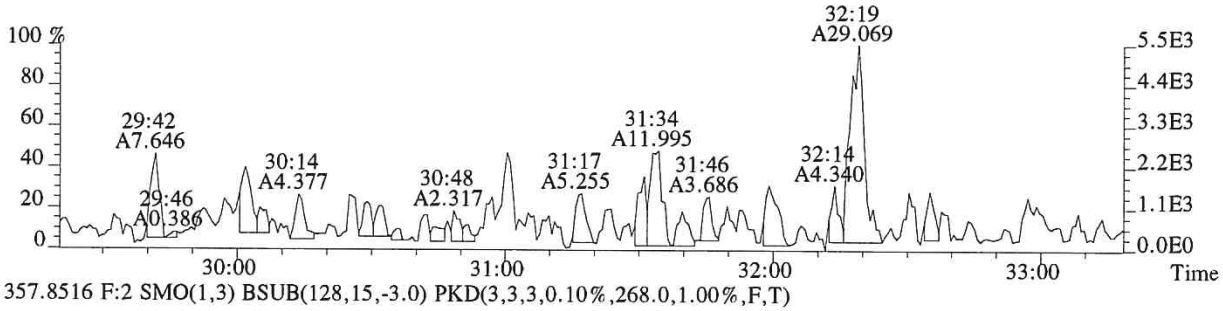


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

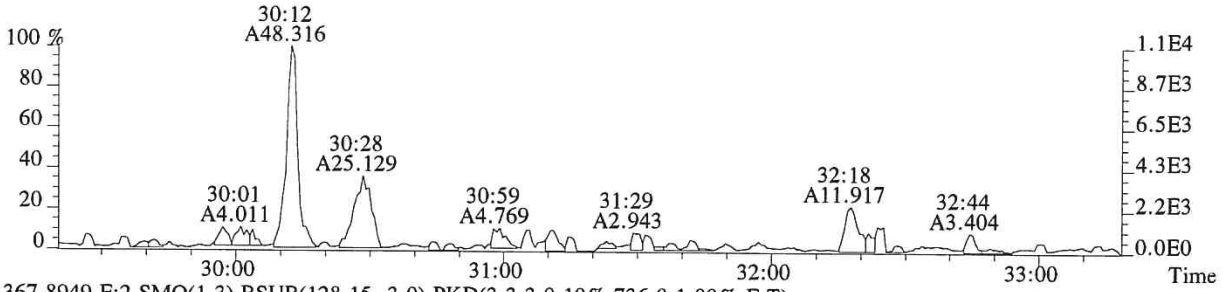


016303

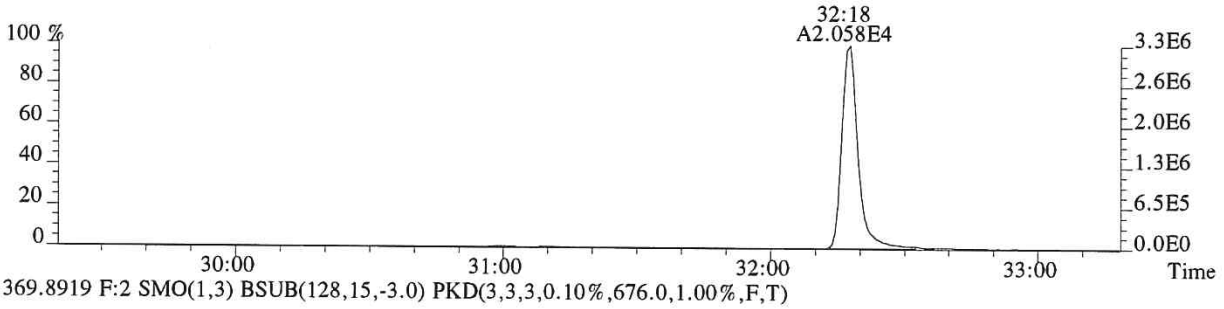
File:P519772 #1-358 Acq: 4-JAN-2019 09:06:33 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,648.0,1.00%,F,T)



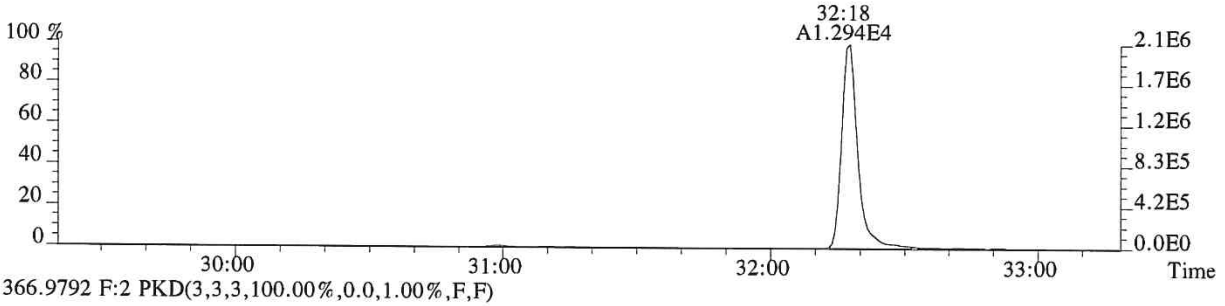
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,268.0,1.00%,F,T)



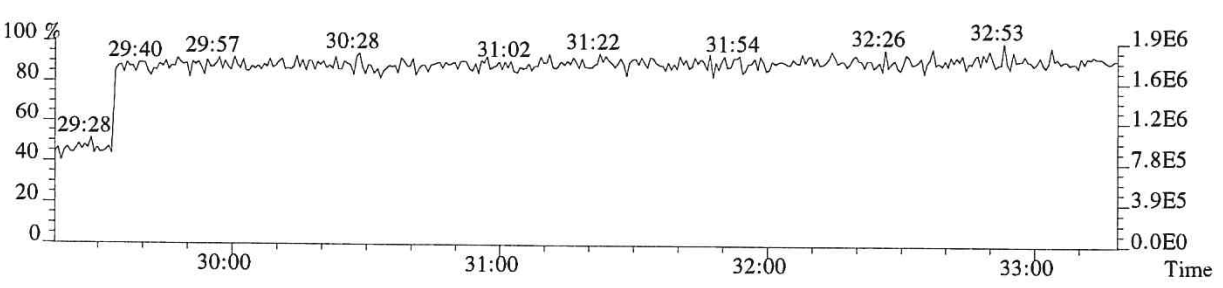
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,736.0,1.00%,F,T)



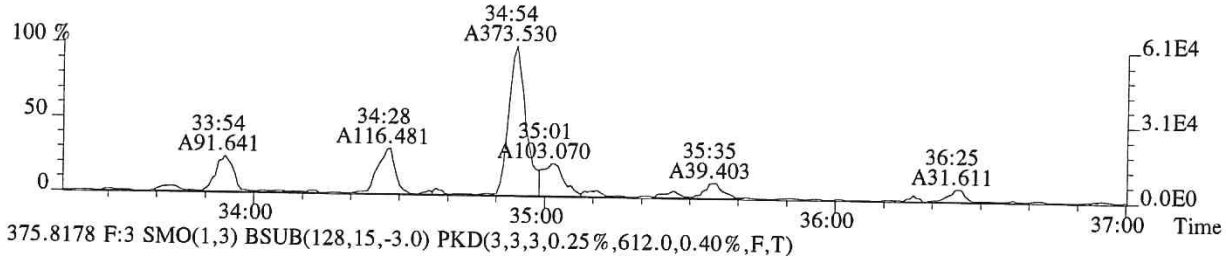
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,676.0,1.00%,F,T)



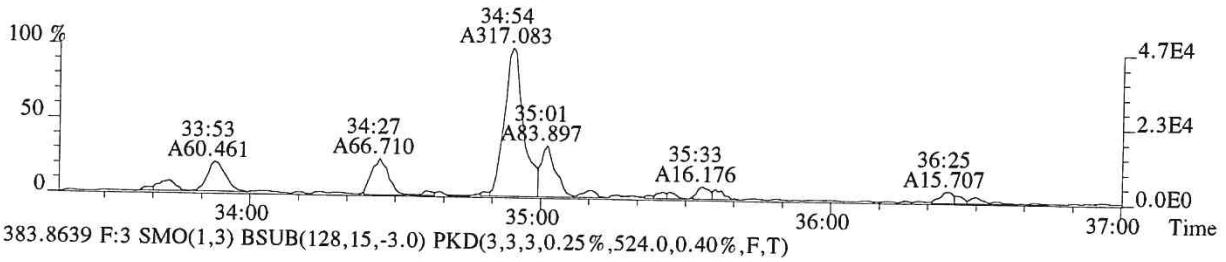
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



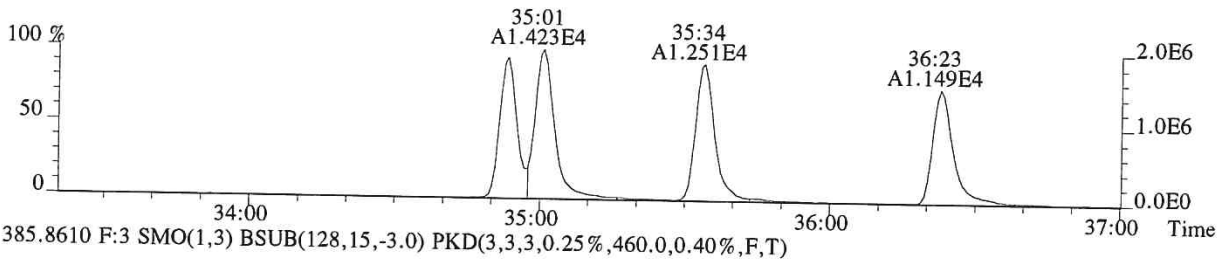
File:P519772 #1-330 Acq: 4-JAN-2019 09:06:33 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,416.0,0.40%,F,T)



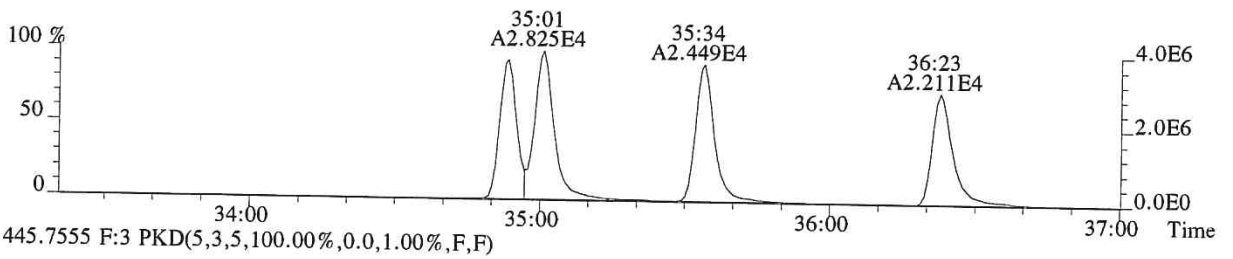
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,612.0,0.40%,F,T)



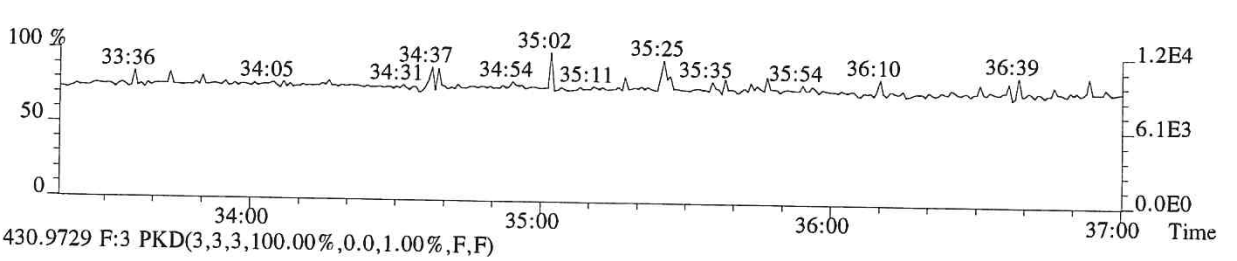
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,524.0,0.40%,F,T)



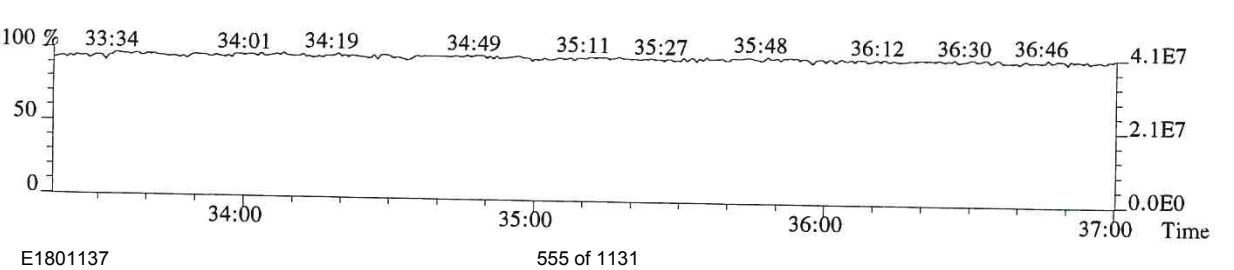
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,460.0,0.40%,F,T)



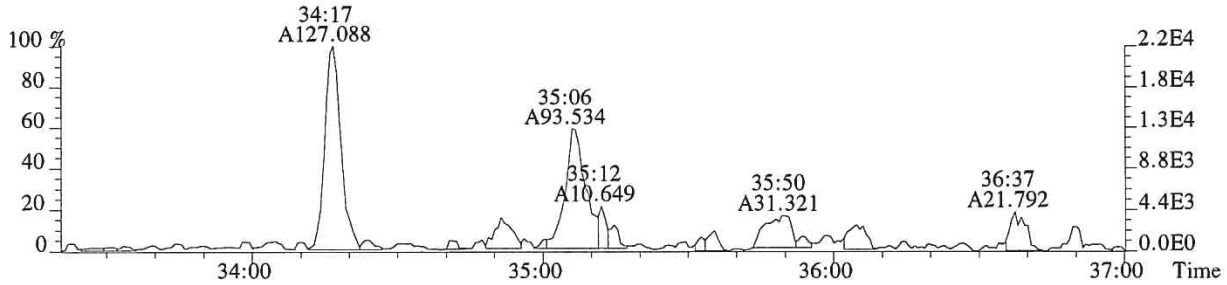
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



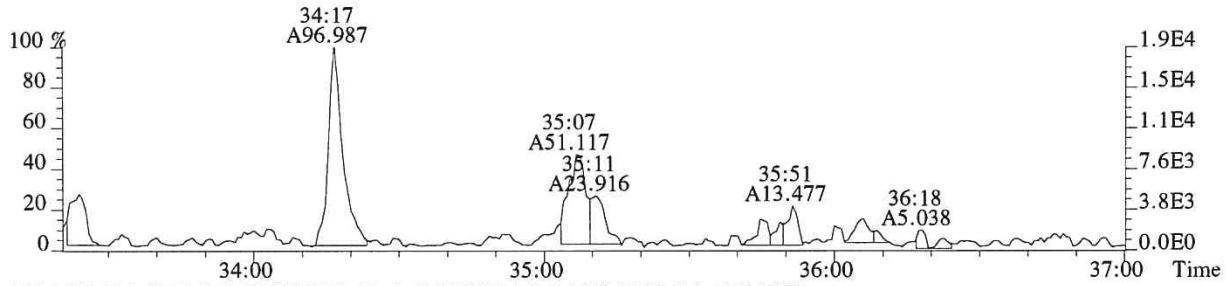
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



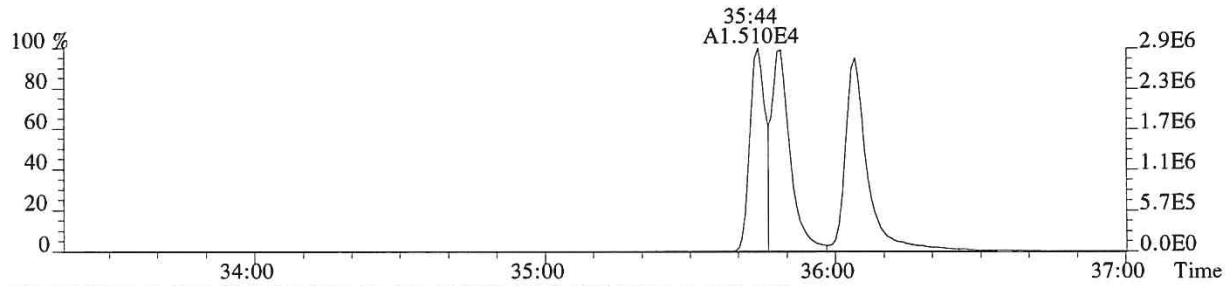
File:P519772 #1-330 Acq: 4-JAN-2019 09:06:33 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,484.0,0.40%,F,T)



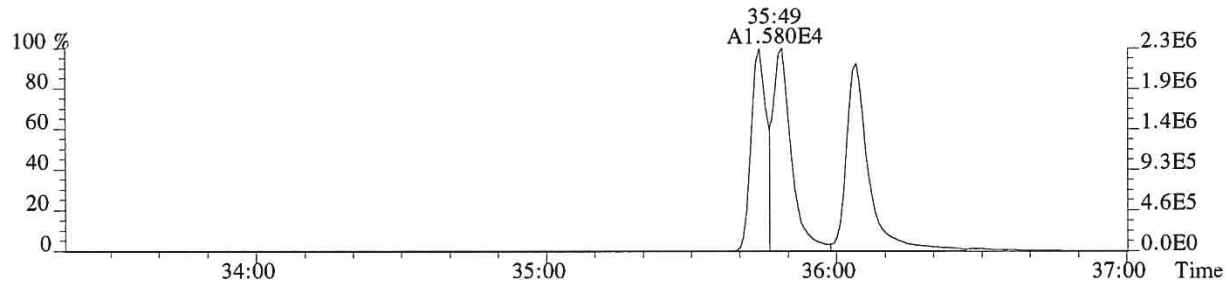
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,924.0,0.40%,F,T)



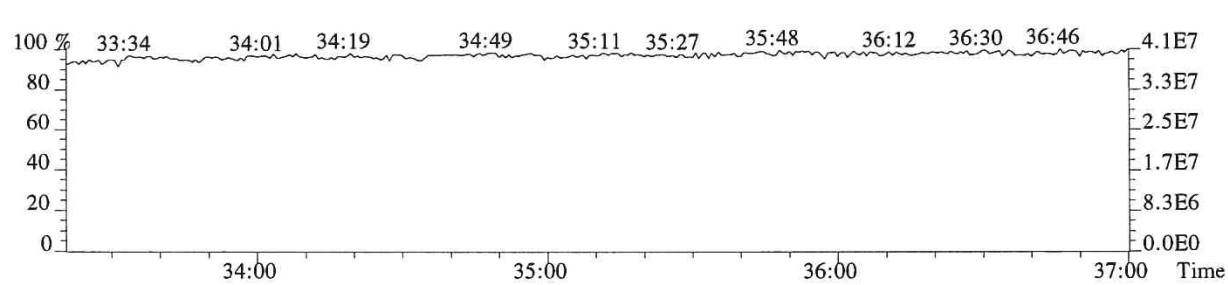
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1088.0,0.40%,F,T)



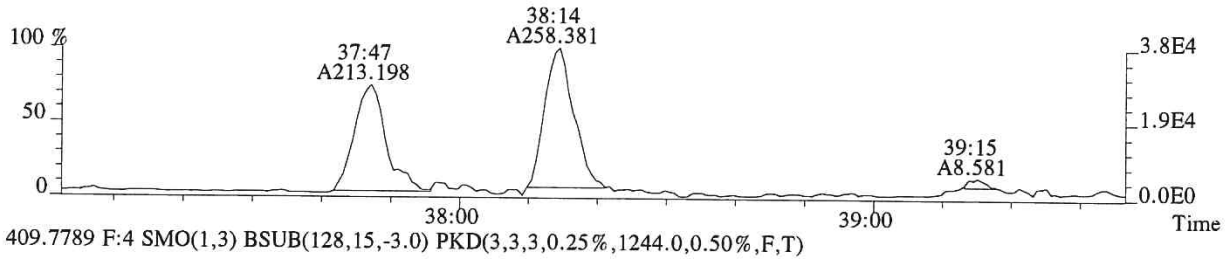
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,540.0,0.40%,F,T)



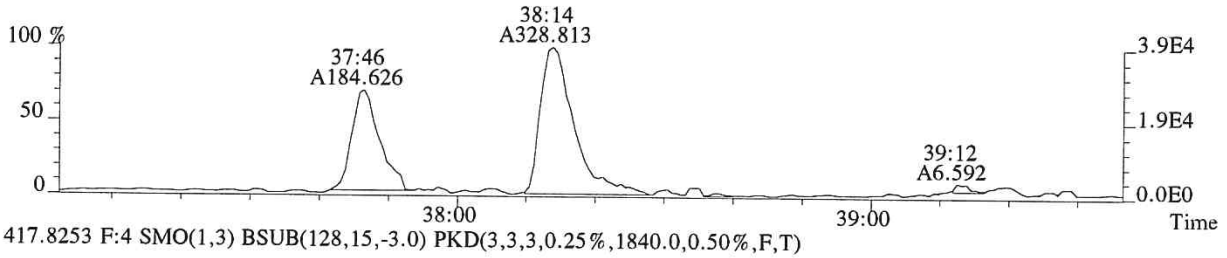
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



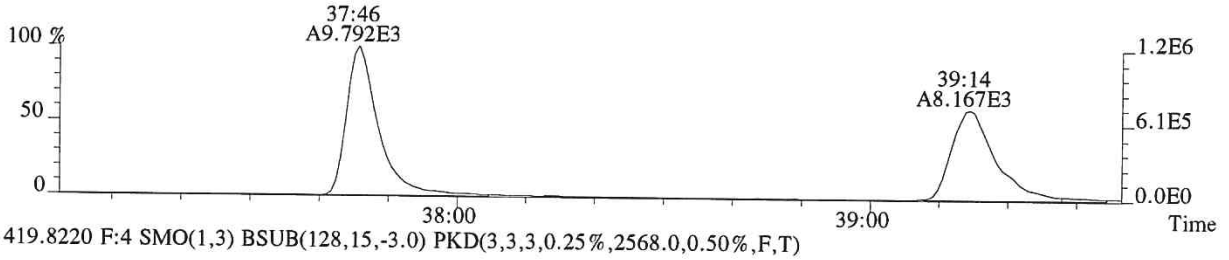
File:P519772 #1-232 Acq: 4-JAN-2019 09:06:33 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1708.0,0.50%,F,T)



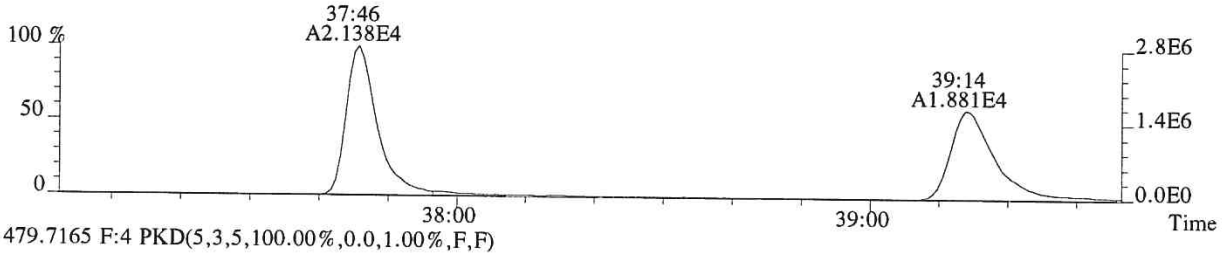
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1244.0,0.50%,F,T)



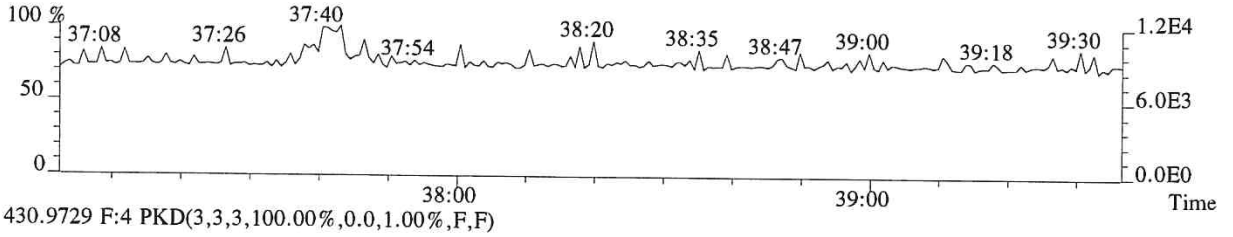
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1840.0,0.50%,F,T)



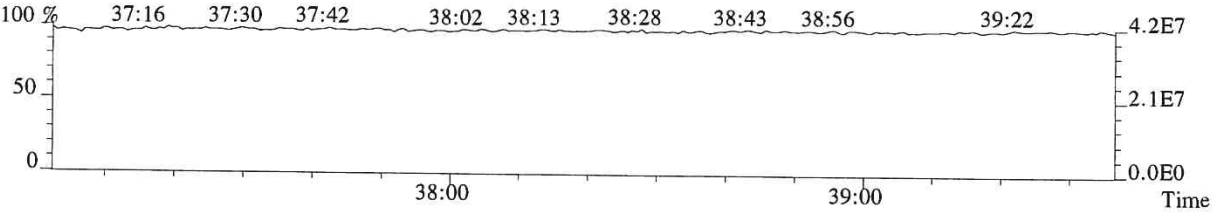
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2568.0,0.50%,F,T)



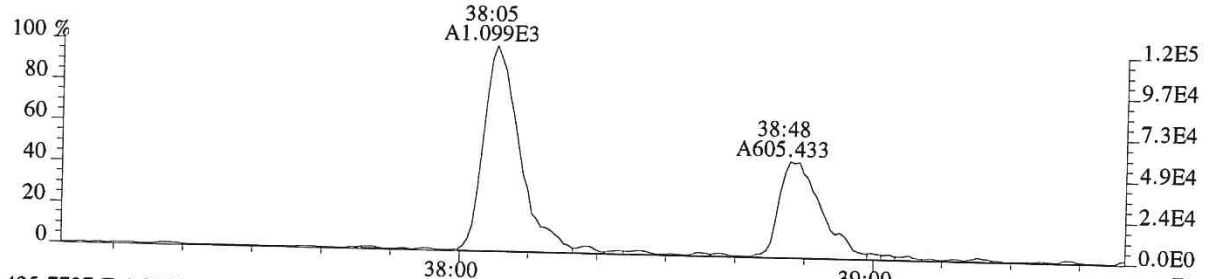
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



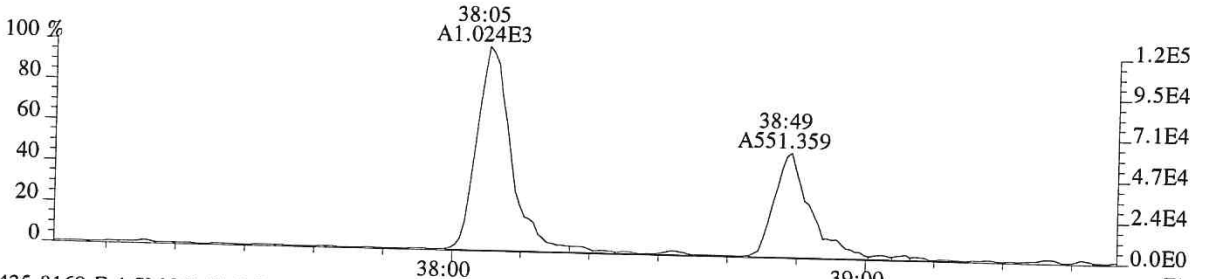
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



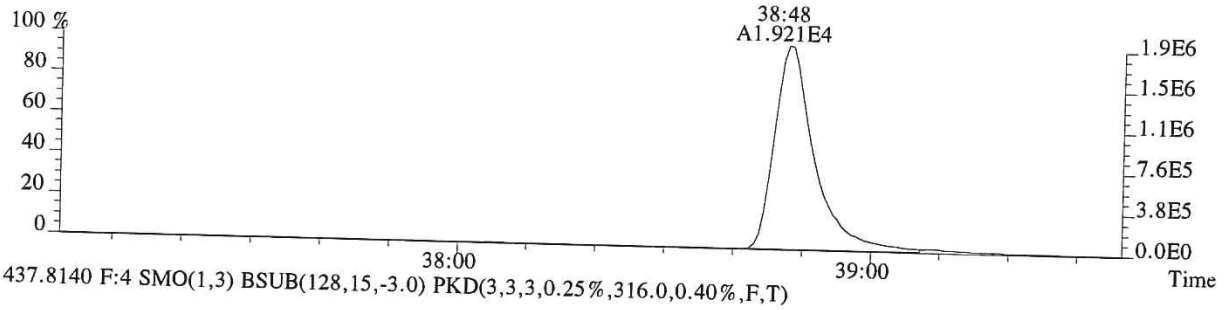
File:P519772 #1-232 Acq: 4-JAN-2019 09:06:33 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,588.0,0.40%,F,T)



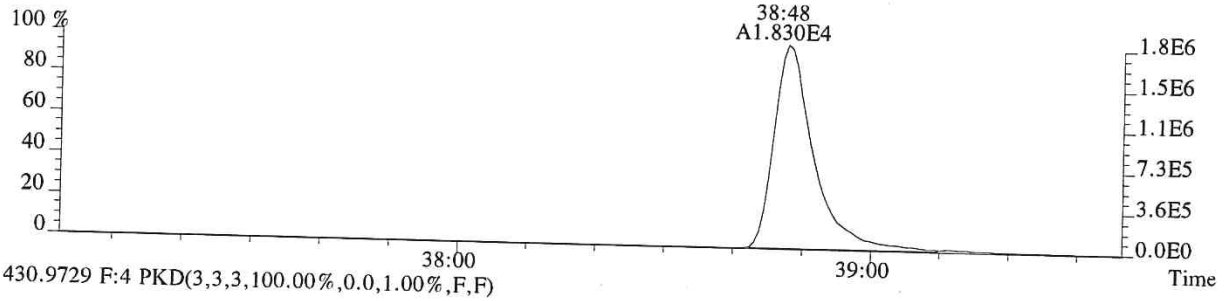
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,676.0,0.40%,F,T)



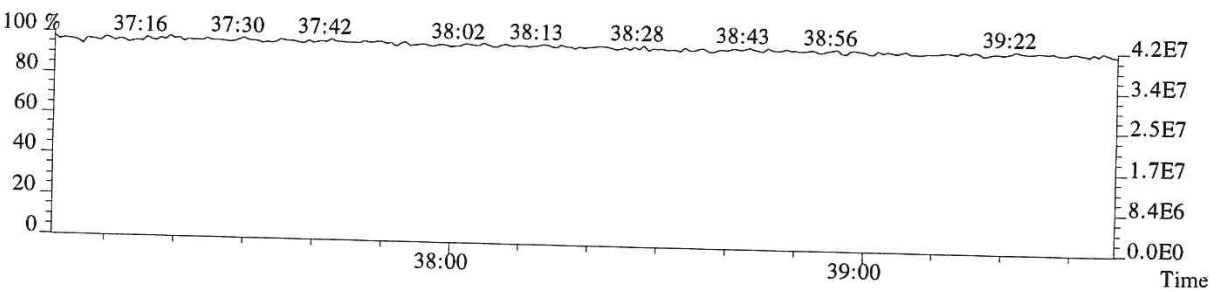
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,684.0,0.40%,F,T)



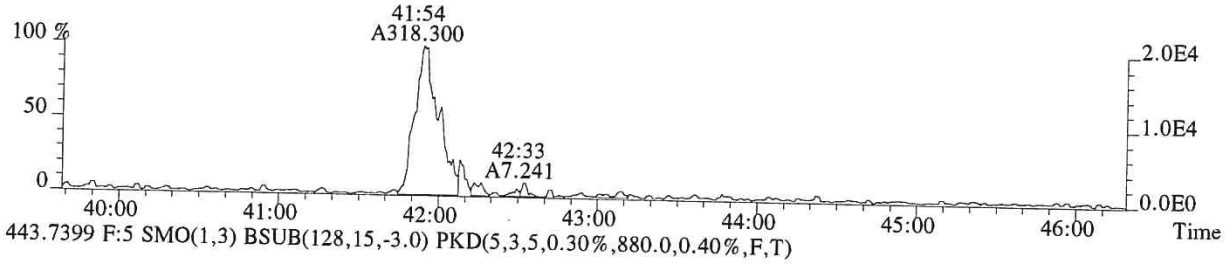
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,316.0,0.40%,F,T)



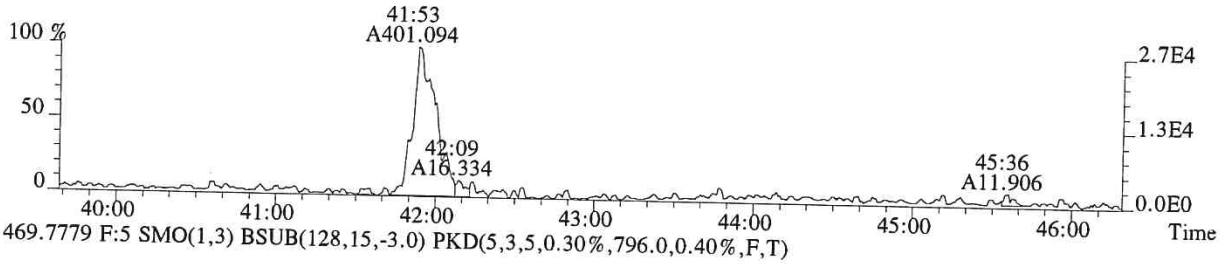
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



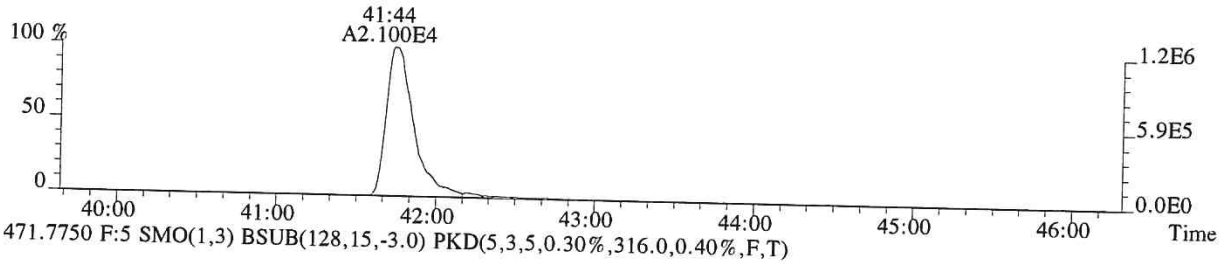
File:P519772 #1-601 Acq: 4-JAN-2019 09:06:33 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,384.0,0.40%,F,T)



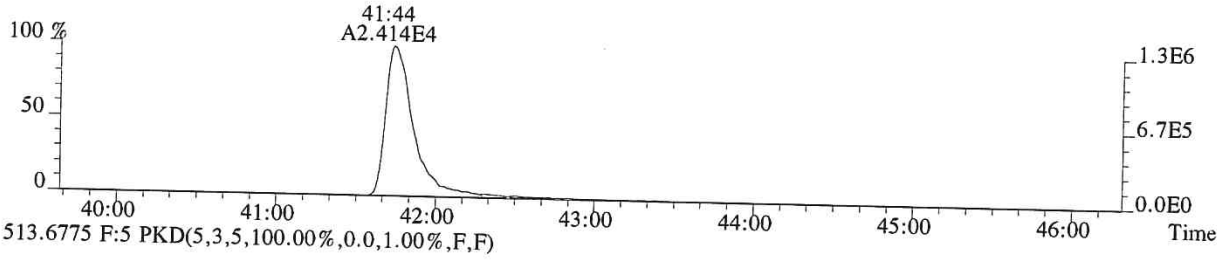
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,880.0,0.40%,F,T)



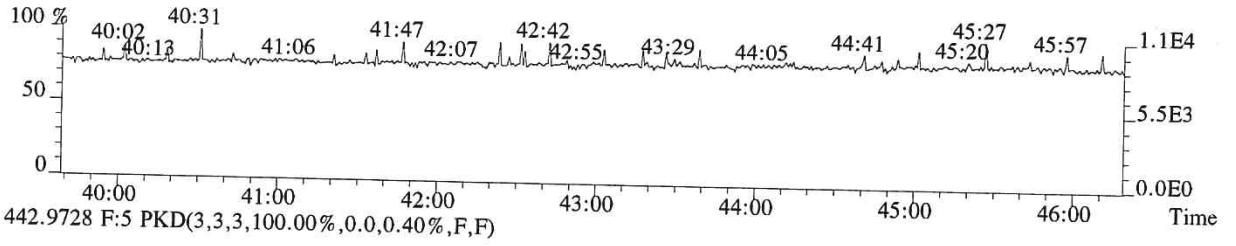
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,796.0,0.40%,F,T)



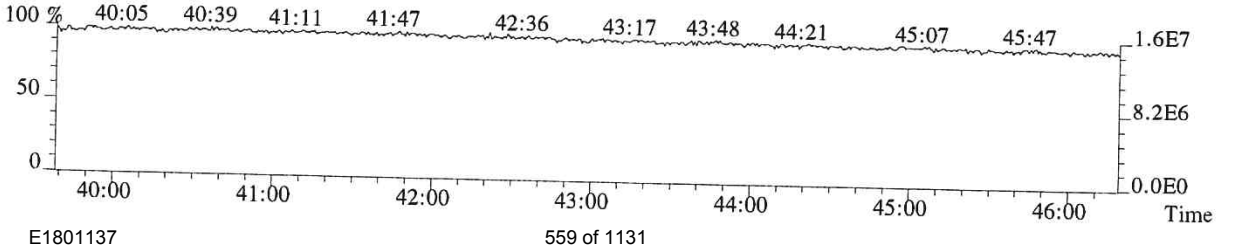
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,316.0,0.40%,F,T)



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

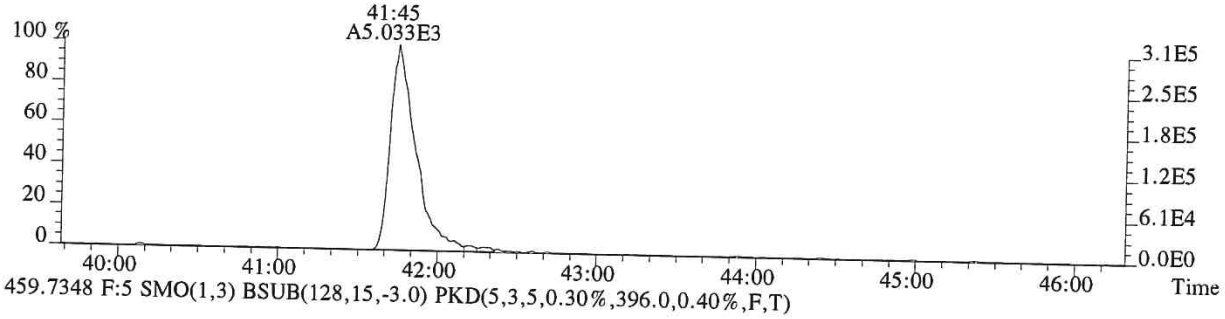


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

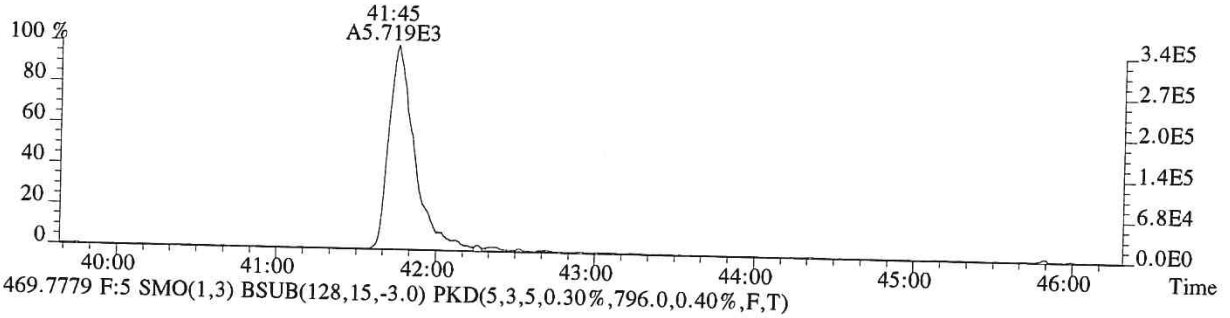


016309

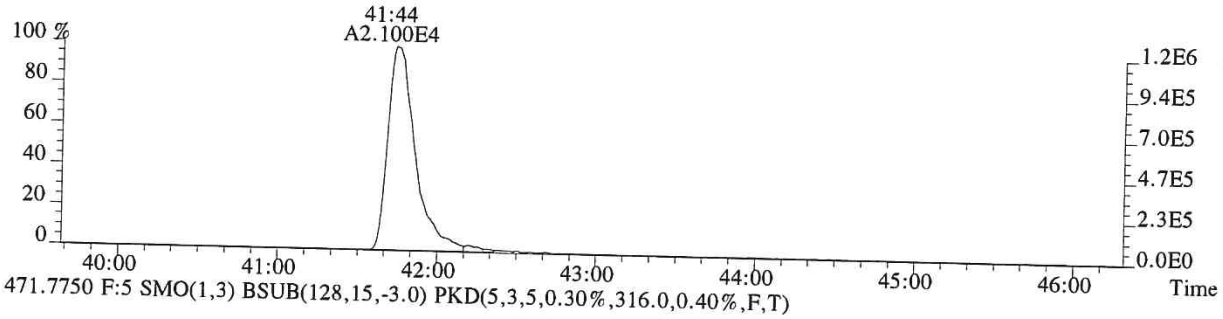
File:P519772 #1-601 Acq: 4-JAN-2019 09:06:33 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-015DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,292.0,0.40%,F,T)



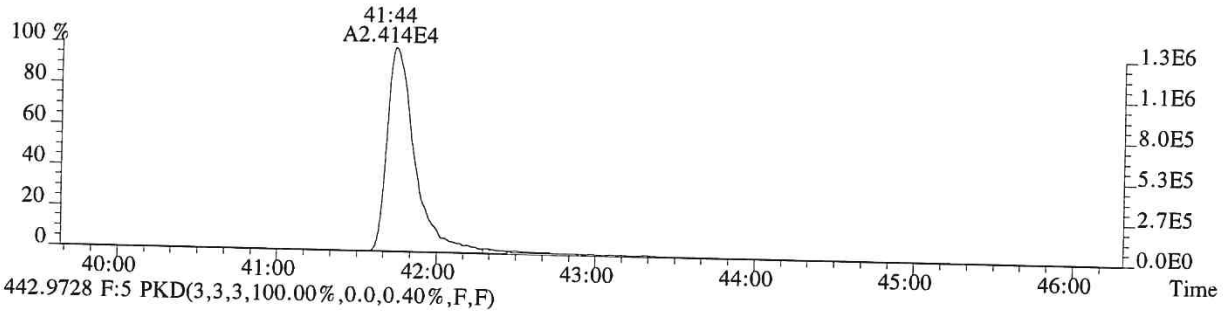
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,396.0,0.40%,F,T)



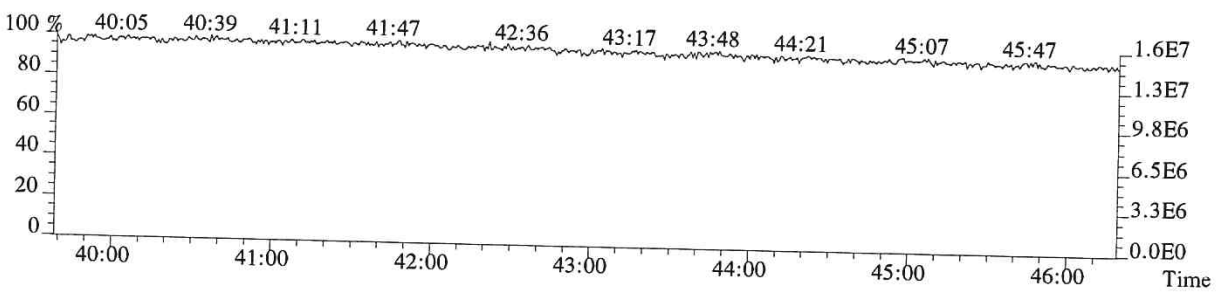
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,796.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,316.0,0.40%,F,T)



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



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0189

Run #16 Filename P519740 Samp: 1 Inj: 1 Acquired: 2-JAN-19 21:50:37
Processed: 3-JAN-19 09:14:28 Sample ID: E1801137-016

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:06	7.817e+05	1.011e+06	0.77	yes	yes	0.942
2	Unk	1,2,3,7,8-PeCDF	30:59	4.933e+04	3.310e+04	1.49	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:59	4.071e+04	2.651e+04	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:55	7.081e+04	5.807e+04	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:02	1.776e+04	1.448e+04	1.23	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:35	3.270e+03	2.734e+03	1.20	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:25	4.731e+03	3.563e+03	1.33	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:48	2.110e+04	2.069e+04	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:15	5.167e+03	5.276e+03	0.98	yes	no	1.258
10	Unk	OCDF	41:56	8.309e+04	9.552e+04	0.87	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:04	2.228e+05	2.835e+05	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:18	3.057e+03	2.031e+03	1.50	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:45	1.591e+02	1.371e+02	1.16	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:50	8.999e+02	6.993e+02	1.29	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:05	5.441e+02	3.362e+02	1.62	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:48	2.254e+04	2.132e+04	1.06	yes	no	1.025
17	Unk	OCDD	41:47	2.499e+05	2.805e+05	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	2.876e+04	3.646e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:58	4.362e+04	2.749e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:58	4.194e+04	2.650e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:54	1.637e+04	3.203e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:01	1.986e+04	3.836e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:34	1.752e+04	3.460e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:22	1.582e+04	3.038e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:47	1.118e+04	2.582e+04	0.43	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:14	9.807e+03	2.279e+04	0.43	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:02	1.386e+04	1.784e+04	0.78	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:18	3.245e+04	2.067e+04	1.57	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:44	2.418e+04	1.928e+04	1.25	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:49	2.607e+04	2.084e+04	1.25	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:47	2.390e+04	2.263e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	41:46	1.870e+04	2.053e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:22	4.665e+04	5.903e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:05	5.820e+04	4.594e+04	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:04	2.356e+04				no	1.014

$$\text{OCDD} = \frac{(2.499e+05 + 2.805e+05) \times 4000 \text{ pg} \times 1}{(1.870e+04 + 2.053e+04) \times 10.410 \text{ g} \times 66.1 / 100 \times 1.118} = 7030 \text{ ng/kg}$$

CM 01/04/19

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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0189

Run #16 Filename P519740 Samp: 1 Inj: 1 Acquired: 2-JAN-19 21:50:37
Processed: 3-JAN-19 09:14:28 LAB. ID: E1801137-016

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.17e+08	2.44e+03	4.8e+04	1.51e+08	1.82e+03	8.3e+04
2	1,2,3,7,8-PeCDF	8.42e+06	9.77e+03	8.6e+02	5.60e+06	3.42e+03	1.6e+03
3	2,3,4,7,8-PeCDF	6.06e+06	9.77e+03	6.2e+02	3.91e+06	3.42e+03	1.1e+03
4	1,2,3,4,7,8-HxCDF	1.26e+07	7.29e+03	1.7e+03	1.04e+07	4.24e+03	2.4e+03
5	1,2,3,6,7,8-HxCDF	2.91e+06	7.29e+03	4.0e+02	2.40e+06	4.24e+03	5.7e+02
6	2,3,4,6,7,8-HxCDF	5.70e+05	7.29e+03	7.8e+01	4.69e+05	4.24e+03	1.1e+02
7	1,2,3,7,8,9-HxCDF	7.22e+05	7.29e+03	9.9e+01	5.86e+05	4.24e+03	1.4e+02
8	1,2,3,4,6,7,8-HpCDF	2.87e+06	8.45e+03	3.4e+02	2.81e+06	7.27e+03	3.9e+02
9	1,2,3,4,7,8,9-HpCDF	5.48e+05	8.45e+03	6.5e+01	5.41e+05	7.27e+03	7.4e+01
10	OCDF	5.28e+06	6.28e+02	8.4e+03	6.04e+06	9.12e+02	6.6e+03
11	2,3,7,8-TCDD	3.75e+07	2.66e+03	1.4e+04	4.75e+07	1.22e+03	3.9e+04
12	1,2,3,7,8-PeCDD	4.60e+05	1.14e+03	4.0e+02	3.18e+05	1.97e+03	1.6e+02
13	1,2,3,4,7,8-HxCDD	3.39e+04	1.38e+03	2.5e+01	2.76e+04	3.74e+03	7.4e+00
14	1,2,3,6,7,8-HxCDD	1.49e+05	1.38e+03	1.1e+02	1.13e+05	3.74e+03	3.0e+01
15	1,2,3,7,8,9-HxCDD	6.49e+04	1.38e+03	4.7e+01	5.26e+04	3.74e+03	1.4e+01
16	1,2,3,4,6,7,8-HpCDD	2.49e+06	5.28e+02	4.7e+03	2.40e+06	2.63e+03	9.1e+02
17	OCDD	1.56e+07	6.20e+02	2.5e+04	1.75e+07	8.40e+02	2.1e+04
18	13C-2,3,7,8-TCDF	4.56e+06	6.82e+03	6.7e+02	5.65e+06	3.54e+03	1.6e+03
19	13C-1,2,3,7,8-PeCDF	7.32e+06	3.88e+03	1.9e+03	4.67e+06	4.30e+03	1.1e+03
20	13C-2,3,4,7,8-PeCDF	7.37e+06	3.88e+03	1.9e+03	4.65e+06	4.30e+03	1.1e+03
21	13C-1,2,3,4,7,8-HxCDF	3.04e+06	1.52e+03	2.0e+03	5.97e+06	3.33e+03	1.8e+03
22	13C-1,2,3,6,7,8-HxCDF	3.23e+06	1.52e+03	2.1e+03	6.19e+06	3.33e+03	1.9e+03
23	13C-2,3,4,6,7,8-HxCDF	2.95e+06	1.52e+03	1.9e+03	5.84e+06	3.33e+03	1.8e+03
24	13C-1,2,3,7,8,9-HxCDF	2.37e+06	1.52e+03	1.6e+03	4.57e+06	3.33e+03	1.4e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.52e+06	2.88e+03	5.3e+02	3.50e+06	4.31e+03	8.1e+02
26	13C-1,2,3,4,7,8,9-HpCDF	1.02e+06	2.88e+03	3.5e+02	2.30e+06	4.31e+03	5.3e+02
27	13C-2,3,7,8-TCDD	2.29e+06	5.44e+03	4.2e+02	2.94e+06	2.40e+03	1.2e+03
28	13C-1,2,3,7,8-PeCDD	5.66e+06	7.48e+02	7.6e+03	3.55e+06	1.09e+03	3.3e+03
29	13C-1,2,3,4,7,8-HxCDD	4.39e+06	1.48e+03	3.0e+03	3.45e+06	9.40e+02	3.7e+03
30	13C-1,2,3,6,7,8-HxCDD	3.96e+06	1.48e+03	2.7e+03	3.26e+06	9.40e+02	3.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.61e+06	5.56e+02	4.7e+03	2.50e+06	5.92e+02	4.2e+03
32	13C-OCDD	1.19e+06	8.28e+02	1.4e+03	1.29e+06	3.12e+02	4.1e+03
33	13C-1,2,3,4-TCDD	7.38e+06	5.44e+03	1.4e+03	9.37e+06	2.40e+03	3.9e+03
34	13C-1,2,3,7,8,9-HxCDD	8.79e+06	1.48e+03	5.9e+03	6.86e+06	9.40e+02	7.3e+03
35	37Cl-2,3,7,8-TCDD	3.92e+06	2.06e+03	1.9e+03			

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Peak List Summary

CLIENT ID.
SL0189

Entry: 36 Totals Name: Total Tetra-Furans

Run: 16 File: P519740 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 21:50:37 Processed: 3-JAN-19 09:14:28

Mass: 303.9020 305.8990 Tot Response: 3.41e+06 RRF: 0.9417

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:54	7.83e+03	1.03e+04	0.76	yes	1.82e+04		n	n
2	23:11	4.04e+04	5.34e+04	0.76	yes	9.38e+04		n	n
3	23:33	1.22e+04	1.63e+04	0.75	yes	2.85e+04		n	n
4	23:42	1.30e+03	1.71e+03	0.76	yes	3.01e+03		n	n
5	23:51	3.10e+04	4.13e+04	0.75	yes	7.23e+04		n	n
6	24:14	6.47e+03	8.64e+03	0.75	yes	1.51e+04		n	n
7	24:28	2.29e+04	3.02e+04	0.76	yes	5.31e+04		n	n
8	24:36	3.78e+04	4.92e+04	0.77	yes	8.70e+04		n	n
9	25:05	3.51e+05	4.58e+05	0.77	yes	8.09e+05		n	n
10	25:24	1.75e+04	2.33e+04	0.75	yes	4.08e+04		n	n
11	25:59	4.57e+04	6.10e+04	0.75	yes	1.07e+05		y	y
12	26:06	7.82e+05	1.01e+06	0.77	yes	1.79e+06	2,3,7,8-TCDF	y	y
13	26:31	5.79e+04	7.68e+04	0.75	yes	1.35e+05		n	n
14	26:47	9.06e+03	1.27e+04	0.71	yes	2.18e+04		n	n
15	28:16	5.94e+04	7.53e+04	0.79	yes	1.35e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0189

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 16 File: P519740 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 21:50:37 Processed: 3-JAN-19 09:14:28

Mass: 319.8970 321.8940 Tot Response: 5.59e+05 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:45	2.78e+03	3.68e+03	0.75	yes	6.46e+03		n	n
2	27:04	2.23e+05	2.83e+05	0.79	yes	5.06e+05	2,3,7,8-TCDD	n	n
3	27:25	2.03e+04	2.60e+04	0.78	yes	4.63e+04		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0189

Entry: 38 Totals Name: Total Penta-Furans1

Run: 16 File: P519740 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 21:50:37 Processed: 3-JAN-19 09:14:28

Mass: 339.8600 341.8570 Tot Response: 3.95e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:17	2.42e+03	1.52e+03 1.59	yes	3.95e+03		n	n

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Peak List Summary

CLIENT ID.
SL0189

Entry: 39 Totals Name: Total Penta-Furans2

Run: 16 File: P519740 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 21:50:37 Processed: 3-JAN-19 09:14:28

Mass: 339.8600 341.8570 Tot Response: 2.36e+05 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:57	2.42e+04	1.61e+04	1.51	yes	4.03e+04		n	n
2	30:33	1.05e+03	7.48e+02	1.41	yes	1.80e+03		n	n
3	30:38	1.22e+03	8.89e+02	1.37	yes	2.10e+03		n	n
4	30:48	6.07e+03	4.21e+03	1.44	yes	1.03e+04		n	n
5	30:59	4.93e+04	3.31e+04	1.49	yes	8.24e+04	1,2,3,7,8-PeCDF	n	n
6	31:15	1.67e+04	1.11e+04	1.51	yes	2.78e+04		n	n
7	31:28	3.94e+01	2.78e+01	1.42	yes	6.72e+01		n	n
8	31:52	5.63e+02	3.54e+02	1.59	yes	9.17e+02		n	n
9	31:59	4.07e+04	2.65e+04	1.54	yes	6.72e+04	2,3,4,7,8-PeCDF	n	n
10	32:58	1.73e+03	1.16e+03	1.49	yes	2.89e+03		n	n

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Peak List Summary

CLIENT ID.
SL0189

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 16 File: P519740 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 21:50:37 Processed: 3-JAN-19 09:14:28

Mass: 355.8550 357.8520 Tot Response: 7.34e+03 RRF: 0.9565

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:59	5.00e+02	3.44e+02	1.45	yes	8.44e+02		n	n
2	31:01	4.35e+02	2.70e+02	1.61	yes	7.05e+02		n	n
3	31:18	1.45e+02	1.09e+02	1.34	yes	2.54e+02		n	n
4	31:31	1.94e+02	1.26e+02	1.53	yes	3.20e+02		n	n
5	31:52	8.52e+01	4.86e+01	1.75	yes	1.34e+02		n	n
6	32:18	3.06e+03	2.03e+03	1.50	yes	5.09e+03	1,2,3,7,8-PeCDD	n	n

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Peak List Summary

CLIENT ID.
SL0189

Entry: 41 Totals Name: Total Hexa-Furans

Run: 16 File: P519740 Sample:1 Injection:1 Function:3

Acquired: 2-JAN-19 21:50:37 Processed: 3-JAN-19 09:14:28

Mass: 373.8210 375.8180 Tot Response: 1.97e+05 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:43	9.65e+02	7.76e+02	1.24	yes	1.74e+03		n	n
2	33:53	6.25e+03	5.32e+03	1.17	yes	1.16e+04		n	n
3	34:27	4.70e+03	3.77e+03	1.25	yes	8.47e+03		n	n
4	34:55	7.08e+04	5.81e+04	1.22	yes	1.29e+05	1,2,3,4,7,8-HxCDF	n	n
5	35:02	1.78e+04	1.45e+04	1.23	yes	3.22e+04	1,2,3,6,7,8-HxCDF	n	n
6	35:35	3.27e+03	2.73e+03	1.20	yes	6.00e+03	2,3,4,6,7,8-HxCDF	n	n
7	36:25	4.73e+03	3.56e+03	1.33	yes	8.29e+03	1,2,3,7,8,9-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0189

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 16 File: P519740 Sample:1 Injection:1 Function:3

Acquired: 2-JAN-19 21:50:37 Processed: 3-JAN-19 09:14:28

Mass: 389.8160 391.8130 Tot Response: 1.50e+04 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:17	4.33e+03	3.43e+03 1.26	yes	7.76e+03		n	n
2	35:07	2.98e+03	2.41e+03 1.24	yes	5.38e+03		n	n
3	35:45	1.59e+02	1.37e+02 1.16	yes	2.96e+02	1,2,3,4,7,8-HxCDD	n	n
4	35:50	9.00e+02	6.99e+02 1.29	yes	1.60e+03	1,2,3,6,7,8-HxCDD	n	n

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Peak List Summary

CLIENT ID.
SL0189

Entry: 43 Totals Name: Total Hepta-Furans

Run: 16 File: P519740 Sample:1 Injection:1 Function:4

Acquired: 2-JAN-19 21:50:37 Processed: 3-JAN-19 09:14:28

Mass: 407.7820 409.7790 Tot Response: 7.69e+04 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:48	2.11e+04	2.07e+04 1.02	yes	4.18e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	38:14	1.24e+04	1.23e+04 1.01	yes	2.46e+04		n	n
3	39:15	5.17e+03	5.28e+03 0.98	yes	1.04e+04	1,2,3,4,7,8,9-HpCDF	n	n

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SL0189

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 16 File: P519740 Sample:1 Injection:1 Function:4

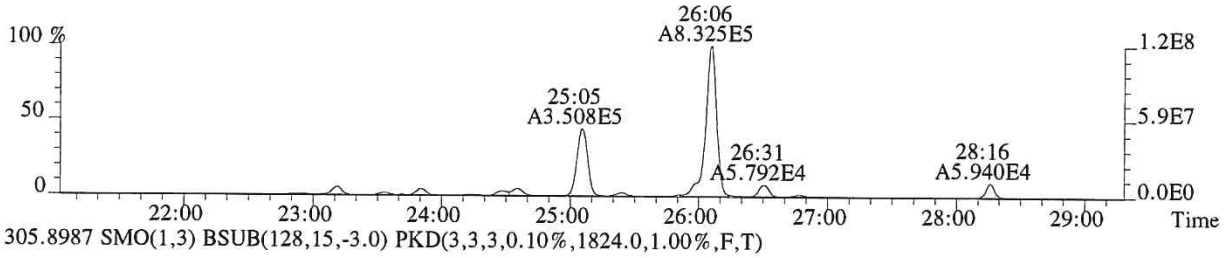
Acquired: 2-JAN-19 21:50:37 Processed: 3-JAN-19 09:14:28

Mass: 423.7770 425.7740 Tot Response: 1.22e+05 RRF: 1.025

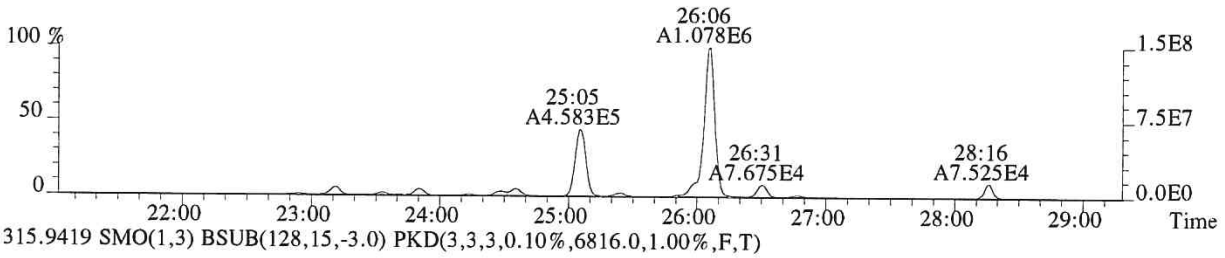
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:05	3.95e+04	3.85e+04	1.03	yes	7.80e+04		n	n
2	38:48	2.25e+04	2.13e+04	1.06	yes	4.39e+04	1,2,3,4,6,7,8-HpCDD	n	n

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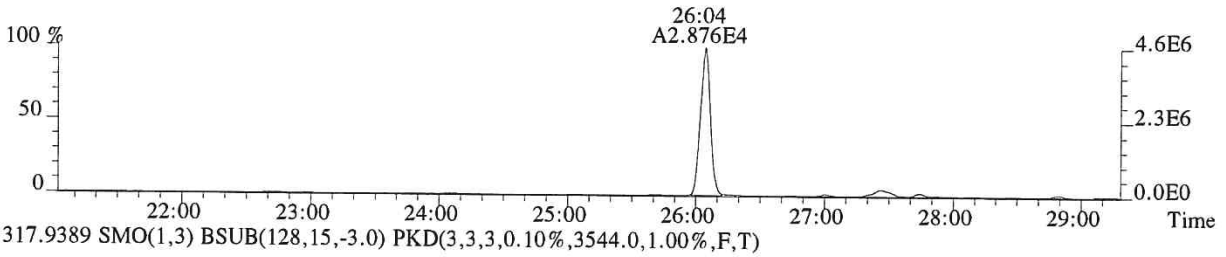
File:P519740 #1-587 Acq: 2-JAN-2019 21:50:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2444.0,1.00%,F,T)



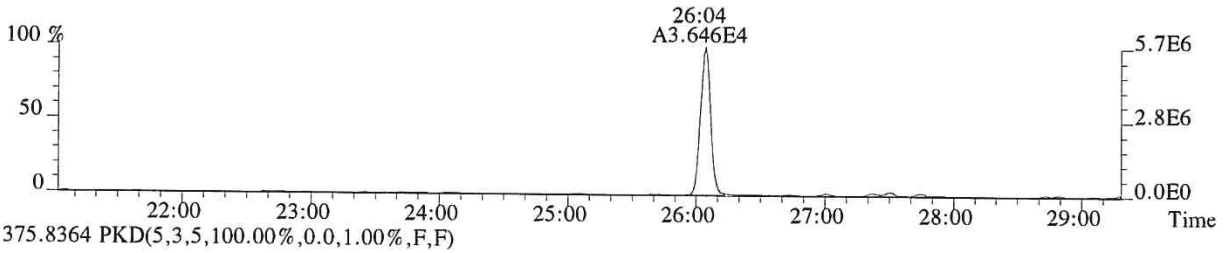
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1824.0,1.00%,F,T)



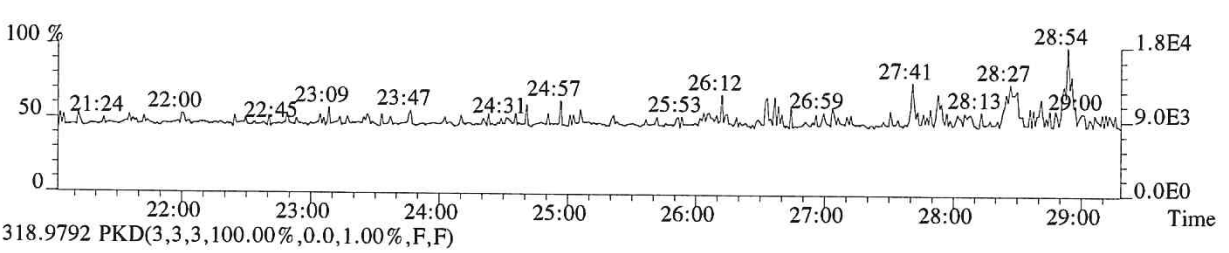
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6816.0,1.00%,F,T)



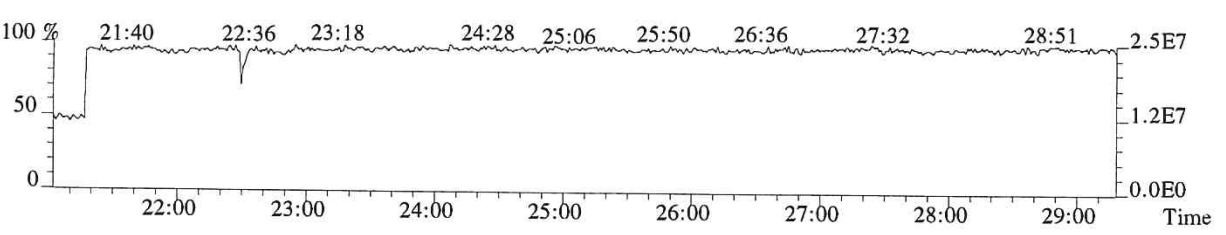
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3544.0,1.00%,F,T)



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

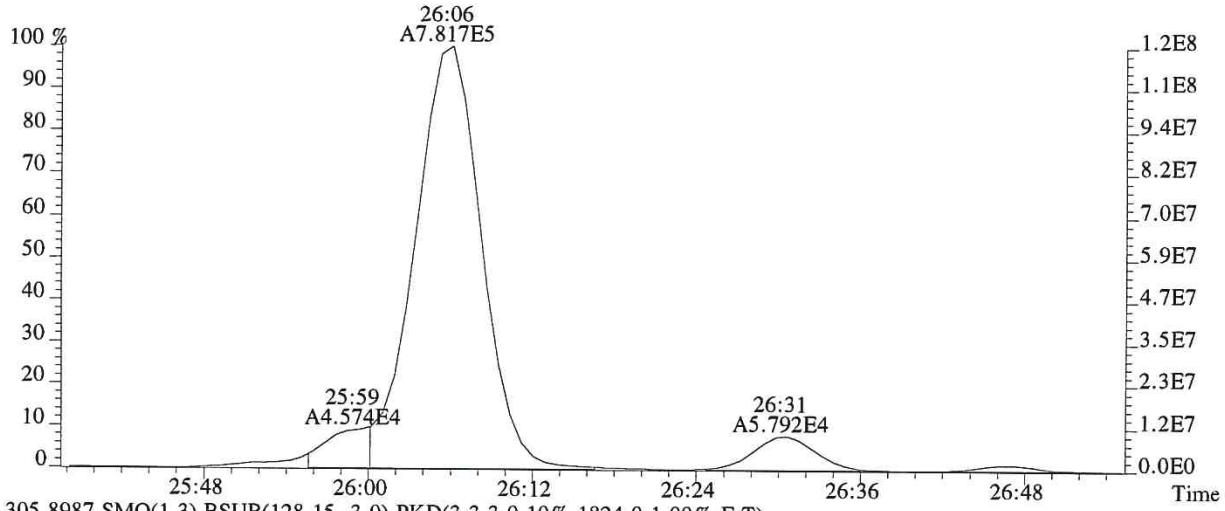


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

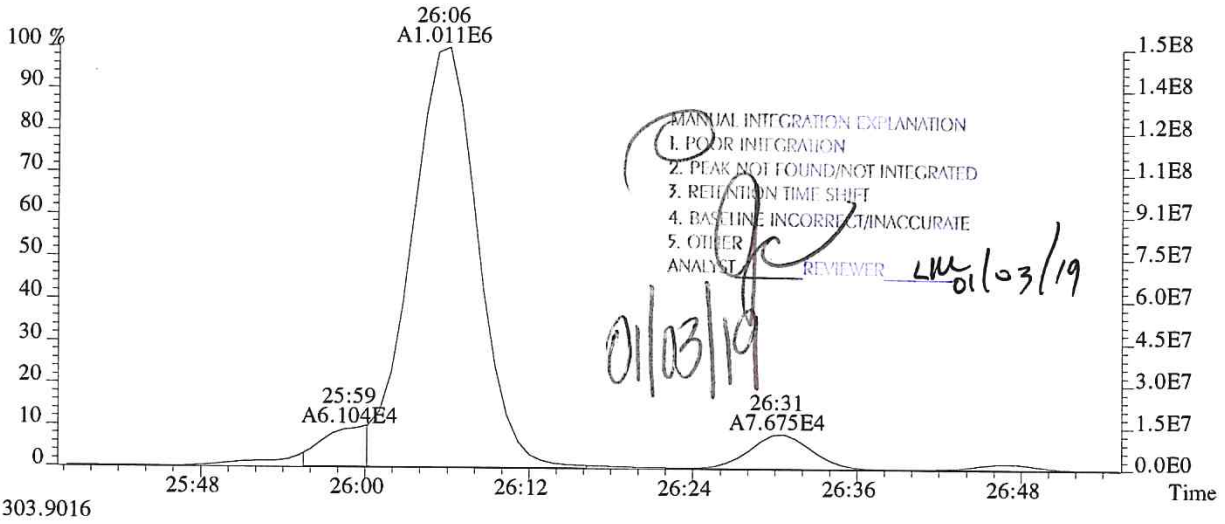


016322

File:P519740 #1-587 Acq: 2-JAN-2019 21:50:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2444.0,1.00%,F,T)

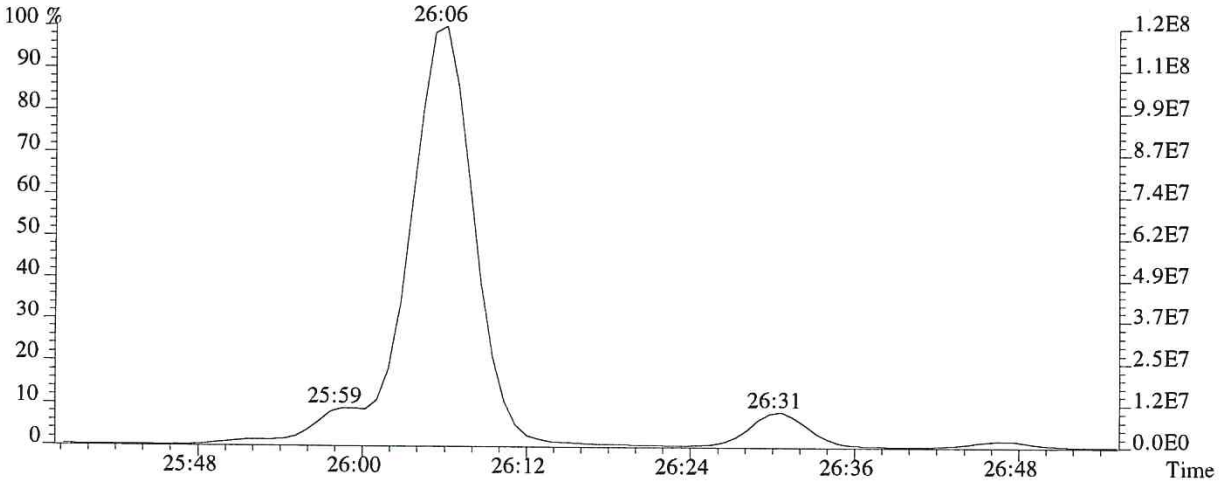


305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1824.0,1.00%,F,T)

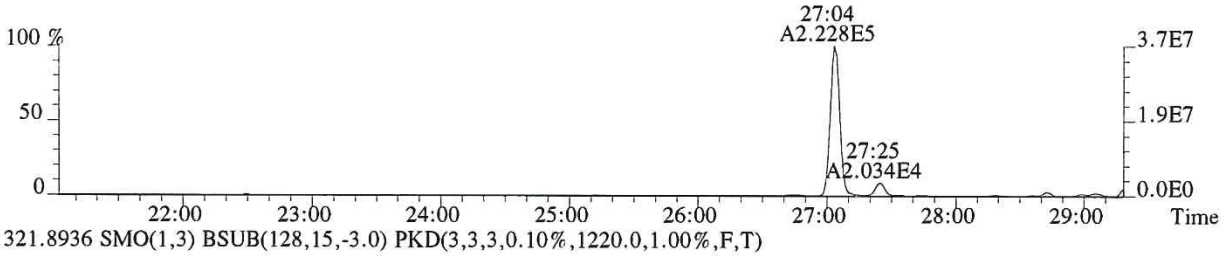


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LMW 01/03/19
01/03/19

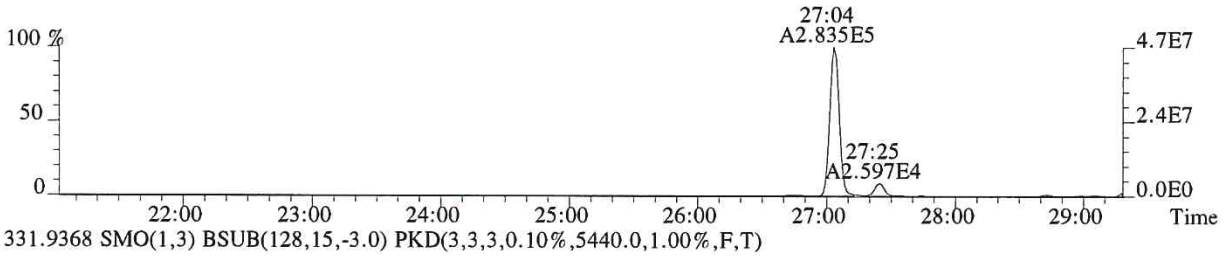
303.9016



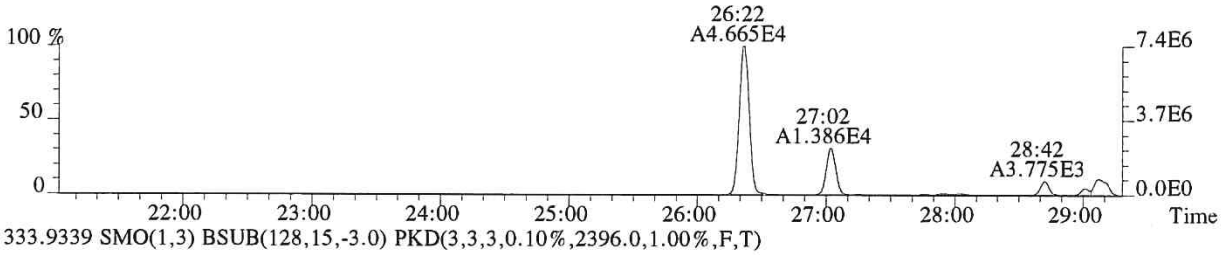
File:P519740 #1-587 Acq: 2-JAN-2019 21:50:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2660.0,1.00%,F,T)



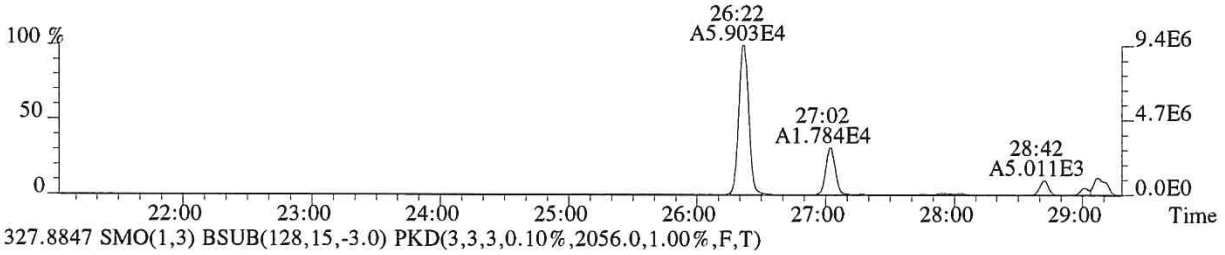
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1220.0,1.00%,F,T)



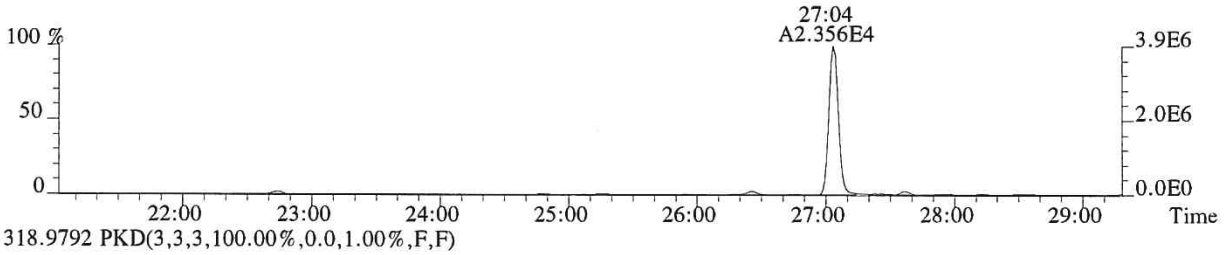
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5440.0,1.00%,F,T)



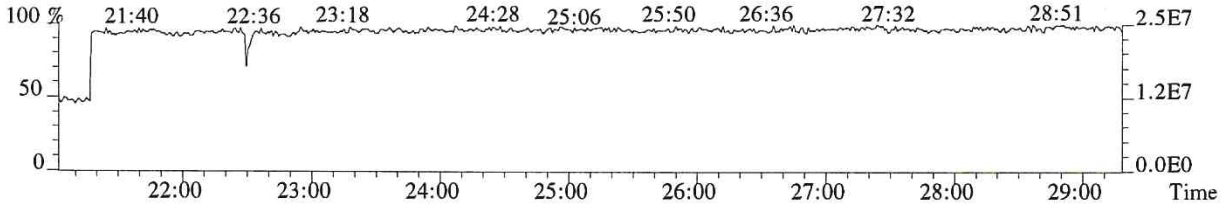
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2396.0,1.00%,F,T)



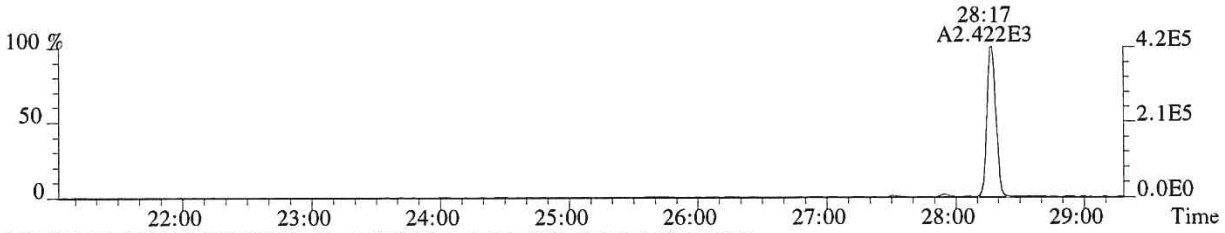
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2056.0,1.00%,F,T)



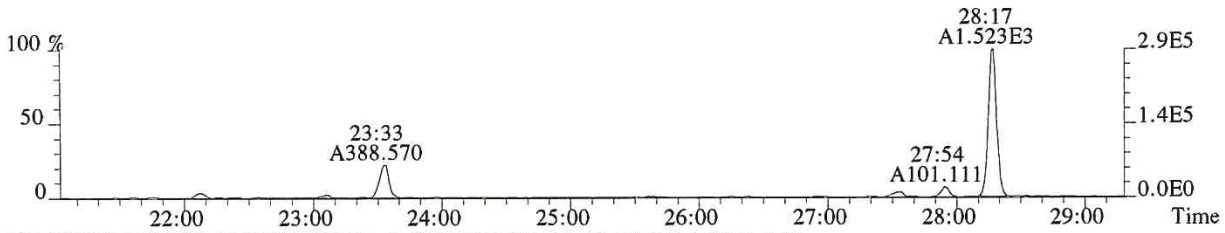
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



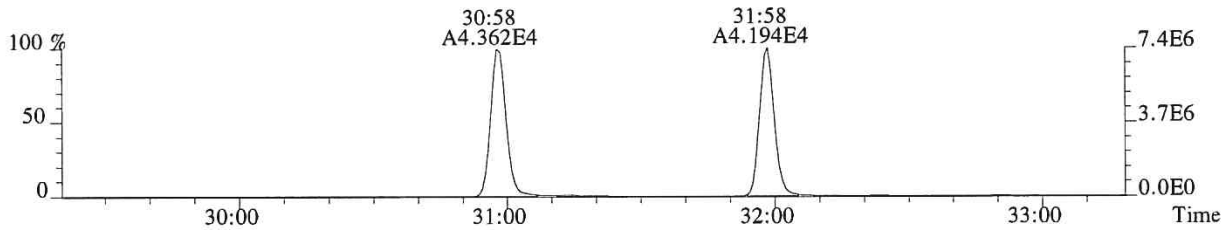
File:P519740 #1-587 Acq: 2-JAN-2019 21:50:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,904.0,1.00%,F,T)



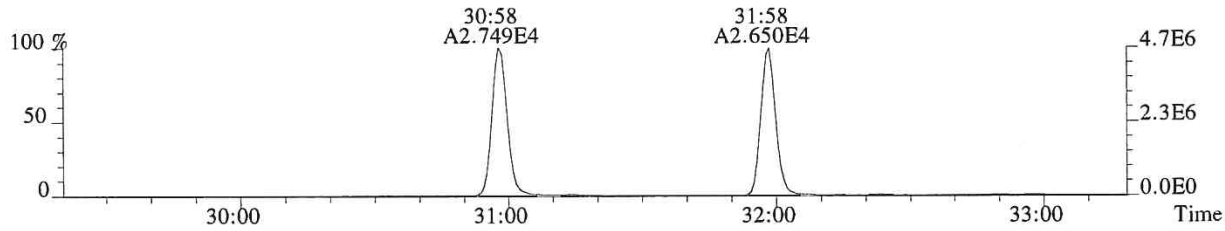
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,972.0,1.00%,F,T)



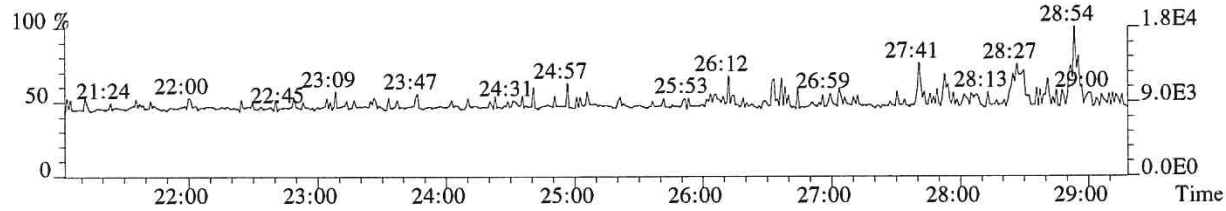
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3880.0,1.00%,F,T)



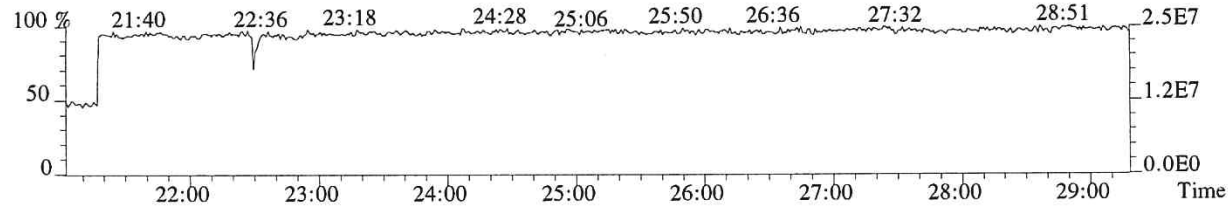
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4304.0,1.00%,F,T)



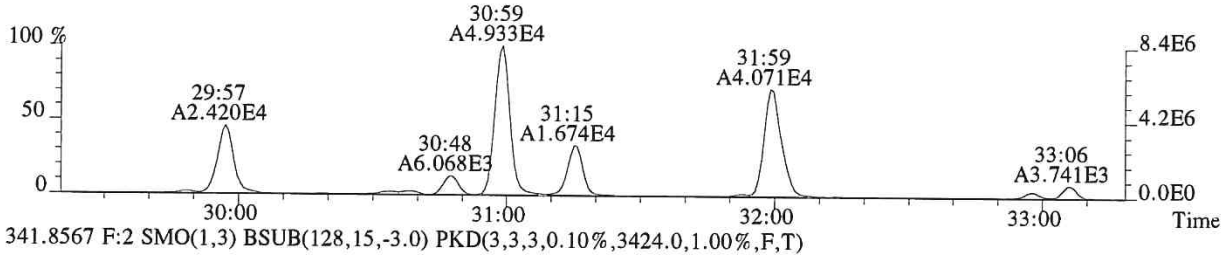
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



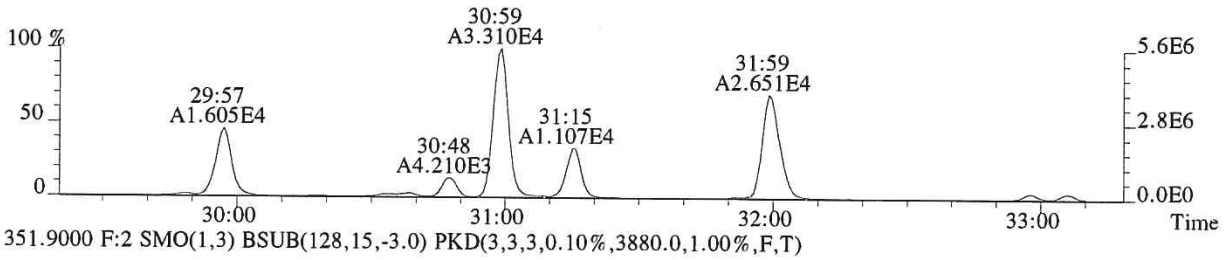
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



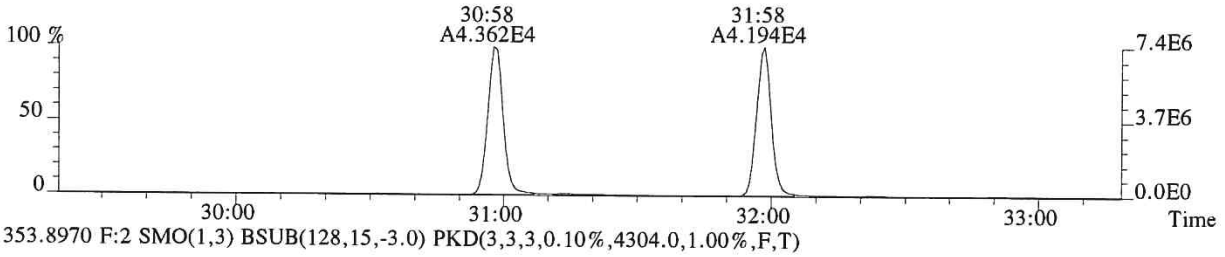
File:P519740 #1-358 Acq: 2-JAN-2019 21:50:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9772.0,1.00%,F,T)



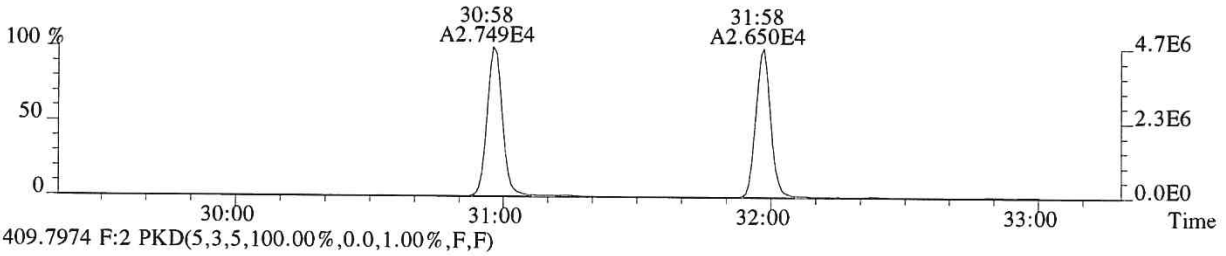
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3424.0,1.00%,F,T)



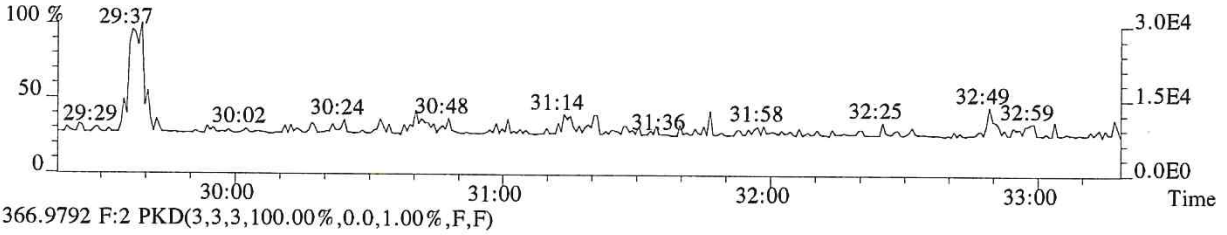
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3880.0,1.00%,F,T)



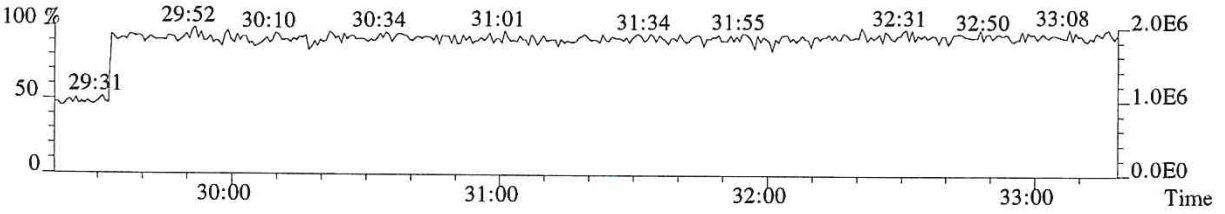
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4304.0,1.00%,F,T)



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

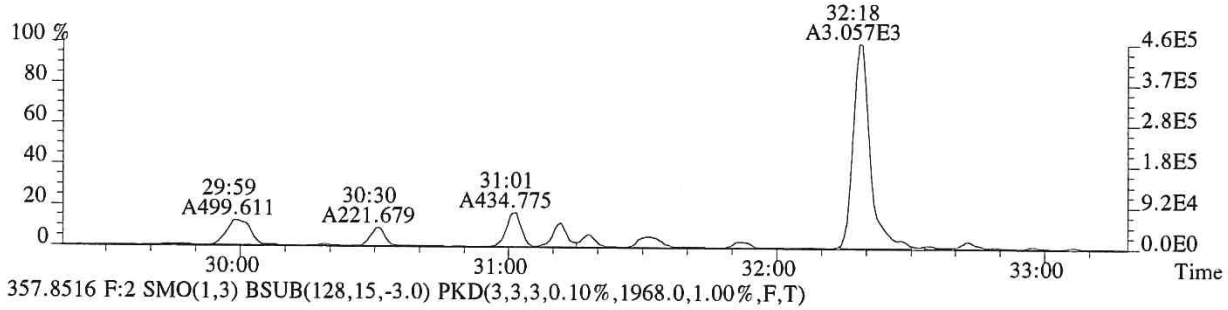


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

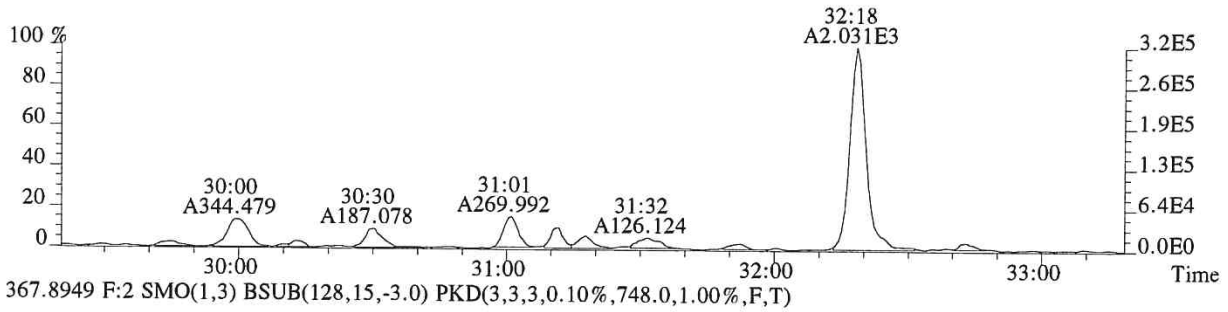


016326

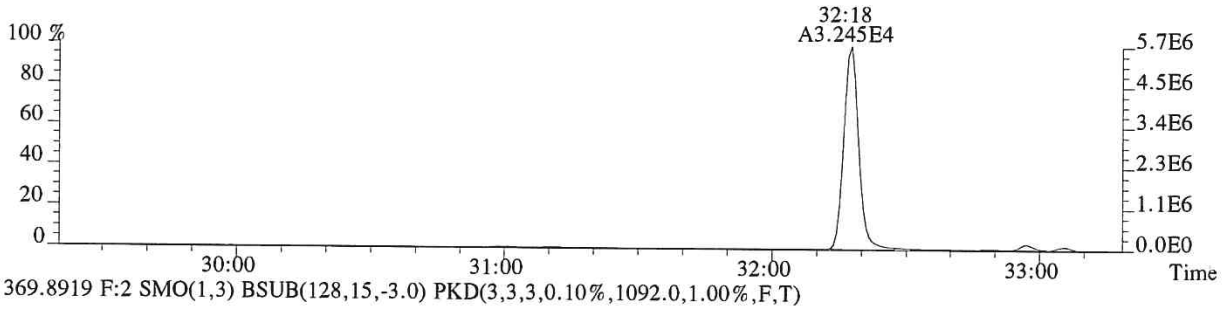
File:P519740 #1-358 Acq: 2-JAN-2019 21:50:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1136.0,1.00%,F,T)



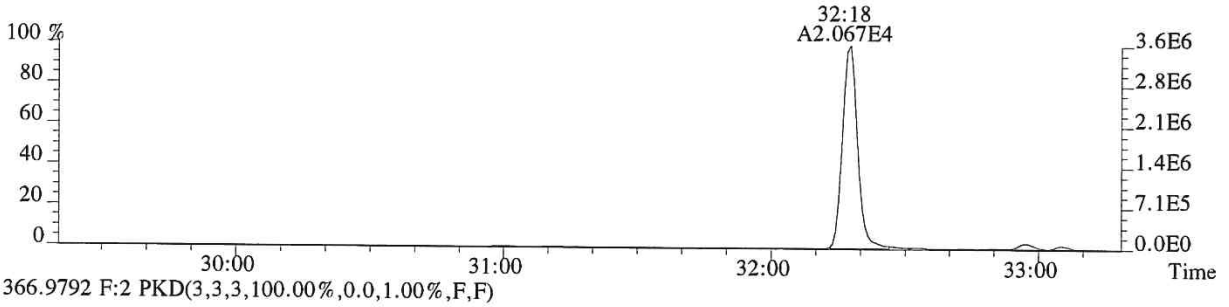
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1968.0,1.00%,F,T)



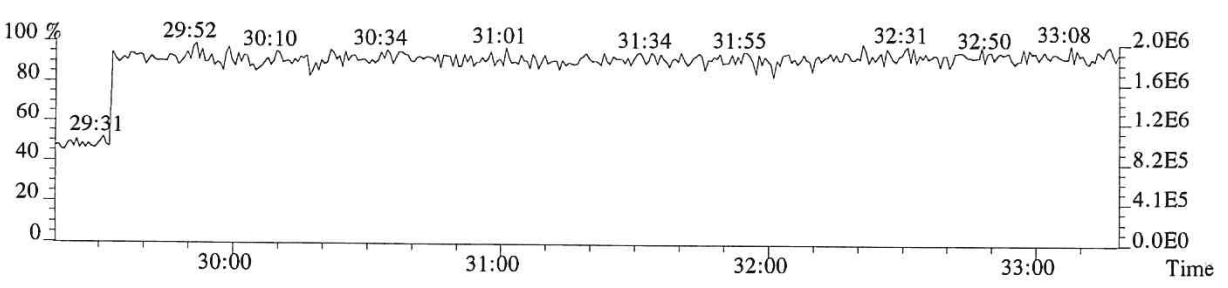
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,748.0,1.00%,F,T)



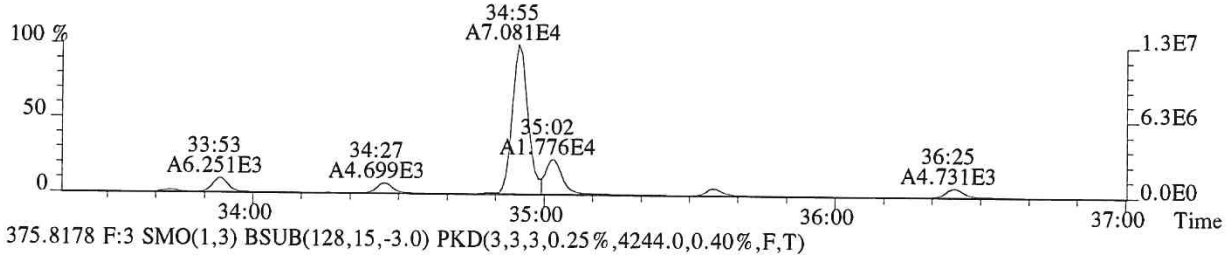
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1092.0,1.00%,F,T)



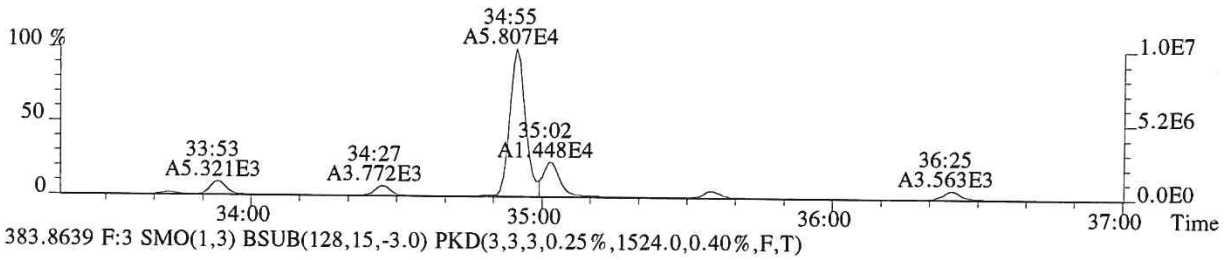
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



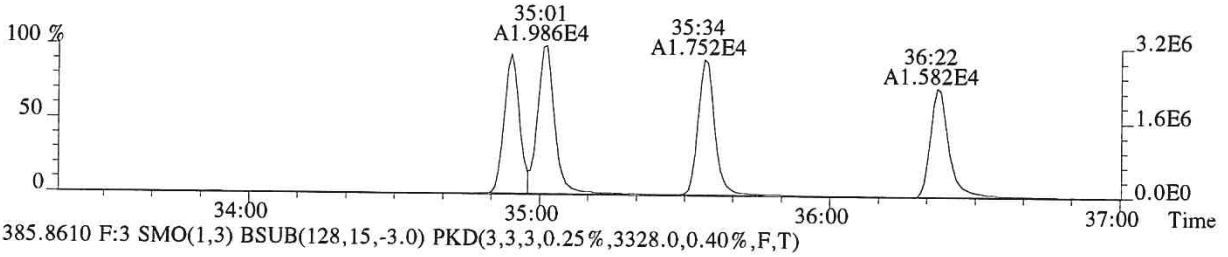
File:P519740 #1-330 Acq: 2-JAN-2019 21:50:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7292.0,0.40%,F,T)



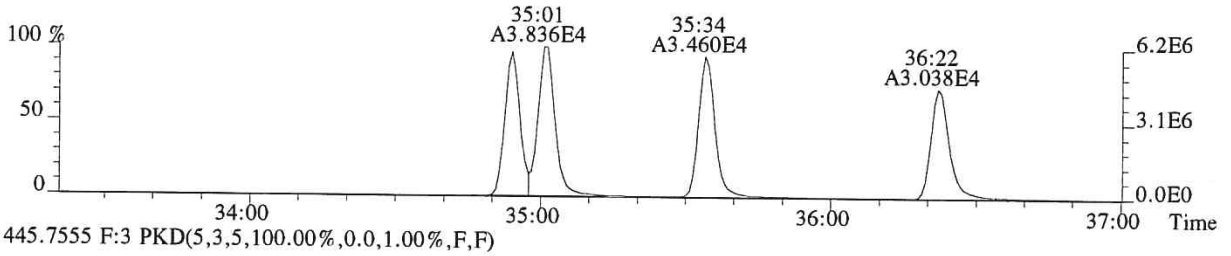
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4244.0,0.40%,F,T)



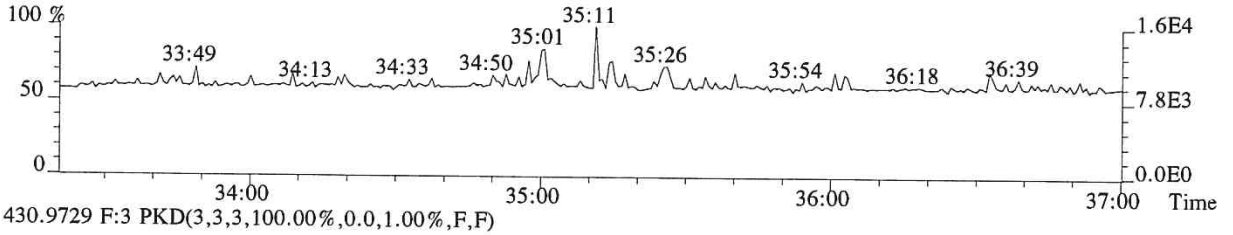
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1524.0,0.40%,F,T)



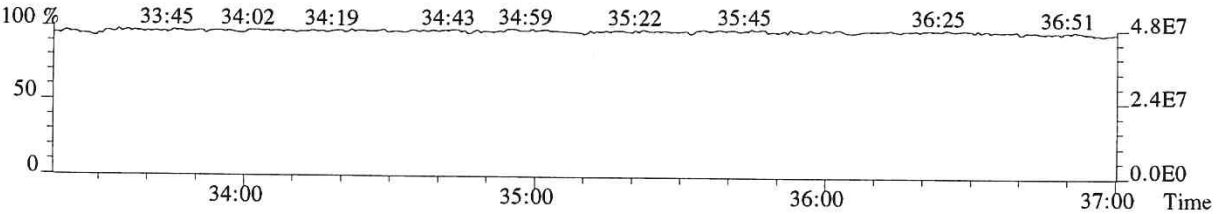
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3328.0,0.40%,F,T)



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

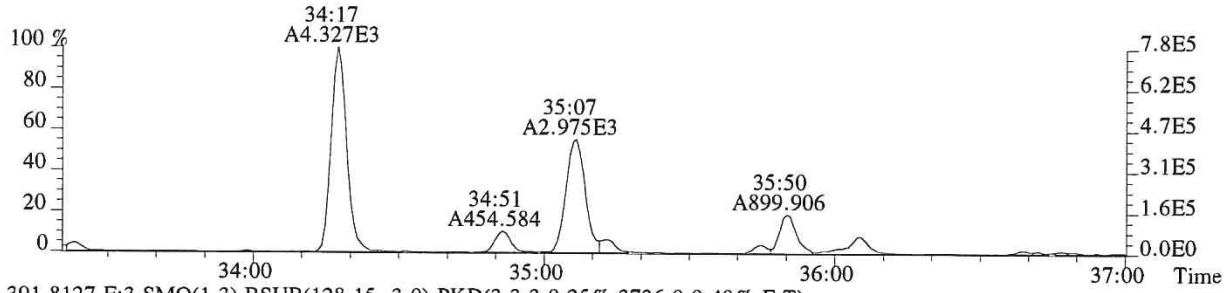


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

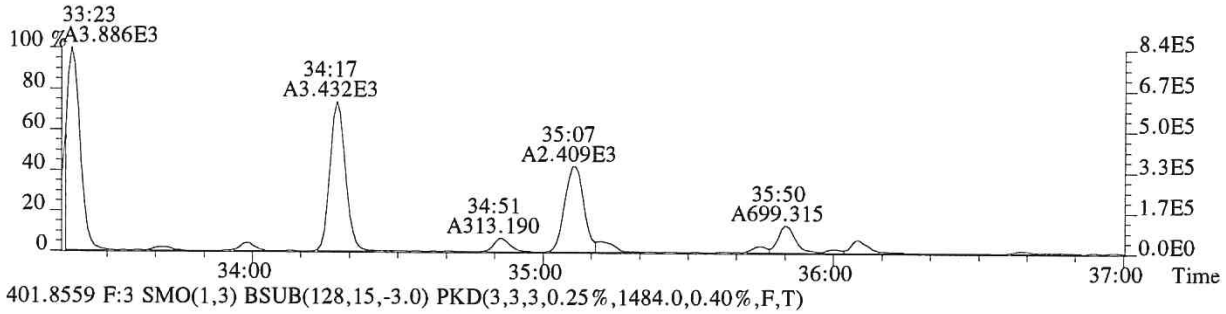


016328

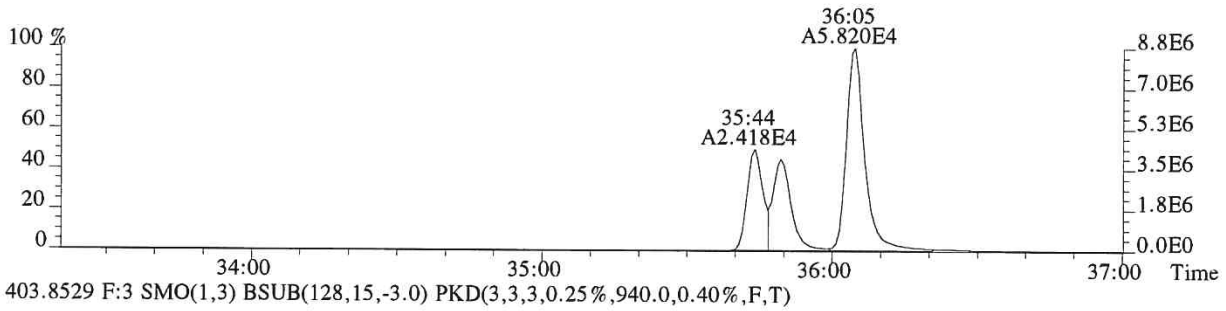
File:P519740 #1-330 Acq: 2-JAN-2019 21:50:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1380.0,0.40%,F,T)



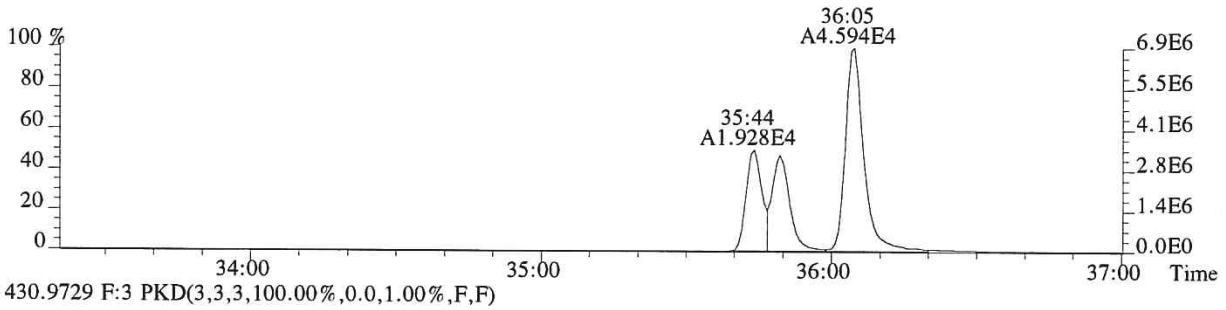
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3736.0,0.40%,F,T)



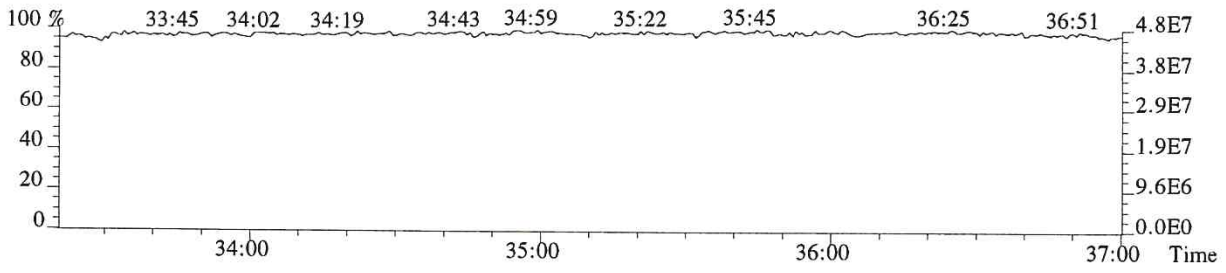
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1484.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,940.0,0.40%,F,T)

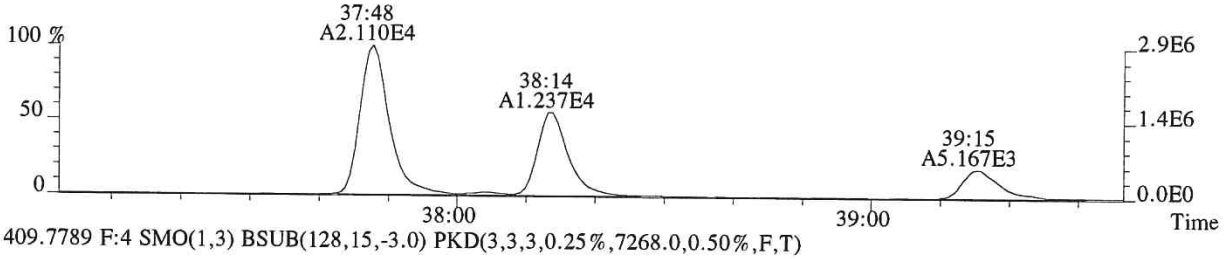


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

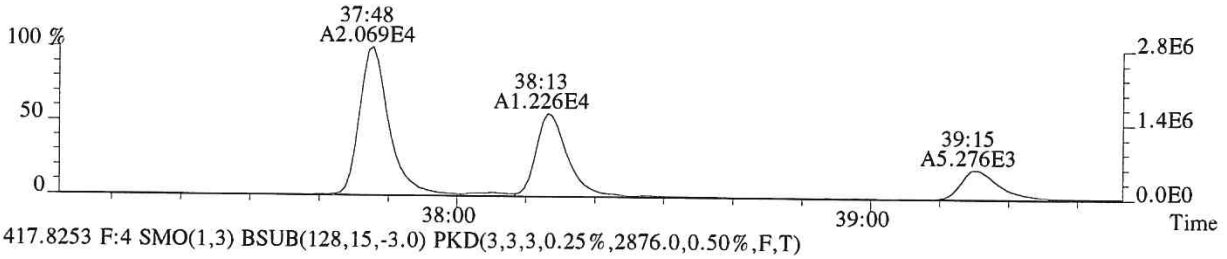


016329

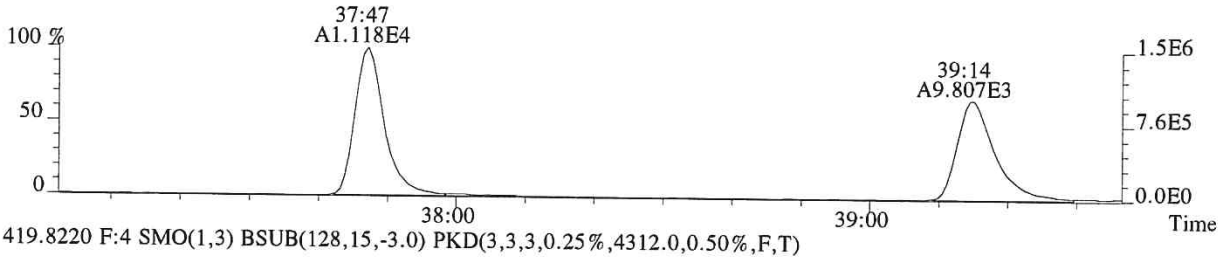
File:P519740 #1-232 Acq: 2-JAN-2019 21:50:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8448.0,0.50%,F,T)



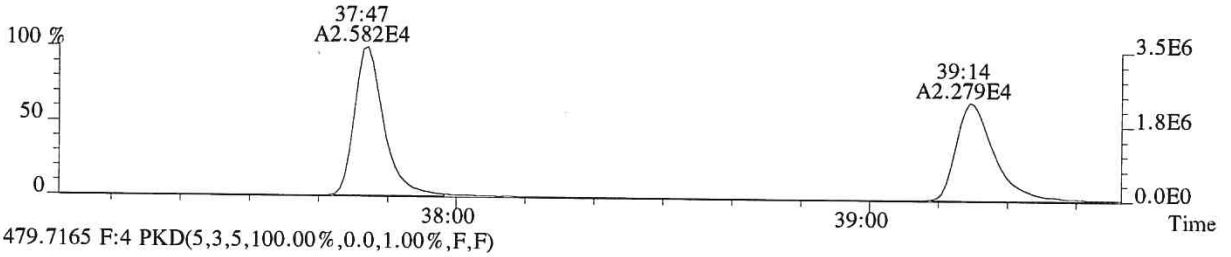
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7268.0,0.50%,F,T)



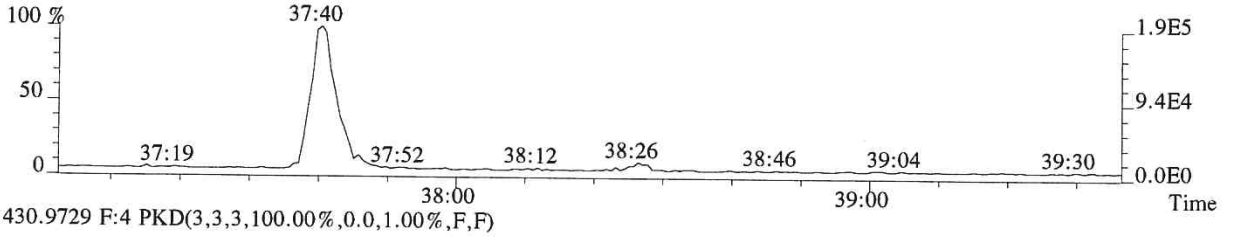
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2876.0,0.50%,F,T)



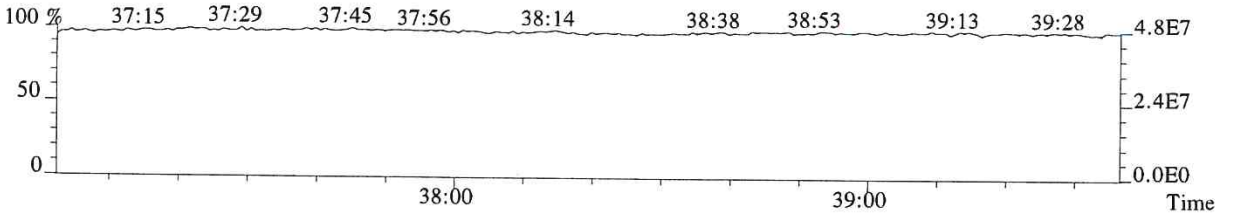
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4312.0,0.50%,F,T)



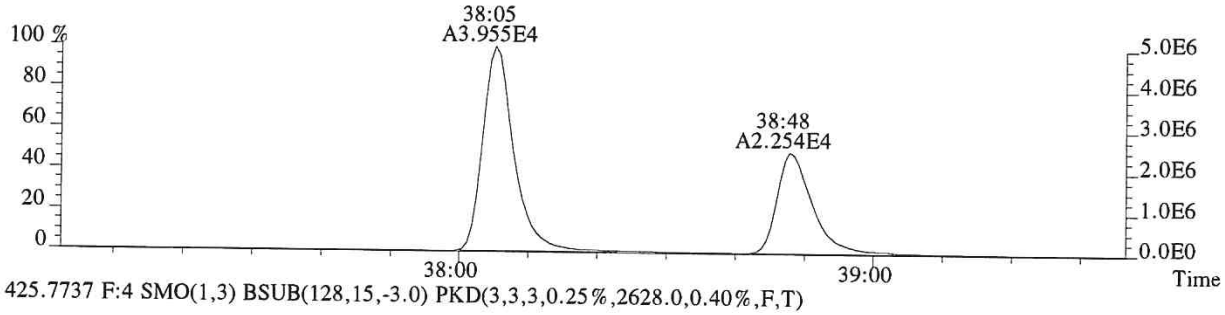
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



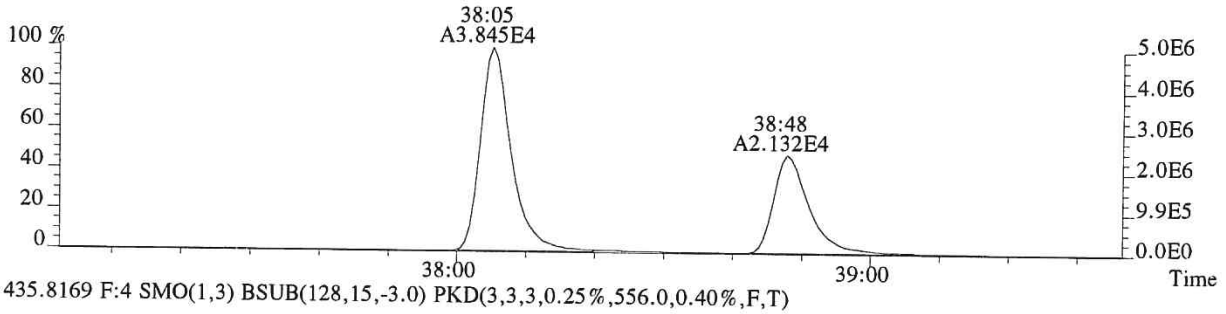
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



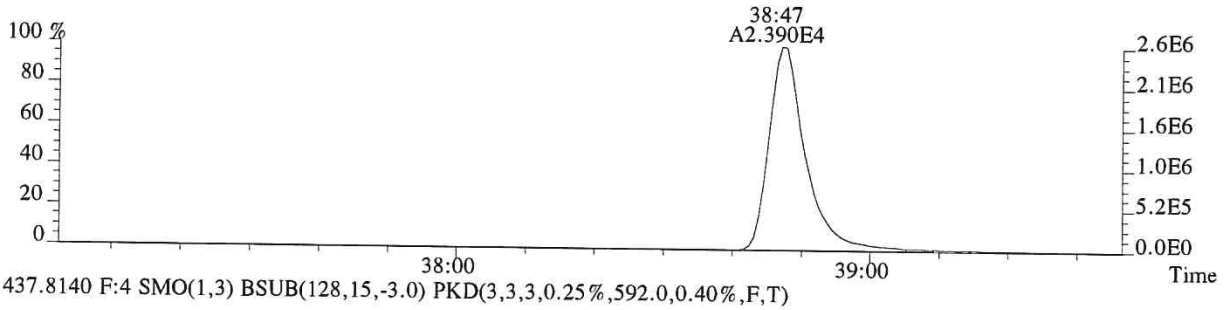
File:P519740 #1-232 Acq: 2-JAN-2019 21:50:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,528.0,0.40%,F,T)



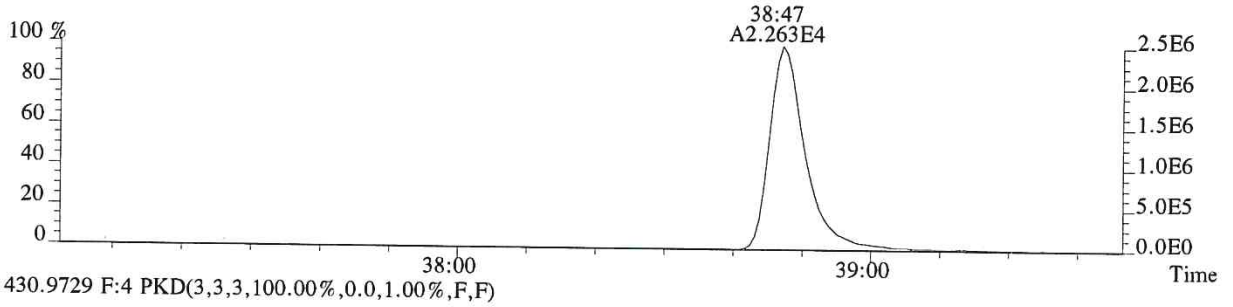
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2628.0,0.40%,F,T)



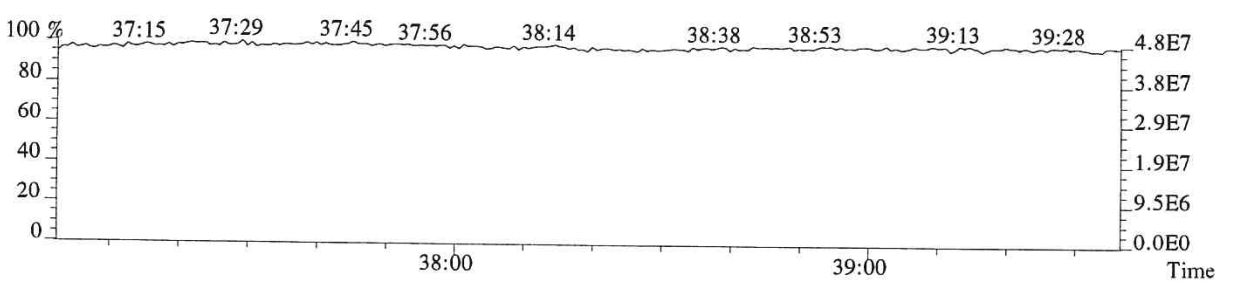
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,556.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,592.0,0.40%,F,T)

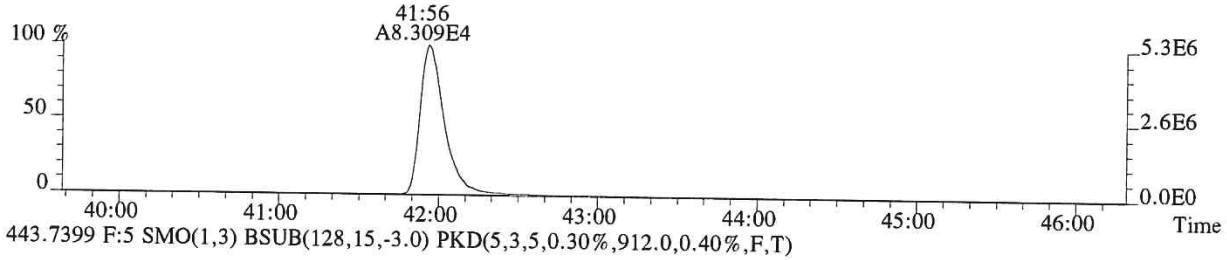


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

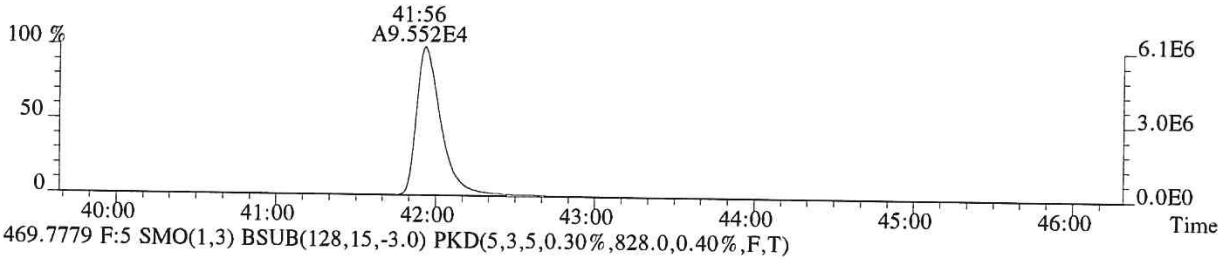


016331

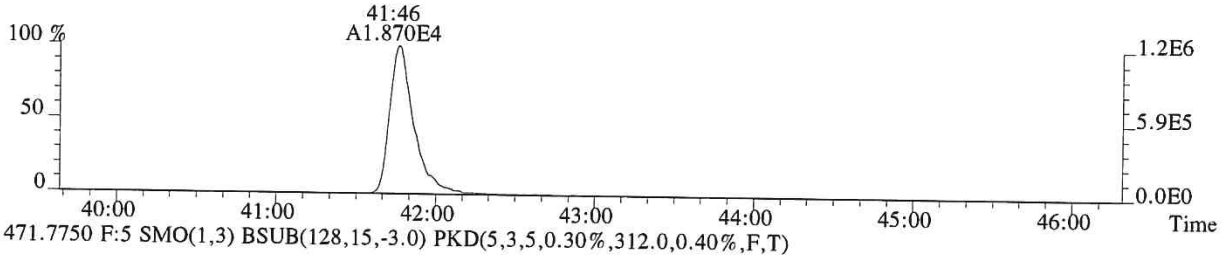
File:P519740 #1-601 Acq: 2-JAN-2019 21:50:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,628.0,0.40%,F,T)



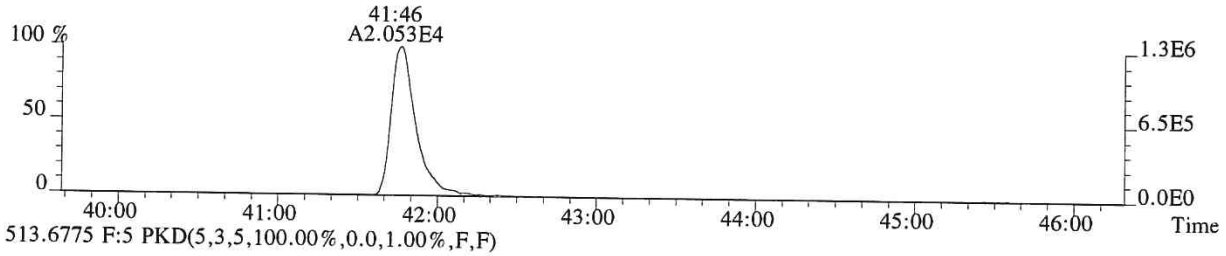
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,912.0,0.40%,F,T)



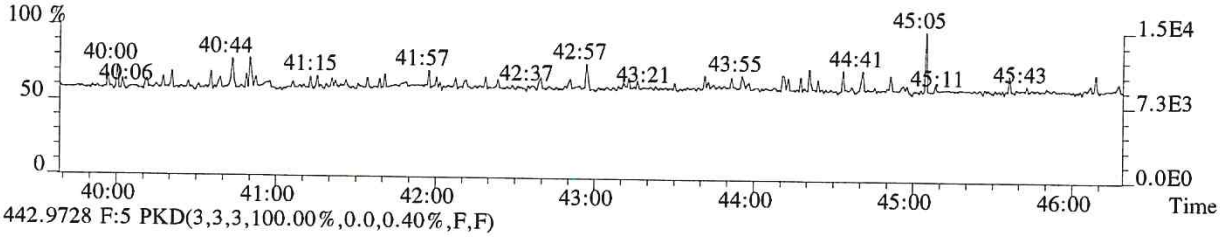
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,828.0,0.40%,F,T)



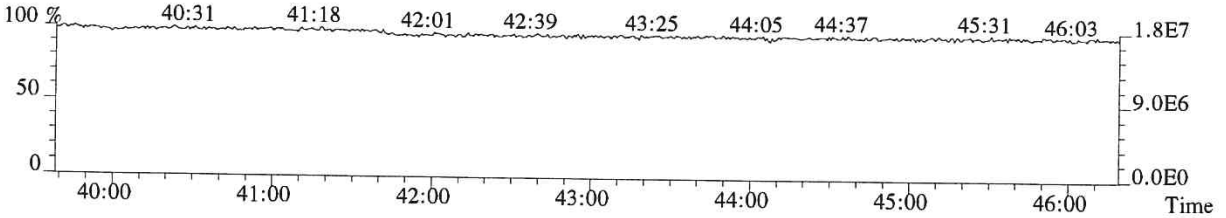
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,312.0,0.40%,F,T)



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

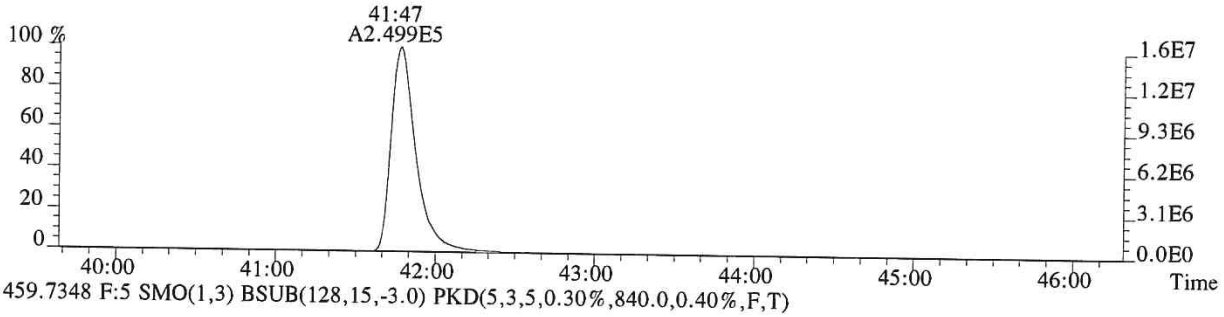


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

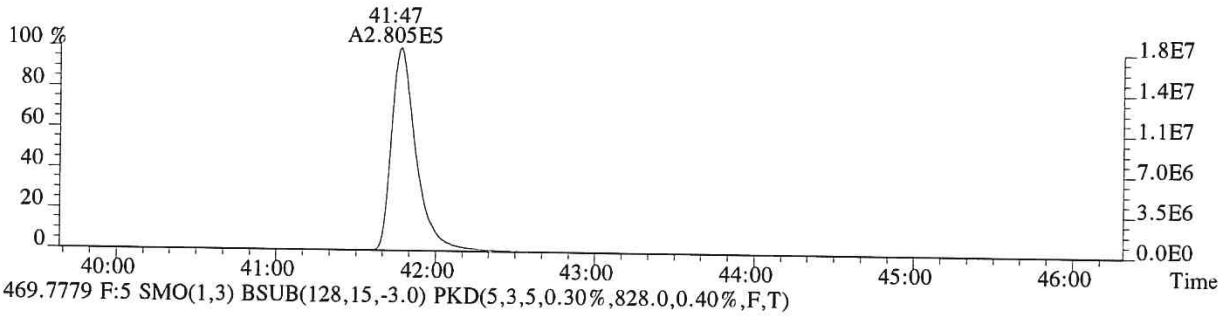


016332

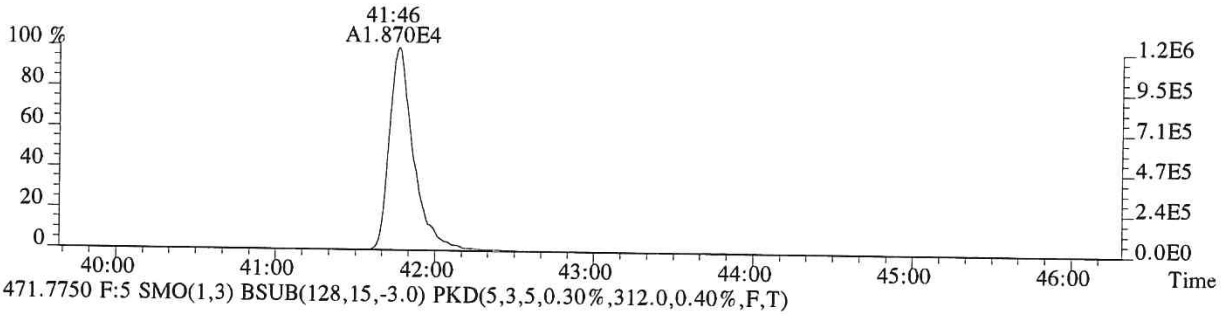
File:P519740 #1-601 Acq: 2-JAN-2019 21:50:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,620.0,0.40%,F,T)



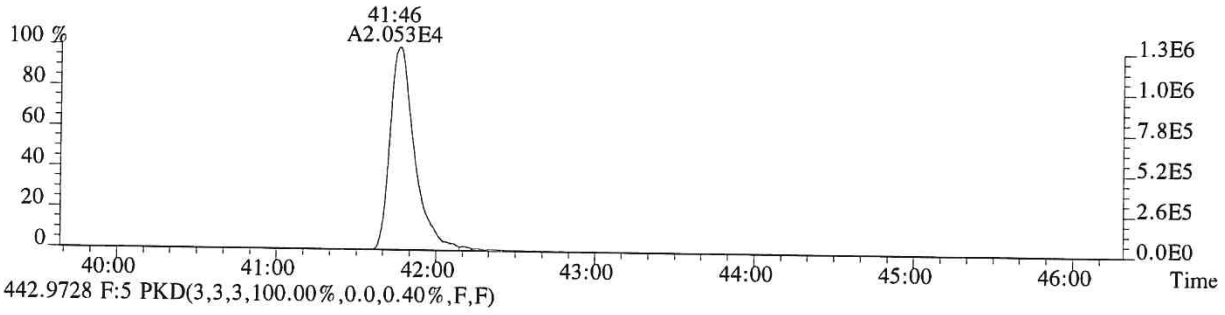
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,840.0,0.40%,F,T)



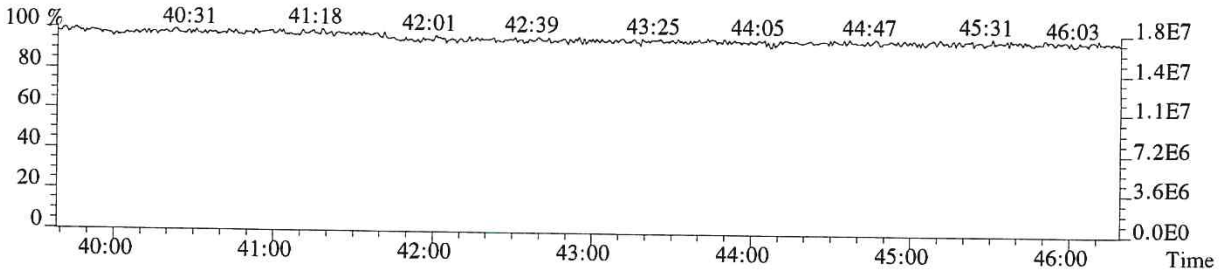
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,828.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,312.0,0.40%,F,T)



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



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Sample Response Summary

CLIENT ID.
SL0189

Run #20 Filename P519773 Samp: 1 Inj: 1 Acquired: 4-JAN-19 09:55:19
Processed: 4-JAN-19 15:57:17 Sample ID: E1801137-016DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:04	7.107e+03	9.192e+03	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:57	4.252e+02	2.597e+02	1.64	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:59	3.526e+02	2.374e+02	1.48	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:55	6.722e+02	4.942e+02	1.36	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:03	1.670e+02	1.806e+02	0.92	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	NotFnd	*	*	*	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:25	3.966e+01	2.706e+01	1.47	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:48	1.850e+02	1.016e+02	1.82	no	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:17	3.284e+01	3.772e+01	0.87	no	no	1.258
10	Unk	OCDF	41:59	7.784e+02	8.520e+02	0.91	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:04	1.847e+03	2.266e+03	0.82	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	NotFnd	*	*	*	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:49	2.974e+00	6.018e+00	0.49	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:52	4.192e+00	1.645e+00	2.55	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:05	4.332e+00	1.359e+00	3.19	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:49	1.851e+02	1.123e+02	1.65	no	no	1.025
17	Unk	OCDD	41:48	2.425e+03	2.769e+03	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:03	2.097e+04	2.726e+04	0.77	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:57	3.253e+04	2.050e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:58	3.035e+04	1.952e+04	1.55	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:54	1.179e+04	2.318e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:01	1.537e+04	2.980e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:35	1.328e+04	2.608e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:23	1.141e+04	2.153e+04	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:48	9.747e+03	2.185e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:16	7.785e+03	1.780e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:01	1.015e+04	1.305e+04	0.78	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:18	2.284e+04	1.462e+04	1.56	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:45	1.662e+04	1.291e+04	1.29	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:50	1.992e+04	1.552e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:48	1.953e+04	1.779e+04	1.10	yes	no	0.858
32	IS	13C-OCDD	41:47	1.972e+04	2.198e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	1.700e+04	2.138e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:05	2.096e+04	1.612e+04	1.30	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:04	2.008e+02				no	1.014

$$\text{OCDD} = \frac{(2.425e+03 + 2.769e+03) \times 4000 \text{ pg} \times 40}{(1.972e+04 + 2.198e+04) \times 10.41 \text{ g} \times 66.1 / 100 \times 1.118} = 8695.4669 \text{ ng/kg}$$

LG 1/7/19

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Signal/Noise Height Ratio Summary

CLIENT ID.
SL0189

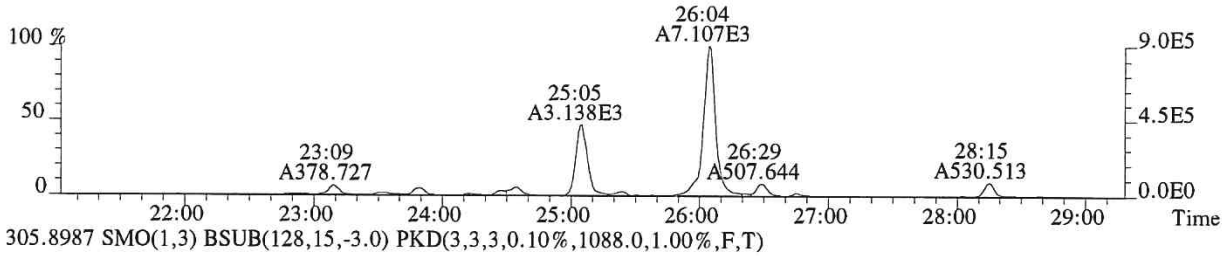
Run #20 Filename P519773 Samp: 1 Inj: 1 Acquired: 4-JAN-19 09:55:19
Processed: 4-JAN-19 15:57:17 LAB. ID: E1801137-016DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.95e+05	4.32e+02	2.1e+03	1.17e+06	1.09e+03	1.1e+03
2	1,2,3,7,8-PeCDF	6.02e+04	1.08e+03	5.6e+01	4.42e+04	1.20e+03	3.7e+01
3	2,3,4,7,8-PeCDF	5.14e+04	1.08e+03	4.8e+01	3.19e+04	1.20e+03	2.7e+01
4	1,2,3,4,7,8-HxCDF	1.02e+05	8.00e+02	1.3e+02	7.56e+04	3.72e+02	2.0e+02
5	1,2,3,6,7,8-HxCDF	2.24e+04	8.00e+02	2.8e+01	2.69e+04	3.72e+02	7.2e+01
6	2,3,4,6,7,8-HxCDF	*	8.00e+02	*	*	3.72e+02	*
7	1,2,3,7,8,9-HxCDF	7.20e+03	8.00e+02	9.0e+00	4.39e+03	3.72e+02	1.2e+01
8	1,2,3,4,6,7,8-HpCDF	2.41e+04	3.64e+02	6.6e+01	2.19e+04	1.10e+03	2.0e+01
9	1,2,3,4,7,8,9-HpCDF	6.49e+03	3.64e+02	1.8e+01	5.25e+03	1.10e+03	4.8e+00
10	OCDF	4.33e+04	4.00e+02	1.1e+02	5.13e+04	5.80e+02	8.8e+01
11	2,3,7,8-TCDD	2.61e+05	1.72e+03	1.5e+02	3.26e+05	1.24e+03	2.6e+02
12	1,2,3,7,8-PeCDD	*	1.12e+03	*	*	5.00e+02	*
13	1,2,3,4,7,8-HxCDD	9.37e+02	2.40e+02	3.9e+00	1.39e+03	4.84e+02	2.9e+00
14	1,2,3,6,7,8-HxCDD	1.53e+03	2.40e+02	6.4e+00	4.36e+02	4.84e+02	9.0e-01
15	1,2,3,7,8,9-HxCDD	9.10e+02	2.40e+02	3.8e+00	5.42e+02	4.84e+02	1.1e+00
16	1,2,3,4,6,7,8-HpCDD	1.95e+04	4.56e+02	4.3e+01	2.09e+04	3.84e+02	5.4e+01
17	OCDD	1.39e+05	3.56e+02	3.9e+02	1.59e+05	4.60e+02	3.5e+02
18	13C-2,3,7,8-TCDF	2.85e+06	3.65e+03	7.8e+02	3.63e+06	2.39e+03	1.5e+03
19	13C-1,2,3,7,8-PeCDF	4.76e+06	1.05e+03	4.5e+03	3.01e+06	4.64e+02	6.5e+03
20	13C-2,3,4,7,8-PeCDF	4.87e+06	1.05e+03	4.6e+03	3.13e+06	4.64e+02	6.7e+03
21	13C-1,2,3,4,7,8-HxCDF	1.97e+06	5.00e+02	3.9e+03	3.88e+06	8.84e+02	4.4e+03
22	13C-1,2,3,6,7,8-HxCDF	2.23e+06	5.00e+02	4.5e+03	4.32e+06	8.84e+02	4.9e+03
23	13C-2,3,4,6,7,8-HxCDF	2.04e+06	5.00e+02	4.1e+03	3.94e+06	8.84e+02	4.5e+03
24	13C-1,2,3,7,8,9-HxCDF	1.43e+06	5.00e+02	2.9e+03	2.85e+06	8.84e+02	3.2e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.10e+06	1.23e+03	8.9e+02	2.47e+06	8.42e+03	2.9e+02
26	13C-1,2,3,4,7,8,9-HpCDF	7.32e+05	1.23e+03	6.0e+02	1.62e+06	8.42e+03	1.9e+02
27	13C-2,3,7,8-TCDD	1.44e+06	4.40e+03	3.3e+02	1.84e+06	2.28e+03	8.1e+02
28	13C-1,2,3,7,8-PeCDD	3.34e+06	4.08e+02	8.2e+03	2.20e+06	9.16e+02	2.4e+03
29	13C-1,2,3,4,7,8-HxCDD	2.85e+06	7.16e+02	4.0e+03	2.21e+06	8.68e+02	2.5e+03
30	13C-1,2,3,6,7,8-HxCDD	2.75e+06	7.16e+02	3.8e+03	2.11e+06	8.68e+02	2.4e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.93e+06	3.28e+02	5.9e+03	1.79e+06	3.16e+02	5.7e+03
32	13C-OCDD	1.06e+06	6.28e+02	1.7e+03	1.20e+06	4.20e+02	2.9e+03
33	13C-1,2,3,4-TCDD	2.57e+06	4.40e+03	5.9e+02	3.23e+06	2.28e+03	1.4e+03
34	13C-1,2,3,7,8,9-HxCDD	2.59e+06	7.16e+02	3.6e+03	2.09e+06	8.68e+02	2.4e+03
35	37Cl-2,3,7,8-TCDD	3.11e+04	1.21e+03	2.6e+01			

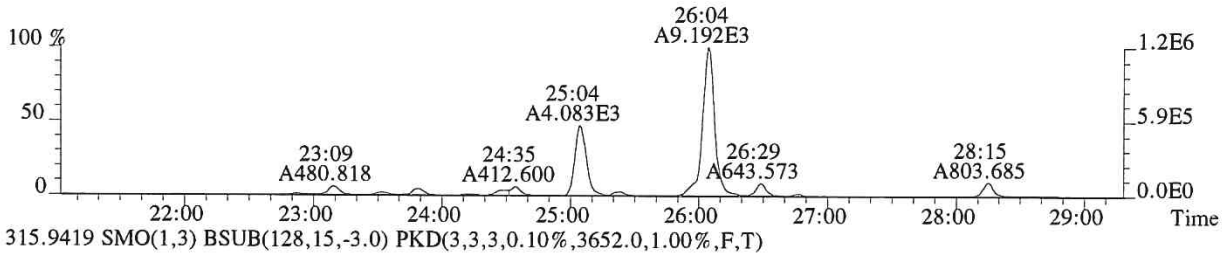
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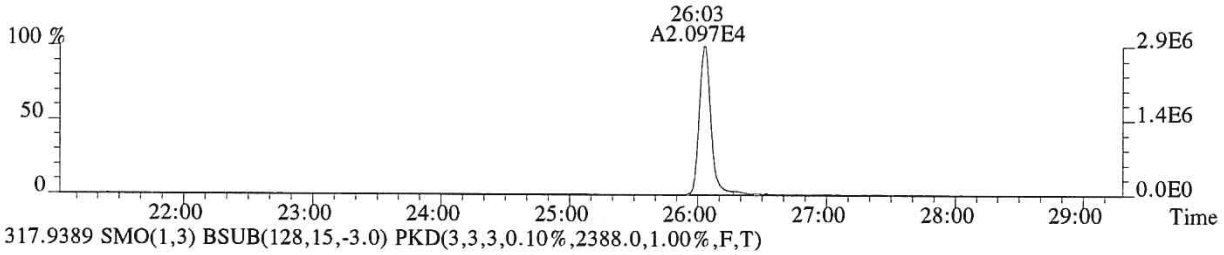
File:P519773 #1-587 Acq: 4-JAN-2019 09:55:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,432.0,1.00%,F,T)



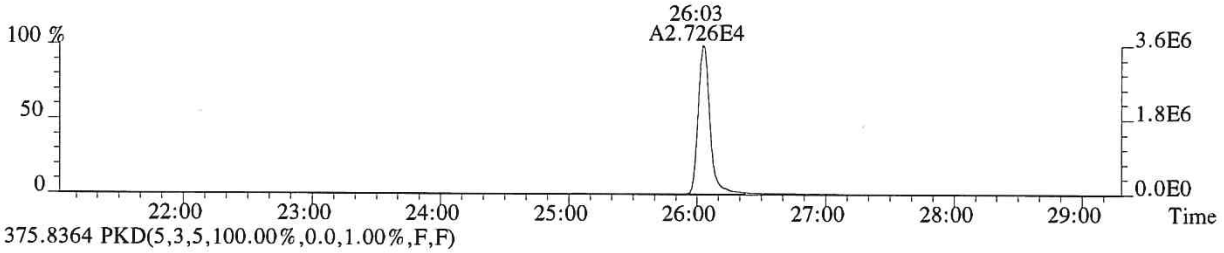
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1088.0,1.00%,F,T)



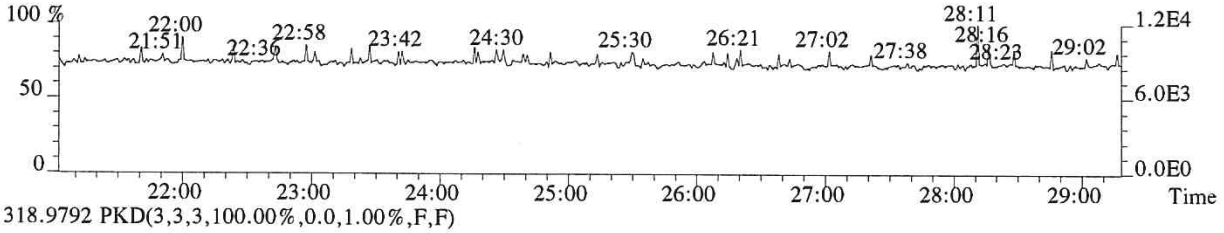
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3652.0,1.00%,F,T)



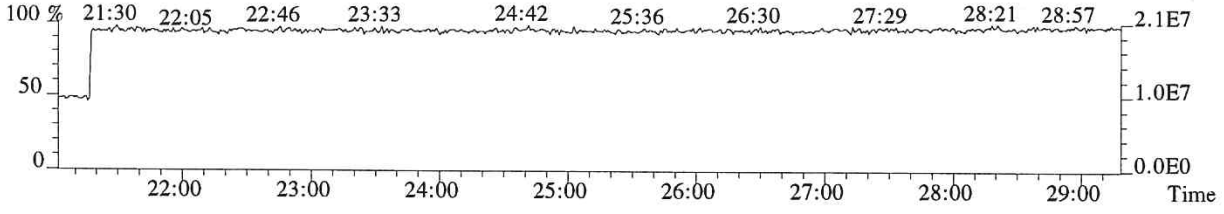
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2388.0,1.00%,F,T)



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

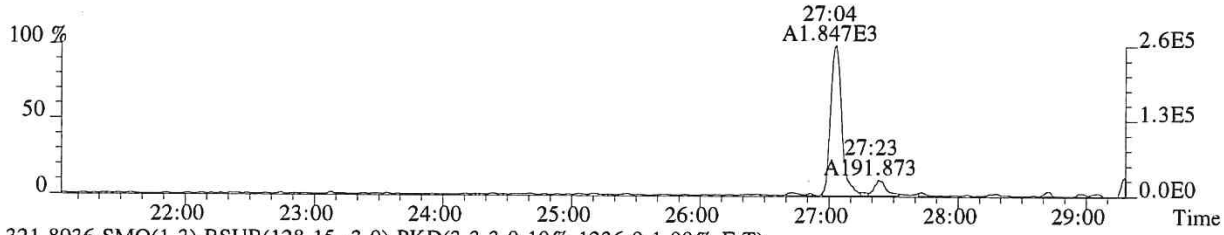


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

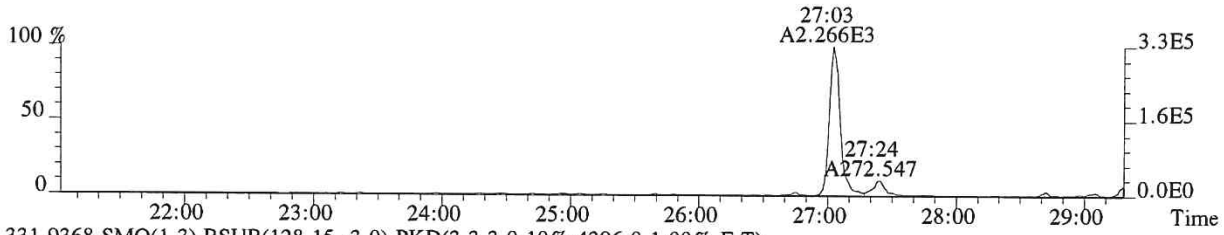


016336

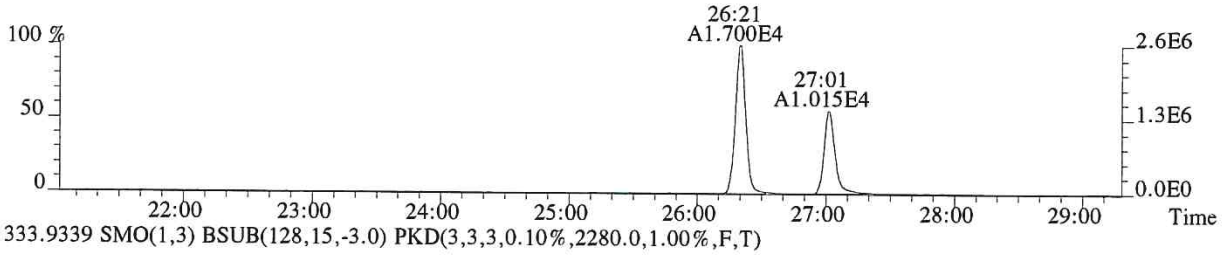
File:P519773 #1-587 Acq: 4-JAN-2019 09:55:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1716.0,1.00%,F,T)



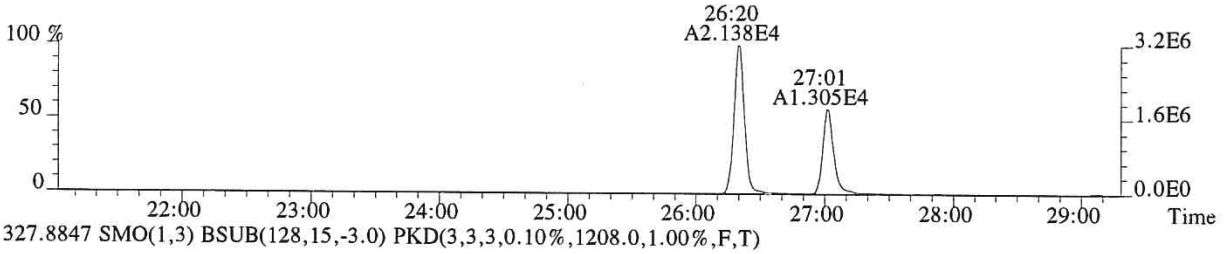
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1236.0,1.00%,F,T)



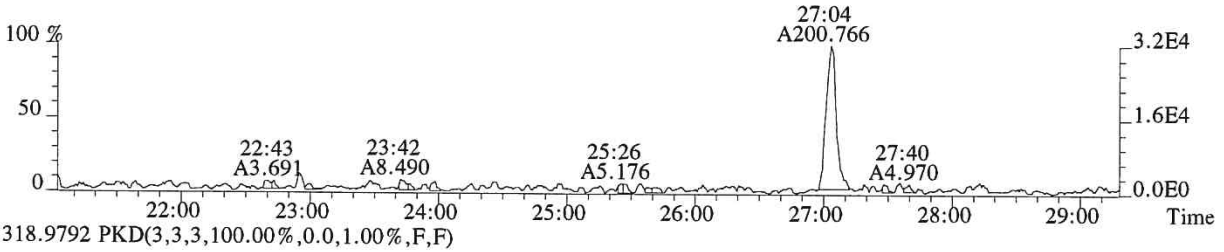
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4396.0,1.00%,F,T)



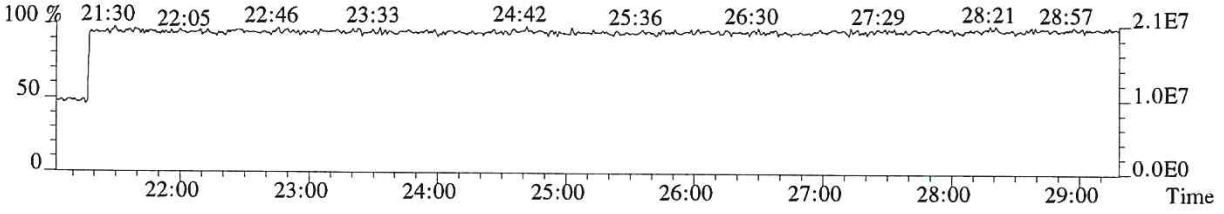
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2280.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1208.0,1.00%,F,T)

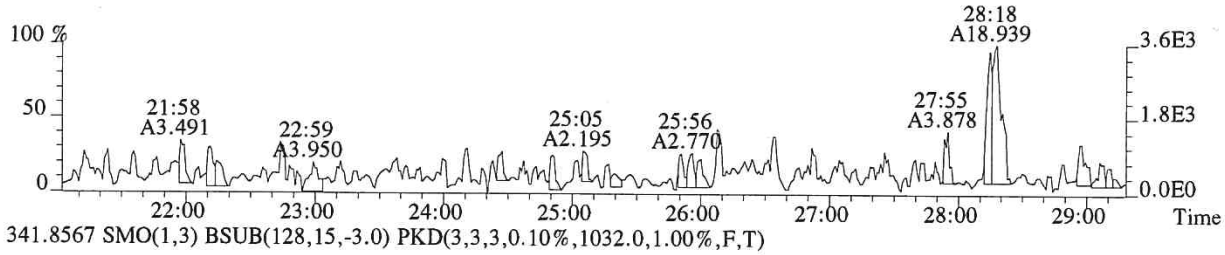


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

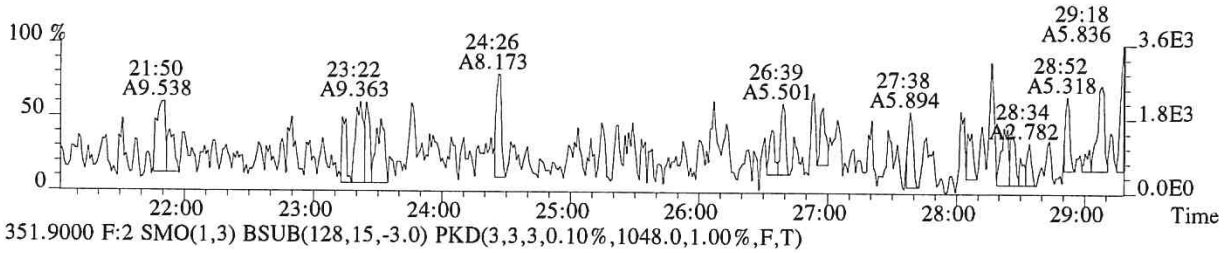


016337

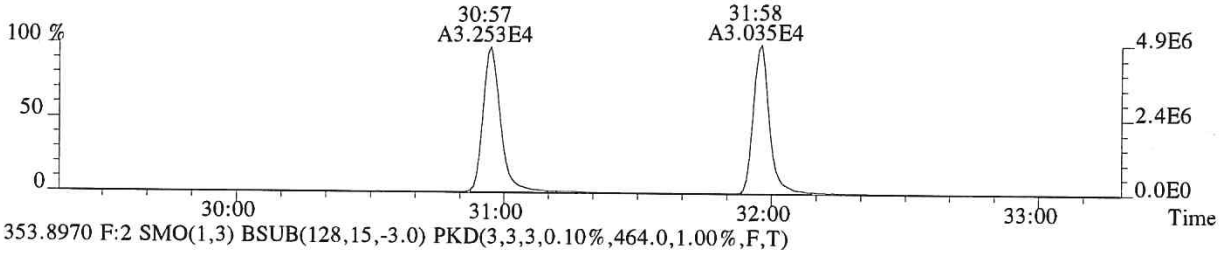
File:P519773 #1-587 Acq: 4-JAN-2019 09:55:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,488.0,1.00%,F,T)



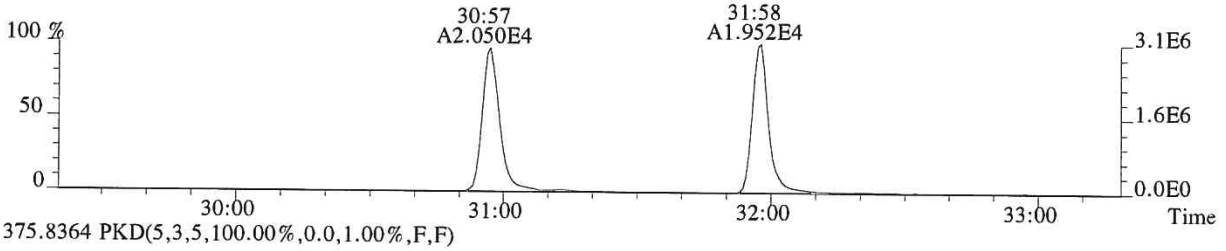
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



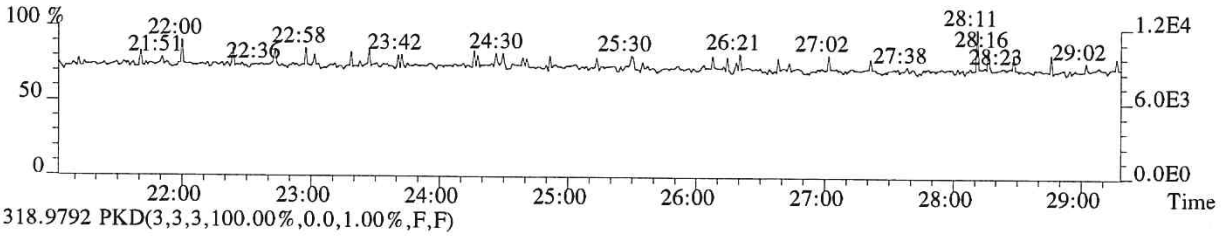
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1048.0,1.00%,F,T)



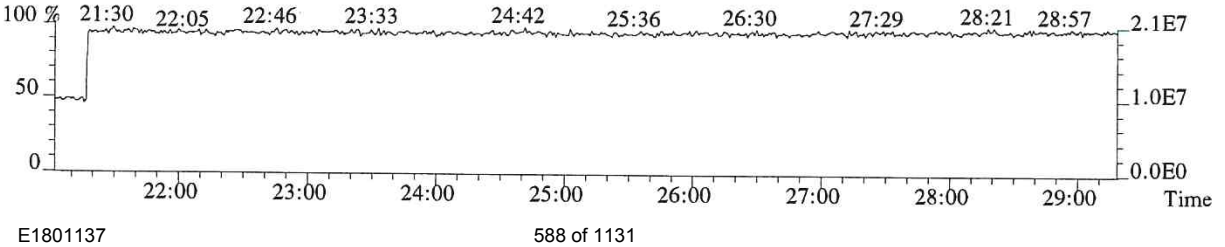
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,464.0,1.00%,F,T)



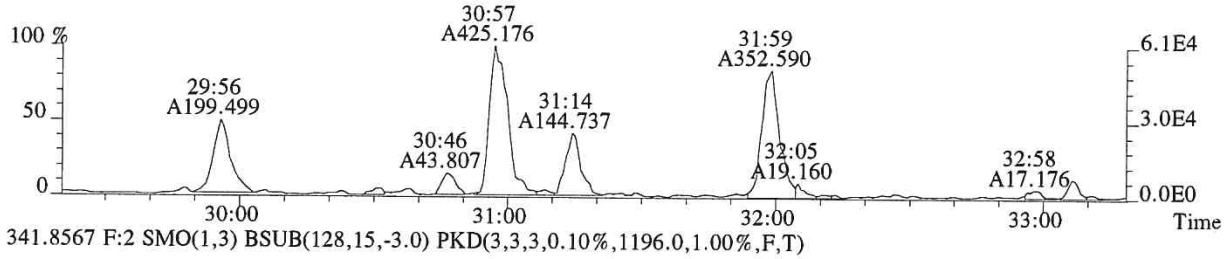
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



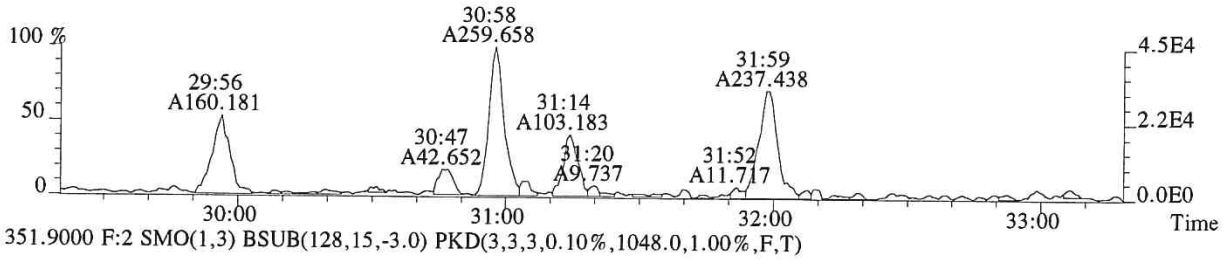
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



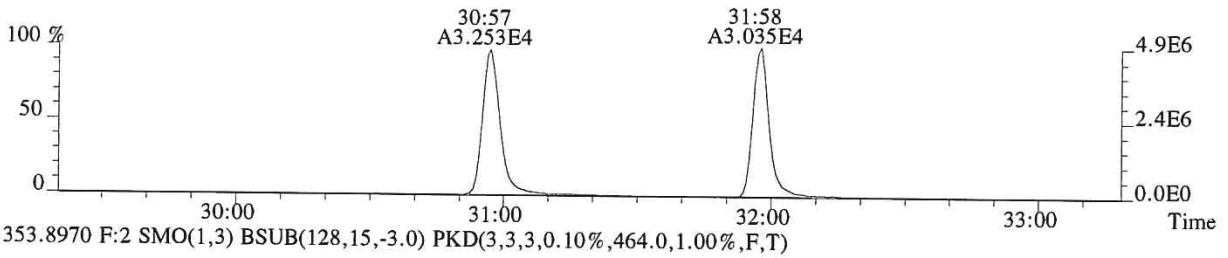
File:P519773 #1-358 Acq: 4-JAN-2019 09:55:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1076.0,1.00%,F,T)



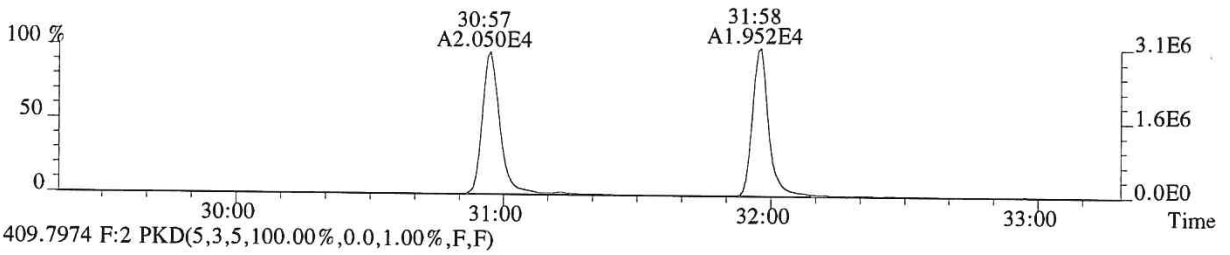
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1196.0,1.00%,F,T)



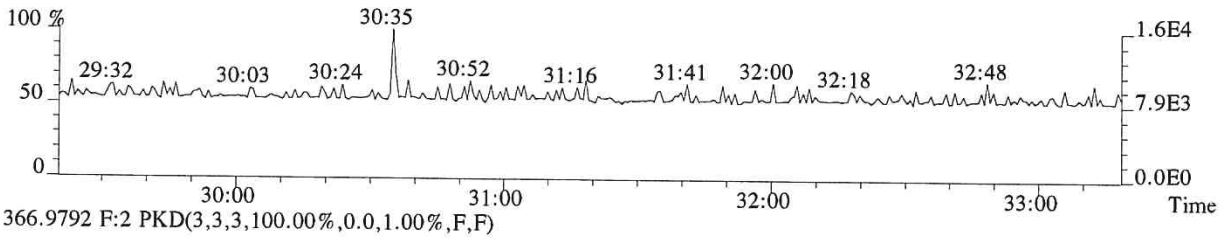
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1048.0,1.00%,F,T)



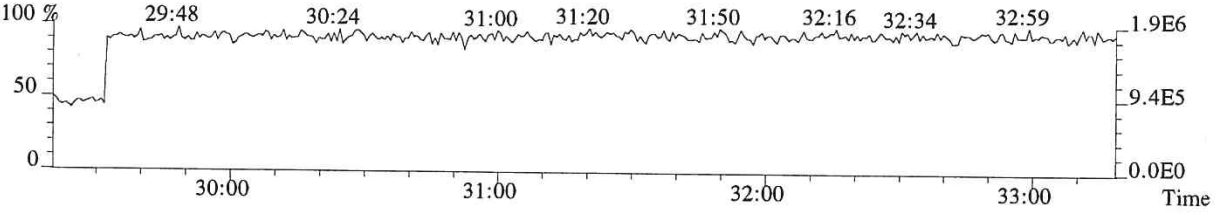
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,464.0,1.00%,F,T)



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

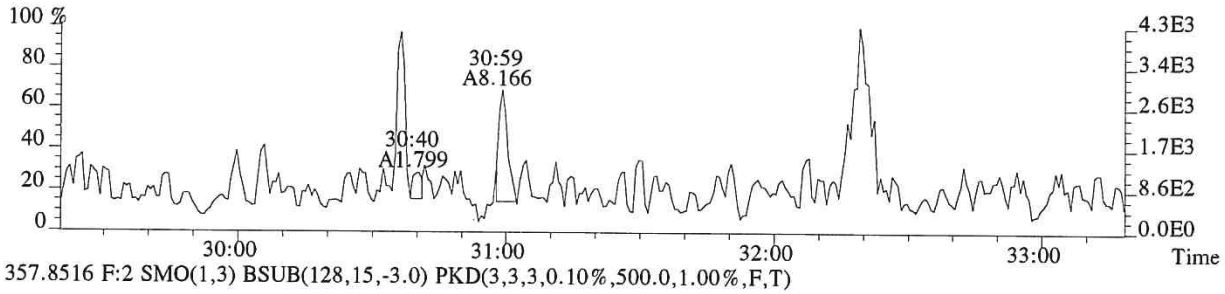


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

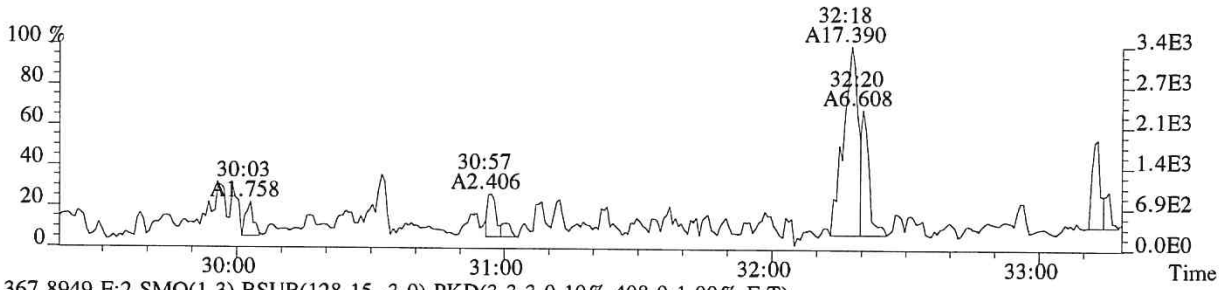


016339

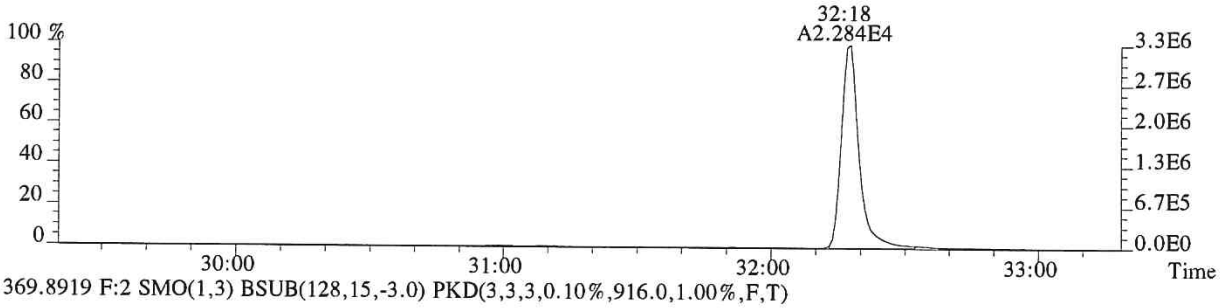
File:P519773 #1-358 Acq: 4-JAN-2019 09:55:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1120.0,1.00%,F,T)



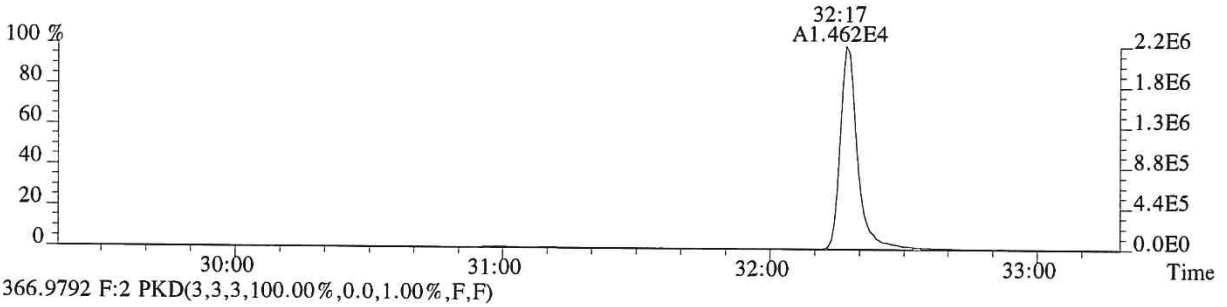
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,500.0,1.00%,F,T)



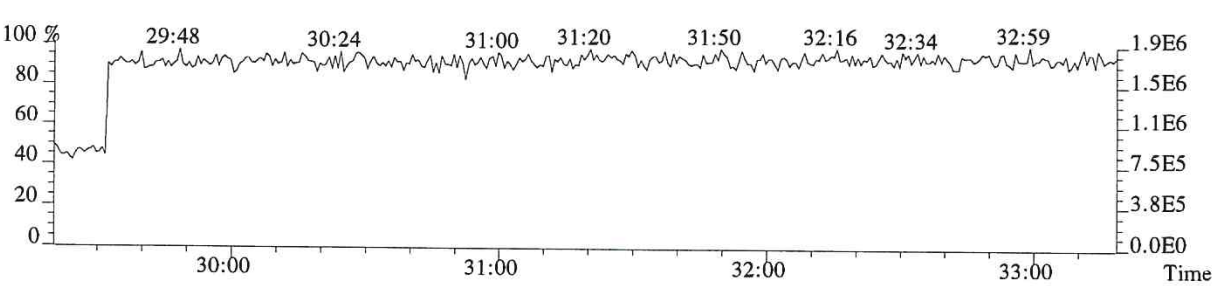
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,408.0,1.00%,F,T)



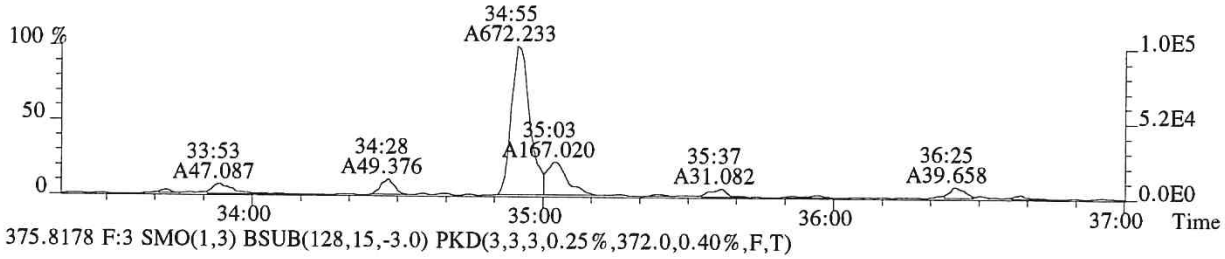
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,916.0,1.00%,F,T)



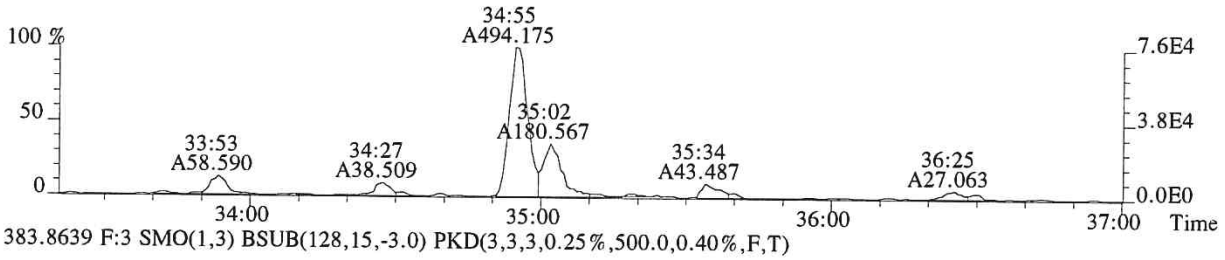
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



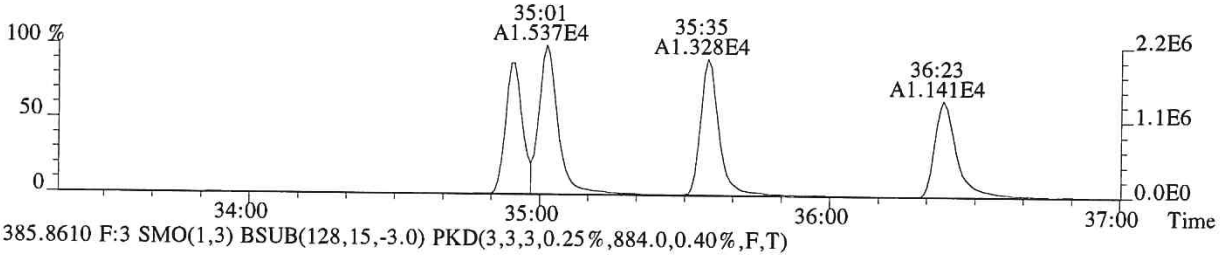
File:P519773 #1-330 Acq: 4-JAN-2019 09:55:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,800.0,0.40%,F,T)



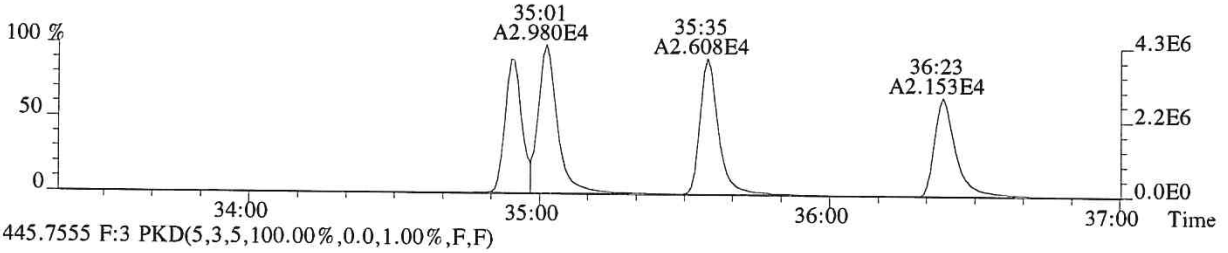
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,372.0,0.40%,F,T)



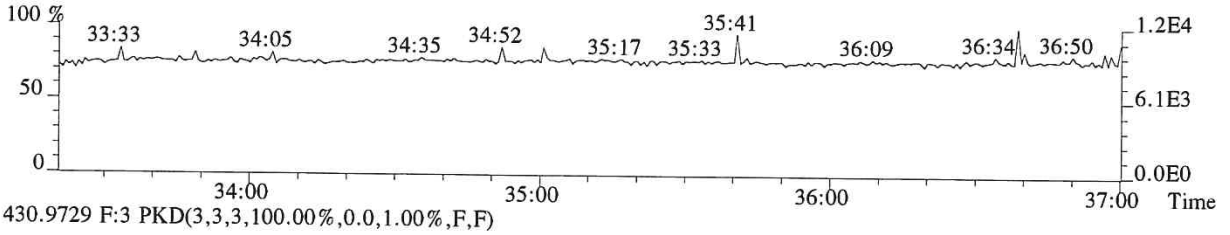
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,500.0,0.40%,F,T)



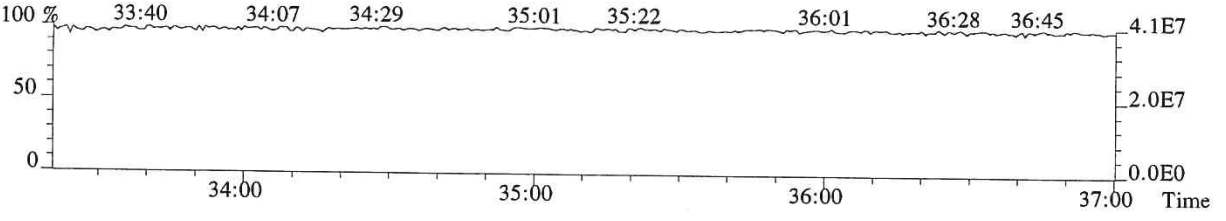
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



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

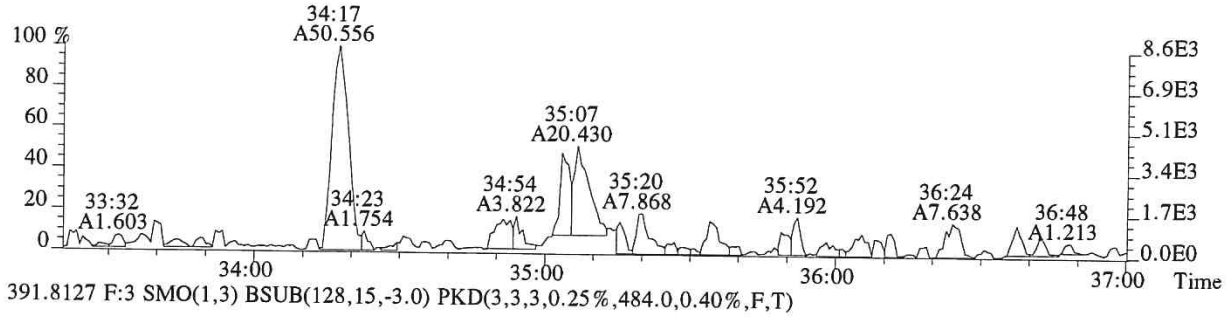


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

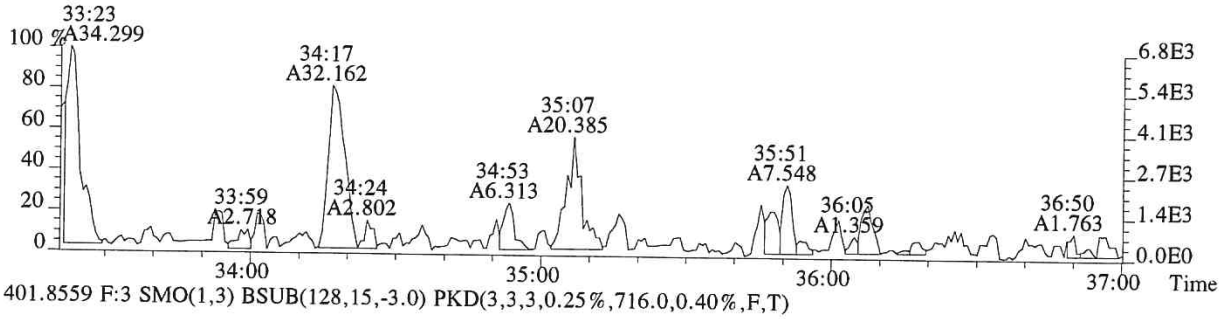


016341

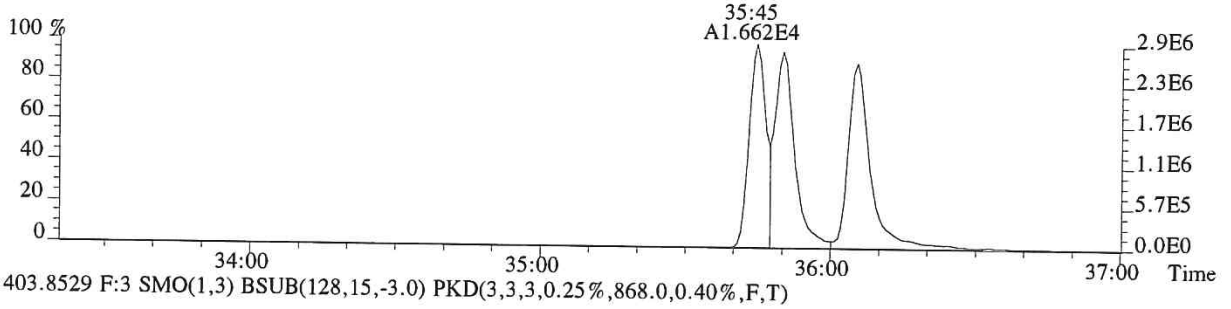
File:P519773 #1-330 Acq: 4-JAN-2019 09:55:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,240.0,0.40%,F,T)



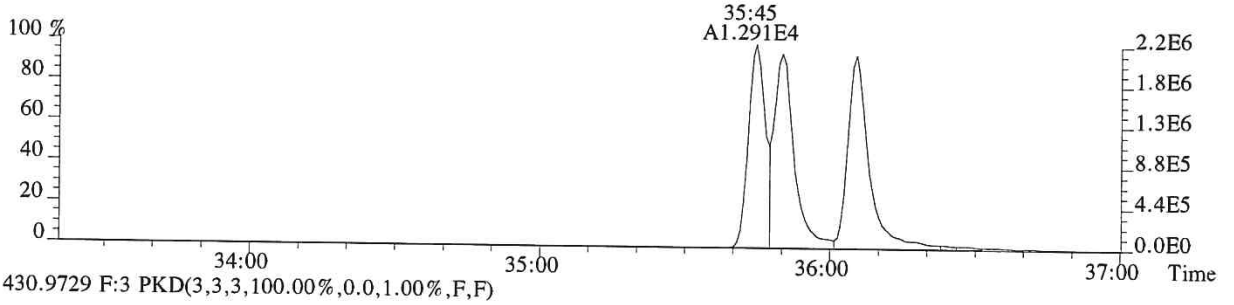
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,484.0,0.40%,F,T)



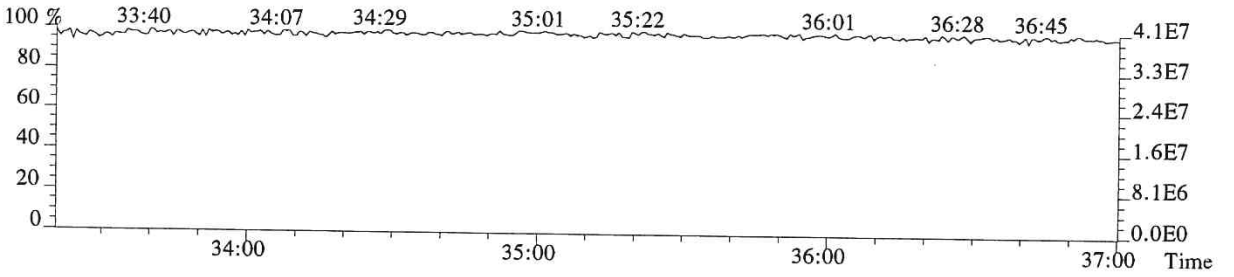
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,716.0,0.40%,F,T)



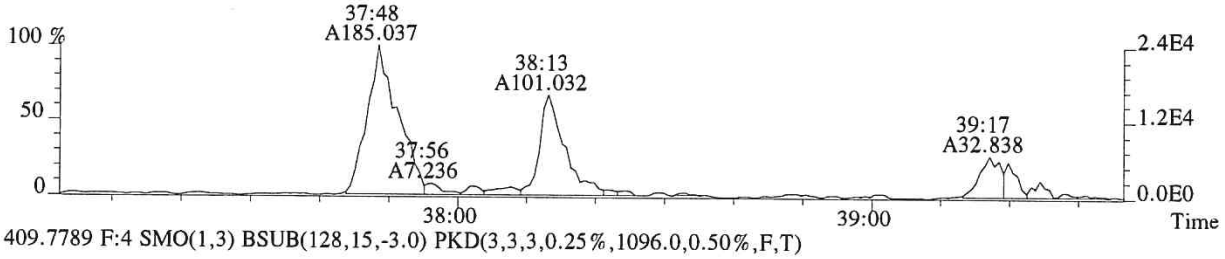
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,868.0,0.40%,F,T)



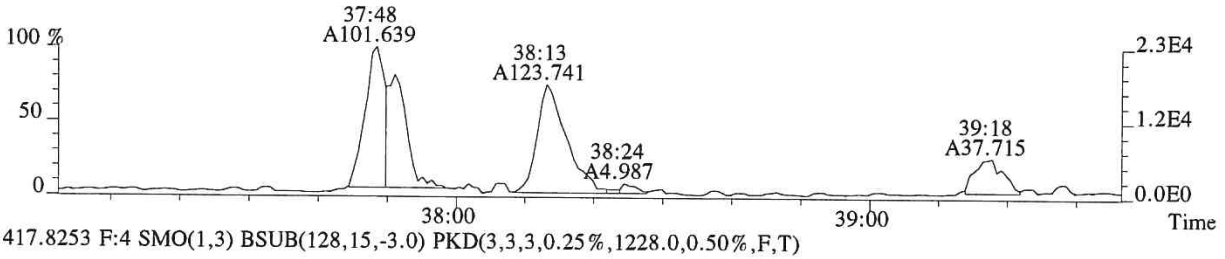
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



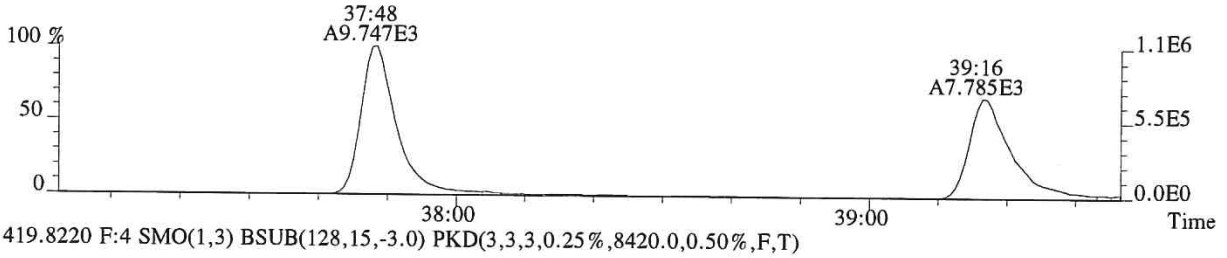
File:P519773 #1-232 Acq: 4-JAN-2019 09:55:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,364.0,0.50%,F,T)



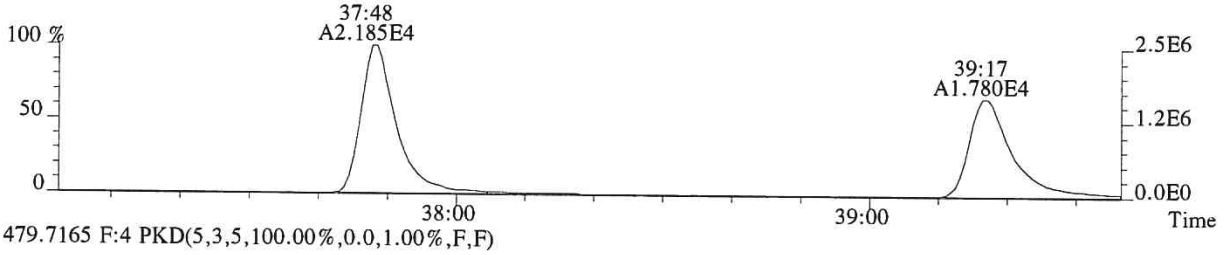
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1096.0,0.50%,F,T)



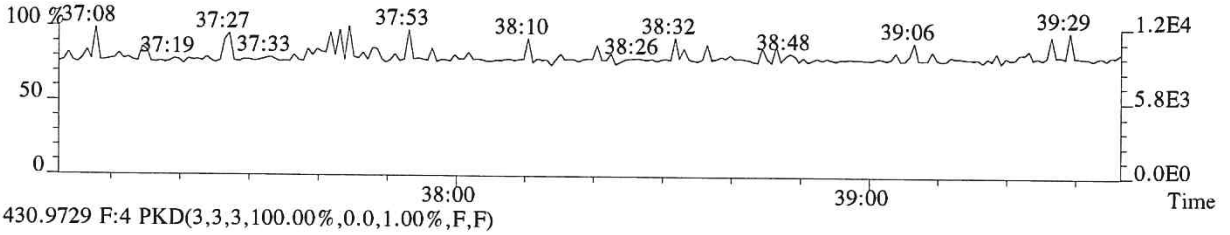
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1228.0,0.50%,F,T)



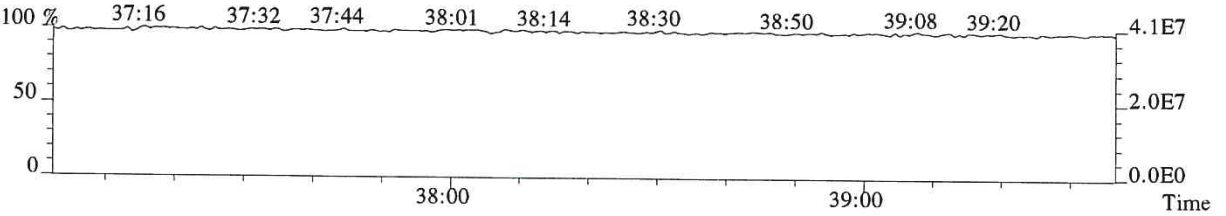
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8420.0,0.50%,F,T)



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

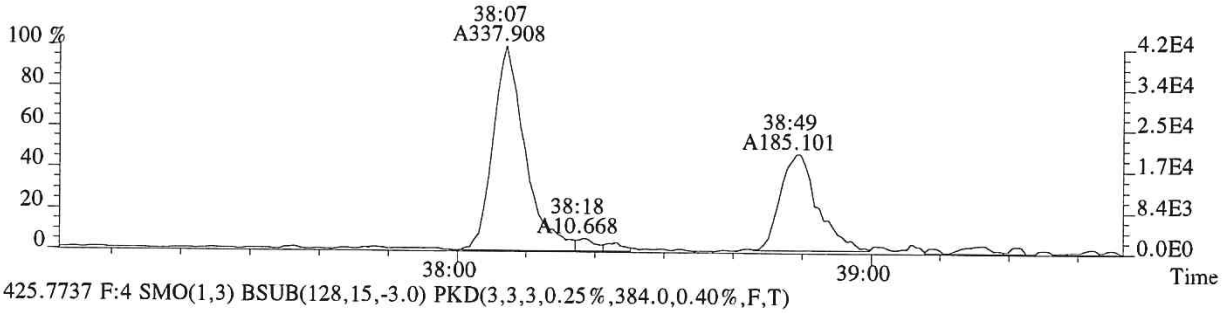


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

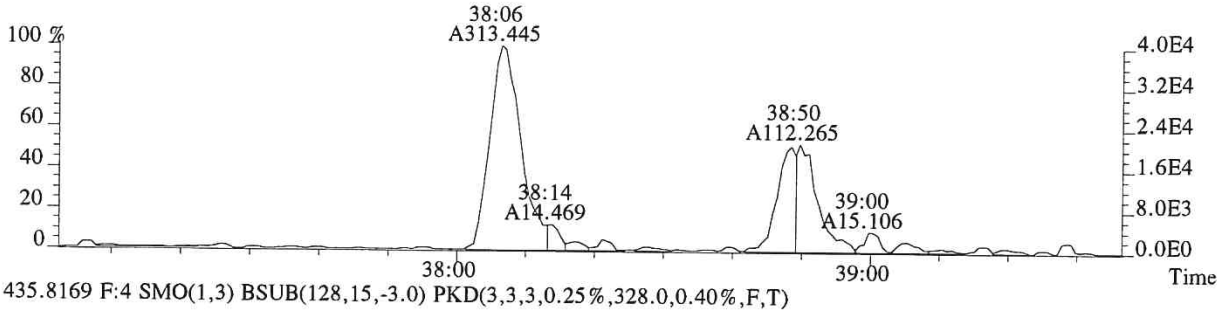


016343

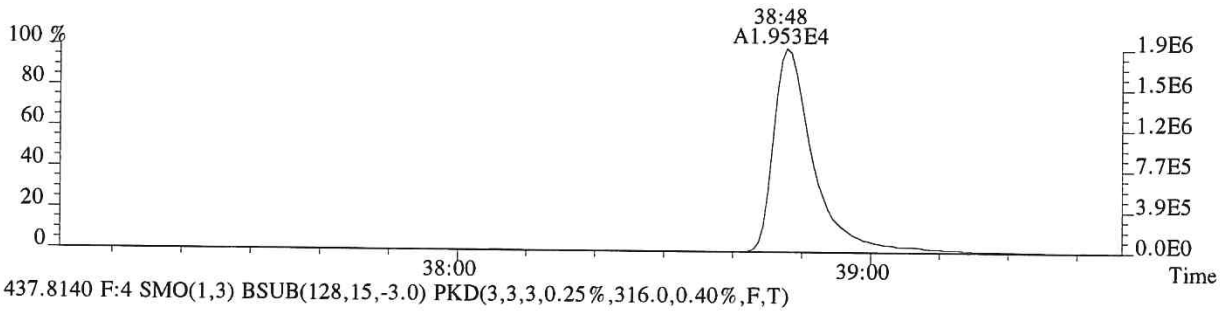
File:P519773 #1-232 Acq: 4-JAN-2019 09:55:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,456.0,0.40%,F,T)



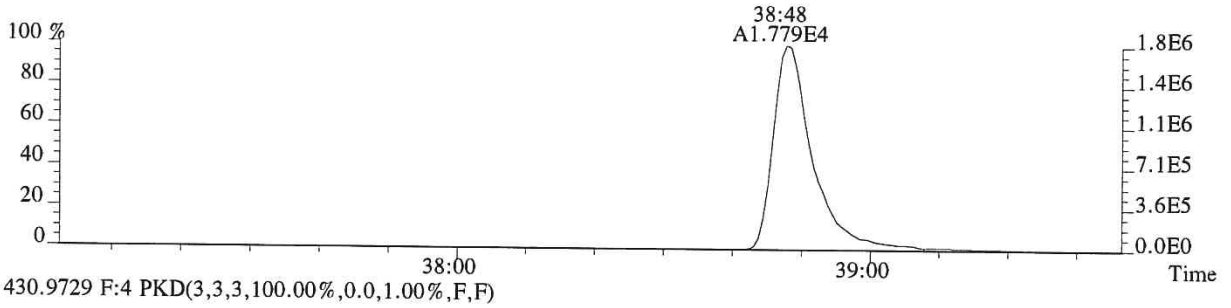
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,384.0,0.40%,F,T)



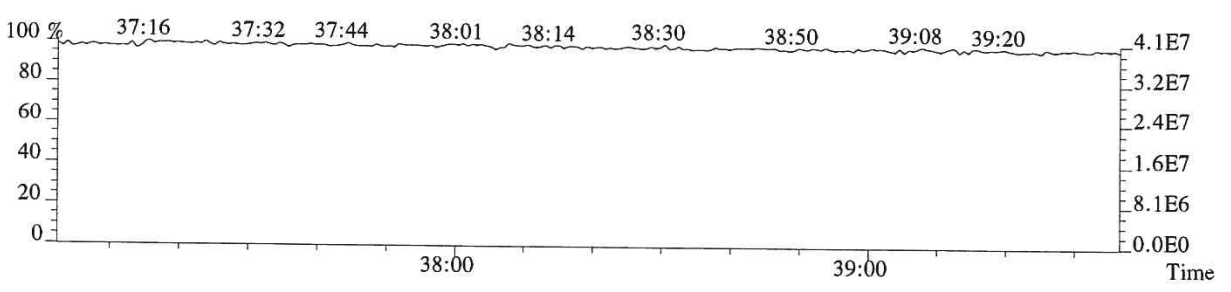
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,328.0,0.40%,F,T)



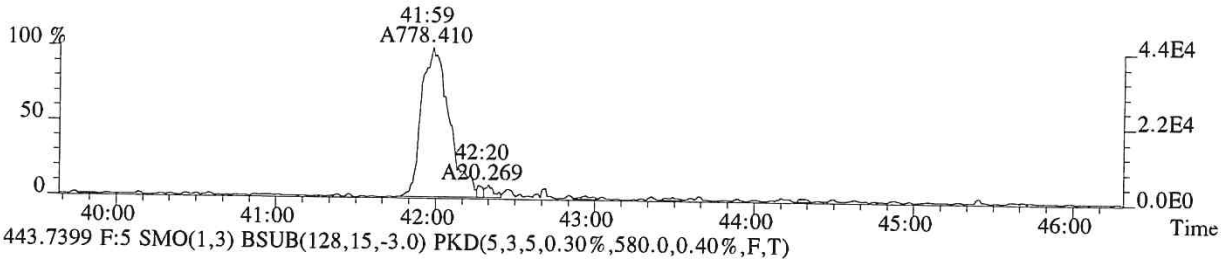
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,316.0,0.40%,F,T)



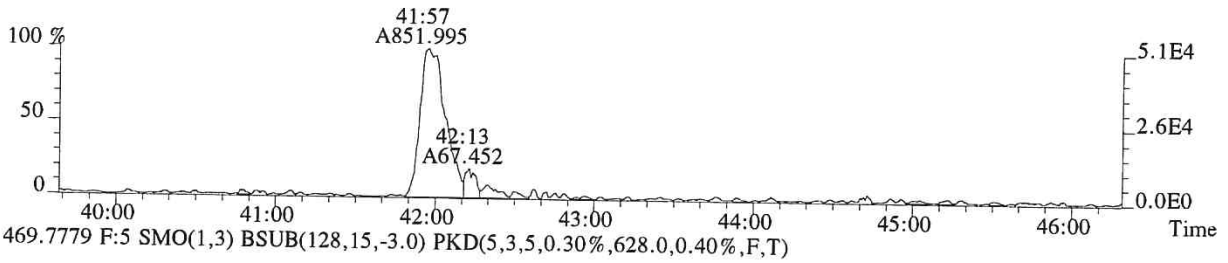
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



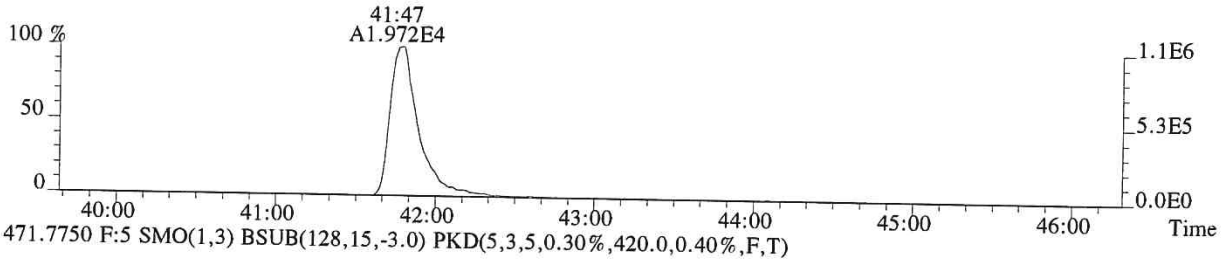
File:P519773 #1-601 Acq: 4-JAN-2019 09:55:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,400.0,0.40%,F,T)



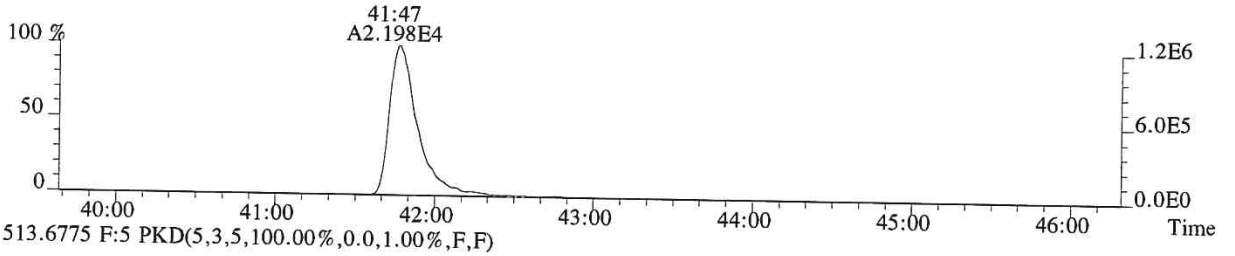
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,580.0,0.40%,F,T)



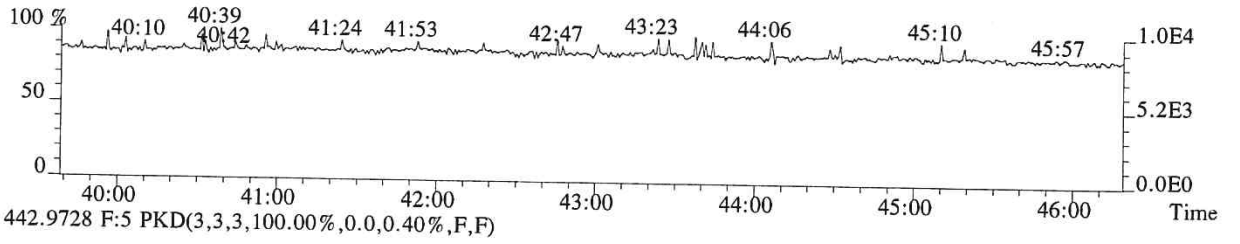
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,628.0,0.40%,F,T)



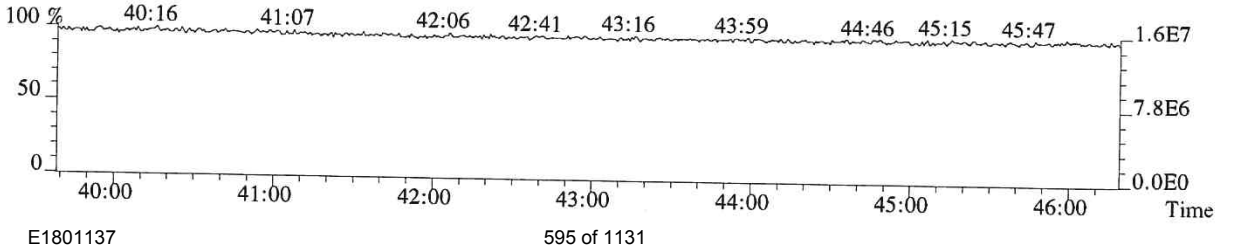
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,420.0,0.40%,F,T)



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

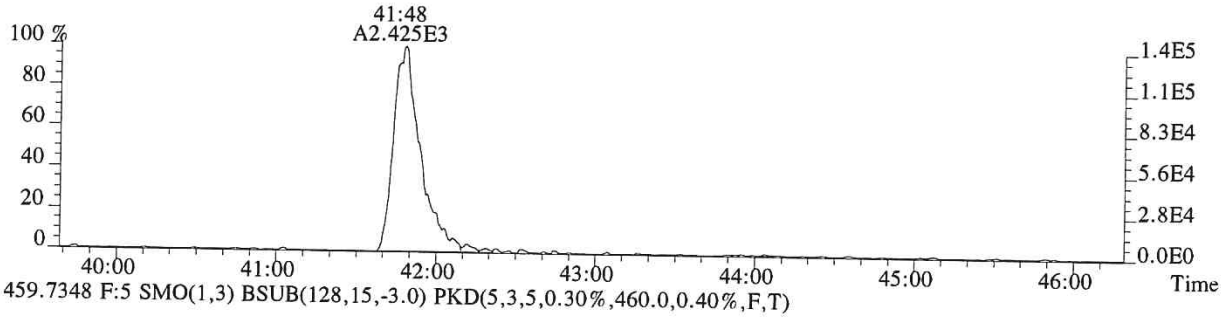


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

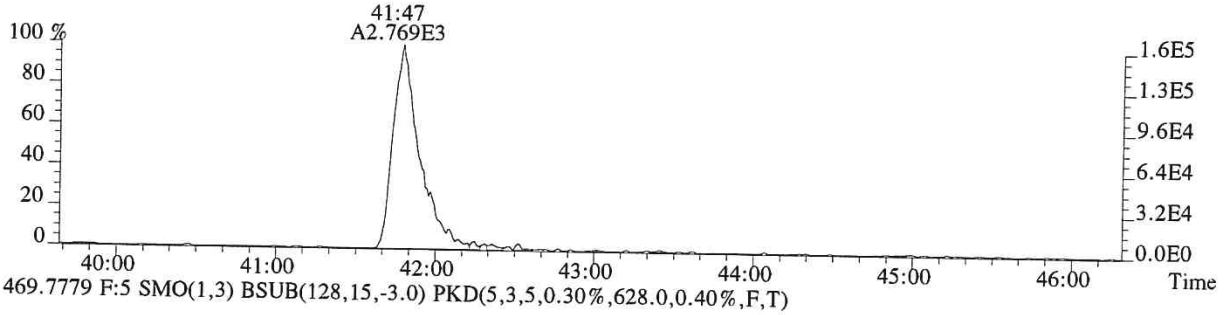


016345

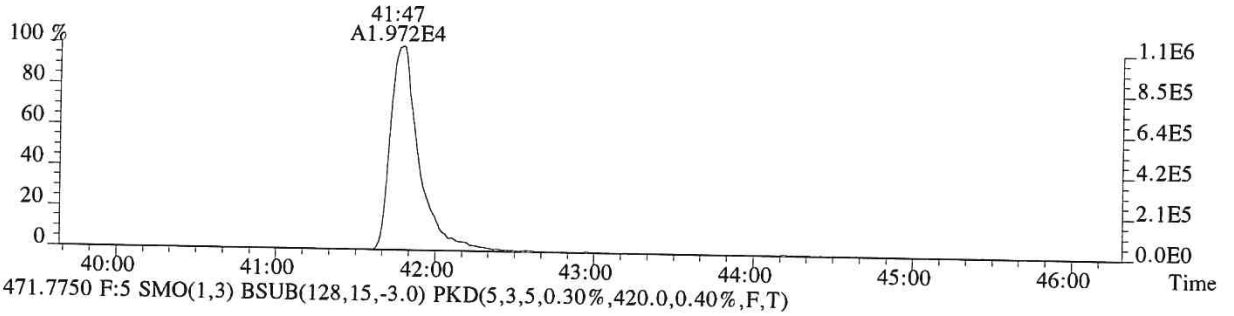
File:P519773 #1-601 Acq: 4-JAN-2019 09:55:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-016DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,356.0,0.40%,F,T)



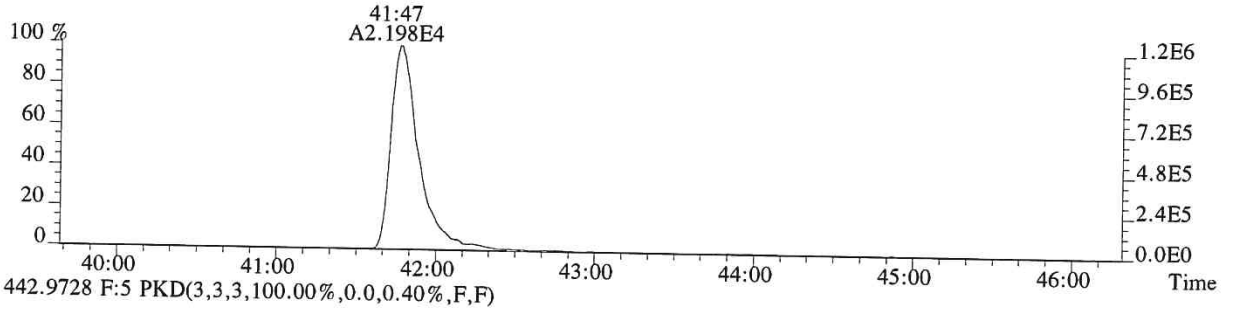
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,460.0,0.40%,F,T)



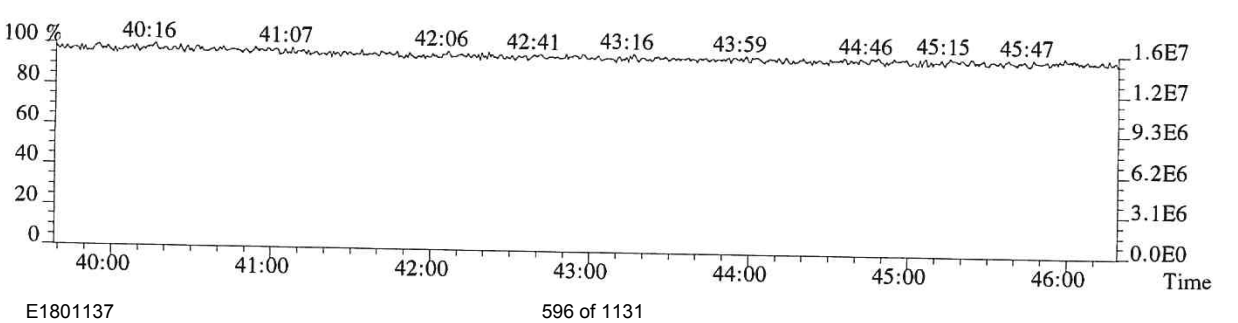
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,628.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,420.0,0.40%,F,T)



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



016346

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0190

Run #14 Filename P519767 Samp: 1 Inj: 1 Acquired: 4-JAN-19 05:03:19
Processed: 4-JAN-19 15:57:12 Sample ID: E1801137-017

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:06	6.579e+02	8.661e+02	0.76	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:59	7.862e+01	5.225e+01	1.50	yes	yes	1.012
3	Unk	2,3,4,7,8-PeCDF	32:00	5.998e+01	2.928e+01	2.05	no	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:55	8.147e+01	7.705e+01	1.06	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:03	3.879e+01	4.056e+01	0.96	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:36	1.063e+01	7.513e+00	1.41	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	NotFnd	*	*	*	no	yes	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:50	4.775e+01	3.725e+01	1.28	no	yes	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	yes	1.258
10	Unk	OCDF	41:59	8.070e+01	6.331e+01	1.27	no	no	1.359
11	Unk	2,3,7,8-TCDD	27:04	1.958e+02	2.673e+02	0.73	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:19	2.276e+01	1.641e+01	1.39	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:07	1.118e+02	5.324e+01	2.10	no	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:50	1.213e+03	1.270e+03	0.95	yes	no	1.025
17	Unk	OCDD	41:49	2.053e+04	2.356e+04	0.87	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	1.116e+04	1.463e+04	0.76	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:58	2.821e+04	1.805e+04	1.56	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:59	2.874e+04	1.805e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:55	1.346e+04	2.609e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:03	1.630e+04	3.141e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:36	1.515e+04	2.871e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:24	1.396e+04	2.661e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:49	1.055e+04	2.487e+04	0.42	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:16	9.291e+03	2.119e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:03	6.139e+03	7.324e+03	0.84	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:18	2.260e+04	1.423e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:45	2.021e+04	1.568e+04	1.29	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:51	2.156e+04	1.709e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:49	2.326e+04	2.164e+04	1.08	yes	no	0.858
32	IS	13C-OCDD	41:48	2.101e+04	2.382e+04	0.88	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	3.707e+04	4.699e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:06	4.797e+04	3.779e+04	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:04	8.821e+03				no	1.014

$$\text{OCDD} = \frac{(2.053e+04 + 2.356e+04) \times 4000\ \text{pg} \times 1}{(2.101e+04 + 2.382e+04) \times 10.004\ \text{g} \times 79.7 / 100 \times 1.118} = 441 \cdot 324\ \text{ng/kg}$$

LG 1/7/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0190

Run #14 Filename P519767 Samp: 1 Inj: 1 Acquired: 4-JAN-19 05:03:19
Processed: 4-JAN-19 15:57:12 LAB. ID: E1801137-017

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.71e+04	1.18e+03	7.4e+01	1.08e+05	9.80e+02	1.1e+02
2	1,2,3,7,8-PeCDF	1.64e+04	5.40e+02	3.0e+01	9.52e+03	1.23e+03	7.7e+00
3	2,3,4,7,8-PeCDF	9.96e+03	5.40e+02	1.8e+01	4.47e+03	1.23e+03	3.6e+00
4	1,2,3,4,7,8-HxCDF	1.37e+04	4.76e+02	2.9e+01	1.39e+04	4.76e+02	2.9e+01
5	1,2,3,6,7,8-HxCDF	7.51e+03	4.76e+02	1.6e+01	6.35e+03	4.76e+02	1.3e+01
6	2,3,4,6,7,8-HxCDF	2.49e+03	4.76e+02	5.2e+00	1.75e+03	4.76e+02	3.7e+00
7	1,2,3,7,8,9-HxCDF	*	4.76e+02	*	*	4.76e+02	*
8	1,2,3,4,6,7,8-HpCDF	7.81e+03	4.04e+02	1.9e+01	5.31e+03	3.32e+02	1.6e+01
9	1,2,3,4,7,8,9-HpCDF	*	4.04e+02	*	*	3.32e+02	*
10	OCDF	7.80e+03	2.44e+02	3.2e+01	7.36e+03	6.68e+02	1.1e+01
11	2,3,7,8-TCDD	3.15e+04	2.28e+03	1.4e+01	4.14e+04	1.07e+03	3.9e+01
12	1,2,3,7,8-PeCDD	5.19e+03	9.64e+02	5.4e+00	3.95e+03	2.64e+02	1.5e+01
13	1,2,3,4,7,8-HxCDD	*	5.96e+02	*	*	3.16e+03	*
14	1,2,3,6,7,8-HxCDD	*	5.96e+02	*	*	3.16e+03	*
15	1,2,3,7,8,9-HxCDD	2.22e+04	5.96e+02	3.7e+01	1.20e+04	3.16e+03	3.8e+00
16	1,2,3,4,6,7,8-HpCDD	1.26e+05	4.80e+02	2.6e+02	1.35e+05	4.52e+02	3.0e+02
17	OCDD	1.17e+06	3.84e+02	3.0e+03	1.33e+06	3.96e+02	3.4e+03
18	13C-2,3,7,8-TCDF	1.60e+06	3.37e+03	4.7e+02	2.07e+06	2.26e+03	9.2e+02
19	13C-1,2,3,7,8-PeCDF	4.34e+06	6.36e+02	6.8e+03	2.79e+06	6.80e+02	4.1e+03
20	13C-2,3,4,7,8-PeCDF	4.66e+06	6.36e+02	7.3e+03	2.96e+06	6.80e+02	4.3e+03
21	13C-1,2,3,4,7,8-HxCDF	2.31e+06	7.04e+02	3.3e+03	4.45e+06	6.60e+02	6.7e+03
22	13C-1,2,3,6,7,8-HxCDF	2.48e+06	7.04e+02	3.5e+03	4.74e+06	6.60e+02	7.2e+03
23	13C-2,3,4,6,7,8-HxCDF	2.39e+06	7.04e+02	3.4e+03	4.52e+06	6.60e+02	6.9e+03
24	13C-1,2,3,7,8,9-HxCDF	1.87e+06	7.04e+02	2.7e+03	3.57e+06	6.60e+02	5.4e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.31e+06	2.34e+03	5.6e+02	3.05e+06	5.19e+03	5.9e+02
26	13C-1,2,3,4,7,8,9-HpCDF	8.65e+05	2.34e+03	3.7e+02	1.93e+06	5.19e+03	3.7e+02
27	13C-2,3,7,8-TCDD	9.24e+05	5.10e+03	1.8e+02	1.15e+06	2.13e+03	5.4e+02
28	13C-1,2,3,7,8-PeCDD	3.61e+06	6.88e+02	5.3e+03	2.26e+06	7.24e+02	3.1e+03
29	13C-1,2,3,4,7,8-HxCDD	3.34e+06	1.11e+03	3.0e+03	2.59e+06	5.84e+02	4.4e+03
30	13C-1,2,3,6,7,8-HxCDD	3.17e+06	1.11e+03	2.9e+03	2.51e+06	5.84e+02	4.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.30e+06	5.12e+02	4.5e+03	2.14e+06	4.88e+02	4.4e+03
32	13C-OCDD	1.19e+06	7.16e+02	1.7e+03	1.39e+06	2.68e+02	5.2e+03
33	13C-1,2,3,4-TCDD	5.66e+06	5.10e+03	1.1e+03	7.21e+06	2.13e+03	3.4e+03
34	13C-1,2,3,7,8,9-HxCDD	6.51e+06	1.11e+03	5.9e+03	5.16e+06	5.84e+02	8.8e+03
35	37Cl-2,3,7,8-TCDD	1.36e+06	1.43e+03	9.5e+02			

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Peak List Summary

CLIENT ID.
SL0190

Entry: 36 Totals Name: Total Tetra-Furans

Run: 14 File: P519767 Sample:1 Injection:1 Function:1

Acquired: 4-JAN-19 05:03:19 Processed: 4-JAN-19 15:57:12

Mass: 303.9020 305.8990 Tot Response: 2.08e+03 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	25:06	2.24e+02	3.36e+02	0.67	yes	5.59e+02		n	n
2	26:06	6.58e+02	8.66e+02	0.76	yes	1.52e+03	2,3,7,8-TCDF	n	n

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Peak List Summary

CLIENT ID.
SL0190

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 14 File: P519767 Sample:1 Injection:1 Function:1

Acquired: 4-JAN-19 05:03:19 Processed: 4-JAN-19 15:57:12

Mass: 319.8970 321.8940 Tot Response: 1.16e+03 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:44	3.20e+02	3.72e+02 0.86	yes	6.92e+02		n	n
2	27:04	1.96e+02	2.67e+02 0.73	yes	4.63e+02	2,3,7,8-TCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0190

Entry: 39 Totals Name: Total Penta-Furans2

Run: 14 File: P519767 Sample:1 Injection:1 Function:2

Acquired: 4-JAN-19 05:03:19 Processed: 4-JAN-19 15:57:12

Mass: 339.8600 341.8570 Tot Response: 1.31e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:59	7.86e+01	5.23e+01 1.50	yes	1.31e+02	1,2,3,7,8-PeCDF	n	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0190

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 14 File: P519767 Sample:1 Injection:1 Function:2

Acquired: 4-JAN-19 05:03:19 Processed: 4-JAN-19 15:57:12

Mass: 355.8550 357.8520 Tot Response: 1.04e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:30	5.06e+02	3.38e+02	1.49	yes	8.44e+02		n	n
2	31:12	2.55e+01	1.50e+01	1.70	yes	4.05e+01		n	n
3	31:32	6.88e+01	5.10e+01	1.35	yes	1.20e+02		y	n
4	32:19	2.28e+01	1.64e+01	1.39	yes	3.92e+01	1,2,3,7,8-PeCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0190

Entry: 41 Totals Name: Total Hexa-Furans

Run: 14 File: P519767 Sample:1 Injection:1 Function:3

Acquired: 4-JAN-19 05:03:19 Processed: 4-JAN-19 15:57:12

Mass: 373.8210 375.8180 Tot Response: 1.77e+02 RRF: 1.141

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:55	8.15e+01	7.70e+01 1.06	yes	1.59e+02	1,2,3,4,7,8-HxCDF	n	n
2	35:36	1.06e+01	7.51e+00 1.41	yes	1.81e+01	2,3,4,6,7,8-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0190

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 14 File: P519767 Sample:1 Injection:1 Function:3

Acquired: 4-JAN-19 05:03:19 Processed: 4-JAN-19 15:57:12

Mass: 389.8160 391.8130 Tot Response: 7.30e+03 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:19	3.49e+03	2.94e+03 1.19	yes	6.43e+03		n	n
2	35:08	5.06e+02	3.62e+02 1.40	yes	8.69e+02		y	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0190

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 14 File: P519767 Sample:1 Injection:1 Function:4

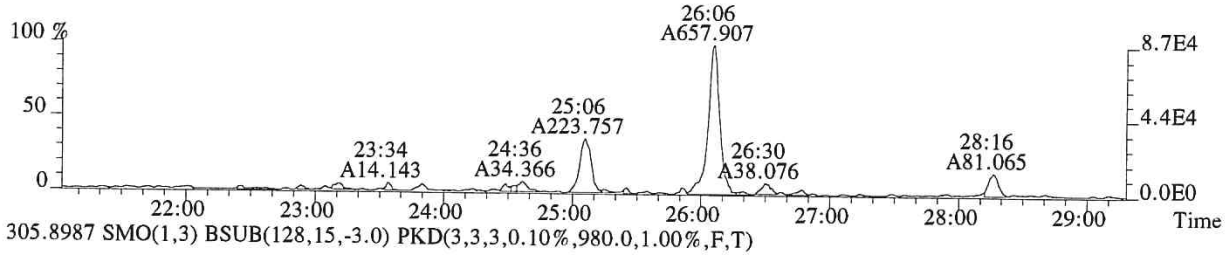
Acquired: 4-JAN-19 05:03:19 Processed: 4-JAN-19 15:57:12

Mass: 423.7770 425.7740 Tot Response: 1.12e+04 RRF: 1.025

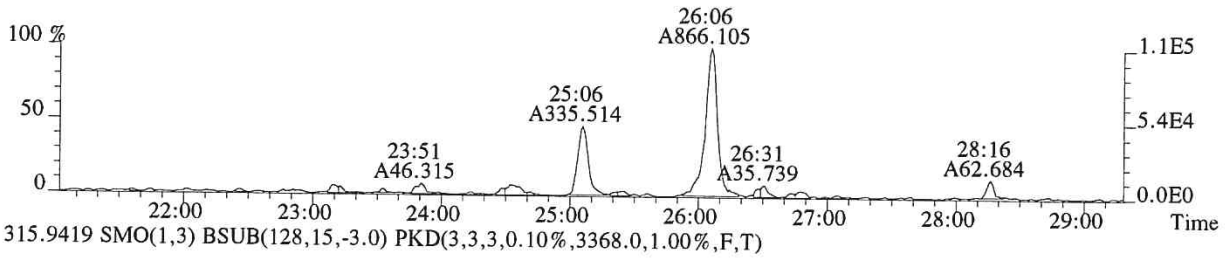
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:07	4.36e+03	4.34e+03	1.00	yes	8.70e+03		n	n
2	38:50	1.21e+03	1.27e+03	0.95	yes	2.48e+03	1,2,3,4,6,7,8-HpCDD	n	n

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

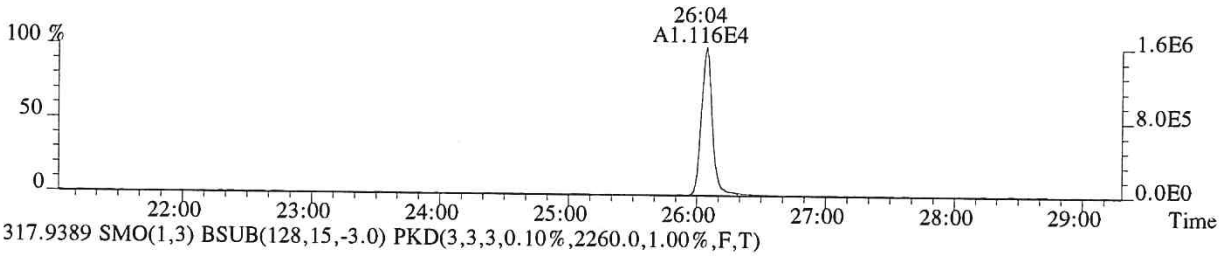
File:P519767 #1-587 Acq: 4-JAN-2019 05:03:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-017
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1180.0,1.00%,F,T)



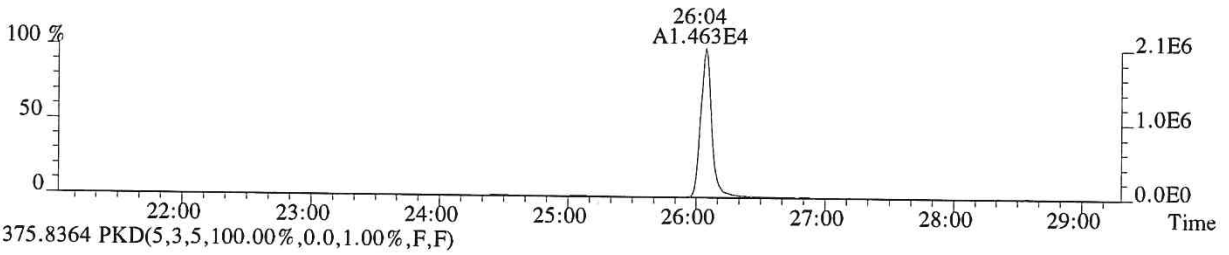
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,980.0,1.00%,F,T)



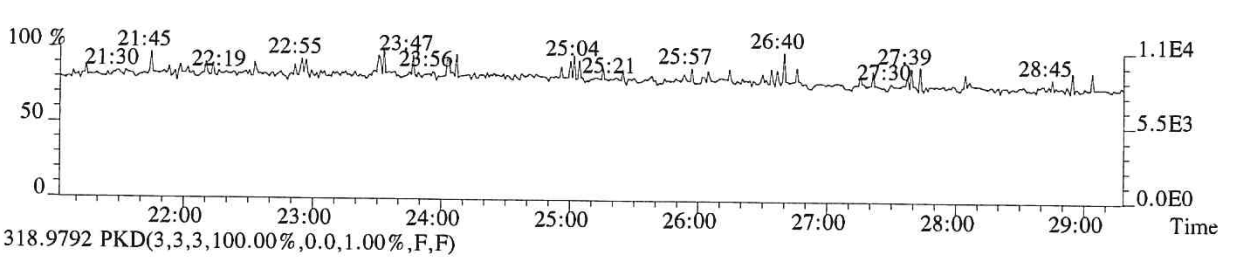
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3368.0,1.00%,F,T)



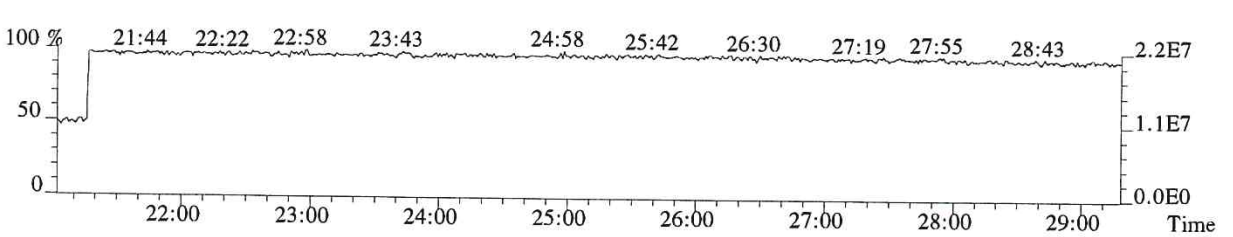
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2260.0,1.00%,F,T)



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

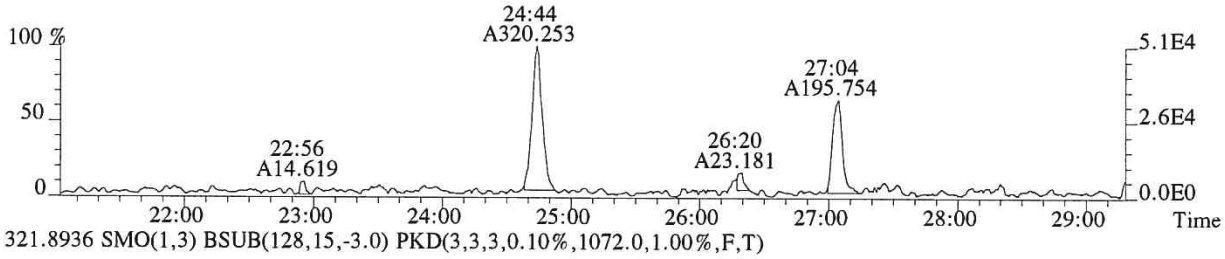


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

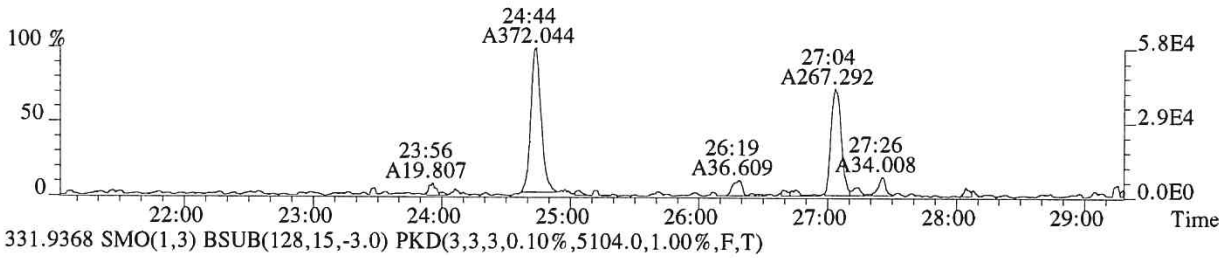


016356

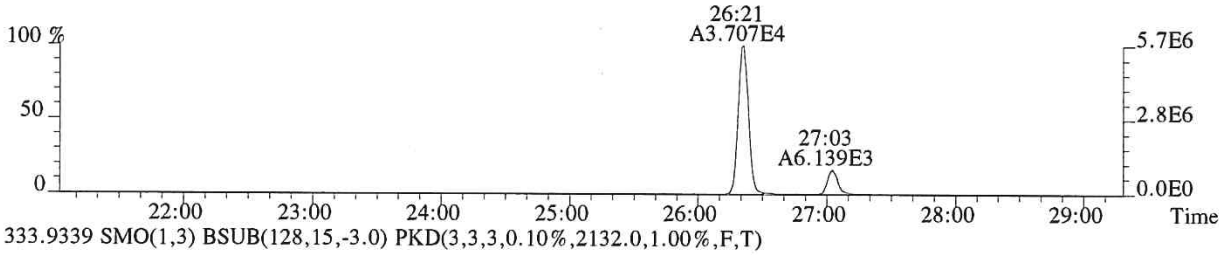
File:P519767 #1-587 Acq: 4-JAN-2019 05:03:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-017
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2284.0,1.00%,F,T)



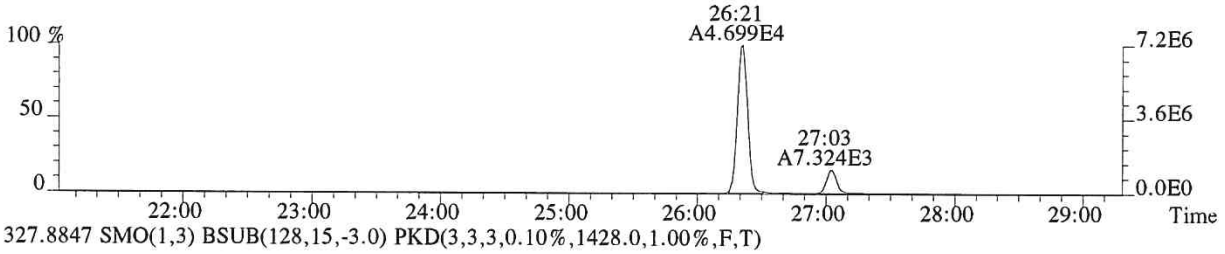
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1072.0,1.00%,F,T)



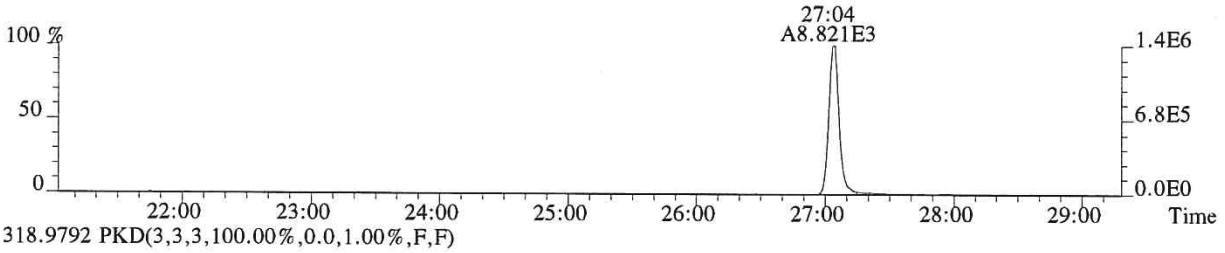
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5104.0,1.00%,F,T)



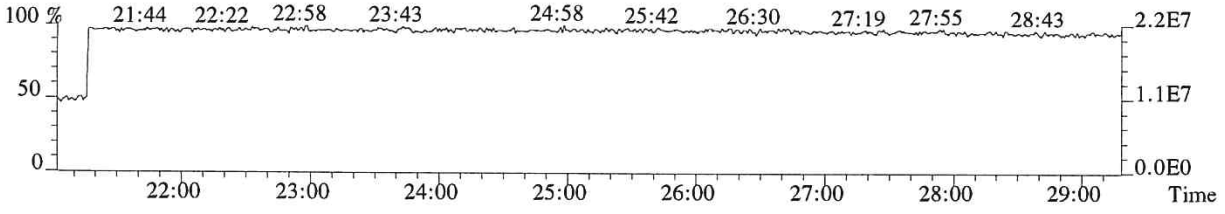
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2132.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1428.0,1.00%,F,T)

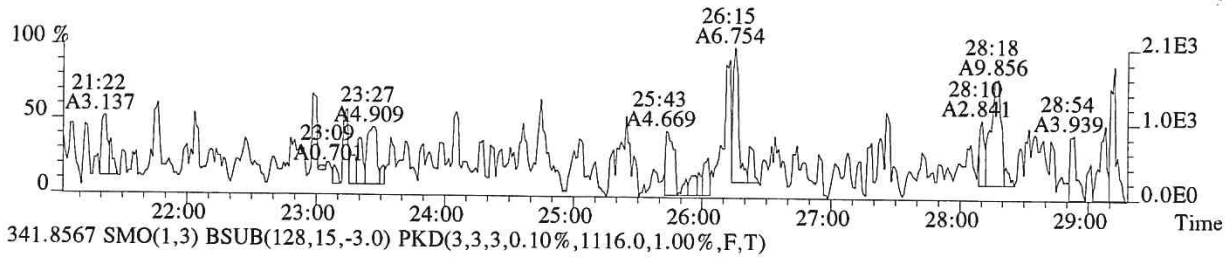


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

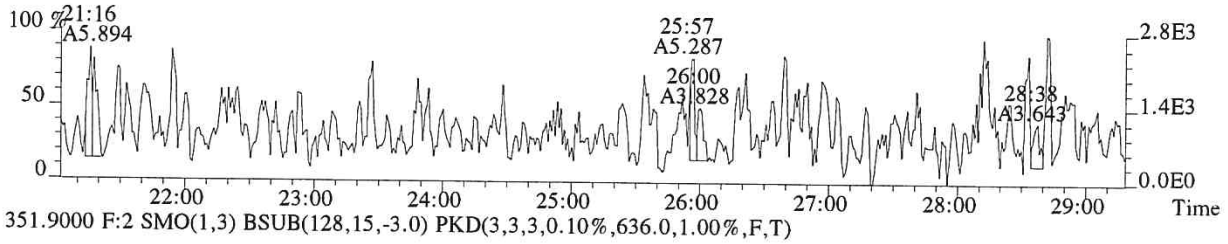


016357

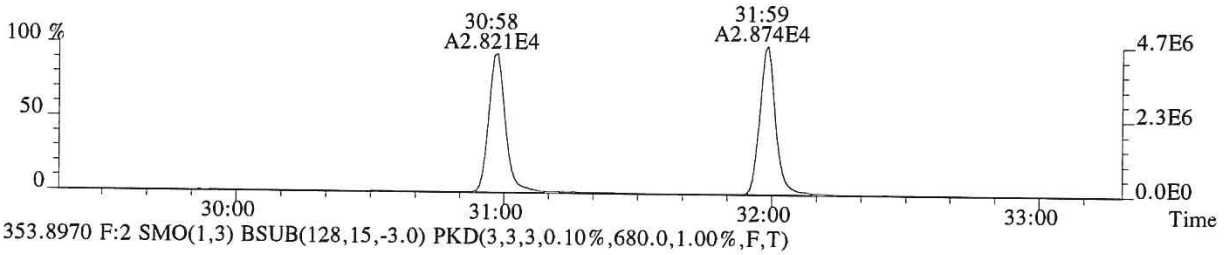
File:P519767 #1-587 Acq: 4-JAN-2019 05:03:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-017
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,552.0,1.00%,F,T)



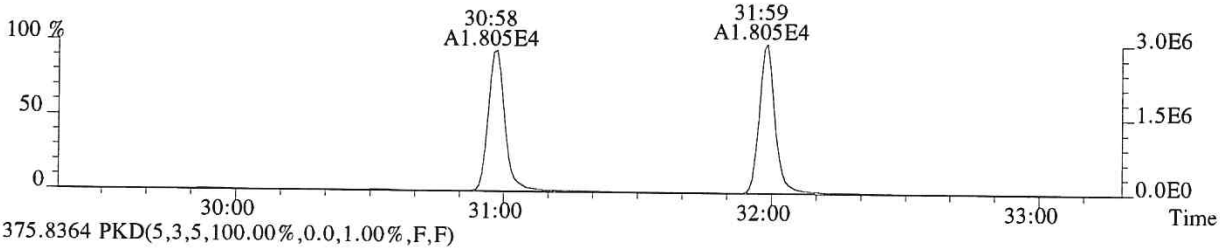
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1116.0,1.00%,F,T)



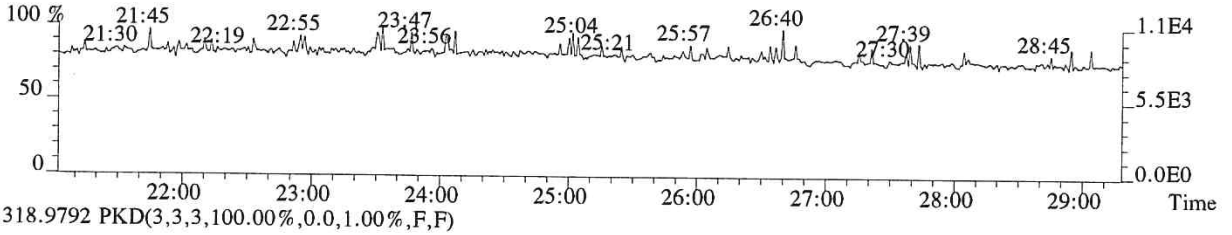
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,636.0,1.00%,F,T)



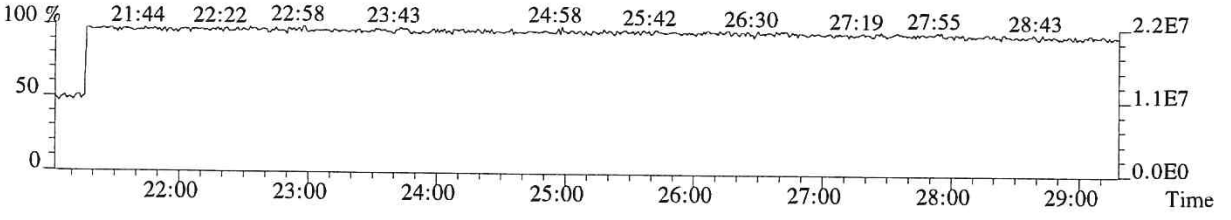
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,680.0,1.00%,F,T)



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

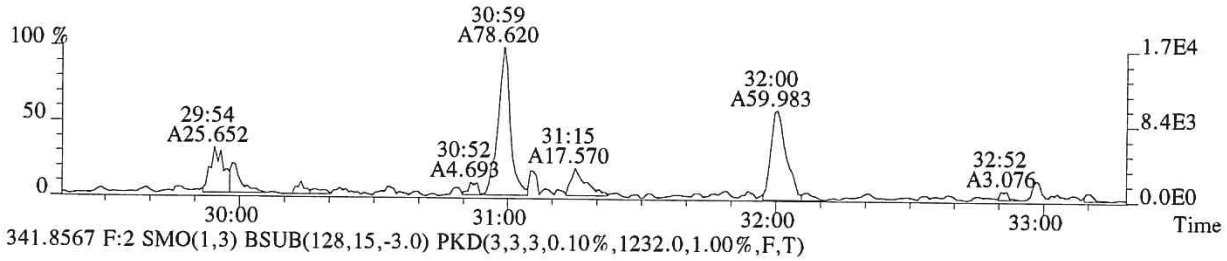


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

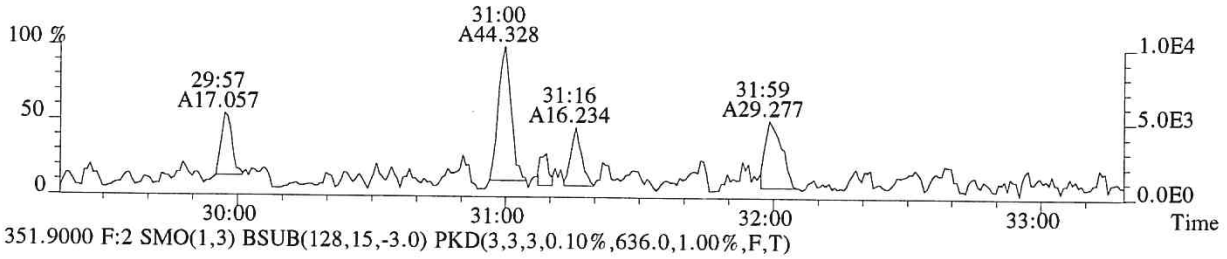


016358

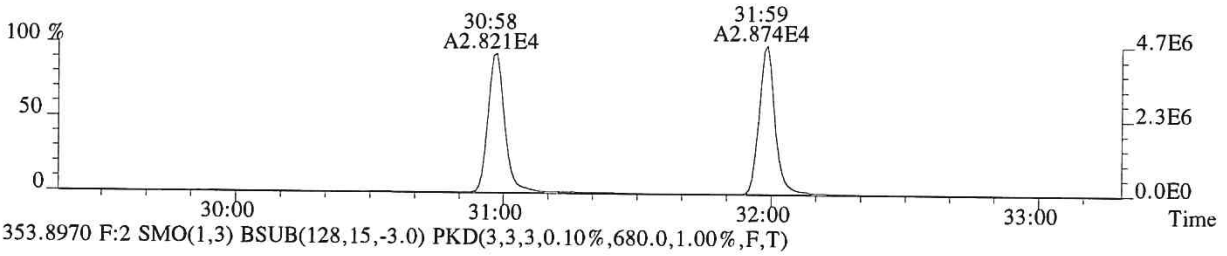
File:P519767 #1-358 Acq: 4-JAN-2019 05:03:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-017
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,540.0,1.00%,F,T)



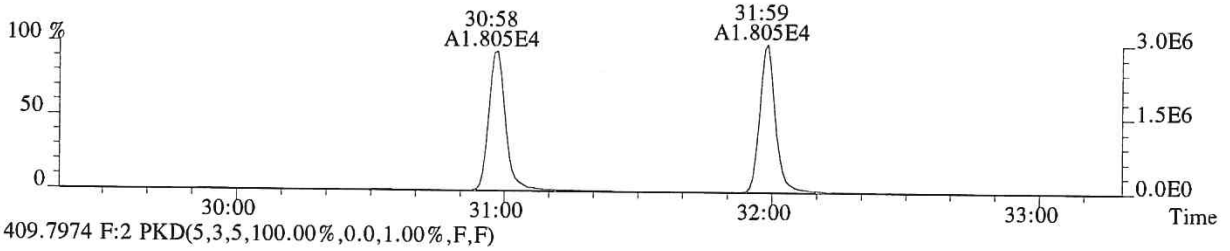
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1232.0,1.00%,F,T)



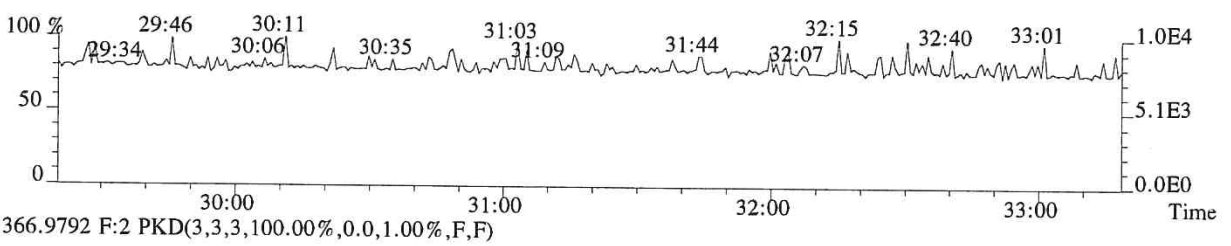
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,636.0,1.00%,F,T)



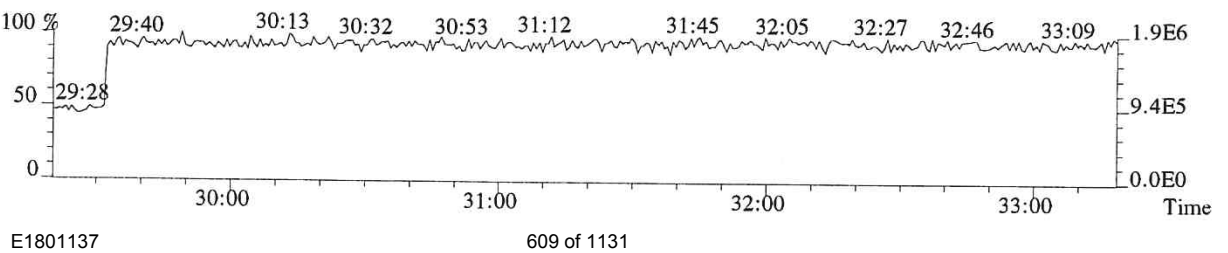
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,680.0,1.00%,F,T)



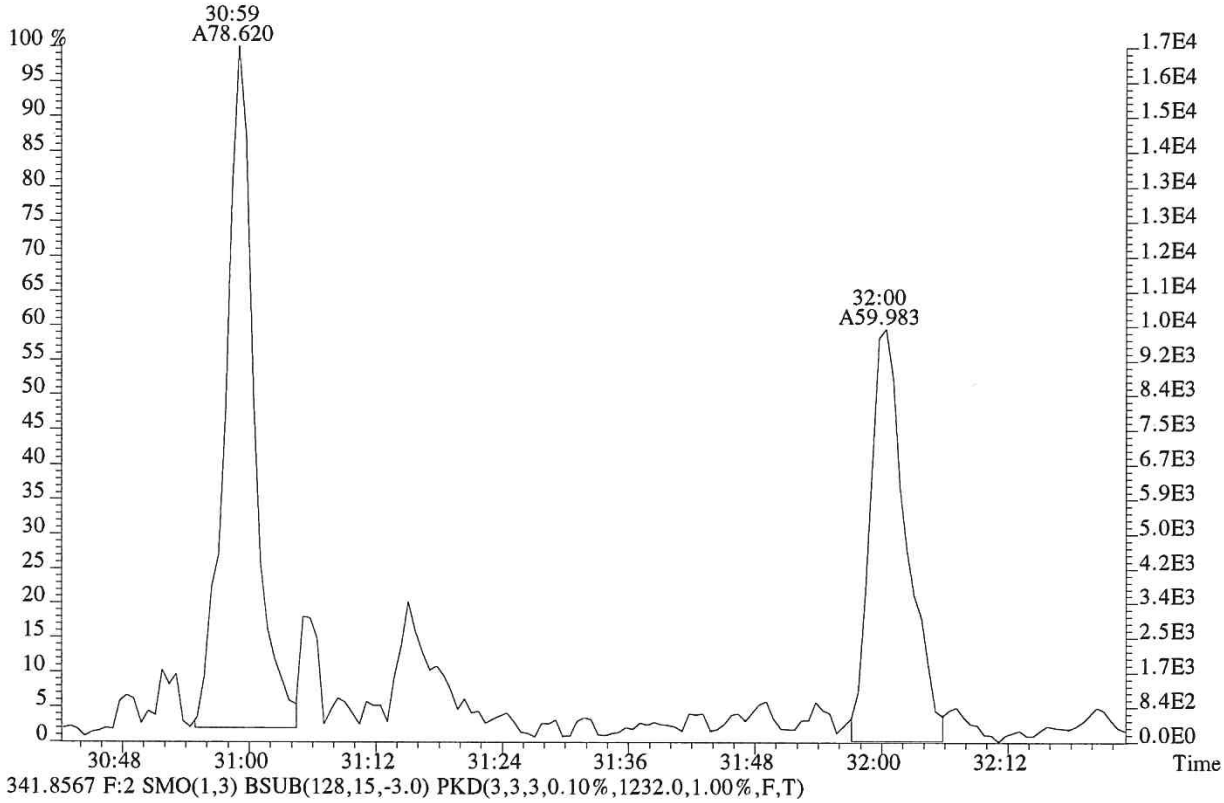
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



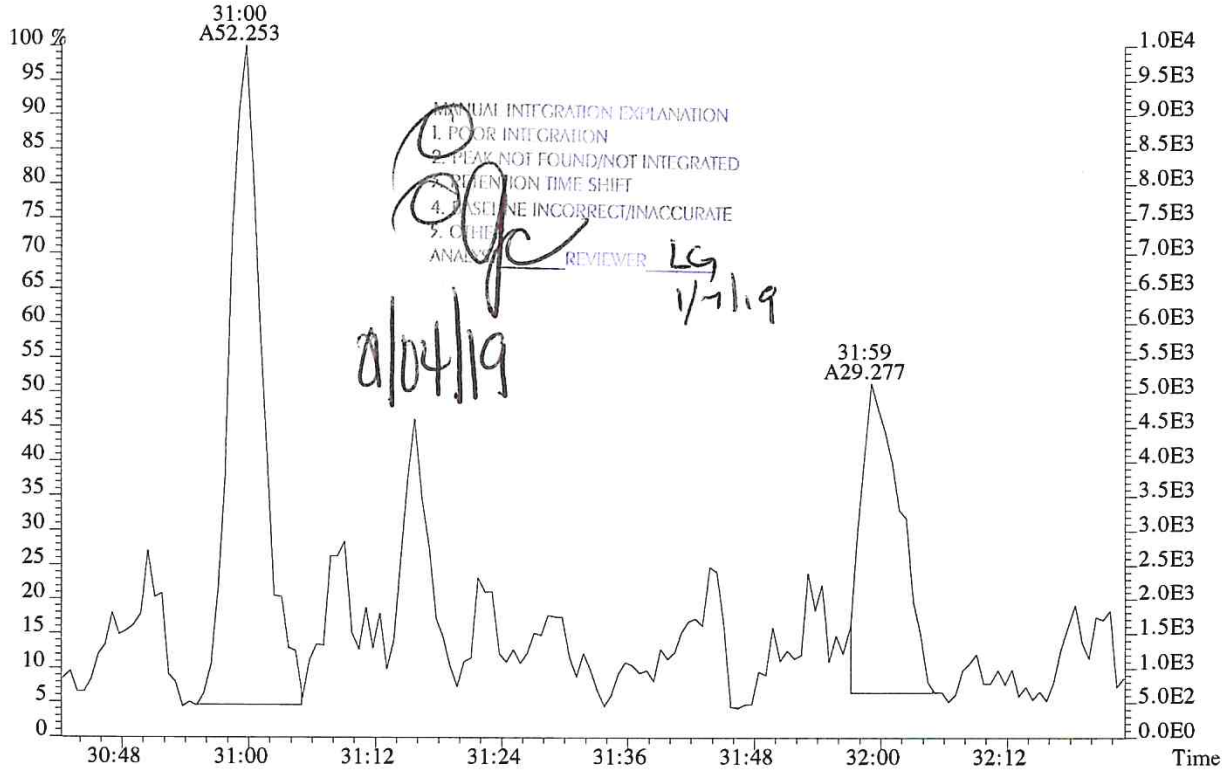
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



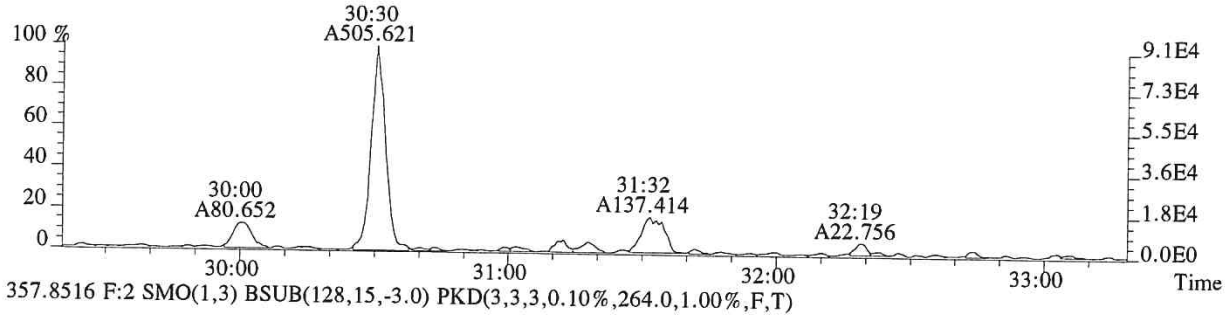
File:P519767 #1-358 Acq: 4-JAN-2019 05:03:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-017
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,540.0,1.00%,F,T)



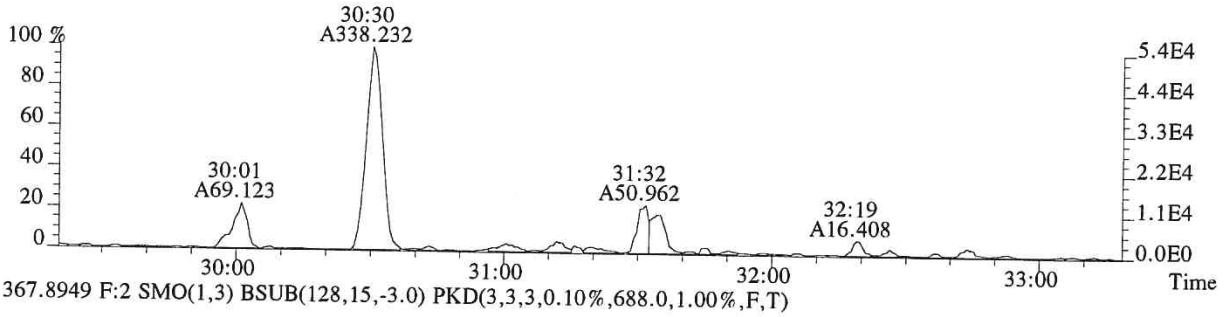
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1232.0,1.00%,F,T)



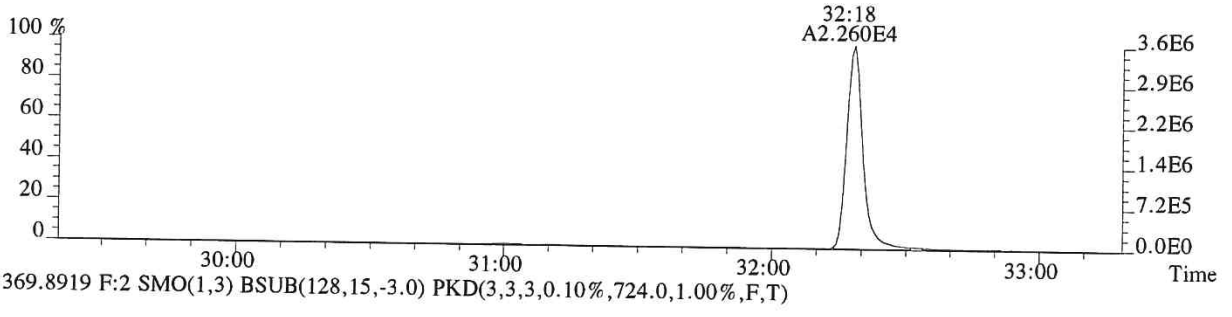
File:P519767 #1-358 Acq: 4-JAN-2019 05:03:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-017
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,964.0,1.00%,F,T)



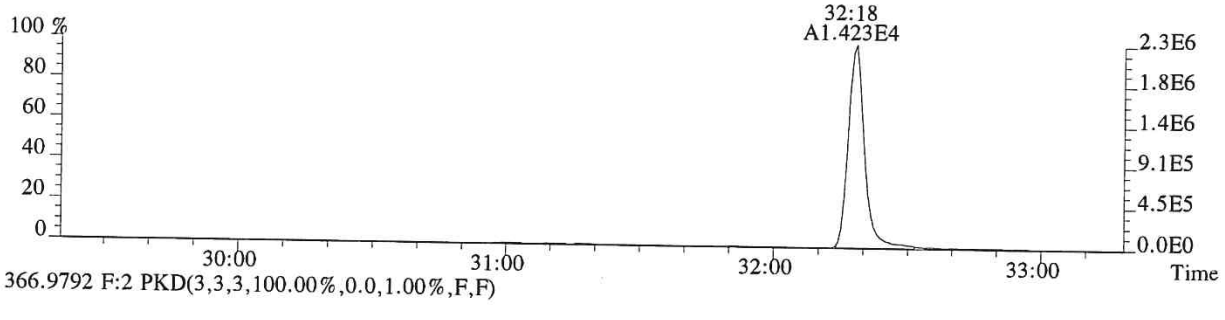
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,264.0,1.00%,F,T)



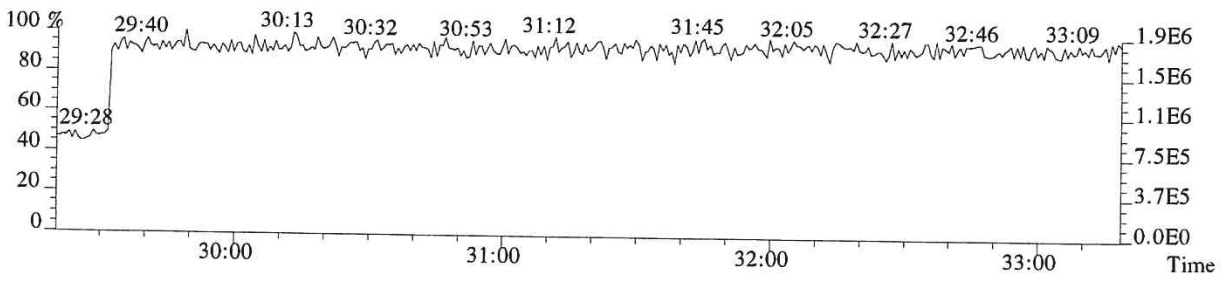
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,688.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,724.0,1.00%,F,T)

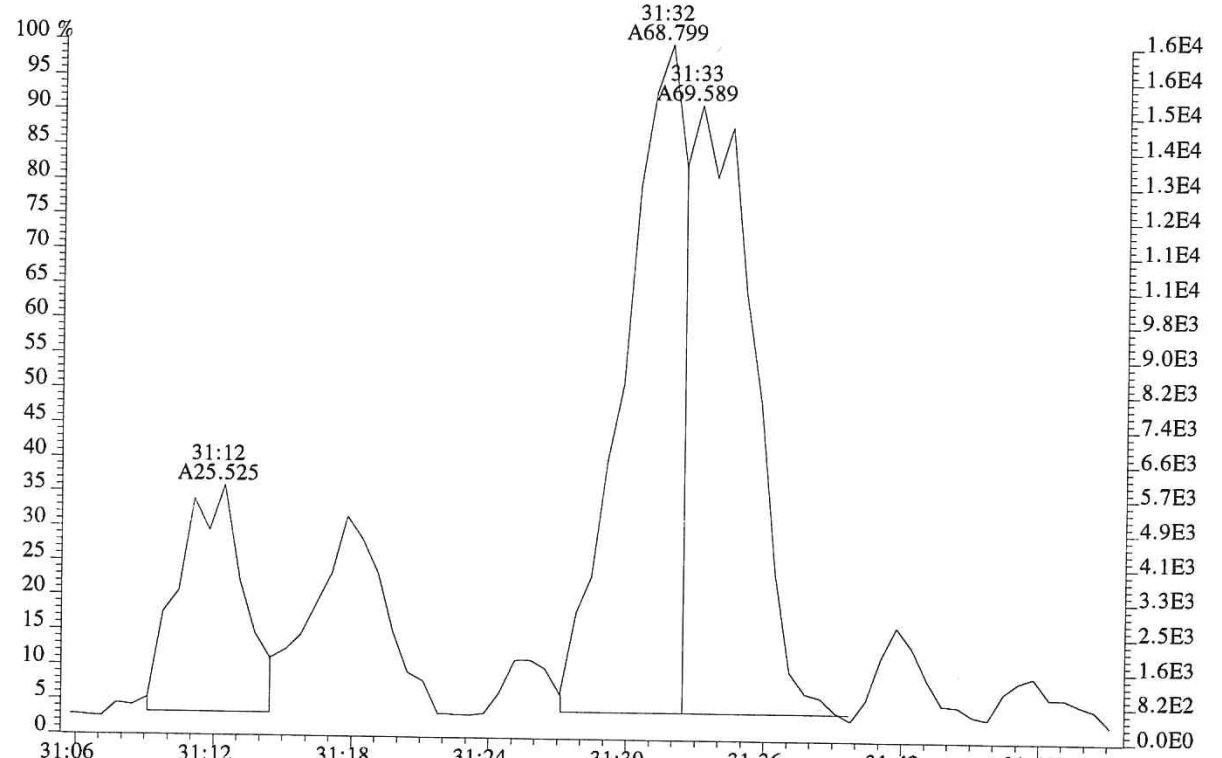


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

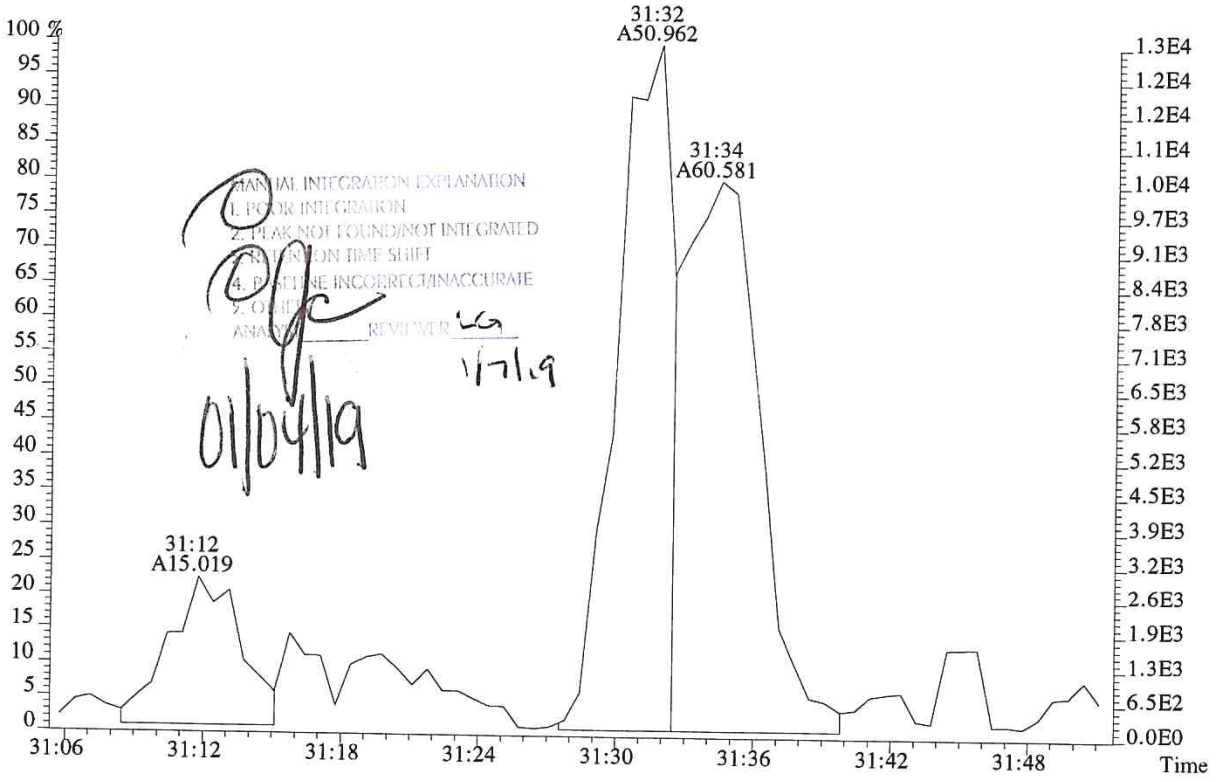


016361

File:P519767 #1-358 Acq: 4-JAN-2019 05:03:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-017
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,964.0,1.00%,F,T)

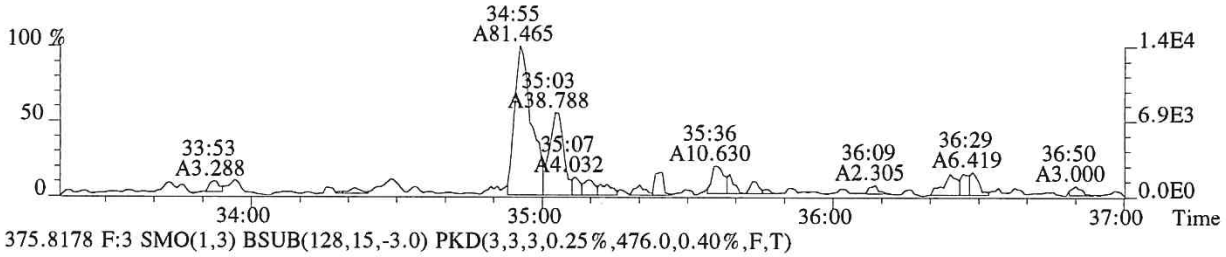


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,264.0,1.00%,F,T)

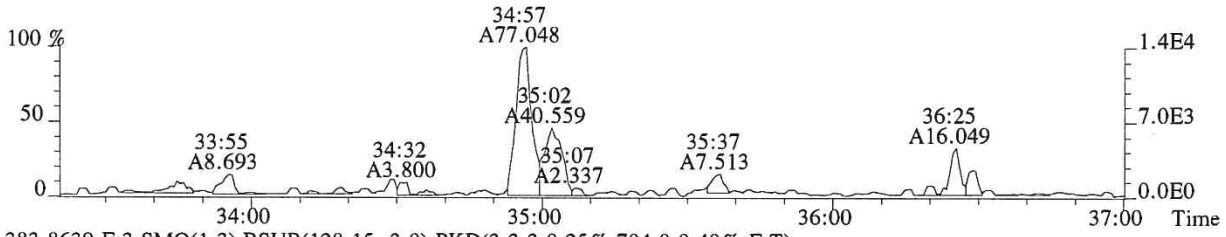


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST
REVIEWER
1/7/19
01/04/19

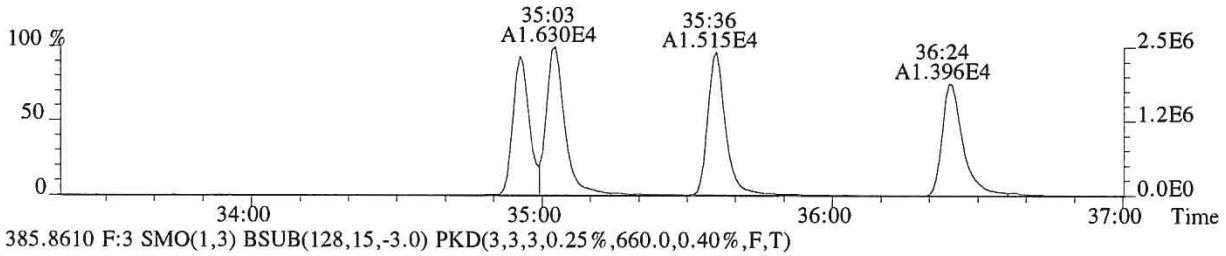
File:P519767 #1-330 Acq: 4-JAN-2019 05:03:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-017
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,476.0,0.40%,F,T)



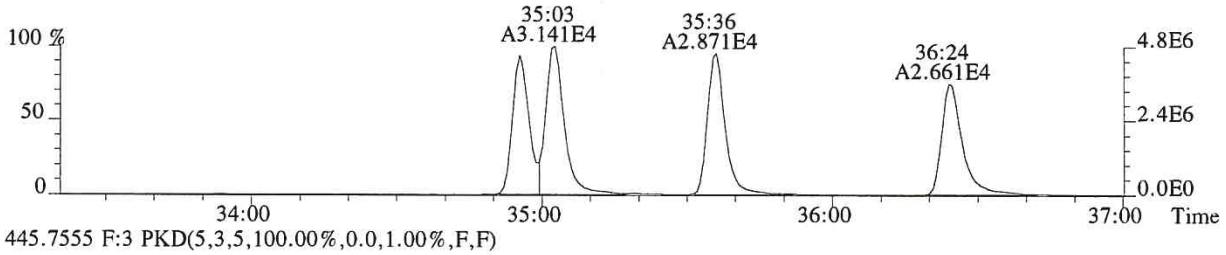
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,476.0,0.40%,F,T)



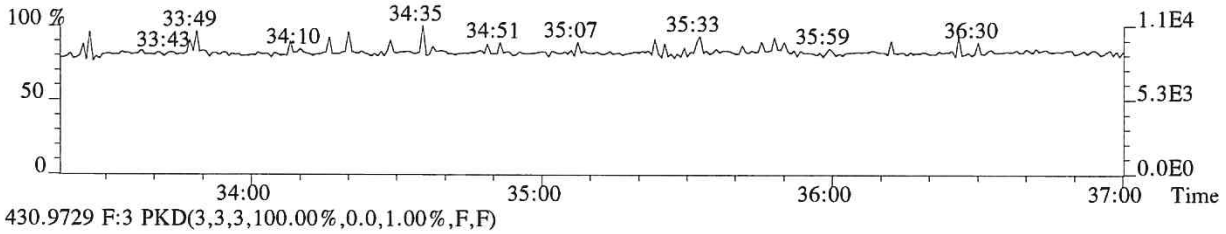
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,704.0,0.40%,F,T)



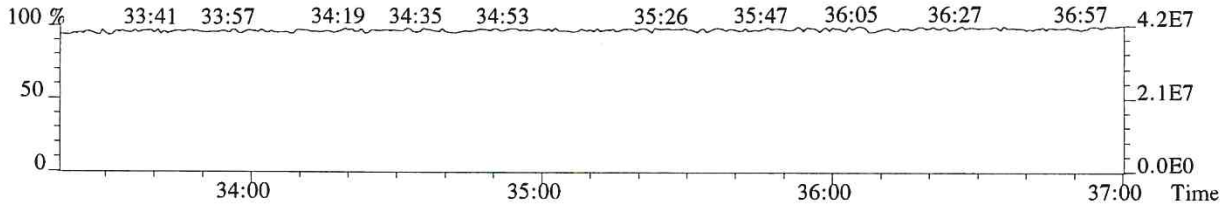
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,660.0,0.40%,F,T)



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

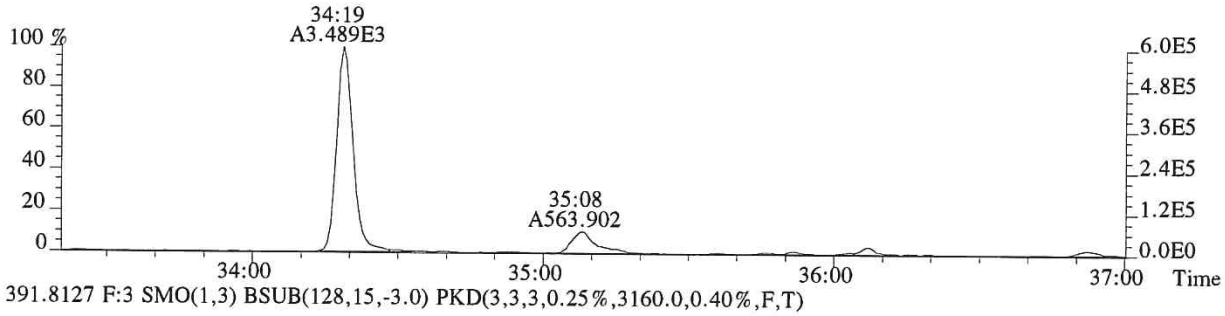


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

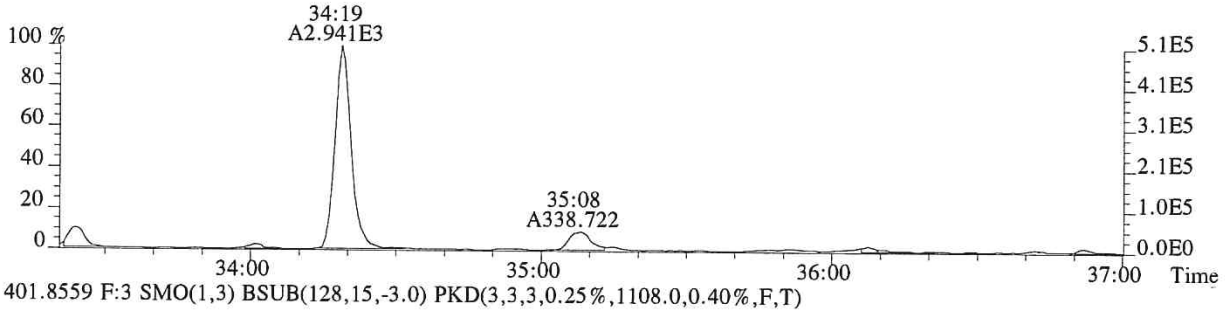


016363

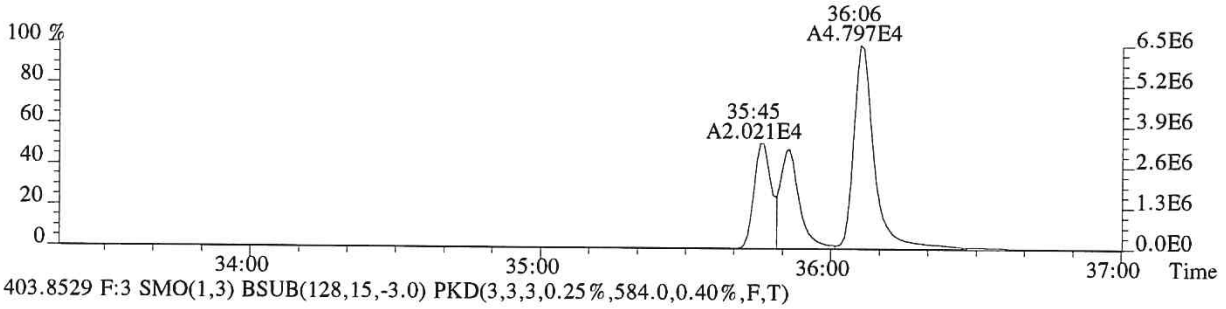
File:P519767 #1-330 Acq: 4-JAN-2019 05:03:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-017
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,596.0,0.40%,F,T)



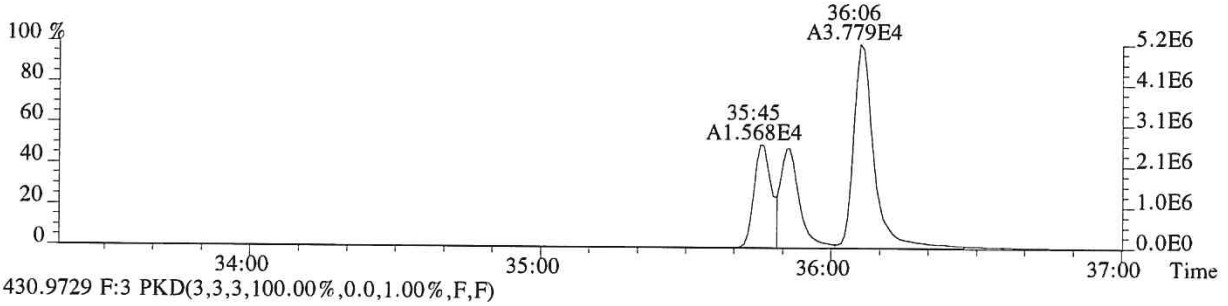
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3160.0,0.40%,F,T)



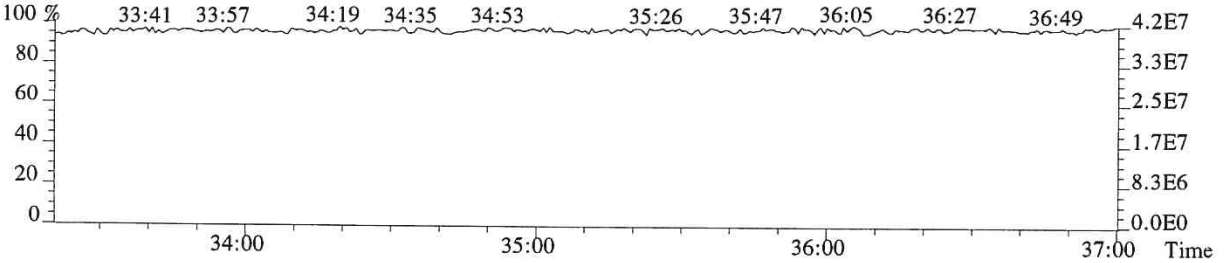
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1108.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,584.0,0.40%,F,T)

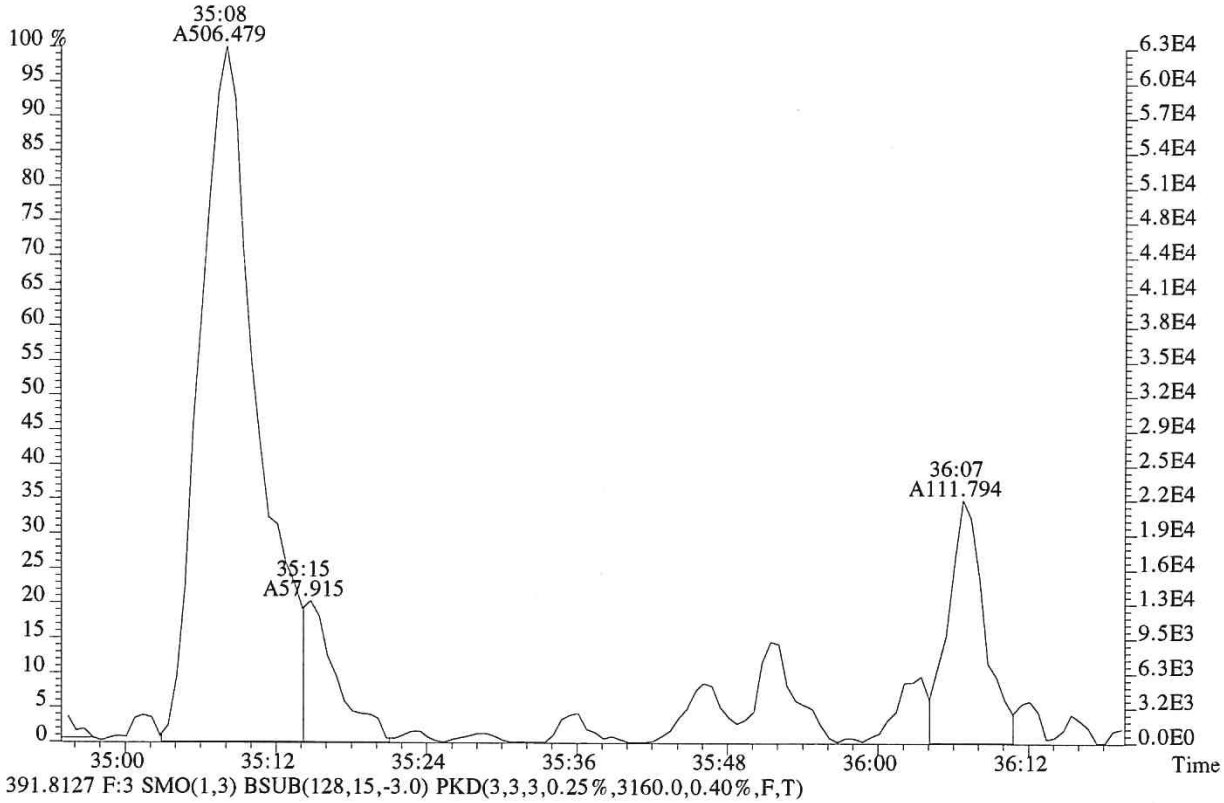


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

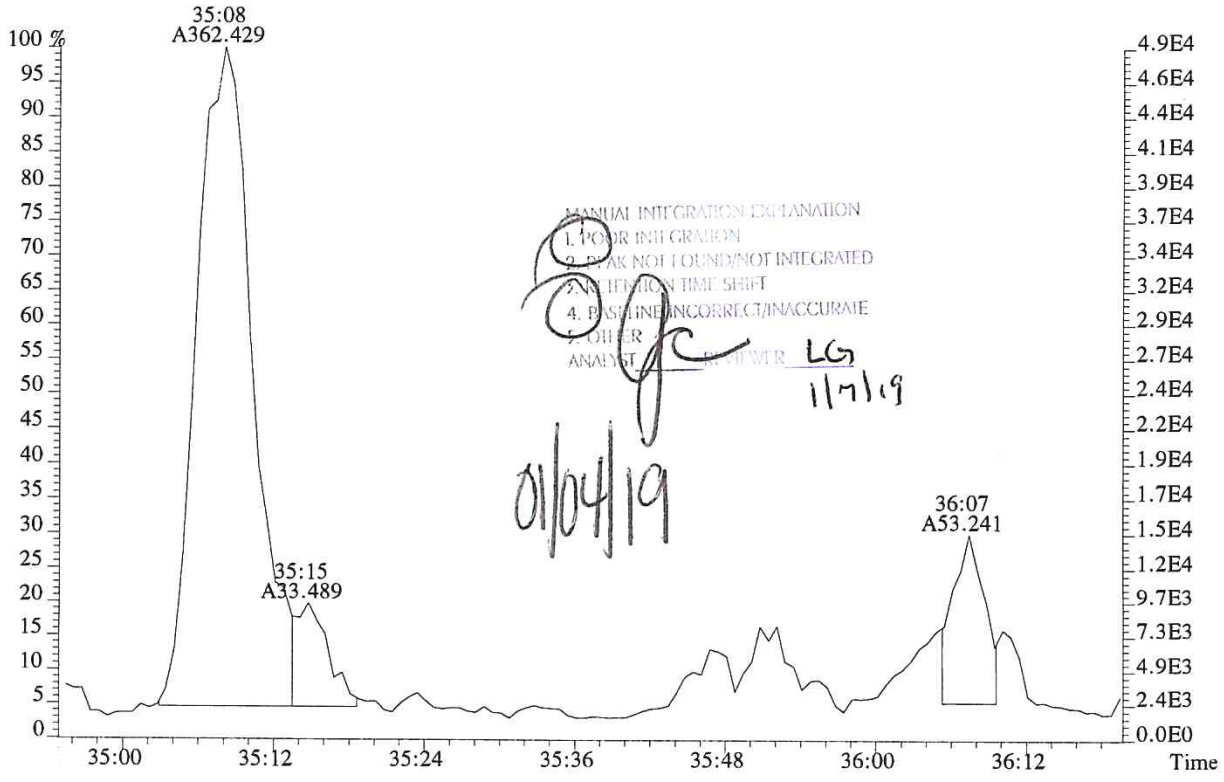


016364

File:P519767 #1-330 Acq: 4-JAN-2019 05:03:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-017
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,596.0,0.40%,F,T)



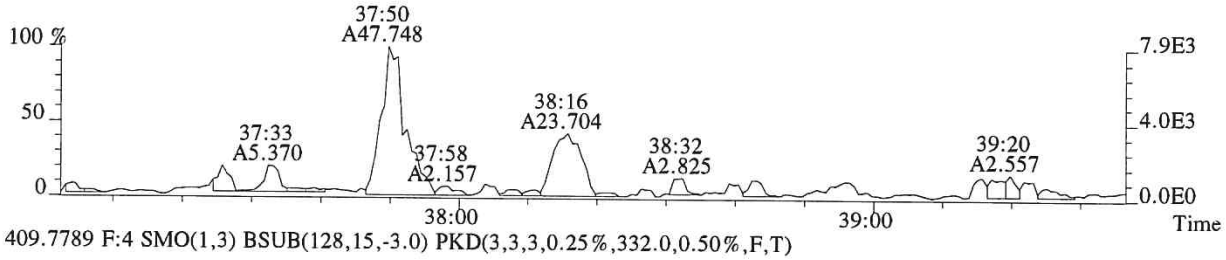
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3160.0,0.40%,F,T)



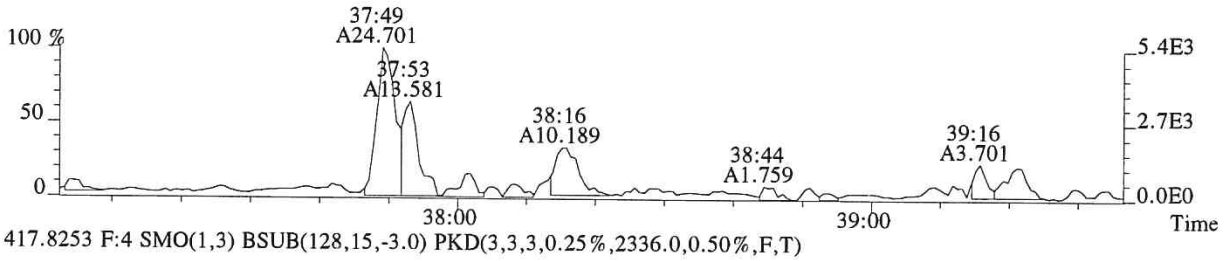
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST LG REVIEWER
1/7/19
01/04/19

016365

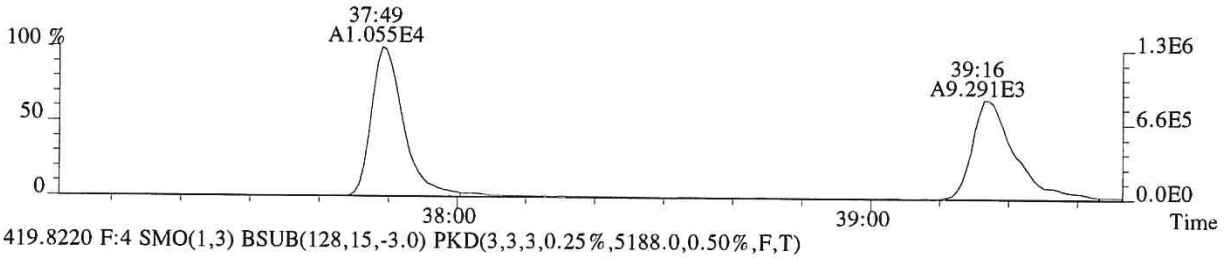
File:P519767 #1-232 Acq: 4-JAN-2019 05:03:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-017
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,404.0,0.50%,F,T)



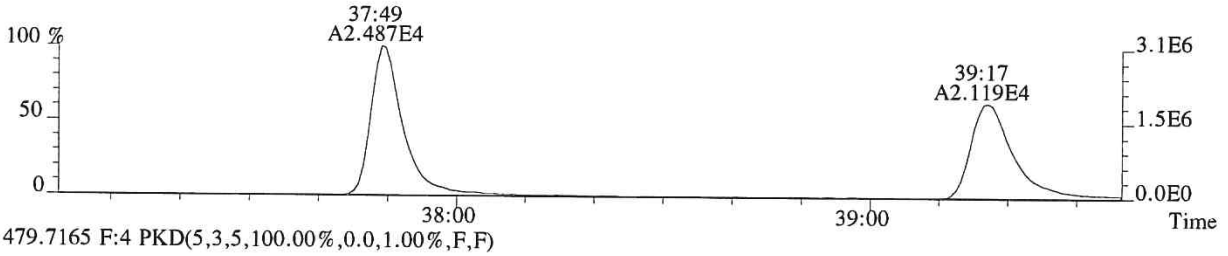
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,332.0,0.50%,F,T)



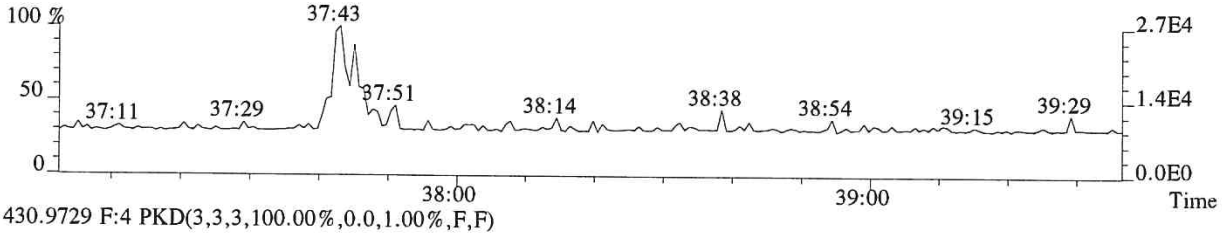
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2336.0,0.50%,F,T)



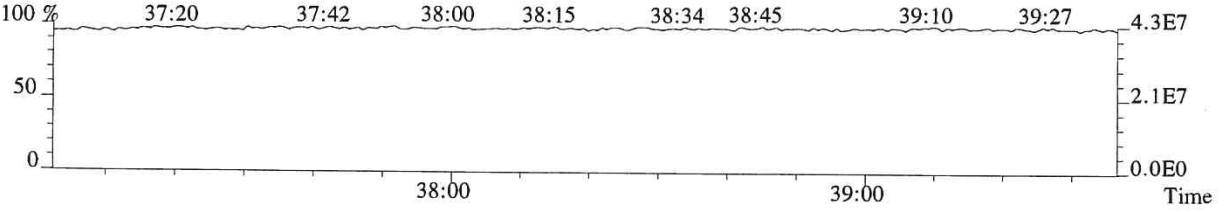
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5188.0,0.50%,F,T)



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

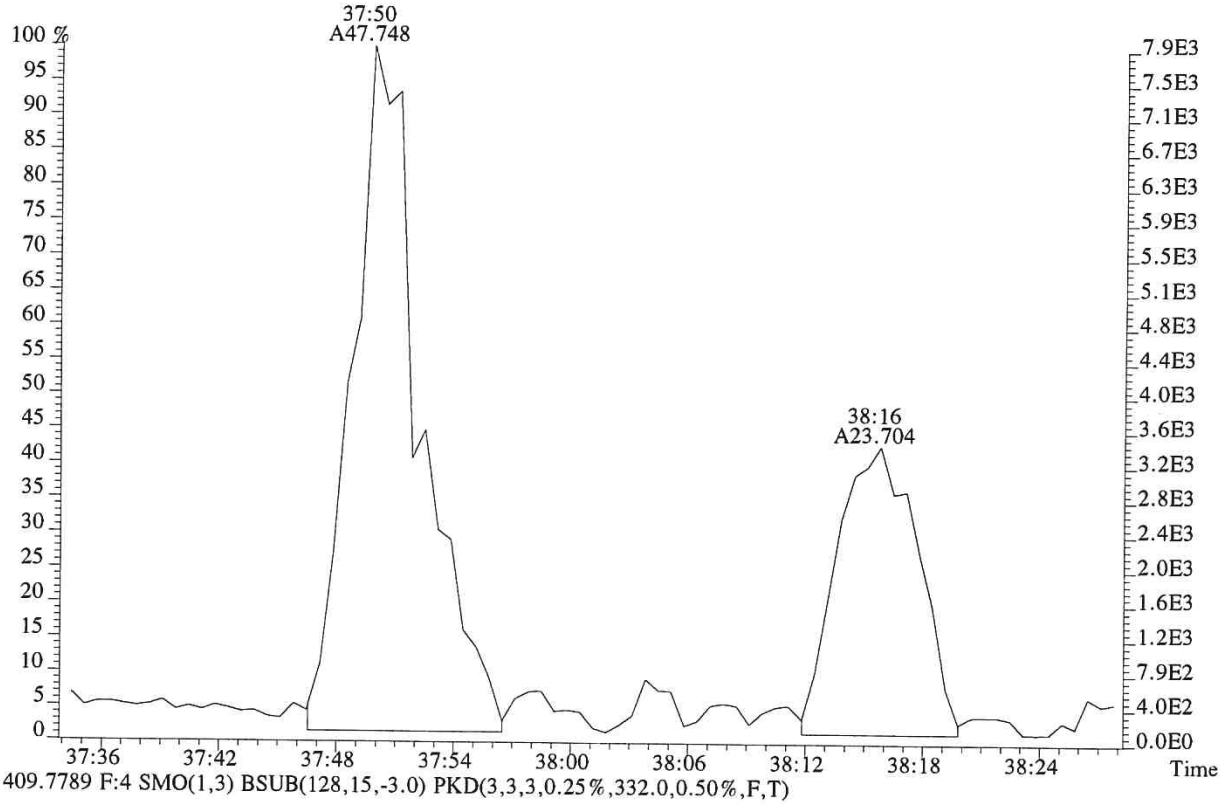


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

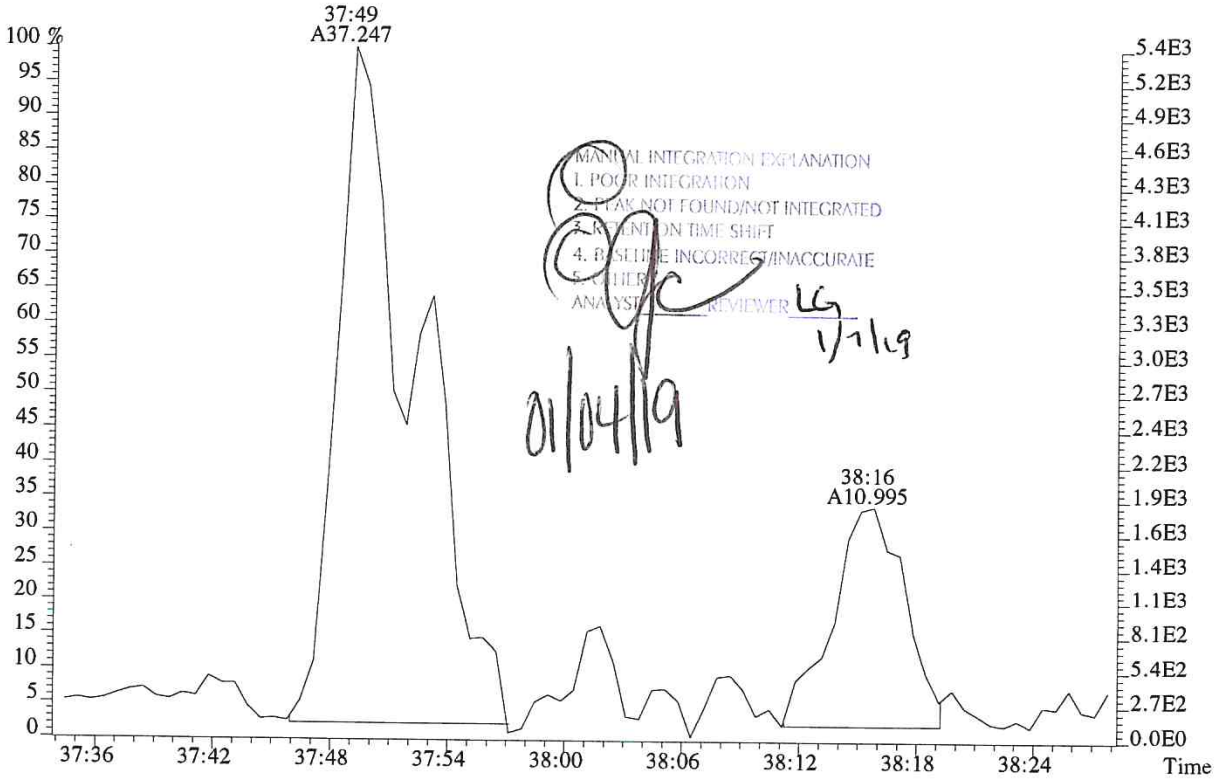


016366

File:P519767 #1-232 Acq: 4-JAN-2019 05:03:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-017
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,404.0,0.50%,F,T)

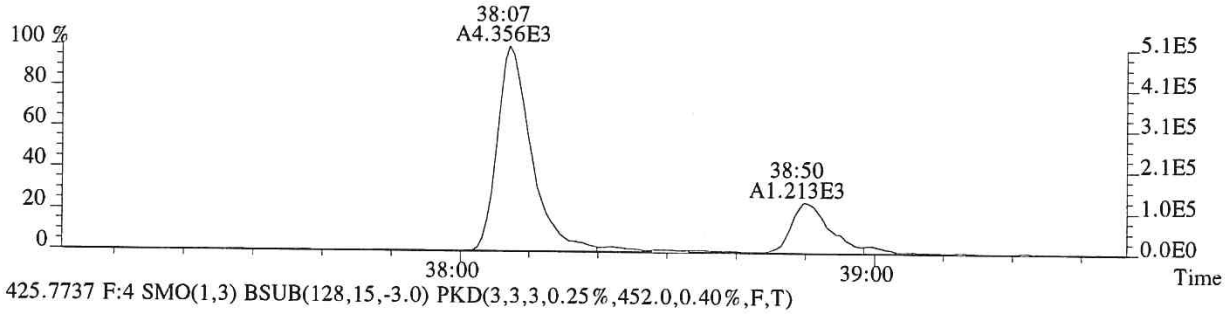


409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,332.0,0.50%,F,T)

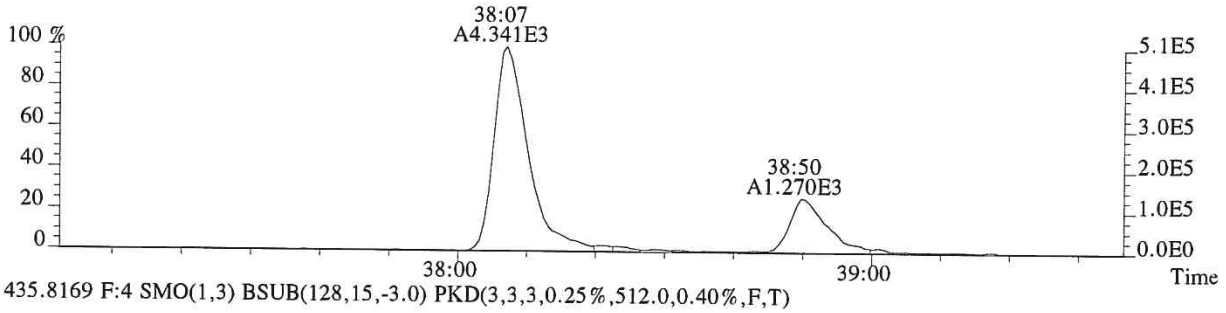


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LG
01/04/19
1/7/19

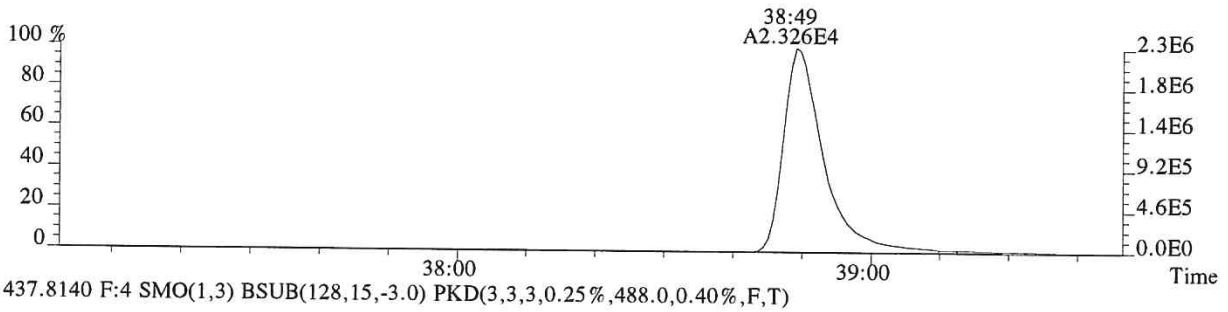
File:P519767 #1-232 Acq: 4-JAN-2019 05:03:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-017
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,480.0,0.40%,F,T)



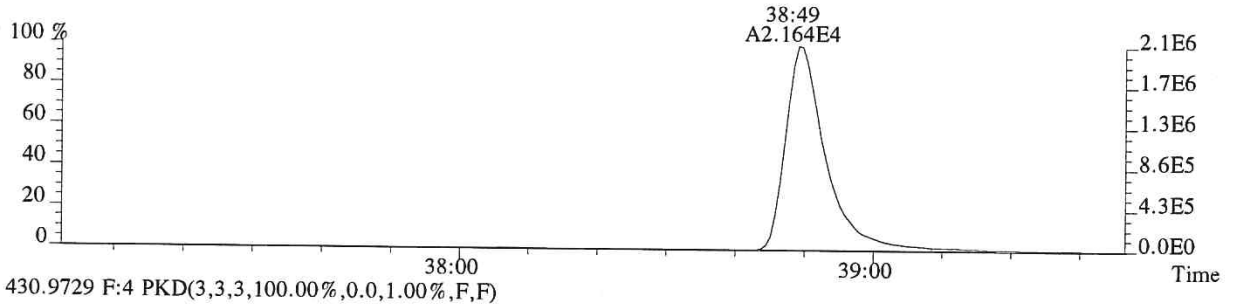
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,452.0,0.40%,F,T)



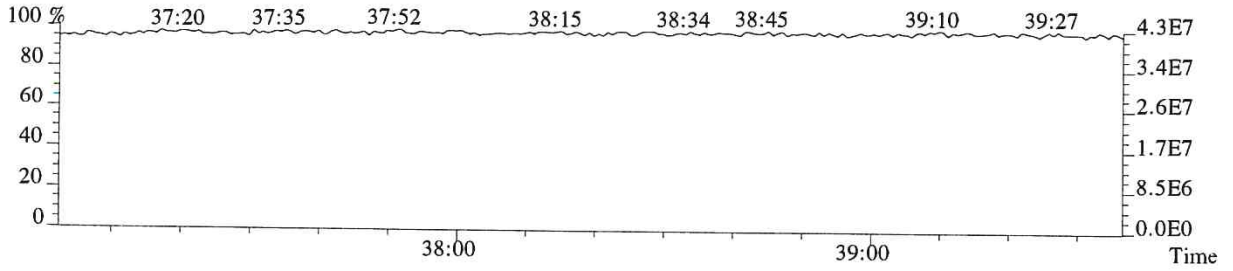
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,512.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,488.0,0.40%,F,T)

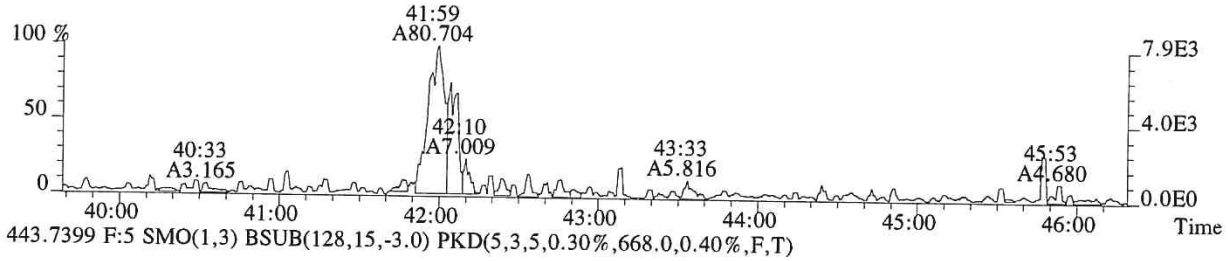


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

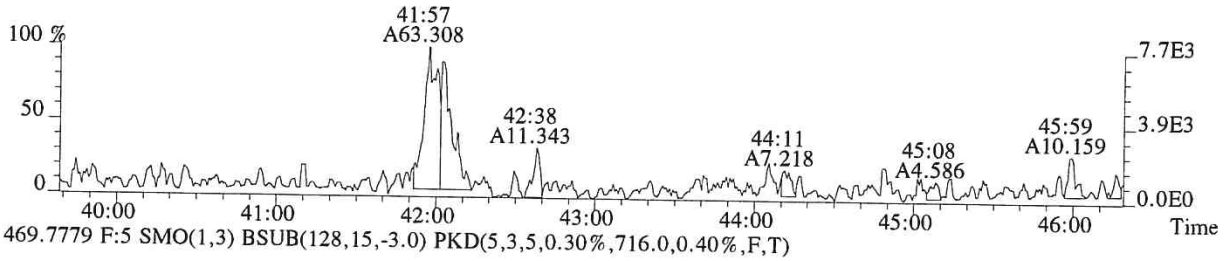


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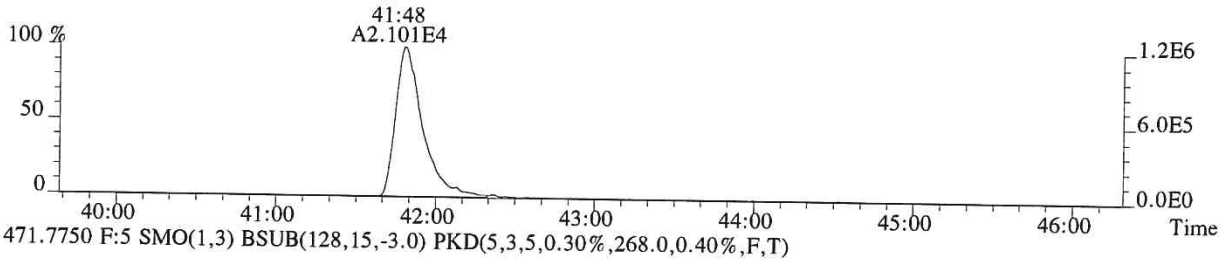
File:P519767 #1-601 Acq: 4-JAN-2019 05:03:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-017
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,244.0,0.40%,F,T)



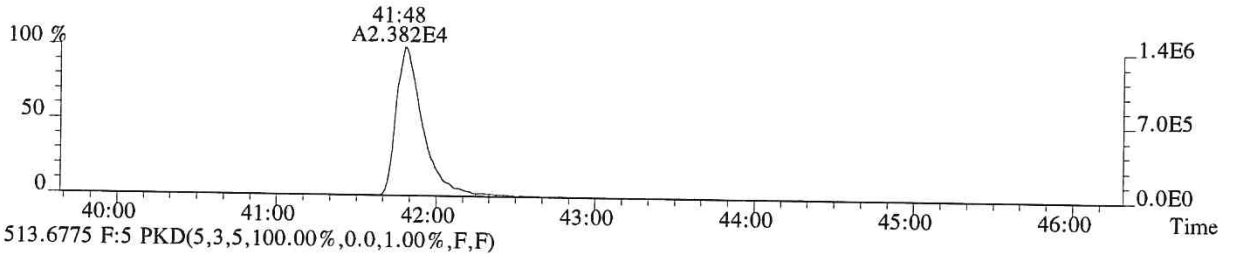
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,668.0,0.40%,F,T)



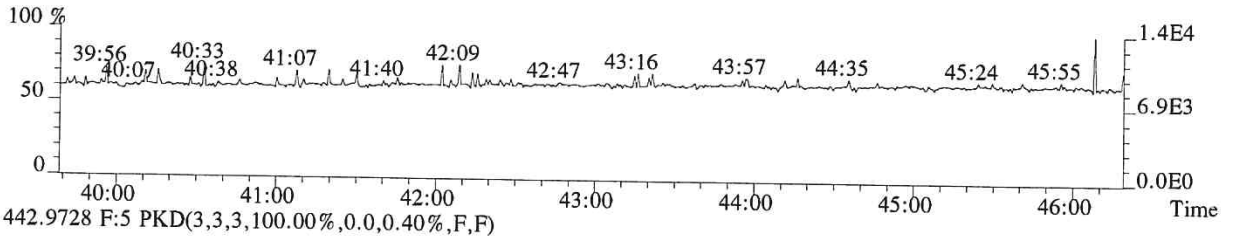
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,716.0,0.40%,F,T)



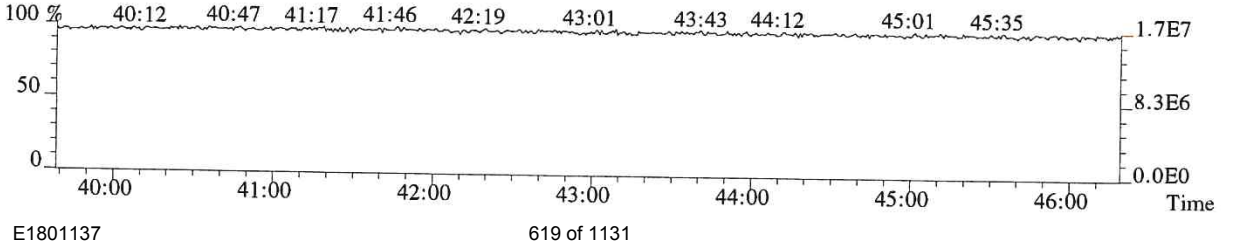
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,268.0,0.40%,F,T)



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

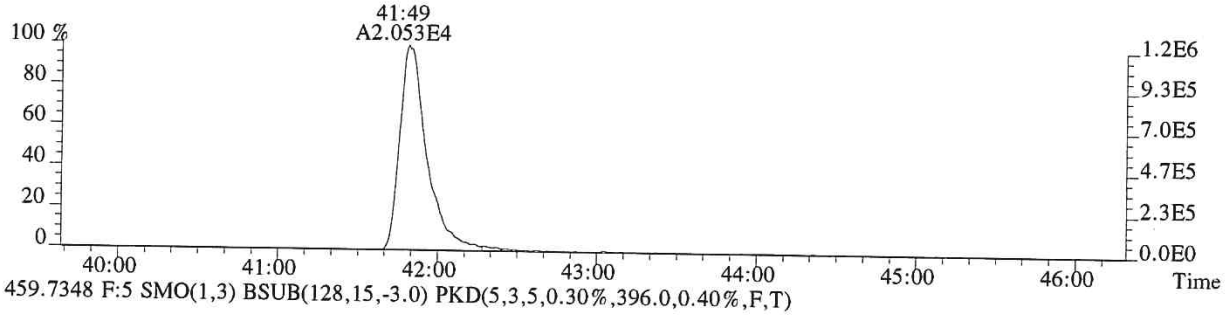


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

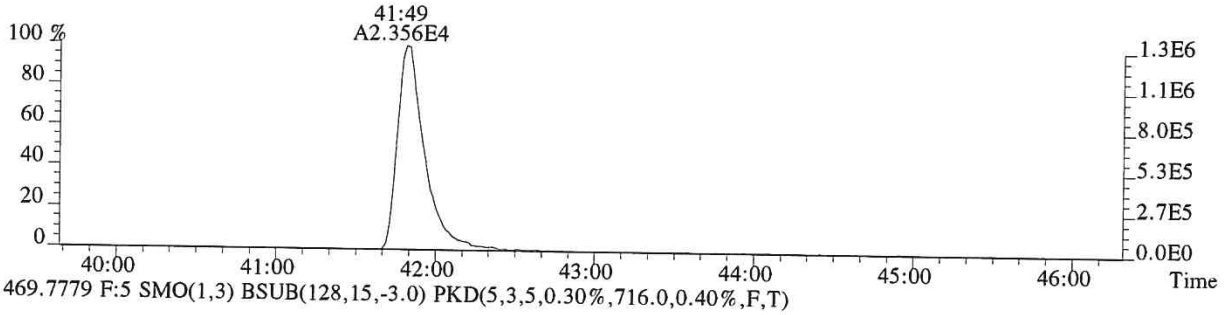


016369

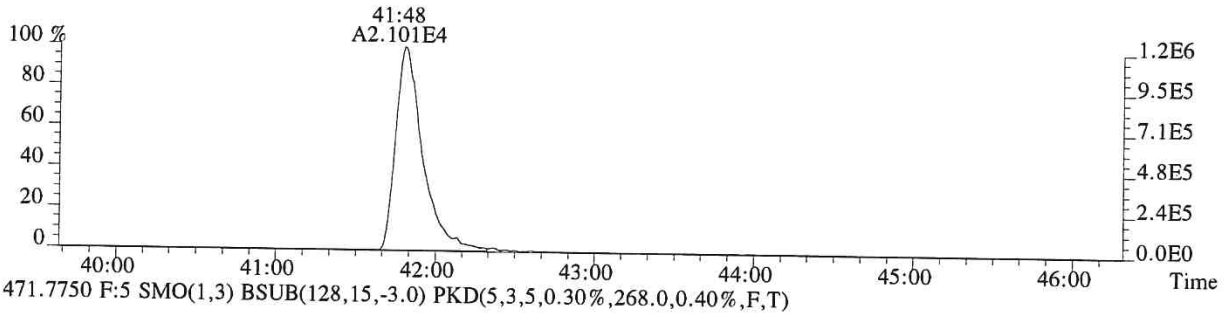
File:P519767 #1-601 Acq: 4-JAN-2019 05:03:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-017
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,384.0,0.40%,F,T)



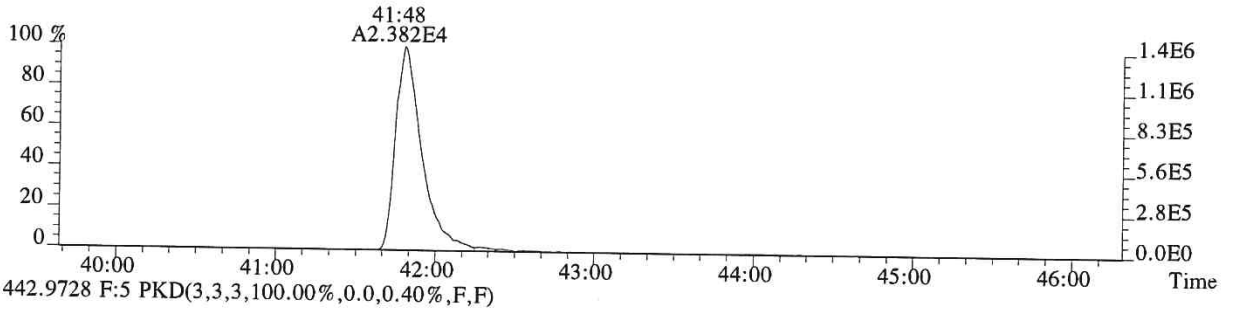
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,396.0,0.40%,F,T)



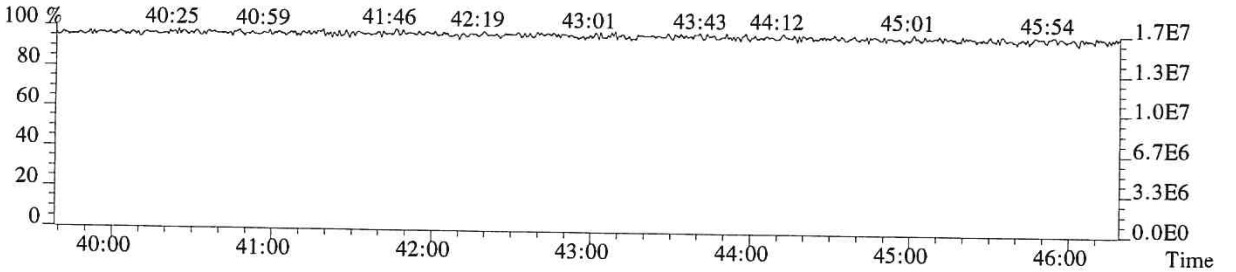
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,716.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,268.0,0.40%,F,T)



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



016370

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0192

Run #18 Filename P519742 Samp: 1 Inj: 1 Acquired: 2-JAN-19 23:27:51
Processed: 3-JAN-19 09:14:30 Sample ID: E1801137-018

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:05	3.734e+03	4.974e+03	0.75	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:58	4.156e+02	2.148e+02	1.93	no	no	1.012
3	Unk	2,3,4,7,8-PeCDF	32:00	3.479e+02	2.155e+02	1.61	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:55	6.815e+02	5.499e+02	1.24	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:01	1.826e+02	1.811e+02	1.01	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:35	9.453e+01	1.064e+02	0.89	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:23	6.215e+01	5.972e+01	1.04	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:48	1.301e+03	1.348e+03	0.97	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:15	1.086e+02	1.105e+02	0.98	yes	no	1.258
10	Unk	OCDF	41:54	2.915e+03	3.432e+03	0.85	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:04	9.276e+02	1.231e+03	0.75	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:18	7.466e+01	5.857e+01	1.27	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:44	5.875e+01	5.824e+01	1.01	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:49	2.685e+02	2.040e+02	1.32	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:05	1.633e+02	1.156e+02	1.41	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:48	5.549e+03	5.448e+03	1.02	yes	no	1.025
17	Unk	OCDD	41:45	5.078e+04	5.766e+04	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	2.571e+04	3.283e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:57	4.218e+04	2.688e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:58	4.040e+04	2.511e+04	1.61	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:54	1.695e+04	3.307e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:01	2.027e+04	3.823e+04	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:34	1.807e+04	3.533e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:22	1.598e+04	3.176e+04	0.50	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:47	1.205e+04	2.688e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:14	1.110e+04	2.540e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:02	1.308e+04	1.610e+04	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:17	3.184e+04	1.992e+04	1.60	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:43	2.568e+04	2.066e+04	1.24	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:49	2.660e+04	2.067e+04	1.29	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:47	2.614e+04	2.433e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	41:44	2.269e+04	2.523e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	3.941e+04	4.893e+04	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:04	5.207e+04	4.100e+04	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:03	1.799e+04				no	1.014

$$\text{OCDD} = \frac{(5.078e+04 + 5.766e+04) \times 4000\ \text{pg} \times 1}{(2.269e+04 + 2.523e+04) \times 10.310\ \text{g} \times 79.5 / 100 \times 1.118} = 987.8\ \text{ng/kg}$$

LM 01/04/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0192

Run #18 Filename P519742 Samp: 1 Inj: 1 Acquired: 2-JAN-19 23:27:51
Processed: 3-JAN-19 09:14:30 LAB. ID: E1801137-018

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.33e+05	1.52e+03	3.5e+02	7.07e+05	1.72e+03	4.1e+02
2	1,2,3,7,8-PeCDF	6.96e+04	7.32e+02	9.5e+01	3.68e+04	1.33e+03	2.8e+01
3	2,3,4,7,8-PeCDF	4.61e+04	7.32e+02	6.3e+01	2.72e+04	1.33e+03	2.1e+01
4	1,2,3,4,7,8-HxCDF	1.18e+05	1.94e+03	6.1e+01	9.76e+04	2.79e+03	3.5e+01
5	1,2,3,6,7,8-HxCDF	2.95e+04	1.94e+03	1.5e+01	2.88e+04	2.79e+03	1.0e+01
6	2,3,4,6,7,8-HxCDF	1.79e+04	1.94e+03	9.2e+00	1.74e+04	2.79e+03	6.3e+00
7	1,2,3,7,8,9-HxCDF	9.47e+03	1.94e+03	4.9e+00	9.65e+03	2.79e+03	3.5e+00
8	1,2,3,4,6,7,8-HpCDF	1.79e+05	1.34e+03	1.3e+02	1.85e+05	3.72e+03	5.0e+01
9	1,2,3,4,7,8,9-HpCDF	1.43e+04	1.34e+03	1.1e+01	1.31e+04	3.72e+03	3.5e+00
10	OCDF	1.95e+05	3.36e+02	5.8e+02	2.35e+05	9.88e+02	2.4e+02
11	2,3,7,8-TCDD	1.48e+05	2.32e+03	6.4e+01	1.92e+05	1.40e+03	1.4e+02
12	1,2,3,7,8-PeCDD	1.38e+04	5.60e+02	2.5e+01	1.14e+04	4.32e+02	2.6e+01
13	1,2,3,4,7,8-HxCDD	1.18e+04	8.84e+02	1.3e+01	1.14e+04	1.52e+03	7.5e+00
14	1,2,3,6,7,8-HxCDD	4.67e+04	8.84e+02	5.3e+01	3.33e+04	1.52e+03	2.2e+01
15	1,2,3,7,8,9-HxCDD	2.27e+04	8.84e+02	2.6e+01	1.76e+04	1.52e+03	1.2e+01
16	1,2,3,4,6,7,8-HpCDD	6.08e+05	2.08e+02	2.9e+03	5.88e+05	3.08e+02	1.9e+03
17	OCDD	3.15e+06	4.20e+02	7.5e+03	3.54e+06	5.92e+02	6.0e+03
18	13C-2,3,7,8-TCDF	3.83e+06	3.60e+03	1.1e+03	4.87e+06	2.08e+03	2.3e+03
19	13C-1,2,3,7,8-PeCDF	6.77e+06	5.80e+02	1.2e+04	4.31e+06	9.32e+02	4.6e+03
20	13C-2,3,4,7,8-PeCDF	6.97e+06	5.80e+02	1.2e+04	4.37e+06	9.32e+02	4.7e+03
21	13C-1,2,3,4,7,8-HxCDF	2.93e+06	7.48e+02	3.9e+03	5.77e+06	1.00e+03	5.7e+03
22	13C-1,2,3,6,7,8-HxCDF	3.26e+06	7.48e+02	4.4e+03	6.17e+06	1.00e+03	6.1e+03
23	13C-2,3,4,6,7,8-HxCDF	3.07e+06	7.48e+02	4.1e+03	5.85e+06	1.00e+03	5.8e+03
24	13C-1,2,3,7,8,9-HxCDF	2.34e+06	7.48e+02	3.1e+03	4.62e+06	1.00e+03	4.6e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.59e+06	3.50e+03	4.5e+02	3.58e+06	3.49e+03	1.0e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.14e+06	3.50e+03	3.3e+02	2.60e+06	3.49e+03	7.5e+02
27	13C-2,3,7,8-TCDD	2.10e+06	5.00e+03	4.2e+02	2.55e+06	2.76e+03	9.3e+02
28	13C-1,2,3,7,8-PeCDD	5.28e+06	7.68e+02	6.9e+03	3.32e+06	1.28e+03	2.6e+03
29	13C-1,2,3,4,7,8-HxCDD	4.38e+06	6.20e+02	7.1e+03	3.52e+06	7.40e+02	4.8e+03
30	13C-1,2,3,6,7,8-HxCDD	4.08e+06	6.20e+02	6.6e+03	3.19e+06	7.40e+02	4.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.84e+06	2.92e+02	9.7e+03	2.61e+06	5.04e+02	5.2e+03
32	13C-OCDD	1.40e+06	5.92e+02	2.4e+03	1.60e+06	2.52e+02	6.3e+03
33	13C-1,2,3,4-TCDD	6.21e+06	5.00e+03	1.2e+03	7.66e+06	2.76e+03	2.8e+03
34	13C-1,2,3,7,8,9-HxCDD	7.64e+06	6.20e+02	1.2e+04	6.03e+06	7.40e+02	8.2e+03
35	37Cl-2,3,7,8-TCDD	2.89e+06	1.54e+03	1.9e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0192

Entry: 36 Totals Name: Total Tetra-Furans

Run: 18 File: P519742 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 23:27:51 Processed: 3-JAN-19 09:14:30

Mass: 303.9020 305.8990 Tot Response: 1.35e+04 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:25	6.14e+01	7.06e+01	0.87	yes	1.32e+02		n	n
2	23:10	1.09e+02	1.66e+02	0.66	yes	2.75e+02		n	n
3	23:31	5.54e+01	6.28e+01	0.88	yes	1.18e+02		n	n
4	24:14	5.51e+01	6.93e+01	0.79	yes	1.24e+02		n	n
5	24:36	1.10e+02	1.64e+02	0.67	yes	2.75e+02		n	n
6	25:05	9.02e+02	1.23e+03	0.73	yes	2.13e+03		n	n
7	25:24	1.31e+02	1.83e+02	0.72	yes	3.15e+02		n	n
8	25:53	4.60e+01	5.80e+01	0.79	yes	1.04e+02		n	n
9	26:05	3.73e+03	4.97e+03	0.75	yes	8.71e+03	2,3,7,8-TCDF	n	n
10	26:30	5.63e+02	7.19e+02	0.78	yes	1.28e+03		n	n

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Peak List Summary

CLIENT ID.
SL0192

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 18 File: P519742 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 23:27:51 Processed: 3-JAN-19 09:14:30

Mass: 319.8970 321.8940 Tot Response: 2.62e+03 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:43	1.07e+02	1.22e+02	0.88	yes	2.29e+02		n	n
2	27:04	9.28e+02	1.23e+03	0.75	yes	2.16e+03	2,3,7,8-TCDD	n	n
3	27:23	9.21e+01	1.38e+02	0.67	yes	2.30e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0192

Entry: 38 Totals Name: Total Penta-Furans1

Run: 18 File: P519742 Sample:1 Injection:1 Function:1

Acquired: 2-JAN-19 23:27:51 Processed: 3-JAN-19 09:14:30

Mass: 339.8600 341.8570 Tot Response: 6.94e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:16	3.98e+02	2.96e+02 1.35	yes	6.94e+02		n	n

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Entry: 39 Totals Name: Total Penta-Furans2

Run: 18 File: P519742 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 23:27:51 Processed: 3-JAN-19 09:14:30

Mass: 339.8600 341.8570 Tot Response: 8.43e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:48	7.63e+01	4.80e+01	1.59	yes	1.24e+02		n	n
2	30:32	9.02e+01	6.52e+01	1.38	yes	1.55e+02		n	n
3	32:00	3.48e+02	2.15e+02	1.61	yes	5.63e+02	2,3,4,7,8-PeCDF	n	n

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Peak List Summary

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SL0192

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 18 File: P519742 Sample:1 Injection:1 Function:2

Acquired: 2-JAN-19 23:27:51 Processed: 3-JAN-19 09:14:30

Mass: 355.8550 357.8520 Tot Response: 2.45e+02 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:00	8.34e+01	6.21e+01	1.34	yes	1.45e+02		n	n
2	31:11	5.88e+01	4.04e+01	1.45	yes	9.92e+01		n	n

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Peak List Summary

CLIENT ID.
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Entry: 41 Totals Name: Total Hexa-Furans

Run: 18 File: P519742 Sample:1 Injection:1 Function:3

Acquired: 2-JAN-19 23:27:51 Processed: 3-JAN-19 09:14:30

Mass: 373.8210 375.8180 Tot Response: 3.63e+03 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:53	6.02e+02	4.78e+02	1.26	yes	1.08e+03		n	n
2	34:27	7.39e+02	5.81e+02	1.27	yes	1.32e+03		n	n
3	34:55	6.81e+02	5.50e+02	1.24	yes	1.23e+03	1,2,3,4,7,8-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0192

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 18 File: P519742 Sample:1 Injection:1 Function:3

Acquired: 2-JAN-19 23:27:51 Processed: 3-JAN-19 09:14:30

Mass: 389.8160 391.8130 Tot Response: 4.57e+03 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:17	1.16e+03	9.36e+02	1.24	yes	2.09e+03		n	n
2	35:06	8.44e+02	6.87e+02	1.23	yes	1.53e+03		n	n
3	35:12	1.04e+02	8.67e+01	1.20	yes	1.90e+02		n	n
4	35:49	2.69e+02	2.04e+02	1.32	yes	4.73e+02	1,2,3,6,7,8-HxCDD	n	n
5	36:05	1.63e+02	1.16e+02	1.41	yes	2.79e+02	1,2,3,7,8,9-HxCDD	n	n

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Peak List Summary

CLIENT ID.
SL0192

Entry: 43 Totals Name: Total Hepta-Furans

Run: 18 File: P519742 Sample:1 Injection:1 Function:4

Acquired: 2-JAN-19 23:27:51 Processed: 3-JAN-19 09:14:30

Mass: 407.7820 409.7790 Tot Response: 7.87e+03 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:48	1.30e+03	1.35e+03	0.97	yes	2.65e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	38:14	2.61e+03	2.40e+03	1.09	yes	5.00e+03		n	n
3	39:15	1.09e+02	1.11e+02	0.98	yes	2.19e+02	1,2,3,4,7,8,9-HpCDF	n	n

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Peak List Summary

CLIENT ID.
SL0192

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 18 File: P519742 Sample:1 Injection:1 Function:4

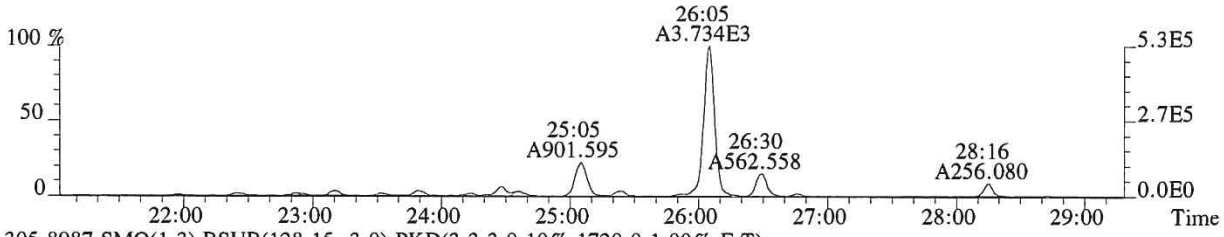
Acquired: 2-JAN-19 23:27:51 Processed: 3-JAN-19 09:14:30

Mass: 423.7770 425.7740 Tot Response: 2.87e+04 RRF: 1.025

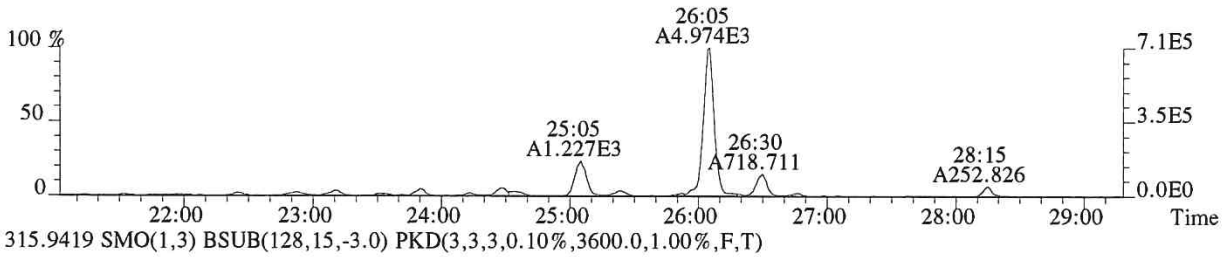
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:05	9.02e+03	8.70e+03	1.04	yes	1.77e+04		n	n
2	38:48	5.55e+03	5.45e+03	1.02	yes	1.10e+04	1,2,3,4,6,7,8-HpCDD	n	n

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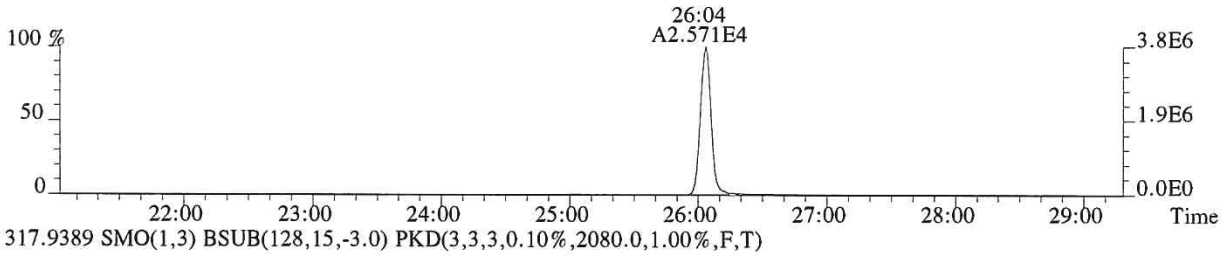
File:P519742 #1-587 Acq: 2-JAN-2019 23:27:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-018
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1524.0,1.00%,F,T)



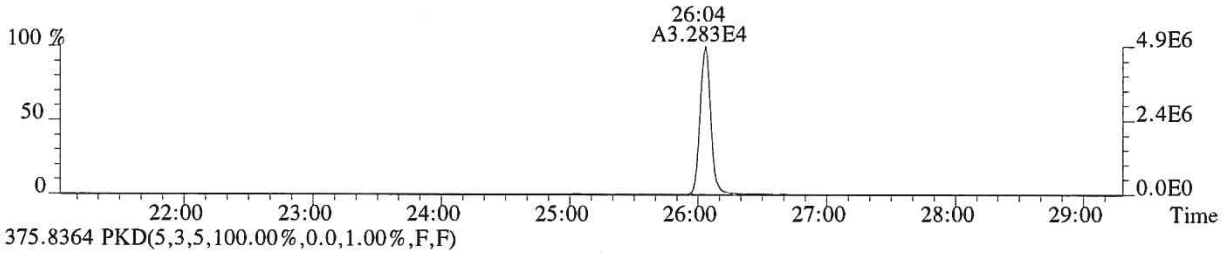
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1720.0,1.00%,F,T)



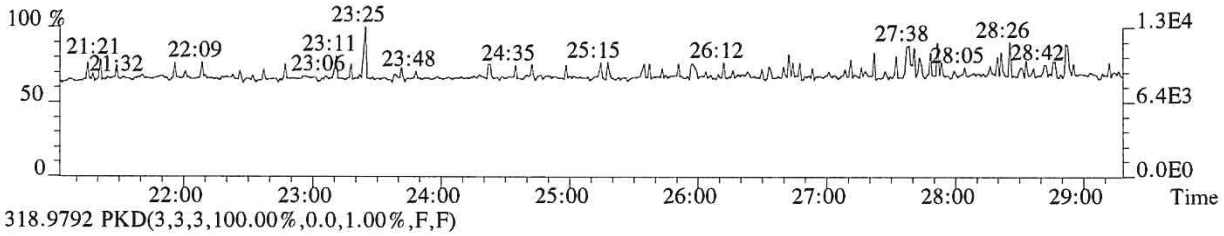
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3600.0,1.00%,F,T)



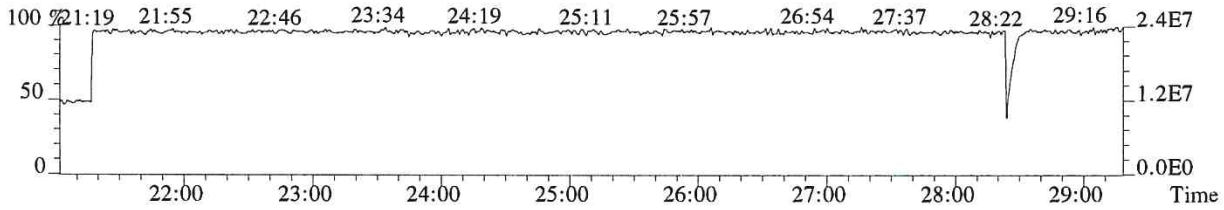
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2080.0,1.00%,F,T)



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

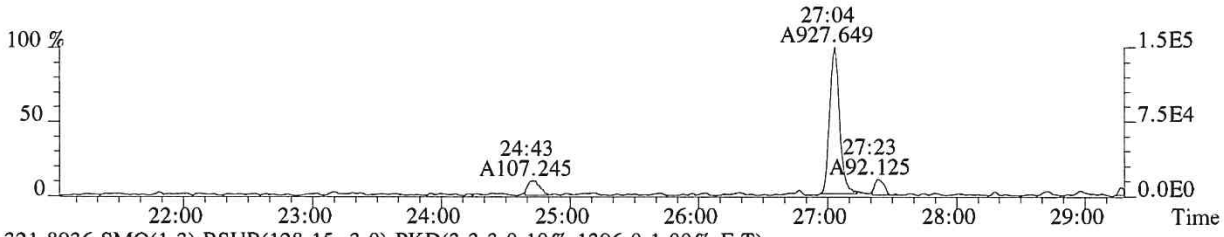


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

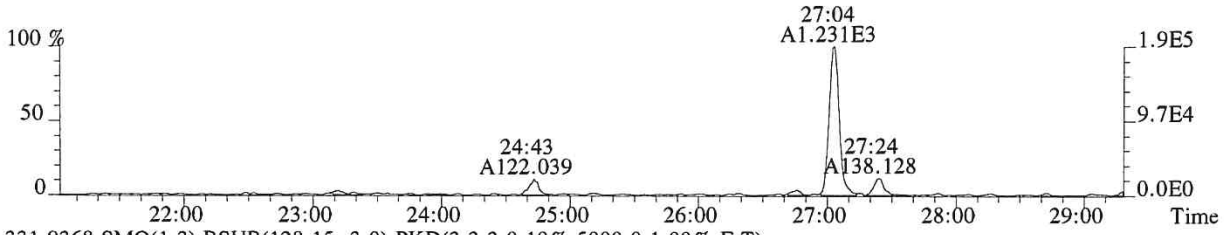


016382

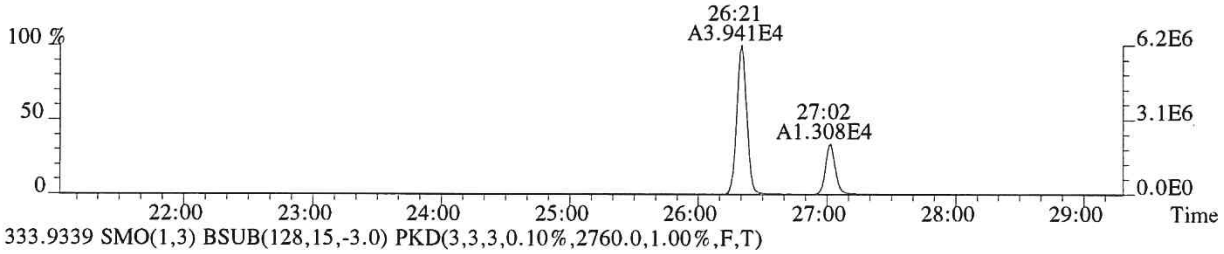
File:P519742 #1-587 Acq: 2-JAN-2019 23:27:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-018
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2320.0,1.00%,F,T)



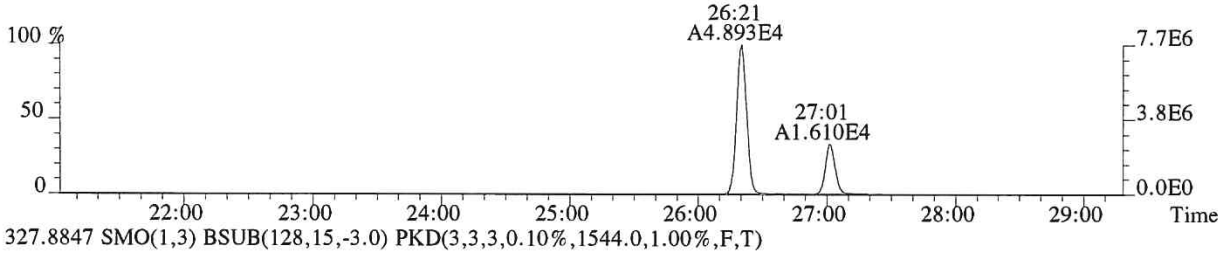
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1396.0,1.00%,F,T)



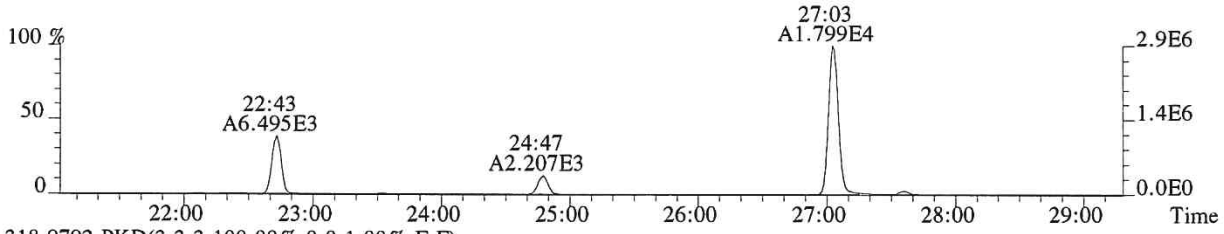
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5000.0,1.00%,F,T)



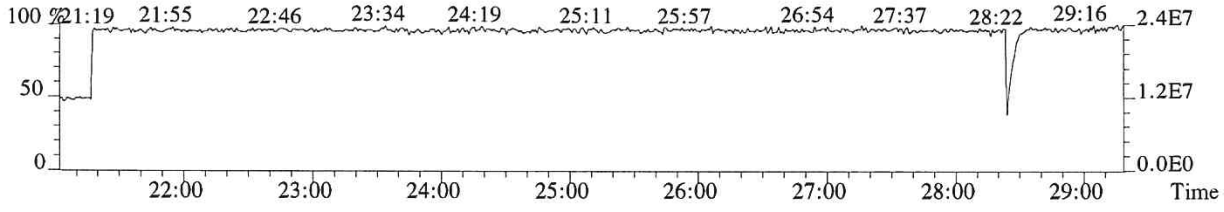
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2760.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1544.0,1.00%,F,T)

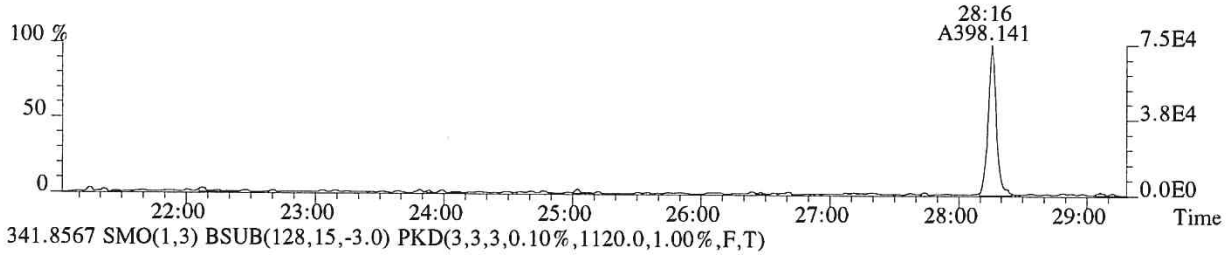


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

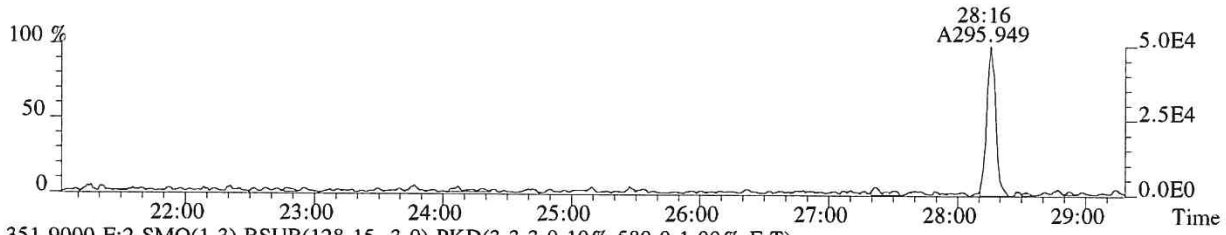


016383

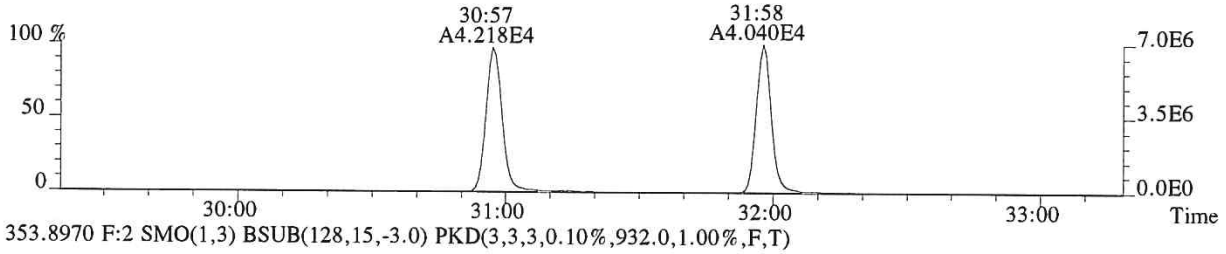
File:P519742 #1-587 Acq: 2-JAN-2019 23:27:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-018
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,744.0,1.00%,F,T)



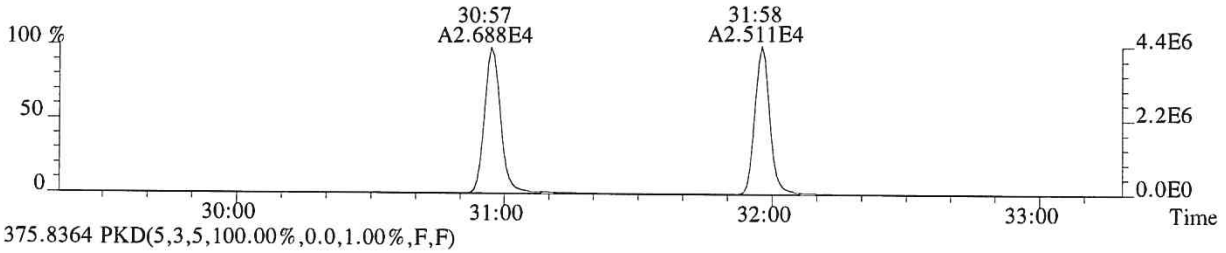
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1120.0,1.00%,F,T)



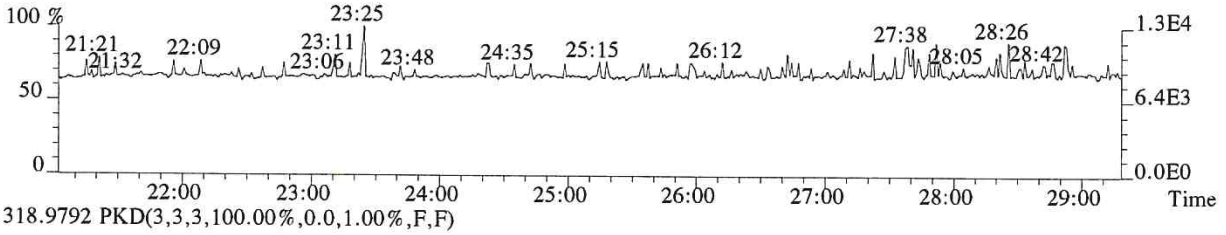
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,580.0,1.00%,F,T)



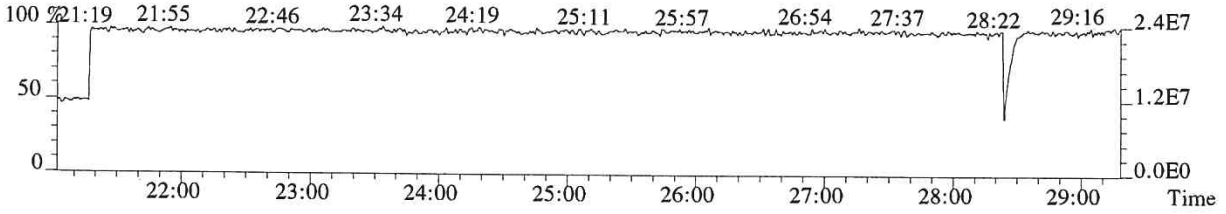
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,932.0,1.00%,F,T)



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

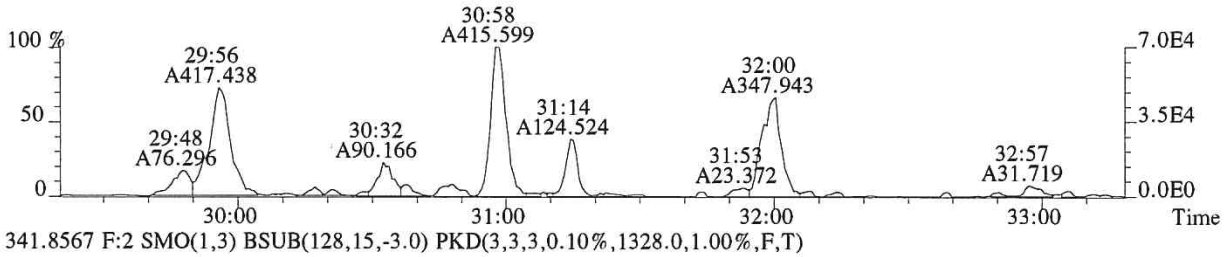


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

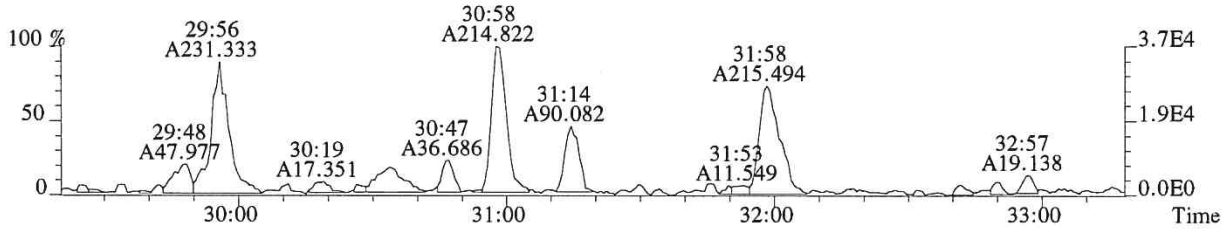


016384

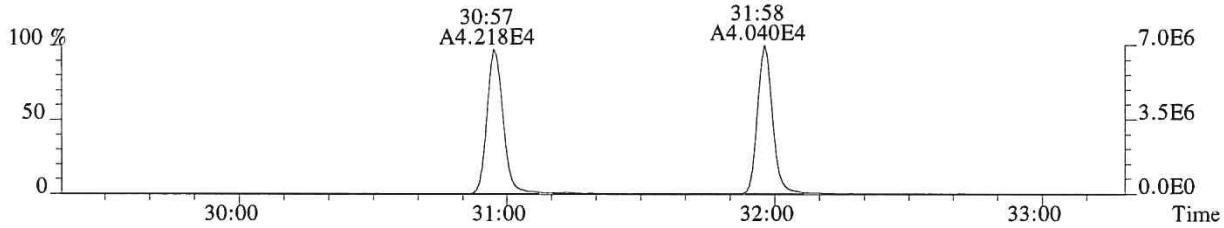
File:P519742 #1-358 Acq: 2-JAN-2019 23:27:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-018
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,732.0,1.00%,F,T)



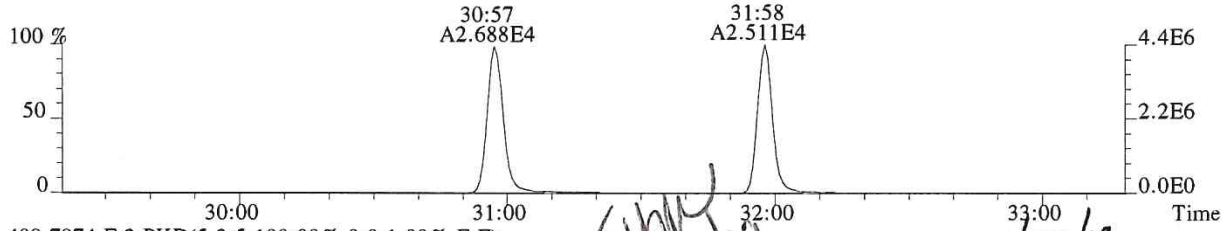
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1328.0,1.00%,F,T)



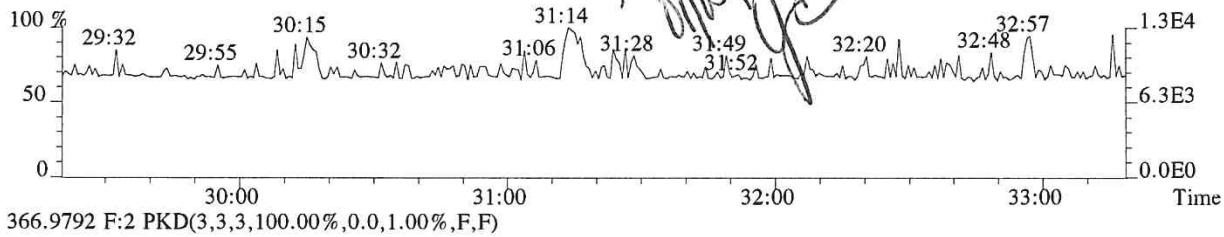
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,580.0,1.00%,F,T)



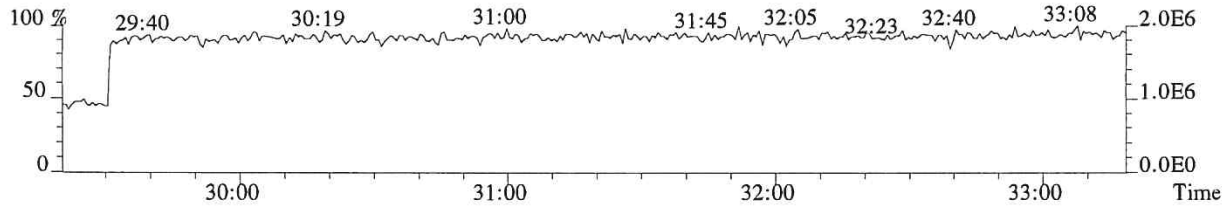
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,932.0,1.00%,F,T)



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

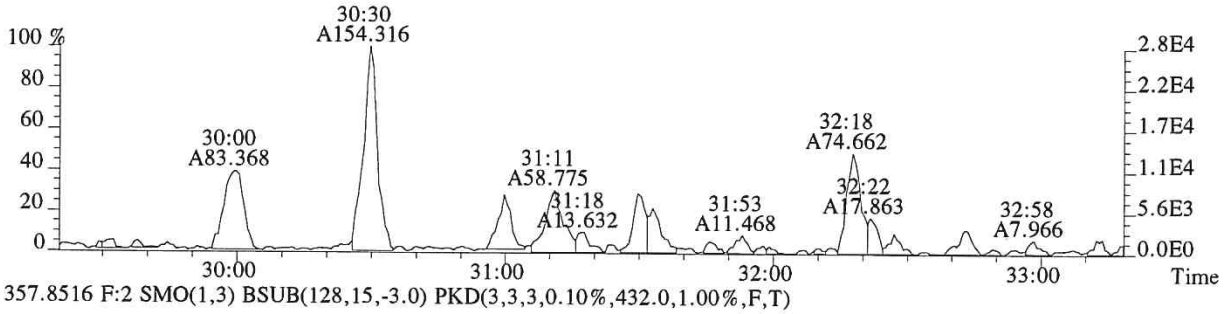


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

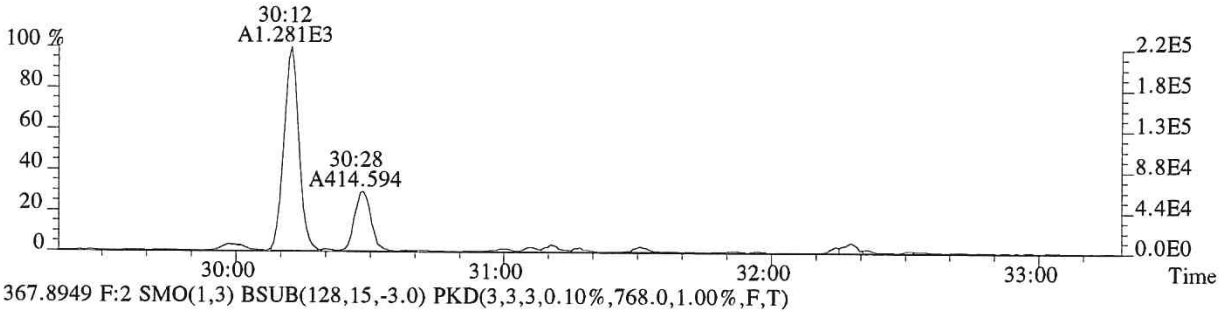


016385

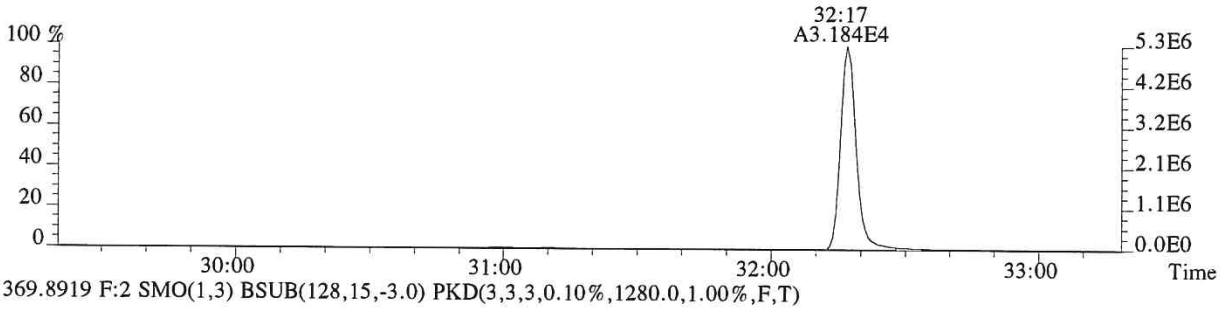
File:P519742 #1-358 Acq: 2-JAN-2019 23:27:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-018
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,560.0,1.00%,F,T)



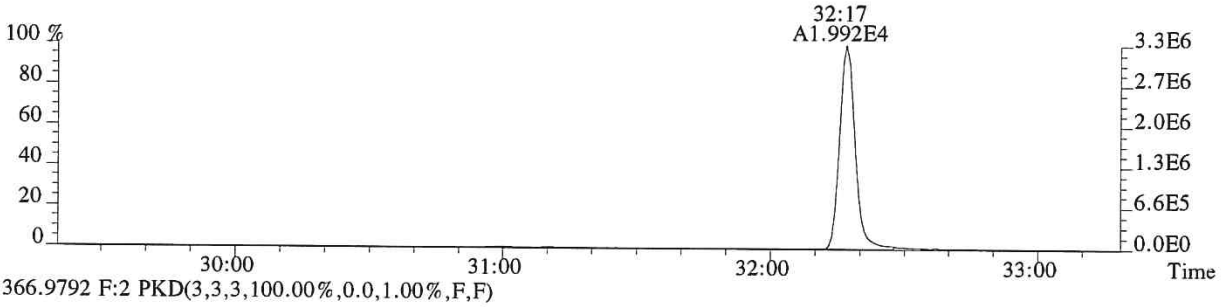
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,432.0,1.00%,F,T)



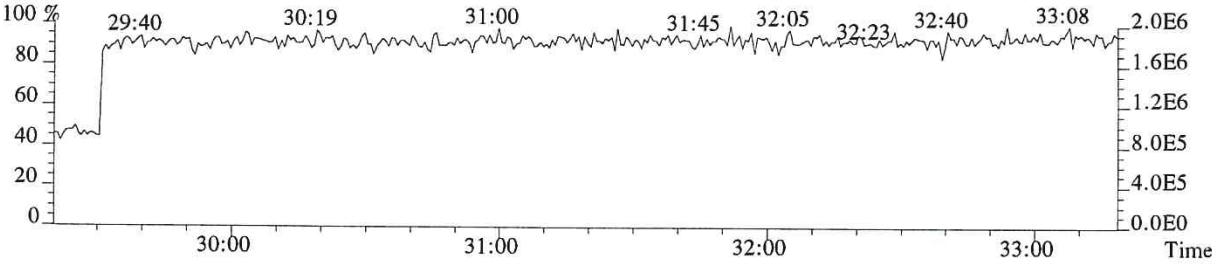
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,768.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1280.0,1.00%,F,T)

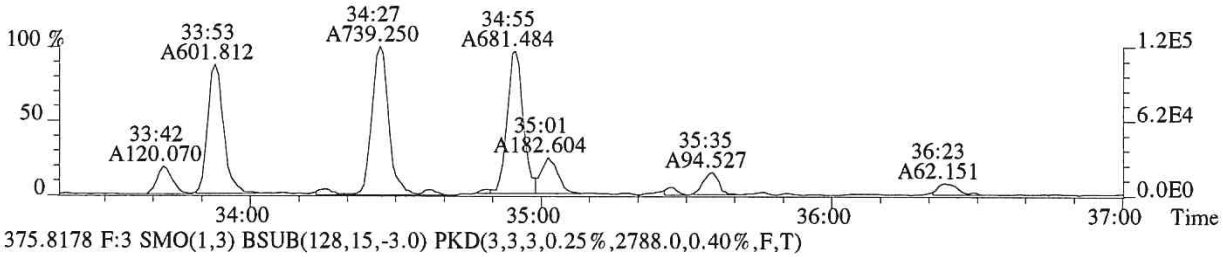


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

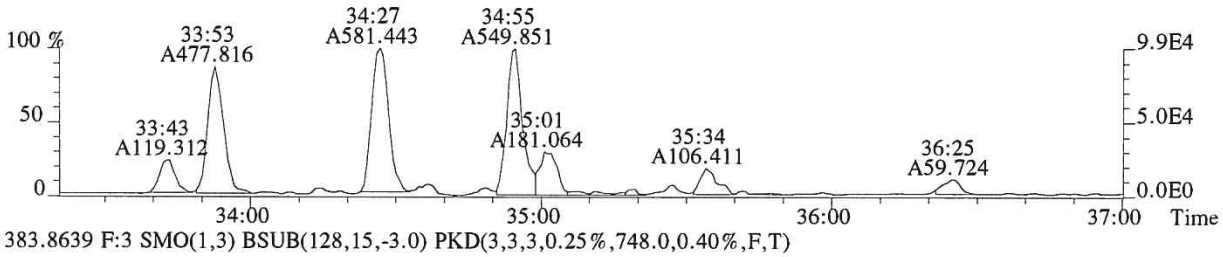


016386

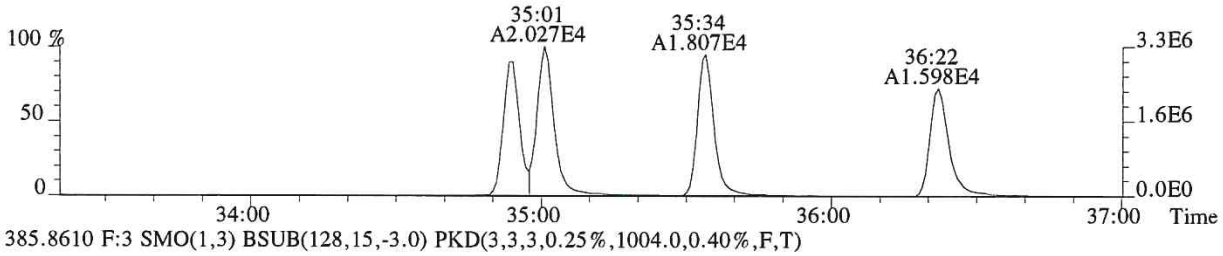
File:P519742 #1-330 Acq: 2-JAN-2019 23:27:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-018
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1940.0,0.40%,F,T)



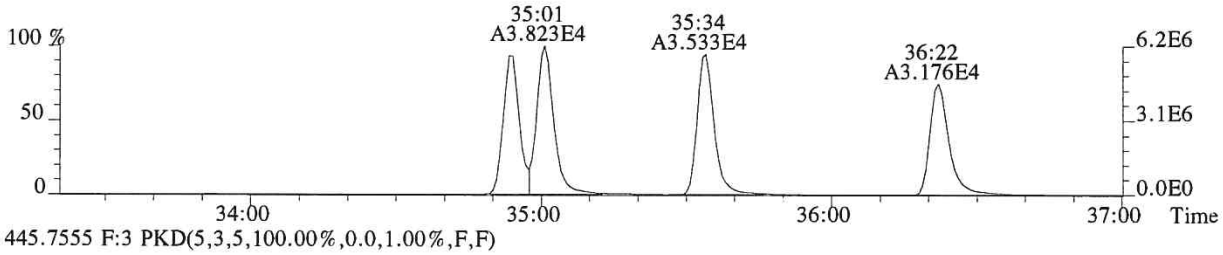
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2788.0,0.40%,F,T)



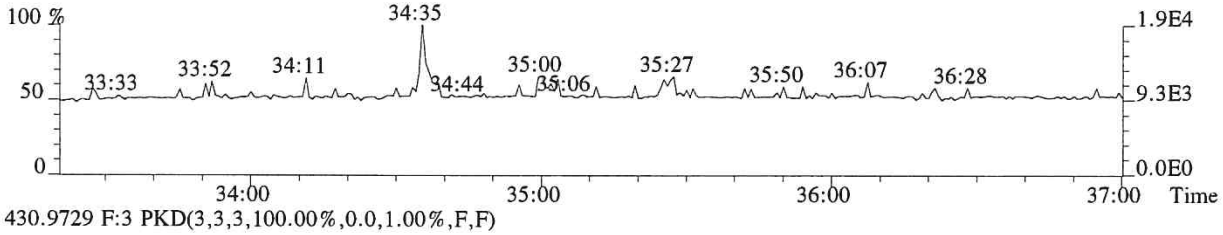
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,748.0,0.40%,F,T)



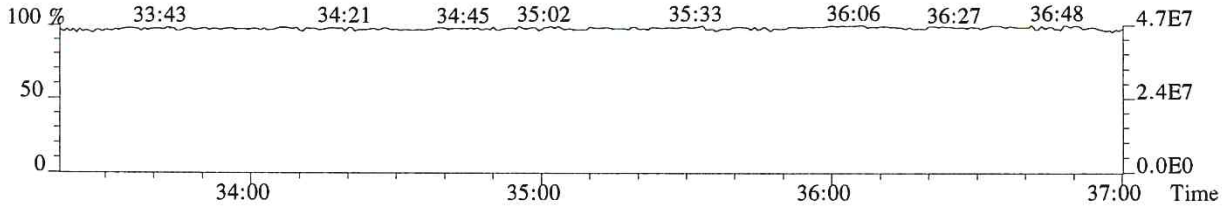
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1004.0,0.40%,F,T)



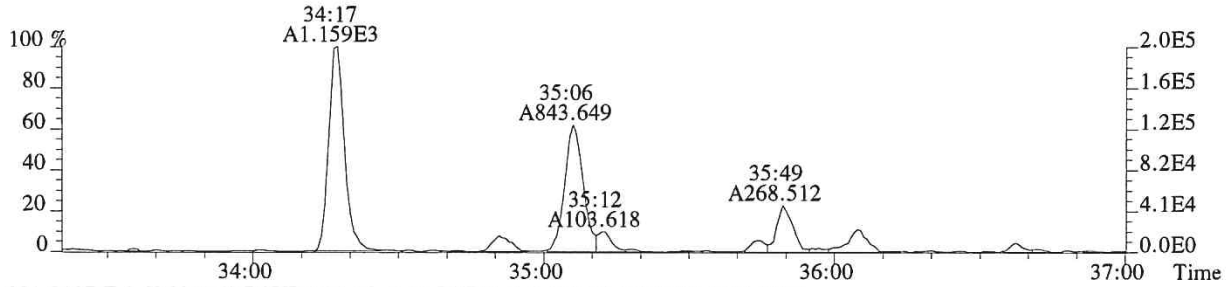
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



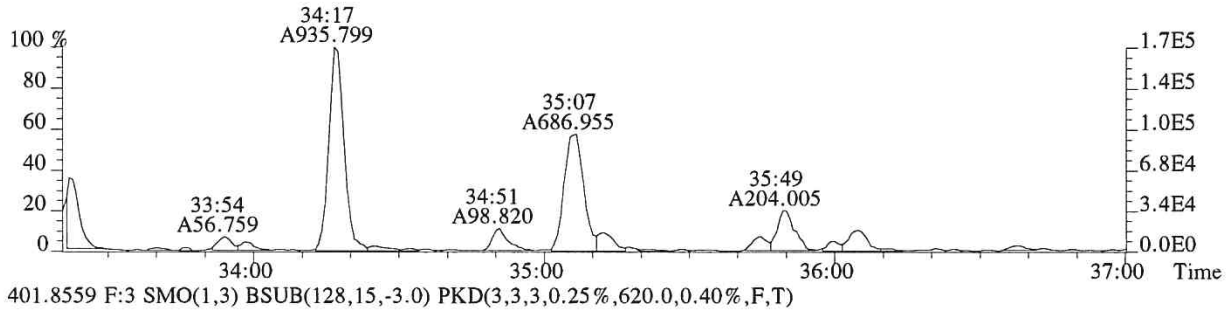
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



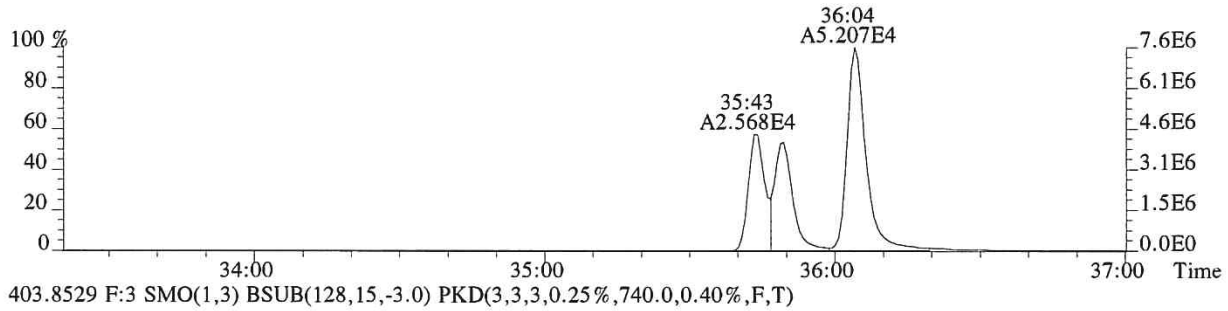
File:P519742 #1-330 Acq: 2-JAN-2019 23:27:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-018
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



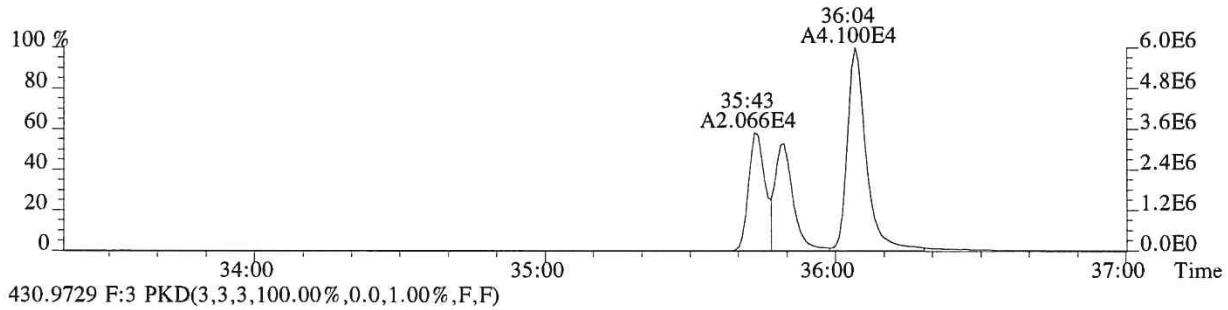
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1524.0,0.40%,F,T)



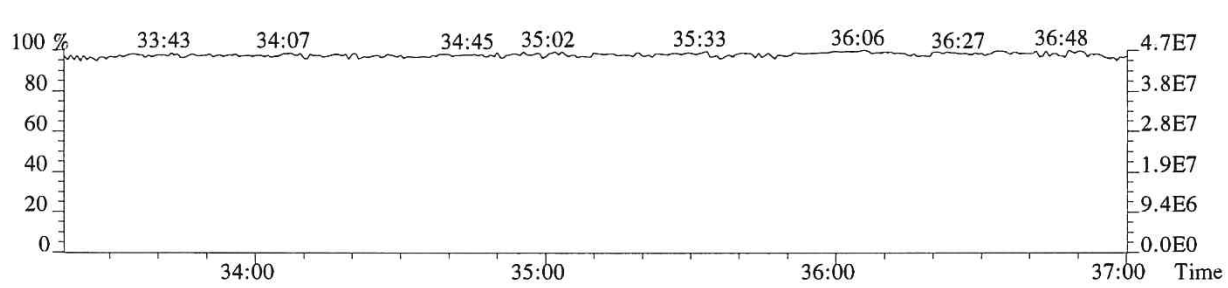
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,620.0,0.40%,F,T)



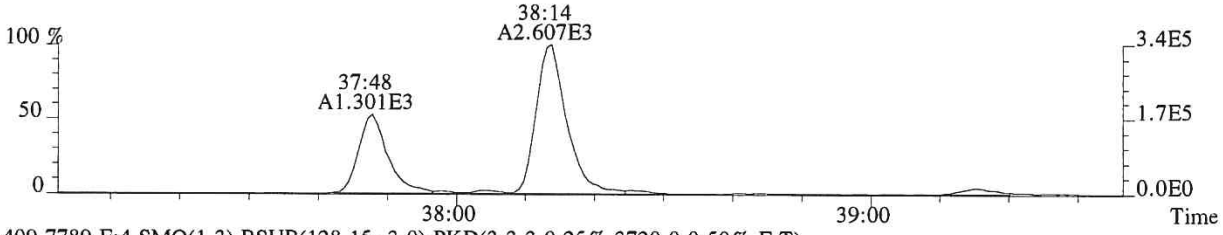
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,740.0,0.40%,F,T)



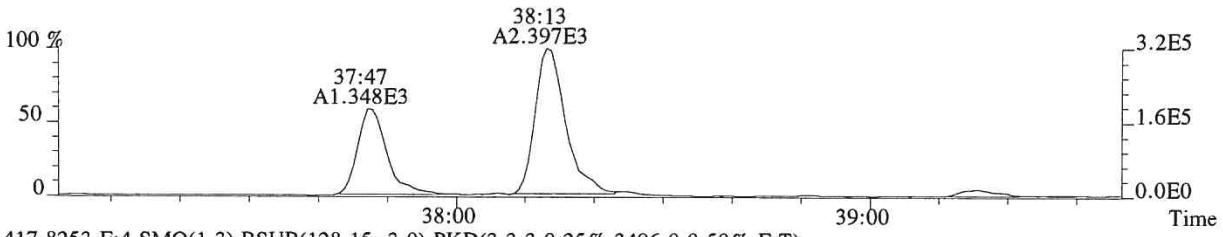
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



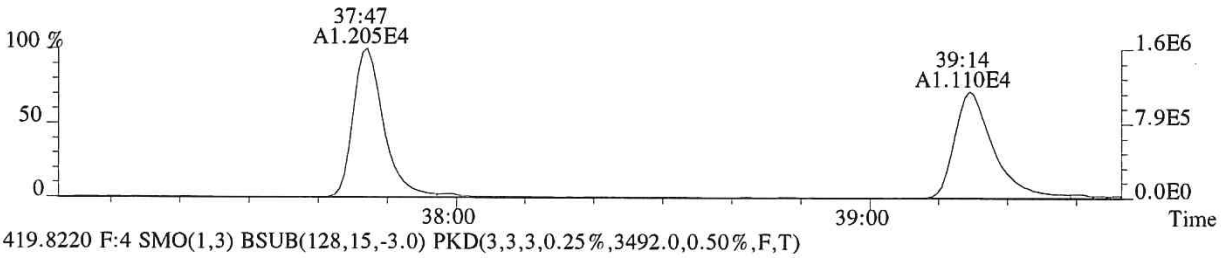
File:P519742 #1-232 Acq: 2-JAN-2019 23:27:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-018
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1344.0,0.50%,F,T)



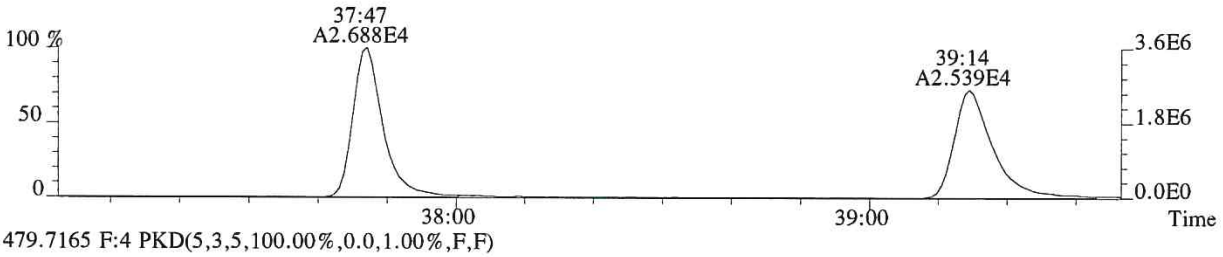
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3720.0,0.50%,F,T)



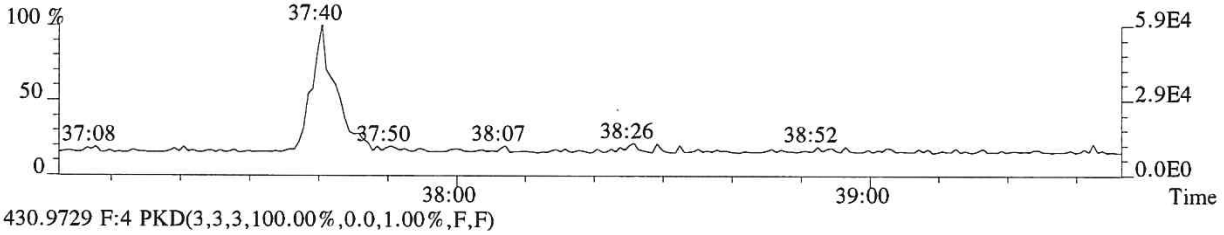
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3496.0,0.50%,F,T)



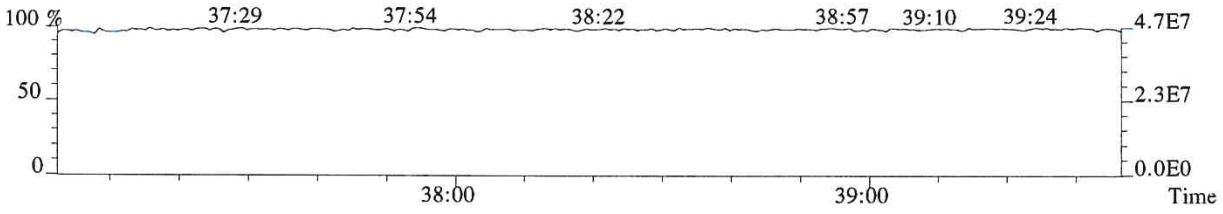
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3492.0,0.50%,F,T)



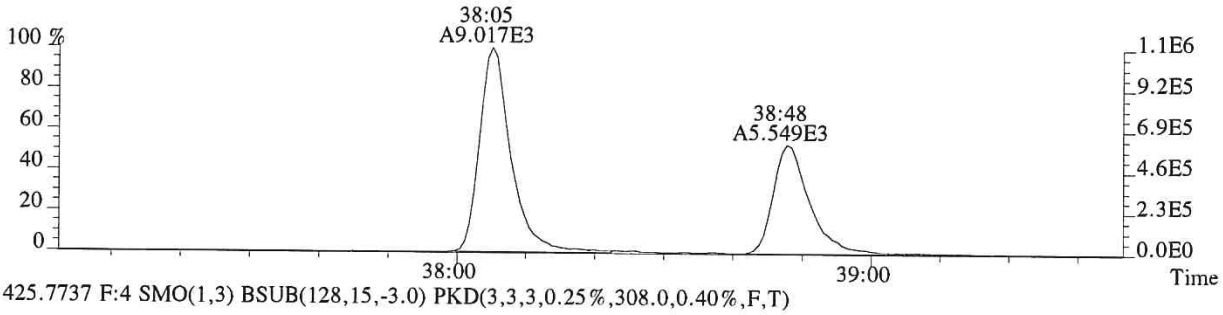
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



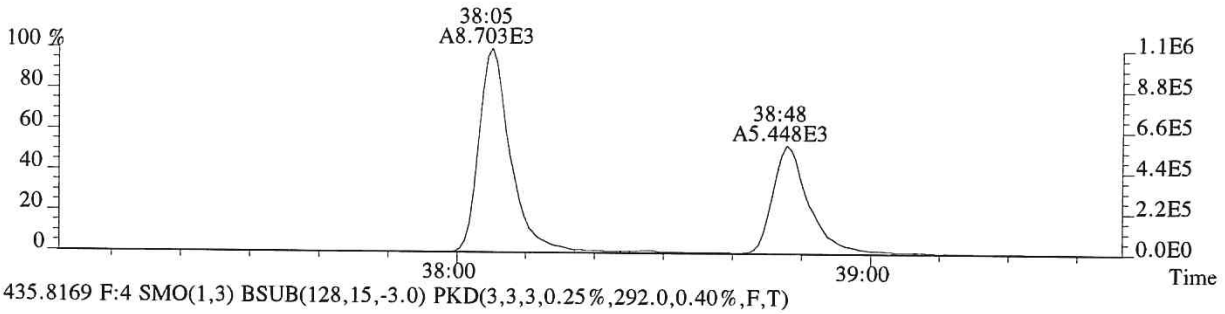
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



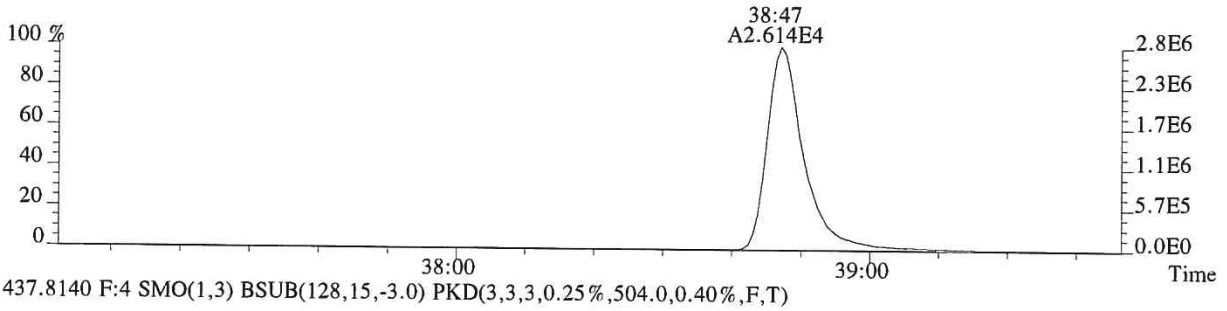
File:P519742 #1-232 Acq: 2-JAN-2019 23:27:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-018
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,208.0,0.40%,F,T)



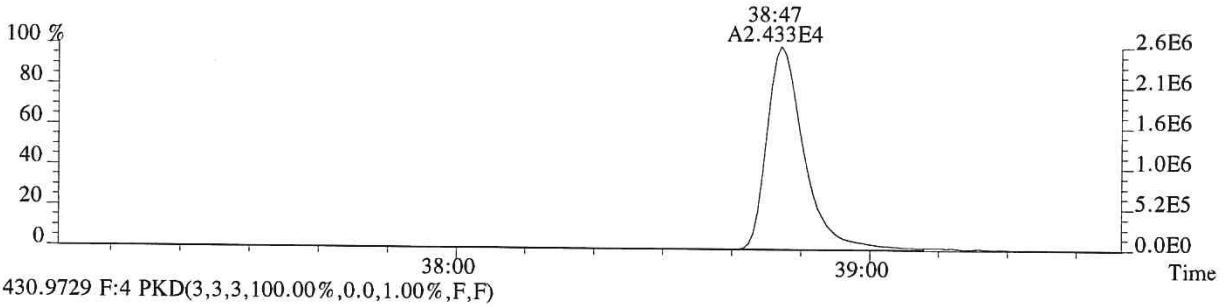
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,308.0,0.40%,F,T)



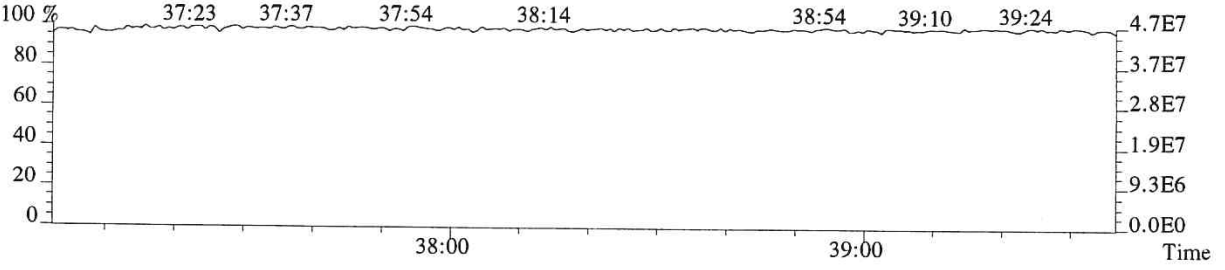
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,292.0,0.40%,F,T)



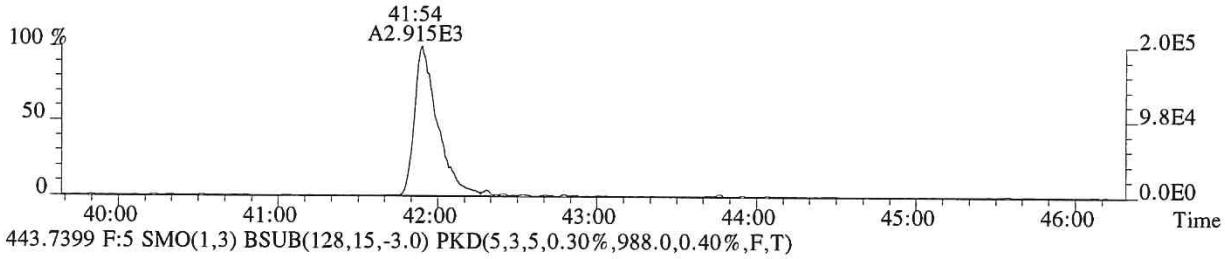
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,504.0,0.40%,F,T)



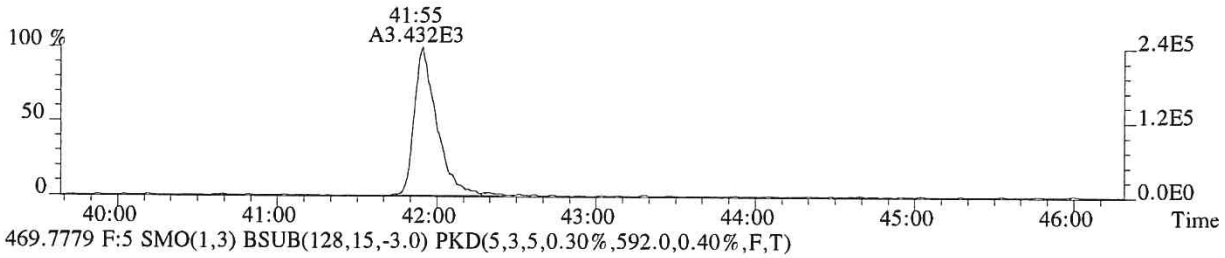
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



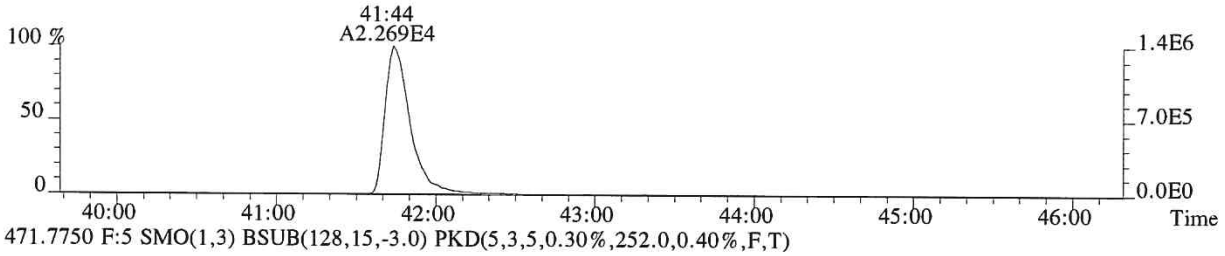
File:P519742 #1-601 Acq: 2-JAN-2019 23:27:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-018
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,336.0,0.40%,F,T)



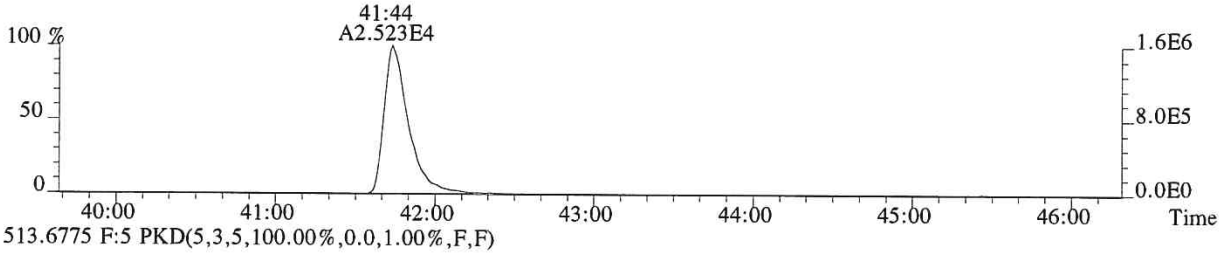
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,988.0,0.40%,F,T)



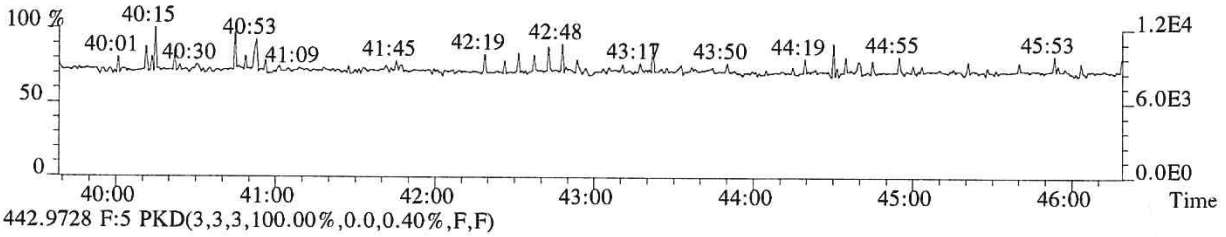
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,592.0,0.40%,F,T)



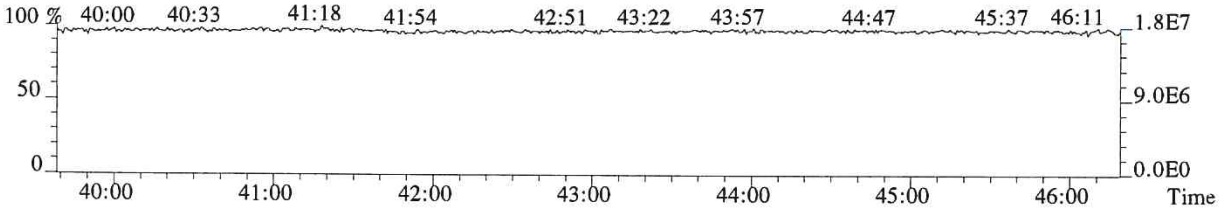
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,252.0,0.40%,F,T)



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

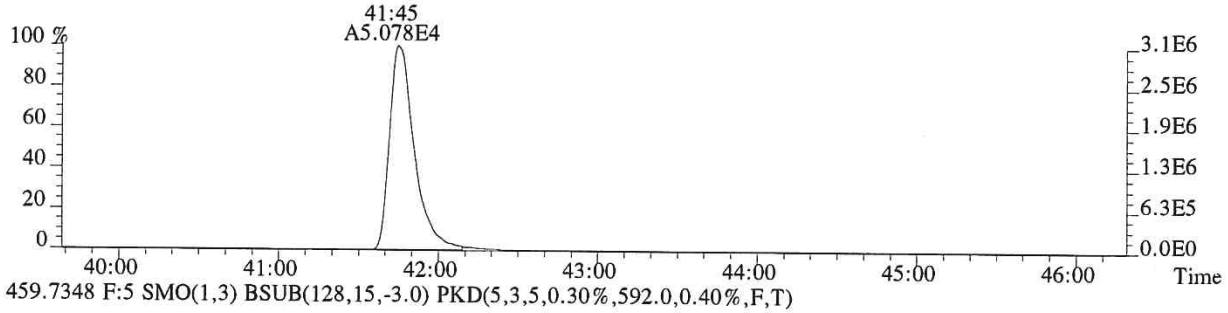


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

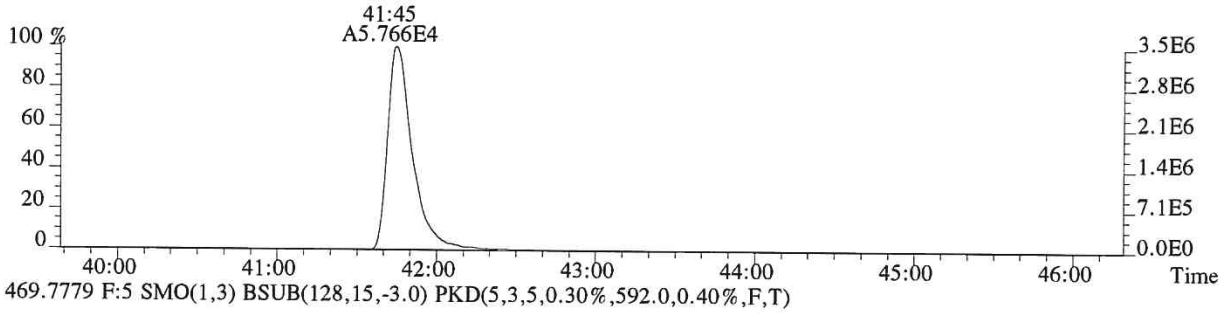


016391

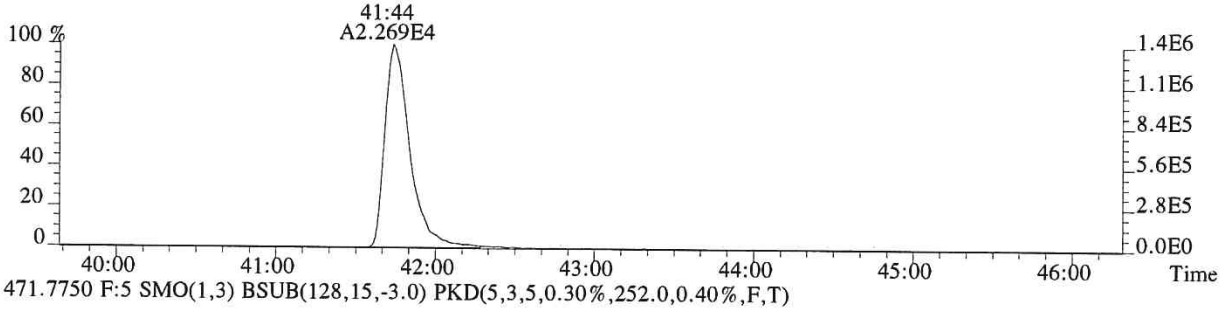
File:P519742 #1-601 Acq: 2-JAN-2019 23:27:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-018
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,420.0,0.40%,F,T)



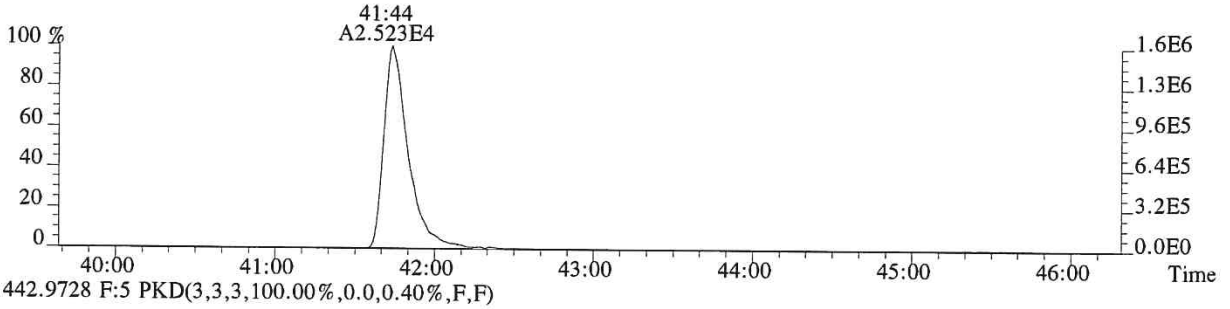
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,592.0,0.40%,F,T)



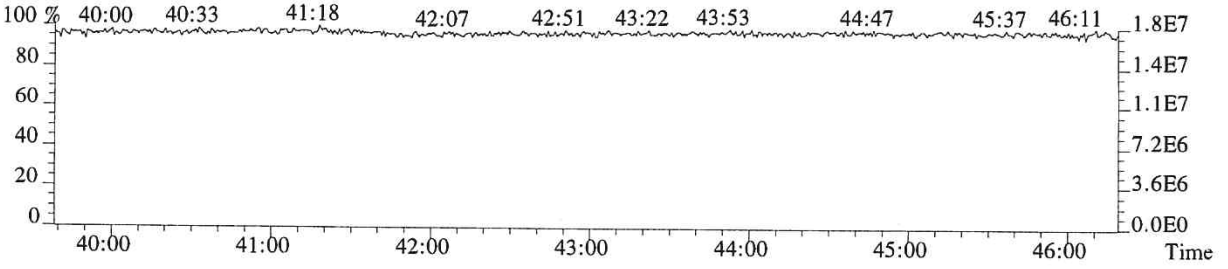
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,592.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,252.0,0.40%,F,T)



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



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0193

Run #19 Filename P519743 Samp: 1 Inj: 1 Acquired: 3-JAN-19 00:16:29
Processed: 3-JAN-19 09:14:31 Sample ID: E1801137-019

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:05	5.363e+03	7.236e+03	0.74	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:58	6.331e+02	4.601e+02	1.38	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:59	4.848e+02	3.341e+02	1.45	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:55	8.692e+02	7.245e+02	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:01	2.759e+02	2.320e+02	1.19	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:35	1.718e+02	1.537e+02	1.12	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:23	8.743e+01	7.076e+01	1.24	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:48	2.651e+03	2.663e+03	1.00	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:16	1.927e+02	1.559e+02	1.24	no	no	1.258
10	Unk	OCDF	41:54	5.811e+03	6.515e+03	0.89	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:04	1.445e+03	1.908e+03	0.76	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:19	1.223e+02	1.213e+02	1.01	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:45	1.136e+02	8.250e+01	1.38	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:50	3.371e+02	3.240e+02	1.04	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:05	2.678e+02	2.292e+02	1.17	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:48	1.020e+04	9.558e+03	1.07	yes	no	1.025
17	Unk	OCDD	41:45	9.492e+04	1.077e+05	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	2.855e+04	3.652e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:58	4.699e+04	2.990e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:58	4.409e+04	2.793e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:54	1.824e+04	3.586e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:01	2.200e+04	4.272e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:34	2.026e+04	3.869e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:22	1.718e+04	3.444e+04	0.50	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:47	1.372e+04	3.146e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:15	1.202e+04	2.690e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:02	1.492e+04	1.841e+04	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:18	3.524e+04	2.211e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:44	2.759e+04	2.161e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:49	2.957e+04	2.307e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:48	2.939e+04	2.780e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	41:45	2.634e+04	2.873e+04	0.92	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	4.360e+04	5.507e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:05	5.511e+04	4.317e+04	1.28	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:04	2.209e+04				no	1.014

$$\text{OCDD} = \frac{(9.492e+04 + 1.077e+05) \times 4000\ \text{pg} \times 1}{(2.634e+04 + 2.873e+04) \times 10.053\ \text{g} \times 78.4/100 \times 1.118} = 1670\ \text{ng/kg}$$

LW 01/04/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0193

Run #19 Filename P519743 Samp: 1 Inj: 1 Acquired: 3-JAN-19 00:16:29
Processed: 3-JAN-19 09:14:31 LAB. ID: E1801137-019

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	7.68e+05	5.56e+02	1.4e+03	1.06e+06	8.56e+02	1.2e+03
2	1,2,3,7,8-PeCDF	1.06e+05	1.74e+03	6.1e+01	7.44e+04	2.40e+03	3.1e+01
3	2,3,4,7,8-PeCDF	6.60e+04	1.74e+03	3.8e+01	4.72e+04	2.40e+03	2.0e+01
4	1,2,3,4,7,8-HxCDF	1.57e+05	1.53e+03	1.0e+02	1.39e+05	2.16e+03	6.4e+01
5	1,2,3,6,7,8-HxCDF	3.98e+04	1.53e+03	2.6e+01	3.24e+04	2.16e+03	1.5e+01
6	2,3,4,6,7,8-HxCDF	3.15e+04	1.53e+03	2.1e+01	2.65e+04	2.16e+03	1.2e+01
7	1,2,3,7,8,9-HxCDF	1.16e+04	1.53e+03	7.6e+00	1.15e+04	2.16e+03	5.3e+00
8	1,2,3,4,6,7,8-HpCDF	3.89e+05	2.35e+03	1.7e+02	3.67e+05	2.48e+02	1.5e+03
9	1,2,3,4,7,8,9-HpCDF	2.38e+04	2.35e+03	1.0e+01	1.99e+04	2.48e+02	8.0e+01
10	OCDF	3.87e+05	2.84e+02	1.4e+03	4.30e+05	6.80e+02	6.3e+02
11	2,3,7,8-TCDD	2.31e+05	1.96e+03	1.2e+02	2.94e+05	1.00e+03	2.9e+02
12	1,2,3,7,8-PeCDD	2.18e+04	4.96e+02	4.4e+01	1.76e+04	5.76e+02	3.1e+01
13	1,2,3,4,7,8-HxCDD	2.09e+04	4.84e+02	4.3e+01	1.74e+04	1.01e+03	1.7e+01
14	1,2,3,6,7,8-HxCDD	5.71e+04	4.84e+02	1.2e+02	5.39e+04	1.01e+03	5.3e+01
15	1,2,3,7,8,9-HxCDD	4.24e+04	4.84e+02	8.8e+01	3.84e+04	1.01e+03	3.8e+01
16	1,2,3,4,6,7,8-HpCDD	1.17e+06	4.80e+02	2.4e+03	1.09e+06	3.80e+02	2.9e+03
17	OCDD	6.16e+06	2.24e+02	2.8e+04	6.98e+06	9.00e+02	7.8e+03
18	13C-2,3,7,8-TCDF	4.22e+06	4.40e+03	9.6e+02	5.47e+06	2.86e+03	1.9e+03
19	13C-1,2,3,7,8-PeCDF	7.63e+06	5.36e+02	1.4e+04	4.86e+06	1.25e+03	3.9e+03
20	13C-2,3,4,7,8-PeCDF	7.52e+06	5.36e+02	1.4e+04	4.69e+06	1.25e+03	3.7e+03
21	13C-1,2,3,4,7,8-HxCDF	3.34e+06	8.28e+02	4.0e+03	6.61e+06	6.68e+03	9.9e+02
22	13C-1,2,3,6,7,8-HxCDF	3.57e+06	8.28e+02	4.3e+03	7.02e+06	6.68e+03	1.1e+03
23	13C-2,3,4,6,7,8-HxCDF	3.42e+06	8.28e+02	4.1e+03	6.55e+06	6.68e+03	9.8e+02
24	13C-1,2,3,7,8,9-HxCDF	2.58e+06	8.28e+02	3.1e+03	5.13e+06	6.68e+03	7.7e+02
25	13C-1,2,3,4,6,7,8-HpCDF	1.93e+06	2.28e+03	8.5e+02	4.29e+06	7.10e+03	6.0e+02
26	13C-1,2,3,4,7,8,9-HpCDF	1.28e+06	2.28e+03	5.6e+02	2.78e+06	7.10e+03	3.9e+02
27	13C-2,3,7,8-TCDD	2.41e+06	5.65e+03	4.3e+02	2.95e+06	2.64e+03	1.1e+03
28	13C-1,2,3,7,8-PeCDD	5.87e+06	5.12e+02	1.1e+04	3.63e+06	1.11e+03	3.3e+03
29	13C-1,2,3,4,7,8-HxCDD	4.99e+06	1.00e+03	5.0e+03	3.88e+06	8.24e+02	4.7e+03
30	13C-1,2,3,6,7,8-HxCDD	4.60e+06	1.00e+03	4.6e+03	3.64e+06	8.24e+02	4.4e+03
31	13C-1,2,3,4,6,7,8-HpCDD	3.30e+06	7.84e+02	4.2e+03	3.12e+06	3.88e+02	8.0e+03
32	13C-OCDD	1.67e+06	6.00e+02	2.8e+03	1.89e+06	4.72e+02	4.0e+03
33	13C-1,2,3,4-TCDD	6.95e+06	5.65e+03	1.2e+03	8.78e+06	2.64e+03	3.3e+03
34	13C-1,2,3,7,8,9-HxCDD	8.37e+06	1.00e+03	8.4e+03	6.55e+06	8.24e+02	8.0e+03
35	37Cl-2,3,7,8-TCDD	3.48e+06	1.87e+03	1.9e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0193

Entry: 36 Totals Name: Total Tetra-Furans

Run: 19 File: P519743 Sample:1 Injection:1 Function:1

Acquired: 3-JAN-19 00:16:29 Processed: 3-JAN-19 09:14:31

Mass: 303.9020 305.8990 Tot Response: 2.01e+04 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:34	3.03e+01	4.43e+01	0.68	yes	7.46e+01		n	n
2	21:40	1.84e+00	2.13e+00	0.86	yes	3.97e+00		n	n
3	21:58	4.40e+01	6.49e+01	0.68	yes	1.09e+02		n	n
4	22:26	8.69e+01	1.14e+02	0.76	yes	2.01e+02		n	n
5	22:52	1.40e+02	2.00e+02	0.70	yes	3.40e+02		n	n
6	23:11	1.37e+02	1.91e+02	0.72	yes	3.28e+02		n	n
7	24:13	9.88e+01	1.38e+02	0.72	yes	2.36e+02		n	n
8	24:29	3.09e+02	4.24e+02	0.73	yes	7.33e+02		n	n
9	25:05	9.61e+02	1.31e+03	0.73	yes	2.27e+03		n	n
10	25:52	7.25e+01	8.21e+01	0.88	yes	1.55e+02		n	n
11	26:05	5.36e+03	7.24e+03	0.74	yes	1.26e+04	2,3,7,8-TCDF	n	n
12	26:30	1.00e+03	1.19e+03	0.84	yes	2.19e+03		n	n
13	28:15	3.93e+02	4.46e+02	0.88	yes	8.39e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0193

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 19 File: P519743 Sample:1 Injection:1 Function:1

Acquired: 3-JAN-19 00:16:29 Processed: 3-JAN-19 09:14:31

Mass: 319.8970 321.8940 Tot Response: 3.35e+03 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:04	1.44e+03	1.91e+03 0.76	yes	3.35e+03	2,3,7,8-TCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0193

Entry: 38 Totals Name: Total Penta-Furans1

Run: 19 File: P519743 Sample:1 Injection:1 Function:1

Acquired: 3-JAN-19 00:16:29 Processed: 3-JAN-19 09:14:31

Mass: 339.8600 341.8570 Tot Response: 8.47e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:16	5.21e+02	3.26e+02 1.60	yes	8.47e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0193

Entry: 39 Totals Name: Total Penta-Furans2

Run: 19 File: P519743 Sample:1 Injection:1 Function:2

Acquired: 3-JAN-19 00:16:29 Processed: 3-JAN-19 09:14:31

Mass: 339.8600 341.8570 Tot Response: 3.71e+03 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:48	1.37e+02	9.03e+01	1.52	yes	2.27e+02		n	n
2	29:56	5.85e+02	3.87e+02	1.51	yes	9.72e+02		n	n
3	30:34	9.33e+01	5.68e+01	1.64	yes	1.50e+02		y	y
4	30:46	6.66e+01	4.23e+01	1.57	yes	1.09e+02		n	y
5	30:58	6.33e+02	4.60e+02	1.38	yes	1.09e+03	1,2,3,7,8-PeCDF	n	n
6	31:14	2.12e+02	1.24e+02	1.71	yes	3.36e+02		n	n
7	31:59	4.85e+02	3.34e+02	1.45	yes	8.19e+02	2,3,4,7,8-PeCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0193

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 19 File: P519743 Sample:1 Injection:1 Function:2

Acquired: 3-JAN-19 00:16:29 Processed: 3-JAN-19 09:14:31

Mass: 355.8550 357.8520 Tot Response: 7.29e+02 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:30	3.06e+02	1.86e+02	1.65	yes	4.92e+02		n	n
2	31:33	1.19e+02	8.98e+01	1.32	yes	2.09e+02		y	n
3	32:42	1.70e+01	1.08e+01	1.57	yes	2.79e+01		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0193

Entry: 41 Totals Name: Total Hexa-Furans

Run: 19 File: P519743 Sample:1 Injection:1 Function:3

Acquired: 3-JAN-19 00:16:29 Processed: 3-JAN-19 09:14:31

Mass: 373.8210 375.8180 Tot Response: 6.95e+03 RRF: 1.141

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:53	1.09e+03	8.81e+02	1.23	yes	1.97e+03		n	n
2	34:27	1.36e+03	1.04e+03	1.31	yes	2.40e+03		n	n
3	34:55	8.69e+02	7.24e+02	1.20	yes	1.59e+03	1,2,3,4,7,8-HxCDF	n	n
4	35:01	2.76e+02	2.32e+02	1.19	yes	5.08e+02	1,2,3,6,7,8-HxCDF	n	n
5	35:35	1.72e+02	1.54e+02	1.12	yes	3.26e+02	2,3,4,6,7,8-HxCDF	n	n
6	36:23	8.74e+01	7.08e+01	1.24	yes	1.58e+02	1,2,3,7,8,9-HxCDF	n	n

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

ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0193

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 19 File: P519743 Sample:1 Injection:1 Function:3

Acquired: 3-JAN-19 00:16:29 Processed: 3-JAN-19 09:14:31

Mass: 389.8160 391.8130 Tot Response: 7.62e+03 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:17	2.19e+03	1.66e+03	1.32	yes	3.85e+03		n	n
2	34:27	3.57e+01	2.53e+01	1.41	yes	6.11e+01		n	n
3	35:06	1.32e+03	1.13e+03	1.18	yes	2.45e+03		n	n
4	35:13	2.20e+02	1.88e+02	1.17	yes	4.08e+02		n	n
5	35:45	1.14e+02	8.25e+01	1.38	yes	1.96e+02	1,2,3,4,7,8-HxCDD	n	n
6	36:00	7.99e+01	7.22e+01	1.11	yes	1.52e+02		n	n
7	36:05	2.68e+02	2.29e+02	1.17	yes	4.97e+02	1,2,3,7,8,9-HxCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0193

Entry: 43 Totals Name: Total Hepta-Furans

Run: 19 File: P519743 Sample:1 Injection:1 Function:4

Acquired: 3-JAN-19 00:16:29 Processed: 3-JAN-19 09:14:31

Mass: 407.7820 409.7790 Tot Response: 1.52e+04 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:48	2.65e+03	2.66e+03	1.00	yes	5.31e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	38:14	4.95e+03	4.97e+03	1.00	yes	9.92e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0193

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 19 File: P519743 Sample:1 Injection:1 Function:4

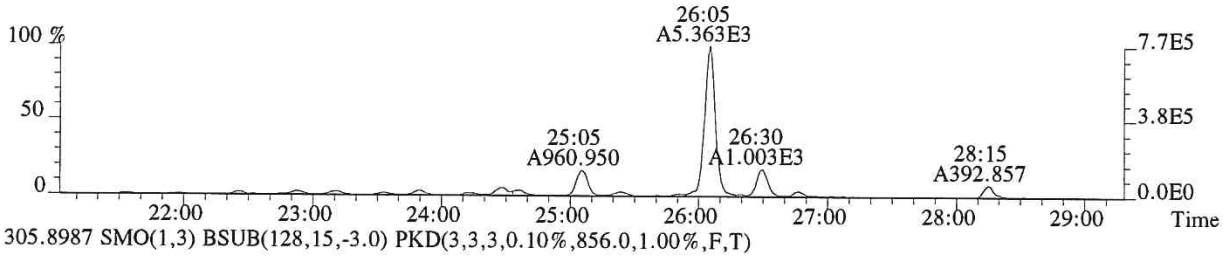
Acquired: 3-JAN-19 00:16:29 Processed: 3-JAN-19 09:14:31

Mass: 423.7770 425.7740 Tot Response: 5.31e+04 RRF: 1.025

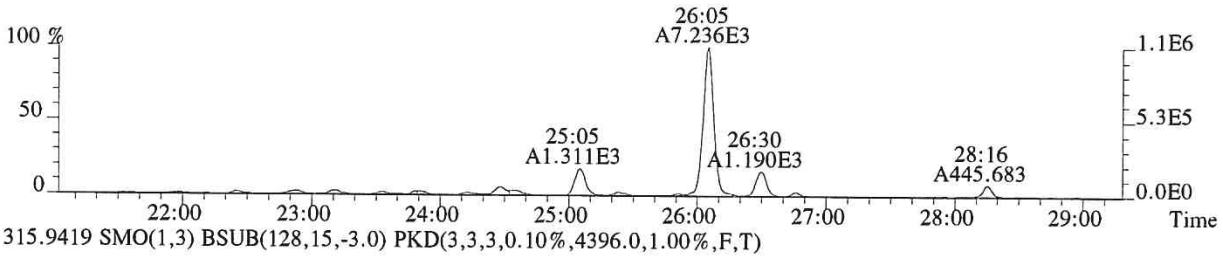
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:06	1.69e+04	1.64e+04 1.03	yes	3.33e+04		n	n
2	38:48	1.02e+04	9.56e+03 1.07	yes	1.98e+04	1,2,3,4,6,7,8-HpCDD	n	n

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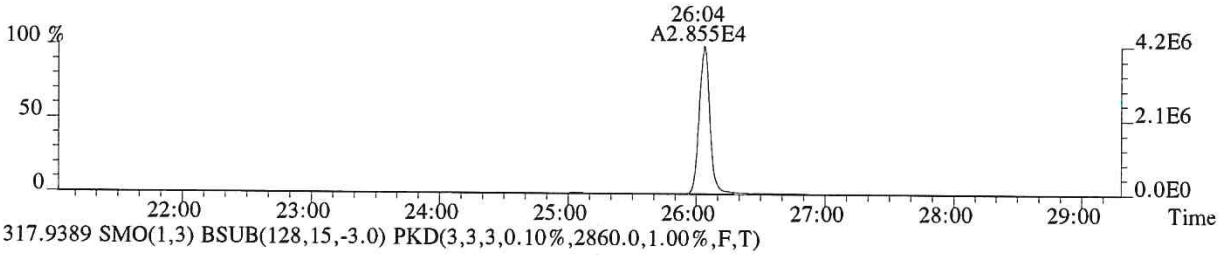
File:P519743 #1-587 Acq: 3-JAN-2019 00:16:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-019
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,556.0,1.00%,F,T)



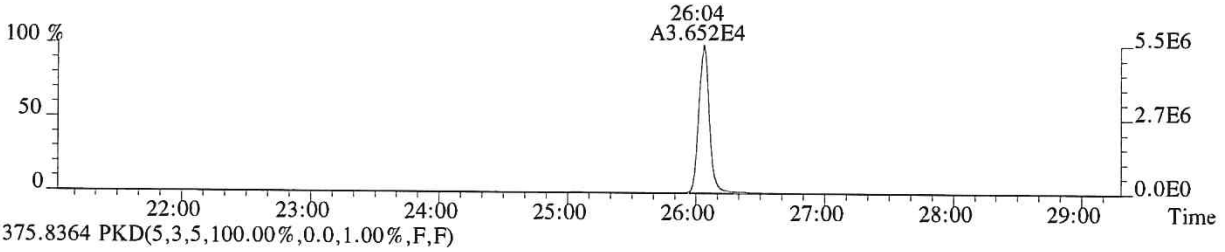
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,856.0,1.00%,F,T)



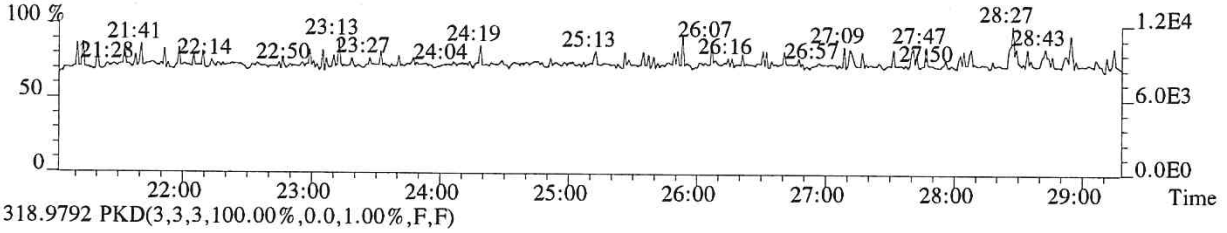
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4396.0,1.00%,F,T)



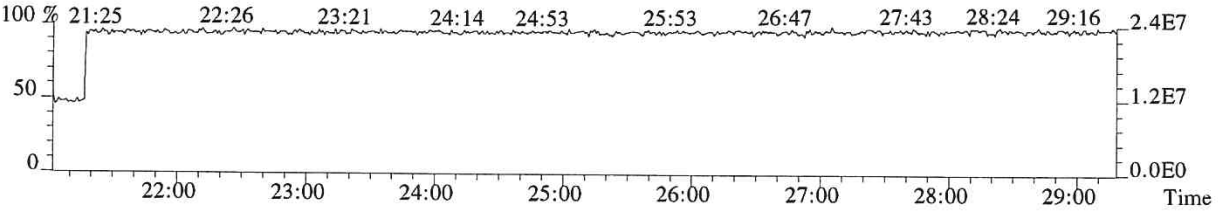
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2860.0,1.00%,F,T)



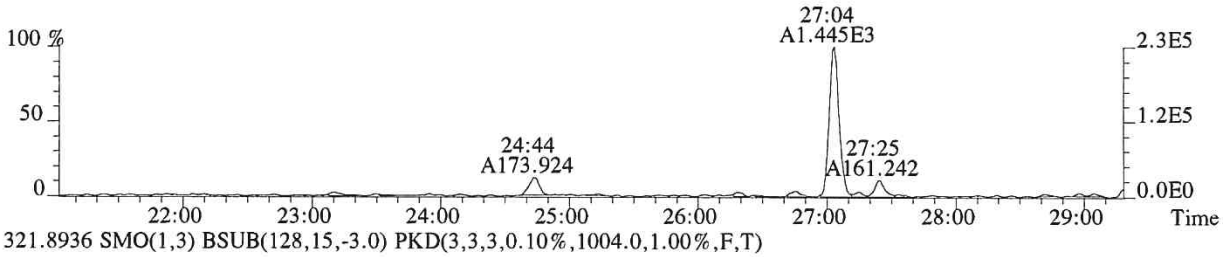
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



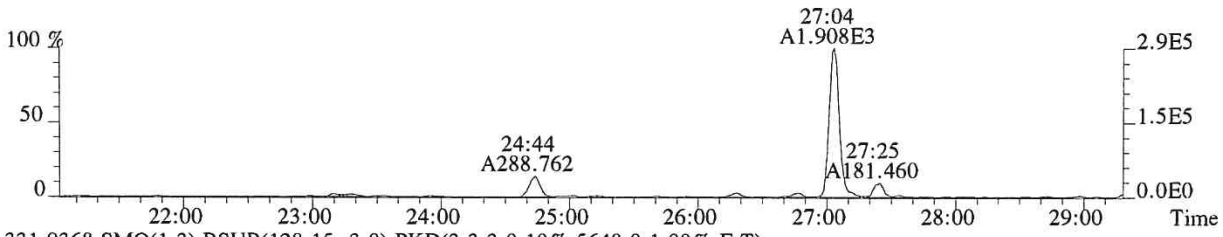
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



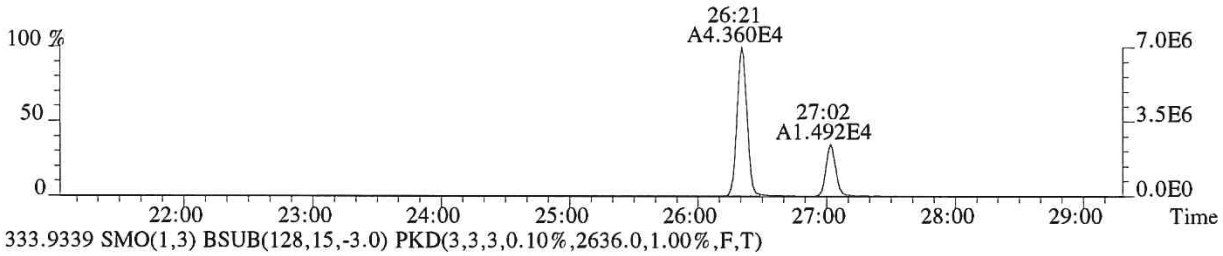
File:P519743 #1-587 Acq: 3-JAN-2019 00:16:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-019
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1960.0,1.00%,F,T)



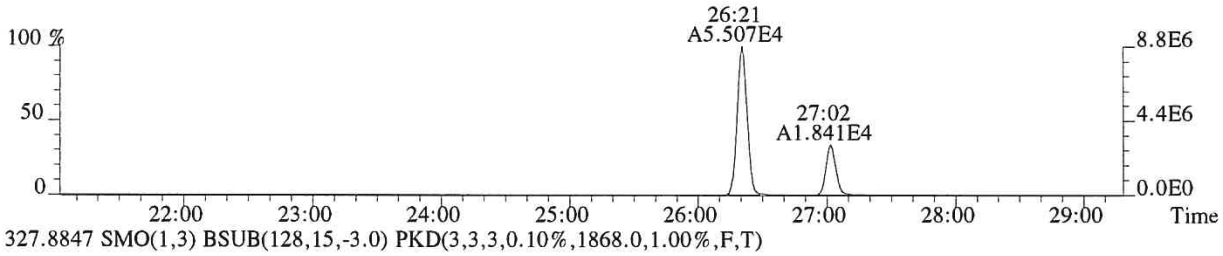
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1004.0,1.00%,F,T)



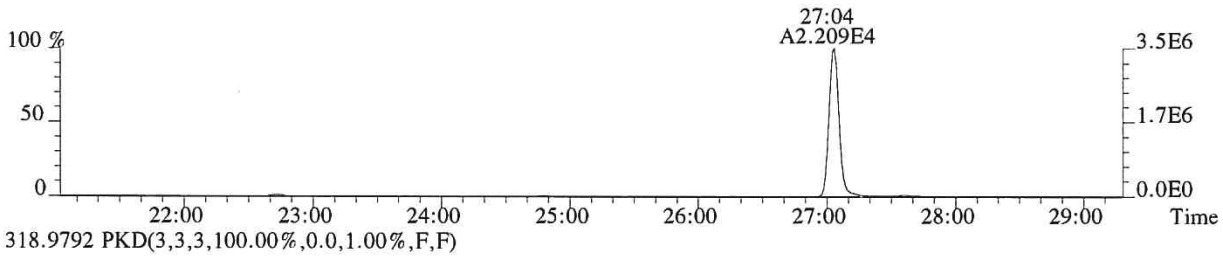
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5648.0,1.00%,F,T)



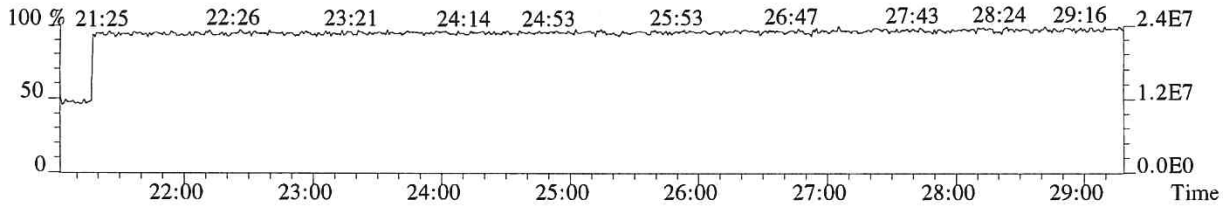
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2636.0,1.00%,F,T)



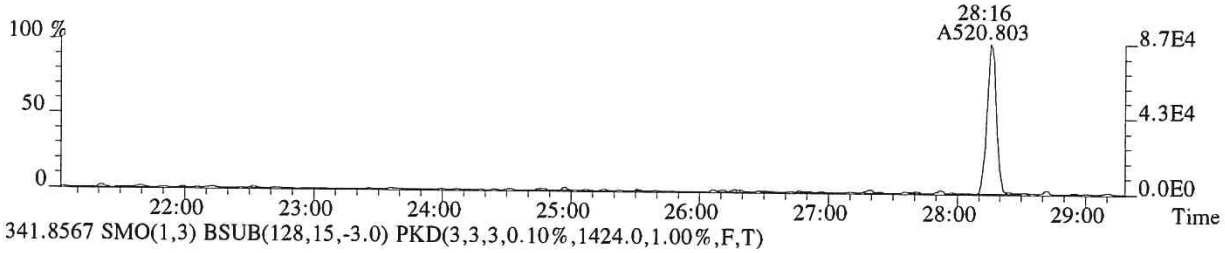
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1868.0,1.00%,F,T)



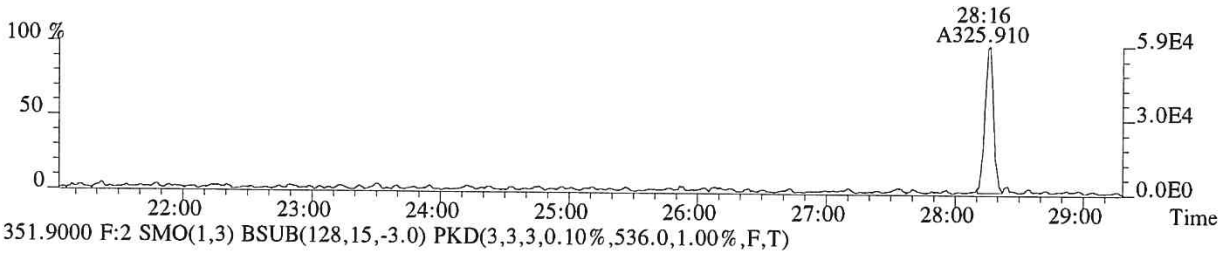
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



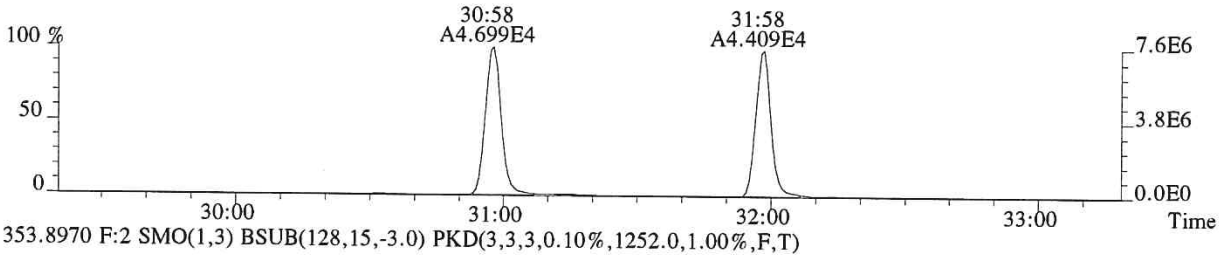
File:P519743 #1-587 Acq: 3-JAN-2019 00:16:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-019
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,460.0,1.00%,F,T)



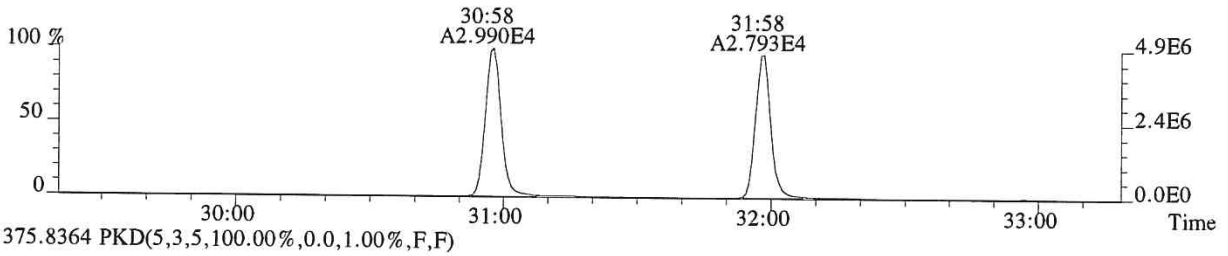
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1424.0,1.00%,F,T)



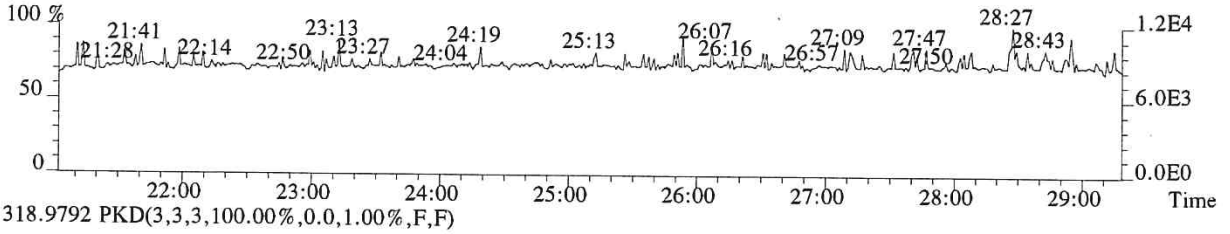
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,536.0,1.00%,F,T)



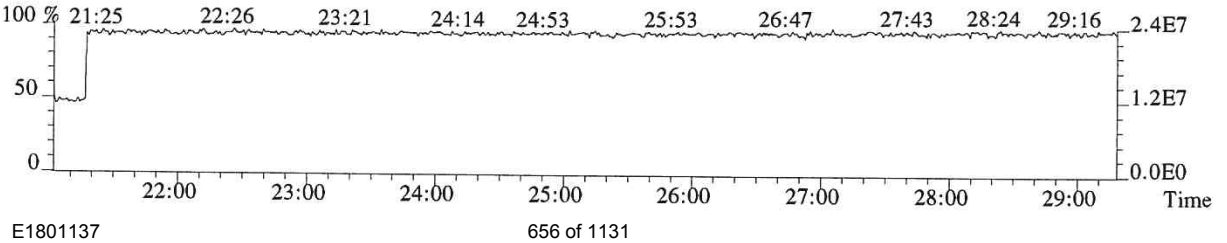
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1252.0,1.00%,F,T)



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

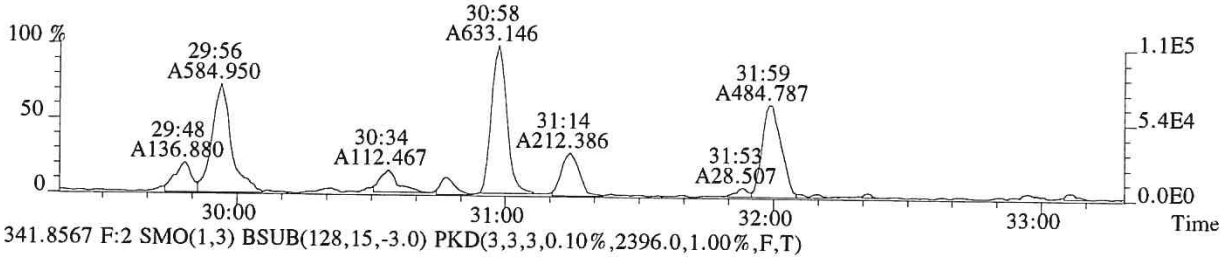


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

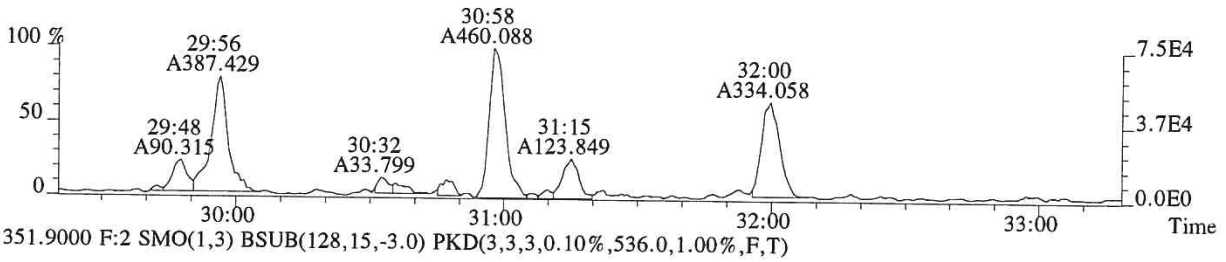


016406

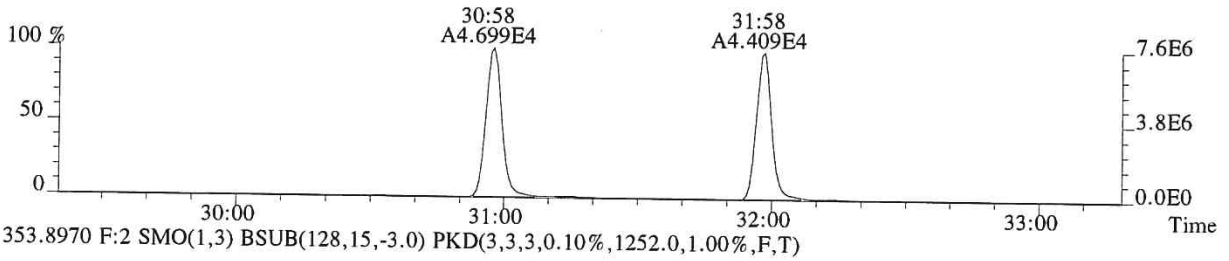
File:P519743 #1-358 Acq: 3-JAN-2019 00:16:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-019
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1740.0,1.00%,F,T)



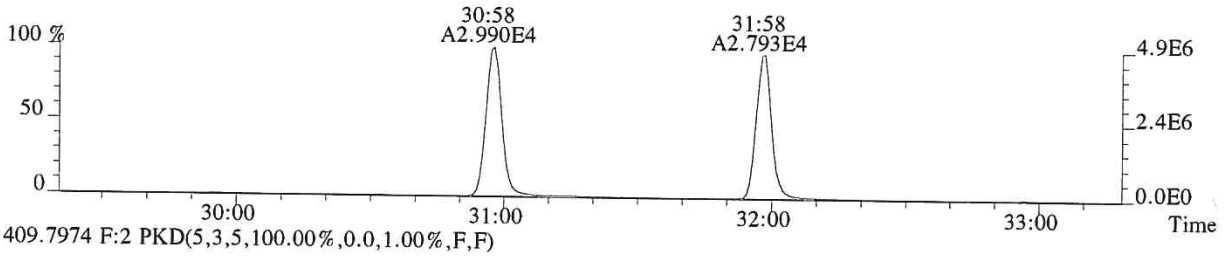
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2396.0,1.00%,F,T)



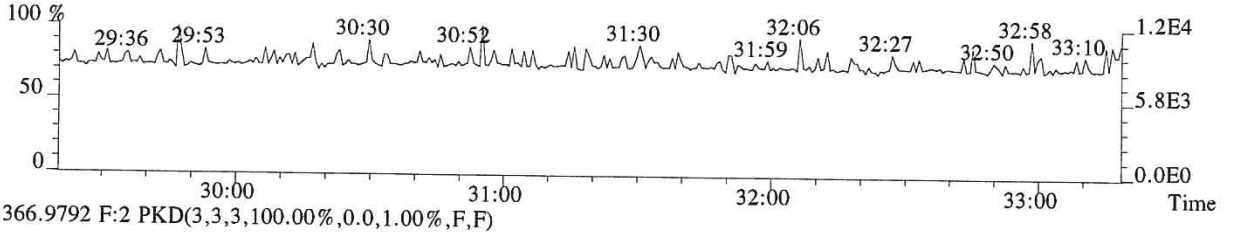
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,536.0,1.00%,F,T)



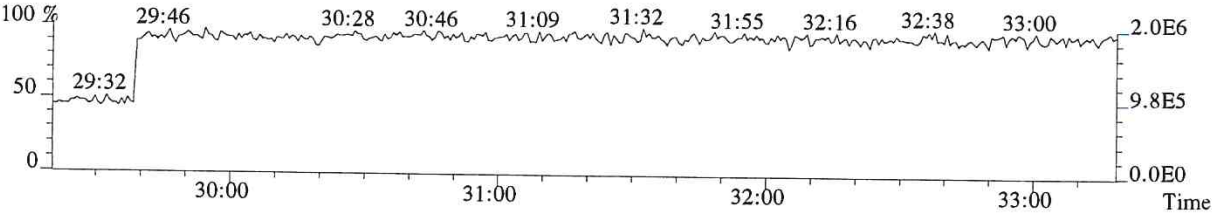
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1252.0,1.00%,F,T)



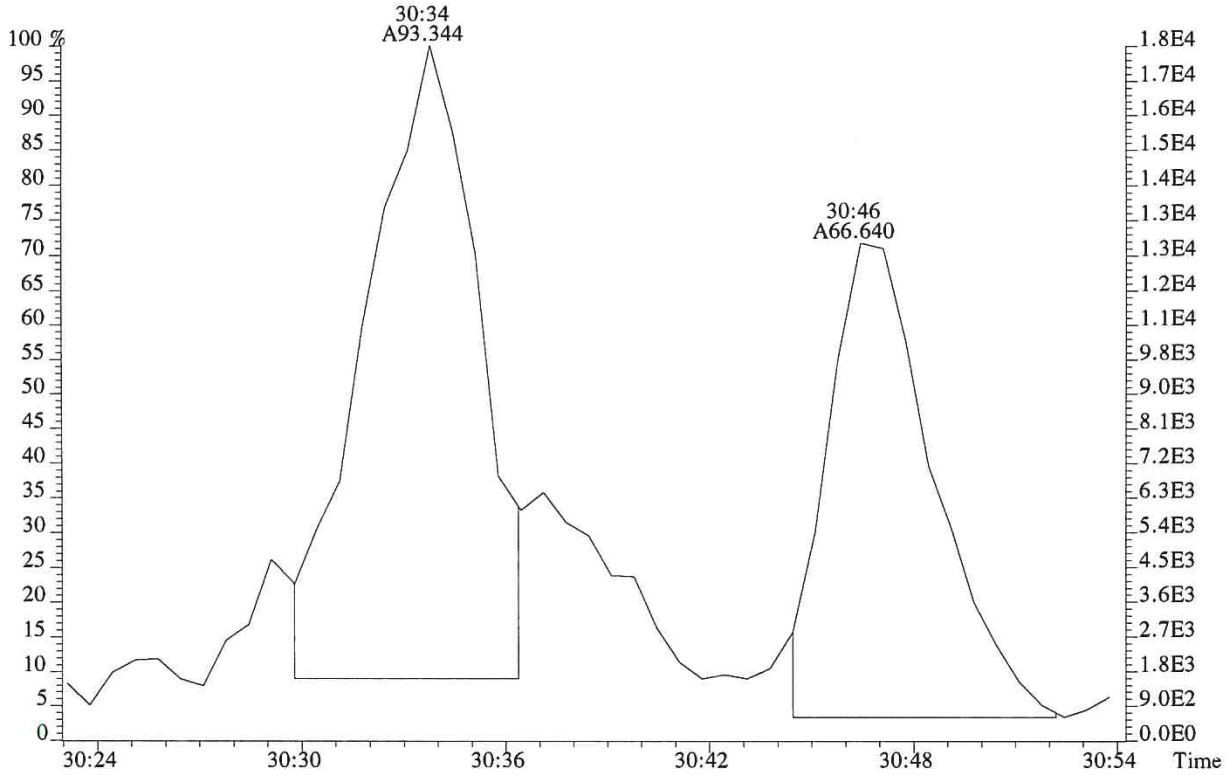
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



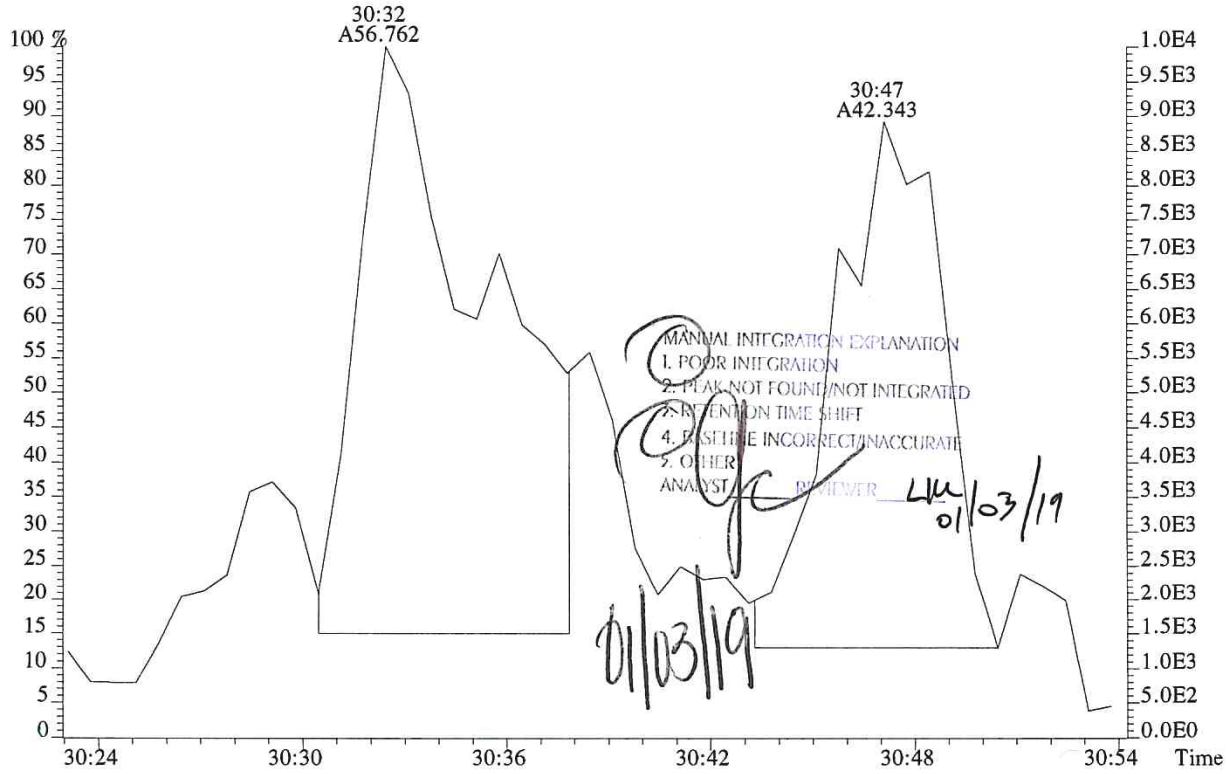
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519743 #1-358 Acq: 3-JAN-2019 00:16:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-019
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1740.0,1.00%,F,T)



341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2396.0,1.00%,F,T)

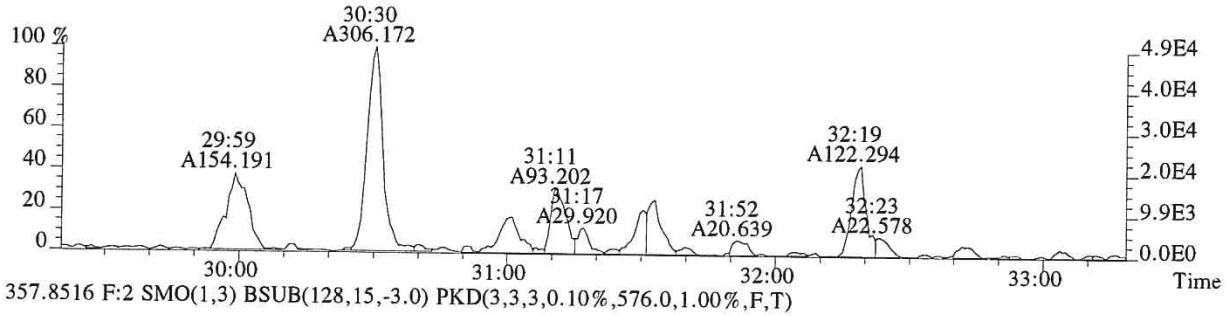


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER

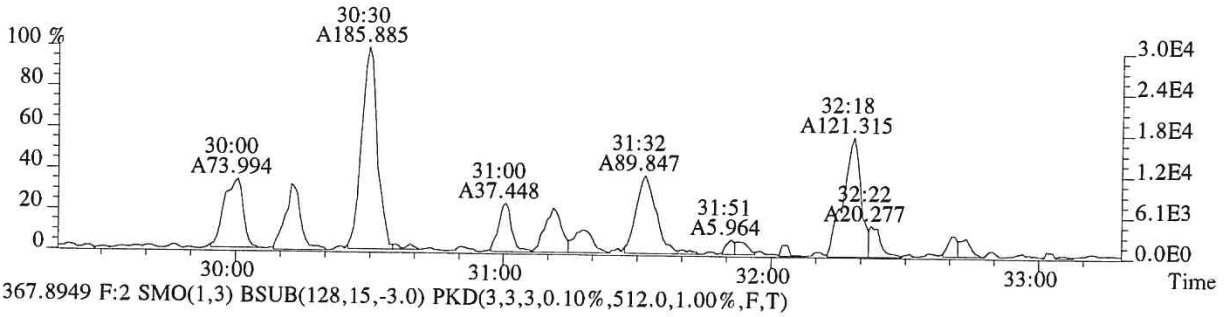
01/03/19

01/03/19

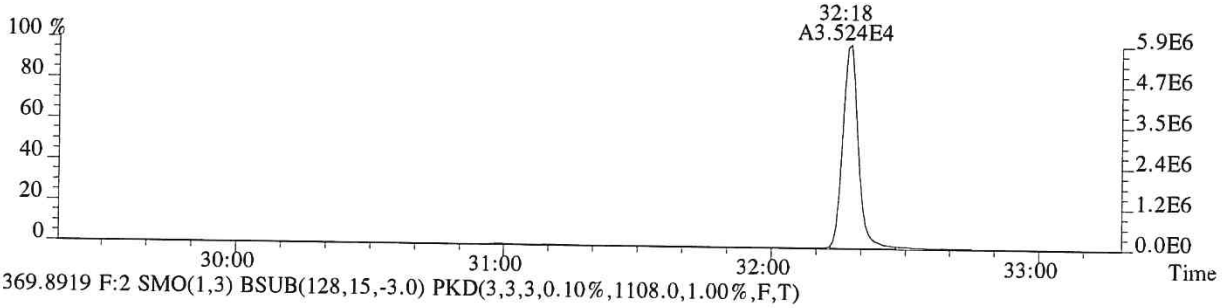
File:P519743 #1-358 Acq: 3-JAN-2019 00:16:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-019
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,496.0,1.00%,F,T)



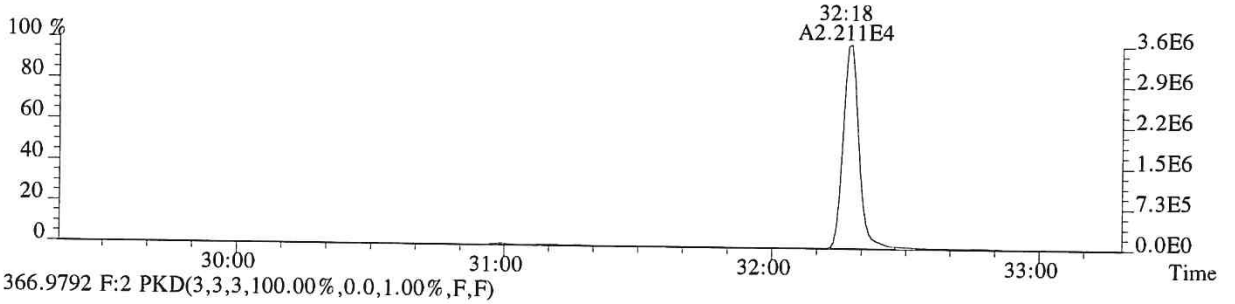
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,576.0,1.00%,F,T)



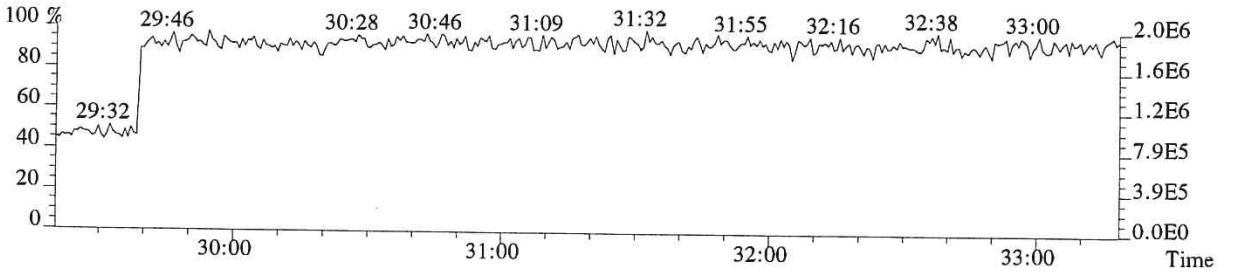
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,512.0,1.00%,F,T)



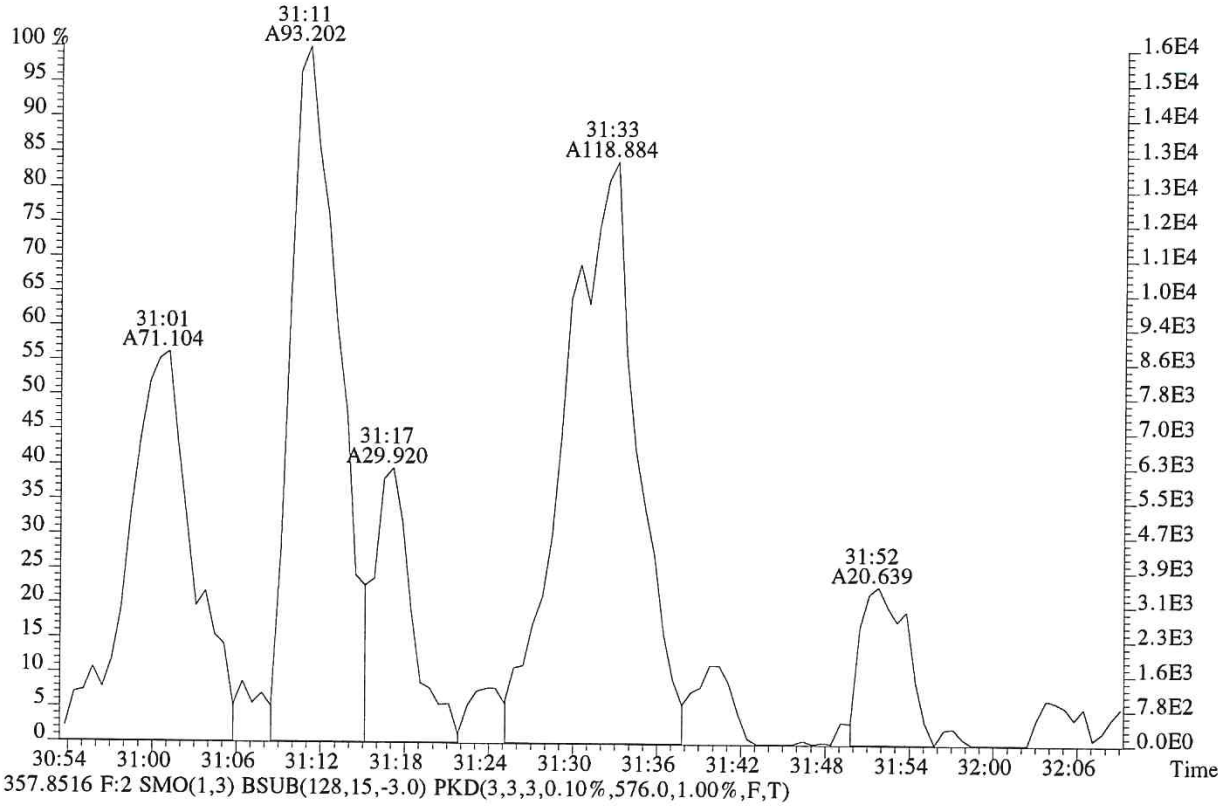
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1108.0,1.00%,F,T)



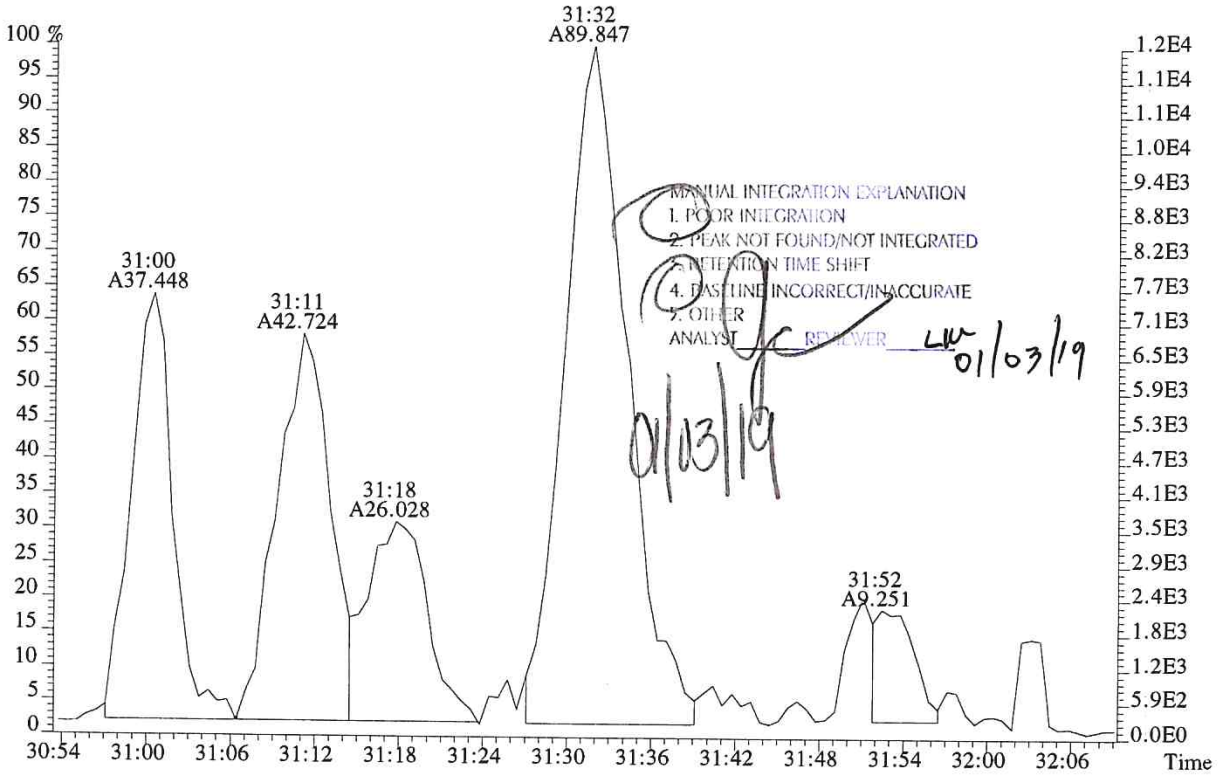
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



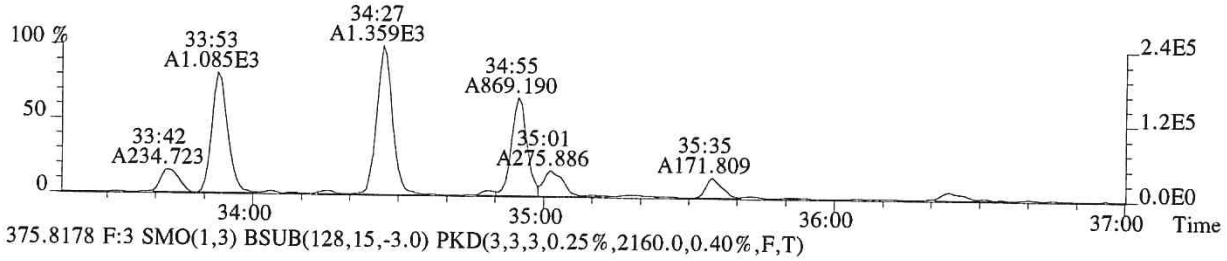
File:P519743 #1-358 Acq: 3-JAN-2019 00:16:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-019
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,496.0,1.00%,F,T)



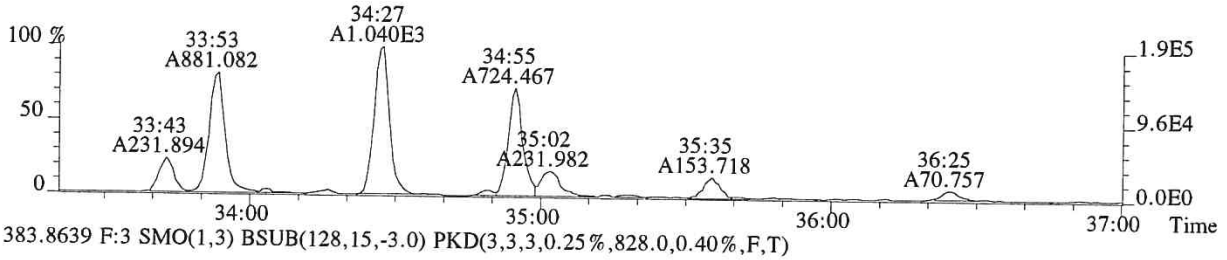
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,576.0,1.00%,F,T)



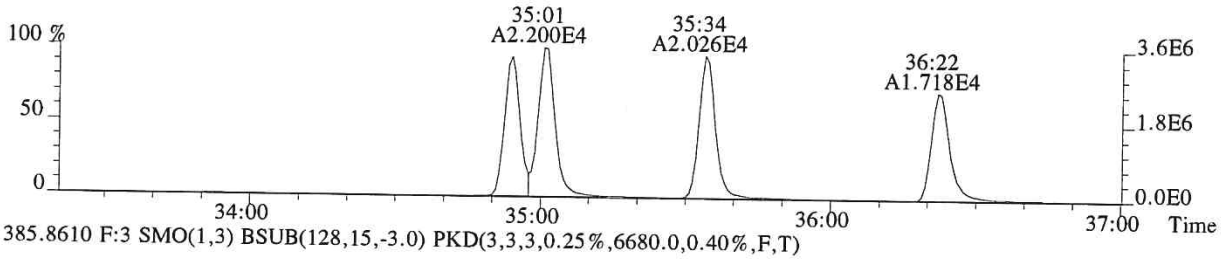
File:P519743 #1-330 Acq: 3-JAN-2019 00:16:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-019
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1532.0,0.40%,F,T)



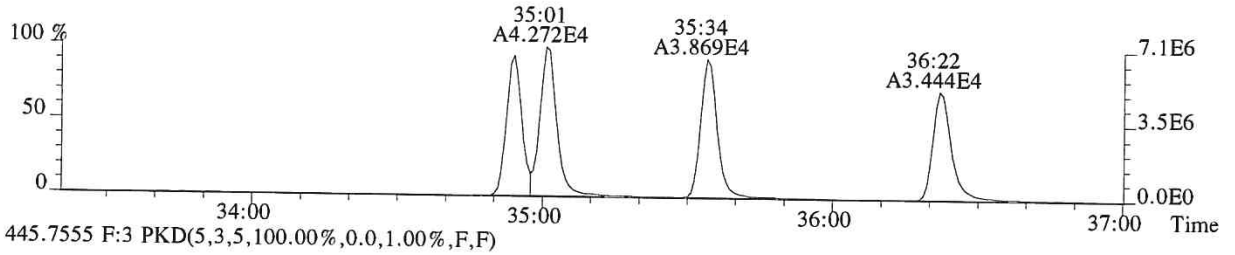
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2160.0,0.40%,F,T)



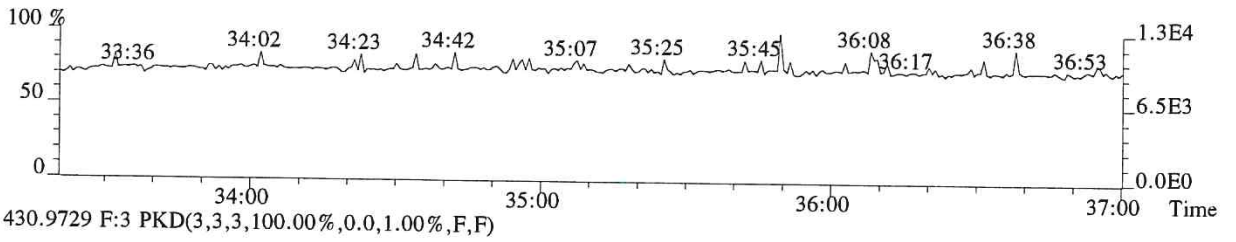
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,828.0,0.40%,F,T)



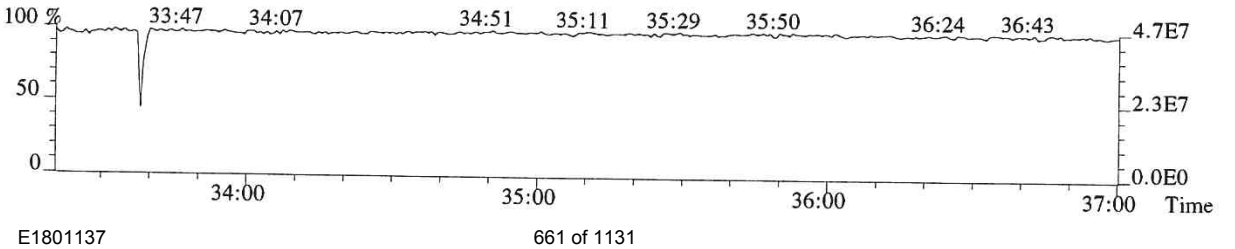
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6680.0,0.40%,F,T)



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

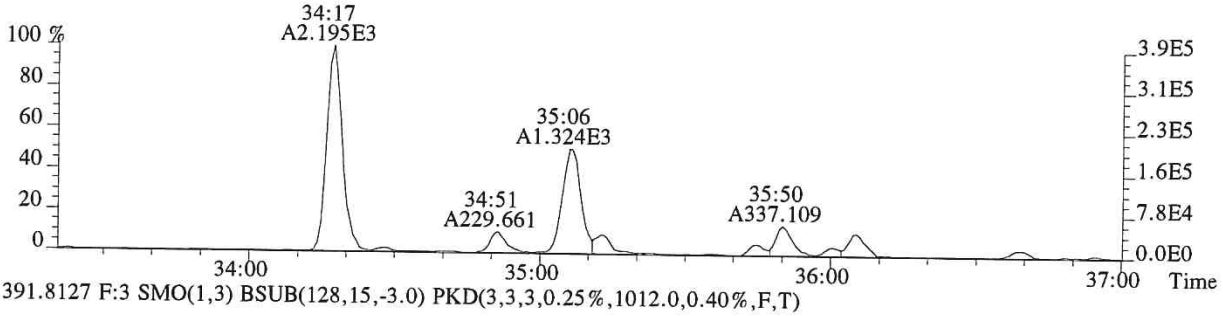


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

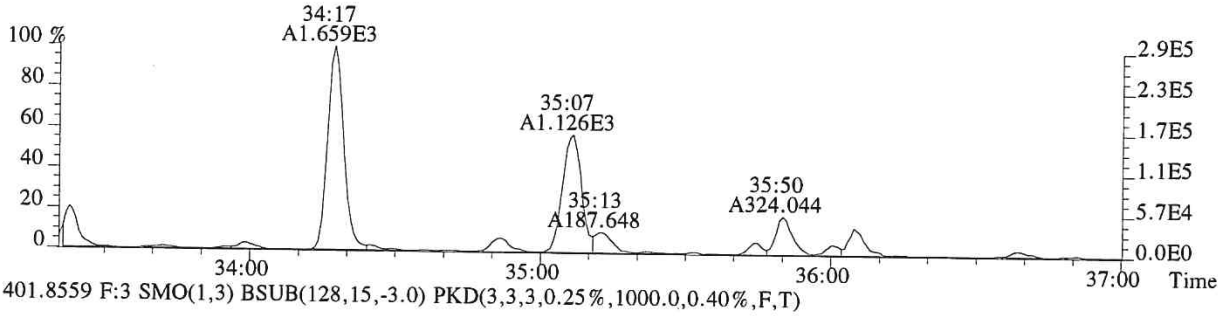


016411

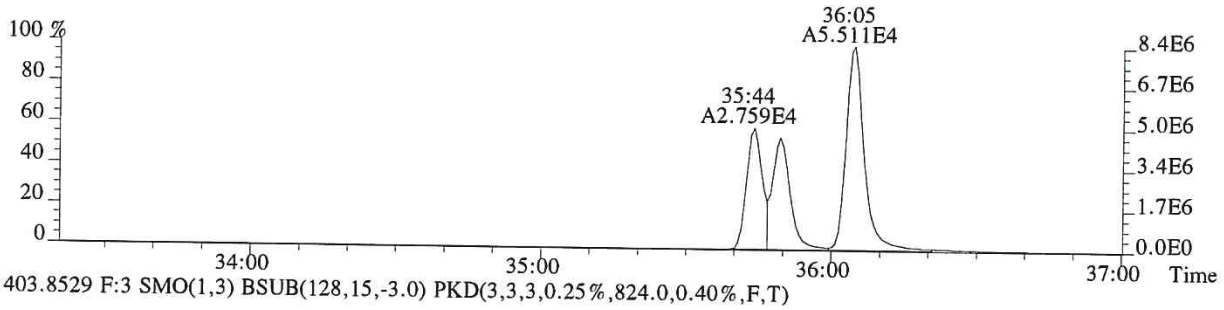
File:P519743 #1-330 Acq: 3-JAN-2019 00:16:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-019
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,484.0,0.40%,F,T)



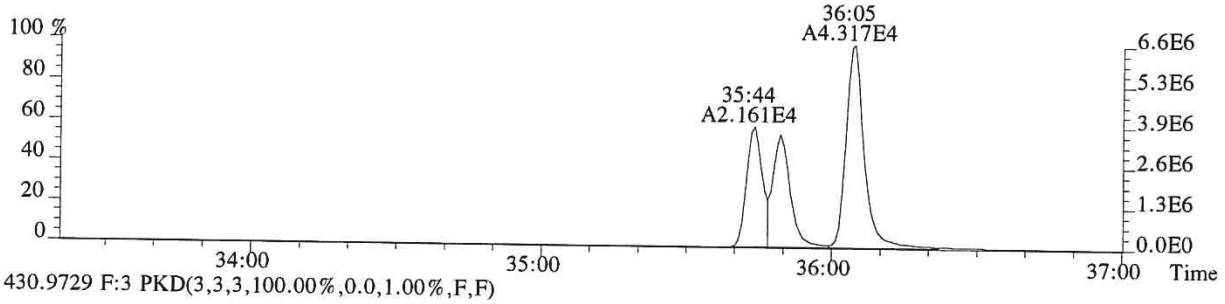
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1012.0,0.40%,F,T)



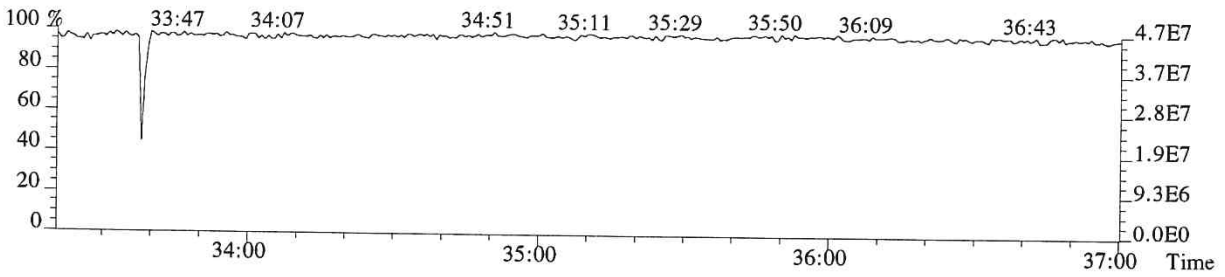
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1000.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,824.0,0.40%,F,T)

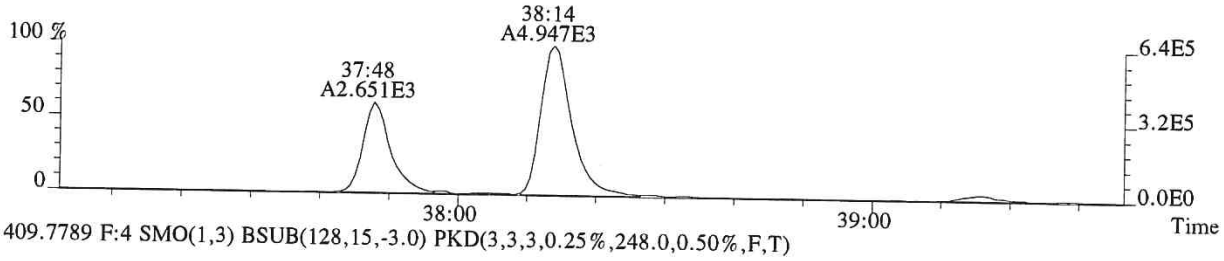


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

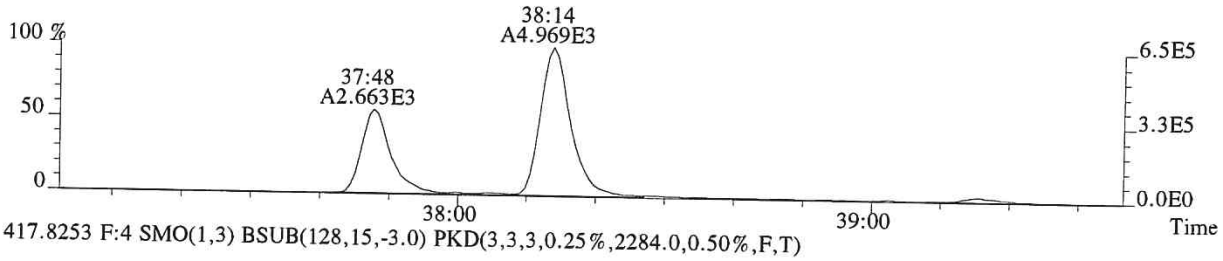


016412

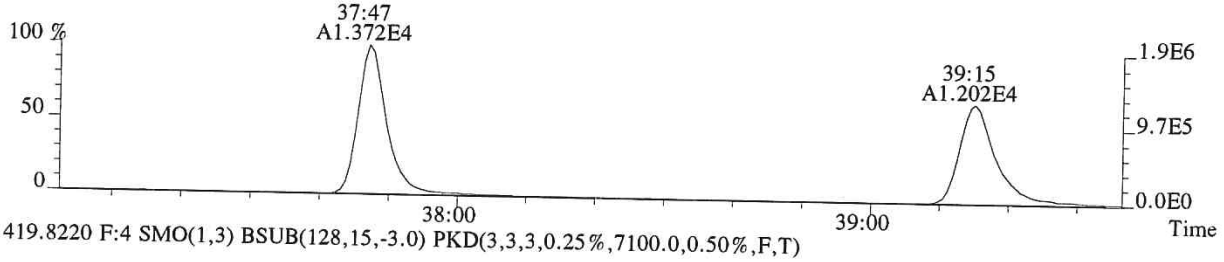
File:P519743 #1-232 Acq: 3-JAN-2019 00:16:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-019
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2352.0,0.50%,F,T)



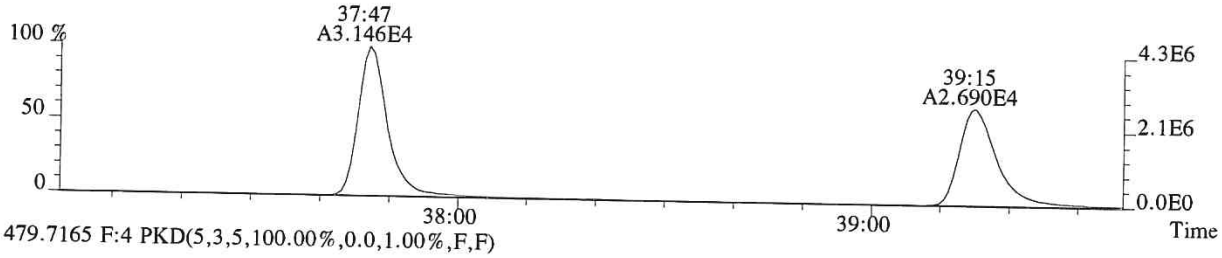
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,248.0,0.50%,F,T)



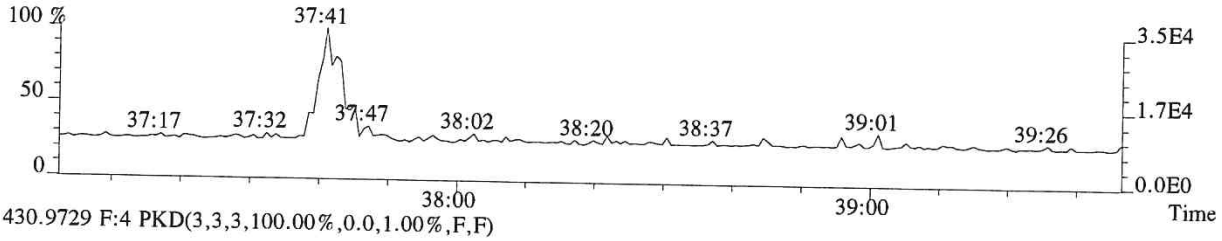
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2284.0,0.50%,F,T)



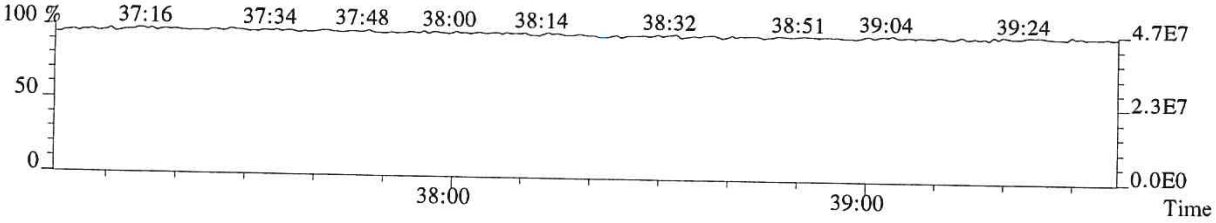
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7100.0,0.50%,F,T)



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

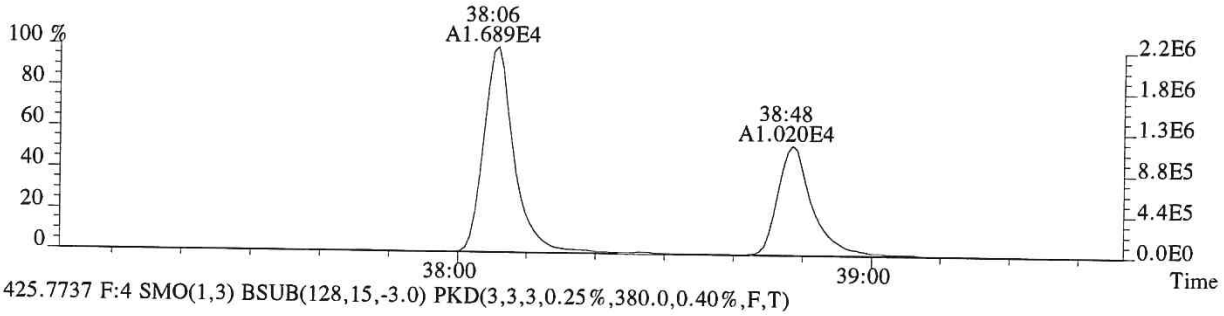


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

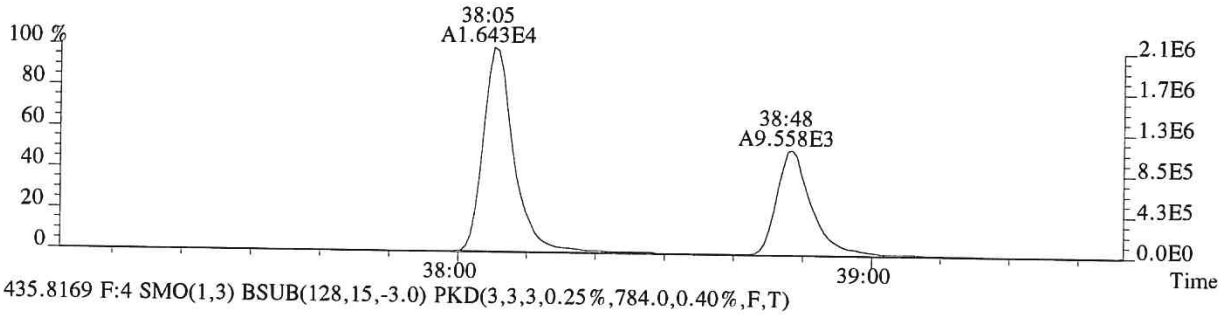


016413

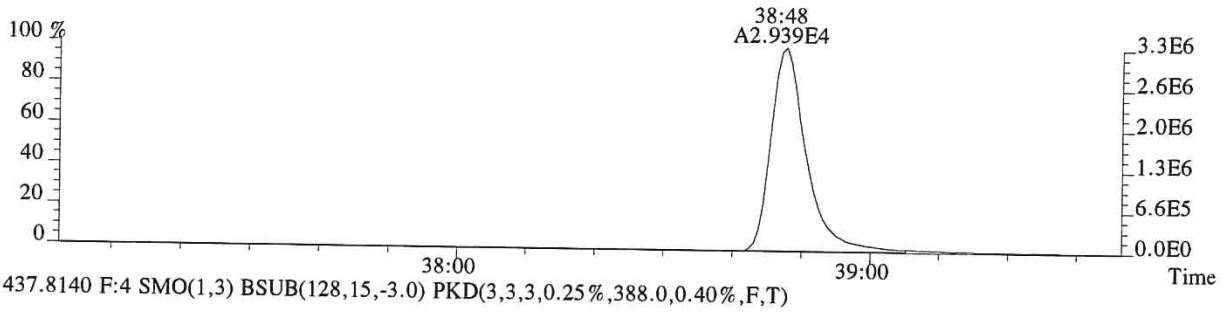
File:P519743 #1-232 Acq: 3-JAN-2019 00:16:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-019
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,480.0,0.40%,F,T)



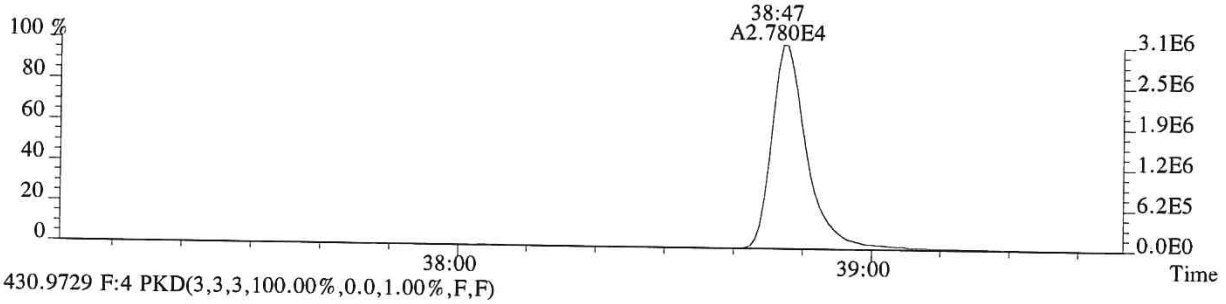
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,380.0,0.40%,F,T)



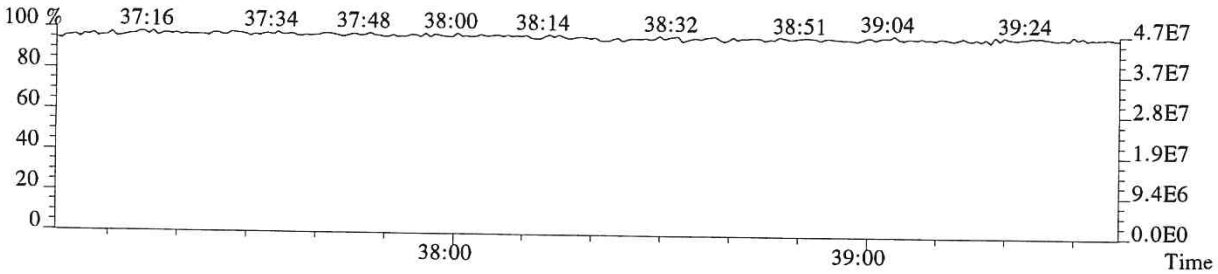
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,784.0,0.40%,F,T)



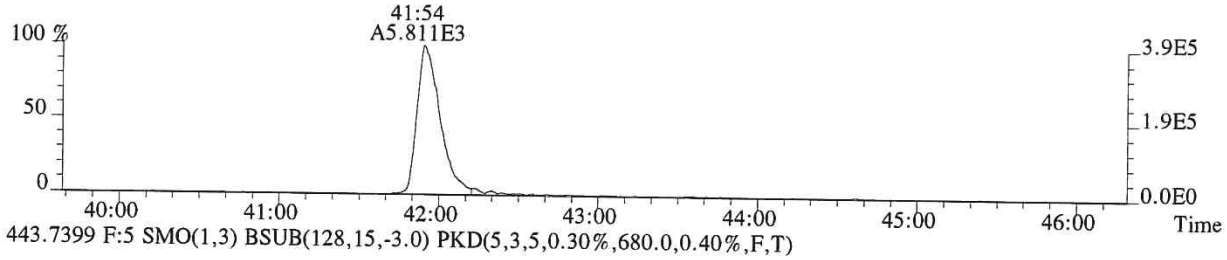
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,388.0,0.40%,F,T)



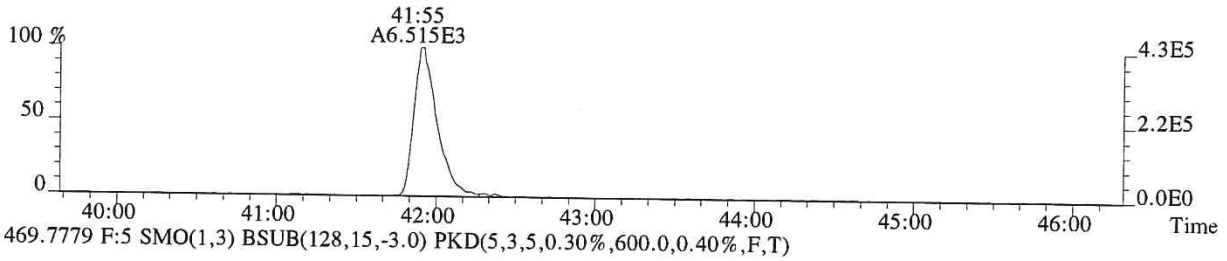
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



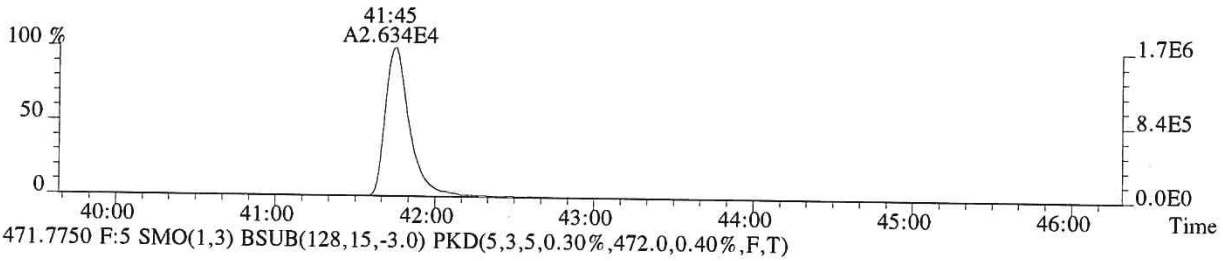
File:P519743 #1-601 Acq: 3-JAN-2019 00:16:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-019
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,284.0,0.40%,F,T)



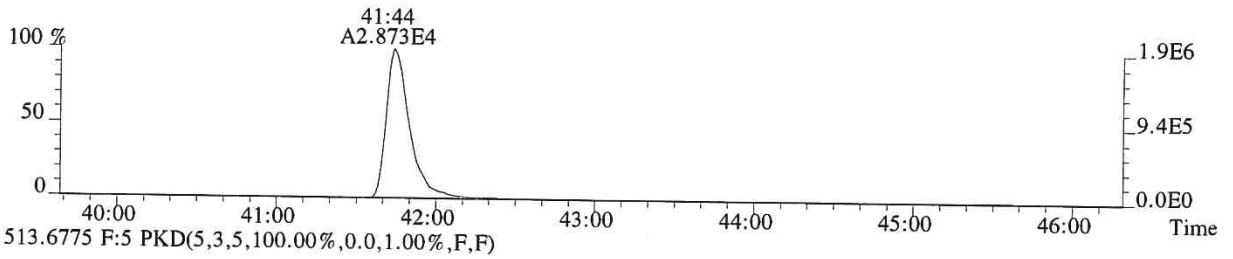
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,680.0,0.40%,F,T)



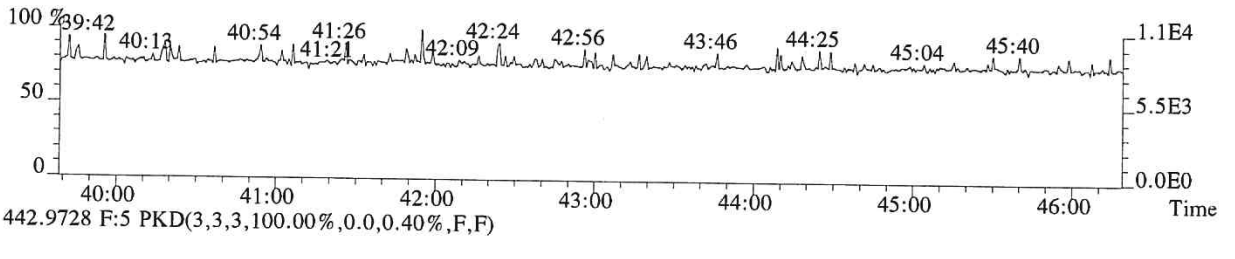
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,600.0,0.40%,F,T)



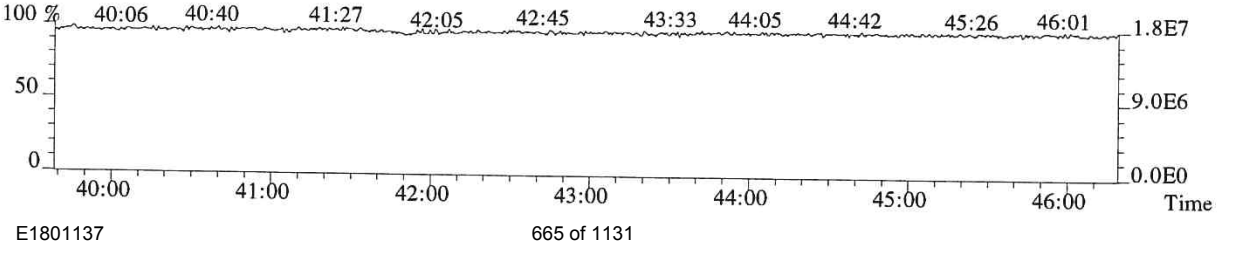
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,472.0,0.40%,F,T)



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

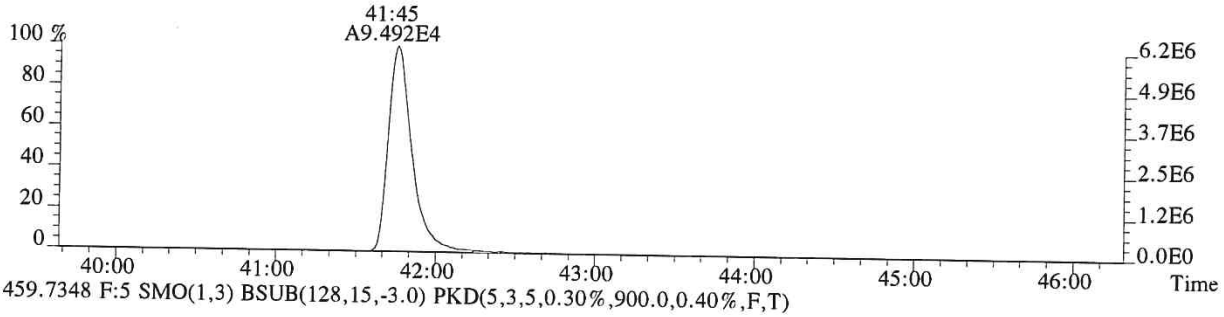


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

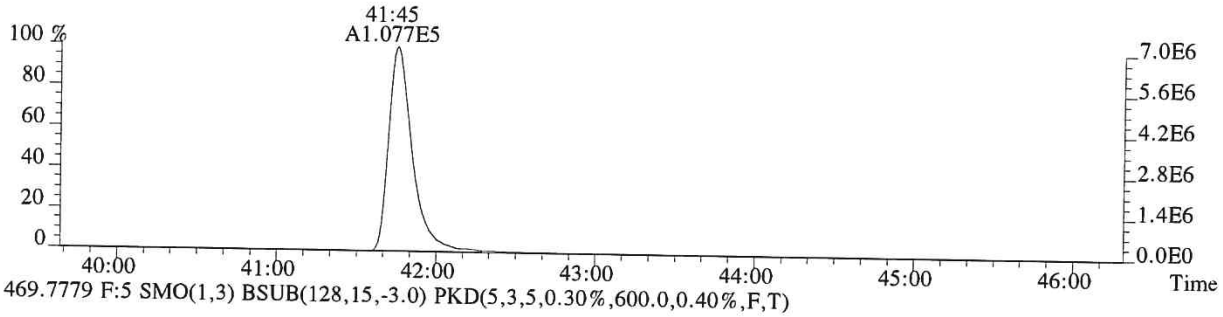


016415

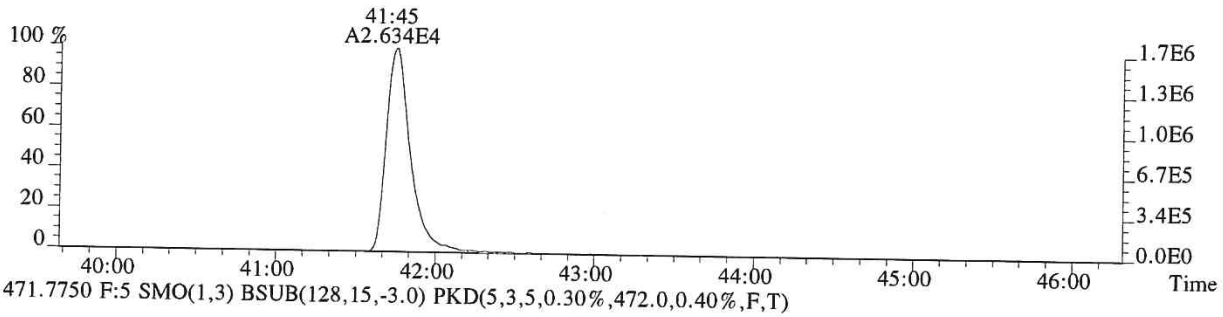
File:P519743 #1-601 Acq: 3-JAN-2019 00:16:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-019
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,224.0,0.40%,F,T)



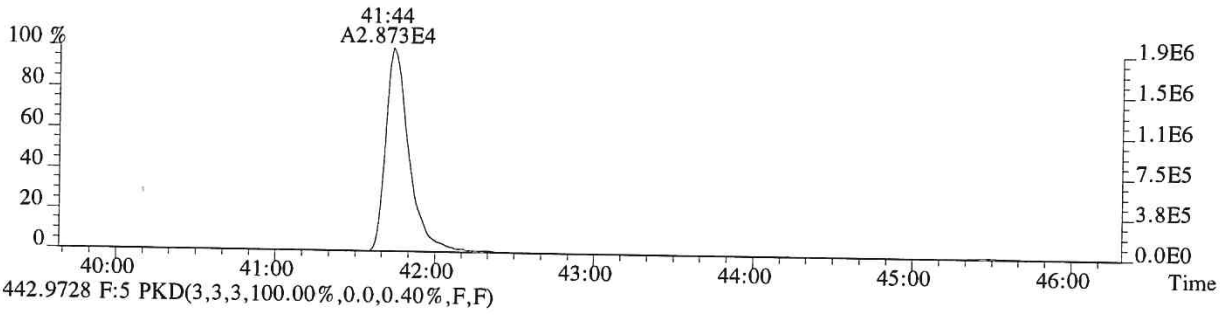
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,900.0,0.40%,F,T)



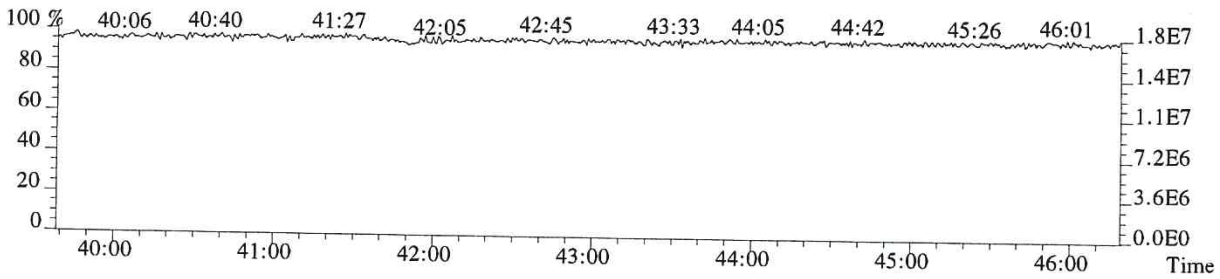
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,600.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,472.0,0.40%,F,T)



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



016416

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0194

Run #20 Filename P519744 Samp: 1 Inj: 1 Acquired: 3-JAN-19 01:05:06
Processed: 3-JAN-19 09:14:32 Sample ID: E1801137-020

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:05	9.211e+03	1.271e+04	0.72	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:59	8.024e+02	5.488e+02	1.46	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	32:00	6.238e+02	4.637e+02	1.35	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:55	1.153e+03	9.652e+02	1.19	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:02	3.641e+02	3.423e+02	1.06	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:35	2.580e+02	1.940e+02	1.33	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:25	1.032e+02	1.065e+02	0.97	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:48	4.777e+03	4.607e+03	1.04	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:15	2.263e+02	2.229e+02	1.02	yes	yes	1.258
10	Unk	OCDF	41:56	7.603e+03	9.381e+03	0.81	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:04	2.591e+03	3.359e+03	0.77	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:19	1.864e+02	1.307e+02	1.43	yes	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:45	1.471e+02	1.537e+02	0.96	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:51	7.746e+02	5.824e+02	1.33	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:06	4.549e+02	3.472e+02	1.31	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:49	1.586e+04	1.556e+04	1.02	yes	no	1.025
17	Unk	OCDD	41:47	1.090e+05	1.242e+05	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	3.051e+04	3.874e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:58	4.756e+04	3.029e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:58	4.460e+04	2.820e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:55	1.762e+04	3.446e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:01	2.078e+04	4.045e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:35	1.872e+04	3.608e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:23	1.614e+04	3.189e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:48	1.048e+04	2.362e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:16	9.623e+03	2.117e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:03	1.541e+04	1.987e+04	0.78	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:18	3.512e+04	2.215e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:45	2.653e+04	2.112e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:50	2.736e+04	2.169e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:48	2.300e+04	2.213e+04	1.04	yes	no	0.858
32	IS	13C-OCDD	41:46	1.562e+04	1.737e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	4.117e+04	5.182e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:05	4.938e+04	3.980e+04	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:04	2.235e+04				no	1.014

$$\text{OCDD} = \frac{(1.090e{+}05 + 1.242e{+}05) \times 4000\ \text{pg} \times 1}{(1.562e{+}04 + 1.737e{+}04) \times 10.144\ \text{g} \times 73.9 / 100 \times 1.118} = 3373\ \text{ng/kg}$$

LMM 01/04/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0194

Run #20 Filename P519744 Samp: 1 Inj: 1 Acquired: 3-JAN-19 01:05:06
Processed: 3-JAN-19 09:14:32 LAB. ID: E1801137-020

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.32e+06	1.46e+03	9.0e+02	1.81e+06	1.30e+03	1.4e+03
2	1,2,3,7,8-PeCDF	1.29e+05	1.01e+03	1.3e+02	1.01e+05	8.92e+02	1.1e+02
3	2,3,4,7,8-PeCDF	9.20e+04	1.01e+03	9.1e+01	6.64e+04	8.92e+02	7.4e+01
4	1,2,3,4,7,8-HxCDF	1.98e+05	1.49e+03	1.3e+02	1.75e+05	8.00e+02	2.2e+02
5	1,2,3,6,7,8-HxCDF	6.11e+04	1.49e+03	4.1e+01	5.67e+04	8.00e+02	7.1e+01
6	2,3,4,6,7,8-HxCDF	4.29e+04	1.49e+03	2.9e+01	3.51e+04	8.00e+02	4.4e+01
7	1,2,3,7,8,9-HxCDF	1.79e+04	1.49e+03	1.2e+01	1.60e+04	8.00e+02	2.0e+01
8	1,2,3,4,6,7,8-HpCDF	6.83e+05	4.96e+02	1.4e+03	6.52e+05	3.60e+02	1.8e+03
9	1,2,3,4,7,8,9-HpCDF	2.33e+04	4.96e+02	4.7e+01	3.12e+04	3.60e+02	8.7e+01
10	OCDF	4.87e+05	4.88e+02	1.0e+03	5.94e+05	6.68e+02	8.9e+02
11	2,3,7,8-TCDD	4.19e+05	1.92e+03	2.2e+02	5.56e+05	1.41e+03	3.9e+02
12	1,2,3,7,8-PeCDD	3.23e+04	7.56e+02	4.3e+01	2.59e+04	5.48e+02	4.7e+01
13	1,2,3,4,7,8-HxCDD	2.81e+04	8.12e+02	3.5e+01	2.56e+04	1.07e+03	2.4e+01
14	1,2,3,6,7,8-HxCDD	1.32e+05	8.12e+02	1.6e+02	1.04e+05	1.07e+03	9.7e+01
15	1,2,3,7,8,9-HxCDD	7.01e+04	8.12e+02	8.6e+01	5.73e+04	1.07e+03	5.4e+01
16	1,2,3,4,6,7,8-HpCDD	1.75e+06	3.44e+02	5.1e+03	1.75e+06	5.20e+02	3.4e+03
17	OCDD	6.89e+06	3.56e+02	1.9e+04	7.81e+06	6.28e+02	1.2e+04
18	13C-2,3,7,8-TCDF	4.63e+06	3.32e+03	1.4e+03	5.87e+06	2.14e+03	2.7e+03
19	13C-1,2,3,7,8-PeCDF	7.69e+06	9.08e+02	8.5e+03	5.04e+06	7.32e+02	6.9e+03
20	13C-2,3,4,7,8-PeCDF	7.66e+06	9.08e+02	8.4e+03	4.87e+06	7.32e+02	6.7e+03
21	13C-1,2,3,4,7,8-HxCDF	3.12e+06	6.04e+02	5.2e+03	6.13e+06	8.60e+02	7.1e+03
22	13C-1,2,3,6,7,8-HxCDF	3.43e+06	6.04e+02	5.7e+03	6.62e+06	8.60e+02	7.7e+03
23	13C-2,3,4,6,7,8-HxCDF	3.16e+06	6.04e+02	5.2e+03	6.19e+06	8.60e+02	7.2e+03
24	13C-1,2,3,7,8,9-HxCDF	2.44e+06	6.04e+02	4.0e+03	4.71e+06	8.60e+02	5.5e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.47e+06	1.52e+03	9.7e+02	3.31e+06	2.85e+03	1.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.00e+06	1.52e+03	6.6e+02	2.18e+06	2.85e+03	7.7e+02
27	13C-2,3,7,8-TCDD	2.51e+06	4.66e+03	5.4e+02	3.17e+06	2.47e+03	1.3e+03
28	13C-1,2,3,7,8-PeCDD	5.98e+06	1.04e+03	5.7e+03	3.79e+06	8.04e+02	4.7e+03
29	13C-1,2,3,4,7,8-HxCDD	4.68e+06	1.44e+03	3.3e+03	3.67e+06	8.20e+02	4.5e+03
30	13C-1,2,3,6,7,8-HxCDD	4.24e+06	1.44e+03	3.0e+03	3.41e+06	8.20e+02	4.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.55e+06	5.52e+02	4.6e+03	2.42e+06	5.08e+02	4.8e+03
32	13C-OCDD	9.70e+05	7.16e+02	1.4e+03	1.09e+06	4.12e+02	2.6e+03
33	13C-1,2,3,4-TCDD	6.56e+06	4.66e+03	1.4e+03	8.22e+06	2.47e+03	3.3e+03
34	13C-1,2,3,7,8,9-HxCDD	7.32e+06	1.44e+03	5.1e+03	5.84e+06	8.20e+02	7.1e+03
35	37Cl-2,3,7,8-TCDD	3.60e+06	1.02e+03	3.5e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0194

Entry: 36 Totals Name: Total Tetra-Furans

Run: 20 File: P519744 Sample:1 Injection:1 Function:1

Acquired: 3-JAN-19 01:05:06 Processed: 3-JAN-19 09:14:32

Mass: 303.9020 305.8990 Tot Response: 3.47e+04 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:26	1.68e+02	2.53e+02	0.66	yes	4.21e+02		n	n
2	22:53	2.57e+02	3.62e+02	0.71	yes	6.19e+02		n	n
3	23:11	3.59e+02	4.33e+02	0.83	yes	7.92e+02		n	n
4	23:34	1.95e+02	2.74e+02	0.71	yes	4.69e+02		n	n
5	23:42	6.62e+01	8.67e+01	0.76	yes	1.53e+02		n	n
6	23:51	3.22e+02	4.18e+02	0.77	yes	7.40e+02		n	n
7	24:14	1.73e+02	2.15e+02	0.81	yes	3.88e+02		n	n
8	24:29	3.86e+02	5.87e+02	0.66	yes	9.73e+02		n	n
9	24:36	3.25e+02	4.04e+02	0.81	yes	7.29e+02		n	n
10	25:06	1.90e+03	2.58e+03	0.74	yes	4.48e+03		n	n
11	26:05	9.21e+03	1.27e+04	0.72	yes	2.19e+04	2,3,7,8-TCDF	n	n
12	26:30	1.21e+03	1.76e+03	0.69	yes	2.97e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0194

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 20 File: P519744 Sample:1 Injection:1 Function:1

Acquired: 3-JAN-19 01:05:06 Processed: 3-JAN-19 09:14:32

Mass: 319.8970 321.8940 Tot Response: 7.77e+03 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	23:11	9.74e+01	1.30e+02	0.75	yes	2.27e+02		n	n
2	23:33	5.80e+01	7.34e+01	0.79	yes	1.31e+02		n	n
3	24:44	2.75e+02	4.04e+02	0.68	yes	6.79e+02		n	n
4	26:19	7.34e+01	1.05e+02	0.70	yes	1.78e+02		n	n
5	27:04	2.59e+03	3.36e+03	0.77	yes	5.95e+03	2,3,7,8-TCDD	n	n
6	27:25	2.49e+02	3.58e+02	0.69	yes	6.07e+02		n	n

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Peak List Summary

CLIENT ID.
SL0194

Entry: 38 Totals Name: Total Penta-Furans1

Run: 20 File: P519744 Sample:1 Injection:1 Function:1

Acquired: 3-JAN-19 01:05:06 Processed: 3-JAN-19 09:14:32

Mass: 339.8600 341.8570 Tot Response: 1.53e+03 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:16	9.22e+02	6.04e+02	1.53	yes	1.53e+03		n	n
2	28:41	3.59e+00	2.43e+00	1.48	yes	6.01e+00		n	n

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Peak List Summary

CLIENT ID.
SL0194

Entry: 39 Totals Name: Total Penta-Furans2

Run: 20 File: P519744 Sample:1 Injection:1 Function:2

Acquired: 3-JAN-19 01:05:06 Processed: 3-JAN-19 09:14:32

Mass: 339.8600 341.8570 Tot Response: 5.37e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:48	1.95e+02	1.45e+02	1.35	yes	3.40e+02		n	n
2	29:57	9.57e+02	6.82e+02	1.40	yes	1.64e+03		n	n
3	30:20	3.70e+01	2.30e+01	1.61	yes	6.00e+01		y	n
4	30:34	2.30e+02	1.35e+02	1.70	yes	3.66e+02		y	n
5	30:59	8.02e+02	5.49e+02	1.46	yes	1.35e+03	1,2,3,7,8-PeCDF	n	n
6	31:16	2.95e+02	1.75e+02	1.68	yes	4.70e+02		n	n
7	32:00	6.24e+02	4.64e+02	1.35	yes	1.09e+03	2,3,4,7,8-PeCDF	n	n
8	32:58	3.52e+01	2.15e+01	1.64	yes	5.67e+01		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0194

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 20 File: P519744 Sample:1 Injection:1 Function:2

Acquired: 3-JAN-19 01:05:06 Processed: 3-JAN-19 09:14:32

Mass: 355.8550 357.8520 Tot Response: 2.19e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:00	3.80e+02	2.33e+02	1.63	yes	6.12e+02		n	n
2	31:00	1.37e+02	8.21e+01	1.66	yes	2.19e+02		n	n
3	31:11	1.74e+02	1.13e+02	1.54	yes	2.87e+02		n	n
4	31:18	1.07e+02	6.39e+01	1.67	yes	1.71e+02		n	n
5	31:32	3.13e+02	1.85e+02	1.69	yes	4.97e+02		n	n
6	31:51	5.11e+01	3.18e+01	1.60	yes	8.29e+01		n	n
7	32:19	1.86e+02	1.31e+02	1.43	yes	3.17e+02	1,2,3,7,8-PeCDD	y	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0194

Entry: 41 Totals Name: Total Hexa-Furans

Run: 20 File: P519744 Sample:1 Injection:1 Function:3

Acquired: 3-JAN-19 01:05:06 Processed: 3-JAN-19 09:14:32

Mass: 373.8210 375.8180 Tot Response: 1.33e+04 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:43	4.48e+02	3.53e+02	1.27	yes	8.01e+02		n	n
2	33:53	1.83e+03	1.50e+03	1.22	yes	3.34e+03		n	n
3	34:03	1.39e+01	1.01e+01	1.37	yes	2.40e+01		n	n
4	34:27	3.15e+03	2.61e+03	1.21	yes	5.76e+03		n	n
5	34:49	7.59e+01	6.77e+01	1.12	yes	1.44e+02		n	n
6	34:55	1.15e+03	9.65e+02	1.19	yes	2.12e+03	1,2,3,4,7,8-HxCDF	n	n
7	35:02	3.64e+02	3.42e+02	1.06	yes	7.06e+02	1,2,3,6,7,8-HxCDF	n	n
8	35:35	2.58e+02	1.94e+02	1.33	yes	4.52e+02	2,3,4,6,7,8-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0194

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 20 File: P519744 Sample:1 Injection:1 Function:3

Acquired: 3-JAN-19 01:05:06 Processed: 3-JAN-19 09:14:32

Mass: 389.8160 391.8130 Tot Response: 1.44e+04 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:18	3.50e+03	2.85e+03	1.23	yes	6.35e+03		n	n
2	34:33	1.25e+01	9.10e+00	1.38	yes	2.16e+01		n	n
3	34:51	3.13e+02	2.55e+02	1.23	yes	5.68e+02		n	n
4	35:07	3.07e+03	2.19e+03	1.40	yes	5.26e+03		n	n
5	35:51	7.75e+02	5.82e+02	1.33	yes	1.36e+03	1,2,3,6,7,8-HxCDD	n	n
6	36:06	4.55e+02	3.47e+02	1.31	yes	8.02e+02	1,2,3,7,8,9-HxCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0194

Entry: 43 Totals Name: Total Hepta-Furans

Run: 20 File: P519744 Sample:1 Injection:1 Function:4

Acquired: 3-JAN-19 01:05:06 Processed: 3-JAN-19 09:14:32

Mass: 407.7820 409.7790 Tot Response: 3.02e+04 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:48	4.78e+03	4.61e+03	1.04	yes	9.38e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	38:14	1.01e+04	1.02e+04	0.99	yes	2.04e+04		n	n
3	39:15	2.26e+02	2.23e+02	1.02	yes	4.49e+02	1,2,3,4,7,8,9-HpCDF	y	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0194

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 20 File: P519744 Sample:1 Injection:1 Function:4

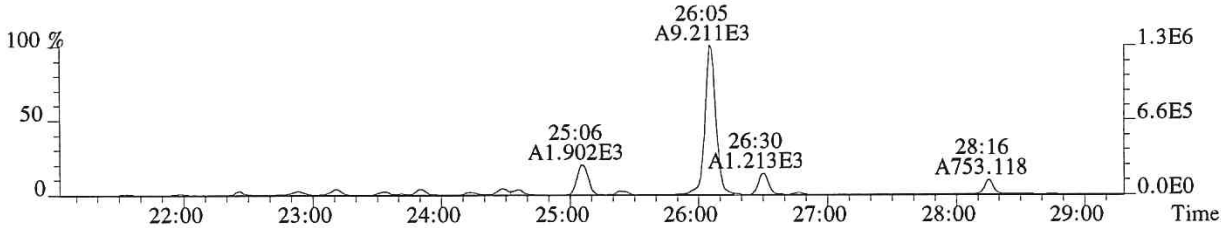
Acquired: 3-JAN-19 01:05:06 Processed: 3-JAN-19 09:14:32

Mass: 423.7770 425.7740 Tot Response: 7.61e+04 RRF: 1.025

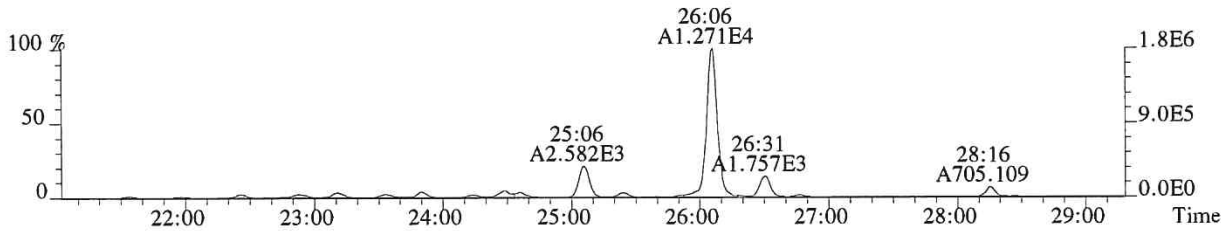
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:06	2.27e+04	2.19e+04	1.04	yes	4.47e+04		n	n
2	38:49	1.59e+04	1.56e+04	1.02	yes	3.14e+04	1,2,3,4,6,7,8-HpCDD	n	n

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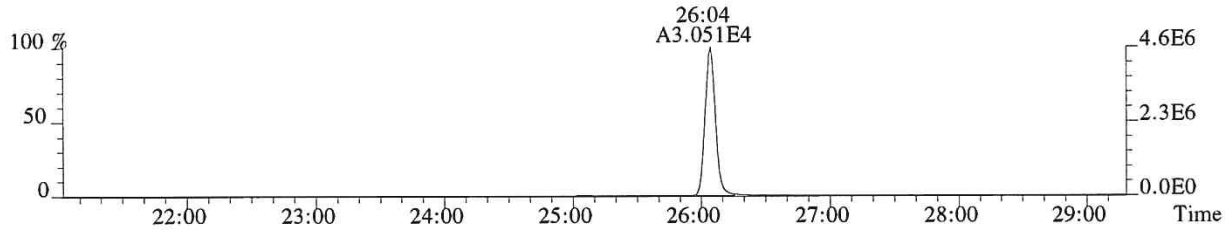
File:P519744 #1-587 Acq: 3-JAN-2019 01:05:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-020
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1460.0,1.00%,F,T)



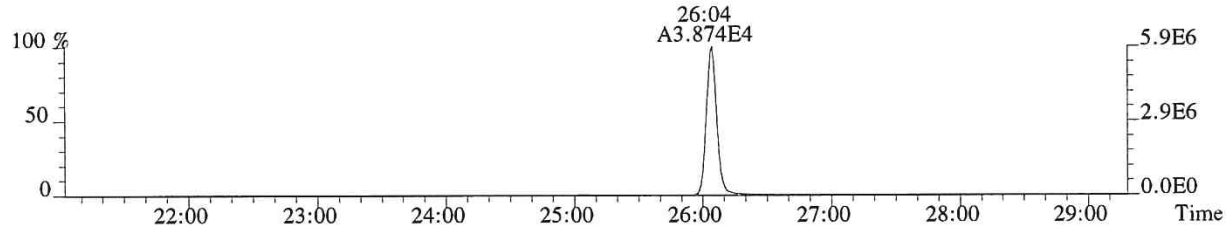
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1304.0,1.00%,F,T)



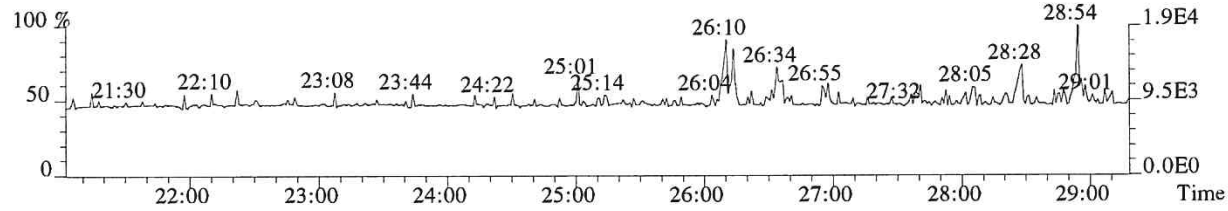
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3324.0,1.00%,F,T)



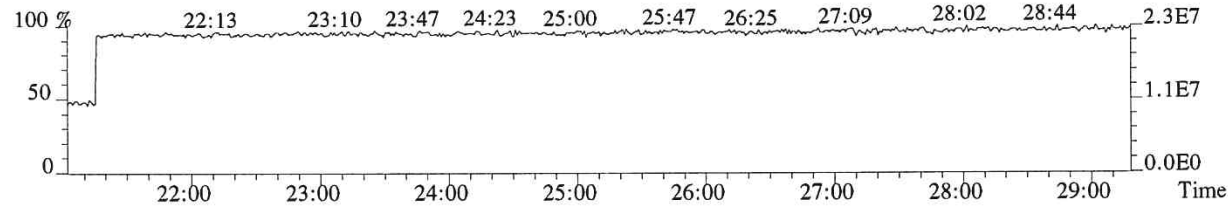
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2144.0,1.00%,F,T)



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

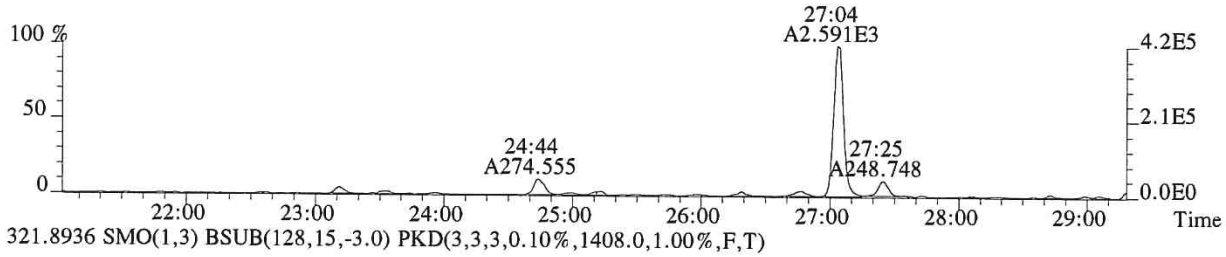


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

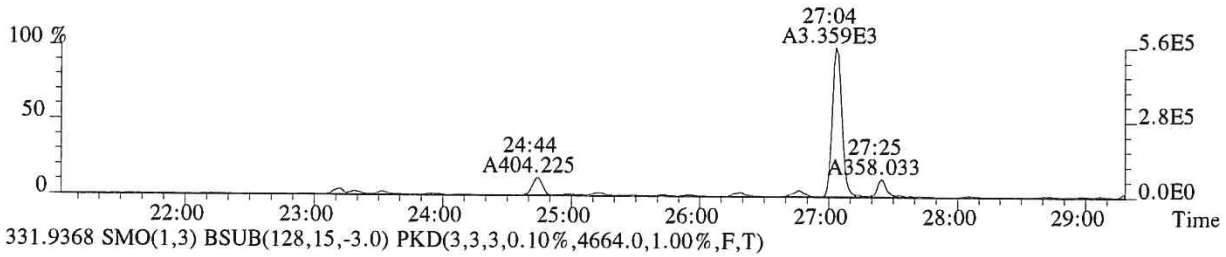


016428

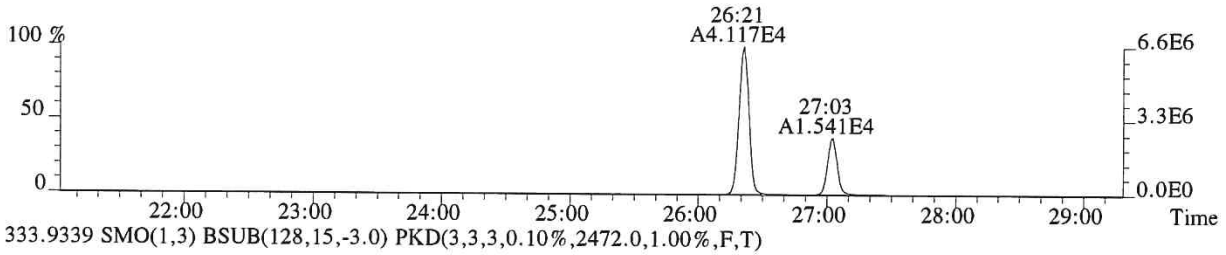
File:P519744 #1-587 Acq: 3-JAN-2019 01:05:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-020
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1916.0,1.00%,F,T)



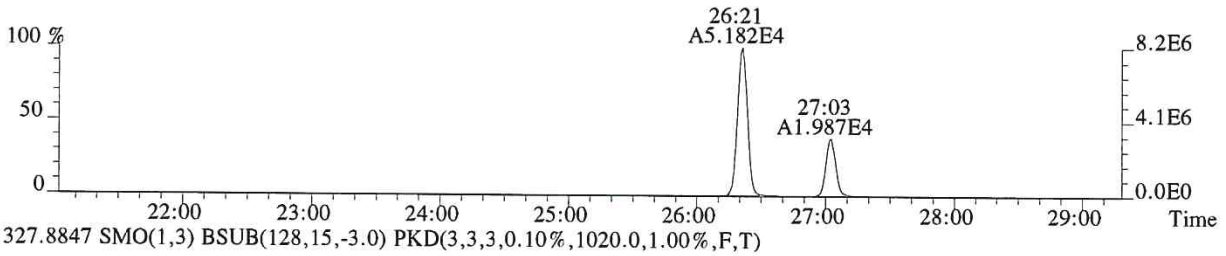
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1408.0,1.00%,F,T)



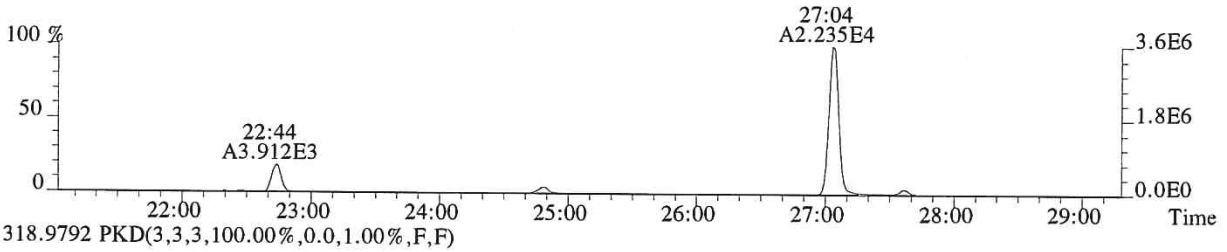
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4664.0,1.00%,F,T)



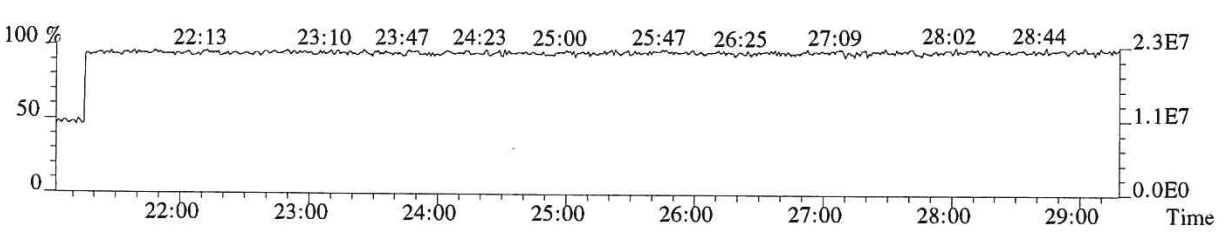
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2472.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1020.0,1.00%,F,T)

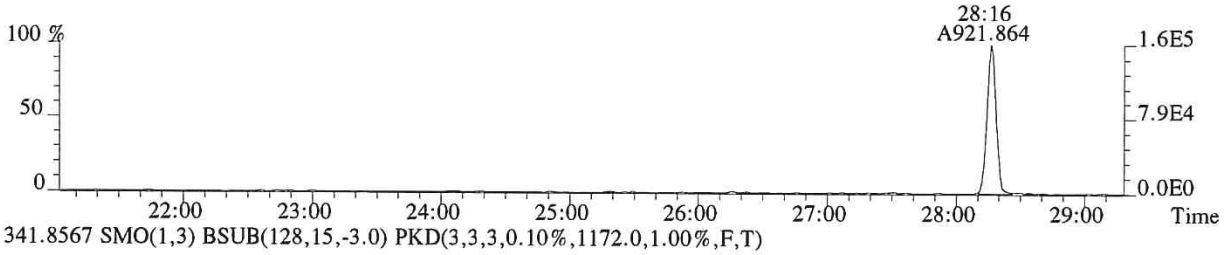


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

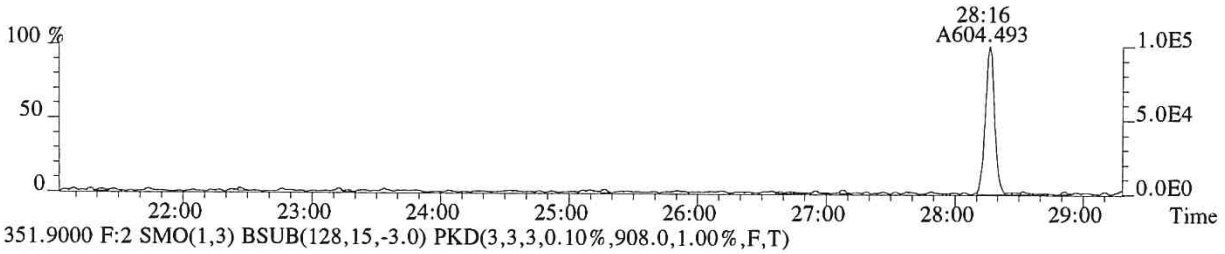


016429

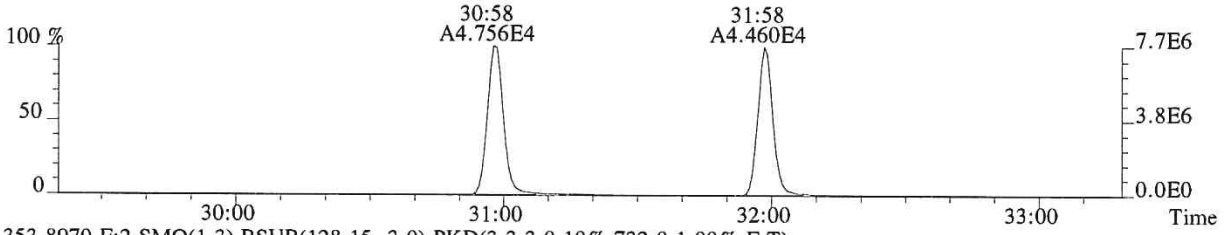
File:P519744 #1-587 Acq: 3-JAN-2019 01:05:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-020
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,632.0,1.00%,F,T)



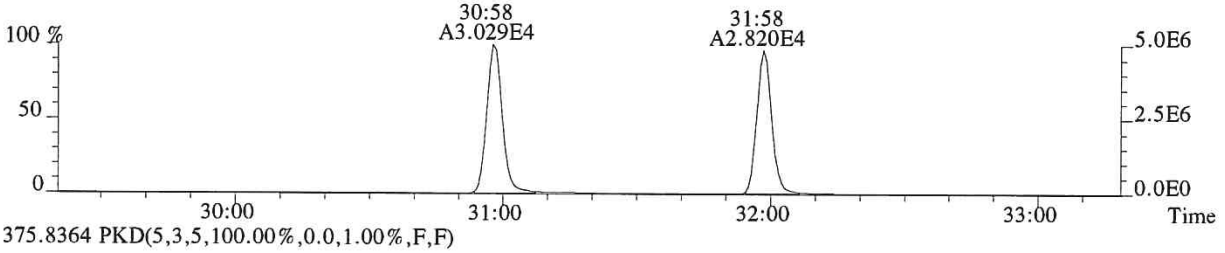
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1172.0,1.00%,F,T)



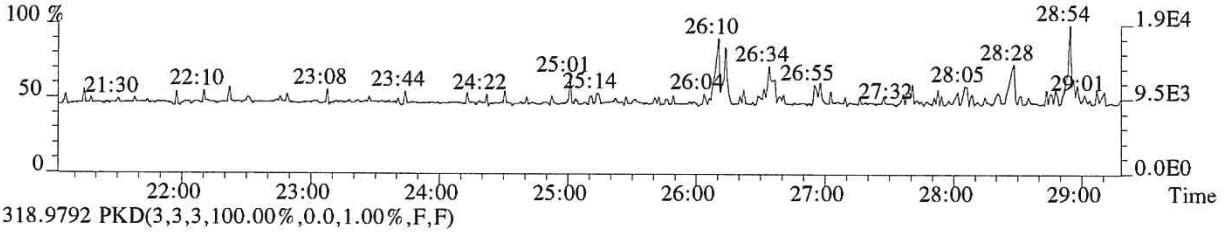
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,908.0,1.00%,F,T)



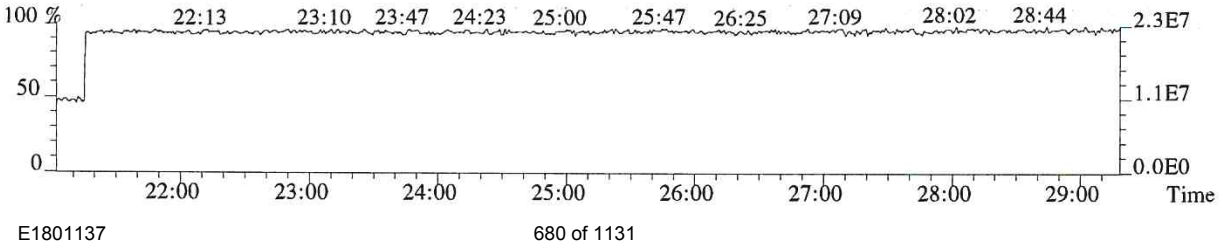
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,732.0,1.00%,F,T)



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

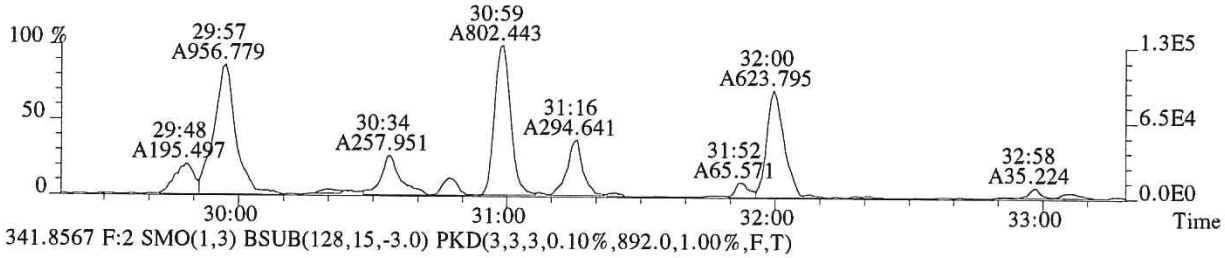


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

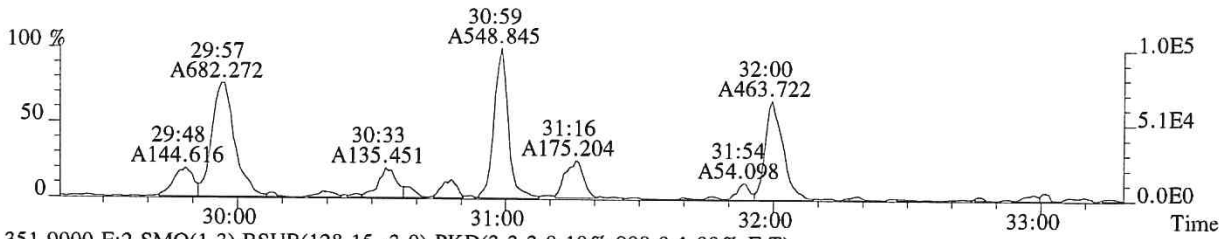


016430

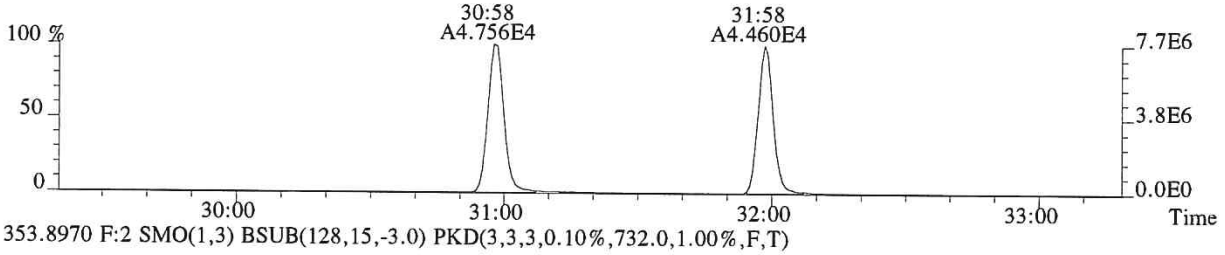
File:P519744 #1-358 Acq: 3-JAN-2019 01:05:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-020
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1008.0,1.00%,F,T)



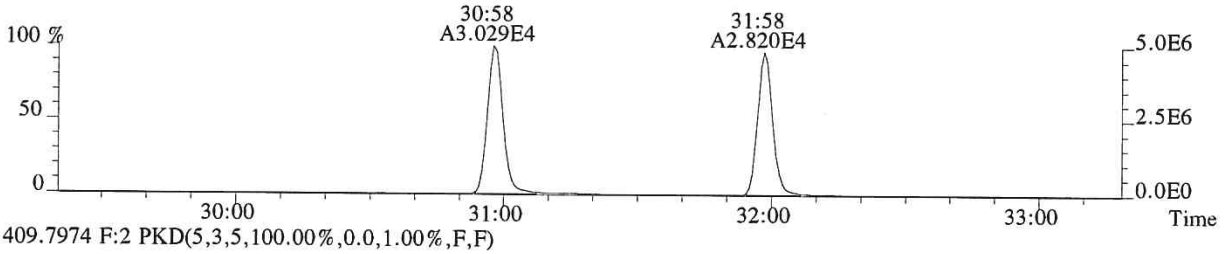
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,892.0,1.00%,F,T)



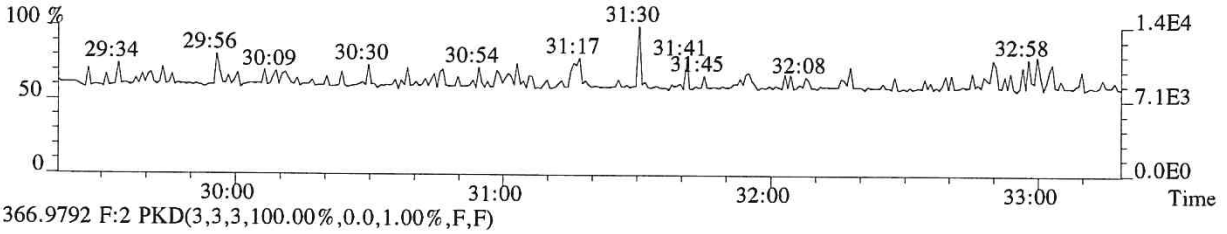
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,908.0,1.00%,F,T)



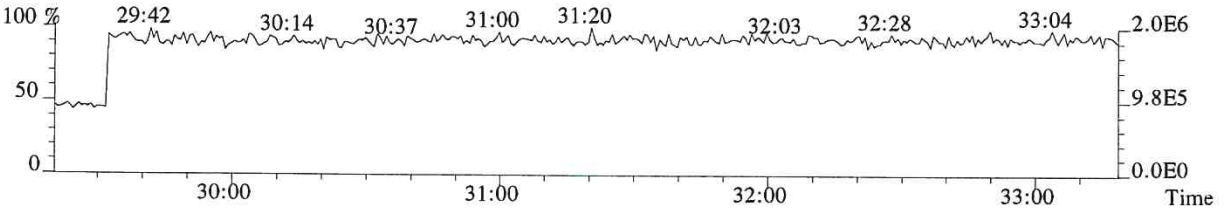
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,732.0,1.00%,F,T)



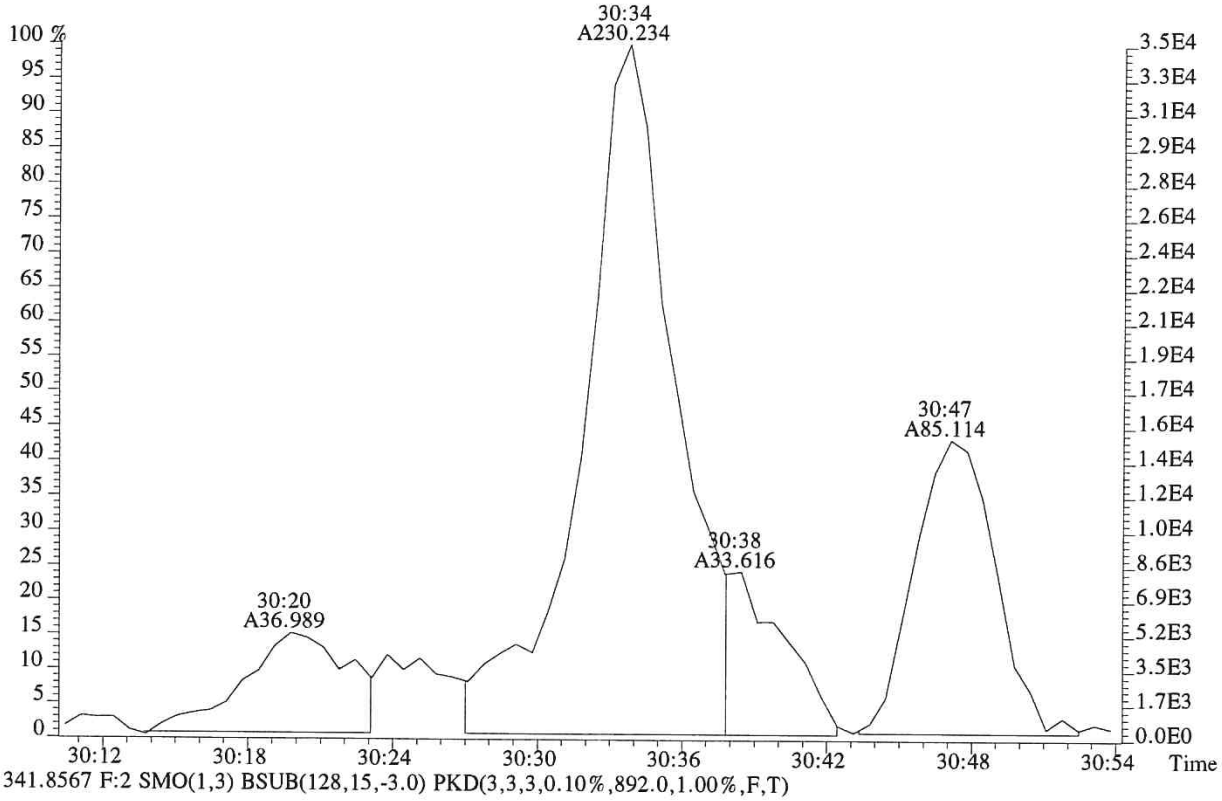
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



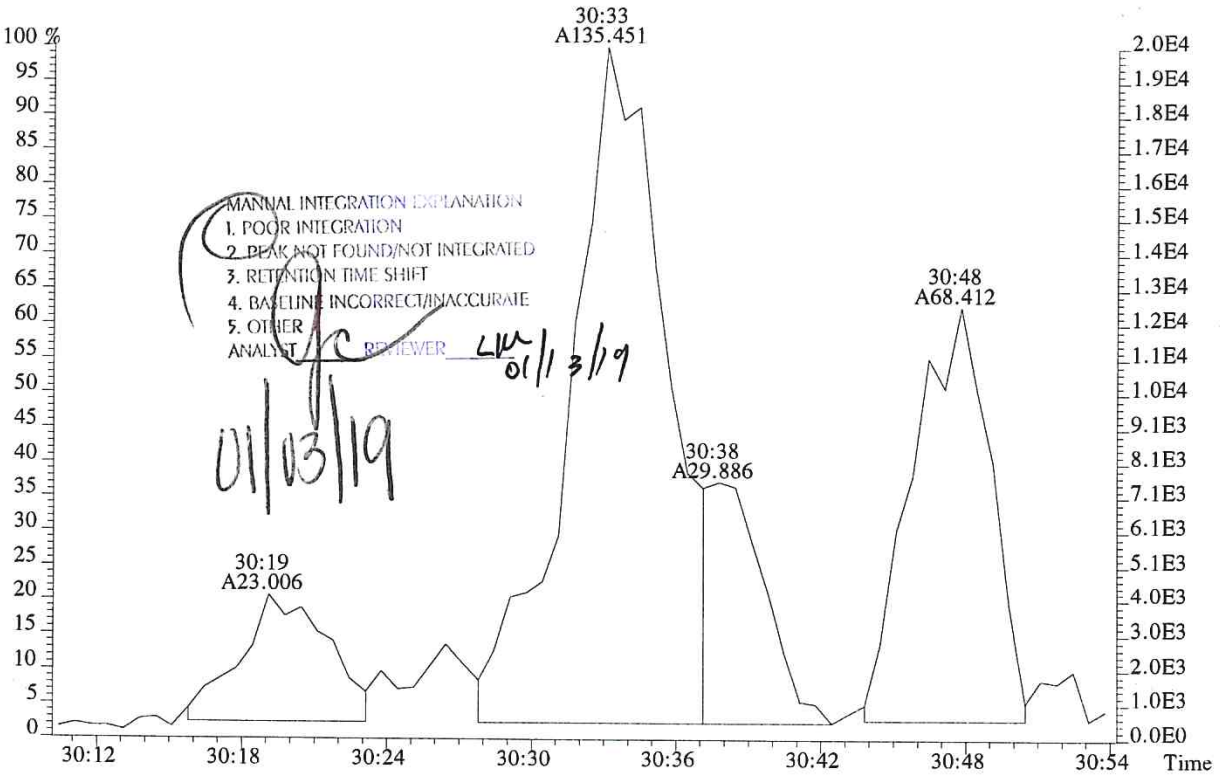
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519744 #1-358 Acq: 3-JAN-2019 01:05:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-020
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1008.0,1.00%,F,T)

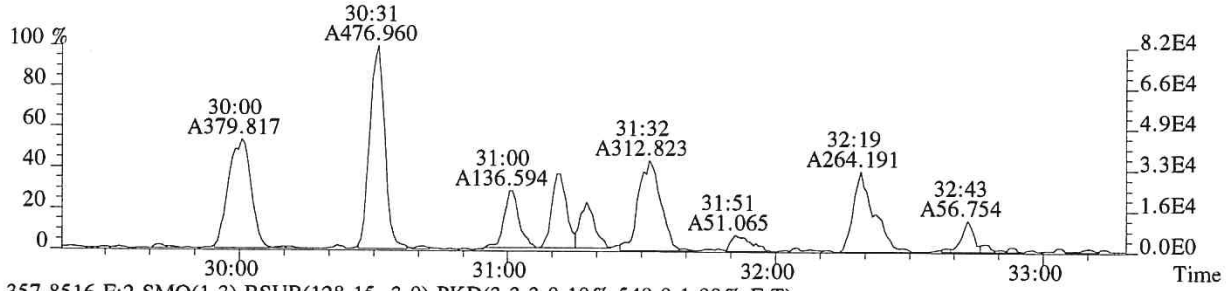


341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,892.0,1.00%,F,T)

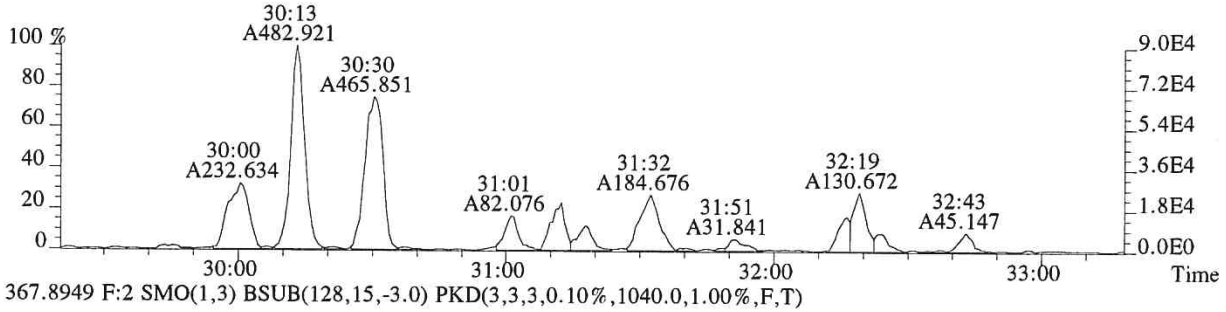


016432

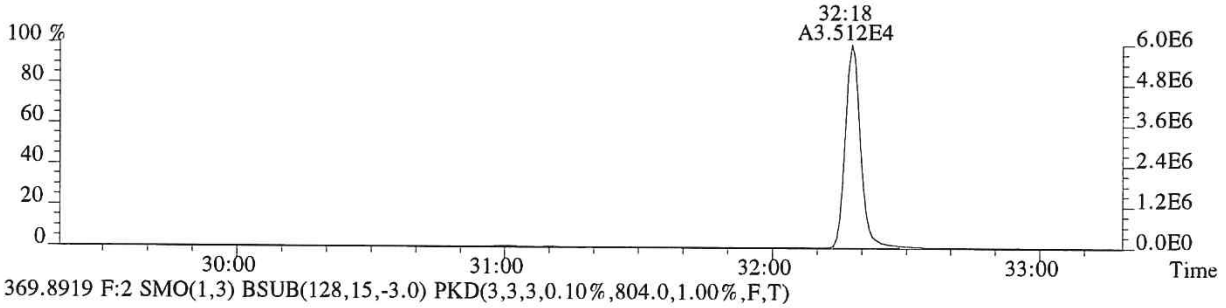
File:P519744 #1-358 Acq: 3-JAN-2019 01:05:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-020
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,756.0,1.00%,F,T)



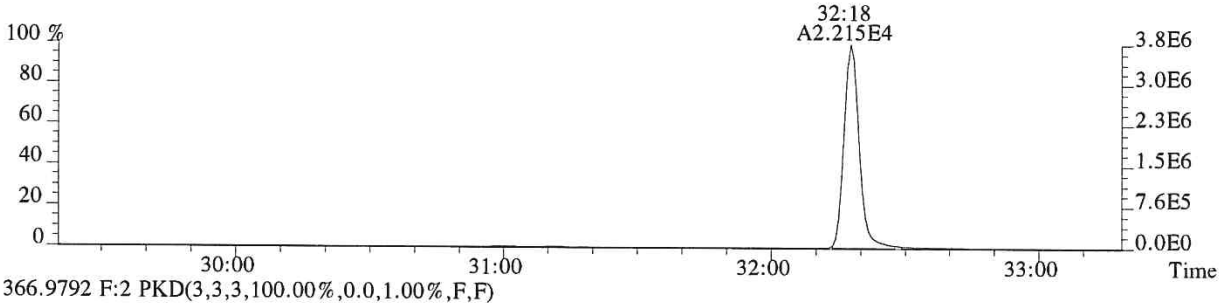
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,548.0,1.00%,F,T)



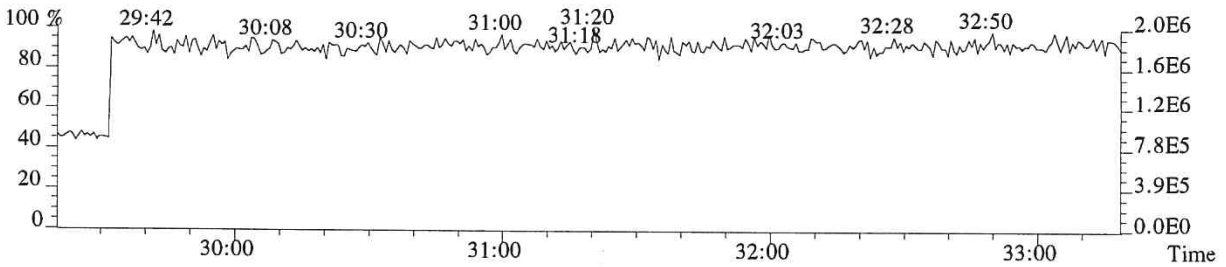
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1040.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,804.0,1.00%,F,T)

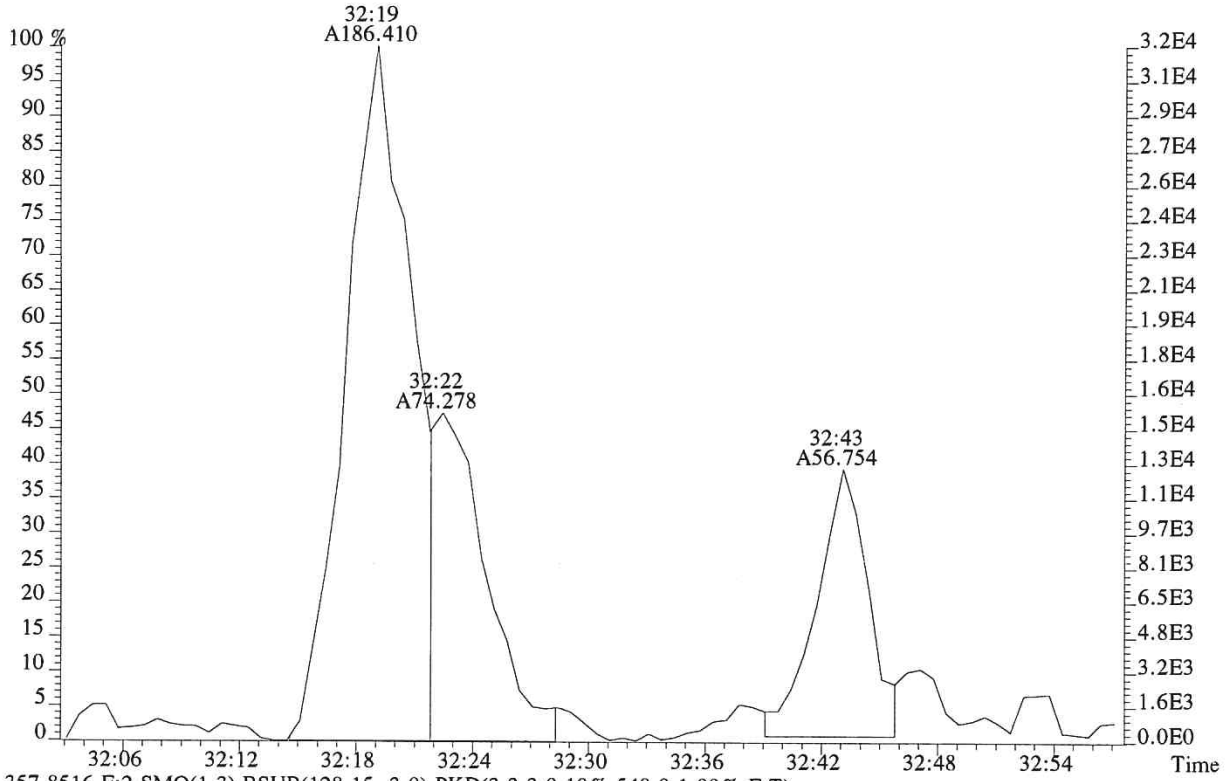


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

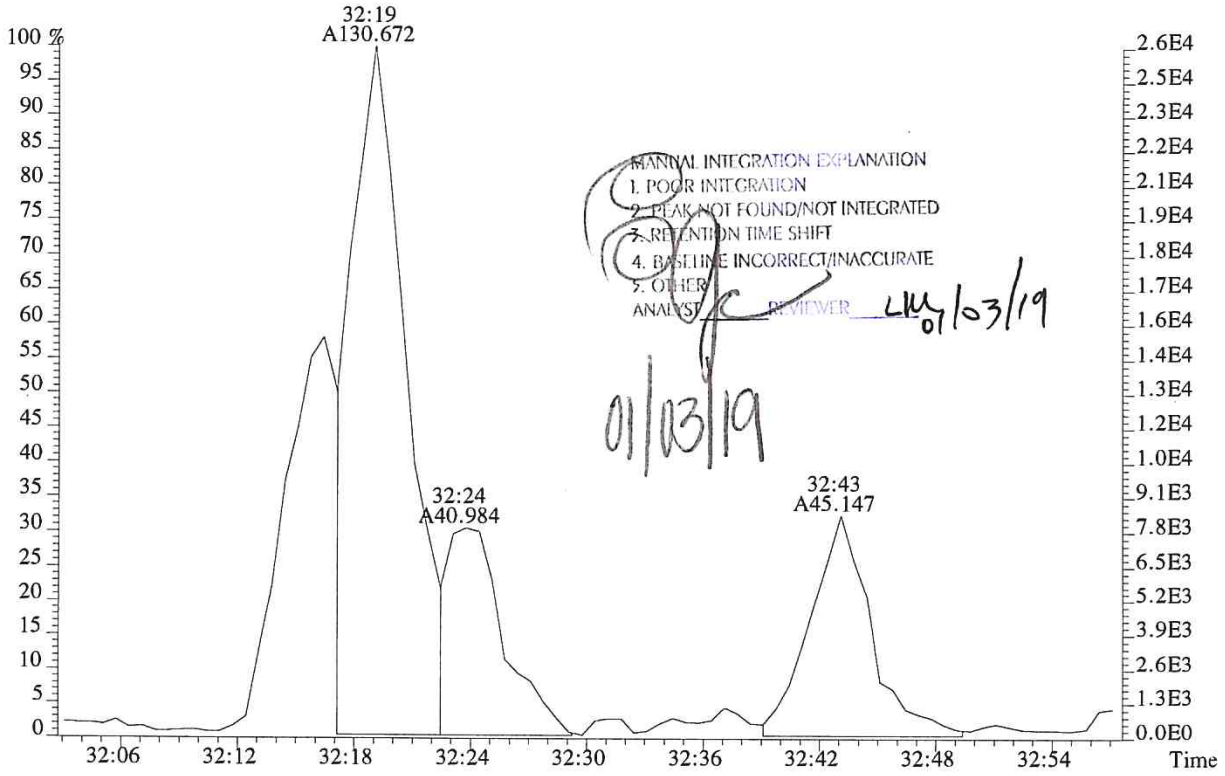


016433

File:P519744 #1-358 Acq: 3-JAN-2019 01:05:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-020
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,756.0,1.00%,F,T)



357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,548.0,1.00%,F,T)

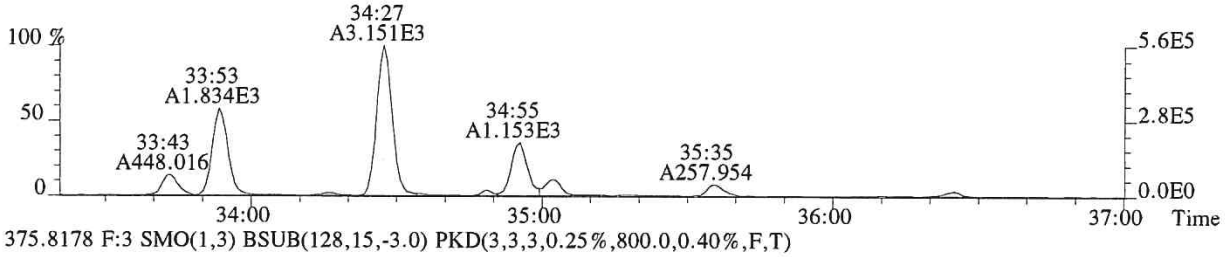


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER 01/03/19

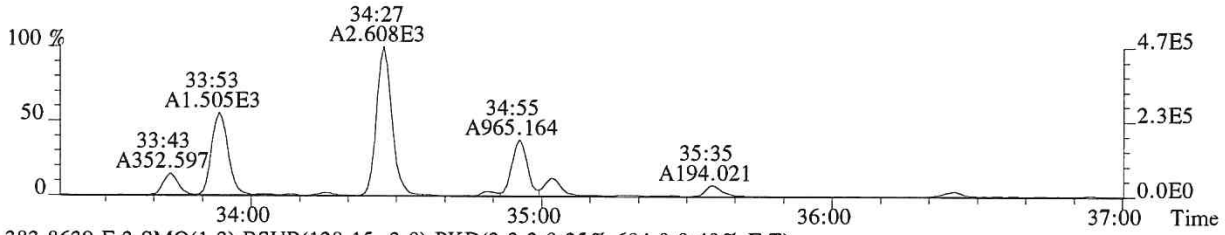
01/03/19

016434

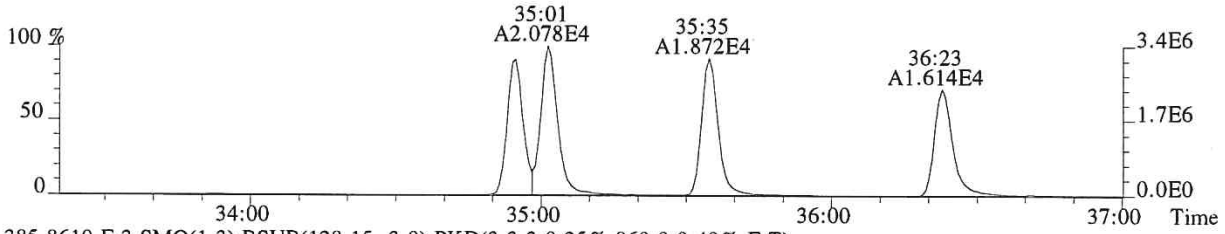
File:P519744 #1-330 Acq: 3-JAN-2019 01:05:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-020
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1488.0,0.40%,F,T)



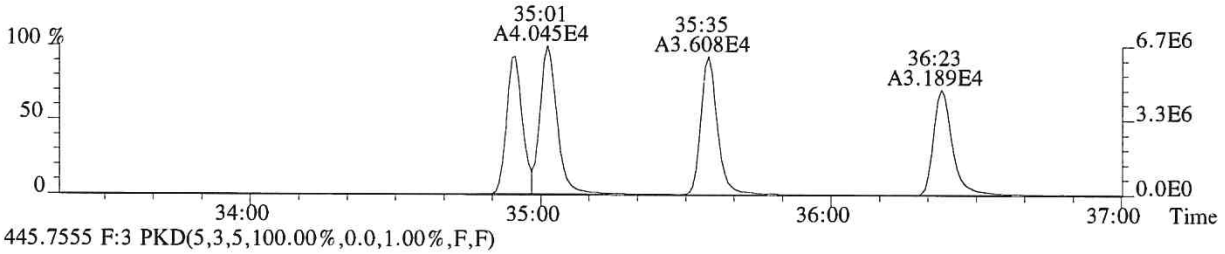
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,800.0,0.40%,F,T)



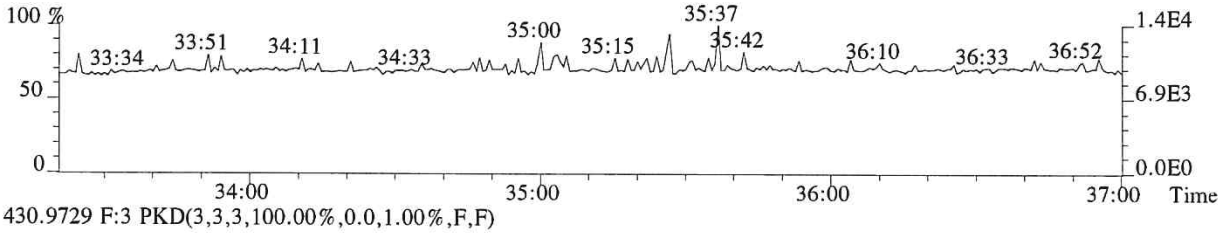
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,604.0,0.40%,F,T)



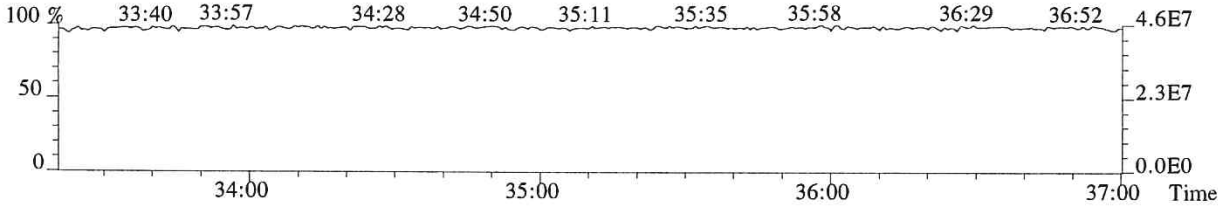
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,860.0,0.40%,F,T)



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

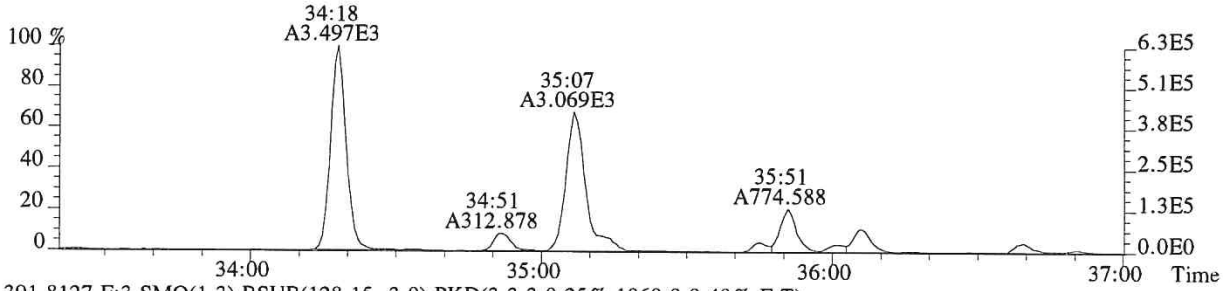


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

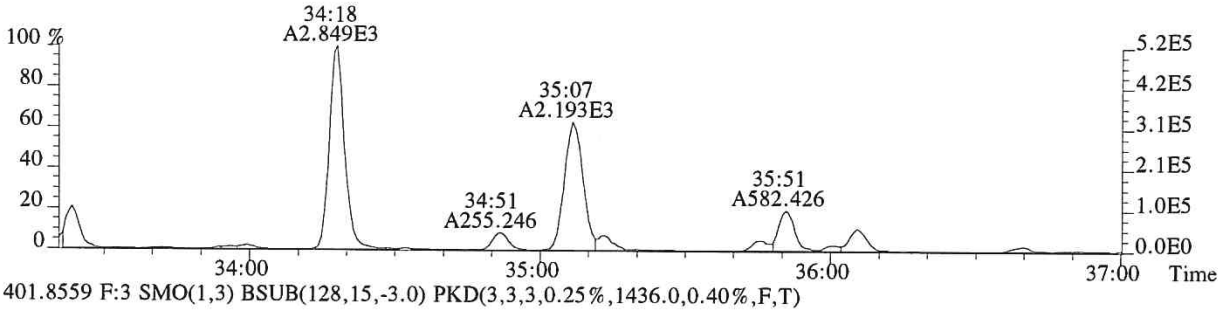


016435

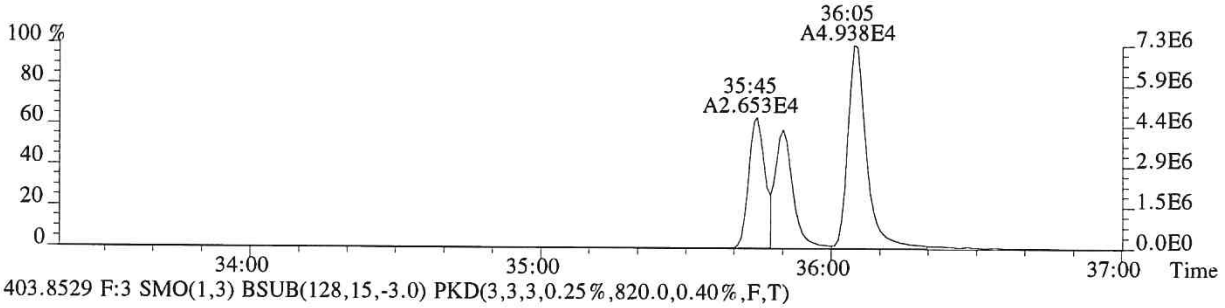
File:P519744 #1-330 Acq: 3-JAN-2019 01:05:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-020
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,812.0,0.40%,F,T)



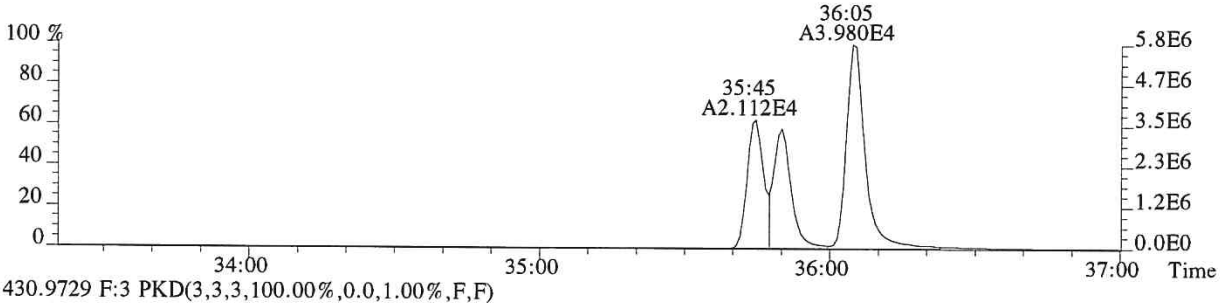
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1068.0,0.40%,F,T)



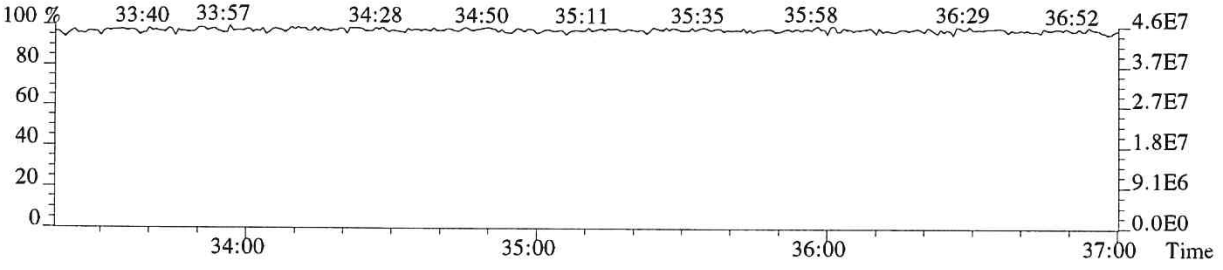
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1436.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,820.0,0.40%,F,T)

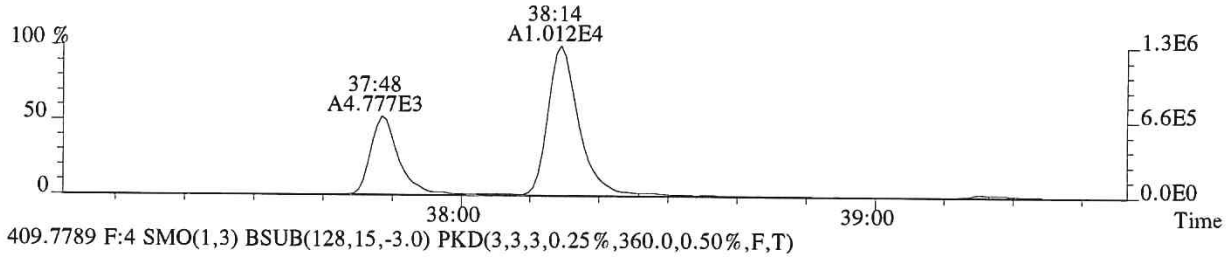


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

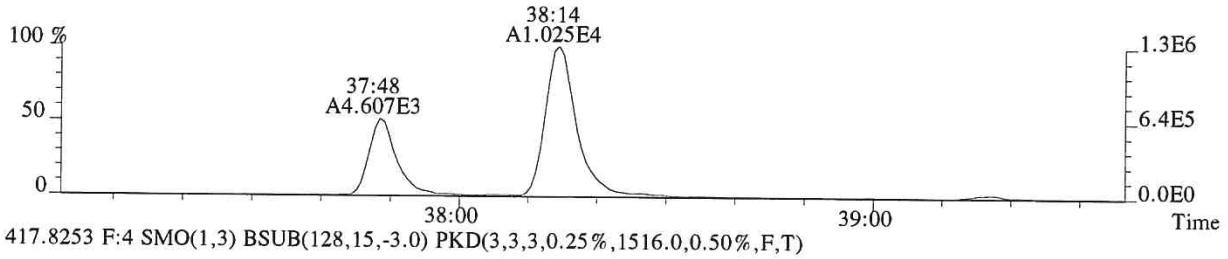


016436

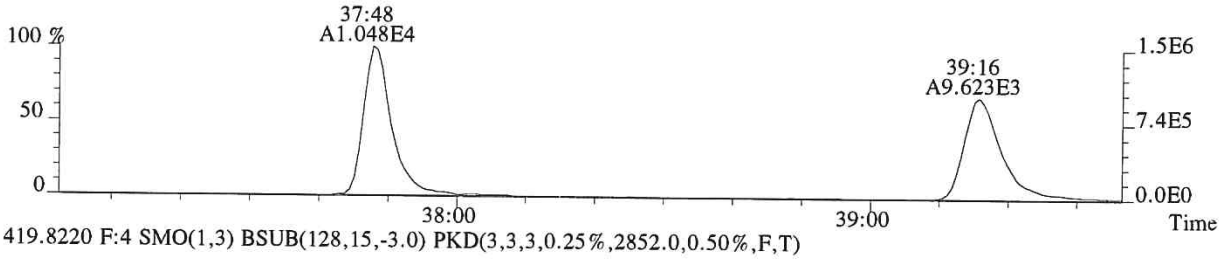
File:P519744 #1-232 Acq: 3-JAN-2019 01:05:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-020
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,496.0,0.50%,F,T)



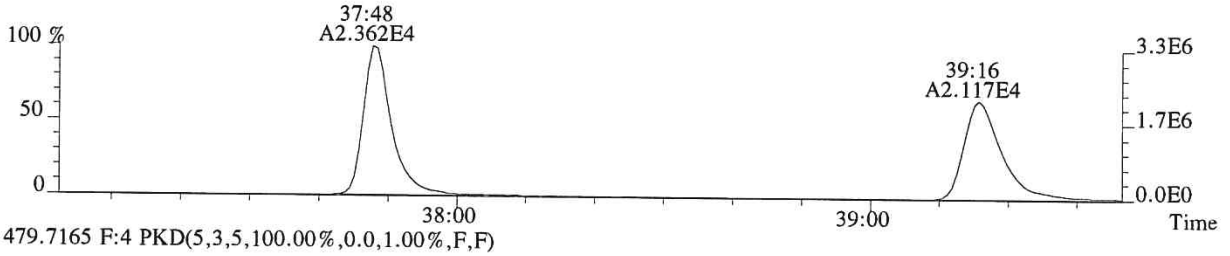
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,360.0,0.50%,F,T)



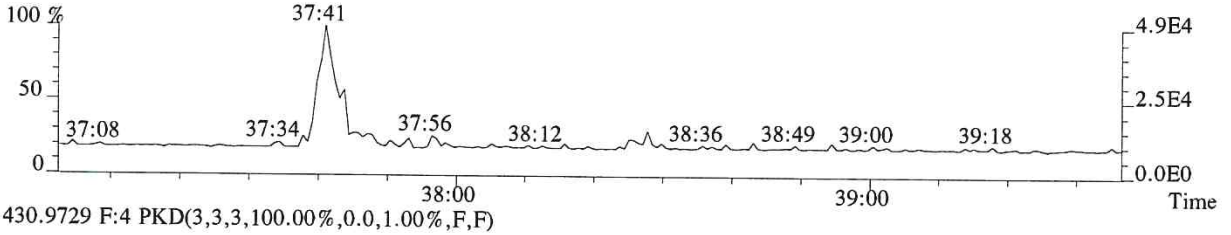
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1516.0,0.50%,F,T)



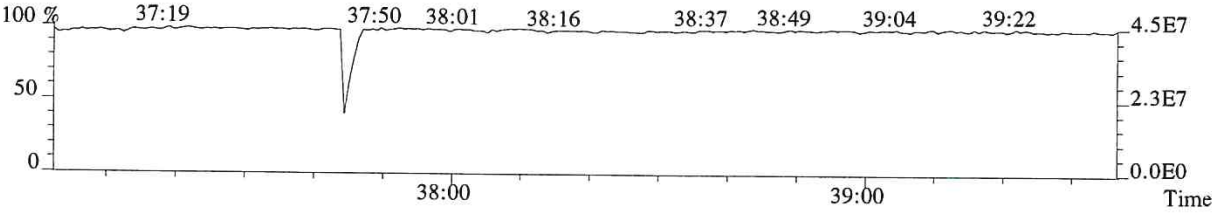
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2852.0,0.50%,F,T)



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

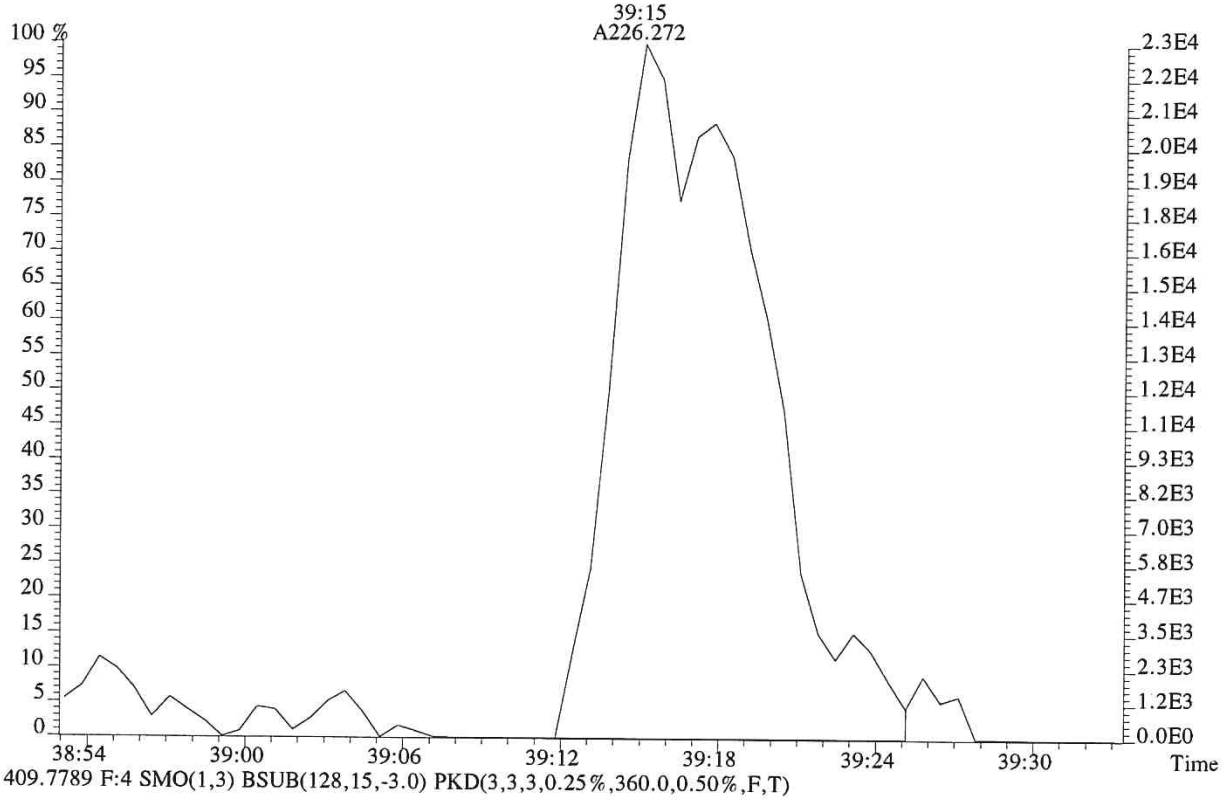


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

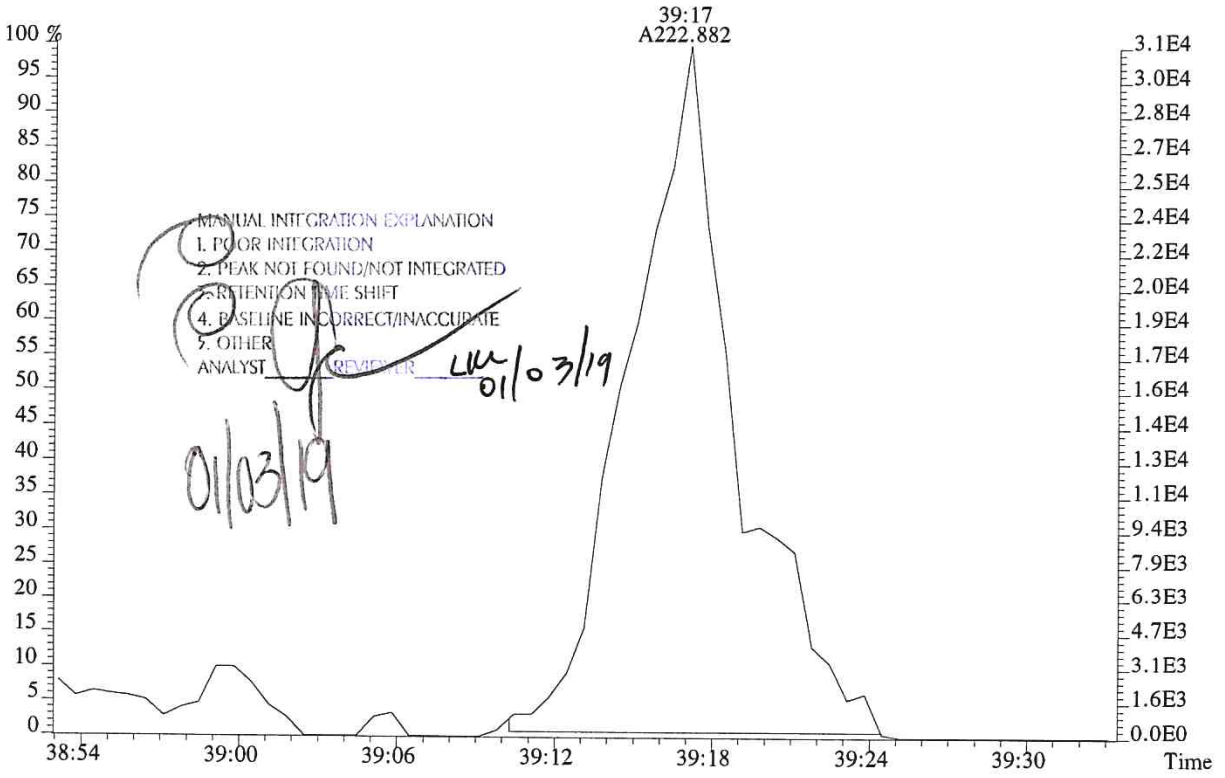


016437

File:P519744 #1-232 Acq: 3-JAN-2019 01:05:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-020
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,496.0,0.50%,F,T)



409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,360.0,0.50%,F,T)

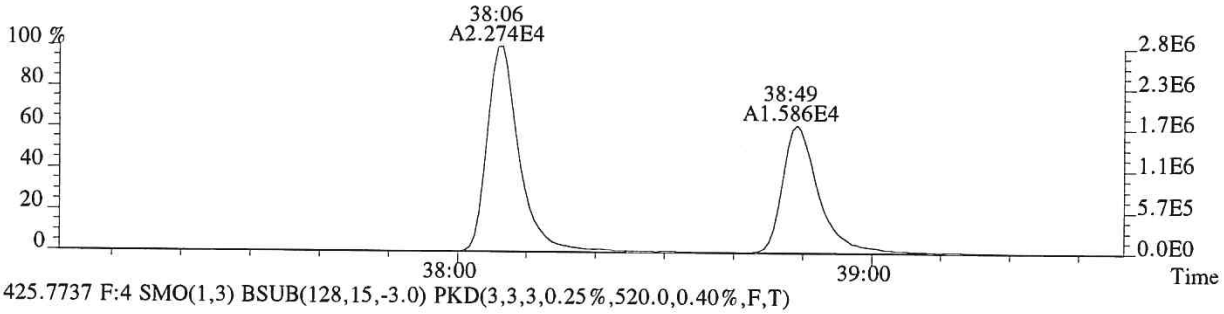


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER

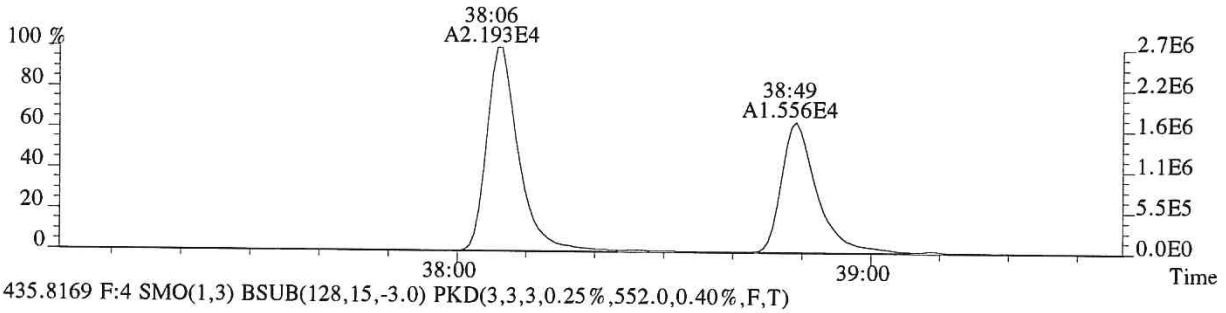
01/03/19

01/03/19

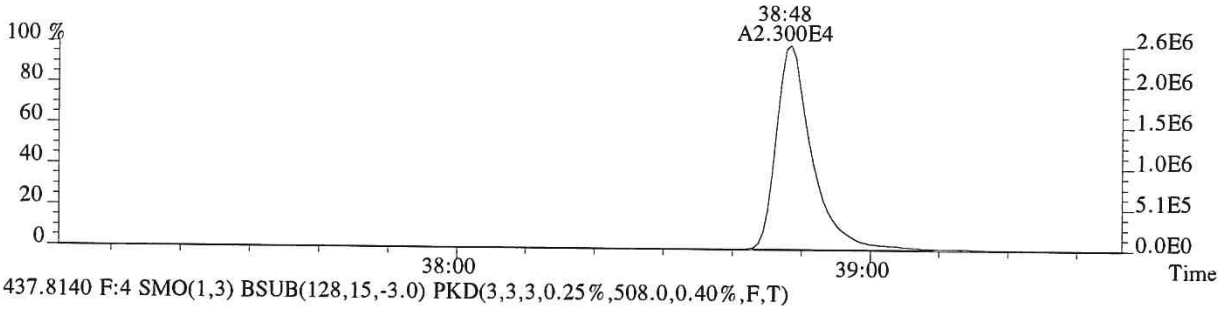
File:P519744 #1-232 Acq: 3-JAN-2019 01:05:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-020
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,344.0,0.40%,F,T)



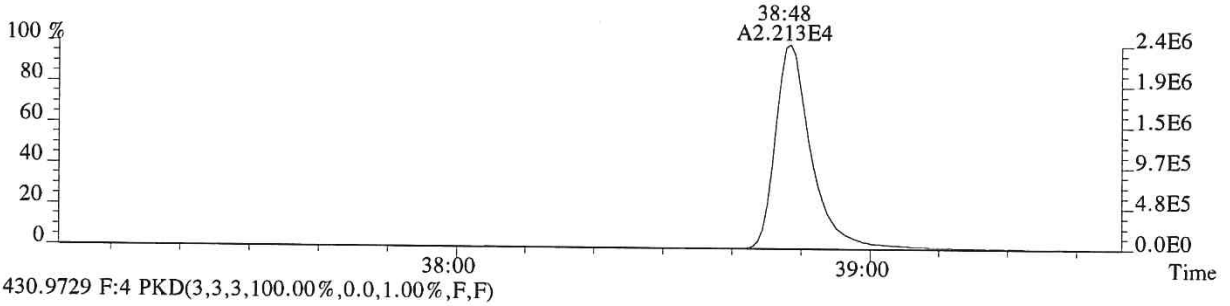
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,520.0,0.40%,F,T)



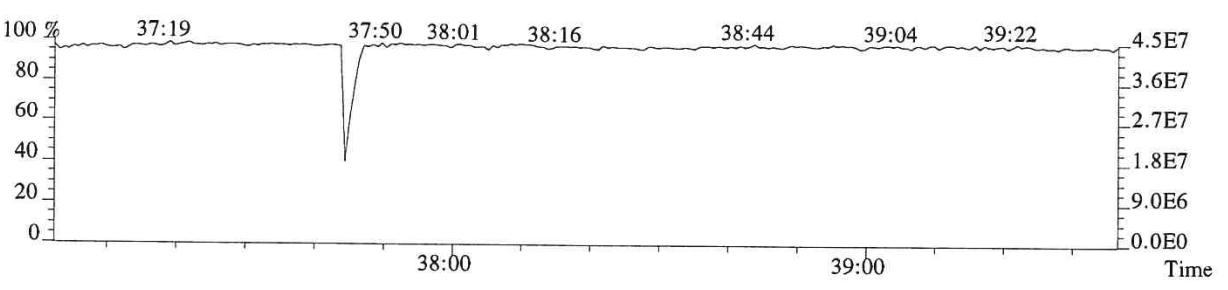
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,552.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,508.0,0.40%,F,T)

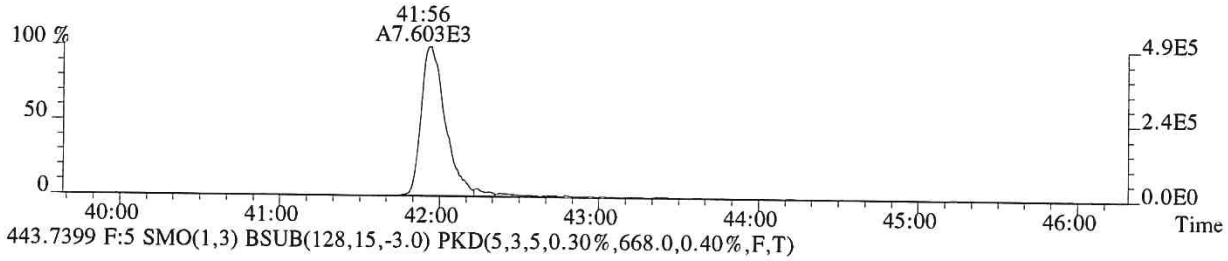


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

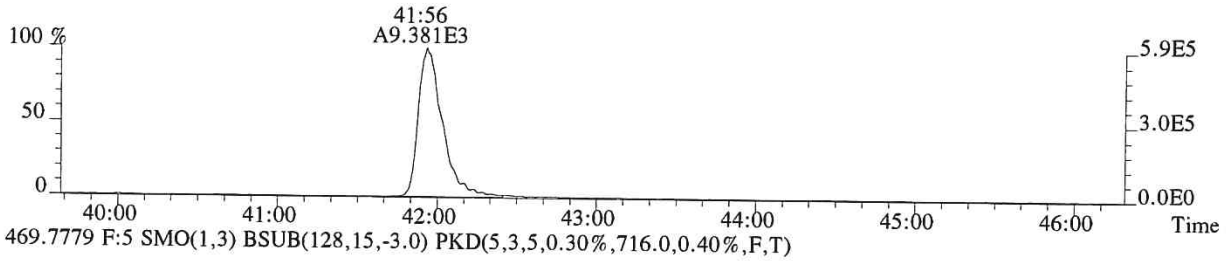


016439

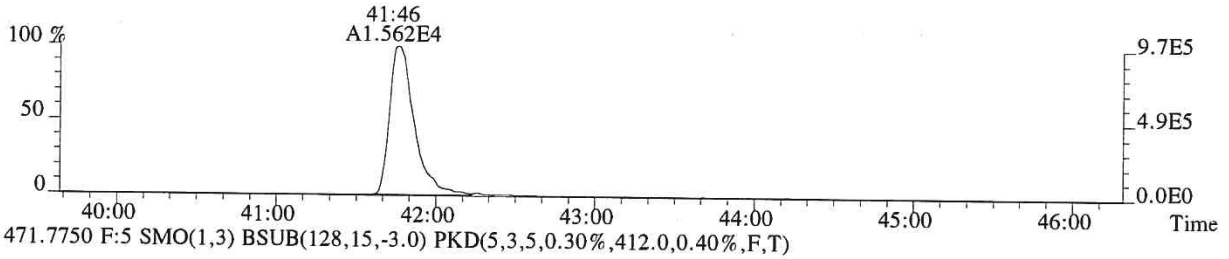
File:P519744 #1-601 Acq: 3-JAN-2019 01:05:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-020
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,488.0,0.40%,F,T)



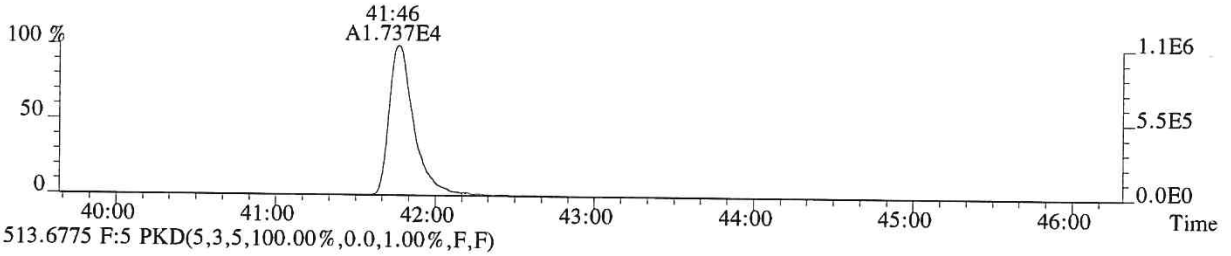
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,668.0,0.40%,F,T)



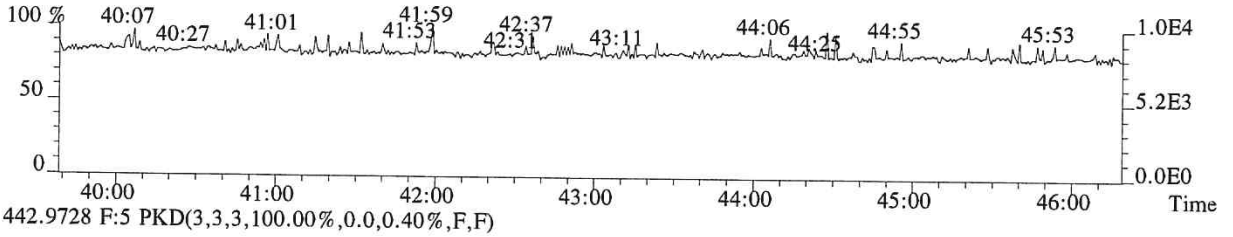
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,716.0,0.40%,F,T)



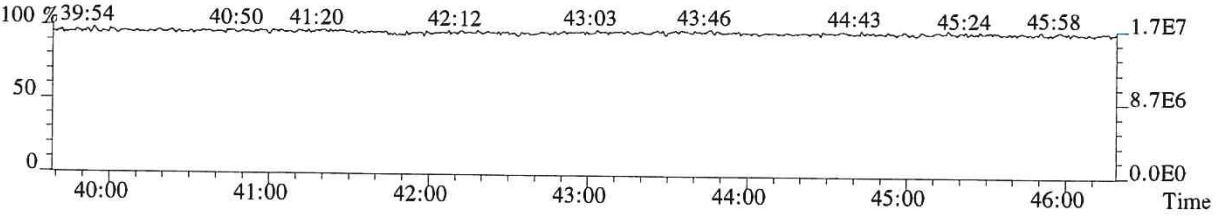
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,412.0,0.40%,F,T)



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

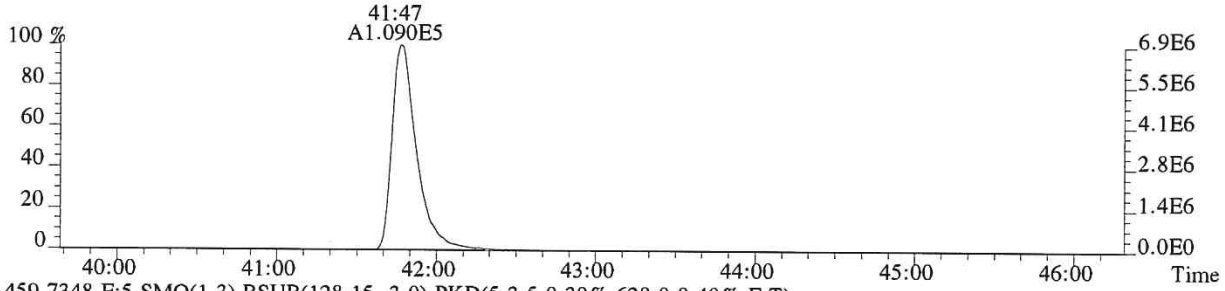


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

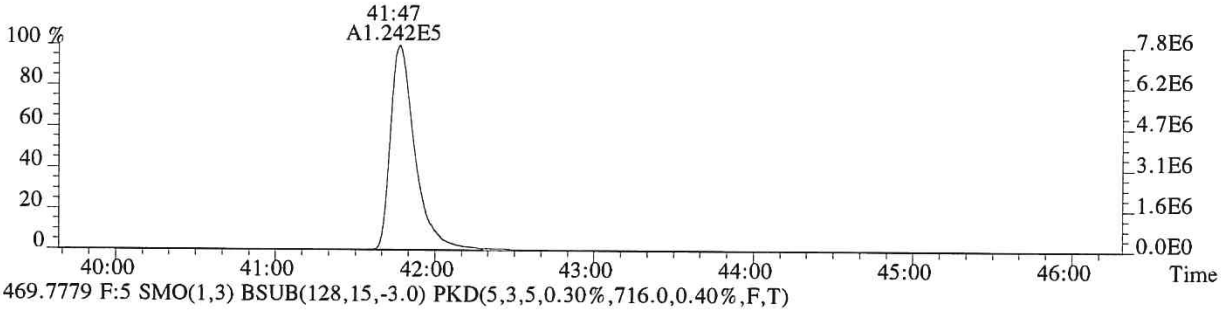


016440

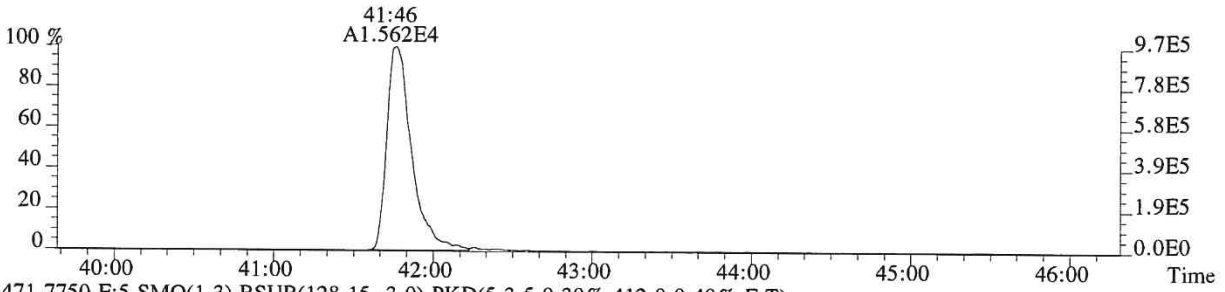
File:P519744 #1-601 Acq: 3-JAN-2019 01:05:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801137-020
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,356.0,0.40%,F,T)



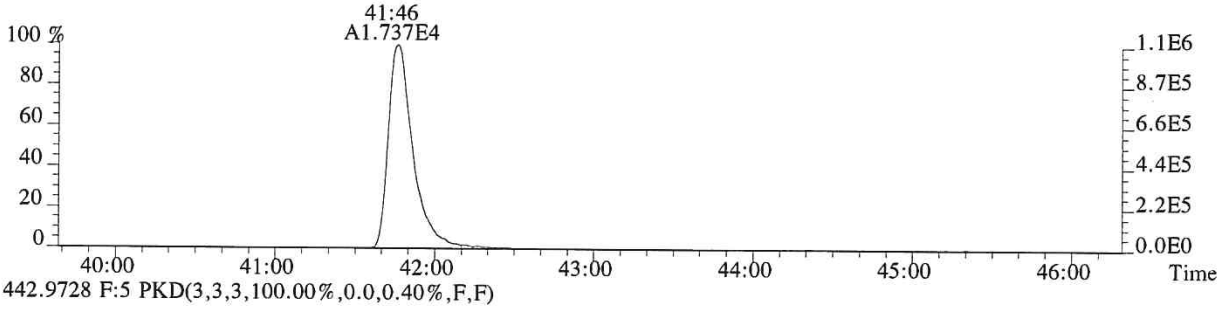
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,628.0,0.40%,F,T)



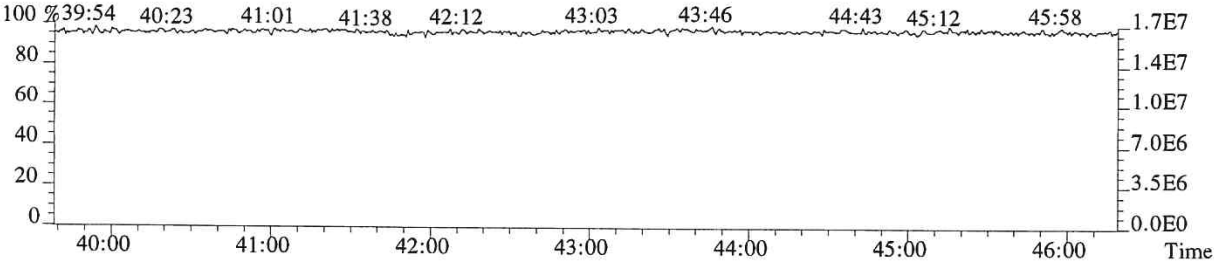
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,716.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,412.0,0.40%,F,T)



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



016441

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
METHOD BLANK

Run #10 Filename P616319 Samp: 1 Inj: 1 Acquired: 2-JAN-19 14:33:20
Processed: 3-JAN-19 13:33:46 Sample ID: EQ1800532-01

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	NotFnd	*	*	*	no	yes	1.081
2	Unk	1,2,3,7,8-PeCDF	NotFnd	*	*	*	no	no	1.156
3	Unk	2,3,4,7,8-PeCDF	NotFnd	*	*	*	no	yes	1.104
4	Unk	1,2,3,4,7,8-HxCDF	NotFnd	*	*	*	no	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	NotFnd	*	*	*	no	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	NotFnd	*	*	*	no	yes	1.281
7	Unk	1,2,3,7,8,9-HxCDF	NotFnd	*	*	*	no	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:05	1.452e+01	8.961e+00	1.62	no	yes	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	no	1.463
10	Unk	OCDF	NotFnd	*	*	*	no	no	1.571
11	Unk	2,3,7,8-TCDD	NotFnd	*	*	*	no	no	1.049
12	Unk	1,2,3,7,8-PeCDD	NotFnd	*	*	*	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	37:58	1.355e+01	1.039e+01	1.30	no	yes	1.112
17	Unk	OCDD	40:26	3.552e+01	5.544e+01	0.64	no	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:24	1.398e+04	1.816e+04	0.77	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:28	2.658e+04	1.679e+04	1.58	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:30	2.524e+04	1.576e+04	1.60	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:21	1.126e+04	2.144e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.328e+04	2.486e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	1.198e+04	2.235e+04	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	1.124e+04	2.050e+04	0.55	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:04	8.348e+03	1.842e+04	0.45	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:24	6.909e+03	1.549e+04	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:26	7.452e+03	9.268e+03	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:49	1.936e+04	1.225e+04	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	1.632e+04	1.295e+04	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	1.614e+04	1.288e+04	1.25	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	37:58	1.622e+04	1.560e+04	1.04	yes	no	0.857
32	IS	13C-OCDD	40:25	1.242e+04	1.394e+04	0.89	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:40	2.349e+04	2.961e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	3.334e+04	2.572e+04	1.30	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:27	1.051e+04				no	1.086

$$\text{OCDD} = \frac{(3.552e+01 + 5.544e+01) \times 4000\ \text{pg} \times 1}{(1.242e+04 + 1.394e+04)\ \text{x}\ \ \text{g}\ \ \text{x}\ \ / 100 \times 1.157} =$$

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

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
METHOD BLANK

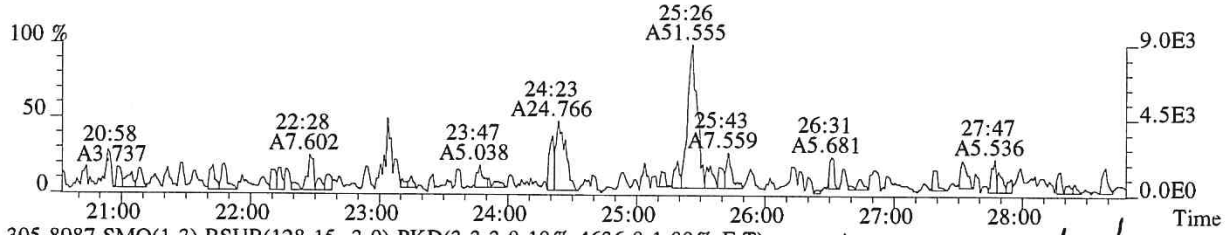
Run #10 Filename P616319 Samp: 1 Inj: 1 Acquired: 2-JAN-19 14:33:20
Processed: 3-JAN-19 13:33:46 LAB. ID: EQ1800532-01

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	*	7.56e+02	*	*	4.64e+03	*
2	1,2,3,7,8-PeCDF	*	5.68e+02	*	*	1.99e+03	*
3	2,3,4,7,8-PeCDF	*	5.68e+02	*	*	1.99e+03	*
4	1,2,3,4,7,8-HxCDF	*	1.08e+03	*	*	7.08e+02	*
5	1,2,3,6,7,8-HxCDF	*	1.08e+03	*	*	7.08e+02	*
6	2,3,4,6,7,8-HxCDF	*	1.08e+03	*	*	7.08e+02	*
7	1,2,3,7,8,9-HxCDF	*	1.08e+03	*	*	7.08e+02	*
8	1,2,3,4,6,7,8-HpCDF	2.73e+03	6.16e+02	4.4e+00	2.00e+03	4.36e+02	4.6e+00
9	1,2,3,4,7,8,9-HpCDF	*	6.16e+02	*	*	4.36e+02	*
10	OCDF	*	5.88e+02	*	*	2.22e+03	*
11	2,3,7,8-TCDD	*	3.24e+03	*	*	1.55e+03	*
12	1,2,3,7,8-PeCDD	*	1.64e+03	*	*	3.92e+02	*
13	1,2,3,4,7,8-HxCDD	*	5.24e+02	*	*	1.18e+03	*
14	1,2,3,6,7,8-HxCDD	*	5.24e+02	*	*	1.18e+03	*
15	1,2,3,7,8,9-HxCDD	*	5.24e+02	*	*	1.18e+03	*
16	1,2,3,4,6,7,8-HpCDD	2.99e+03	1.01e+03	3.0e+00	2.55e+03	4.28e+02	6.0e+00
17	OCDD	6.19e+03	5.64e+02	1.1e+01	1.07e+04	5.28e+02	2.0e+01
18	13C-2,3,7,8-TCDF	1.99e+06	1.37e+04	1.5e+02	2.56e+06	9.14e+03	2.8e+02
19	13C-1,2,3,7,8-PeCDF	4.53e+06	4.20e+02	1.1e+04	2.82e+06	1.41e+03	2.0e+03
20	13C-2,3,4,7,8-PeCDF	4.84e+06	4.20e+02	1.2e+04	3.03e+06	1.41e+03	2.1e+03
21	13C-1,2,3,4,7,8-HxCDF	2.34e+06	1.06e+03	2.2e+03	4.53e+06	1.54e+03	2.9e+03
22	13C-1,2,3,6,7,8-HxCDF	2.71e+06	1.06e+03	2.6e+03	5.07e+06	1.54e+03	3.3e+03
23	13C-2,3,4,6,7,8-HxCDF	2.47e+06	1.06e+03	2.3e+03	4.60e+06	1.54e+03	3.0e+03
24	13C-1,2,3,7,8,9-HxCDF	2.26e+06	1.06e+03	2.1e+03	4.31e+06	1.54e+03	2.8e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.82e+06	1.99e+03	9.2e+02	3.98e+06	1.71e+03	2.3e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.44e+06	1.99e+03	7.3e+02	3.28e+06	1.71e+03	1.9e+03
27	13C-2,3,7,8-TCDD	1.19e+06	1.16e+04	1.0e+02	1.43e+06	3.96e+03	3.6e+02
28	13C-1,2,3,7,8-PeCDD	3.50e+06	1.75e+03	2.0e+03	2.22e+06	2.43e+03	9.1e+02
29	13C-1,2,3,4,7,8-HxCDD	3.63e+06	1.82e+03	2.0e+03	2.91e+06	1.09e+03	2.7e+03
30	13C-1,2,3,6,7,8-HxCDD	3.22e+06	1.82e+03	1.8e+03	2.63e+06	1.09e+03	2.4e+03
31	13C-1,2,3,4,6,7,8-HpCDD	3.61e+06	9.16e+02	3.9e+03	3.43e+06	7.20e+02	4.8e+03
32	13C-OCDD	2.41e+06	6.40e+02	3.8e+03	2.67e+06	4.96e+02	5.4e+03
33	13C-1,2,3,4-TCDD	3.41e+06	1.16e+04	3.0e+02	4.29e+06	3.96e+03	1.1e+03
34	13C-1,2,3,7,8,9-HxCDD	6.89e+06	1.82e+03	3.8e+03	5.34e+06	1.09e+03	4.9e+03
35	37Cl-2,3,7,8-TCDD	1.63e+06	2.62e+03	6.2e+02			

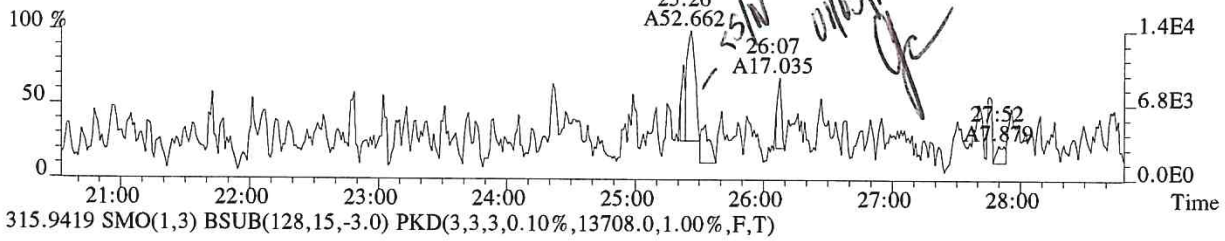
ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office:(713)266-1599. Fax:(713)266-0130

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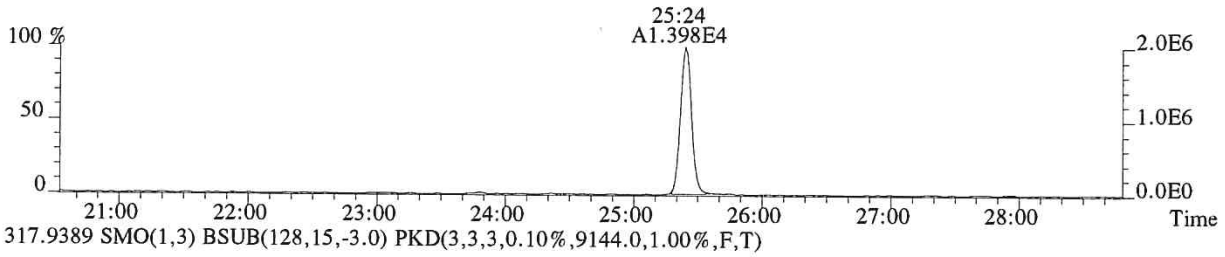
File:P616319 #1-587 Acq: 2-JAN-2019 14:33:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,756.0,1.00%,F,T)



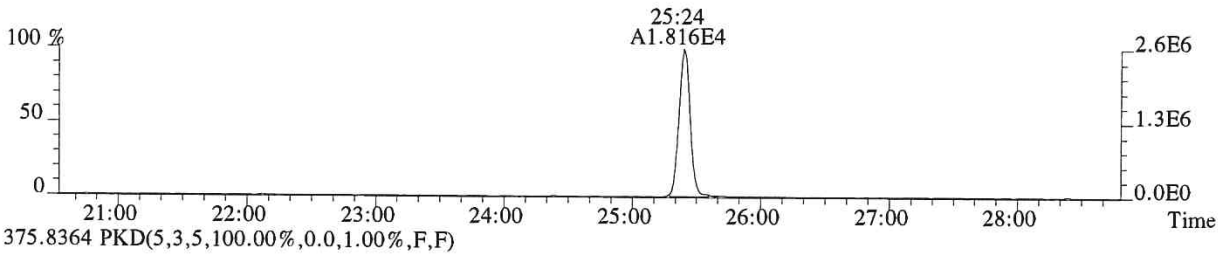
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4636.0,1.00%,F,T)



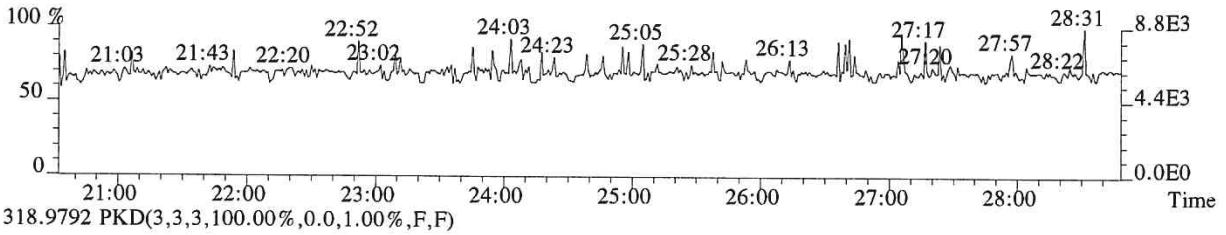
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,13708.0,1.00%,F,T)



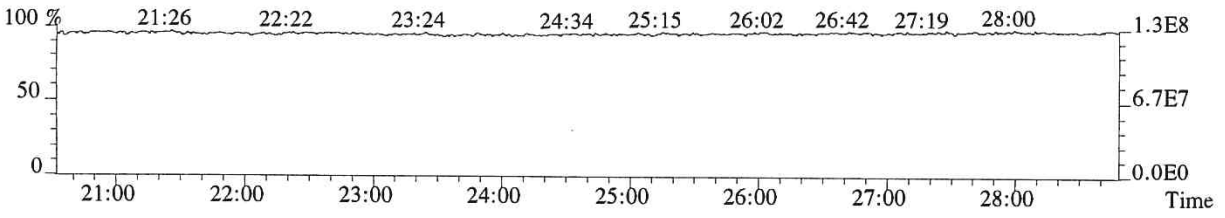
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9144.0,1.00%,F,T)



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

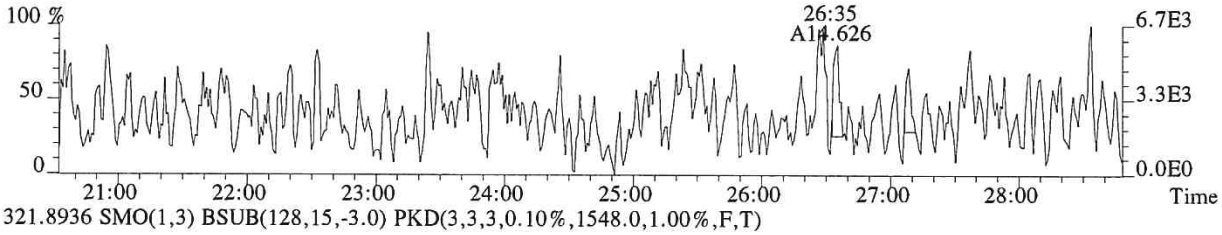


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

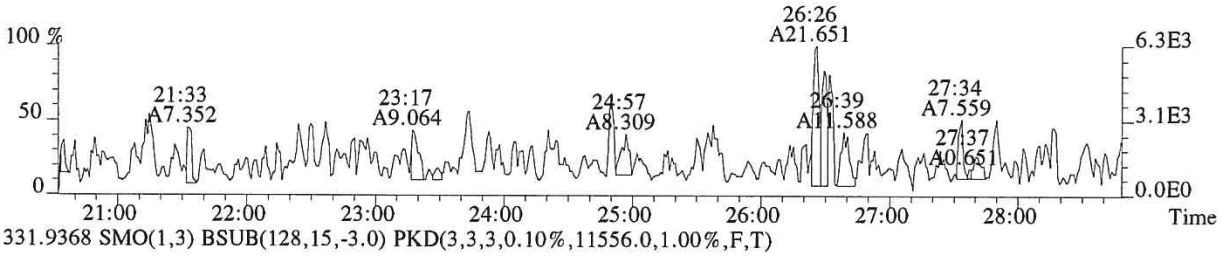


016444

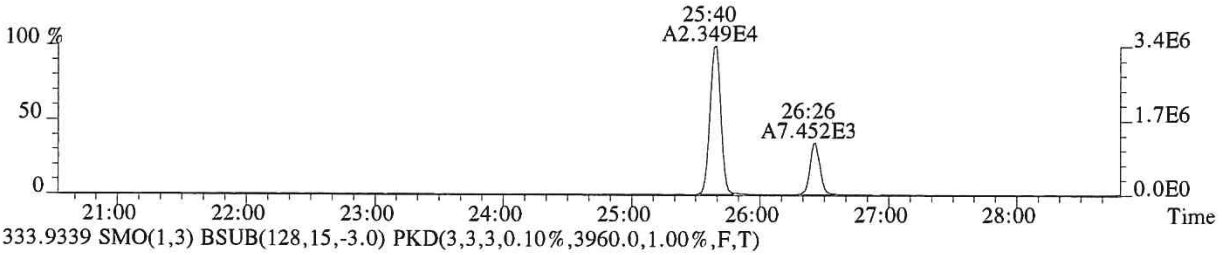
File:P616319 #1-587 Acq: 2-JAN-2019 14:33:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3240.0,1.00%,F,T)



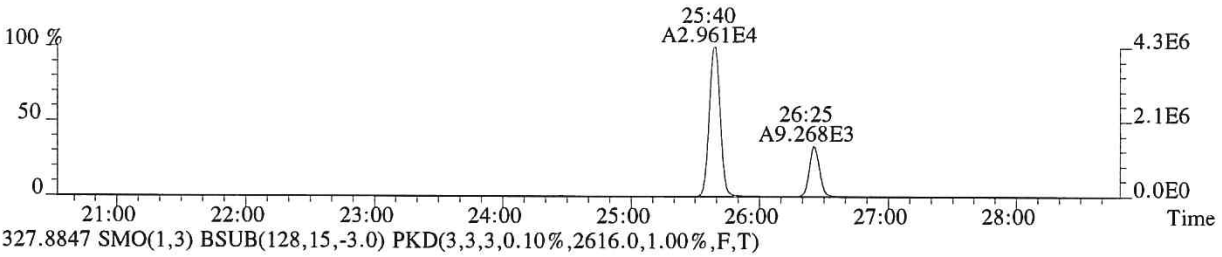
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1548.0,1.00%,F,T)



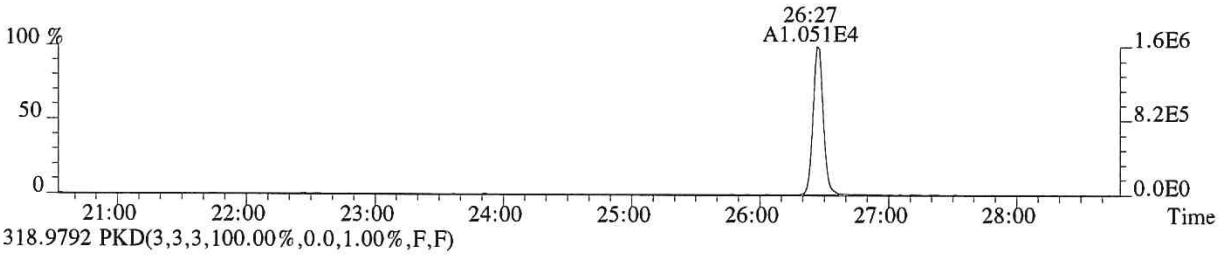
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11556.0,1.00%,F,T)



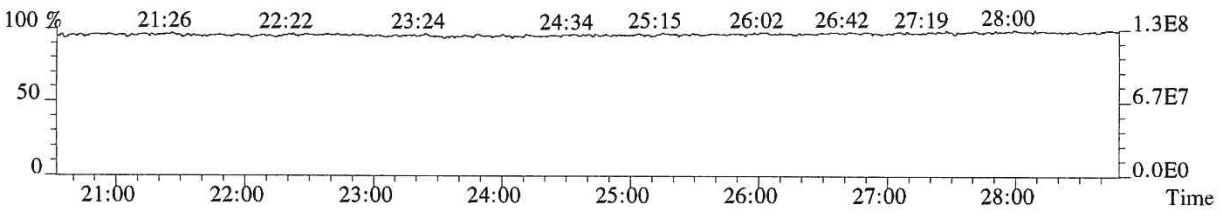
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3960.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2616.0,1.00%,F,T)

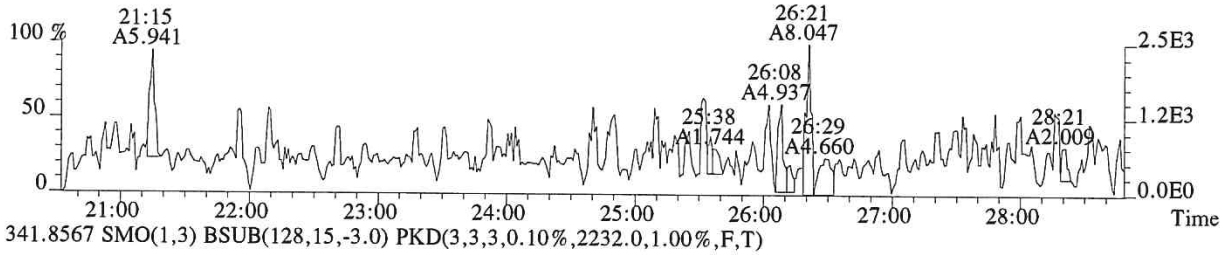


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

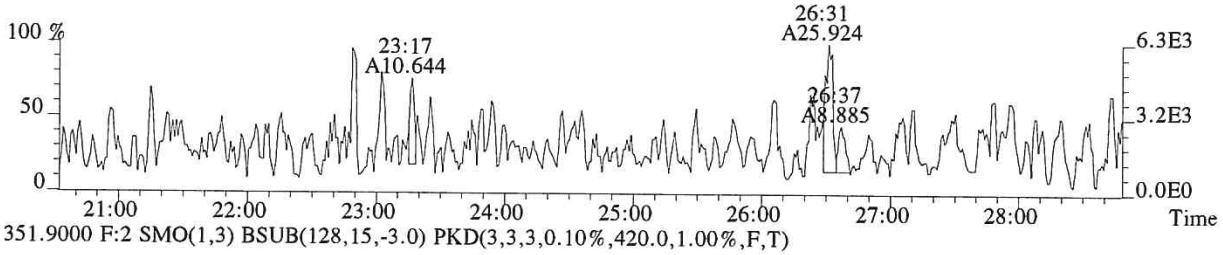


016445

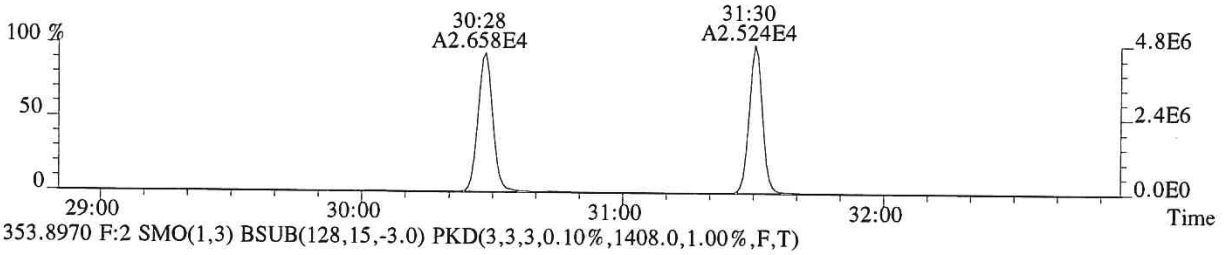
File:P616319 #1-587 Acq: 2-JAN-2019 14:33:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,748.0,1.00%,F,T)



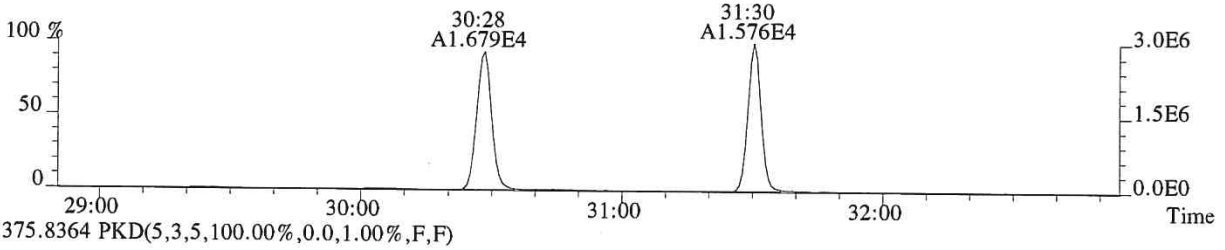
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2232.0,1.00%,F,T)



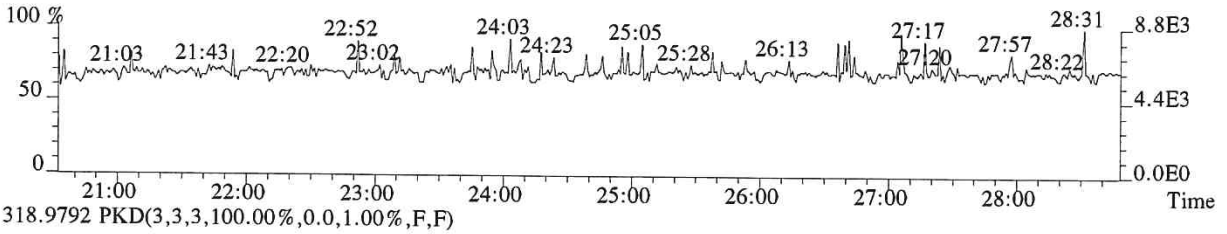
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,420.0,1.00%,F,T)



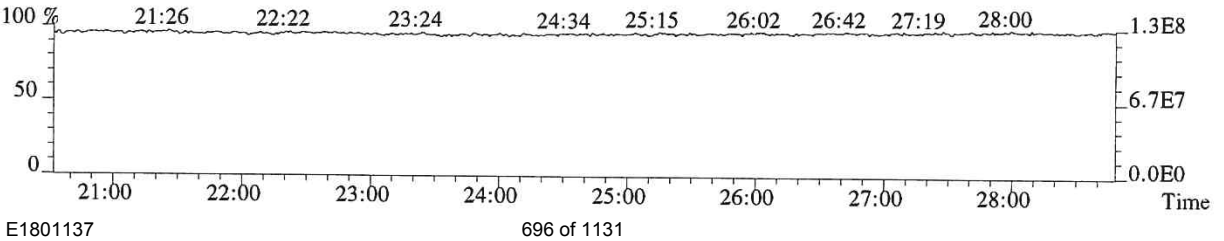
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1408.0,1.00%,F,T)



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



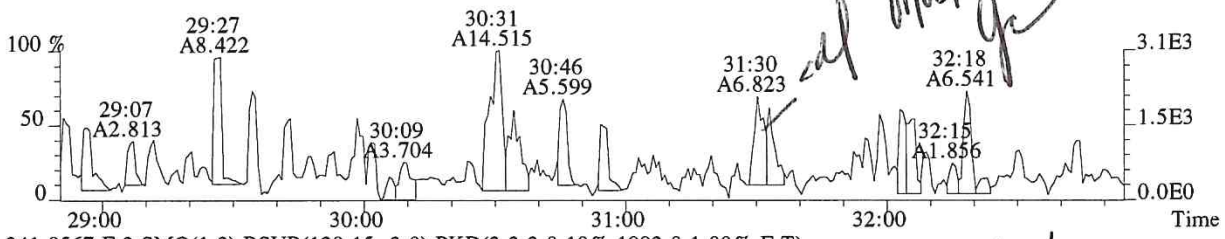
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



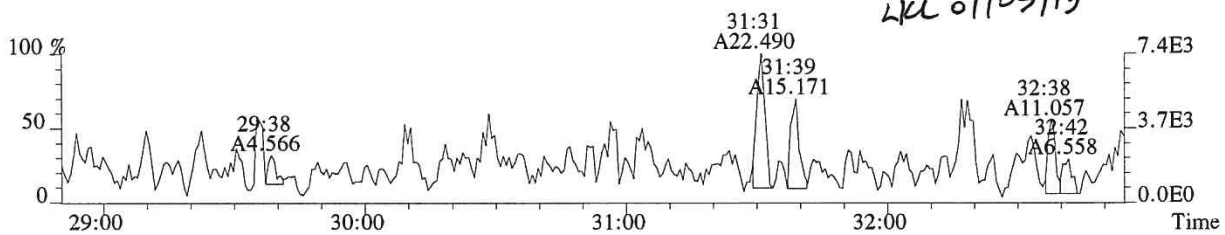
016446

File:P616319 #1-367 Acq: 2-JAN-2019 14:33:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB

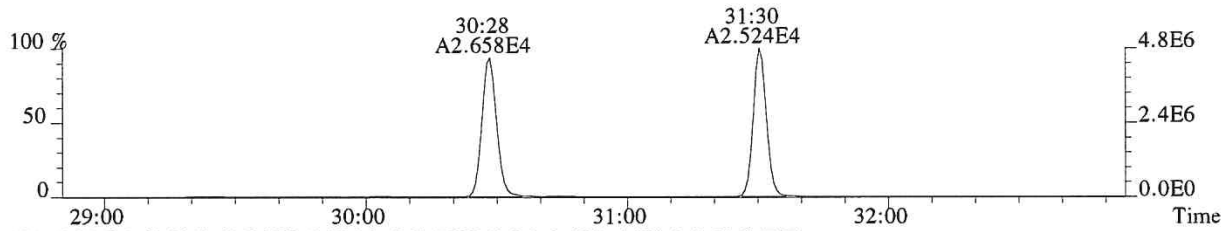
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,568.0,1.00%,F,T)



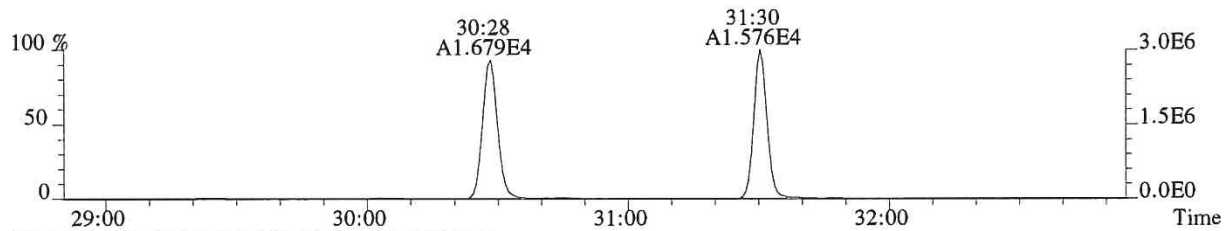
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1992.0,1.00%,F,T)



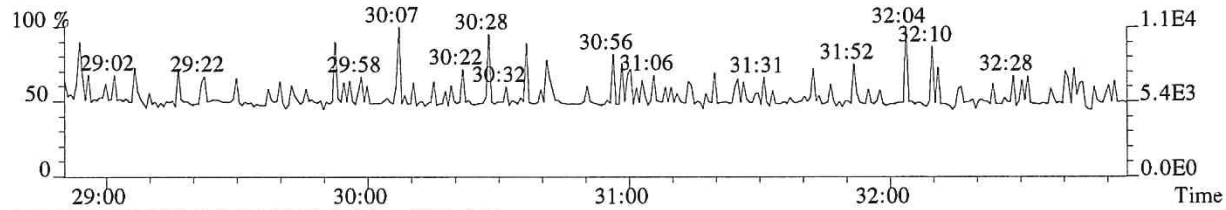
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,420.0,1.00%,F,T)



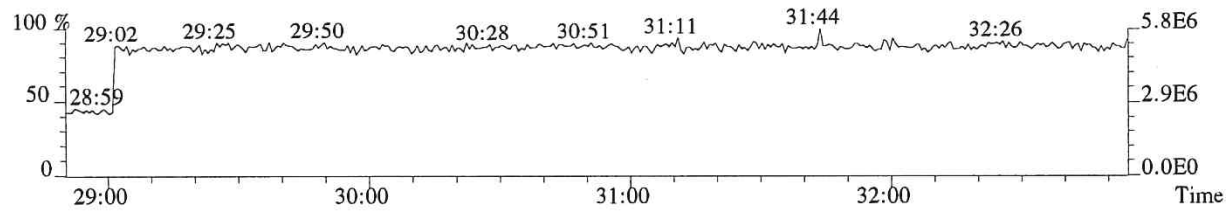
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1408.0,1.00%,F,T)



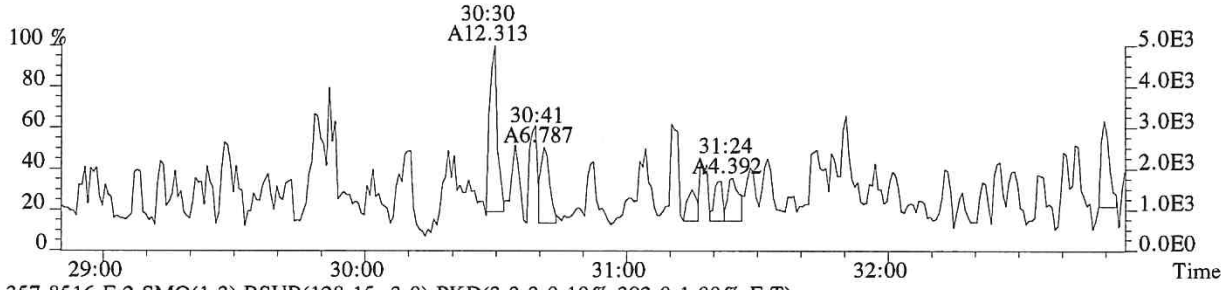
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



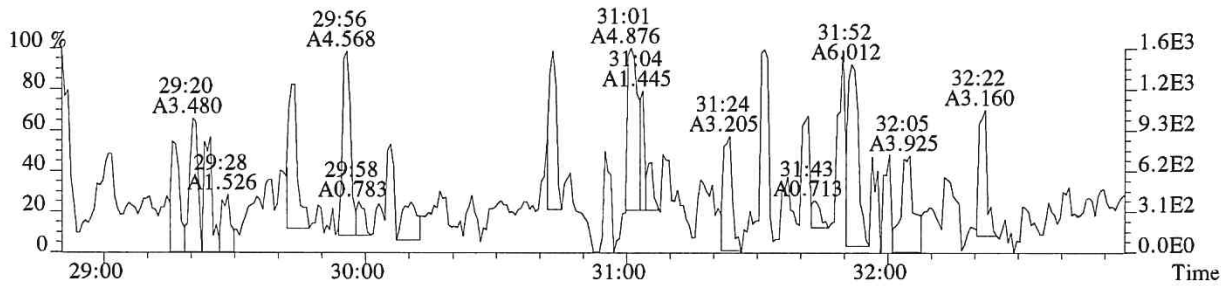
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



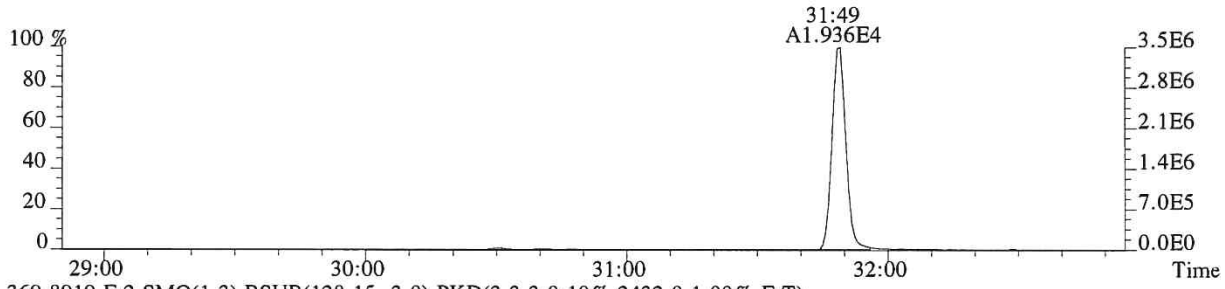
File:P616319 #1-367 Acq: 2-JAN-2019 14:33:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1644.0,1.00%,F,T)



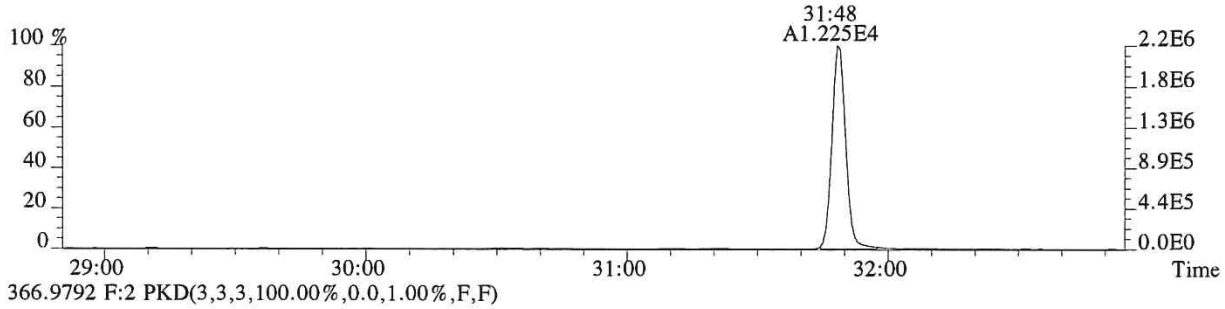
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,392.0,1.00%,F,T)



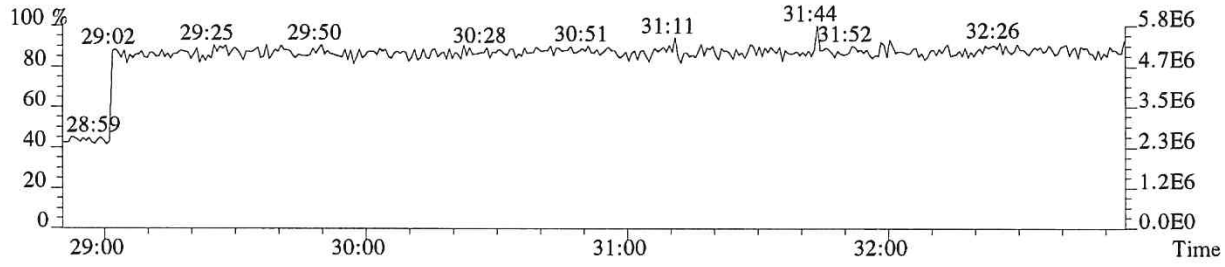
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1748.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2432.0,1.00%,F,T)

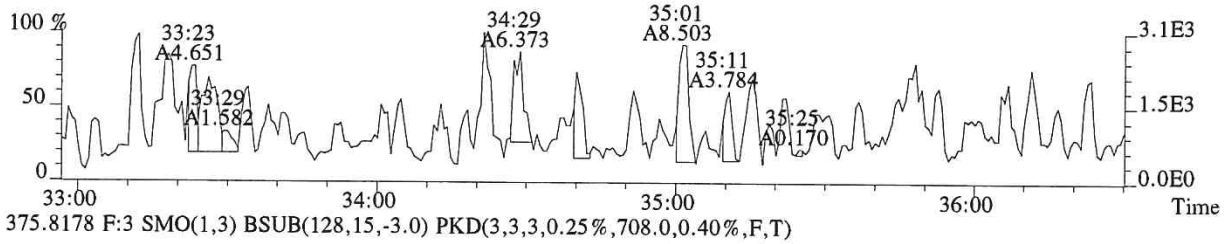


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

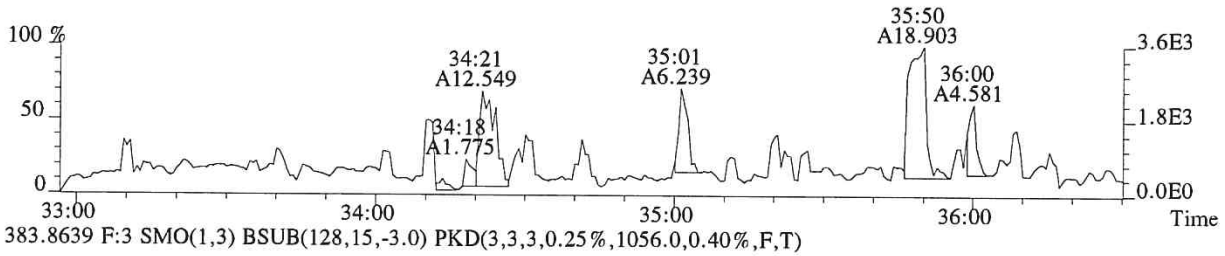


016448

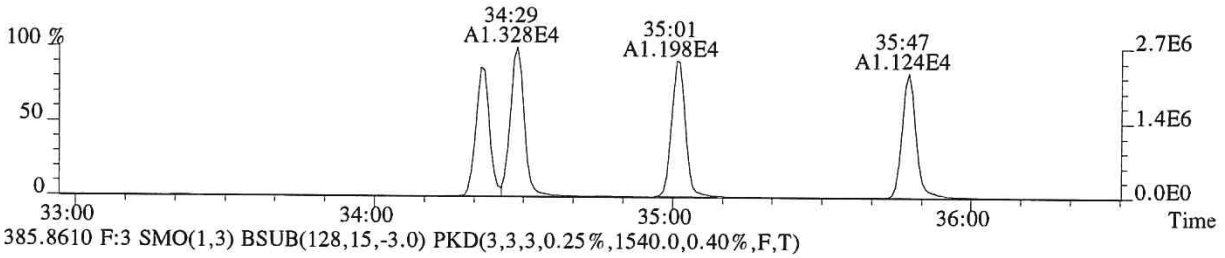
File:P616319 #1-321 Acq: 2-JAN-2019 14:33:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1076.0,0.40%,F,T)



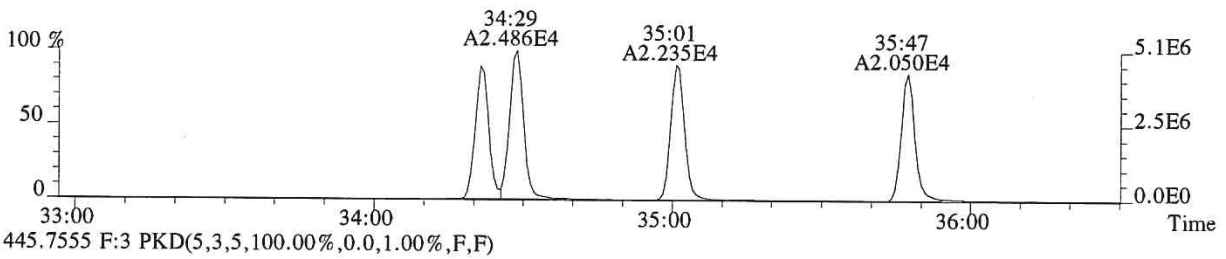
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,708.0,0.40%,F,T)



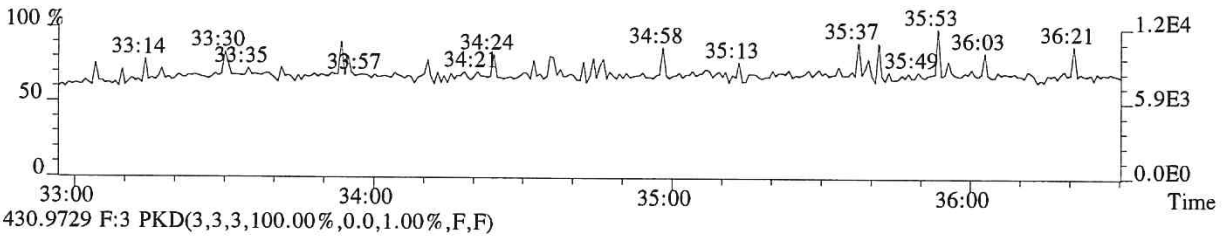
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1056.0,0.40%,F,T)



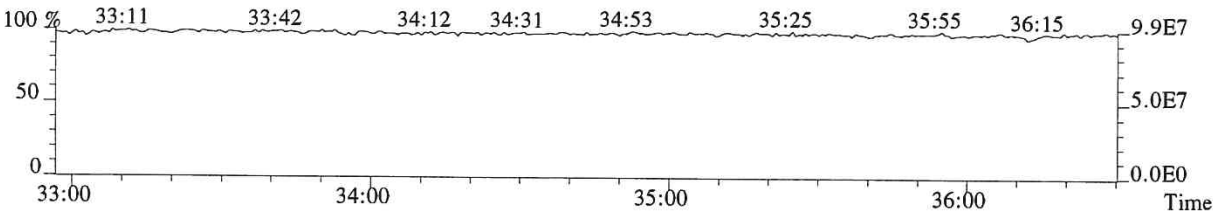
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1540.0,0.40%,F,T)



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

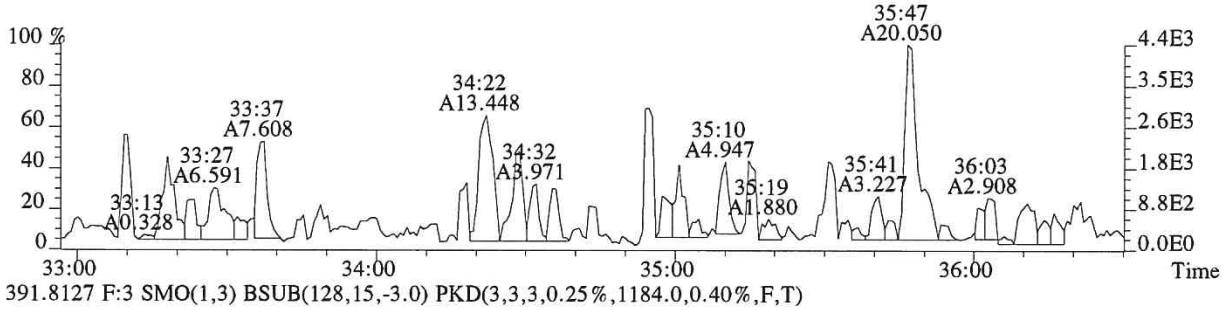


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

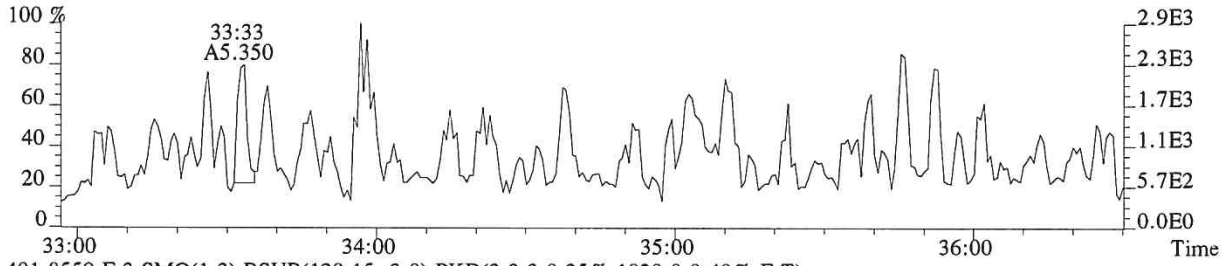


016449

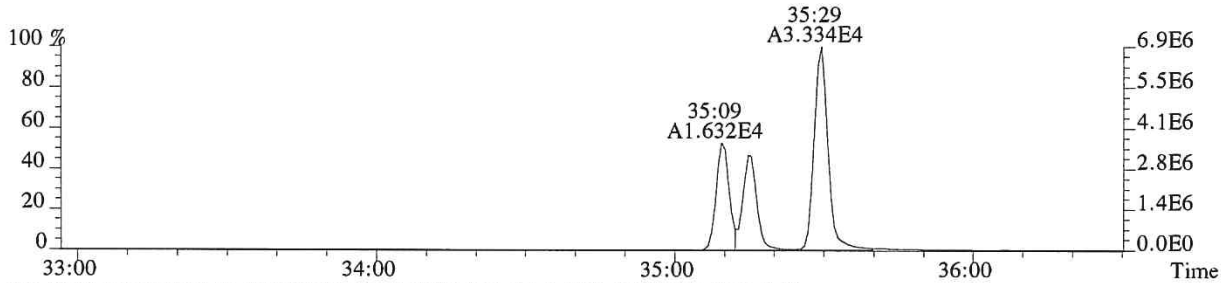
File:P616319 #1-321 Acq: 2-JAN-2019 14:33:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,524.0,0.40%,F,T)



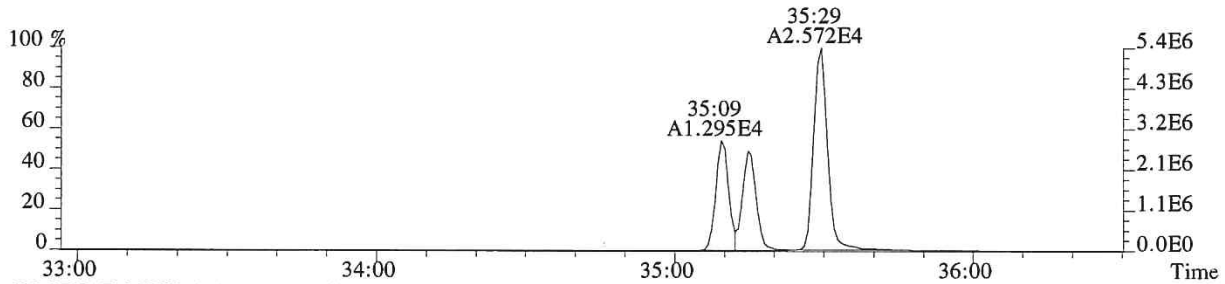
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1184.0,0.40%,F,T)



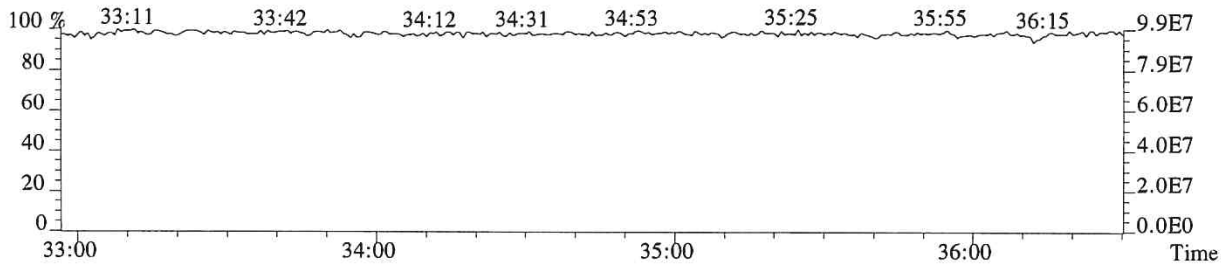
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1820.0,0.40%,F,T)



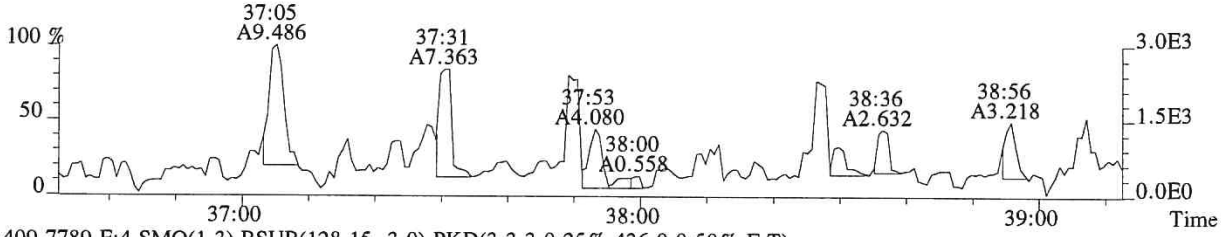
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1088.0,0.40%,F,T)



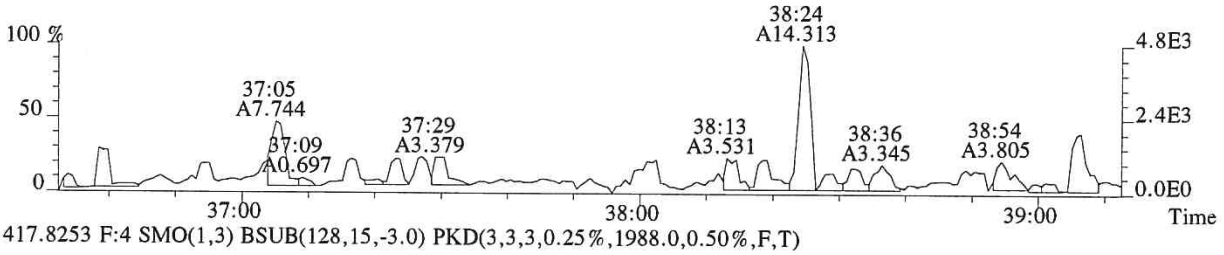
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



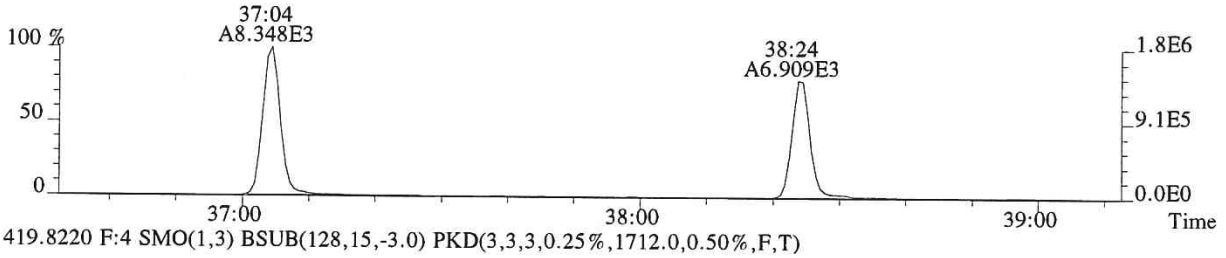
File:P616319 #1-241 Acq: 2-JAN-2019 14:33:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,616.0,0.50%,F,T)



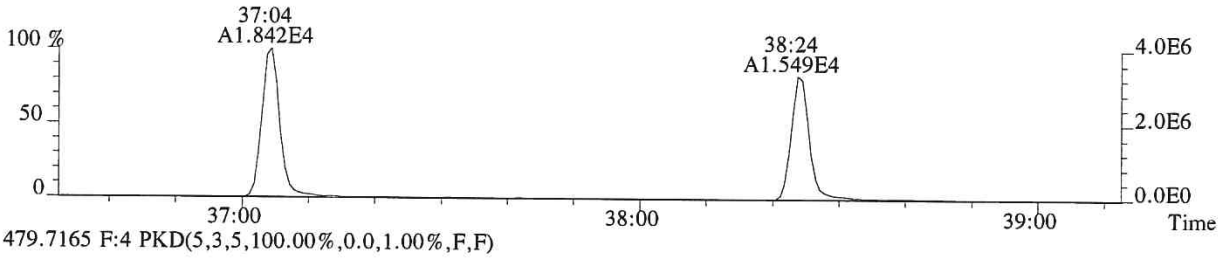
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,436.0,0.50%,F,T)



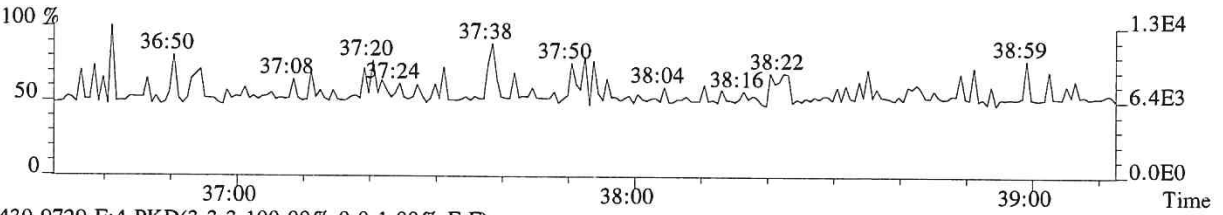
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1988.0,0.50%,F,T)



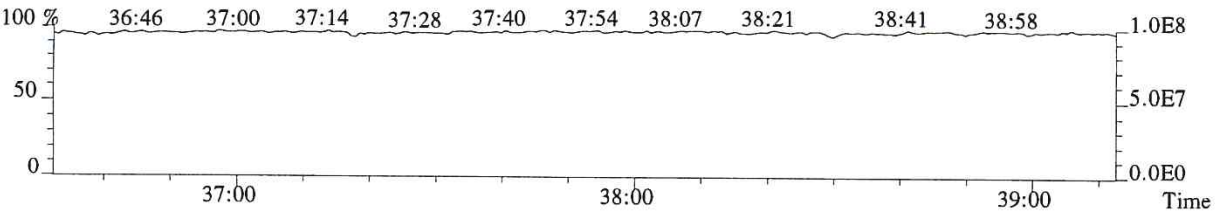
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1712.0,0.50%,F,T)



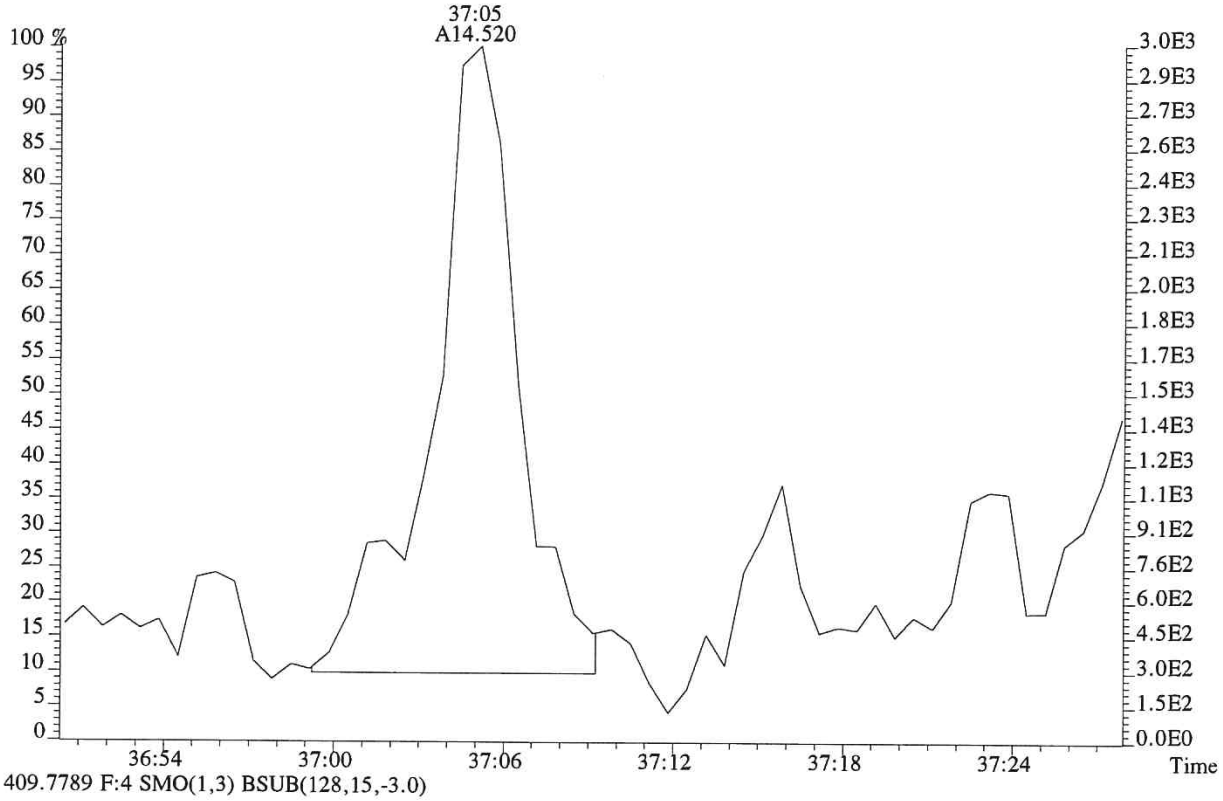
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



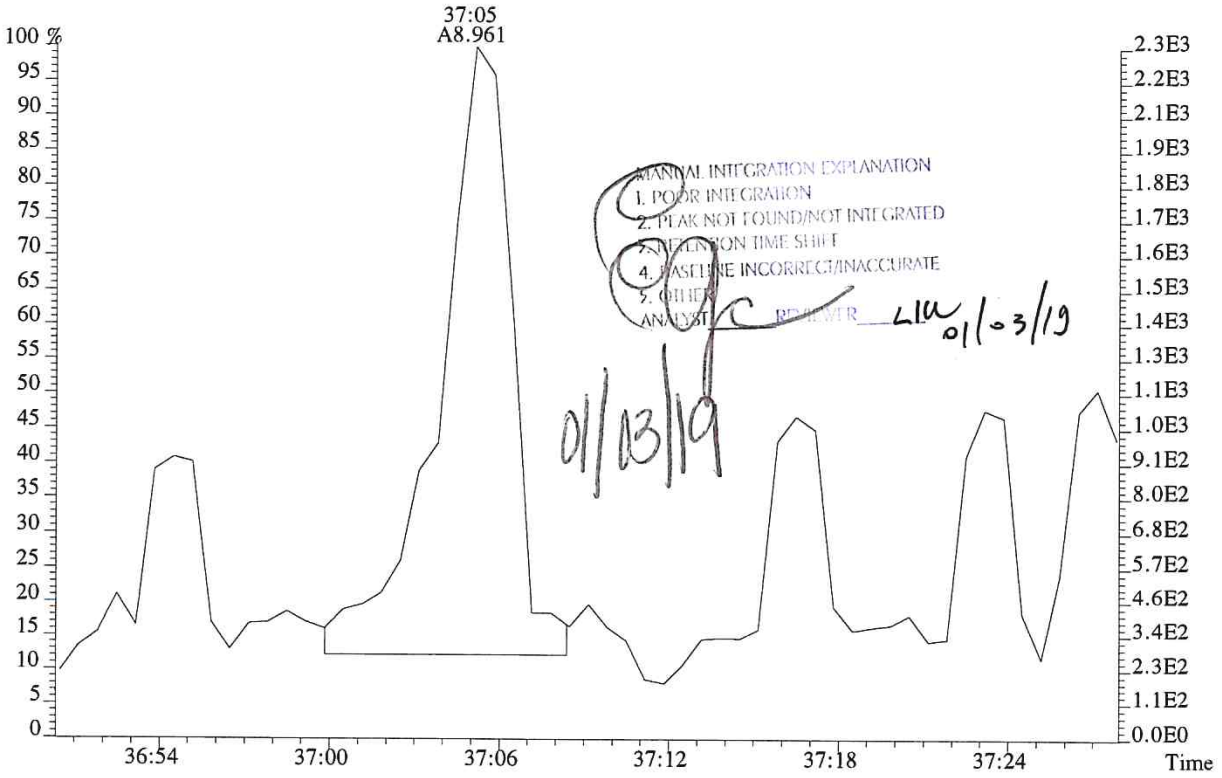
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P616319 #1-241 Acq: 2-JAN-2019 14:33:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0)

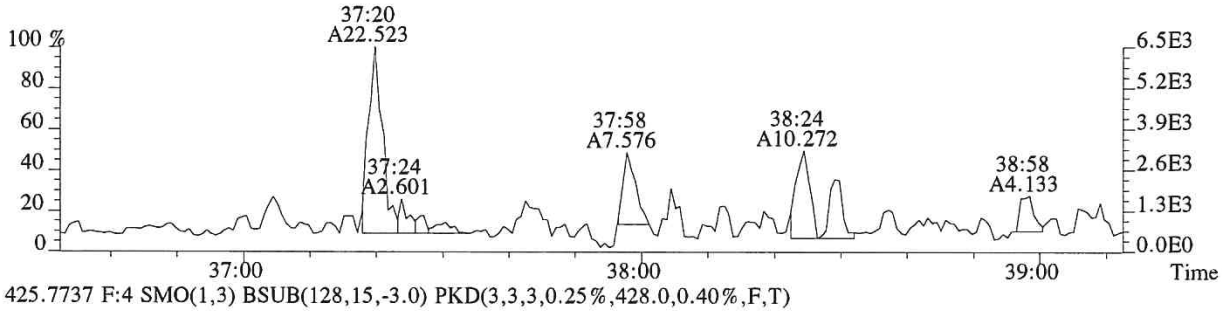


409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0)

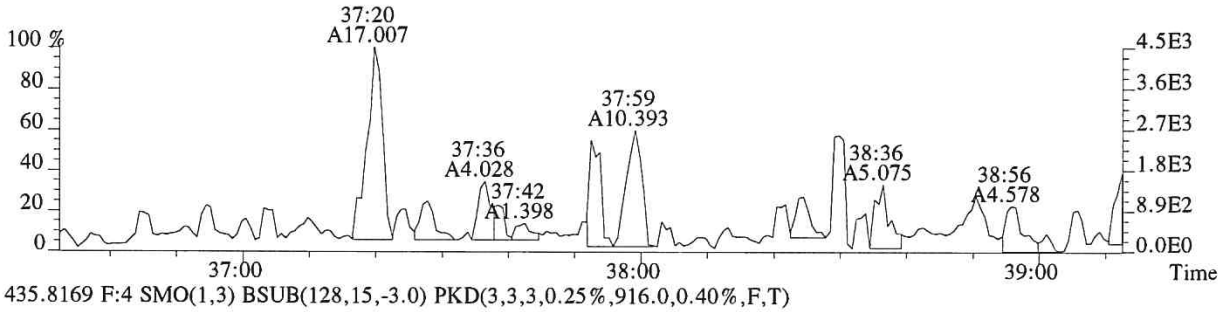


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST C REVIEWER LLW 01/03/19
01/03/19

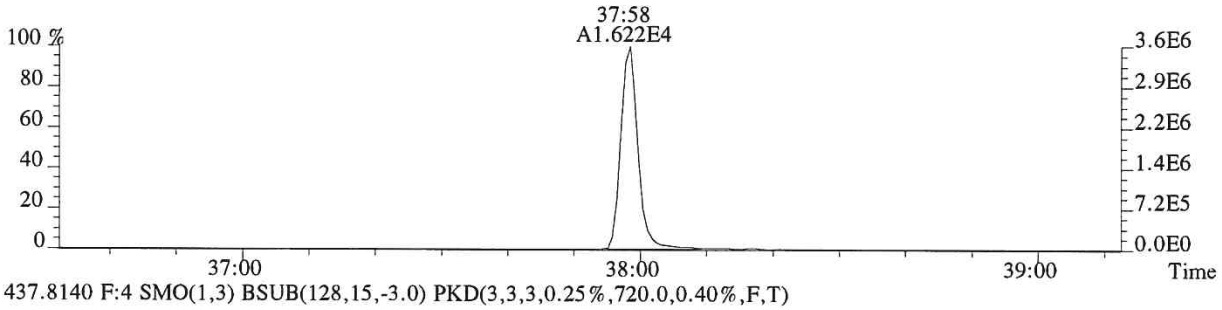
File:P616319 #1-241 Acq: 2-JAN-2019 14:33:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1012.0,0.40%,F,T)



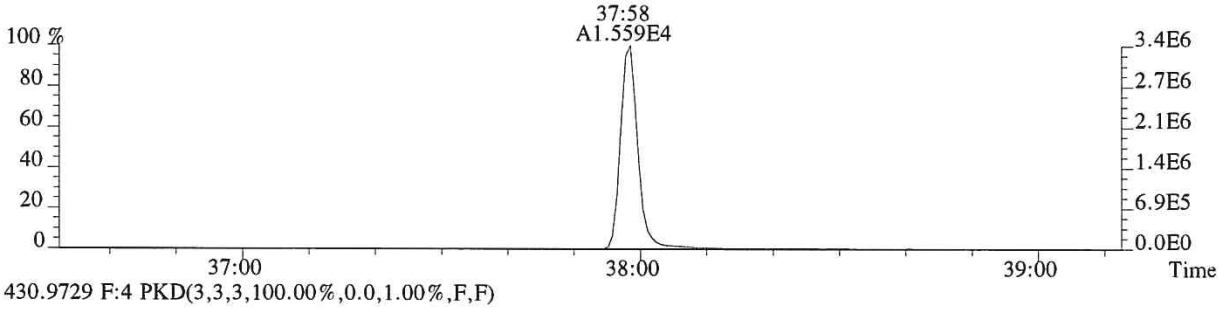
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,428.0,0.40%,F,T)



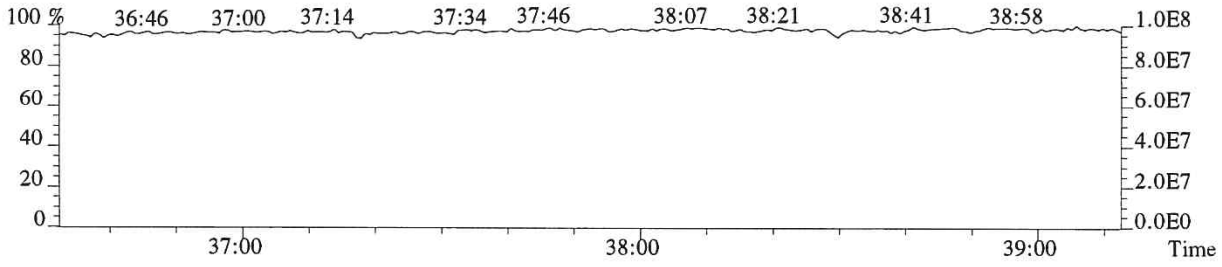
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,916.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,720.0,0.40%,F,T)

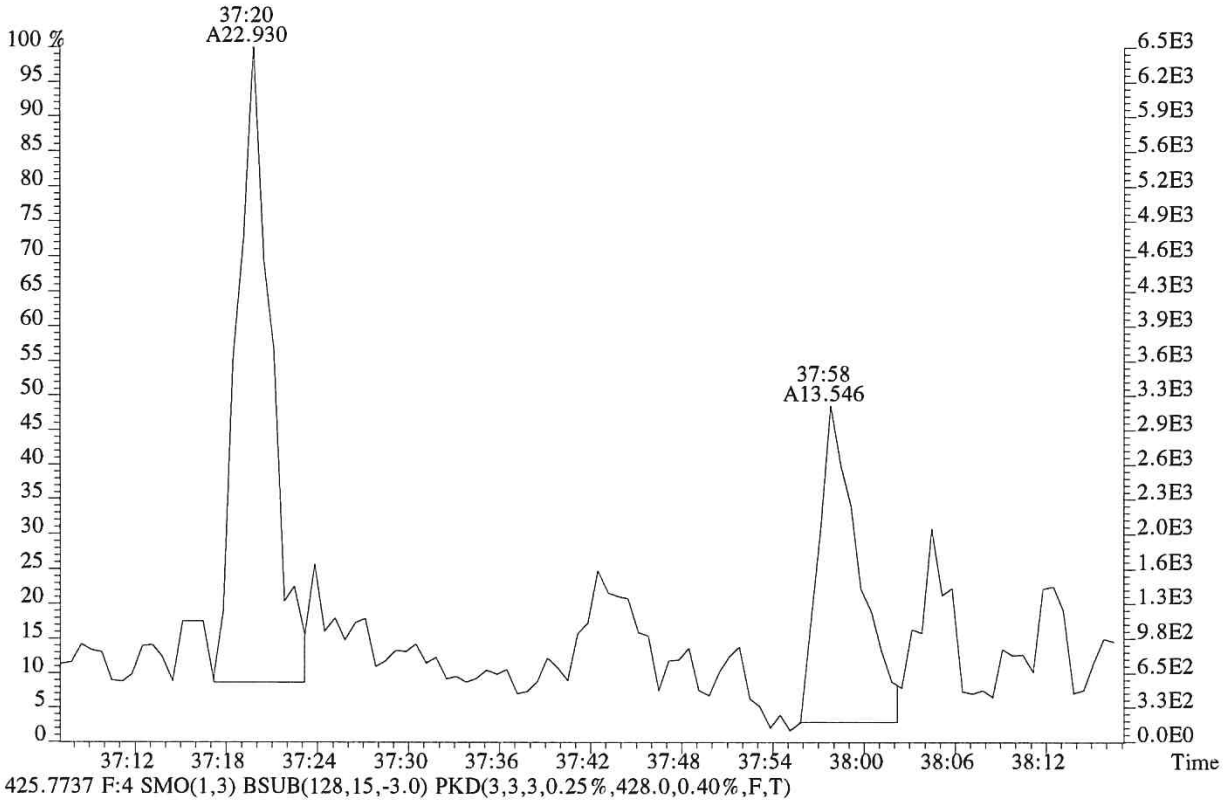


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

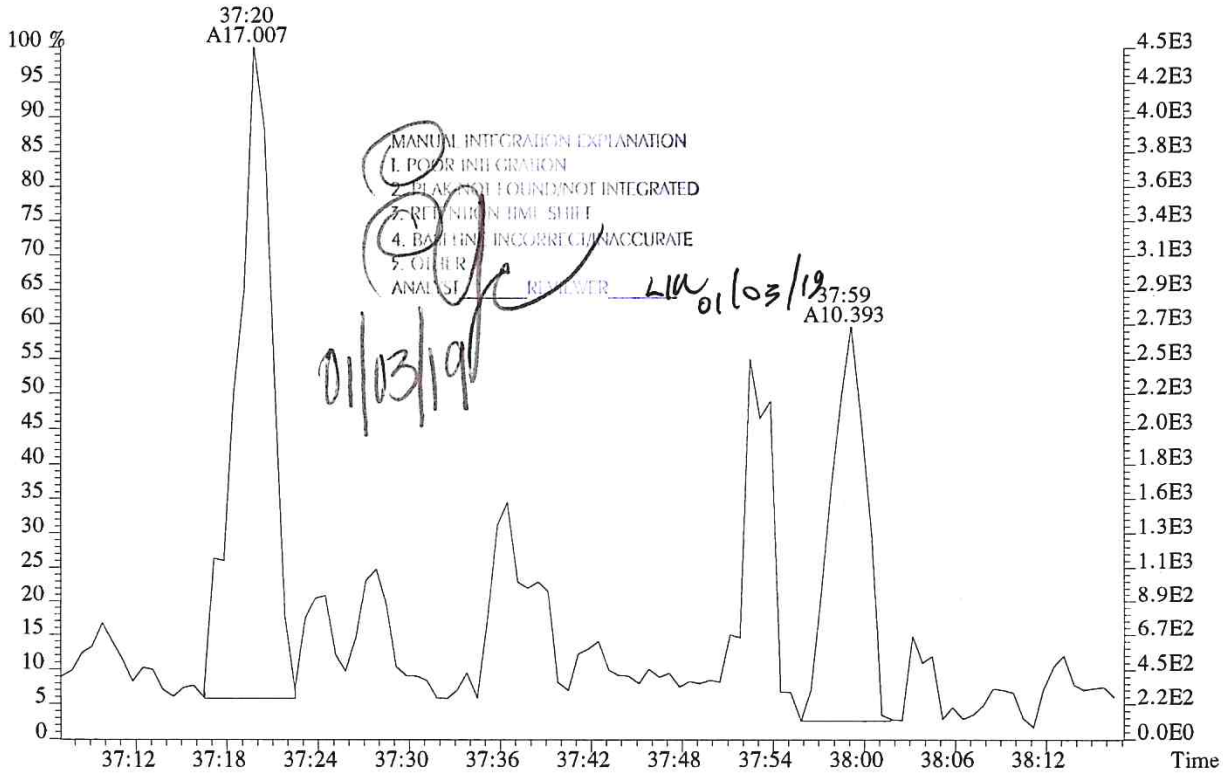


016453

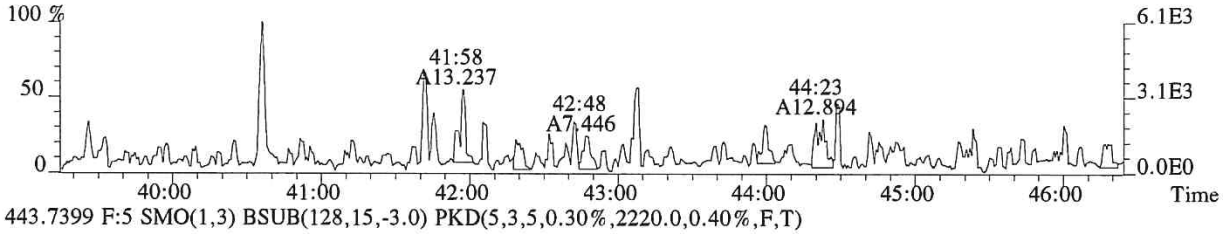
File:P616319 #1-241 Acq: 2-JAN-2019 14:33:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1012.0,0.40%,F,T)



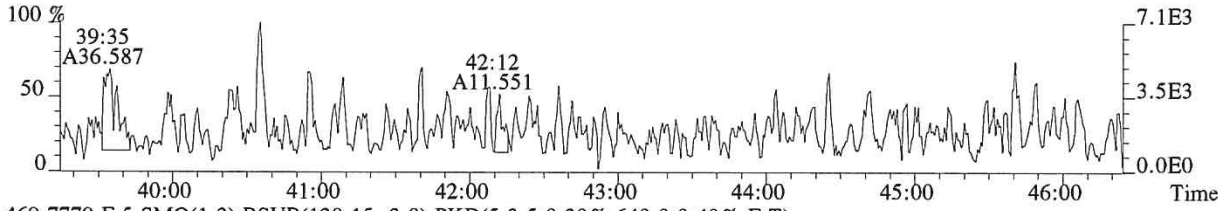
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,428.0,0.40%,F,T)



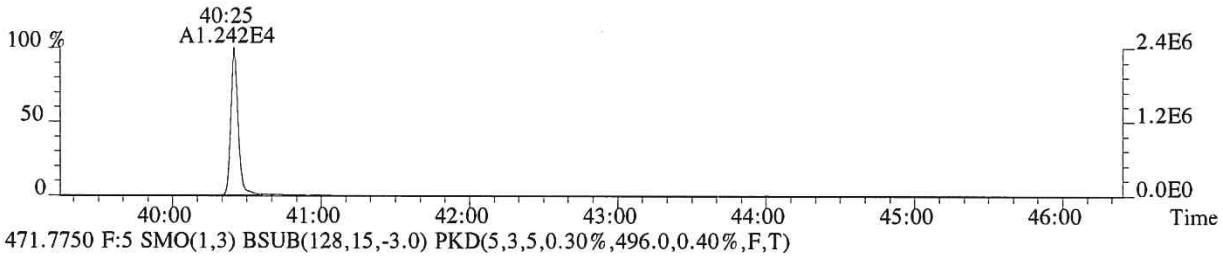
File:P616319 #1-645 Acq: 2-JAN-2019 14:33:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,588.0,0.40%,F,T)



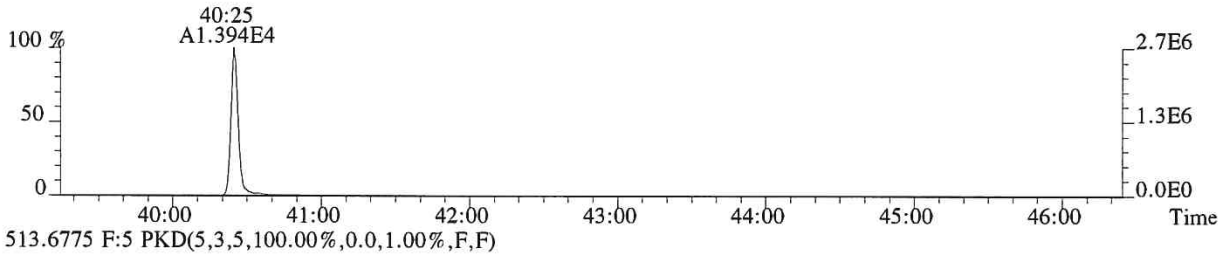
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2220.0,0.40%,F,T)



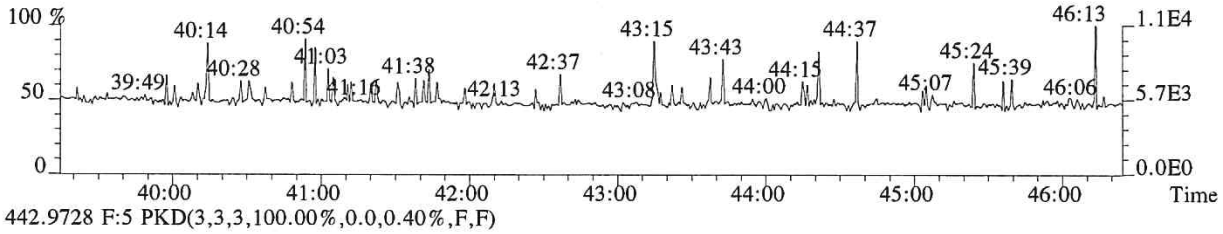
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,640.0,0.40%,F,T)



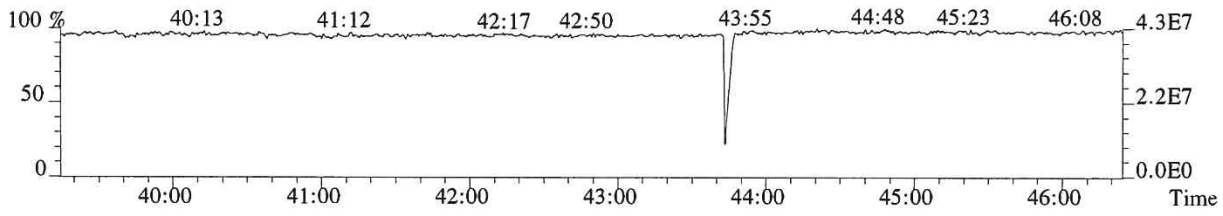
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,496.0,0.40%,F,T)



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

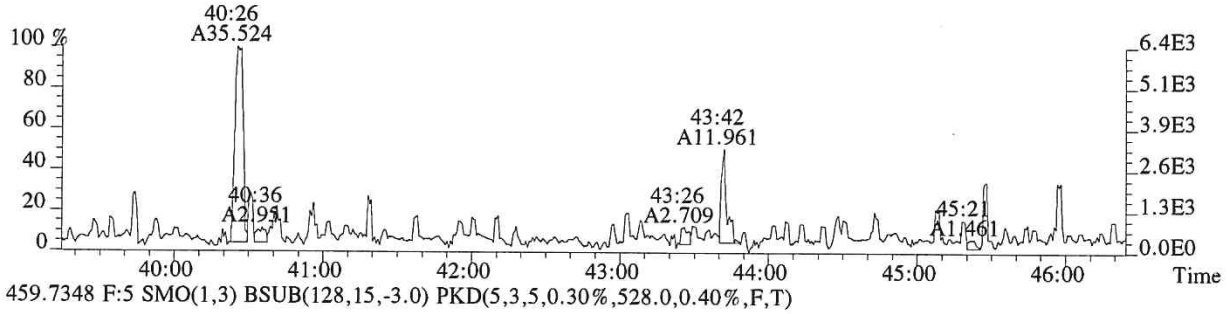


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

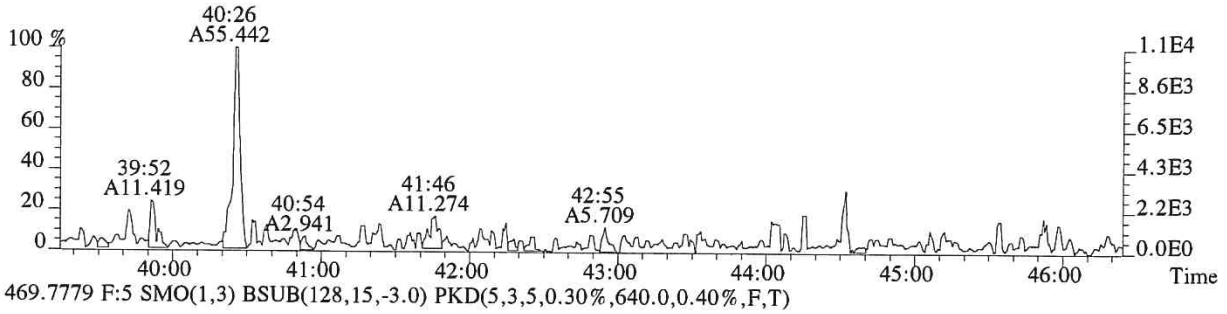


016455

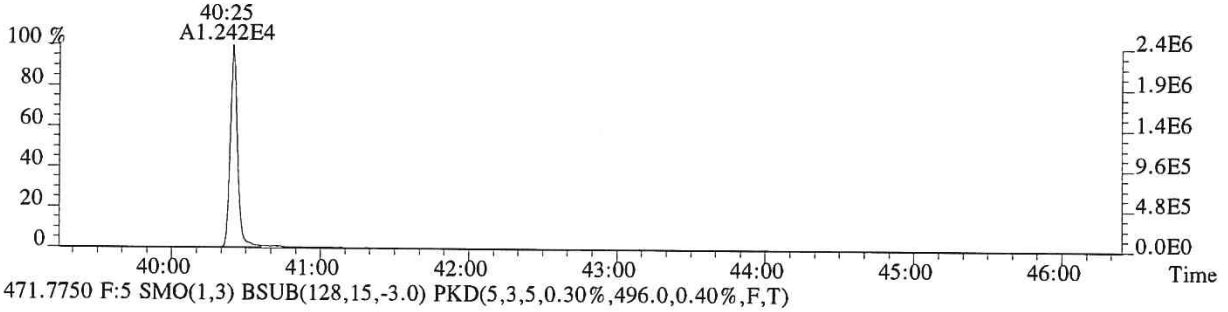
File:P616319 #1-645 Acq: 2-JAN-2019 14:33:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,564.0,0.40%,F,T)



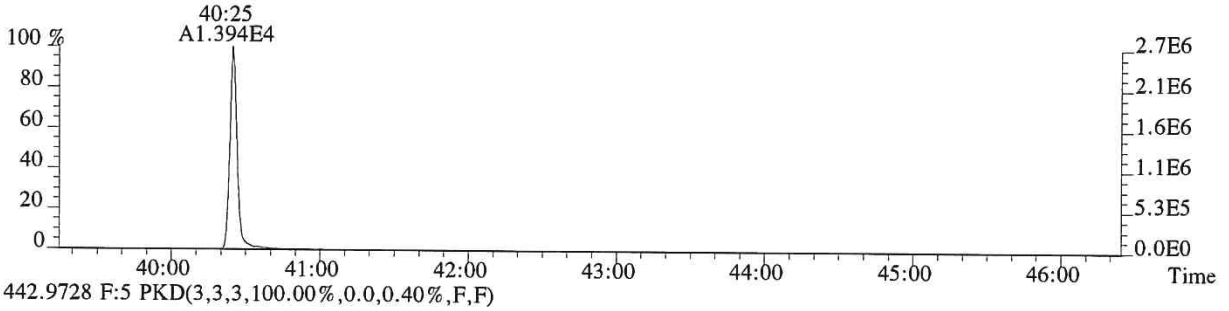
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,528.0,0.40%,F,T)



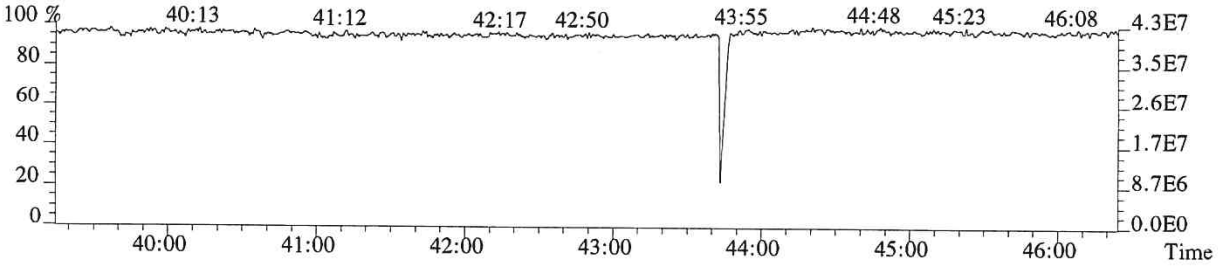
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,640.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,496.0,0.40%,F,T)



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



016456

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
LCS

Run #21 Filename P519774 Samp: 1 Inj: 1 Acquired: 4-JAN-19 10:43:57
Processed: 4-JAN-19 15:57:18 Sample ID: EQ1800532-02

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:05	1.706e+03	2.363e+03	0.72	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:59	1.527e+04	9.876e+03	1.55	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	32:00	1.596e+04	1.036e+04	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:56	1.362e+04	1.129e+04	1.21	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:03	1.649e+04	1.403e+04	1.18	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:36	1.396e+04	1.182e+04	1.18	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:25	1.261e+04	1.063e+04	1.19	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:50	1.229e+04	1.245e+04	0.99	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:18	1.063e+04	1.022e+04	1.04	yes	no	1.258
10	Unk	OCDF	41:57	1.608e+04	1.788e+04	0.90	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:04	1.462e+03	1.865e+03	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:19	1.216e+04	7.746e+03	1.57	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:46	9.649e+03	7.833e+03	1.23	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:51	1.240e+04	1.008e+04	1.23	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:07	1.212e+04	9.189e+03	1.32	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:51	9.070e+03	8.881e+03	1.02	yes	no	1.025
17	Unk	OCDD	41:46	1.300e+04	1.462e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	1.875e+04	2.387e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:58	3.459e+04	2.214e+04	1.56	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:58	3.403e+04	2.146e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:55	1.503e+04	2.948e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:02	1.904e+04	3.683e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:35	1.669e+04	3.205e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:24	1.466e+04	2.895e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:49	1.233e+04	2.766e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:18	1.020e+04	2.338e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:02	9.131e+03	1.162e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:18	2.694e+04	1.676e+04	1.61	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:45	2.130e+04	1.672e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:51	2.503e+04	1.982e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:50	2.440e+04	2.344e+04	1.04	yes	no	0.858
32	IS	13C-OCDD	41:45	2.371e+04	2.689e+04	0.88	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	3.299e+04	4.121e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:06	4.697e+04	3.749e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:04	1.329e+04				no	1.014

$$\text{OCDD} = \frac{(1.300e+04 + 1.462e+04) \times 4000\ \text{pg} \times 1}{(2.371e+04 + 2.689e+04) \times \quad \text{g} \times \quad / 100 \times 1.118}$$

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

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
LCS

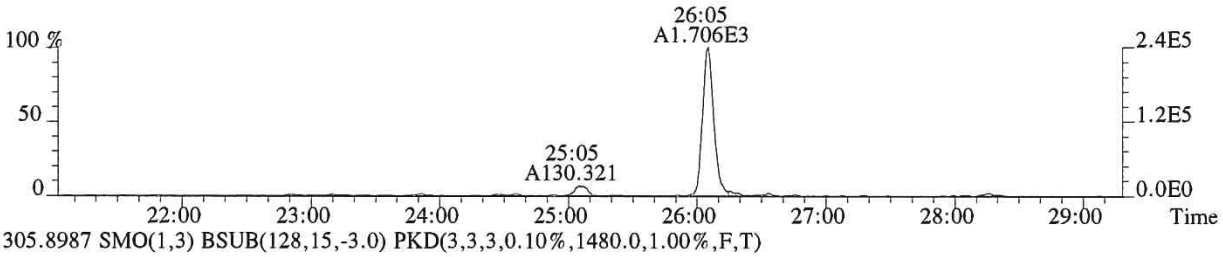
Run #21 Filename P519774 Samp: 1 Inj: 1 Acquired: 4-JAN-19 10:43:57
Processed: 4-JAN-19 15:57:18 LAB. ID: EQ1800532-02

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.37e+05	5.56e+02	4.3e+02	3.11e+05	1.48e+03	2.1e+02
2	1,2,3,7,8-PeCDF	2.37e+06	7.00e+02	3.4e+03	1.55e+06	1.48e+03	1.0e+03
3	2,3,4,7,8-PeCDF	2.59e+06	7.00e+02	3.7e+03	1.72e+06	1.48e+03	1.2e+03
4	1,2,3,4,7,8-HxCDF	2.33e+06	4.76e+02	4.9e+03	1.94e+06	5.60e+02	3.5e+03
5	1,2,3,6,7,8-HxCDF	2.36e+06	4.76e+02	5.0e+03	2.00e+06	5.60e+02	3.6e+03
6	2,3,4,6,7,8-HxCDF	2.20e+06	4.76e+02	4.6e+03	1.87e+06	5.60e+02	3.3e+03
7	1,2,3,7,8,9-HxCDF	1.66e+06	4.76e+02	3.5e+03	1.39e+06	5.60e+02	2.5e+03
8	1,2,3,4,6,7,8-HpCDF	1.49e+06	1.45e+03	1.0e+03	1.46e+06	4.00e+02	3.7e+03
9	1,2,3,4,7,8,9-HpCDF	9.36e+05	1.45e+03	6.5e+02	9.42e+05	4.00e+02	2.4e+03
10	OCDF	9.24e+05	3.32e+02	2.8e+03	9.95e+05	7.84e+02	1.3e+03
11	2,3,7,8-TCDD	2.20e+05	1.87e+03	1.2e+02	2.72e+05	9.64e+02	2.8e+02
12	1,2,3,7,8-PeCDD	1.92e+06	8.92e+02	2.1e+03	1.20e+06	2.92e+02	4.1e+03
13	1,2,3,4,7,8-HxCDD	1.67e+06	5.28e+02	3.2e+03	1.39e+06	6.88e+02	2.0e+03
14	1,2,3,6,7,8-HxCDD	1.77e+06	5.28e+02	3.3e+03	1.40e+06	6.88e+02	2.0e+03
15	1,2,3,7,8,9-HxCDD	1.56e+06	5.28e+02	3.0e+03	1.28e+06	6.88e+02	1.9e+03
16	1,2,3,4,6,7,8-HpCDD	8.95e+05	5.76e+02	1.6e+03	8.60e+05	4.32e+02	2.0e+03
17	OCDD	6.96e+05	4.60e+02	1.5e+03	8.14e+05	5.80e+02	1.4e+03
18	13C-2,3,7,8-TCDF	2.55e+06	3.80e+03	6.7e+02	3.30e+06	2.24e+03	1.5e+03
19	13C-1,2,3,7,8-PeCDF	5.38e+06	6.08e+02	8.8e+03	3.41e+06	3.88e+02	8.8e+03
20	13C-2,3,4,7,8-PeCDF	5.50e+06	6.08e+02	9.0e+03	3.49e+06	3.88e+02	9.0e+03
21	13C-1,2,3,4,7,8-HxCDF	2.56e+06	8.72e+02	2.9e+03	4.99e+06	1.27e+03	3.9e+03
22	13C-1,2,3,6,7,8-HxCDF	2.81e+06	8.72e+02	3.2e+03	5.46e+06	1.27e+03	4.3e+03
23	13C-2,3,4,6,7,8-HxCDF	2.64e+06	8.72e+02	3.0e+03	5.06e+06	1.27e+03	4.0e+03
24	13C-1,2,3,7,8,9-HxCDF	1.94e+06	8.72e+02	2.2e+03	3.83e+06	1.27e+03	3.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.50e+06	3.09e+03	4.9e+02	3.34e+06	3.40e+03	9.8e+02
26	13C-1,2,3,4,7,8,9-HpCDF	9.41e+05	3.09e+03	3.0e+02	2.08e+06	3.40e+03	6.1e+02
27	13C-2,3,7,8-TCDD	1.35e+06	3.84e+03	3.5e+02	1.80e+06	1.89e+03	9.5e+02
28	13C-1,2,3,7,8-PeCDD	4.16e+06	7.64e+02	5.4e+03	2.63e+06	8.72e+02	3.0e+03
29	13C-1,2,3,4,7,8-HxCDD	3.68e+06	1.10e+03	3.3e+03	2.88e+06	8.64e+02	3.3e+03
30	13C-1,2,3,6,7,8-HxCDD	3.53e+06	1.10e+03	3.2e+03	2.77e+06	8.64e+02	3.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.34e+06	3.04e+02	7.7e+03	2.28e+06	5.04e+02	4.5e+03
32	13C-OCDD	1.28e+06	8.68e+02	1.5e+03	1.48e+06	4.12e+02	3.6e+03
33	13C-1,2,3,4-TCDD	5.07e+06	3.84e+03	1.3e+03	6.34e+06	1.89e+03	3.4e+03
34	13C-1,2,3,7,8,9-HxCDD	6.32e+06	1.10e+03	5.7e+03	4.96e+06	8.64e+02	5.7e+03
35	37Cl-2,3,7,8-TCDD	2.00e+06	1.24e+03	1.6e+03			

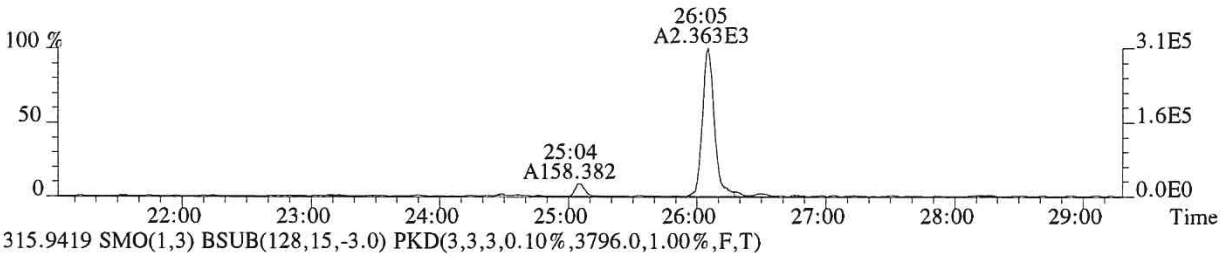
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10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office:(713)266-1599. Fax:(713)266-0130

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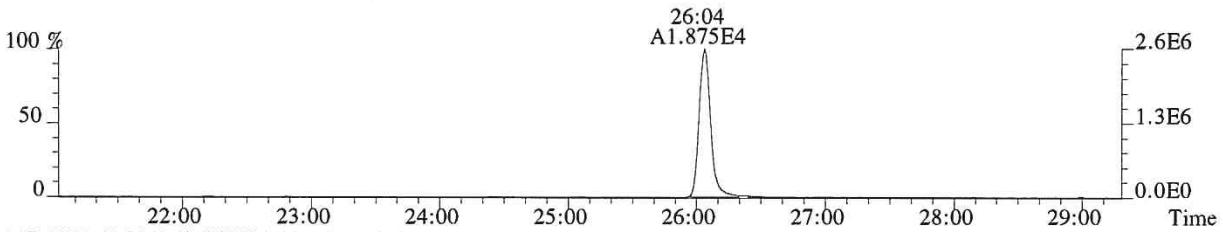
File:P519774 #1-587 Acq: 4-JAN-2019 10:43:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1800532-02
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,556.0,1.00%,F,T)



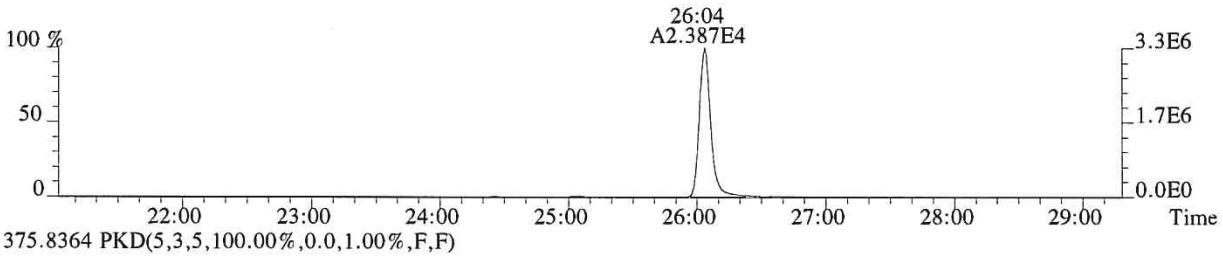
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1480.0,1.00%,F,T)



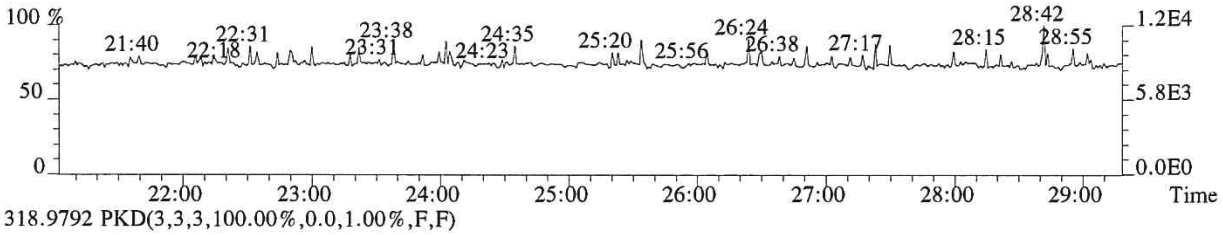
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3796.0,1.00%,F,T)



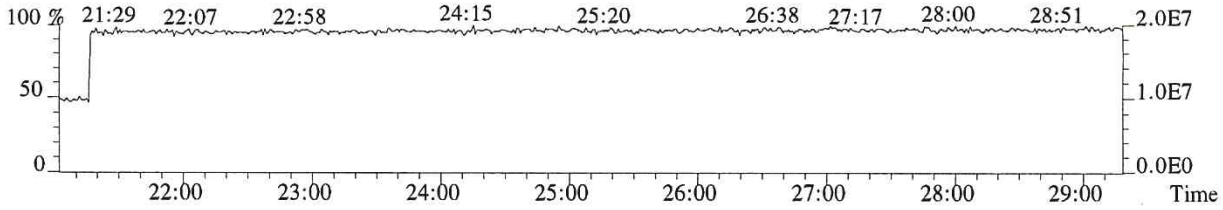
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2240.0,1.00%,F,T)



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

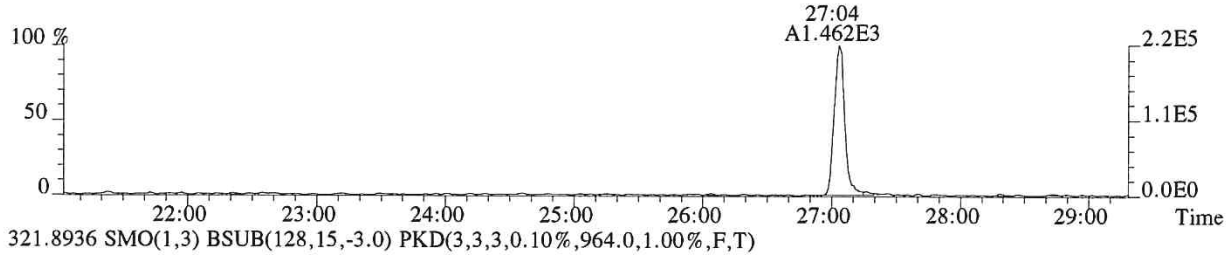


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

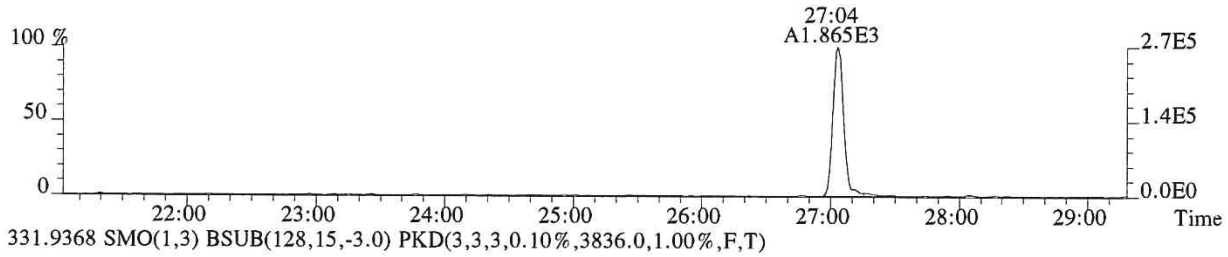


016459

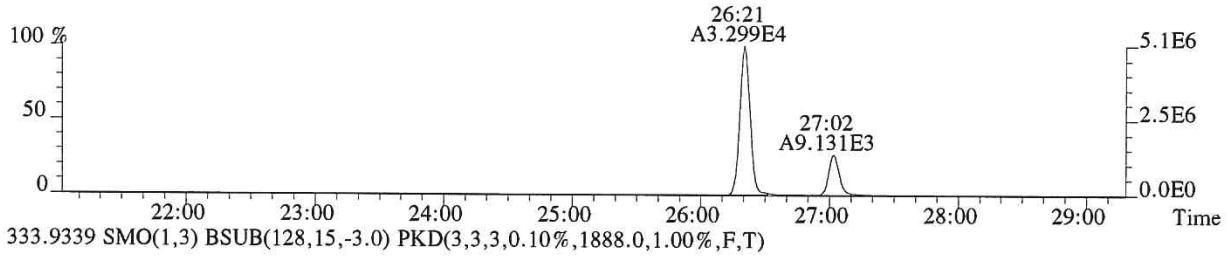
File:P519774 #1-587 Acq: 4-JAN-2019 10:43:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1800532-02
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1868.0,1.00%,F,T)



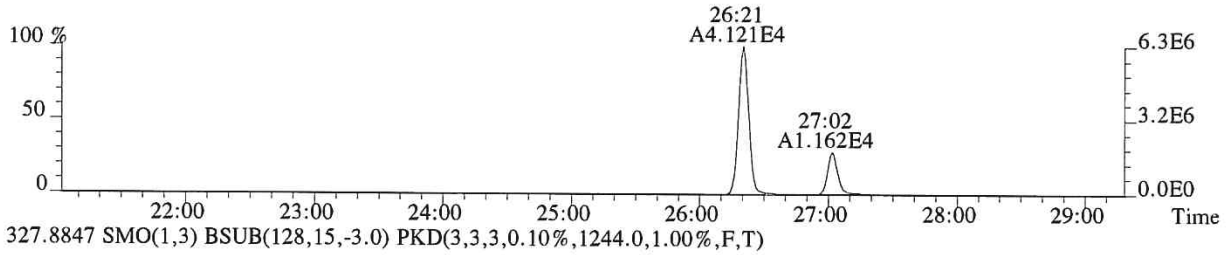
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,964.0,1.00%,F,T)



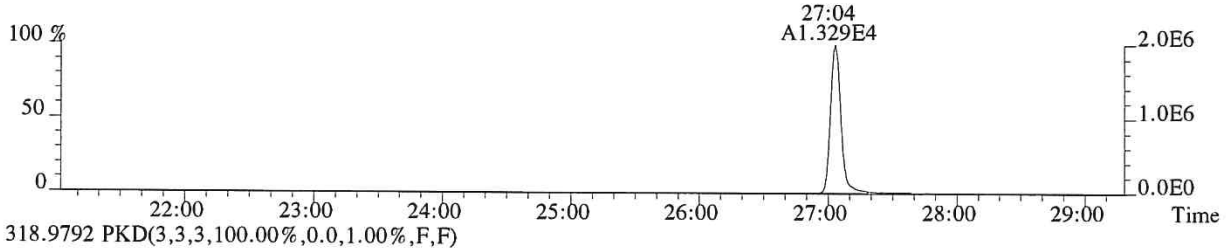
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3836.0,1.00%,F,T)



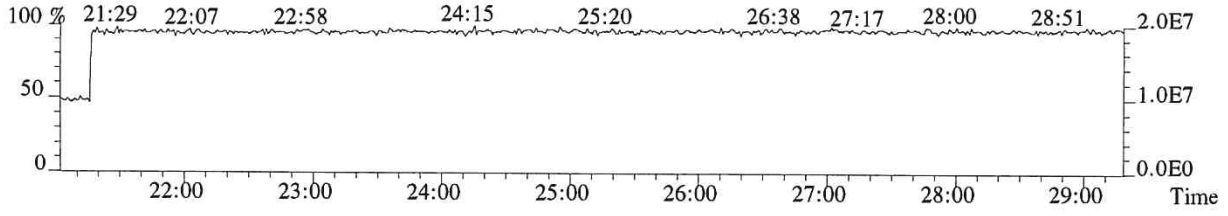
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1888.0,1.00%,F,T)



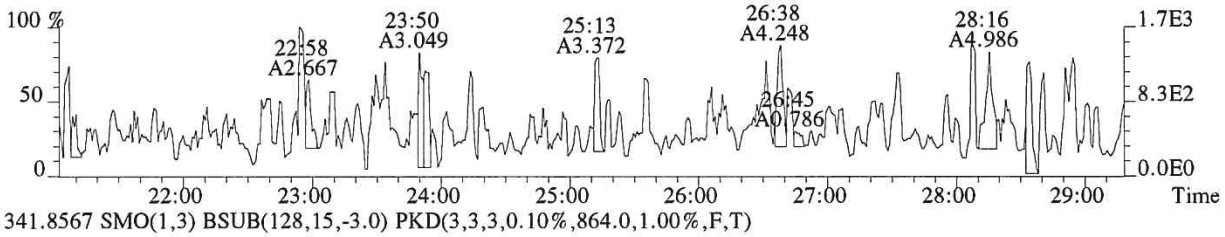
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1244.0,1.00%,F,T)



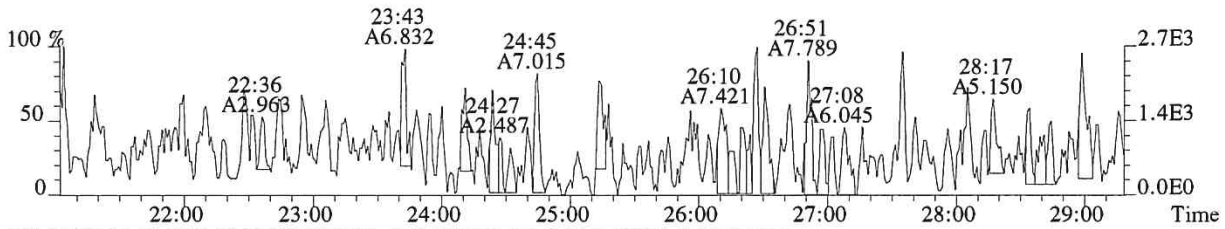
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



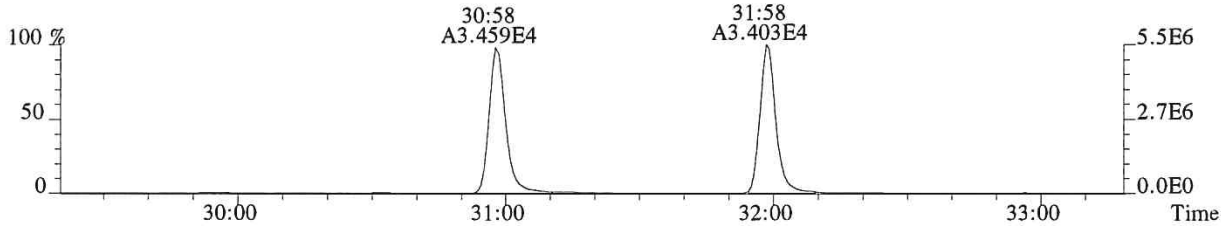
File:P519774 #1-587 Acq: 4-JAN-2019 10:43:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1800532-02
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,584.0,1.00%,F,T)



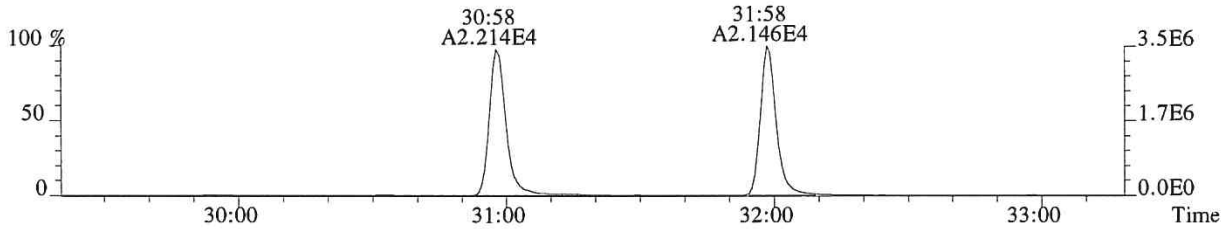
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,864.0,1.00%,F,T)



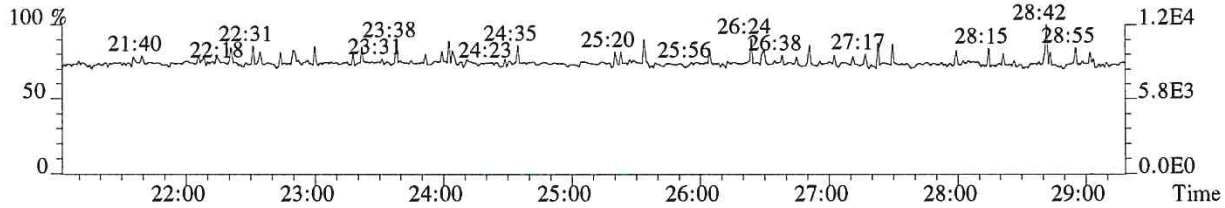
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,608.0,1.00%,F,T)



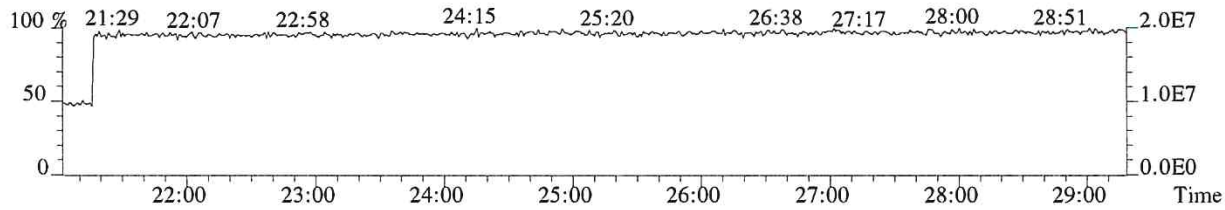
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,388.0,1.00%,F,T)



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

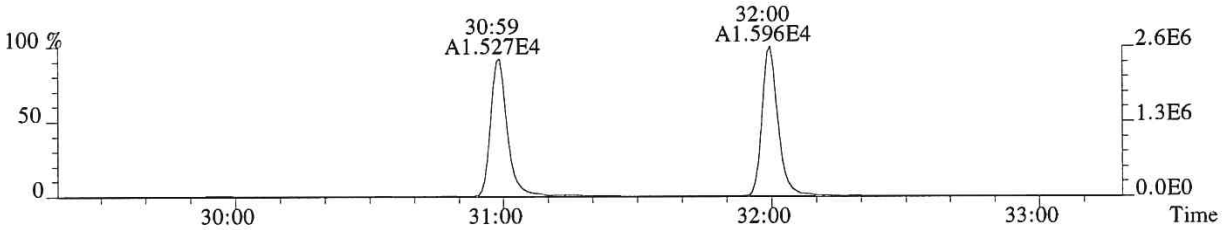


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

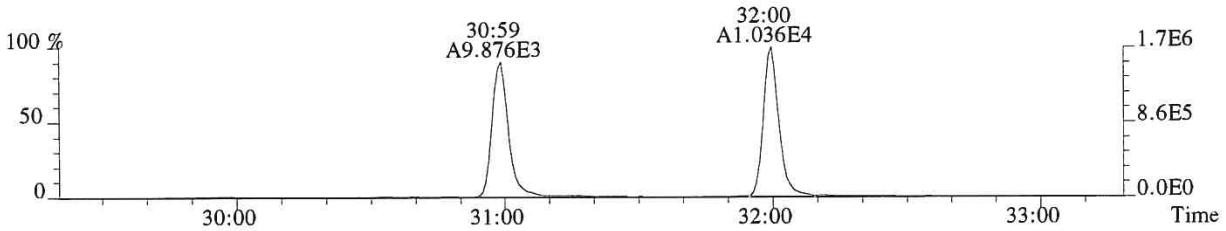


016461

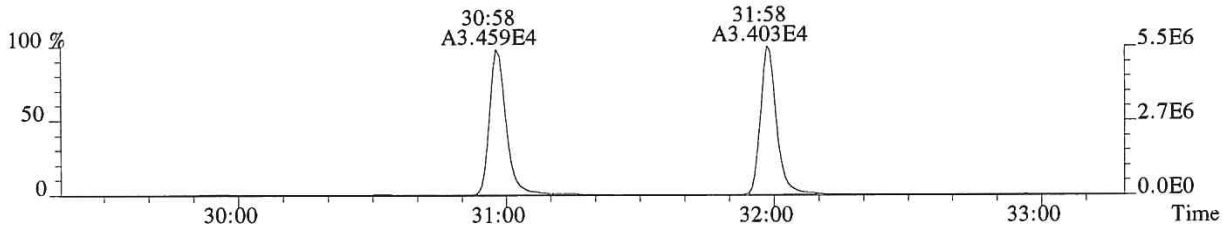
File:P519774 #1-358 Acq: 4-JAN-2019 10:43:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1800532-02
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,700.0,1.00%,F,T)



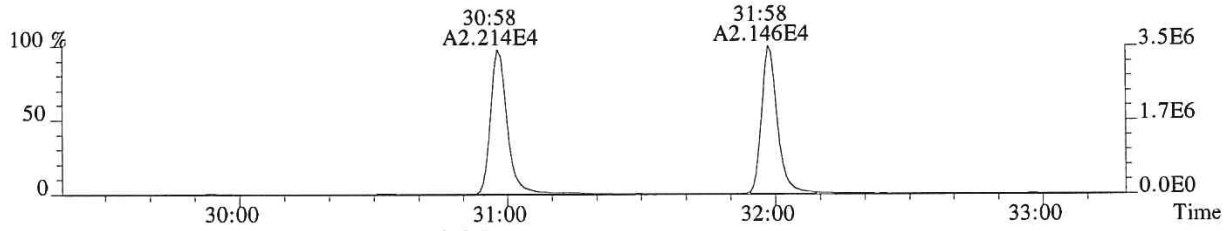
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1484.0,1.00%,F,T)



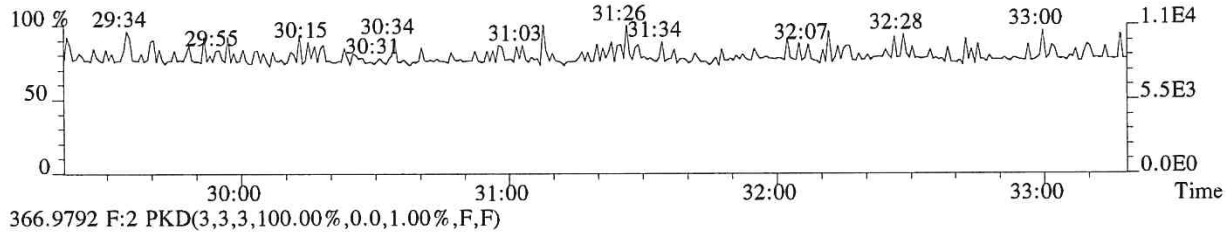
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,608.0,1.00%,F,T)



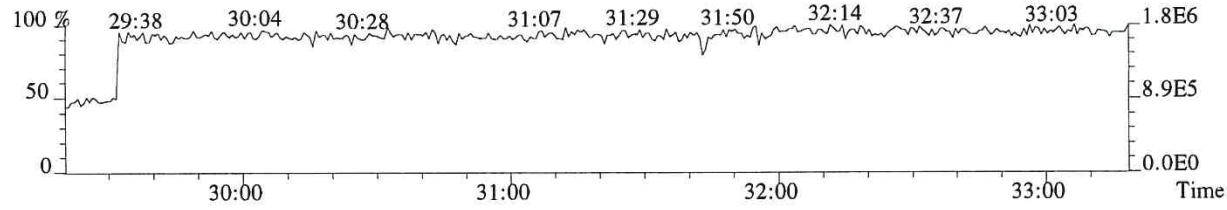
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,388.0,1.00%,F,T)



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

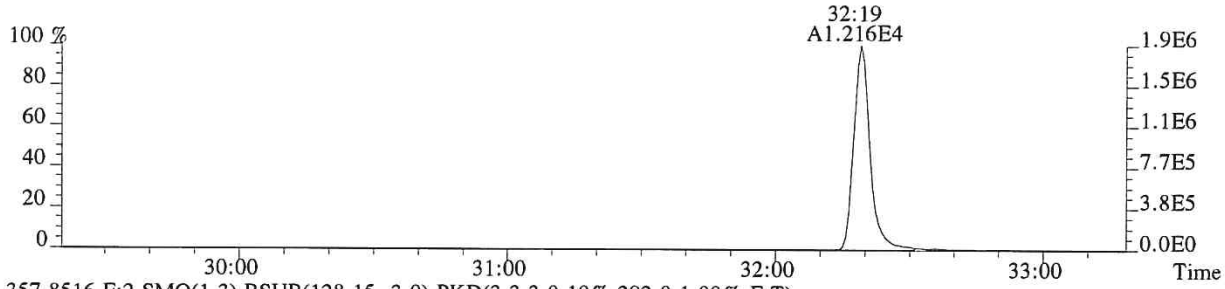


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

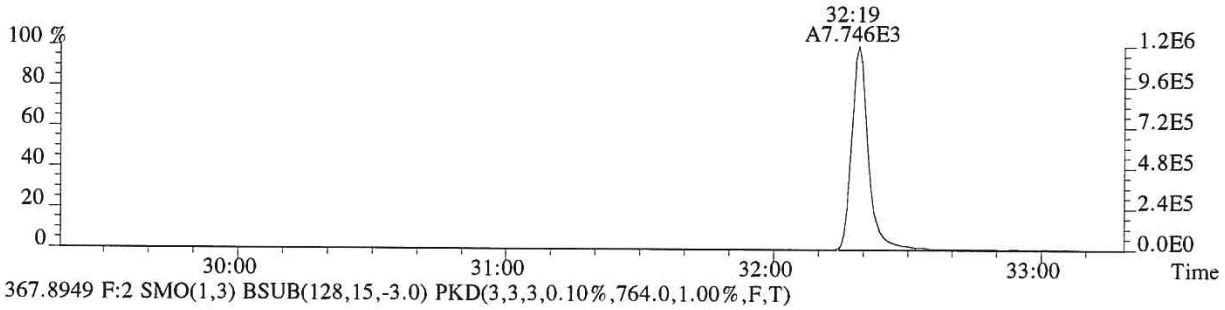


016462

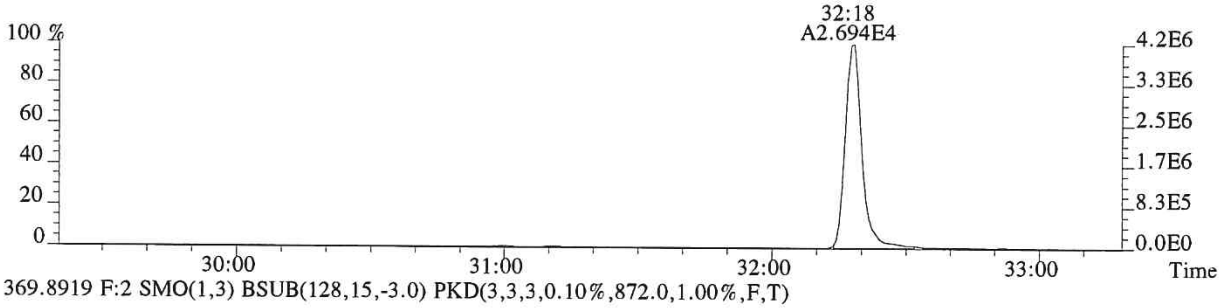
File:P519774 #1-358 Acq: 4-JAN-2019 10:43:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1800532-02
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,892.0,1.00%,F,T)



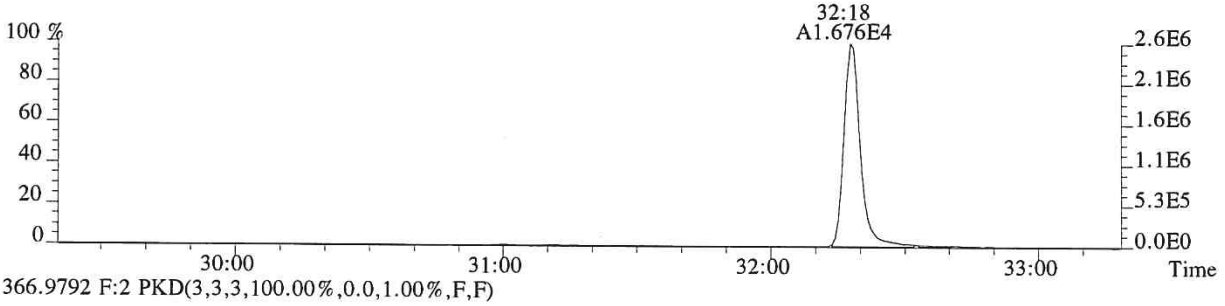
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,292.0,1.00%,F,T)



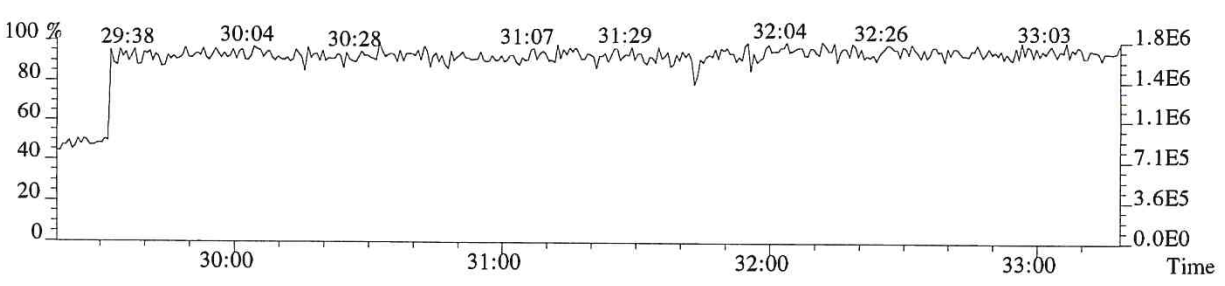
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,764.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,872.0,1.00%,F,T)

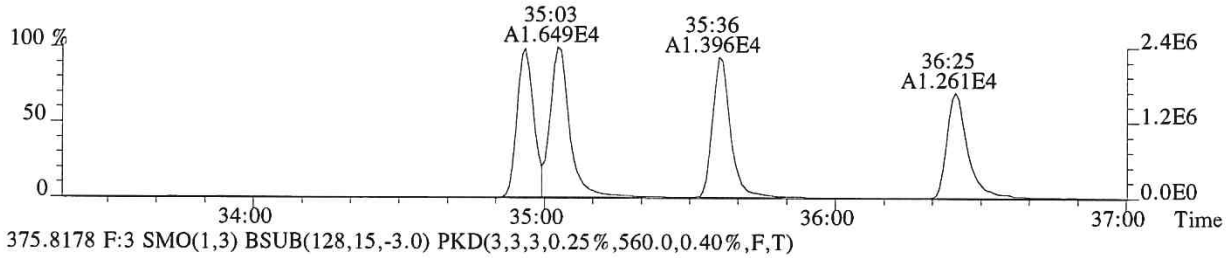


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

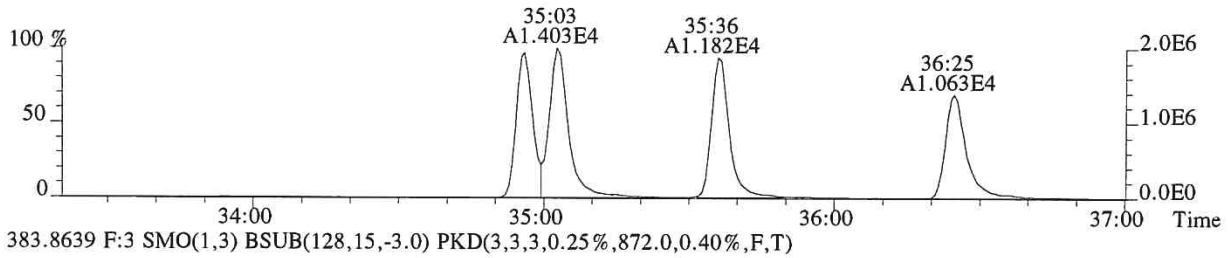


016463

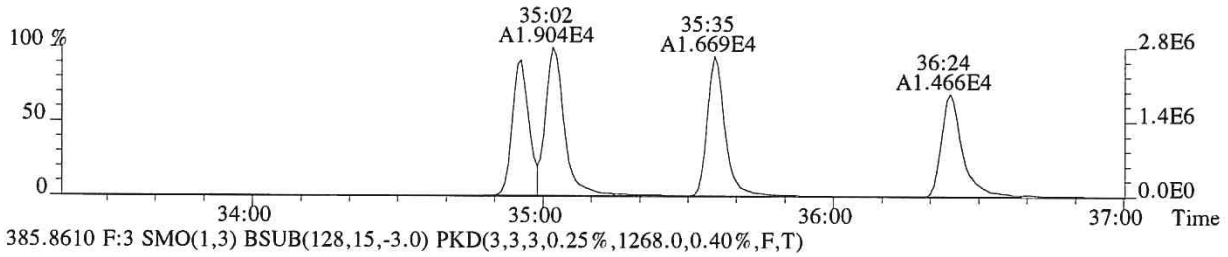
File:P519774 #1-330 Acq: 4-JAN-2019 10:43:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1800532-02
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,476.0,0.40%,F,T)



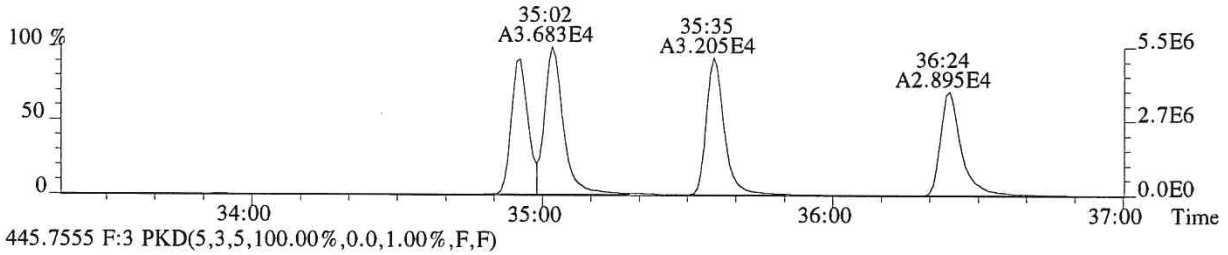
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,560.0,0.40%,F,T)



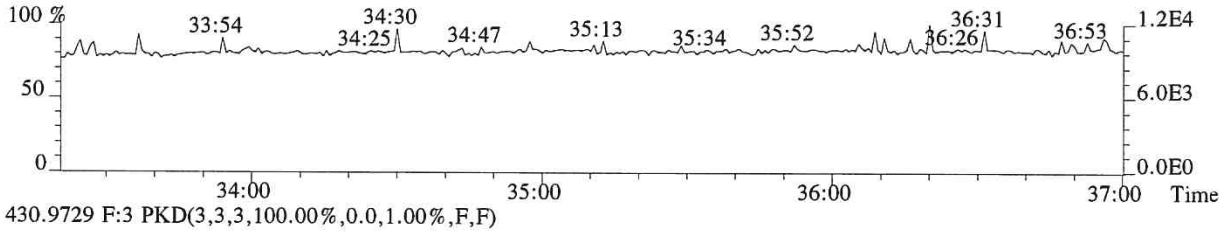
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,872.0,0.40%,F,T)



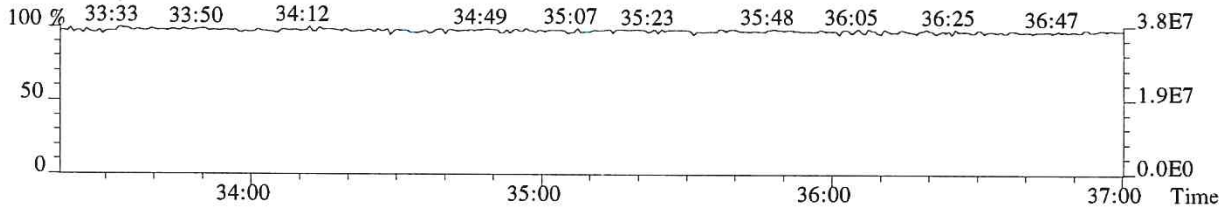
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1268.0,0.40%,F,T)



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

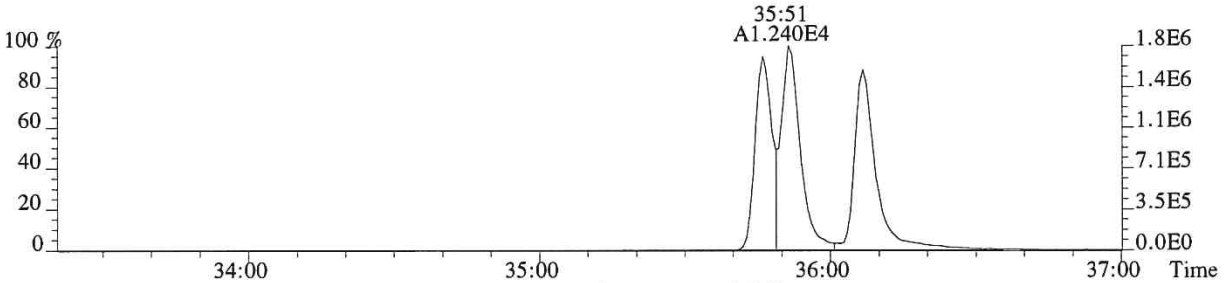


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

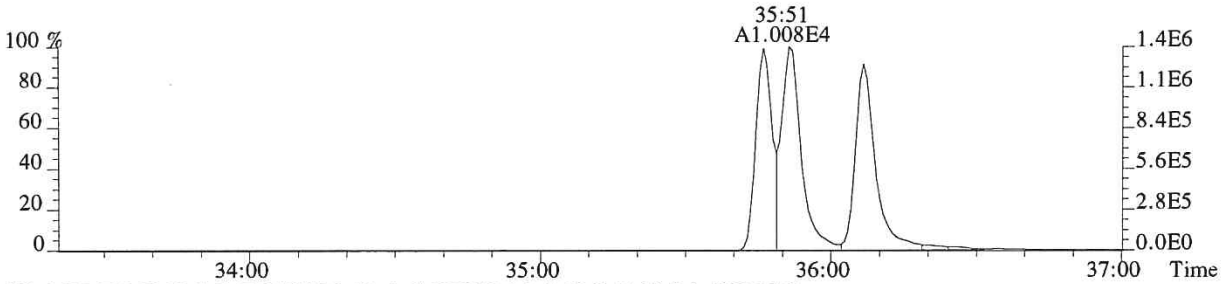


016464

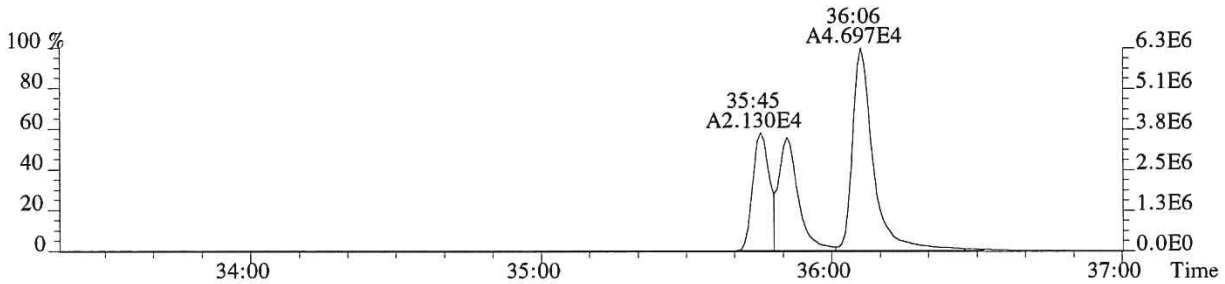
File:P519774 #1-330 Acq: 4-JAN-2019 10:43:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1800532-02
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,528.0,0.40%,F,T)



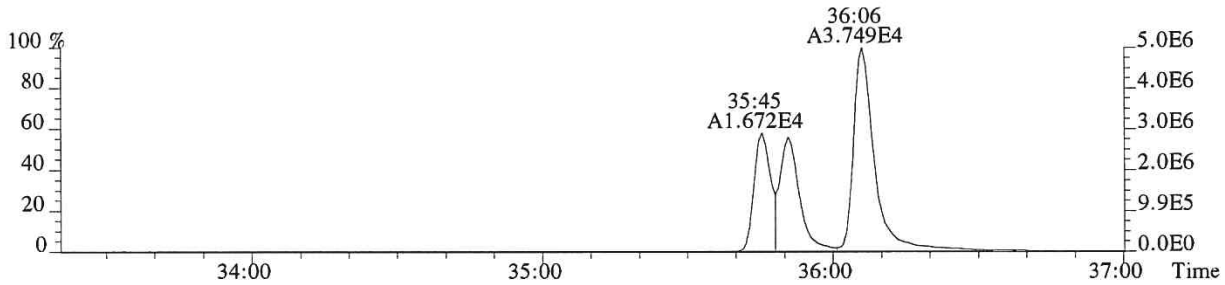
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,688.0,0.40%,F,T)



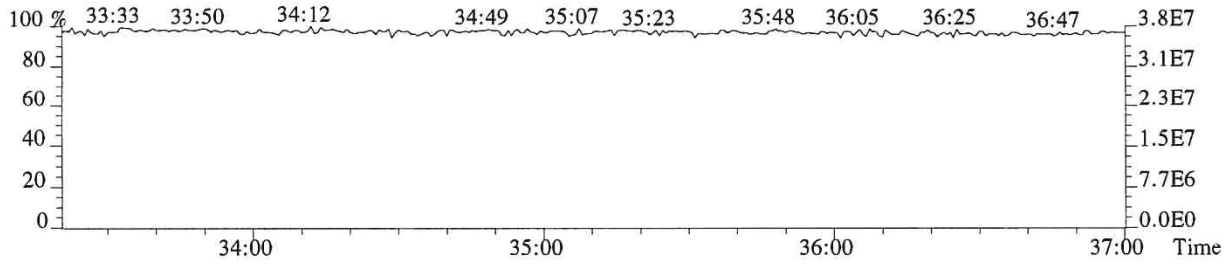
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1100.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,864.0,0.40%,F,T)

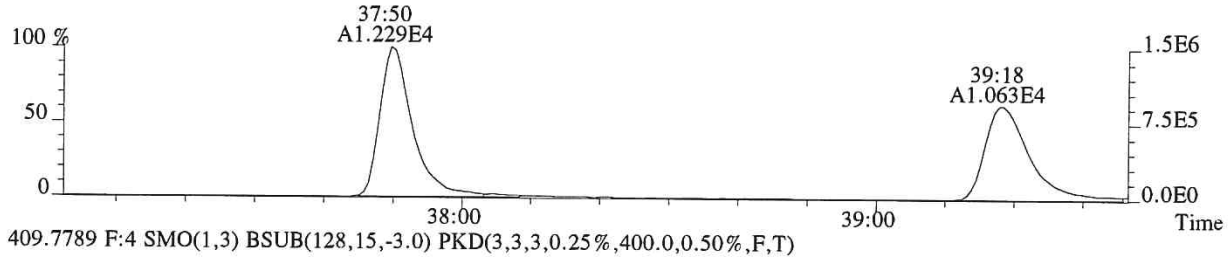


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

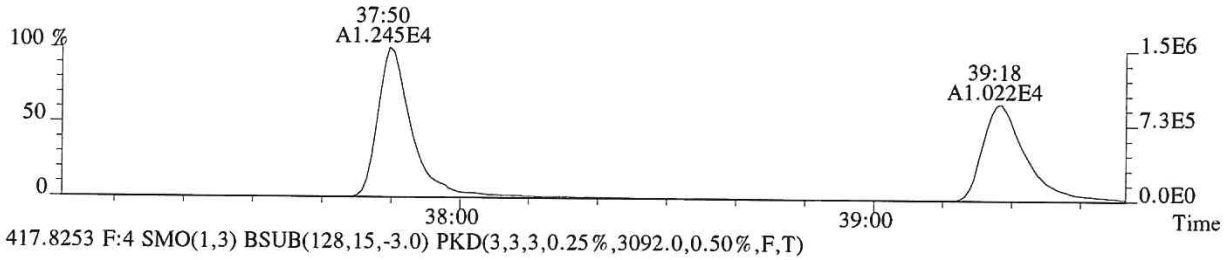


016465

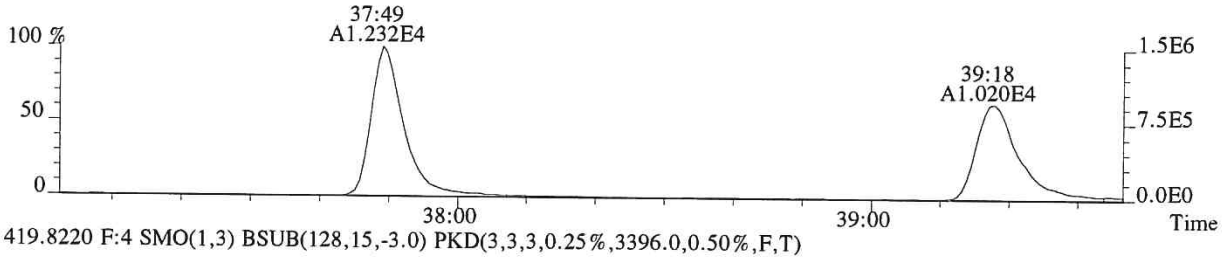
File:P519774 #1-232 Acq: 4-JAN-2019 10:43:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1800532-02
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1448.0,0.50%,F,T)



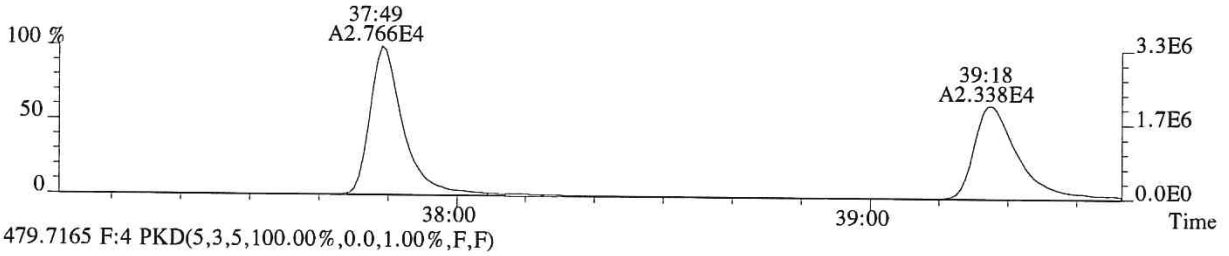
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,400.0,0.50%,F,T)



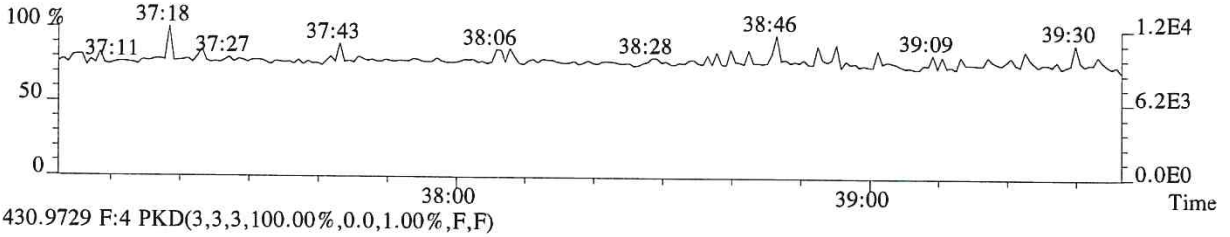
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3092.0,0.50%,F,T)



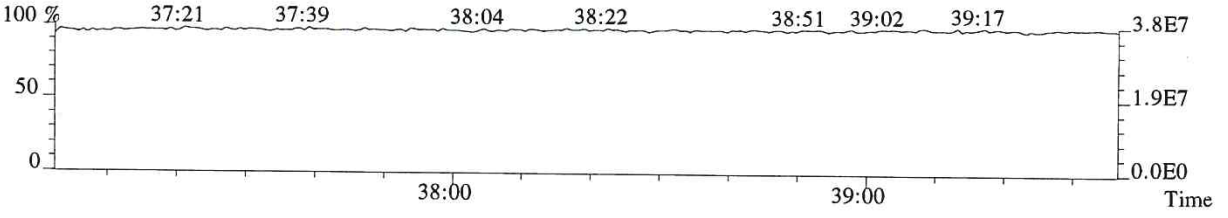
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3396.0,0.50%,F,T)



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

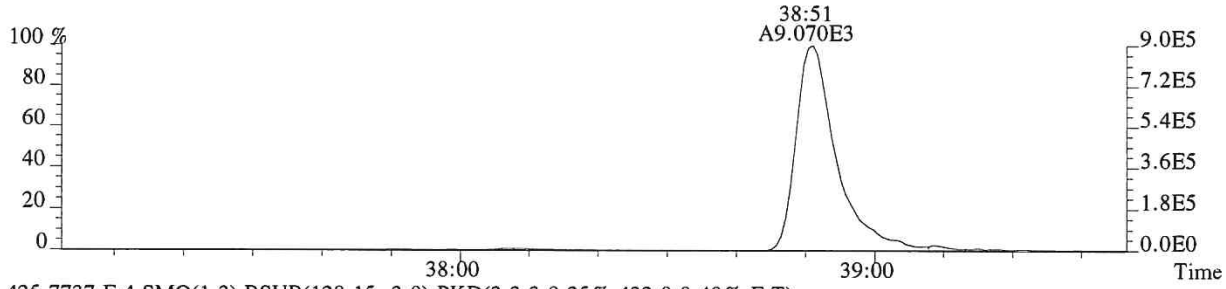


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

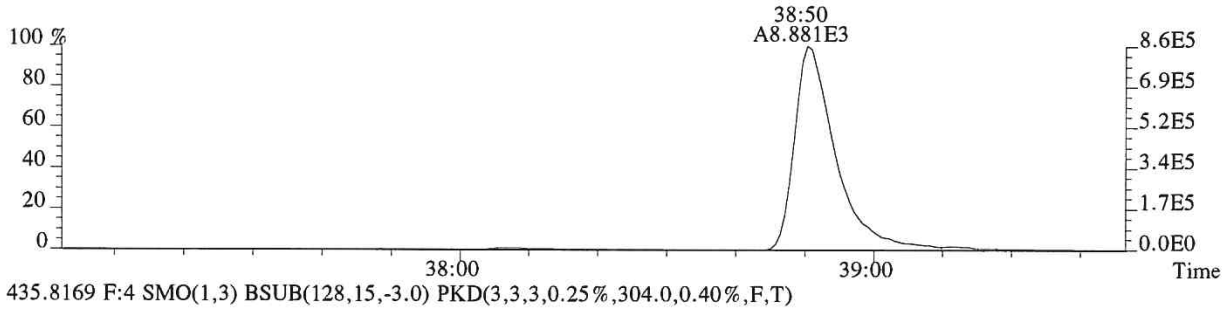


016466

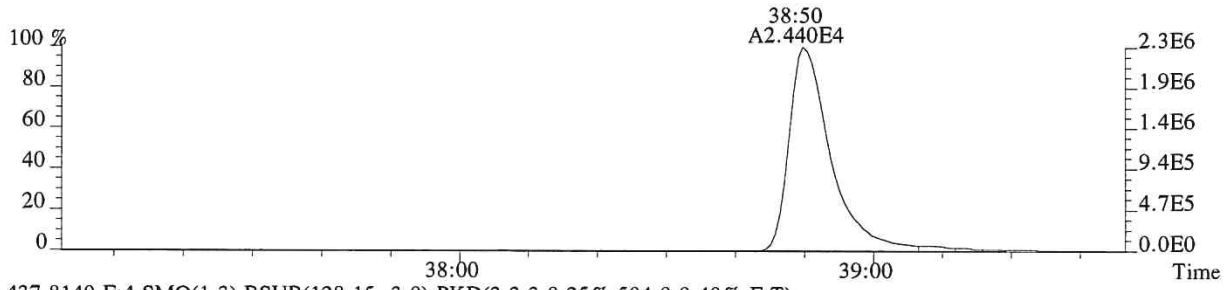
File:P519774 #1-232 Acq: 4-JAN-2019 10:43:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1800532-02
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,576.0,0.40%,F,T)



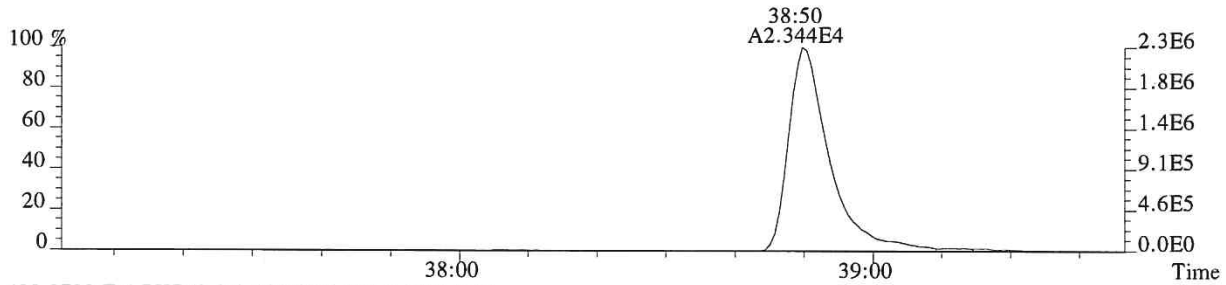
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,432.0,0.40%,F,T)



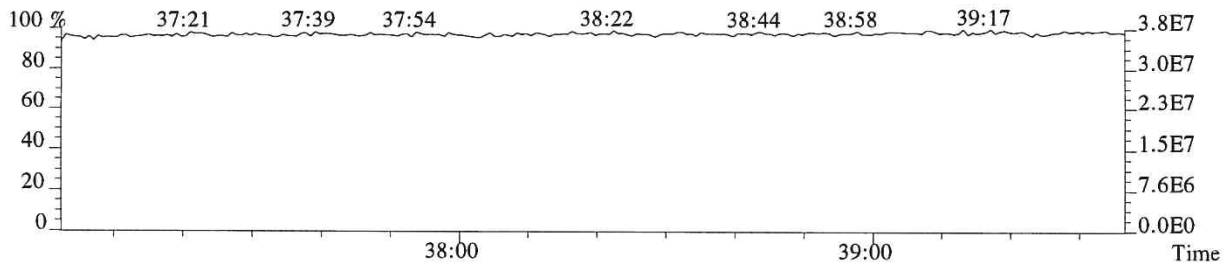
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,304.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,504.0,0.40%,F,T)

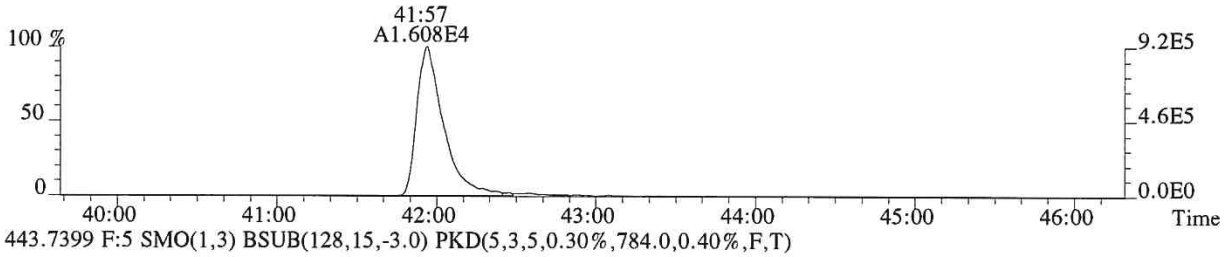


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

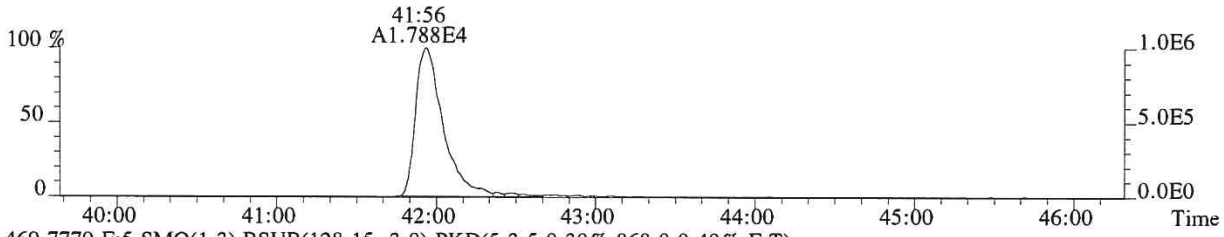


016467

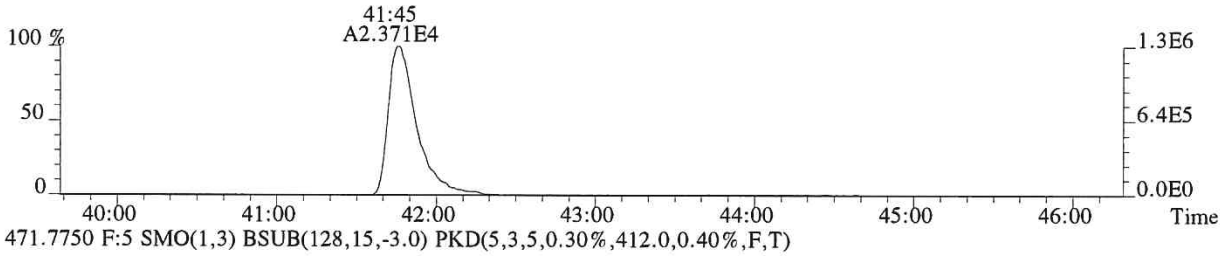
File:P519774 #1-601 Acq: 4-JAN-2019 10:43:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1800532-02
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,332.0,0.40%,F,T)



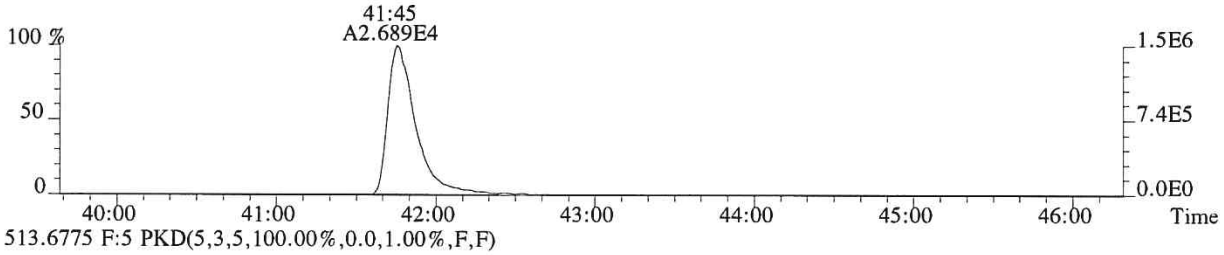
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,784.0,0.40%,F,T)



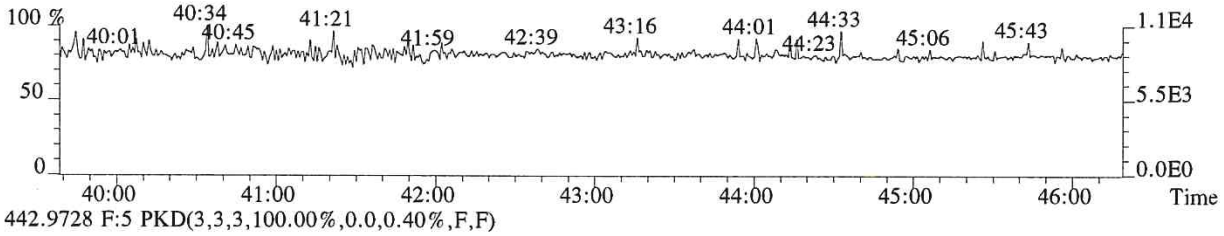
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,868.0,0.40%,F,T)



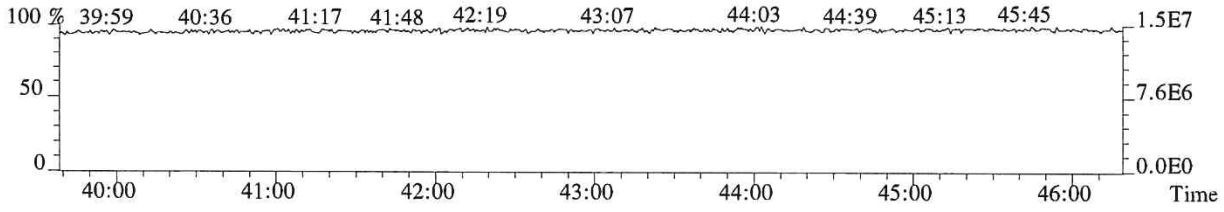
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,412.0,0.40%,F,T)



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

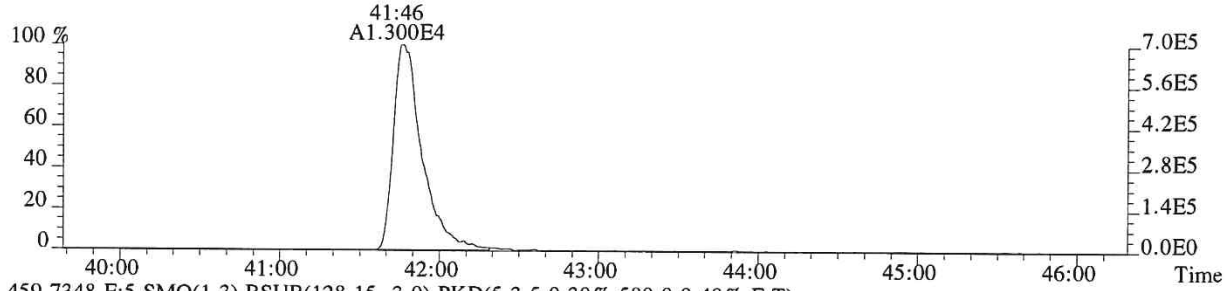


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

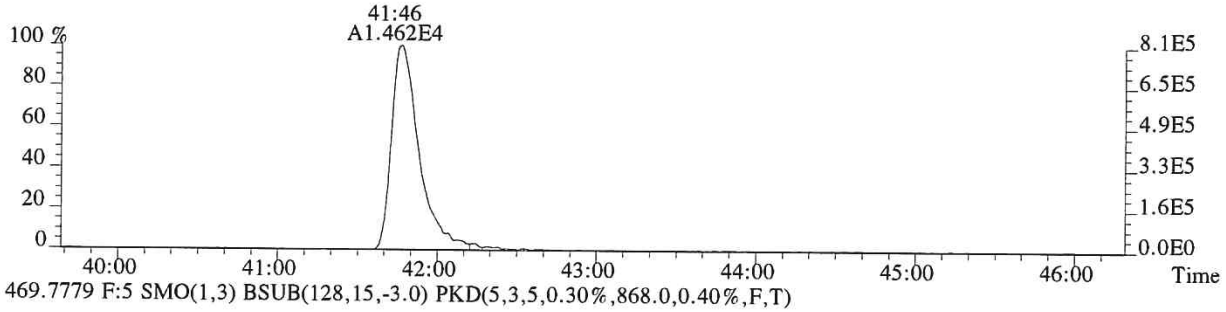


016468

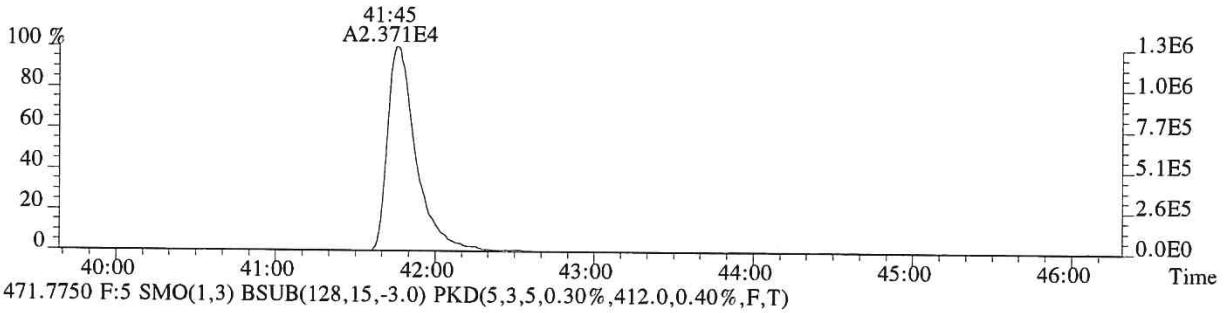
File:P519774 #1-601 Acq: 4-JAN-2019 10:43:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1800532-02
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,460.0,0.40%,F,T)



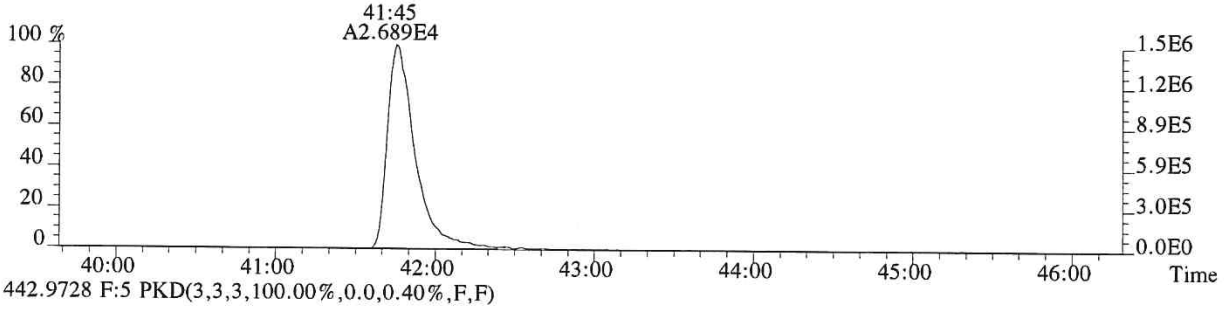
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,580.0,0.40%,F,T)



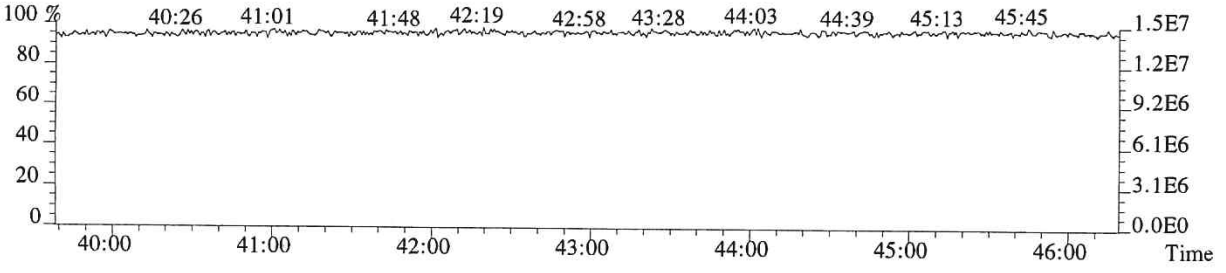
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,868.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,412.0,0.40%,F,T)



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



016469

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
DLCS

Run #21 Filename P616330 Samp: 1 Inj: 1 Acquired: 2-JAN-19 23:36:42
Processed: 3-JAN-19 13:34:06 Sample ID: EQ1800532-03

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:26	1.562e+03	1.949e+03	0.80	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:29	1.267e+04	7.946e+03	1.59	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:32	1.232e+04	7.751e+03	1.59	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:22	1.129e+04	8.888e+03	1.27	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:29	1.164e+04	9.108e+03	1.28	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	1.079e+04	8.276e+03	1.30	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:48	9.197e+03	7.387e+03	1.25	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:04	8.150e+03	7.743e+03	1.05	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:24	5.926e+03	5.922e+03	1.00	yes	no	1.463
10	Unk	OCDF	40:36	6.735e+03	7.228e+03	0.93	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:28	1.123e+03	1.474e+03	0.76	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:50	8.595e+03	5.453e+03	1.58	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:10	7.215e+03	5.579e+03	1.29	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:15	7.321e+03	5.713e+03	1.28	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:30	7.415e+03	5.935e+03	1.25	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	37:59	5.104e+03	4.823e+03	1.06	yes	no	1.112
17	Unk	OCDD	40:26	5.093e+03	5.702e+03	0.89	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:24	1.370e+04	1.685e+04	0.81	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:28	2.527e+04	1.596e+04	1.58	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:30	2.340e+04	1.471e+04	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:21	1.069e+04	1.959e+04	0.55	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.201e+04	2.194e+04	0.55	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	1.066e+04	2.013e+04	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	9.337e+03	1.813e+04	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:04	7.083e+03	1.513e+04	0.47	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:24	5.470e+03	1.166e+04	0.47	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:26	7.003e+03	8.885e+03	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:48	1.831e+04	1.140e+04	1.61	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	1.486e+04	1.152e+04	1.29	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	1.417e+04	1.094e+04	1.30	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	37:58	1.254e+04	1.199e+04	1.05	yes	no	0.857
32	IS	13C-OCDD	40:25	9.169e+03	1.006e+04	0.91	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:40	2.236e+04	2.805e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	2.781e+04	2.238e+04	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:28	9.926e+03				no	1.086

$$\text{OCDD} = \frac{(5.093\text{e+}03 + 5.702\text{e+}03) \times 4000\ \text{pg} \times 1}{(9.169\text{e+}03 + 1.006\text{e+}04)\ \times\ \text{g}\ \times\ /\ 100 \times 1.157} =$$

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
DLCS

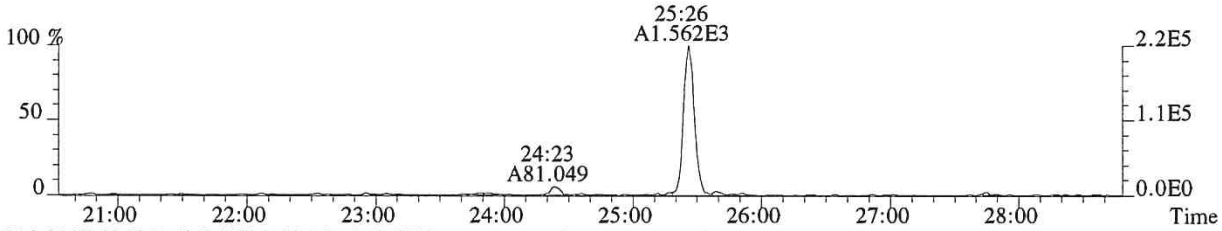
Run #21 Filename P616330 Samp: 1 Inj: 1 Acquired: 2-JAN-19 23:36:42
Processed: 3-JAN-19 13:34:06 LAB. ID: EQ1800532-03

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.24e+05	1.02e+03	2.2e+02	2.84e+05	3.32e+03	8.5e+01
2	1,2,3,7,8-PeCDF	2.17e+06	9.24e+02	2.3e+03	1.40e+06	1.46e+03	9.6e+02
3	2,3,4,7,8-PeCDF	2.30e+06	9.24e+02	2.5e+03	1.45e+06	1.46e+03	9.9e+02
4	1,2,3,4,7,8-HxCDF	2.36e+06	1.34e+03	1.8e+03	1.89e+06	7.28e+02	2.6e+03
5	1,2,3,6,7,8-HxCDF	2.48e+06	1.34e+03	1.9e+03	1.91e+06	7.28e+02	2.6e+03
6	2,3,4,6,7,8-HxCDF	2.29e+06	1.34e+03	1.7e+03	1.75e+06	7.28e+02	2.4e+03
7	1,2,3,7,8,9-HxCDF	1.99e+06	1.34e+03	1.5e+03	1.54e+06	7.28e+02	2.1e+03
8	1,2,3,4,6,7,8-HpCDF	1.77e+06	8.68e+02	2.0e+03	1.74e+06	1.01e+03	1.7e+03
9	1,2,3,4,7,8,9-HpCDF	1.36e+06	8.68e+02	1.6e+03	1.38e+06	1.01e+03	1.4e+03
10	OCDF	1.38e+06	8.20e+02	1.7e+03	1.45e+06	1.98e+03	7.3e+02
11	2,3,7,8-TCDD	1.74e+05	3.58e+03	4.9e+01	2.17e+05	1.01e+03	2.2e+02
12	1,2,3,7,8-PeCDD	1.64e+06	1.57e+03	1.0e+03	1.01e+06	6.32e+02	1.6e+03
13	1,2,3,4,7,8-HxCDD	1.61e+06	5.64e+02	2.9e+03	1.28e+06	7.52e+02	1.7e+03
14	1,2,3,6,7,8-HxCDD	1.50e+06	5.64e+02	2.7e+03	1.21e+06	7.52e+02	1.6e+03
15	1,2,3,7,8,9-HxCDD	1.59e+06	5.64e+02	2.8e+03	1.22e+06	7.52e+02	1.6e+03
16	1,2,3,4,6,7,8-HpCDD	1.18e+06	8.08e+02	1.5e+03	1.09e+06	5.92e+02	1.8e+03
17	OCDD	1.02e+06	7.96e+02	1.3e+03	1.13e+06	5.28e+02	2.1e+03
18	13C-2,3,7,8-TCDF	1.89e+06	8.76e+03	2.2e+02	2.32e+06	8.73e+03	2.7e+02
19	13C-1,2,3,7,8-PeCDF	4.46e+06	9.04e+02	4.9e+03	2.77e+06	6.80e+02	4.1e+03
20	13C-2,3,4,7,8-PeCDF	4.48e+06	9.04e+02	5.0e+03	2.85e+06	6.80e+02	4.2e+03
21	13C-1,2,3,4,7,8-HxCDF	2.24e+06	1.86e+03	1.2e+03	4.19e+06	1.31e+03	3.2e+03
22	13C-1,2,3,6,7,8-HxCDF	2.53e+06	1.86e+03	1.4e+03	4.57e+06	1.31e+03	3.5e+03
23	13C-2,3,4,6,7,8-HxCDF	2.30e+06	1.86e+03	1.2e+03	4.33e+06	1.31e+03	3.3e+03
24	13C-1,2,3,7,8,9-HxCDF	1.96e+06	1.86e+03	1.1e+03	3.86e+06	1.31e+03	3.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.57e+06	9.64e+02	1.6e+03	3.32e+06	1.40e+03	2.4e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.27e+06	9.64e+02	1.3e+03	2.71e+06	1.40e+03	1.9e+03
27	13C-2,3,7,8-TCDD	1.11e+06	1.11e+04	1.0e+02	1.36e+06	3.32e+03	4.1e+02
28	13C-1,2,3,7,8-PeCDD	3.39e+06	1.66e+03	2.0e+03	2.13e+06	1.96e+03	1.1e+03
29	13C-1,2,3,4,7,8-HxCDD	3.40e+06	1.52e+03	2.2e+03	2.62e+06	1.27e+03	2.1e+03
30	13C-1,2,3,6,7,8-HxCDD	2.95e+06	1.52e+03	1.9e+03	2.34e+06	1.27e+03	1.8e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.81e+06	6.80e+02	4.1e+03	2.67e+06	4.72e+02	5.7e+03
32	13C-OCDD	1.84e+06	5.76e+02	3.2e+03	2.04e+06	6.84e+02	3.0e+03
33	13C-1,2,3,4-TCDD	3.33e+06	1.11e+04	3.0e+02	4.07e+06	3.32e+03	1.2e+03
34	13C-1,2,3,7,8,9-HxCDD	6.02e+06	1.52e+03	4.0e+03	4.68e+06	1.27e+03	3.7e+03
35	37Cl-2,3,7,8-TCDD	1.52e+06	1.71e+03	8.9e+02			

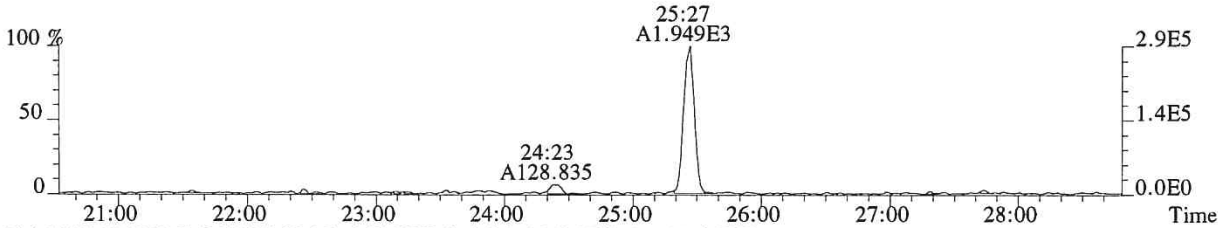
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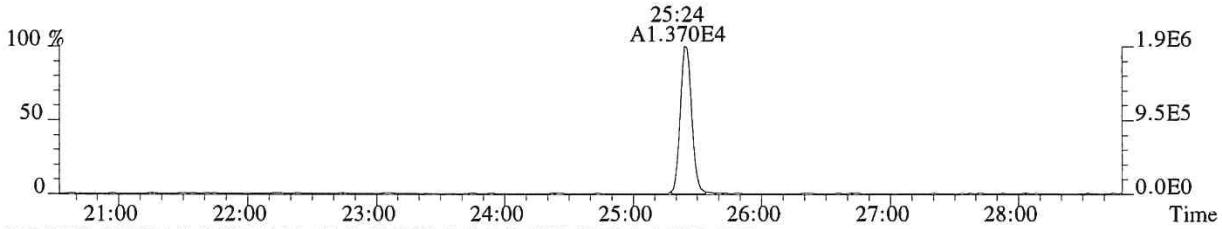
File:P616330 #1-587 Acq: 2-JAN-2019 23:36:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



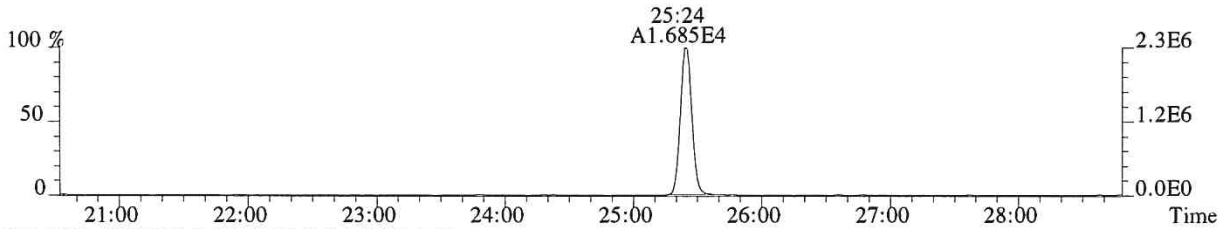
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3324.0,1.00%,F,T)



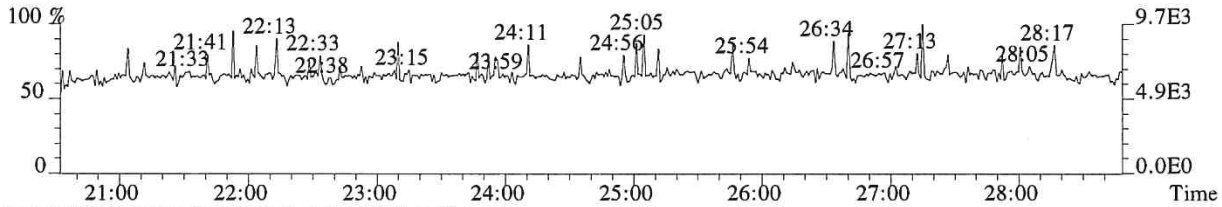
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8760.0,1.00%,F,T)



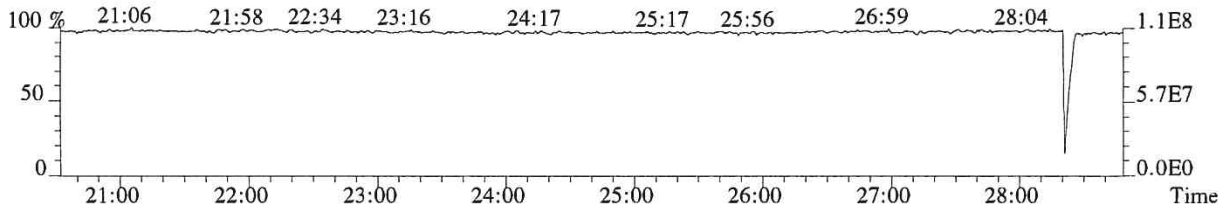
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8728.0,1.00%,F,T)



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

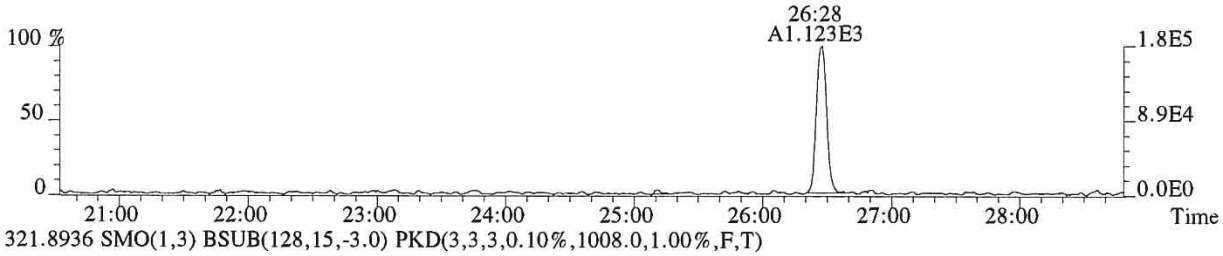


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

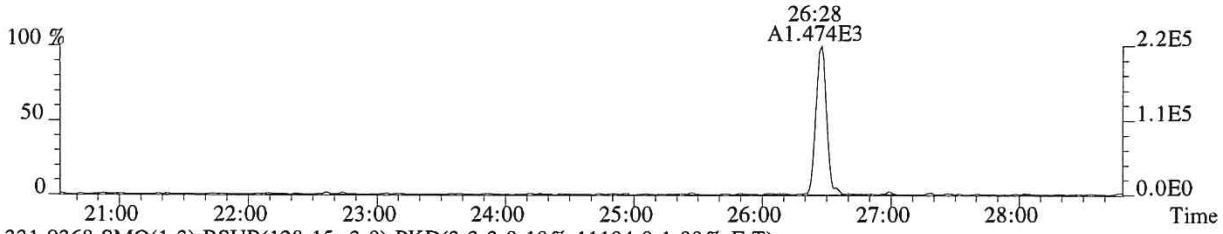


016472

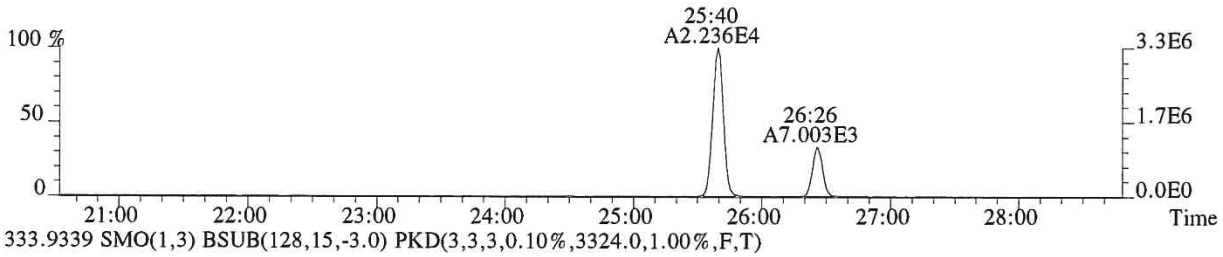
File:P616330 #1-587 Acq: 2-JAN-2019 23:36:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3580.0,1.00%,F,T)



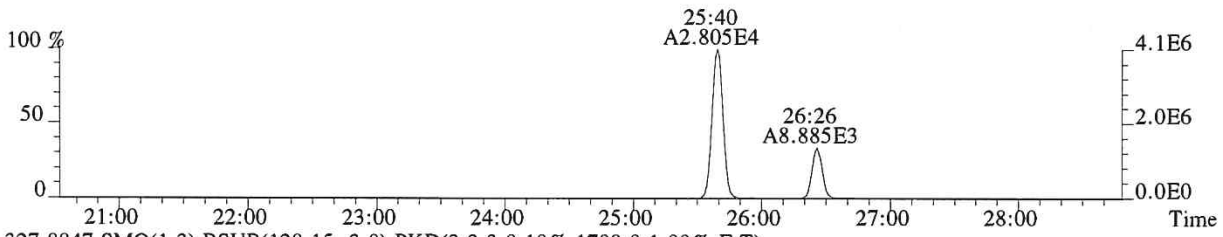
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1008.0,1.00%,F,T)



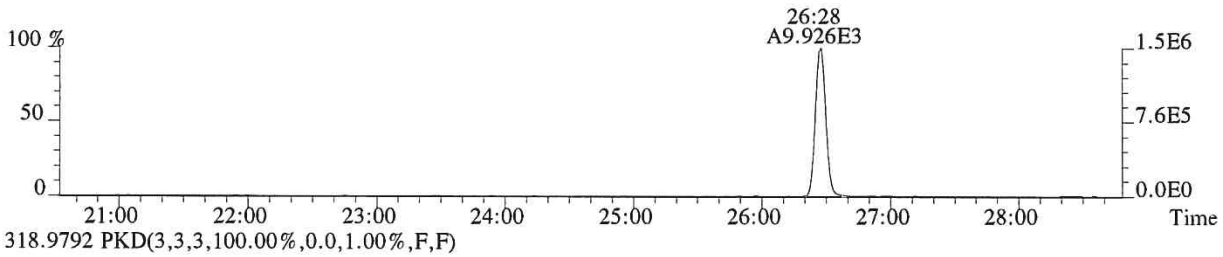
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11104.0,1.00%,F,T)



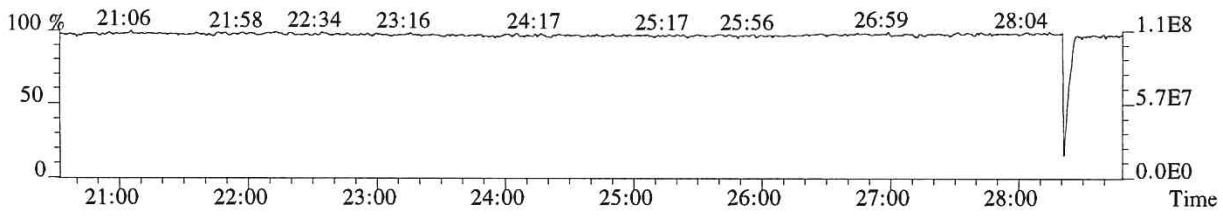
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3324.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1708.0,1.00%,F,T)

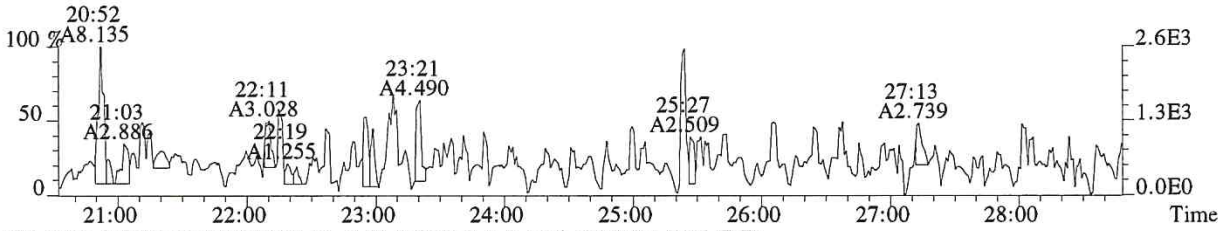


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

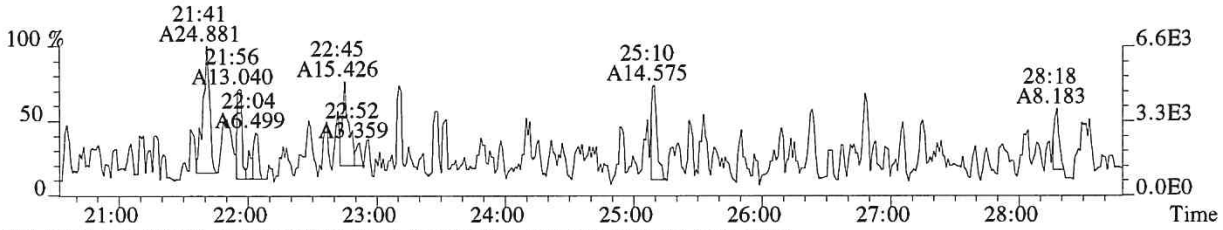


016473

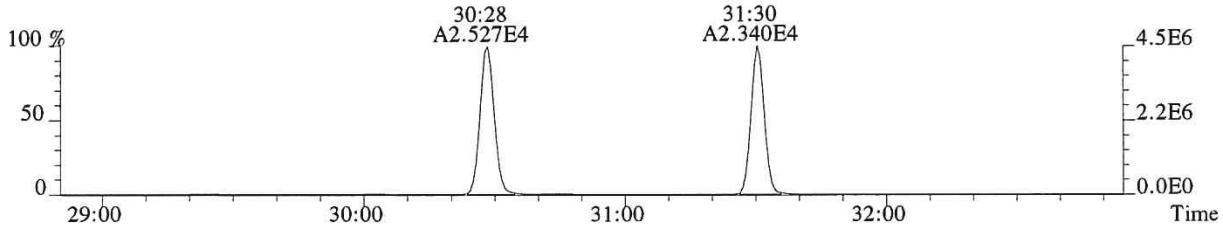
File:P616330 #1-587 Acq: 2-JAN-2019 23:36:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,668.0,1.00%,F,T)



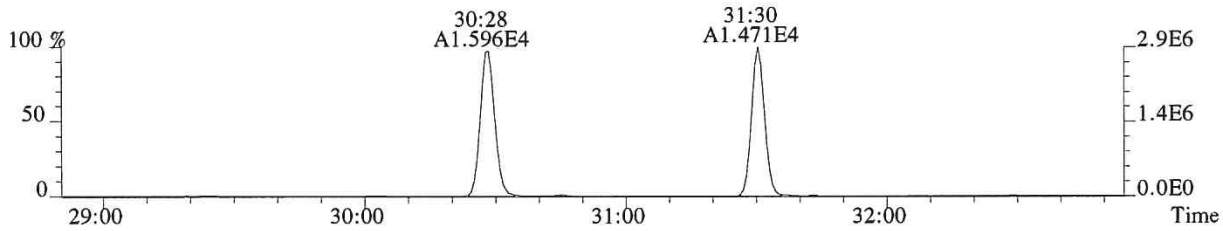
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1792.0,1.00%,F,T)



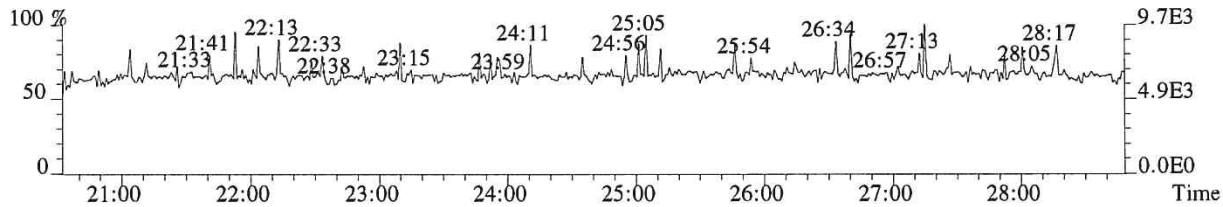
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,904.0,1.00%,F,T)



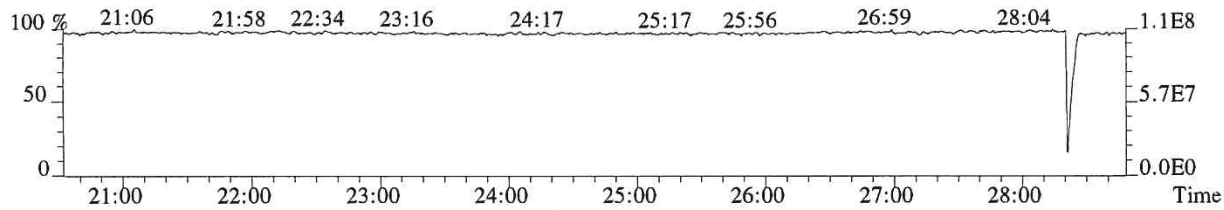
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,680.0,1.00%,F,T)



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

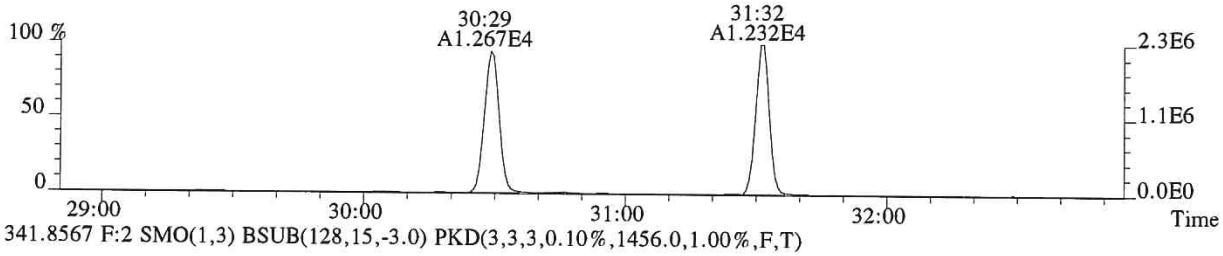


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

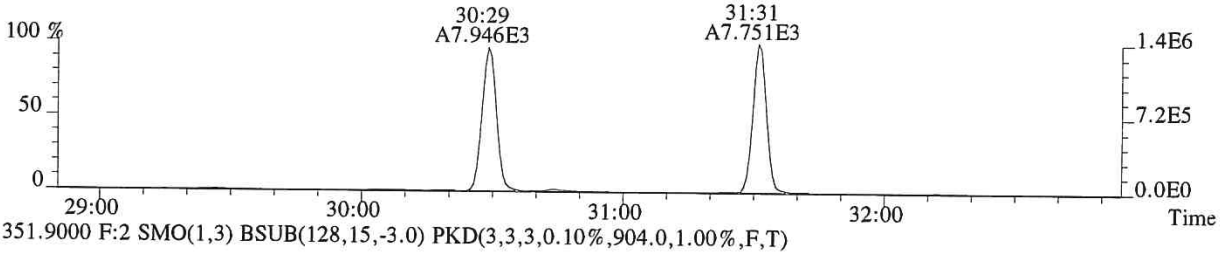


016474

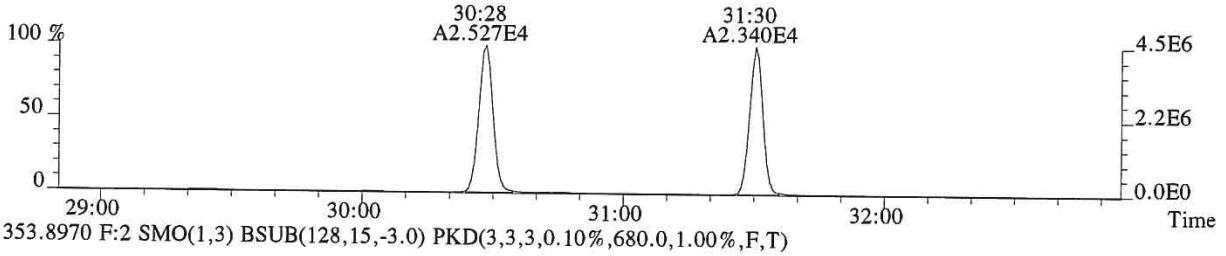
File:P616330 #1-367 Acq: 2-JAN-2019 23:36:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,924.0,1.00%,F,T)



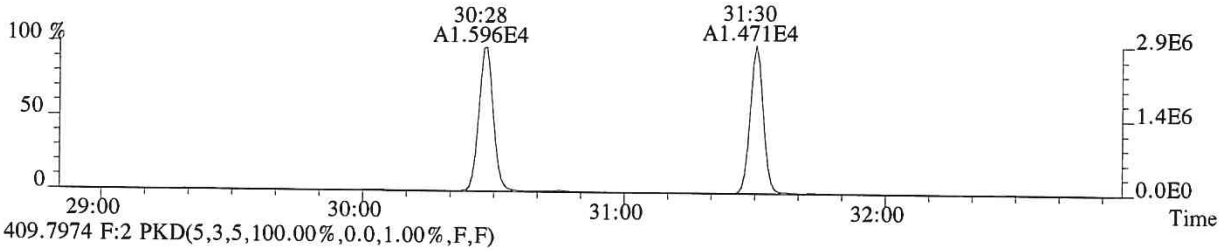
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1456.0,1.00%,F,T)



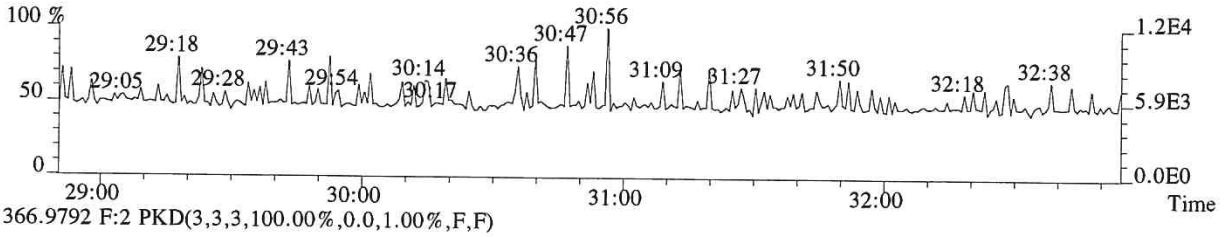
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,904.0,1.00%,F,T)



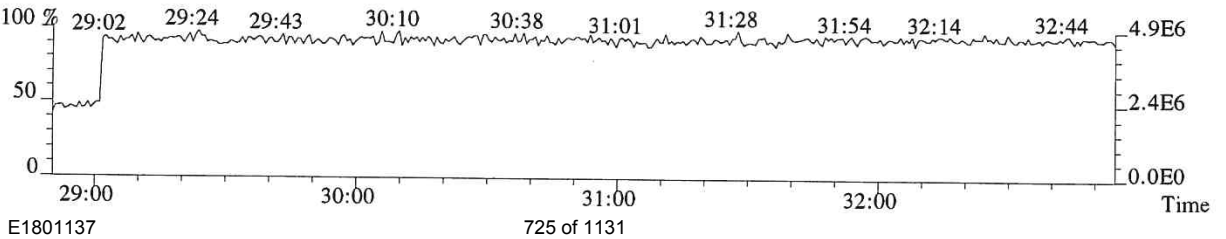
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,680.0,1.00%,F,T)



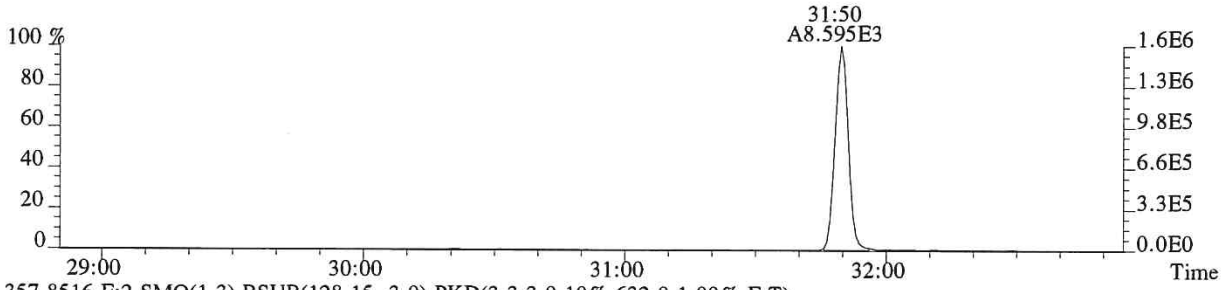
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



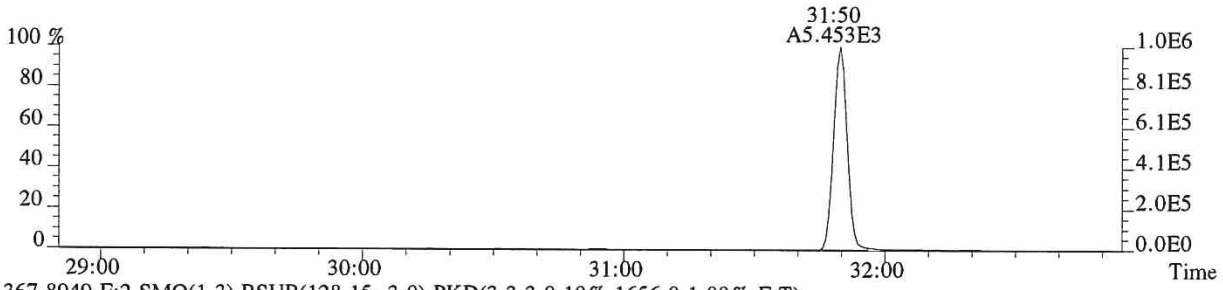
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



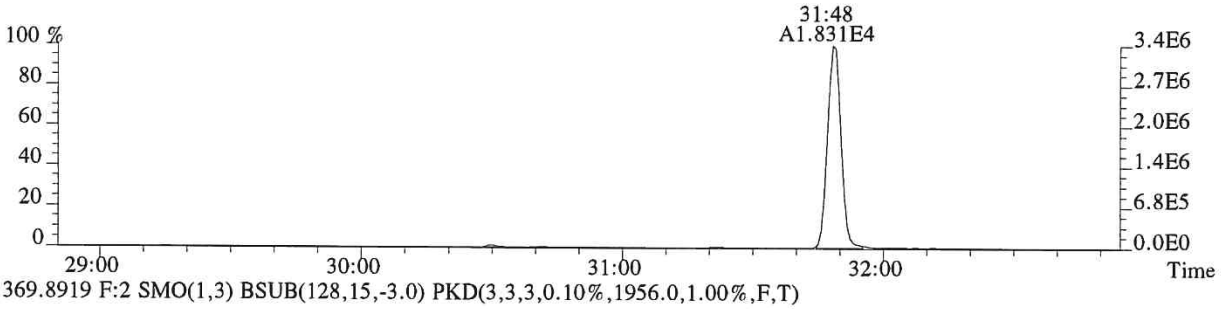
File:P616330 #1-367 Acq: 2-JAN-2019 23:36:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1572.0,1.00%,F,T)



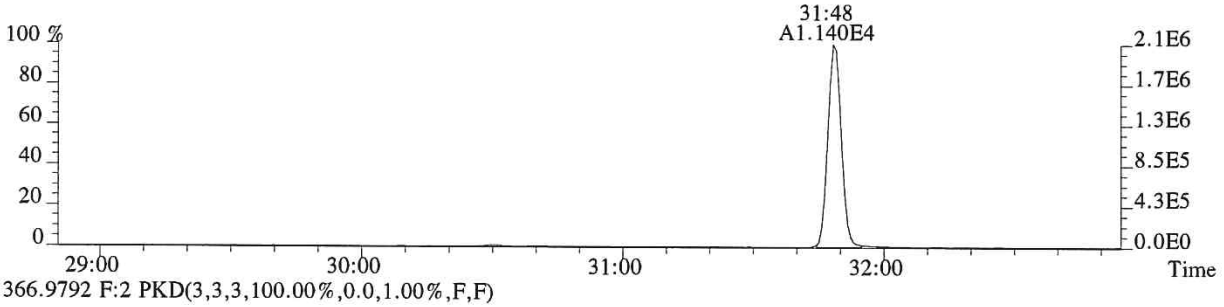
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,632.0,1.00%,F,T)



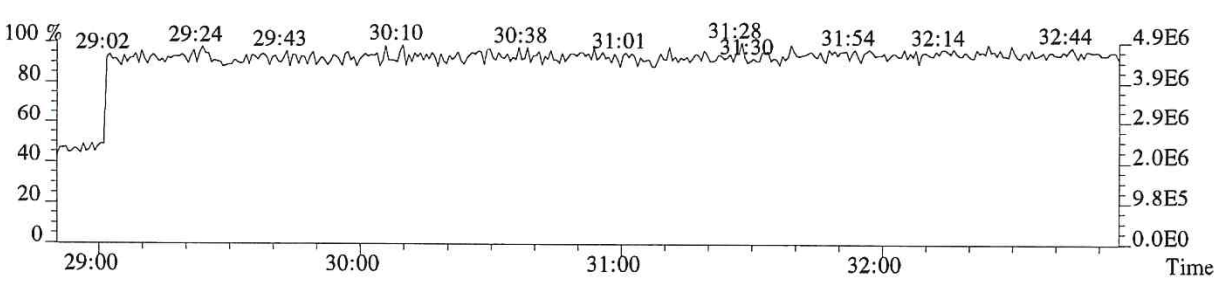
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1656.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1956.0,1.00%,F,T)

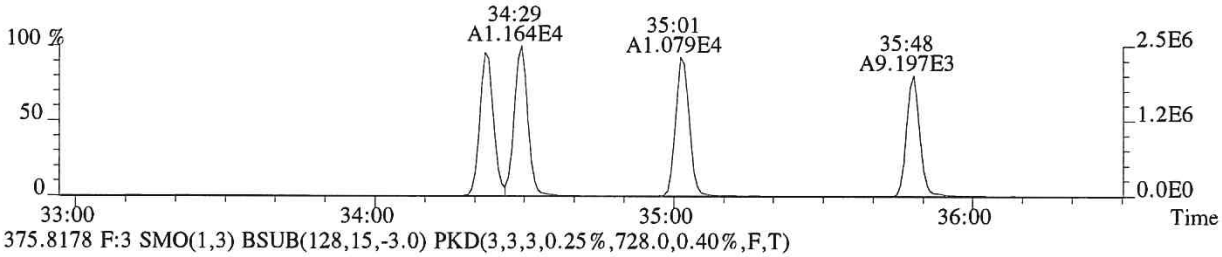


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

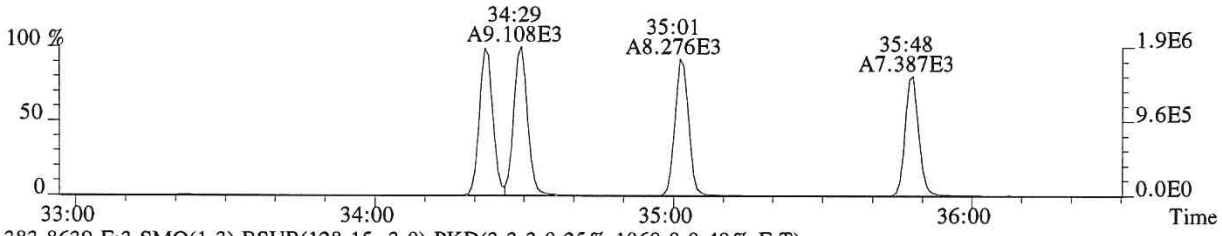


016476

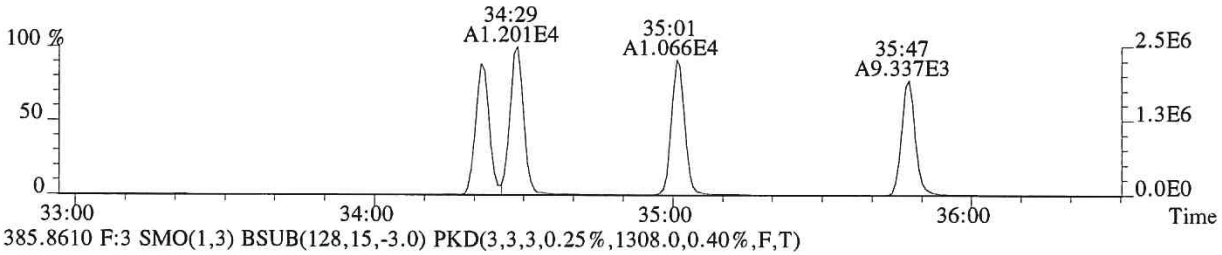
File:P616330 #1-321 Acq: 2-JAN-2019 23:36:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1340.0,0.40%,F,T)



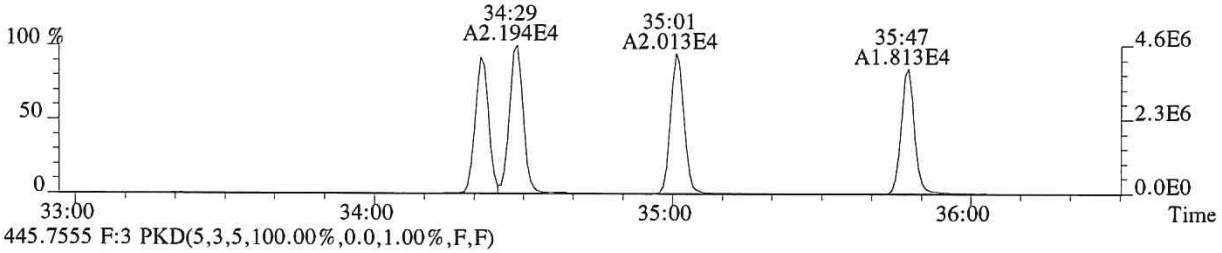
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,728.0,0.40%,F,T)



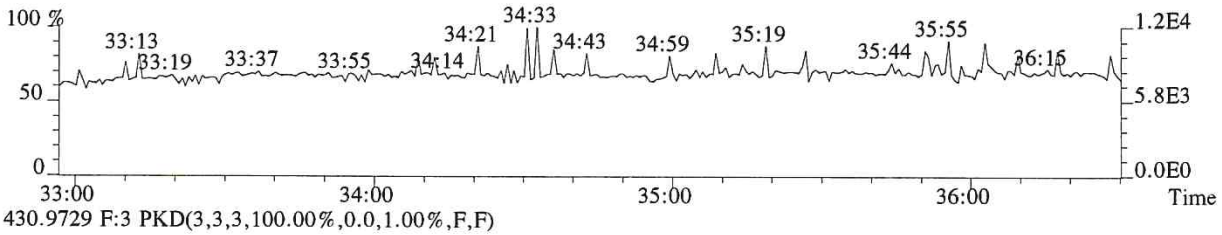
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1860.0,0.40%,F,T)



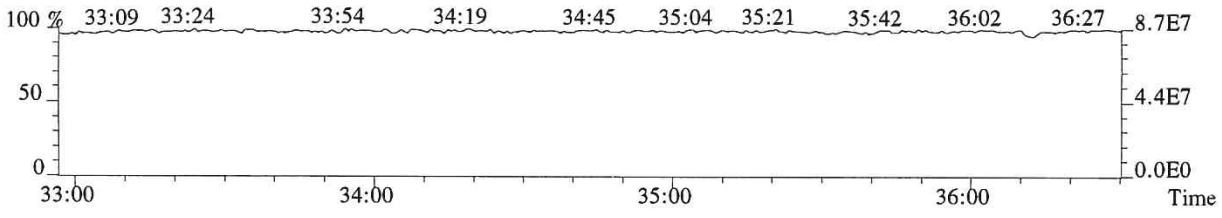
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1308.0,0.40%,F,T)



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

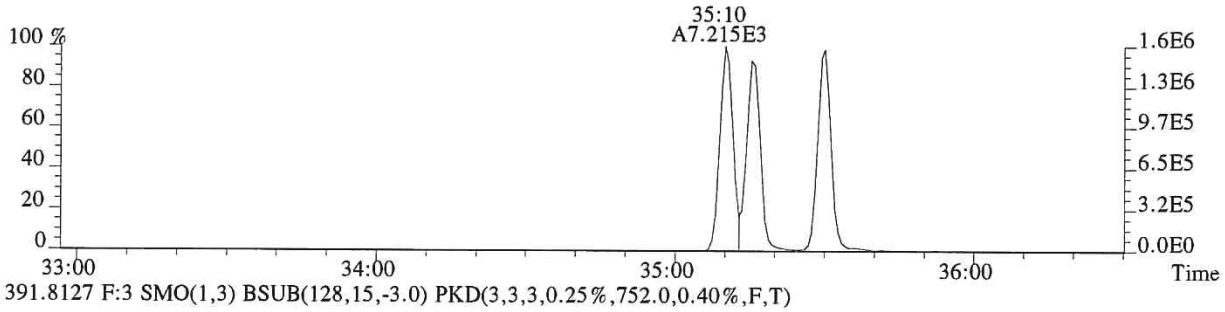


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

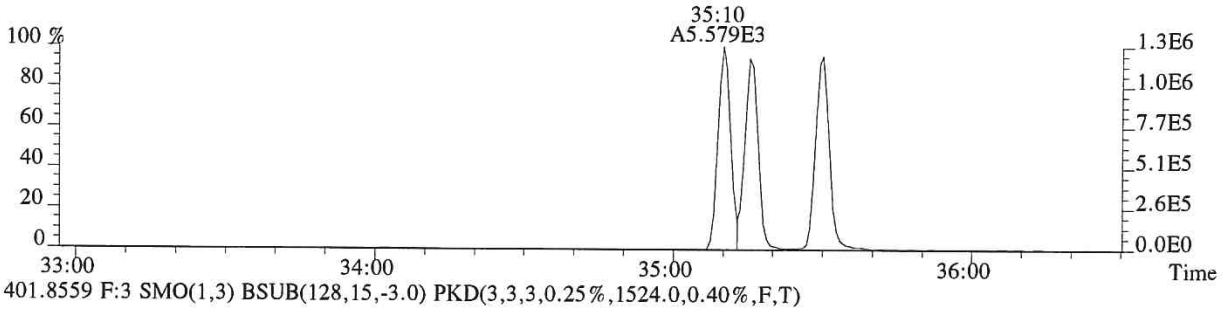


016477

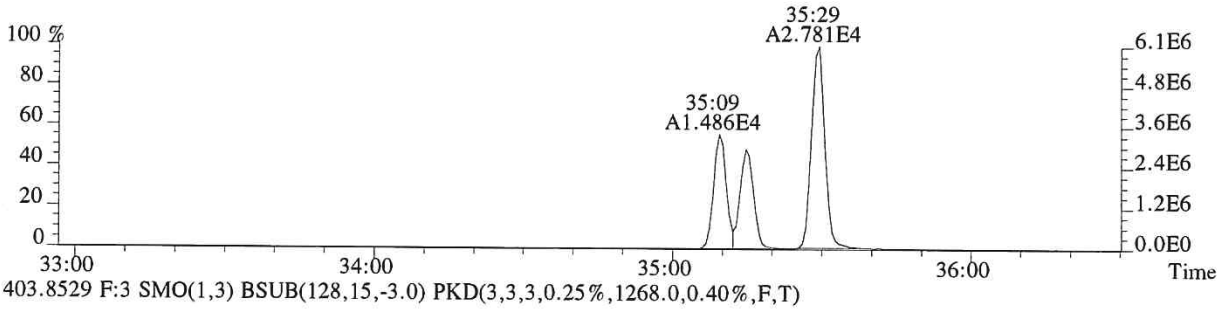
File:P616330 #1-321 Acq: 2-JAN-2019 23:36:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,564.0,0.40%,F,T)



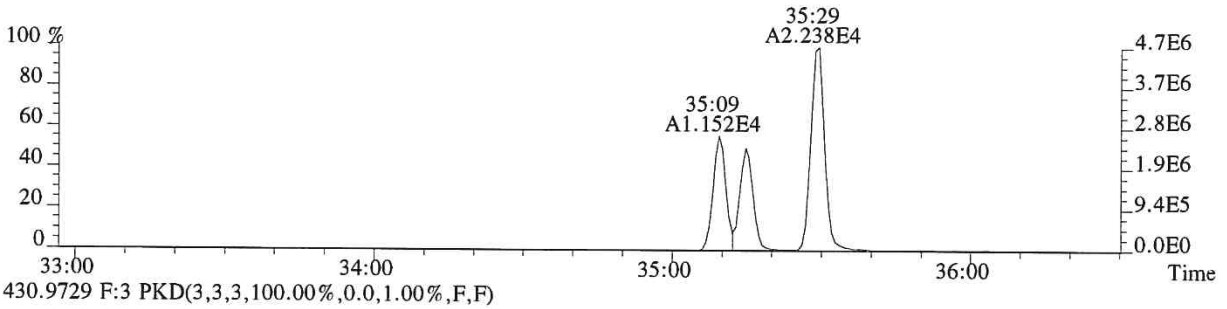
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,752.0,0.40%,F,T)



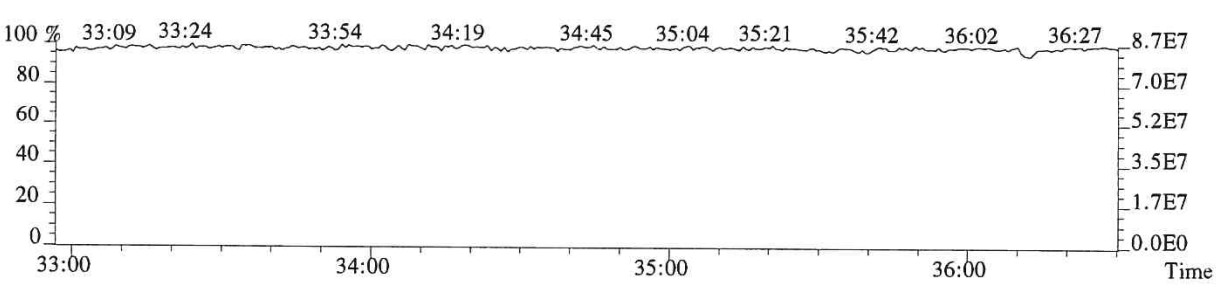
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1524.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1268.0,0.40%,F,T)

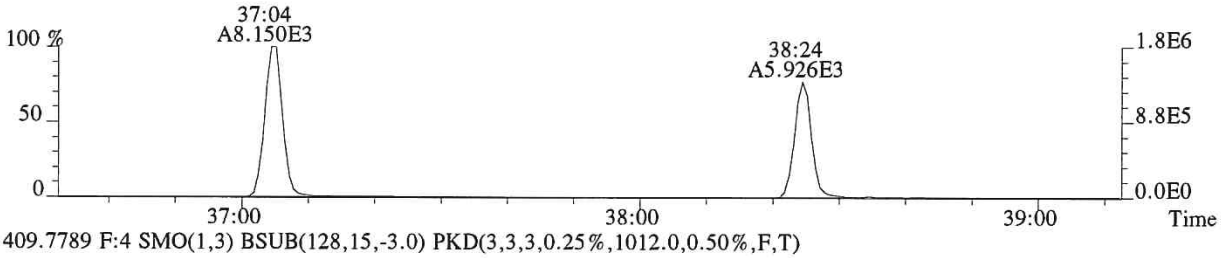


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

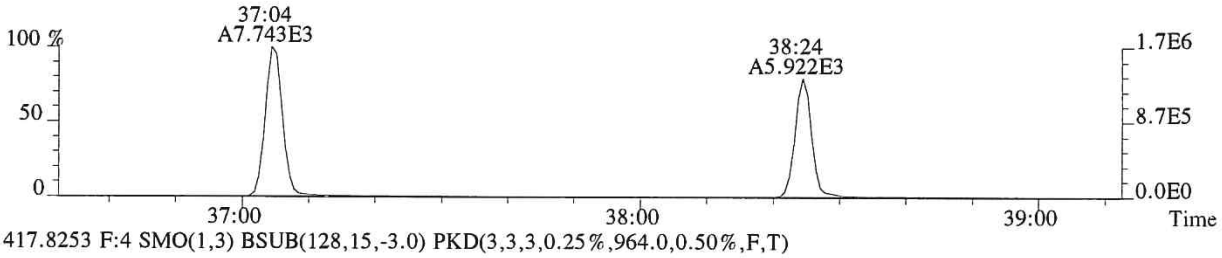


016478

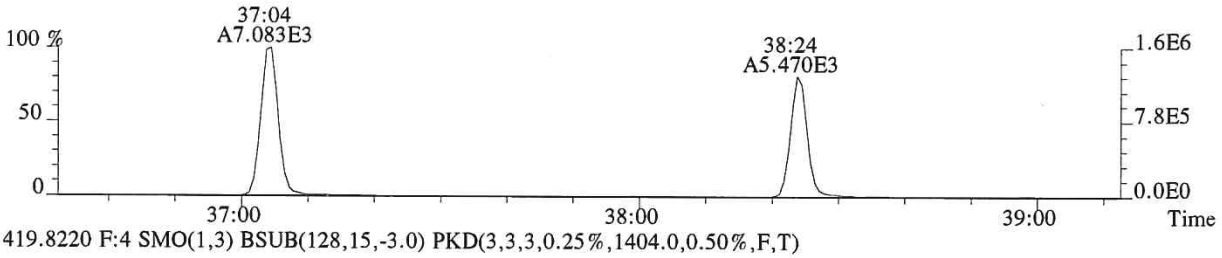
File:P616330 #1-241 Acq: 2-JAN-2019 23:36:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,868.0,0.50%,F,T)



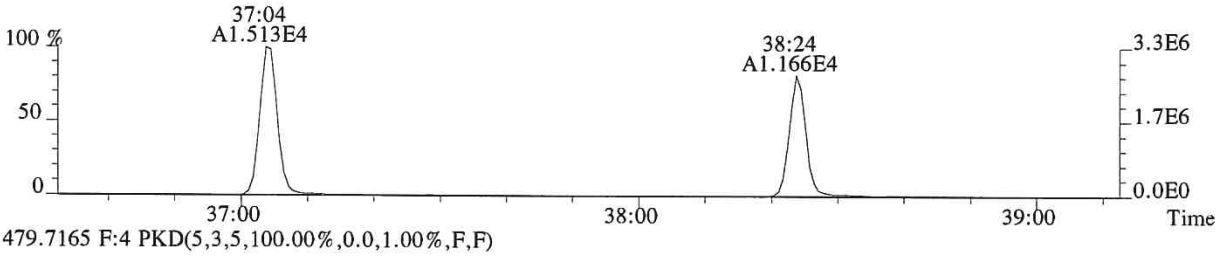
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1012.0,0.50%,F,T)



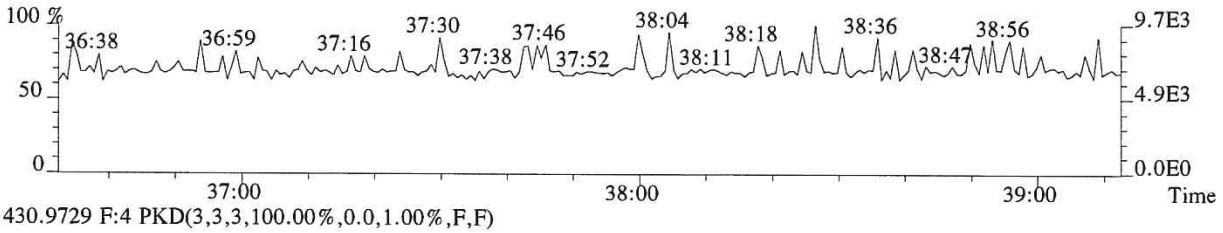
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,964.0,0.50%,F,T)



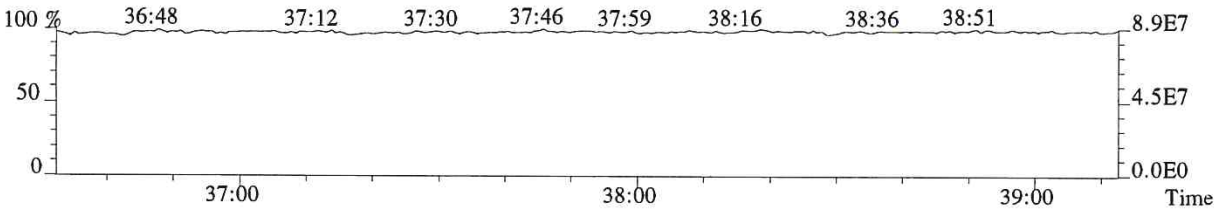
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1404.0,0.50%,F,T)



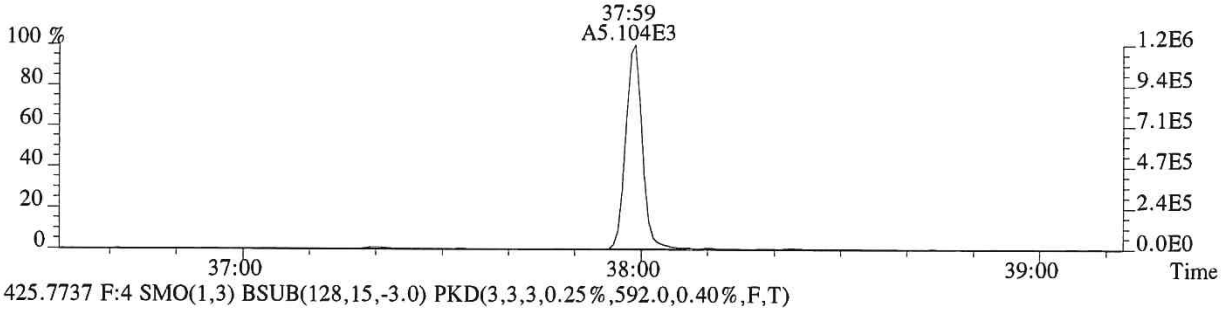
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



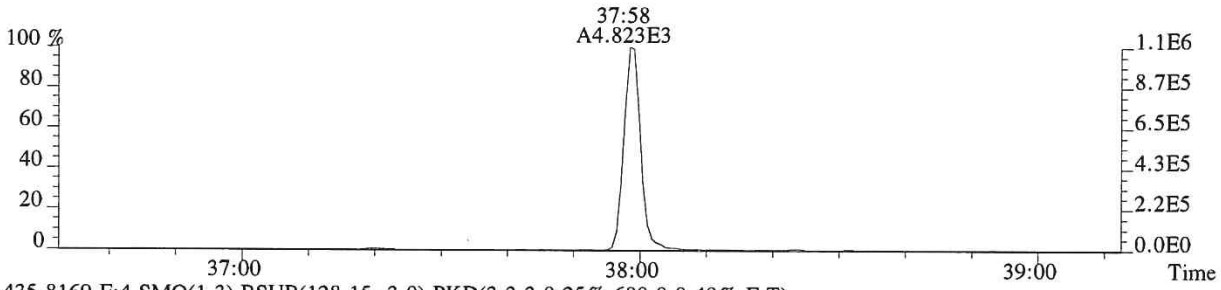
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



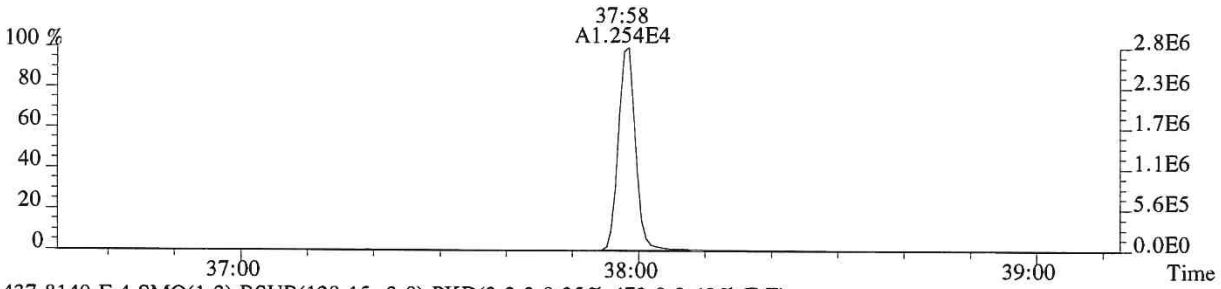
File:P616330 #1-241 Acq: 2-JAN-2019 23:36:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,808.0,0.40%,F,T)



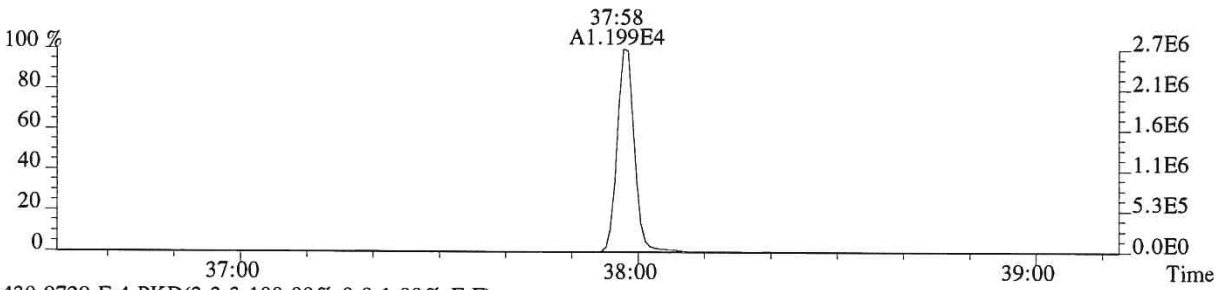
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,592.0,0.40%,F,T)



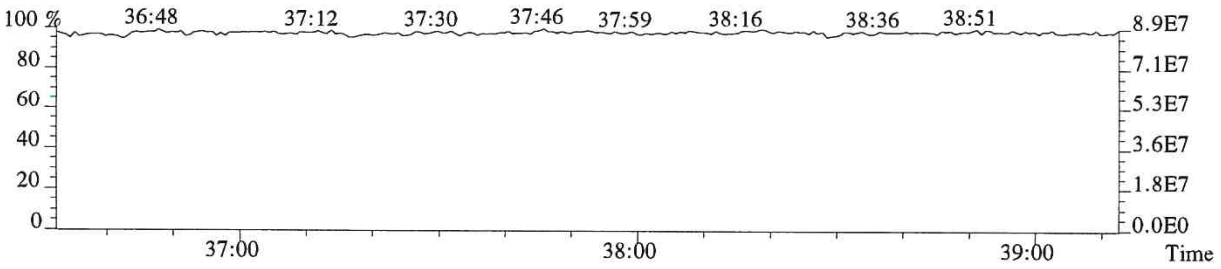
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,680.0,0.40%,F,T)



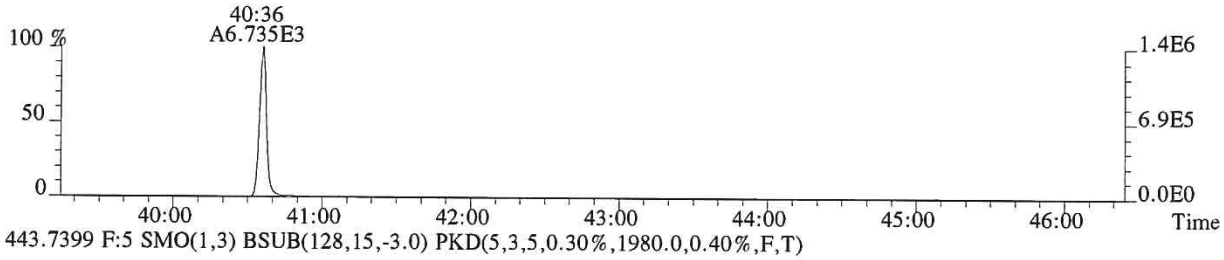
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,472.0,0.40%,F,T)



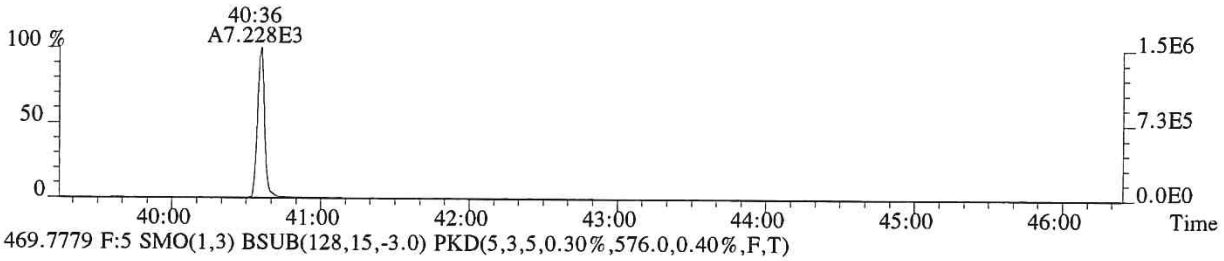
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



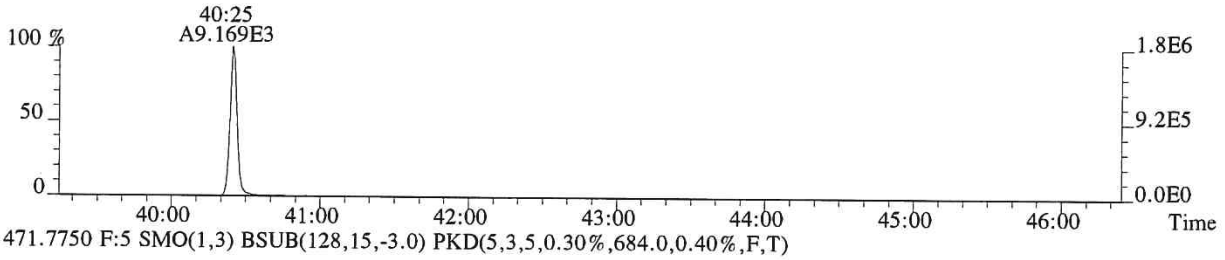
File:P616330 #1-645 Acq: 2-JAN-2019 23:36:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,820.0,0.40%,F,T)



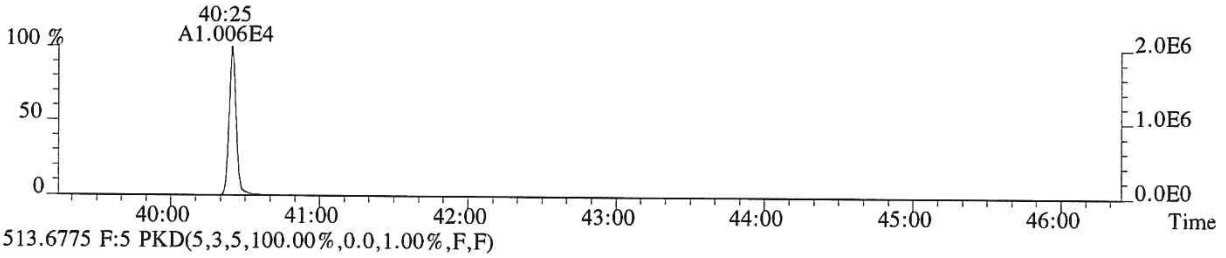
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1980.0,0.40%,F,T)



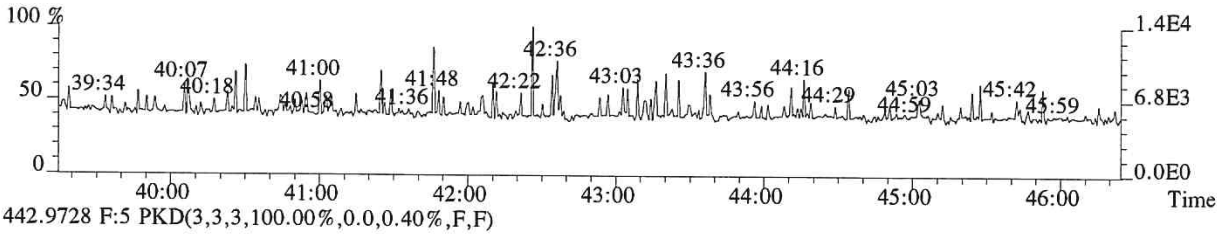
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,576.0,0.40%,F,T)



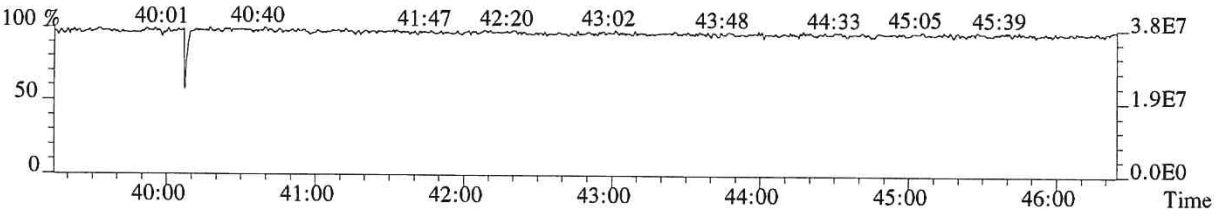
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,684.0,0.40%,F,T)



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

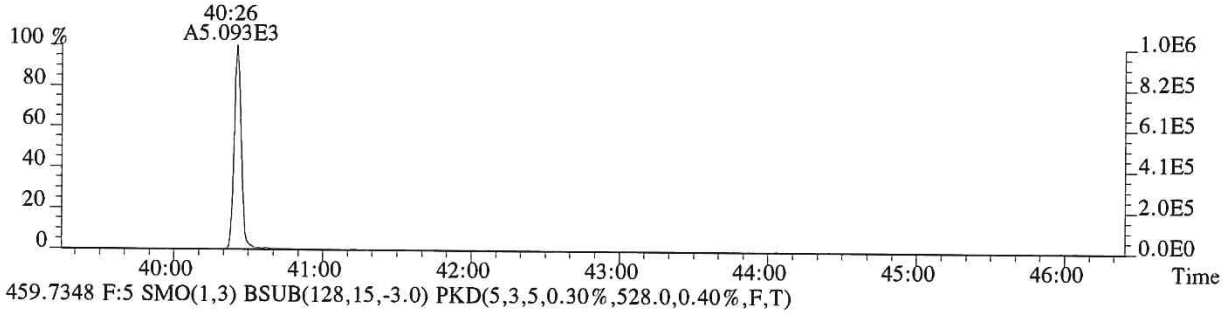


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

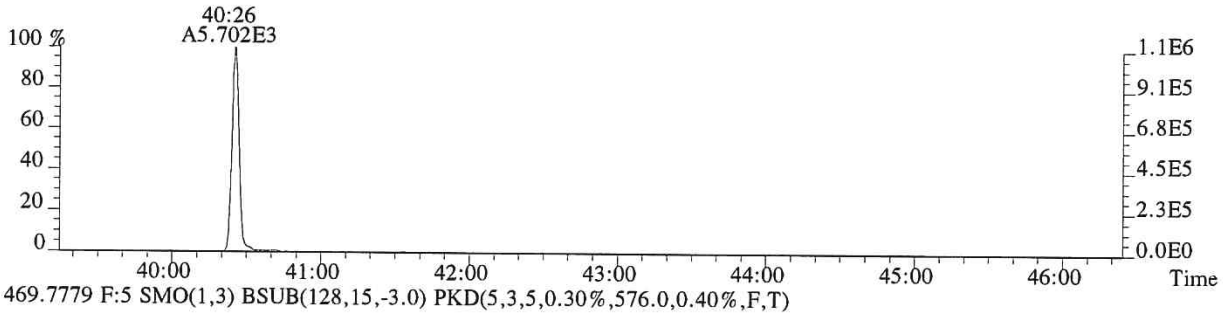


016481

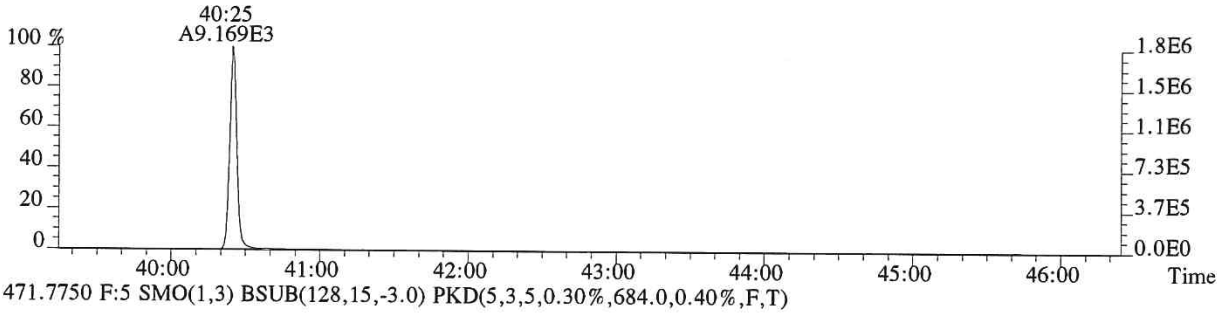
File:P616330 #1-645 Acq: 2-JAN-2019 23:36:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,796.0,0.40%,F,T)



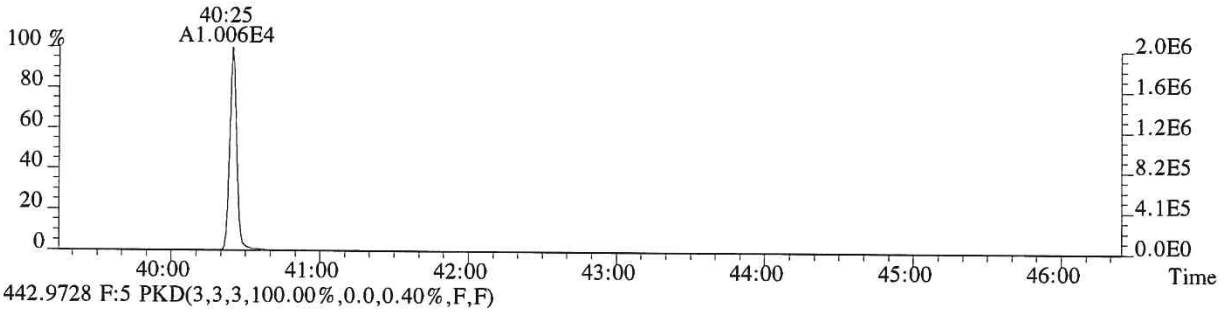
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,528.0,0.40%,F,T)



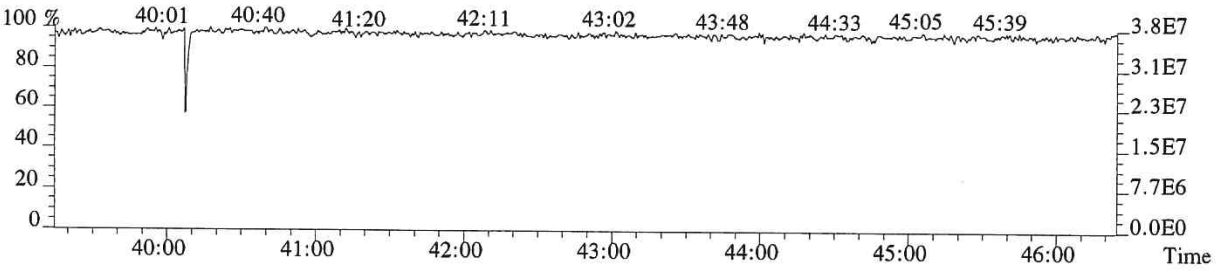
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,576.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,684.0,0.40%,F,T)



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



016482

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
METHOD BLANK

Run #10 Filename P519999 Samp: 1 Inj: 1 Acquired: 16-JAN-19 14:33:01
Processed: 17-JAN-19 11:27:58 Sample ID: EQ1900017-01

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	NotFnd	*	*	*	no	yes	0.942
2	Unk	1,2,3,7,8-PeCDF	NotFnd	*	*	*	no	no	1.012
3	Unk	2,3,4,7,8-PeCDF	NotFnd	*	*	*	no	yes	0.959
4	Unk	1,2,3,4,7,8-HxCDF	NotFnd	*	*	*	no	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	NotFnd	*	*	*	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	NotFnd	*	*	*	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:23	2.284e+01	2.496e+01	0.91	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:39	1.747e+01	1.447e+01	1.21	no	yes	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	yes	1.258
10	Unk	OCDF	NotFnd	*	*	*	no	no	1.359
11	Unk	2,3,7,8-TCDD	NotFnd	*	*	*	no	no	1.085
12	Unk	1,2,3,7,8-PeCDD	NotFnd	*	*	*	no	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:51	1.168e+01	7.863e+00	1.48	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:35	2.604e+01	1.463e+01	1.78	no	no	1.025
17	Unk	OCDD	42:23	5.477e+01	6.314e+01	0.87	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:16	6.594e+04	8.377e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:27	1.075e+05	6.852e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:21	1.011e+05	6.372e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	4.487e+04	8.678e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:08	5.118e+04	9.935e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:38	4.717e+04	9.121e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:23	4.181e+04	8.084e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	3.324e+04	7.260e+04	0.46	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:03	2.925e+04	6.526e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:03	3.286e+04	4.197e+04	0.78	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:38	7.846e+04	4.929e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:46	6.728e+04	5.305e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:51	6.605e+04	5.249e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:34	6.816e+04	6.457e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:23	6.183e+04	6.935e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:30	5.550e+04	6.915e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	7.379e+04	5.667e+04	1.30	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:04	4.462e+04				no	1.014

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www.alsglobal.com

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
METHOD BLANK

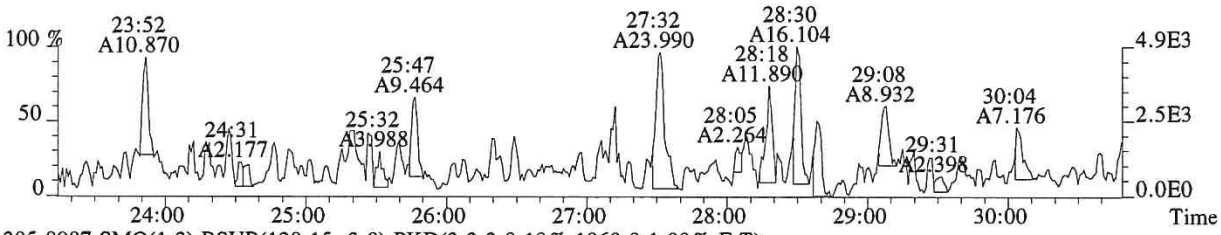
Run #10 Filename P519999 Samp: 1 Inj: 1 Acquired: 16-JAN-19 14:33:01
Processed: 17-JAN-19 11:27:58 LAB. ID: EQ1900017-01

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	*	9.60e+02	*	*	1.86e+03	*
2	1,2,3,7,8-PeCDF	*	6.92e+02	*	*	1.63e+03	*
3	2,3,4,7,8-PeCDF	*	6.92e+02	*	*	1.63e+03	*
4	1,2,3,4,7,8-HxCDF	*	1.40e+03	*	*	9.44e+02	*
5	1,2,3,6,7,8-HxCDF	*	1.40e+03	*	*	9.44e+02	*
6	2,3,4,6,7,8-HxCDF	*	1.40e+03	*	*	9.44e+02	*
7	1,2,3,7,8,9-HxCDF	4.89e+03	1.40e+03	3.5e+00	4.37e+03	9.44e+02	4.6e+00
8	1,2,3,4,6,7,8-HpCDF	3.13e+03	8.48e+02	3.7e+00	2.98e+03	7.76e+02	3.8e+00
9	1,2,3,4,7,8,9-HpCDF	*	8.48e+02	*	*	7.76e+02	*
10	OCDF	*	3.60e+02	*	*	1.44e+03	*
11	2,3,7,8-TCDD	*	3.26e+03	*	*	1.96e+03	*
12	1,2,3,7,8-PeCDD	*	9.60e+02	*	*	3.32e+02	*
13	1,2,3,4,7,8-HxCDD	*	4.64e+02	*	*	8.84e+02	*
14	1,2,3,6,7,8-HxCDD	2.12e+03	4.64e+02	4.6e+00	2.22e+03	8.84e+02	2.5e+00
15	1,2,3,7,8,9-HxCDD	*	4.64e+02	*	*	8.84e+02	*
16	1,2,3,4,6,7,8-HpCDD	4.92e+03	9.40e+02	5.2e+00	3.46e+03	7.56e+02	4.6e+00
17	OCDD	8.60e+03	5.16e+02	1.7e+01	1.02e+04	7.28e+02	1.4e+01
18	13C-2,3,7,8-TCDF	1.24e+07	9.63e+03	1.3e+03	1.57e+07	6.28e+03	2.5e+03
19	13C-1,2,3,7,8-PeCDF	2.07e+07	3.76e+02	5.5e+04	1.33e+07	1.02e+03	1.3e+04
20	13C-2,3,4,7,8-PeCDF	2.06e+07	3.76e+02	5.5e+04	1.30e+07	1.02e+03	1.3e+04
21	13C-1,2,3,4,7,8-HxCDF	9.74e+06	1.05e+03	9.3e+03	1.90e+07	1.05e+03	1.8e+04
22	13C-1,2,3,6,7,8-HxCDF	1.09e+07	1.05e+03	1.0e+04	2.09e+07	1.05e+03	2.0e+04
23	13C-2,3,4,6,7,8-HxCDF	1.03e+07	1.05e+03	9.8e+03	1.98e+07	1.05e+03	1.9e+04
24	13C-1,2,3,7,8,9-HxCDF	8.75e+06	1.05e+03	8.3e+03	1.68e+07	1.05e+03	1.6e+04
25	13C-1,2,3,4,6,7,8-HpCDF	6.93e+06	3.33e+03	2.1e+03	1.53e+07	6.20e+03	2.5e+03
26	13C-1,2,3,4,7,8,9-HpCDF	5.60e+06	3.33e+03	1.7e+03	1.24e+07	6.20e+03	2.0e+03
27	13C-2,3,7,8-TCDD	6.73e+06	6.50e+03	1.0e+03	8.50e+06	2.63e+03	3.2e+03
28	13C-1,2,3,7,8-PeCDD	1.59e+07	1.59e+03	1.0e+04	9.99e+06	1.66e+03	6.0e+03
29	13C-1,2,3,4,7,8-HxCDD	1.53e+07	1.80e+03	8.5e+03	1.20e+07	1.16e+03	1.0e+04
30	13C-1,2,3,6,7,8-HxCDD	1.38e+07	1.80e+03	7.7e+03	1.10e+07	1.16e+03	9.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.36e+07	1.24e+03	1.1e+04	1.27e+07	8.12e+02	1.6e+04
32	13C-OCDD	1.01e+07	9.12e+02	1.1e+04	1.13e+07	4.16e+02	2.7e+04
33	13C-1,2,3,4-TCDD	1.09e+07	6.50e+03	1.7e+03	1.35e+07	2.63e+03	5.1e+03
34	13C-1,2,3,7,8,9-HxCDD	1.49e+07	1.80e+03	8.3e+03	1.19e+07	1.16e+03	1.0e+04
35	37Cl-2,3,7,8-TCDD	8.80e+06	2.06e+03	4.3e+03			

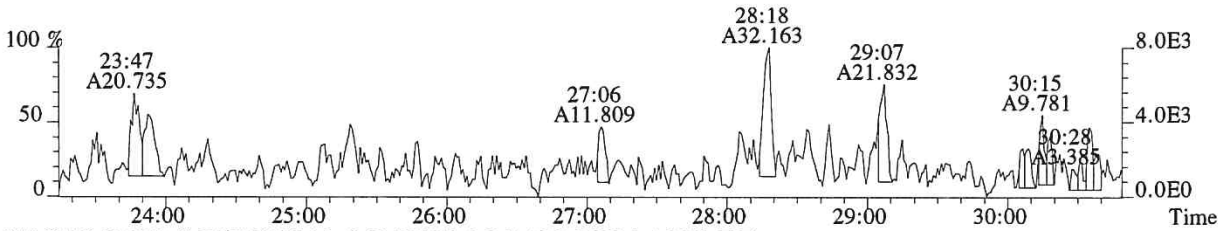
ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
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Office:(713)266-1599. Fax:(713)266-0130

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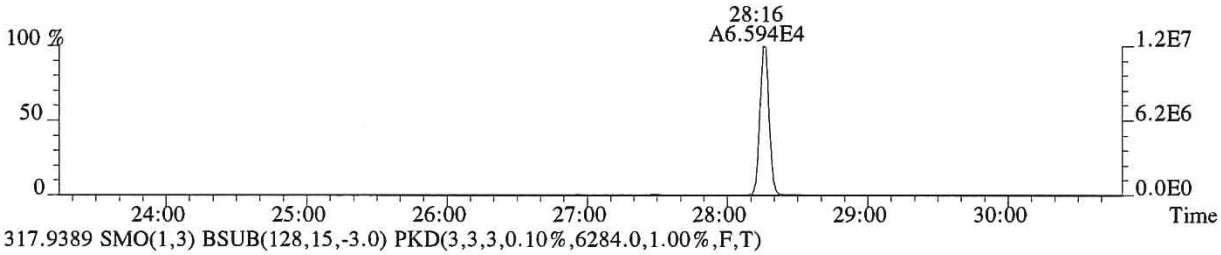
File:P519999 #1-538 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,960.0,1.00%,F,T)



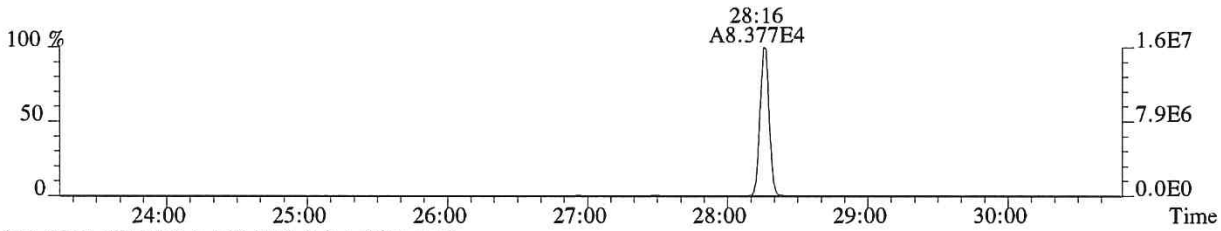
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1860.0,1.00%,F,T)



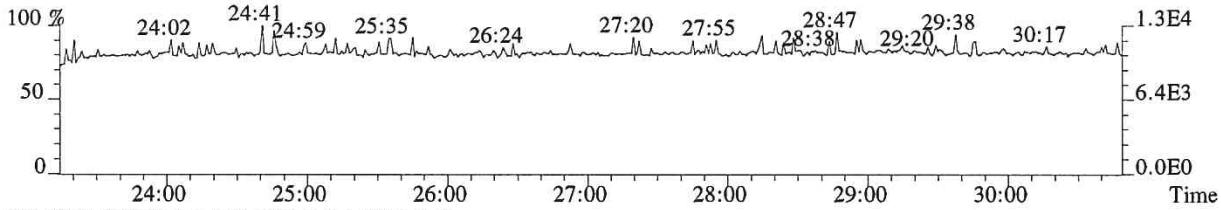
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9632.0,1.00%,F,T)



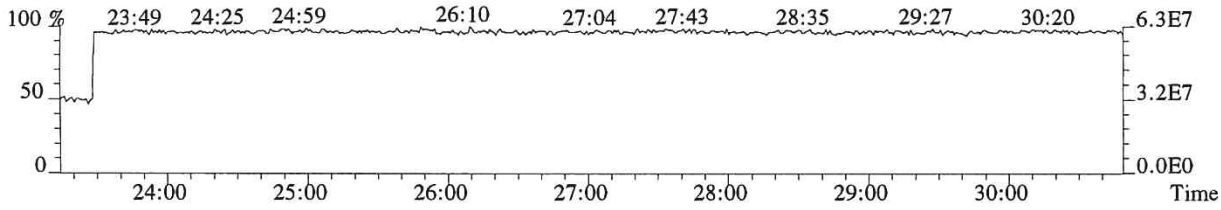
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6284.0,1.00%,F,T)



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



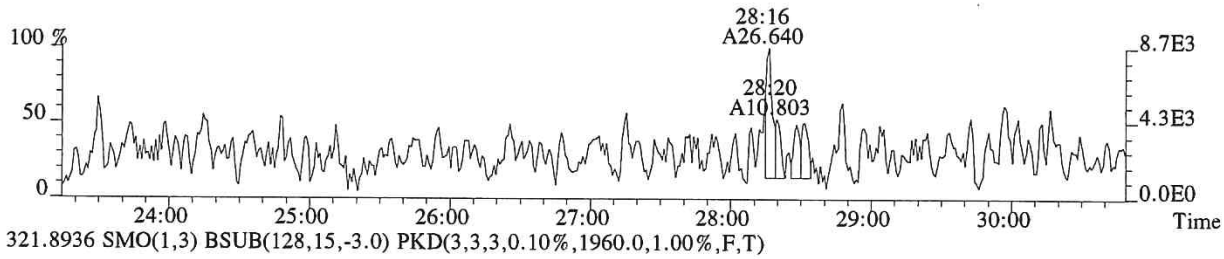
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



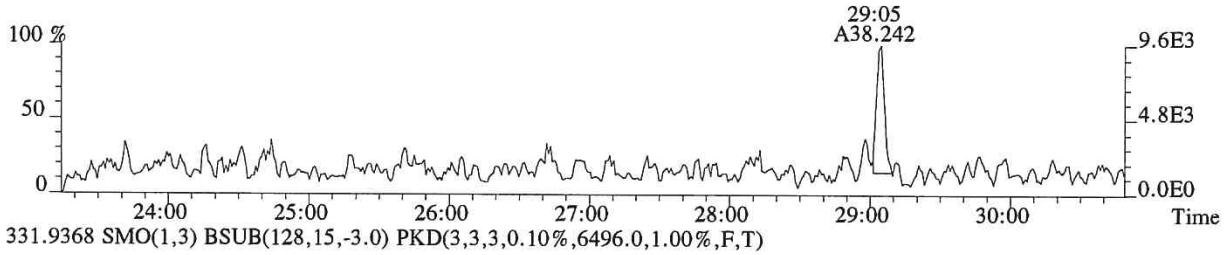
016485

File:P519999 #1-538 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01

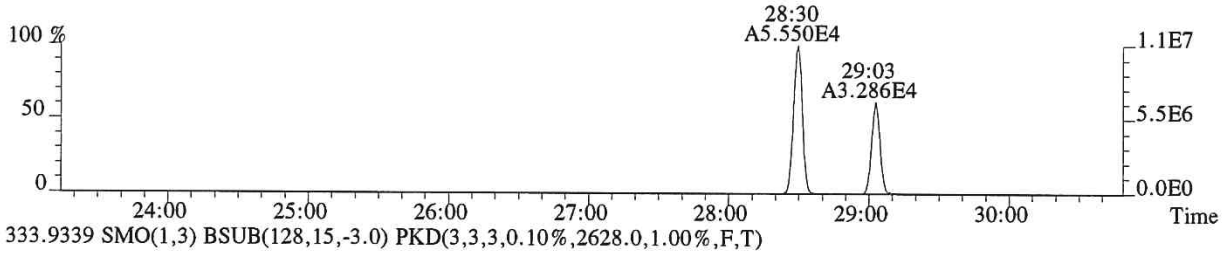
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3256.0,1.00%,F,T)



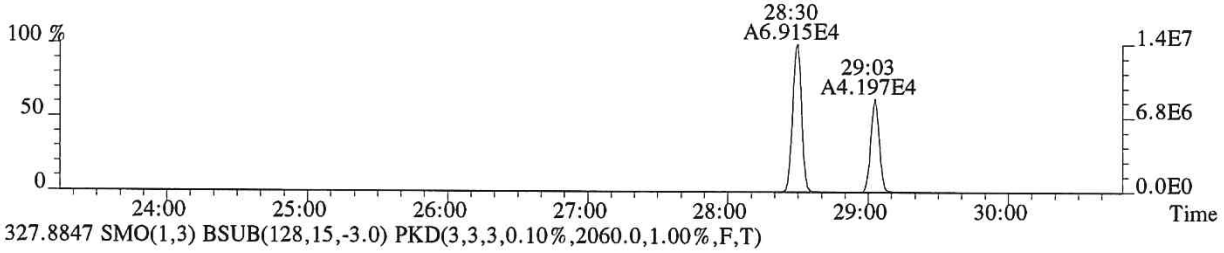
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1960.0,1.00%,F,T)



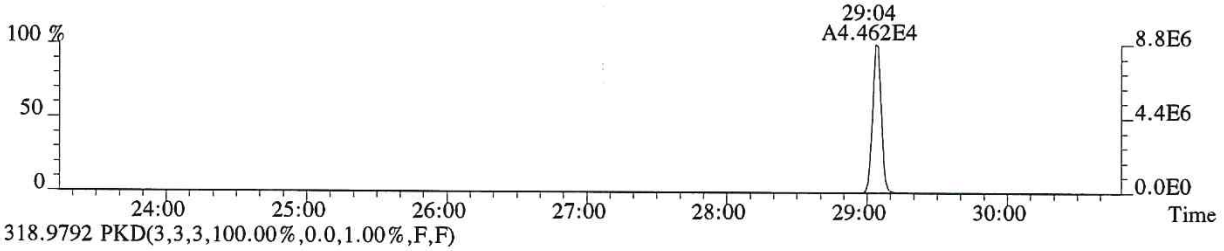
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6496.0,1.00%,F,T)



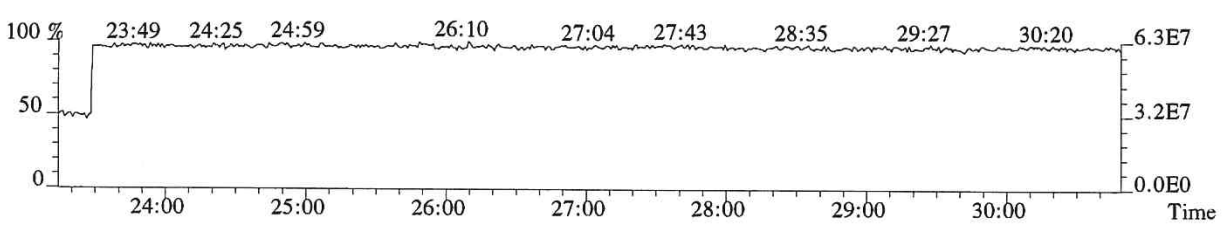
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2628.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2060.0,1.00%,F,T)

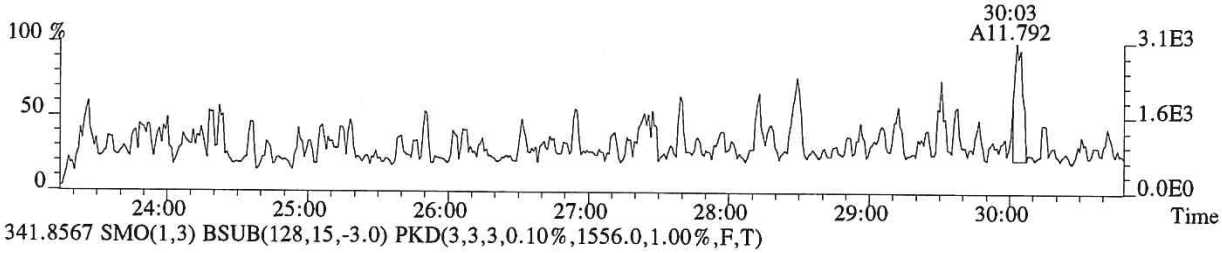


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

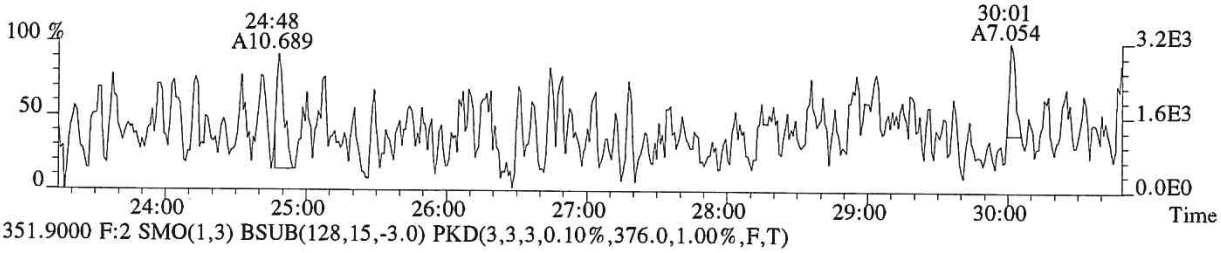


016486

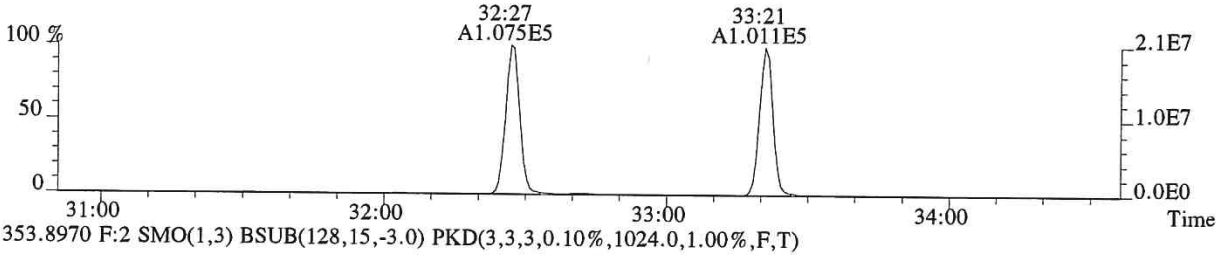
File:P519999 #1-538 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1200.0,1.00%,F,T)



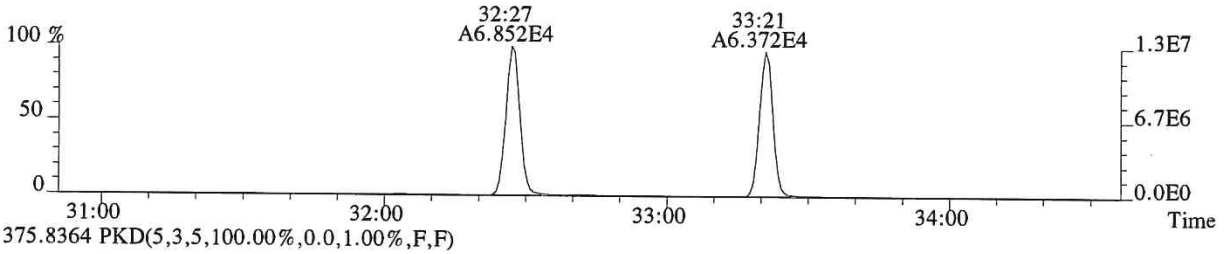
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1556.0,1.00%,F,T)



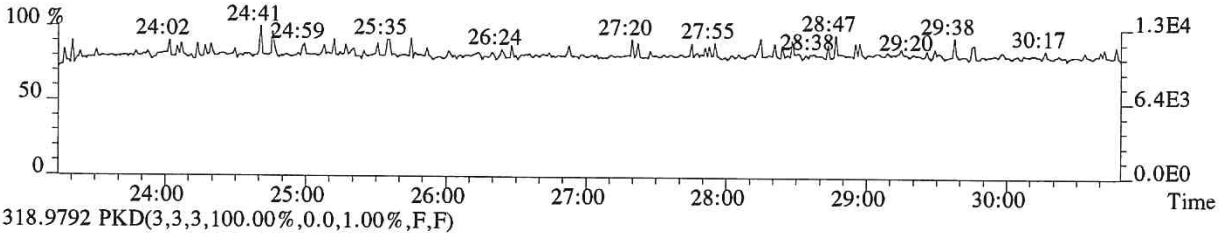
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,376.0,1.00%,F,T)



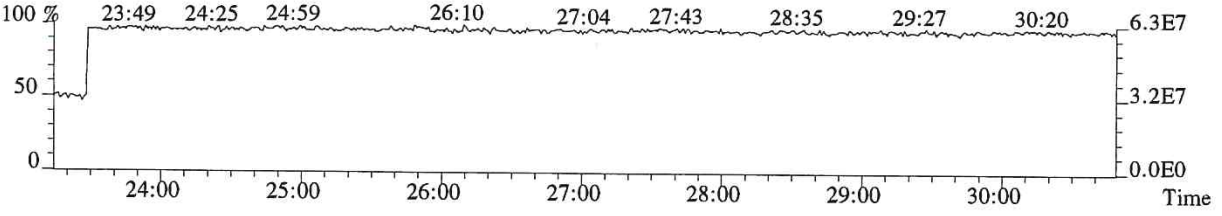
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



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

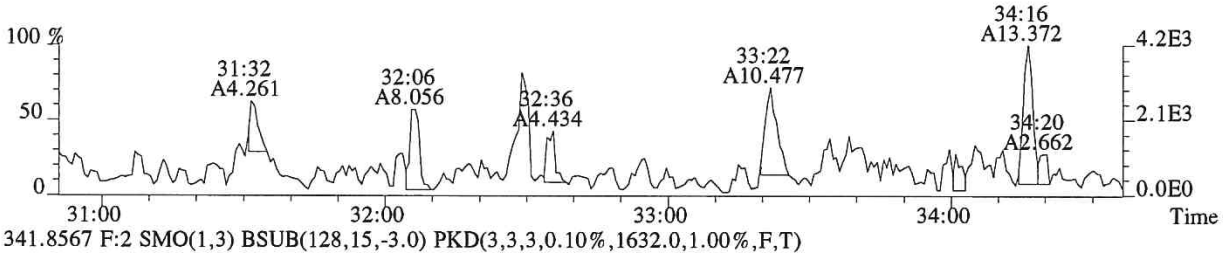


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

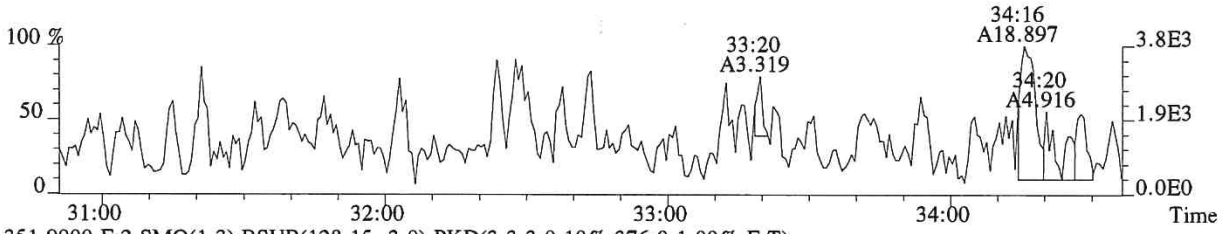


016487

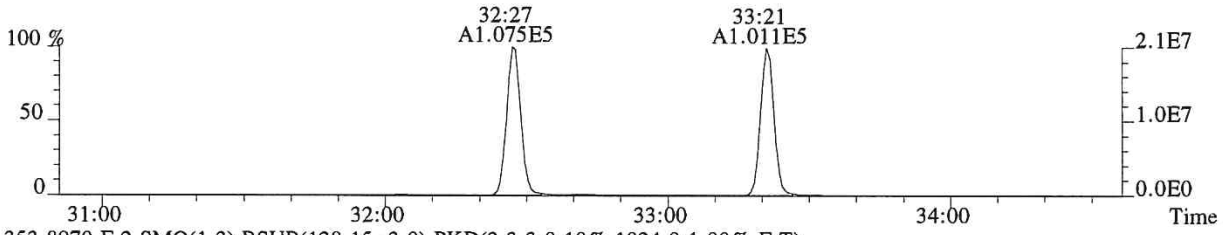
File:P519999 #1-339 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,692.0,1.00%,F,T)



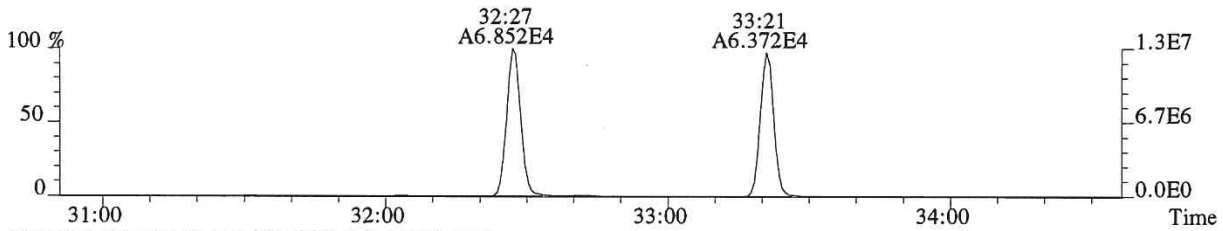
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1632.0,1.00%,F,T)



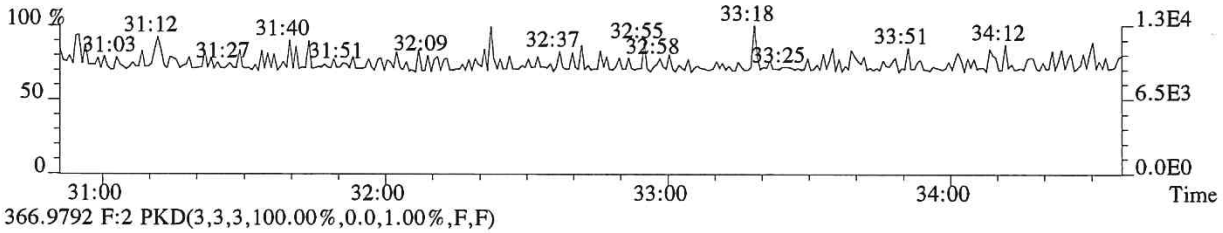
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,376.0,1.00%,F,T)



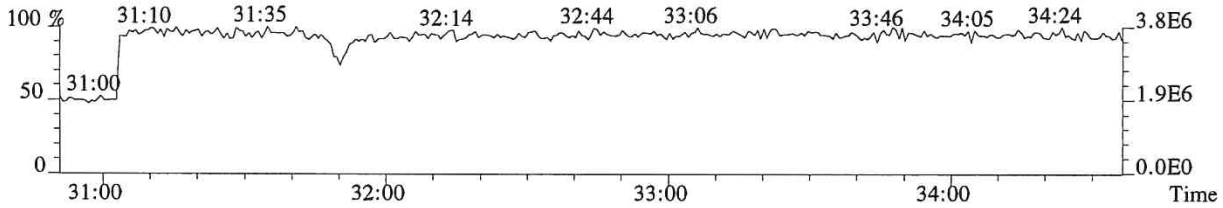
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



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

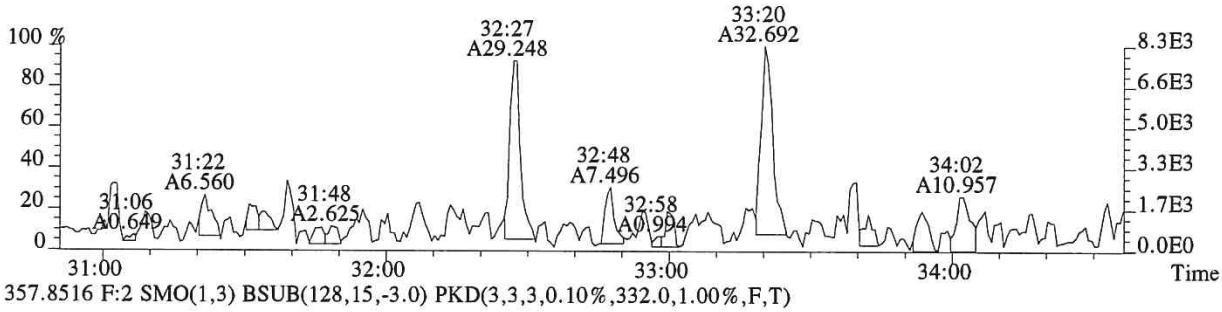


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

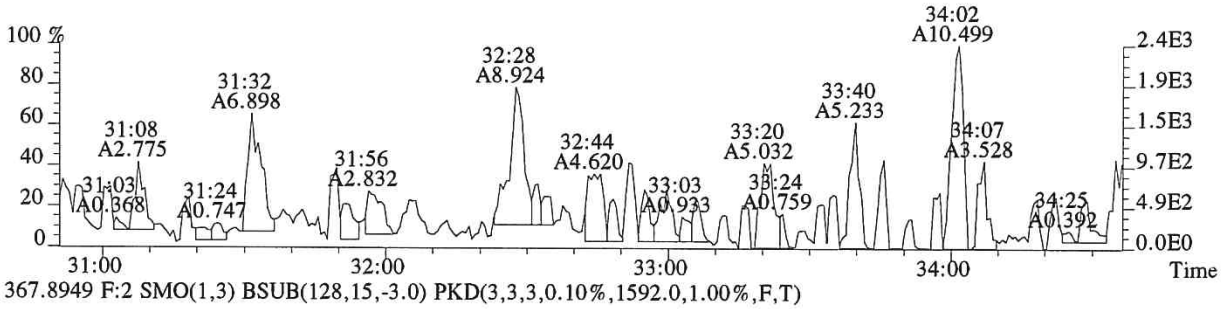


016488

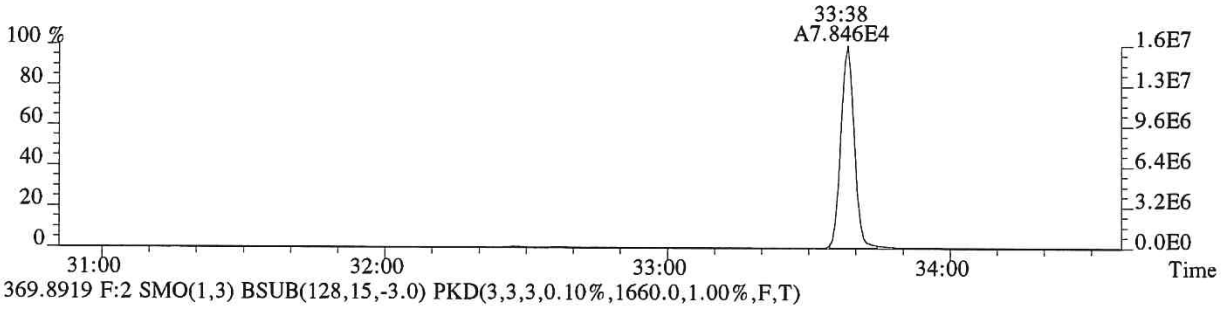
File:P519999 #1-339 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,960.0,1.00%,F,T)



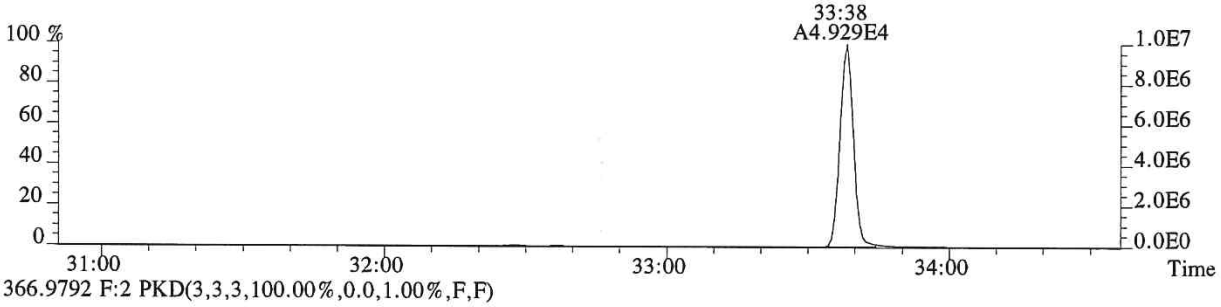
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,332.0,1.00%,F,T)



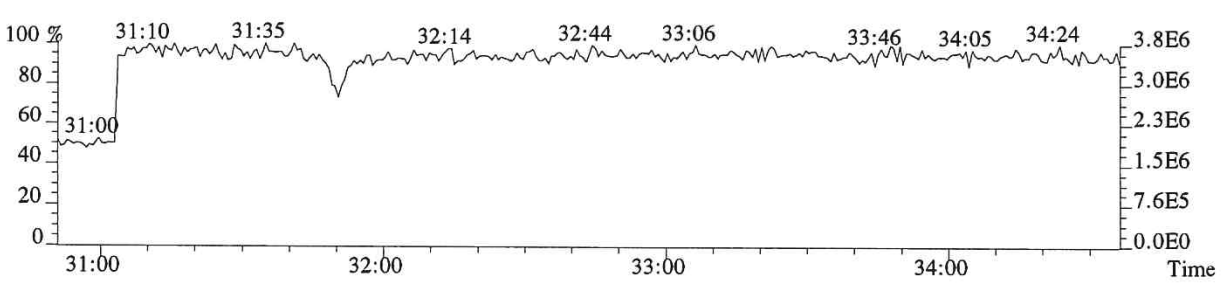
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1592.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1660.0,1.00%,F,T)

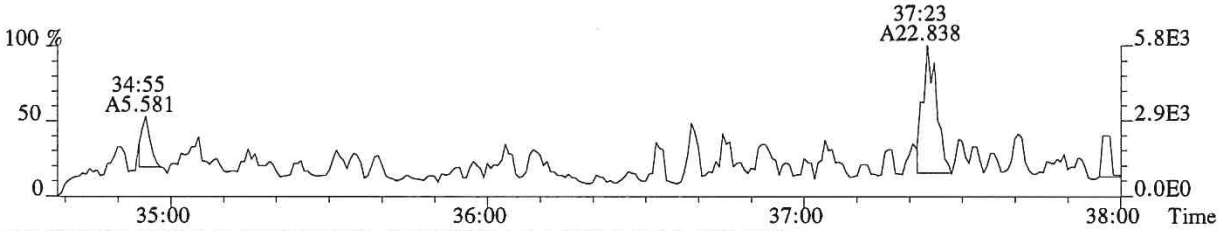


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

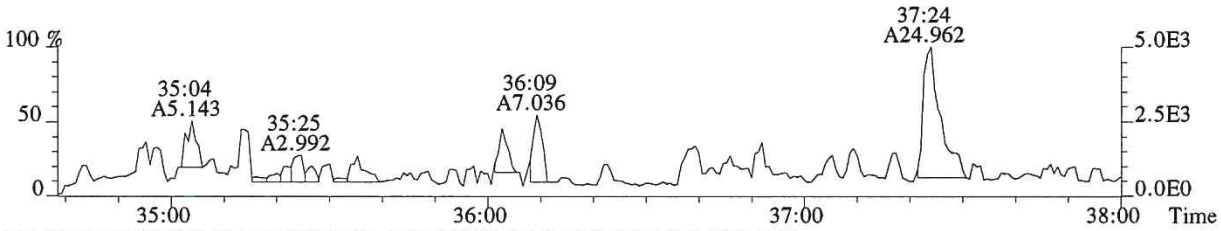


016489

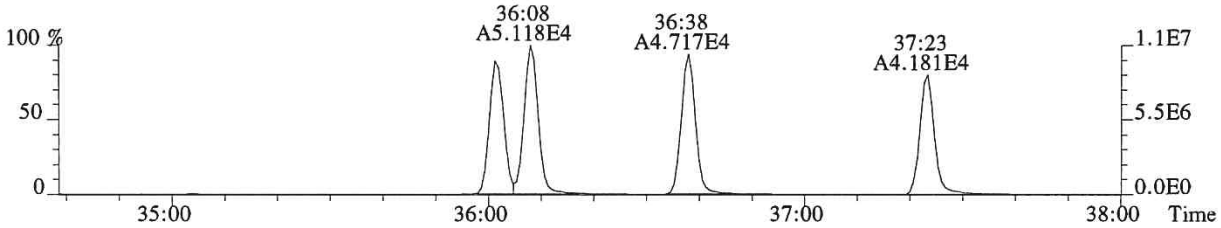
File:P519999 #1-303 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1396.0,0.40%,F,T)



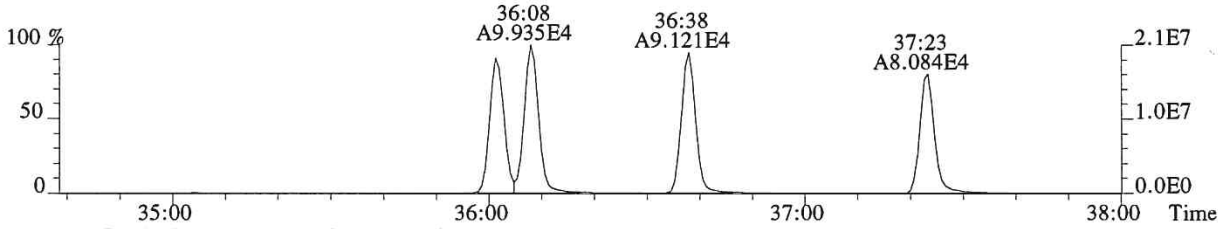
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,944.0,0.40%,F,T)



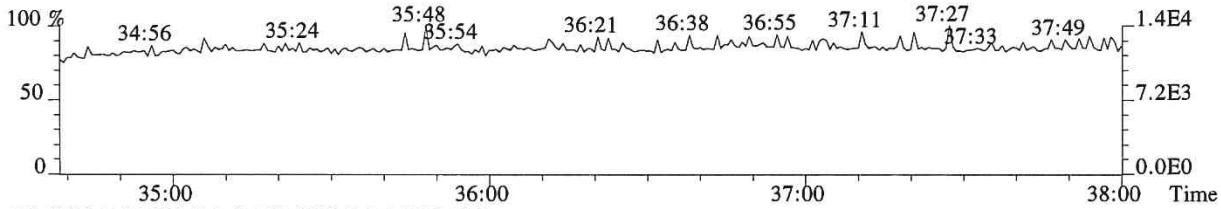
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1048.0,0.40%,F,T)



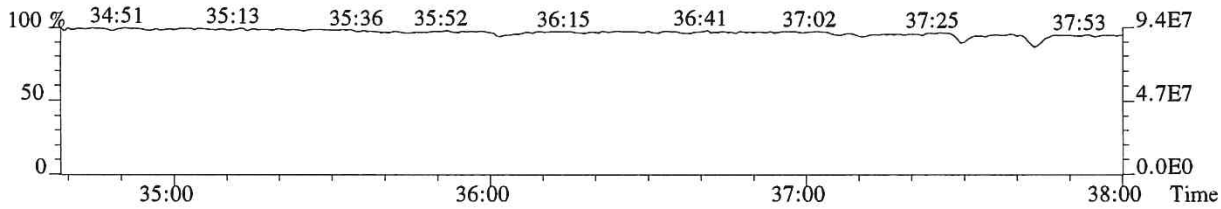
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1052.0,0.40%,F,T)



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

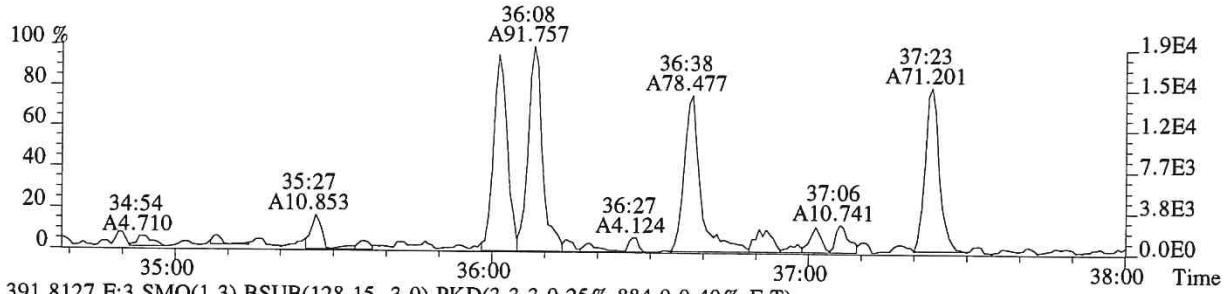


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

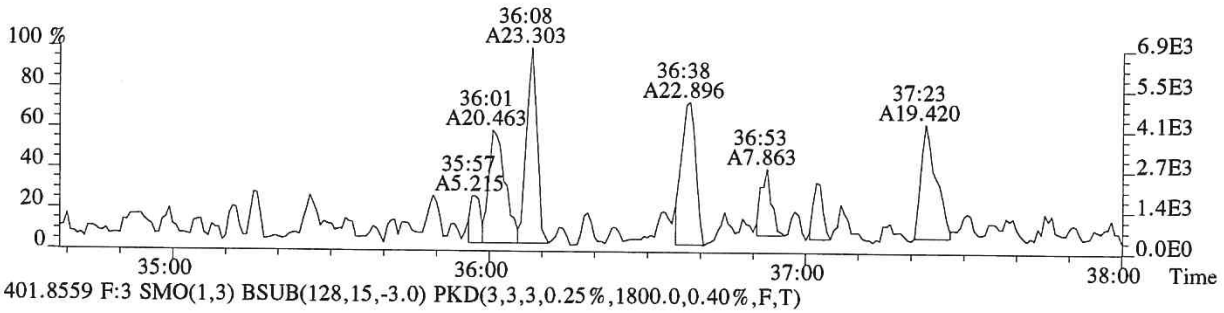


016490

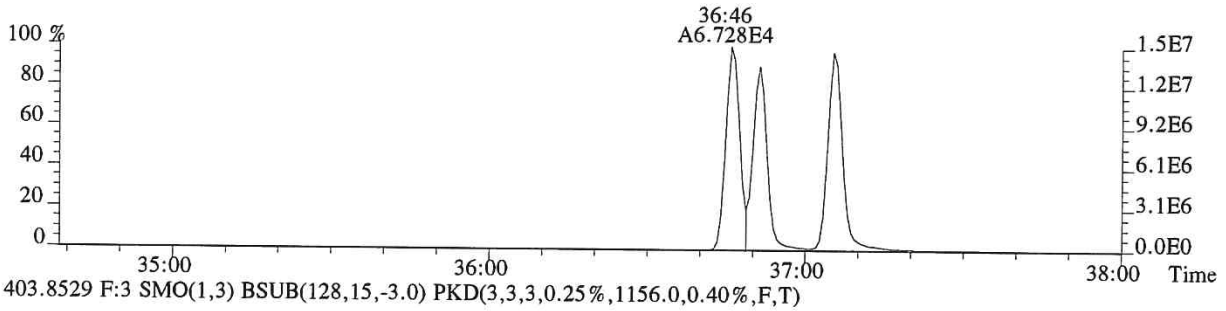
File:P519999 #1-303 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,464.0,0.40%,F,T)



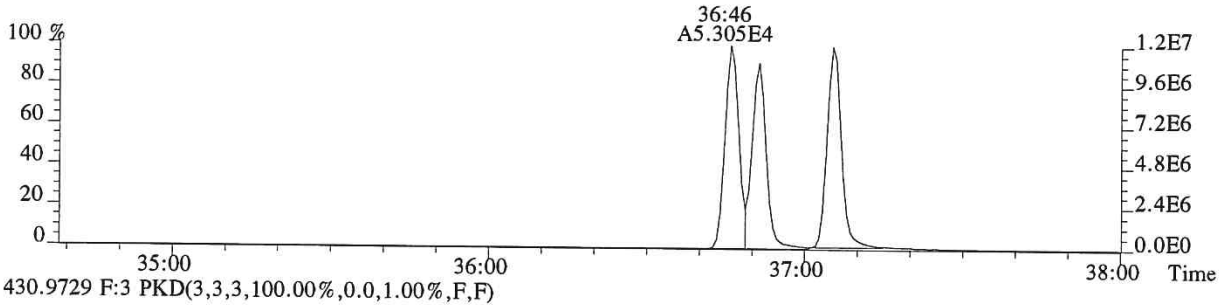
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



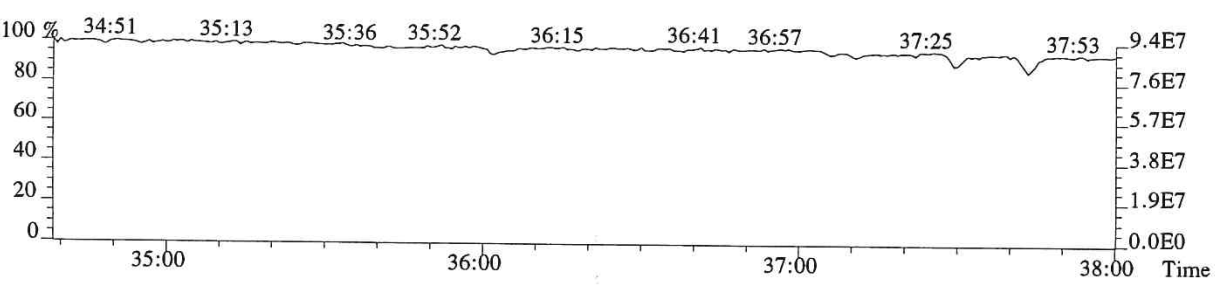
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1800.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1156.0,0.40%,F,T)

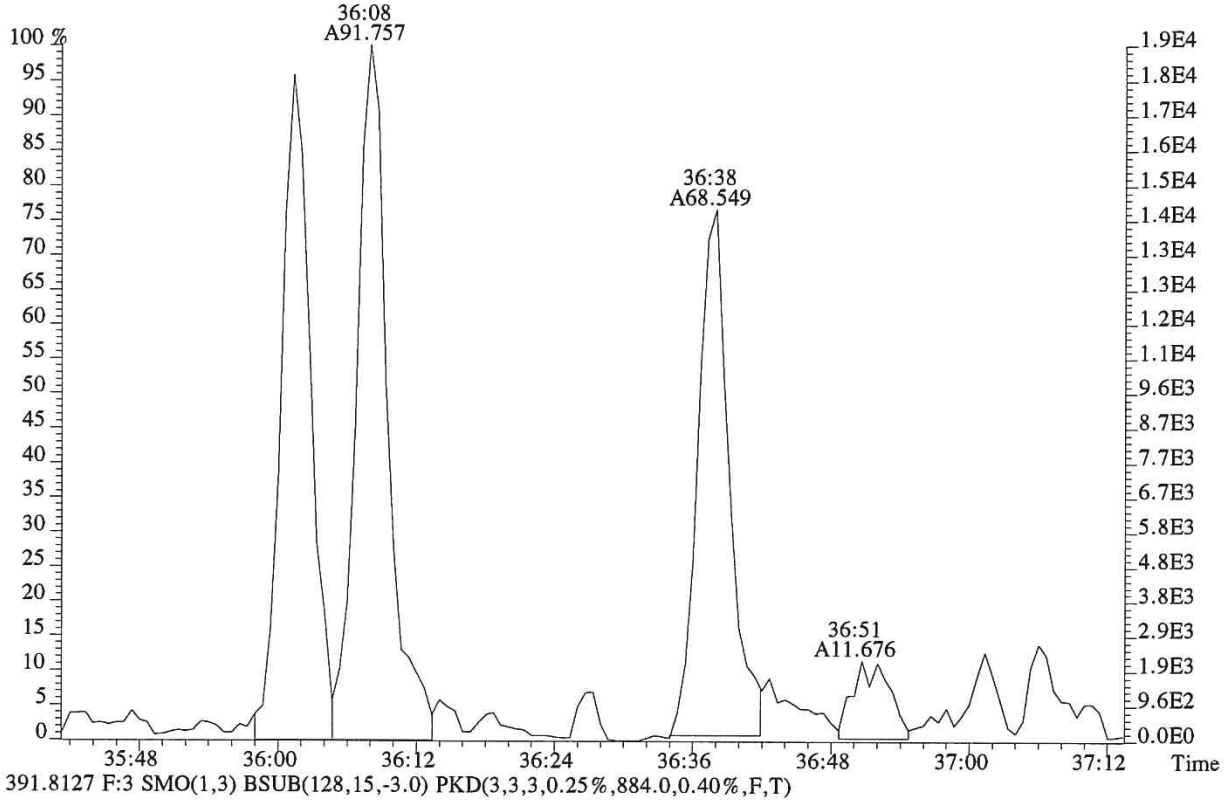


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

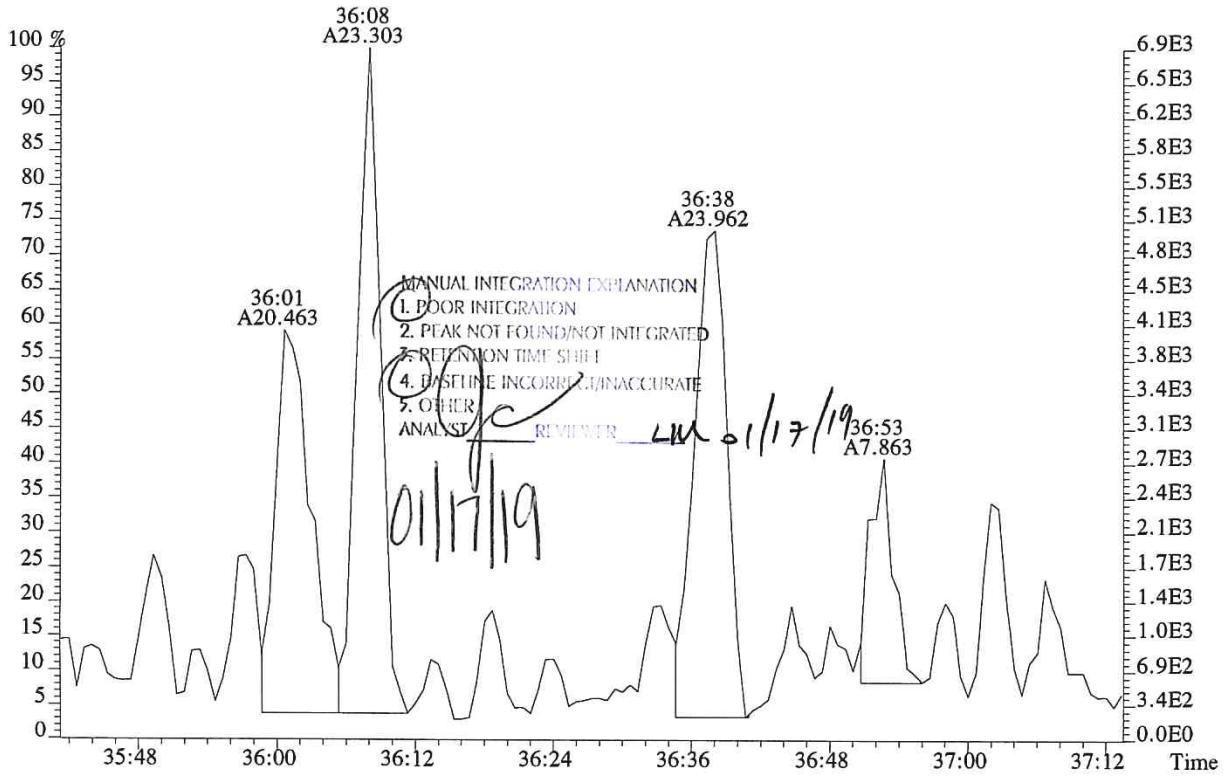


016491

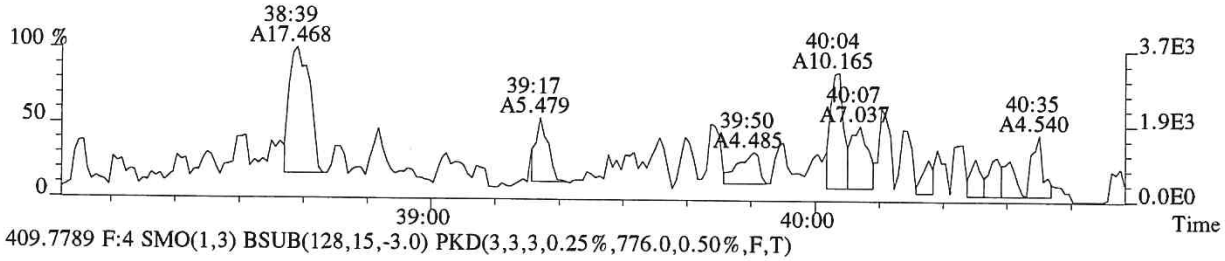
File:P519999 #1-303 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,464.0,0.40%,F,T)



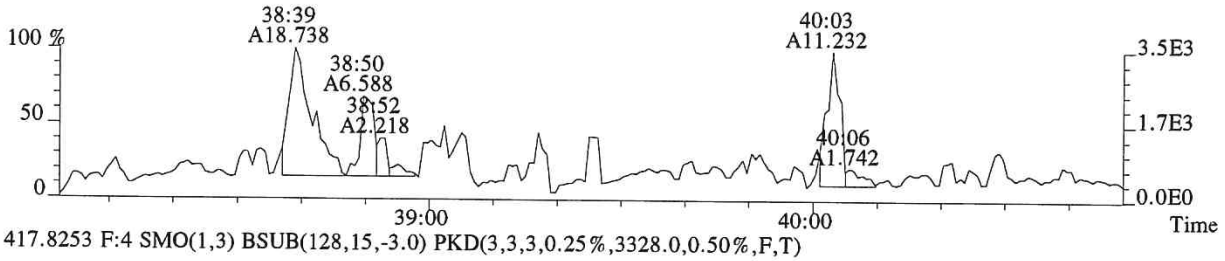
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



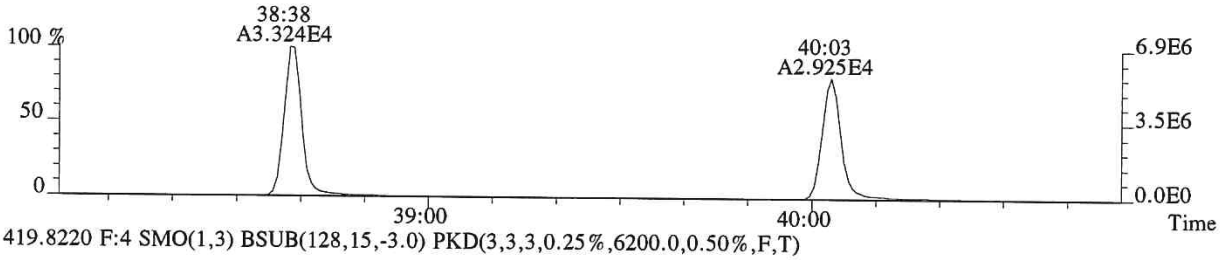
File:P519999 #1-250 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,848.0,0.50%,F,T)



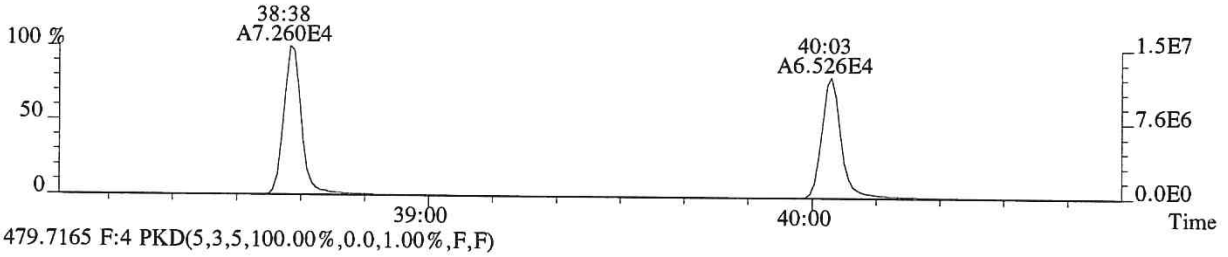
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,776.0,0.50%,F,T)



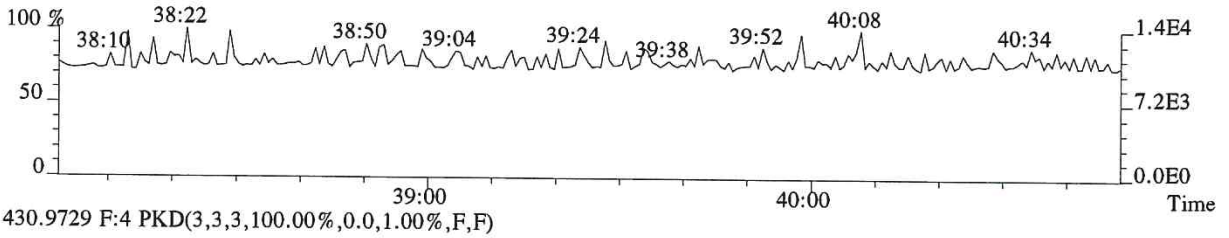
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3328.0,0.50%,F,T)



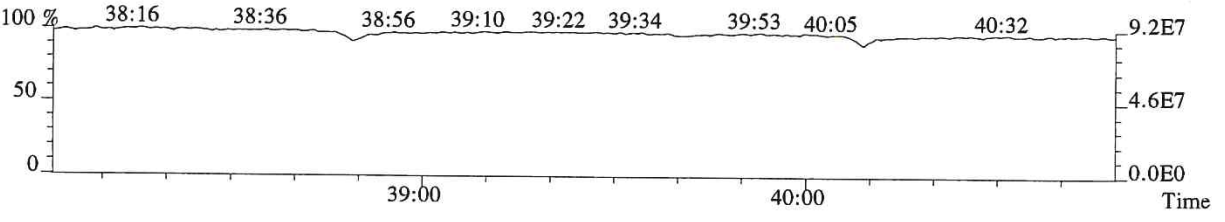
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6200.0,0.50%,F,T)



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

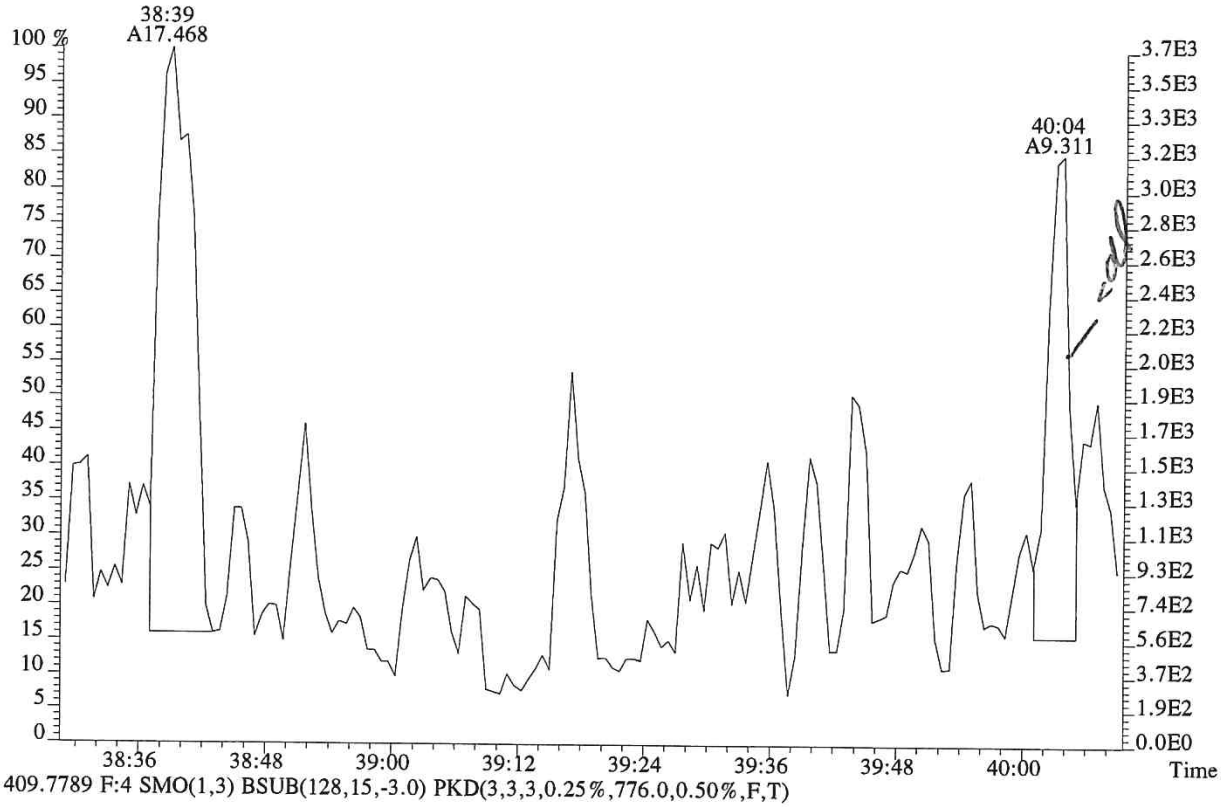


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

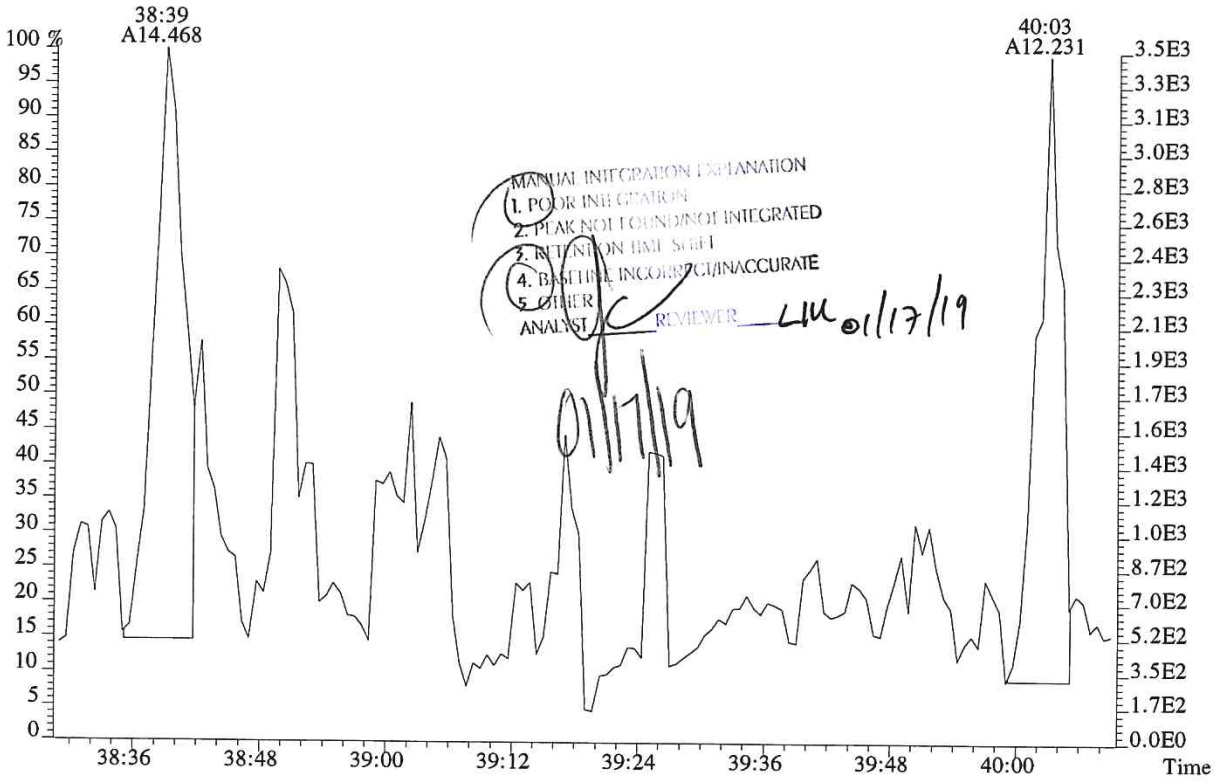


016493

File:P519999 #1-250 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,848.0,0.50%,F,T)



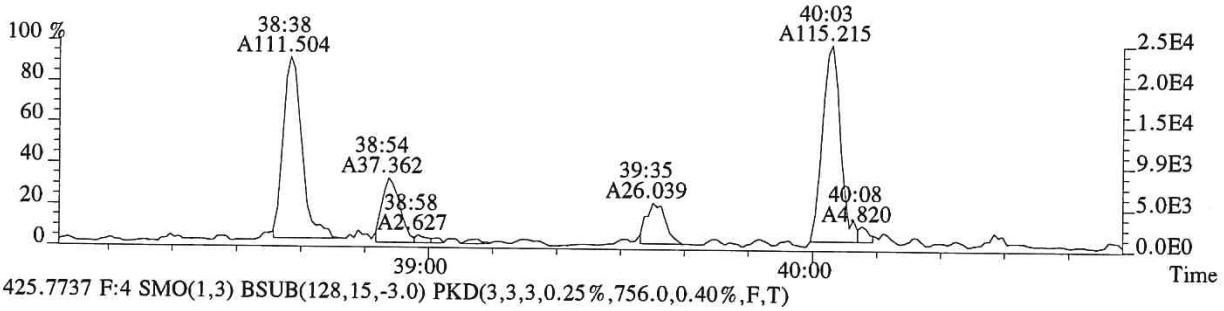
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,776.0,0.50%,F,T)



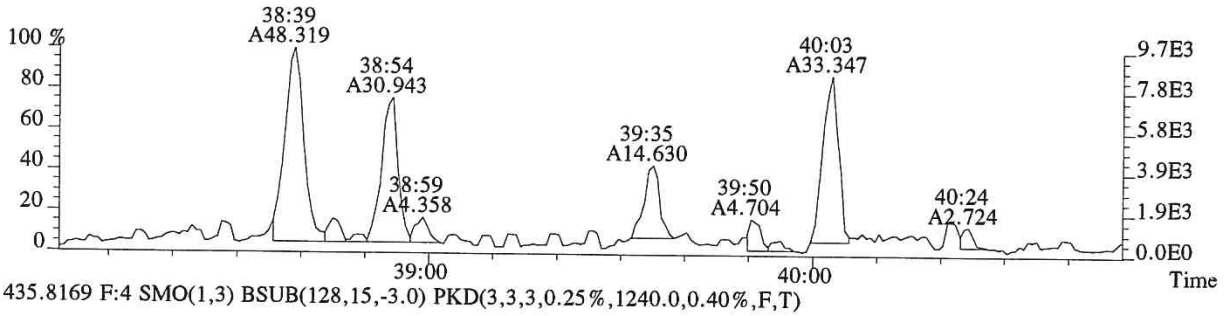
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LM 01/17/19
01/17/19

016494

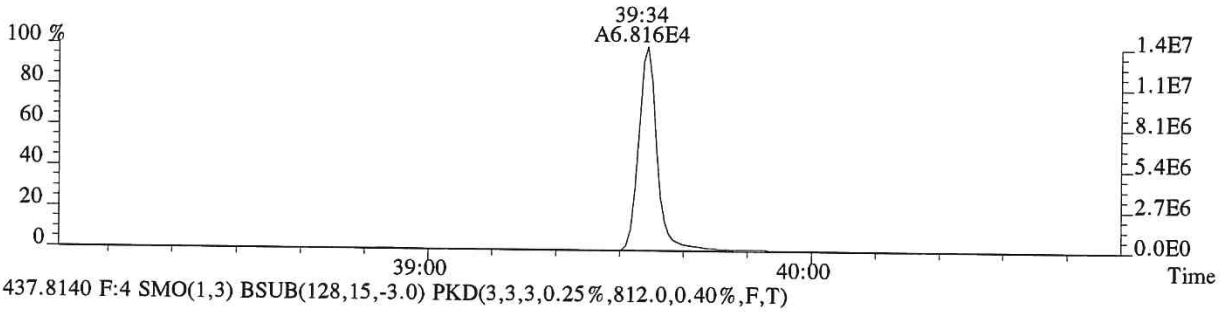
File:P519999 #1-250 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,940.0,0.40%,F,T)



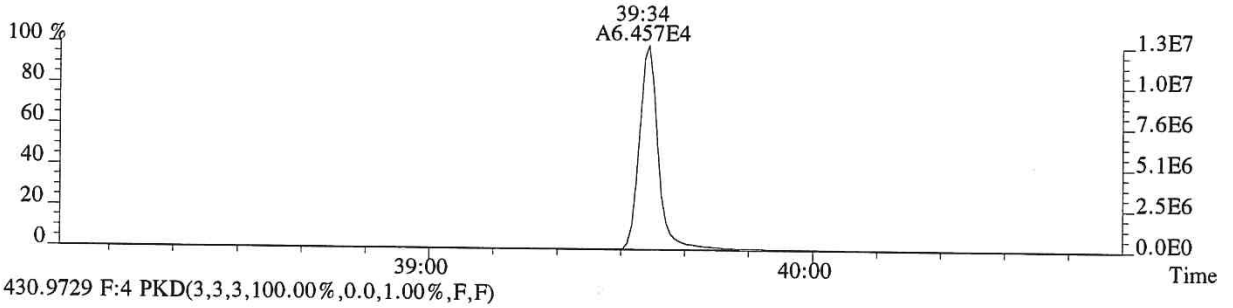
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,756.0,0.40%,F,T)



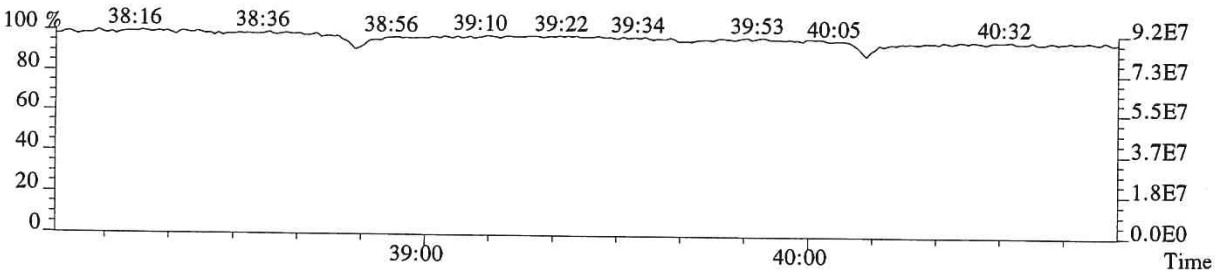
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1240.0,0.40%,F,T)



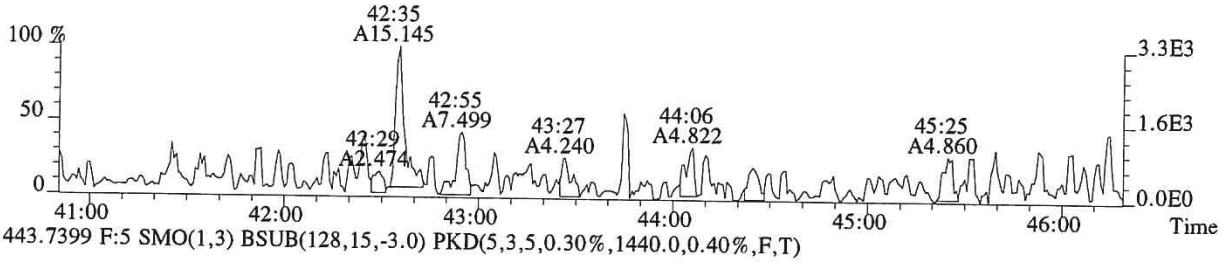
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,812.0,0.40%,F,T)



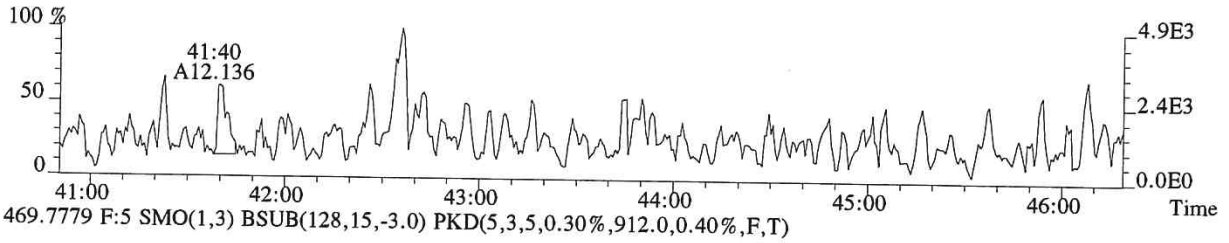
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



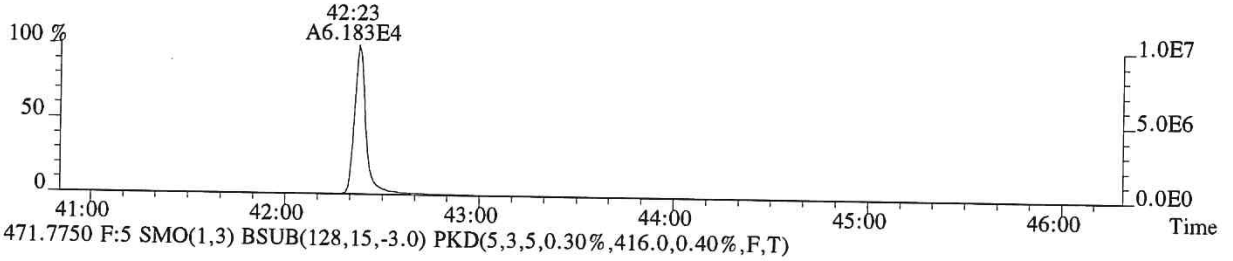
File:P519999 #1-493 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,360.0,0.40%,F,T)



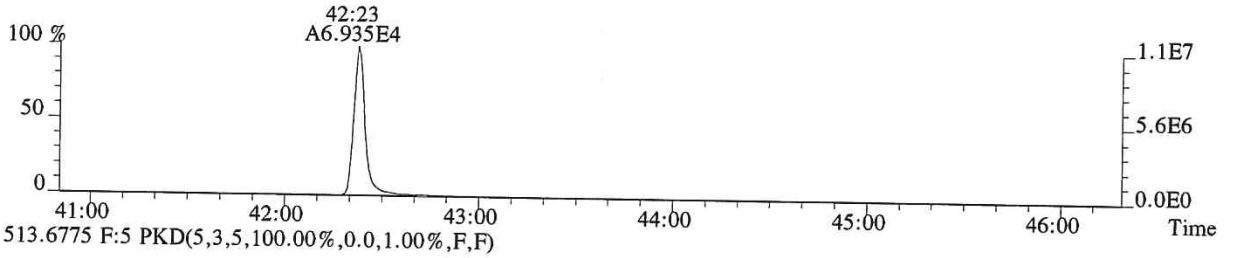
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1440.0,0.40%,F,T)



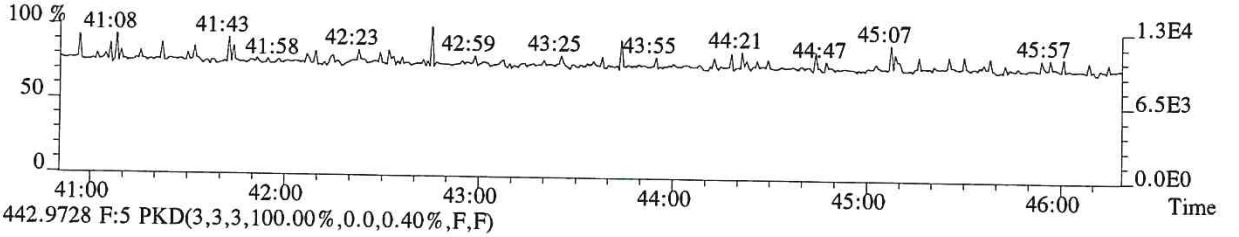
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,912.0,0.40%,F,T)



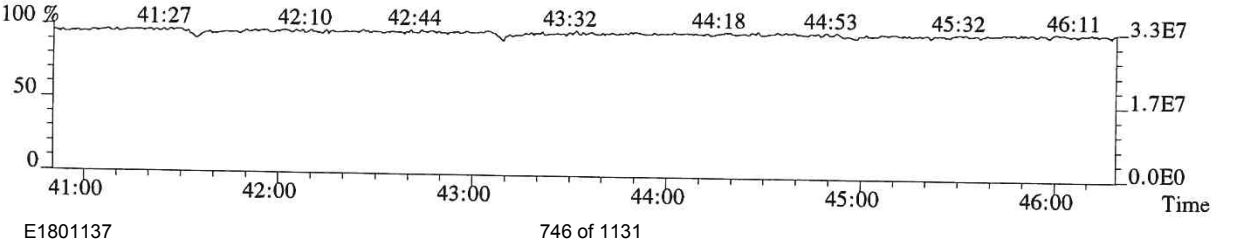
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,416.0,0.40%,F,T)



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

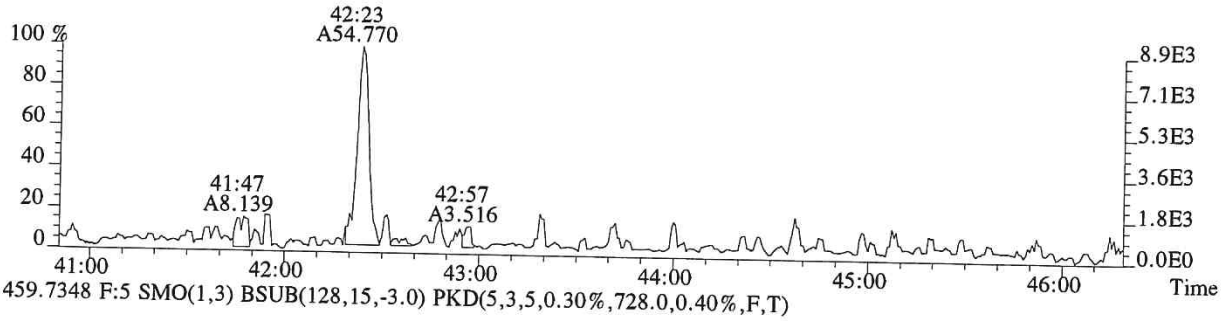


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

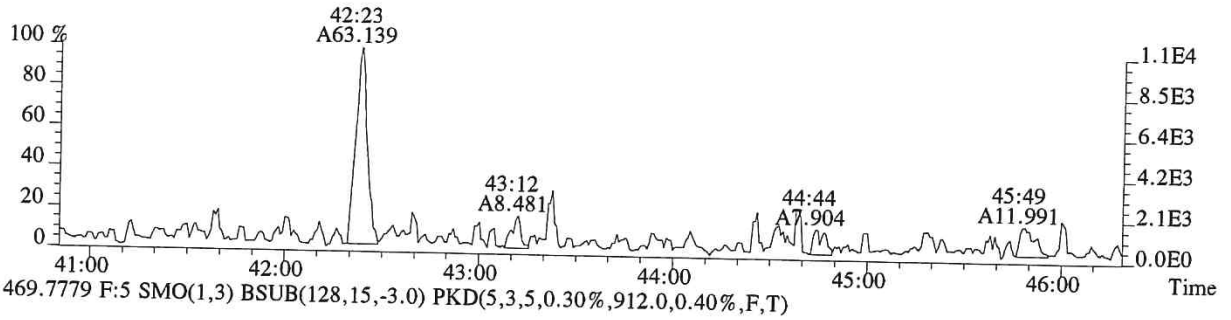


016496

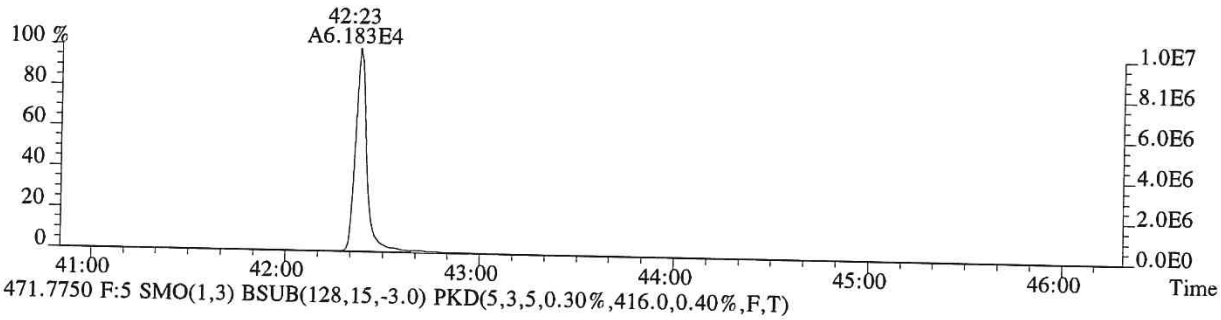
File:P519999 #1-493 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,516.0,0.40%,F,T)



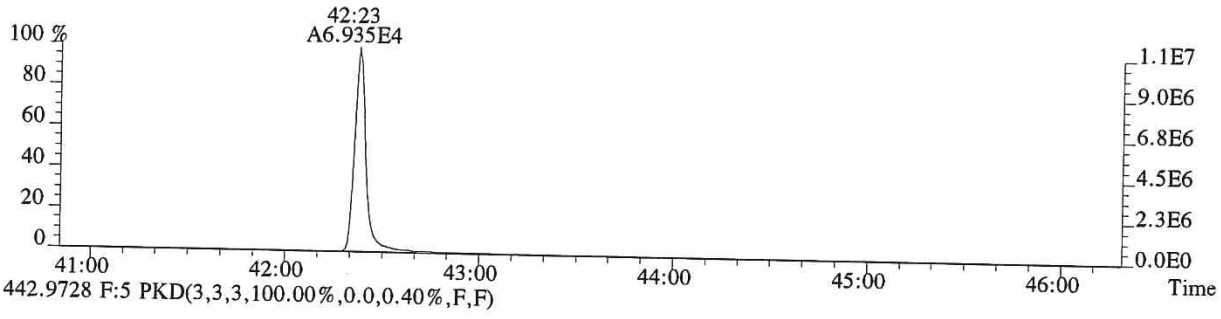
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,728.0,0.40%,F,T)



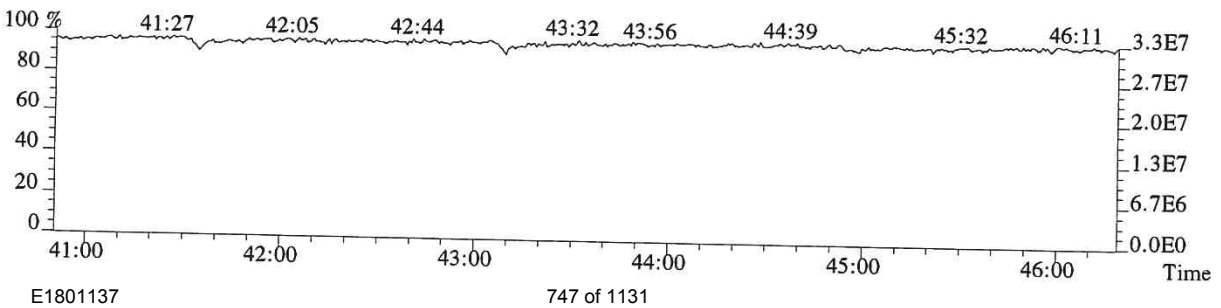
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,912.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,416.0,0.40%,F,T)



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



016497

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
LCS

Run #18 Filename P520007 Samp: 1 Inj: 1 Acquired: 16-JAN-19 21:02:38
Processed: 17-JAN-19 11:28:05 Sample ID: EQ1900017-02

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:16	4.831e+03	6.710e+03	0.72	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:28	4.494e+04	2.985e+04	1.51	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:21	4.316e+04	2.891e+04	1.49	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:01	4.158e+04	3.387e+04	1.23	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:08	4.270e+04	3.565e+04	1.20	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:38	3.932e+04	3.321e+04	1.18	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:23	3.577e+04	2.956e+04	1.21	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:38	3.304e+04	3.275e+04	1.01	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:02	2.927e+04	2.848e+04	1.03	yes	no	1.258
10	Unk	OCDF	42:35	3.920e+04	4.470e+04	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:04	4.007e+03	5.174e+03	0.77	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:38	3.310e+04	2.099e+04	1.58	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:46	2.994e+04	2.406e+04	1.24	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:51	3.135e+04	2.477e+04	1.27	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:05	3.212e+04	2.472e+04	1.30	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:34	2.530e+04	2.349e+04	1.08	yes	no	1.025
17	Unk	OCDD	42:23	3.103e+04	3.498e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:16	5.381e+04	6.808e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:26	9.493e+04	6.057e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:20	8.832e+04	5.620e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	4.208e+04	8.231e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:07	4.727e+04	9.164e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:37	4.227e+04	8.161e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:22	3.911e+04	7.636e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	3.036e+04	6.776e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:02	2.764e+04	6.154e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:02	2.724e+04	3.450e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:38	6.869e+04	4.371e+04	1.57	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:45	6.238e+04	4.956e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:51	5.901e+04	4.639e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:33	6.280e+04	5.940e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:22	5.399e+04	5.991e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:29	5.224e+04	6.612e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	7.833e+04	6.149e+04	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:04	3.922e+04				no	1.014

$$\text{OCDD} = \frac{(3.103e{+}04 + 3.498e{+}04) \times 4000\ \text{pg} \times 1}{(5.399e{+}04 + 5.991e{+}04) \times \text{g} \times / 100 \times 1.118}$$

ALS ENVIRONMENTAL -- HOUSTON HRMS
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Signal/Noise Height Ratio Summary

CLIENT ID.
LCS

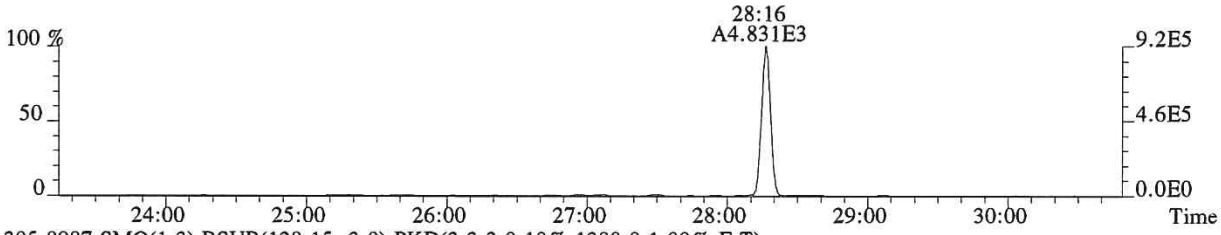
Run #18 Filename P520007 Samp: 1 Inj: 1 Acquired: 16-JAN-19 21:02:38
Processed: 17-JAN-19 11:28:05 LAB. ID: EQ1900017-02

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	9.22e+05	6.92e+02	1.3e+03	1.32e+06	1.39e+03	9.5e+02
2	1,2,3,7,8-PeCDF	8.75e+06	1.08e+03	8.1e+03	5.78e+06	2.07e+03	2.8e+03
3	2,3,4,7,8-PeCDF	8.86e+06	1.08e+03	8.2e+03	5.89e+06	2.07e+03	2.8e+03
4	1,2,3,4,7,8-HxCDF	9.35e+06	1.18e+03	7.9e+03	7.55e+06	1.11e+03	6.8e+03
5	1,2,3,6,7,8-HxCDF	9.21e+06	1.18e+03	7.8e+03	7.68e+06	1.11e+03	6.9e+03
6	2,3,4,6,7,8-HxCDF	8.68e+06	1.18e+03	7.3e+03	7.28e+06	1.11e+03	6.6e+03
7	1,2,3,7,8,9-HxCDF	7.50e+06	1.18e+03	6.3e+03	6.30e+06	1.11e+03	5.7e+03
8	1,2,3,4,6,7,8-HpCDF	7.32e+06	1.58e+03	4.6e+03	7.20e+06	1.12e+03	6.4e+03
9	1,2,3,4,7,8,9-HpCDF	5.71e+06	1.58e+03	3.6e+03	5.59e+06	1.12e+03	5.0e+03
10	OCDF	6.54e+06	5.20e+02	1.3e+04	7.34e+06	1.78e+03	4.1e+03
11	2,3,7,8-TCDD	8.11e+05	3.45e+03	2.3e+02	1.03e+06	1.57e+03	6.6e+02
12	1,2,3,7,8-PeCDD	6.86e+06	1.54e+03	4.5e+03	4.35e+06	5.68e+02	7.7e+03
13	1,2,3,4,7,8-HxCDD	6.87e+06	7.36e+02	9.3e+03	5.42e+06	8.80e+02	6.2e+03
14	1,2,3,6,7,8-HxCDD	6.73e+06	7.36e+02	9.1e+03	5.25e+06	8.80e+02	6.0e+03
15	1,2,3,7,8,9-HxCDD	6.90e+06	7.36e+02	9.4e+03	5.45e+06	8.80e+02	6.2e+03
16	1,2,3,4,6,7,8-HpCDD	5.03e+06	1.09e+03	4.6e+03	4.75e+06	5.00e+02	9.5e+03
17	OCDD	5.21e+06	4.48e+02	1.2e+04	5.71e+06	9.20e+02	6.2e+03
18	13C-2,3,7,8-TCDF	1.01e+07	7.39e+03	1.4e+03	1.28e+07	4.15e+03	3.1e+03
19	13C-1,2,3,7,8-PeCDF	1.85e+07	8.92e+02	2.1e+04	1.18e+07	7.60e+02	1.6e+04
20	13C-2,3,4,7,8-PeCDF	1.82e+07	8.92e+02	2.0e+04	1.17e+07	7.60e+02	1.5e+04
21	13C-1,2,3,4,7,8-HxCDF	9.47e+06	1.43e+03	6.6e+03	1.84e+07	2.30e+03	8.0e+03
22	13C-1,2,3,6,7,8-HxCDF	1.02e+07	1.43e+03	7.2e+03	1.97e+07	2.30e+03	8.6e+03
23	13C-2,3,4,6,7,8-HxCDF	9.19e+06	1.43e+03	6.4e+03	1.77e+07	2.30e+03	7.7e+03
24	13C-1,2,3,7,8,9-HxCDF	8.06e+06	1.43e+03	5.6e+03	1.59e+07	2.30e+03	6.9e+03
25	13C-1,2,3,4,6,7,8-HpCDF	6.64e+06	3.83e+03	1.7e+03	1.48e+07	4.58e+03	3.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	5.35e+06	3.83e+03	1.4e+03	1.19e+07	4.58e+03	2.6e+03
27	13C-2,3,7,8-TCDD	5.48e+06	6.35e+03	8.6e+02	6.93e+06	3.33e+03	2.1e+03
28	13C-1,2,3,7,8-PeCDD	1.41e+07	9.36e+02	1.5e+04	8.85e+06	1.20e+03	7.4e+03
29	13C-1,2,3,4,7,8-HxCDD	1.42e+07	1.96e+03	7.2e+03	1.12e+07	1.36e+03	8.2e+03
30	13C-1,2,3,6,7,8-HxCDD	1.26e+07	1.96e+03	6.4e+03	9.82e+06	1.36e+03	7.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.26e+07	1.08e+03	1.2e+04	1.20e+07	7.80e+02	1.5e+04
32	13C-OCDD	8.94e+06	6.24e+02	1.4e+04	9.84e+06	6.76e+02	1.5e+04
33	13C-1,2,3,4-TCDD	1.03e+07	6.35e+03	1.6e+03	1.29e+07	3.33e+03	3.9e+03
34	13C-1,2,3,7,8,9-HxCDD	1.67e+07	1.96e+03	8.5e+03	1.33e+07	1.36e+03	9.7e+03
35	37Cl-2,3,7,8-TCDD	7.93e+06	2.53e+03	3.1e+03			

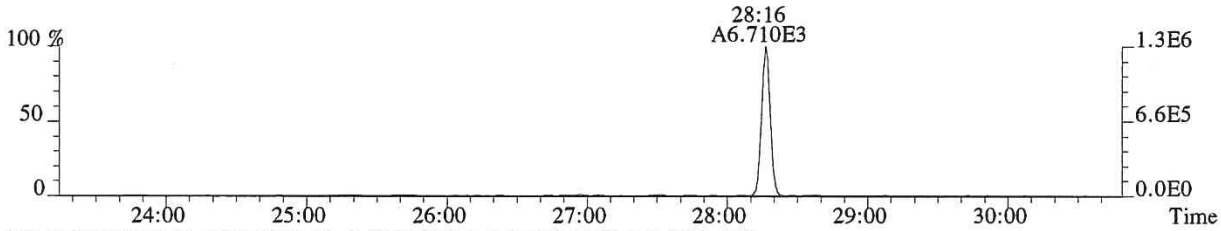
ALS ENVIRONMENTAL
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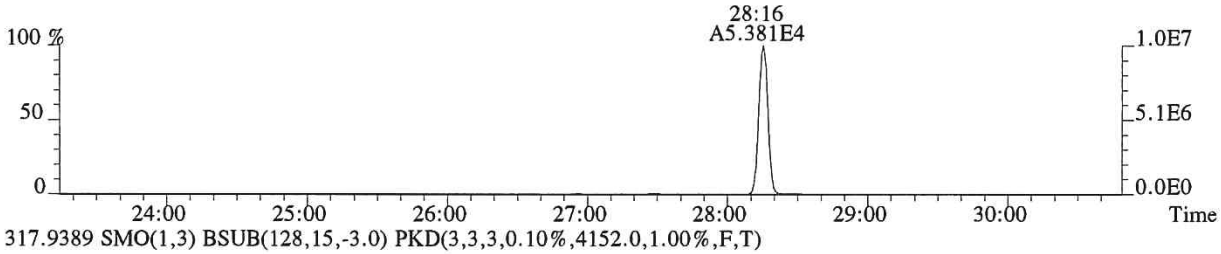
File:P520007 #1-538 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,692.0,1.00%,F,T)



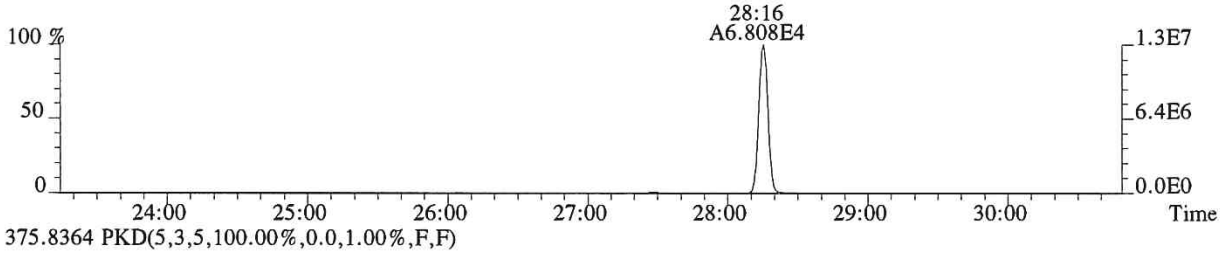
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1388.0,1.00%,F,T)



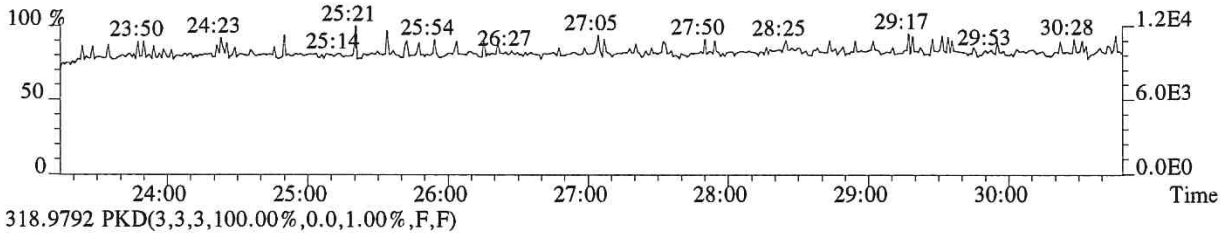
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7388.0,1.00%,F,T)



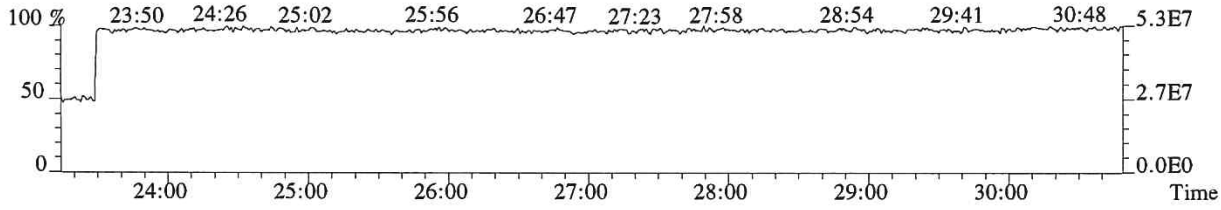
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4152.0,1.00%,F,T)



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

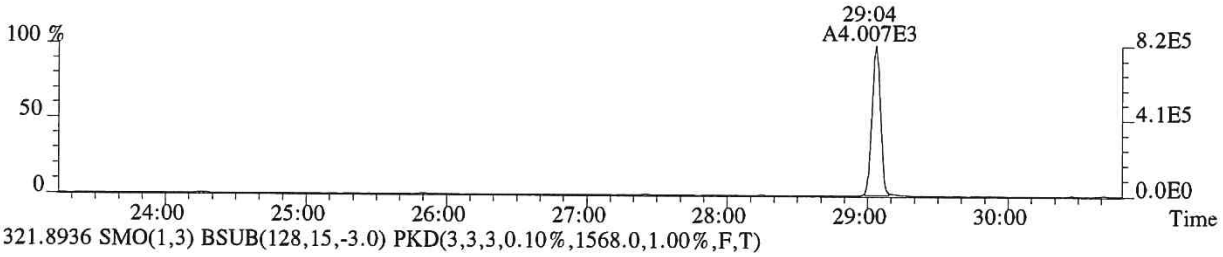


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

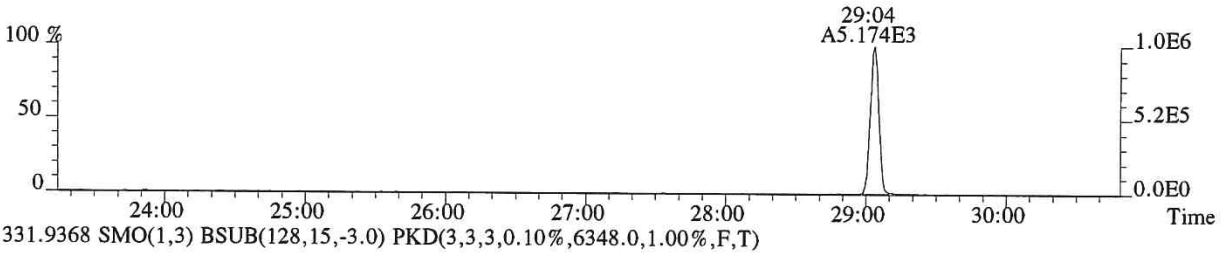


016500

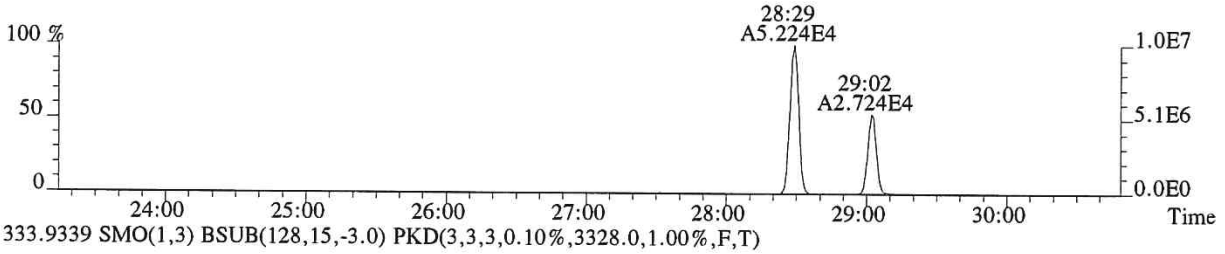
File:P520007 #1-538 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3452.0,1.00%,F,T)



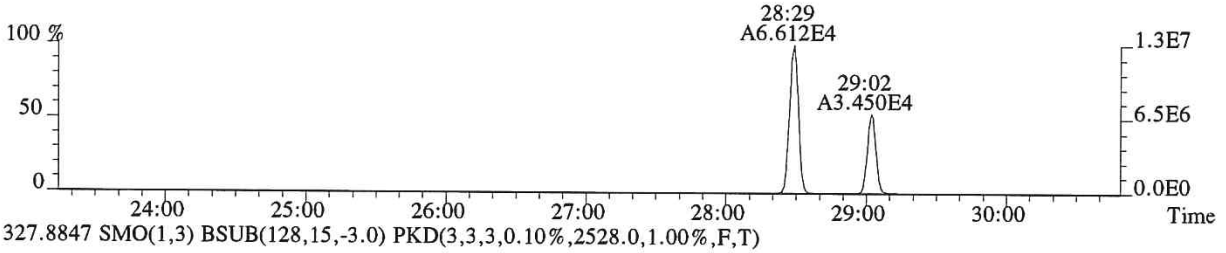
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1568.0,1.00%,F,T)



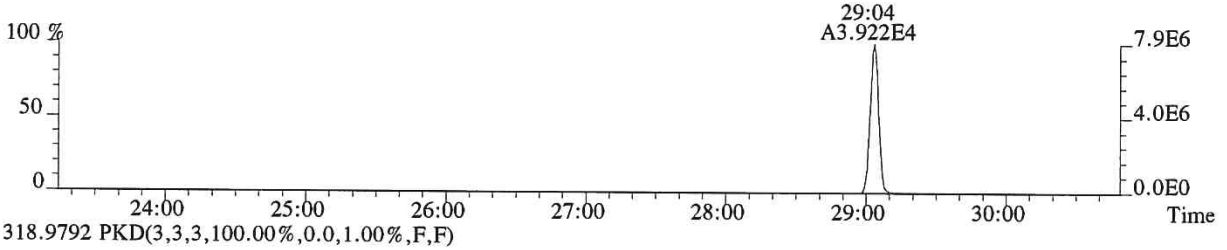
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6348.0,1.00%,F,T)



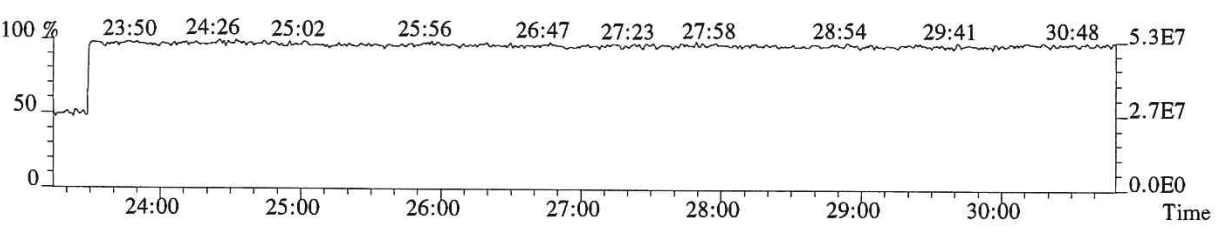
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3328.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2528.0,1.00%,F,T)

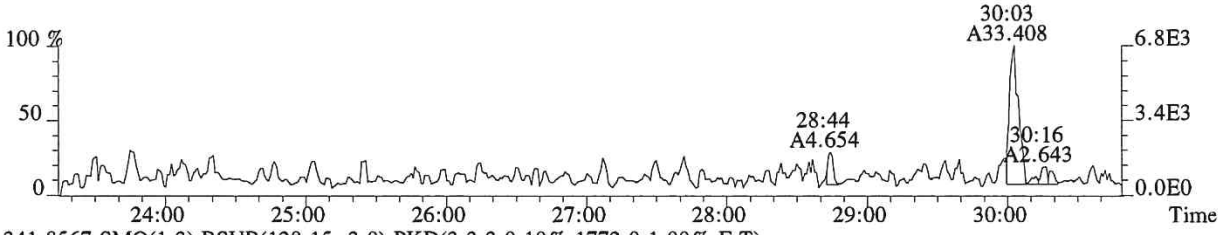


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

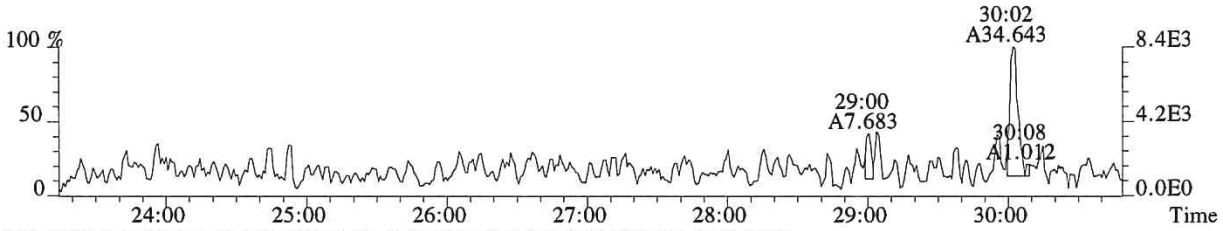


016501

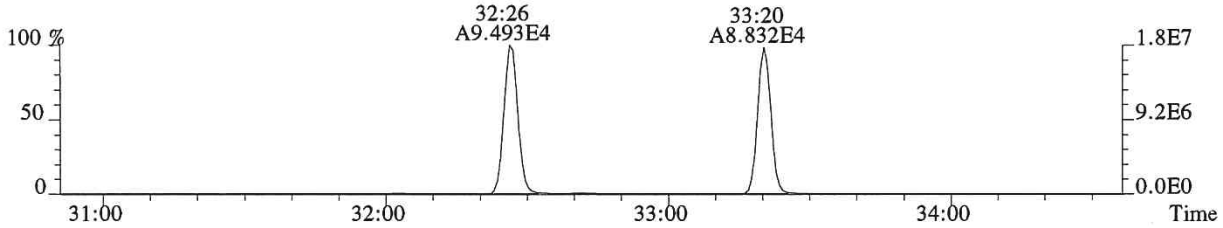
File:P520007 #1-538 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,980.0,1.00%,F,T)



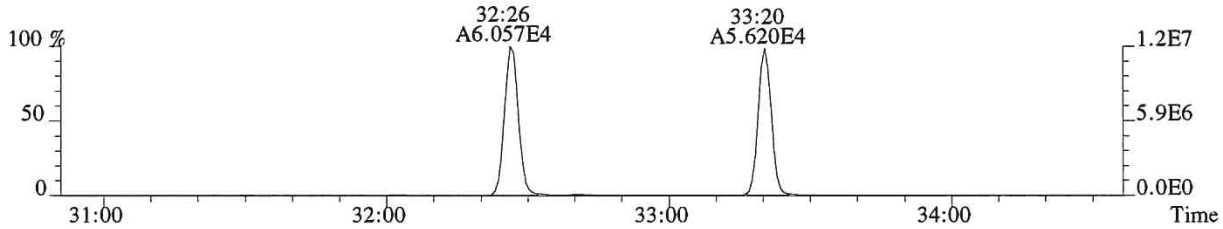
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1772.0,1.00%,F,T)



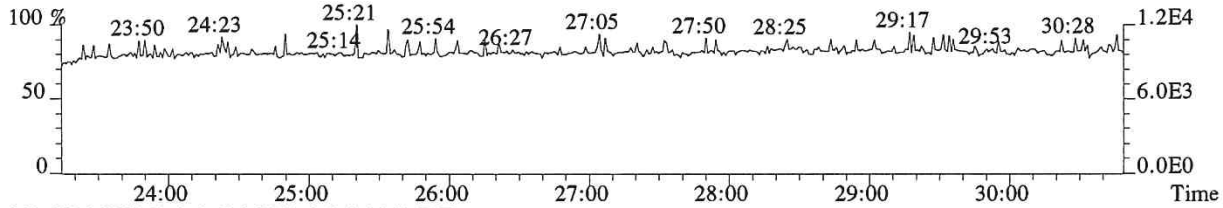
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,892.0,1.00%,F,T)



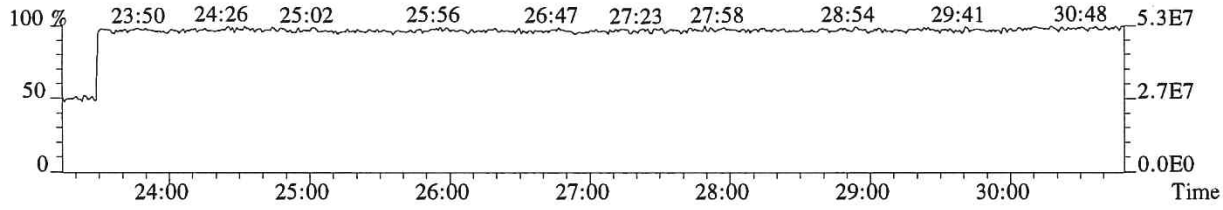
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,760.0,1.00%,F,T)



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

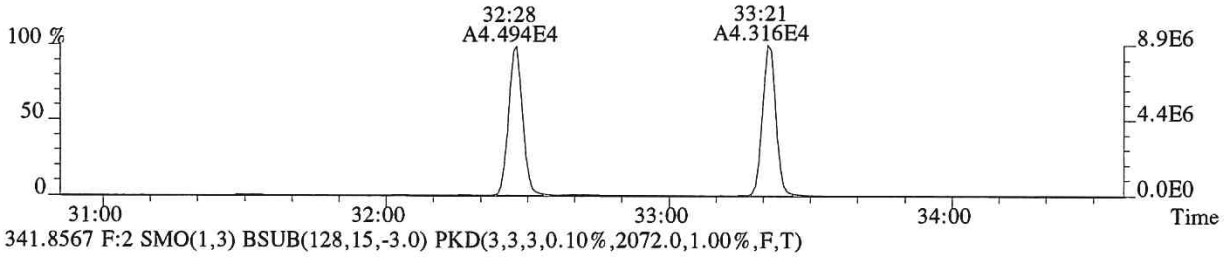


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

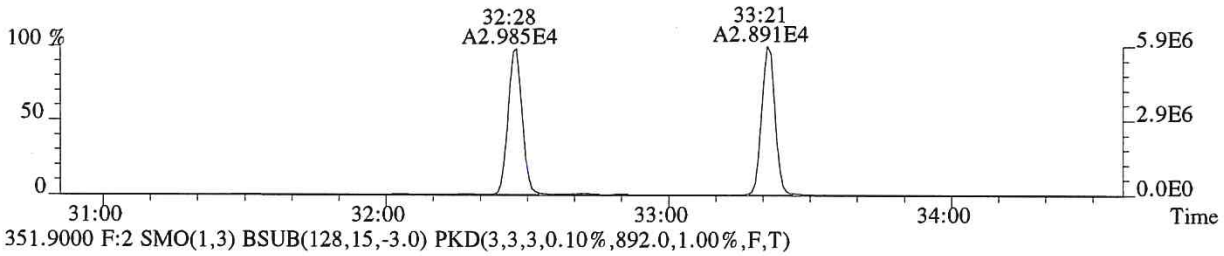


016502

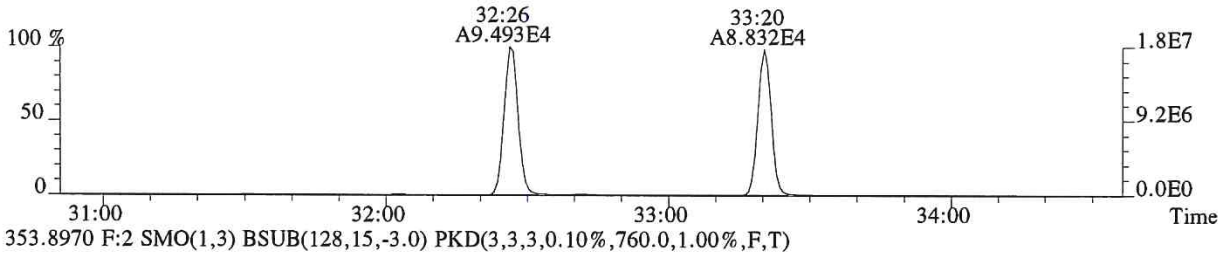
File:P520007 #1-339 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1076.0,1.00%,F,T)



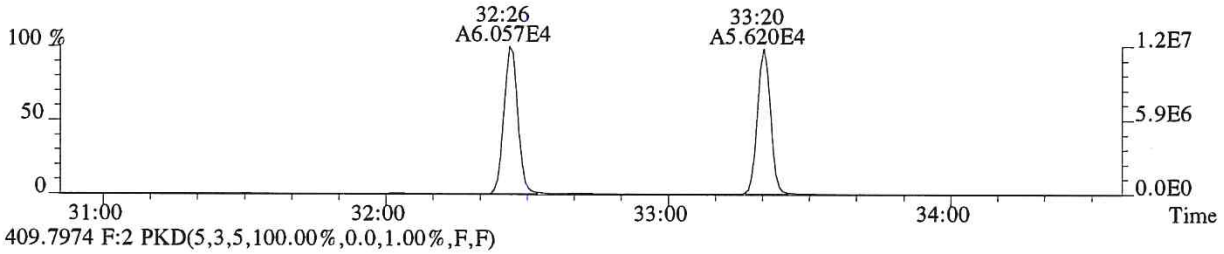
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2072.0,1.00%,F,T)



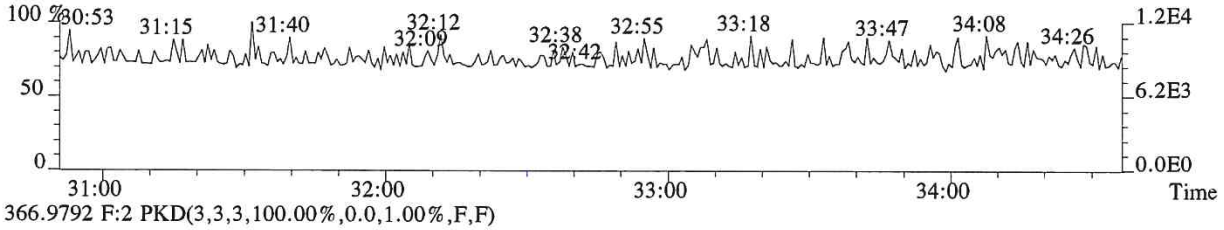
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,892.0,1.00%,F,T)



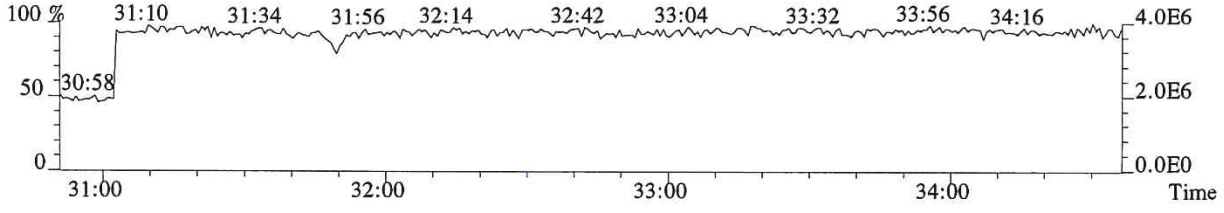
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,760.0,1.00%,F,T)



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

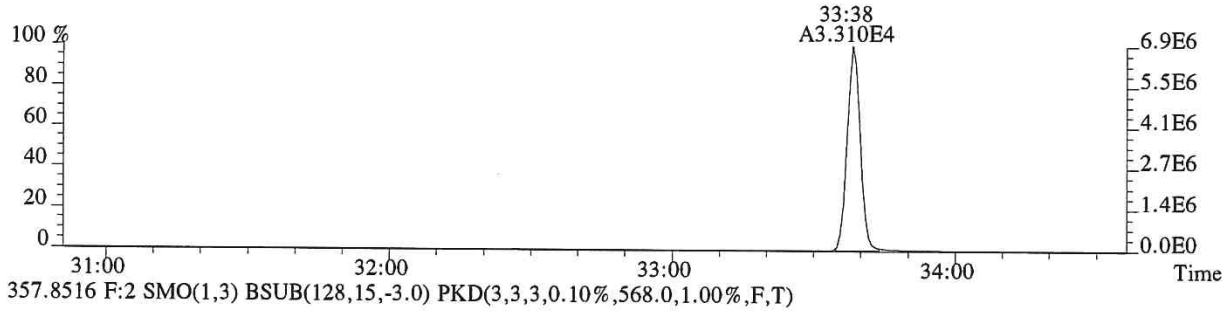


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

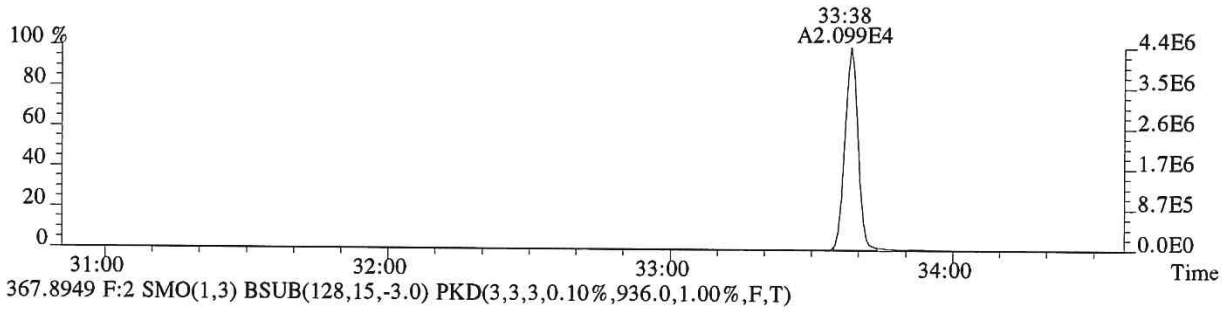


016503

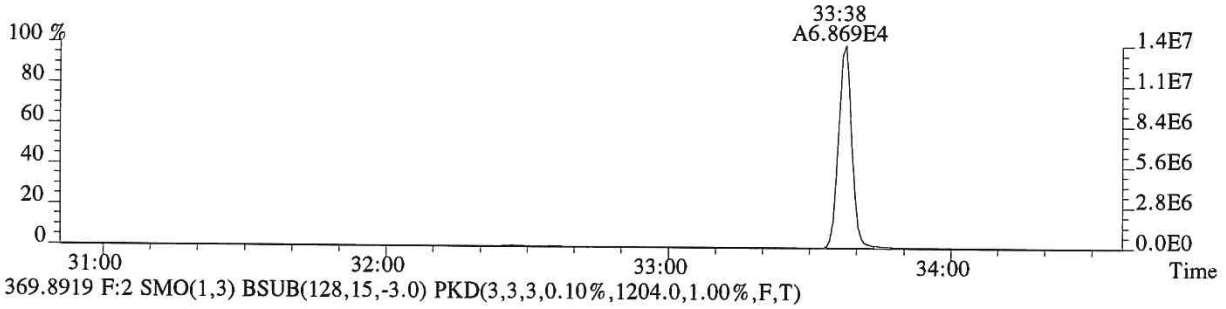
File:P520007 #1-339 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1536.0,1.00%,F,T)



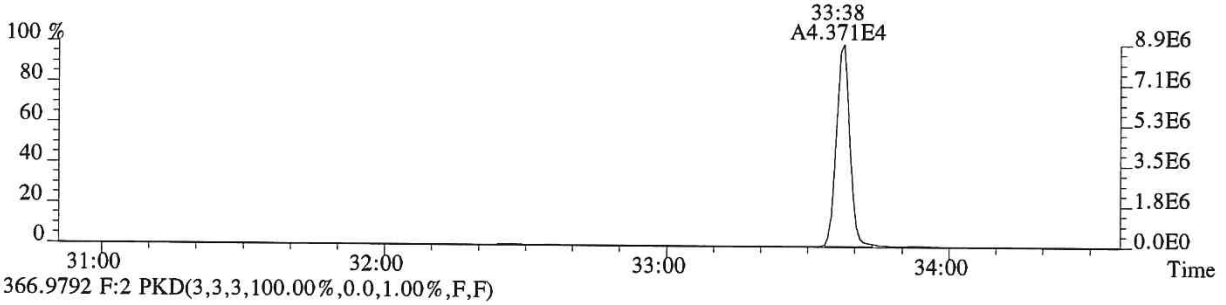
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,568.0,1.00%,F,T)



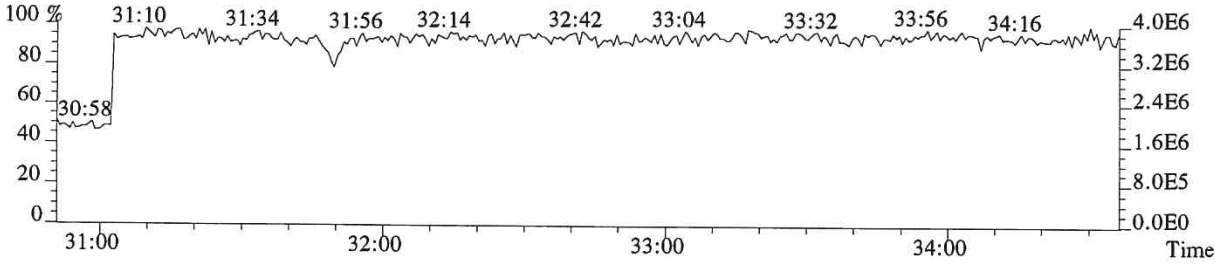
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,936.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1204.0,1.00%,F,T)

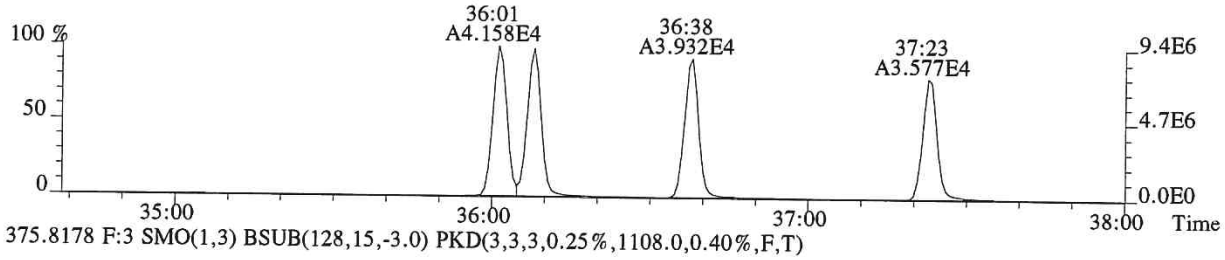


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

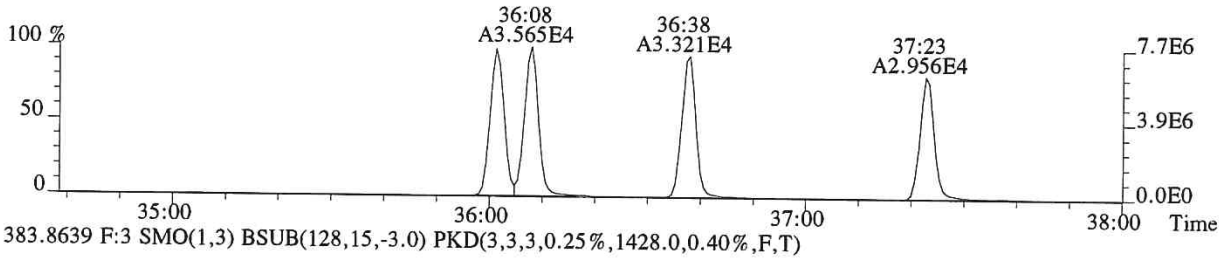


016504

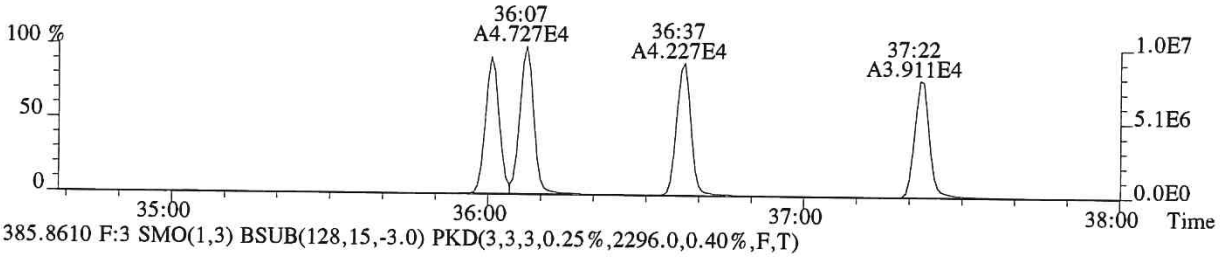
File:P520007 #1-303 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1184.0,0.40%,F,T)



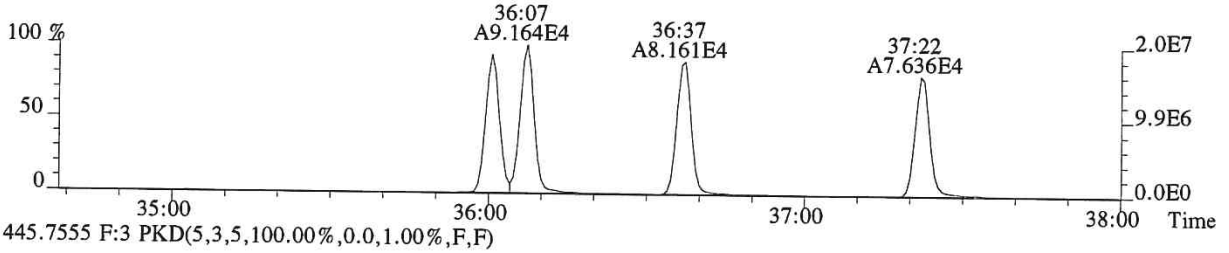
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1108.0,0.40%,F,T)



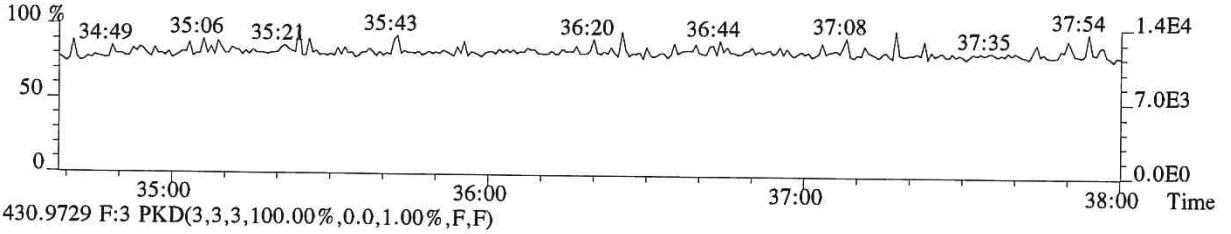
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1428.0,0.40%,F,T)



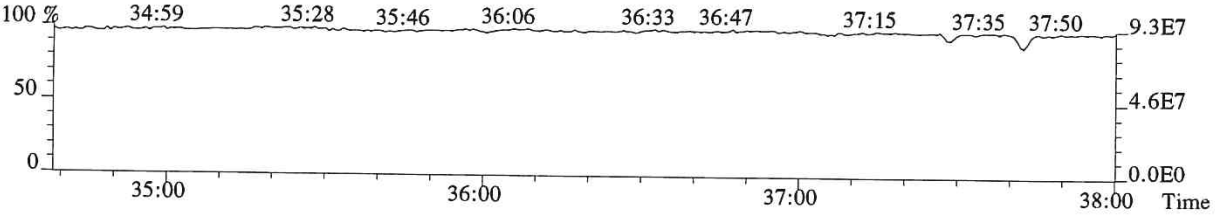
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2296.0,0.40%,F,T)



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

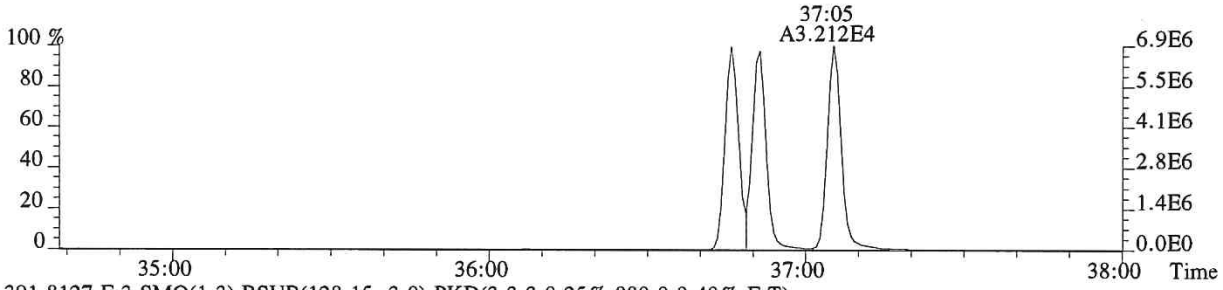


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

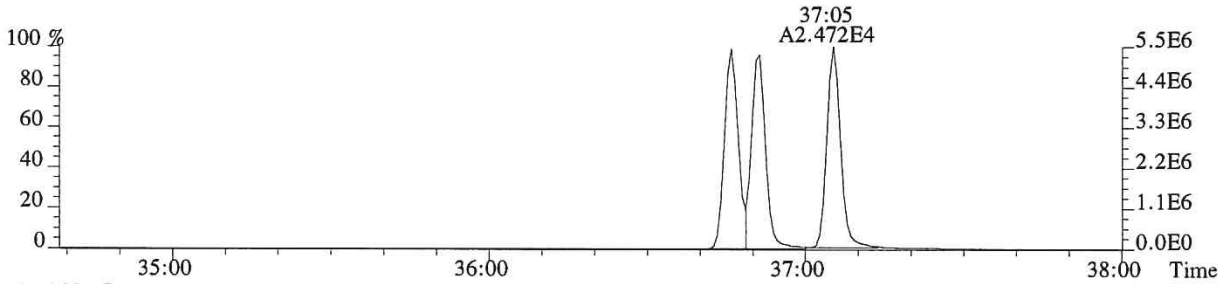


016505

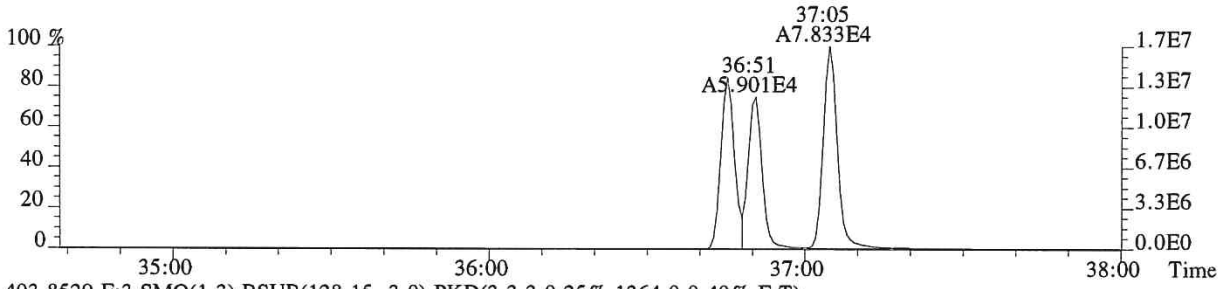
File:P520007 #1-303 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,736.0,0.40%,F,T)



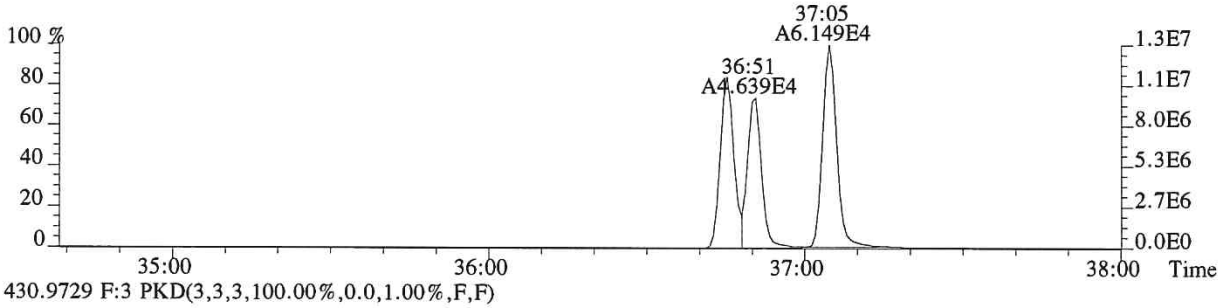
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,880.0,0.40%,F,T)



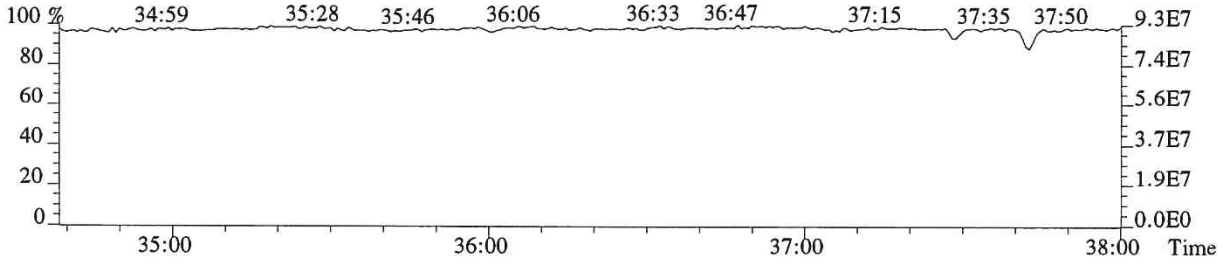
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1956.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1364.0,0.40%,F,T)

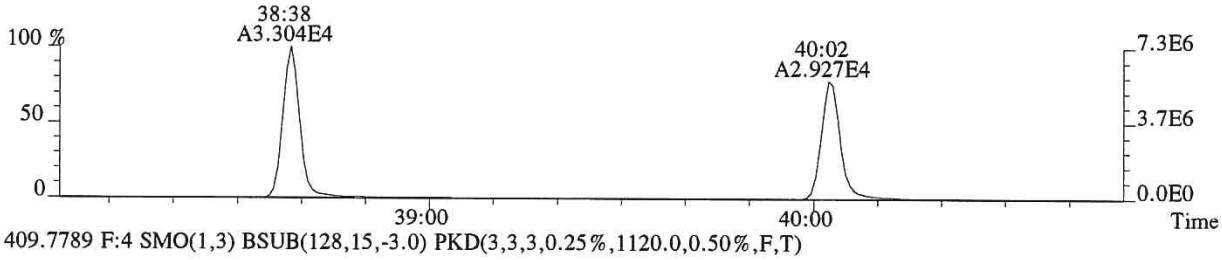


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

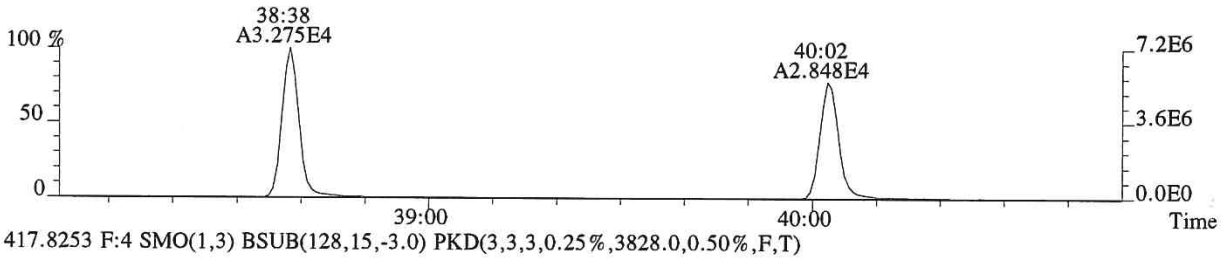


016506

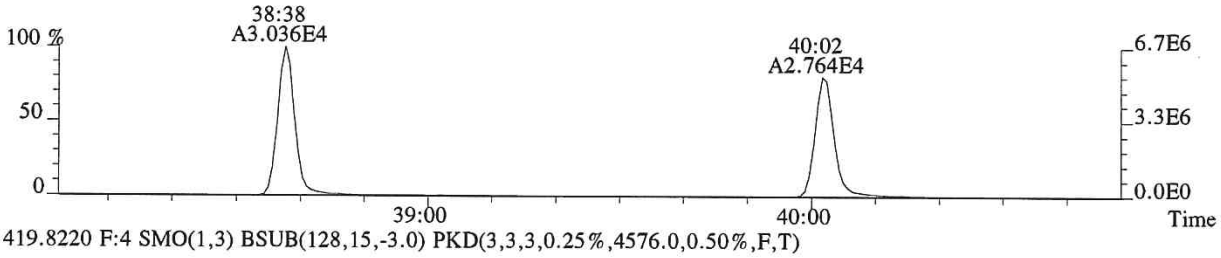
File:P520007 #1-250 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1580.0,0.50%,F,T)



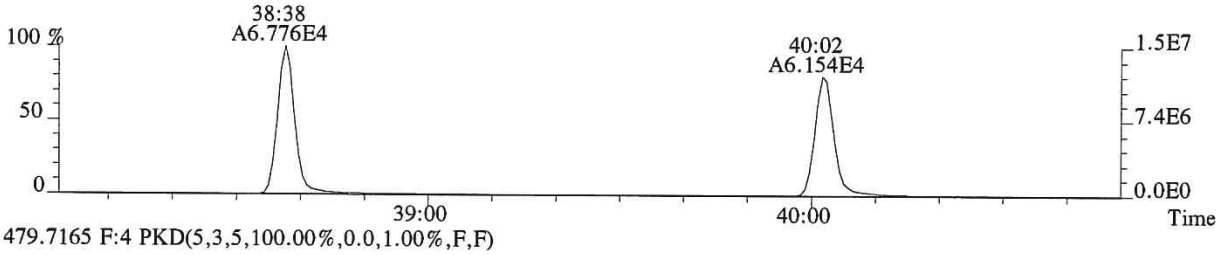
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1120.0,0.50%,F,T)



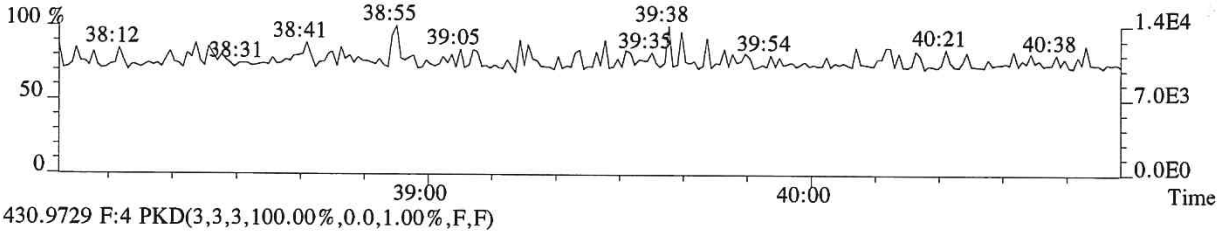
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3828.0,0.50%,F,T)



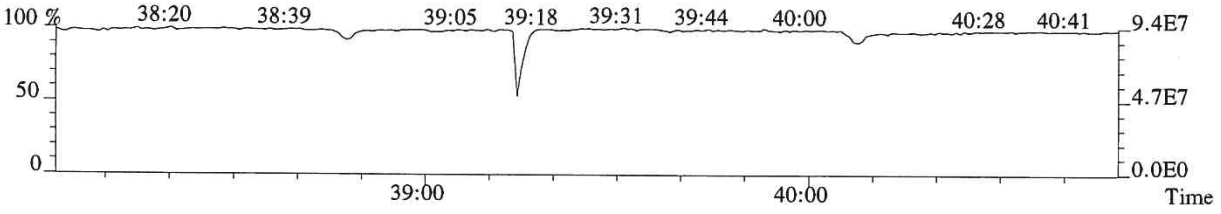
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4576.0,0.50%,F,T)



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

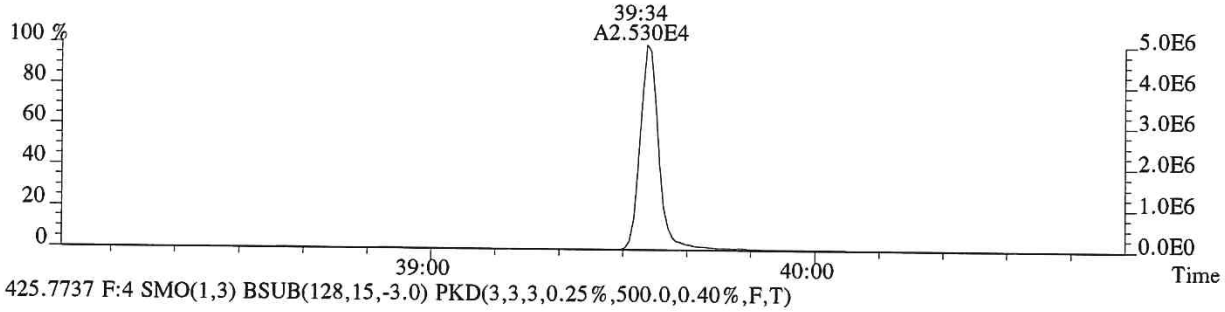


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

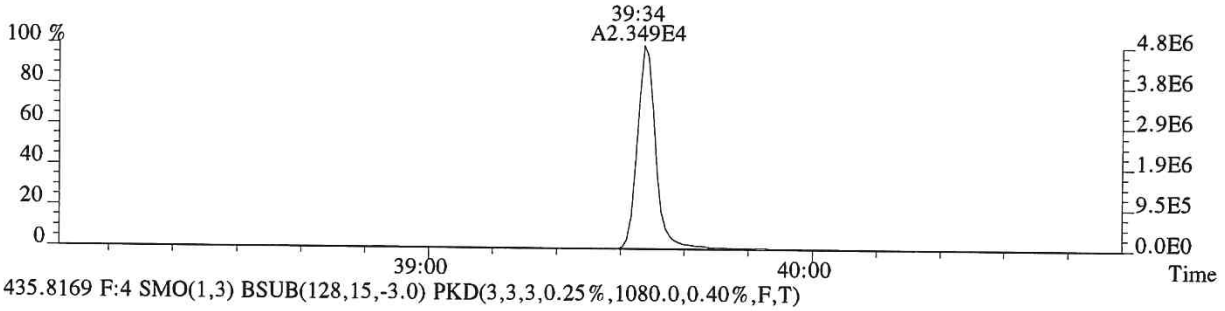


016507

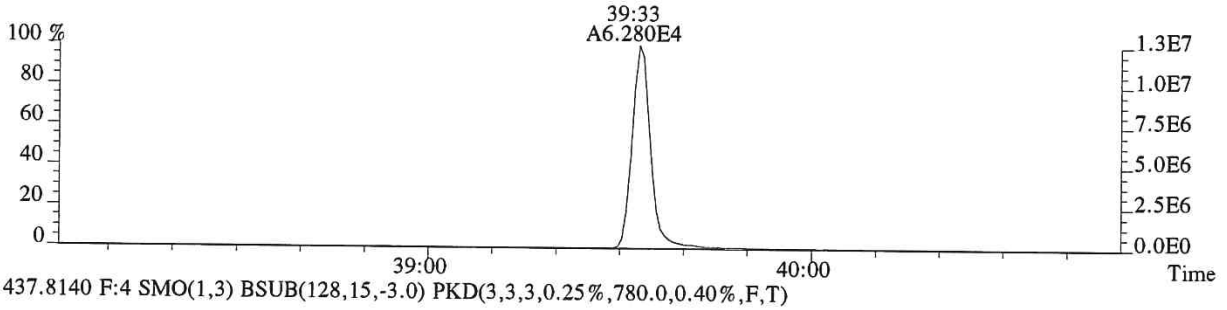
File:P520007 #1-250 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1092.0,0.40%,F,T)



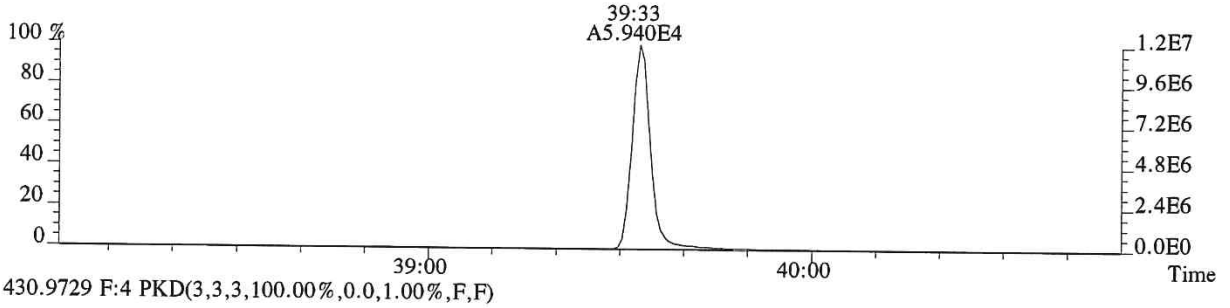
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,500.0,0.40%,F,T)



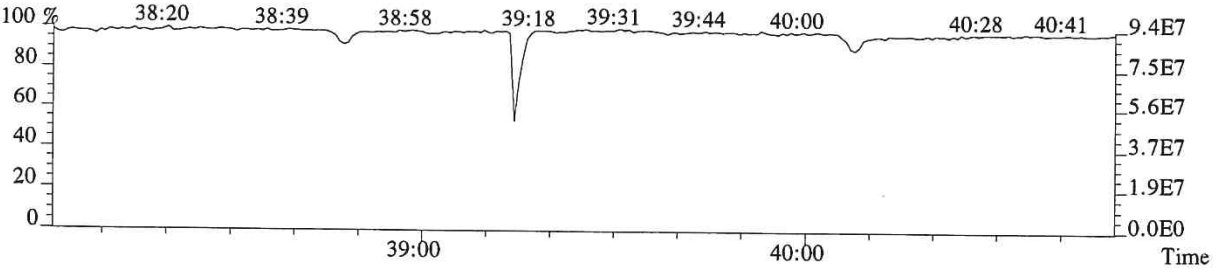
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1080.0,0.40%,F,T)



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

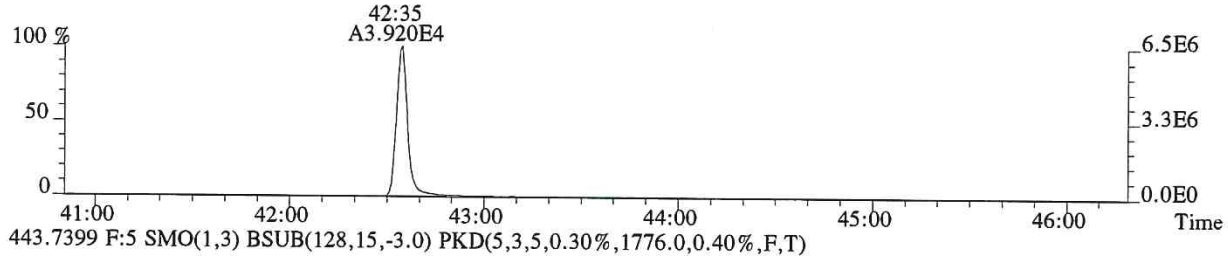


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

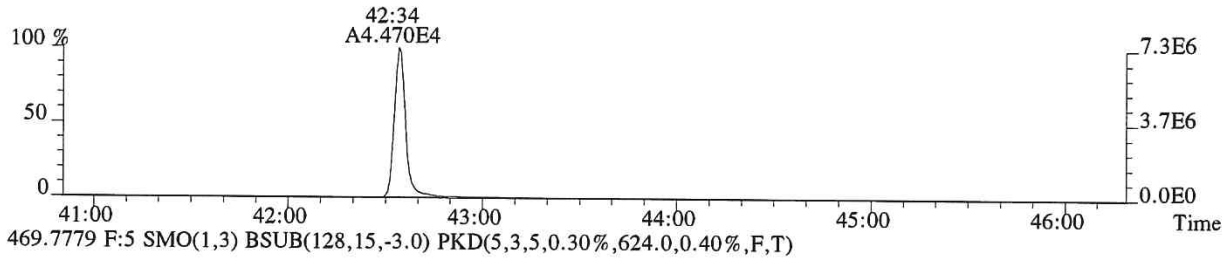


016508

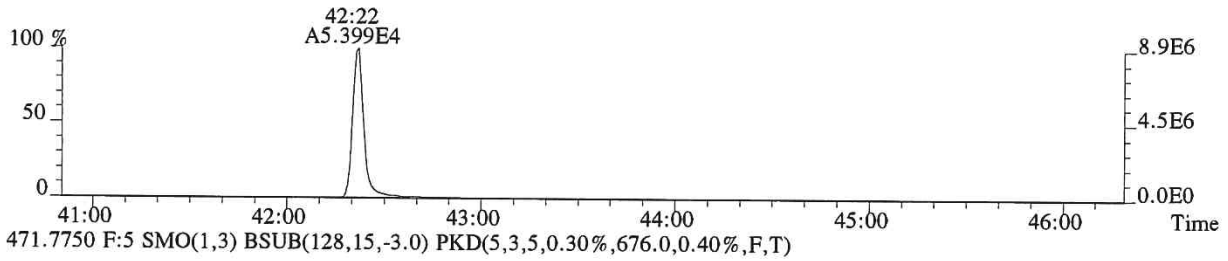
File:P520007 #1-493 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,520.0,0.40%,F,T)



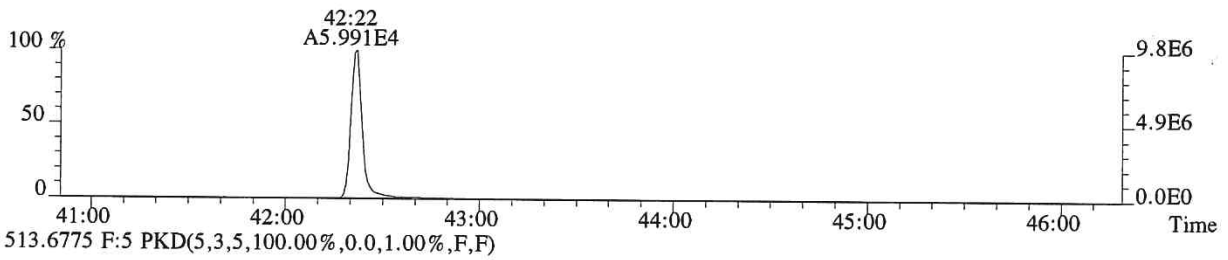
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1776.0,0.40%,F,T)



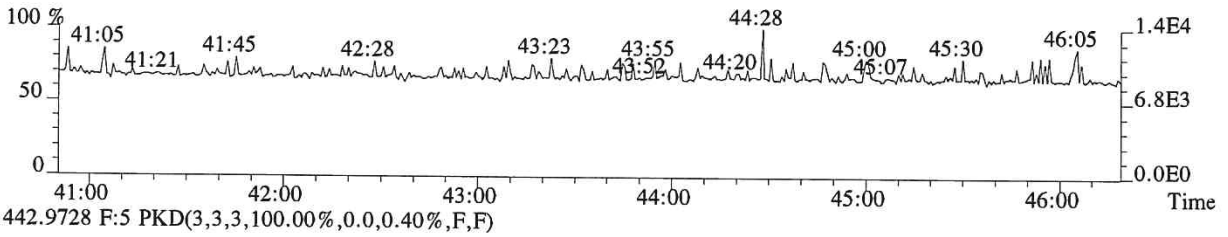
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,624.0,0.40%,F,T)



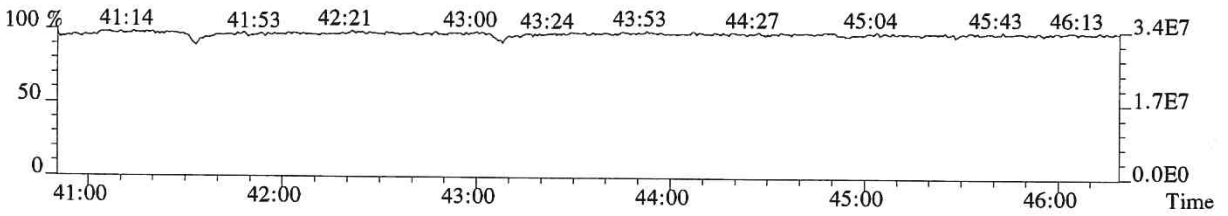
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,676.0,0.40%,F,T)



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

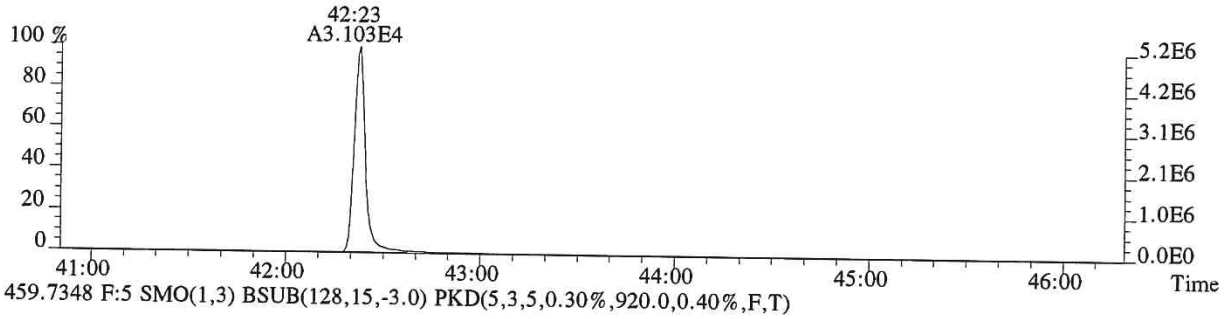


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

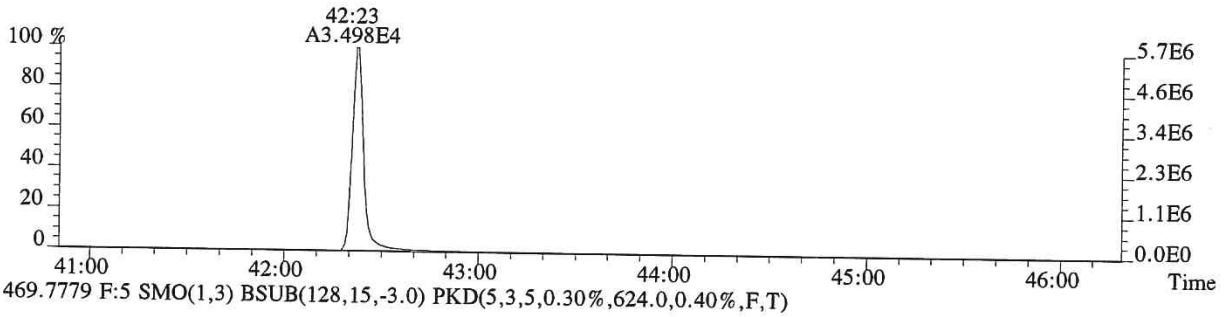


016509

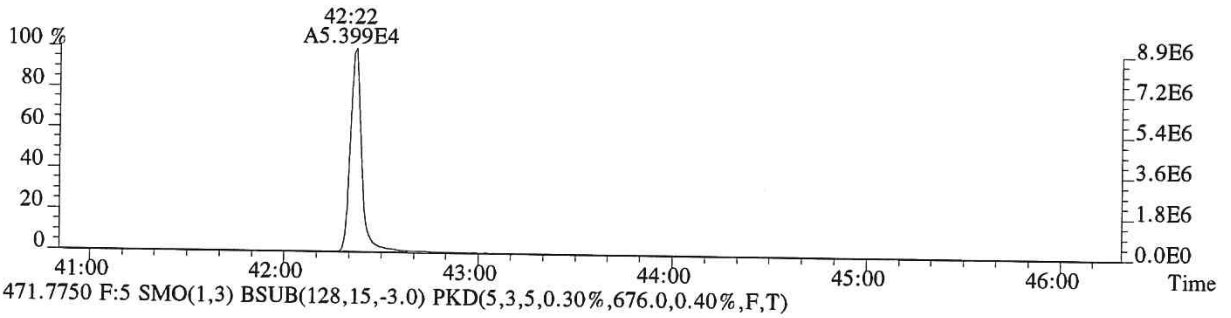
File:P520007 #1-493 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,448.0,0.40%,F,T)



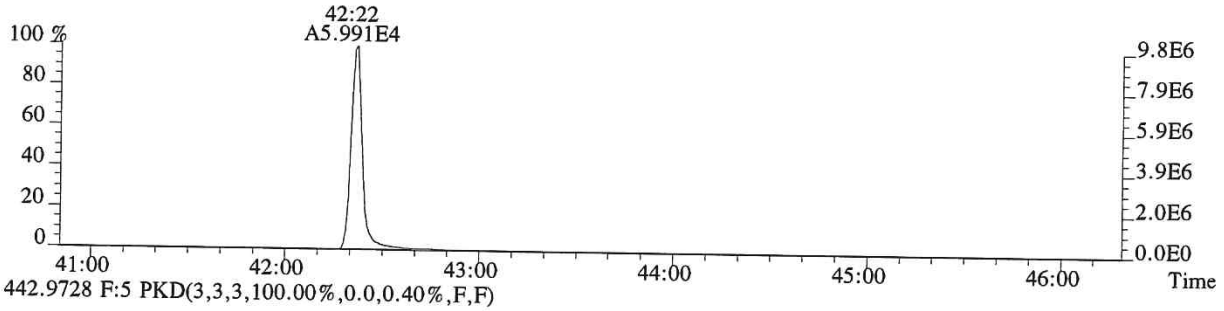
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,920.0,0.40%,F,T)



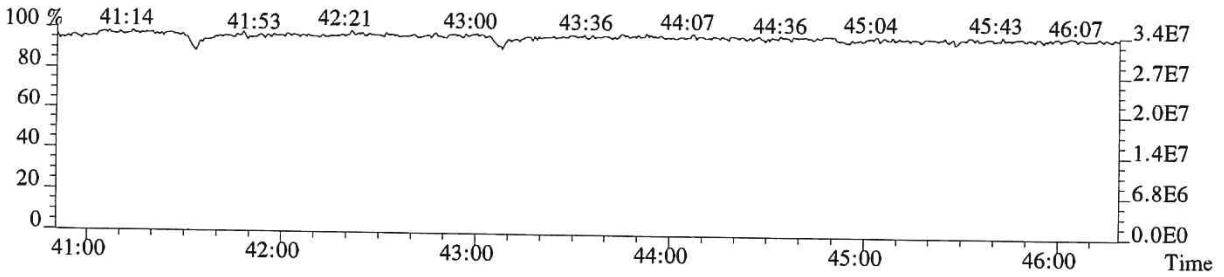
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,624.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,676.0,0.40%,F,T)



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



016510

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
DLCS

Run #19 Filename P520008 Samp: 1 Inj: 1 Acquired: 16-JAN-19 21:59:29
Processed: 17-JAN-19 11:28:05 Sample ID: EQ1900017-03

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:17	8.265e+03	1.133e+04	0.73	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:28	6.025e+04	3.998e+04	1.51	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:22	5.998e+04	3.987e+04	1.50	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:02	5.323e+04	4.463e+04	1.19	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:09	5.630e+04	4.639e+04	1.21	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:39	5.308e+04	4.340e+04	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:23	4.772e+04	3.938e+04	1.21	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:39	4.017e+04	3.951e+04	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:03	3.689e+04	3.703e+04	1.00	yes	no	1.258
10	Unk	OCDF	42:35	4.913e+04	5.485e+04	0.90	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:05	5.913e+03	7.686e+03	0.77	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:39	4.549e+04	2.885e+04	1.58	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:47	3.999e+04	3.134e+04	1.28	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:52	4.094e+04	3.203e+04	1.28	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:06	4.213e+04	3.398e+04	1.24	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:34	3.111e+04	3.001e+04	1.04	yes	no	1.025
17	Unk	OCDD	42:23	4.390e+04	4.969e+04	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:16	7.597e+04	9.675e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:27	1.302e+05	8.287e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:21	1.232e+05	7.837e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	5.554e+04	1.066e+05	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:08	6.112e+04	1.181e+05	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:38	5.837e+04	1.119e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:23	5.313e+04	1.031e+05	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	3.643e+04	8.101e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:02	3.523e+04	7.857e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:03	3.735e+04	4.703e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:38	9.458e+04	5.933e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:46	8.269e+04	6.484e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:51	7.727e+04	6.107e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:34	7.785e+04	7.337e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:23	6.720e+04	7.525e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:30	6.743e+04	8.349e+04	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	9.080e+04	7.368e+04	1.23	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:05	5.320e+04				no	1.014

$$\text{OCDD} = \frac{(4.390e+04 + 4.969e+04) \times 4000\ \text{pg} \times 1}{(6.720e+04 + 7.525e+04) \times \quad \text{g} \times \quad / 100 \times 1.118} =$$

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Houston, TX 77099
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Signal/Noise Height Ratio Summary

CLIENT ID.
DLCS

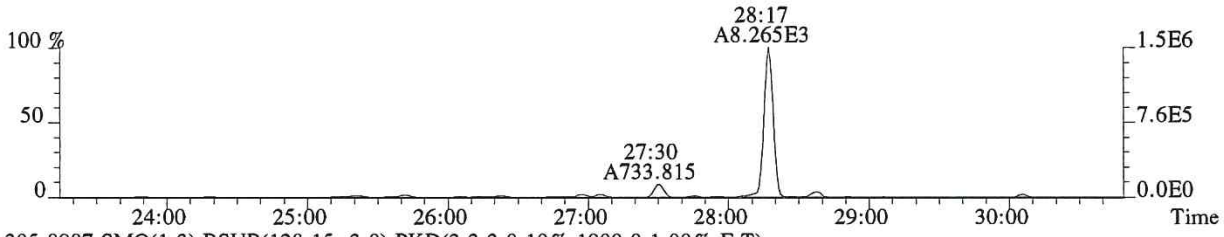
Run #19 Filename P520008 Samp: 1 Inj: 1 Acquired: 16-JAN-19 21:59:29
Processed: 17-JAN-19 11:28:05 LAB. ID: EQ1900017-03

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.51e+06	7.56e+02	2.0e+03	2.17e+06	1.90e+03	1.1e+03
2	1,2,3,7,8-PeCDF	1.15e+07	1.39e+03	8.3e+03	7.65e+06	2.32e+03	3.3e+03
3	2,3,4,7,8-PeCDF	1.23e+07	1.39e+03	8.8e+03	8.21e+06	2.32e+03	3.5e+03
4	1,2,3,4,7,8-HxCDF	1.18e+07	1.91e+03	6.2e+03	9.92e+06	9.84e+02	1.0e+04
5	1,2,3,6,7,8-HxCDF	1.19e+07	1.91e+03	6.2e+03	9.79e+06	9.84e+02	9.9e+03
6	2,3,4,6,7,8-HxCDF	1.13e+07	1.91e+03	5.9e+03	9.26e+06	9.84e+02	9.4e+03
7	1,2,3,7,8,9-HxCDF	9.99e+06	1.91e+03	5.2e+03	8.20e+06	9.84e+02	8.3e+03
8	1,2,3,4,6,7,8-HpCDF	8.74e+06	4.16e+03	2.1e+03	8.56e+06	2.18e+03	3.9e+03
9	1,2,3,4,7,8,9-HpCDF	7.26e+06	4.16e+03	1.7e+03	7.26e+06	2.18e+03	3.3e+03
10	OCDF	8.06e+06	7.84e+02	1.0e+04	8.96e+06	1.64e+03	5.5e+03
11	2,3,7,8-TCDD	1.21e+06	2.88e+03	4.2e+02	1.53e+06	1.84e+03	8.3e+02
12	1,2,3,7,8-PeCDD	9.44e+06	1.20e+03	7.9e+03	5.96e+06	7.32e+02	8.1e+03
13	1,2,3,4,7,8-HxCDD	9.08e+06	8.80e+02	1.0e+04	7.09e+06	5.12e+02	1.4e+04
14	1,2,3,6,7,8-HxCDD	8.72e+06	8.80e+02	9.9e+03	6.80e+06	5.12e+02	1.3e+04
15	1,2,3,7,8,9-HxCDD	8.89e+06	8.80e+02	1.0e+04	7.17e+06	5.12e+02	1.4e+04
16	1,2,3,4,6,7,8-HpCDD	6.20e+06	1.01e+03	6.1e+03	6.01e+06	5.60e+02	1.1e+04
17	OCDD	7.18e+06	6.16e+02	1.2e+04	8.08e+06	9.48e+02	8.5e+03
18	13C-2,3,7,8-TCDF	1.43e+07	6.68e+03	2.1e+03	1.82e+07	3.43e+03	5.3e+03
19	13C-1,2,3,7,8-PeCDF	2.51e+07	1.52e+03	1.7e+04	1.60e+07	1.26e+03	1.3e+04
20	13C-2,3,4,7,8-PeCDF	2.54e+07	1.52e+03	1.7e+04	1.61e+07	1.26e+03	1.3e+04
21	13C-1,2,3,4,7,8-HxCDF	1.23e+07	1.52e+03	8.1e+03	2.37e+07	2.57e+03	9.2e+03
22	13C-1,2,3,6,7,8-HxCDF	1.30e+07	1.52e+03	8.6e+03	2.48e+07	2.57e+03	9.6e+03
23	13C-2,3,4,6,7,8-HxCDF	1.24e+07	1.52e+03	8.2e+03	2.38e+07	2.57e+03	9.3e+03
24	13C-1,2,3,7,8,9-HxCDF	1.10e+07	1.52e+03	7.2e+03	2.14e+07	2.57e+03	8.3e+03
25	13C-1,2,3,4,6,7,8-HpCDF	7.81e+06	5.76e+03	1.4e+03	1.74e+07	4.87e+03	3.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	6.85e+06	5.76e+03	1.2e+03	1.53e+07	4.87e+03	3.1e+03
27	13C-2,3,7,8-TCDD	7.69e+06	8.62e+03	8.9e+02	9.65e+06	3.14e+03	3.1e+03
28	13C-1,2,3,7,8-PeCDD	1.93e+07	1.01e+03	1.9e+04	1.20e+07	1.54e+03	7.8e+03
29	13C-1,2,3,4,7,8-HxCDD	1.87e+07	2.36e+03	7.9e+03	1.46e+07	9.96e+02	1.5e+04
30	13C-1,2,3,6,7,8-HxCDD	1.61e+07	2.36e+03	6.8e+03	1.28e+07	9.96e+02	1.3e+04
31	13C-1,2,3,4,6,7,8-HpCDD	1.54e+07	1.08e+03	1.4e+04	1.45e+07	1.22e+03	1.2e+04
32	13C-OCDD	1.11e+07	9.96e+02	1.1e+04	1.22e+07	8.88e+02	1.4e+04
33	13C-1,2,3,4-TCDD	1.35e+07	8.62e+03	1.6e+03	1.66e+07	3.14e+03	5.3e+03
34	13C-1,2,3,7,8,9-HxCDD	1.92e+07	2.36e+03	8.1e+03	1.52e+07	9.96e+02	1.5e+04
35	37Cl-2,3,7,8-TCDD	1.06e+07	2.39e+03	4.4e+03			

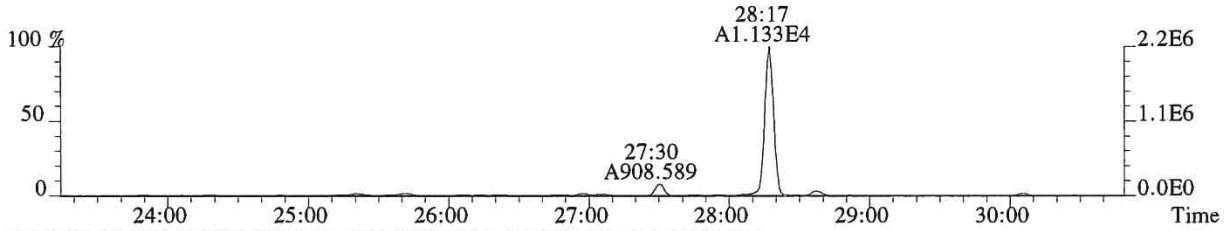
ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
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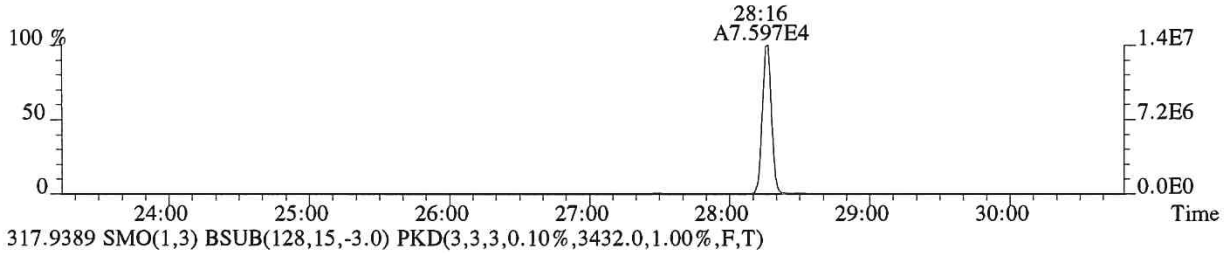
File:P520008 #1-538 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,756.0,1.00%,F,T)



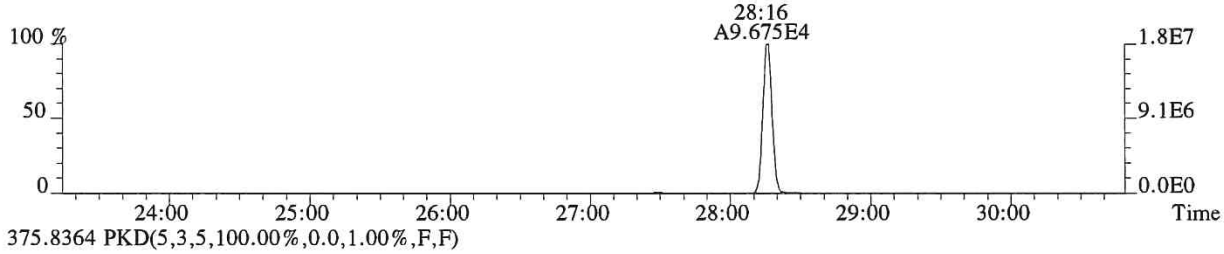
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1900.0,1.00%,F,T)



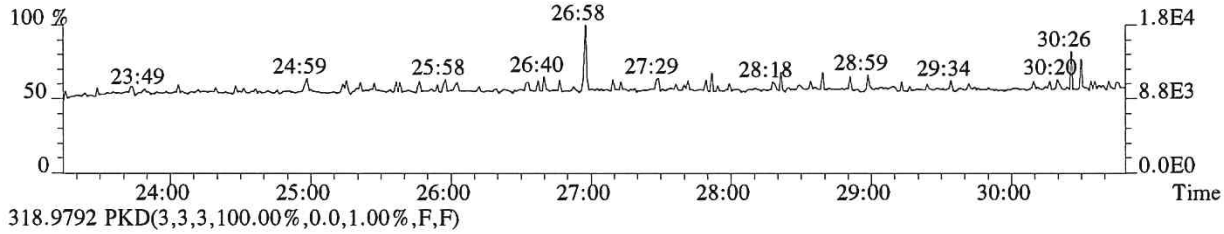
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6684.0,1.00%,F,T)



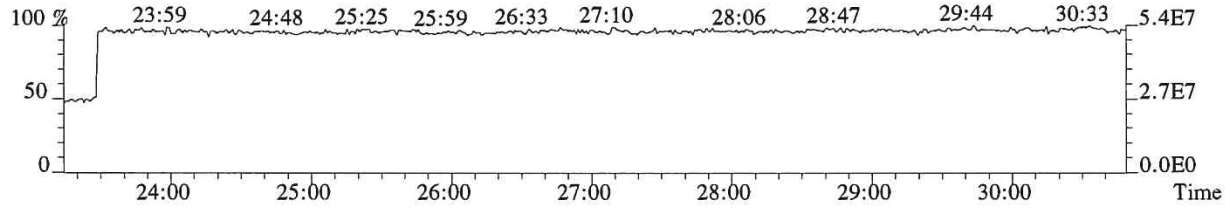
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3432.0,1.00%,F,T)



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

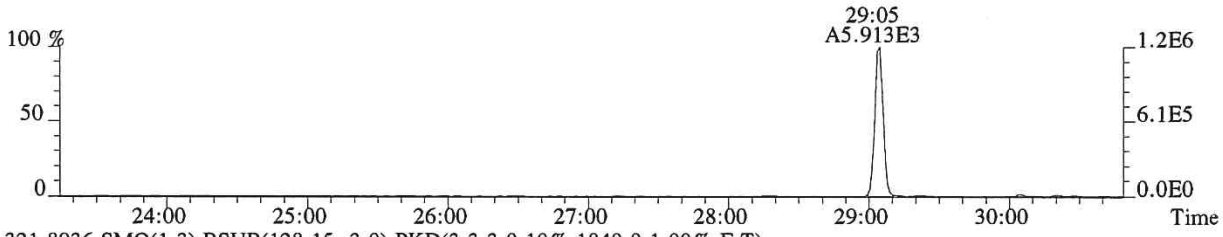


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

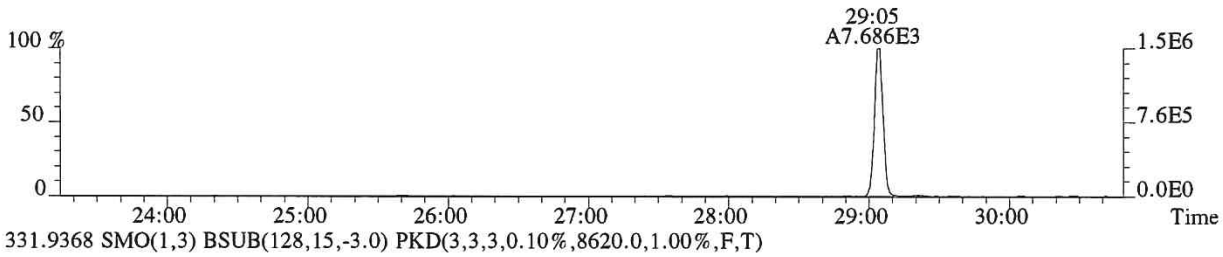


016513

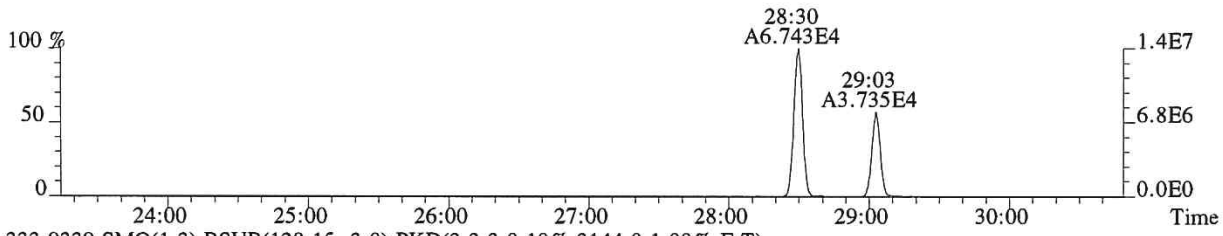
File:P520008 #1-538 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2880.0,1.00%,F,T)



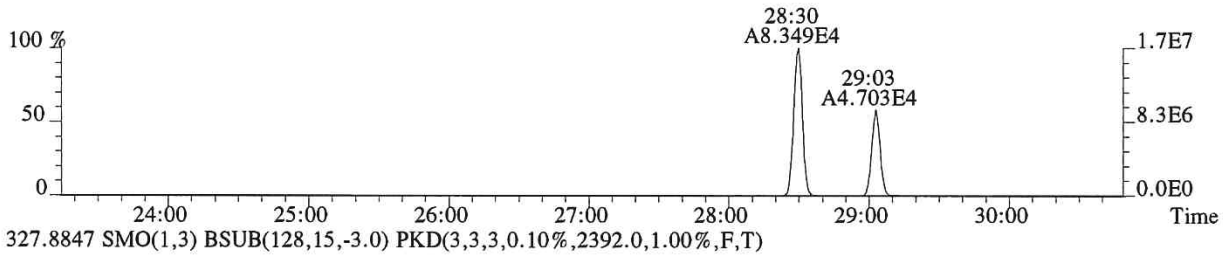
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1840.0,1.00%,F,T)



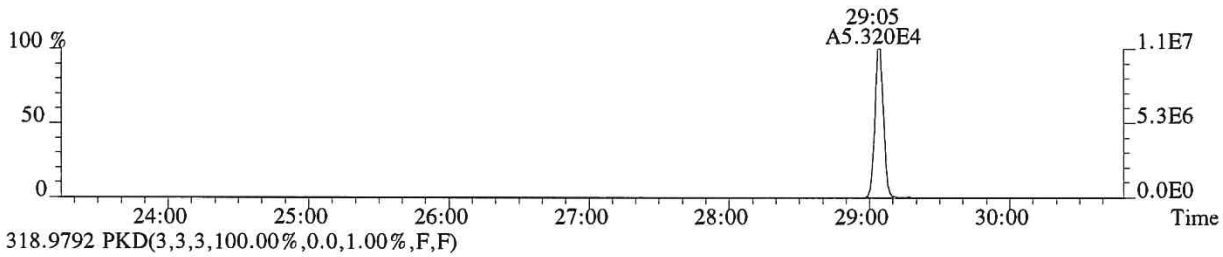
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8620.0,1.00%,F,T)



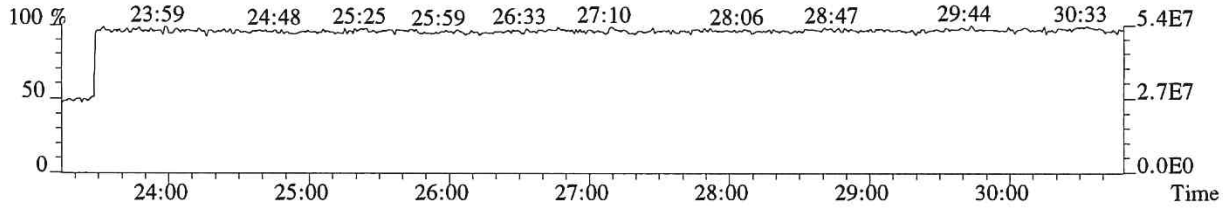
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3144.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2392.0,1.00%,F,T)

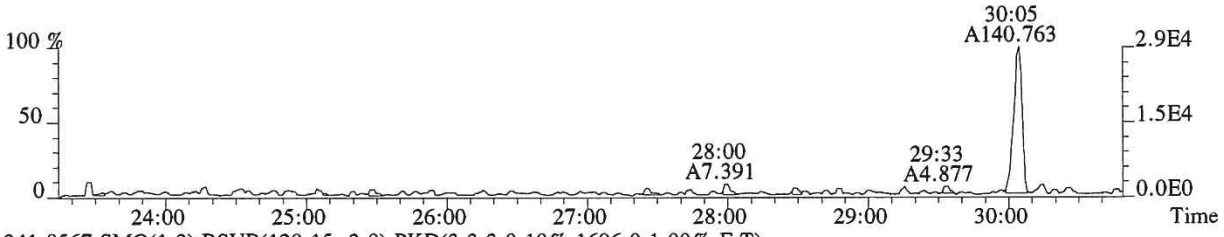


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

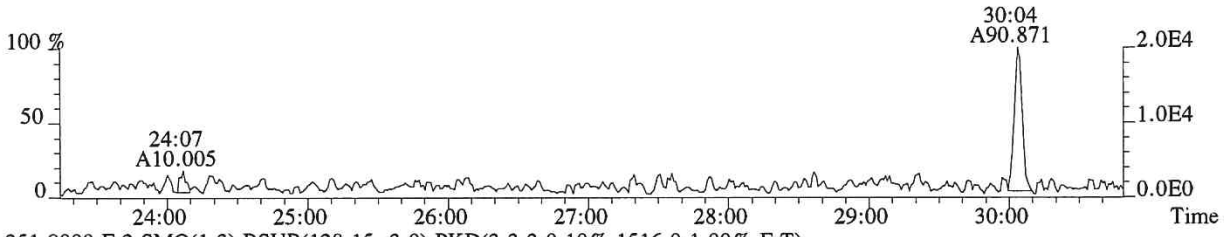


016514

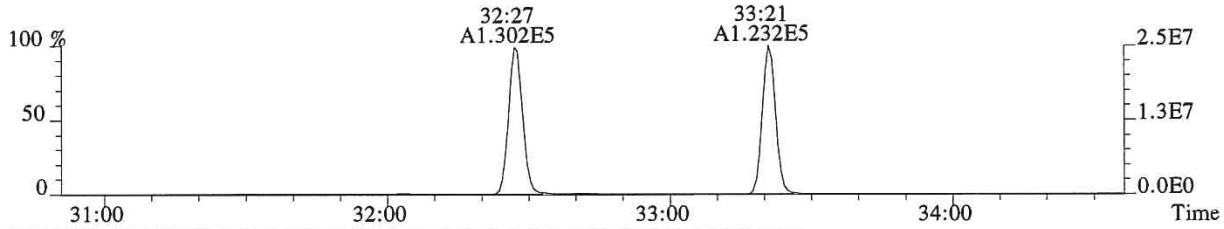
File:P520008 #1-538 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,916.0,1.00%,F,T)



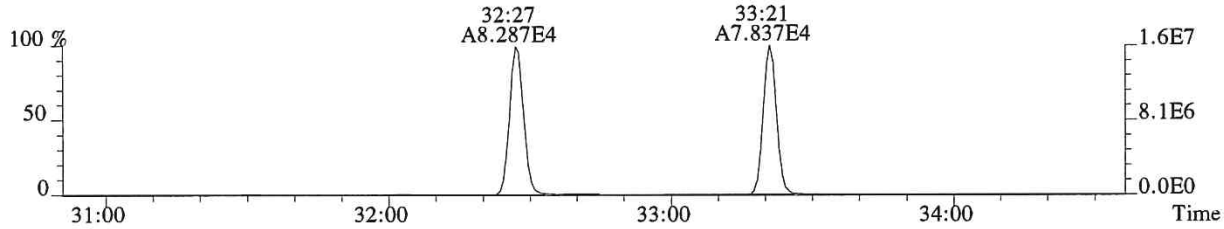
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1696.0,1.00%,F,T)



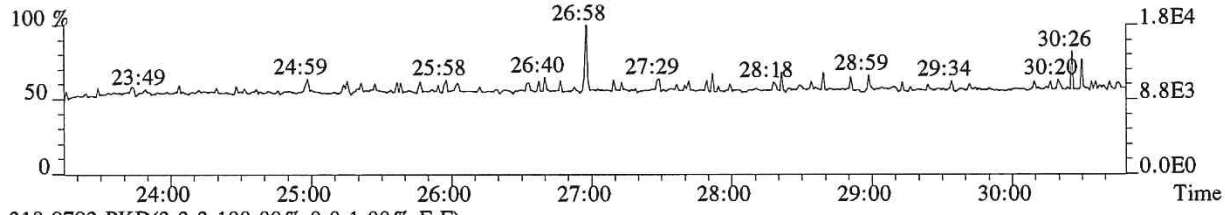
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1516.0,1.00%,F,T)



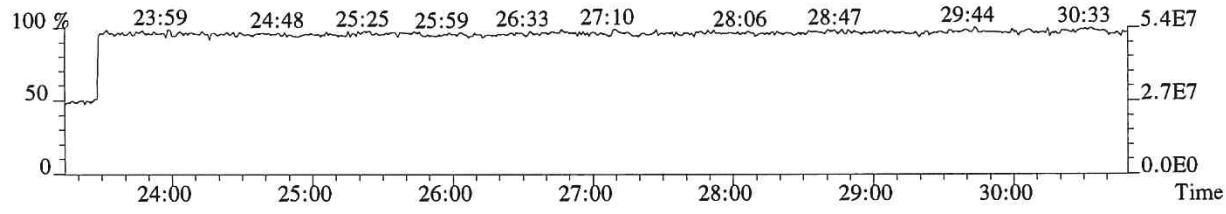
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1260.0,1.00%,F,T)



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

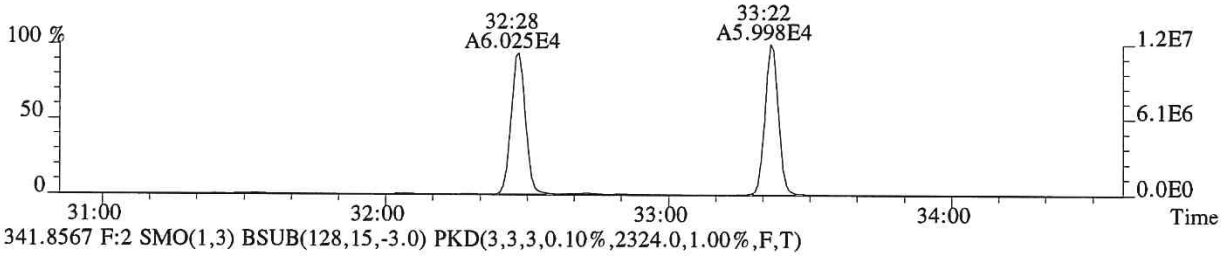


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

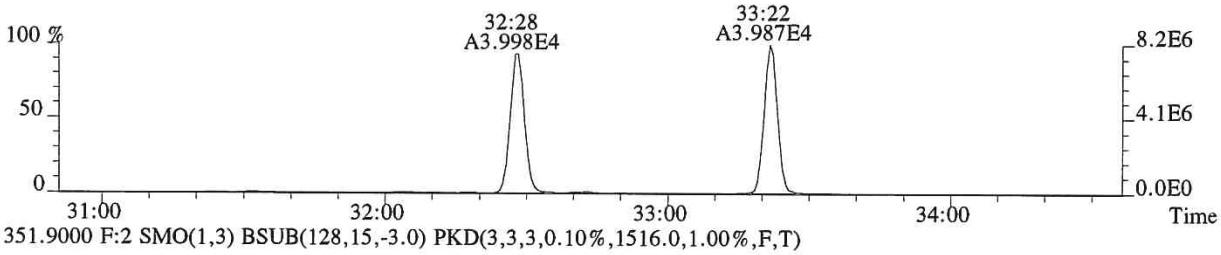


016515

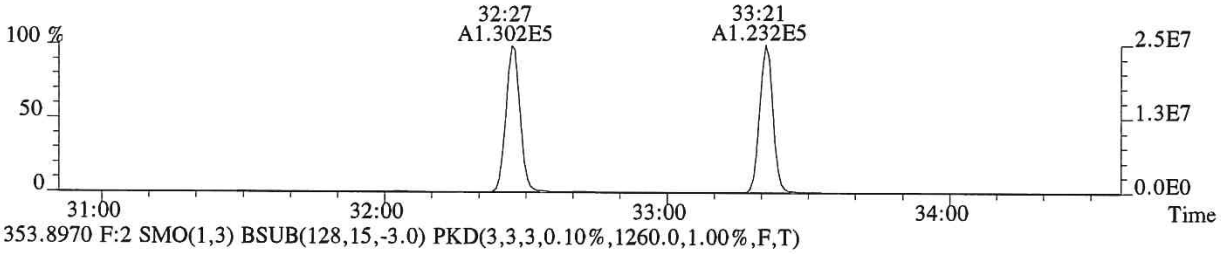
File:P520008 #1-339 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1388.0,1.00%,F,T)



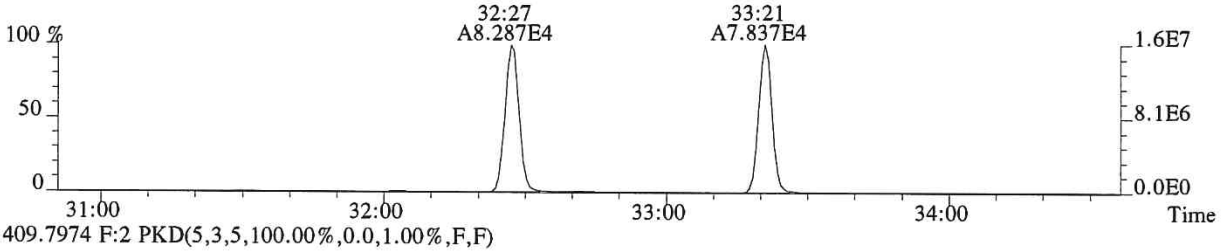
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2324.0,1.00%,F,T)



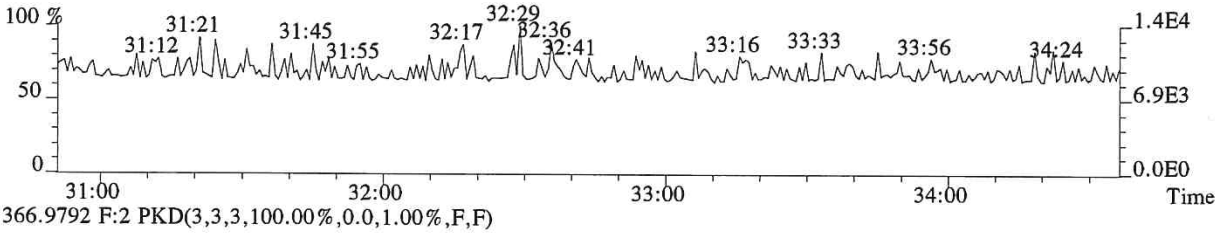
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1516.0,1.00%,F,T)



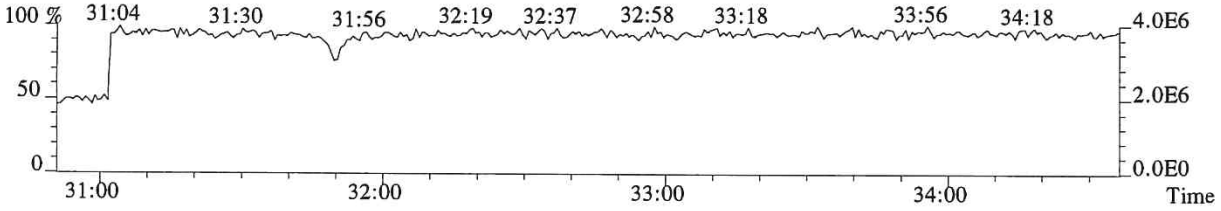
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1260.0,1.00%,F,T)



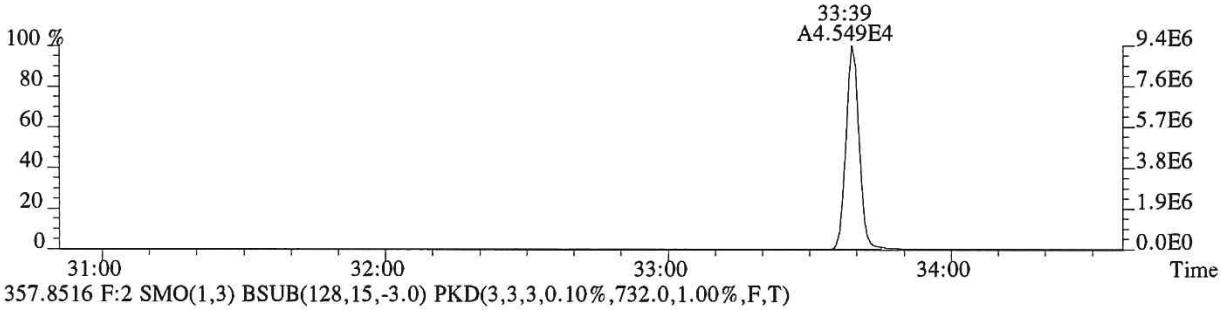
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



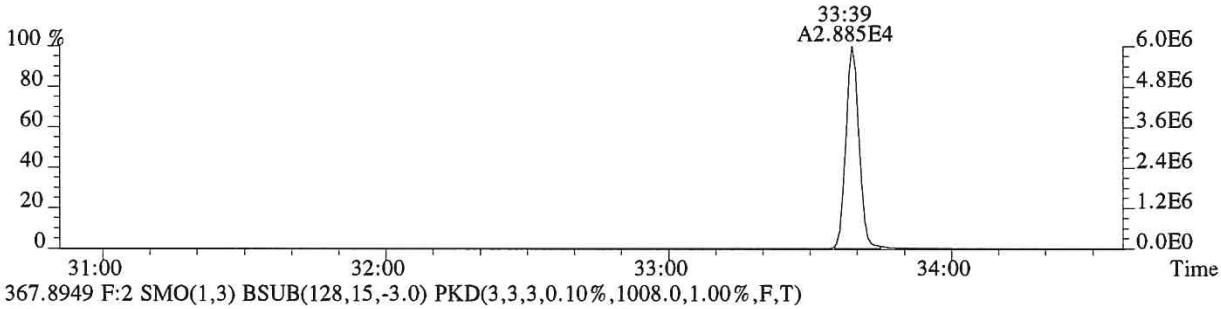
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



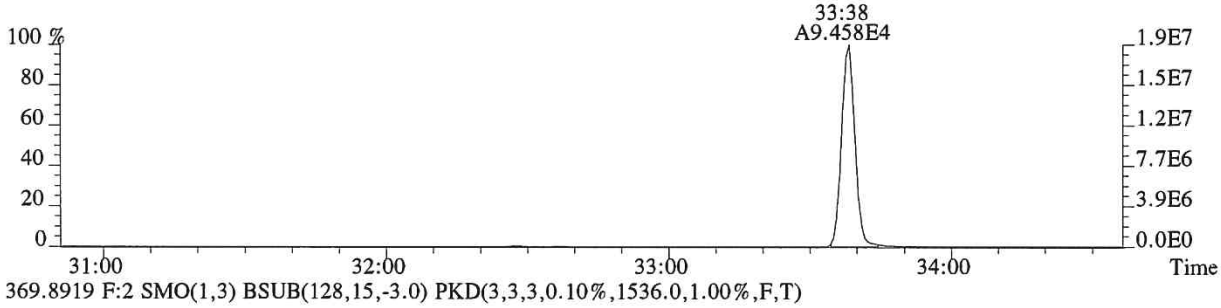
File:P520008 #1-339 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1196.0,1.00%,F,T)



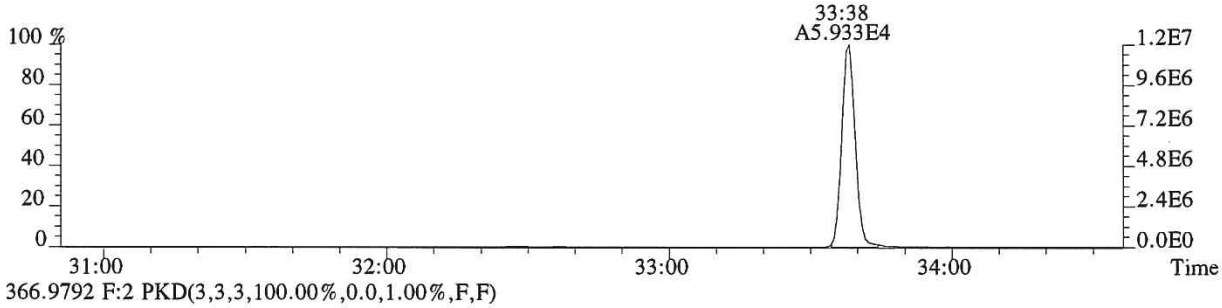
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,732.0,1.00%,F,T)



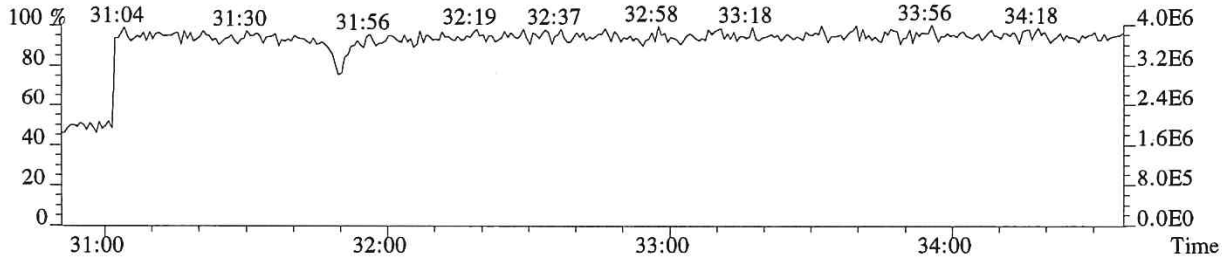
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1008.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1536.0,1.00%,F,T)

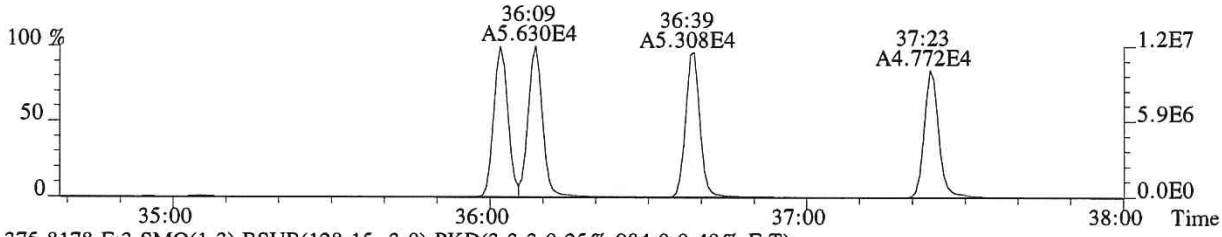


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

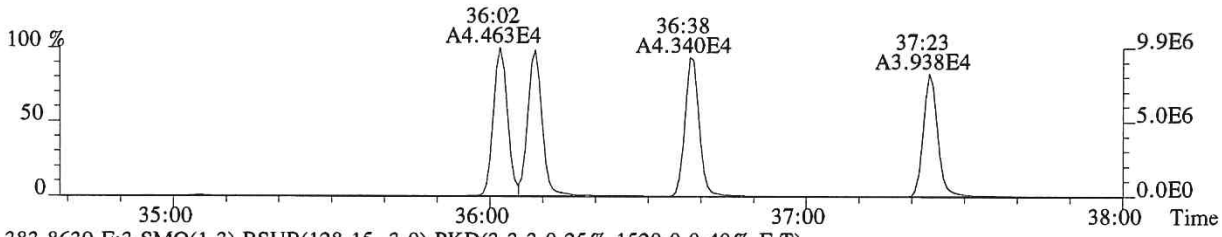


016517

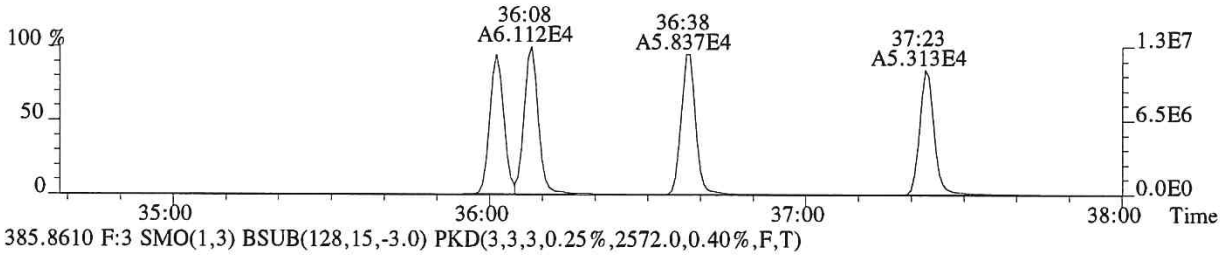
File:P520008 #1-303 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1912.0,0.40%,F,T)



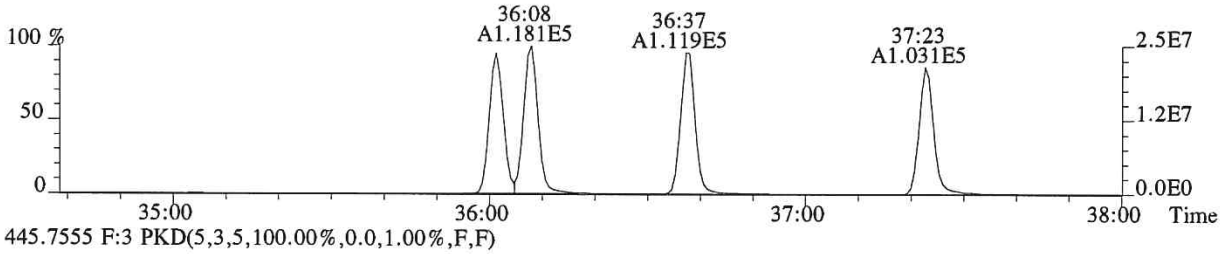
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,984.0,0.40%,F,T)



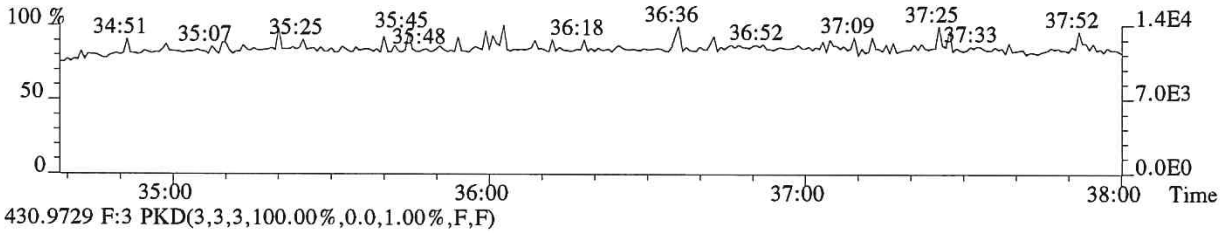
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1520.0,0.40%,F,T)



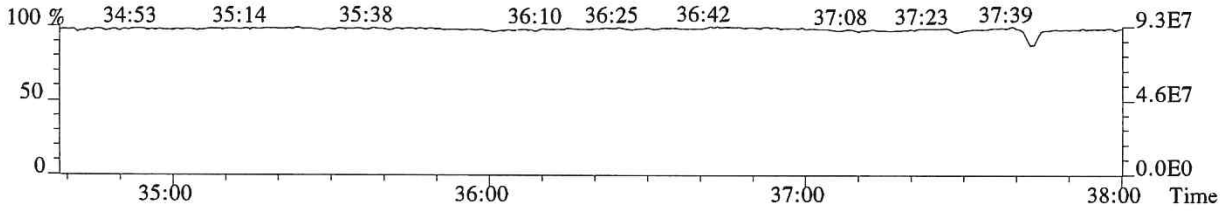
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2572.0,0.40%,F,T)



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

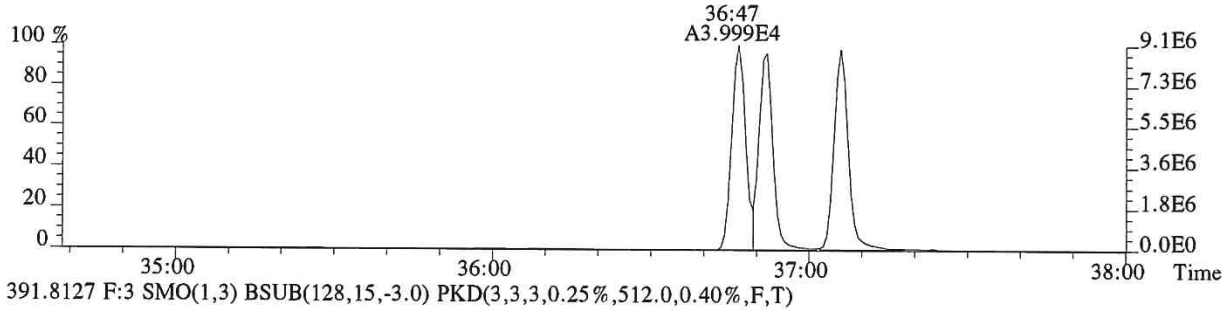


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

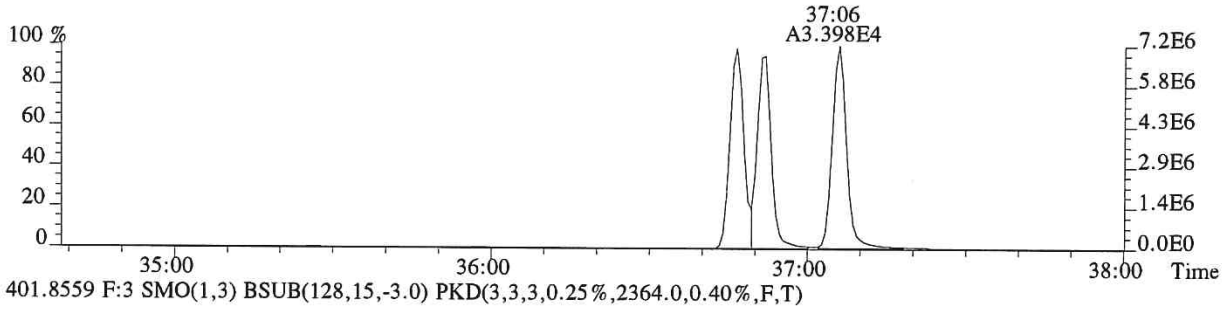


016518

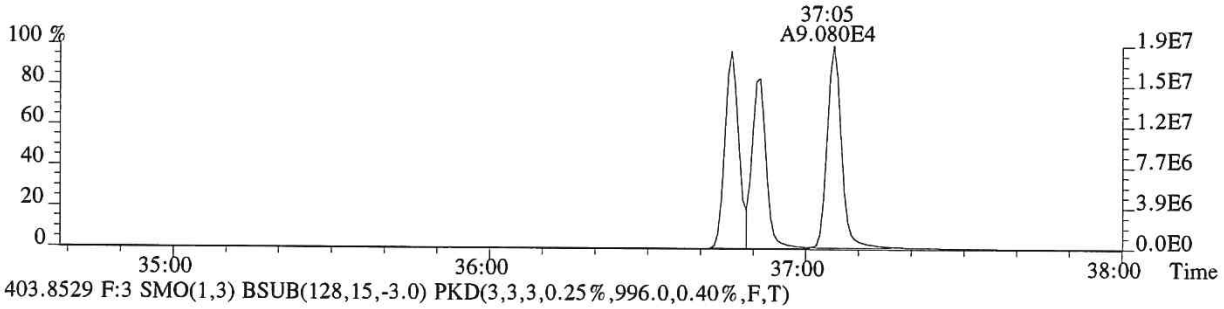
File:P520008 #1-303 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,880.0,0.40%,F,T)



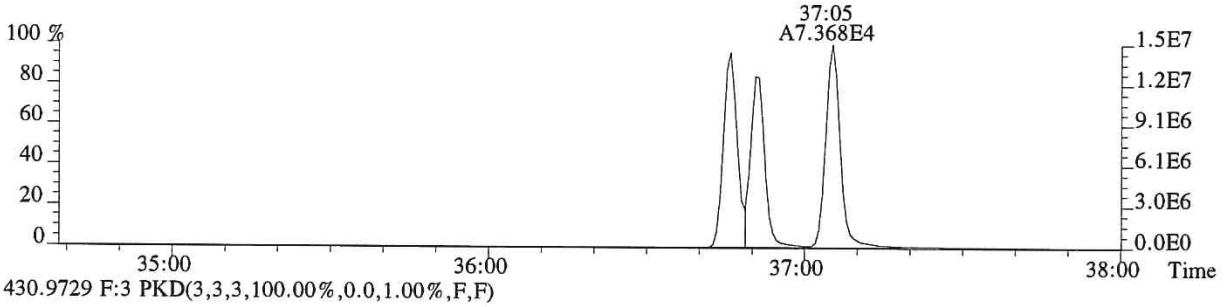
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,512.0,0.40%,F,T)



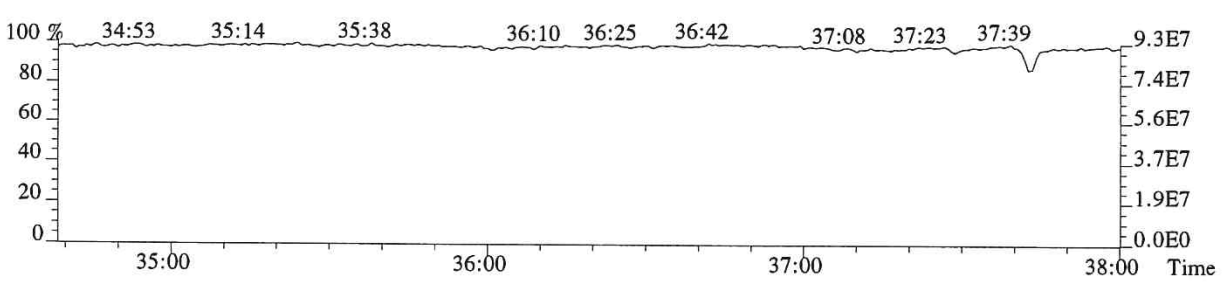
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2364.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,996.0,0.40%,F,T)

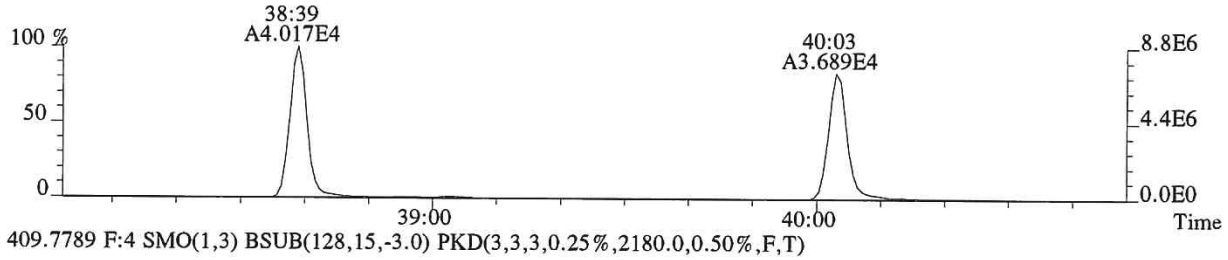


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

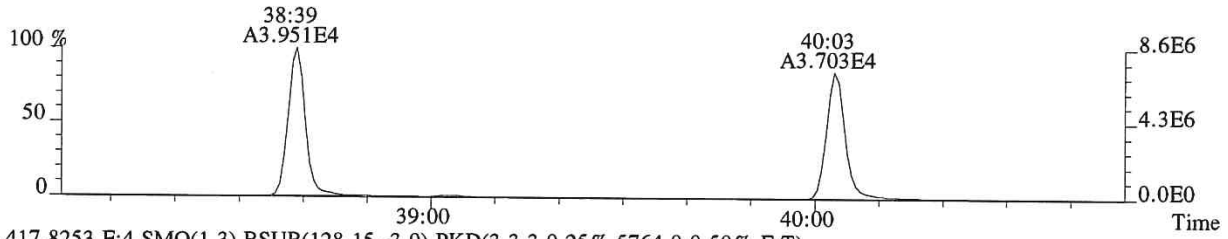


016519

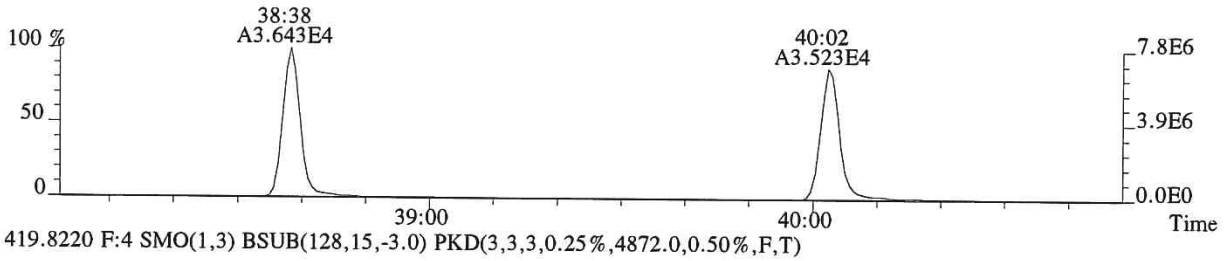
File:P520008 #1-250 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4160.0,0.50%,F,T)



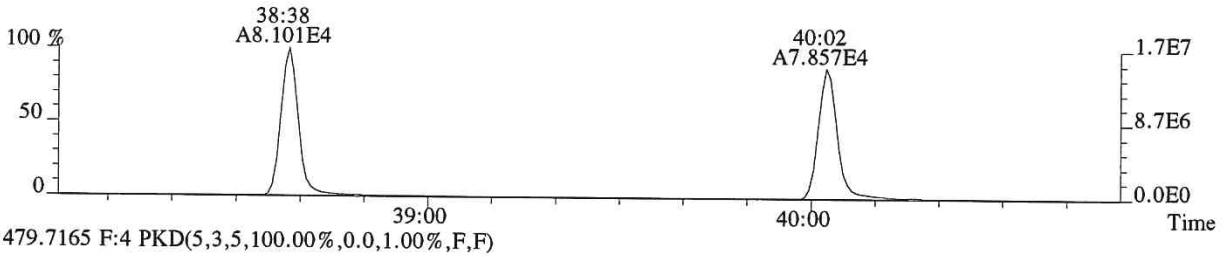
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2180.0,0.50%,F,T)



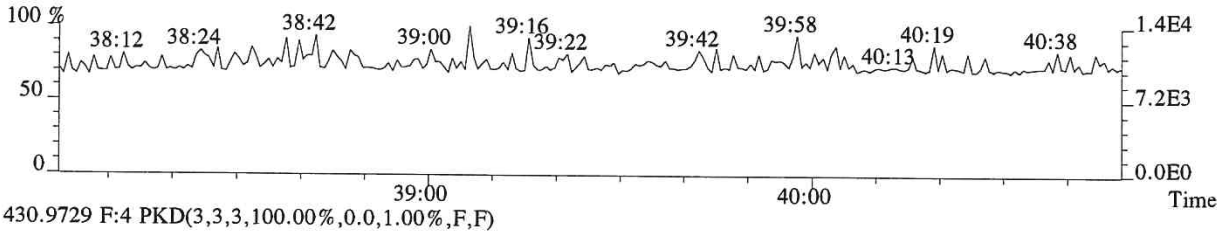
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5764.0,0.50%,F,T)



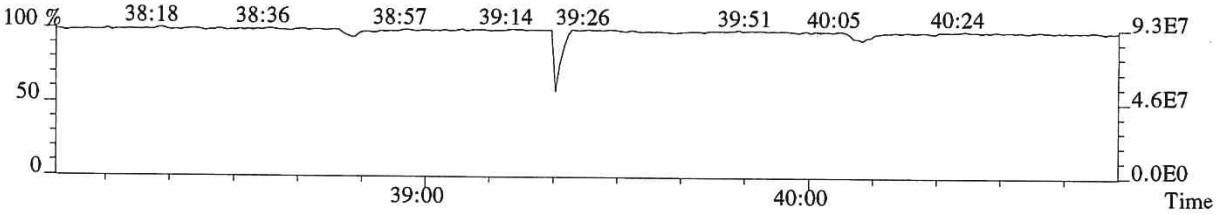
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4872.0,0.50%,F,T)



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

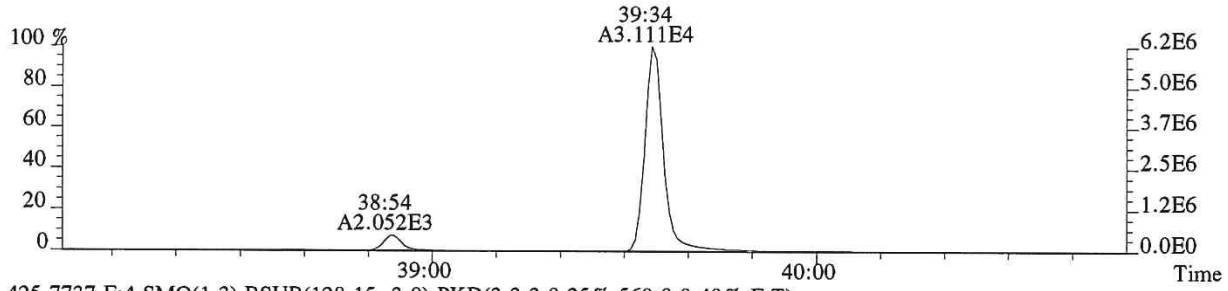


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

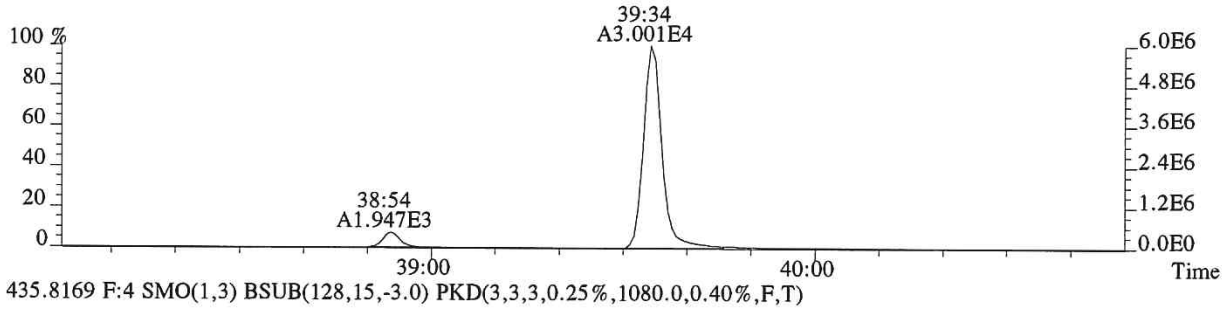


016520

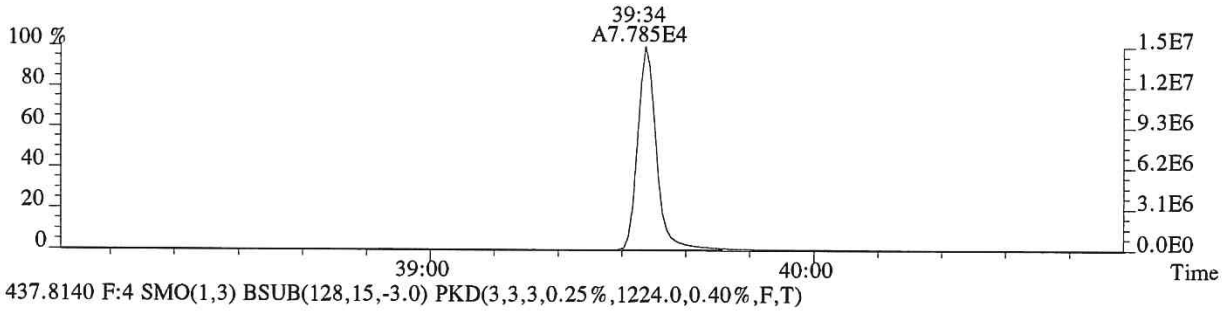
File:P520008 #1-250 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1012.0,0.40%,F,T)



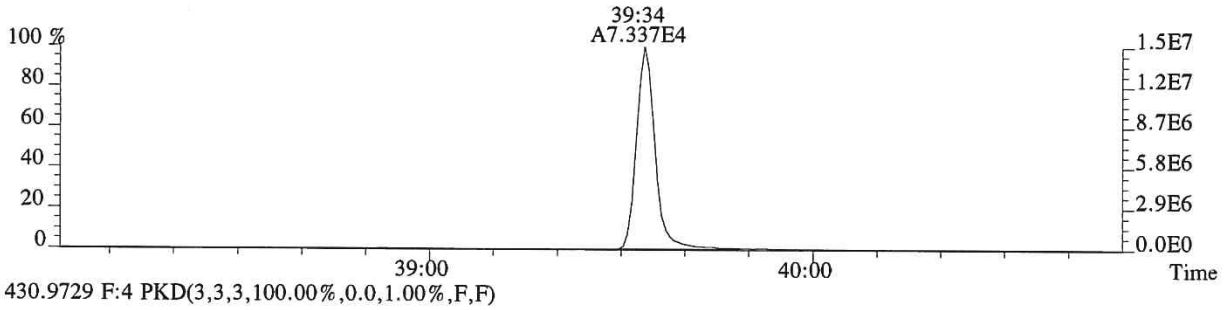
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,560.0,0.40%,F,T)



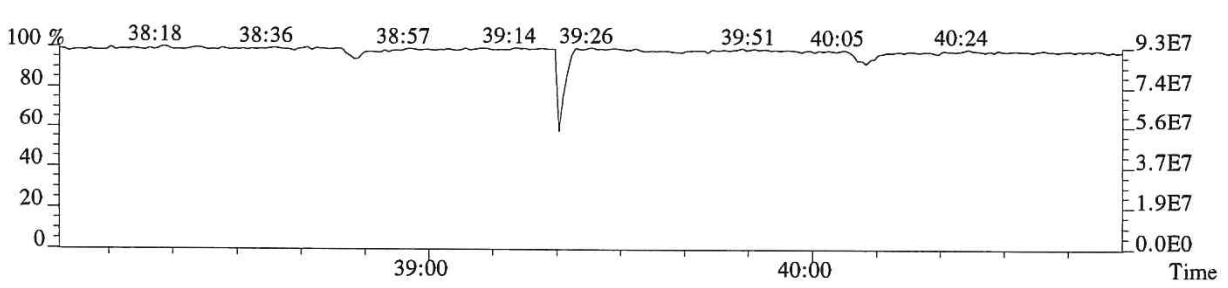
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1080.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1224.0,0.40%,F,T)

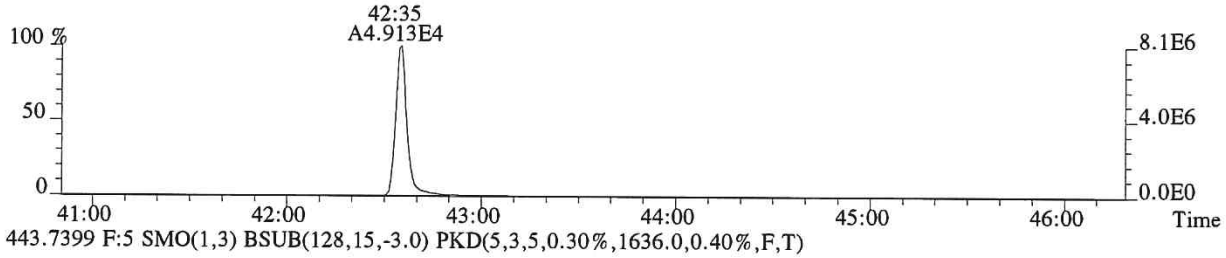


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

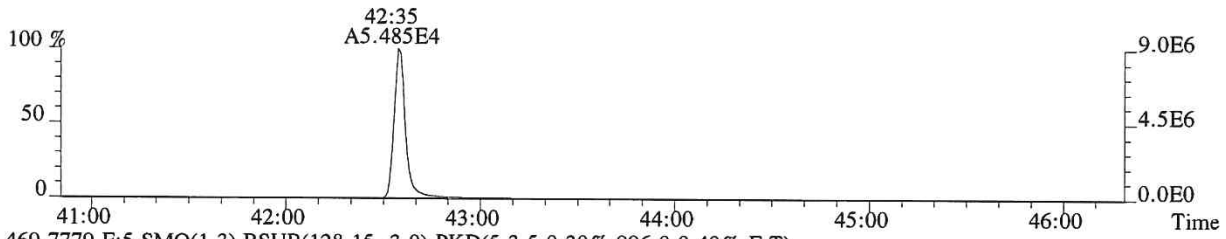


016521

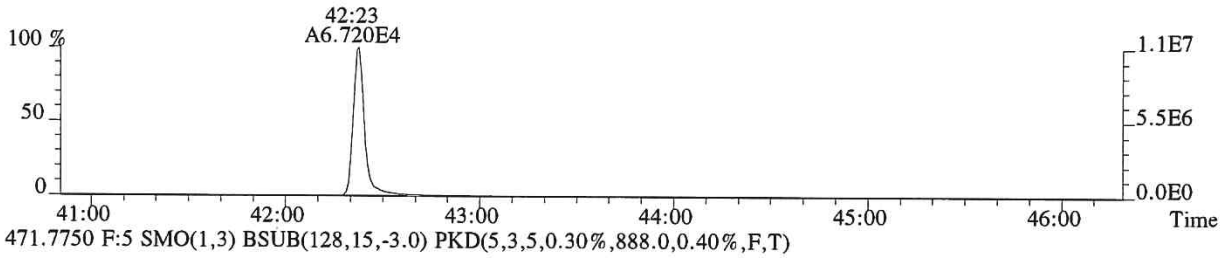
File:P520008 #1-493 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,784.0,0.40%,F,T)



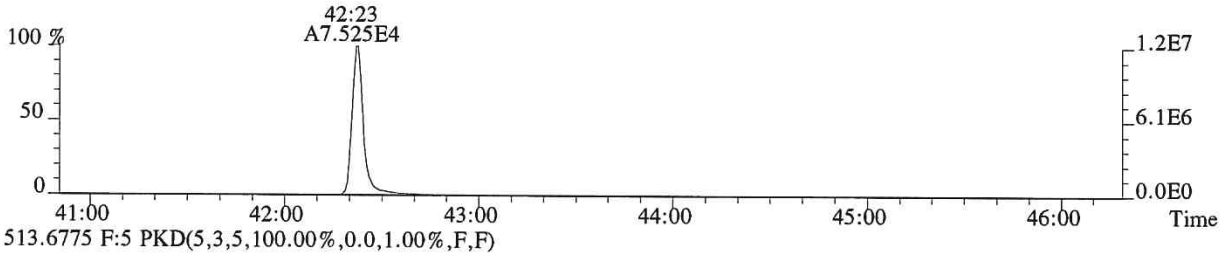
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1636.0,0.40%,F,T)



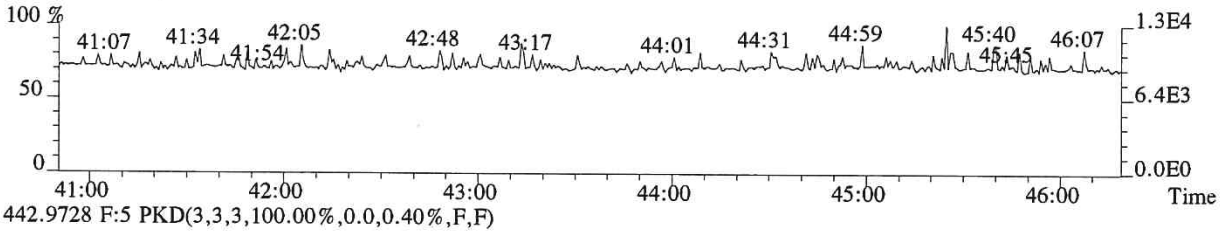
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,996.0,0.40%,F,T)



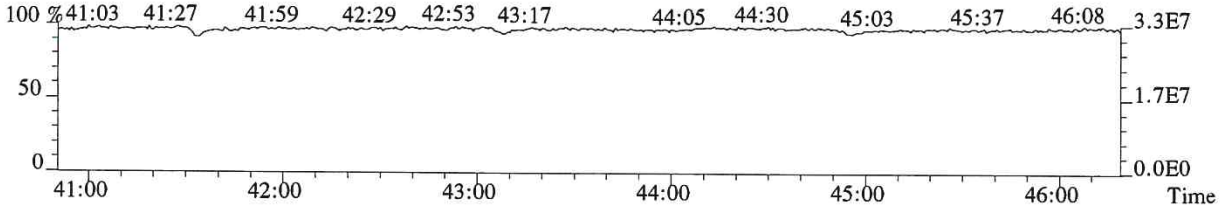
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,888.0,0.40%,F,T)



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

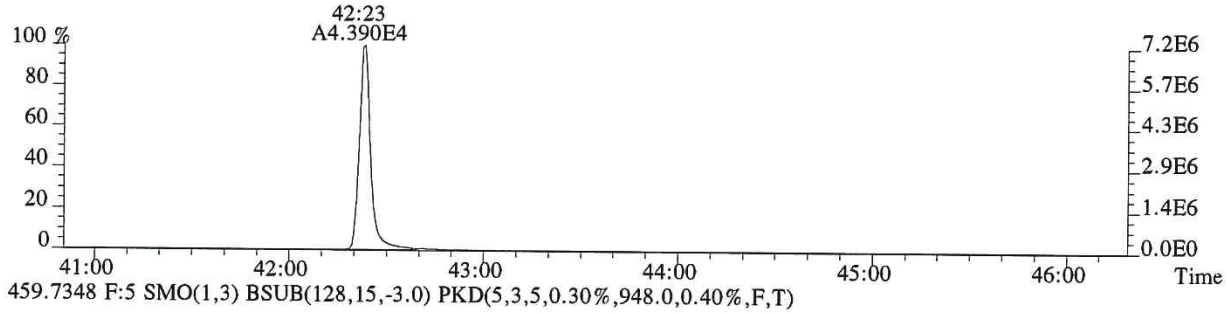


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

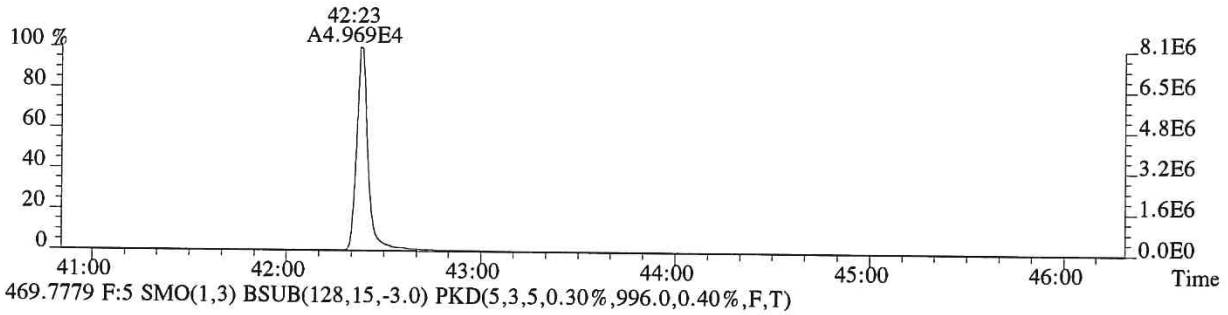


016522

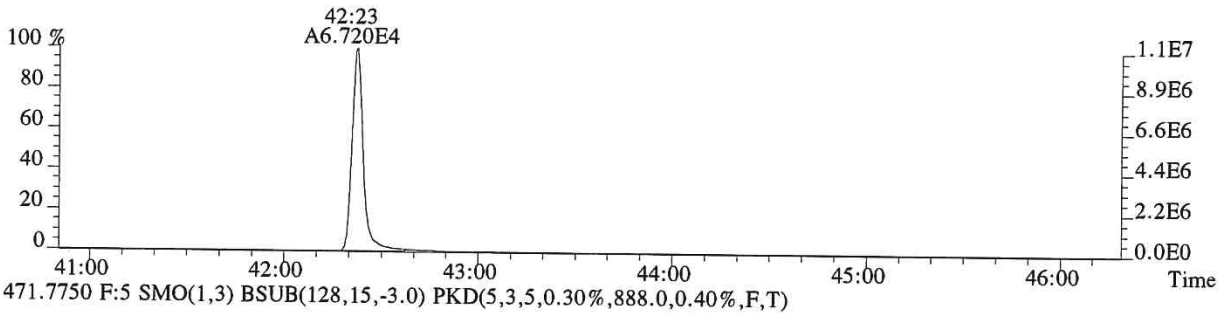
File:P520008 #1-493 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,616.0,0.40%,F,T)



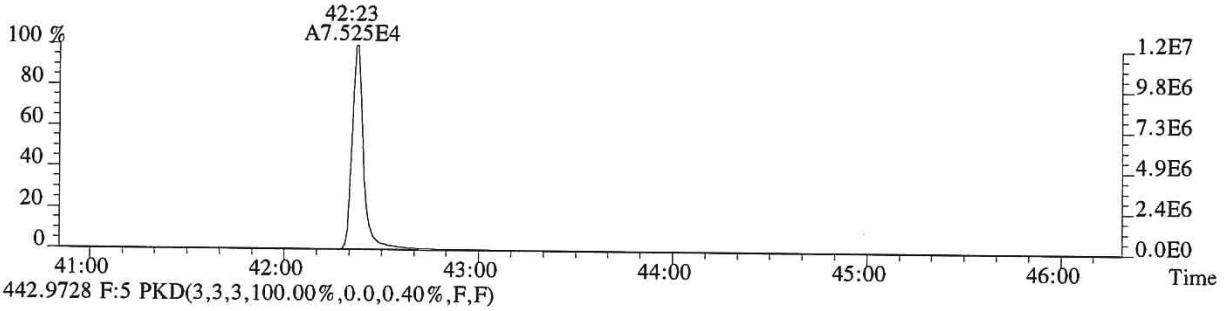
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,948.0,0.40%,F,T)



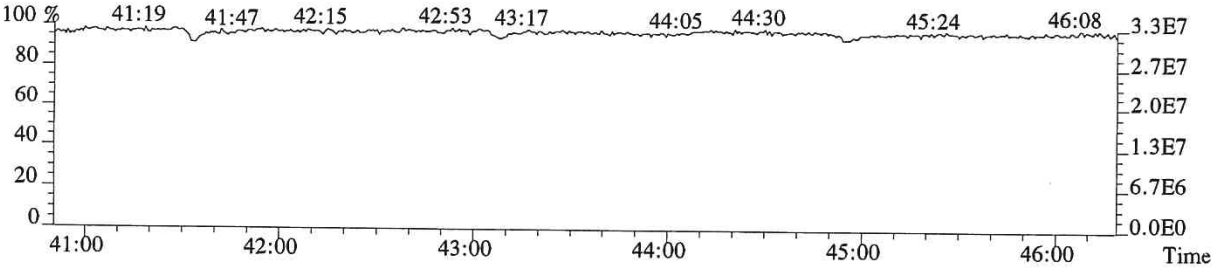
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,996.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,888.0,0.40%,F,T)



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



016523

Continuing Calibration

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

CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P5|9731

Date: 01/02|19–01/03|19 (Beginning / Ending)

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

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

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

Analyst: _____ Second QC: LKL

ccalqc.xls 07/17/12

016525

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

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

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

Init. Calib. Date: 01/24/18

Init. Calib.Times: 11:44

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
194503	CS3	P519731	2-JAN-19	14:32:41
192977	WINDOW DEFINE	P519732	2-JAN-19	15:22:23
METHOD BLANK	EQ1800529-01	P519733	2-JAN-19	16:10:47
SL0133	E1801137-010	P519734	2-JAN-19	16:58:52
SL0134	E1801137-011	P519735	2-JAN-19	17:47:29
SL0135	E1801137-012	P519736	2-JAN-19	18:36:06
SL0186	E1801137-013	P519737	2-JAN-19	19:24:44
SL0187	E1801137-014	P519738	2-JAN-19	20:13:21
SL0188	E1801137-015	P519739	2-JAN-19	21:01:58
SL0189	E1801137-016	P519740	2-JAN-19	21:50:37
SL0190	E1801137-017	P519741	2-JAN-19	22:39:13
SL0192	E1801137-018	P519742	2-JAN-19	23:27:51
SL0193	E1801137-019	P519743	3-JAN-19	00:16:29
SL0194	E1801137-020	P519744	3-JAN-19	01:05:06

E1801137

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

Sample List: C:\MassLynx\EHRMS07.PRO\SampleDB\20190102.SPL
Last Modified: Wednesday, January 02, 2019 15:47:27 Central Standard Time
Printed: Thursday, January 03, 2019 08:31:38 Central Standard Time

Page Position (1, 1)

Opus 4: P519731res

	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	01/02/19	13:38	P519730	CS3	194503	EPA1613_ALS	Dioxin_ALS	Tray1:2	LKL for LG	HRMS check 13:23
2		14:32	P519731	CS3	194503	EPA1613_ALS	Dioxin_ALS	Tray1:2		
3		15:25	P519732	WINDOWDEFINE	192977	EPA1613_ALS	Dioxin_ALS	Tray1:1		
4		16:10	P519733	MB	EQ1800529-01	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		16:58	P519734	E1801137-010	E1801137-010	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		17:47	P519735	E1801137-011	E1801137-011	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		18:36	P519736	E1801137-012	E1801137-012	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		19:24	P519737	E1801137-013	E1801137-013	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		20:13	P519738	E1801137-014	E1801137-014	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		21:01	P519739	E1801137-015	E1801137-015	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		21:50	P519740	E1801137-016	E1801137-016	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		22:39	P519741	E1801137-017	E1801137-017	EPA1613_ALS	Dioxin_ALS	Tray1:12		needs reinjection
13		23:27	P519742	E1801137-018	E1801137-018	EPA1613_ALS	Dioxin_ALS	Tray1:13		
14	01/03/19	00:16	P519743	E1801137-019	E1801137-019	EPA1613_ALS	Dioxin_ALS	Tray1:14		
15		01:05	P519744	E1801137-020	E1801137-020	EPA1613_ALS	Dioxin_ALS	Tray1:15		
16		02:02	P519745	CS3	194503	EPA1613_ALS	Dioxin_ALS	Tray1:2		HRMS check 02:02
17	---	---	P519746	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:17	---	---
18	---	---	P519747	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:18	---	---
19	---	---	P519748	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	P519749	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---
21	---	---	P519750	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:21	---	---
22	---	---	P519751	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:22	---	---
23	---	---	P519752	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:23	---	---
24	---	---	P519753	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:24	---	---
25	---	---	P519754	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:25	---	---
26	---	---	P519755	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:26	---	---
27	---	---	P519756	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:27	---	---
28	---	---	P519757	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:28	---	---
29	---	---	P519758	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:29	---	---
30	---	---	P519759	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:30	---	---
31	---	---	P519760	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:31	---	---
32	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:32	---	---
33	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:33	---	---
34	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:34	---	---
35	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:35	---	---
36	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:36	---	---
37	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:37	---	---
38	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:38	---	---
39	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:39	---	---

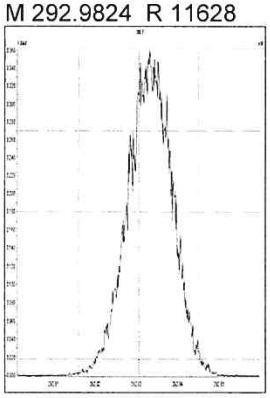
gc 01/03/19

777 of 1131

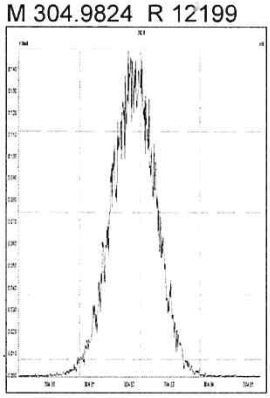
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Printed: Wednesday, January 02, 2019 13:23:00 Central Standard Time

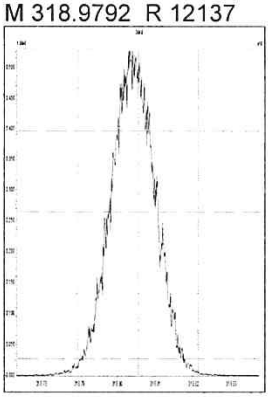
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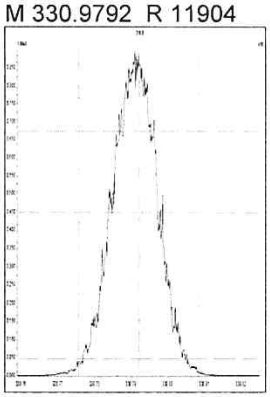
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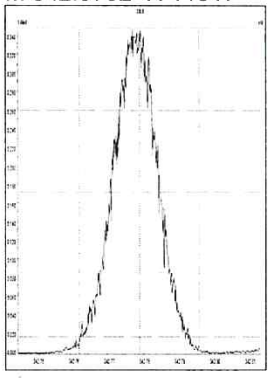
M 318.9792 R 12137



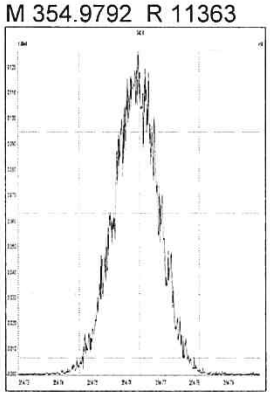
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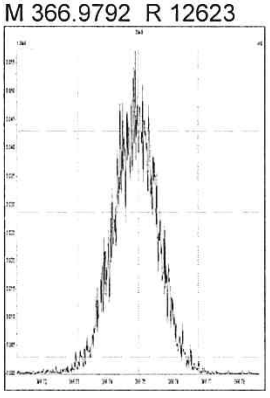
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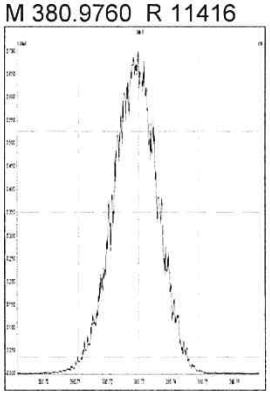
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M 366.9792 R 12623



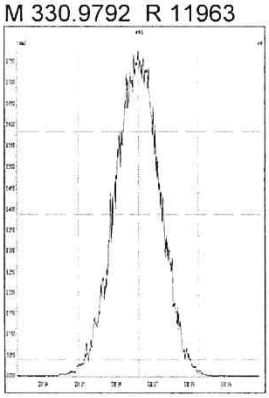
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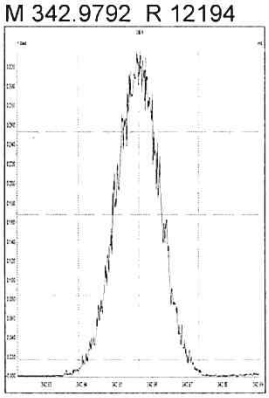
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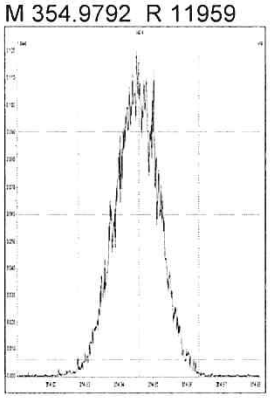
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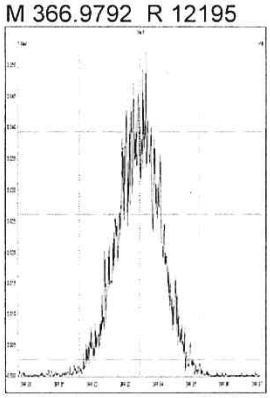
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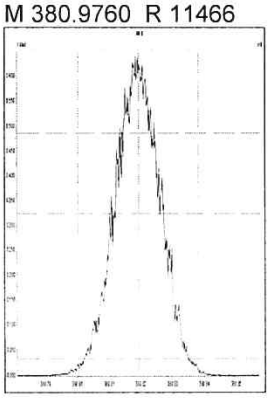
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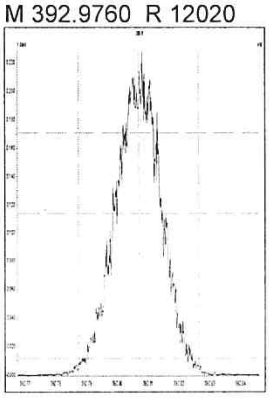
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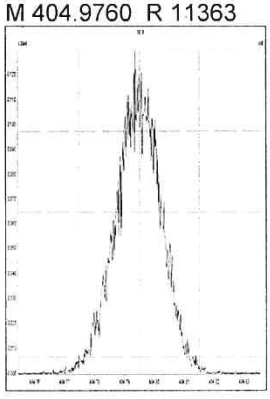
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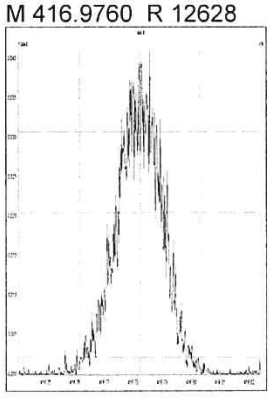
M 392.9760 R 12020



M 404.9760 R 11363



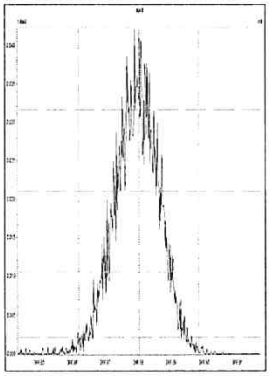
M 416.9760 R 12628



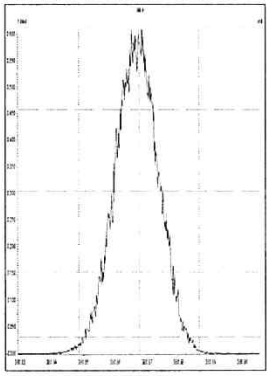
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Wednesday, January 02, 2019 13:24:11 Central Standard Time

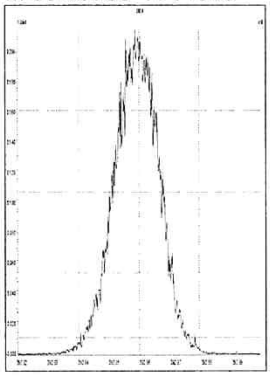
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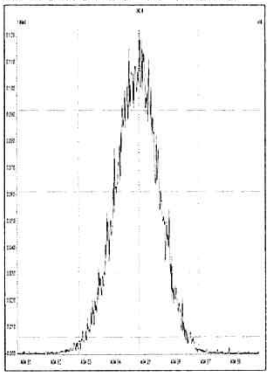
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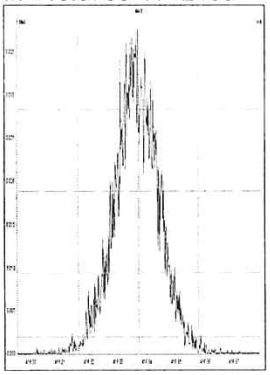
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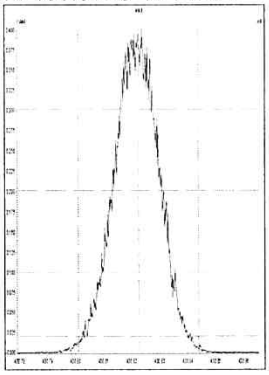
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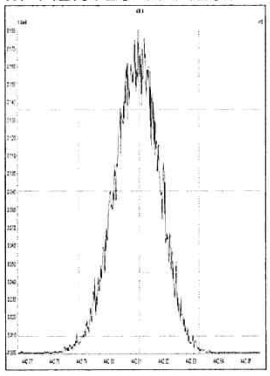
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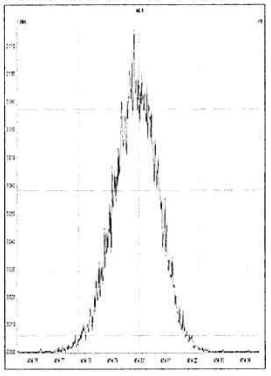
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M 442.9728 R 11261



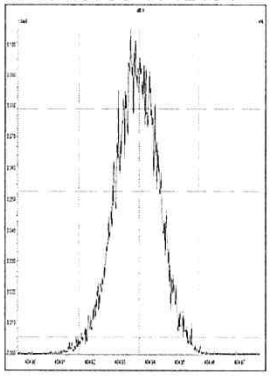
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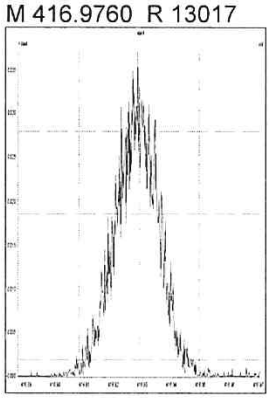
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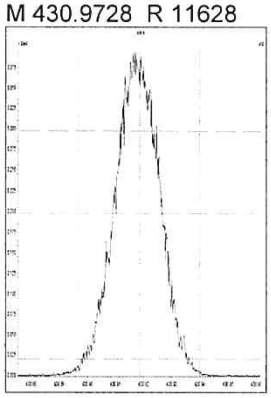
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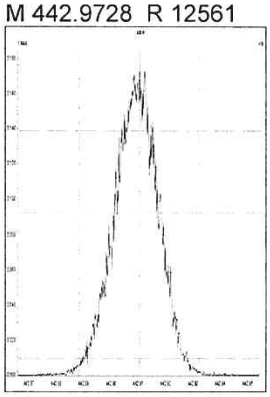
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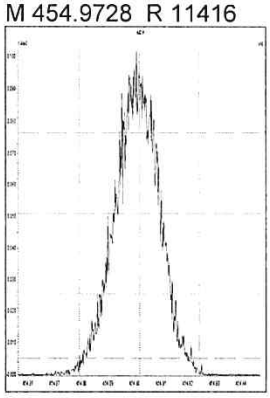
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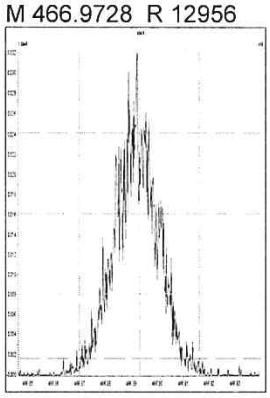
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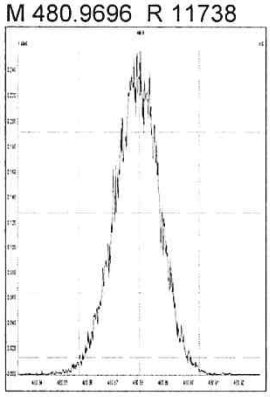
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M 466.9728 R 12956



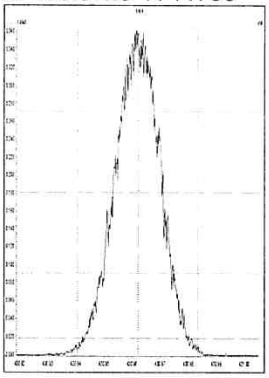
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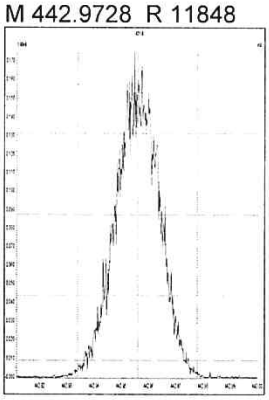
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Wednesday, January 02, 2019 13:25:21 Central Standard Time

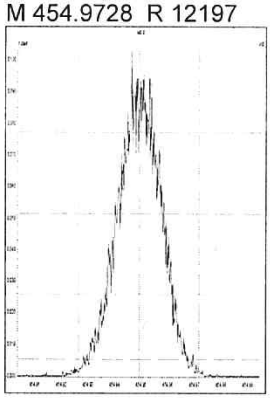
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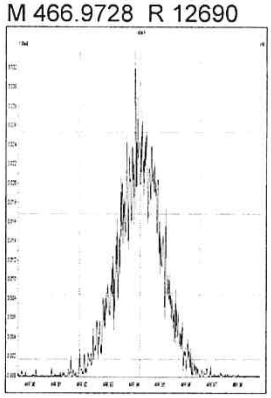
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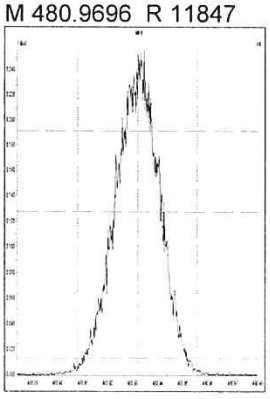
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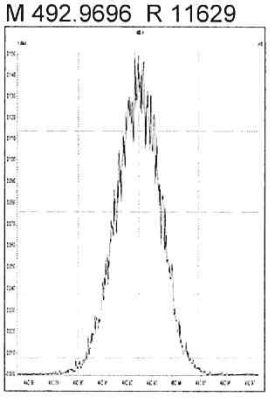
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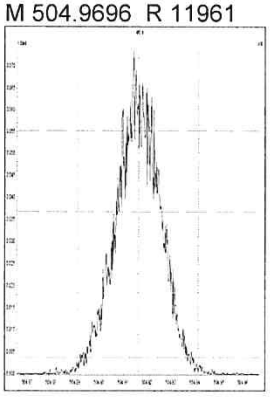
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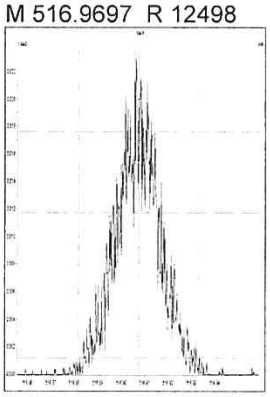
M 492.9696 R 11629



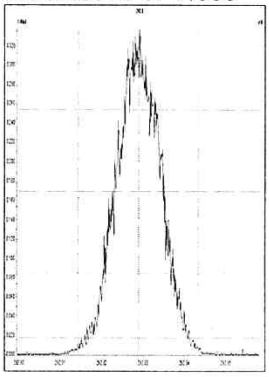
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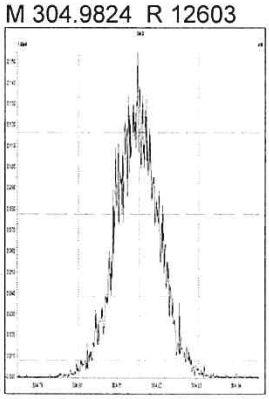
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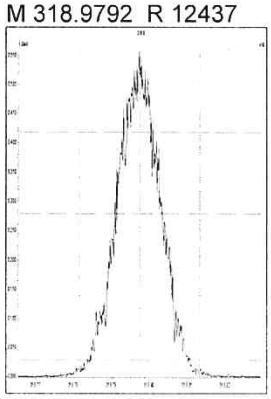
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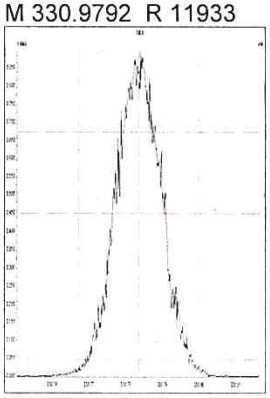
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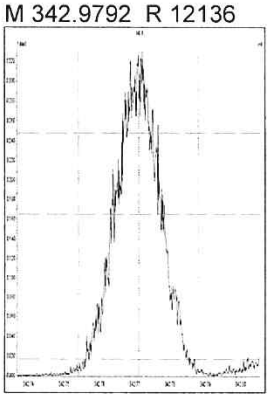
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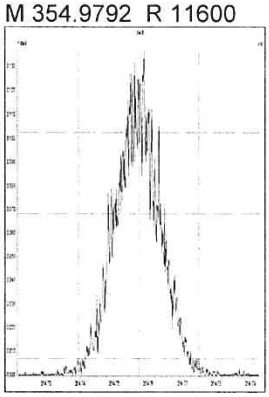
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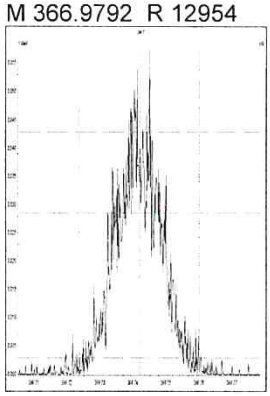
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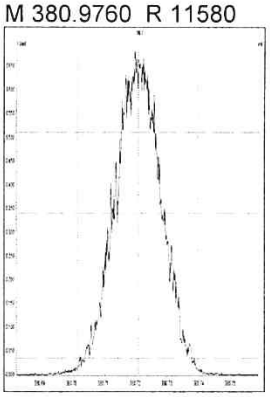
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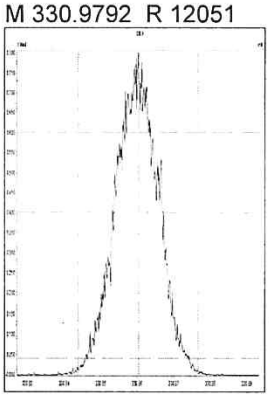
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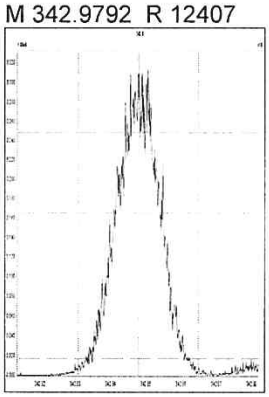
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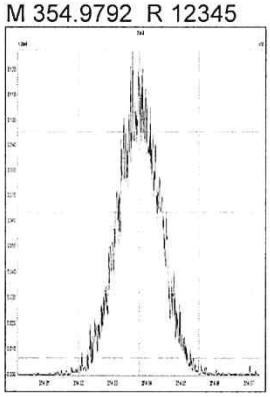
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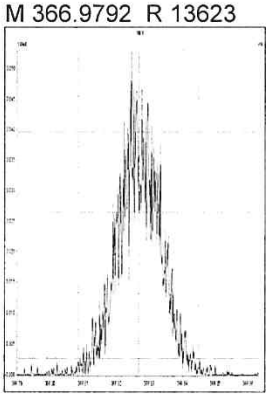
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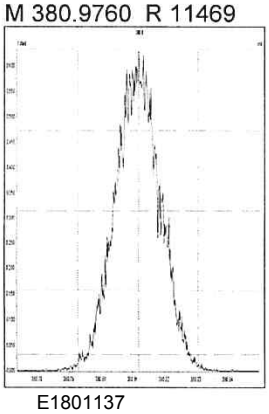
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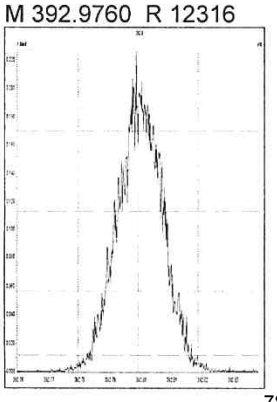
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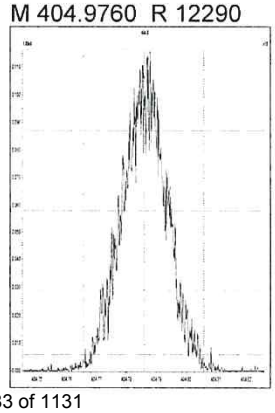
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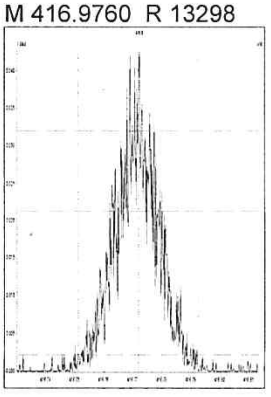
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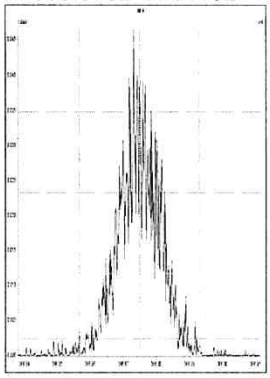
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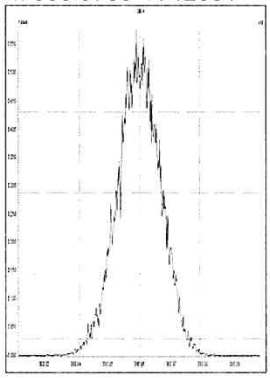
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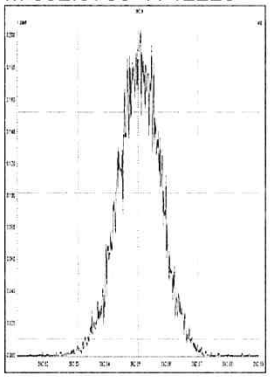
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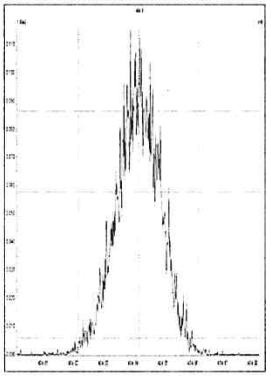
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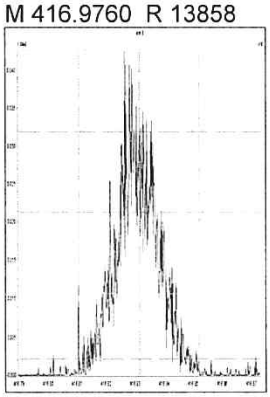
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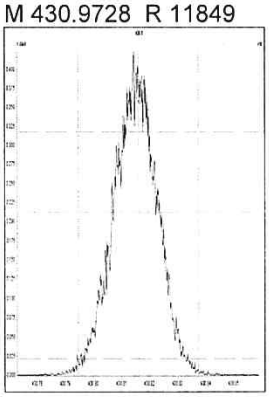
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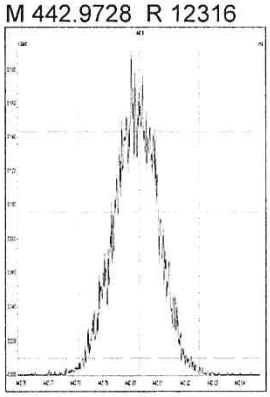
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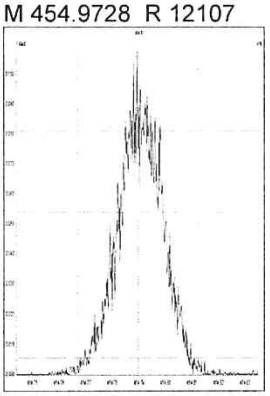
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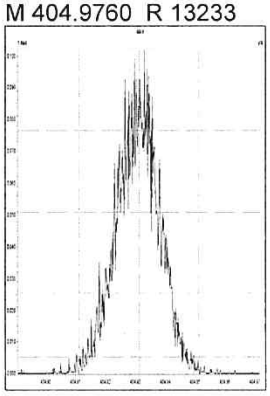
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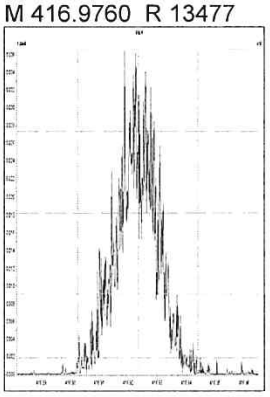
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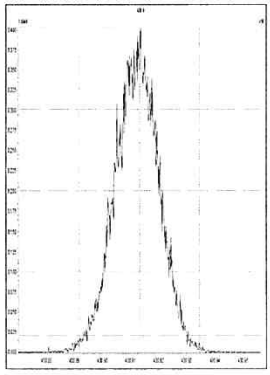
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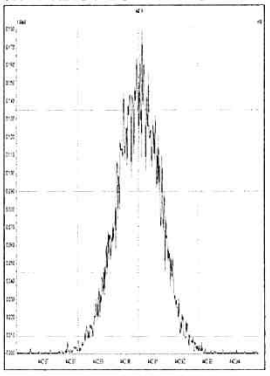
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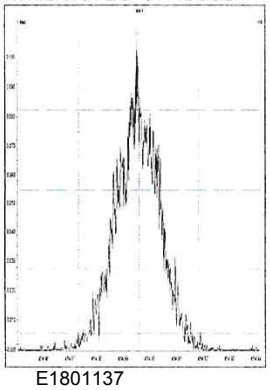
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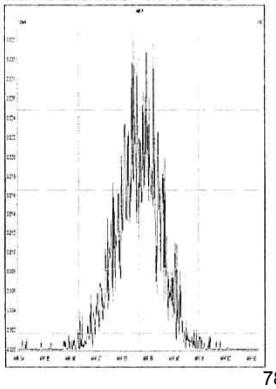
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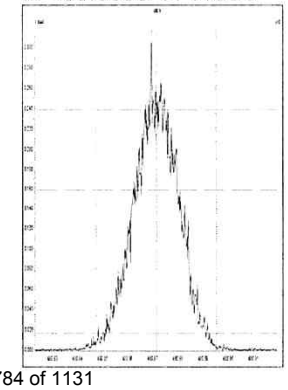
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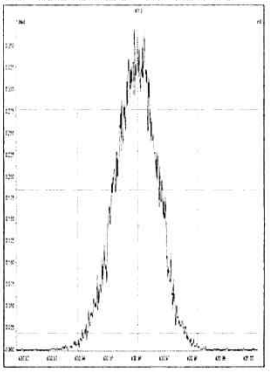
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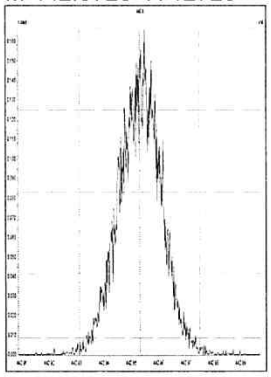
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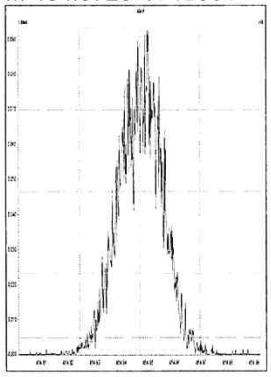
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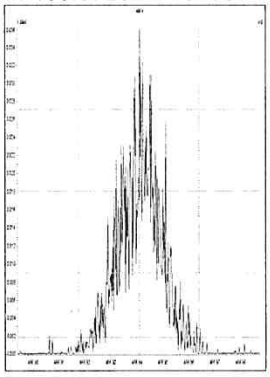
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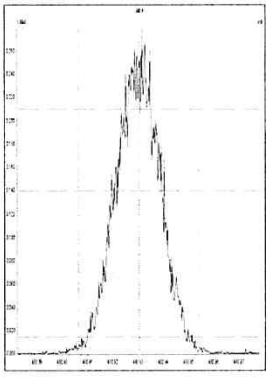
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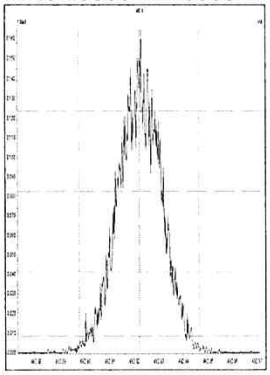
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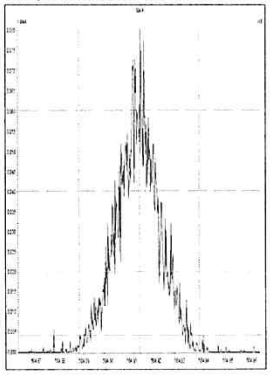
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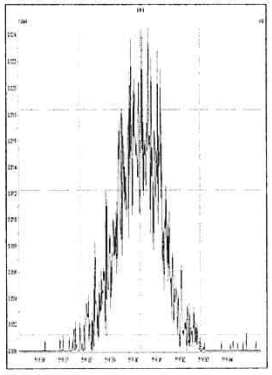
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M 504.9696 R 12596



M 516.9697 R 13968



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

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

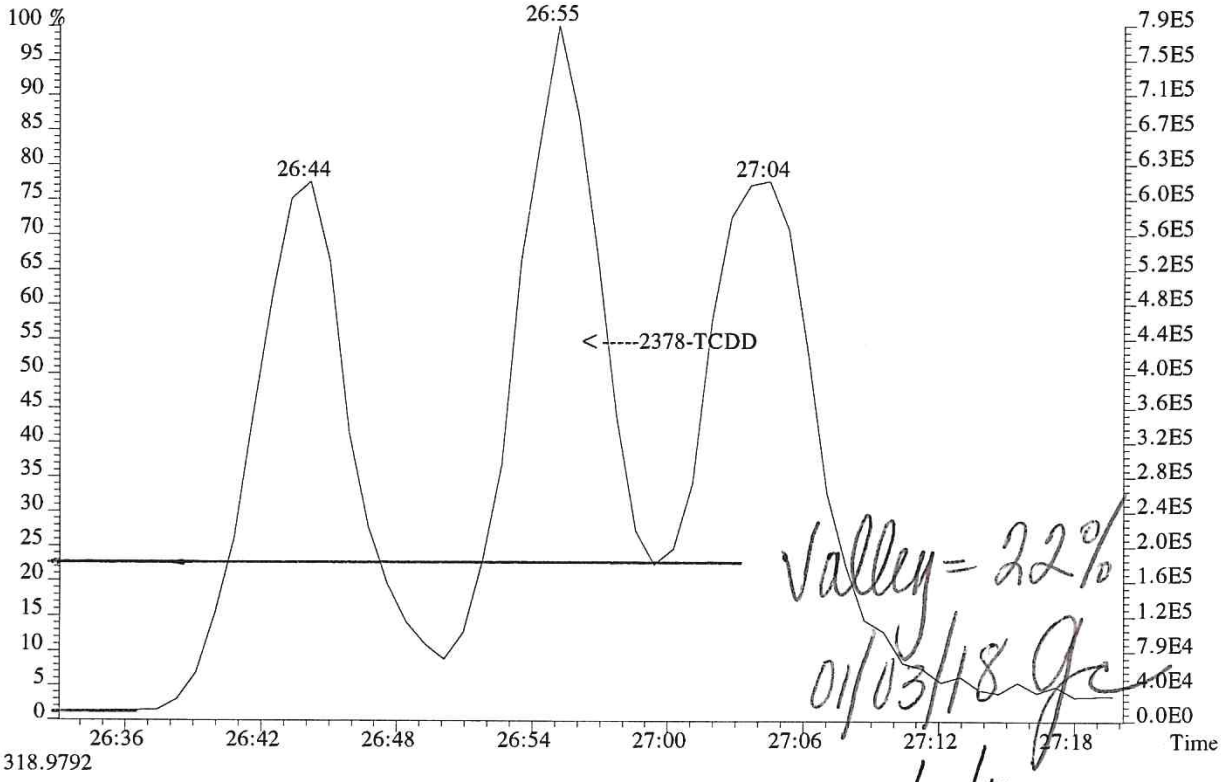
Case No.: _____ SDG No.:
ID: 0.25 (mm)

Lab File ID: P519732
Date Analyzed: 2-JAN-2019
Time Analyzed: 15:22:23

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	21:33	28:16
TCDD	23:11	28:06
PeCDF	28:15	32:58
PeCDD	30:00	32:43
HxCDF	33:43	36:26
HxCDD	34:18	36:01
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HpCDD	38:06	38:50

% Valley 2378-TCDD: 22 %

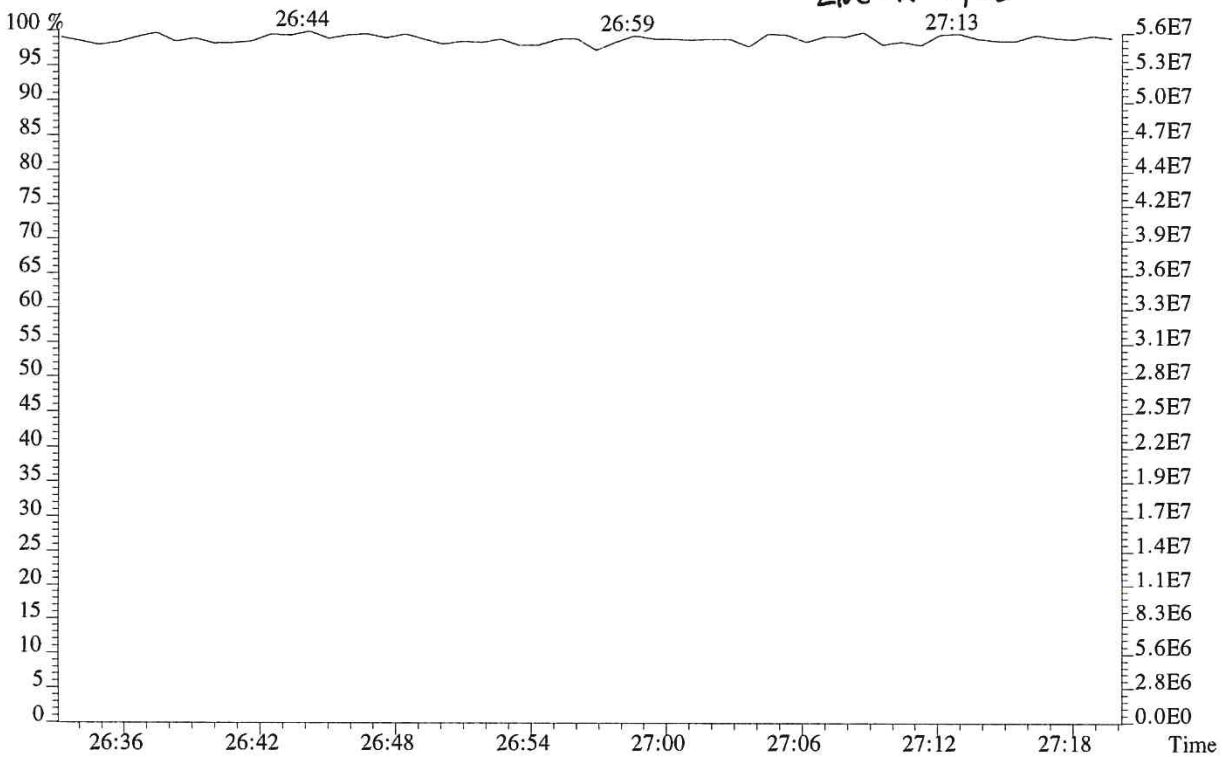
File:P519732 #1-587 Acq: 2-JAN-2019 15:22:23 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
319.8965



Valley = 22%
01/03/18 gc

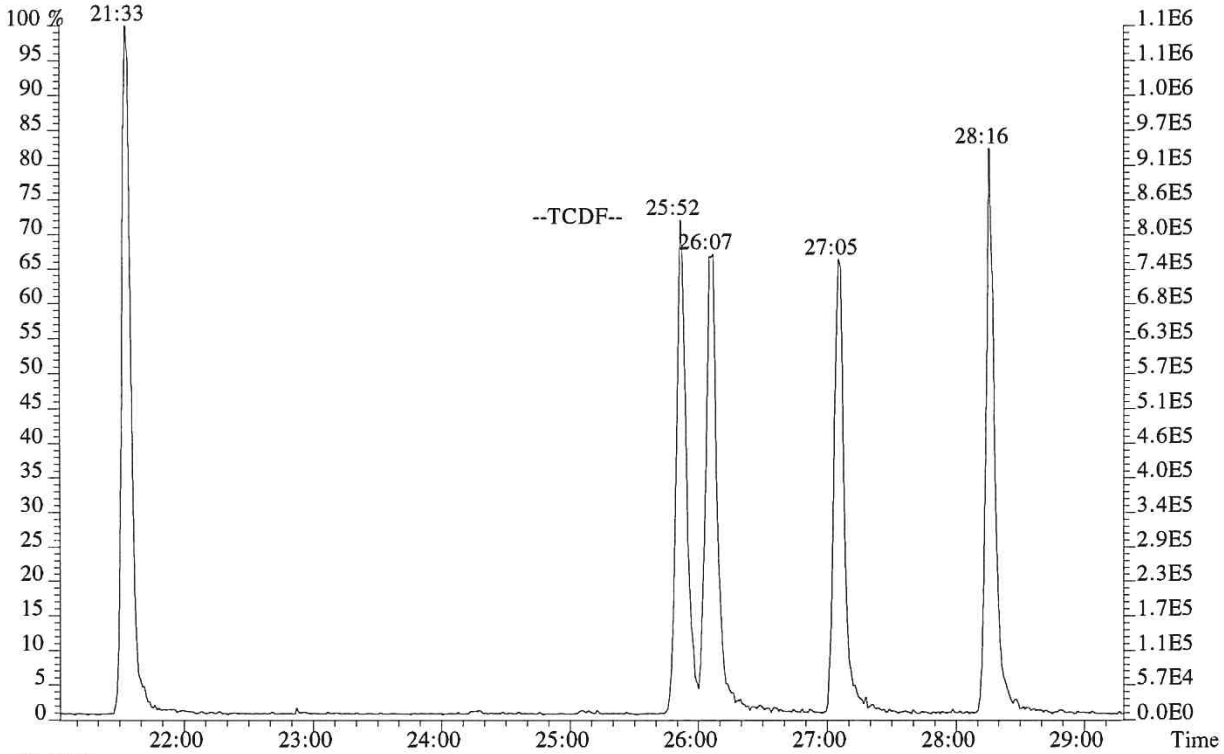
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LM 01/03/19

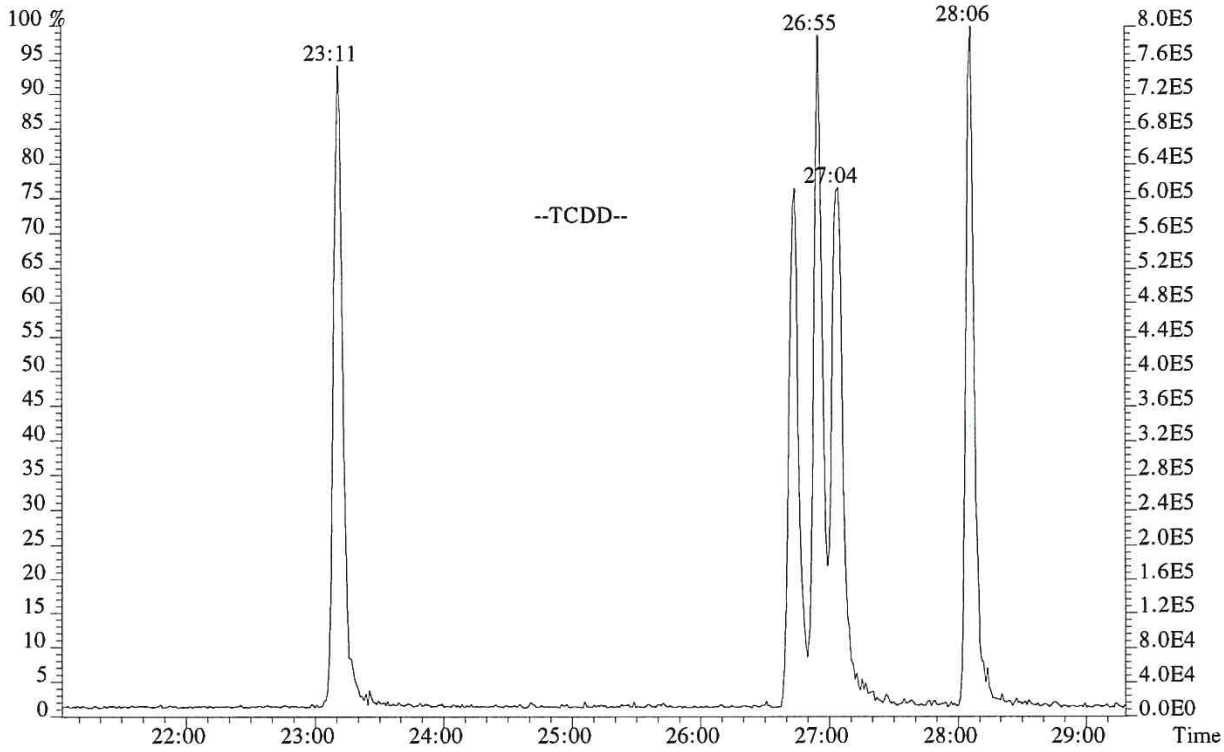


016537

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303.9016

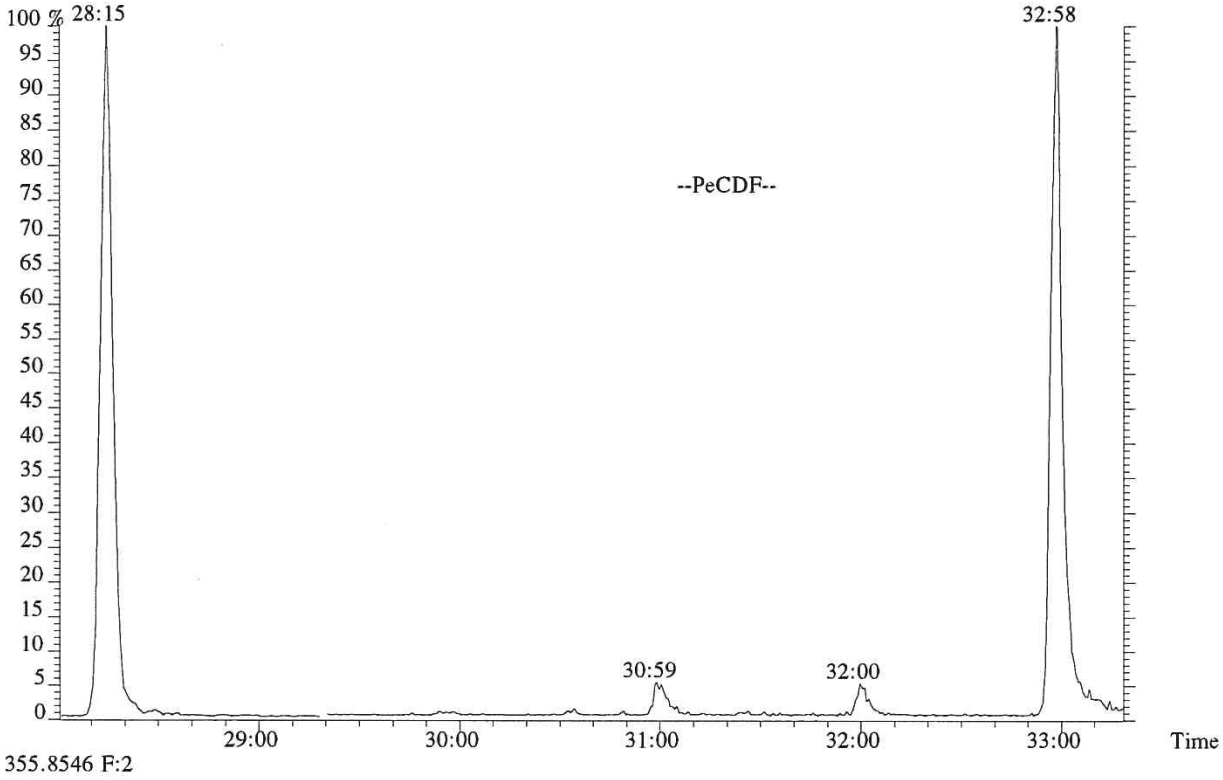


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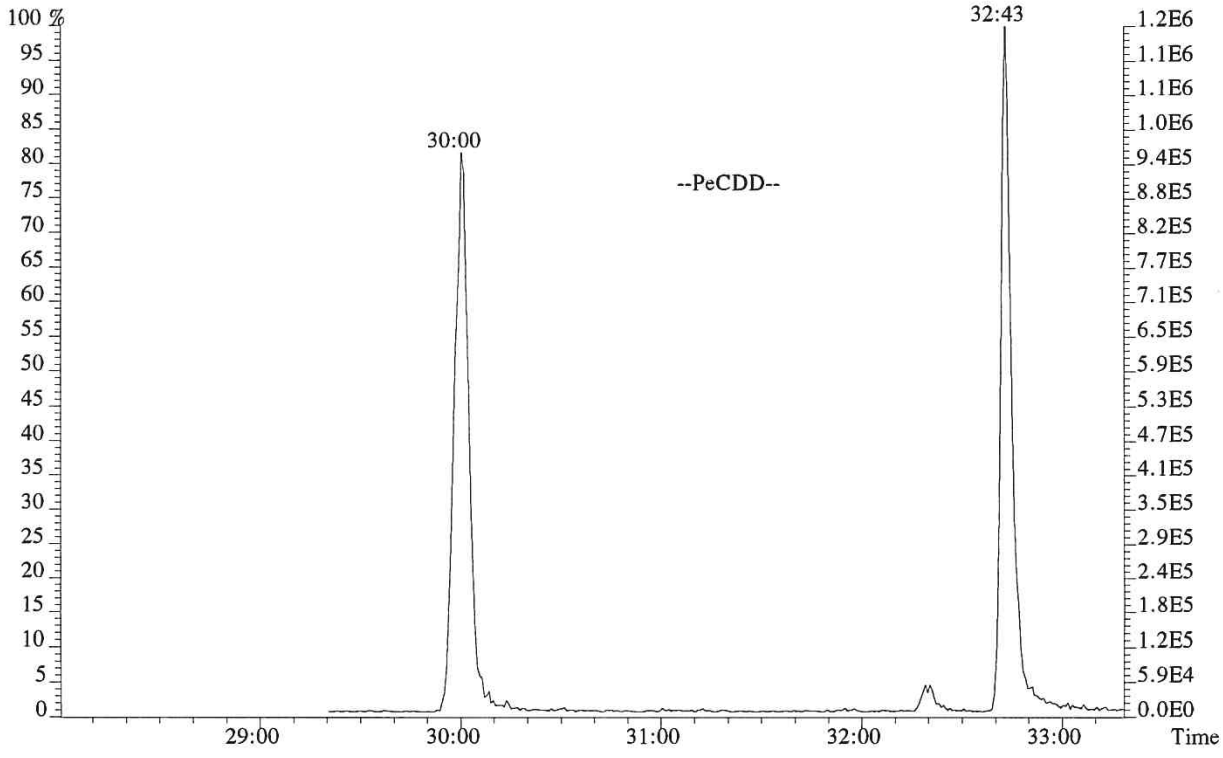


016538

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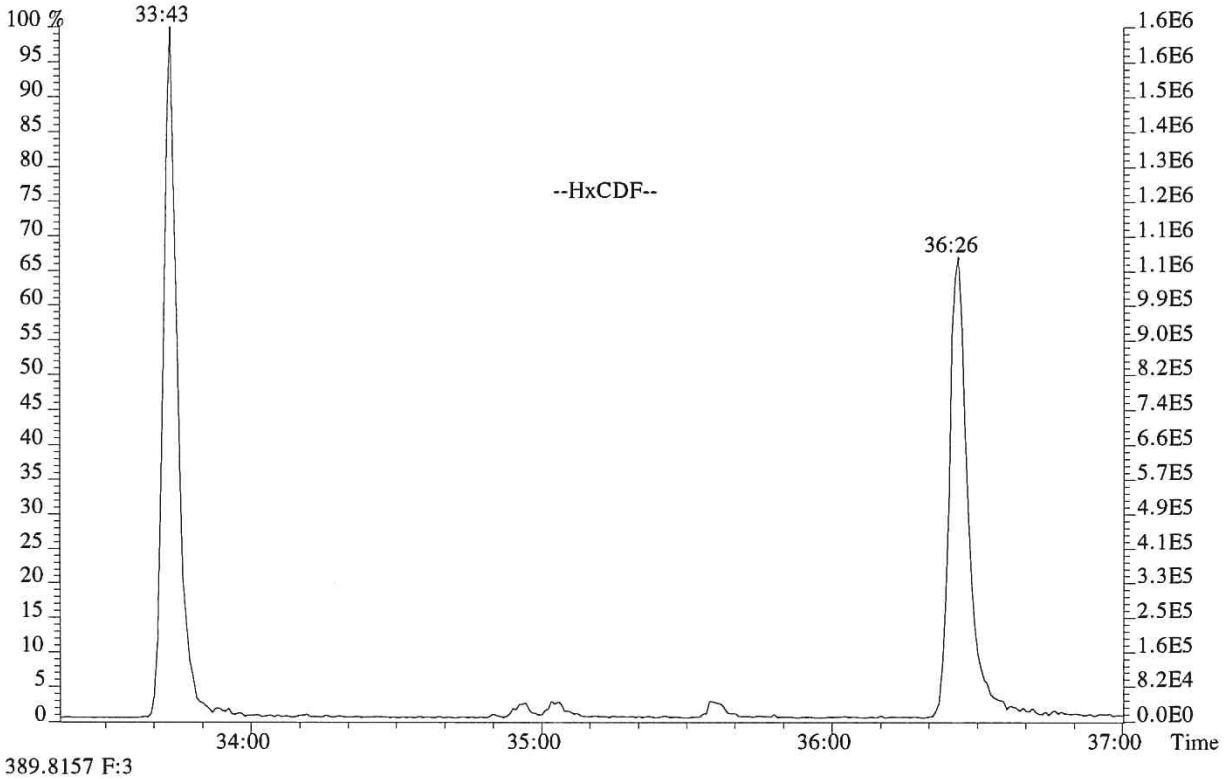


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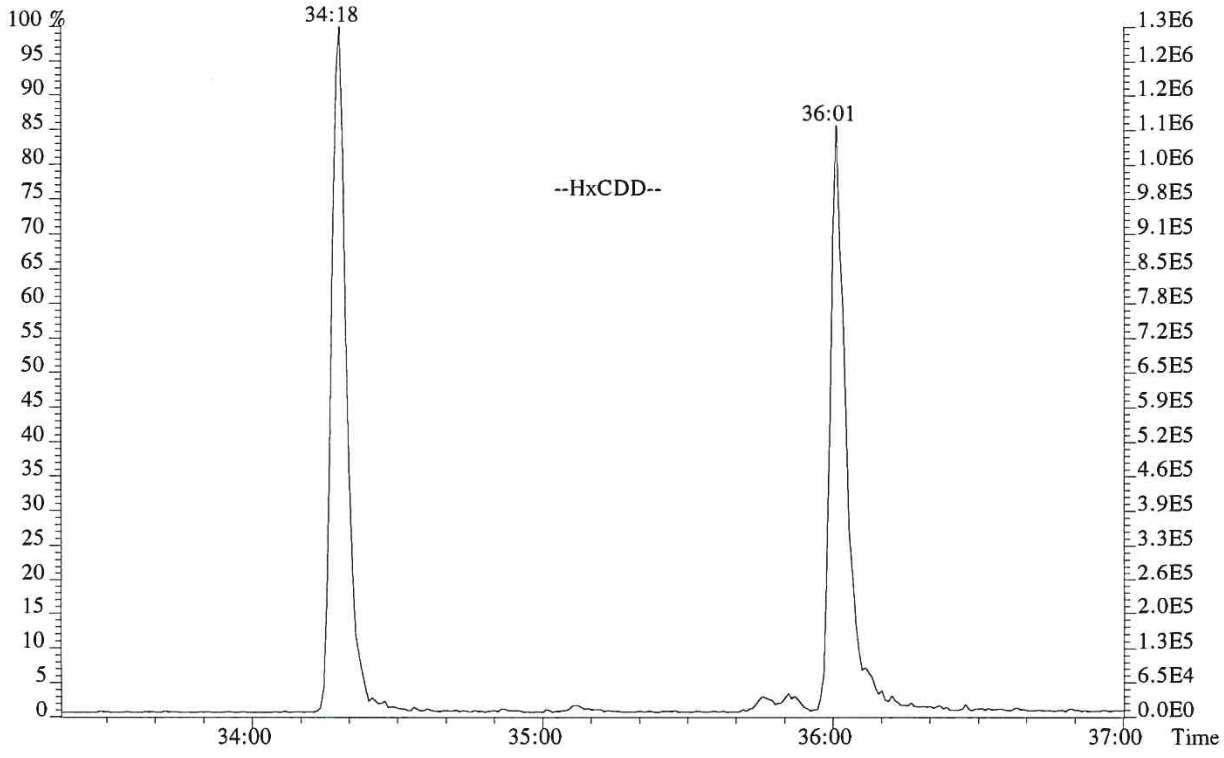


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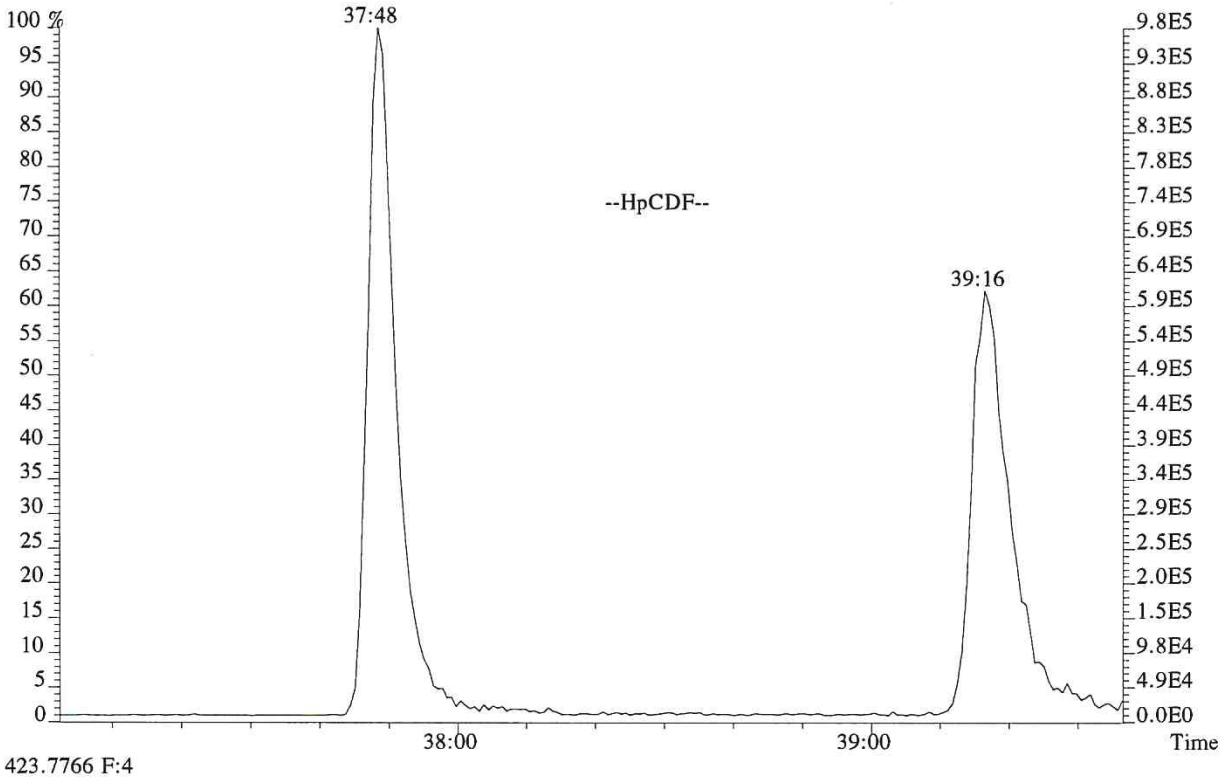
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Sample#1 Exp:192977
373.8208 F:3



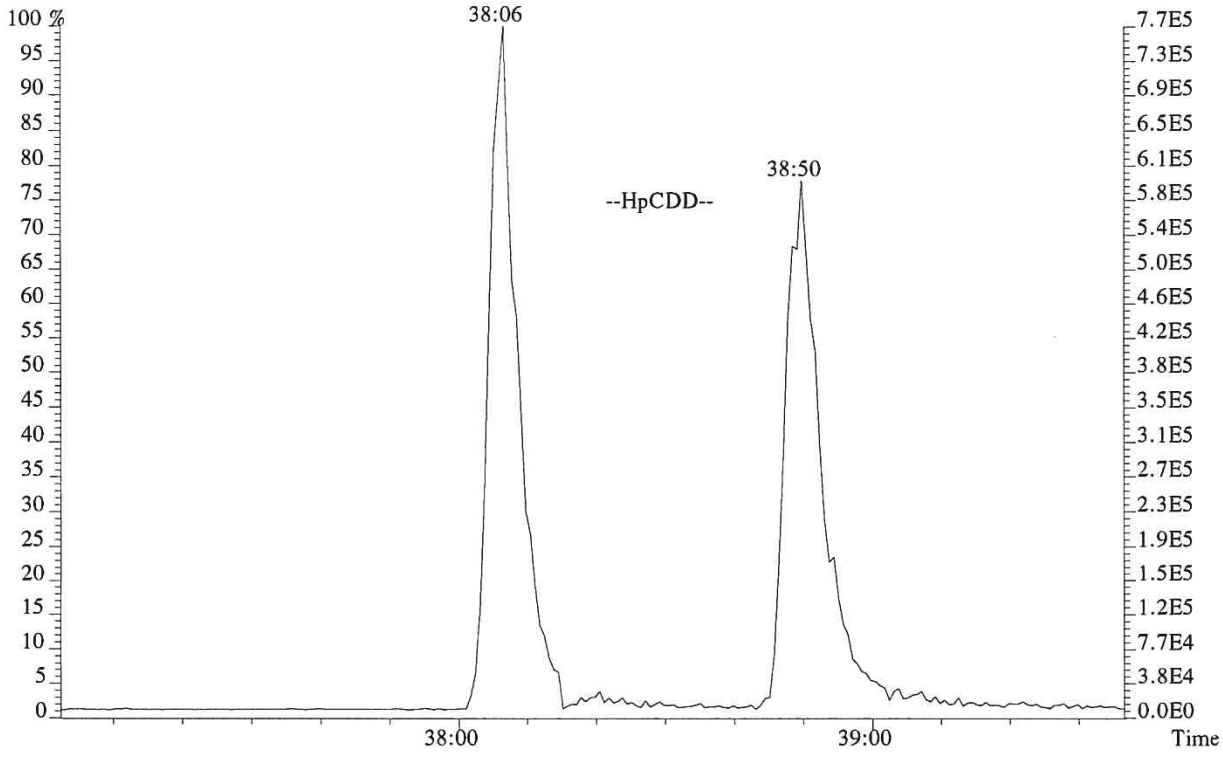
389.8157 F:3



File:P519732 #1-232 Acq: 2-JAN-2019 15:22:23 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
407.7818 F:4



423.7766 F:4



016541

USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519731 Analysis Date: 2-JAN-19 Time: 14:32:41

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	9.1	7.8 - 12.9	-8.7
1,2,3,7,8-PeCDD	M+2/M+4	1.58	1.32-1.78	49	39 - 65	-1.4
1,2,3,4,7,8-HxCDD	M+2/M+4	1.37	1.05-1.43	51	39 - 64	1.4
1,2,3,6,7,8-HxCDD	M+2/M+4	1.17	1.05-1.43	47	39 - 64	-5.8
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	52	41 - 61	4.6
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	50	43 - 58	-0.5
OCDD	M+2/M+4	0.90	0.76-1.02	100	79 - 126	-0.2
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	9.5	8.4 - 12.0	-5.1
1,2,3,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	49	41 - 60	-1.5
2,3,4,7,8-PeCDF	M+2/M+4	1.48	1.32-1.78	49	41 - 61	-2.7
1,2,3,4,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	51	45 - 56	1.2
1,2,3,6,7,8-HxCDF	M+2/M+4	1.18	1.05-1.43	51	44 - 57	1.4
1,2,3,7,8,9-HxCDF	M+2/M+4	1.20	1.05-1.43	49	45 - 56	-1.2
2,3,4,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	50	44 - 57	0.1
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.01	0.88-1.20	50	45 - 55	0.2
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.00	0.88-1.20	50	43 - 58	0.9
OCDF	M+2/M+4	0.88	0.76-1.02	93	63 - 159	-7.0

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

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

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

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

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519731 Analysis Date: 2-JAN-19 Time: 14:32:41

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	100	82 - 121	0.1
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.59	1.32-1.78	107	62 - 160	7.3
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	87	85 - 117	-12.8
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	104	85 - 118	4.1
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	103	72 - 138	3.5
13C-OCDD	M+2/M+4	0.90	0.76-1.02	247	96 - 415	23.6
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	85	71 - 140	-14.7
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	98	76 - 130	-2.3
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	99	77 - 130	-0.7
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	79	76 - 131	-20.5
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	86	70 - 143	-13.8
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	86	74 - 135	-14.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	89	73 - 137	-11.1
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	94	78 - 129	-5.9
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	96	77 - 129	-3.6
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				9.7	7.8 - 12.7	-3.0

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

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
194503

Run #7 Filename P519731 Samp: 1 Inj: 1 Acquired: 2-JAN-19 14:32:41
Processed: 3-JAN-19 09:14:20 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:05	3.795e+03	4.889e+03	0.78	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:58	3.269e+04	2.121e+04	1.54	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:58	3.030e+04	2.043e+04	1.48	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:54	2.548e+04	2.128e+04	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:01	2.939e+04	2.491e+04	1.18	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:33	2.676e+04	2.237e+04	1.20	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:22	2.274e+04	1.903e+04	1.20	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:47	2.445e+04	2.423e+04	1.01	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:13	1.981e+04	1.987e+04	1.00	yes	no	1.258
10	Unk	OCDF	41:51	3.380e+04	3.821e+04	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:04	3.041e+03	3.847e+03	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:18	2.273e+04	1.437e+04	1.58	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:44	1.940e+04	1.422e+04	1.37	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:49	2.057e+04	1.765e+04	1.17	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:03	2.198e+04	1.752e+04	1.25	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:45	1.824e+04	1.758e+04	1.04	yes	no	1.025
17	Unk	OCDD	41:41	3.003e+04	3.353e+04	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	4.301e+04	5.411e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:57	6.622e+04	4.185e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:58	6.666e+04	4.207e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:53	2.644e+04	5.121e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:00	3.277e+04	6.265e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:33	3.018e+04	5.825e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:21	2.505e+04	4.887e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:46	2.202e+04	4.993e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:12	1.916e+04	4.341e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:02	3.092e+04	3.860e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:17	4.824e+04	3.042e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:43	3.564e+04	2.822e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:48	4.399e+04	3.420e+04	1.29	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:44	3.597e+04	3.429e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	41:40	5.398e+04	5.996e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	3.344e+04	4.177e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:03	4.439e+04	3.478e+04	1.28	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:04	7.399e+03				no	1.014

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
194503

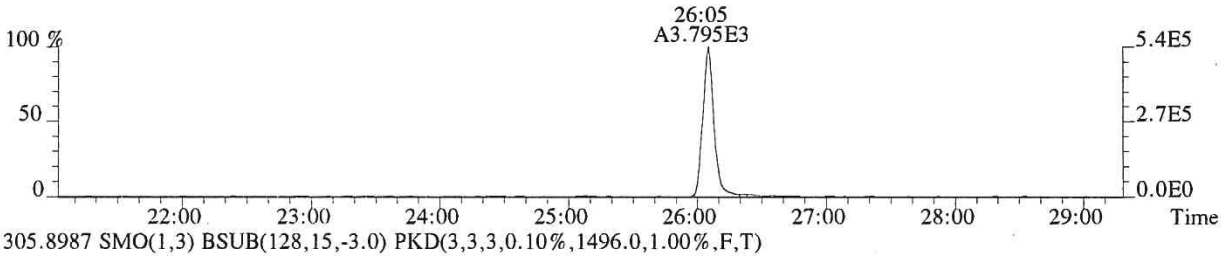
Run #7 Filename P519731 Samp: 1 Inj: 1 Acquired: 2-JAN-19 14:32:41
Processed: 3-JAN-19 09:14:20 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.35e+05	5.92e+02	9.0e+02	6.53e+05	1.50e+03	4.4e+02
2	1,2,3,7,8-PeCDF	5.13e+06	8.96e+02	5.7e+03	3.33e+06	2.54e+03	1.3e+03
3	2,3,4,7,8-PeCDF	5.32e+06	8.96e+02	5.9e+03	3.52e+06	2.54e+03	1.4e+03
4	1,2,3,4,7,8-HxCDF	4.67e+06	7.00e+02	6.7e+03	3.86e+06	4.24e+02	9.1e+03
5	1,2,3,6,7,8-HxCDF	4.68e+06	7.00e+02	6.7e+03	3.95e+06	4.24e+02	9.3e+03
6	2,3,4,6,7,8-HxCDF	4.46e+06	7.00e+02	6.4e+03	3.71e+06	4.24e+02	8.8e+03
7	1,2,3,7,8,9-HxCDF	3.29e+06	7.00e+02	4.7e+03	2.71e+06	4.24e+02	6.4e+03
8	1,2,3,4,6,7,8-HpCDF	3.29e+06	2.62e+03	1.3e+03	3.19e+06	6.06e+03	5.3e+02
9	1,2,3,4,7,8,9-HpCDF	2.20e+06	2.62e+03	8.4e+02	2.16e+06	6.06e+03	3.6e+02
10	OCDF	2.20e+06	4.68e+02	4.7e+03	2.51e+06	1.10e+03	2.3e+03
11	2,3,7,8-TCDD	4.39e+05	2.15e+03	2.0e+02	5.67e+05	1.16e+03	4.9e+02
12	1,2,3,7,8-PeCDD	3.75e+06	7.00e+02	5.4e+03	2.33e+06	3.72e+02	6.3e+03
13	1,2,3,4,7,8-HxCDD	3.33e+06	4.16e+02	8.0e+03	2.69e+06	7.52e+02	3.6e+03
14	1,2,3,6,7,8-HxCDD	3.48e+06	4.16e+02	8.4e+03	2.80e+06	7.52e+02	3.7e+03
15	1,2,3,7,8,9-HxCDD	3.16e+06	4.16e+02	7.6e+03	2.54e+06	7.52e+02	3.4e+03
16	1,2,3,4,6,7,8-HpCDD	2.07e+06	4.72e+02	4.4e+03	2.00e+06	5.12e+02	3.9e+03
17	OCDD	1.96e+06	3.52e+02	5.6e+03	2.22e+06	5.60e+02	4.0e+03
18	13C-2,3,7,8-TCDF	5.96e+06	5.24e+03	1.1e+03	7.58e+06	3.98e+03	1.9e+03
19	13C-1,2,3,7,8-PeCDF	1.04e+07	9.00e+02	1.2e+04	6.53e+06	6.92e+02	9.4e+03
20	13C-2,3,4,7,8-PeCDF	1.15e+07	9.00e+02	1.3e+04	7.23e+06	6.92e+02	1.0e+04
21	13C-1,2,3,4,7,8-HxCDF	4.82e+06	6.20e+02	7.8e+03	9.21e+06	9.92e+02	9.3e+03
22	13C-1,2,3,6,7,8-HxCDF	5.20e+06	6.20e+02	8.4e+03	1.02e+07	9.92e+02	1.0e+04
23	13C-2,3,4,6,7,8-HxCDF	4.96e+06	6.20e+02	8.0e+03	9.62e+06	9.92e+02	9.7e+03
24	13C-1,2,3,7,8,9-HxCDF	3.62e+06	6.20e+02	5.8e+03	7.04e+06	9.92e+02	7.1e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.95e+06	3.23e+03	9.1e+02	6.63e+06	6.06e+03	1.1e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.10e+06	3.23e+03	6.5e+02	4.67e+06	6.06e+03	7.7e+02
27	13C-2,3,7,8-TCDD	4.75e+06	6.22e+03	7.6e+02	5.92e+06	1.40e+03	4.2e+03
28	13C-1,2,3,7,8-PeCDD	7.77e+06	8.20e+02	9.5e+03	4.85e+06	9.84e+02	4.9e+03
29	13C-1,2,3,4,7,8-HxCDD	6.63e+06	8.56e+02	7.7e+03	5.28e+06	8.04e+02	6.6e+03
30	13C-1,2,3,6,7,8-HxCDD	6.93e+06	8.56e+02	8.1e+03	5.41e+06	8.04e+02	6.7e+03
31	13C-1,2,3,4,6,7,8-HpCDD	4.18e+06	8.12e+02	5.1e+03	3.99e+06	5.92e+02	6.7e+03
32	13C-OCDD	3.50e+06	3.08e+02	1.1e+04	3.96e+06	3.96e+02	1.0e+04
33	13C-1,2,3,4-TCDD	5.06e+06	6.22e+03	8.1e+02	6.37e+06	1.40e+03	4.6e+03
34	13C-1,2,3,7,8,9-HxCDD	6.42e+06	8.56e+02	7.5e+03	5.13e+06	8.04e+02	6.4e+03
35	37Cl-2,3,7,8-TCDD	1.09e+06	1.28e+03	8.5e+02			

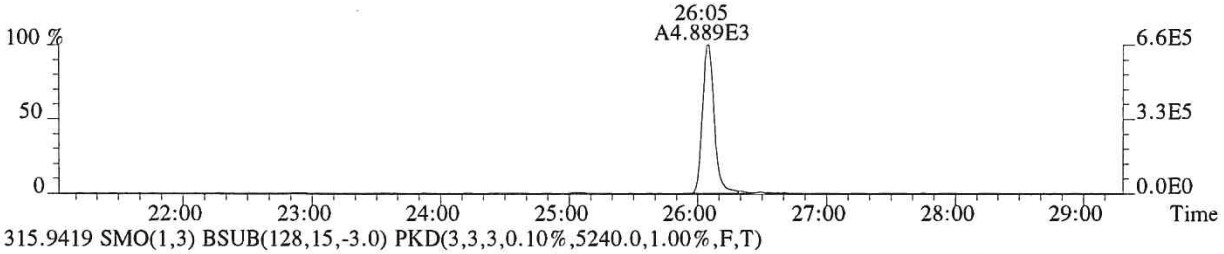
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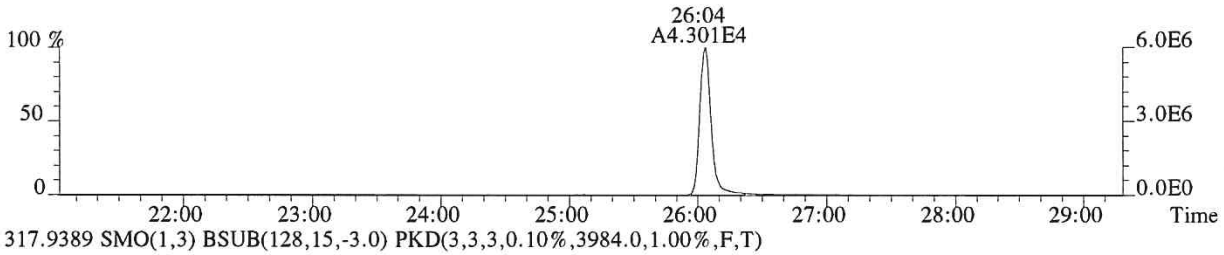
File:P519731 #1-587 Acq: 2-JAN-2019 14:32:41 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,592.0,1.00%,F,T)



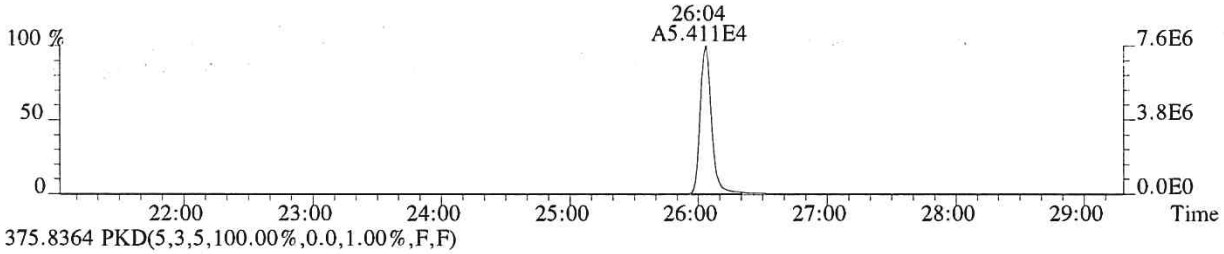
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1496.0,1.00%,F,T)



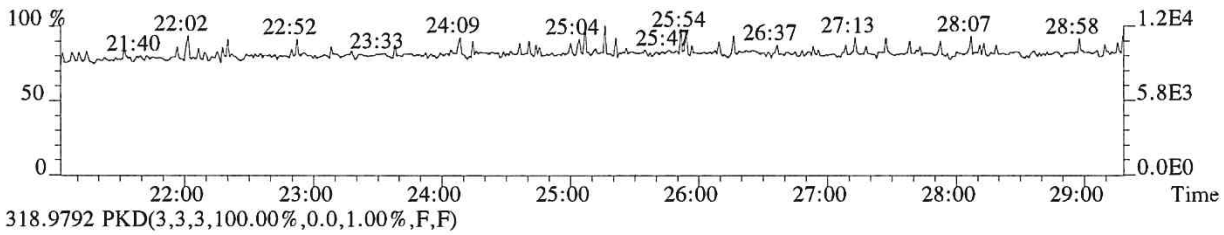
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5240.0,1.00%,F,T)



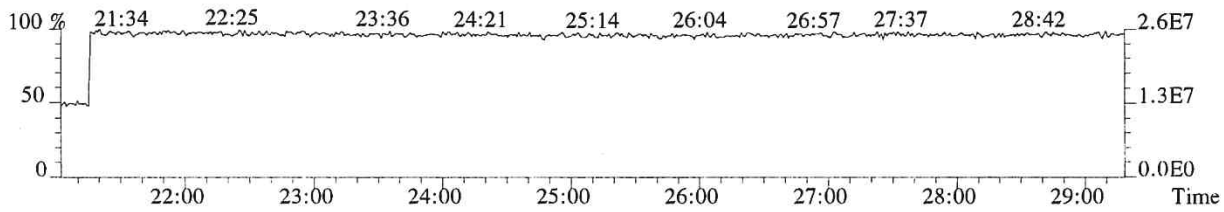
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3984.0,1.00%,F,T)



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

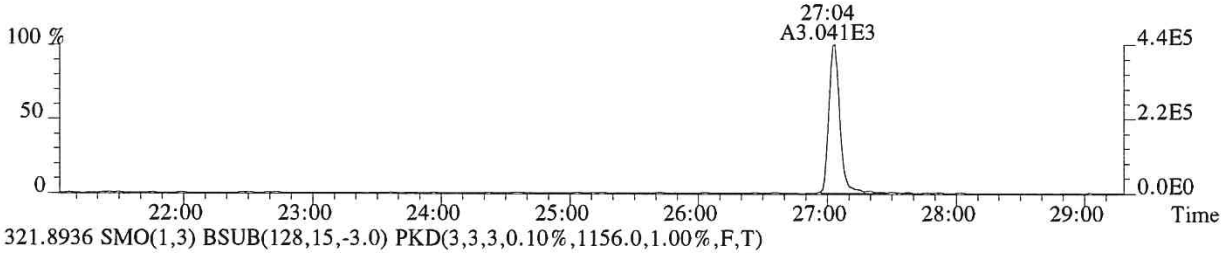


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

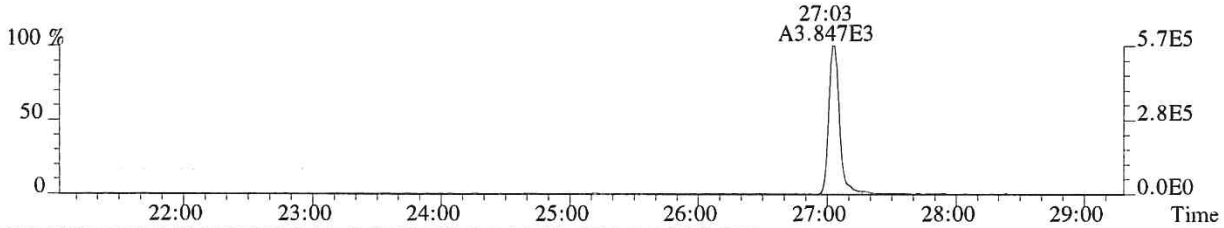


016546

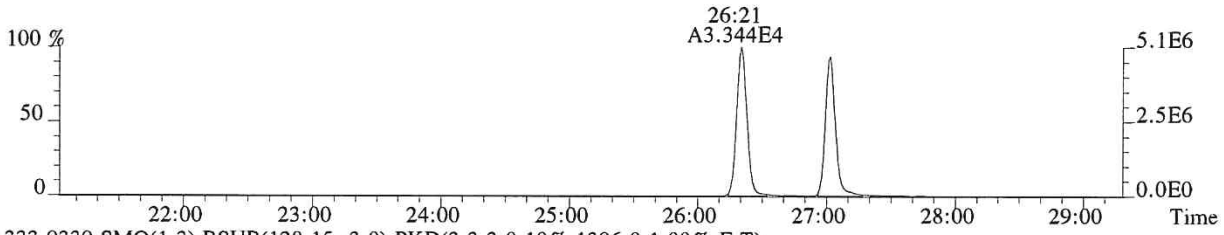
File:P519731 #1-587 Acq: 2-JAN-2019 14:32:41 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2148.0,1.00%,F,T)



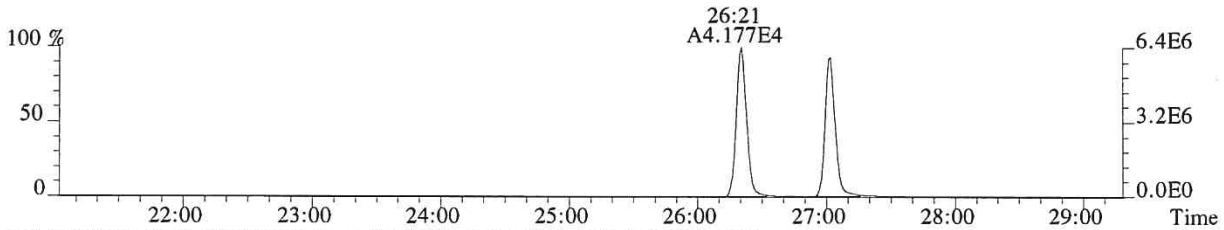
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1156.0,1.00%,F,T)



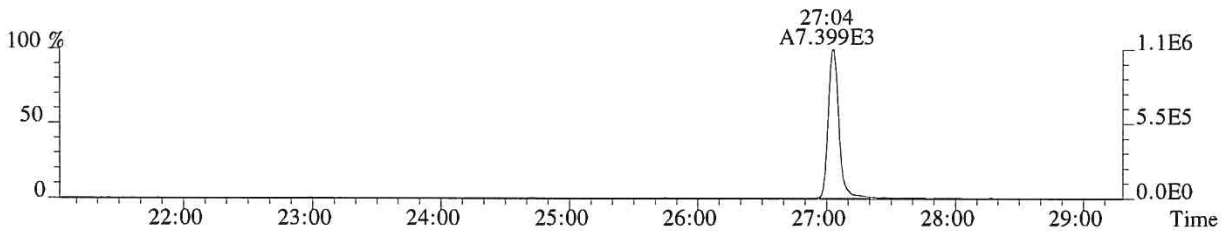
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6224.0,1.00%,F,T)



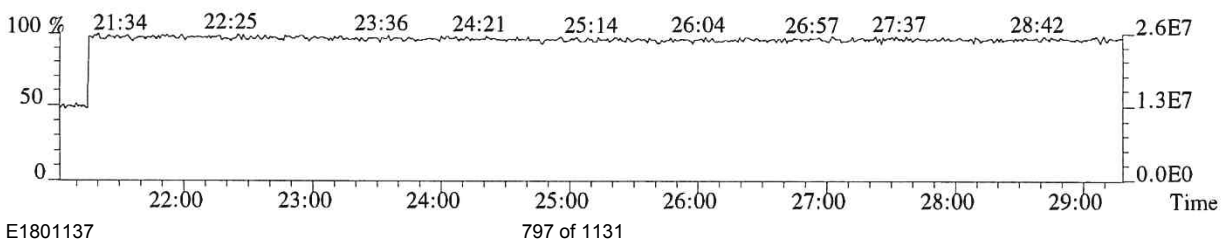
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1396.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1284.0,1.00%,F,T)

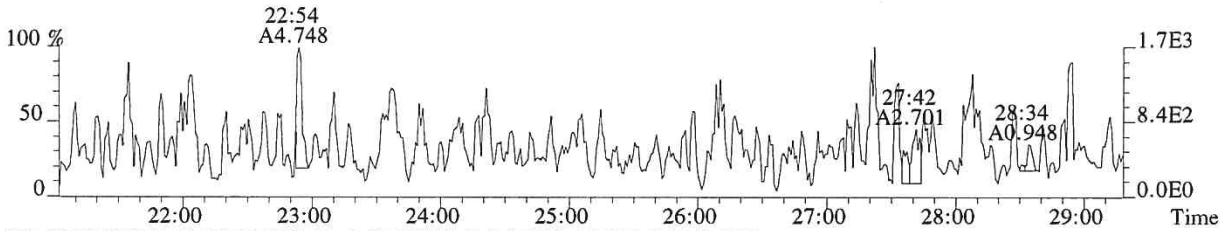


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

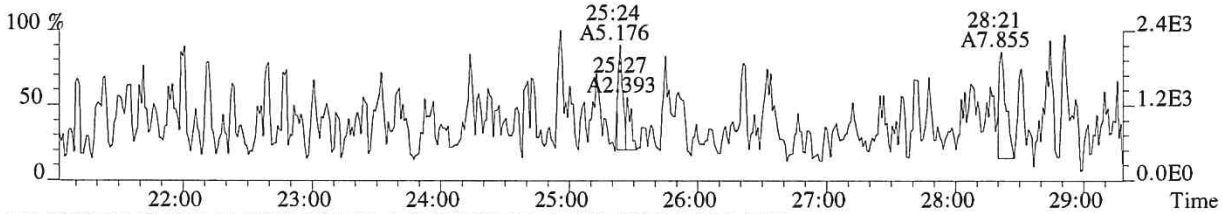


016547

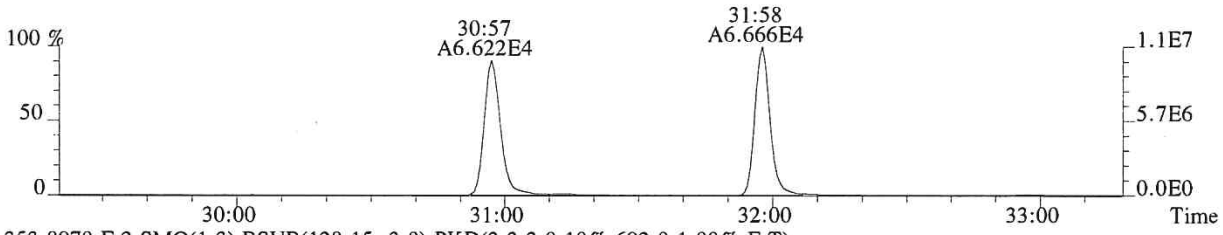
File:P519731 #1-587 Acq: 2-JAN-2019 14:32:41 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,588.0,1.00%,F,T)



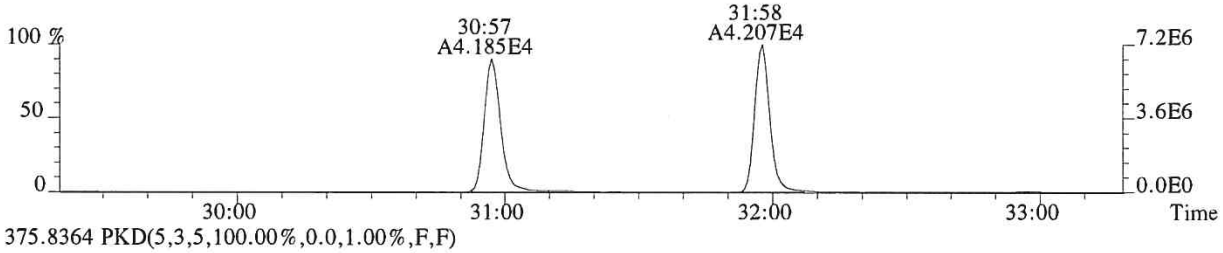
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1068.0,1.00%,F,T)



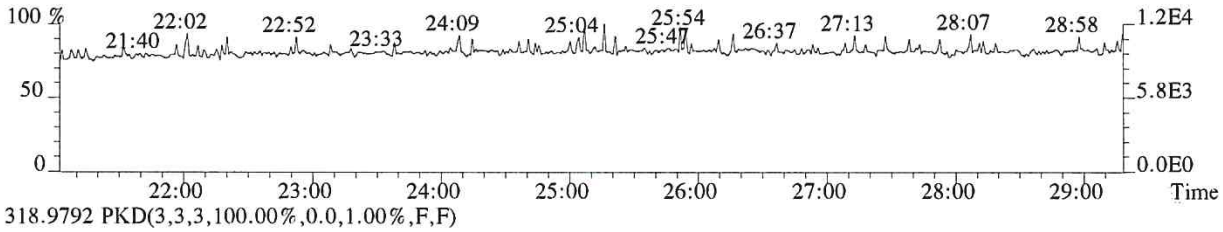
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,900.0,1.00%,F,T)



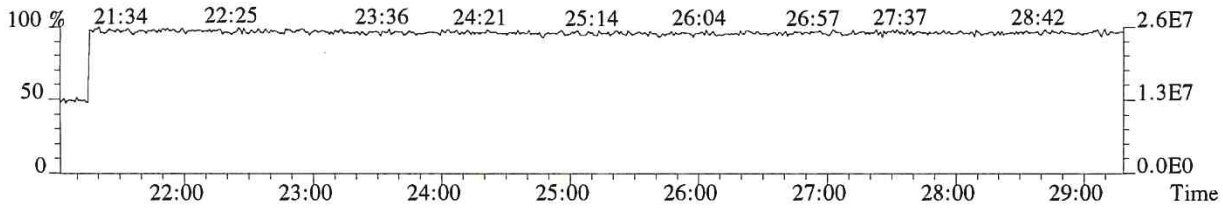
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,692.0,1.00%,F,T)



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

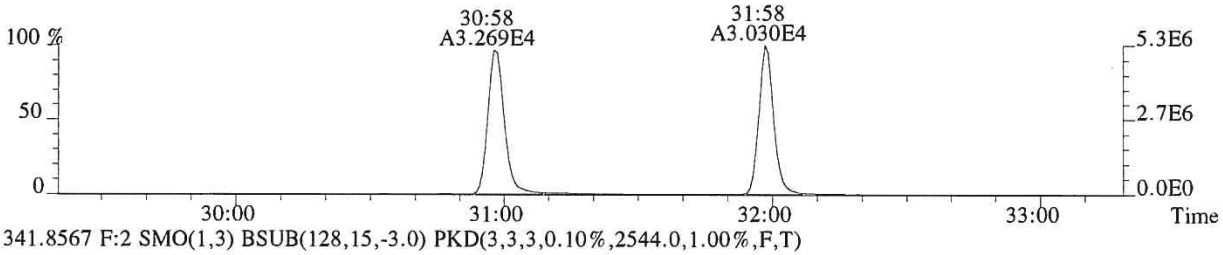


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

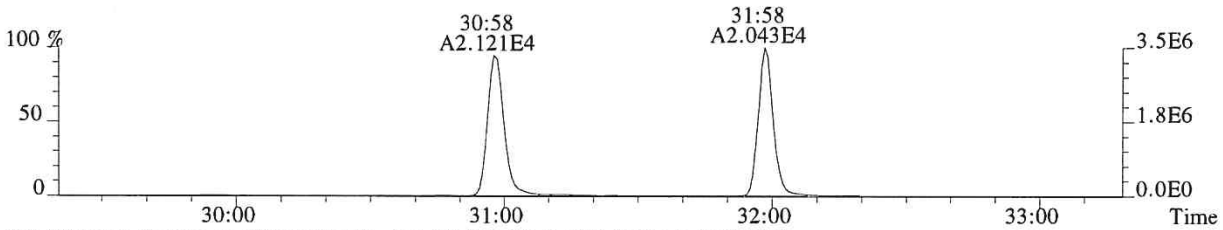


016548

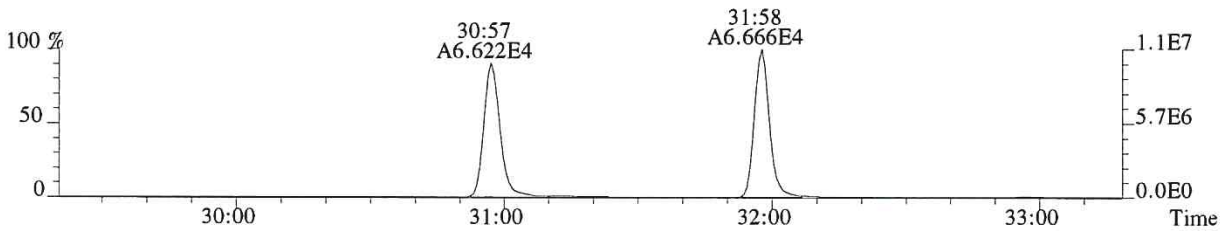
File:P519731 #1-358 Acq: 2-JAN-2019 14:32:41 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,896.0,1.00%,F,T)



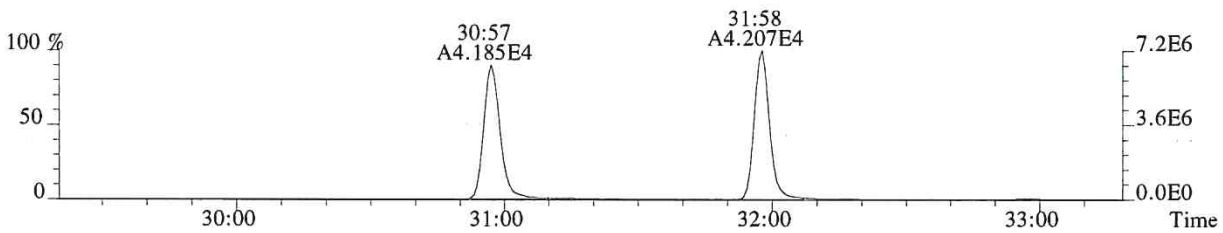
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2544.0,1.00%,F,T)



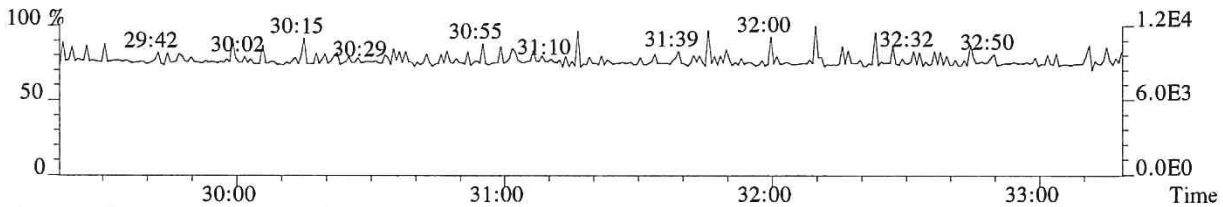
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,900.0,1.00%,F,T)



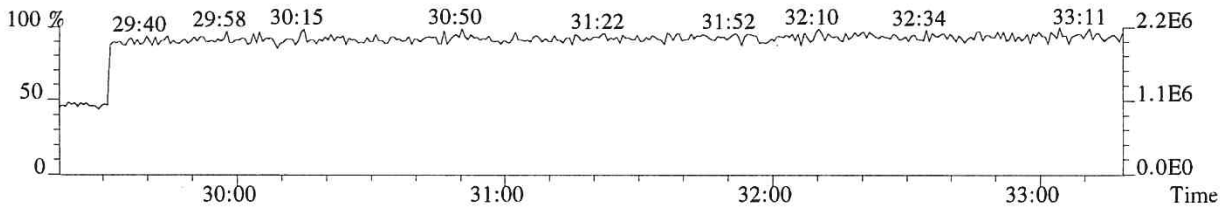
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,692.0,1.00%,F,T)



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

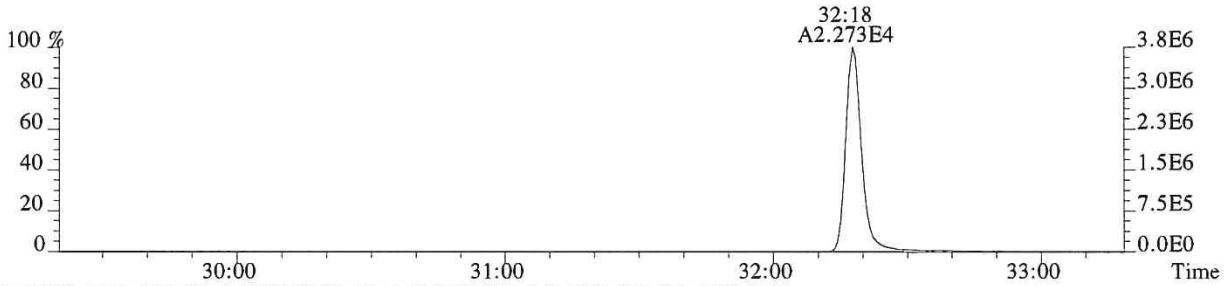


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

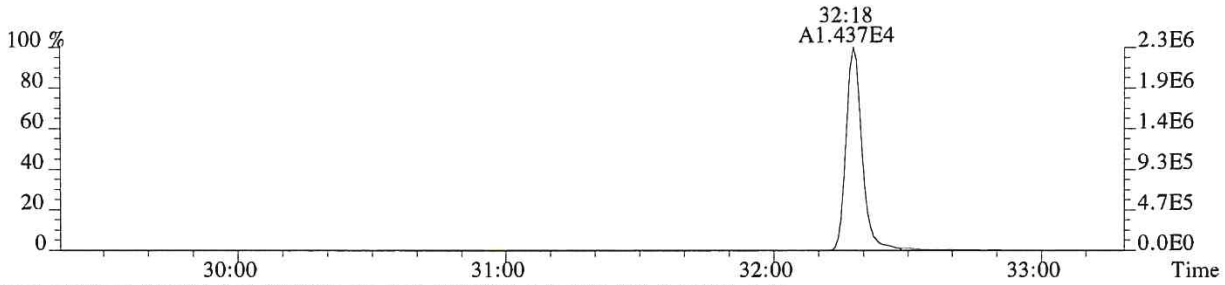


016549

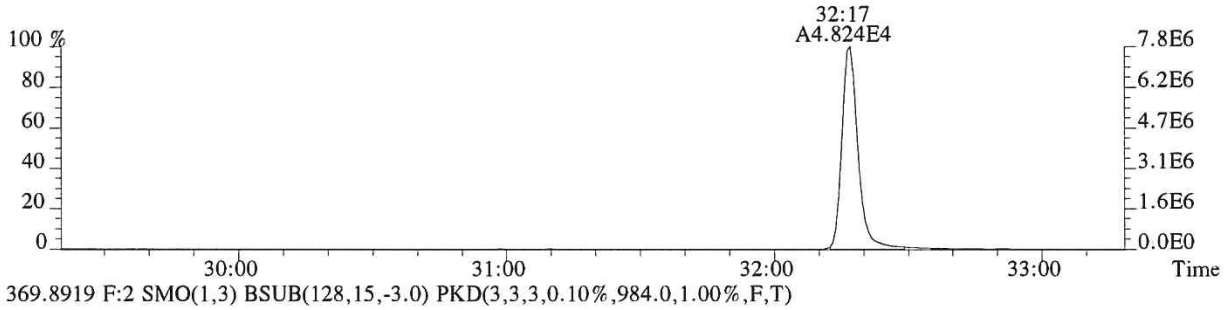
File:P519731 #1-358 Acq: 2-JAN-2019 14:32:41 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,700.0,1.00%,F,T)



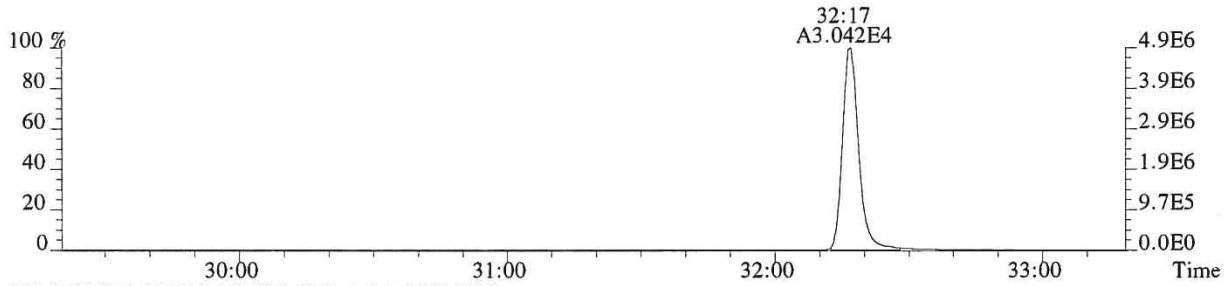
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,372.0,1.00%,F,T)



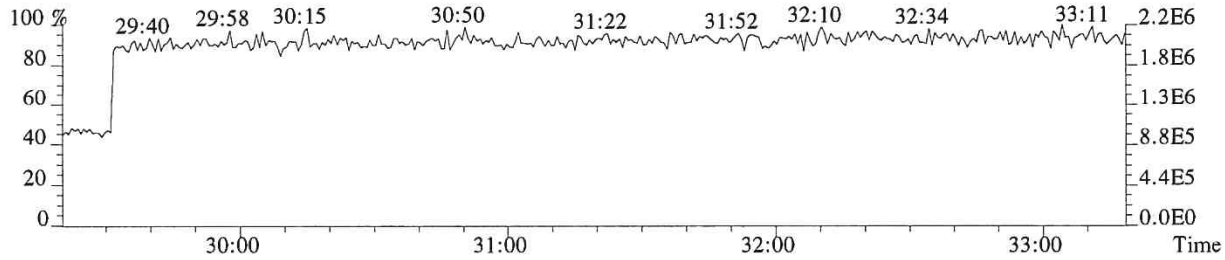
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,820.0,1.00%,F,T)



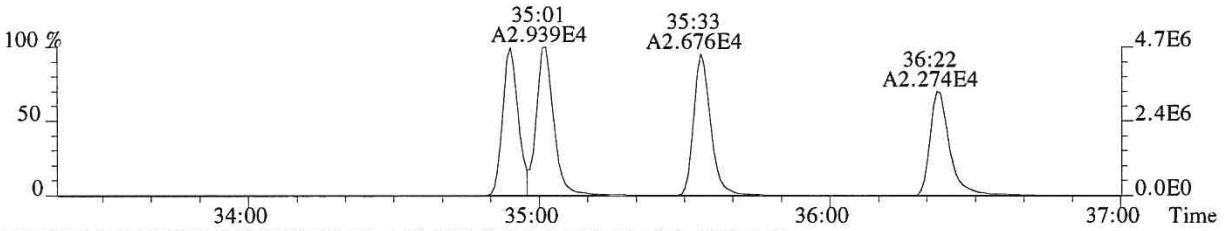
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,984.0,1.00%,F,T)



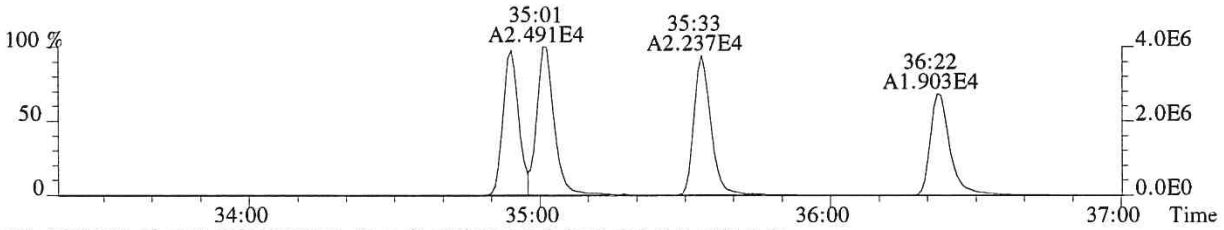
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



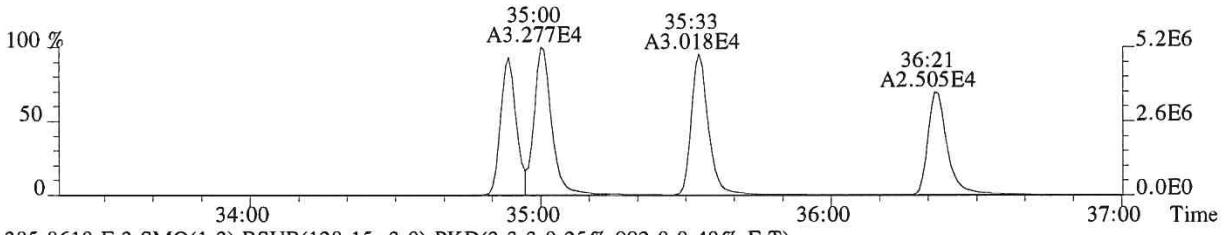
File:P519731 #1-330 Acq: 2-JAN-2019 14:32:41 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,700.0,0.40%,F,T)



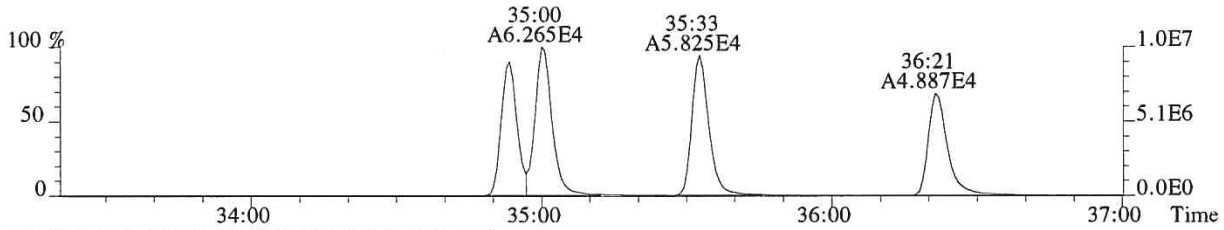
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,424.0,0.40%,F,T)



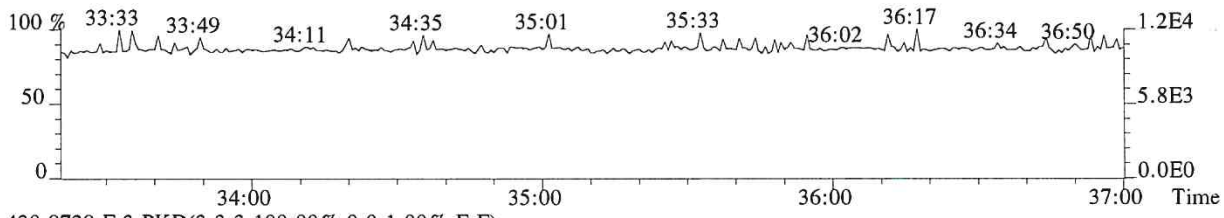
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,620.0,0.40%,F,T)



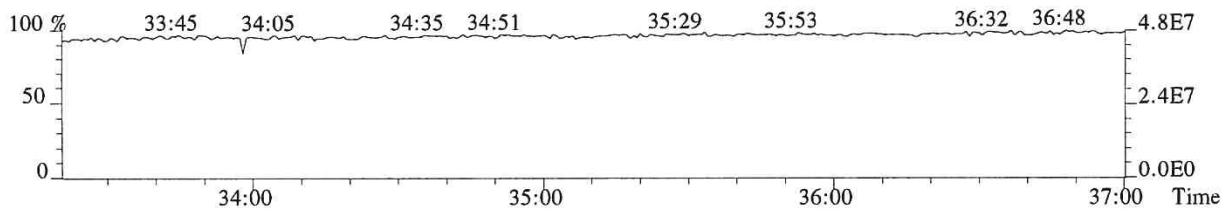
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,992.0,0.40%,F,T)



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

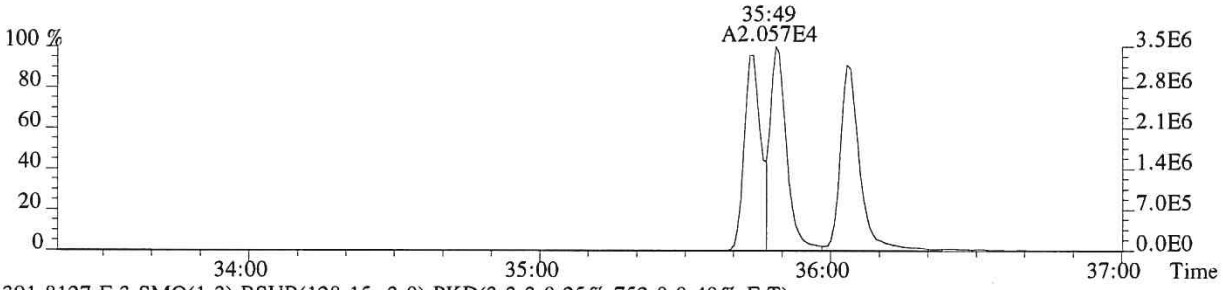


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

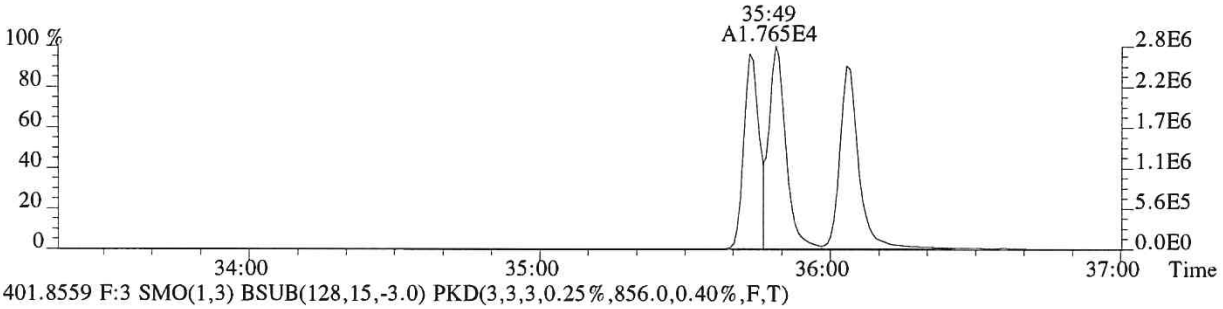


016551

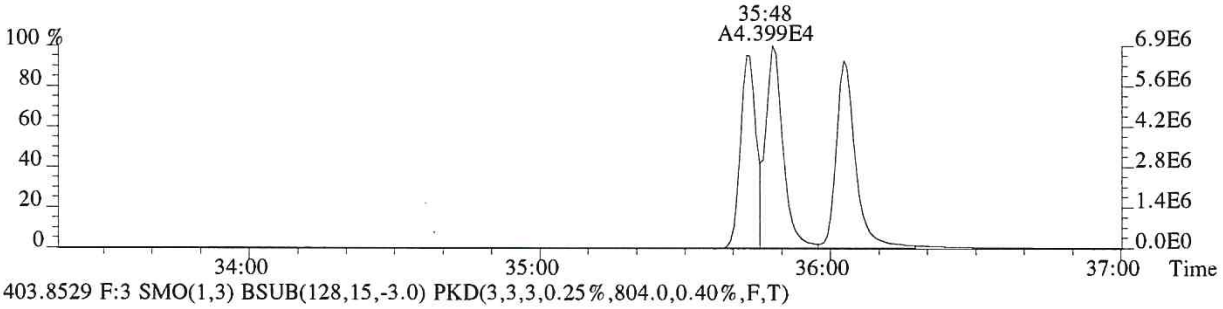
File:P519731 #1-330 Acq: 2-JAN-2019 14:32:41 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,416.0,0.40%,F,T)



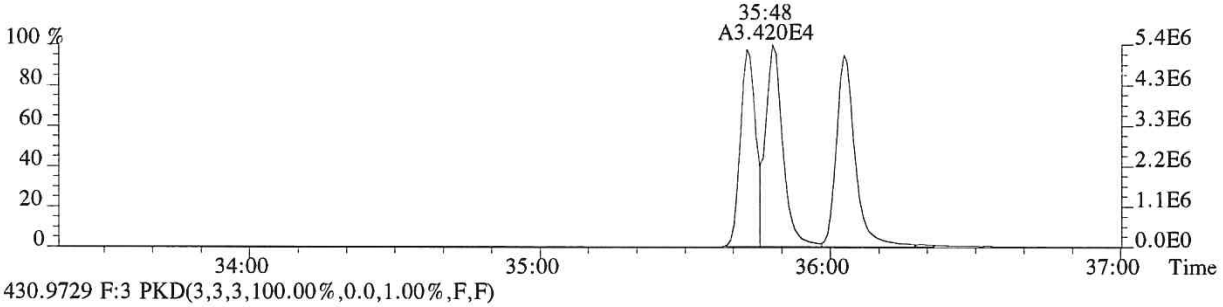
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,752.0,0.40%,F,T)



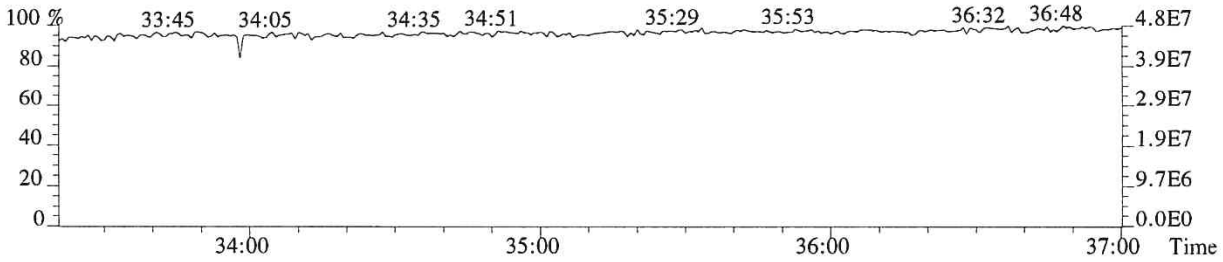
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,856.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,804.0,0.40%,F,T)

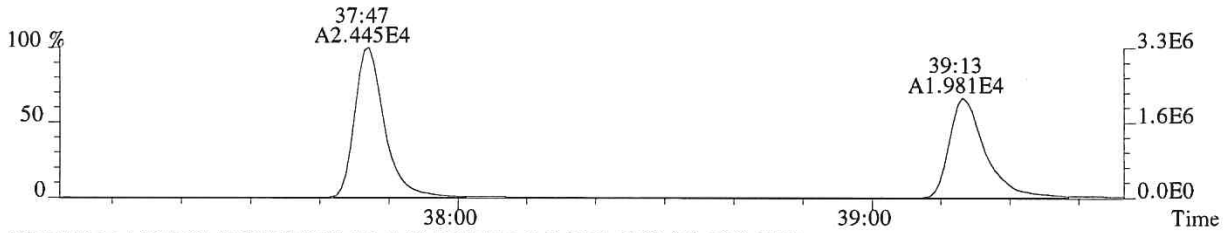


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

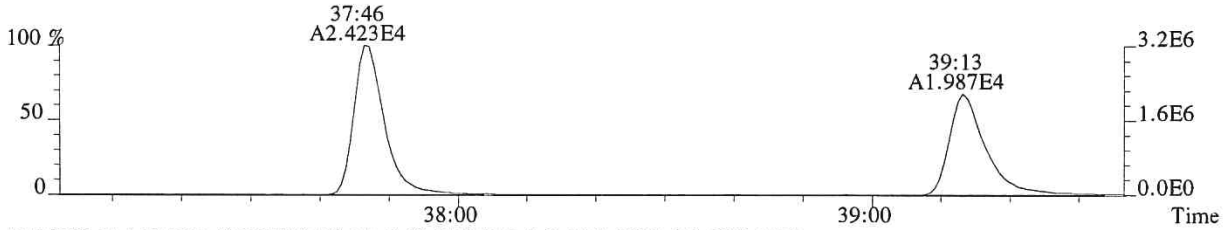


016552

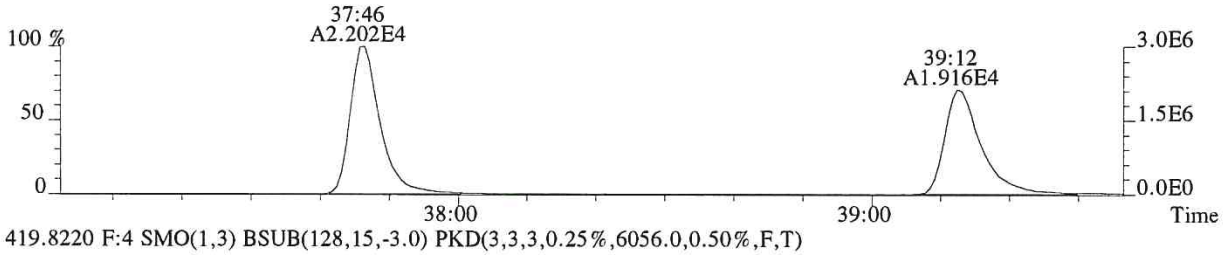
File:P519731 #1-232 Acq: 2-JAN-2019 14:32:41 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2624.0,0.50%,F,T)



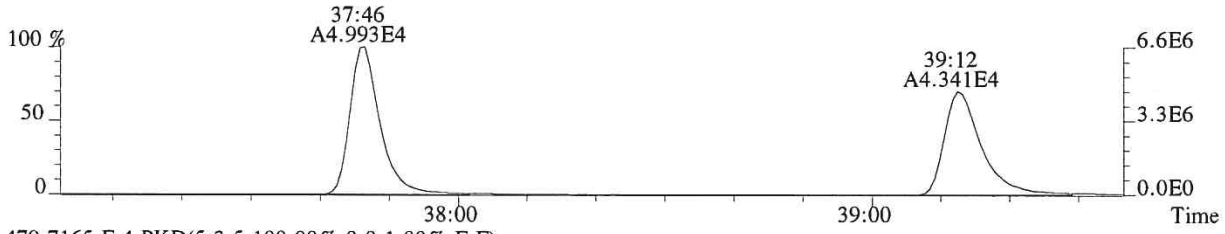
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6060.0,0.50%,F,T)



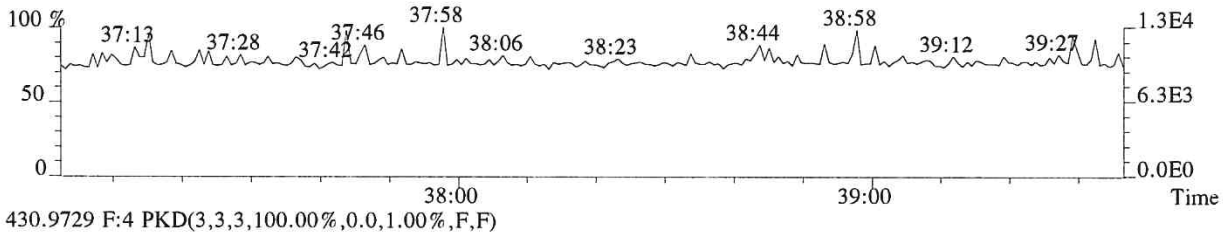
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3232.0,0.50%,F,T)



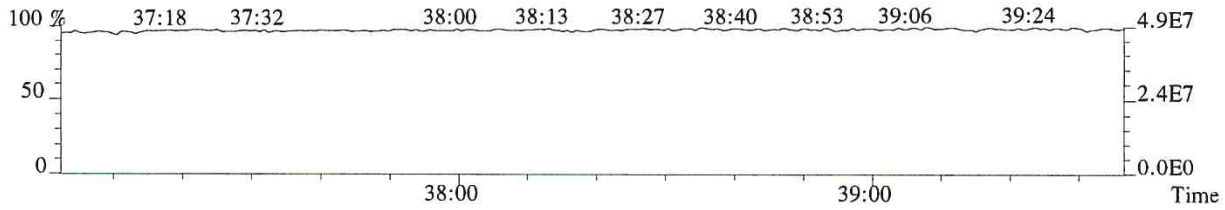
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6056.0,0.50%,F,T)



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

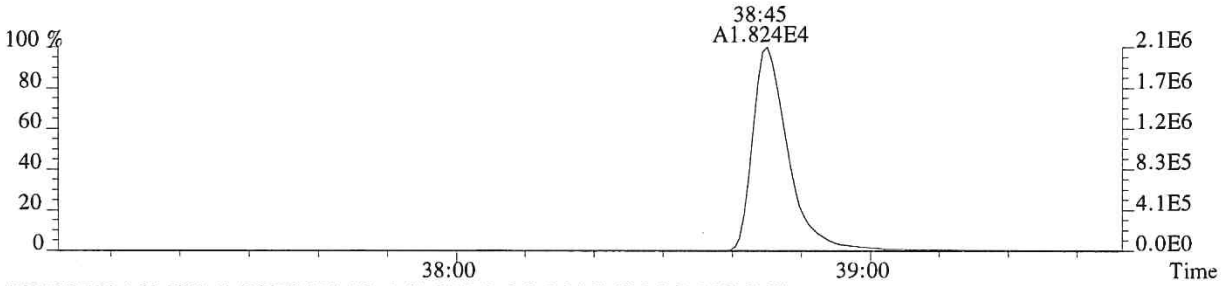


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

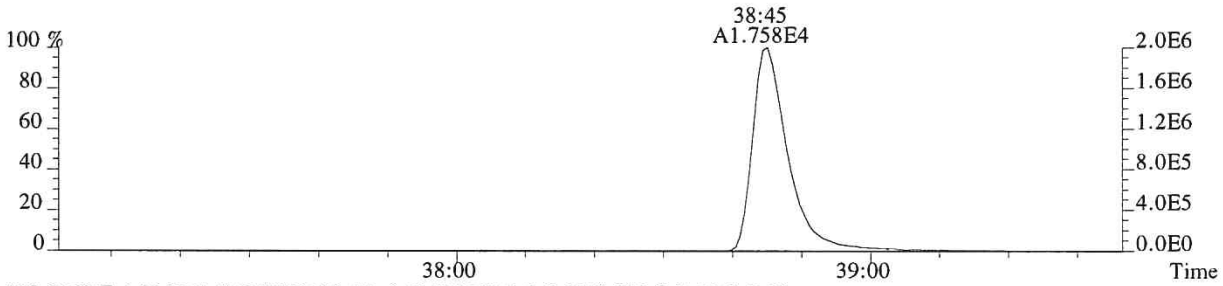


016553

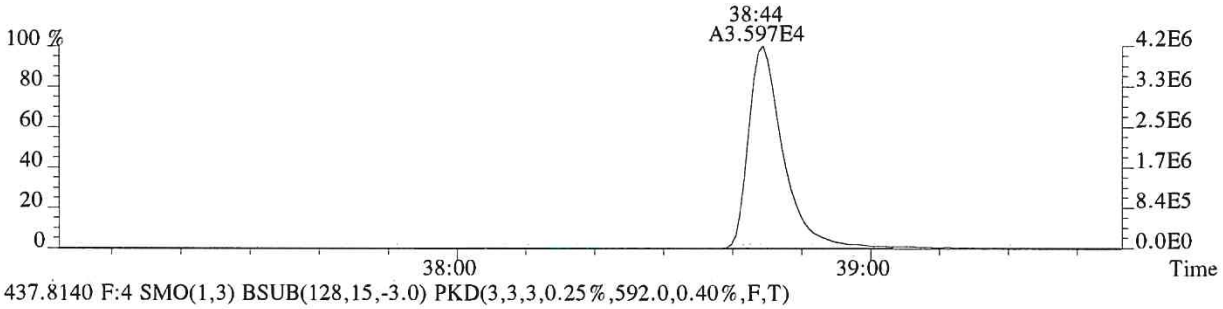
File:P519731 #1-232 Acq: 2-JAN-2019 14:32:41 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,472.0,0.40%,F,T)



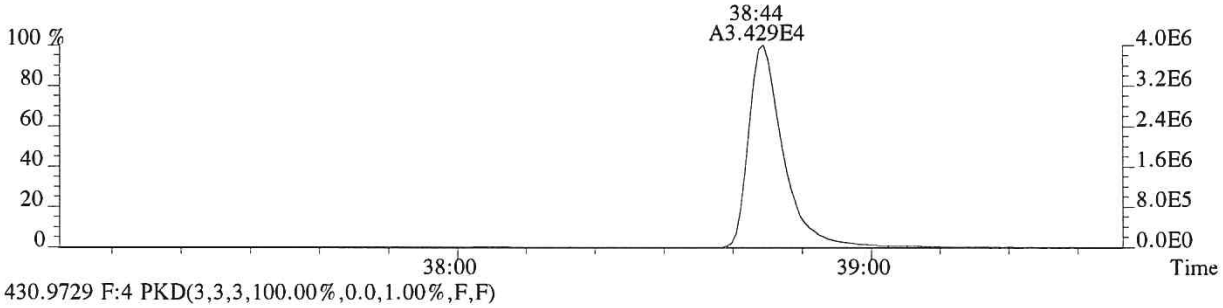
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,512.0,0.40%,F,T)



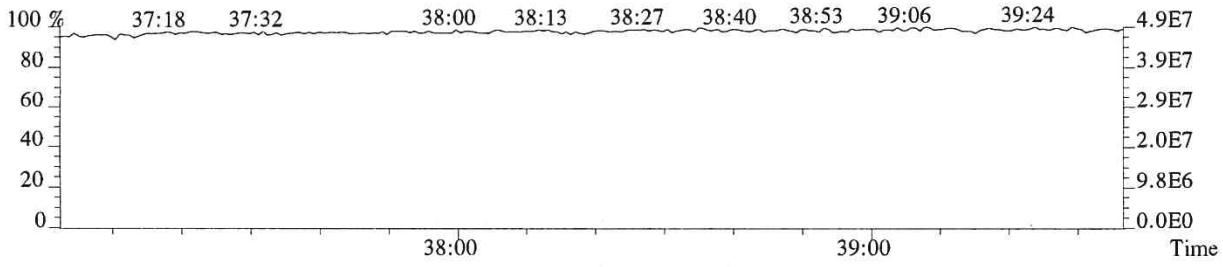
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,812.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,592.0,0.40%,F,T)

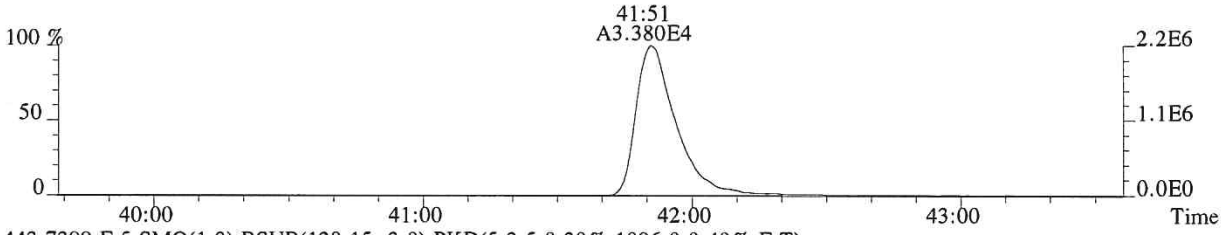


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

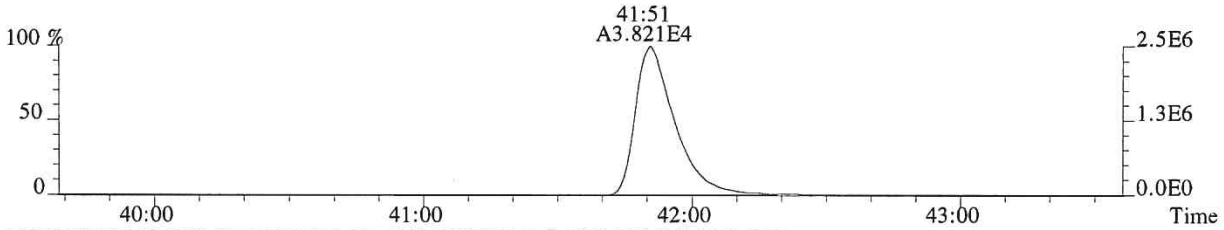


016554

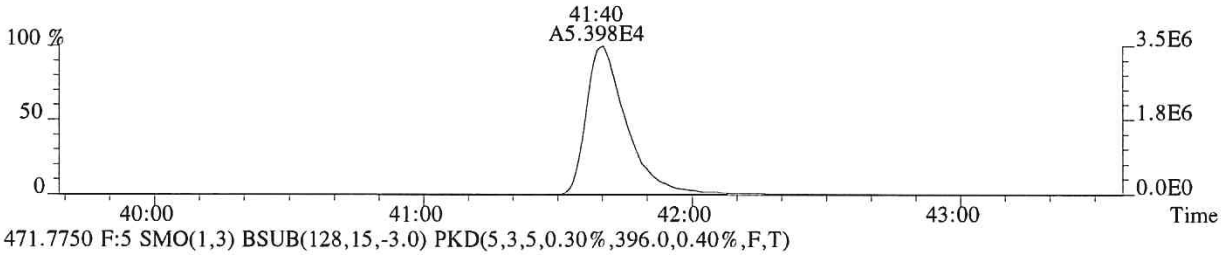
File:P519731 #1-357 Acq: 2-JAN-2019 14:32:41 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,468.0,0.40%,F,T)



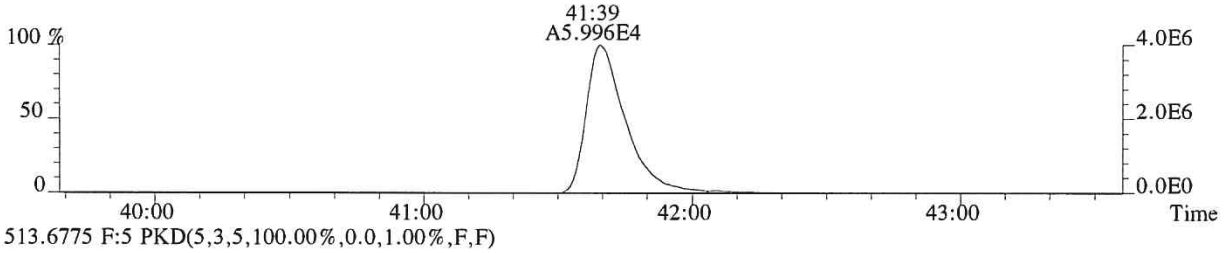
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1096.0,0.40%,F,T)



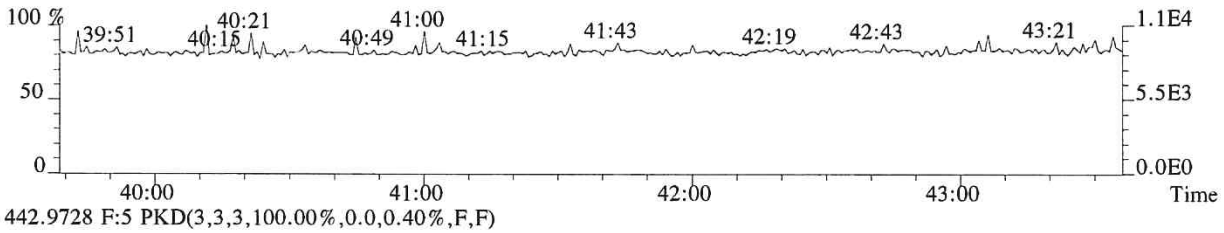
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,308.0,0.40%,F,T)



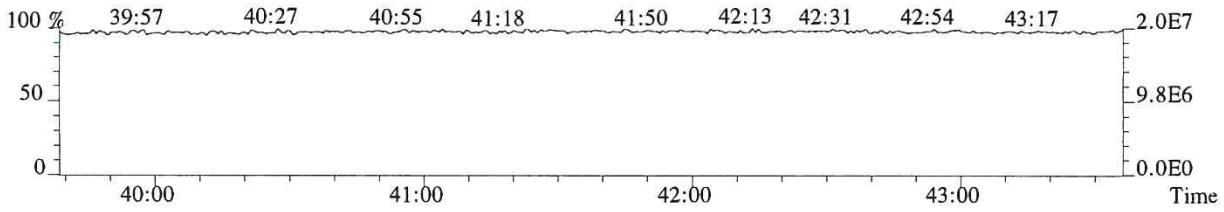
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,396.0,0.40%,F,T)



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

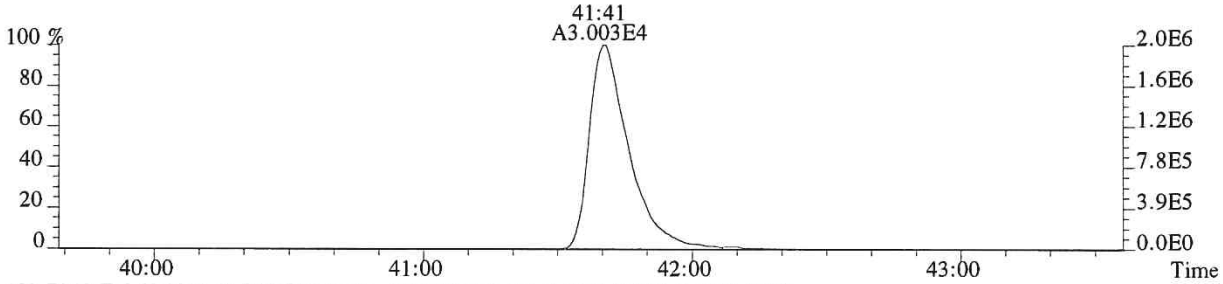


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

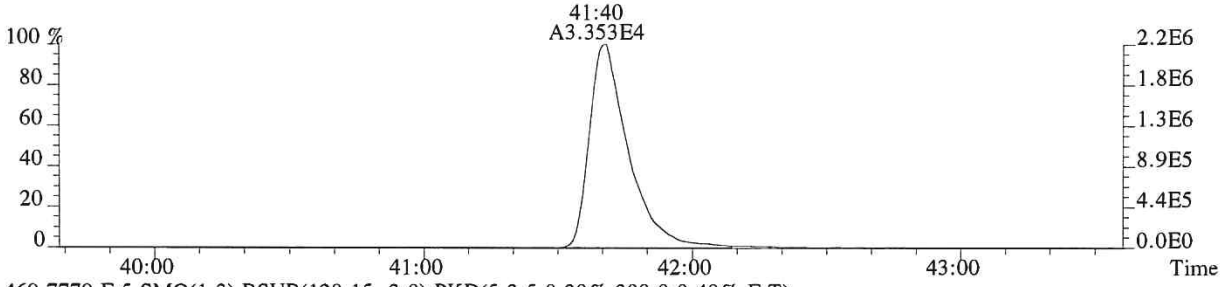


016555

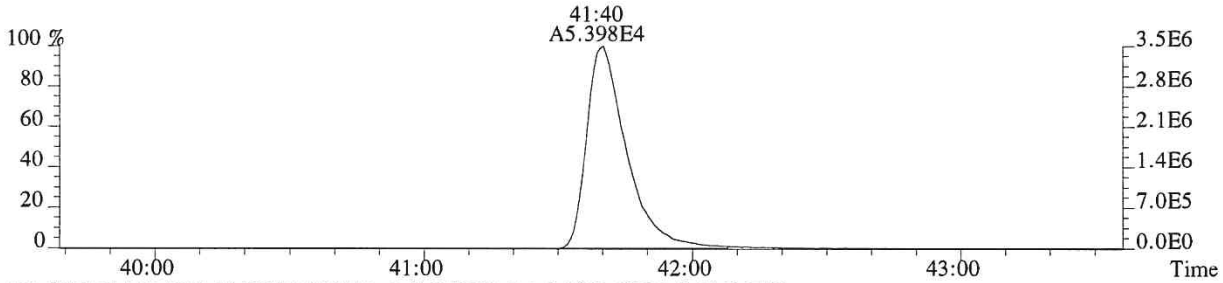
File:P519731 #1-357 Acq: 2-JAN-2019 14:32:41 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,352.0,0.40%,F,T)



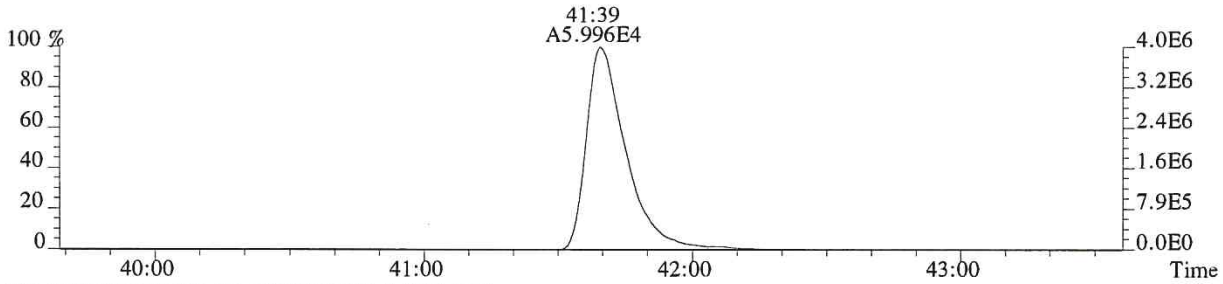
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,560.0,0.40%,F,T)



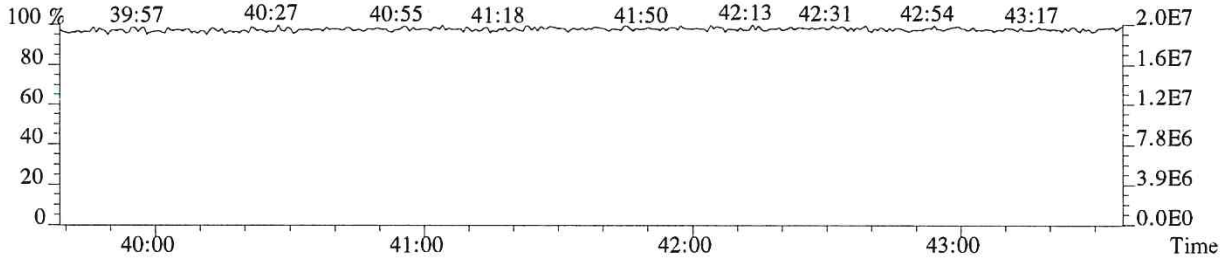
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,308.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,396.0,0.40%,F,T)



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



016556

CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P519760

Date: 01/03/19-01/04/19 (Beginning) Circle one: / Ending

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

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

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

Analyst: JC Second QC: LG

ccalqc.xls 07/17/12

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

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

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

Init. Calib. Date: 01/24/18

Init. Calib.Times: 11:44

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
194503	CS3	P519760	3-JAN-19	23:16:18
194503	DO NOT USE	P519761	4-JAN-19	00:12:17
192977	WINDOW DEFINE	P519762	4-JAN-19	01:00:04
METHOD BLANK	EQ1800529-01	P519763	4-JAN-19	01:48:41
METHOD BLANK	EQ1800532-01	P519764	4-JAN-19	02:37:27
SL0131	E1801137-008	P519765	4-JAN-19	03:26:04
SL0132	E1801137-009	P519766	4-JAN-19	04:14:41
SL0190	E1801137-017	P519767	4-JAN-19	05:03:19
SL0144	E1801137-001DL	P519768	4-JAN-19	05:51:56
SL0139	E1801137-006DL	P519769	4-JAN-19	06:40:33
SL0140	E1801137-007DL	P519770	4-JAN-19	07:29:10
SL0133	E1801137-010DL	P519771	4-JAN-19	08:17:48
SL0188	E1801137-015DL	P519772	4-JAN-19	09:06:33
SL0189	E1801137-016DL	P519773	4-JAN-19	09:55:19
LCS	EQ1800532-02	P519774	4-JAN-19	10:43:57

E1801137

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

Sample List: C:\MassLynx\EHRMS07.PRO\SampleDB\20190103B.SPL
Last Modified: Friday, January 04, 2019 13:12:12 Central Standard Time
Printed: Friday, January 04, 2019 13:12:24 Central Standard Time

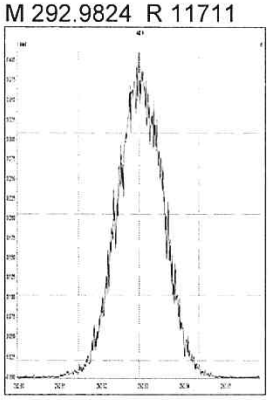
1613

OPUS4: P519760Res

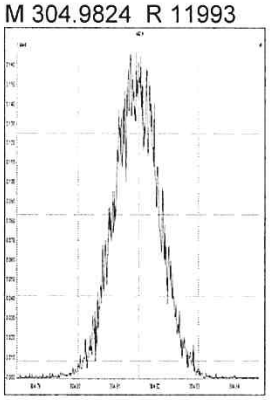
	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	01/03/19	23:16	P519760	CS3	194503	EPA1613_ALS	Dioxin_ALS	Tray1:2	LKL	HRMS check 23:16
2	01/04/19	00:12	P519761	CS3	194503	EPA1613_ALS	Dioxin_ALS	Tray1:2		Not use
3		01:00	P519762	WINDOWDEFINE	192977	EPA1613_ALS	Dioxin_ALS	Tray1:1		
4		01:48	P519763	MB	EQ1800529-01	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		02:37	P519764	MB	EQ1800532-01	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		03:26	P519765	E1801137-008	E1801137-008	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		04:14	P519766	E1801137-009	E1801137-009	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		05:03	P519767	E1801137-017	E1801137-017	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		05:51	P519768	E1801137-001DL	E1801137-001DL	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		06:40	P519769	E1801137-006DL	E1801137-006DL	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		07:29	P519770	E1801137-007DL	E1801137-007DL	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		08:17	P519771	E1801137-010DL	E1801137-010DL	EPA1613_ALS	Dioxin_ALS	Tray1:12		
13		09:06	P519772	E1801137-015DL	E1801137-015DL	EPA1613_ALS	Dioxin_ALS	Tray1:13		
14		09:55	P519773	E1801137-016DL	E1801137-016DL	EPA1613_ALS	Dioxin_ALS	Tray1:14		
15	↓	10:43	P519774	LCS	EQ1800532-02	EPA1613_ALS	Dioxin_ALS	Tray1:15	↓	HRMS check 11:40
16			---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2		
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---
21	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:21	---	---
22	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:22	---	---
23	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:23	---	---
24	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:24	---	---
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01/04/19

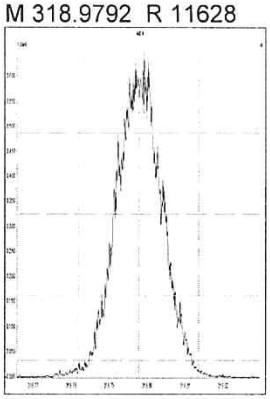
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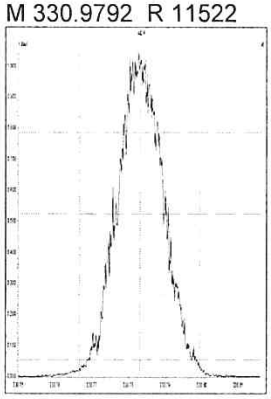
M 304.9824 R 11993



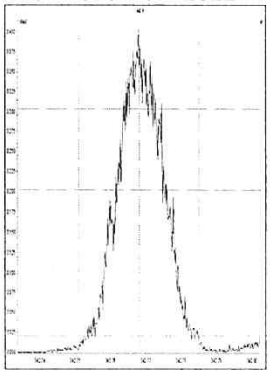
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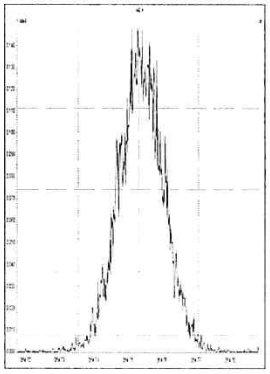
M 330.9792 R 11522



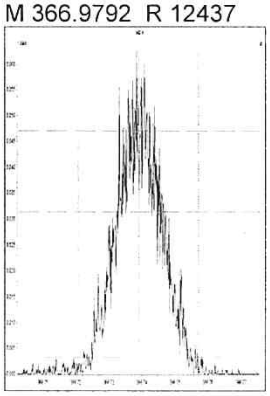
M 342.9792 R 12322



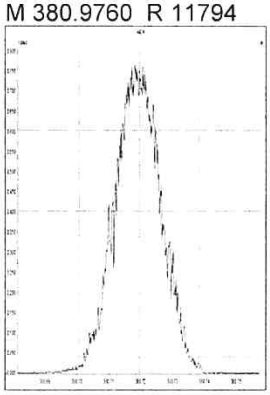
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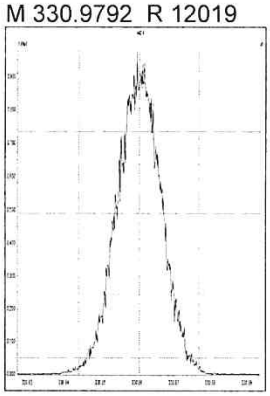
M 366.9792 R 12437



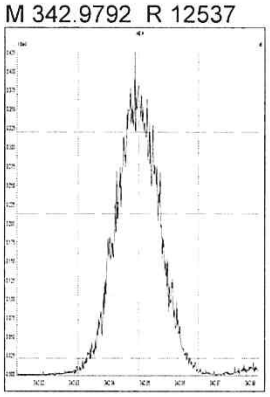
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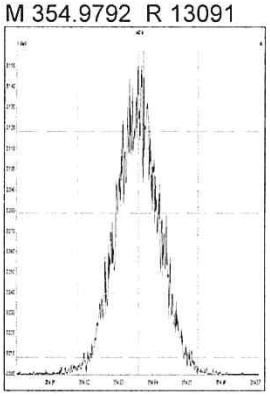
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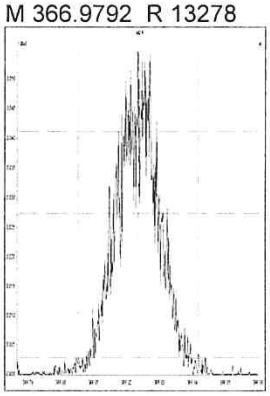
M 342.9792 R 12537



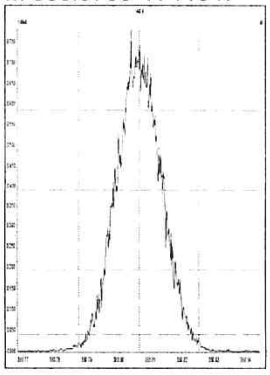
M 354.9792 R 13091



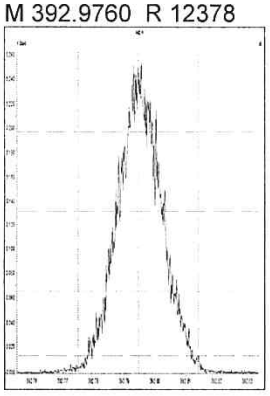
M 366.9792 R 13278



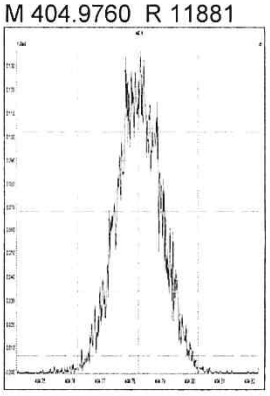
M 380.9760 R 11547



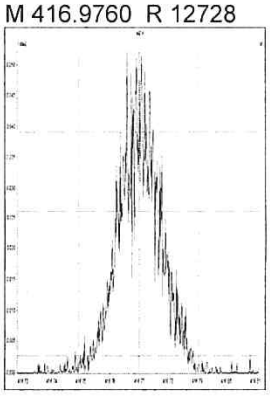
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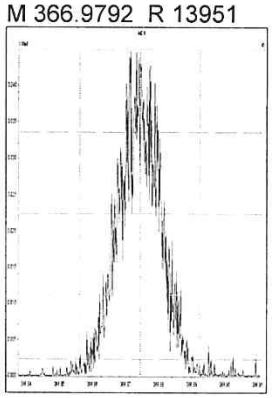
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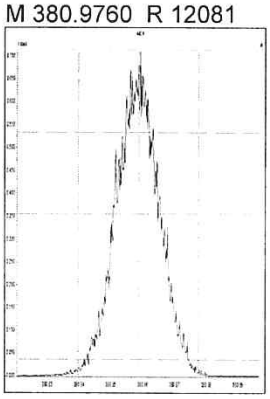
M 416.9760 R 12728



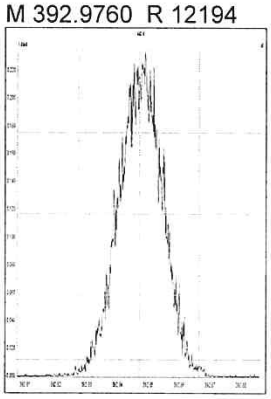
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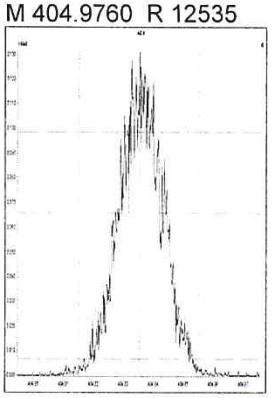
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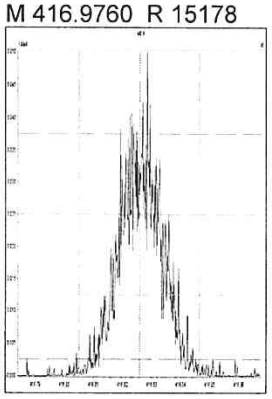
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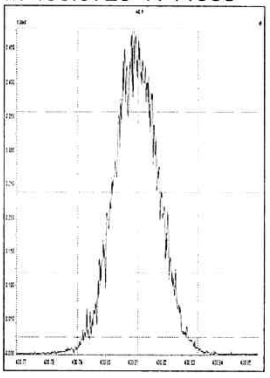
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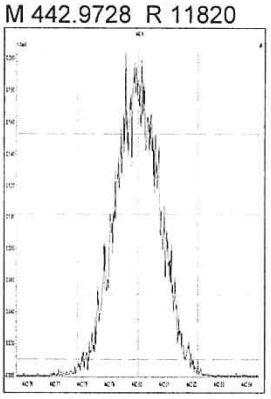
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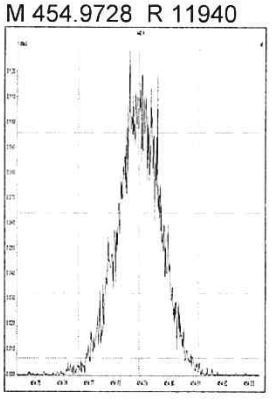
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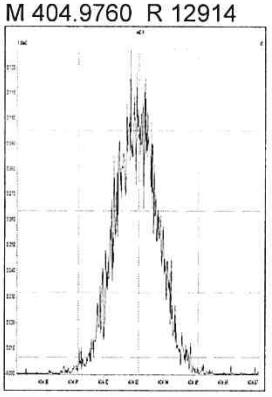
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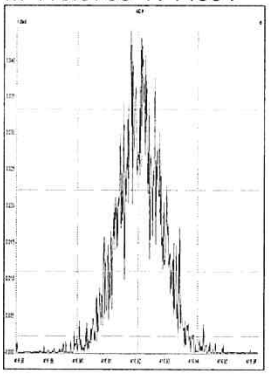
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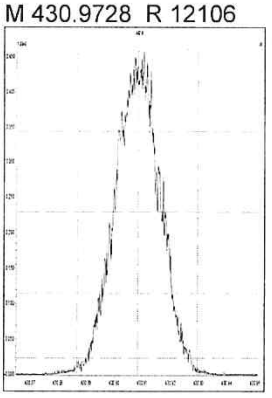
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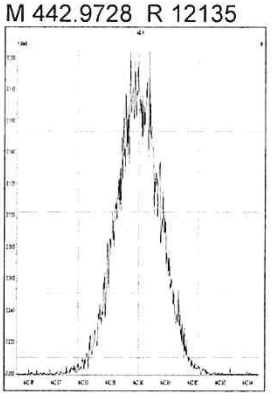
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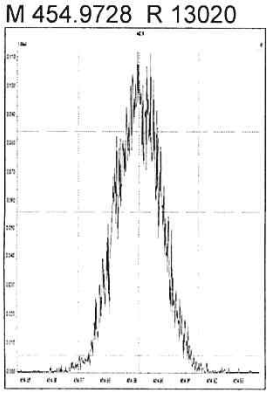
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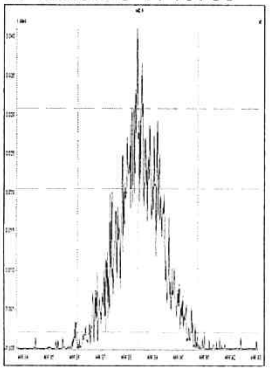
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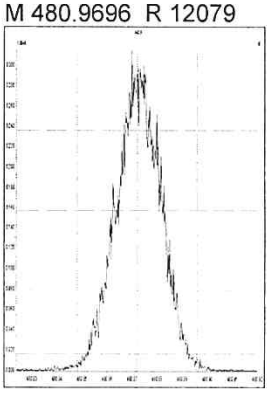
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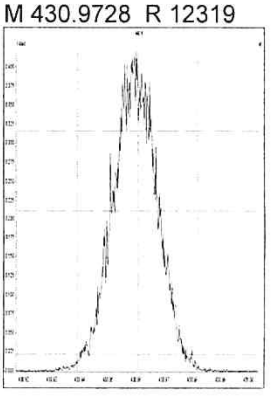
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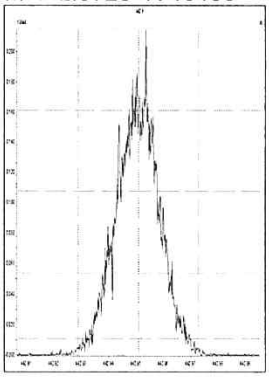
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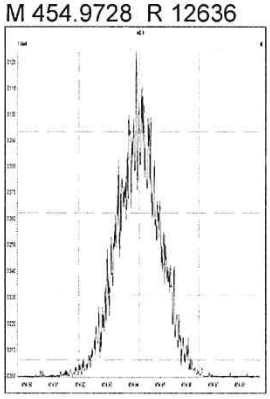
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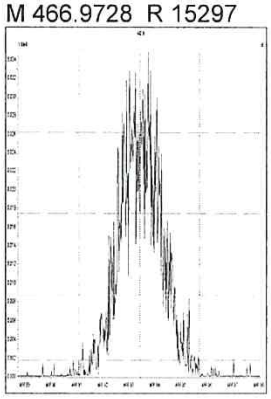
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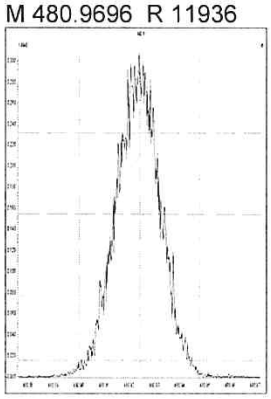
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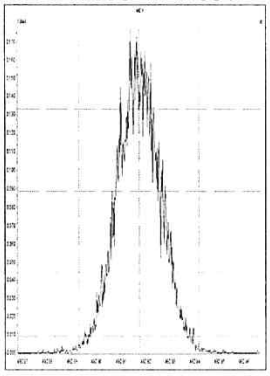
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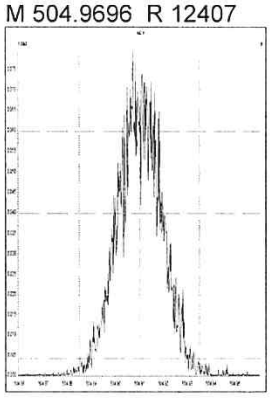
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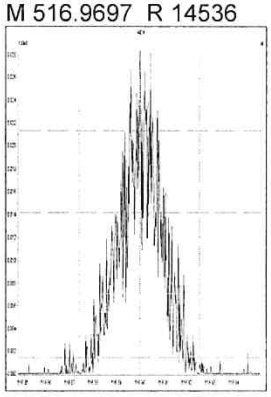
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M 504.9696 R 12407

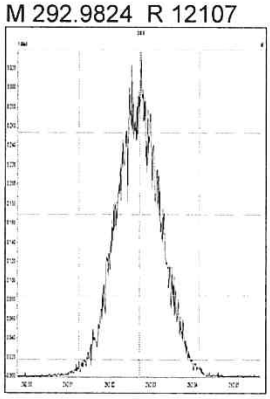


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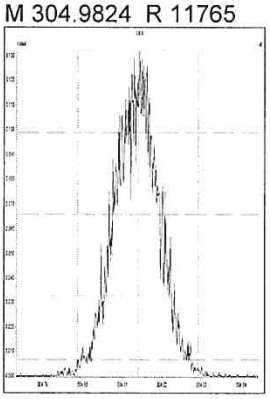


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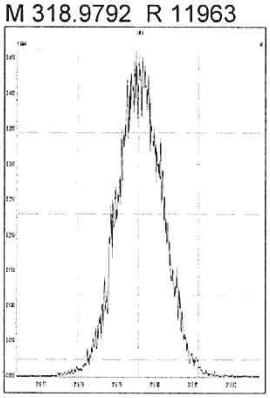
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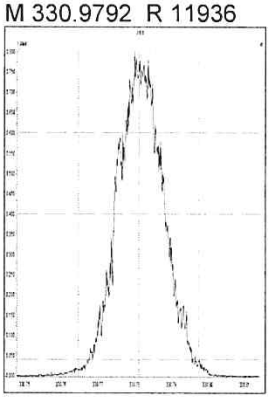
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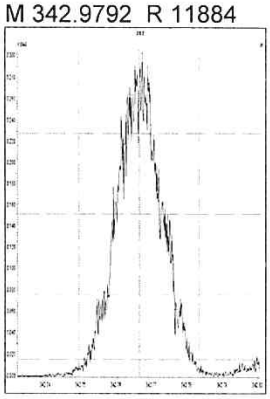
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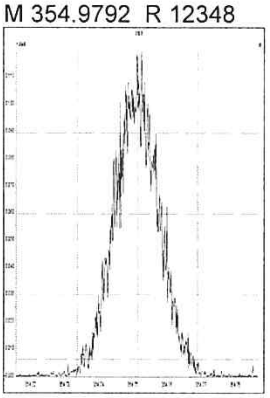
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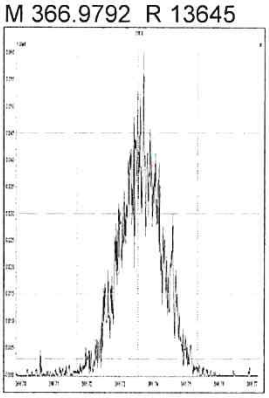
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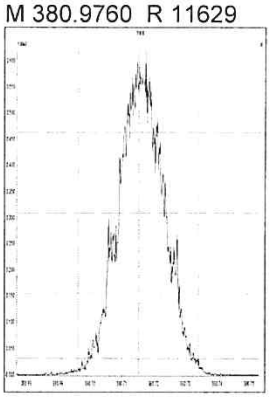
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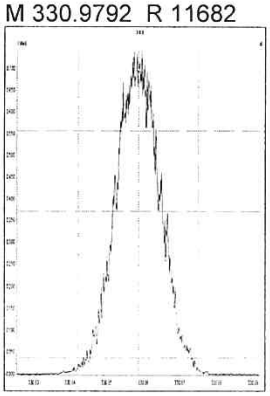
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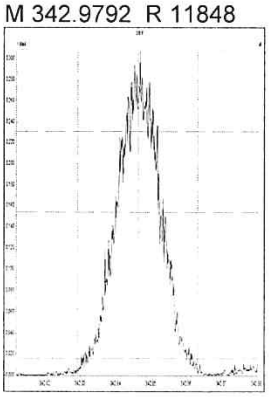
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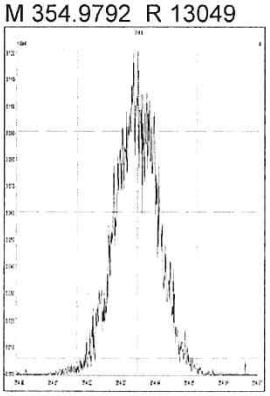
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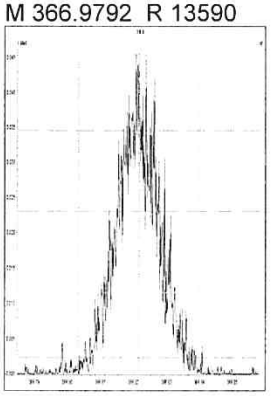
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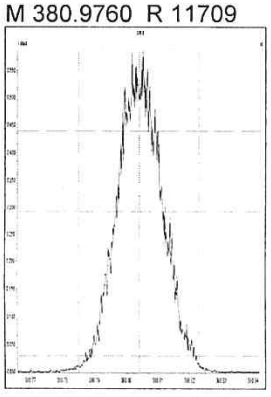
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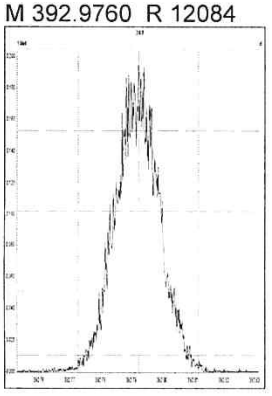
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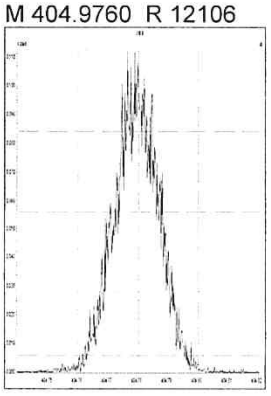
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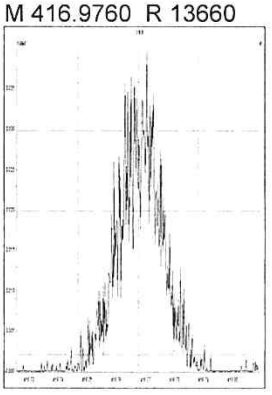
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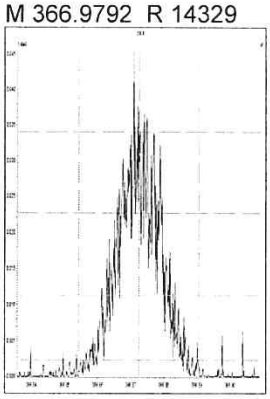
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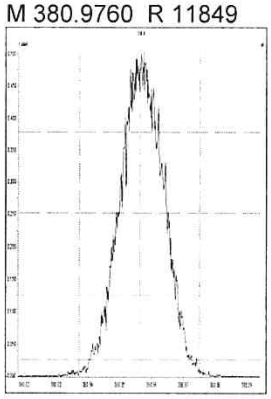
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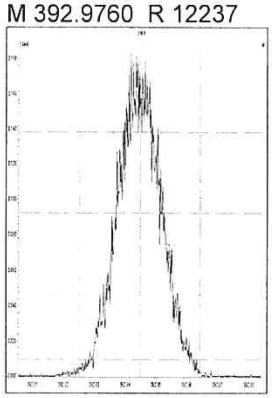
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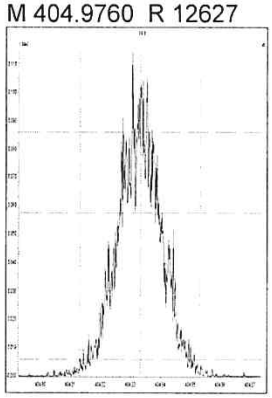
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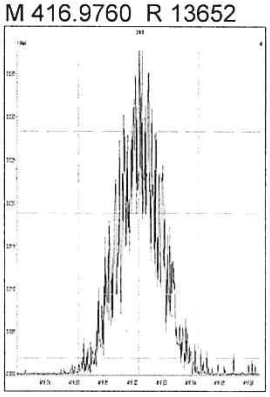
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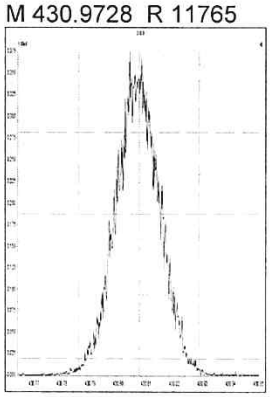
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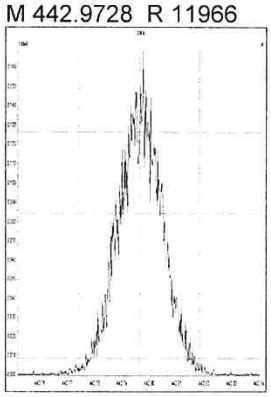
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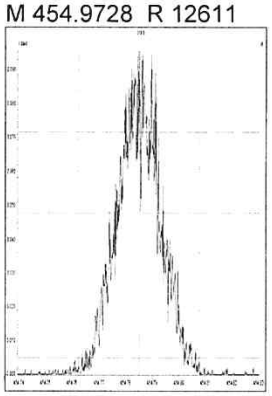
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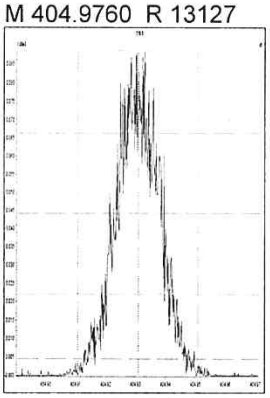
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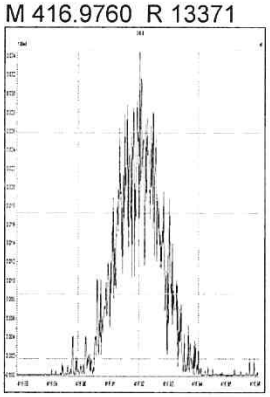
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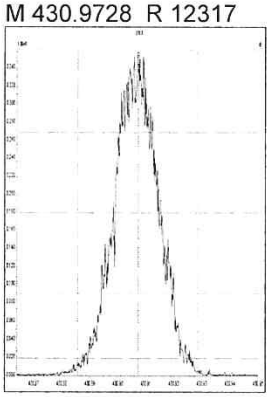
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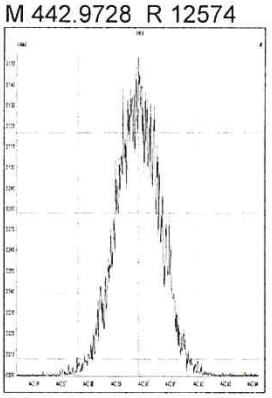
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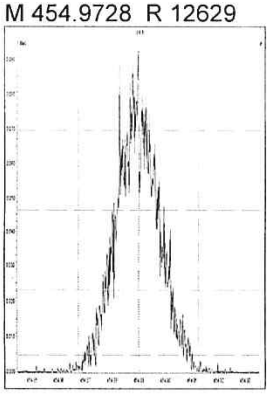
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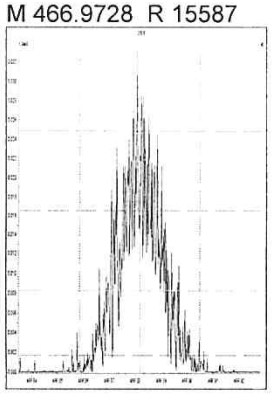
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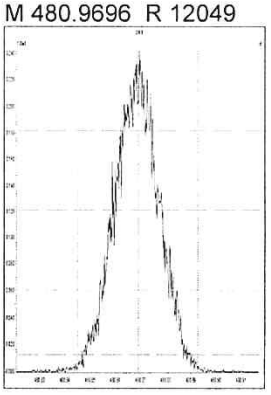
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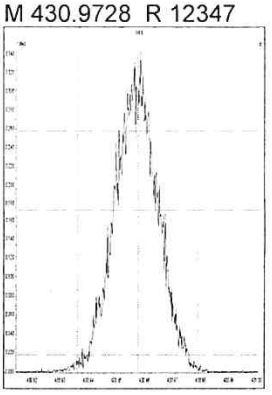
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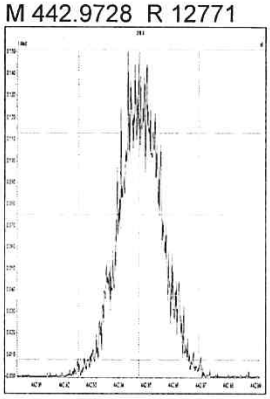
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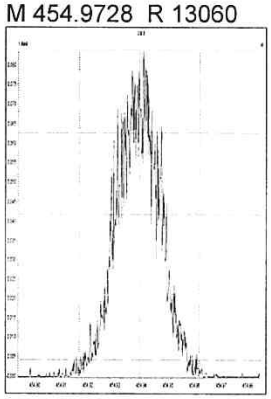
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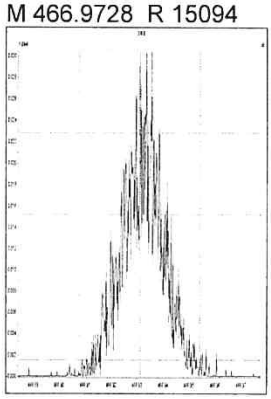
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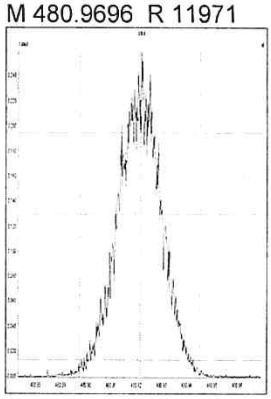
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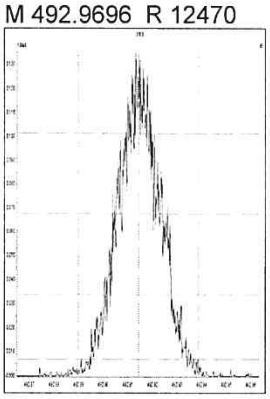
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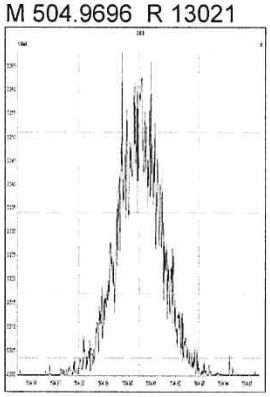
M 480.9696 R 11971



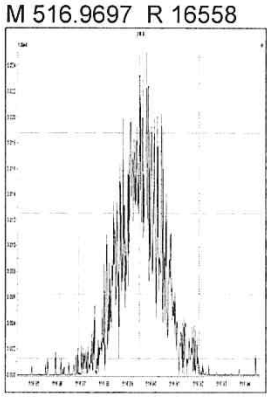
M 492.9696 R 12470



M 504.9696 R 13021



M 516.9697 R 16558



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

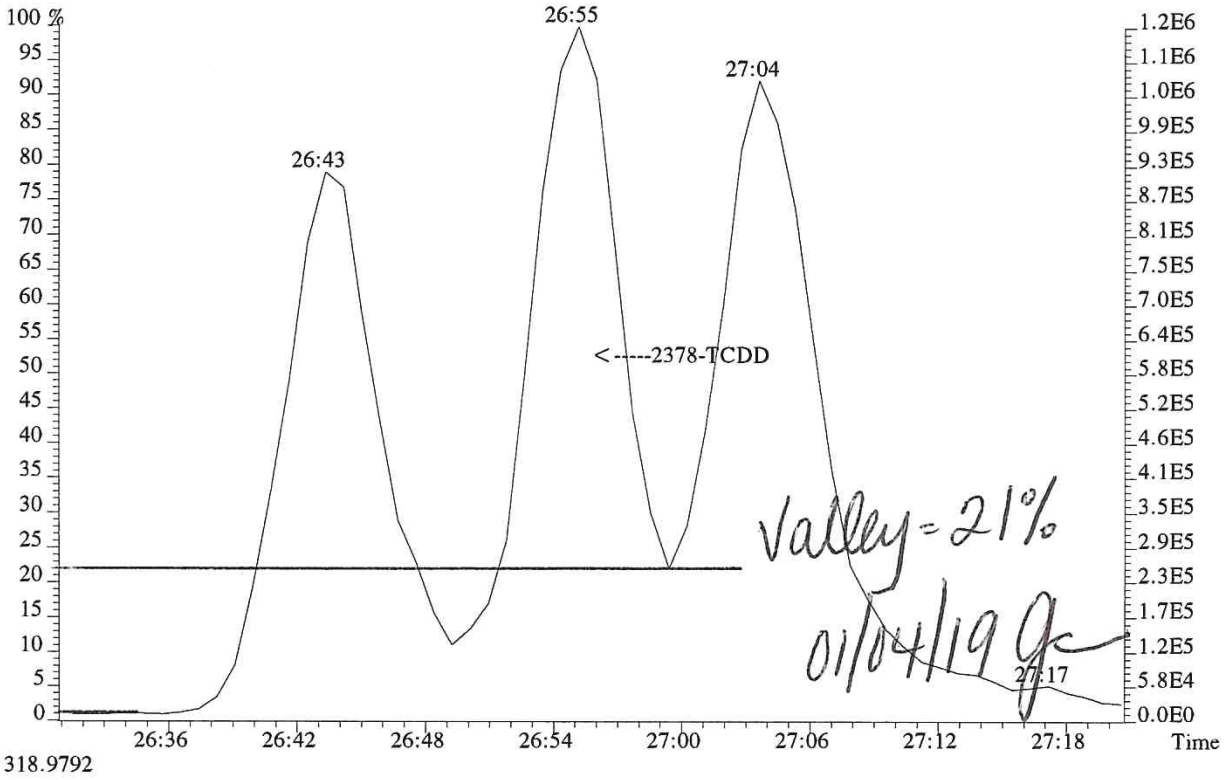
Lab Name: ALS Environmental
Lab Code: ALSTX
GC Column: DB-5MSUI

Case No.: _____ SDG No.:
ID: 0.25 (mm) Lab File ID: P519762
Date Analyzed: 4-JAN-2019
Time Analyzed: 01:00:04

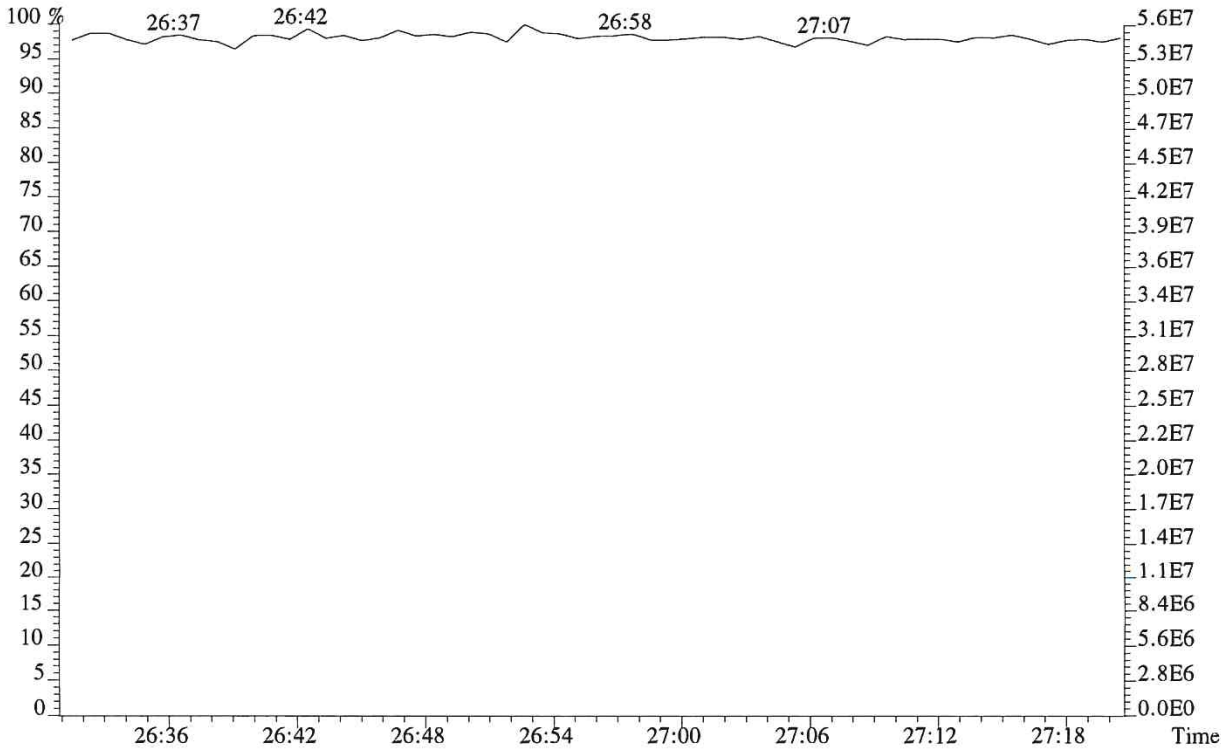
Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	21:33	28:16
TCDD	23:11	28:06
PeCDF	28:15	32:58
PeCDD	30:01	32:44
HxCDF	33:43	36:26
HxCDD	34:18	36:01
HpCDF	37:50	39:18
HpCDD	38:07	38:50

% Valley 2378-TCDD: 21 %

File:P519762 #1-587 Acq: 4-JAN-2019 01:00:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
319.8965

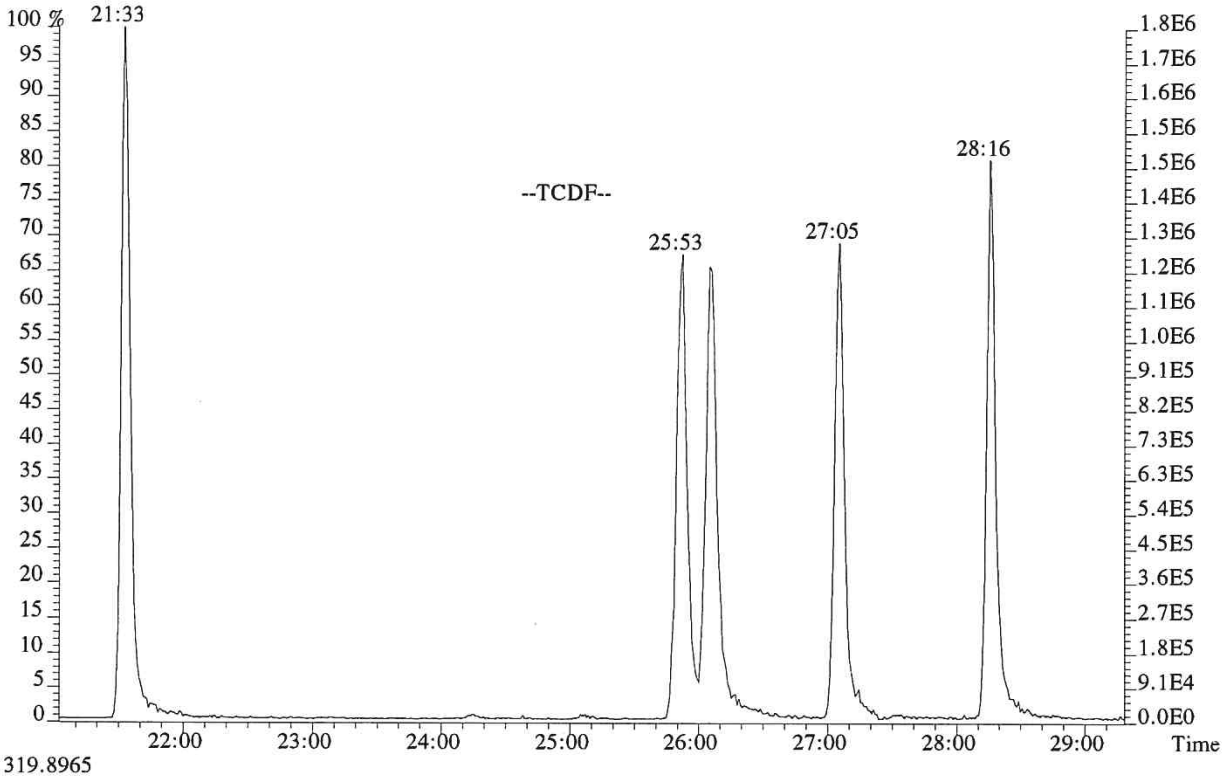


318.9792

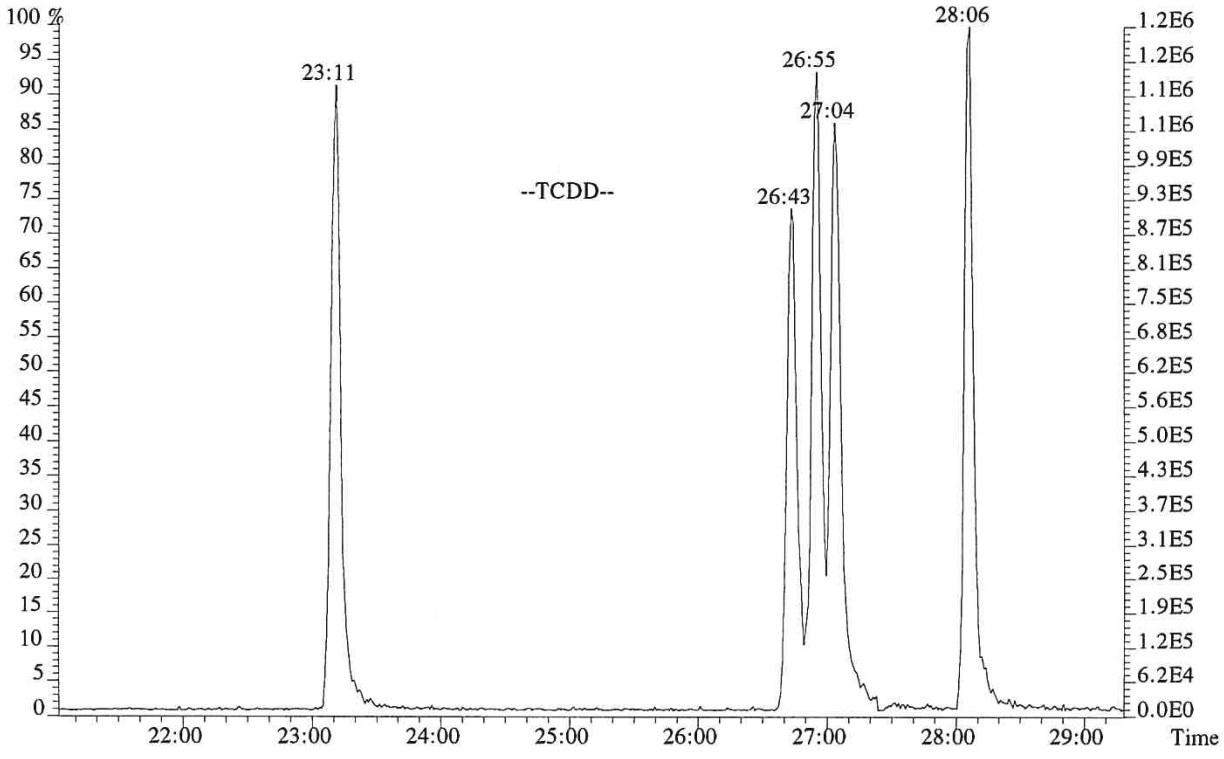


016567

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Sample#1 Exp:192977
303.9016

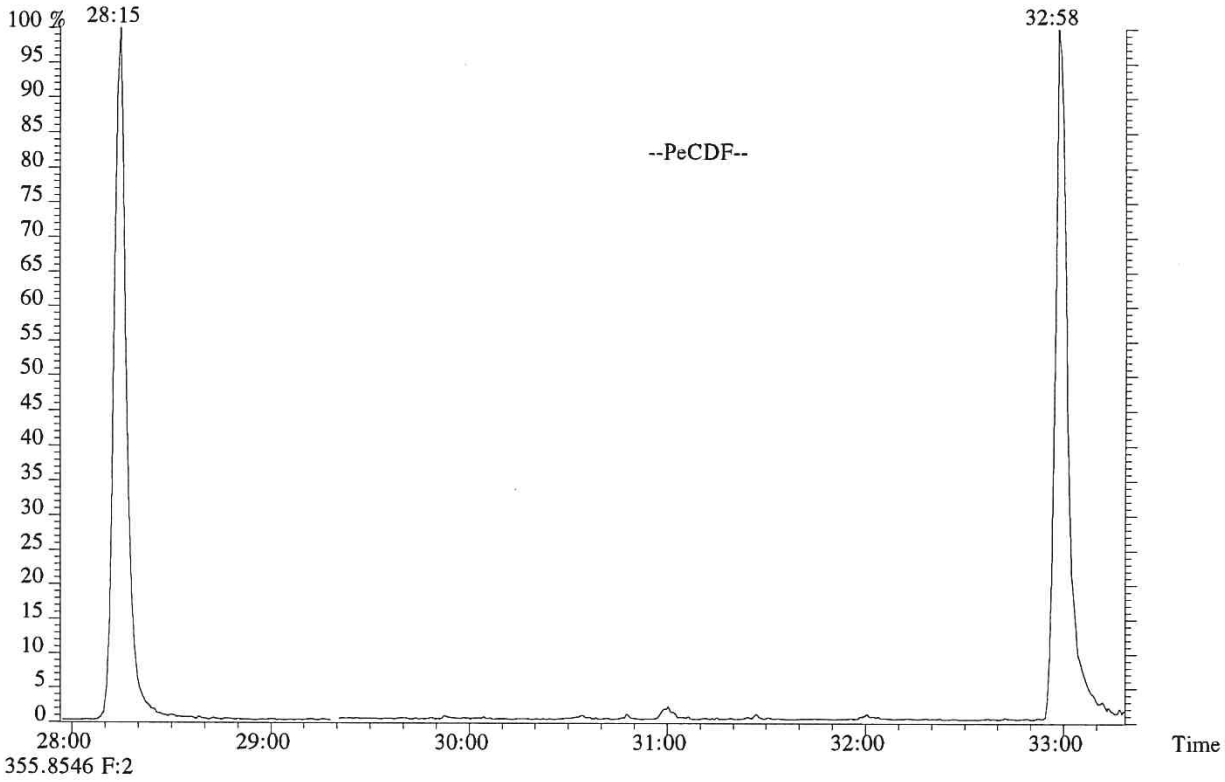


319.8965

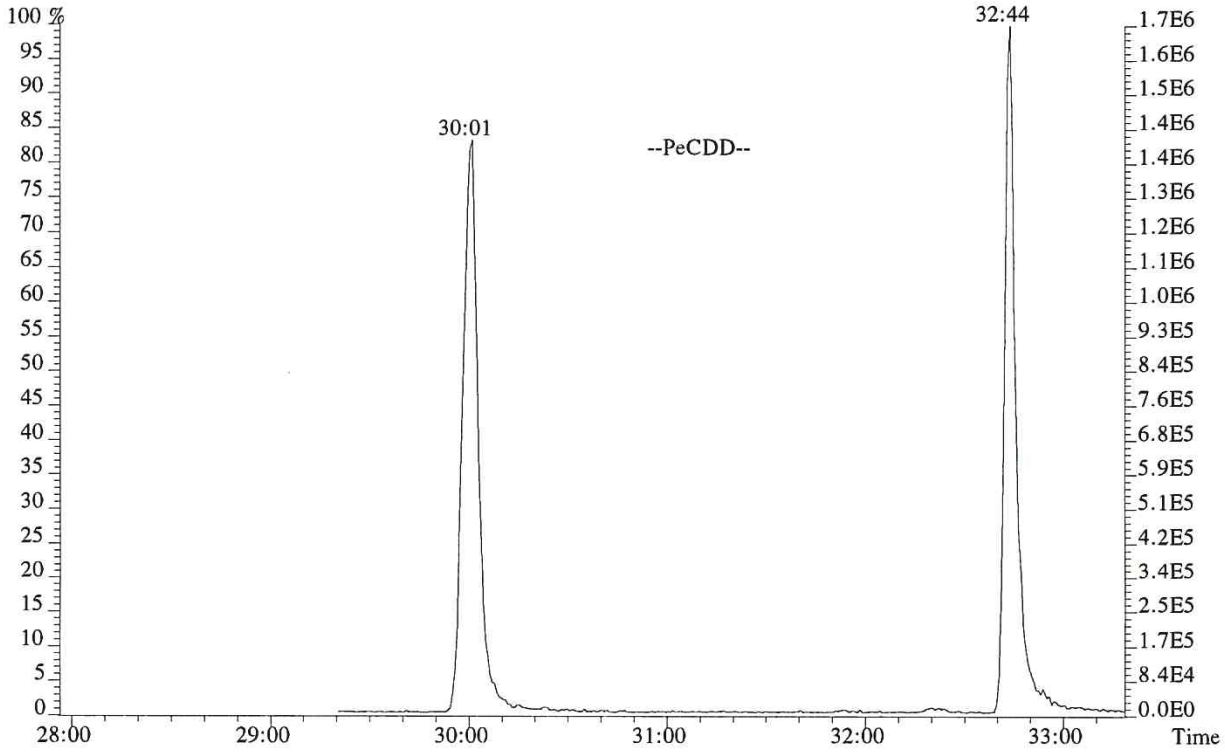


016568

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Sample#1 Exp:192977
339.8597,339.8597 F:2

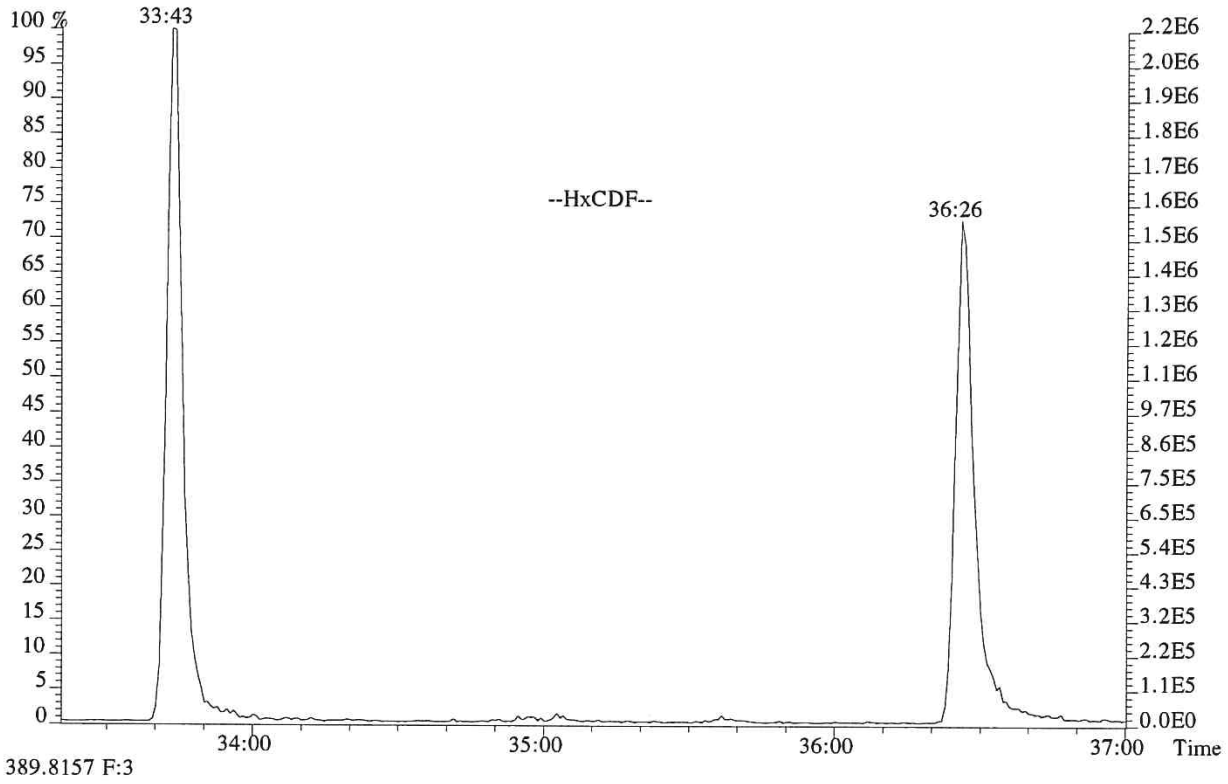


355.8546 F:2

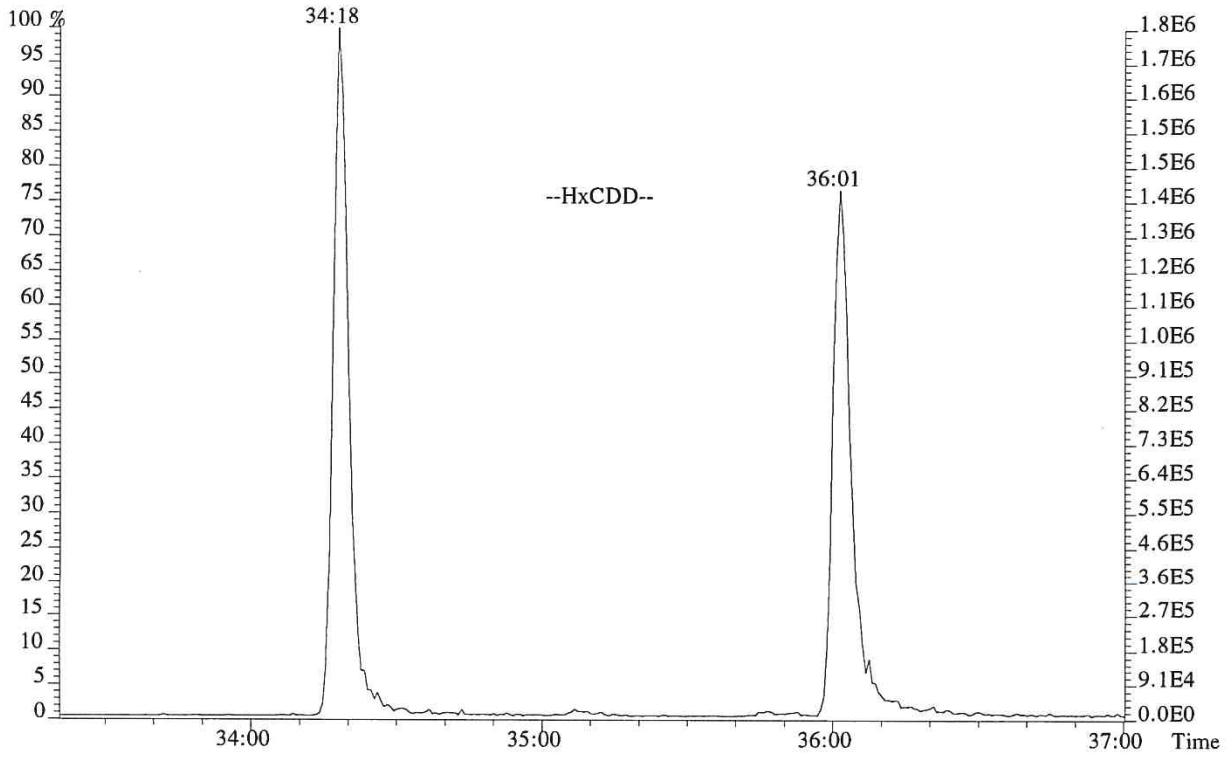


016569

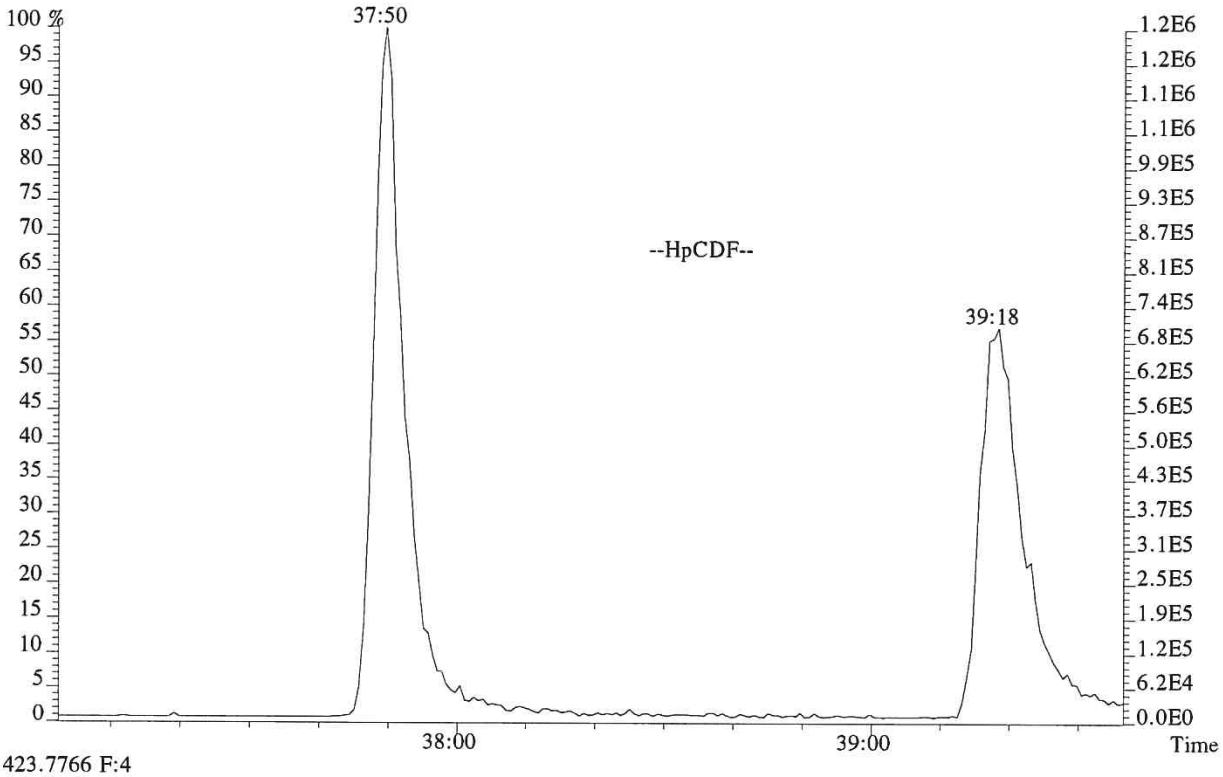
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Sample#1 Exp:192977
373.8208 F:3



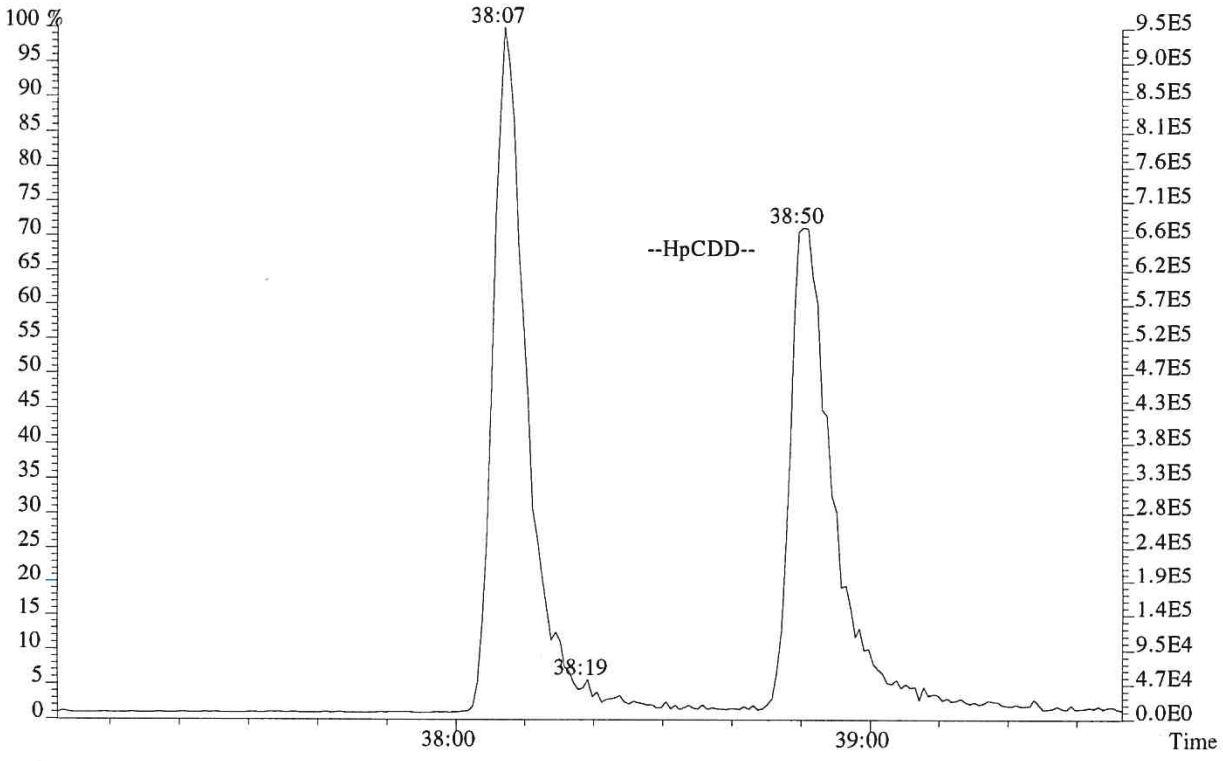
389.8157 F:3



File:P519762 #1-232 Acq: 4-JAN-2019 01:00:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
407.7818 F:4



423.7766 F:4



USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519760 Analysis Date: 3-JAN-19 Time: 23:16:18

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	9.2	7.8 - 12.9	-7.7
1,2,3,7,8-PeCDD	M+2/M+4	1.59	1.32-1.78	49	39 - 65	-2.4
1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	48	39 - 64	-3.1
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	49	39 - 64	-2.6
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	53	41 - 61	5.5
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	49	43 - 58	-2.5
OCDD	M+2/M+4	0.88	0.76-1.02	97	79 - 126	-3.4
2,3,7,8-TCDF	M/M+2	0.75	0.65-0.89	9.5	8.4 - 12.0	-4.7
1,2,3,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	48	41 - 60	-4.1
2,3,4,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	48	41 - 61	-3.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	50	45 - 56	-0.2
1,2,3,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	50	44 - 57	-0.4
1,2,3,7,8,9-HxCDF	M+2/M+4	1.23	1.05-1.43	48	45 - 56	-3.6
2,3,4,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	49	44 - 57	-1.5
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.02	0.88-1.20	49	45 - 55	-2.8
1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.98	0.88-1.20	49	43 - 58	-1.2
OCDF	M+2/M+4	0.88	0.76-1.02	93	63 - 159	-7.3

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

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

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

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

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519760 Analysis Date: 3-JAN-19 Time: 23:16:18

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	100	82 - 121	-0.2
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.58	1.32-1.78	109	62 - 160	9.4
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	88	85 - 117	-11.9
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	101	85 - 118	0.9
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	95	72 - 138	-5.3
13C-OCDD	M+2/M+4	0.91	0.76-1.02	214	96 - 415	6.8
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	86	71 - 140	-13.7
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	100	76 - 130	0.5
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	101	77 - 130	0.9
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	79	76 - 131	-20.6
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	89	70 - 143	-11.1
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	88	74 - 135	-11.7
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	89	73 - 137	-11.2
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	89	78 - 129	-11.2
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	88	77 - 129	-11.9
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				9.7	7.8 - 12.7	-2.7

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

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
194503

Run #7 Filename P519760 Samp: 1 Inj: 1 Acquired: 3-JAN-19 23:16:18
Processed: 4-JAN-19 15:57:05 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:06	4.773e+03	6.355e+03	0.75	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:59	4.118e+04	2.703e+04	1.52	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	32:00	3.921e+04	2.573e+04	1.52	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:56	3.186e+04	2.659e+04	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:03	3.812e+04	3.177e+04	1.20	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:36	3.343e+04	2.785e+04	1.20	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:24	2.923e+04	2.386e+04	1.23	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:50	2.854e+04	2.811e+04	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:18	2.236e+04	2.276e+04	0.98	yes	no	1.258
10	Unk	OCDF	41:59	3.688e+04	4.183e+04	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:04	3.855e+03	4.926e+03	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:19	2.903e+04	1.827e+04	1.59	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:46	2.288e+04	1.831e+04	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:51	2.701e+04	2.164e+04	1.25	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:07	2.789e+04	2.203e+04	1.27	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:50	2.106e+04	1.971e+04	1.07	yes	no	1.025
17	Unk	OCDD	41:50	3.156e+04	3.598e+04	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:04	5.484e+04	6.922e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:58	8.654e+04	5.393e+04	1.60	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:59	8.538e+04	5.434e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:55	3.338e+04	6.502e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:02	4.235e+04	8.259e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:35	3.840e+04	7.370e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:24	3.294e+04	6.338e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:49	2.692e+04	5.933e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:17	2.246e+04	5.014e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:03	3.858e+04	4.906e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:18	6.213e+04	3.922e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:45	4.558e+04	3.627e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:51	5.383e+04	4.236e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:50	4.164e+04	3.997e+04	1.04	yes	no	0.858
32	IS	13C-OCDD	41:49	5.955e+04	6.545e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:21	4.209e+04	5.295e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:06	5.602e+04	4.445e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:04	9.378e+03				no	1.014

ALS ENVIRONMENTAL
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Houston, TX 77099
Office(713)266-1599. Fax(713)266-0130

www.alsglobal.com

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
194503

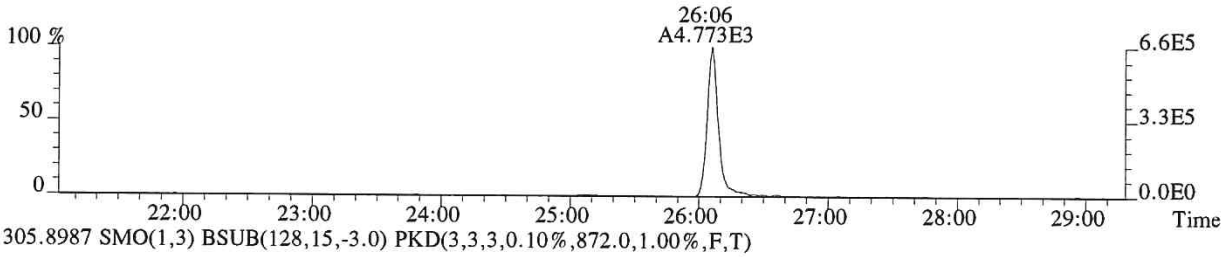
Run #7 Filename P519760 Samp: 1 Inj: 1 Acquired: 3-JAN-19 23:16:18
Processed: 4-JAN-19 15:57:05 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.63e+05	2.76e+02	2.4e+03	8.81e+05	8.72e+02	1.0e+03
2	1,2,3,7,8-PeCDF	6.28e+06	4.40e+02	1.4e+04	4.20e+06	2.31e+03	1.8e+03
3	2,3,4,7,8-PeCDF	6.43e+06	4.40e+02	1.5e+04	4.28e+06	2.31e+03	1.9e+03
4	1,2,3,4,7,8-HxCDF	5.50e+06	6.76e+02	8.1e+03	4.59e+06	5.44e+02	8.4e+03
5	1,2,3,6,7,8-HxCDF	5.80e+06	6.76e+02	8.6e+03	4.82e+06	5.44e+02	8.9e+03
6	2,3,4,6,7,8-HxCDF	5.42e+06	6.76e+02	8.0e+03	4.49e+06	5.44e+02	8.3e+03
7	1,2,3,7,8,9-HxCDF	3.92e+06	6.76e+02	5.8e+03	3.16e+06	5.44e+02	5.8e+03
8	1,2,3,4,6,7,8-HpCDF	3.54e+06	4.20e+03	8.4e+02	3.49e+06	3.21e+03	1.1e+03
9	1,2,3,4,7,8,9-HpCDF	2.10e+06	4.20e+03	5.0e+02	2.15e+06	3.21e+03	6.7e+02
10	OCDF	2.05e+06	5.36e+02	3.8e+03	2.44e+06	1.02e+03	2.4e+03
11	2,3,7,8-TCDD	5.79e+05	1.64e+03	3.5e+02	7.36e+05	1.22e+03	6.1e+02
12	1,2,3,7,8-PeCDD	4.59e+06	8.40e+02	5.5e+03	2.88e+06	4.60e+02	6.3e+03
13	1,2,3,4,7,8-HxCDD	3.95e+06	6.52e+02	6.1e+03	3.13e+06	4.88e+02	6.4e+03
14	1,2,3,6,7,8-HxCDD	3.95e+06	6.52e+02	6.1e+03	3.19e+06	4.88e+02	6.5e+03
15	1,2,3,7,8,9-HxCDD	3.81e+06	6.52e+02	5.8e+03	2.98e+06	4.88e+02	6.1e+03
16	1,2,3,4,6,7,8-HpCDD	2.12e+06	6.16e+02	3.4e+03	2.02e+06	5.24e+02	3.9e+03
17	OCDD	1.86e+06	4.12e+02	4.5e+03	2.06e+06	4.44e+02	4.6e+03
18	13C-2,3,7,8-TCDF	7.45e+06	4.61e+03	1.6e+03	9.37e+06	2.81e+03	3.3e+03
19	13C-1,2,3,7,8-PeCDF	1.33e+07	9.60e+02	1.4e+04	8.21e+06	8.64e+02	9.5e+03
20	13C-2,3,4,7,8-PeCDF	1.39e+07	9.60e+02	1.5e+04	8.78e+06	8.64e+02	1.0e+04
21	13C-1,2,3,4,7,8-HxCDF	5.75e+06	1.10e+03	5.2e+03	1.12e+07	7.88e+02	1.4e+04
22	13C-1,2,3,6,7,8-HxCDF	6.47e+06	1.10e+03	5.9e+03	1.27e+07	7.88e+02	1.6e+04
23	13C-2,3,4,6,7,8-HxCDF	6.23e+06	1.10e+03	5.7e+03	1.18e+07	7.88e+02	1.5e+04
24	13C-1,2,3,7,8,9-HxCDF	4.36e+06	1.10e+03	4.0e+03	8.47e+06	7.88e+02	1.1e+04
25	13C-1,2,3,4,6,7,8-HpCDF	3.29e+06	2.64e+03	1.2e+03	7.39e+06	7.40e+03	1.0e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.08e+06	2.64e+03	7.9e+02	4.74e+06	7.40e+03	6.4e+02
27	13C-2,3,7,8-TCDD	5.82e+06	4.33e+03	1.3e+03	7.36e+06	2.14e+03	3.4e+03
28	13C-1,2,3,7,8-PeCDD	9.89e+06	5.44e+02	1.8e+04	6.22e+06	6.36e+02	9.8e+03
29	13C-1,2,3,4,7,8-HxCDD	7.79e+06	1.05e+03	7.4e+03	6.11e+06	8.08e+02	7.6e+03
30	13C-1,2,3,6,7,8-HxCDD	7.87e+06	1.05e+03	7.5e+03	6.27e+06	8.08e+02	7.8e+03
31	13C-1,2,3,4,6,7,8-HpCDD	4.25e+06	5.28e+02	8.1e+03	4.02e+06	4.40e+02	9.1e+03
32	13C-OCDD	3.38e+06	8.84e+02	3.8e+03	3.71e+06	6.84e+02	5.4e+03
33	13C-1,2,3,4-TCDD	6.31e+06	4.33e+03	1.5e+03	7.85e+06	2.14e+03	3.7e+03
34	13C-1,2,3,7,8,9-HxCDD	7.66e+06	1.05e+03	7.3e+03	6.07e+06	8.08e+02	7.5e+03
35	37Cl-2,3,7,8-TCDD	1.35e+06	1.10e+03	1.2e+03			

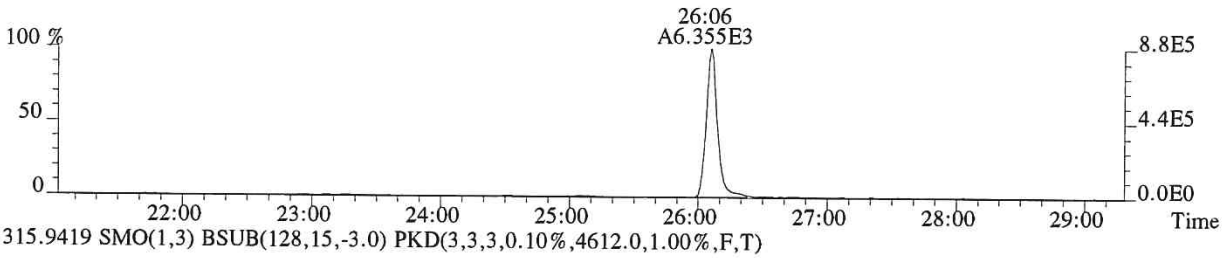
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10450 Stancliff Rd., Suite 115
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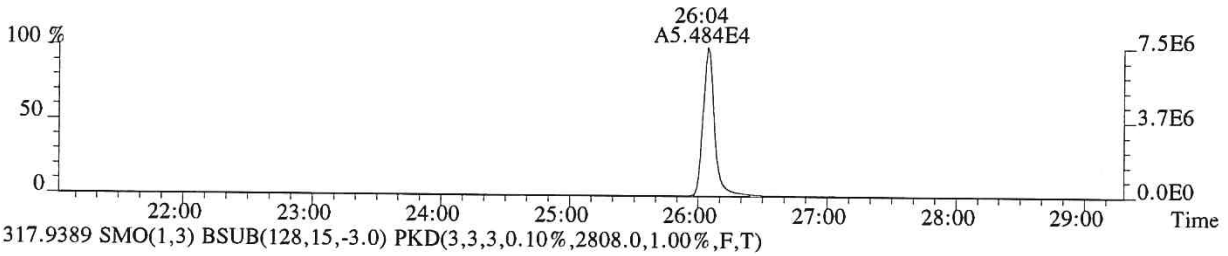
File:P519760 #1-587 Acq: 3-JAN-2019 23:16:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,276.0,1.00%,F,T)



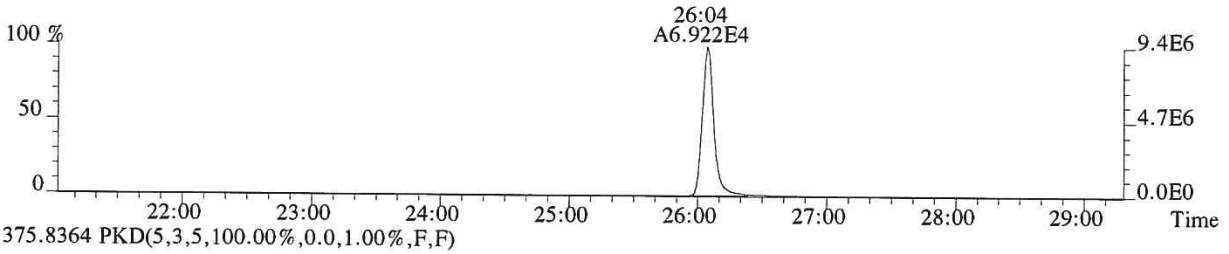
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,872.0,1.00%,F,T)



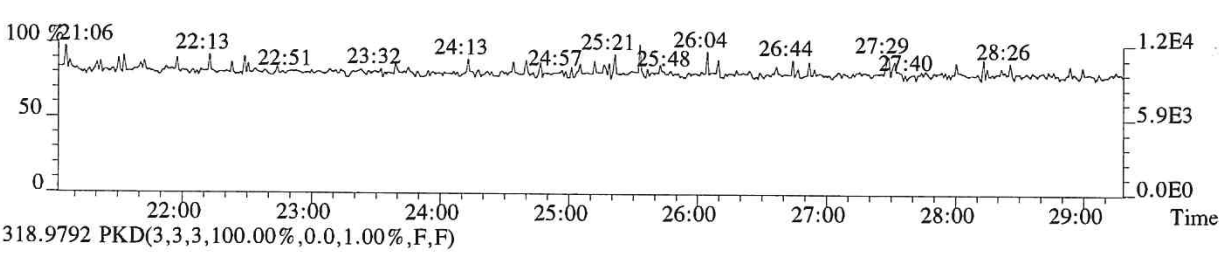
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4612.0,1.00%,F,T)



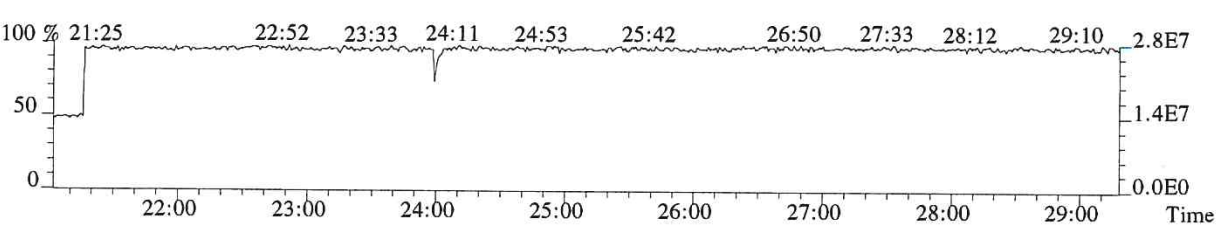
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2808.0,1.00%,F,T)



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

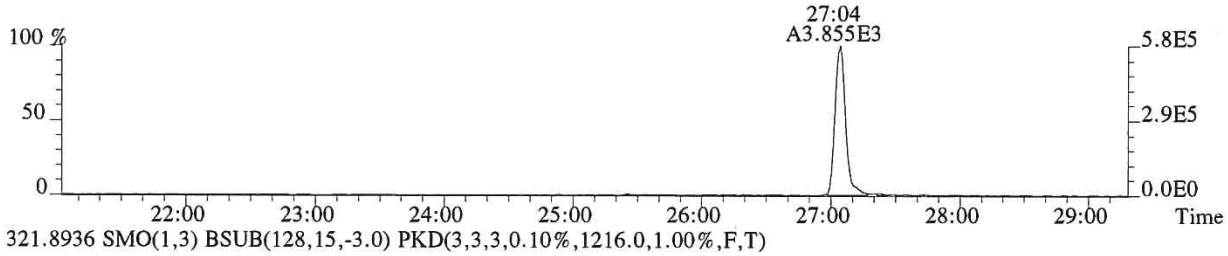


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

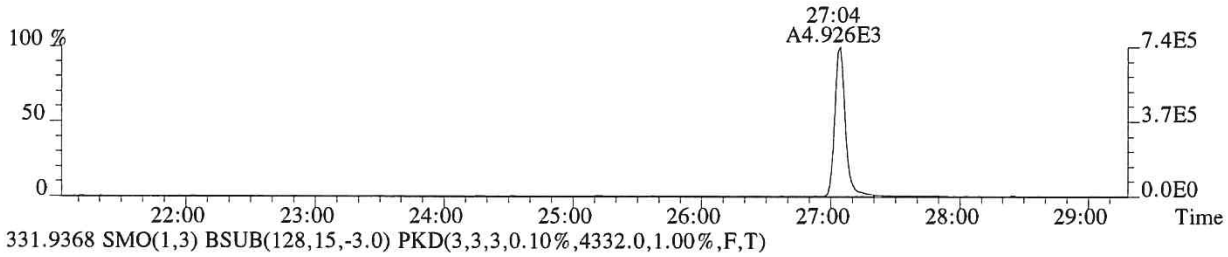


016576

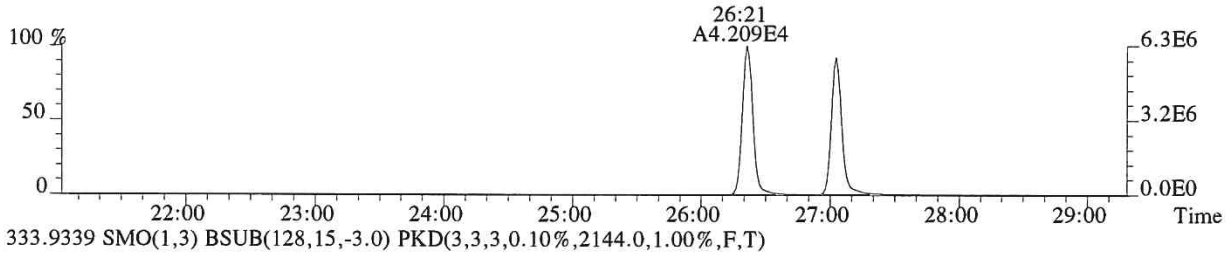
File:P519760 #1-587 Acq: 3-JAN-2019 23:16:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1644.0,1.00%,F,T)



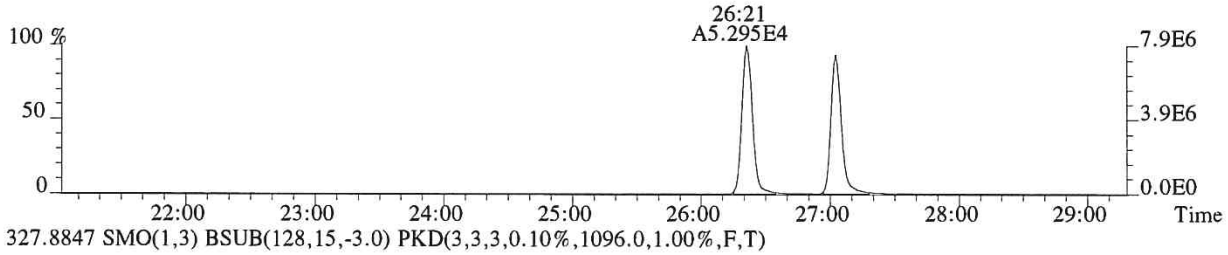
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1216.0,1.00%,F,T)



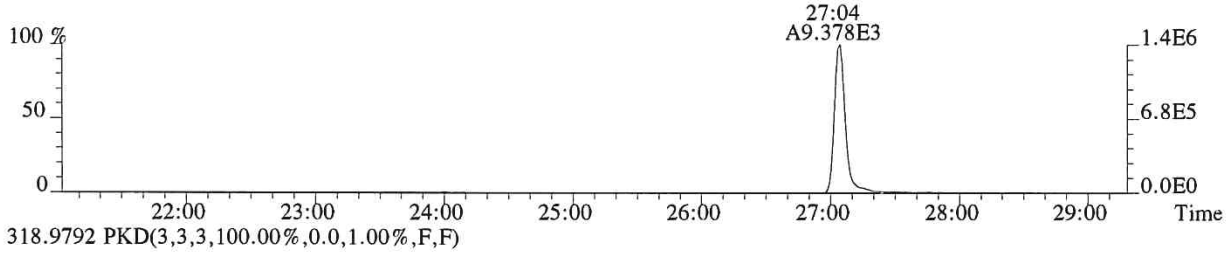
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4332.0,1.00%,F,T)



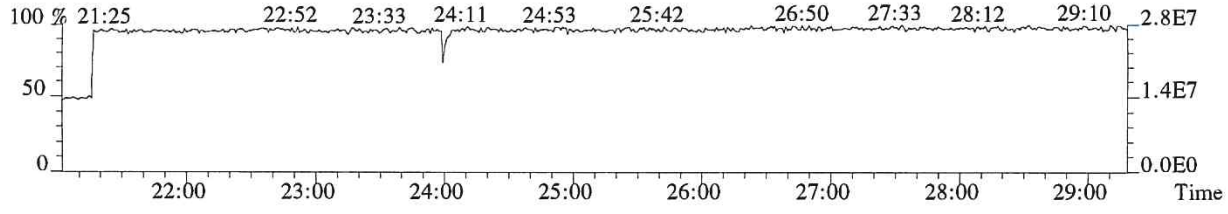
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2144.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1096.0,1.00%,F,T)

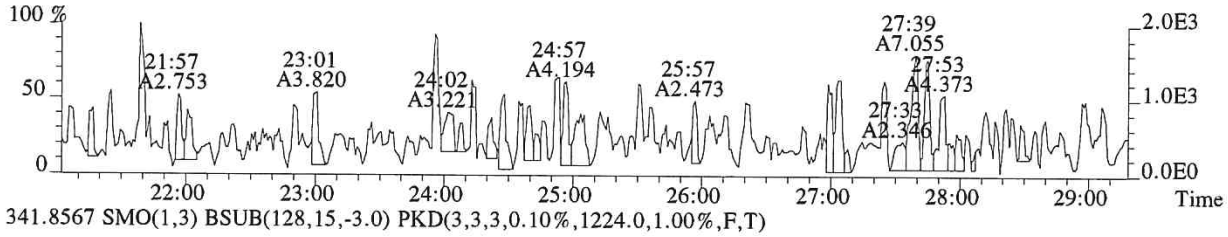


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

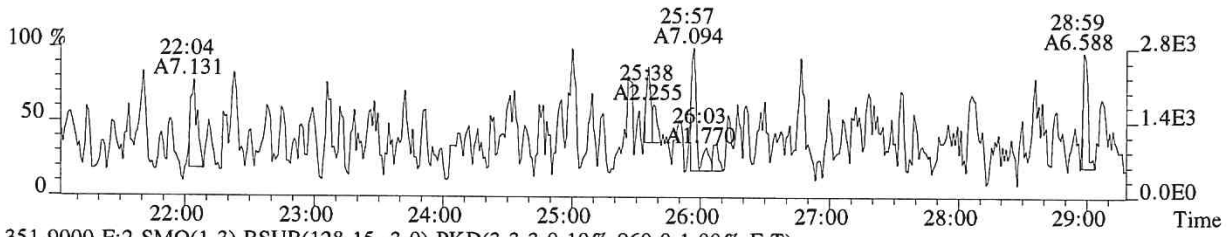


016577

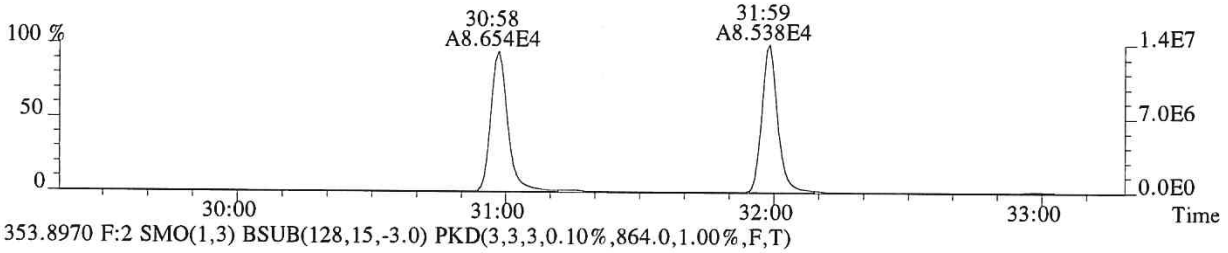
File:P519760 #1-587 Acq: 3-JAN-2019 23:16:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,520.0,1.00%,F,T)



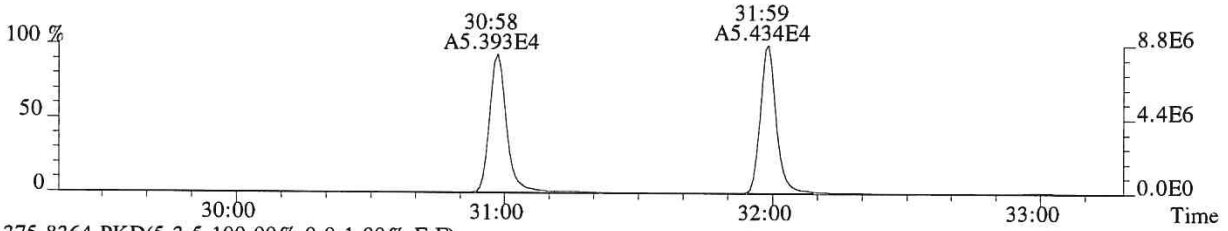
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1224.0,1.00%,F,T)



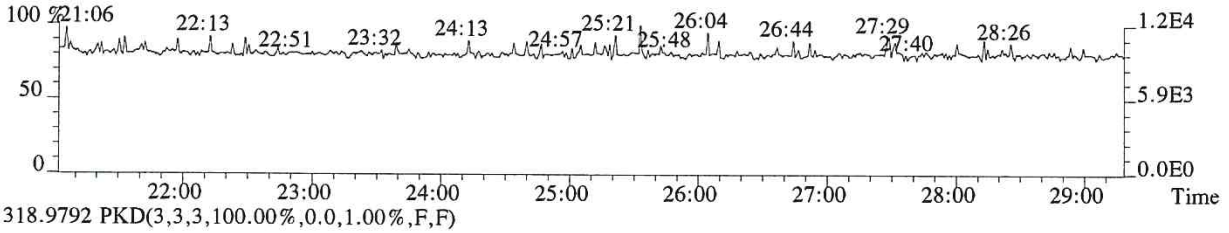
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,960.0,1.00%,F,T)



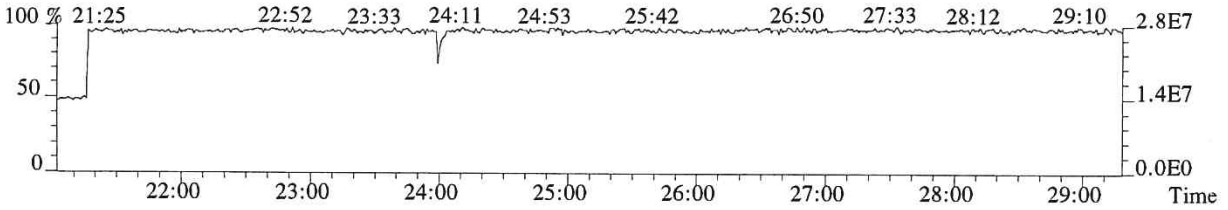
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,864.0,1.00%,F,T)



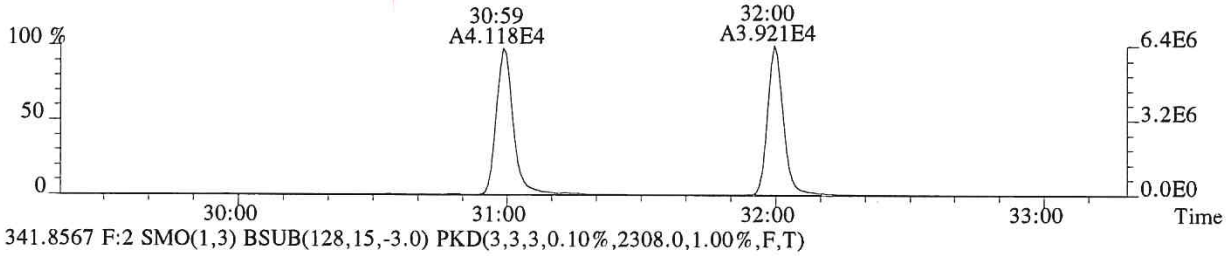
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



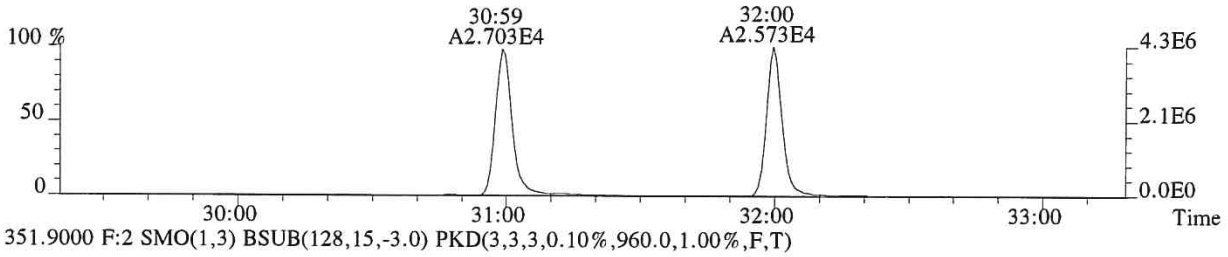
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



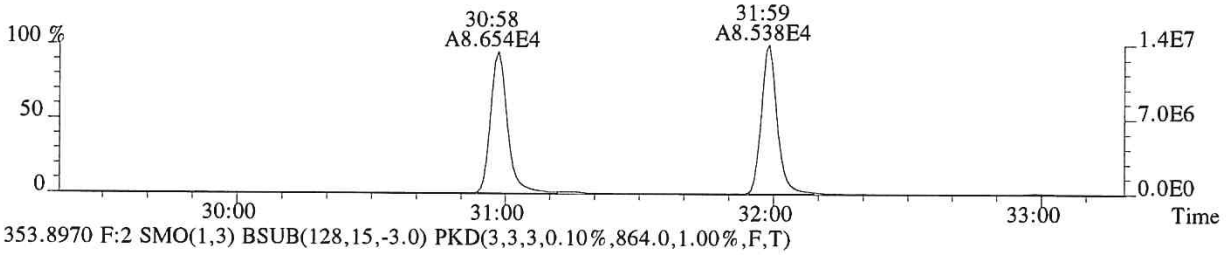
File:P519760 #1-358 Acq: 3-JAN-2019 23:16:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,440.0,1.00%,F,T)



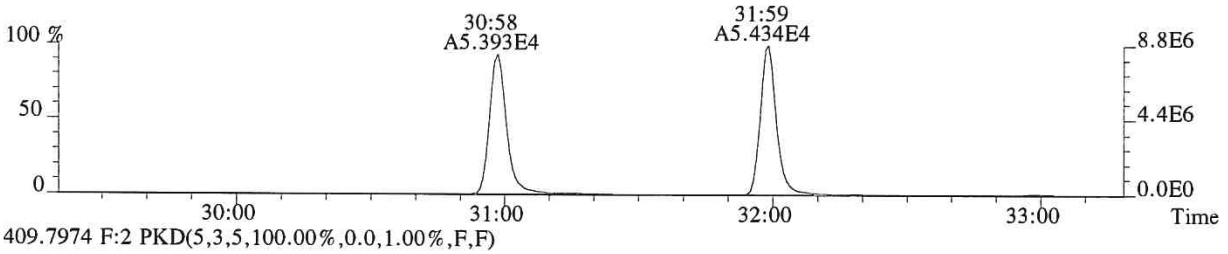
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2308.0,1.00%,F,T)



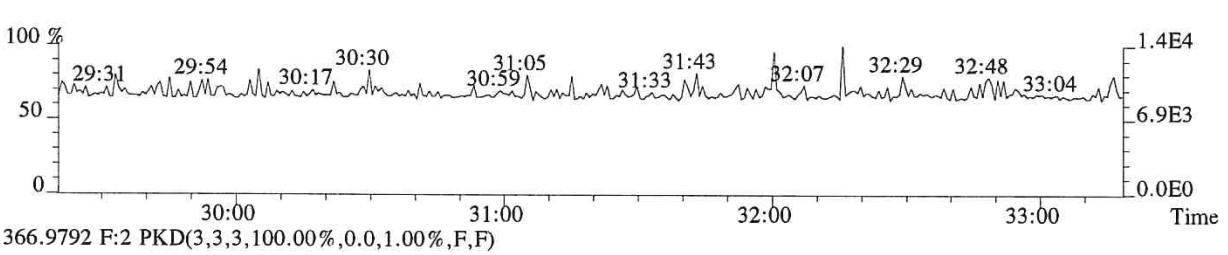
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,960.0,1.00%,F,T)



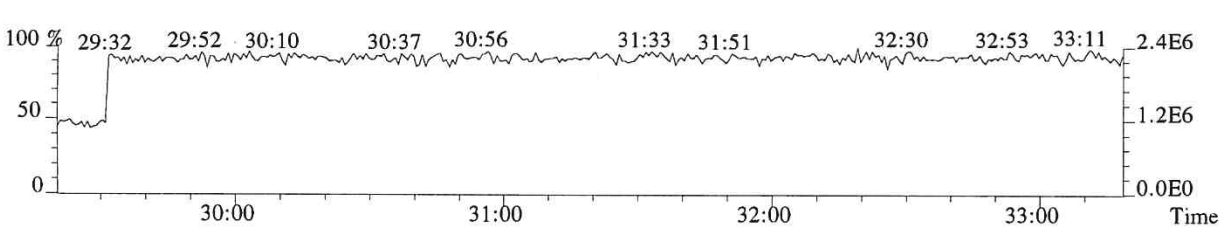
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,864.0,1.00%,F,T)



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

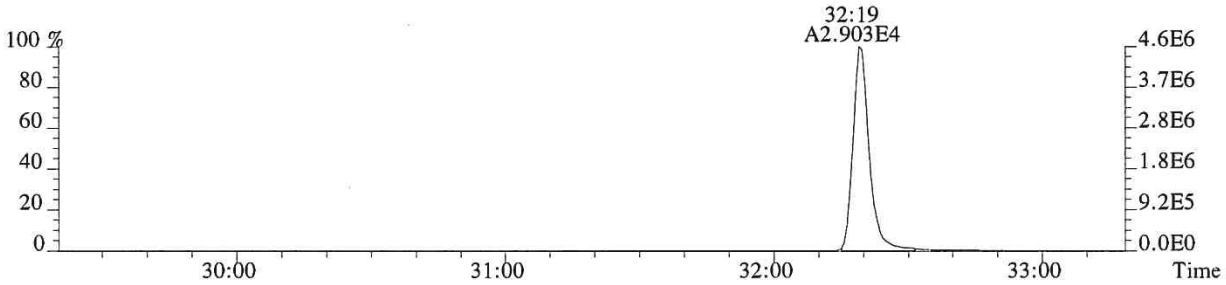


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

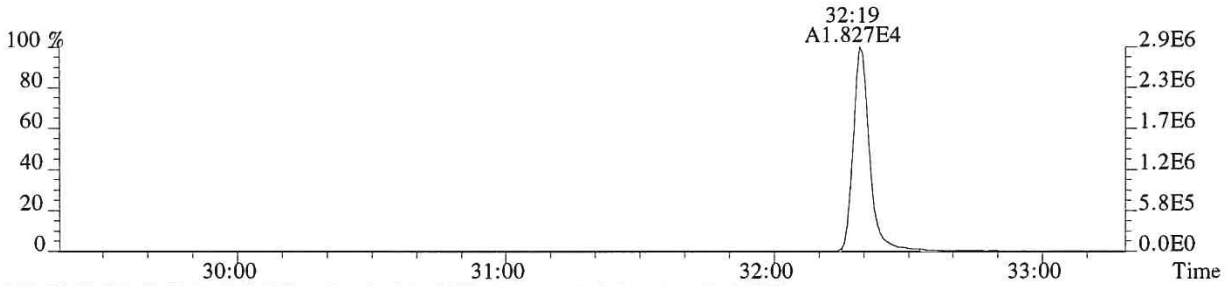


016579

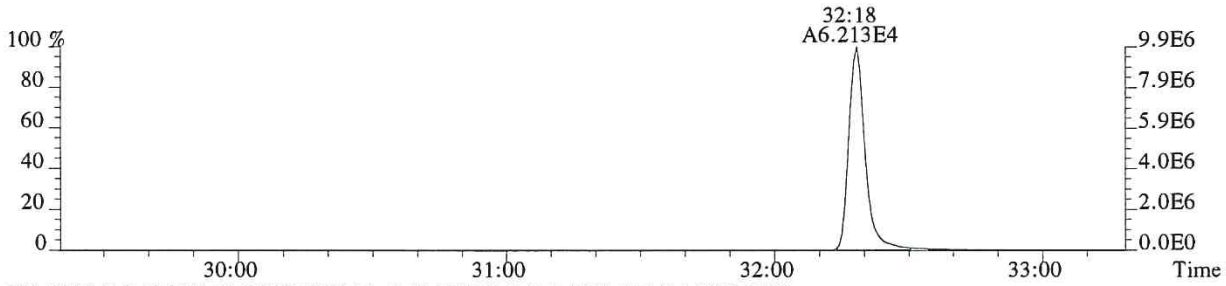
File:P519760 #1-358 Acq: 3-JAN-2019 23:16:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,840.0,1.00%,F,T)



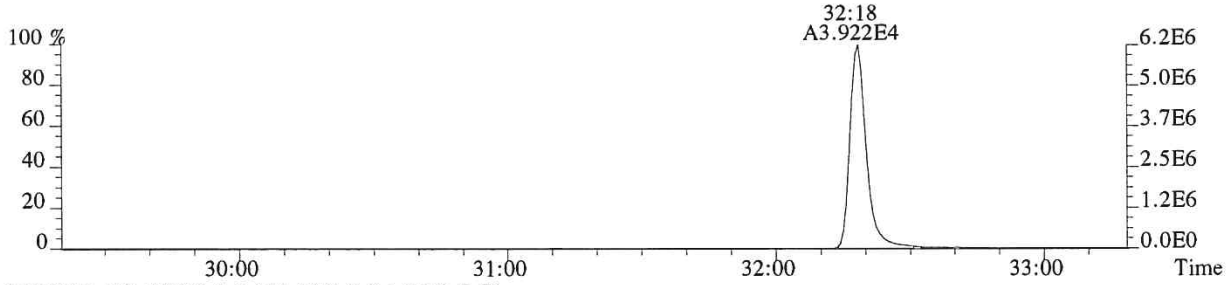
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,460.0,1.00%,F,T)



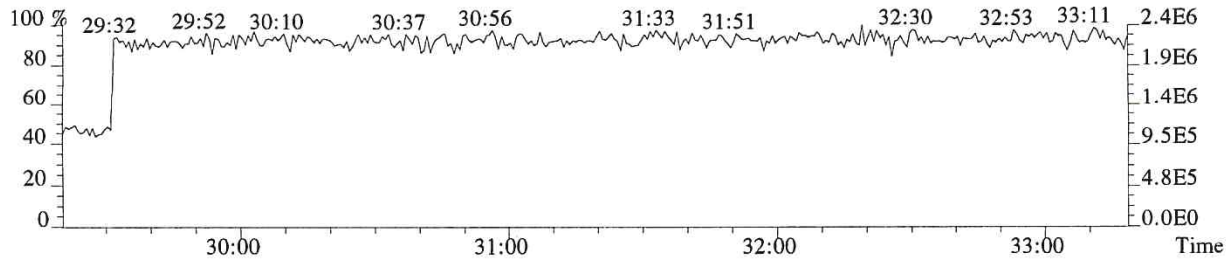
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,544.0,1.00%,F,T)



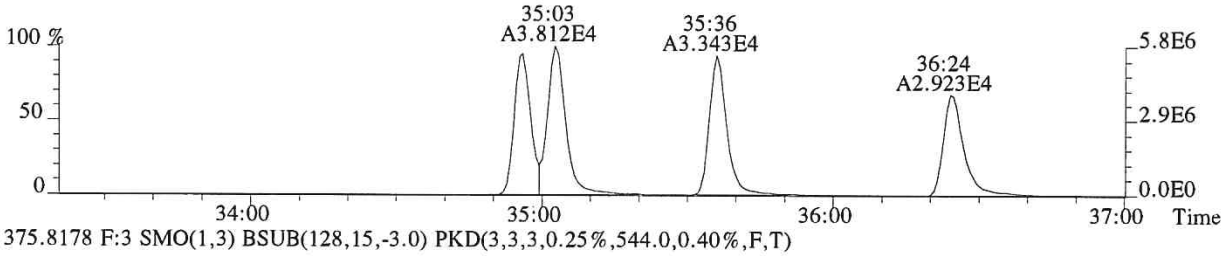
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,636.0,1.00%,F,T)



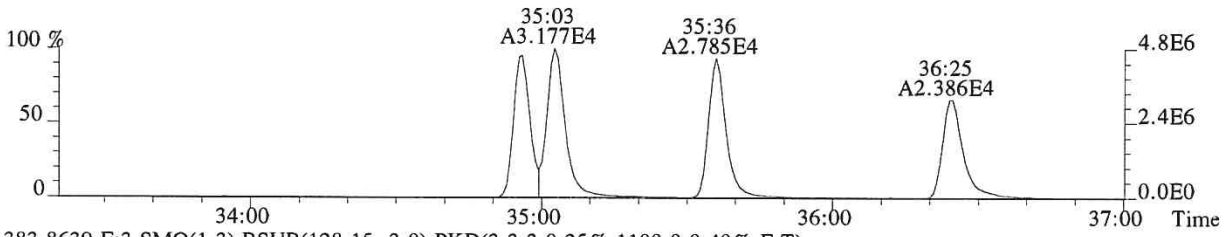
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



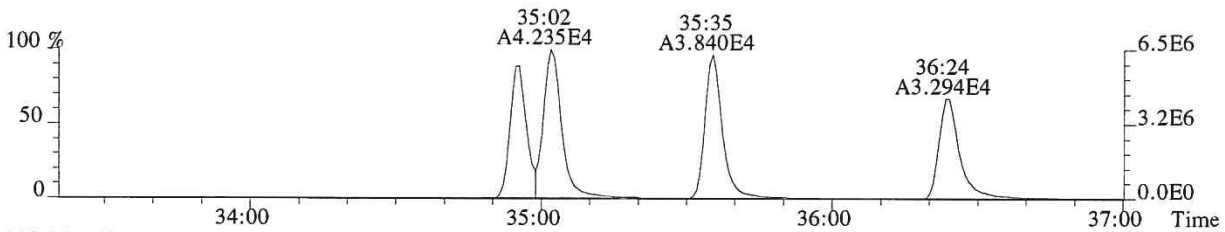
File:P519760 #1-330 Acq: 3-JAN-2019 23:16:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,676.0,0.40%,F,T)



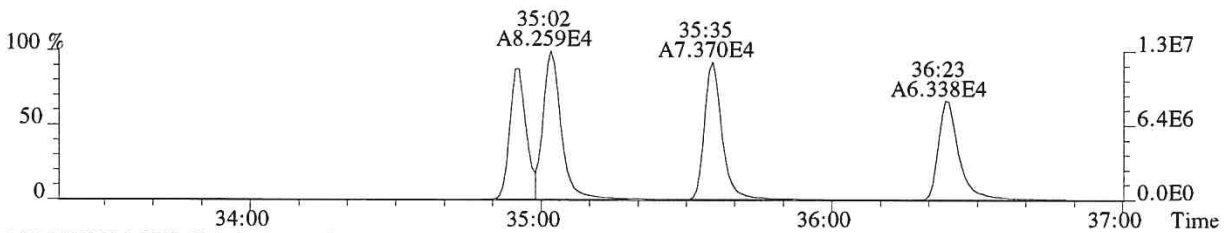
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,544.0,0.40%,F,T)



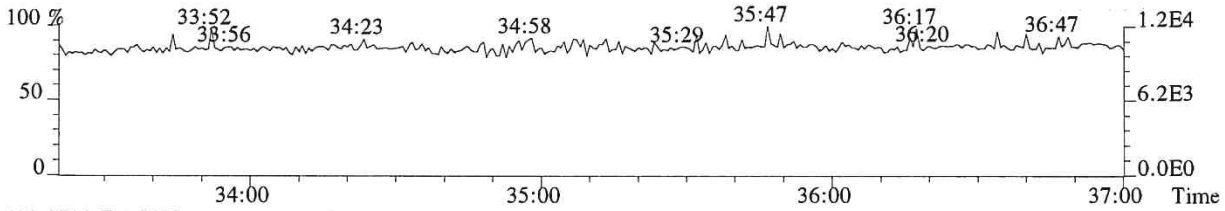
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1100.0,0.40%,F,T)



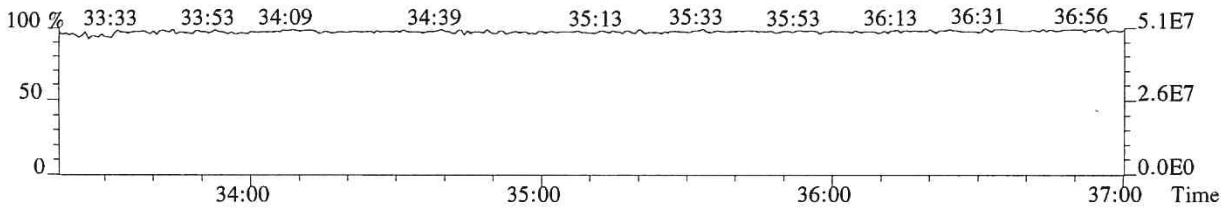
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,788.0,0.40%,F,T)



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

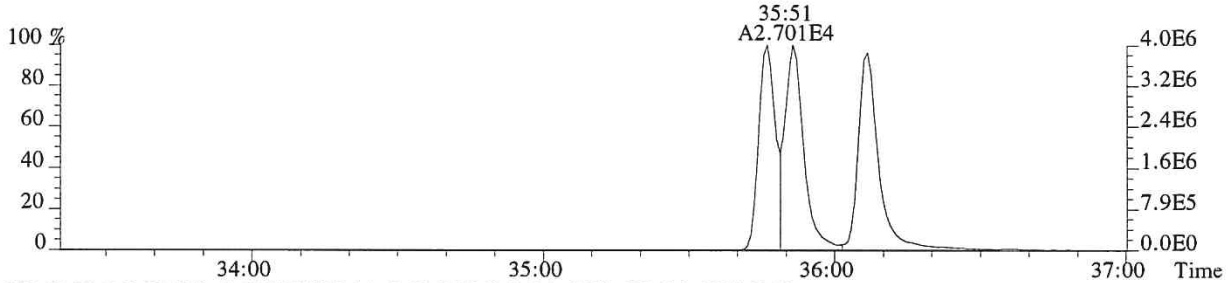


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

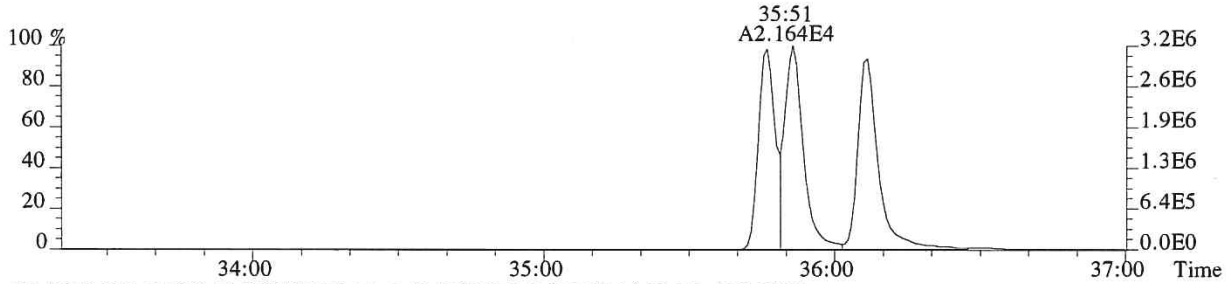


016581

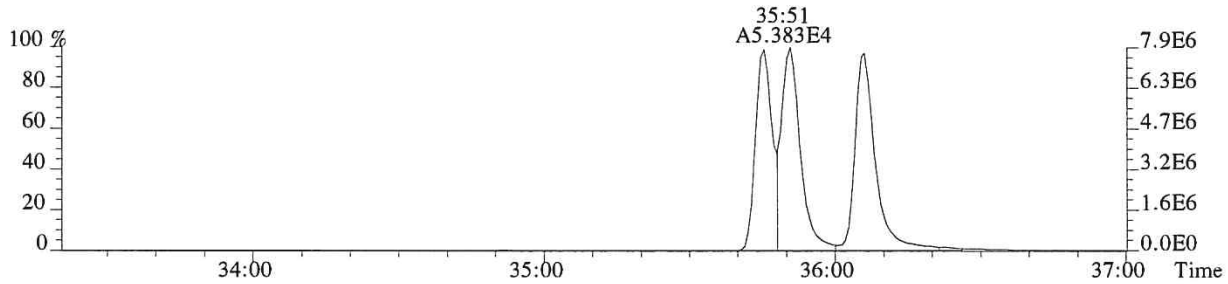
File:P519760 #1-330 Acq: 3-JAN-2019 23:16:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,652.0,0.40%,F,T)



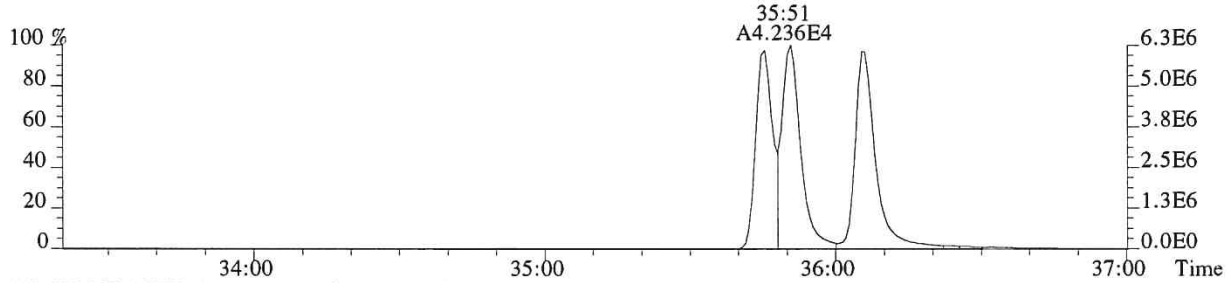
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,488.0,0.40%,F,T)



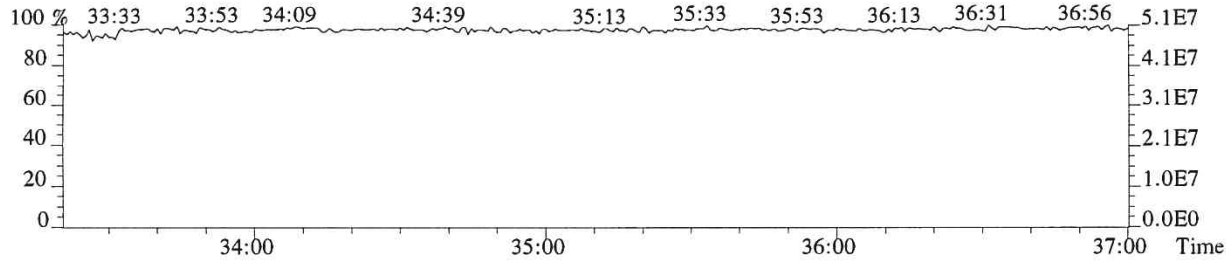
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1048.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,808.0,0.40%,F,T)

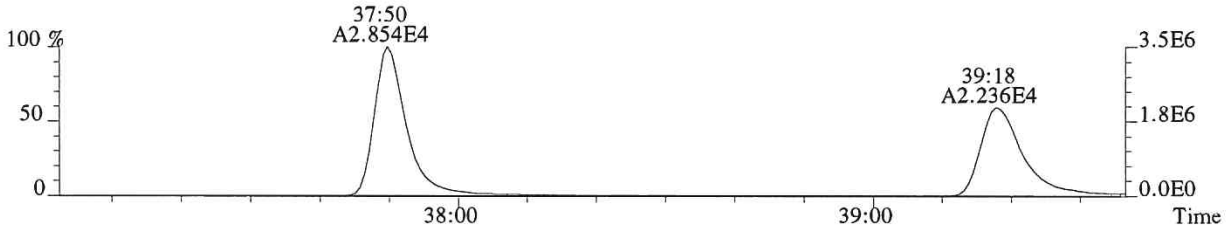


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

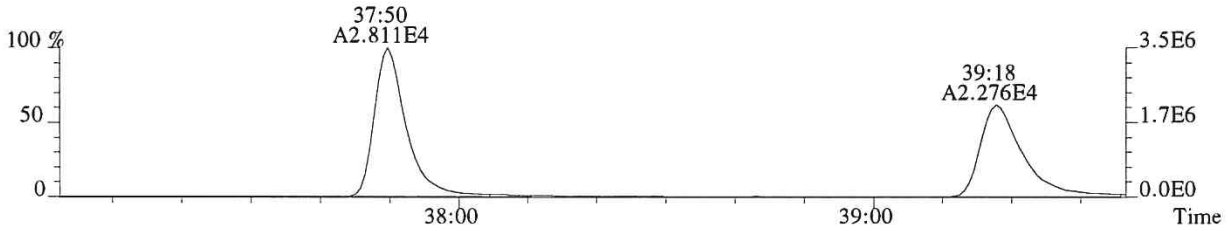


016582

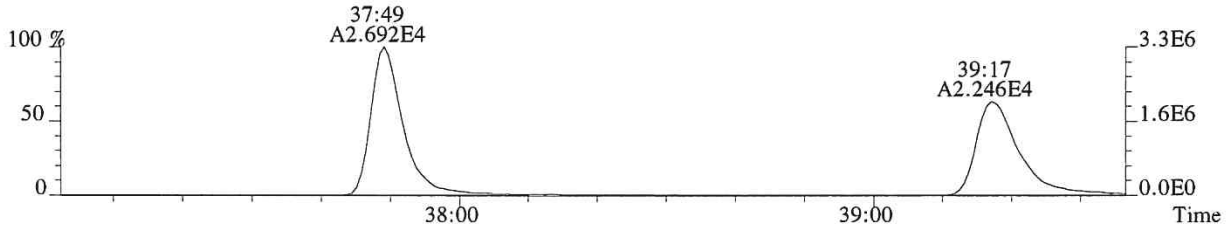
File:P519760 #1-232 Acq: 3-JAN-2019 23:16:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4200.0,0.50%,F,T)



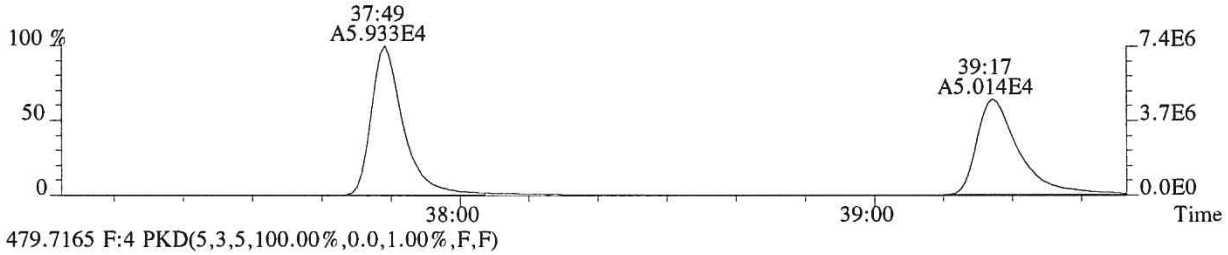
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3212.0,0.50%,F,T)



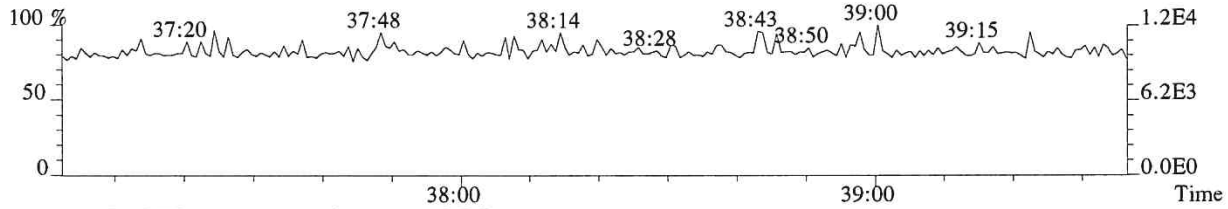
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2640.0,0.50%,F,T)



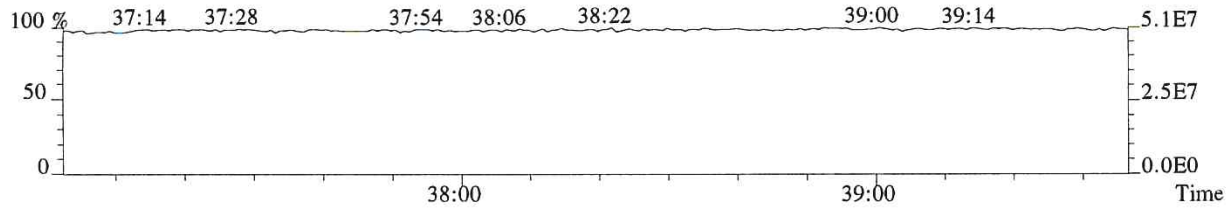
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7400.0,0.50%,F,T)



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

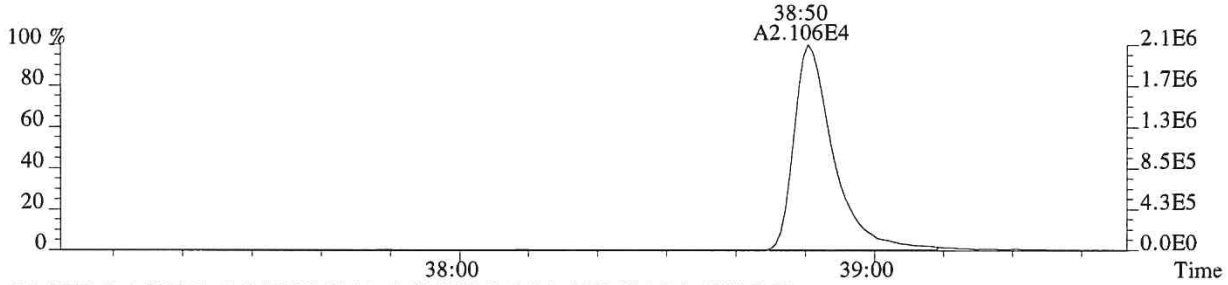


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

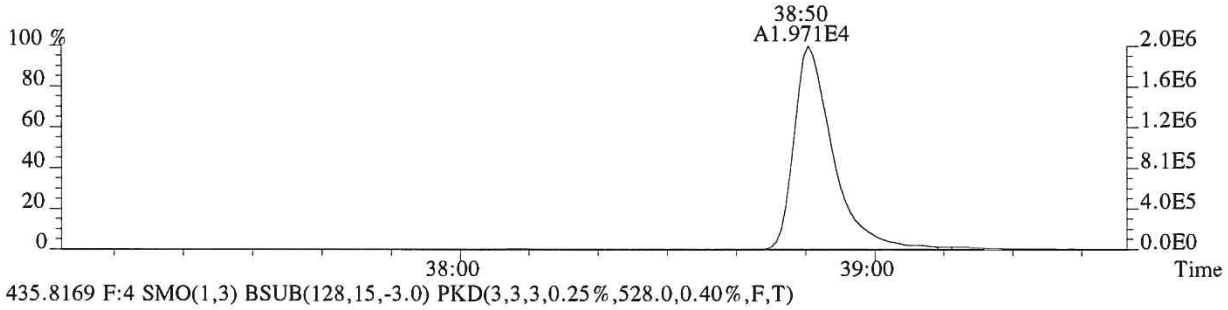


016583

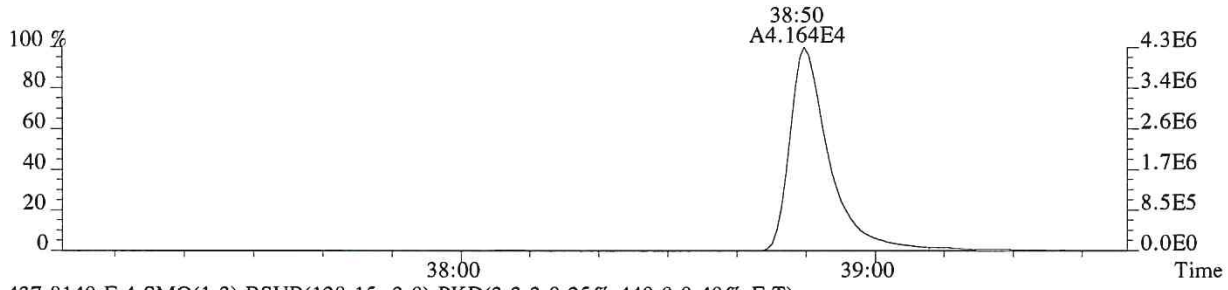
File:P519760 #1-232 Acq: 3-JAN-2019 23:16:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,616.0,0.40%,F,T)



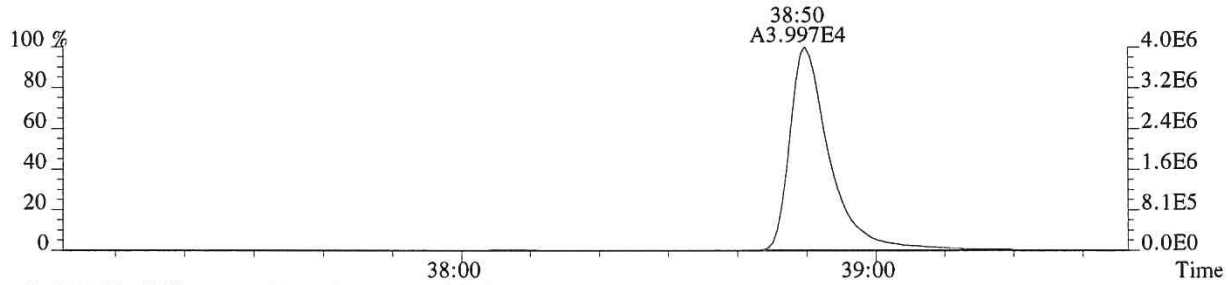
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,524.0,0.40%,F,T)



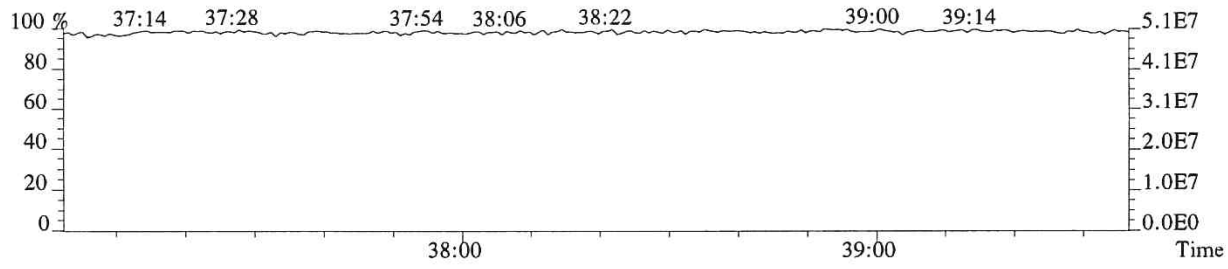
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,528.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,440.0,0.40%,F,T)

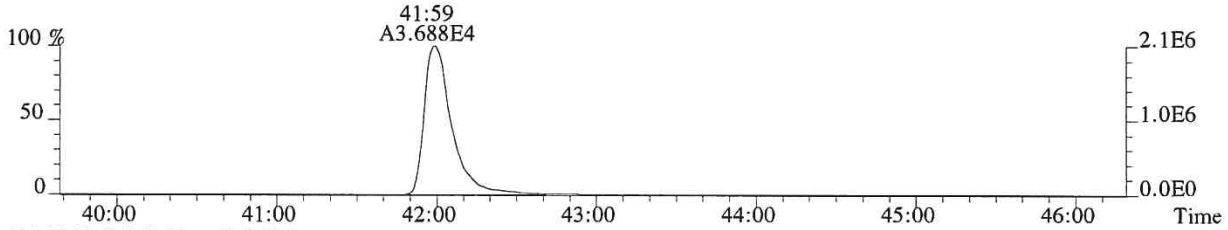


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

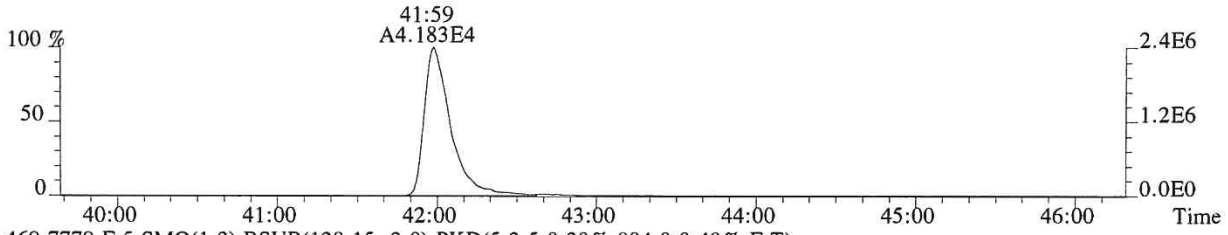


016584

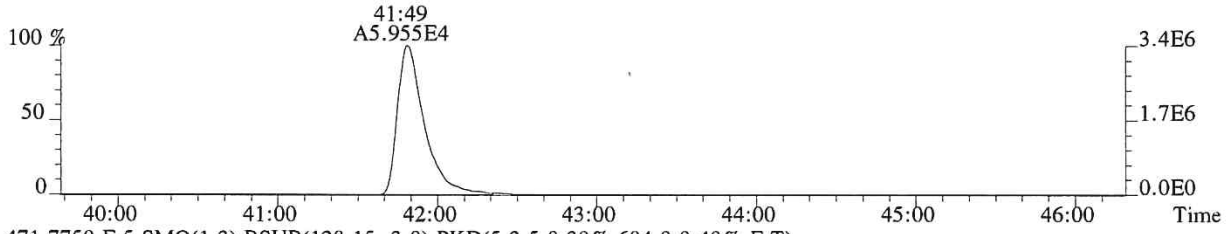
File:P519760 #1-601 Acq: 3-JAN-2019 23:16:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,536.0,0.40%,F,T)



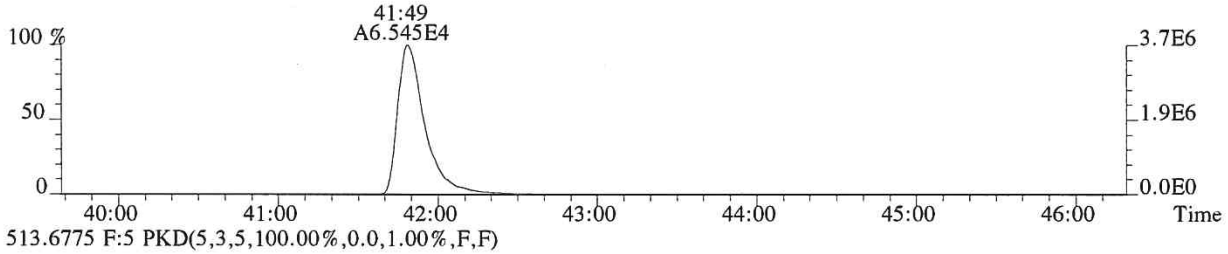
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1024.0,0.40%,F,T)



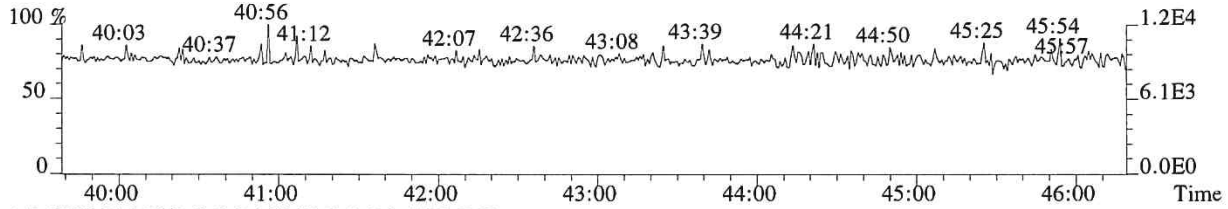
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,884.0,0.40%,F,T)



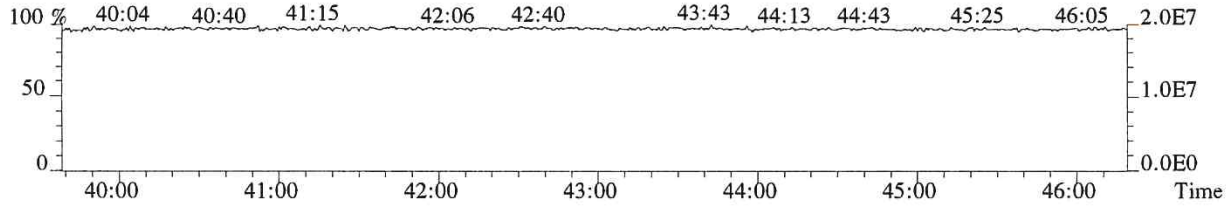
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,684.0,0.40%,F,T)



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

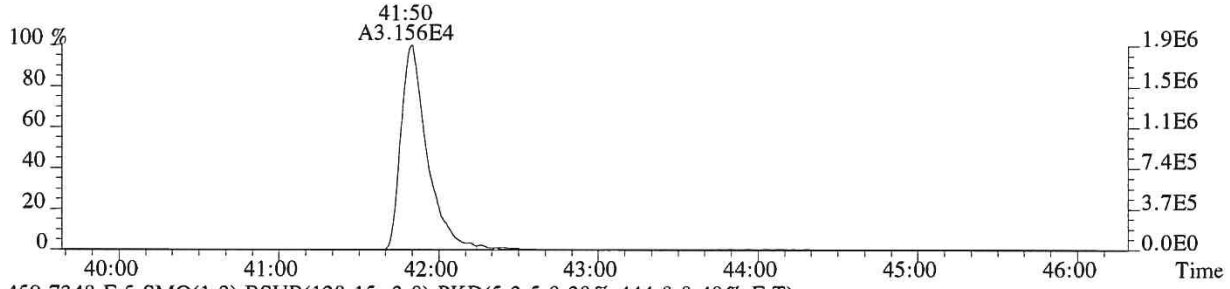


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

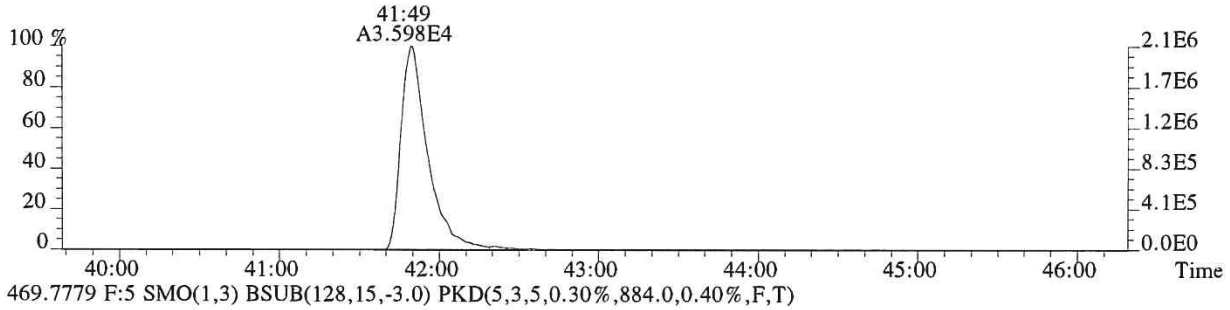


016585

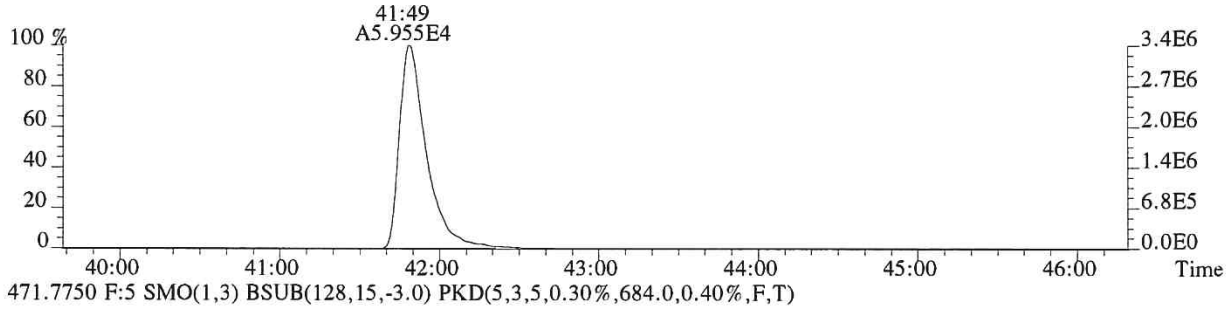
File:P519760 #1-601 Acq: 3-JAN-2019 23:16:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,412.0,0.40%,F,T)



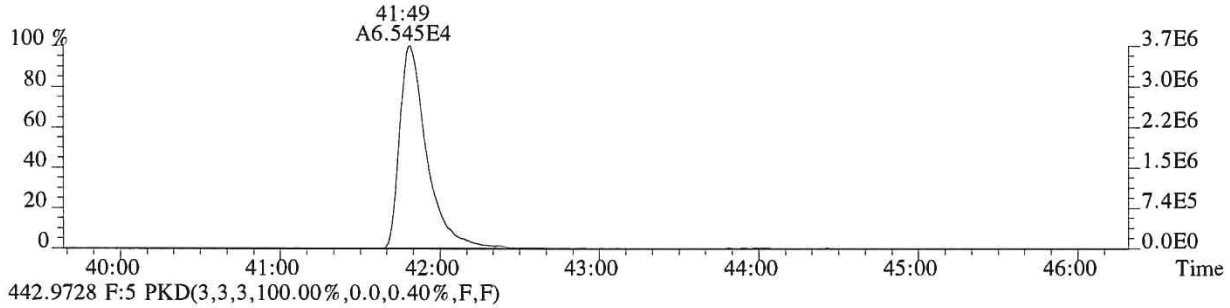
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,444.0,0.40%,F,T)



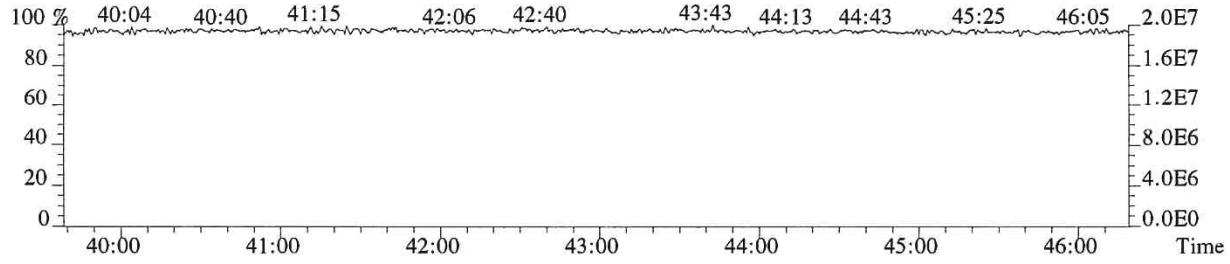
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,884.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,684.0,0.40%,F,T)



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



016586

CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P519996

Date: 01/16/19

Circle one: (Beginning) / Ending

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

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

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

Analyst: JC

Second QC: LKL

ccalqc.xls 07/17/12

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

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

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

Init. Calib. Date: 01/24/18

Init. Calib.Times: 11:44

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
195556	CS3	P519996	16-JAN-19	11:58:18
192977	WINDOW DEFINE	P519997	16-JAN-19	12:49:47
METHOD BLANK	EQ1900011-01	P519998	16-JAN-19	13:45:13
METHOD BLANK	EQ1900017-01	P519999	16-JAN-19	14:33:01
SL0132	E1801137-009RE	P520000	16-JAN-19	15:22:42
SL0247	E1801139-021RE	P520001	16-JAN-19	16:10:30
SL0248	E1801139-022RE	P520002	16-JAN-19	16:59:48
SLC-7822-002	E1801142-001RE	P520003	16-JAN-19	17:48:53
GP-BE-12-04-18-B4G	J1808607-001RE	P520004	16-JAN-19	18:36:42
ALKALINE SEWER OUT	K1900281-001	P520005	16-JAN-19	19:25:21
ACID SEWER OUTFALL	K1900281-002	P520006	16-JAN-19	20:13:59
LCS	EQ1900017-02	P520007	16-JAN-19	21:02:38
DLCS	EQ1900017-03	P520008	16-JAN-19	21:59:29
ALKALINE SEWER OUT	EQ1900015-03	P520009	16-JAN-19	22:55:29
ALKALINE SEWER OUT	EQ1900015-04	P520010	16-JAN-19	23:43:16

E1801137

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

Sample List: C:\MassLynx\EHRMS07.PRO\SampleDB\20190116A.SPL
Last Modified: Thursday, January 17, 2019 06:29:47 Central Standard Time
Printed: Thursday, January 17, 2019 06:50:23 Central Standard Time

Page Position (1, 1)

OPUS 4: P519996 res

	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	1/16/19	11:58	P519996	CS3	195556	EPA1613_ALS	Dioxin_ALS	Tray1:2	LG	HRMS check 11:54
2		12:49	P519997	WINDOWDEFINE	192977	EPA1613_ALS	Dioxin_ALS	Tray1:1		
3		13:45	P519998	MB	EQ1900011-01	EPA1613_ALS	Dioxin_ALS	Tray1:3		
4		14:38	P519999	MB	EQ1900017-01	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		15:22	P520000	E1801137-009RE	E1801137-009RE	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		16:10	P520001	E1801139-021RE	E1801139-021RE	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		16:59	P520002	E1801139-022RE	E1801139-022RE	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		17:48	P520003	E1801142-001RE	E1801142-001RE	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		18:36	P520004	J1808607-001RE	J1808607-001RE	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		19:25	P520005	K1900281-001	K1900281-001	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		20:13	P520006	K1900281-002	K1900281-002	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		21:02	P520007	LCS	EQ1900017-02	EPA1613_ALS	Dioxin_ALS	Tray1:12		
13		21:59	P520008	DLCS	EQ1900017-03	EPA1613_ALS	Dioxin_ALS	Tray1:13		
14		22:55	P520009	MS	EQ1900015-03	EPA1613_ALS	Dioxin_ALS	Tray1:14		
15		23:43	P520010	DMS	EQ1900015-04	EPA1613_ALS	Dioxin_ALS	Tray1:15		
16		00:31	P520011	CS3	195556	EPA1613_ALS	Dioxin_ALS	Tray1:2		HRMS check 07:02 (1/17/19)
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---
21	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:21	---	---

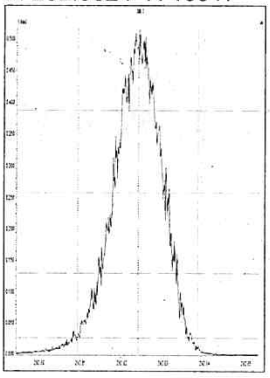
839 of 1131

gc 01/17/19

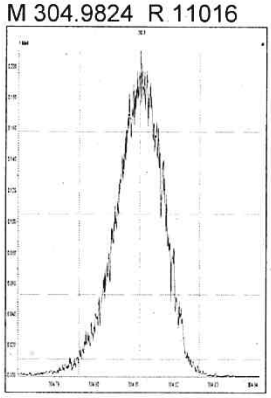
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Wednesday, January 16, 2019 11:54:14 Central Standard Time

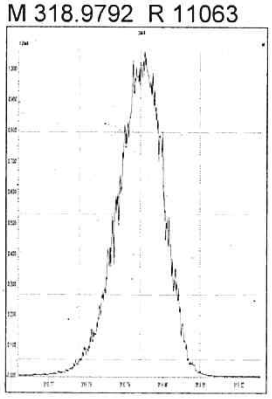
M 292.9824 R 10917



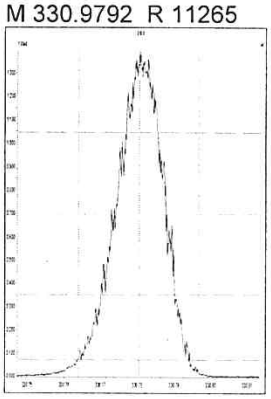
M 304.9824 R 11016



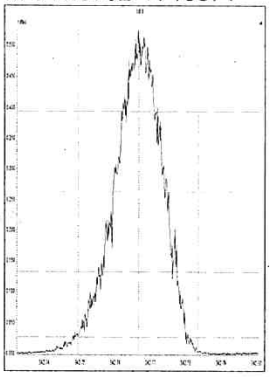
M 318.9792 R 11063



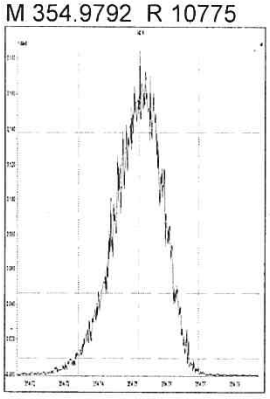
M 330.9792 R 11265



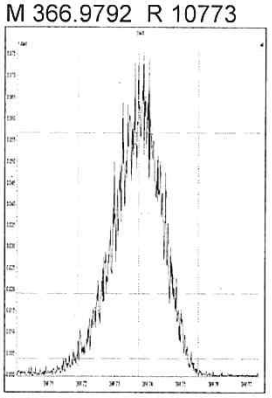
M 342.9792 R 10871



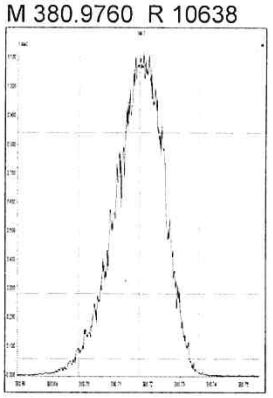
M 354.9792 R 10775



M 366.9792 R 10773



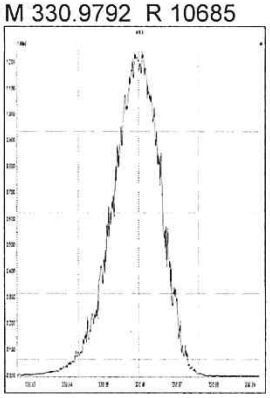
M 380.9760 R 10638



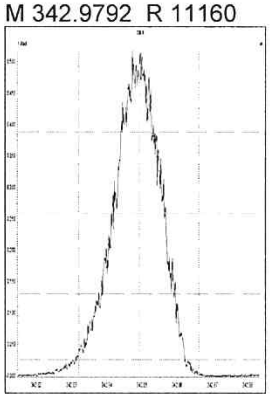
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Wednesday, January 16, 2019 11:55:02 Central Standard Time

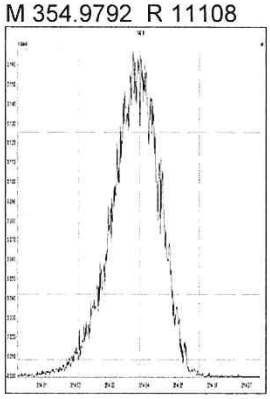
M 330.9792 R 10685



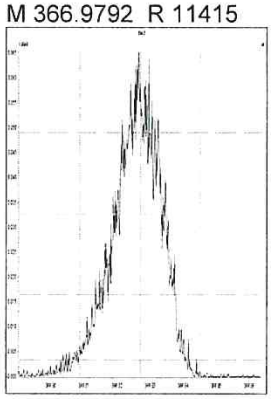
M 342.9792 R 11160



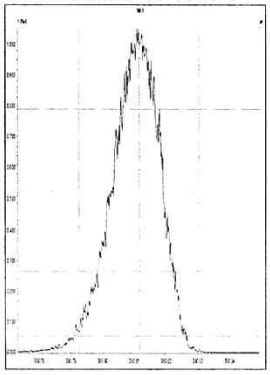
M 354.9792 R 11108



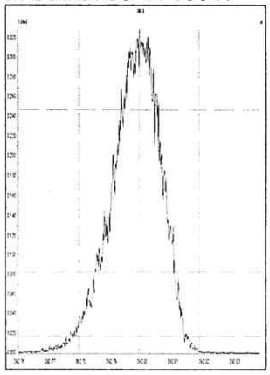
M 366.9792 R 11415



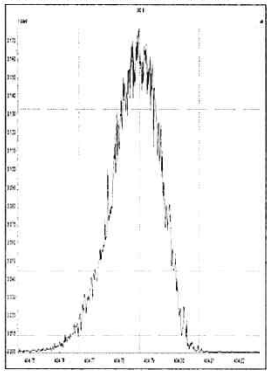
M 380.9760 R 10774



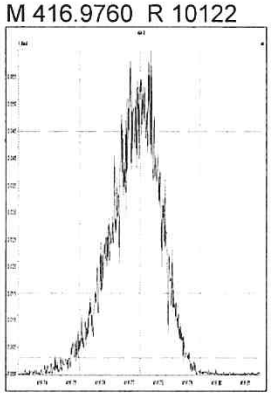
M 392.9760 R 10917



M 404.9760 R 10637



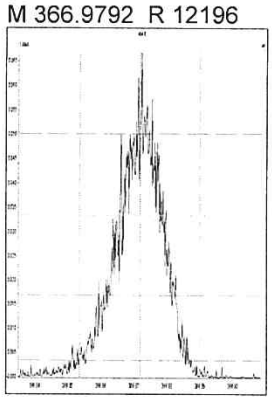
M 416.9760 R 10122



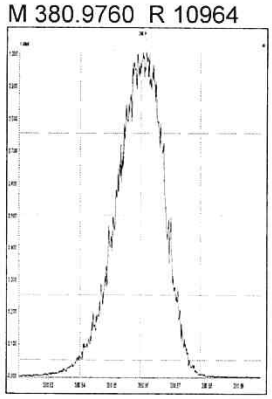
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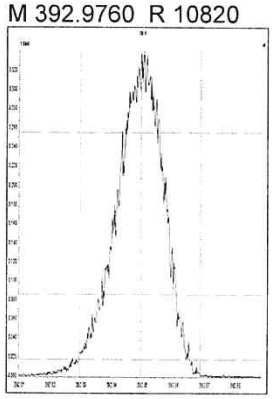
M 366.9792 R 12196



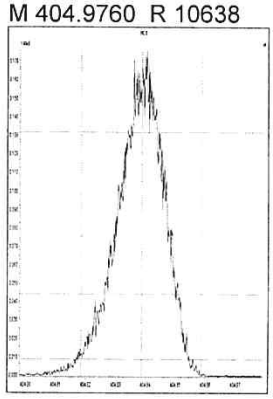
M 380.9760 R 10964



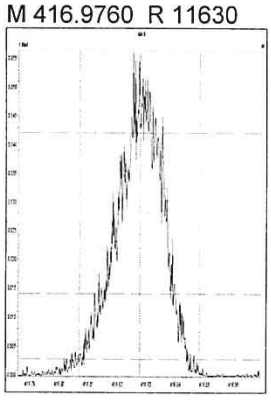
M 392.9760 R 10820



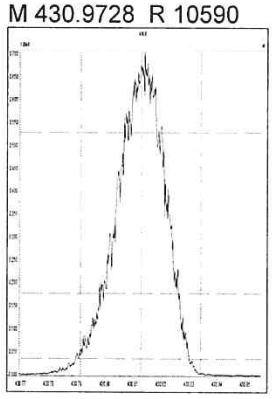
M 404.9760 R 10638



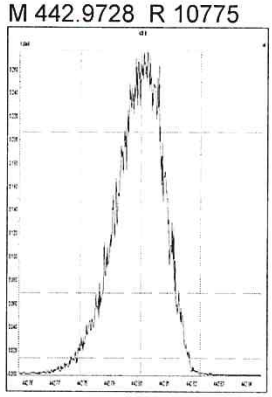
M 416.9760 R 11630



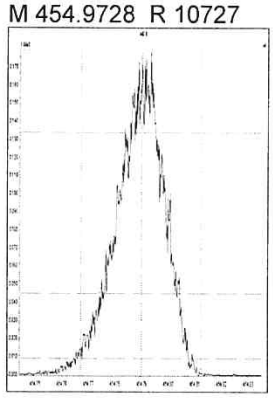
M 430.9728 R 10590



M 442.9728 R 10775



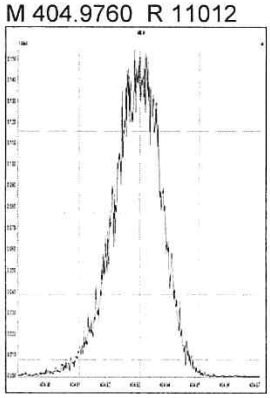
M 454.9728 R 10727



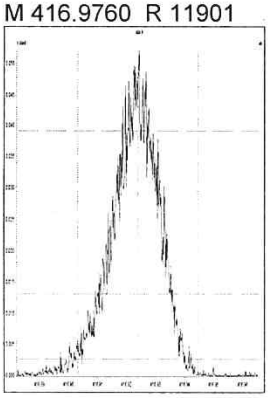
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Printed: Wednesday, January 16, 2019 11:56:21 Central Standard Time

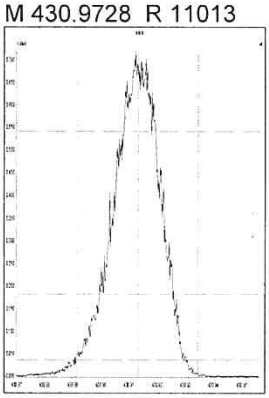
M 404.9760 R 11012



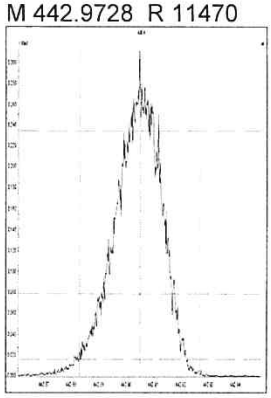
M 416.9760 R 11901



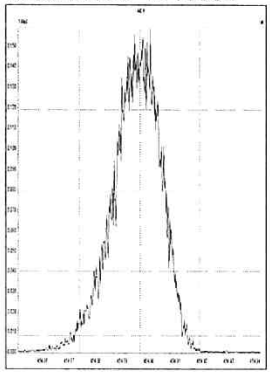
M 430.9728 R 11013



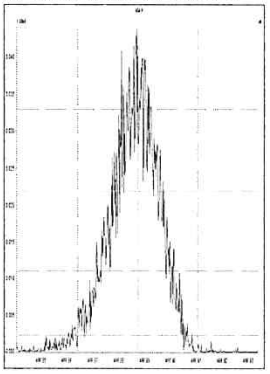
M 442.9728 R 11470



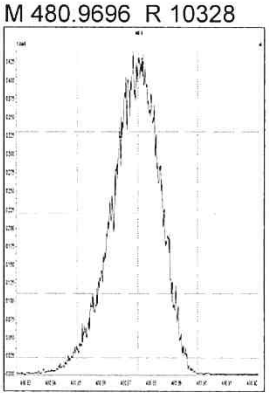
M 454.9728 R 10684



M 466.9728 R 12314



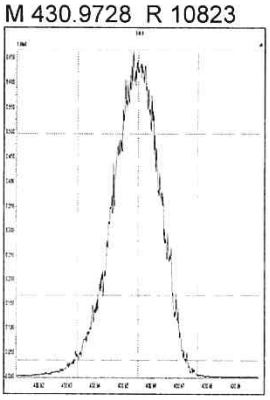
M 480.9696 R 10328



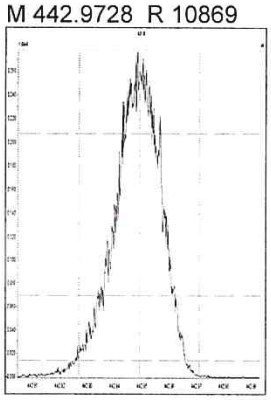
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Printed: Wednesday, January 16, 2019 11:57:00 Central Standard Time

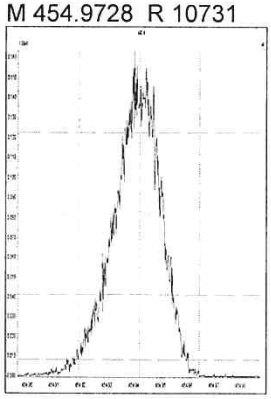
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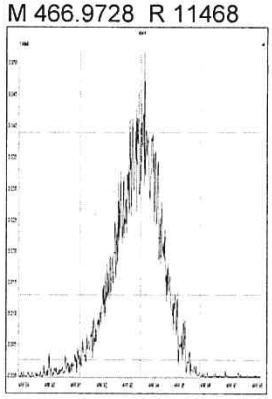
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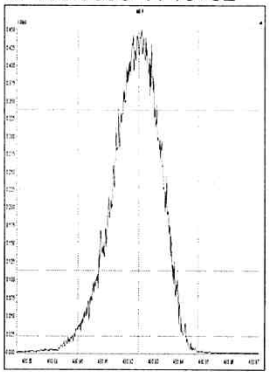
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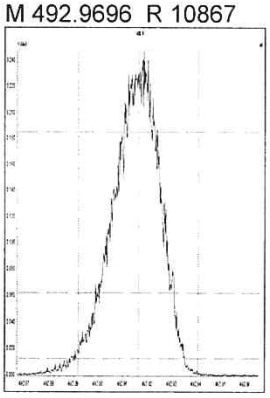
M 466.9728 R 11468



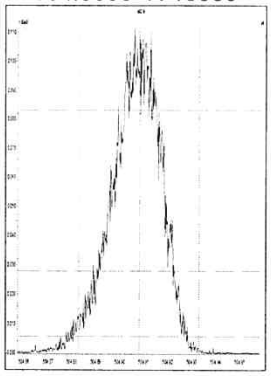
M 480.9696 R 10732



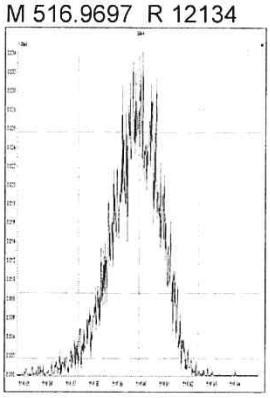
M 492.9696 R 10867



M 504.9696 R 10683



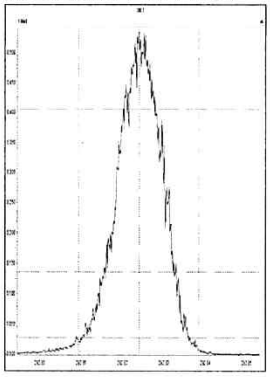
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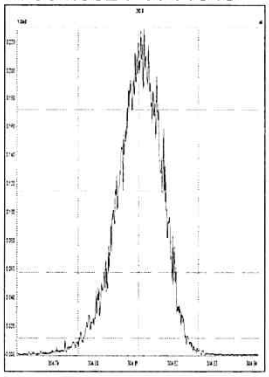
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Printed: Thursday, January 17, 2019 07:02:13 Central Standard Time

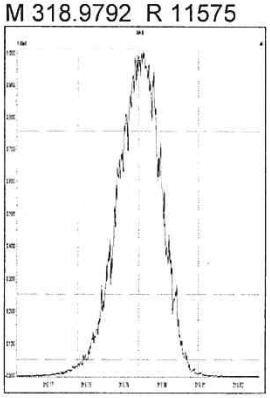
M 292.9824 R 11261



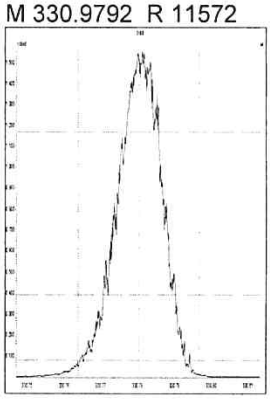
M 304.9824 R 11846



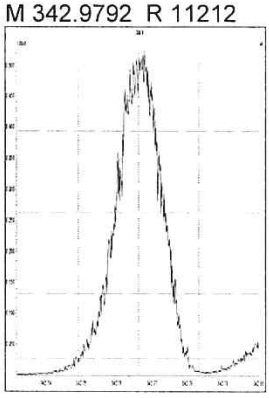
M 318.9792 R 11575



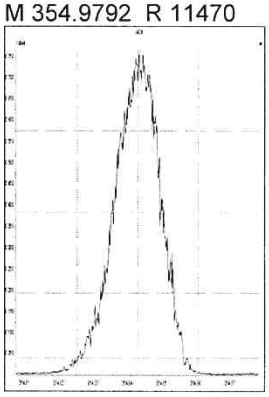
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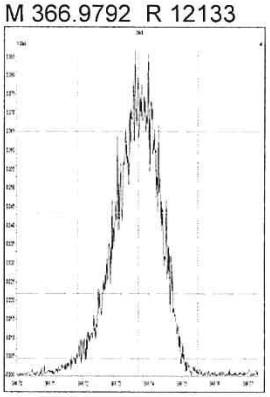
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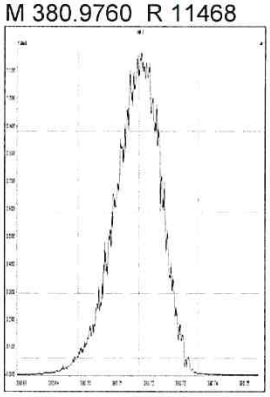
M 354.9792 R 11470



M 366.9792 R 12133



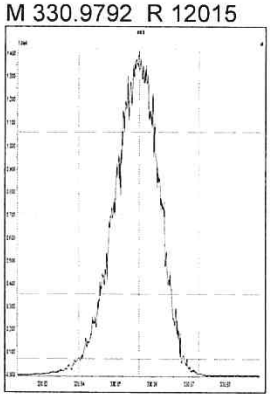
M 380.9760 R 11468



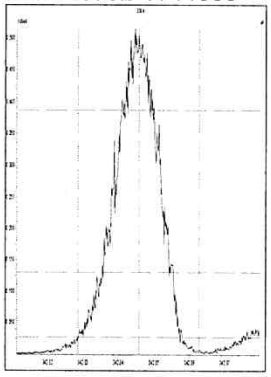
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, January 17, 2019 07:02:56 Central Standard Time

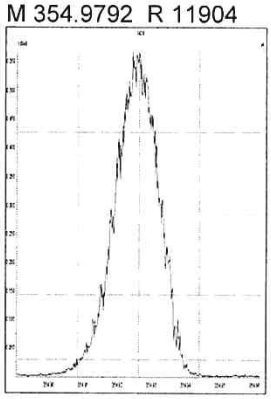
M 330.9792 R 12015



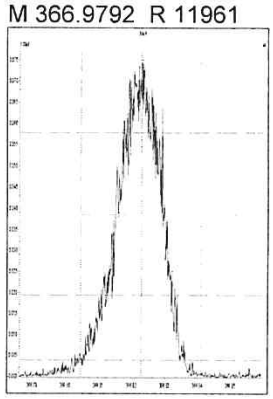
M 342.9792 R 11960



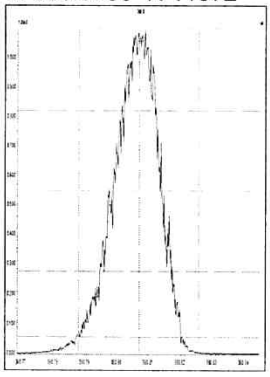
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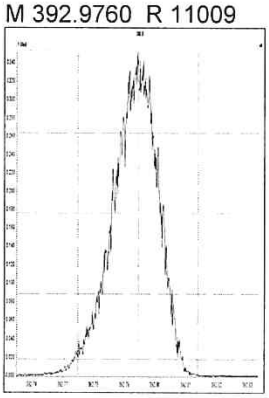
M 366.9792 R 11961



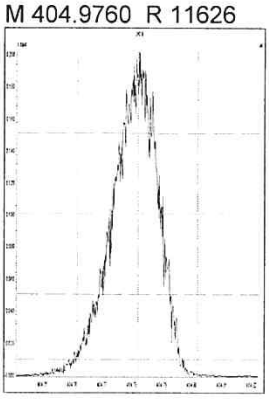
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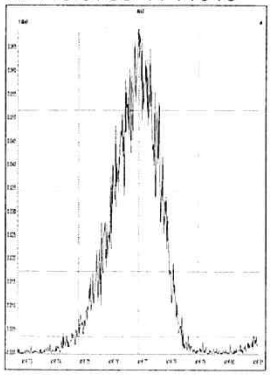
M 392.9760 R 11009



M 404.9760 R 11626



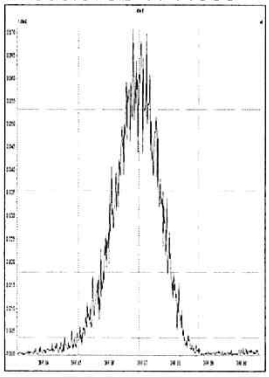
M 416.9760 R 11313



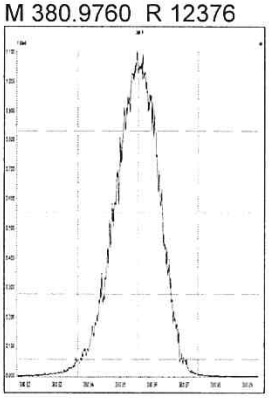
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Printed: Thursday, January 17, 2019 07:03:32 Central Standard Time

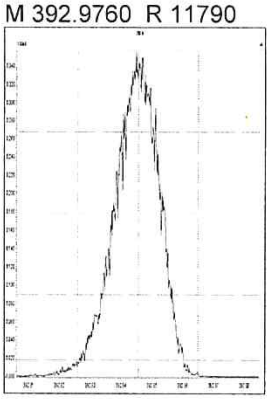
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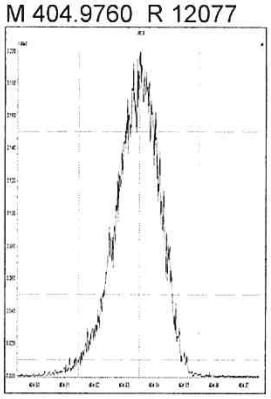
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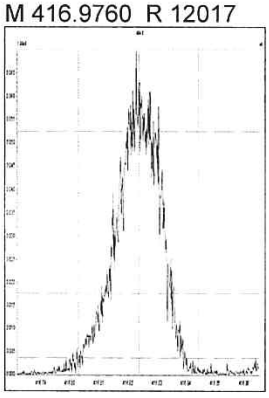
M 392.9760 R 11790



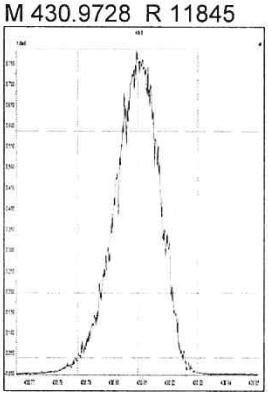
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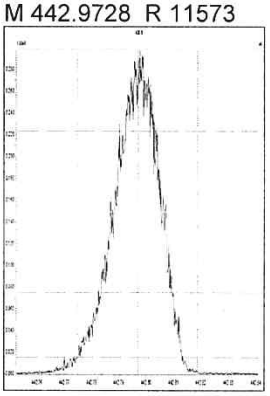
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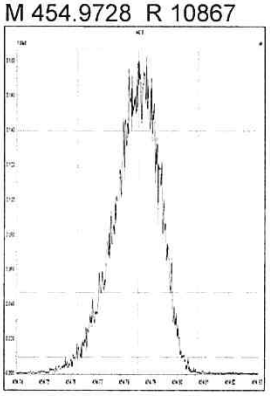
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M 442.9728 R 11573



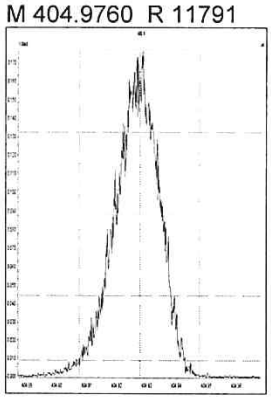
M 454.9728 R 10867



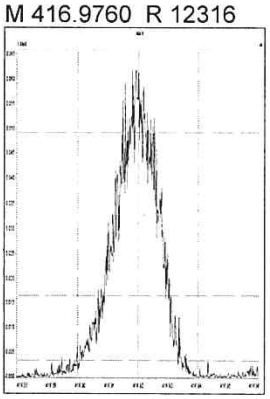
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Printed: Thursday, January 17, 2019 07:04:00 Central Standard Time

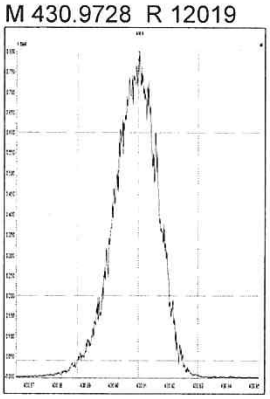
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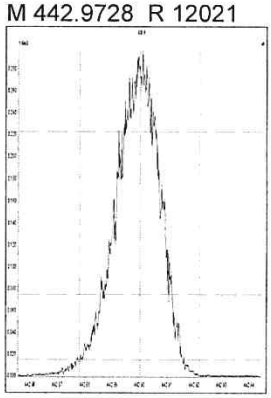
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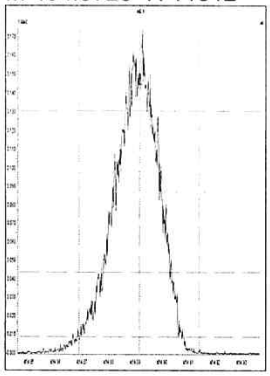
M 430.9728 R 12019



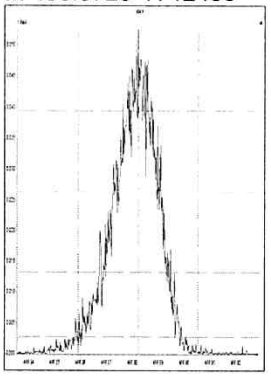
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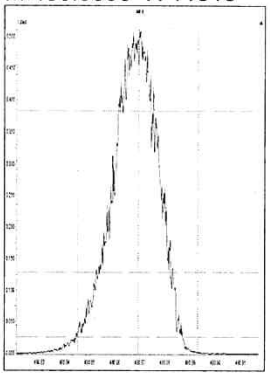
M 454.9728 R 11312



M 466.9728 R 12436



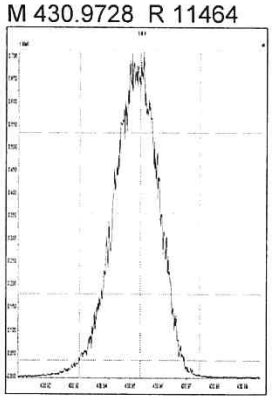
M 480.9696 R 11310



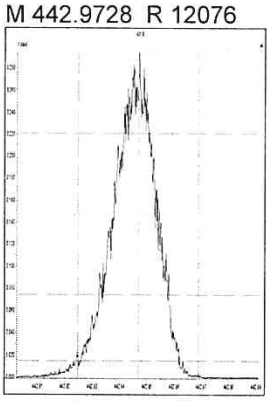
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Printed: Thursday, January 17, 2019 07:04:22 Central Standard Time

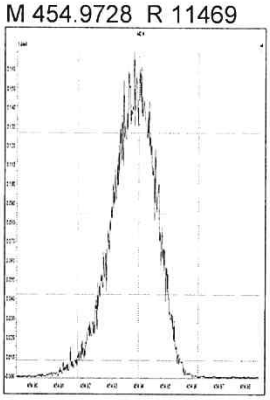
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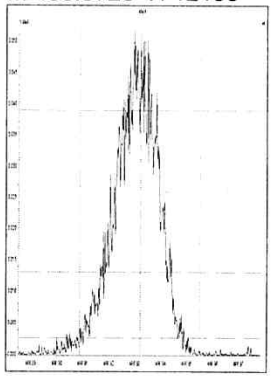
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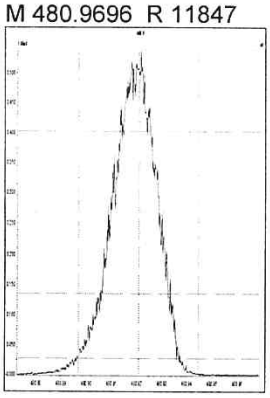
M 454.9728 R 11469



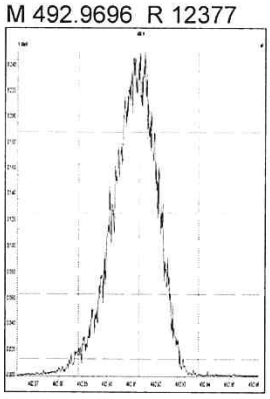
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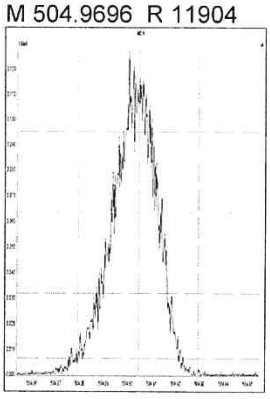
M 480.9696 R 11847



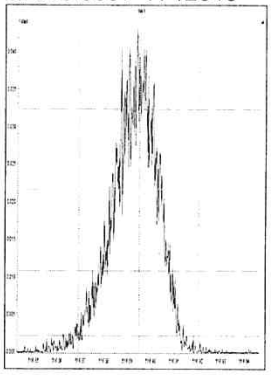
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M 504.9696 R 11904



M 516.9697 R 12313



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

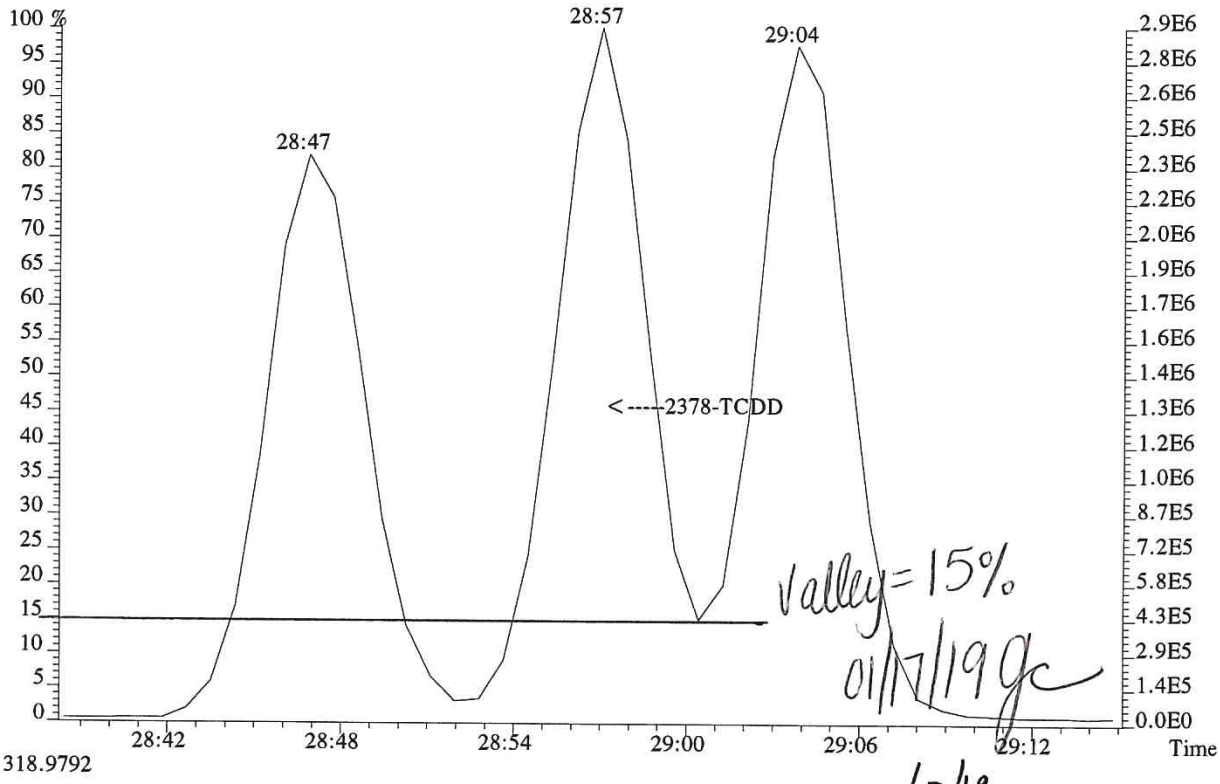
WDM

Lab Name: ALS Environmental
Lab Code: ALSTX Case No.: _____ SDG No.:
GC Column: DB-5MSUI ID: 0.25 (mm) Lab File ID: P519997
Date Analyzed: 16-JAN-2019
Time Analyzed: 12:49:47

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	23:49	30:06
TCDD	25:41	29:56
PeCDF	30:02	34:16
PeCDD	31:34	34:01
HxCDF	34:55	37:25
HxCDD	35:26	37:01
HpCDF	38:38	40:02
HpCDD	38:53	39:34

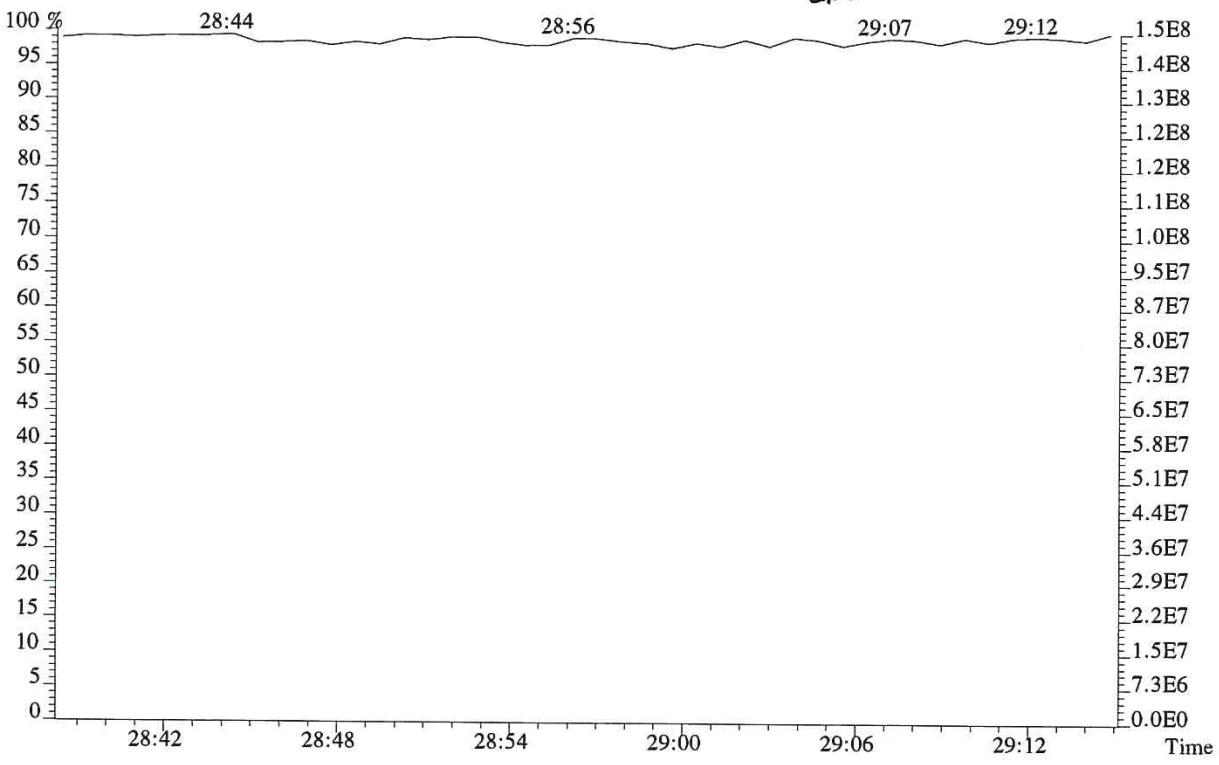
% Valley 2378-TCDD: 15 %

File:P519997 #1-538 Acq:16-JAN-2019 12:49:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
319.8965



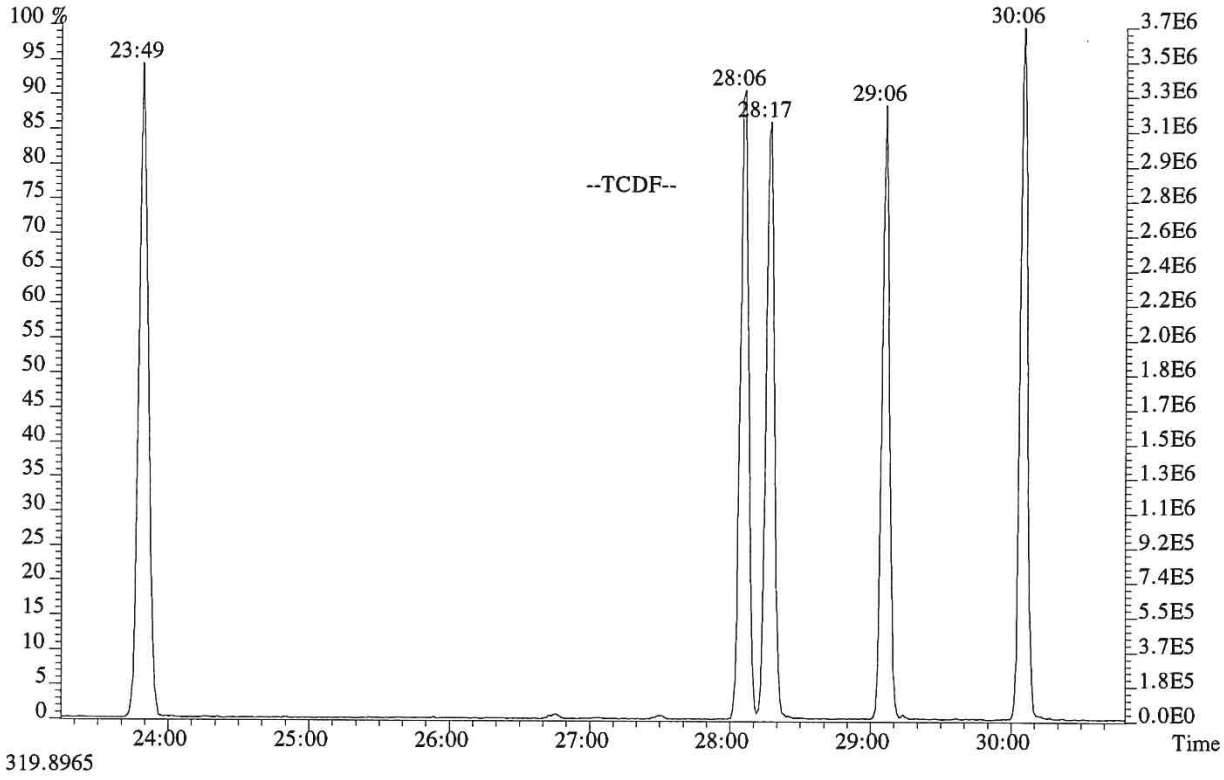
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LM 01/17/19

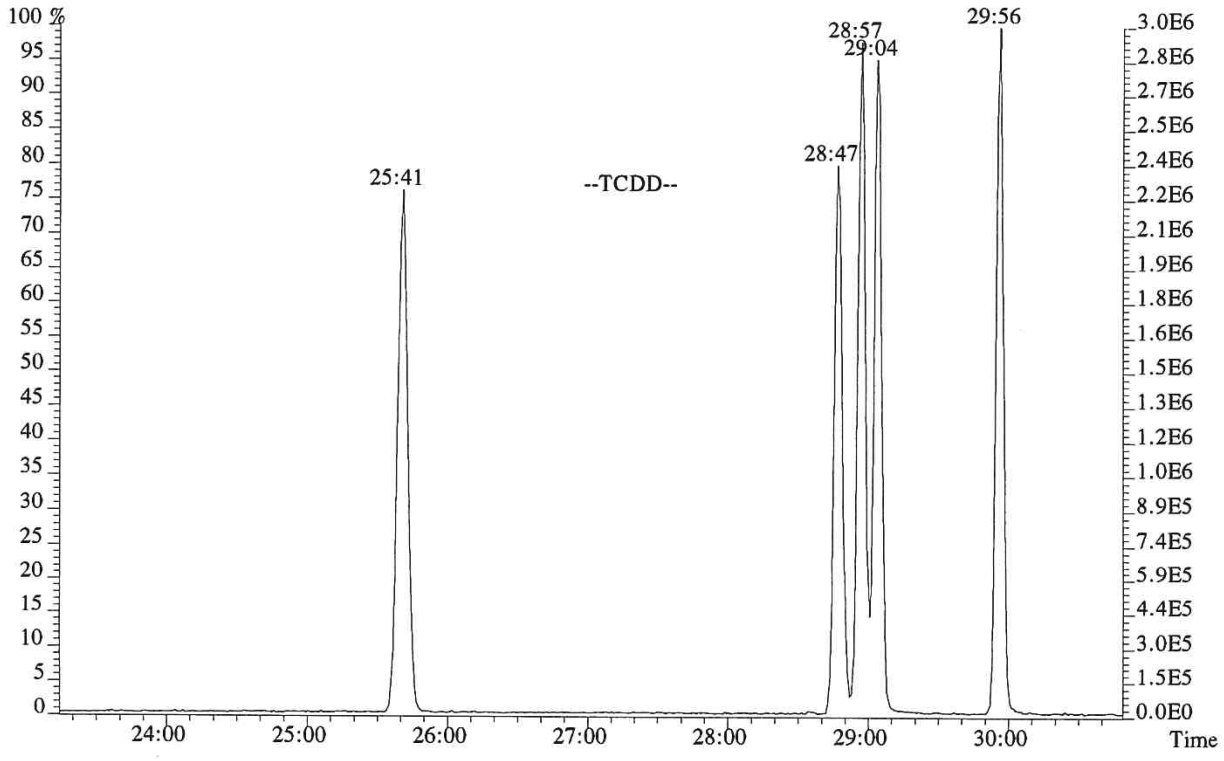


016601

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Sample#1 Exp:192977
303.9016

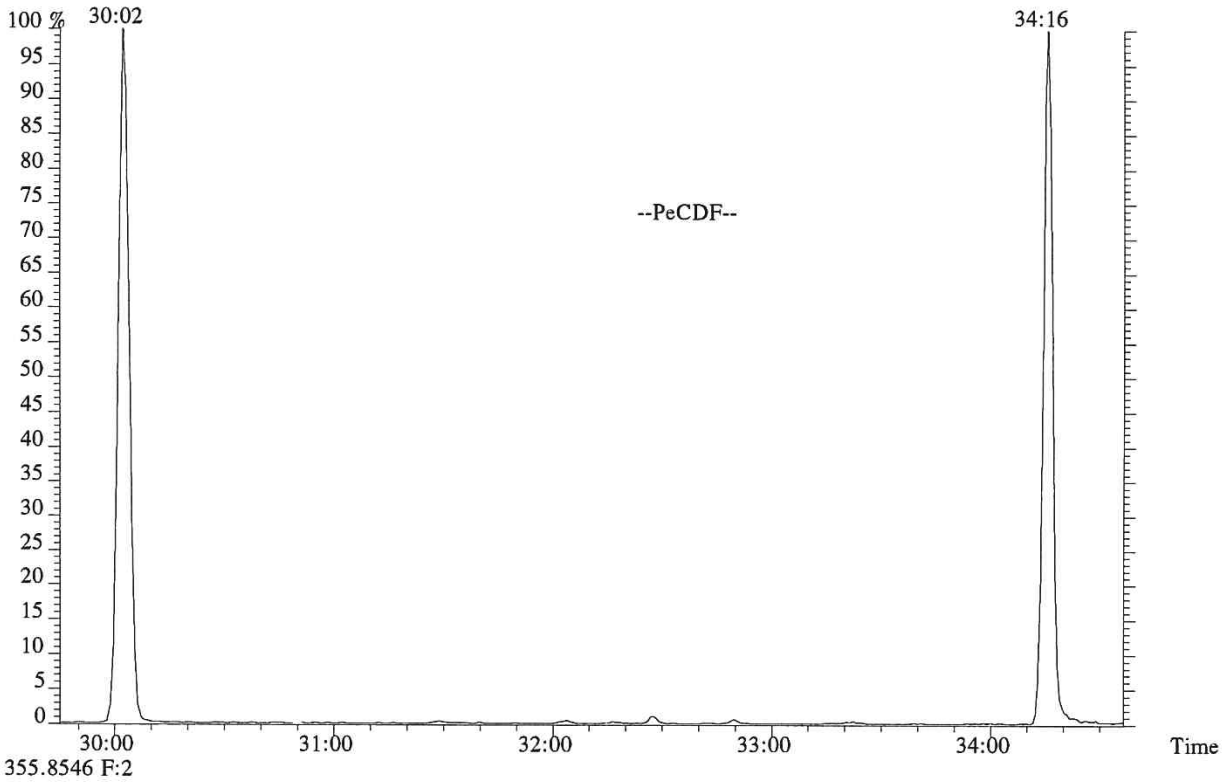


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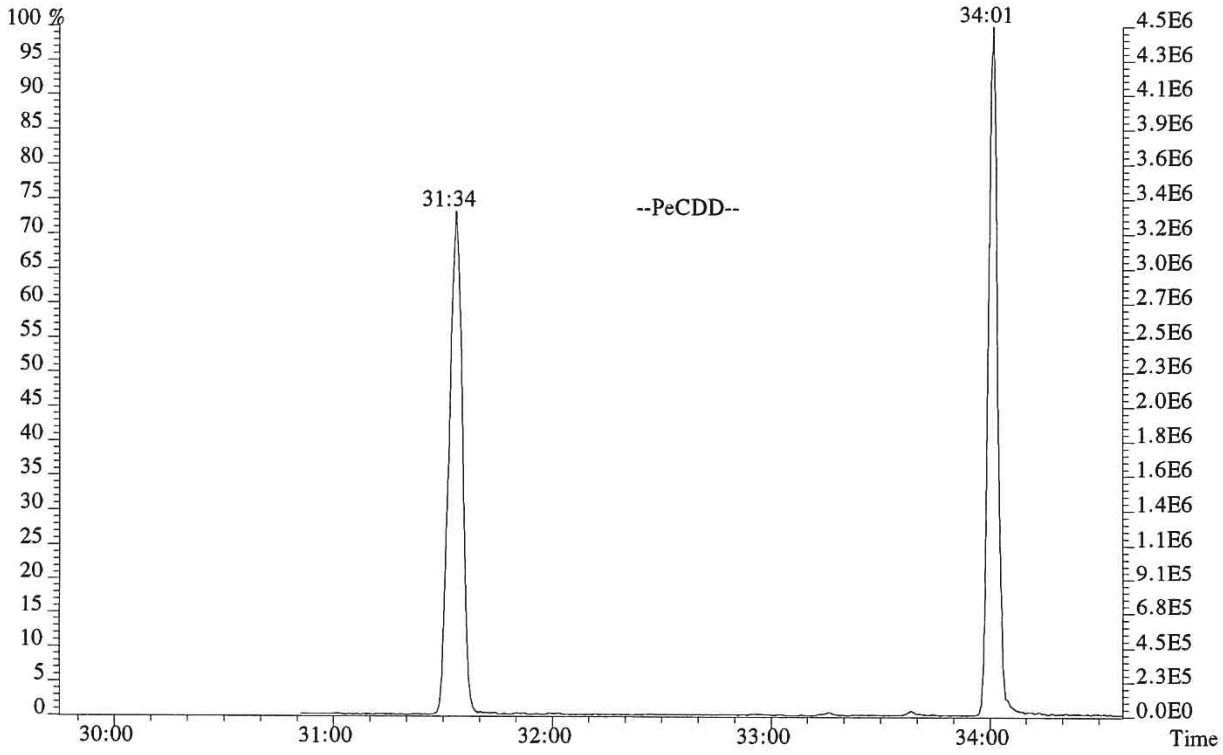


016602

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Sample#1 Exp:192977
339.8597,339.8597 F:2

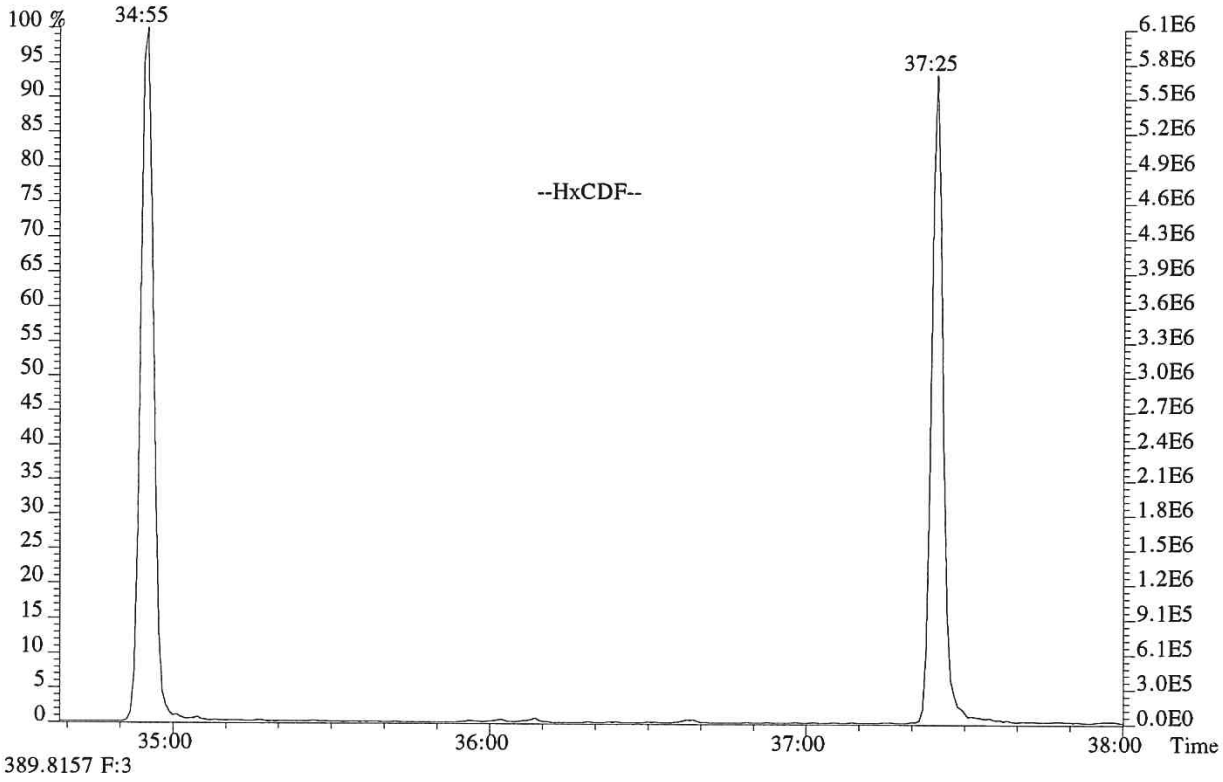


355.8546 F:2

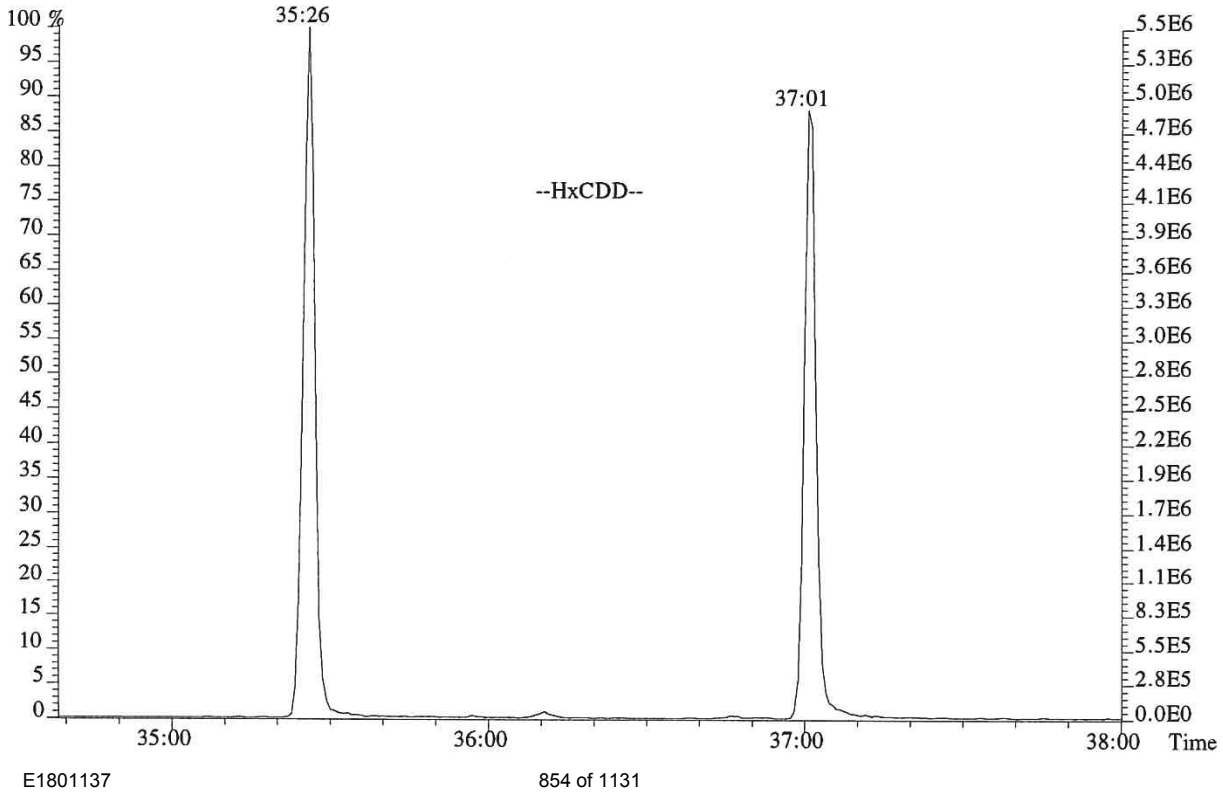


016603

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373.8208 F:3

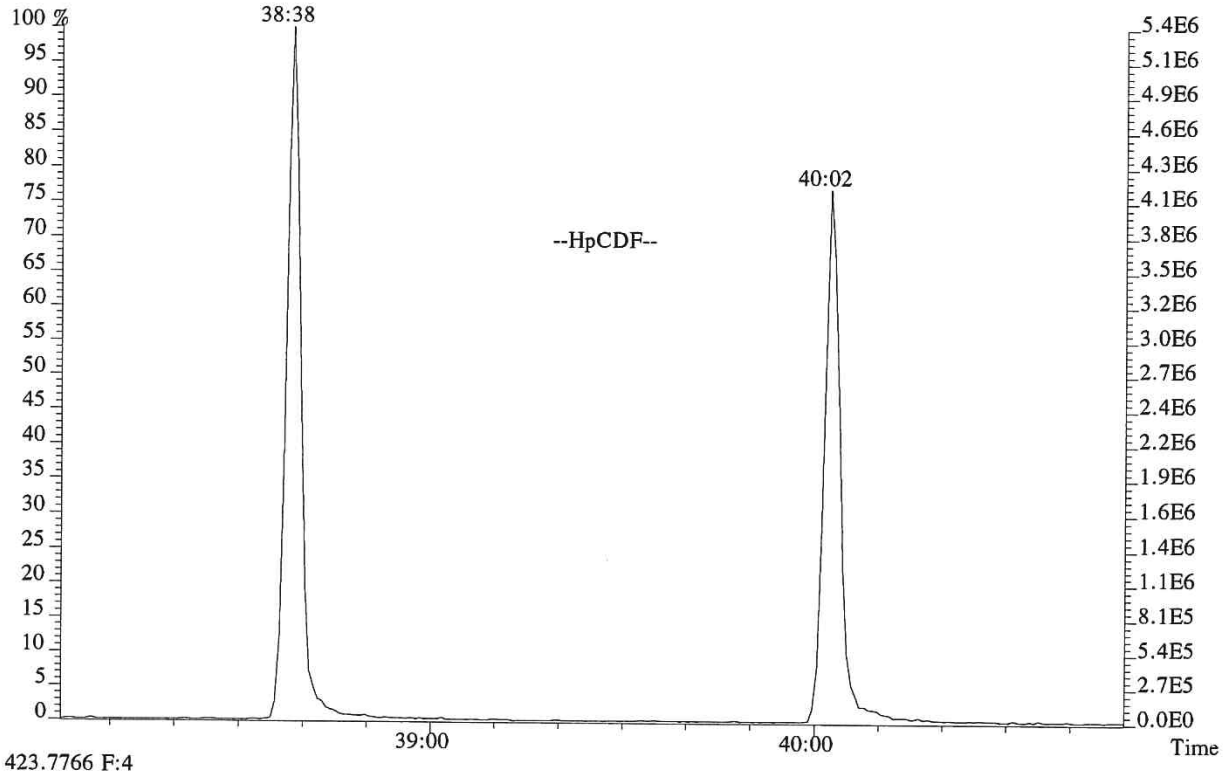


389.8157 F:3

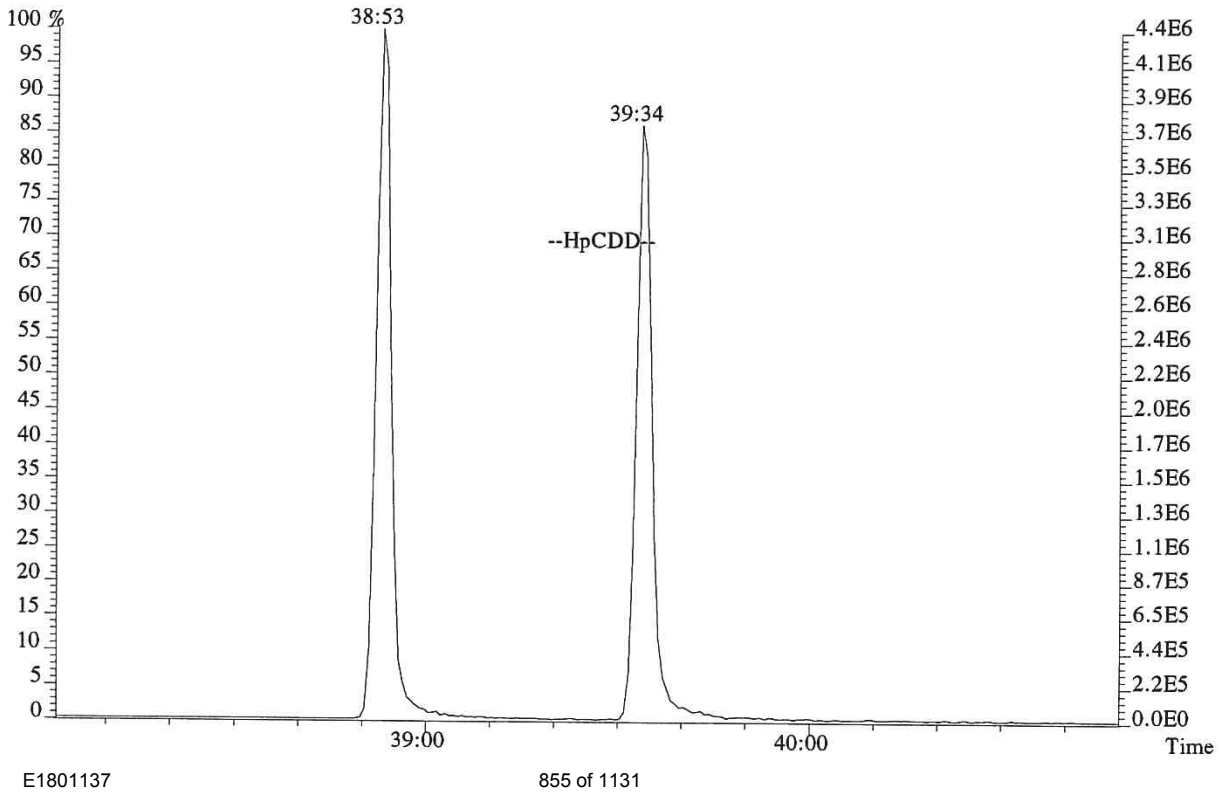


016604

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Sample#1 Exp:192977
407.7818 F:4



423.7766 F:4



016605

USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519996 Analysis Date: 16-JAN-19 Time: 11:58:18

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	9.3	7.8 - 12.9	-7.0
1,2,3,7,8-PeCDD	M+2/M+4	1.57	1.32-1.78	49	39 - 65	-2.5
1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	49	39 - 64	-1.3
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	50	39 - 64	0.4
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	52	41 - 61	4.7
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	50	43 - 58	-0.3
OCDD	M+2/M+4	0.89	0.76-1.02	100	79 - 126	-0.3
2,3,7,8-TCDF	M/M+2	0.75	0.65-0.89	9.6	8.4 - 12.0	-3.7
1,2,3,7,8-PeCDF	M+2/M+4	1.53	1.32-1.78	49	41 - 60	-2.0
2,3,4,7,8-PeCDF	M+2/M+4	1.50	1.32-1.78	49	41 - 61	-2.2
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	51	45 - 56	1.5
1,2,3,6,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	50	44 - 57	-0.4
1,2,3,7,8,9-HxCDF	M+2/M+4	1.21	1.05-1.43	49	45 - 56	-1.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	51	44 - 57	2.1
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.01	0.88-1.20	49	45 - 55	-1.2
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.02	0.88-1.20	51	43 - 58	1.0
OCDF	M+2/M+4	0.90	0.76-1.02	96	63 - 159	-3.8

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

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

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

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

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519996 Analysis Date: 16-JAN-19 Time: 11:58:18

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	106	82 - 121	6.4
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.57	1.32-1.78	112	62 - 160	12.5
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	98	85 - 117	-2.1
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	99	85 - 118	-1.2
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	101	72 - 138	1.2
13C-OCDD	M+2/M+4	0.89	0.76-1.02	224	96 - 415	12.0
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	91	71 - 140	-8.9
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	102	76 - 130	2.1
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	103	77 - 130	2.8
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	85	76 - 131	-14.7
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	88	70 - 143	-11.6
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	94	74 - 135	-5.6
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	90	73 - 137	-10.2
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	94	78 - 129	-6.5
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	96	77 - 129	-4.3
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				10.2	7.8 - 12.7	2.2

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

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
195556

Run #7 Filename P519996 Samp: 1 Inj: 1 Acquired: 16-JAN-19 11:58:18
Processed: 17-JAN-19 11:27:55 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:17	6.282e+03	8.342e+03	0.75	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:28	5.279e+04	3.441e+04	1.53	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:22	4.921e+04	3.290e+04	1.50	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:01	4.398e+04	3.618e+04	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:08	4.785e+04	3.936e+04	1.22	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:38	4.441e+04	3.626e+04	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:23	4.009e+04	3.309e+04	1.21	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:38	3.816e+04	3.792e+04	1.01	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:03	3.184e+04	3.110e+04	1.02	yes	no	1.258
10	Unk	OCDF	42:35	5.090e+04	5.672e+04	0.90	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:04	4.995e+03	6.604e+03	0.76	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:39	3.655e+04	2.329e+04	1.57	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:46	3.238e+04	2.610e+04	1.24	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:51	3.447e+04	2.716e+04	1.27	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:05	3.611e+04	2.858e+04	1.26	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:34	2.870e+04	2.724e+04	1.05	yes	no	1.025
17	Unk	OCDD	42:23	4.318e+04	4.863e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:16	7.114e+04	9.010e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:27	1.078e+05	6.787e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:21	1.066e+05	6.860e+04	1.55	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	4.543e+04	8.732e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:07	5.309e+04	1.029e+05	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:37	4.905e+04	9.335e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:23	4.442e+04	8.484e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	3.526e+04	7.878e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:02	3.071e+04	6.836e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:03	5.056e+04	6.435e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:38	7.837e+04	4.992e+04	1.57	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:45	6.400e+04	5.018e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:51	6.577e+04	5.246e+04	1.25	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:34	5.649e+04	5.303e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	42:22	7.754e+04	8.713e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:30	5.172e+04	6.524e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	7.030e+04	5.587e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:04	1.212e+04				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
195556

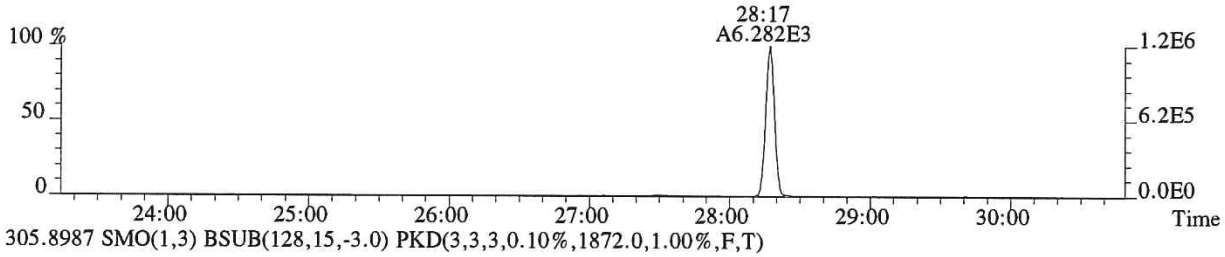
Run #7 Filename P519996 Samp: 1 Inj: 1 Acquired: 16-JAN-19 11:58:18
Processed: 17-JAN-19 11:27:55 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.23e+06	8.60e+02	1.4e+03	1.61e+06	1.87e+03	8.6e+02
2	1,2,3,7,8-PeCDF	1.05e+07	8.76e+02	1.2e+04	6.81e+06	1.67e+03	4.1e+03
3	2,3,4,7,8-PeCDF	1.02e+07	8.76e+02	1.2e+04	6.78e+06	1.67e+03	4.1e+03
4	1,2,3,4,7,8-HxCDF	9.48e+06	5.88e+02	1.6e+04	7.79e+06	7.72e+02	1.0e+04
5	1,2,3,6,7,8-HxCDF	1.01e+07	5.88e+02	1.7e+04	8.39e+06	7.72e+02	1.1e+04
6	2,3,4,6,7,8-HxCDF	9.96e+06	5.88e+02	1.7e+04	8.02e+06	7.72e+02	1.0e+04
7	1,2,3,7,8,9-HxCDF	8.44e+06	5.88e+02	1.4e+04	6.93e+06	7.72e+02	9.0e+03
8	1,2,3,4,6,7,8-HpCDF	8.28e+06	6.13e+03	1.4e+03	8.31e+06	1.64e+03	5.1e+03
9	1,2,3,4,7,8,9-HpCDF	6.20e+06	6.13e+03	1.0e+03	5.94e+06	1.64e+03	3.6e+03
10	OCDF	8.48e+06	3.52e+02	2.4e+04	9.22e+06	1.44e+03	6.4e+03
11	2,3,7,8-TCDD	9.90e+05	2.67e+03	3.7e+02	1.31e+06	1.72e+03	7.6e+02
12	1,2,3,7,8-PeCDD	7.35e+06	1.11e+03	6.6e+03	4.68e+06	6.80e+02	6.9e+03
13	1,2,3,4,7,8-HxCDD	7.38e+06	6.76e+02	1.1e+04	5.95e+06	5.56e+02	1.1e+04
14	1,2,3,6,7,8-HxCDD	7.42e+06	6.76e+02	1.1e+04	5.81e+06	5.56e+02	1.0e+04
15	1,2,3,7,8,9-HxCDD	7.57e+06	6.76e+02	1.1e+04	6.16e+06	5.56e+02	1.1e+04
16	1,2,3,4,6,7,8-HpCDD	5.70e+06	9.44e+02	6.0e+03	5.37e+06	8.12e+02	6.6e+03
17	OCDD	7.18e+06	8.64e+02	8.3e+03	8.11e+06	8.36e+02	9.7e+03
18	13C-2,3,7,8-TCDF	1.34e+07	9.68e+03	1.4e+03	1.70e+07	8.26e+03	2.1e+03
19	13C-1,2,3,7,8-PeCDF	2.09e+07	5.04e+02	4.2e+04	1.32e+07	3.64e+02	3.6e+04
20	13C-2,3,4,7,8-PeCDF	2.12e+07	5.04e+02	4.2e+04	1.38e+07	3.64e+02	3.8e+04
21	13C-1,2,3,4,7,8-HxCDF	9.89e+06	1.15e+03	8.6e+03	1.90e+07	1.58e+03	1.2e+04
22	13C-1,2,3,6,7,8-HxCDF	1.13e+07	1.15e+03	9.8e+03	2.19e+07	1.58e+03	1.4e+04
23	13C-2,3,4,6,7,8-HxCDF	1.08e+07	1.15e+03	9.5e+03	2.08e+07	1.58e+03	1.3e+04
24	13C-1,2,3,7,8,9-HxCDF	9.34e+06	1.15e+03	8.1e+03	1.76e+07	1.58e+03	1.1e+04
25	13C-1,2,3,4,6,7,8-HpCDF	7.54e+06	1.80e+03	4.2e+03	1.69e+07	5.37e+03	3.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	5.82e+06	1.80e+03	3.2e+03	1.29e+07	5.37e+03	2.4e+03
27	13C-2,3,7,8-TCDD	1.03e+07	7.13e+03	1.4e+03	1.30e+07	2.83e+03	4.6e+03
28	13C-1,2,3,7,8-PeCDD	1.62e+07	1.32e+03	1.2e+04	1.04e+07	2.12e+03	4.9e+03
29	13C-1,2,3,4,7,8-HxCDD	1.45e+07	1.03e+03	1.4e+04	1.14e+07	1.10e+03	1.0e+04
30	13C-1,2,3,6,7,8-HxCDD	1.41e+07	1.03e+03	1.4e+04	1.12e+07	1.10e+03	1.0e+04
31	13C-1,2,3,4,6,7,8-HpCDD	1.09e+07	8.84e+02	1.2e+04	1.01e+07	6.08e+02	1.7e+04
32	13C-OCDD	1.29e+07	9.68e+02	1.3e+04	1.45e+07	6.20e+02	2.3e+04
33	13C-1,2,3,4-TCDD	1.01e+07	7.13e+03	1.4e+03	1.28e+07	2.83e+03	4.5e+03
34	13C-1,2,3,7,8,9-HxCDD	1.52e+07	1.03e+03	1.5e+04	1.20e+07	1.10e+03	1.1e+04
35	37Cl-2,3,7,8-TCDD	2.42e+06	1.84e+03	1.3e+03			

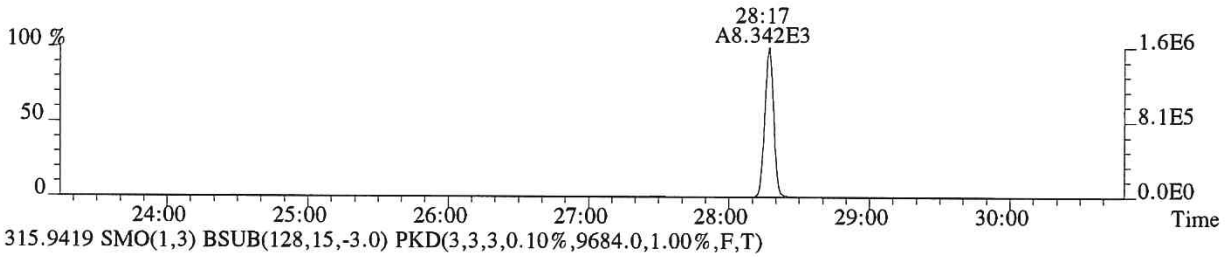
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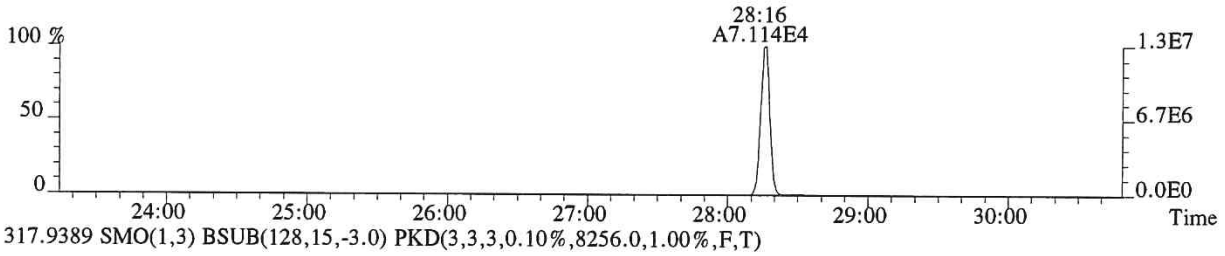
File:P519996 #1-538 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,860.0,1.00%,F,T)



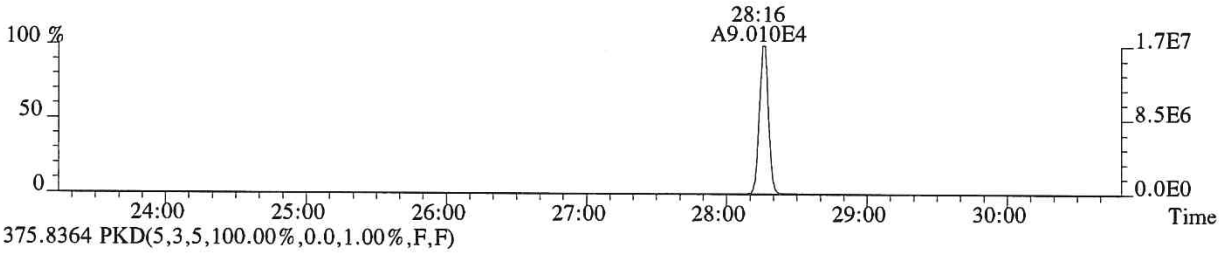
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1872.0,1.00%,F,T)



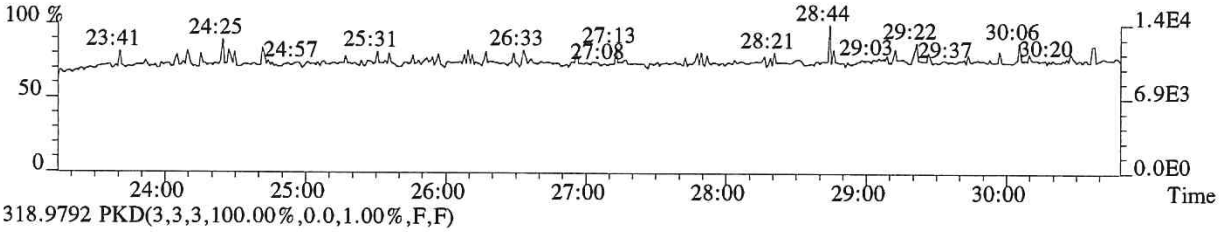
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9684.0,1.00%,F,T)



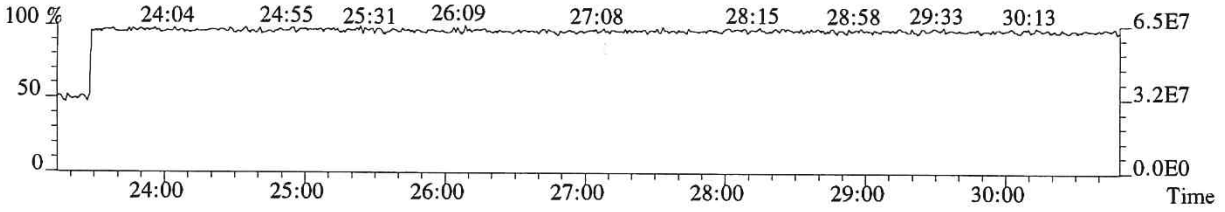
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8256.0,1.00%,F,T)



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

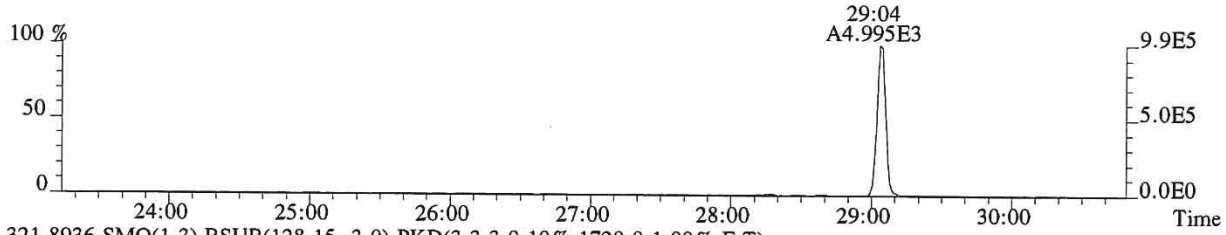


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

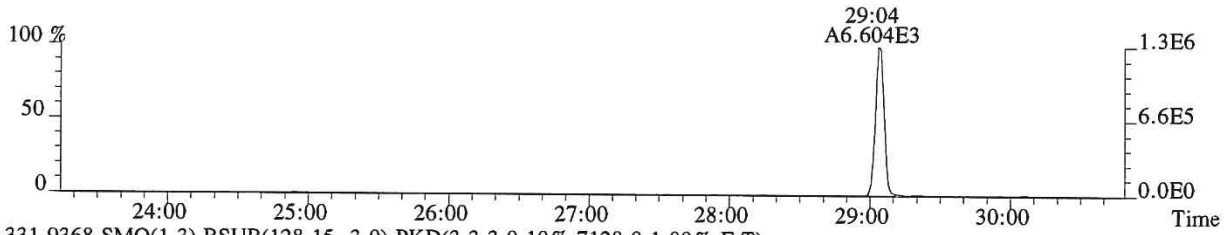


016610

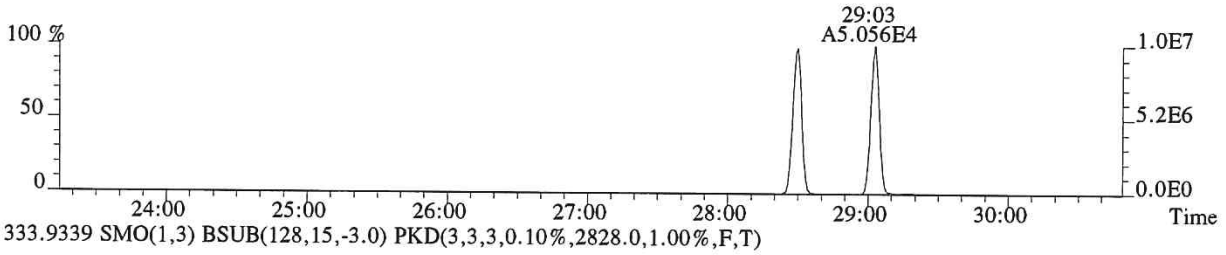
File:P519996 #1-538 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2668.0,1.00%,F,T)



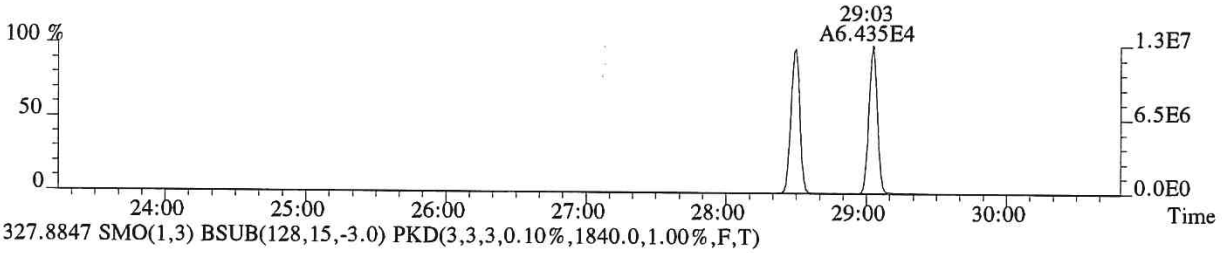
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1720.0,1.00%,F,T)



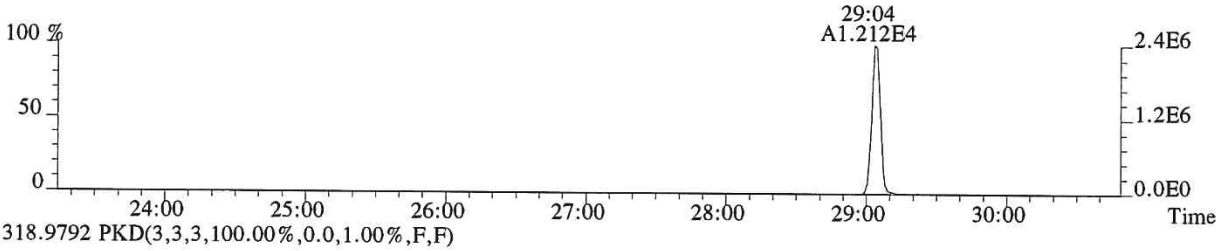
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7128.0,1.00%,F,T)



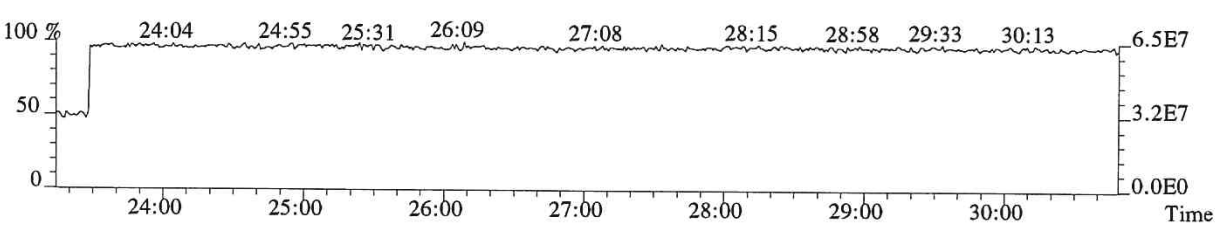
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2828.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1840.0,1.00%,F,T)

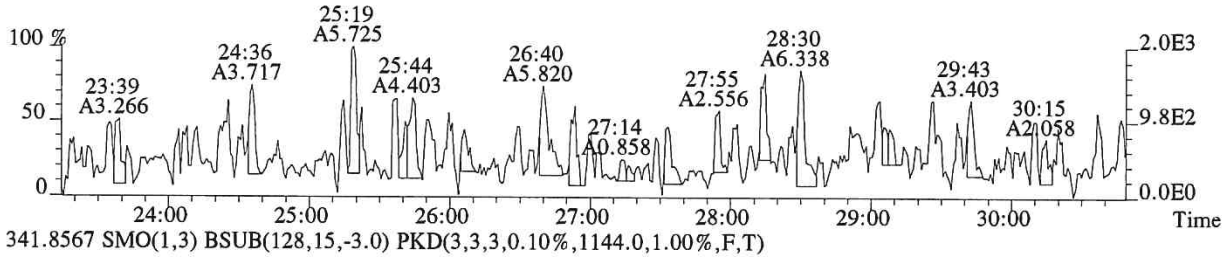


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

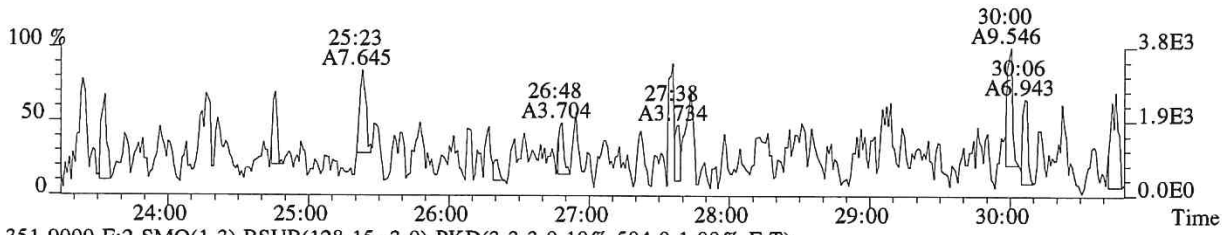


016611

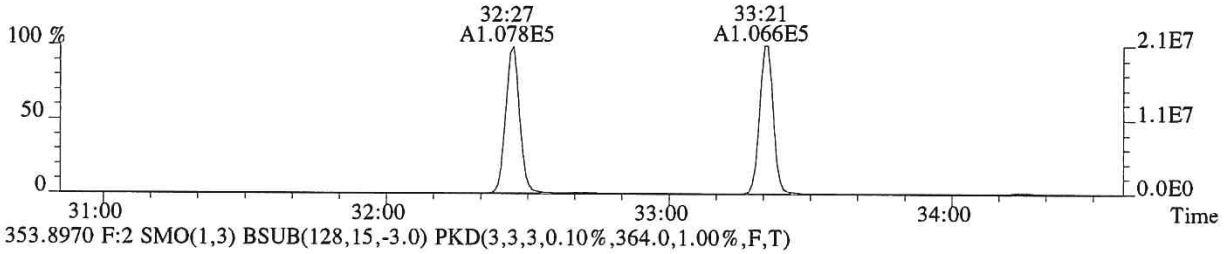
File:P519996 #1-538 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,528.0,1.00%,F,T)



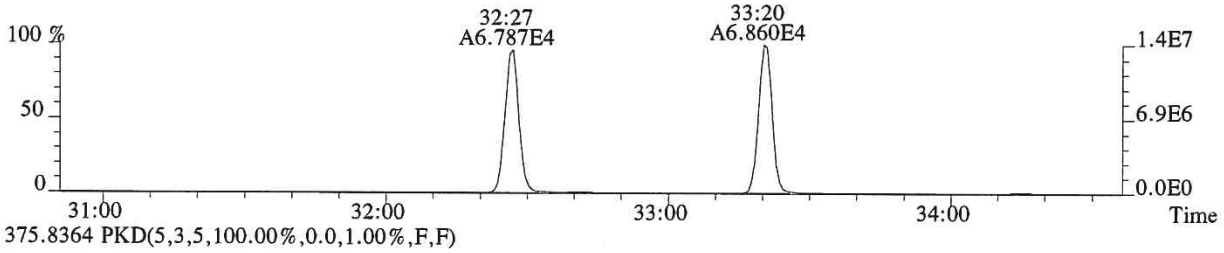
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1144.0,1.00%,F,T)



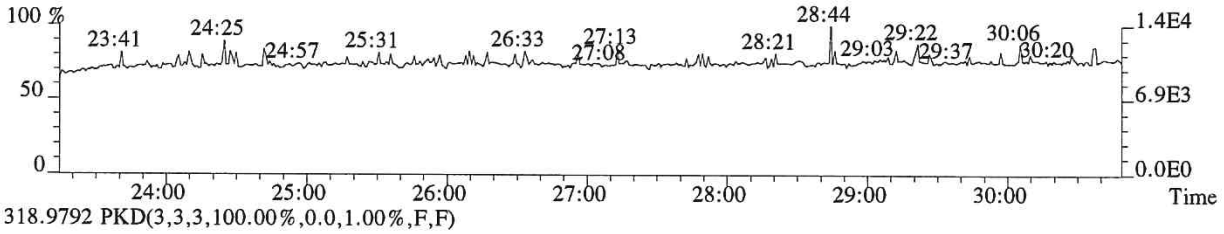
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,504.0,1.00%,F,T)



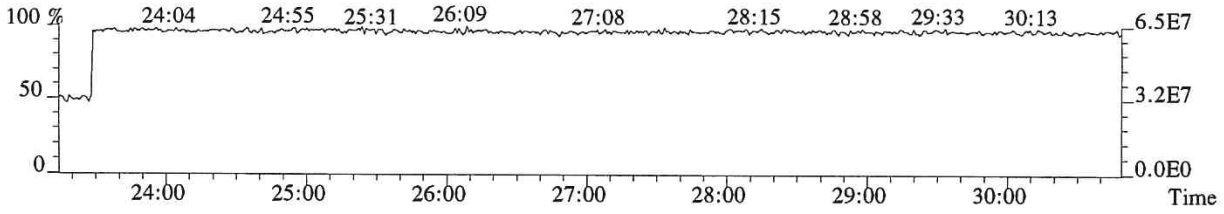
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,364.0,1.00%,F,T)



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

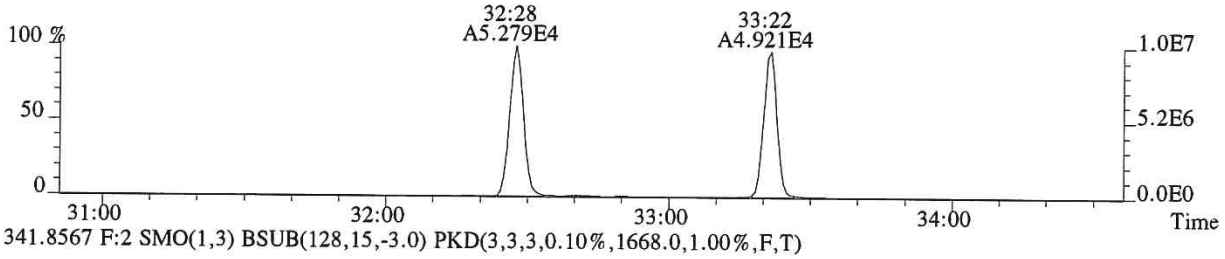


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

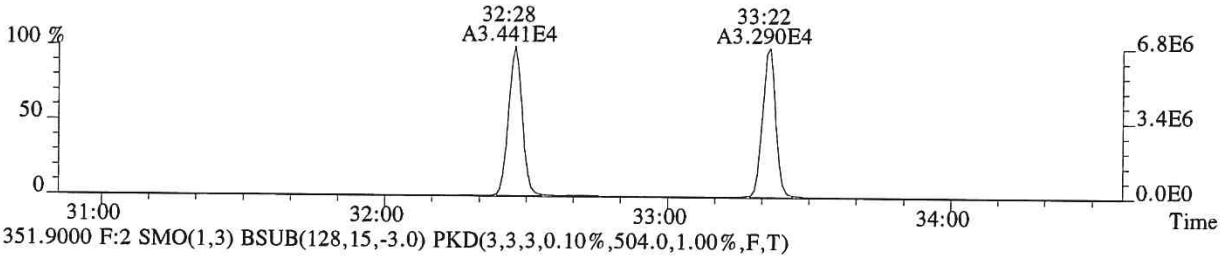


016612

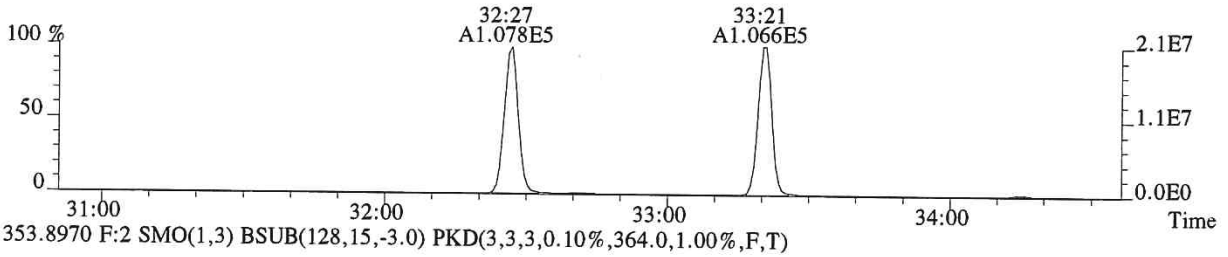
File:P519996 #1-339 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,876.0,1.00%,F,T)



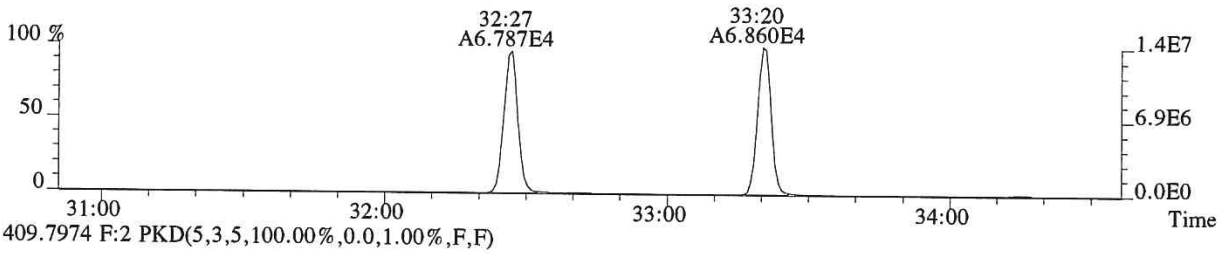
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1668.0,1.00%,F,T)



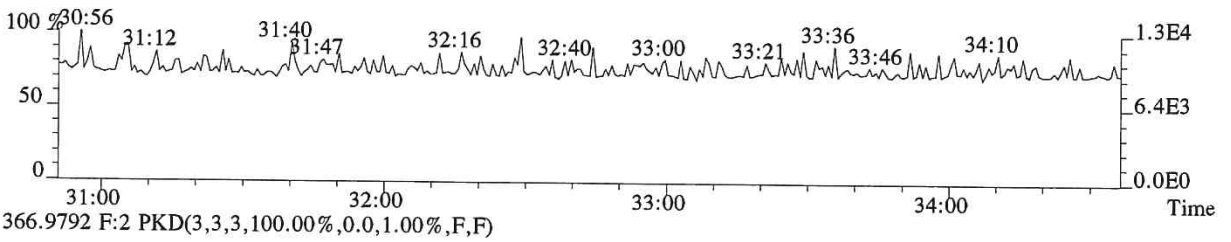
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,504.0,1.00%,F,T)



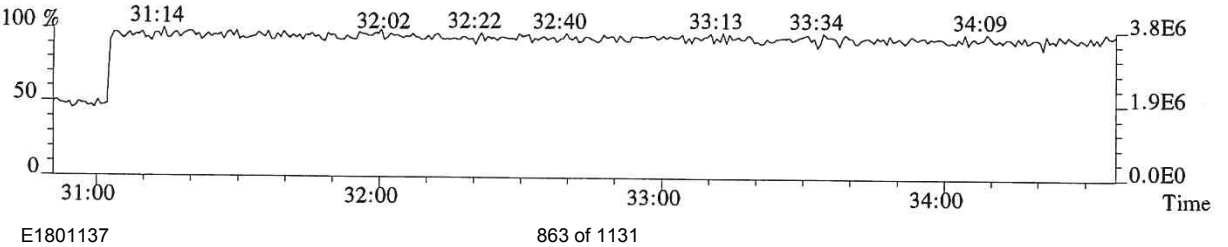
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,364.0,1.00%,F,T)



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

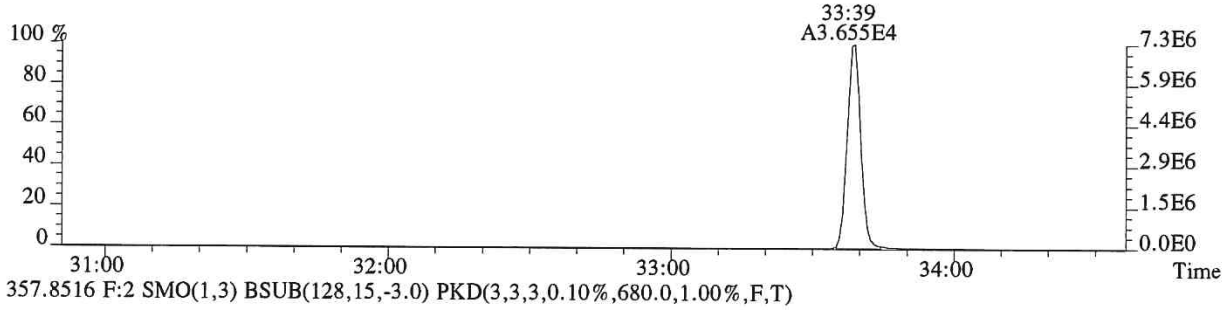


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

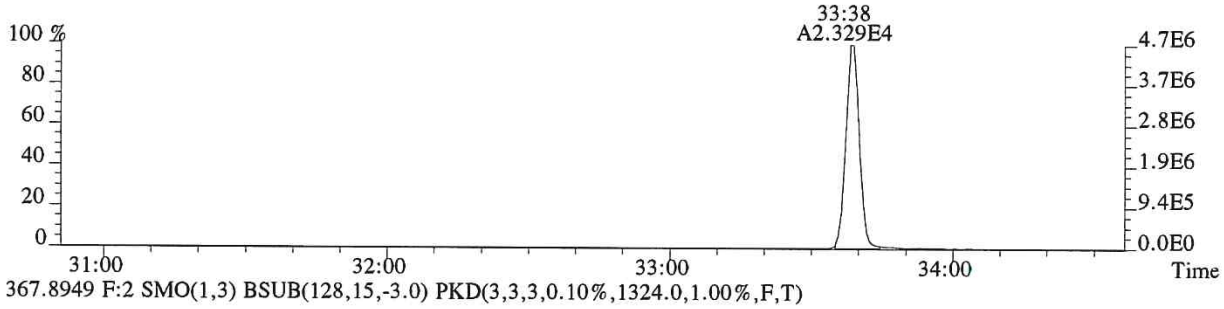


016613

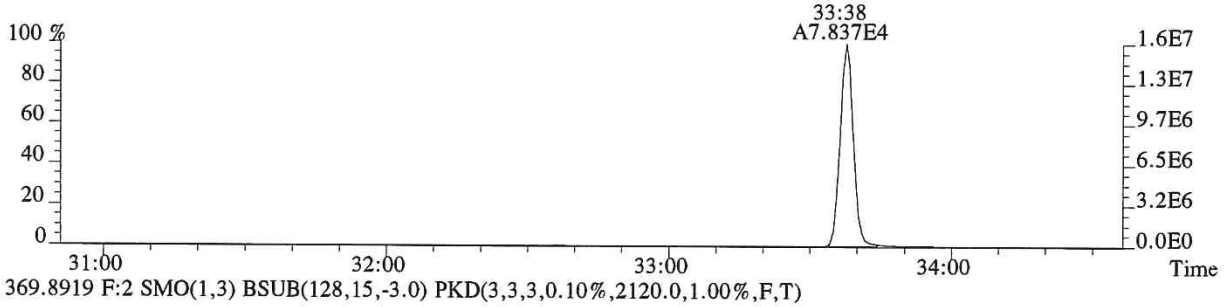
File:P519996 #1-339 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1112.0,1.00%,F,T)



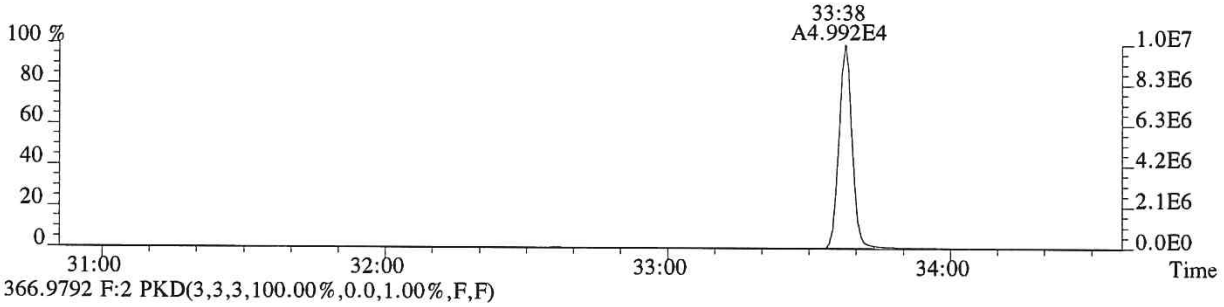
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,680.0,1.00%,F,T)



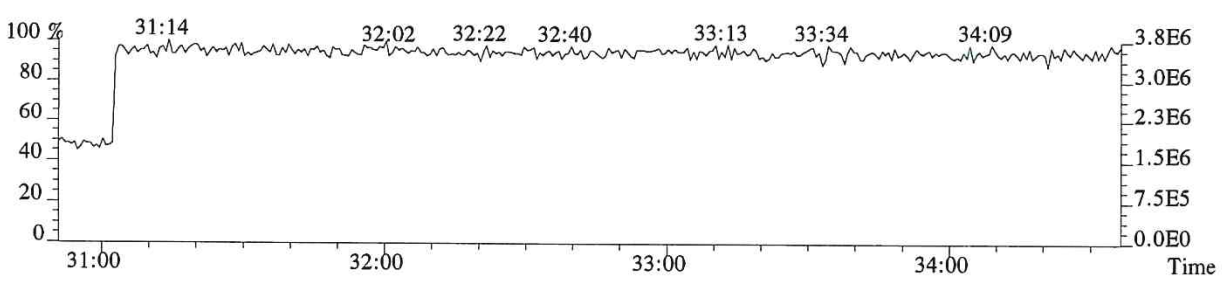
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1324.0,1.00%,F,T)



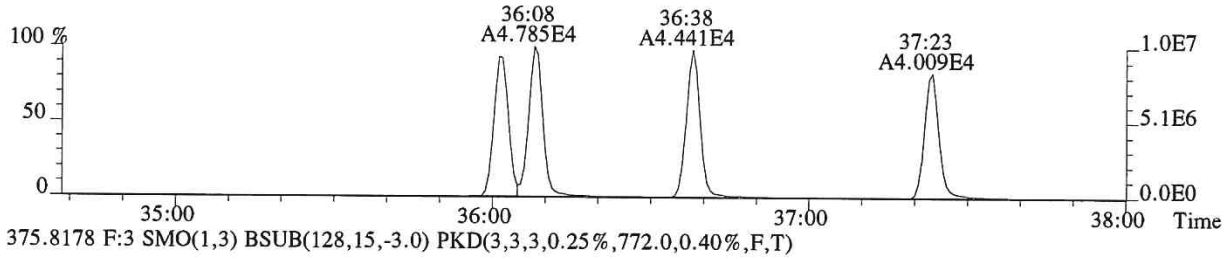
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2120.0,1.00%,F,T)



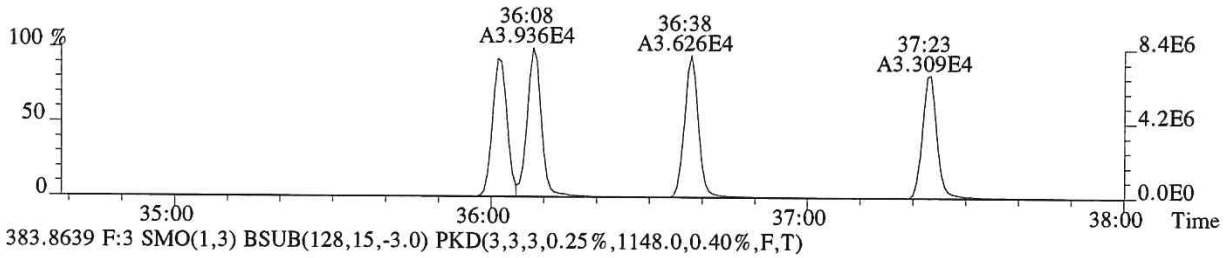
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



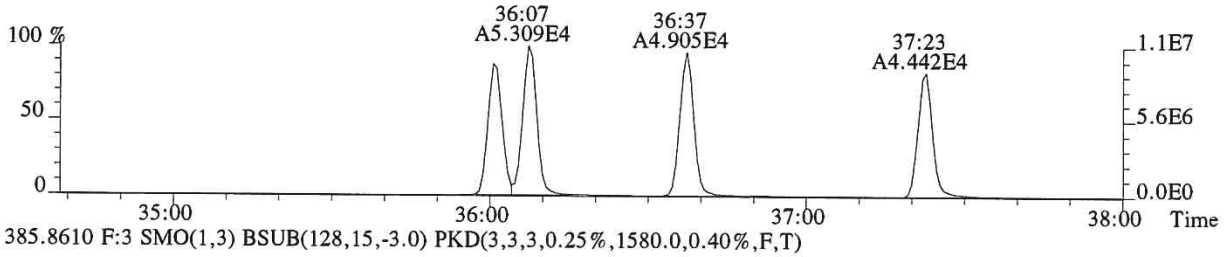
File:P519996 #1-303 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,588.0,0.40%,F,T)



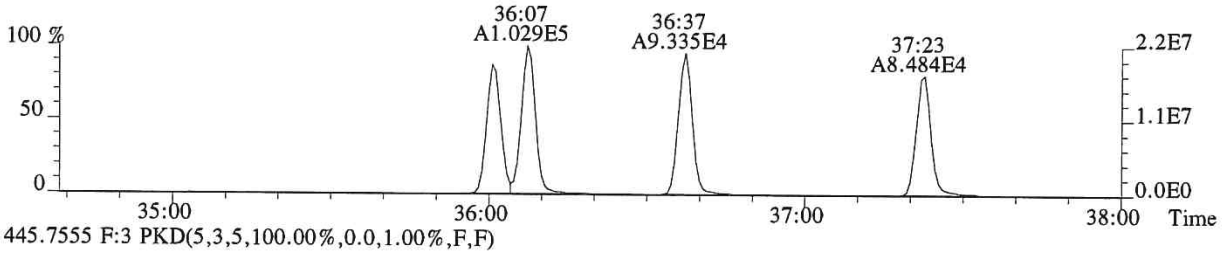
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,772.0,0.40%,F,T)



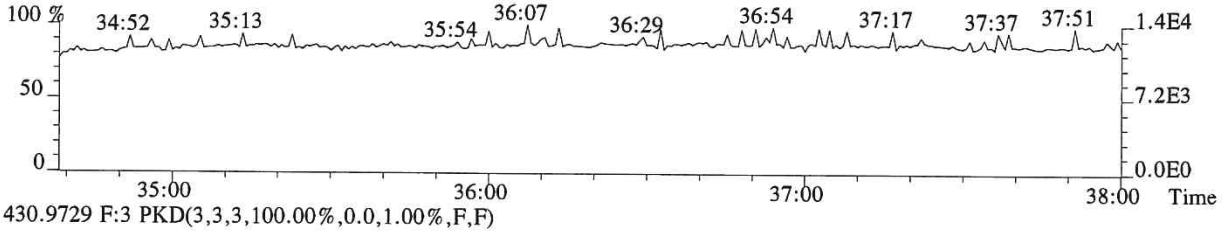
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1148.0,0.40%,F,T)



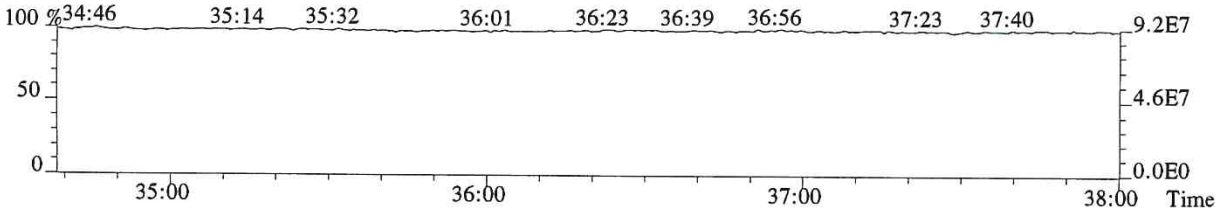
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1580.0,0.40%,F,T)



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

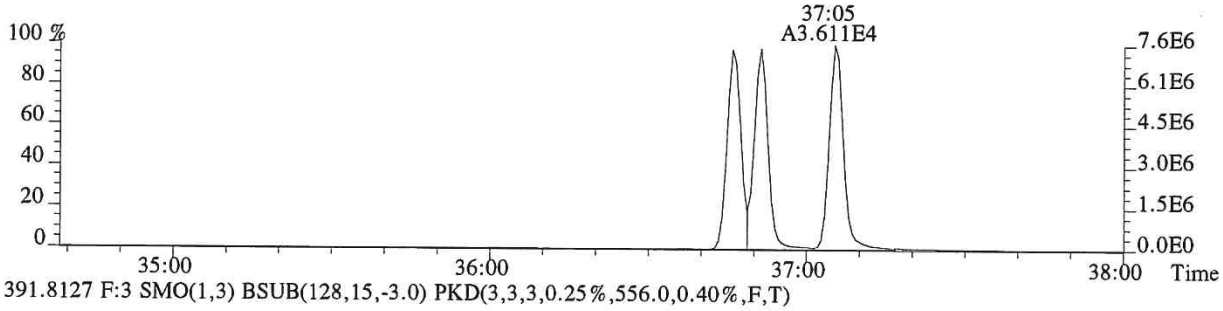


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

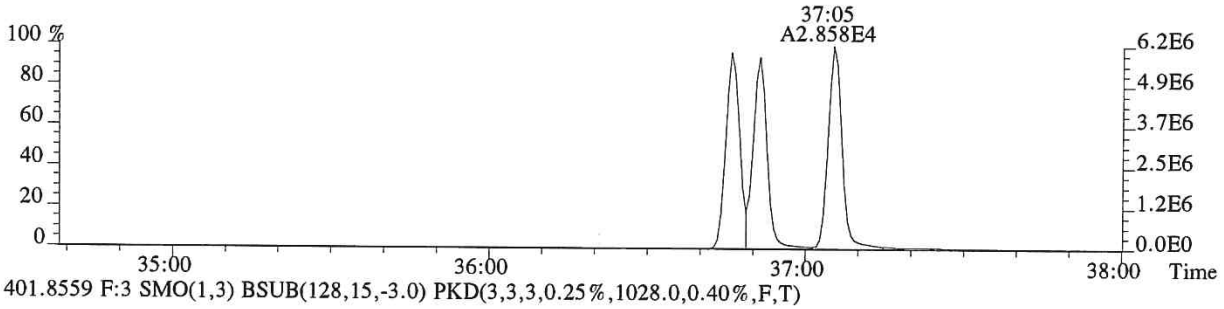


016615

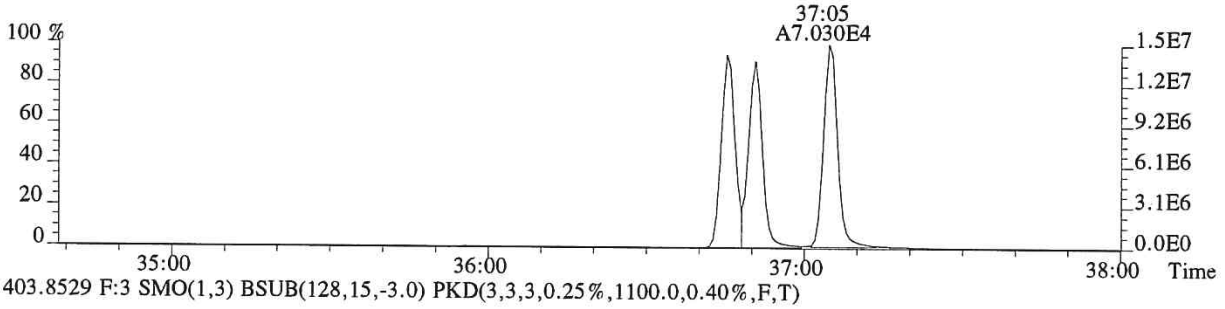
File:P519996 #1-303 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,676.0,0.40%,F,T)



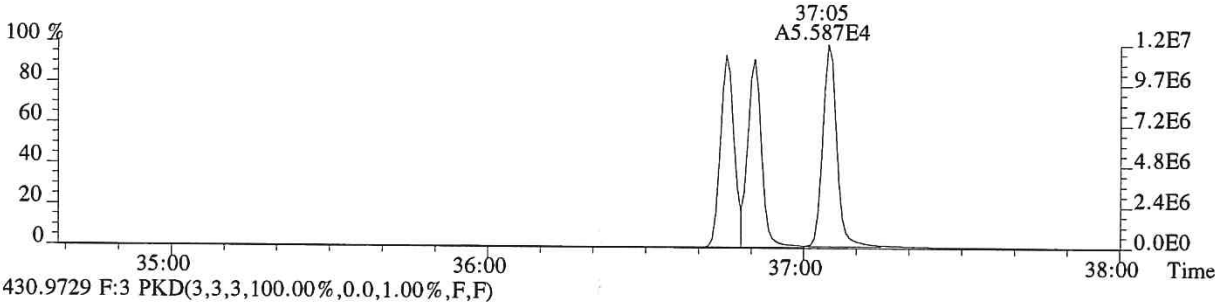
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,556.0,0.40%,F,T)



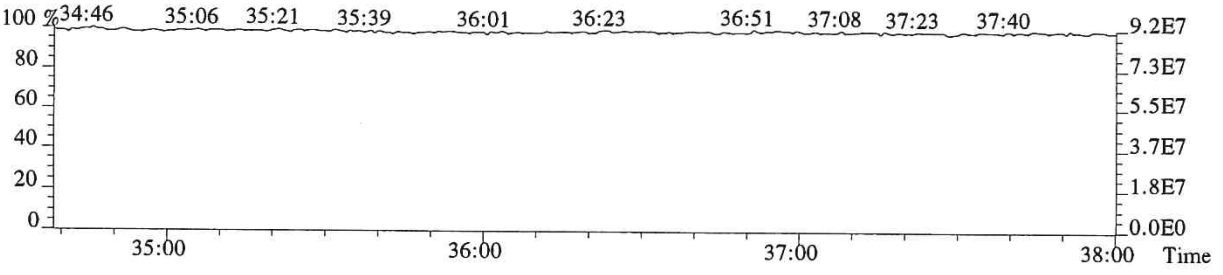
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1028.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1100.0,0.40%,F,T)

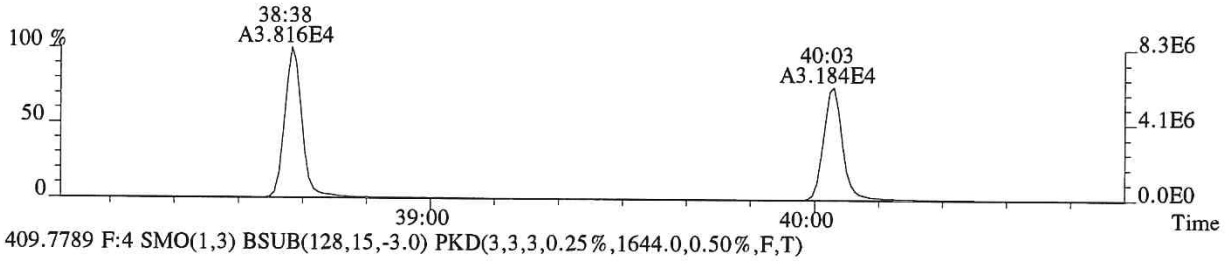


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

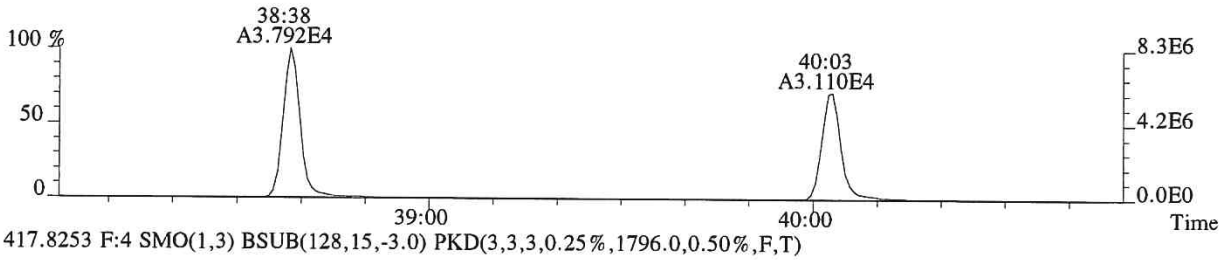


016616

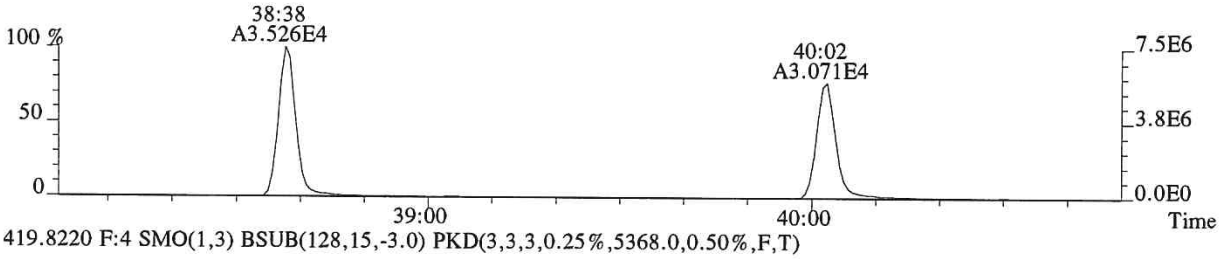
File:P519996 #1-250 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6128.0,0.50%,F,T)



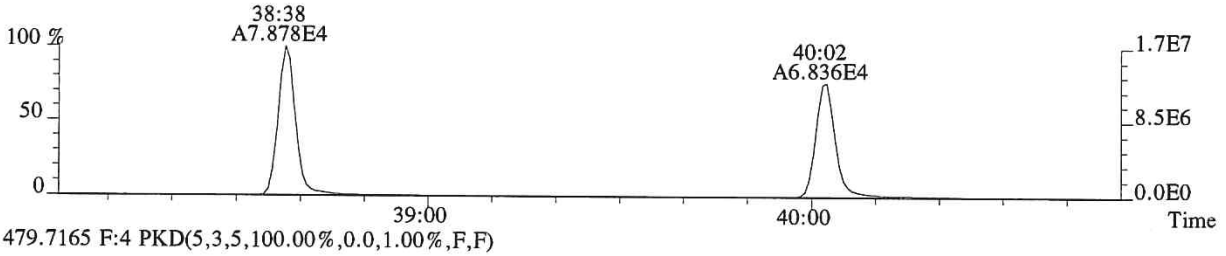
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1644.0,0.50%,F,T)



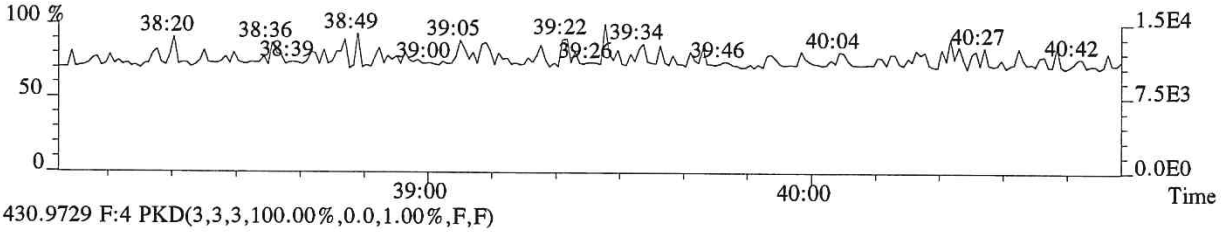
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1796.0,0.50%,F,T)



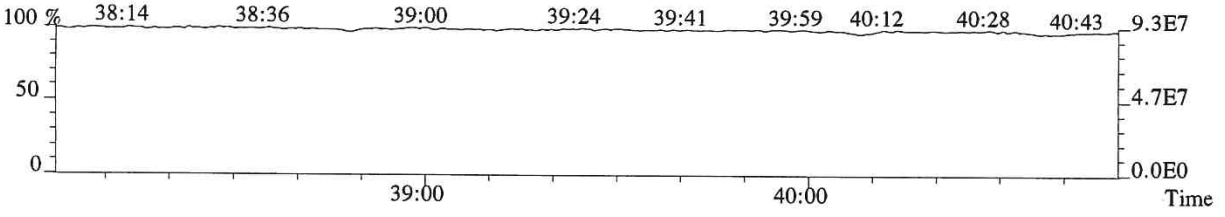
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5368.0,0.50%,F,T)



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

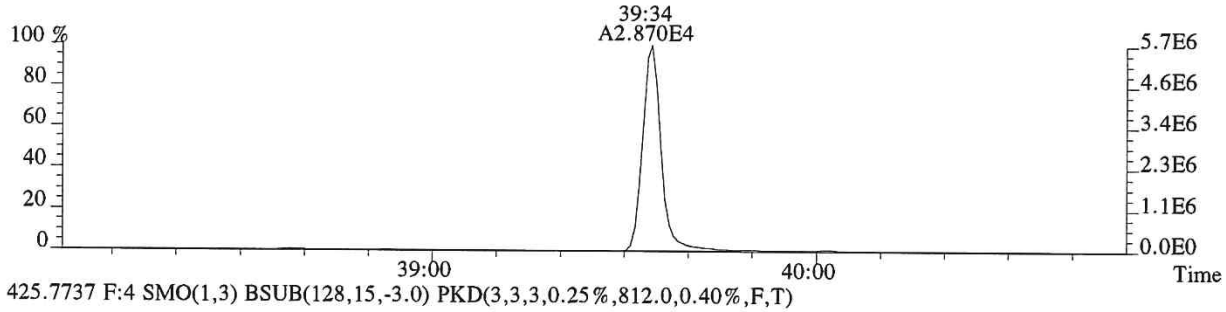


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

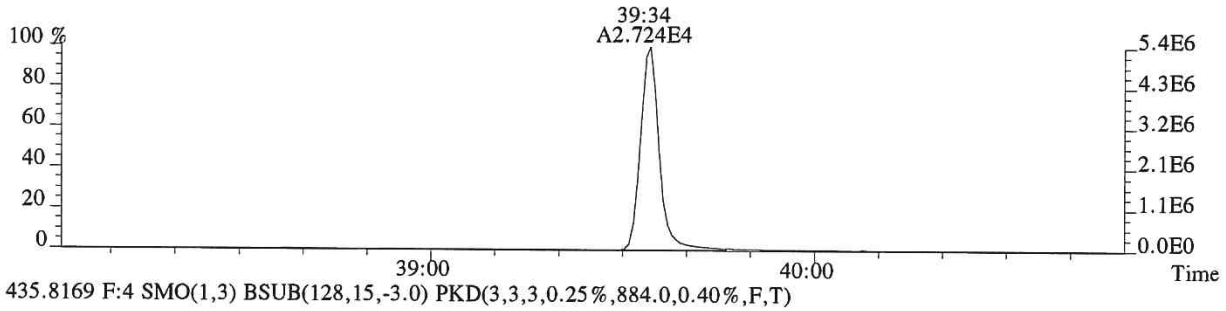


016617

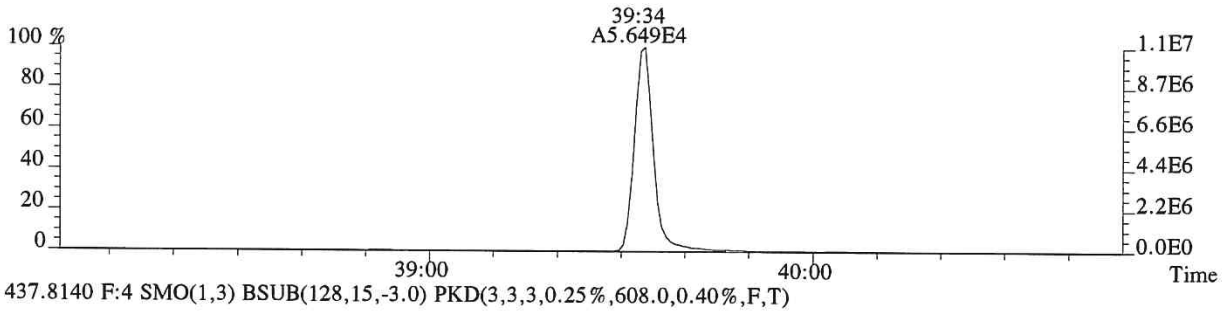
File:P519996 #1-250 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,944.0,0.40%,F,T)



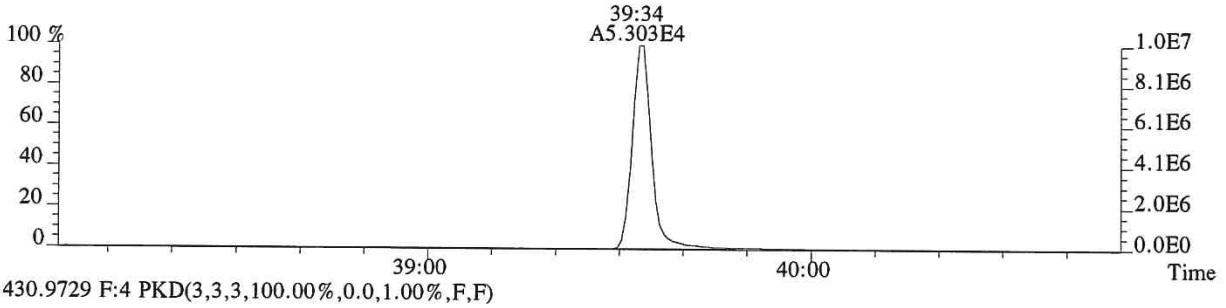
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,812.0,0.40%,F,T)



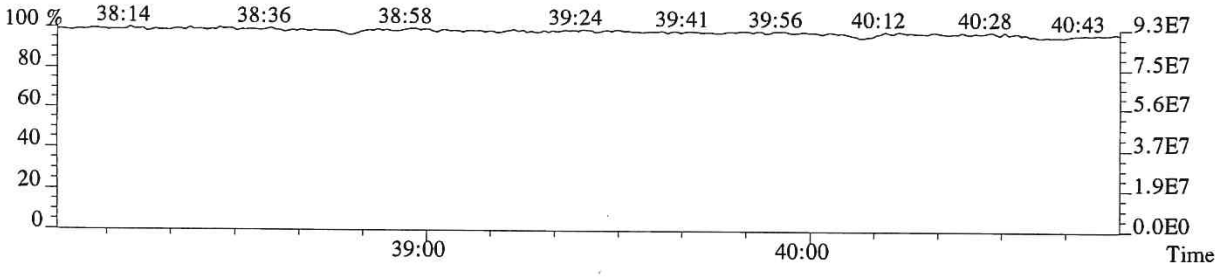
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,608.0,0.40%,F,T)

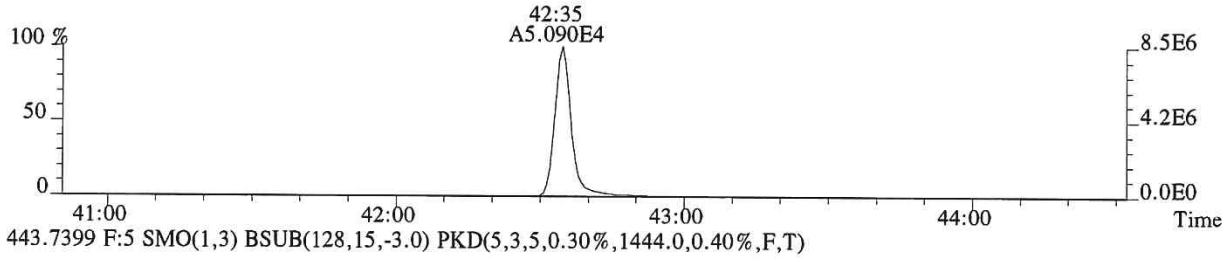


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

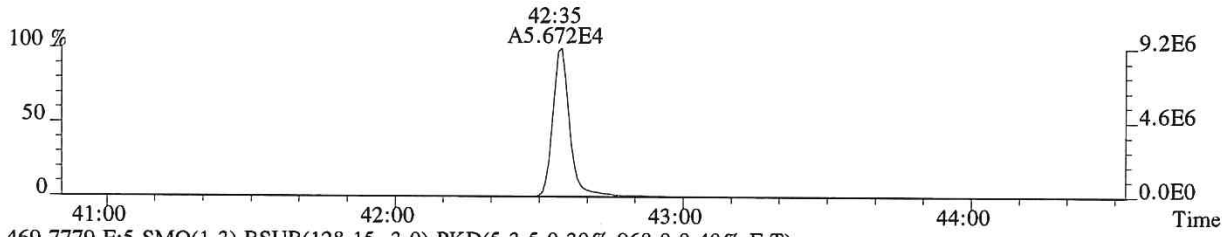


016618

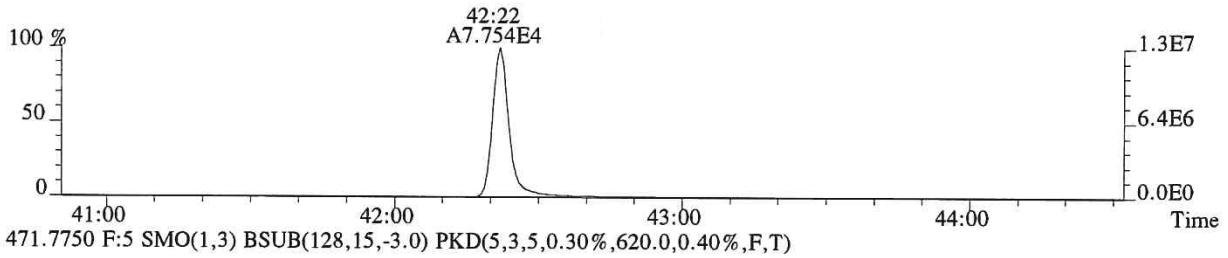
File:P519996 #1-333 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,352.0,0.40%,F,T)



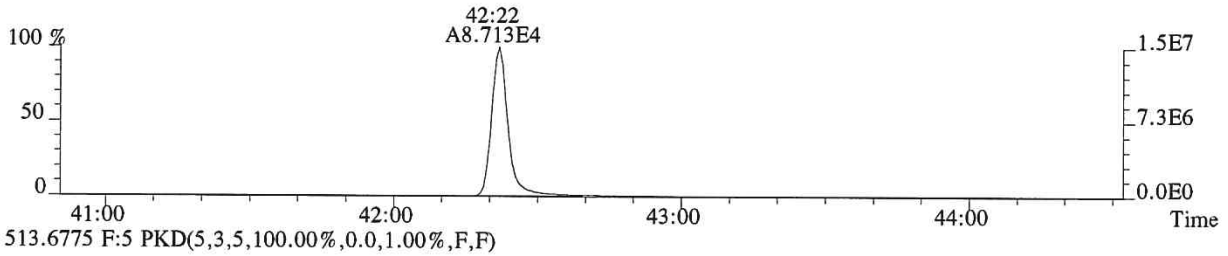
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1444.0,0.40%,F,T)



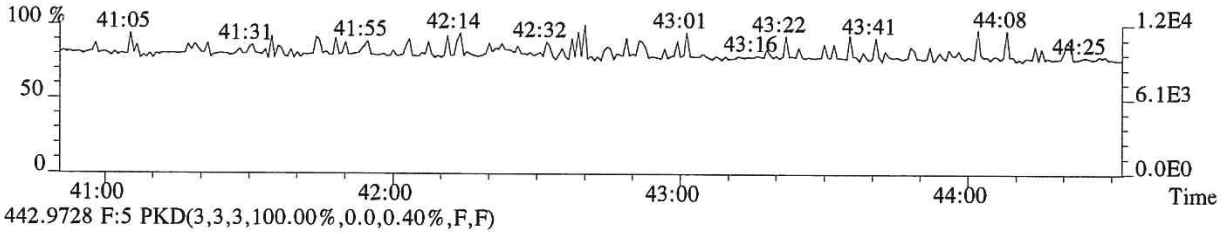
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,968.0,0.40%,F,T)



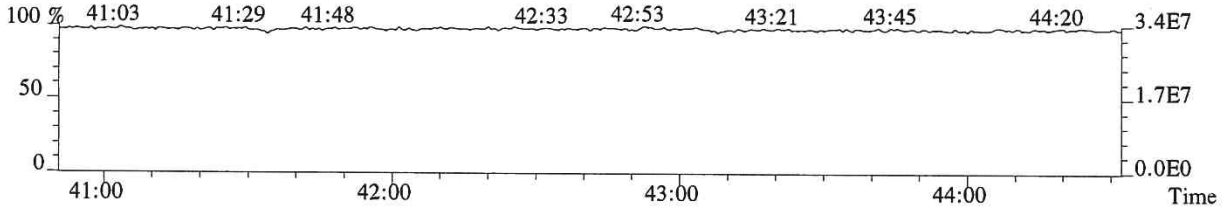
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,620.0,0.40%,F,T)



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

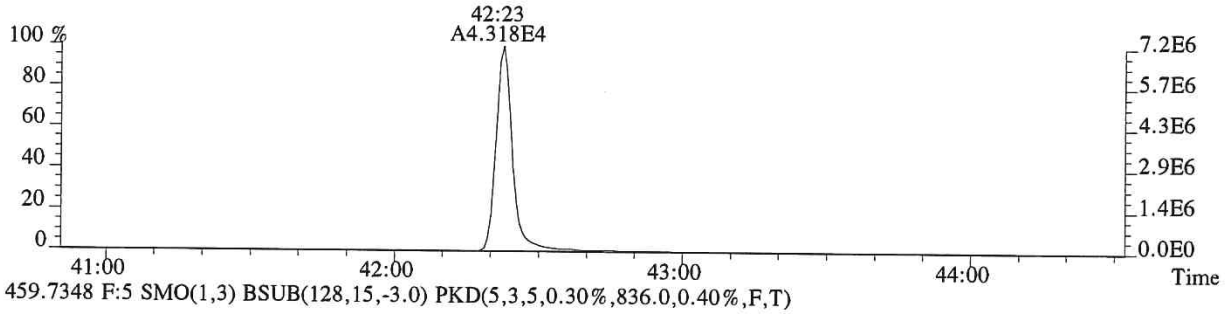


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

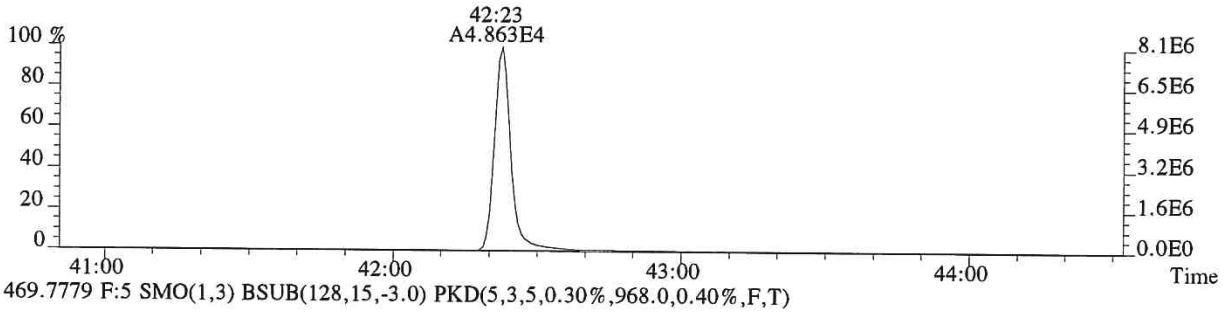


016619

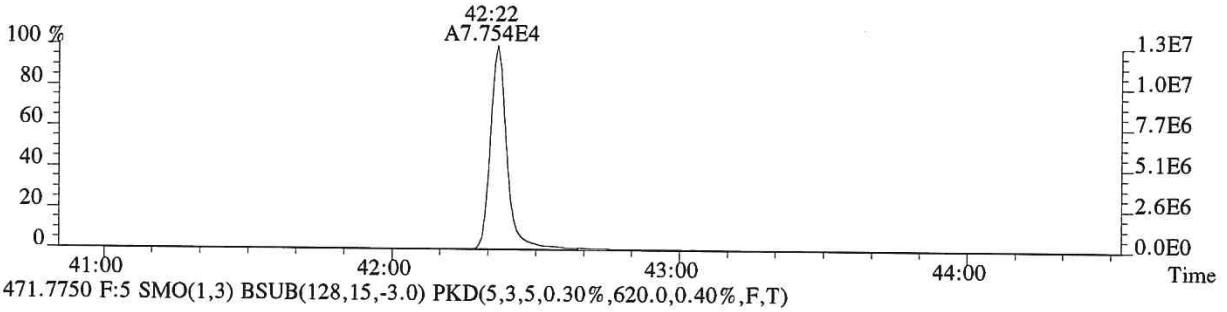
File:P519996 #1-333 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,864.0,0.40%,F,T)



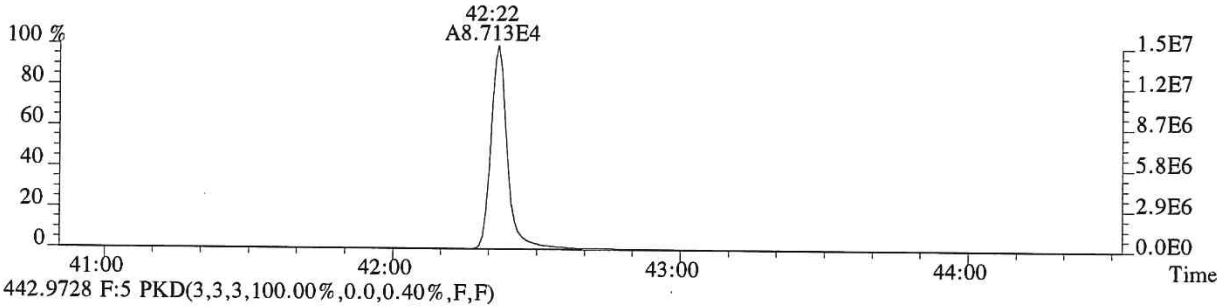
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,836.0,0.40%,F,T)



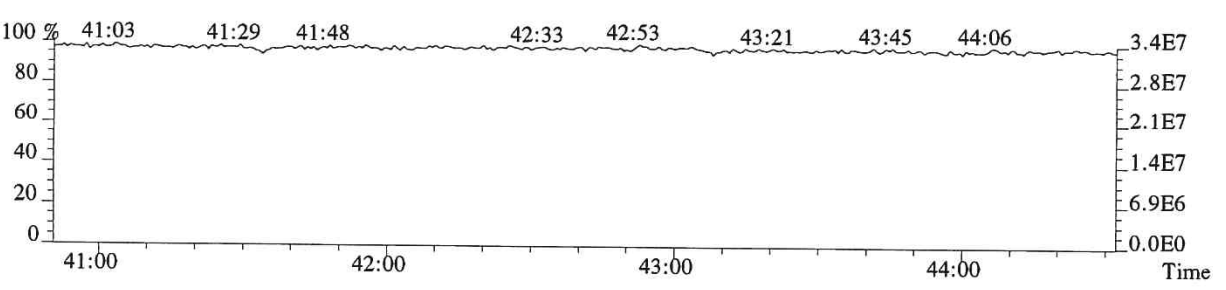
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,968.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,620.0,0.40%,F,T)



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



016620

CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P916316

Date: 01/02/19

Circle one: (Beginning) / Ending

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

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

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

Analyst: JC

Second QC: LKL

ccalqc.xls 07/17/12

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

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

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

Init. Calib. Date: 09/25/18

Init. Calib.Times: 12:13

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
194503	CS3	P616316	2-JAN-19	12:05:39
192977	WINDOW DEFINE	P616317	2-JAN-19	12:55:49
METHOD BLANK	EQ1800526-01	P616318	2-JAN-19	13:44:18
METHOD BLANK	EQ1800532-01	P616319	2-JAN-19	14:33:20
SL0144	E1801137-001	P616320	2-JAN-19	15:22:33
SL0145	E1801137-002	P616321	2-JAN-19	16:15:01
SL0136	E1801137-003	P616322	2-JAN-19	17:03:20
SL0137	E1801137-004	P616323	2-JAN-19	17:52:32
SL0138	E1801137-005	P616324	2-JAN-19	18:41:39
SL0139	E1801137-006	P616325	2-JAN-19	19:30:50
SL0140	E1801137-007	P616326	2-JAN-19	20:20:03
SL0131	E1801137-008	P616327	2-JAN-19	21:09:11
SL0132	E1801137-009	P616328	2-JAN-19	21:58:17
LCS	EQ1800532-02	P616329	2-JAN-19	22:47:30
DLCS	EQ1800532-03	P616330	2-JAN-19	23:36:42

E1801137

Sample List Report **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS08.PRO\SampleDB\20190102A.SPL
Last Modified: Thursday, January 03, 2019 09:22:52 Central Standard Time
Printed: Thursday, January 03, 2019 09:23:01 Central Standard Time

Page Position (1, 1)

OPUS 4: Pellegrines

	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst (For LG)	Comments
1	01/02/19	12:05	P616316	194503	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:2	LKL	HRMS check 11:57
2		12:55	P616317	192977	WINDOW DEFINE	EPA1613_ALS	Dioxin_ALS	Tray1:1		
3		13:44	P616318	EQ1800526-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:3		
4		14:33	P616319	EQ1800532-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		15:22	P616320	E1801137-001	E1801137-001	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		16:15	P616321	E1801137-002	E1801137-002	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		17:03	P616322	E1801137-003	E1801137-003	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		17:53	P616323	E1801137-004	E1801137-004	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		18:41	P616324	E1801137-005	E1801137-005	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		19:30	P616325	E1801137-006	E1801137-006	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		20:20	P616326	E1801137-007	E1801137-007	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		21:09	P616327	E1801137-008	E1801137-008	EPA1613_ALS	Dioxin_ALS	Tray1:12		
13		21:58	P616328	E1801137-009	E1801137-009	EPA1613_ALS	Dioxin_ALS	Tray1:13		
14		22:47	P616329	EQ1800532-02	LCS	EPA1613_ALS	Dioxin_ALS	Tray1:14		
15	↓	23:36	P616330	EQ1800532-03	DLCS	EPA1613_ALS	Dioxin_ALS	Tray1:15		
16	01/03/19	00:34	P616331	194503	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:2	↓	HRMS check 00:34

QC 01/03/19

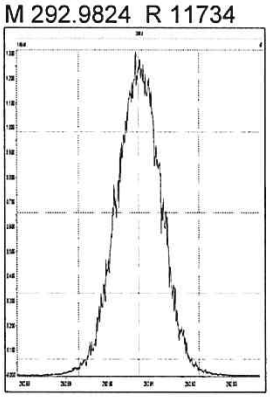
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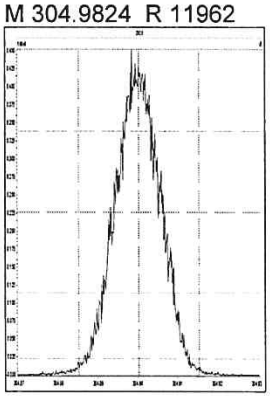
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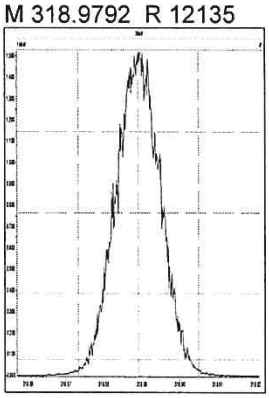
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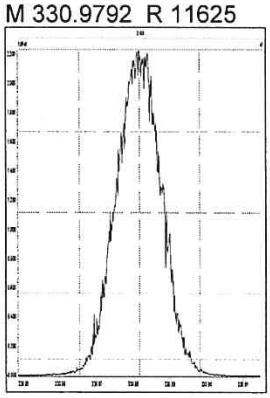
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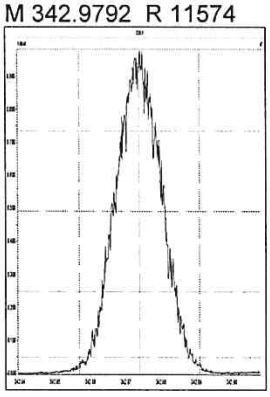
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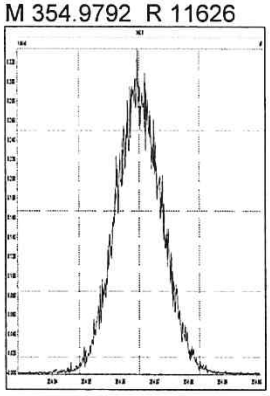
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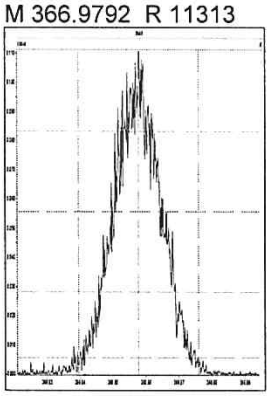
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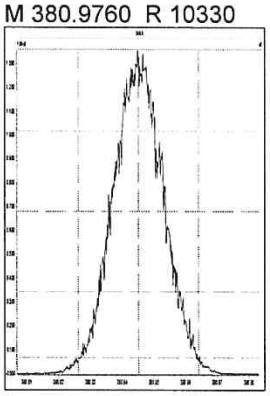
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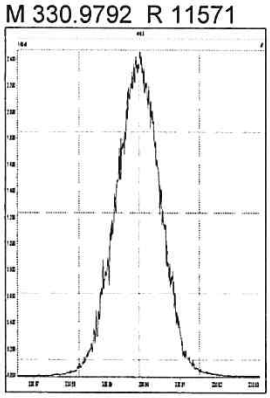
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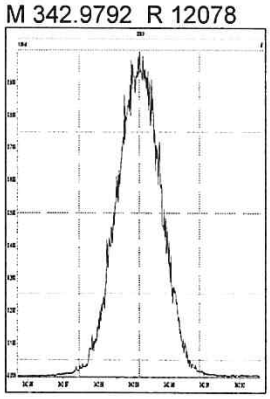
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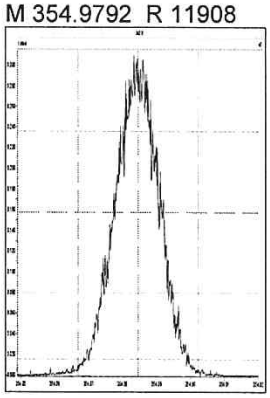
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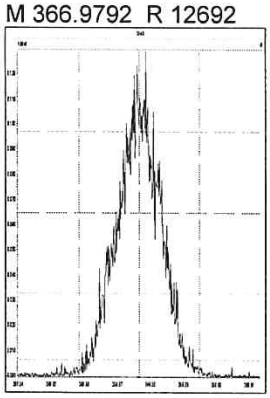
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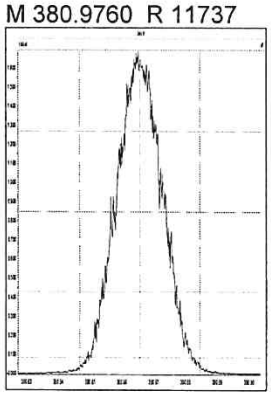
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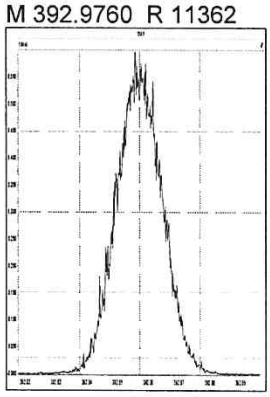
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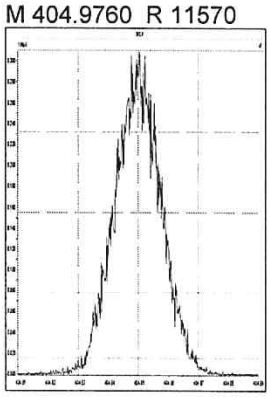
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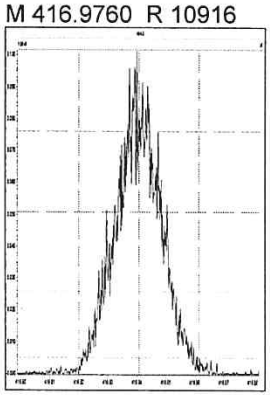
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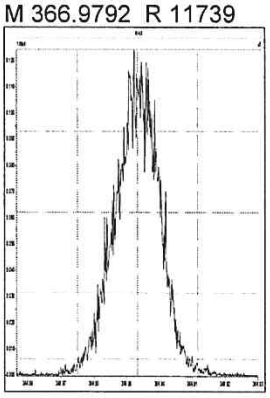
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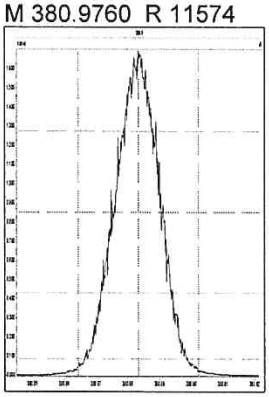
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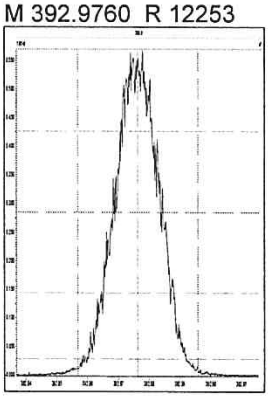
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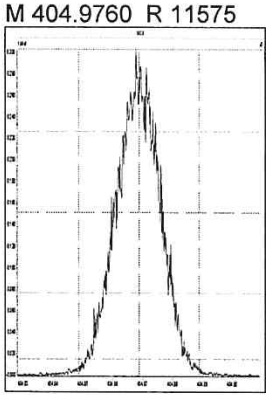
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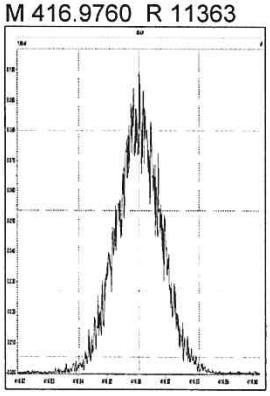
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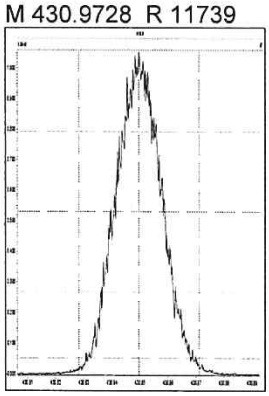
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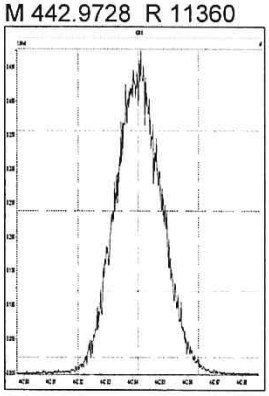
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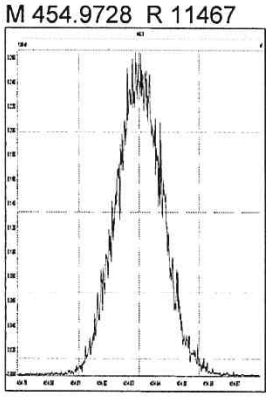
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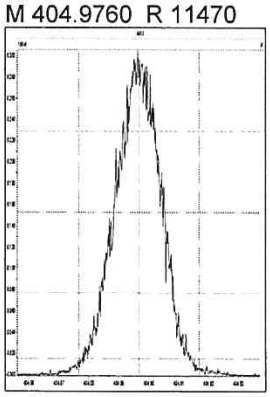
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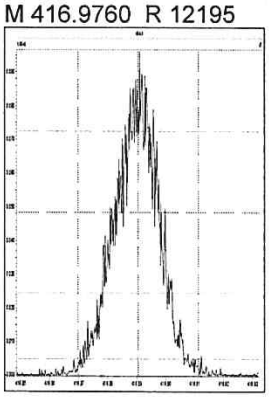
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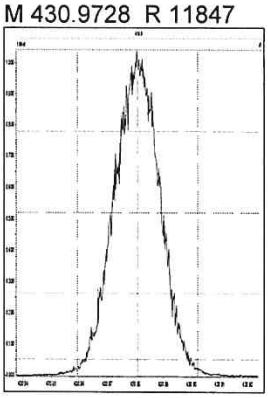
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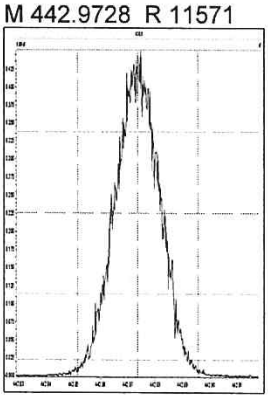
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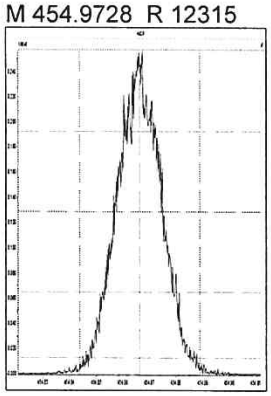
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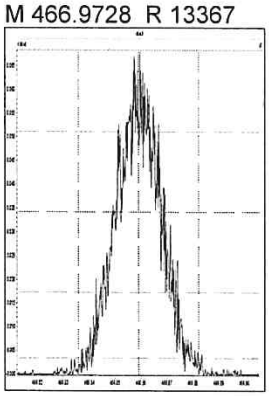
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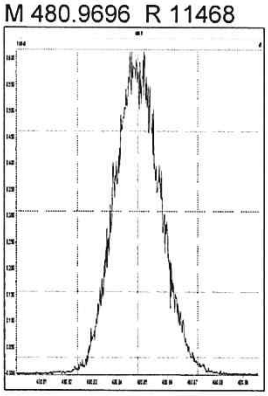
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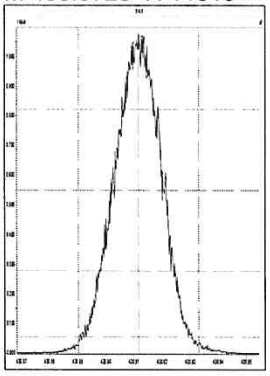
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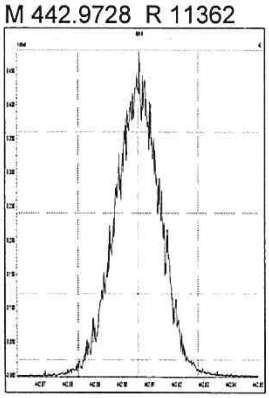
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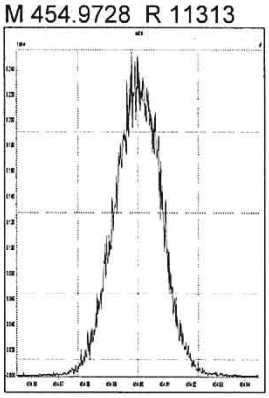
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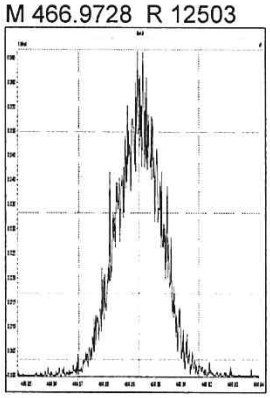
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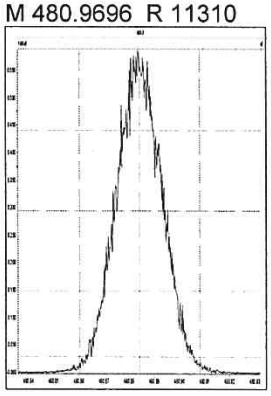
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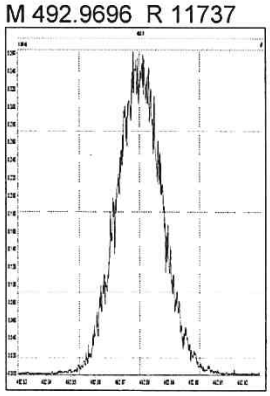
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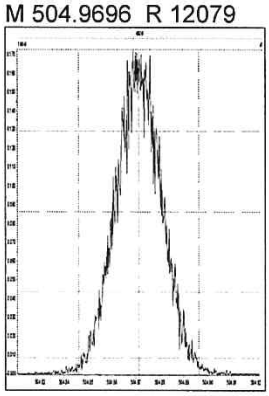
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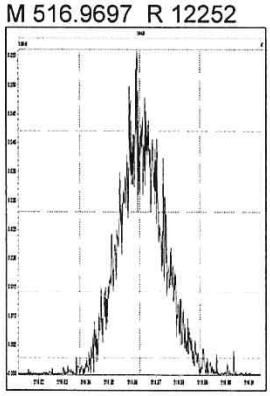
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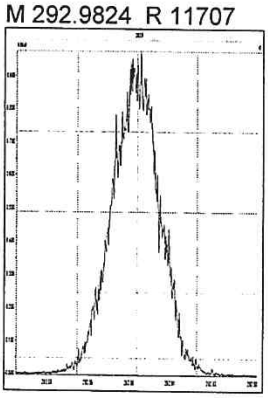
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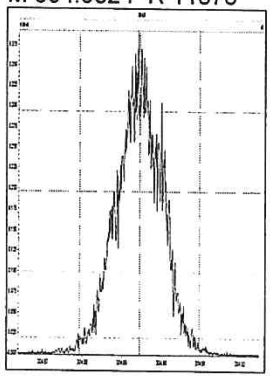
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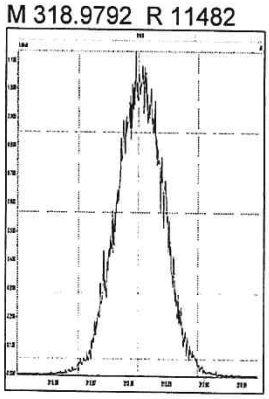
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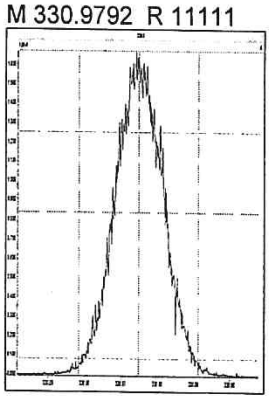
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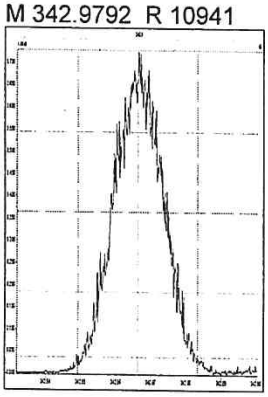
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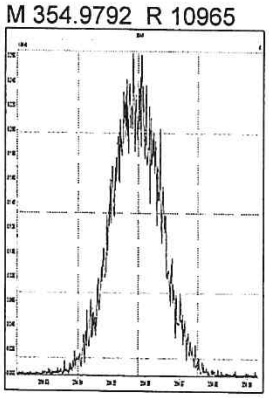
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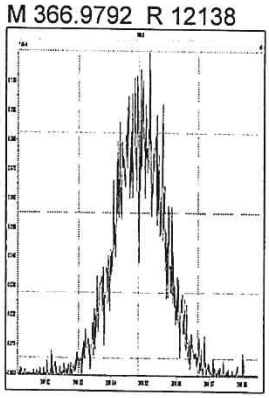
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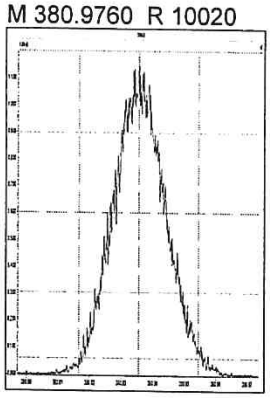
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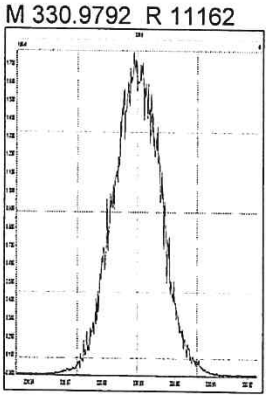
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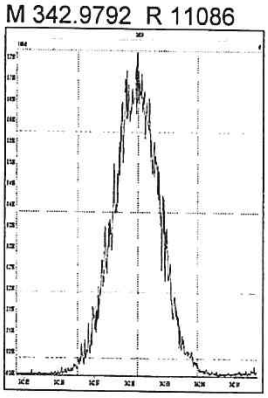
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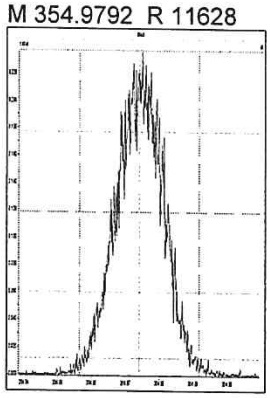
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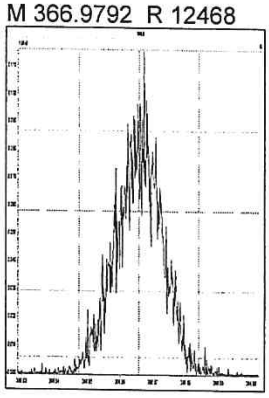
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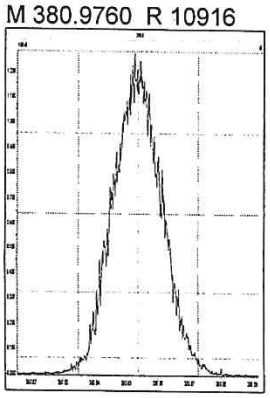
M 354.9792 R 11628



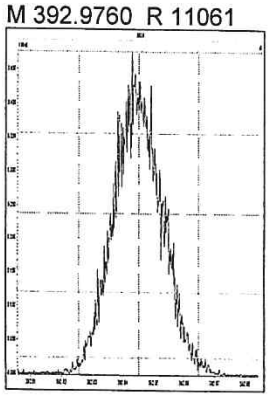
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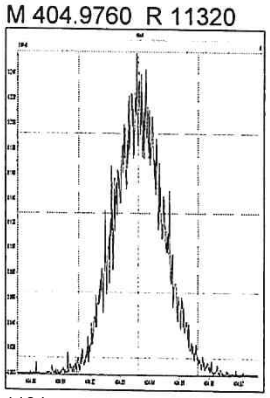
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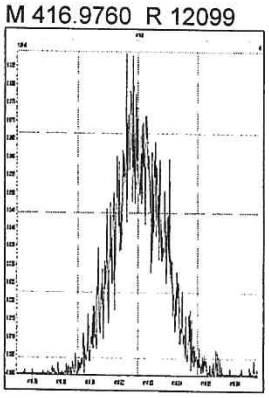
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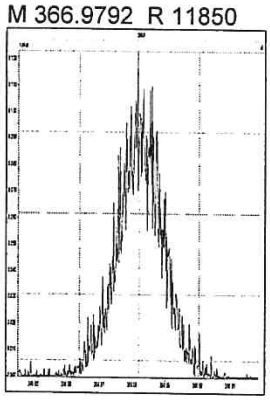
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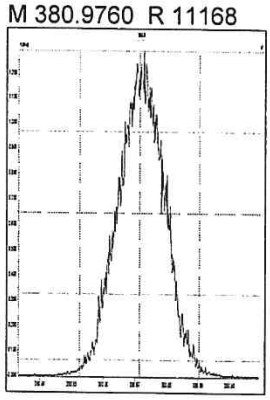
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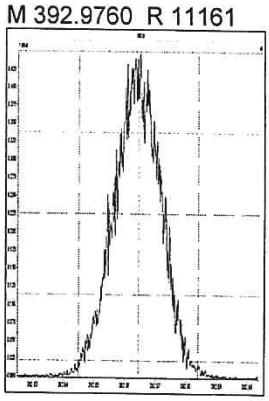
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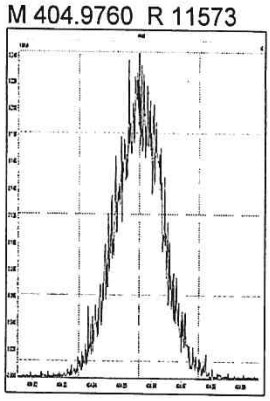
M 380.9760 R 11168



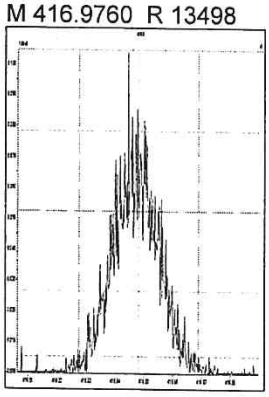
M 392.9760 R 11161



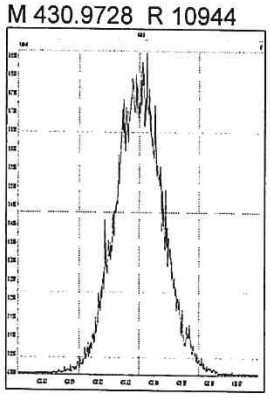
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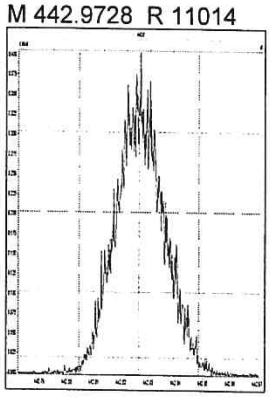
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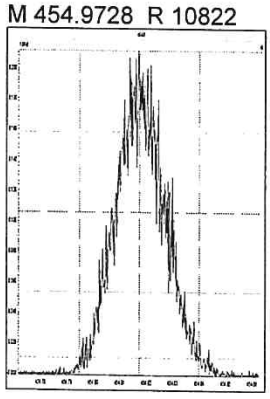
M 430.9728 R 10944



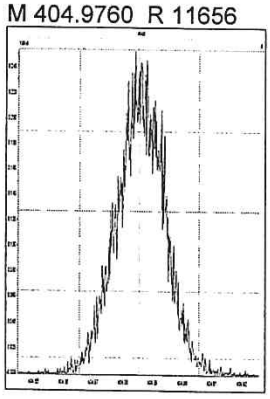
M 442.9728 R 11014



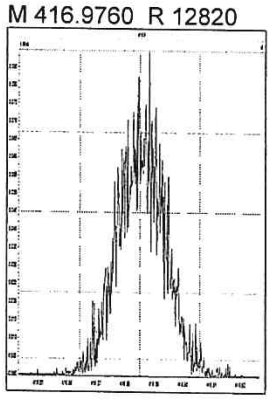
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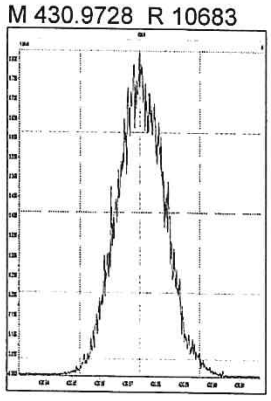
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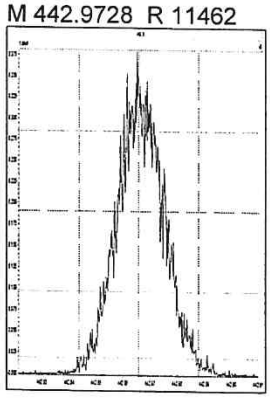
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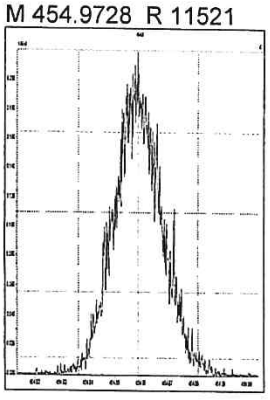
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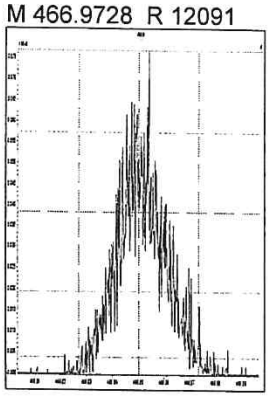
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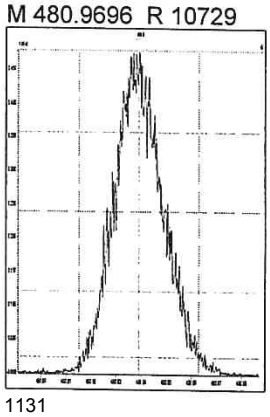
M 454.9728 R 11521



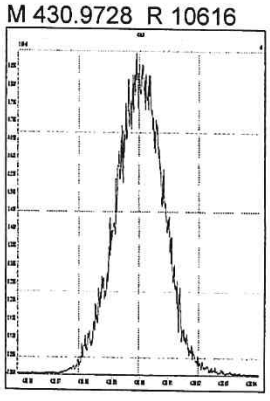
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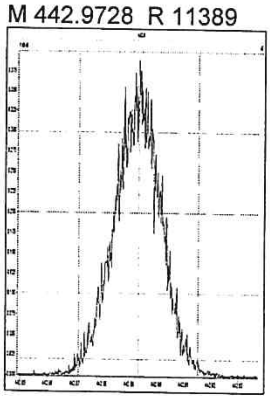
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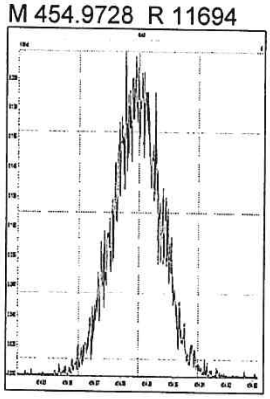
M 430.9728 R 10616



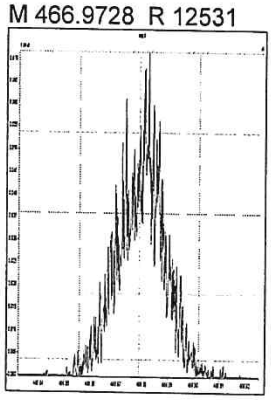
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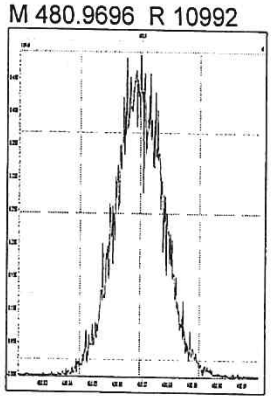
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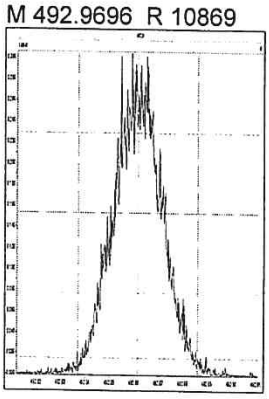
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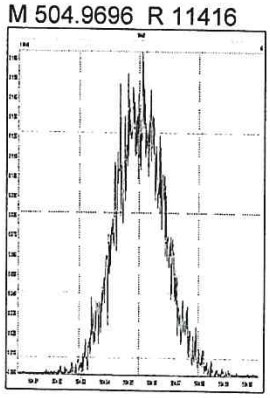
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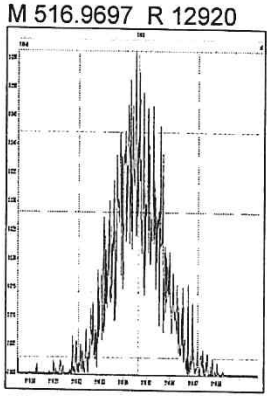
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M 504.9696 R 11416



M 516.9697 R 12920



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

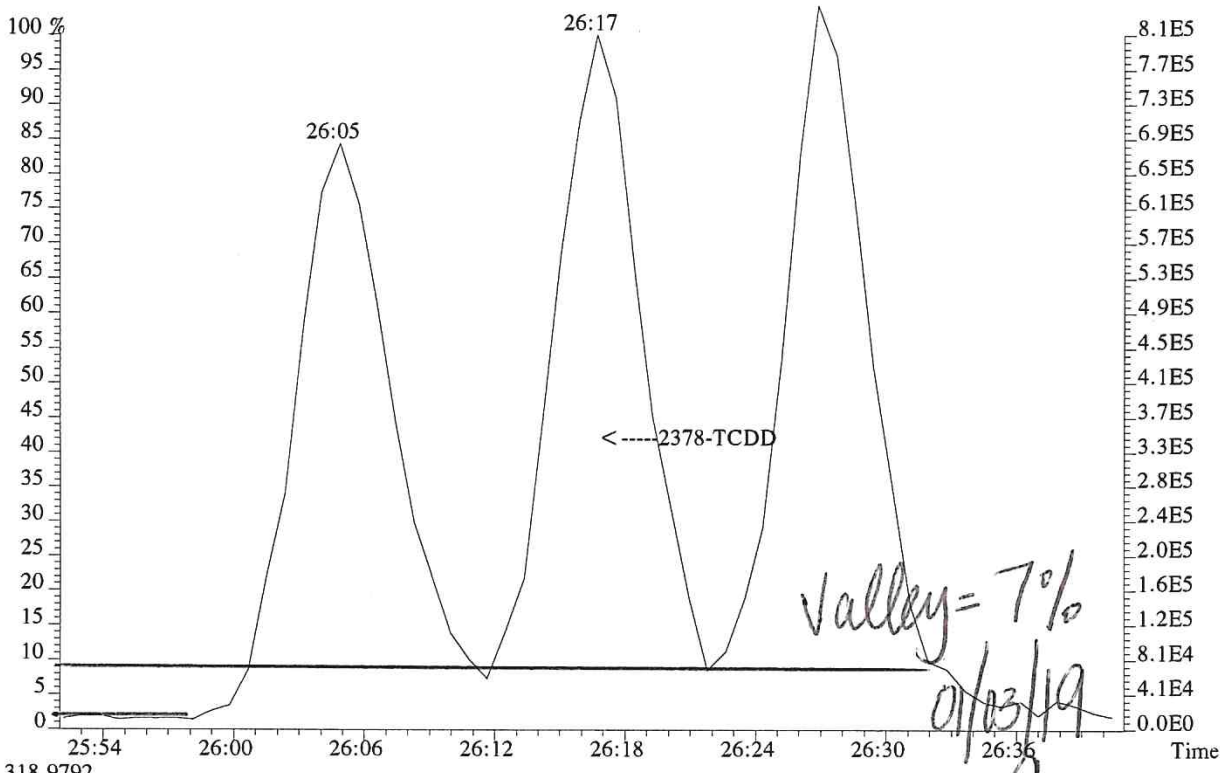
WDM

Lab Name: ALS Environmental
Lab Code: ALSTX Case No.: _____ SDG No.:
GC Column: DB-5MSUI ID: 0.25 (mm) Lab File ID: P616317
Date Analyzed: 2-JAN-19
Time Analyzed: 12:55:49

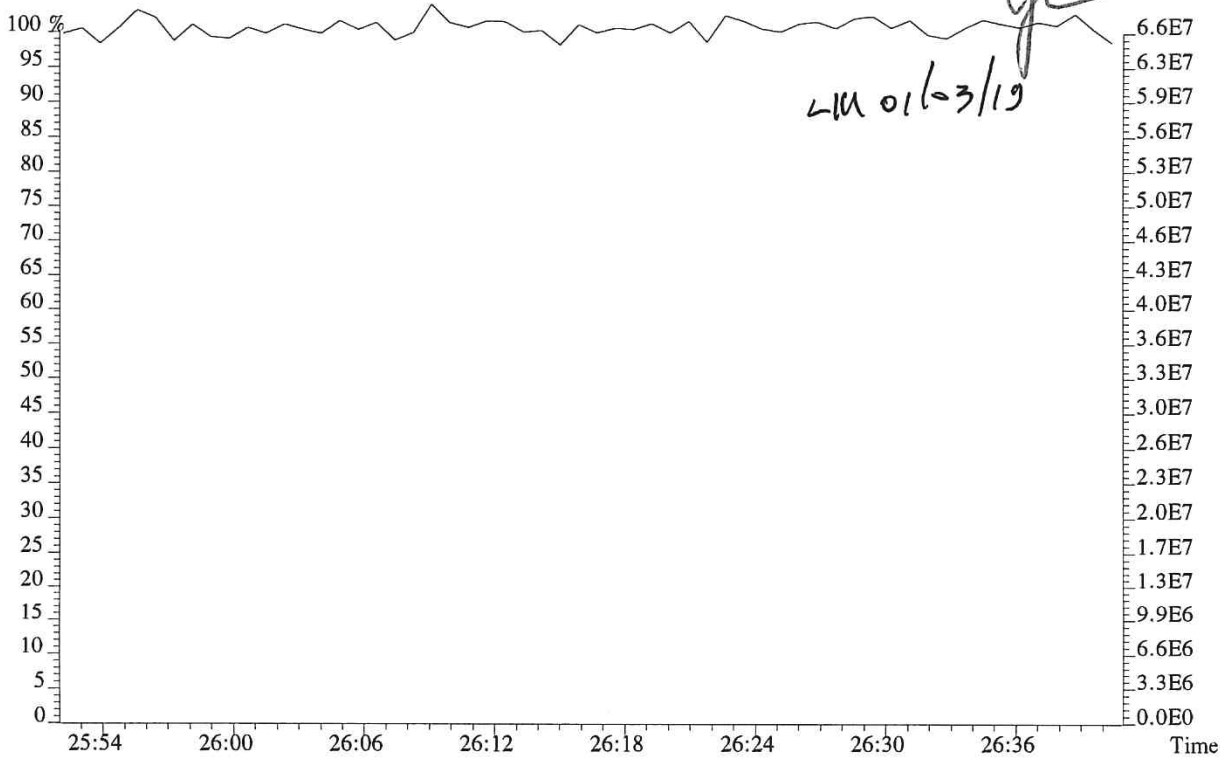
Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	20:57	27:44
TCDD	22:32	27:32
PeCDF	27:39	32:29
PeCDD	29:28	32:14
HxCDF	33:11	35:50
HxCDD	33:45	35:25
HpCDF	37:04	38:24
HpCDD	37:20	37:59

% Valley 2378-TCDD: 7 %

File:P616317 #1-587 Acq: 2-JAN-2019 12:55:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
319.8965

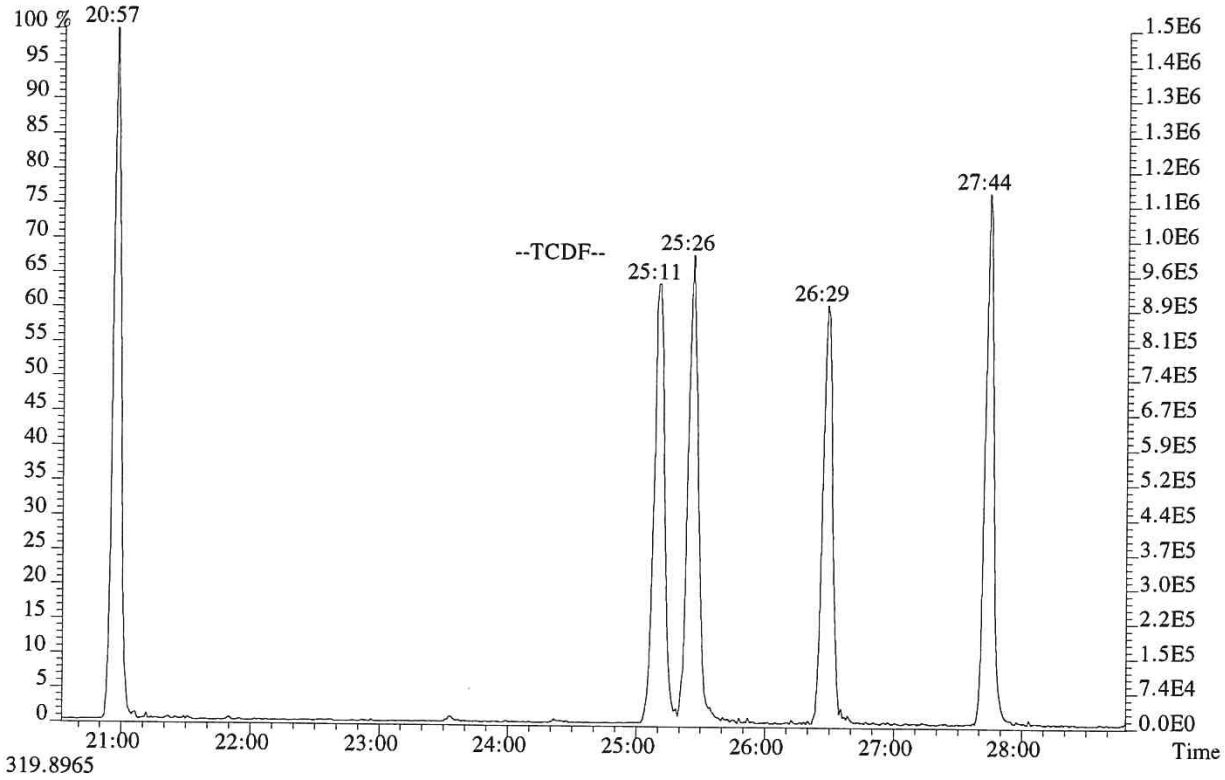


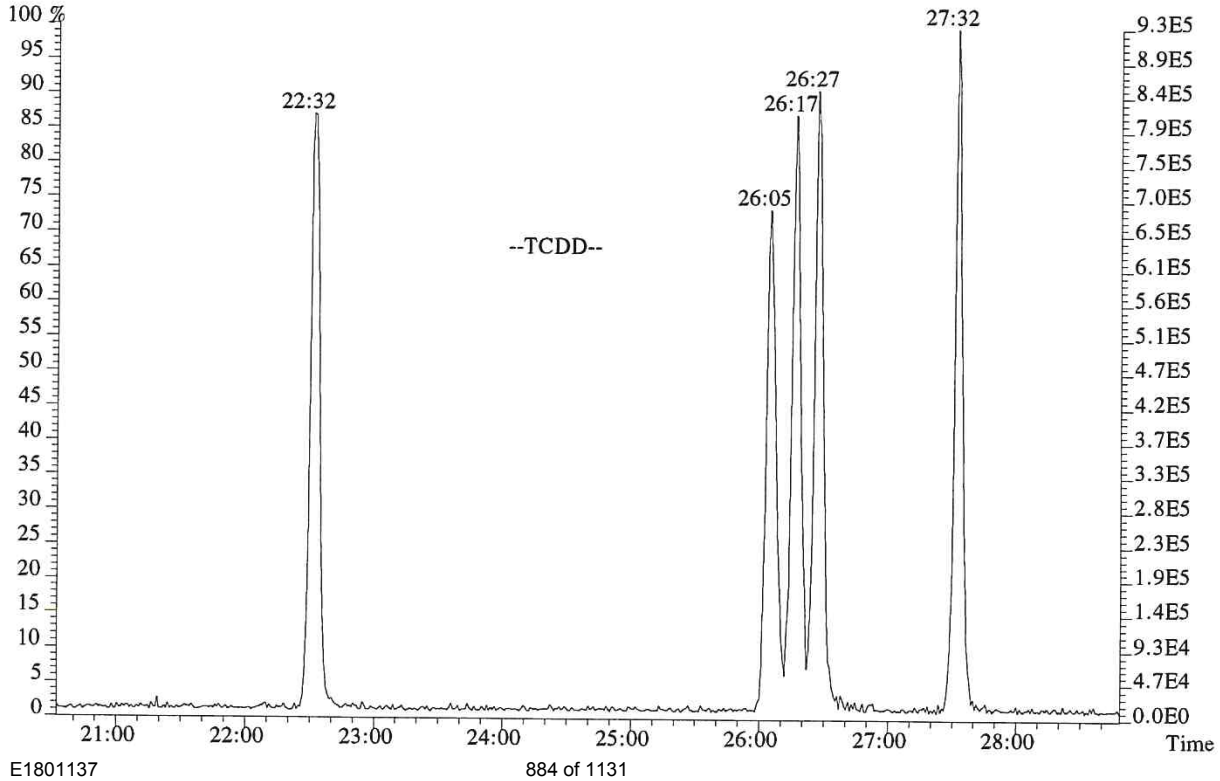
318.9792



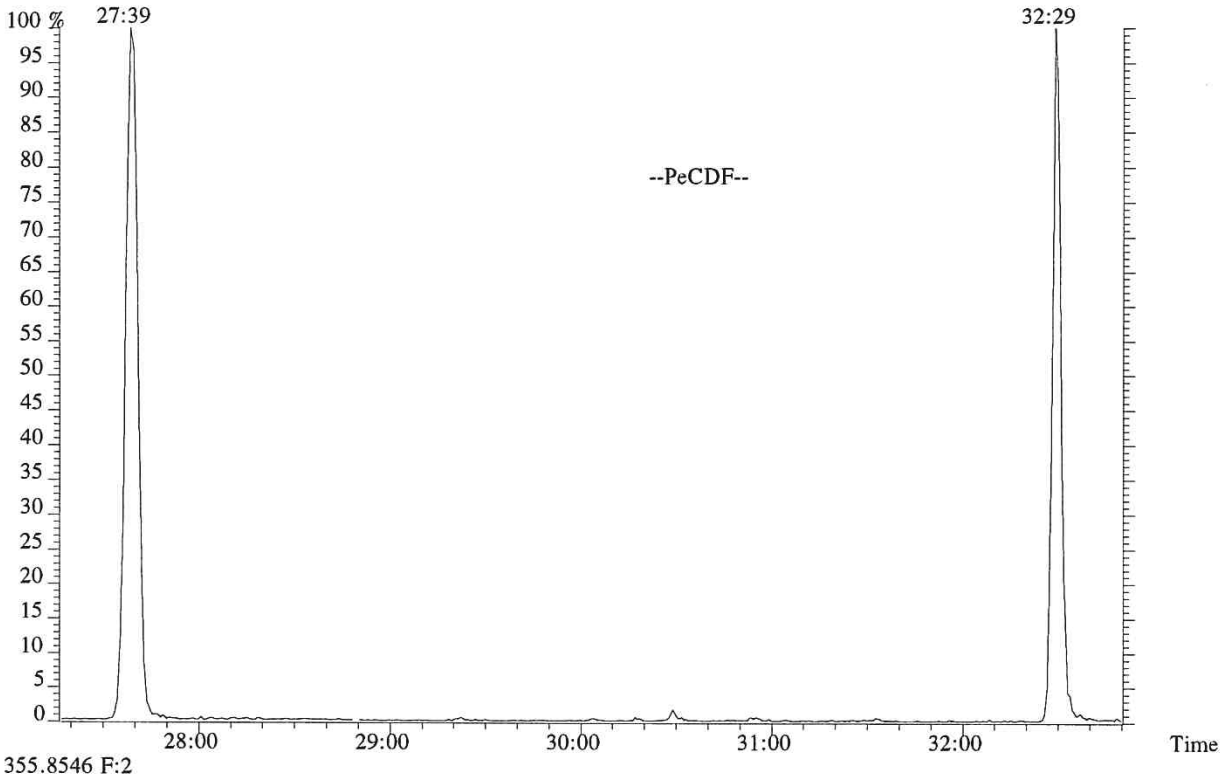
LM 01/03/19

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Sample#1 Exp:WINDOW DEFINE
303.9016

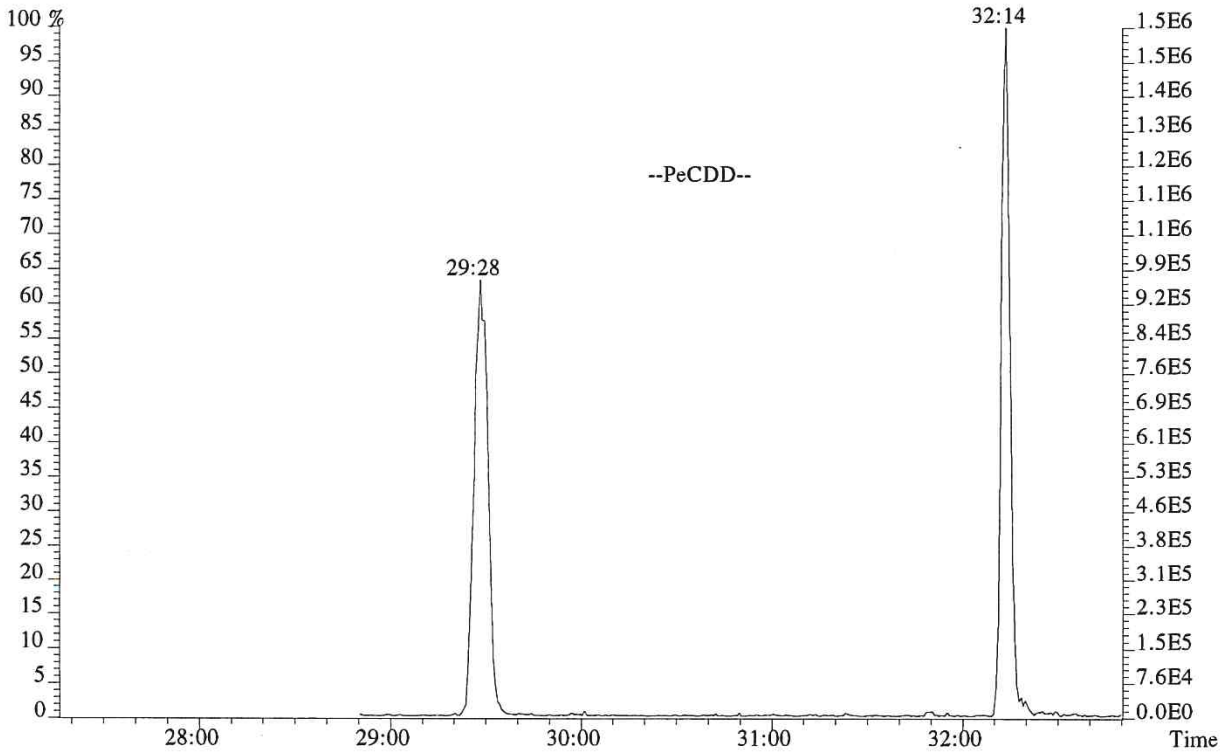




File:P616317 #1-587 Acq: 2-JAN-2019 12:55:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
339.8597,339.8597 F:2

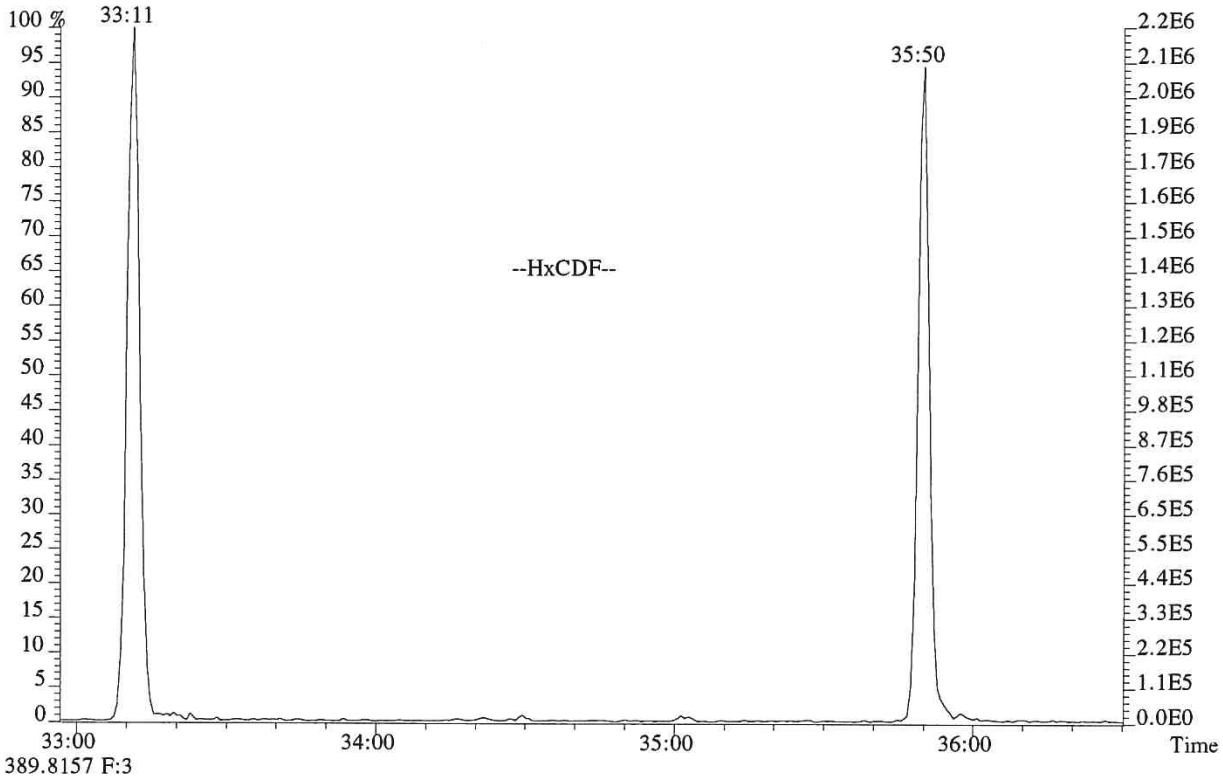


355.8546 F:2

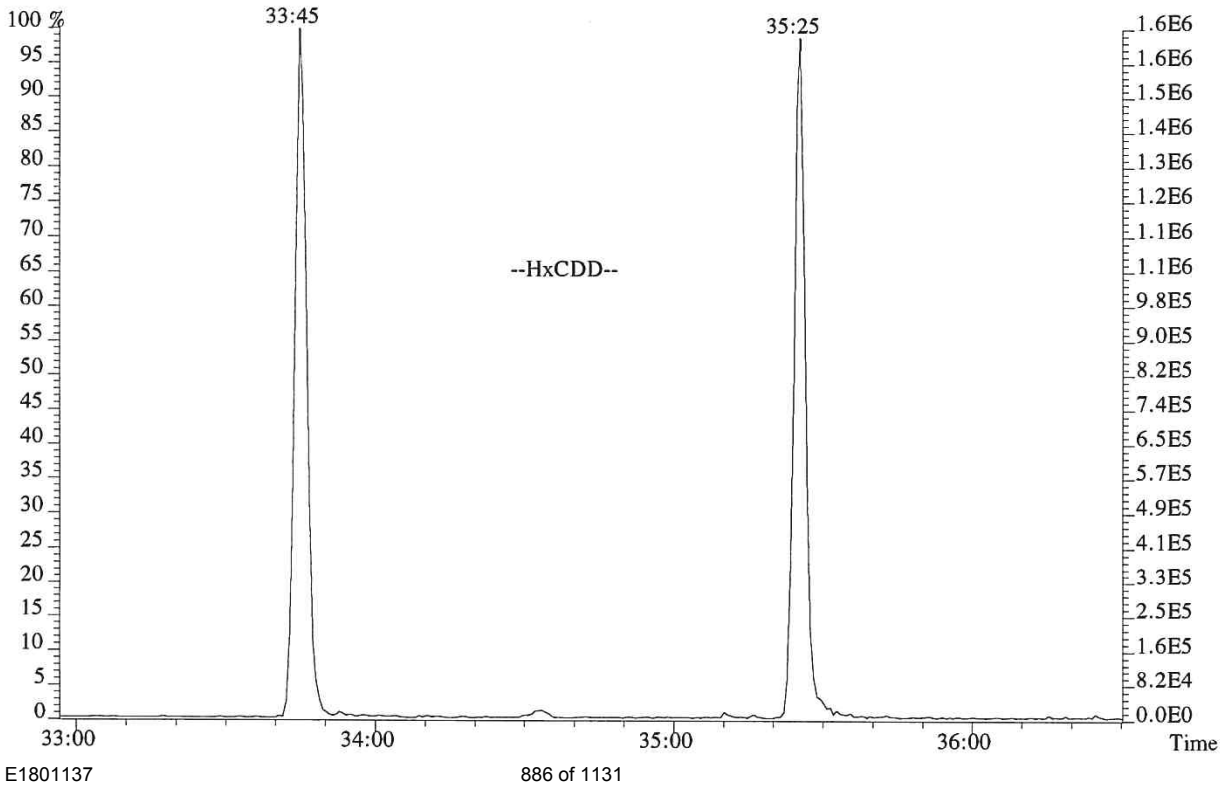


016635

File:P616317 #1-321 Acq: 2-JAN-2019 12:55:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
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373.8208 F:3

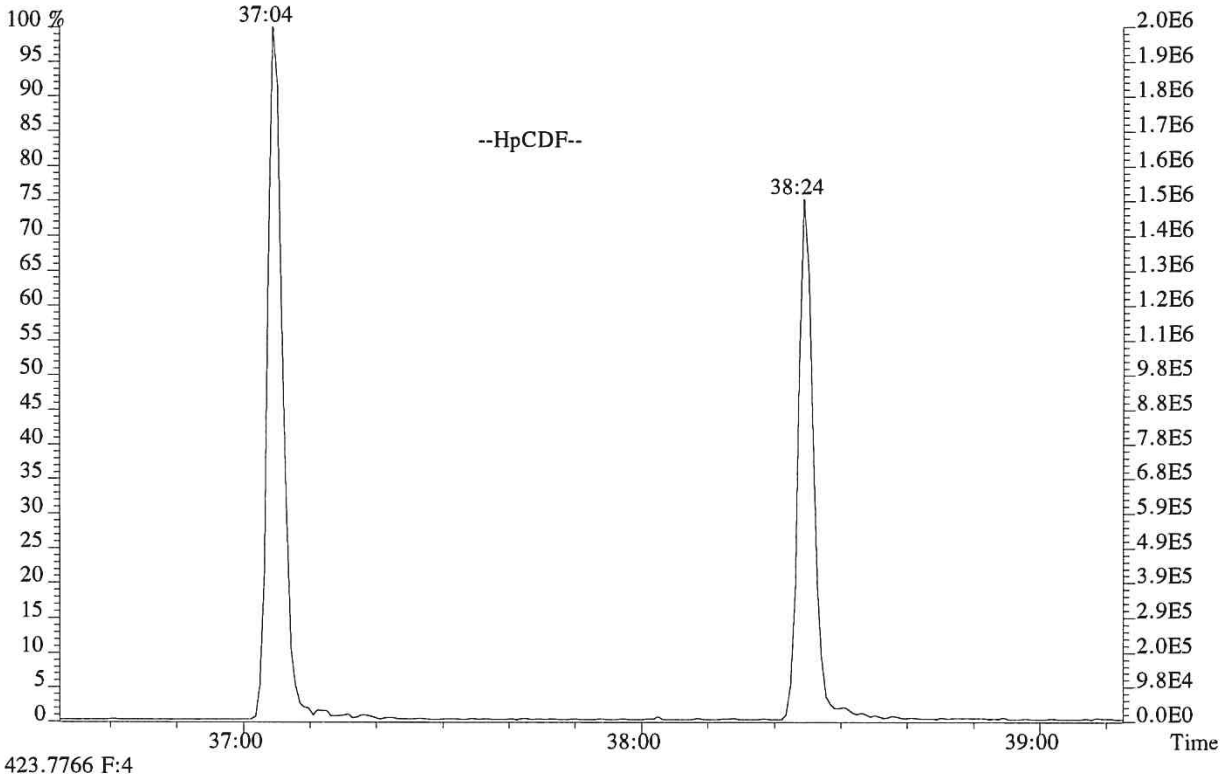


389.8157 F:3

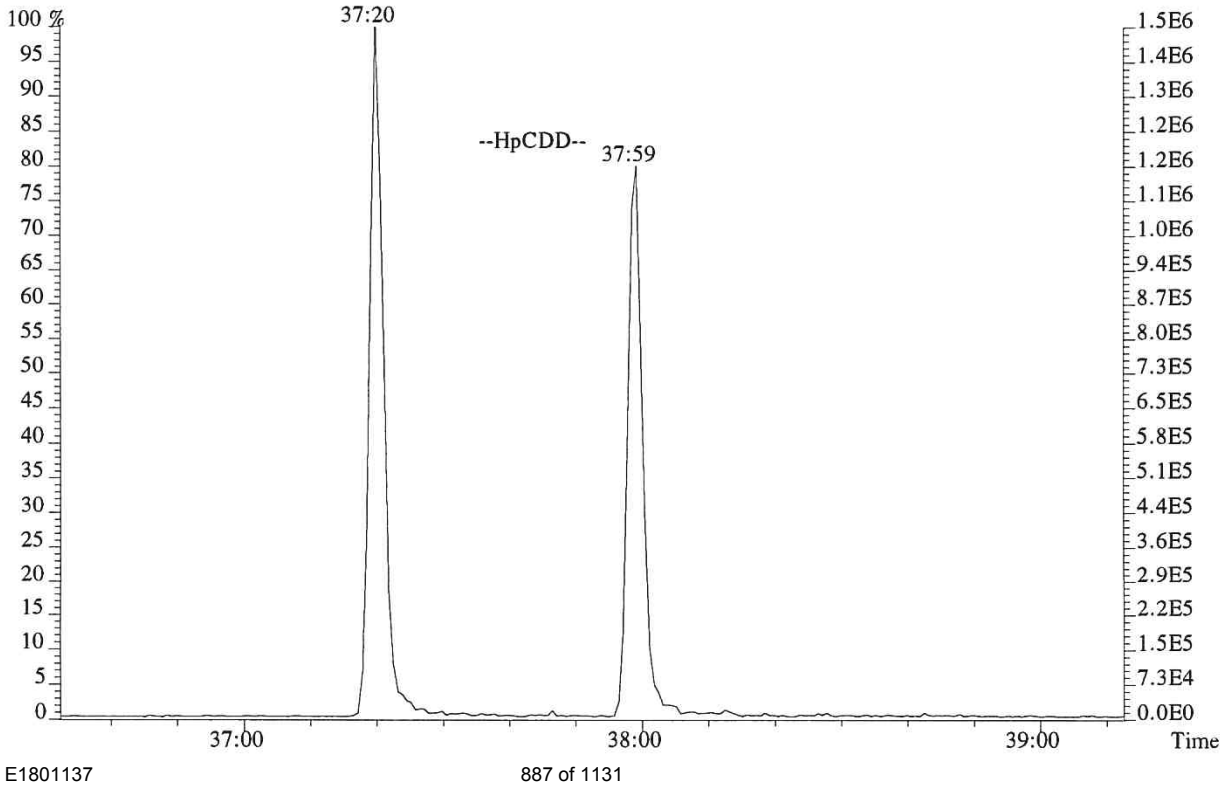


016636

File:P616317 #1-241 Acq: 2-JAN-2019 12:55:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
407.7818 F:4



423.7766 F:4



USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

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

VER Data Filename: P616316 Analysis Date: 2-JAN-19 Time: 12:05:39

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	9.9	7.8 - 12.9	-1.2
1,2,3,7,8-PeCDD	M+2/M+4	1.60	1.32-1.78	52	39 - 65	3.6
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	49	39 - 64	-2.6
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	50	39 - 64	-0.2
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	49	41 - 61	-2.9
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	46	43 - 58	-7.1
OCDD	M+2/M+4	0.87	0.76-1.02	95	79 - 126	-4.8
2,3,7,8-TCDF	M/M+2	0.84	0.65-0.89	9.4	8.4 - 12.0	-5.6
1,2,3,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	46	41 - 60	-8.4
2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	45	41 - 61	-9.9
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	46	45 - 56	-7.3
1,2,3,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	48	44 - 57	-4.4
1,2,3,7,8,9-HxCDF	M+2/M+4	1.30	1.05-1.43	48	45 - 56	-3.8
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	48	44 - 57	-3.1
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.03	0.88-1.20	48	45 - 55	-4.5
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.07	0.88-1.20	48	43 - 58	-4.2
OCDF	M+2/M+4	0.90	0.76-1.02	80	63 - 159	-20.3

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

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

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

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

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

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

VER Data Filename: P616316 Analysis Date: 2-JAN-19 Time: 12:05:39

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	102	82 - 121	2.3
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.57	1.32-1.78	106	62 - 160	6.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	102	85 - 117	2.3
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	100	85 - 118	-0.4
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	92	72 - 138	-7.6
13C-OCDD	M+2/M+4	0.91	0.76-1.02	141	96 - 415	-29.7
13C-2,3,7,8-TCDF	M/M+2	0.81	0.65-0.89	98	71 - 140	-1.5
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	104	76 - 130	3.8
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	106	77 - 130	5.7
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	95	76 - 131	-5.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	91	70 - 143	-8.9
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	87	74 - 135	-13.4
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	91	73 - 137	-8.8
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	86	78 - 129	-14.4
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	77	77 - 129	-23.1
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				10.4	7.8 - 12.7	3.6

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

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
194503

Run #7 Filename P616316 Samp: 1 Inj: 1 Acquired: 2-JAN-19 12:05:39
Processed: 3-JAN-19 13:33:40 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:27	3.060e+03	3.636e+03	0.84	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:29	2.550e+04	1.578e+04	1.62	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:31	2.352e+04	1.529e+04	1.54	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:22	2.193e+04	1.724e+04	1.27	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:29	2.284e+04	1.789e+04	1.28	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	2.121e+04	1.709e+04	1.24	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:47	1.891e+04	1.459e+04	1.30	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:04	1.755e+04	1.711e+04	1.03	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:24	1.371e+04	1.276e+04	1.07	yes	no	1.463
10	Unk	OCDF	40:36	1.487e+04	1.656e+04	0.90	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:28	2.214e+03	2.685e+03	0.82	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:50	1.663e+04	1.038e+04	1.60	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:10	1.459e+04	1.151e+04	1.27	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:15	1.441e+04	1.135e+04	1.27	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:29	1.524e+04	1.221e+04	1.25	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	37:58	1.117e+04	1.100e+04	1.02	yes	no	1.112
17	Unk	OCDD	40:25	1.287e+04	1.478e+04	0.87	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:24	2.929e+04	3.636e+04	0.81	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:28	4.770e+04	3.022e+04	1.58	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:30	4.781e+04	3.028e+04	1.58	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:21	2.058e+04	3.908e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:28	2.285e+04	4.303e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	2.115e+04	4.055e+04	0.52	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	1.821e+04	3.484e+04	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:04	1.505e+04	3.263e+04	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:24	1.171e+04	2.606e+04	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:26	2.078e+04	2.650e+04	0.78	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:48	3.433e+04	2.180e+04	1.57	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	2.786e+04	2.215e+04	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	2.737e+04	2.135e+04	1.28	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	37:58	2.202e+04	2.088e+04	1.05	yes	no	0.857
32	IS	13C-OCDD	40:24	2.390e+04	2.627e+04	0.91	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:40	2.090e+04	2.616e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	2.989e+04	2.425e+04	1.23	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:28	5.295e+03				no	1.086

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Signal/Noise Height Ratio Summary

CLIENT ID.
194503

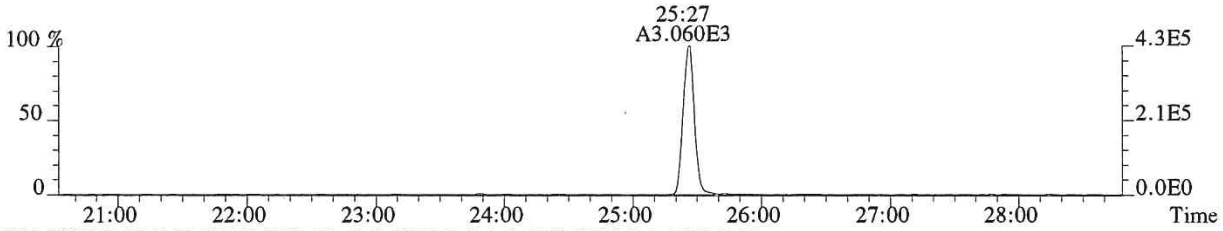
Run #7 Filename P616316 Samp: 1 Inj: 1 Acquired: 2-JAN-19 12:05:39
Processed: 3-JAN-19 13:33:40 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	4.26e+05	1.00e+03	4.3e+02	5.51e+05	2.23e+03	2.5e+02
2	1,2,3,7,8-PeCDF	4.49e+06	6.80e+02	6.6e+03	2.78e+06	1.32e+03	2.1e+03
3	2,3,4,7,8-PeCDF	4.54e+06	6.80e+02	6.7e+03	2.95e+06	1.32e+03	2.2e+03
4	1,2,3,4,7,8-HxCDF	4.71e+06	9.68e+02	4.9e+03	3.67e+06	9.96e+02	3.7e+03
5	1,2,3,6,7,8-HxCDF	4.87e+06	9.68e+02	5.0e+03	3.84e+06	9.96e+02	3.9e+03
6	2,3,4,6,7,8-HxCDF	4.63e+06	9.68e+02	4.8e+03	3.68e+06	9.96e+02	3.7e+03
7	1,2,3,7,8,9-HxCDF	4.16e+06	9.68e+02	4.3e+03	3.19e+06	9.96e+02	3.2e+03
8	1,2,3,4,6,7,8-HpCDF	3.97e+06	3.71e+03	1.1e+03	3.86e+06	2.51e+03	1.5e+03
9	1,2,3,4,7,8,9-HpCDF	3.11e+06	3.71e+03	8.4e+02	2.92e+06	2.51e+03	1.2e+03
10	OCDF	2.96e+06	6.16e+02	4.8e+03	3.24e+06	1.98e+03	1.6e+03
11	2,3,7,8-TCDD	3.34e+05	4.03e+03	8.3e+01	4.42e+05	1.24e+03	3.6e+02
12	1,2,3,7,8-PeCDD	3.13e+06	9.28e+02	3.4e+03	1.95e+06	5.28e+02	3.7e+03
13	1,2,3,4,7,8-HxCDD	3.18e+06	7.00e+02	4.5e+03	2.51e+06	7.60e+02	3.3e+03
14	1,2,3,6,7,8-HxCDD	3.17e+06	7.00e+02	4.5e+03	2.54e+06	7.60e+02	3.3e+03
15	1,2,3,7,8,9-HxCDD	3.41e+06	7.00e+02	4.9e+03	2.71e+06	7.60e+02	3.6e+03
16	1,2,3,4,6,7,8-HpCDD	2.62e+06	9.08e+02	2.9e+03	2.59e+06	7.56e+02	3.4e+03
17	OCDD	2.64e+06	4.28e+02	6.2e+03	3.06e+06	5.48e+02	5.6e+03
18	13C-2,3,7,8-TCDF	4.19e+06	1.24e+04	3.4e+02	5.14e+06	1.15e+04	4.5e+02
19	13C-1,2,3,7,8-PeCDF	8.50e+06	1.43e+03	6.0e+03	5.43e+06	1.32e+03	4.1e+03
20	13C-2,3,4,7,8-PeCDF	9.03e+06	1.43e+03	6.3e+03	5.66e+06	1.32e+03	4.3e+03
21	13C-1,2,3,4,7,8-HxCDF	4.38e+06	1.31e+03	3.3e+03	8.30e+06	2.15e+03	3.9e+03
22	13C-1,2,3,6,7,8-HxCDF	4.88e+06	1.31e+03	3.7e+03	9.21e+06	2.15e+03	4.3e+03
23	13C-2,3,4,6,7,8-HxCDF	4.58e+06	1.31e+03	3.5e+03	8.70e+06	2.15e+03	4.1e+03
24	13C-1,2,3,7,8,9-HxCDF	4.03e+06	1.31e+03	3.1e+03	7.67e+06	2.15e+03	3.6e+03
25	13C-1,2,3,4,6,7,8-HpCDF	3.46e+06	2.22e+03	1.6e+03	7.40e+06	2.00e+03	3.7e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.63e+06	2.22e+03	1.2e+03	5.85e+06	2.00e+03	2.9e+03
27	13C-2,3,7,8-TCDD	3.21e+06	1.27e+04	2.5e+02	4.20e+06	3.58e+03	1.2e+03
28	13C-1,2,3,7,8-PeCDD	6.69e+06	1.63e+03	4.1e+03	4.17e+06	1.51e+03	2.8e+03
29	13C-1,2,3,4,7,8-HxCDD	6.03e+06	1.26e+03	4.8e+03	4.84e+06	8.84e+02	5.5e+03
30	13C-1,2,3,6,7,8-HxCDD	5.97e+06	1.26e+03	4.7e+03	4.69e+06	8.84e+02	5.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	5.12e+06	1.63e+03	3.1e+03	4.86e+06	1.04e+03	4.7e+03
32	13C-OCDD	4.94e+06	3.44e+02	1.4e+04	5.45e+06	3.08e+02	1.8e+04
33	13C-1,2,3,4-TCDD	3.07e+06	1.27e+04	2.4e+02	3.92e+06	3.58e+03	1.1e+03
34	13C-1,2,3,7,8,9-HxCDD	6.73e+06	1.26e+03	5.3e+03	5.35e+06	8.84e+02	6.1e+03
35	37Cl-2,3,7,8-TCDD	8.14e+05	1.69e+03	4.8e+02			

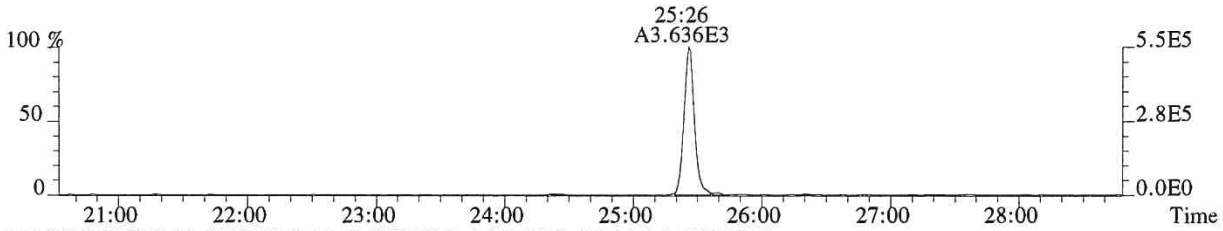
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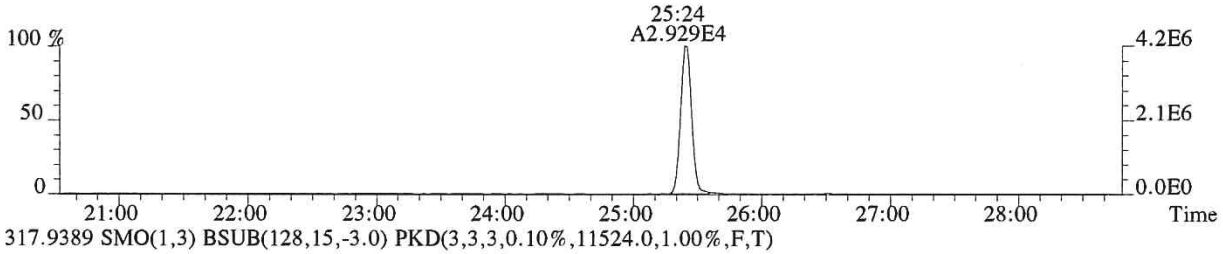
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Sample#1 Exp:CS3
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1000.0,1.00%,F,T)



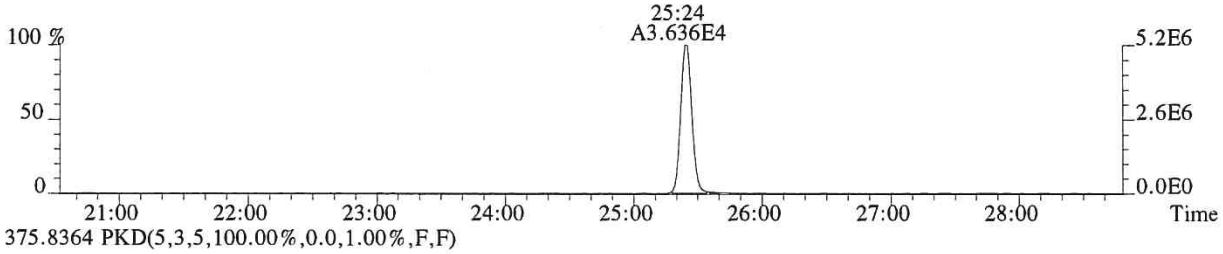
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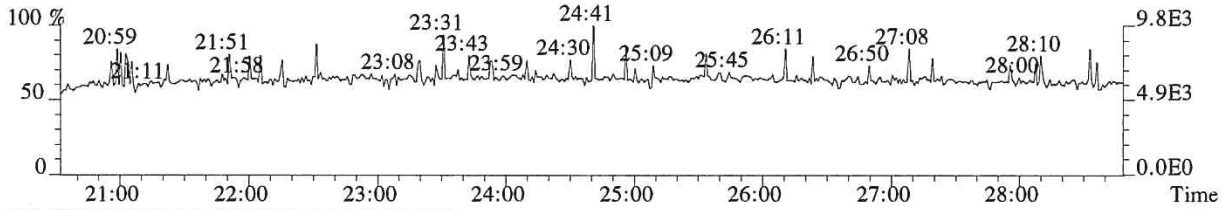
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12384.0,1.00%,F,T)



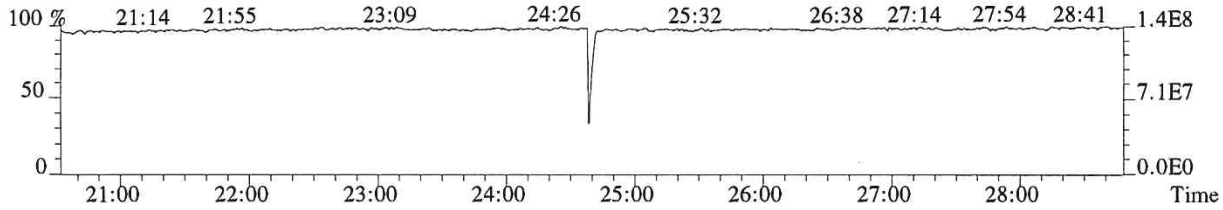
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11524.0,1.00%,F,T)



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

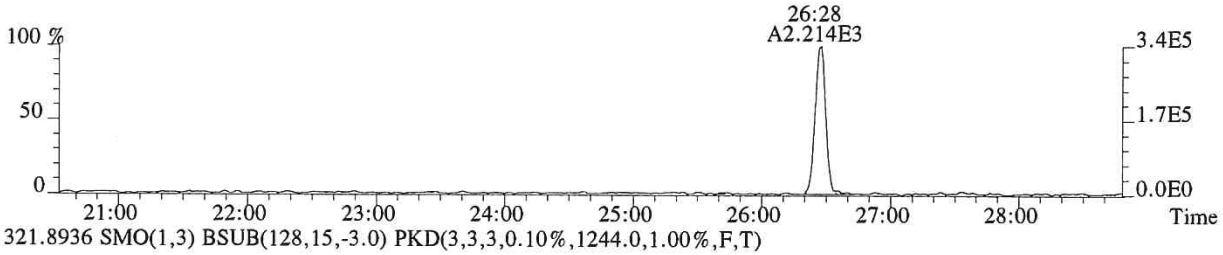


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

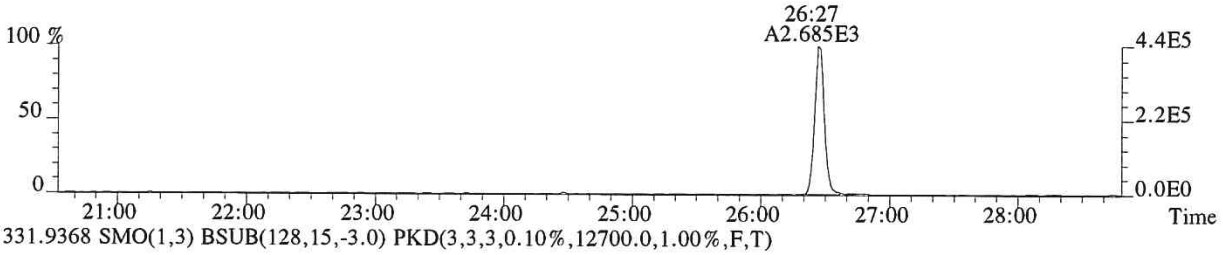


016642

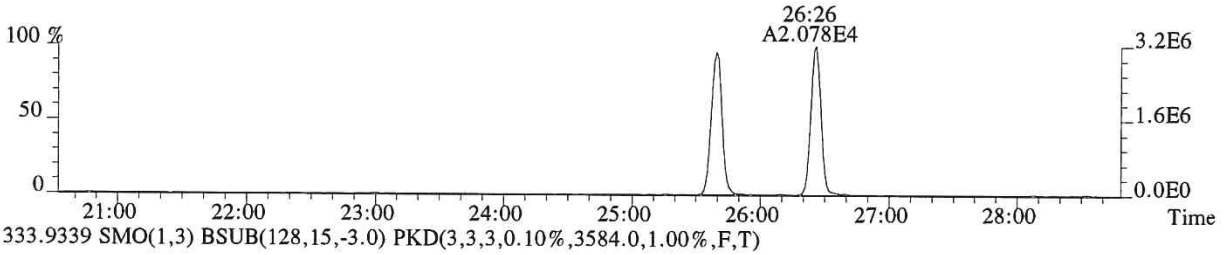
File:P616316 #1-587 Acq: 2-JAN-2019 12:05:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
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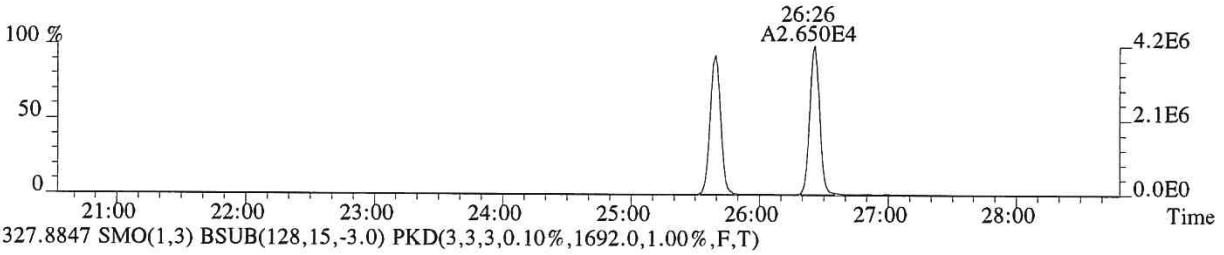
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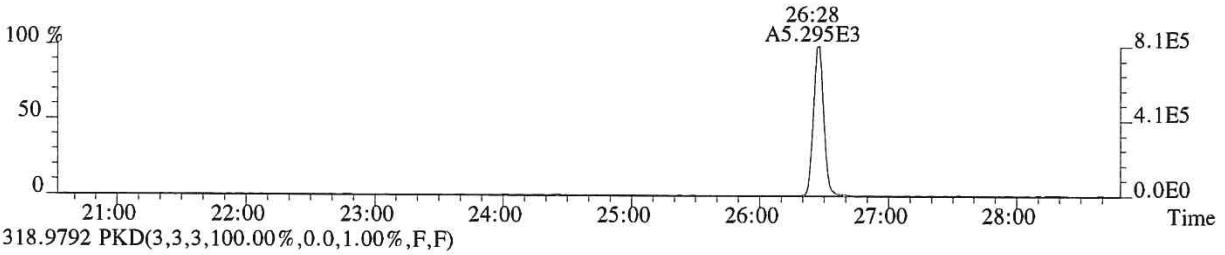
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12700.0,1.00%,F,T)



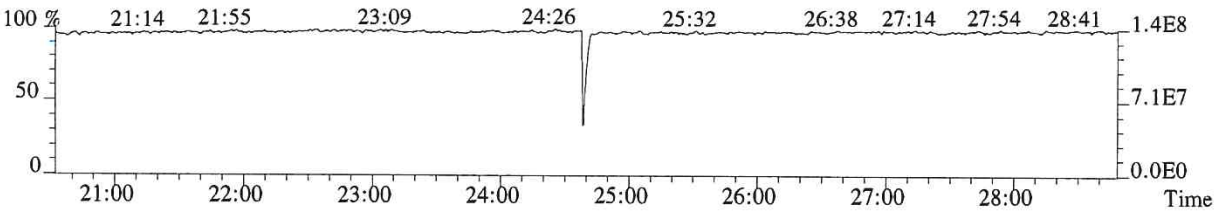
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3584.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1692.0,1.00%,F,T)

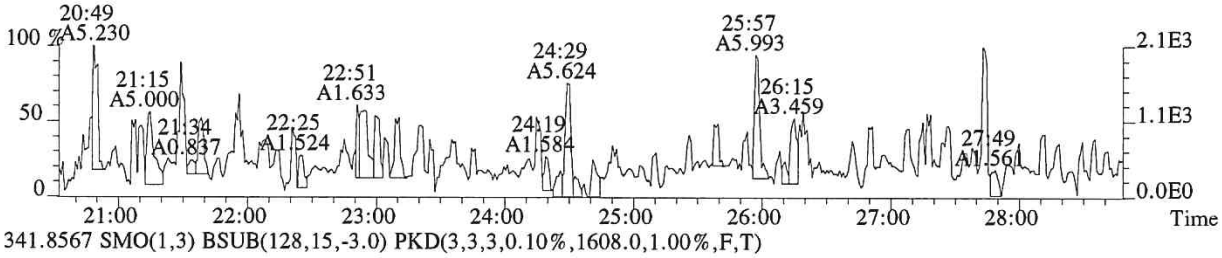


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

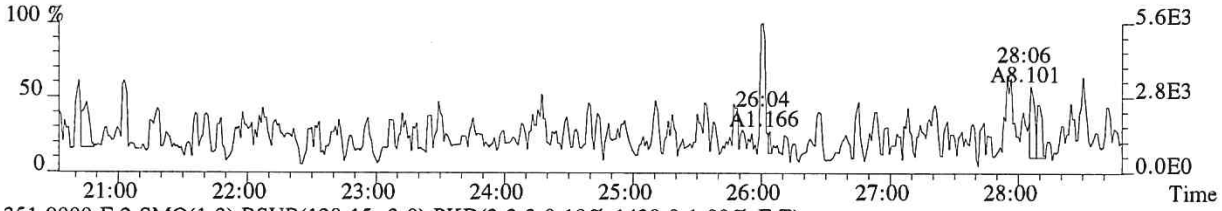


016643

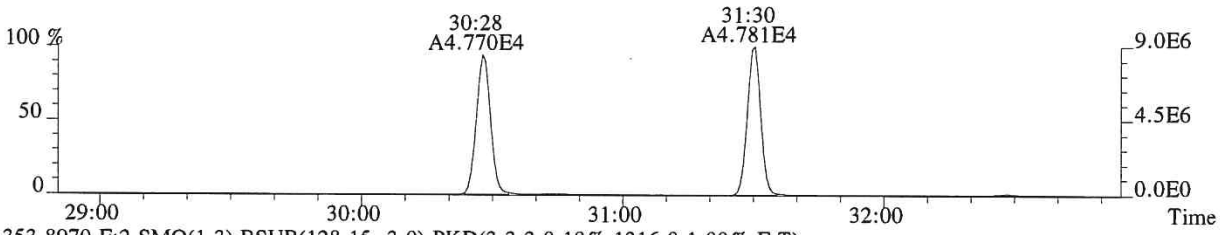
File:P616316 #1-587 Acq: 2-JAN-2019 12:05:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,552.0,1.00%,F,T)



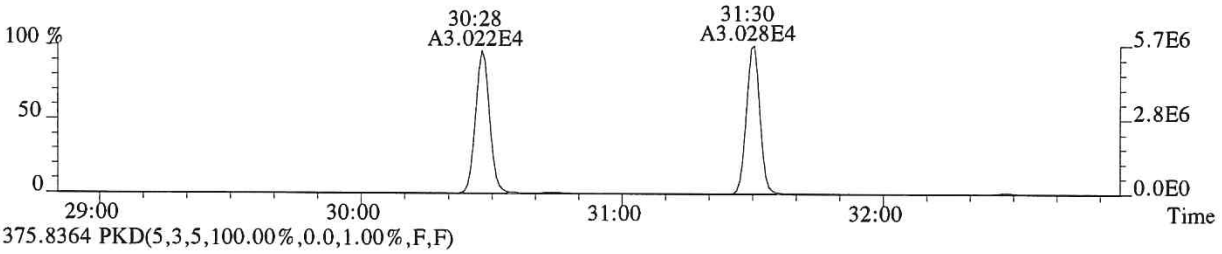
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1608.0,1.00%,F,T)



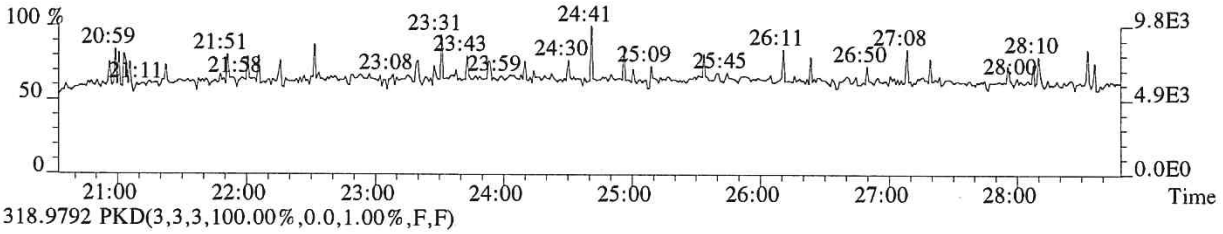
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1428.0,1.00%,F,T)



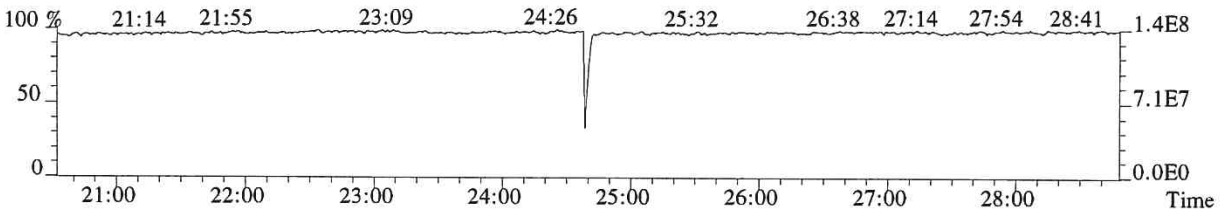
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1316.0,1.00%,F,T)



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

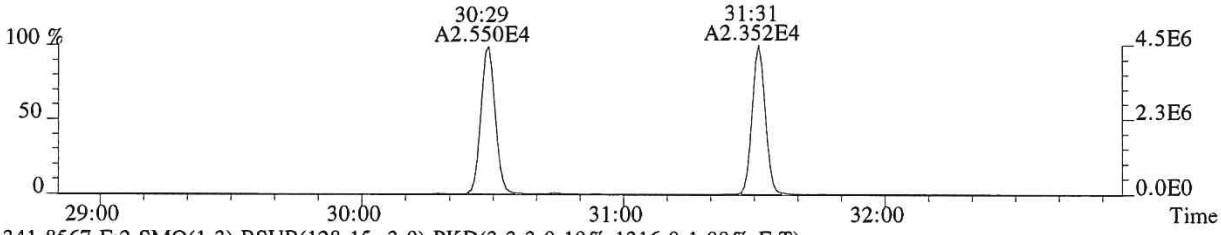


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

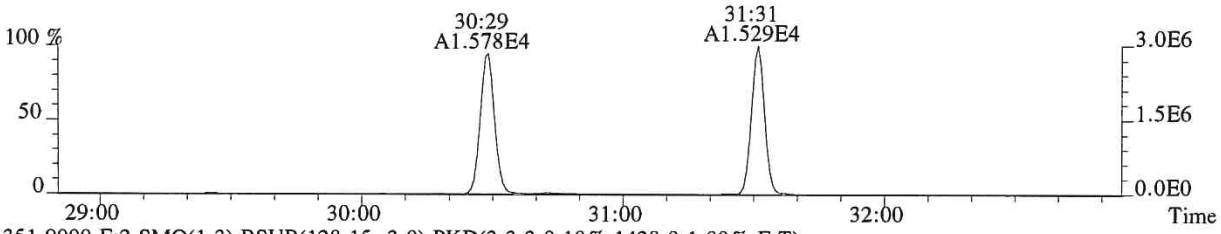


016644

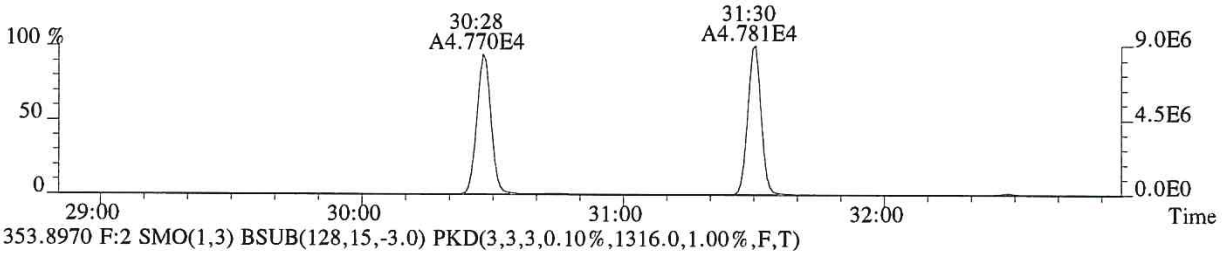
File:P616316 #1-367 Acq: 2-JAN-2019 12:05:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,680.0,1.00%,F,T)



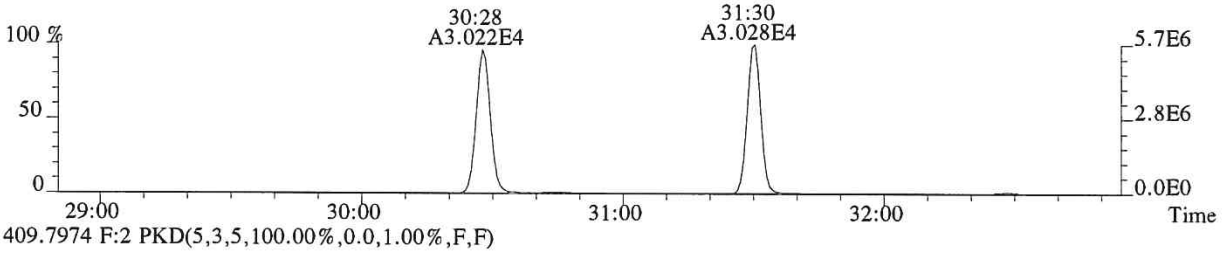
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1316.0,1.00%,F,T)



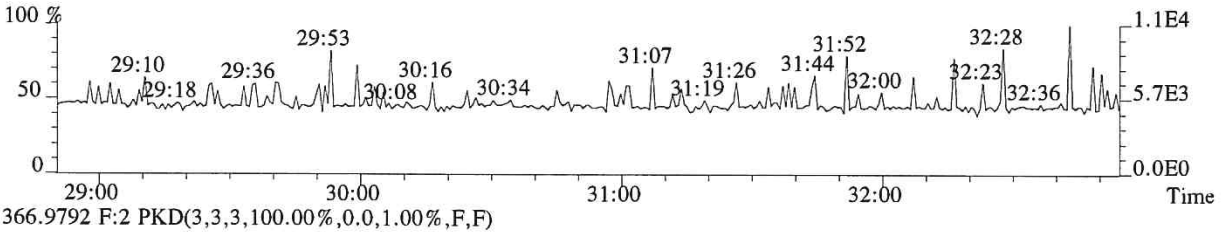
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1428.0,1.00%,F,T)



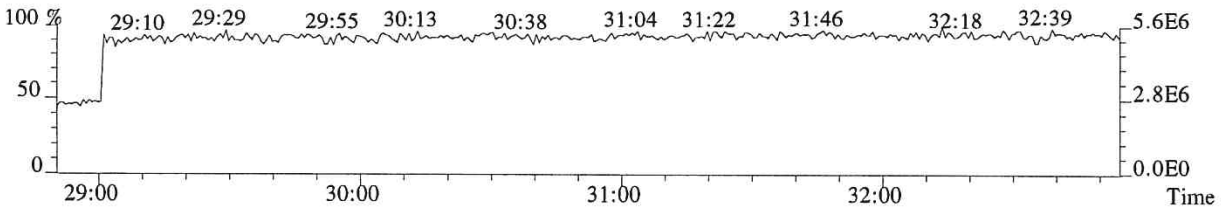
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1316.0,1.00%,F,T)



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

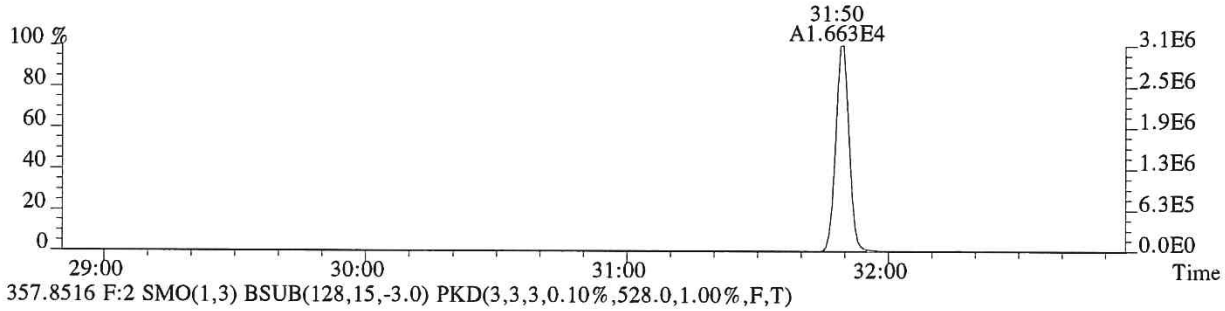


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

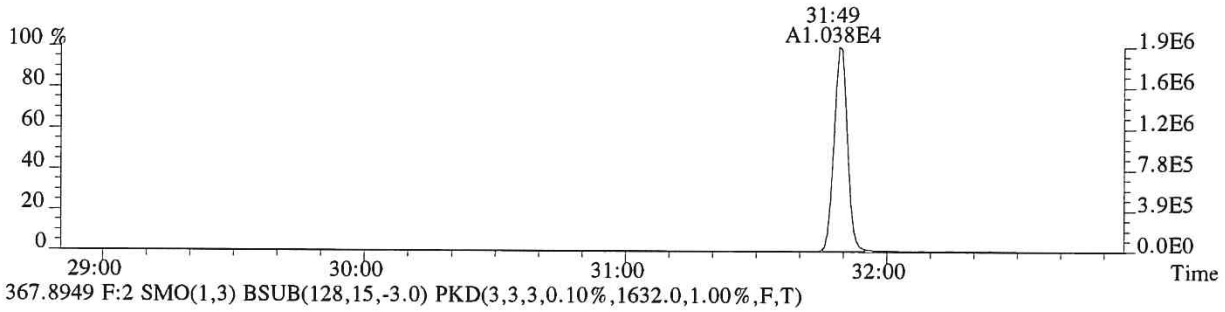


016645

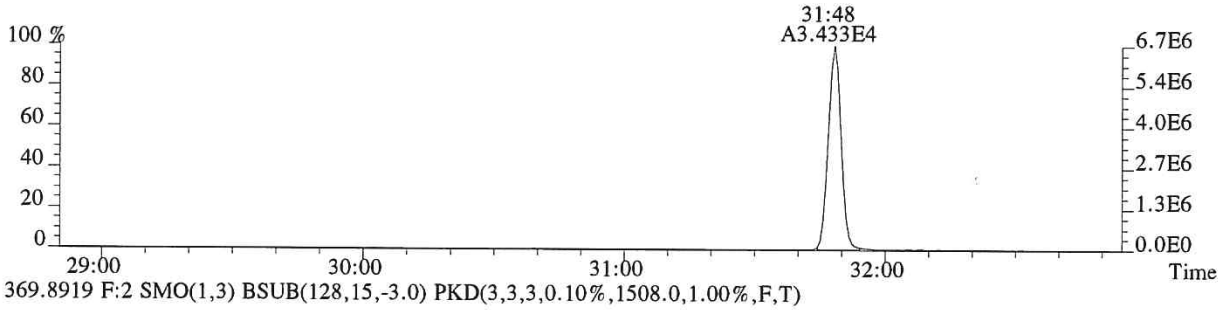
File:P616316 #1-367 Acq: 2-JAN-2019 12:05:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,928.0,1.00%,F,T)



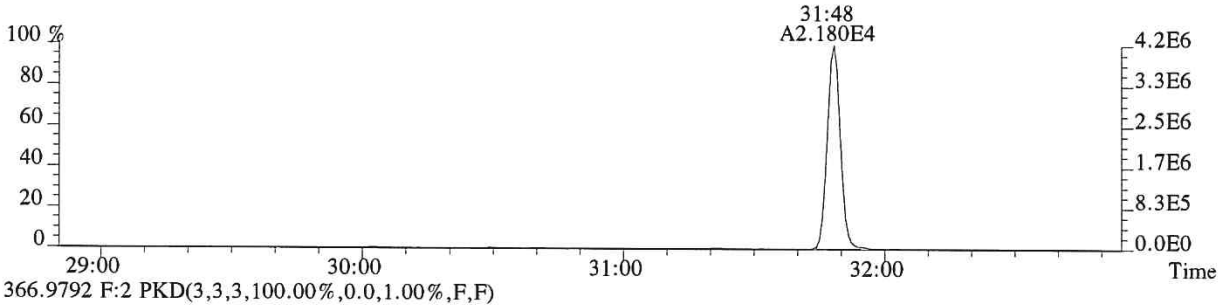
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,528.0,1.00%,F,T)



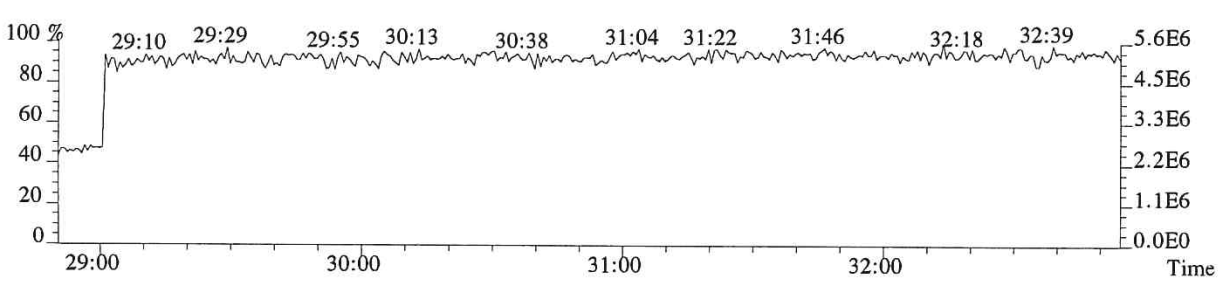
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1632.0,1.00%,F,T)



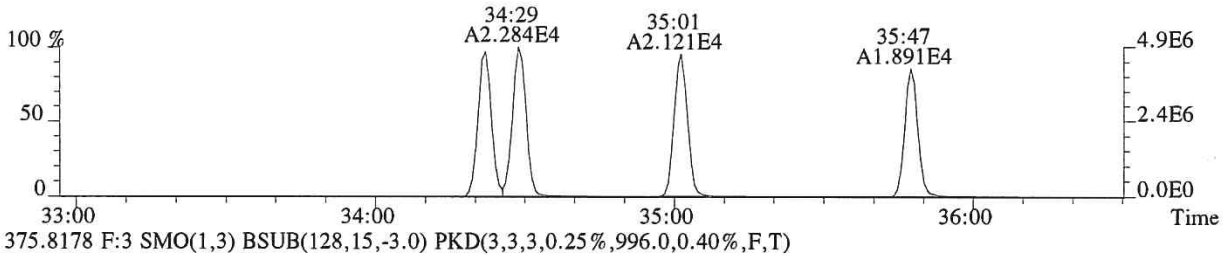
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1508.0,1.00%,F,T)



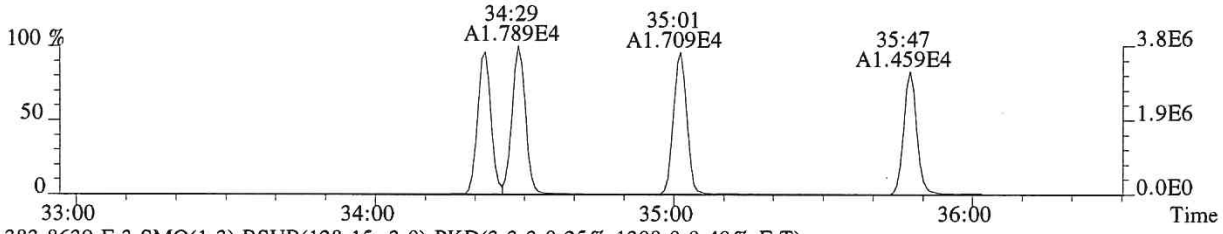
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



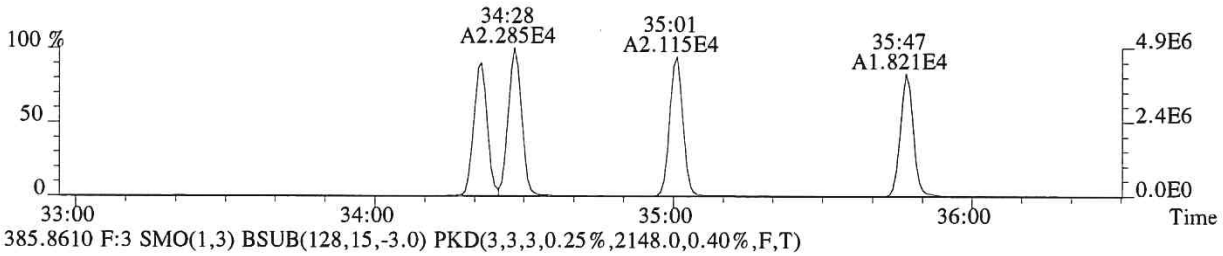
File:P616316 #1-321 Acq: 2-JAN-2019 12:05:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,968.0,0.40%,F,T)



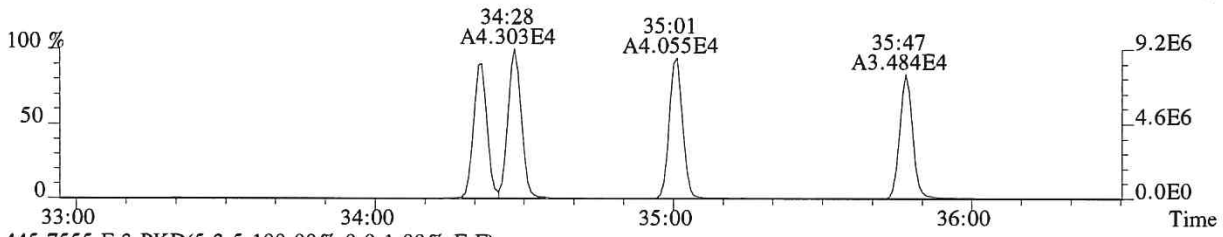
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,996.0,0.40%,F,T)



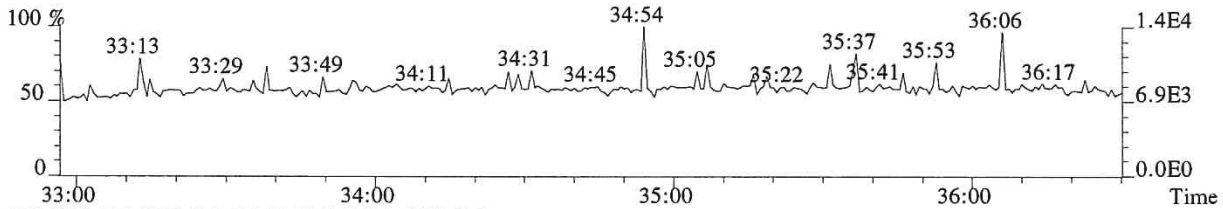
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1308.0,0.40%,F,T)



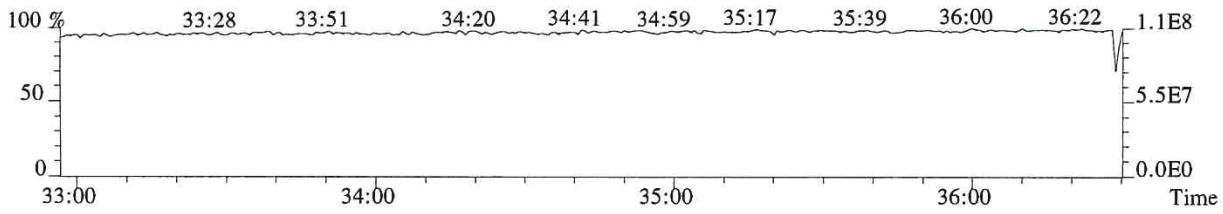
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2148.0,0.40%,F,T)



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

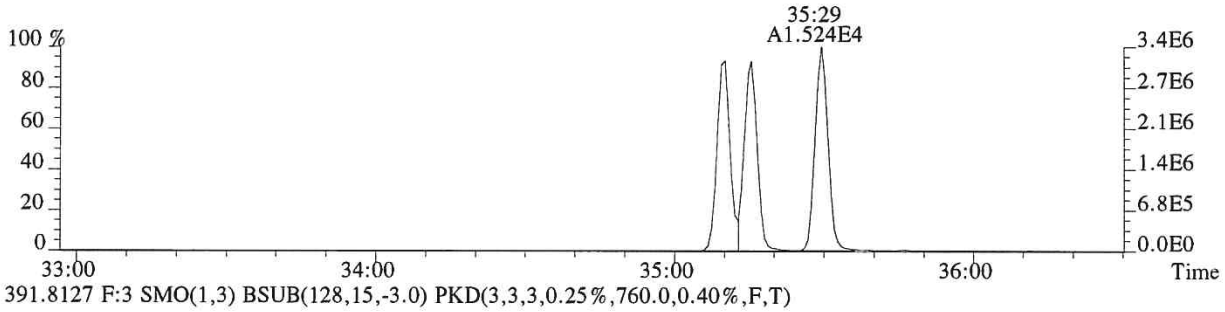


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

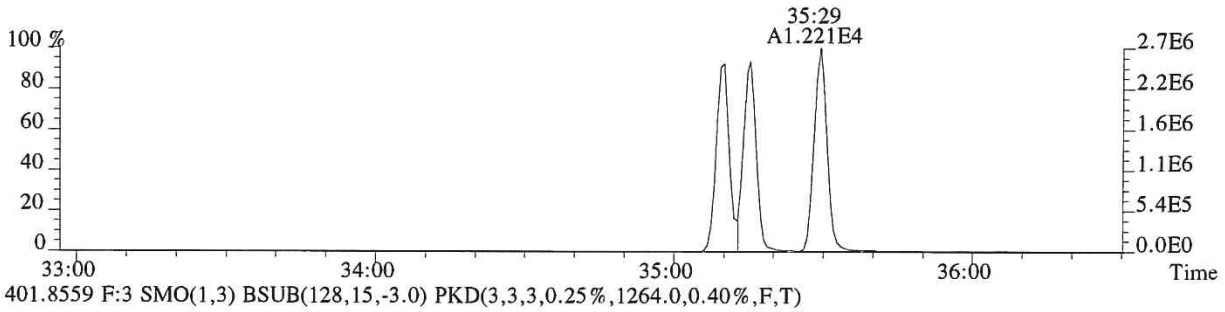


016647

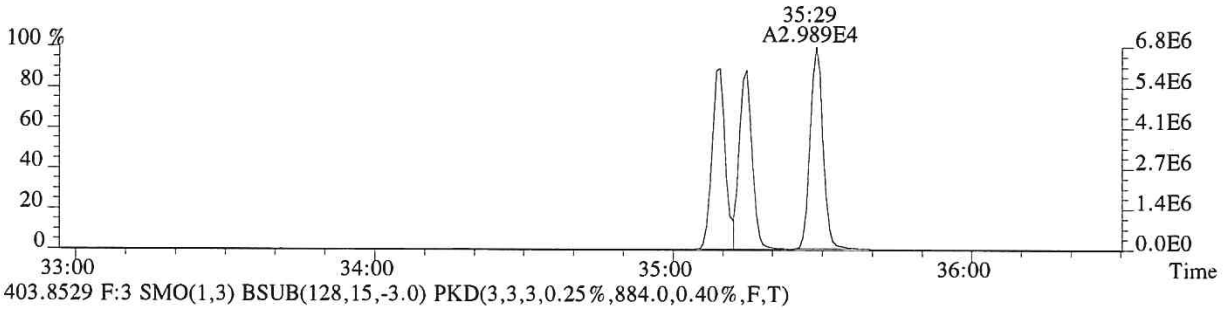
File:P616316 #1-321 Acq: 2-JAN-2019 12:05:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,700.0,0.40%,F,T)



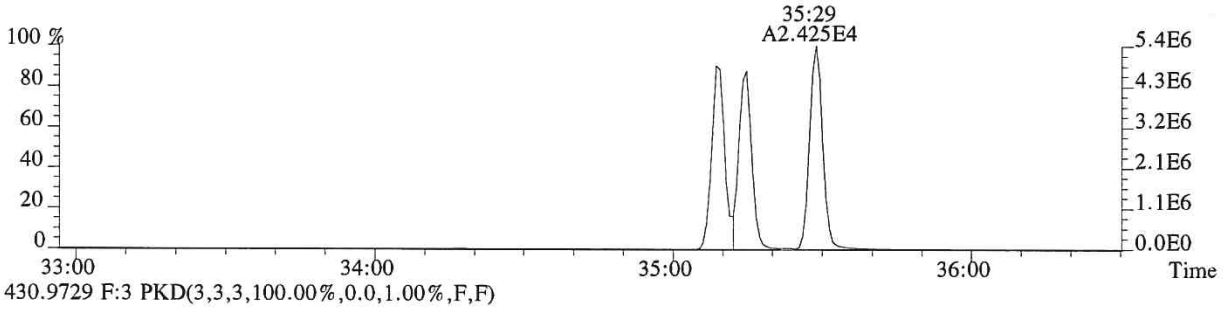
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,760.0,0.40%,F,T)



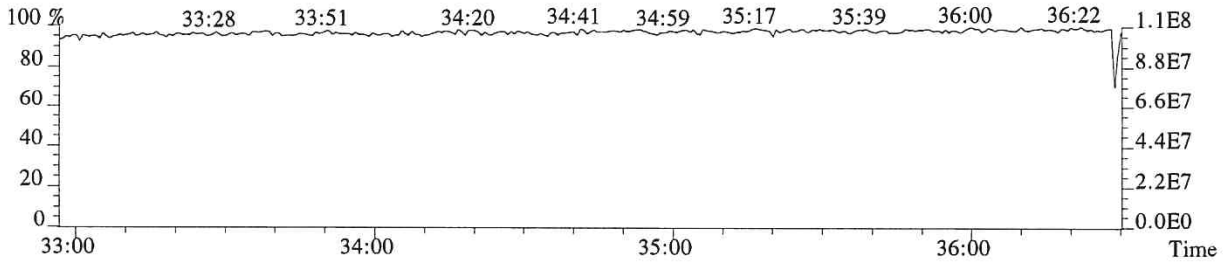
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1264.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



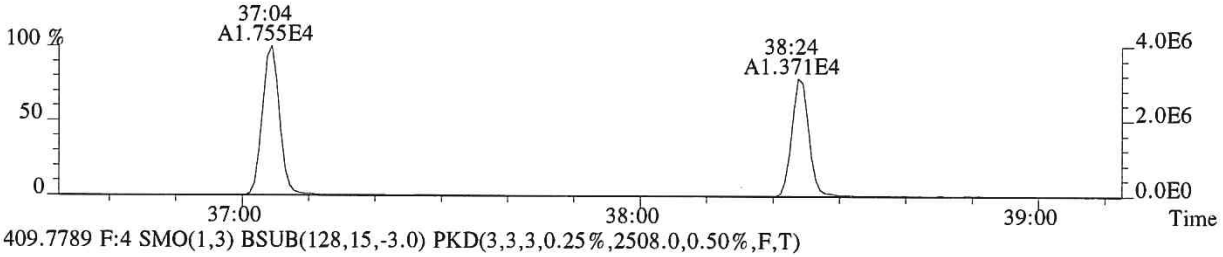
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



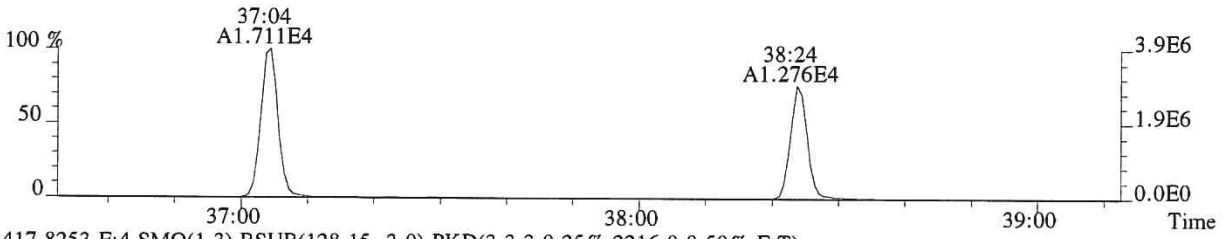
016648

File:P616316 #1-241 Acq: 2-JAN-2019 12:05:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

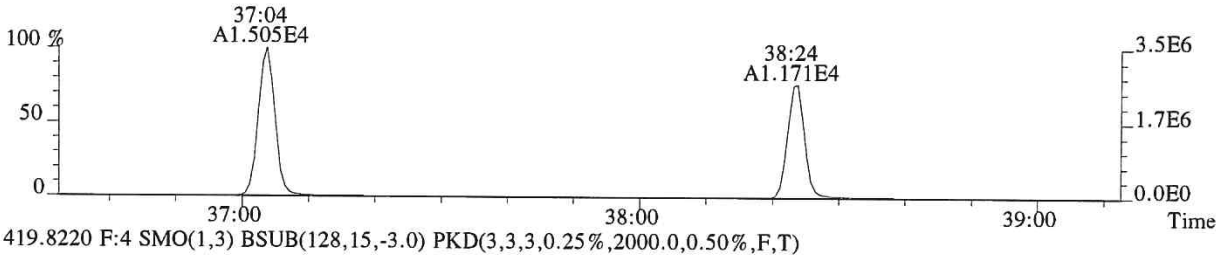
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3712.0,0.50%,F,T)



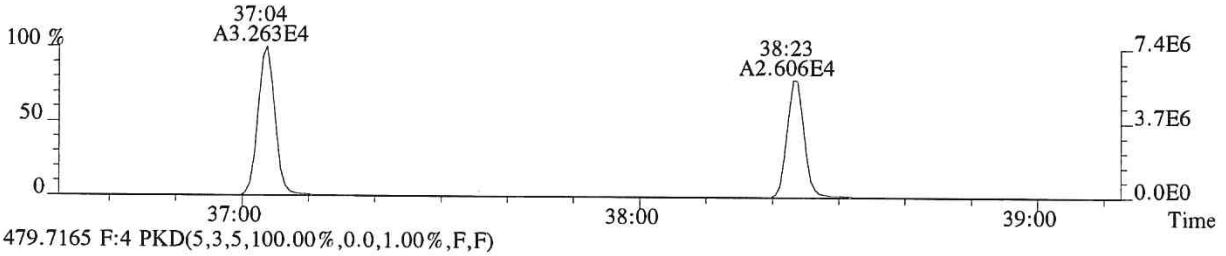
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2508.0,0.50%,F,T)



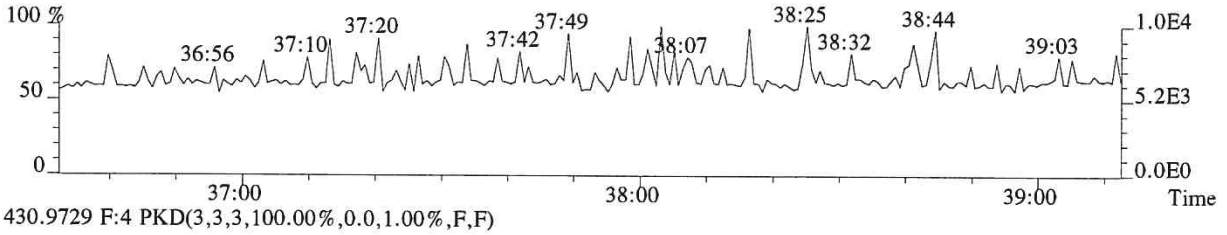
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2216.0,0.50%,F,T)



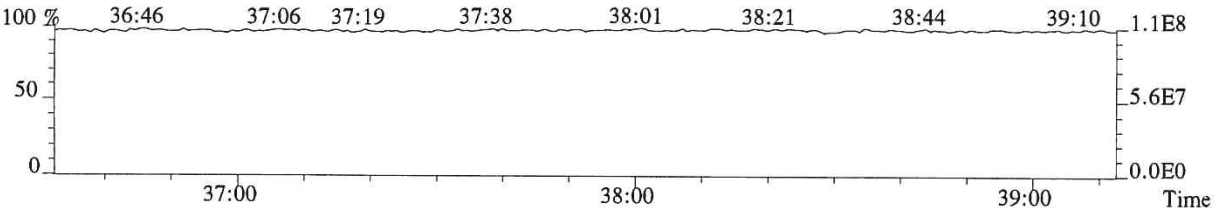
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2000.0,0.50%,F,T)



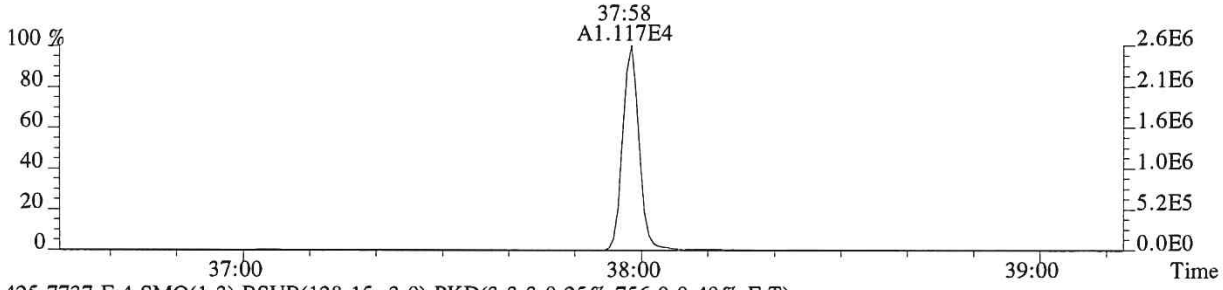
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



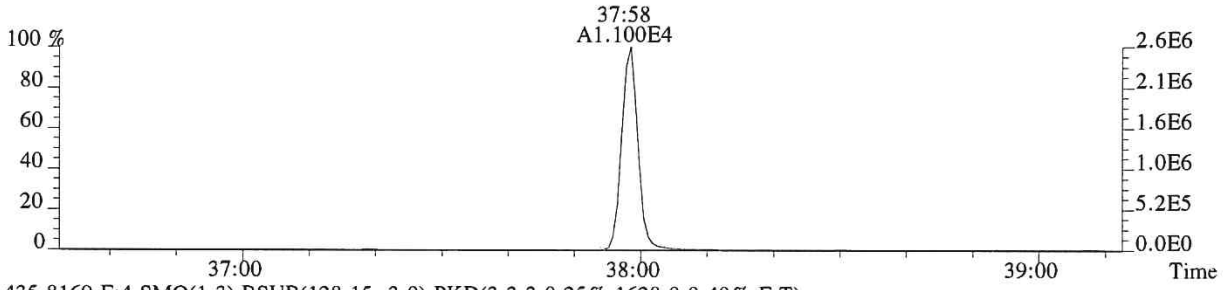
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



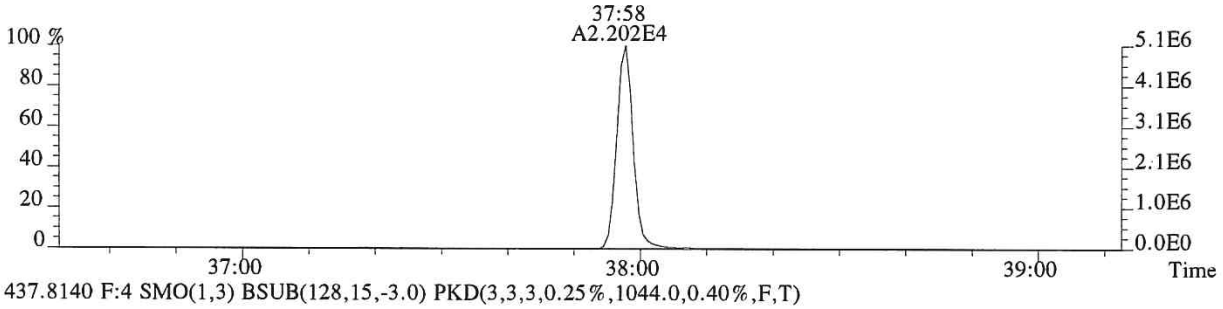
File:P616316 #1-241 Acq: 2-JAN-2019 12:05:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,908.0,0.40%,F,T)



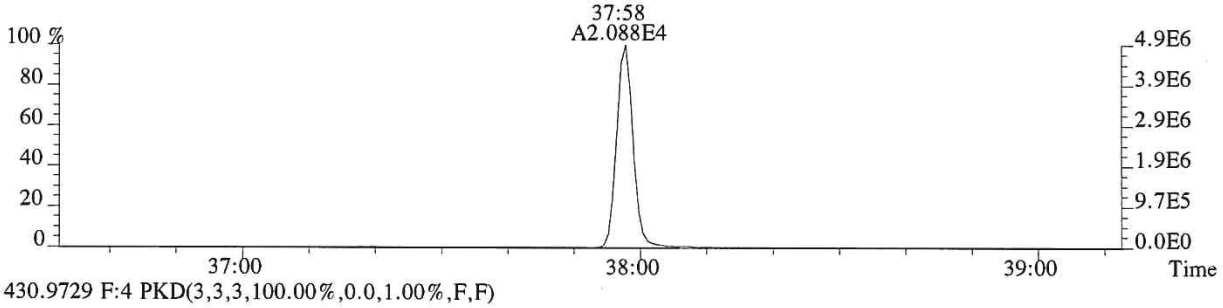
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,756.0,0.40%,F,T)



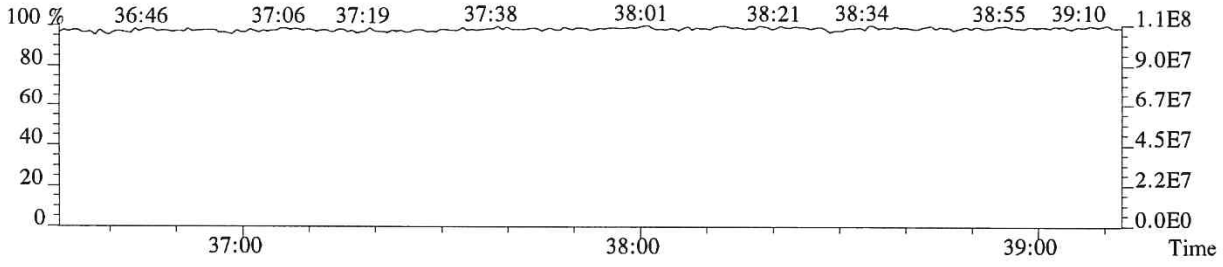
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1628.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1044.0,0.40%,F,T)

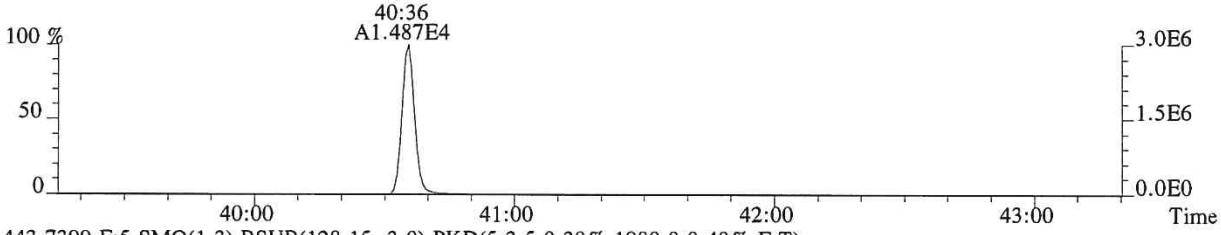


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

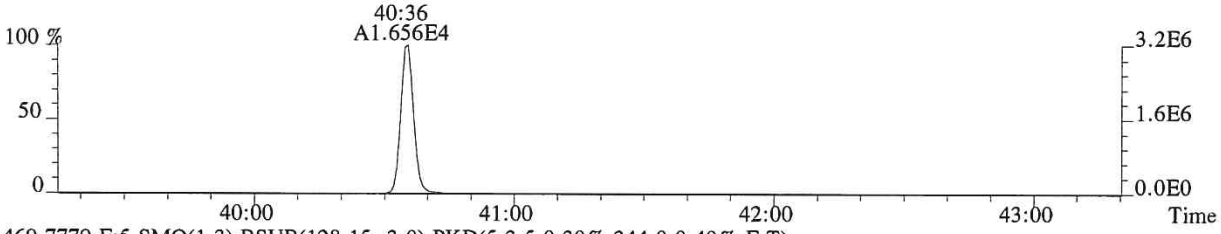


016650

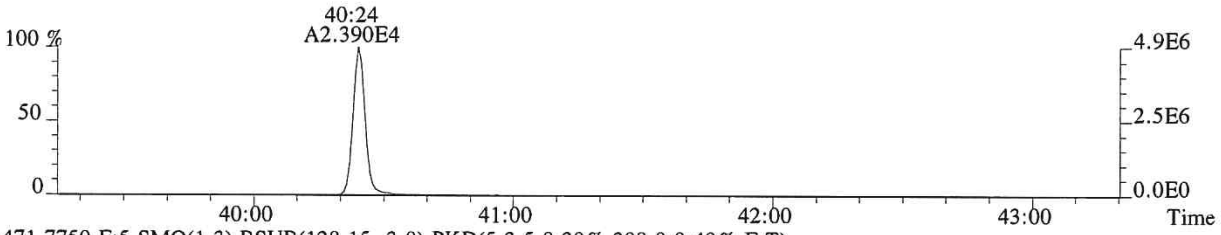
File:P616316 #1-369 Acq: 2-JAN-2019 12:05:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,616.0,0.40%,F,T)



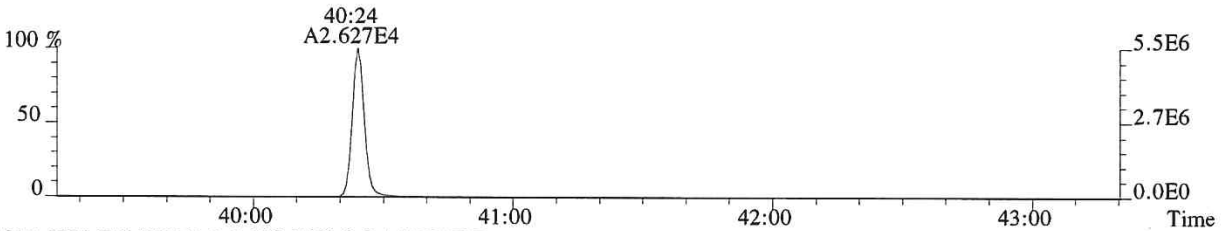
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1980.0,0.40%,F,T)



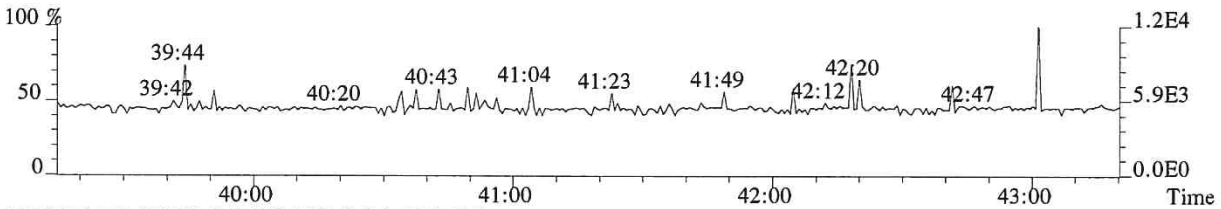
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,344.0,0.40%,F,T)



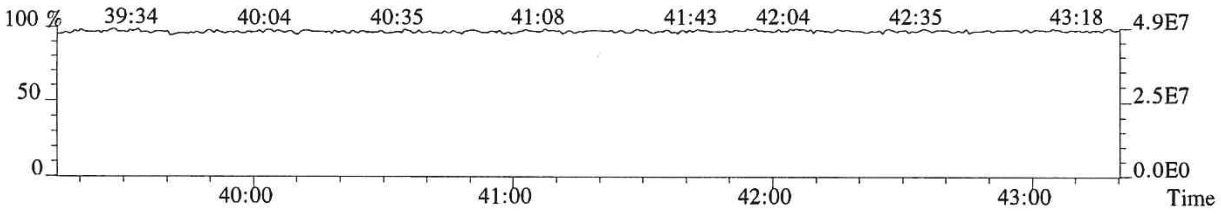
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,308.0,0.40%,F,T)



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

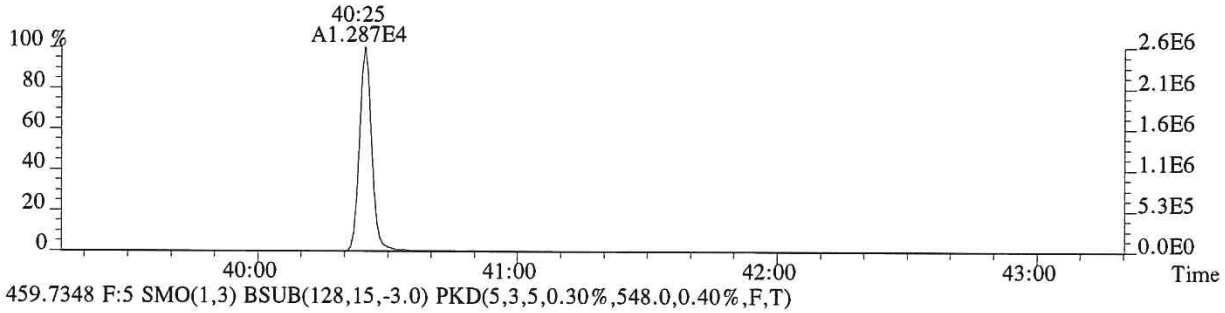


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

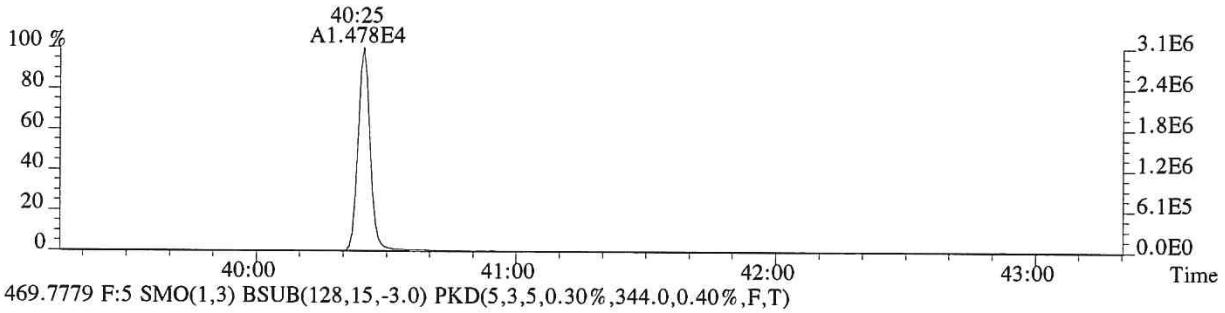


016651

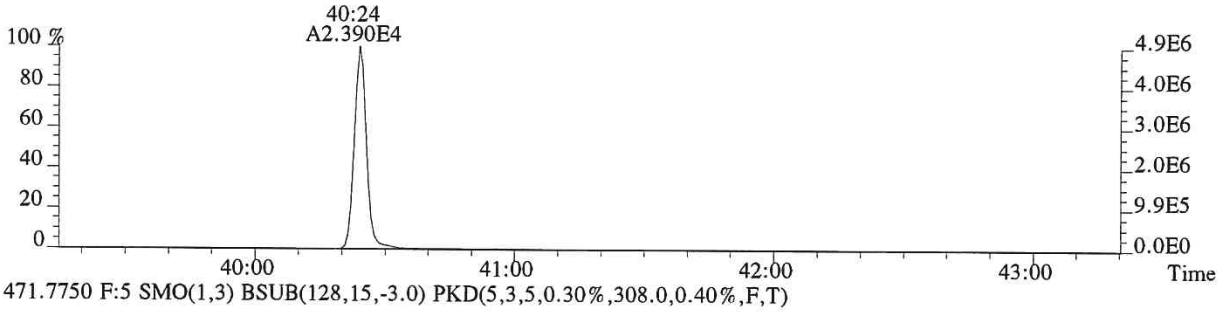
File:P616316 #1-369 Acq: 2-JAN-2019 12:05:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,428.0,0.40%,F,T)



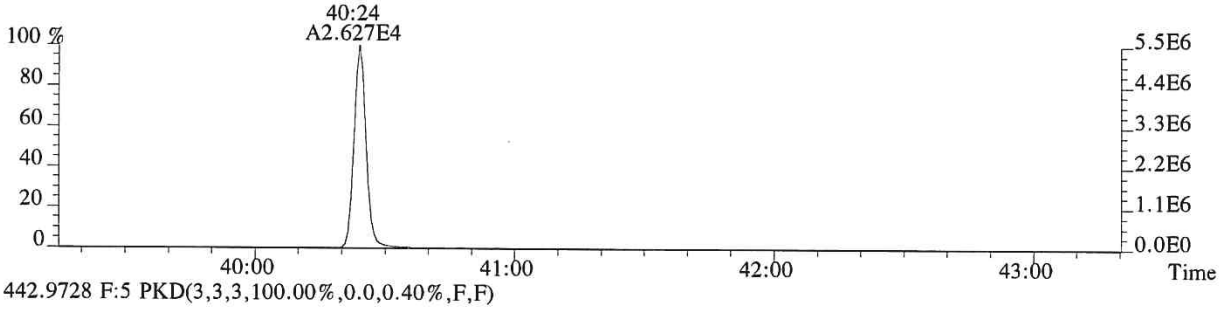
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,548.0,0.40%,F,T)



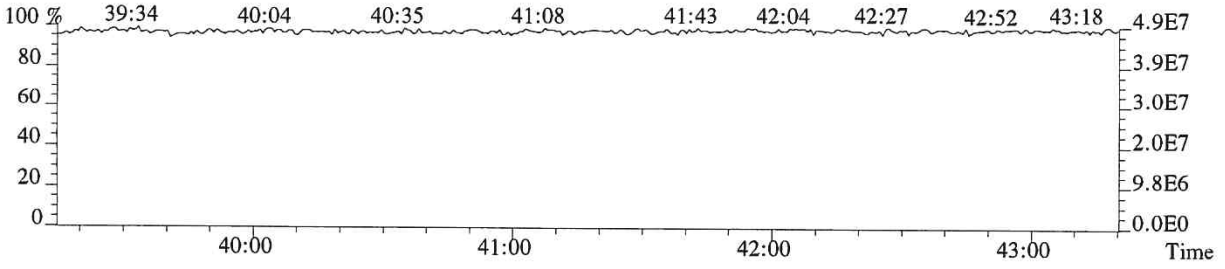
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,344.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,308.0,0.40%,F,T)



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



016652

Initial Calibration

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

Laboratory Review Checklist: HRMS Initial Calibration

Method: 1613/8290	Process Date: 01/25/18
Instrument Name: E-HRMS-07	Calibration File Name: P5-1801241613I
Processor Name: Gisela Cruz	Reviewer Name: Loan Leung
Supervisor: Kristin Neir	

Description	Yes	No	NA	NR	ER#
Analytical Sequence					
Does the analytical sequence summary accurately reflect the instrument run log, including ICV?	√				
Was a Mass Resolution Check performed at the beginning and end of the 12-hour sequence?	√				
Were all calibration standards and the ICV analyzed within the same 12-hour sequence?	√				
Were all calibration standards analyzed only once?	√				
Was the ICV analyzed after the ICAL, before analyzing samples?	√				
	√				
Mass Resolution Check					
Are beginning and ending resolution checks provided and legible?	√				
Were all target masses >10,000 resolving power at the beginning of the sequence?	√				
Were all target masses >10,000 resolving power at the end of the sequence?	√				
For PCB analysis, were masses at the low and high end of each function mass range >8,000?			√		
Where automatic printout of the mass resolution were not >10,000, was the resolution inspected by a trained analyst, including manual calculation of the resolution, if warranted?			√		
Window Define/209					
Is the window defining mix summary present, and accompanied by SICPs/Chromatograms for the WDM?	√				
Was the WDM/Column Performance/209 solution analyzed prior to the analysis of the calibration standards?	√				
Was 2,3,7,8-TCDD peak valley <25% to any other TCDD?	√				
Were all first and last eluters adequately resolved in each function?	√				
If first and last eluters were not resolved, was corrective action performed and documented, followed by a reanalysis of the WDM?			√		
Was the retention time of PCB 209 >55 min?			√		
Were the following congeners uniquely resolved (valley height <40% of the shortest peak)? PCB-34 and PCB-23 PCB-187 and PCB-182			√		
Did PCB 156/157 co-elute within 2 seconds at peak maximum?			√		
Calibration Standards					
Were there at least 5 calibration standards analyzed?	√				
If not all calibration standards were used, were the omitted standards either the lowest or highest calibration standard?			√		

Laboratory Review Checklist: HRMS Initial Calibration

Method: 1613/8290	Process Date: 01/25/18
Instrument Name: E-HRMS-07	Calibration File Name: P5-180124161 3I
Processor Name: Gisela Cruz	Reviewer Name: Loan Luong
Supervisor: Kristin Neir	

Description	Yes	No	NA	NR	ER#
Are all sample response summaries, S/N height summaries, and SICPs included (and legible) for the entire sequence?	√				
Did each calibration point meet method criteria for Ion Abundance Ratio for all analytes and labeled standards?	√				
Did each calibration point meet method criteria for signal-to-noise ratios (S/N)?	√				
Were area counts for the highest calibration standard below levels of saturation?	√				
Were manual integrations technically justified to correct for poor software integration?		√			
Response Factors					
Is the ICAL Response Factor Summary present, including RR/RF values for each native/labeled analyte at each level of calibration?	√				
Were all calibration standards used in determining response factors?	√				
Were relative response factors (RR) for each native analyte calculated at each calibration point?	√				
Did the RSD for RRFs for each native analyte meet method criteria?	√				
Were response factors (RF) for each native analyte not having a corresponding labeled compound calculated at each calibration point?	√				
Were RFs for each labeled compound calculated for each calibration point?	√				
Did the RSD for RF for each labeled compound meet method criteria?	√				
Initial Calibration Verification					
Is the calibration verification present, including form 4A/B reflecting results for the ICV (Conc. or %D)	√				
Did all analytes meet method criteria for the ICV.	√				

Laboratory Review Checklist: Initial Calibration

Method: 1613/8290	Process Date: 01/25/18
Instrument Name: E-HRMS-07	Calibration File Name: P5-180124161 3I
Processor Name: Gisela Cruz	Reviewer Name: Loan Luong

ER#[5]	Description

NA = Not Applicable;
NR = Not Reviewed;
R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: TX01411 Episode No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm) Instrument ID: E-HRMS-07

Init. Calib. Date: 01/24/18

Init. Calib.Times: 11:44

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, SPIKES AND DUPLICATES IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
183360	WINDOW DEFINE	P513848	24-JAN-18	11:44:47
76554	CS0.5	P513850	24-JAN-18	13:32:06
76555	CS1	P513851	24-JAN-18	14:23:56
76556	CS2	P513852	24-JAN-18	15:18:44
76557	CS3	P513853	24-JAN-18	16:06:29
76558	CS4	P513854	24-JAN-18	16:55:09
185657	CS5	P513855	24-JAN-18	17:43:48
75080	2ND SOURCE	P513857	24-JAN-18	19:21:06

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

Sample List: C:\MassLynx\EHRMS07.PRO\SampleDB\20180124A.SPL
Last Modified: Thursday, January 25, 2018 07:09:10 Eastern Standard Time
Printed: Thursday, January 25, 2018 07:24:00 Eastern Standard Time

Page Position (1, 1)

Opus 4: P5-180124I613I P513857res

*Opus 4: P5-180124m23I P513857resm23

	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	1/24/18	10:39	P513847	CS3	186061	EPA1613_ALS	Dioxin_ALS	Tray1:1	YY	not used
2		11:44	P513848	WINDOWDEFINE	183360	EPA1613_ALS	Dioxin_ALS	Tray1:2		H2Ocheck 11:10
3		12:35	P513849	CS0.5	76554	EPA1613_ALS	Dioxin_ALS	Tray1:3		not used
4		13:32	P513850	CS0.5	76554	EPA1613_ALS	Dioxin_ALS	Tray1:4		~~not used~~ YB 1/25/18
5		14:23	P513851	CS1	76555	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		15:18	P513852	CS2	76556	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		16:06	P513853	CS3	76557	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		16:55	P513854	CS4	76558	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		17:43	P513855	CS5	185657	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		18:32	P513856	NONANE	NONANE	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		19:21	P513857	2ND SOURCE	75080	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12			---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1		
13			---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1		
14			---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2		
15			---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:15		H2Ocheck 1/25/18 00:51
16		19:21	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:16	---	---
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:17	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:18	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---
21	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:21	---	---
22	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:22	---	---
23	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:23	---	---
24	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:24	---	---
25	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:25	---	---

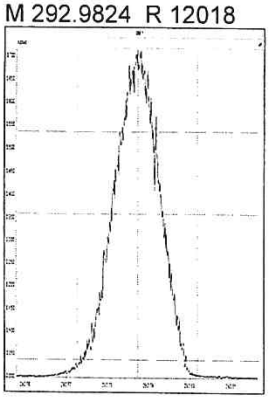
gc 01/25/18

* gc 01/25/18

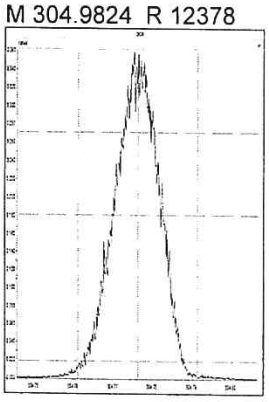
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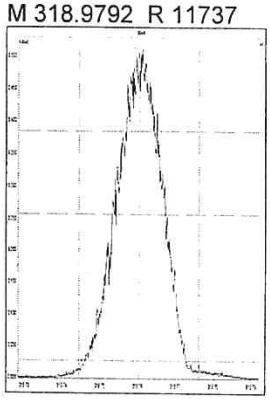
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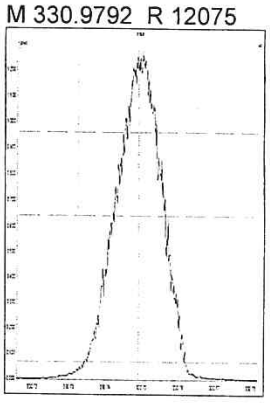
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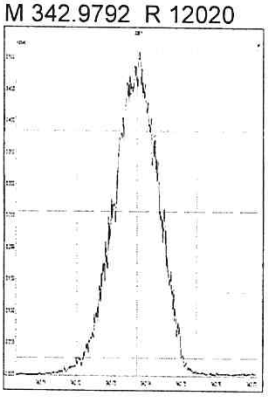
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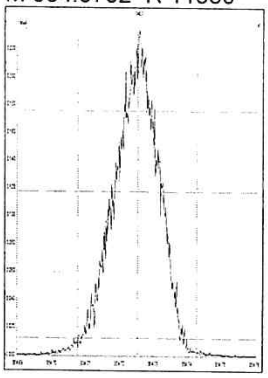
M 330.9792 R 12075



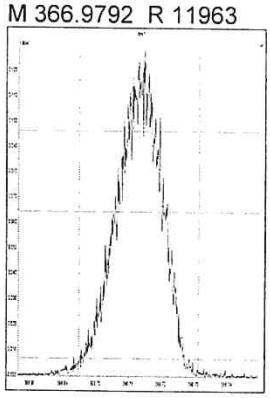
M 342.9792 R 12020



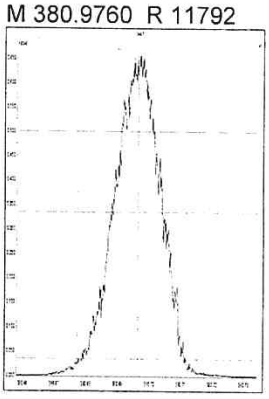
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M 366.9792 R 11963



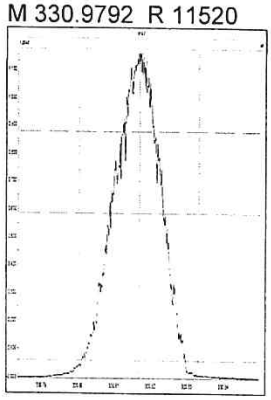
M 380.9760 R 11792



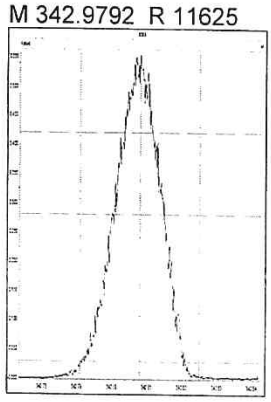
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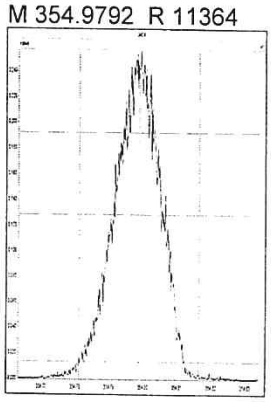
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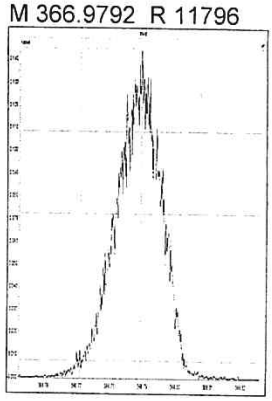
M 342.9792 R 11625



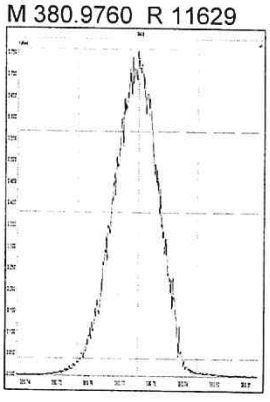
M 354.9792 R 11364



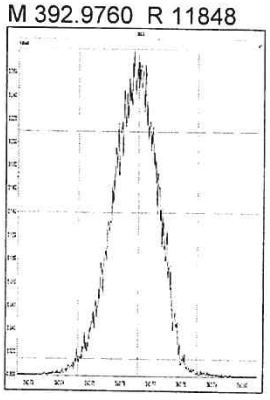
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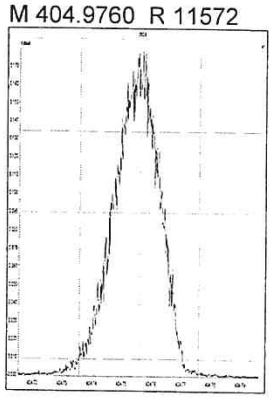
M 380.9760 R 11629



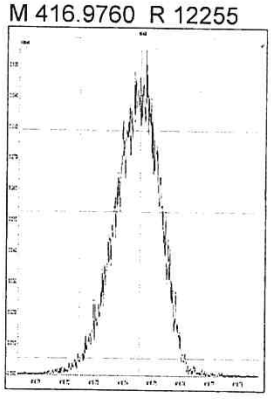
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M 404.9760 R 11572



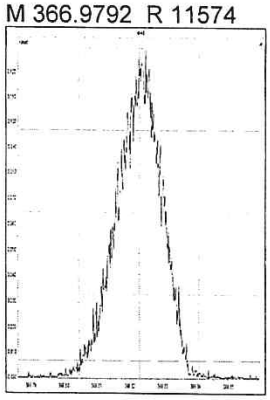
M 416.9760 R 12255



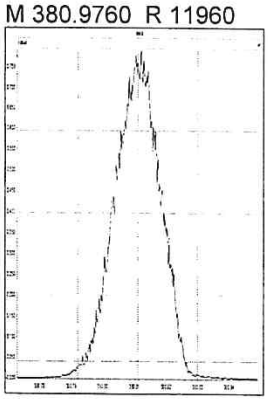
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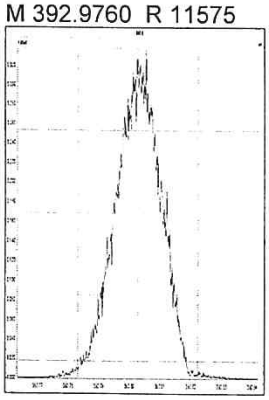
M 366.9792 R 11574



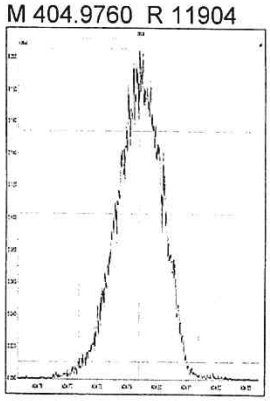
M 380.9760 R 11960



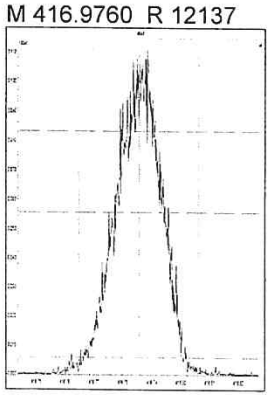
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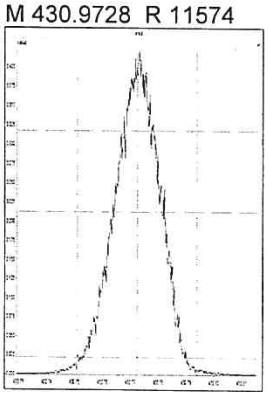
M 404.9760 R 11904



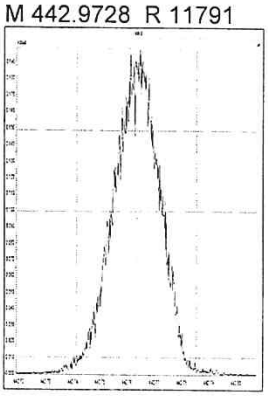
M 416.9760 R 12137



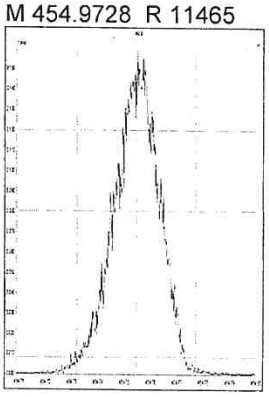
M 430.9728 R 11574



M 442.9728 R 11791



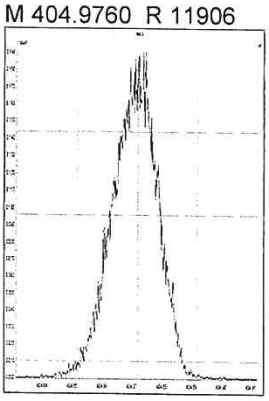
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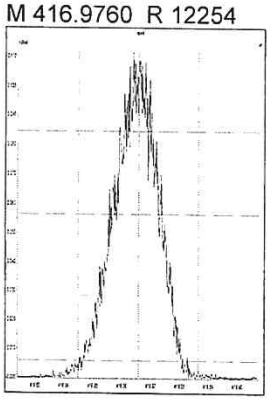
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Printed: Wednesday, January 24, 2018 11:43:11 Eastern Standard Time

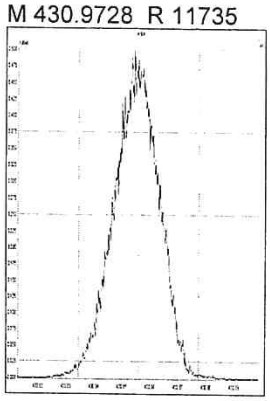
M 404.9760 R 11906



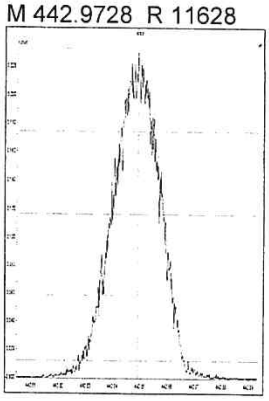
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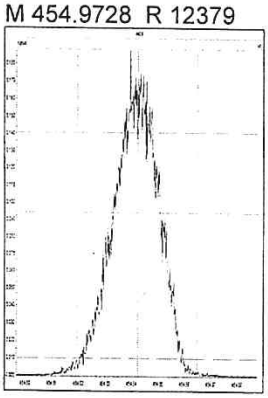
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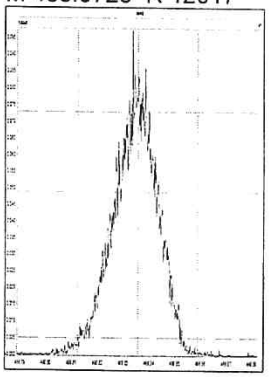
M 442.9728 R 11628



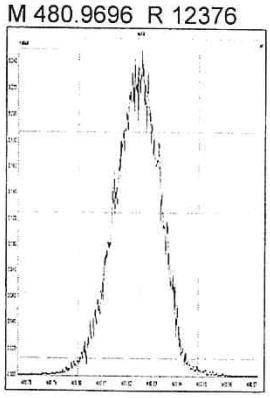
M 454.9728 R 12379



M 466.9728 R 12017



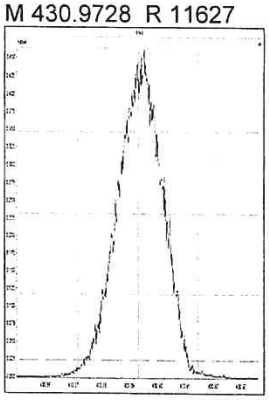
M 480.9696 R 12376



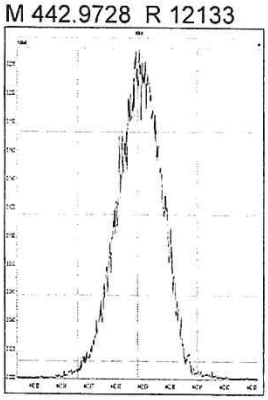
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Printed: Wednesday, January 24, 2018 11:43:57 Eastern Standard Time

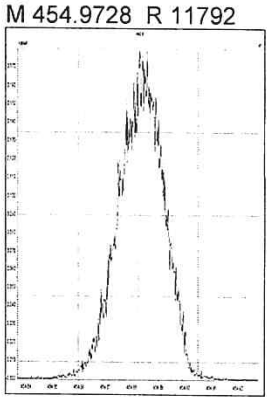
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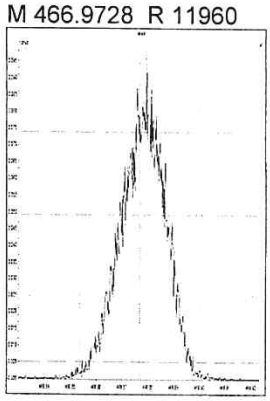
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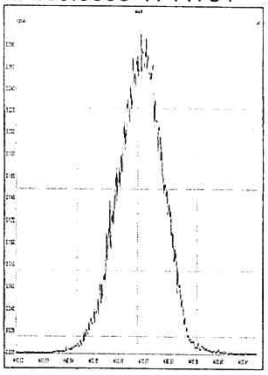
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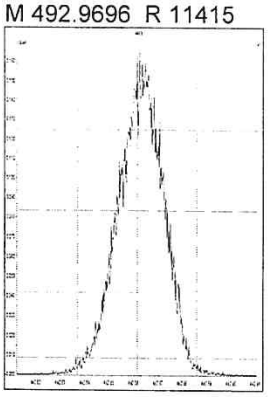
M 466.9728 R 11960



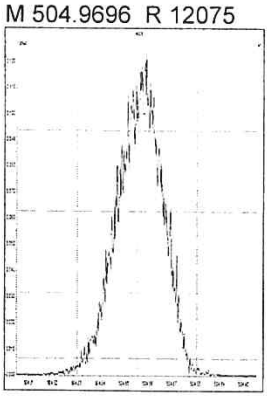
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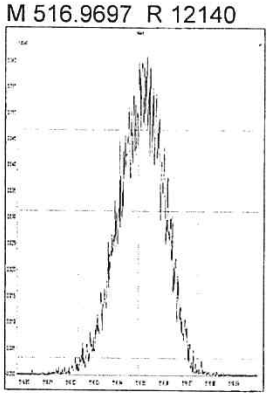
M 492.9696 R 11415



M 504.9696 R 12075



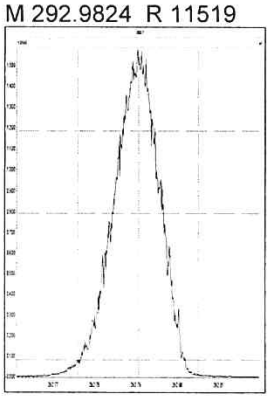
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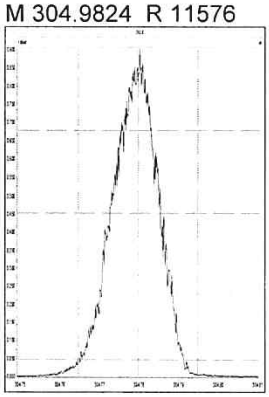
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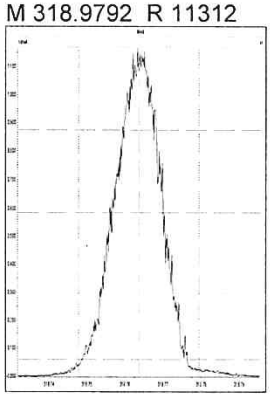
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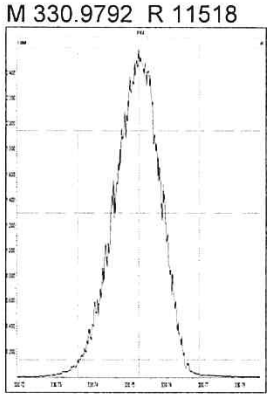
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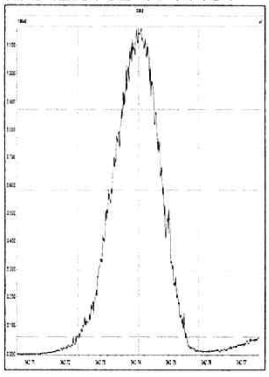
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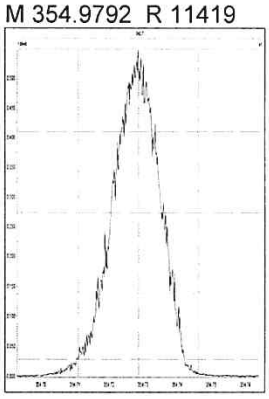
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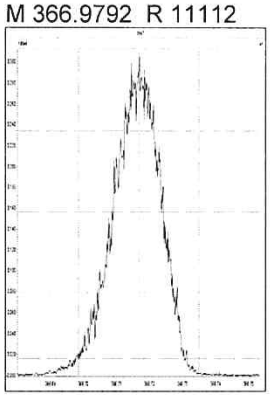
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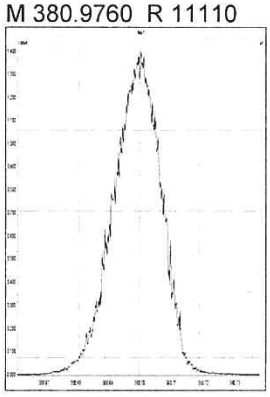
M 354.9792 R 11419



M 366.9792 R 11112



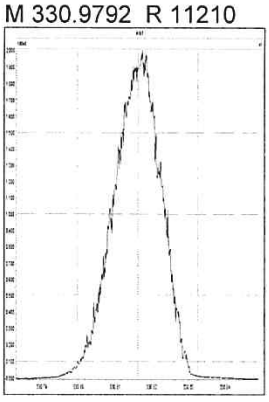
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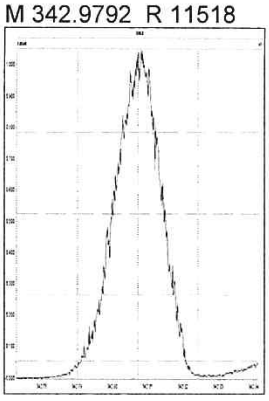
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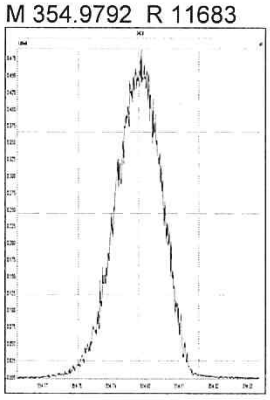
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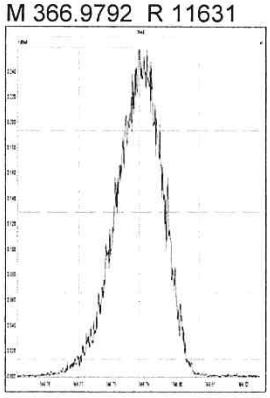
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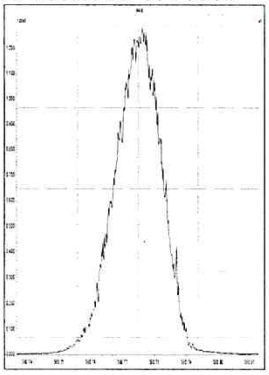
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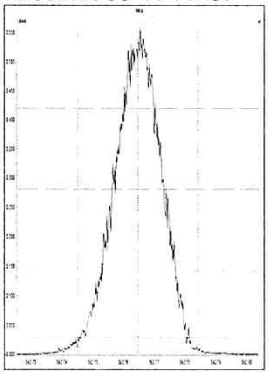
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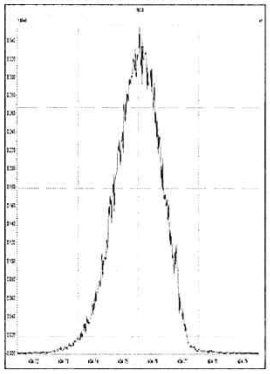
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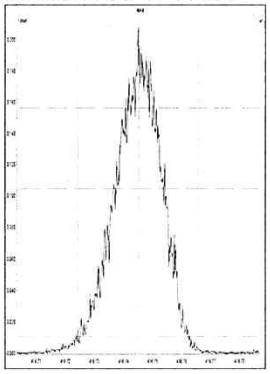
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M 404.9760 R 11518



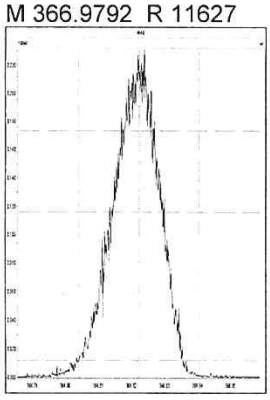
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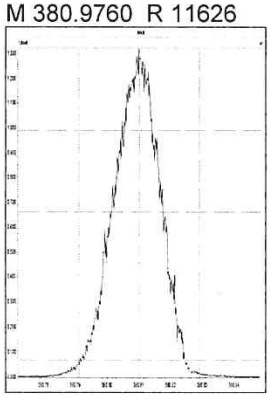
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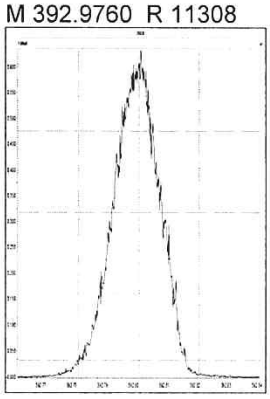
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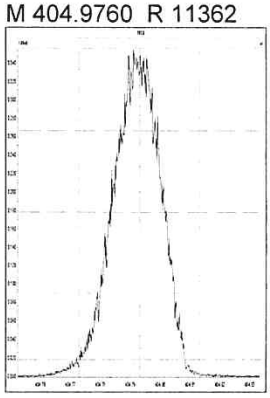
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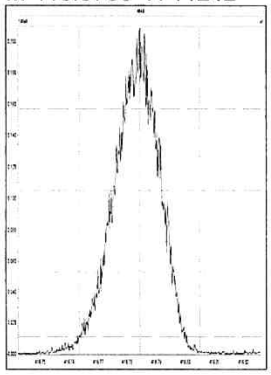
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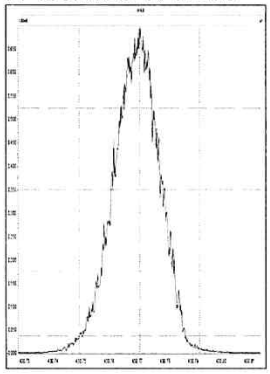
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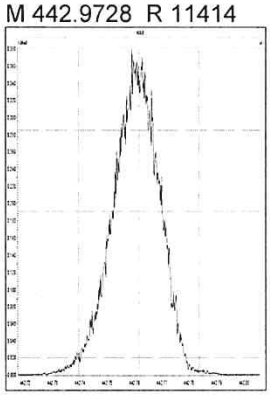
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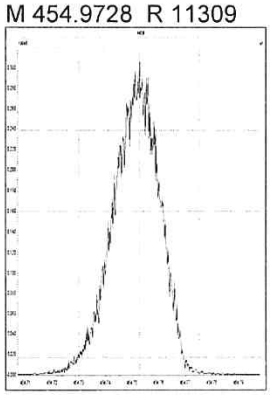
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M 442.9728 R 11414



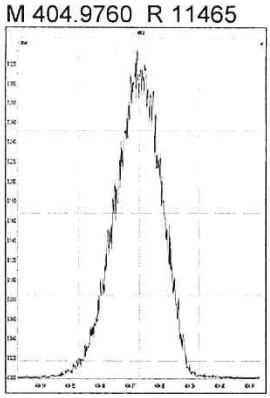
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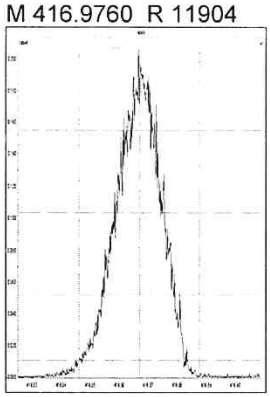
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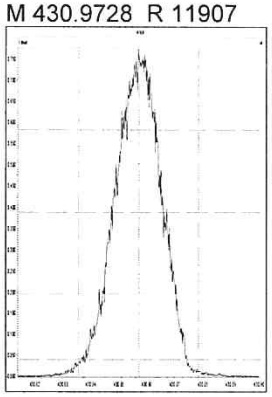
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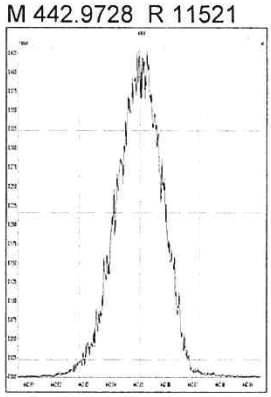
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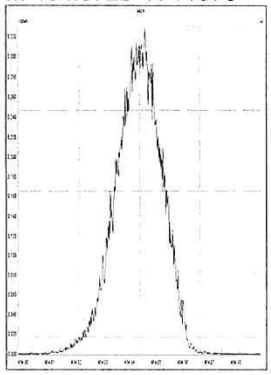
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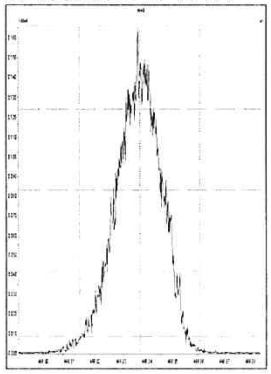
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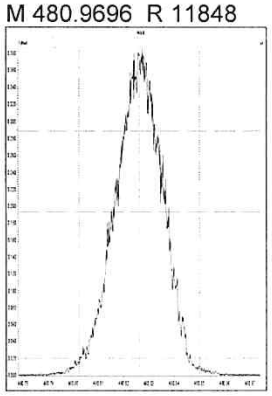
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M 466.9728 R 11417



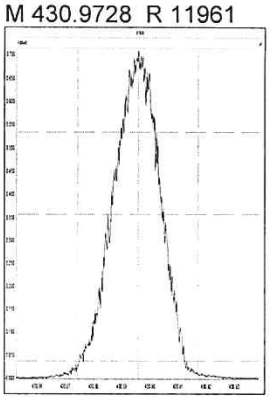
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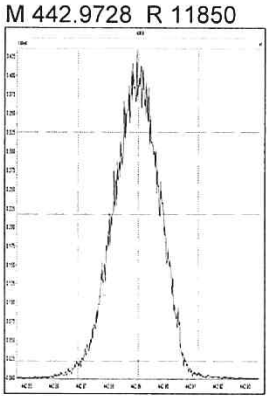
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

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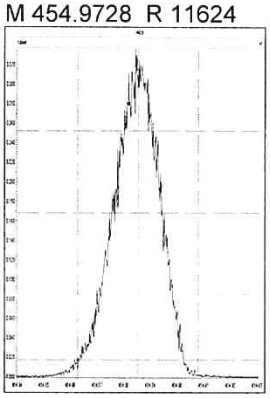
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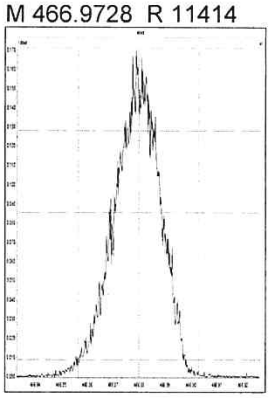
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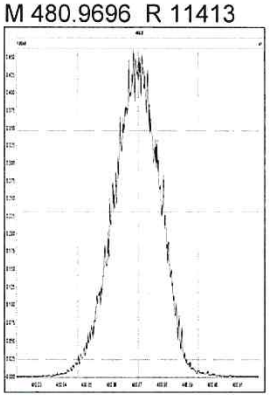
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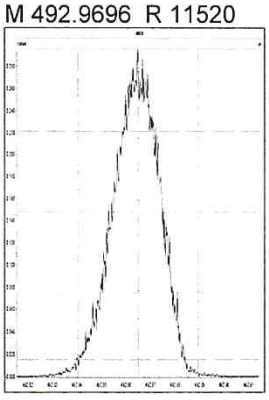
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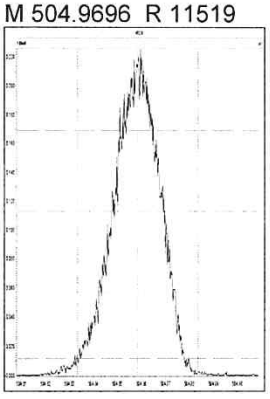
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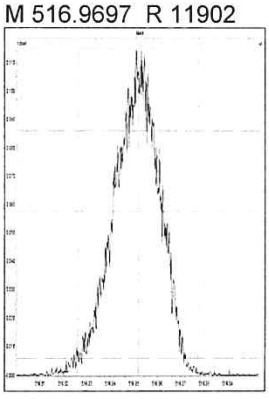
M 492.9696 R 11520



M 504.9696 R 11519



M 516.9697 R 11902



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

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

Case No.: _____ SDG No.:
ID: 0.25 (mm)

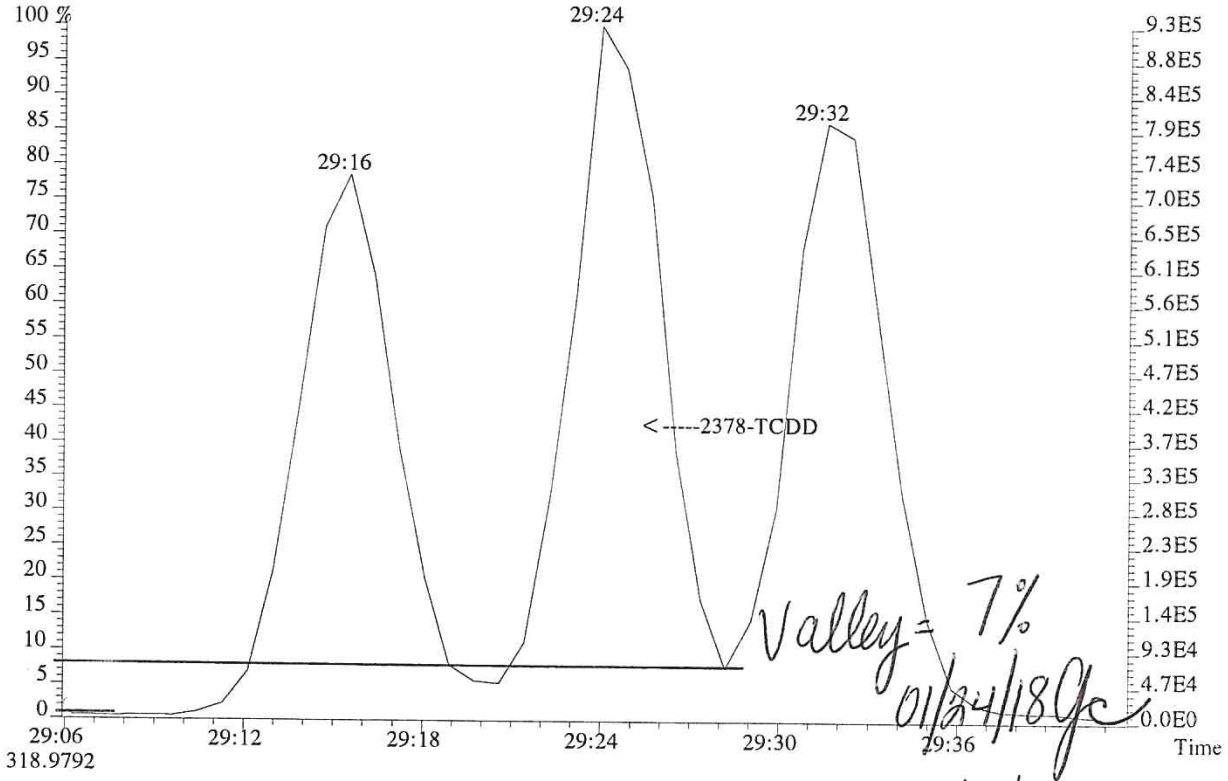
Lab File ID: P513848
Date Analyzed: 24-JAN-2018
Time Analyzed: 11:44:47

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	24:25	30:32
TCDD	26:17	30:22
PeCDF	30:27	34:34
PeCDD	31:55	34:19
HxCDF	35:11	37:38
HxCDD	35:41	37:14
HpCDF	38:49	40:14
HpCDD	39:04	39:44

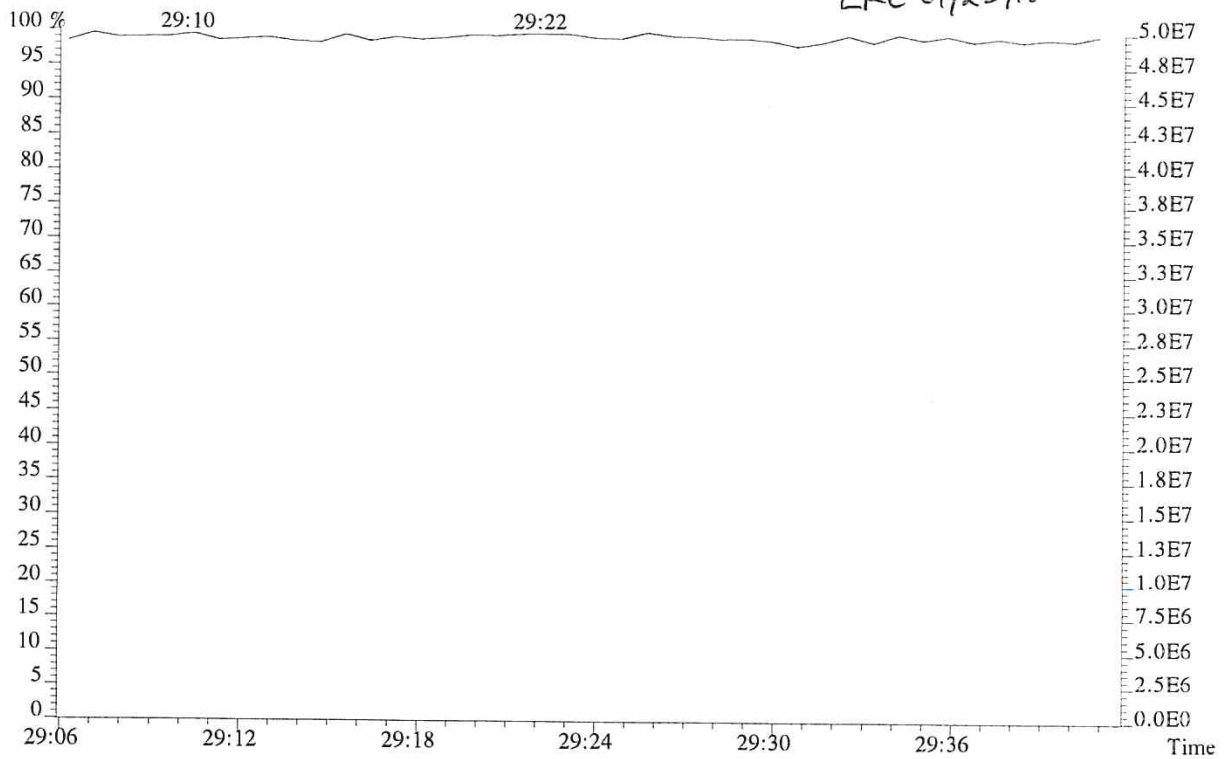
% Valley 2378-TCDD: 7 %

016668

File:P513848 #1-665 Acq:24-JAN-2018 11:44:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:183360
319.8965

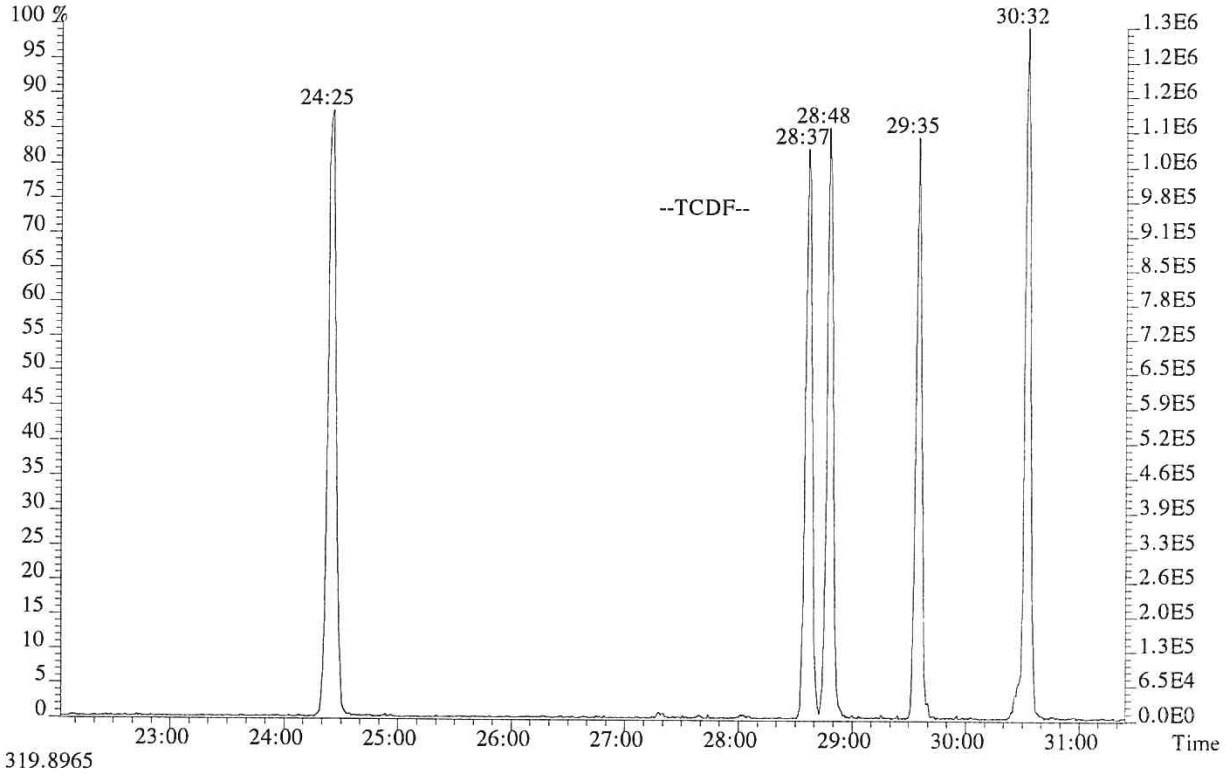


LKL 01/25/18

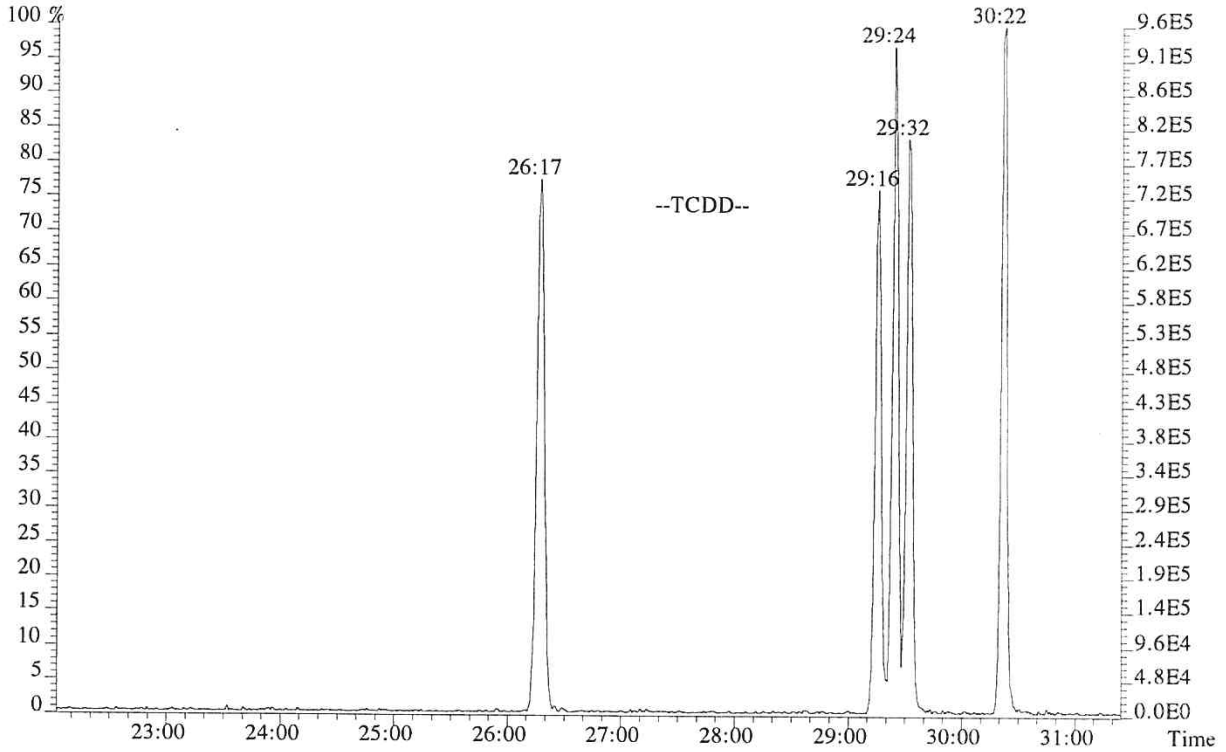


016669

File:P513848 #1-665 Acq:24-JAN-2018 11:44:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:183360
303.9016

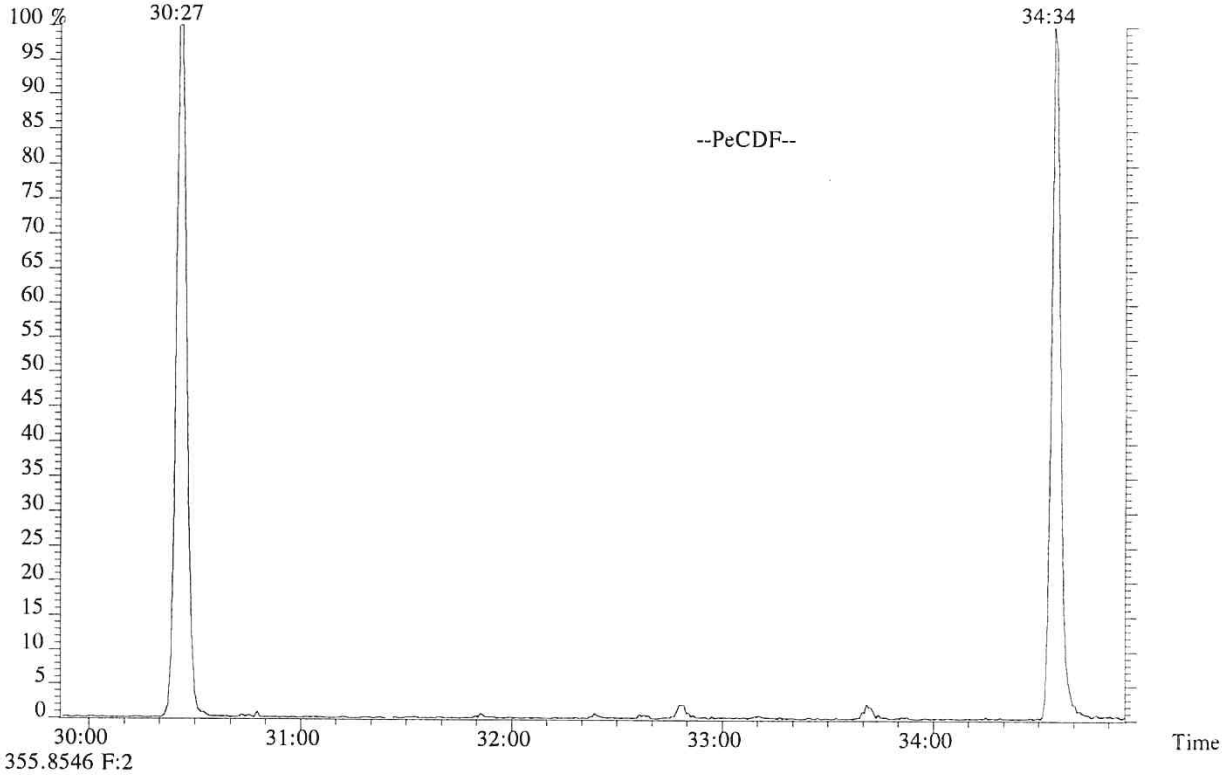


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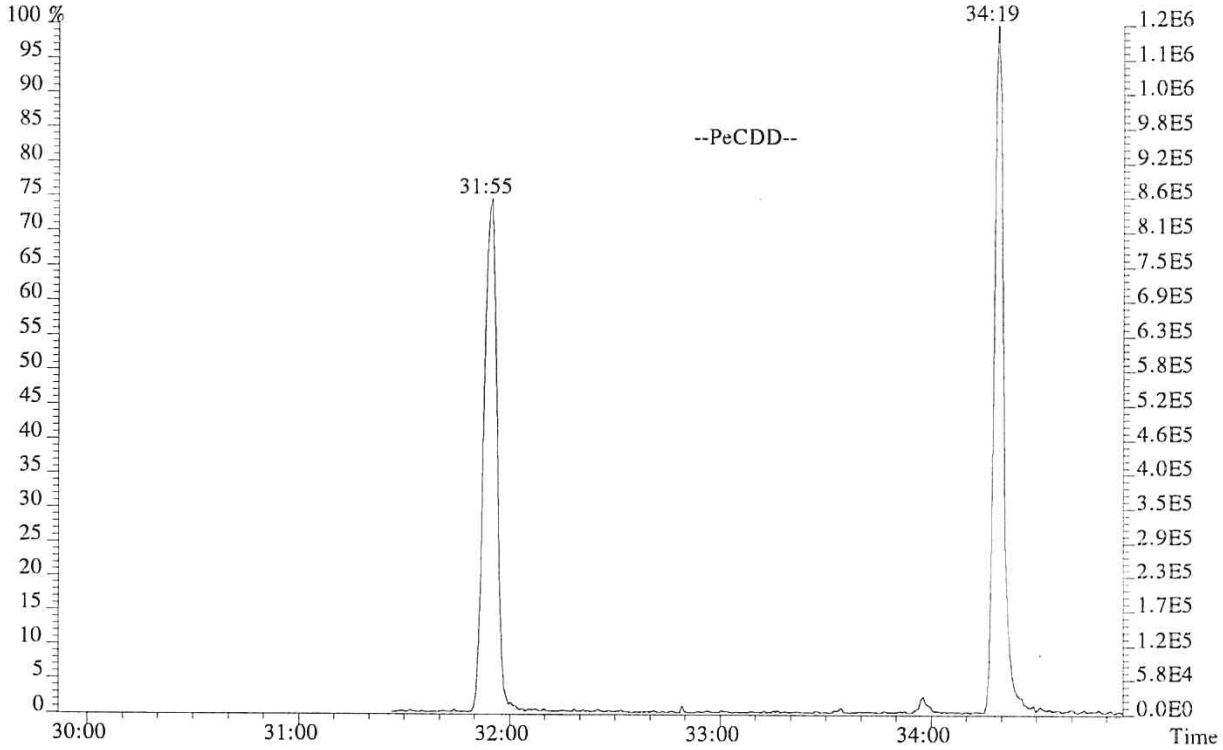


016670

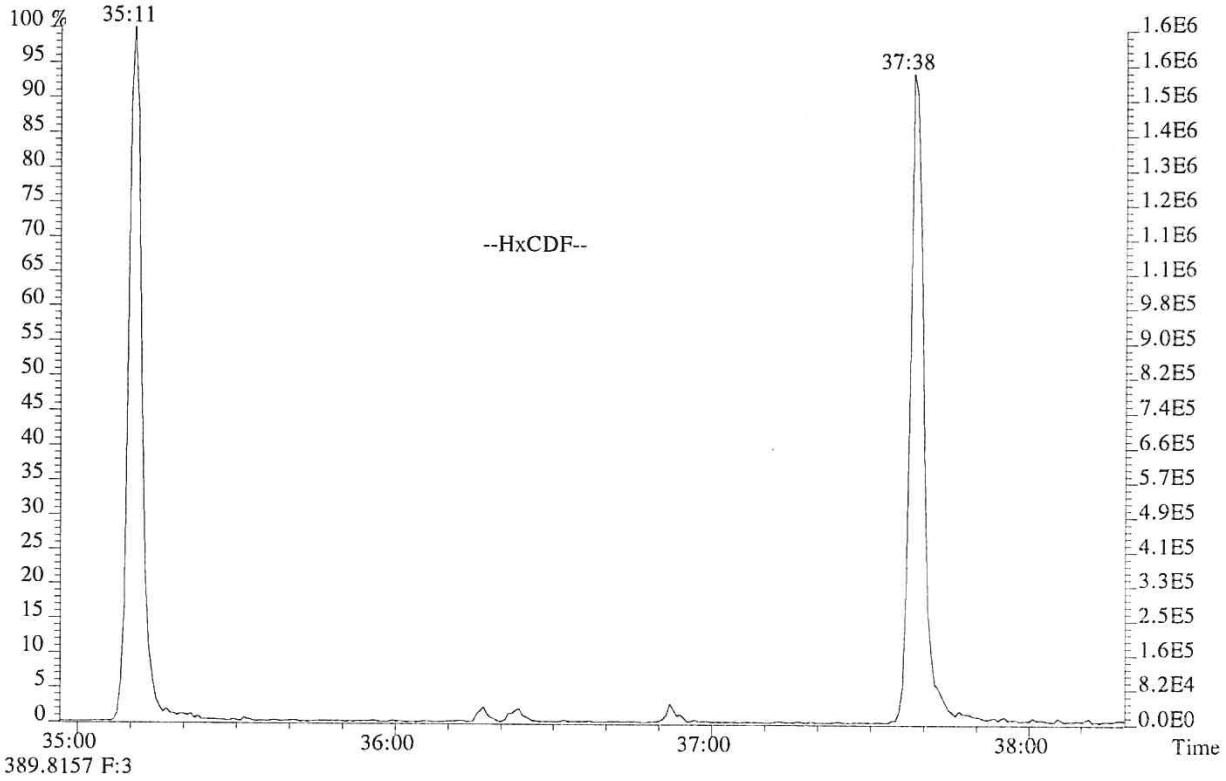
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Sample#1 Exp:183360
339.8597,339.8597 F:2



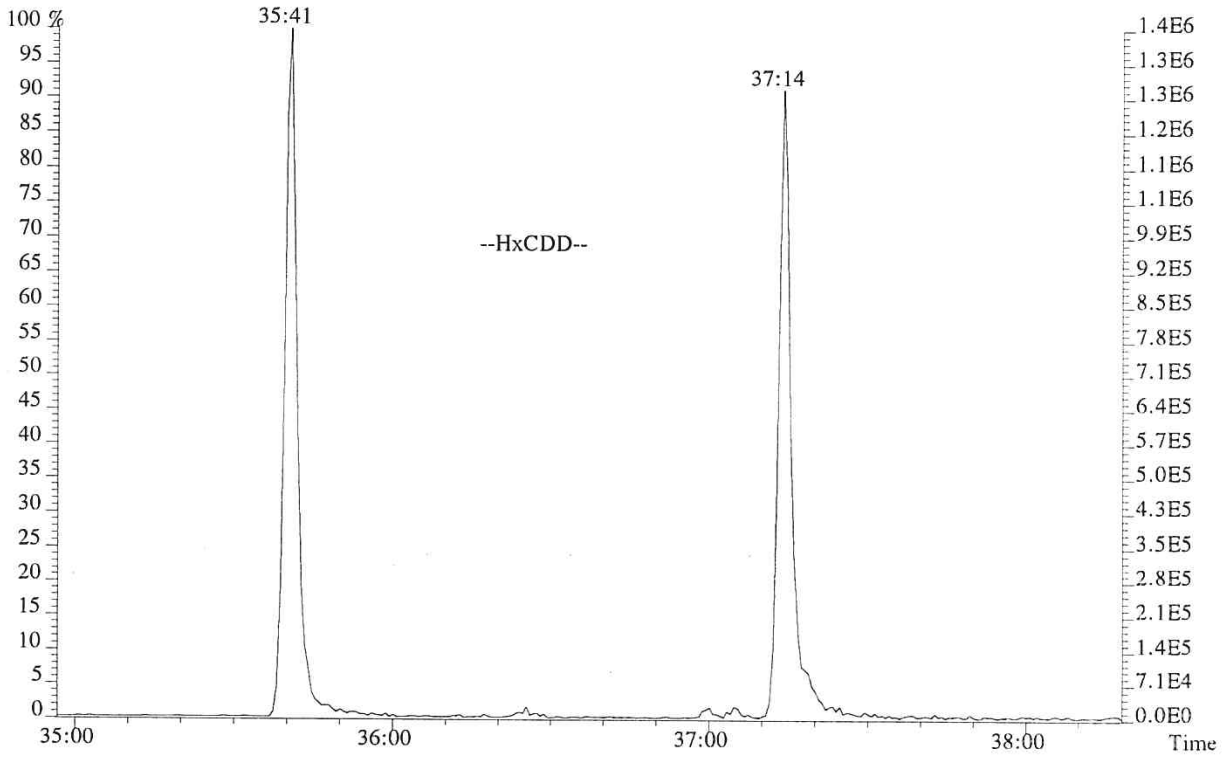
355.8546 F:2



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Sample#1 Exp:183360
373.8208 F:3

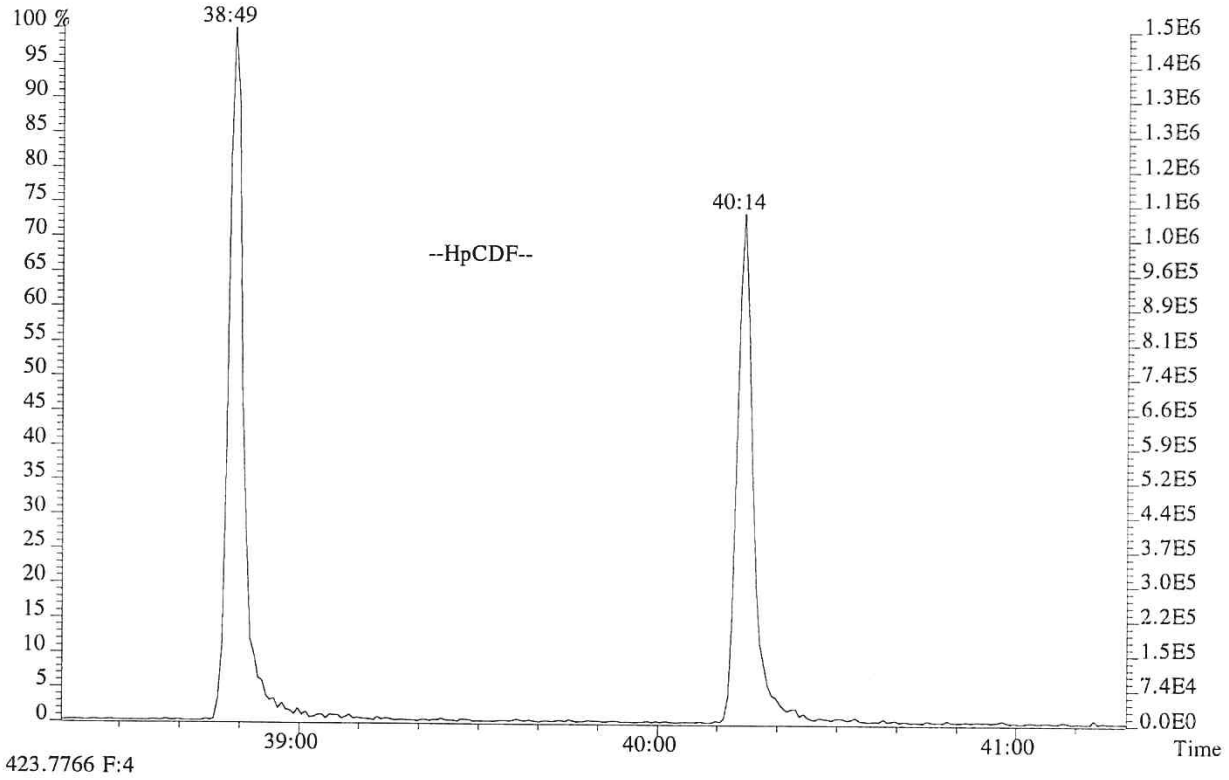


389.8157 F:3

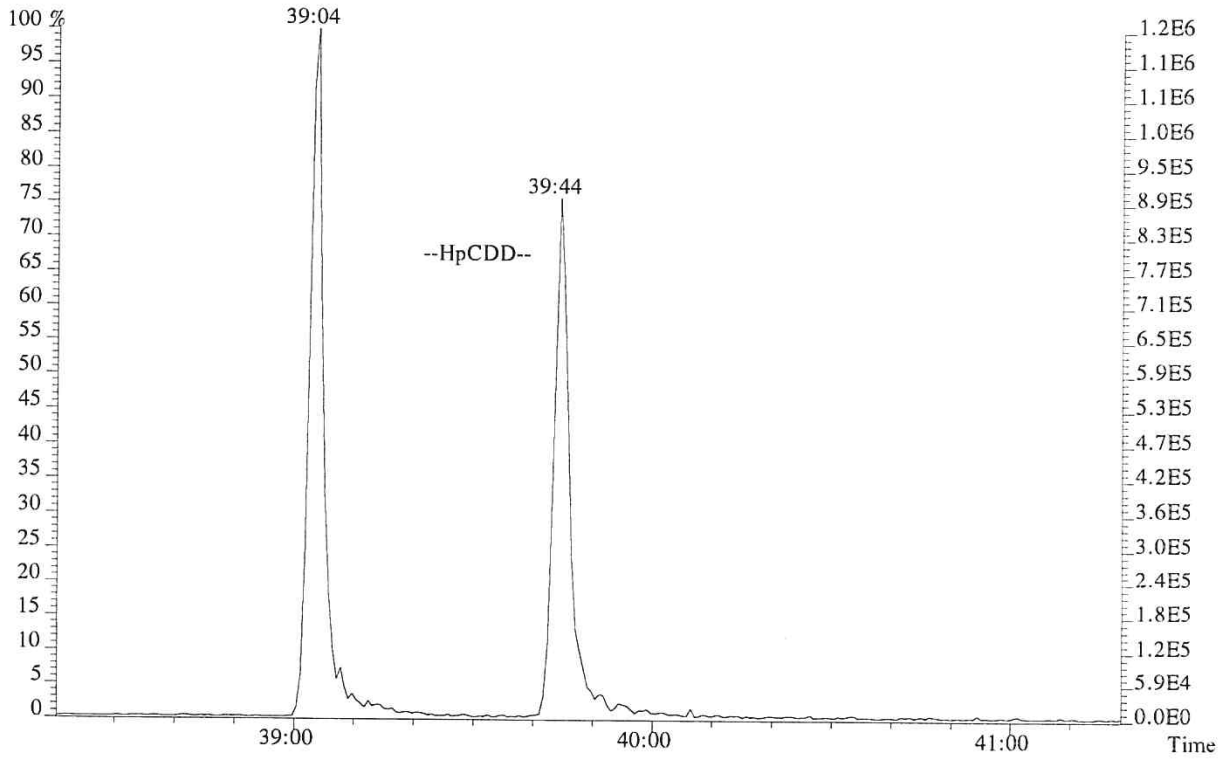


016672

File:P513848 #1-268 Acq:24-JAN-2018 11:44:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:183360
407.7818 F:4



423.7766 F:4



USEPA - CLP
6DFA6
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name: ALS Environmental Contract No.:
Lab Code: ALSTX Case No.: TO No.: SDG No.:
GC Column: DB-5MSUI ID: 0.25(mm) Instrument ID: E-HRMS-07
Init. Calib. Date(s).: 01/24/18 Method 1613/8290
Init. Calib. Time.: 11:44

	RR/RRF						MEAN		
Target Analytes	CS0.5	CS1	CS2	CS3	CS4	CS5	RR/RRF	%RSD	QC LIMITS
2,3,7,8-TCDD	1.10	1.07	1.06	1.07	1.10	1.11	1.09	1.96	+/-20%
2,3,7,8-TCDF	0.89	0.96	0.91	0.94	0.96	0.99	0.94	4.09	+/-20%
1,2,3,7,8-PeCDF	0.93	0.98	1.02	1.03	1.06	1.06	1.01	5.02	+/-20%
1,2,3,7,8-PeCDD	0.92	0.97	0.96	0.95	0.97	0.97	0.96	2.08	+/-20%
2,3,4,7,8-PeCDF	0.87	0.94	0.98	0.97	0.99	1.00	0.96	4.97	+/-20%
1,2,3,4,7,8-HxCDF	1.07	1.13	1.22	1.21	1.25	1.26	1.19	6.34	+/-20%
1,2,3,6,7,8-HxCDF	1.06	1.07	1.13	1.13	1.17	1.17	1.12	4.28	+/-20%
1,2,3,4,7,8-HxCDD	0.96	1.04	1.03	1.06	1.06	1.07	1.04	3.78	+/-20%
1,2,3,6,7,8-HxCDD	1.00	1.06	1.03	1.03	1.05	1.06	1.04	2.33	+/-20%
1,2,3,7,8,9-HxCDD	0.98	1.06	1.10	1.06	1.07	1.10	1.06	4.09	+/-20%
2,3,4,6,7,8-HxCDF	1.01	1.09	1.12	1.13	1.15	1.17	1.11	5.18	+/-20%
1,2,3,7,8,9-HxCDF	1.08	1.10	1.15	1.17	1.18	1.18	1.14	3.94	+/-20%
1,2,3,4,6,7,8-HpCDF	1.31	1.32	1.36	1.37	1.37	1.38	1.35	2.22	+/-20%
1,2,3,4,6,7,8-HpCDD	1.00	0.98	1.05	1.03	1.05	1.04	1.02	2.88	+/-20%
1,2,3,4,7,8,9-HpCDF	1.18	1.23	1.29	1.30	1.28	1.27	1.26	3.68	+/-20%
OCDD	1.05	1.14	1.14	1.13	1.12	1.12	1.12	2.97	+/-20%
OCDF	1.26	1.39	1.35	1.33	1.39	1.43	1.36	4.36	+/-20%
Labeled Compounds									
13C-2,3,7,8-TCDD	0.91	0.87	0.93	0.90	0.94	0.98	0.92	4.14	+/-35%
13C-1,2,3,7,8-PeCDD	0.91	0.83	1.03	0.99	1.01	1.08	0.98	9.21	+/-35%
13C-1,2,3,4,7,8-HxCDD	0.94	0.90	0.90	0.95	0.93	0.92	0.92	2.06	+/-35%
13C-1,2,3,6,7,8-HxCDD	0.96	0.96	0.94	0.97	0.97	0.91	0.95	2.50	+/-35%
13C-1,2,3,4,6,7,8-HpCDD	0.81	0.92	0.79	0.88	0.90	0.85	0.86	5.83	+/-35%
13C-OCDD	0.52	0.63	0.58	0.58	0.62	0.57	0.58	6.90	+/-35%
13C-2,3,7,8-TCDF	1.45	1.48	1.53	1.60	1.53	1.49	1.51	3.54	+/-35%
13C-1,2,3,7,8-PeCDF	1.37	1.32	1.50	1.50	1.52	1.62	1.47	7.34	+/-35%
13C-2,3,4,7,8-PeCDF	1.36	1.29	1.50	1.46	1.52	1.61	1.46	7.94	+/-35%
13C-1,2,3,4,7,8-HxCDF	1.22	1.27	1.18	1.29	1.25	1.19	1.23	3.63	+/-35%
13C-1,2,3,6,7,8-HxCDF	1.40	1.48	1.34	1.42	1.41	1.34	1.40	3.84	+/-35%
13C-2,3,4,6,7,8-HxCDF	1.26	1.26	1.23	1.27	1.28	1.23	1.26	1.87	+/-35%
13C-1,2,3,7,8,9-HxCDF	1.03	1.17	1.06	1.00	1.17	1.08	1.09	6.47	+/-35%
13C-1,2,3,4,6,7,8-HpCDF	0.96	1.02	0.92	0.99	0.98	0.93	0.97	3.83	+/-35%
13C-1,2,3,4,7,8,9-HpCDF	0.76	0.95	0.79	0.74	0.86	0.82	0.82	9.19	+/-35%
37Cl-2,3,7,8-TCDD	0.93	0.96	1.03	1.00	1.05	1.11	1.01	6.21	+/-35%

1.123789-HxCDD Relative Response (RR) is calculated based on the labeled analog of the other two HxCDDs.
2. OCDF RR is calculated based on the labeled analog of OCDD

USEPA - CLP
6DFB6
CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY
HIGH RESOLUTION

Lab Name: ALS Environmental Contract No.:
Lab Code: ALSTX Case No.: TO No.: SDG No.:
GC Column: DB-5MSUI ID: 0.25(mm) Instrument ID: E-HRMS-07
Init. Calib. Date(s).: 01/24/18 Method 1613/8290
Init. Calib. Time.: 11:44

Target Analytes	SELECTED IONS	ION ABUNDANCE RATIO CS0.5	CS1	CS2	CS3	CS4	CS5	FLAG	ION RATIO QC LIMITS
2,3,7,8-TCDF	304/306	0.76	0.72	0.74	0.75	0.77	0.77		0.65-0.89
2,3,7,8-TCDD	320/322	0.73	0.88	0.76	0.79	0.78	0.78		0.65-0.89
1,2,3,7,8-PeCDF	340/342	1.42	1.54	1.48	1.53	1.54	1.55		1.32-1.78
2,3,4,7,8-PeCDF	340/342	1.48	1.46	1.50	1.52	1.53	1.54		1.32-1.78
1,2,3,7,8-PeCDD	356/358	1.64	1.66	1.58	1.56	1.56	1.57		1.32-1.78
1,2,3,4,7,8-HxCDF	374/376	1.18	1.20	1.20	1.22	1.22	1.23		1.05-1.43
1,2,3,6,7,8-HxCDF	374/376	1.28	1.17	1.21	1.21	1.22	1.24		1.05-1.43
2,3,4,6,7,8-HxCDF	374/376	1.12	1.24	1.22	1.22	1.21	1.22		1.05-1.43
1,2,3,7,8,9-HxCDF	374/376	1.19	1.33	1.22	1.21	1.24	1.23		1.05-1.43
1,2,3,4,7,8-HxCDD	390/392	1.32	1.26	1.25	1.25	1.25	1.26		1.05-1.43
1,2,3,6,7,8-HxCDD	390/392	1.09	1.35	1.26	1.26	1.26	1.26		1.05-1.43
1,2,3,7,8,9-HxCDD	390/392	1.23	1.21	1.24	1.28	1.26	1.25		1.05-1.43
1,2,3,4,6,7,8-HpCDF	408/410	0.98	1.03	1.02	1.02	1.03	1.04		0.88-1.20
1,2,3,4,7,8,9-HpCDF	408/410	1.03	0.96	1.01	1.03	1.03	1.04		0.88-1.20
1,2,3,4,6,7,8-HpCDD	424/426	0.99	1.11	1.04	1.05	1.05	1.05		0.88-1.20
OCDF	442/444	0.88	0.95	0.89	0.90	0.91	0.91		0.76-1.02
OCDD	458/460	0.86	0.88	0.89	0.89	0.89	0.89		0.76-1.02
13C-2,3,7,8-TCDD	332/334	0.81	0.80	0.80	0.80	0.81	0.80		0.65-0.89
13C-1,2,3,7,8-PeCDD	368/370	1.60	1.59	1.59	1.58	1.59	1.59		1.32-1.78
13C-1,2,3,4,7,8-HxCDD	402/404	1.29	1.27	1.26	1.33	1.27	1.28		1.05-1.43
13C-1,2,3,6,7,8-HxCDD	402/404	1.26	1.28	1.27	1.20	1.26	1.26		1.05-1.43
13C-1,2,3,4,6,7,8-HpCDD	436/438	1.06	1.04	1.06	1.06	1.08	1.06		0.88-1.20
13C-OCDD	470/472	0.90	0.91	0.90	0.89	0.90	0.89		0.76-1.02
13C-2,3,7,8-TCDF	316/318	0.79	0.79	0.80	0.79	0.79	0.79		0.65-0.89
13C-1,2,3,7,8-PeCDF	352/354	1.58	1.60	1.59	1.58	1.58	1.59		1.32-1.78
13C-2,3,4,7,8-PeCDF	352/354	1.58	1.58	1.58	1.58	1.58	1.58		1.32-1.78
13C-1,2,3,4,7,8-HxCDF	384/386	0.53	0.52	0.52	0.53	0.53	0.53		0.43-0.59
13C-1,2,3,6,7,8-HxCDF	384/386	0.53	0.53	0.53	0.53	0.53	0.53		0.43-0.59
13C-2,3,4,6,7,8-HxCDF	384/386	0.52	0.52	0.52	0.52	0.53	0.52		0.43-0.59
13C-1,2,3,7,8,9-HxCDF	384/386	0.52	0.52	0.53	0.53	0.52	0.52		0.43-0.59
13C-1,2,3,4,6,7,8-HpCDF	418/420	0.45	0.45	0.45	0.45	0.45	0.45		0.37-0.51
13C-1,2,3,4,7,8,9-HpCDF	418/420	0.45	0.44	0.45	0.45	0.45	0.45		0.37-0.51
13C-1,2,3,4-TCDD	332/334	0.81	0.82	0.81	0.81	0.82	0.82		0.65-0.89
13C-1,2,3,7,8,9-HxCDD	402/404	1.26	1.25	1.27	1.23	1.25	1.25		1.05-1.43

Quality Control (QC) limits represent +/- 15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76554

Run #1 Filename P513850 Samp: 1 Inj: 1 Acquired: 24-JAN-18 13:32:06
Processed: 24-JAN-18 15:49:37 Sample ID: CS0.5

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	3.276e+02	4.332e+02	0.76	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	2.212e+03	1.557e+03	1.42	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:42	2.093e+03	1.410e+03	1.48	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:17	1.728e+03	1.459e+03	1.18	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	2.025e+03	1.584e+03	1.28	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:53	1.636e+03	1.459e+03	1.12	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.473e+03	1.234e+03	1.19	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	1.513e+03	1.543e+03	0.98	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.104e+03	1.067e+03	1.03	yes	no	1.258
10	Unk	OCDF	42:45	1.481e+03	1.680e+03	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	2.508e+02	3.419e+02	0.73	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:58	1.543e+03	9.381e+02	1.64	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	37:00	1.247e+03	9.443e+02	1.32	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	1.208e+03	1.105e+03	1.09	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	1.245e+03	1.015e+03	1.23	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	9.700e+02	9.817e+02	0.99	yes	no	1.025
17	Unk	OCDD	42:31	1.223e+03	1.416e+03	0.86	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	1.518e+05	1.920e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:48	1.987e+05	1.259e+05	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:41	1.969e+05	1.249e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:16	8.196e+04	1.558e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:23	9.429e+04	1.782e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:52	8.377e+04	1.622e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:37	6.829e+04	1.322e+05	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	5.778e+04	1.288e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	4.552e+04	1.019e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	9.630e+04	1.195e+05	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	1.330e+05	8.317e+04	1.60	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	1.026e+05	7.962e+04	1.29	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	1.036e+05	8.231e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	8.056e+04	7.625e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	9.520e+04	1.052e+05	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:58	1.055e+05	1.310e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	1.085e+05	8.606e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	5.518e+02				no	1.014

ALS ENVIRONMENTAL
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www.alsglobal.com

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
76554

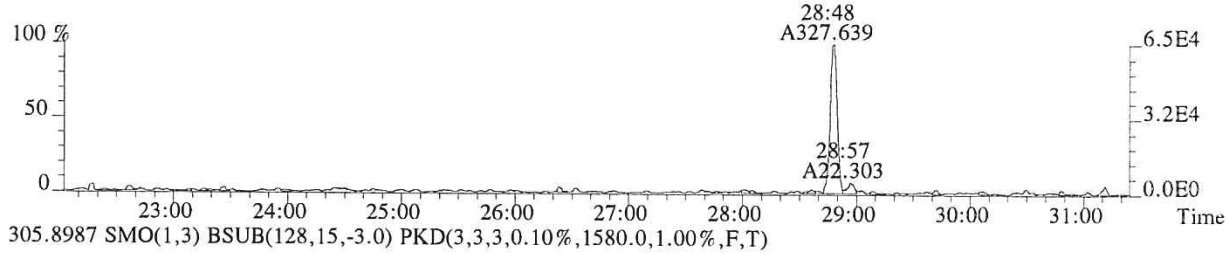
Run #1 Filename P513850 Samp: 1 Inj: 1 Acquired: 24-JAN-18 13:32:06
Processed: 24-JAN-18 15:49:37 LAB. ID: CS0.5

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.43e+04	7.40e+02	8.7e+01	8.19e+04	1.58e+03	5.2e+01
2	1,2,3,7,8-PeCDF	4.30e+05	1.01e+03	4.3e+02	3.00e+05	2.96e+03	1.0e+02
3	2,3,4,7,8-PeCDF	4.25e+05	1.01e+03	4.2e+02	2.98e+05	2.96e+03	1.0e+02
4	1,2,3,4,7,8-HxCDF	3.96e+05	8.76e+02	4.5e+02	3.10e+05	2.44e+02	1.3e+03
5	1,2,3,6,7,8-HxCDF	4.08e+05	8.76e+02	4.7e+02	3.20e+05	2.44e+02	1.3e+03
6	2,3,4,6,7,8-HxCDF	3.56e+05	8.76e+02	4.1e+02	3.17e+05	2.44e+02	1.3e+03
7	1,2,3,7,8,9-HxCDF	3.08e+05	8.76e+02	3.5e+02	2.40e+05	2.44e+02	9.9e+02
8	1,2,3,4,6,7,8-HpCDF	3.07e+05	8.60e+02	3.6e+02	3.29e+05	5.36e+02	6.1e+02
9	1,2,3,4,7,8,9-HpCDF	2.09e+05	8.60e+02	2.4e+02	1.94e+05	5.36e+02	3.6e+02
10	OCDF	2.59e+05	6.40e+02	4.0e+02	2.85e+05	1.05e+03	2.7e+02
11	2,3,7,8-TCDD	4.96e+04	1.22e+03	4.1e+01	7.37e+04	7.32e+02	1.0e+02
12	1,2,3,7,8-PeCDD	3.05e+05	1.17e+03	2.6e+02	1.78e+05	1.88e+02	9.5e+02
13	1,2,3,4,7,8-HxCDD	2.70e+05	5.20e+02	5.2e+02	2.09e+05	4.64e+02	4.5e+02
14	1,2,3,6,7,8-HxCDD	2.52e+05	5.20e+02	4.8e+02	2.26e+05	4.64e+02	4.9e+02
15	1,2,3,7,8,9-HxCDD	2.55e+05	5.20e+02	4.9e+02	2.09e+05	4.64e+02	4.5e+02
16	1,2,3,4,6,7,8-HpCDD	1.84e+05	1.72e+02	1.1e+03	2.04e+05	1.92e+02	1.1e+03
17	OCDD	1.95e+05	1.24e+02	1.6e+03	2.29e+05	1.76e+03	1.3e+02
18	13C-2,3,7,8-TCDF	2.97e+07	7.00e+03	4.2e+03	3.74e+07	3.24e+03	1.2e+04
19	13C-1,2,3,7,8-PeCDF	3.75e+07	6.04e+02	6.2e+04	2.38e+07	1.03e+03	2.3e+04
20	13C-2,3,4,7,8-PeCDF	3.92e+07	6.04e+02	6.5e+04	2.45e+07	1.03e+03	2.4e+04
21	13C-1,2,3,4,7,8-HxCDF	1.77e+07	4.00e+02	4.4e+04	3.34e+07	1.14e+03	2.9e+04
22	13C-1,2,3,6,7,8-HxCDF	1.91e+07	4.00e+02	4.8e+04	3.65e+07	1.14e+03	3.2e+04
23	13C-2,3,4,6,7,8-HxCDF	1.78e+07	4.00e+02	4.5e+04	3.38e+07	1.14e+03	3.0e+04
24	13C-1,2,3,7,8,9-HxCDF	1.38e+07	4.00e+02	3.5e+04	2.65e+07	1.14e+03	2.3e+04
25	13C-1,2,3,4,6,7,8-HpCDF	1.16e+07	1.44e+03	8.1e+03	2.60e+07	5.60e+03	4.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	8.60e+06	1.44e+03	6.0e+03	1.92e+07	5.60e+03	3.4e+03
27	13C-2,3,7,8-TCDD	1.97e+07	6.10e+03	3.2e+03	2.45e+07	2.10e+03	1.2e+04
28	13C-1,2,3,7,8-PeCDD	2.62e+07	9.88e+02	2.7e+04	1.65e+07	6.72e+02	2.4e+04
29	13C-1,2,3,4,7,8-HxCDD	2.25e+07	4.24e+03	5.3e+03	1.74e+07	9.28e+02	1.9e+04
30	13C-1,2,3,6,7,8-HxCDD	2.12e+07	4.24e+03	5.0e+03	1.71e+07	9.28e+02	1.8e+04
31	13C-1,2,3,4,6,7,8-HpCDD	1.57e+07	9.20e+02	1.7e+04	1.49e+07	8.32e+02	1.8e+04
32	13C-OCDD	1.56e+07	1.68e+02	9.3e+04	1.71e+07	3.40e+02	5.0e+04
33	13C-1,2,3,4-TCDD	2.11e+07	6.10e+03	3.5e+03	2.60e+07	2.10e+03	1.2e+04
34	13C-1,2,3,7,8,9-HxCDD	2.13e+07	4.24e+03	5.0e+03	1.71e+07	9.28e+02	1.8e+04
35	37Cl-2,3,7,8-TCDD	1.10e+05	1.04e+03	1.1e+02			

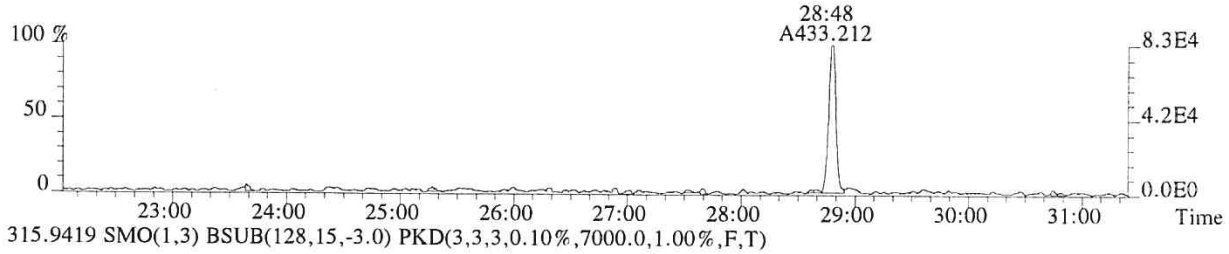
ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office:(713)266-1599. Fax:(713)266-0130

www.alsglobal.com

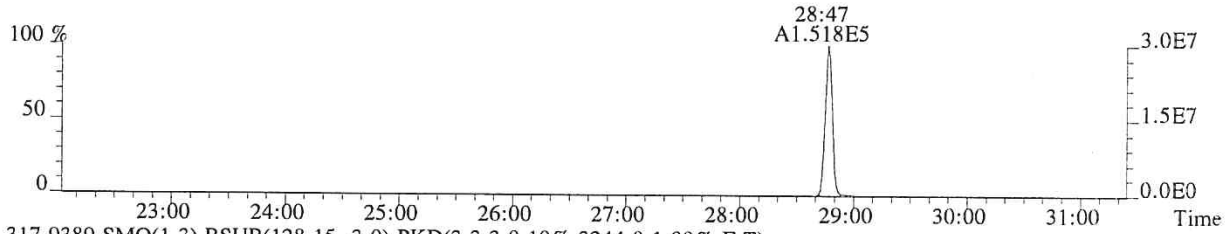
File:P513850 #1-665 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,740.0,1.00%,F,T)



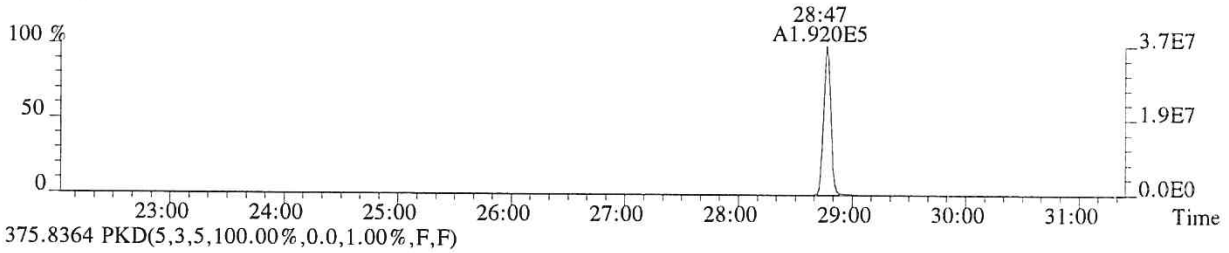
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1580.0,1.00%,F,T)



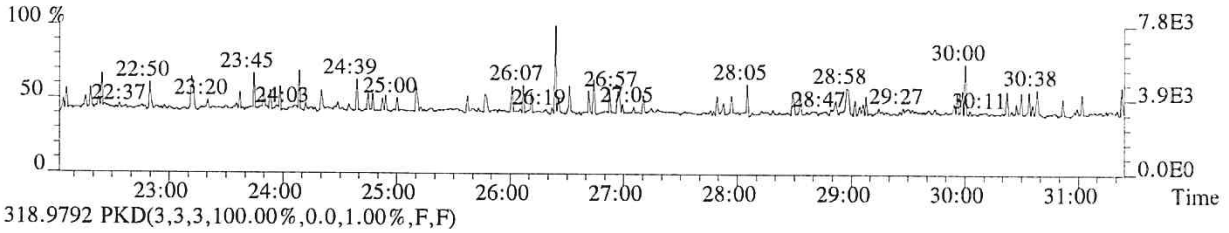
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7000.0,1.00%,F,T)



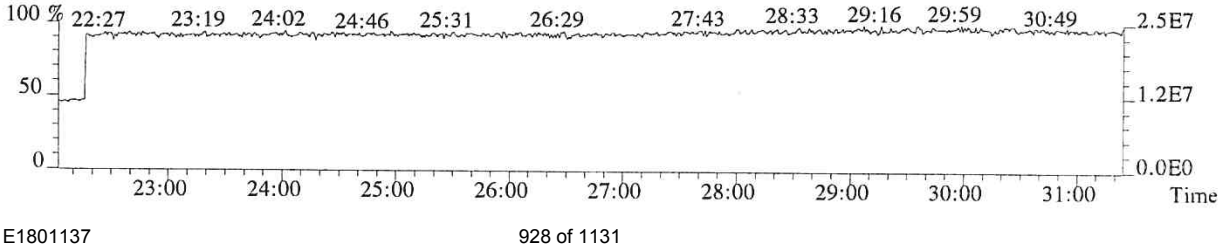
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3244.0,1.00%,F,T)



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

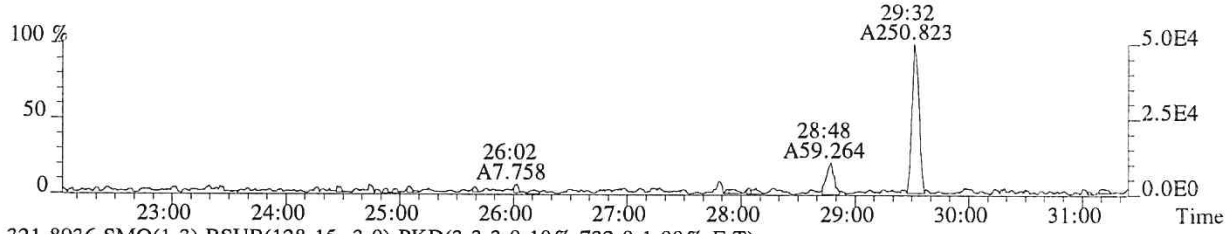


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

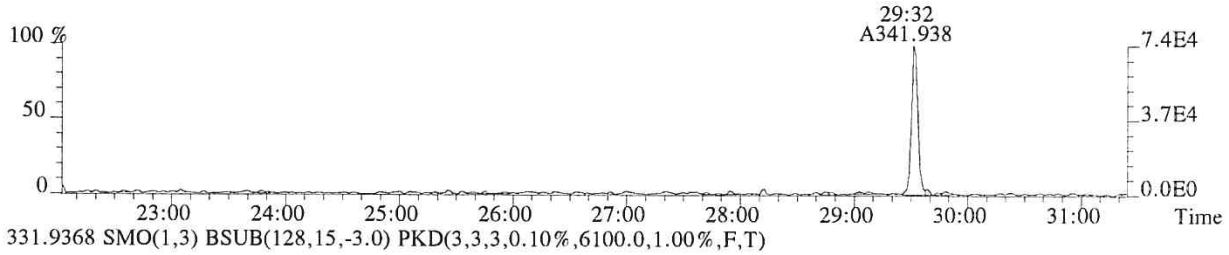


016678

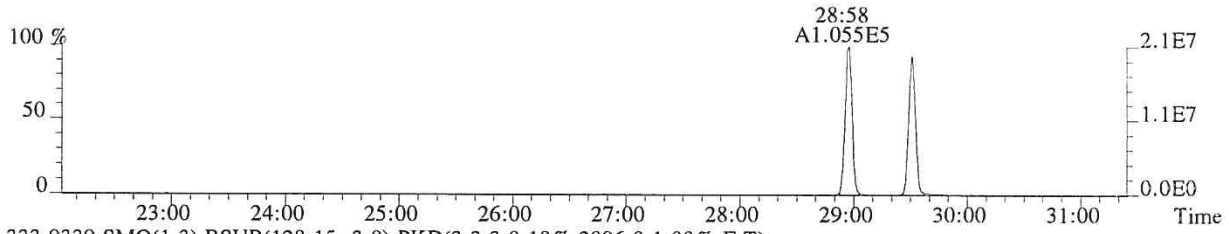
File:P513850 #1-665 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1220.0,1.00%,F,T)



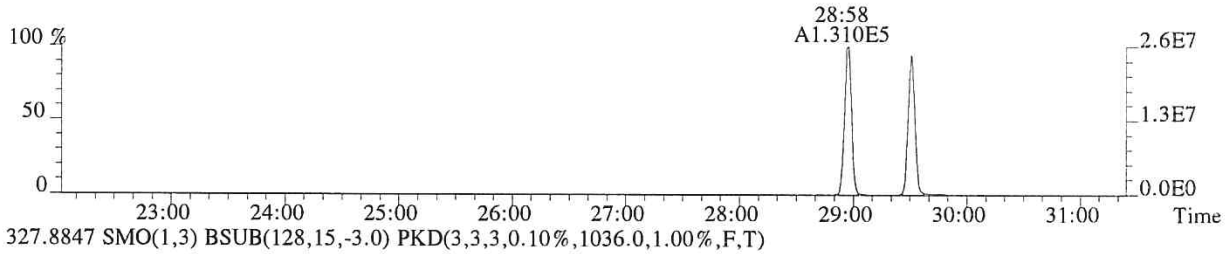
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,732.0,1.00%,F,T)



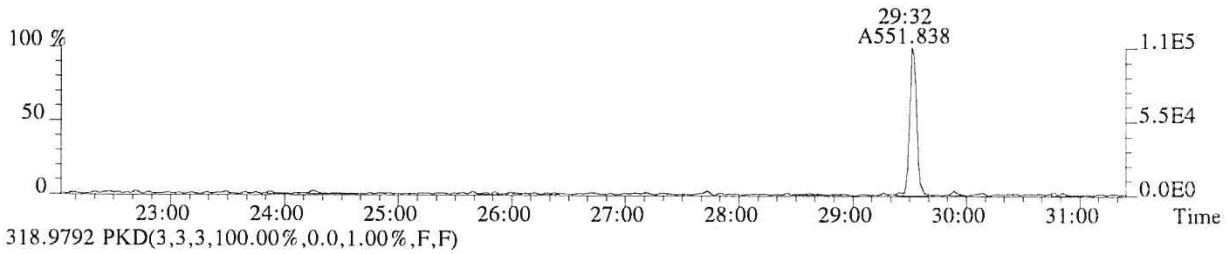
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6100.0,1.00%,F,T)



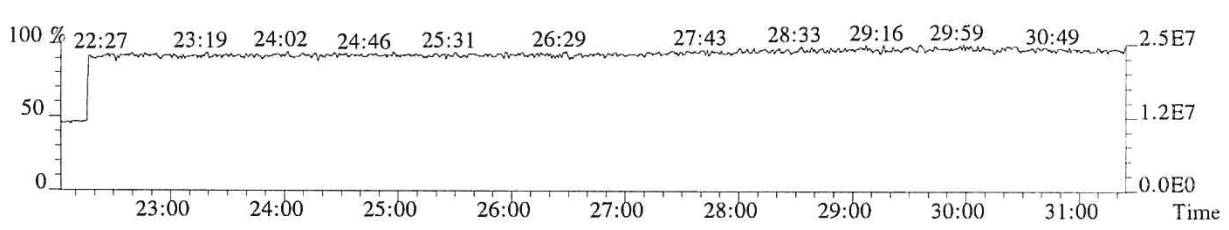
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2096.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1036.0,1.00%,F,T)

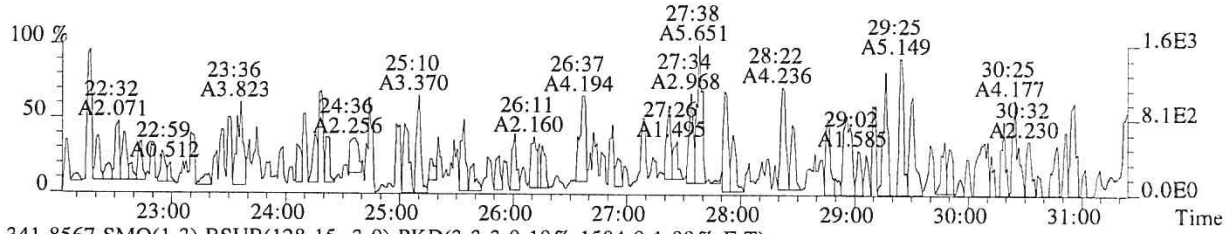


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

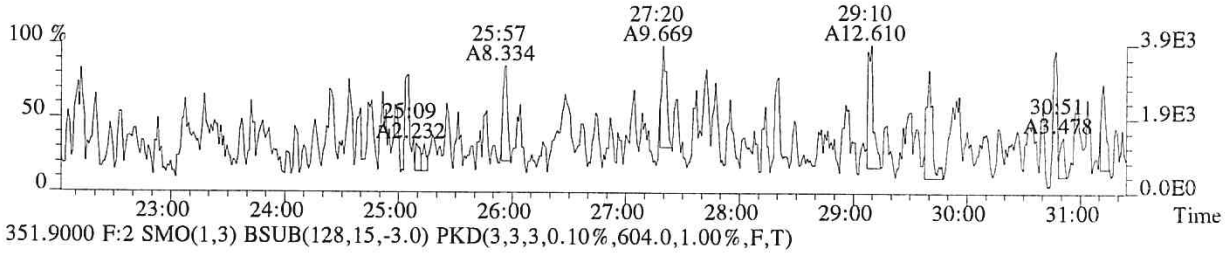


016679

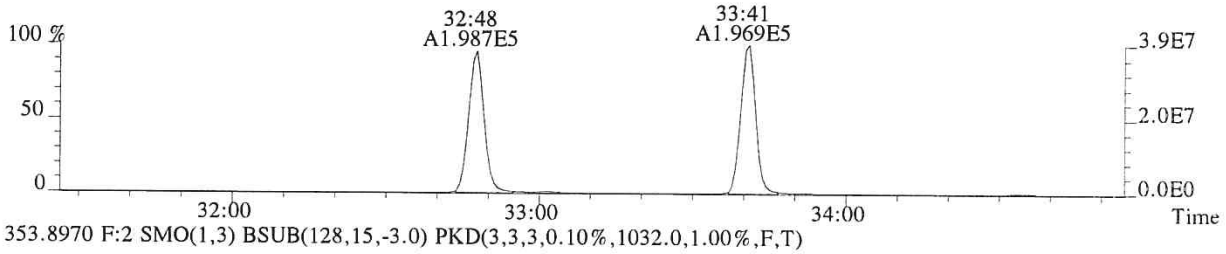
File:P513850 #1-665 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,244.0,1.00%,F,T)



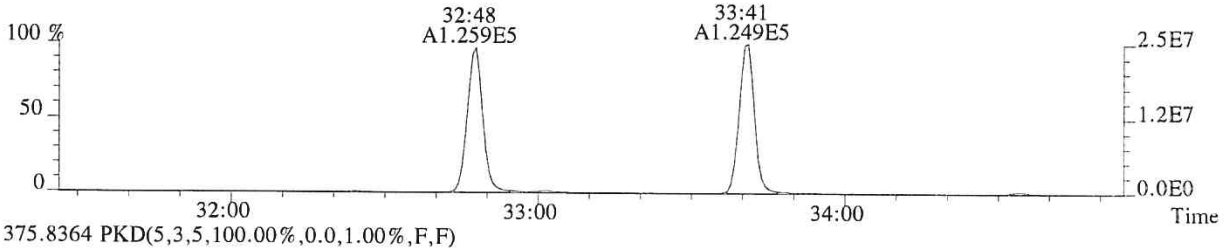
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1504.0,1.00%,F,T)



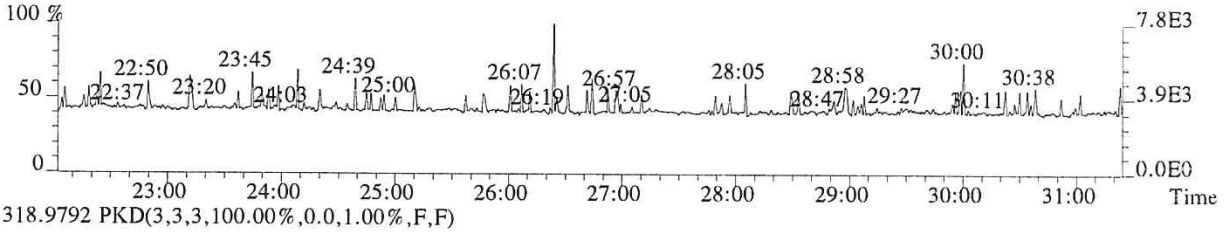
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,604.0,1.00%,F,T)



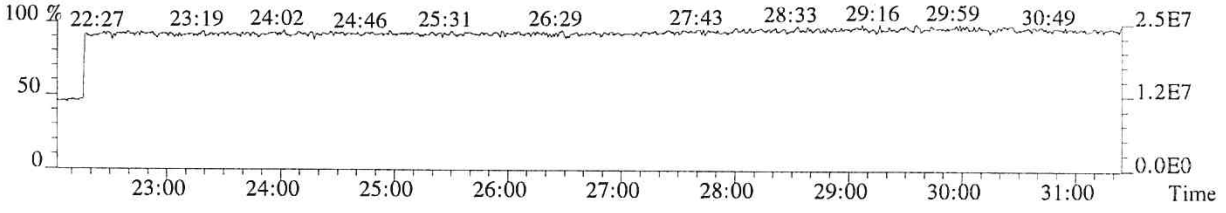
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



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

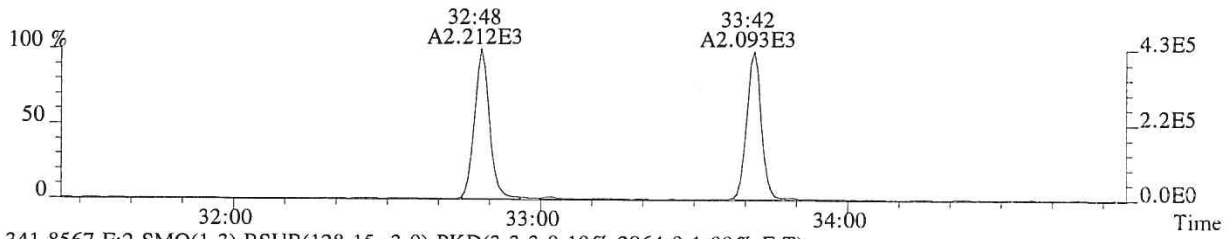


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

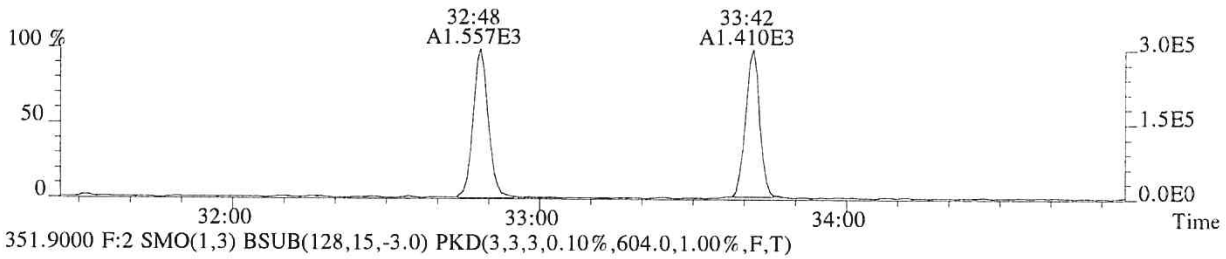


016680

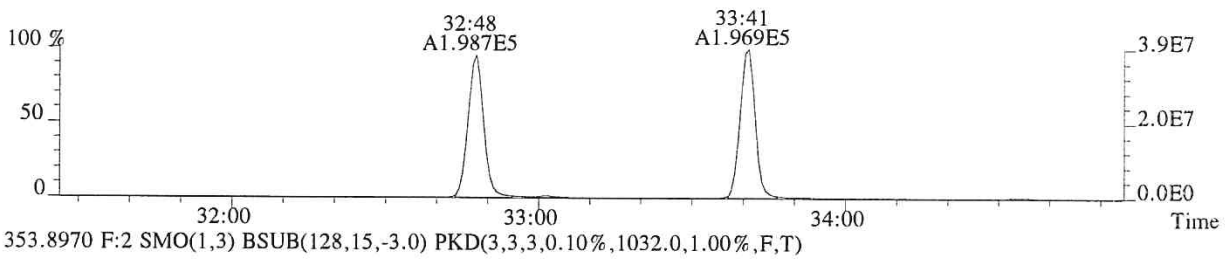
File:P513850 #1-313 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1008.0,1.00%,F,T)



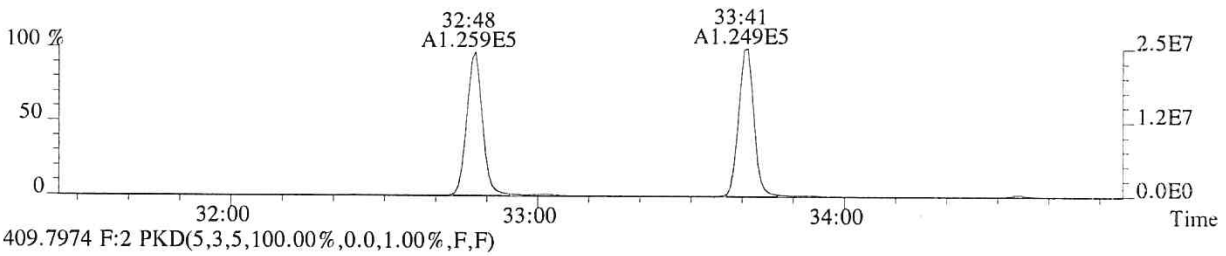
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2964.0,1.00%,F,T)



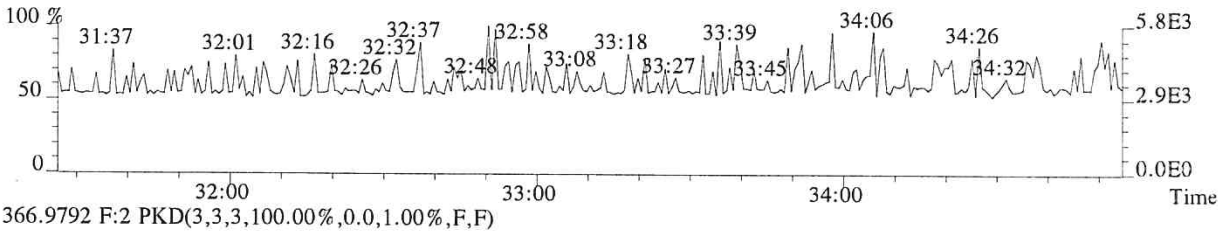
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,604.0,1.00%,F,T)



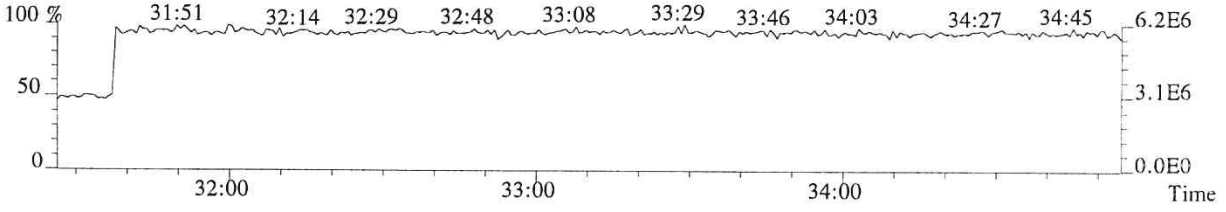
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



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

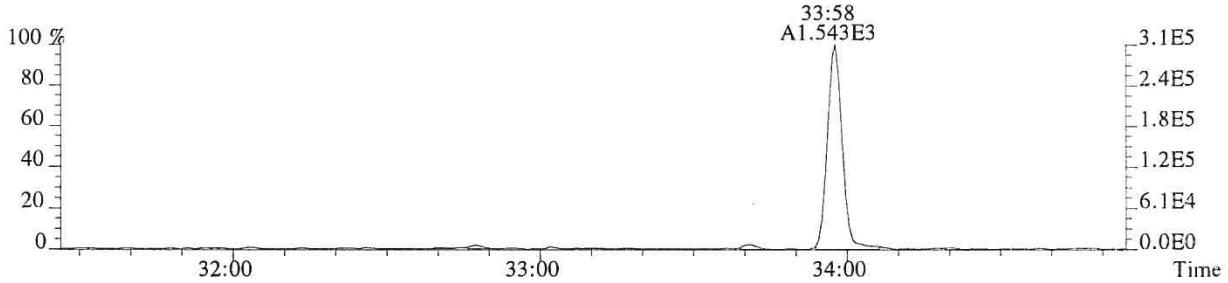


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

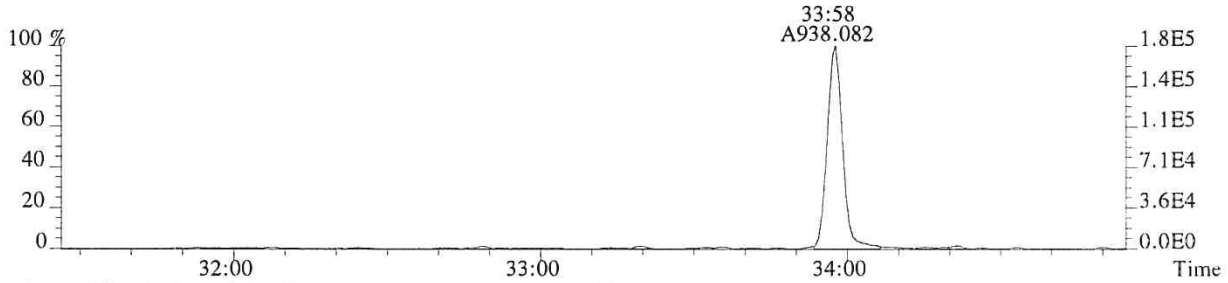


016681

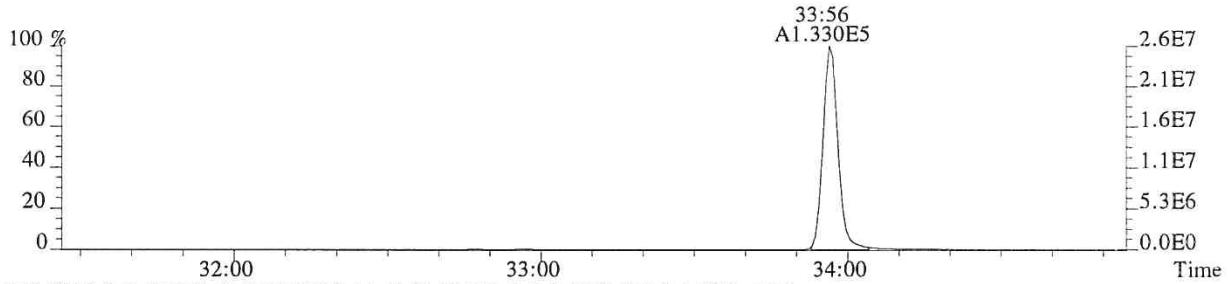
File:P513850 #1-313 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1172.0,1.00%,F,T)



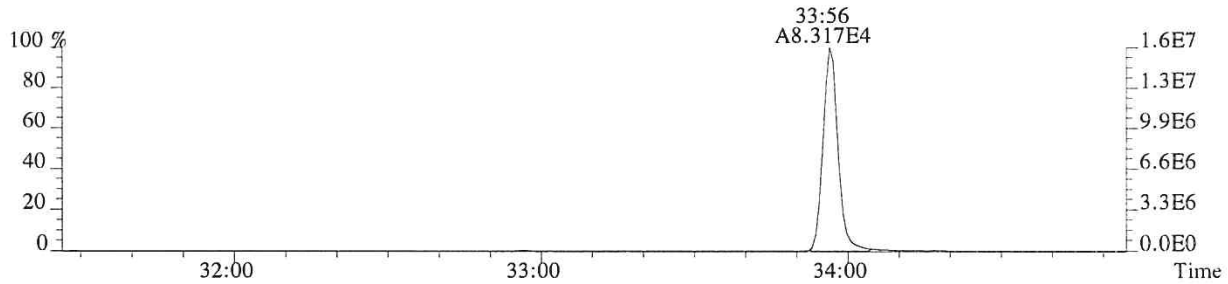
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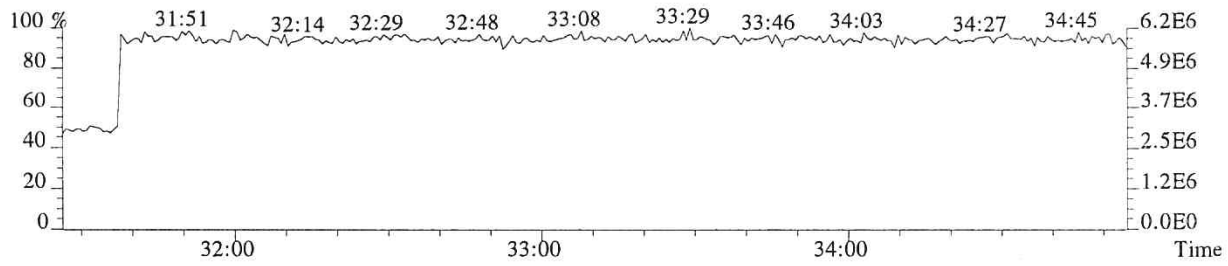
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,988.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,672.0,1.00%,F,T)

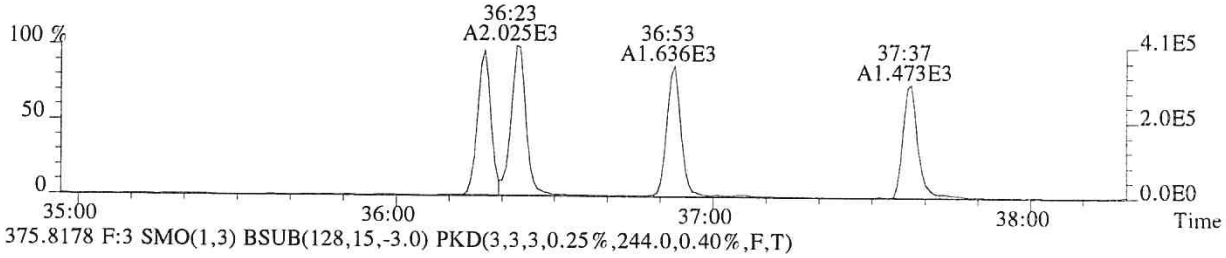


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

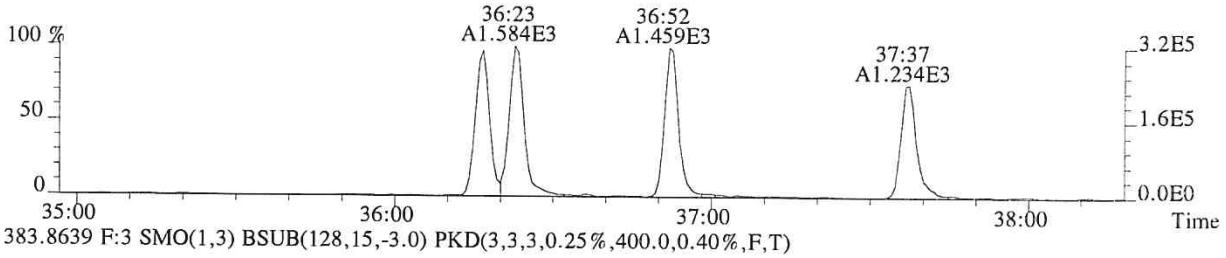


016682

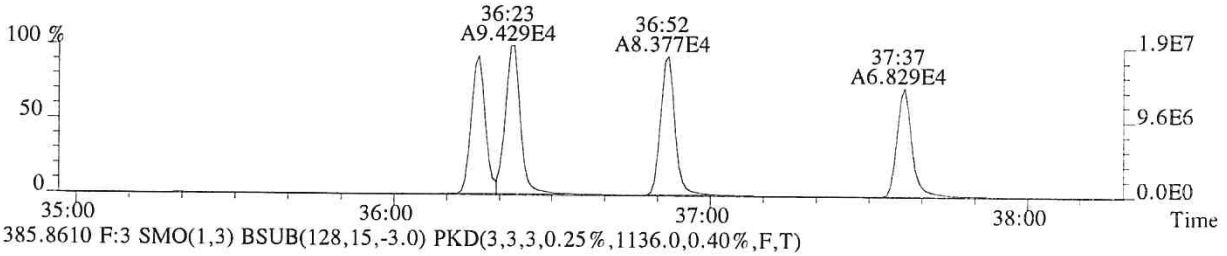
File:P513850 #1-303 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,876.0,0.40%,F,T)



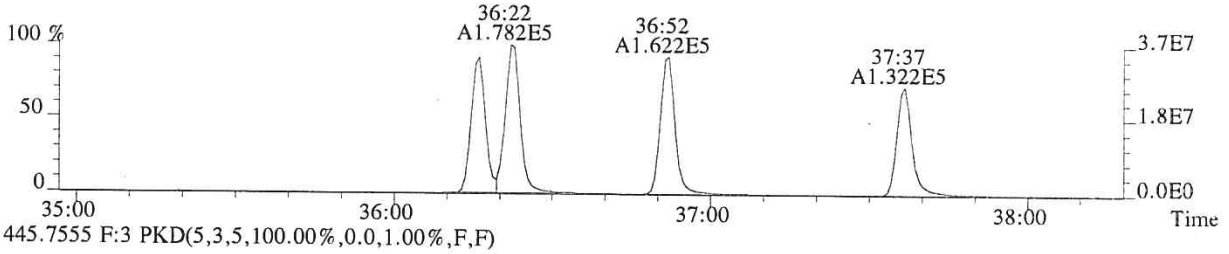
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,244.0,0.40%,F,T)



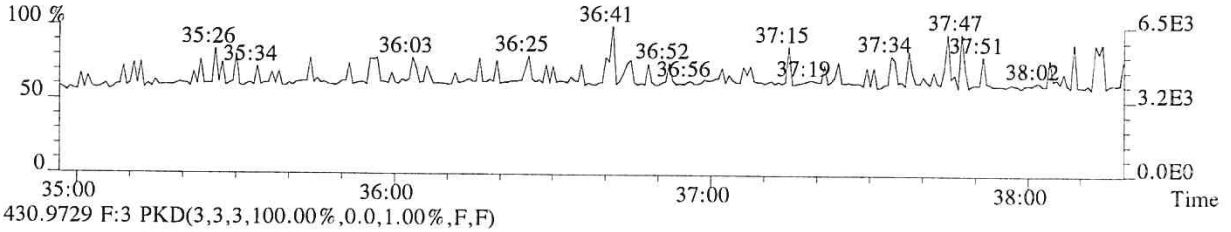
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,400.0,0.40%,F,T)



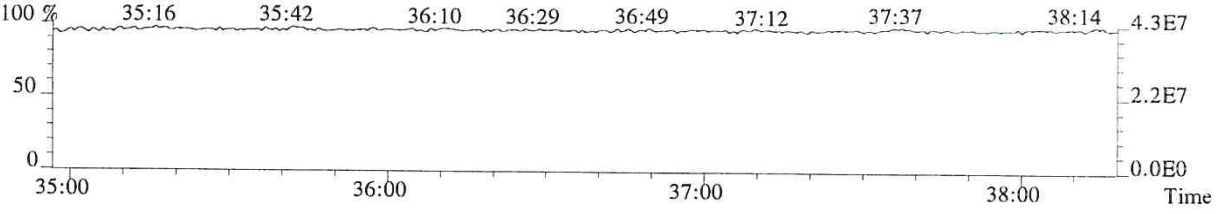
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1136.0,0.40%,F,T)



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

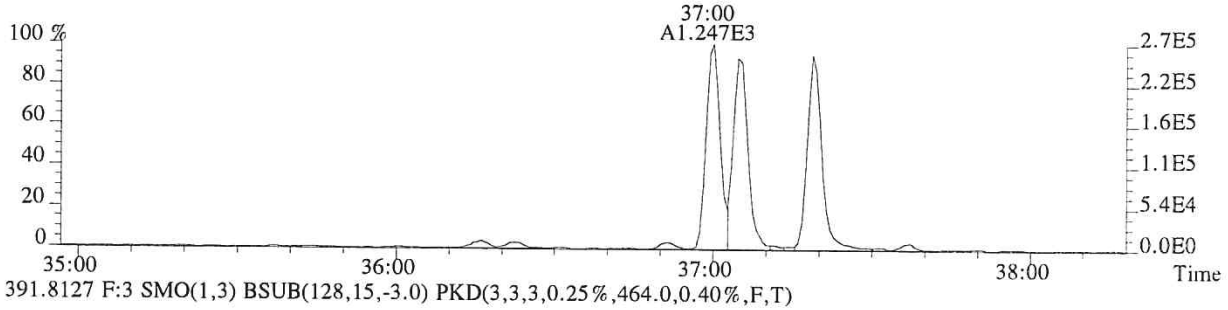


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

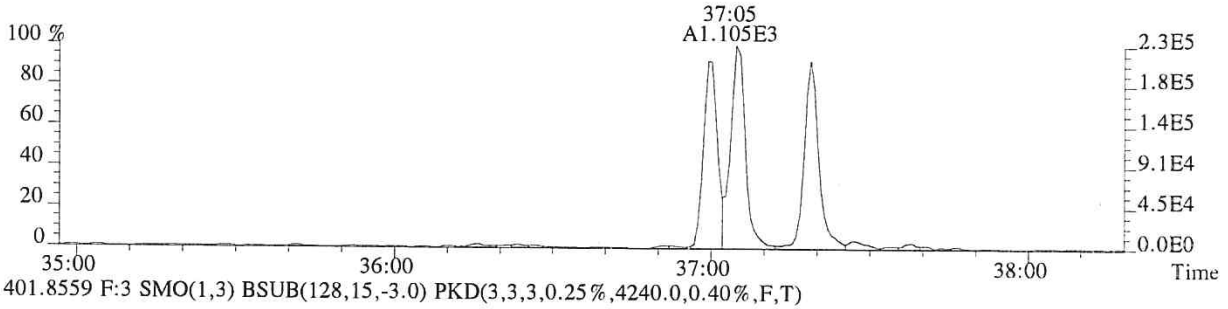


016683

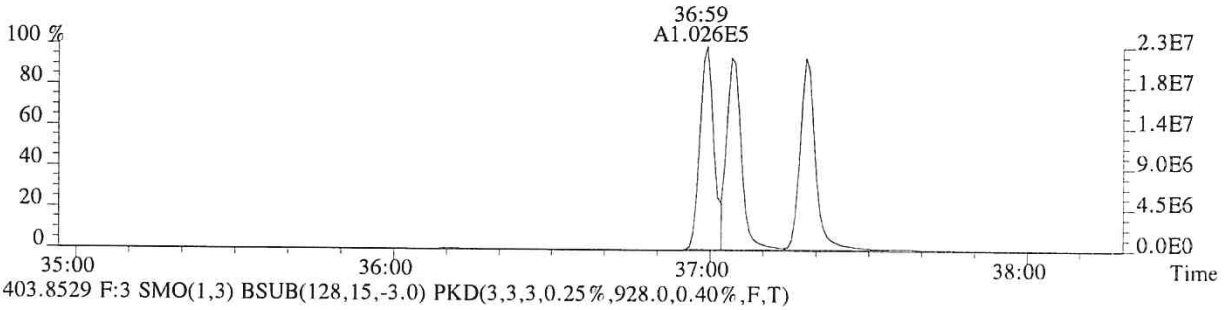
File:P513850 #1-303 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,520.0,0.40%,F,T)



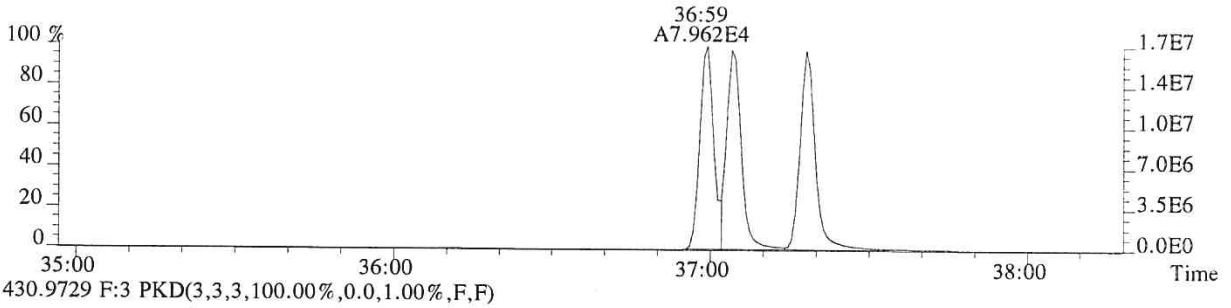
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,464.0,0.40%,F,T)



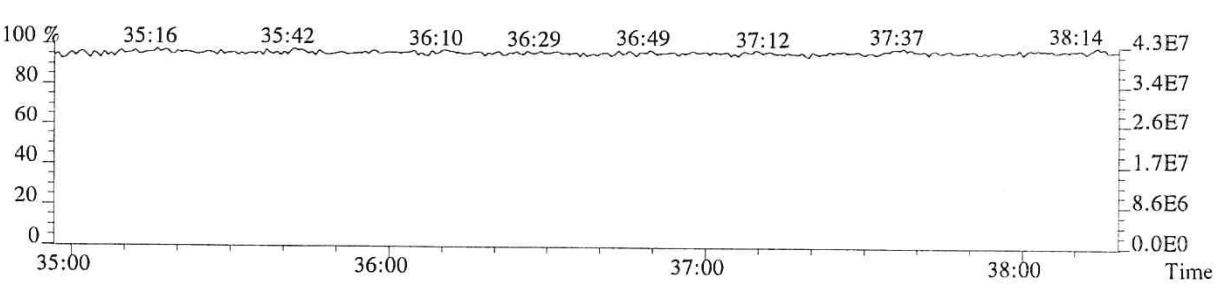
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4240.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,928.0,0.40%,F,T)

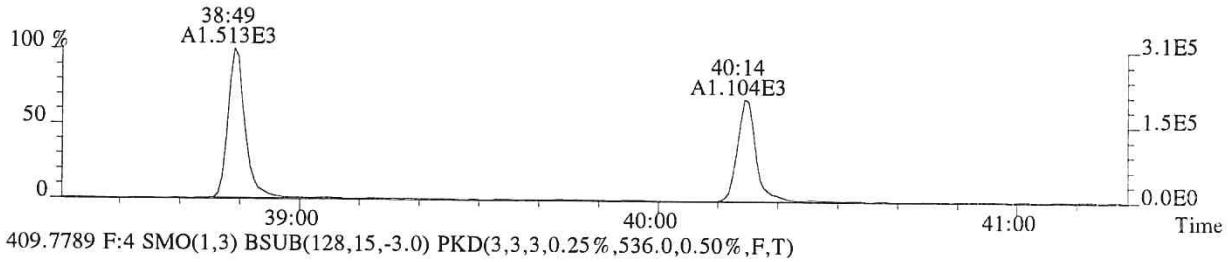


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

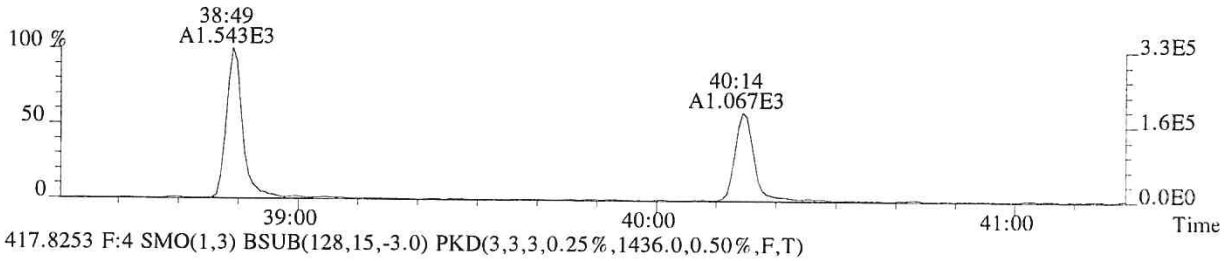


016684

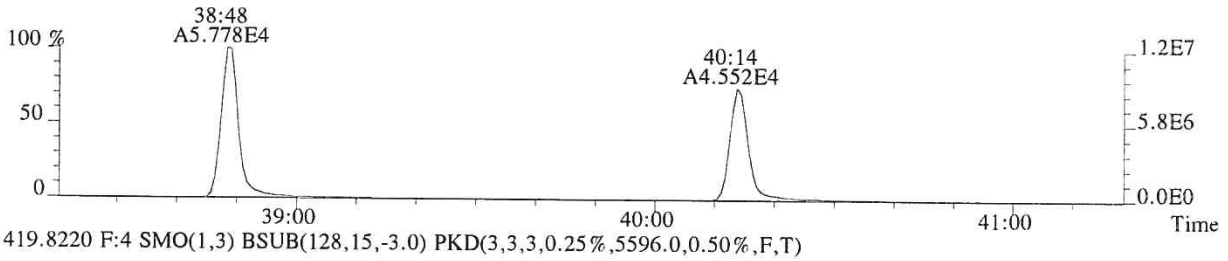
File:P513850 #1-268 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,860.0,0.50%,F,T)



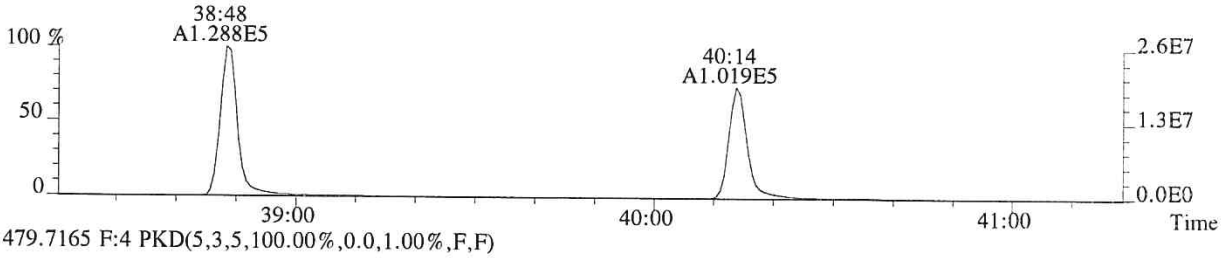
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,536.0,0.50%,F,T)



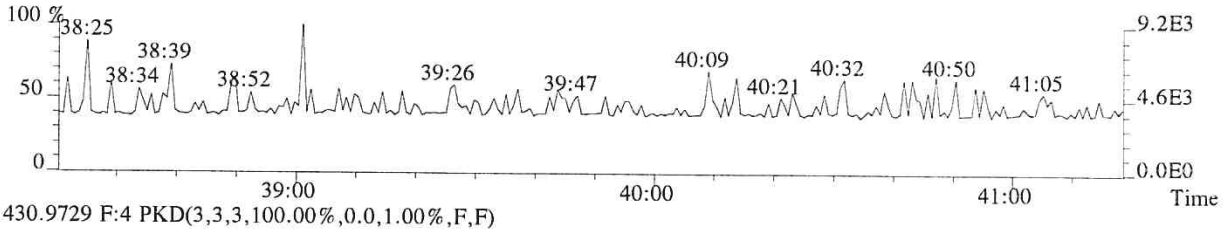
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1436.0,0.50%,F,T)



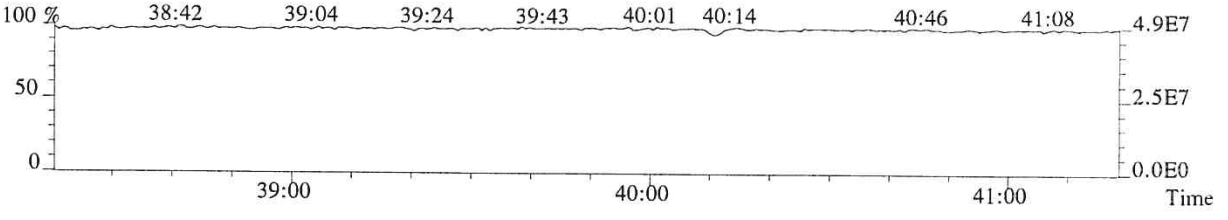
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5596.0,0.50%,F,T)



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

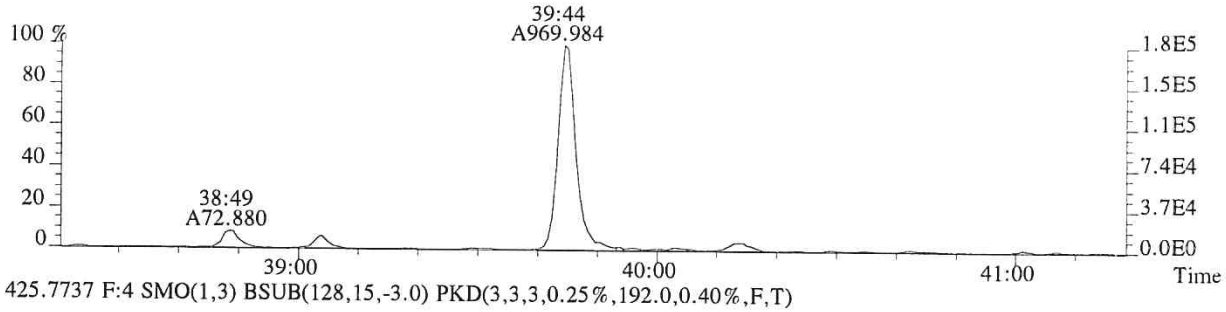


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

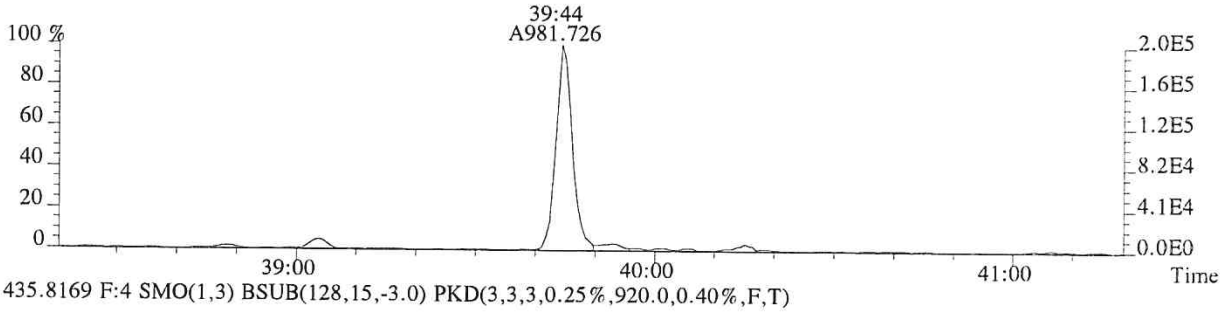


016685

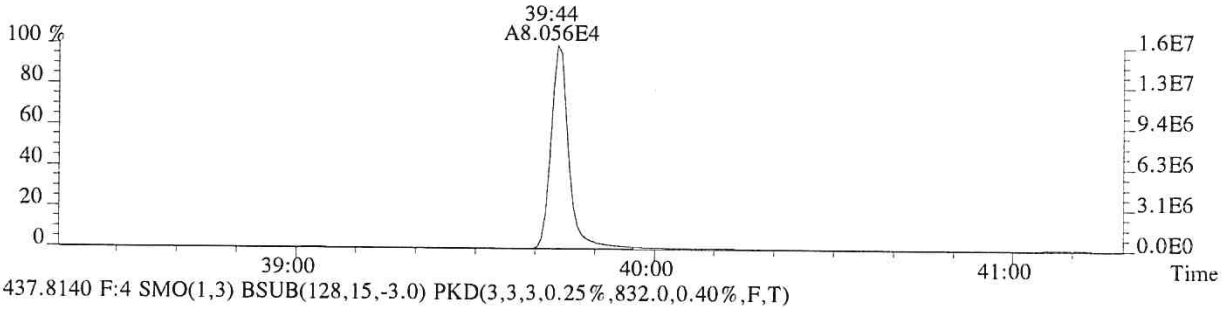
File:P513850 #1-268 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,172.0,0.40%,F,T)



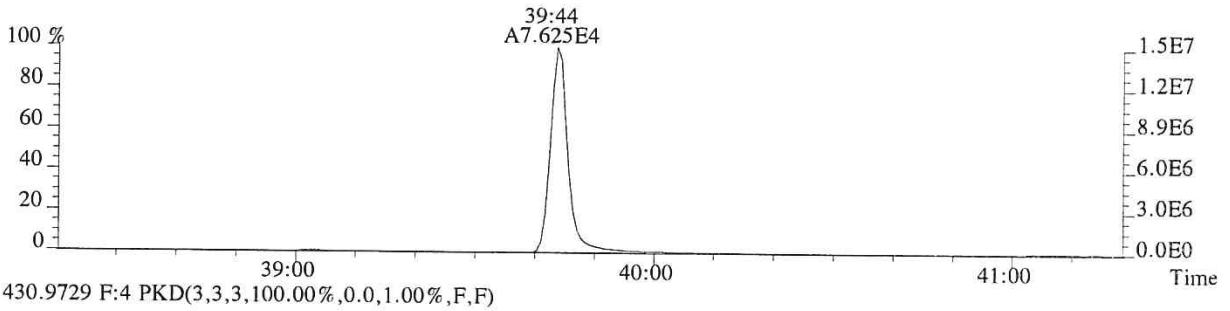
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,192.0,0.40%,F,T)



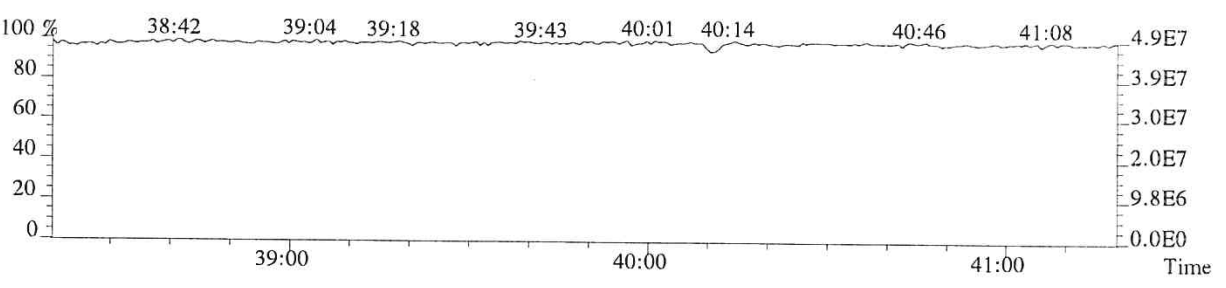
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,920.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,832.0,0.40%,F,T)

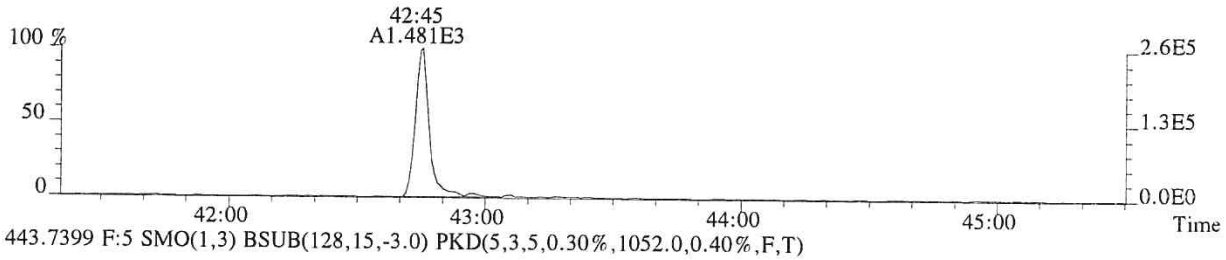


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

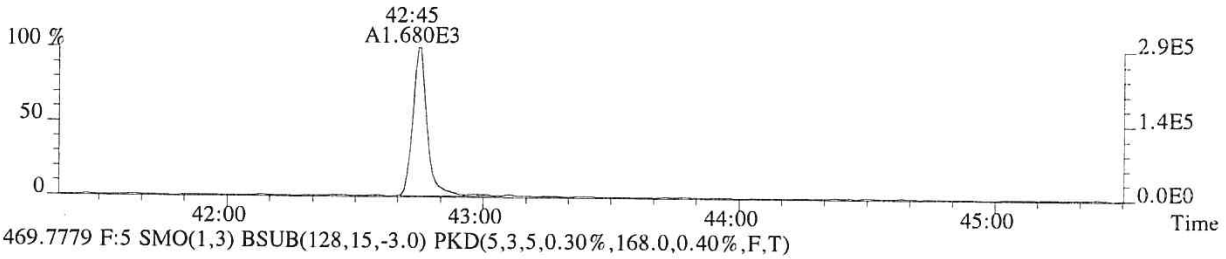


016686

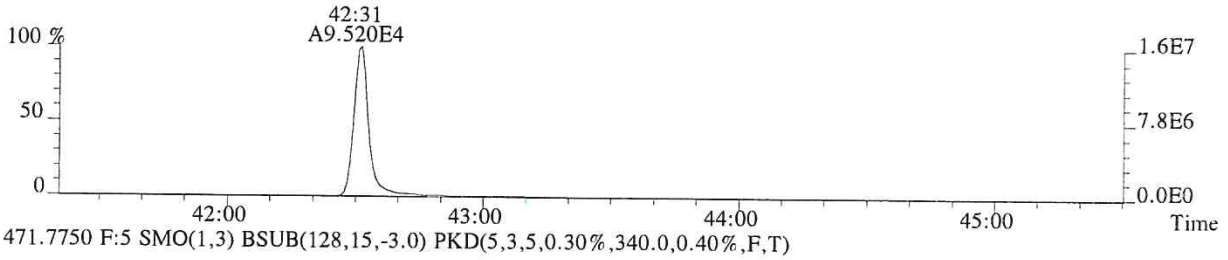
File:P513850 #1-375 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,640.0,0.40%,F,T)



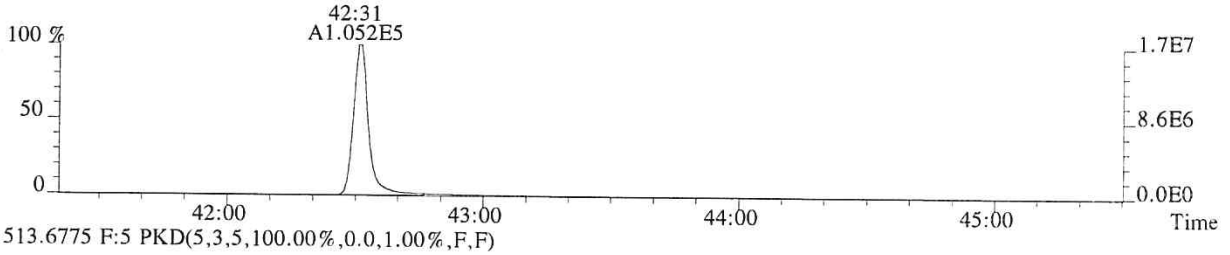
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1052.0,0.40%,F,T)



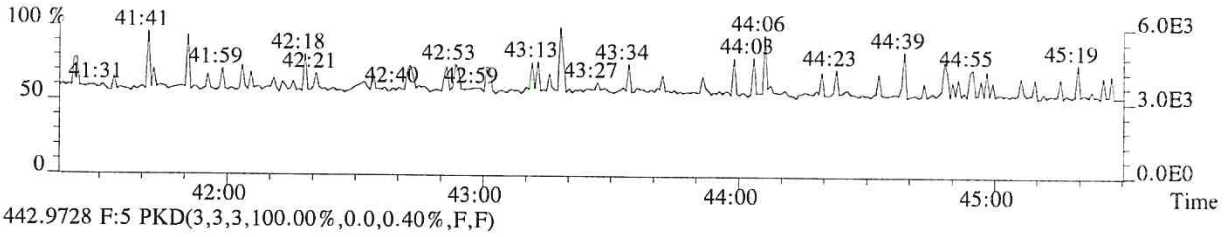
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,168.0,0.40%,F,T)



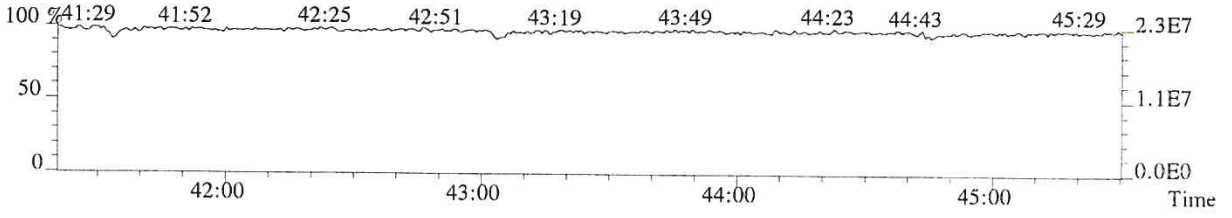
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,340.0,0.40%,F,T)



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

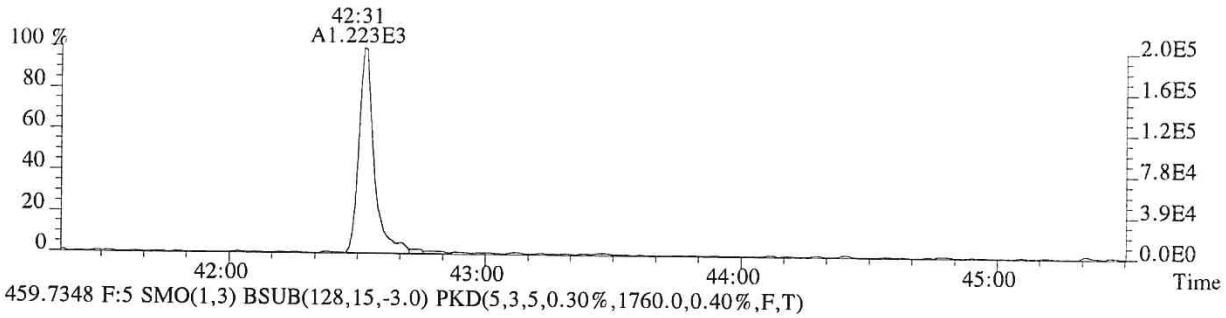


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

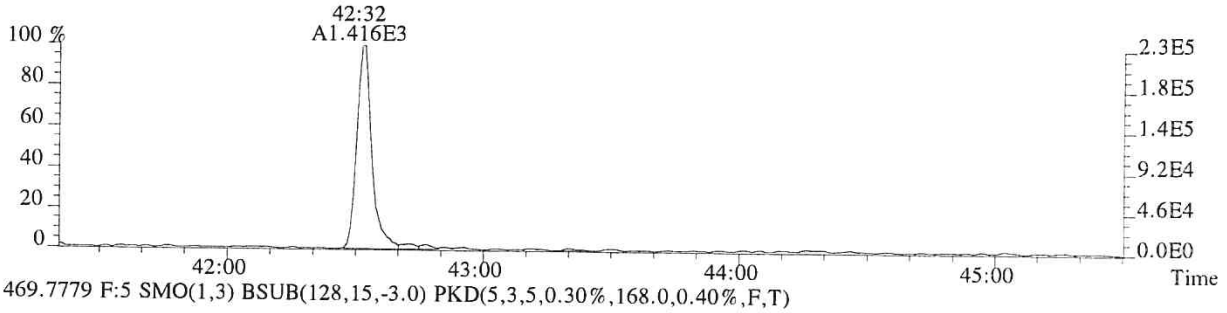


016687

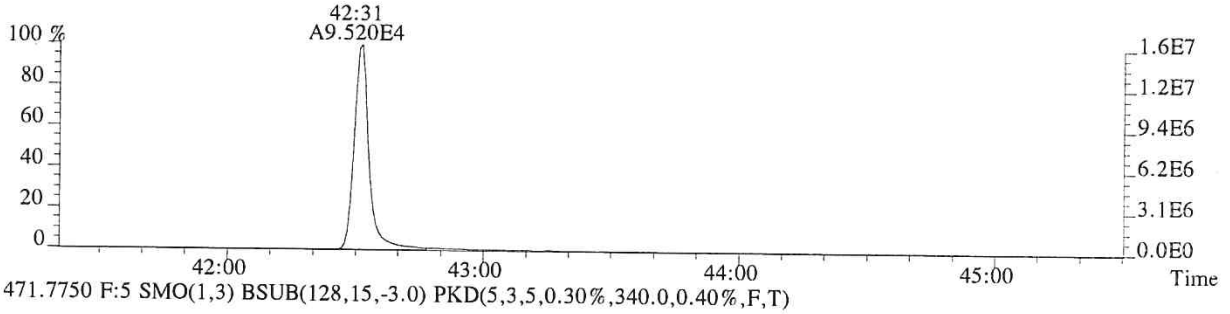
File:P513850 #1-375 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,124.0,0.40%,F,T)



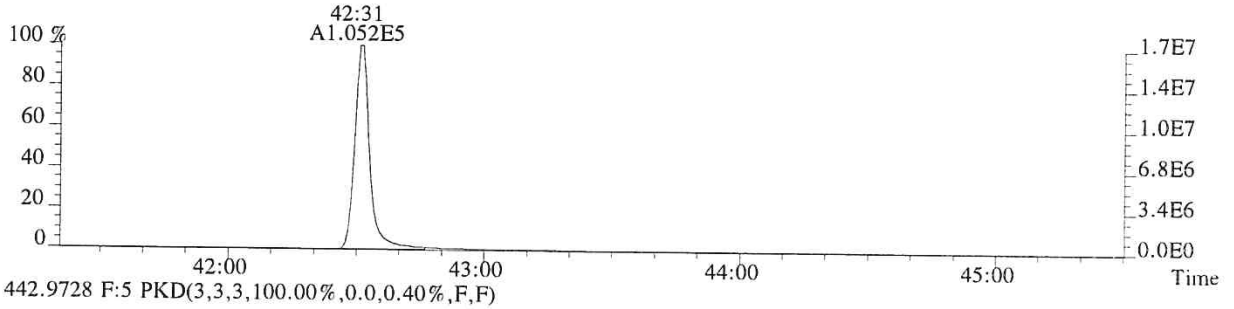
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1760.0,0.40%,F,T)



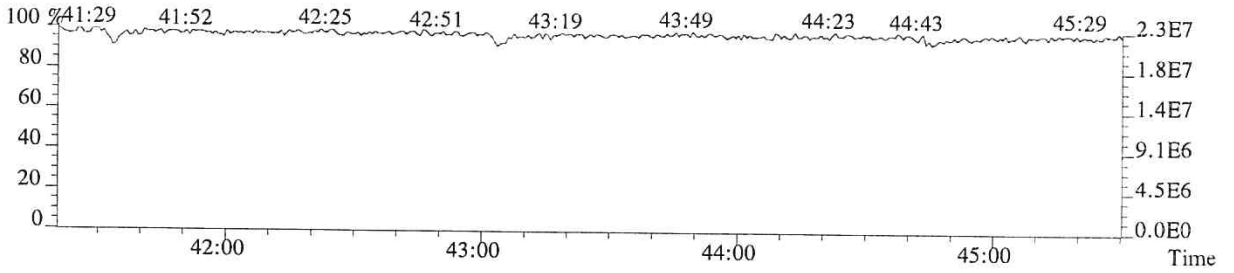
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,168.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,340.0,0.40%,F,T)



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



016688

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76555

Run #2 Filename P513851 Samp: 1 Inj: 1 Acquired: 24-JAN-18 14:23:56
Processed: 24-JAN-18 15:49:38 Sample ID: CS1

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	3.265e+02	4.510e+02	0.72	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	2.143e+03	1.390e+03	1.54	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:41	1.966e+03	1.345e+03	1.46	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:16	1.692e+03	1.406e+03	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	1.851e+03	1.586e+03	1.17	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:52	1.642e+03	1.320e+03	1.24	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.587e+03	1.193e+03	1.33	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	1.464e+03	1.425e+03	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.230e+03	1.277e+03	0.96	yes	no	1.258
10	Unk	OCDF	42:45	1.832e+03	1.936e+03	0.95	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	2.385e+02	2.700e+02	0.88	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:57	1.365e+03	8.234e+02	1.66	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	1.134e+03	9.001e+02	1.26	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	1.250e+03	9.288e+02	1.35	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	1.168e+03	9.616e+02	1.21	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	1.020e+03	9.210e+02	1.11	yes	no	1.025
17	Unk	OCDD	42:31	1.446e+03	1.652e+03	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	7.137e+04	9.000e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:47	8.867e+04	5.547e+04	1.60	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	8.638e+04	5.480e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	3.777e+04	7.232e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:22	4.414e+04	8.392e+04	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	3.753e+04	7.150e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	3.488e+04	6.647e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	2.710e+04	6.070e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	2.509e+04	5.658e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	4.231e+04	5.302e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	5.560e+04	3.503e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	4.358e+04	3.432e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	4.635e+04	3.621e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	4.039e+04	3.882e+04	1.04	yes	no	0.858
32	IS	13C-OCDD	42:31	5.166e+04	5.687e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	4.919e+04	6.018e+04	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	4.800e+04	3.836e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	5.257e+02				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
76555

Run #2 Filename P513851 Samp: 1 Inj: 1 Acquired: 24-JAN-18 14:23:56
Processed: 24-JAN-18 15:49:38 LAB. ID: CS1

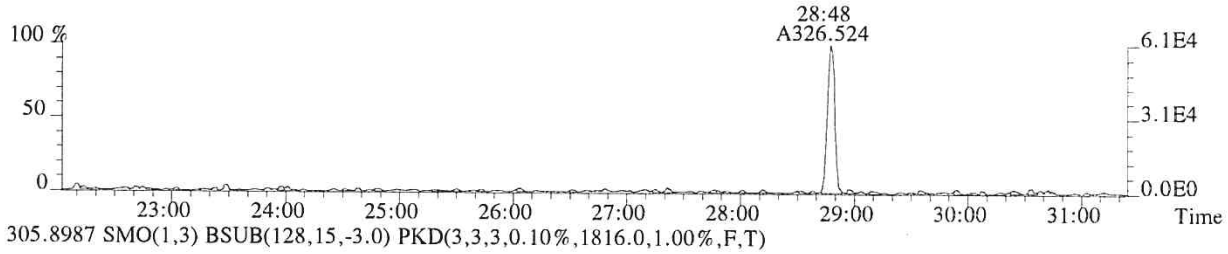
	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.11e+04	5.52e+02	1.1e+02	8.10e+04	1.82e+03	4.5e+01
2	1,2,3,7,8-PeCDF	4.20e+05	1.32e+03	3.2e+02	2.59e+05	1.41e+03	1.8e+02
3	2,3,4,7,8-PeCDF	4.04e+05	1.32e+03	3.1e+02	2.67e+05	1.41e+03	1.9e+02
4	1,2,3,4,7,8-HxCDF	3.58e+05	5.32e+02	6.7e+02	3.14e+05	1.28e+02	2.5e+03
5	1,2,3,6,7,8-HxCDF	3.97e+05	5.32e+02	7.5e+02	3.35e+05	1.28e+02	2.6e+03
6	2,3,4,6,7,8-HxCDF	3.52e+05	5.32e+02	6.6e+02	2.91e+05	1.28e+02	2.3e+03
7	1,2,3,7,8,9-HxCDF	3.28e+05	5.32e+02	6.2e+02	2.40e+05	1.28e+02	1.9e+03
8	1,2,3,4,6,7,8-HpCDF	3.00e+05	3.04e+02	9.9e+02	3.07e+05	7.12e+02	4.3e+02
9	1,2,3,4,7,8,9-HpCDF	2.35e+05	3.04e+02	7.7e+02	2.45e+05	7.12e+02	3.4e+02
10	OCDF	3.05e+05	4.12e+02	7.4e+02	3.13e+05	8.20e+02	3.8e+02
11	2,3,7,8-TCDD	5.05e+04	1.50e+03	3.4e+01	5.68e+04	1.02e+03	5.5e+01
12	1,2,3,7,8-PeCDD	2.75e+05	9.88e+02	2.8e+02	1.65e+05	1.80e+02	9.2e+02
13	1,2,3,4,7,8-HxCDD	2.60e+05	5.96e+02	4.4e+02	2.09e+05	7.60e+02	2.7e+02
14	1,2,3,6,7,8-HxCDD	2.55e+05	5.96e+02	4.3e+02	1.96e+05	7.60e+02	2.6e+02
15	1,2,3,7,8,9-HxCDD	2.36e+05	5.96e+02	4.0e+02	1.94e+05	7.60e+02	2.6e+02
16	1,2,3,4,6,7,8-HpCDD	1.99e+05	6.88e+02	2.9e+02	1.95e+05	5.68e+02	3.4e+02
17	OCDD	2.63e+05	1.92e+02	1.4e+03	2.88e+05	1.59e+03	1.8e+02
18	13C-2,3,7,8-TCDF	1.42e+07	6.97e+03	2.0e+03	1.79e+07	2.86e+03	6.3e+03
19	13C-1,2,3,7,8-PeCDF	1.70e+07	6.48e+02	2.6e+04	1.08e+07	1.59e+03	6.8e+03
20	13C-2,3,4,7,8-PeCDF	1.78e+07	6.48e+02	2.7e+04	1.13e+07	1.59e+03	7.1e+03
21	13C-1,2,3,4,7,8-HxCDF	8.20e+06	9.16e+02	9.0e+03	1.58e+07	1.42e+03	1.1e+04
22	13C-1,2,3,6,7,8-HxCDF	9.34e+06	9.16e+02	1.0e+04	1.79e+07	1.42e+03	1.3e+04
23	13C-2,3,4,6,7,8-HxCDF	8.09e+06	9.16e+02	8.8e+03	1.56e+07	1.42e+03	1.1e+04
24	13C-1,2,3,7,8,9-HxCDF	7.17e+06	9.16e+02	7.8e+03	1.36e+07	1.42e+03	9.6e+03
25	13C-1,2,3,4,6,7,8-HpCDF	5.66e+06	2.69e+03	2.1e+03	1.28e+07	9.09e+03	1.4e+03
26	13C-1,2,3,4,7,8,9-HpCDF	4.79e+06	2.69e+03	1.8e+03	1.07e+07	9.09e+03	1.2e+03
27	13C-2,3,7,8-TCDD	8.84e+06	4.39e+03	2.0e+03	1.11e+07	2.59e+03	4.3e+03
28	13C-1,2,3,7,8-PeCDD	1.13e+07	1.11e+03	1.0e+04	7.15e+06	7.88e+02	9.1e+03
29	13C-1,2,3,4,7,8-HxCDD	9.90e+06	2.00e+03	4.9e+03	7.79e+06	1.42e+03	5.5e+03
30	13C-1,2,3,6,7,8-HxCDD	9.60e+06	2.00e+03	4.8e+03	7.47e+06	1.42e+03	5.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	7.95e+06	1.15e+03	6.9e+03	7.67e+06	8.88e+02	8.6e+03
32	13C-OCDD	8.56e+06	6.00e+01	1.4e+05	9.50e+06	8.00e+02	1.2e+04
33	13C-1,2,3,4-TCDD	9.96e+06	4.39e+03	2.3e+03	1.22e+07	2.59e+03	4.7e+03
34	13C-1,2,3,7,8,9-HxCDD	9.63e+06	2.00e+03	4.8e+03	7.67e+06	1.42e+03	5.4e+03
35	37Cl-2,3,7,8-TCDD	1.07e+05	1.30e+03	8.2e+01			

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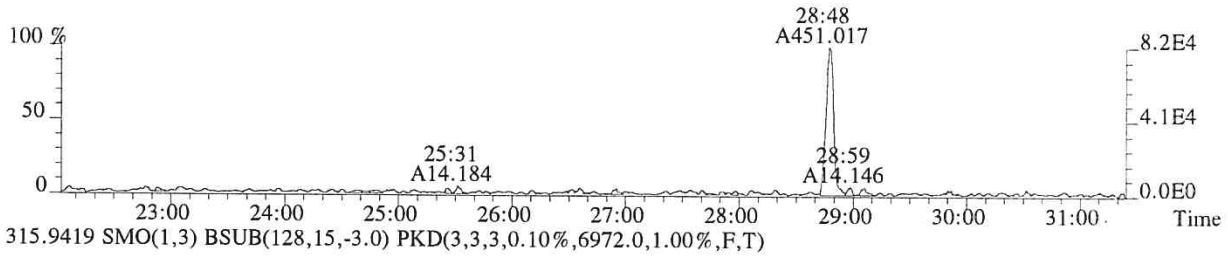
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File:P513851 #1-665 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555

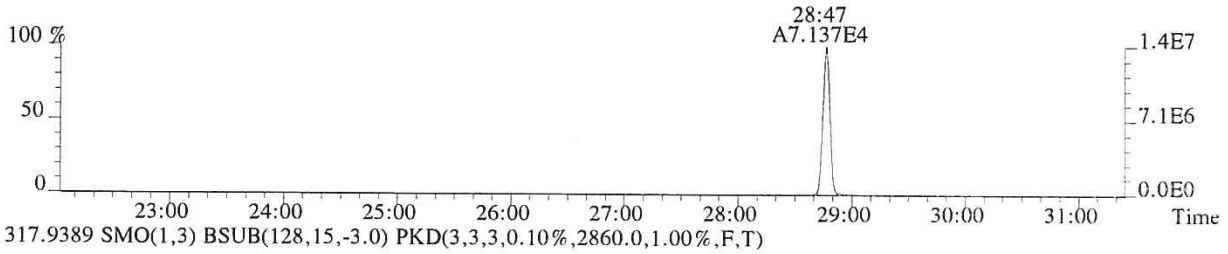
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,552.0,1.00%,F,T)



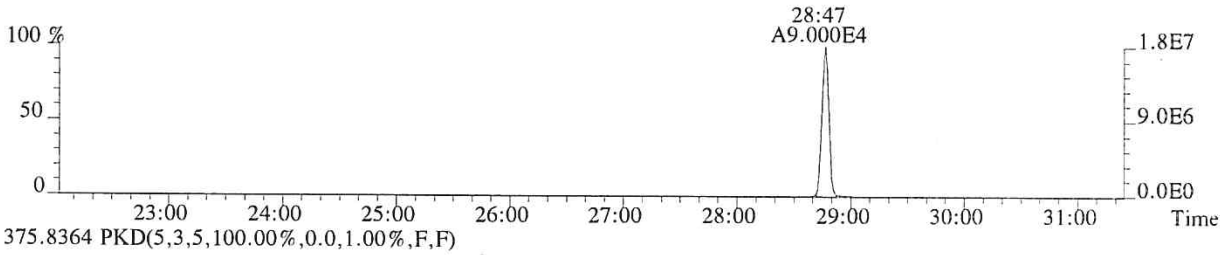
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1816.0,1.00%,F,T)



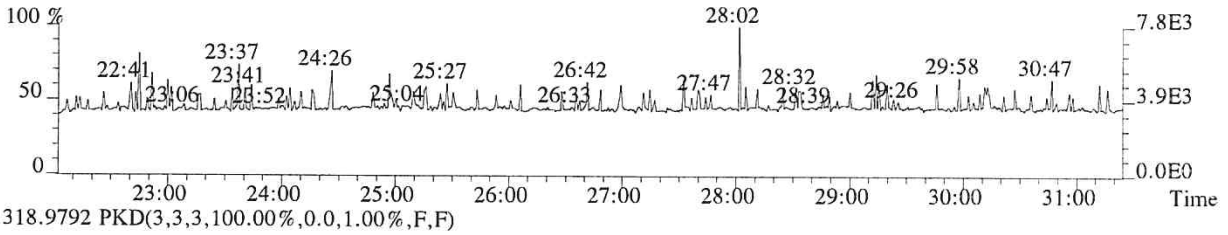
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6972.0,1.00%,F,T)



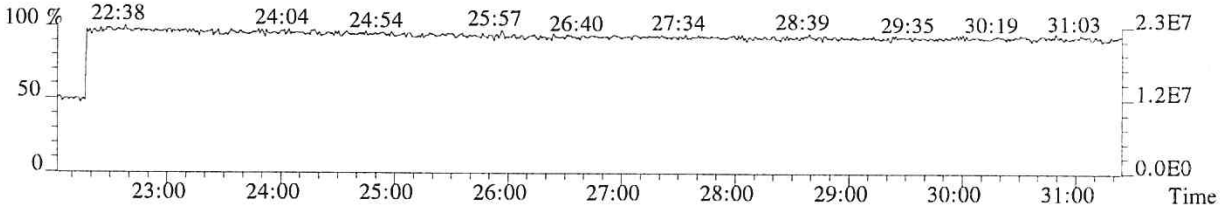
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2860.0,1.00%,F,T)



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

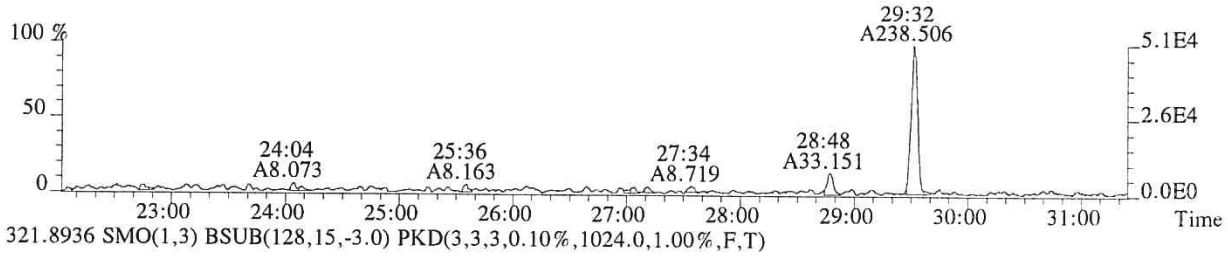


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

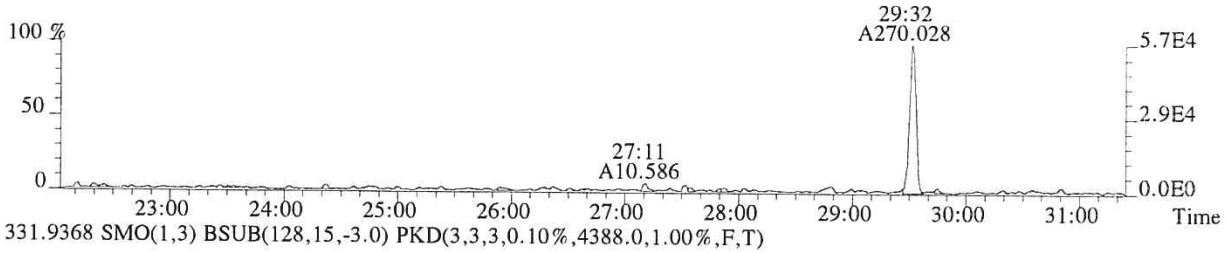


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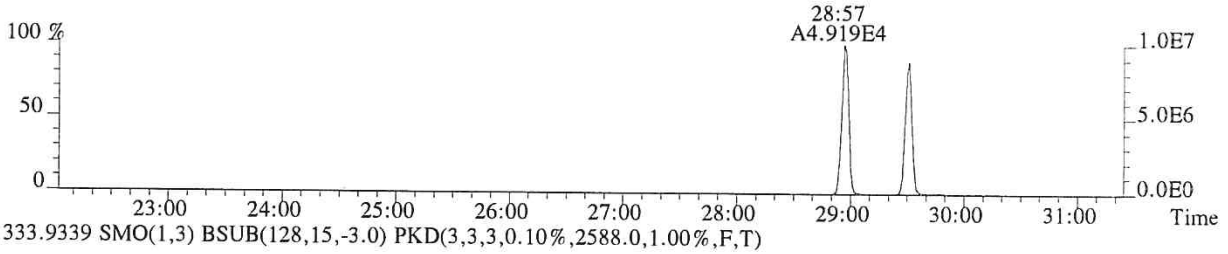
File:P513851 #1-665 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:76555
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1496.0,1.00%,F,T)



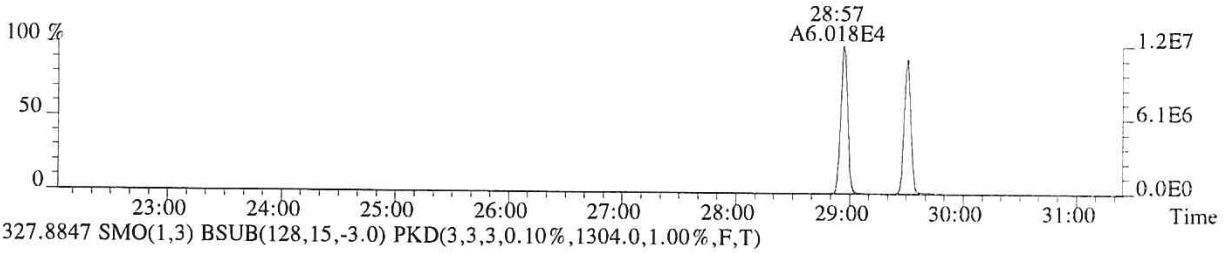
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



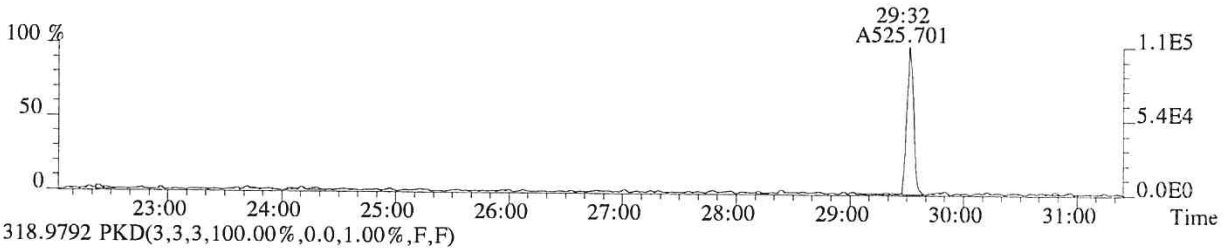
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4388.0,1.00%,F,T)



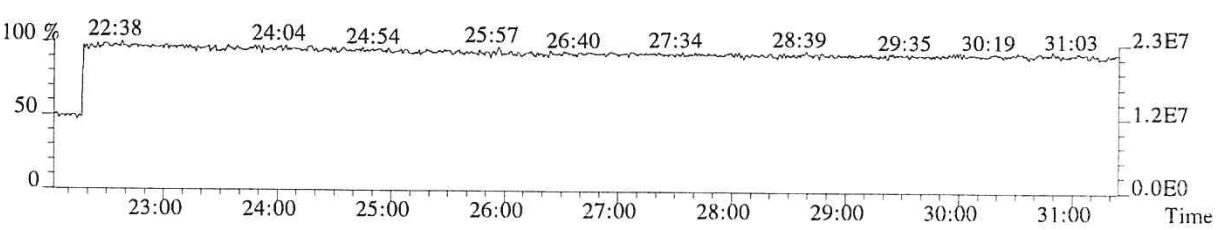
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2588.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1304.0,1.00%,F,T)

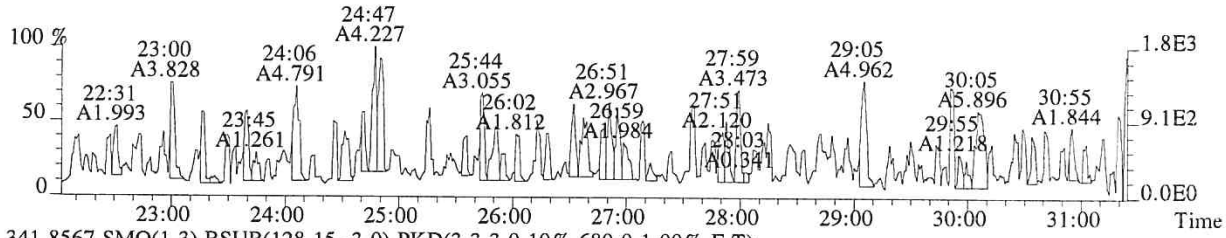


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

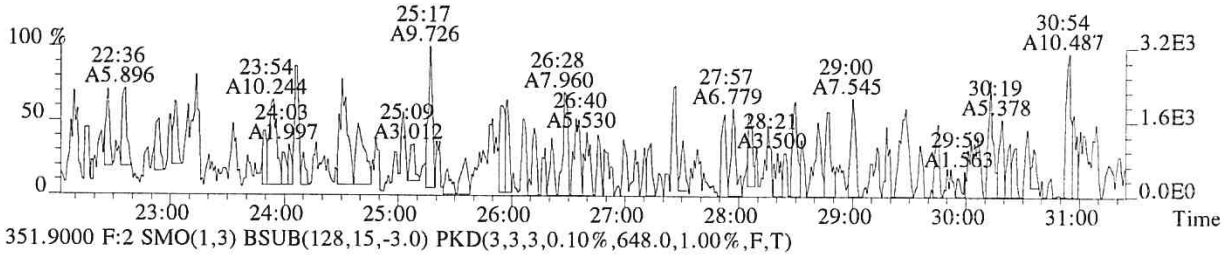


016692

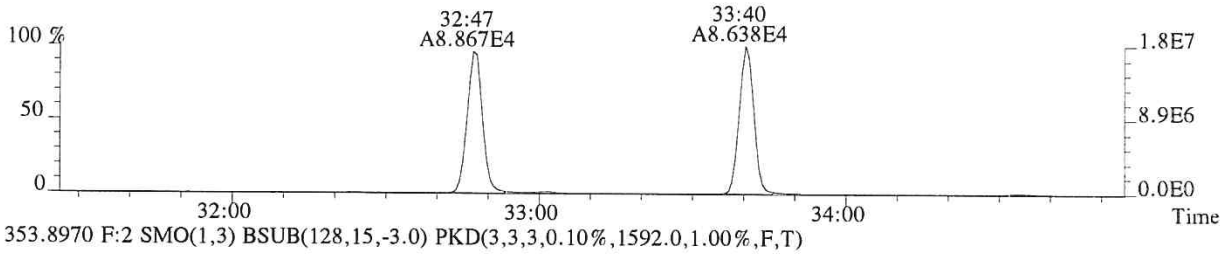
File:P513851 #1-665 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:76555
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,388.0,1.00%,F,T)



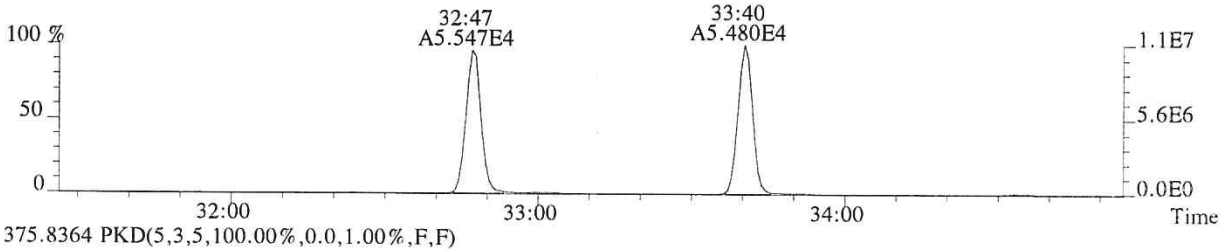
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,680.0,1.00%,F,T)



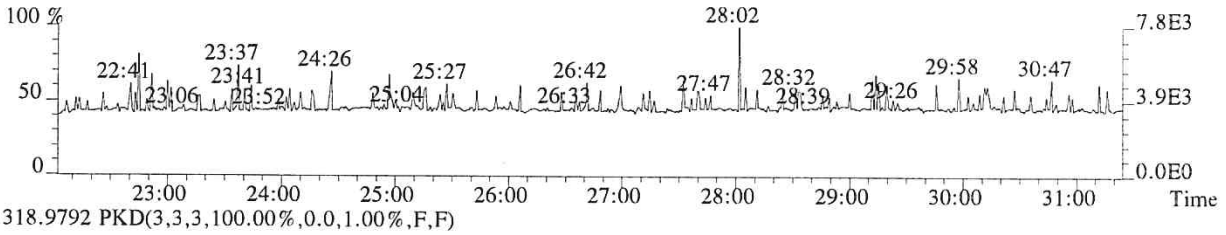
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,648.0,1.00%,F,T)



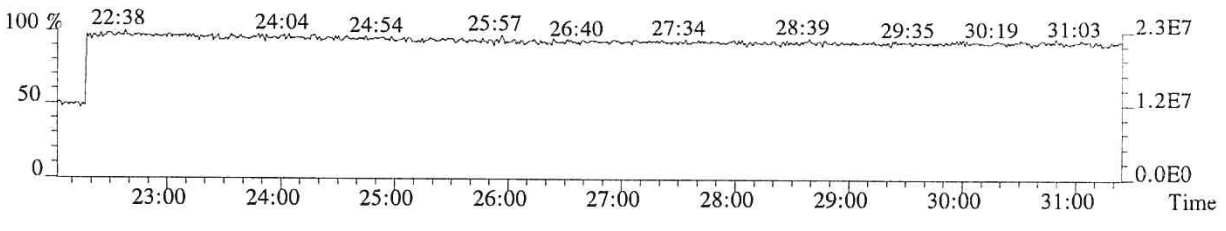
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1592.0,1.00%,F,T)



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

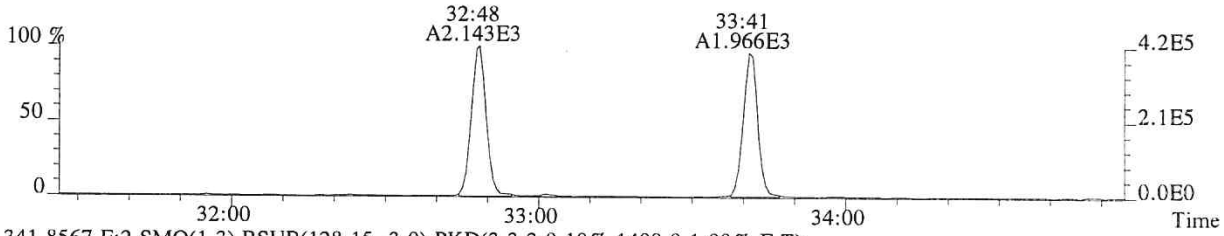


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

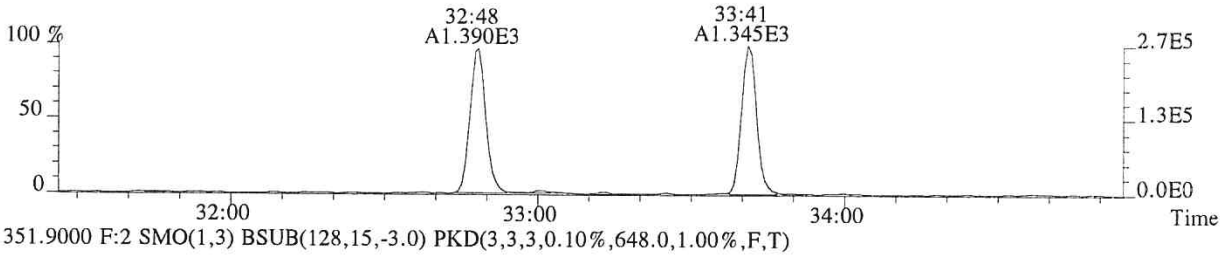


016693

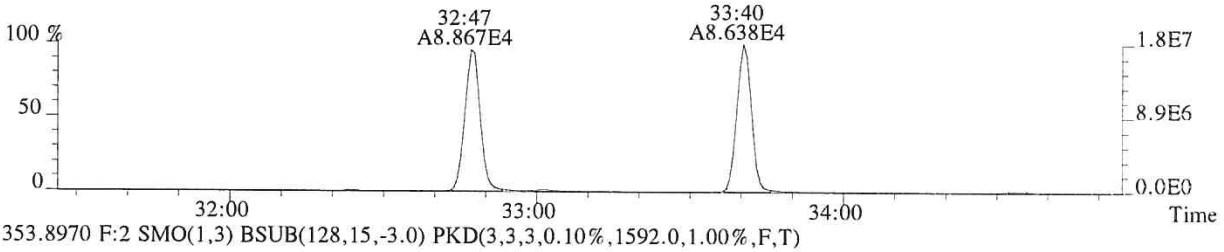
File:P513851 #1-313 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1316.0,1.00%,F,T)



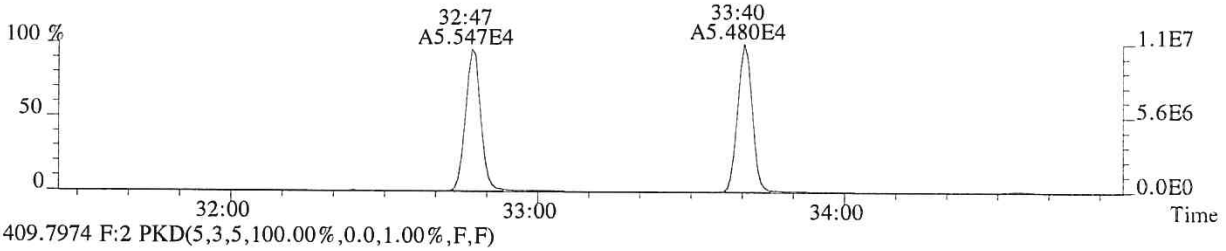
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1408.0,1.00%,F,T)



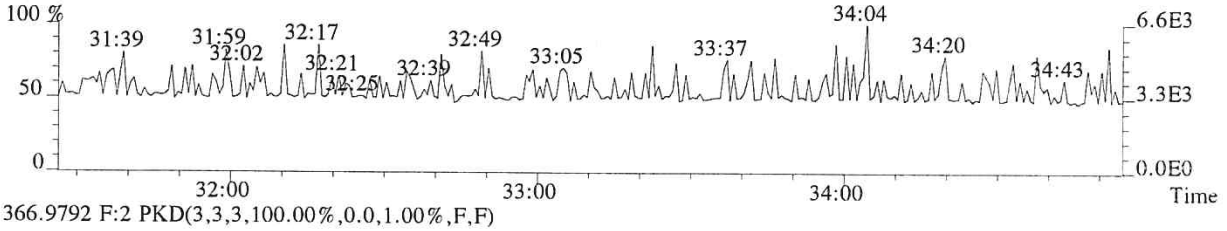
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,648.0,1.00%,F,T)



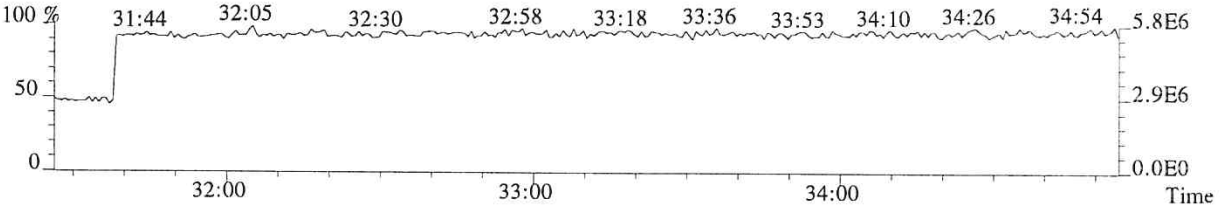
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1592.0,1.00%,F,T)



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

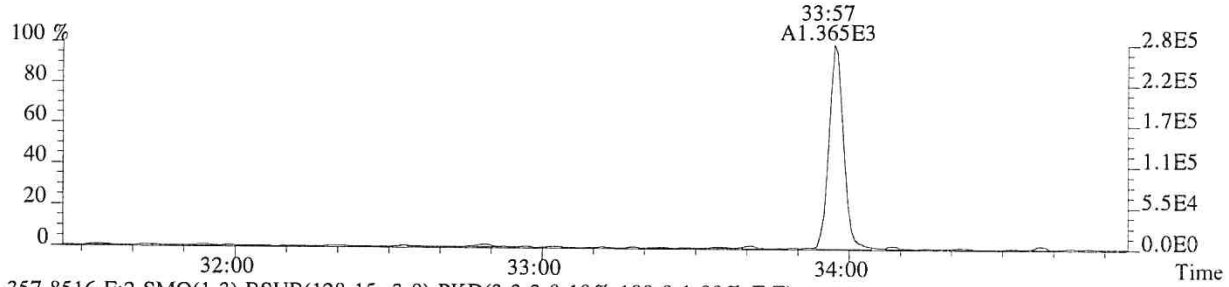


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

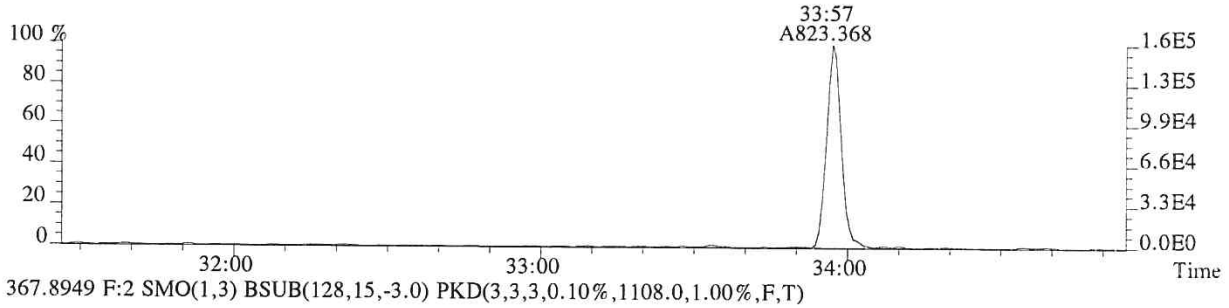


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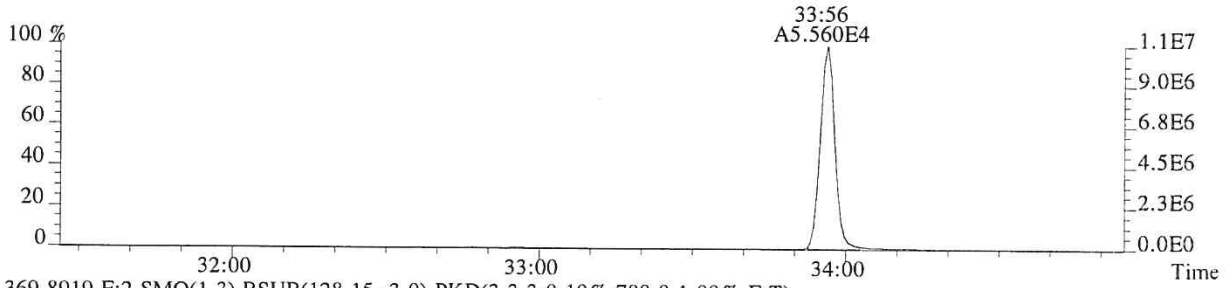
File:P513851 #1-313 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,988.0,1.00%,F,T)



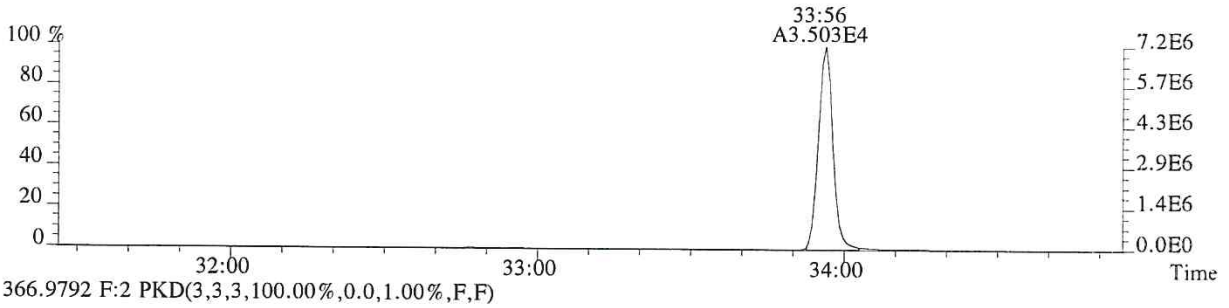
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,180.0,1.00%,F,T)



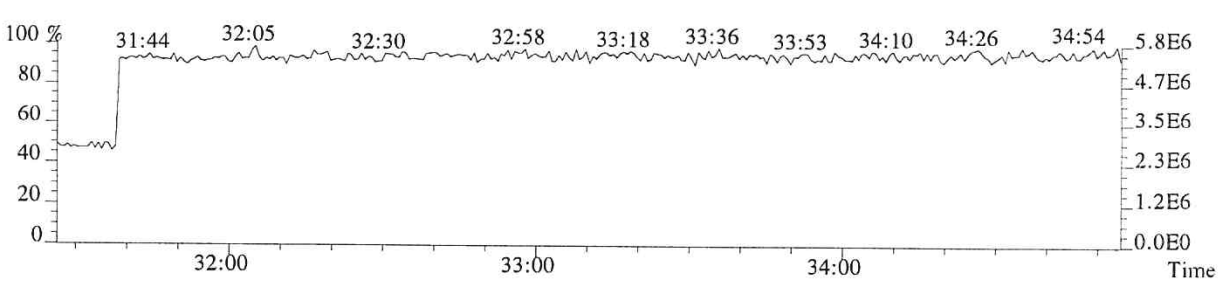
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1108.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,788.0,1.00%,F,T)

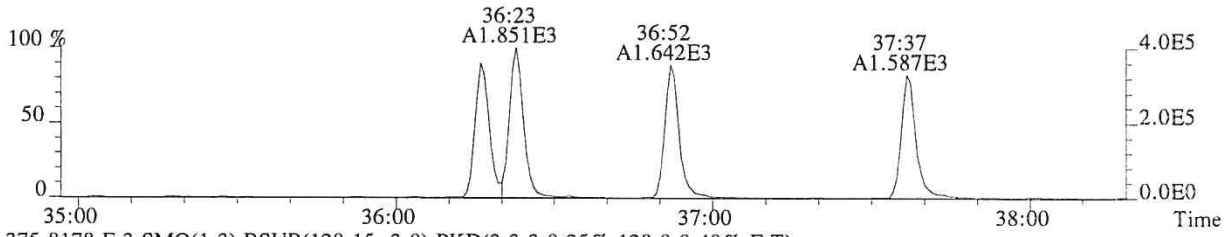


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

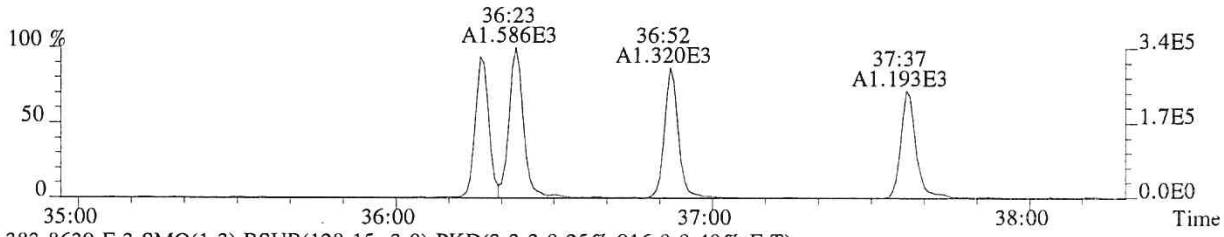


016695

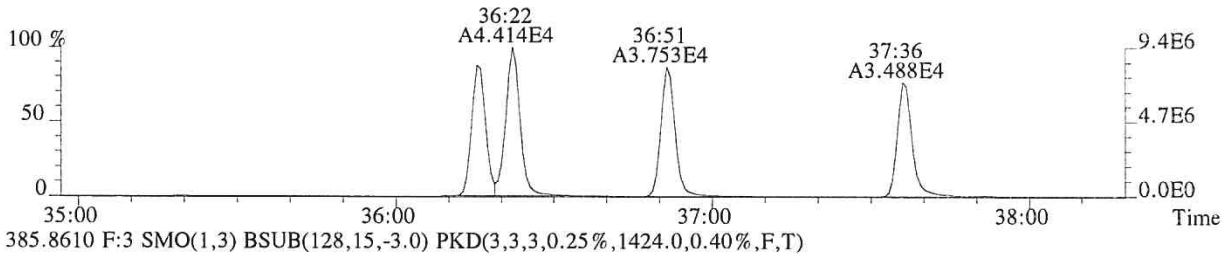
File:P513851 #1-303 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,532.0,0.40%,F,T)



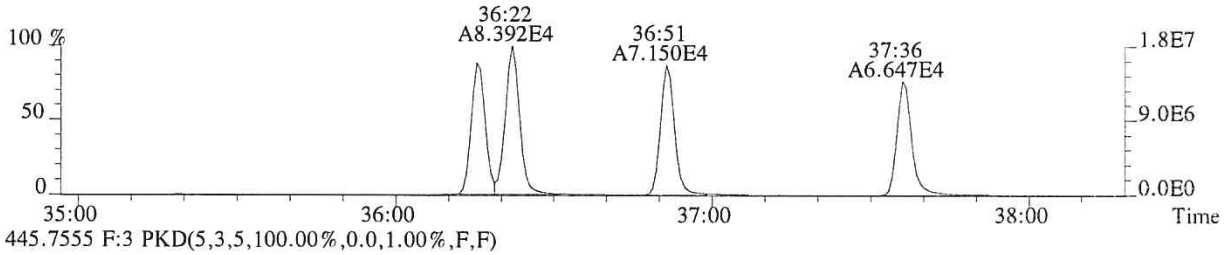
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,128.0,0.40%,F,T)



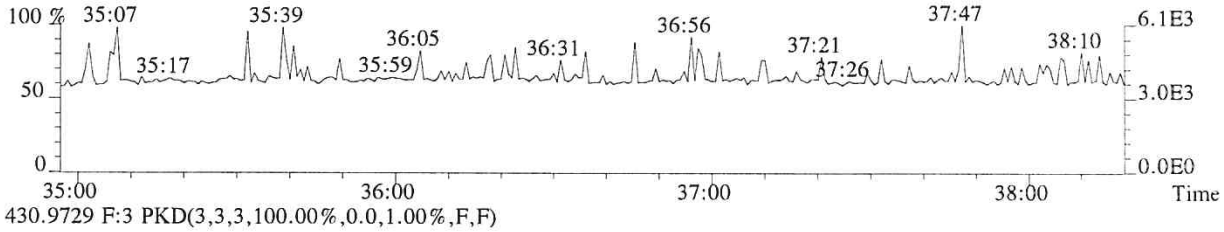
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,916.0,0.40%,F,T)



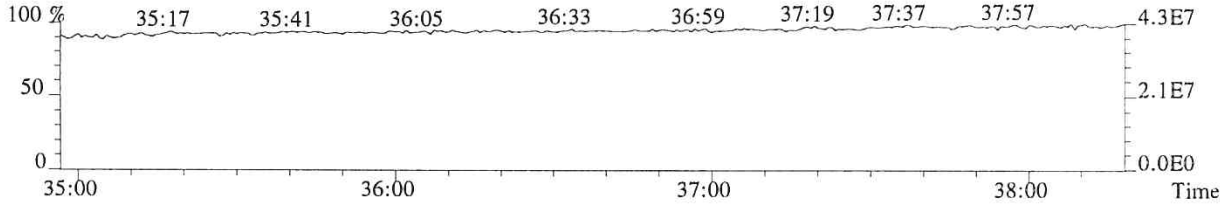
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1424.0,0.40%,F,T)



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

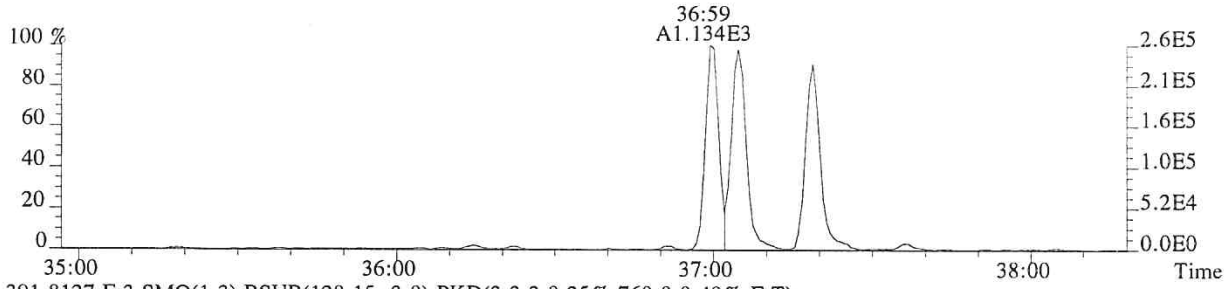


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

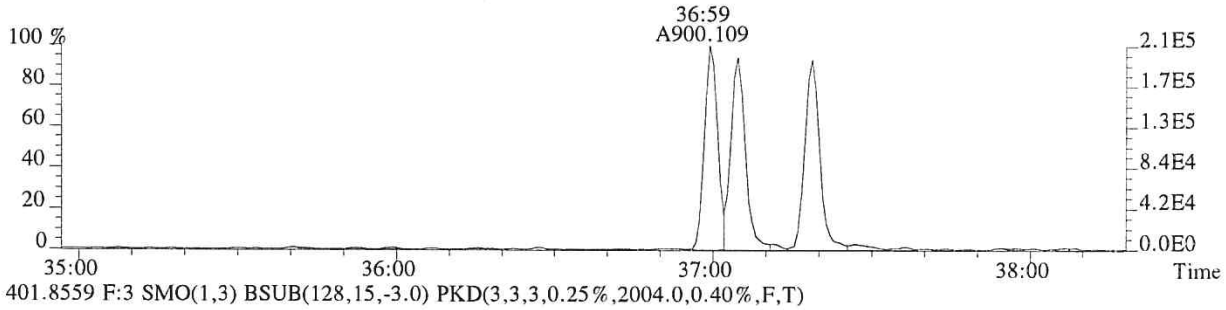


016696

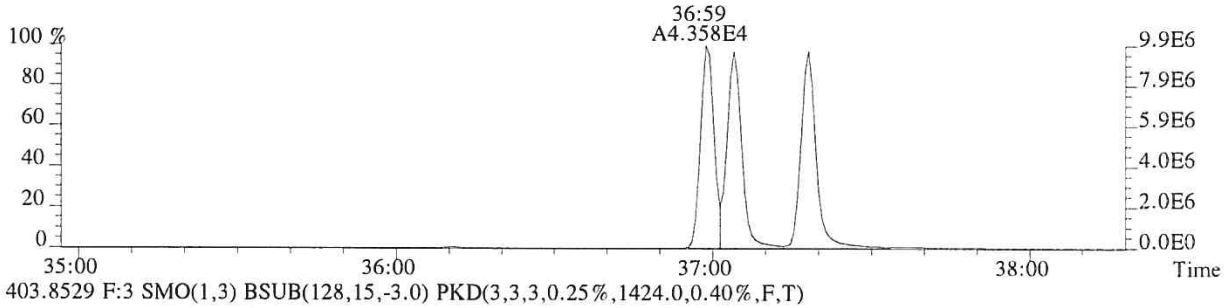
File:P513851 #1-303 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,596.0,0.40%,F,T)



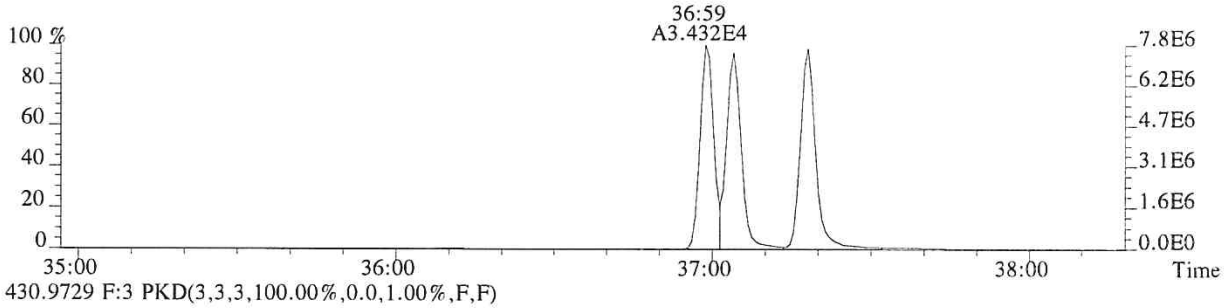
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,760.0,0.40%,F,T)



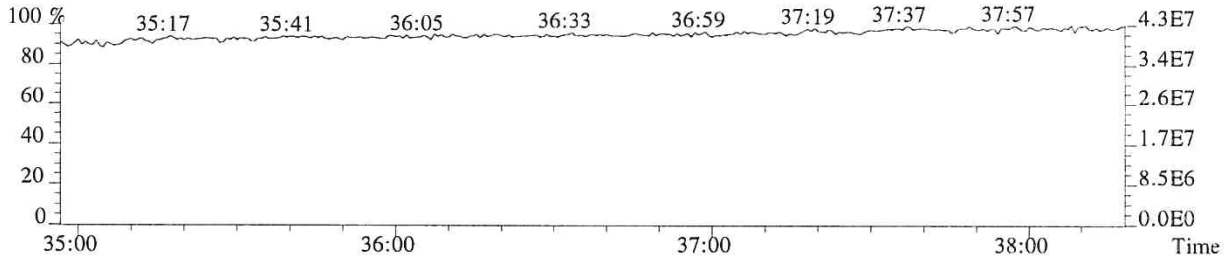
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2004.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1424.0,0.40%,F,T)

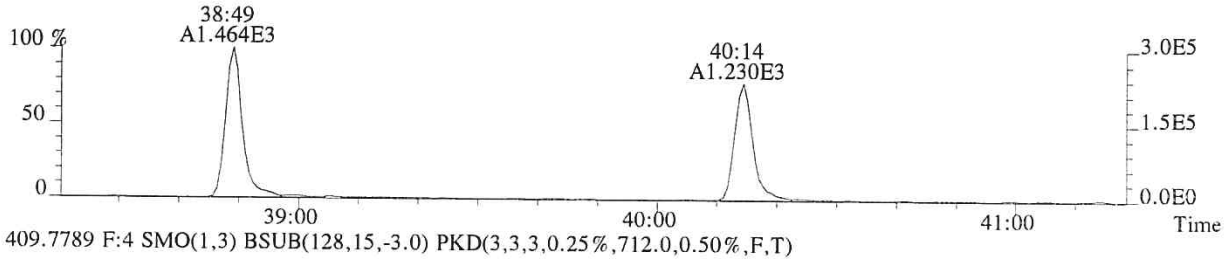


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

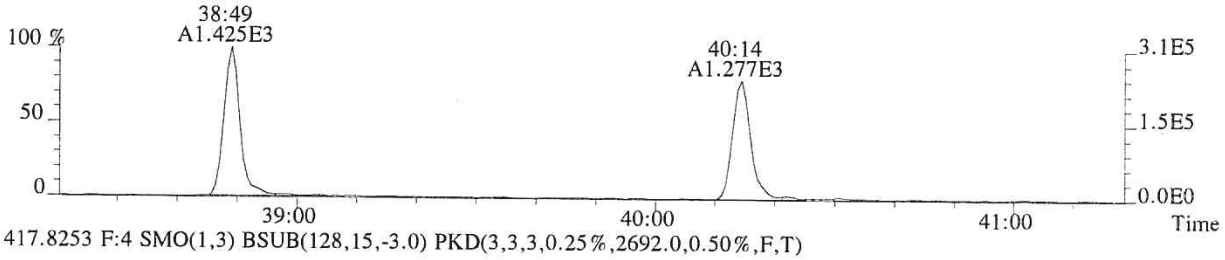


016697

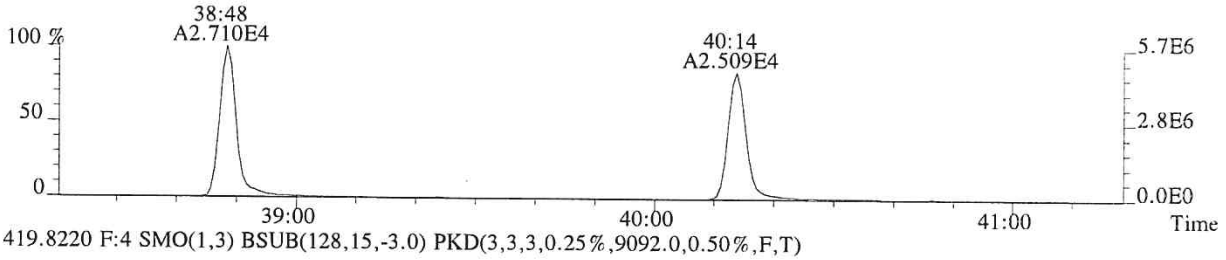
File:P513851 #1-268 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,304.0,0.50%,F,T)



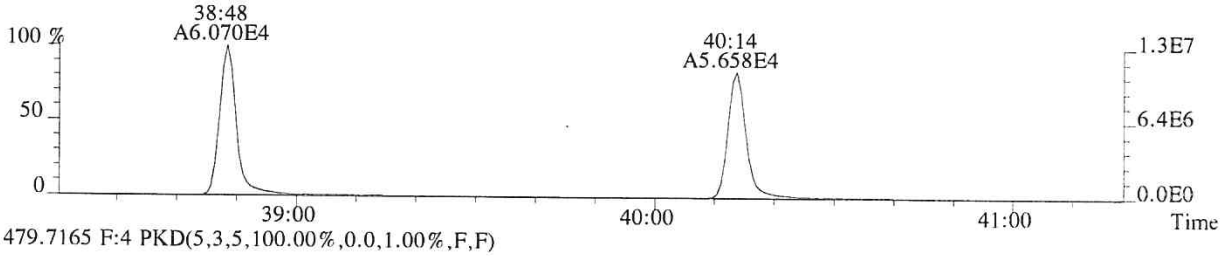
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,712.0,0.50%,F,T)



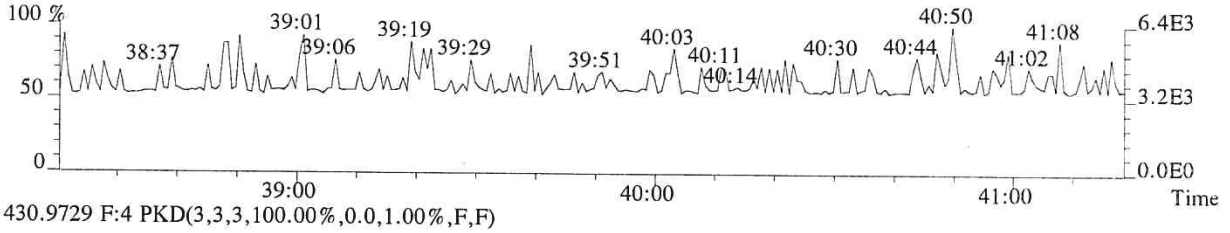
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2692.0,0.50%,F,T)



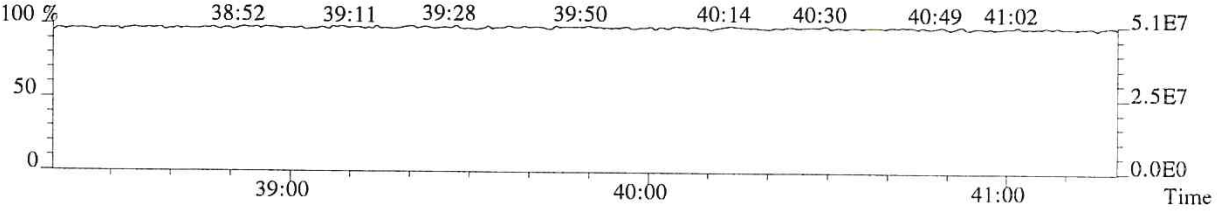
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,9092.0,0.50%,F,T)



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

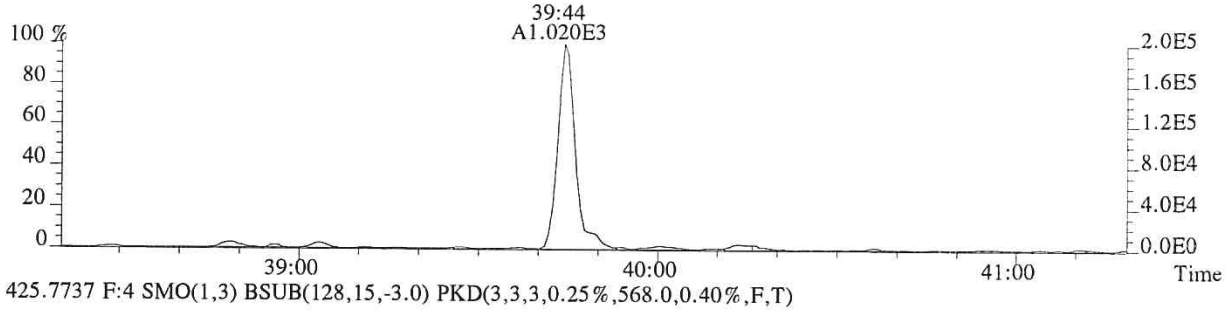


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

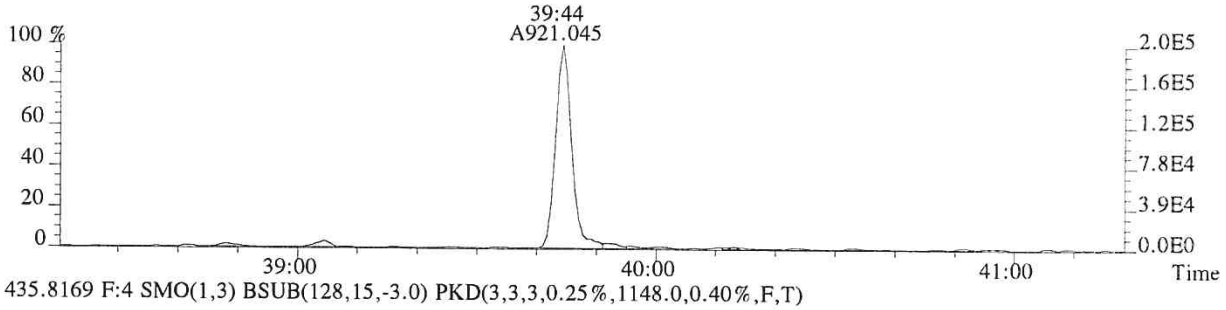


016698

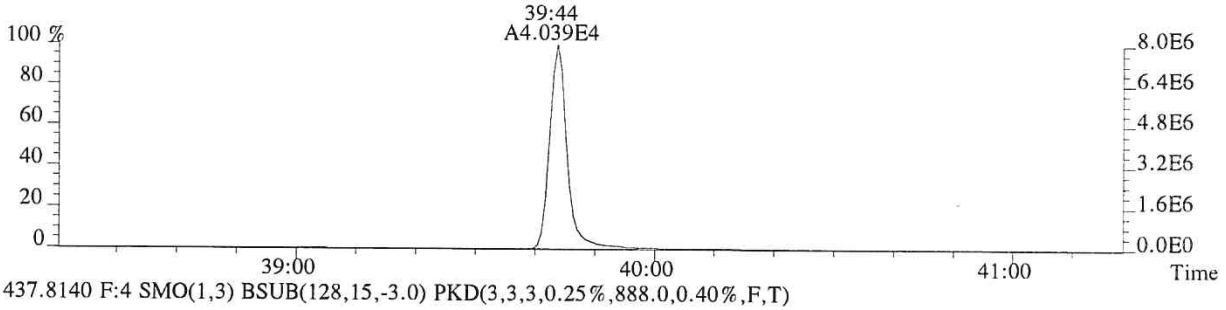
File:P513851 #1-268 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,688.0,0.40%,F,T)



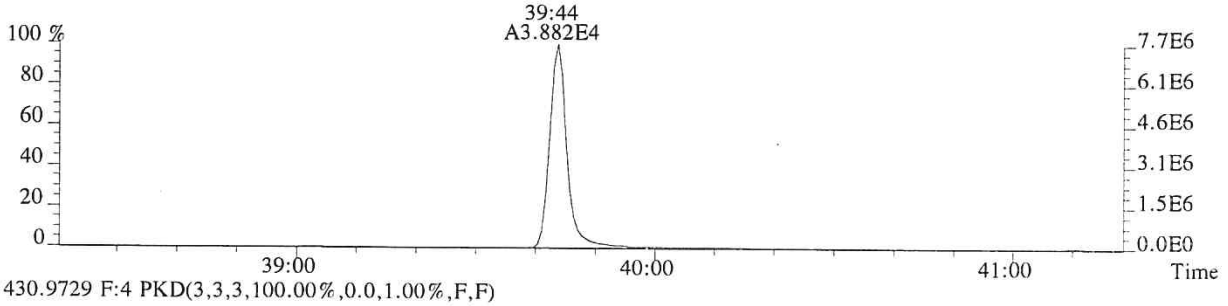
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,568.0,0.40%,F,T)



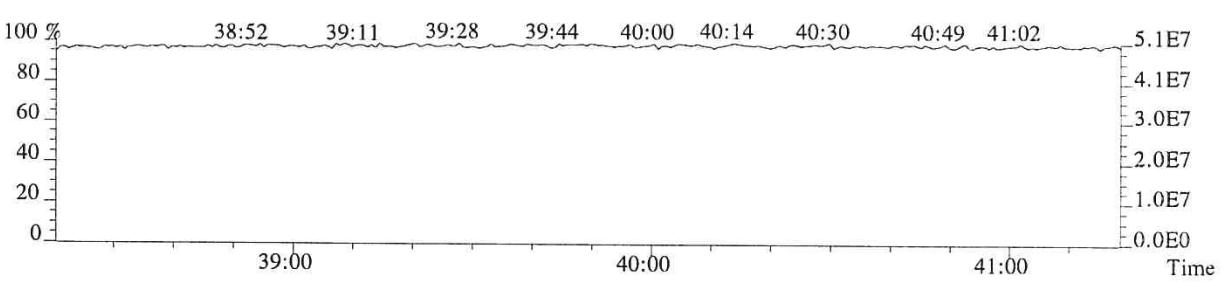
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1148.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,888.0,0.40%,F,T)

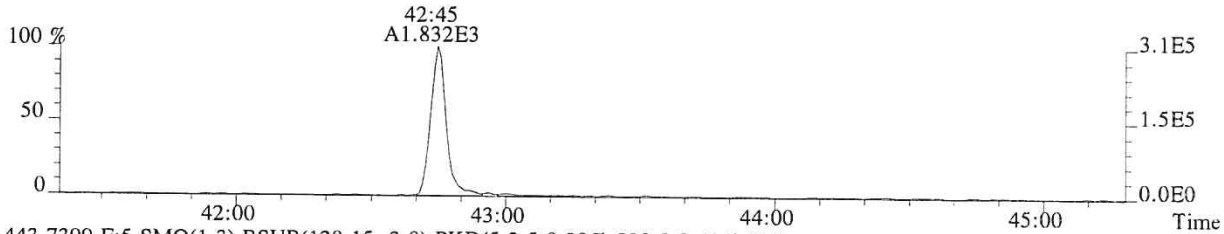


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

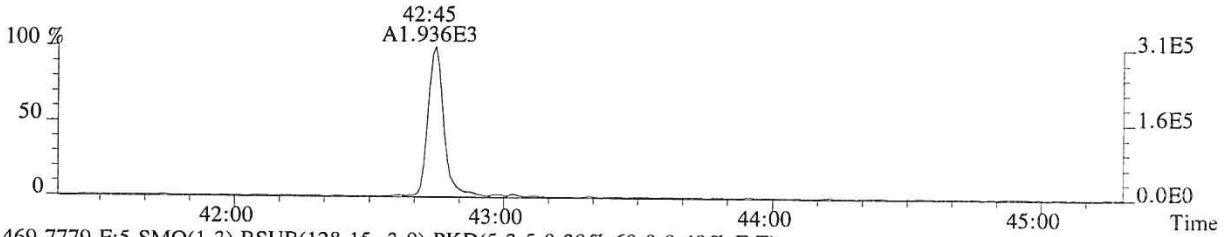


016699

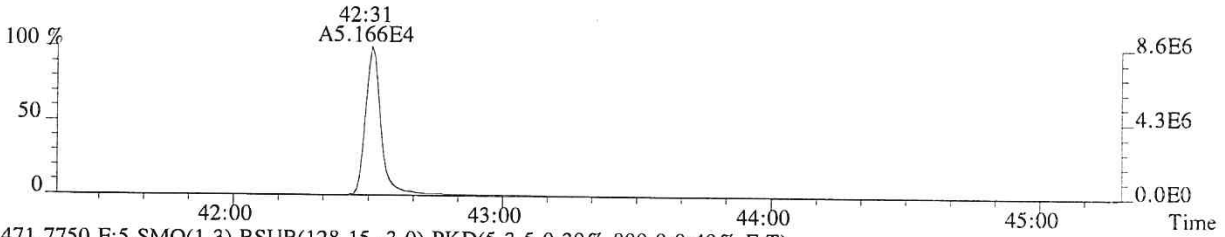
File:P513851 #1-357 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,412.0,0.40%,F,T)



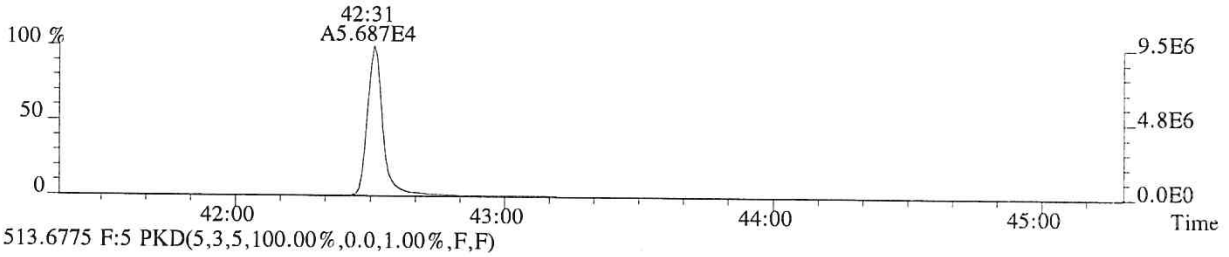
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,820.0,0.40%,F,T)



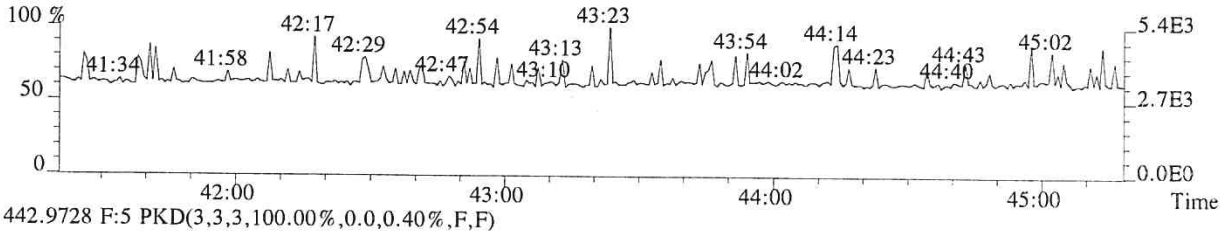
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,60.0,0.40%,F,T)



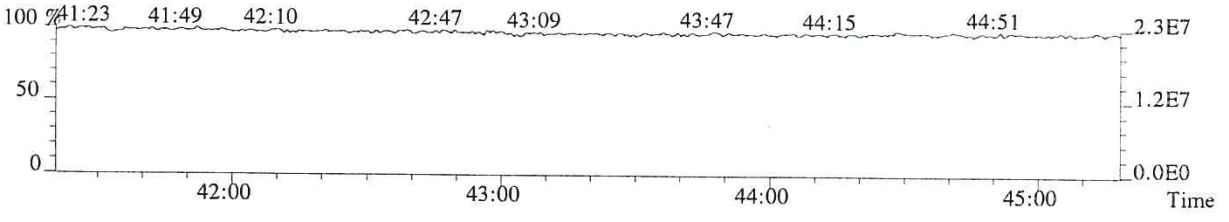
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,800.0,0.40%,F,T)



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

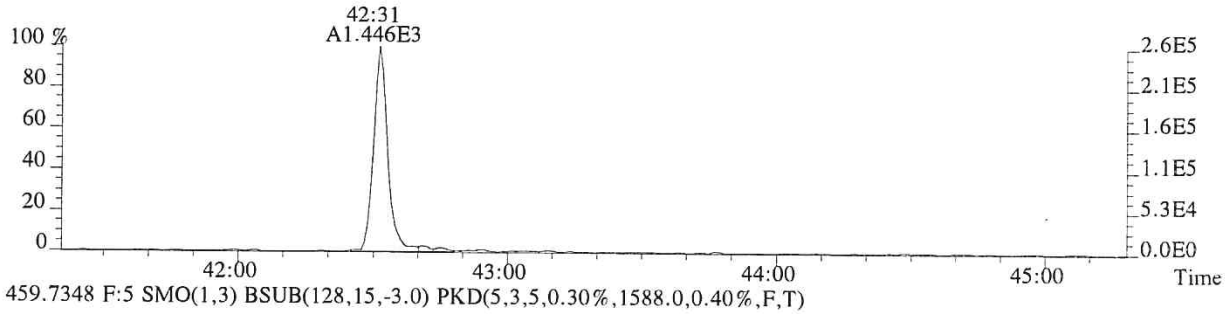


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

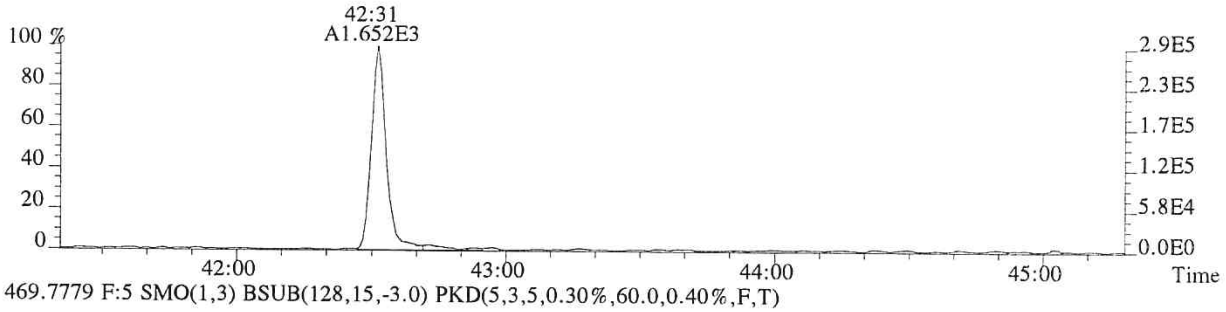


016700

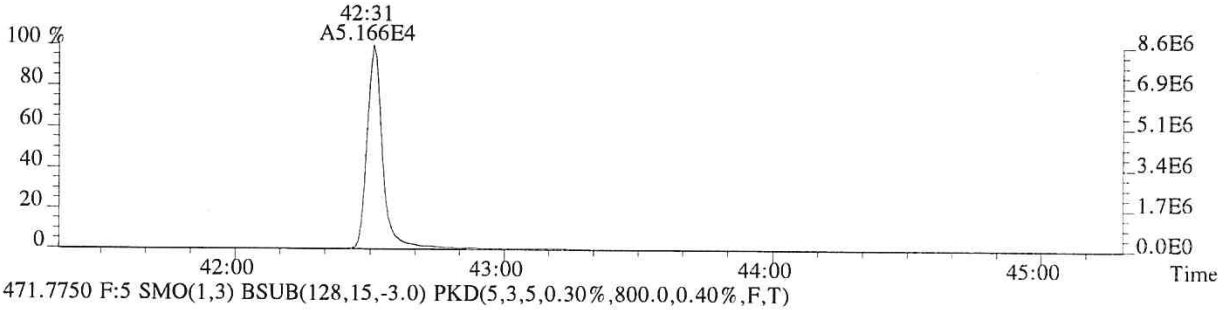
File:P513851 #1-357 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,192.0,0.40%,F,T)



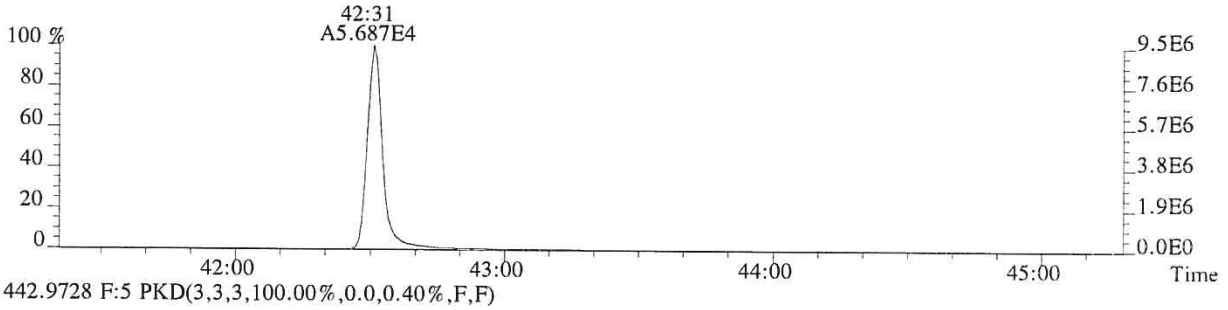
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1588.0,0.40%,F,T)



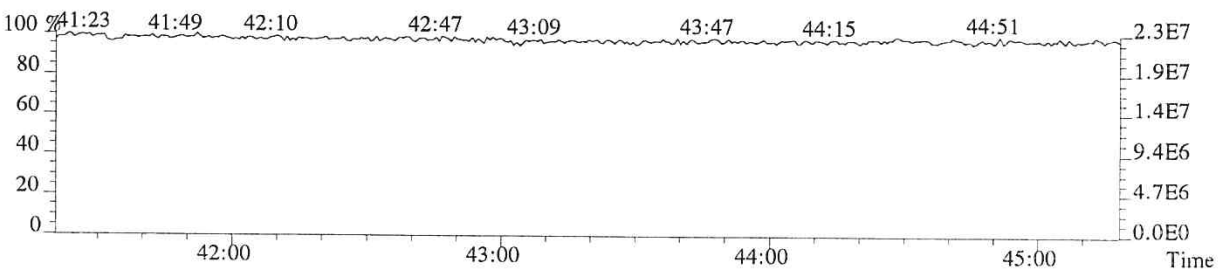
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,60.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,800.0,0.40%,F,T)



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



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76556

Run #3 Filename P513852 Samp: 1 Inj: 1 Acquired: 24-JAN-18 15:18:44
Processed: 24-JAN-18 16:27:06 Sample ID: CS2

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	5.859e+03	7.932e+03	0.74	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	4.499e+04	3.047e+04	1.48	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:42	4.356e+04	2.901e+04	1.50	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:17	4.061e+04	3.382e+04	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	4.295e+04	3.562e+04	1.21	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:53	3.905e+04	3.212e+04	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	3.479e+04	2.862e+04	1.22	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	3.262e+04	3.207e+04	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	2.654e+04	2.632e+04	1.01	yes	no	1.258
10	Unk	OCDF	42:45	3.789e+04	4.247e+04	0.89	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	4.192e+03	5.525e+03	0.76	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:58	2.973e+04	1.886e+04	1.58	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	37:00	2.687e+04	2.156e+04	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	2.801e+04	2.223e+04	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	2.898e+04	2.343e+04	1.24	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:45	2.194e+04	2.114e+04	1.04	yes	no	1.025
17	Unk	OCDD	42:32	3.213e+04	3.615e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	3.357e+05	4.220e+05	0.80	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:48	4.551e+05	2.871e+05	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	4.534e+05	2.868e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:16	2.091e+05	4.014e+05	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:23	2.405e+05	4.554e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:52	2.176e+05	4.192e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:37	1.900e+05	3.615e+05	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:49	1.476e+05	3.275e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	1.279e+05	2.823e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	2.035e+05	2.546e+05	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	3.112e+05	1.963e+05	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	2.611e+05	2.071e+05	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:05	2.721e+05	2.137e+05	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	2.118e+05	1.999e+05	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	2.824e+05	3.150e+05	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	2.212e+05	2.732e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:19	2.902e+05	2.282e+05	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	1.018e+04				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
76556

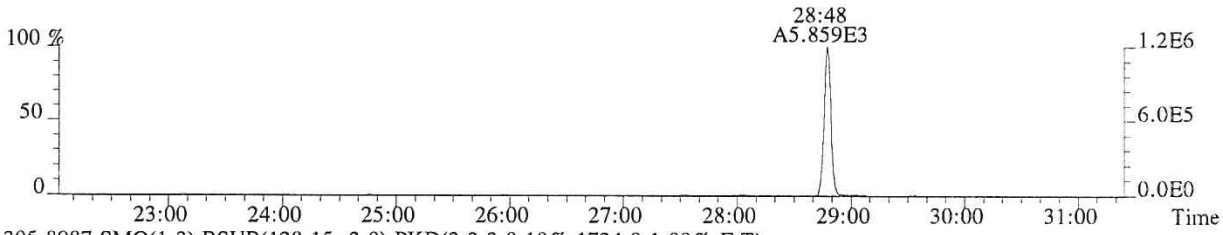
Run #3 Filename P513852 Samp: 1 Inj: 1 Acquired: 24-JAN-18 15:18:44
Processed: 24-JAN-18 16:27:06 LAB. ID: CS2

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.20e+06	7.00e+02	1.7e+03	1.59e+06	1.72e+03	9.3e+02
2	1,2,3,7,8-PeCDF	9.02e+06	1.92e+02	4.7e+04	6.06e+06	3.56e+03	1.7e+03
3	2,3,4,7,8-PeCDF	8.94e+06	1.92e+02	4.7e+04	5.88e+06	3.56e+03	1.7e+03
4	1,2,3,4,7,8-HxCDF	9.11e+06	1.02e+03	9.0e+03	7.52e+06	1.04e+03	7.2e+03
5	1,2,3,6,7,8-HxCDF	8.86e+06	1.02e+03	8.7e+03	7.32e+06	1.04e+03	7.0e+03
6	2,3,4,6,7,8-HxCDF	8.62e+06	1.02e+03	8.5e+03	6.97e+06	1.04e+03	6.7e+03
7	1,2,3,7,8,9-HxCDF	7.31e+06	1.02e+03	7.2e+03	6.00e+06	1.04e+03	5.7e+03
8	1,2,3,4,6,7,8-HpCDF	6.83e+06	3.67e+03	1.9e+03	6.77e+06	3.04e+03	2.2e+03
9	1,2,3,4,7,8,9-HpCDF	5.23e+06	3.67e+03	1.4e+03	5.30e+06	3.04e+03	1.7e+03
10	OCDF	6.47e+06	1.08e+03	6.0e+03	7.24e+06	1.74e+03	4.2e+03
11	2,3,7,8-TCDD	8.47e+05	1.35e+03	6.3e+02	1.14e+06	7.40e+02	1.5e+03
12	1,2,3,7,8-PeCDD	6.05e+06	5.16e+02	1.2e+04	3.80e+06	5.04e+02	7.5e+03
13	1,2,3,4,7,8-HxCDD	6.06e+06	7.48e+02	8.1e+03	4.85e+06	1.29e+03	3.8e+03
14	1,2,3,6,7,8-HxCDD	5.88e+06	7.48e+02	7.9e+03	4.64e+06	1.29e+03	3.6e+03
15	1,2,3,7,8,9-HxCDD	5.73e+06	7.48e+02	7.7e+03	4.69e+06	1.29e+03	3.6e+03
16	1,2,3,4,6,7,8-HpCDD	4.40e+06	1.68e+03	2.6e+03	4.18e+06	7.28e+02	5.7e+03
17	OCDD	5.55e+06	1.60e+02	3.5e+04	6.20e+06	1.07e+03	5.8e+03
18	13C-2,3,7,8-TCDF	6.63e+07	8.64e+03	7.7e+03	8.31e+07	4.36e+03	1.9e+04
19	13C-1,2,3,7,8-PeCDF	8.82e+07	9.44e+02	9.3e+04	5.54e+07	2.55e+03	2.2e+04
20	13C-2,3,4,7,8-PeCDF	9.11e+07	9.44e+02	9.6e+04	5.80e+07	2.55e+03	2.3e+04
21	13C-1,2,3,4,7,8-HxCDF	4.63e+07	1.33e+03	3.5e+04	8.84e+07	3.58e+03	2.5e+04
22	13C-1,2,3,6,7,8-HxCDF	4.97e+07	1.33e+03	3.7e+04	9.31e+07	3.58e+03	2.6e+04
23	13C-2,3,4,6,7,8-HxCDF	4.74e+07	1.33e+03	3.6e+04	9.03e+07	3.58e+03	2.5e+04
24	13C-1,2,3,7,8,9-HxCDF	3.91e+07	1.33e+03	2.9e+04	7.44e+07	3.58e+03	2.1e+04
25	13C-1,2,3,4,6,7,8-HpCDF	3.05e+07	5.18e+03	5.9e+03	6.68e+07	7.38e+03	9.0e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.48e+07	5.18e+03	4.8e+03	5.51e+07	7.38e+03	7.5e+03
27	13C-2,3,7,8-TCDD	4.21e+07	6.43e+03	6.5e+03	5.22e+07	3.34e+03	1.6e+04
28	13C-1,2,3,7,8-PeCDD	6.30e+07	1.05e+03	6.0e+04	3.99e+07	1.24e+03	3.2e+04
29	13C-1,2,3,4,7,8-HxCDD	5.84e+07	4.36e+03	1.3e+04	4.60e+07	2.04e+03	2.3e+04
30	13C-1,2,3,6,7,8-HxCDD	5.57e+07	4.36e+03	1.3e+04	4.34e+07	2.04e+03	2.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	4.12e+07	2.07e+03	2.0e+04	3.91e+07	2.18e+03	1.8e+04
32	13C-OCDD	4.87e+07	6.80e+01	7.2e+05	5.40e+07	9.12e+02	5.9e+04
33	13C-1,2,3,4-TCDD	4.48e+07	6.43e+03	7.0e+03	5.57e+07	3.34e+03	1.7e+04
34	13C-1,2,3,7,8,9-HxCDD	5.61e+07	4.36e+03	1.3e+04	4.47e+07	2.04e+03	2.2e+04
35	37Cl-2,3,7,8-TCDD	2.10e+06	1.00e+03	2.1e+03			

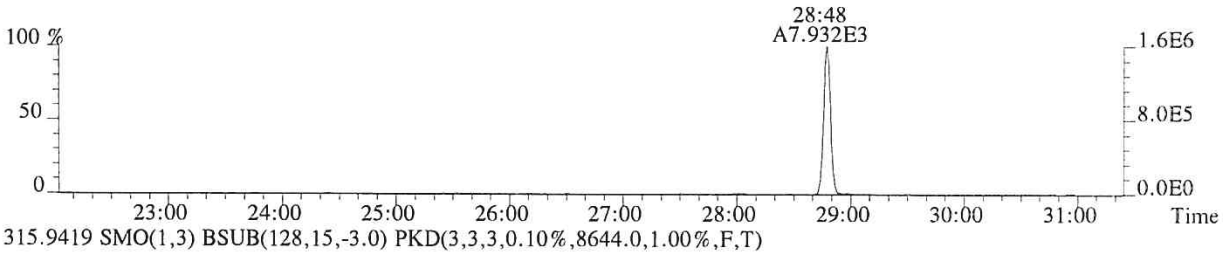
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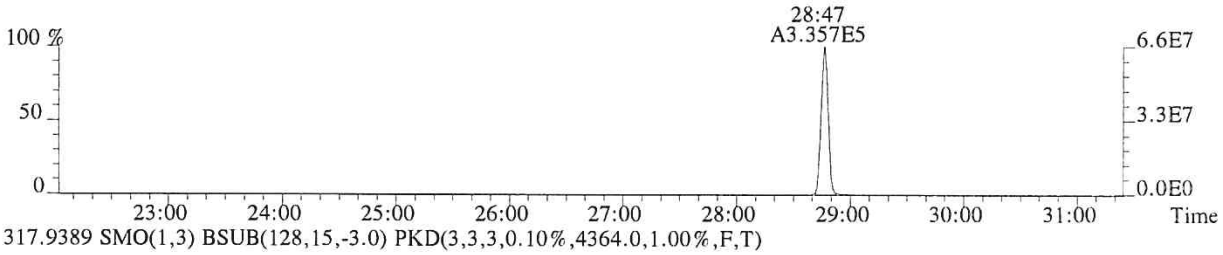
File:P513852 #1-665 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,700.0,1.00%,F,T)



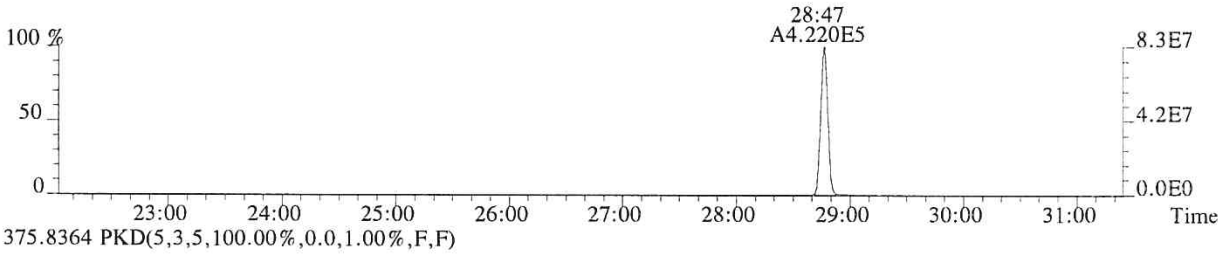
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1724.0,1.00%,F,T)



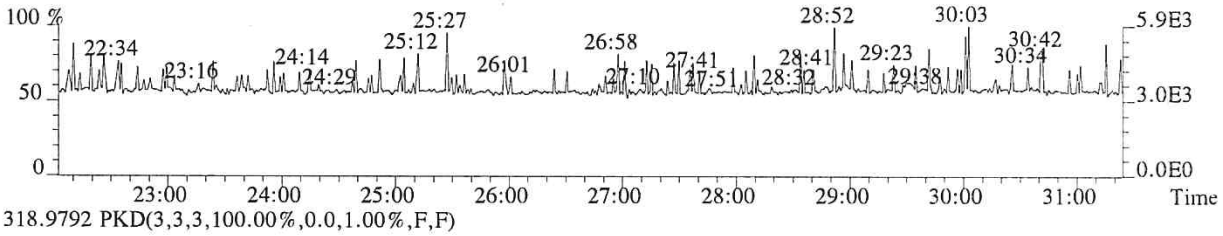
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8644.0,1.00%,F,T)



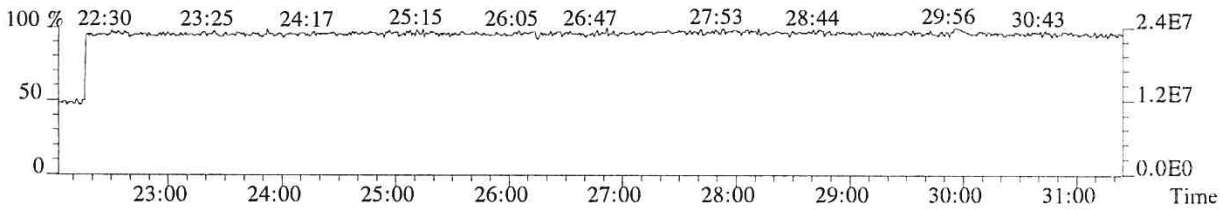
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4364.0,1.00%,F,T)



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

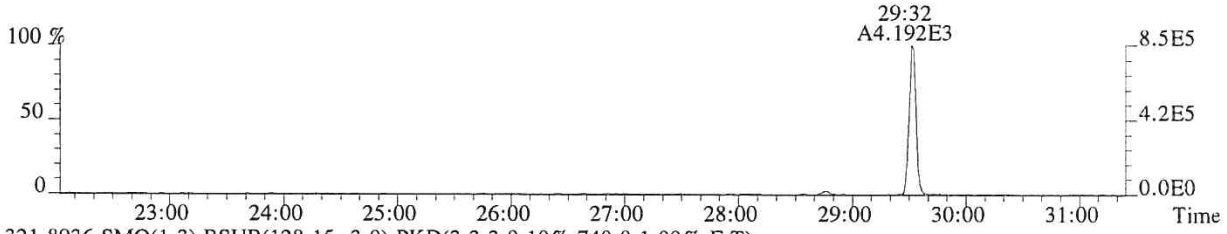


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

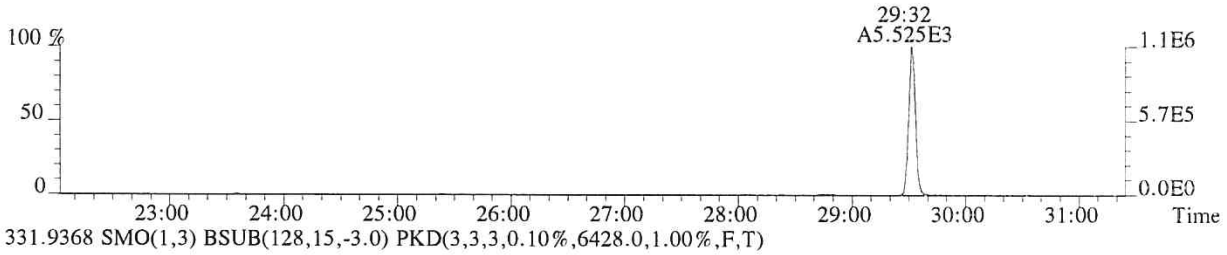


016704

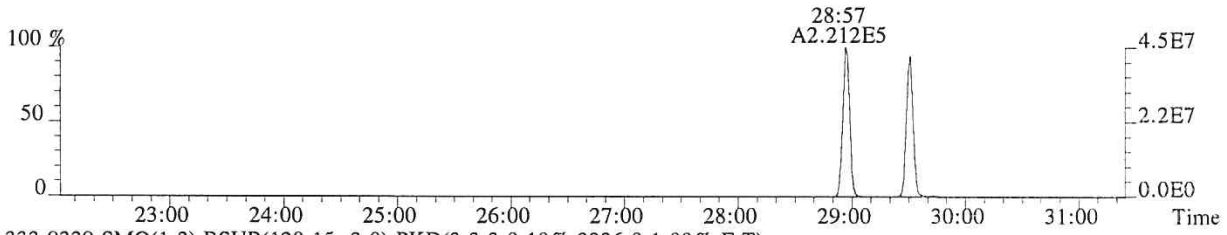
File:P513852 #1-665 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1348.0,1.00%,F,T)



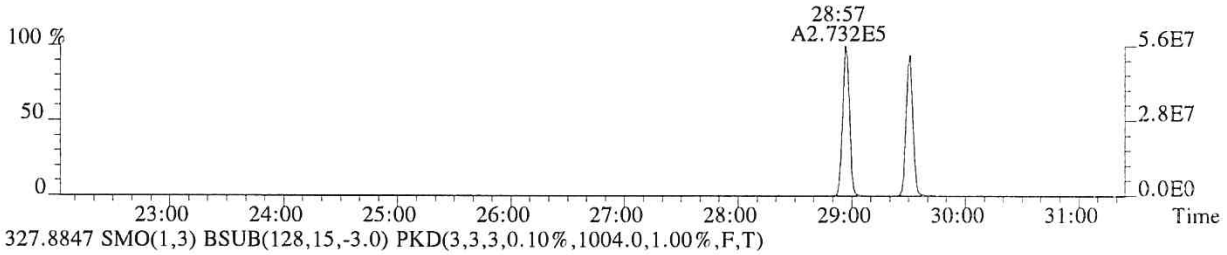
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,740.0,1.00%,F,T)



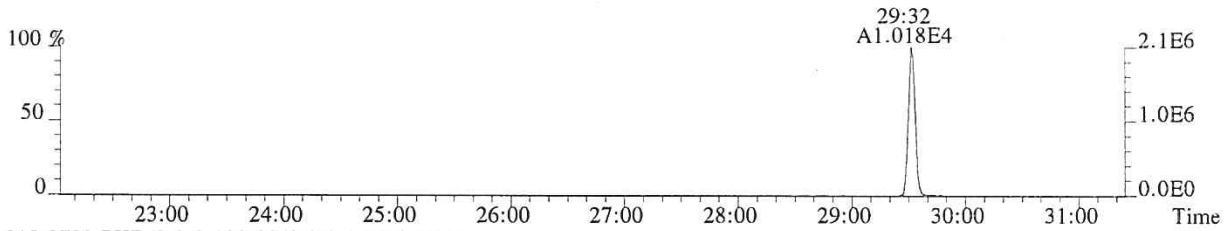
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6428.0,1.00%,F,T)



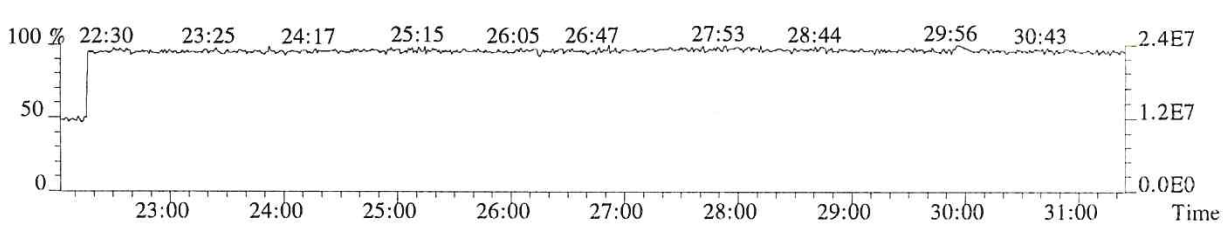
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3336.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1004.0,1.00%,F,T)

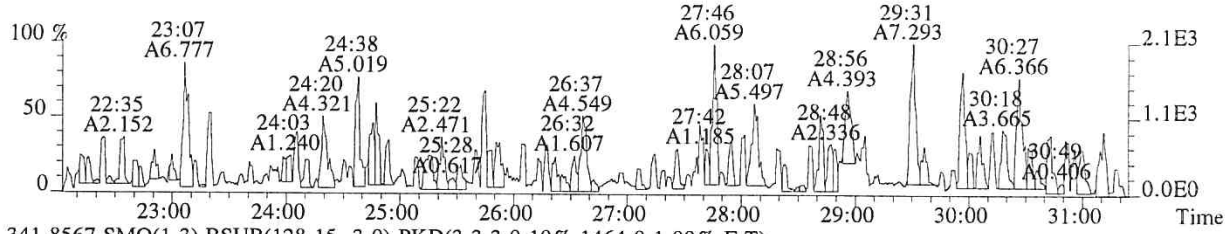


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

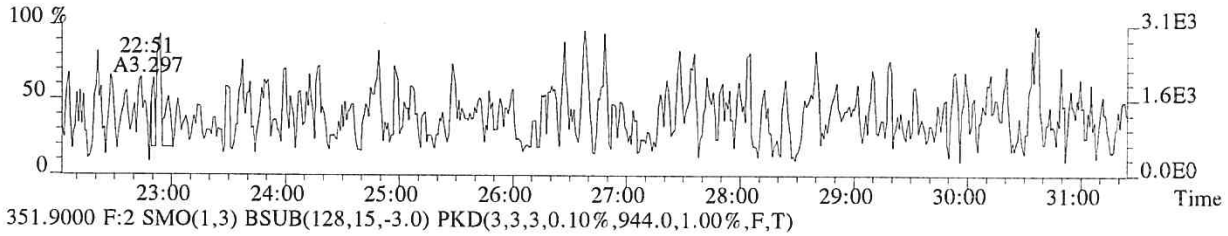


016705

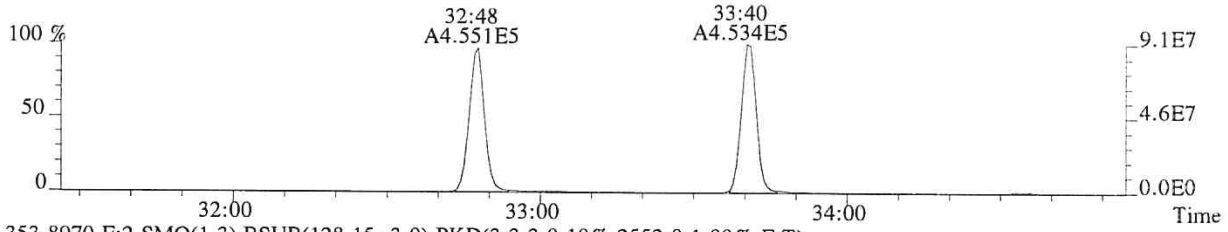
File:P513852 #1-665 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,196.0,1.00%,F,T)



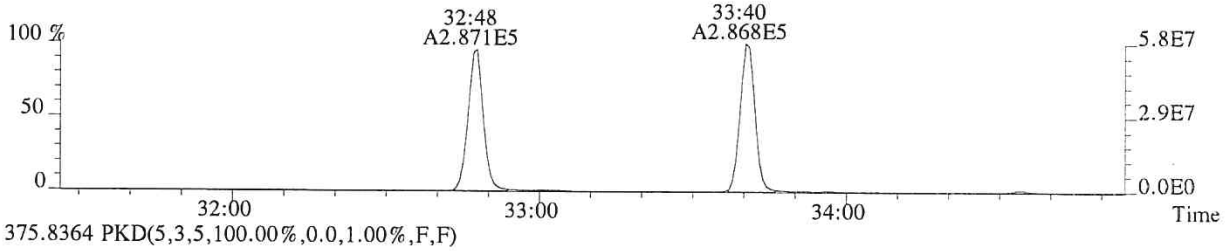
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1464.0,1.00%,F,T)



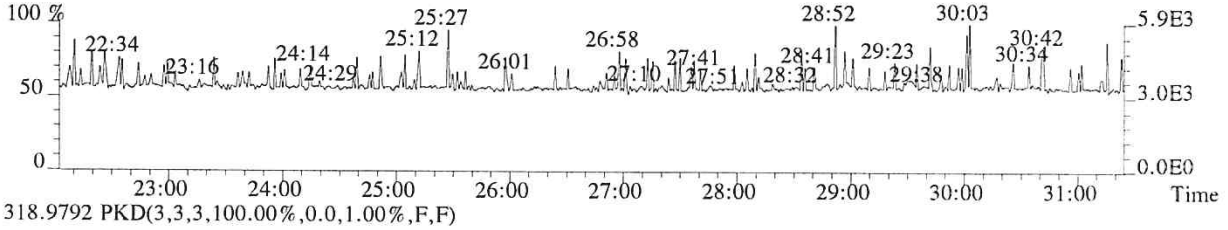
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



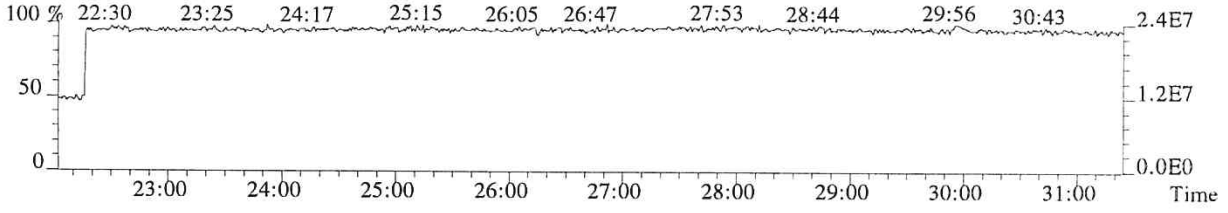
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2552.0,1.00%,F,T)



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

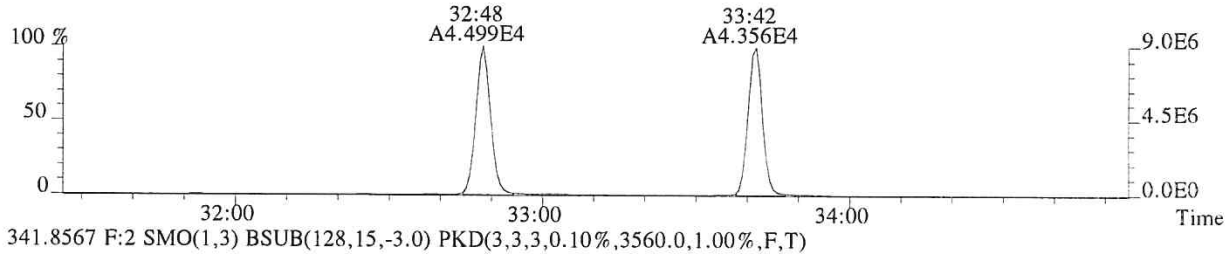


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

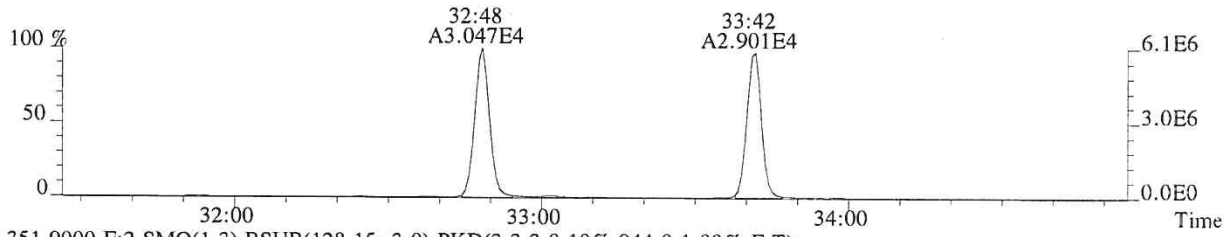


016706

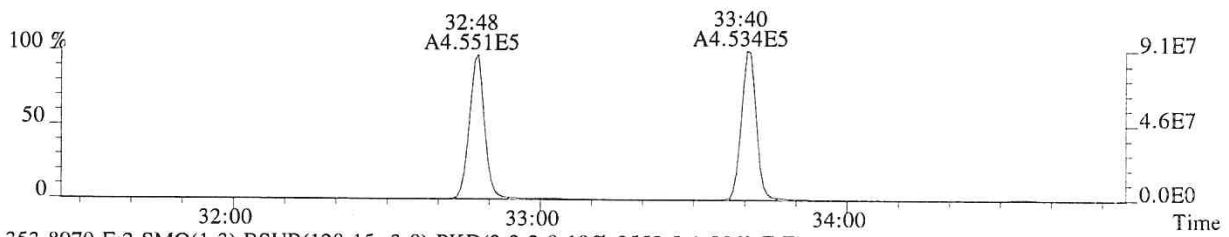
File:P513852 #1-313 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,192.0,1.00%,F,T)



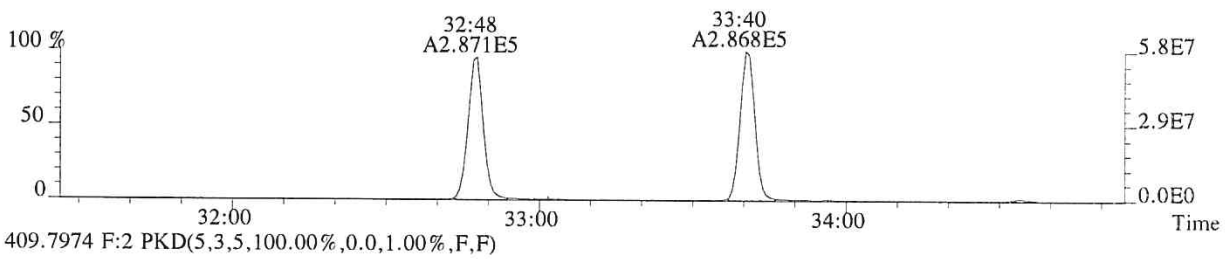
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3560.0,1.00%,F,T)



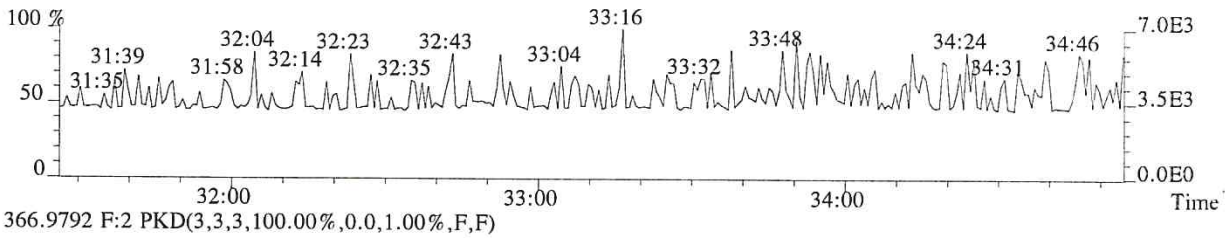
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



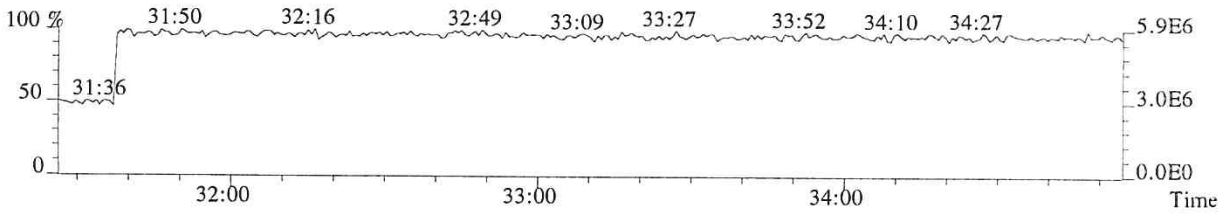
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2552.0,1.00%,F,T)



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

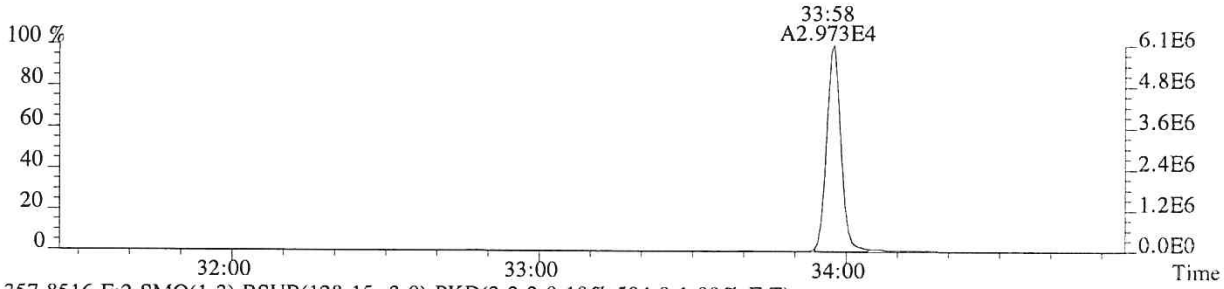


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

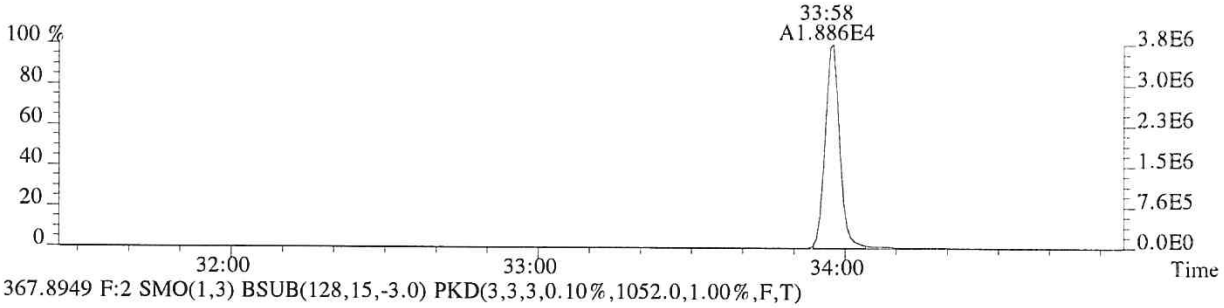


016707

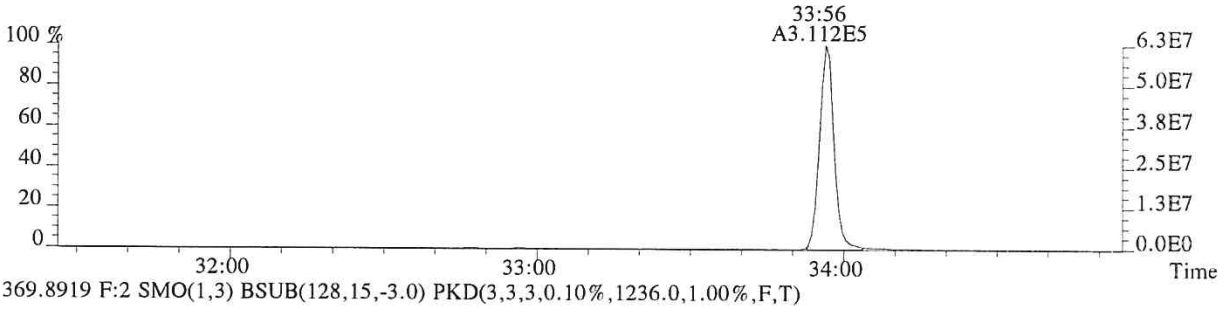
File:P513852 #1-313 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,516.0,1.00%,F,T)



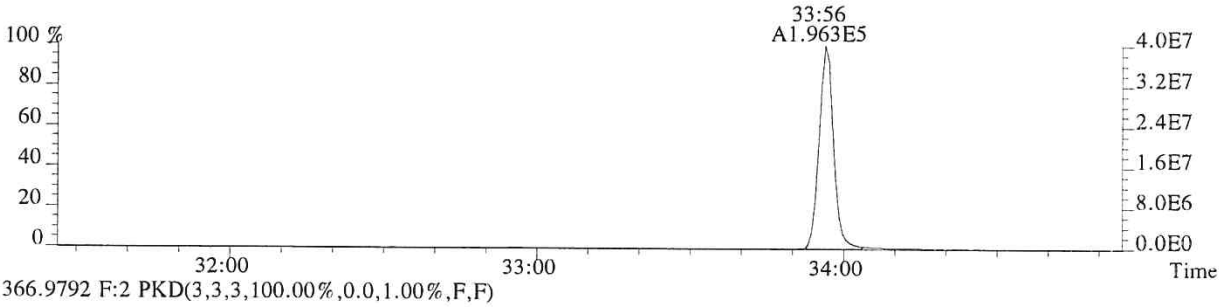
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,504.0,1.00%,F,T)



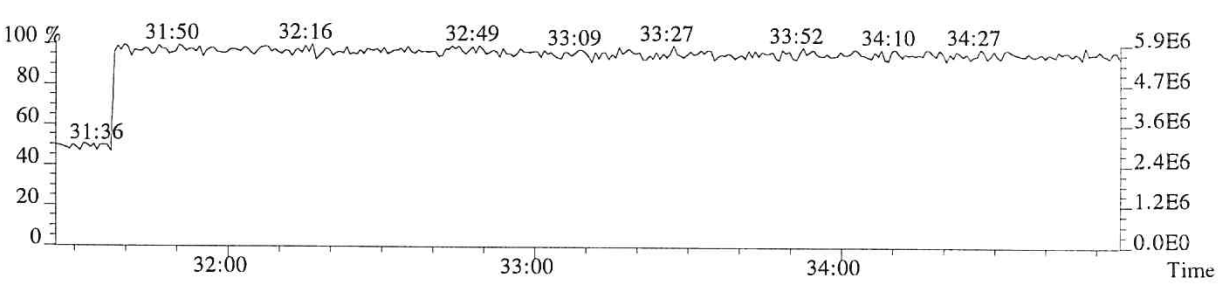
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1052.0,1.00%,F,T)



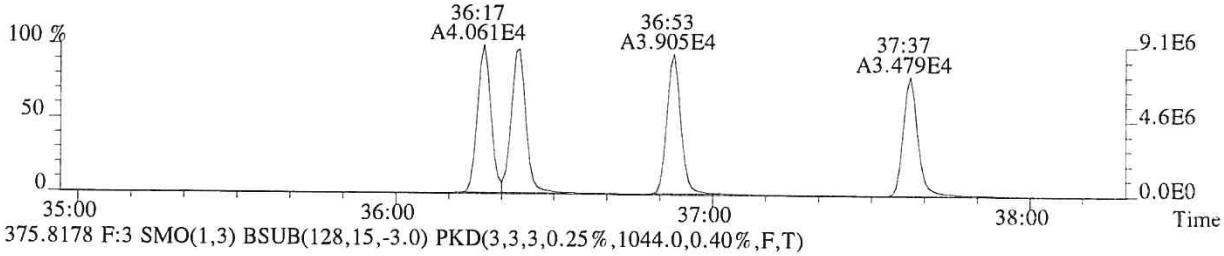
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1236.0,1.00%,F,T)



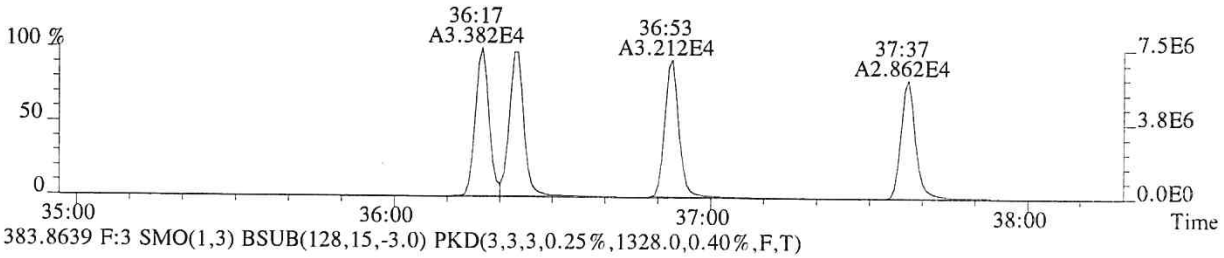
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



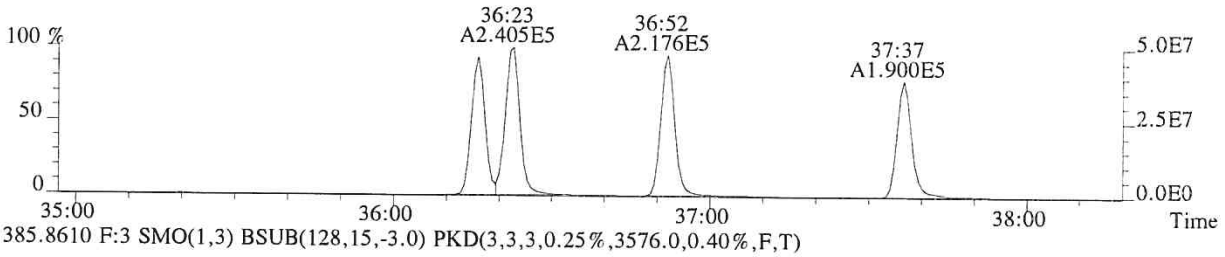
File:P513852 #1-303 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:76556
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1016.0,0.40%,F,T)



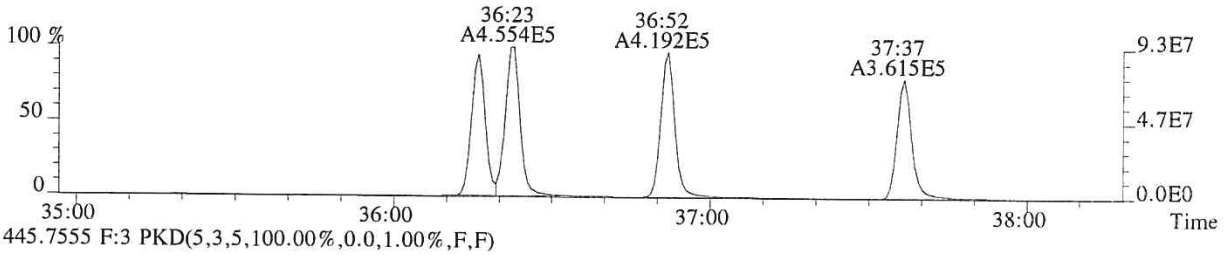
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1044.0,0.40%,F,T)



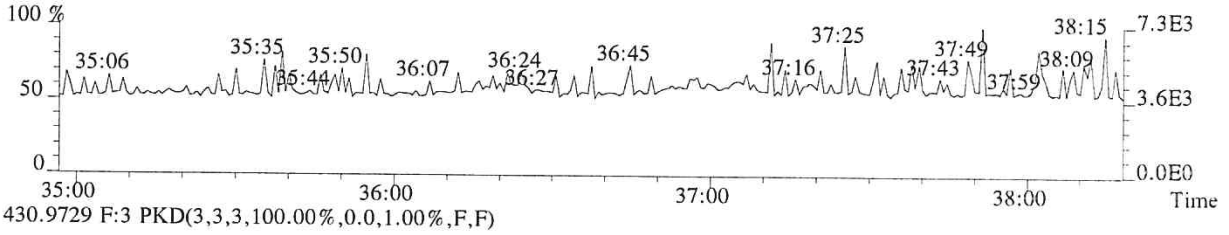
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1328.0,0.40%,F,T)



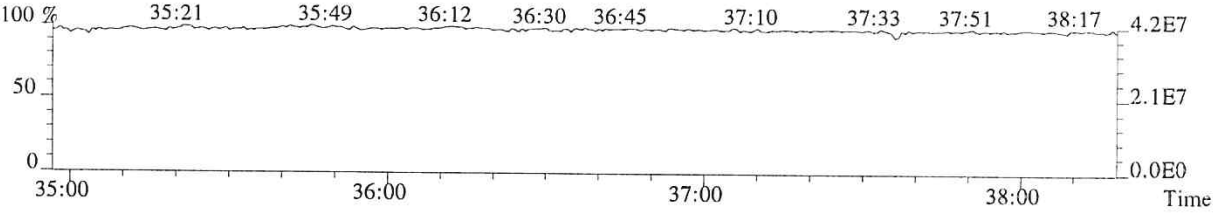
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3576.0,0.40%,F,T)



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

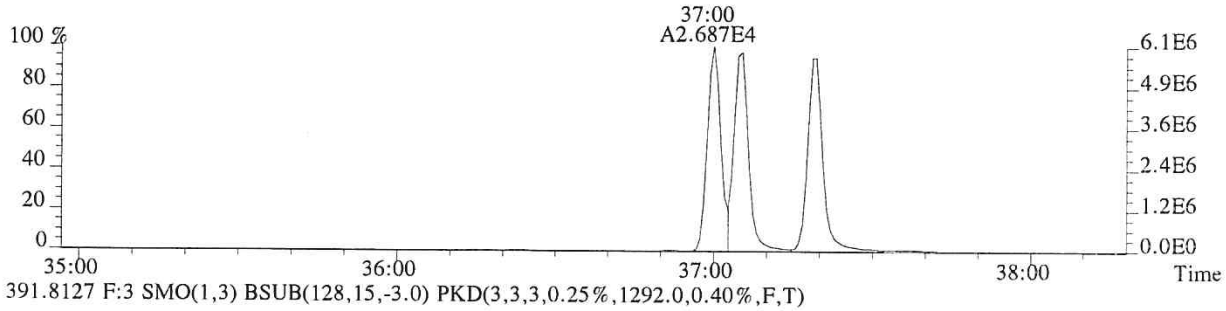


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

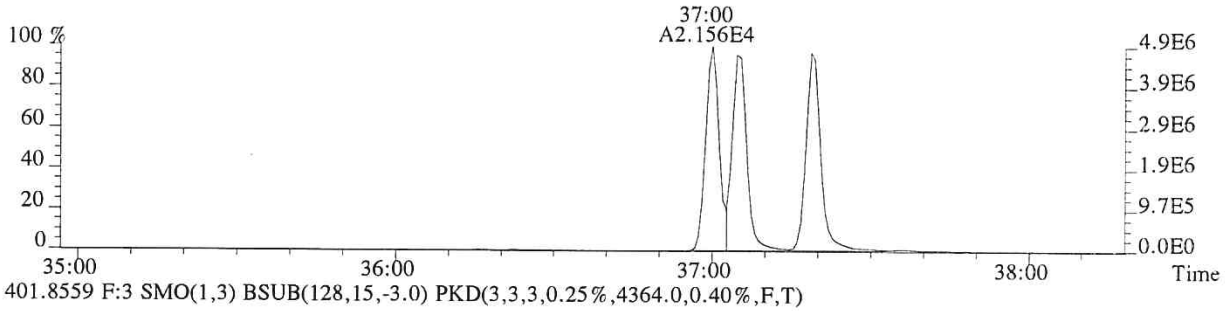


016709

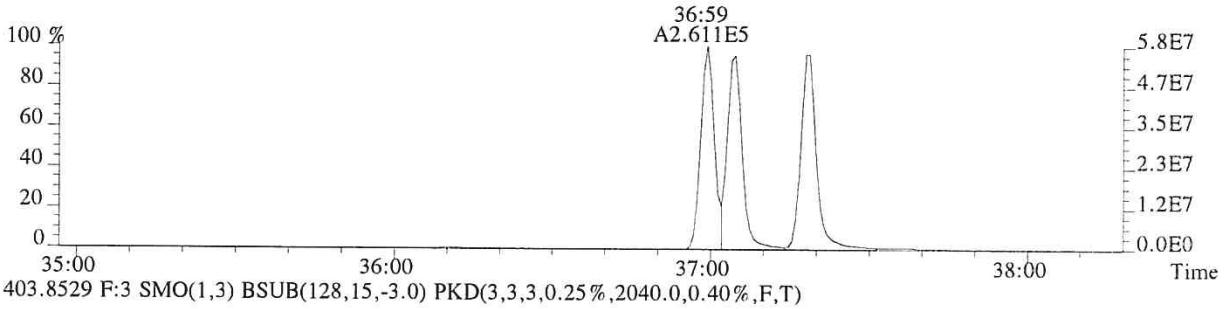
File:P513852 #1-303 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,748.0,0.40%,F,T)



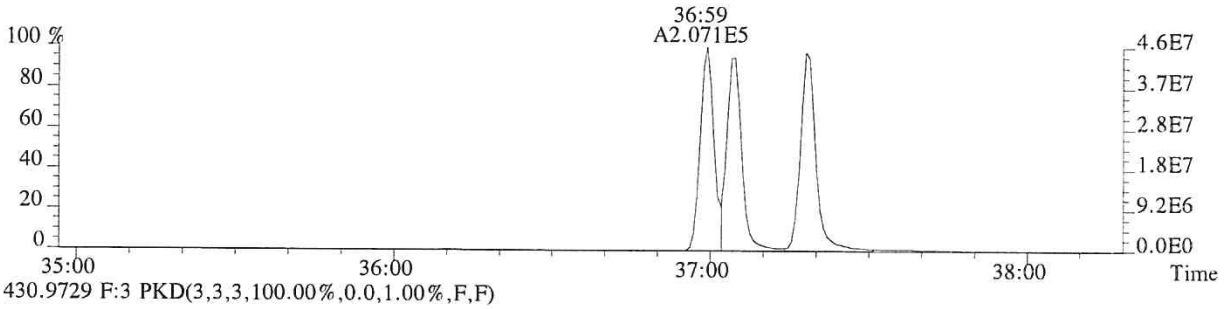
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1292.0,0.40%,F,T)



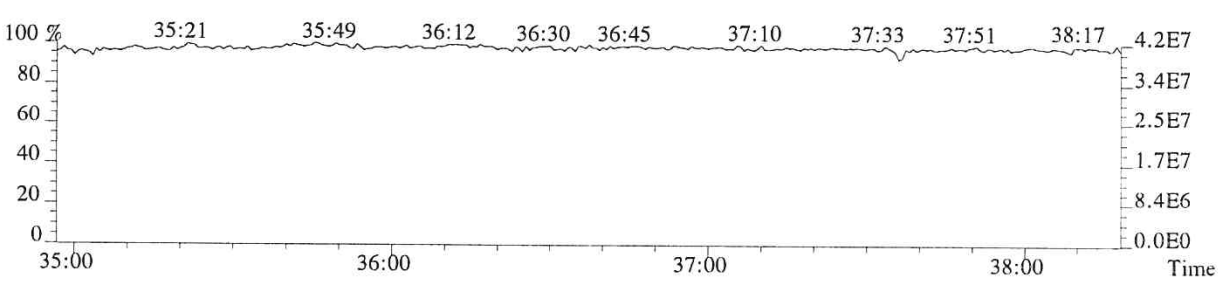
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4364.0,0.40%,F,T)



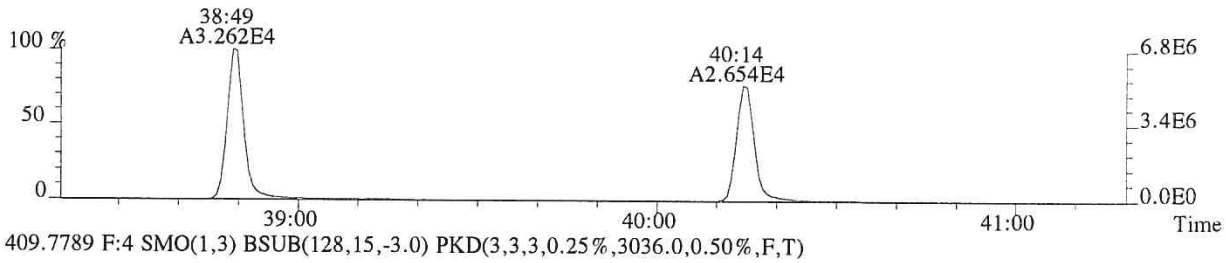
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2040.0,0.40%,F,T)



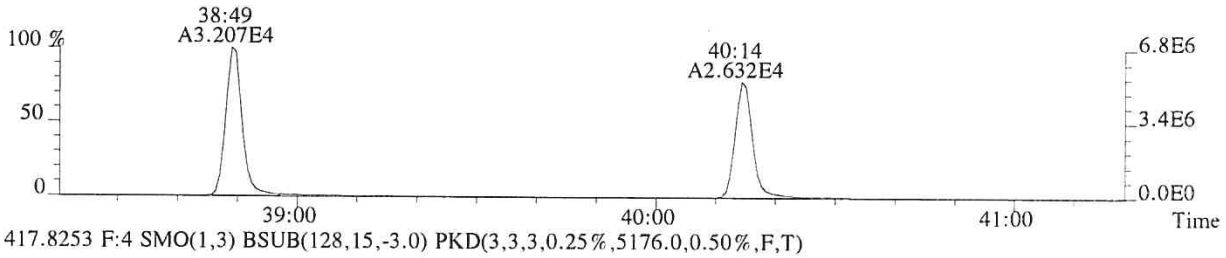
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



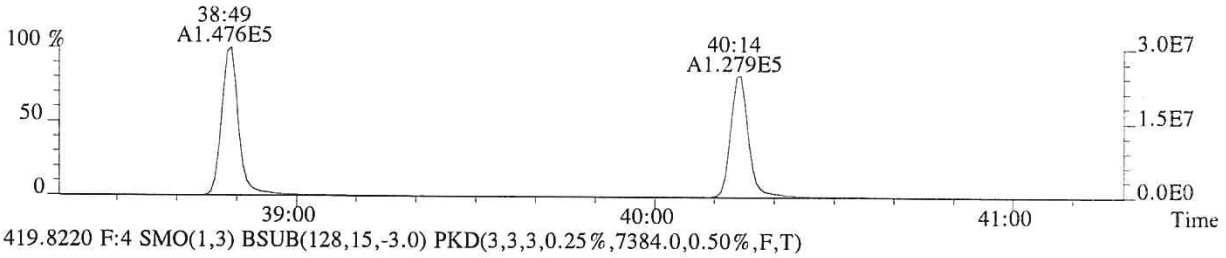
File:P513852 #1-268 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3668.0,0.50%,F,T)



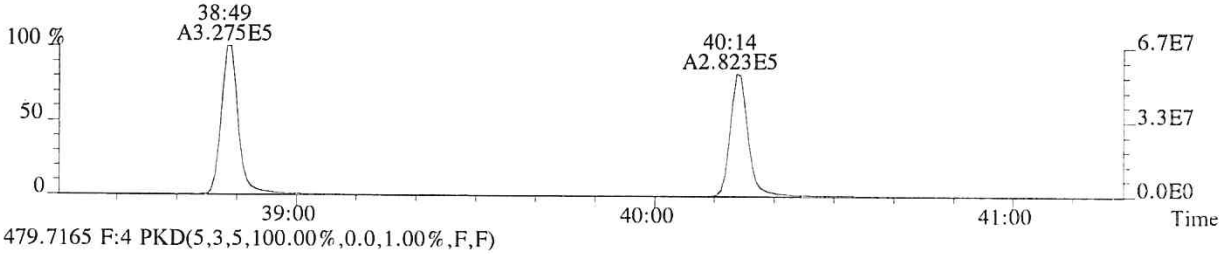
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3036.0,0.50%,F,T)



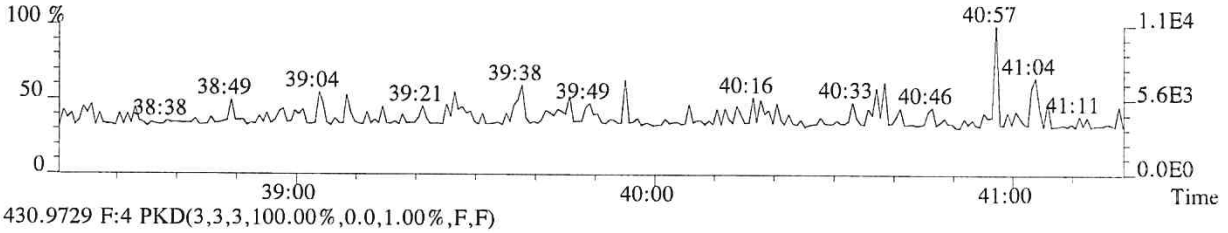
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5176.0,0.50%,F,T)



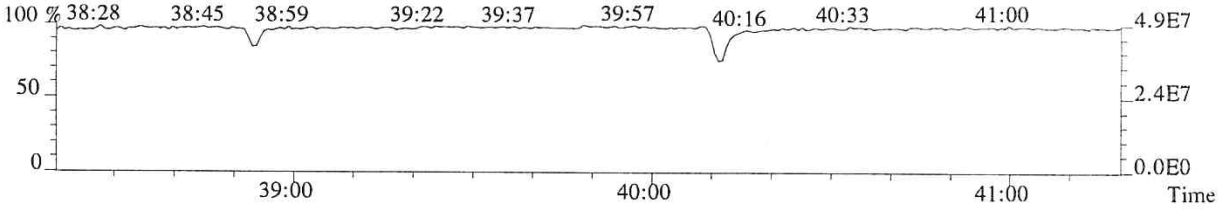
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7384.0,0.50%,F,T)



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

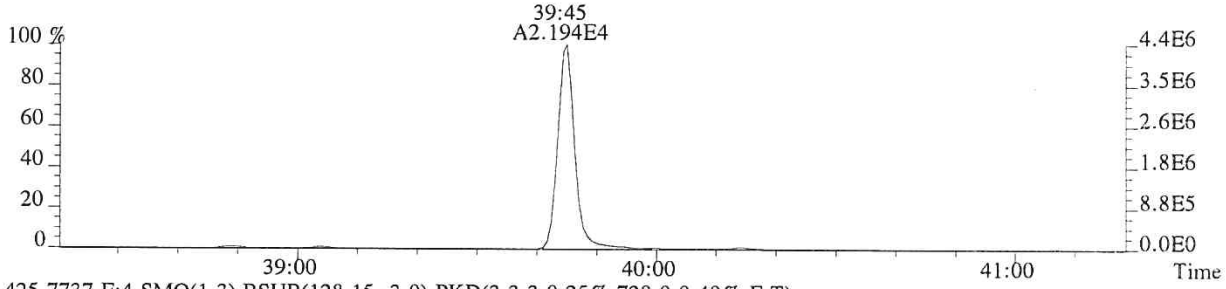


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

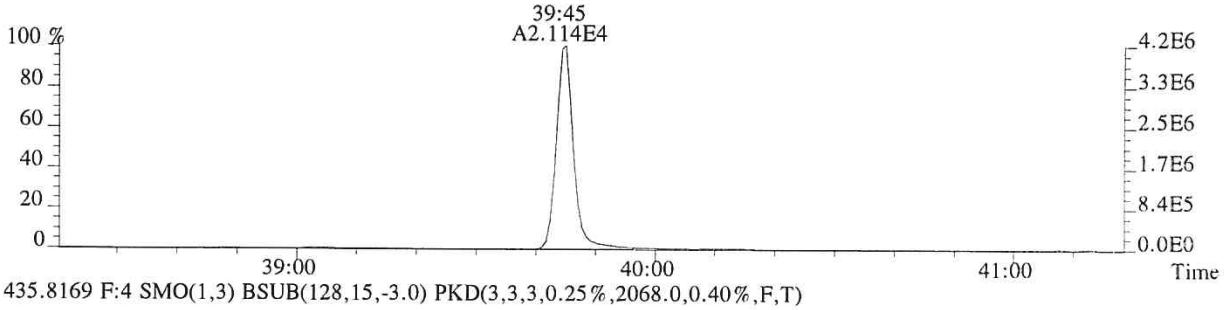


016711

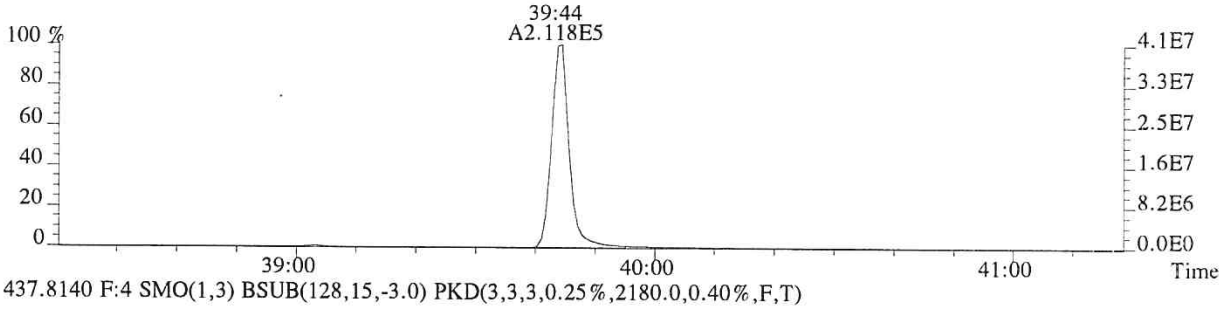
File:P513852 #1-268 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spectŁ
Sample#1 Exp:76556
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1676.0,0.40%,F,T)



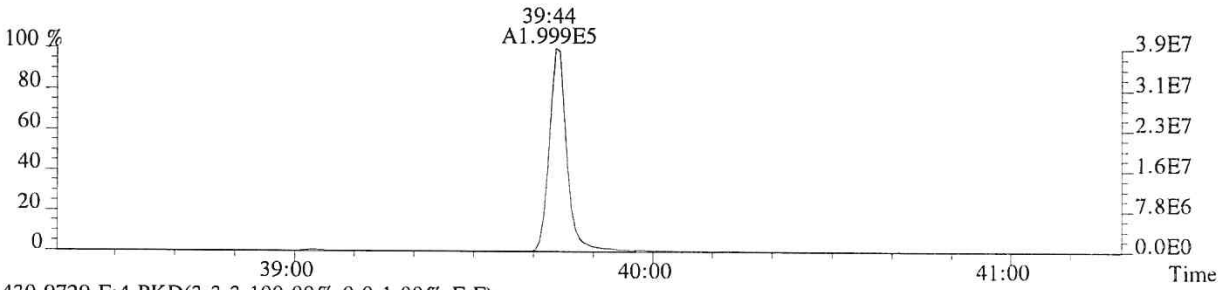
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,728.0,0.40%,F,T)



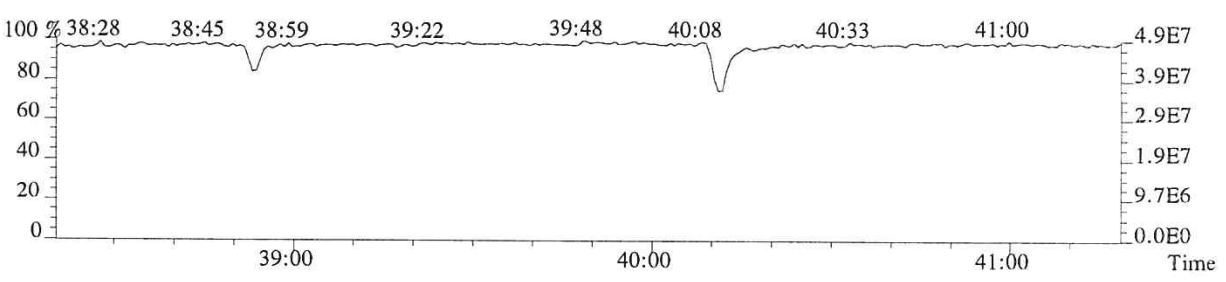
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2068.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2180.0,0.40%,F,T)

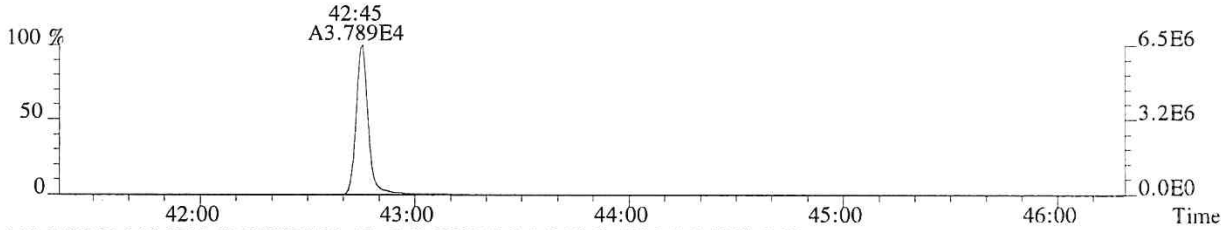


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

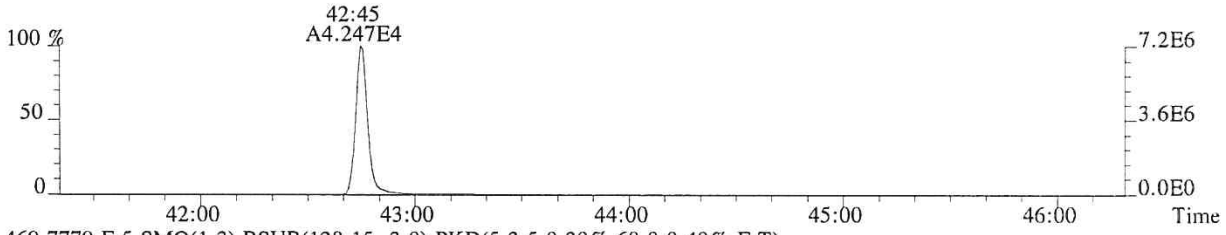


016712

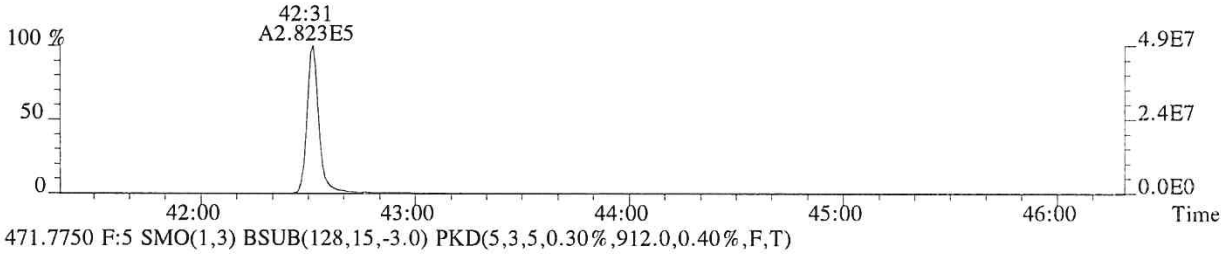
File:P513852 #1-448 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1076.0,0.40%,F,T)



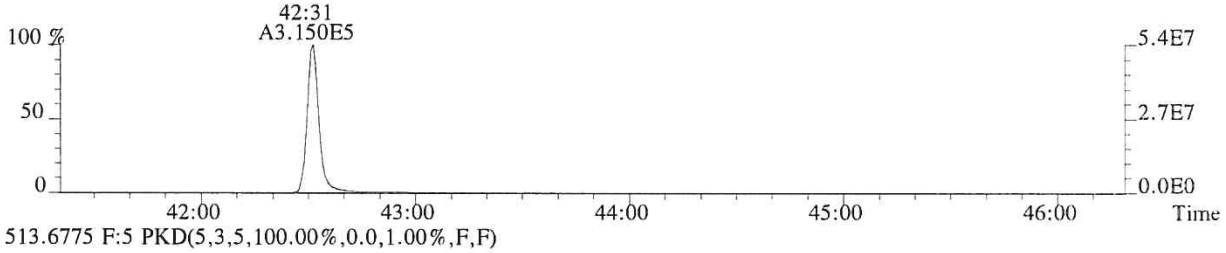
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1736.0,0.40%,F,T)



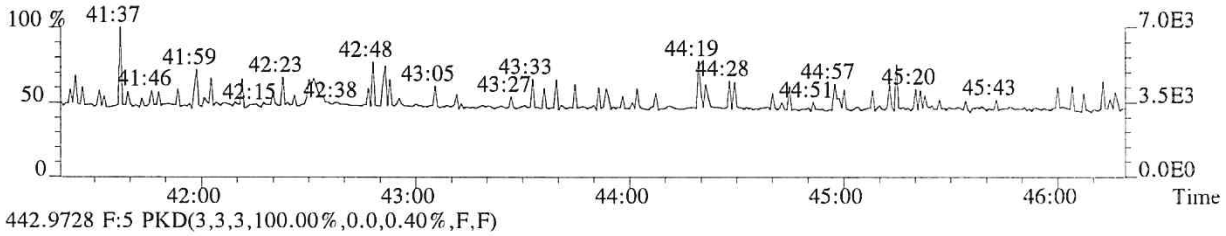
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,68.0,0.40%,F,T)



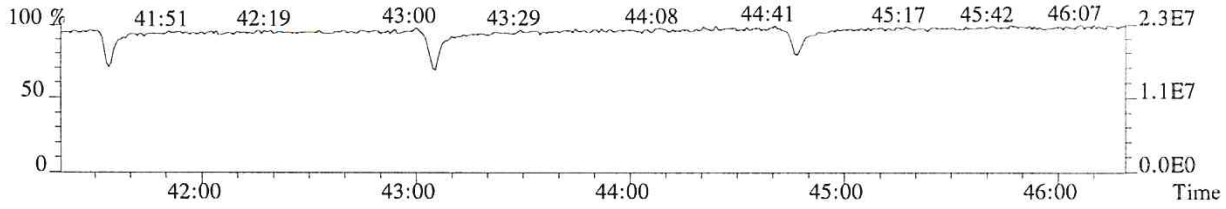
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,912.0,0.40%,F,T)



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

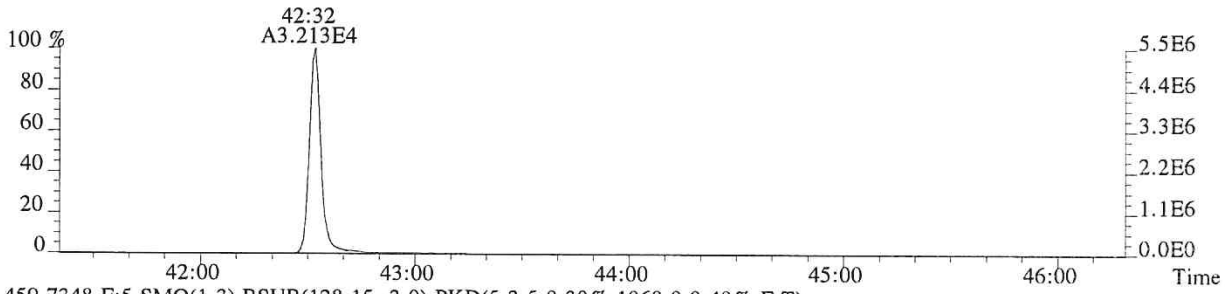


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

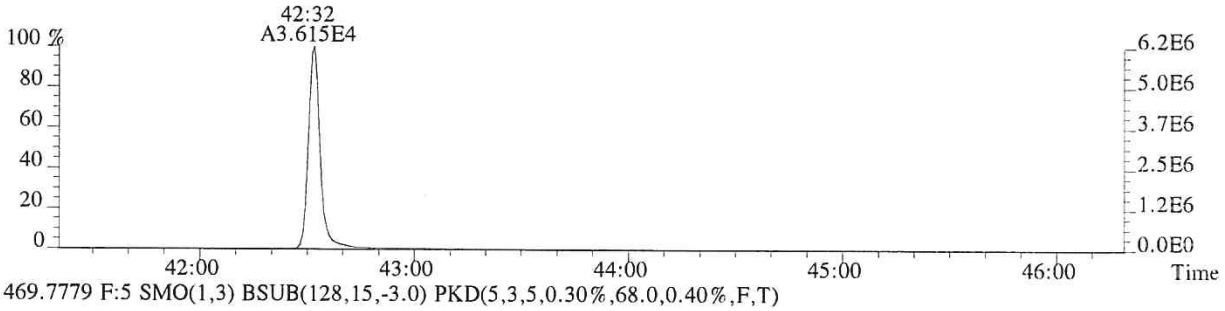


016713

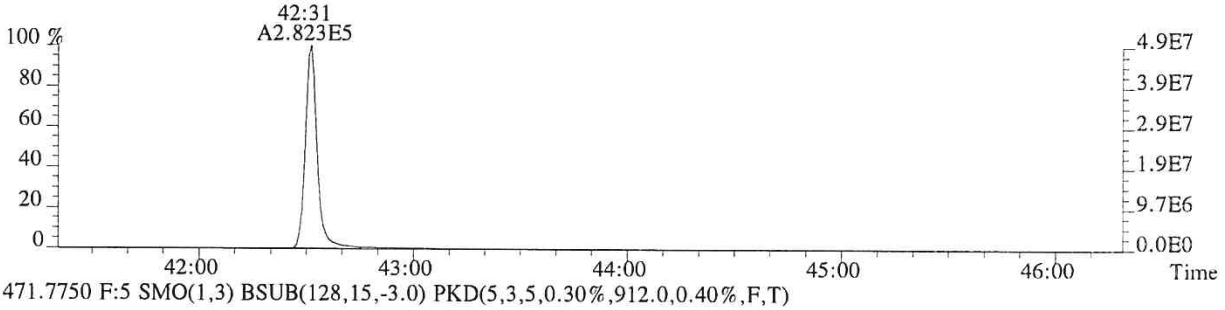
File:P513852 #1-448 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,160.0,0.40%,F,T)



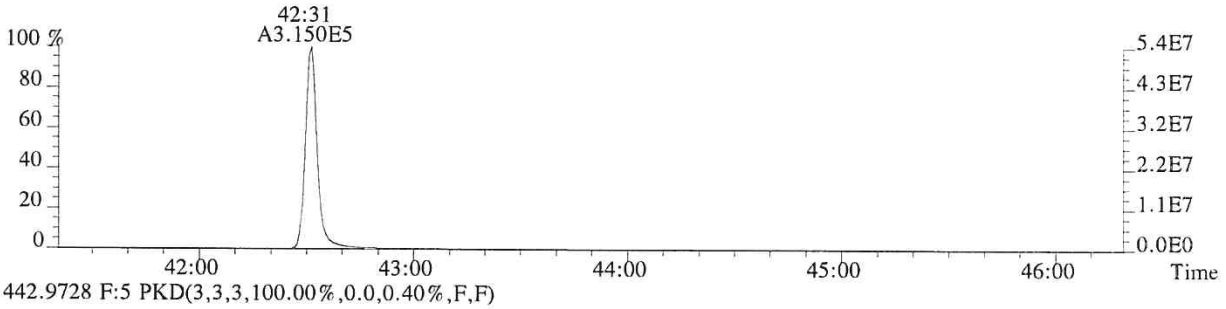
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1068.0,0.40%,F,T)



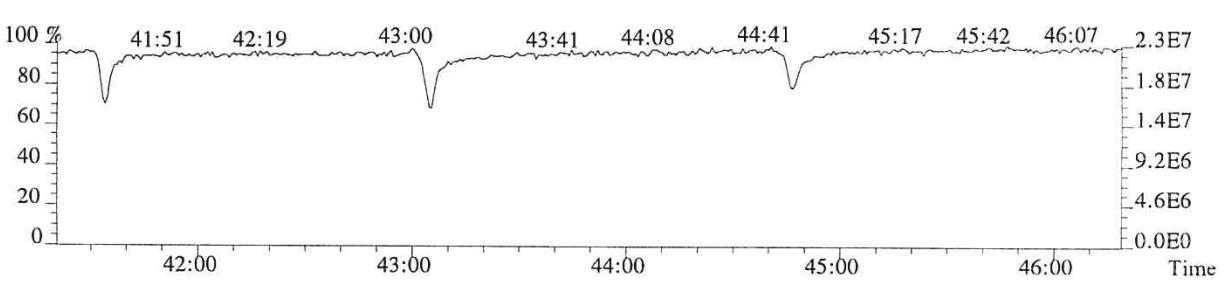
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,68.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,912.0,0.40%,F,T)



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



016714

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76557

Run #4 Filename P513853 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:06:29
Processed: 24-JAN-18 17:13:42 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:47	4.270e+04	5.692e+04	0.75	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	3.077e+05	2.016e+05	1.53	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:41	2.833e+05	1.864e+05	1.52	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:16	2.625e+05	2.158e+05	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:22	2.702e+05	2.228e+05	1.21	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:52	2.439e+05	2.001e+05	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.977e+05	1.631e+05	1.21	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:48	2.099e+05	2.057e+05	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.509e+05	1.470e+05	1.03	yes	no	1.258
10	Unk	OCDF	42:45	2.260e+05	2.525e+05	0.90	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:31	2.824e+04	3.588e+04	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:57	1.903e+05	1.221e+05	1.56	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	1.727e+05	1.384e+05	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:04	1.705e+05	1.356e+05	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:18	1.758e+05	1.371e+05	1.28	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	1.431e+05	1.365e+05	1.05	yes	no	1.025
17	Unk	OCDD	42:31	1.906e+05	2.140e+05	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:46	4.689e+05	5.926e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:47	6.073e+05	3.832e+05	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	5.900e+05	3.740e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	2.738e+05	5.189e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:21	3.023e+05	5.708e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	2.671e+05	5.167e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	2.133e+05	4.042e+05	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	1.882e+05	4.188e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	1.419e+05	3.155e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:30	2.668e+05	3.316e+05	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	4.009e+05	2.534e+05	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	3.335e+05	2.508e+05	1.33	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:03	3.244e+05	2.699e+05	1.20	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:43	2.779e+05	2.632e+05	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	3.375e+05	3.799e+05	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:56	2.956e+05	3.663e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:17	3.390e+05	2.761e+05	1.23	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:31	6.612e+04				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
76557

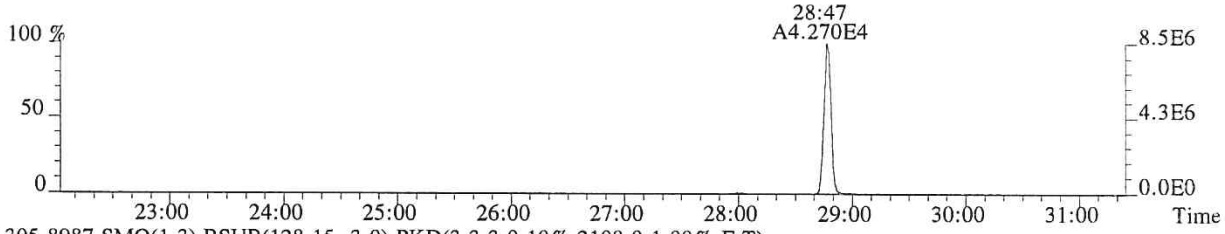
Run #4 Filename P513853 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:06:29
Processed: 24-JAN-18 17:13:42 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.50e+06	6.40e+02	1.3e+04	1.14e+07	2.11e+03	5.4e+03
2	1,2,3,7,8-PeCDF	6.16e+07	1.61e+03	3.8e+04	4.01e+07	2.10e+03	1.9e+04
3	2,3,4,7,8-PeCDF	5.79e+07	1.61e+03	3.6e+04	3.78e+07	2.10e+03	1.8e+04
4	1,2,3,4,7,8-HxCDF	5.83e+07	1.86e+03	3.1e+04	4.74e+07	2.55e+03	1.9e+04
5	1,2,3,6,7,8-HxCDF	5.80e+07	1.86e+03	3.1e+04	4.80e+07	2.55e+03	1.9e+04
6	2,3,4,6,7,8-HxCDF	5.37e+07	1.86e+03	2.9e+04	4.34e+07	2.55e+03	1.7e+04
7	1,2,3,7,8,9-HxCDF	4.12e+07	1.86e+03	2.2e+04	3.39e+07	2.55e+03	1.3e+04
8	1,2,3,4,6,7,8-HpCDF	4.57e+07	4.44e+03	1.0e+04	4.52e+07	1.05e+04	4.3e+03
9	1,2,3,4,7,8,9-HpCDF	3.06e+07	4.44e+03	6.9e+03	2.99e+07	1.05e+04	2.8e+03
10	OCDF	3.93e+07	1.44e+02	2.7e+05	4.34e+07	1.38e+03	3.1e+04
11	2,3,7,8-TCDD	5.83e+06	1.92e+03	3.0e+03	7.39e+06	1.30e+03	5.7e+03
12	1,2,3,7,8-PeCDD	3.83e+07	1.45e+03	2.6e+04	2.46e+07	7.04e+02	3.5e+04
13	1,2,3,4,7,8-HxCDD	3.89e+07	5.12e+02	7.6e+04	3.08e+07	1.23e+03	2.5e+04
14	1,2,3,6,7,8-HxCDD	3.74e+07	5.12e+02	7.3e+04	3.02e+07	1.23e+03	2.5e+04
15	1,2,3,7,8,9-HxCDD	3.75e+07	5.12e+02	7.3e+04	3.01e+07	1.23e+03	2.5e+04
16	1,2,3,4,6,7,8-HpCDD	2.89e+07	1.84e+03	1.6e+04	2.78e+07	1.41e+03	2.0e+04
17	OCDD	3.41e+07	6.32e+02	5.4e+04	3.81e+07	1.31e+03	2.9e+04
18	13C-2,3,7,8-TCDF	9.47e+07	6.52e+03	1.5e+04	1.19e+08	4.12e+03	2.9e+04
19	13C-1,2,3,7,8-PeCDF	1.17e+08	1.28e+03	9.1e+04	7.33e+07	8.08e+02	9.1e+04
20	13C-2,3,4,7,8-PeCDF	1.21e+08	1.28e+03	9.4e+04	7.72e+07	8.08e+02	9.6e+04
21	13C-1,2,3,4,7,8-HxCDF	6.01e+07	1.97e+03	3.1e+04	1.13e+08	1.75e+03	6.5e+04
22	13C-1,2,3,6,7,8-HxCDF	6.52e+07	1.97e+03	3.3e+04	1.24e+08	1.75e+03	7.1e+04
23	13C-2,3,4,6,7,8-HxCDF	5.86e+07	1.97e+03	3.0e+04	1.11e+08	1.75e+03	6.4e+04
24	13C-1,2,3,7,8,9-HxCDF	4.44e+07	1.97e+03	2.3e+04	8.35e+07	1.75e+03	4.8e+04
25	13C-1,2,3,4,6,7,8-HpCDF	4.03e+07	8.48e+03	4.8e+03	9.01e+07	6.21e+03	1.5e+04
26	13C-1,2,3,4,7,8,9-HpCDF	2.83e+07	8.48e+03	3.3e+03	6.33e+07	6.21e+03	1.0e+04
27	13C-2,3,7,8-TCDD	5.56e+07	5.87e+03	9.5e+03	6.88e+07	2.90e+03	2.4e+04
28	13C-1,2,3,7,8-PeCDD	8.27e+07	1.46e+03	5.7e+04	5.24e+07	1.17e+03	4.5e+04
29	13C-1,2,3,4,7,8-HxCDD	7.51e+07	3.07e+03	2.4e+04	5.90e+07	2.67e+03	2.2e+04
30	13C-1,2,3,6,7,8-HxCDD	7.07e+07	3.07e+03	2.3e+04	5.69e+07	2.67e+03	2.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	5.63e+07	2.93e+03	1.9e+04	5.39e+07	1.32e+03	4.1e+04
32	13C-OCDD	5.98e+07	1.07e+03	5.6e+04	6.69e+07	9.36e+02	7.1e+04
33	13C-1,2,3,4-TCDD	5.97e+07	5.87e+03	1.0e+04	7.42e+07	2.90e+03	2.6e+04
34	13C-1,2,3,7,8,9-HxCDD	7.31e+07	3.07e+03	2.4e+04	5.89e+07	2.67e+03	2.2e+04
35	37Cl-2,3,7,8-TCDD	1.36e+07	1.25e+03	1.1e+04			

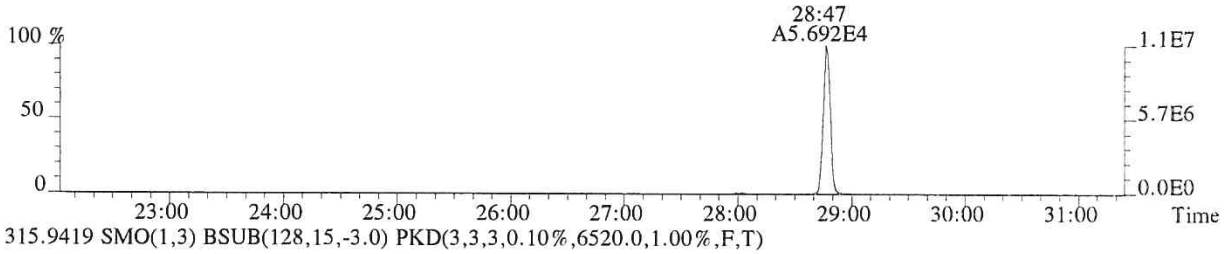
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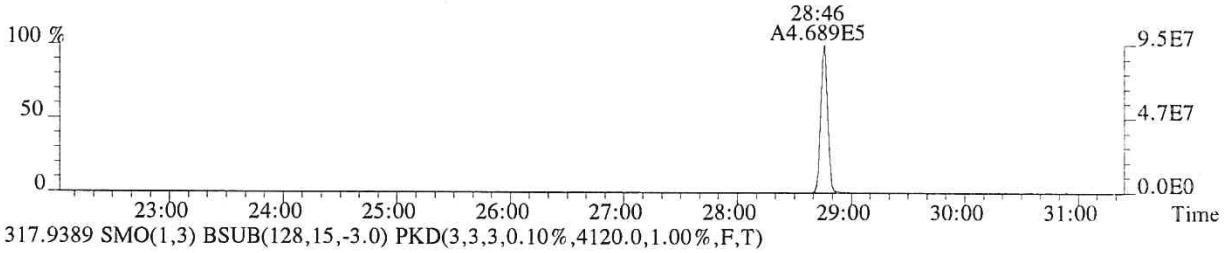
File:P513853 #1-665 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,640.0,1.00%,F,T)



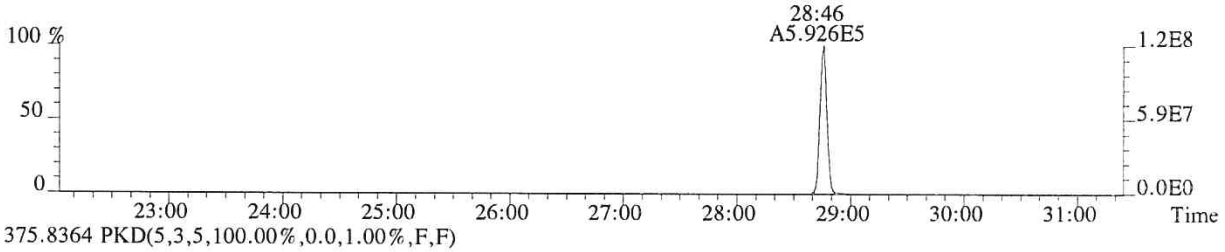
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2108.0,1.00%,F,T)



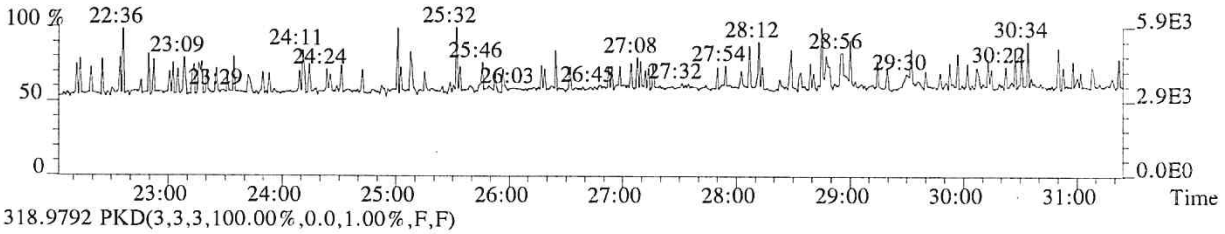
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6520.0,1.00%,F,T)



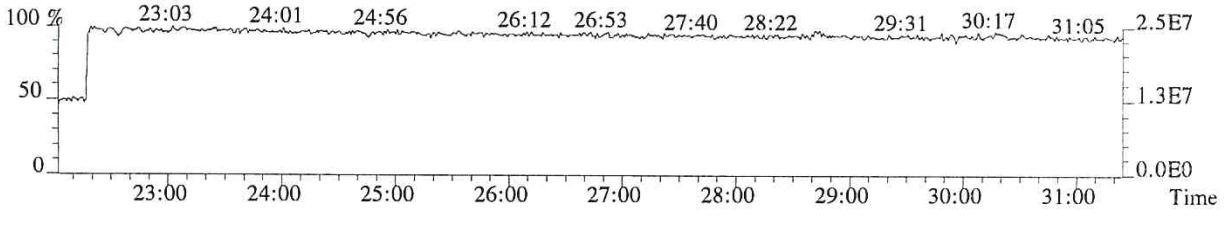
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4120.0,1.00%,F,T)



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

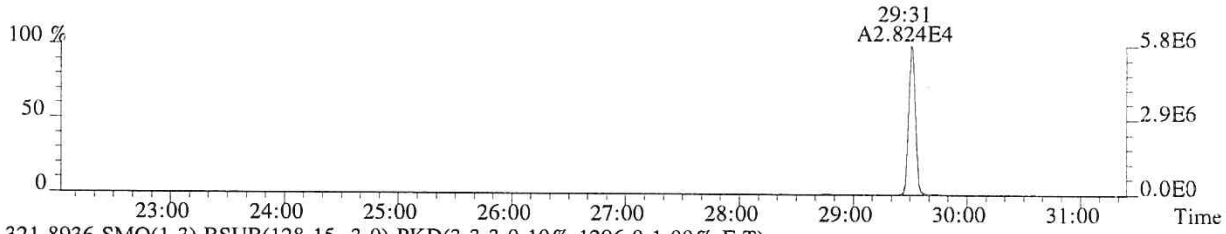


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

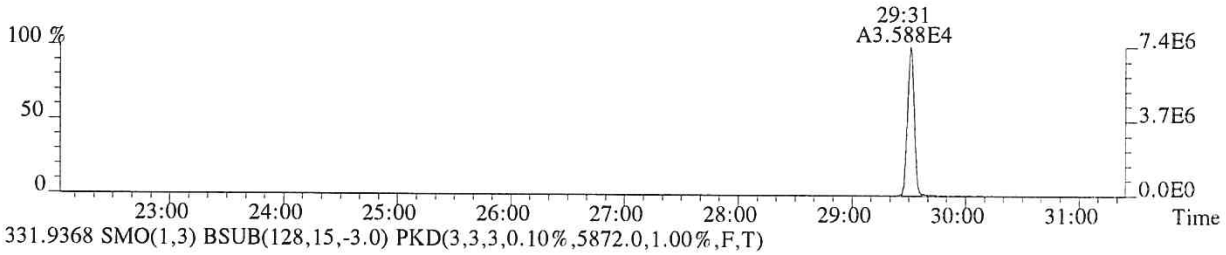


016717

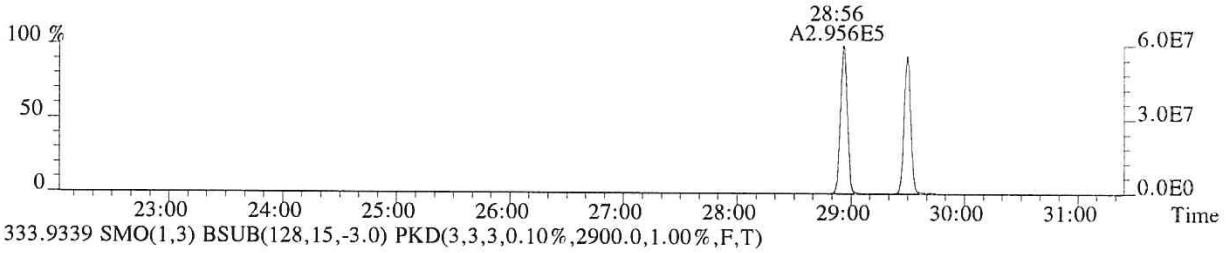
File:P513853 #1-665 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1924.0,1.00%,F,T)



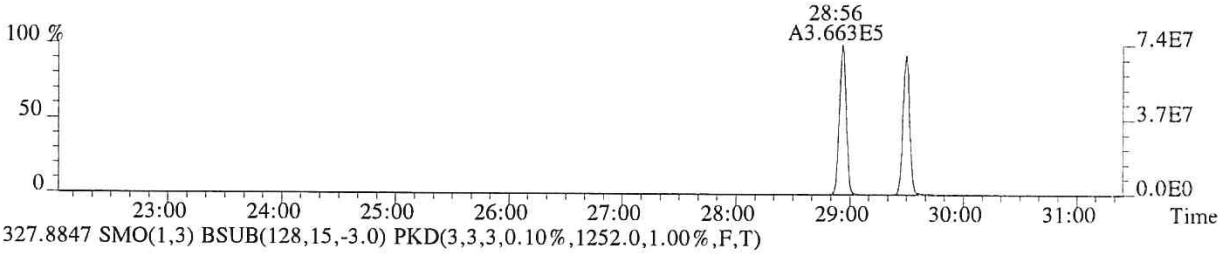
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1296.0,1.00%,F,T)



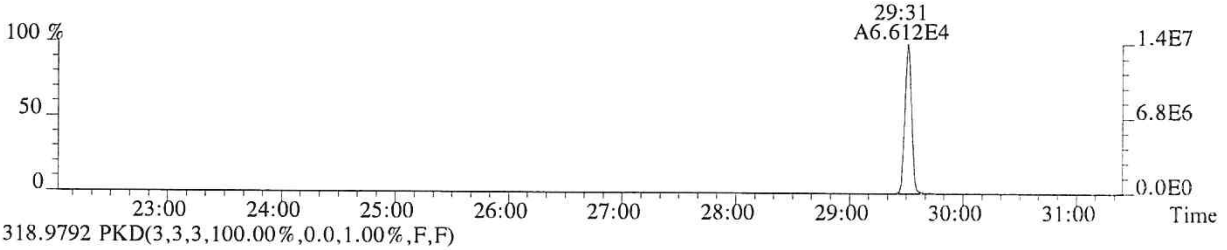
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5872.0,1.00%,F,T)



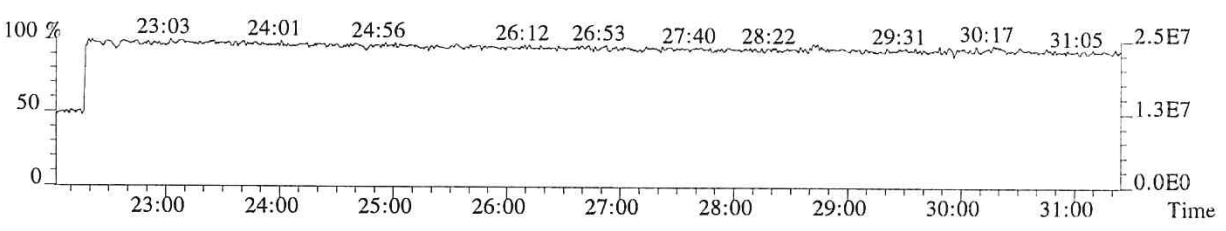
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2900.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1252.0,1.00%,F,T)

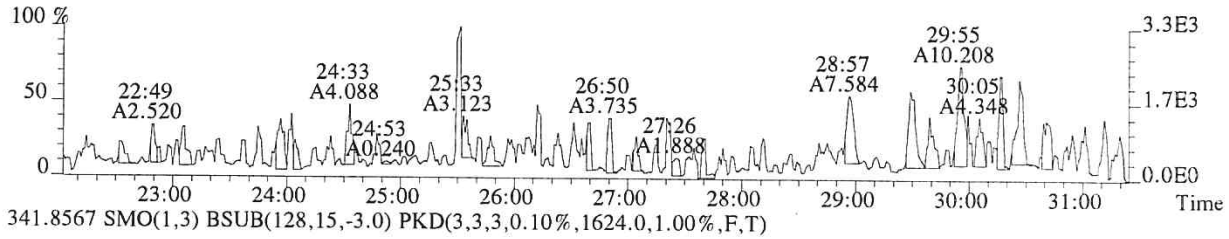


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

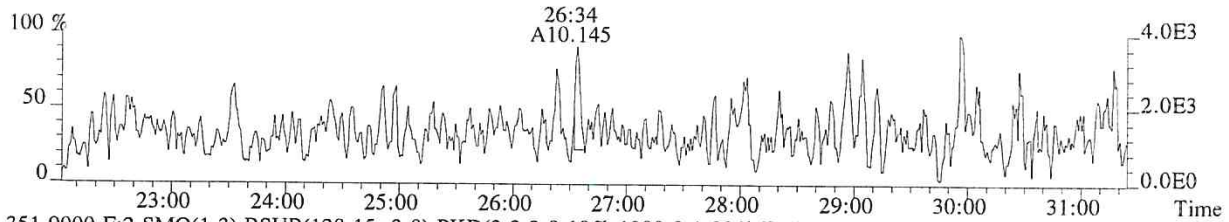


016718

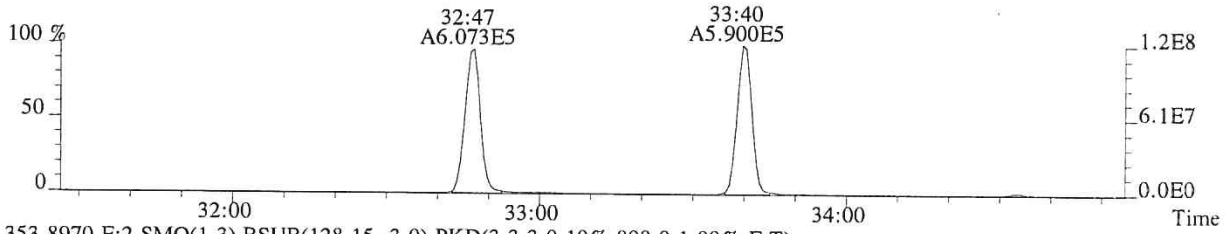
File:P513853 #1-665 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,452.0,1.00%,F,T)



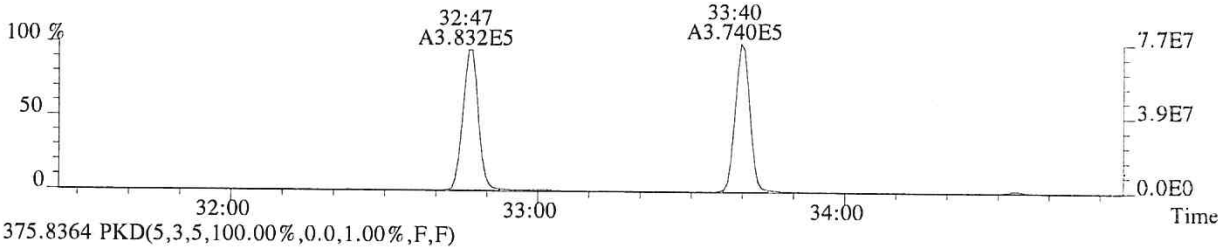
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1624.0,1.00%,F,T)



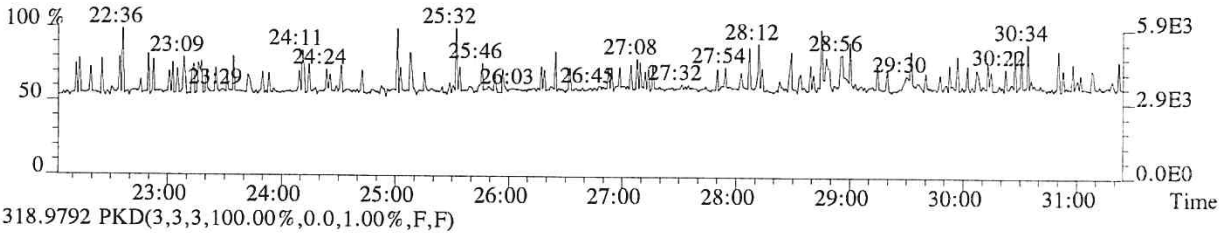
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1280.0,1.00%,F,T)



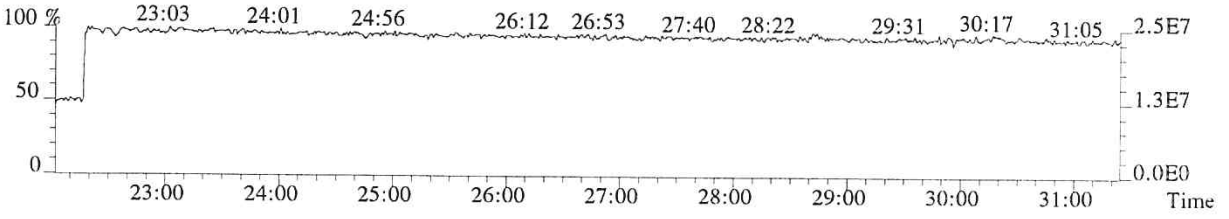
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,808.0,1.00%,F,T)



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

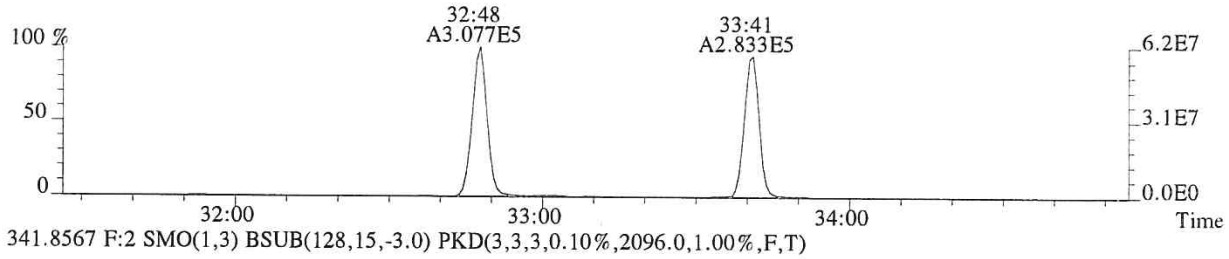


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

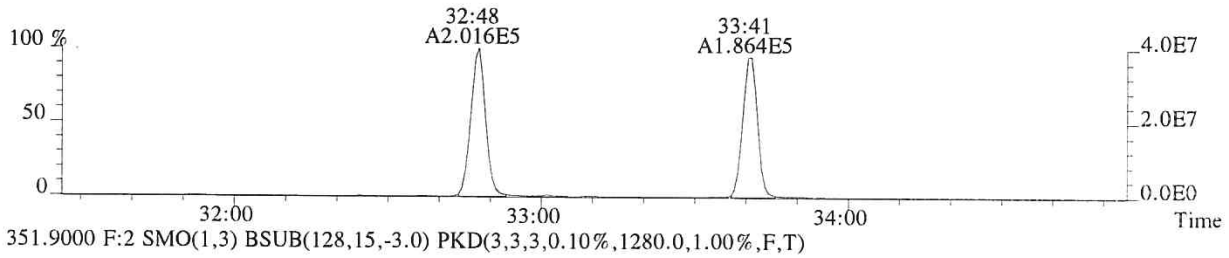


016719

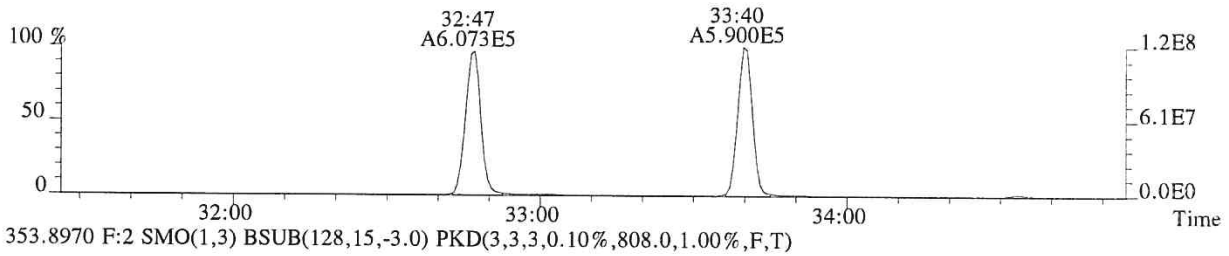
File:P513853 #1-313 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1612.0,1.00%,F,T)



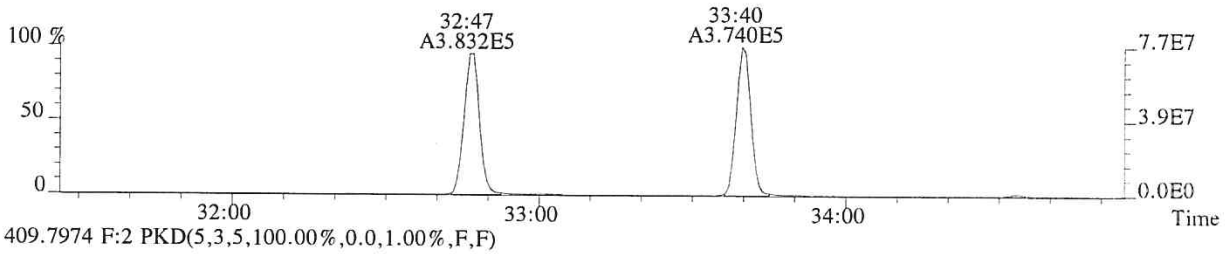
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2096.0,1.00%,F,T)



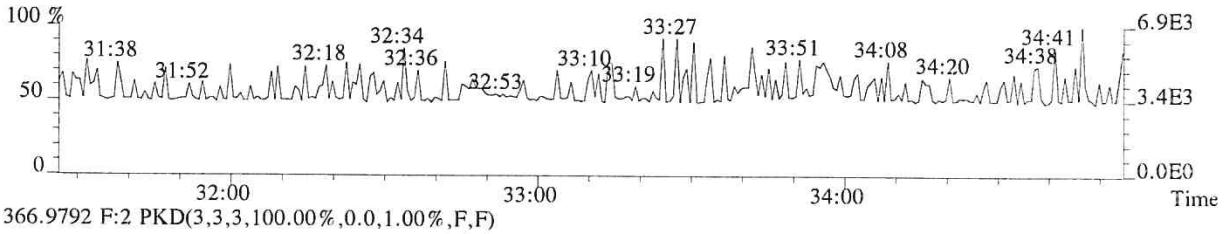
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1280.0,1.00%,F,T)



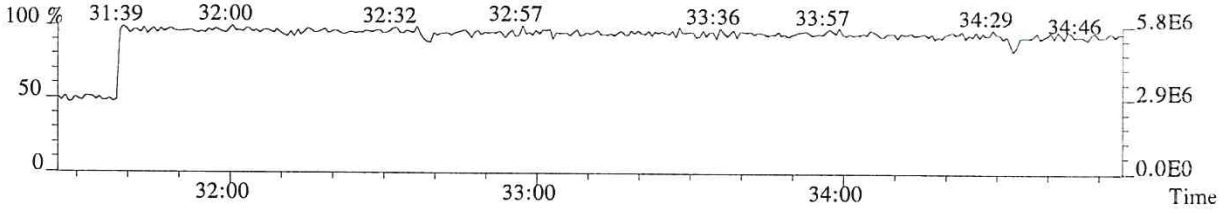
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,808.0,1.00%,F,T)



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

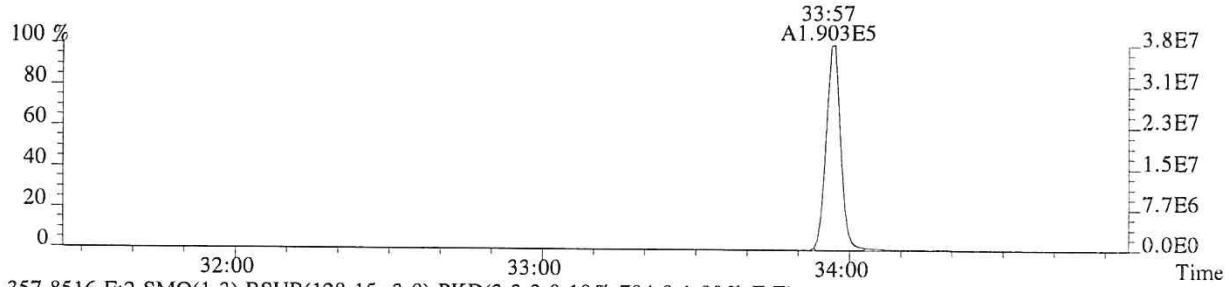


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

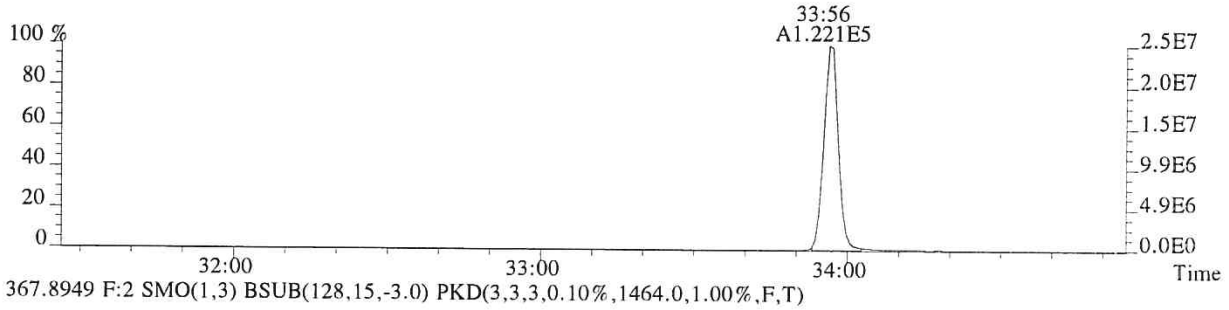


016720

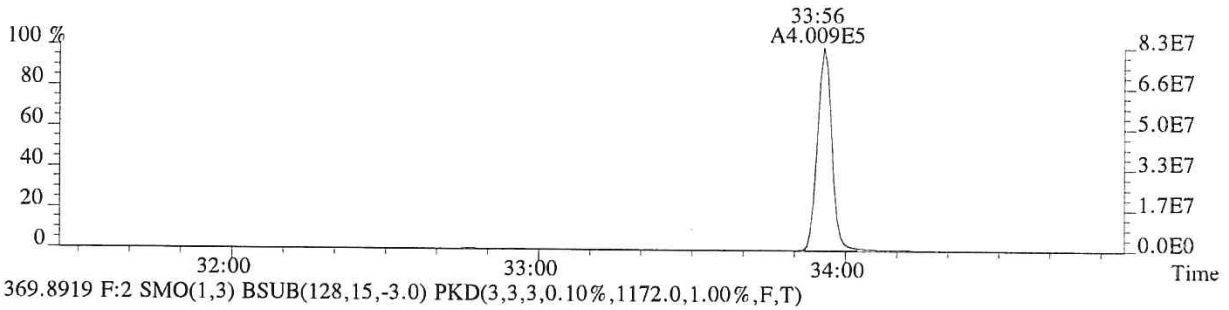
File:P513853 #1-313 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1452.0,1.00%,F,T)



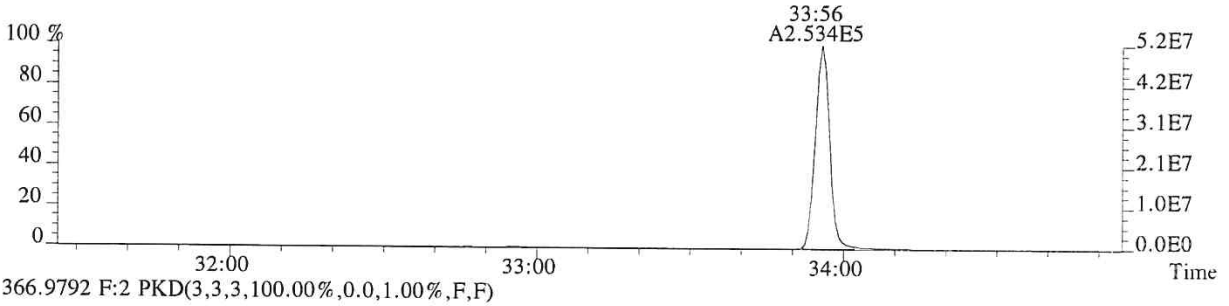
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,704.0,1.00%,F,T)



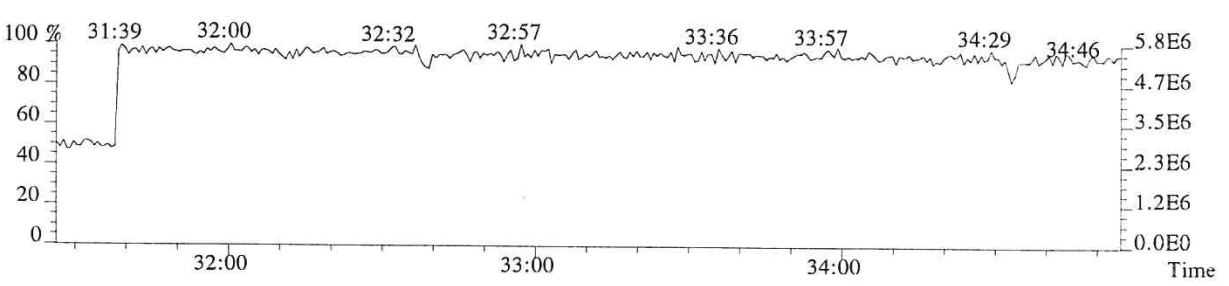
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1464.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1172.0,1.00%,F,T)

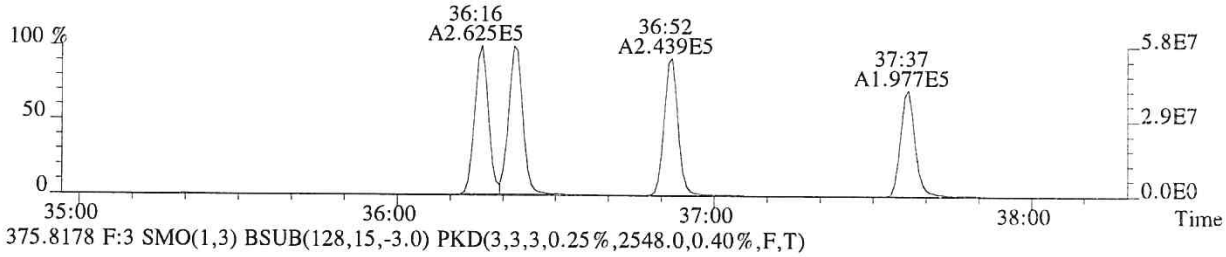


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

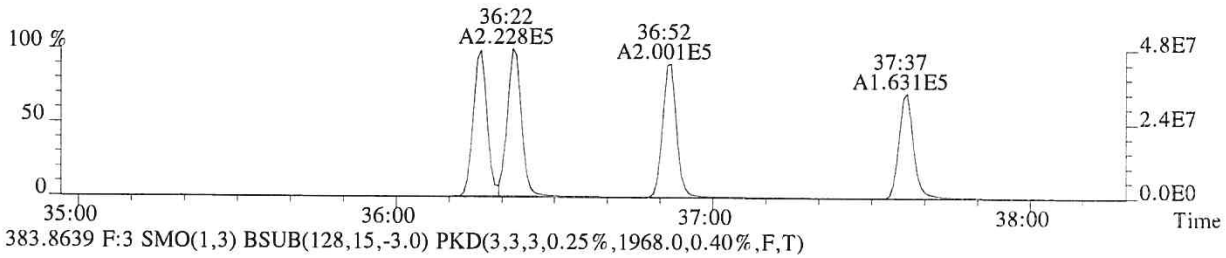


016721

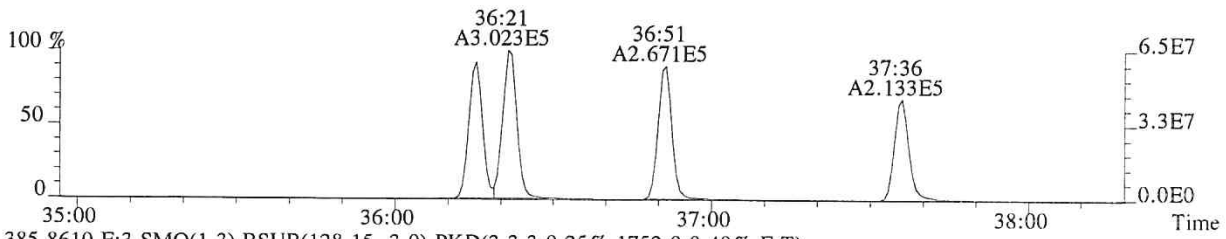
File:P513853 #1-303 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:76557
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1856.0,0.40%,F,T)



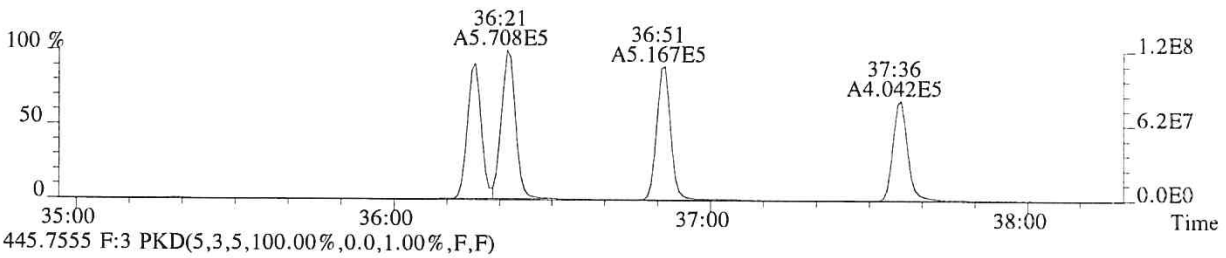
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2548.0,0.40%,F,T)



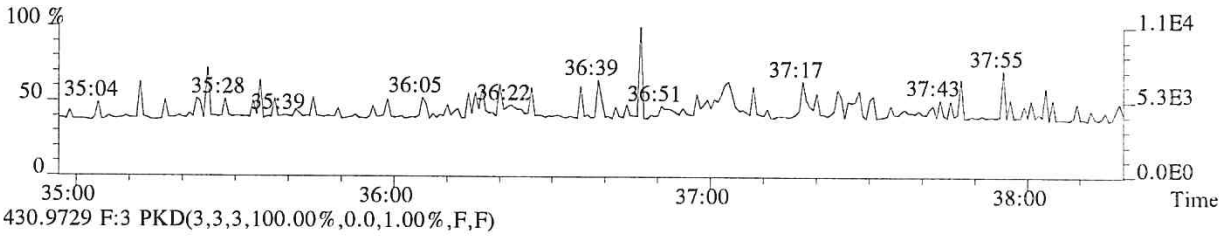
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1968.0,0.40%,F,T)



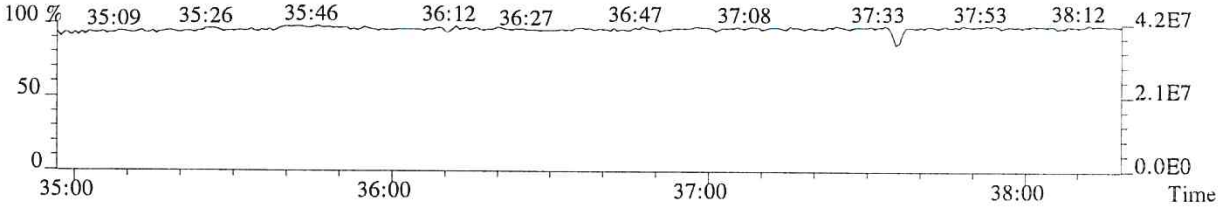
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1752.0,0.40%,F,T)



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

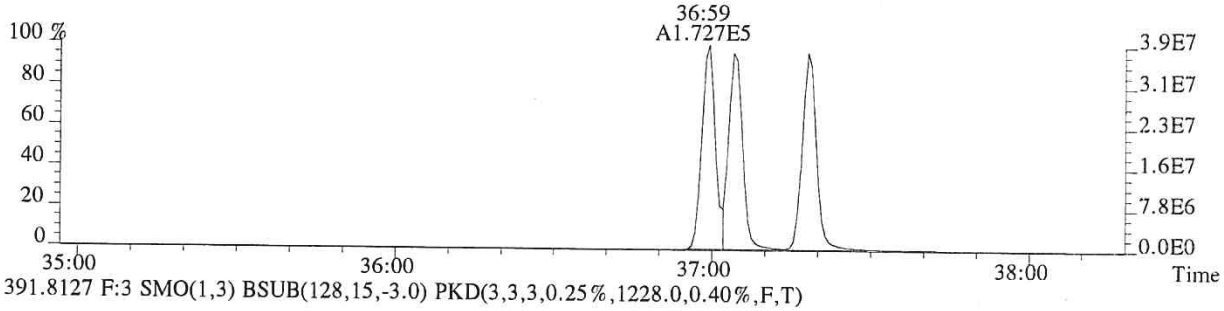


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

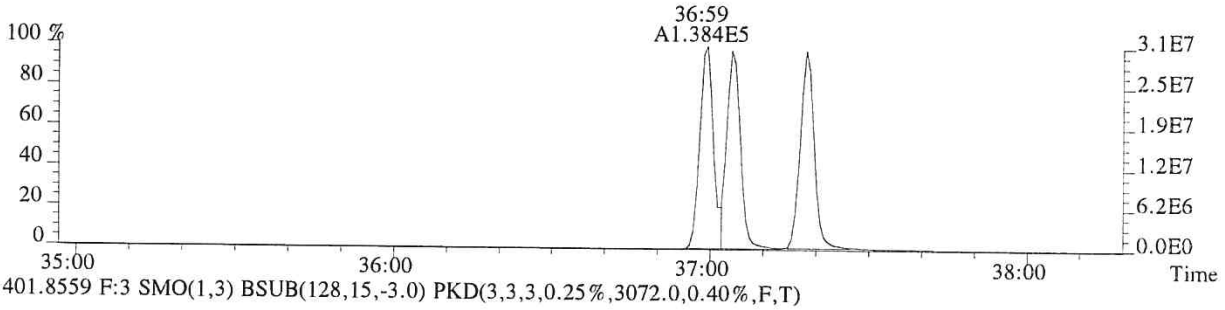


016722

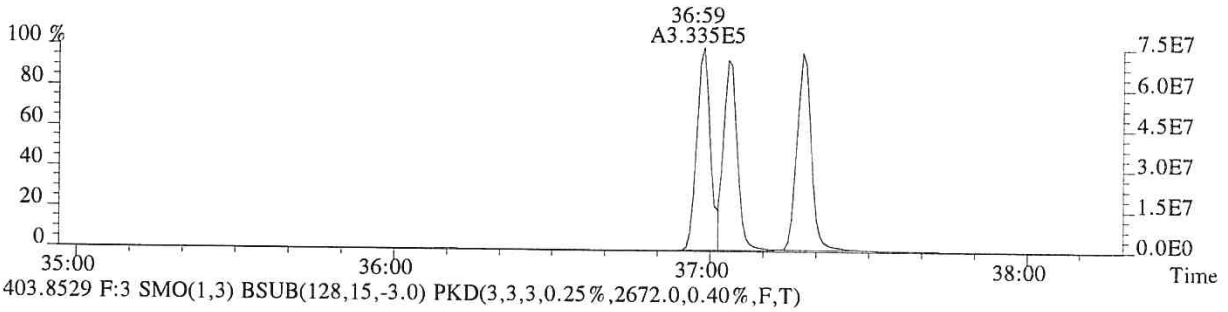
File:P513853 #1-303 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,512.0,0.40%,F,T)



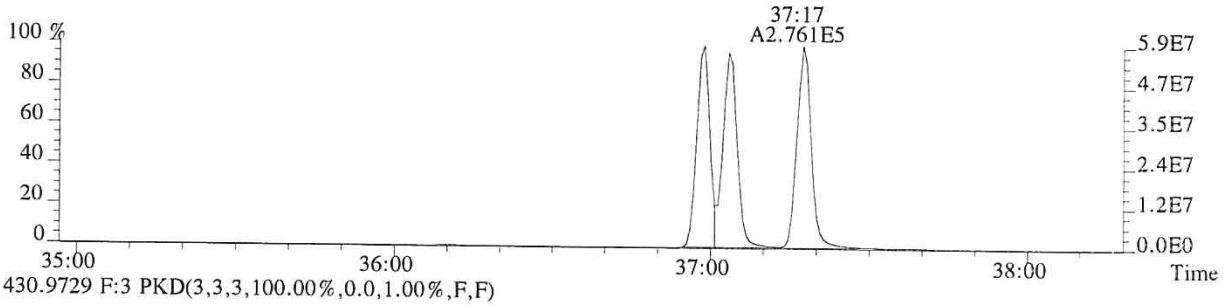
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1228.0,0.40%,F,T)



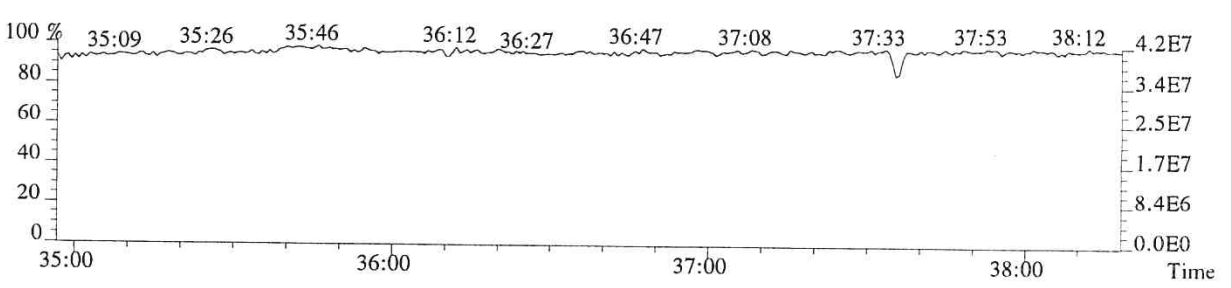
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3072.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2672.0,0.40%,F,T)

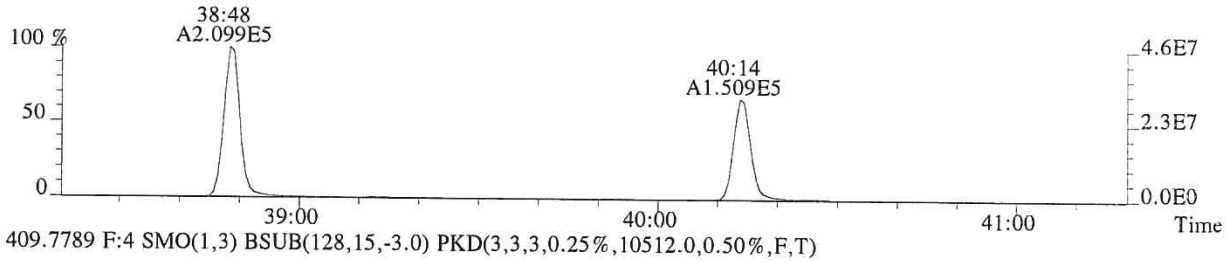


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

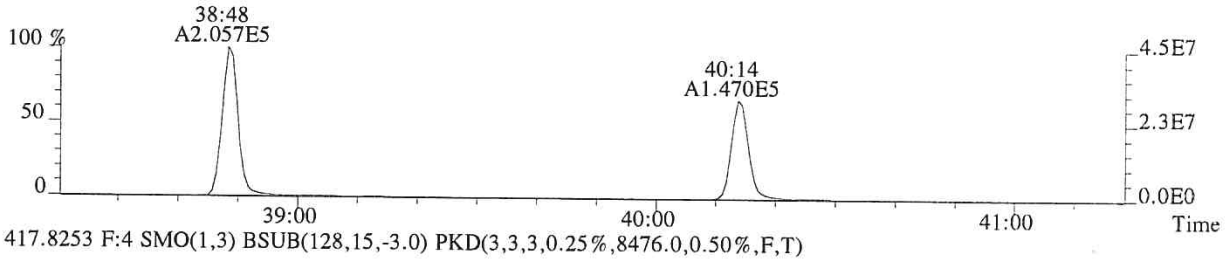


016723

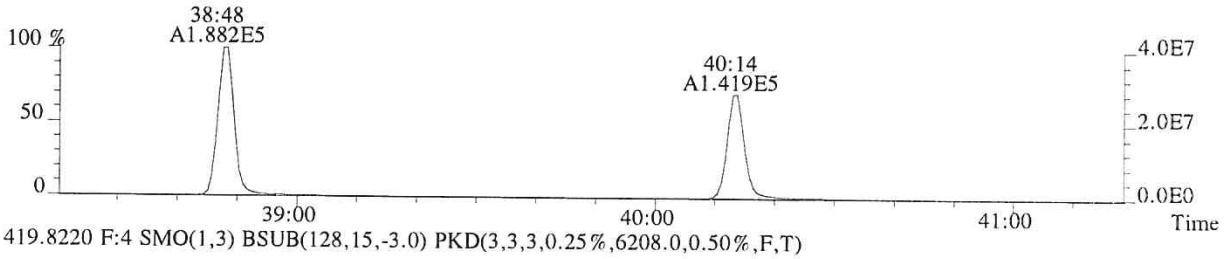
File:P513853 #1-268 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4436.0,0.50%,F,T)



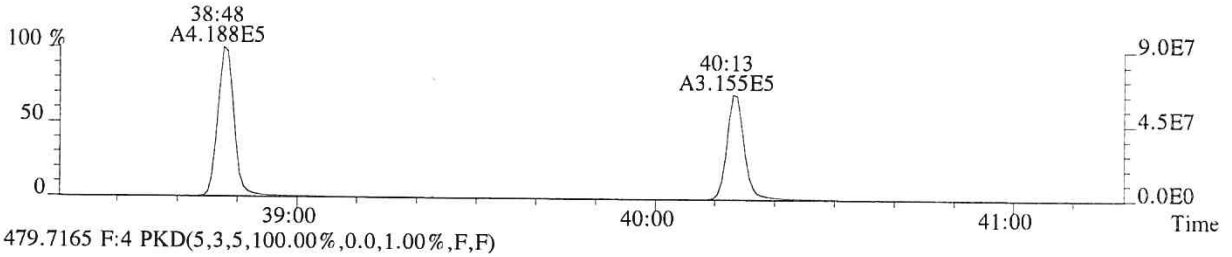
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10512.0,0.50%,F,T)



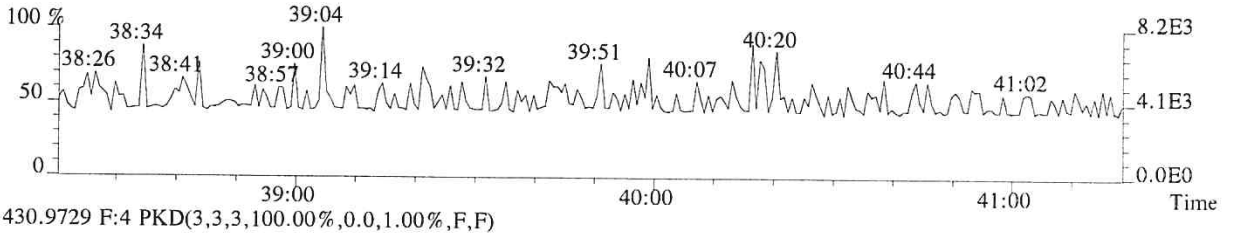
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8476.0,0.50%,F,T)



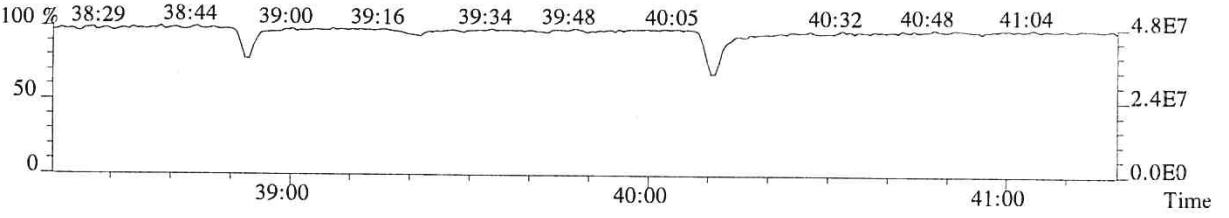
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6208.0,0.50%,F,T)



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

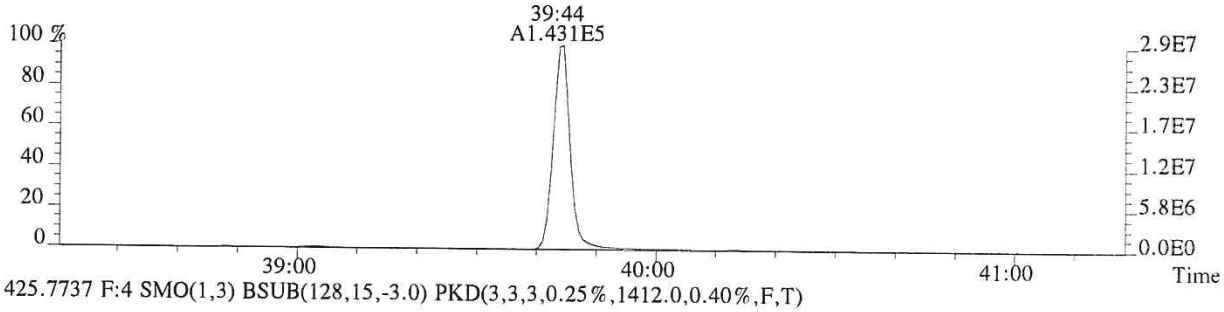


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

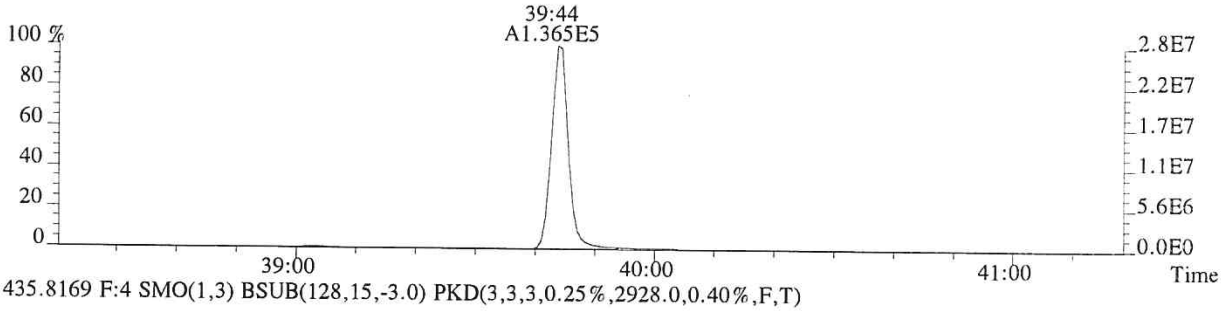


016724

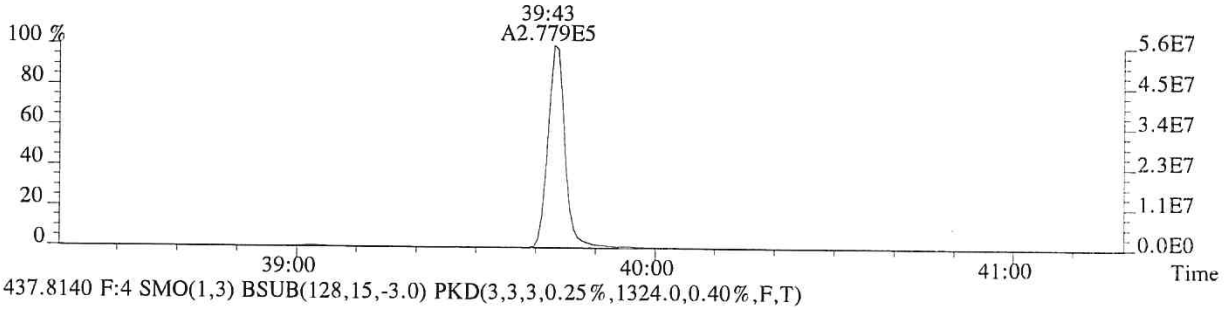
File:P513853 #1-268 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1840.0,0.40%,F,T)



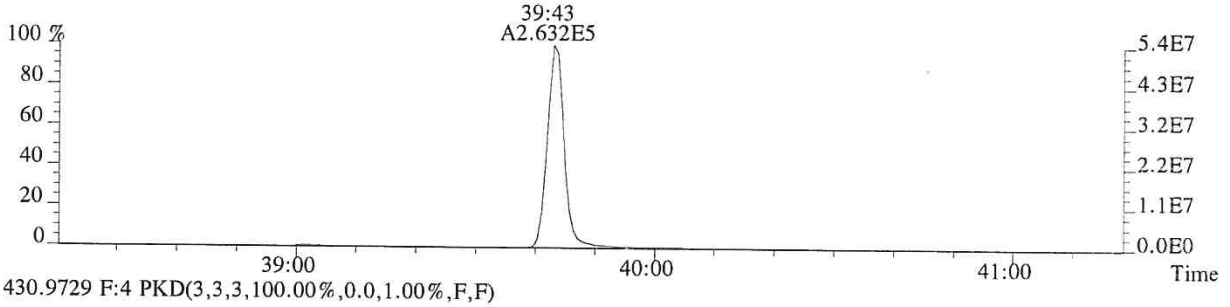
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1412.0,0.40%,F,T)



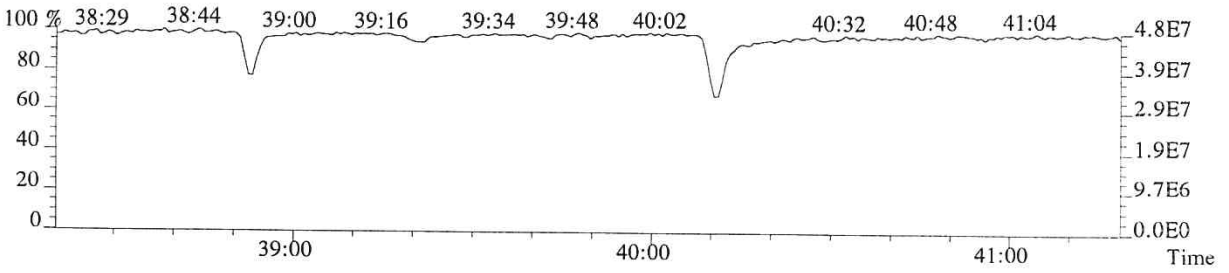
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2928.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1324.0,0.40%,F,T)

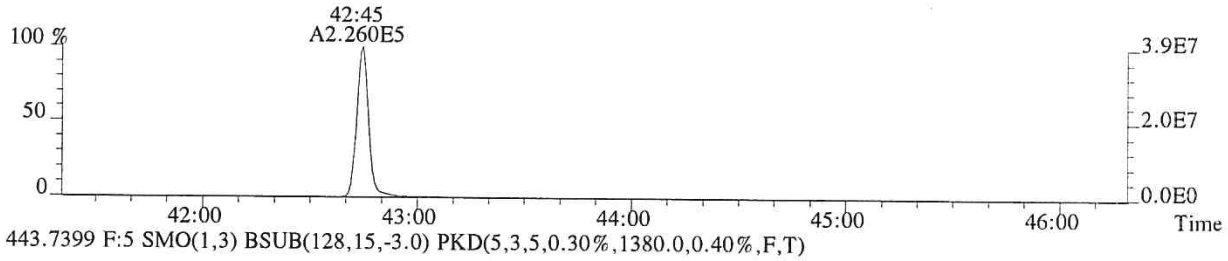


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

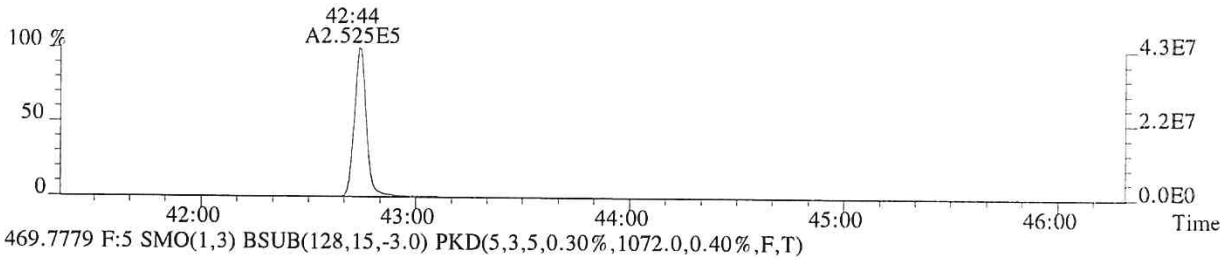


016725

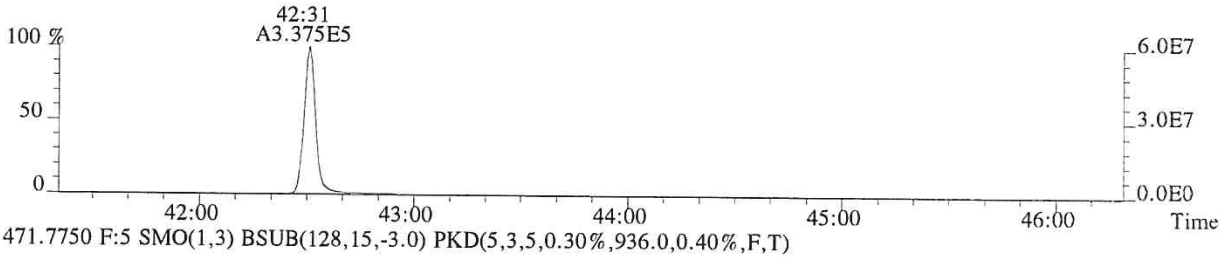
File:P513853 #1-448 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,144.0,0.40%,F,T)



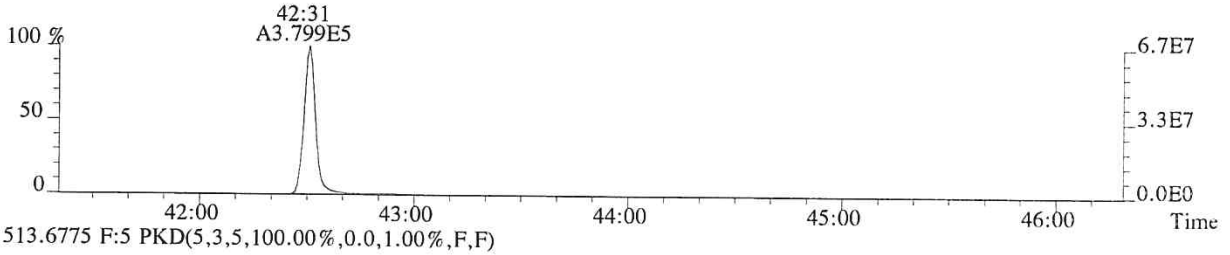
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1380.0,0.40%,F,T)



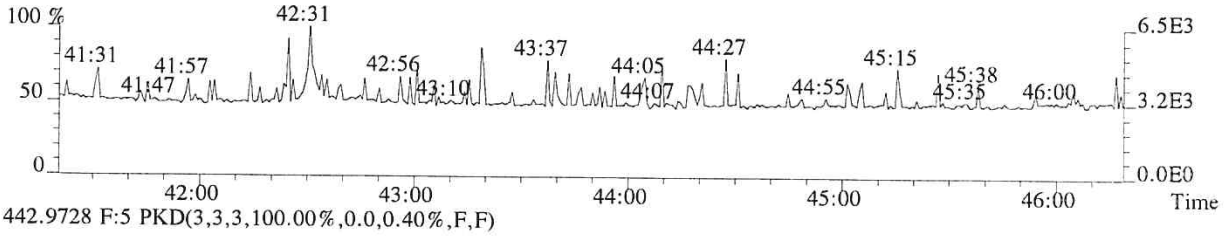
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1072.0,0.40%,F,T)



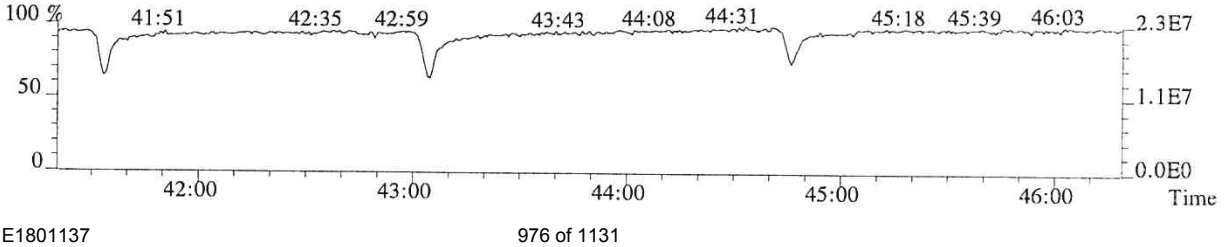
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,936.0,0.40%,F,T)



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

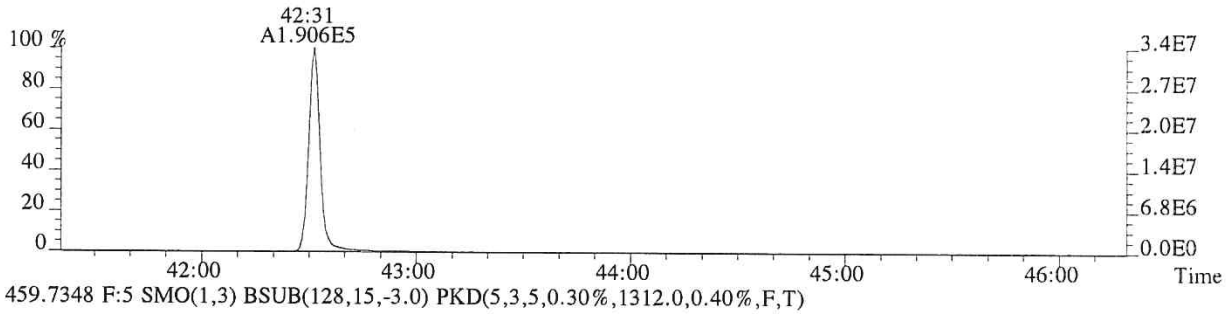


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

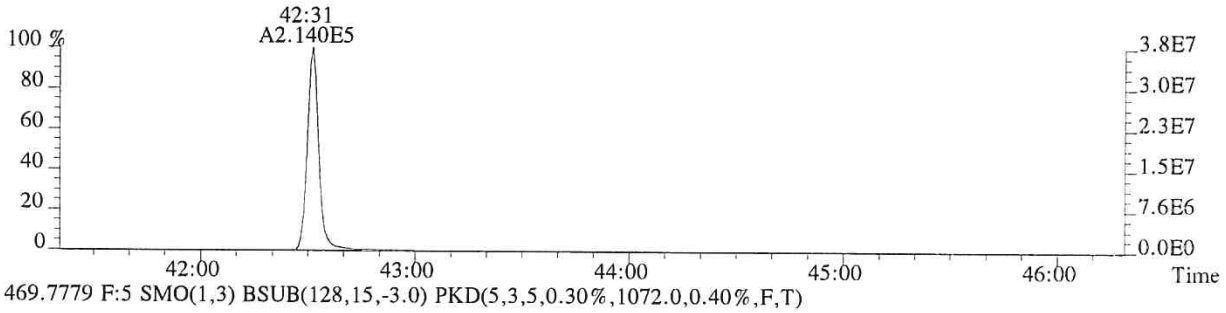


016726

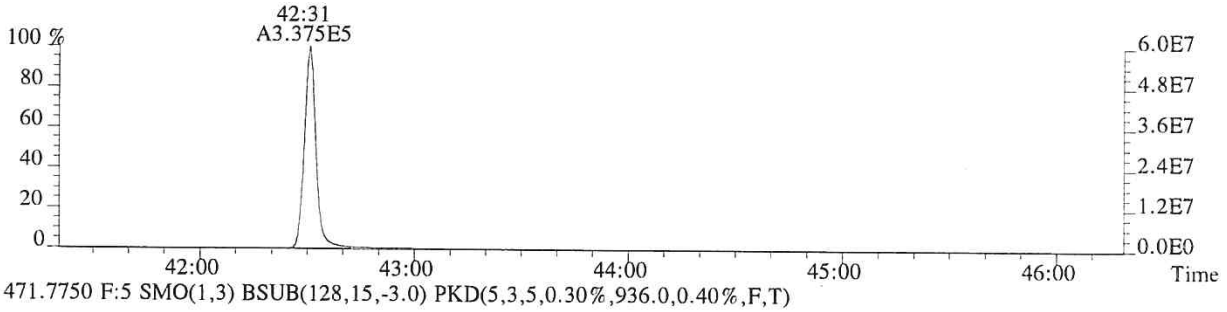
File:P513853 #1-448 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,632.0,0.40%,F,T)



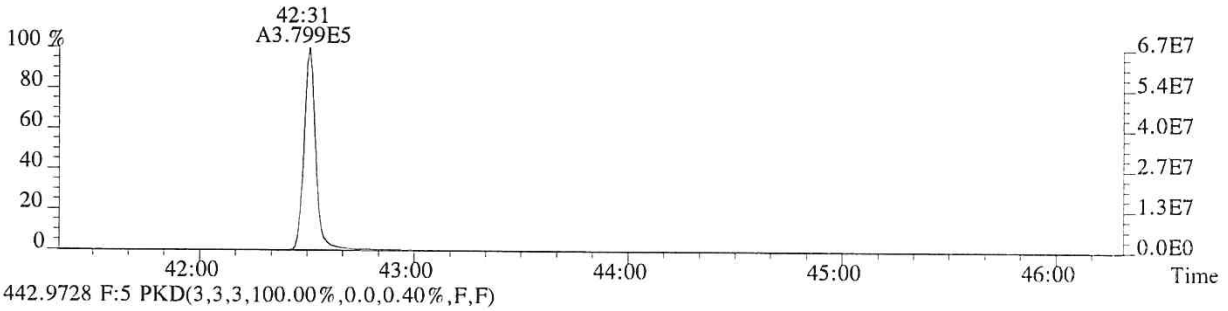
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1312.0,0.40%,F,T)



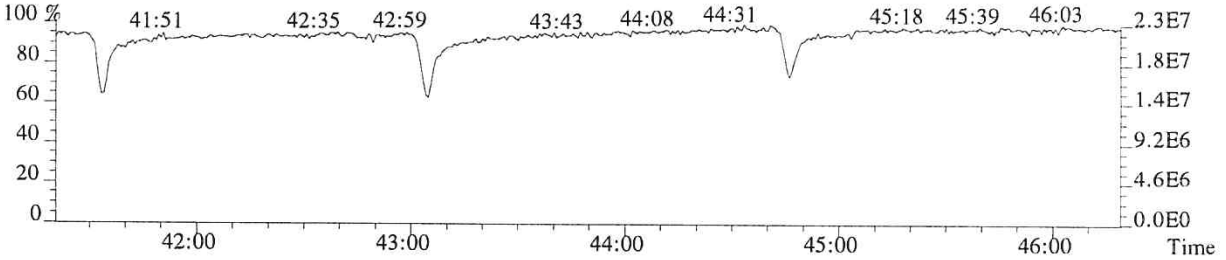
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1072.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,936.0,0.40%,F,T)



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



016727

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76558

Run #5 Filename P513854 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:55:09
Processed: 24-JAN-18 17:50:33 Sample ID: CS4

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:47	9.367e+04	1.218e+05	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:47	7.158e+05	4.652e+05	1.54	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:40	6.668e+05	4.362e+05	1.53	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:15	6.097e+05	4.979e+05	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:22	6.415e+05	5.246e+05	1.22	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:51	5.685e+05	4.706e+05	1.21	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:36	5.397e+05	4.367e+05	1.24	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:48	4.833e+05	4.698e+05	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	3.955e+05	3.845e+05	1.03	yes	no	1.258
10	Unk	OCDF	42:44	5.770e+05	6.374e+05	0.91	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:31	6.699e+04	8.569e+04	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:56	4.394e+05	2.817e+05	1.56	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	3.869e+05	3.085e+05	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:04	4.031e+05	3.210e+05	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:18	4.024e+05	3.196e+05	1.26	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	3.425e+05	3.252e+05	1.05	yes	no	1.025
17	Unk	OCDD	42:31	4.623e+05	5.191e+05	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:46	2.467e+05	3.121e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:46	3.414e+05	2.167e+05	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	3.412e+05	2.161e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	1.522e+05	2.895e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:21	1.720e+05	3.253e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	1.562e+05	2.969e+05	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	1.406e+05	2.715e+05	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	1.081e+05	2.395e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:13	9.438e+04	2.110e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:30	1.544e+05	1.910e+05	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	2.282e+05	1.431e+05	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	1.841e+05	1.451e+05	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:03	1.915e+05	1.516e+05	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:43	1.646e+05	1.528e+05	1.08	yes	no	0.858
32	IS	13C-OCDD	42:31	2.072e+05	2.298e+05	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:56	1.645e+05	2.018e+05	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:17	1.964e+05	1.566e+05	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:31	1.545e+05				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
76558

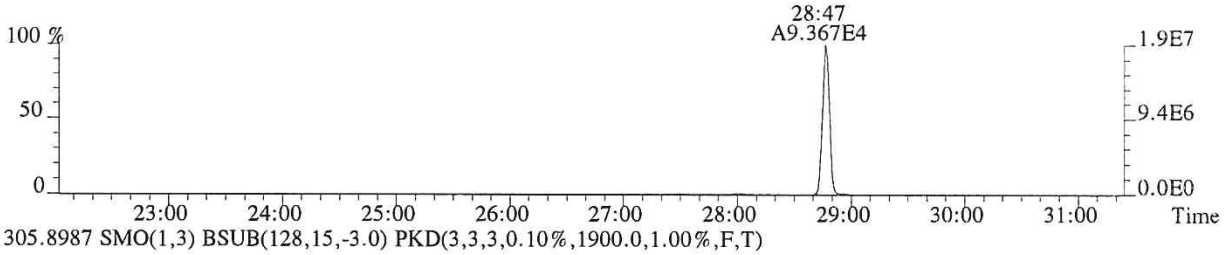
Run #5 Filename P513854 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:55:09
Processed: 24-JAN-18 17:50:33 LAB. ID: CS4

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.89e+07	1.00e+03	1.9e+04	2.44e+07	1.90e+03	1.3e+04
2	1,2,3,7,8-PeCDF	1.40e+08	2.03e+03	6.9e+04	9.16e+07	1.47e+03	6.2e+04
3	2,3,4,7,8-PeCDF	1.39e+08	2.03e+03	6.9e+04	9.17e+07	1.47e+03	6.2e+04
4	1,2,3,4,7,8-HxCDF	1.35e+08	1.80e+03	7.5e+04	1.11e+08	2.10e+03	5.3e+04
5	1,2,3,6,7,8-HxCDF	1.41e+08	1.80e+03	7.8e+04	1.16e+08	2.10e+03	5.5e+04
6	2,3,4,6,7,8-HxCDF	1.27e+08	1.80e+03	7.0e+04	1.06e+08	2.10e+03	5.0e+04
7	1,2,3,7,8,9-HxCDF	1.14e+08	1.80e+03	6.3e+04	9.30e+07	2.10e+03	4.4e+04
8	1,2,3,4,6,7,8-HpCDF	1.07e+08	1.75e+04	6.1e+03	1.05e+08	2.93e+04	3.6e+03
9	1,2,3,4,7,8,9-HpCDF	8.10e+07	1.75e+04	4.6e+03	7.89e+07	2.93e+04	2.7e+03
10	OCDF	1.02e+08	5.04e+02	2.0e+05	1.14e+08	1.72e+03	6.6e+04
11	2,3,7,8-TCDD	1.41e+07	2.20e+03	6.4e+03	1.80e+07	1.38e+03	1.3e+04
12	1,2,3,7,8-PeCDD	9.08e+07	1.42e+03	6.4e+04	5.86e+07	1.44e+02	4.1e+05
13	1,2,3,4,7,8-HxCDD	8.77e+07	1.20e+03	7.3e+04	7.06e+07	1.58e+03	4.5e+04
14	1,2,3,6,7,8-HxCDD	8.80e+07	1.20e+03	7.3e+04	7.05e+07	1.58e+03	4.5e+04
15	1,2,3,7,8,9-HxCDD	8.97e+07	1.20e+03	7.5e+04	7.13e+07	1.58e+03	4.5e+04
16	1,2,3,4,6,7,8-HpCDD	7.19e+07	1.52e+03	4.7e+04	6.86e+07	1.50e+03	4.6e+04
17	OCDD	8.05e+07	7.36e+02	1.1e+05	9.09e+07	1.16e+03	7.8e+04
18	13C-2,3,7,8-TCDF	4.92e+07	8.28e+03	5.9e+03	6.18e+07	3.78e+03	1.6e+04
19	13C-1,2,3,7,8-PeCDF	6.78e+07	1.09e+03	6.2e+04	4.35e+07	7.12e+02	6.1e+04
20	13C-2,3,4,7,8-PeCDF	7.11e+07	1.09e+03	6.5e+04	4.54e+07	7.12e+02	6.4e+04
21	13C-1,2,3,4,7,8-HxCDF	3.32e+07	1.94e+03	1.7e+04	6.39e+07	1.54e+03	4.2e+04
22	13C-1,2,3,6,7,8-HxCDF	3.76e+07	1.94e+03	1.9e+04	7.17e+07	1.54e+03	4.7e+04
23	13C-2,3,4,6,7,8-HxCDF	3.46e+07	1.94e+03	1.8e+04	6.63e+07	1.54e+03	4.3e+04
24	13C-1,2,3,7,8,9-HxCDF	2.97e+07	1.94e+03	1.5e+04	5.66e+07	1.54e+03	3.7e+04
25	13C-1,2,3,4,6,7,8-HpCDF	2.37e+07	7.11e+03	3.3e+03	5.25e+07	1.03e+04	5.1e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.95e+07	7.11e+03	2.7e+03	4.34e+07	1.03e+04	4.2e+03
27	13C-2,3,7,8-TCDD	3.25e+07	6.40e+03	5.1e+03	3.99e+07	2.77e+03	1.4e+04
28	13C-1,2,3,7,8-PeCDD	4.73e+07	1.13e+03	4.2e+04	2.97e+07	8.40e+02	3.5e+04
29	13C-1,2,3,4,7,8-HxCDD	4.15e+07	3.03e+03	1.4e+04	3.28e+07	2.40e+03	1.4e+04
30	13C-1,2,3,6,7,8-HxCDD	4.14e+07	3.03e+03	1.4e+04	3.31e+07	2.40e+03	1.4e+04
31	13C-1,2,3,4,6,7,8-HpCDD	3.45e+07	1.55e+03	2.2e+04	3.21e+07	1.32e+03	2.4e+04
32	13C-OCDD	3.61e+07	1.25e+03	2.9e+04	4.00e+07	1.19e+03	3.4e+04
33	13C-1,2,3,4-TCDD	3.34e+07	6.40e+03	5.2e+03	4.12e+07	2.77e+03	1.5e+04
34	13C-1,2,3,7,8,9-HxCDD	4.34e+07	3.03e+03	1.4e+04	3.46e+07	2.40e+03	1.4e+04
35	37Cl-2,3,7,8-TCDD	3.25e+07	1.28e+03	2.5e+04			

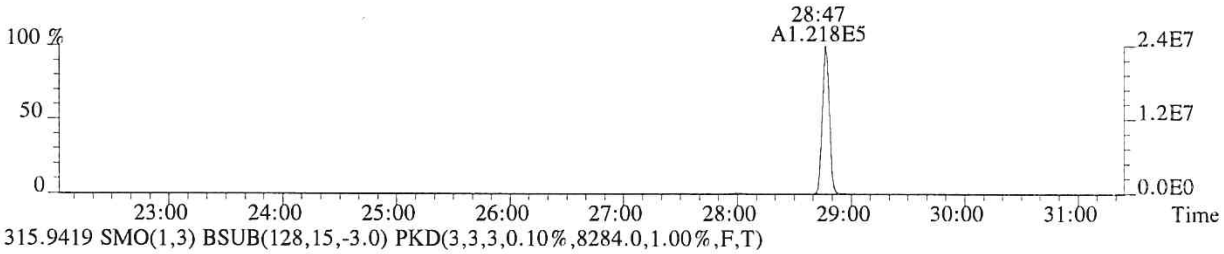
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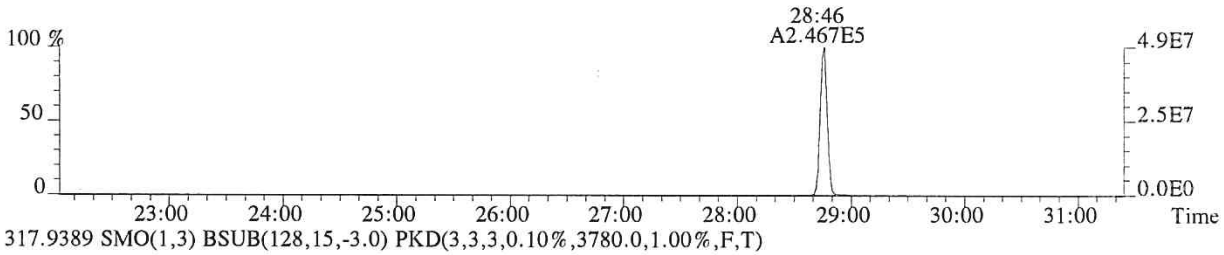
File:P513854 #1-665 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1004.0,1.00%,F,T)



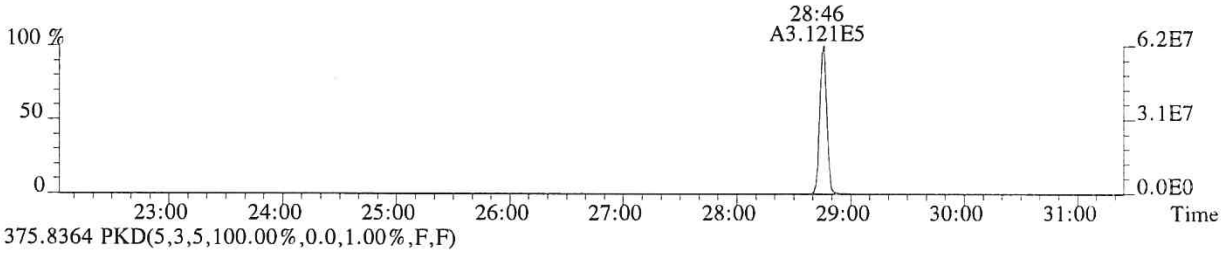
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1900.0,1.00%,F,T)



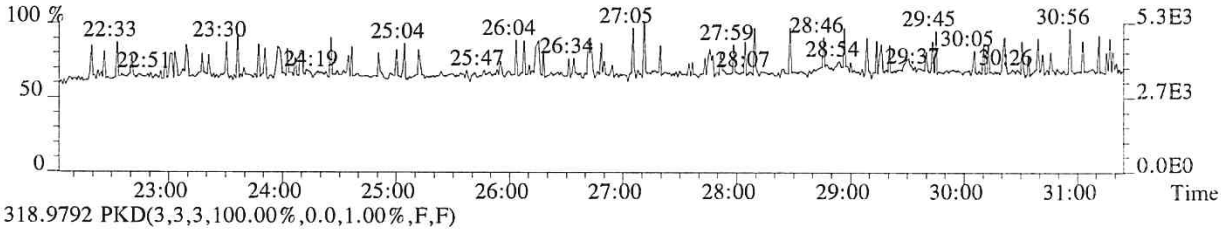
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8284.0,1.00%,F,T)



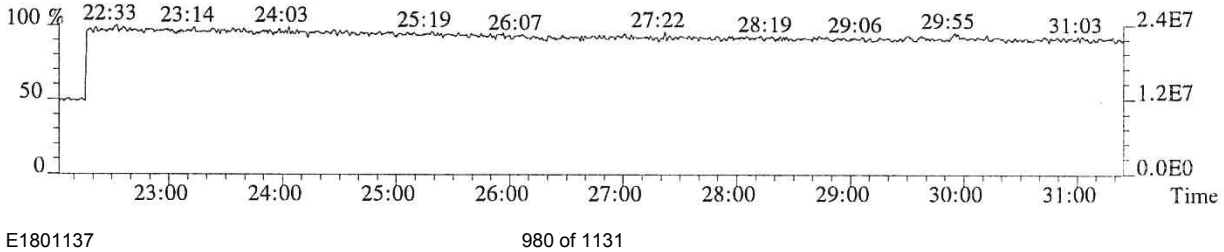
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3780.0,1.00%,F,T)



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

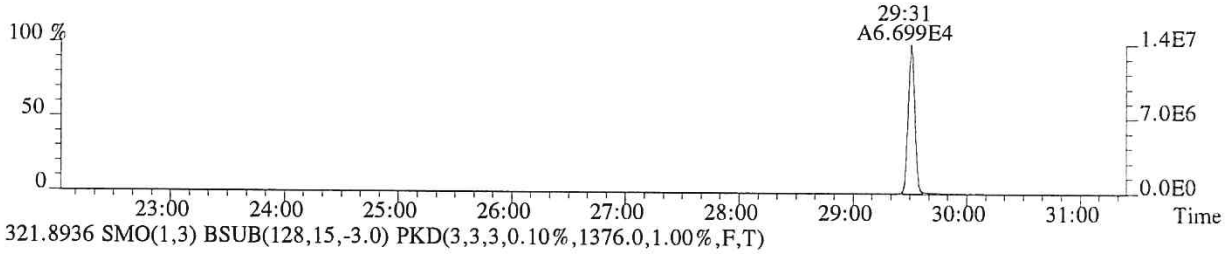


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

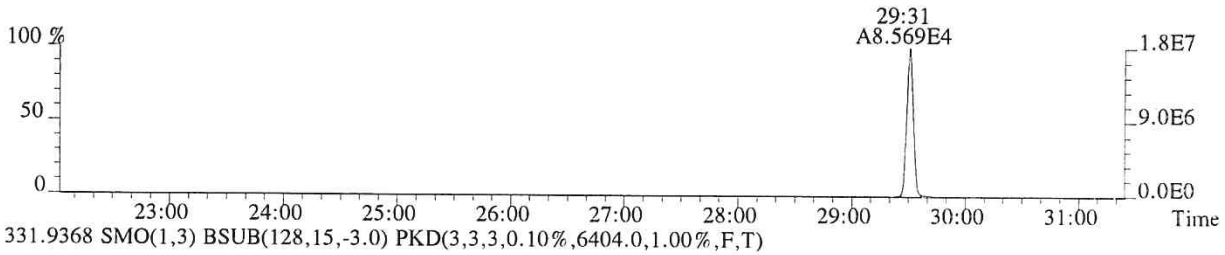


016730

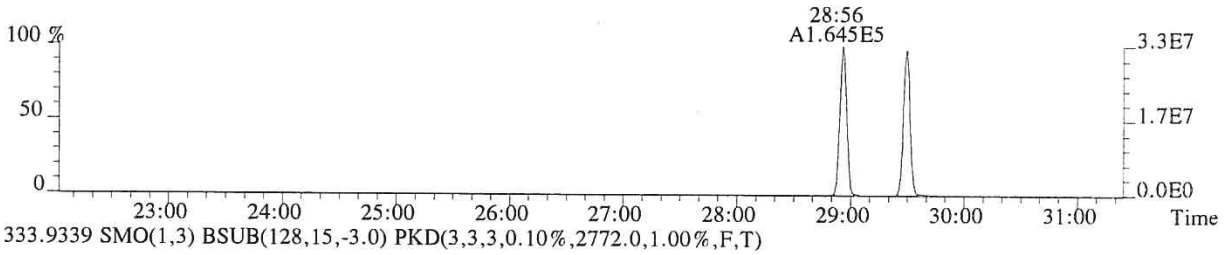
File:P513854 #1-665 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2200.0,1.00%,F,T)



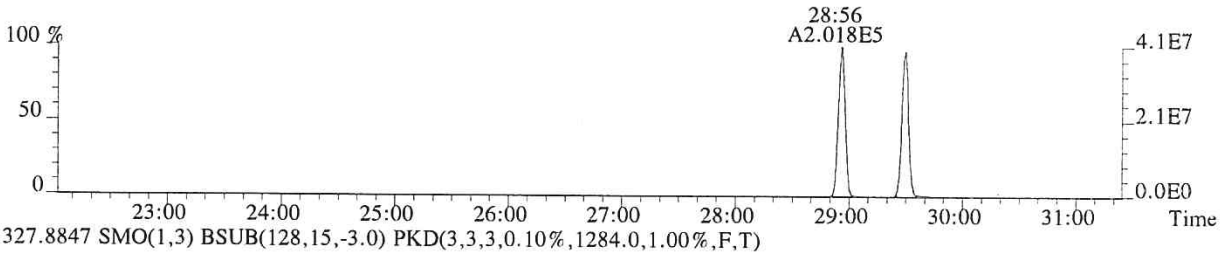
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1376.0,1.00%,F,T)



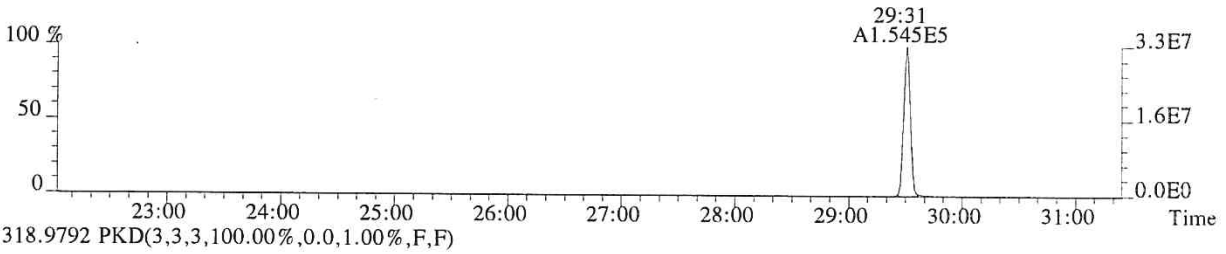
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6404.0,1.00%,F,T)



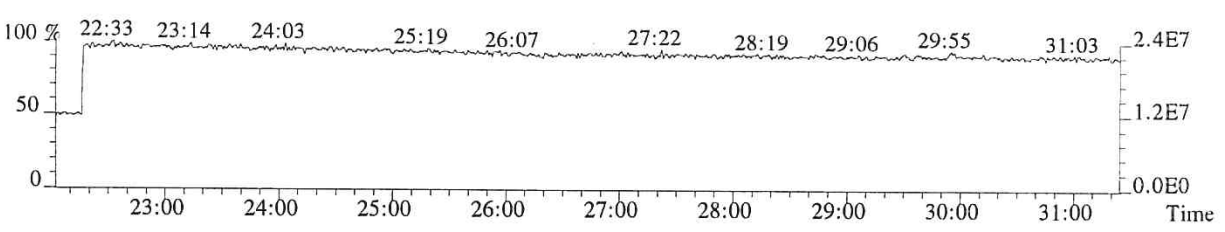
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2772.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1284.0,1.00%,F,T)

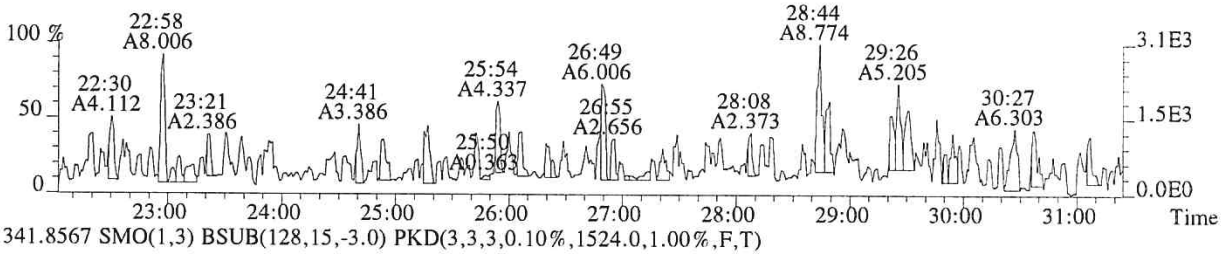


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

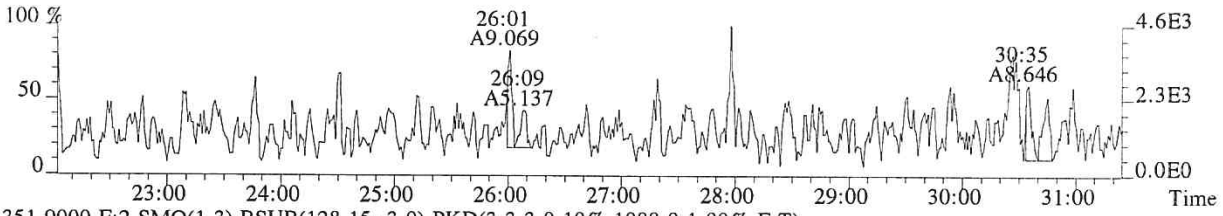


016731

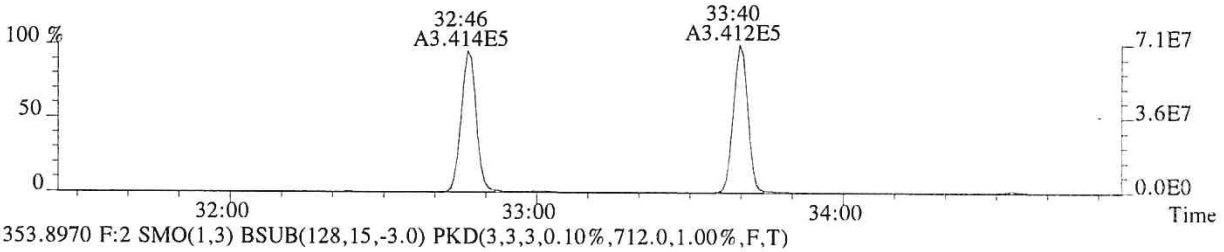
File:P513854 #1-665 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,600.0,1.00%,F,T)



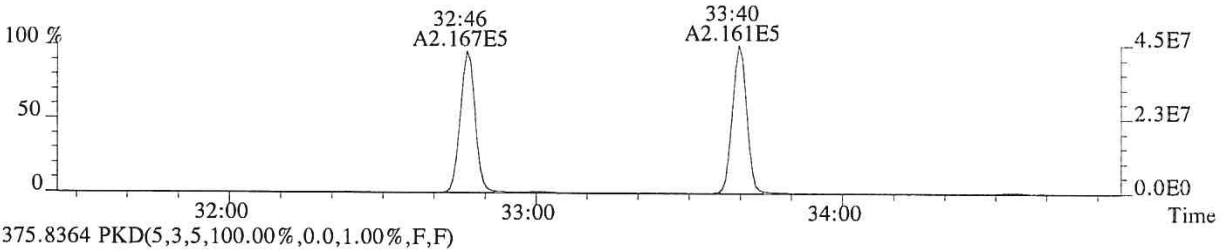
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1524.0,1.00%,F,T)



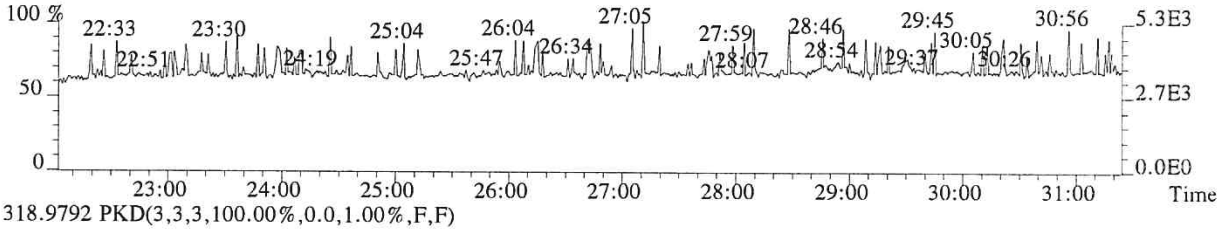
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1088.0,1.00%,F,T)



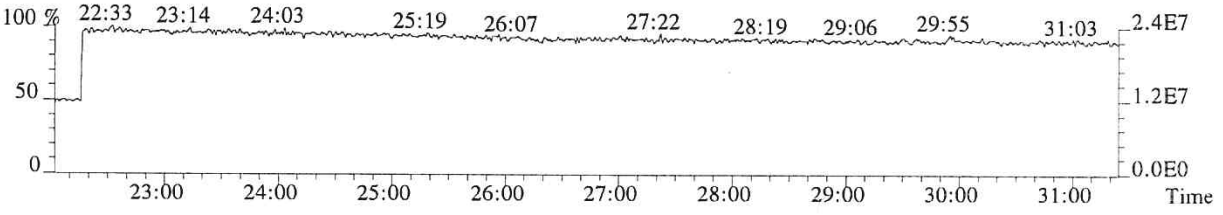
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,712.0,1.00%,F,T)



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

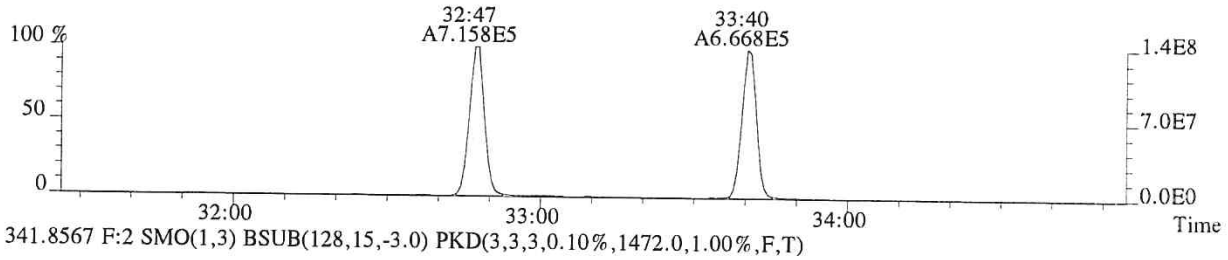


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

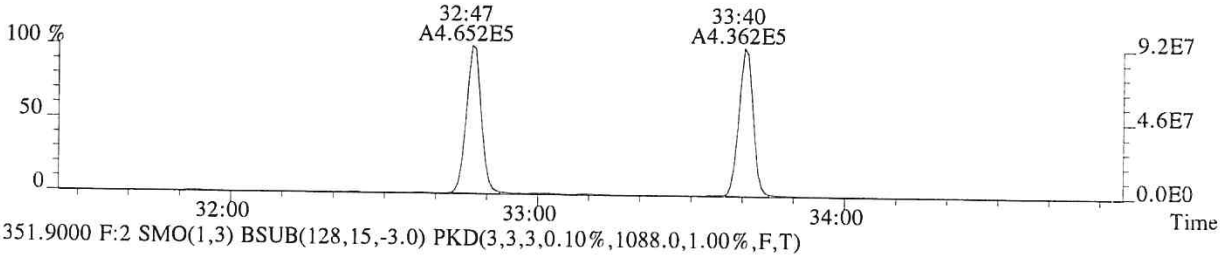


016732

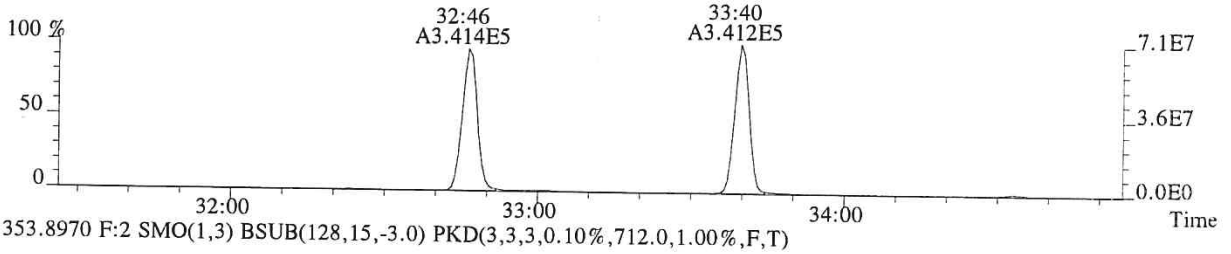
File:P513854 #1-313 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2028.0,1.00%,F,T)



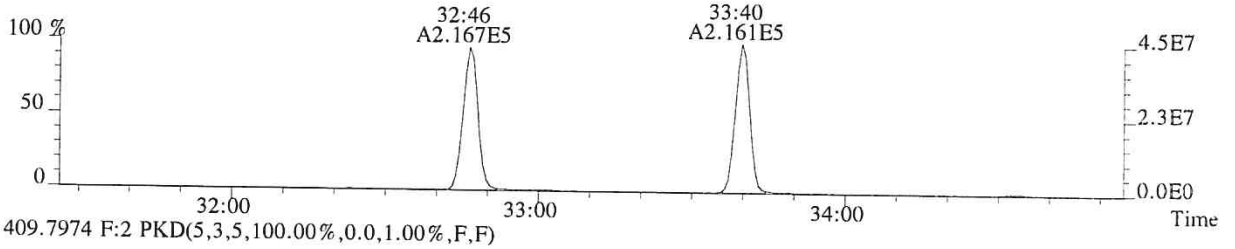
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1472.0,1.00%,F,T)



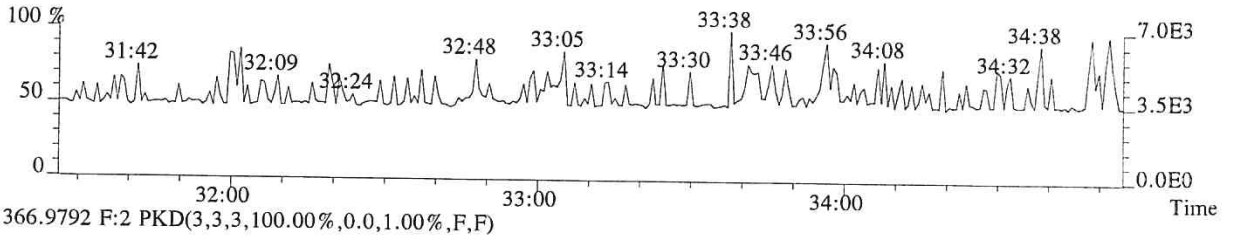
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1088.0,1.00%,F,T)



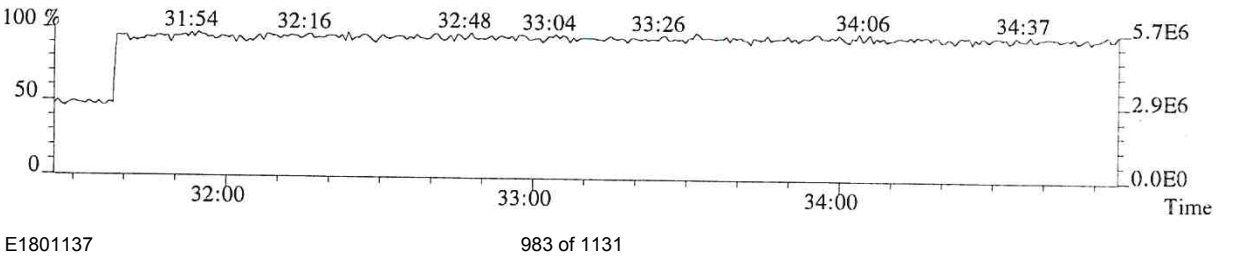
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,712.0,1.00%,F,T)



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

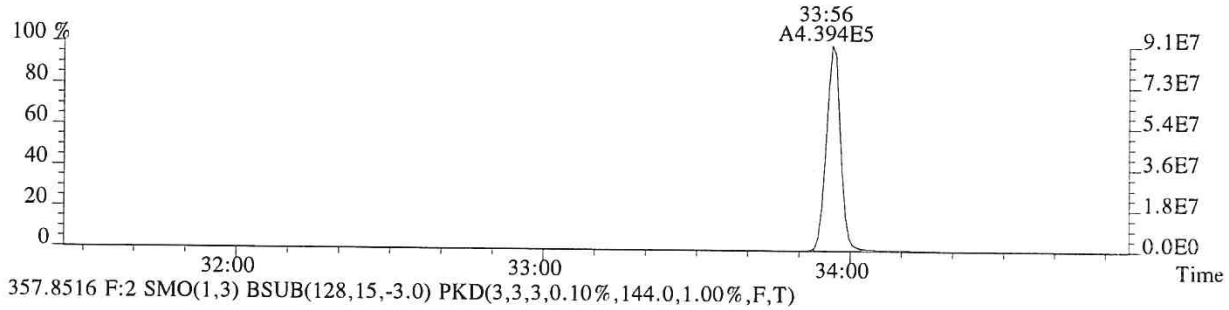


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

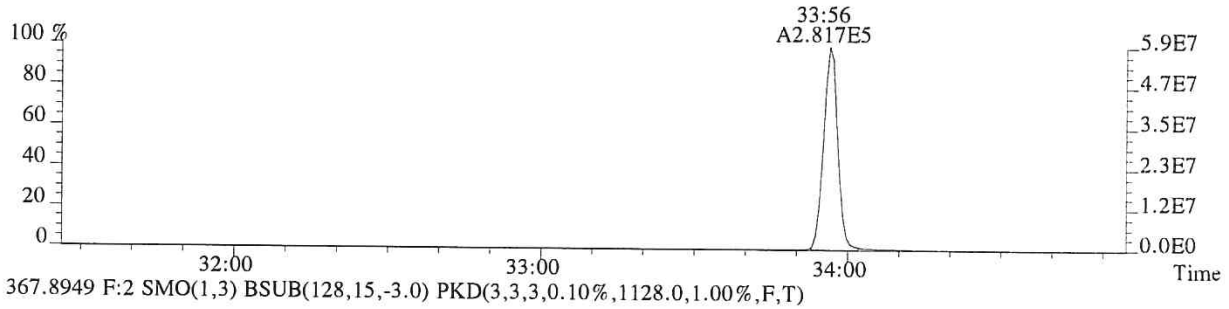


016733

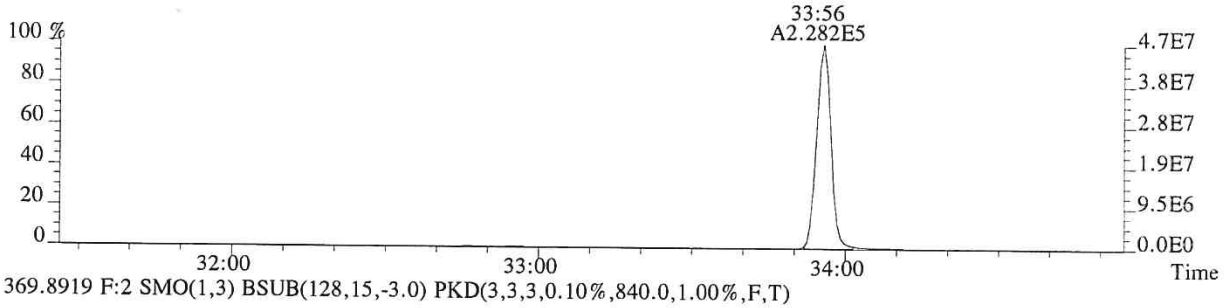
File:P513854 #1-313 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1420.0,1.00%,F,T)



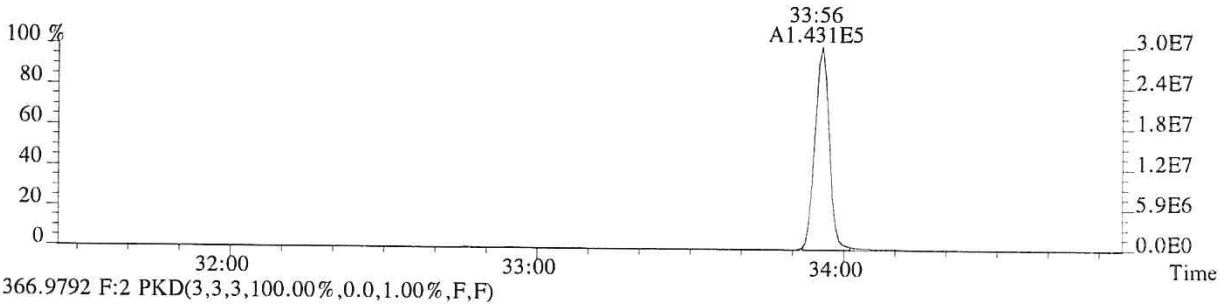
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,144.0,1.00%,F,T)



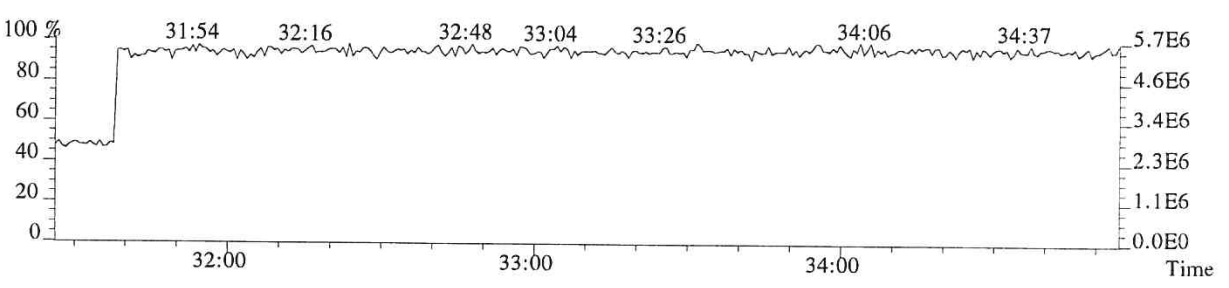
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1128.0,1.00%,F,T)



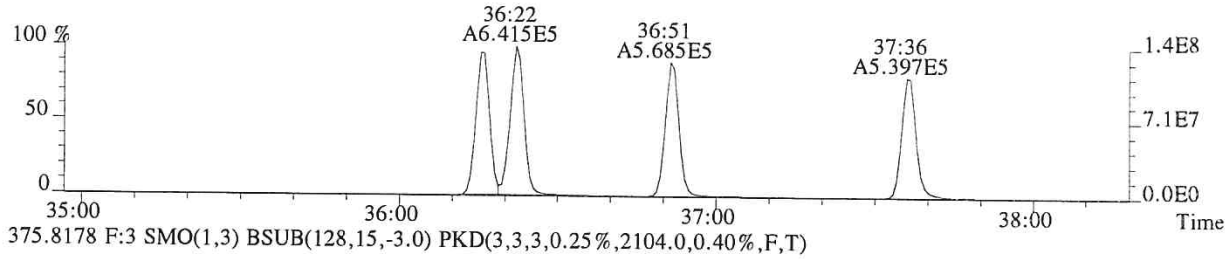
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,840.0,1.00%,F,T)



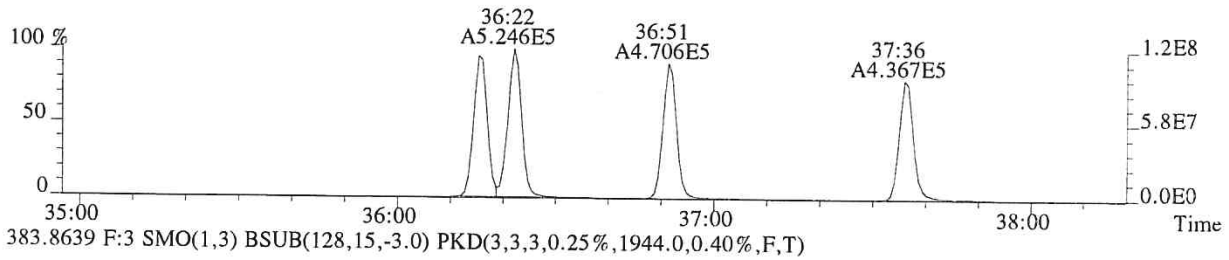
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



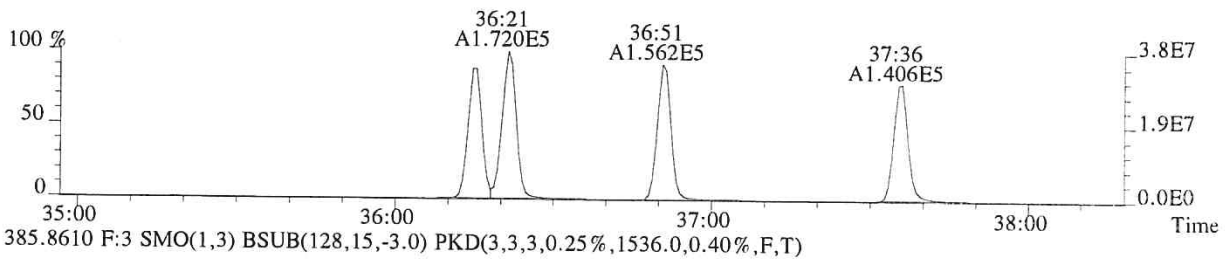
File:P513854 #1-303 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1804.0,0.40%,F,T)



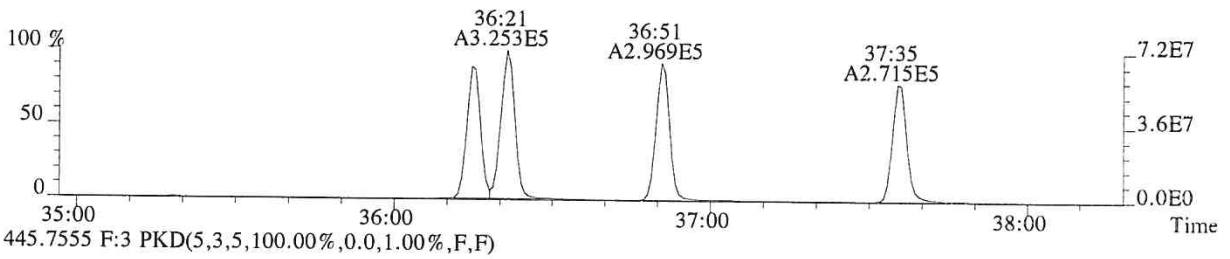
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2104.0,0.40%,F,T)



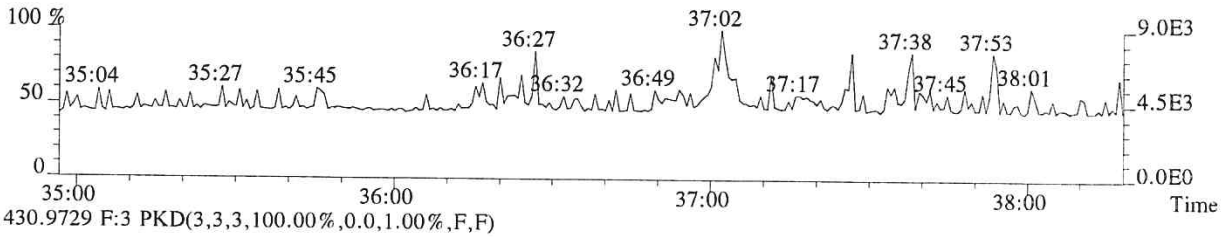
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1944.0,0.40%,F,T)



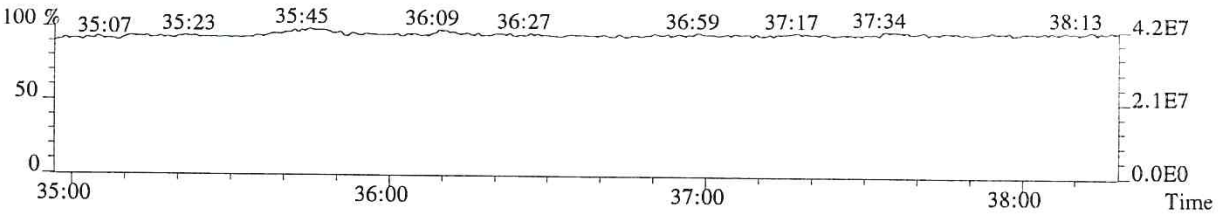
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1536.0,0.40%,F,T)



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

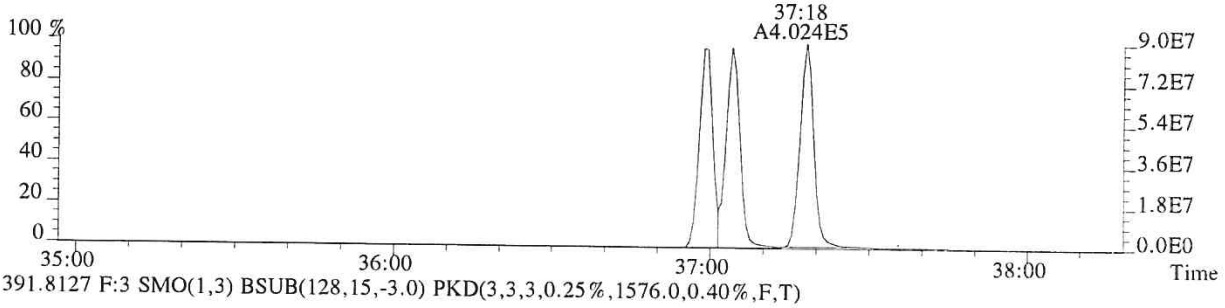


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

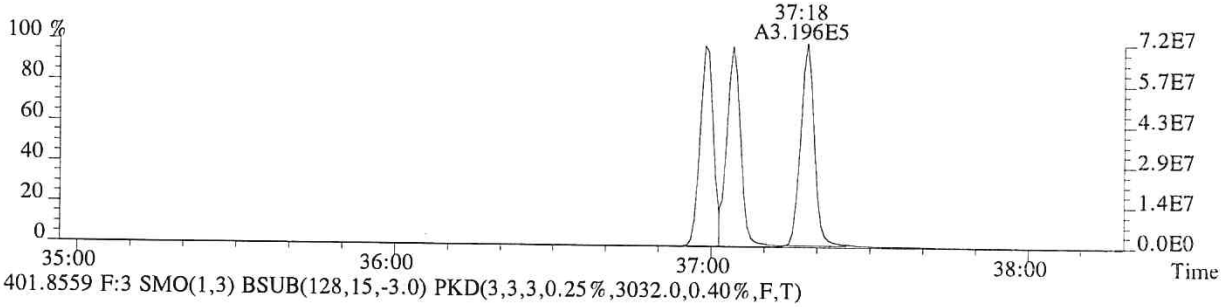


016735

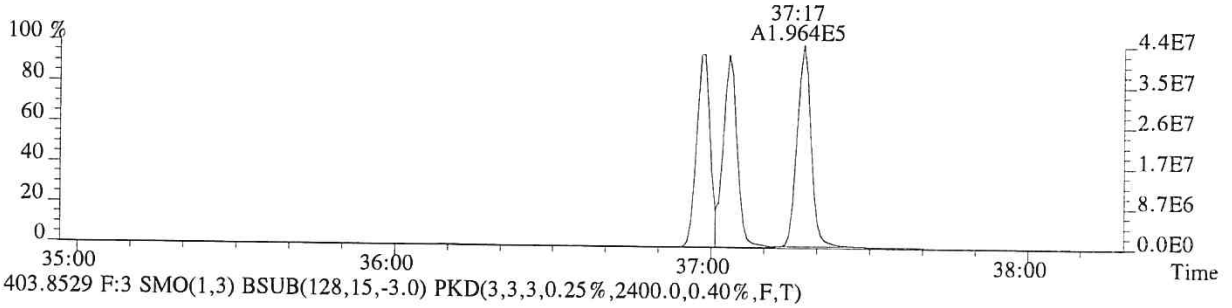
File:P513854 #1-303 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1200.0,0.40%,F,T)



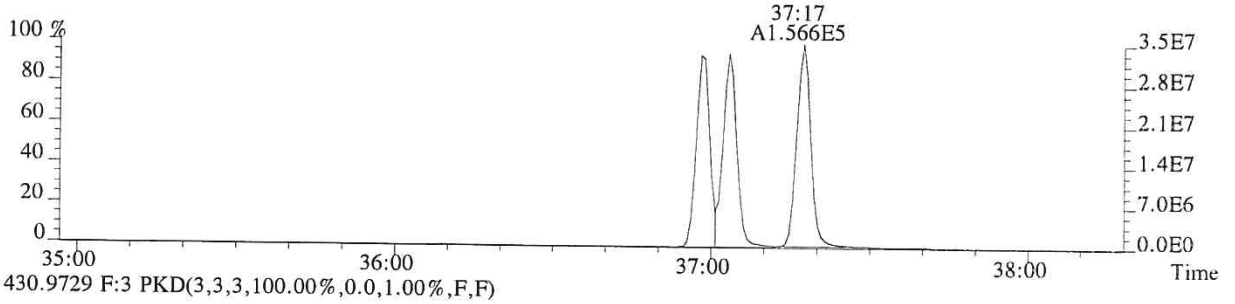
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1576.0,0.40%,F,T)



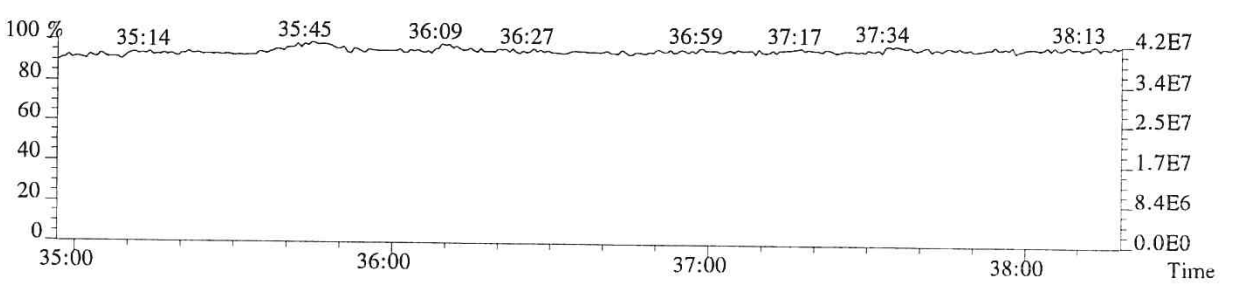
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3032.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2400.0,0.40%,F,T)

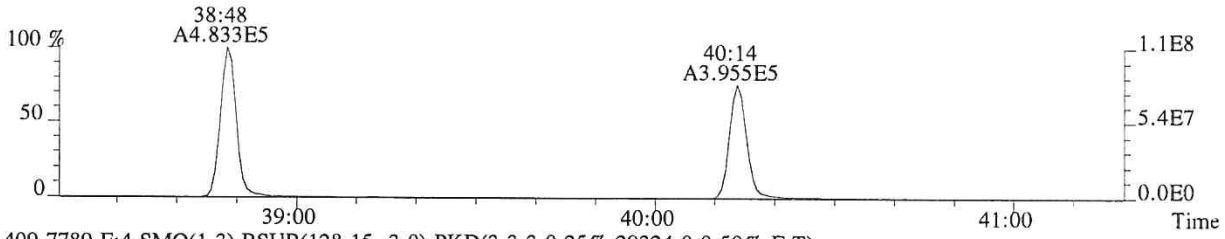


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

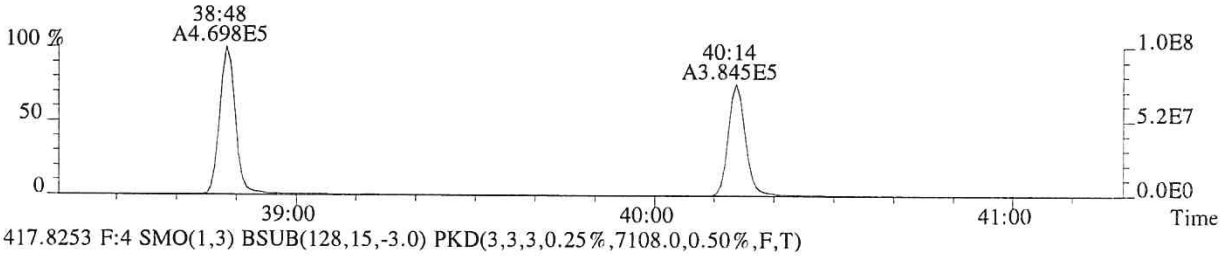


016736

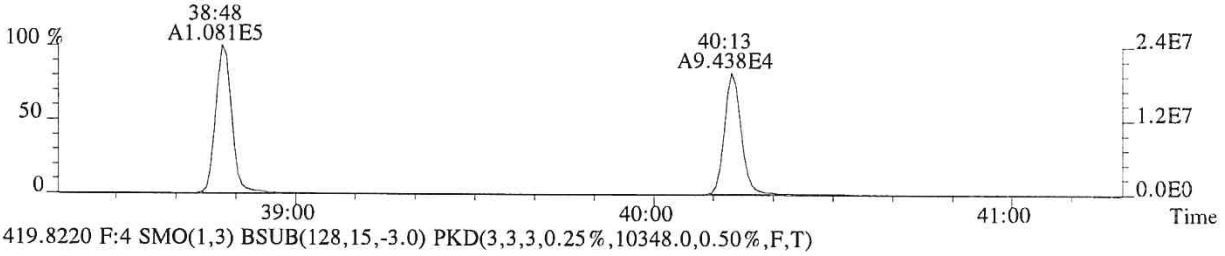
File:P513854 #1-268 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,17516.0,0.50%,F,T)



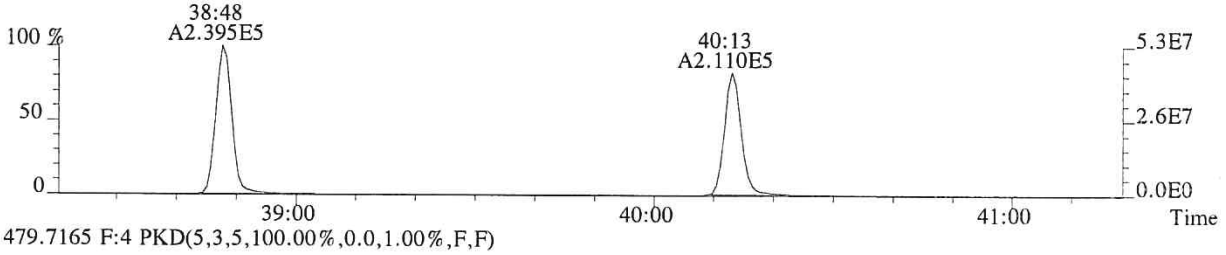
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,29324.0,0.50%,F,T)



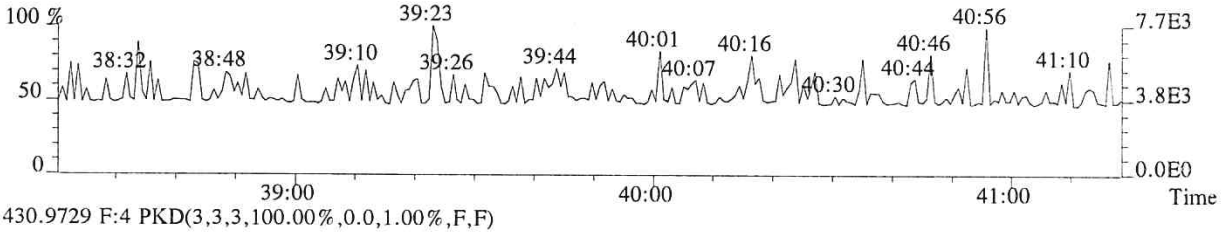
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7108.0,0.50%,F,T)



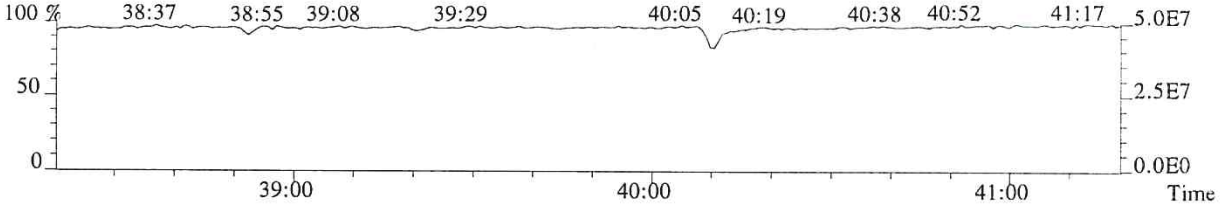
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10348.0,0.50%,F,T)



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

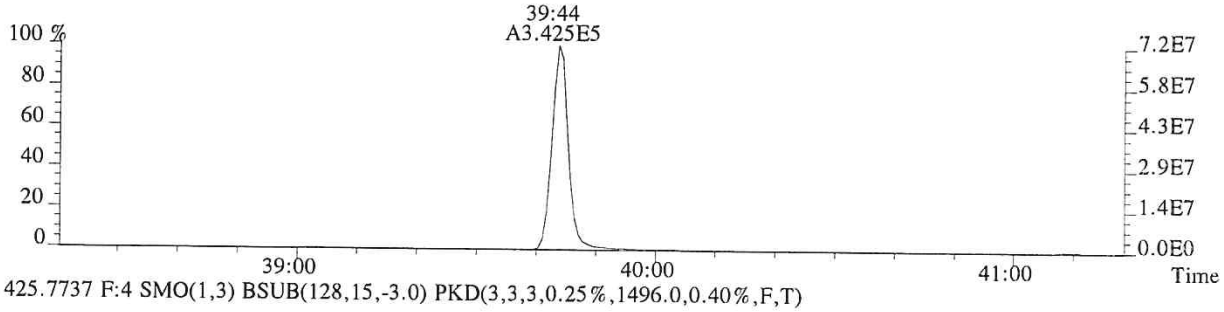


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

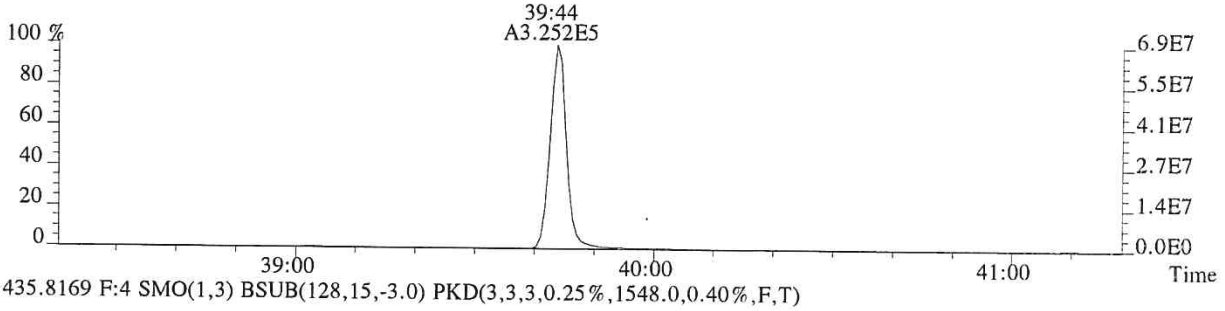


016737

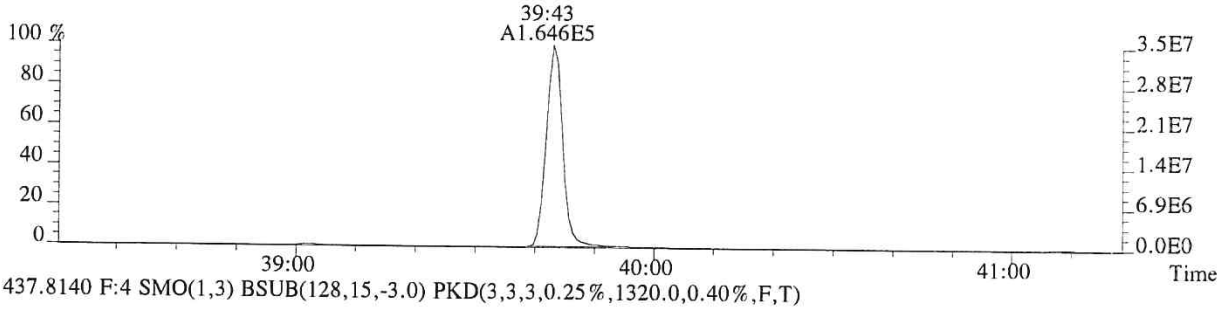
File:P513854 #1-268 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1516.0,0.40%,F,T)



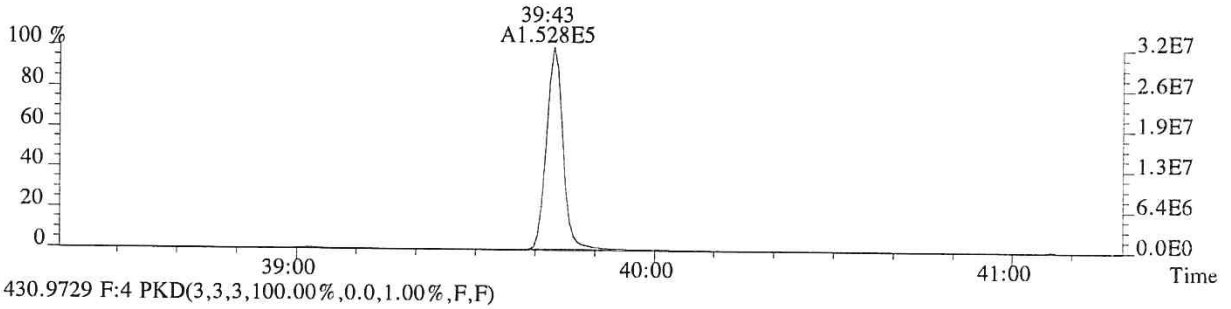
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1496.0,0.40%,F,T)



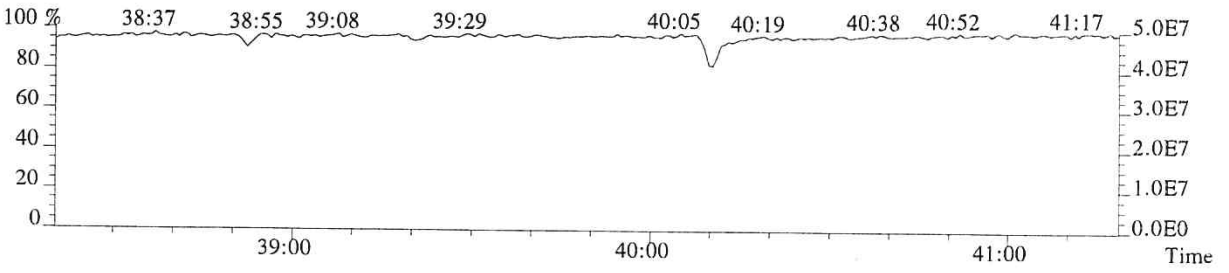
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1548.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1320.0,0.40%,F,T)

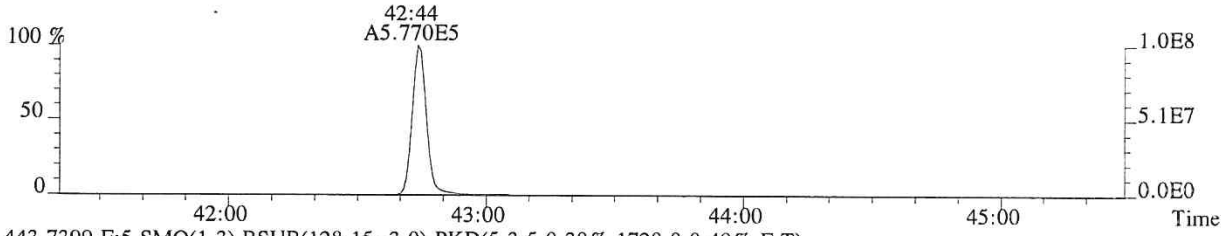


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

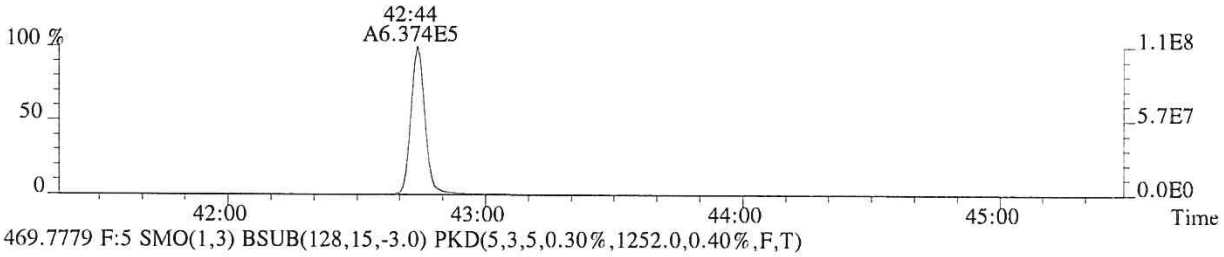


016738

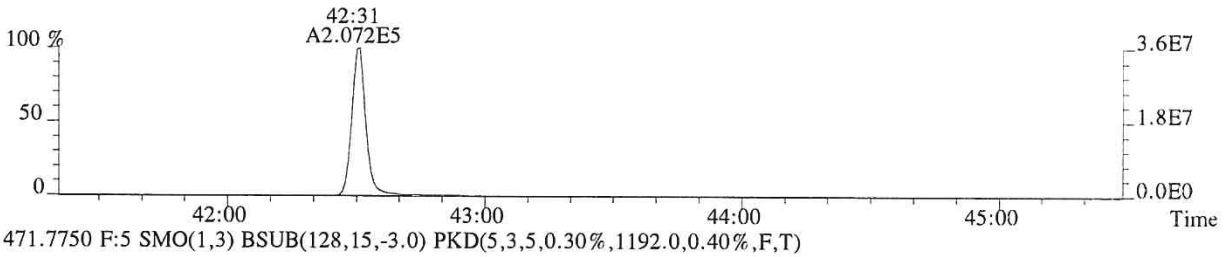
File:P513854 #1-373 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,504.0,0.40%,F,T)



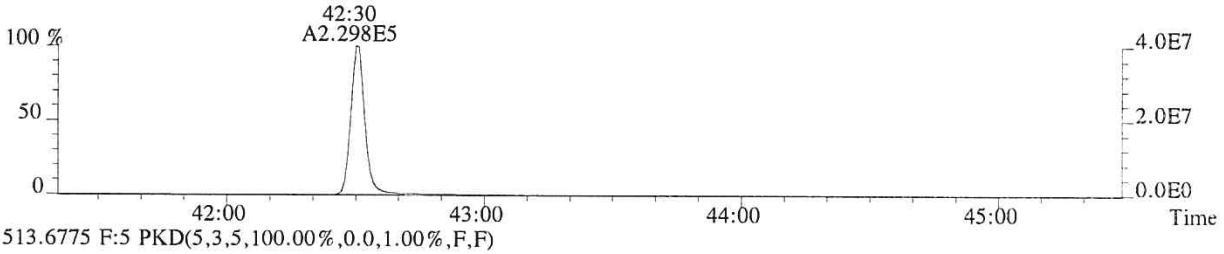
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1720.0,0.40%,F,T)



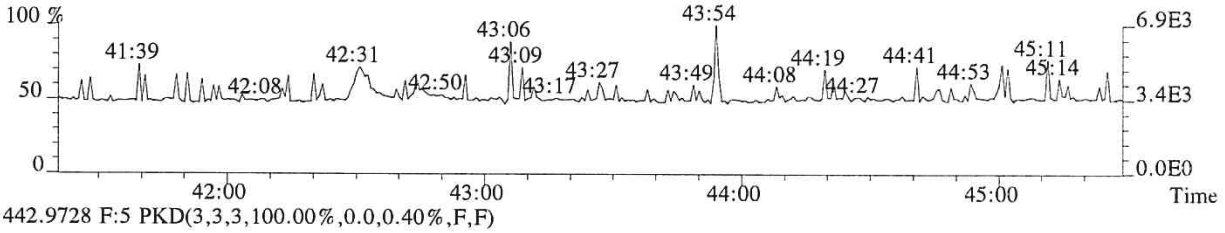
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1252.0,0.40%,F,T)



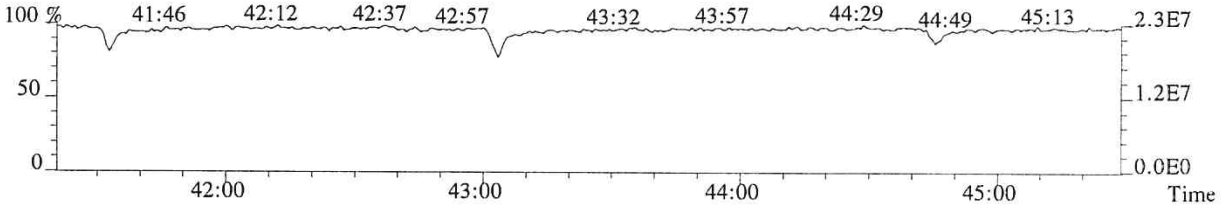
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1192.0,0.40%,F,T)



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

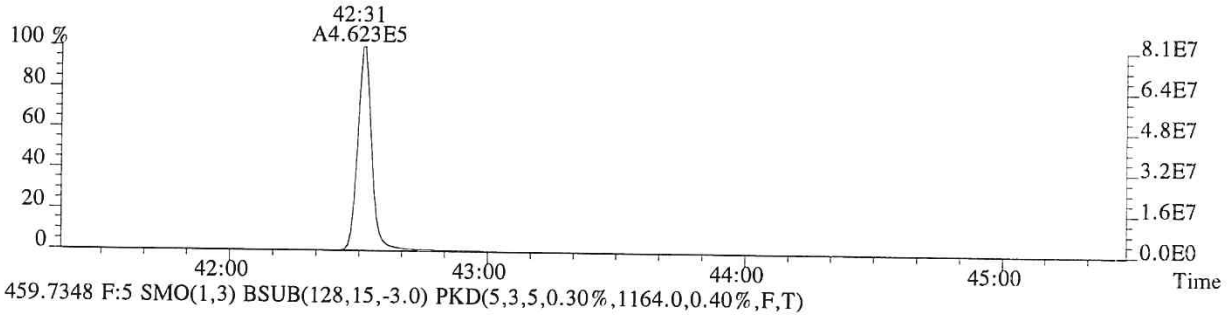


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

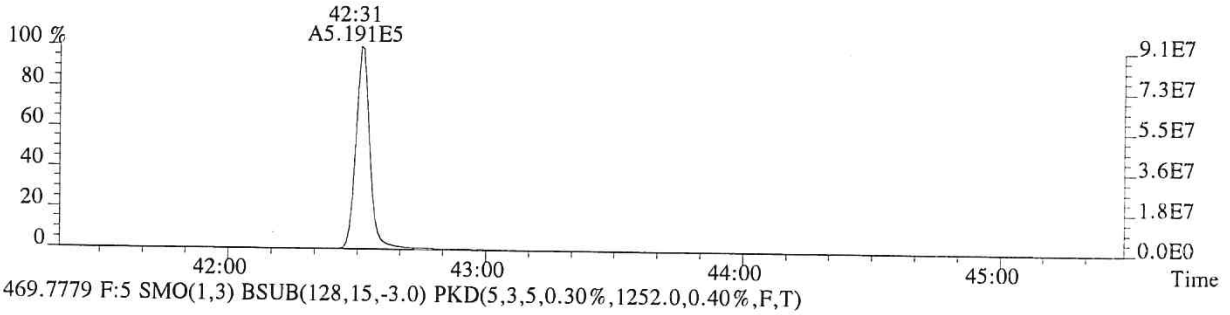


016739

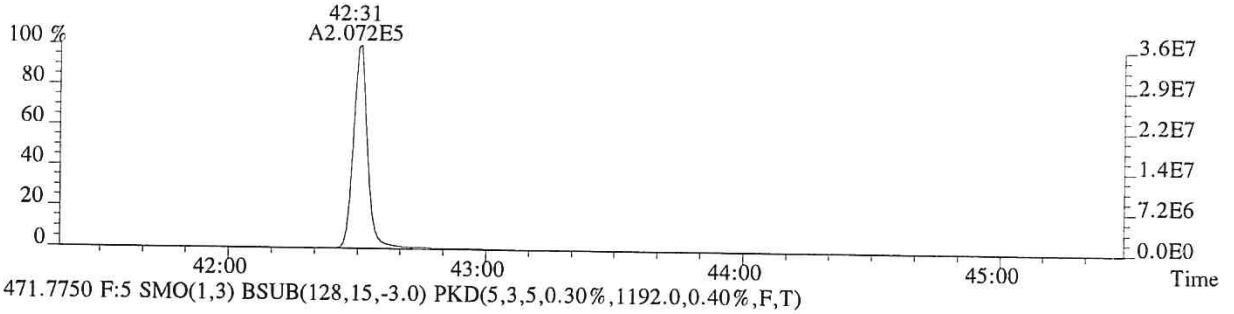
File:P513854 #1-373 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,736.0,0.40%,F,T)



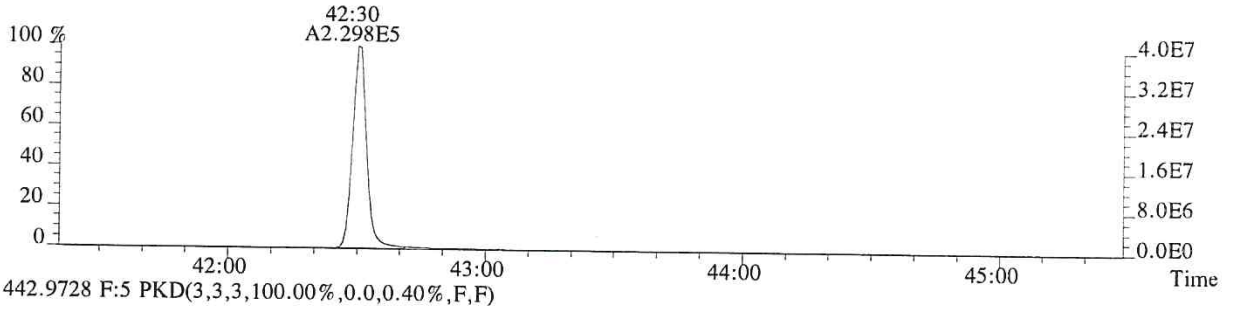
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1164.0,0.40%,F,T)



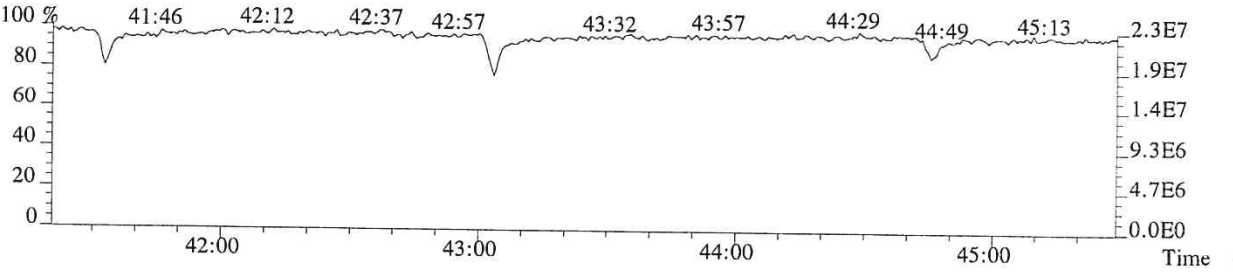
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1252.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1192.0,0.40%,F,T)



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



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
185657

Run #6 Filename P513855 Samp: 1 Inj: 1 Acquired: 24-JAN-18 17:43:48
Processed: 25-JAN-18 08:12:42 Sample ID: CS5

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	2.519e+05	3.290e+05	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	2.059e+06	1.330e+06	1.55	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:42	1.928e+06	1.251e+06	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:17	1.692e+06	1.377e+06	1.23	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	1.772e+06	1.434e+06	1.24	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:53	1.608e+06	1.317e+06	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.433e+06	1.167e+06	1.23	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	1.339e+06	1.290e+06	1.04	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.080e+06	1.042e+06	1.04	yes	no	1.258
10	Unk	OCDF	42:45	1.595e+06	1.756e+06	0.91	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	1.888e+05	2.423e+05	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:58	1.263e+06	8.057e+05	1.57	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	37:00	1.121e+06	8.925e+05	1.26	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	1.092e+06	8.671e+05	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	1.145e+06	9.139e+05	1.25	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:45	9.236e+05	8.810e+05	1.05	yes	no	1.025
17	Unk	OCDD	42:32	1.236e+06	1.384e+06	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	1.298e+05	1.639e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:48	1.958e+05	1.231e+05	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	1.948e+05	1.236e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:16	8.374e+04	1.594e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:23	9.521e+04	1.780e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:52	8.554e+04	1.650e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:37	7.556e+04	1.441e+05	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:49	5.927e+04	1.314e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	5.166e+04	1.153e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	8.633e+04	1.080e+05	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	1.308e+05	8.218e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	1.058e+05	8.279e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	1.031e+05	8.205e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	8.934e+04	8.409e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	1.103e+05	1.236e+05	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	8.893e+04	1.085e+05	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	1.136e+05	9.051e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	4.366e+05				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
185657

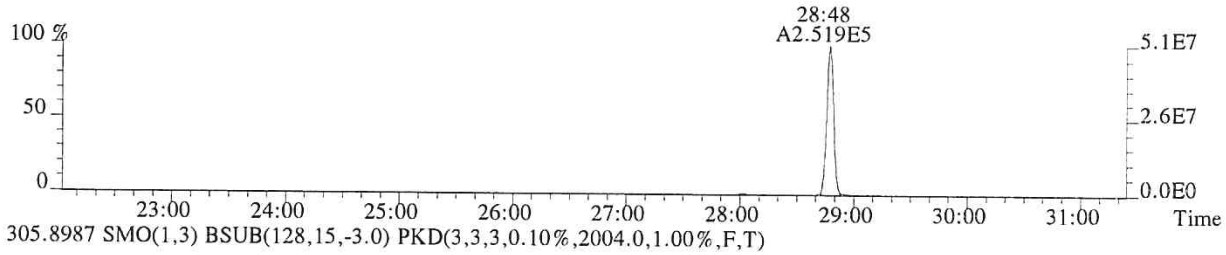
Run #6 Filename P513855 Samp: 1 Inj: 1 Acquired: 24-JAN-18 17:43:48
Processed: 25-JAN-18 08:12:42 LAB. ID: CS5

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.13e+07	1.02e+03	5.0e+04	6.69e+07	2.00e+03	3.3e+04
2	1,2,3,7,8-PeCDF	4.18e+08	1.72e+03	2.4e+05	2.69e+08	4.25e+03	6.3e+04
3	2,3,4,7,8-PeCDF	4.06e+08	1.72e+03	2.4e+05	2.60e+08	4.25e+03	6.1e+04
4	1,2,3,4,7,8-HxCDF	3.87e+08	3.18e+03	1.2e+05	3.12e+08	2.28e+03	1.4e+05
5	1,2,3,6,7,8-HxCDF	3.87e+08	3.18e+03	1.2e+05	3.14e+08	2.28e+03	1.4e+05
6	2,3,4,6,7,8-HxCDF	3.59e+08	3.18e+03	1.1e+05	2.88e+08	2.28e+03	1.3e+05
7	1,2,3,7,8,9-HxCDF	3.14e+08	3.18e+03	9.9e+04	2.53e+08	2.28e+03	1.1e+05
8	1,2,3,4,6,7,8-HpCDF	2.94e+08	4.87e+04	6.0e+03	2.86e+08	4.51e+04	6.3e+03
9	1,2,3,4,7,8,9-HpCDF	2.17e+08	4.87e+04	4.5e+03	2.12e+08	4.51e+04	4.7e+03
10	OCDF	2.95e+08	6.68e+02	4.4e+05	3.20e+08	1.53e+03	2.1e+05
11	2,3,7,8-TCDD	4.01e+07	1.56e+03	2.6e+04	5.16e+07	1.78e+03	2.9e+04
12	1,2,3,7,8-PeCDD	2.63e+08	1.48e+03	1.8e+05	1.68e+08	6.04e+02	2.8e+05
13	1,2,3,4,7,8-HxCDD	2.57e+08	1.76e+03	1.5e+05	2.02e+08	1.10e+03	1.8e+05
14	1,2,3,6,7,8-HxCDD	2.40e+08	1.76e+03	1.4e+05	1.94e+08	1.10e+03	1.8e+05
15	1,2,3,7,8,9-HxCDD	2.55e+08	1.76e+03	1.5e+05	2.05e+08	1.10e+03	1.9e+05
16	1,2,3,4,6,7,8-HpCDD	1.92e+08	4.16e+03	4.6e+04	1.82e+08	2.40e+03	7.6e+04
17	OCDD	2.24e+08	1.92e+02	1.2e+06	2.52e+08	1.77e+03	1.4e+05
18	13C-2,3,7,8-TCDF	2.56e+07	8.72e+03	2.9e+03	3.23e+07	4.65e+03	7.0e+03
19	13C-1,2,3,7,8-PeCDF	3.90e+07	1.47e+03	2.7e+04	2.42e+07	1.14e+03	2.1e+04
20	13C-2,3,4,7,8-PeCDF	3.95e+07	1.47e+03	2.7e+04	2.53e+07	1.14e+03	2.2e+04
21	13C-1,2,3,4,7,8-HxCDF	1.87e+07	1.28e+03	1.5e+04	3.55e+07	3.08e+03	1.2e+04
22	13C-1,2,3,6,7,8-HxCDF	2.06e+07	1.28e+03	1.6e+04	3.85e+07	3.08e+03	1.3e+04
23	13C-2,3,4,6,7,8-HxCDF	1.90e+07	1.28e+03	1.5e+04	3.60e+07	3.08e+03	1.2e+04
24	13C-1,2,3,7,8,9-HxCDF	1.65e+07	1.28e+03	1.3e+04	3.12e+07	3.08e+03	1.0e+04
25	13C-1,2,3,4,6,7,8-HpCDF	1.32e+07	1.18e+04	1.1e+03	2.87e+07	5.77e+03	5.0e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.03e+07	1.18e+04	8.7e+02	2.29e+07	5.77e+03	4.0e+03
27	13C-2,3,7,8-TCDD	1.81e+07	7.00e+03	2.6e+03	2.26e+07	3.08e+03	7.3e+03
28	13C-1,2,3,7,8-PeCDD	2.76e+07	1.47e+03	1.9e+04	1.74e+07	7.76e+02	2.2e+04
29	13C-1,2,3,4,7,8-HxCDD	2.40e+07	2.43e+03	9.9e+03	1.87e+07	1.70e+03	1.1e+04
30	13C-1,2,3,6,7,8-HxCDD	2.24e+07	2.43e+03	9.2e+03	1.82e+07	1.70e+03	1.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	1.84e+07	1.79e+03	1.0e+04	1.72e+07	1.40e+03	1.2e+04
32	13C-OCDD	1.97e+07	1.62e+03	1.2e+04	2.22e+07	1.42e+03	1.6e+04
33	13C-1,2,3,4-TCDD	1.83e+07	7.00e+03	2.6e+03	2.22e+07	3.08e+03	7.2e+03
34	13C-1,2,3,7,8,9-HxCDD	2.50e+07	2.43e+03	1.0e+04	1.99e+07	1.70e+03	1.2e+04
35	37Cl-2,3,7,8-TCDD	9.29e+07	1.57e+03	5.9e+04			

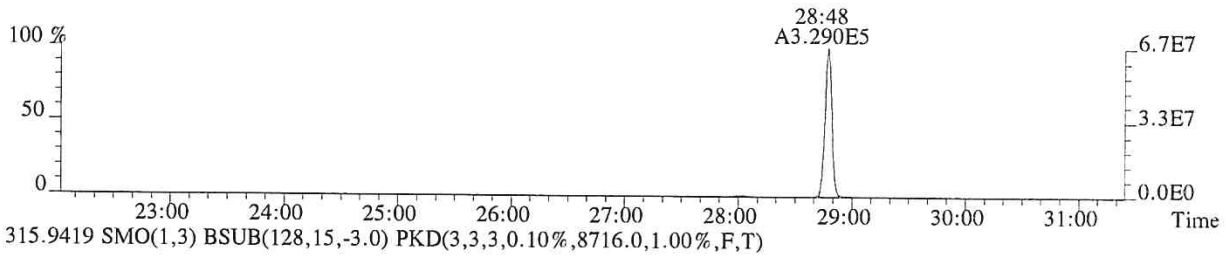
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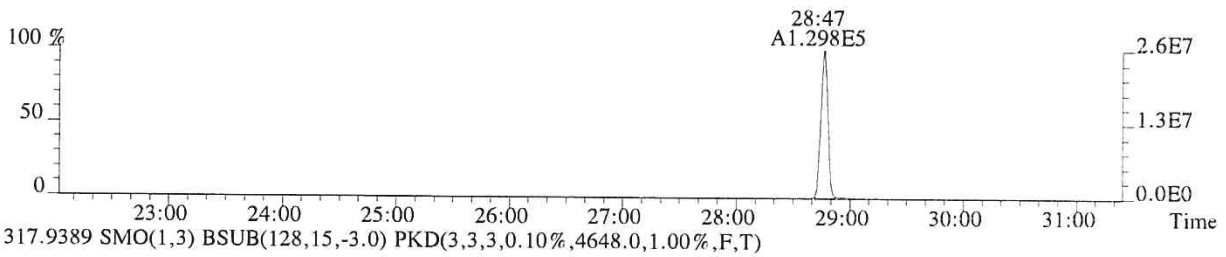
File:P513855 #1-665 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



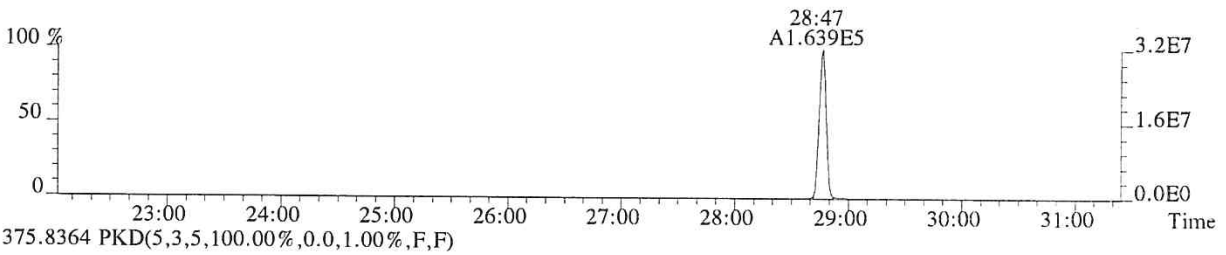
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2004.0,1.00%,F,T)



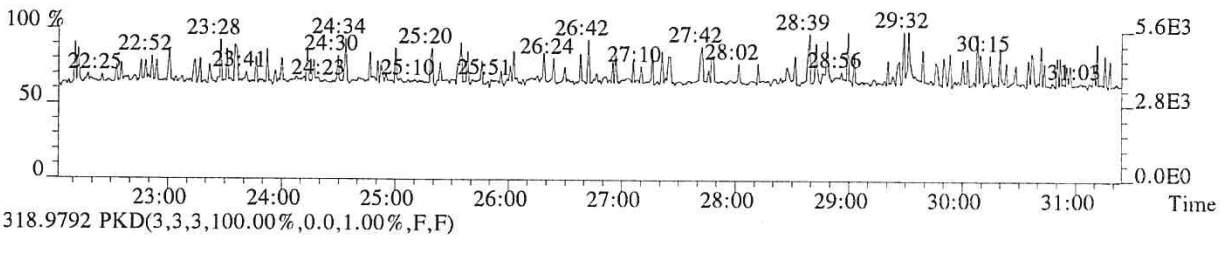
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8716.0,1.00%,F,T)



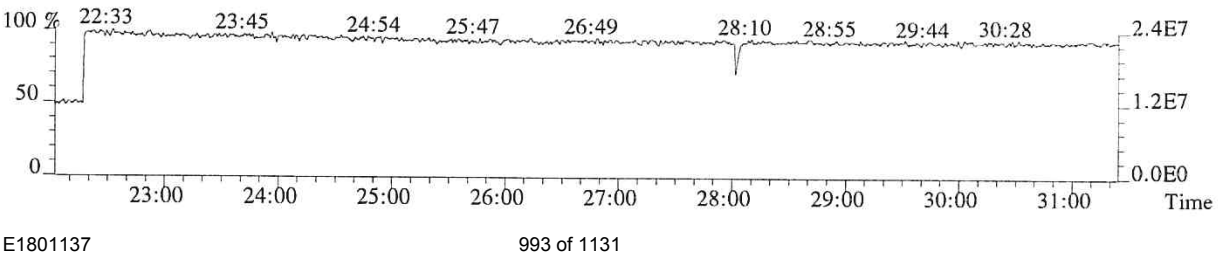
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4648.0,1.00%,F,T)



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

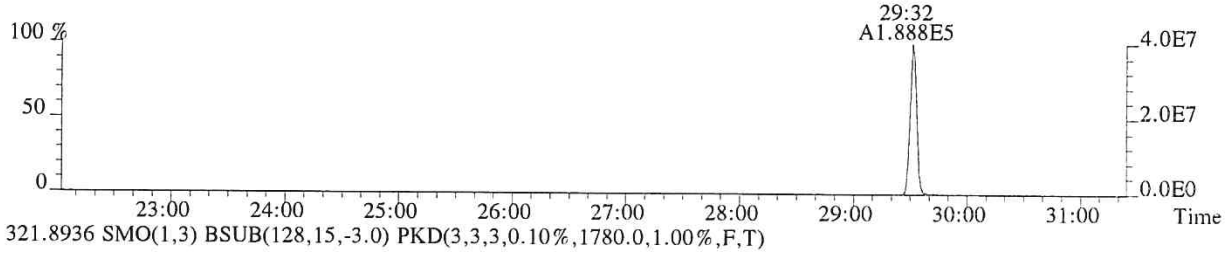


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

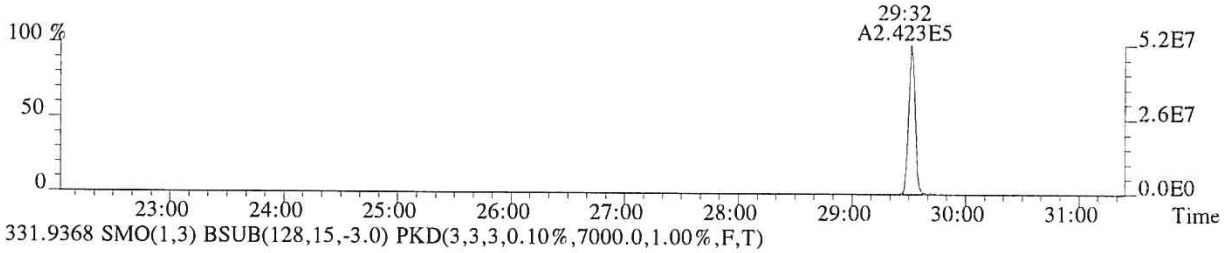


016743

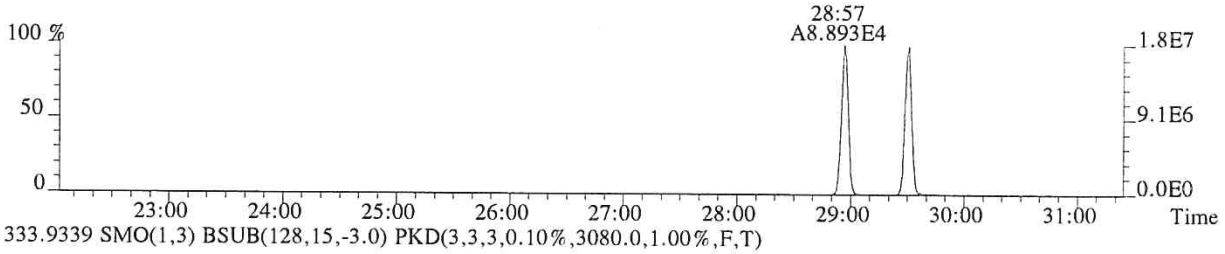
File:P513855 #1-665 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1556.0,1.00%,F,T)



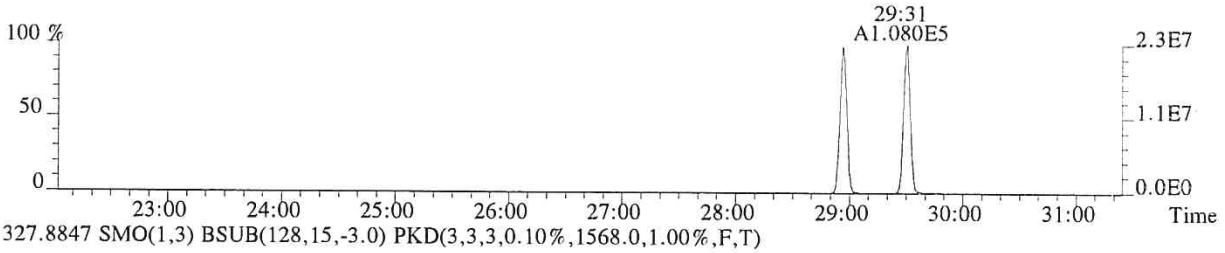
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1780.0,1.00%,F,T)



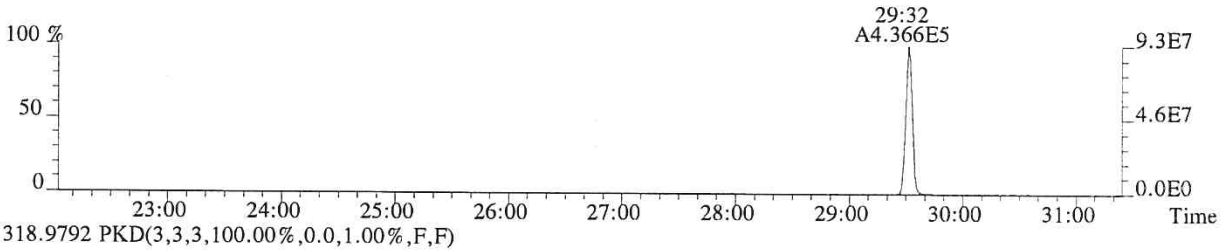
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7000.0,1.00%,F,T)



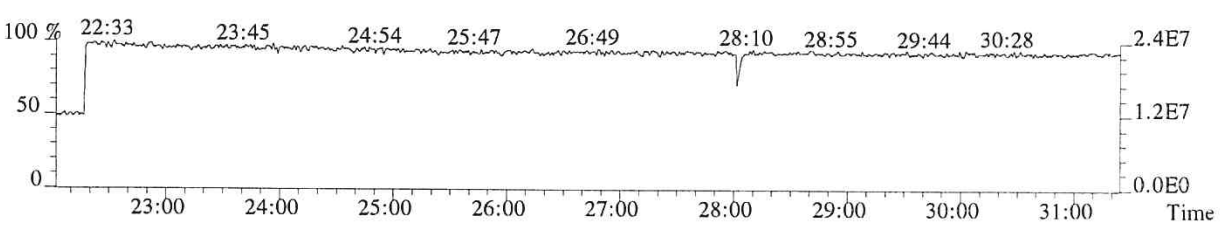
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3080.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1568.0,1.00%,F,T)

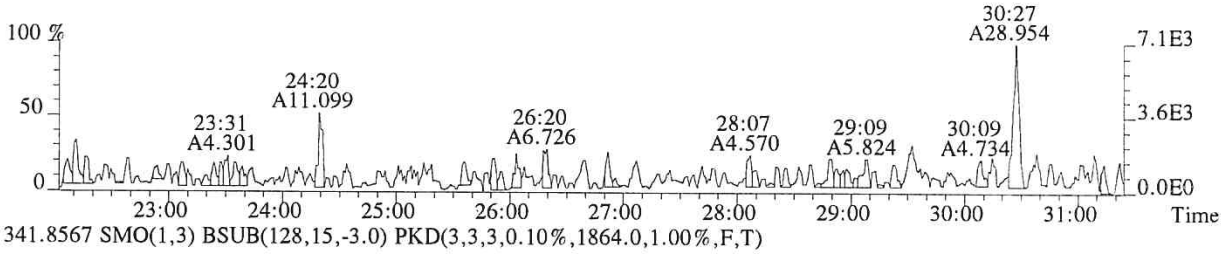


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

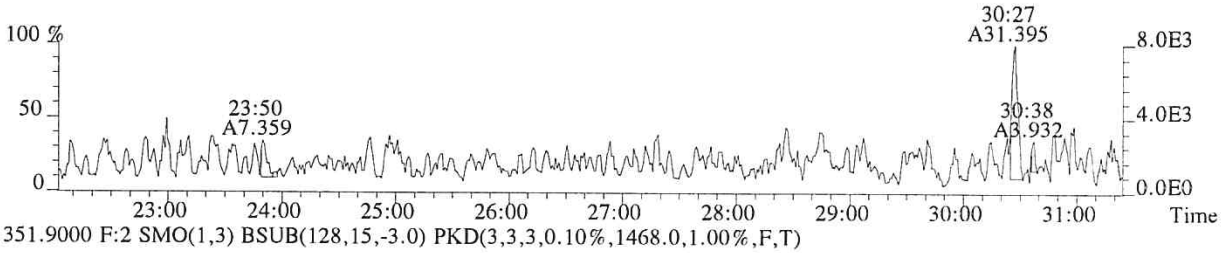


016744

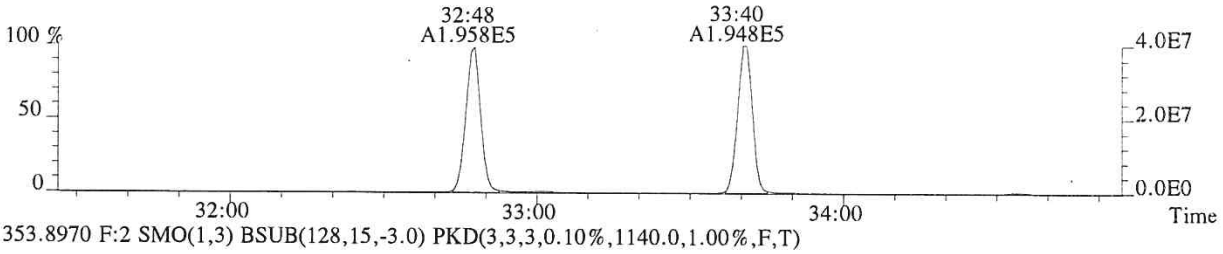
File:P513855 #1-665 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,696.0,1.00%,F,T)



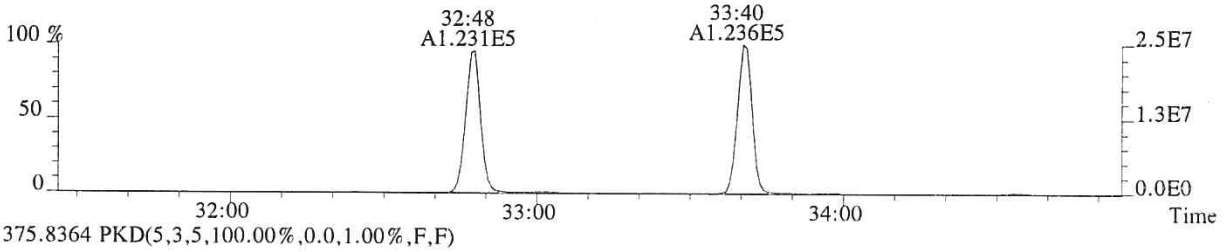
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1864.0,1.00%,F,T)



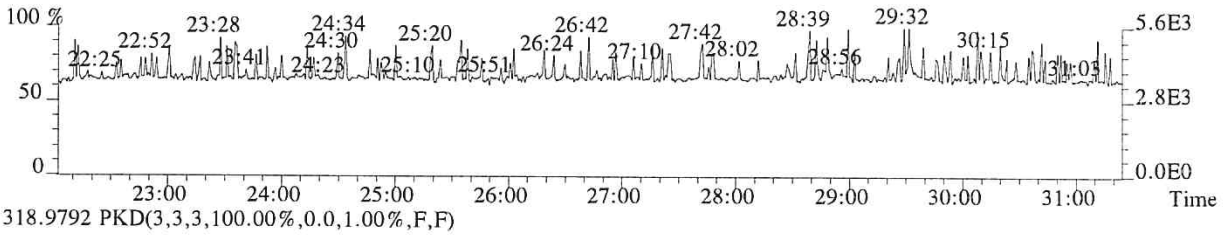
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1468.0,1.00%,F,T)



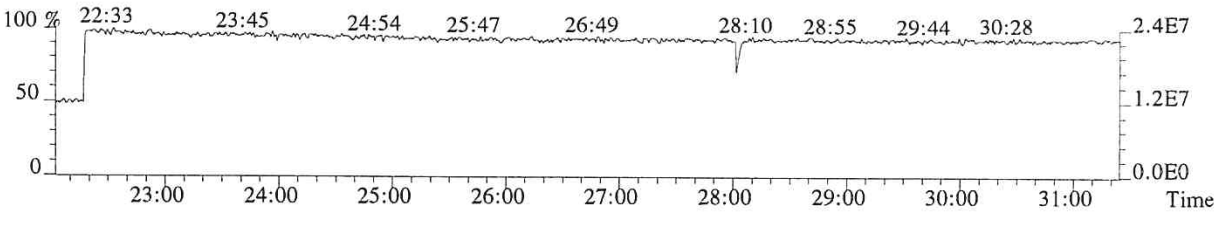
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1140.0,1.00%,F,T)



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

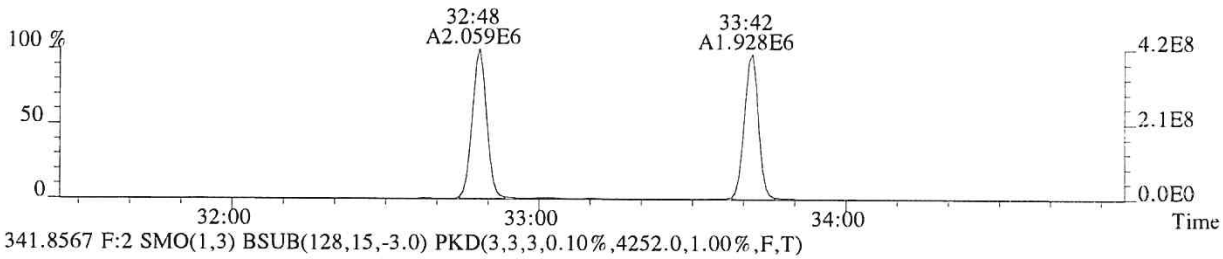


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

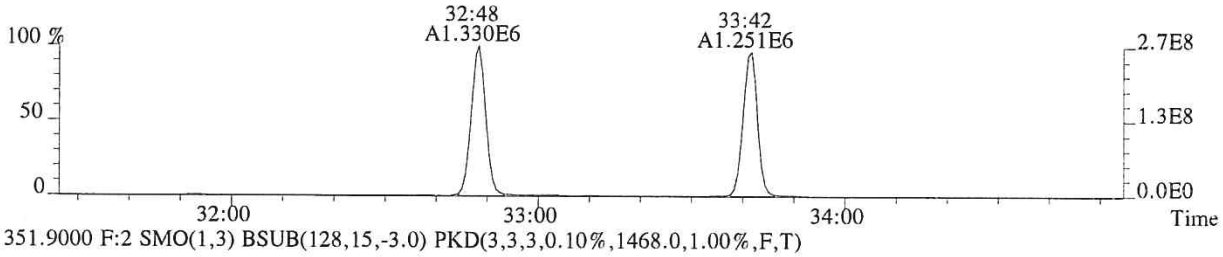


016745

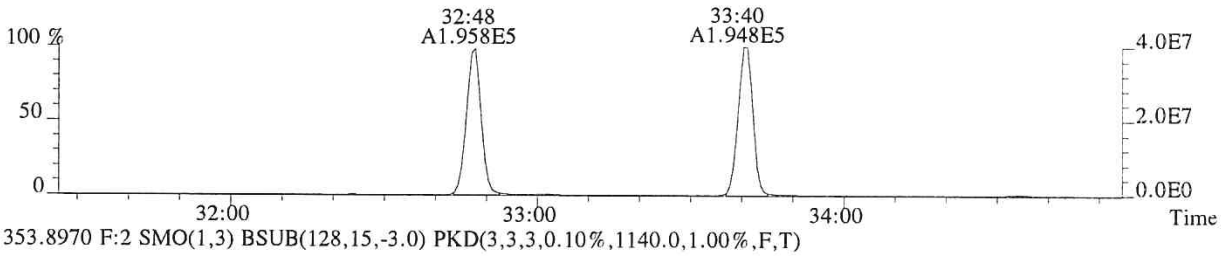
File:P513855 #1-313 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1724.0,1.00%,F,T)



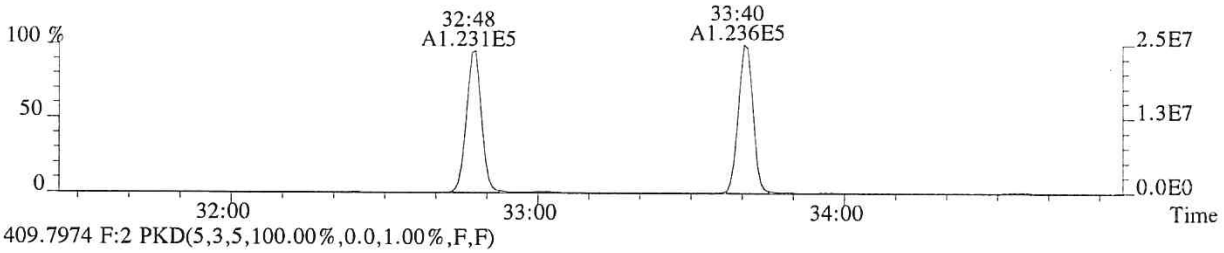
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4252.0,1.00%,F,T)



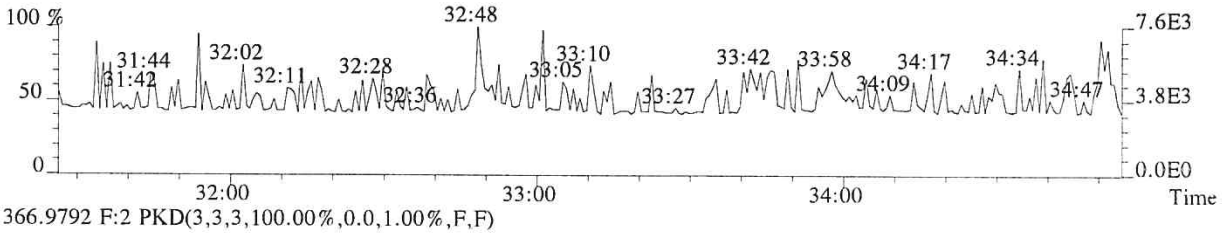
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1468.0,1.00%,F,T)



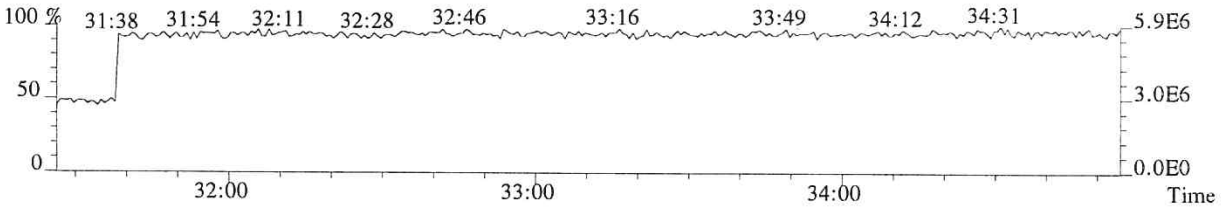
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1140.0,1.00%,F,T)



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

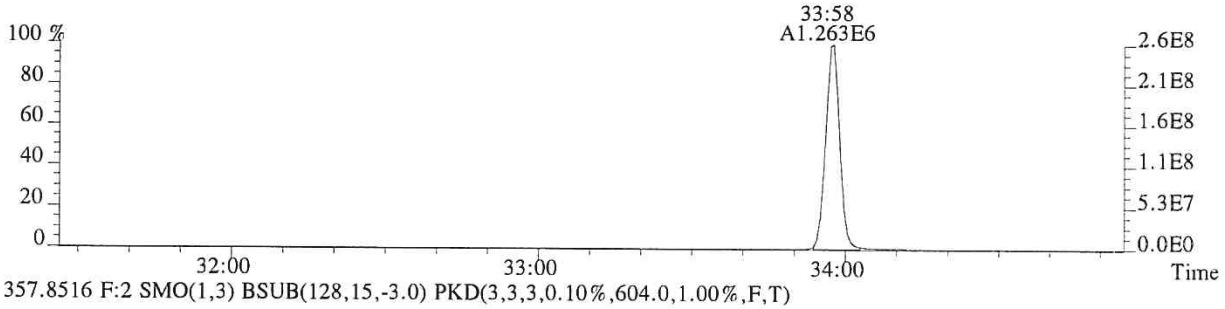


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

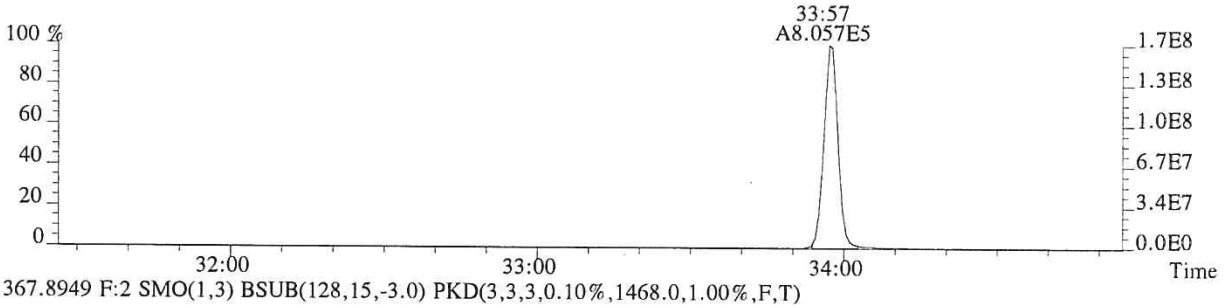


016746

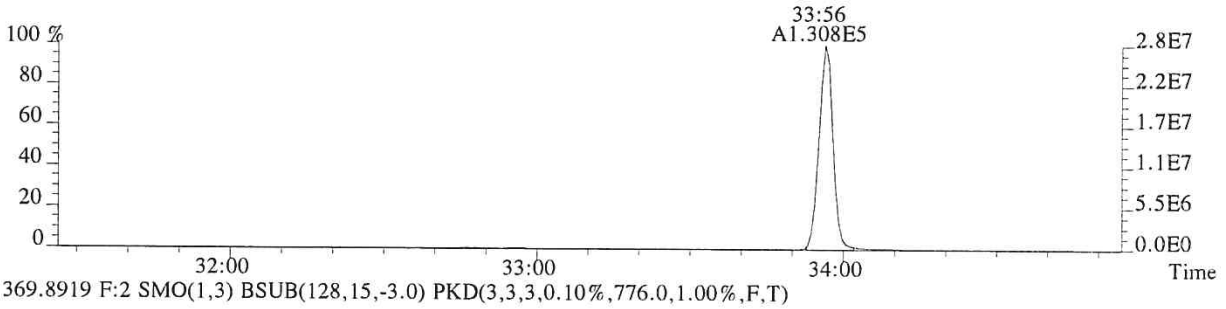
File:P513855 #1-313 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1476.0,1.00%,F,T)



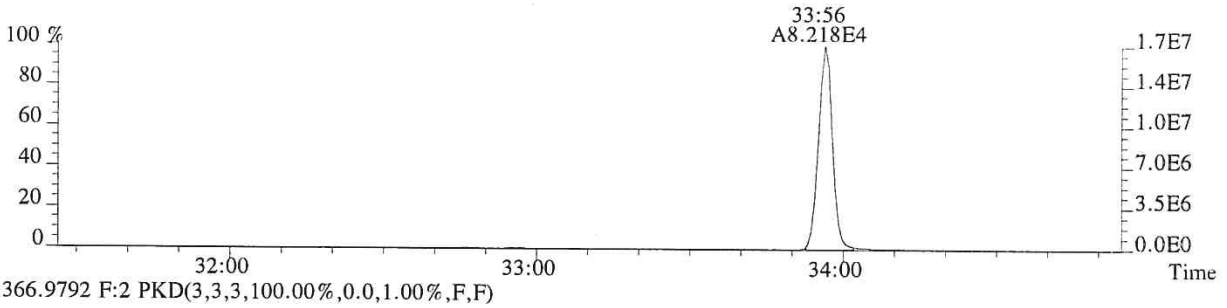
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,604.0,1.00%,F,T)



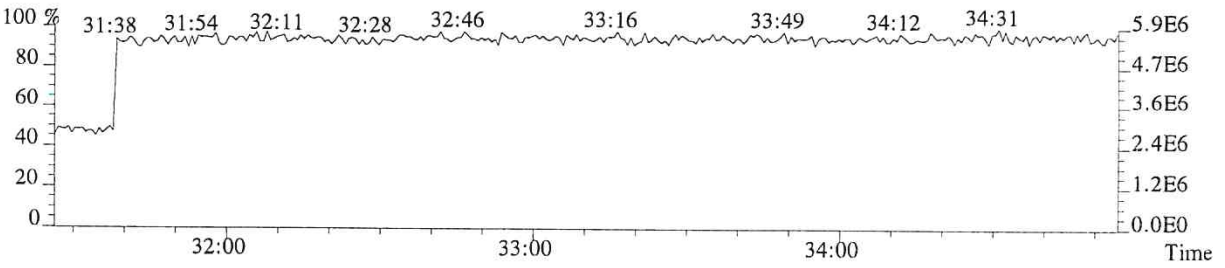
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1468.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,776.0,1.00%,F,T)



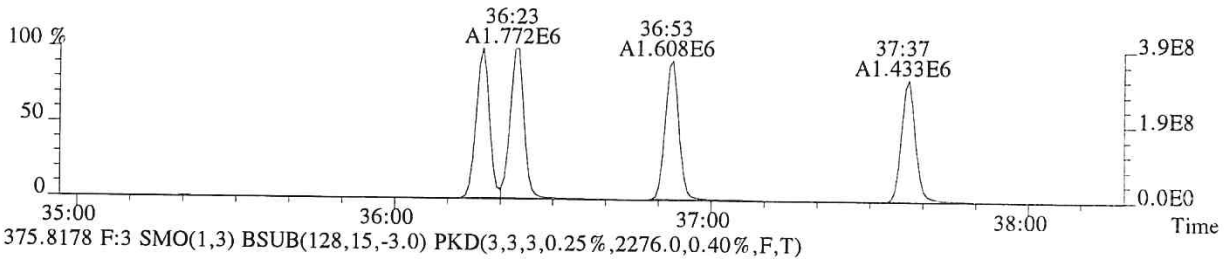
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



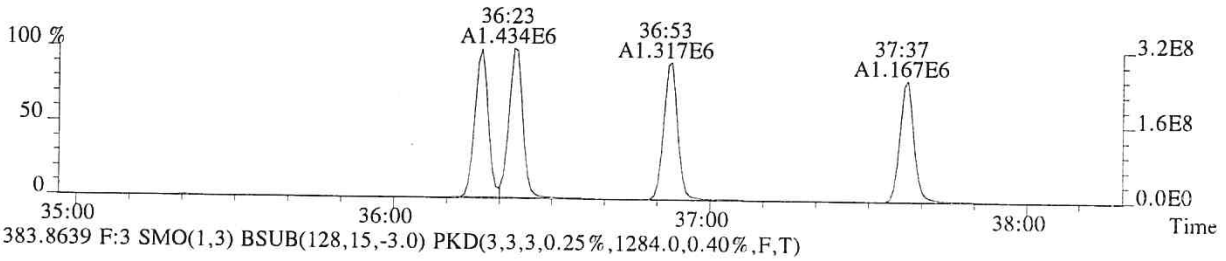
016747

File:P513855 #1-303 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:185657

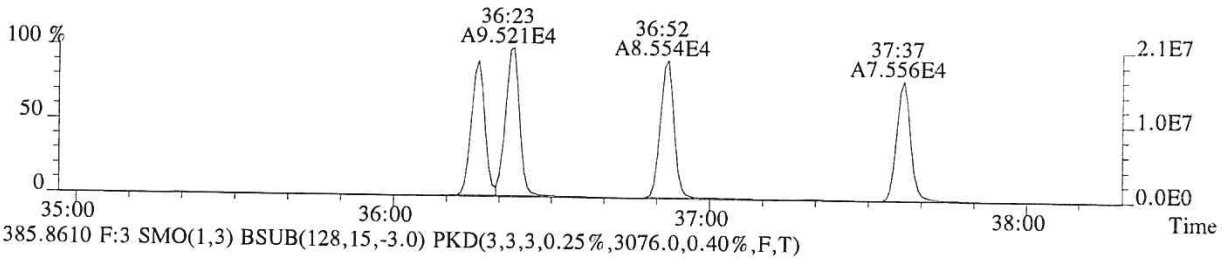
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3180.0,0.40%,F,T)



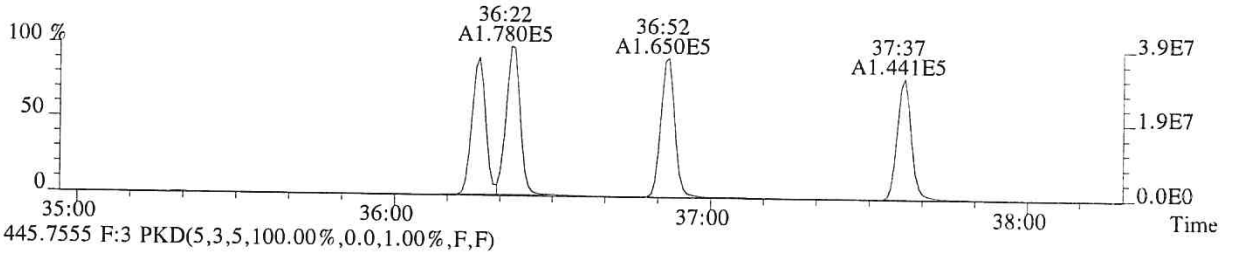
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2276.0,0.40%,F,T)



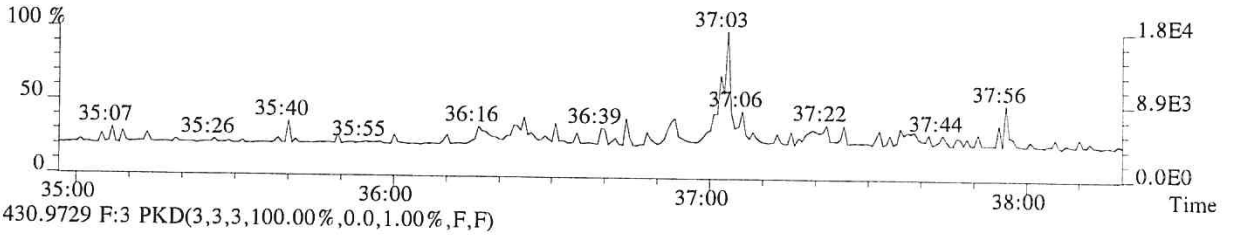
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1284.0,0.40%,F,T)



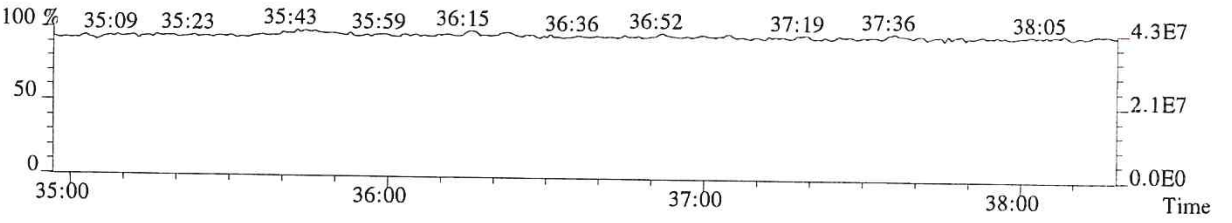
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3076.0,0.40%,F,T)



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

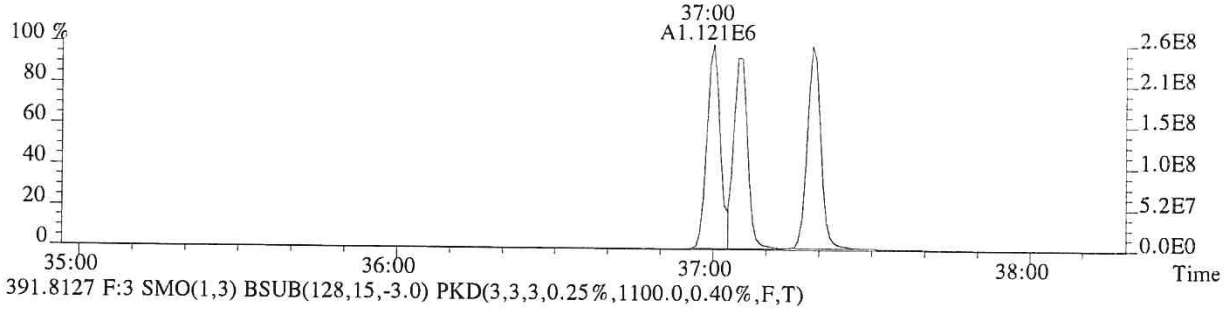


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

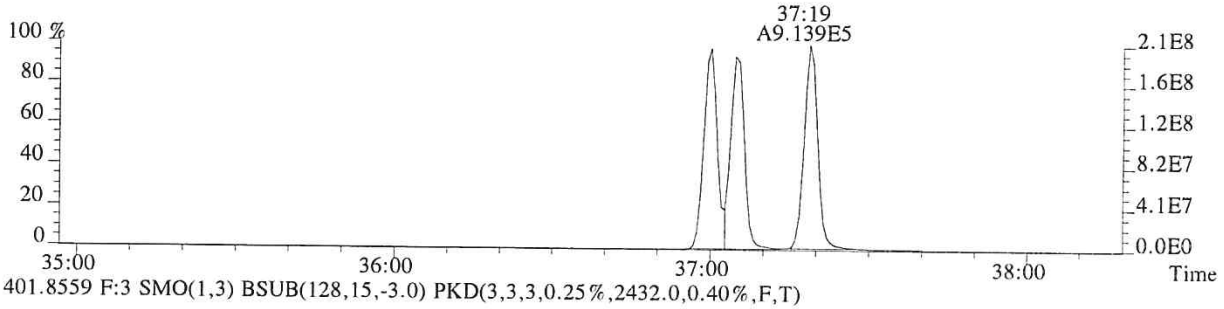


016748

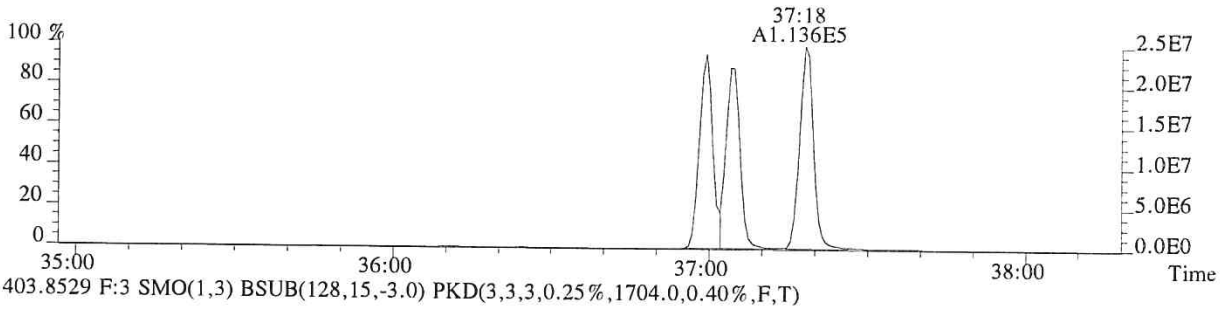
File:P513855 #1-303 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1760.0,0.40%,F,T)



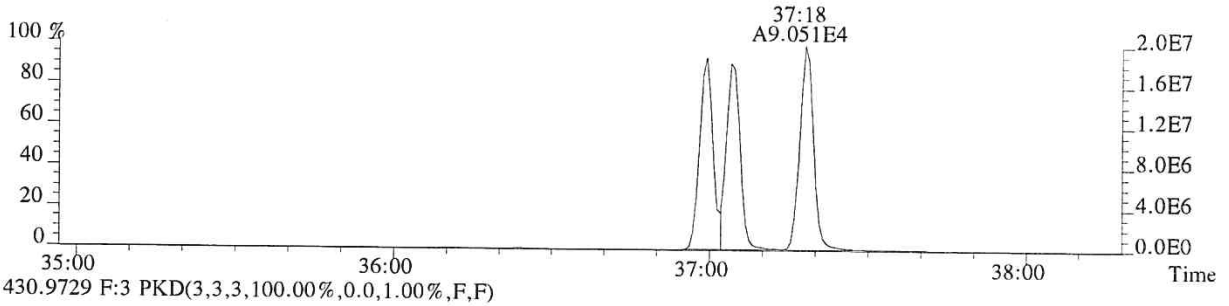
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1100.0,0.40%,F,T)



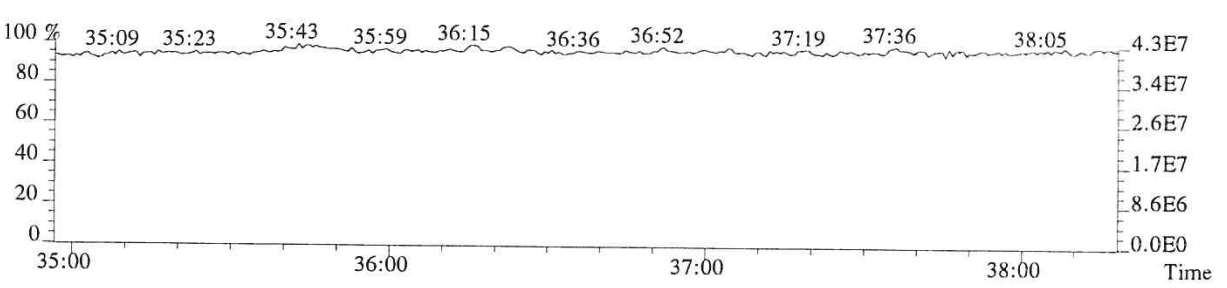
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2432.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1704.0,0.40%,F,T)

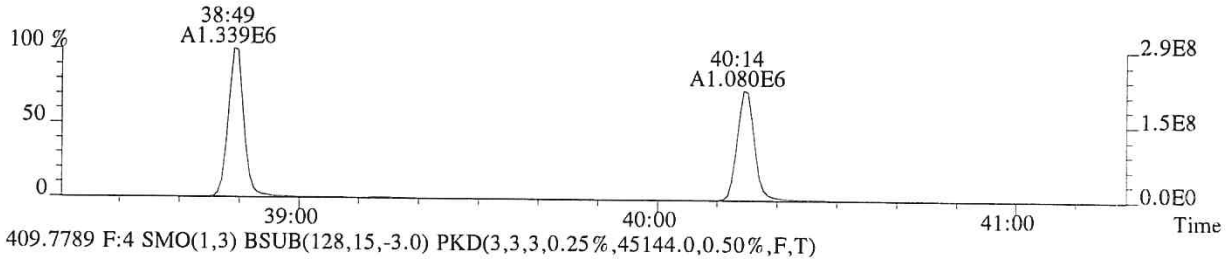


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

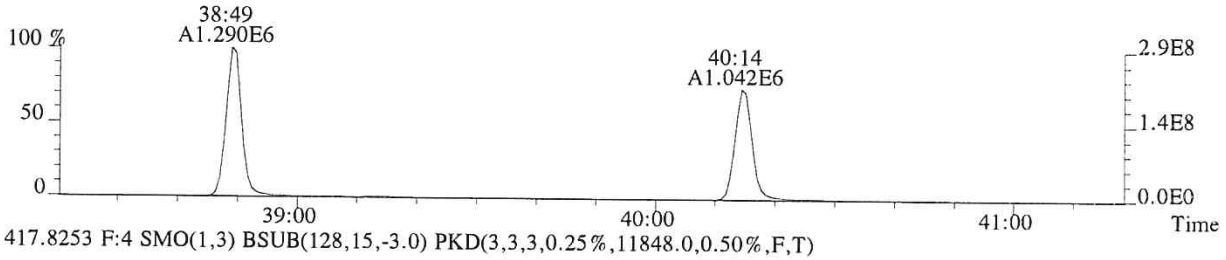


016749

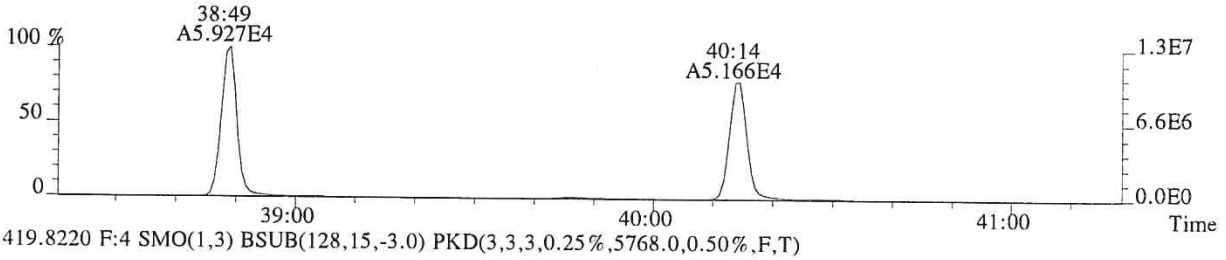
File:P513855 #1-268 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spectŁ
Sample#1 Exp:185657
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,48736.0,0.50%,F,T)



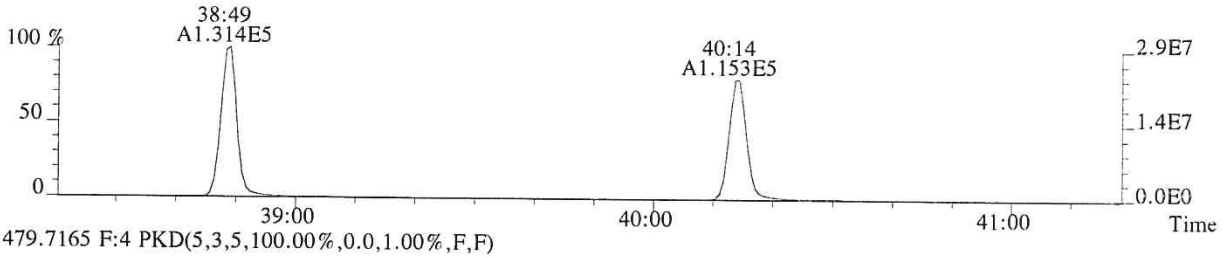
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,45144.0,0.50%,F,T)



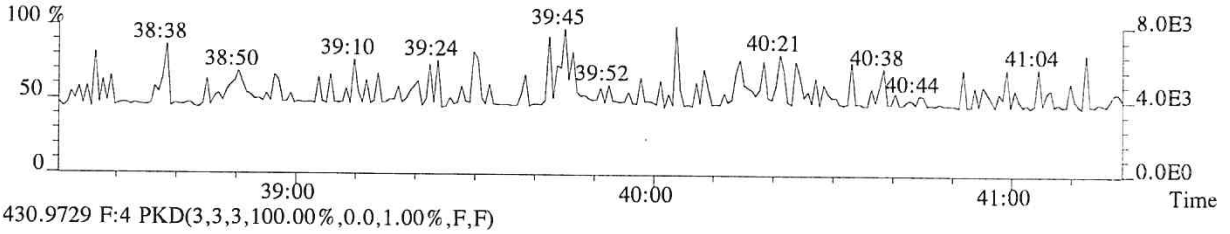
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11848.0,0.50%,F,T)



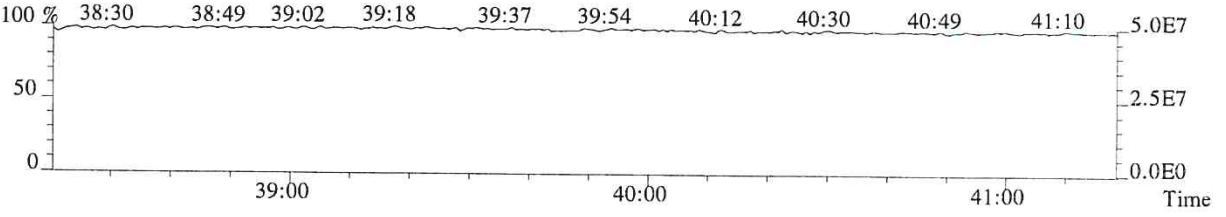
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5768.0,0.50%,F,T)



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

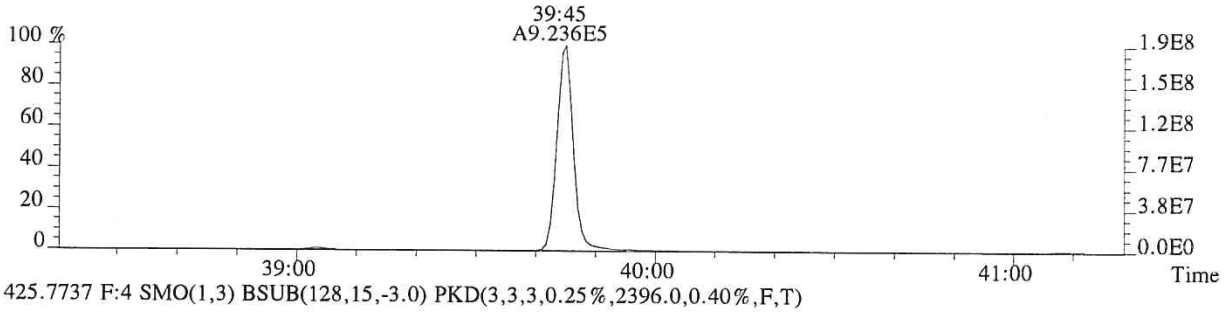


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

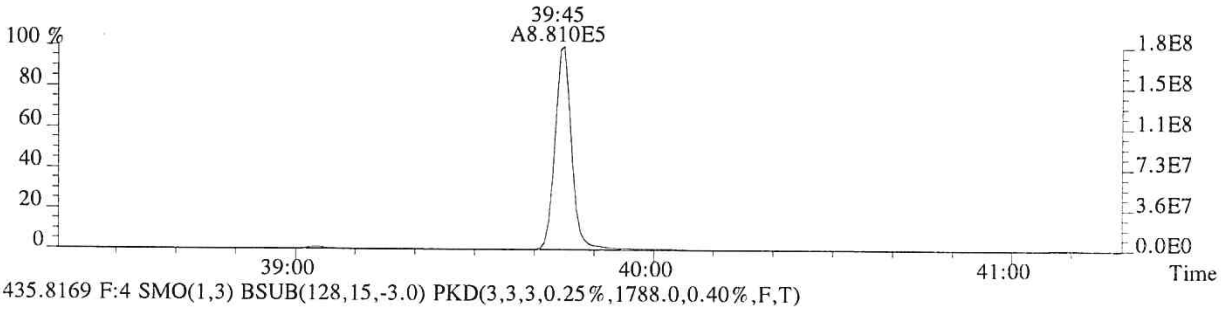


016750

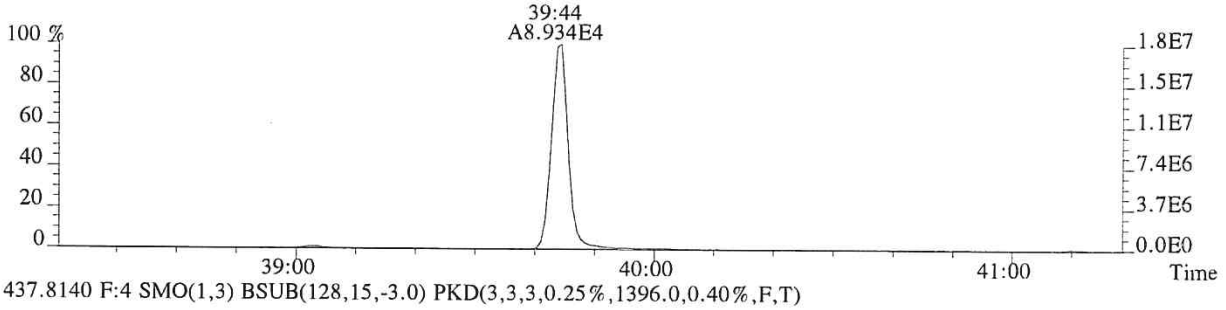
File:P513855 #1-268 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4156.0,0.40%,F,T)



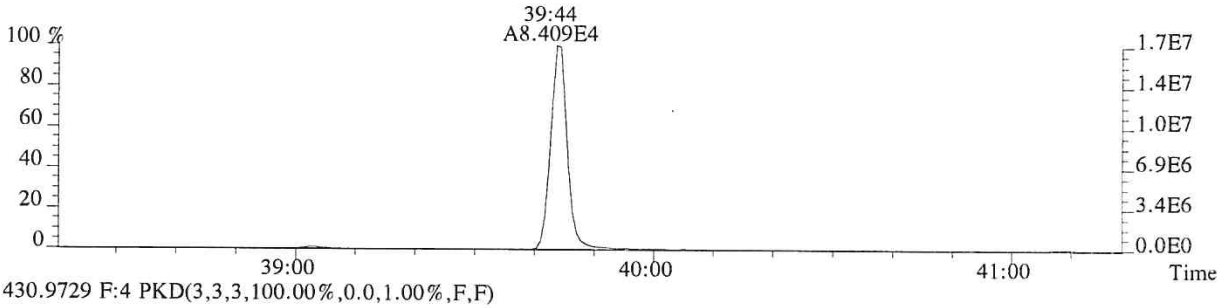
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2396.0,0.40%,F,T)



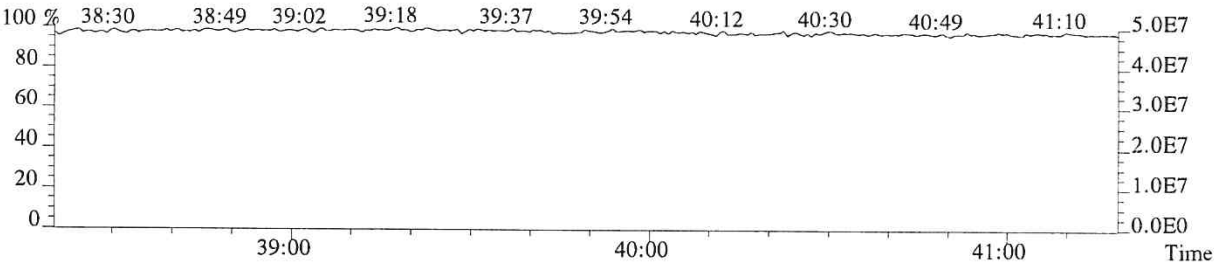
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1788.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1396.0,0.40%,F,T)

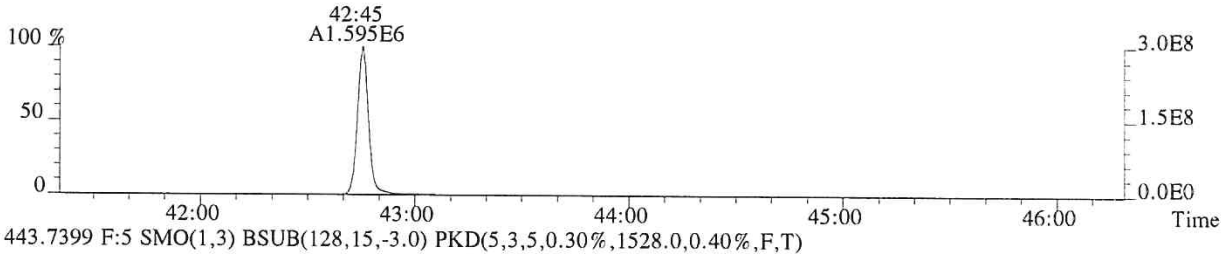


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

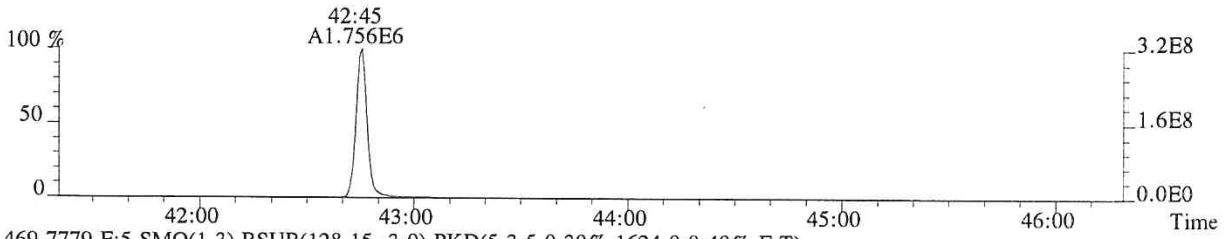


016751

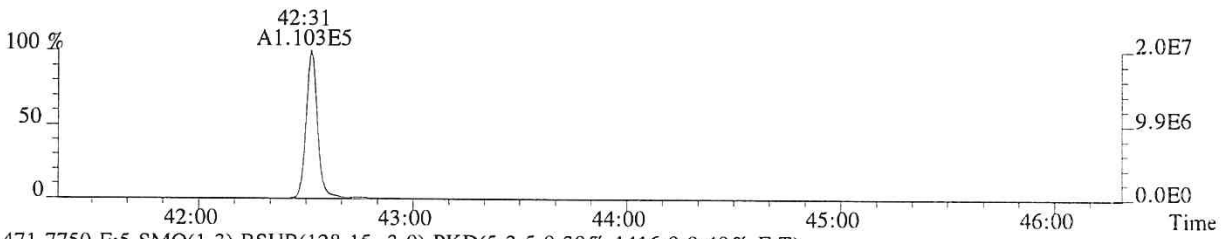
File:P513855 #1-448 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,668.0,0.40%,F,T)



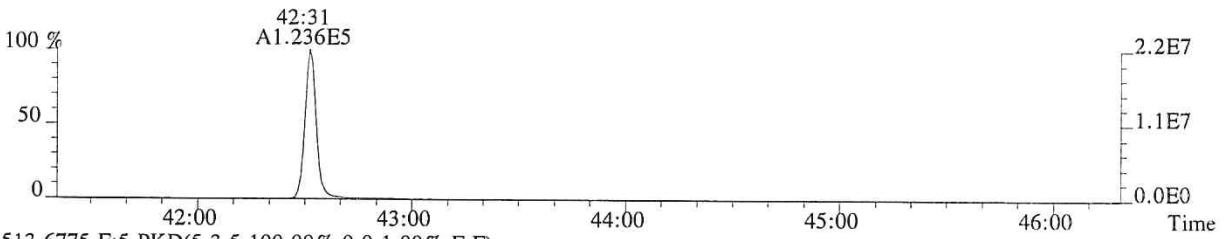
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1528.0,0.40%,F,T)



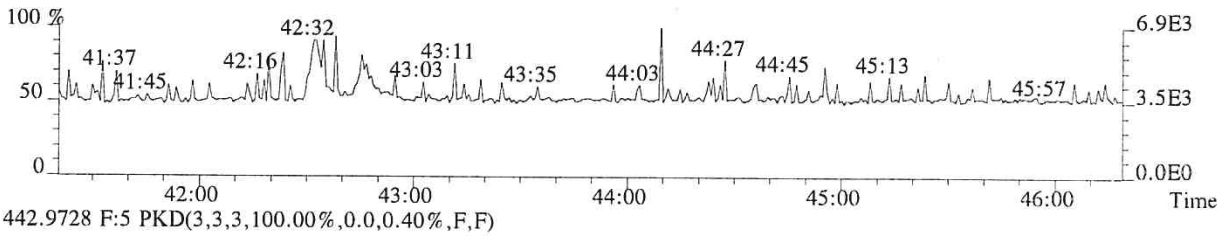
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1624.0,0.40%,F,T)



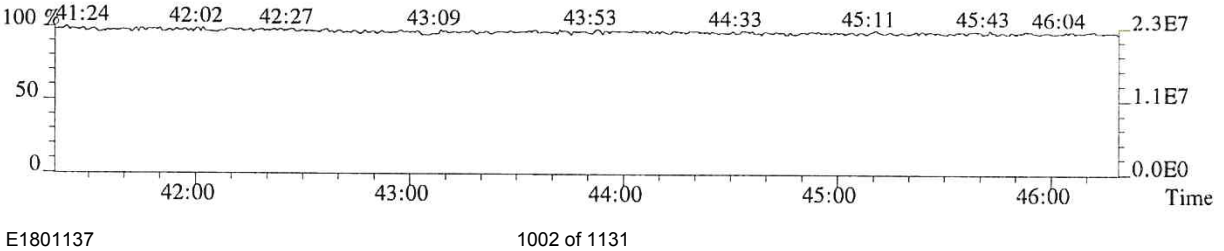
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1416.0,0.40%,F,T)



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

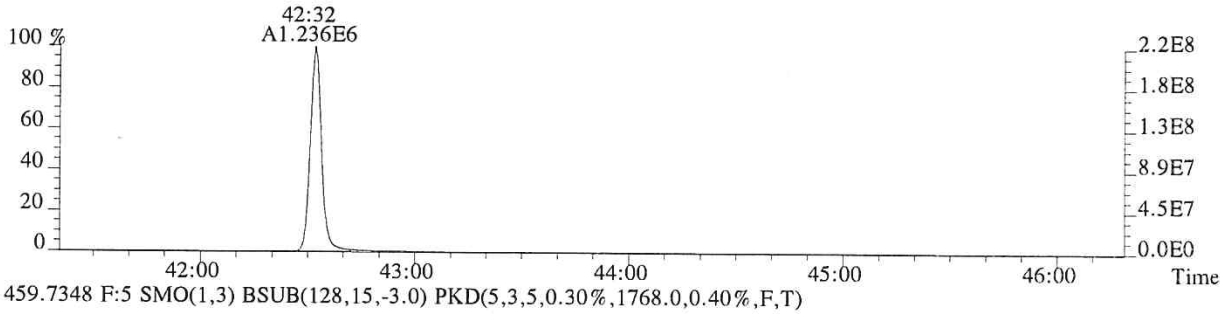


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

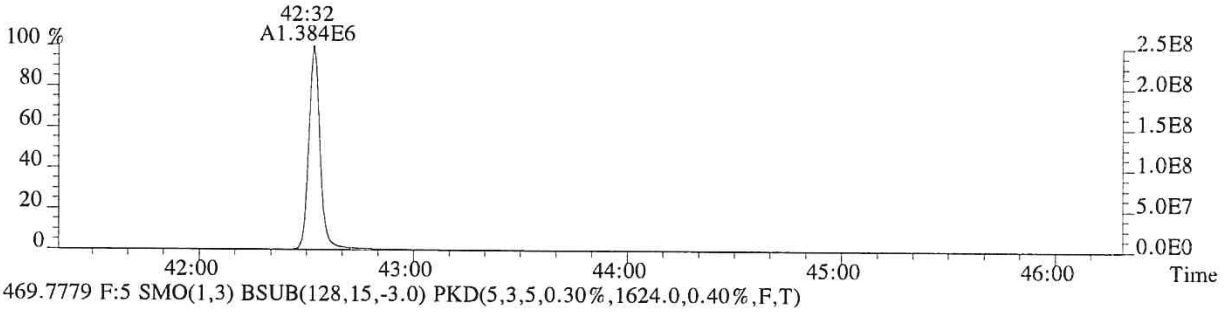


016752

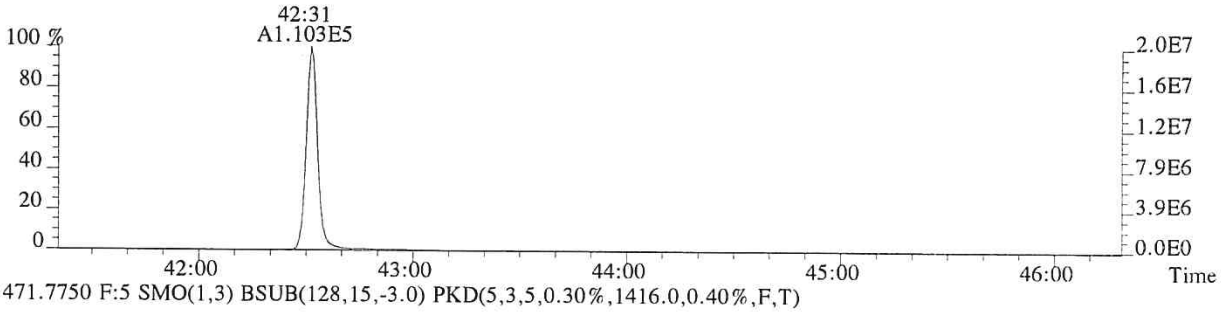
File:P513855 #1-448 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,192.0,0.40%,F,T)



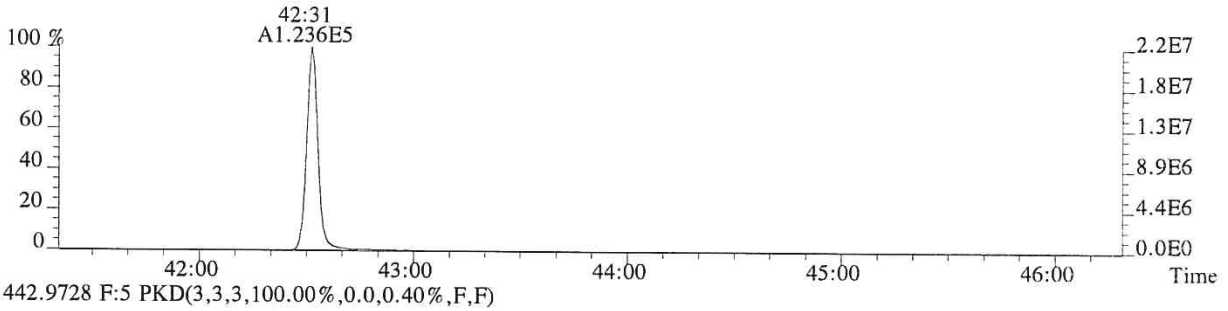
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1768.0,0.40%,F,T)



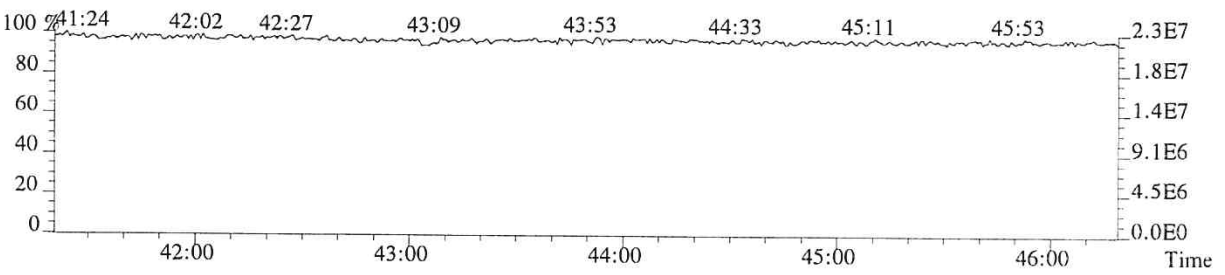
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1624.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1416.0,0.40%,F,T)



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



016753

USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P513857 Analysis Date: 24-JAN-18 Time: 19:21:06

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	9.9	7.8 - 12.9	-0.8
1,2,3,7,8-PeCDD	M+2/M+4	1.55	1.32-1.78	50	39 - 65	0.9
1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	50	39 - 64	0.2
1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	50	39 - 64	0.8
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	50	41 - 61	-0.7
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	51	43 - 58	1.6
OCDD	M+2/M+4	0.89	0.76-1.02	101	79 - 126	1.5
2,3,7,8-TCDF	M/M+2	0.71	0.65-0.89	10.2	8.4 - 12.0	2.1
1,2,3,7,8-PeCDF	M+2/M+4	1.51	1.32-1.78	51	41 - 60	2.7
2,3,4,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	50	41 - 61	0.8
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	52	45 - 56	4.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	50	44 - 57	-0.1
1,2,3,7,8,9-HxCDF	M+2/M+4	1.23	1.05-1.43	51	45 - 56	2.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	50	44 - 57	0.8
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.00	0.88-1.20	50	45 - 55	0.3
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.00	0.88-1.20	50	43 - 58	0.1
OCDF	M+2/M+4	0.89	0.76-1.02	100	63 - 159	0.0

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

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

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

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

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P513857 Analysis Date: 24-JAN-18 Time: 19:21:06

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	98	82 - 121	-1.7
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.59	1.32-1.78	92	62 - 160	-8.5
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	101	85 - 117	1.4
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	103	85 - 118	2.7
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	113	72 - 138	13.3
13C-OCDD	M+2/M+4	0.89	0.76-1.02	253	96 - 415	26.3
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	94	71 - 140	-6.2
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	94	76 - 130	-6.3
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	94	77 - 130	-6.4
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	97	76 - 131	-2.6
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	102	70 - 143	1.7
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	104	74 - 135	3.6
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	105	73 - 137	4.9
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	112	78 - 129	11.6
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	116	77 - 129	16.1
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				10.1	7.8 - 12.7	0.9

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

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
75080

Run #7 Filename P513857 Samp: 1 Inj: 1 Acquired: 24-JAN-18 19:21:06
Processed: 25-JAN-18 08:41:26 Sample ID: 2ND SOURCE

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	5.152e+03	7.223e+03	0.71	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	3.916e+04	2.586e+04	1.51	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:41	3.607e+04	2.366e+04	1.52	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:16	3.202e+04	2.632e+04	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	3.416e+04	2.839e+04	1.20	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:52	3.150e+04	2.633e+04	1.20	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	2.836e+04	2.314e+04	1.23	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	2.874e+04	2.862e+04	1.00	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	2.352e+04	2.346e+04	1.00	yes	no	1.258
10	Unk	OCDF	42:45	3.688e+04	4.148e+04	0.89	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	3.845e+03	5.032e+03	0.76	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:57	2.377e+04	1.531e+04	1.55	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	2.145e+04	1.680e+04	1.28	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	2.240e+04	1.756e+04	1.28	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	2.219e+04	1.741e+04	1.27	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	2.034e+04	1.933e+04	1.05	yes	no	1.025
17	Unk	OCDD	42:31	3.083e+04	3.462e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:46	5.681e+04	7.189e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:47	7.678e+04	4.833e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	7.550e+04	4.814e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	3.216e+04	6.216e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:22	3.808e+04	7.348e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	3.589e+04	6.747e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	3.054e+04	5.771e+04	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	2.616e+04	5.845e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	2.287e+04	5.181e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:30	3.654e+04	4.587e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	4.972e+04	3.125e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	4.147e+04	3.207e+04	1.29	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	4.264e+04	3.379e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	3.921e+04	3.703e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	5.445e+04	6.090e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	4.052e+04	5.019e+04	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	4.325e+04	3.518e+04	1.23	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	9.276e+03				no	1.014

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
75080

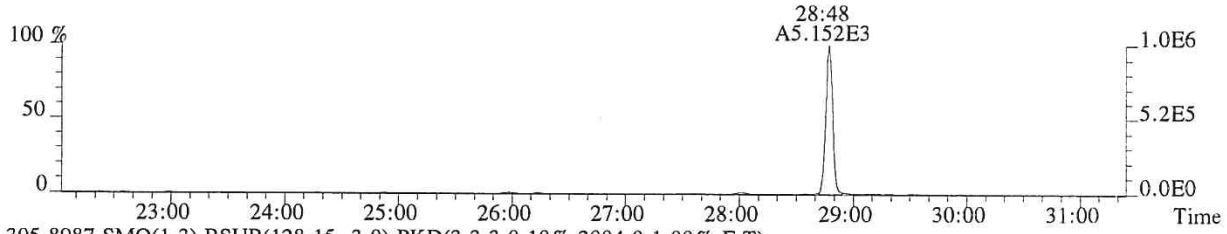
Run #7 Filename P513857 Samp: 1 Inj: 1 Acquired: 24-JAN-18 19:21:06
Processed: 25-JAN-18 08:41:26 LAB. ID: 2ND SOURCE

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.04e+06	1.03e+03	1.0e+03	1.42e+06	2.00e+03	7.1e+02
2	1,2,3,7,8-PeCDF	7.88e+06	8.44e+02	9.3e+03	5.19e+06	1.52e+03	3.4e+03
3	2,3,4,7,8-PeCDF	7.53e+06	8.44e+02	8.9e+03	4.93e+06	1.52e+03	3.2e+03
4	1,2,3,4,7,8-HxCDF	7.21e+06	1.53e+03	4.7e+03	5.89e+06	1.36e+03	4.3e+03
5	1,2,3,6,7,8-HxCDF	7.34e+06	1.53e+03	4.8e+03	6.08e+06	1.36e+03	4.5e+03
6	2,3,4,6,7,8-HxCDF	7.02e+06	1.53e+03	4.6e+03	5.88e+06	1.36e+03	4.3e+03
7	1,2,3,7,8,9-HxCDF	6.10e+06	1.53e+03	4.0e+03	4.95e+06	1.36e+03	3.6e+03
8	1,2,3,4,6,7,8-HpCDF	6.16e+06	5.00e+03	1.2e+03	6.13e+06	6.59e+03	9.3e+02
9	1,2,3,4,7,8,9-HpCDF	4.58e+06	5.00e+03	9.1e+02	4.45e+06	6.59e+03	6.7e+02
10	OCDF	6.54e+06	1.44e+02	4.5e+04	7.12e+06	8.36e+02	8.5e+03
11	2,3,7,8-TCDD	8.13e+05	1.92e+03	4.2e+02	1.05e+06	1.26e+03	8.3e+02
12	1,2,3,7,8-PeCDD	4.95e+06	8.52e+02	5.8e+03	3.18e+06	2.84e+02	1.1e+04
13	1,2,3,4,7,8-HxCDD	4.98e+06	7.64e+02	6.5e+03	3.93e+06	4.12e+02	9.5e+03
14	1,2,3,6,7,8-HxCDD	4.78e+06	7.64e+02	6.3e+03	3.77e+06	4.12e+02	9.2e+03
15	1,2,3,7,8,9-HxCDD	4.67e+06	7.64e+02	6.1e+03	3.64e+06	4.12e+02	8.8e+03
16	1,2,3,4,6,7,8-HpCDD	4.20e+06	1.17e+03	3.6e+03	3.99e+06	7.20e+01	5.5e+04
17	OCDD	5.25e+06	1.60e+02	3.3e+04	5.90e+06	1.22e+03	4.8e+03
18	13C-2,3,7,8-TCDF	1.11e+07	9.00e+03	1.2e+03	1.40e+07	3.76e+03	3.7e+03
19	13C-1,2,3,7,8-PeCDF	1.52e+07	6.36e+02	2.4e+04	9.62e+06	1.34e+03	7.2e+03
20	13C-2,3,4,7,8-PeCDF	1.56e+07	6.36e+02	2.5e+04	9.99e+06	1.34e+03	7.5e+03
21	13C-1,2,3,4,7,8-HxCDF	7.22e+06	7.60e+02	9.5e+03	1.40e+07	1.60e+03	8.8e+03
22	13C-1,2,3,6,7,8-HxCDF	8.16e+06	7.60e+02	1.1e+04	1.57e+07	1.60e+03	9.8e+03
23	13C-2,3,4,6,7,8-HxCDF	7.92e+06	7.60e+02	1.0e+04	1.49e+07	1.60e+03	9.3e+03
24	13C-1,2,3,7,8,9-HxCDF	6.41e+06	7.60e+02	8.4e+03	1.22e+07	1.60e+03	7.6e+03
25	13C-1,2,3,4,6,7,8-HpCDF	5.67e+06	2.84e+03	2.0e+03	1.26e+07	6.70e+03	1.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	4.44e+06	2.84e+03	1.6e+03	1.00e+07	6.70e+03	1.5e+03
27	13C-2,3,7,8-TCDD	7.51e+06	5.77e+03	1.3e+03	9.42e+06	2.25e+03	4.2e+03
28	13C-1,2,3,7,8-PeCDD	1.01e+07	1.06e+03	9.5e+03	6.31e+06	5.88e+02	1.1e+04
29	13C-1,2,3,4,7,8-HxCDD	9.57e+06	2.66e+03	3.6e+03	7.40e+06	1.57e+03	4.7e+03
30	13C-1,2,3,6,7,8-HxCDD	9.03e+06	2.66e+03	3.4e+03	7.14e+06	1.57e+03	4.6e+03
31	13C-1,2,3,4,6,7,8-HpCDD	7.97e+06	1.17e+03	6.8e+03	7.51e+06	7.00e+02	1.1e+04
32	13C-OCDD	9.30e+06	2.60e+02	3.6e+04	1.03e+07	4.00e+02	2.6e+04
33	13C-1,2,3,4-TCDD	8.25e+06	5.77e+03	1.4e+03	1.02e+07	2.25e+03	4.5e+03
34	13C-1,2,3,7,8,9-HxCDD	9.23e+06	2.66e+03	3.5e+03	7.29e+06	1.57e+03	4.6e+03
35	37Cl-2,3,7,8-TCDD	1.94e+06	1.18e+03	1.6e+03			

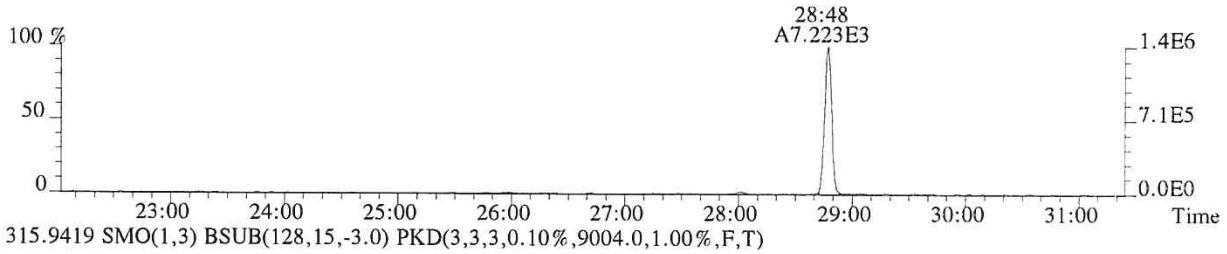
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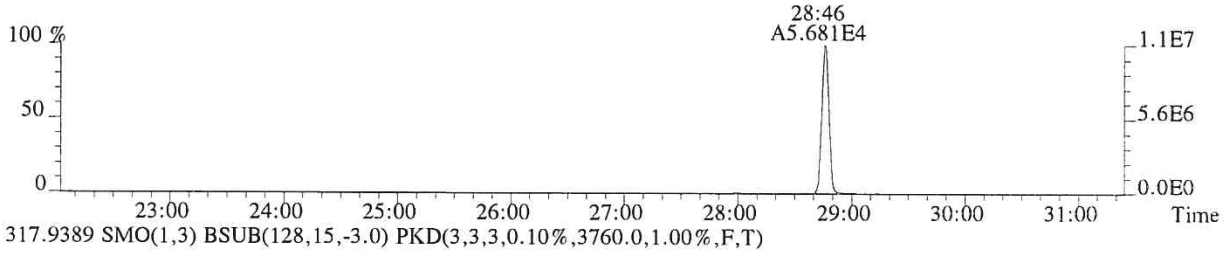
File:P513857 #1-665 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



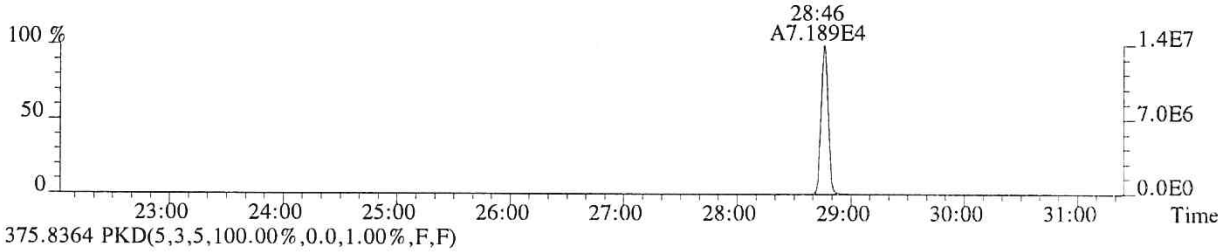
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2004.0,1.00%,F,T)



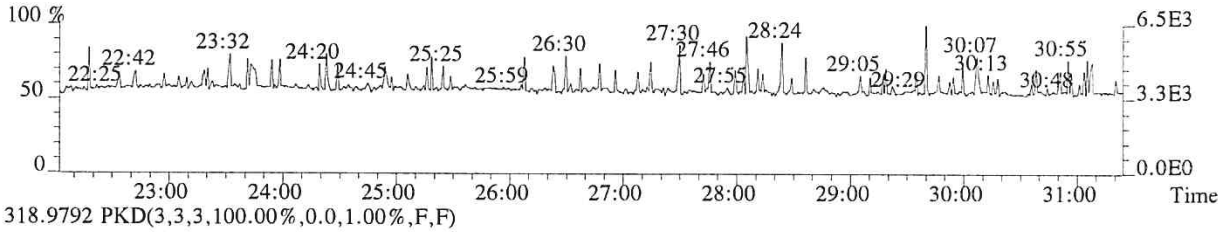
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9004.0,1.00%,F,T)



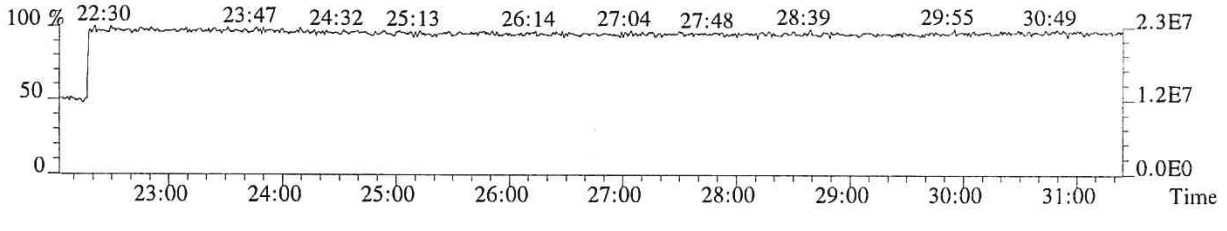
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3760.0,1.00%,F,T)



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

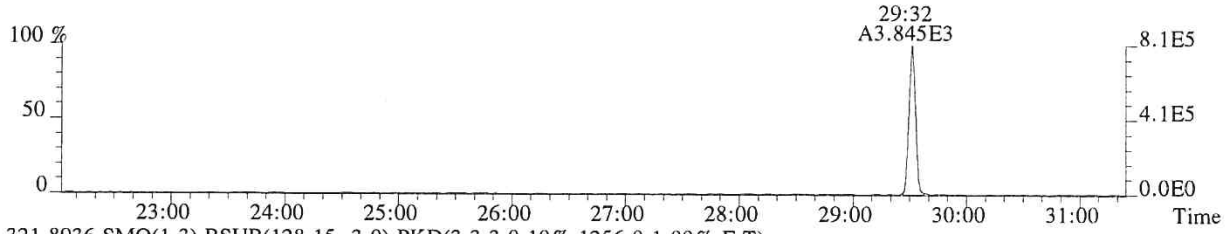


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

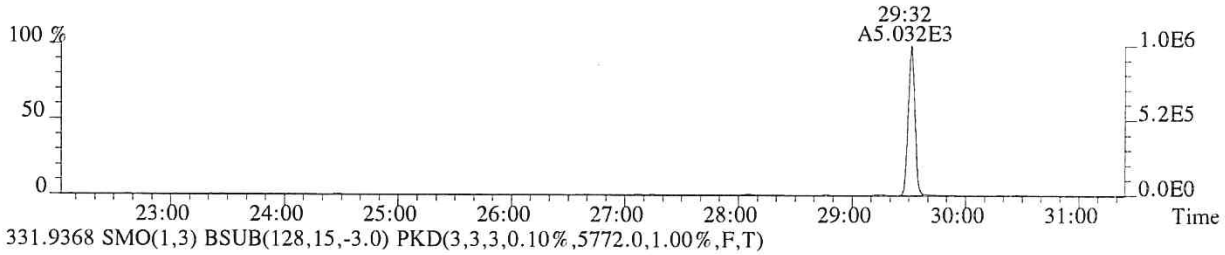


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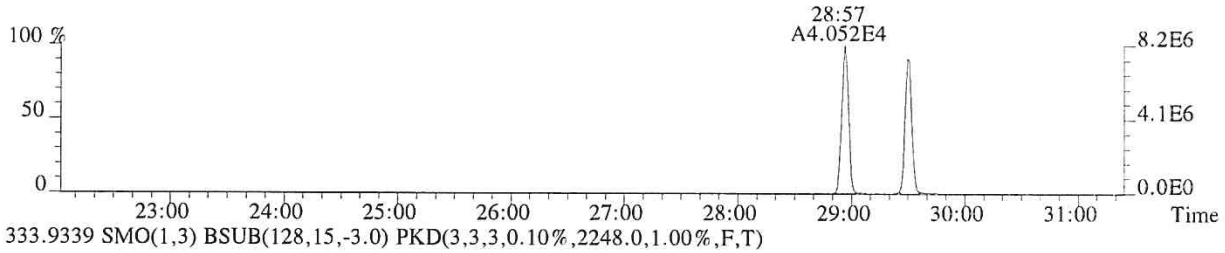
File:P513857 #1-665 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1924.0,1.00%,F,T)



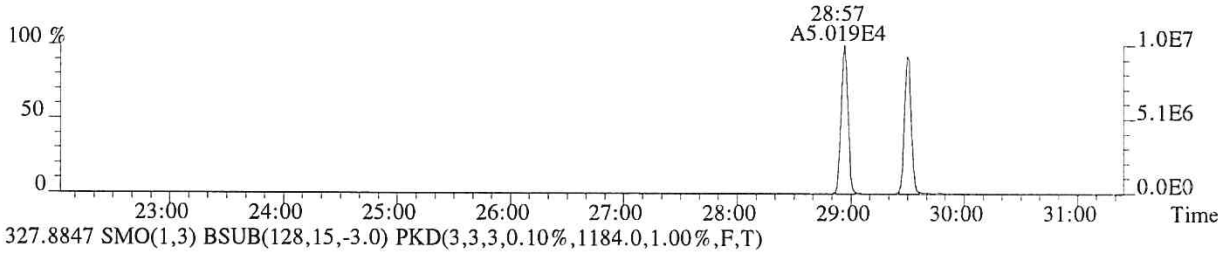
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1256.0,1.00%,F,T)



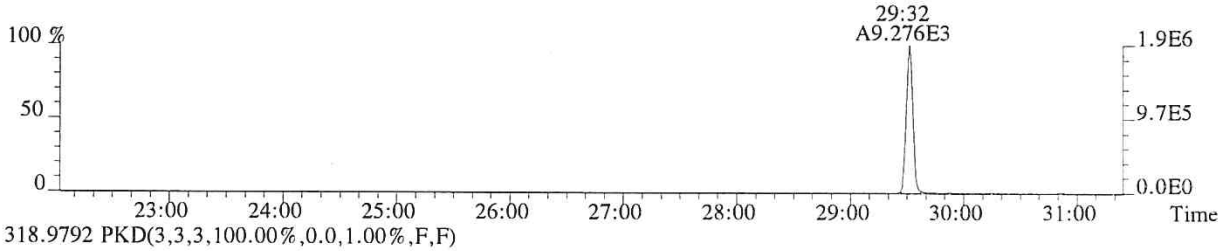
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5772.0,1.00%,F,T)



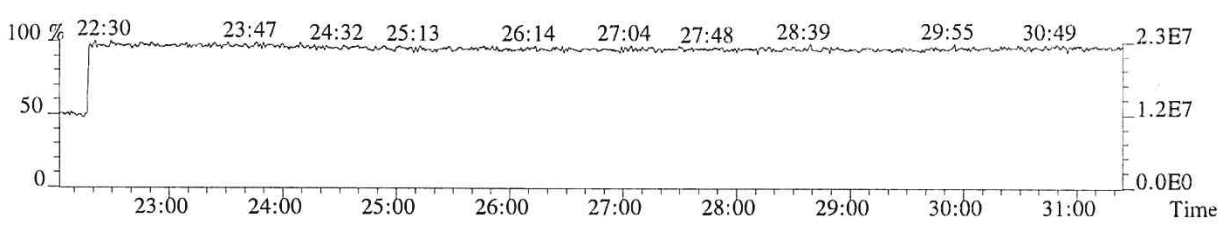
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2248.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1184.0,1.00%,F,T)

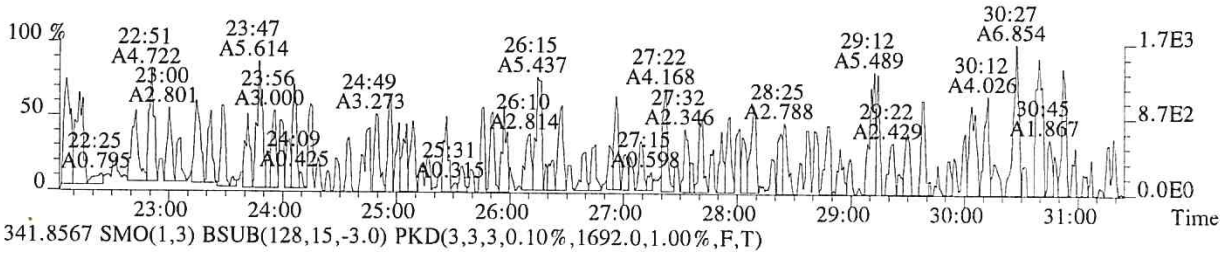


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

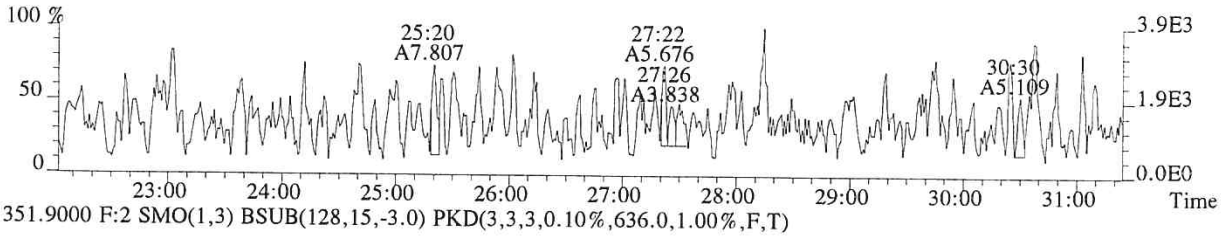


016759

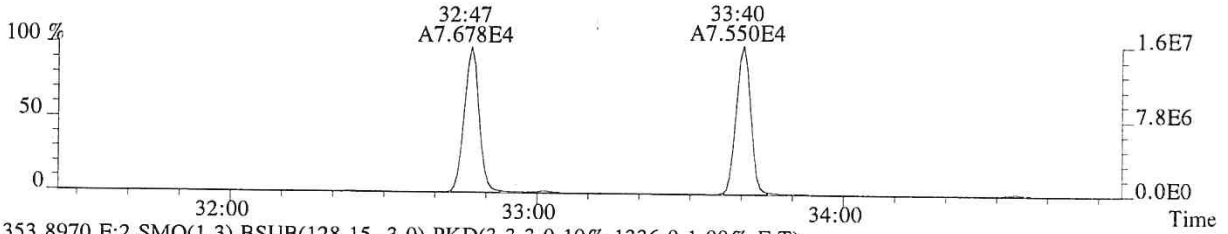
File:P513857 #1-665 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,188.0,1.00%,F,T)



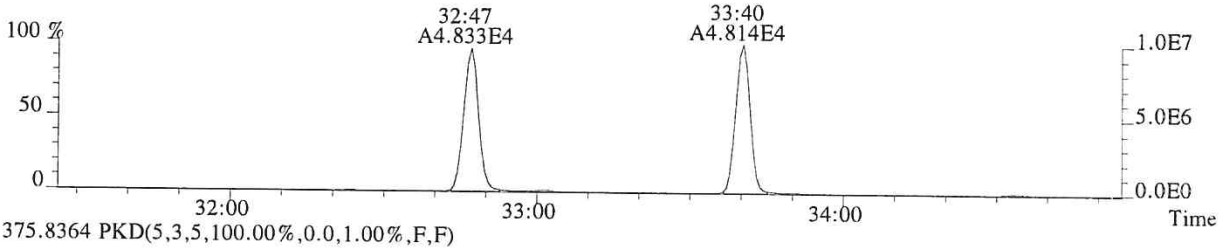
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1692.0,1.00%,F,T)



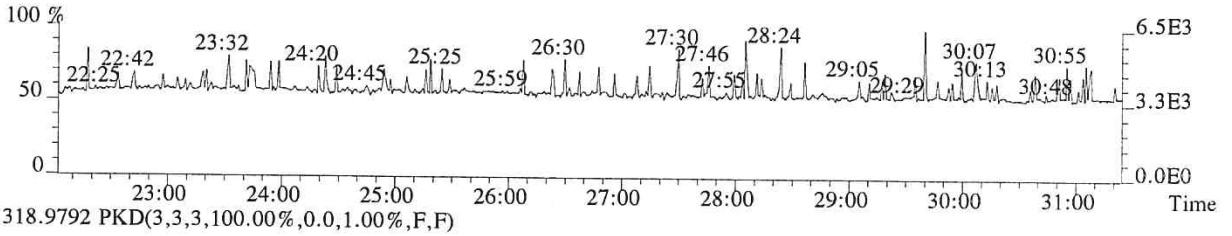
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,636.0,1.00%,F,T)



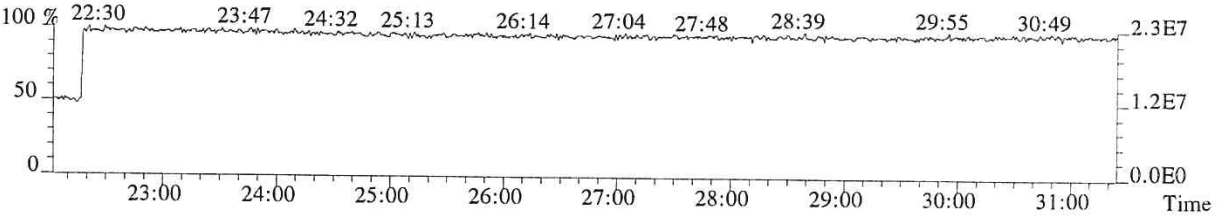
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1336.0,1.00%,F,T)



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

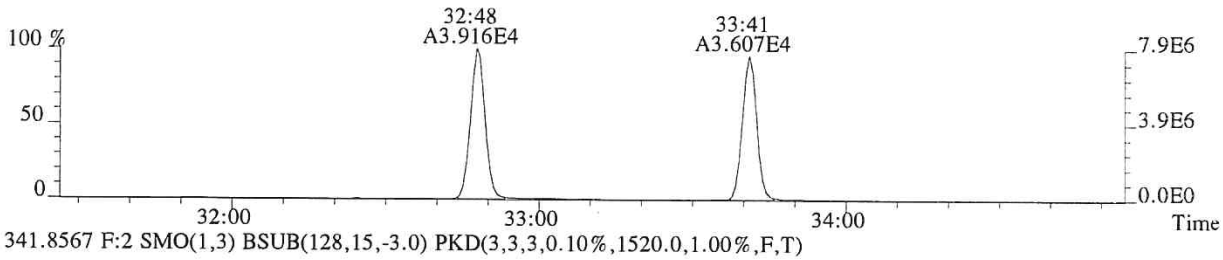


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

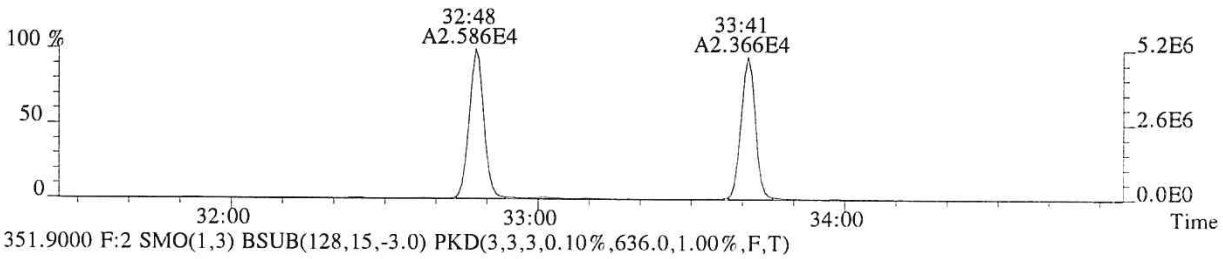


016760

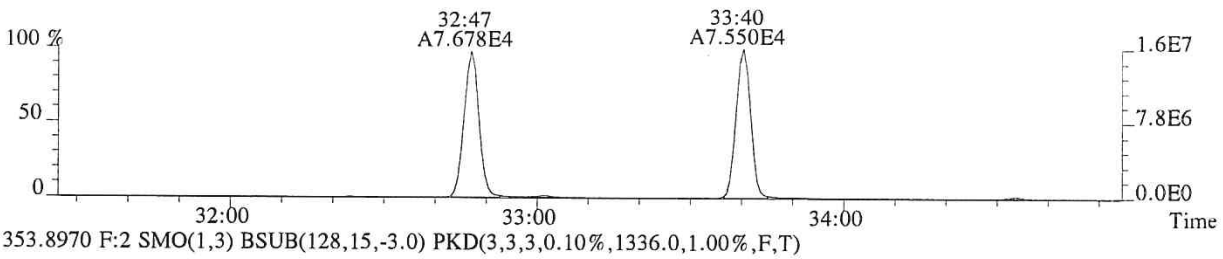
File:P513857 #1-313 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,844.0,1.00%,F,T)



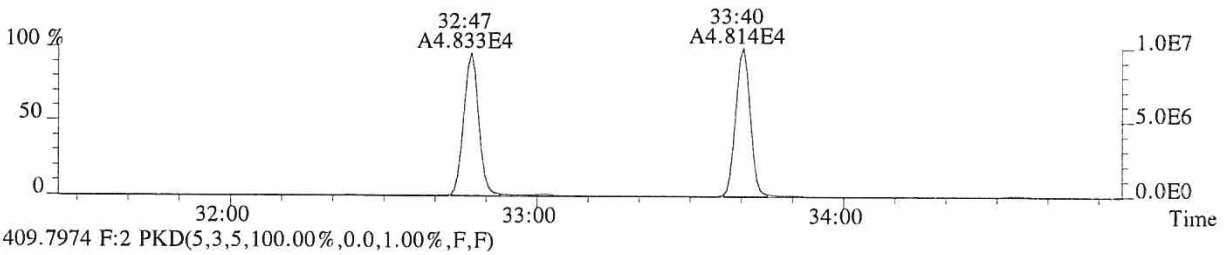
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1520.0,1.00%,F,T)



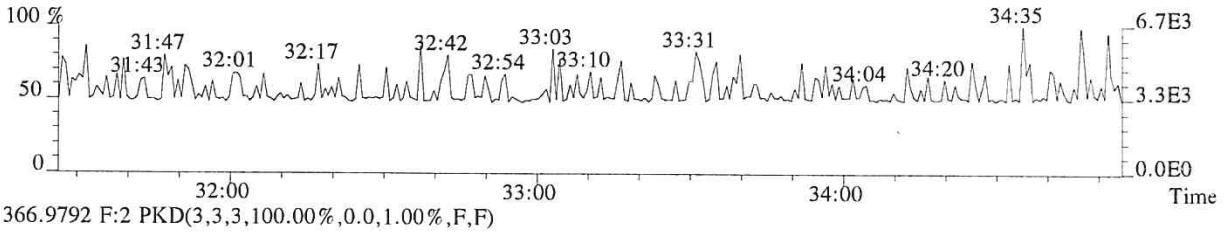
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,636.0,1.00%,F,T)



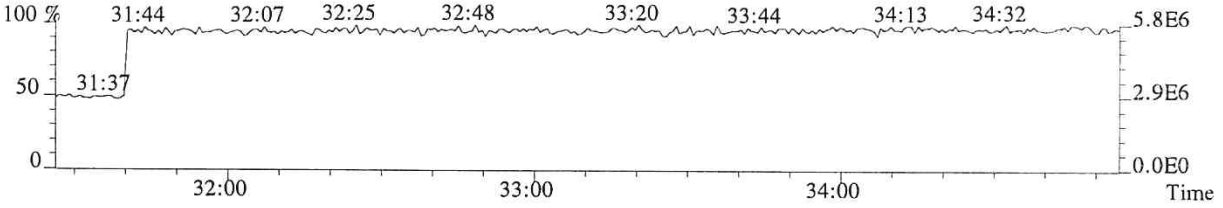
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1336.0,1.00%,F,T)



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

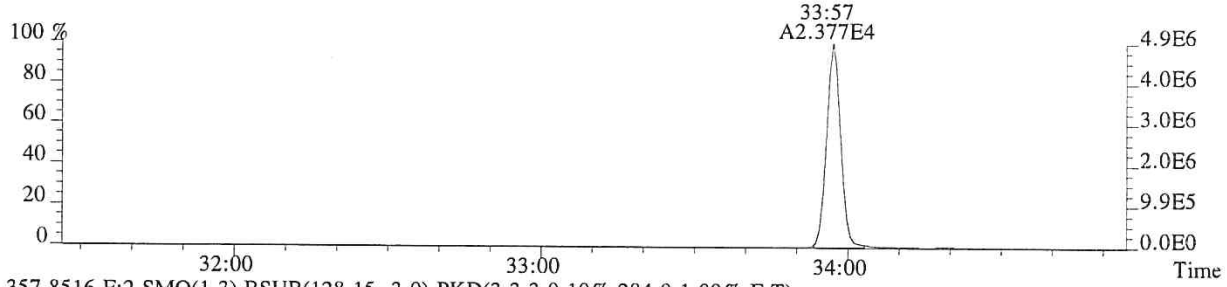


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

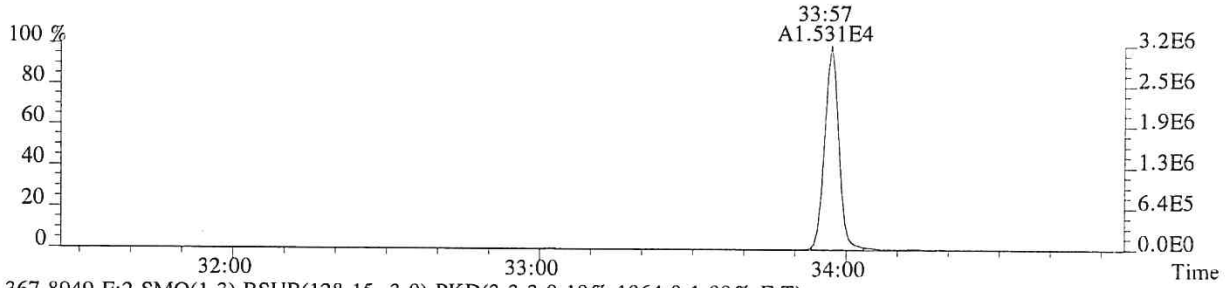


016761

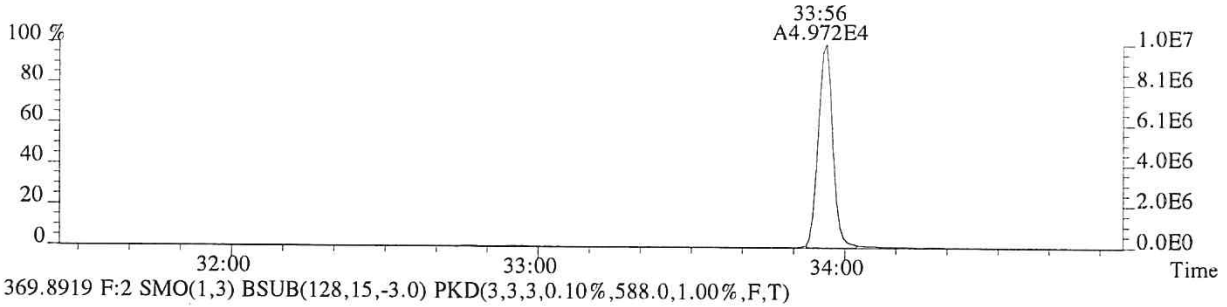
File:P513857 #1-313 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,852.0,1.00%,F,T)



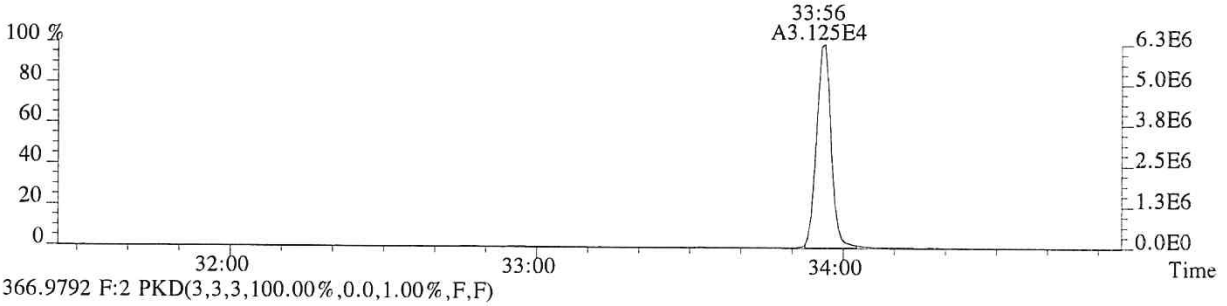
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,284.0,1.00%,F,T)



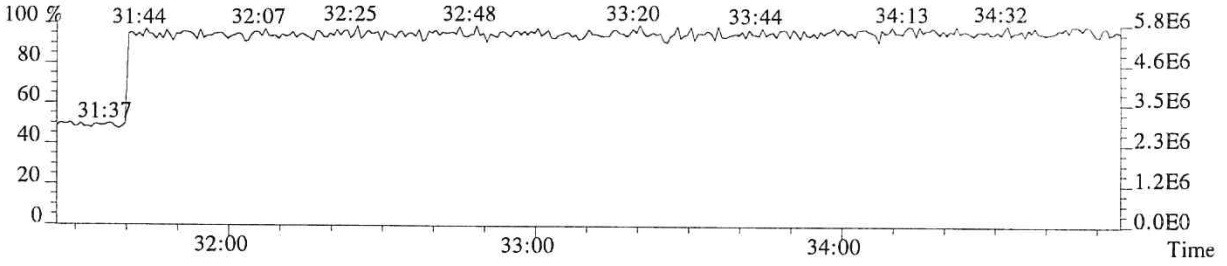
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1064.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,588.0,1.00%,F,T)

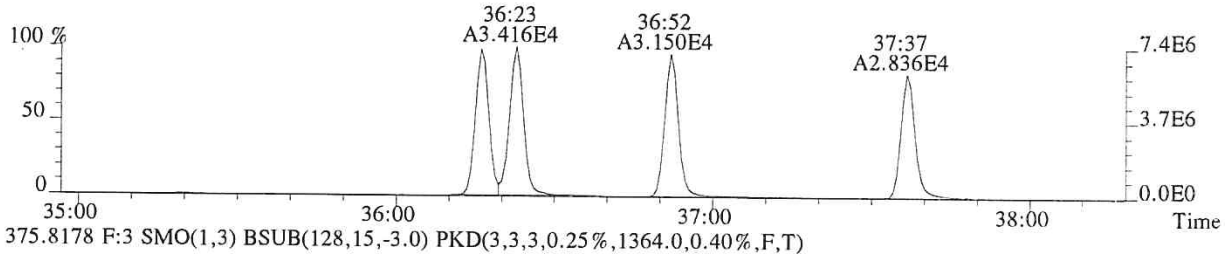


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

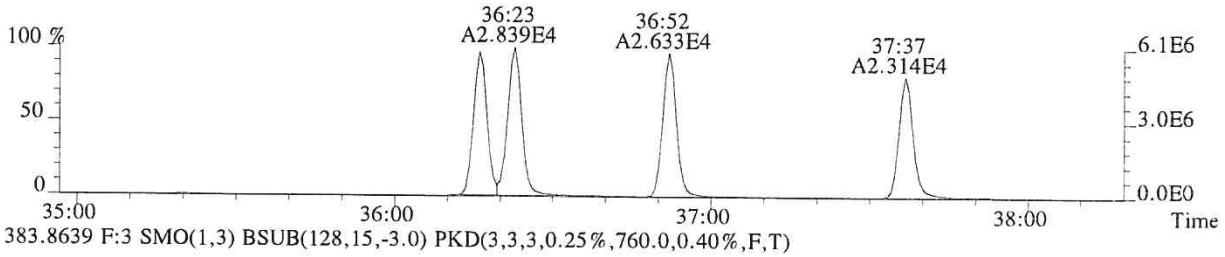


016762

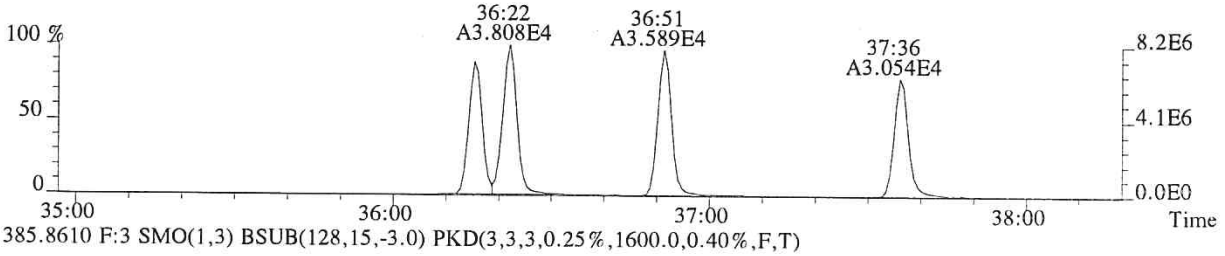
File:P513857 #1-303 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1528.0,0.40%,F,T)



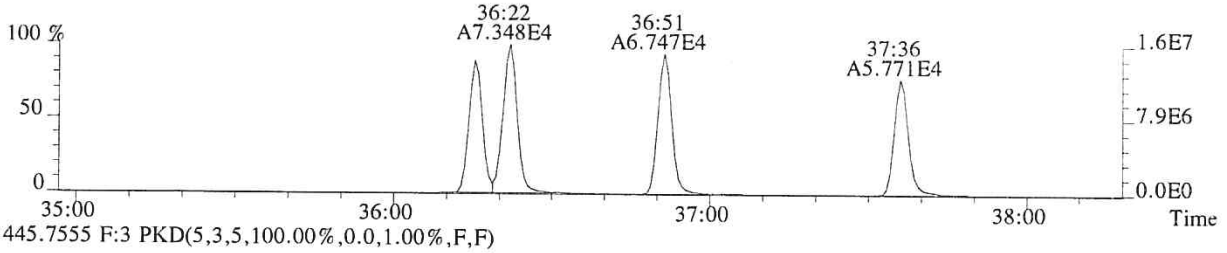
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1364.0,0.40%,F,T)



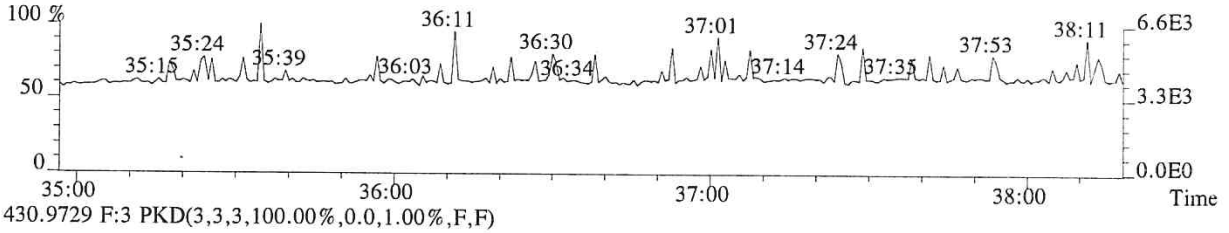
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,760.0,0.40%,F,T)



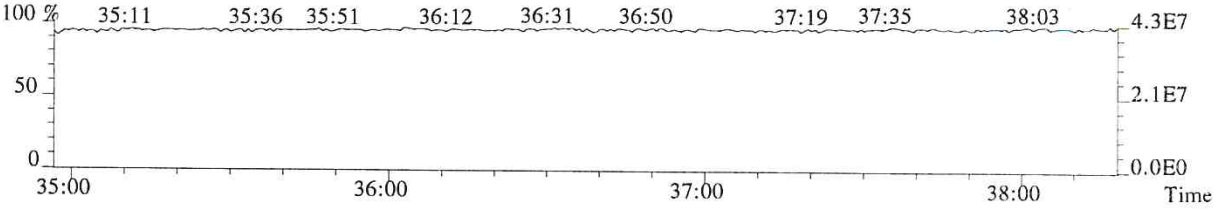
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1600.0,0.40%,F,T)



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

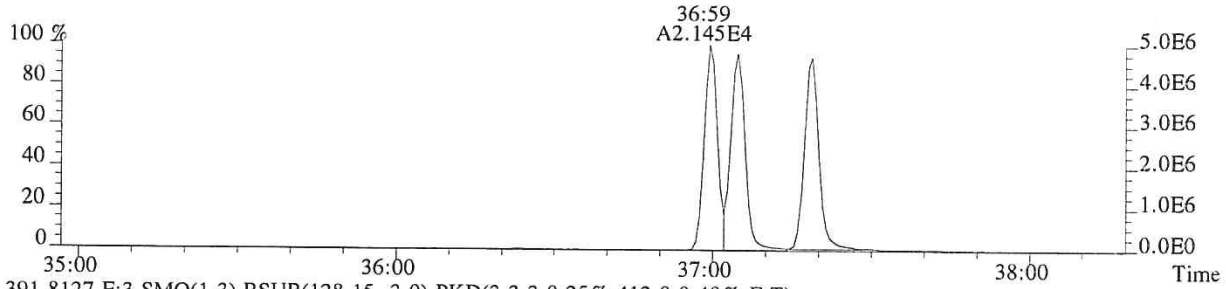


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

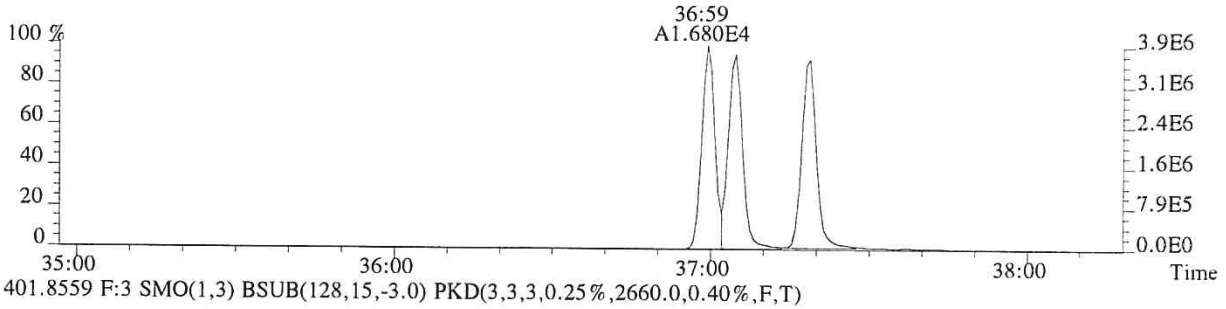


016763

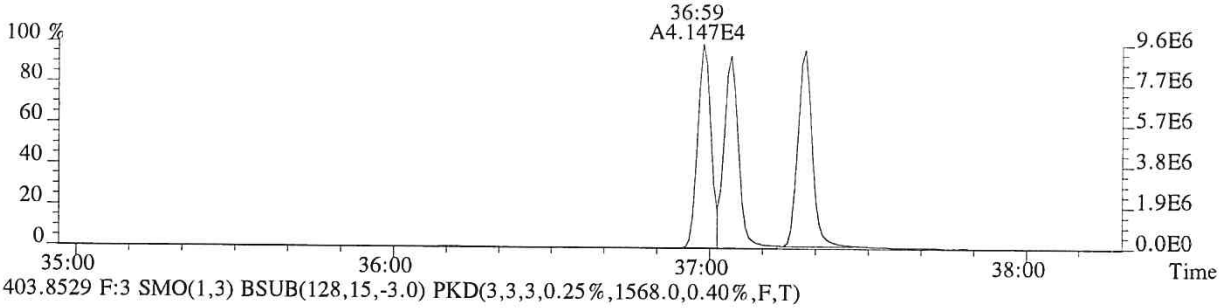
File:P513857 #1-303 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,764.0,0.40%,F,T)



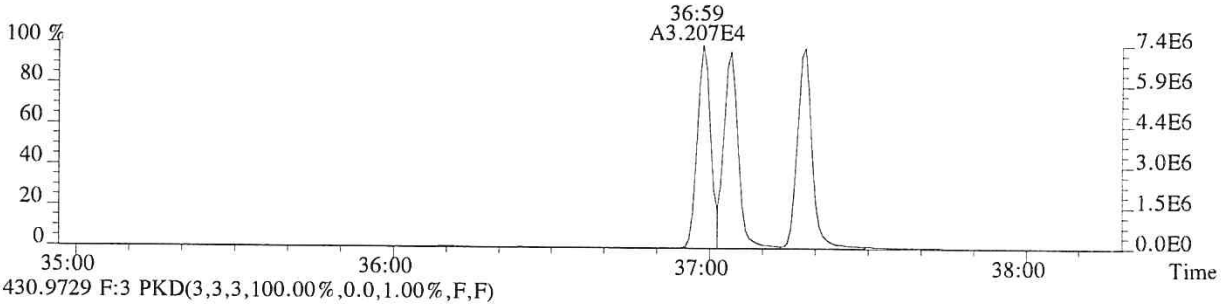
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,412.0,0.40%,F,T)



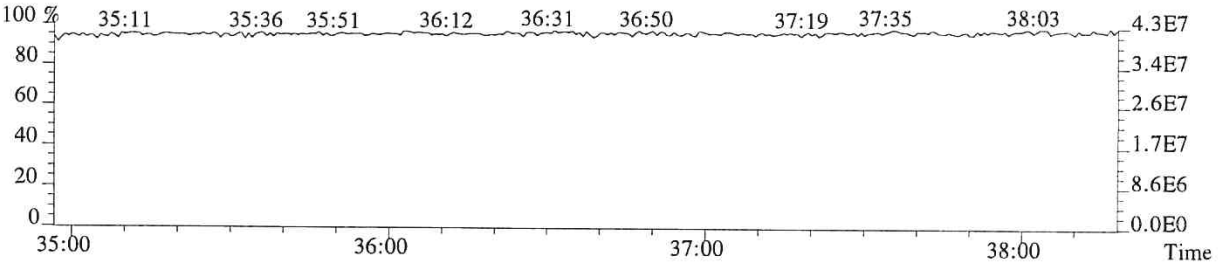
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2660.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1568.0,0.40%,F,T)

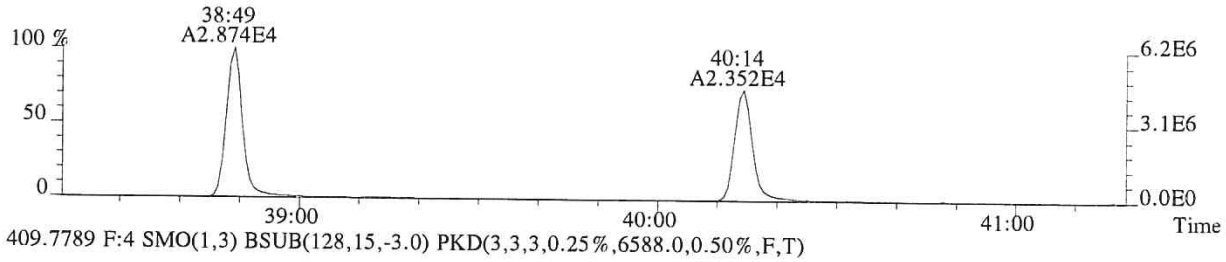


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

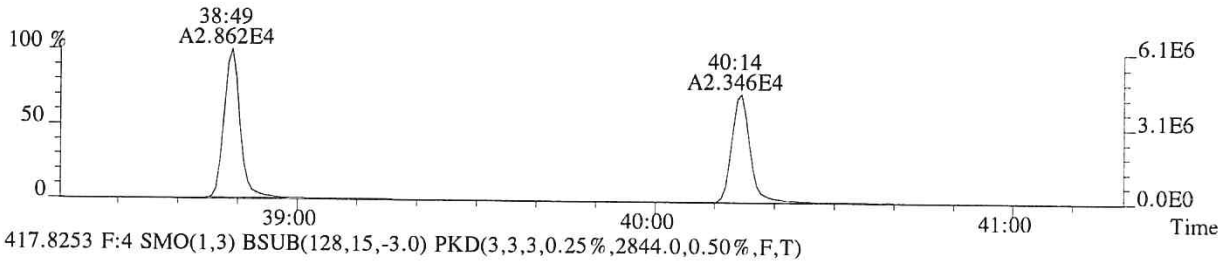


016764

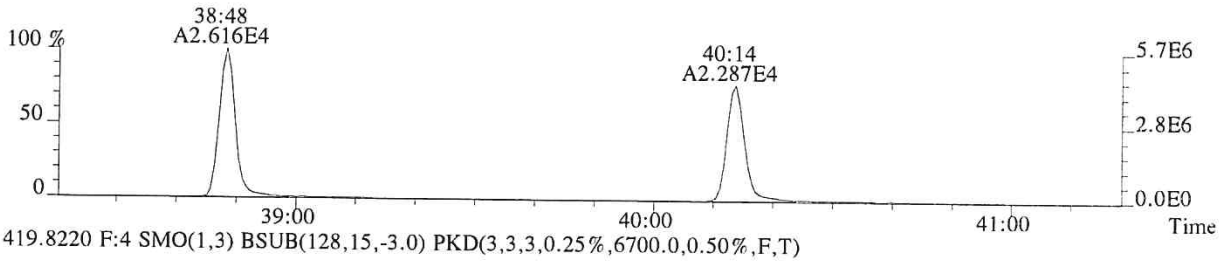
File:P513857 #1-268 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5004.0,0.50%,F,T)



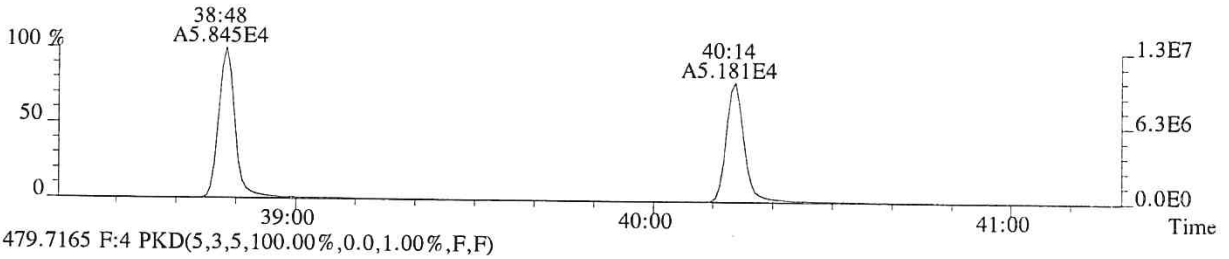
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6588.0,0.50%,F,T)



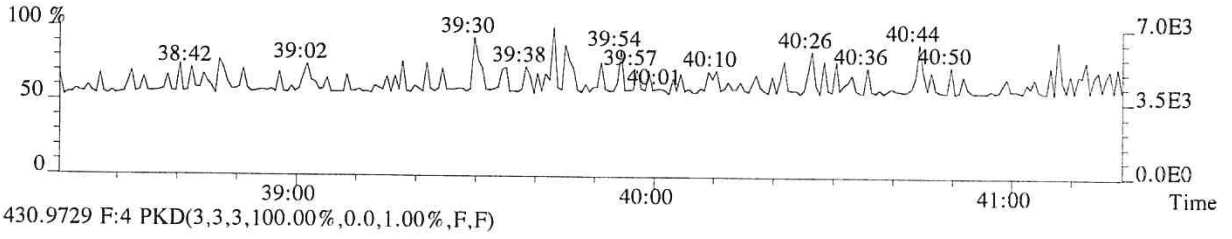
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2844.0,0.50%,F,T)



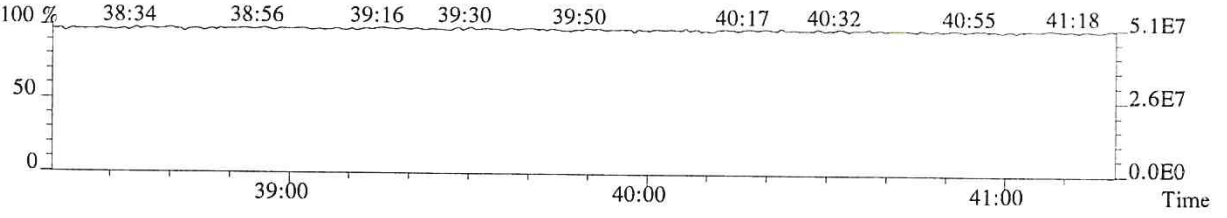
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6700.0,0.50%,F,T)



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

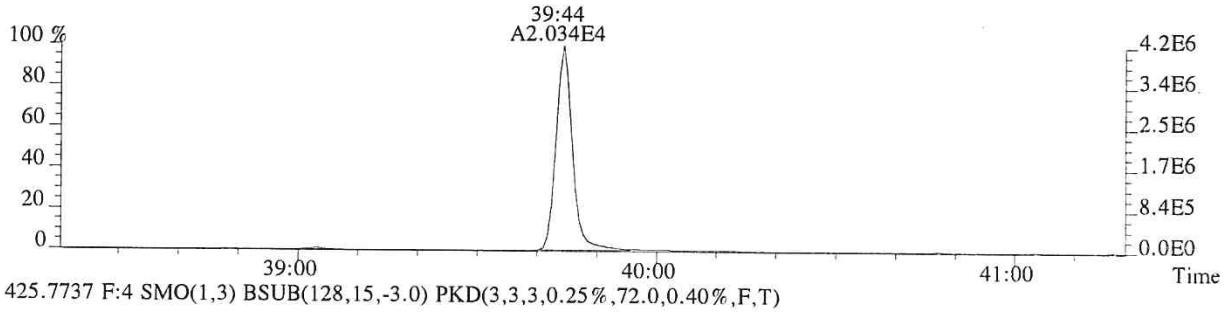


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

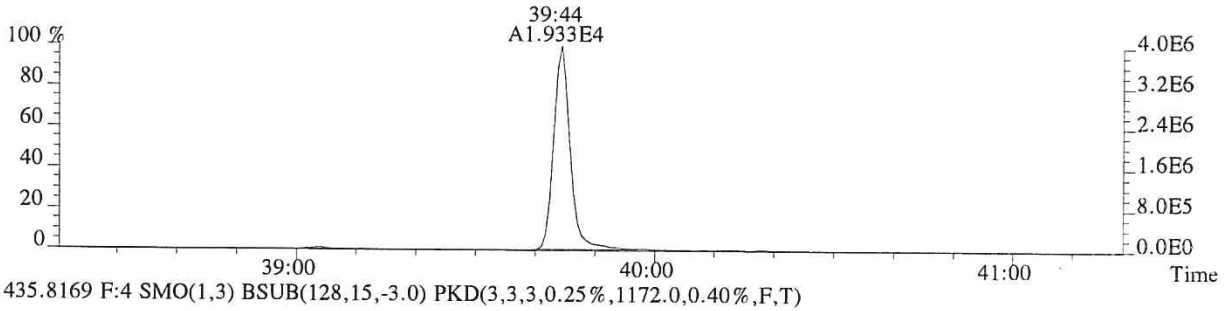


016765

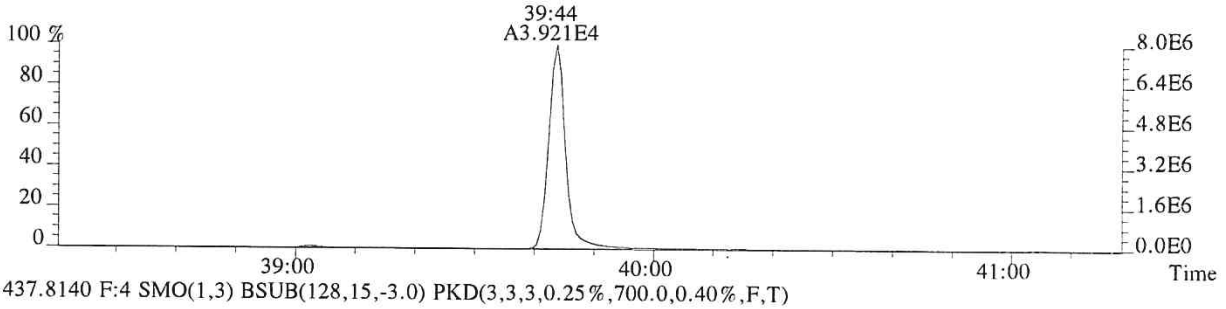
File:P513857 #1-268 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1168.0,0.40%,F,T)



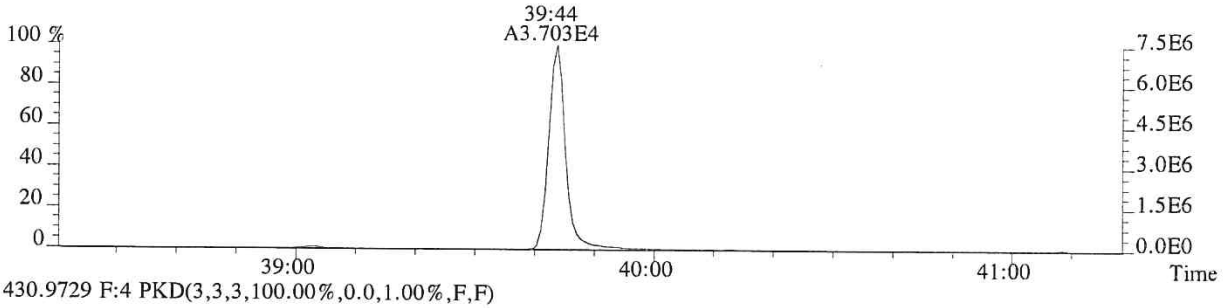
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,72.0,0.40%,F,T)



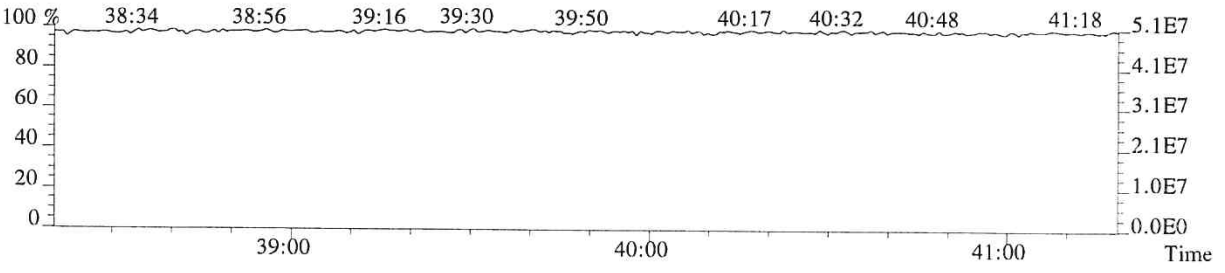
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1172.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,700.0,0.40%,F,T)

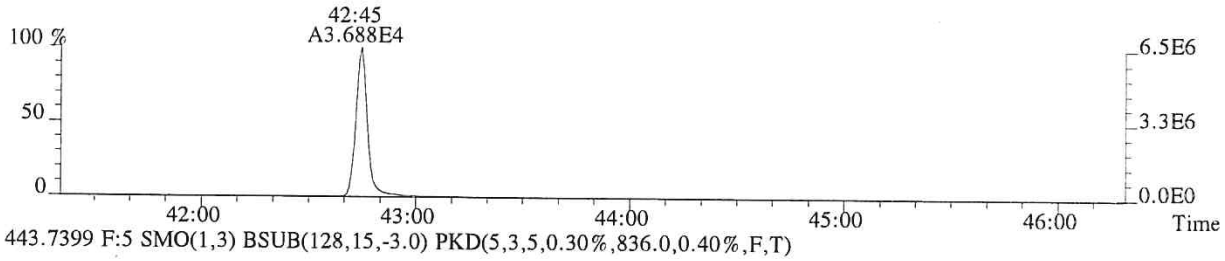


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

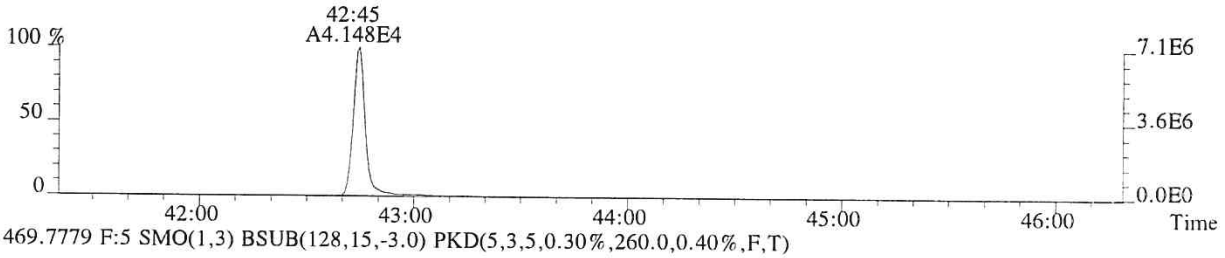


016766

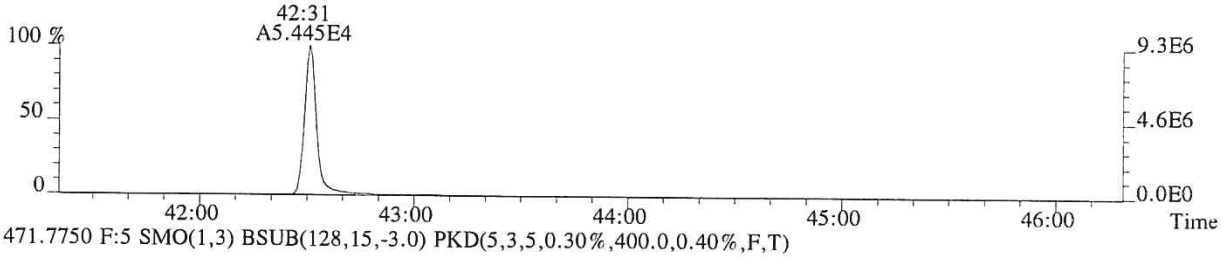
File:P513857 #1-448 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,144.0,0.40%,F,T)



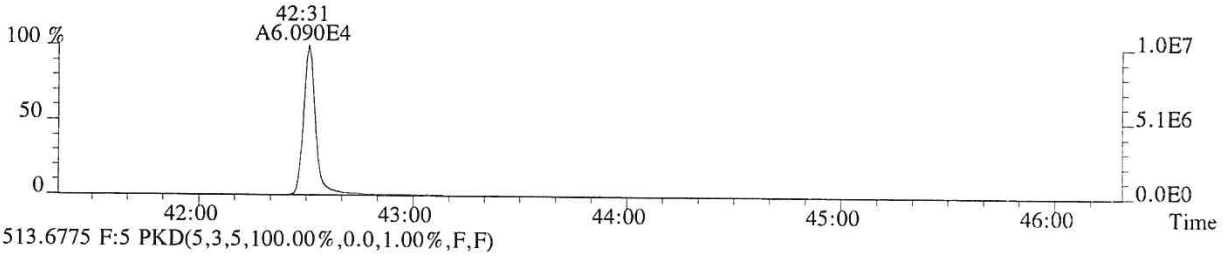
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,836.0,0.40%,F,T)



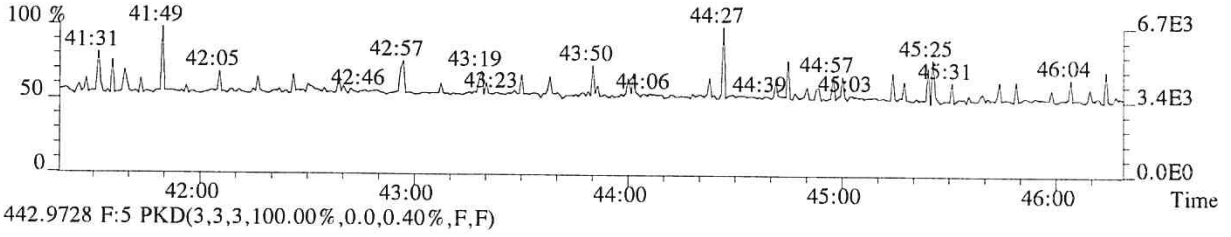
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,260.0,0.40%,F,T)



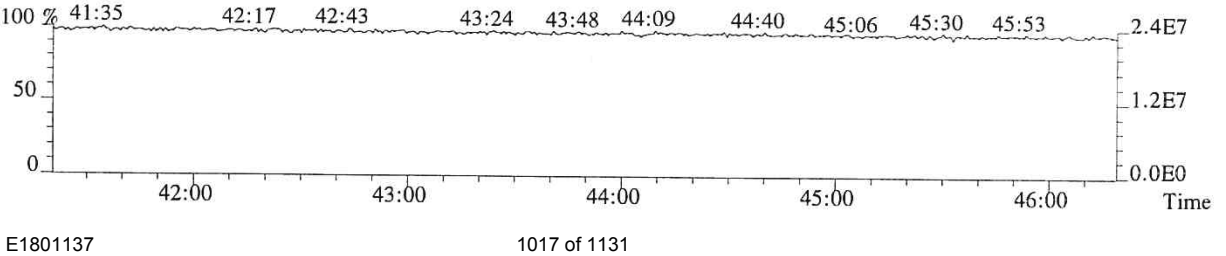
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,400.0,0.40%,F,T)



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

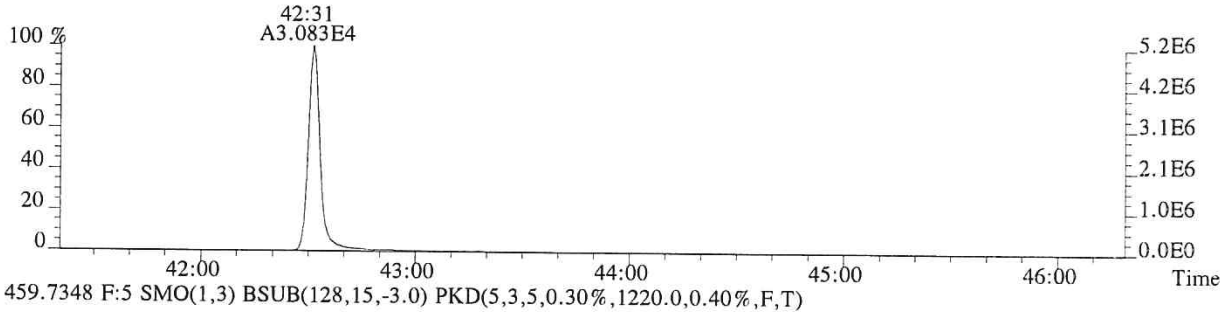


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

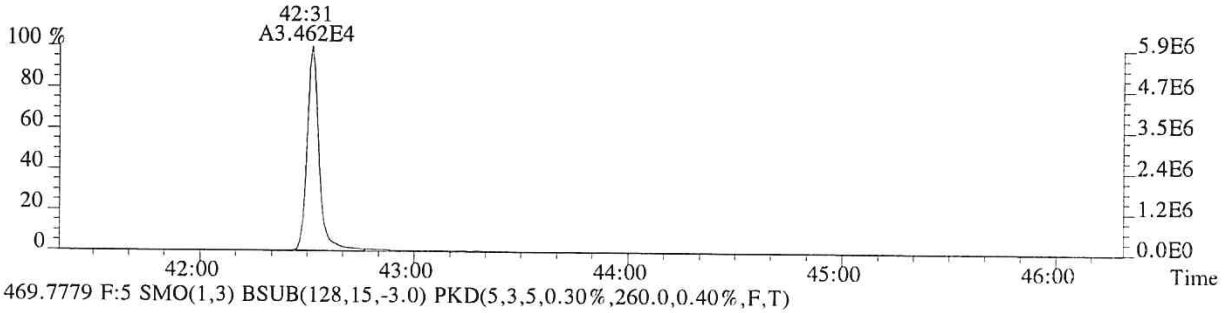


016767

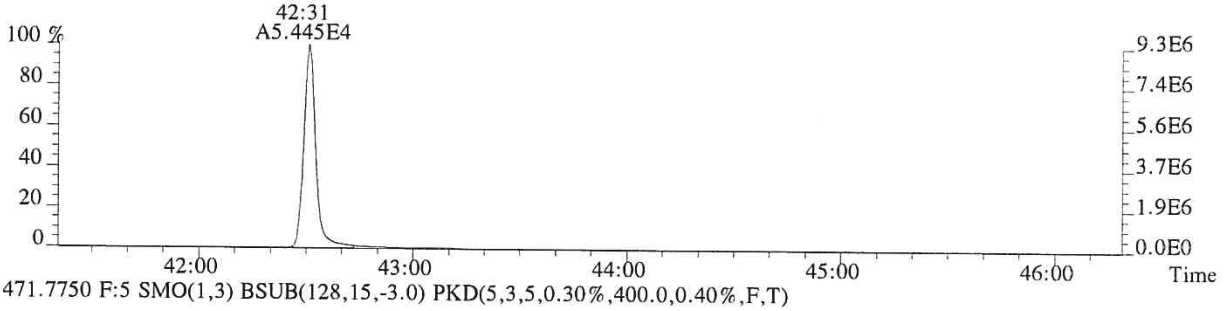
File:P513857 #1-448 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,160.0,0.40%,F,T)



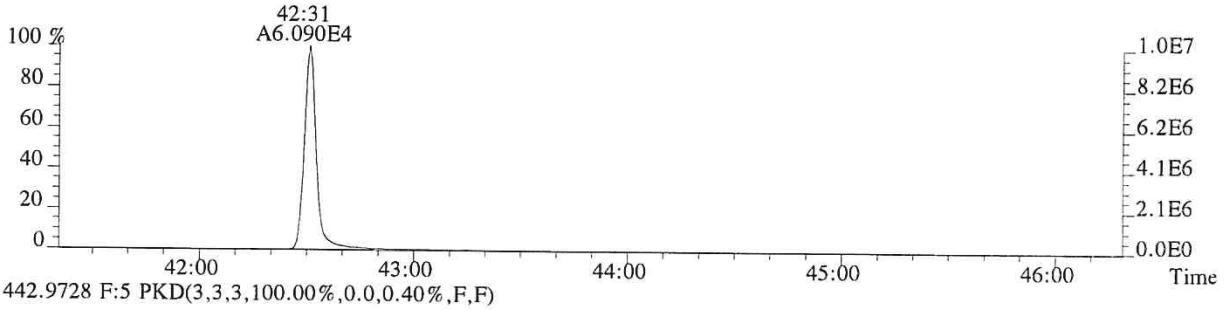
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1220.0,0.40%,F,T)



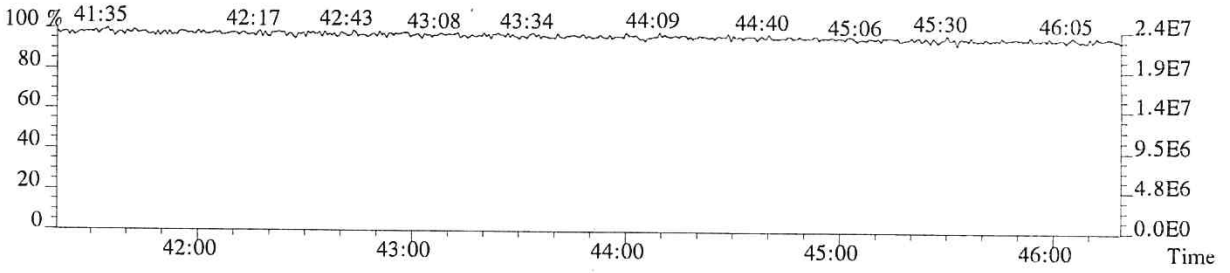
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,260.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,400.0,0.40%,F,T)



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



016768

Laboratory Review Checklist: HRMS Initial Calibration

Method: 1613/8290		Process Date: 09/26/2018				
Instrument Name: E-HRMS-08		Calibration File Name: P6-18092516131				
Processor Name: Gisela Cruz		Reviewer Name: Loan Luong				
Supervisor Signature: Kristin Neir						
Description		**Yes**	**No**	**NA**	**NR**	**ER#**
Analytical Sequence						
Does the analytical sequence summary accurately reflect the instrument run log, including ICV?		√				
Was a Mass Resolution Check performed at the beginning and end of the 12-hour sequence?		√				
Were all calibration standards and the ICV analyzed within the same 12-hour sequence?		√				
Were all calibration standards analyzed only once?		√				
Was the ICV analyzed after the ICAL, before analyzing samples?		√				
Mass Resolution Check						
Are beginning and ending resolution checks provided and legible?		√				
Were all target masses >10,000 resolving power at the beginning of the sequence?		√				
Were all target masses >10,000 resolving power at the end of the sequence?		√				
For PCB analysis, were masses at the low and high end of each function mass range >8,000?				√		
Where automatic printout of the mass resolution were not >10,000, was the resolution inspected by a trained analyst, including manual calculation of the resolution, if warranted?				√		
Window Define/209						
Is the window defining mix summary present, and accompanied by SICPs/Chromatograms for the WDM?		√				
Was the WDM/Column Performance/209 solution analyzed prior to the analysis of the calibration standards?		√				
Was 2,3,7,8-TCDD peak valley <25% to any other TCDD?		√				
Were all first and last eluters adequately resolved in each function?		√				
If first and last eluters were not resolved, was corrective action performed and documented, followed by a reanalysis of the WDM?				√		
Was the retention time of PCB 209 >55 min?				√		
Were the following congeners uniquely resolved (valley height <40% of the shortest peak)? PCB-34 and PCB-23 PCB-187 and PCB-182				√		
Did PCB 156/157 co-elute within 2 seconds at peak maximum?				√		
Calibration Standards						
Were there at least 5 calibration standards analyzed?		√				
If not all calibration standards were used, were the omitted standards either the lowest or highest calibration standard?				√		
Are all sample response summaries, S/N height summaries, and SICPs included (and legible) for the entire sequence?		√				

Laboratory Review Checklist: HRMS Initial Calibration

Method: 1613/8290		Process Date: 09/26/2018				
Instrument Name: E-HRMS-08		Calibration File Name: P6-180925161 3I				
Processor Name: Gisela Cruz		Reviewer Name: Loan Luong				
Supervisor Signature: Kristin Weir		Yes	No	NA	NR	ER#
Description						
Did each calibration point meet method criteria for Ion Abundance Ratio for all analytes and labeled standards?		√				
Did each calibration point meet method criteria for signal-to-noise ratios (S/N)?		√				
Were area counts for the highest calibration standard below levels of saturation?		√				
Were manual integrations technically justified to correct for poor software integration?				√		
Response Factors						
Is the ICAL Response Factor Summary present, including RR/RF values for each native/labeled analyte at each level of calibration?		√				
Were all calibration standards used in determining response factors?		√				
Were relative response factors (RR) for each native analyte calculated at each calibration point?		√				
Did the RSD for RRFs for each native analyte meet method criteria?		√				
Were response factors (RF) for each native analyte not having a corresponding labeled compound calculated at each calibration point?		√				
Were RFs for each labeled compound calculated for each calibration point?		√				
Did the RSD for RF for each labeled compound meet method criteria?		√				
Initial Calibration Verification						
Is the calibration verification present, including form 4A/B reflecting results for the ICV (Conc. or %D)		√				
Did all analytes meet method criteria for the ICV.		√				

Laboratory Review Checklist: Initial Calibration			
Method: 1613/8290		Process Date: 09/26/2018	
Instrument Name: E-HRMS-08		Calibration File Name: P6-180925161 3I	
Processor Name: Gisela Cruz		Reviewer Name: Loan Luong	
ER#[5]	**Description**		

NA = Not Applicable;
NR = Not Reviewed;
R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: TX01411 Episode No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm) Instrument ID: E-HRMS-08

Init. Calib. Date: 09/25/18

Init. Calib.Times: 12:13

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, SPIKES AND DUPLICATES IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
192977	WINDOW DEFINE	P614680	25-SEP-18	12:13:01
76554	CS0.5	P614682	25-SEP-18	14:18:27
82614	CS1	P614683	25-SEP-18	15:08:49
193434	CS2	P614684	25-SEP-18	15:59:37
76557	CS3	P614685	25-SEP-18	16:52:47
82167	CS4	P614686	25-SEP-18	17:41:03
185657	CS5	P614687	25-SEP-18	18:30:08
188969	2ND SOURCE	P614690	25-SEP-18	20:57:19

Sample List Report **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS08.PRO\SampleDB\20180925A.SPL
Last Modified: Wednesday, September 26, 2018 06:14:12 Central Daylight Time
Printed: Wednesday, September 26, 2018 06:14:14 Central Daylight Time

Page Position (1, 1)

OPUS4: P6-180925161 3I
P614690res

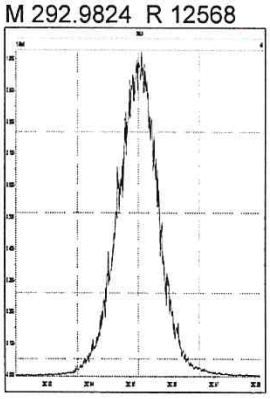
	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	9/25/18	12:13	P614680	192977	WINDOW DEFINE	EPA1613_ALS	Dioxin_ALS	Tray1:1	LG	HRMScheck 12:08
2		13:01	P614681	192807	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:2		
3		14:18	P614682	76554	CS0.5	EPA1613_ALS	Dioxin_ALS	Tray1:3		
4		15:08	P614683	82614	CS1	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		15:59	P614684	193434	CS2	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		16:52	P614685	76557	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		17:41	P614686	82167	CS4	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		18:30	P614687	185657	CS5	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		19:19	P614688	NONANE	NONANE	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		20:08	P614689	188969	2ND SOURCE	EPA1613_ALS	Dioxin_ALS	Tray1:10		Do not use
11		20:57	P614690	188969	2ND SOURCE	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		21:52	P614691	NONANE	NONANE	EPA1613_ALS	Dioxin_ALS	Tray1:12		HRMScheck 22:51
13	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:13	---	---
14	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:14	---	---
15	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:15	---	---
16	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:16	---	---
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:17	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:18	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---
21	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:21	---	---

LG 09/26/18

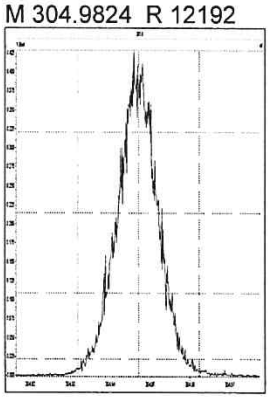
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Printed: Tuesday, September 25, 2018 12:08:26 Central Daylight Time

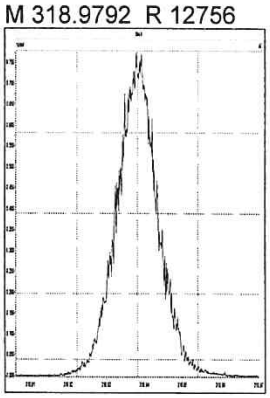
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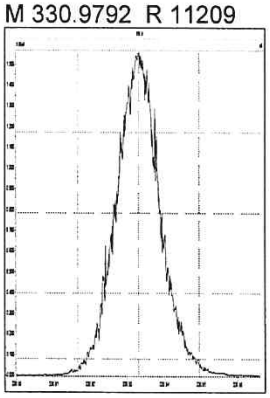
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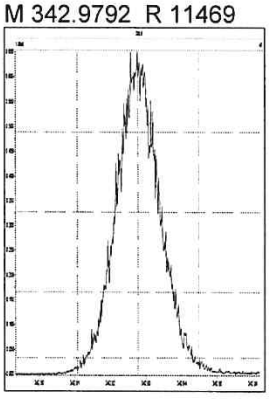
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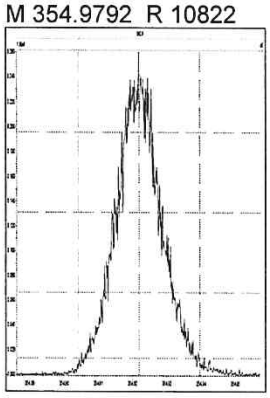
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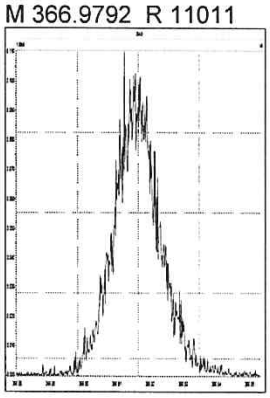
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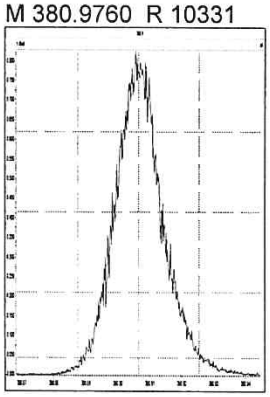
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M 366.9792 R 11011



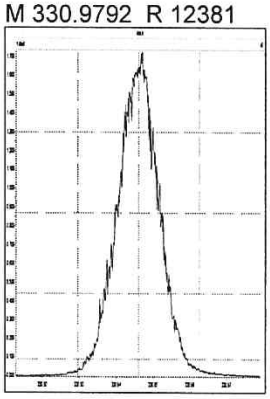
M 380.9760 R 10331



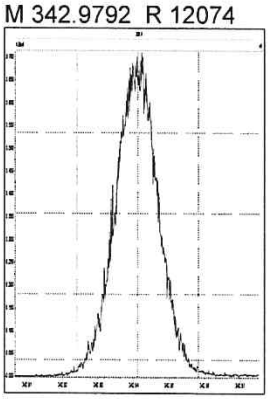
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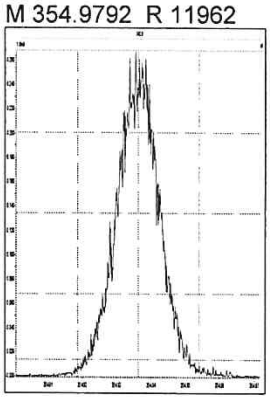
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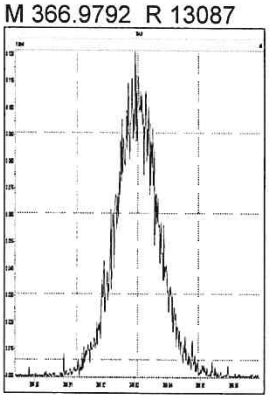
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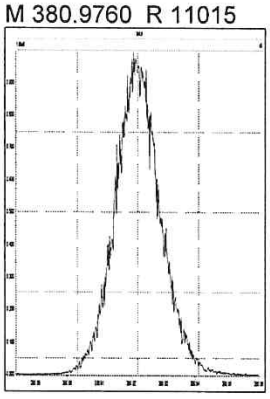
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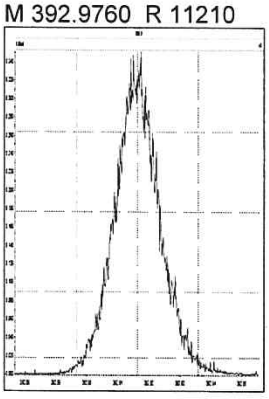
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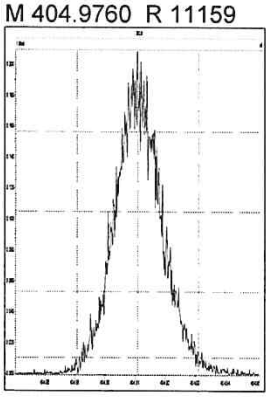
M 380.9760 R 11015



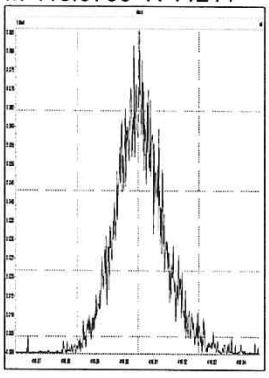
M 392.9760 R 11210



M 404.9760 R 11159



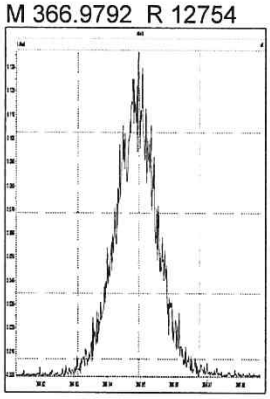
M 416.9760 R 11211



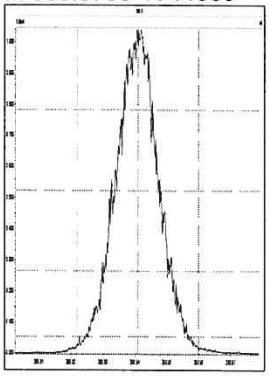
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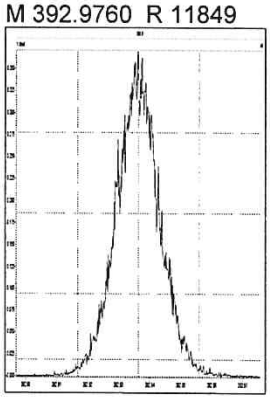
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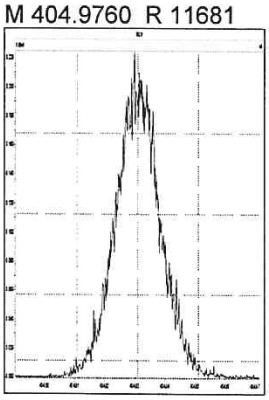
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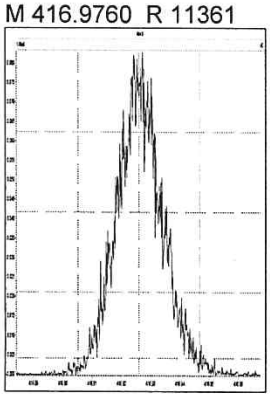
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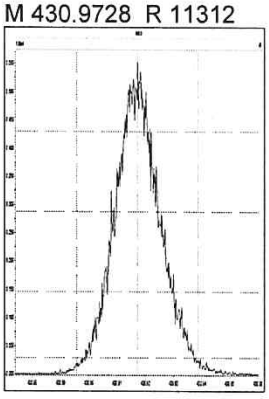
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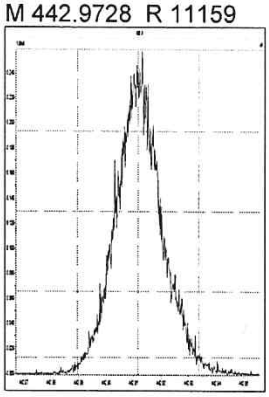
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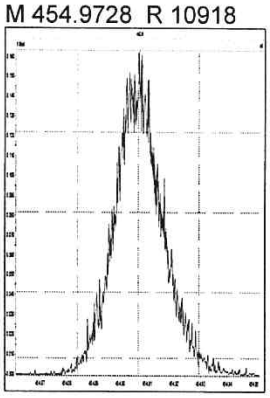
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M 442.9728 R 11159



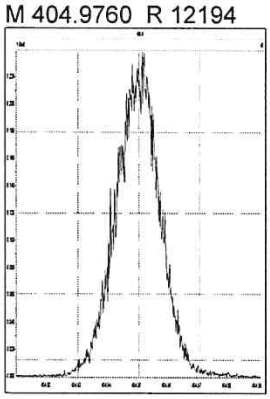
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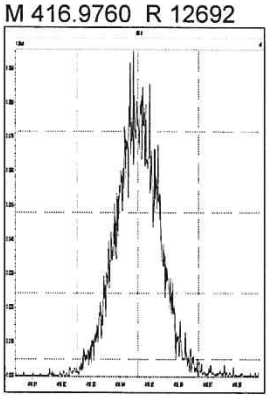
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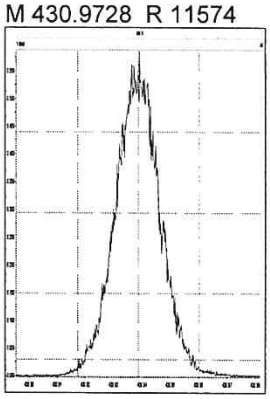
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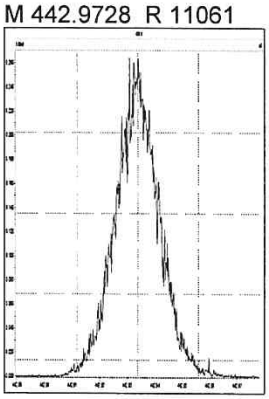
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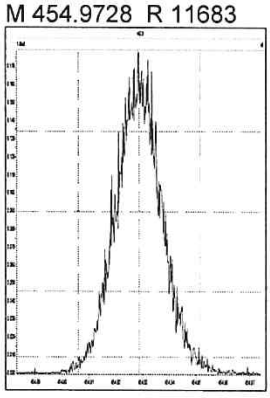
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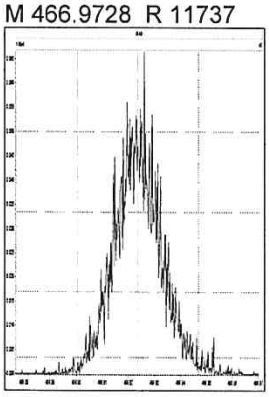
M 442.9728 R 11061



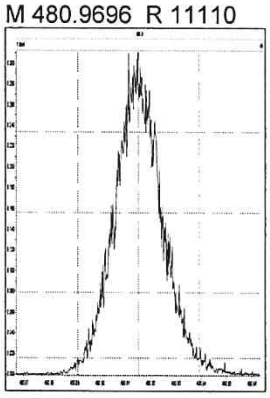
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M 466.9728 R 11737



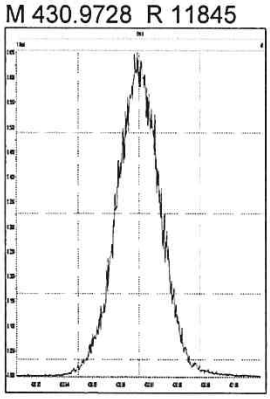
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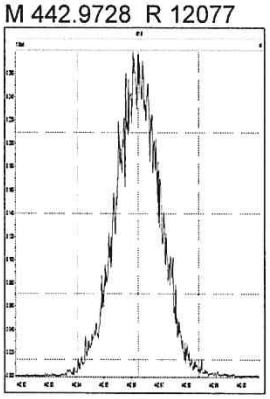
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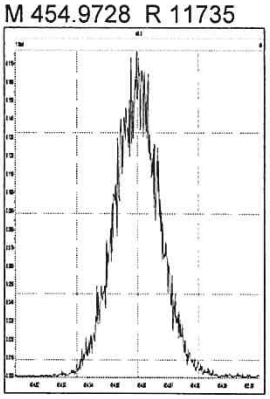
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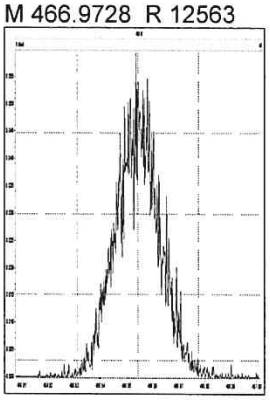
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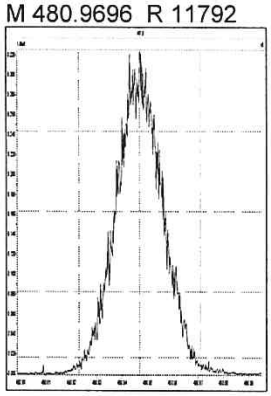
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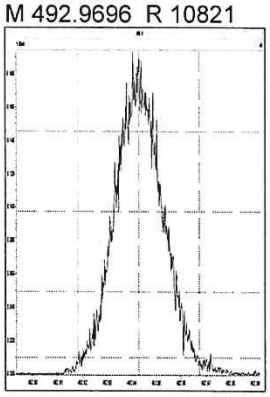
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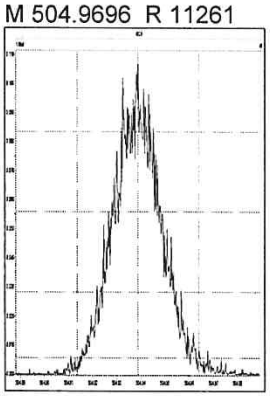
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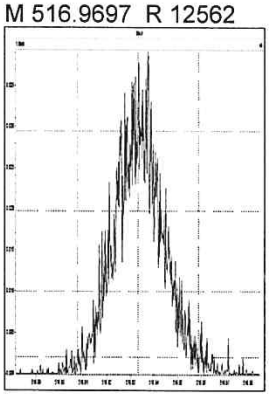
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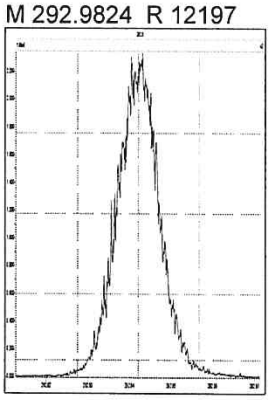
M 504.9696 R 11261



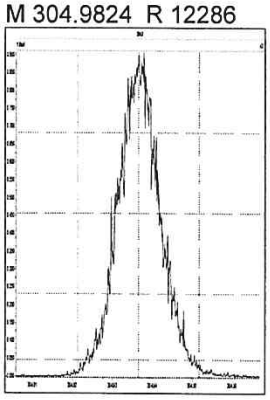
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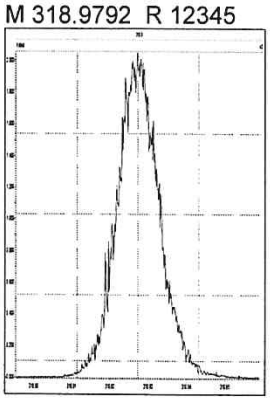
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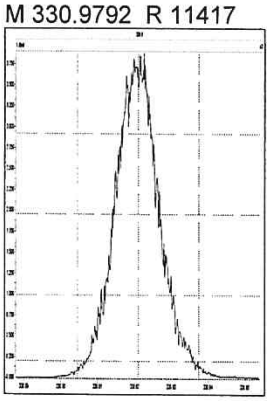
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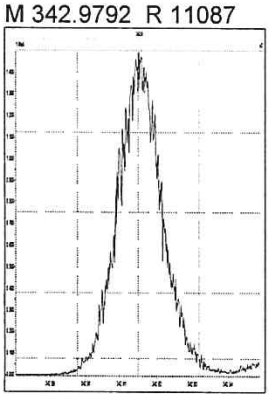
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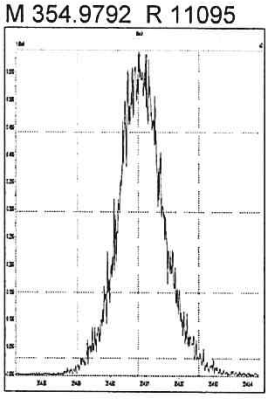
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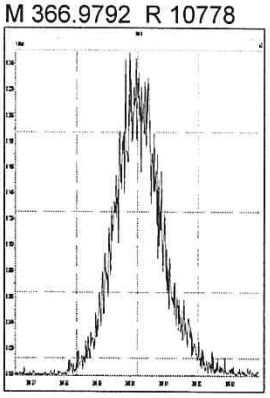
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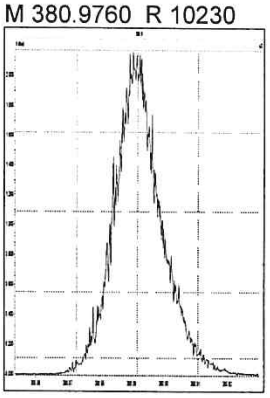
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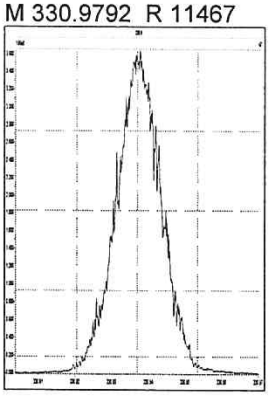
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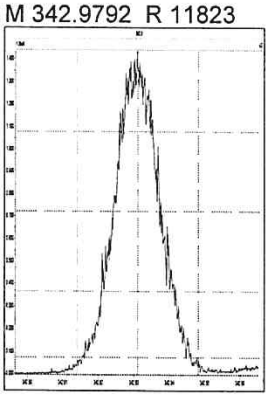
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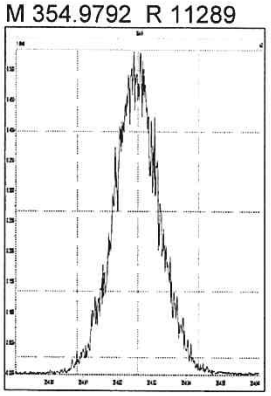
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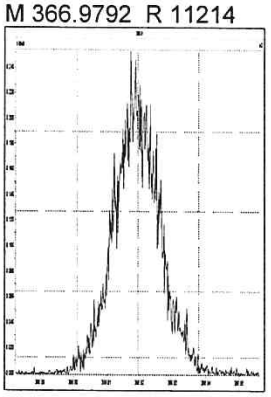
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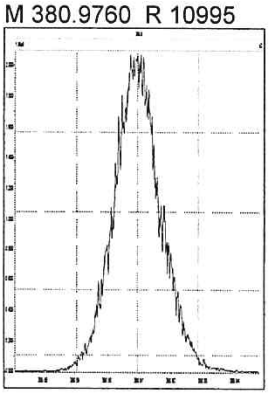
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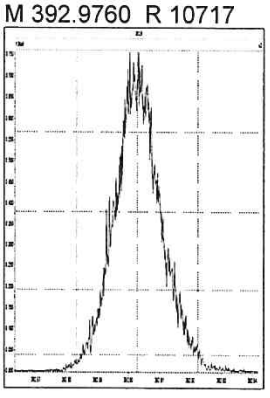
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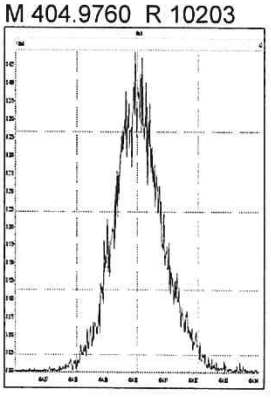
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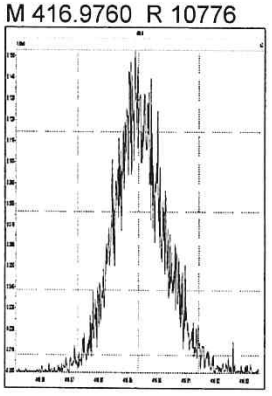
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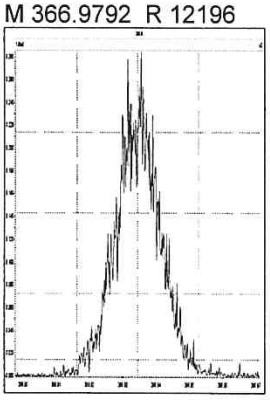
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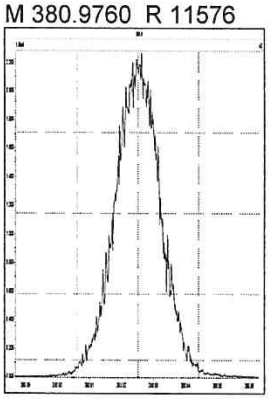
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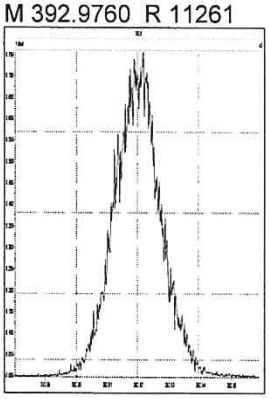
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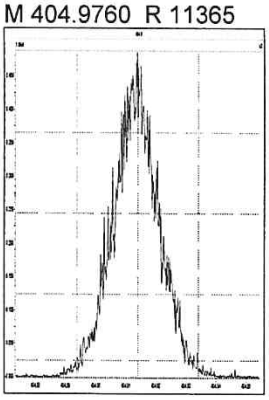
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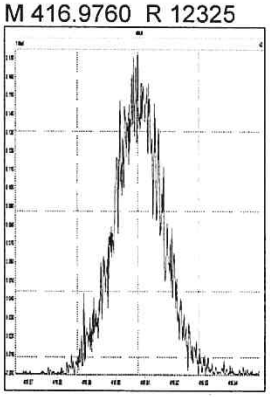
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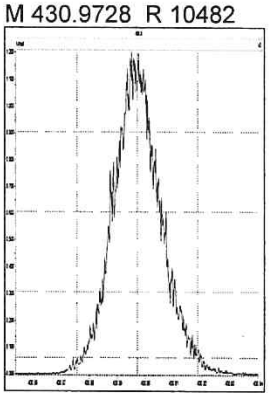
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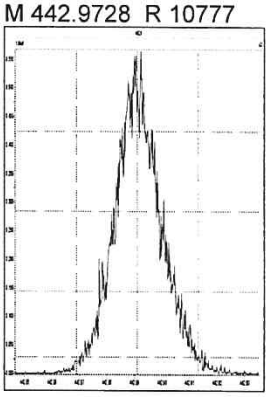
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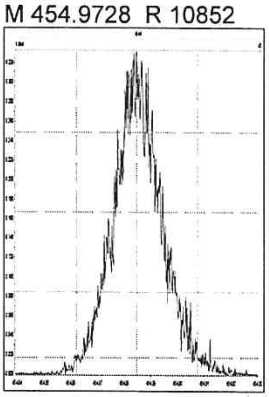
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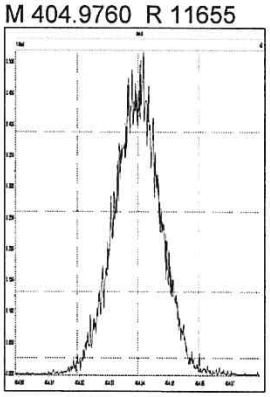
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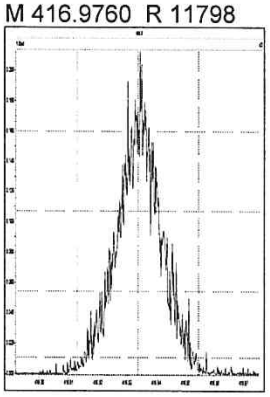
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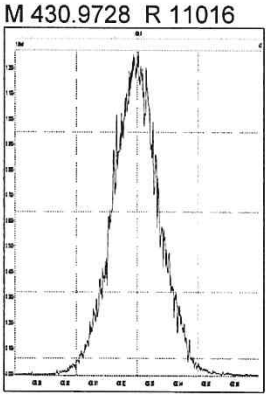
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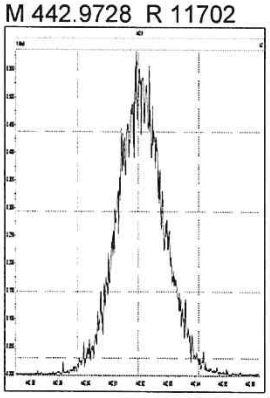
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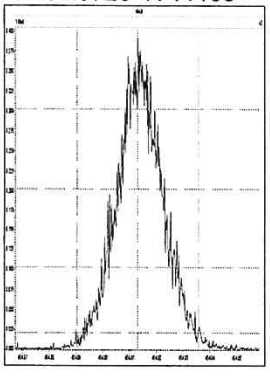
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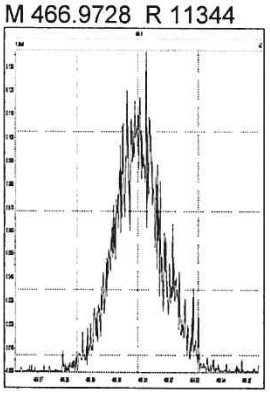
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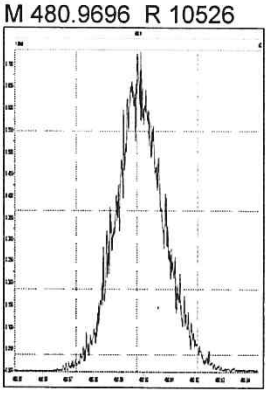
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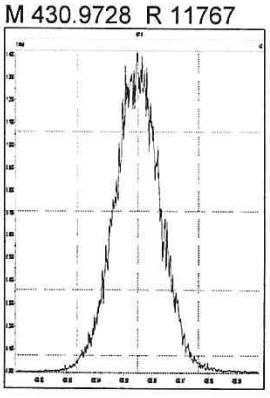
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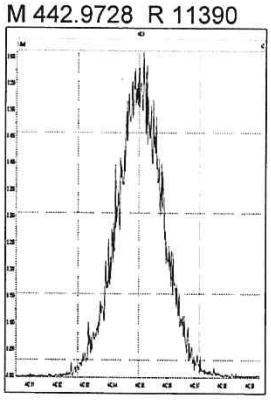
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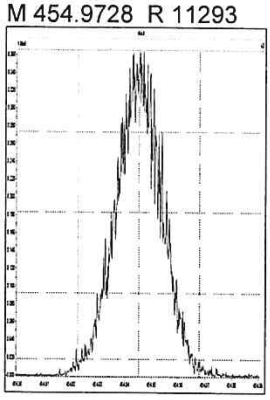
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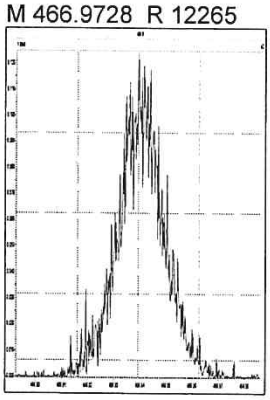
M 442.9728 R 11390



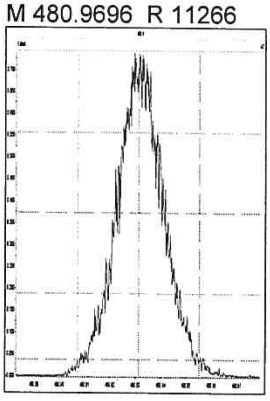
M 454.9728 R 11293



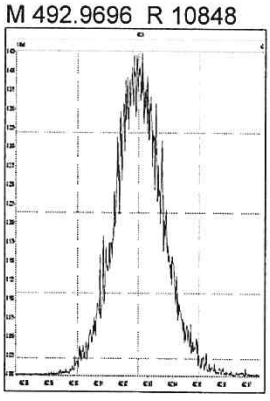
M 466.9728 R 12265



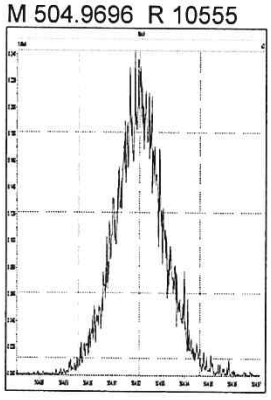
M 480.9696 R 11266



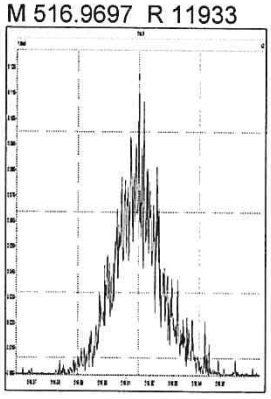
M 492.9696 R 10848



M 504.9696 R 10555



M 516.9697 R 11933



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

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

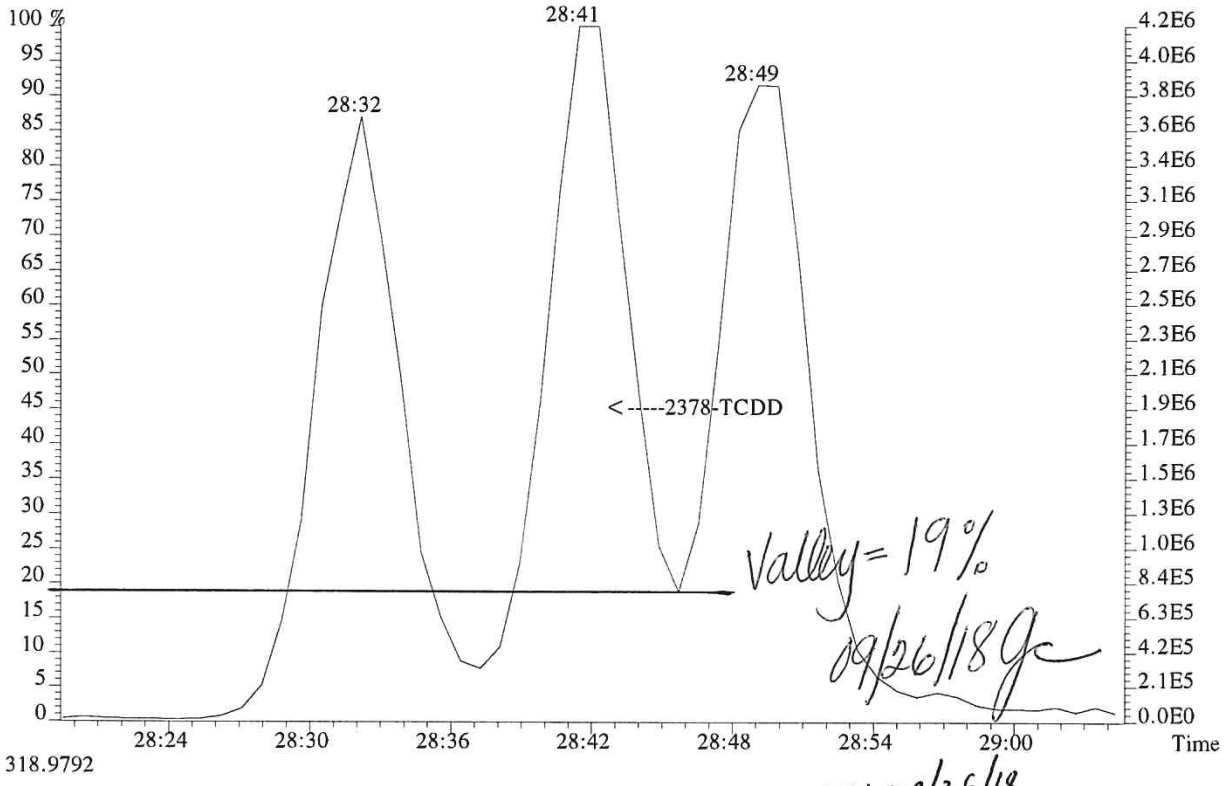
Case No.: _____ SDG No.:
ID: 0.25 (mm)

Lab File ID: P614680
Date Analyzed: 25-SEP-18
Time Analyzed: 12:13:01

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	23:28	29:52
TCDD	25:18	29:42
PeCDF	29:48	34:04
PeCDD	31:21	33:49
HxCDF	34:43	37:12
HxCDD	35:14	36:49
HpCDF	38:24	39:46
HpCDD	38:39	39:18

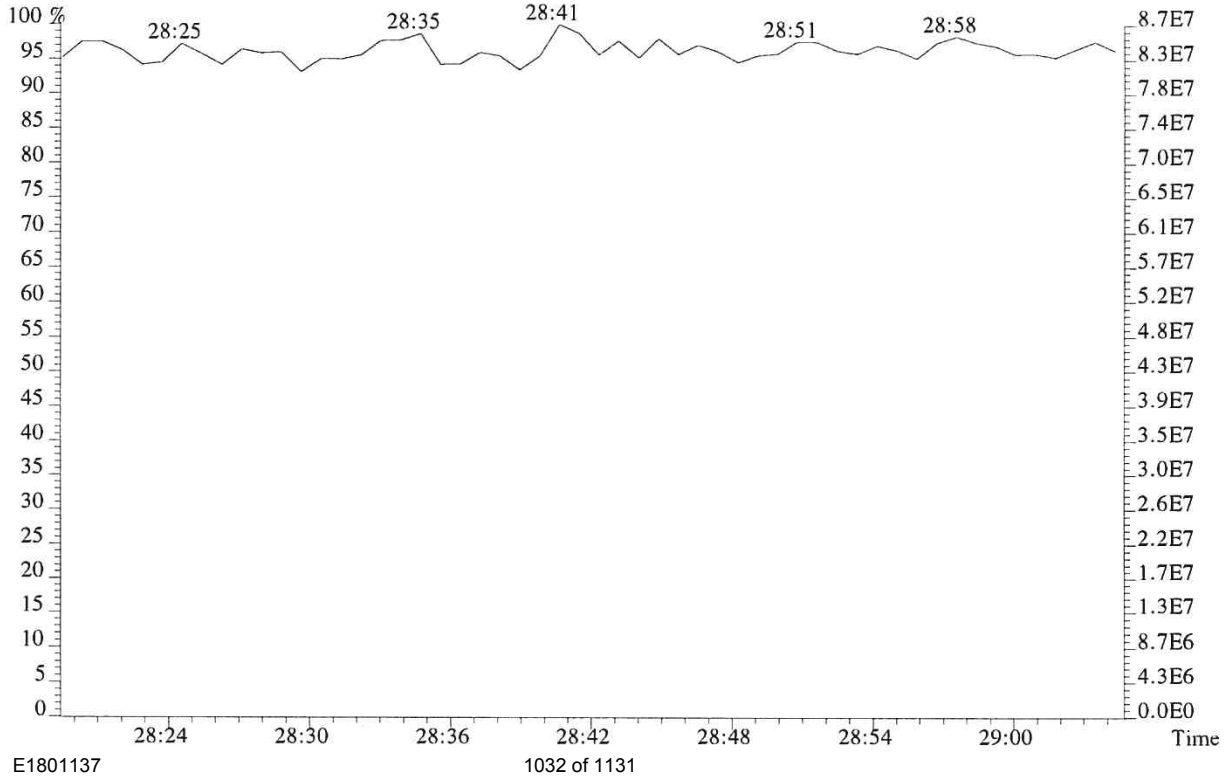
% Valley 2378-TCDD: 19 %

File:P614680 #1-552 Acq:25-SEP-2018 12:13:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
319.8965



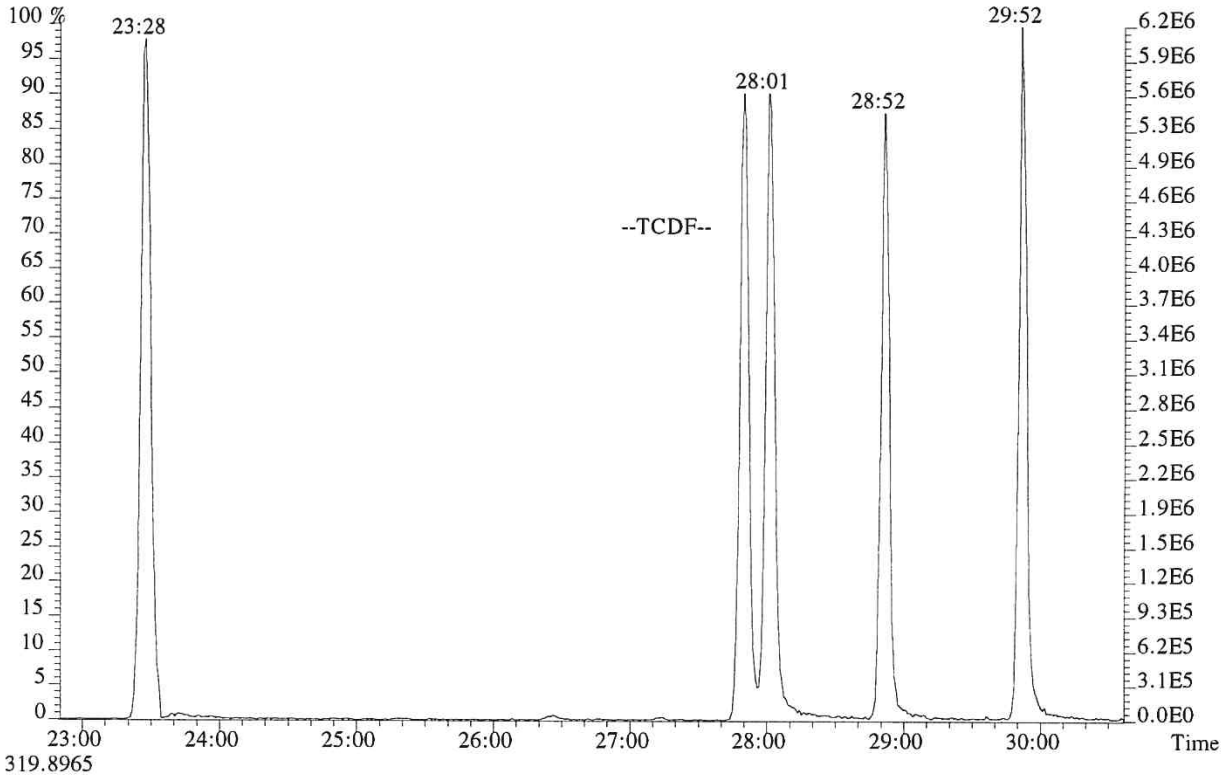
318.9792

LKL 09/26/18

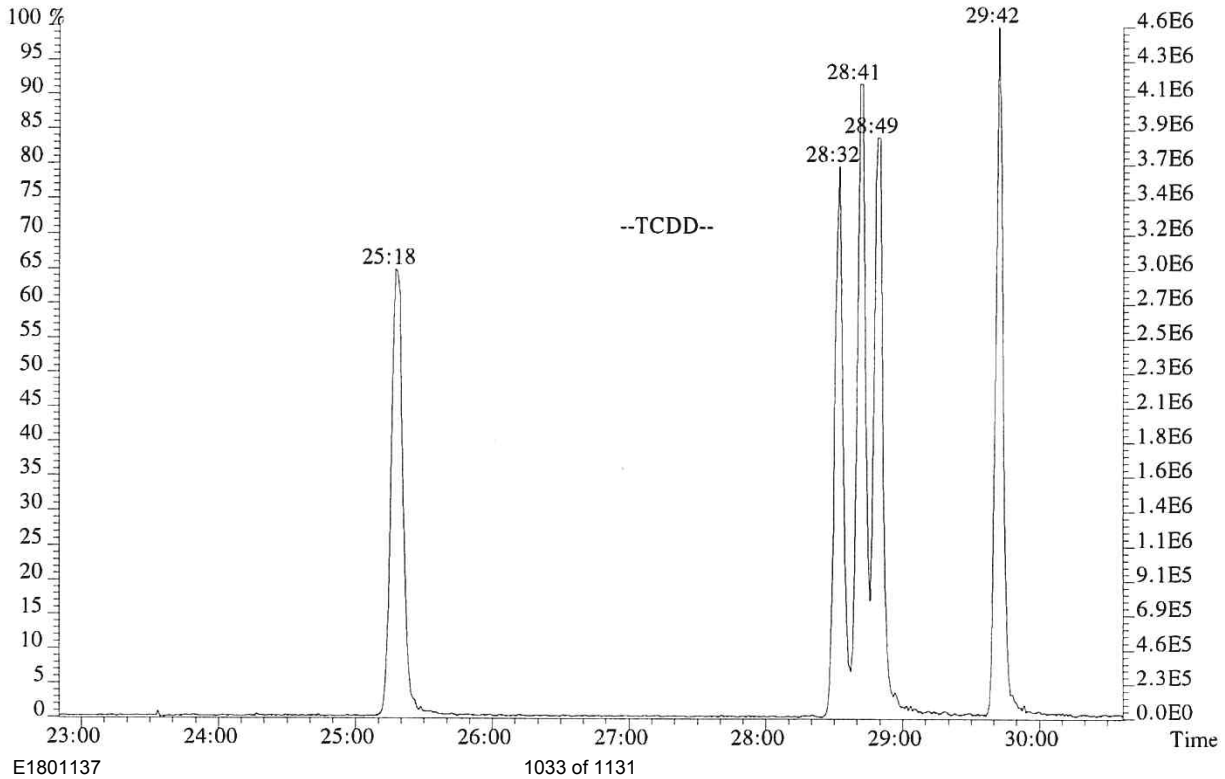


016782

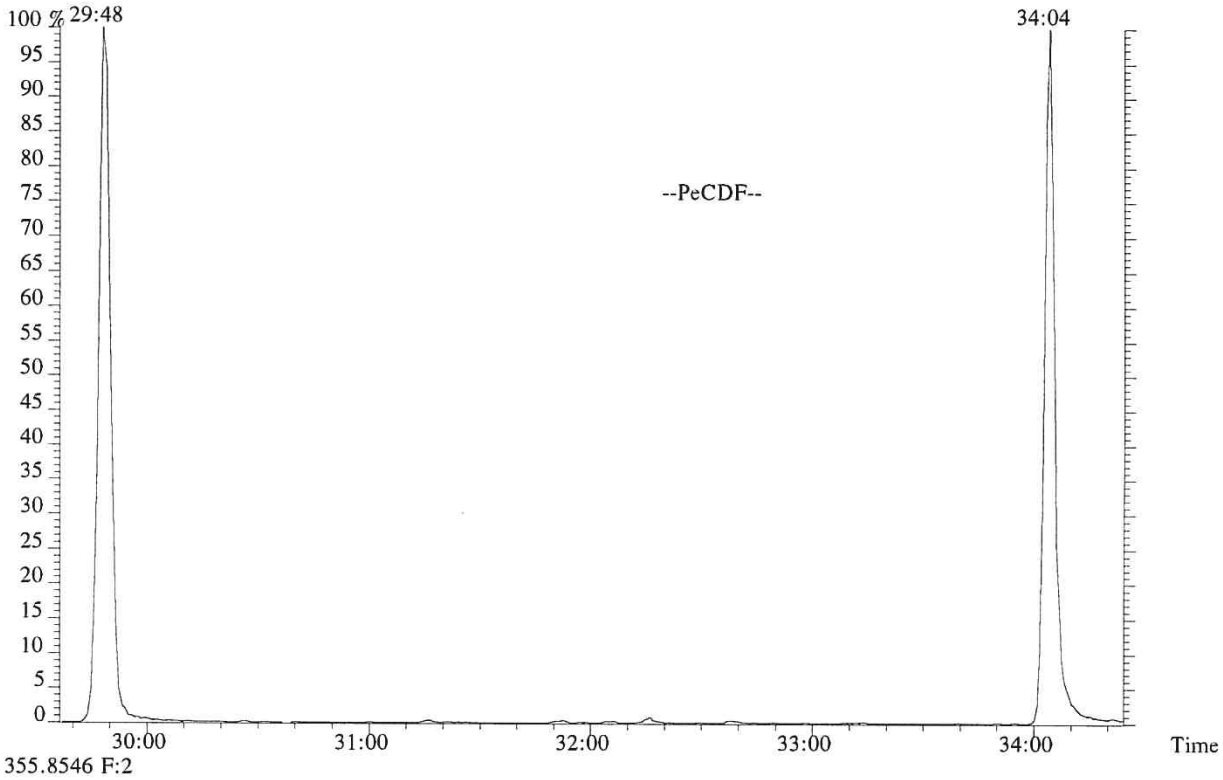
File:P614680 #1-552 Acq:25-SEP-2018 12:13:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
303.9016



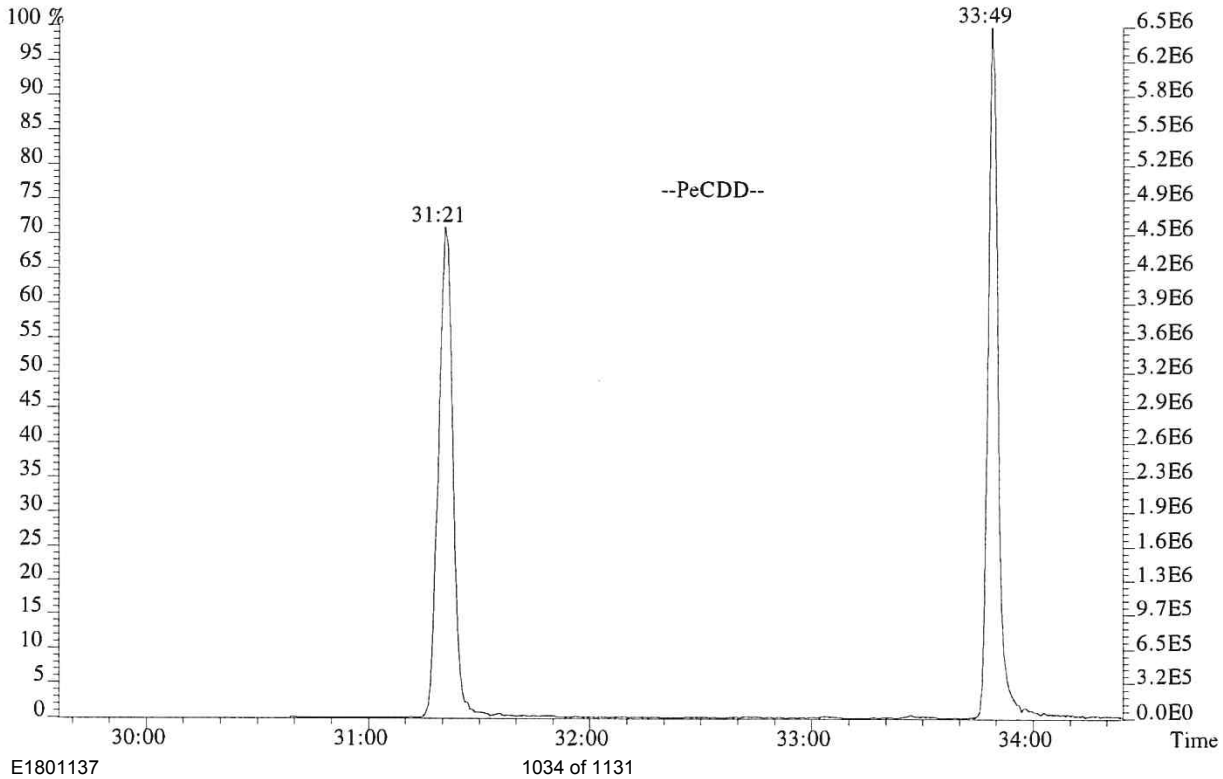
319.8965



File:P614680 #1-552 Acq:25-SEP-2018 12:13:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
339.8597,339.8597 F:2

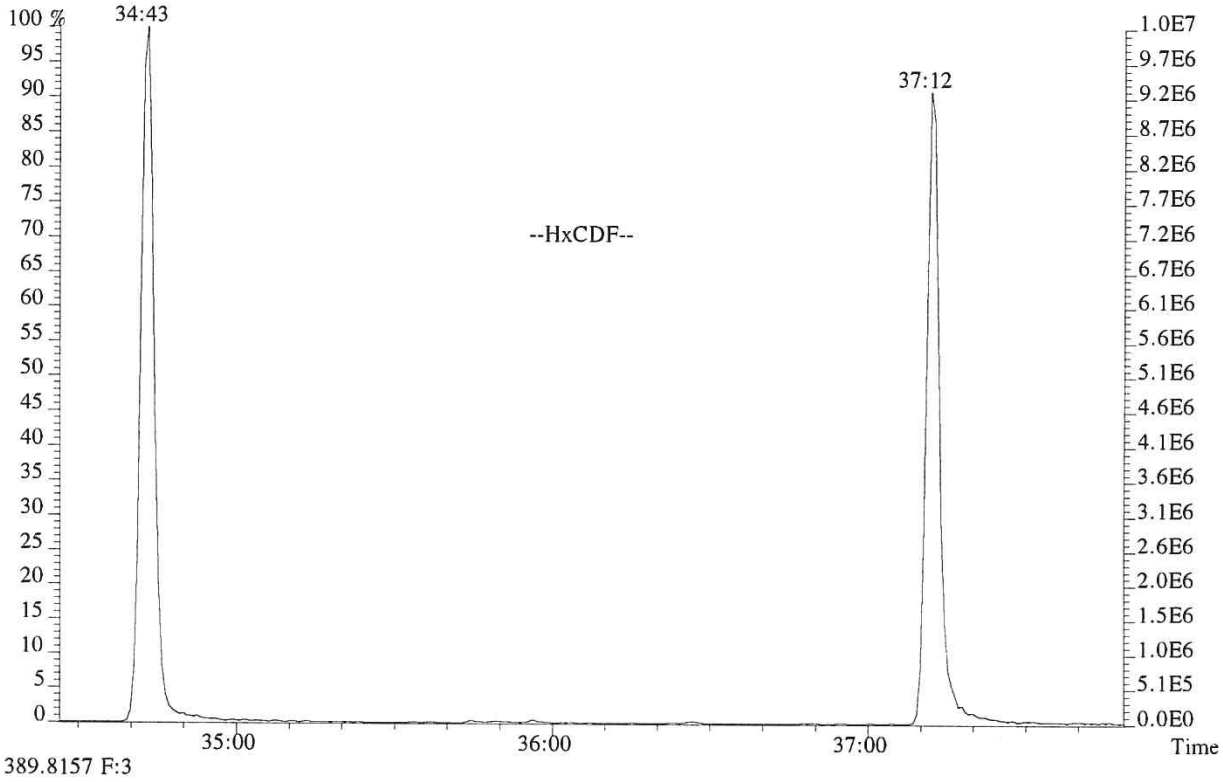


355.8546 F:2

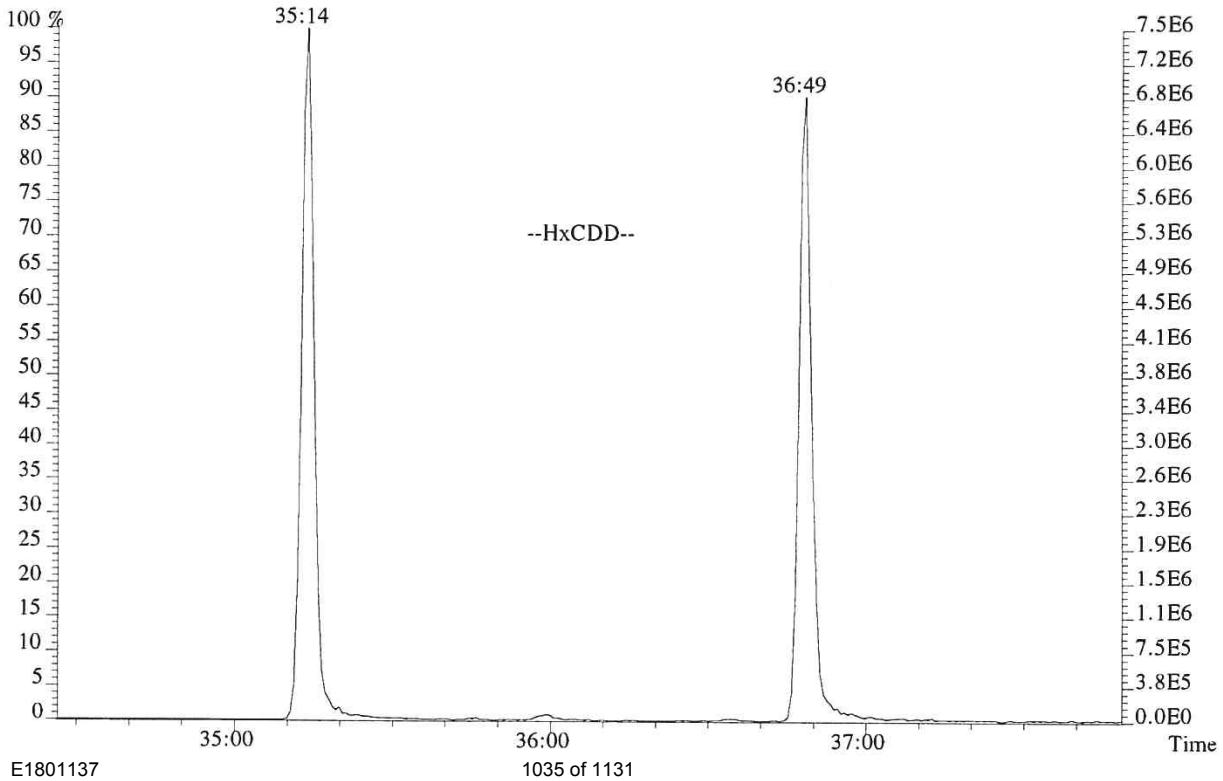


016784

File:P614680 #1-304 Acq:25-SEP-2018 12:13:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
373.8208 F:3

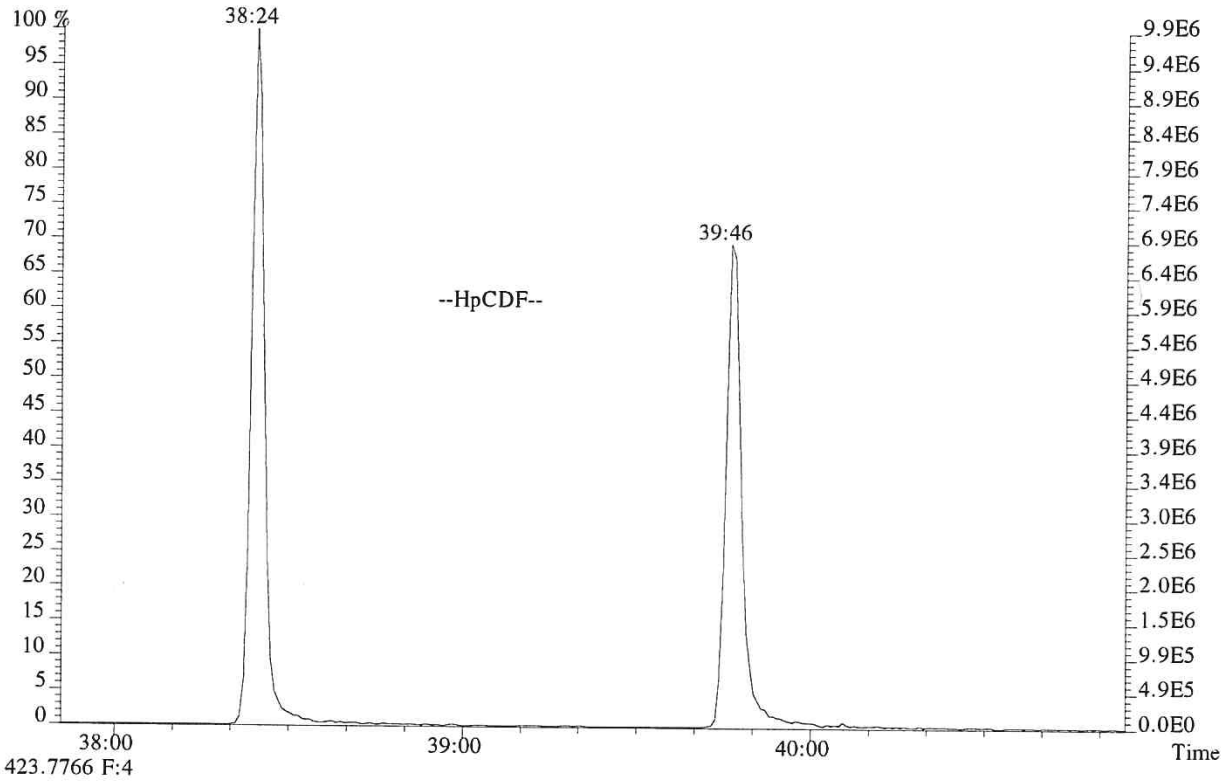


389.8157 F:3

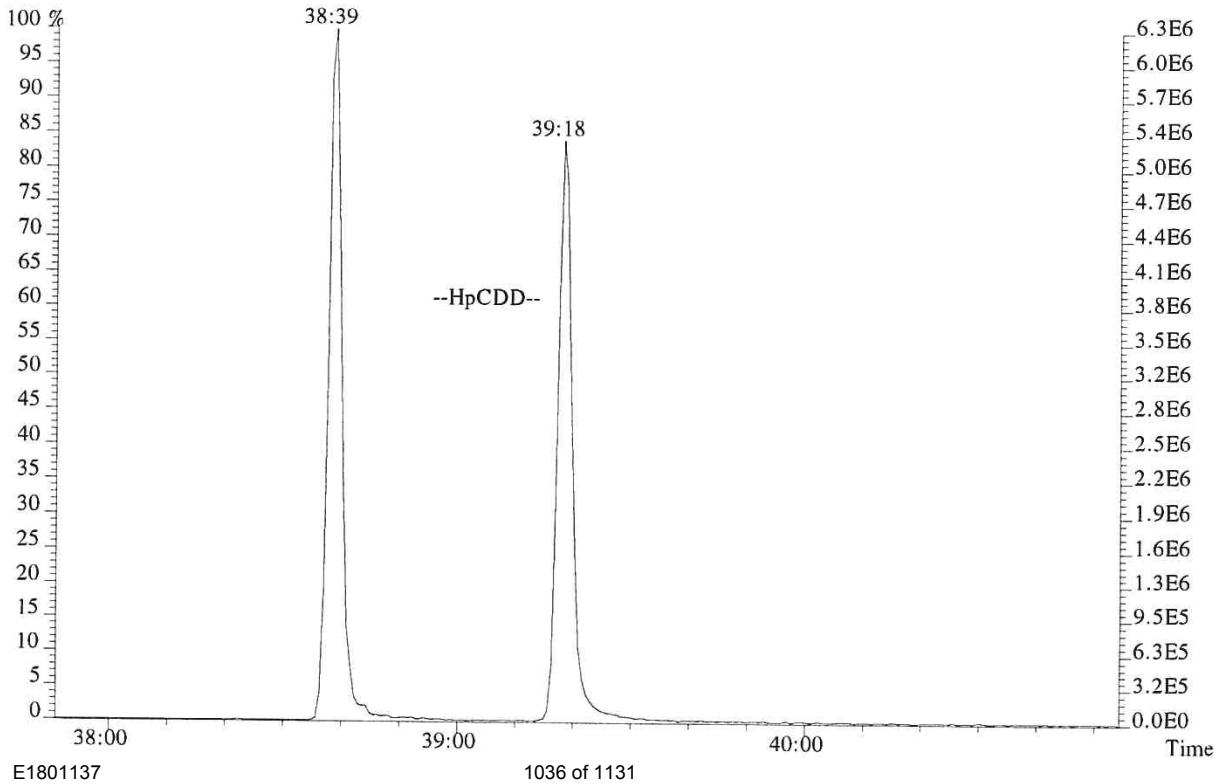


016785

File:P614680 #1-276 Acq:25-SEP-2018 12:13:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
407.7818 F:4



423.7766 F:4



016786

USEPA - CLP
6DFA6
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name: ALS Environmental Contract No.:
Lab Code: ALSTX Case No.: TO No.: SDG No.:
GC Column: DB-5MSUI ID: 0.25(mm) Instrument ID: E-HRMS-08
Init. Calib. Date(s).: 09/25/18 Method 1613/8290
Init. Calib. Time.: 12:13

	RR/RRF						MEAN		
Target Analytes	CS0.5	CS1	CS2	CS3	CS4	CS5	RR/RRF	%RSD	QC LIMITS
2,3,7,8-TCDD	1.15	1.00	1.00	1.03	1.05	1.06	1.05	5.38	+/-20%
2,3,7,8-TCDF	1.13	1.08	1.12	1.05	1.06	1.05	1.08	3.07	+/-20%
1,2,3,7,8-PeCDF	1.16	1.17	1.12	1.15	1.16	1.18	1.16	1.72	+/-20%
1,2,3,7,8-PeCDD	0.89	0.95	0.95	0.91	0.93	0.93	0.93	2.61	+/-20%
2,3,4,7,8-PeCDF	1.10	1.13	1.10	1.08	1.10	1.11	1.10	1.49	+/-20%
1,2,3,4,7,8-HxCDF	1.47	1.46	1.39	1.36	1.38	1.42	1.42	3.10	+/-20%
1,2,3,6,7,8-HxCDF	1.27	1.36	1.30	1.28	1.28	1.28	1.29	2.52	+/-20%
1,2,3,4,7,8-HxCDD	1.11	1.11	1.04	1.06	1.05	1.06	1.07	3.00	+/-20%
1,2,3,6,7,8-HxCDD	1.06	1.07	1.06	1.06	1.06	1.05	1.06	0.70	+/-20%
1,2,3,7,8,9-HxCDD	1.17	1.18	1.12	1.13	1.14	1.12	1.15	2.24	+/-20%
2,3,4,6,7,8-HxCDF	1.27	1.32	1.29	1.28	1.27	1.27	1.28	1.52	+/-20%
1,2,3,7,8,9-HxCDF	1.34	1.34	1.29	1.30	1.30	1.30	1.31	1.68	+/-20%
1,2,3,4,6,7,8-HpCDF	1.56	1.60	1.46	1.50	1.51	1.51	1.52	3.15	+/-20%
1,2,3,4,6,7,8-HpCDD	1.14	1.13	1.09	1.10	1.10	1.11	1.11	1.85	+/-20%
1,2,3,4,7,8,9-HpCDF	1.47	1.54	1.46	1.45	1.43	1.43	1.46	2.80	+/-20%
OCDD	1.22	1.21	1.10	1.14	1.14	1.14	1.16	4.23	+/-20%
OCDF	1.60	1.61	1.49	1.57	1.57	1.59	1.57	2.60	+/-20%
Labeled Compounds									
13C-2,3,7,8-TCDD	0.96	0.98	0.97	0.97	1.00	1.01	0.98	2.13	+/-35%
13C-1,2,3,7,8-PeCDD	1.09	1.05	1.16	1.13	1.16	1.15	1.12	3.77	+/-35%
13C-1,2,3,4,7,8-HxCDD	0.91	0.90	0.91	0.90	0.90	0.89	0.90	0.67	+/-35%
13C-1,2,3,6,7,8-HxCDD	0.92	0.92	0.89	0.89	0.91	0.90	0.90	1.52	+/-35%
13C-1,2,3,4,6,7,8-HpCDD	0.86	0.88	0.85	0.86	0.84	0.84	0.86	1.91	+/-35%
13C-OCDD	0.65	0.69	0.65	0.67	0.65	0.65	0.66	2.45	+/-35%
13C-2,3,7,8-TCDF	1.40	1.41	1.42	1.44	1.40	1.43	1.42	1.24	+/-35%
13C-1,2,3,7,8-PeCDF	1.52	1.54	1.61	1.61	1.65	1.63	1.60	3.24	+/-35%
13C-2,3,4,7,8-PeCDF	1.52	1.49	1.60	1.57	1.63	1.61	1.57	3.42	+/-35%
13C-1,2,3,4,7,8-HxCDF	1.18	1.19	1.14	1.21	1.18	1.06	1.16	4.58	+/-35%
13C-1,2,3,6,7,8-HxCDF	1.39	1.34	1.33	1.35	1.31	1.29	1.34	2.46	+/-35%
13C-2,3,4,6,7,8-HxCDF	1.27	1.25	1.24	1.24	1.25	1.24	1.25	1.06	+/-35%
13C-1,2,3,7,8,9-HxCDF	1.13	1.13	1.12	1.15	1.15	1.10	1.13	1.66	+/-35%
13C-1,2,3,4,6,7,8-HpCDF	1.04	1.06	1.02	1.04	1.01	1.01	1.03	1.93	+/-35%
13C-1,2,3,4,7,8,9-HpCDF	0.94	0.95	0.90	0.86	0.90	0.88	0.91	3.64	+/-35%
37Cl-2,3,7,8-TCDD	1.06	1.11	1.07	1.05	1.11	1.13	1.09	3.15	+/-35%

1.123789-HxCDD Relative Response (RR) is calculated based on the labeled analog of the other two HxCDDs.
2. OCDF RR is calculated based on the labeled analog of OCDD

USEPA - CLP

6DFB6

CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY

HIGH RESOLUTION

Lab Name: ALS Environmental Contract No.:
Lab Code: ALSTX Case No.: TO No.: SDG No.:
GC Column: DB-5MSUI ID: 0.25(mm) Instrument ID: E-HRMS-08
Init. Calib. Date(s).: 09/25/18 Method 1613/8290
Init. Calib. Time.: 12:13

Target Analytes	SELECTED IONS	ION ABUNDANCE RATIO CS0.5	CS1	CS2	CS3	CS4	CS5	FLAG	ION RATIO QC lIMITS
2,3,7,8-TCDF	304/306	0.75	0.75	0.83	0.80	0.79	0.80		0.65-0.89
2,3,7,8-TCDD	320/322	0.78	0.83	0.80	0.78	0.79	0.77		0.65-0.89
1,2,3,7,8-PeCDF	340/342	1.65	1.58	1.57	1.58	1.60	1.60		1.32-1.78
2,3,4,7,8-PeCDF	340/342	1.57	1.61	1.57	1.58	1.59	1.59		1.32-1.78
1,2,3,7,8-PeCDD	356/358	1.56	1.52	1.53	1.55	1.55	1.57		1.32-1.78
1,2,3,4,7,8-HxCDF	374/376	1.26	1.29	1.25	1.26	1.28	1.29		1.05-1.43
1,2,3,6,7,8-HxCDF	374/376	1.29	1.24	1.25	1.27	1.27	1.27		1.05-1.43
2,3,4,6,7,8-HxCDF	374/376	1.29	1.25	1.28	1.28	1.26	1.26		1.05-1.43
1,2,3,7,8,9-HxCDF	374/376	1.22	1.29	1.23	1.28	1.28	1.27		1.05-1.43
1,2,3,4,7,8-HxCDD	390/392	1.21	1.20	1.26	1.33	1.26	1.27		1.05-1.43
1,2,3,6,7,8-HxCDD	390/392	1.41	1.27	1.25	1.23	1.27	1.26		1.05-1.43
1,2,3,7,8,9-HxCDD	390/392	1.20	1.22	1.25	1.24	1.27	1.26		1.05-1.43
1,2,3,4,6,7,8-HpCDF	408/410	1.04	1.02	1.06	1.05	1.04	1.05		0.88-1.20
1,2,3,4,7,8,9-HpCDF	408/410	0.89	1.07	1.05	1.04	1.05	1.05		0.88-1.20
1,2,3,4,6,7,8-HpCDD	424/426	1.10	1.07	1.07	1.06	1.06	1.06		0.88-1.20
OCDF	442/444	0.90	0.87	0.91	0.92	0.93	0.92		0.76-1.02
OCDD	458/460	0.93	0.89	0.88	0.90	0.90	0.90		0.76-1.02
13C-2,3,7,8-TCDD	332/334	0.79	0.80	0.80	0.80	0.80	0.79		0.65-0.89
13C-1,2,3,7,8-PeCDD	368/370	1.58	1.58	1.57	1.58	1.56	1.57		1.32-1.78
13C-1,2,3,4,7,8-HxCDD	402/404	1.27	1.26	1.26	1.32	1.25	1.26		1.05-1.43
13C-1,2,3,6,7,8-HxCDD	402/404	1.27	1.26	1.26	1.20	1.25	1.26		1.05-1.43
13C-1,2,3,4,6,7,8-HpCDD	436/438	1.06	1.06	1.04	1.06	1.05	1.05		0.88-1.20
13C-OCDD	470/472	0.90	0.90	0.90	0.91	0.90	0.89		0.76-1.02
13C-2,3,7,8-TCDF	316/318	0.78	0.80	0.79	0.79	0.79	0.79		0.65-0.89
13C-1,2,3,7,8-PeCDF	352/354	1.61	1.62	1.60	1.60	1.60	1.60		1.32-1.78
13C-2,3,4,7,8-PeCDF	352/354	1.59	1.59	1.62	1.61	1.59	1.61		1.32-1.78
13C-1,2,3,4,7,8-HxCDF	384/386	0.54	0.53	0.53	0.53	0.53	0.54		0.43-0.59
13C-1,2,3,6,7,8-HxCDF	384/386	0.53	0.54	0.53	0.54	0.54	0.54		0.43-0.59
13C-2,3,4,6,7,8-HxCDF	384/386	0.54	0.54	0.53	0.54	0.54	0.53		0.43-0.59
13C-1,2,3,7,8,9-HxCDF	384/386	0.52	0.53	0.53	0.54	0.53	0.53		0.43-0.59
13C-1,2,3,4,6,7,8-HpCDF	418/420	0.46	0.46	0.46	0.46	0.46	0.46		0.37-0.51
13C-1,2,3,4,7,8,9-HpCDF	418/420	0.46	0.46	0.45	0.46	0.45	0.46		0.37-0.51
13C-1,2,3,4-TCDD	332/334	0.81	0.81	0.81	0.80	0.79	0.81		0.65-0.89
13C-1,2,3,7,8,9-HxCDD	402/404	1.24	1.26	1.26	1.24	1.25	1.25		1.05-1.43

Quality Control (QC) limits represent +/- 15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76554

Run #1 Filename P614682 Samp: 1 Inj: 1 Acquired: 25-SEP-18 14:18:27
Processed: 26-SEP-18 07:39:04 Sample ID: CS0.5

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:01	3.991e+02	5.332e+02	0.75	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:15	3.245e+03	1.970e+03	1.65	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:10	3.017e+03	1.917e+03	1.57	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	2.964e+03	2.360e+03	1.26	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	3.032e+03	2.349e+03	1.29	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	2.788e+03	2.154e+03	1.29	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:10	2.544e+03	2.080e+03	1.22	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	2.520e+03	2.421e+03	1.04	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	1.988e+03	2.226e+03	0.89	yes	no	1.463
10	Unk	OCDF	42:13	3.006e+03	3.322e+03	0.90	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:49	2.873e+02	3.690e+02	0.78	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	1.757e+03	1.126e+03	1.56	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	1.695e+03	1.402e+03	1.21	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:39	1.736e+03	1.234e+03	1.41	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:53	1.790e+03	1.494e+03	1.20	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	1.575e+03	1.438e+03	1.10	yes	no	1.112
17	Unk	OCDD	42:01	2.333e+03	2.510e+03	0.93	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	28:00	1.453e+05	1.860e+05	0.78	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	2.225e+05	1.378e+05	1.61	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	2.208e+05	1.389e+05	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:49	1.017e+05	1.873e+05	0.54	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:55	1.172e+05	2.227e+05	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:25	1.097e+05	2.020e+05	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	9.463e+04	1.814e+05	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:24	7.990e+04	1.736e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:46	7.243e+04	1.569e+05	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	1.005e+05	1.270e+05	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:26	1.588e+05	1.004e+05	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:33	1.251e+05	9.838e+04	1.27	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:38	1.252e+05	9.893e+04	1.27	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:18	1.083e+05	1.026e+05	1.06	yes	no	0.857
32	IS	13C-OCDD	42:01	1.503e+05	1.668e+05	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:14	1.058e+05	1.311e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:52	1.355e+05	1.094e+05	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:49	6.272e+02				no	1.086

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Signal/Noise Height Ratio Summary

CLIENT ID.
76554

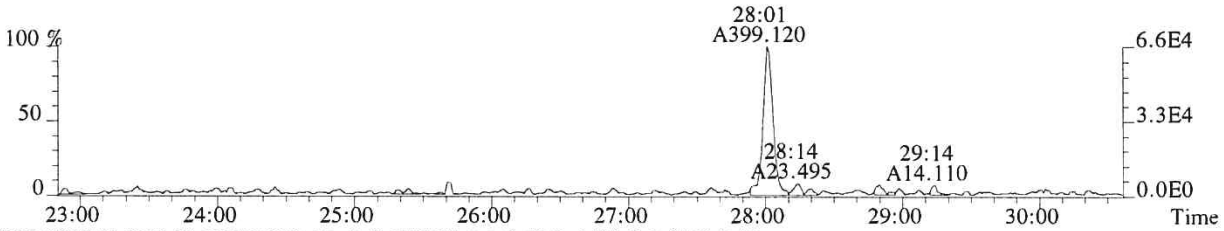
Run #1 Filename P614682 Samp: 1 Inj: 1 Acquired: 25-SEP-18 14:18:27
Processed: 26-SEP-18 07:39:04 LAB. ID: CS0.5

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.55e+04	1.79e+03	3.7e+01	1.00e+05	4.41e+03	2.3e+01
2	1,2,3,7,8-PeCDF	5.99e+05	1.18e+03	5.1e+02	3.57e+05	4.28e+03	8.3e+01
3	2,3,4,7,8-PeCDF	5.69e+05	1.18e+03	4.8e+02	3.70e+05	4.28e+03	8.7e+01
4	1,2,3,4,7,8-HxCDF	6.38e+05	3.25e+03	2.0e+02	4.85e+05	1.42e+03	3.4e+02
5	1,2,3,6,7,8-HxCDF	6.38e+05	3.25e+03	2.0e+02	4.95e+05	1.42e+03	3.5e+02
6	2,3,4,6,7,8-HxCDF	6.03e+05	3.25e+03	1.9e+02	4.83e+05	1.42e+03	3.4e+02
7	1,2,3,7,8,9-HxCDF	4.97e+05	3.25e+03	1.5e+02	4.13e+05	1.42e+03	2.9e+02
8	1,2,3,4,6,7,8-HpCDF	5.62e+05	1.66e+03	3.4e+02	5.47e+05	1.04e+03	5.3e+02
9	1,2,3,4,7,8,9-HpCDF	4.02e+05	1.66e+03	2.4e+02	4.51e+05	1.04e+03	4.3e+02
10	OCDF	5.23e+05	1.34e+03	3.9e+02	5.81e+05	4.02e+03	1.4e+02
11	2,3,7,8-TCDD	6.18e+04	5.07e+03	1.2e+01	6.68e+04	2.40e+03	2.8e+01
12	1,2,3,7,8-PeCDD	3.47e+05	2.36e+03	1.5e+02	2.20e+05	2.64e+02	8.3e+02
13	1,2,3,4,7,8-HxCDD	3.95e+05	1.84e+03	2.1e+02	3.18e+05	1.66e+03	1.9e+02
14	1,2,3,6,7,8-HxCDD	3.64e+05	1.84e+03	2.0e+02	2.60e+05	1.66e+03	1.6e+02
15	1,2,3,7,8,9-HxCDD	4.06e+05	1.84e+03	2.2e+02	3.23e+05	1.66e+03	1.9e+02
16	1,2,3,4,6,7,8-HpCDD	3.19e+05	2.32e+03	1.4e+02	3.31e+05	1.19e+03	2.8e+02
17	OCDD	4.28e+05	8.48e+02	5.0e+02	4.37e+05	1.30e+03	3.4e+02
18	13C-2,3,7,8-TCDF	2.54e+07	1.52e+04	1.7e+03	3.22e+07	1.06e+04	3.1e+03
19	13C-1,2,3,7,8-PeCDF	4.04e+07	2.12e+03	1.9e+04	2.49e+07	3.13e+03	8.0e+03
20	13C-2,3,4,7,8-PeCDF	4.23e+07	2.12e+03	2.0e+04	2.67e+07	3.13e+03	8.5e+03
21	13C-1,2,3,4,7,8-HxCDF	2.18e+07	3.28e+03	6.7e+03	4.05e+07	3.71e+03	1.1e+04
22	13C-1,2,3,6,7,8-HxCDF	2.40e+07	3.28e+03	7.3e+03	4.55e+07	3.71e+03	1.2e+04
23	13C-2,3,4,6,7,8-HxCDF	2.42e+07	3.28e+03	7.4e+03	4.44e+07	3.71e+03	1.2e+04
24	13C-1,2,3,7,8,9-HxCDF	1.91e+07	3.28e+03	5.8e+03	3.68e+07	3.71e+03	9.9e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.81e+07	5.66e+03	3.2e+03	3.90e+07	2.05e+04	1.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.45e+07	5.66e+03	2.6e+03	3.15e+07	2.05e+04	1.5e+03
27	13C-2,3,7,8-TCDD	1.84e+07	1.55e+04	1.2e+03	2.34e+07	5.32e+03	4.4e+03
28	13C-1,2,3,7,8-PeCDD	3.10e+07	3.24e+03	9.6e+03	1.95e+07	2.82e+03	6.9e+03
29	13C-1,2,3,4,7,8-HxCDD	2.85e+07	5.20e+03	5.5e+03	2.24e+07	3.08e+03	7.3e+03
30	13C-1,2,3,6,7,8-HxCDD	2.65e+07	5.20e+03	5.1e+03	2.10e+07	3.08e+03	6.8e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.26e+07	2.60e+03	8.7e+03	2.13e+07	2.03e+03	1.1e+04
32	13C-OCDD	2.73e+07	1.56e+03	1.8e+04	2.99e+07	4.32e+02	6.9e+04
33	13C-1,2,3,4-TCDD	1.96e+07	1.55e+04	1.3e+03	2.41e+07	5.32e+03	4.5e+03
34	13C-1,2,3,7,8,9-HxCDD	3.00e+07	5.20e+03	5.8e+03	2.40e+07	3.08e+03	7.8e+03
35	37Cl-2,3,7,8-TCDD	1.12e+05	4.66e+03	2.4e+01			

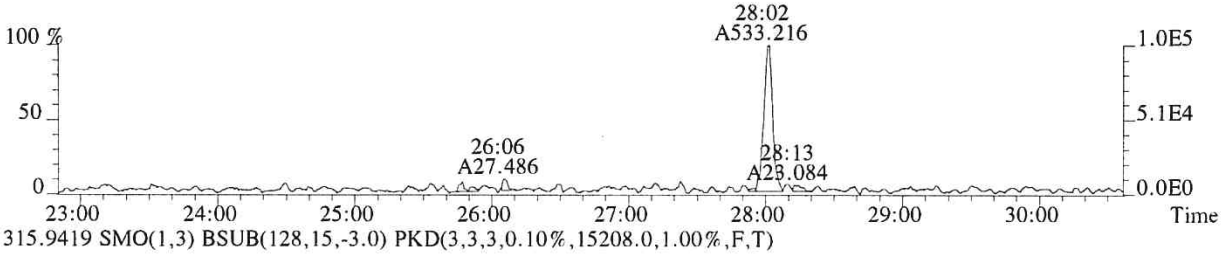
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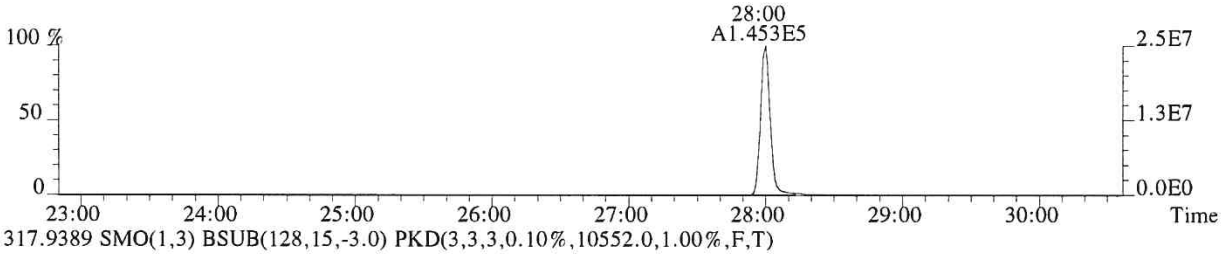
File:P614682 #1-552 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1788.0,1.00%,F,T)



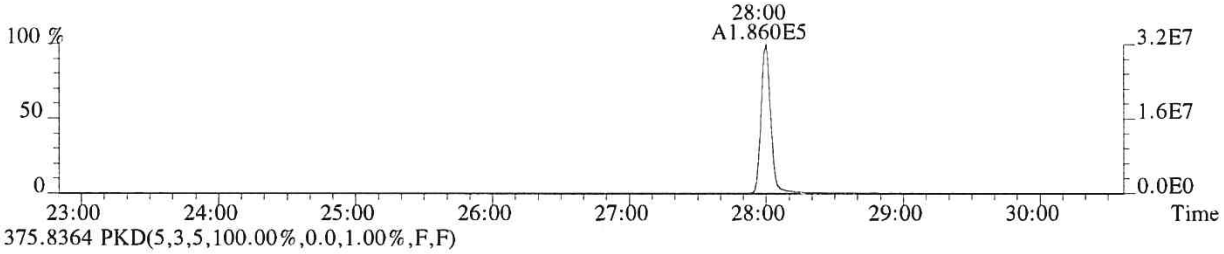
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4408.0,1.00%,F,T)



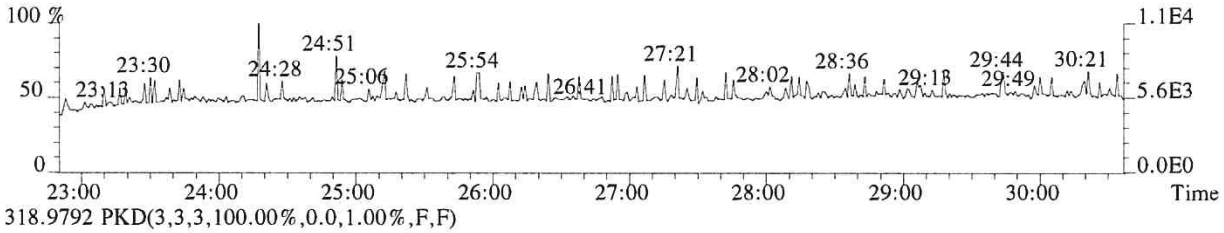
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15208.0,1.00%,F,T)



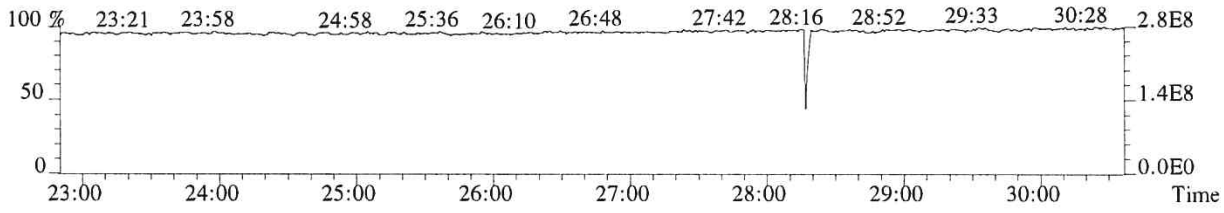
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10552.0,1.00%,F,T)



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

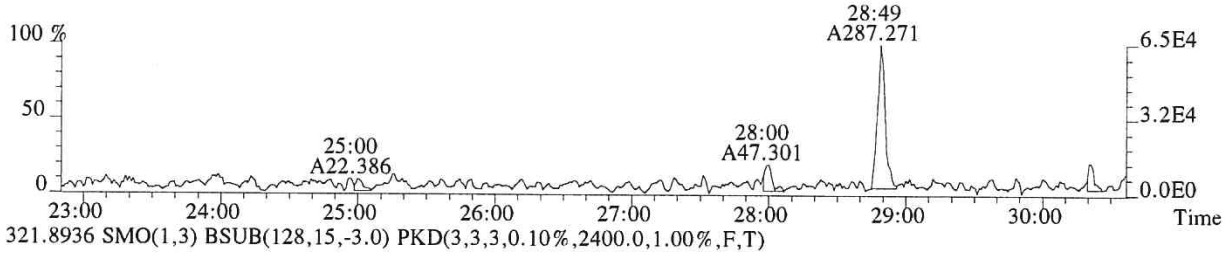


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

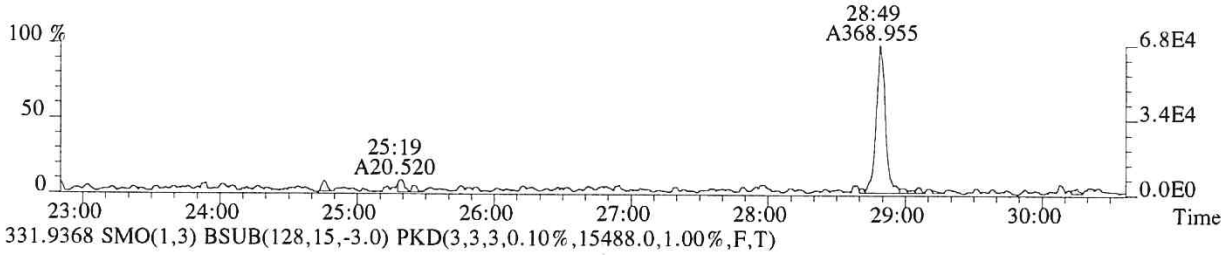


016791

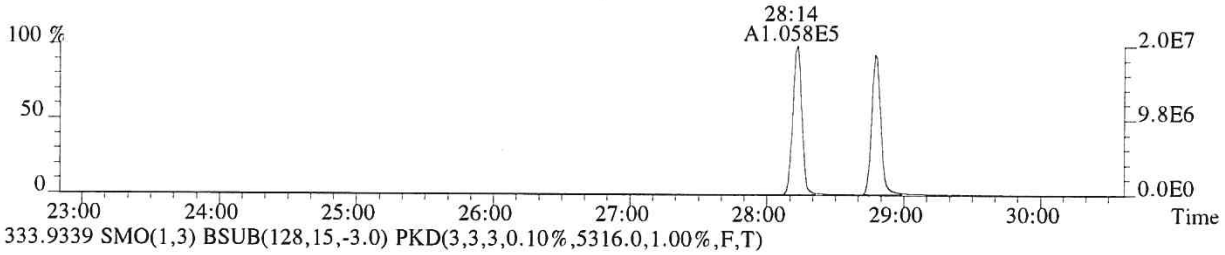
File:P614682 #1-552 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5072.0,1.00%,F,T)



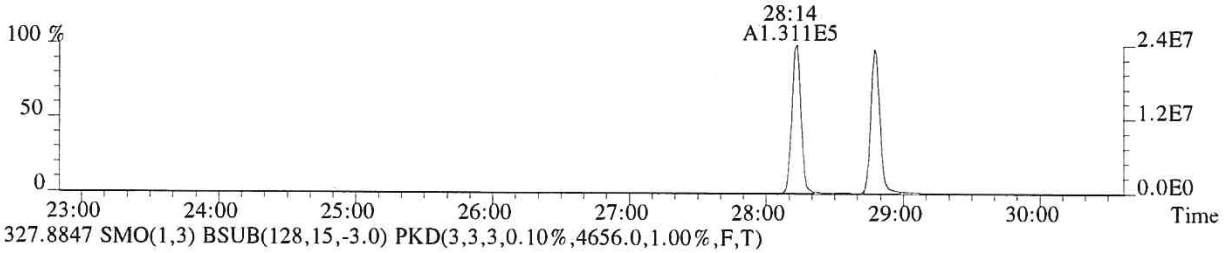
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2400.0,1.00%,F,T)



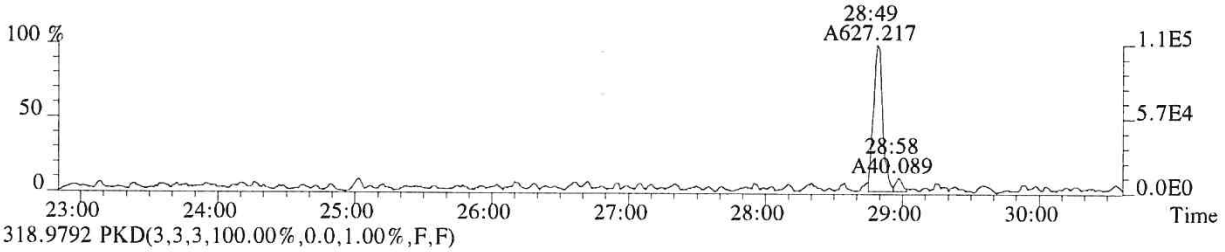
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15488.0,1.00%,F,T)



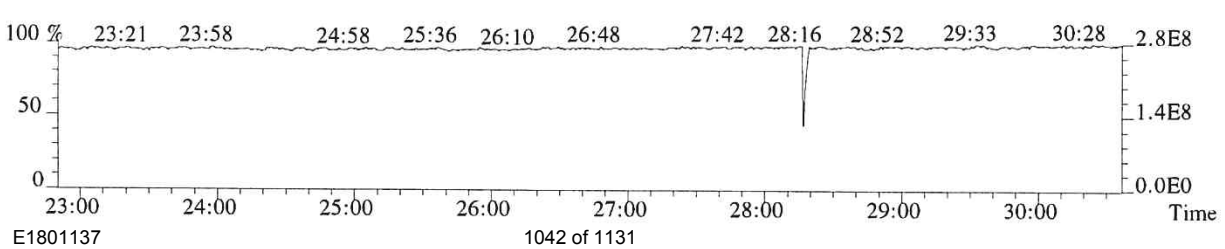
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5316.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4656.0,1.00%,F,T)

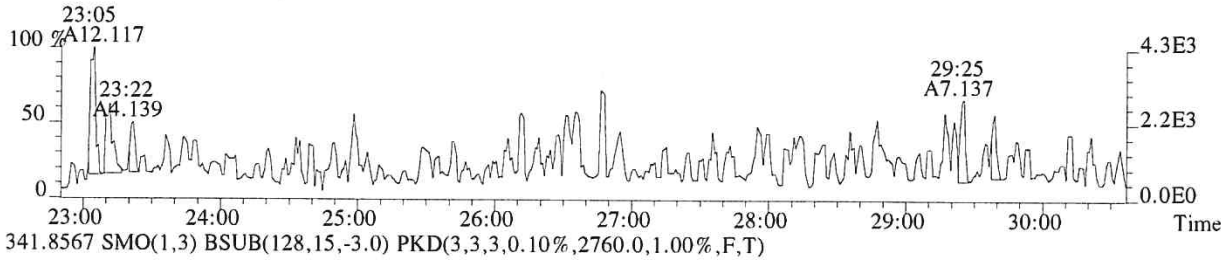


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

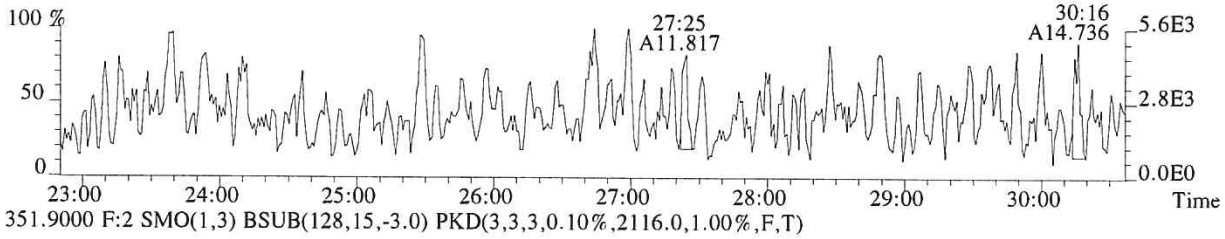


016792

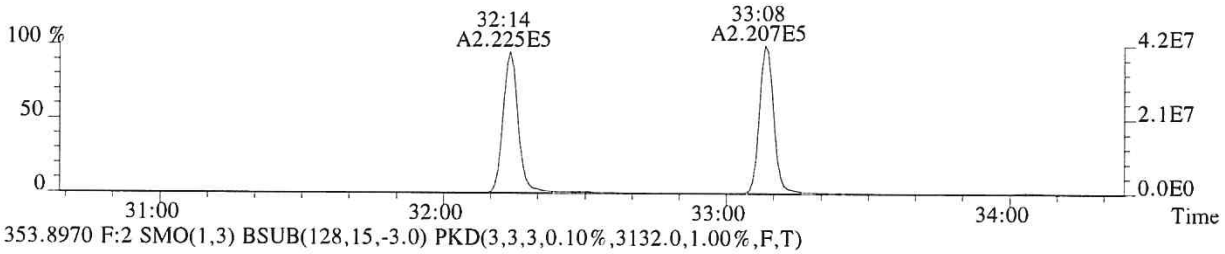
File:P614682 #1-552 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1072.0,1.00%,F,T)



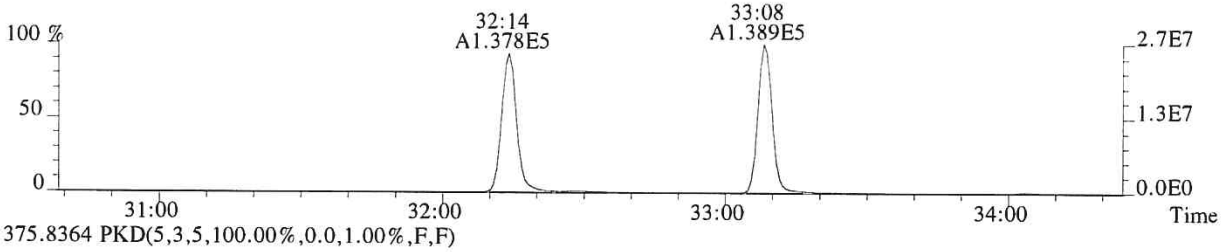
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2760.0,1.00%,F,T)



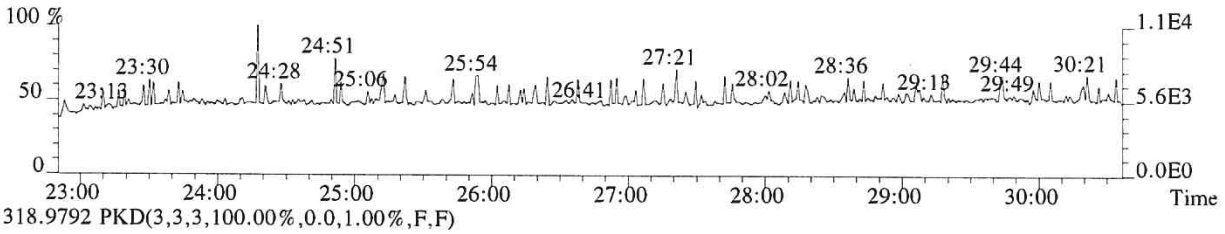
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2116.0,1.00%,F,T)



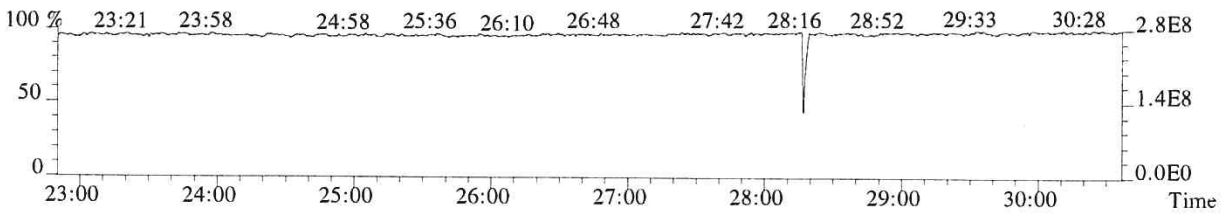
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3132.0,1.00%,F,T)



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

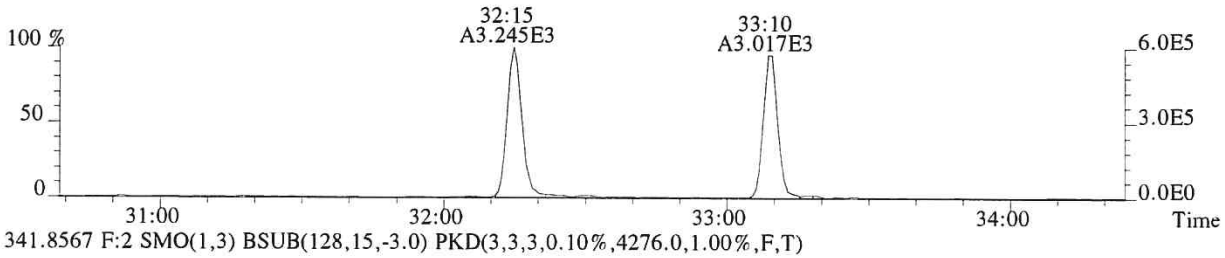


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

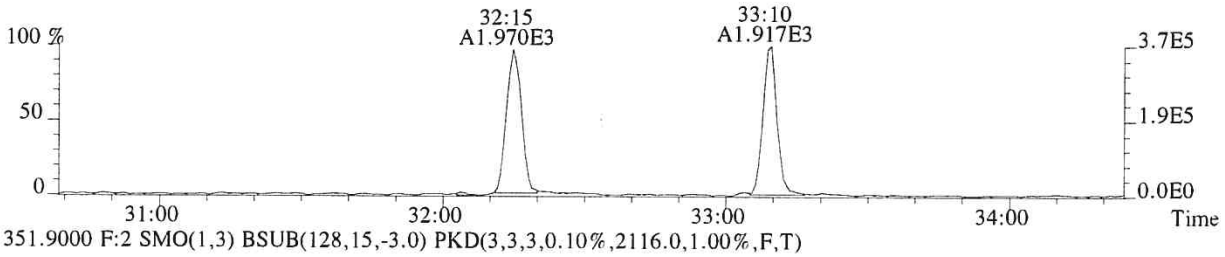


016793

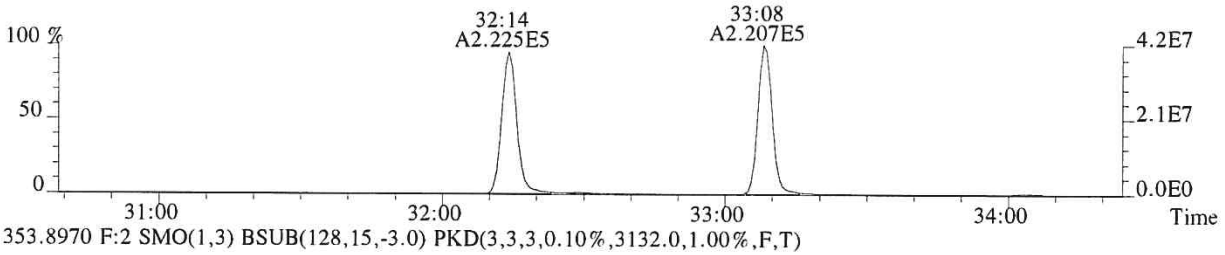
File:P614682 #1-339 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1180.0,1.00%,F,T)



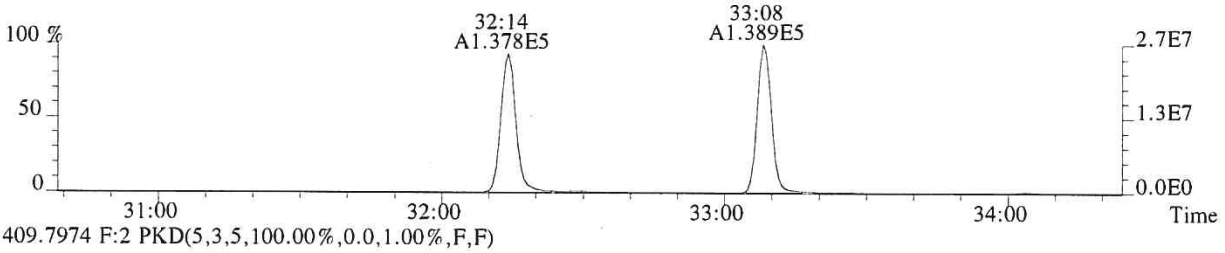
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4276.0,1.00%,F,T)



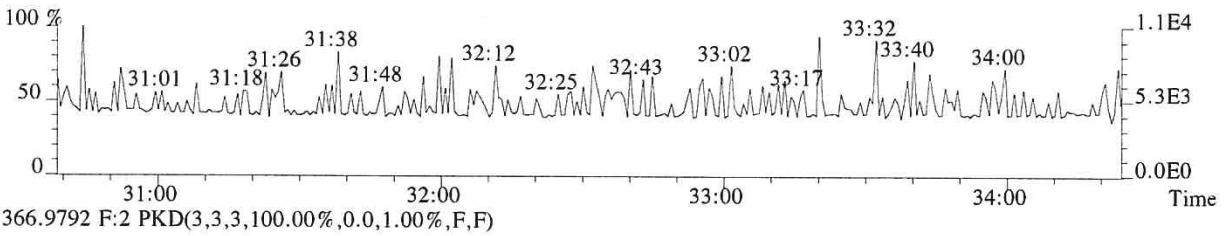
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2116.0,1.00%,F,T)



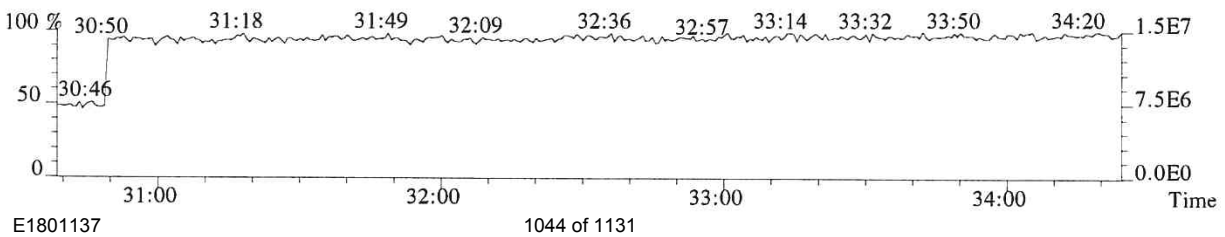
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3132.0,1.00%,F,T)



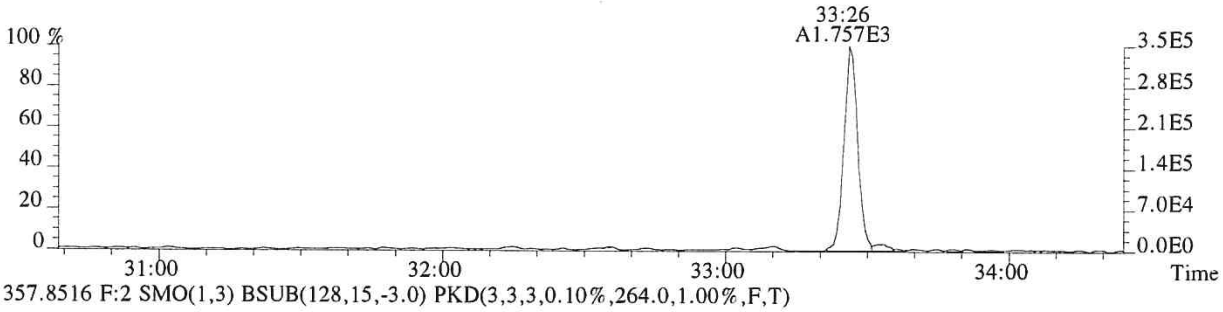
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



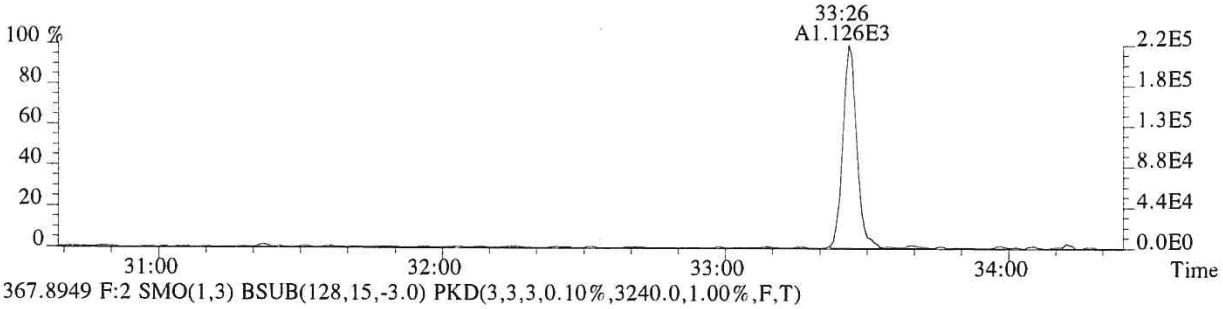
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



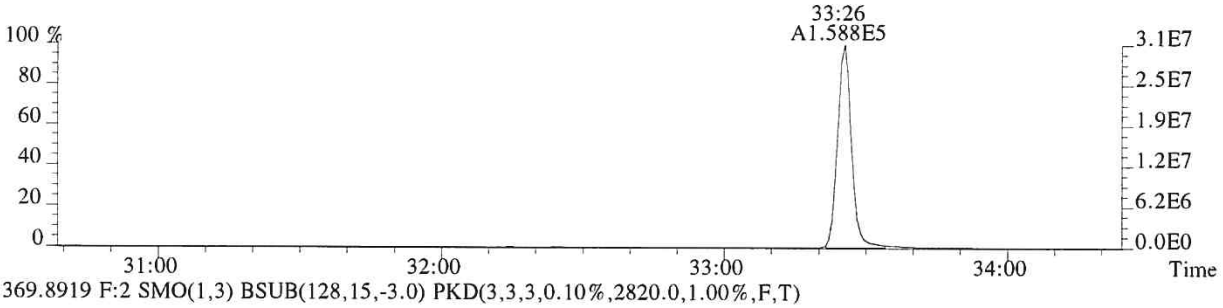
File:P614682 #1-339 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2356.0,1.00%,F,T)



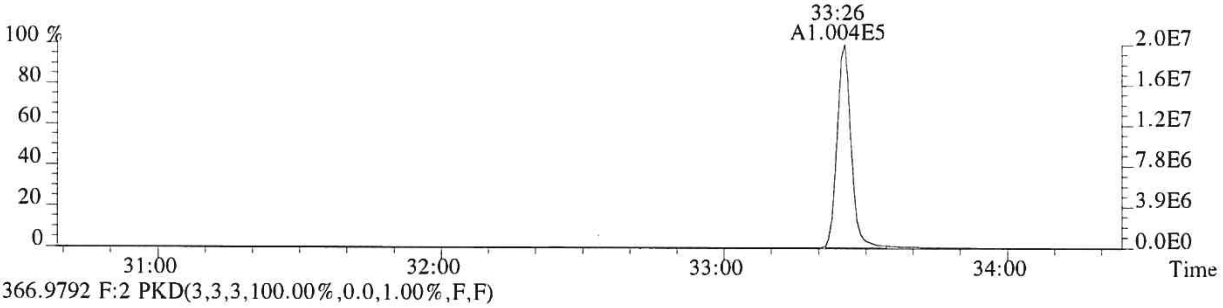
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,264.0,1.00%,F,T)



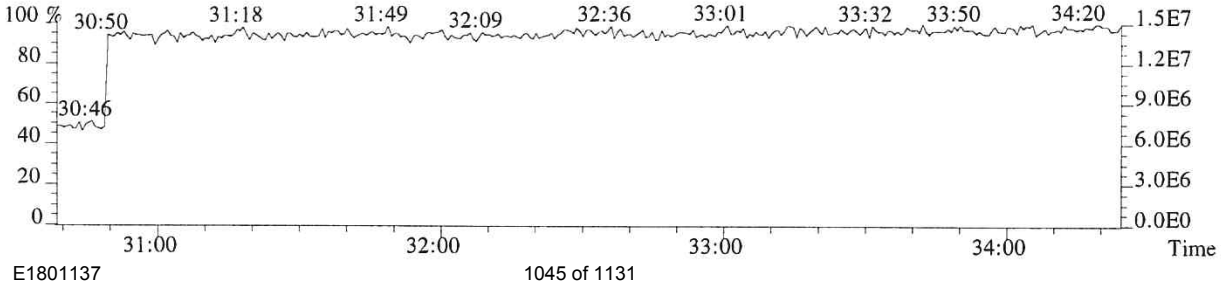
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3240.0,1.00%,F,T)



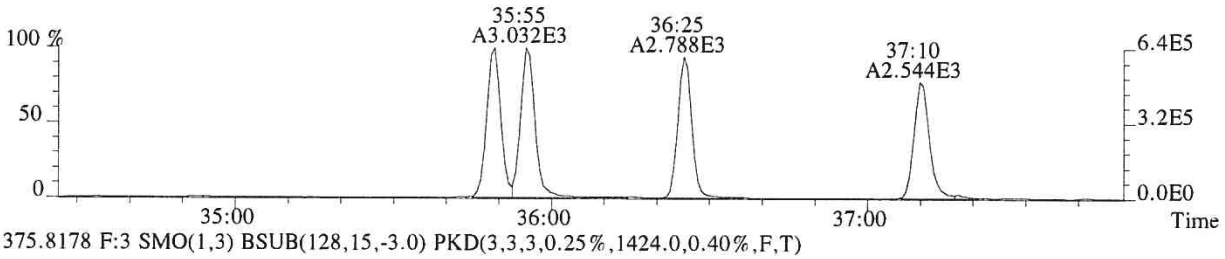
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2820.0,1.00%,F,T)



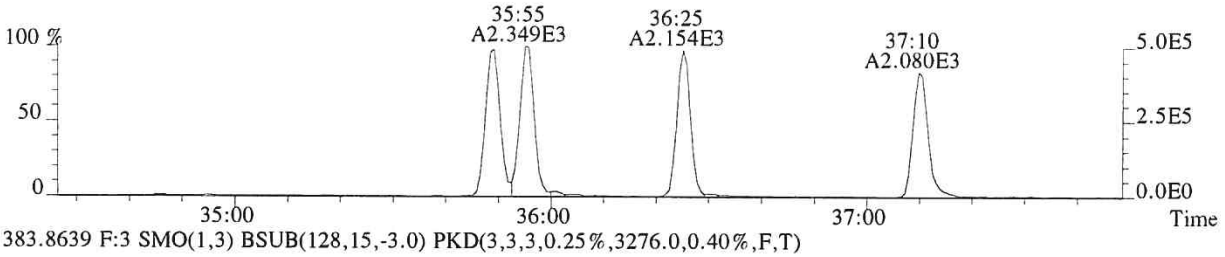
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



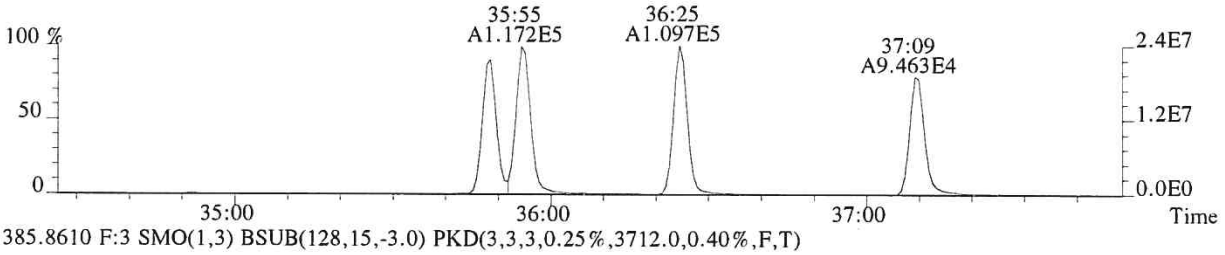
File:P614682 #1-304 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3252.0,0.40%,F,T)



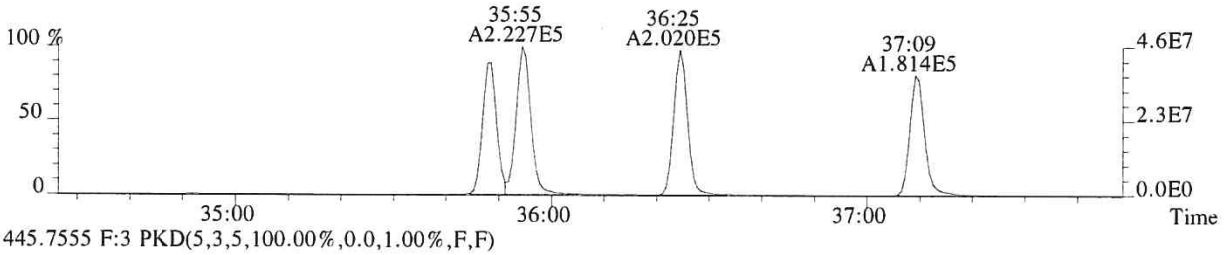
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1424.0,0.40%,F,T)



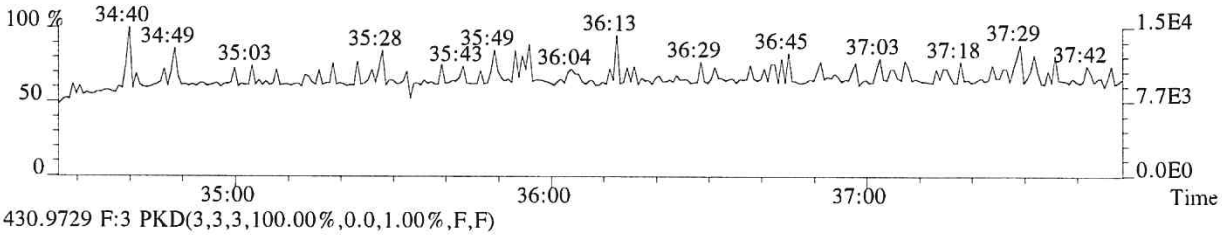
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3276.0,0.40%,F,T)



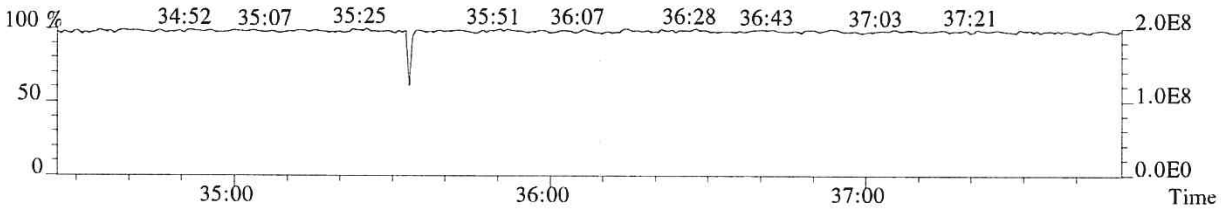
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3712.0,0.40%,F,T)



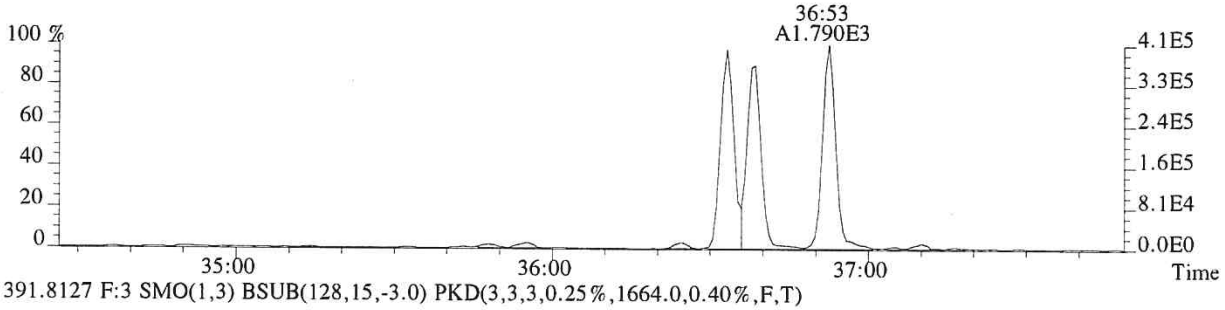
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



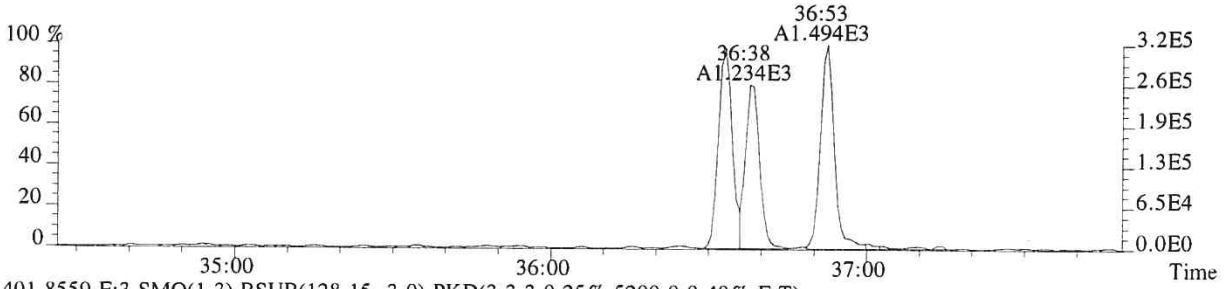
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



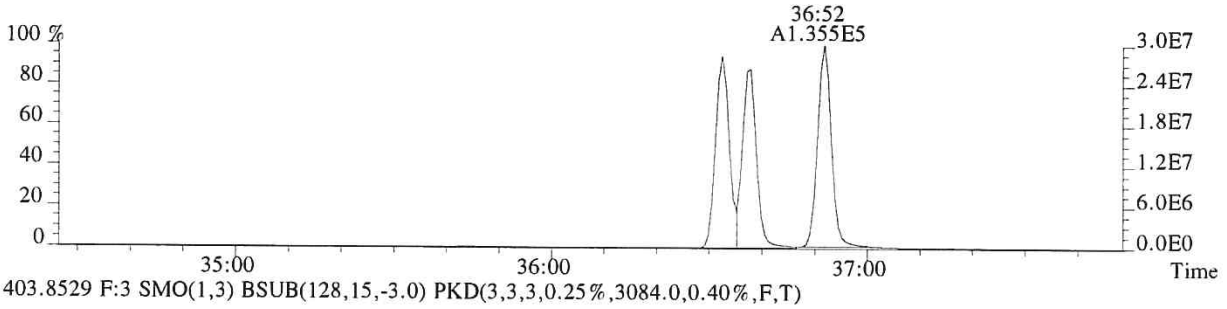
File:P614682 #1-304 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1840.0,0.40%,F,T)



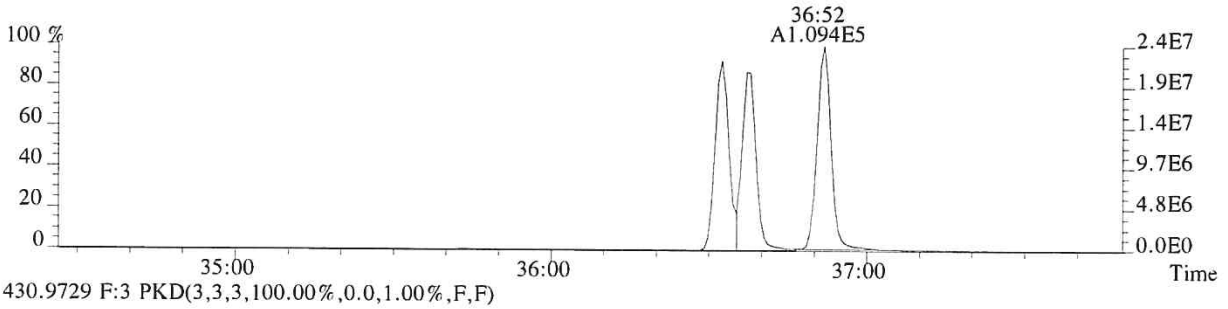
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1664.0,0.40%,F,T)



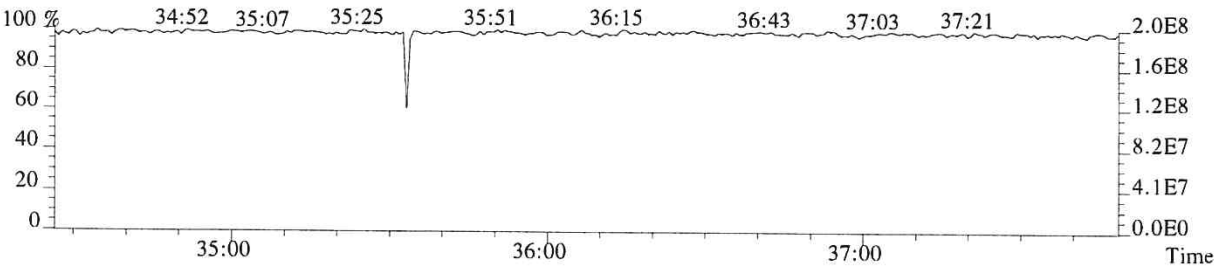
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5200.0,0.40%,F,T)



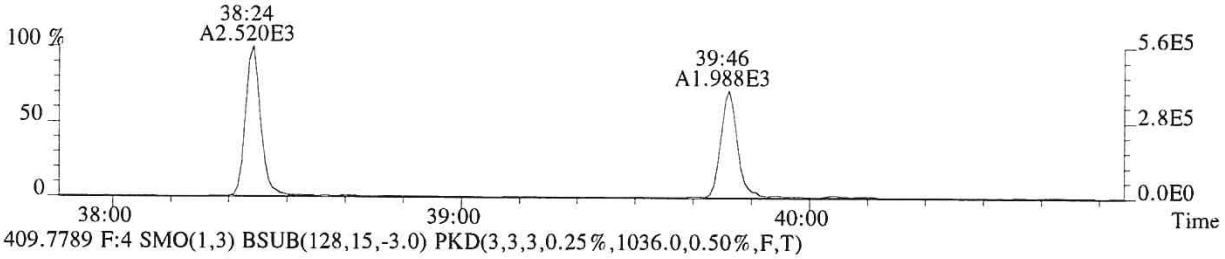
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3084.0,0.40%,F,T)



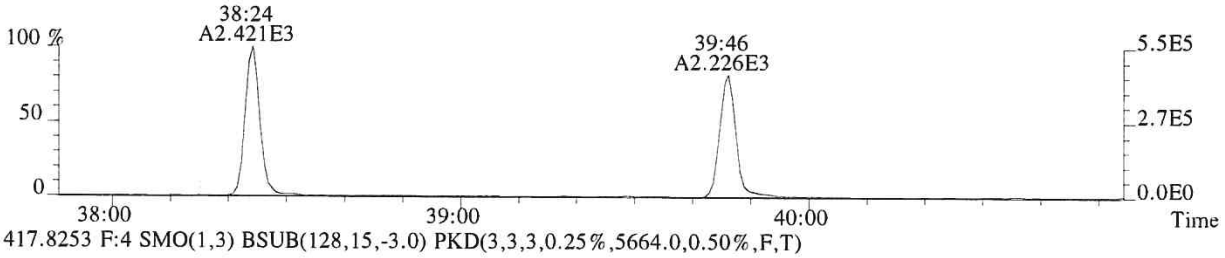
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



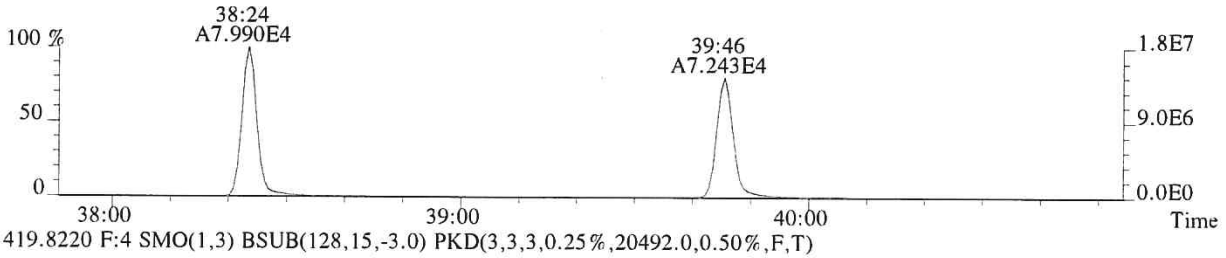
File:P614682 #1-276 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1664.0,0.50%,F,T)



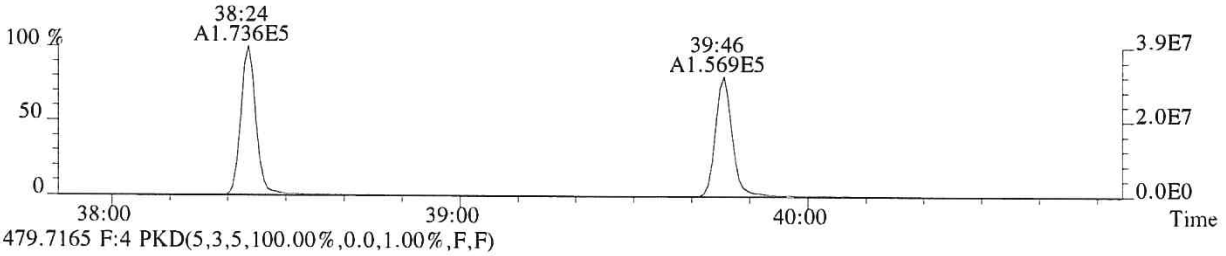
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1036.0,0.50%,F,T)



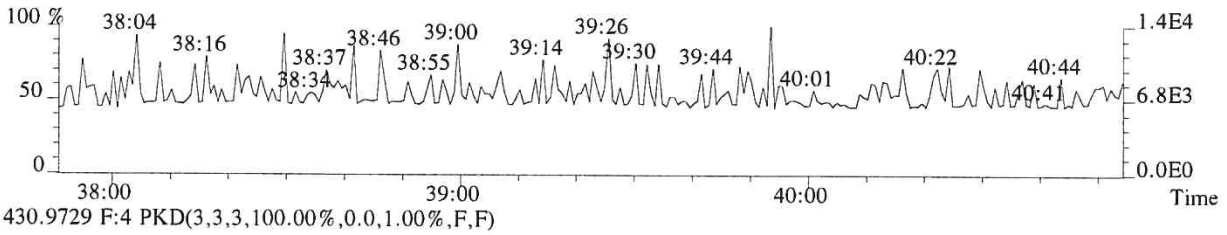
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5664.0,0.50%,F,T)



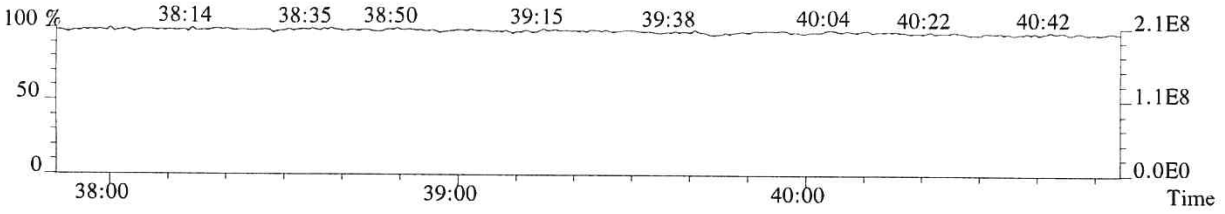
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,20492.0,0.50%,F,T)



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

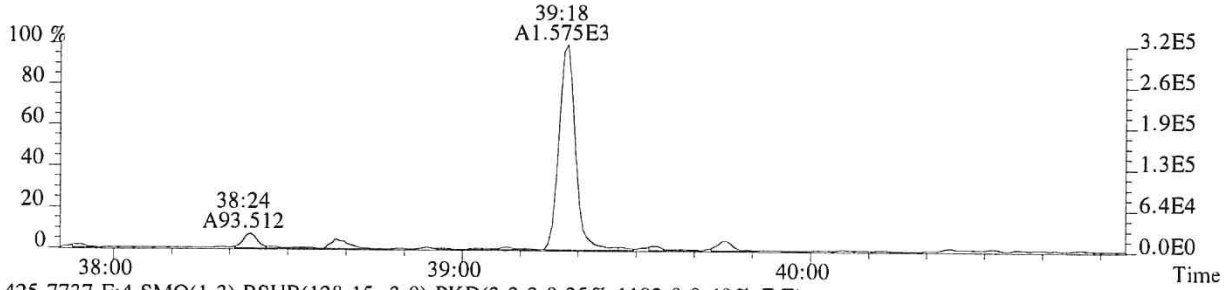


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

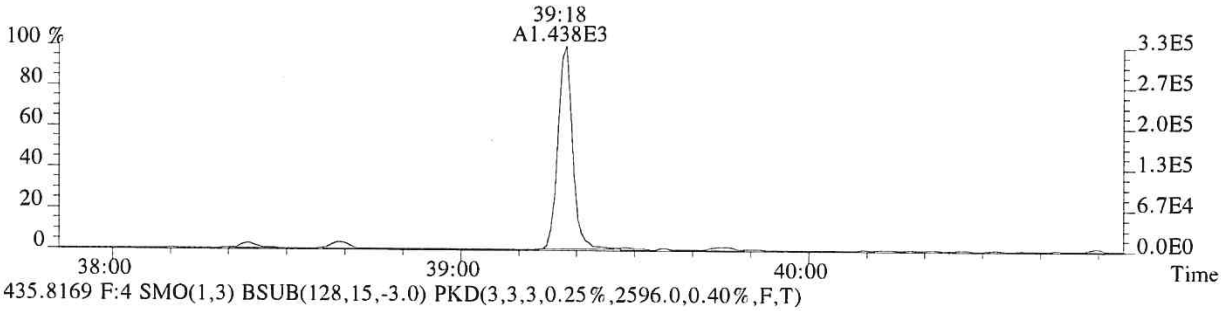


016798

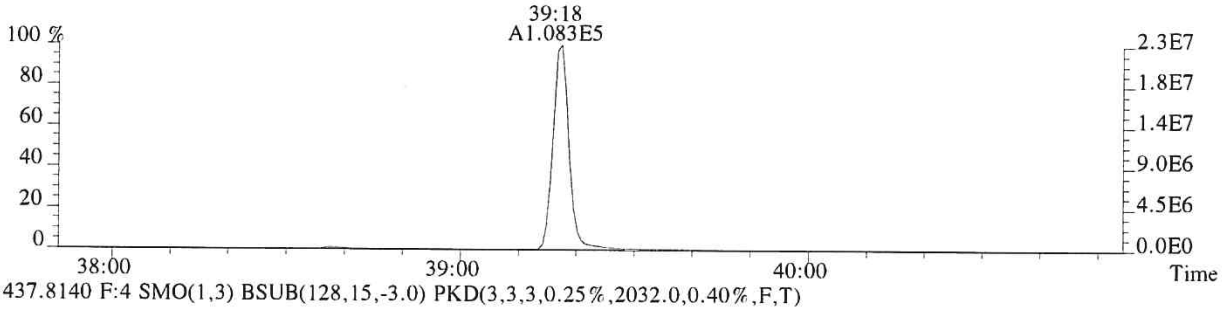
File:P614682 #1-276 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2320.0,0.40%,F,T)



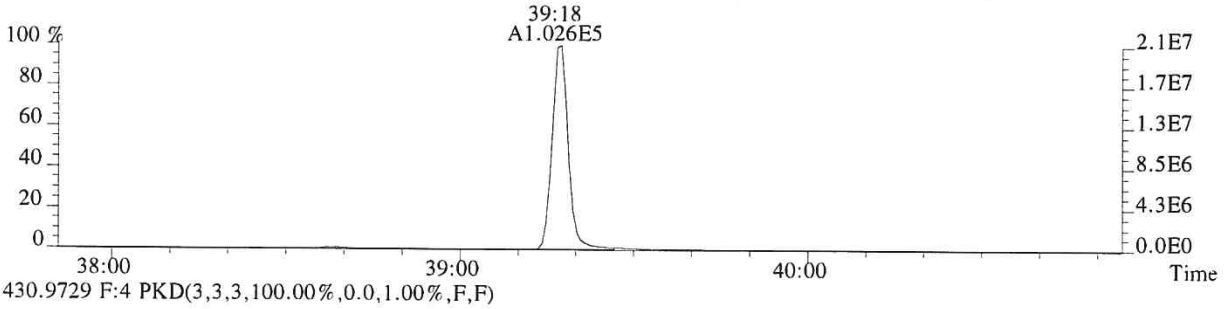
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1192.0,0.40%,F,T)



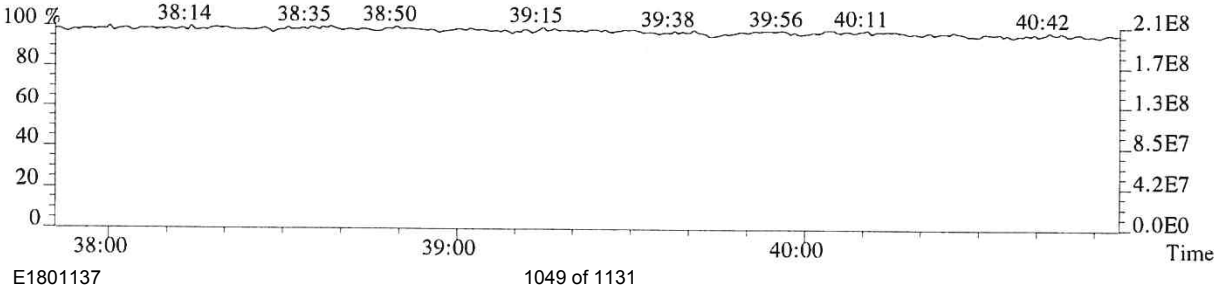
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2596.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2032.0,0.40%,F,T)

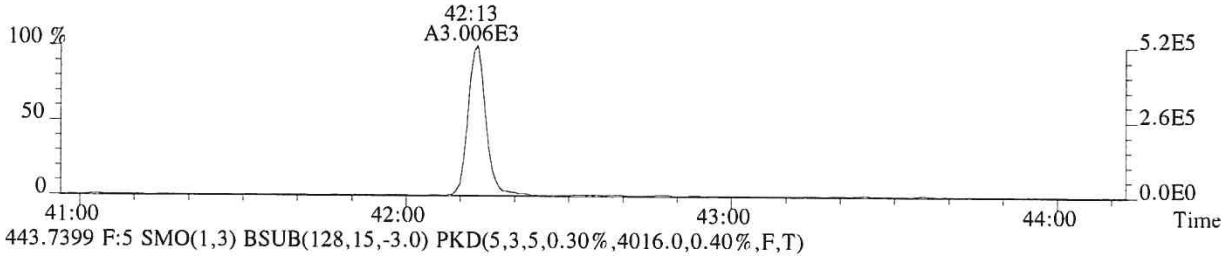


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

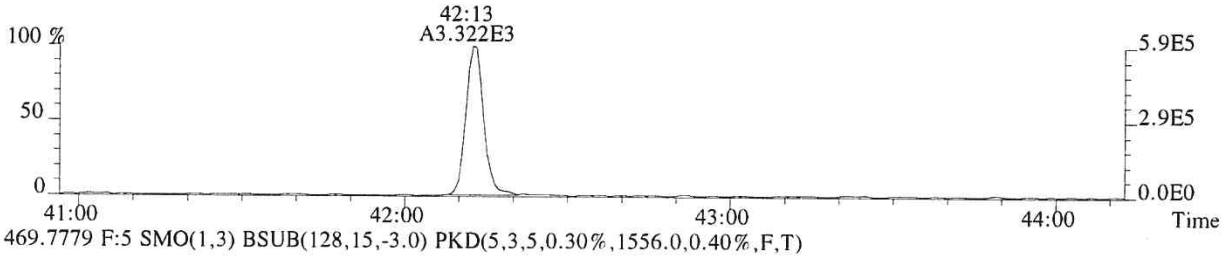


016799

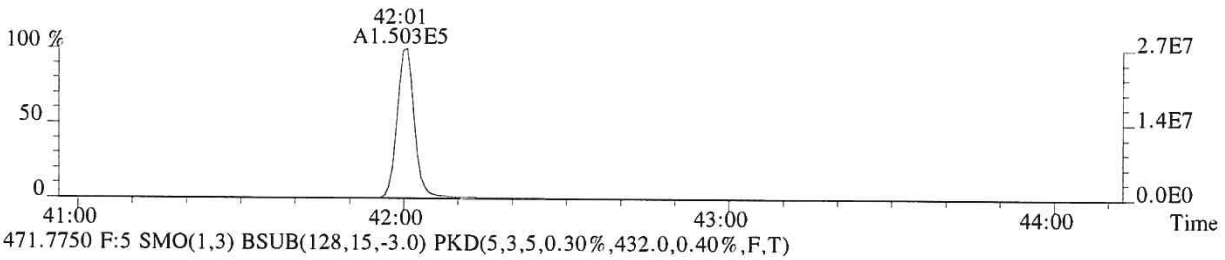
File:P614682 #1-295 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1340.0,0.40%,F,T)



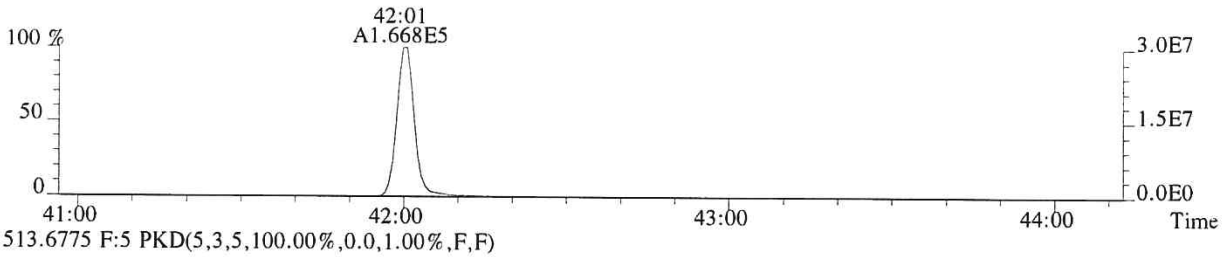
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,4016.0,0.40%,F,T)



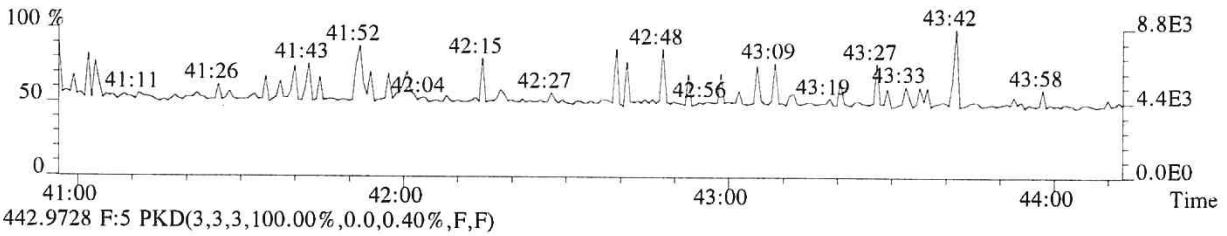
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1556.0,0.40%,F,T)



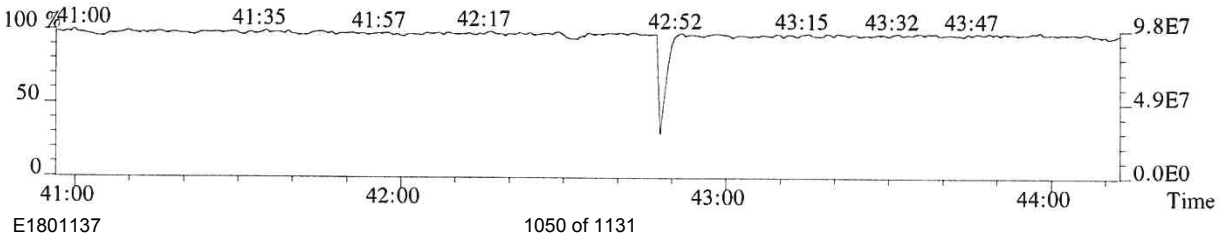
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,432.0,0.40%,F,T)



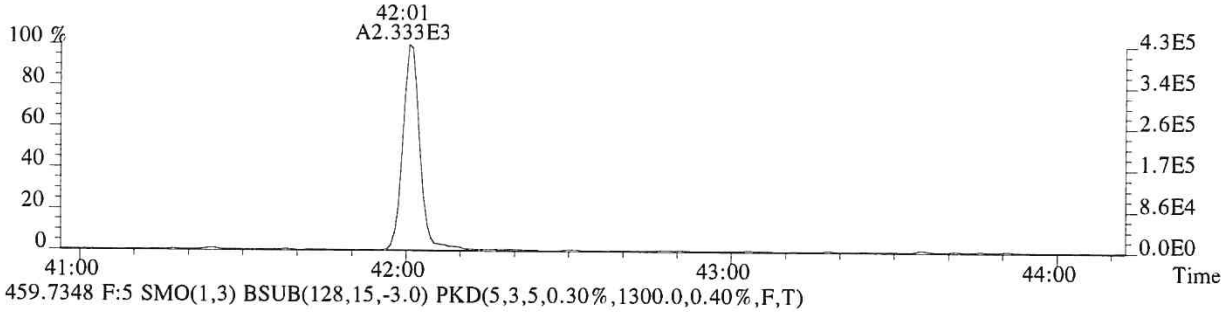
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



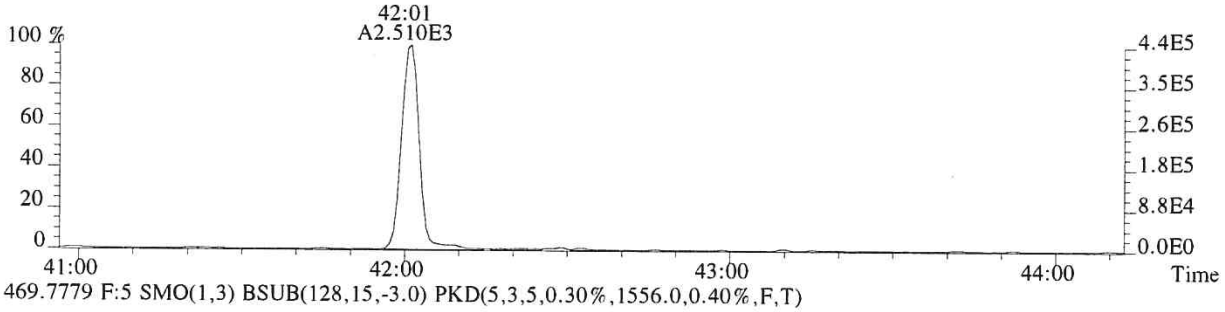
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



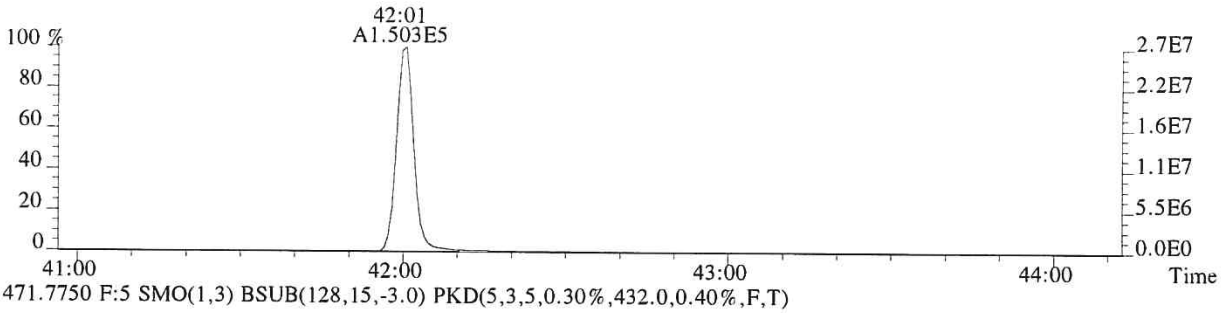
File:P614682 #1-295 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,848.0,0.40%,F,T)



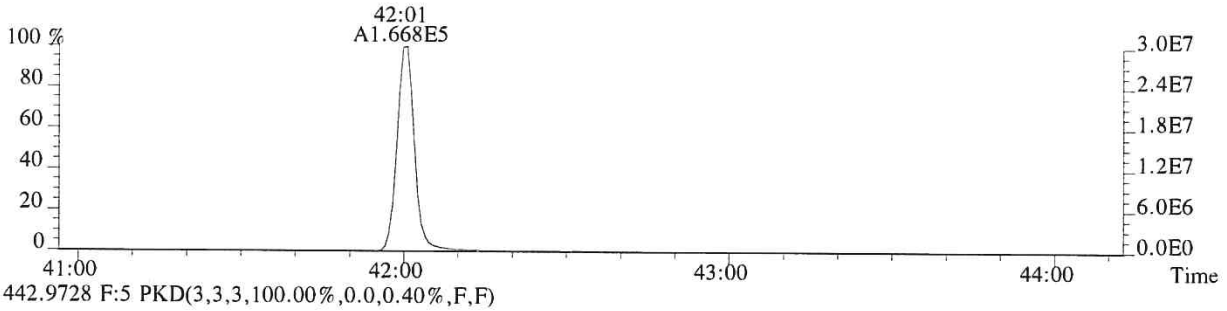
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1300.0,0.40%,F,T)



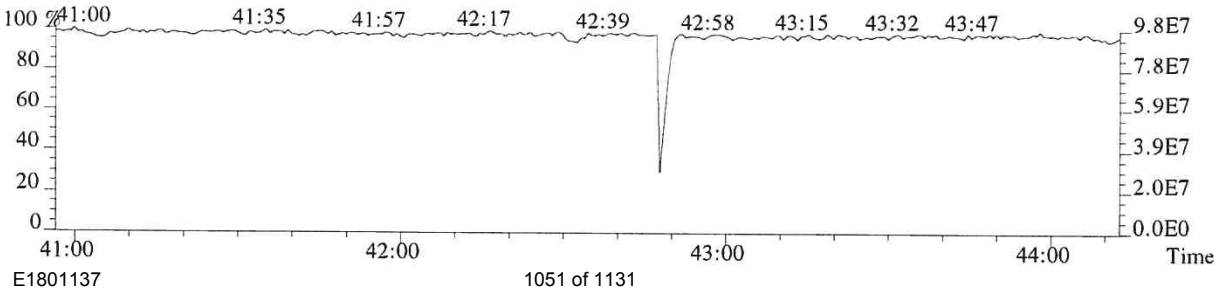
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1556.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,432.0,0.40%,F,T)



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



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
82614

Run #2 Filename P614683 Samp: 1 Inj: 1 Acquired: 25-SEP-18 15:08:49
Processed: 26-SEP-18 07:39:06 Sample ID: CS1

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:00	9.696e+02	1.301e+03	0.75	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:14	8.209e+03	5.211e+03	1.58	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:09	7.782e+03	4.847e+03	1.61	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	7.580e+03	5.860e+03	1.29	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	7.826e+03	6.295e+03	1.24	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	7.149e+03	5.707e+03	1.25	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:10	6.633e+03	5.137e+03	1.29	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	6.668e+03	6.509e+03	1.02	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	5.874e+03	5.515e+03	1.07	yes	no	1.463
10	Unk	OCDF	42:13	7.957e+03	9.190e+03	0.87	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	6.591e+02	7.969e+02	0.83	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	4.521e+03	2.979e+03	1.52	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	4.250e+03	3.535e+03	1.20	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	4.303e+03	3.394e+03	1.27	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:52	4.586e+03	3.767e+03	1.22	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	4.011e+03	3.764e+03	1.07	yes	no	1.112
17	Unk	OCDD	42:01	6.097e+03	6.815e+03	0.89	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	1.863e+05	2.330e+05	0.80	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	2.845e+05	1.757e+05	1.62	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	2.739e+05	1.718e+05	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:48	1.281e+05	2.407e+05	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:55	1.461e+05	2.703e+05	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:25	1.362e+05	2.538e+05	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	1.215e+05	2.294e+05	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:23	1.041e+05	2.259e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:45	9.345e+04	2.024e+05	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	1.293e+05	1.616e+05	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	1.924e+05	1.218e+05	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:32	1.556e+05	1.239e+05	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	1.601e+05	1.267e+05	1.26	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	1.414e+05	1.336e+05	1.06	yes	no	0.857
32	IS	13C-OCDD	42:00	2.022e+05	2.237e+05	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:13	1.337e+05	1.646e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:51	1.731e+05	1.377e+05	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	1.653e+03				no	1.086

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Signal/Noise Height Ratio Summary

CLIENT ID.
82614

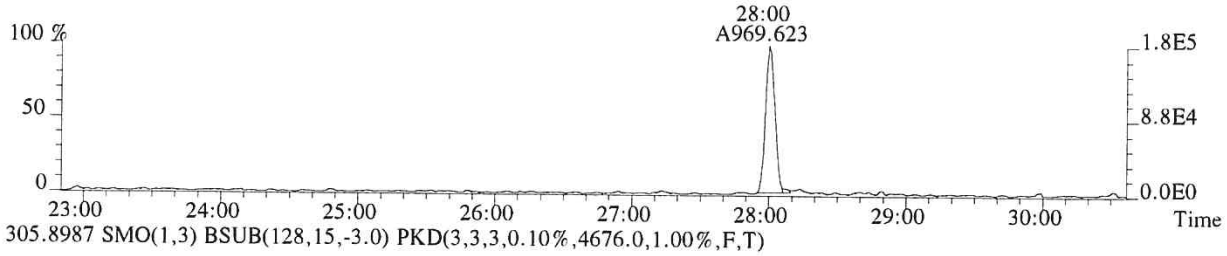
Run #2 Filename P614683 Samp: 1 Inj: 1 Acquired: 25-SEP-18 15:08:49
Processed: 26-SEP-18 07:39:06 LAB. ID: CS1

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.73e+05	2.52e+03	6.9e+01	2.26e+05	4.68e+03	4.8e+01
2	1,2,3,7,8-PeCDF	1.49e+06	1.07e+03	1.4e+03	9.88e+05	5.47e+03	1.8e+02
3	2,3,4,7,8-PeCDF	1.55e+06	1.07e+03	1.5e+03	9.81e+05	5.47e+03	1.8e+02
4	1,2,3,4,7,8-HxCDF	1.64e+06	3.19e+03	5.1e+02	1.29e+06	1.24e+03	1.0e+03
5	1,2,3,6,7,8-HxCDF	1.65e+06	3.19e+03	5.2e+02	1.30e+06	1.24e+03	1.0e+03
6	2,3,4,6,7,8-HxCDF	1.53e+06	3.19e+03	4.8e+02	1.19e+06	1.24e+03	9.6e+02
7	1,2,3,7,8,9-HxCDF	1.37e+06	3.19e+03	4.3e+02	1.06e+06	1.24e+03	8.5e+02
8	1,2,3,4,6,7,8-HpCDF	1.48e+06	1.97e+03	7.5e+02	1.45e+06	1.25e+03	1.2e+03
9	1,2,3,4,7,8,9-HpCDF	1.19e+06	1.97e+03	6.0e+02	1.11e+06	1.25e+03	8.9e+02
10	OCDF	1.45e+06	1.15e+03	1.3e+03	1.64e+06	2.28e+03	7.2e+02
11	2,3,7,8-TCDD	1.20e+05	6.88e+03	1.7e+01	1.48e+05	2.99e+03	5.0e+01
12	1,2,3,7,8-PeCDD	8.64e+05	2.37e+03	3.6e+02	5.83e+05	1.39e+03	4.2e+02
13	1,2,3,4,7,8-HxCDD	9.60e+05	1.02e+03	9.4e+02	8.07e+05	1.68e+03	4.8e+02
14	1,2,3,6,7,8-HxCDD	9.46e+05	1.02e+03	9.3e+02	7.52e+05	1.68e+03	4.5e+02
15	1,2,3,7,8,9-HxCDD	1.01e+06	1.02e+03	9.9e+02	8.34e+05	1.68e+03	5.0e+02
16	1,2,3,4,6,7,8-HpCDD	8.38e+05	1.17e+03	7.2e+02	8.29e+05	4.84e+02	1.7e+03
17	OCDD	1.16e+06	3.14e+03	3.7e+02	1.30e+06	1.96e+03	6.6e+02
18	13C-2,3,7,8-TCDF	3.28e+07	1.64e+04	2.0e+03	4.11e+07	1.27e+04	3.2e+03
19	13C-1,2,3,7,8-PeCDF	5.29e+07	3.44e+03	1.5e+04	3.26e+07	2.57e+03	1.3e+04
20	13C-2,3,4,7,8-PeCDF	5.43e+07	3.44e+03	1.6e+04	3.38e+07	2.57e+03	1.3e+04
21	13C-1,2,3,4,7,8-HxCDF	2.86e+07	3.47e+03	8.3e+03	5.39e+07	4.48e+03	1.2e+04
22	13C-1,2,3,6,7,8-HxCDF	3.07e+07	3.47e+03	8.8e+03	5.68e+07	4.48e+03	1.3e+04
23	13C-2,3,4,6,7,8-HxCDF	2.95e+07	3.47e+03	8.5e+03	5.46e+07	4.48e+03	1.2e+04
24	13C-1,2,3,7,8,9-HxCDF	2.51e+07	3.47e+03	7.2e+03	4.72e+07	4.48e+03	1.1e+04
25	13C-1,2,3,4,6,7,8-HpCDF	2.28e+07	1.29e+04	1.8e+03	4.99e+07	2.56e+04	2.0e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.87e+07	1.29e+04	1.5e+03	4.06e+07	2.56e+04	1.6e+03
27	13C-2,3,7,8-TCDD	2.37e+07	1.79e+04	1.3e+03	2.98e+07	7.48e+03	4.0e+03
28	13C-1,2,3,7,8-PeCDD	3.81e+07	3.05e+03	1.3e+04	2.43e+07	1.79e+03	1.4e+04
29	13C-1,2,3,4,7,8-HxCDD	3.53e+07	4.99e+03	7.1e+03	2.84e+07	2.28e+03	1.2e+04
30	13C-1,2,3,6,7,8-HxCDD	3.46e+07	4.99e+03	6.9e+03	2.73e+07	2.28e+03	1.2e+04
31	13C-1,2,3,4,6,7,8-HpCDD	3.08e+07	3.94e+03	7.8e+03	2.93e+07	1.60e+03	1.8e+04
32	13C-OCDD	3.85e+07	1.12e+03	3.4e+04	4.22e+07	1.86e+03	2.3e+04
33	13C-1,2,3,4-TCDD	2.49e+07	1.79e+04	1.4e+03	3.07e+07	7.48e+03	4.1e+03
34	13C-1,2,3,7,8,9-HxCDD	3.76e+07	4.99e+03	7.5e+03	3.01e+07	2.28e+03	1.3e+04
35	37Cl-2,3,7,8-TCDD	3.03e+05	3.87e+03	7.8e+01			

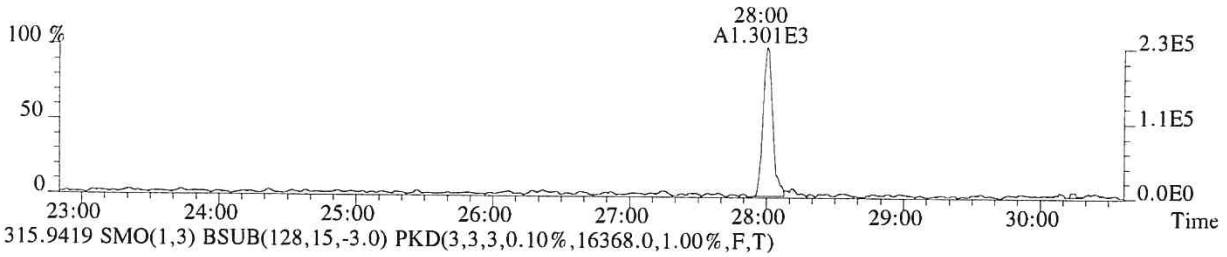
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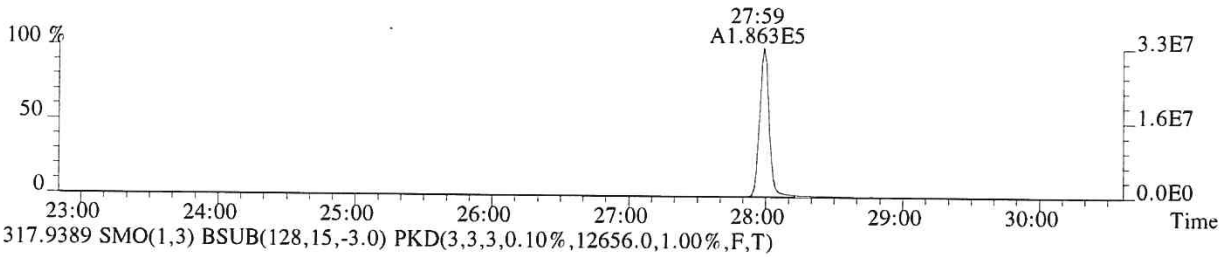
File:P614683 #1-552 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2516.0,1.00%,F,T)



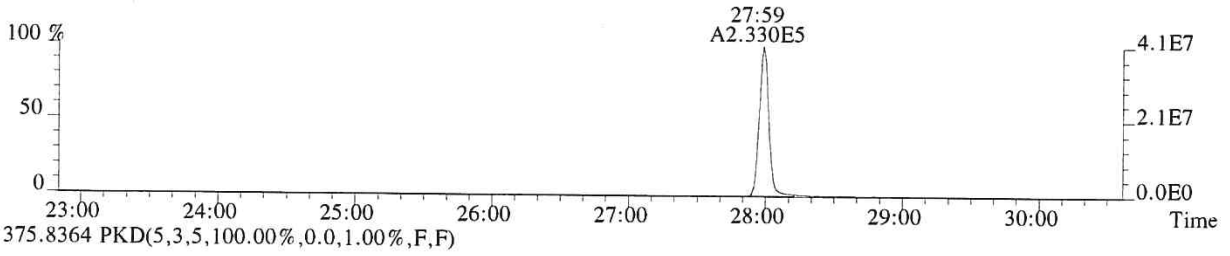
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4676.0,1.00%,F,T)



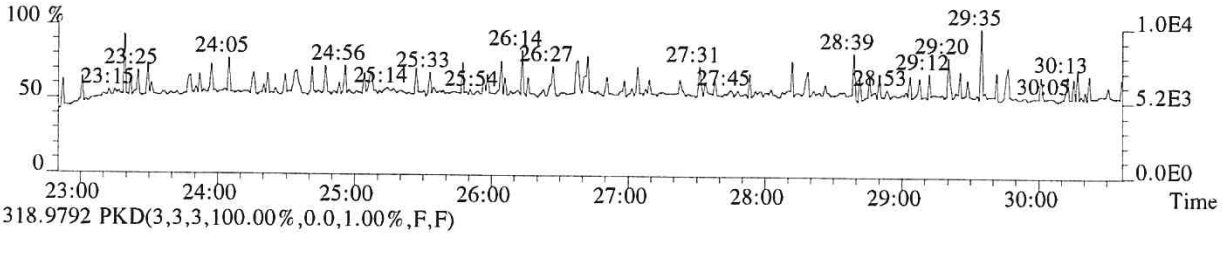
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,16368.0,1.00%,F,T)



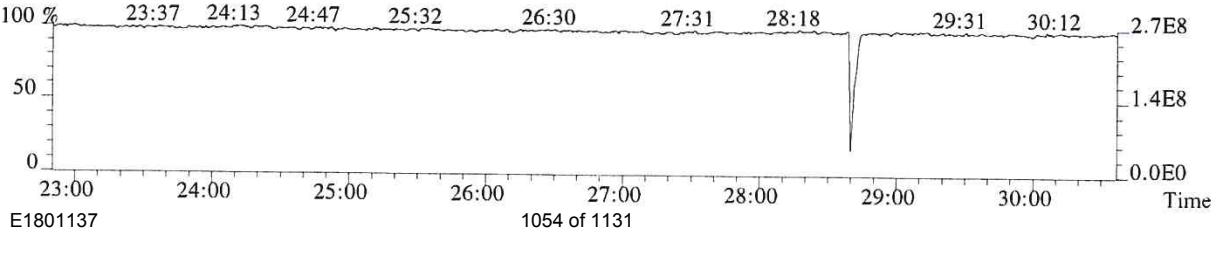
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12656.0,1.00%,F,T)



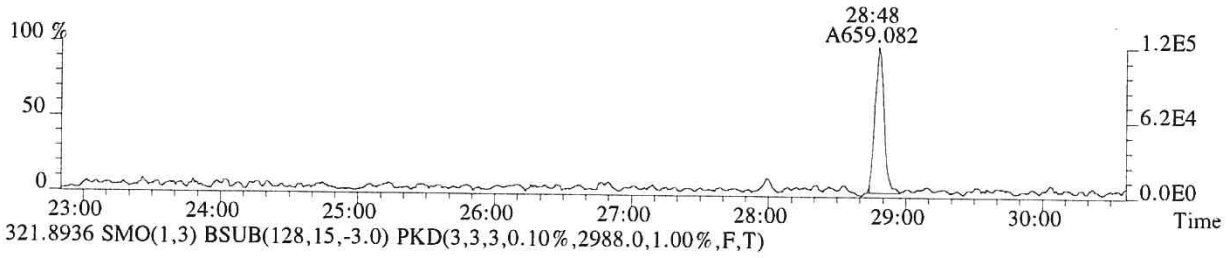
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



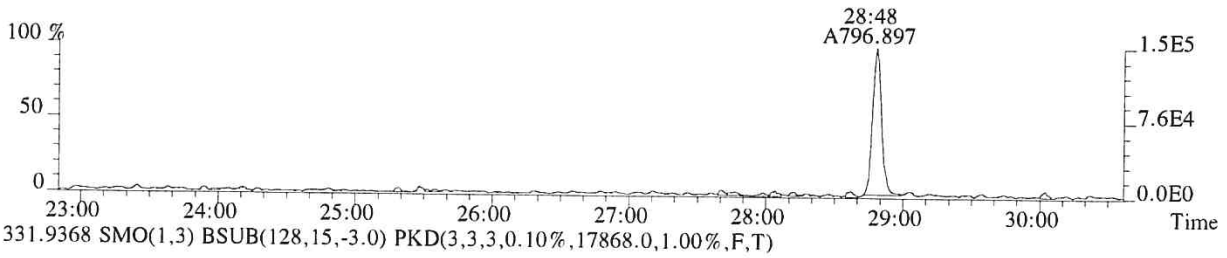
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



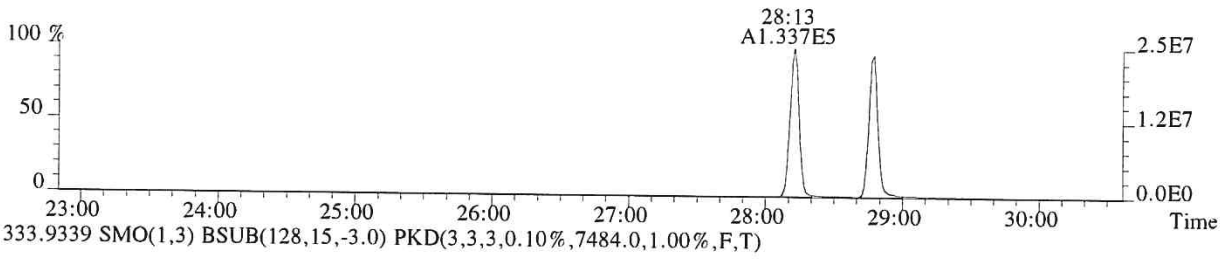
File:P614683 #1-552 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6880.0,1.00%,F,T)



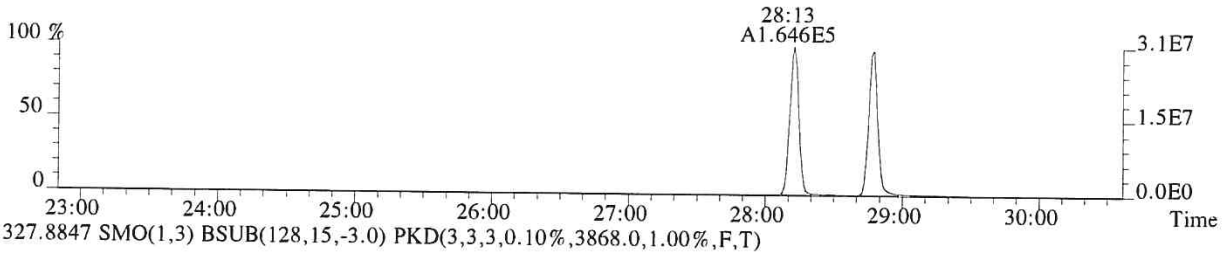
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2988.0,1.00%,F,T)



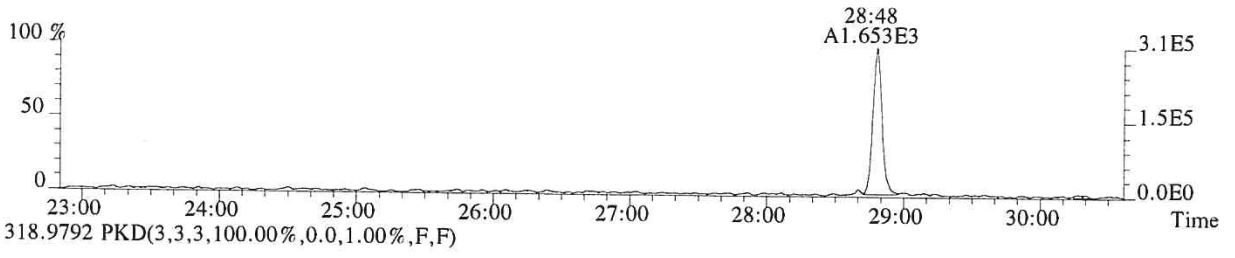
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,17868.0,1.00%,F,T)



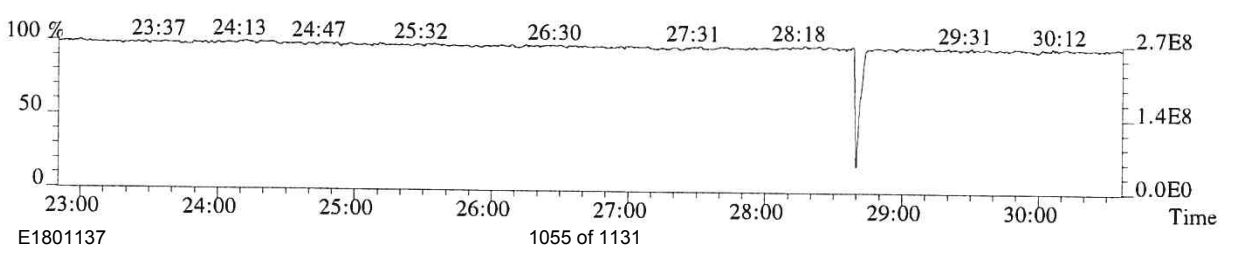
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7484.0,1.00%,F,T)



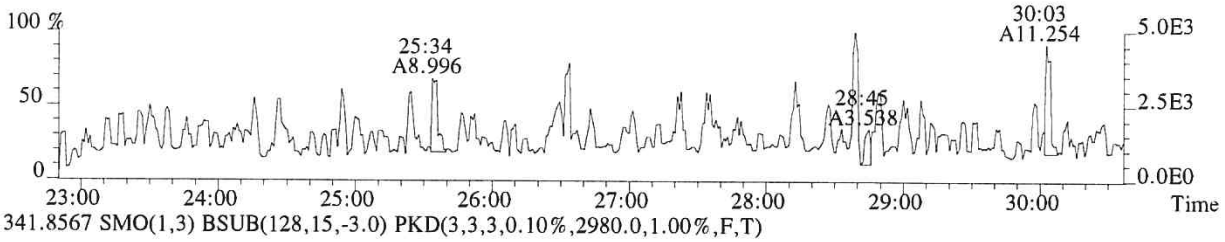
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3868.0,1.00%,F,T)



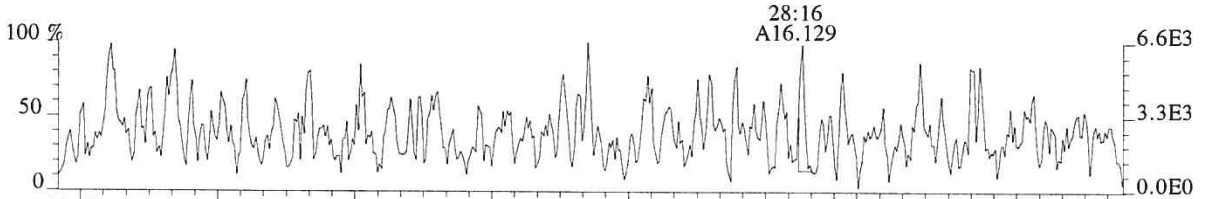
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



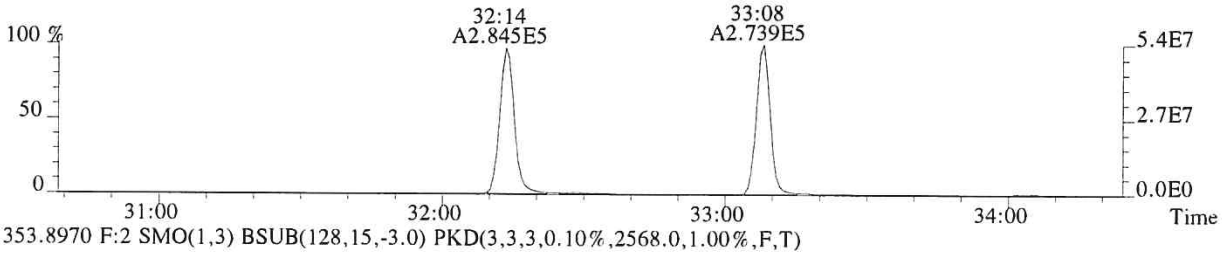
File:P614683 #1-552 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1796.0,1.00%,F,T)



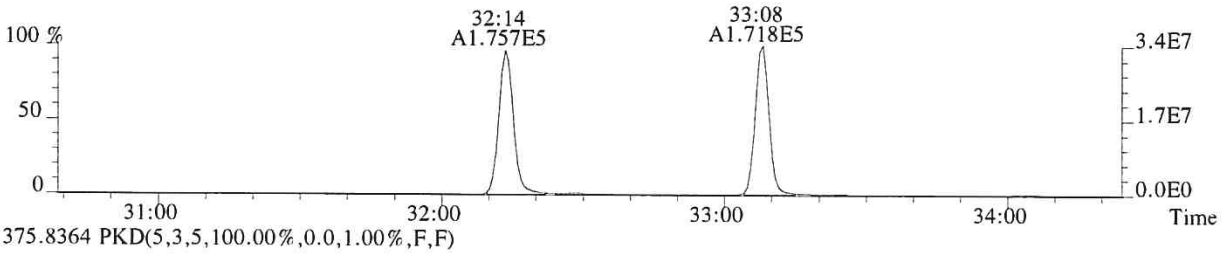
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2980.0,1.00%,F,T)



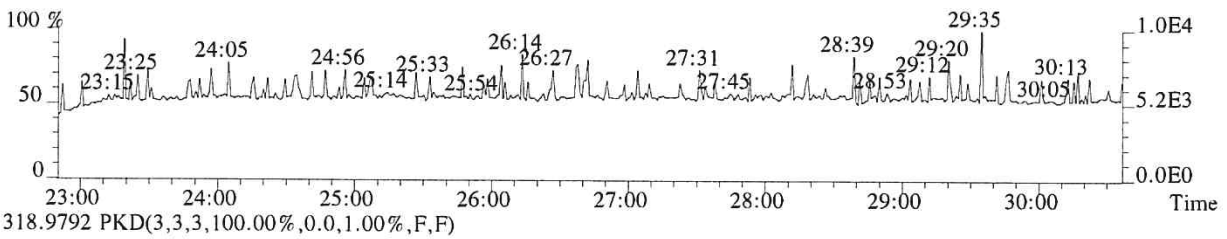
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3436.0,1.00%,F,T)



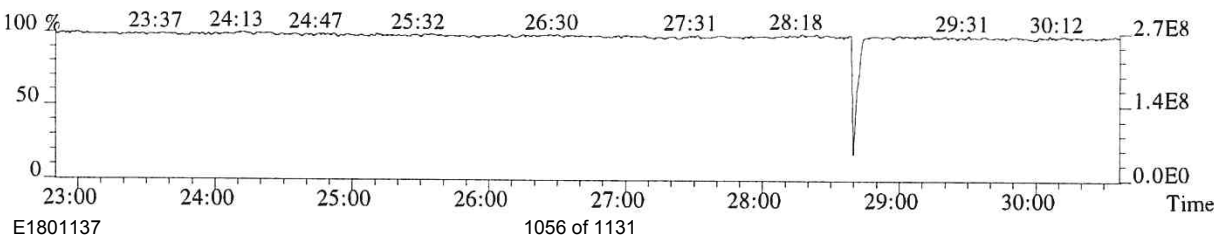
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2568.0,1.00%,F,T)



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



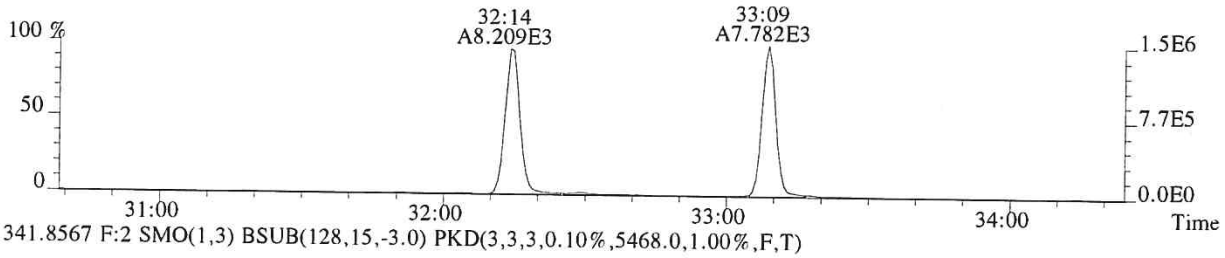
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



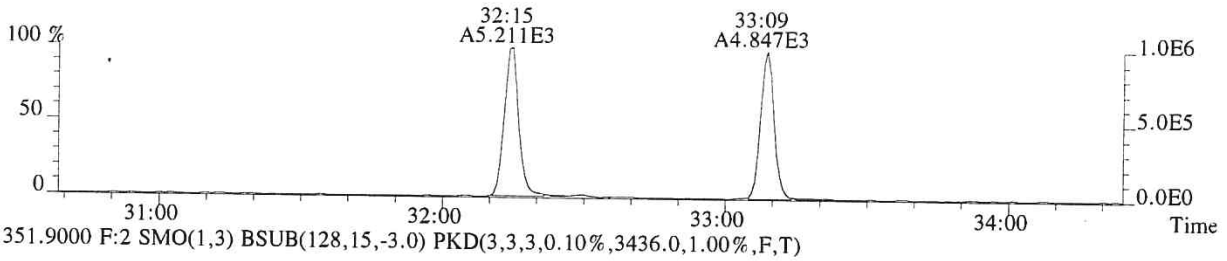
016806

File:P614683 #1-339 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1

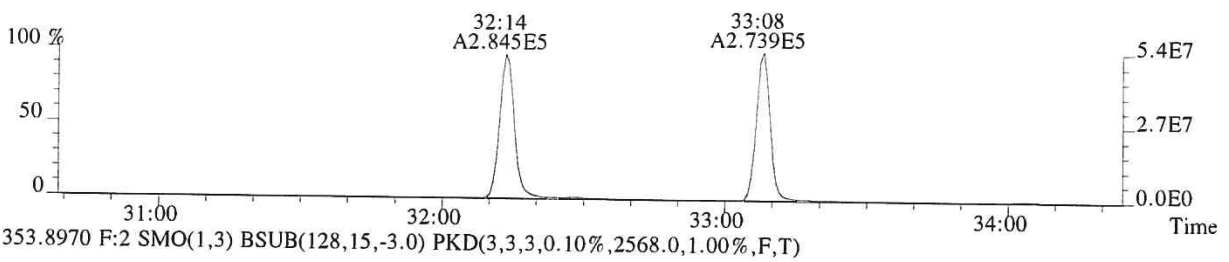
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1068.0,1.00%,F,T)



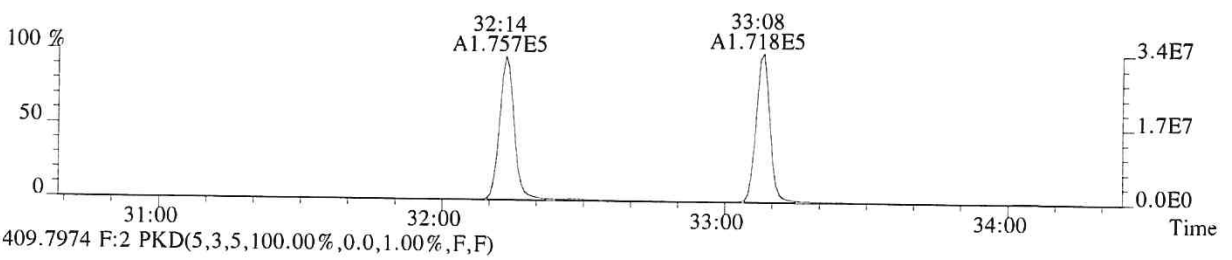
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5468.0,1.00%,F,T)



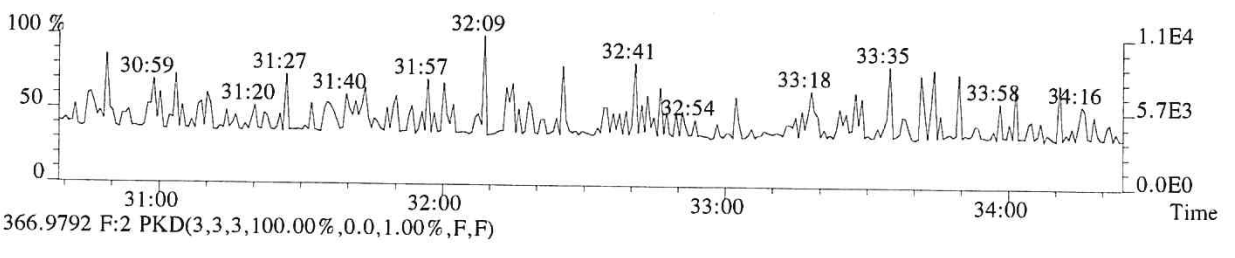
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3436.0,1.00%,F,T)



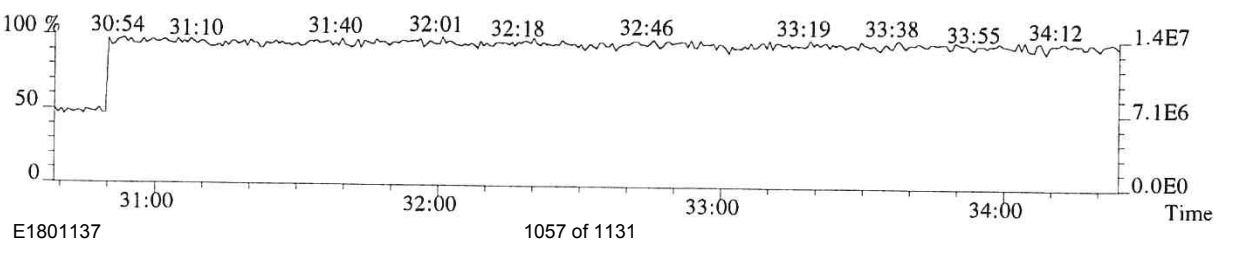
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2568.0,1.00%,F,T)



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

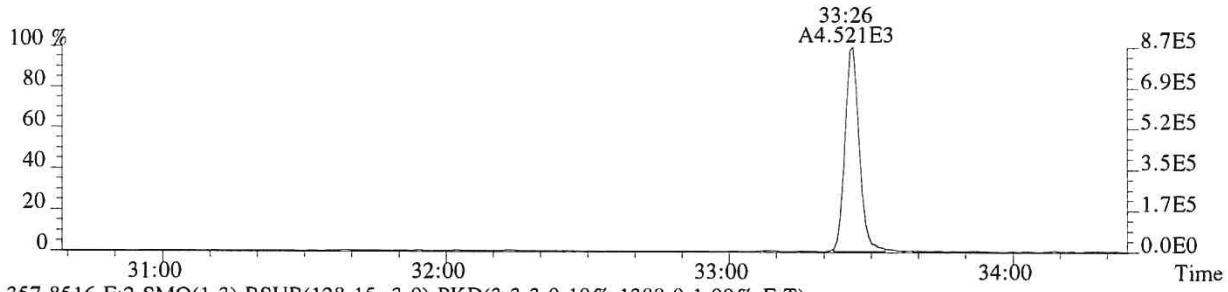


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

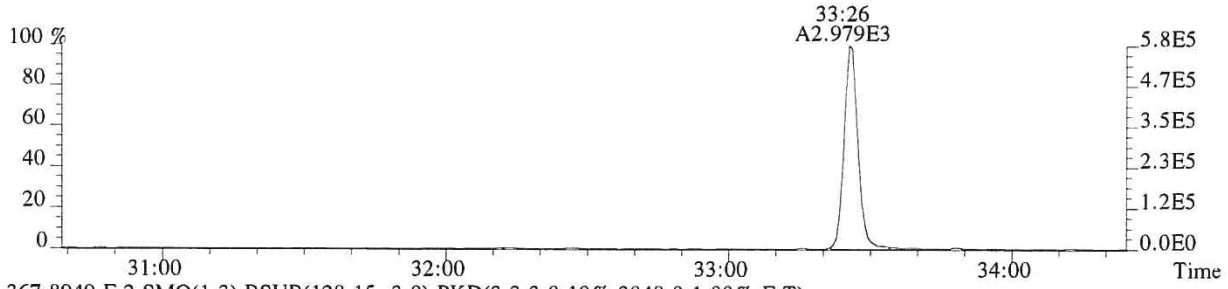


016807

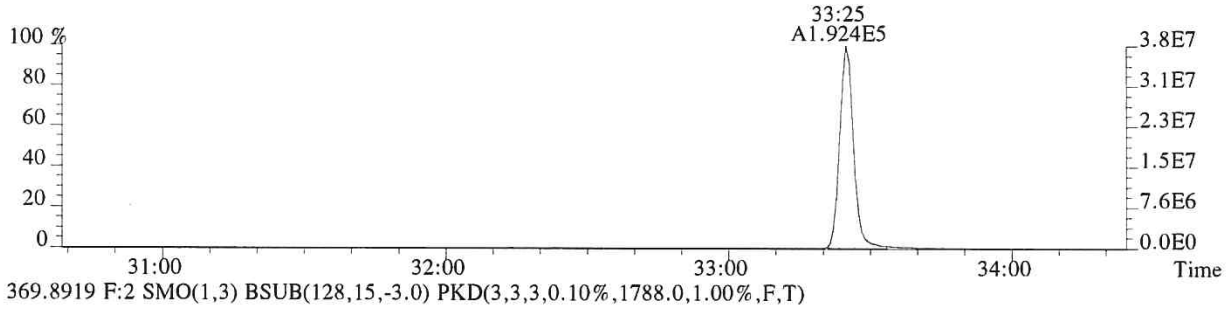
File:P614683 #1-339 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2368.0,1.00%,F,T)



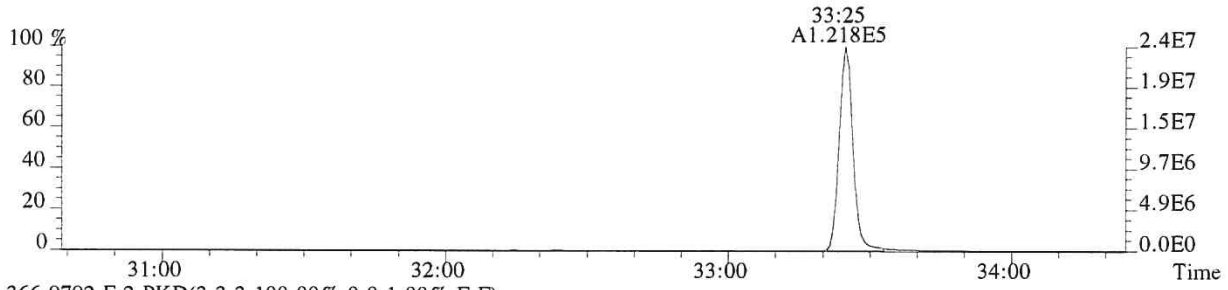
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1388.0,1.00%,F,T)



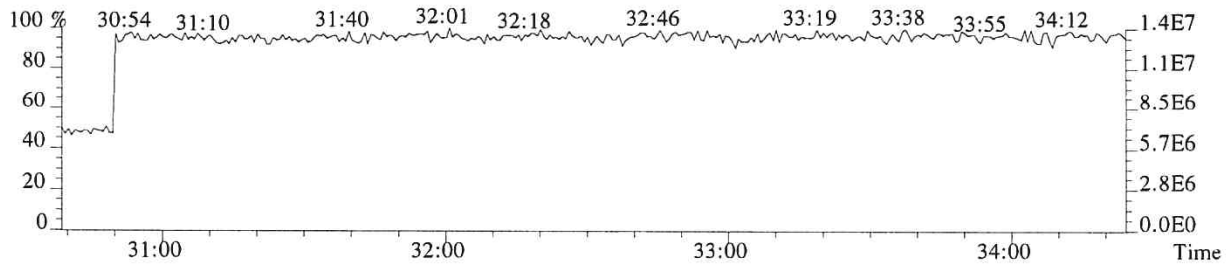
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3048.0,1.00%,F,T)



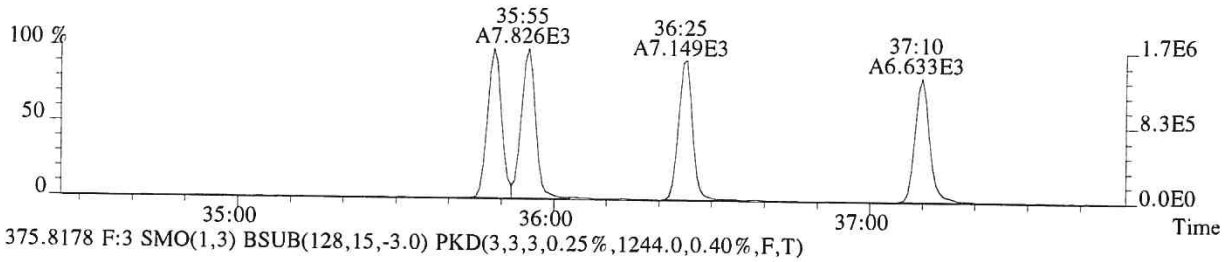
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1788.0,1.00%,F,T)



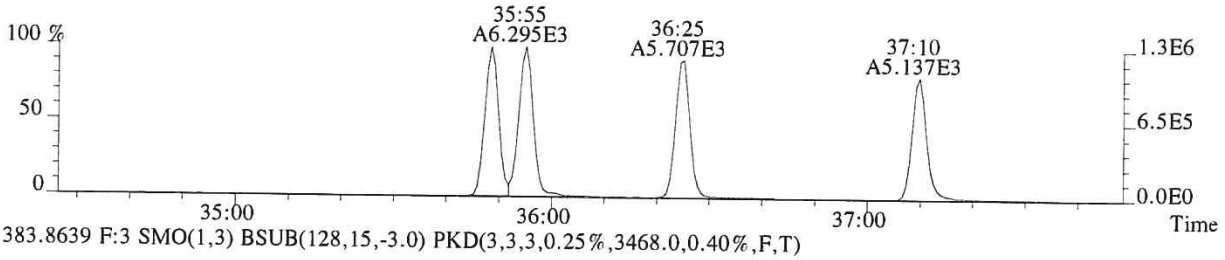
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



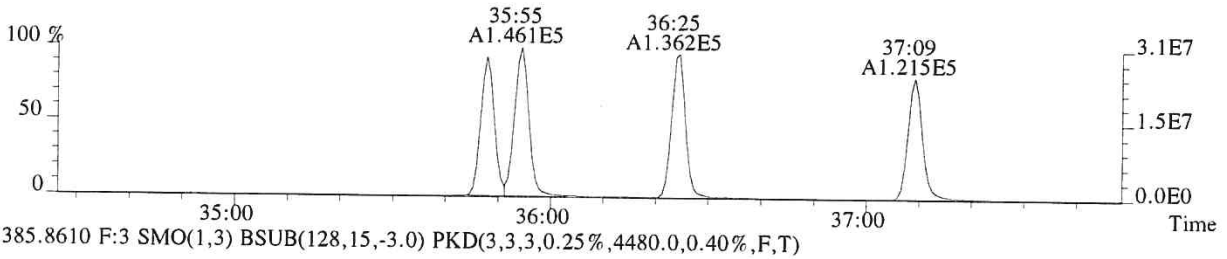
File:P614683 #1-304 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3192.0,0.40%,F,T)



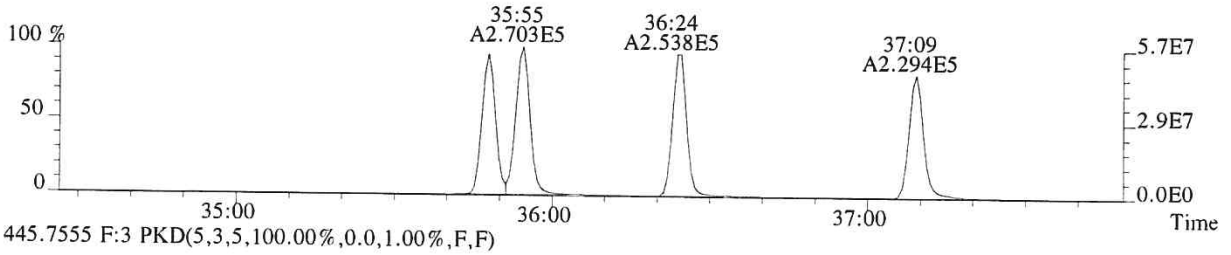
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1244.0,0.40%,F,T)



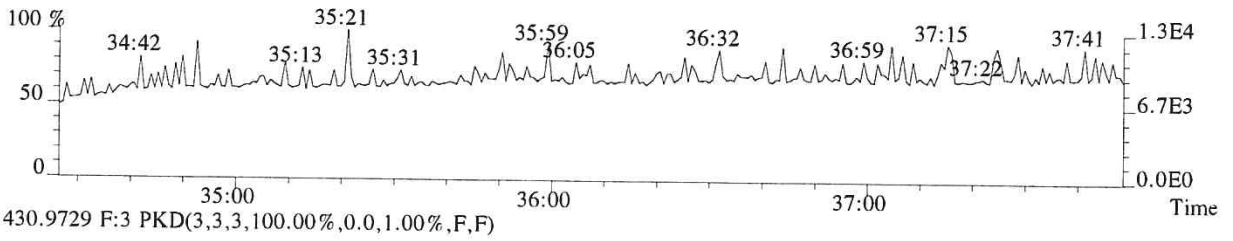
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3468.0,0.40%,F,T)



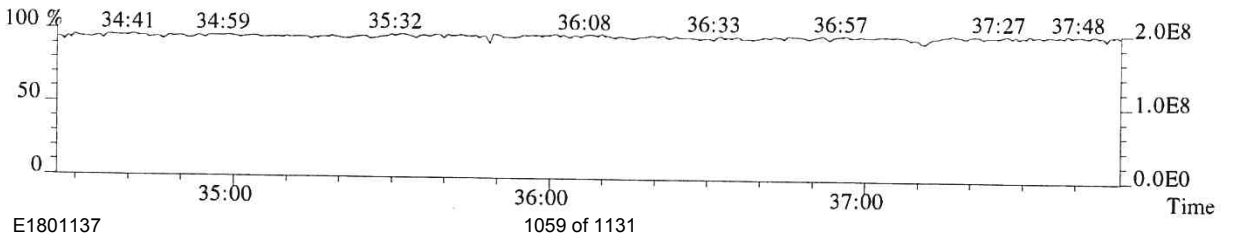
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4480.0,0.40%,F,T)



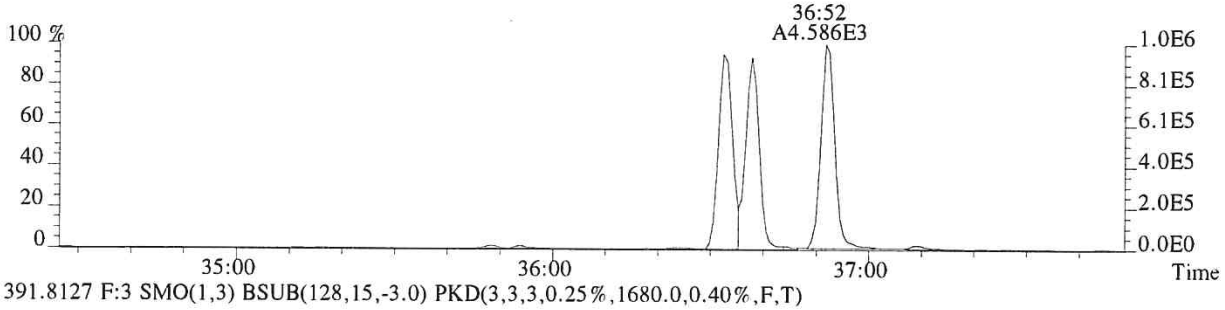
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



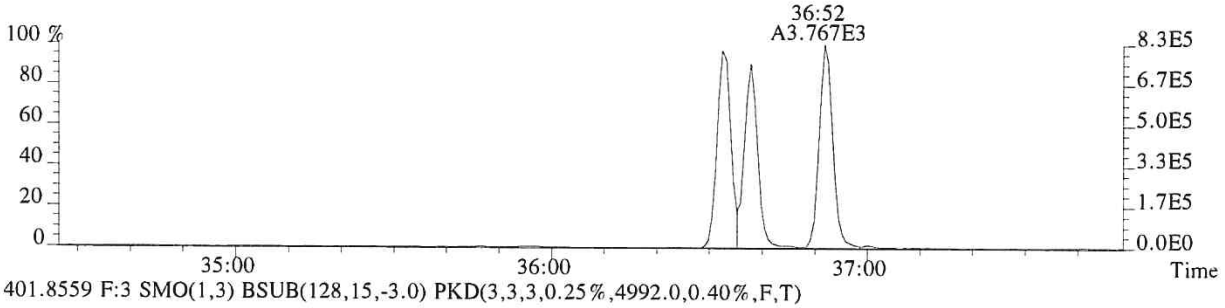
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



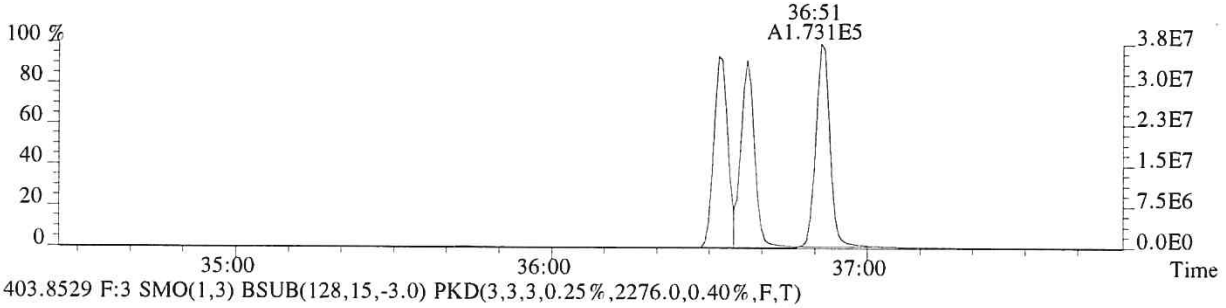
File:P614683 #1-304 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1020.0,0.40%,F,T)



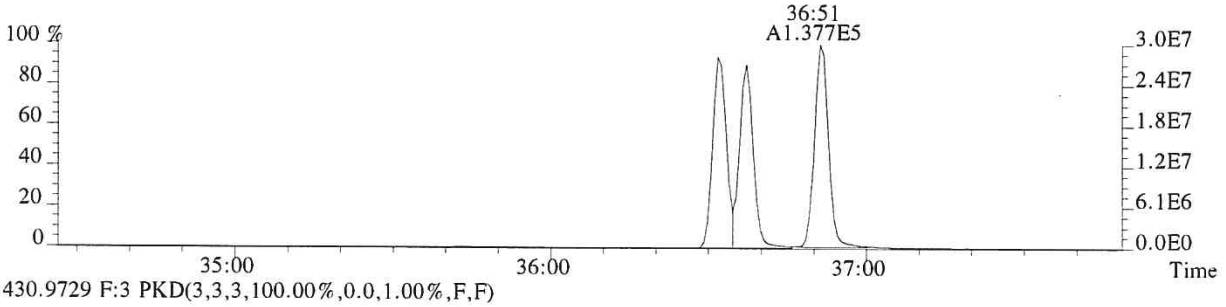
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1680.0,0.40%,F,T)



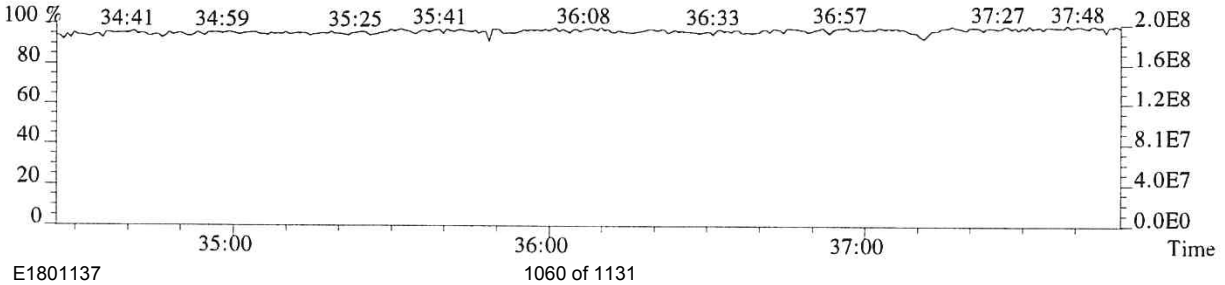
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4992.0,0.40%,F,T)



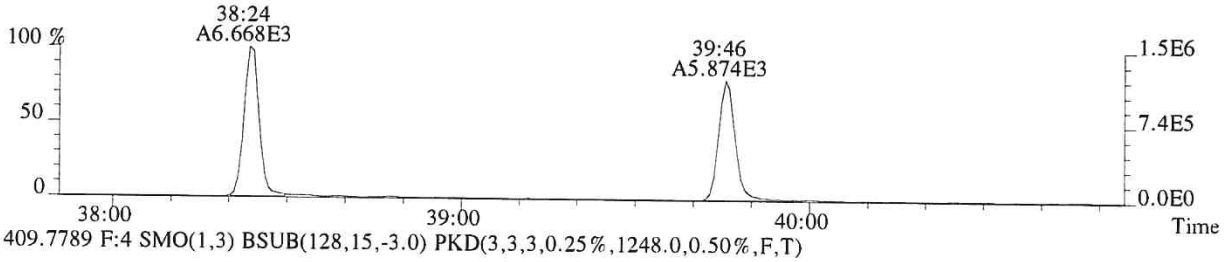
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2276.0,0.40%,F,T)



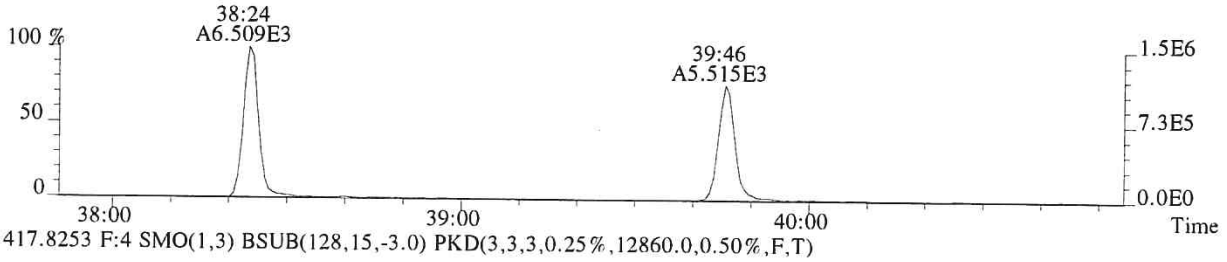
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



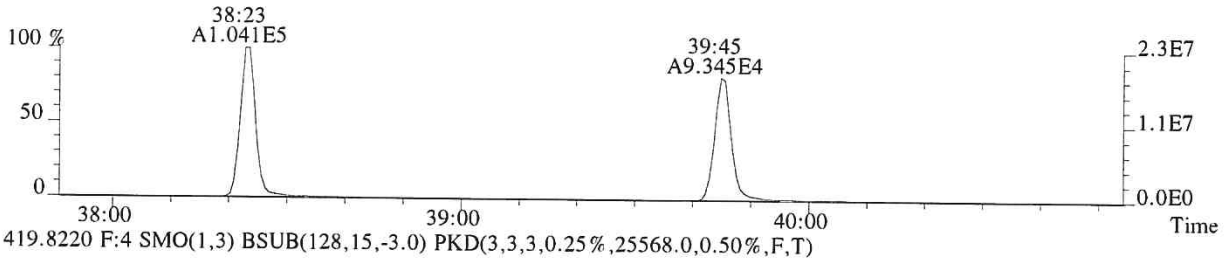
File:P614683 #1-276 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1968.0,0.50%,F,T)



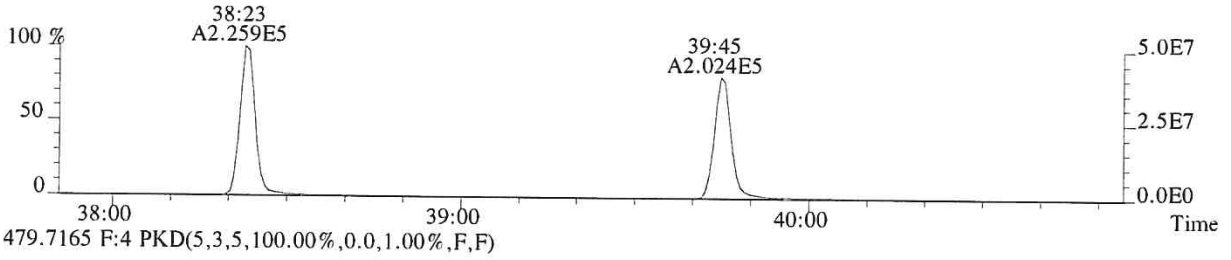
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1248.0,0.50%,F,T)



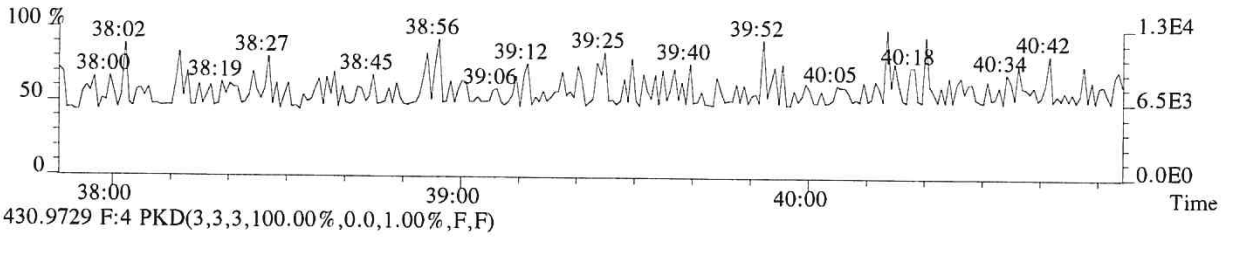
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,12860.0,0.50%,F,T)



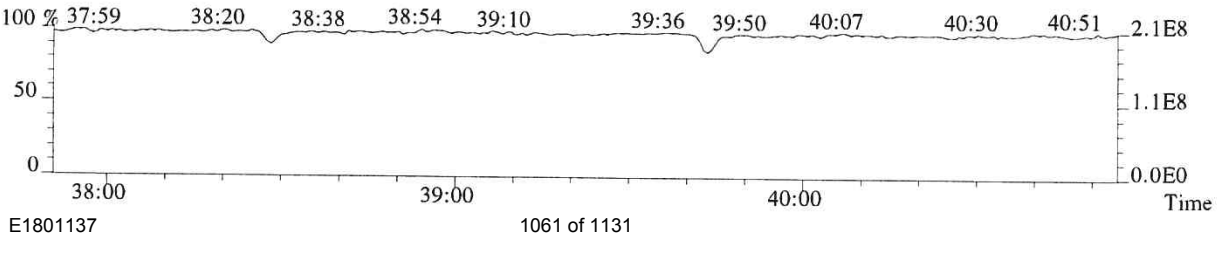
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,25568.0,0.50%,F,T)



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

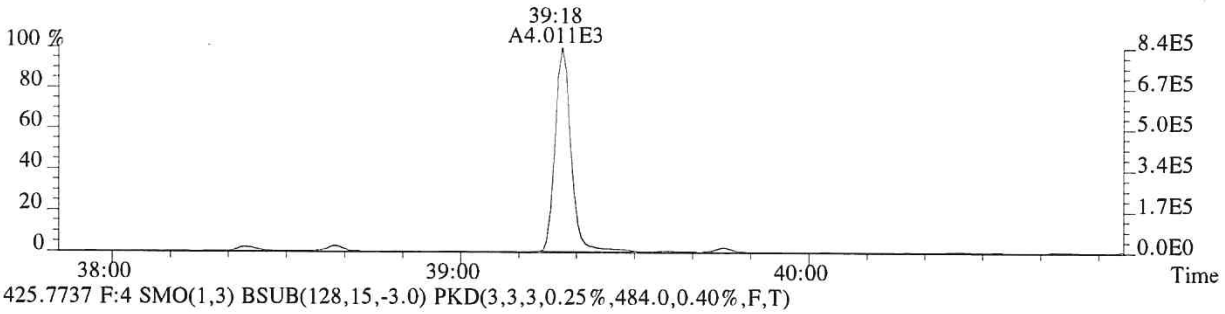


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

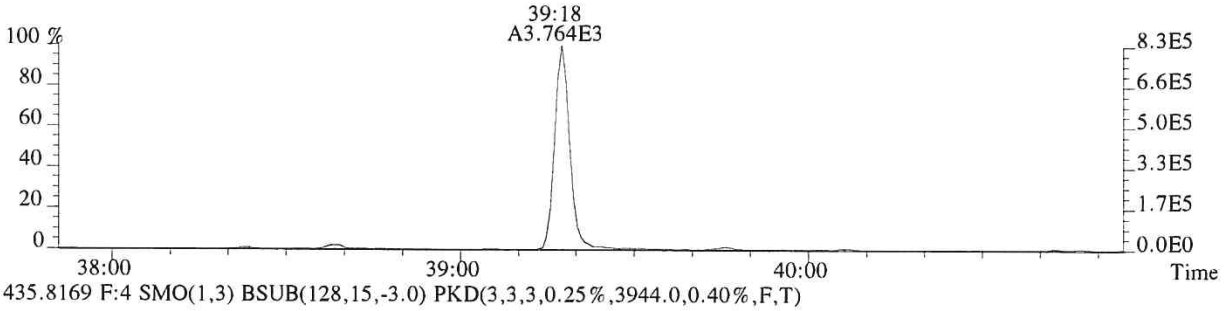


016811

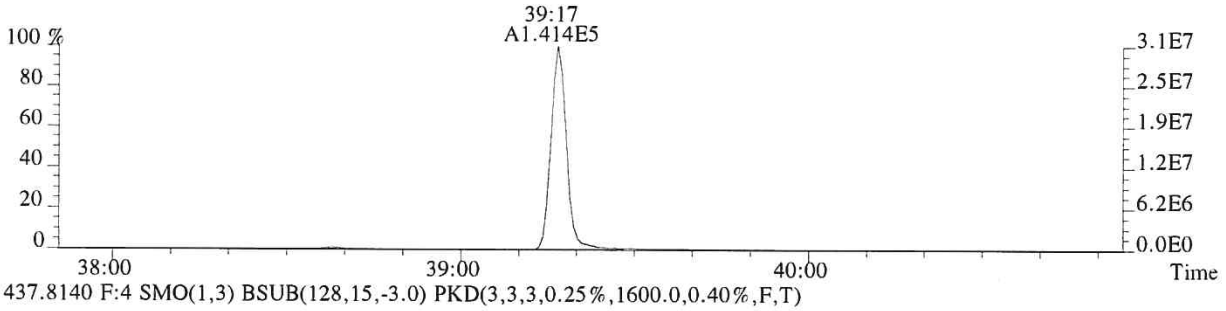
File:P614683 #1-276 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1168.0,0.40%,F,T)



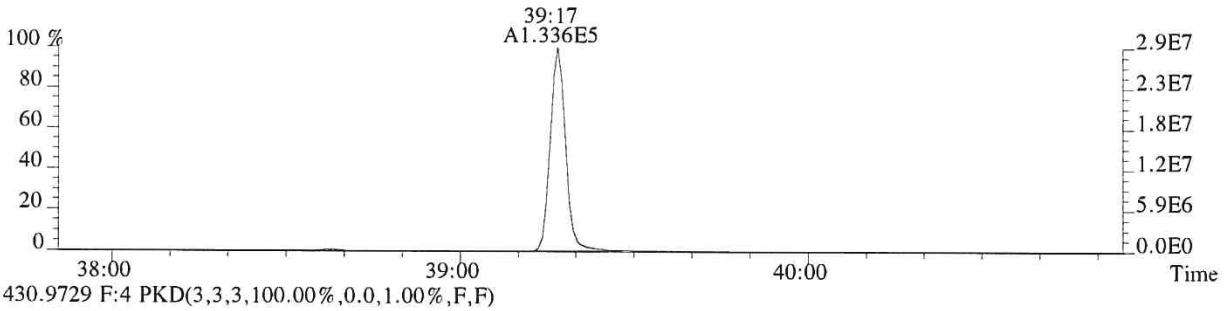
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,484.0,0.40%,F,T)



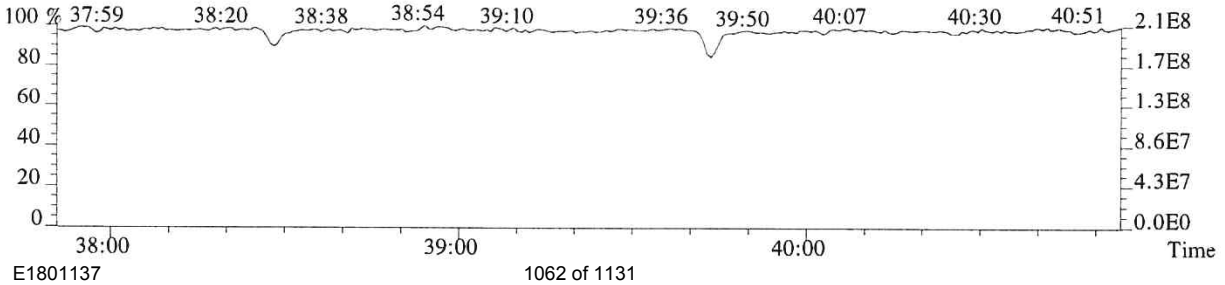
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3944.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1600.0,0.40%,F,T)

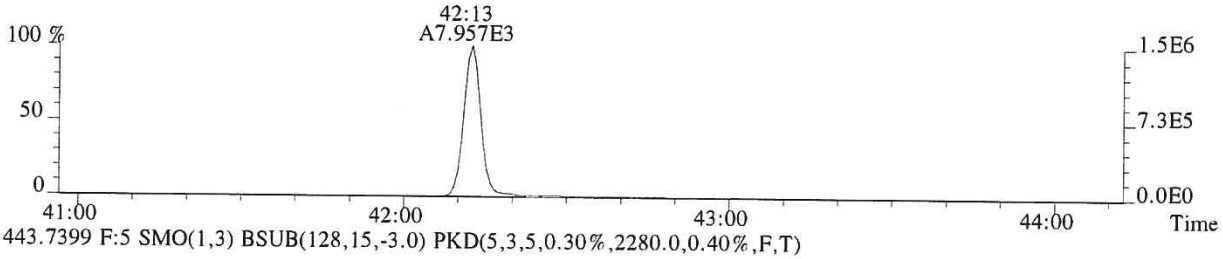


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

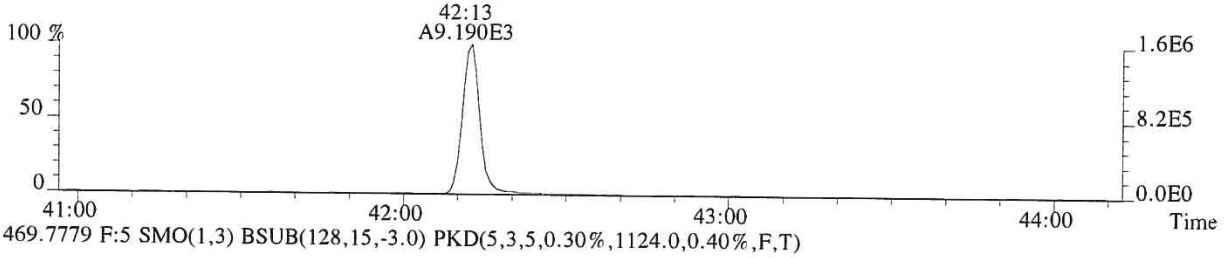


File:P614683 #1-295 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1

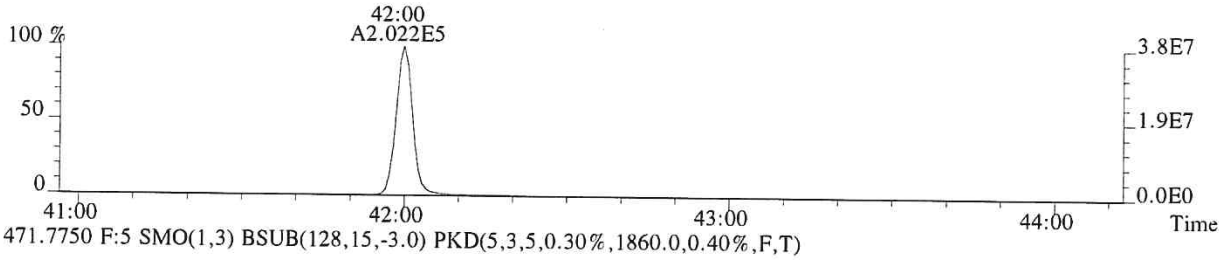
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1152.0,0.40%,F,T)



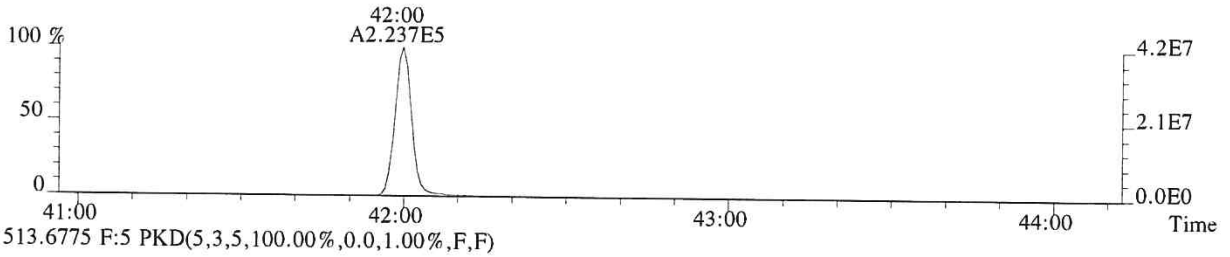
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2280.0,0.40%,F,T)



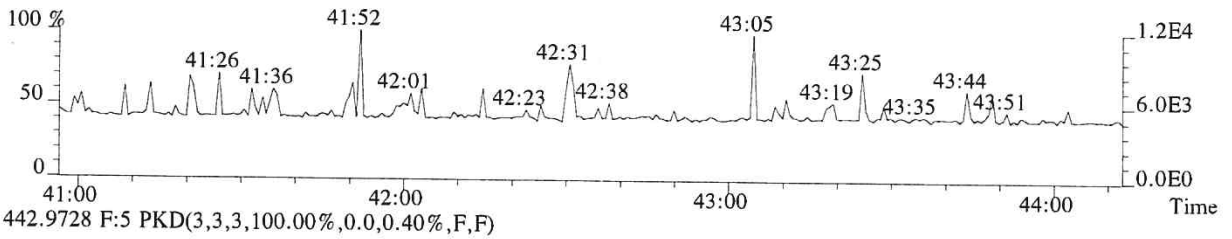
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1124.0,0.40%,F,T)



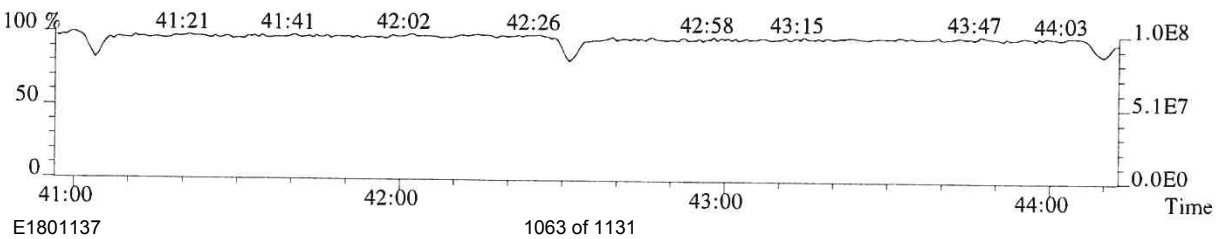
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1860.0,0.40%,F,T)



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

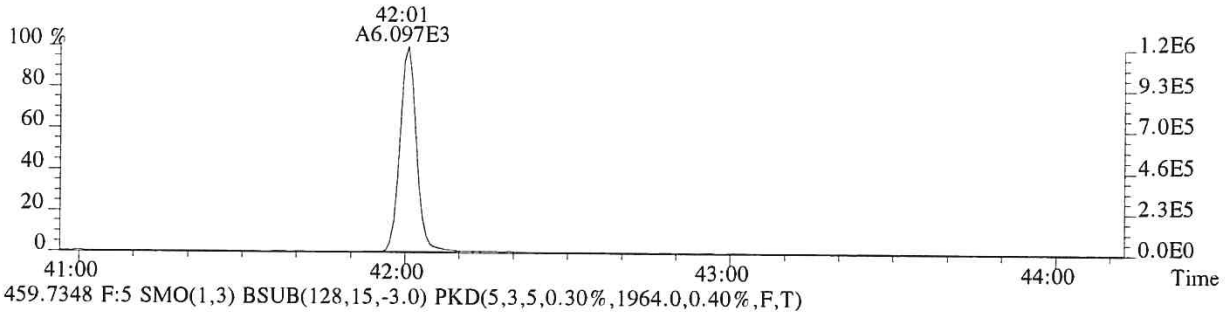


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

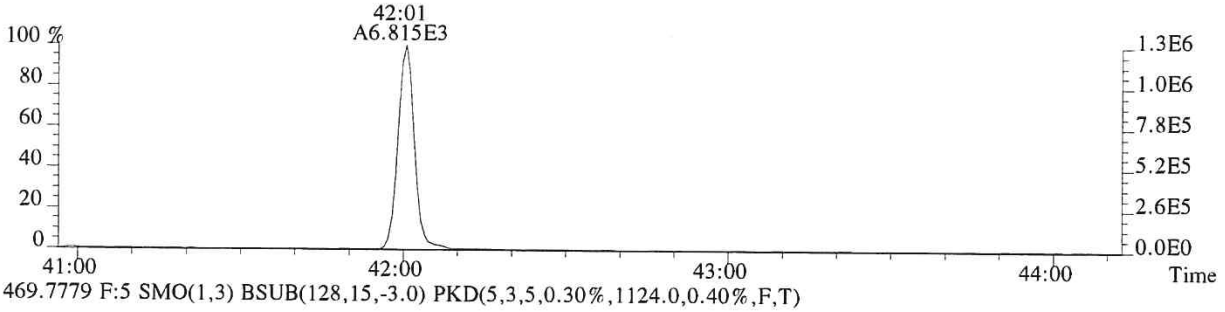


016813

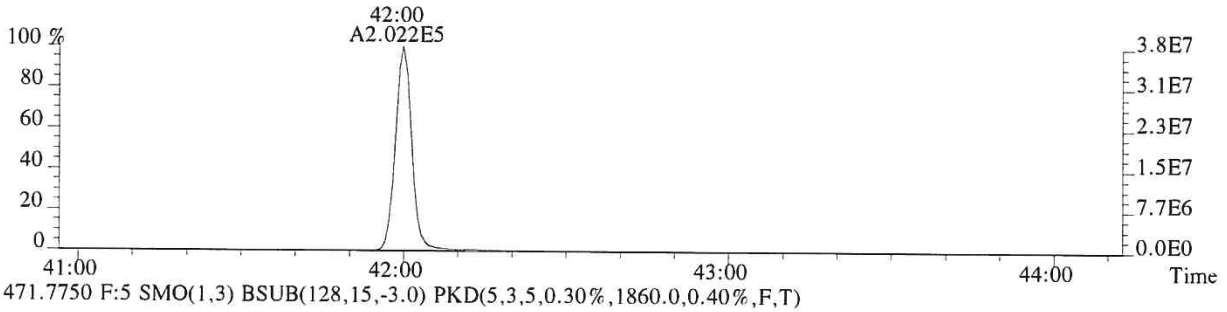
File:P614683 #1-295 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3136.0,0.40%,F,T)



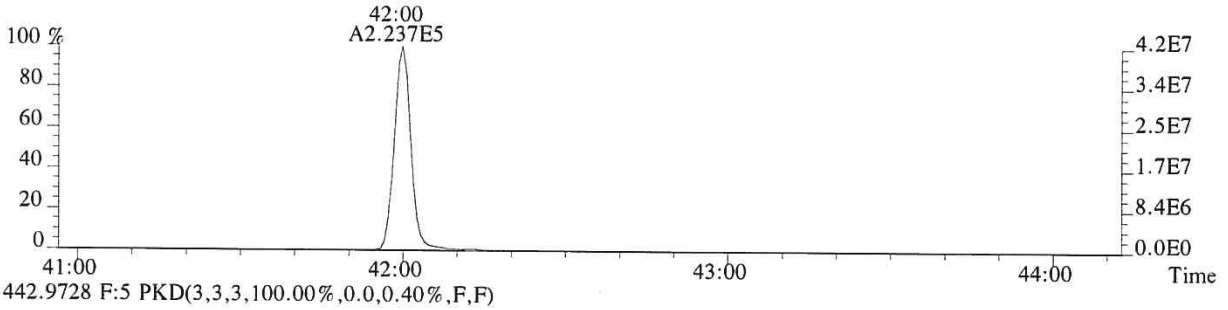
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1964.0,0.40%,F,T)



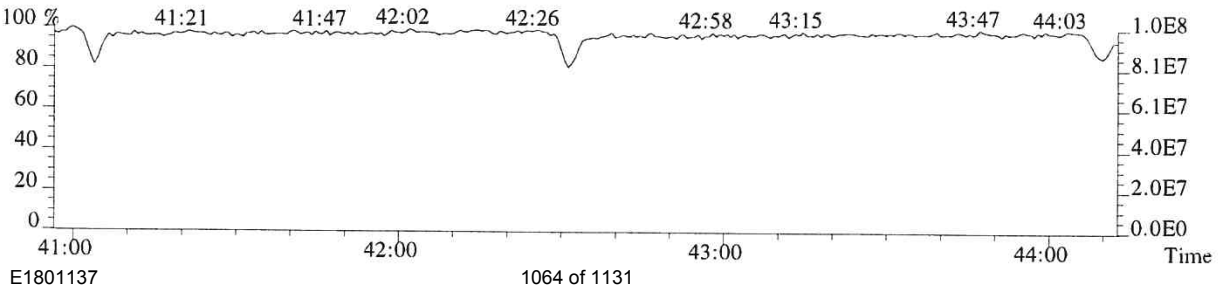
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1124.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1860.0,0.40%,F,T)



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



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
193434

Run #3 Filename P614684 Samp: 1 Inj: 1 Acquired: 25-SEP-18 15:59:37
Processed: 26-SEP-18 07:39:08 Sample ID: CS2

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:00	3.102e+03	3.732e+03	0.83	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:14	2.387e+04	1.519e+04	1.57	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:08	2.329e+04	1.484e+04	1.57	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	2.143e+04	1.713e+04	1.25	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	2.340e+04	1.874e+04	1.25	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	2.188e+04	1.713e+04	1.28	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:09	1.950e+04	1.588e+04	1.23	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	1.863e+04	1.764e+04	1.06	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	1.650e+04	1.567e+04	1.05	yes	no	1.463
10	Unk	OCDF	42:12	2.250e+04	2.478e+04	0.91	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	1.874e+03	2.328e+03	0.80	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	1.440e+04	9.416e+03	1.53	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	1.279e+04	1.013e+04	1.26	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	1.275e+04	1.020e+04	1.25	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:52	1.359e+04	1.091e+04	1.25	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	1.169e+04	1.088e+04	1.07	yes	no	1.112
17	Unk	OCDD	42:01	1.626e+04	1.848e+04	0.88	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	1.350e+05	1.713e+05	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	2.144e+05	1.340e+05	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	2.142e+05	1.318e+05	1.62	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:47	9.603e+04	1.811e+05	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:54	1.132e+05	2.120e+05	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:24	1.055e+05	1.978e+05	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	9.513e+04	1.787e+05	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:23	7.767e+04	1.706e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:45	6.849e+04	1.521e+05	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	9.327e+04	1.167e+05	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	1.531e+05	9.729e+04	1.57	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:32	1.232e+05	9.748e+04	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	1.208e+05	9.608e+04	1.26	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	1.060e+05	1.018e+05	1.04	yes	no	0.857
32	IS	13C-OCDD	42:00	1.501e+05	1.663e+05	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:12	9.647e+04	1.194e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:51	1.360e+05	1.078e+05	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	4.600e+03				no	1.086

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Signal/Noise Height Ratio Summary

CLIENT ID.
193434

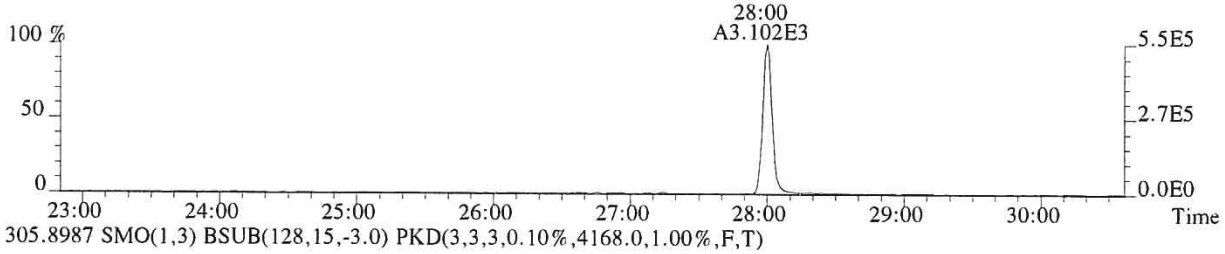
Run #3 Filename P614684 Samp: 1 Inj: 1 Acquired: 25-SEP-18 15:59:37
Processed: 26-SEP-18 07:39:08 LAB. ID: CS2

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.46e+05	1.35e+03	4.0e+02	6.81e+05	4.17e+03	1.6e+02
2	1,2,3,7,8-PeCDF	4.40e+06	1.19e+03	3.7e+03	2.83e+06	5.62e+03	5.0e+02
3	2,3,4,7,8-PeCDF	4.45e+06	1.19e+03	3.7e+03	2.83e+06	5.62e+03	5.0e+02
4	1,2,3,4,7,8-HxCDF	4.64e+06	2.66e+03	1.7e+03	3.65e+06	1.33e+03	2.7e+03
5	1,2,3,6,7,8-HxCDF	4.85e+06	2.66e+03	1.8e+03	3.88e+06	1.33e+03	2.9e+03
6	2,3,4,6,7,8-HxCDF	4.77e+06	2.66e+03	1.8e+03	3.75e+06	1.33e+03	2.8e+03
7	1,2,3,7,8,9-HxCDF	3.92e+06	2.66e+03	1.5e+03	3.16e+06	1.33e+03	2.4e+03
8	1,2,3,4,6,7,8-HpCDF	4.16e+06	4.06e+03	1.0e+03	3.98e+06	5.19e+03	7.7e+02
9	1,2,3,4,7,8,9-HpCDF	3.43e+06	4.06e+03	8.5e+02	3.23e+06	5.19e+03	6.2e+02
10	OCDF	4.02e+06	1.02e+03	3.9e+03	4.45e+06	3.18e+03	1.4e+03
11	2,3,7,8-TCDD	3.59e+05	5.08e+03	7.1e+01	4.49e+05	2.84e+03	1.6e+02
12	1,2,3,7,8-PeCDD	2.79e+06	2.23e+03	1.3e+03	1.83e+06	1.03e+03	1.8e+03
13	1,2,3,4,7,8-HxCDD	2.90e+06	1.16e+03	2.5e+03	2.30e+06	2.22e+03	1.0e+03
14	1,2,3,6,7,8-HxCDD	2.75e+06	1.16e+03	2.4e+03	2.20e+06	2.22e+03	9.9e+02
15	1,2,3,7,8,9-HxCDD	2.97e+06	1.16e+03	2.6e+03	2.38e+06	2.22e+03	1.1e+03
16	1,2,3,4,6,7,8-HpCDD	2.45e+06	1.22e+03	2.0e+03	2.30e+06	1.43e+03	1.6e+03
17	OCDD	3.03e+06	8.24e+02	3.7e+03	3.48e+06	2.34e+03	1.5e+03
18	13C-2,3,7,8-TCDF	2.30e+07	1.44e+04	1.6e+03	2.91e+07	8.40e+03	3.5e+03
19	13C-1,2,3,7,8-PeCDF	3.88e+07	2.39e+03	1.6e+04	2.43e+07	1.71e+03	1.4e+04
20	13C-2,3,4,7,8-PeCDF	4.22e+07	2.39e+03	1.8e+04	2.60e+07	1.71e+03	1.5e+04
21	13C-1,2,3,4,7,8-HxCDF	2.07e+07	2.16e+03	9.6e+03	3.93e+07	5.29e+03	7.4e+03
22	13C-1,2,3,6,7,8-HxCDF	2.36e+07	2.16e+03	1.1e+04	4.45e+07	5.29e+03	8.4e+03
23	13C-2,3,4,6,7,8-HxCDF	2.32e+07	2.16e+03	1.1e+04	4.39e+07	5.29e+03	8.3e+03
24	13C-1,2,3,7,8,9-HxCDF	1.94e+07	2.16e+03	8.9e+03	3.69e+07	5.29e+03	7.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.76e+07	7.69e+03	2.3e+03	3.85e+07	2.07e+04	1.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.41e+07	7.69e+03	1.8e+03	3.12e+07	2.07e+04	1.5e+03
27	13C-2,3,7,8-TCDD	1.74e+07	1.66e+04	1.0e+03	2.17e+07	7.77e+03	2.8e+03
28	13C-1,2,3,7,8-PeCDD	2.92e+07	3.94e+03	7.4e+03	1.87e+07	3.45e+03	5.4e+03
29	13C-1,2,3,4,7,8-HxCDD	2.82e+07	5.37e+03	5.3e+03	2.21e+07	2.98e+03	7.4e+03
30	13C-1,2,3,6,7,8-HxCDD	2.61e+07	5.37e+03	4.9e+03	2.11e+07	2.98e+03	7.1e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.24e+07	3.06e+03	7.3e+03	2.12e+07	2.68e+03	7.9e+03
32	13C-OCDD	2.74e+07	2.09e+03	1.3e+04	3.02e+07	1.61e+03	1.9e+04
33	13C-1,2,3,4-TCDD	1.78e+07	1.66e+04	1.1e+03	2.20e+07	7.77e+03	2.8e+03
34	13C-1,2,3,7,8,9-HxCDD	2.99e+07	5.37e+03	5.6e+03	2.35e+07	2.98e+03	7.9e+03
35	37Cl-2,3,7,8-TCDD	8.73e+05	3.54e+03	2.5e+02			

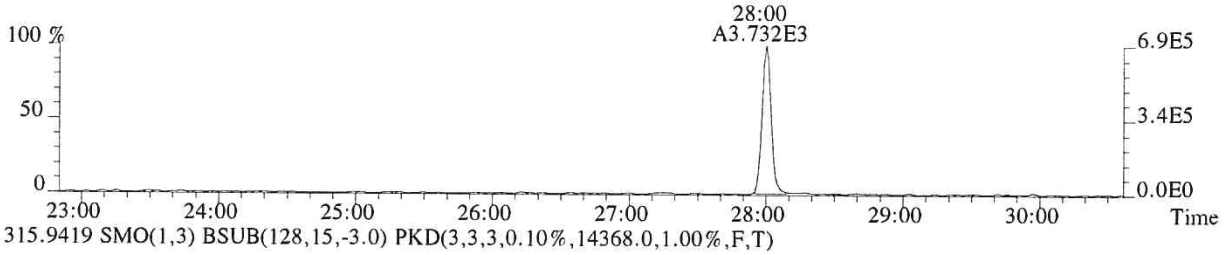
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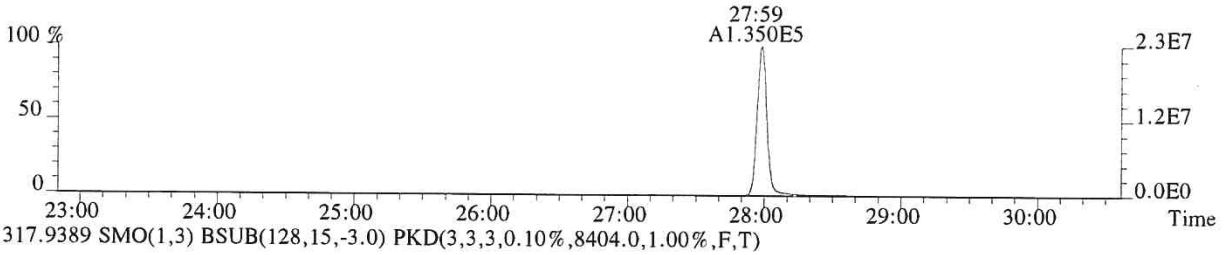
File:P614684 #1-552 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1352.0,1.00%,F,T)



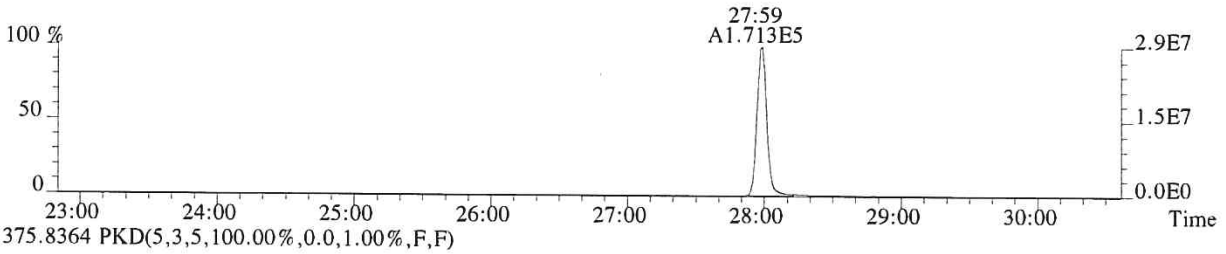
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4168.0,1.00%,F,T)



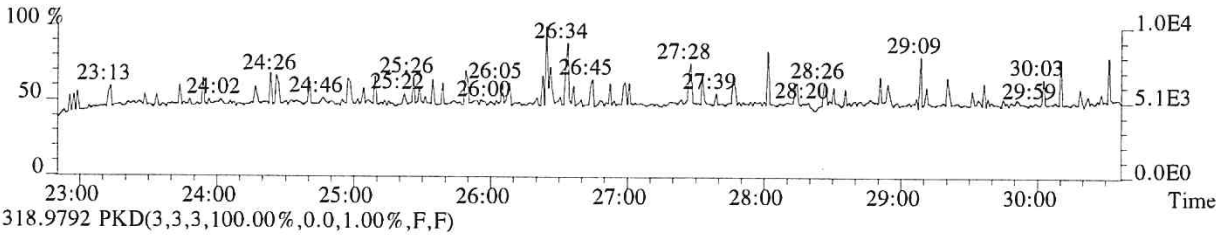
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,14368.0,1.00%,F,T)



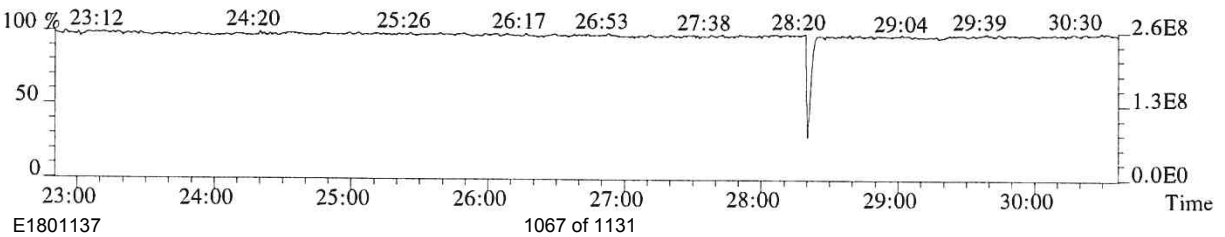
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8404.0,1.00%,F,T)



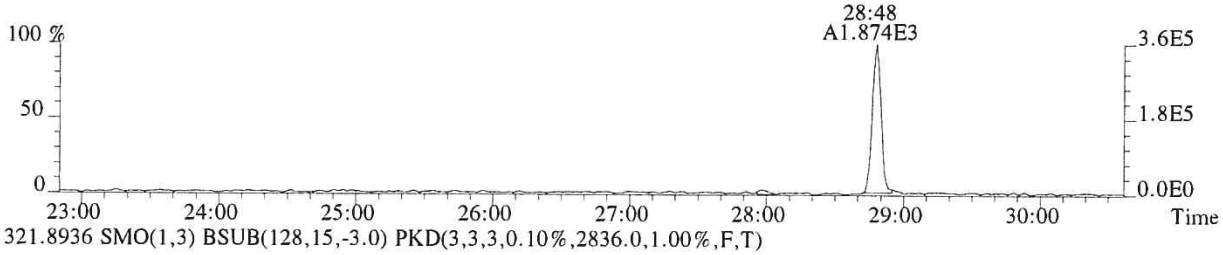
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



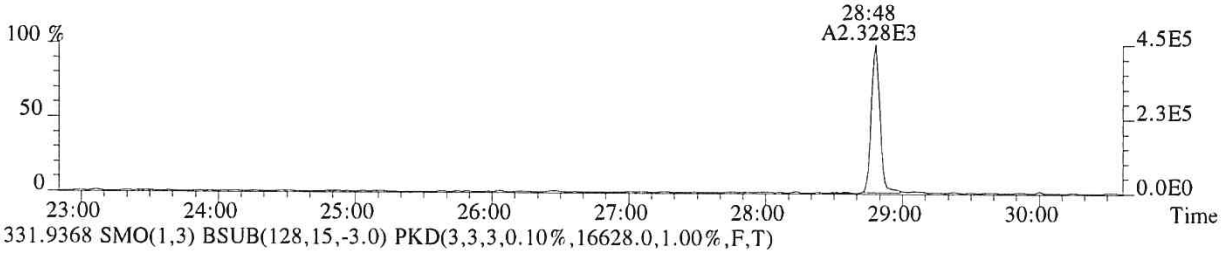
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



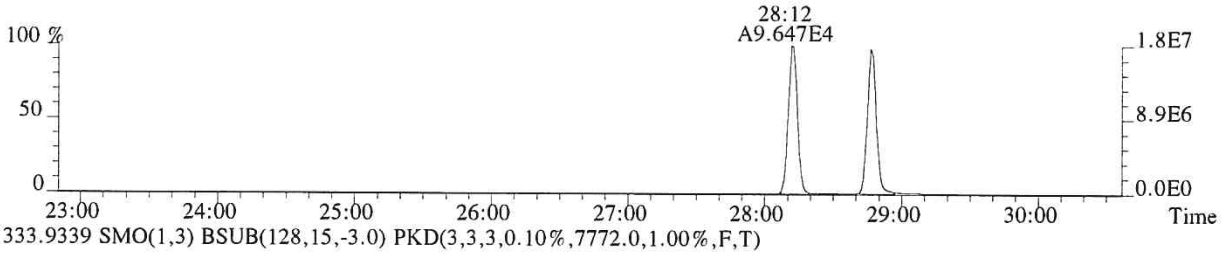
File:P614684 #1-552 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5080.0,1.00%,F,T)



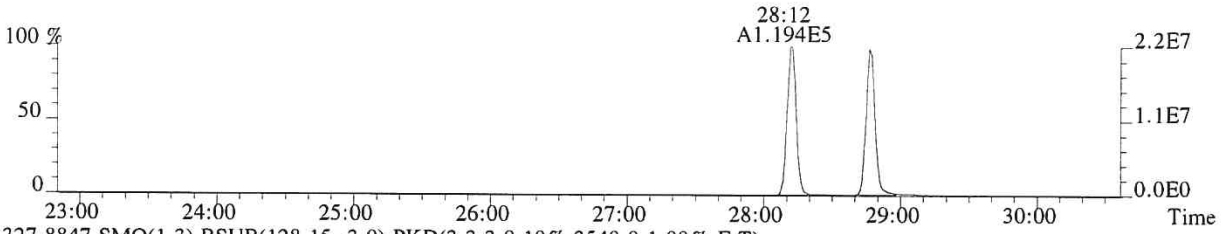
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2836.0,1.00%,F,T)



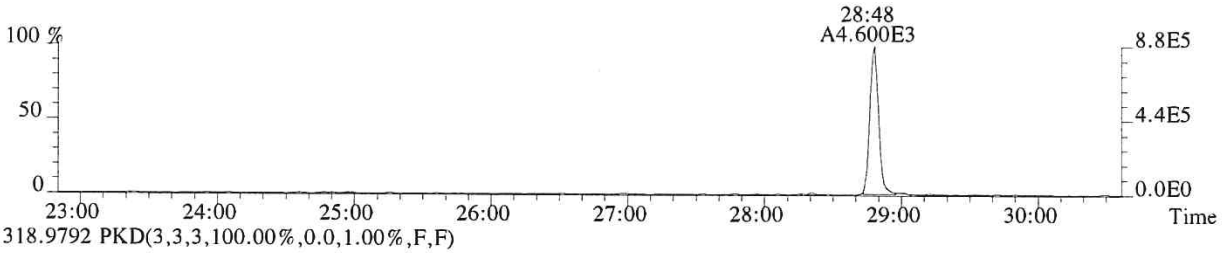
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,16628.0,1.00%,F,T)



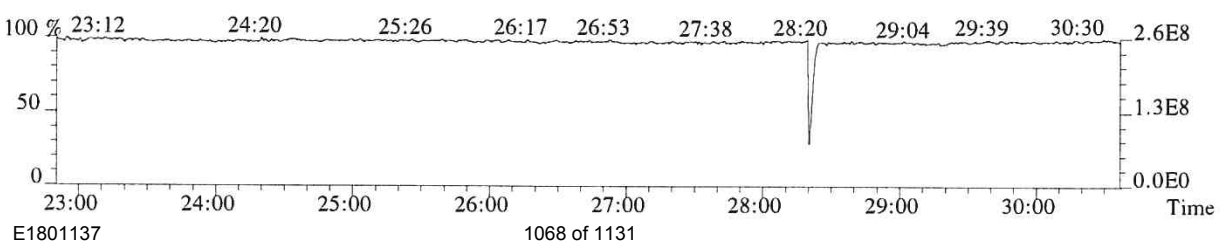
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7772.0,1.00%,F,T)



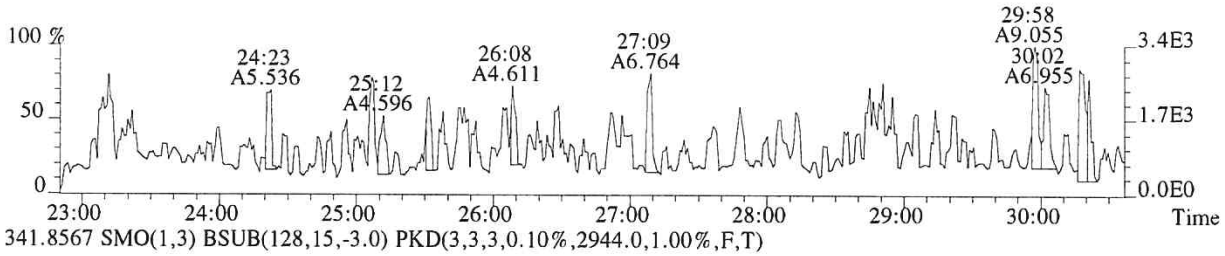
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3540.0,1.00%,F,T)



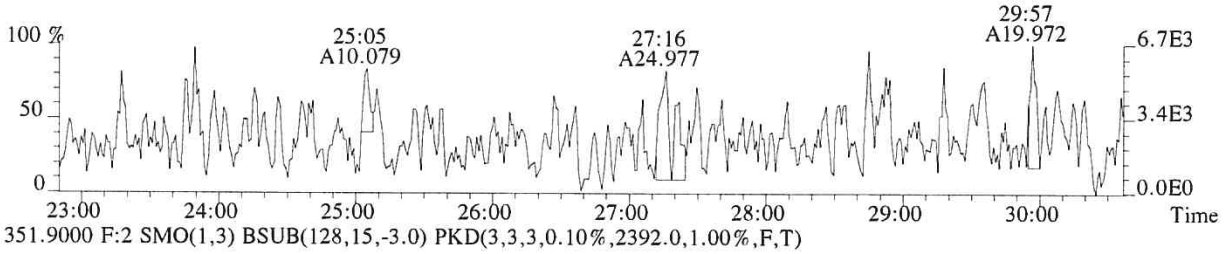
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



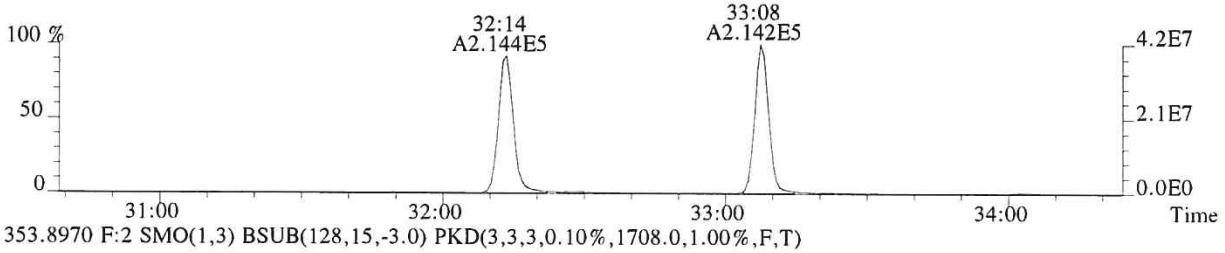
File:P614684 #1-552 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1084.0,1.00%,F,T)



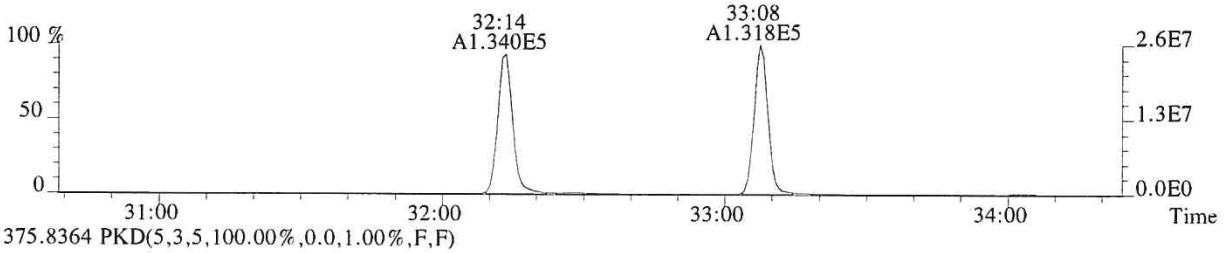
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2944.0,1.00%,F,T)



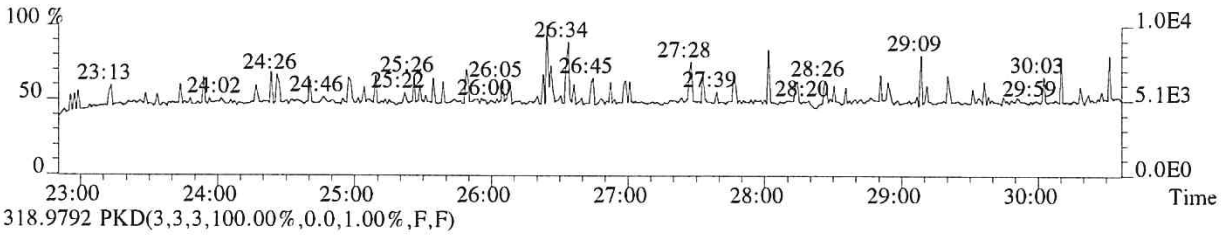
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2392.0,1.00%,F,T)



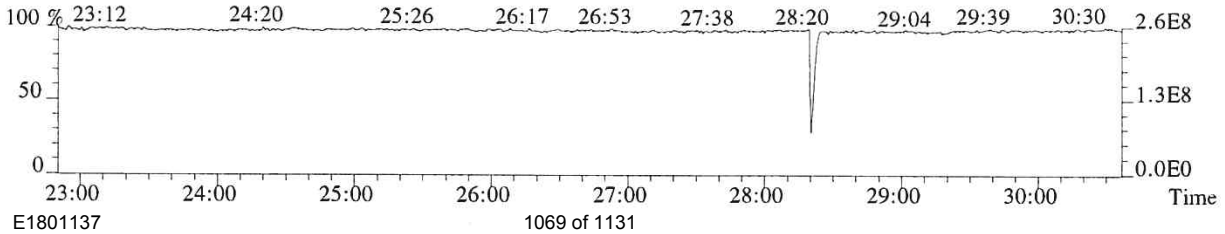
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1708.0,1.00%,F,T)



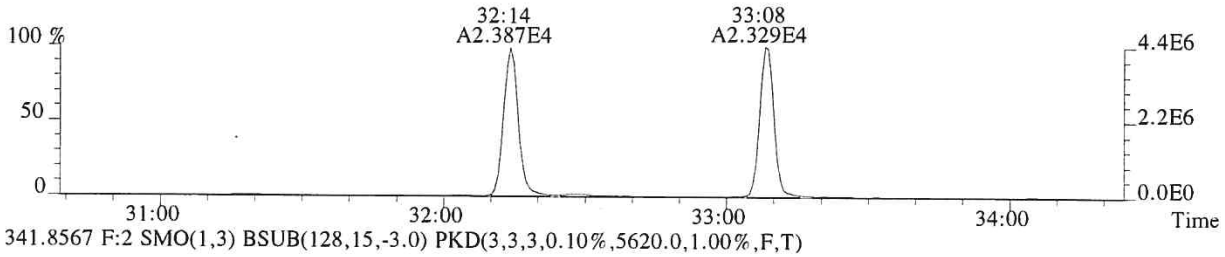
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



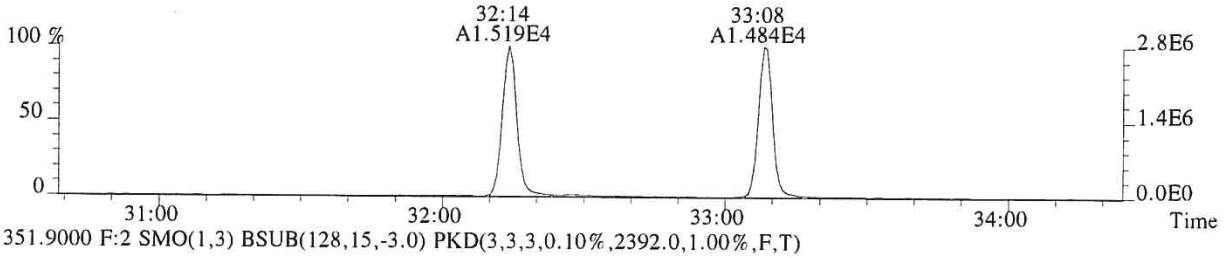
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



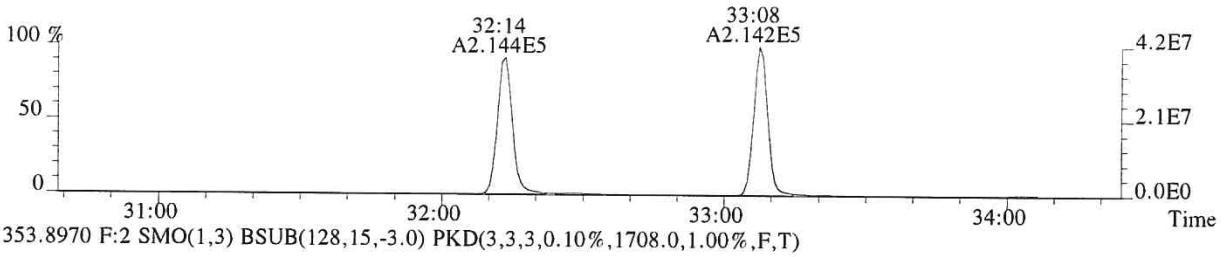
File:P614684 #1-339 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1188.0,1.00%,F,T)



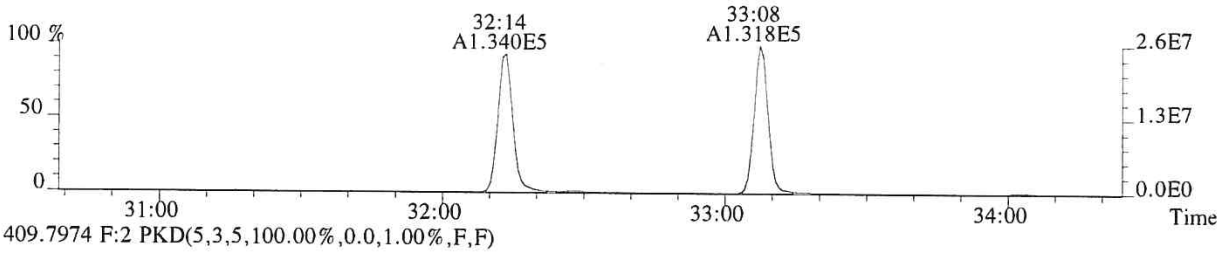
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5620.0,1.00%,F,T)



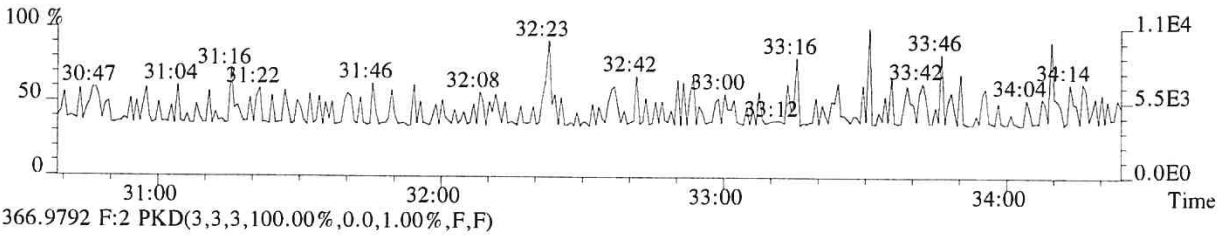
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2392.0,1.00%,F,T)



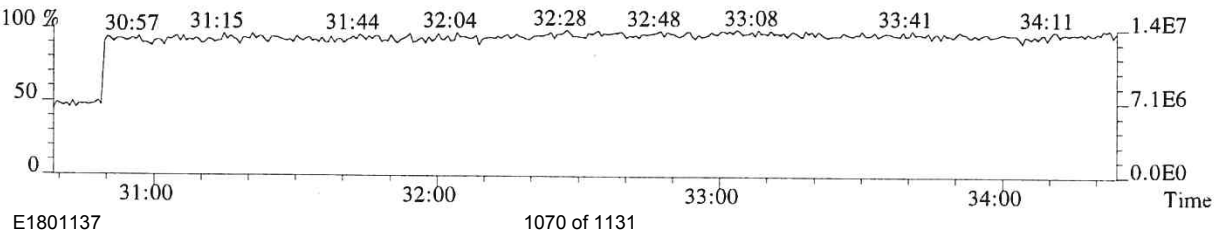
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1708.0,1.00%,F,T)



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

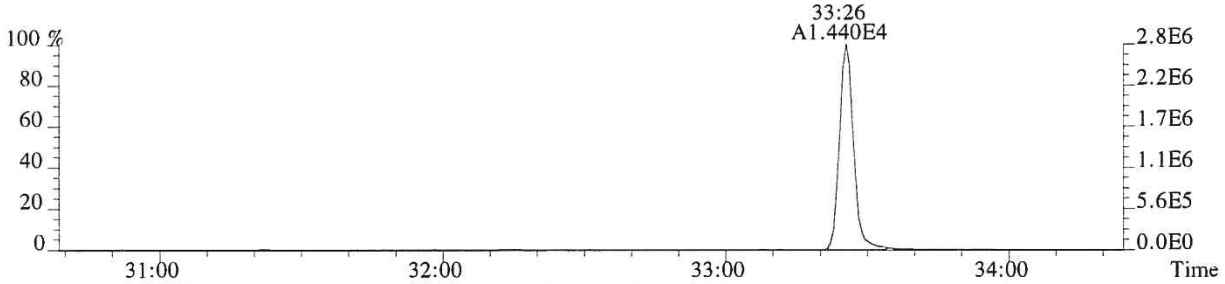


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

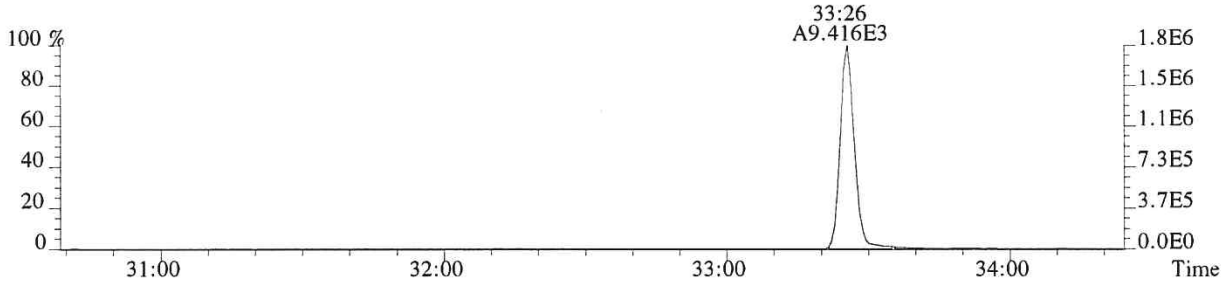


016820

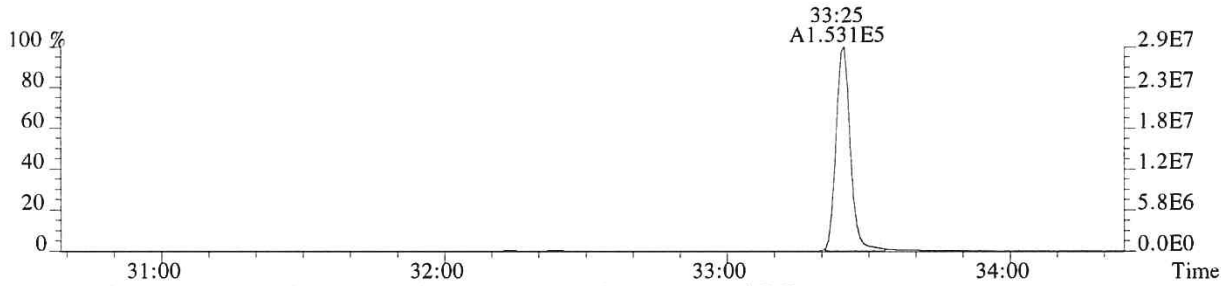
File:P614684 #1-339 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2228.0,1.00%,F,T)



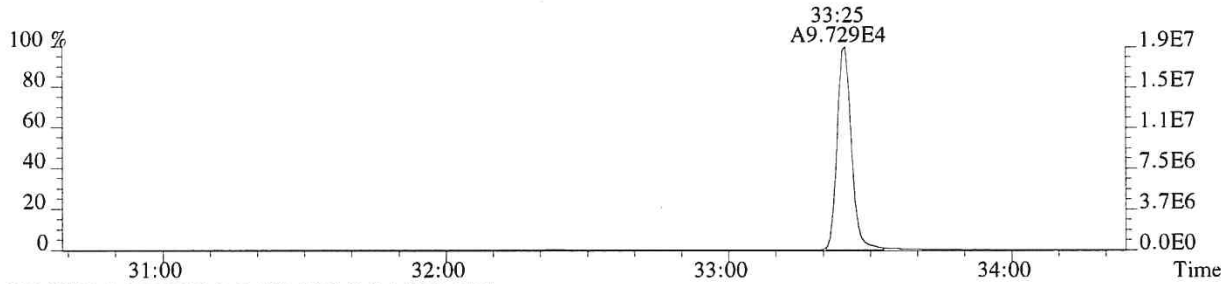
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



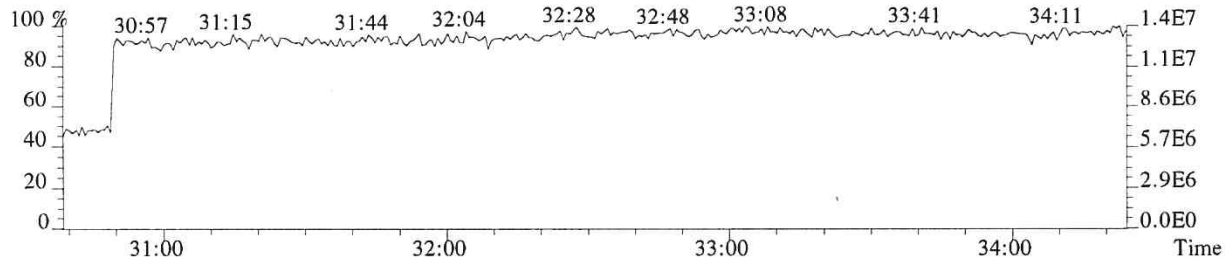
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3936.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3448.0,1.00%,F,T)

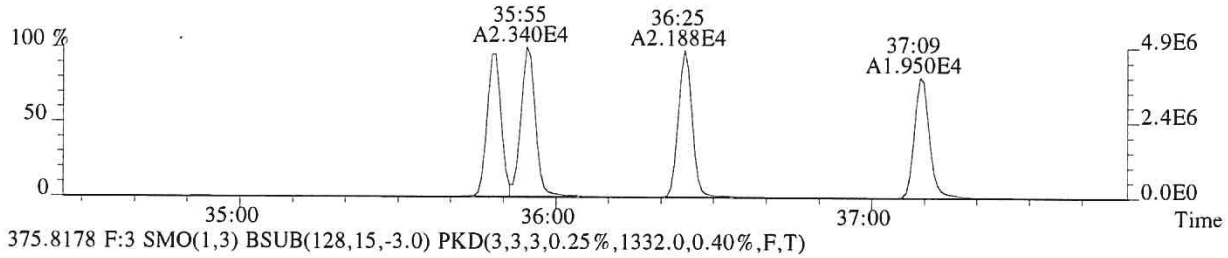


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

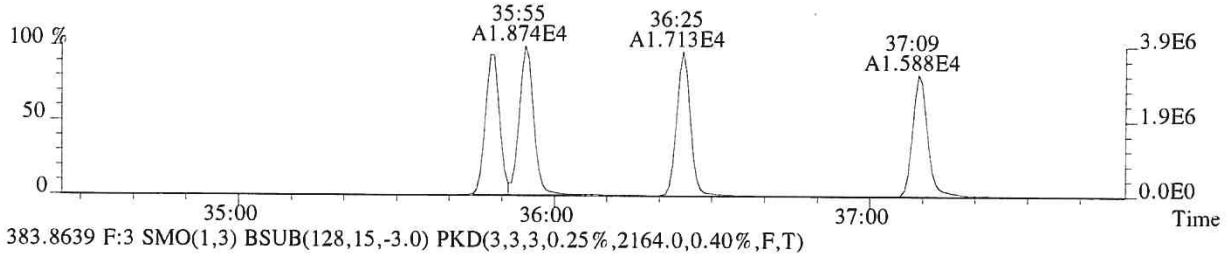


016821

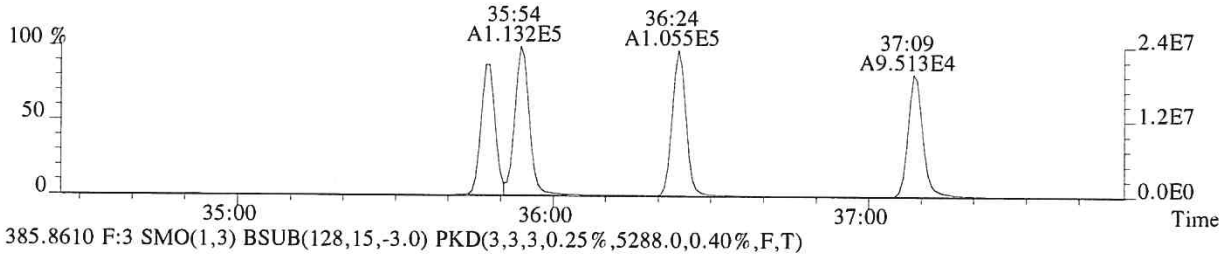
File:P614684 #1-304 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2656.0,0.40%,F,T)



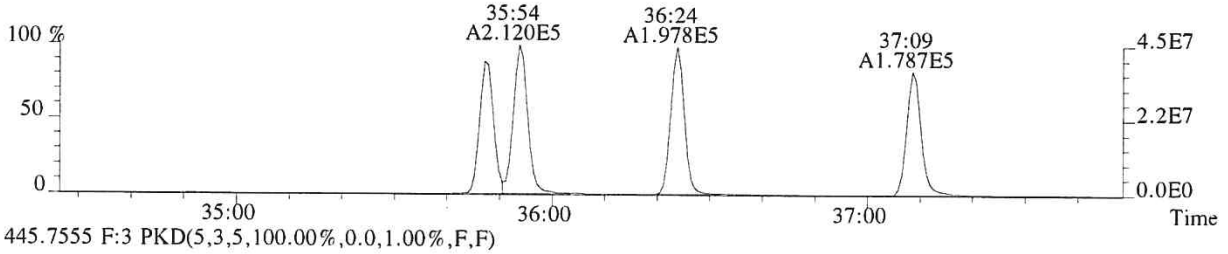
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1332.0,0.40%,F,T)



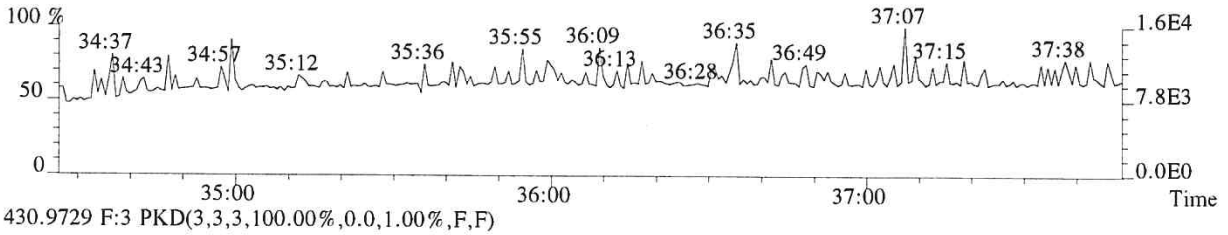
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2164.0,0.40%,F,T)



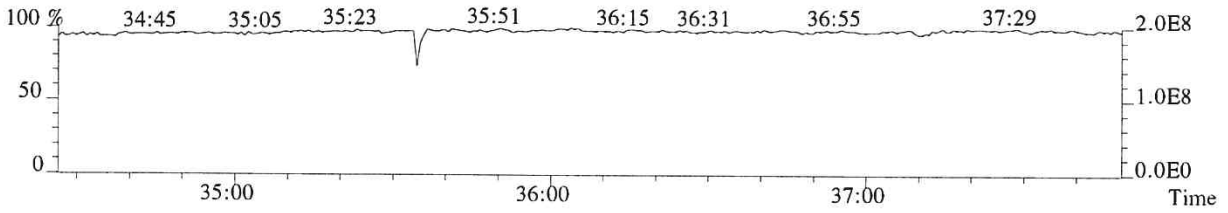
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5288.0,0.40%,F,T)



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

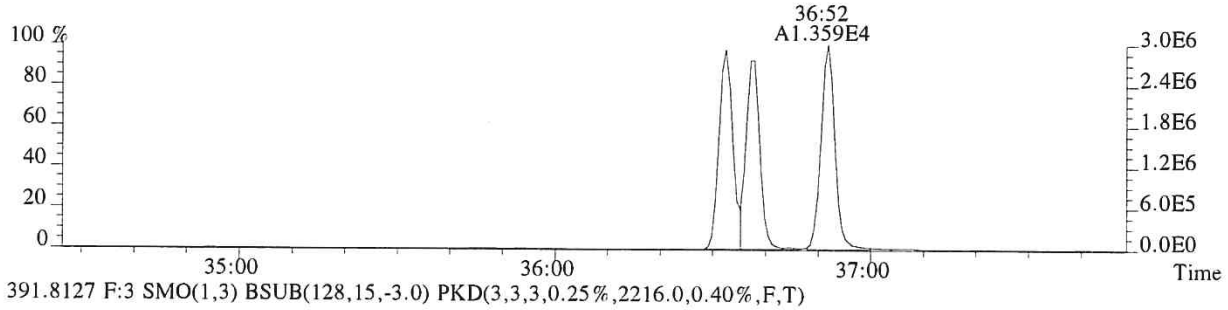


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

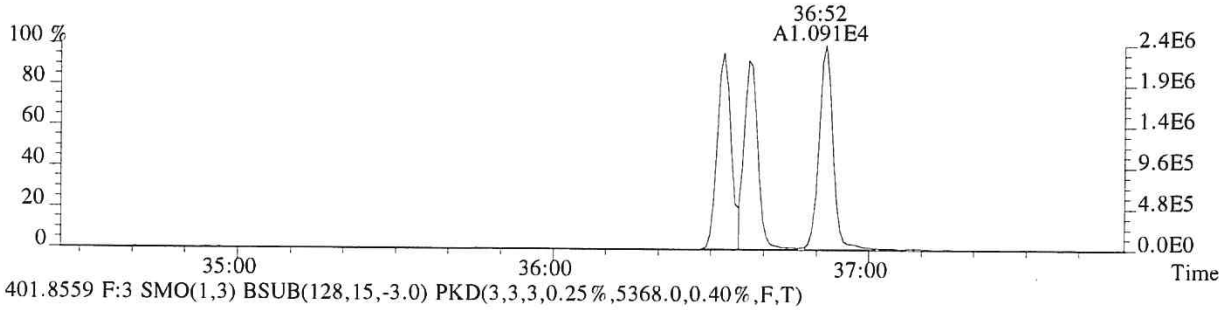


016822

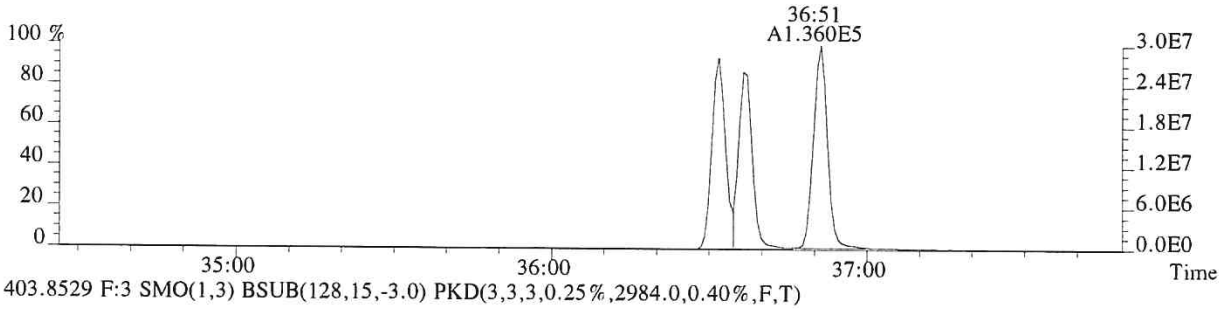
File:P614684 #1-304 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1156.0,0.40%,F,T)



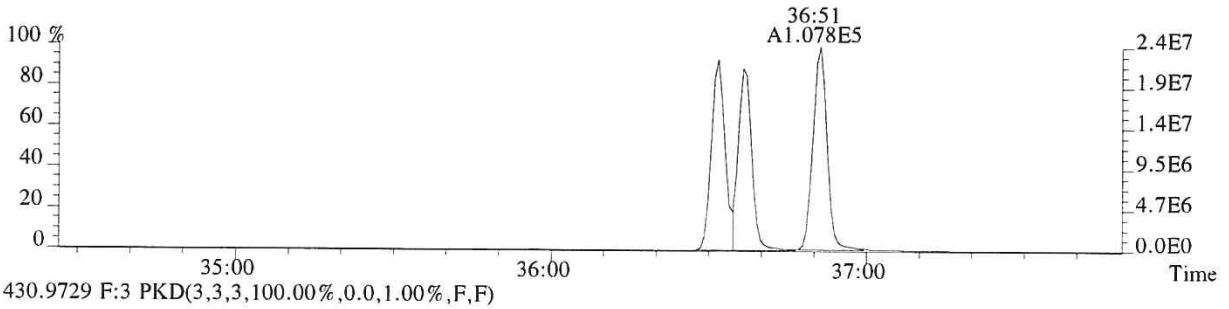
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2216.0,0.40%,F,T)



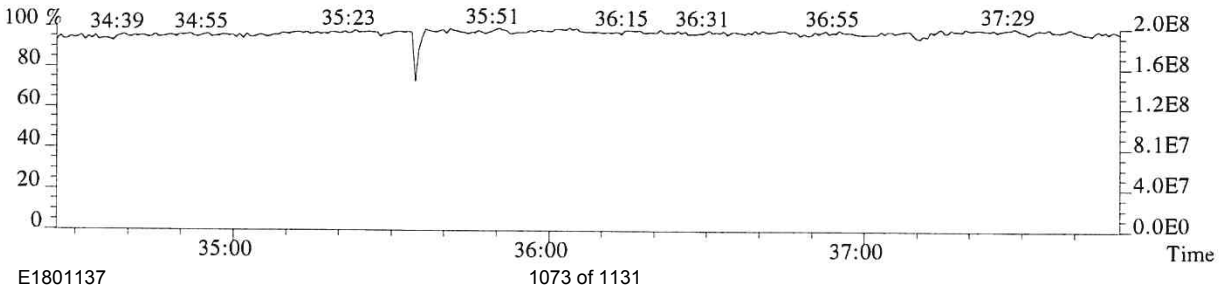
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5368.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2984.0,0.40%,F,T)

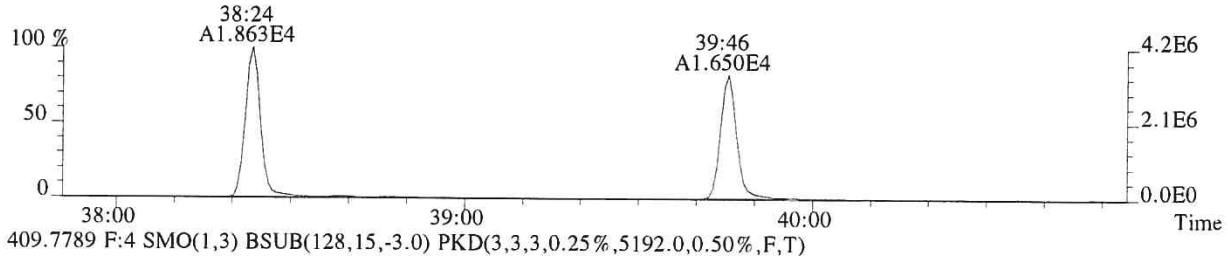


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

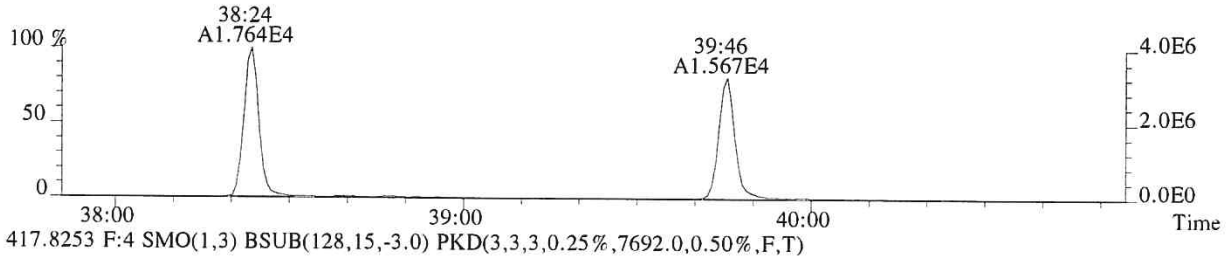


016823

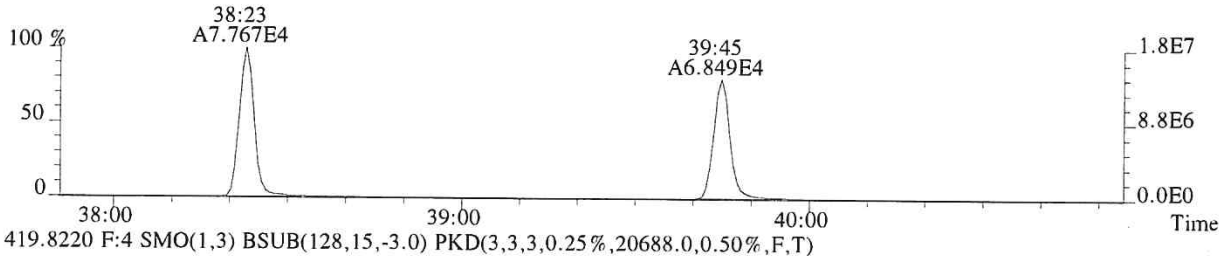
File:P614684 #1-276 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4060.0,0.50%,F,T)



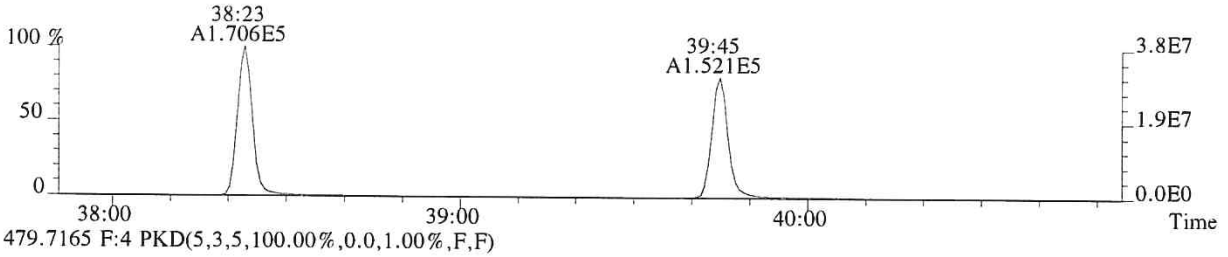
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5192.0,0.50%,F,T)



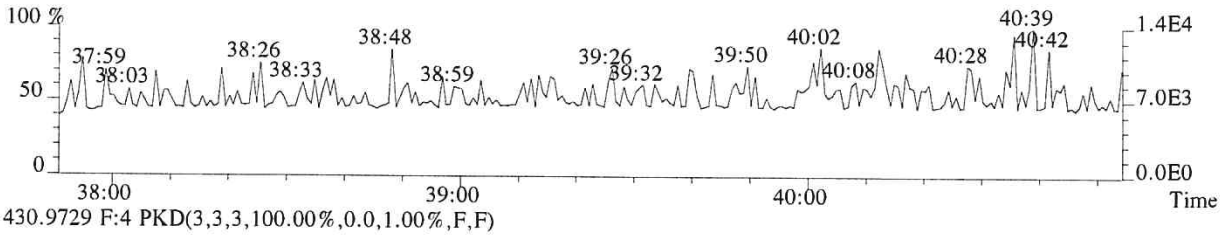
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7692.0,0.50%,F,T)



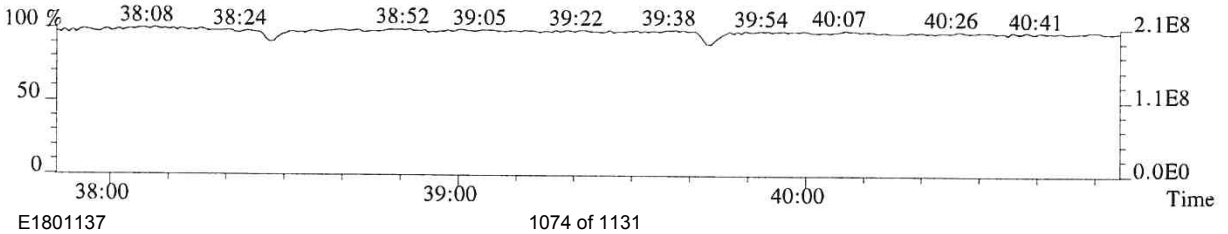
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,20688.0,0.50%,F,T)



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

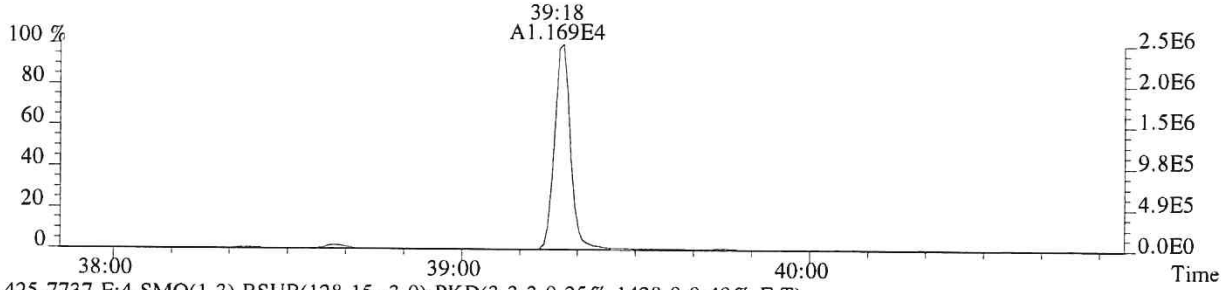


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

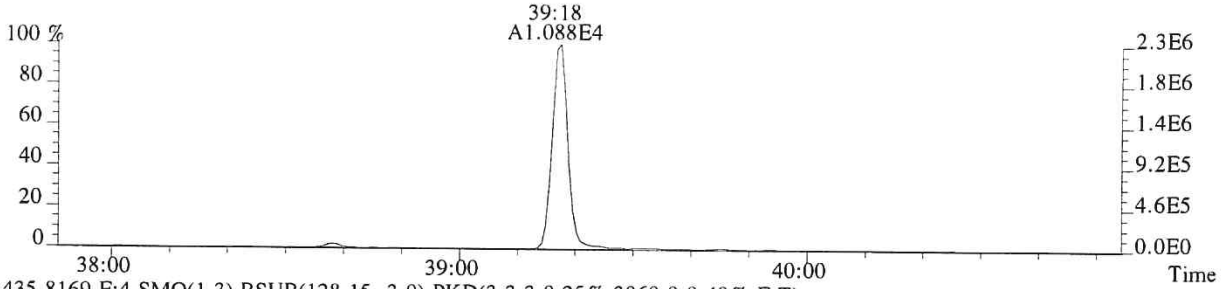


016824

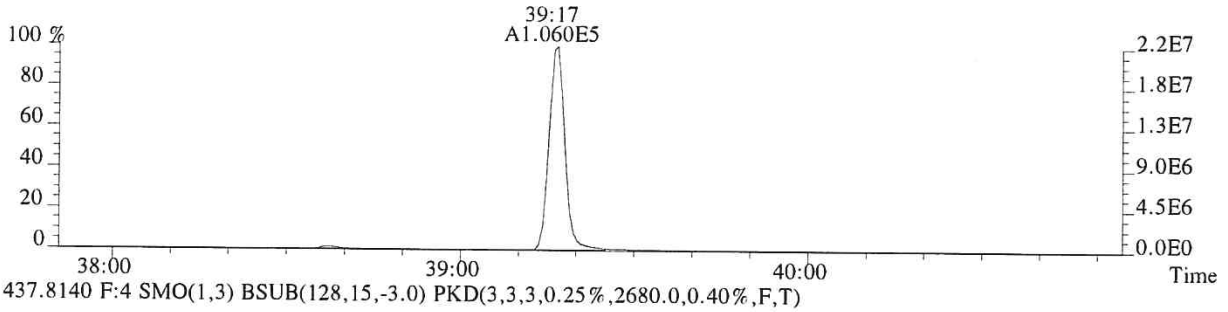
File:P614684 #1-276 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1224.0,0.40%,F,T)



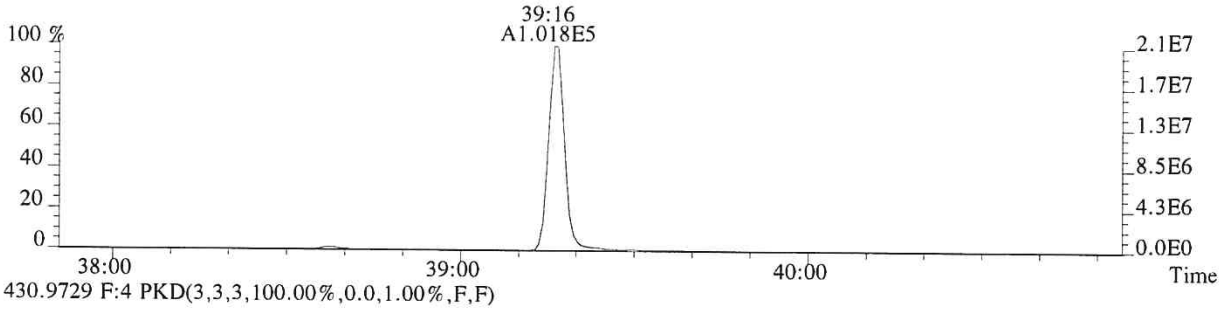
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1428.0,0.40%,F,T)



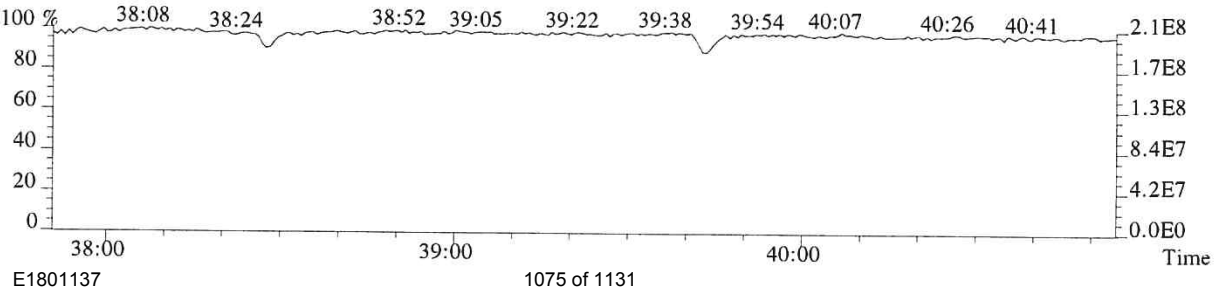
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3060.0,0.40%,F,T)



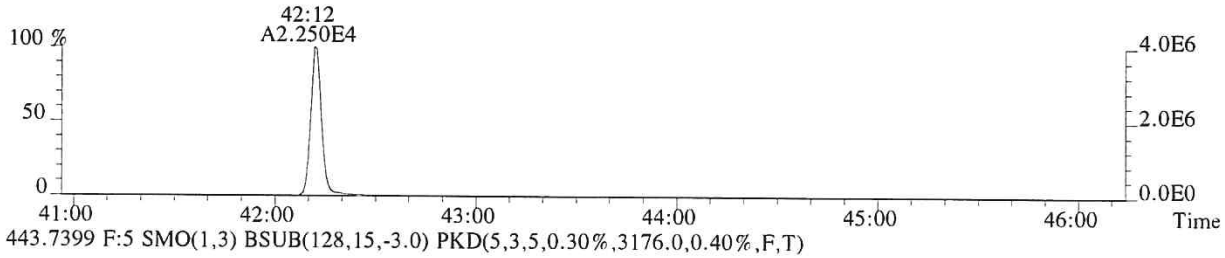
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2680.0,0.40%,F,T)



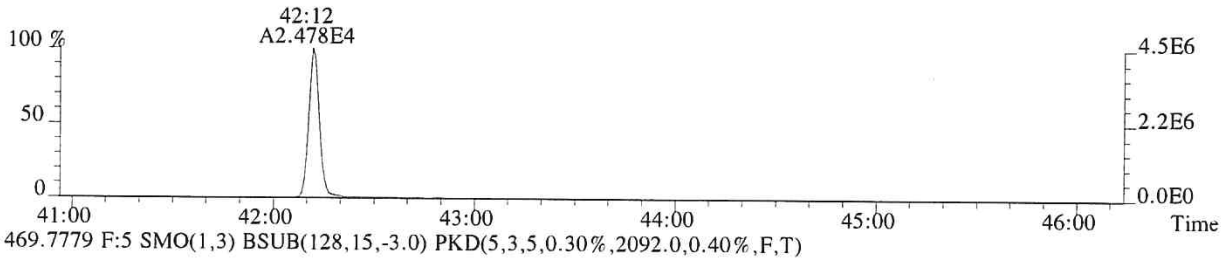
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



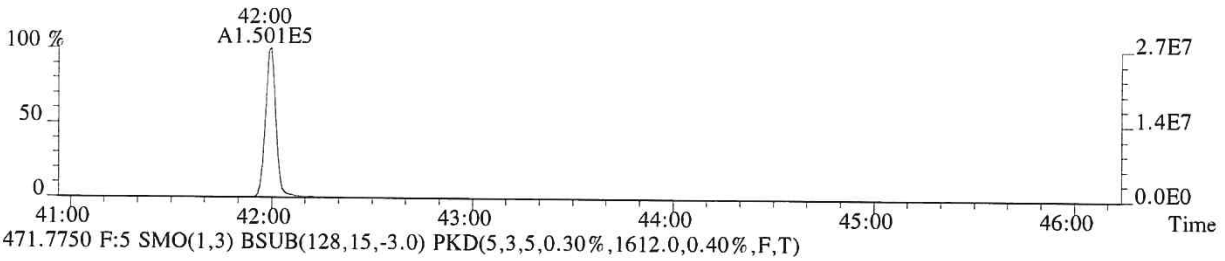
File:P614684 #1-477 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1020.0,0.40%,F,T)



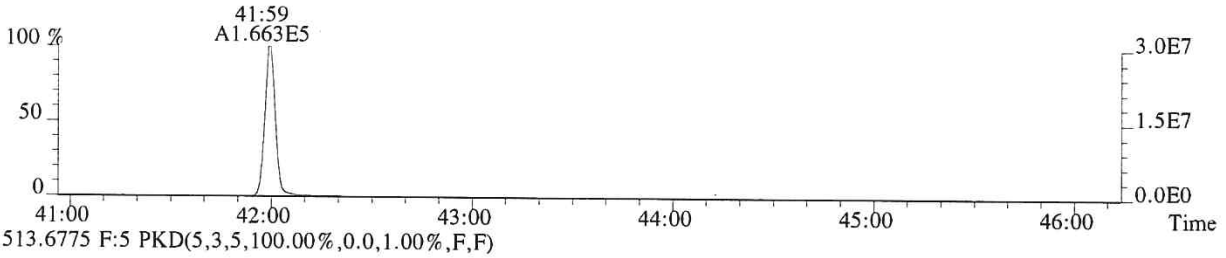
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3176.0,0.40%,F,T)



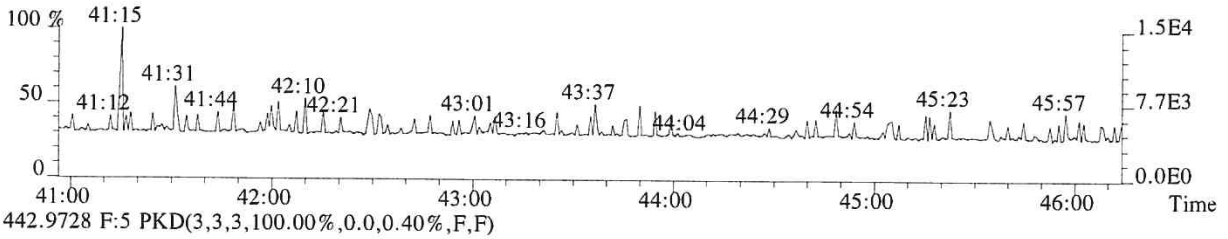
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2092.0,0.40%,F,T)



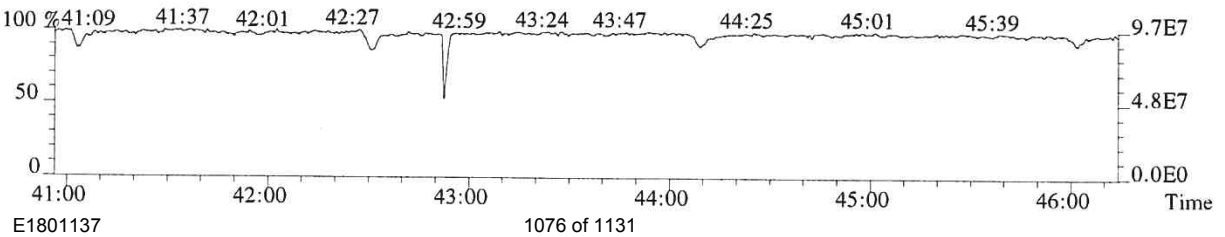
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1612.0,0.40%,F,T)



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

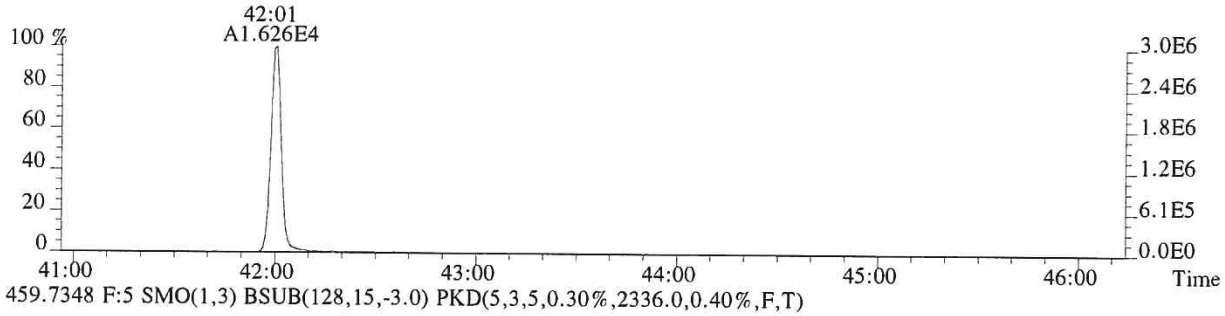


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

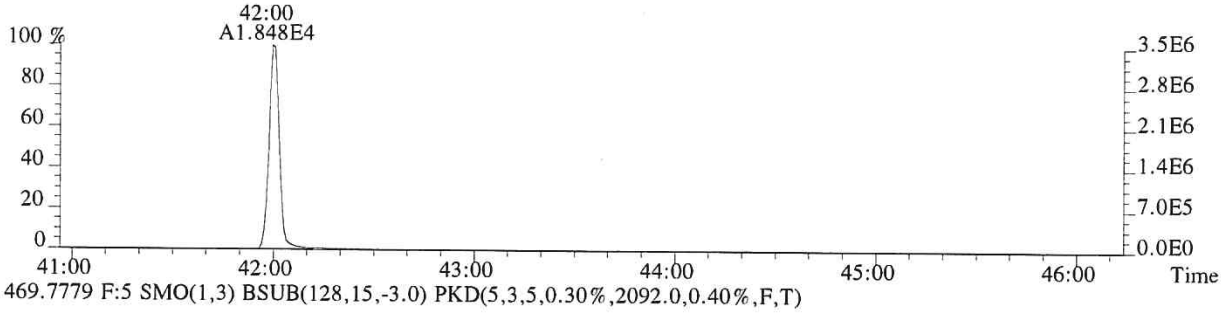


016826

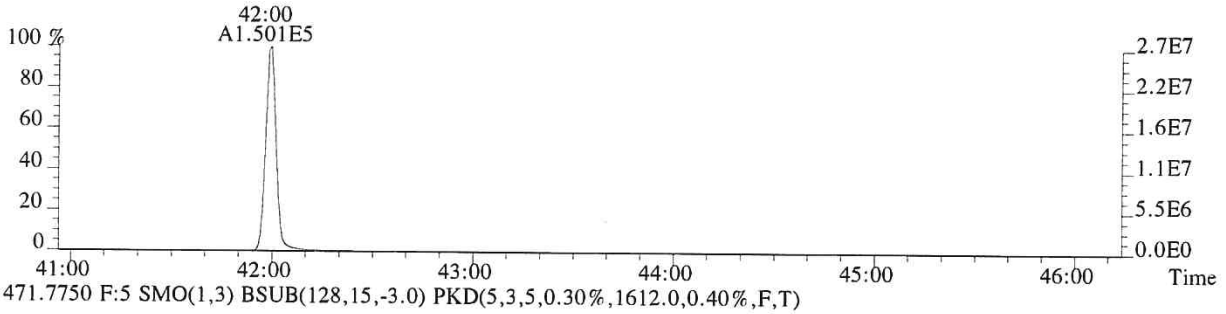
File:P614684 #1-477 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,824.0,0.40%,F,T)



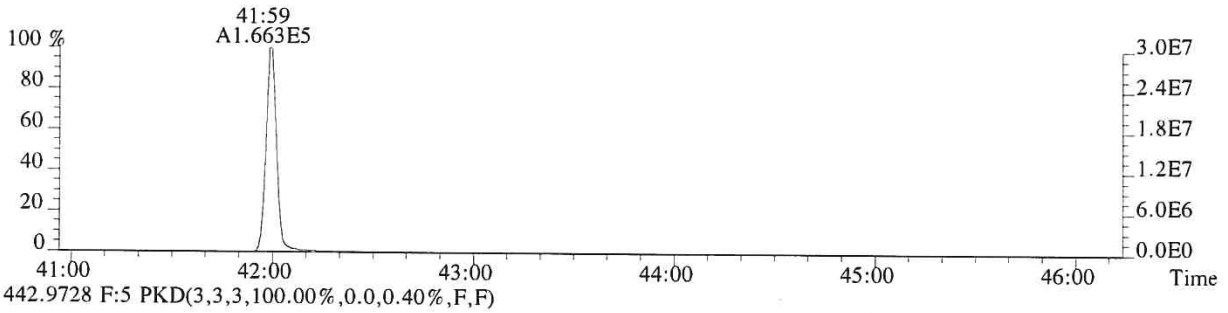
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2336.0,0.40%,F,T)



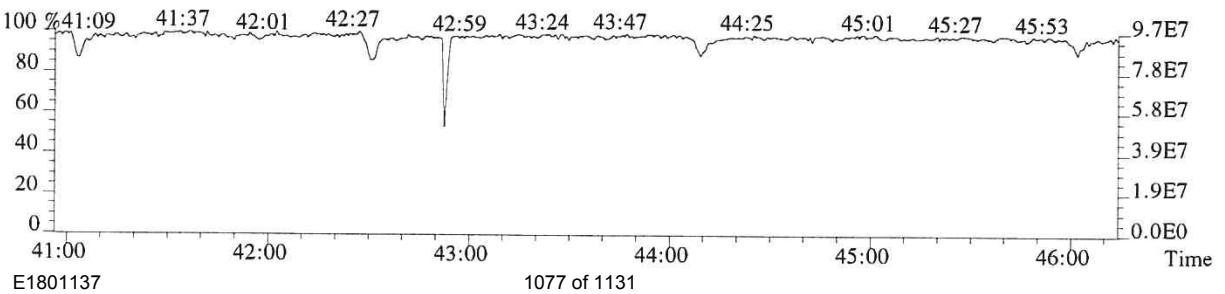
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2092.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1612.0,0.40%,F,T)



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



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76557

Run #4 Filename P614685 Samp: 1 Inj: 1 Acquired: 25-SEP-18 16:52:47
Processed: 26-SEP-18 07:39:09 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:01	3.637e+04	4.546e+04	0.80	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:15	3.073e+05	1.939e+05	1.58	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:09	2.818e+05	1.782e+05	1.58	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	2.774e+05	2.200e+05	1.26	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	2.905e+05	2.295e+05	1.27	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	2.685e+05	2.105e+05	1.28	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:10	2.537e+05	1.982e+05	1.28	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	2.407e+05	2.292e+05	1.05	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	1.925e+05	1.847e+05	1.04	yes	no	1.463
10	Unk	OCDF	42:13	3.041e+05	3.309e+05	0.92	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	2.365e+04	3.051e+04	0.78	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	1.706e+05	1.098e+05	1.55	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	1.645e+05	1.238e+05	1.33	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	1.567e+05	1.272e+05	1.23	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:53	1.702e+05	1.368e+05	1.24	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	1.477e+05	1.392e+05	1.06	yes	no	1.112
17	Unk	OCDD	42:01	2.180e+05	2.422e+05	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	3.444e+05	4.352e+05	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	5.358e+05	3.352e+05	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	5.234e+05	3.254e+05	1.61	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:48	2.524e+05	4.773e+05	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:55	2.834e+05	5.294e+05	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:25	2.621e+05	4.867e+05	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	2.431e+05	4.520e+05	0.54	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:24	1.967e+05	4.289e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:46	1.638e+05	3.571e+05	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	2.330e+05	2.909e+05	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	3.758e+05	2.372e+05	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:33	3.106e+05	2.345e+05	1.32	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	2.932e+05	2.439e+05	1.20	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	2.673e+05	2.524e+05	1.06	yes	no	0.857
32	IS	13C-OCDD	42:00	3.863e+05	4.247e+05	0.91	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:13	2.395e+05	3.006e+05	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:52	3.335e+05	2.694e+05	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	5.645e+04				no	1.086

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Signal/Noise Height Ratio Summary

CLIENT ID.
76557

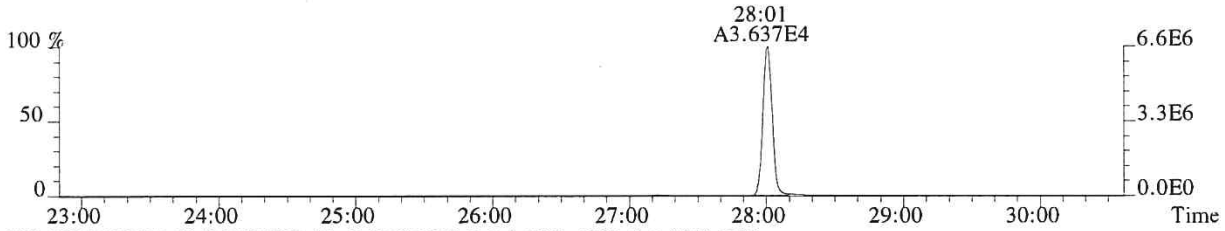
Run #4 Filename P614685 Samp: 1 Inj: 1 Acquired: 25-SEP-18 16:52:47
Processed: 26-SEP-18 07:39:09 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.55e+06	2.18e+03	3.0e+03	8.17e+06	4.39e+03	1.9e+03
2	1,2,3,7,8-PeCDF	5.78e+07	2.87e+03	2.0e+04	3.64e+07	4.35e+03	8.4e+03
3	2,3,4,7,8-PeCDF	5.79e+07	2.87e+03	2.0e+04	3.65e+07	4.35e+03	8.4e+03
4	1,2,3,4,7,8-HxCDF	6.15e+07	2.89e+03	2.1e+04	4.93e+07	2.08e+03	2.4e+04
5	1,2,3,6,7,8-HxCDF	6.26e+07	2.89e+03	2.2e+04	4.97e+07	2.08e+03	2.4e+04
6	2,3,4,6,7,8-HxCDF	6.14e+07	2.89e+03	2.1e+04	4.79e+07	2.08e+03	2.3e+04
7	1,2,3,7,8,9-HxCDF	5.42e+07	2.89e+03	1.9e+04	4.26e+07	2.08e+03	2.0e+04
8	1,2,3,4,6,7,8-HpCDF	5.56e+07	1.47e+04	3.8e+03	5.23e+07	1.66e+04	3.1e+03
9	1,2,3,4,7,8,9-HpCDF	3.99e+07	1.47e+04	2.7e+03	3.80e+07	1.66e+04	2.3e+03
10	OCDF	5.72e+07	1.23e+03	4.7e+04	6.22e+07	3.01e+03	2.1e+04
11	2,3,7,8-TCDD	4.49e+06	5.36e+03	8.4e+02	5.78e+06	2.64e+03	2.2e+03
12	1,2,3,7,8-PeCDD	3.45e+07	2.46e+03	1.4e+04	2.21e+07	1.02e+03	2.2e+04
13	1,2,3,4,7,8-HxCDD	3.72e+07	9.04e+02	4.1e+04	2.90e+07	1.56e+03	1.9e+04
14	1,2,3,6,7,8-HxCDD	3.60e+07	9.04e+02	4.0e+04	2.81e+07	1.56e+03	1.8e+04
15	1,2,3,7,8,9-HxCDD	3.80e+07	9.04e+02	4.2e+04	3.00e+07	1.56e+03	1.9e+04
16	1,2,3,4,6,7,8-HpCDD	3.19e+07	1.58e+03	2.0e+04	3.06e+07	1.63e+03	1.9e+04
17	OCDD	4.21e+07	1.71e+03	2.5e+04	4.66e+07	1.53e+03	3.0e+04
18	13C-2,3,7,8-TCDF	6.23e+07	1.55e+04	4.0e+03	7.90e+07	1.02e+04	7.8e+03
19	13C-1,2,3,7,8-PeCDF	1.00e+08	2.14e+03	4.7e+04	6.28e+07	2.18e+03	2.9e+04
20	13C-2,3,4,7,8-PeCDF	1.07e+08	2.14e+03	5.0e+04	6.66e+07	2.18e+03	3.1e+04
21	13C-1,2,3,4,7,8-HxCDF	5.63e+07	2.92e+03	1.9e+04	1.07e+08	4.60e+03	2.3e+04
22	13C-1,2,3,6,7,8-HxCDF	6.12e+07	2.92e+03	2.1e+04	1.15e+08	4.60e+03	2.5e+04
23	13C-2,3,4,6,7,8-HxCDF	5.95e+07	2.92e+03	2.0e+04	1.10e+08	4.60e+03	2.4e+04
24	13C-1,2,3,7,8,9-HxCDF	5.22e+07	2.92e+03	1.8e+04	9.74e+07	4.60e+03	2.1e+04
25	13C-1,2,3,4,6,7,8-HpCDF	4.59e+07	1.18e+04	3.9e+03	9.95e+07	3.82e+04	2.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	3.37e+07	1.18e+04	2.9e+03	7.29e+07	3.82e+04	1.9e+03
27	13C-2,3,7,8-TCDD	4.45e+07	1.91e+04	2.3e+03	5.53e+07	7.70e+03	7.2e+03
28	13C-1,2,3,7,8-PeCDD	7.50e+07	3.59e+03	2.1e+04	4.74e+07	2.50e+03	1.9e+04
29	13C-1,2,3,4,7,8-HxCDD	6.95e+07	5.55e+03	1.3e+04	5.43e+07	3.18e+03	1.7e+04
30	13C-1,2,3,6,7,8-HxCDD	6.70e+07	5.55e+03	1.2e+04	5.36e+07	3.18e+03	1.7e+04
31	13C-1,2,3,4,6,7,8-HpCDD	5.80e+07	4.72e+03	1.2e+04	5.53e+07	2.63e+03	2.1e+04
32	13C-OCDD	7.33e+07	1.86e+03	4.0e+04	8.10e+07	5.92e+02	1.4e+05
33	13C-1,2,3,4-TCDD	4.48e+07	1.91e+04	2.3e+03	5.67e+07	7.70e+03	7.4e+03
34	13C-1,2,3,7,8,9-HxCDD	7.38e+07	5.55e+03	1.3e+04	5.89e+07	3.18e+03	1.9e+04
35	37Cl-2,3,7,8-TCDD	1.08e+07	3.52e+03	3.1e+03			

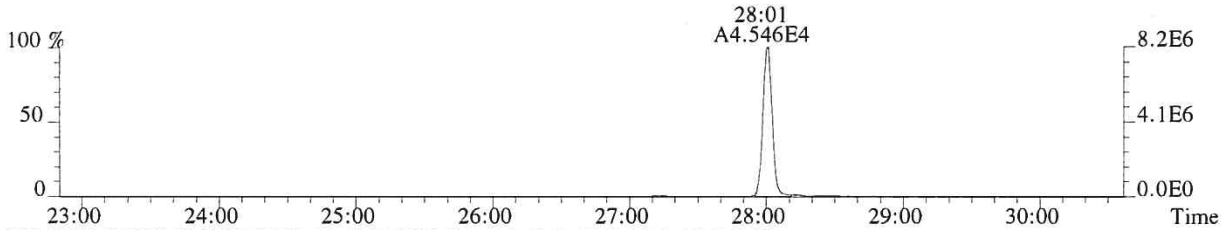
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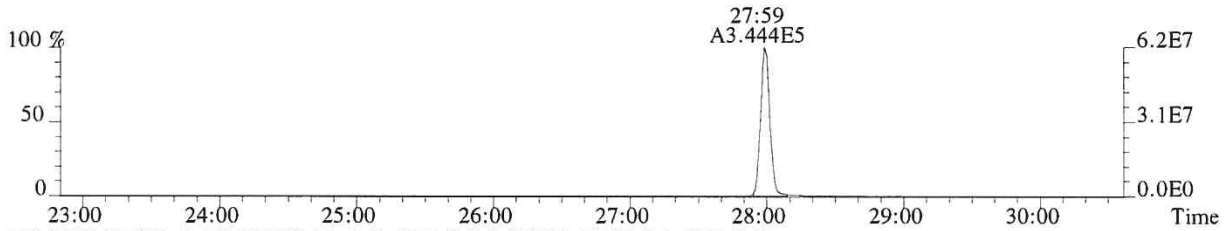
File:P614685 #1-552 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2176.0,1.00%,F,T)



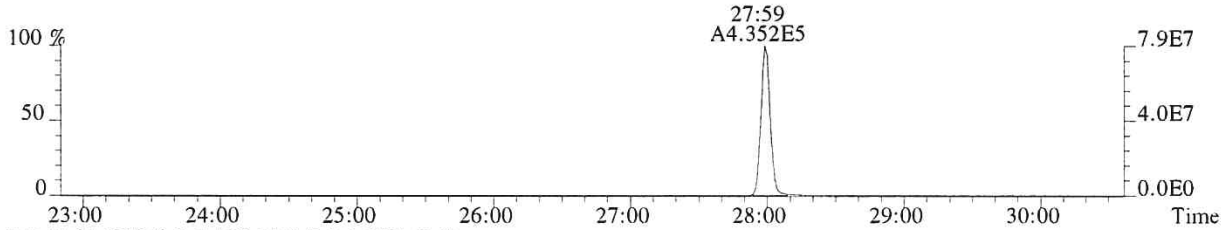
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4392.0,1.00%,F,T)



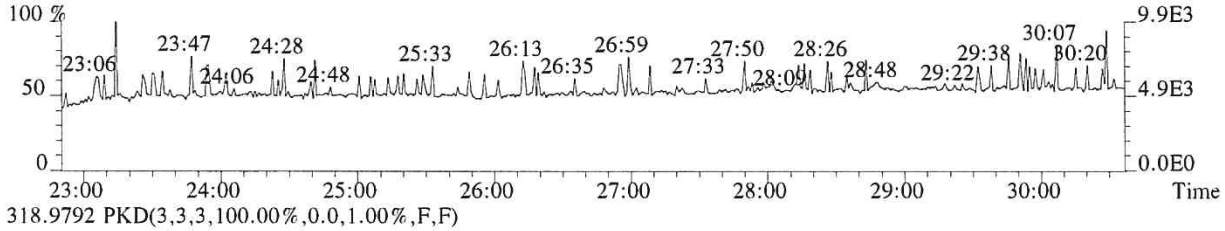
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15516.0,1.00%,F,T)



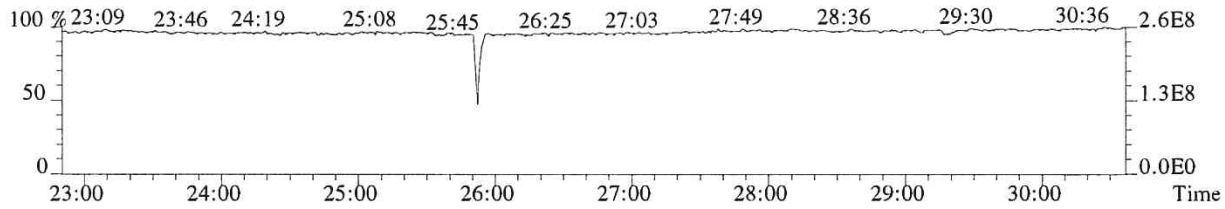
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10180.0,1.00%,F,T)



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

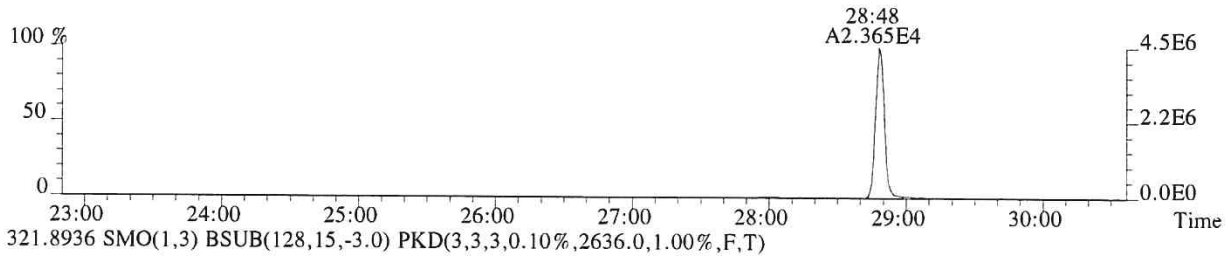


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

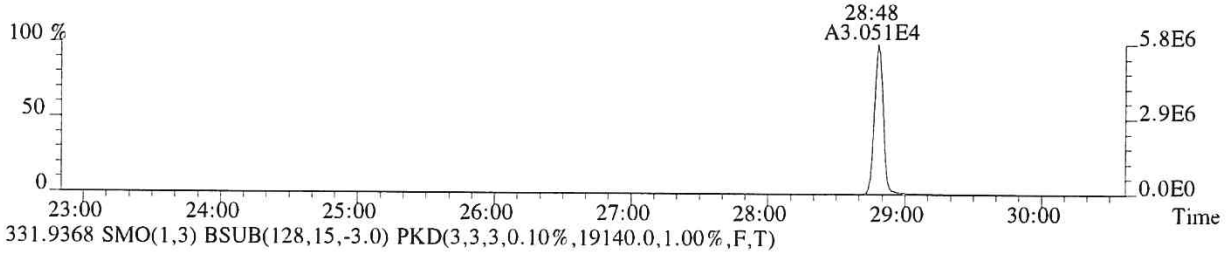


016830

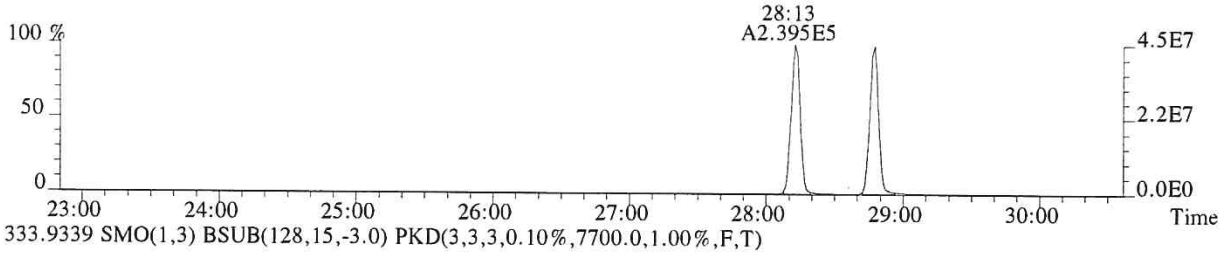
File:P614685 #1-552 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5364.0,1.00%,F,T)



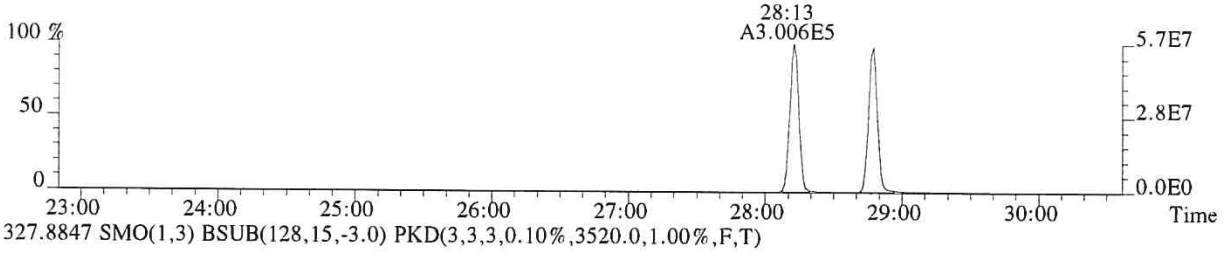
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2636.0,1.00%,F,T)



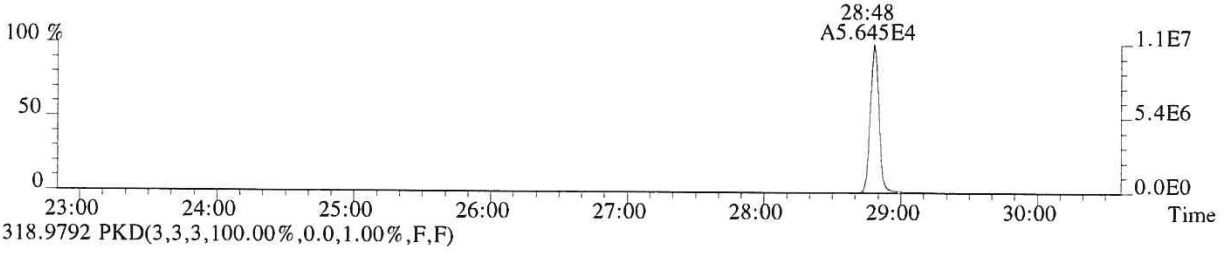
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,19140.0,1.00%,F,T)



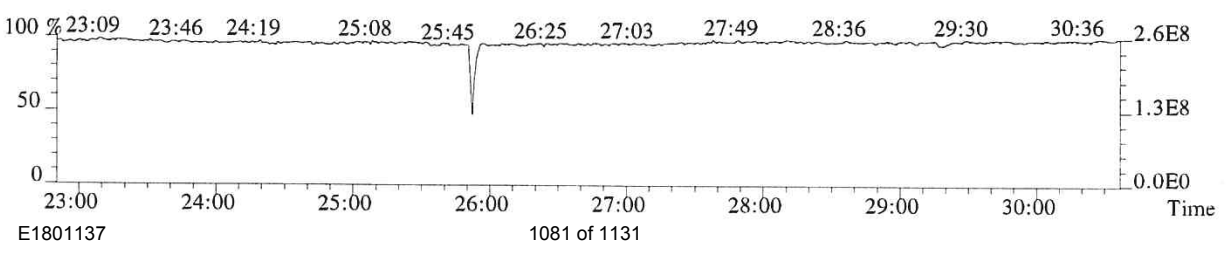
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7700.0,1.00%,F,T)



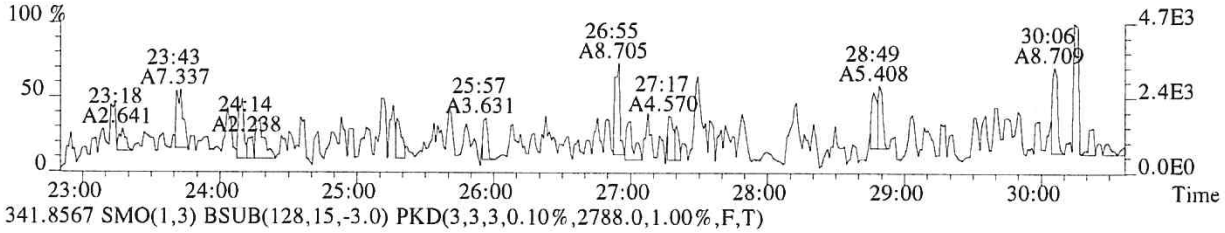
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3520.0,1.00%,F,T)



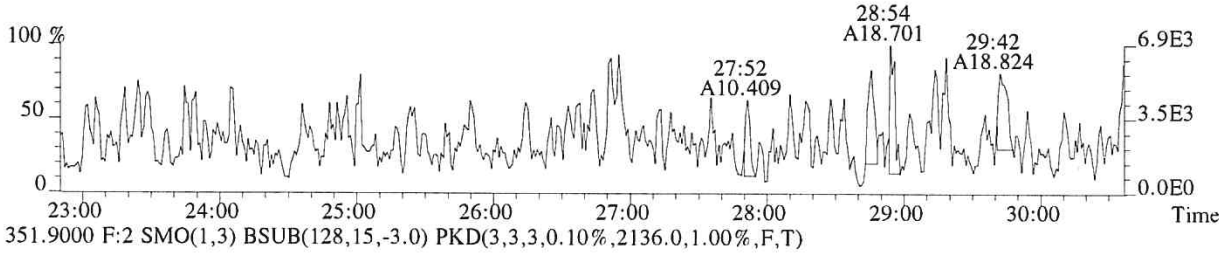
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



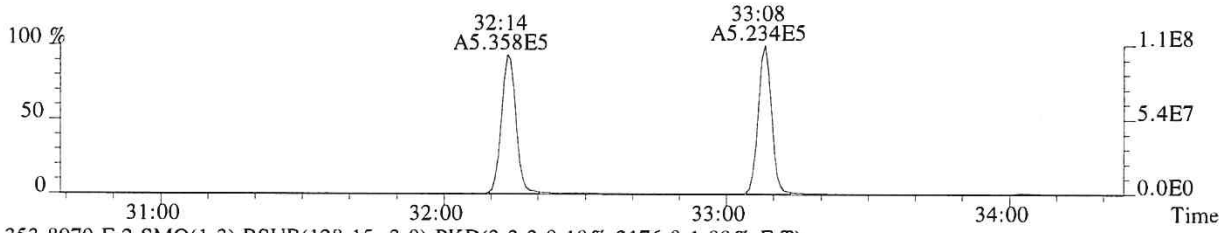
File:P614685 #1-552 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1116.0,1.00%,F,T)



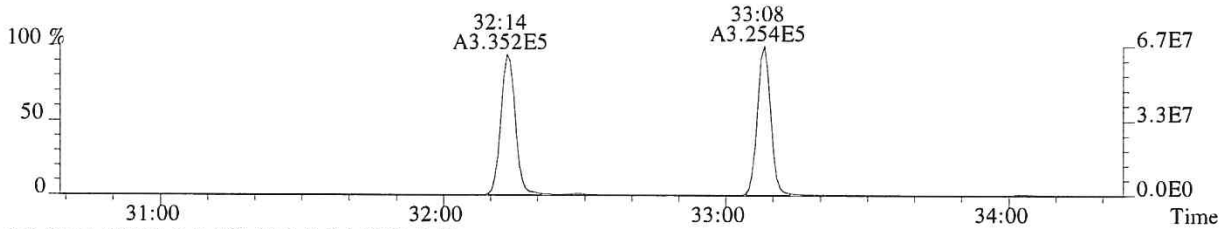
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2788.0,1.00%,F,T)



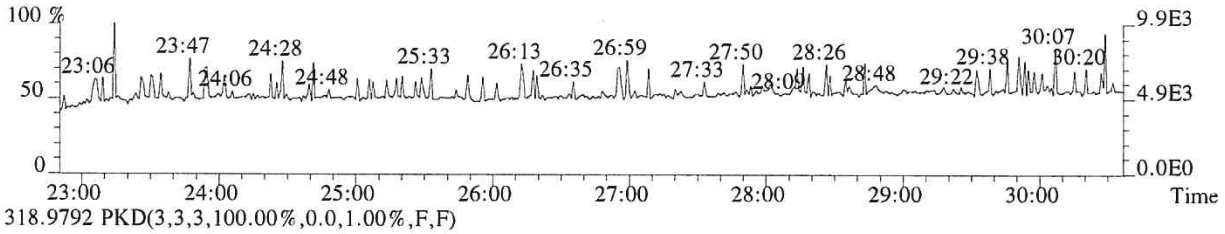
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2136.0,1.00%,F,T)



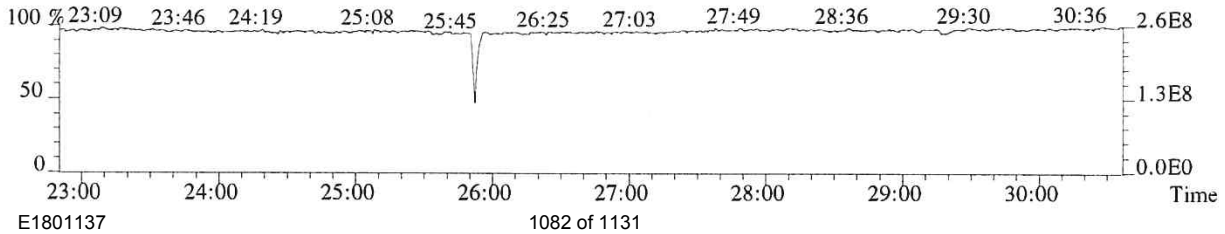
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2176.0,1.00%,F,T)



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



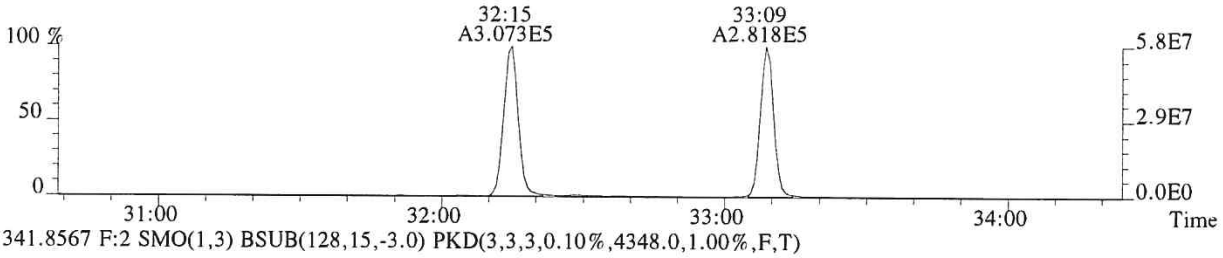
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



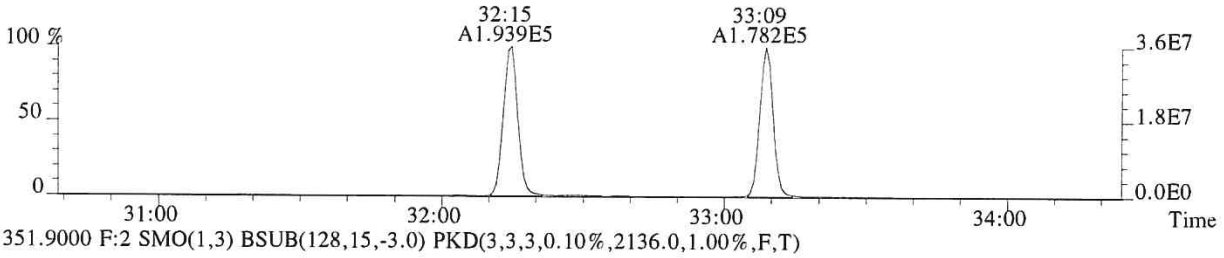
016832

File:P614685 #1-339 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

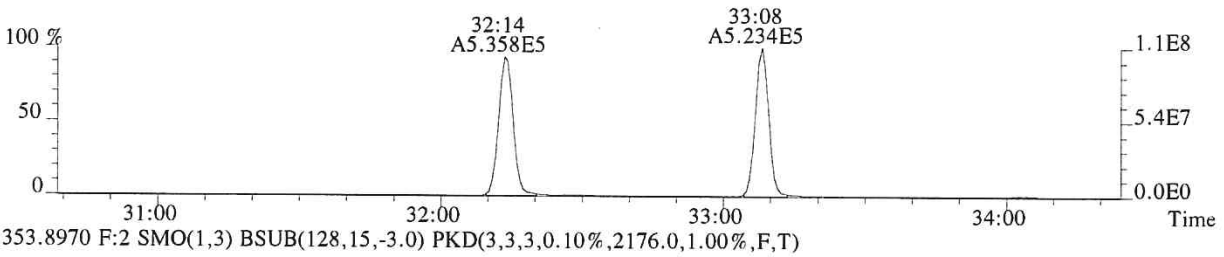
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2872.0,1.00%,F,T)



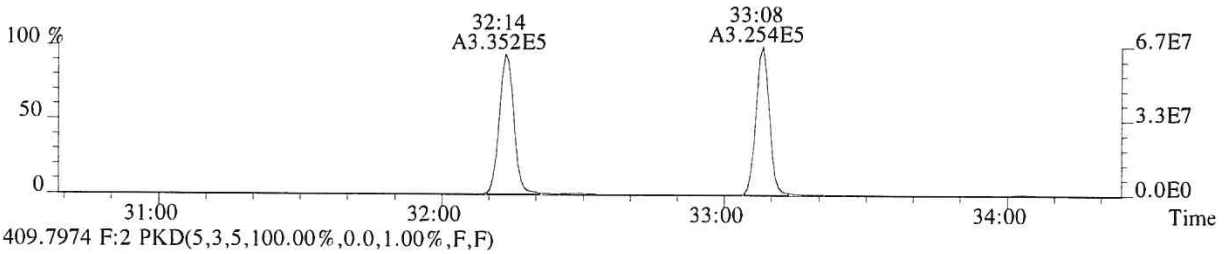
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4348.0,1.00%,F,T)



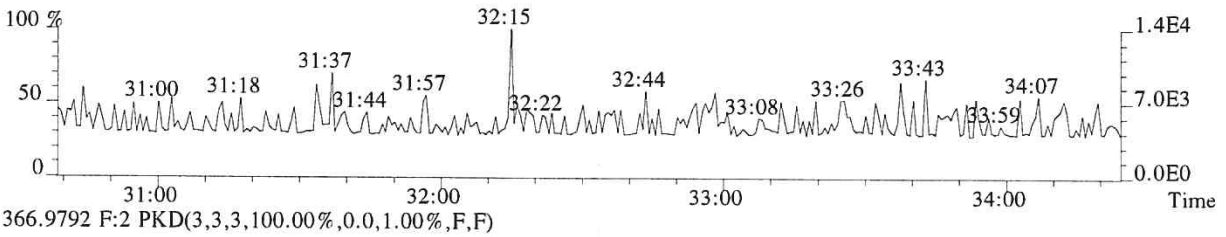
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2136.0,1.00%,F,T)



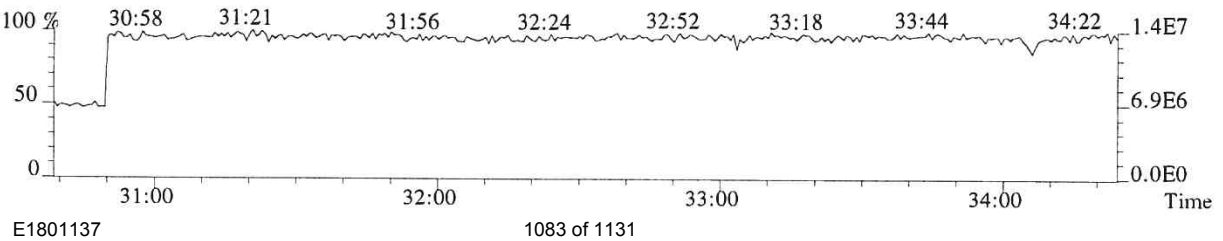
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2176.0,1.00%,F,T)



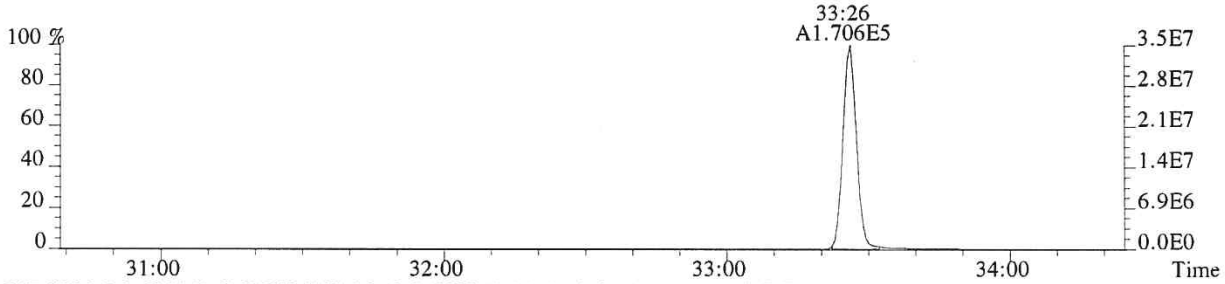
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



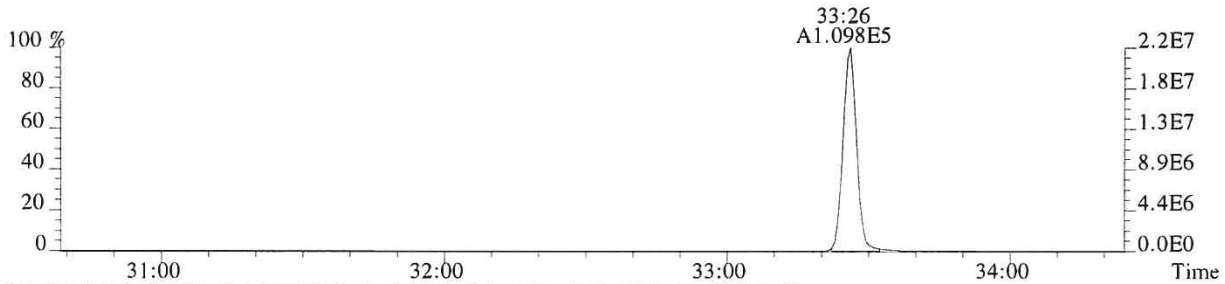
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



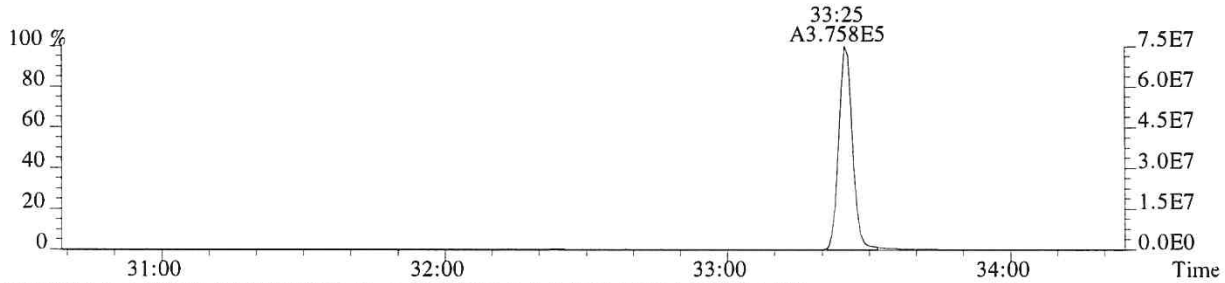
File:P614685 #1-339 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2460.0,1.00%,F,T)



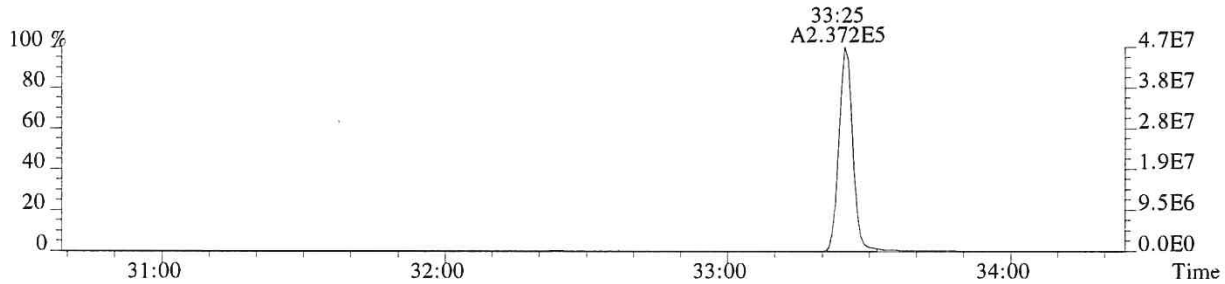
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1020.0,1.00%,F,T)



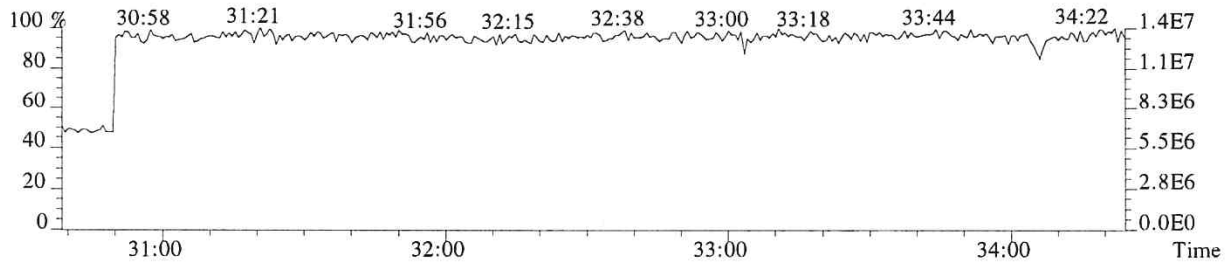
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3592.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2496.0,1.00%,F,T)

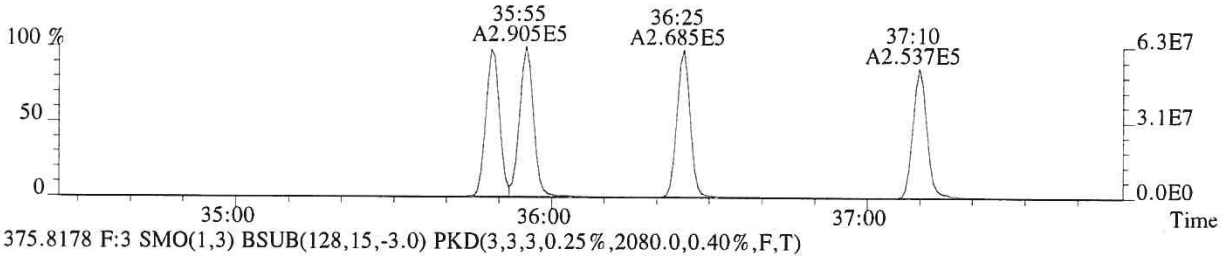


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

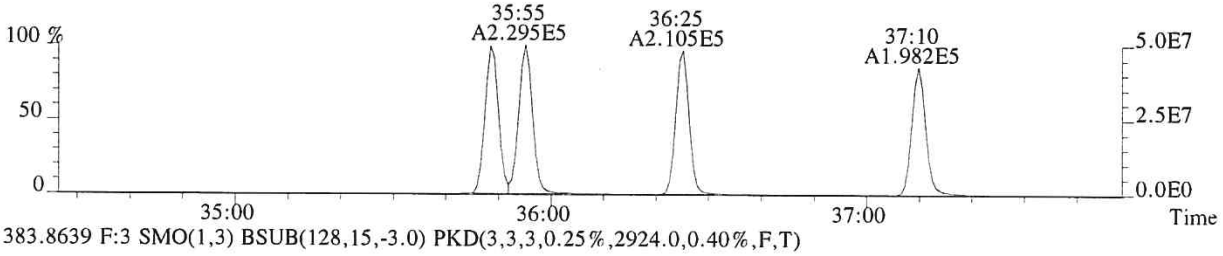


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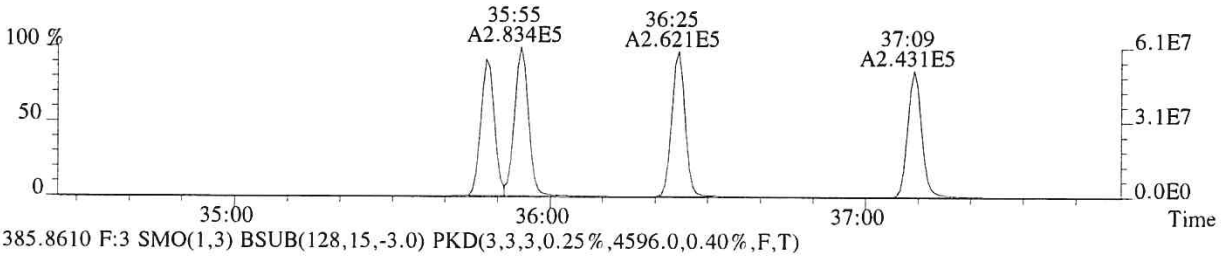
File:P614685 #1-304 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2888.0,0.40%,F,T)



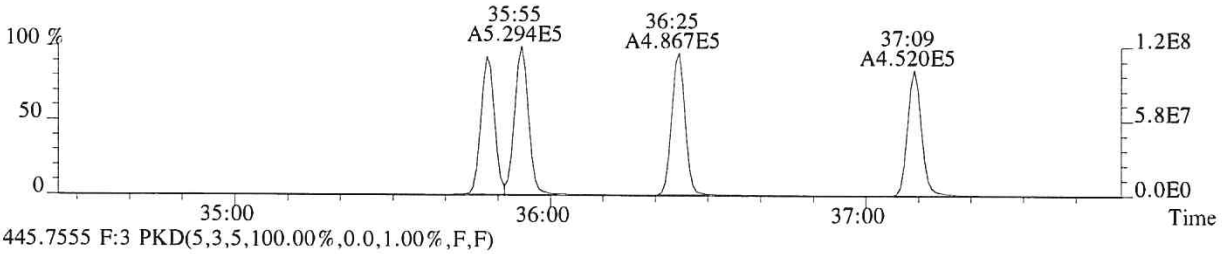
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2080.0,0.40%,F,T)



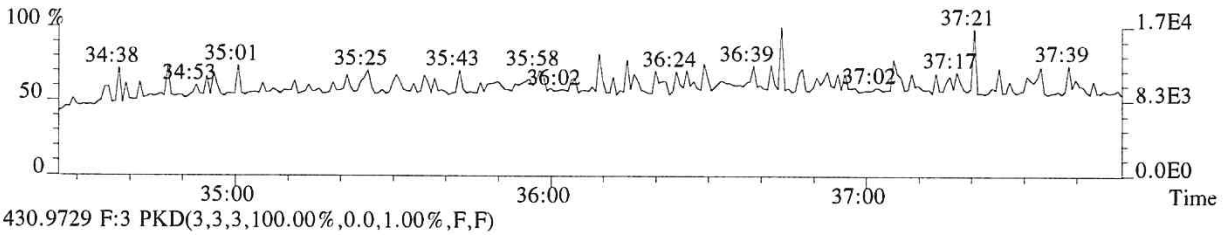
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2924.0,0.40%,F,T)



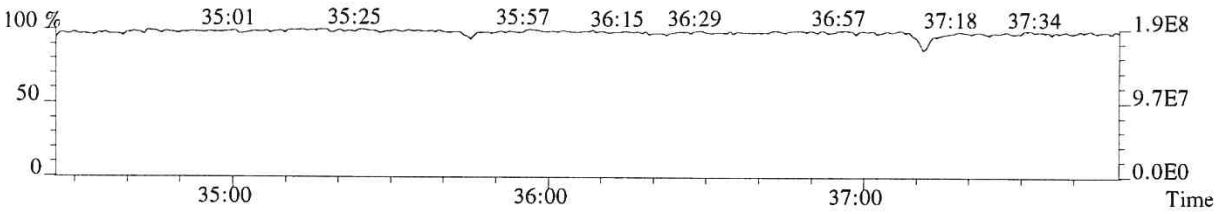
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4596.0,0.40%,F,T)



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

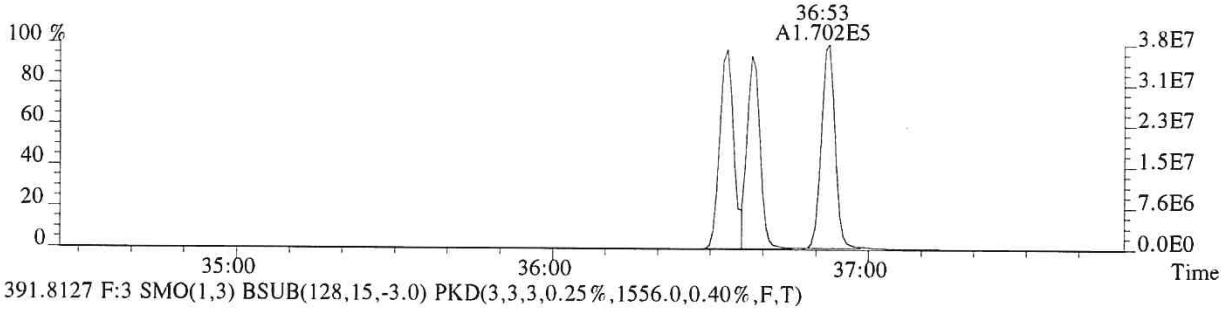


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

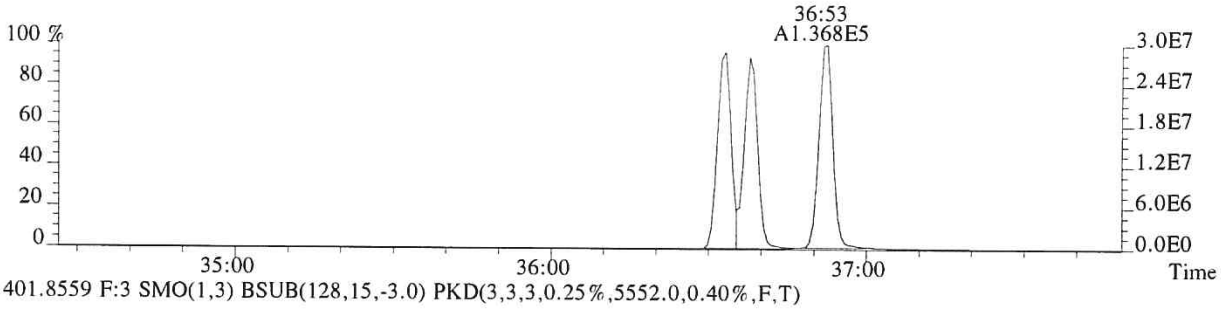


016835

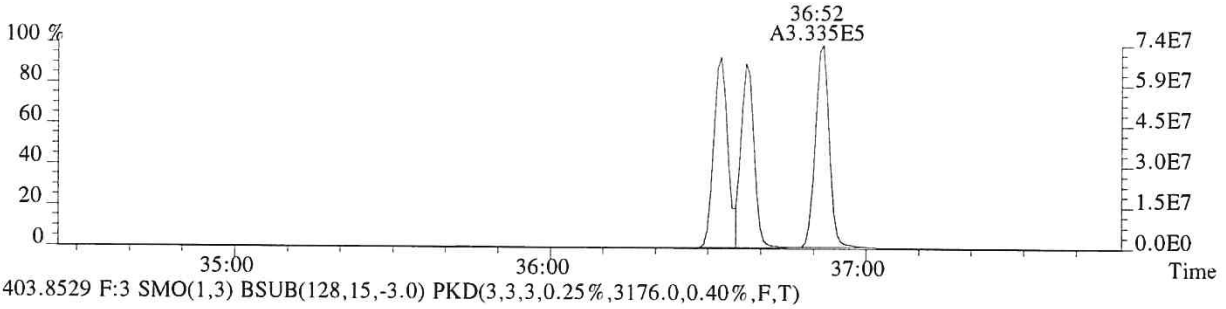
File:P614685 #1-304 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,904.0,0.40%,F,T)



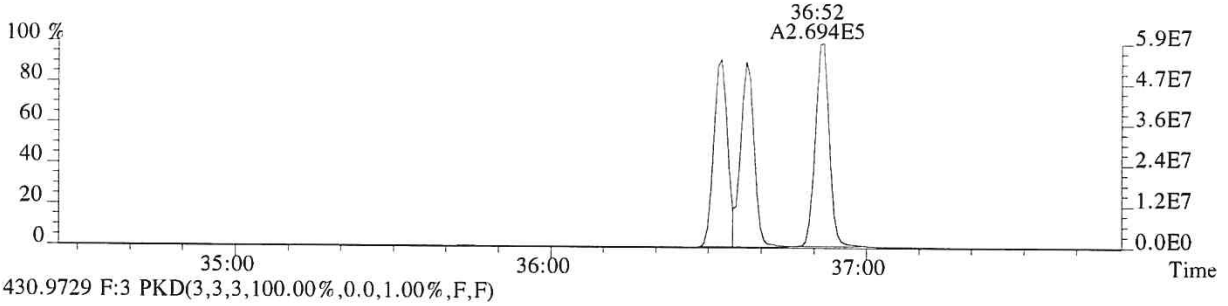
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1556.0,0.40%,F,T)



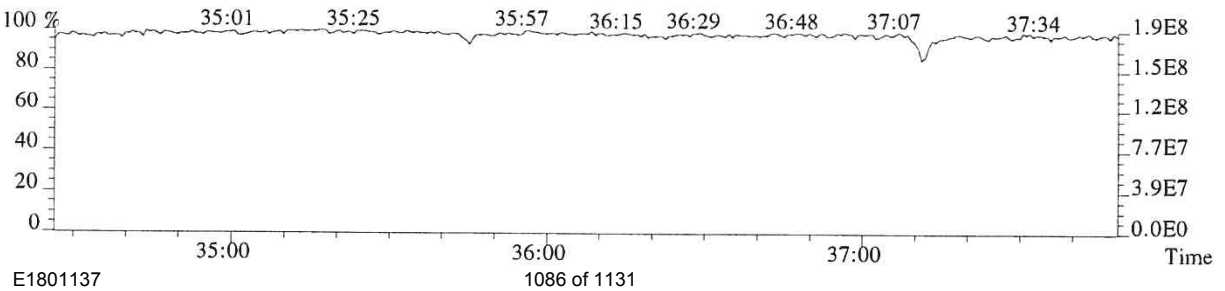
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5552.0,0.40%,F,T)



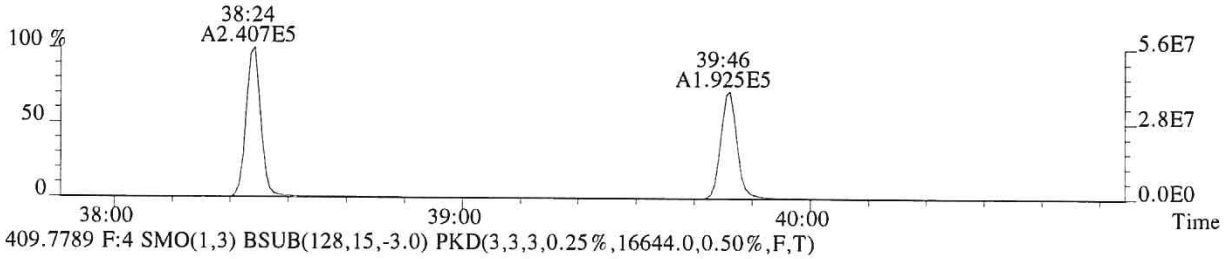
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3176.0,0.40%,F,T)



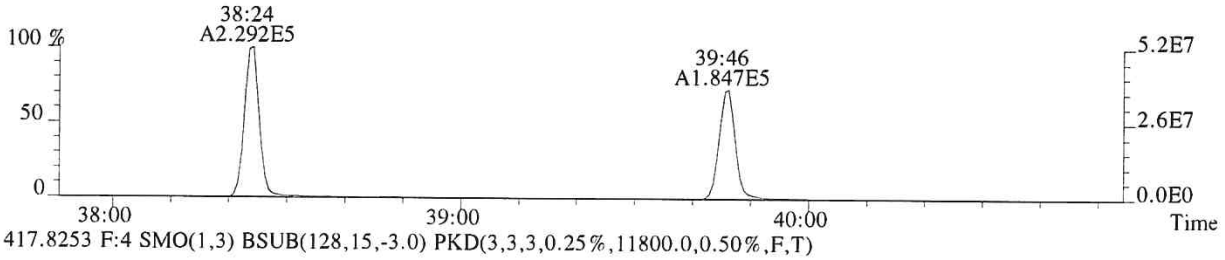
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



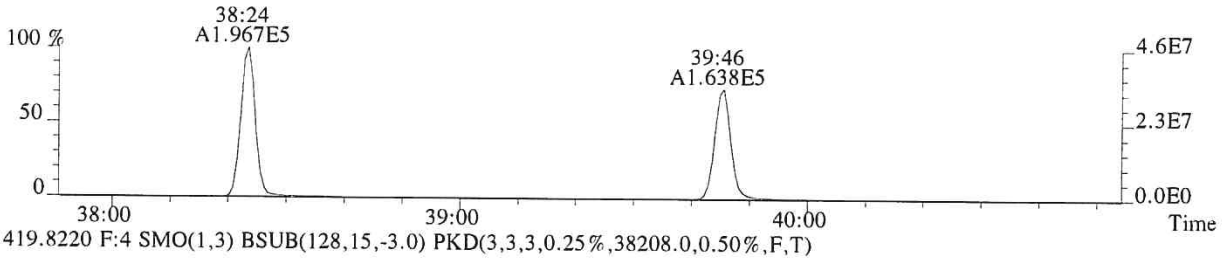
File:P614685 #1-276 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,14728.0,0.50%,F,T)



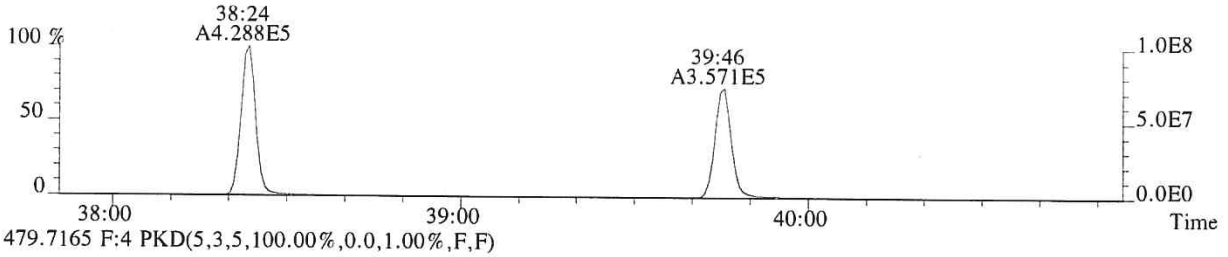
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,16644.0,0.50%,F,T)



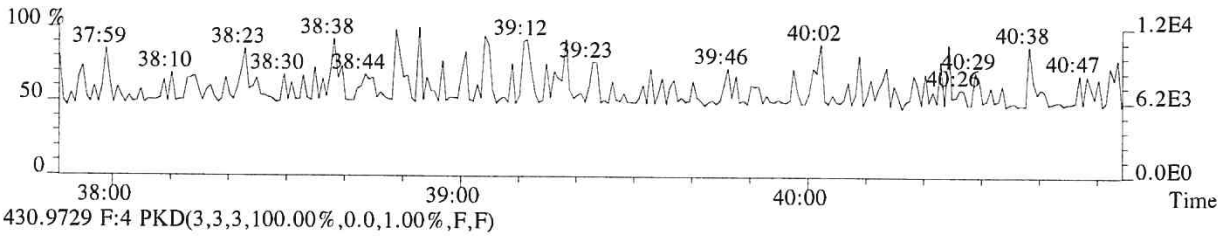
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11800.0,0.50%,F,T)



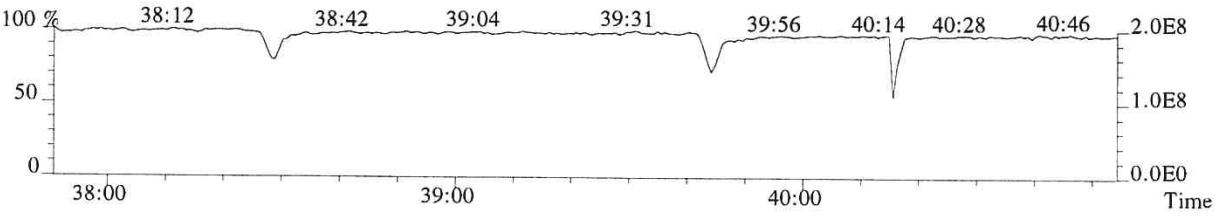
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,38208.0,0.50%,F,T)



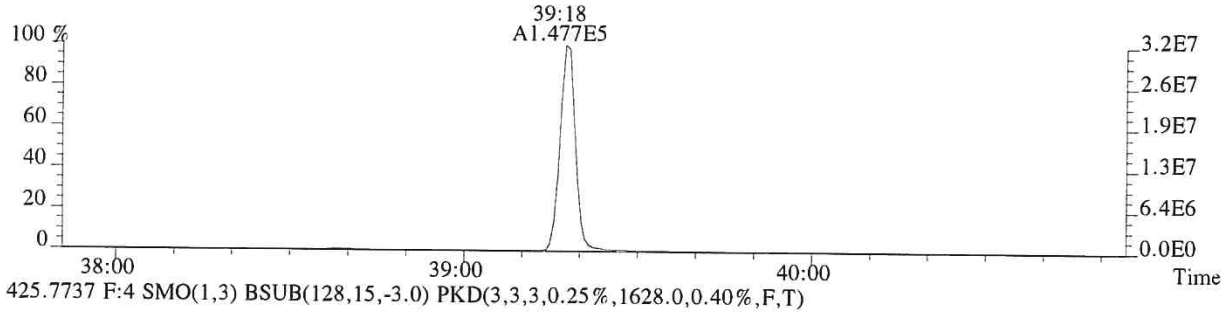
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



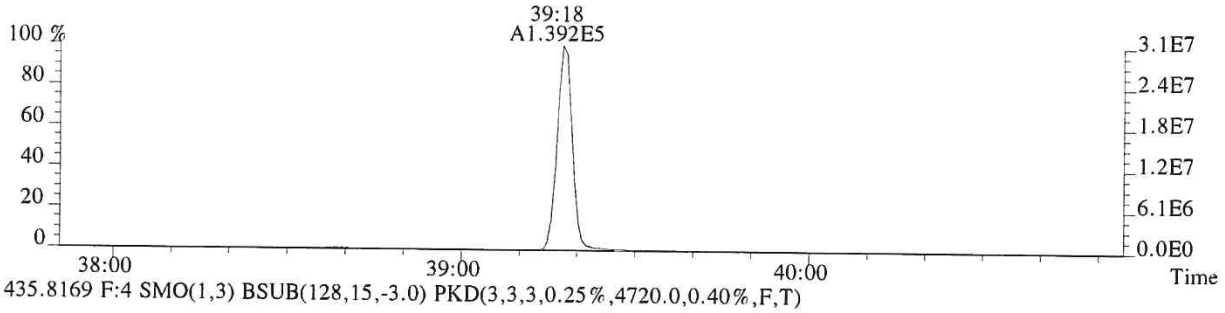
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



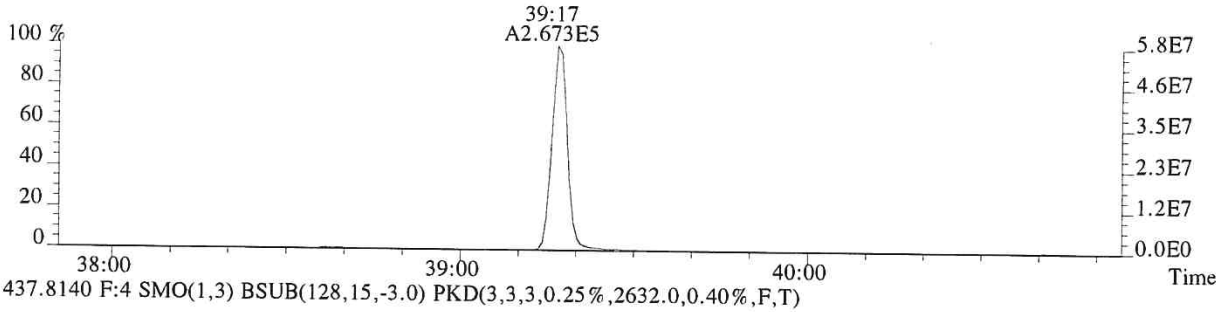
File:P614685 #1-276 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1576.0,0.40%,F,T)



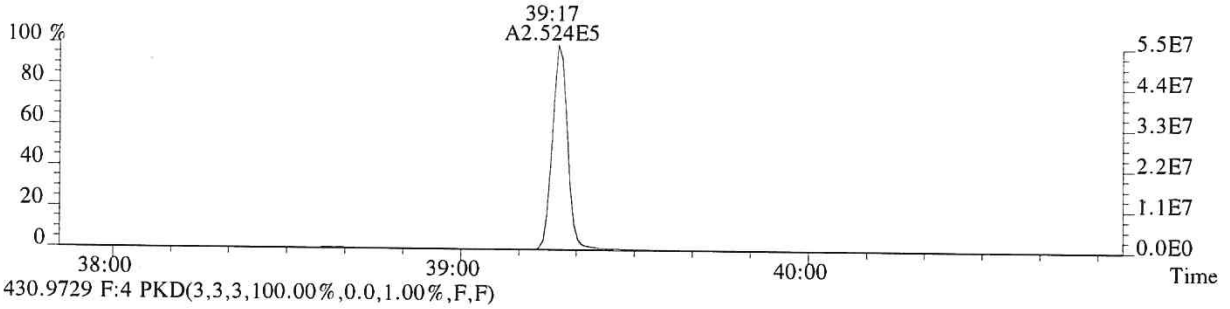
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1628.0,0.40%,F,T)



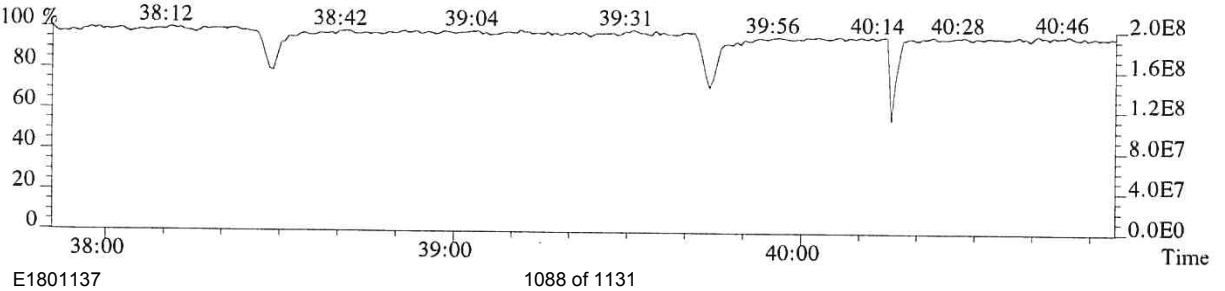
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4720.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2632.0,0.40%,F,T)

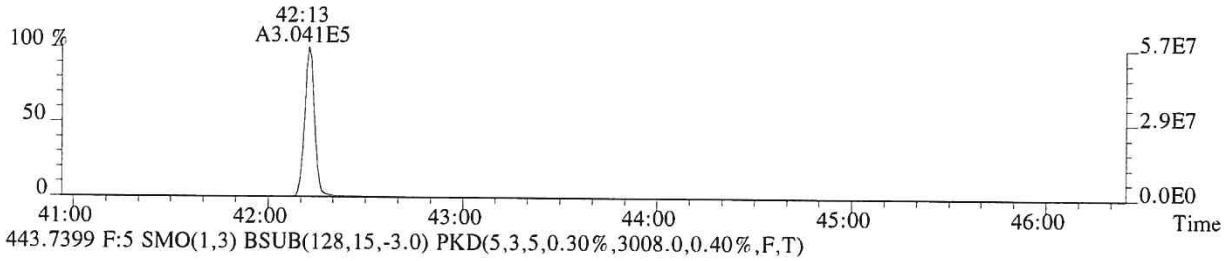


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

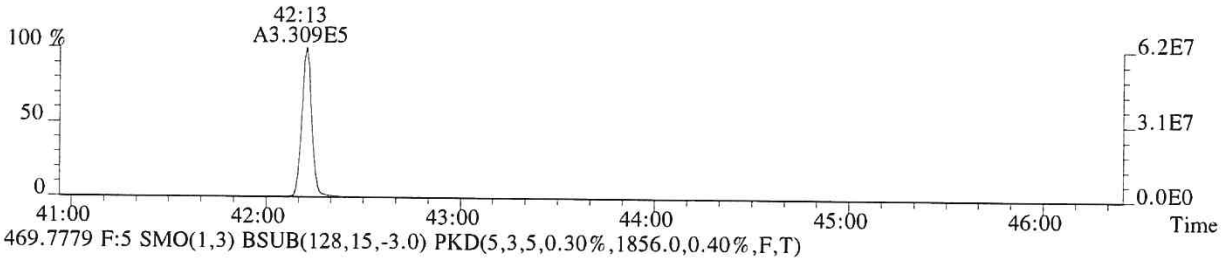


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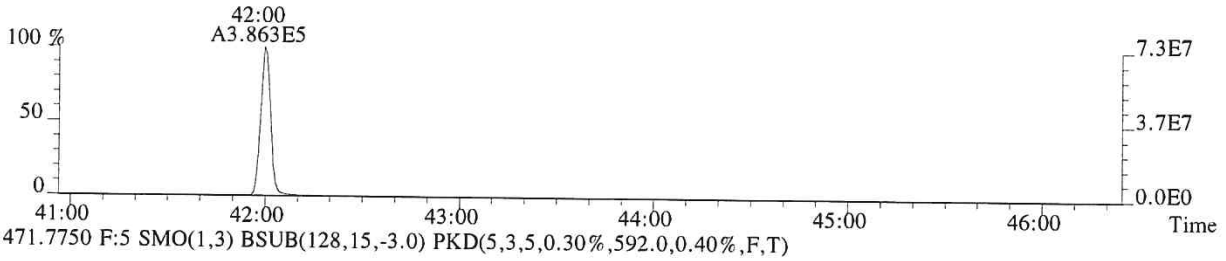
File:P614685 #1-493 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:CS3
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1228.0,0.40%,F,T)



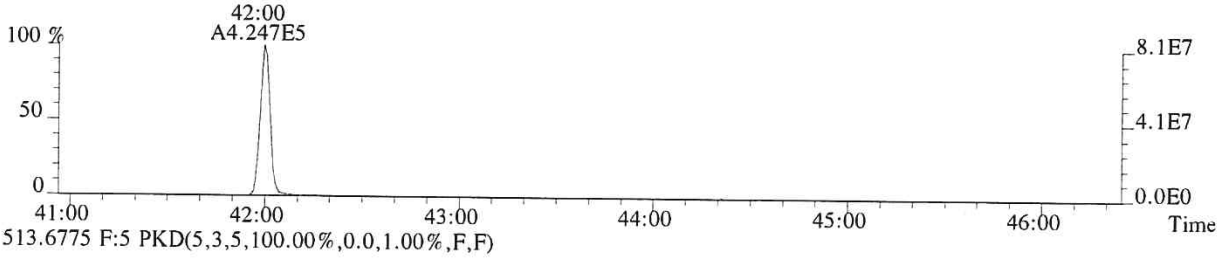
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3008.0,0.40%,F,T)



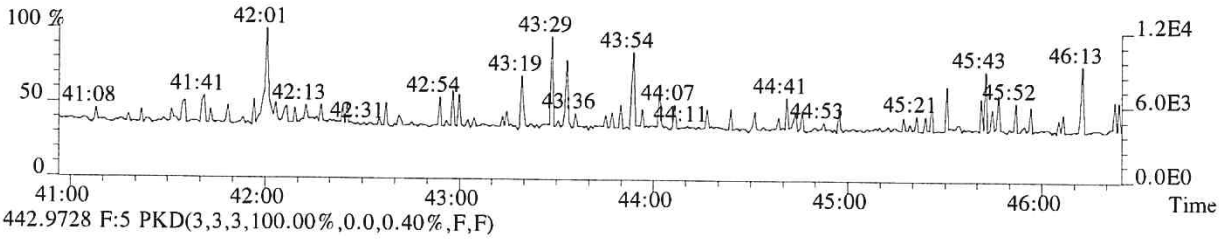
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1856.0,0.40%,F,T)



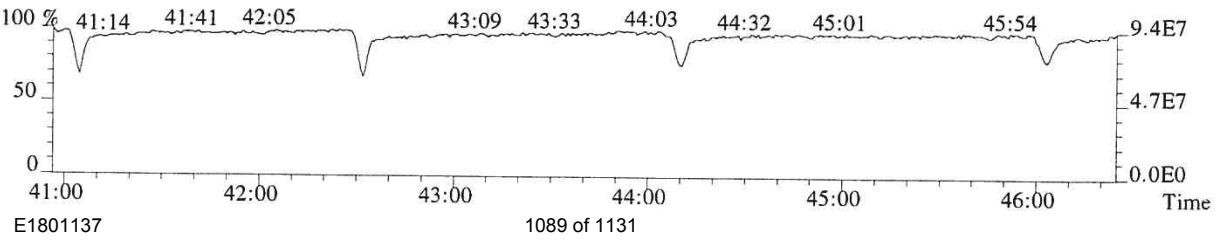
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,592.0,0.40%,F,T)



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

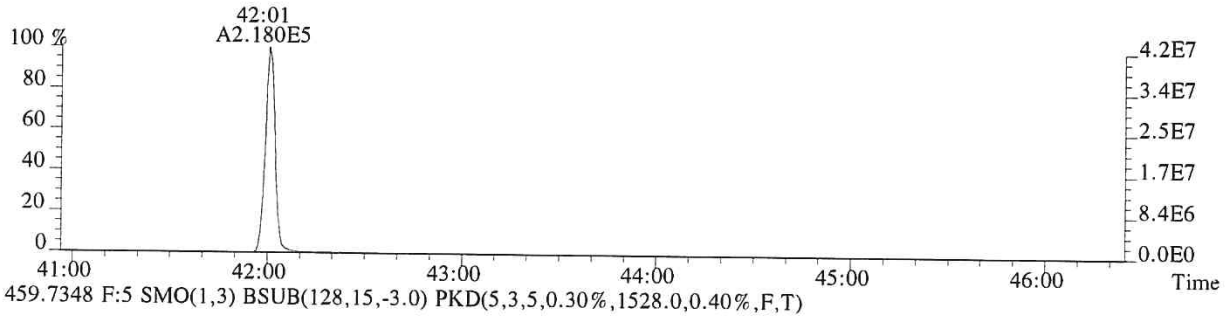


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

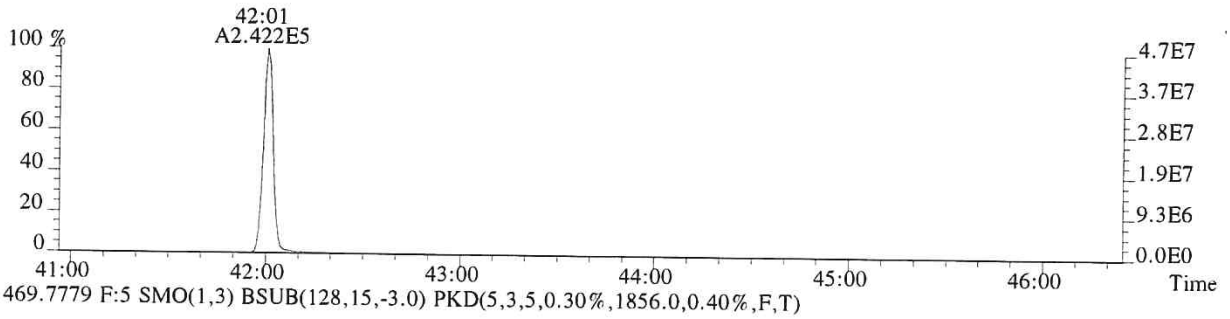


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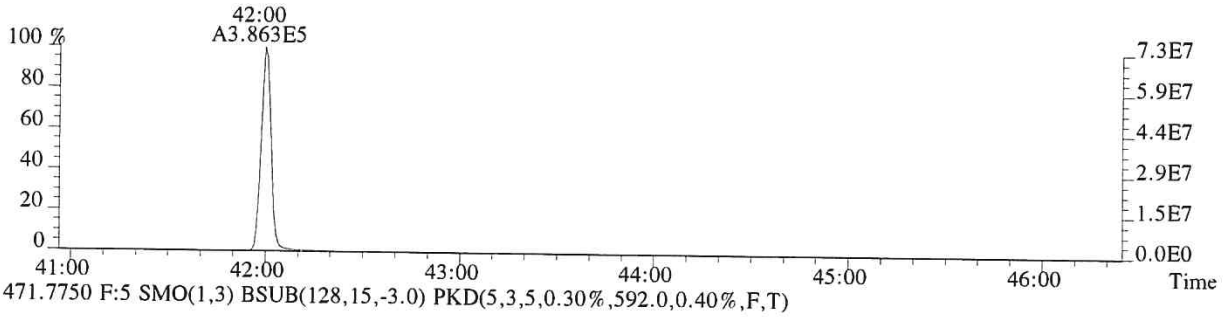
File:P614685 #1-493 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1708.0,0.40%,F,T)



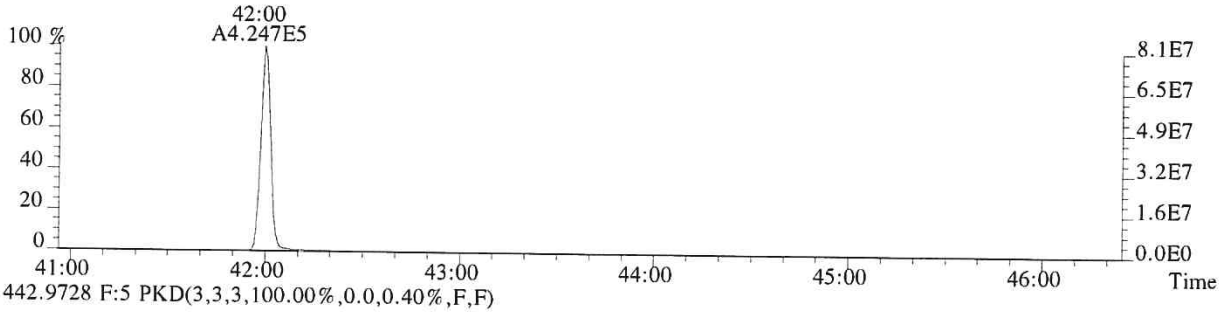
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1528.0,0.40%,F,T)



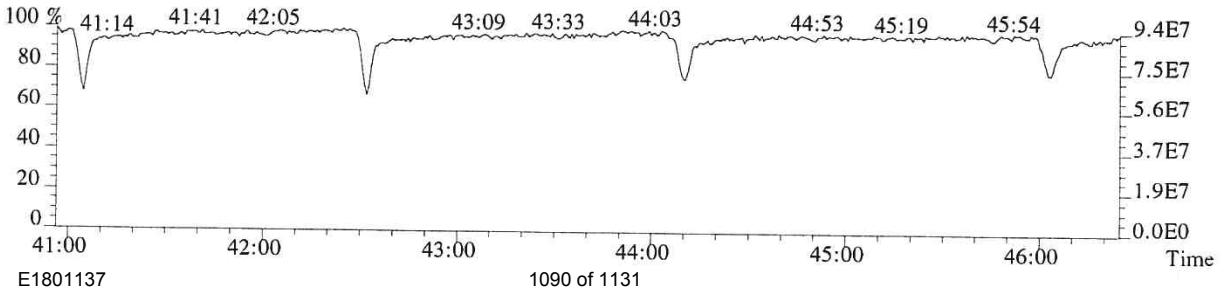
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1856.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,592.0,0.40%,F,T)



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



016840

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
82167

Run #5 Filename P614686 Samp: 1 Inj: 1 Acquired: 25-SEP-18 17:41:03
Processed: 26-SEP-18 07:39:11 Sample ID: CS4

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:00	1.186e+05	1.498e+05	0.79	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:14	1.070e+06	6.680e+05	1.60	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:09	9.931e+05	6.255e+05	1.59	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	9.336e+05	7.318e+05	1.28	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	9.546e+05	7.530e+05	1.27	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	9.004e+05	7.134e+05	1.26	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:10	8.574e+05	6.711e+05	1.28	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	7.924e+05	7.640e+05	1.04	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	6.712e+05	6.389e+05	1.05	yes	no	1.463
10	Unk	OCDF	42:13	9.999e+05	1.075e+06	0.93	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	8.371e+04	1.065e+05	0.79	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	5.908e+05	3.807e+05	1.55	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	5.387e+05	4.268e+05	1.26	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	5.444e+05	4.299e+05	1.27	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:52	5.850e+05	4.610e+05	1.27	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	4.859e+05	4.568e+05	1.06	yes	no	1.112
17	Unk	OCDD	42:01	7.127e+05	7.901e+05	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	2.799e+05	3.543e+05	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	4.595e+05	2.875e+05	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	4.523e+05	2.842e+05	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:48	2.092e+05	3.928e+05	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:55	2.332e+05	4.327e+05	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:25	2.224e+05	4.139e+05	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	2.041e+05	3.825e+05	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:24	1.626e+05	3.528e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:46	1.431e+05	3.159e+05	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	2.012e+05	2.528e+05	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	3.193e+05	2.044e+05	1.56	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:33	2.552e+05	2.035e+05	1.25	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	2.565e+05	2.045e+05	1.25	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	2.187e+05	2.081e+05	1.05	yes	no	0.857
32	IS	13C-OCDD	42:00	3.133e+05	3.464e+05	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:13	2.000e+05	2.518e+05	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:51	2.828e+05	2.264e+05	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	2.003e+05				no	1.086

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Signal/Noise Height Ratio Summary

CLIENT ID.
82167

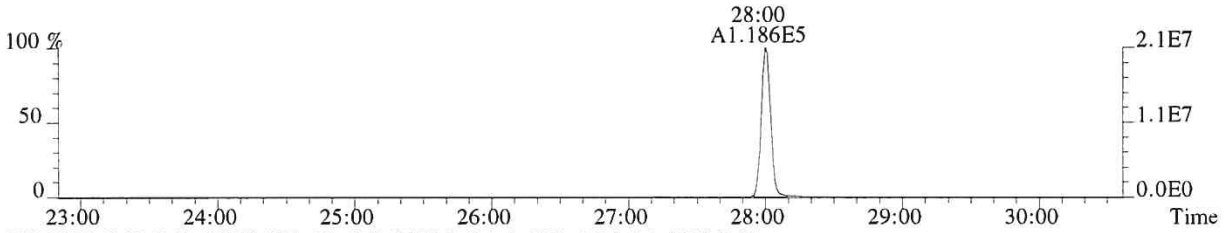
Run #5 Filename P614686 Samp: 1 Inj: 1 Acquired: 25-SEP-18 17:41:03
Processed: 26-SEP-18 07:39:11 LAB. ID: CS4

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.13e+07	2.15e+03	9.9e+03	2.70e+07	4.22e+03	6.4e+03
2	1,2,3,7,8-PeCDF	2.03e+08	3.06e+03	6.6e+04	1.29e+08	4.95e+03	2.6e+04
3	2,3,4,7,8-PeCDF	2.04e+08	3.06e+03	6.7e+04	1.28e+08	4.95e+03	2.6e+04
4	1,2,3,4,7,8-HxCDF	2.14e+08	1.85e+03	1.2e+05	1.68e+08	4.92e+03	3.4e+04
5	1,2,3,6,7,8-HxCDF	2.12e+08	1.85e+03	1.1e+05	1.67e+08	4.92e+03	3.4e+04
6	2,3,4,6,7,8-HxCDF	2.02e+08	1.85e+03	1.1e+05	1.59e+08	4.92e+03	3.2e+04
7	1,2,3,7,8,9-HxCDF	1.88e+08	1.85e+03	1.0e+05	1.47e+08	4.92e+03	3.0e+04
8	1,2,3,4,6,7,8-HpCDF	1.78e+08	2.61e+04	6.8e+03	1.72e+08	1.83e+04	9.4e+03
9	1,2,3,4,7,8,9-HpCDF	1.41e+08	2.61e+04	5.4e+03	1.35e+08	1.83e+04	7.4e+03
10	OCDF	1.94e+08	1.46e+03	1.3e+05	2.08e+08	3.00e+03	6.9e+04
11	2,3,7,8-TCDD	1.62e+07	6.38e+03	2.5e+03	2.06e+07	2.42e+03	8.5e+03
12	1,2,3,7,8-PeCDD	1.19e+08	3.22e+03	3.7e+04	7.64e+07	1.02e+03	7.5e+04
13	1,2,3,4,7,8-HxCDD	1.25e+08	9.48e+02	1.3e+05	9.78e+07	1.64e+03	5.9e+04
14	1,2,3,6,7,8-HxCDD	1.22e+08	9.48e+02	1.3e+05	9.73e+07	1.64e+03	5.9e+04
15	1,2,3,7,8,9-HxCDD	1.31e+08	9.48e+02	1.4e+05	1.04e+08	1.64e+03	6.3e+04
16	1,2,3,4,6,7,8-HpCDD	1.10e+08	2.46e+03	4.5e+04	1.04e+08	2.38e+03	4.4e+04
17	OCDD	1.42e+08	1.24e+03	1.1e+05	1.57e+08	1.46e+03	1.1e+05
18	13C-2,3,7,8-TCDF	5.06e+07	1.14e+04	4.4e+03	6.41e+07	7.28e+03	8.8e+03
19	13C-1,2,3,7,8-PeCDF	8.88e+07	3.08e+03	2.9e+04	5.58e+07	3.54e+03	1.6e+04
20	13C-2,3,4,7,8-PeCDF	9.15e+07	3.08e+03	3.0e+04	5.70e+07	3.54e+03	1.6e+04
21	13C-1,2,3,4,7,8-HxCDF	4.76e+07	3.01e+03	1.6e+04	8.96e+07	4.64e+03	1.9e+04
22	13C-1,2,3,6,7,8-HxCDF	5.17e+07	3.01e+03	1.7e+04	9.54e+07	4.64e+03	2.1e+04
23	13C-2,3,4,6,7,8-HxCDF	4.99e+07	3.01e+03	1.7e+04	9.21e+07	4.64e+03	2.0e+04
24	13C-1,2,3,7,8,9-HxCDF	4.48e+07	3.01e+03	1.5e+04	8.44e+07	4.64e+03	1.8e+04
25	13C-1,2,3,4,6,7,8-HpCDF	3.73e+07	8.80e+03	4.2e+03	8.02e+07	1.92e+04	4.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.97e+07	8.80e+03	3.4e+03	6.54e+07	1.92e+04	3.4e+03
27	13C-2,3,7,8-TCDD	3.77e+07	1.85e+04	2.0e+03	4.78e+07	7.81e+03	6.1e+03
28	13C-1,2,3,7,8-PeCDD	6.47e+07	3.56e+03	1.8e+04	4.18e+07	3.26e+03	1.3e+04
29	13C-1,2,3,4,7,8-HxCDD	5.86e+07	4.66e+03	1.3e+04	4.67e+07	3.04e+03	1.5e+04
30	13C-1,2,3,6,7,8-HxCDD	5.76e+07	4.66e+03	1.2e+04	4.61e+07	3.04e+03	1.5e+04
31	13C-1,2,3,4,6,7,8-HpCDD	4.94e+07	3.14e+03	1.6e+04	4.74e+07	1.71e+03	2.8e+04
32	13C-OCDD	6.18e+07	1.83e+03	3.4e+04	6.87e+07	9.56e+02	7.2e+04
33	13C-1,2,3,4-TCDD	3.76e+07	1.85e+04	2.0e+03	4.73e+07	7.81e+03	6.1e+03
34	13C-1,2,3,7,8,9-HxCDD	6.25e+07	4.66e+03	1.3e+04	5.04e+07	3.04e+03	1.7e+04
35	37Cl-2,3,7,8-TCDD	3.86e+07	4.32e+03	9.0e+03			

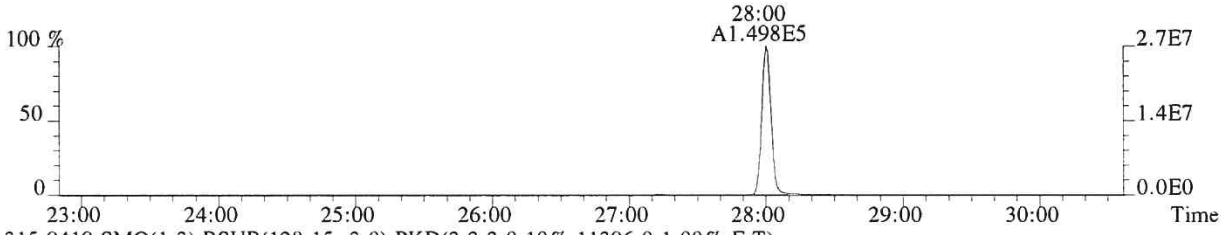
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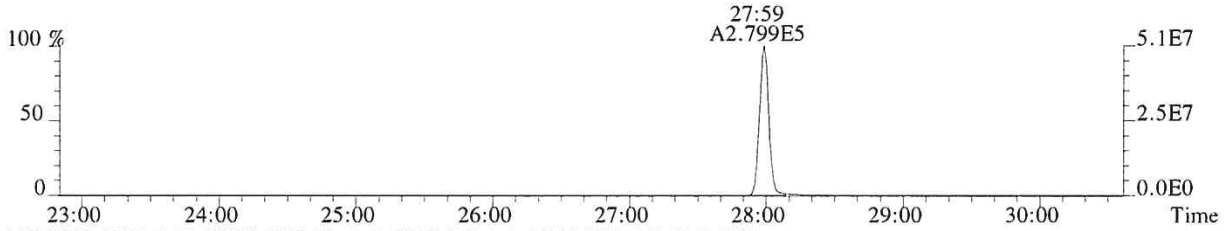
File:P614686 #1-552 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2148.0,1.00%,F,T)



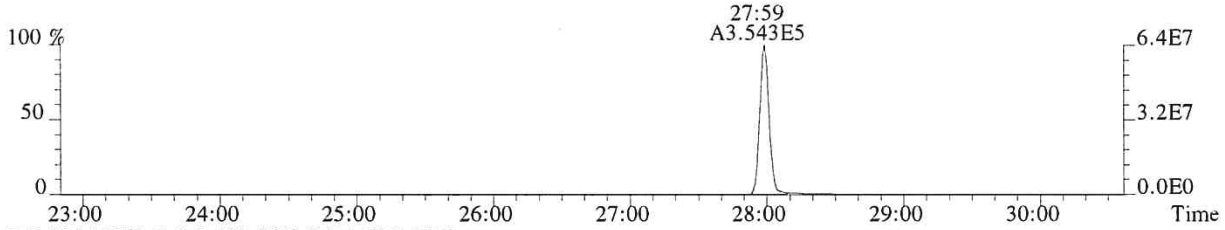
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4220.0,1.00%,F,T)



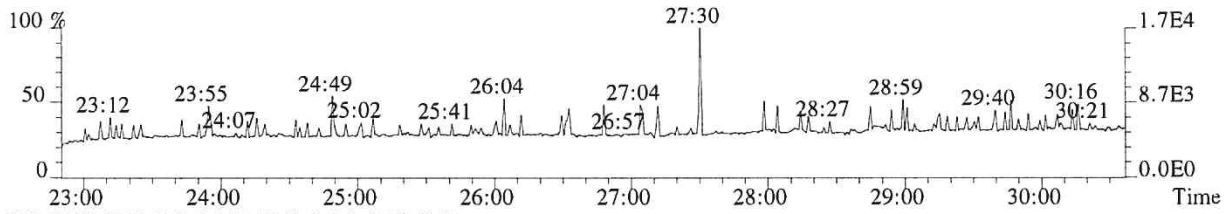
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11396.0,1.00%,F,T)



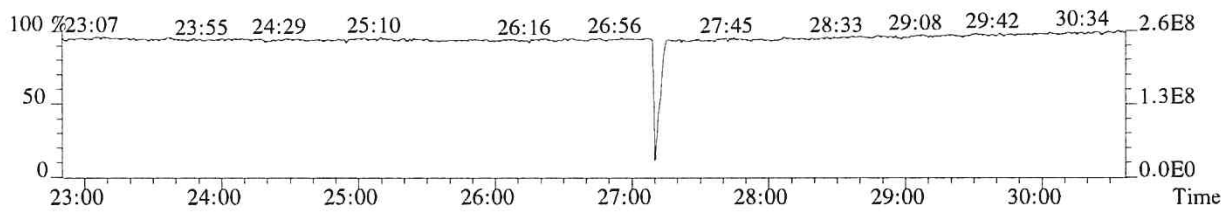
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7276.0,1.00%,F,T)



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

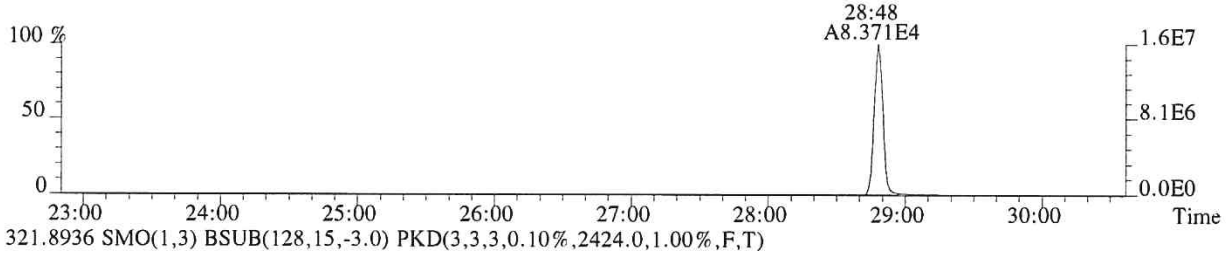


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

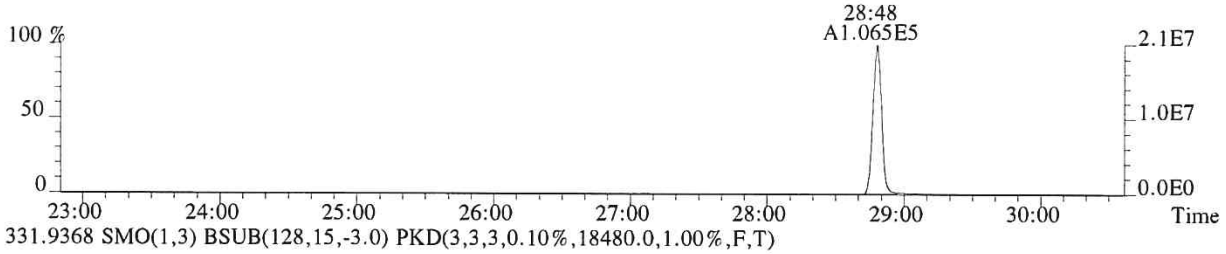


016843

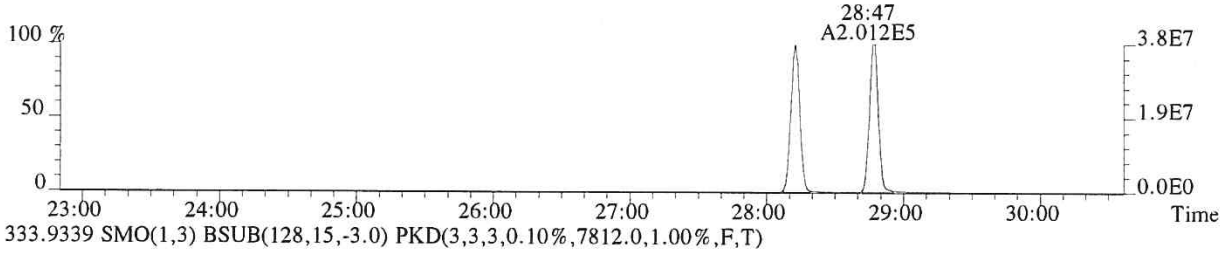
File:P614686 #1-552 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6384.0,1.00%,F,T)



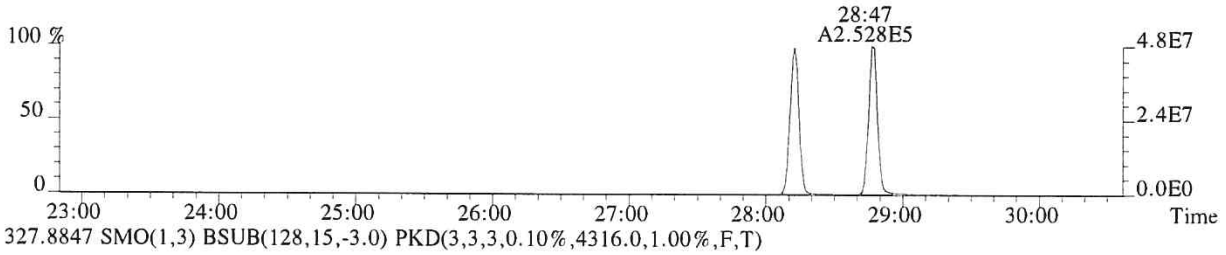
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2424.0,1.00%,F,T)



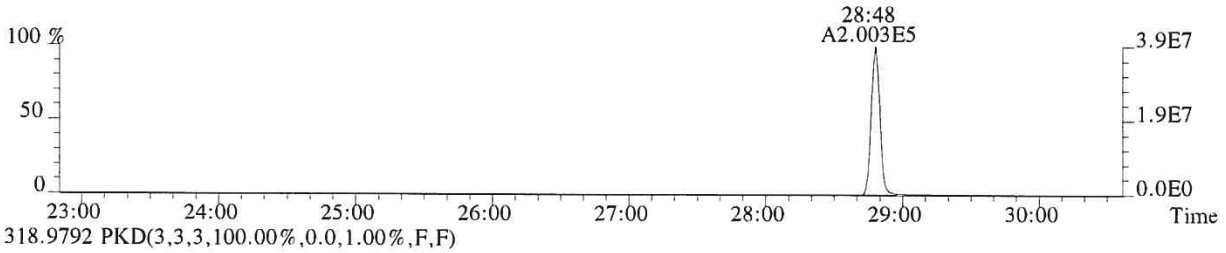
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,18480.0,1.00%,F,T)



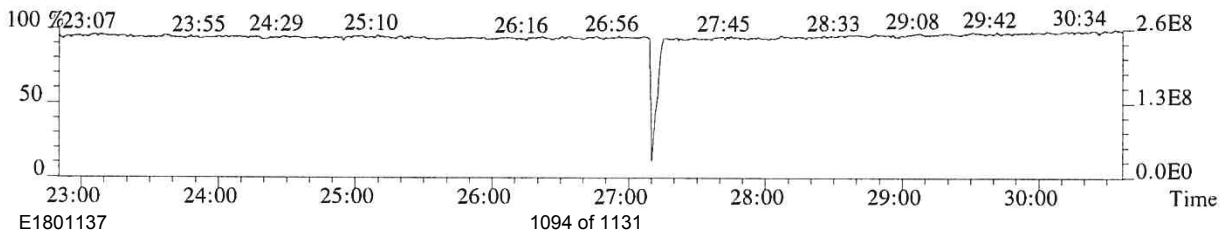
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7812.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4316.0,1.00%,F,T)

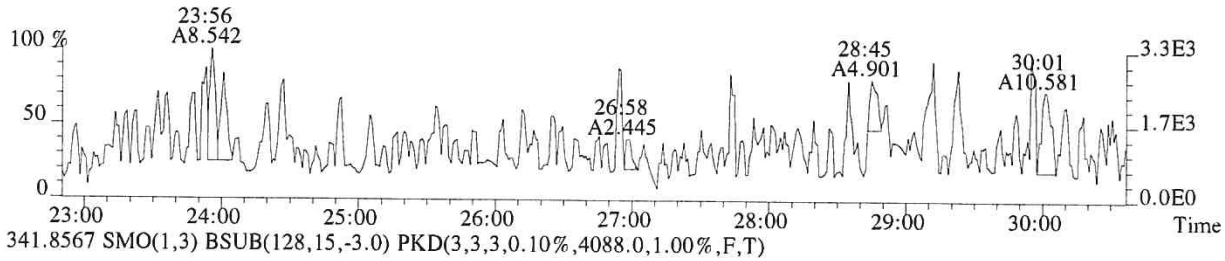


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

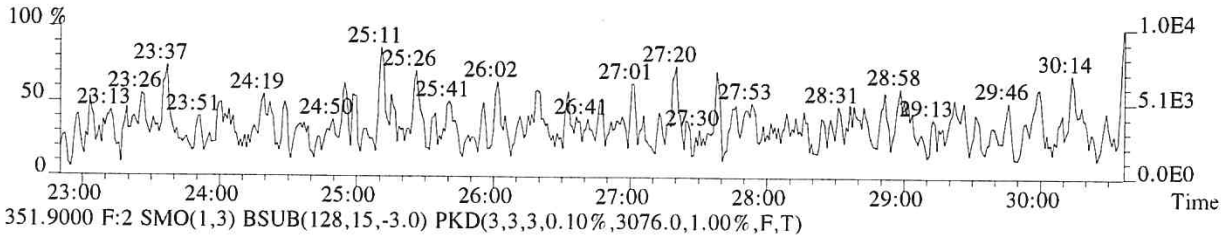


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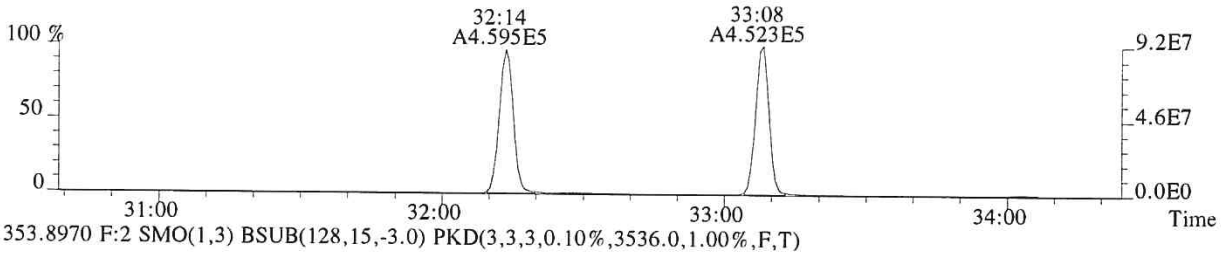
File:P614686 #1-552 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1356.0,1.00%,F,T)



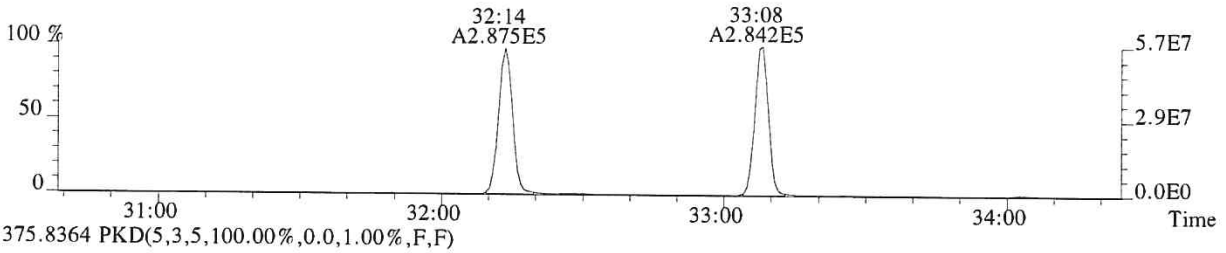
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4088.0,1.00%,F,T)



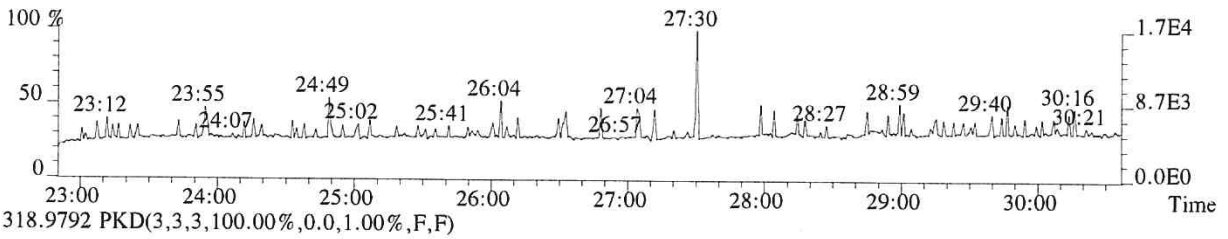
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3076.0,1.00%,F,T)



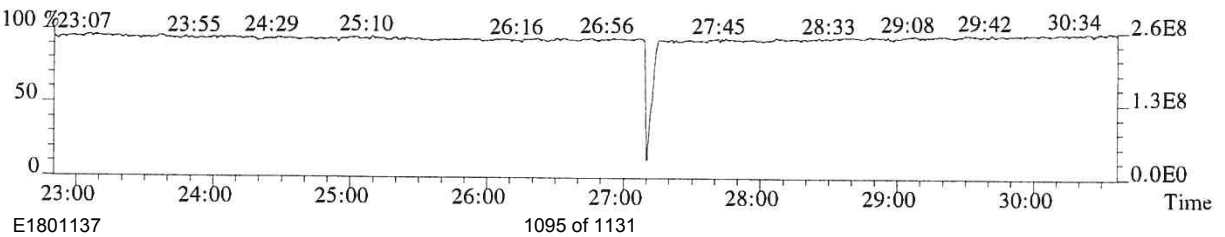
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3536.0,1.00%,F,T)



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

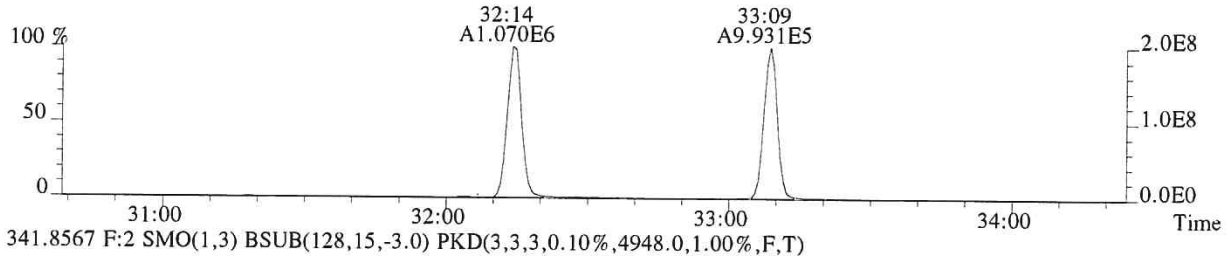


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

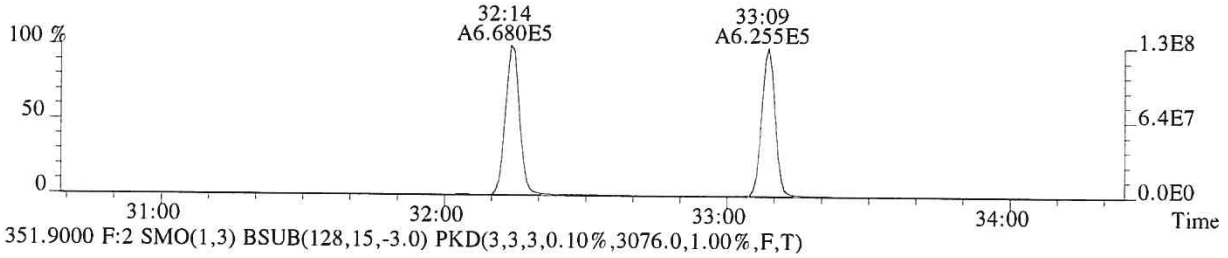


016845

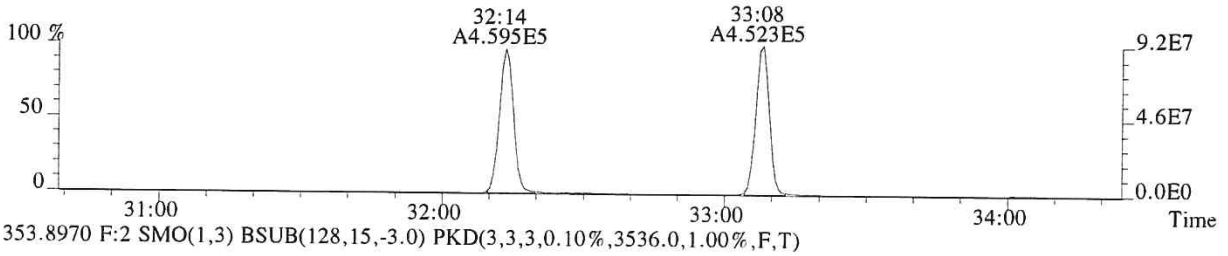
File:P614686 #1-339 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3064.0,1.00%,F,T)



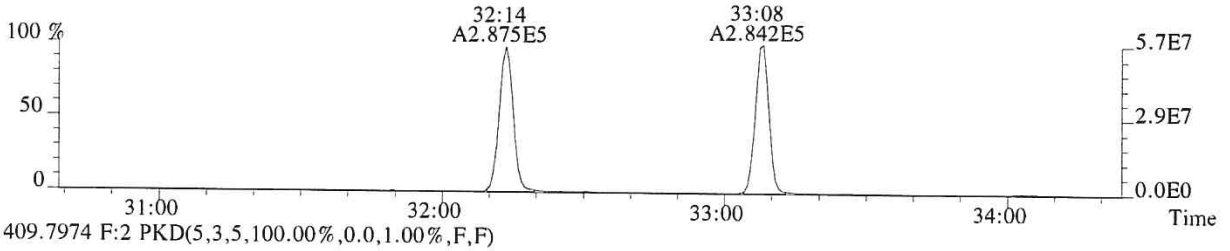
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4948.0,1.00%,F,T)



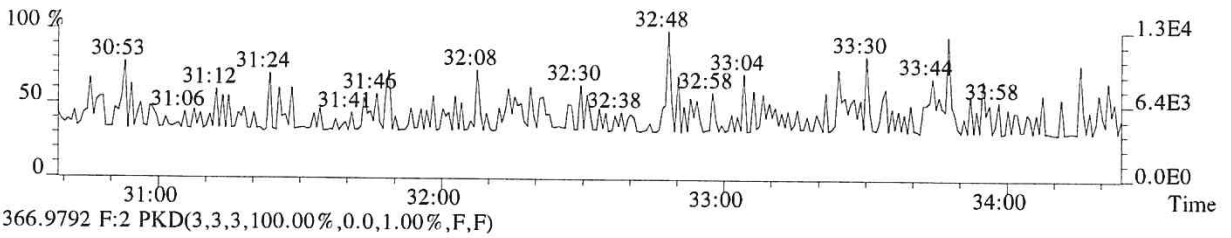
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3076.0,1.00%,F,T)



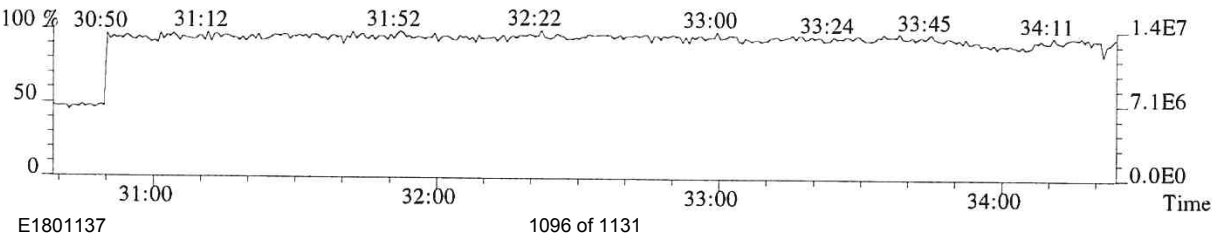
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3536.0,1.00%,F,T)



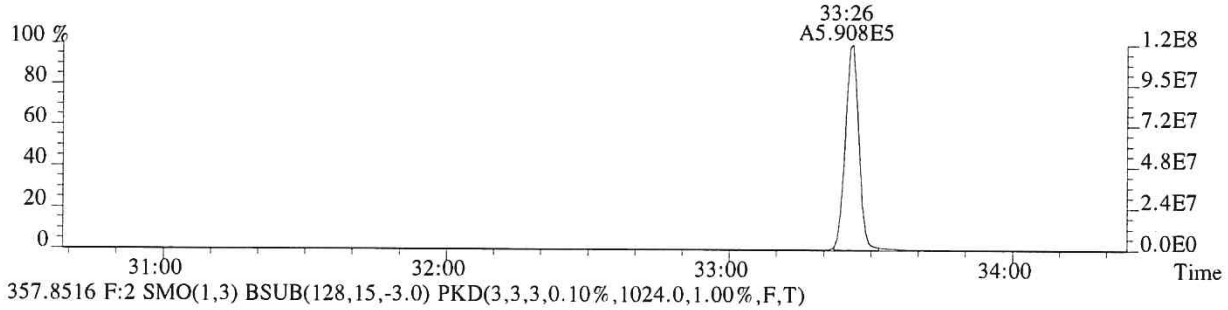
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



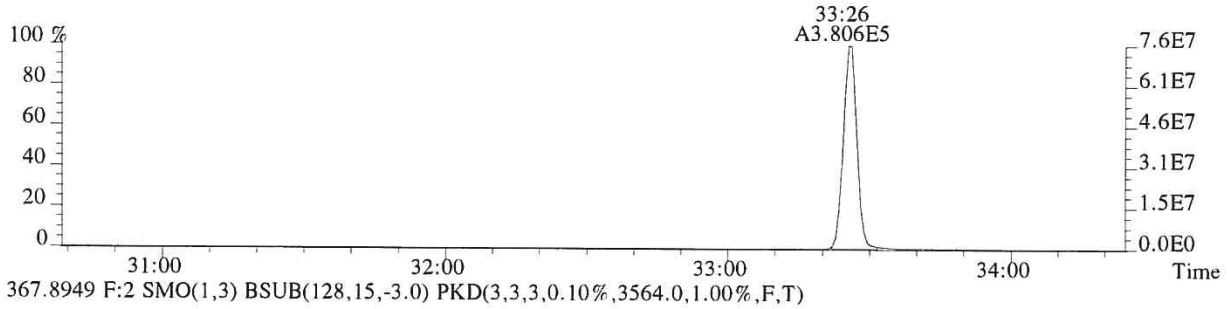
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



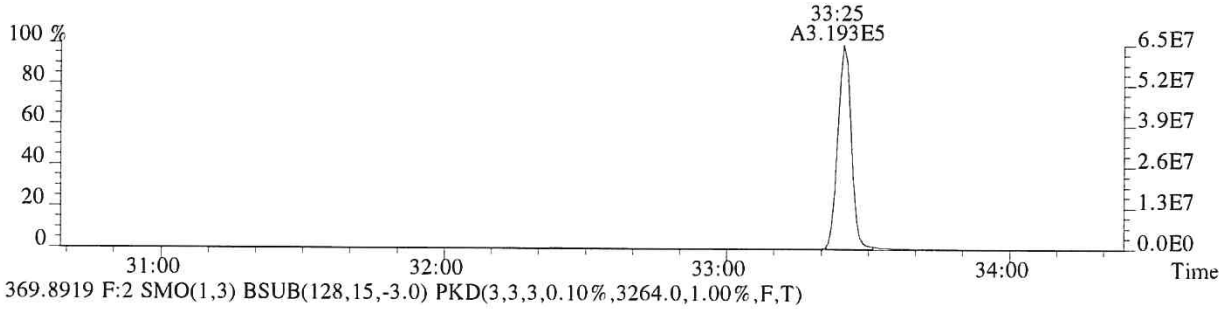
File:P614686 #1-339 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3220.0,1.00%,F,T)



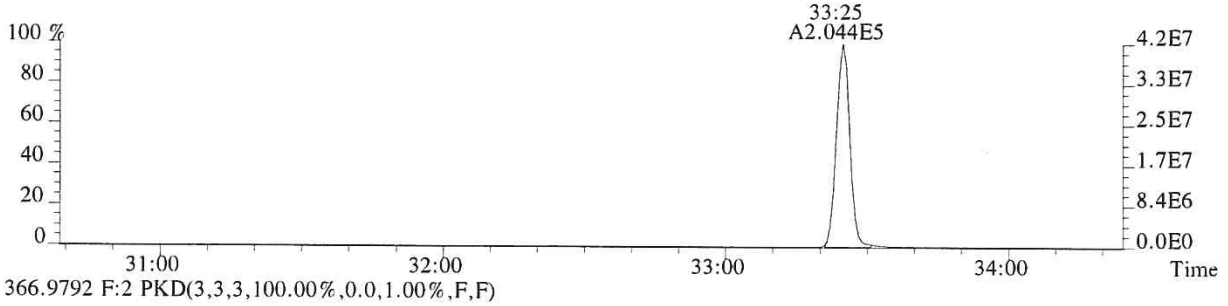
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



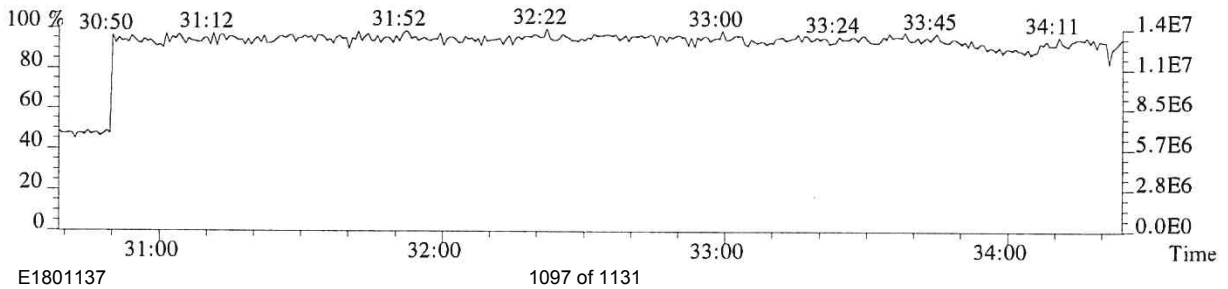
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3564.0,1.00%,F,T)



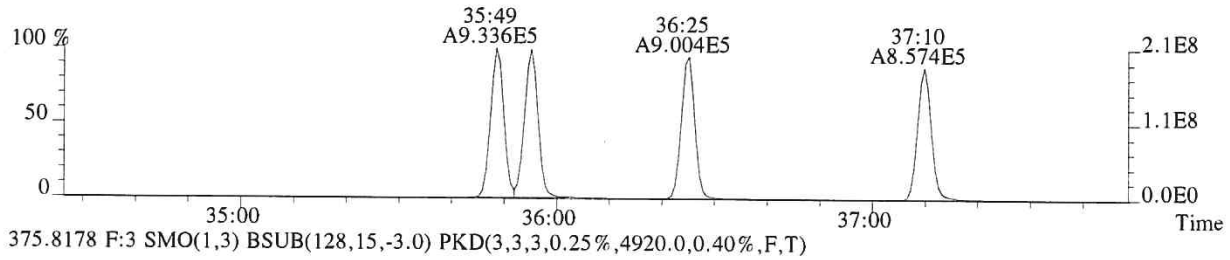
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3264.0,1.00%,F,T)



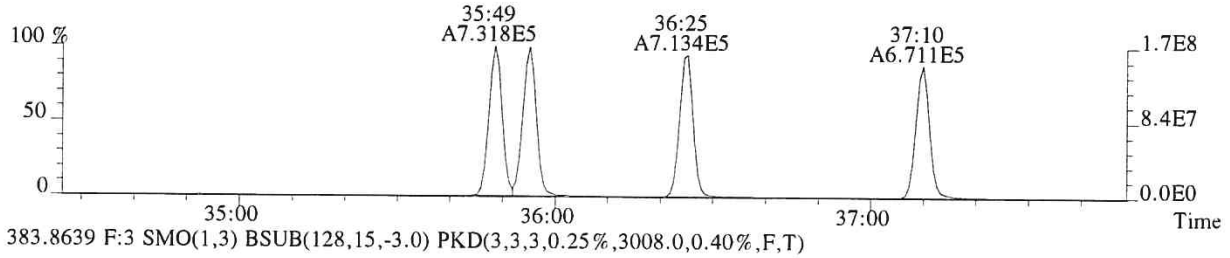
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



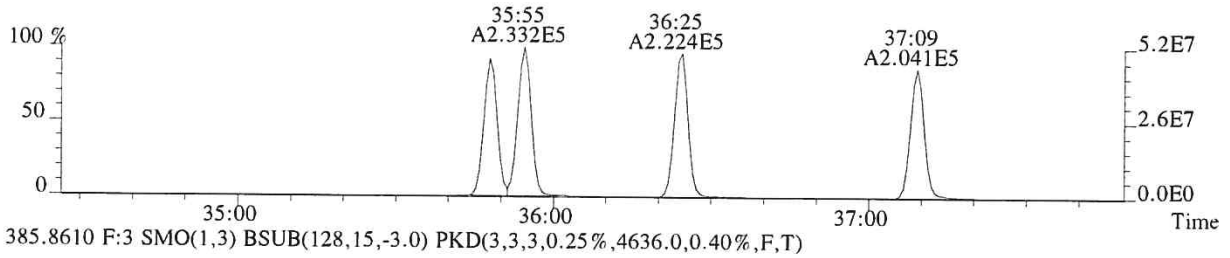
File:P614686 #1-304 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1848.0,0.40%,F,T)



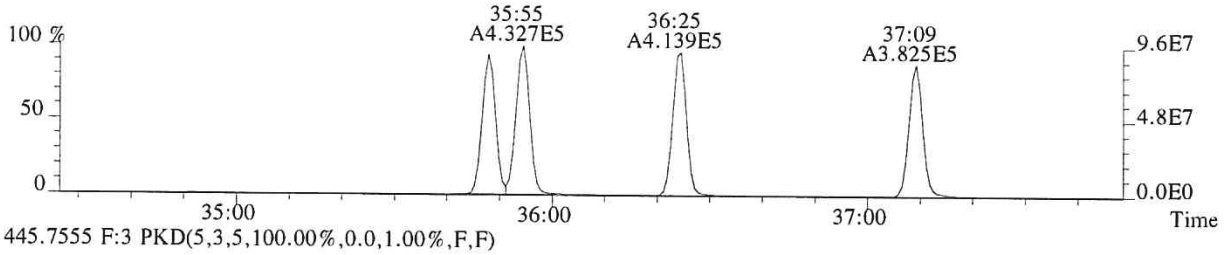
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4920.0,0.40%,F,T)



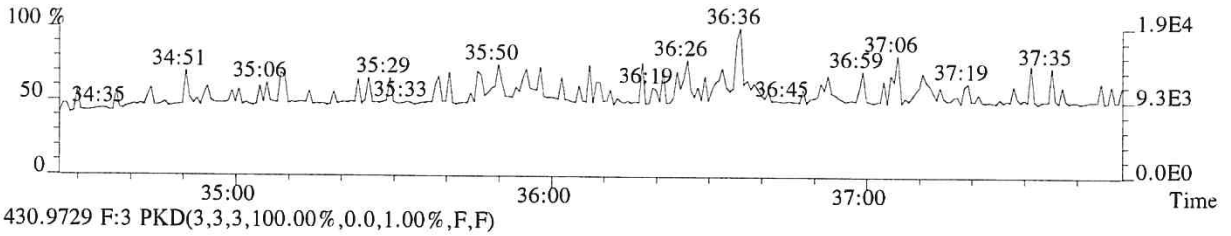
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3008.0,0.40%,F,T)



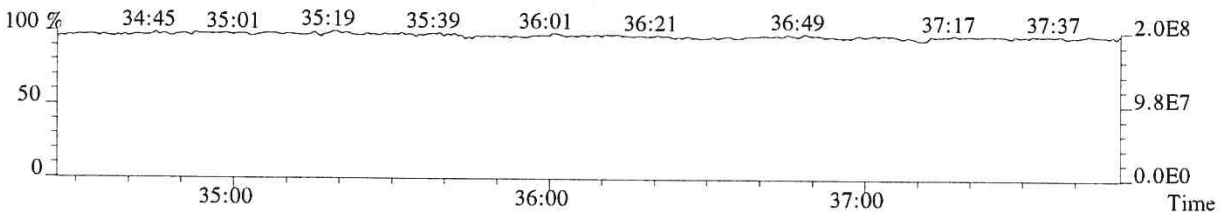
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4636.0,0.40%,F,T)



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

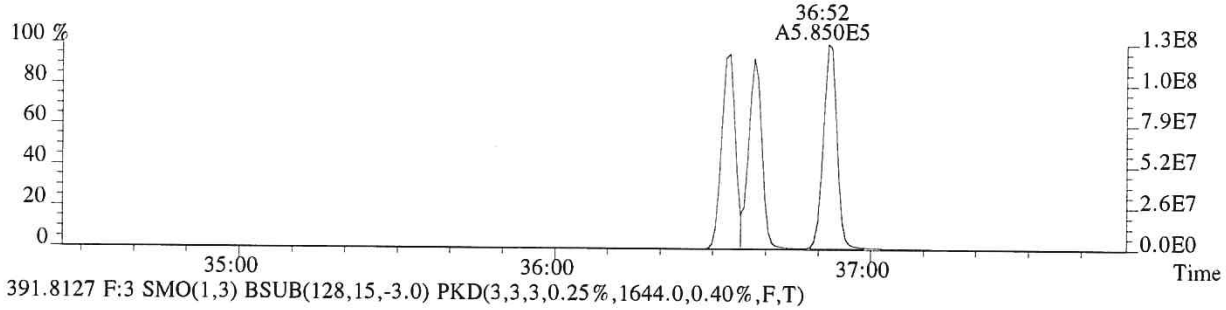


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

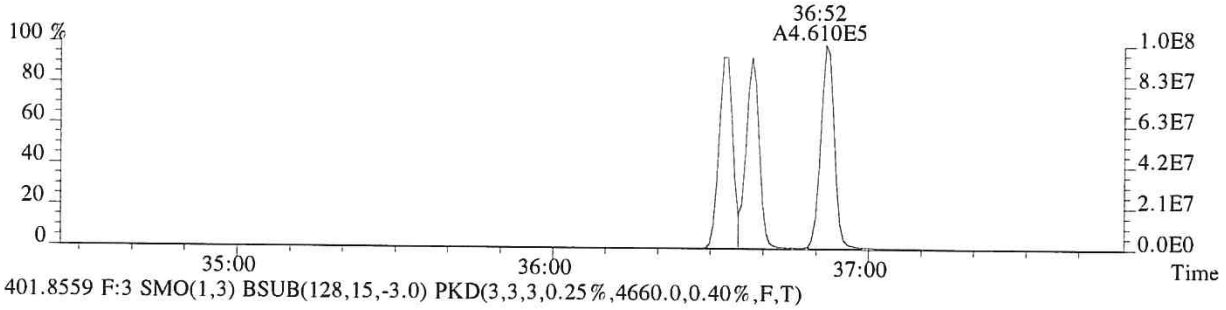


016848

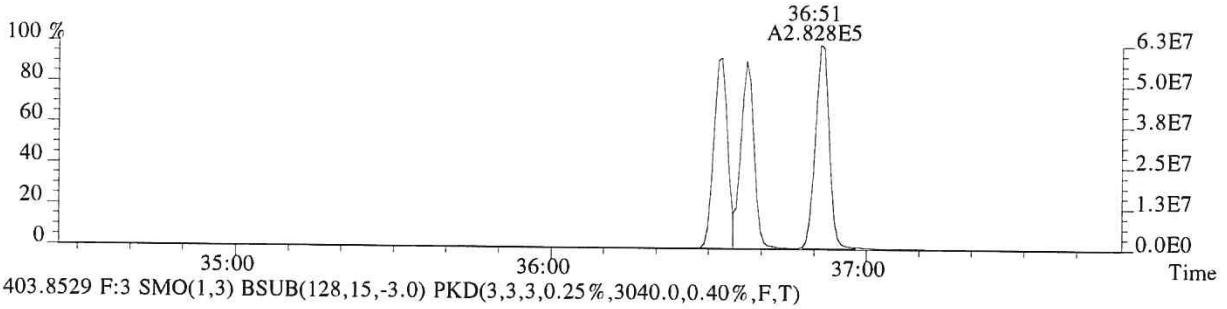
File:P614686 #1-304 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,948.0,0.40%,F,T)



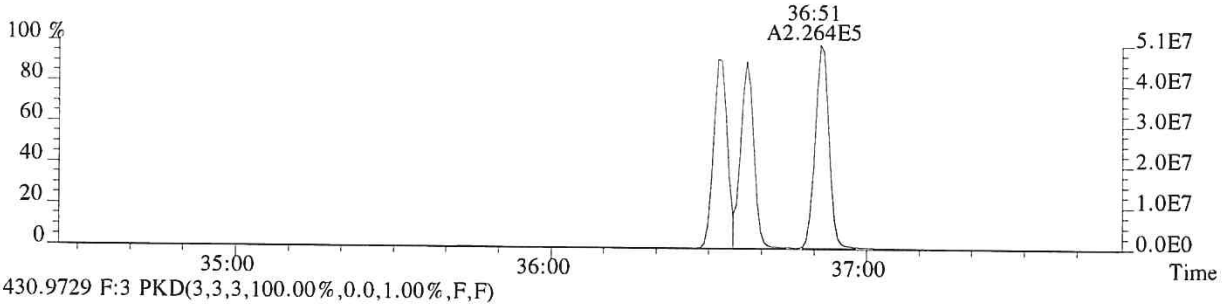
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1644.0,0.40%,F,T)



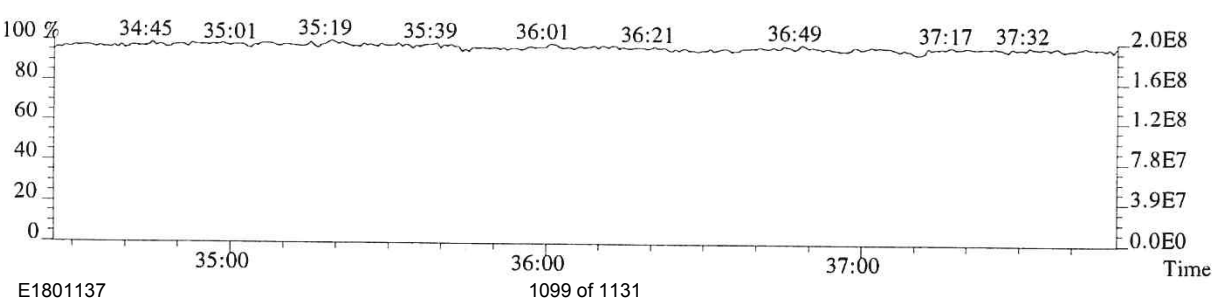
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4660.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3040.0,0.40%,F,T)

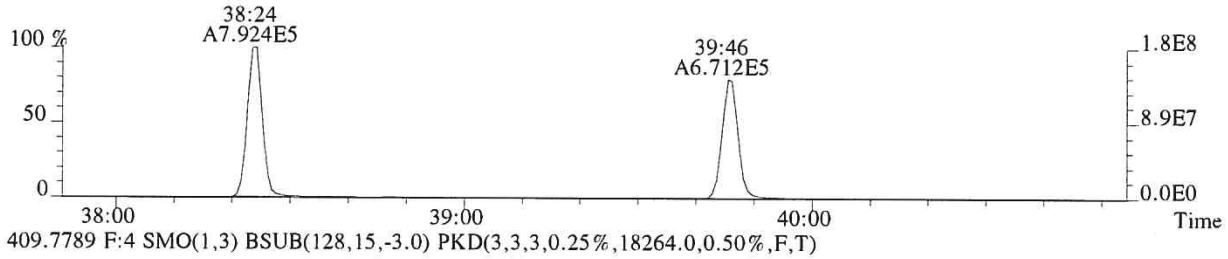


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

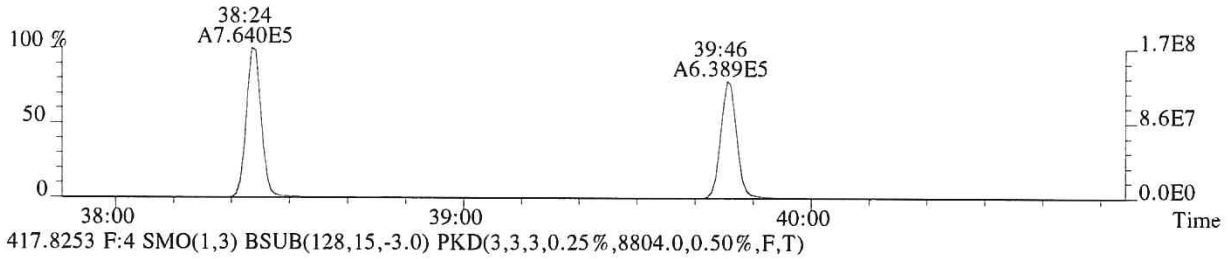


016849

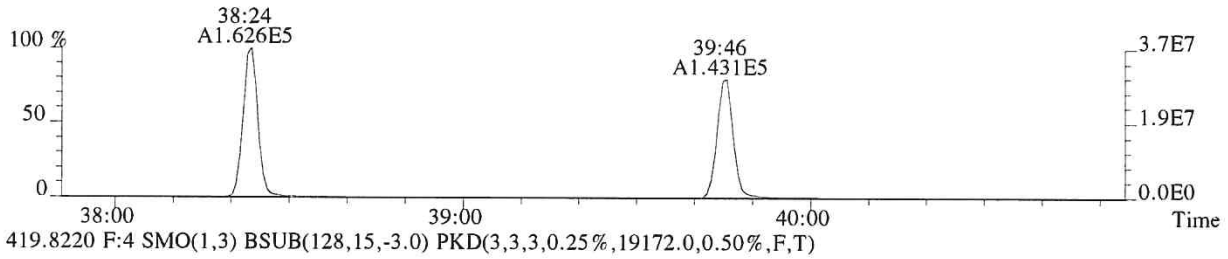
File:P614686 #1-276 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,26056.0,0.50%,F,T)



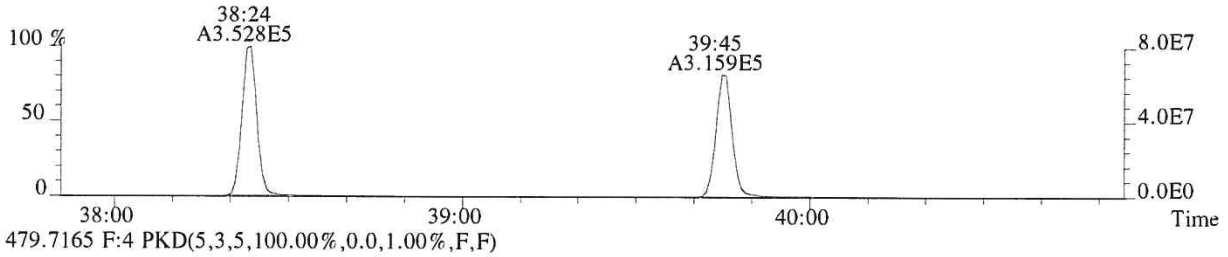
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,18264.0,0.50%,F,T)



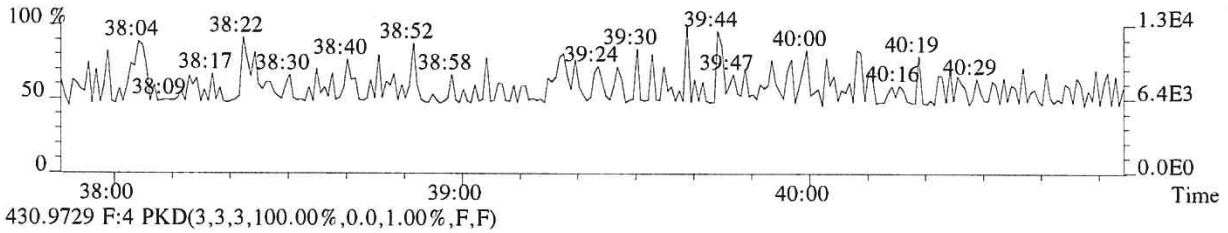
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8804.0,0.50%,F,T)



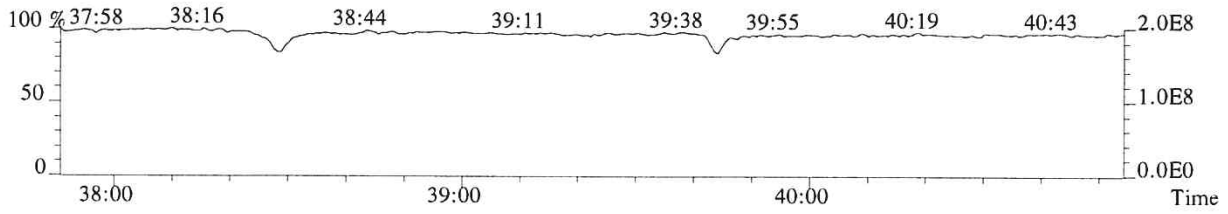
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,19172.0,0.50%,F,T)



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

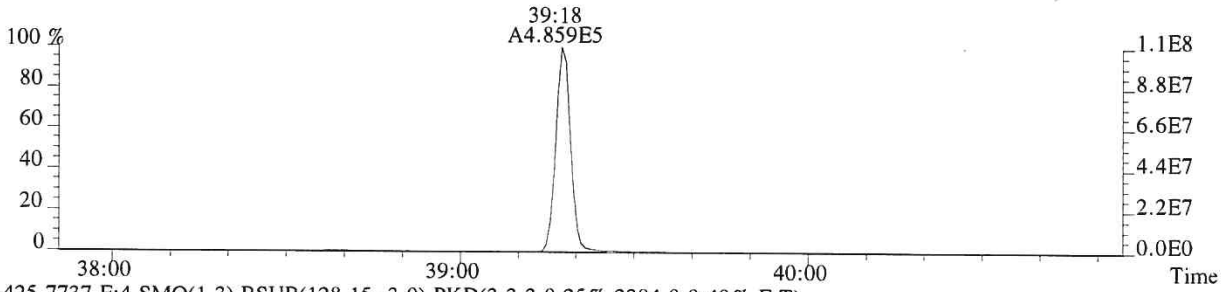


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

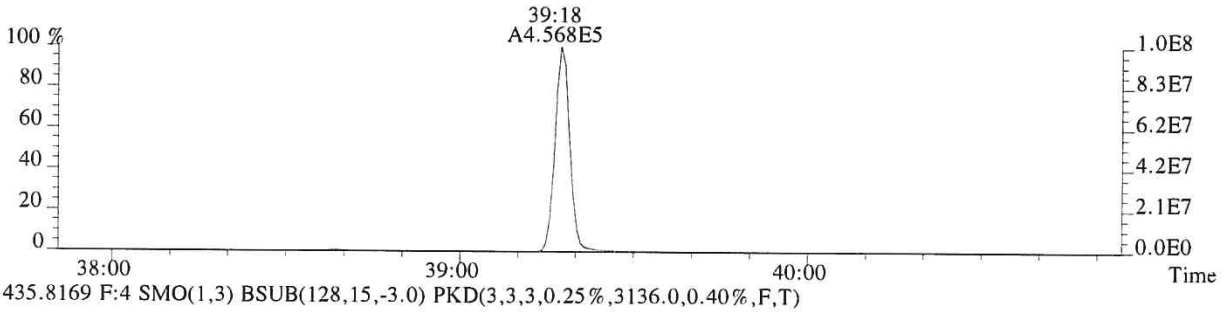


016850

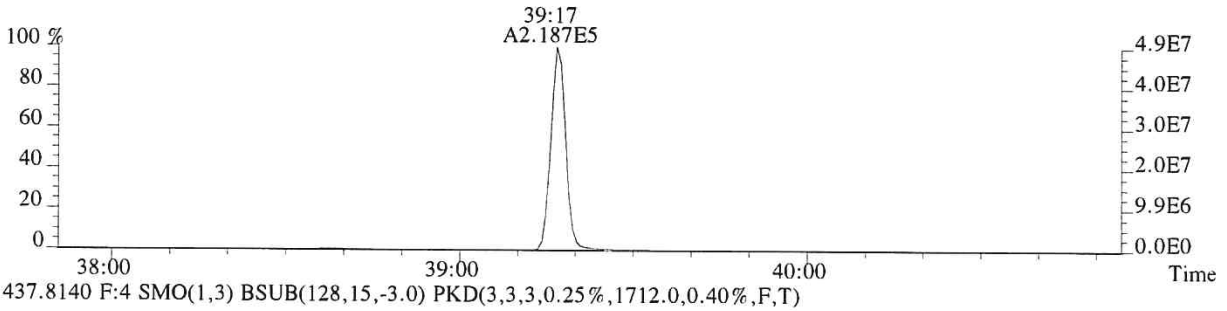
File:P614686 #1-276 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2456.0,0.40%,F,T)



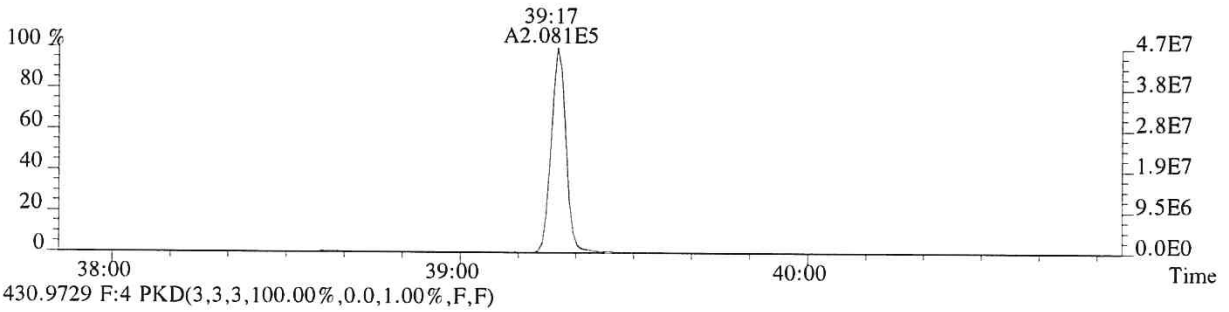
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2384.0,0.40%,F,T)



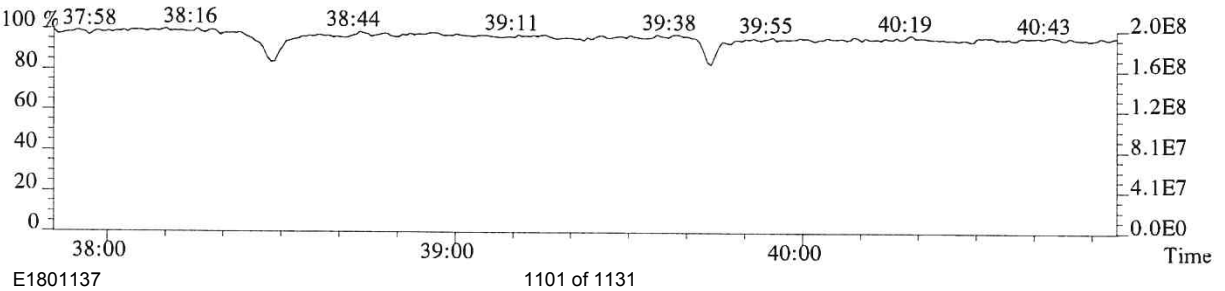
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3136.0,0.40%,F,T)



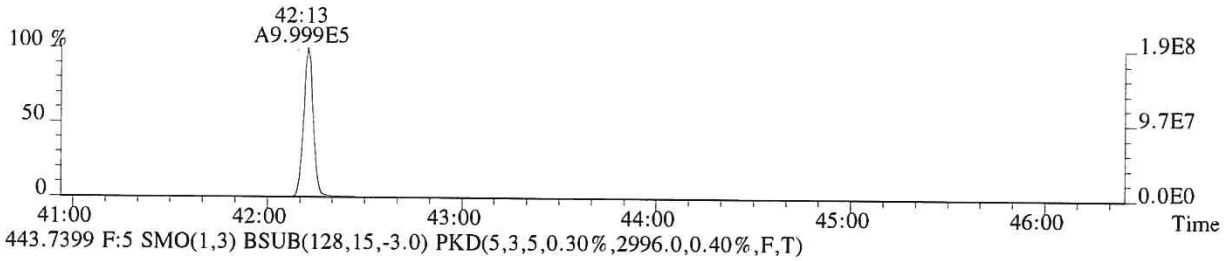
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1712.0,0.40%,F,T)



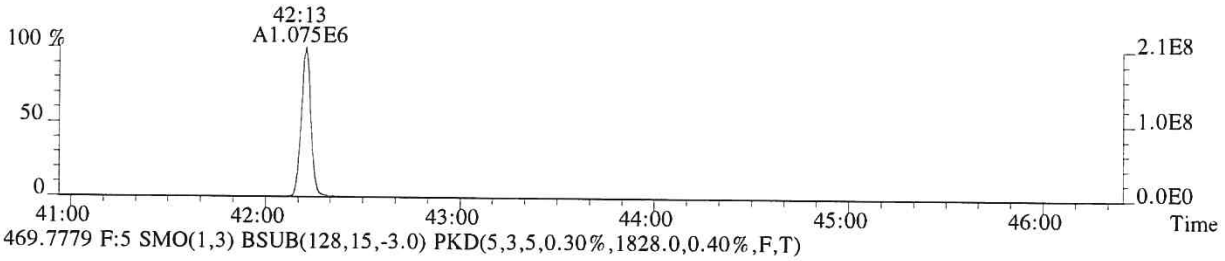
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



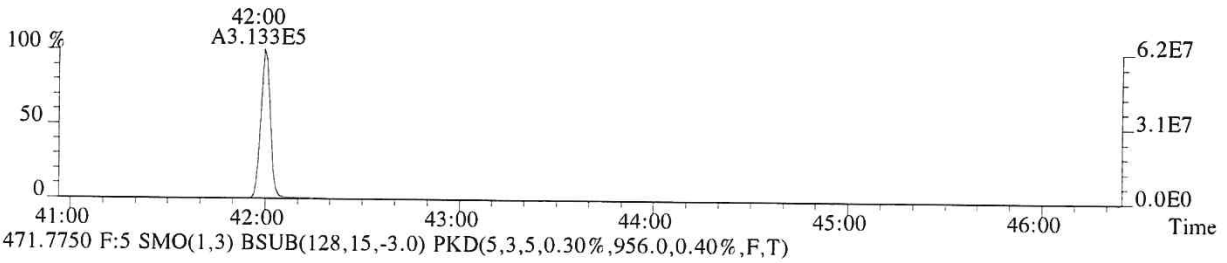
File:P614686 #1-493 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1464.0,0.40%,F,T)



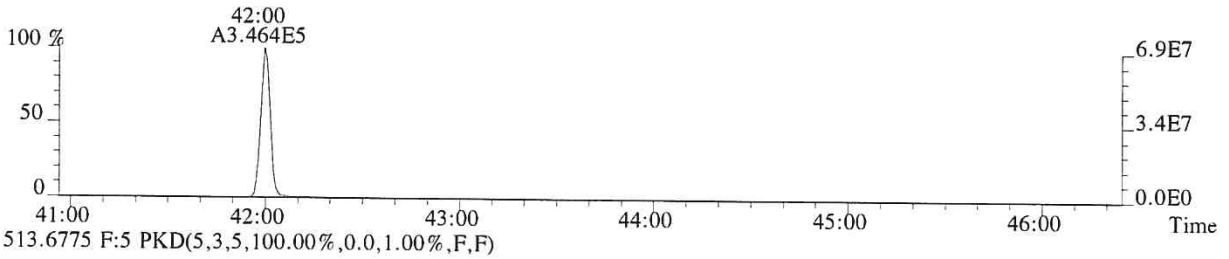
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2996.0,0.40%,F,T)



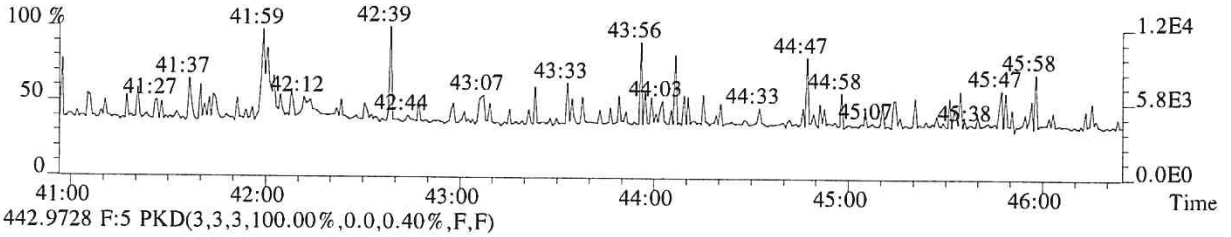
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1828.0,0.40%,F,T)



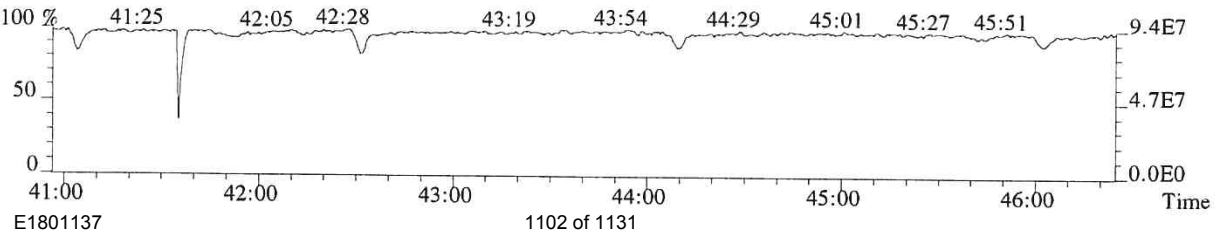
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,956.0,0.40%,F,T)



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

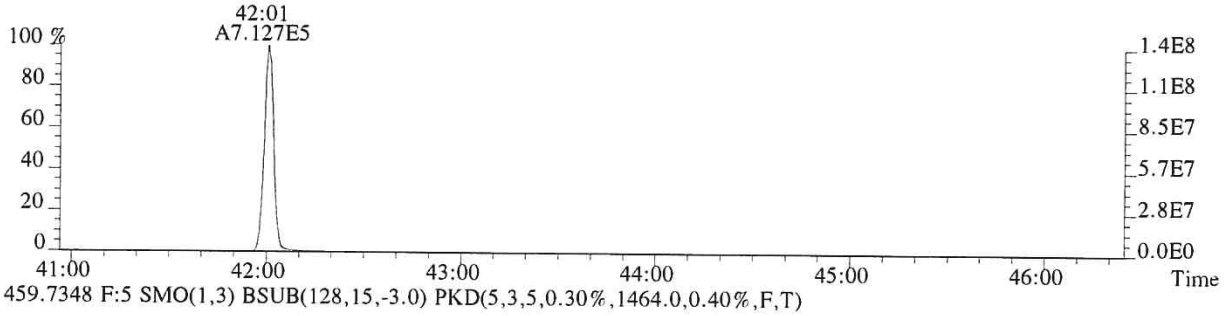


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

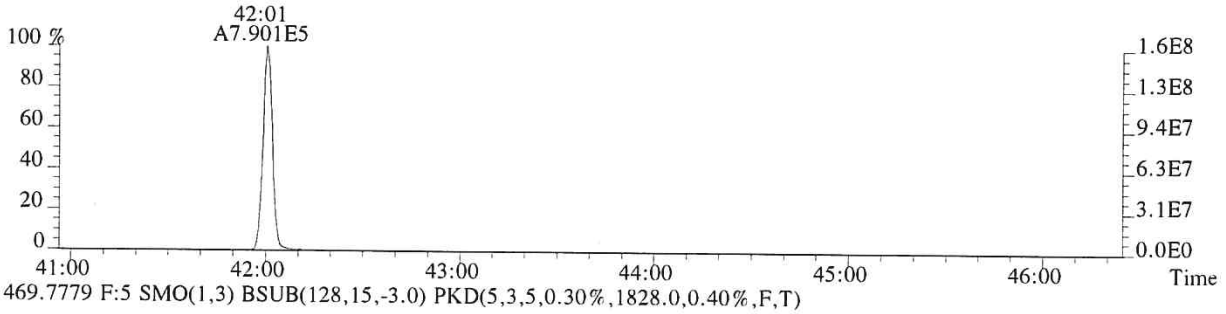


016852

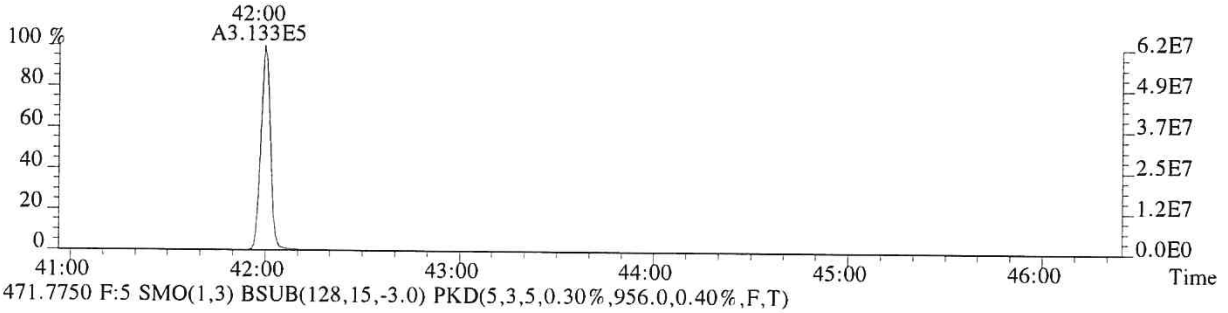
File:P614686 #1-493 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1244.0,0.40%,F,T)



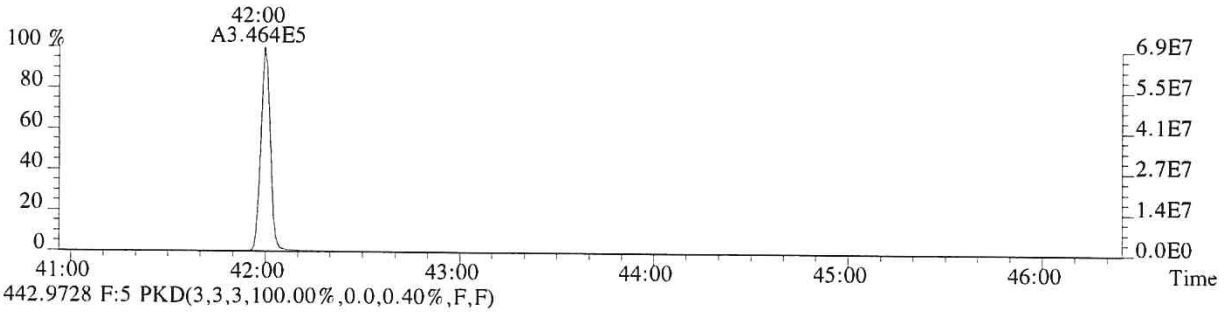
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1464.0,0.40%,F,T)



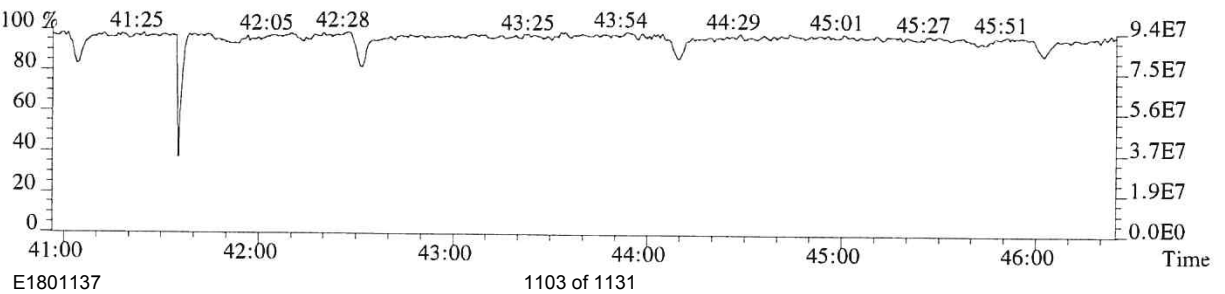
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1828.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,956.0,0.40%,F,T)



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



016853

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
185657

Run #6 Filename P614687 Samp: 1 Inj: 1 Acquired: 25-SEP-18 18:30:08
Processed: 26-SEP-18 07:39:13 Sample ID: CS5

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:00	4.651e+05	5.844e+05	0.80	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:14	4.117e+06	2.575e+06	1.60	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:09	3.795e+06	2.391e+06	1.59	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	3.313e+06	2.571e+06	1.29	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	3.588e+06	2.836e+06	1.27	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	3.399e+06	2.690e+06	1.26	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:10	3.119e+06	2.463e+06	1.27	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	3.035e+06	2.883e+06	1.05	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	2.518e+06	2.388e+06	1.05	yes	no	1.463
10	Unk	OCDF	42:13	3.855e+06	4.175e+06	0.92	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	3.257e+05	4.207e+05	0.77	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	2.277e+06	1.455e+06	1.57	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	2.053e+06	1.616e+06	1.27	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	2.042e+06	1.617e+06	1.26	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:52	2.180e+06	1.732e+06	1.26	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	1.868e+06	1.765e+06	1.06	yes	no	1.112
17	Unk	OCDD	42:01	2.725e+06	3.028e+06	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	2.197e+05	2.785e+05	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	3.496e+05	2.178e+05	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	3.453e+05	2.138e+05	1.61	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:48	1.447e+05	2.684e+05	0.54	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:55	1.758e+05	3.274e+05	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:25	1.668e+05	3.132e+05	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	1.489e+05	2.799e+05	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:23	1.241e+05	2.682e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:45	1.078e+05	2.346e+05	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	1.558e+05	1.966e+05	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	2.439e+05	1.553e+05	1.57	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:32	1.940e+05	1.538e+05	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	1.938e+05	1.542e+05	1.26	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	1.682e+05	1.601e+05	1.05	yes	no	0.857
32	IS	13C-OCDD	42:00	2.375e+05	2.681e+05	0.89	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:13	1.555e+05	1.925e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:51	2.160e+05	1.725e+05	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	7.877e+05				no	1.086

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Signal/Noise Height Ratio Summary

CLIENT ID.
185657

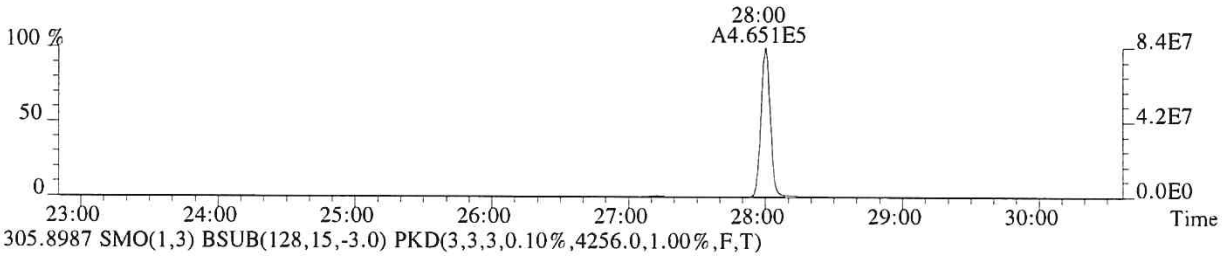
Run #6 Filename P614687 Samp: 1 Inj: 1 Acquired: 25-SEP-18 18:30:08
Processed: 26-SEP-18 07:39:13 LAB. ID: CS5

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.41e+07	1.94e+03	4.3e+04	1.06e+08	4.26e+03	2.5e+04
2	1,2,3,7,8-PeCDF	8.11e+08	8.46e+03	9.6e+04	5.11e+08	9.13e+03	5.6e+04
3	2,3,4,7,8-PeCDF	7.87e+08	8.46e+03	9.3e+04	4.93e+08	9.13e+03	5.4e+04
4	1,2,3,4,7,8-HxCDF	7.76e+08	1.23e+04	6.3e+04	6.07e+08	9.42e+03	6.4e+04
5	1,2,3,6,7,8-HxCDF	8.10e+08	1.23e+04	6.6e+04	6.40e+08	9.42e+03	6.8e+04
6	2,3,4,6,7,8-HxCDF	7.65e+08	1.23e+04	6.2e+04	6.05e+08	9.42e+03	6.4e+04
7	1,2,3,7,8,9-HxCDF	6.96e+08	1.23e+04	5.6e+04	5.46e+08	9.42e+03	5.8e+04
8	1,2,3,4,6,7,8-HpCDF	7.09e+08	9.68e+04	7.3e+03	6.78e+08	6.15e+04	1.1e+04
9	1,2,3,4,7,8,9-HpCDF	5.55e+08	9.68e+04	5.7e+03	5.29e+08	6.15e+04	8.6e+03
10	OCDF	7.55e+08	1.43e+03	5.3e+05	8.22e+08	2.80e+03	2.9e+05
11	2,3,7,8-TCDD	6.32e+07	4.52e+03	1.4e+04	8.21e+07	2.67e+03	3.1e+04
12	1,2,3,7,8-PeCDD	4.67e+08	3.26e+03	1.4e+05	2.98e+08	1.54e+03	1.9e+05
13	1,2,3,4,7,8-HxCDD	4.65e+08	2.34e+03	2.0e+05	3.68e+08	1.99e+03	1.8e+05
14	1,2,3,6,7,8-HxCDD	4.59e+08	2.34e+03	2.0e+05	3.67e+08	1.99e+03	1.8e+05
15	1,2,3,7,8,9-HxCDD	4.96e+08	2.34e+03	2.1e+05	3.98e+08	1.99e+03	2.0e+05
16	1,2,3,4,6,7,8-HpCDD	4.28e+08	1.10e+04	3.9e+04	4.06e+08	8.82e+03	4.6e+04
17	OCDD	5.24e+08	9.60e+02	5.5e+05	5.87e+08	1.87e+03	3.1e+05
18	13C-2,3,7,8-TCDF	3.91e+07	1.53e+04	2.6e+03	4.94e+07	1.22e+04	4.0e+03
19	13C-1,2,3,7,8-PeCDF	6.89e+07	2.06e+03	3.3e+04	4.27e+07	4.55e+03	9.4e+03
20	13C-2,3,4,7,8-PeCDF	6.95e+07	2.06e+03	3.4e+04	4.34e+07	4.55e+03	9.5e+03
21	13C-1,2,3,4,7,8-HxCDF	3.33e+07	2.62e+03	1.3e+04	6.22e+07	4.07e+03	1.5e+04
22	13C-1,2,3,6,7,8-HxCDF	3.91e+07	2.62e+03	1.5e+04	7.31e+07	4.07e+03	1.8e+04
23	13C-2,3,4,6,7,8-HxCDF	3.74e+07	2.62e+03	1.4e+04	6.98e+07	4.07e+03	1.7e+04
24	13C-1,2,3,7,8,9-HxCDF	3.36e+07	2.62e+03	1.3e+04	6.29e+07	4.07e+03	1.5e+04
25	13C-1,2,3,4,6,7,8-HpCDF	2.82e+07	6.76e+03	4.2e+03	6.20e+07	1.14e+04	5.5e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.34e+07	6.76e+03	3.5e+03	5.11e+07	1.14e+04	4.5e+03
27	13C-2,3,7,8-TCDD	3.04e+07	1.91e+04	1.6e+03	3.86e+07	8.85e+03	4.4e+03
28	13C-1,2,3,7,8-PeCDD	5.04e+07	1.98e+03	2.5e+04	3.21e+07	2.85e+03	1.1e+04
29	13C-1,2,3,4,7,8-HxCDD	4.39e+07	4.70e+03	9.3e+03	3.50e+07	2.24e+03	1.6e+04
30	13C-1,2,3,6,7,8-HxCDD	4.37e+07	4.70e+03	9.3e+03	3.49e+07	2.24e+03	1.6e+04
31	13C-1,2,3,4,6,7,8-HpCDD	3.82e+07	2.97e+03	1.3e+04	3.65e+07	2.54e+03	1.4e+04
32	13C-OCDD	4.50e+07	3.46e+03	1.3e+04	5.10e+07	1.82e+03	2.8e+04
33	13C-1,2,3,4-TCDD	2.93e+07	1.91e+04	1.5e+03	3.60e+07	8.85e+03	4.1e+03
34	13C-1,2,3,7,8,9-HxCDD	4.90e+07	4.70e+03	1.0e+04	3.94e+07	2.24e+03	1.8e+04
35	37Cl-2,3,7,8-TCDD	1.54e+08	4.95e+03	3.1e+04			

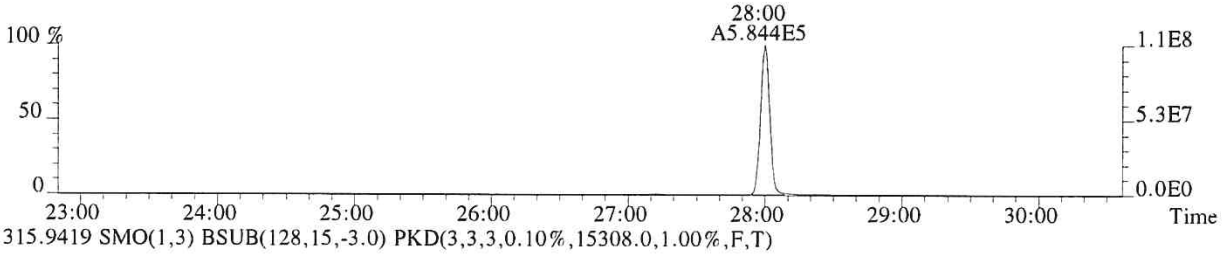
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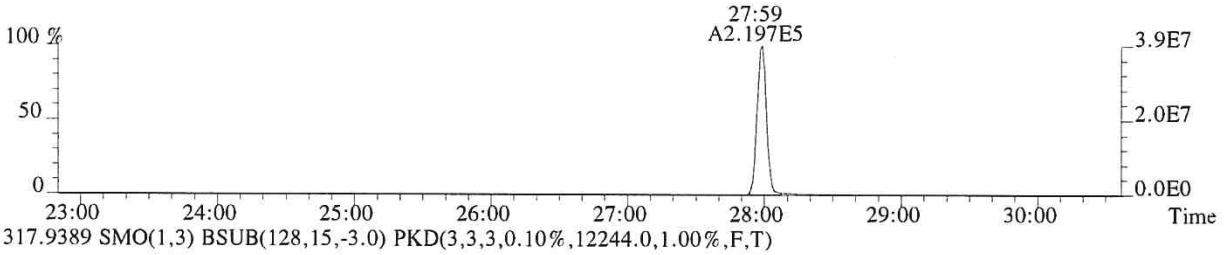
File:P614687 #1-552 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1940.0,1.00%,F,T)



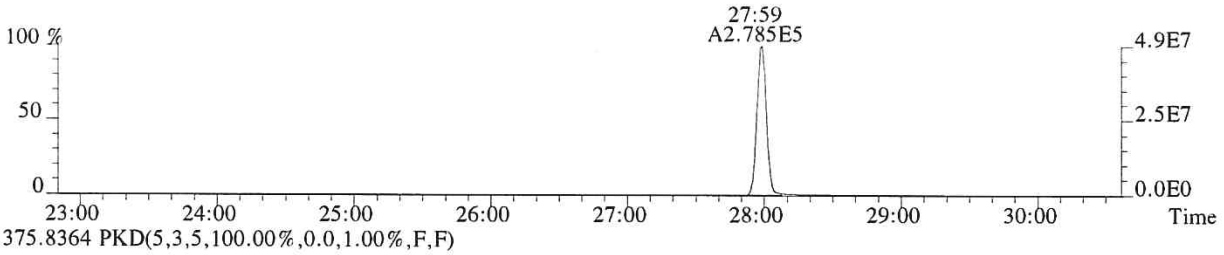
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4256.0,1.00%,F,T)



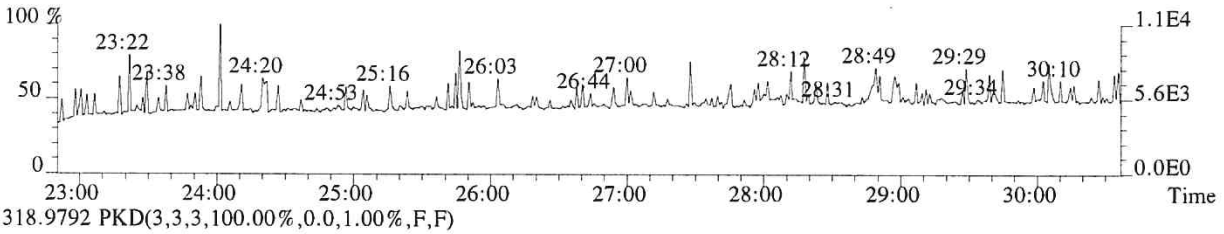
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15308.0,1.00%,F,T)



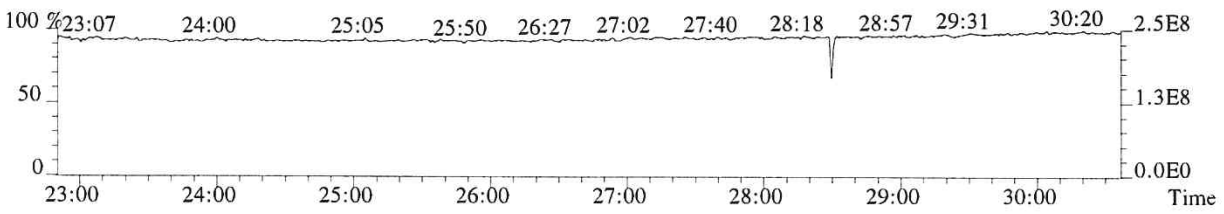
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12244.0,1.00%,F,T)



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

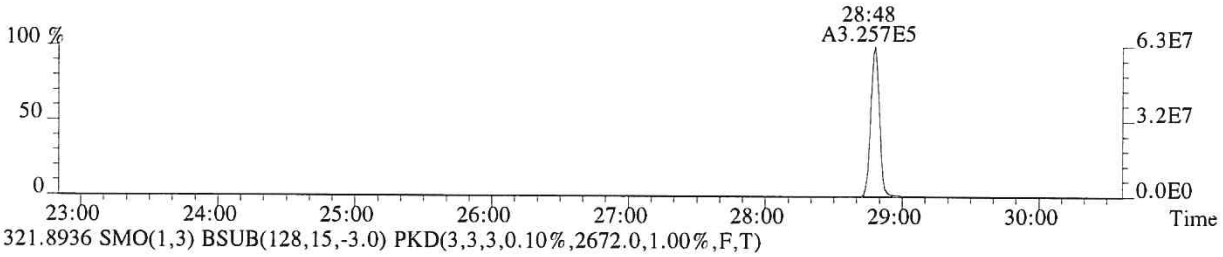


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

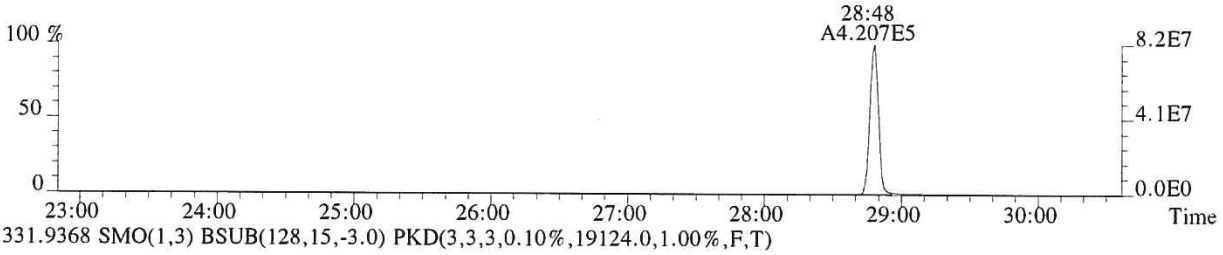


016856

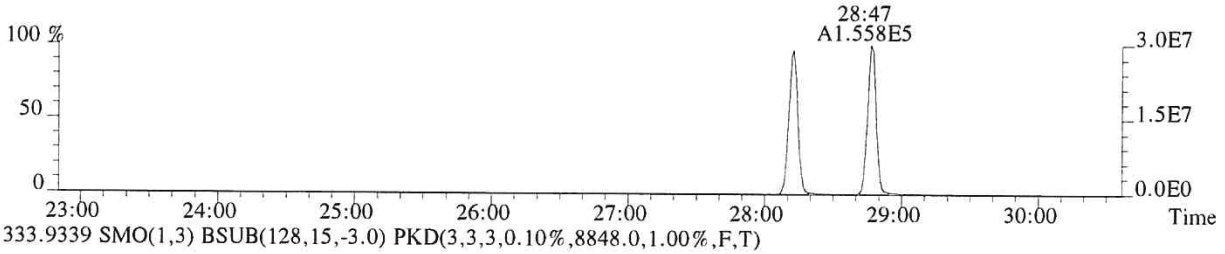
File:P614687 #1-552 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4516.0,1.00%,F,T)



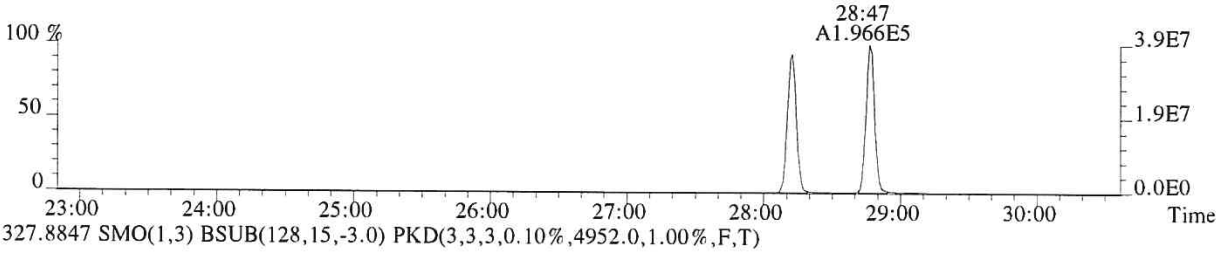
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2672.0,1.00%,F,T)



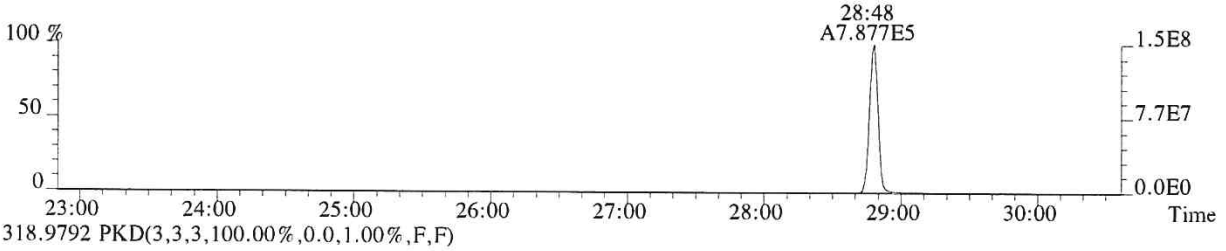
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,19124.0,1.00%,F,T)



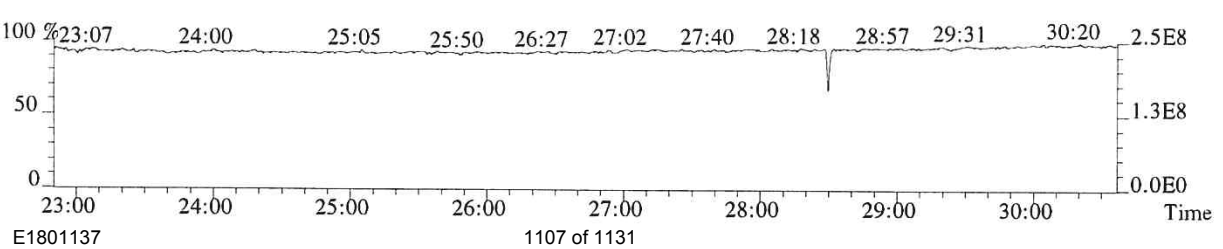
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8848.0,1.00%,F,T)



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

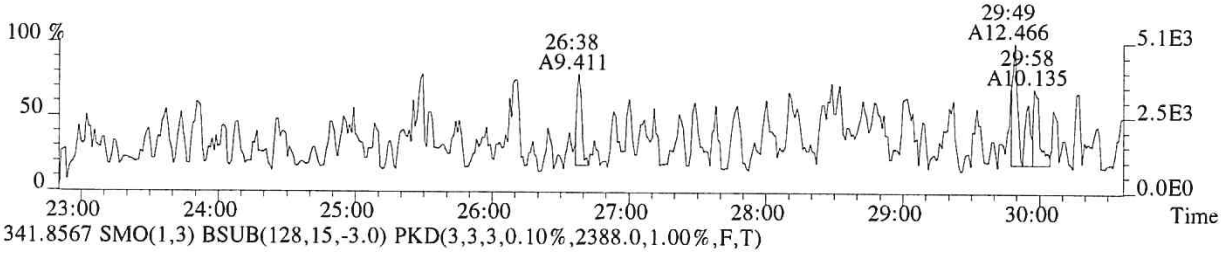


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

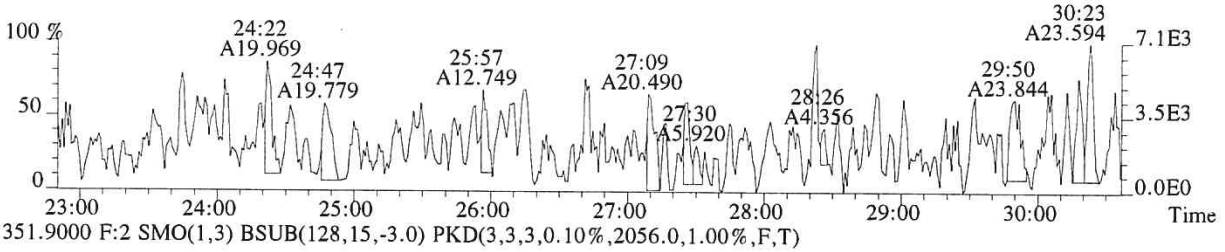


016857

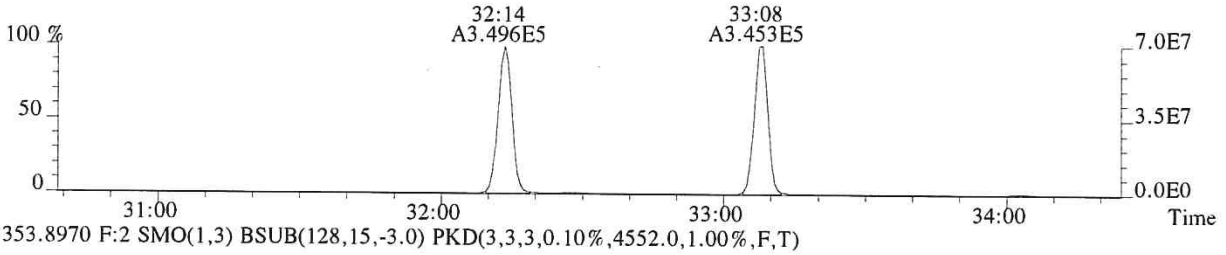
File:P614687 #1-552 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1884.0,1.00%,F,T)



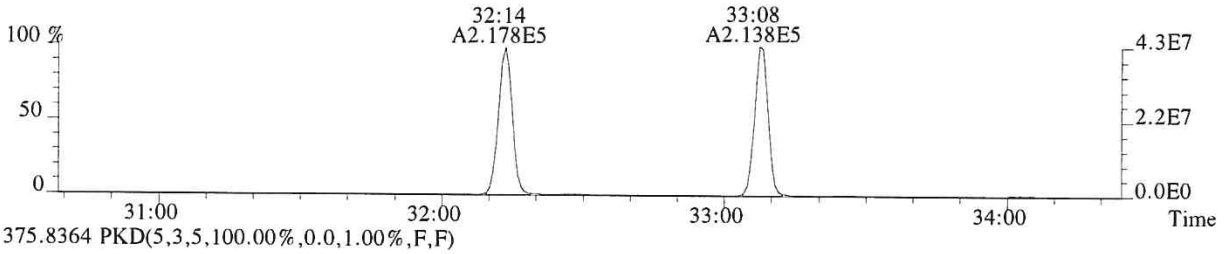
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2388.0,1.00%,F,T)



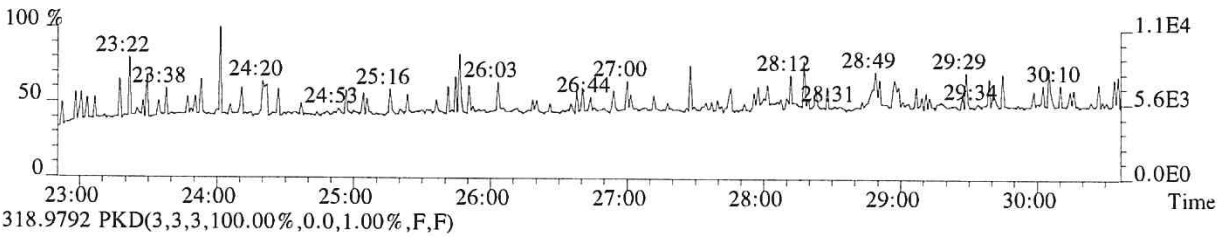
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2056.0,1.00%,F,T)



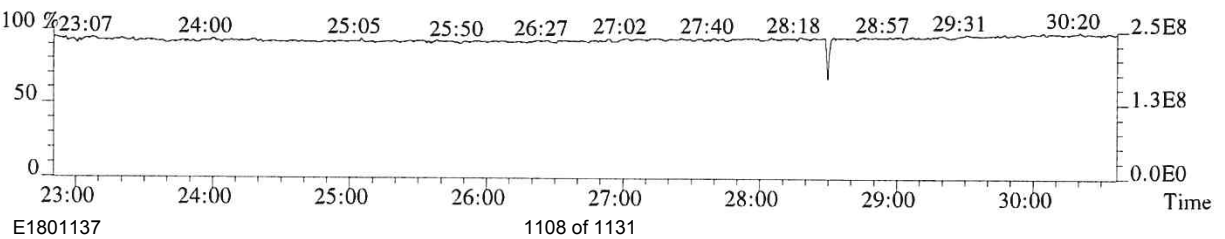
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4552.0,1.00%,F,T)



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



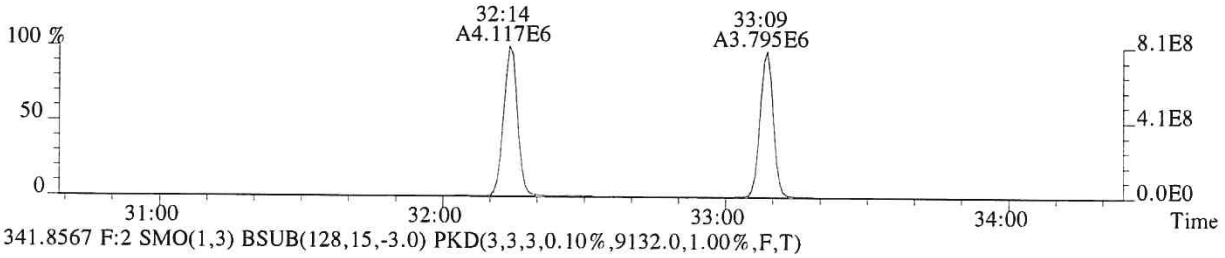
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



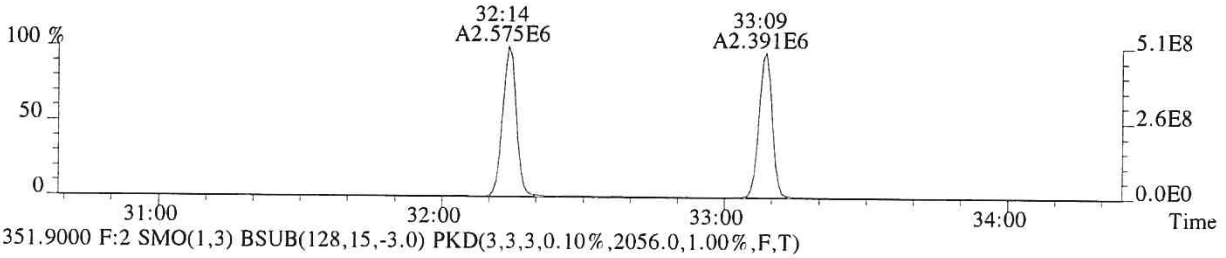
016858

File:P614687 #1-339 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5

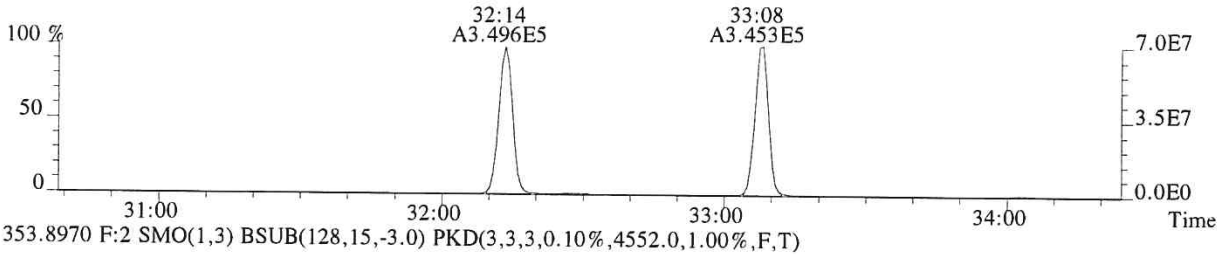
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8456.0,1.00%,F,T)



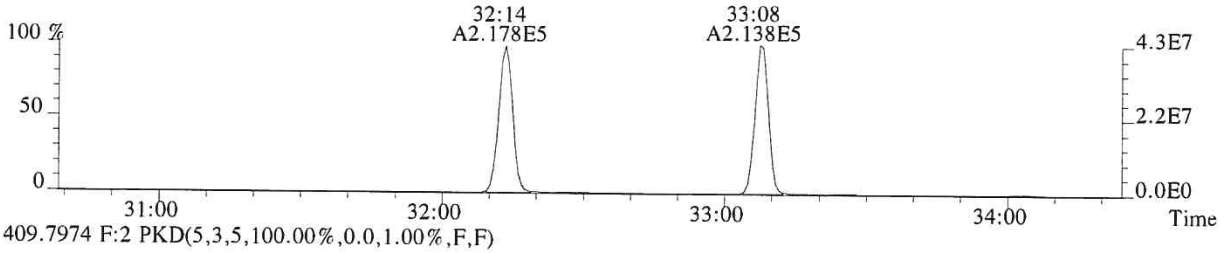
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9132.0,1.00%,F,T)



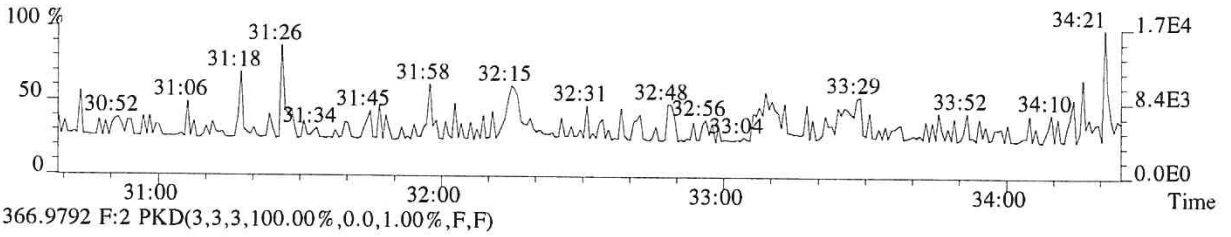
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2056.0,1.00%,F,T)



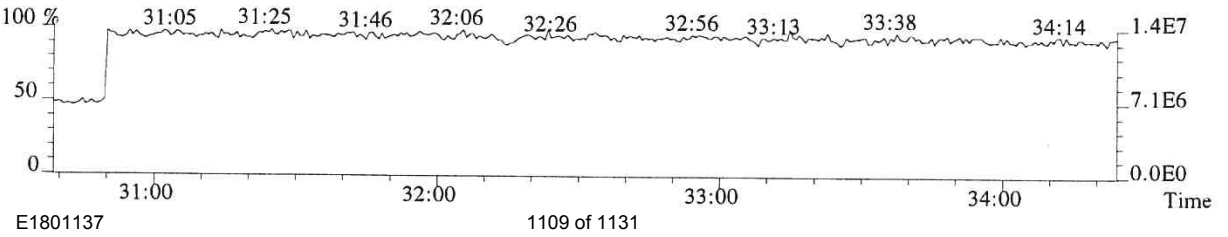
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4552.0,1.00%,F,T)



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

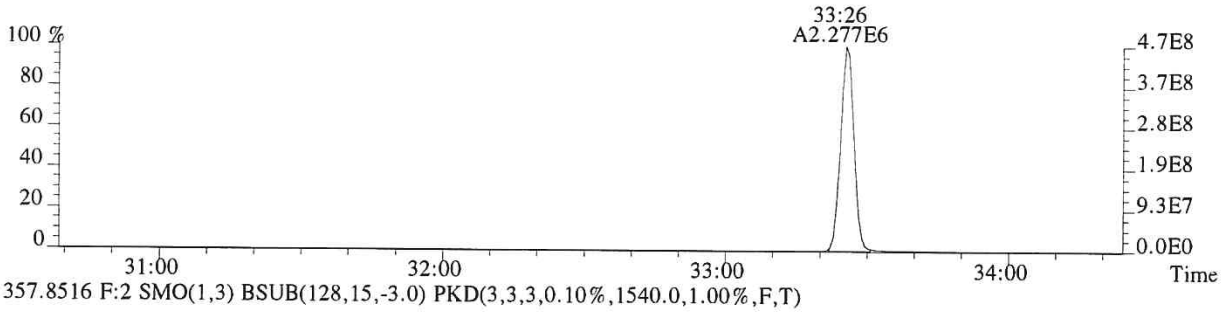


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

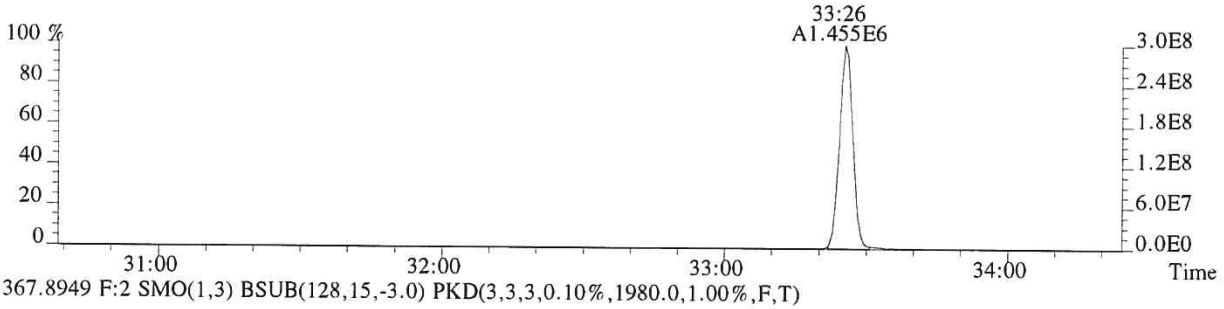


016859

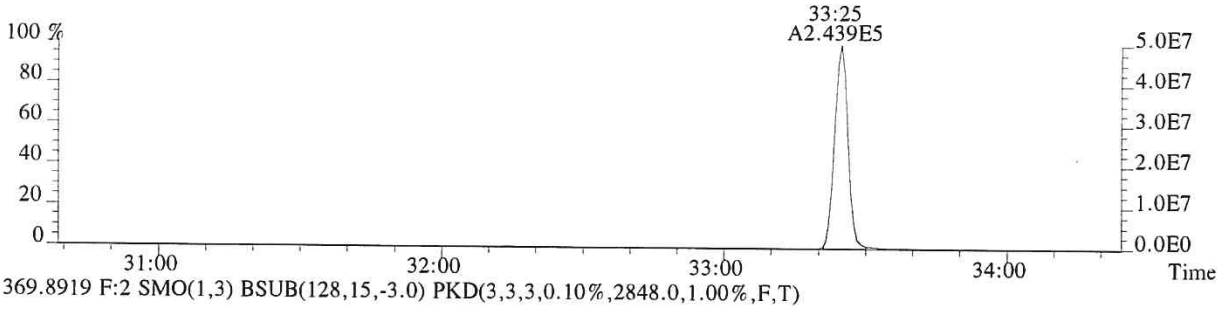
File:P614687 #1-339 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3264.0,1.00%,F,T)



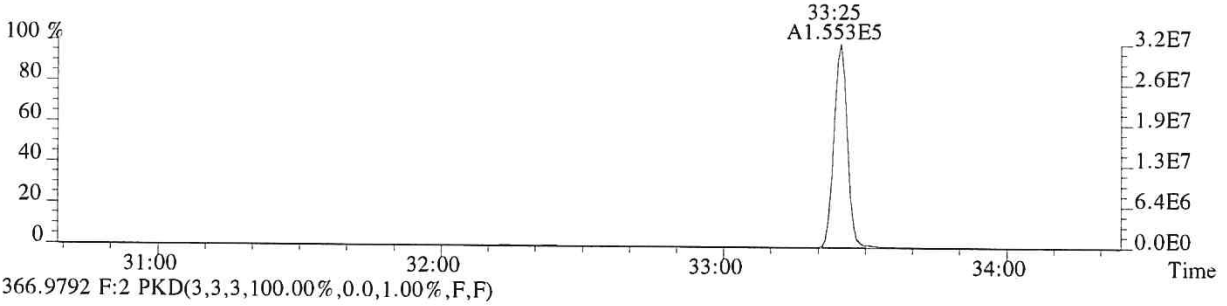
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1540.0,1.00%,F,T)



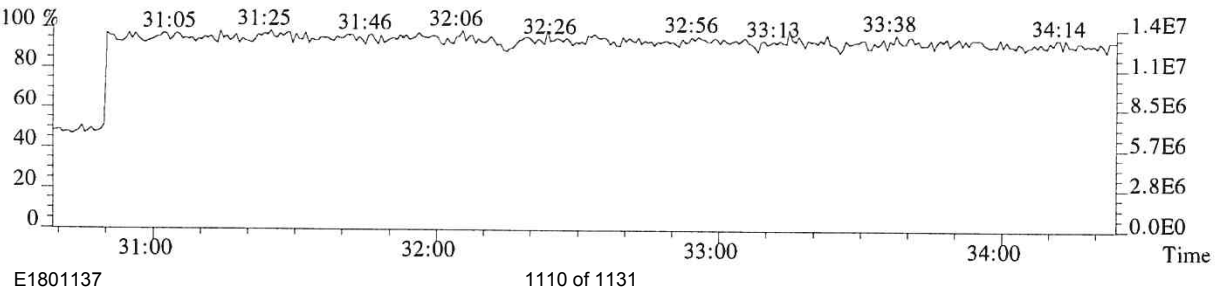
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1980.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2848.0,1.00%,F,T)

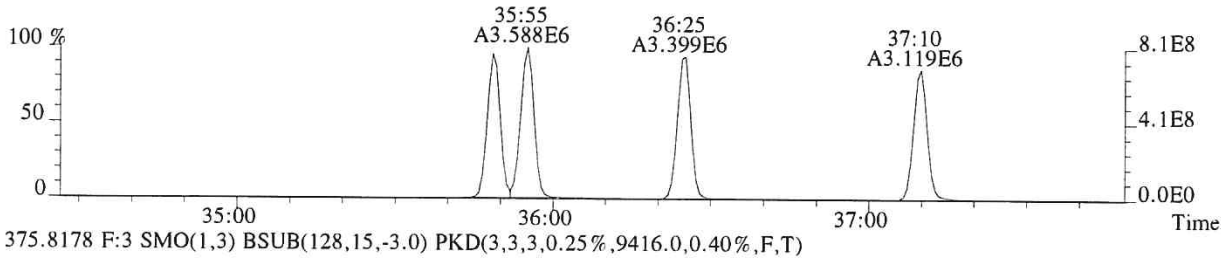


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

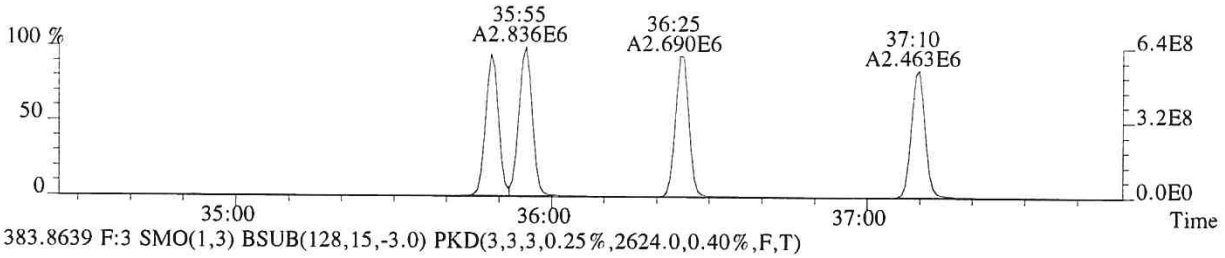


016860

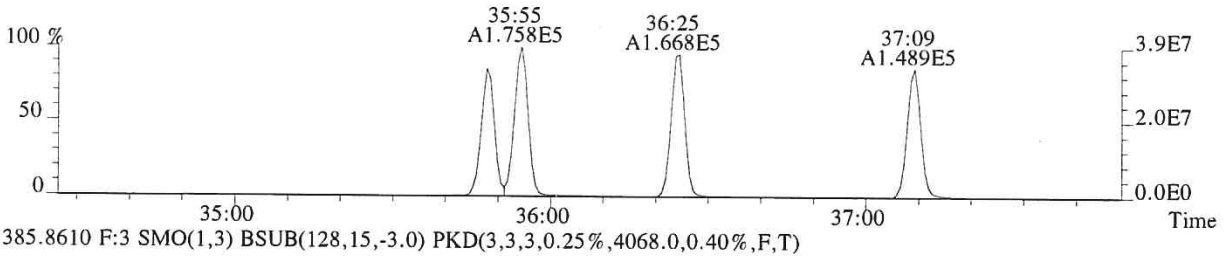
File:P614687 #1-304 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,12332.0,0.40%,F,T)



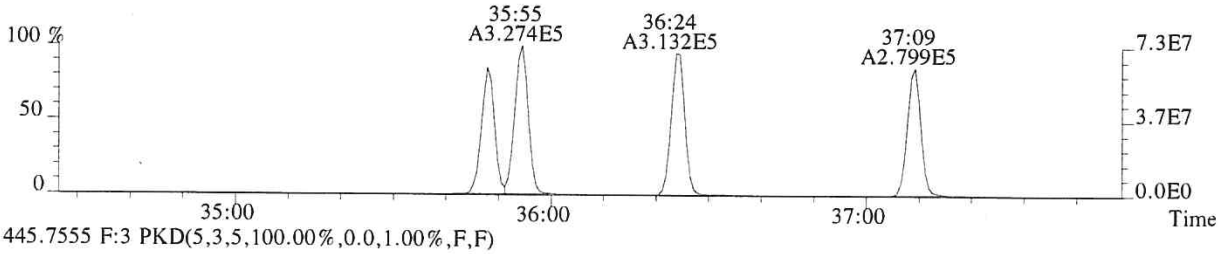
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,9416.0,0.40%,F,T)



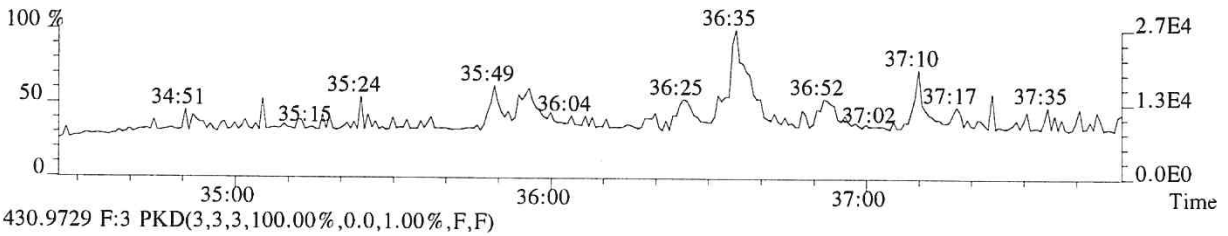
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2624.0,0.40%,F,T)



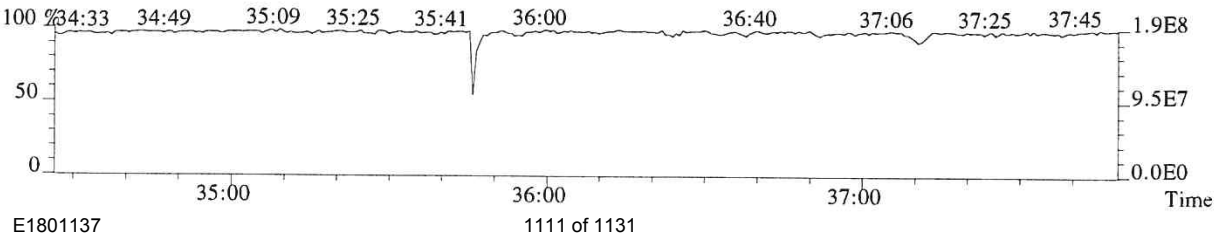
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4068.0,0.40%,F,T)



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

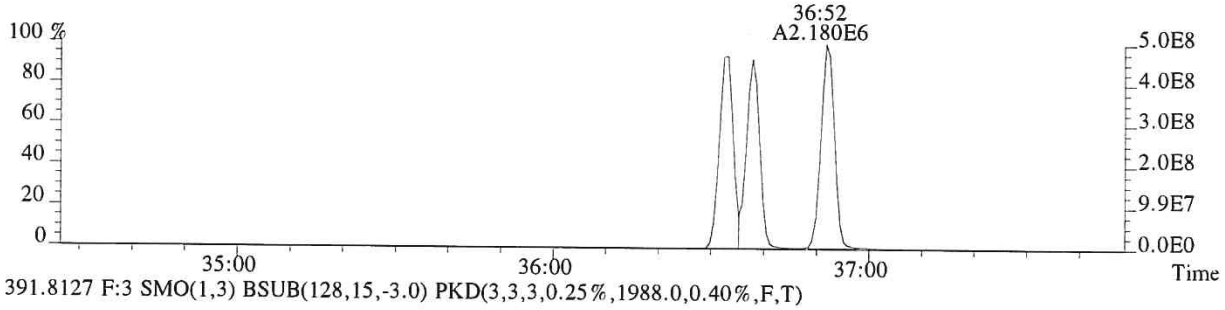


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

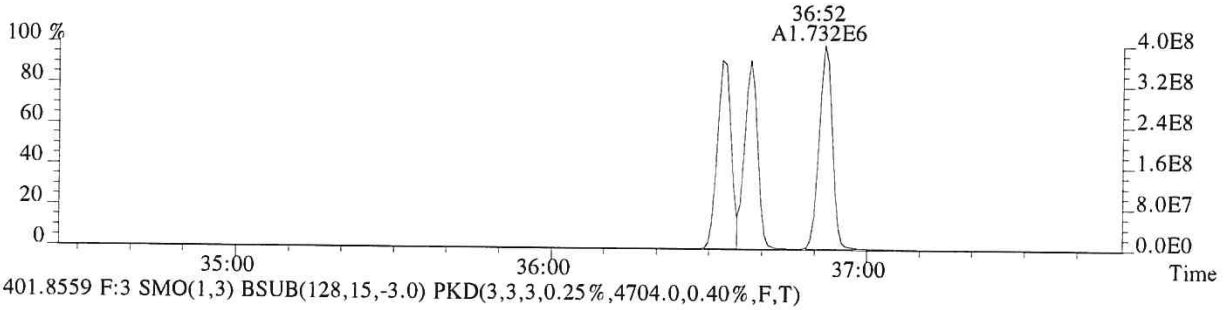


016861

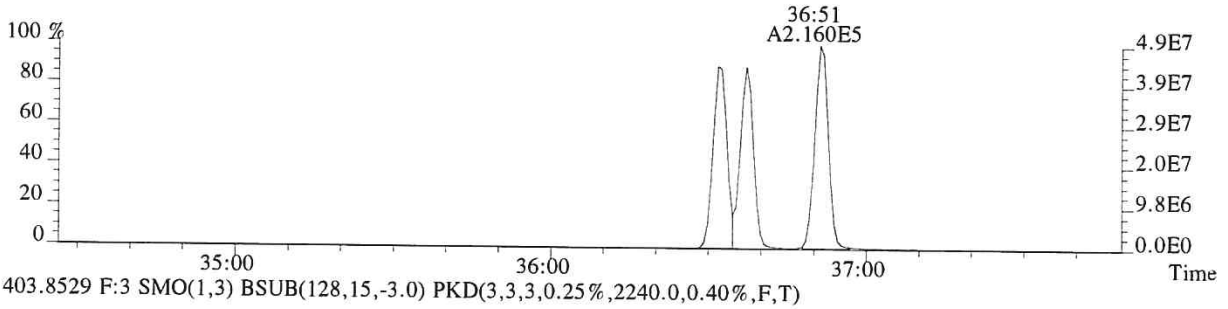
File:P614687 #1-304 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2336.0,0.40%,F,T)



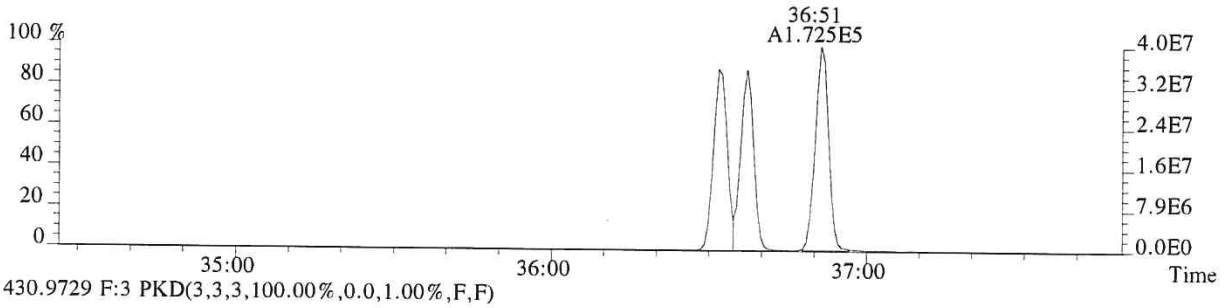
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1988.0,0.40%,F,T)



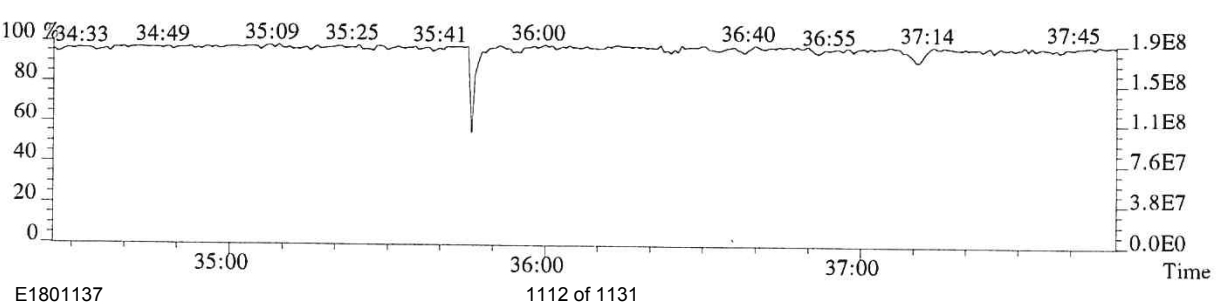
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4704.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2240.0,0.40%,F,T)

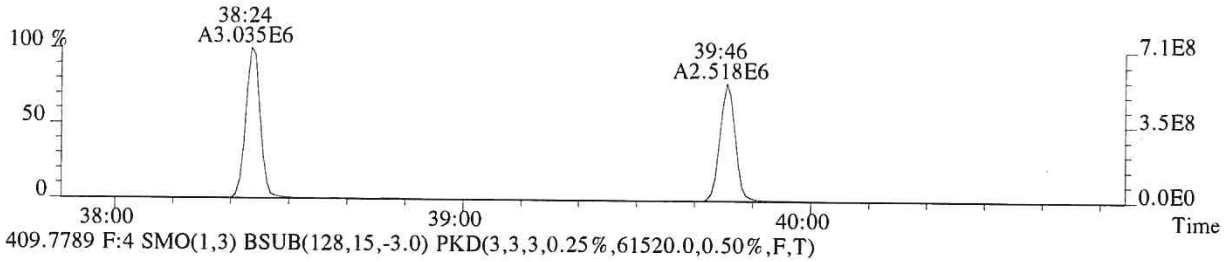


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

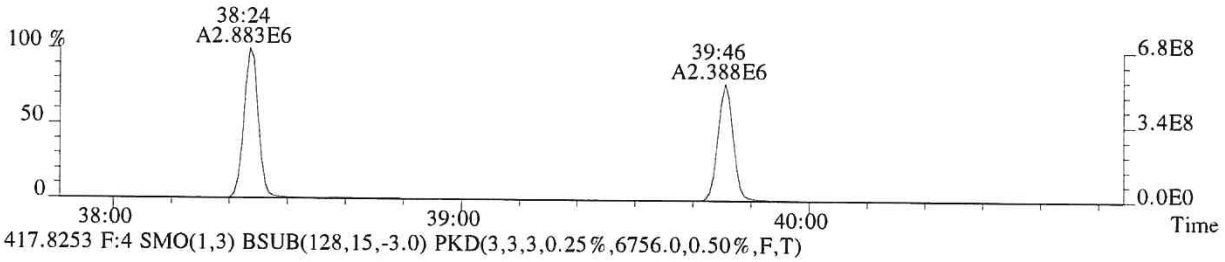


016862

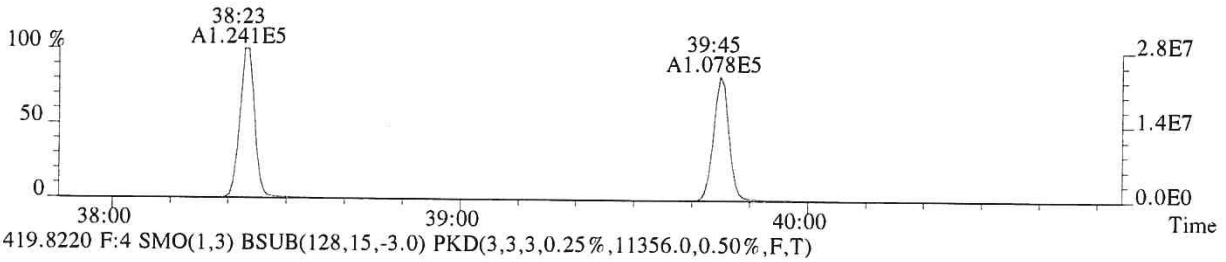
File:P614687 #1-276 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,96804.0,0.50%,F,T)



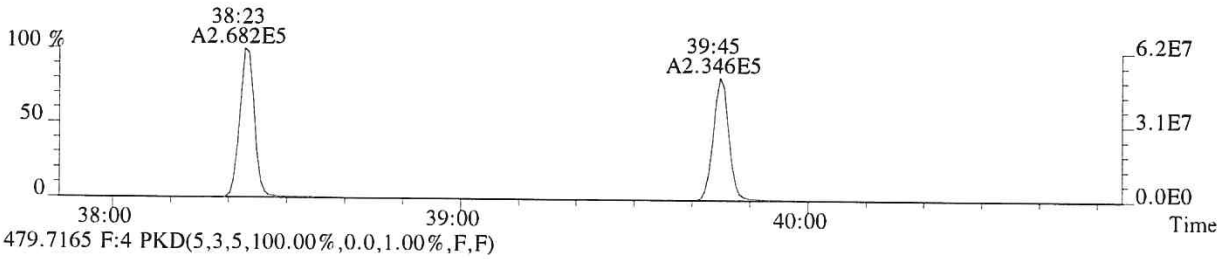
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,61520.0,0.50%,F,T)



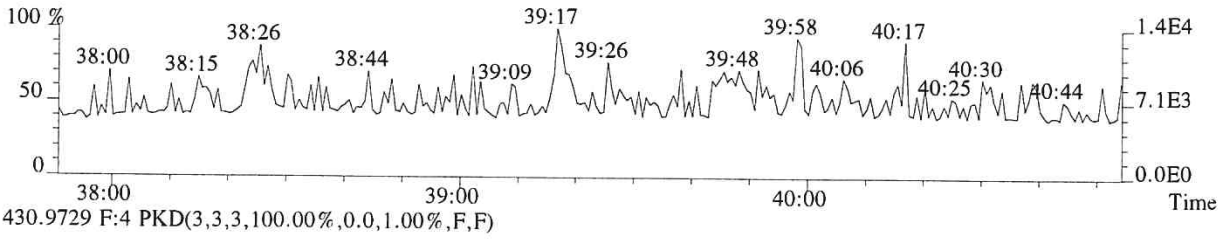
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6756.0,0.50%,F,T)



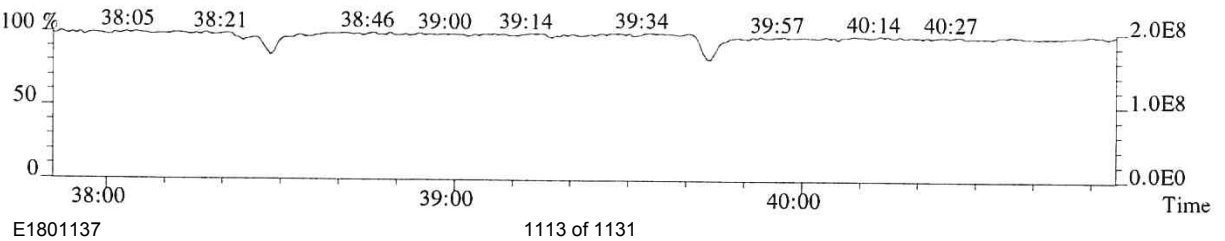
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11356.0,0.50%,F,T)



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

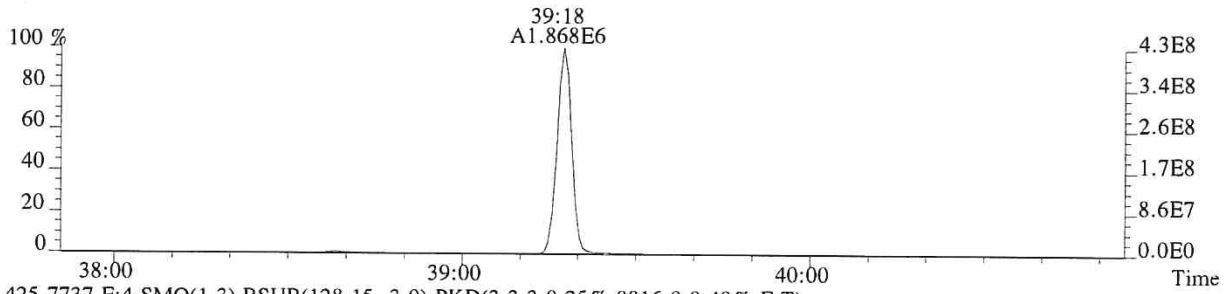


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

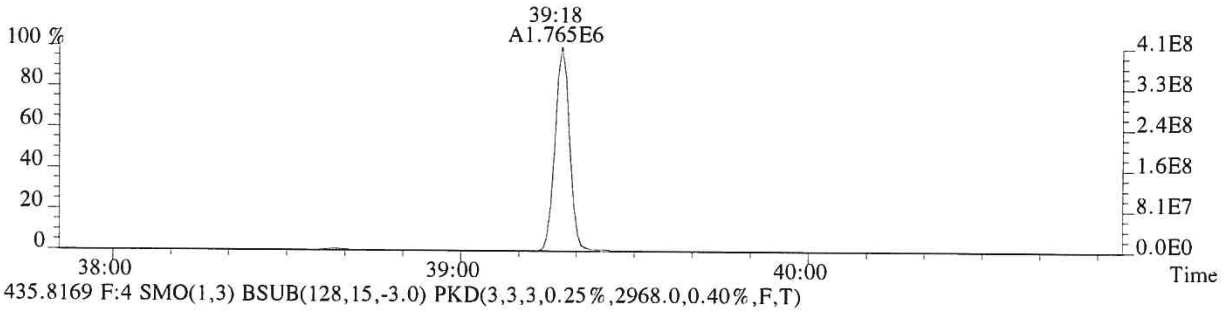


016863

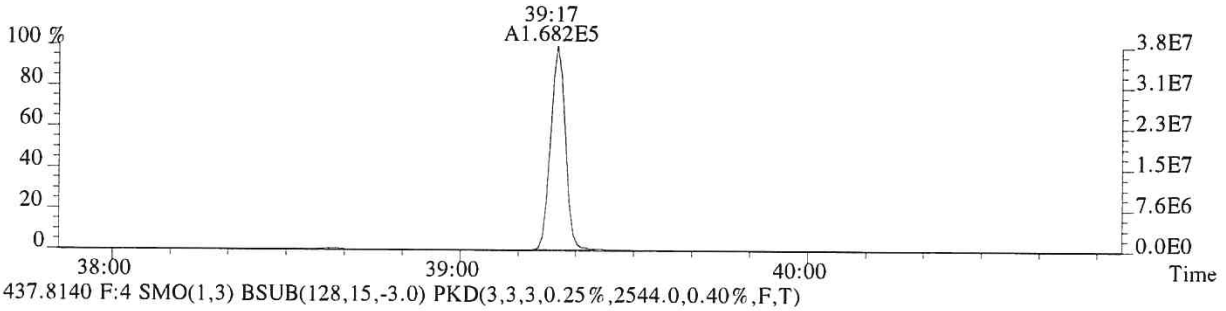
File:P614687 #1-276 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11044.0,0.40%,F,T)



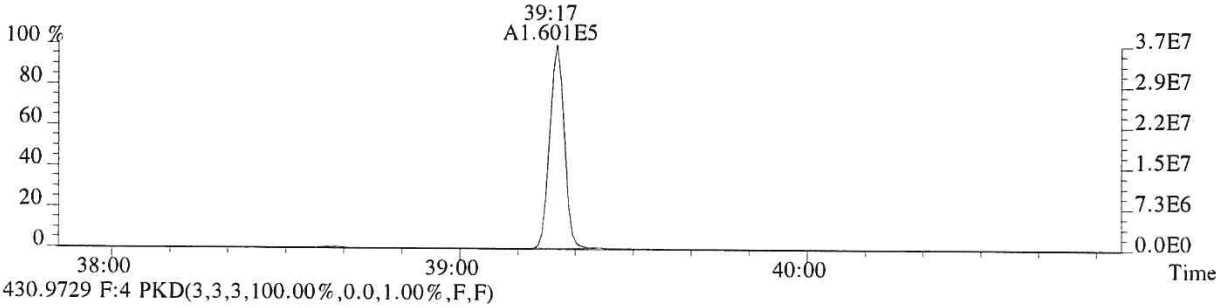
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8816.0,0.40%,F,T)



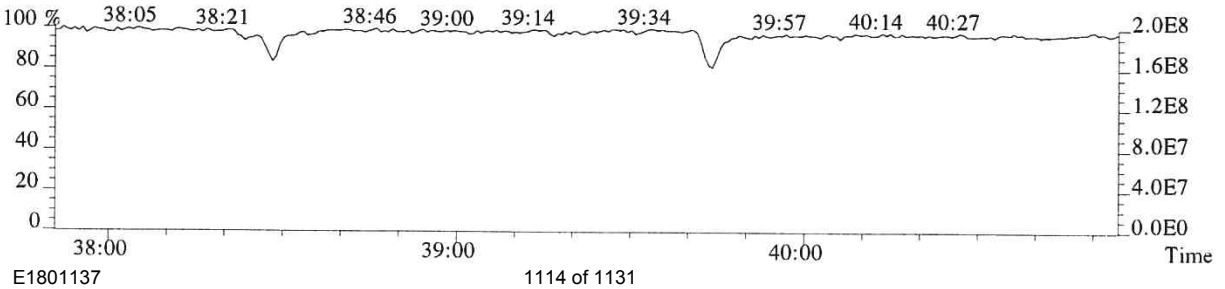
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2968.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2544.0,0.40%,F,T)

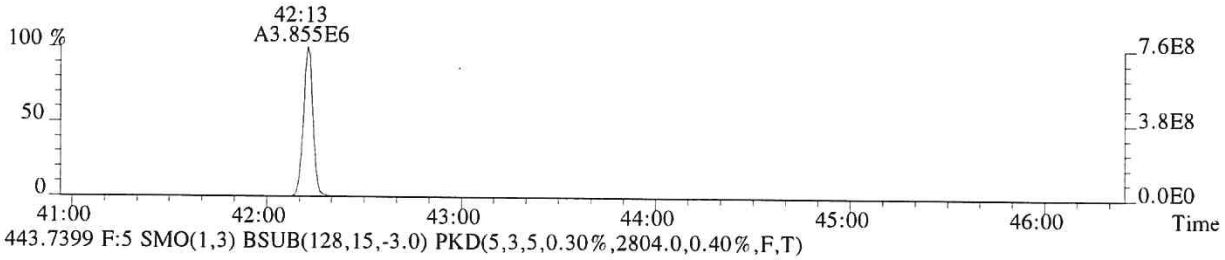


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

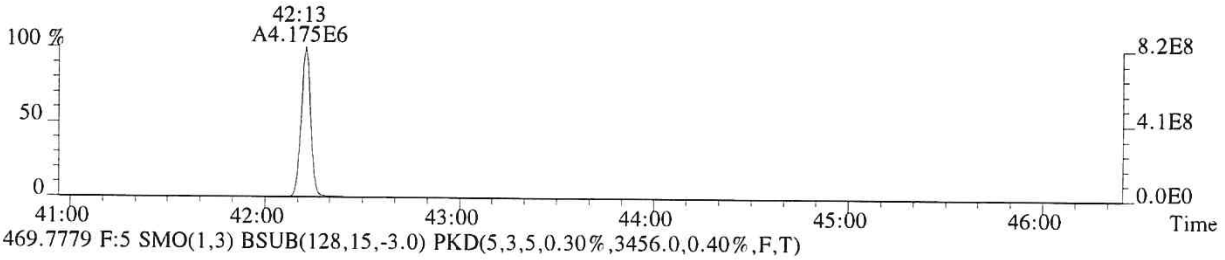


016864

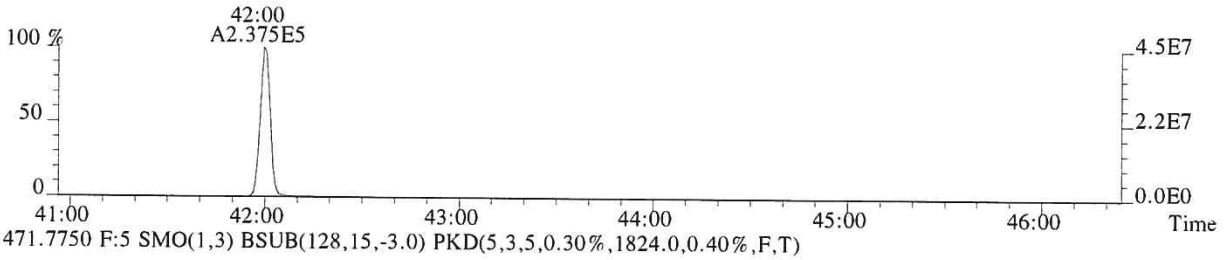
File:P614687 #1-493 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1428.0,0.40%,F,T)



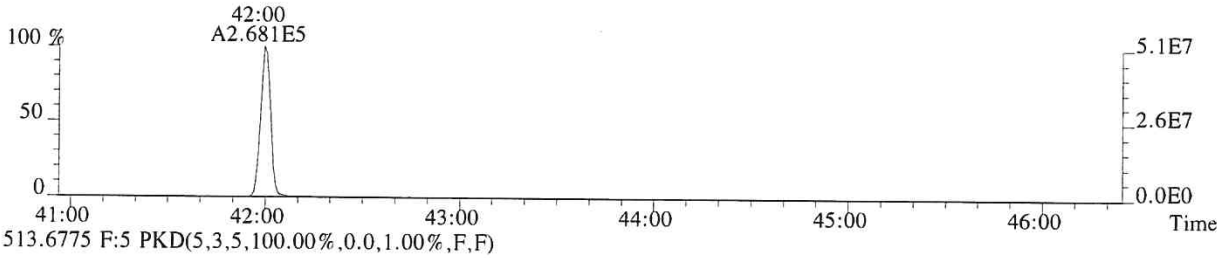
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2804.0,0.40%,F,T)



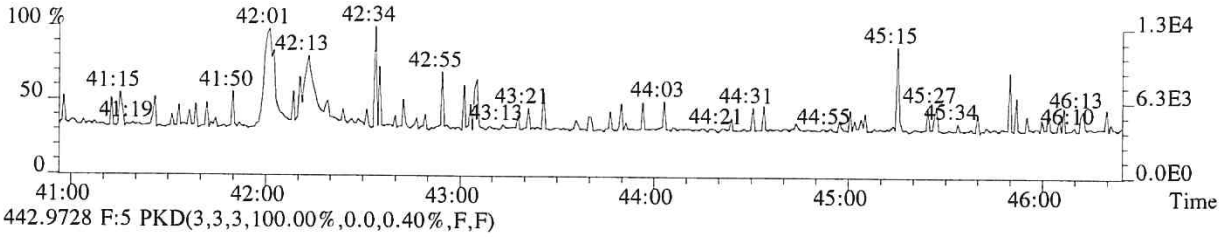
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3456.0,0.40%,F,T)



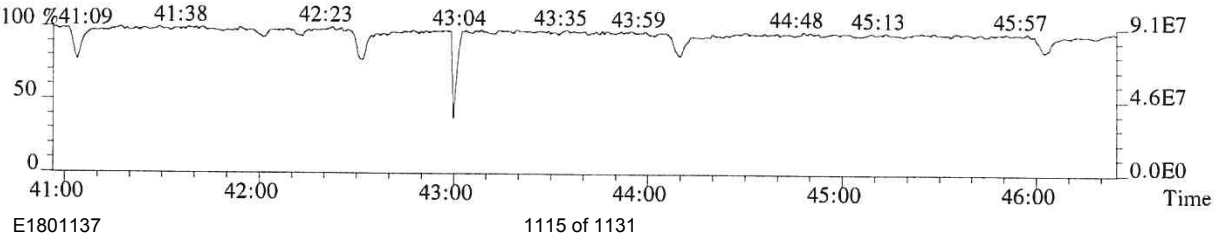
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1824.0,0.40%,F,T)



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

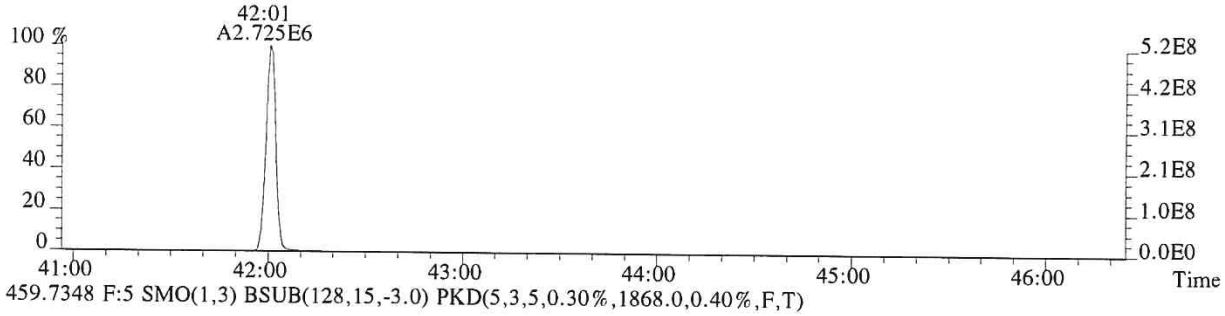


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

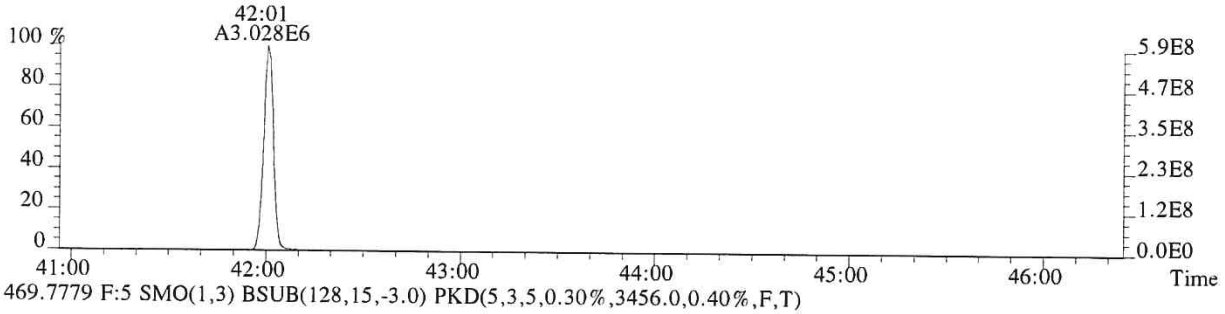


016865

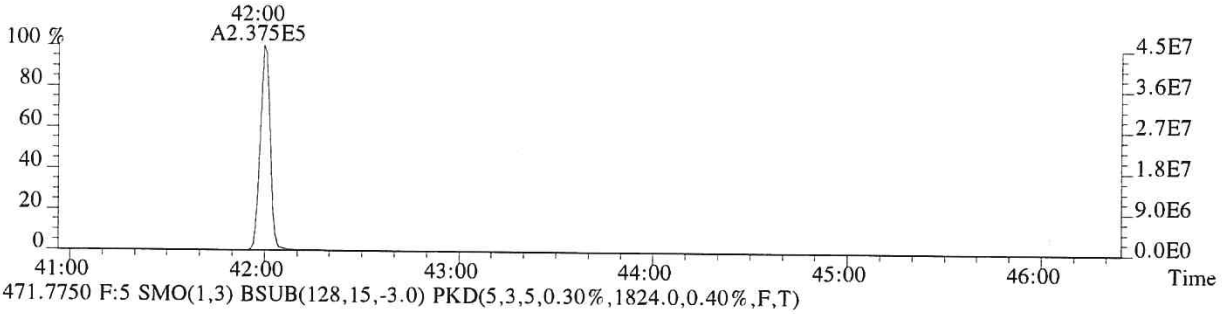
File:P614687 #1-493 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spectℓ
Sample#1 Exp:CS5
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,960.0,0.40%,F,T)



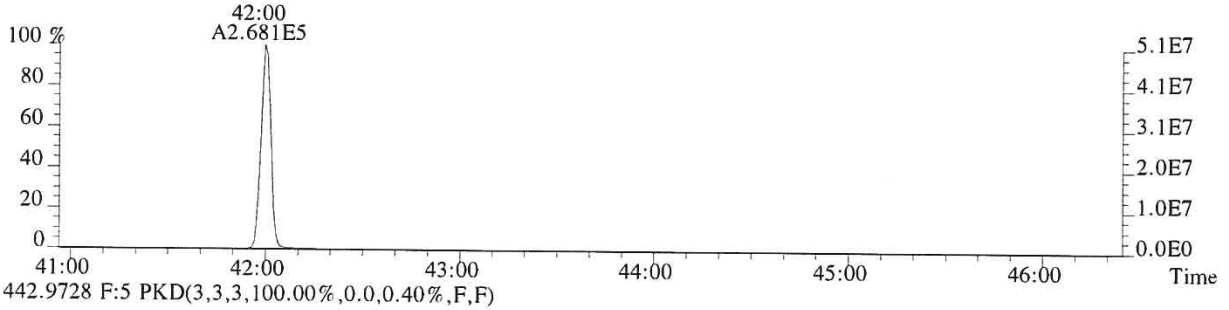
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1868.0,0.40%,F,T)



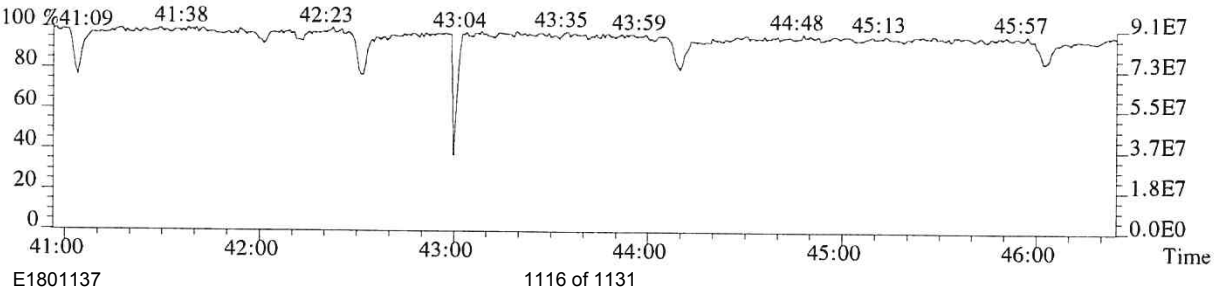
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3456.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1824.0,0.40%,F,T)



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



016866

USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

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

VER Data Filename: P614690 Analysis Date: 25-SEP-18 Time: 20:57:19

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	9.7	7.8 - 12.9	-2.5
1,2,3,7,8-PeCDD	M+2/M+4	1.57	1.32-1.78	49	39 - 65	-2.2
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	49	39 - 64	-2.2
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	50	39 - 64	-0.1
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	49	41 - 61	-1.9
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	50	43 - 58	-0.9
OCDD	M+2/M+4	0.91	0.76-1.02	98	79 - 126	-2.1
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	9.7	8.4 - 12.0	-2.7
1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	49	41 - 60	-1.1
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	49	41 - 61	-1.4
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	49	45 - 56	-2.6
1,2,3,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	49	44 - 57	-2.3
1,2,3,7,8,9-HxCDF	M+2/M+4	1.28	1.05-1.43	50	45 - 56	0.3
2,3,4,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	50	44 - 57	-0.4
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	50	45 - 55	-0.6
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.02	0.88-1.20	48	43 - 58	-3.5
OCDF	M+2/M+4	0.93	0.76-1.02	100	63 - 159	-0.4

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

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

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

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

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

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

VER Data Filename: P614690 Analysis Date: 25-SEP-18 Time: 20:57:19

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	99	82 - 121	-0.7
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.56	1.32-1.78	97	62 - 160	-2.6
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	102	85 - 117	1.5
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	100	85 - 118	-0.2
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	105	72 - 138	5.2
13C-OCDD	M+2/M+4	0.89	0.76-1.02	224	96 - 415	11.9
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	99	71 - 140	-0.7
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	98	76 - 130	-2.1
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	96	77 - 130	-3.8
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	102	76 - 131	2.1
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	101	70 - 143	0.6
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	100	74 - 135	0.4
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	100	73 - 137	0.2
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	103	78 - 129	2.7
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	109	77 - 129	9.0
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				9.9	7.8 - 12.7	-1.0

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

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
188969

Run #7 Filename P614690 Samp: 1 Inj: 1 Acquired: 25-SEP-18 20:57:19
Processed: 26-SEP-18 08:08:37 Sample ID: 2ND SOURCE

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:00	1.742e+04	2.239e+04	0.78	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:14	1.470e+05	9.342e+04	1.57	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:09	1.362e+05	8.490e+04	1.60	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	1.308e+05	1.044e+05	1.25	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	1.371e+05	1.074e+05	1.28	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	1.285e+05	1.018e+05	1.26	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:09	1.211e+05	9.459e+04	1.28	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	1.180e+05	1.126e+05	1.05	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	1.018e+05	9.931e+04	1.02	yes	no	1.463
10	Unk	OCDF	42:12	1.605e+05	1.721e+05	0.93	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	1.193e+04	1.490e+04	0.80	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	8.164e+04	5.215e+04	1.57	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	7.752e+04	6.082e+04	1.27	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	7.678e+04	6.066e+04	1.27	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:52	8.213e+04	6.494e+04	1.26	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	7.382e+04	6.944e+04	1.06	yes	no	1.112
17	Unk	OCDD	42:01	1.146e+05	1.261e+05	0.91	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	1.682e+05	2.104e+05	0.80	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	2.590e+05	1.613e+05	1.61	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	2.497e+05	1.565e+05	1.60	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:48	1.202e+05	2.212e+05	0.54	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:54	1.342e+05	2.529e+05	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:24	1.258e+05	2.350e+05	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	1.132e+05	2.142e+05	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:23	9.579e+04	2.089e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:45	8.964e+04	1.952e+05	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	1.166e+05	1.457e+05	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	1.797e+05	1.149e+05	1.56	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:32	1.476e+05	1.165e+05	1.27	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	1.453e+05	1.145e+05	1.27	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	1.336e+05	1.263e+05	1.06	yes	no	0.857
32	IS	13C-OCDD	42:00	2.007e+05	2.242e+05	0.89	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:13	1.202e+05	1.487e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:51	1.598e+05	1.284e+05	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	2.893e+04				no	1.086

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
188969

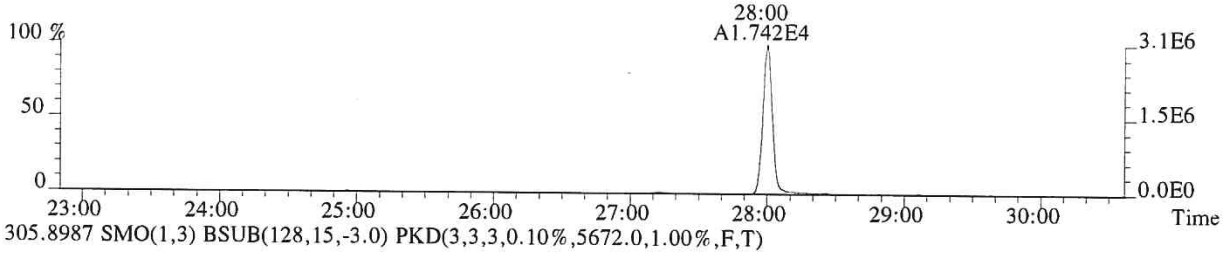
Run #7 Filename P614690 Samp: 1 Inj: 1 Acquired: 25-SEP-18 20:57:19
Processed: 26-SEP-18 08:08:37 LAB. ID: 2ND SOURCE

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	3.08e+06	2.16e+03	1.4e+03	3.95e+06	5.67e+03	7.0e+02
2	1,2,3,7,8-PeCDF	2.75e+07	1.50e+03	1.8e+04	1.74e+07	8.24e+03	2.1e+03
3	2,3,4,7,8-PeCDF	2.67e+07	1.50e+03	1.8e+04	1.67e+07	8.24e+03	2.0e+03
4	1,2,3,4,7,8-HxCDF	2.88e+07	2.35e+03	1.2e+04	2.29e+07	2.48e+03	9.3e+03
5	1,2,3,6,7,8-HxCDF	2.88e+07	2.35e+03	1.2e+04	2.30e+07	2.48e+03	9.3e+03
6	2,3,4,6,7,8-HxCDF	2.86e+07	2.35e+03	1.2e+04	2.28e+07	2.48e+03	9.2e+03
7	1,2,3,7,8,9-HxCDF	2.47e+07	2.35e+03	1.1e+04	1.95e+07	2.48e+03	7.9e+03
8	1,2,3,4,6,7,8-HpCDF	2.70e+07	4.46e+03	6.0e+03	2.58e+07	1.29e+04	2.0e+03
9	1,2,3,4,7,8,9-HpCDF	2.12e+07	4.46e+03	4.8e+03	2.03e+07	1.29e+04	1.6e+03
10	OCDF	3.01e+07	1.50e+03	2.0e+04	3.28e+07	3.09e+03	1.1e+04
11	2,3,7,8-TCDD	2.20e+06	4.04e+03	5.4e+02	2.73e+06	2.27e+03	1.2e+03
12	1,2,3,7,8-PeCDD	1.64e+07	3.14e+03	5.2e+03	1.06e+07	2.92e+02	3.6e+04
13	1,2,3,4,7,8-HxCDD	1.79e+07	1.59e+03	1.1e+04	1.41e+07	2.43e+03	5.8e+03
14	1,2,3,6,7,8-HxCDD	1.70e+07	1.59e+03	1.1e+04	1.34e+07	2.43e+03	5.5e+03
15	1,2,3,7,8,9-HxCDD	1.85e+07	1.59e+03	1.2e+04	1.48e+07	2.43e+03	6.1e+03
16	1,2,3,4,6,7,8-HpCDD	1.59e+07	2.28e+03	7.0e+03	1.49e+07	8.84e+02	1.7e+04
17	OCDD	2.16e+07	1.17e+03	1.8e+04	2.38e+07	1.31e+03	1.8e+04
18	13C-2,3,7,8-TCDF	2.88e+07	1.57e+04	1.8e+03	3.60e+07	9.18e+03	3.9e+03
19	13C-1,2,3,7,8-PeCDF	4.79e+07	4.01e+03	1.2e+04	3.00e+07	3.41e+03	8.8e+03
20	13C-2,3,4,7,8-PeCDF	4.95e+07	4.01e+03	1.2e+04	3.12e+07	3.41e+03	9.1e+03
21	13C-1,2,3,4,7,8-HxCDF	2.65e+07	2.99e+03	8.9e+03	4.93e+07	3.83e+03	1.3e+04
22	13C-1,2,3,6,7,8-HxCDF	2.83e+07	2.99e+03	9.5e+03	5.32e+07	3.83e+03	1.4e+04
23	13C-2,3,4,6,7,8-HxCDF	2.80e+07	2.99e+03	9.4e+03	5.25e+07	3.83e+03	1.4e+04
24	13C-1,2,3,7,8,9-HxCDF	2.35e+07	2.99e+03	7.9e+03	4.43e+07	3.83e+03	1.2e+04
25	13C-1,2,3,4,6,7,8-HpCDF	2.19e+07	7.32e+03	3.0e+03	4.77e+07	1.38e+04	3.5e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.88e+07	7.32e+03	2.6e+03	4.06e+07	1.38e+04	2.9e+03
27	13C-2,3,7,8-TCDD	2.17e+07	2.56e+04	8.4e+02	2.71e+07	6.97e+03	3.9e+03
28	13C-1,2,3,7,8-PeCDD	3.57e+07	3.26e+03	1.1e+04	2.28e+07	2.28e+03	1.0e+04
29	13C-1,2,3,4,7,8-HxCDD	3.37e+07	5.66e+03	6.0e+03	2.64e+07	3.42e+03	7.7e+03
30	13C-1,2,3,6,7,8-HxCDD	3.18e+07	5.66e+03	5.6e+03	2.51e+07	3.42e+03	7.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.85e+07	3.13e+03	9.1e+03	2.68e+07	1.88e+03	1.4e+04
32	13C-OCDD	3.77e+07	2.72e+03	1.4e+04	4.17e+07	9.60e+02	4.3e+04
33	13C-1,2,3,4-TCDD	2.21e+07	2.56e+04	8.6e+02	2.72e+07	6.97e+03	3.9e+03
34	13C-1,2,3,7,8,9-HxCDD	3.62e+07	5.66e+03	6.4e+03	2.92e+07	3.42e+03	8.5e+03
35	37Cl-2,3,7,8-TCDD	5.28e+06	4.24e+03	1.2e+03			

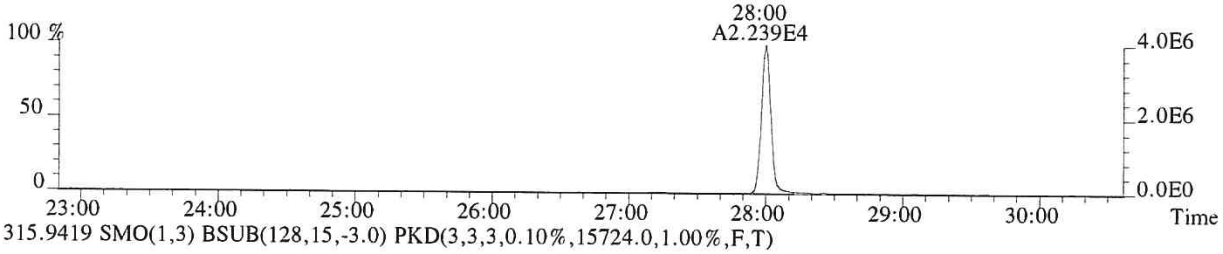
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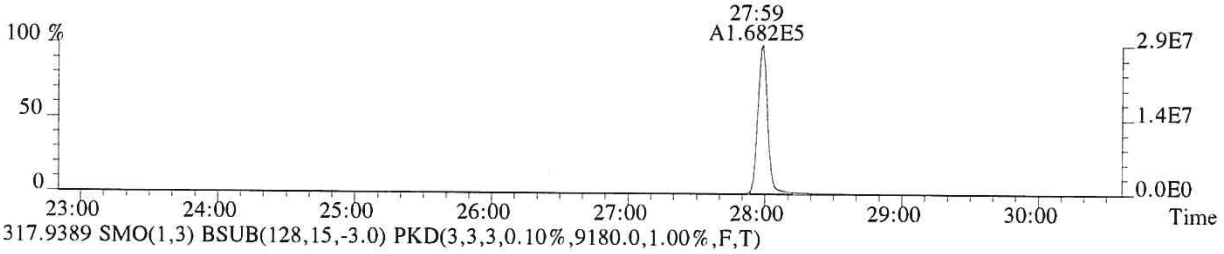
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Sample#1 Exp:2ND SOURCE
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2160.0,1.00%,F,T)



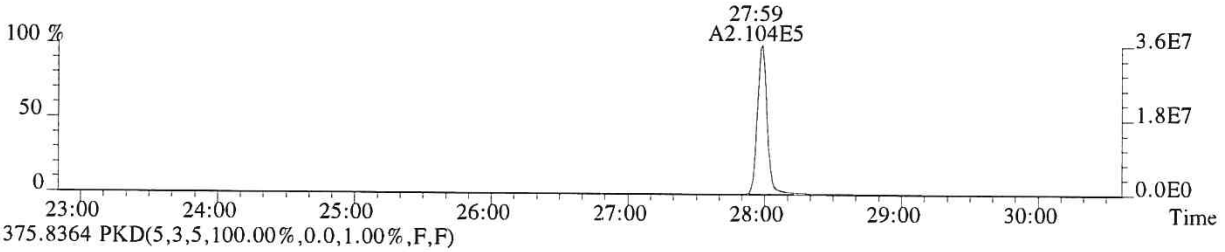
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5672.0,1.00%,F,T)



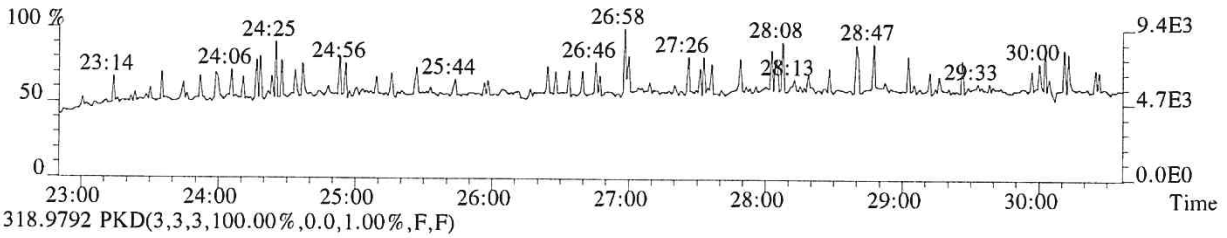
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15724.0,1.00%,F,T)



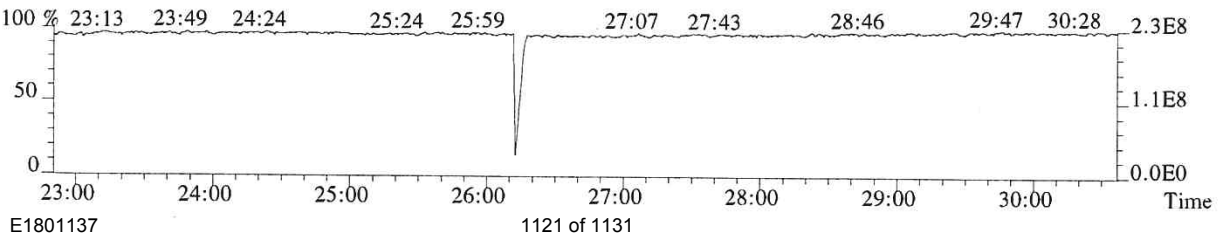
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9180.0,1.00%,F,T)



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

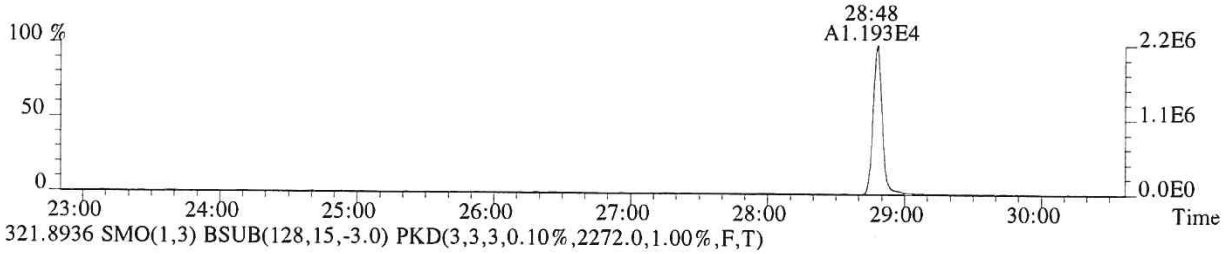


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

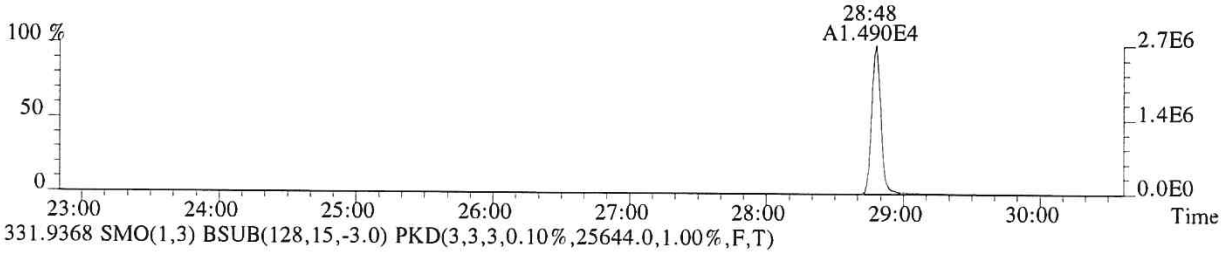


016871

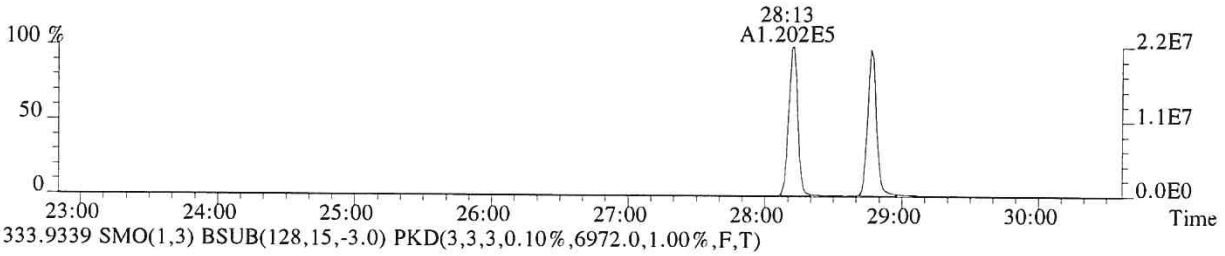
File:P614690 #1-552 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4040.0,1.00%,F,T)



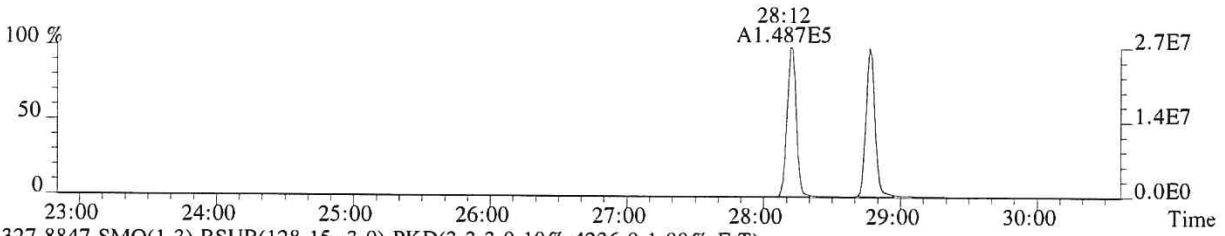
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2272.0,1.00%,F,T)



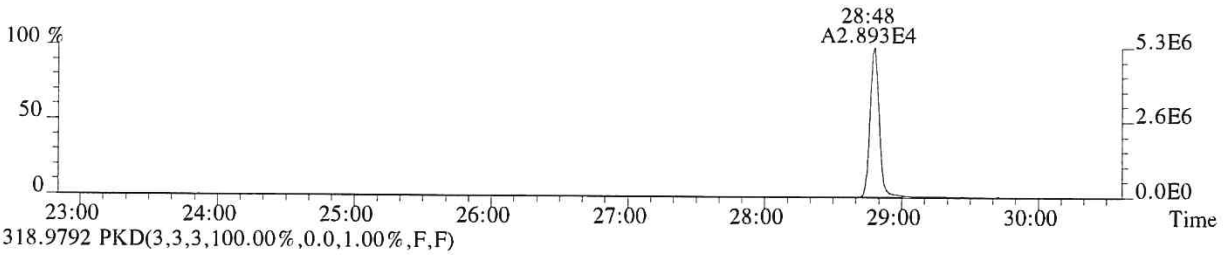
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,25644.0,1.00%,F,T)



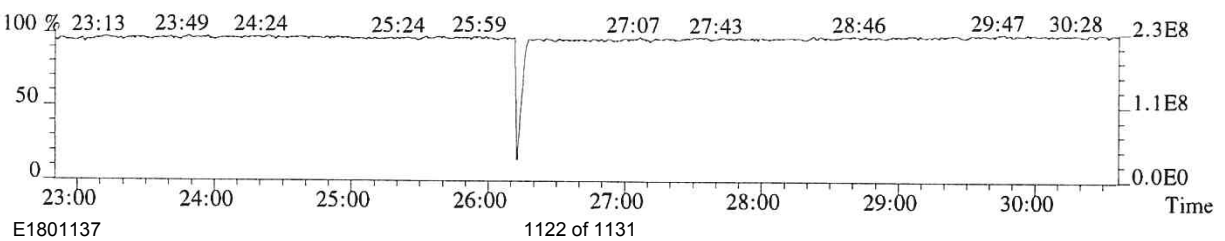
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6972.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4236.0,1.00%,F,T)

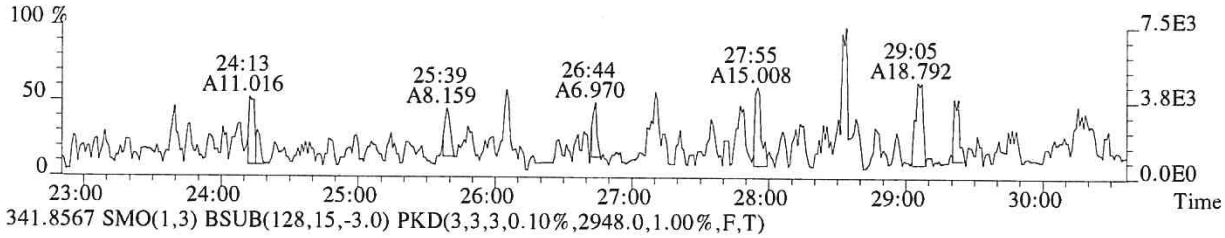


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

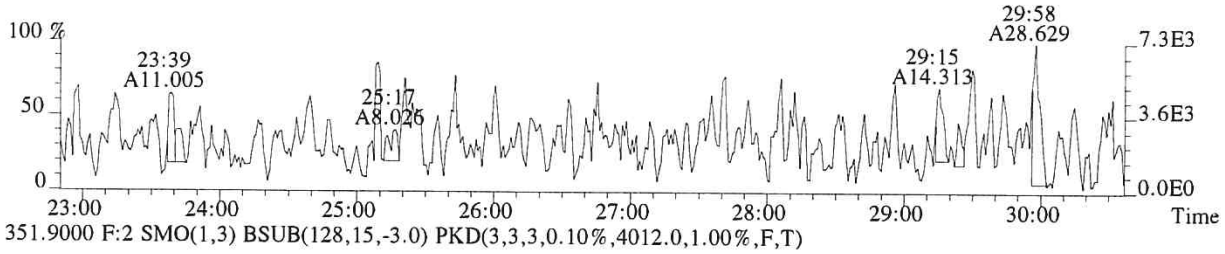


016872

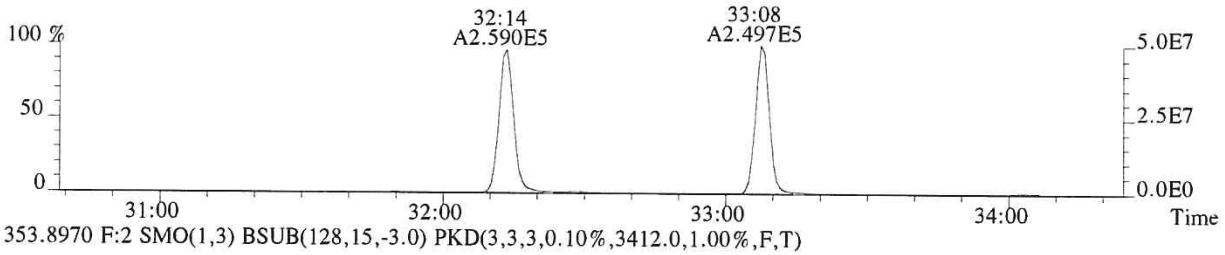
File:P614690 #1-552 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spectℓ
Sample#1 Exp:2ND SOURCE
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1588.0,1.00%,F,T)



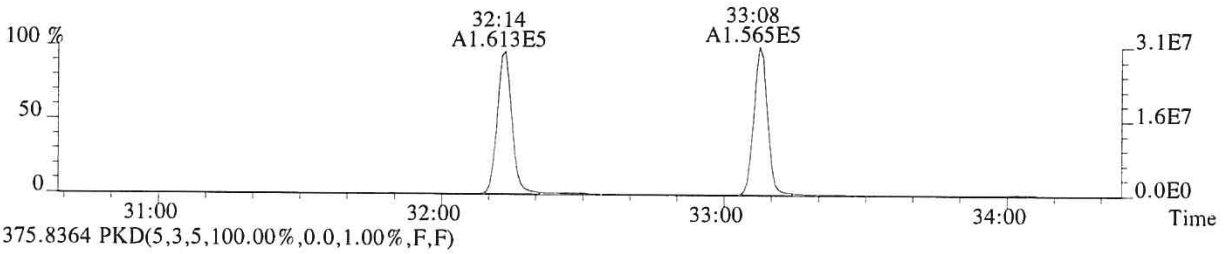
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2948.0,1.00%,F,T)



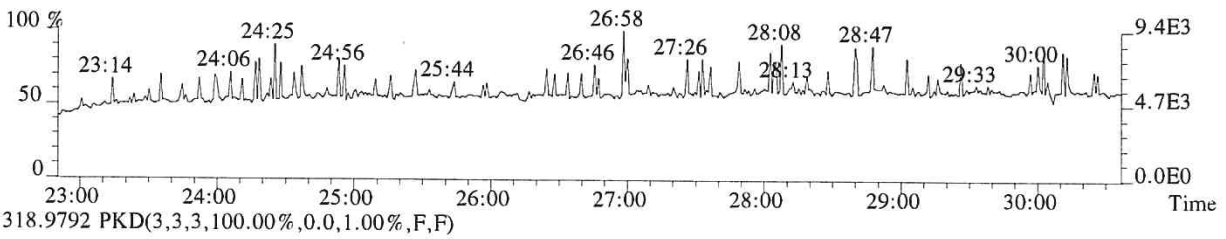
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4012.0,1.00%,F,T)



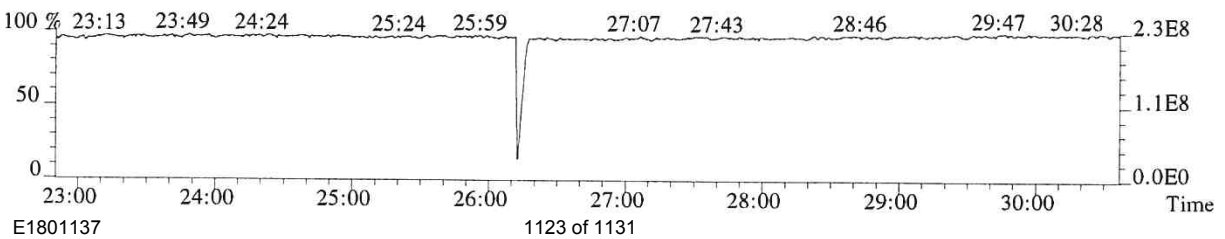
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3412.0,1.00%,F,T)



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

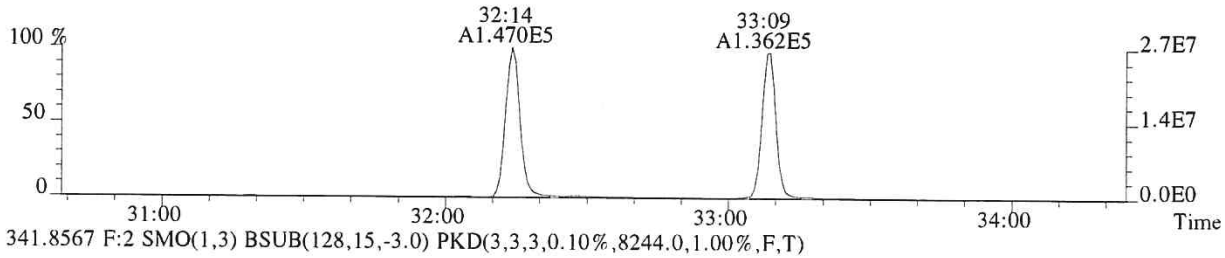


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

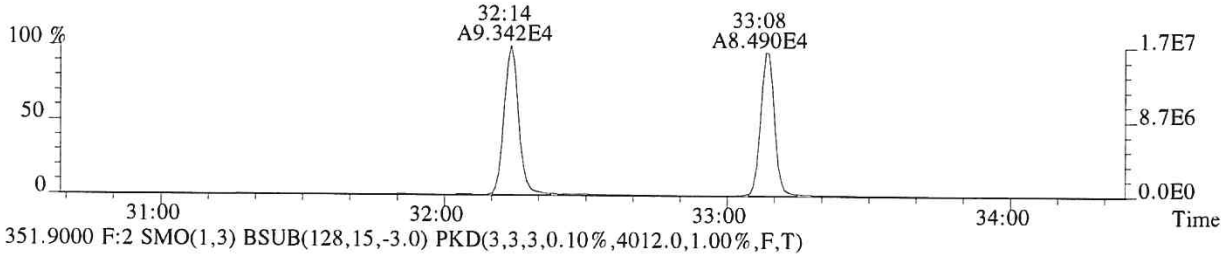


016873

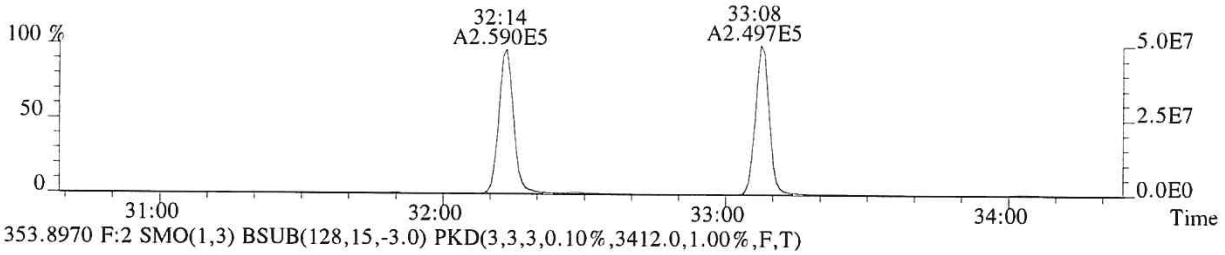
File:P614690 #1-339 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1504.0,1.00%,F,T)



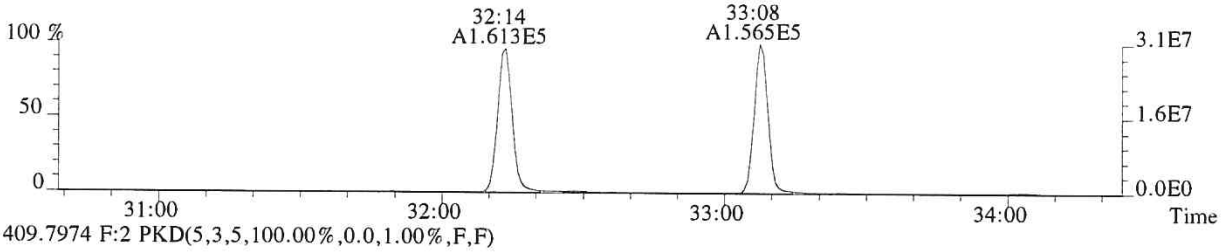
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8244.0,1.00%,F,T)



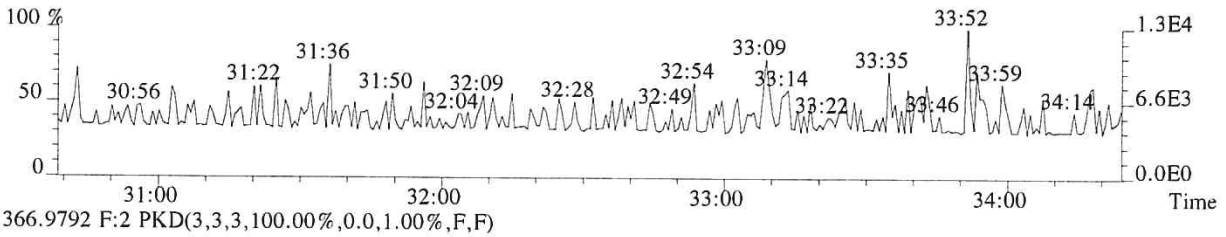
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4012.0,1.00%,F,T)



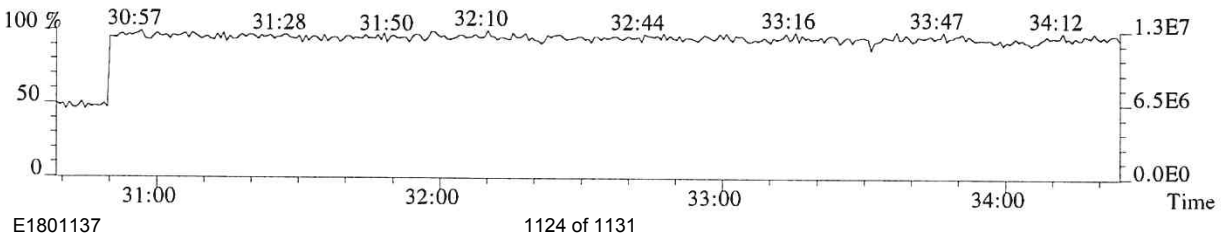
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3412.0,1.00%,F,T)



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

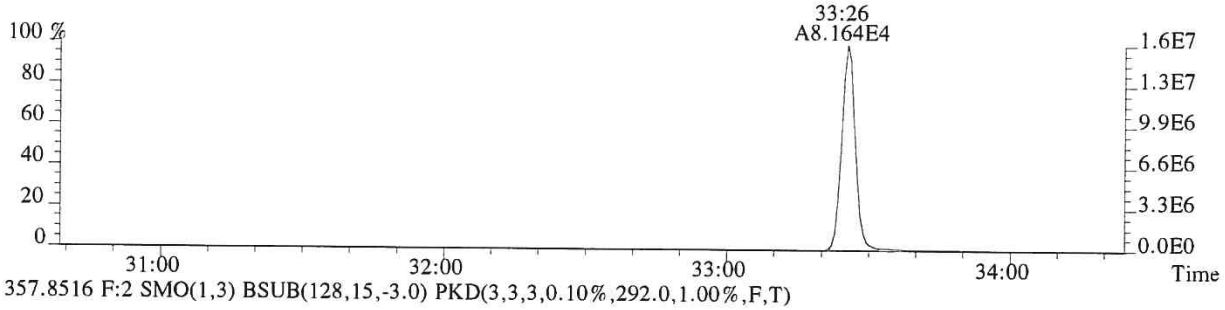


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

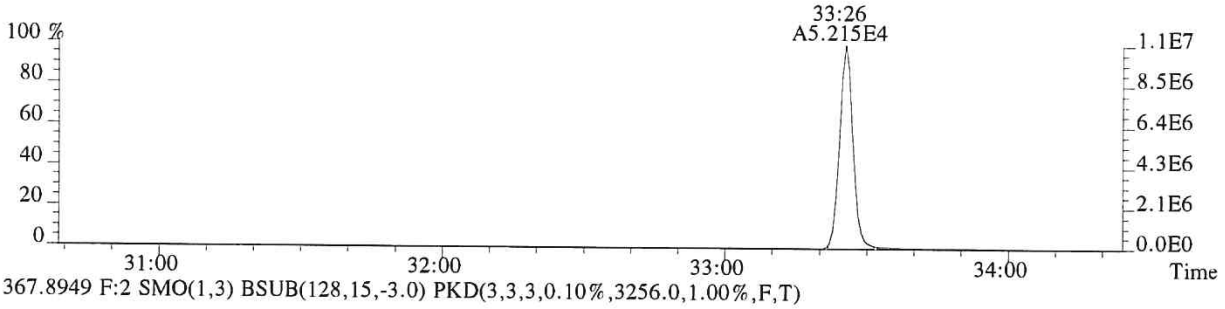


016874

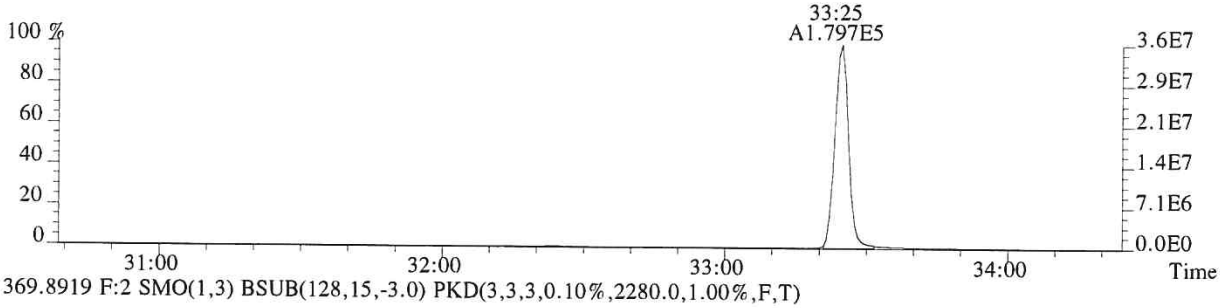
File:P614690 #1-339 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3144.0,1.00%,F,T)



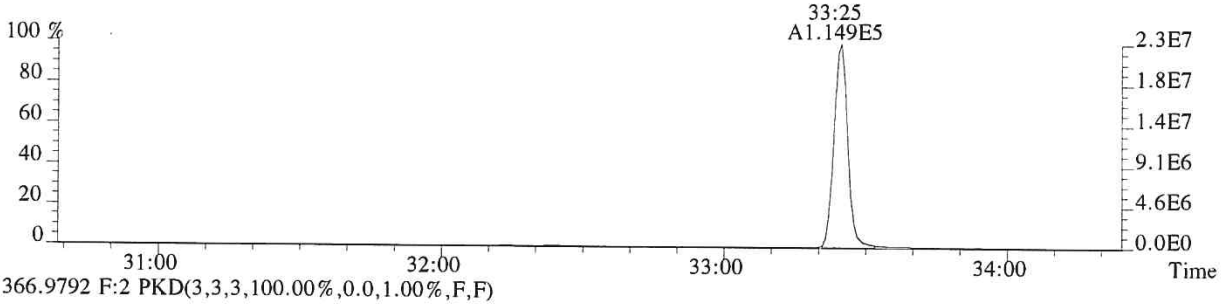
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,292.0,1.00%,F,T)



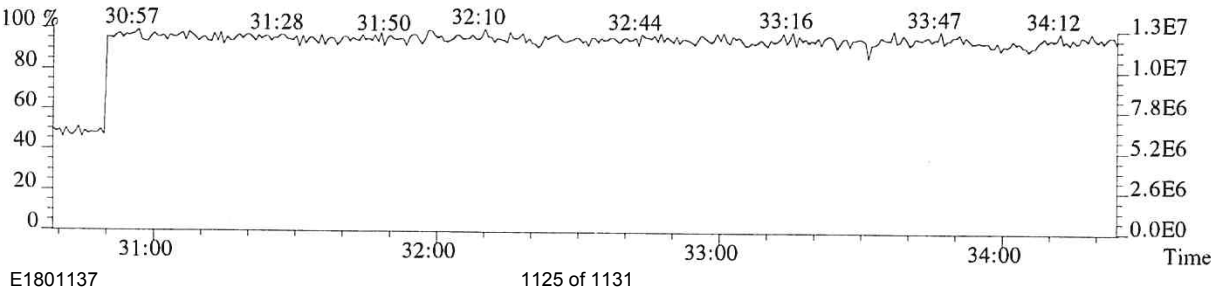
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3256.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2280.0,1.00%,F,T)

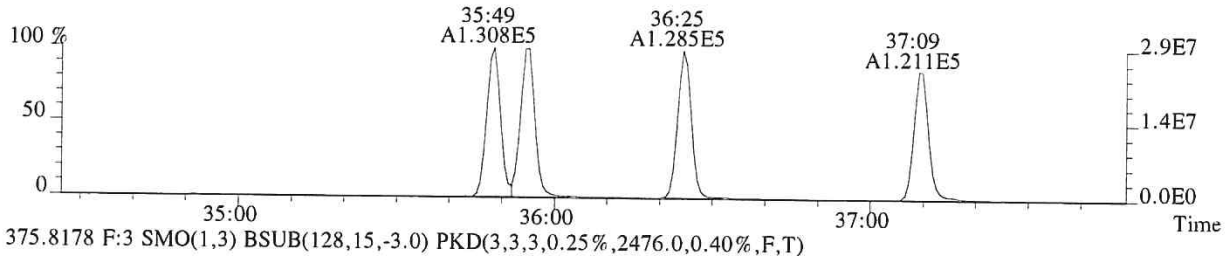


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

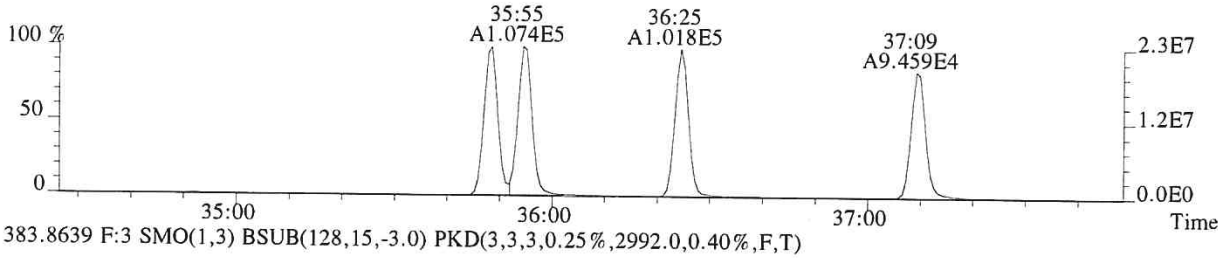


016875

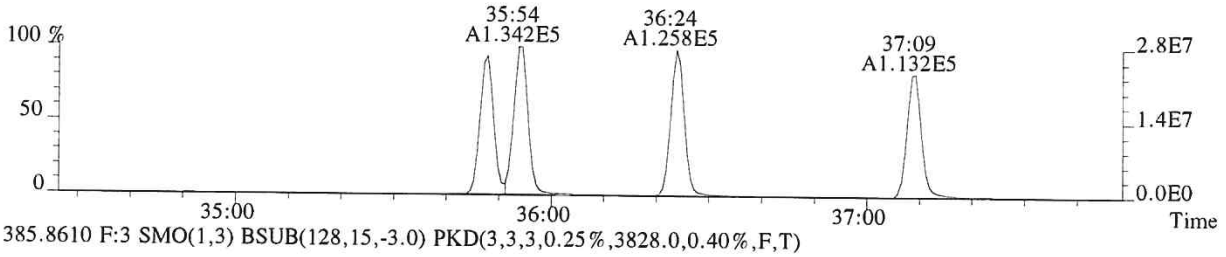
File:P614690 #1-304 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2352.0,0.40%,F,T)



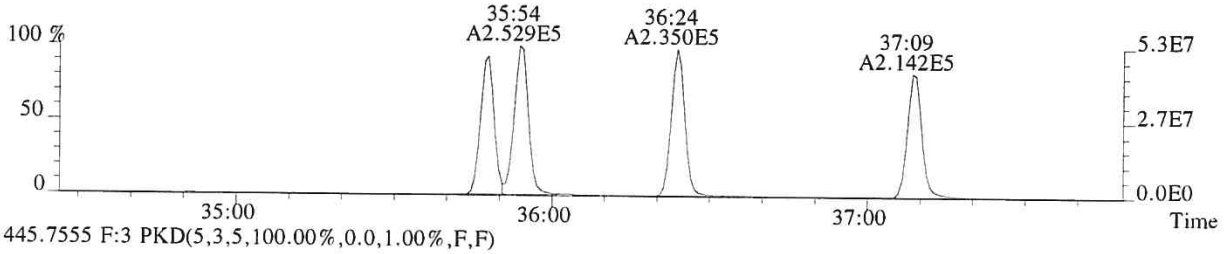
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2476.0,0.40%,F,T)



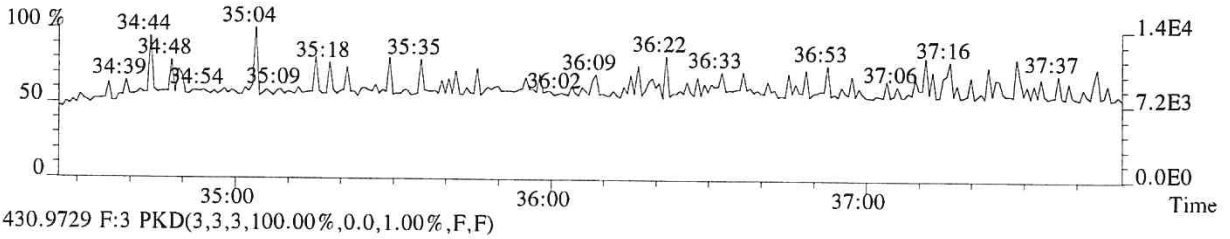
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2992.0,0.40%,F,T)



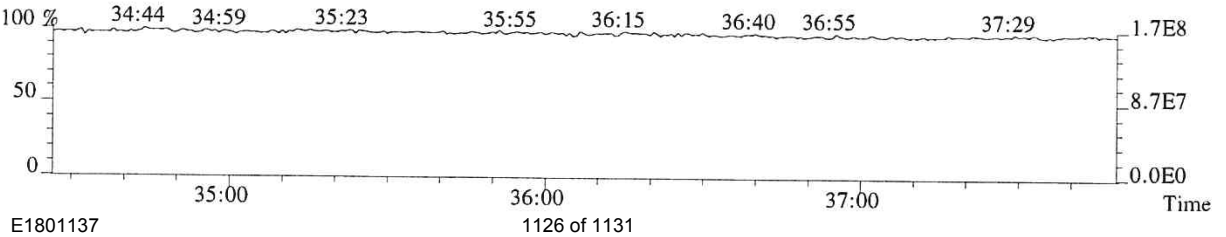
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3828.0,0.40%,F,T)



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

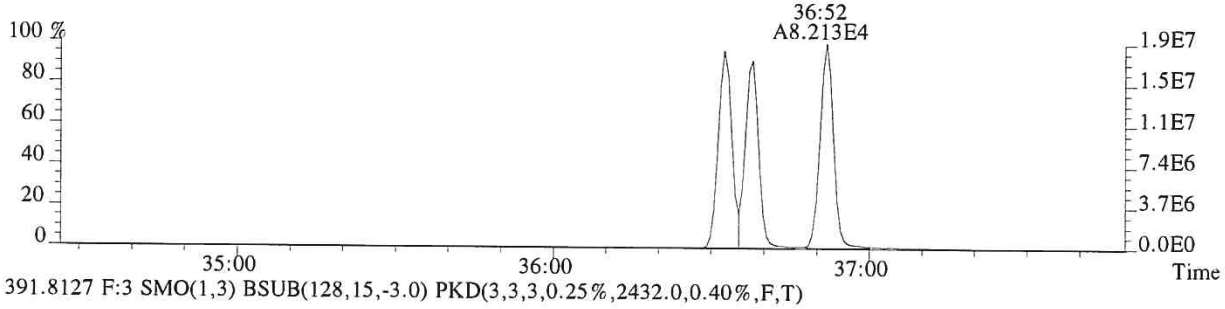


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

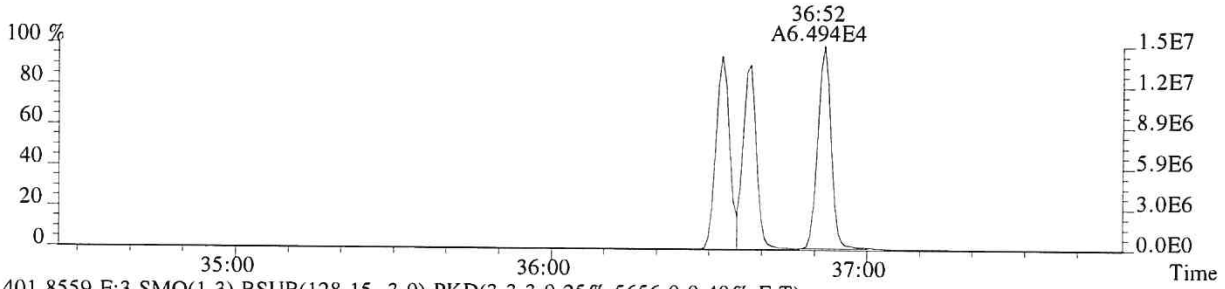


016876

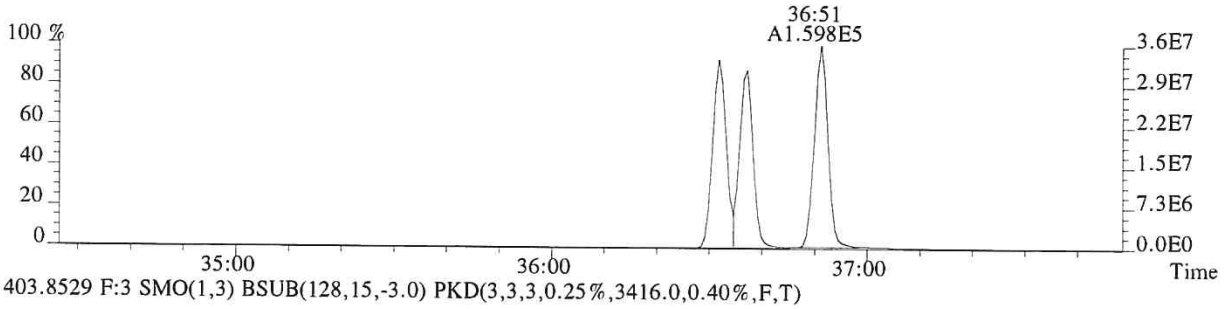
File:P614690 #1-304 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1588.0,0.40%,F,T)



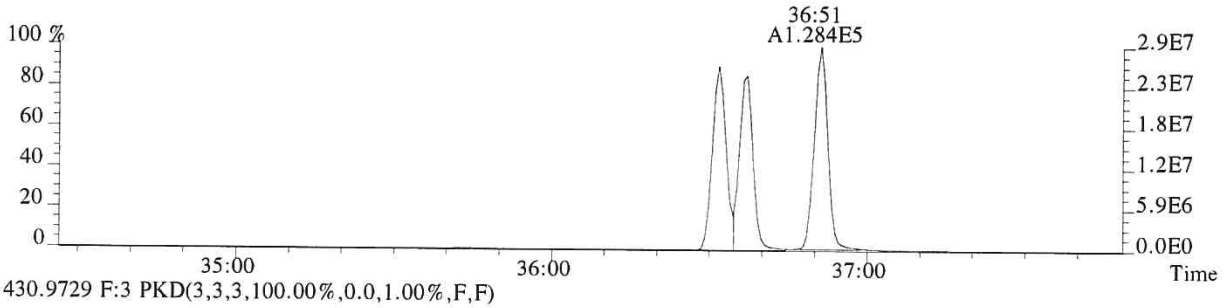
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2432.0,0.40%,F,T)



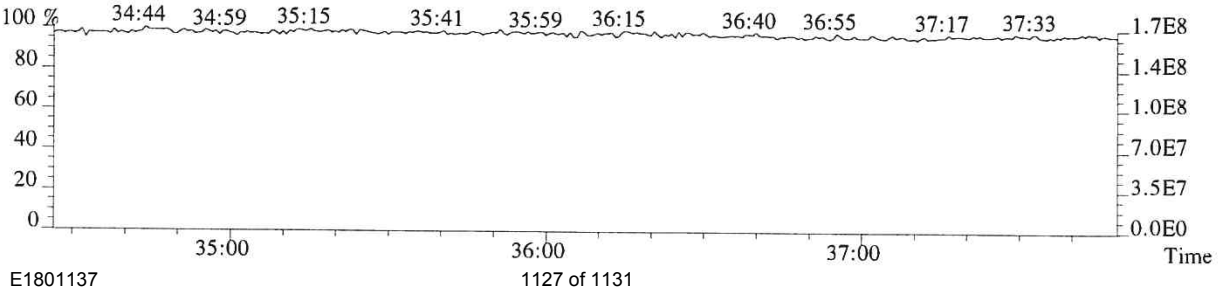
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5656.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3416.0,0.40%,F,T)

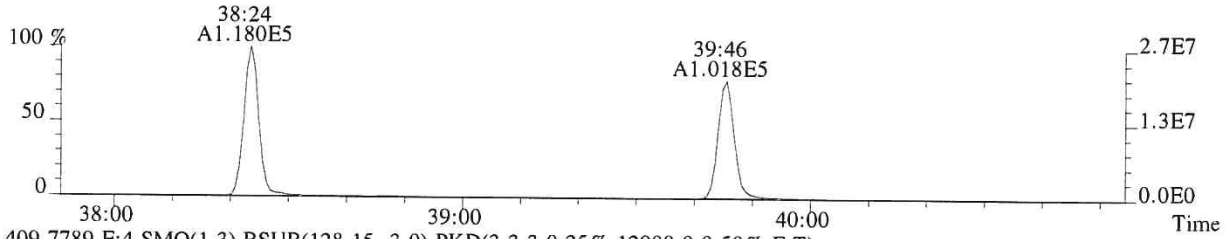


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

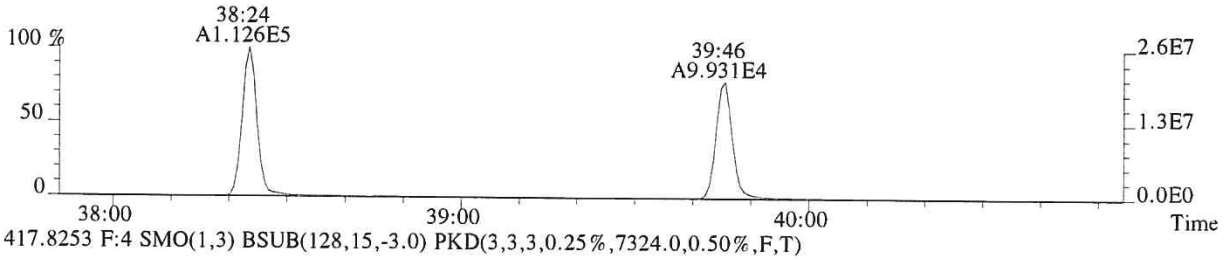


016877

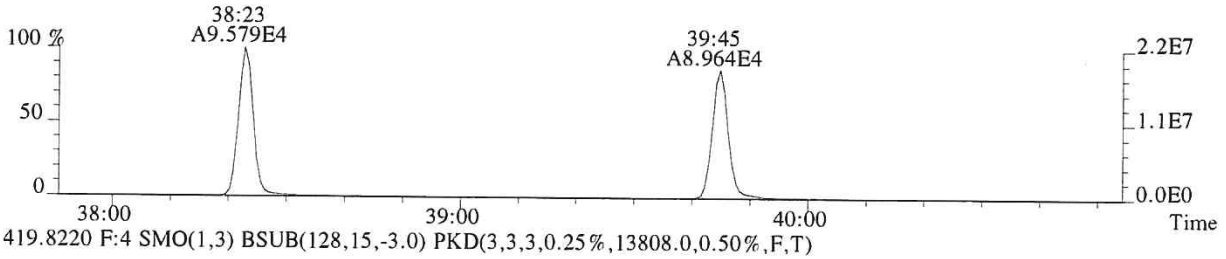
File:P614690 #1-276 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4460.0,0.50%,F,T)



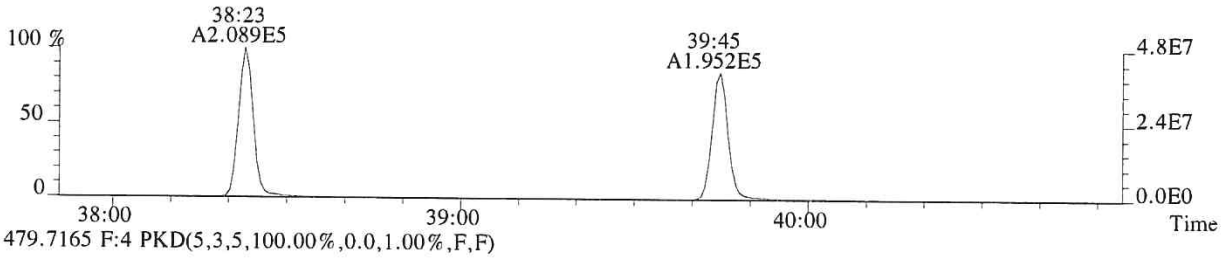
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,12908.0,0.50%,F,T)



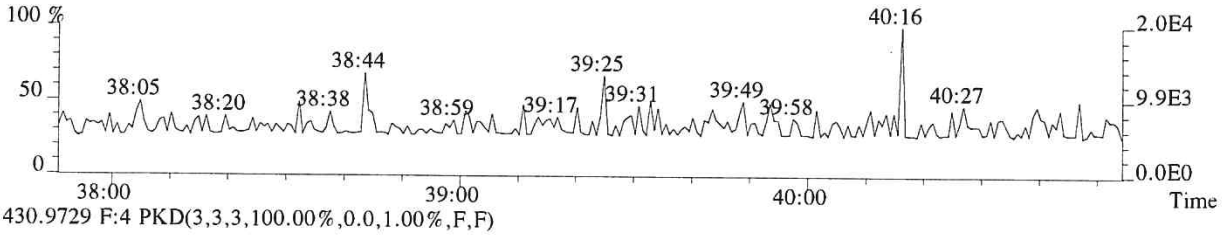
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7324.0,0.50%,F,T)



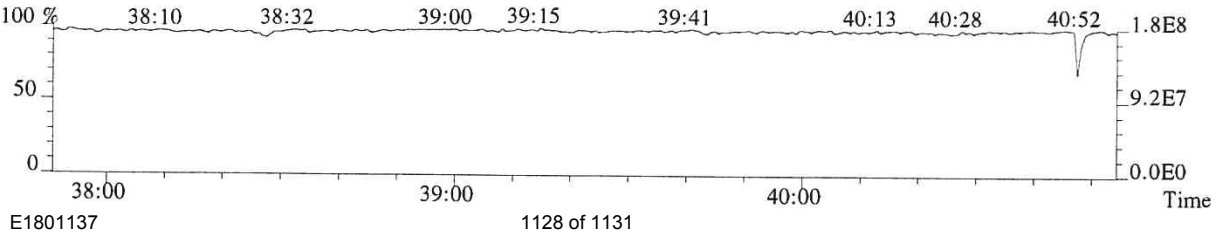
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,13808.0,0.50%,F,T)



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

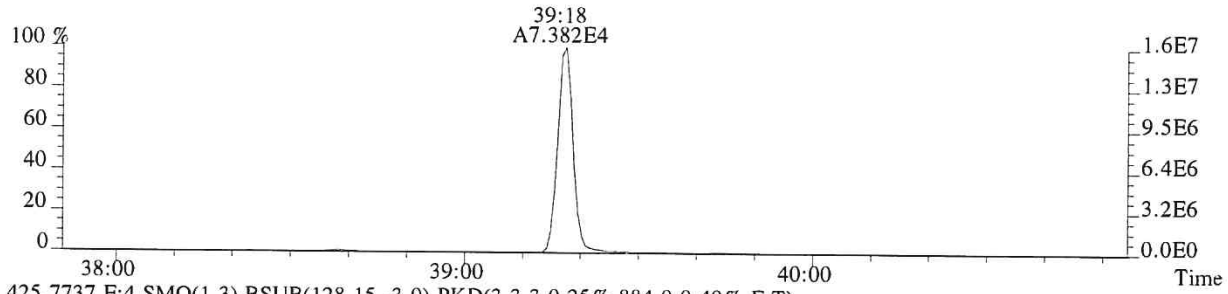


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

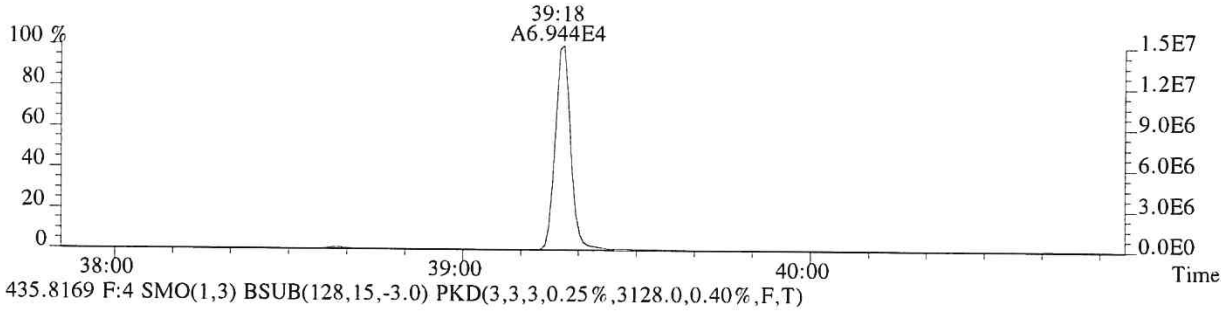


016878

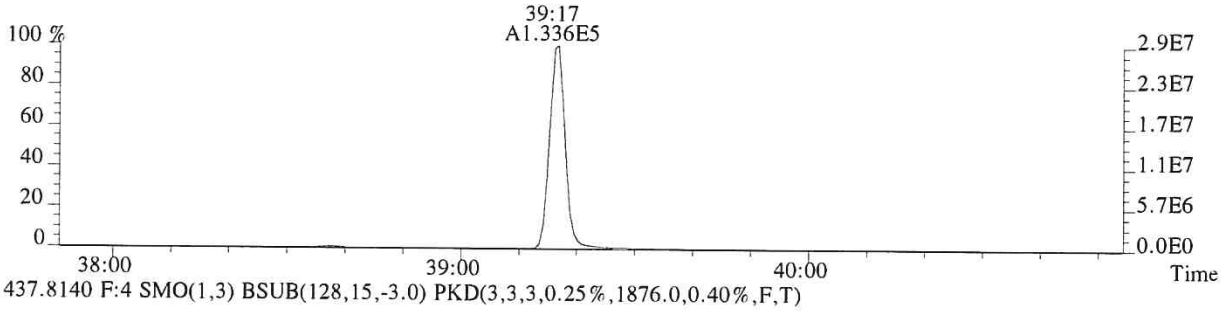
File:P614690 #1-276 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2280.0,0.40%,F,T)



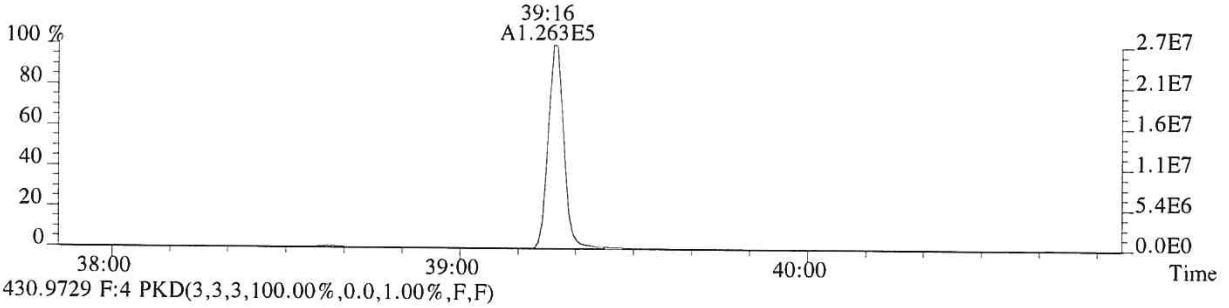
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



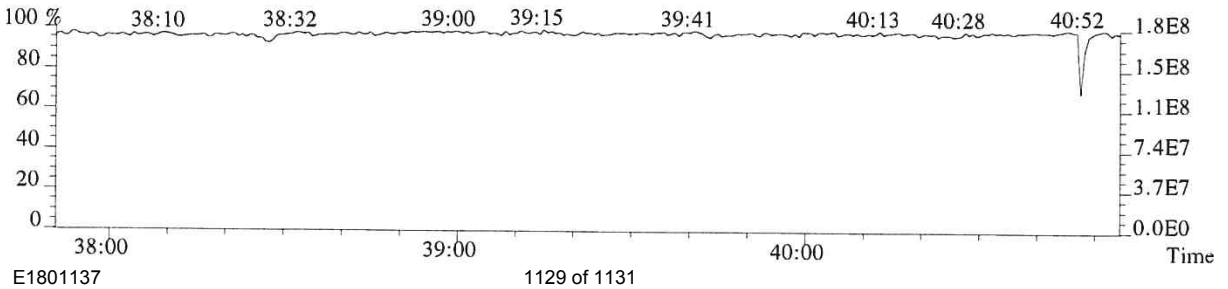
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3128.0,0.40%,F,T)



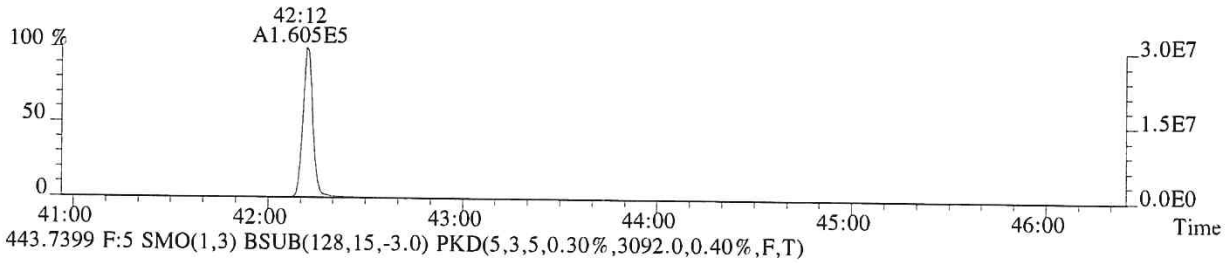
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1876.0,0.40%,F,T)



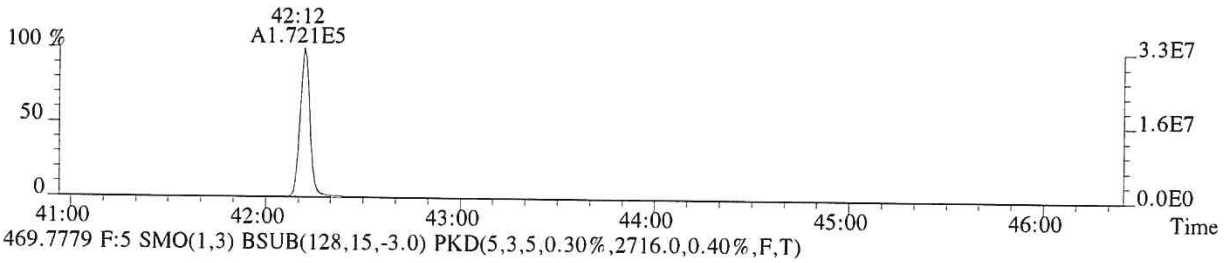
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



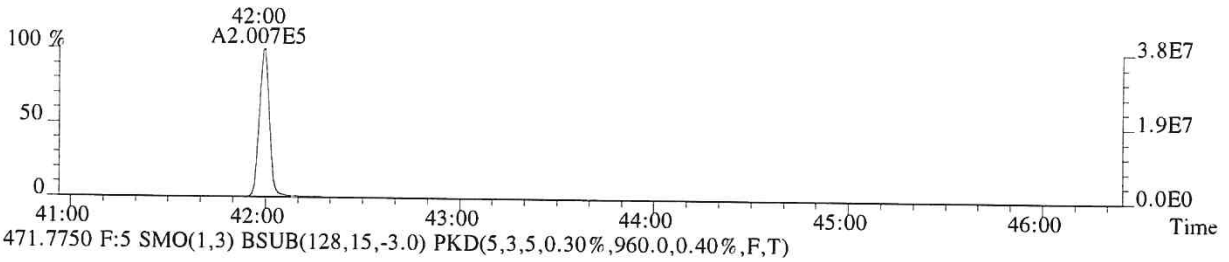
File:P614690 #1-493 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1500.0,0.40%,F,T)



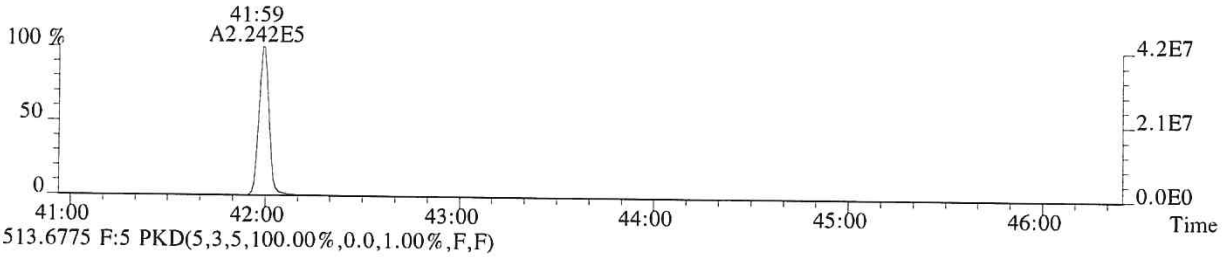
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3092.0,0.40%,F,T)



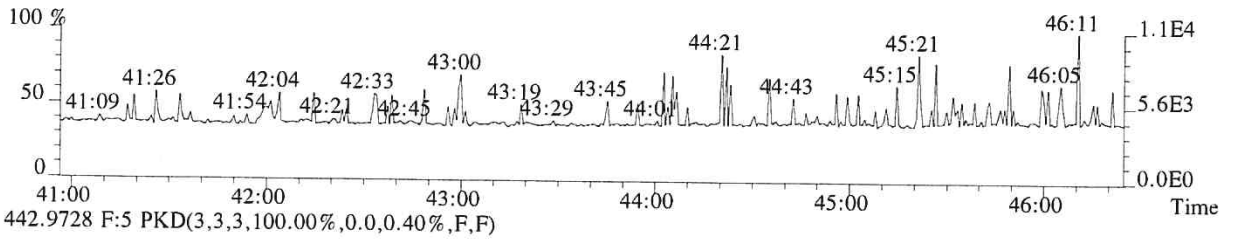
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2716.0,0.40%,F,T)



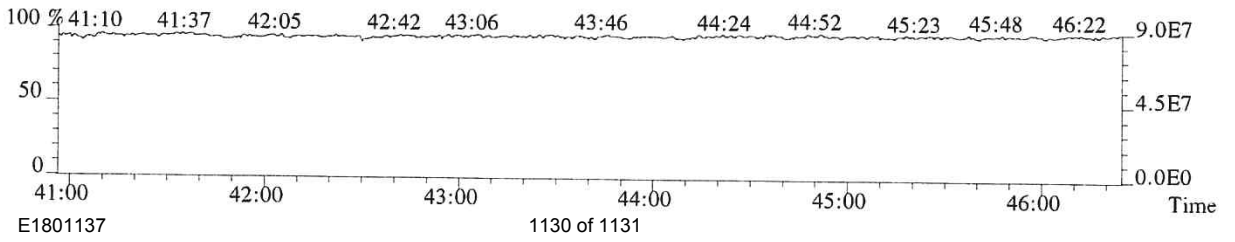
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,960.0,0.40%,F,T)



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

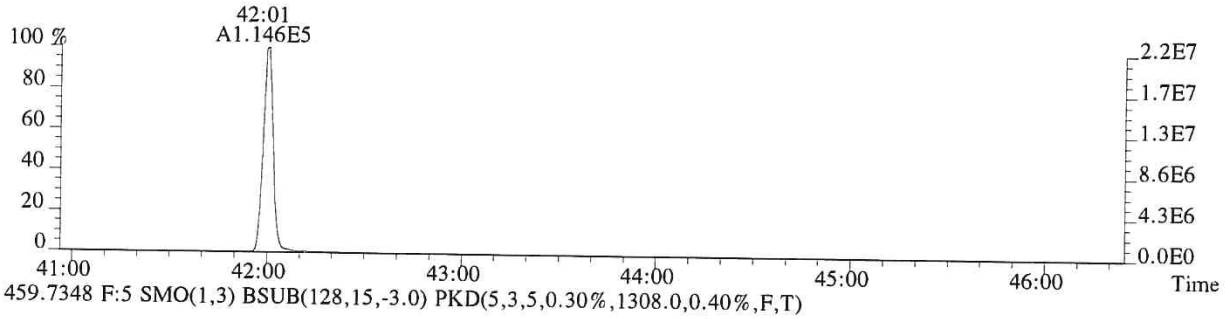


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

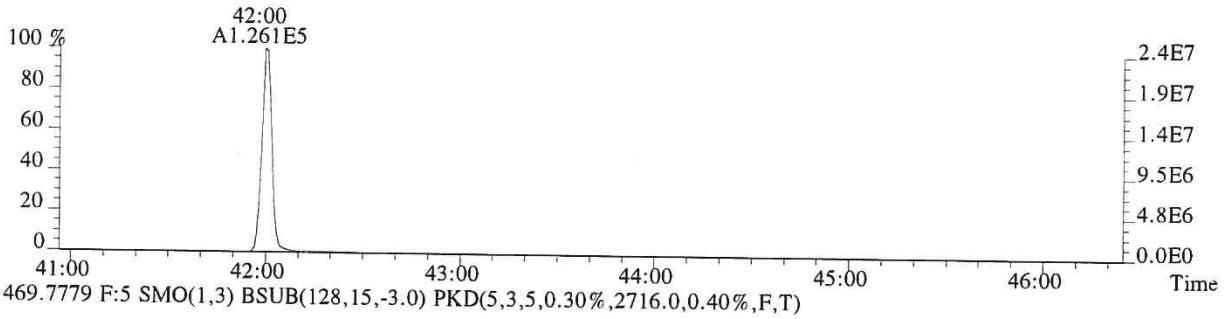


016880

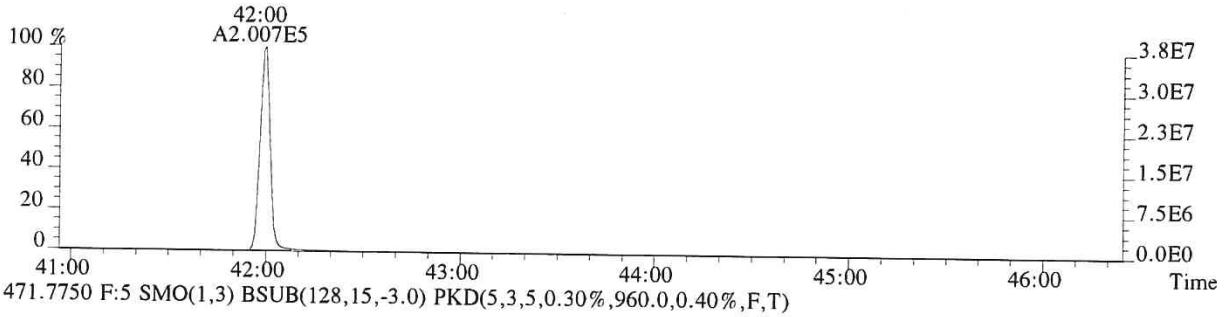
File:P614690 #1-493 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1172.0,0.40%,F,T)



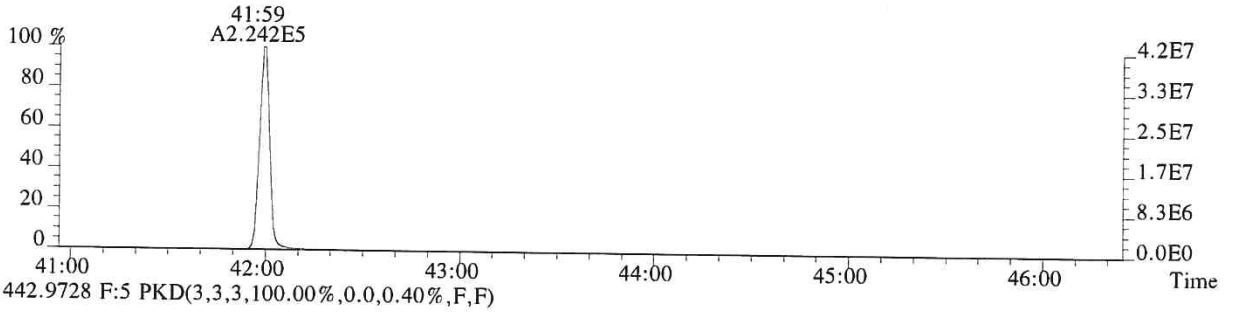
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1308.0,0.40%,F,T)



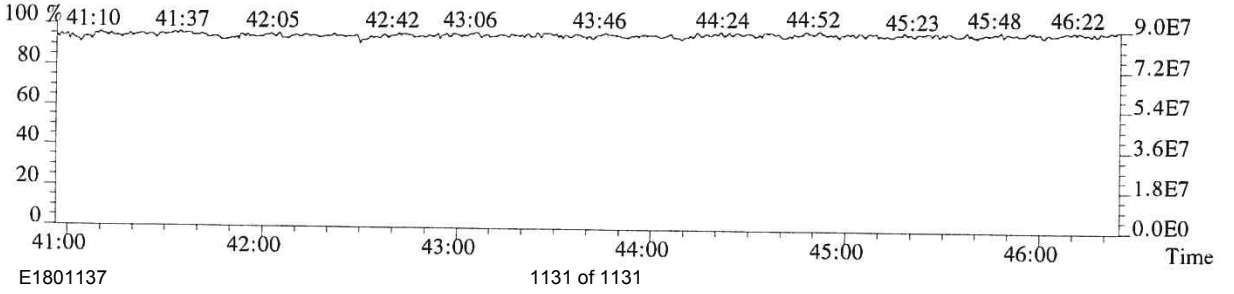
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2716.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,960.0,0.40%,F,T)



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



016881

January 10, 2019 Service Request No:E1801138

Craig Hutchings
Integral Consulting, Inc.
1205 West Bay Drive NW
Olympia, WA 98502-4670

Laboratory Results for: C1887-0501

Dear Craig,

Enclosed are the results of the sample(s) submitted to our laboratory November 16, 2018
For your reference, these analyses have been assigned our service request number **E1801138.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the final complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the TNI 2009 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kristin Brown

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

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

ALS Environmental

Client:	Integral	**Service Request No.:**	E1801138
Project:	C1887-0501		
Sample Matrix:	Sediment		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Sample on hold originally reported on a separate ALS service request number; samples were activated and reported under E1801138.

Data Validation Notes and Discussion

B flags – Method Blanks

The Method Blank EQ1900001-01 contained low levels of various dioxins furans compounds below the Method Reporting Limit (MRL). The associated compounds in the samples are flagged with 'B' flags where the sample result is less than ten times the level detected in the method blank.

Precision and Accuracy:

EQ1900001: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within control limits.

E flags

When OCDD exceed the upper method calibration limit (MCL), we use an 'E' flag on the Sample Analytical Report results page when the detector is not saturated. Samples E1801138-005 and 011 are reported with an 'E' flag to denote that they had concentration greater than the highest calibration point. The process of dilution is counter to the isotopic dilution technique that the laboratory uses to determine recovery and produces variability in the final value. The laboratory only dilutes when detector saturation occurs.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

2378-TCDF

Samples analyzed on the DB-5MSUI column were analyzed under conditions where sufficient separation between 2,3,7,8-TCDF and its closest eluter was achieved. Confirmation of this result was not required.

Dilutions

Various samples had elevated levels of target analytes and required a dilution. The undiluted and diluted results were combined into one Total TEQ summary report for each sample. This reports a 'Total' result that includes the most appropriate concentration found for the associated target analyte.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

Manual Integrations

For this type of instrumentation and software, manual integration may be required frequently to correct inaccurate integrations performed by the processing software. These manual integrations are indicated in the raw data with a before and after chromatogram and are stamped with the reason for integration.

The TEQ Summary results for each sample have been calculated by ALS/Houston to include:

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- 2378-TCDF from the DB-225 column, when confirmation required
- Non-detected compounds are not included in the 'Total'
- The 1:1 and associated dilution have been combined into one TEQ Summary report

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E1801138-001	SL0195	11/14/2018	1615
E1801138-002	SL0196	11/14/2018	1620
E1801138-003	SL0170	11/14/2018	1030
E1801138-004	SL0171	11/14/2018	1035
E1801138-005	SL0172	11/14/2018	1040
E1801138-006	SL0173	11/14/2018	1045
E1801138-007	SL0174	11/14/2018	1050
E1801138-008	SL0176	11/14/2018	1140
E1801138-009	SL0177	11/14/2018	1145
E1801138-010	SL0178	11/14/2018	1150
E1801138-011	SL0179	11/14/2018	1155
E1801138-012	SL0180	11/14/2018	1200
E1801138-013	SL0198	11/15/2018	0850
E1801138-014	SL0199	11/15/2018	0855
E1801138-015	SL0200	11/15/2018	0900
E1801138-016	SL0201	11/15/2018	0905
E1801138-017	SL0202	11/15/2018	0910
E1801138-018	SL0211	11/15/2018	1320
E1801138-019	SL0212	11/15/2018	1325
E1801138-020	SL0213	11/15/2018	1330

Service Request Summary

Folder #: **E1801138**
Client Name: Integral Consulting, Incorporated
Project Name: C1887-0501
Project Number:

Report To: Craig Hutchings
Integral Consulting, Inc.
1205 West Bay Drive NW
Olympia, WA 98502-4670
USA
Phone Number: 360-705-3534
Cell Number:
Fax Number:
E-mail: chutchings@integral-corp.com

Project Chemist: Kristin Brown
Originating Lab: HOUSTON
Logged By: ALOPEZ
Date Received: 11/16/18
Internal Due Date: 1/11/2019
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N, Y
Report to MDL?: N, Y
P.O. Number:
EDD: Integral-UCR

20 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
Location: EHRMS-WIC 2E
Pressure Gas:

				HOUSTON	
				Dioxins Furans/1613B	Total Solids/ALS SOP
Lab Samp No.	**Client Samp No**	**Matrix**	**Collected**		
E1801138-001	SL0195	Sediment	11/14/18 1615	**IV**	**IV**
E1801138-002	SL0196	Sediment	11/14/18 1620	**IV**	**IV**
E1801138-003	SL0170	Sediment	11/14/18 1030	**IV**	**IV**
E1801138-004	SL0171	Sediment	11/14/18 1035	**IV**	**IV**
E1801138-005	SL0172	Sediment	11/14/18 1040	**IV**	**IV**
E1801138-006	SL0173	Sediment	11/14/18 1045	**IV**	**IV**
E1801138-007	SL0174	Sediment	11/14/18 1050	**IV**	**IV**
E1801138-008	SL0176	Sediment	11/14/18 1140	**IV**	**IV**
E1801138-009	SL0177	Sediment	11/14/18 1145	**IV**	**IV**
E1801138-010	SL0178	Sediment	11/14/18 1150	**IV**	**IV**
E1801138-011	SL0179	Sediment	11/14/18 1155	**IV**	**IV**
E1801138-012	SL0180	Sediment	11/14/18 1200	**IV**	**IV**
E1801138-013	SL0198	Sediment	11/15/18 0850	**IV**	**IV**
E1801138-014	SL0199	Sediment	11/15/18 0855	**IV**	**IV**
E1801138-015	SL0200	Sediment	11/15/18 0900	**IV**	**IV**
E1801138-016	SL0201	Sediment	11/15/18 0905	**IV**	**IV**

Service Request Summary

Folder #: **E1801138**
Client Name: Integral Consulting, Incorporated
Project Name: C1887-0501
Project Number:

Report To: Craig Hutchings
Integral Consulting, Inc.
1205 West Bay Drive NW
Olympia, WA 98502-4670
USA
Phone Number: 360-705-3534
Cell Number:
Fax Number:
E-mail: chutchings@integral-corp.com

Project Chemist: Kristin Brown
Originating Lab: HOUSTON
Logged By: ALOPEZ
Date Received: 11/16/18
Internal Due Date: 1/11/2019
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N, Y
Report to MDL?: N, Y
P.O. Number:
EDD: Integral-UCR

20 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
Location: EHRMS-WIC 2E
Pressure Gas:

				HOUSTON	
Lab Samp No.	**Client Samp No**	**Matrix**	**Collected**	Dioxins Furans/1613B	Total Solids/ALS SOP
E1801138-017	SL0202	Sediment	11/15/18 0910	**IV**	**IV**
E1801138-018	SL0211	Sediment	11/15/18 1320	**IV**	**IV**
E1801138-019	SL0212	Sediment	11/15/18 1325	**IV**	**IV**
E1801138-020	SL0213	Sediment	11/15/18 1330	**IV**	**IV**

Service Request Summary

Folder #:	**E1801138**
Client Name:	Integral Consulting, Incorporated
Project Name:	C1887-0501
Project Number:	
Report To:	Craig Hutchings Integral Consulting, Inc. 1205 West Bay Drive NW Olympia, WA 98502-4670 USA
Phone Number:	360-705-3534
Cell Number:	
Fax Number:	
E-mail:	chutchings@integral-corp.com

Project Chemist:	Kristin Brown
Originating Lab:	HOUSTON
Logged By:	ALOPEZ
Date Received:	11/16/18
Internal Due Date:	1/11/2019
QAP:	LAB QAP
Qualifier Set:	HRMS Qualifier Set
Formset:	Lab Standard
Merged?:	N, Y
Report to MDL?:	N, Y
P.O. Number:	
EDD:	Integral-UCR

20 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved

Location: EHRMS-WIC 2E

Pressure Gas:

Superset Summary

Service Request: E1801138 **SuperSet Reference:** 19-0000493770 rev 00

Analytical Method: **1613B**

Calibrations: 01/24/18

Data Files:

Raw Data	Begin CCAL	Method Blank	Lab ID
P519836	P519832	P616378	E1801138-010
P519837	P519832	P616378	E1801138-011
P519838	P519832	P616378	E1801138-012.R01
P519840	P519832	P616378	E1801138-014.R01
P519841	P519832	P616378	E1801138-015.R01
P519842	P519832	P616378	E1801138-016
P519843	P519832	P616378	E1801138-017
P519844	P519832	P616378	E1801138-018.R01
P519845	P519832	P616378	E1801138-019.R01
P519846	P519832	P616378	E1801138-020.R01

Calibrations: 09/25/18

Data Files:

Raw Data	Begin CCAL	Method Blank	Lab ID
P616379	P616375	P616378	E1801138-001
P616408	P616404	P616378	E1801138-002
P616380	P616375	P616378	E1801138-002.R01
P616381	P616375	P616378	E1801138-003
P616382	P616375	P616378	E1801138-004
P616383	P616375	P616378	E1801138-005
P616409	P616404	P616378	E1801138-006
P616384	P616375	P616378	E1801138-006.R01
P616410	P616404	P616378	E1801138-007
P616385	P616375	P616378	E1801138-007.R01
P616386	P616375	P616378	E1801138-008
P616387	P616375	P616378	E1801138-009
P616412	P616404	P616378	E1801138-012
P616411	P616404	P616378	E1801138-013
P616413	P616404	P616378	E1801138-014
P616414	P616404	P616378	E1801138-015
P616415	P616404	P616378	E1801138-018
P616416	P616404	P616378	E1801138-019
P616417	P616404	P616378	E1801138-020
P616378	P616375	P616378	EQ1900001-01
P616388	P616375	P616378	EQ1900001-02
P616389	P616375	P616378	EQ1900001-03

Data Qualifiers

HRMS Qualifier Set

B	Indicates the associated analyte was found in the method blank at >1/10th the reported value.
E	Estimated value. The reported concentration is above the calibration range of the instrument.
H	Sample extracted and/or analyzed out of suggested holding time.
J	Estimated value. The reported concentration is below the MRL.
K	The ion abundance ratio between the primary and secondary ions were outside of theoretical acceptance limits.The concentration of this analyte should be considered as an estimate.
P	Chlorodiphenyl ether interference was present at the retention time of the target analyte. Reported result should be considered an estimate.
Q	Monitored lock-mass indicates matrix-interference. Reported result is estimated.
S	Signal saturated detector. Result reported from dilution.
U	Compound was analyzed for, but was not detected (ND).
X	See Case Narrative.
Y	Isotopically Labeled Standard recovery outside of acceptance limits. In all cases, the signal-to-nois ratios are greater than 10:1, making the recoveries acceptable.
i	The MDL/MRL have been elevated due to a matrix interference.

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID: E1801138 | DB-5MSUI | SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
01/09/19	JC	001-009

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
01/09/19	LKL	001-009

HS-HRMSREVIEW R1.0

PEER REVIEW PAGE2015

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID: E1801138 | DB-5MSUI | SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
01/09/19	YC	010-012, 014-020

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
01/10/19	LKL	010-012, 014-020

HS-HRMSREVIEW R1.0

PEER REVIEW PAGE2015

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID: E1801138 | DB-5MSUI | SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
01/10/19	YC	002DL, 006DL, 007DL, 012DL, 014DL, 015DL, 018DL-020DL, 013

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
01/10/19	LKL	002DL, 006DL, 007DL, 012DL, 014DL, 015DL, 018DL-020DL, 013

HS-HRMSREVIEW R1.0

PEER REVIEW PAGE2015

Preparation Information Benchsheets

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

Preparation Information Benchsheet

Prep Run#: 329114 **Prep WorkFlow:** OrgExtS(365) **Status:** Prepped
Team: Semivoa GCMS/ALOPEZ **Prep Method:** Method Soxhlet **Prep Date/Time:** 1/2/19 08:00 AM

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E1801138-001	SL0195	.01	1613B/Dioxins Furans			Sediment	10.388g	Brown Mud
2	E1801138-002	SL0196	.01	1613B/Dioxins Furans			Sediment	10.776g	Brown Mud
3	E1801138-003	SL0170	.01	1613B/Dioxins Furans			Sediment	10.088g	Brown Mud
4	E1801138-004	SL0171	.01	1613B/Dioxins Furans			Sediment	10.599g	Brown Mud
5	E1801138-005	SL0172	.01	1613B/Dioxins Furans			Sediment	10.538g	Brown Mud
6	E1801138-006	SL0173	.01	1613B/Dioxins Furans			Sediment	10.143g	Brown Mud
7	E1801138-007	SL0174	.01	1613B/Dioxins Furans			Sediment	10.583g	Brown Mud
8	E1801138-008	SL0176	.01	1613B/Dioxins Furans			Sediment	10.310g	Brown Mud
9	E1801138-009	SL0177	.01	1613B/Dioxins Furans			Sediment	10.970g	Brown Mud
10	E1801138-010	SL0178	.01	1613B/Dioxins Furans			Sediment	10.445g	Brown Mud
11	E1801138-011	SL0179	.01	1613B/Dioxins Furans			Sediment	10.358g	Brown Mud
12	E1801138-012	SL0180	.01	1613B/Dioxins Furans			Sediment	10.178g	Brown Mud
13	E1801138-013	SL0198	.01	1613B/Dioxins Furans			Sediment	10.378g	Brown Mud
14	E1801138-014	SL0199	.01	1613B/Dioxins Furans			Sediment	10.247g	Brown Mud
15	E1801138-015	SL0200	.01	1613B/Dioxins Furans			Sediment	10.094g	Brown Mud
16	E1801138-016	SL0201	.01	1613B/Dioxins Furans			Sediment	10.827g	Brown Mud
17	E1801138-017	SL0202	.01	1613B/Dioxins Furans			Sediment	10.926g	Brown Mud
18	E1801138-018	SL0211	.01	1613B/Dioxins Furans			Sediment	10.223g	Brown Dirt
19	E1801138-019	SL0212	.01	1613B/Dioxins Furans			Sediment	10.250g	Brown Dirt
20	E1801138-020	SL0213	.01	1613B/Dioxins Furans			Sediment	10.412g	Brown Mud
21	EQ1900001-01	MB		1613B/Dioxins Furans			Solid	10.243g	
22	EQ1900001-02	LCS		1613B/Dioxins Furans			Solid	10.291g	
23	EQ1900001-03	DLCS		1613B/Dioxins Furans			Solid	10.461g	

Spiking Solutions

Name: 1613B Matrix Working Standard Inventory ID 195855 Logbook Ref: 195855 AL 12/26/18 2-20 ng/mL Expires On: 06/24/2019

EQ1900001-02 100.00µL EQ1900001-03 100.00µL

Name: 1613B Labeled Working Standard Inventory ID 196003 Logbook Ref: 196003 AL 1/2/19 2-4 ng/mL Expires On: 01/31/2019

E1801138-001	1,000.00µL	E1801138-002	1,000.00µL	E1801138-002.R	1,000.00µL	E1801138-003	1,000.00µL	E1801138-004	1,000.00µL	E1801138-005	1,000.00µL
E1801138-006	1,000.00µL	E1801138-006.R	1,000.00µL	E1801138-007	1,000.00µL	E1801138-007.R	1,000.00µL	E1801138-008	1,000.00µL	E1801138-009	1,000.00µL
E1801138-010	1,000.00µL	E1801138-011	1,000.00µL	E1801138-012	1,000.00µL	E1801138-013	1,000.00µL	E1801138-014	1,000.00µL	E1801138-015	1,000.00µL
E1801138-016	1,000.00µL	E1801138-017	1,000.00µL	E1801138-018	1,000.00µL	E1801138-019	1,000.00µL	E1801138-020	1,000.00µL	EQ1900001-01	1,000.00µL
EQ1900001-02	1,000.00µL	EQ1900001-03	1,000.00µL								

Preparation Information Benchsheet

Prep Run#: 329114 **Prep WorkFlow:** OrgExtS(365) **Status:** Prepped
Team: Semivoa GCMS/ALOPEZ **Prep Method:** Method Soxhlet **Prep Date/Time:** 1/2/19 08:00 AM

Name:	8290/1613B Cleanup Working Standard	Inventory ID	196034	Logbook Ref:	tw 010319 196034 8ng/ml	Expires On:	04/27/2019

E1801138-001	100.00µL	E1801138-002	100.00µL	E1801138-002.R	100.00µL	E1801138-003	100.00µL	E1801138-004	100.00µL	E1801138-005	100.00µL
E1801138-006	100.00µL	E1801138-006.R	100.00µL	E1801138-007	100.00µL	E1801138-007.R	100.00µL	E1801138-008	100.00µL	E1801138-009	100.00µL
E1801138-010	100.00µL	E1801138-011	100.00µL	E1801138-012	100.00µL	E1801138-013	100.00µL	E1801138-014	100.00µL	E1801138-015	100.00µL
E1801138-016	100.00µL	E1801138-017	100.00µL	E1801138-018	100.00µL	E1801138-019	100.00µL	E1801138-020	100.00µL	EQ1900001-01	100.00µL
EQ1900001-02	100.00µL	EQ1900001-03	100.00µL								

Preparation Materials

Carbon, High Purity	JG 12/17/18 (195653)	Ethyl Acetate 99.9% Minimum EtOAc	AL 12/31/18 (195971)	Glass Wool	112018 tw glasswool (195079)
Hexanes 95%	JG 12/17/18 #2 (195674)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	AL (195005)	Sodium Hydroxide 1N NaOH	TW 6/14/18 (191093)
Sodium Sulfate Anhydrous Reagent Grade Na2SO4	AL 10/12/18 (194060)	Tridecane (n-Tridecane)	AL 12/12/18 (195585)	Silica Gel	tw 12/31/18 (195984)
sulfuric acid	AL 10/11/18 (194007)	Toluene 99.9% Minimum	JG 12/17/18 (195675)		

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	1/2/19 08:00	Started:	1/7/19 09:00	Started:	1/7/19 12:00	Started:	1/8/19 10:00
Finished:	1/3/19 07:30	Finished:	1/7/19 10:00	Finished:	1/7/19 15:00	Finished:	1/8/19 13:00
By:	ALOPEZ	By:	TWOODS	By:	TWOODS	By:	TWOODS
Comments		Comments		Comments		Comments	

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

E1801138 17 of 1083

016898

Analytical Results

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 16:15
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0195	**Units:**	ng/Kg
Lab Code:	E1801138-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 14:37
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.388g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616379	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	55.4		1.78	1.78	0.82	1.001	1
1,2,3,7,8-PeCDD	1.94	**JK**	0.304	4.71	1.01	1.001	1
1,2,3,4,7,8-HxCDD	1.11	**JK**	0.383	4.71	0.90	1.000	1
1,2,3,6,7,8-HxCDD	10.5		0.409	4.71	1.26	1.000	1
1,2,3,7,8,9-HxCDD	4.77		0.368	4.71	1.12	1.007	1
1,2,3,4,6,7,8-HpCDD	214		0.750	4.71	1.08	1.000	1
OCDD	3390		0.533	9.42	0.88	1.000	1
2,3,7,8-TCDF	115		0.452	0.942	0.80	1.001	1
1,2,3,7,8-PeCDF	4.96		0.388	4.71	1.56	1.001	1
2,3,4,7,8-PeCDF	4.87		0.395	4.71	1.54	1.001	1
1,2,3,4,7,8-HxCDF	7.33		0.309	4.71	1.05	1.000	1
1,2,3,6,7,8-HxCDF	2.89	**J**	0.313	4.71	1.09	1.000	1
1,2,3,7,8,9-HxCDF	0.492	**BJK**	0.405	4.71	0.86	1.000	1
2,3,4,6,7,8-HxCDF	2.22	**J**	0.351	4.71	1.21	1.000	1
1,2,3,4,6,7,8-HpCDF	65.1		0.329	4.71	0.98	1.000	1
1,2,3,4,7,8,9-HpCDF	1.93	**JK**	0.448	4.71	1.53	1.000	1
OCDF	245		0.855	9.42	0.88	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 16:15
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0195	**Units:**	ng/Kg
Lab Code:	E1801138-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 14:37
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.388g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616379	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	55.4		1.78	1.78	0.82		1
Total Penta-Dioxins	7.12		0.304	4.71	1.39		1
Total Hexa-Dioxins	75.6		0.386	4.71	1.05		1
Total Hepta-Dioxins	430		0.750	4.71	1.03		1
Total Tetra-Furans	189		0.452	0.942	0.76		1
Total Penta-Furans	16.0		0.392	4.71	1.34		1
Total Hexa-Furans	54.3		0.341	4.71	1.25		1
Total Hepta-Furans	232		0.381	4.71	0.98		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 16:15
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0195	**Units:**	Percent
Lab Code:	E1801138-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 14:37
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.388g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616379	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	829.956	41		25-164	0.82	1.031
13C-1,2,3,7,8-PeCDD	2000	1168.460	58		25-181	1.60	1.247
13C-1,2,3,4,7,8-HxCDD	2000	1337.450	67		32-141	1.29	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1262.462	63		28-130	1.28	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1198.618	60		23-140	1.05	1.072
13C-OCDD	4000	1043.773	26		17-157	0.89	1.144
13C-2,3,7,8-TCDF	2000	1222.141	61		24-169	0.82	0.990
13C-1,2,3,7,8-PeCDF	2000	1221.765	61		24-185	1.61	1.193
13C-2,3,4,7,8-PeCDF	2000	1161.717	58		21-178	1.59	1.235
13C-1,2,3,4,7,8-HxCDF	2000	1233.927	62		26-152	0.52	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1283.767	64		26-123	0.53	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1116.646	56		29-147	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1151.493	58		28-136	0.54	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	926.332	46		28-143	0.45	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	838.382	42		26-138	0.47	1.084
37Cl-2,3,7,8-TCDD	800	546.189	68		35-197	NA	1.032

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 16:15
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0195	**Units:**	ng/Kg
Lab Code:	E1801138-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**55.4**	1.78	1.78	1	1	55.4
1,2,3,7,8-PeCDD	**1.94**	0.304	4.71	1	1	1.94
1,2,3,4,7,8-HxCDD	**1.11**	0.383	4.71	1	0.1	0.111
1,2,3,6,7,8-HxCDD	**10.5**	0.409	4.71	1	0.1	1.05
1,2,3,7,8,9-HxCDD	**4.77**	0.368	4.71	1	0.1	0.477
1,2,3,4,6,7,8-HpCDD	**214**	0.750	4.71	1	0.01	2.14
OCDD	**3390**	0.533	9.42	1	0.0003	1.02
2,3,7,8-TCDF	**115**	0.452	0.942	1	0.1	11.5
1,2,3,7,8-PeCDF	**4.96**	0.388	4.71	1	0.03	0.149
2,3,4,7,8-PeCDF	**4.87**	0.395	4.71	1	0.3	1.46
1,2,3,4,7,8-HxCDF	**7.33**	0.309	4.71	1	0.1	0.733
1,2,3,6,7,8-HxCDF	**2.89**	0.313	4.71	1	0.1	0.289
1,2,3,7,8,9-HxCDF	**0.492**	0.405	4.71	1	0.1	0.0492
2,3,4,6,7,8-HxCDF	**2.22**	0.351	4.71	1	0.1	0.222
1,2,3,4,6,7,8-HpCDF	**65.1**	0.329	4.71	1	0.01	0.651
1,2,3,4,7,8,9-HpCDF	**1.93**	0.448	4.71	1	0.01	0.0193
OCDF	**245**	0.855	9.42	1	0.0003	0.0735
		Total TEQ				77.3

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 16:15
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0195	**Units:**	Percent
Lab Code:	E1801138-001	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	5.606g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	51.1		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 16:20
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0196	**Units:**	ng/Kg
Lab Code:	E1801138-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 14:50
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.776g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616408	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	1640		61.2	61.2	0.78	1.001	10
1,2,3,7,8-PeCDD	7.76	**K**	0.501	3.36	1.94	1.001	1
1,2,3,4,7,8-HxCDD	1.97	**J**	0.421	3.36	1.30	1.000	1
1,2,3,6,7,8-HxCDD	9.75		0.453	3.36	1.34	1.000	1
1,2,3,7,8,9-HxCDD	4.19		0.406	3.36	1.24	1.007	1
1,2,3,4,6,7,8-HpCDD	174		0.779	3.36	1.06	1.000	1
OCDD	3680		0.286	6.71	0.90	1.000	1
2,3,7,8-TCDF	2170		26.6	26.6	0.78	1.001	10
1,2,3,7,8-PeCDF	60.9		0.332	3.36	1.62	1.001	1
2,3,4,7,8-PeCDF	54.5		0.341	3.36	1.54	1.001	1
1,2,3,4,7,8-HxCDF	104		0.376	3.36	1.20	1.000	1
1,2,3,6,7,8-HxCDF	26.5		0.386	3.36	1.16	1.000	1
1,2,3,7,8,9-HxCDF	9.45		0.484	3.36	1.16	1.001	1
2,3,4,6,7,8-HxCDF	8.04		0.417	3.36	1.13	1.000	1
1,2,3,4,6,7,8-HpCDF	105		0.164	3.36	1.09	1.000	1
1,2,3,4,7,8,9-HpCDF	16.9		0.230	3.36	1.13	1.000	1
OCDF	3330		0.895	6.71	0.89	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 16:20
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0196	**Units:**	ng/Kg
Lab Code:	E1801138-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 14:50
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.776g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616408	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	1090		1.11	1.11	0.74		1
Total Penta-Dioxins	13.4		0.501	3.36	1.61		1
Total Hexa-Dioxins	102		0.426	3.36	1.22		1
Total Hepta-Dioxins	440		0.779	3.36	1.04		1
Total Tetra-Furans	3460		0.534	0.671	0.76		1
Total Penta-Furans	213		0.336	3.36	1.52		1
Total Hexa-Furans	221		0.413	3.36	1.38		1
Total Hepta-Furans	243		0.192	3.36	1.09		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 16:20
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0196	**Units:**	Percent
Lab Code:	E1801138-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 15:25
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.776g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616380	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	864.438	43		25-164	0.82	1.031
13C-1,2,3,7,8-PeCDD	2000	1197.685	60		25-181	1.59	1.246
13C-1,2,3,4,7,8-HxCDD	2000	1301.870	65		32-141	1.30	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1192.699	60		28-130	1.28	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1117.102	56		23-140	1.08	1.072
13C-OCDD	4000	930.311	23		17-157	0.91	1.144
13C-2,3,7,8-TCDF	2000	1255.135	63		24-169	0.79	0.990
13C-1,2,3,7,8-PeCDF	2000	1214.639	61		24-185	1.61	1.192
13C-2,3,4,7,8-PeCDF	2000	1184.017	59		21-178	1.63	1.233
13C-1,2,3,4,7,8-HxCDF	2000	1216.847	61		26-152	0.52	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1207.335	60		26-123	0.54	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1130.045	57		29-147	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1152.681	58		28-136	0.52	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	899.609	45		28-143	0.45	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	785.395	39		26-138	0.45	1.084
37Cl-2,3,7,8-TCDD	800	559.958	70		35-197	NA	1.031

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 16:20
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0196	**Units:**	ng/Kg
Lab Code:	E1801138-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**1640**	61.2	61.2	10	1	1640
1,2,3,7,8-PeCDD	**7.76**	0.501	3.36	1	1	7.76
1,2,3,4,7,8-HxCDD	**1.97**	0.421	3.36	1	0.1	0.197
1,2,3,6,7,8-HxCDD	**9.75**	0.453	3.36	1	0.1	0.975
1,2,3,7,8,9-HxCDD	**4.19**	0.406	3.36	1	0.1	0.419
1,2,3,4,6,7,8-HpCDD	**174**	0.779	3.36	1	0.01	1.74
OCDD	**3680**	0.286	6.71	1	0.0003	1.10
2,3,7,8-TCDF	**2170**	26.6	26.6	10	0.1	217
1,2,3,7,8-PeCDF	**60.9**	0.332	3.36	1	0.03	1.83
2,3,4,7,8-PeCDF	**54.5**	0.341	3.36	1	0.3	16.4
1,2,3,4,7,8-HxCDF	**104**	0.376	3.36	1	0.1	10.4
1,2,3,6,7,8-HxCDF	**26.5**	0.386	3.36	1	0.1	2.65
1,2,3,7,8,9-HxCDF	**9.45**	0.484	3.36	1	0.1	0.945
2,3,4,6,7,8-HxCDF	**8.04**	0.417	3.36	1	0.1	0.804
1,2,3,4,6,7,8-HpCDF	**105**	0.164	3.36	1	0.01	1.05
1,2,3,4,7,8,9-HpCDF	**16.9**	0.230	3.36	1	0.01	0.169
OCDF	**3330**	0.895	6.71	1	0.0003	0.999
		Total TEQ				1900

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 16:20
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0196	**Units:**	Percent
Lab Code:	E1801138-002	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	6.056g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	69.1		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:30
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0170	**Units:**	ng/Kg
Lab Code:	E1801138-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 16:16
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.088g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616381	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	24.4		1.55	1.55	0.73	1.001	1
1,2,3,7,8-PeCDD	1.73	**JK**	0.274	3.05	0.89	1.001	1
1,2,3,4,7,8-HxCDD	1.97	**J**	0.564	3.05	1.41	1.000	1
1,2,3,6,7,8-HxCDD	6.61		0.612	3.05	1.16	1.000	1
1,2,3,7,8,9-HxCDD	3.08	**K**	0.546	3.05	1.58	1.007	1
1,2,3,4,6,7,8-HpCDD	195		0.646	3.05	1.01	1.000	1
OCDD	2870		0.501	6.10	0.89	1.000	1
2,3,7,8-TCDF	43.8		1.03	1.03	0.84	1.001	1
1,2,3,7,8-PeCDF	2.38	**J**	0.333	3.05	1.74	1.001	1
2,3,4,7,8-PeCDF	2.71	**JK**	0.359	3.05	1.16	1.001	1
1,2,3,4,7,8-HxCDF	6.01		0.419	3.05	1.22	1.000	1
1,2,3,6,7,8-HxCDF	1.93	**JK**	0.413	3.05	1.56	1.000	1
1,2,3,7,8,9-HxCDF	0.756	**JK**	0.519	3.05	1.96	1.001	1
2,3,4,6,7,8-HxCDF	2.43	**J**	0.459	3.05	1.42	1.000	1
1,2,3,4,6,7,8-HpCDF	32.2		0.457	3.05	1.08	1.000	1
1,2,3,4,7,8,9-HpCDF	3.41		0.628	3.05	1.02	1.000	1
OCDF	153		1.45	6.10	0.93	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:30
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0170	**Units:**	ng/Kg
Lab Code:	E1801138-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 16:16
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.088g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616381	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	25.3		1.55	1.55	0.81		1
Total Penta-Dioxins	1.67	**J**	0.274	3.05	1.36		1
Total Hexa-Dioxins	103		0.573	3.05	1.31		1
Total Hepta-Dioxins	805		0.646	3.05	1.04		1
Total Tetra-Furans	65.3		1.03	1.03	0.80		1
Total Penta-Furans	12.7		0.223	3.05	1.75		1
Total Hexa-Furans	24.5		0.449	3.05	1.13		1
Total Hepta-Furans	103		0.532	3.05	1.08		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:30
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0170	**Units:**	Percent
Lab Code:	E1801138-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 16:16
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.088g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616381	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	893.200	45		25-164	0.76	1.032
13C-1,2,3,7,8-PeCDD	2000	1266.016	63		25-181	1.60	1.248
13C-1,2,3,4,7,8-HxCDD	2000	1366.570	68		32-141	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1300.549	65		28-130	1.27	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1260.564	63		23-140	1.06	1.072
13C-OCDD	4000	1028.848	26		17-157	0.95	1.144
13C-2,3,7,8-TCDF	2000	1289.301	64		24-169	0.78	0.991
13C-1,2,3,7,8-PeCDF	2000	1316.571	66		24-185	1.59	1.194
13C-2,3,4,7,8-PeCDF	2000	1210.003	61		21-178	1.61	1.235
13C-1,2,3,4,7,8-HxCDF	2000	1282.356	64		26-152	0.53	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1316.939	66		26-123	0.52	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1214.934	61		29-147	0.55	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1226.009	61		28-136	0.52	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	939.907	47		28-143	0.45	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	846.838	42		26-138	0.45	1.085
37Cl-2,3,7,8-TCDD	800	546.442	68		35-197	NA	1.033

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:30
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0170	**Units:**	ng/Kg
Lab Code:	E1801138-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**24.4**	1.55	1.55	1	1	24.4
1,2,3,7,8-PeCDD	**1.73**	0.274	3.05	1	1	1.73
1,2,3,4,7,8-HxCDD	**1.97**	0.564	3.05	1	0.1	0.197
1,2,3,6,7,8-HxCDD	**6.61**	0.612	3.05	1	0.1	0.661
1,2,3,7,8,9-HxCDD	**3.08**	0.546	3.05	1	0.1	0.308
1,2,3,4,6,7,8-HpCDD	**195**	0.646	3.05	1	0.01	1.95
OCDD	**2870**	0.501	6.10	1	0.0003	0.861
2,3,7,8-TCDF	**43.8**	1.03	1.03	1	0.1	4.38
1,2,3,7,8-PeCDF	**2.38**	0.333	3.05	1	0.03	0.0714
2,3,4,7,8-PeCDF	**2.71**	0.359	3.05	1	0.3	0.813
1,2,3,4,7,8-HxCDF	**6.01**	0.419	3.05	1	0.1	0.601
1,2,3,6,7,8-HxCDF	**1.93**	0.413	3.05	1	0.1	0.193
1,2,3,7,8,9-HxCDF	**0.756**	0.519	3.05	1	0.1	0.0756
2,3,4,6,7,8-HxCDF	**2.43**	0.459	3.05	1	0.1	0.243
1,2,3,4,6,7,8-HpCDF	**32.2**	0.457	3.05	1	0.01	0.322
1,2,3,4,7,8,9-HpCDF	**3.41**	0.628	3.05	1	0.01	0.0341
OCDF	**153**	1.45	6.10	1	0.0003	0.0459
		Total TEQ				36.9

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:30
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0170	**Units:**	Percent
Lab Code:	E1801138-003	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	8.057g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	81.3		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:35
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0171	**Units:**	ng/Kg
Lab Code:	E1801138-004	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 17:05
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.599g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616382	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	8.74		1.76	1.76	0.72	1.001	1
1,2,3,7,8-PeCDD	0.473**J**		0.225	2.89	1.66	1.001	1
1,2,3,4,7,8-HxCDD	ND	U	0.232	2.89			1
1,2,3,6,7,8-HxCDD	1.53**J**		0.264	2.89	1.16	1.000	1
1,2,3,7,8,9-HxCDD	0.875**JK**		0.231	2.89	0.92	1.007	1
1,2,3,4,6,7,8-HpCDD	26.1		0.310	2.89	1.03	1.000	1
OCDD	639		0.192	5.78	0.94	1.000	1
2,3,7,8-TCDF	22.8		0.891	0.891	0.81	1.001	1
1,2,3,7,8-PeCDF	0.653**JK**		0.295	2.89	0.87	1.001	1
2,3,4,7,8-PeCDF	ND	U	0.317	2.89			1
1,2,3,4,7,8-HxCDF	1.03**J**		0.136	2.89	1.22	1.000	1
1,2,3,6,7,8-HxCDF	0.600**JK**		0.129	2.89	1.56	1.000	1
1,2,3,7,8,9-HxCDF	ND	U	0.164	2.89			1
2,3,4,6,7,8-HxCDF	0.317**JK**		0.140	2.89	0.85	1.000	1
1,2,3,4,6,7,8-HpCDF	4.89**K**		0.234	2.89	1.21	1.000	1
1,2,3,4,7,8,9-HpCDF	0.436**JK**		0.300	2.89	2.14	1.000	1
OCDF	29.1		0.627	5.78	0.86	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:35
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0171	**Units:**	ng/Kg
Lab Code:	E1801138-004	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 17:05
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.599g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616382	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	8.74		1.76	1.76	0.72		1
Total Penta-Dioxins	1.07**J**		0.225	2.89	1.64		1
Total Hexa-Dioxins	9.90		0.242	2.89	1.22		1
Total Hepta-Dioxins	70.6		0.310	2.89	1.04		1
Total Tetra-Furans	32.3		0.891	0.891	0.83		1
Total Penta-Furans	0.838**J**		0.306	2.89	1.54		1
Total Hexa-Furans	4.86		0.141	2.89	1.33		1
Total Hepta-Furans	ND	U	0.264	2.89			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:35
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0171	**Units:**	Percent
Lab Code:	E1801138-004	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 17:05
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.599g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616382	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	859.905	43		25-164	0.78	1.032
13C-1,2,3,7,8-PeCDD	2000	1309.299	65		25-181	1.59	1.248
13C-1,2,3,4,7,8-HxCDD	2000	1368.963	68		32-141	1.25	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1384.498	69		28-130	1.23	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1409.517	70		23-140	1.05	1.072
13C-OCDD	4000	1419.904	35		17-157	0.95	1.144
13C-2,3,7,8-TCDF	2000	1238.593	62		24-169	0.79	0.991
13C-1,2,3,7,8-PeCDF	2000	1336.674	67		24-185	1.57	1.194
13C-2,3,4,7,8-PeCDF	2000	1248.044	62		21-178	1.61	1.235
13C-1,2,3,4,7,8-HxCDF	2000	1317.679	66		26-152	0.52	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1390.147	70		26-123	0.52	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1265.882	63		29-147	0.53	1.009
13C-2,3,4,6,7,8-HxCDF	2000	1265.369	63		28-136	0.52	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	1055.619	53		28-143	0.46	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1023.143	51		26-138	0.45	1.085
37Cl-2,3,7,8-TCDD	800	548.995	69		35-197	NA	1.033

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:35
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0171	**Units:**	ng/Kg
Lab Code:	E1801138-004	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**8.74**	1.76	1.76	1	1	8.74
1,2,3,7,8-PeCDD	**0.473**	0.225	2.89	1	1	0.473
1,2,3,4,7,8-HxCDD	ND	0.232	2.89	1	0.1	
1,2,3,6,7,8-HxCDD	**1.53**	0.264	2.89	1	0.1	0.153
1,2,3,7,8,9-HxCDD	**0.875**	0.231	2.89	1	0.1	0.0875
1,2,3,4,6,7,8-HpCDD	**26.1**	0.310	2.89	1	0.01	0.261
OCDD	**639**	0.192	5.78	1	0.0003	0.192
2,3,7,8-TCDF	**22.8**	0.891	0.891	1	0.1	2.28
1,2,3,7,8-PeCDF	**0.653**	0.295	2.89	1	0.03	0.0196
2,3,4,7,8-PeCDF	ND	0.317	2.89	1	0.3	
1,2,3,4,7,8-HxCDF	**1.03**	0.136	2.89	1	0.1	0.103
1,2,3,6,7,8-HxCDF	**0.600**	0.129	2.89	1	0.1	0.0600
1,2,3,7,8,9-HxCDF	ND	0.164	2.89	1	0.1	
2,3,4,6,7,8-HxCDF	**0.317**	0.140	2.89	1	0.1	0.0317
1,2,3,4,6,7,8-HpCDF	**4.89**	0.234	2.89	1	0.01	0.0489
1,2,3,4,7,8,9-HpCDF	**0.436**	0.300	2.89	1	0.01	0.00436
OCDF	**29.1**	0.627	5.78	1	0.0003	0.00873
		Total TEQ				12.5

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:35
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0171	**Units:**	Percent
Lab Code:	E1801138-004	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	8.018g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	81.6		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:40
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0172	**Units:**	ng/Kg
Lab Code:	E1801138-005	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 17:53
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.538g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616383	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	88.2		1.43	1.43	0.76	1.001	1
1,2,3,7,8-PeCDD	0.889	**JK**	0.246	2.69	3.71	1.001	1
1,2,3,4,7,8-HxCDD	1.26	**JK**	0.264	2.69	1.57	1.000	1
1,2,3,6,7,8-HxCDD	6.87		0.293	2.69	1.35	1.000	1
1,2,3,7,8,9-HxCDD	3.10	**K**	0.259	2.69	1.49	1.008	1
1,2,3,4,6,7,8-HpCDD	149		0.291	2.69	1.07	1.000	1
OCDD	7700	**E**	0.260	5.37	0.90	1.000	1
2,3,7,8-TCDF	165		0.796	0.796	0.78	1.001	1
1,2,3,7,8-PeCDF	8.00		0.613	2.69	1.62	1.001	1
2,3,4,7,8-PeCDF	7.26		0.630	2.69	1.55	1.001	1
1,2,3,4,7,8-HxCDF	15.4		0.284	2.69	1.28	1.000	1
1,2,3,6,7,8-HxCDF	4.18		0.276	2.69	1.30	1.000	1
1,2,3,7,8,9-HxCDF	1.47	**JK**	0.369	2.69	1.03	1.001	1
2,3,4,6,7,8-HxCDF	2.64	**J**	0.316	2.69	1.18	1.000	1
1,2,3,4,6,7,8-HpCDF	38.5		0.302	2.69	0.99	1.000	1
1,2,3,4,7,8,9-HpCDF	3.96	**K**	0.418	2.69	0.84	1.000	1
OCDF	163		0.902	5.37	0.88	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:40
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0172	**Units:**	ng/Kg
Lab Code:	E1801138-005	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 17:53
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.538g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616383	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	92.9		1.43	1.43	0.77		1
Total Penta-Dioxins	ND	U	0.246	2.69			1
Total Hexa-Dioxins	49.6		0.272	2.69	1.18		1
Total Hepta-Dioxins	361		0.291	2.69	1.04		1
Total Tetra-Furans	272		0.796	0.796	0.76		1
Total Penta-Furans	25.1		0.621	2.69	1.76		1
Total Hexa-Furans	53.9		0.308	2.69	1.13		1
Total Hepta-Furans	121		0.353	2.69	0.99		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:40
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0172	**Units:**	Percent
Lab Code:	E1801138-005	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 17:53
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.538g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616383	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	822.296	41		25-164	0.78	1.032
13C-1,2,3,7,8-PeCDD	2000	1181.255	59		25-181	1.62	1.248
13C-1,2,3,4,7,8-HxCDD	2000	1266.917	63		32-141	1.32	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1259.284	63		28-130	1.28	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1152.630	58		23-140	1.07	1.072
13C-OCDD	4000	993.205	25		17-157	0.91	1.144
13C-2,3,7,8-TCDF	2000	1186.886	59		24-169	0.80	0.991
13C-1,2,3,7,8-PeCDF	2000	1135.953	57		24-185	1.59	1.194
13C-2,3,4,7,8-PeCDF	2000	1156.801	58		21-178	1.59	1.235
13C-1,2,3,4,7,8-HxCDF	2000	1243.229	62		26-152	0.54	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1256.294	63		26-123	0.53	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1124.502	56		29-147	0.52	1.009
13C-2,3,4,6,7,8-HxCDF	2000	1138.521	57		28-136	0.55	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	907.951	45		28-143	0.46	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	833.569	42		26-138	0.45	1.085
37Cl-2,3,7,8-TCDD	800	547.363	68		35-197	NA	1.033

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:40
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0172	**Units:**	ng/Kg
Lab Code:	E1801138-005	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**88.2**	1.43	1.43	1	1	88.2
1,2,3,7,8-PeCDD	**0.889**	0.246	2.69	1	1	0.889
1,2,3,4,7,8-HxCDD	**1.26**	0.264	2.69	1	0.1	0.126
1,2,3,6,7,8-HxCDD	**6.87**	0.293	2.69	1	0.1	0.687
1,2,3,7,8,9-HxCDD	**3.10**	0.259	2.69	1	0.1	0.310
1,2,3,4,6,7,8-HpCDD	**149**	0.291	2.69	1	0.01	1.49
OCDD	**7700**	0.260	5.37	1	0.0003	2.31
2,3,7,8-TCDF	**165**	0.796	0.796	1	0.1	16.5
1,2,3,7,8-PeCDF	**8.00**	0.613	2.69	1	0.03	0.240
2,3,4,7,8-PeCDF	**7.26**	0.630	2.69	1	0.3	2.18
1,2,3,4,7,8-HxCDF	**15.4**	0.284	2.69	1	0.1	1.54
1,2,3,6,7,8-HxCDF	**4.18**	0.276	2.69	1	0.1	0.418
1,2,3,7,8,9-HxCDF	**1.47**	0.369	2.69	1	0.1	0.147
2,3,4,6,7,8-HxCDF	**2.64**	0.316	2.69	1	0.1	0.264
1,2,3,4,6,7,8-HpCDF	**38.5**	0.302	2.69	1	0.01	0.385
1,2,3,4,7,8,9-HpCDF	**3.96**	0.418	2.69	1	0.01	0.0396
OCDF	**163**	0.902	5.37	1	0.0003	0.0489
		Total TEQ				116

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:40
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0172	**Units:**	Percent
Lab Code:	E1801138-005	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	5.718g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	88.3		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:45
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0173	**Units:**	ng/Kg
Lab Code:	E1801138-006	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 15:39
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.143g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616409	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	22100		763	763	0.73	1.001	100
1,2,3,7,8-PeCDD	83.1		1.61	3.73	1.65	1.001	1
1,2,3,4,7,8-HxCDD	3.33	**JK**	0.496	3.73	0.88	1.000	1
1,2,3,6,7,8-HxCDD	21.6		0.565	3.73	1.36	1.000	1
1,2,3,7,8,9-HxCDD	8.62		0.492	3.73	1.23	1.007	1
1,2,3,4,6,7,8-HpCDD	573		1.24	3.73	1.06	1.000	1
OCDD	36300		234	747	0.88	1.001	100
2,3,7,8-TCDF	26800		317	317	0.78	1.001	100
1,2,3,7,8-PeCDF	836		0.958	3.73	1.60	1.001	1
2,3,4,7,8-PeCDF	644		1.13	3.73	1.57	1.001	1
1,2,3,4,7,8-HxCDF	1410		0.725	3.73	1.25	1.000	1
1,2,3,6,7,8-HxCDF	349		0.735	3.73	1.27	1.000	1
1,2,3,7,8,9-HxCDF	119		0.852	3.73	1.25	1.001	1
2,3,4,6,7,8-HxCDF	72.7		0.780	3.73	1.25	1.000	1
1,2,3,4,6,7,8-HpCDF	512		0.337	3.73	1.07	1.000	1
1,2,3,4,7,8,9-HpCDF	153		0.459	3.73	1.02	1.000	1
OCDF	3510		1.26	7.47	0.88	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:45
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0173	**Units:**	ng/Kg
Lab Code:	E1801138-006	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 15:39
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.143g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616409	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	12400		2.32	2.32	0.80		1
Total Penta-Dioxins	111		1.61	3.73	1.64		1
Total Hexa-Dioxins	211		0.516	3.73	1.27		1
Total Hepta-Dioxins	1270		1.24	3.73	1.05		1
Total Tetra-Furans	39400		0.910	0.910	0.79		1
Total Penta-Furans	2360		1.04	3.73	1.47		1
Total Hexa-Furans	2210		0.771	3.73	1.21		1
Total Hepta-Furans	970		0.391	3.73	1.07		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:45
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0173	**Units:**	Percent
Lab Code:	E1801138-006	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 18:42
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.143g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616384	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	874.919	44		25-164	0.83	1.029
13C-1,2,3,7,8-PeCDD	2000	1229.996	61		25-181	1.59	1.241
13C-1,2,3,4,7,8-HxCDD	2000	1416.650	71		32-141	1.29	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1284.215	64		28-130	1.26	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1156.392	58		23-140	1.09	1.072
13C-OCDD	4000	989.465	25		17-157	0.91	1.144
13C-2,3,7,8-TCDF	2000	1325.857	66		24-169	0.78	0.990
13C-1,2,3,7,8-PeCDF	2000	1264.559	63		24-185	1.62	1.189
13C-2,3,4,7,8-PeCDF	2000	1189.595	59		21-178	1.59	1.229
13C-1,2,3,4,7,8-HxCDF	2000	1314.592	66		26-152	0.53	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1257.010	63		26-123	0.54	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1237.615	62		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1267.788	63		28-136	0.54	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	896.871	45		28-143	0.47	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	831.108	42		26-138	0.43	1.084
37Cl-2,3,7,8-TCDD	800	714.225	89		35-197	NA	1.031

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:45
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0173	**Units:**	ng/Kg
Lab Code:	E1801138-006	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**22100**	763	763	100	1	22100
1,2,3,7,8-PeCDD	**83.1**	1.61	3.73	1	1	83.1
1,2,3,4,7,8-HxCDD	**3.33**	0.496	3.73	1	0.1	0.333
1,2,3,6,7,8-HxCDD	**21.6**	0.565	3.73	1	0.1	2.16
1,2,3,7,8,9-HxCDD	**8.62**	0.492	3.73	1	0.1	0.862
1,2,3,4,6,7,8-HpCDD	**573**	1.24	3.73	1	0.01	5.73
OCDD	**36300**	234	747	100	0.0003	10.9
2,3,7,8-TCDF	**26800**	317	317	100	0.1	2680
1,2,3,7,8-PeCDF	**836**	0.958	3.73	1	0.03	25.1
2,3,4,7,8-PeCDF	**644**	1.13	3.73	1	0.3	193
1,2,3,4,7,8-HxCDF	**1410**	0.725	3.73	1	0.1	141
1,2,3,6,7,8-HxCDF	**349**	0.735	3.73	1	0.1	34.9
1,2,3,7,8,9-HxCDF	**119**	0.852	3.73	1	0.1	11.9
2,3,4,6,7,8-HxCDF	**72.7**	0.780	3.73	1	0.1	7.27
1,2,3,4,6,7,8-HpCDF	**512**	0.337	3.73	1	0.01	5.12
1,2,3,4,7,8,9-HpCDF	**153**	0.459	3.73	1	0.01	1.53
OCDF	**3510**	1.26	7.47	1	0.0003	1.05
		Total TEQ				25300

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:45
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0173	**Units:**	Percent
Lab Code:	E1801138-006	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	6.842g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	66.0		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0174	**Units:**	ng/Kg
Lab Code:	E1801138-007	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 16:28
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.583g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616410	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	609		90.1	90.1	0.66	1.001	10
1,2,3,7,8-PeCDD	6.51	**K**	0.817	3.89	1.20	1.001	1
1,2,3,4,7,8-HxCDD	3.42	**J**	0.669	3.89	1.34	1.000	1
1,2,3,6,7,8-HxCDD	15.0		0.724	3.89	1.11	1.000	1
1,2,3,7,8,9-HxCDD	8.23		0.647	3.89	1.16	1.007	1
1,2,3,4,6,7,8-HpCDD	232		0.828	3.89	1.00	1.000	1
OCDD	4810		0.532	7.78	0.90	1.000	1
2,3,7,8-TCDF	818		34.5	34.5	0.83	1.001	10
1,2,3,7,8-PeCDF	23.2		0.692	3.89	1.43	1.001	1
2,3,4,7,8-PeCDF	28.5		0.731	3.89	1.49	1.001	1
1,2,3,4,7,8-HxCDF	34.9		0.660	3.89	1.26	1.000	1
1,2,3,6,7,8-HxCDF	10.9		0.692	3.89	1.36	1.000	1
1,2,3,7,8,9-HxCDF	5.26		0.818	3.89	1.31	1.001	1
2,3,4,6,7,8-HxCDF	7.56		0.722	3.89	1.25	1.001	1
1,2,3,4,6,7,8-HpCDF	145		0.909	3.89	1.00	1.000	1
1,2,3,4,7,8,9-HpCDF	14.9		1.33	3.89	1.09	1.000	1
OCDF	11100		98.8	98.8	0.92	1.005	10

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0174	**Units:**	ng/Kg
Lab Code:	E1801138-007	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 16:28
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.583g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616410	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	540		2.57	2.57	0.72		1
Total Penta-Dioxins	10.3		0.817	3.89	1.62		1
Total Hexa-Dioxins	159		0.678	3.89	1.26		1
Total Hepta-Dioxins	589		0.828	3.89	1.04		1
Total Tetra-Furans	2000		1.02	1.02	0.67		1
Total Penta-Furans	143		0.711	3.89	1.68		1
Total Hexa-Furans	166		0.720	3.89	1.22		1
Total Hepta-Furans	333		1.09	3.89	1.00		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0174	**Units:**	Percent
Lab Code:	E1801138-007	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 19:31
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.583g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616385	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	773.743	39		25-164	0.77	1.031
13C-1,2,3,7,8-PeCDD	2000	1049.204	52		25-181	1.52	1.245
13C-1,2,3,4,7,8-HxCDD	2000	1168.904	58		32-141	1.26	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1076.176	54		28-130	1.24	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	988.430	49		23-140	1.00	1.072
13C-OCDD	4000	804.199	20		17-157	0.93	1.144
13C-2,3,7,8-TCDF	2000	1139.597	57		24-169	0.81	0.990
13C-1,2,3,7,8-PeCDF	2000	1100.196	55		24-185	1.60	1.191
13C-2,3,4,7,8-PeCDF	2000	1035.317	52		21-178	1.64	1.233
13C-1,2,3,4,7,8-HxCDF	2000	1103.609	55		26-152	0.51	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1082.582	54		26-123	0.52	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1032.258	52		29-147	0.54	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1053.839	53		28-136	0.54	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	791.855	40		28-143	0.44	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	679.600	34		26-138	0.44	1.084
37Cl-2,3,7,8-TCDD	800	574.851	72		35-197	NA	1.032

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0174	**Units:**	ng/Kg
Lab Code:	E1801138-007	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**609**	90.1	90.1	10	1	609
1,2,3,7,8-PeCDD	**6.51**	0.817	3.89	1	1	6.51
1,2,3,4,7,8-HxCDD	**3.42**	0.669	3.89	1	0.1	0.342
1,2,3,6,7,8-HxCDD	**15.0**	0.724	3.89	1	0.1	1.50
1,2,3,7,8,9-HxCDD	**8.23**	0.647	3.89	1	0.1	0.823
1,2,3,4,6,7,8-HpCDD	**232**	0.828	3.89	1	0.01	2.32
OCDD	**4810**	0.532	7.78	1	0.0003	1.44
2,3,7,8-TCDF	**818**	34.5	34.5	10	0.1	81.8
1,2,3,7,8-PeCDF	**23.2**	0.692	3.89	1	0.03	0.696
2,3,4,7,8-PeCDF	**28.5**	0.731	3.89	1	0.3	8.55
1,2,3,4,7,8-HxCDF	**34.9**	0.660	3.89	1	0.1	3.49
1,2,3,6,7,8-HxCDF	**10.9**	0.692	3.89	1	0.1	1.09
1,2,3,7,8,9-HxCDF	**5.26**	0.818	3.89	1	0.1	0.526
2,3,4,6,7,8-HxCDF	**7.56**	0.722	3.89	1	0.1	0.756
1,2,3,4,6,7,8-HpCDF	**145**	0.909	3.89	1	0.01	1.45
1,2,3,4,7,8,9-HpCDF	**14.9**	1.33	3.89	1	0.01	0.149
OCDF	**11100**	98.8	98.8	10	0.0003	3.33
		Total TEQ				724

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 10:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0174	**Units:**	Percent
Lab Code:	E1801138-007	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	5.772g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	60.7		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:40
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0176	**Units:**	ng/Kg
Lab Code:	E1801138-008	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 20:21
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.310g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616386	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	17.5	**K**	1.58	1.58	0.94	1.001	1
1,2,3,7,8-PeCDD	1.26	**JK**	0.304	2.97	1.04	1.001	1
1,2,3,4,7,8-HxCDD	1.11	**JK**	0.287	2.97	2.06	1.000	1
1,2,3,6,7,8-HxCDD	5.11		0.307	2.97	1.43	1.000	1
1,2,3,7,8,9-HxCDD	2.96	**JK**	0.276	2.97	1.76	1.007	1
1,2,3,4,6,7,8-HpCDD	97.0		0.265	2.97	1.03	1.000	1
OCDD	2060		0.313	5.94	0.90	1.000	1
2,3,7,8-TCDF	39.4		0.493	0.594	0.83	1.001	1
1,2,3,7,8-PeCDF	2.92	**J**	0.252	2.97	1.66	1.000	1
2,3,4,7,8-PeCDF	2.90	**J**	0.266	2.97	1.44	1.001	1
1,2,3,4,7,8-HxCDF	7.56		0.255	2.97	1.29	1.000	1
1,2,3,6,7,8-HxCDF	2.46	**J**	0.249	2.97	1.35	1.000	1
1,2,3,7,8,9-HxCDF	0.634	**JK**	0.317	2.97	2.15	1.001	1
2,3,4,6,7,8-HxCDF	2.05	**J**	0.277	2.97	1.21	1.000	1
1,2,3,4,6,7,8-HpCDF	25.5		0.227	2.97	1.13	1.000	1
1,2,3,4,7,8,9-HpCDF	3.18		0.311	2.97	0.97	1.000	1
OCDF	119		0.677	5.94	0.90	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:40
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0176	**Units:**	ng/Kg
Lab Code:	E1801138-008	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 20:21
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.310g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616386	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	1.58	1.58			1
Total Penta-Dioxins	1.98**J**		0.304	2.97	1.56		1
Total Hexa-Dioxins	25.7		0.290	2.97	1.11		1
Total Hepta-Dioxins	239		0.265	2.97	1.03		1
Total Tetra-Furans	54.0		0.493	0.594	0.67		1
Total Penta-Furans	18.7		0.259	2.97	1.52		1
Total Hexa-Furans	35.7		0.272	2.97	1.12		1
Total Hepta-Furans	66.7		0.264	2.97	1.13		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:40
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0176	**Units:**	Percent
Lab Code:	E1801138-008	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 20:21
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.310g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616386	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	840.456	42		25-164	0.82	1.031
13C-1,2,3,7,8-PeCDD	2000	1228.984	61		25-181	1.57	1.247
13C-1,2,3,4,7,8-HxCDD	2000	1419.704	71		32-141	1.31	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1364.969	68		28-130	1.22	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1337.347	67		23-140	1.09	1.072
13C-OCDD	4000	1262.937	32		17-157	0.93	1.144
13C-2,3,7,8-TCDF	2000	1263.209	63		24-169	0.82	0.991
13C-1,2,3,7,8-PeCDF	2000	1316.844	66		24-185	1.61	1.194
13C-2,3,4,7,8-PeCDF	2000	1217.912	61		21-178	1.58	1.234
13C-1,2,3,4,7,8-HxCDF	2000	1354.011	68		26-152	0.52	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1448.193	72		26-123	0.52	0.970
13C-1,2,3,7,8,9-HxCDF	2000	1270.472	64		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1276.350	64		28-136	0.55	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1044.392	52		28-143	0.46	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	968.840	48		26-138	0.45	1.085
37Cl-2,3,7,8-TCDD	800	535.683	67		35-197	NA	1.032

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:40
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0176	**Units:**	ng/Kg
Lab Code:	E1801138-008	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**17.5**	1.58	1.58	1	1	17.5
1,2,3,7,8-PeCDD	**1.26**	0.304	2.97	1	1	1.26
1,2,3,4,7,8-HxCDD	**1.11**	0.287	2.97	1	0.1	0.111
1,2,3,6,7,8-HxCDD	**5.11**	0.307	2.97	1	0.1	0.511
1,2,3,7,8,9-HxCDD	**2.96**	0.276	2.97	1	0.1	0.296
1,2,3,4,6,7,8-HpCDD	**97.0**	0.265	2.97	1	0.01	0.970
OCDD	**2060**	0.313	5.94	1	0.0003	0.618
2,3,7,8-TCDF	**39.4**	0.493	0.594	1	0.1	3.94
1,2,3,7,8-PeCDF	**2.92**	0.252	2.97	1	0.03	0.0876
2,3,4,7,8-PeCDF	**2.90**	0.266	2.97	1	0.3	0.870
1,2,3,4,7,8-HxCDF	**7.56**	0.255	2.97	1	0.1	0.756
1,2,3,6,7,8-HxCDF	**2.46**	0.249	2.97	1	0.1	0.246
1,2,3,7,8,9-HxCDF	**0.634**	0.317	2.97	1	0.1	0.0634
2,3,4,6,7,8-HxCDF	**2.05**	0.277	2.97	1	0.1	0.205
1,2,3,4,6,7,8-HpCDF	**25.5**	0.227	2.97	1	0.01	0.255
1,2,3,4,7,8,9-HpCDF	**3.18**	0.311	2.97	1	0.01	0.0318
OCDF	**119**	0.677	5.94	1	0.0003	0.0357
		Total TEQ				27.8

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:40
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0176	**Units:**	Percent
Lab Code:	E1801138-008	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	6.916g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	81.6		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:45
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0177	**Units:**	ng/Kg
Lab Code:	E1801138-009	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 21:10
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.970g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616387	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	11.6		1.30	1.30	0.82	1.001	1
1,2,3,7,8-PeCDD	1.04	**JK**	0.205	2.76	1.02	1.001	1
1,2,3,4,7,8-HxCDD	0.698	**JK**	0.184	2.76	0.94	1.000	1
1,2,3,6,7,8-HxCDD	3.08		0.213	2.76	1.24	1.000	1
1,2,3,7,8,9-HxCDD	1.96	**JK**	0.184	2.76	1.01	1.007	1
1,2,3,4,6,7,8-HpCDD	45.5		0.635	2.76	1.03	1.001	1
OCDD	1030		0.307	5.52	0.88	1.000	1
2,3,7,8-TCDF	29.0		0.703	0.703	0.74	1.001	1
1,2,3,7,8-PeCDF	1.26	**JK**	0.224	2.76	1.23	1.001	1
2,3,4,7,8-PeCDF	1.42	**J**	0.230	2.76	1.68	1.001	1
1,2,3,4,7,8-HxCDF	2.33	**JK**	0.152	2.76	0.95	1.000	1
1,2,3,6,7,8-HxCDF	0.916	**JK**	0.152	2.76	1.56	1.000	1
1,2,3,7,8,9-HxCDF	0.475	**BJK**	0.176	2.76	1.88	1.001	1
2,3,4,6,7,8-HxCDF	0.922	**JK**	0.170	2.76	1.48	1.000	1
1,2,3,4,6,7,8-HpCDF	9.44	**K**	0.277	2.76	0.87	1.000	1
1,2,3,4,7,8,9-HpCDF	0.844	**J**	0.339	2.76	0.88	1.000	1
OCDF	64.5		0.894	5.52	0.88	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:45
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0177	**Units:**	ng/Kg
Lab Code:	E1801138-009	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 21:10
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.970g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616387	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	11.6		1.30	1.30	0.82		1
Total Penta-Dioxins	ND	U	0.205	2.76			1
Total Hexa-Dioxins	23.2		0.193	2.76	1.30		1
Total Hepta-Dioxins	127		0.635	2.76	1.02		1
Total Tetra-Furans	33.3		0.703	0.703	0.74		1
Total Penta-Furans	3.52		0.227	2.76	1.61		1
Total Hexa-Furans	0.620**J**		0.162	2.76	1.31		1
Total Hepta-Furans	18.7		0.306	2.76	0.97		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:45
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0177	**Units:**	Percent
Lab Code:	E1801138-009	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 21:10
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.970g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616387	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	852.069	43		25-164	0.84	1.032
13C-1,2,3,7,8-PeCDD	2000	1240.526	62		25-181	1.59	1.247
13C-1,2,3,4,7,8-HxCDD	2000	1374.035	69		32-141	1.27	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1268.563	63		28-130	1.25	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1276.028	64		23-140	1.10	1.072
13C-OCDD	4000	1273.618	32		17-157	0.92	1.144
13C-2,3,7,8-TCDF	2000	1256.795	63		24-169	0.81	0.991
13C-1,2,3,7,8-PeCDF	2000	1301.114	65		24-185	1.61	1.193
13C-2,3,4,7,8-PeCDF	2000	1228.469	61		21-178	1.58	1.235
13C-1,2,3,4,7,8-HxCDF	2000	1227.384	61		26-152	0.53	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1261.214	63		26-123	0.52	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1218.774	61		29-147	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1093.501	55		28-136	0.54	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	922.316	46		28-143	0.45	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	937.420	47		26-138	0.44	1.085
37Cl-2,3,7,8-TCDD	800	548.892	69		35-197	NA	1.033

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:45
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0177	**Units:**	ng/Kg
Lab Code:	E1801138-009	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**11.6**	1.30	1.30	1	1	11.6
1,2,3,7,8-PeCDD	**1.04**	0.205	2.76	1	1	1.04
1,2,3,4,7,8-HxCDD	**0.698**	0.184	2.76	1	0.1	0.0698
1,2,3,6,7,8-HxCDD	**3.08**	0.213	2.76	1	0.1	0.308
1,2,3,7,8,9-HxCDD	**1.96**	0.184	2.76	1	0.1	0.196
1,2,3,4,6,7,8-HpCDD	**45.5**	0.635	2.76	1	0.01	0.455
OCDD	**1030**	0.307	5.52	1	0.0003	0.309
2,3,7,8-TCDF	**29.0**	0.703	0.703	1	0.1	2.90
1,2,3,7,8-PeCDF	**1.26**	0.224	2.76	1	0.03	0.0378
2,3,4,7,8-PeCDF	**1.42**	0.230	2.76	1	0.3	0.426
1,2,3,4,7,8-HxCDF	**2.33**	0.152	2.76	1	0.1	0.233
1,2,3,6,7,8-HxCDF	**0.916**	0.152	2.76	1	0.1	0.0916
1,2,3,7,8,9-HxCDF	**0.475**	0.176	2.76	1	0.1	0.0475
2,3,4,6,7,8-HxCDF	**0.922**	0.170	2.76	1	0.1	0.0922
1,2,3,4,6,7,8-HpCDF	**9.44**	0.277	2.76	1	0.01	0.0944
1,2,3,4,7,8,9-HpCDF	**0.844**	0.339	2.76	1	0.01	0.00844
OCDF	**64.5**	0.894	5.52	1	0.0003	0.0194
		Total TEQ				17.9

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:45
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0177	**Units:**	Percent
Lab Code:	E1801138-009	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	7.562g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	82.6		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0178	**Units:**	ng/Kg
Lab Code:	E1801138-010	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 14:15
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.445g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519836	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	24.8		0.436	0.595	0.77	1.001	1
1,2,3,7,8-PeCDD	1.25**JK**		0.154	2.97	1.15	1.000	1
1,2,3,4,7,8-HxCDD	0.962**J**		0.204	2.97	1.22	1.000	1
1,2,3,6,7,8-HxCDD	3.36		0.210	2.97	1.21	1.000	1
1,2,3,7,8,9-HxCDD	2.60**J**		0.202	2.97	1.29	1.007	1
1,2,3,4,6,7,8-HpCDD	84.4		0.146	2.97	1.08	1.000	1
OCDD	2160		0.403	5.95	0.90	1.000	1
2,3,7,8-TCDF	45.5		0.223	0.595	0.76	1.001	1
1,2,3,7,8-PeCDF	2.39**J**		0.194	2.97	1.69	1.001	1
2,3,4,7,8-PeCDF	2.27**J**		0.208	2.97	1.35	1.001	1
1,2,3,4,7,8-HxCDF	4.35		0.240	2.97	1.19	1.000	1
1,2,3,6,7,8-HxCDF	1.17**JK**		0.235	2.97	0.99	1.000	1
1,2,3,7,8,9-HxCDF	0.847**J**		0.293	2.97	1.37	1.000	1
2,3,4,6,7,8-HxCDF	1.20**J**		0.259	2.97	1.09	1.000	1
1,2,3,4,6,7,8-HpCDF	16.0		0.419	2.97	1.02	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.648	2.97			1
OCDF	81.8		0.672	5.95	0.91	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0178	**Units:**	ng/Kg
Lab Code:	E1801138-010	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 14:15
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.445g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519836	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	27.6		0.436	0.595	0.67		1
Total Penta-Dioxins	3.82		0.154	2.97	1.49		1
Total Hexa-Dioxins	37.6		0.205	2.97	1.29		1
Total Hepta-Dioxins	239		0.146	2.97	1.05		1
Total Tetra-Furans	79.6		0.223	0.595	0.80		1
Total Penta-Furans	12.6		0.201	2.97	1.52		1
Total Hexa-Furans	21.0		0.256	2.97	1.26		1
Total Hepta-Furans	52.6		0.524	2.97	1.02		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0178	**Units:**	Percent
Lab Code:	E1801138-010	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 14:15
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.445g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519836	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	856.157	43		25-164	0.81	1.027
13C-1,2,3,7,8-PeCDD	2000	1388.430	69		25-181	1.59	1.231
13C-1,2,3,4,7,8-HxCDD	2000	1144.431	57		32-141	1.29	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1312.751	66		28-130	1.29	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1557.827	78		23-140	1.08	1.077
13C-OCDD	4000	2173.964	54		17-157	0.90	1.161
13C-2,3,7,8-TCDF	2000	1093.317	55		24-169	0.79	0.989
13C-1,2,3,7,8-PeCDF	2000	1301.550	65		24-185	1.57	1.179
13C-2,3,4,7,8-PeCDF	2000	1229.169	61		21-178	1.58	1.218
13C-1,2,3,4,7,8-HxCDF	2000	998.320	50		26-152	0.52	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1126.501	56		26-123	0.51	0.970
13C-1,2,3,7,8,9-HxCDF	2000	1198.504	60		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1080.732	54		28-136	0.50	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1104.497	55		28-143	0.45	1.049
13C-1,2,3,4,7,8,9-HpCDF	2000	1203.557	60		26-138	0.43	1.090
37Cl-2,3,7,8-TCDD	800	551.324	69		35-197	NA	1.027

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0178	**Units:**	ng/Kg
Lab Code:	E1801138-010	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**24.8**	0.436	0.595	1	1	24.8
1,2,3,7,8-PeCDD	**1.25**	0.154	2.97	1	1	1.25
1,2,3,4,7,8-HxCDD	**0.962**	0.204	2.97	1	0.1	0.0962
1,2,3,6,7,8-HxCDD	**3.36**	0.210	2.97	1	0.1	0.336
1,2,3,7,8,9-HxCDD	**2.60**	0.202	2.97	1	0.1	0.260
1,2,3,4,6,7,8-HpCDD	**84.4**	0.146	2.97	1	0.01	0.844
OCDD	**2160**	0.403	5.95	1	0.0003	0.648
2,3,7,8-TCDF	**45.5**	0.223	0.595	1	0.1	4.55
1,2,3,7,8-PeCDF	**2.39**	0.194	2.97	1	0.03	0.0717
2,3,4,7,8-PeCDF	**2.27**	0.208	2.97	1	0.3	0.681
1,2,3,4,7,8-HxCDF	**4.35**	0.240	2.97	1	0.1	0.435
1,2,3,6,7,8-HxCDF	**1.17**	0.235	2.97	1	0.1	0.117
1,2,3,7,8,9-HxCDF	**0.847**	0.293	2.97	1	0.1	0.0847
2,3,4,6,7,8-HxCDF	**1.20**	0.259	2.97	1	0.1	0.120
1,2,3,4,6,7,8-HpCDF	**16.0**	0.419	2.97	1	0.01	0.160
1,2,3,4,7,8,9-HpCDF	ND	0.648	2.97	1	0.01	
OCDF	**81.8**	0.672	5.95	1	0.0003	0.0245
		Total TEQ				34.5

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0178	**Units:**	Percent
Lab Code:	E1801138-010	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	7.911g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	80.5		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0179	**Units:**	ng/Kg
Lab Code:	E1801138-011	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 15:02
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.358g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519837	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	1.89		0.402	0.621	0.84	1.001	1
1,2,3,7,8-PeCDD	1.17**JK**		0.124	3.11	1.26	1.001	1
1,2,3,4,7,8-HxCDD	1.26**J**		0.359	3.11	1.43	1.000	1
1,2,3,6,7,8-HxCDD	4.71		0.379	3.11	1.23	1.000	1
1,2,3,7,8,9-HxCDD	3.99**K**		0.361	3.11	1.01	1.007	1
1,2,3,4,6,7,8-HpCDD	319		5.86	5.86	1.06	1.000	1
OCDD	108000**E**		0.884	6.21	0.90	1.001	1
2,3,7,8-TCDF	3.27		0.190	0.621	0.81	1.001	1
1,2,3,7,8-PeCDF	0.638**JK**		0.180	3.11	1.30	1.000	1
2,3,4,7,8-PeCDF	0.742**JK**		0.191	3.11	1.21	1.002	1
1,2,3,4,7,8-HxCDF	0.965**J**		0.171	3.11	1.19	1.000	1
1,2,3,6,7,8-HxCDF	0.741**JK**		0.172	3.11	0.89	1.000	1
1,2,3,7,8,9-HxCDF	0.452**BJK**		0.249	3.11	1.51	1.000	1
2,3,4,6,7,8-HxCDF	0.818**J**		0.189	3.11	1.29	1.001	1
1,2,3,4,6,7,8-HpCDF	7.03		0.609	3.11	0.96	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	1.11	3.11			1
OCDF	55.1		0.896	6.21	0.82	1.003	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0179	**Units:**	ng/Kg
Lab Code:	E1801138-011	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 15:02
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.358g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519837	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	4.35		0.402	0.621	0.80		1
Total Penta-Dioxins	13.9		0.124	3.11	1.52		1
Total Hexa-Dioxins	212		0.367	3.11	1.23		1
Total Hepta-Dioxins	1030		5.86	5.86	1.07		1
Total Tetra-Furans	11.0		0.190	0.621	0.71		1
Total Penta-Furans	4.12		0.185	3.11	1.44		1
Total Hexa-Furans	9.57		0.192	3.11	1.32		1
Total Hepta-Furans	28.1		0.814	3.11	0.96		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0179	**Units:**	Percent
Lab Code:	E1801138-011	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 15:02
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.358g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519837	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	999.082	50		25-164	0.80	1.027
13C-1,2,3,7,8-PeCDD	2000	1579.875	79		25-181	1.59	1.231
13C-1,2,3,4,7,8-HxCDD	2000	1263.534	63		32-141	1.27	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1537.356	77		28-130	1.28	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1296.838	65		23-140	1.07	1.077
13C-OCDD	4000	1457.322	36		17-157	0.90	1.161
13C-2,3,7,8-TCDF	2000	1288.466	64		24-169	0.80	0.989
13C-1,2,3,7,8-PeCDF	2000	1479.506	74		24-185	1.57	1.180
13C-2,3,4,7,8-PeCDF	2000	1427.458	71		21-178	1.60	1.218
13C-1,2,3,4,7,8-HxCDF	2000	1223.957	61		26-152	0.52	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1271.379	64		26-123	0.52	0.970
13C-1,2,3,7,8,9-HxCDF	2000	1215.215	61		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1246.605	62		28-136	0.52	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1043.964	52		28-143	0.43	1.049
13C-1,2,3,4,7,8,9-HpCDF	2000	925.912	46		26-138	0.44	1.090
37Cl-2,3,7,8-TCDD	800	632.114	79		35-197	NA	1.028

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0179	**Units:**	ng/Kg
Lab Code:	E1801138-011	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**1.89**	0.402	0.621	1	1	1.89
1,2,3,7,8-PeCDD	**1.17**	0.124	3.11	1	1	1.17
1,2,3,4,7,8-HxCDD	**1.26**	0.359	3.11	1	0.1	0.126
1,2,3,6,7,8-HxCDD	**4.71**	0.379	3.11	1	0.1	0.471
1,2,3,7,8,9-HxCDD	**3.99**	0.361	3.11	1	0.1	0.399
1,2,3,4,6,7,8-HpCDD	**319**	5.86	5.86	1	0.01	3.19
OCDD	**108000**	0.884	6.21	1	0.0003	32.4
2,3,7,8-TCDF	**3.27**	0.190	0.621	1	0.1	0.327
1,2,3,7,8-PeCDF	**0.638**	0.180	3.11	1	0.03	0.0191
2,3,4,7,8-PeCDF	**0.742**	0.191	3.11	1	0.3	0.223
1,2,3,4,7,8-HxCDF	**0.965**	0.171	3.11	1	0.1	0.0965
1,2,3,6,7,8-HxCDF	**0.741**	0.172	3.11	1	0.1	0.0741
1,2,3,7,8,9-HxCDF	**0.452**	0.249	3.11	1	0.1	0.0452
2,3,4,6,7,8-HxCDF	**0.818**	0.189	3.11	1	0.1	0.0818
1,2,3,4,6,7,8-HpCDF	**7.03**	0.609	3.11	1	0.01	0.0703
1,2,3,4,7,8,9-HpCDF	ND	1.11	3.11	1	0.01	
OCDF	**55.1**	0.896	6.21	1	0.0003	0.0165
		Total TEQ				40.6

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 11:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0179	**Units:**	Percent
Lab Code:	E1801138-011	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	7.394g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	77.7		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 12:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0180	**Units:**	ng/Kg
Lab Code:	E1801138-012	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 18:07
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.178g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616412	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	41600		1820	1820	0.80	1.001	200
1,2,3,7,8-PeCDD	141		0.773	5.25	1.54	1.001	1
1,2,3,4,7,8-HxCDD	1.60	**JK**	0.863	5.25	1.64	1.000	1
1,2,3,6,7,8-HxCDD	10.6		0.924	5.25	1.34	1.000	1
1,2,3,7,8,9-HxCDD	4.54	**J**	0.875	5.25	1.14	1.007	1
1,2,3,4,6,7,8-HpCDD	384		1.12	5.25	1.09	1.001	1
OCDD	37500		490	2100	0.79	1.000	200
2,3,7,8-TCDF	62500		812	812	0.81	1.001	200
1,2,3,7,8-PeCDF	2110		4.74	5.25	1.53	1.000	1
2,3,4,7,8-PeCDF	1550		5.05	5.25	1.54	1.001	1
1,2,3,4,7,8-HxCDF	3570		1.45	5.25	1.22	1.000	1
1,2,3,6,7,8-HxCDF	870		1.44	5.25	1.23	1.000	1
1,2,3,7,8,9-HxCDF	303		1.98	5.25	1.22	1.001	1
2,3,4,6,7,8-HxCDF	158		1.64	5.25	1.24	1.000	1
1,2,3,4,6,7,8-HpCDF	776		4.68	5.25	1.01	1.000	1
1,2,3,4,7,8,9-HpCDF	335		7.78	7.78	1.01	1.000	1
OCDF	414		1.78	10.5	0.84	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 12:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0180	**Units:**	ng/Kg
Lab Code:	E1801138-012	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 18:07
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.178g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616412	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	25100		1.22	1.22	0.81		1
Total Penta-Dioxins	175		0.773	5.25	1.69		1
Total Hexa-Dioxins	131		0.889	5.25	1.31		1
Total Hepta-Dioxins	823		1.12	5.25	1.02		1
Total Tetra-Furans	92000		0.921	1.05	0.76		1
Total Penta-Furans	5620		4.89	5.25	1.57		1
Total Hexa-Furans	5300		1.61	5.25	1.23		1
Total Hepta-Furans	1400		6.06	6.06	1.01		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 12:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0180	**Units:**	Percent
Lab Code:	E1801138-012	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 15:51
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.178g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519838	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	730.944	37		25-164	0.80	1.025
13C-1,2,3,7,8-PeCDD	2000	1180.190	59		25-181	1.61	1.225
13C-1,2,3,4,7,8-HxCDD	2000	920.221	46		32-141	1.40	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1034.898	52		28-130	1.17	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1023.614	51		23-140	1.05	1.076
13C-OCDD	4000	1193.449	30		17-157	0.91	1.161
13C-2,3,7,8-TCDF	2000	951.835	48		24-169	0.81	0.988
13C-1,2,3,7,8-PeCDF	2000	1092.195	55		24-185	1.56	1.175
13C-2,3,4,7,8-PeCDF	2000	1033.810	52		21-178	1.60	1.213
13C-1,2,3,4,7,8-HxCDF	2000	847.634	42		26-152	0.54	0.967
13C-1,2,3,6,7,8-HxCDF	2000	914.471	46		26-123	0.50	0.970
13C-1,2,3,7,8,9-HxCDF	2000	921.814	46		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	874.673	44		28-136	0.51	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	781.764	39		28-143	0.45	1.048
13C-1,2,3,4,7,8,9-HpCDF	2000	791.925	40		26-138	0.44	1.089
37Cl-2,3,7,8-TCDD	800	795.906	99		35-197	NA	1.025

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 12:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0180	**Units:**	ng/Kg
Lab Code:	E1801138-012	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**41600**	1820	1820	200	1	41600
1,2,3,7,8-PeCDD	**141**	0.773	5.25	1	1	141
1,2,3,4,7,8-HxCDD	**1.60**	0.863	5.25	1	0.1	0.160
1,2,3,6,7,8-HxCDD	**10.6**	0.924	5.25	1	0.1	1.06
1,2,3,7,8,9-HxCDD	**4.54**	0.875	5.25	1	0.1	0.454
1,2,3,4,6,7,8-HpCDD	**384**	1.12	5.25	1	0.01	3.84
OCDD	**37500**	490	2100	200	0.0003	11.3
2,3,7,8-TCDF	**62500**	812	812	200	0.1	6250
1,2,3,7,8-PeCDF	**2110**	4.74	5.25	1	0.03	63.3
2,3,4,7,8-PeCDF	**1550**	5.05	5.25	1	0.3	465
1,2,3,4,7,8-HxCDF	**3570**	1.45	5.25	1	0.1	357
1,2,3,6,7,8-HxCDF	**870**	1.44	5.25	1	0.1	87.0
1,2,3,7,8,9-HxCDF	**303**	1.98	5.25	1	0.1	30.3
2,3,4,6,7,8-HxCDF	**158**	1.64	5.25	1	0.1	15.8
1,2,3,4,6,7,8-HpCDF	**776**	4.68	5.25	1	0.01	7.76
1,2,3,4,7,8,9-HpCDF	**335**	7.78	7.78	1	0.01	3.35
OCDF	**414**	1.78	10.5	1	0.0003	0.124
		Total TEQ				49000

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/14/18 12:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0180	**Units:**	Percent
Lab Code:	E1801138-012	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	5.948g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	46.8		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 08:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0198	**Units:**	ng/Kg
Lab Code:	E1801138-013	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 17:18
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.378g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616411	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	11.3		2.02	2.02	0.83	1.001	1
1,2,3,7,8-PeCDD	0.737	**JK**	0.490	2.92	3.18	1.000	1
1,2,3,4,7,8-HxCDD	2.29	**J**	0.647	2.92	1.41	1.000	1
1,2,3,6,7,8-HxCDD	7.53		0.706	2.92	1.12	1.000	1
1,2,3,7,8,9-HxCDD	3.24	**K**	0.630	2.92	0.98	1.007	1
1,2,3,4,6,7,8-HpCDD	185		0.230	2.92	1.06	1.000	1
OCDD	3700		0.551	5.83	0.92	1.000	1
2,3,7,8-TCDF	23.2		1.20	1.20	0.85	1.001	1
1,2,3,7,8-PeCDF	2.64	**J**	0.657	2.92	1.44	1.001	1
2,3,4,7,8-PeCDF	3.42	**K**	0.676	2.92	1.96	1.001	1
1,2,3,4,7,8-HxCDF	7.35		0.966	2.92	1.29	1.001	1
1,2,3,6,7,8-HxCDF	3.53		0.938	2.92	1.35	1.000	1
1,2,3,7,8,9-HxCDF	1.58	**J**	1.42	2.92	1.11	1.001	1
2,3,4,6,7,8-HxCDF	3.78		1.11	2.92	1.23	1.000	1
1,2,3,4,6,7,8-HpCDF	46.3		0.327	2.92	1.07	1.000	1
1,2,3,4,7,8,9-HpCDF	4.19		0.512	2.92	1.02	1.000	1
OCDF	158		1.73	5.83	0.98	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 08:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0198	**Units:**	ng/Kg
Lab Code:	E1801138-013	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 17:18
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.378g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616411	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	11.3		2.02	2.02	0.83		1
Total Penta-Dioxins	10.2		0.490	2.92	1.41		1
Total Hexa-Dioxins	68.8		0.660	2.92	1.31		1
Total Hepta-Dioxins	465		0.230	2.92	1.04		1
Total Tetra-Furans	40.5		1.20	1.20	0.80		1
Total Penta-Furans	25.2		0.666	2.92	1.64		1
Total Hexa-Furans	43.4		1.09	2.92	1.13		1
Total Hepta-Furans	132		0.403	2.92	1.07		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 08:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0198	**Units:**	Percent
Lab Code:	E1801138-013	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 17:18
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.378g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616411	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	764.526	38		25-164	0.75	1.031
13C-1,2,3,7,8-PeCDD	2000	1123.047	56		25-181	1.60	1.247
13C-1,2,3,4,7,8-HxCDD	2000	1140.928	57		32-141	1.25	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1224.535	61		28-130	1.27	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	945.496	47		23-140	1.06	1.073
13C-OCDD	4000	682.198	17		17-157	0.95	1.145
13C-2,3,7,8-TCDF	2000	1111.610	56		24-169	0.82	0.990
13C-1,2,3,7,8-PeCDF	2000	1226.017	61		24-185	1.63	1.193
13C-2,3,4,7,8-PeCDF	2000	1162.067	58		21-178	1.62	1.235
13C-1,2,3,4,7,8-HxCDF	2000	1132.099	57		26-152	0.52	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1266.849	63		26-123	0.53	0.971
13C-1,2,3,7,8,9-HxCDF	2000	994.799	50		29-147	0.55	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1074.401	54		28-136	0.52	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	818.527	41		28-143	0.42	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	666.844	33		26-138	0.48	1.085
37Cl-2,3,7,8-TCDD	800	518.428	65		35-197	NA	1.032

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 08:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0198	**Units:**	ng/Kg
Lab Code:	E1801138-013	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**11.3**	2.02	2.02	1	1	11.3
1,2,3,7,8-PeCDD	**0.737**	0.490	2.92	1	1	0.737
1,2,3,4,7,8-HxCDD	**2.29**	0.647	2.92	1	0.1	0.229
1,2,3,6,7,8-HxCDD	**7.53**	0.706	2.92	1	0.1	0.753
1,2,3,7,8,9-HxCDD	**3.24**	0.630	2.92	1	0.1	0.324
1,2,3,4,6,7,8-HpCDD	**185**	0.230	2.92	1	0.01	1.85
OCDD	**3700**	0.551	5.83	1	0.0003	1.11
2,3,7,8-TCDF	**23.2**	1.20	1.20	1	0.1	2.32
1,2,3,7,8-PeCDF	**2.64**	0.657	2.92	1	0.03	0.0792
2,3,4,7,8-PeCDF	**3.42**	0.676	2.92	1	0.3	1.03
1,2,3,4,7,8-HxCDF	**7.35**	0.966	2.92	1	0.1	0.735
1,2,3,6,7,8-HxCDF	**3.53**	0.938	2.92	1	0.1	0.353
1,2,3,7,8,9-HxCDF	**1.58**	1.42	2.92	1	0.1	0.158
2,3,4,6,7,8-HxCDF	**3.78**	1.11	2.92	1	0.1	0.378
1,2,3,4,6,7,8-HpCDF	**46.3**	0.327	2.92	1	0.01	0.463
1,2,3,4,7,8,9-HpCDF	**4.19**	0.512	2.92	1	0.01	0.0419
OCDF	**158**	1.73	5.83	1	0.0003	0.0474
		Total TEQ				21.9

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 08:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0198	**Units:**	Percent
Lab Code:	E1801138-013	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	6.67g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	82.6		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 08:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0199	**Units:**	ng/Kg
Lab Code:	E1801138-014	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 18:56
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.247g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616413	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	16800		682	682	0.85	1.001	100
1,2,3,7,8-PeCDD	52.4		0.208	3.43	1.63	1.001	1
1,2,3,4,7,8-HxCDD	1.10	**J**	0.260	3.43	1.42	1.000	1
1,2,3,6,7,8-HxCDD	8.04		0.286	3.43	1.38	1.000	1
1,2,3,7,8,9-HxCDD	3.09	**J**	0.267	3.43	1.38	1.007	1
1,2,3,4,6,7,8-HpCDD	227		0.435	3.43	1.03	1.000	1
OCDD	4050		2.95	6.85	0.89	1.000	1
2,3,7,8-TCDF	23500		339	339	0.84	1.001	100
1,2,3,7,8-PeCDF	576		0.240	3.43	1.55	1.001	1
2,3,4,7,8-PeCDF	465		0.265	3.43	1.54	1.001	1
1,2,3,4,7,8-HxCDF	1040		1.02	3.43	1.22	1.000	1
1,2,3,6,7,8-HxCDF	242		1.01	3.43	1.21	1.000	1
1,2,3,7,8,9-HxCDF	76.1		1.69	3.43	1.14	1.001	1
2,3,4,6,7,8-HxCDF	41.9		1.14	3.43	1.21	1.000	1
1,2,3,4,6,7,8-HpCDF	298		1.15	3.43	1.00	1.000	1
1,2,3,4,7,8,9-HpCDF	106		2.08	3.43	1.02	1.000	1
OCDF	193		1.35	6.85	0.89	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 08:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0199	**Units:**	ng/Kg
Lab Code:	E1801138-014	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 18:56
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.247g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616413	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	8760		0.584	0.685	0.81		1
Total Penta-Dioxins	70.4		0.208	3.43	1.42		1
Total Hexa-Dioxins	55.9		0.272	3.43	1.25		1
Total Hepta-Dioxins	464		0.435	3.43	1.05		1
Total Tetra-Furans	31700		0.433	0.685	0.76		1
Total Penta-Furans	1570		0.251	3.43	1.43		1
Total Hexa-Furans	1540		1.17	3.43	1.38		1
Total Hepta-Furans	535		1.55	3.43	1.00		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 08:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0199	**Units:**	Percent
Lab Code:	E1801138-014	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 17:28
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.247g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519840	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	843.991	42		25-164	0.80	1.027
13C-1,2,3,7,8-PeCDD	2000	1539.452	77		25-181	1.58	1.223
13C-1,2,3,4,7,8-HxCDD	2000	1215.945	61		32-141	1.39	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1305.494	65		28-130	1.17	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1124.269	56		23-140	1.07	1.075
13C-OCDD	4000	955.024	24		17-157	0.89	1.159
13C-2,3,7,8-TCDF	2000	1273.017	64		24-169	0.79	0.991
13C-1,2,3,7,8-PeCDF	2000	1440.037	72		24-185	1.61	1.173
13C-2,3,4,7,8-PeCDF	2000	1259.331	63		21-178	1.58	1.211
13C-1,2,3,4,7,8-HxCDF	2000	1121.755	56		26-152	0.52	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1152.550	58		26-123	0.52	0.970
13C-1,2,3,7,8,9-HxCDF	2000	962.169	48		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1121.576	56		28-136	0.53	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	903.780	45		28-143	0.45	1.047
13C-1,2,3,4,7,8,9-HpCDF	2000	833.379	42		26-138	0.43	1.088
37Cl-2,3,7,8-TCDD	800	651.942	81		35-197	NA	1.028

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 08:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0199	**Units:**	ng/Kg
Lab Code:	E1801138-014	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**16800**	682	682	100	1	16800
1,2,3,7,8-PeCDD	**52.4**	0.208	3.43	1	1	52.4
1,2,3,4,7,8-HxCDD	**1.10**	0.260	3.43	1	0.1	0.110
1,2,3,6,7,8-HxCDD	**8.04**	0.286	3.43	1	0.1	0.804
1,2,3,7,8,9-HxCDD	**3.09**	0.267	3.43	1	0.1	0.309
1,2,3,4,6,7,8-HpCDD	**227**	0.435	3.43	1	0.01	2.27
OCDD	**4050**	2.95	6.85	1	0.0003	1.22
2,3,7,8-TCDF	**23500**	339	339	100	0.1	2350
1,2,3,7,8-PeCDF	**576**	0.240	3.43	1	0.03	17.3
2,3,4,7,8-PeCDF	**465**	0.265	3.43	1	0.3	140
1,2,3,4,7,8-HxCDF	**1040**	1.02	3.43	1	0.1	104
1,2,3,6,7,8-HxCDF	**242**	1.01	3.43	1	0.1	24.2
1,2,3,7,8,9-HxCDF	**76.1**	1.69	3.43	1	0.1	7.61
2,3,4,6,7,8-HxCDF	**41.9**	1.14	3.43	1	0.1	4.19
1,2,3,4,6,7,8-HpCDF	**298**	1.15	3.43	1	0.01	2.98
1,2,3,4,7,8,9-HpCDF	**106**	2.08	3.43	1	0.01	1.06
OCDF	**193**	1.35	6.85	1	0.0003	0.0579
		Total TEQ				19500

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 08:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0199	**Units:**	Percent
Lab Code:	E1801138-014	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	6.668g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	71.2		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 09:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0200	**Units:**	ng/Kg
Lab Code:	E1801138-015	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 19:45
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.094g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616414	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	3640		88.3	88.3	0.79	1.001	20
1,2,3,7,8-PeCDD	16.0		0.218	3.32	1.59	1.001	1
1,2,3,4,7,8-HxCDD	0.677	**J**	0.405	3.32	1.32	1.001	1
1,2,3,6,7,8-HxCDD	3.27	**J**	0.429	3.32	1.15	1.000	1
1,2,3,7,8,9-HxCDD	1.94	**JK**	0.408	3.32	1.02	1.007	1
1,2,3,4,6,7,8-HpCDD	82.6		0.318	3.32	1.06	1.000	1
OCDD	1830		0.804	6.64	0.89	1.000	1
2,3,7,8-TCDF	5490		54.5	54.5	0.79	1.001	20
1,2,3,7,8-PeCDF	247		0.698	3.32	1.54	1.001	1
2,3,4,7,8-PeCDF	168		0.757	3.32	1.52	1.001	1
1,2,3,4,7,8-HxCDF	425		0.419	3.32	1.20	1.000	1
1,2,3,6,7,8-HxCDF	108		0.408	3.32	1.18	1.000	1
1,2,3,7,8,9-HxCDF	31.9		0.590	3.32	1.22	1.001	1
2,3,4,6,7,8-HxCDF	18.7		0.476	3.32	1.31	1.000	1
1,2,3,4,6,7,8-HpCDF	101		0.716	3.32	1.03	1.000	1
1,2,3,4,7,8,9-HpCDF	38.8		1.25	3.32	0.98	1.000	1
OCDF	298		0.837	6.64	0.88	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 09:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0200	**Units:**	ng/Kg
Lab Code:	E1801138-015	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 19:45
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.094g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616414	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	2480		0.567	0.664	0.81		1
Total Penta-Dioxins	26.1		0.218	3.32	1.44		1
Total Hexa-Dioxins	45.2		0.414	3.32	1.19		1
Total Hepta-Dioxins	205		0.318	3.32	1.07		1
Total Tetra-Furans	9090		0.363	0.664	0.76		1
Total Penta-Furans	638		0.726	3.32	1.67		1
Total Hexa-Furans	635		0.467	3.32	1.31		1
Total Hepta-Furans	188		0.945	3.32	1.03		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 09:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0200	**Units:**	Percent
Lab Code:	E1801138-015	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 18:17
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.094g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519841	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	875.403	44		25-164	0.78	1.026
13C-1,2,3,7,8-PeCDD	2000	1301.631	65		25-181	1.61	1.229
13C-1,2,3,4,7,8-HxCDD	2000	1142.403	57		32-141	1.28	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1193.841	60		28-130	1.25	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1227.340	61		23-140	1.08	1.076
13C-OCDD	4000	1382.582	35		17-157	0.90	1.160
13C-2,3,7,8-TCDF	2000	1132.533	57		24-169	0.79	0.989
13C-1,2,3,7,8-PeCDF	2000	1240.358	62		24-185	1.58	1.177
13C-2,3,4,7,8-PeCDF	2000	1168.841	58		21-178	1.58	1.217
13C-1,2,3,4,7,8-HxCDF	2000	1025.292	51		26-152	0.51	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1080.048	54		26-123	0.52	0.970
13C-1,2,3,7,8,9-HxCDF	2000	1060.906	53		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1034.166	52		28-136	0.51	0.985
13C-1,2,3,4,6,7,8-HpCDF	2000	934.769	47		28-143	0.44	1.048
13C-1,2,3,4,7,8,9-HpCDF	2000	909.057	45		26-138	0.45	1.089
37Cl-2,3,7,8-TCDD	800	599.840	75		35-197	NA	1.027

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 09:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0200	**Units:**	ng/Kg
Lab Code:	E1801138-015	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**3640**	88.3	88.3	20	1	3640
1,2,3,7,8-PeCDD	**16.0**	0.218	3.32	1	1	16.0
1,2,3,4,7,8-HxCDD	**0.677**	0.405	3.32	1	0.1	0.0677
1,2,3,6,7,8-HxCDD	**3.27**	0.429	3.32	1	0.1	0.327
1,2,3,7,8,9-HxCDD	**1.94**	0.408	3.32	1	0.1	0.194
1,2,3,4,6,7,8-HpCDD	**82.6**	0.318	3.32	1	0.01	0.826
OCDD	**1830**	0.804	6.64	1	0.0003	0.549
2,3,7,8-TCDF	**5490**	54.5	54.5	20	0.1	549
1,2,3,7,8-PeCDF	**247**	0.698	3.32	1	0.03	7.41
2,3,4,7,8-PeCDF	**168**	0.757	3.32	1	0.3	50.4
1,2,3,4,7,8-HxCDF	**425**	0.419	3.32	1	0.1	42.5
1,2,3,6,7,8-HxCDF	**108**	0.408	3.32	1	0.1	10.8
1,2,3,7,8,9-HxCDF	**31.9**	0.590	3.32	1	0.1	3.19
2,3,4,6,7,8-HxCDF	**18.7**	0.476	3.32	1	0.1	1.87
1,2,3,4,6,7,8-HpCDF	**101**	0.716	3.32	1	0.01	1.01
1,2,3,4,7,8,9-HpCDF	**38.8**	1.25	3.32	1	0.01	0.388
OCDF	**298**	0.837	6.64	1	0.0003	0.0894
		Total TEQ				4320

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 09:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0200	**Units:**	Percent
Lab Code:	E1801138-015	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	7.998g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	74.6		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 09:05
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0201	**Units:**	ng/Kg
Lab Code:	E1801138-016	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 19:06
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.827g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519842	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	47.6		0.619	0.619	0.80	1.001	1
1,2,3,7,8-PeCDD	0.744**JK**		0.125	3.01	1.82	1.001	1
1,2,3,4,7,8-HxCDD	0.319**JK**		0.219	3.01	0.78	1.001	1
1,2,3,6,7,8-HxCDD	0.558**BJK**		0.234	3.01	0.86	1.000	1
1,2,3,7,8,9-HxCDD	1.06**J**		0.221	3.01	1.29	1.007	1
1,2,3,4,6,7,8-HpCDD	12.8		0.146	3.01	0.93	1.000	1
OCDD	393		0.605	6.02	0.87	1.000	1
2,3,7,8-TCDF	108		0.257	0.602	0.74	1.001	1
1,2,3,7,8-PeCDF	3.72		0.184	3.01	1.46	1.001	1
2,3,4,7,8-PeCDF	3.04		0.195	3.01	1.49	1.001	1
1,2,3,4,7,8-HxCDF	6.71		0.108	3.01	1.16	1.000	1
1,2,3,6,7,8-HxCDF	1.58**J**		0.108	3.01	1.39	1.000	1
1,2,3,7,8,9-HxCDF	0.618**JK**		0.150	3.01	1.00	1.001	1
2,3,4,6,7,8-HxCDF	0.391**J**		0.122	3.01	1.40	1.000	1
1,2,3,4,6,7,8-HpCDF	2.10**J**		0.125	3.01	1.13	1.000	1
1,2,3,4,7,8,9-HpCDF	0.600**J**		0.190	3.01	0.90	1.000	1
OCDF	ND	U	0.554	6.02			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 09:05
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0201	**Units:**	ng/Kg
Lab Code:	E1801138-016	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 19:06
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.827g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519842	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	65.9		0.619	0.619	0.77		1
Total Penta-Dioxins	6.32		0.125	3.01	1.73		1
Total Hexa-Dioxins	35.3		0.225	3.01	1.26		1
Total Hepta-Dioxins	61.5		0.146	3.01	1.07		1
Total Tetra-Furans	189		0.257	0.602	0.79		1
Total Penta-Furans	6.76		0.189	3.01	1.46		1
Total Hexa-Furans	9.23		0.121	3.01	1.33		1
Total Hepta-Furans	2.70	**J**	0.154	3.01	1.13		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 09:05
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0201	**Units:**	Percent
Lab Code:	E1801138-016	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 19:06
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.827g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519842	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	736.009	37		25-164	0.80	1.026
13C-1,2,3,7,8-PeCDD	2000	1276.284	64		25-181	1.56	1.230
13C-1,2,3,4,7,8-HxCDD	2000	1052.351	53		32-141	1.39	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1184.369	59		28-130	1.18	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1297.290	65		23-140	1.06	1.077
13C-OCDD	4000	1688.836	42		17-157	0.90	1.161
13C-2,3,7,8-TCDF	2000	931.136	47		24-169	0.78	0.989
13C-1,2,3,7,8-PeCDF	2000	1186.926	59		24-185	1.58	1.179
13C-2,3,4,7,8-PeCDF	2000	1134.016	57		21-178	1.59	1.218
13C-1,2,3,4,7,8-HxCDF	2000	954.254	48		26-152	0.51	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1002.493	50		26-123	0.52	0.970
13C-1,2,3,7,8,9-HxCDF	2000	1016.264	51		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	963.914	48		28-136	0.52	0.985
13C-1,2,3,4,6,7,8-HpCDF	2000	960.112	48		28-143	0.44	1.048
13C-1,2,3,4,7,8,9-HpCDF	2000	1020.681	51		26-138	0.44	1.089
37Cl-2,3,7,8-TCDD	800	494.100	62		35-197	NA	1.027

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 09:05
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0201	**Units:**	ng/Kg
Lab Code:	E1801138-016	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**47.6**	0.619	0.619	1	1	47.6
1,2,3,7,8-PeCDD	**0.744**	0.125	3.01	1	1	0.744
1,2,3,4,7,8-HxCDD	**0.319**	0.219	3.01	1	0.1	0.0319
1,2,3,6,7,8-HxCDD	**0.558**	0.234	3.01	1	0.1	0.0558
1,2,3,7,8,9-HxCDD	**1.06**	0.221	3.01	1	0.1	0.106
1,2,3,4,6,7,8-HpCDD	**12.8**	0.146	3.01	1	0.01	0.128
OCDD	**393**	0.605	6.02	1	0.0003	0.118
2,3,7,8-TCDF	**108**	0.257	0.602	1	0.1	10.8
1,2,3,7,8-PeCDF	**3.72**	0.184	3.01	1	0.03	0.112
2,3,4,7,8-PeCDF	**3.04**	0.195	3.01	1	0.3	0.912
1,2,3,4,7,8-HxCDF	**6.71**	0.108	3.01	1	0.1	0.671
1,2,3,6,7,8-HxCDF	**1.58**	0.108	3.01	1	0.1	0.158
1,2,3,7,8,9-HxCDF	**0.618**	0.150	3.01	1	0.1	0.0618
2,3,4,6,7,8-HxCDF	**0.391**	0.122	3.01	1	0.1	0.0391
1,2,3,4,6,7,8-HpCDF	**2.10**	0.125	3.01	1	0.01	0.0210
1,2,3,4,7,8,9-HpCDF	**0.600**	0.190	3.01	1	0.01	0.00600
OCDF	ND	0.554	6.02	1	0.0003	
		Total TEQ				61.6

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 09:05
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0201	**Units:**	Percent
Lab Code:	E1801138-016	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	8.633g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	76.7		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 09:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0202	**Units:**	ng/Kg
Lab Code:	E1801138-017	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 19:54
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.926g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519843	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	67.4		0.456	0.584	0.78	1.001	1
1,2,3,7,8-PeCDD	0.765**J**		0.150	2.92	1.70	1.001	1
1,2,3,4,7,8-HxCDD	ND	U	0.260	2.92			1
1,2,3,6,7,8-HxCDD	0.391**BJK**		0.276	2.92	1.00	1.000	1
1,2,3,7,8,9-HxCDD	0.422**JK**		0.262	2.92	0.98	1.007	1
1,2,3,4,6,7,8-HpCDD	10.1		0.386	2.92	1.04	1.000	1
OCDD	299		0.660	5.84	0.88	1.000	1
2,3,7,8-TCDF	155		0.237	0.584	0.77	1.001	1
1,2,3,7,8-PeCDF	4.90		0.139	2.92	1.50	1.001	1
2,3,4,7,8-PeCDF	4.05		0.154	2.92	1.57	1.001	1
1,2,3,4,7,8-HxCDF	8.66		0.0582	2.92	1.18	1.000	1
1,2,3,6,7,8-HxCDF	2.21**J**		0.0573	2.92	1.32	1.000	1
1,2,3,7,8,9-HxCDF	0.727**J**		0.0808	2.92	1.11	1.001	1
2,3,4,6,7,8-HxCDF	0.467**JK**		0.0763	2.92	1.62	1.000	1
1,2,3,4,6,7,8-HpCDF	2.48**J**		0.127	2.92	0.98	1.000	1
1,2,3,4,7,8,9-HpCDF	0.775**J**		0.200	2.92	0.96	1.000	1
OCDF	3.93**J**		0.811	5.84	0.99	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 09:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0202	**Units:**	ng/Kg
Lab Code:	E1801138-017	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 19:54
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.926g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519843	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	99.8		0.456	0.584	0.80		1
Total Penta-Dioxins	14.3		0.150	2.92	1.38		1
Total Hexa-Dioxins	57.0		0.266	2.92	1.24		1
Total Hepta-Dioxins	59.1		0.386	2.92	1.04		1
Total Tetra-Furans	269		0.237	0.584	0.75		1
Total Penta-Furans	13.4		0.146	2.92	1.44		1
Total Hexa-Furans	12.3		0.0671	2.92	1.23		1
Total Hepta-Furans	4.49		0.160	2.92	0.98		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 09:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0202	**Units:**	Percent
Lab Code:	E1801138-017	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 19:54
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.926g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519843	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	842.492	42		25-164	0.79	1.027
13C-1,2,3,7,8-PeCDD	2000	1337.724	67		25-181	1.61	1.231
13C-1,2,3,4,7,8-HxCDD	2000	1106.770	55		32-141	1.30	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1166.843	58		28-130	1.28	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1179.144	59		23-140	1.06	1.077
13C-OCDD	4000	1331.686	33		17-157	0.90	1.161
13C-2,3,7,8-TCDF	2000	1103.467	55		24-169	0.79	0.989
13C-1,2,3,7,8-PeCDF	2000	1259.243	63		24-185	1.56	1.179
13C-2,3,4,7,8-PeCDF	2000	1165.869	58		21-178	1.60	1.218
13C-1,2,3,4,7,8-HxCDF	2000	974.854	49		26-152	0.50	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1027.076	51		26-123	0.51	0.970
13C-1,2,3,7,8,9-HxCDF	2000	1020.067	51		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	847.548	42		28-136	0.51	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	892.845	45		28-143	0.45	1.048
13C-1,2,3,4,7,8,9-HpCDF	2000	956.152	48		26-138	0.44	1.090
37Cl-2,3,7,8-TCDD	800	560.066	70		35-197	NA	1.028

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 09:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0202	**Units:**	ng/Kg
Lab Code:	E1801138-017	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**67.4**	0.456	0.584	1	1	67.4
1,2,3,7,8-PeCDD	**0.765**	0.150	2.92	1	1	0.765
1,2,3,4,7,8-HxCDD	ND	0.260	2.92	1	0.1	
1,2,3,6,7,8-HxCDD	**0.391**	0.276	2.92	1	0.1	0.0391
1,2,3,7,8,9-HxCDD	**0.422**	0.262	2.92	1	0.1	0.0422
1,2,3,4,6,7,8-HpCDD	**10.1**	0.386	2.92	1	0.01	0.101
OCDD	**299**	0.660	5.84	1	0.0003	0.0897
2,3,7,8-TCDF	**155**	0.237	0.584	1	0.1	15.5
1,2,3,7,8-PeCDF	**4.90**	0.139	2.92	1	0.03	0.147
2,3,4,7,8-PeCDF	**4.05**	0.154	2.92	1	0.3	1.22
1,2,3,4,7,8-HxCDF	**8.66**	0.0582	2.92	1	0.1	0.866
1,2,3,6,7,8-HxCDF	**2.21**	0.0573	2.92	1	0.1	0.221
1,2,3,7,8,9-HxCDF	**0.727**	0.0808	2.92	1	0.1	0.0727
2,3,4,6,7,8-HxCDF	**0.467**	0.0763	2.92	1	0.1	0.0467
1,2,3,4,6,7,8-HpCDF	**2.48**	0.127	2.92	1	0.01	0.0248
1,2,3,4,7,8,9-HpCDF	**0.775**	0.200	2.92	1	0.01	0.00775
OCDF	**3.93**	0.811	5.84	1	0.0003	0.00118
		Total TEQ				86.5

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 09:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0202	**Units:**	Percent
Lab Code:	E1801138-017	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	8.349g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	78.4		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 13:20
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0211	**Units:**	ng/Kg
Lab Code:	E1801138-018	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 20:34
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.223g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616415	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	7330		264	264	0.75	1.001	50
1,2,3,7,8-PeCDD	25.6		0.127	2.85	1.51	1.001	1
1,2,3,4,7,8-HxCDD	0.874	**J**	0.367	2.85	1.27	1.000	1
1,2,3,6,7,8-HxCDD	4.17		0.391	2.85	1.27	1.000	1
1,2,3,7,8,9-HxCDD	2.95		0.371	2.85	1.25	1.007	1
1,2,3,4,6,7,8-HpCDD	152		0.199	2.85	1.04	1.000	1
OCDD	3270		0.599	5.69	0.90	1.000	1
2,3,7,8-TCDF	10900		142	142	0.78	1.001	50
1,2,3,7,8-PeCDF	281		0.554	2.85	1.55	1.001	1
2,3,4,7,8-PeCDF	228		0.594	2.85	1.55	1.001	1
1,2,3,4,7,8-HxCDF	510		0.352	2.85	1.19	1.000	1
1,2,3,6,7,8-HxCDF	118		0.359	2.85	1.18	1.000	1
1,2,3,7,8,9-HxCDF	36.0		0.483	2.85	1.12	1.001	1
2,3,4,6,7,8-HxCDF	21.4		0.399	2.85	1.18	1.000	1
1,2,3,4,6,7,8-HpCDF	136		0.132	2.85	0.99	1.000	1
1,2,3,4,7,8,9-HpCDF	49.4		0.196	2.85	0.99	1.000	1
OCDF	89.3		0.531	5.69	0.88	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 13:20
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0211	**Units:**	ng/Kg
Lab Code:	E1801138-018	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 20:34
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.223g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616415	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	4360		0.295	0.569	0.81		1
Total Penta-Dioxins	41.1		0.127	2.85	1.39		1
Total Hexa-Dioxins	65.2		0.377	2.85	1.26		1
Total Hepta-Dioxins	331		0.199	2.85	1.04		1
Total Tetra-Furans	14700		0.277	0.569	0.75		1
Total Penta-Furans	780		0.574	2.85	1.48		1
Total Hexa-Furans	745		0.396	2.85	1.11		1
Total Hepta-Furans	249		0.162	2.85	0.99		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 13:20
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0211	**Units:**	Percent
Lab Code:	E1801138-018	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 20:43
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.223g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519844	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	833.156	42		25-164	0.82	1.025
13C-1,2,3,7,8-PeCDD	2000	1349.364	67		25-181	1.60	1.228
13C-1,2,3,4,7,8-HxCDD	2000	1052.548	53		32-141	1.24	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1150.529	58		28-130	1.30	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1192.283	60		23-140	1.07	1.077
13C-OCDD	4000	1544.450	39		17-157	0.88	1.161
13C-2,3,7,8-TCDF	2000	1069.238	53		24-169	0.80	0.988
13C-1,2,3,7,8-PeCDF	2000	1260.060	63		24-185	1.58	1.177
13C-2,3,4,7,8-PeCDF	2000	1205.340	60		21-178	1.59	1.216
13C-1,2,3,4,7,8-HxCDF	2000	931.565	47		26-152	0.52	0.967
13C-1,2,3,6,7,8-HxCDF	2000	995.693	50		26-123	0.53	0.970
13C-1,2,3,7,8,9-HxCDF	2000	1038.758	52		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	961.919	48		28-136	0.52	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	866.131	43		28-143	0.44	1.048
13C-1,2,3,4,7,8,9-HpCDF	2000	960.609	48		26-138	0.43	1.089
37Cl-2,3,7,8-TCDD	800	588.759	74		35-197	NA	1.027

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 13:20
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0211	**Units:**	ng/Kg
Lab Code:	E1801138-018	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**7330**	264	264	50	1	7330
1,2,3,7,8-PeCDD	**25.6**	0.127	2.85	1	1	25.6
1,2,3,4,7,8-HxCDD	**0.874**	0.367	2.85	1	0.1	0.0874
1,2,3,6,7,8-HxCDD	**4.17**	0.391	2.85	1	0.1	0.417
1,2,3,7,8,9-HxCDD	**2.95**	0.371	2.85	1	0.1	0.295
1,2,3,4,6,7,8-HpCDD	**152**	0.199	2.85	1	0.01	1.52
OCDD	**3270**	0.599	5.69	1	0.0003	0.981
2,3,7,8-TCDF	**10900**	142	142	50	0.1	1090
1,2,3,7,8-PeCDF	**281**	0.554	2.85	1	0.03	8.43
2,3,4,7,8-PeCDF	**228**	0.594	2.85	1	0.3	68.4
1,2,3,4,7,8-HxCDF	**510**	0.352	2.85	1	0.1	51.0
1,2,3,6,7,8-HxCDF	**118**	0.359	2.85	1	0.1	11.8
1,2,3,7,8,9-HxCDF	**36.0**	0.483	2.85	1	0.1	3.60
2,3,4,6,7,8-HxCDF	**21.4**	0.399	2.85	1	0.1	2.14
1,2,3,4,6,7,8-HpCDF	**136**	0.132	2.85	1	0.01	1.36
1,2,3,4,7,8,9-HpCDF	**49.4**	0.196	2.85	1	0.01	0.494
OCDF	**89.3**	0.531	5.69	1	0.0003	0.0268
		Total TEQ				8600

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 13:20
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0211	**Units:**	Percent
Lab Code:	E1801138-018	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	7.286g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	85.9		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 13:25
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0212	**Units:**	ng/Kg
Lab Code:	E1801138-019	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 21:23
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.250g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616416	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	14500		341	341	0.79	1.001	100
1,2,3,7,8-PeCDD	50.8		0.221	2.92	1.57	1.001	1
1,2,3,4,7,8-HxCDD	1.04	**J**	0.573	2.92	1.18	1.000	1
1,2,3,6,7,8-HxCDD	7.49		0.606	2.92	1.22	1.000	1
1,2,3,7,8,9-HxCDD	2.72	**JK**	0.577	2.92	1.48	1.007	1
1,2,3,4,6,7,8-HpCDD	271		0.289	2.92	1.04	1.000	1
OCDD	7220		115	585	0.94	1.000	100
2,3,7,8-TCDF	20800		245	245	0.84	1.001	100
1,2,3,7,8-PeCDF	589		0.364	2.92	1.55	1.001	1
2,3,4,7,8-PeCDF	485		0.406	2.92	1.55	1.000	1
1,2,3,4,7,8-HxCDF	1030		0.912	2.92	1.21	1.000	1
1,2,3,6,7,8-HxCDF	258		0.888	2.92	1.21	1.000	1
1,2,3,7,8,9-HxCDF	75.4		1.23	2.92	1.25	1.001	1
2,3,4,6,7,8-HxCDF	45.3		0.998	2.92	1.30	1.000	1
1,2,3,4,6,7,8-HpCDF	262		0.252	2.92	1.02	1.000	1
1,2,3,4,7,8,9-HpCDF	96.0		0.429	2.92	1.01	1.000	1
OCDF	162		0.666	5.85	0.85	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 13:25
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0212	**Units:**	ng/Kg
Lab Code:	E1801138-019	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 21:23
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.250g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616416	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	8600		0.589	0.589	0.78		1
Total Penta-Dioxins	71.8		0.221	2.92	1.56		1
Total Hexa-Dioxins	68.4		0.586	2.92	1.25		1
Total Hepta-Dioxins	522		0.289	2.92	1.06		1
Total Tetra-Furans	30400		0.569	0.585	0.75		1
Total Penta-Furans	1640		0.384	2.92	1.44		1
Total Hexa-Furans	1530		0.999	2.92	1.19		1
Total Hepta-Furans	481		0.330	2.92	1.02		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 13:25
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0212	**Units:**	Percent
Lab Code:	E1801138-019	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 21:32
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.250g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519845	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	876.090	44		25-164	0.79	1.025
13C-1,2,3,7,8-PeCDD	2000	1367.727	68		25-181	1.57	1.226
13C-1,2,3,4,7,8-HxCDD	2000	1082.978	54		32-141	1.27	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1234.369	62		28-130	1.28	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1221.450	61		23-140	1.09	1.077
13C-OCDD	4000	1360.144	34		17-157	0.89	1.161
13C-2,3,7,8-TCDF	2000	1132.322	57		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	1287.535	64		24-185	1.58	1.176
13C-2,3,4,7,8-PeCDF	2000	1214.999	61		21-178	1.61	1.215
13C-1,2,3,4,7,8-HxCDF	2000	1005.824	50		26-152	0.51	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1047.383	52		26-123	0.52	0.970
13C-1,2,3,7,8,9-HxCDF	2000	1105.826	55		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1042.652	52		28-136	0.51	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	930.791	47		28-143	0.45	1.049
13C-1,2,3,4,7,8,9-HpCDF	2000	926.855	46		26-138	0.45	1.090
37Cl-2,3,7,8-TCDD	800	704.935	88		35-197	NA	1.026

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 13:25
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0212	**Units:**	ng/Kg
Lab Code:	E1801138-019	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**14500**	341	341	100	1	14500
1,2,3,7,8-PeCDD	**50.8**	0.221	2.92	1	1	50.8
1,2,3,4,7,8-HxCDD	**1.04**	0.573	2.92	1	0.1	0.104
1,2,3,6,7,8-HxCDD	**7.49**	0.606	2.92	1	0.1	0.749
1,2,3,7,8,9-HxCDD	**2.72**	0.577	2.92	1	0.1	0.272
1,2,3,4,6,7,8-HpCDD	**271**	0.289	2.92	1	0.01	2.71
OCDD	**7220**	115	585	100	0.0003	2.17
2,3,7,8-TCDF	**20800**	245	245	100	0.1	2080
1,2,3,7,8-PeCDF	**589**	0.364	2.92	1	0.03	17.7
2,3,4,7,8-PeCDF	**485**	0.406	2.92	1	0.3	146
1,2,3,4,7,8-HxCDF	**1030**	0.912	2.92	1	0.1	103
1,2,3,6,7,8-HxCDF	**258**	0.888	2.92	1	0.1	25.8
1,2,3,7,8,9-HxCDF	**75.4**	1.23	2.92	1	0.1	7.54
2,3,4,6,7,8-HxCDF	**45.3**	0.998	2.92	1	0.1	4.53
1,2,3,4,6,7,8-HpCDF	**262**	0.252	2.92	1	0.01	2.62
1,2,3,4,7,8,9-HpCDF	**96.0**	0.429	2.92	1	0.01	0.960
OCDF	**162**	0.666	5.85	1	0.0003	0.0486
		Total TEQ				16900

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 13:25
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0212	**Units:**	Percent
Lab Code:	E1801138-019	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	7.311g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	83.4		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 13:30
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0213	**Units:**	ng/Kg
Lab Code:	E1801138-020	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 22:12
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.412g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616417	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	1020		54.6	54.6	0.78	1.001	10
1,2,3,7,8-PeCDD	5.07		0.169	3.11	1.51	1.001	1
1,2,3,4,7,8-HxCDD	ND	U	0.0991	3.11			1
1,2,3,6,7,8-HxCDD	0.928**J**		0.107	3.11	1.07	1.000	1
1,2,3,7,8,9-HxCDD	1.64**J**		0.101	3.11	1.39	1.007	1
1,2,3,4,6,7,8-HpCDD	37.7		0.194	3.11	1.03	1.000	1
OCDD	1390		0.559	6.22	0.90	1.000	1
2,3,7,8-TCDF	1540		23.6	23.6	0.77	1.001	10
1,2,3,7,8-PeCDF	44.6		0.189	3.11	1.49	1.001	1
2,3,4,7,8-PeCDF	38.5		0.199	3.11	1.50	1.001	1
1,2,3,4,7,8-HxCDF	84.0		0.264	3.11	1.18	1.000	1
1,2,3,6,7,8-HxCDF	21.4		0.258	3.11	1.16	1.000	1
1,2,3,7,8,9-HxCDF	6.17		0.352	3.11	1.21	1.001	1
2,3,4,6,7,8-HxCDF	4.03		0.292	3.11	1.13	1.001	1
1,2,3,4,6,7,8-HpCDF	25.7		0.159	3.11	1.03	1.000	1
1,2,3,4,7,8,9-HpCDF	9.30		0.249	3.11	1.00	1.000	1
OCDF	15.5		0.564	6.22	0.92	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 13:30
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0213	**Units:**	ng/Kg
Lab Code:	E1801138-020	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 22:12
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.412g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616417	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616404

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	755		0.642	0.642	0.84		1
Total Penta-Dioxins	14.3		0.169	3.11	1.72		1
Total Hexa-Dioxins	55.0		0.103	3.11	1.25		1
Total Hepta-Dioxins	108		0.194	3.11	1.01		1
Total Tetra-Furans	2650		0.411	0.622	0.74		1
Total Penta-Furans	127		0.194	3.11	1.34		1
Total Hexa-Furans	125		0.290	3.11	1.13		1
Total Hepta-Furans	45.7		0.201	3.11	1.03		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 13:30
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0213	**Units:**	Percent
Lab Code:	E1801138-020	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 22:20
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.412g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519846	**Blank File Name:**	P616378
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519832

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	752.702	38		25-164	0.78	1.027
13C-1,2,3,7,8-PeCDD	2000	1261.837	63		25-181	1.59	1.230
13C-1,2,3,4,7,8-HxCDD	2000	1051.823	53		32-141	1.38	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1152.131	58		28-130	1.19	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1376.075	69		23-140	1.09	1.077
13C-OCDD	4000	1980.051	50		17-157	0.89	1.162
13C-2,3,7,8-TCDF	2000	974.784	49		24-169	0.79	0.989
13C-1,2,3,7,8-PeCDF	2000	1201.645	60		24-185	1.59	1.179
13C-2,3,4,7,8-PeCDF	2000	1137.521	57		21-178	1.58	1.218
13C-1,2,3,4,7,8-HxCDF	2000	944.758	47		26-152	0.51	0.967
13C-1,2,3,6,7,8-HxCDF	2000	993.821	50		26-123	0.52	0.970
13C-1,2,3,7,8,9-HxCDF	2000	1043.057	52		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	969.054	48		28-136	0.51	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	970.952	49		28-143	0.44	1.049
13C-1,2,3,4,7,8,9-HpCDF	2000	1081.777	54		26-138	0.43	1.090
37Cl-2,3,7,8-TCDD	800	514.261	64		35-197	NA	1.027

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 13:30
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0213	**Units:**	ng/Kg
Lab Code:	E1801138-020	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**1020**	54.6	54.6	10	1	1020
1,2,3,7,8-PeCDD	**5.07**	0.169	3.11	1	1	5.07
1,2,3,4,7,8-HxCDD	ND	0.0991	3.11	1	0.1	
1,2,3,6,7,8-HxCDD	**0.928**	0.107	3.11	1	0.1	0.0928
1,2,3,7,8,9-HxCDD	**1.64**	0.101	3.11	1	0.1	0.164
1,2,3,4,6,7,8-HpCDD	**37.7**	0.194	3.11	1	0.01	0.377
OCDD	**1390**	0.559	6.22	1	0.0003	0.417
2,3,7,8-TCDF	**1540**	23.6	23.6	10	0.1	154
1,2,3,7,8-PeCDF	**44.6**	0.189	3.11	1	0.03	1.34
2,3,4,7,8-PeCDF	**38.5**	0.199	3.11	1	0.3	11.6
1,2,3,4,7,8-HxCDF	**84.0**	0.264	3.11	1	0.1	8.40
1,2,3,6,7,8-HxCDF	**21.4**	0.258	3.11	1	0.1	2.14
1,2,3,7,8,9-HxCDF	**6.17**	0.352	3.11	1	0.1	0.617
2,3,4,6,7,8-HxCDF	**4.03**	0.292	3.11	1	0.1	0.403
1,2,3,4,6,7,8-HpCDF	**25.7**	0.159	3.11	1	0.01	0.257
1,2,3,4,7,8,9-HpCDF	**9.30**	0.249	3.11	1	0.01	0.0930
OCDF	**15.5**	0.564	6.22	1	0.0003	0.00465
		Total TEQ				1200

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	11/15/18 13:30
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0213	**Units:**	Percent
Lab Code:	E1801138-020	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:24
	7.614g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	77.2		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1900001-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 13:46
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.243g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616378	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.575	0.575			1
1,2,3,7,8-PeCDD	ND	U	0.104	2.44			1
1,2,3,4,7,8-HxCDD	ND	U	0.0412	2.44			1
1,2,3,6,7,8-HxCDD	0.0693**JK**		0.0457	2.44	0.91	1.000	1
1,2,3,7,8,9-HxCDD	ND	U	0.0404	2.44			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.0472	2.44			1
OCDD	0.492**JK**		0.138	4.88	0.58	1.000	1
2,3,7,8-TCDF	ND	U	0.219	0.488			1
1,2,3,7,8-PeCDF	ND	U	0.0672	2.44			1
2,3,4,7,8-PeCDF	ND	U	0.0682	2.44			1
1,2,3,4,7,8-HxCDF	ND	U	0.0371	2.44			1
1,2,3,6,7,8-HxCDF	ND	U	0.0377	2.44			1
1,2,3,7,8,9-HxCDF	0.0578**J**		0.0444	2.44	1.27	1.001	1
2,3,4,6,7,8-HxCDF	ND	U	0.0383	2.44			1
1,2,3,4,6,7,8-HpCDF	0.0938**JK**		0.0435	2.44	1.35	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0617	2.44			1
OCDF	ND	U	0.318	4.88			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1900001-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 13:46
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.243g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616378	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.575	0.575			1
Total Penta-Dioxins	ND	U	0.104	2.44			1
Total Hexa-Dioxins	ND	U	0.0423	2.44			1
Total Hepta-Dioxins	ND	U	0.0472	2.44			1
Total Tetra-Furans	ND	U	0.219	0.488			1
Total Penta-Furans	ND	U	0.0678	2.44			1
Total Hexa-Furans	0.0578**J**		0.0393	2.44	1.27		1
Total Hepta-Furans	ND	U	0.0514	2.44			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	Percent
Lab Code:	EQ1900001-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 13:46
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.243g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616378	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	965.484	48		25-164	0.79	1.031
13C-1,2,3,7,8-PeCDD	2000	1543.829	77		25-181	1.56	1.247
13C-1,2,3,4,7,8-HxCDD	2000	1653.604	83		32-141	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1502.487	75		28-130	1.24	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1683.809	84		23-140	1.08	1.072
13C-OCDD	4000	1623.697	41		17-157	0.89	1.144
13C-2,3,7,8-TCDF	2000	1446.735	72		24-169	0.79	0.990
13C-1,2,3,7,8-PeCDF	2000	1562.689	78		24-185	1.57	1.194
13C-2,3,4,7,8-PeCDF	2000	1386.412	69		21-178	1.57	1.235
13C-1,2,3,4,7,8-HxCDF	2000	1492.023	75		26-152	0.53	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1465.275	73		26-123	0.53	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1458.598	73		29-147	0.54	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1457.930	73		28-136	0.53	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1253.349	63		28-143	0.47	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1136.695	57		26-138	0.46	1.085
37Cl-2,3,7,8-TCDD	800	554.007	69		35-197	NA	1.032

Accuracy & Precision

ALS Environmental - Houston HRMS
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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Analyzed:**	01/08/19
Sample Matrix:	Sediment	**Date Extracted:**	01/02/19

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Units:**	ng/Kg
Prep Method:	Method Soxhlet	**Basis:**	Dry
		Analysis Lot:	621472

	Lab Control Sample EQ1900001-02			Duplicate Lab Control Sample EQ1900001-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,2,3,4,6,7,8-HpCDD	68.6	97.2	71	68.3	95.6	71	70-140	<1	50
1,2,3,4,7,8-HxCDD	87.0	97.2	90	86.0	95.6	90	70-164	1	50
1,2,3,6,7,8-HxCDD	99.9	97.2	103	95.6	95.6	100	76-134	4	50
1,2,3,7,8,9-HxCDD	90.4	97.2	93	86.4	95.6	90	64-162	4	50
1,2,3,7,8-PeCDD	102	97.2	105	95.3	95.6	100	70-142	7	50
2,3,7,8-TCDD	27.9	19.4	144	28.5	19.1	149	67-158	2	50
OCDD	189	194	97	190	191	100	78-144	<1	50
1,2,3,4,6,7,8-HpCDF	89.4	97.2	92	88.9	95.6	93	82-122	<1	50
1,2,3,4,7,8,9-HpCDF	86.9	97.2	89	87.5	95.6	91	78-138	<1	50
1,2,3,4,7,8-HxCDF	88.4	97.2	91	84.7	95.6	89	72-134	4	50
1,2,3,6,7,8-HxCDF	89.3	97.2	92	86.3	95.6	90	84-130	3	50
1,2,3,7,8,9-HxCDF	88.9	97.2	91	85.7	95.6	90	78-130	4	50
1,2,3,7,8-PeCDF	85.1	97.2	88	82.3	95.6	86	80-134	3	50
2,3,4,6,7,8-HxCDF	90.5	97.2	93	87.2	95.6	91	70-156	4	50
2,3,4,7,8-PeCDF	90.3	97.2	93	90.9	95.6	95	68-160	<1	50
2,3,7,8-TCDF	19.3	19.4	99	18.8	19.1	98	75-158	2	50
OCDF	179	194	92	177	191	93	63-170	1	50

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900001-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 21:59
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.291g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616388	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	27.9		1.03	1.03	0.78	1.001	1
1,2,3,7,8-PeCDD	102		0.129	2.43	1.54	1.001	1
1,2,3,4,7,8-HxCDD	87.0		0.0502	2.43	1.30	1.000	1
1,2,3,6,7,8-HxCDD	99.9		0.0544	2.43	1.29	1.000	1
1,2,3,7,8,9-HxCDD	90.4		0.0486	2.43	1.21	1.008	1
1,2,3,4,6,7,8-HpCDD	68.6		0.0746	2.43	1.06	1.000	1
OCDD	189		0.134	4.86	0.93	1.000	1
2,3,7,8-TCDF	19.3		0.291	0.486	0.84	1.001	1
1,2,3,7,8-PeCDF	85.1		0.120	2.43	1.57	1.000	1
2,3,4,7,8-PeCDF	90.3		0.121	2.43	1.53	1.001	1
1,2,3,4,7,8-HxCDF	88.4		0.0304	2.43	1.24	1.000	1
1,2,3,6,7,8-HxCDF	89.3		0.0311	2.43	1.28	1.000	1
1,2,3,7,8,9-HxCDF	88.9		0.0385	2.43	1.28	1.000	1
2,3,4,6,7,8-HxCDF	90.5		0.0335	2.43	1.28	1.000	1
1,2,3,4,6,7,8-HpCDF	89.4		0.162	2.43	1.02	1.000	1
1,2,3,4,7,8,9-HpCDF	86.9		0.229	2.43	1.11	1.000	1
OCDF	179		0.401	4.86	0.85	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900001-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 21:59
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.291g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616388	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	27.9		1.03	1.03	0.78		1
Total Penta-Dioxins	102		0.129	2.43	1.54		1
Total Hexa-Dioxins	277		0.0510	2.43	1.30		1
Total Hepta-Dioxins	68.6		0.0746	2.43	1.06		1
Total Tetra-Furans	19.3		0.291	0.486	0.84		1
Total Penta-Furans	177		0.121	2.43	1.52		1
Total Hexa-Furans	357		0.0331	2.43	1.24		1
Total Hepta-Furans	176		0.191	2.43	1.02		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1900001-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 21:59
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.291g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616388	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	859.958	43		25-164	0.76	1.031
13C-1,2,3,7,8-PeCDD	2000	1301.357	65		25-181	1.55	1.247
13C-1,2,3,4,7,8-HxCDD	2000	1547.347	77		32-141	1.31	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1522.044	76		28-130	1.26	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1569.854	78		23-140	1.04	1.072
13C-OCDD	4000	1675.974	42		17-157	0.90	1.144
13C-2,3,7,8-TCDF	2000	1293.248	65		24-169	0.82	0.990
13C-1,2,3,7,8-PeCDF	2000	1377.965	69		24-185	1.59	1.194
13C-2,3,4,7,8-PeCDF	2000	1324.701	66		21-178	1.65	1.234
13C-1,2,3,4,7,8-HxCDF	2000	1506.791	75		26-152	0.52	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1558.465	78		26-123	0.53	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1442.610	72		29-147	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1481.311	74		28-136	0.52	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1220.712	61		28-143	0.46	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1112.284	56		26-138	0.44	1.085
37Cl-2,3,7,8-TCDD	800	527.074	66		35-197	NA	1.032

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900001-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 22:48
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.461g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616389	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	28.5		0.872	0.872	0.74	1.001	1
1,2,3,7,8-PeCDD	95.3		0.0714	2.39	1.59	1.001	1
1,2,3,4,7,8-HxCDD	86.0		0.0866	2.39	1.27	1.000	1
1,2,3,6,7,8-HxCDD	95.6		0.0965	2.39	1.26	1.000	1
1,2,3,7,8,9-HxCDD	86.4		0.0851	2.39	1.13	1.007	1
1,2,3,4,6,7,8-HpCDD	68.3		0.0782	2.39	1.06	1.000	1
OCDD	190		0.145	4.78	0.88	1.000	1
2,3,7,8-TCDF	18.8		0.359	0.478	0.79	1.001	1
1,2,3,7,8-PeCDF	82.3		0.0946	2.39	1.56	1.001	1
2,3,4,7,8-PeCDF	90.9		0.0978	2.39	1.55	1.001	1
1,2,3,4,7,8-HxCDF	84.7		0.0883	2.39	1.27	1.000	1
1,2,3,6,7,8-HxCDF	86.3		0.0876	2.39	1.23	1.000	1
1,2,3,7,8,9-HxCDF	85.7		0.118	2.39	1.26	1.000	1
2,3,4,6,7,8-HxCDF	87.2		0.0932	2.39	1.26	1.000	1
1,2,3,4,6,7,8-HpCDF	88.9		0.259	2.39	1.09	1.000	1
1,2,3,4,7,8,9-HpCDF	87.5		0.373	2.39	1.09	1.000	1
OCDF	177		0.598	4.78	0.90	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900001-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 22:48
Prep Method:	Method Soxhlet	**Date Extracted:**	1/2/19
Sample Amount:	10.461g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616389	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	28.5		0.872	0.872	0.74		1
Total Penta-Dioxins	96.6		0.0714	2.39	1.59		1
Total Hexa-Dioxins	268		0.0892	2.39	1.27		1
Total Hepta-Dioxins	68.3		0.0782	2.39	1.06		1
Total Tetra-Furans	18.8		0.359	0.478	0.79		1
Total Penta-Furans	174		0.0962	2.39	1.56		1
Total Hexa-Furans	344		0.0955	2.39	1.27		1
Total Hepta-Furans	176		0.309	2.39	1.09		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801138
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1900001-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/08/19 22:48
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Sample Amount:	10.461g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P616389	**Blank File Name:**	P616378
ICAL Date:	09/25/18	**Cal Ver. File Name:**	P616375

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	832.437	42		25-164	0.80	1.031
13C-1,2,3,7,8-PeCDD	2000	1200.034	60		25-181	1.60	1.247
13C-1,2,3,4,7,8-HxCDD	2000	1531.065	77		32-141	1.27	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1492.763	75		28-130	1.28	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1362.397	68		23-140	1.04	1.072
13C-OCDD	4000	1259.584	31		17-157	0.95	1.144
13C-2,3,7,8-TCDF	2000	1272.401	64		24-169	0.82	0.990
13C-1,2,3,7,8-PeCDF	2000	1372.063	69		24-185	1.54	1.194
13C-2,3,4,7,8-PeCDF	2000	1290.272	65		21-178	1.61	1.235
13C-1,2,3,4,7,8-HxCDF	2000	1468.502	73		26-152	0.52	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1542.252	77		26-123	0.53	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1328.018	66		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1451.739	73		28-136	0.54	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1101.961	55		28-143	0.44	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	982.137	49		26-138	0.46	1.085
37Cl-2,3,7,8-TCDD	800	506.431	63		35-197	NA	1.032

Chromatograms and Selected Ion Monitoring

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ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0195

Run #11 Filename P616379 Samp: 1 Inj: 1 Acquired: 8-JAN-19 14:37:21
Processed: 9-JAN-19 08:58:07 Sample ID: E1801138-001

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:14	4.982e+03	6.207e+03	0.80	yes	yes	1.081
2	Unk	1,2,3,7,8-PeCDF	30:23	3.546e+02	2.275e+02	1.56	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:27	3.098e+02	2.008e+02	1.54	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:20	3.883e+02	3.713e+02	1.05	no	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:27	1.578e+02	1.445e+02	1.09	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:00	1.061e+02	8.738e+01	1.21	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:47	2.135e+01	2.475e+01	0.86	no	yes	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:06	2.209e+03	2.252e+03	0.98	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:29	7.590e+01	4.974e+01	1.53	no	no	1.463
10	Unk	OCDF	40:46	2.935e+03	3.317e+03	0.88	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:16	1.115e+03	1.352e+03	0.82	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:45	7.470e+01	7.429e+01	1.01	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:09	3.753e+01	4.169e+01	0.90	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:15	3.319e+02	2.644e+02	1.26	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:29	1.601e+02	1.427e+02	1.12	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:02	5.997e+03	5.559e+03	1.08	yes	no	1.112
17	Unk	OCDD	40:36	2.986e+04	3.388e+04	0.88	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:12	1.531e+04	1.863e+04	0.82	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:22	2.356e+04	1.466e+04	1.61	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	2.196e+04	1.381e+04	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:19	8.667e+03	1.680e+04	0.52	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	1.057e+04	1.994e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	34:59	8.980e+03	1.663e+04	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	7.741e+03	1.474e+04	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:06	5.240e+03	1.172e+04	0.45	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:28	4.345e+03	9.181e+03	0.47	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:15	7.205e+03	8.781e+03	0.82	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:44	1.587e+04	9.895e+03	1.60	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	1.211e+04	9.380e+03	1.29	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:14	1.138e+04	8.905e+03	1.28	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:02	9.371e+03	8.915e+03	1.05	yes	no	0.857
32	IS	13C-OCDD	40:35	5.769e+03	6.465e+03	0.89	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:27	1.742e+04	2.178e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	1.963e+04	1.595e+04	1.23	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:16	1.163e+04				no	1.086

$$\text{OCDD} = \frac{(2.986e+04 + 3.388e+04) \times 4000\ \text{pg} \times 1}{(5.769e+03 + 6.465e+03) \times 10.388\ \text{g} \times 51.1 / 100 \times 1.157} = 3393\ \text{ng/kg}$$

LLM 01/09/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0195

Run #11 Filename P616379 Samp: 1 Inj: 1 Acquired: 8-JAN-19 14:37:21
Processed: 9-JAN-19 08:58:07 LAB. ID: E1801138-001

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	7.48e+05	2.48e+02	3.0e+03	9.00e+05	2.30e+03	3.9e+02
2	1,2,3,7,8-PeCDF	5.76e+04	9.56e+02	6.0e+01	4.11e+04	2.17e+03	1.9e+01
3	2,3,4,7,8-PeCDF	4.92e+04	9.56e+02	5.1e+01	3.09e+04	2.17e+03	1.4e+01
4	1,2,3,4,7,8-HxCDF	8.69e+04	2.01e+03	4.3e+01	8.11e+04	5.52e+02	1.5e+02
5	1,2,3,6,7,8-HxCDF	3.23e+04	2.01e+03	1.6e+01	3.07e+04	5.52e+02	5.6e+01
6	2,3,4,6,7,8-HxCDF	2.12e+04	2.01e+03	1.1e+01	1.69e+04	5.52e+02	3.1e+01
7	1,2,3,7,8,9-HxCDF	6.46e+03	2.01e+03	3.2e+00	6.48e+03	5.52e+02	1.2e+01
8	1,2,3,4,6,7,8-HpCDF	4.89e+05	1.62e+03	3.0e+02	4.94e+05	3.64e+02	1.4e+03
9	1,2,3,4,7,8,9-HpCDF	1.78e+04	1.62e+03	1.1e+01	1.15e+04	3.64e+02	3.2e+01
10	OCDF	5.06e+05	3.32e+02	1.5e+03	5.83e+05	1.24e+03	4.7e+02
11	2,3,7,8-TCDD	1.75e+05	3.43e+03	5.1e+01	2.17e+05	1.40e+03	1.5e+02
12	1,2,3,7,8-PeCDD	1.58e+04	1.26e+03	1.3e+01	1.14e+04	1.68e+02	6.8e+01
13	1,2,3,4,7,8-HxCDD	9.90e+03	5.40e+02	1.8e+01	9.61e+03	1.44e+03	6.7e+00
14	1,2,3,6,7,8-HxCDD	7.23e+04	5.40e+02	1.3e+02	6.49e+04	1.44e+03	4.5e+01
15	1,2,3,7,8,9-HxCDD	3.24e+04	5.40e+02	6.0e+01	2.85e+04	1.44e+03	2.0e+01
16	1,2,3,4,6,7,8-HpCDD	1.22e+06	7.60e+02	1.6e+03	1.18e+06	2.73e+03	4.3e+02
17	OCDD	5.38e+06	4.12e+02	1.3e+04	6.08e+06	3.08e+02	2.0e+04
18	13C-2,3,7,8-TCDF	2.23e+06	1.13e+04	2.0e+02	2.68e+06	8.64e+03	3.1e+02
19	13C-1,2,3,7,8-PeCDF	4.01e+06	4.40e+02	9.1e+03	2.53e+06	2.04e+02	1.2e+04
20	13C-2,3,4,7,8-PeCDF	4.16e+06	4.40e+02	9.5e+03	2.58e+06	2.04e+02	1.3e+04
21	13C-1,2,3,4,7,8-HxCDF	1.89e+06	1.45e+03	1.3e+03	3.60e+06	1.29e+03	2.8e+03
22	13C-1,2,3,6,7,8-HxCDF	2.07e+06	1.45e+03	1.4e+03	3.89e+06	1.29e+03	3.0e+03
23	13C-2,3,4,6,7,8-HxCDF	1.87e+06	1.45e+03	1.3e+03	3.50e+06	1.29e+03	2.7e+03
24	13C-1,2,3,7,8,9-HxCDF	1.57e+06	1.45e+03	1.1e+03	2.94e+06	1.29e+03	2.3e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.14e+06	1.91e+03	6.0e+02	2.59e+06	2.01e+03	1.3e+03
26	13C-1,2,3,4,7,8,9-HpCDF	9.19e+05	1.91e+03	4.8e+02	1.93e+06	2.01e+03	9.6e+02
27	13C-2,3,7,8-TCDD	1.10e+06	1.21e+04	9.1e+01	1.33e+06	3.88e+03	3.4e+02
28	13C-1,2,3,7,8-PeCDD	2.95e+06	2.28e+03	1.3e+03	1.80e+06	1.83e+03	9.8e+02
29	13C-1,2,3,4,7,8-HxCDD	2.55e+06	1.32e+03	1.9e+03	1.98e+06	4.44e+02	4.5e+03
30	13C-1,2,3,6,7,8-HxCDD	2.42e+06	1.32e+03	1.8e+03	1.87e+06	4.44e+02	4.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.02e+06	5.12e+02	3.9e+03	1.90e+06	3.12e+02	6.1e+03
32	13C-OCDD	1.03e+06	6.72e+02	1.5e+03	1.16e+06	2.20e+02	5.3e+03
33	13C-1,2,3,4-TCDD	2.47e+06	1.21e+04	2.0e+02	3.09e+06	3.88e+03	8.0e+02
34	13C-1,2,3,7,8,9-HxCDD	4.06e+06	1.32e+03	3.1e+03	3.21e+06	4.44e+02	7.2e+03
35	37Cl-2,3,7,8-TCDD	1.75e+06	2.16e+03	8.1e+02			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0195

Entry: 36 Totals Name: Total Tetra-Furans

Run: 11 File: P616379 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 14:37:21 Processed: 9-JAN-19 08:58:07

Mass: 303.9020 305.8990 Tot Response: 1.84e+04 RRF: 1.081

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:04	1.03e+02	1.36e+02	0.76	yes	2.39e+02		n	n
2	22:22	3.61e+02	4.11e+02	0.88	yes	7.72e+02		n	n
3	22:43	1.17e+02	1.69e+02	0.69	yes	2.87e+02		n	n
4	22:50	2.45e+01	3.37e+01	0.73	yes	5.83e+01		n	n
5	24:12	2.18e+03	2.76e+03	0.79	yes	4.95e+03		n	n
6	25:07	4.07e+02	4.92e+02	0.83	yes	9.00e+02		n	y
7	25:14	4.98e+03	6.21e+03	0.80	yes	1.12e+04	2,3,7,8-TCDF	n	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0195

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 11 File: P616379 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 14:37:21 Processed: 9-JAN-19 08:58:07

Mass: 319.8970 321.8940 Tot Response: 2.47e+03 RRF: 1.049

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:16	1.12e+03	1.35e+03 0.82	yes	2.47e+03	2,3,7,8-TCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0195

Entry: 39 Totals Name: Total Penta-Furans2

Run: 11 File: P616379 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 14:37:21 Processed: 9-JAN-19 08:58:07

Mass: 339.8600 341.8570 Tot Response: 1.78e+03 RRF: 1.130

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:20	2.74e+02	2.05e+02	1.34	yes	4.78e+02		n	y
2	30:23	3.55e+02	2.27e+02	1.56	yes	5.82e+02	1,2,3,7,8-PeCDF	n	n
3	30:40	1.31e+02	7.59e+01	1.72	yes	2.07e+02		n	n
4	31:27	3.10e+02	2.01e+02	1.54	yes	5.11e+02	2,3,4,7,8-PeCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0195

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 11 File: P616379 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 14:37:21 Processed: 9-JAN-19 08:58:07

Mass: 355.8550 357.8520 Tot Response: 4.52e+02 RRF: 0.9288

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:22	1.64e+02	1.18e+02	1.39	yes	2.82e+02		n	n
2	30:57	7.73e+01	4.98e+01	1.55	yes	1.27e+02		y	n
3	32:09	2.66e+01	1.66e+01	1.60	yes	4.32e+01		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0195

Entry: 41 Totals Name: Total Hexa-Furans

Run: 11 File: P616379 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 14:37:21 Processed: 9-JAN-19 08:58:07

Mass: 373.8210 375.8180 Tot Response: 4.99e+03 RRF: 1.324

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:08	1.52e+02	1.22e+02	1.25	yes	2.73e+02		n	n
2	33:18	7.62e+02	5.71e+02	1.33	yes	1.33e+03		n	n
3	33:53	1.68e+03	1.21e+03	1.38	yes	2.89e+03		n	n
4	34:27	1.58e+02	1.45e+02	1.09	yes	3.02e+02	1,2,3,6,7,8-HxCDF	n	n
5	35:00	1.06e+02	8.74e+01	1.21	yes	1.93e+02	2,3,4,6,7,8-HxCDF	n	n

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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0195

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 11 File: P616379 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 14:37:21 Processed: 9-JAN-19 08:58:07

Mass: 389.8160 391.8130 Tot Response: 4.55e+03 RRF: 1.092

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:43	7.02e+02	6.66e+02	1.05	yes	1.37e+03		n	n
2	34:31	1.17e+03	9.84e+02	1.19	yes	2.16e+03		n	n
3	34:37	7.22e+01	5.83e+01	1.24	yes	1.31e+02		n	n
4	35:15	3.32e+02	2.64e+02	1.26	yes	5.96e+02	1,2,3,6,7,8-HxCDD	n	n
5	35:29	1.60e+02	1.43e+02	1.12	yes	3.03e+02	1,2,3,7,8,9-HxCDD	n	n

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Peak List Summary

CLIENT ID.
SL0195

Entry: 43 Totals Name: Total Hepta-Furans

Run: 11 File: P616379 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 14:37:21 Processed: 9-JAN-19 08:58:07

Mass: 407.7820 409.7790 Tot Response: 1.45e+04 RRF: 1.495

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:06	2.21e+03	2.25e+03 0.98	yes	4.46e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	37:31	5.15e+03	4.94e+03 1.04	yes	1.01e+04		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0195

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 11 File: P616379 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 14:37:21 Processed: 9-JAN-19 08:58:07

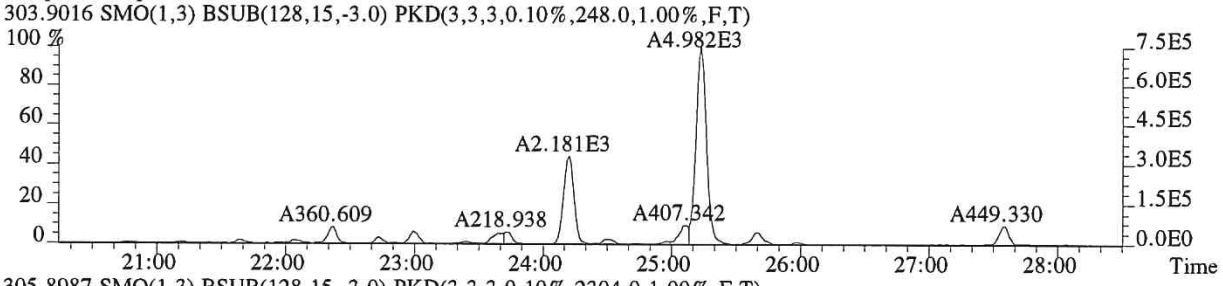
Mass: 423.7770 425.7740 Tot Response: 2.32e+04 RRF: 1.112

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:22	5.91e+03	5.73e+03	1.03	yes	1.16e+04		n	n
2	38:02	6.00e+03	5.56e+03	1.08	yes	1.16e+04	1,2,3,4,6,7,8-HpCDD	n	n

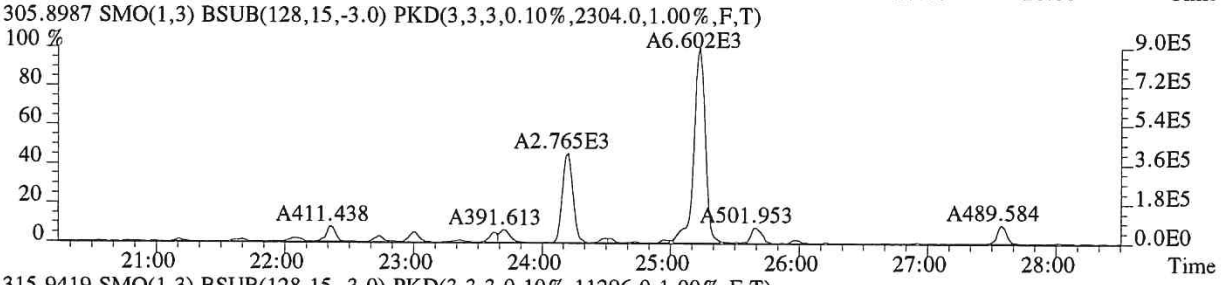
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File:P616379 #1-587 Acq: 8-JAN-2019 14:37:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-001

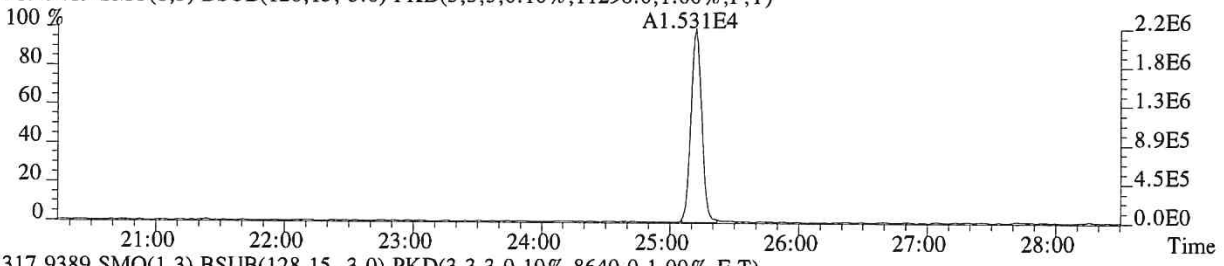
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,248.0,1.00%,F,T)



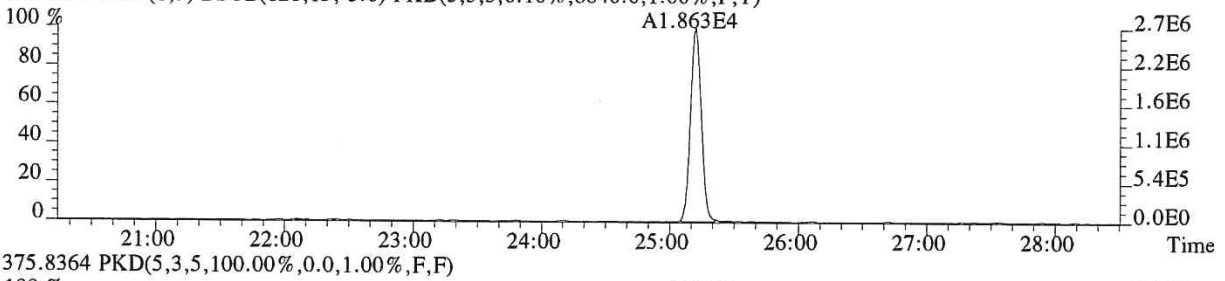
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2304.0,1.00%,F,T)



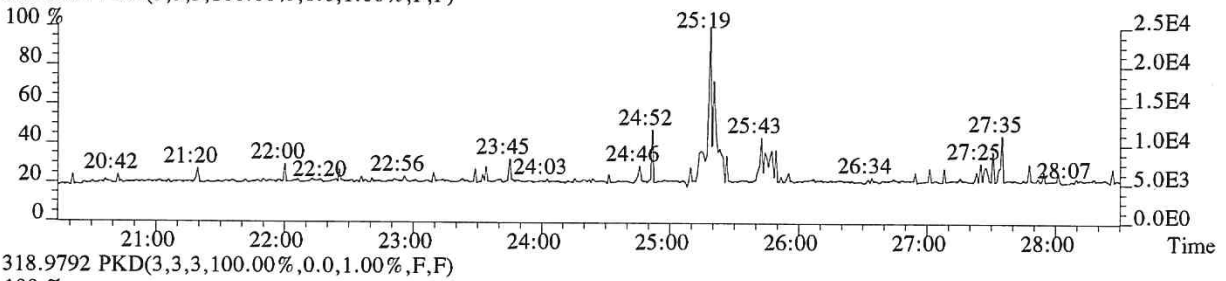
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11296.0,1.00%,F,T)



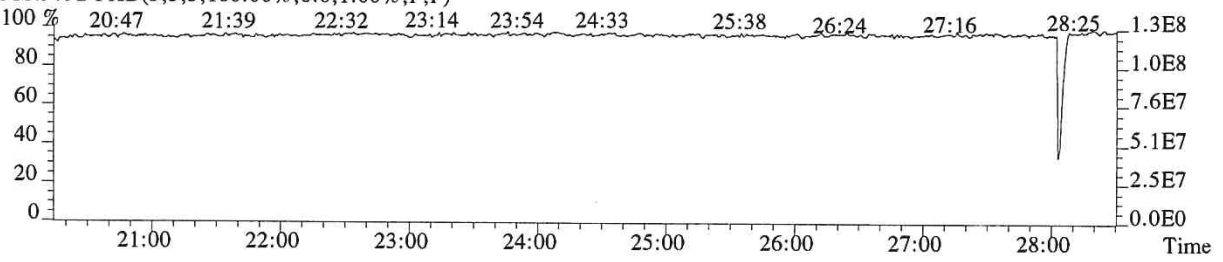
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8640.0,1.00%,F,T)



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

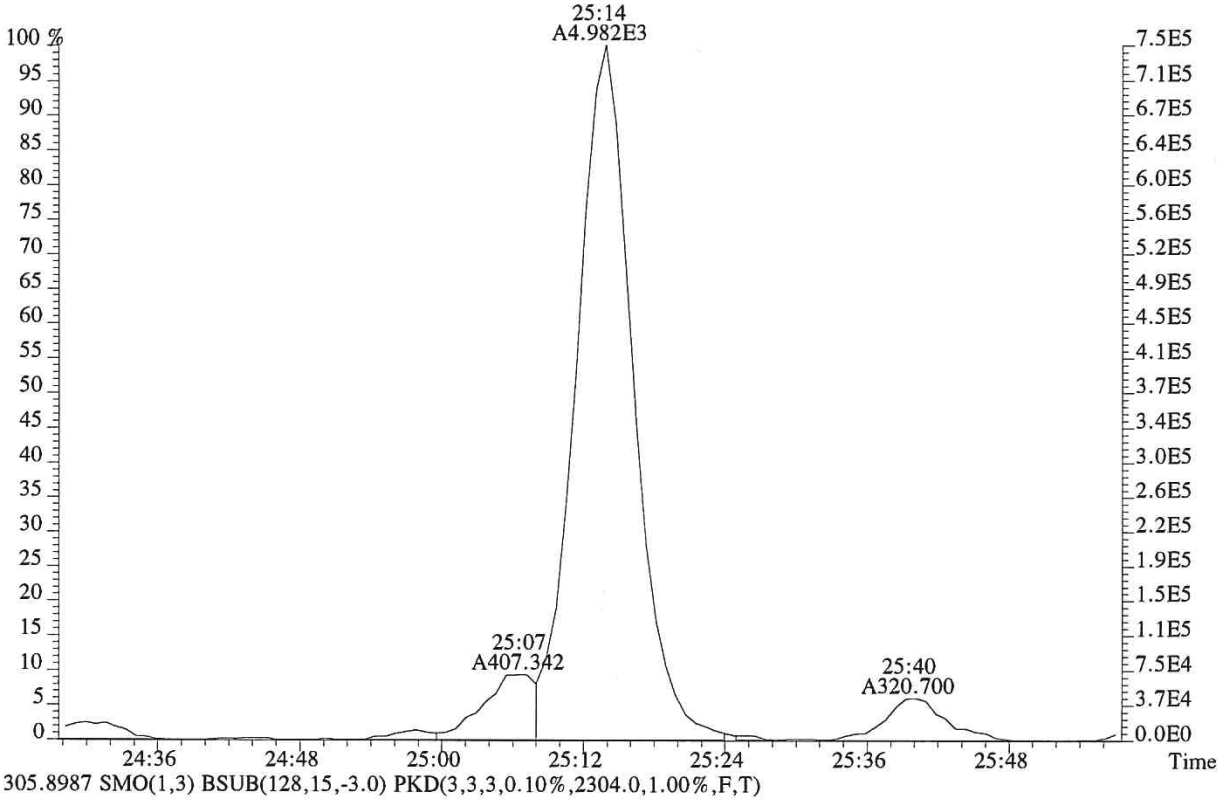


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

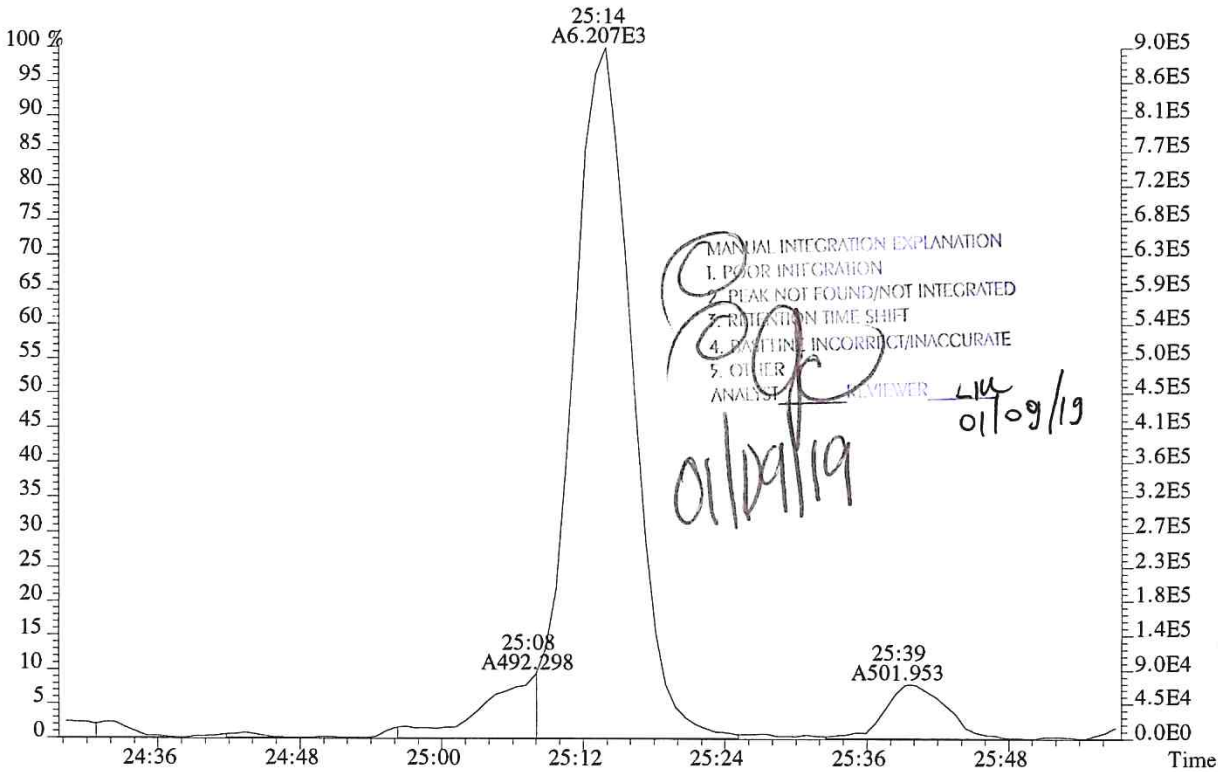


017022

File:P616379 #1-587 Acq: 8-JAN-2019 14:37:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-001
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,248.0,1.00%,F,T)

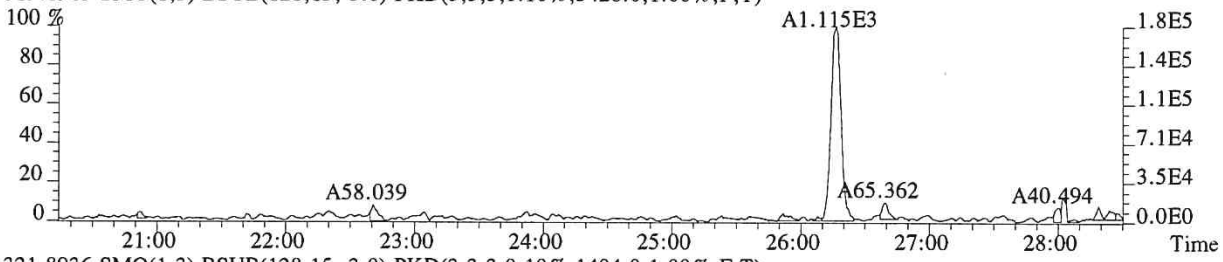


305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2304.0,1.00%,F,T)

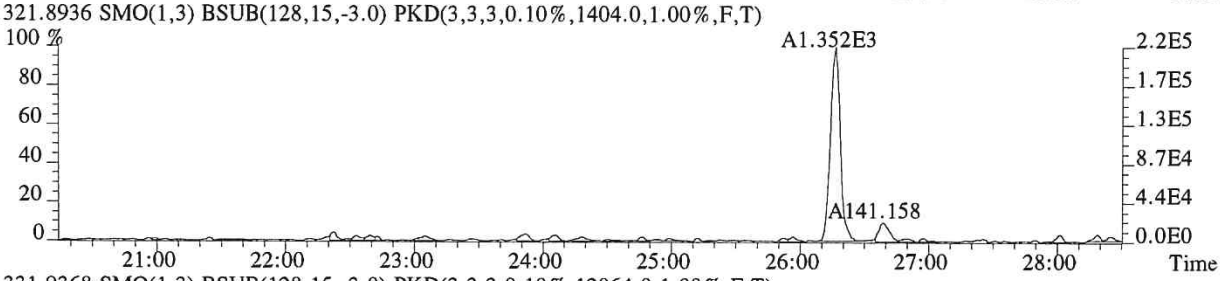


File:P616379 #1-587 Acq: 8-JAN-2019 14:37:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-001

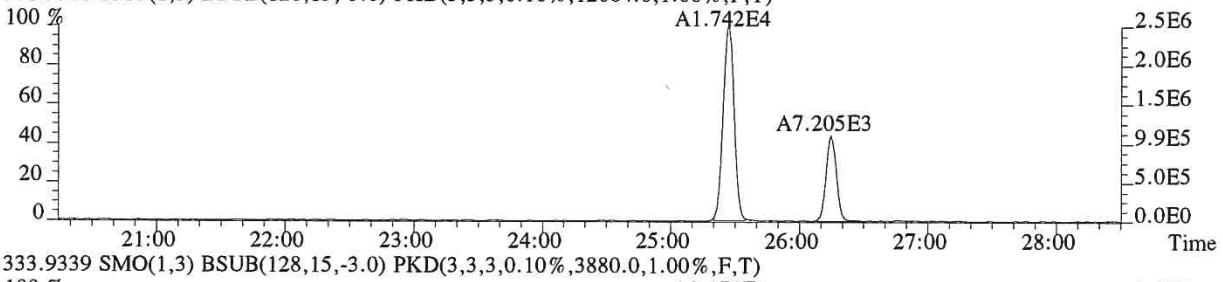
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3428.0,1.00%,F,T)



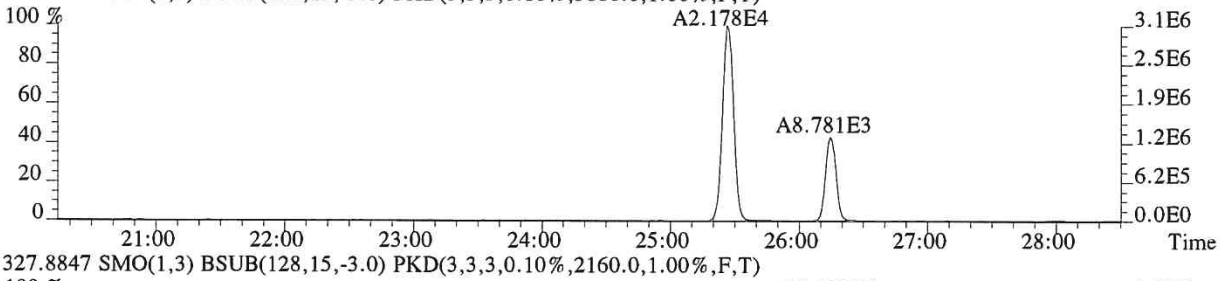
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1404.0,1.00%,F,T)



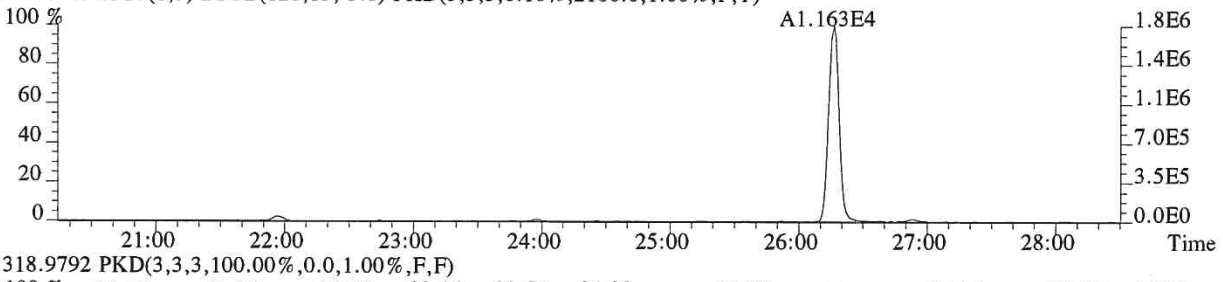
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12064.0,1.00%,F,T)



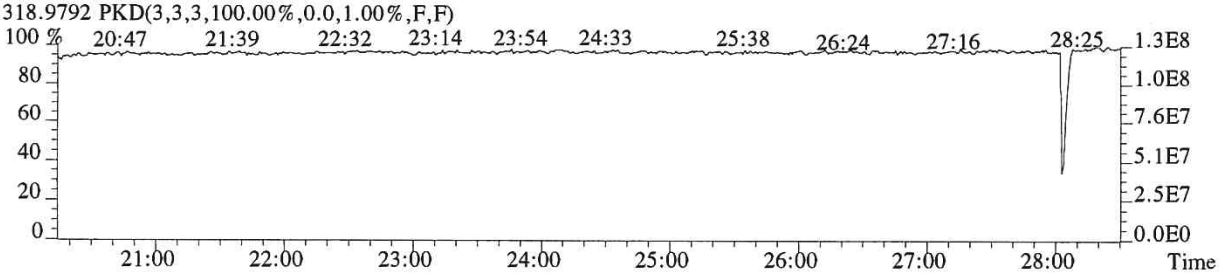
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3880.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2160.0,1.00%,F,T)



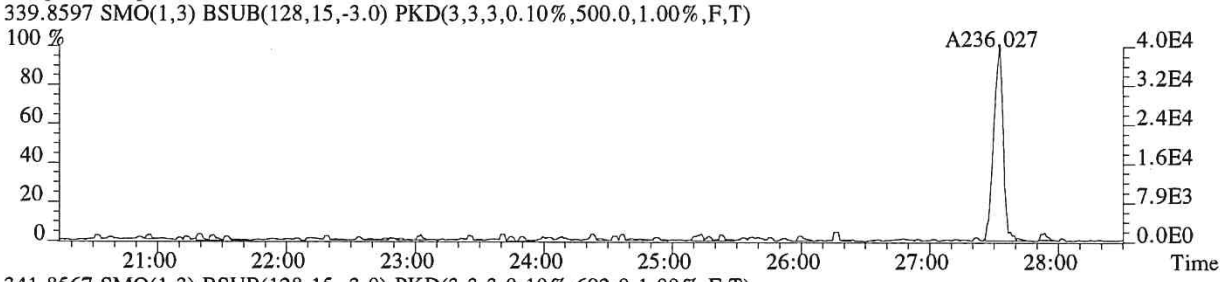
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



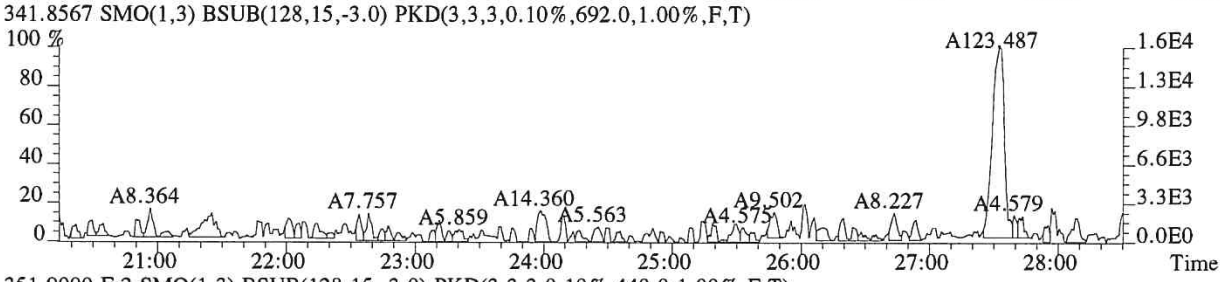
017024

File:P616379 #1-587 Acq: 8-JAN-2019 14:37:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-001

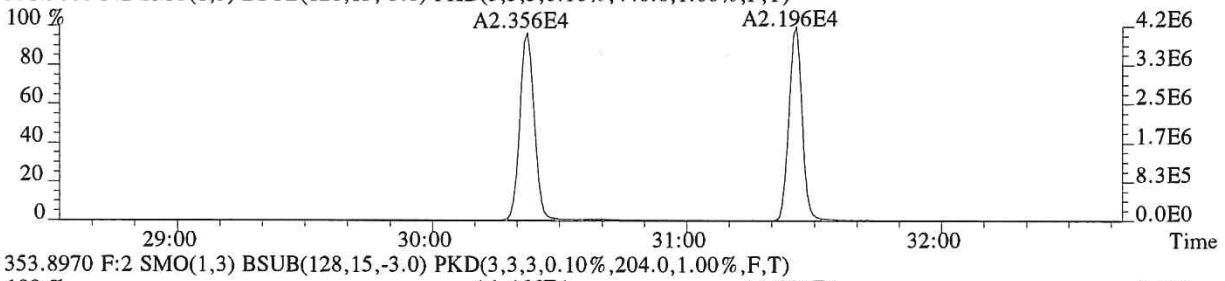
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,500.0,1.00%,F,T)



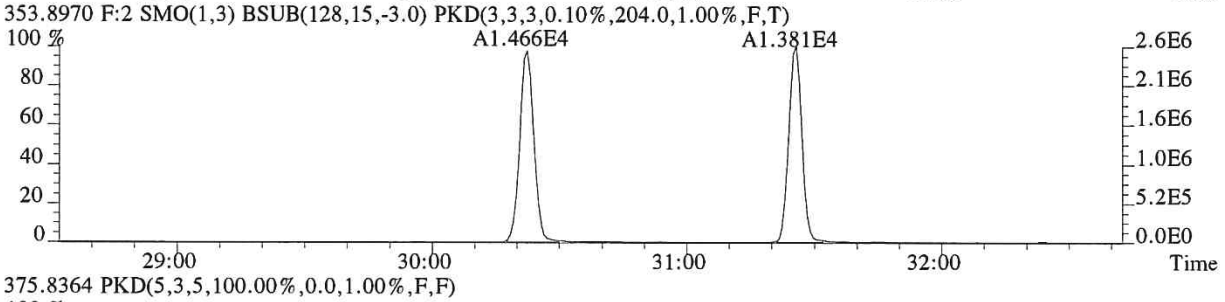
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,692.0,1.00%,F,T)



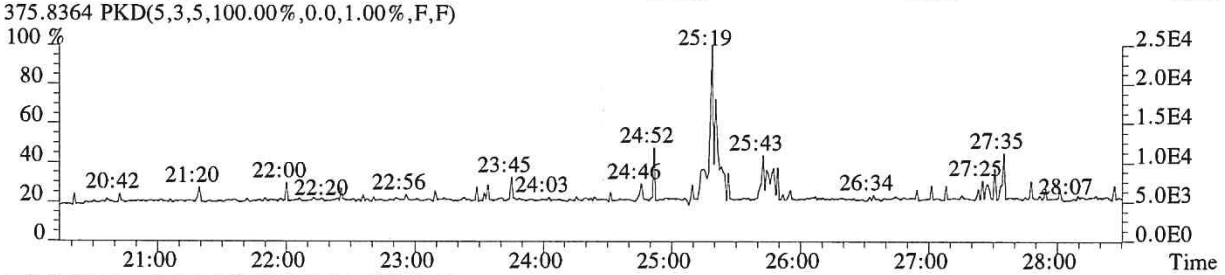
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,440.0,1.00%,F,T)



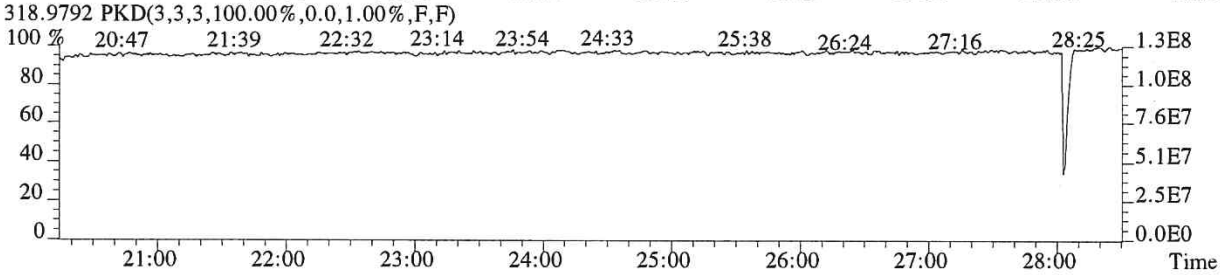
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,204.0,1.00%,F,T)



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



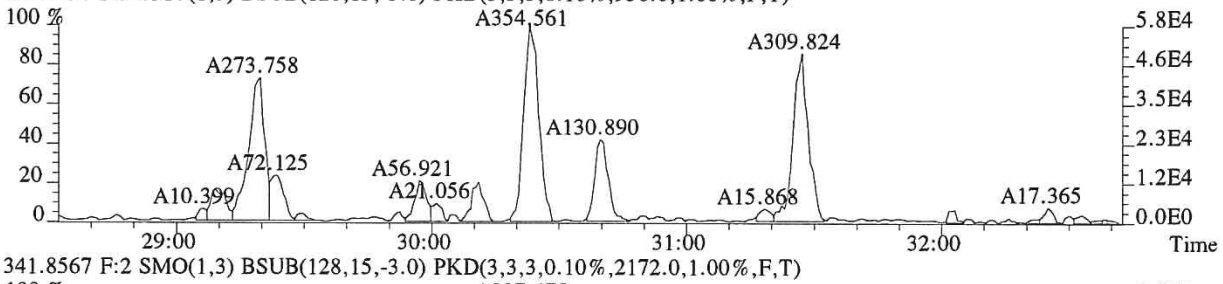
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



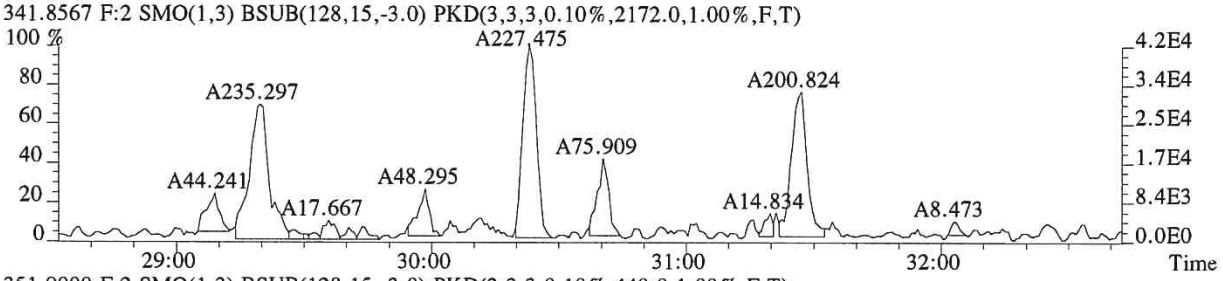
017025

File:P616379 #1-376 Acq: 8-JAN-2019 14:37:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-001

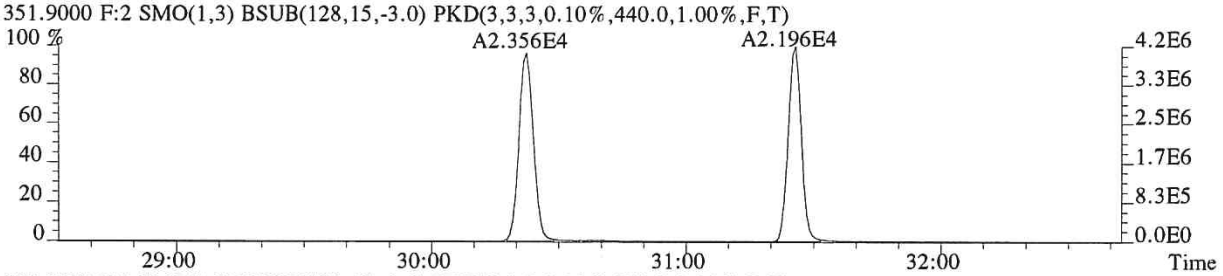
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,956.0,1.00%,F,T)



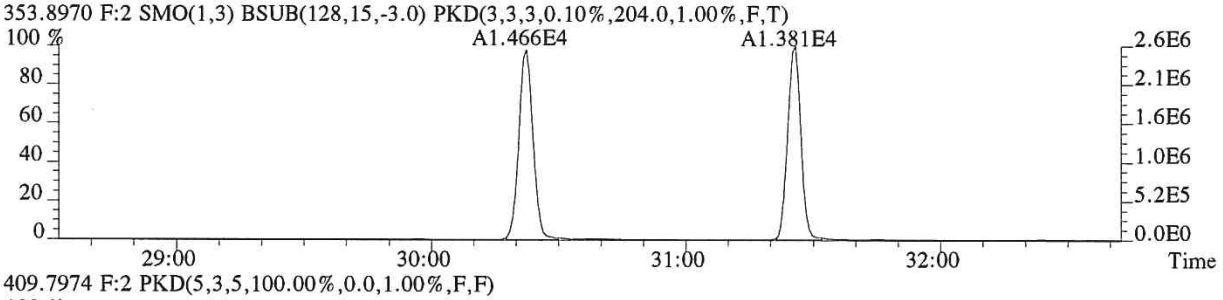
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2172.0,1.00%,F,T)



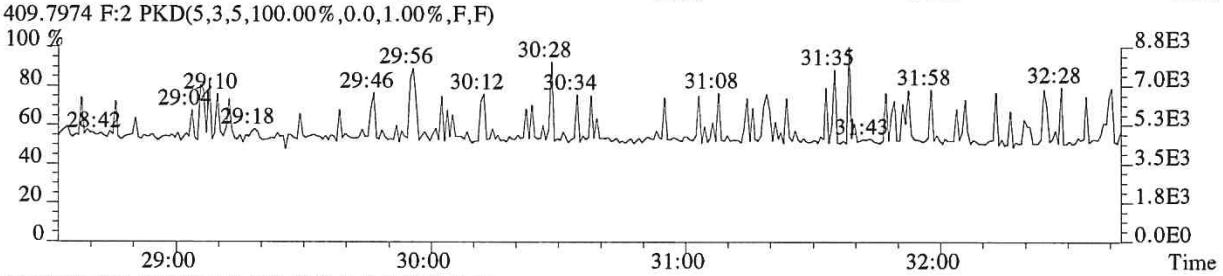
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,440.0,1.00%,F,T)



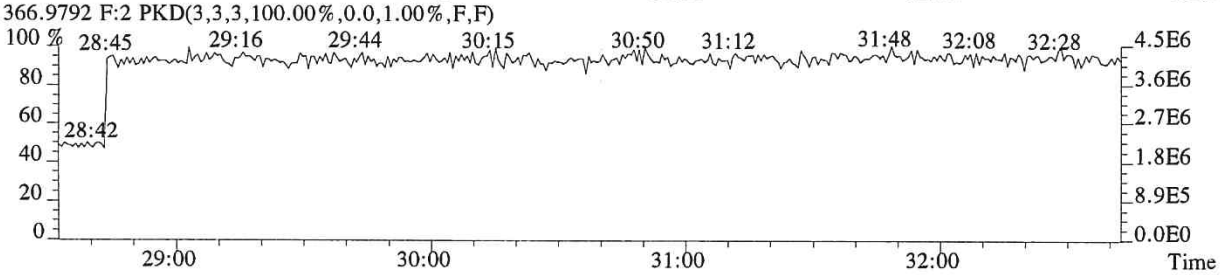
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,204.0,1.00%,F,T)



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

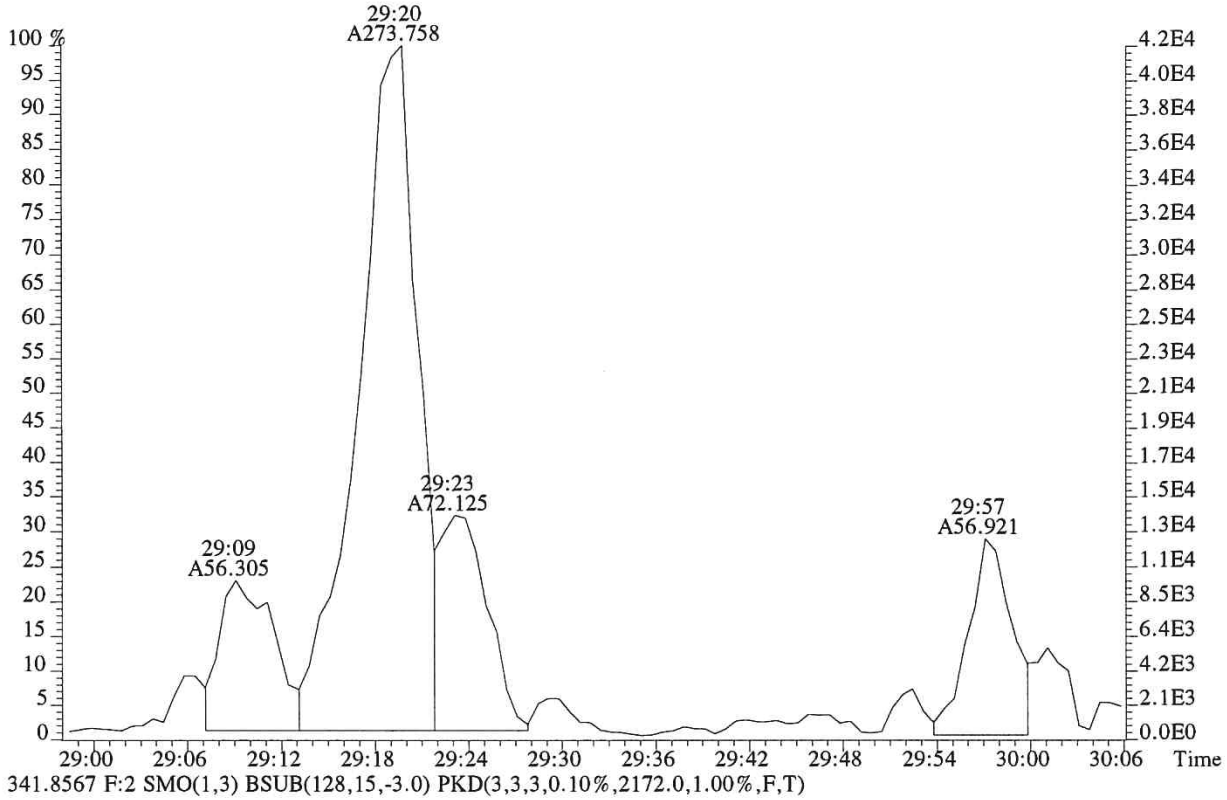


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

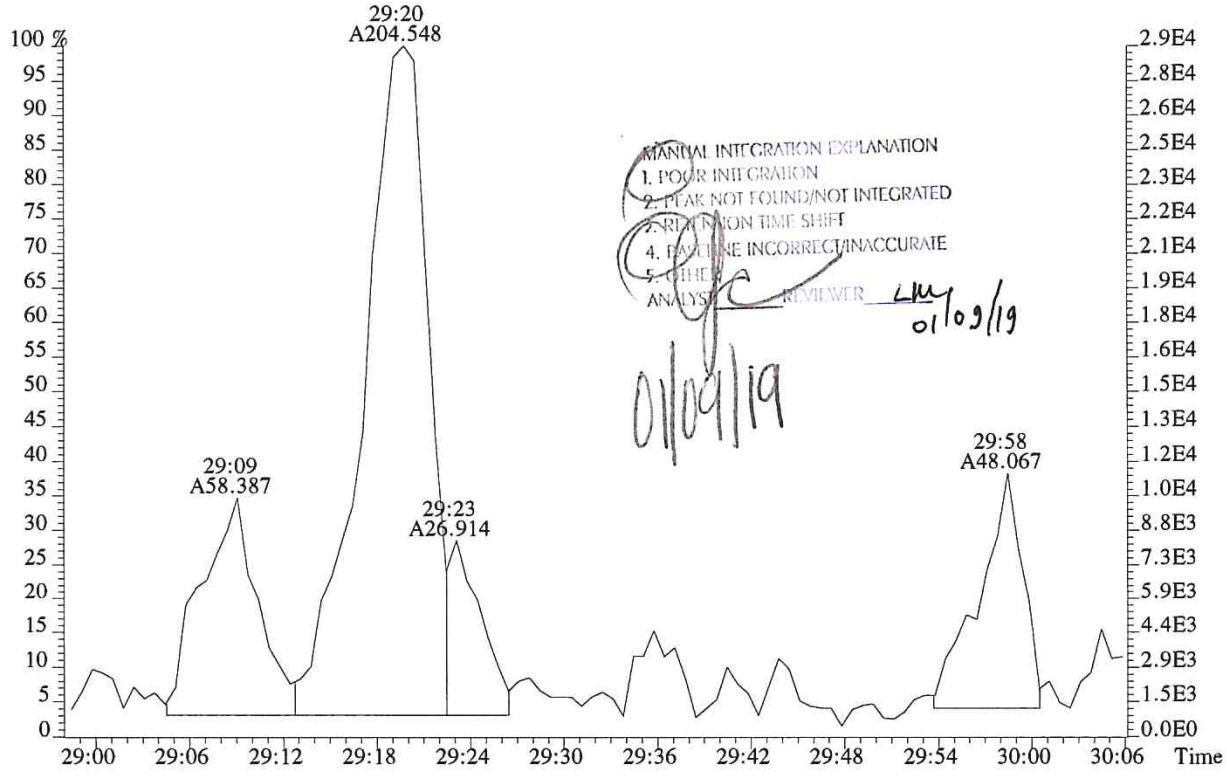


017026

File:P616379 #1-376 Acq: 8-JAN-2019 14:37:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-001
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,956.0,1.00%,F,T)



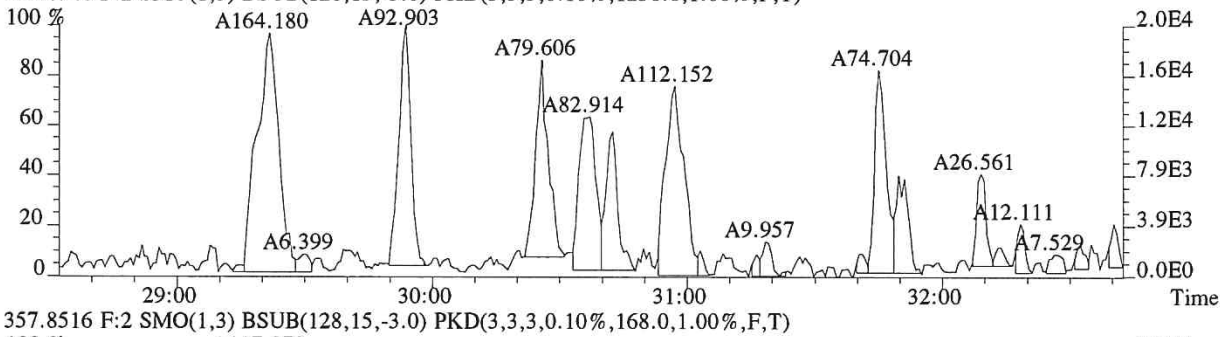
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2172.0,1.00%,F,T)



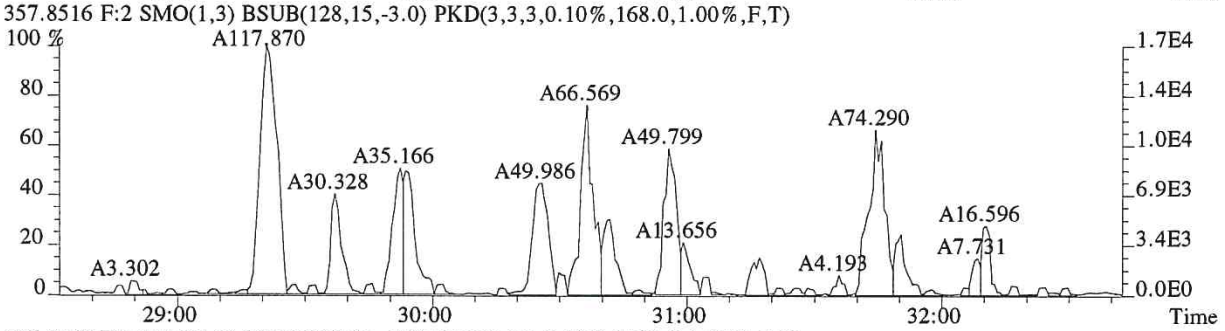
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LKW 01/09/19
01/09/19

File:P616379 #1-376 Acq: 8-JAN-2019 14:37:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-001

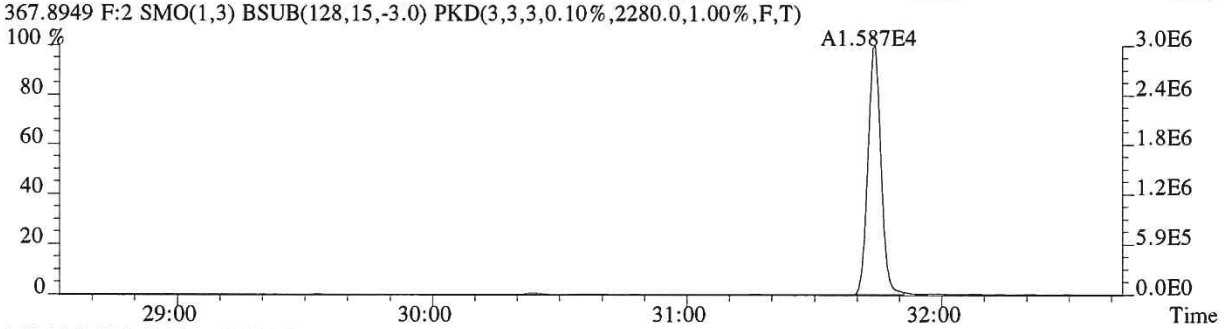
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1256.0,1.00%,F,T)



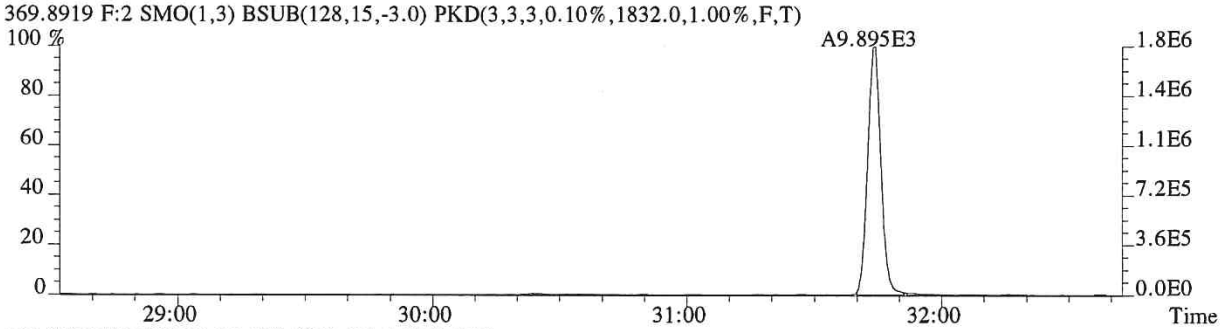
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,168.0,1.00%,F,T)



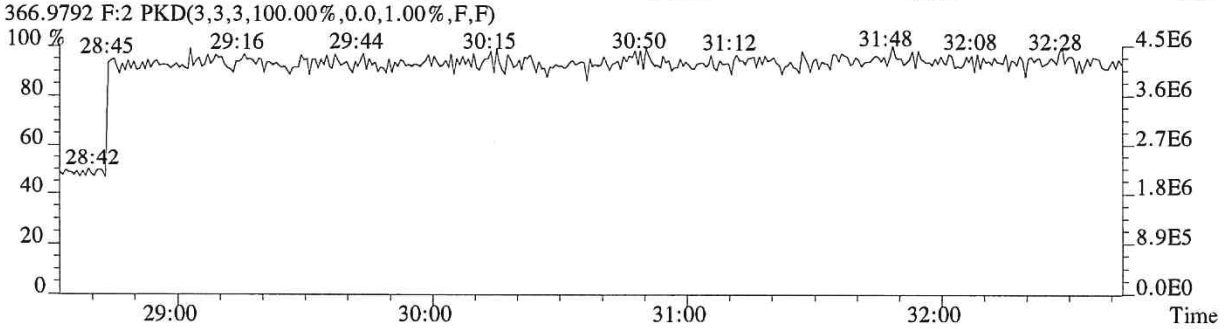
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2280.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1832.0,1.00%,F,T)

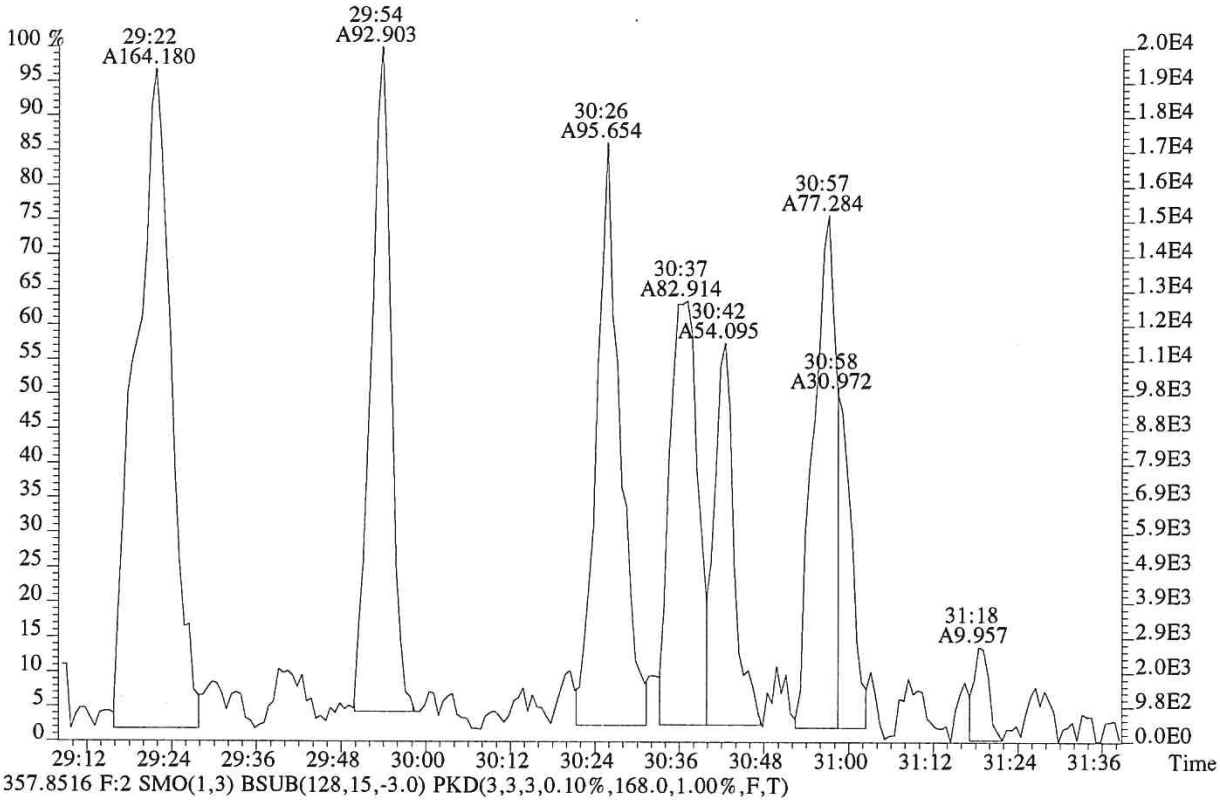


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

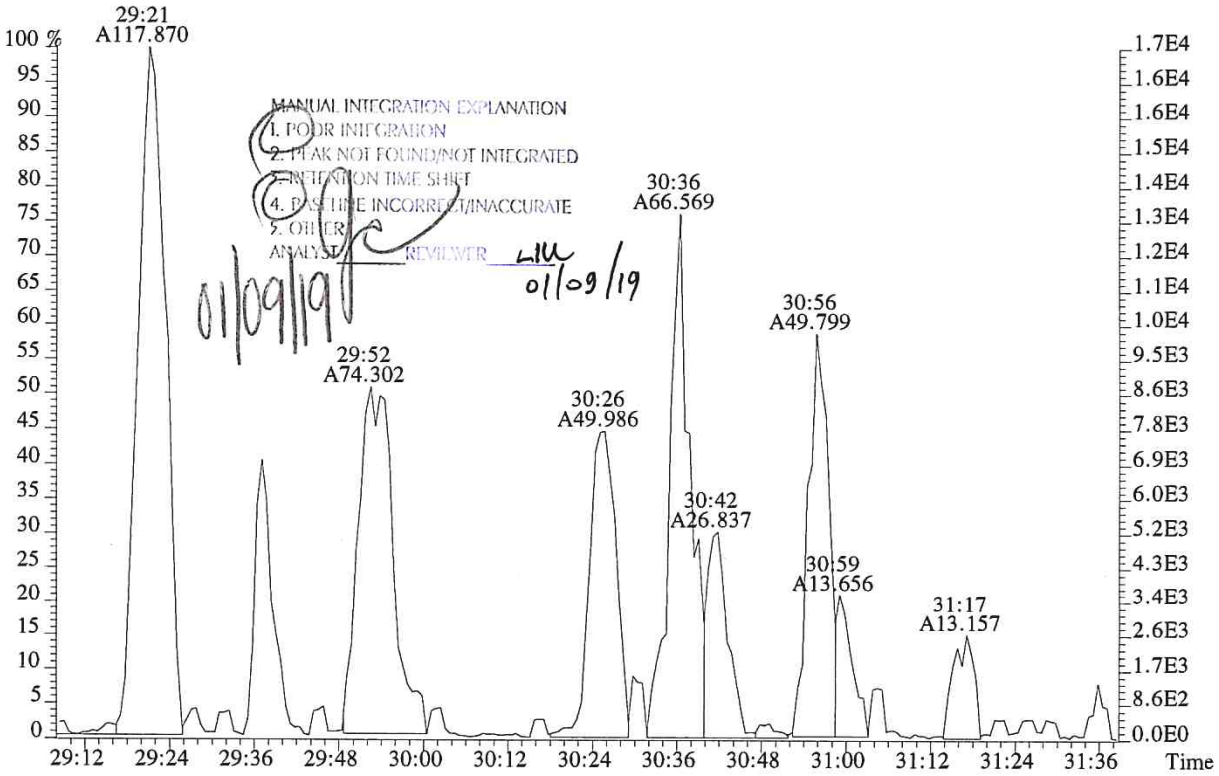


017028

File:P616379 #1-376 Acq: 8-JAN-2019 14:37:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-001
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1256.0,1.00%,F,T)

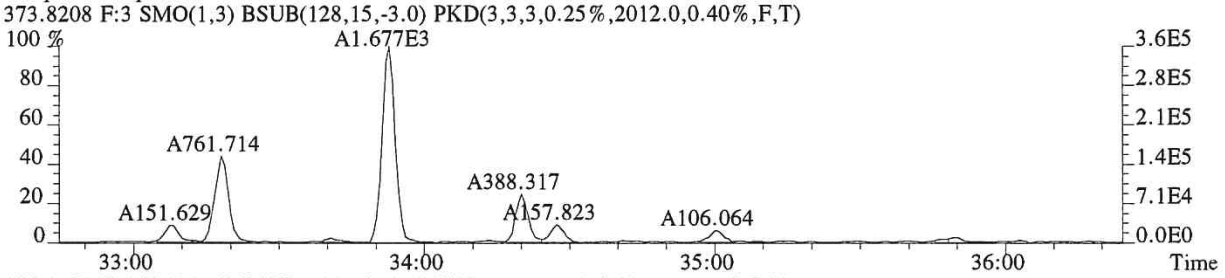


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,168.0,1.00%,F,T)

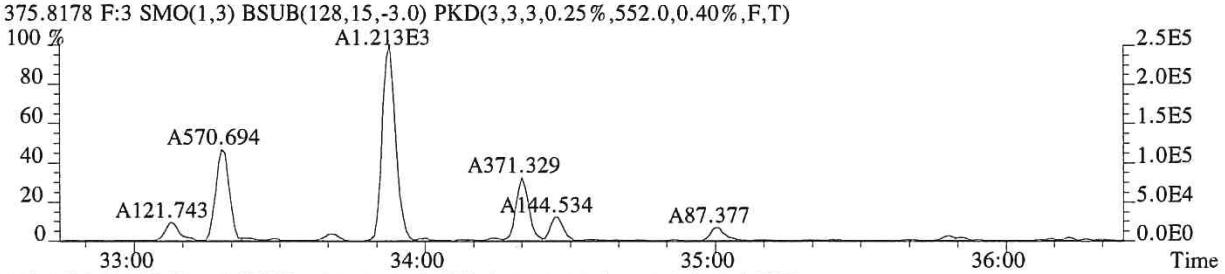


File:P616379 #1-330 Acq: 8-JAN-2019 14:37:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-001

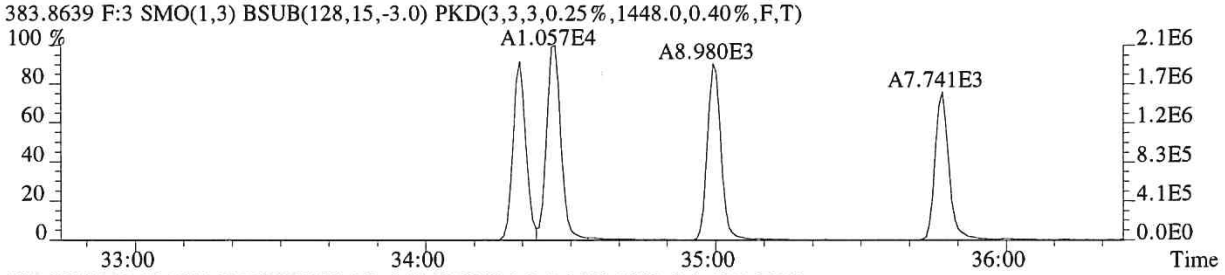
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2012.0,0.40%,F,T)



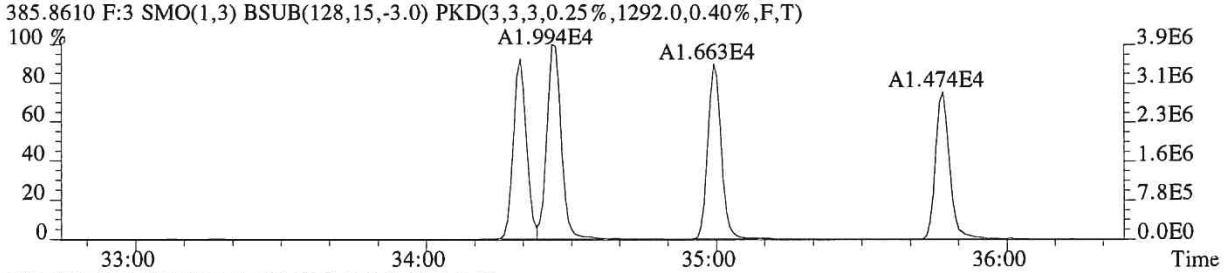
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,552.0,0.40%,F,T)



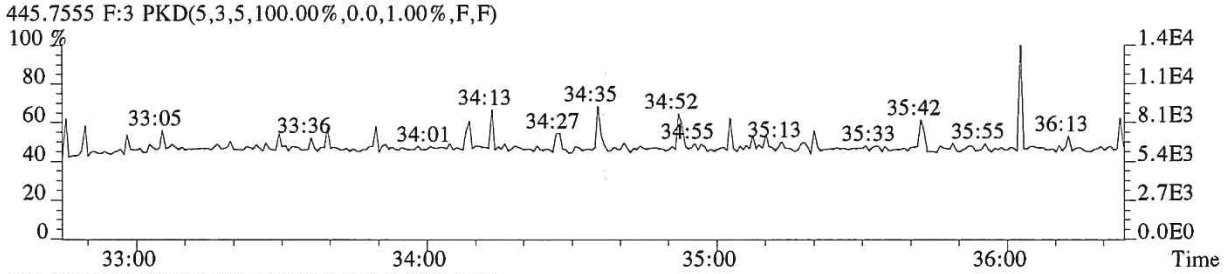
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1448.0,0.40%,F,T)



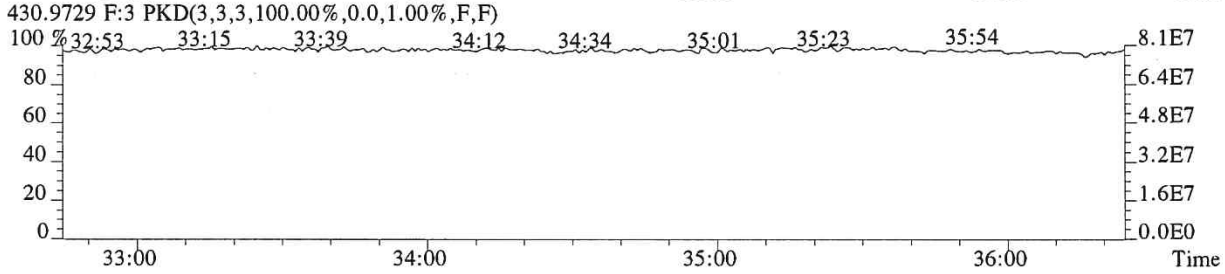
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1292.0,0.40%,F,T)



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

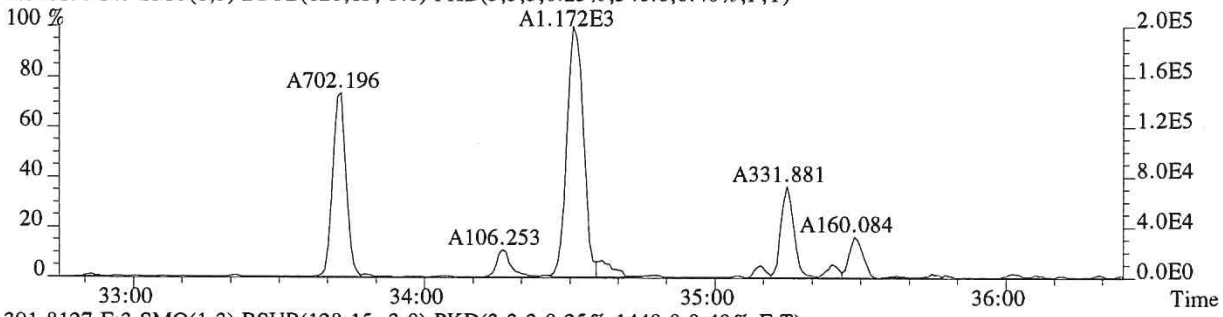


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

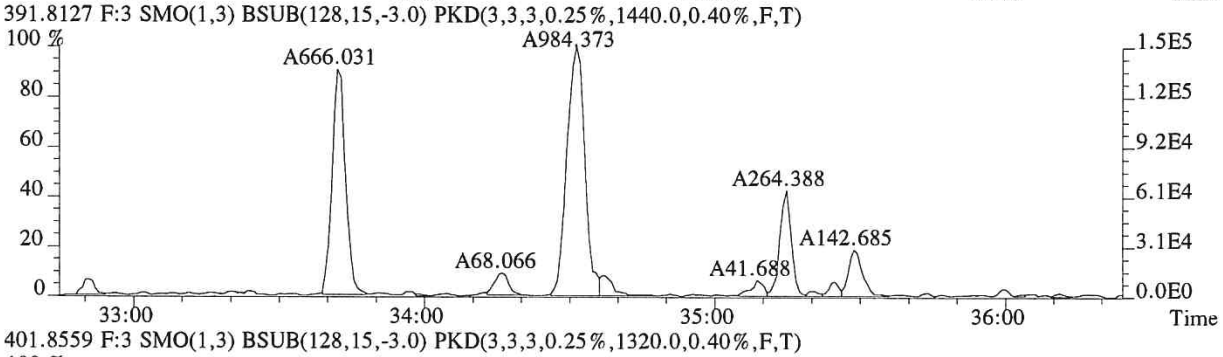


File:P616379 #1-330 Acq: 8-JAN-2019 14:37:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-001

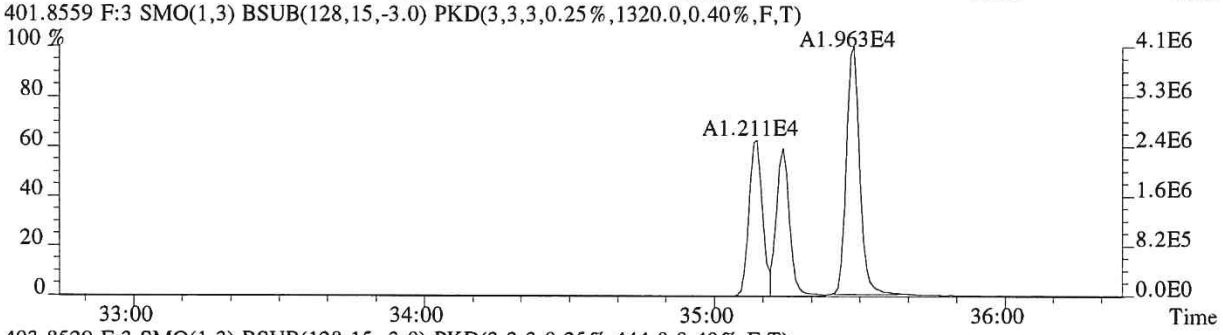
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,540.0,0.40%,F,T)



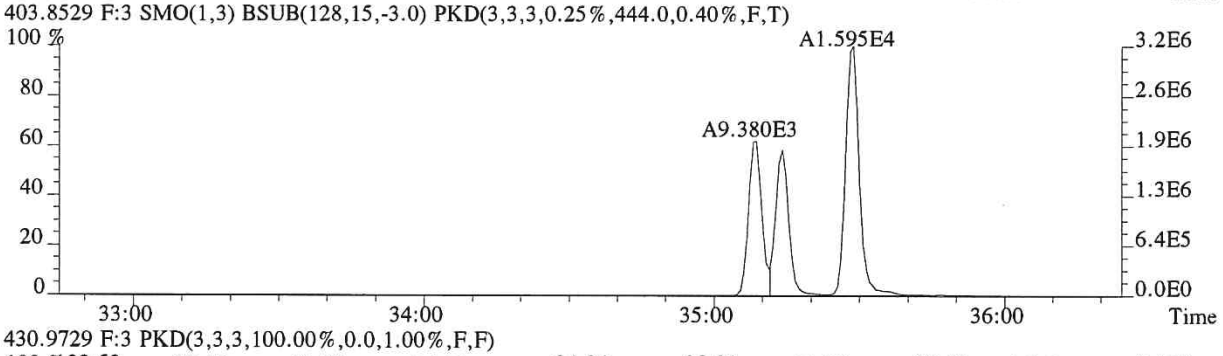
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1440.0,0.40%,F,T)



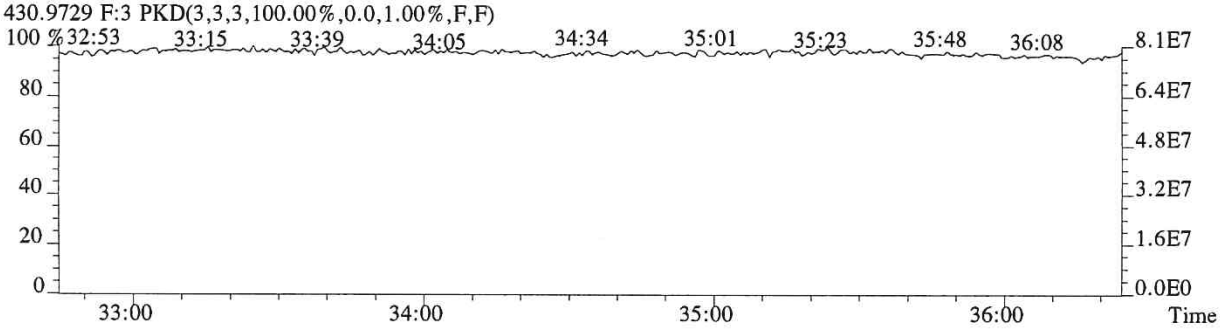
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1320.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,444.0,0.40%,F,T)

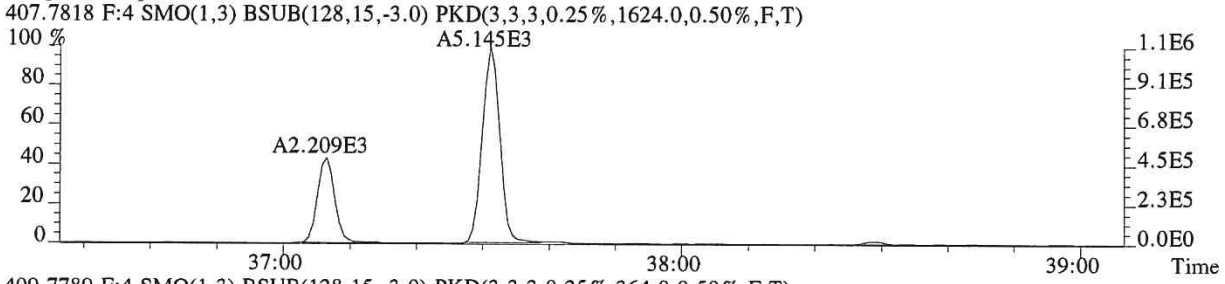


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

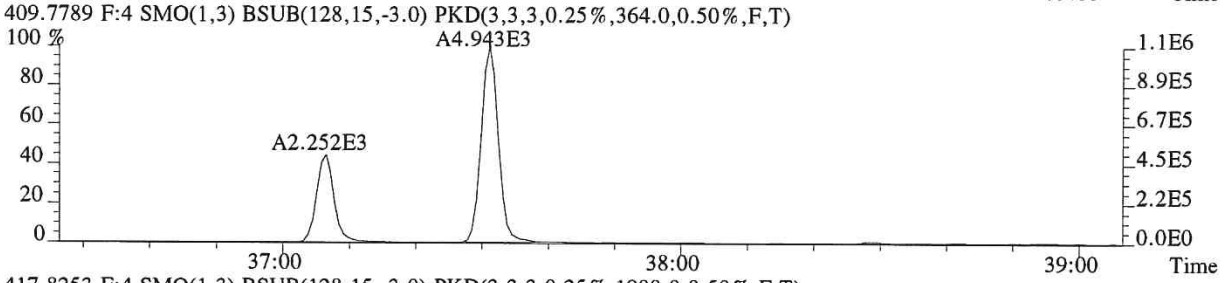


File:P616379 #1-241 Acq: 8-JAN-2019 14:37:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-001

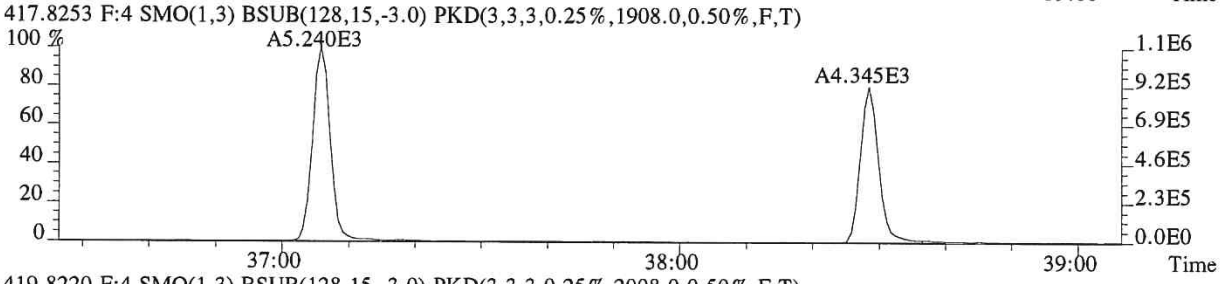
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1624.0,0.50%,F,T)



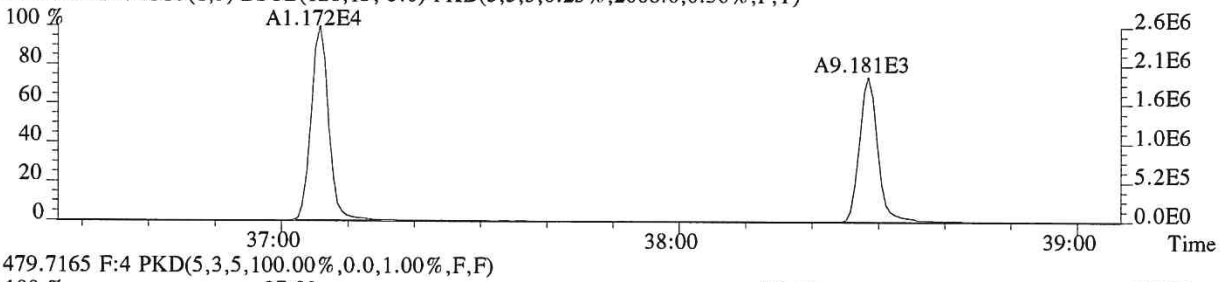
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,364.0,0.50%,F,T)



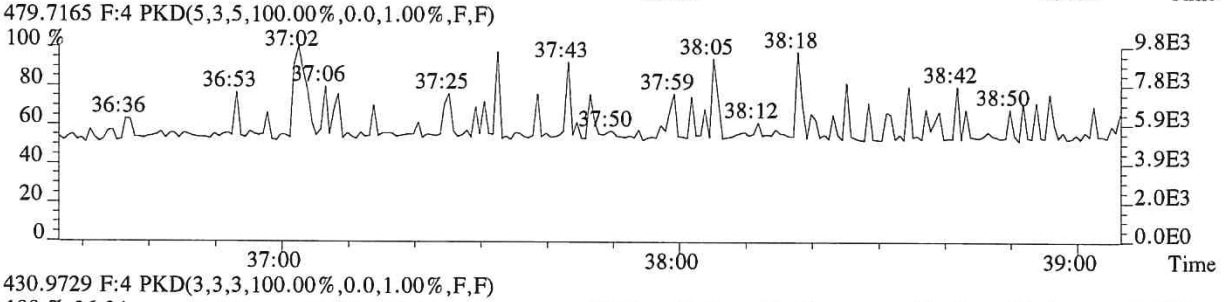
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1908.0,0.50%,F,T)



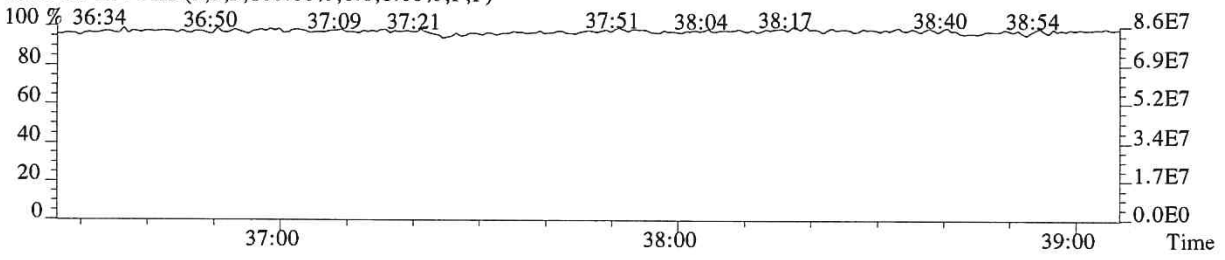
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2008.0,0.50%,F,T)



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

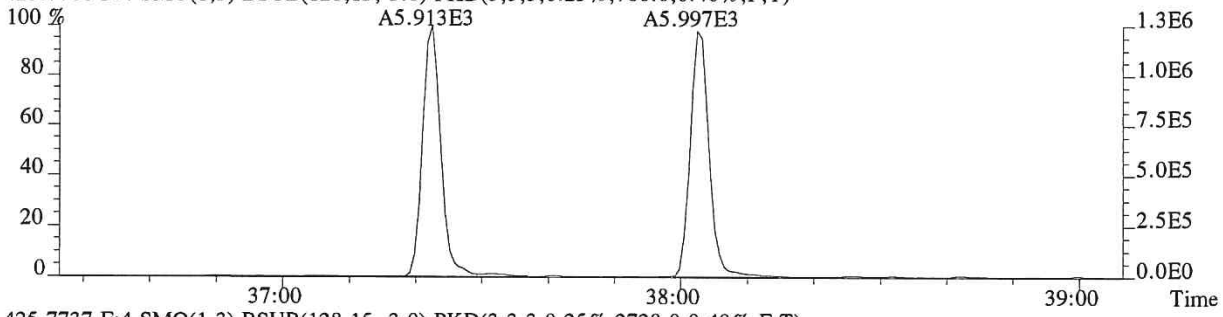


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

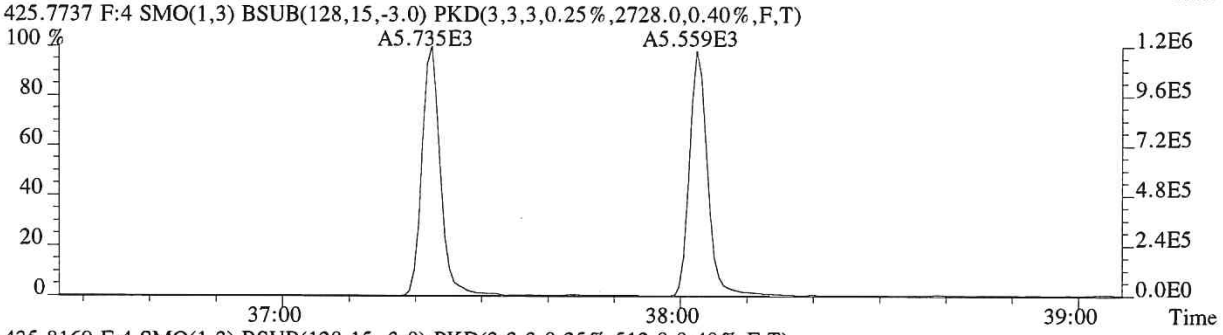


File:P616379 #1-241 Acq: 8-JAN-2019 14:37:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-001

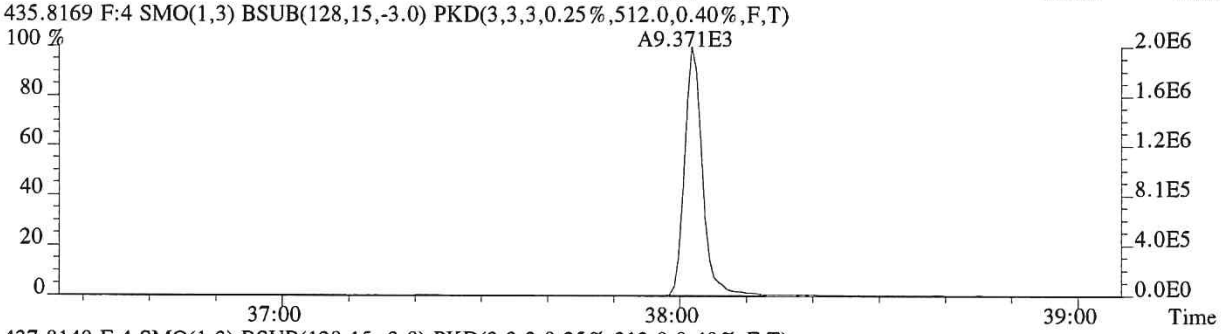
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,760.0,0.40%,F,T)



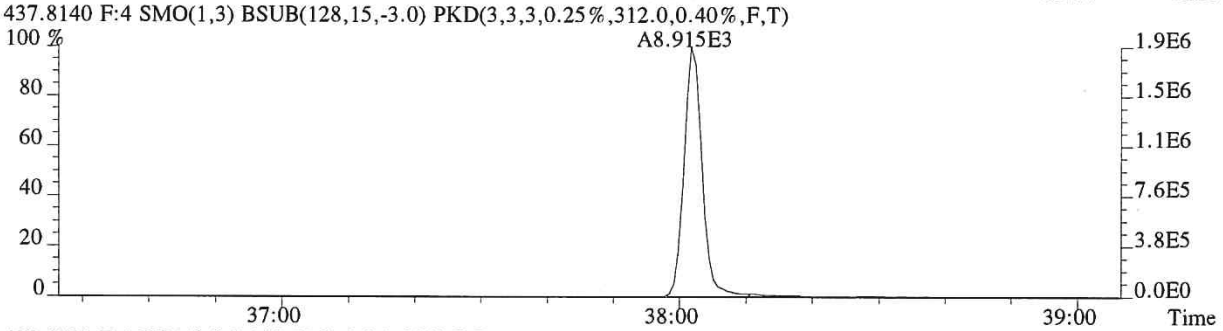
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2728.0,0.40%,F,T)



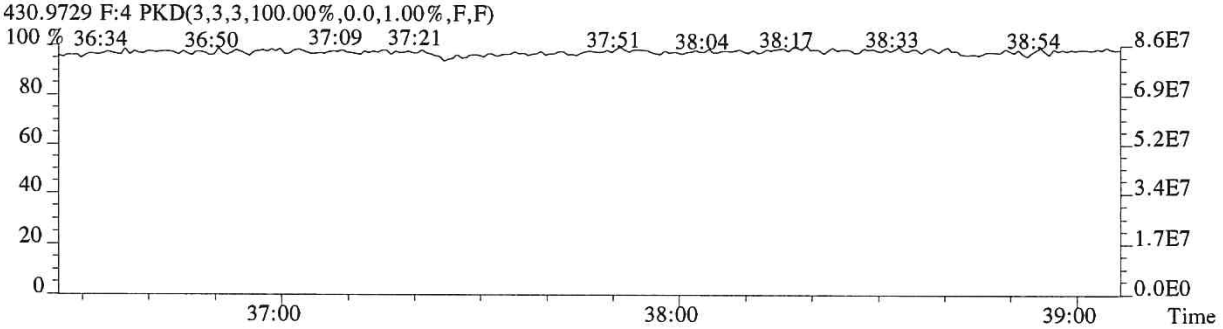
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,512.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,312.0,0.40%,F,T)

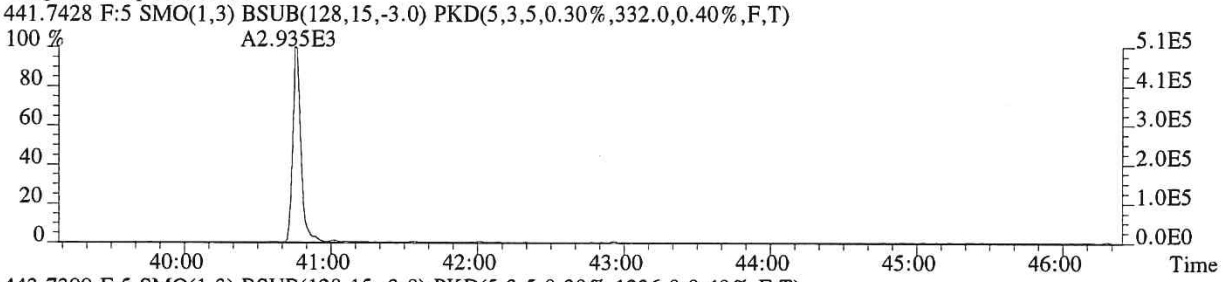


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

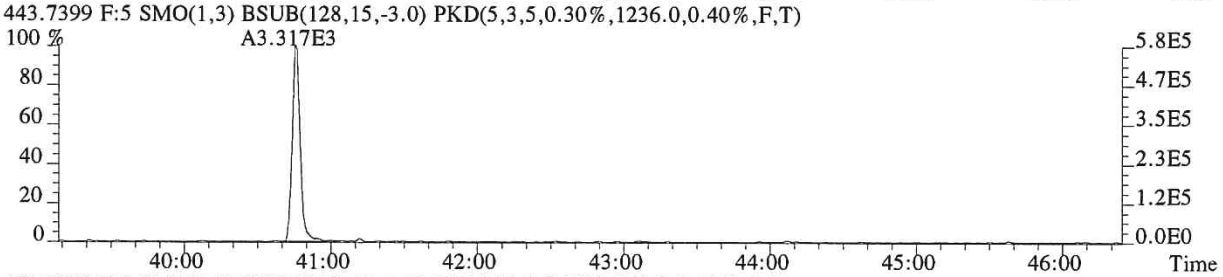


File:P616379 #1-654 Acq: 8-JAN-2019 14:37:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-001

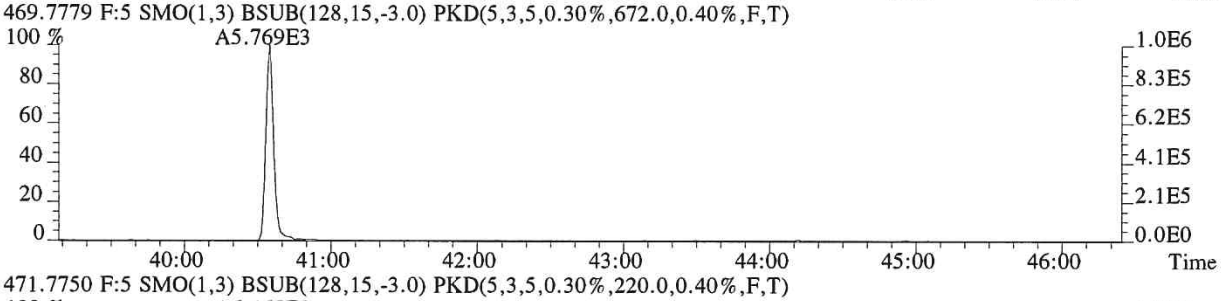
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,332.0,0.40%,F,T)



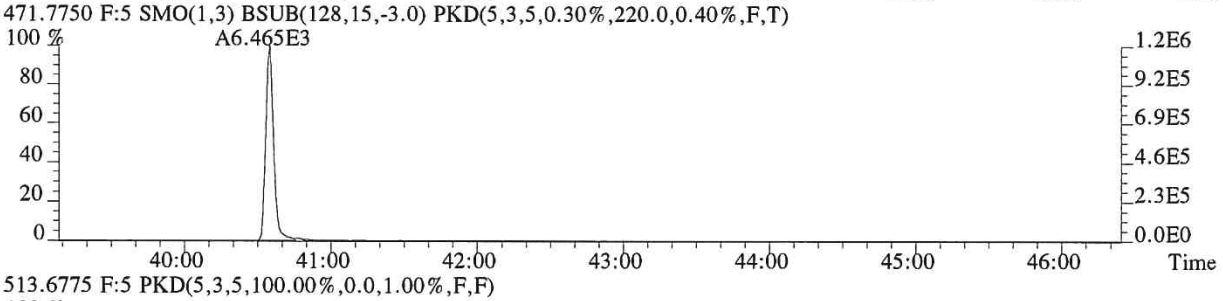
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1236.0,0.40%,F,T)



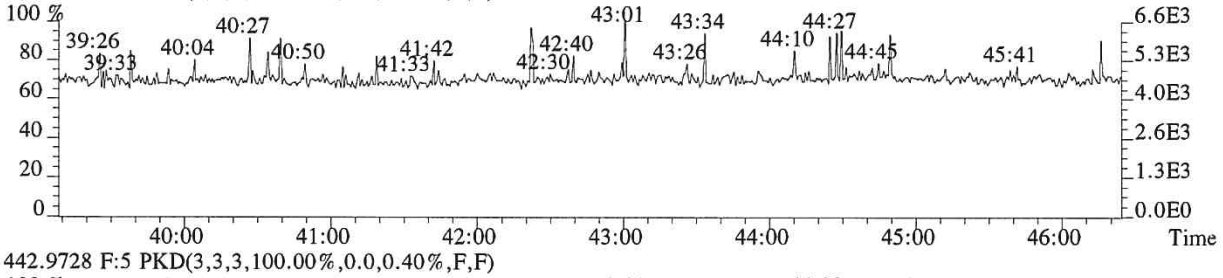
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,672.0,0.40%,F,T)



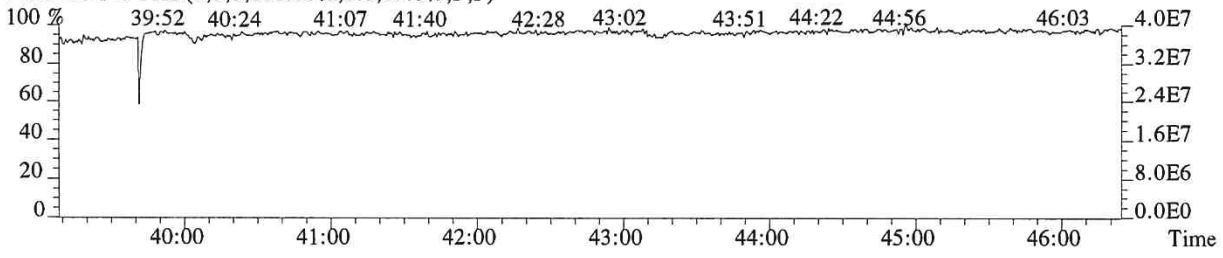
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,220.0,0.40%,F,T)



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

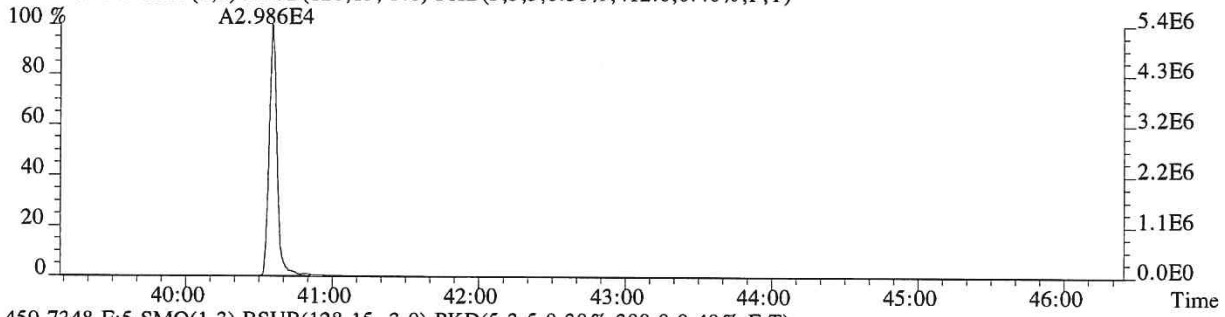


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

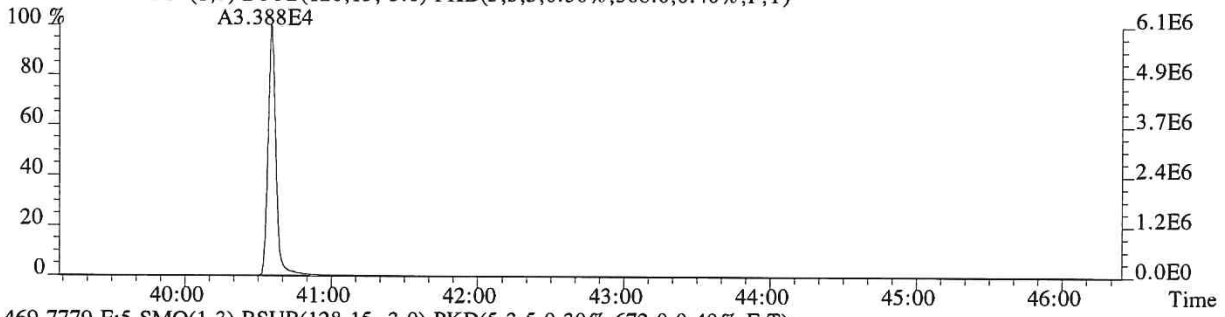


File:P616379 #1-654 Acq: 8-JAN-2019 14:37:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-001

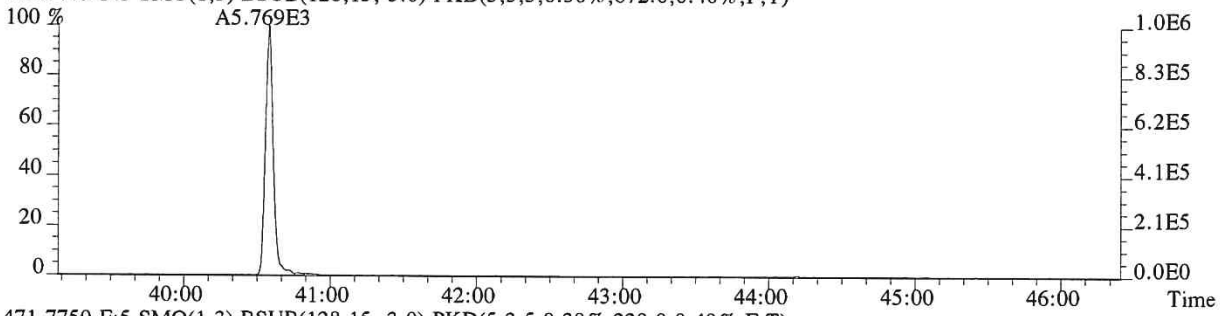
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,412.0,0.40%,F,T)



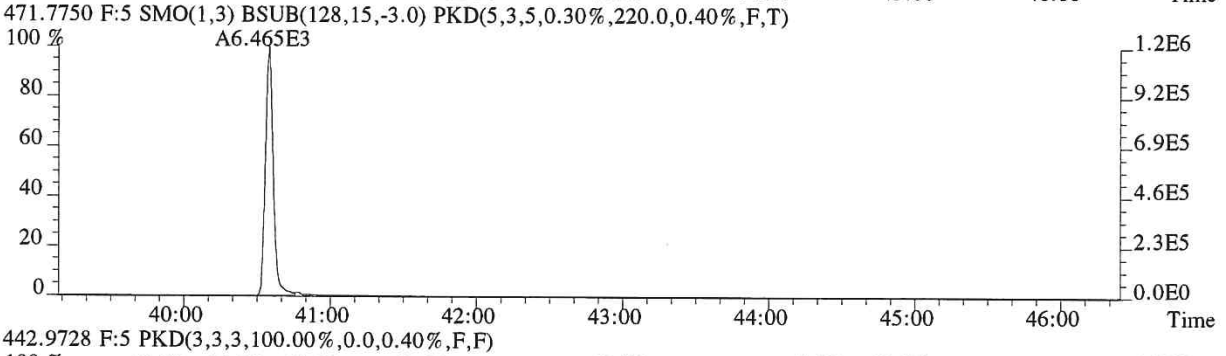
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,308.0,0.40%,F,T)



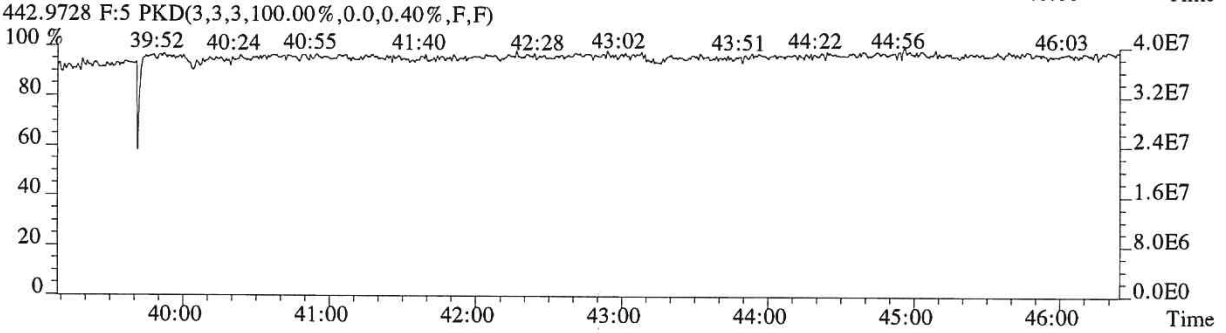
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,672.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,220.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017035

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0196

Run #12 Filename P616380 Samp: 1 Inj: 1 Acquired: 8-JAN-19 15:25:39
Processed: 9-JAN-19 08:58:09 Sample ID: E1801138-002

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:15	1.183e+05	1.478e+05	0.80	yes	yes	1.081
2	Unk	1,2,3,7,8-PeCDF	30:24	6.453e+03	3.974e+03	1.62	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:28	5.179e+03	3.363e+03	1.54	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	7.889e+03	6.587e+03	1.20	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:27	2.058e+03	1.778e+03	1.16	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	5.466e+02	4.832e+02	1.13	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:49	5.912e+02	5.090e+02	1.16	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:07	5.369e+03	4.946e+03	1.09	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:29	6.476e+02	5.752e+02	1.13	yes	no	1.463
10	Unk	OCDF	40:46	5.254e+04	5.871e+04	0.89	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:17	2.961e+04	3.773e+04	0.78	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:46	5.647e+02	2.912e+02	1.94	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:09	9.723e+01	7.475e+01	1.30	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:15	4.420e+02	3.299e+02	1.34	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:30	2.076e+02	1.675e+02	1.24	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	6.610e+03	6.224e+03	1.06	yes	no	1.112
17	Unk	OCDD	40:36	4.276e+04	4.771e+04	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:14	1.609e+04	2.042e+04	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:23	2.453e+04	1.526e+04	1.61	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	2.367e+04	1.450e+04	1.63	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:20	8.947e+03	1.735e+04	0.52	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	1.056e+04	1.948e+04	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:00	9.173e+03	1.767e+04	0.52	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	8.261e+03	1.556e+04	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:06	5.349e+03	1.190e+04	0.45	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:28	4.087e+03	9.183e+03	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:16	7.846e+03	9.591e+03	0.82	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:45	1.696e+04	1.069e+04	1.59	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	1.238e+04	9.524e+03	1.30	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	1.127e+04	8.805e+03	1.28	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:02	9.281e+03	8.566e+03	1.08	yes	no	0.857
32	IS	13C-OCDD	40:35	5.427e+03	5.992e+03	0.91	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:29	1.831e+04	2.275e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	2.071e+04	1.656e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:17	1.249e+04				no	1.086

$$\text{OCDD} = \frac{(4.276e+04 + 4.771e+04) \times 4000\ \text{pg} \times 1}{(5.427e+03 + 5.992e+03) \times 10.776\ \text{g} \times 69.1 / 100 \times 1.157} = 3678\ \text{ng/kg}$$

LW 01/09/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0196

Run #12 Filename P616380 Samp: 1 Inj: 1 Acquired: 8-JAN-19 15:25:39
Processed: 9-JAN-19 08:58:09 LAB. ID: E1801138-002

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.63e+07	1.41e+03	1.2e+04	2.04e+07	3.06e+03	6.7e+03
2	1,2,3,7,8-PeCDF	1.11e+06	1.44e+03	7.7e+02	6.93e+05	2.57e+03	2.7e+02
3	2,3,4,7,8-PeCDF	8.53e+05	1.44e+03	5.9e+02	5.21e+05	2.57e+03	2.0e+02
4	1,2,3,4,7,8-HxCDF	1.69e+06	2.22e+03	7.6e+02	1.42e+06	2.32e+03	6.1e+02
5	1,2,3,6,7,8-HxCDF	4.08e+05	2.22e+03	1.8e+02	3.43e+05	2.32e+03	1.5e+02
6	2,3,4,6,7,8-HxCDF	1.19e+05	2.22e+03	5.4e+01	1.01e+05	2.32e+03	4.3e+01
7	1,2,3,7,8,9-HxCDF	1.05e+05	2.22e+03	4.7e+01	1.07e+05	2.32e+03	4.6e+01
8	1,2,3,4,6,7,8-HpCDF	1.13e+06	6.40e+02	1.8e+03	1.04e+06	7.60e+02	1.4e+03
9	1,2,3,4,7,8,9-HpCDF	1.43e+05	6.40e+02	2.2e+02	1.12e+05	7.60e+02	1.5e+02
10	OCDF	9.53e+06	2.68e+02	3.6e+04	1.04e+07	1.92e+03	5.4e+03
11	2,3,7,8-TCDD	4.64e+06	3.52e+03	1.3e+03	5.94e+06	1.28e+03	4.7e+03
12	1,2,3,7,8-PeCDD	9.44e+04	2.05e+03	4.6e+01	5.01e+04	1.54e+03	3.3e+01
13	1,2,3,4,7,8-HxCDD	2.10e+04	1.67e+03	1.3e+01	1.83e+04	1.40e+03	1.3e+01
14	1,2,3,6,7,8-HxCDD	1.01e+05	1.67e+03	6.1e+01	7.23e+04	1.40e+03	5.2e+01
15	1,2,3,7,8,9-HxCDD	3.70e+04	1.67e+03	2.2e+01	3.09e+04	1.40e+03	2.2e+01
16	1,2,3,4,6,7,8-HpCDD	1.43e+06	1.46e+03	9.8e+02	1.36e+06	3.46e+03	3.9e+02
17	OCDD	7.73e+06	3.28e+02	2.4e+04	8.75e+06	1.88e+02	4.7e+04
18	13C-2,3,7,8-TCDF	2.27e+06	1.20e+04	1.9e+02	2.93e+06	1.23e+04	2.4e+02
19	13C-1,2,3,7,8-PeCDF	4.34e+06	7.54e+03	5.8e+02	2.68e+06	8.46e+03	3.2e+02
20	13C-2,3,4,7,8-PeCDF	4.46e+06	7.54e+03	5.9e+02	2.70e+06	8.46e+03	3.2e+02
21	13C-1,2,3,4,7,8-HxCDF	1.95e+06	1.88e+03	1.0e+03	3.77e+06	3.51e+03	1.1e+03
22	13C-1,2,3,6,7,8-HxCDF	2.13e+06	1.88e+03	1.1e+03	3.98e+06	3.51e+03	1.1e+03
23	13C-2,3,4,6,7,8-HxCDF	1.95e+06	1.88e+03	1.0e+03	3.73e+06	3.51e+03	1.1e+03
24	13C-1,2,3,7,8,9-HxCDF	1.67e+06	1.88e+03	8.9e+02	3.10e+06	3.51e+03	8.9e+02
25	13C-1,2,3,4,6,7,8-HpCDF	1.16e+06	1.50e+03	7.8e+02	2.60e+06	2.15e+03	1.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	8.64e+05	1.50e+03	5.8e+02	1.93e+06	2.15e+03	9.0e+02
27	13C-2,3,7,8-TCDD	1.25e+06	8.39e+03	1.5e+02	1.51e+06	3.10e+03	4.9e+02
28	13C-1,2,3,7,8-PeCDD	3.19e+06	2.02e+03	1.6e+03	1.98e+06	1.92e+03	1.0e+03
29	13C-1,2,3,4,7,8-HxCDD	2.58e+06	1.42e+03	1.8e+03	1.98e+06	7.84e+02	2.5e+03
30	13C-1,2,3,6,7,8-HxCDD	2.37e+06	1.42e+03	1.7e+03	1.90e+06	7.84e+02	2.4e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.98e+06	1.07e+03	1.9e+03	1.82e+06	3.20e+02	5.7e+03
32	13C-OCDD	9.84e+05	9.08e+02	1.1e+03	1.10e+06	2.20e+02	5.0e+03
33	13C-1,2,3,4-TCDD	2.56e+06	8.39e+03	3.1e+02	3.20e+06	3.10e+03	1.0e+03
34	13C-1,2,3,7,8,9-HxCDD	4.20e+06	1.42e+03	3.0e+03	3.36e+06	7.84e+02	4.3e+03
35	37Cl-2,3,7,8-TCDD	1.98e+06	1.96e+03	1.0e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0196

Entry: 36 Totals Name: Total Tetra-Furans

Run: 12 File: P616380 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 15:25:39 Processed: 9-JAN-19 08:58:09

Mass: 303.9020 305.8990 Tot Response: 5.08e+05 RRF: 1.081

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:40	4.24e+02	5.57e+02	0.76	yes	9.81e+02		n	n
2	22:06	1.39e+03	1.72e+03	0.81	yes	3.12e+03		n	n
3	22:23	6.38e+03	7.79e+03	0.82	yes	1.42e+04		n	n
4	22:44	2.06e+03	2.54e+03	0.81	yes	4.60e+03		n	n
5	23:01	5.14e+03	6.64e+03	0.77	yes	1.18e+04		n	n
6	23:23	1.05e+03	1.54e+03	0.68	yes	2.60e+03		n	n
7	23:43	9.35e+03	1.17e+04	0.80	yes	2.10e+04		n	n
8	24:13	5.13e+04	6.52e+04	0.79	yes	1.16e+05		n	n
9	24:32	2.71e+03	3.33e+03	0.81	yes	6.04e+03		n	n
10	25:00	1.03e+03	1.25e+03	0.82	yes	2.28e+03		y	n
11	25:07	6.30e+03	8.28e+03	0.76	yes	1.46e+04		y	y
12	25:15	1.18e+05	1.48e+05	0.80	yes	2.66e+05	2,3,7,8-TCDF	y	y
13	25:42	9.11e+03	1.13e+04	0.81	yes	2.04e+04		n	n
14	26:00	1.42e+03	1.70e+03	0.84	yes	3.12e+03		n	n
15	27:36	9.04e+03	1.14e+04	0.79	yes	2.05e+04		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0196

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 12 File: P616380 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 15:25:39 Processed: 9-JAN-19 08:58:09

Mass: 319.8970 321.8940 Tot Response: 7.45e+04 RRF: 1.049

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:23	2.02e+02	2.72e+02	0.74	yes	4.74e+02		n	n
2	23:51	1.27e+02	1.53e+02	0.83	yes	2.80e+02		n	n
3	24:21	1.09e+02	1.24e+02	0.88	yes	2.33e+02		n	n
4	26:17	2.96e+04	3.77e+04	0.78	yes	6.73e+04	2,3,7,8-TCDD	n	n
5	26:40	2.60e+03	3.54e+03	0.73	yes	6.14e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0196

Entry: 38 Totals Name: Total Penta-Furans1

Run: 12 File: P616380 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 15:25:39 Processed: 9-JAN-19 08:58:09

Mass: 339.8600 341.8570 Tot Response: 2.99e+03 RRF: 1.130

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:33	1.89e+03	1.10e+03 1.71	yes	2.99e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0196

Entry: 39 Totals Name: Total Penta-Furans2

Run: 12 File: P616380 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 15:25:39 Processed: 9-JAN-19 08:58:09

Mass: 339.8600 341.8570 Tot Response: 3.21e+04 RRF: 1.130

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:20	3.96e+03	2.60e+03	1.52	yes	6.56e+03		n	n
2	29:58	7.03e+02	4.22e+02	1.67	yes	1.13e+03		n	n
3	30:12	7.72e+02	4.79e+02	1.61	yes	1.25e+03		n	n
4	30:24	6.45e+03	3.97e+03	1.62	yes	1.04e+04	1,2,3,7,8-PeCDF	n	n
5	30:41	2.15e+03	1.34e+03	1.61	yes	3.49e+03		n	n
6	31:20	1.30e+02	7.87e+01	1.66	yes	2.09e+02		n	n
7	31:28	5.18e+03	3.36e+03	1.54	yes	8.54e+03	2,3,4,7,8-PeCDF	n	n
8	32:26	2.79e+02	1.88e+02	1.48	yes	4.67e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0196

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 12 File: P616380 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 15:25:39 Processed: 9-JAN-19 08:58:09

Mass: 355.8550 357.8520 Tot Response: 1.29e+03 RRF: 0.9288

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:23	3.84e+02	2.38e+02	1.61	yes	6.22e+02		n	n
2	30:26	2.29e+02	1.45e+02	1.59	yes	3.74e+02		n	n
3	30:38	1.84e+02	1.05e+02	1.75	yes	2.89e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0196

Entry: 41 Totals Name: Total Hexa-Furans

Run: 12 File: P616380 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 15:25:39 Processed: 9-JAN-19 08:58:09

Mass: 373.8210 375.8180 Tot Response: 3.00e+04 RRF: 1.324

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:09	5.83e+02	4.24e+02	1.38	yes	1.01e+03		n	n
2	33:19	2.37e+03	1.76e+03	1.35	yes	4.12e+03		n	n
3	33:53	2.30e+03	1.85e+03	1.25	yes	4.15e+03		n	n
4	34:14	1.45e+02	1.13e+02	1.28	yes	2.57e+02		n	n
5	34:21	7.89e+03	6.59e+03	1.20	yes	1.45e+04	1,2,3,4,7,8-HxCDF	n	n
6	34:27	2.06e+03	1.78e+03	1.16	yes	3.84e+03	1,2,3,6,7,8-HxCDF	n	n
7	35:01	5.47e+02	4.83e+02	1.13	yes	1.03e+03	2,3,4,6,7,8-HxCDF	n	n
8	35:49	5.91e+02	5.09e+02	1.16	yes	1.10e+03	1,2,3,7,8,9-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0196

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 12 File: P616380 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 15:25:39 Processed: 9-JAN-19 08:58:09

Mass: 389.8160 391.8130 Tot Response: 8.69e+03 RRF: 1.092

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:43	2.10e+03	1.72e+03	1.22	yes	3.82e+03		n	n
2	34:17	2.92e+02	2.45e+02	1.19	yes	5.37e+02		n	n
3	34:32	1.47e+03	1.20e+03	1.22	yes	2.68e+03		n	n
4	34:39	1.08e+02	9.90e+01	1.09	yes	2.07e+02		n	n
5	35:09	9.72e+01	7.47e+01	1.30	yes	1.72e+02	1,2,3,4,7,8-HxCDD	n	n
6	35:15	4.42e+02	3.30e+02	1.34	yes	7.72e+02	1,2,3,6,7,8-HxCDD	n	n
7	35:25	6.78e+01	6.08e+01	1.11	yes	1.29e+02		n	n
8	35:30	2.08e+02	1.68e+02	1.24	yes	3.75e+02	1,2,3,7,8,9-HxCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0196

Entry: 43 Totals Name: Total Hepta-Furans

Run: 12 File: P616380 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 15:25:39 Processed: 9-JAN-19 08:58:09

Mass: 407.7820 409.7790 Tot Response: 2.18e+04 RRF: 1.495

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:07	5.37e+03	4.95e+03	1.09	yes	1.03e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	37:23	2.83e+02	2.44e+02	1.16	yes	5.27e+02		n	n
3	37:32	5.05e+03	4.68e+03	1.08	yes	9.73e+03		n	n
4	38:29	6.48e+02	5.75e+02	1.13	yes	1.22e+03	1,2,3,4,7,8,9-HpCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0196

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 12 File: P616380 Sample:1 Injection:1 Function:4

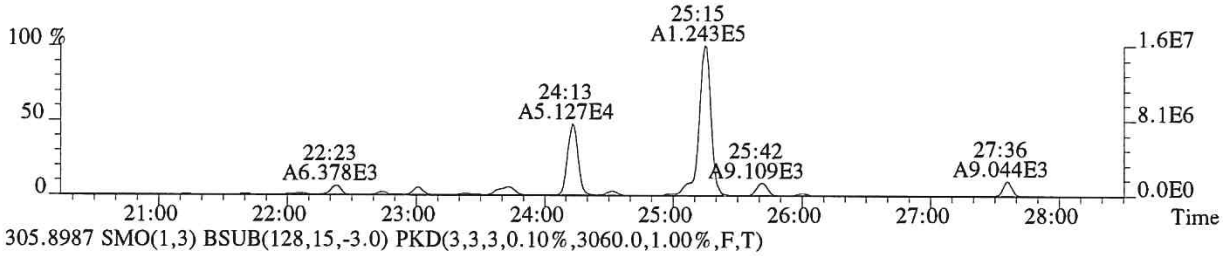
Acquired: 8-JAN-19 15:25:39 Processed: 9-JAN-19 08:58:09

Mass: 423.7770 425.7740 Tot Response: 3.25e+04 RRF: 1.112

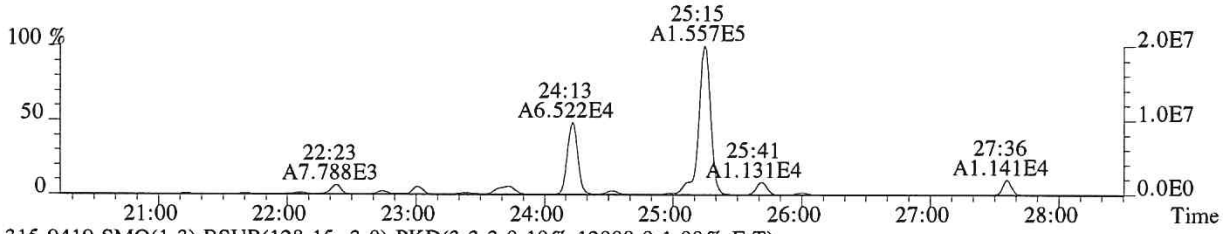
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:23	1.01e+04	9.64e+03 1.04	yes	1.97e+04		n	n
2	38:03	6.61e+03	6.22e+03 1.06	yes	1.28e+04	1,2,3,4,6,7,8-HpCDD	n	n

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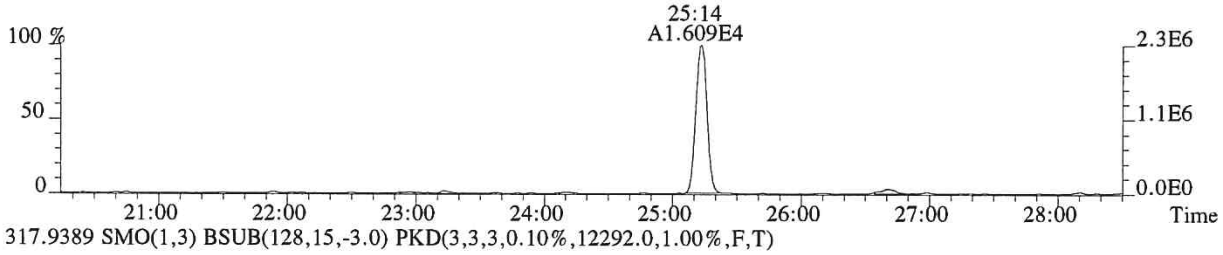
File:P616380 #1-587 Acq: 8-JAN-2019 15:25:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1412.0,1.00%,F,T)



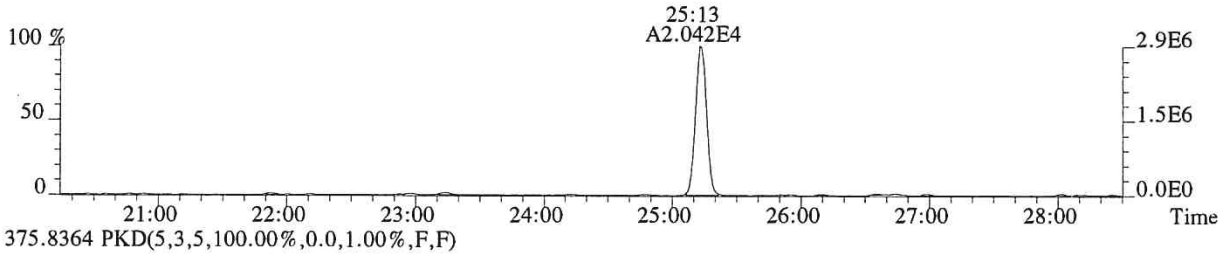
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3060.0,1.00%,F,T)



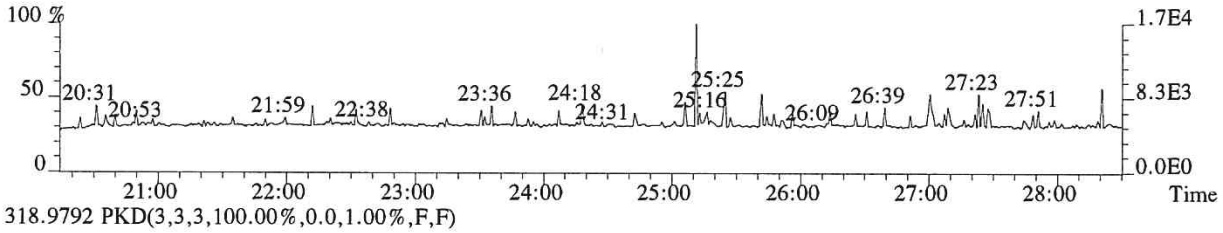
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12008.0,1.00%,F,T)



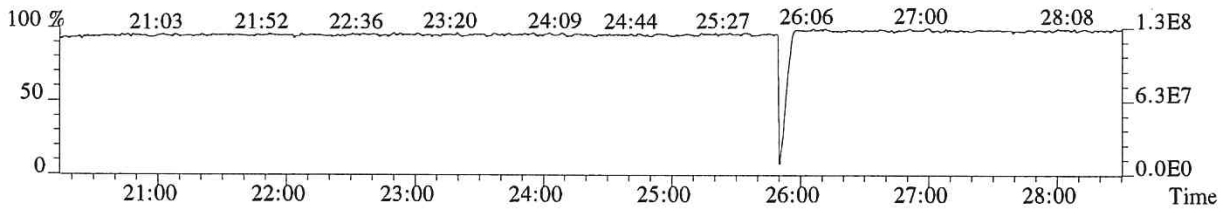
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12292.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

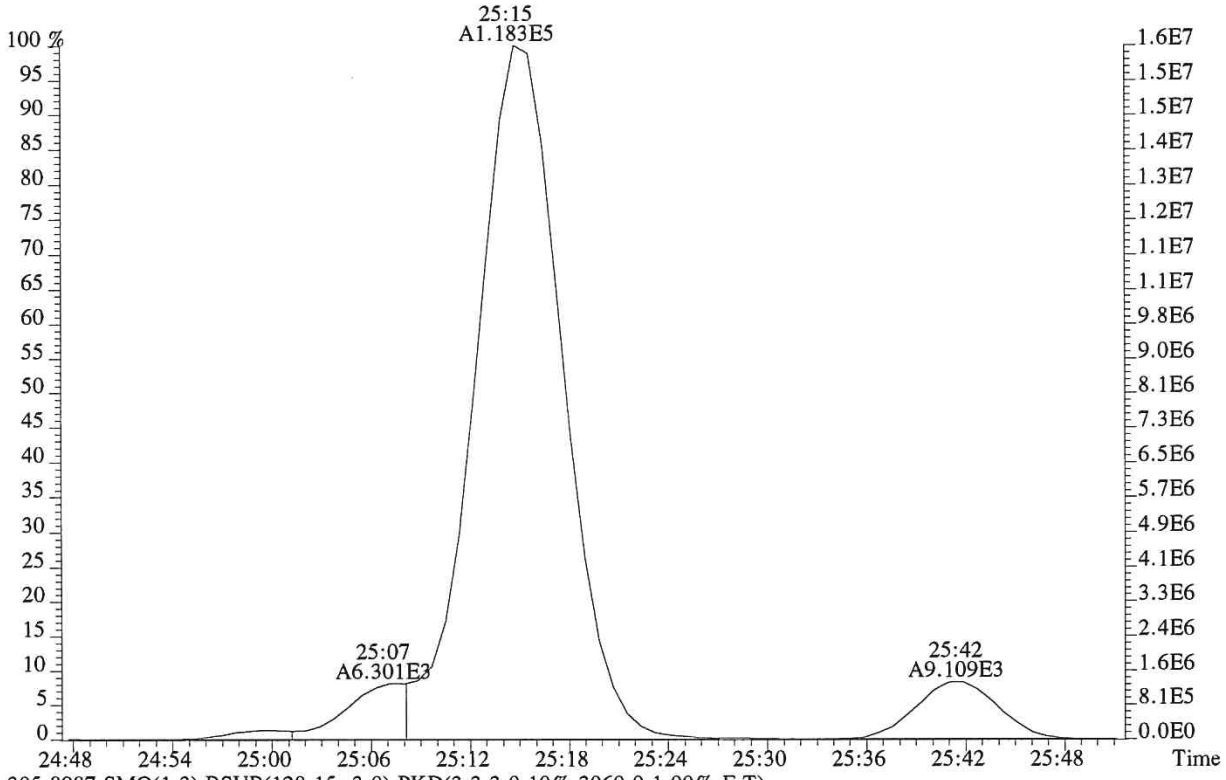


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

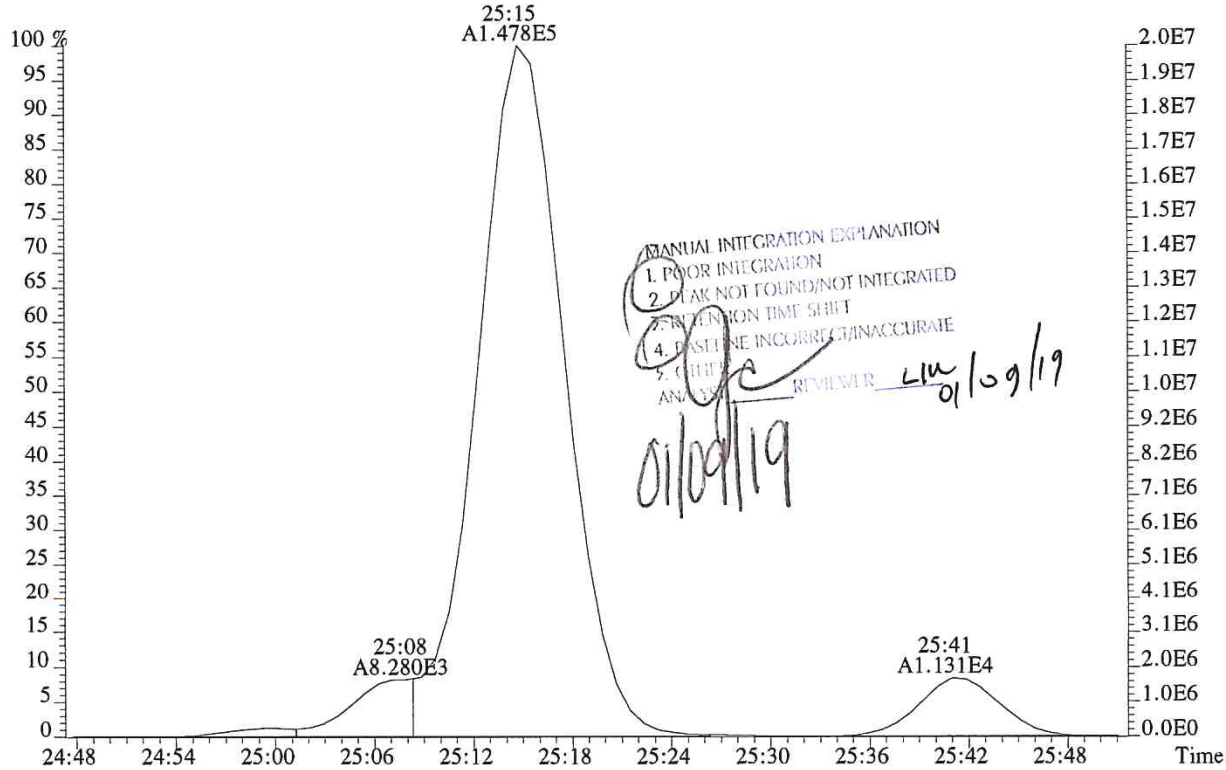


017047

File:P616380 #1-587 Acq: 8-JAN-2019 15:25:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1412.0,1.00%,F,T)



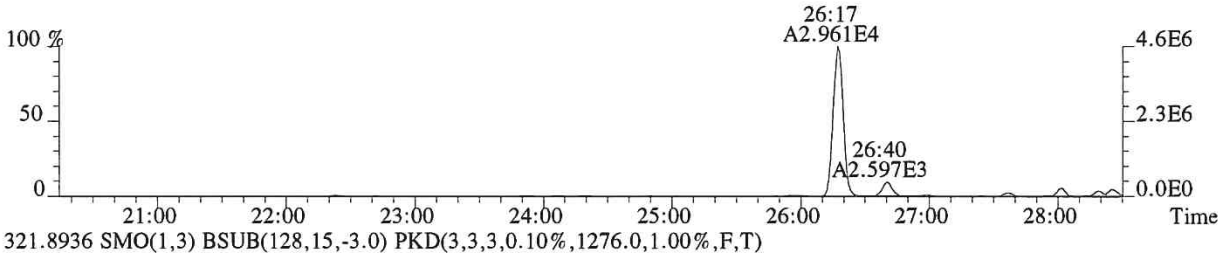
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3060.0,1.00%,F,T)



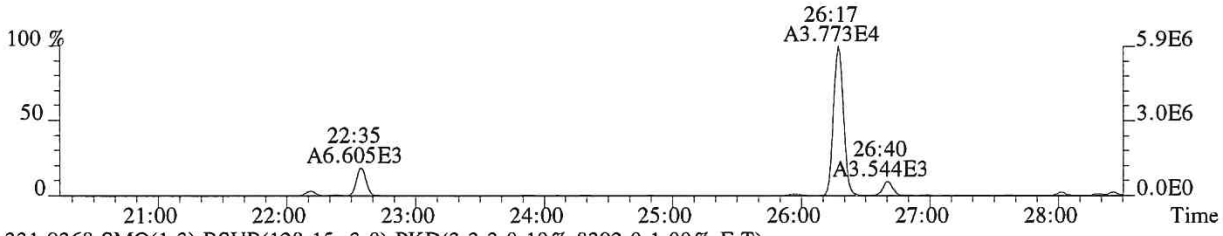
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST
REVIEWER LM 01/09/19
01/09/19

017048

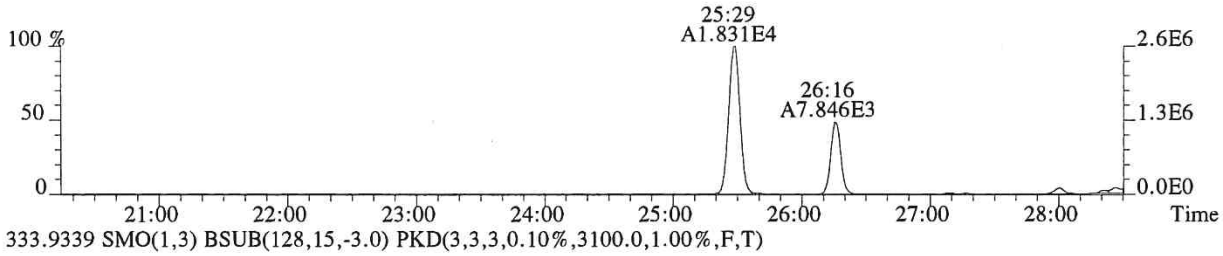
File:P616380 #1-587 Acq: 8-JAN-2019 15:25:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3520.0,1.00%,F,T)



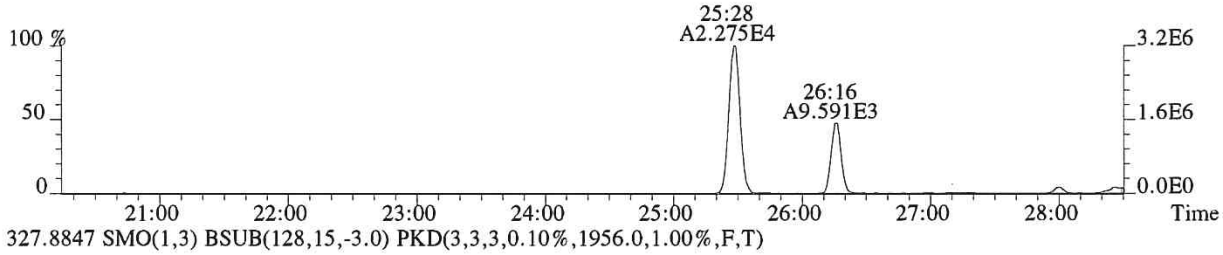
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1276.0,1.00%,F,T)



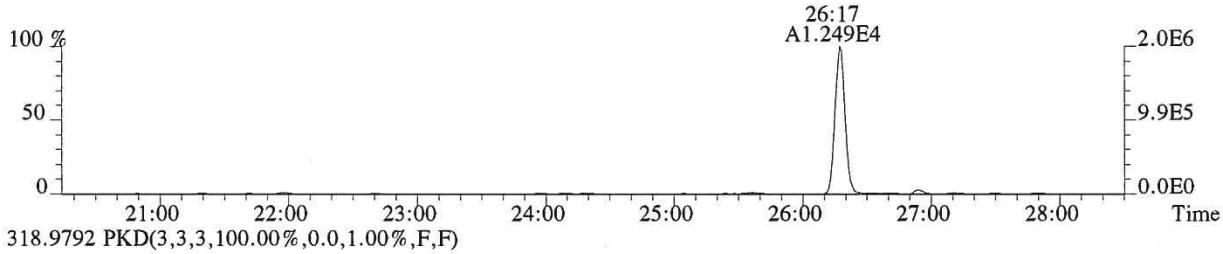
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8392.0,1.00%,F,T)



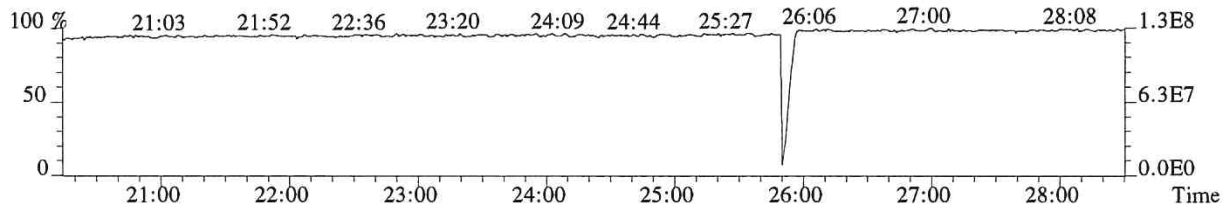
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3100.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1956.0,1.00%,F,T)

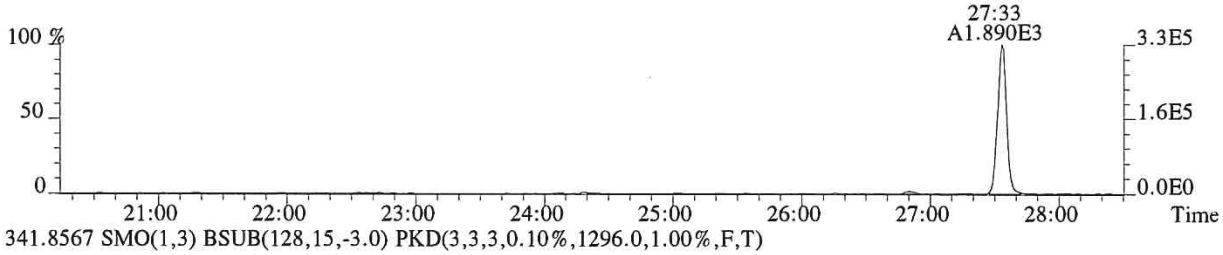


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

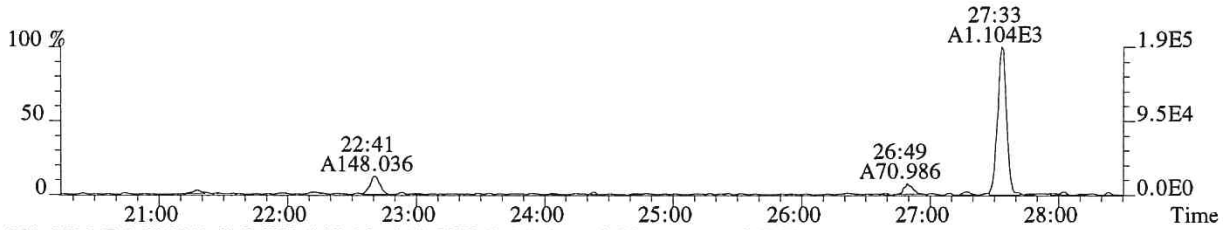


017049

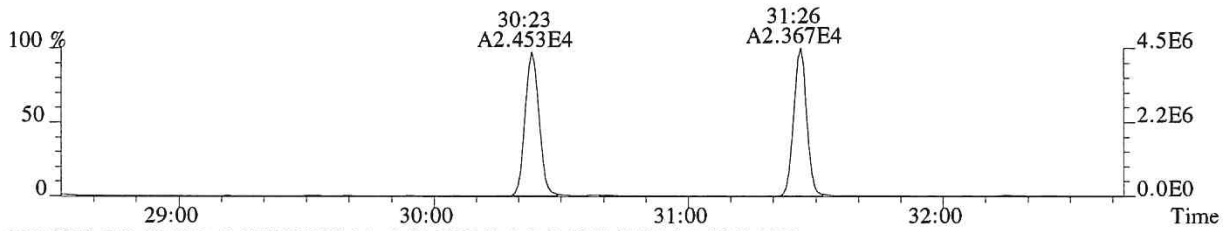
File:P616380 #1-587 Acq: 8-JAN-2019 15:25:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,504.0,1.00%,F,T)



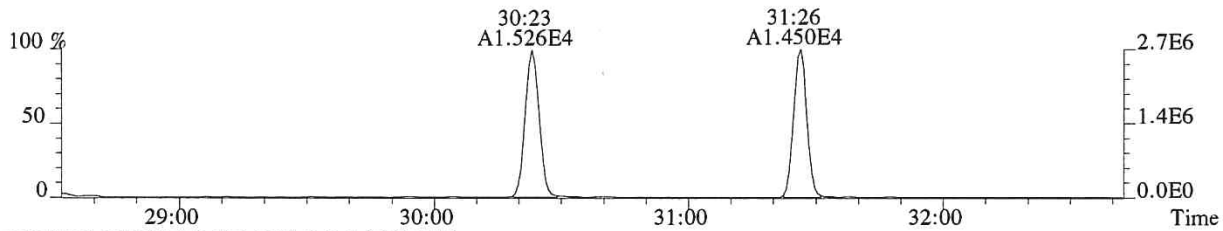
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1296.0,1.00%,F,T)



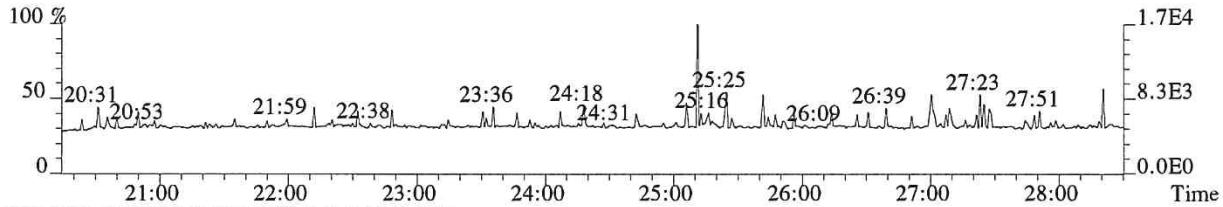
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7540.0,1.00%,F,T)



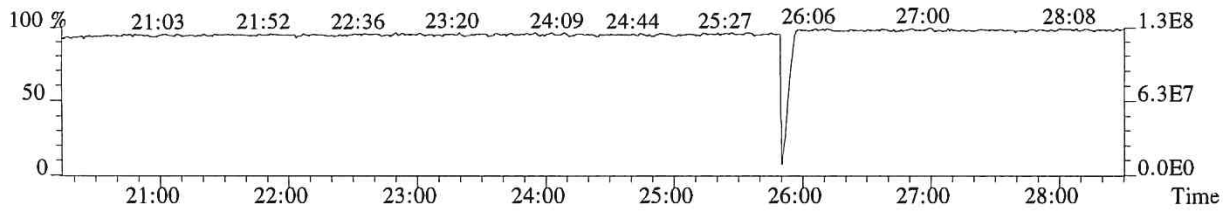
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8464.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

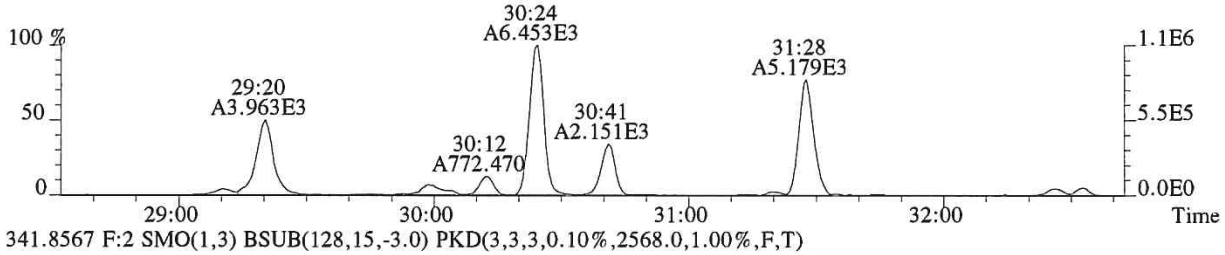


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

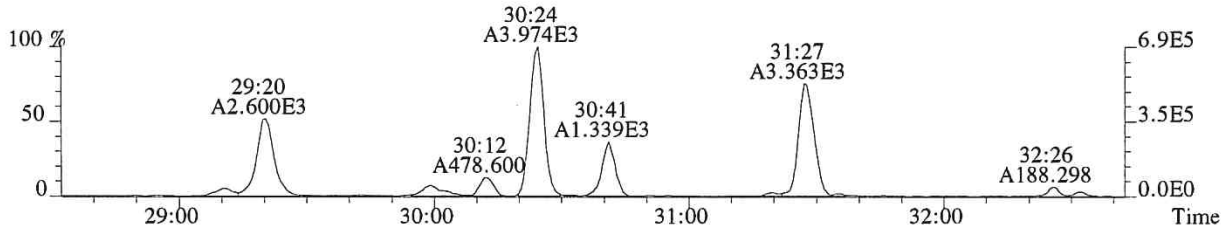


017050

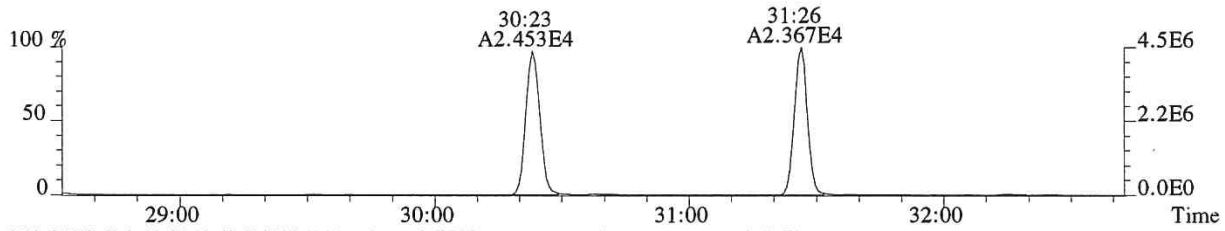
File:P616380 #1-376 Acq: 8-JAN-2019 15:25:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1444.0,1.00%,F,T)



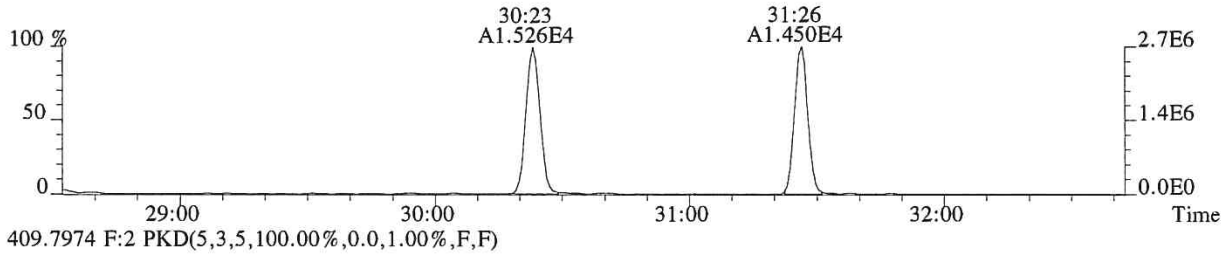
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2568.0,1.00%,F,T)



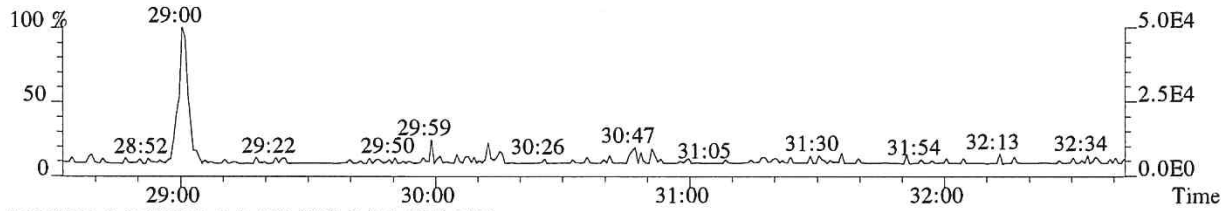
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7540.0,1.00%,F,T)



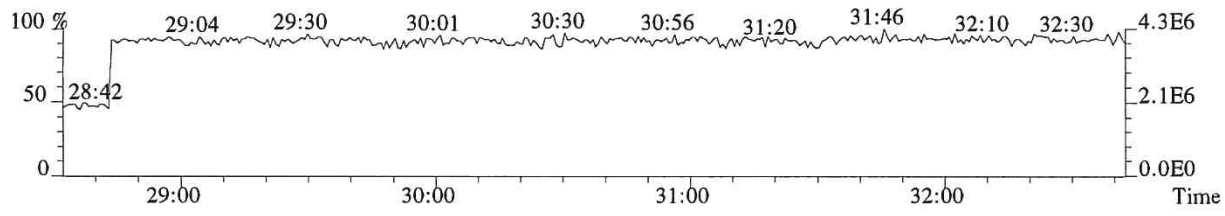
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8464.0,1.00%,F,T)



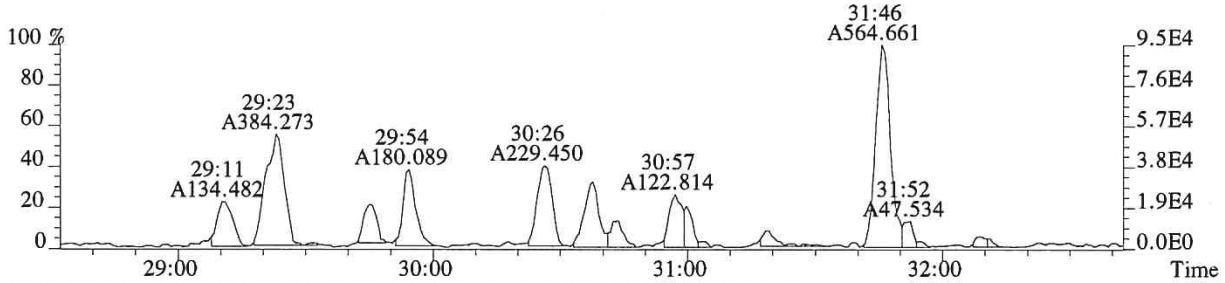
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



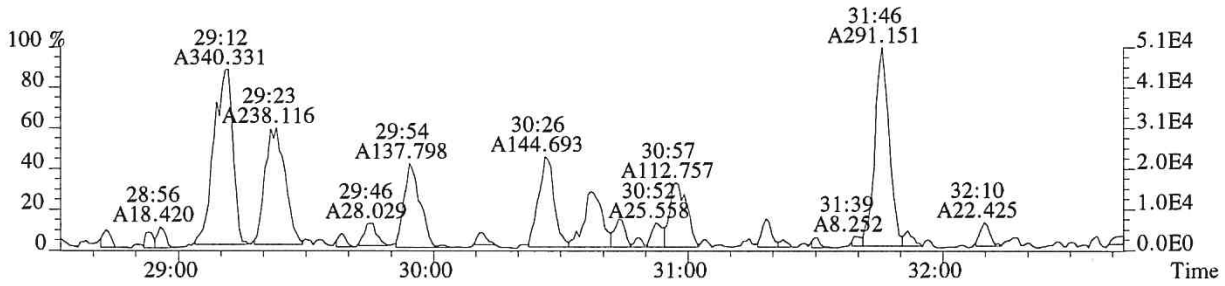
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



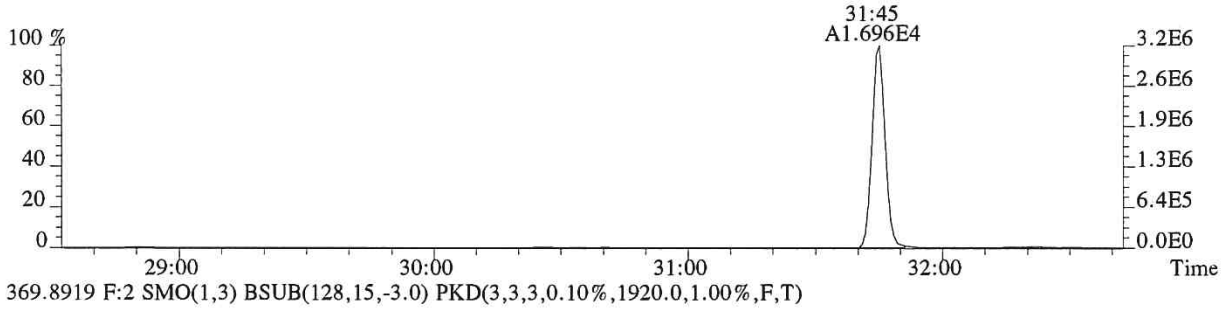
File:P616380 #1-376 Acq: 8-JAN-2019 15:25:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2052.0,1.00%,F,T)



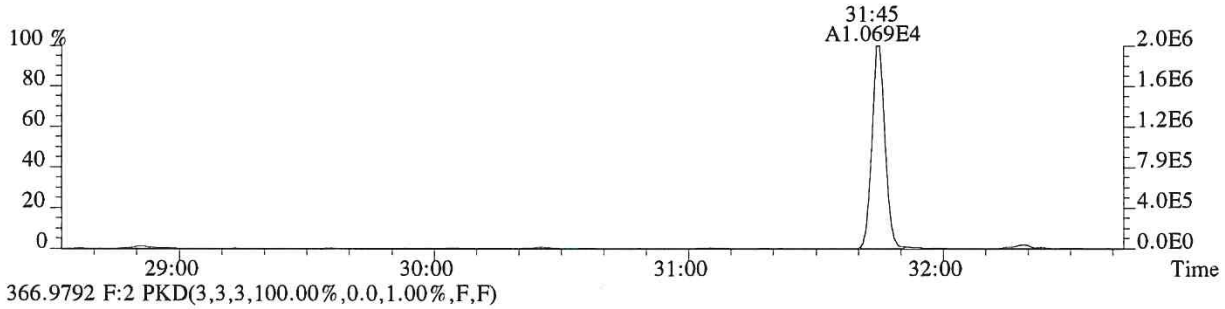
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1540.0,1.00%,F,T)



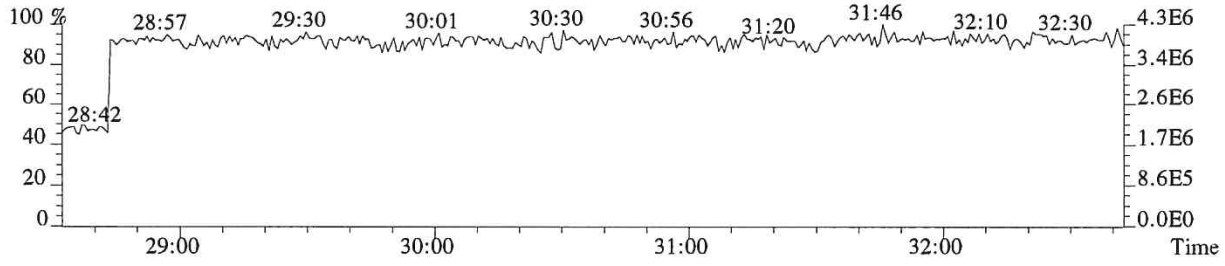
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2024.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1920.0,1.00%,F,T)

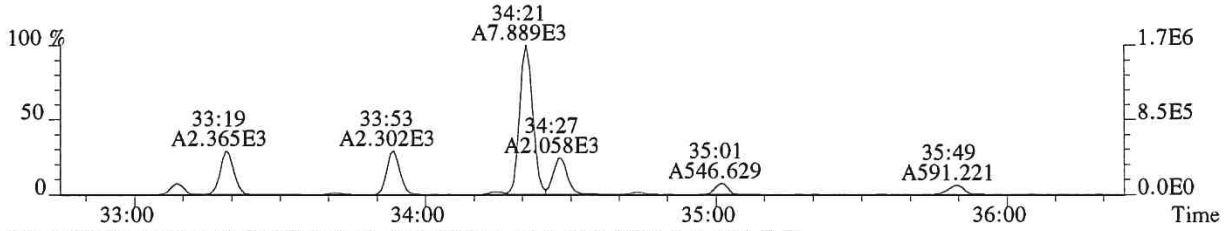


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

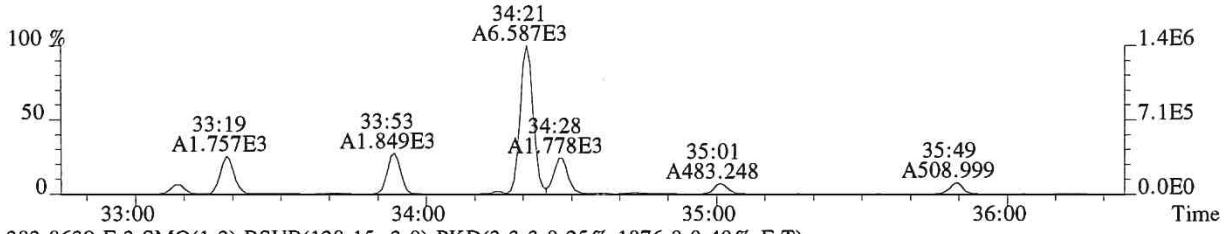


017052

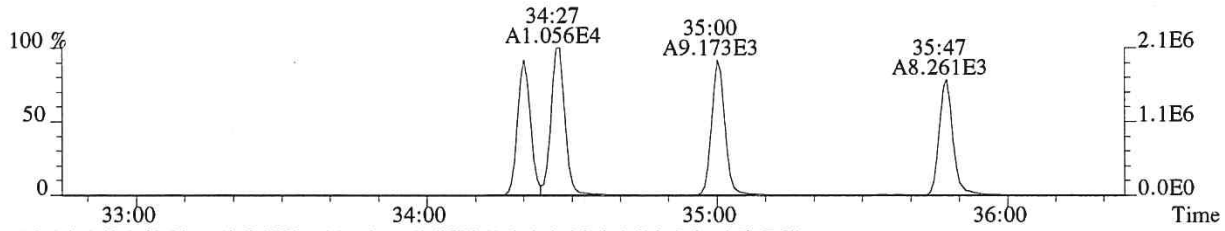
File:P616380 #1-330 Acq: 8-JAN-2019 15:25:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2220.0,0.40%,F,T)



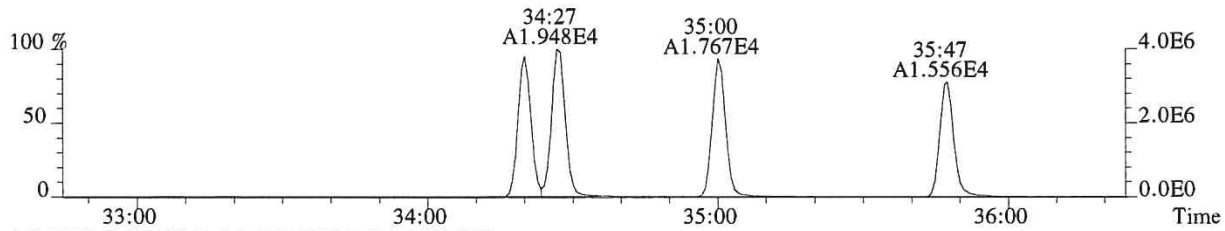
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2324.0,0.40%,F,T)



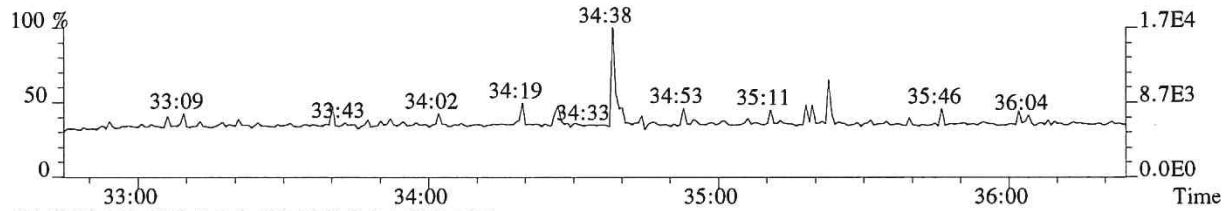
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1876.0,0.40%,F,T)



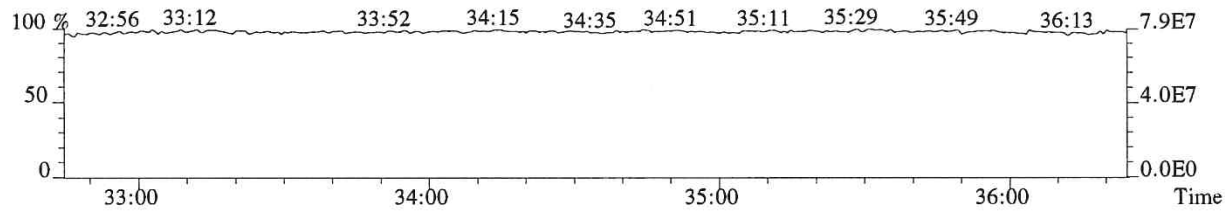
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3508.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

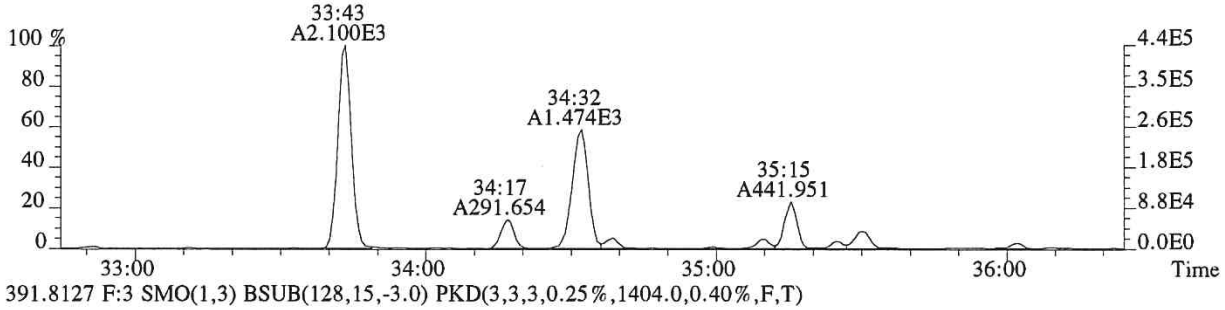


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

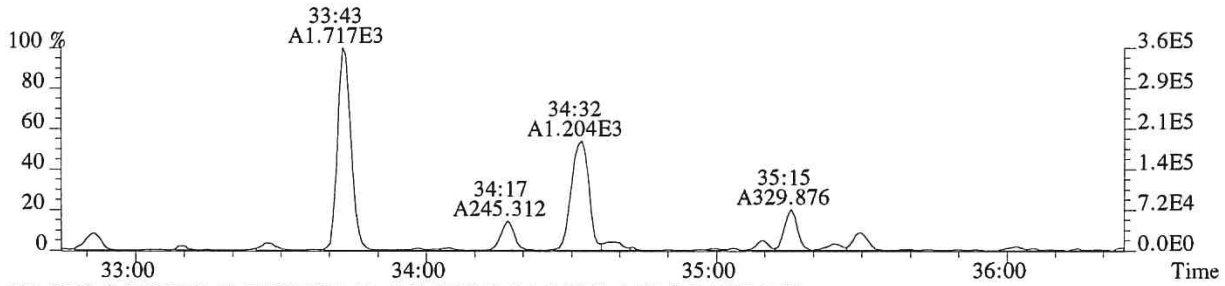


017053

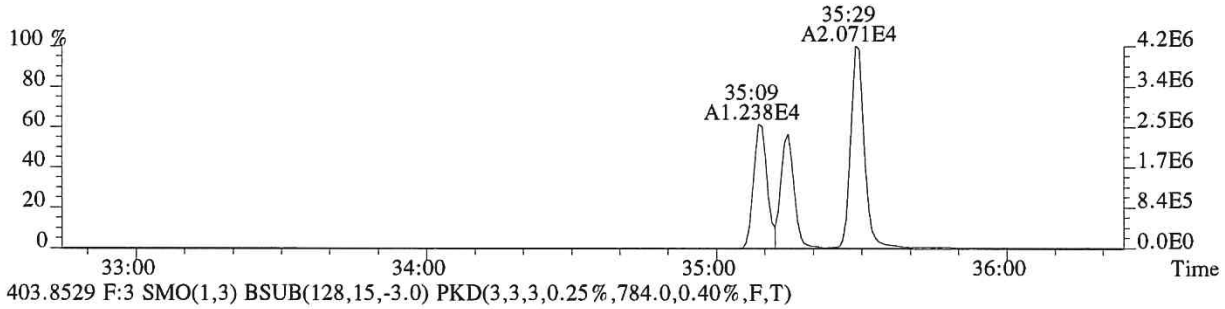
File:P616380 #1-330 Acq: 8-JAN-2019 15:25:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1668.0,0.40%,F,T)



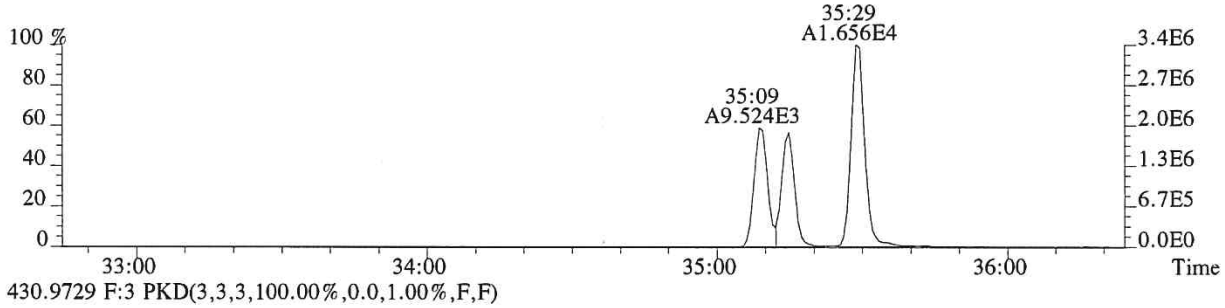
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1404.0,0.40%,F,T)



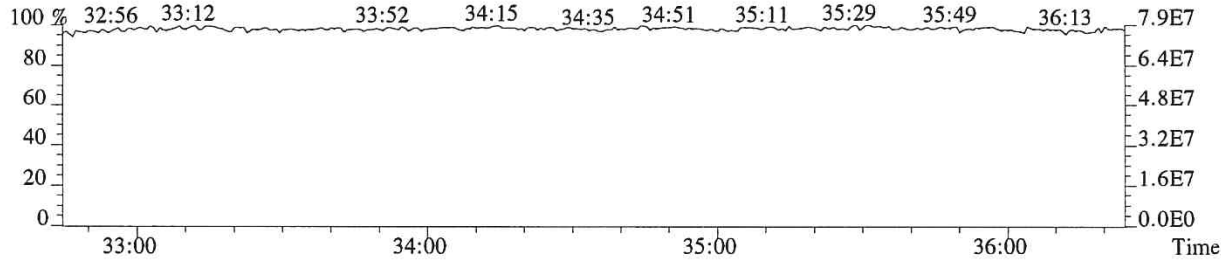
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1424.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,784.0,0.40%,F,T)

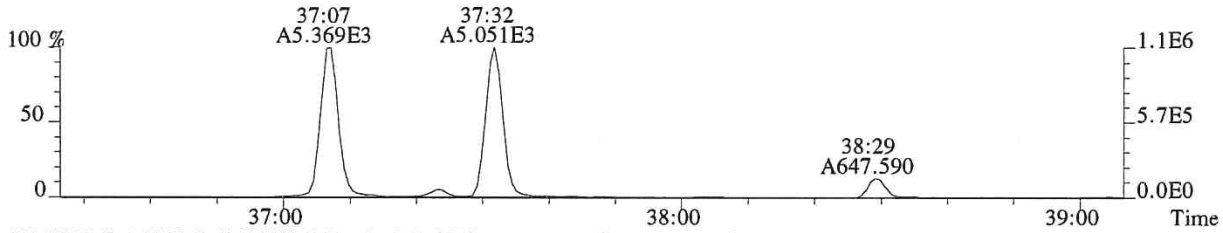


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

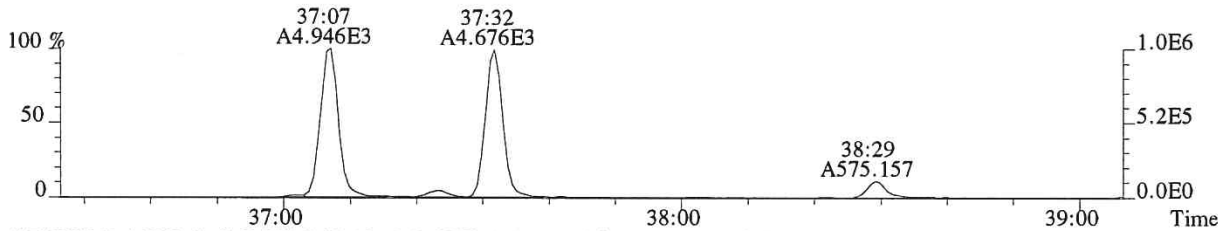


017054

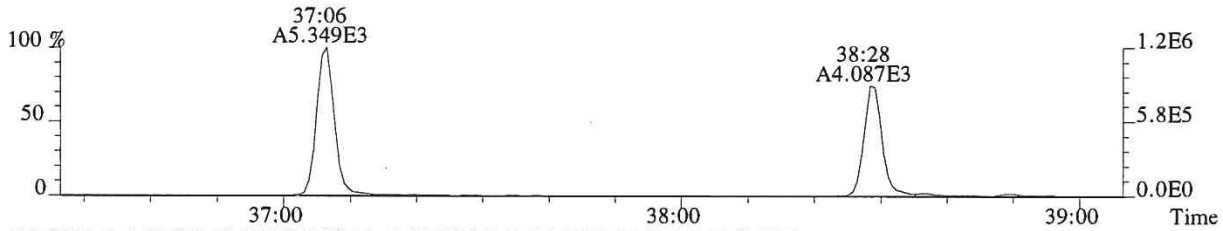
File:P616380 #1-241 Acq: 8-JAN-2019 15:25:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,640.0,0.50%,F,T)



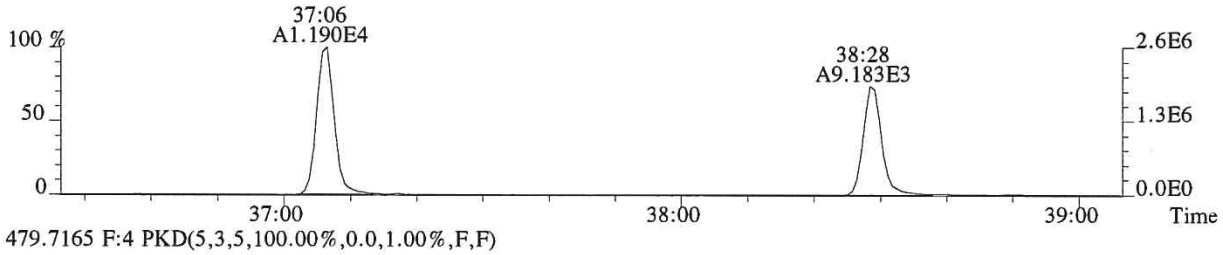
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,760.0,0.50%,F,T)



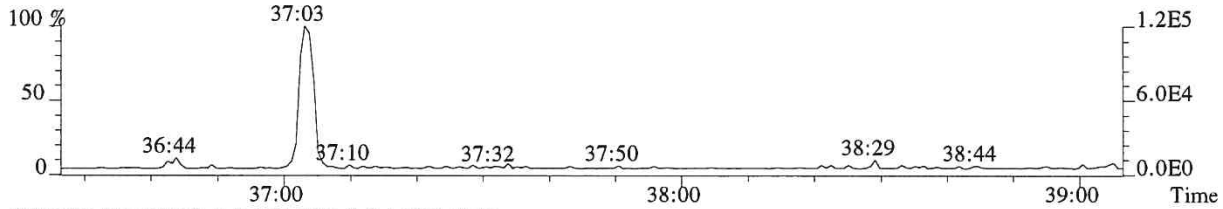
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1496.0,0.50%,F,T)



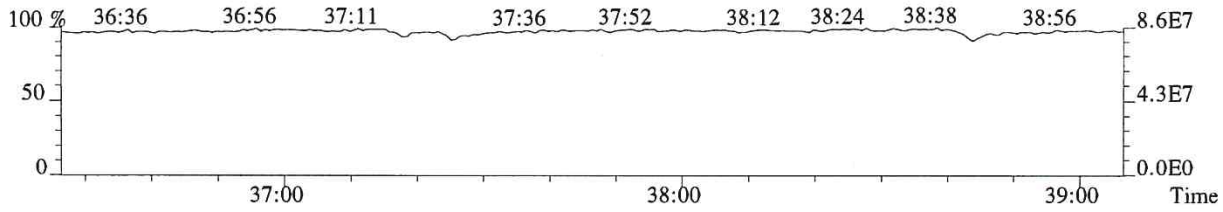
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2148.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

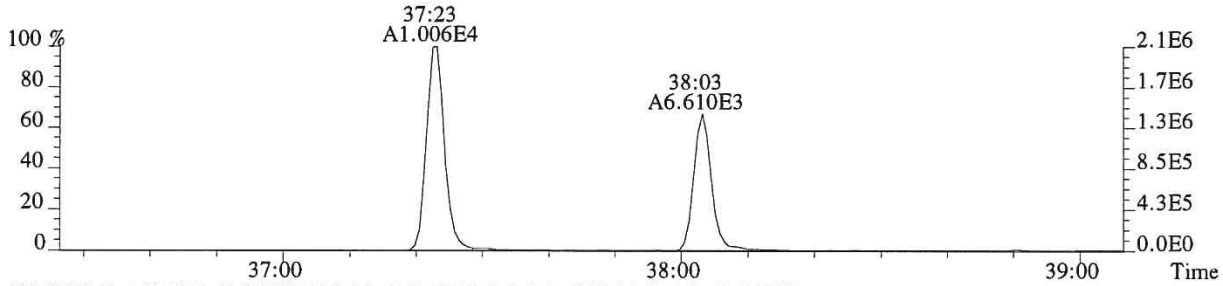


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

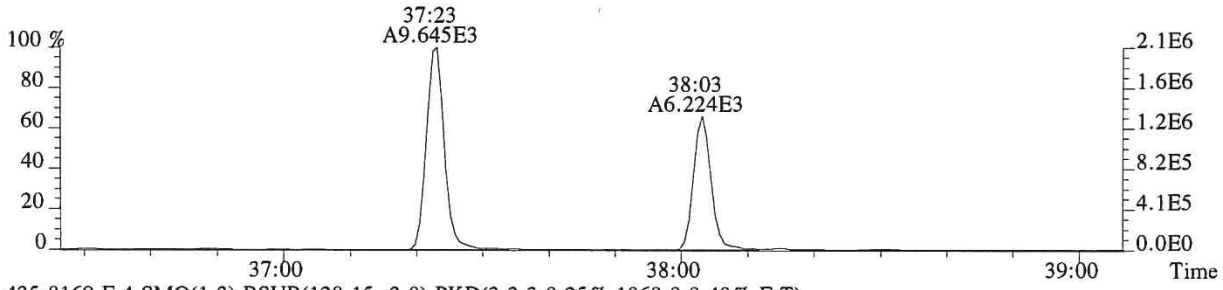


017055

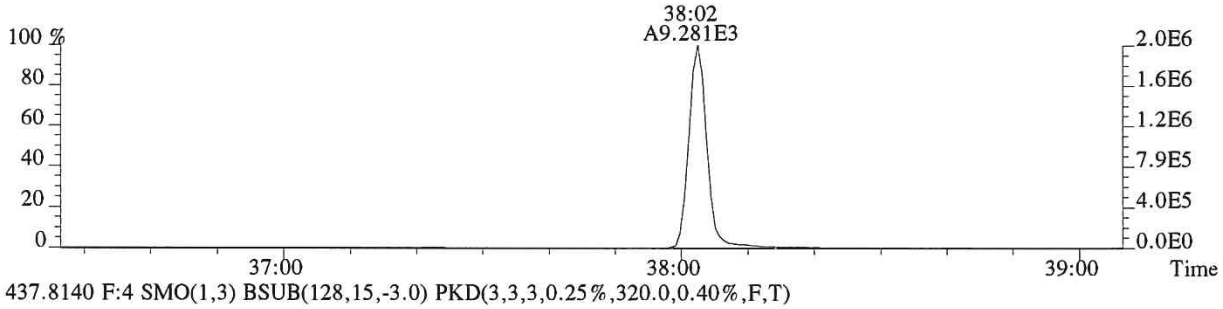
File:P616380 #1-241 Acq: 8-JAN-2019 15:25:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1456.0,0.40%,F,T)



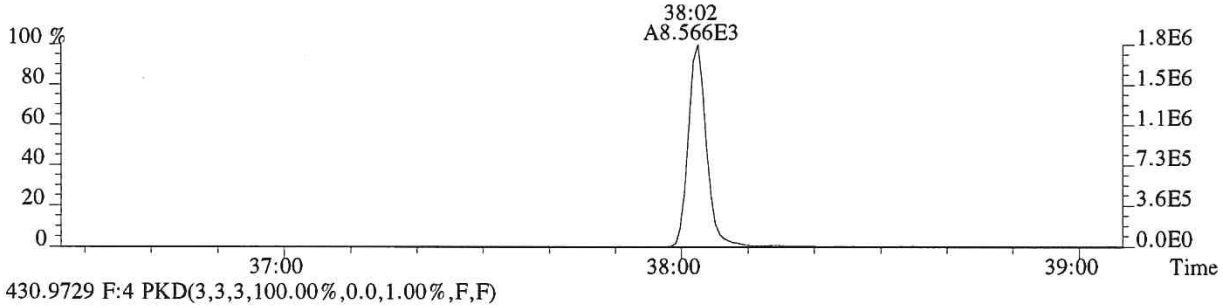
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3464.0,0.40%,F,T)



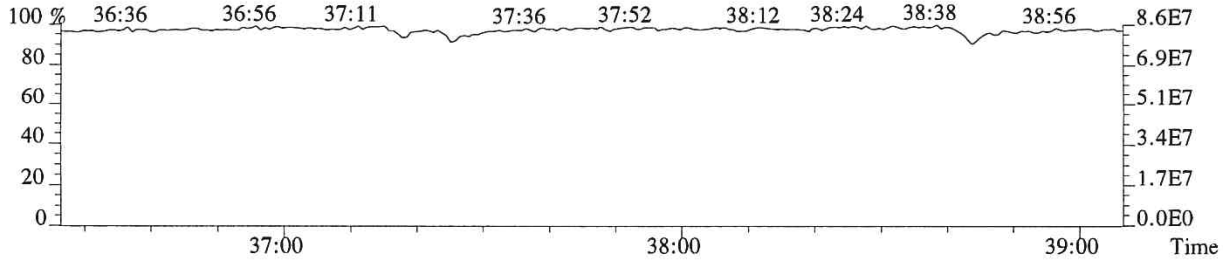
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1068.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,320.0,0.40%,F,T)

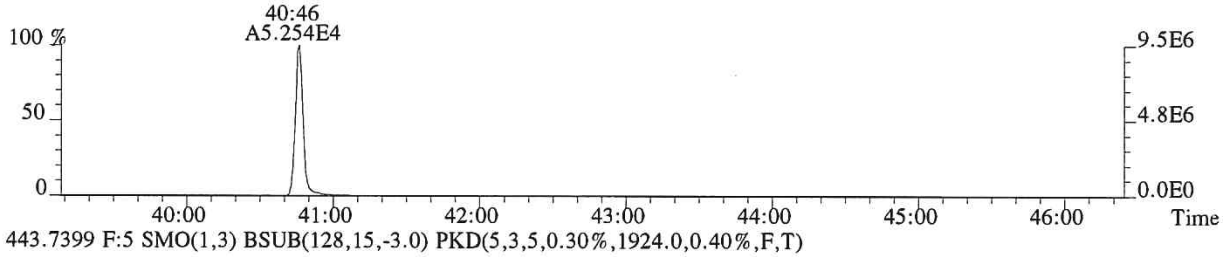


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

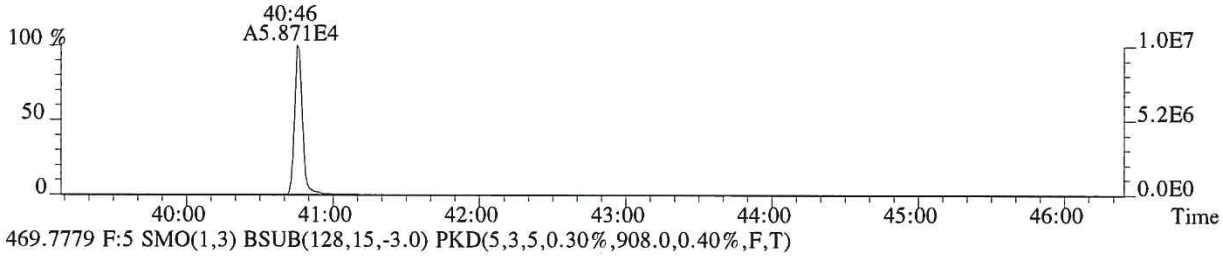


017056

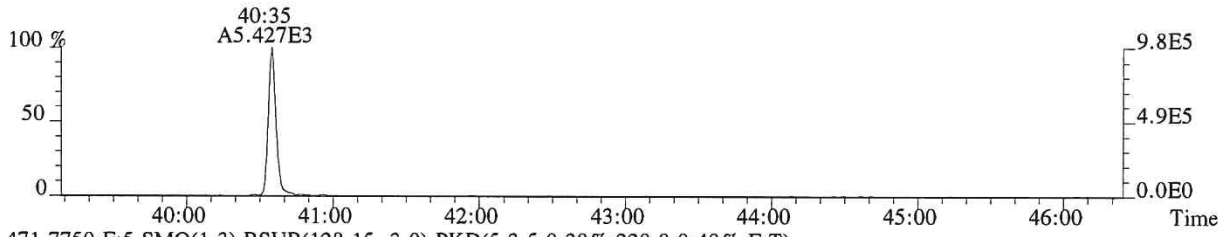
File:P616380 #1-654 Acq: 8-JAN-2019 15:25:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,268.0,0.40%,F,T)



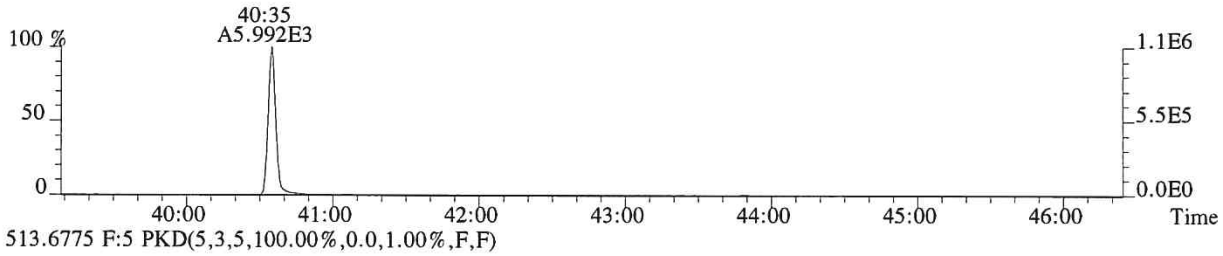
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1924.0,0.40%,F,T)



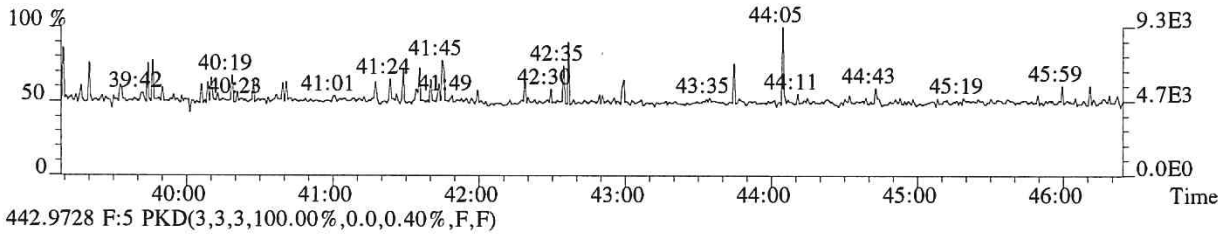
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,908.0,0.40%,F,T)



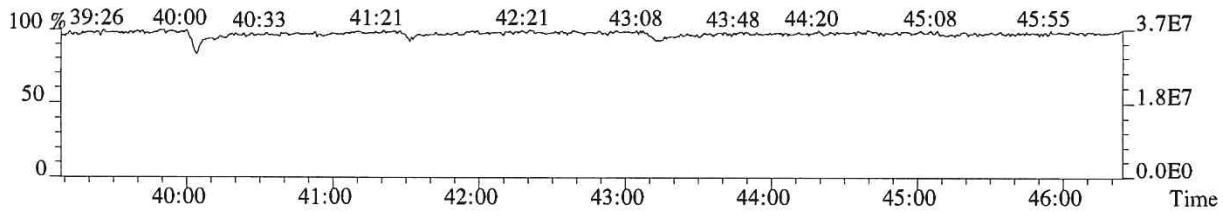
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,220.0,0.40%,F,T)



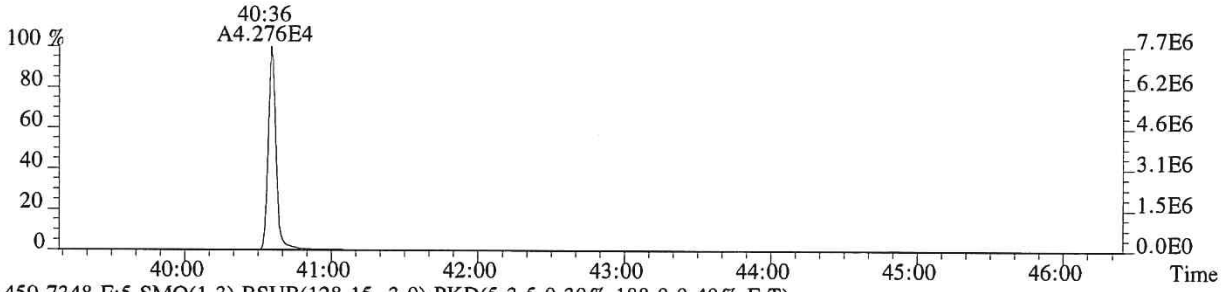
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



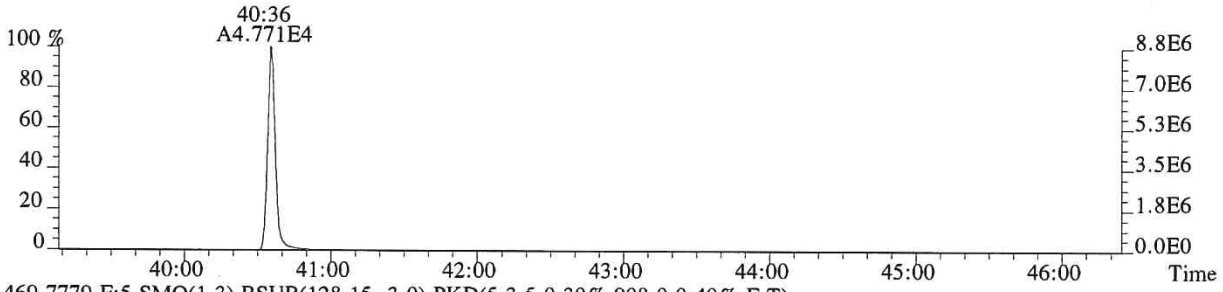
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



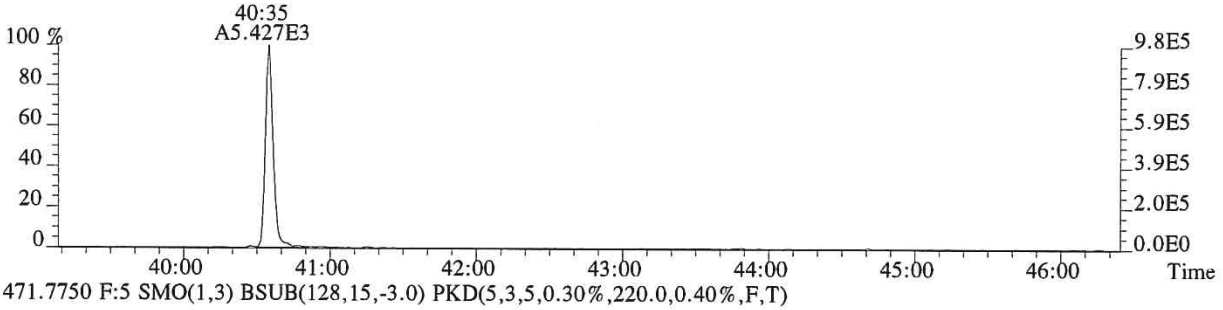
File:P616380 #1-654 Acq: 8-JAN-2019 15:25:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,328.0,0.40%,F,T)



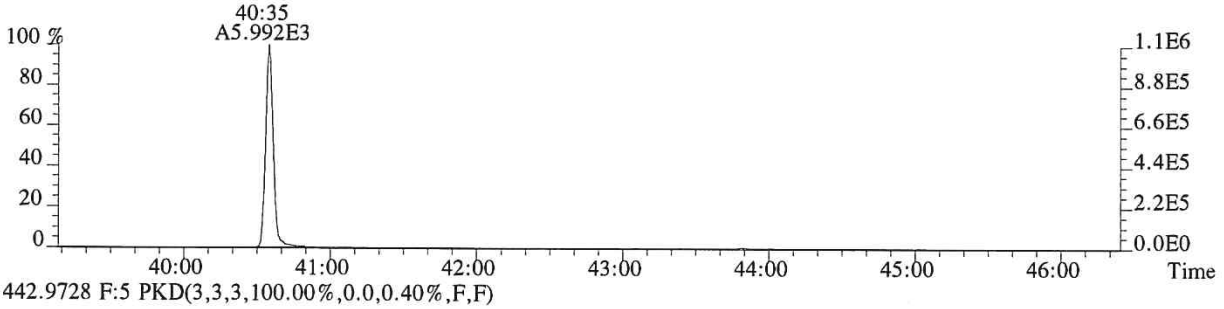
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,188.0,0.40%,F,T)



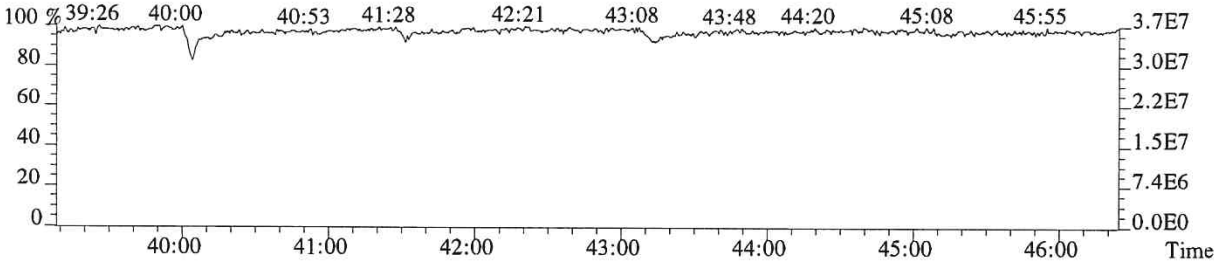
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,908.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,220.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017058

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0196

Run #11 Filename P616408 Samp: 1 Inj: 1 Acquired: 9-JAN-19 14:50:42
Processed: 10-JAN-19 08:31:56 Sample ID: E1801138-002DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:13	4.553e+03	5.809e+03	0.78	yes	yes	1.081
2	Unk	1,2,3,7,8-PeCDF	30:23	2.411e+02	1.950e+02	1.24	no	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:26	1.808e+02	1.565e+02	1.16	no	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	2.699e+02	2.653e+02	1.02	no	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:28	1.220e+02	2.916e+01	4.19	no	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	2.014e+01	2.846e+01	0.71	no	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	NotFnd	*	*	*	no	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	2.532e+02	1.936e+02	1.31	no	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:31	1.804e+01	2.563e+01	0.70	no	no	1.463
10	Unk	OCDF	40:48	2.465e+03	3.114e+03	0.79	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:16	1.027e+03	1.309e+03	0.78	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:46	1.207e+01	1.128e+01	1.07	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	2.940e+02	2.510e+02	1.17	yes	no	1.112
17	Unk	OCDD	40:38	2.299e+03	2.507e+03	0.92	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:11	8.590e+03	1.025e+04	0.84	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:22	1.302e+04	8.169e+03	1.59	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	1.240e+04	7.672e+03	1.62	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:20	4.945e+03	9.217e+03	0.54	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	5.988e+03	1.182e+04	0.51	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:00	5.246e+03	9.649e+03	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	4.657e+03	8.508e+03	0.55	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	3.613e+03	8.230e+03	0.44	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	2.515e+03	5.878e+03	0.43	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:14	3.901e+03	4.571e+03	0.85	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:44	8.469e+03	5.347e+03	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	6.097e+03	4.856e+03	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	6.724e+03	5.302e+03	1.27	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	5.930e+03	5.320e+03	1.11	yes	no	0.857
32	IS	13C-OCDD	40:38	4.804e+03	5.233e+03	0.92	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:27	6.180e+03	7.736e+03	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	7.579e+03	5.988e+03	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:16	4.188e+02				no	1.086

$$\text{OCDD} = \frac{(2.299e+03 + 2.507e+03) \times 4000\ \text{pg} \times 10}{(4.804e+03 + 5.233e+03) \times 10.776\ \text{g} \times 69.1 / 100 \times 1.157 \times 0.23} = 9665\ \text{ng/kg}$$

LM 01/10/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0196

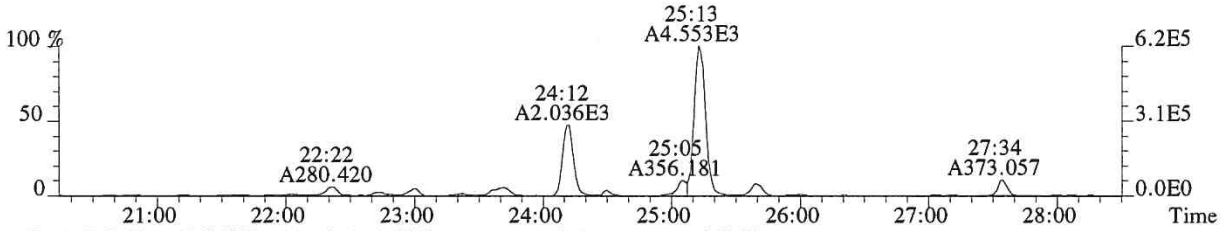
Run #11 Filename P616408 Samp: 1 Inj: 1 Acquired: 9-JAN-19 14:50:42
Processed: 10-JAN-19 08:31:56 LAB. ID: E1801138-002DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.21e+05	9.24e+02	6.7e+02	8.09e+05	6.31e+03	1.3e+02
2	1,2,3,7,8-PeCDF	3.78e+04	1.14e+03	3.3e+01	2.95e+04	2.73e+03	1.1e+01
3	2,3,4,7,8-PeCDF	2.47e+04	1.14e+03	2.2e+01	2.50e+04	2.73e+03	9.1e+00
4	1,2,3,4,7,8-HxCDF	4.69e+04	1.89e+03	2.5e+01	5.07e+04	5.20e+02	9.8e+01
5	1,2,3,6,7,8-HxCDF	2.08e+04	1.89e+03	1.1e+01	9.62e+03	5.20e+02	1.9e+01
6	2,3,4,6,7,8-HxCDF	5.28e+03	1.89e+03	2.8e+00	5.08e+03	5.20e+02	9.8e+00
7	1,2,3,7,8,9-HxCDF	*	1.89e+03	*	*	5.20e+02	*
8	1,2,3,4,6,7,8-HpCDF	5.17e+04	1.56e+03	3.3e+01	3.31e+04	6.84e+02	4.8e+01
9	1,2,3,4,7,8,9-HpCDF	5.24e+03	1.56e+03	3.4e+00	7.25e+03	6.84e+02	1.1e+01
10	OCDF	3.99e+05	4.12e+02	9.7e+02	4.48e+05	1.66e+03	2.7e+02
11	2,3,7,8-TCDD	1.60e+05	4.25e+03	3.8e+01	1.93e+05	1.02e+03	1.9e+02
12	1,2,3,7,8-PeCDD	3.09e+03	1.05e+03	3.0e+00	3.36e+03	4.08e+02	8.2e+00
13	1,2,3,4,7,8-HxCDD	*	6.40e+02	*	*	1.18e+03	*
14	1,2,3,6,7,8-HxCDD	*	6.40e+02	*	*	1.18e+03	*
15	1,2,3,7,8,9-HxCDD	*	6.40e+02	*	*	1.18e+03	*
16	1,2,3,4,6,7,8-HpCDD	5.45e+04	1.04e+03	5.3e+01	4.45e+04	5.92e+02	7.5e+01
17	OCDD	3.17e+05	2.68e+02	1.2e+03	3.49e+05	3.92e+02	8.9e+02
18	13C-2,3,7,8-TCDF	1.24e+06	1.14e+04	1.1e+02	1.44e+06	1.21e+04	1.2e+02
19	13C-1,2,3,7,8-PeCDF	2.07e+06	1.34e+03	1.5e+03	1.29e+06	1.21e+03	1.1e+03
20	13C-2,3,4,7,8-PeCDF	2.17e+06	1.34e+03	1.6e+03	1.34e+06	1.21e+03	1.1e+03
21	13C-1,2,3,4,7,8-HxCDF	9.60e+05	2.46e+03	3.9e+02	1.81e+06	1.77e+03	1.0e+03
22	13C-1,2,3,6,7,8-HxCDF	1.07e+06	2.46e+03	4.4e+02	1.95e+06	1.77e+03	1.1e+03
23	13C-2,3,4,6,7,8-HxCDF	9.69e+05	2.46e+03	3.9e+02	1.79e+06	1.77e+03	1.0e+03
24	13C-1,2,3,7,8,9-HxCDF	7.95e+05	2.46e+03	3.2e+02	1.44e+06	1.77e+03	8.1e+02
25	13C-1,2,3,4,6,7,8-HpCDF	6.45e+05	1.48e+03	4.4e+02	1.49e+06	1.89e+03	7.9e+02
26	13C-1,2,3,4,7,8,9-HpCDF	4.27e+05	1.48e+03	2.9e+02	1.02e+06	1.89e+03	5.4e+02
27	13C-2,3,7,8-TCDD	5.82e+05	9.77e+03	6.0e+01	6.94e+05	5.08e+03	1.4e+02
28	13C-1,2,3,7,8-PeCDD	1.36e+06	2.47e+03	5.5e+02	8.61e+05	2.38e+03	3.6e+02
29	13C-1,2,3,4,7,8-HxCDD	1.22e+06	2.62e+03	4.7e+02	9.58e+05	1.73e+03	5.5e+02
30	13C-1,2,3,6,7,8-HxCDD	1.16e+06	2.62e+03	4.4e+02	9.21e+05	1.73e+03	5.3e+02
31	13C-1,2,3,4,6,7,8-HpCDD	1.04e+06	7.68e+02	1.4e+03	9.52e+05	4.32e+02	2.2e+03
32	13C-OCDD	6.66e+05	1.15e+03	5.8e+02	6.90e+05	2.76e+02	2.5e+03
33	13C-1,2,3,4-TCDD	8.76e+05	9.77e+03	9.0e+01	1.09e+06	5.08e+03	2.1e+02
34	13C-1,2,3,7,8,9-HxCDD	1.26e+06	2.62e+03	4.8e+02	9.72e+05	1.73e+03	5.6e+02
35	37Cl-2,3,7,8-TCDD	6.03e+04	2.79e+03	2.2e+01			

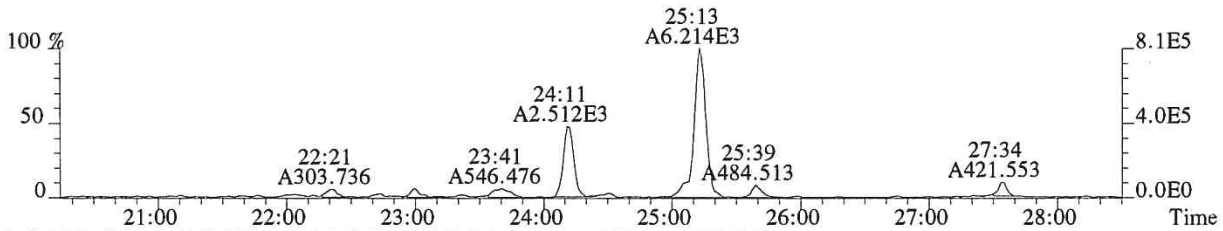
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Office:(713)266-1599. Fax:(713)266-0130

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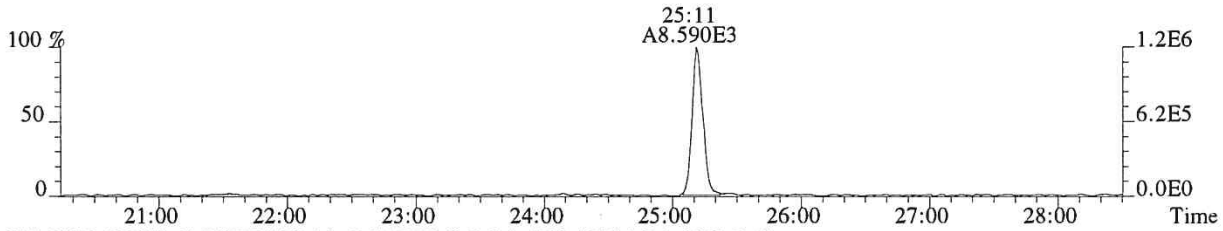
File:P616408 #1-587 Acq: 9-JAN-2019 14:50:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,924.0,1.00%,F,T)



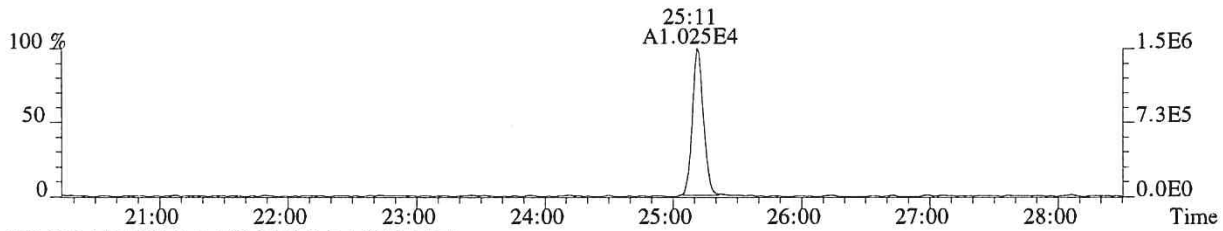
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6312.0,1.00%,F,T)



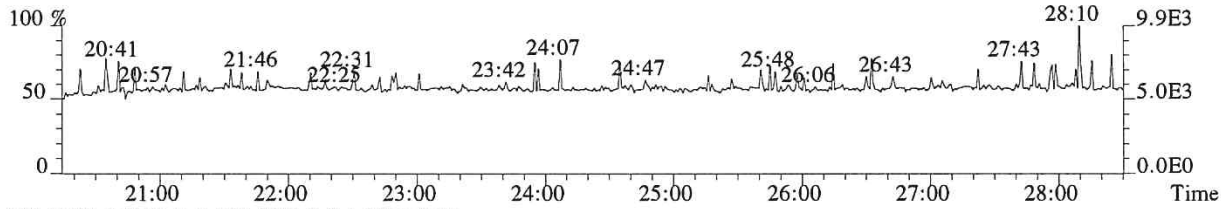
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11360.0,1.00%,F,T)



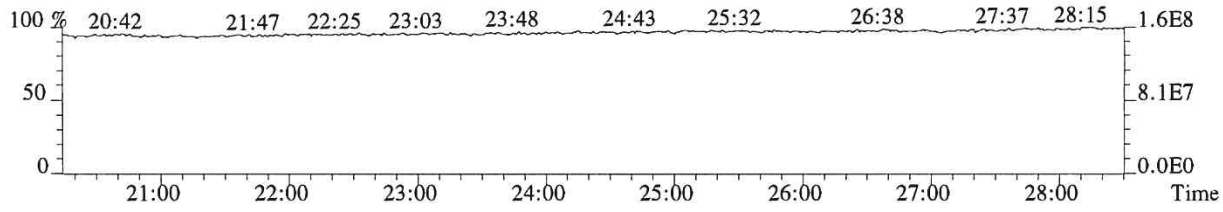
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12084.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

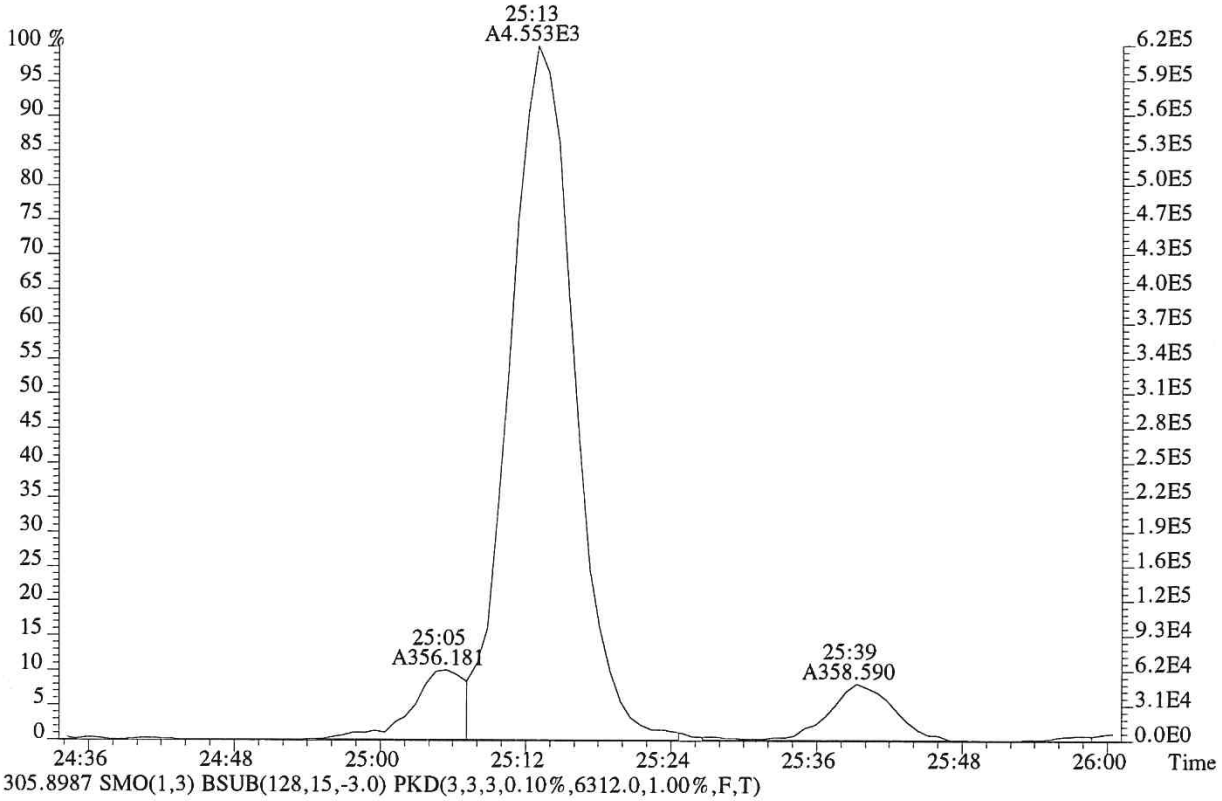


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

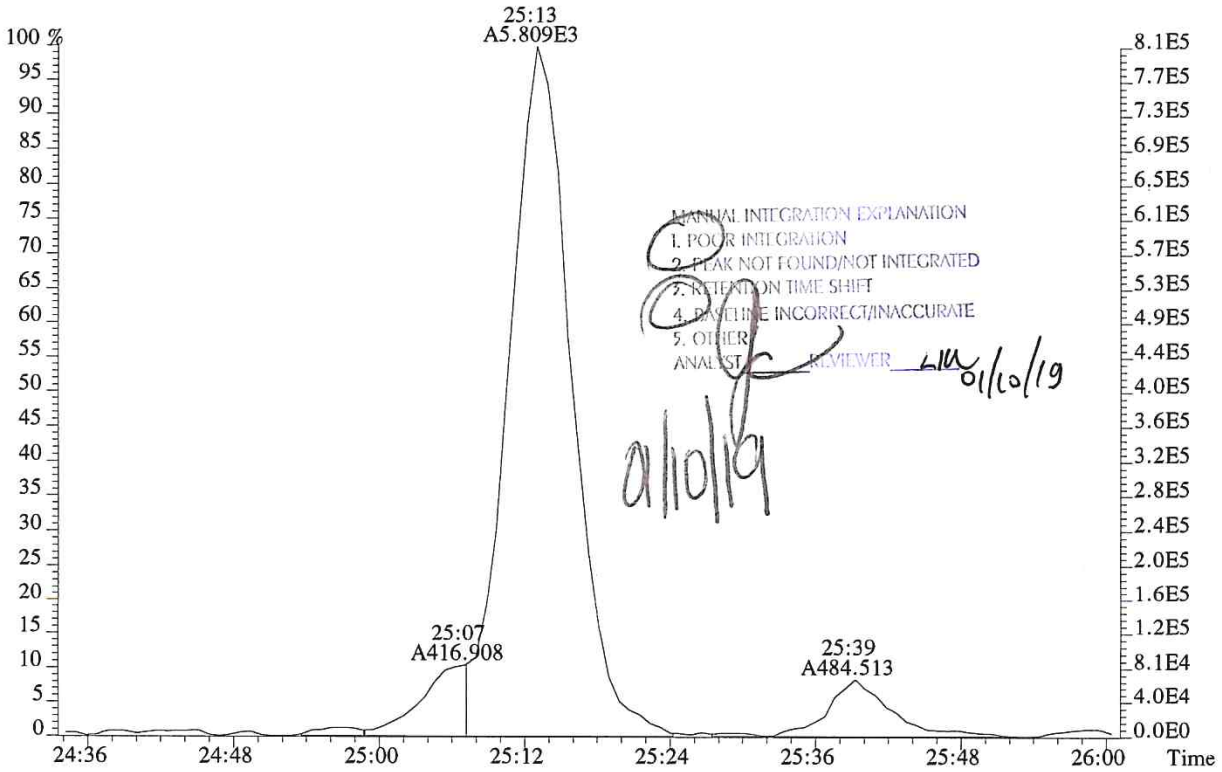


017061

File:P616408 #1-587 Acq: 9-JAN-2019 14:50:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,924.0,1.00%,F,T)



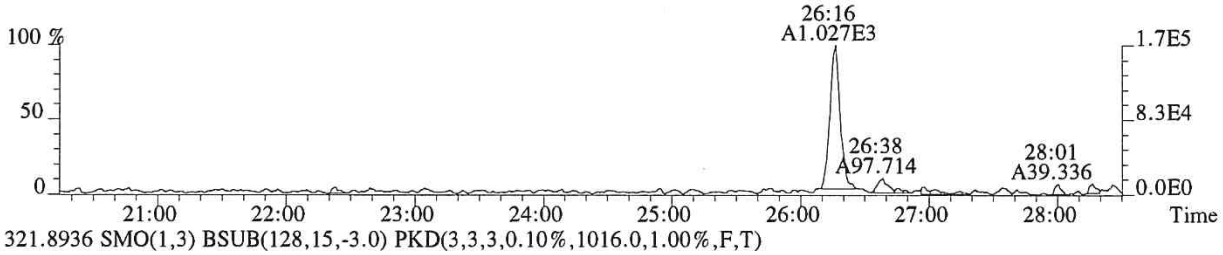
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6312.0,1.00%,F,T)



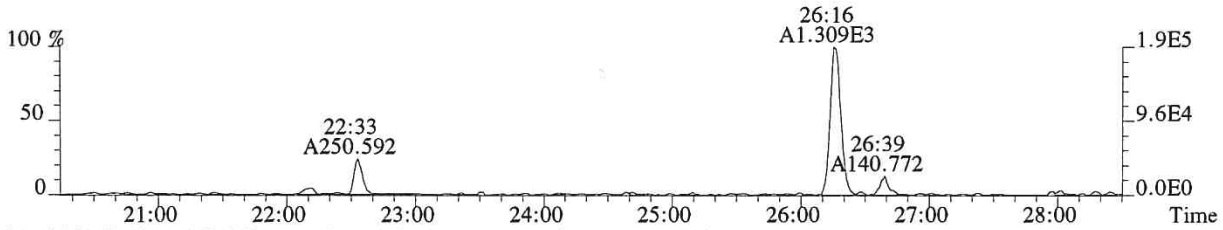
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER 01/10/19
01/10/19

017062

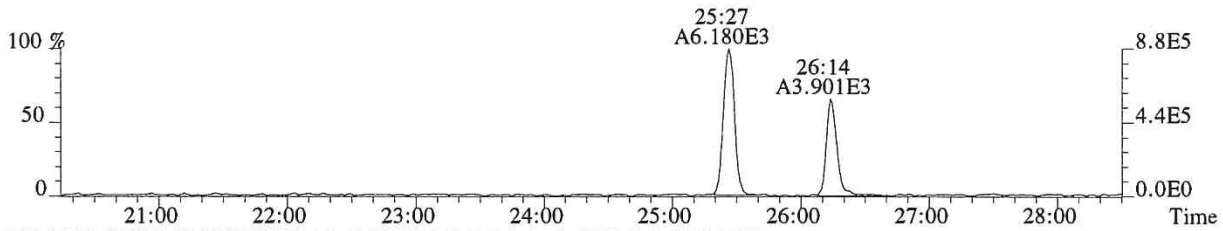
File:P616408 #1-587 Acq: 9-JAN-2019 14:50:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4248.0,1.00%,F,T)



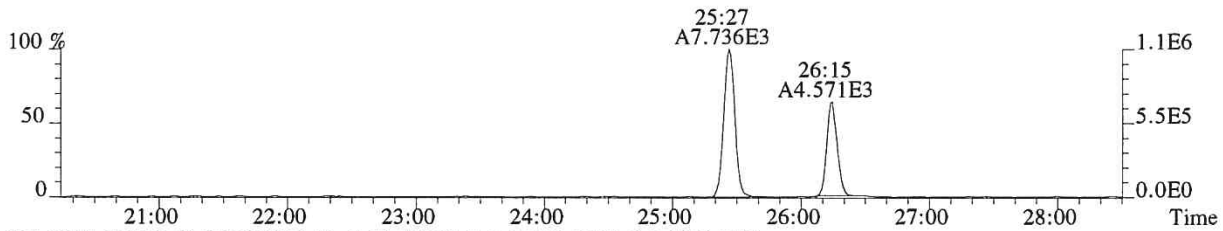
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1016.0,1.00%,F,T)



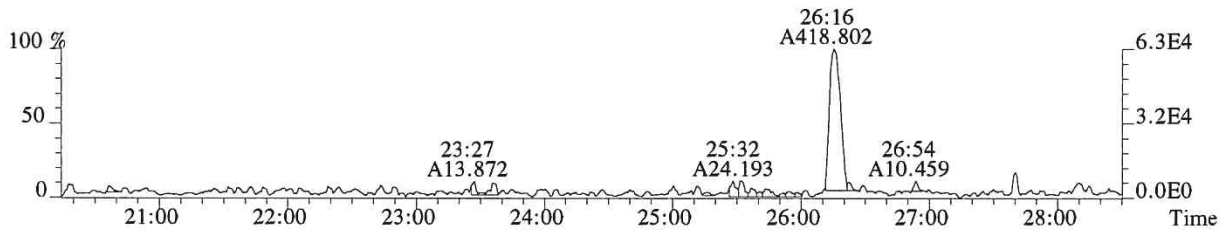
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9772.0,1.00%,F,T)



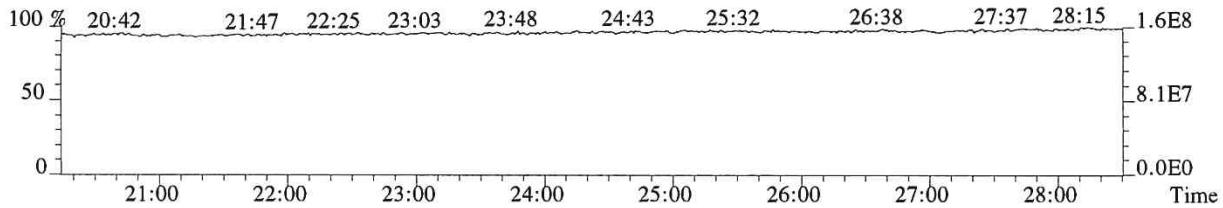
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5084.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2792.0,1.00%,F,T)

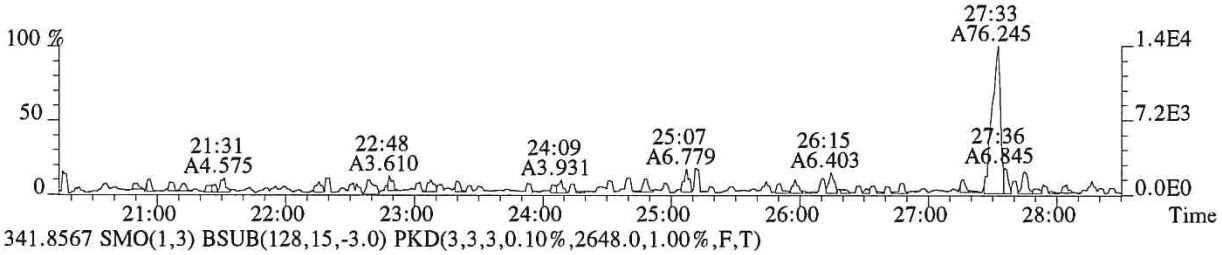


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

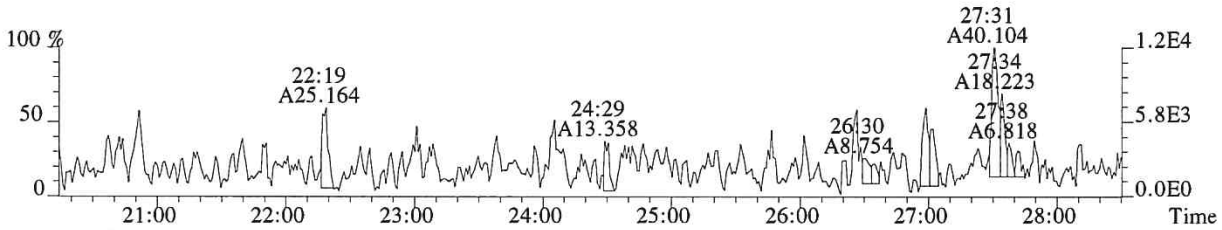


017063

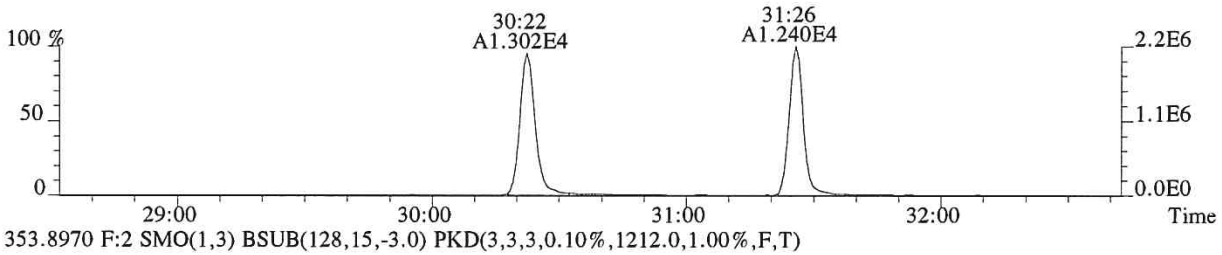
File:P616408 #1-587 Acq: 9-JAN-2019 14:50:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,512.0,1.00%,F,T)



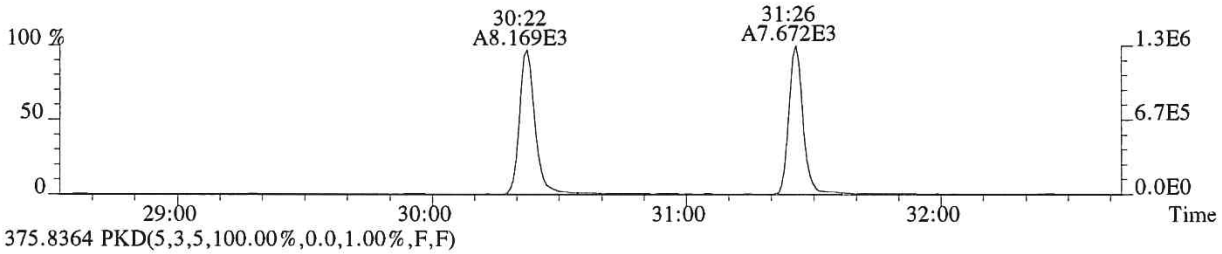
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2648.0,1.00%,F,T)



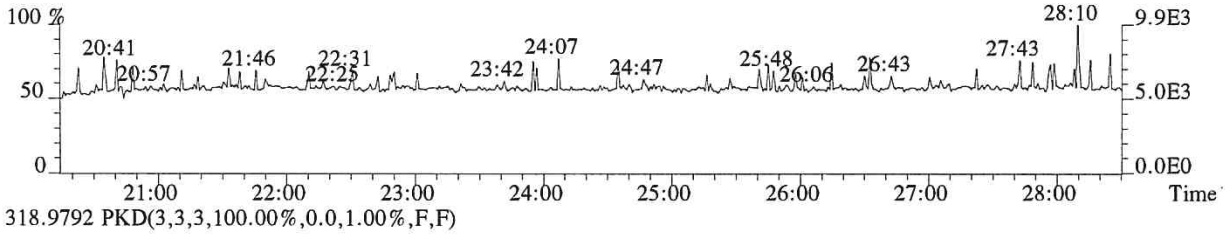
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1344.0,1.00%,F,T)



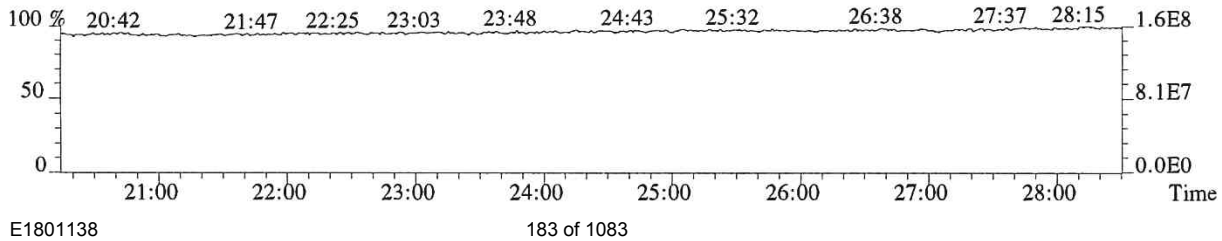
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1212.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

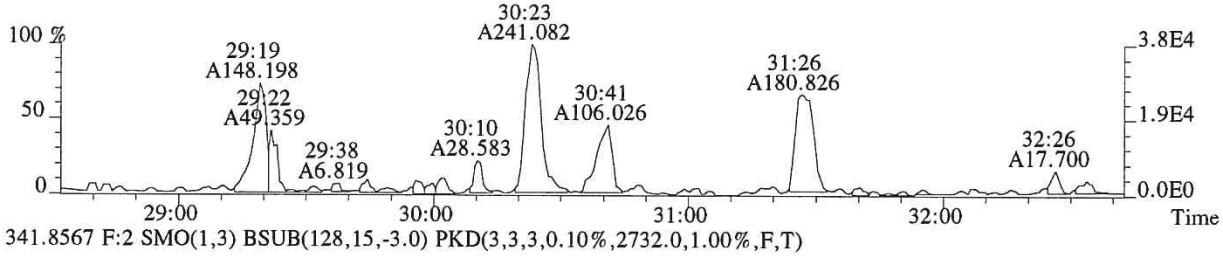


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

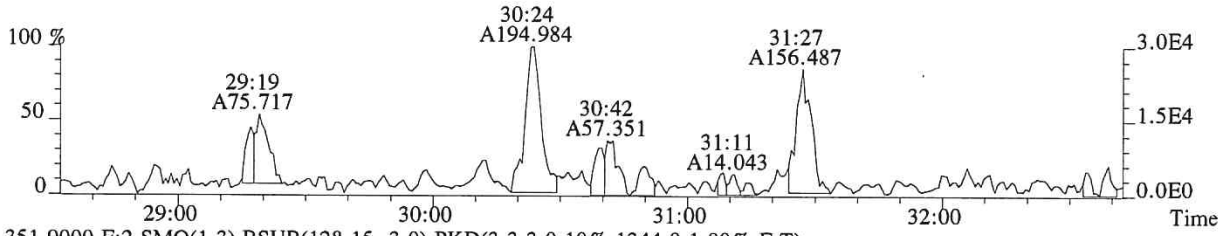


017064

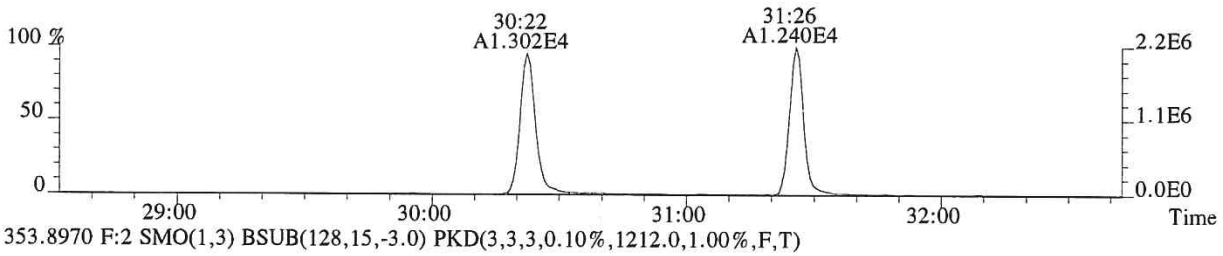
File:P616408 #1-376 Acq: 9-JAN-2019 14:50:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1140.0,1.00%,F,T)



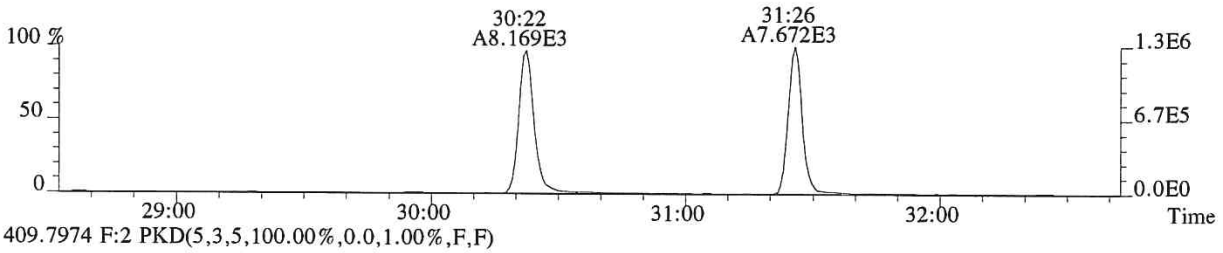
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2732.0,1.00%,F,T)



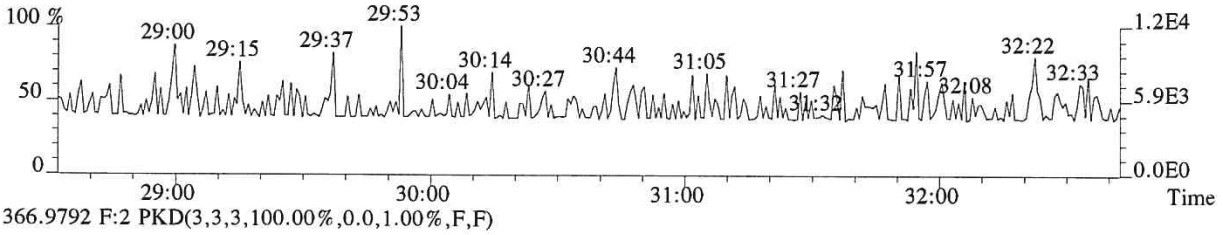
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1344.0,1.00%,F,T)



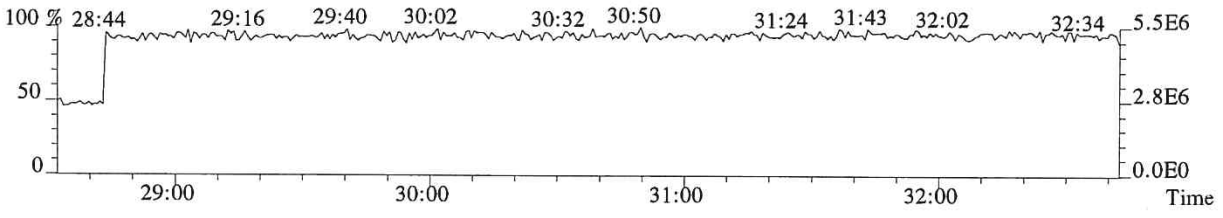
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1212.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

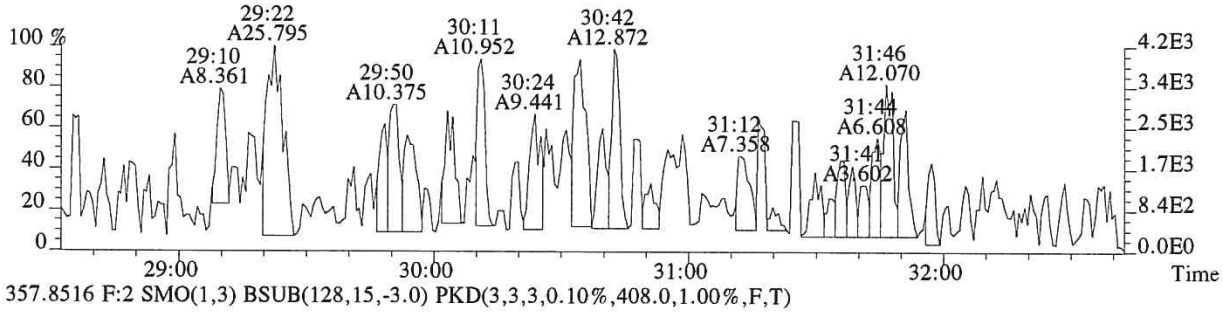


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

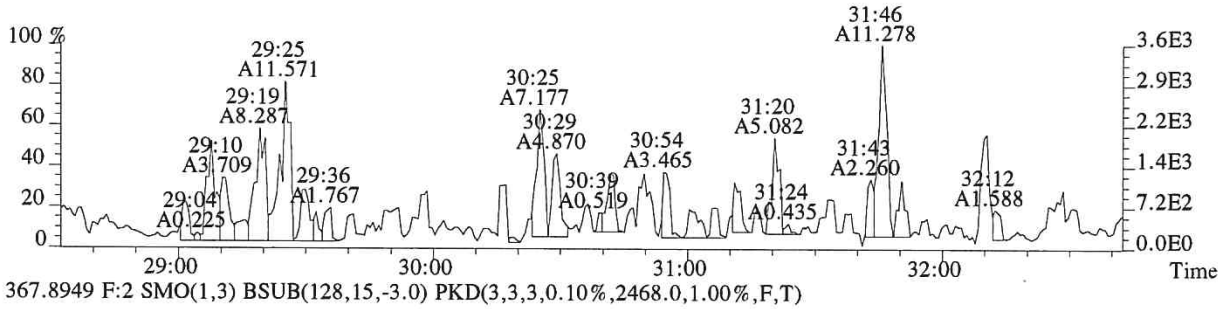


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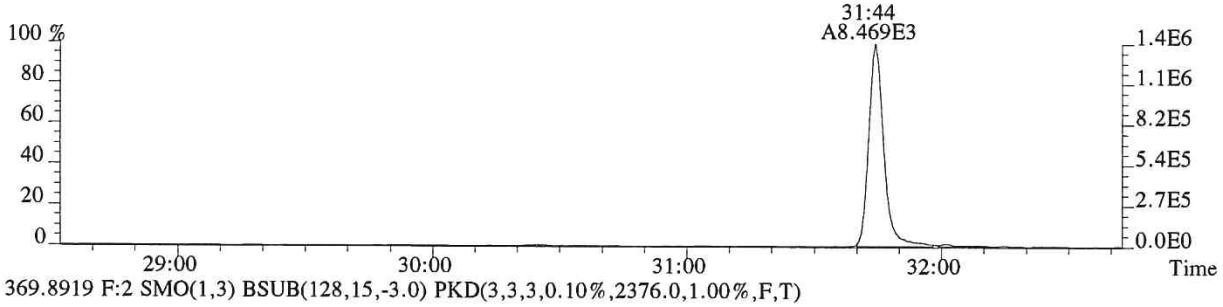
File:P616408 #1-376 Acq: 9-JAN-2019 14:50:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1048.0,1.00%,F,T)



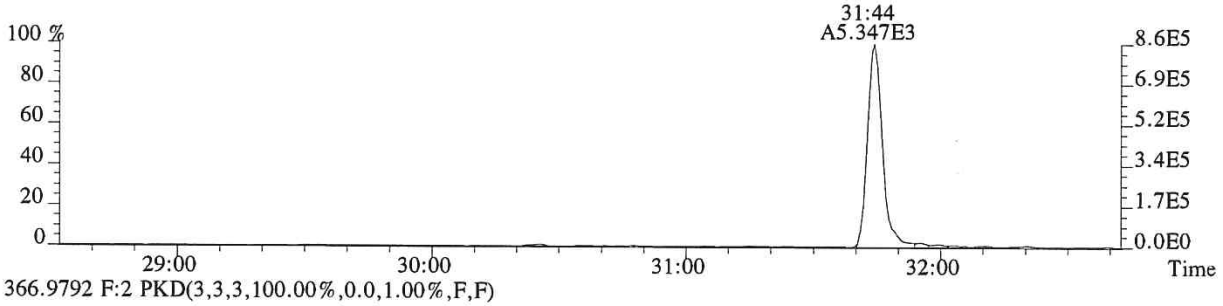
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,408.0,1.00%,F,T)



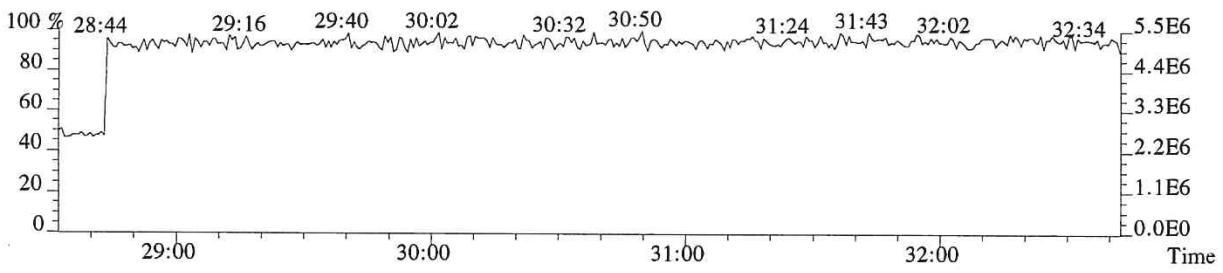
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2468.0,1.00%,F,T)



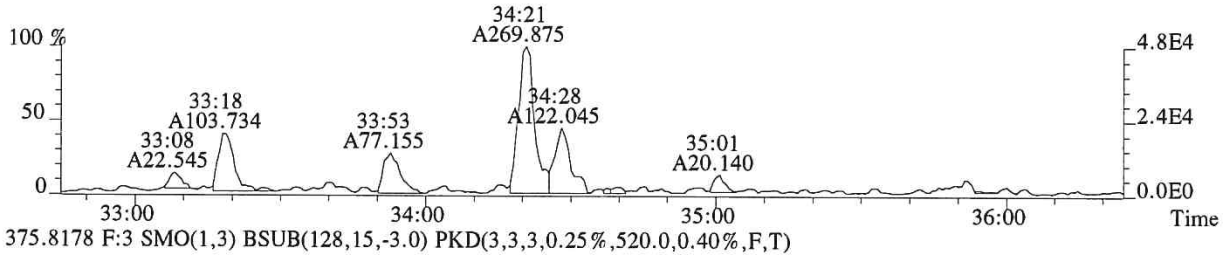
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2376.0,1.00%,F,T)



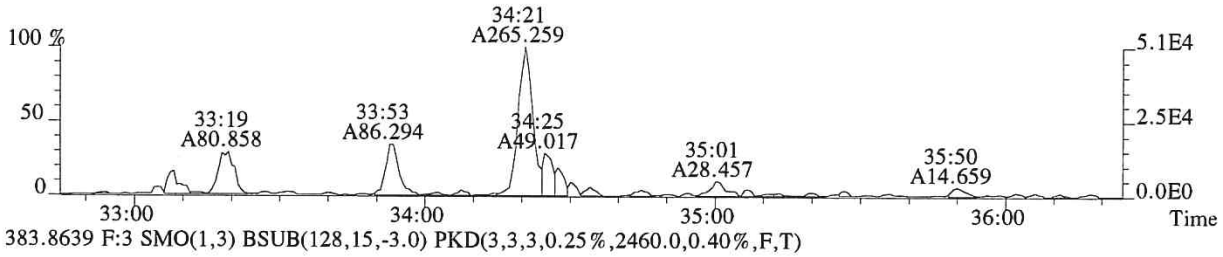
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



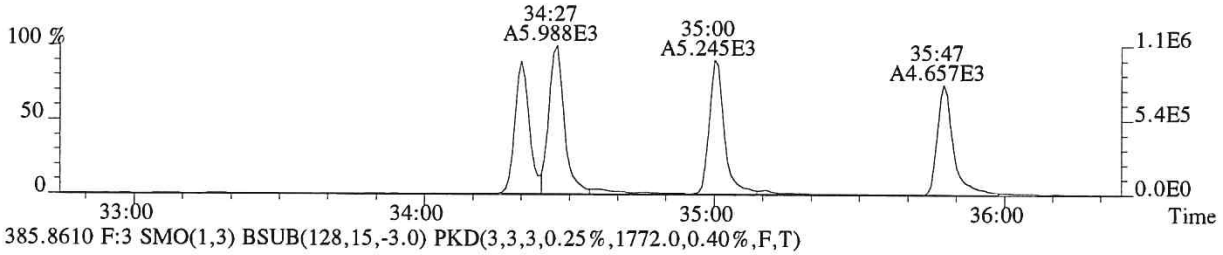
File:P616408 #1-330 Acq: 9-JAN-2019 14:50:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1888.0,0.40%,F,T)



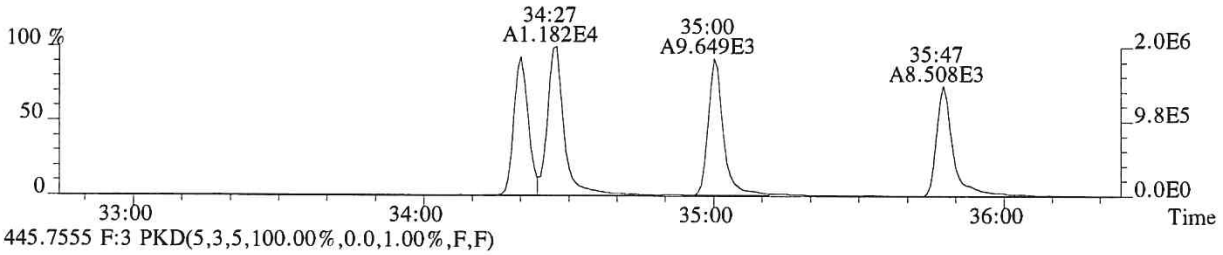
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,520.0,0.40%,F,T)



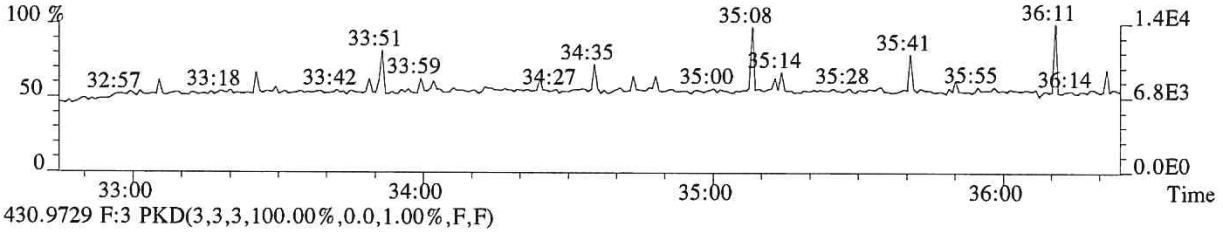
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2460.0,0.40%,F,T)



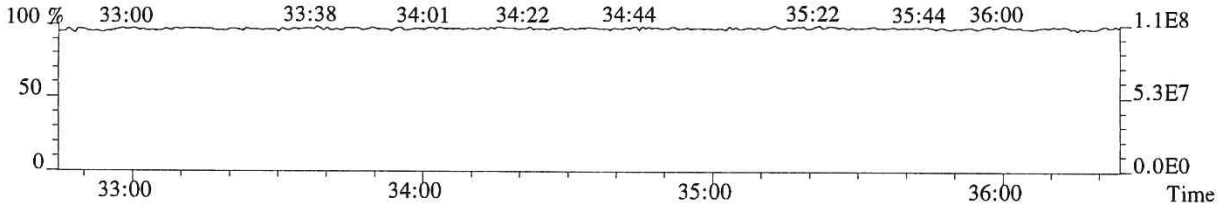
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1772.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

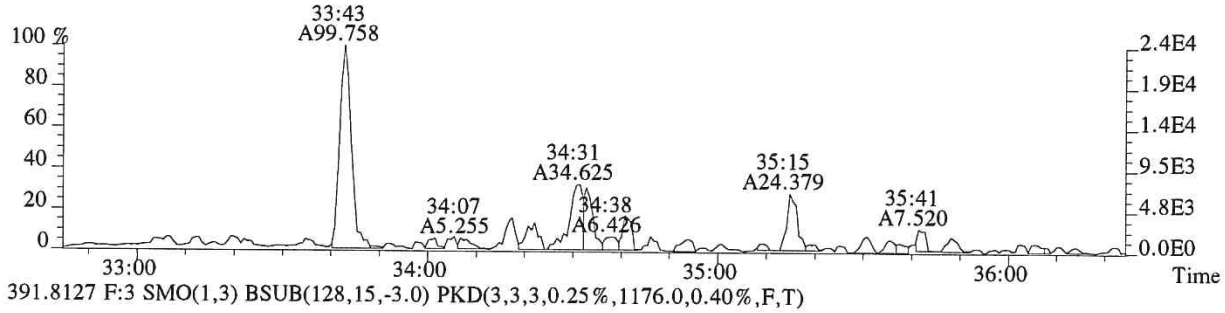


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

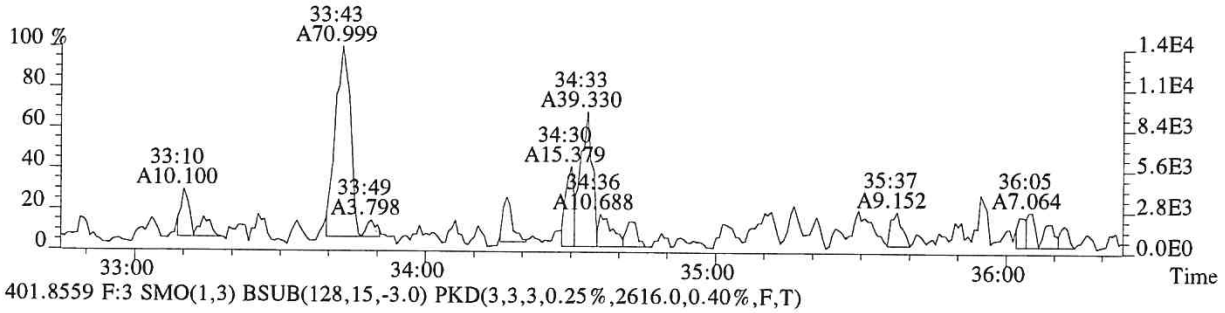


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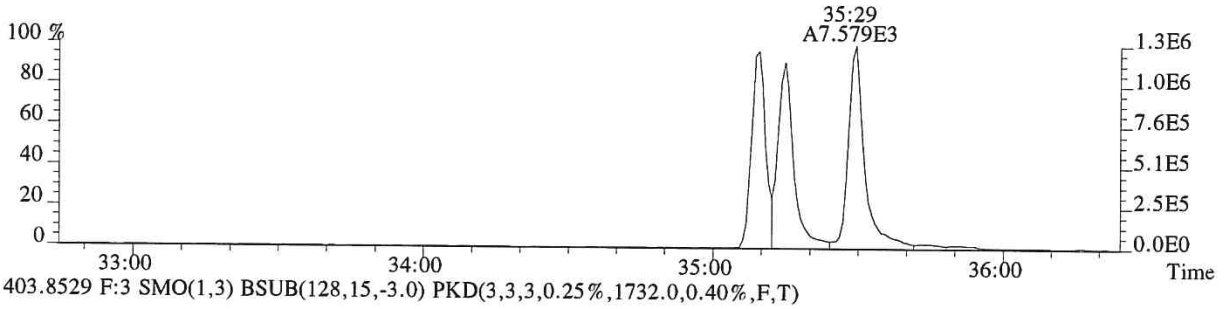
File:P616408 #1-330 Acq: 9-JAN-2019 14:50:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,640.0,0.40%,F,T)



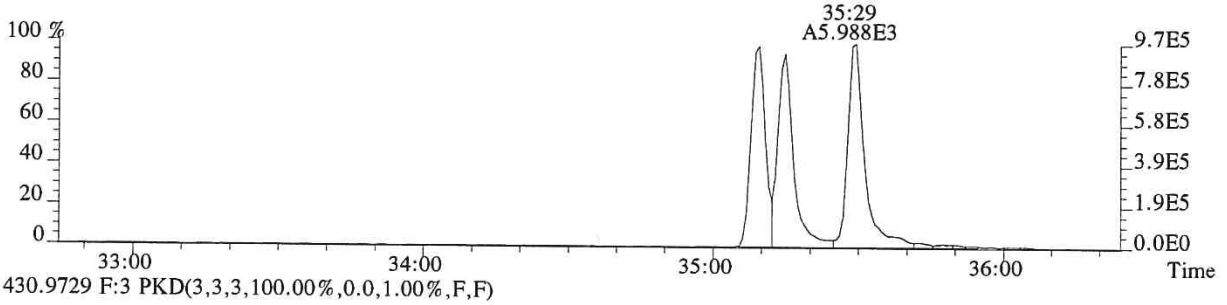
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1176.0,0.40%,F,T)



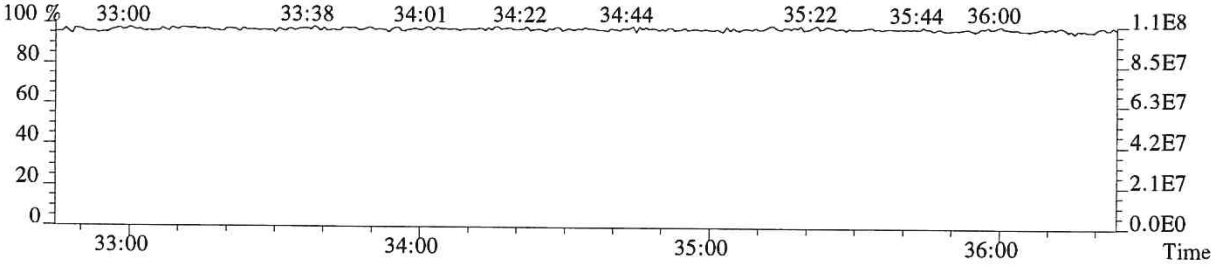
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2616.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1732.0,0.40%,F,T)

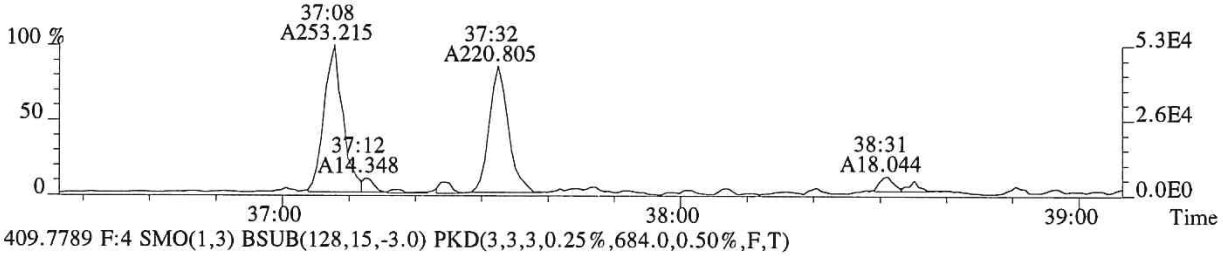


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

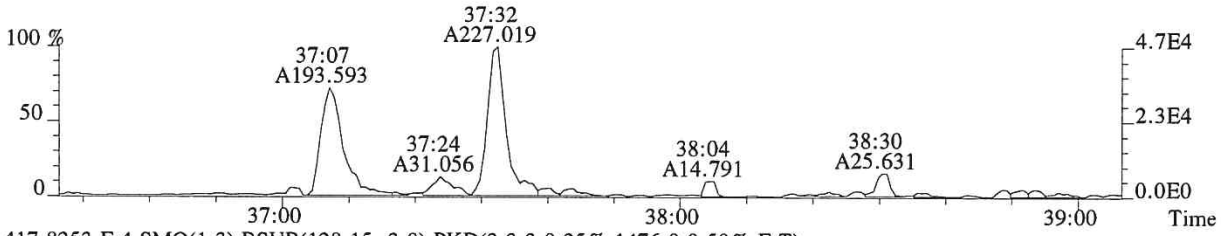


017068

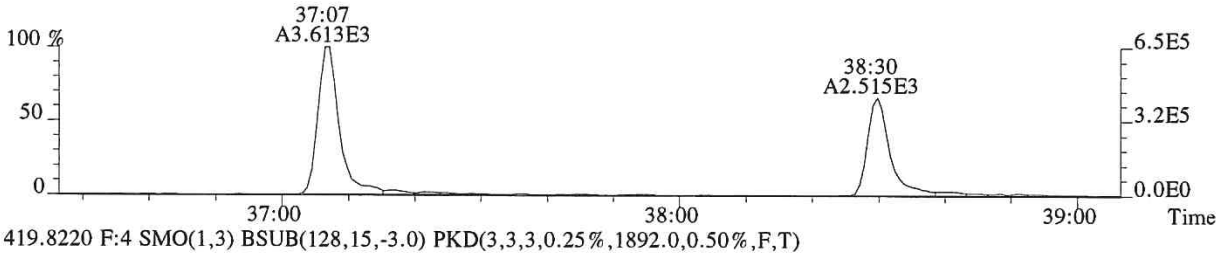
File:P616408 #1-241 Acq: 9-JAN-2019 14:50:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1556.0,0.50%,F,T)



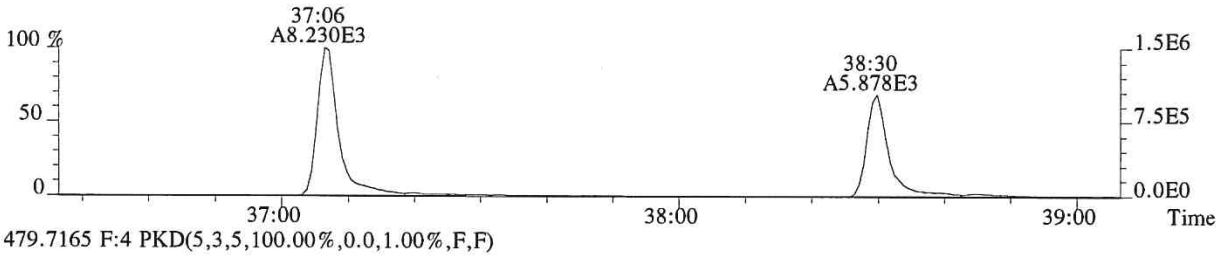
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,684.0,0.50%,F,T)



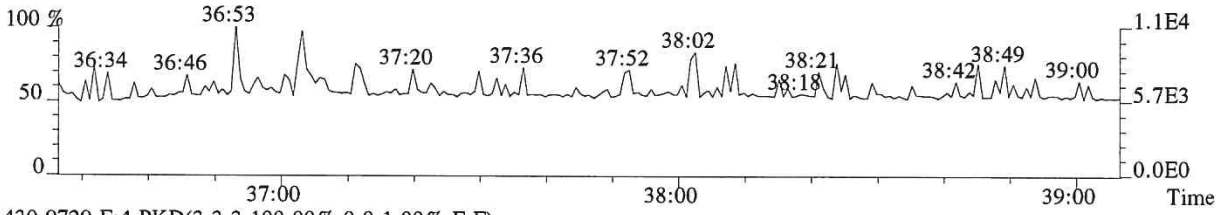
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1476.0,0.50%,F,T)



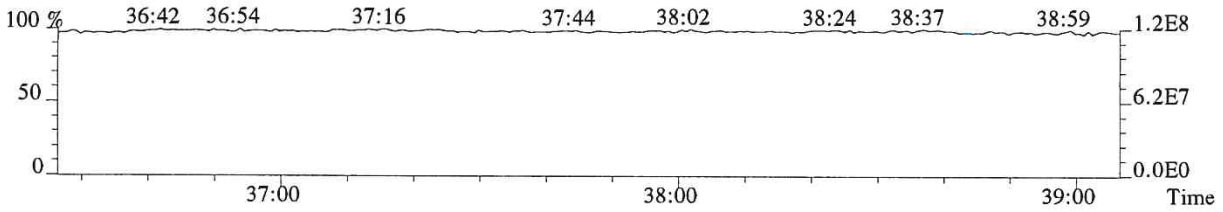
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1892.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

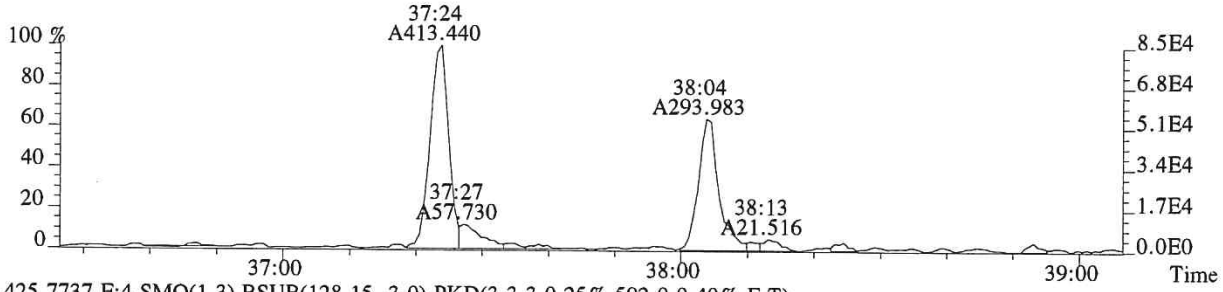


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

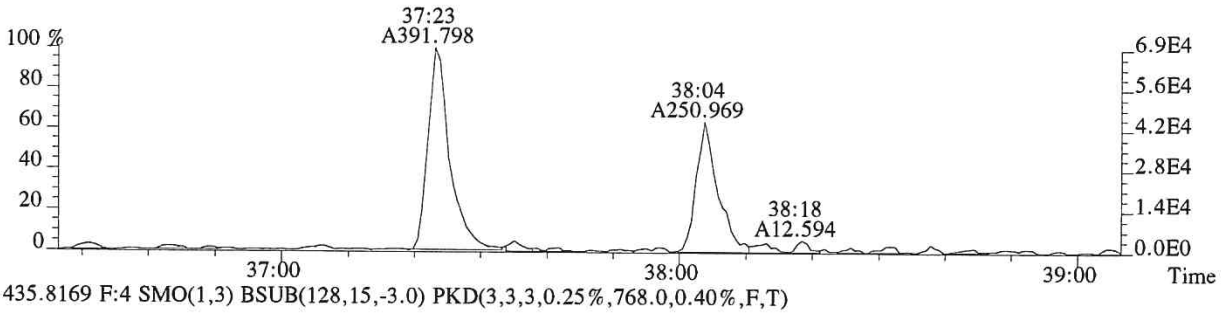


017069

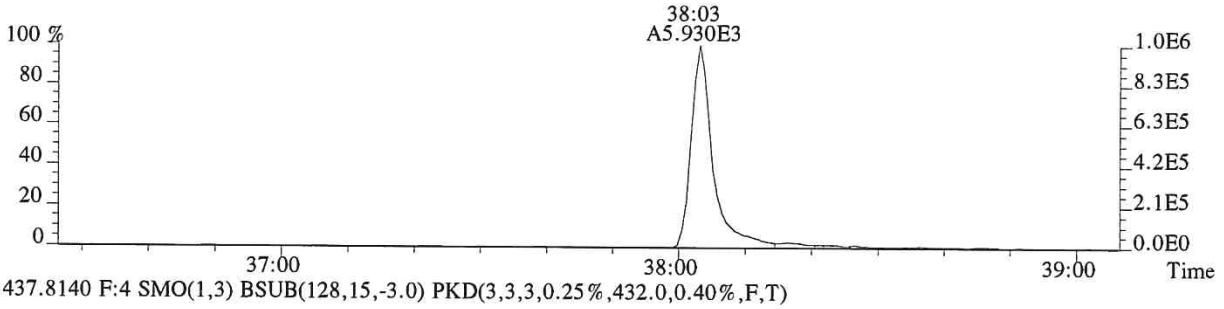
File:P616408 #1-241 Acq: 9-JAN-2019 14:50:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1036.0,0.40%,F,T)



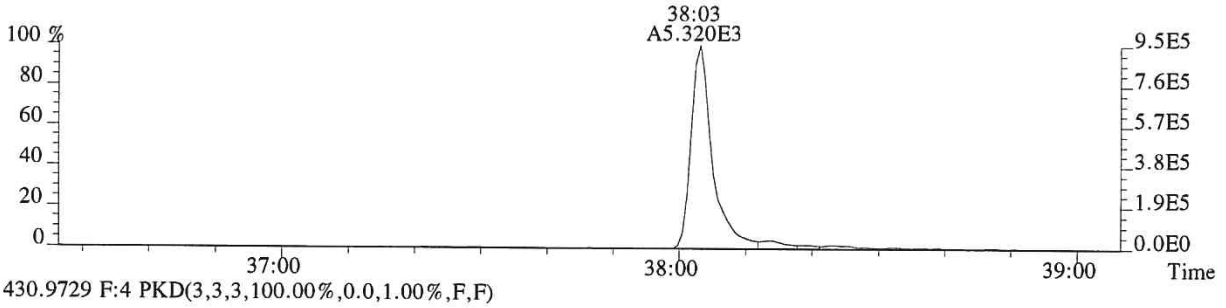
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,592.0,0.40%,F,T)



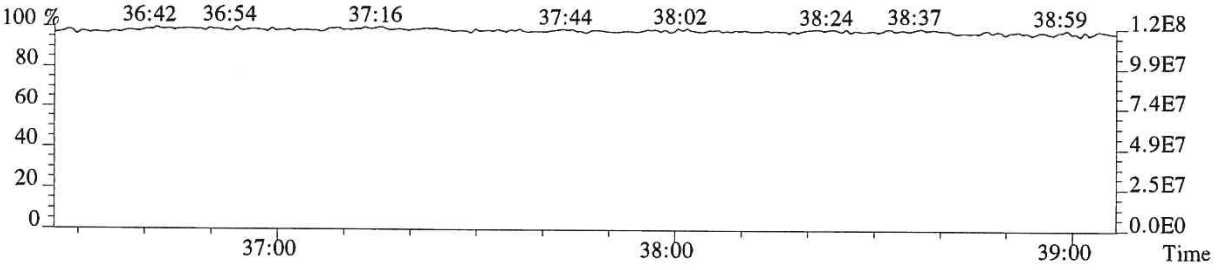
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,768.0,0.40%,F,T)



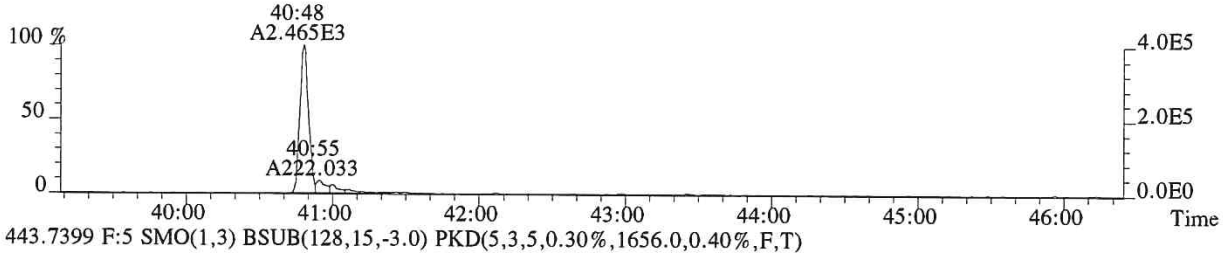
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,432.0,0.40%,F,T)



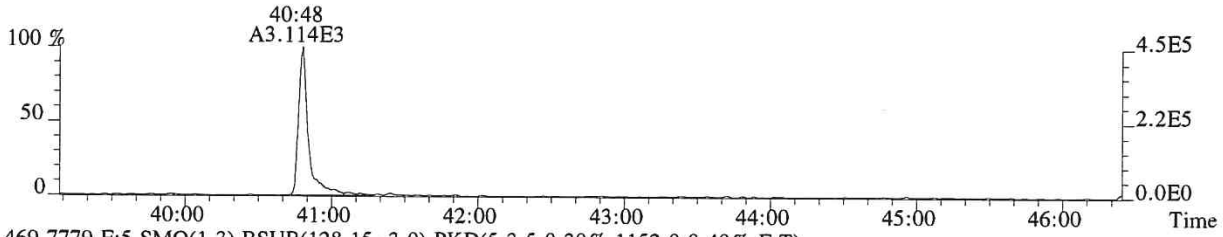
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



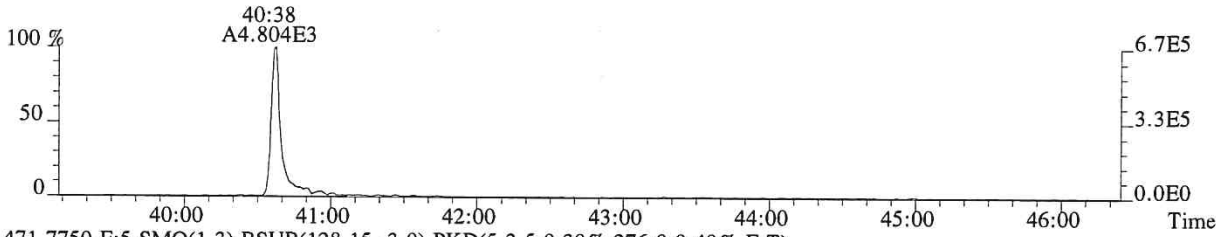
File:P616408 #1-654 Acq: 9-JAN-2019 14:50:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,412.0,0.40%,F,T)



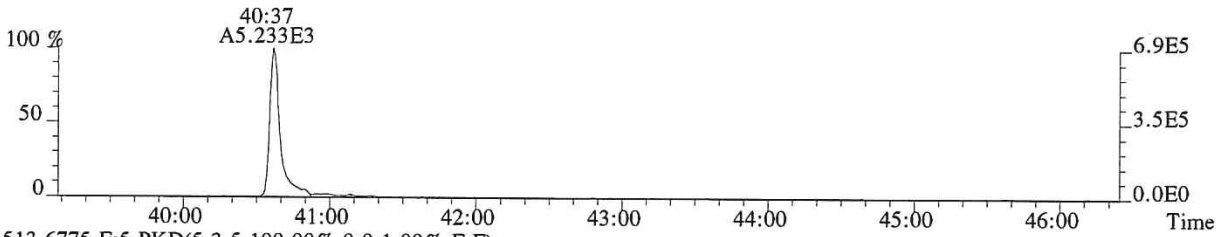
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1656.0,0.40%,F,T)



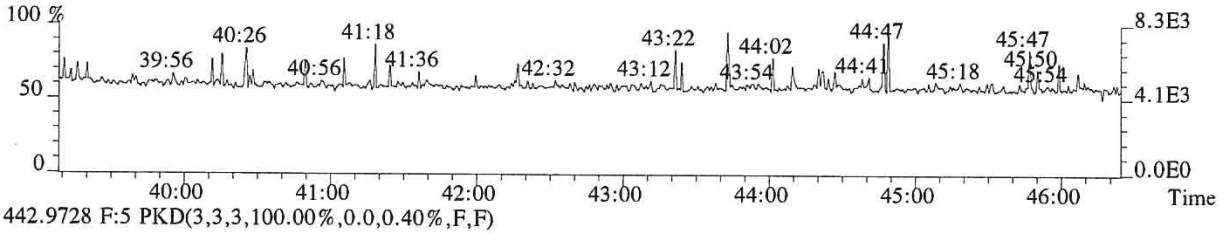
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1152.0,0.40%,F,T)



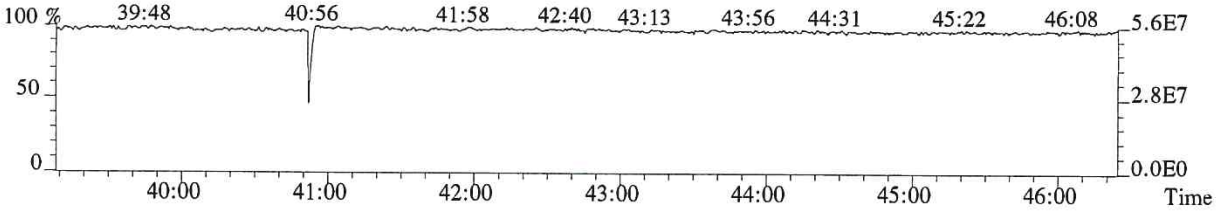
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,276.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

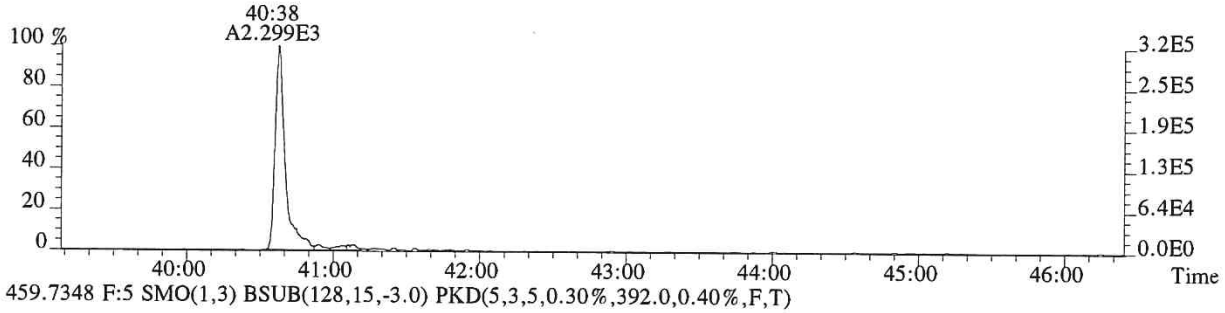


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

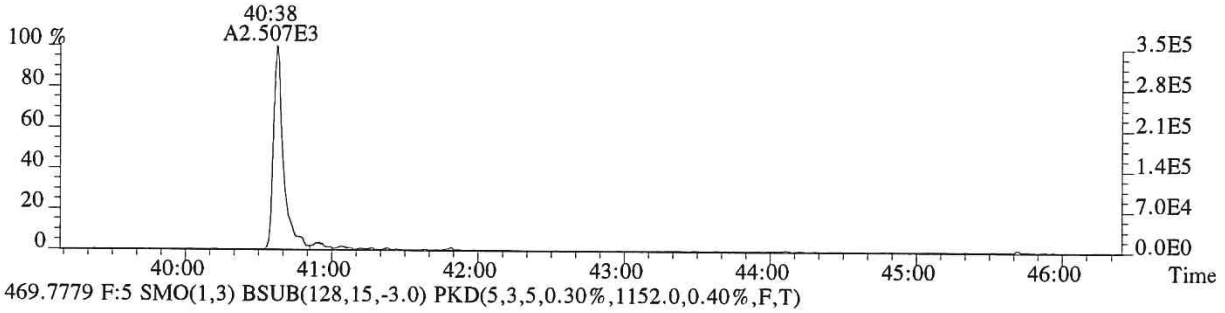


017071

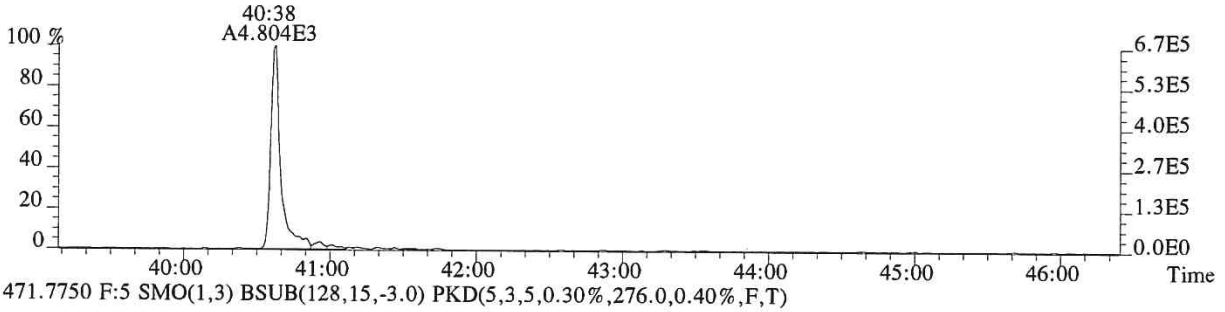
File:P616408 #1-654 Acq: 9-JAN-2019 14:50:42 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-002DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,268.0,0.40%,F,T)



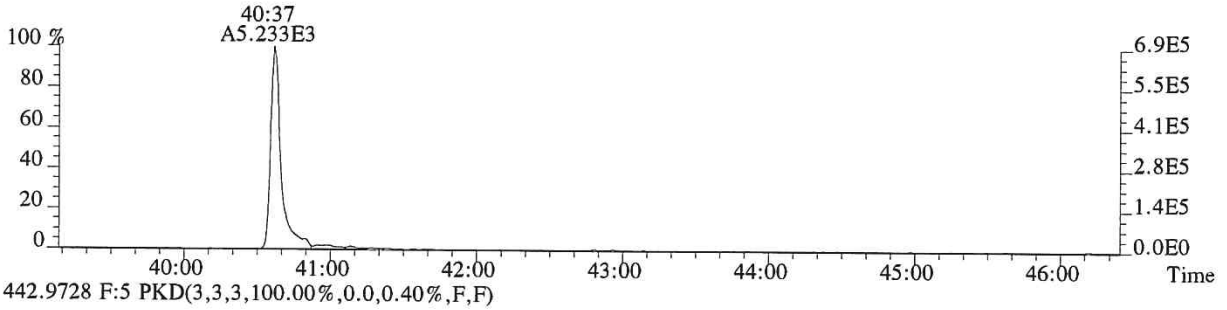
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,392.0,0.40%,F,T)



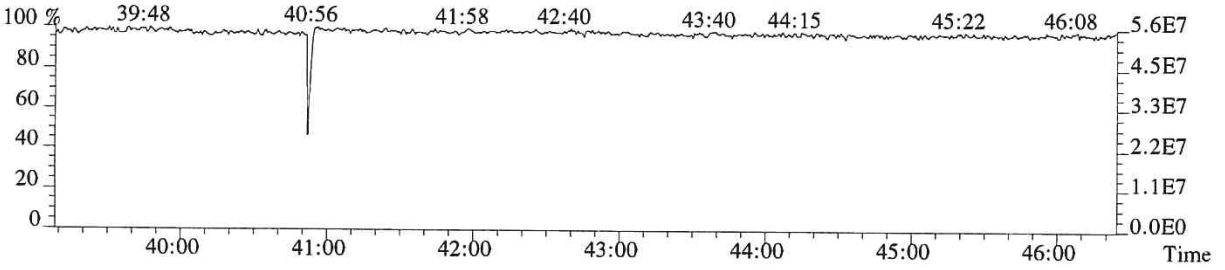
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1152.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,276.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017072

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0170

Run #13 Filename P616381 Samp: 1 Inj: 1 Acquired: 8-JAN-19 16:16:14
Processed: 9-JAN-19 08:58:10 Sample ID: E1801138-003

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:15	2.648e+03	3.139e+03	0.84	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:24	2.453e+02	1.407e+02	1.74	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:28	2.312e+02	1.991e+02	1.16	no	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	4.304e+02	3.531e+02	1.22	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:27	1.902e+02	1.217e+02	1.56	no	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	1.735e+02	1.224e+02	1.42	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:49	7.380e+01	3.774e+01	1.96	no	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:07	1.524e+03	1.413e+03	1.08	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	1.200e+02	1.176e+02	1.02	yes	no	1.463
10	Unk	OCDF	40:47	2.432e+03	2.623e+03	0.93	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:17	6.344e+02	8.690e+02	0.73	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:46	9.292e+01	1.048e+02	0.89	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:10	9.459e+01	6.690e+01	1.41	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:15	2.740e+02	2.355e+02	1.16	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:30	1.857e+02	1.175e+02	1.58	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	7.285e+03	7.225e+03	1.01	yes	no	1.112
17	Unk	OCDD	40:36	3.290e+04	3.682e+04	0.89	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:13	1.309e+04	1.670e+04	0.78	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:23	2.102e+04	1.324e+04	1.59	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	1.913e+04	1.186e+04	1.61	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:20	7.782e+03	1.469e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	9.034e+03	1.754e+04	0.52	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:00	7.955e+03	1.519e+04	0.52	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	7.357e+03	1.341e+04	0.55	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:06	4.518e+03	1.009e+04	0.45	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	3.589e+03	8.011e+03	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:16	6.196e+03	8.117e+03	0.76	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:45	1.430e+04	8.918e+03	1.60	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	1.048e+04	8.158e+03	1.28	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	9.936e+03	7.809e+03	1.27	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:02	8.410e+03	7.918e+03	1.06	yes	no	0.857
32	IS	13C-OCDD	40:36	4.988e+03	5.251e+03	0.95	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:27	1.468e+04	1.793e+04	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	1.688e+04	1.333e+04	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:17	9.680e+03				no	1.086

$$\text{OCDD} = \frac{(3.290e+04 + 3.682e+04) \times 4000\ \text{pg} \times 1}{(4.988e+03 + 5.251e+03) \times 10.088\ \text{g} \times 81.3 / 100 \times 1.157} = 2870\ \text{ng/kg}$$

LM 01/09/19

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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0170

Run #13 Filename P616381 Samp: 1 Inj: 1 Acquired: 8-JAN-19 16:16:14
Processed: 9-JAN-19 08:58:10 LAB. ID: E1801138-003

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	3.48e+05	2.00e+03	1.7e+02	4.27e+05	5.82e+03	7.3e+01
2	1,2,3,7,8-PeCDF	4.48e+04	1.86e+03	2.4e+01	2.68e+04	1.83e+03	1.5e+01
3	2,3,4,7,8-PeCDF	3.57e+04	1.86e+03	1.9e+01	2.74e+04	1.83e+03	1.5e+01
4	1,2,3,4,7,8-HxCDF	9.09e+04	1.85e+03	4.9e+01	6.96e+04	2.74e+03	2.5e+01
5	1,2,3,6,7,8-HxCDF	3.94e+04	1.85e+03	2.1e+01	2.56e+04	2.74e+03	9.3e+00
6	2,3,4,6,7,8-HxCDF	2.96e+04	1.85e+03	1.6e+01	2.61e+04	2.74e+03	9.5e+00
7	1,2,3,7,8,9-HxCDF	1.21e+04	1.85e+03	6.5e+00	7.79e+03	2.74e+03	2.8e+00
8	1,2,3,4,6,7,8-HpCDF	3.17e+05	1.52e+03	2.1e+02	3.11e+05	2.01e+03	1.5e+02
9	1,2,3,4,7,8,9-HpCDF	2.73e+04	1.52e+03	1.8e+01	2.31e+04	2.01e+03	1.1e+01
10	OCDF	4.17e+05	9.60e+02	4.3e+02	4.59e+05	2.35e+03	2.0e+02
11	2,3,7,8-TCDD	9.89e+04	4.11e+03	2.4e+01	1.30e+05	1.74e+03	7.5e+01
12	1,2,3,7,8-PeCDD	1.63e+04	1.46e+03	1.1e+01	1.47e+04	2.84e+02	5.2e+01
13	1,2,3,4,7,8-HxCDD	2.15e+04	8.84e+02	2.4e+01	1.76e+04	2.93e+03	6.0e+00
14	1,2,3,6,7,8-HxCDD	6.39e+04	8.84e+02	7.2e+01	5.31e+04	2.93e+03	1.8e+01
15	1,2,3,7,8,9-HxCDD	4.05e+04	8.84e+02	4.6e+01	2.39e+04	2.93e+03	8.2e+00
16	1,2,3,4,6,7,8-HpCDD	1.49e+06	3.75e+03	4.0e+02	1.51e+06	2.24e+02	6.7e+03
17	OCDD	5.76e+06	3.48e+02	1.7e+04	6.30e+06	5.00e+02	1.3e+04
18	13C-2,3,7,8-TCDF	1.86e+06	1.45e+04	1.3e+02	2.41e+06	1.28e+04	1.9e+02
19	13C-1,2,3,7,8-PeCDF	3.59e+06	3.60e+02	1.0e+04	2.25e+06	1.09e+03	2.1e+03
20	13C-2,3,4,7,8-PeCDF	3.43e+06	3.60e+02	9.5e+03	2.21e+06	1.09e+03	2.0e+03
21	13C-1,2,3,4,7,8-HxCDF	1.62e+06	1.26e+03	1.3e+03	3.11e+06	1.78e+03	1.8e+03
22	13C-1,2,3,6,7,8-HxCDF	1.81e+06	1.26e+03	1.4e+03	3.40e+06	1.78e+03	1.9e+03
23	13C-2,3,4,6,7,8-HxCDF	1.66e+06	1.26e+03	1.3e+03	3.06e+06	1.78e+03	1.7e+03
24	13C-1,2,3,7,8,9-HxCDF	1.46e+06	1.26e+03	1.2e+03	2.62e+06	1.78e+03	1.5e+03
25	13C-1,2,3,4,6,7,8-HpCDF	9.54e+05	1.86e+03	5.1e+02	2.13e+06	3.08e+03	6.9e+02
26	13C-1,2,3,4,7,8,9-HpCDF	7.18e+05	1.86e+03	3.9e+02	1.62e+06	3.08e+03	5.3e+02
27	13C-2,3,7,8-TCDD	9.47e+05	1.29e+04	7.3e+01	1.25e+06	4.59e+03	2.7e+02
28	13C-1,2,3,7,8-PeCDD	2.59e+06	1.72e+03	1.5e+03	1.60e+06	3.08e+03	5.2e+02
29	13C-1,2,3,4,7,8-HxCDD	2.17e+06	1.59e+03	1.4e+03	1.67e+06	6.96e+02	2.4e+03
30	13C-1,2,3,6,7,8-HxCDD	2.01e+06	1.59e+03	1.3e+03	1.57e+06	6.96e+02	2.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.73e+06	8.68e+02	2.0e+03	1.63e+06	6.24e+02	2.6e+03
32	13C-OCDD	8.58e+05	3.64e+02	2.4e+03	9.20e+05	1.76e+02	5.2e+03
33	13C-1,2,3,4-TCDD	2.13e+06	1.29e+04	1.6e+02	2.58e+06	4.59e+03	5.6e+02
34	13C-1,2,3,7,8,9-HxCDD	3.29e+06	1.59e+03	2.1e+03	2.53e+06	6.96e+02	3.6e+03
35	37Cl-2,3,7,8-TCDD	1.47e+06	2.65e+03	5.5e+02			

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Peak List Summary

CLIENT ID.
SL0170

Entry: 36 Totals Name: Total Tetra-Furans

Run: 13 File: P616381 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 16:16:14 Processed: 9-JAN-19 08:58:10

Mass: 303.9020 305.8990 Tot Response: 8.63e+03 RRF: 1.081

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:39	1.04e+02	1.29e+02	0.80	yes	2.33e+02		n	n
2	22:23	1.83e+02	2.48e+02	0.74	yes	4.31e+02		n	n
3	24:13	5.74e+02	8.18e+02	0.70	yes	1.39e+03		n	n
4	25:15	2.65e+03	3.14e+03	0.84	yes	5.79e+03	2,3,7,8-TCDF	n	n
5	25:41	3.34e+02	4.50e+02	0.74	yes	7.84e+02		n	n

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Peak List Summary

CLIENT ID.
SL0170

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 13 File: P616381 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 16:16:14 Processed: 9-JAN-19 08:58:10

Mass: 319.8970 321.8940 Tot Response: 1.56e+03 RRF: 1.049

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	23:53	2.46e+01	3.02e+01 0.81	yes	5.48e+01		n	n
2	26:17	6.34e+02	8.69e+02 0.73	yes	1.50e+03	2,3,7,8-TCDD	n	n

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Peak List Summary

CLIENT ID.
SL0170

Entry: 38 Totals Name: Total Penta-Furans1

Run: 13 File: P616381 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 16:16:14 Processed: 9-JAN-19 08:58:10

Mass: 339.8600 341.8570 Tot Response: 6.44e+02 RRF: 1.130

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:33	3.86e+02	2.58e+02 1.50	yes	6.44e+02		n	n

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Peak List Summary

CLIENT ID.
SL0170

Entry: 39 Totals Name: Total Penta-Furans2

Run: 13 File: P616381 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 16:16:14 Processed: 9-JAN-19 08:58:10

Mass: 339.8600 341.8570 Tot Response: 1.30e+03 RRF: 1.130

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:20	5.83e+02	3.34e+02	1.75	yes	9.16e+02		n	n
2	30:24	2.45e+02	1.41e+02	1.74	yes	3.86e+02	1,2,3,7,8-PeCDF	n	n

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Peak List Summary

CLIENT ID.
SL0170

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 13 File: P616381 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 16:16:14 Processed: 9-JAN-19 08:58:10

Mass: 355.8550 357.8520 Tot Response: 1.47e+02 RRF: 0.9288

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:59	3.40e+01	2.51e+01	1.36	yes	5.90e+01		n	n
2	31:18	5.45e+01	3.38e+01	1.61	yes	8.83e+01		n	n

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Peak List Summary

CLIENT ID.
SL0170

Entry: 41 Totals Name: Total Hexa-Furans

Run: 13 File: P616381 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 16:16:14 Processed: 9-JAN-19 08:58:10

Mass: 373.8210 375.8180 Tot Response: 3.11e+03 RRF: 1.324

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:09	2.20e+02	1.95e+02	1.13	yes	4.15e+02		n	n
2	33:19	8.14e+02	6.17e+02	1.32	yes	1.43e+03		n	n
3	34:15	9.80e+01	8.54e+01	1.15	yes	1.83e+02		n	n
4	34:21	4.30e+02	3.53e+02	1.22	yes	7.84e+02	1,2,3,4,7,8-HxCDF	n	n
5	35:01	1.73e+02	1.22e+02	1.42	yes	2.96e+02	2,3,4,6,7,8-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0170

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 13 File: P616381 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 16:16:14 Processed: 9-JAN-19 08:58:10

Mass: 389.8160 391.8130 Tot Response: 8.40e+03 RRF: 1.092

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:43	2.36e+03	1.80e+03	1.31	yes	4.16e+03		n	n
2	34:32	1.63e+03	1.21e+03	1.35	yes	2.84e+03		n	n
3	34:38	4.24e+02	3.06e+02	1.39	yes	7.30e+02		n	n
4	35:10	9.46e+01	6.69e+01	1.41	yes	1.61e+02	1,2,3,4,7,8-HxCDD	n	n
5	35:15	2.74e+02	2.35e+02	1.16	yes	5.10e+02	1,2,3,6,7,8-HxCDD	n	n

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Peak List Summary

CLIENT ID.
SL0170

Entry: 43 Totals Name: Total Hepta-Furans

Run: 13 File: P616381 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 16:16:14 Processed: 9-JAN-19 08:58:10

Mass: 407.7820 409.7790 Tot Response: 8.58e+03 RRF: 1.495

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:07	1.52e+03	1.41e+03	1.08	yes	2.94e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	37:24	8.12e+01	8.37e+01	0.97	yes	1.65e+02		n	n
3	37:32	2.64e+03	2.60e+03	1.01	yes	5.24e+03		n	n
4	38:30	1.20e+02	1.18e+02	1.02	yes	2.38e+02	1,2,3,4,7,8,9-HpCDF	n	n

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Peak List Summary

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SL0170

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 13 File: P616381 Sample:1 Injection:1 Function:4

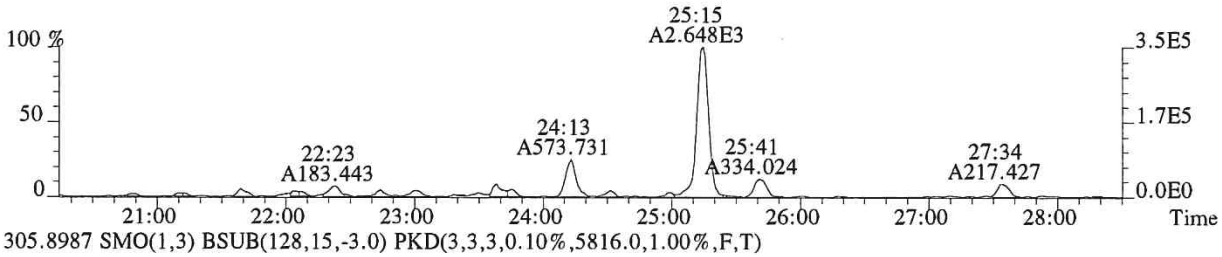
Acquired: 8-JAN-19 16:16:14 Processed: 9-JAN-19 08:58:10

Mass: 423.7770 425.7740 Tot Response: 5.99e+04 RRF: 1.112

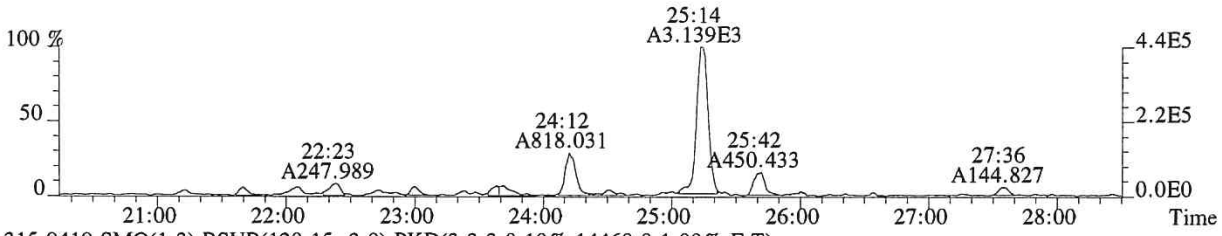
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:23	2.32e+04	1.04	yes	4.54e+04		n	n
2	38:03	7.29e+03	1.01	yes	1.45e+04	1,2,3,4,6,7,8-HpCDD	n	n

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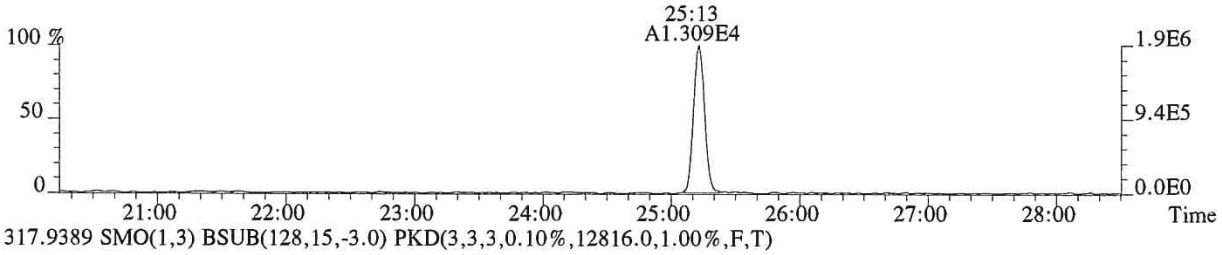
File:P616381 #1-587 Acq: 8-JAN-2019 16:16:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-003
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1996.0,1.00%,F,T)



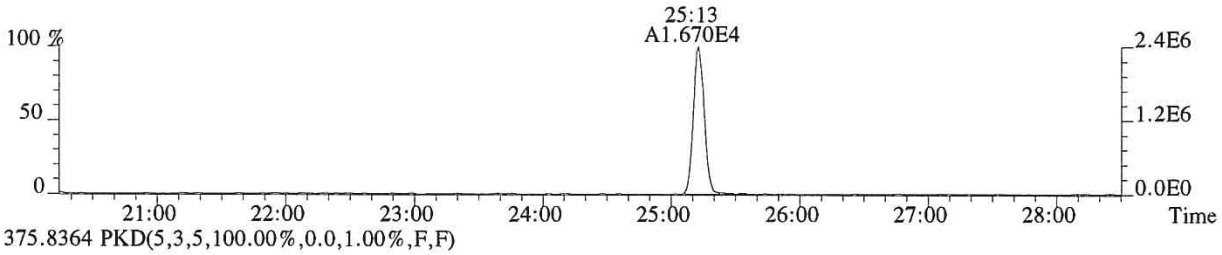
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5816.0,1.00%,F,T)



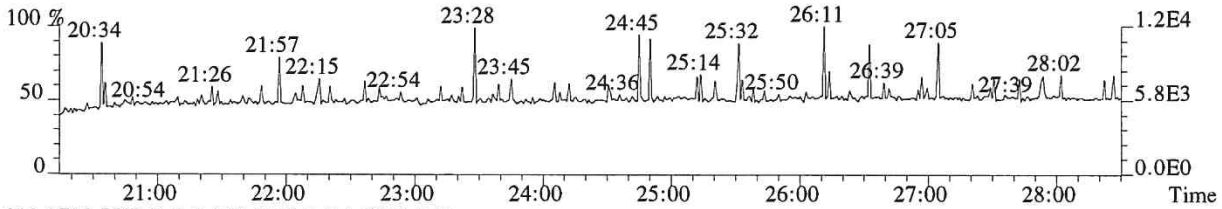
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,14460.0,1.00%,F,T)



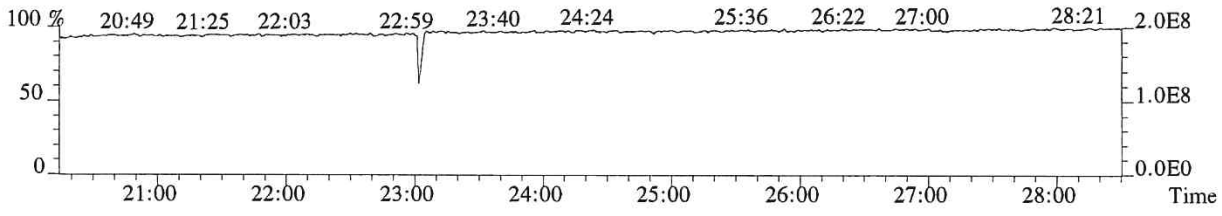
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12816.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

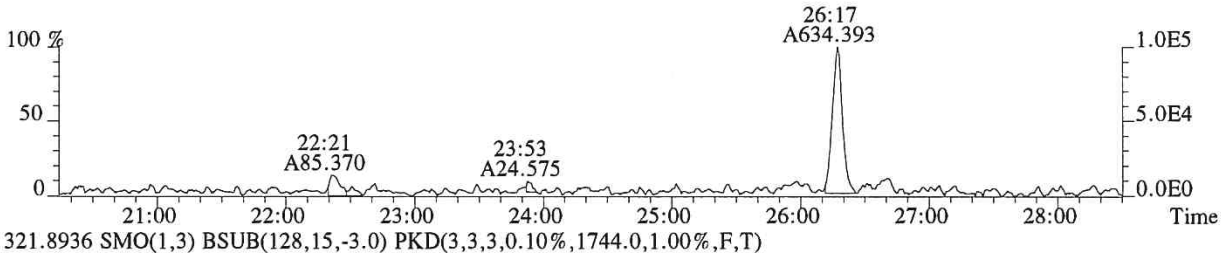


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

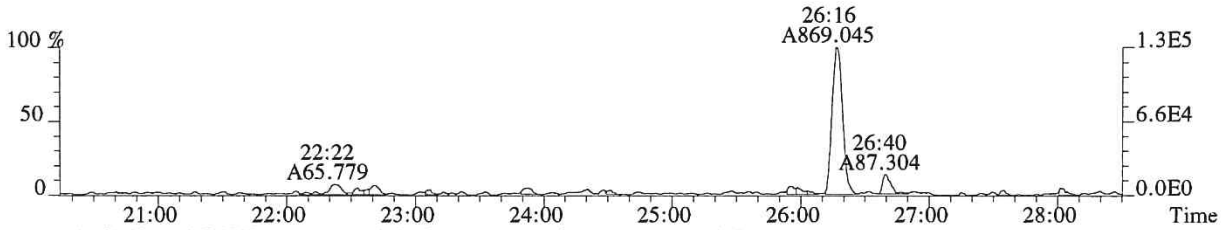


017084

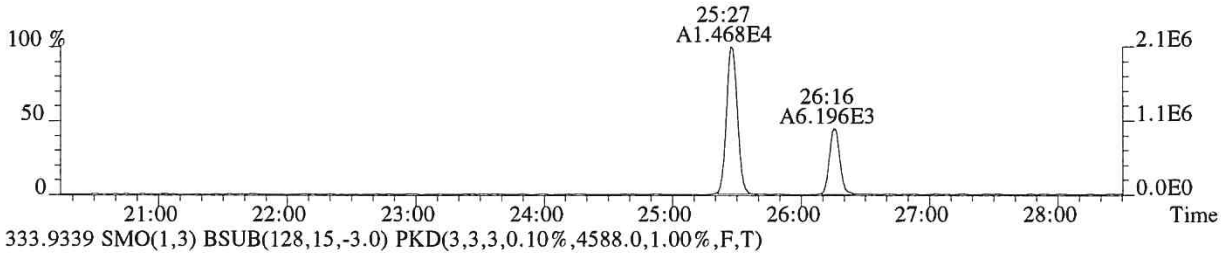
File:P616381 #1-587 Acq: 8-JAN-2019 16:16:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-003
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4108.0,1.00%,F,T)



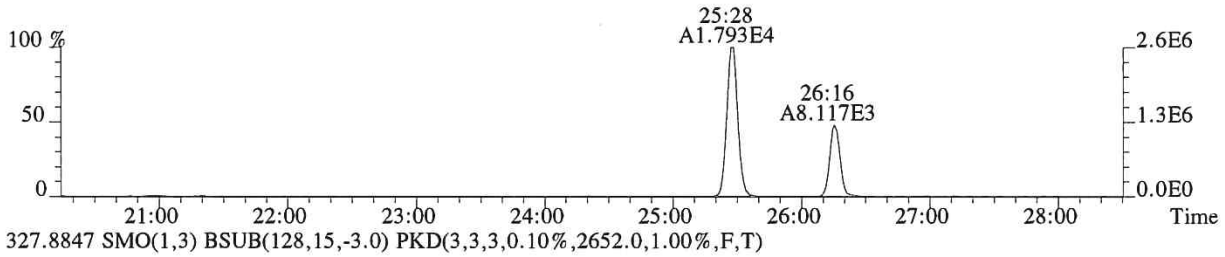
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1744.0,1.00%,F,T)



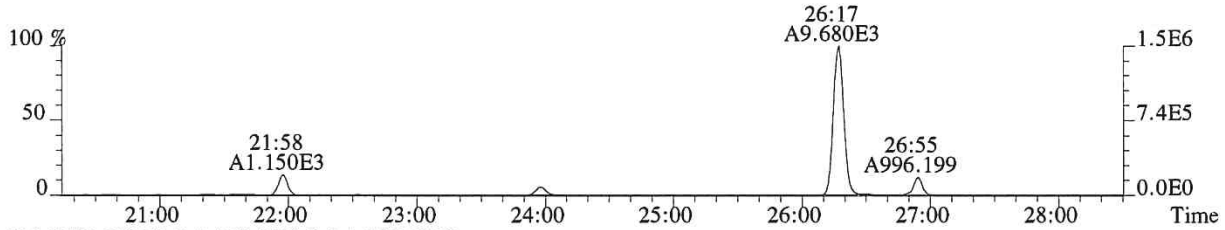
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12888.0,1.00%,F,T)



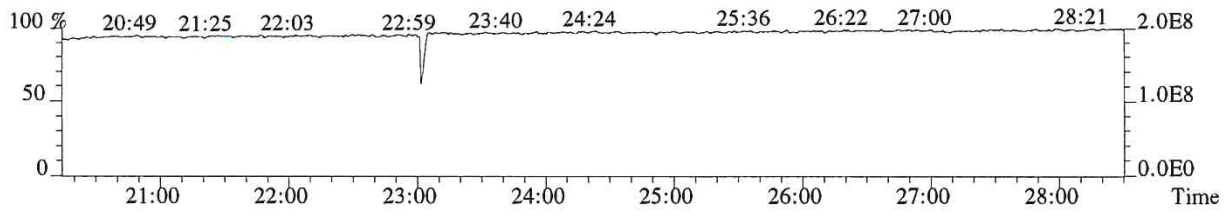
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4588.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2652.0,1.00%,F,T)

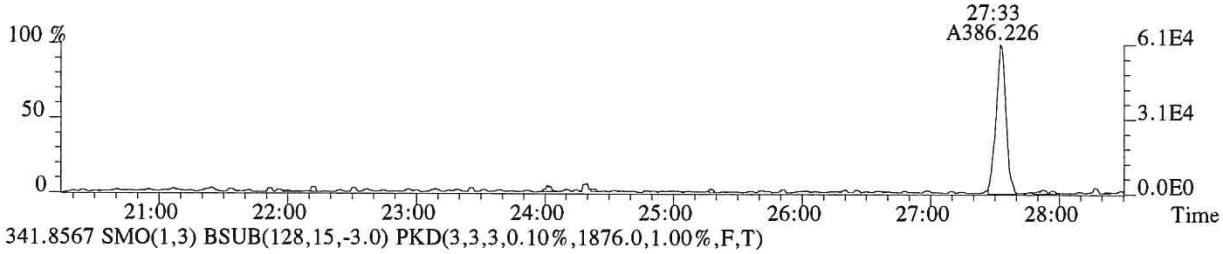


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

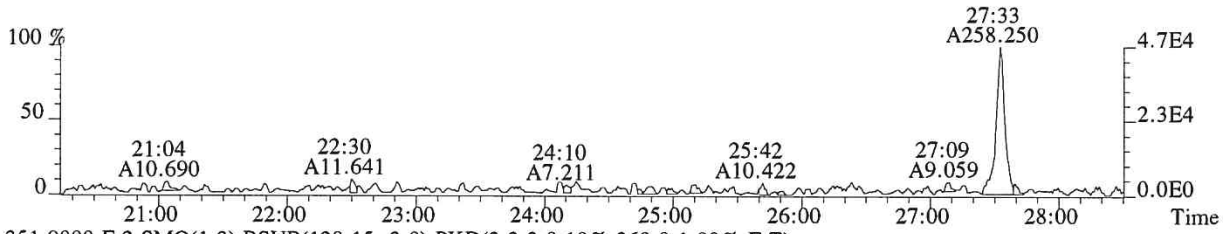


017085

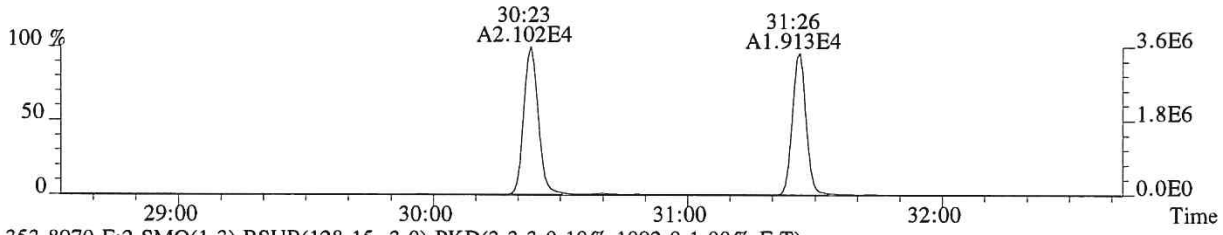
File:P616381 #1-587 Acq: 8-JAN-2019 16:16:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-003
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,956.0,1.00%,F,T)



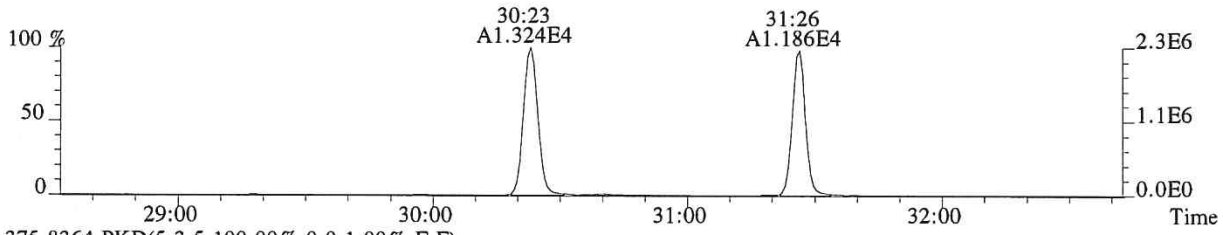
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1876.0,1.00%,F,T)



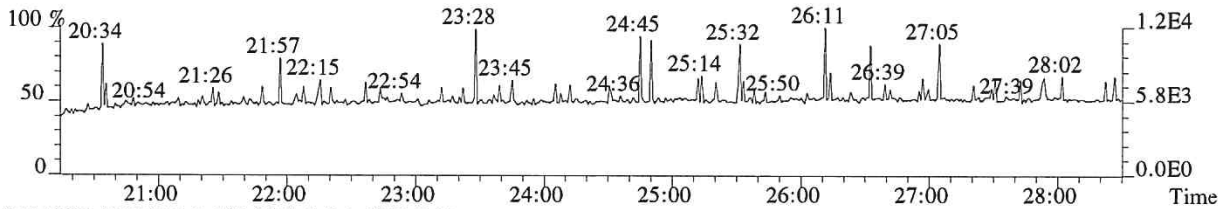
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,360.0,1.00%,F,T)



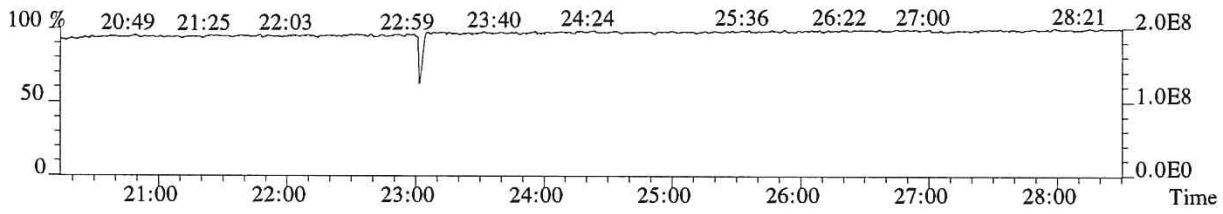
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1092.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

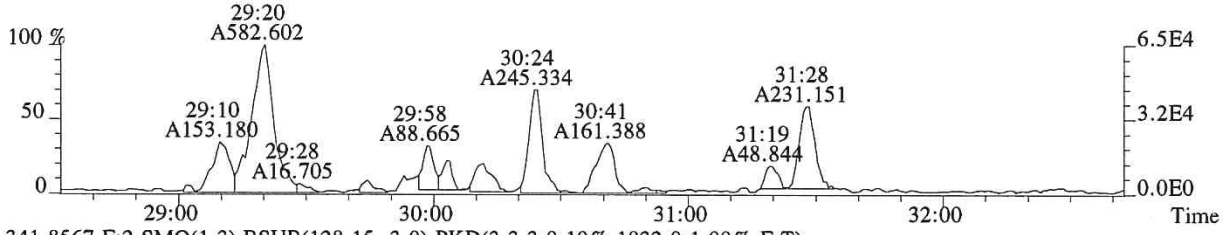


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

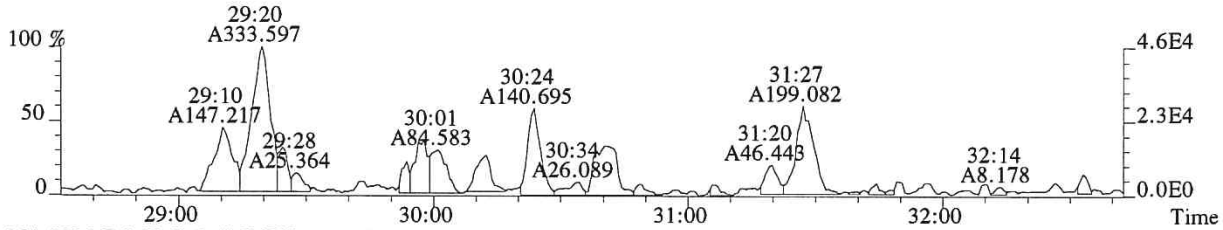


017086

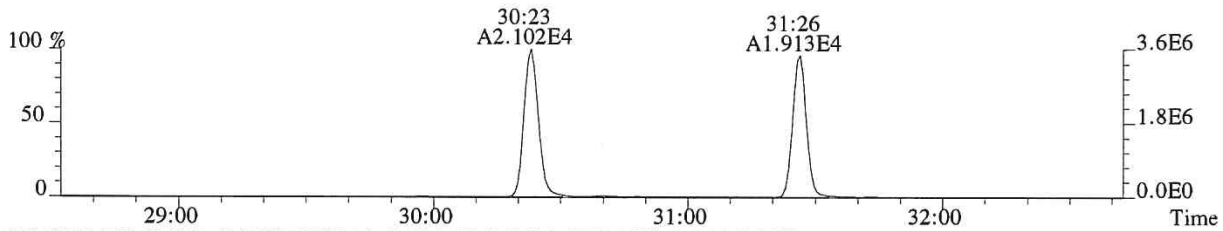
File:P616381 #1-376 Acq: 8-JAN-2019 16:16:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-003
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1860.0,1.00%,F,T)



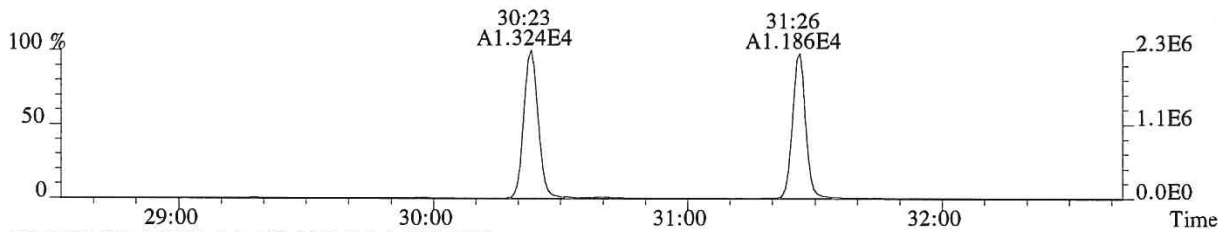
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1832.0,1.00%,F,T)



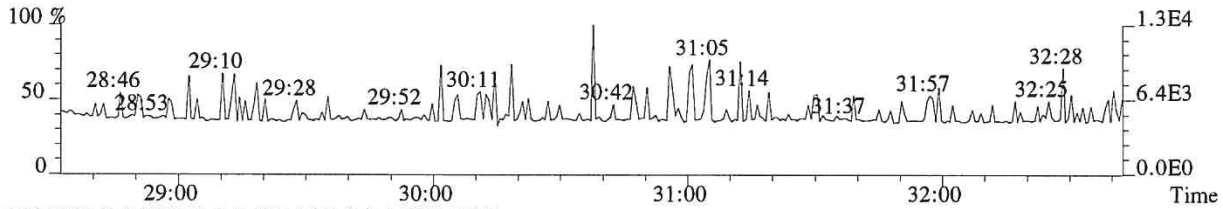
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,360.0,1.00%,F,T)



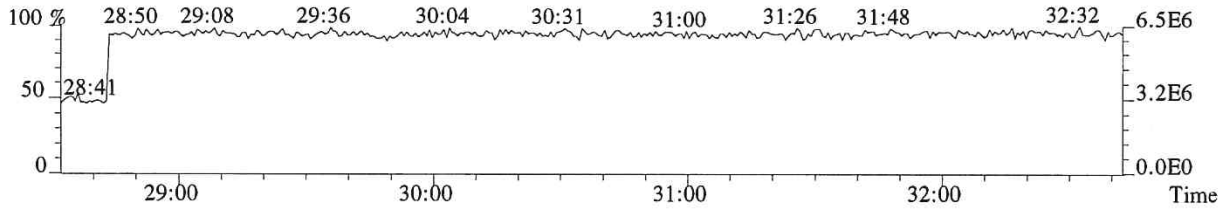
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1092.0,1.00%,F,T)



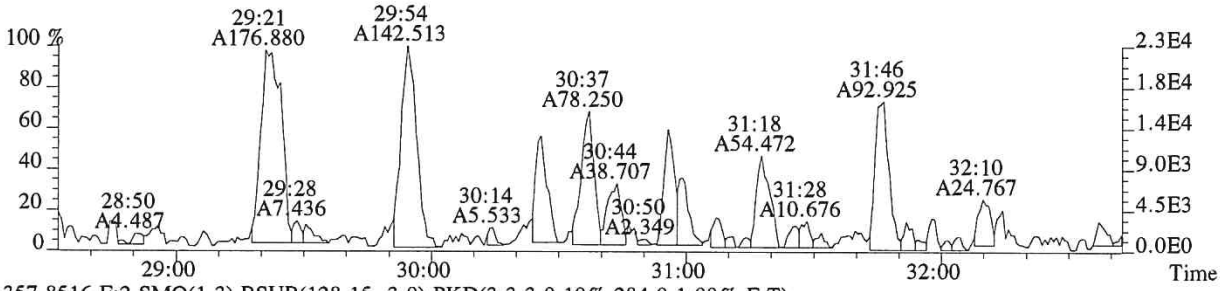
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



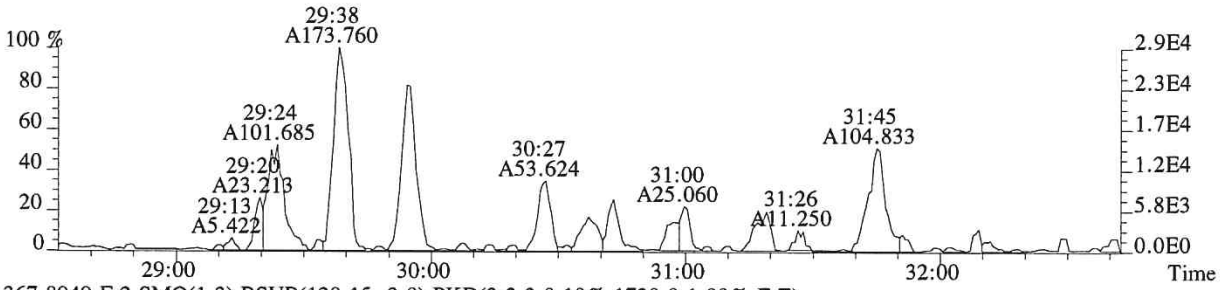
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



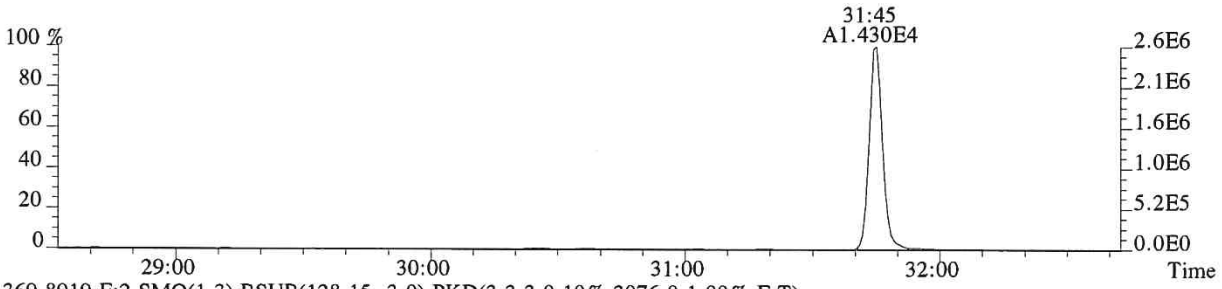
File:P616381 #1-376 Acq: 8-JAN-2019 16:16:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-003
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1464.0,1.00%,F,T)



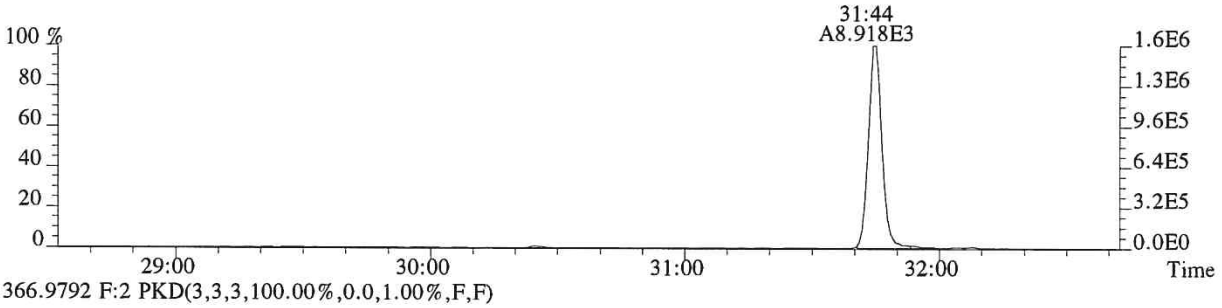
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,284.0,1.00%,F,T)



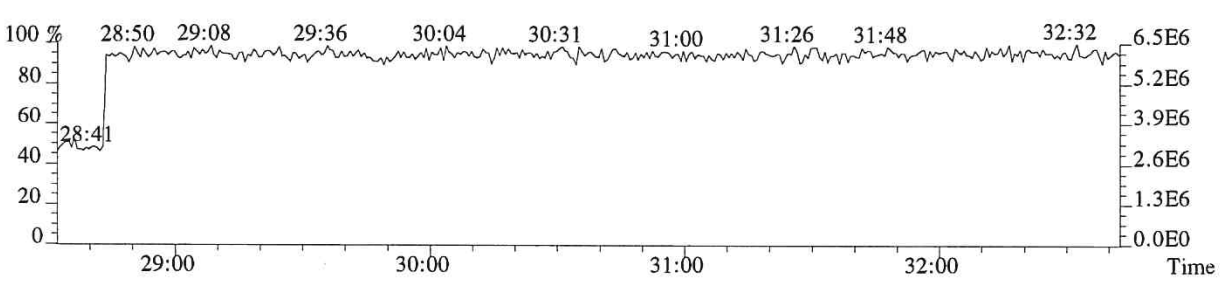
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1720.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3076.0,1.00%,F,T)

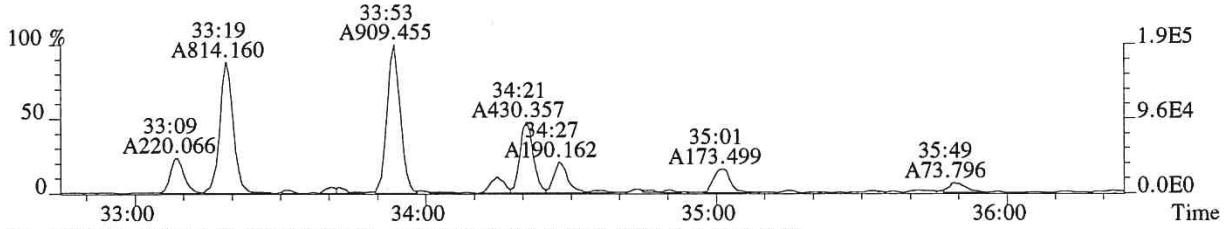


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

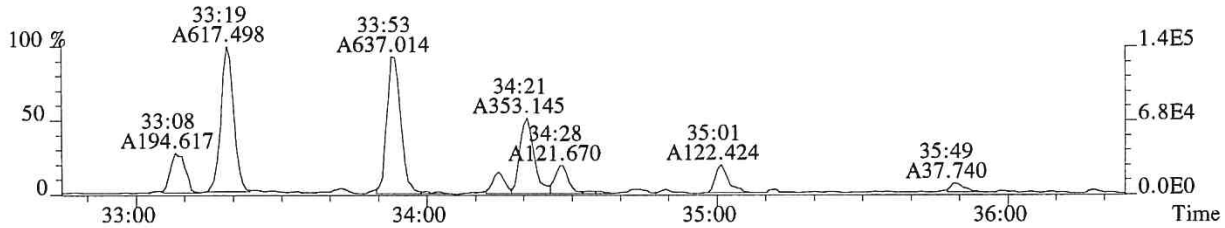


017088

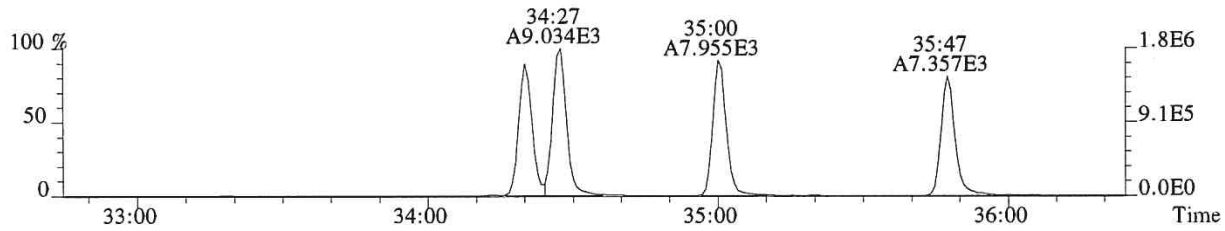
File:P616381 #1-330 Acq: 8-JAN-2019 16:16:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-003
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1848.0,0.40%,F,T)



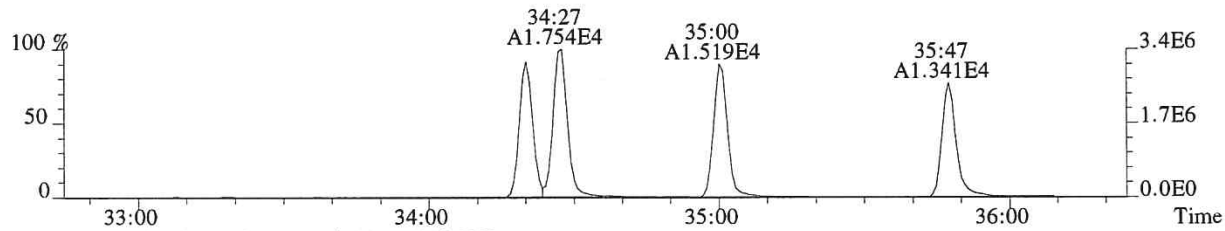
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2744.0,0.40%,F,T)



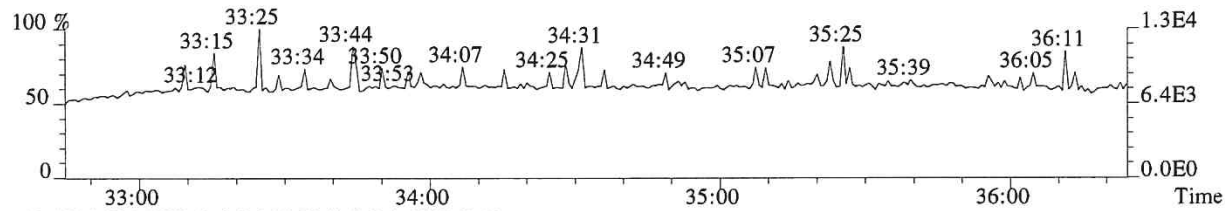
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1260.0,0.40%,F,T)



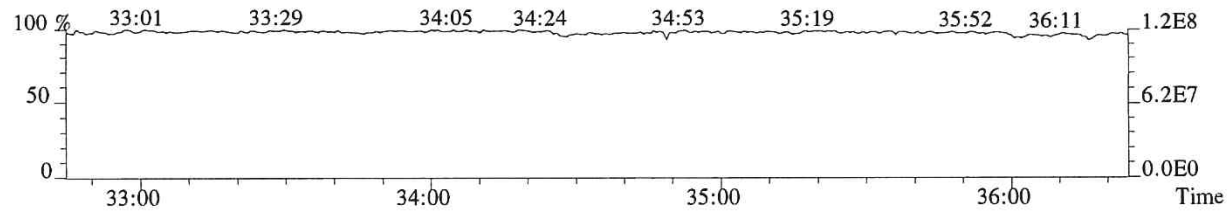
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1776.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

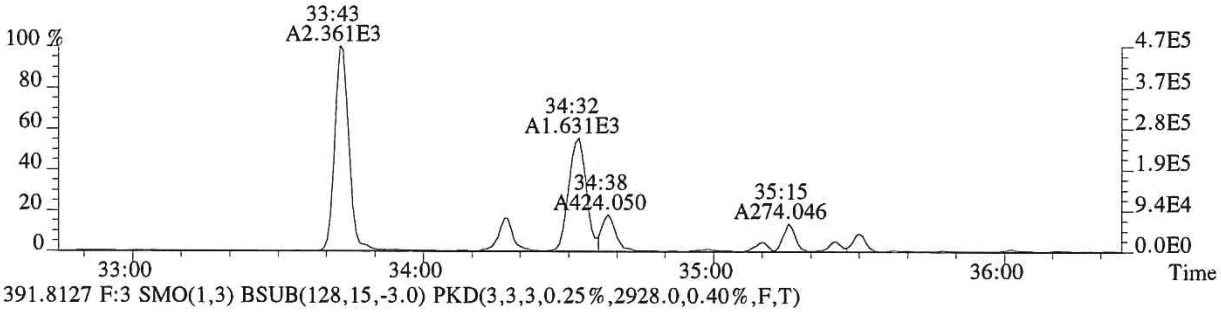


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

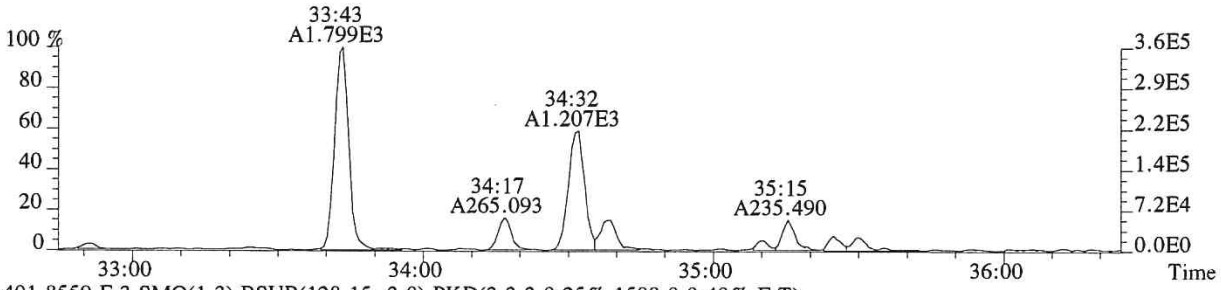


017089

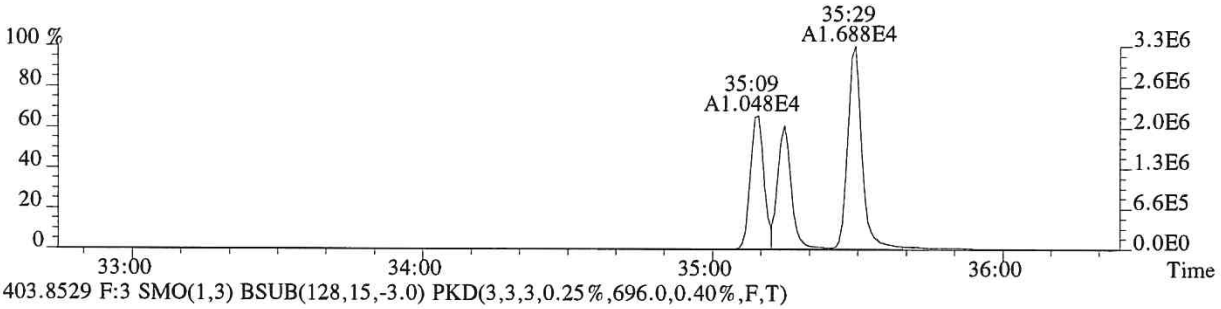
File:P616381 #1-330 Acq: 8-JAN-2019 16:16:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-003
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



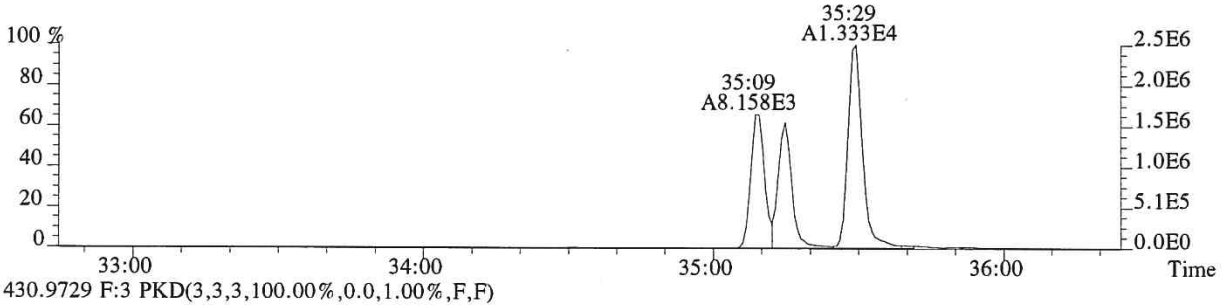
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2928.0,0.40%,F,T)



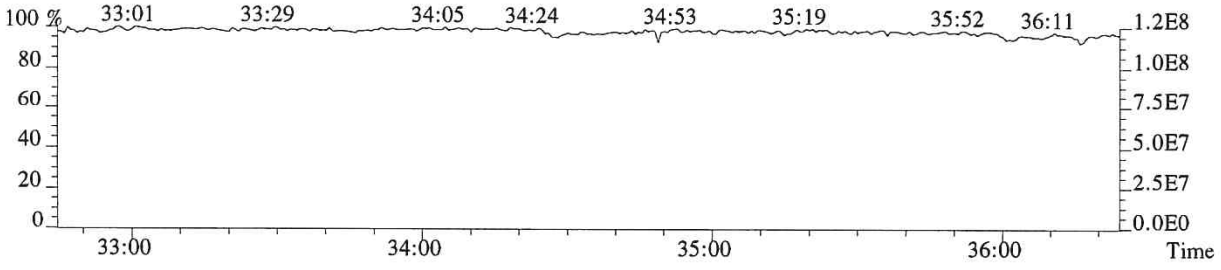
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1588.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,696.0,0.40%,F,T)

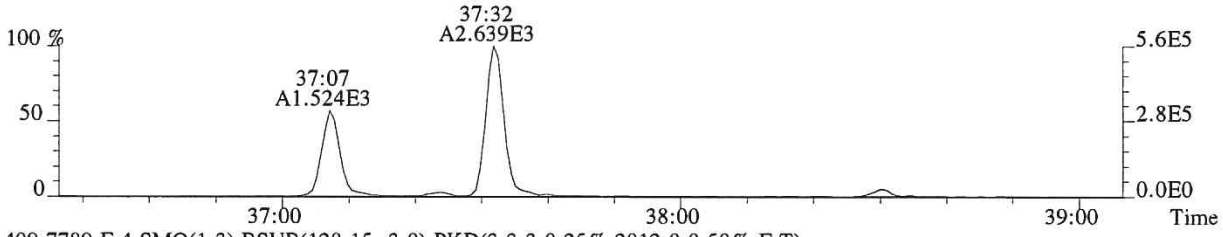


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

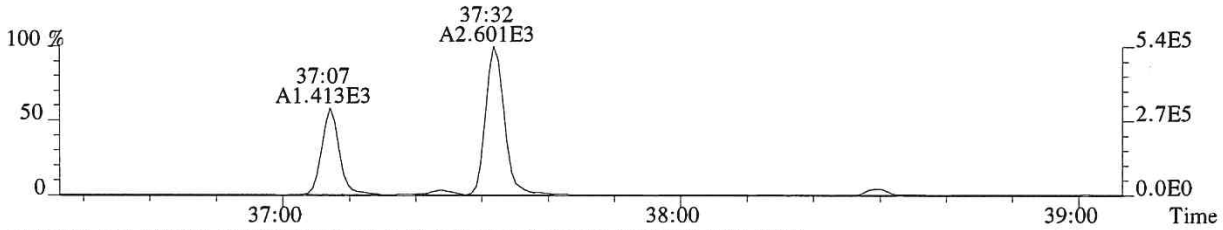


017090

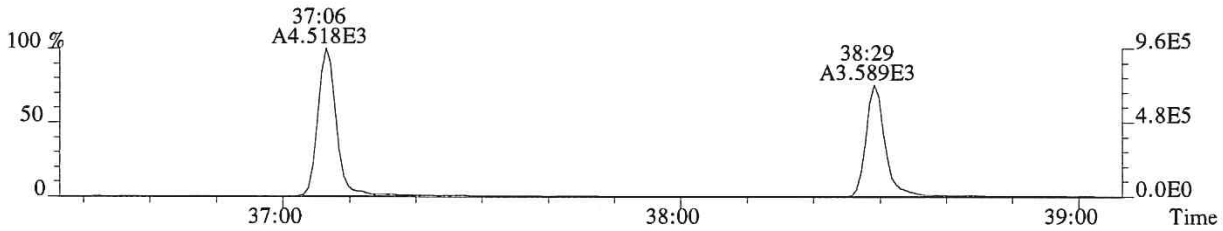
File:P616381 #1-241 Acq: 8-JAN-2019 16:16:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-003
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1516.0,0.50%,F,T)



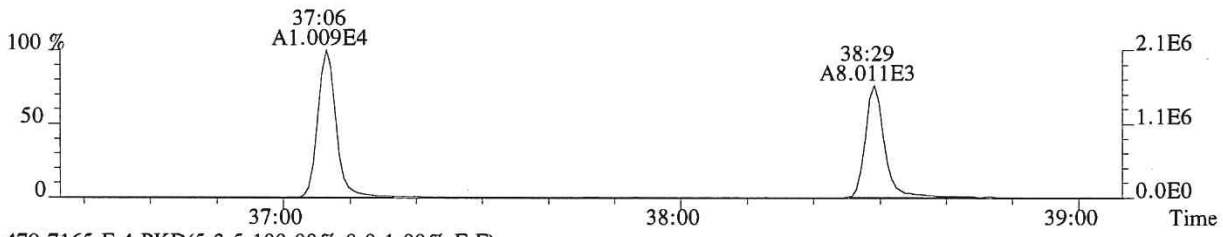
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2012.0,0.50%,F,T)



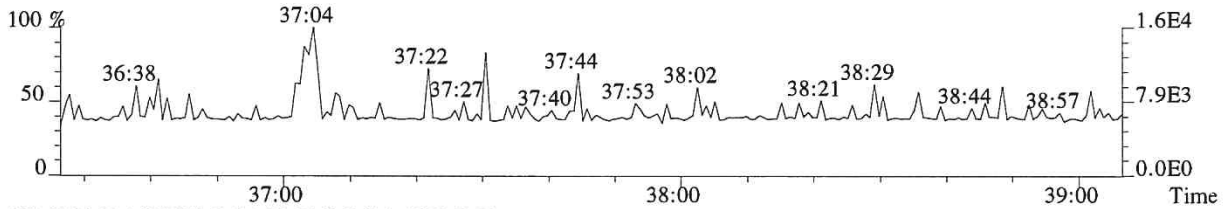
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1856.0,0.50%,F,T)



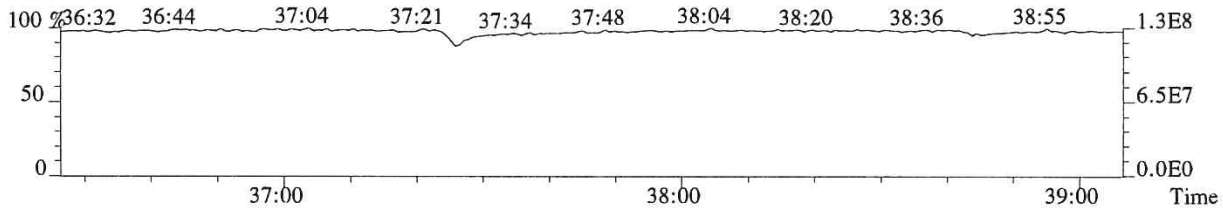
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3076.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

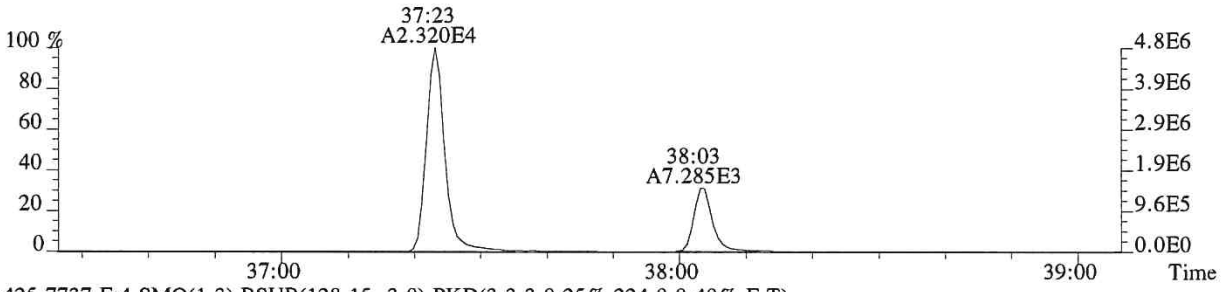


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

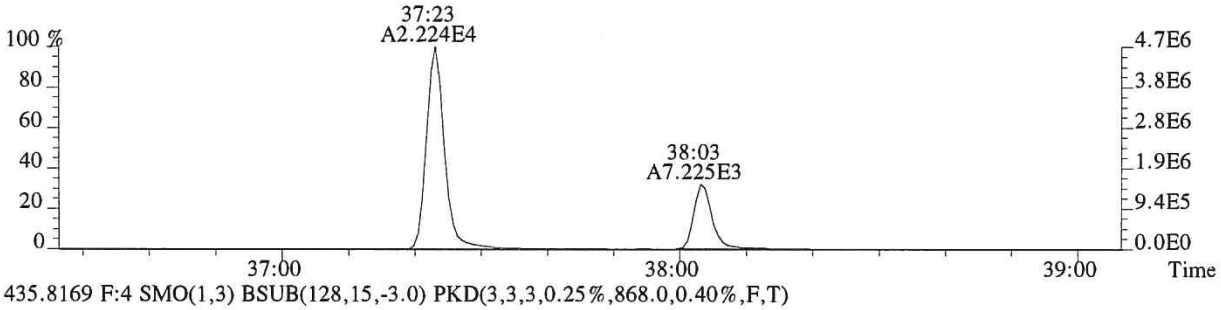


017091

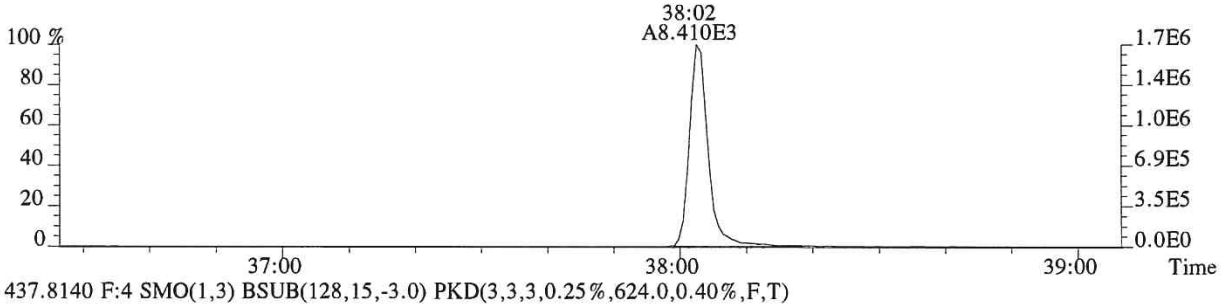
File:P616381 #1-241 Acq: 8-JAN-2019 16:16:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-003
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3748.0,0.40%,F,T)



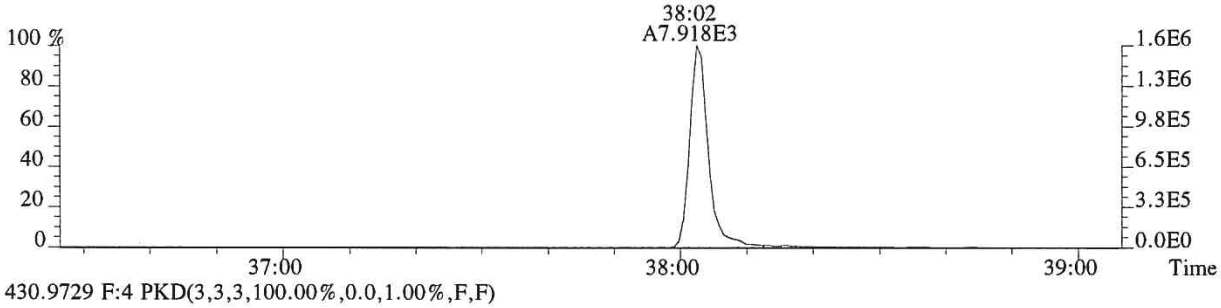
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,224.0,0.40%,F,T)



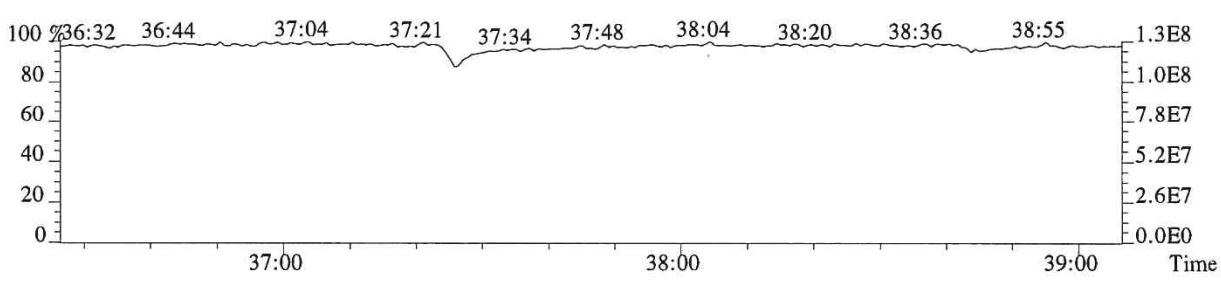
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,868.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,624.0,0.40%,F,T)

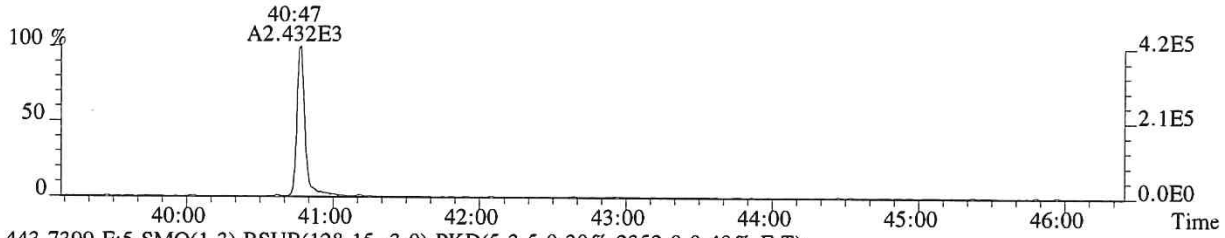


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

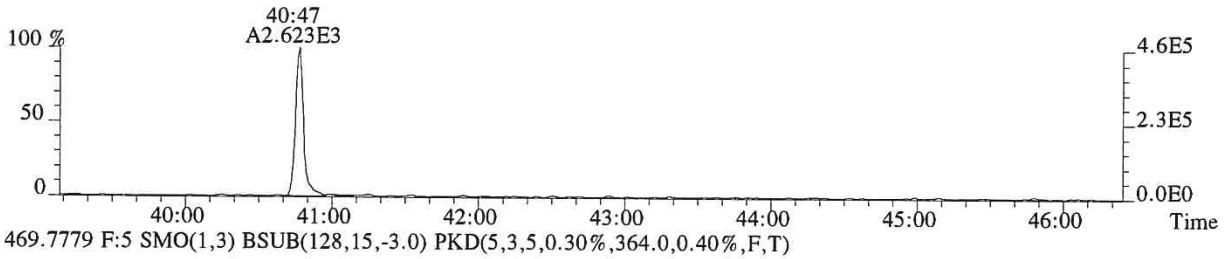


017092

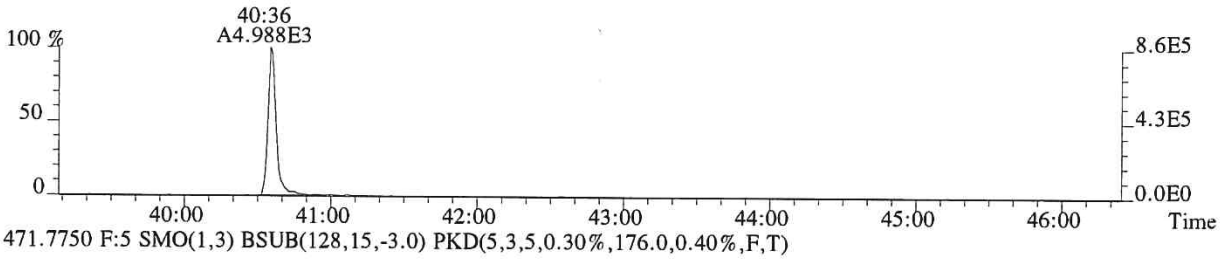
File:P616381 #1-654 Acq: 8-JAN-2019 16:16:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-003
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,960.0,0.40%,F,T)



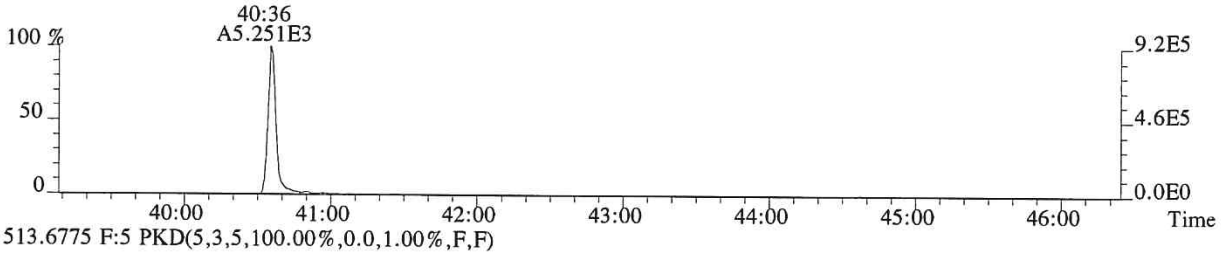
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2352.0,0.40%,F,T)



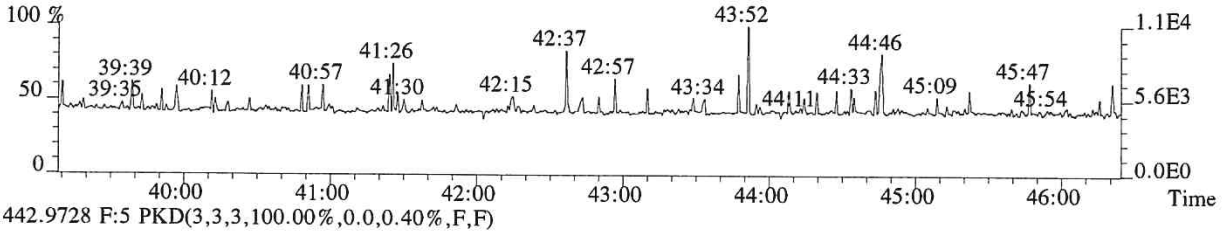
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,364.0,0.40%,F,T)



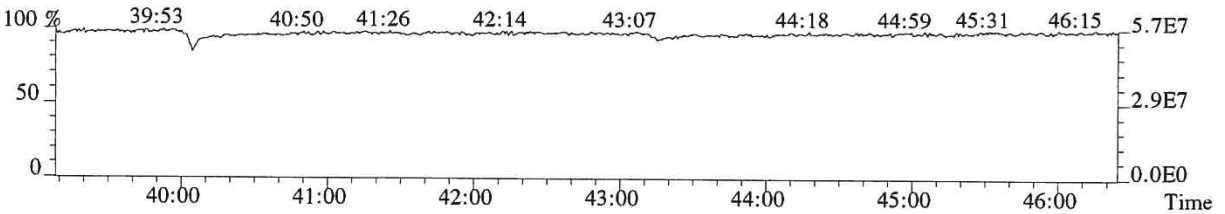
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,176.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

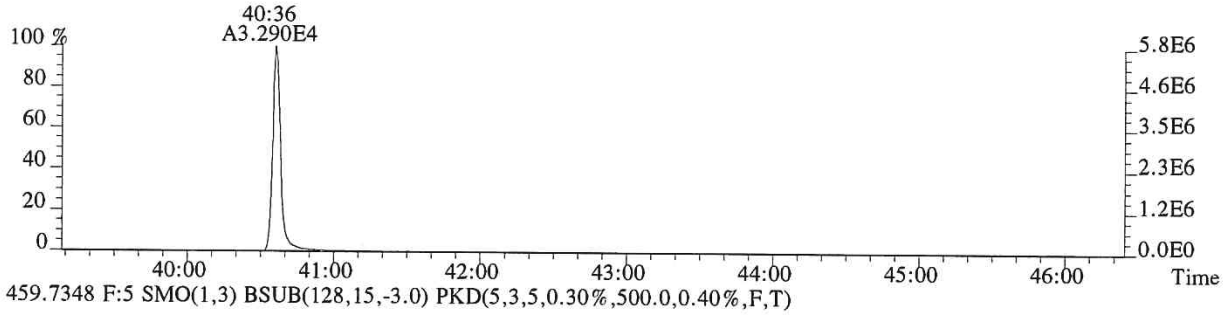


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

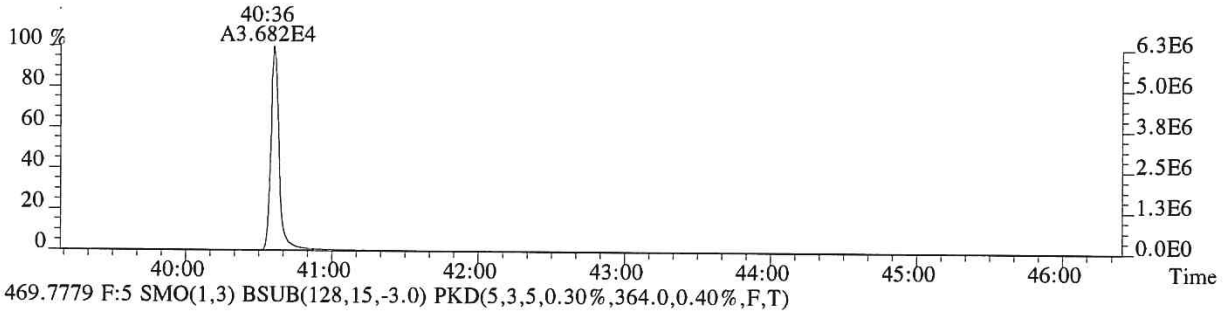


017093

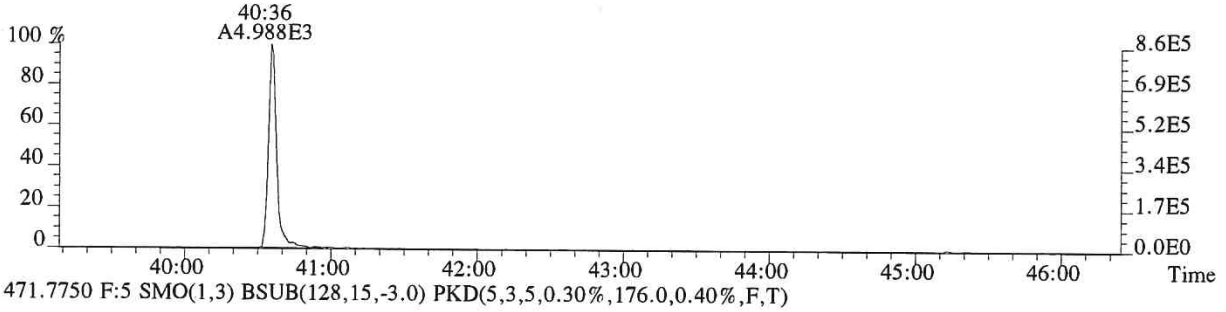
File:P616381 #1-654 Acq: 8-JAN-2019 16:16:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-003
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,348.0,0.40%,F,T)



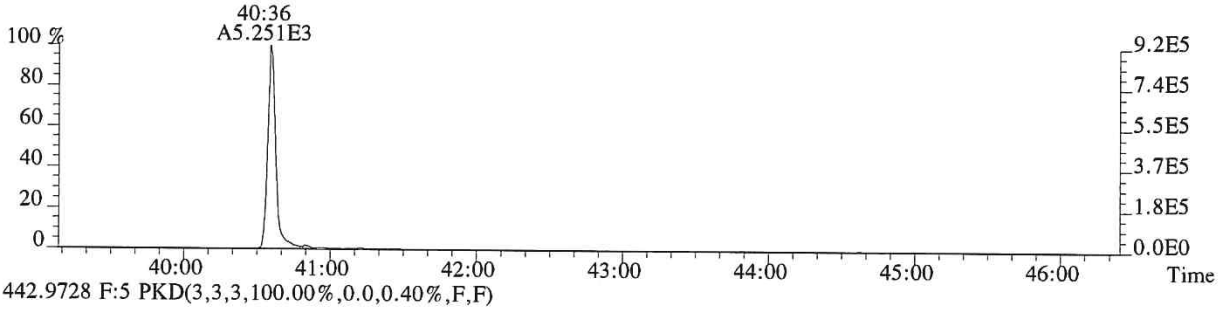
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,500.0,0.40%,F,T)



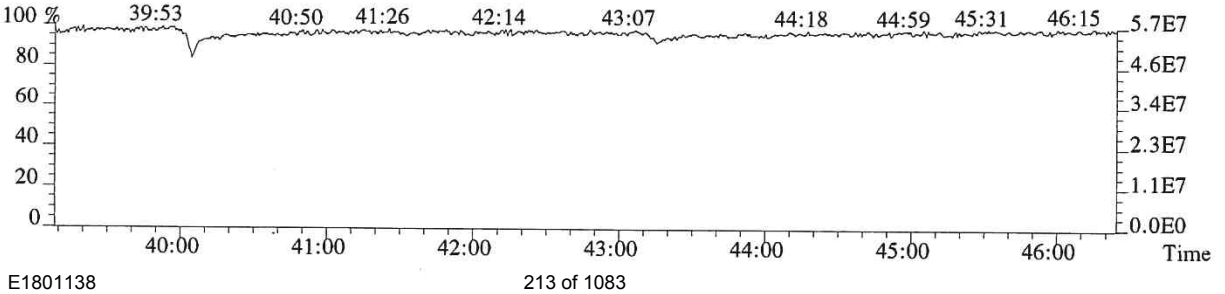
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,364.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,176.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017094

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0171

Run #14 Filename P616382 Samp: 1 Inj: 1 Acquired: 8-JAN-19 17:05:05
Processed: 9-JAN-19 08:58:12 Sample ID: E1801138-004

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:15	1.431e+03	1.763e+03	0.81	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:24	7.243e+01	8.343e+01	0.87	no	no	1.156
3	Unk	2,3,4,7,8-PeCDF	NotFnd	*	*	*	no	yes	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	8.691e+01	7.148e+01	1.22	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:27	7.116e+01	4.566e+01	1.56	no	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	2.523e+01	2.955e+01	0.85	no	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	NotFnd	*	*	*	no	yes	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	3.397e+02	2.817e+02	1.21	no	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	4.404e+01	2.062e+01	2.14	no	no	1.463
10	Unk	OCDF	40:48	7.017e+02	8.168e+02	0.86	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:18	2.404e+02	3.325e+02	0.72	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:46	2.989e+01	1.800e+01	1.66	yes	yes	0.929
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	yes	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:16	7.765e+01	6.681e+01	1.16	yes	yes	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:30	4.897e+01	5.295e+01	0.92	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	1.267e+03	1.230e+03	1.03	yes	no	1.112
17	Unk	OCDD	40:37	1.191e+04	1.267e+04	0.94	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:13	1.327e+04	1.675e+04	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:23	2.231e+04	1.417e+04	1.57	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	2.067e+04	1.286e+04	1.61	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:21	8.554e+03	1.655e+04	0.52	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	1.040e+04	2.011e+04	0.52	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	8.931e+03	1.705e+04	0.52	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	8.184e+03	1.535e+04	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	5.610e+03	1.224e+04	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	4.713e+03	1.053e+04	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:16	6.314e+03	8.138e+03	0.78	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:45	1.545e+04	9.735e+03	1.59	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	1.128e+04	9.023e+03	1.25	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	1.132e+04	9.227e+03	1.23	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	1.017e+04	9.681e+03	1.05	yes	no	0.857
32	IS	13C-OCDD	40:36	7.479e+03	7.888e+03	0.95	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:27	1.502e+04	1.918e+04	0.78	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	1.855e+04	1.431e+04	1.30	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:17	1.020e+04				no	1.086

$$\text{OCDD} = \frac{(1.191e+04 + 1.267e+04) \times 4000\ \text{pg} \times 1}{(7.479e+03 + 7.888e+03) \times 10.594\ \text{g} \times 81.6 / 100 \times 1.157} = 639\ \text{ng/kg}$$

LMO 01/09/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0171

Run #14 Filename P616382 Samp: 1 Inj: 1 Acquired: 8-JAN-19 17:05:05
Processed: 9-JAN-19 08:58:12 LAB. ID: E1801138-004

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.92e+05	2.18e+03	8.8e+01	2.60e+05	4.99e+03	5.2e+01
2	1,2,3,7,8-PeCDF	1.13e+04	5.76e+02	2.0e+01	1.98e+04	3.13e+03	6.3e+00
3	2,3,4,7,8-PeCDF	*	5.76e+02	*	*	3.13e+03	*
4	1,2,3,4,7,8-HxCDF	1.91e+04	1.28e+03	1.5e+01	1.48e+04	4.08e+02	3.6e+01
5	1,2,3,6,7,8-HxCDF	1.16e+04	1.28e+03	9.1e+00	1.09e+04	4.08e+02	2.7e+01
6	2,3,4,6,7,8-HxCDF	6.58e+03	1.28e+03	5.2e+00	7.23e+03	4.08e+02	1.8e+01
7	1,2,3,7,8,9-HxCDF	*	1.28e+03	*	*	4.08e+02	*
8	1,2,3,4,6,7,8-HpCDF	7.18e+04	6.92e+02	1.0e+02	6.22e+04	1.58e+03	3.9e+01
9	1,2,3,4,7,8,9-HpCDF	1.19e+04	6.92e+02	1.7e+01	4.76e+03	1.58e+03	3.0e+00
10	OCDF	1.13e+05	3.72e+02	3.0e+02	1.50e+05	1.86e+03	8.0e+01
11	2,3,7,8-TCDD	4.33e+04	5.14e+03	8.4e+00	5.21e+04	1.82e+03	2.9e+01
12	1,2,3,7,8-PeCDD	5.95e+03	1.40e+03	4.3e+00	4.49e+03	2.88e+02	1.6e+01
13	1,2,3,4,7,8-HxCDD	*	5.32e+02	*	*	1.38e+03	*
14	1,2,3,6,7,8-HxCDD	1.64e+04	5.32e+02	3.1e+01	1.11e+04	1.38e+03	8.0e+00
15	1,2,3,7,8,9-HxCDD	1.23e+04	5.32e+02	2.3e+01	1.31e+04	1.38e+03	9.5e+00
16	1,2,3,4,6,7,8-HpCDD	2.50e+05	2.01e+03	1.2e+02	2.46e+05	4.12e+02	6.0e+02
17	OCDD	2.01e+06	2.64e+02	7.6e+03	2.09e+06	2.40e+02	8.7e+03
18	13C-2,3,7,8-TCDF	1.89e+06	2.34e+04	8.1e+01	2.40e+06	2.07e+04	1.2e+02
19	13C-1,2,3,7,8-PeCDF	3.81e+06	9.16e+02	4.2e+03	2.45e+06	1.08e+03	2.3e+03
20	13C-2,3,4,7,8-PeCDF	3.77e+06	9.16e+02	4.1e+03	2.35e+06	1.08e+03	2.2e+03
21	13C-1,2,3,4,7,8-HxCDF	1.70e+06	1.27e+03	1.3e+03	3.36e+06	1.66e+03	2.0e+03
22	13C-1,2,3,6,7,8-HxCDF	1.95e+06	1.27e+03	1.5e+03	3.94e+06	1.66e+03	2.4e+03
23	13C-2,3,4,6,7,8-HxCDF	1.88e+06	1.27e+03	1.5e+03	3.55e+06	1.66e+03	2.1e+03
24	13C-1,2,3,7,8,9-HxCDF	1.59e+06	1.27e+03	1.3e+03	2.91e+06	1.66e+03	1.7e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.17e+06	2.21e+03	5.3e+02	2.51e+06	3.21e+03	7.8e+02
26	13C-1,2,3,4,7,8,9-HpCDF	9.29e+05	2.21e+03	4.2e+02	2.05e+06	3.21e+03	6.4e+02
27	13C-2,3,7,8-TCDD	9.51e+05	1.87e+04	5.1e+01	1.22e+06	5.43e+03	2.3e+02
28	13C-1,2,3,7,8-PeCDD	2.83e+06	1.54e+03	1.8e+03	1.81e+06	2.29e+03	7.9e+02
29	13C-1,2,3,4,7,8-HxCDD	2.44e+06	1.04e+03	2.4e+03	1.98e+06	1.41e+03	1.4e+03
30	13C-1,2,3,6,7,8-HxCDD	2.17e+06	1.04e+03	2.1e+03	1.78e+06	1.41e+03	1.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.07e+06	1.17e+03	1.8e+03	1.98e+06	5.16e+02	3.8e+03
32	13C-OCDD	1.27e+06	1.23e+03	1.0e+03	1.35e+06	2.96e+02	4.6e+03
33	13C-1,2,3,4-TCDD	2.18e+06	1.87e+04	1.2e+02	2.75e+06	5.43e+03	5.1e+02
34	13C-1,2,3,7,8,9-HxCDD	3.62e+06	1.04e+03	3.5e+03	2.81e+06	1.41e+03	2.0e+03
35	37Cl-2,3,7,8-TCDD	1.58e+06	2.83e+03	5.6e+02			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0171

Entry: 36 Totals Name: Total Tetra-Furans

Run: 14 File: P616382 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 17:05:05 Processed: 9-JAN-19 08:58:12

Mass: 303.9020 305.8990 Tot Response: 4.53e+03 RRF: 1.081

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	23:45	9.15e+01	1.10e+02	0.83	yes	2.02e+02		n	n
2	24:13	3.46e+02	4.08e+02	0.85	yes	7.54e+02		n	n
3	25:15	1.43e+03	1.76e+03	0.81	yes	3.19e+03	2,3,7,8-TCDF	n	n
4	25:42	1.76e+02	2.03e+02	0.86	yes	3.79e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0171

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 14 File: P616382 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 17:05:05 Processed: 9-JAN-19 08:58:12

Mass: 319.8970 321.8940 Tot Response: 5.73e+02 RRF: 1.049

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:18	2.40e+02	3.32e+02 0.72	yes	5.73e+02	2,3,7,8-TCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0171

Entry: 38 Totals Name: Total Penta-Furans1

Run: 14 File: P616382 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 17:05:05 Processed: 9-JAN-19 08:58:12

Mass: 339.8600 341.8570 Tot Response: 1.43e+02 RRF: 1.130

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:33	8.69e+01	5.65e+01 1.54	yes	1.43e+02		n	n

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Peak List Summary

CLIENT ID.
SL0171

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 14 File: P616382 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 17:05:05 Processed: 9-JAN-19 08:58:12

Mass: 355.8550 357.8520 Tot Response: 1.08e+02 RRF: 0.9288

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:28	3.76e+01	2.29e+01 1.64	yes	6.06e+01		y	n
2	31:46	2.99e+01	1.80e+01 1.66	yes	4.79e+01	1,2,3,7,8-PeCDD	y	n

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Peak List Summary

CLIENT ID.
SL0171

Entry: 41 Totals Name: Total Hexa-Furans

Run: 14 File: P616382 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 17:05:05 Processed: 9-JAN-19 08:58:12

Mass: 373.8210 375.8180 Tot Response: 7.35e+02 RRF: 1.324

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:19	1.80e+02	1.36e+02	1.33	yes	3.16e+02		n	n
2	33:53	1.51e+02	1.10e+02	1.37	yes	2.61e+02		n	n
3	34:21	8.69e+01	7.15e+01	1.22	yes	1.58e+02	1,2,3,4,7,8-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0171

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 14 File: P616382 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 17:05:05 Processed: 9-JAN-19 08:58:12

Mass: 389.8160 391.8130 Tot Response: 9.51e+02 RRF: 1.092

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:43	3.62e+02	2.97e+02	1.22	yes	6.59e+02		n	n
2	34:17	8.32e+01	6.46e+01	1.29	yes	1.48e+02		n	n
3	35:16	7.77e+01	6.68e+01	1.16	yes	1.44e+02	1,2,3,6,7,8-HxCDD	n	y

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Peak List Summary

CLIENT ID.
SL0171

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 14 File: P616382 Sample:1 Injection:1 Function:4

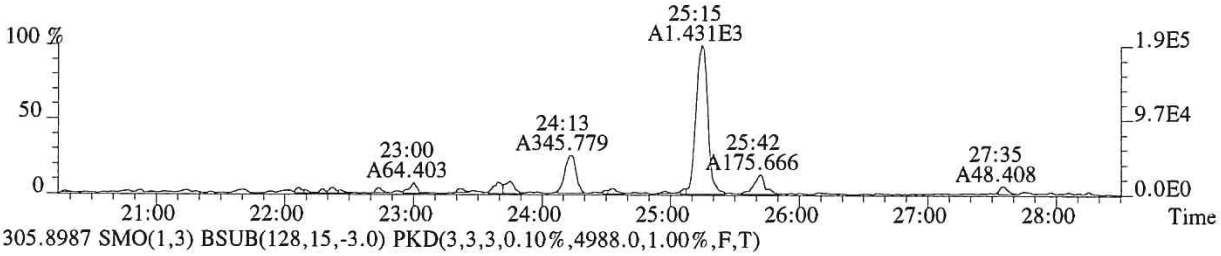
Acquired: 8-JAN-19 17:05:05 Processed: 9-JAN-19 08:58:12

Mass: 423.7770 425.7740 Tot Response: 6.75e+03 RRF: 1.112

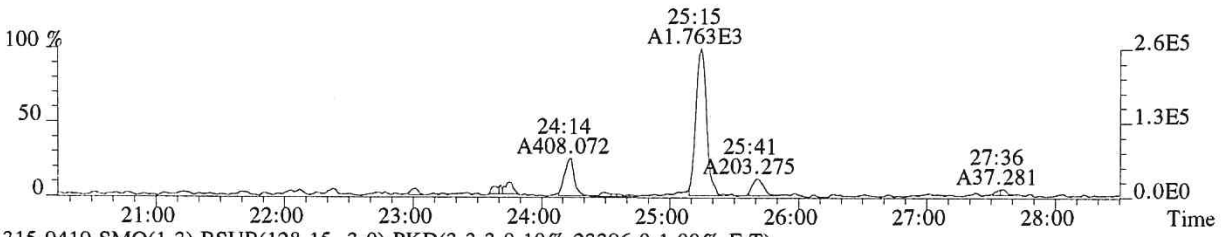
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:23	2.16e+03	2.09e+03 1.04	yes	4.25e+03		n	n
2	38:04	1.27e+03	1.23e+03 1.03	yes	2.50e+03	1,2,3,4,6,7,8-HpCDD	n	n

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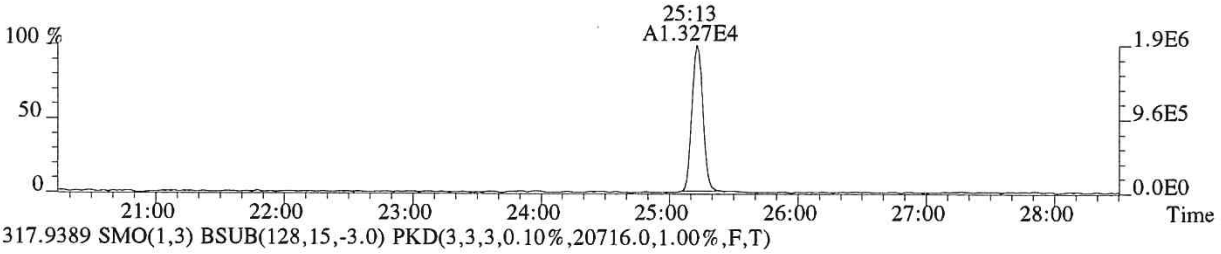
File:P616382 #1-587 Acq: 8-JAN-2019 17:05:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-004
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2180.0,1.00%,F,T)



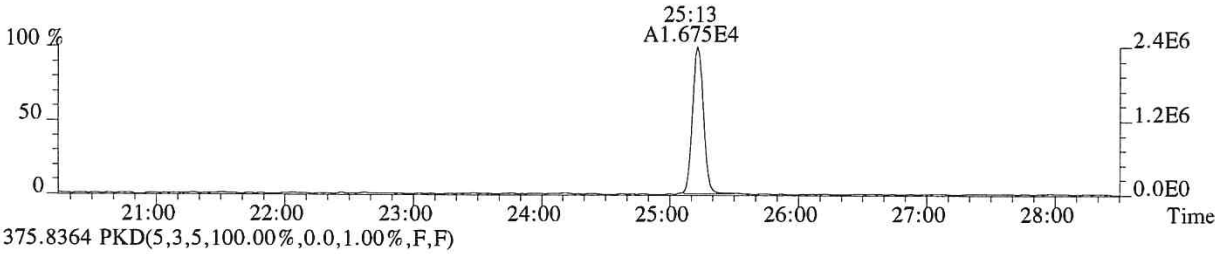
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4988.0,1.00%,F,T)



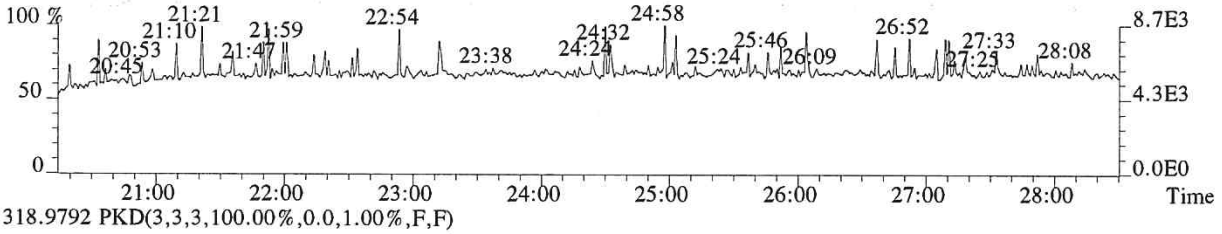
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,23396.0,1.00%,F,T)



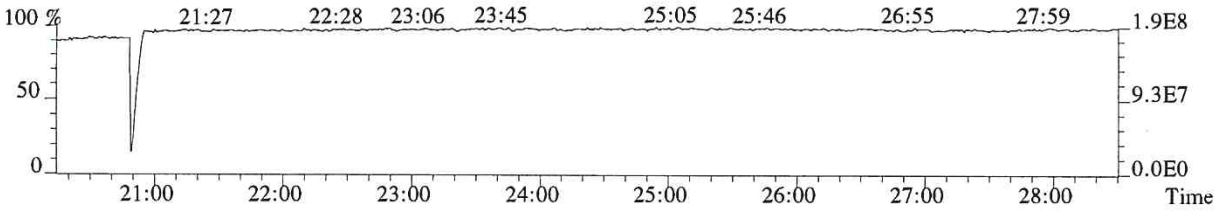
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,20716.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

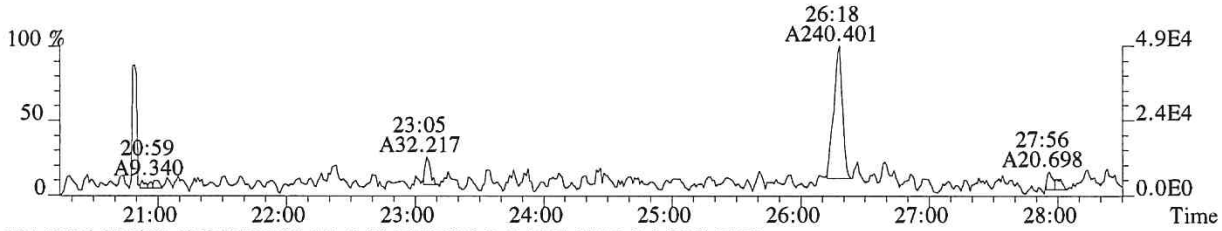


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

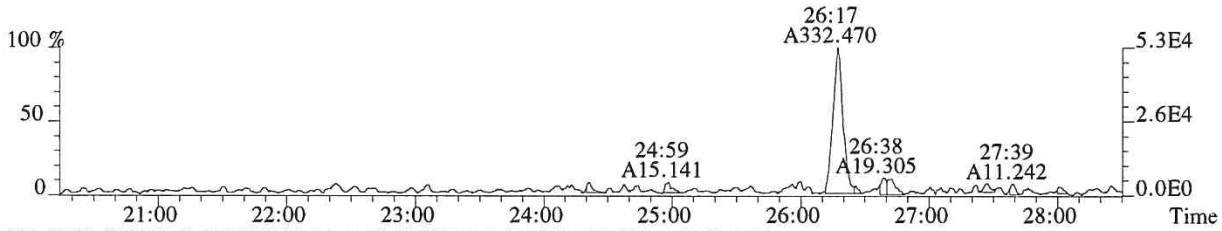


017104

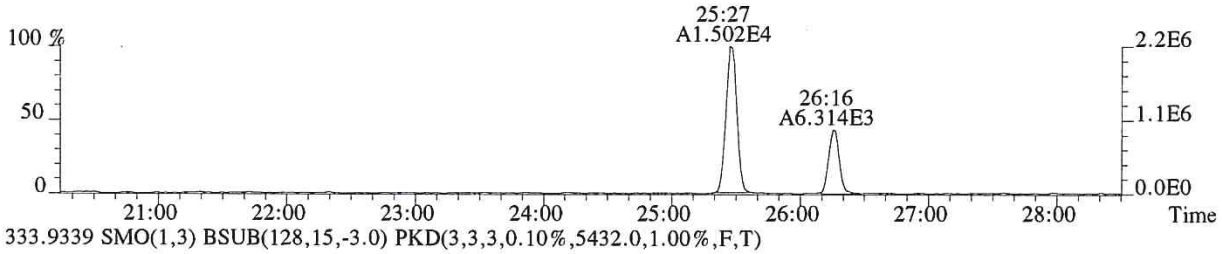
File:P616382 #1-587 Acq: 8-JAN-2019 17:05:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-004
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5140.0,1.00%,F,T)



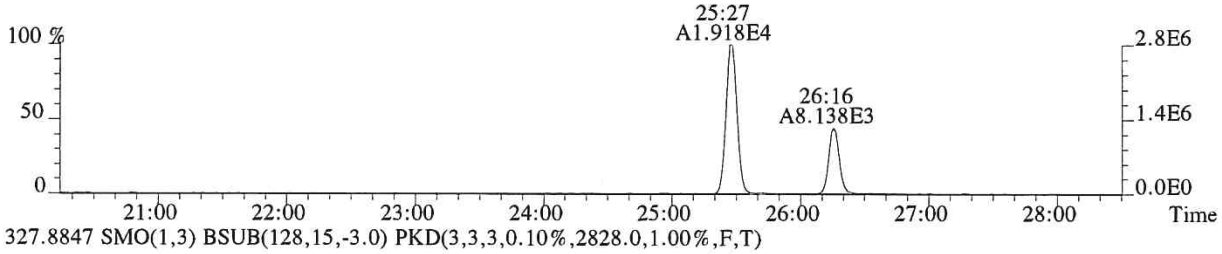
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1816.0,1.00%,F,T)



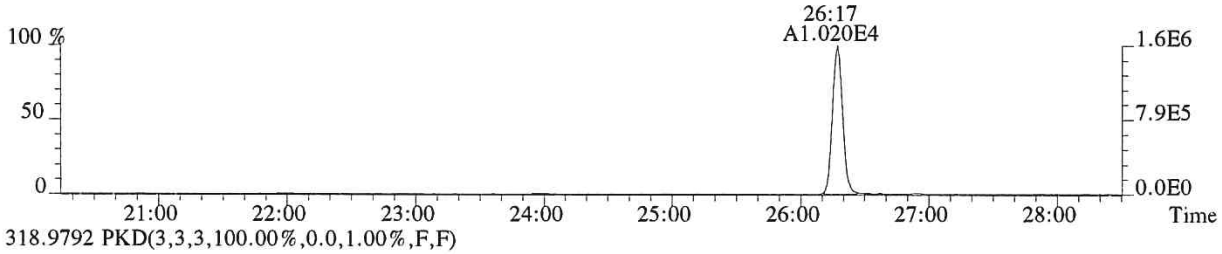
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,18676.0,1.00%,F,T)



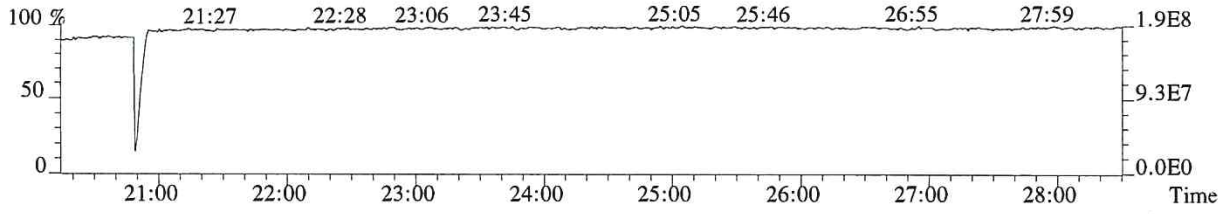
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5432.0,1.00%,F,T)



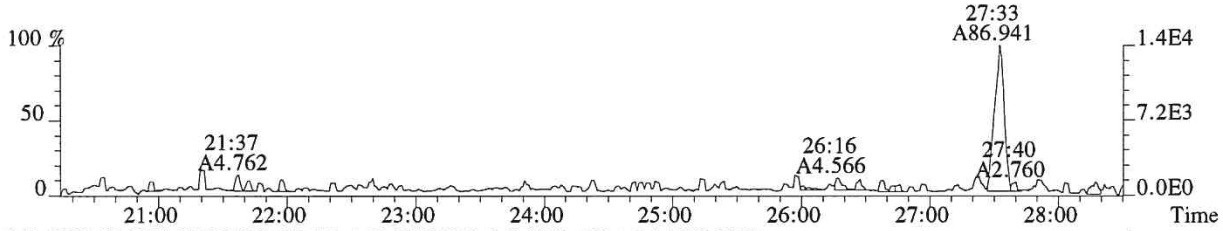
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2828.0,1.00%,F,T)



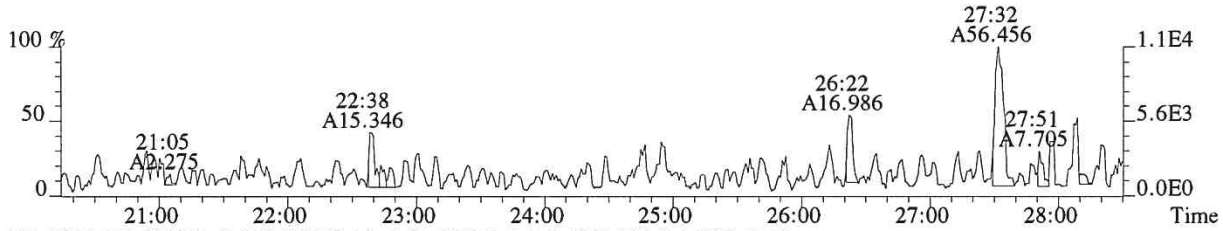
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



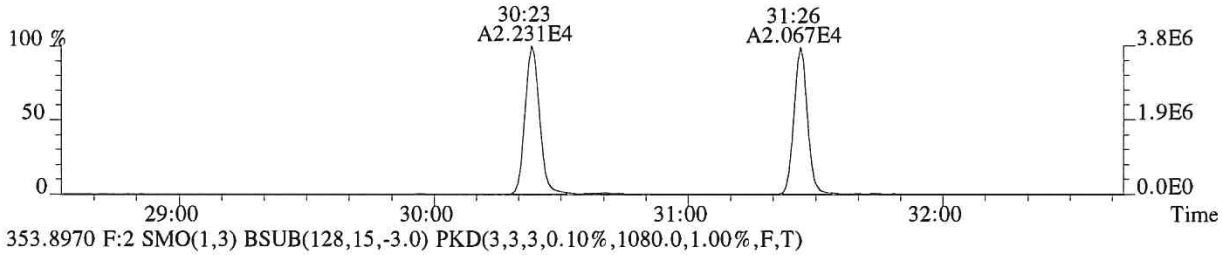
File:P616382 #1-587 Acq: 8-JAN-2019 17:05:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-004
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,764.0,1.00%,F,T)



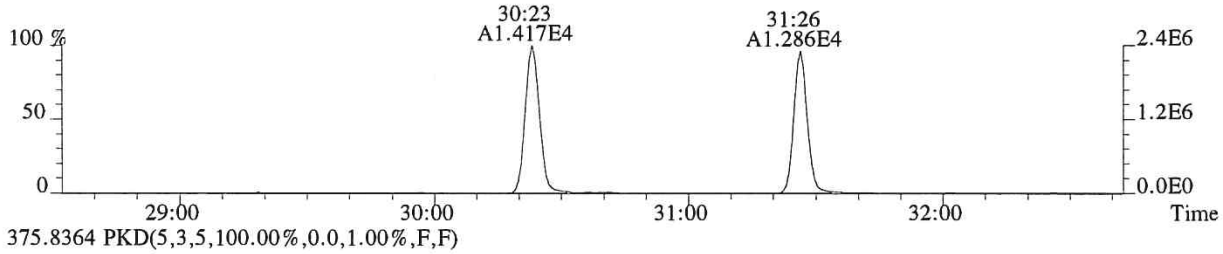
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1684.0,1.00%,F,T)



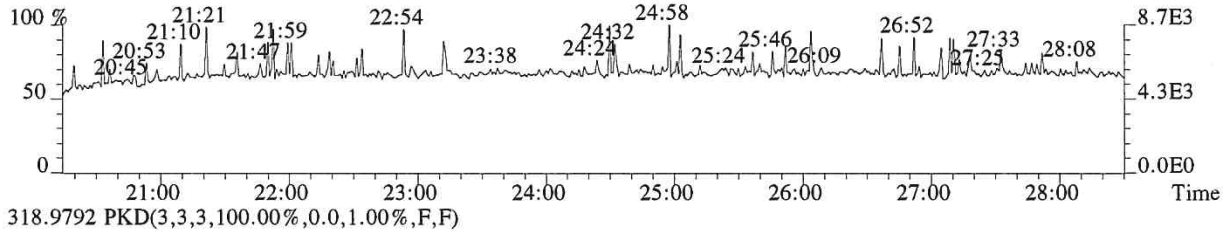
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,916.0,1.00%,F,T)



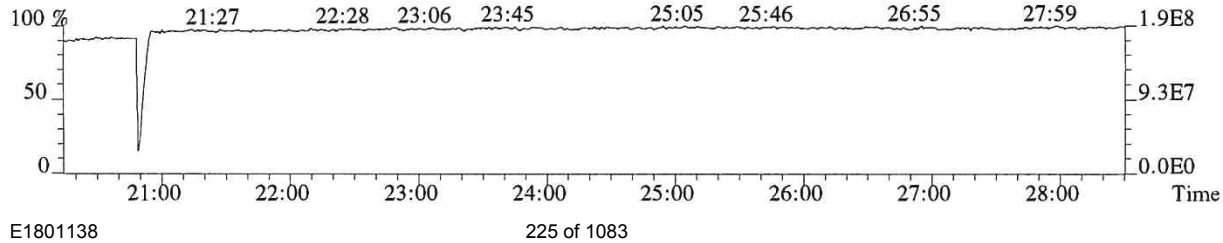
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1080.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

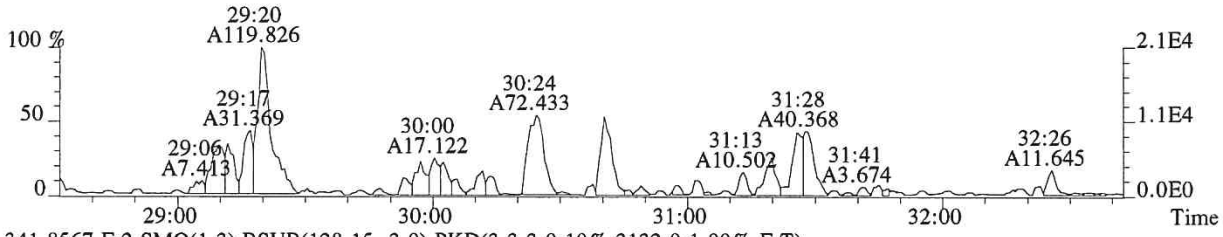


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

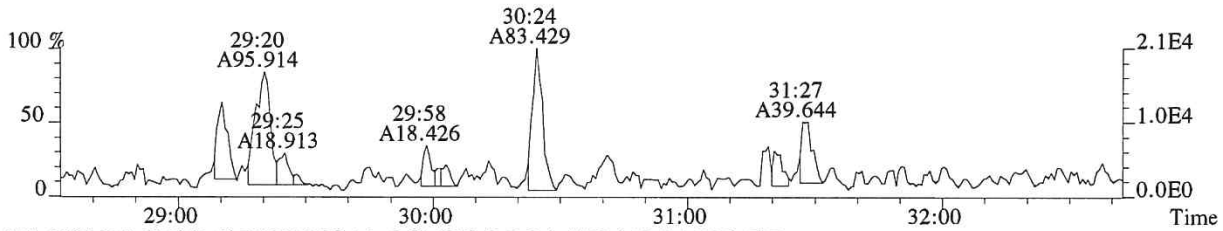


017106

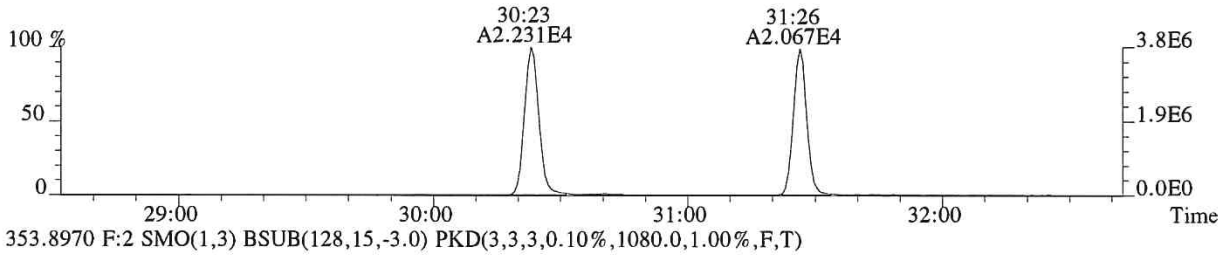
File:P616382 #1-376 Acq: 8-JAN-2019 17:05:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-004
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,576.0,1.00%,F,T)



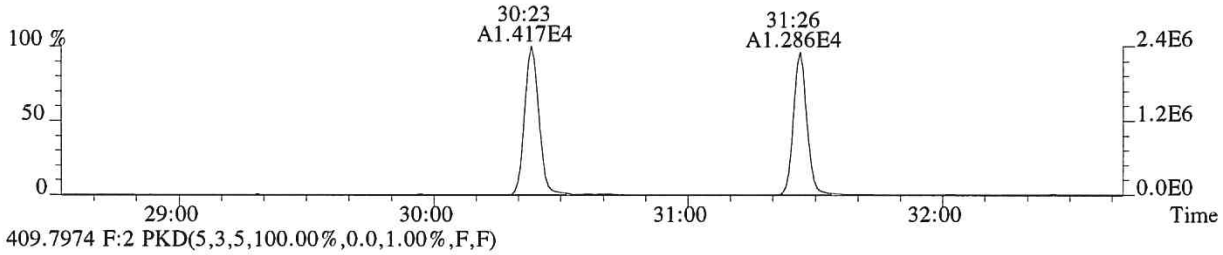
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3132.0,1.00%,F,T)



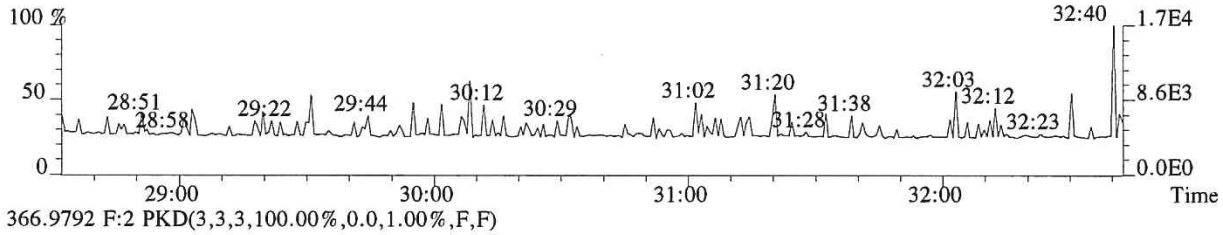
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,916.0,1.00%,F,T)



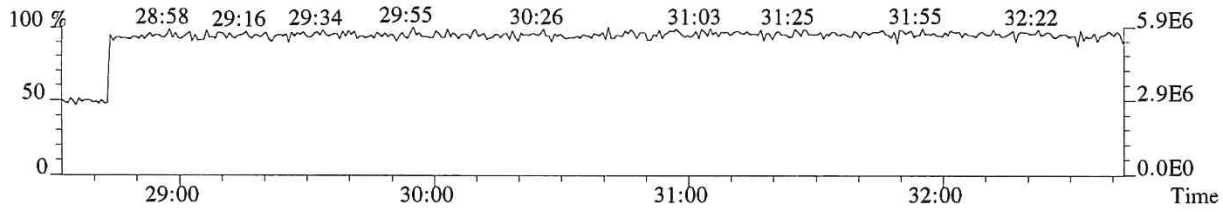
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1080.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

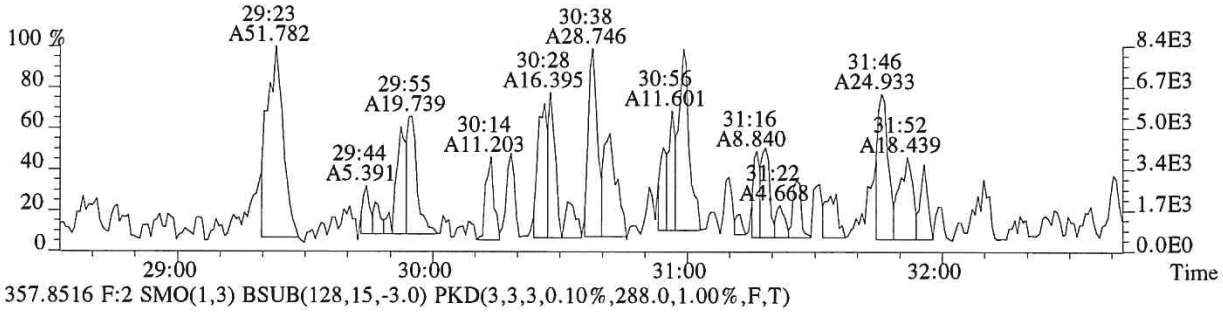


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

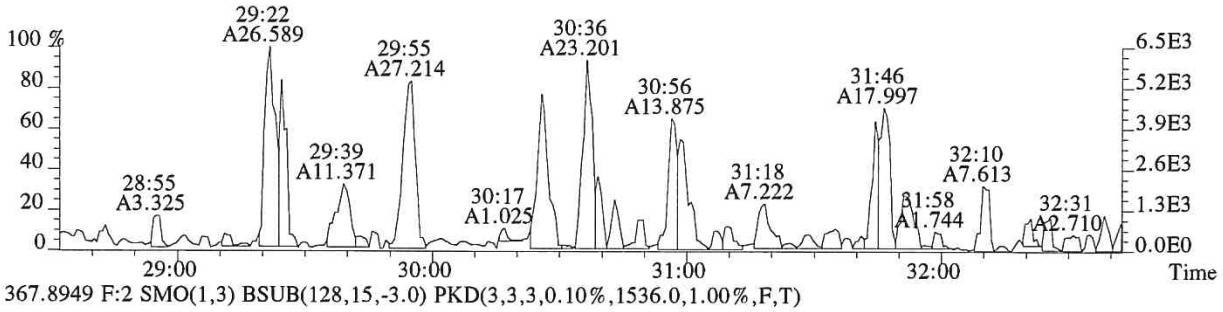


017107

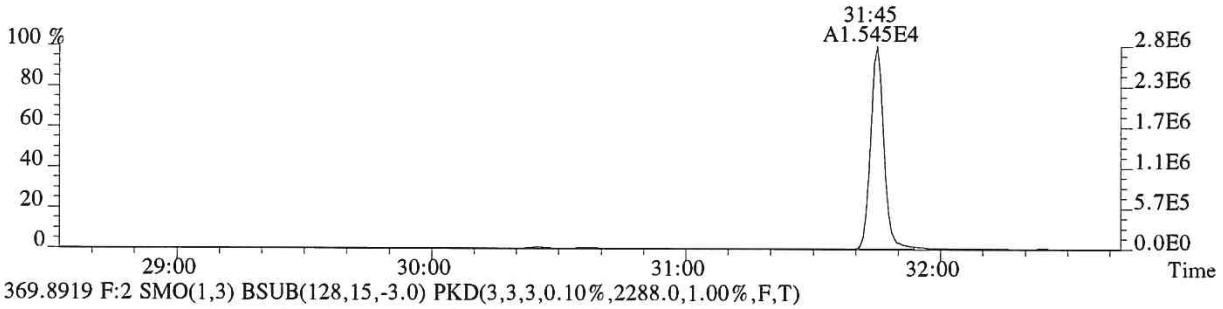
File:P616382 #1-376 Acq: 8-JAN-2019 17:05:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-004
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1400.0,1.00%,F,T)



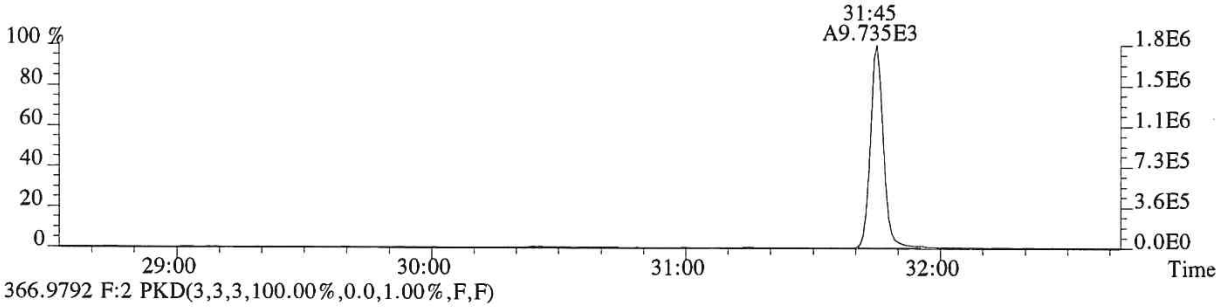
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,288.0,1.00%,F,T)



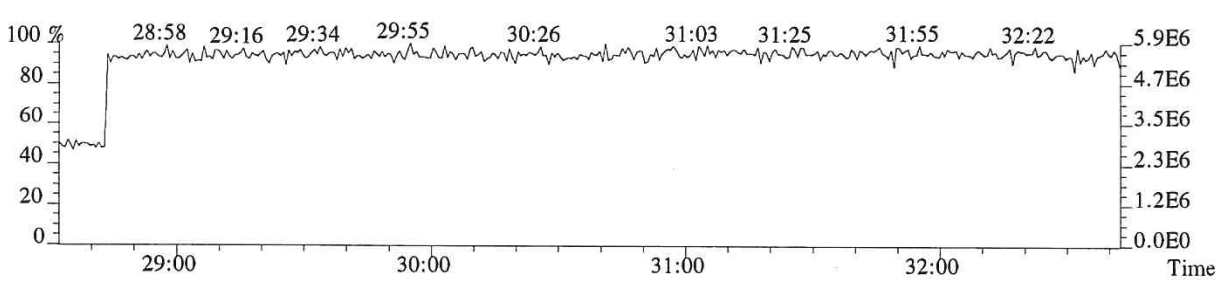
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1536.0,1.00%,F,T)



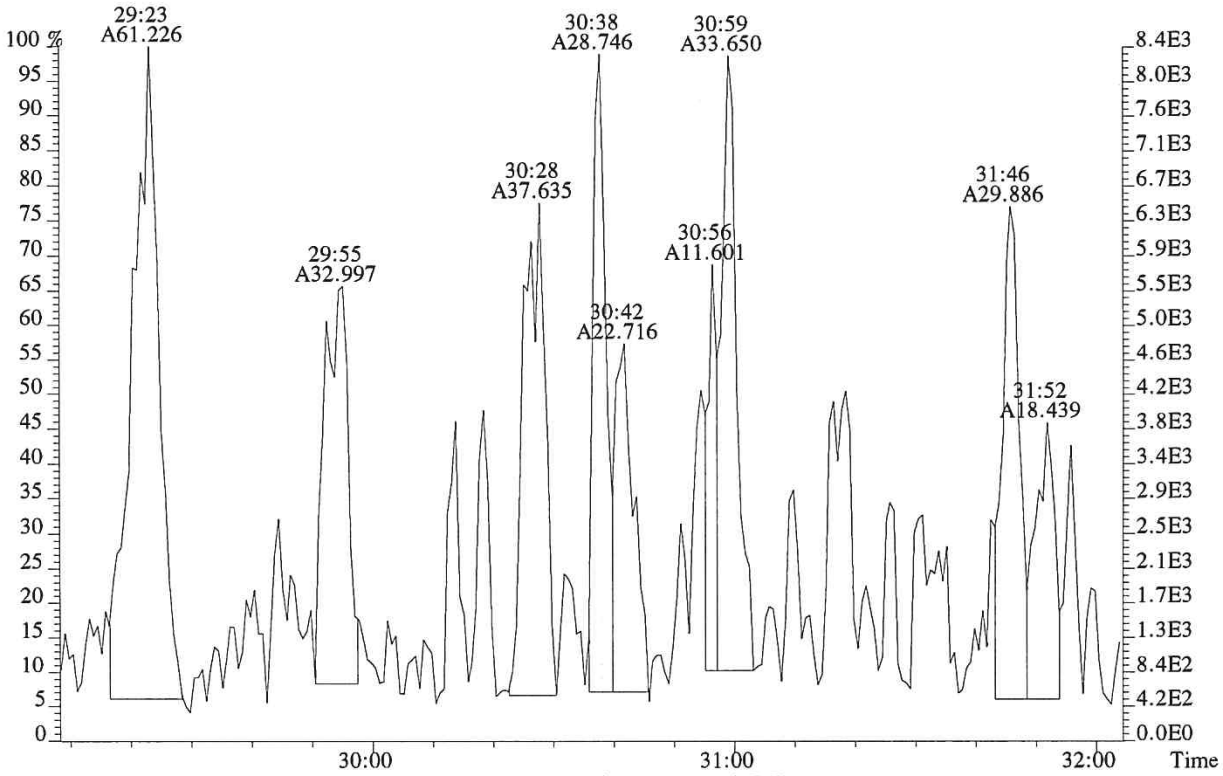
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2288.0,1.00%,F,T)



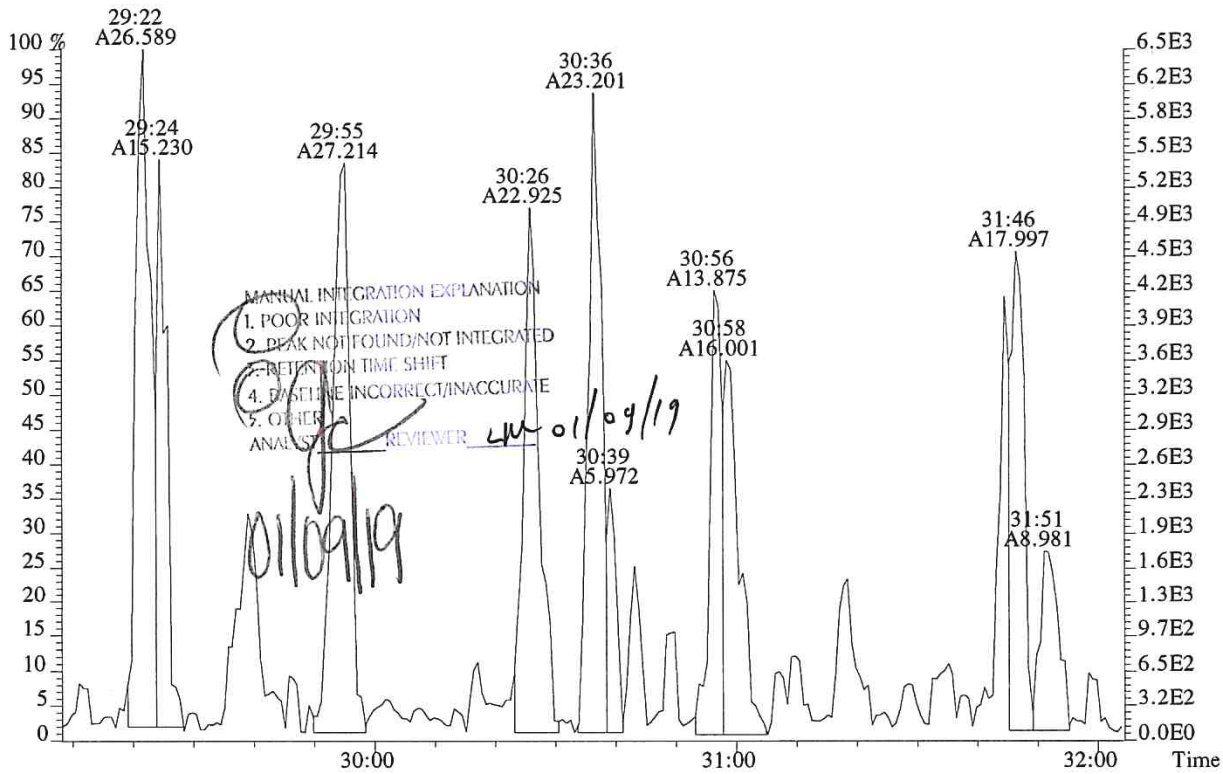
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



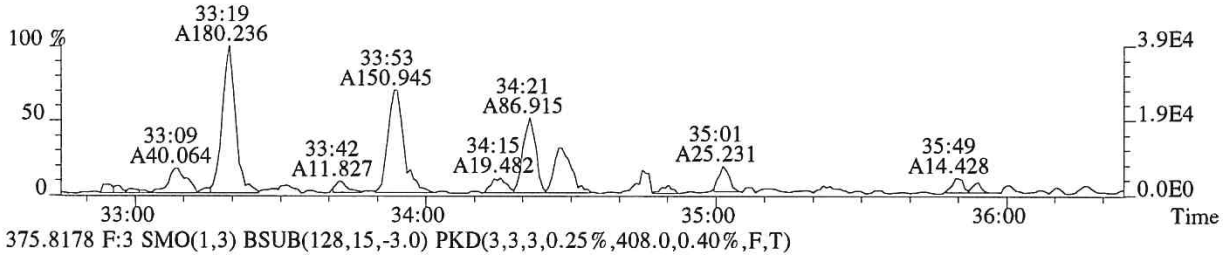
File:P616382 #1-376 Acq: 8-JAN-2019 17:05:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-004
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1400.0,1.00%,F,T)



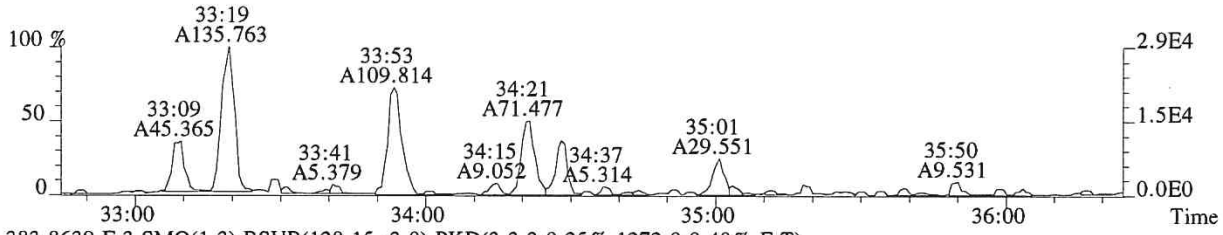
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,288.0,1.00%,F,T)



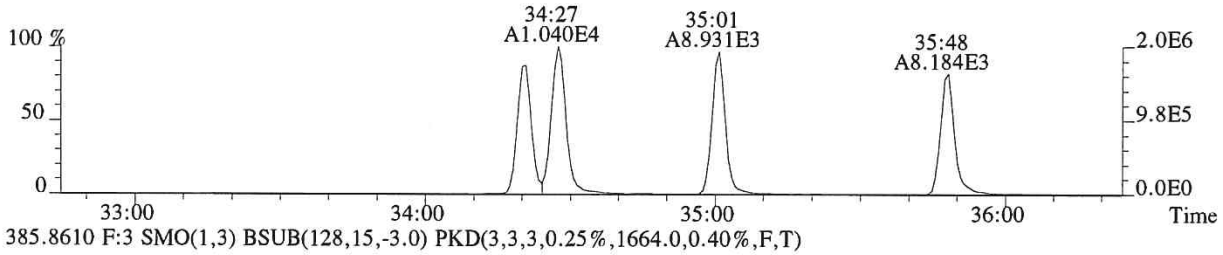
File:P616382 #1-330 Acq: 8-JAN-2019 17:05:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-004
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1276.0,0.40%,F,T)



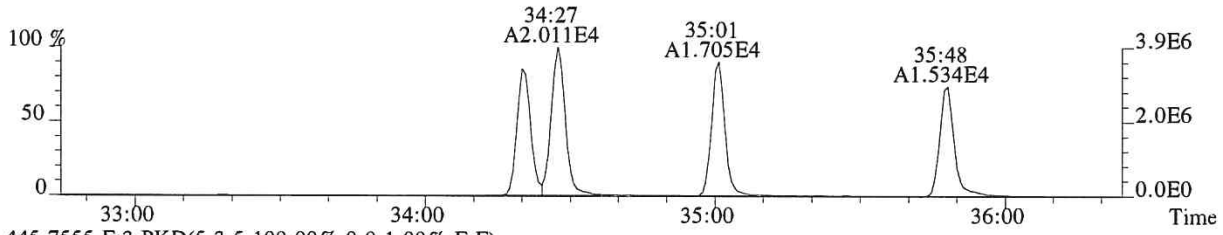
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,408.0,0.40%,F,T)



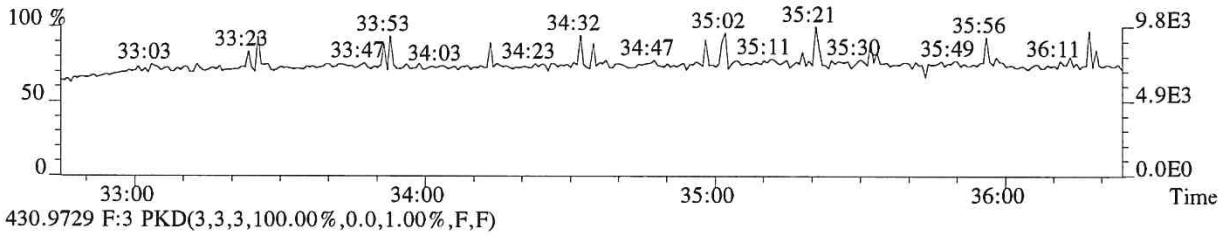
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1272.0,0.40%,F,T)



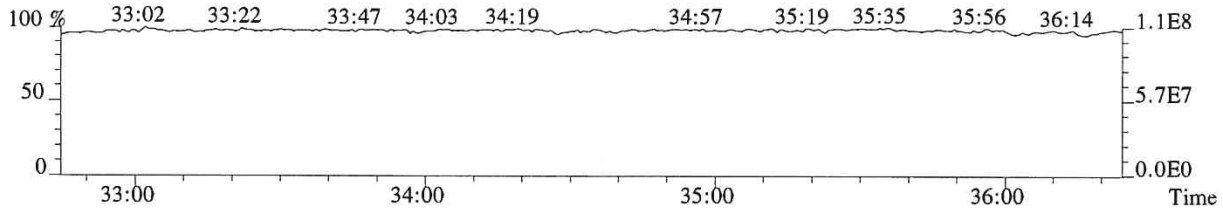
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1664.0,0.40%,F,T)



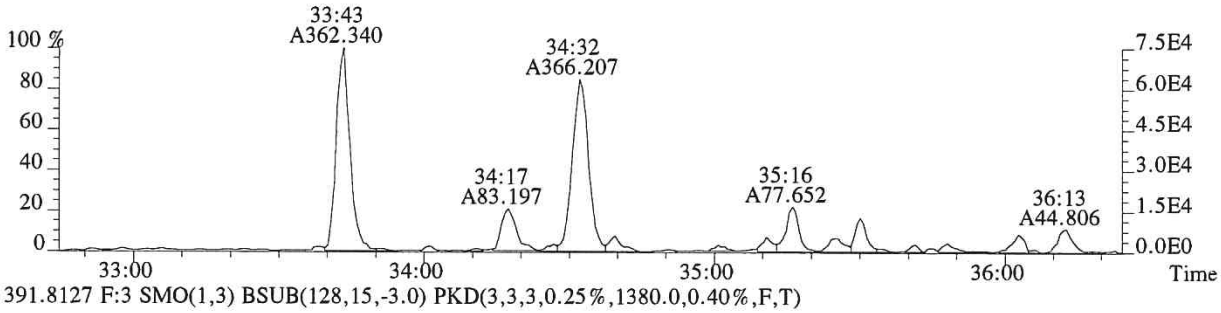
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



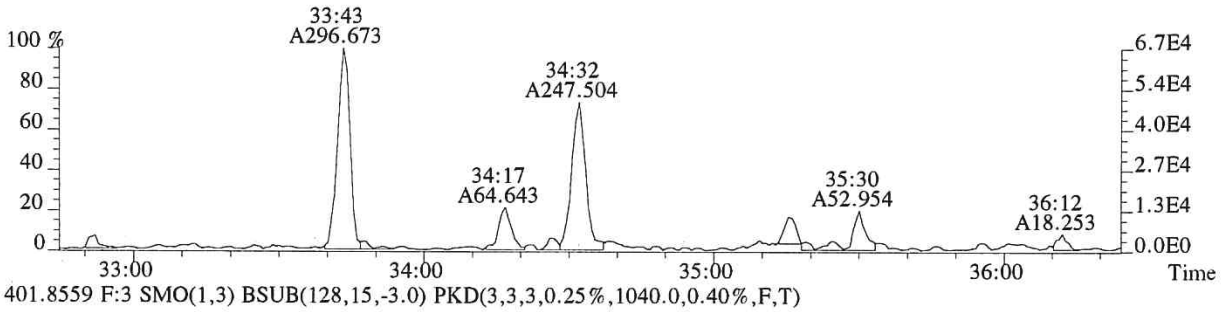
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



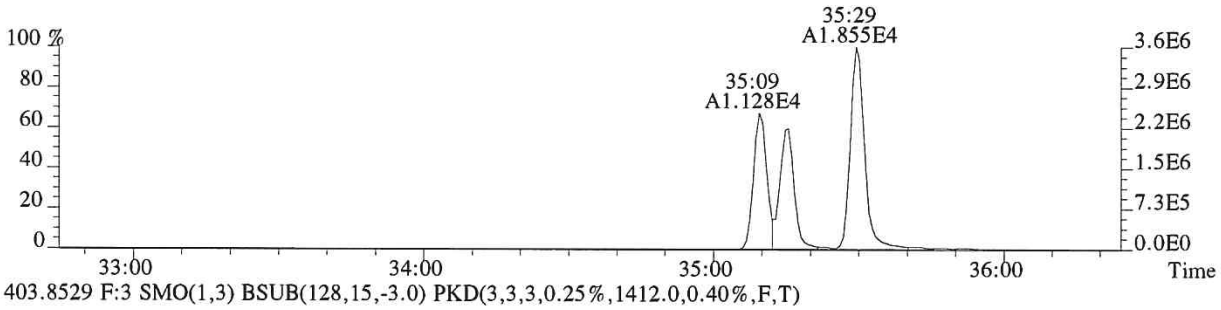
File:P616382 #1-330 Acq: 8-JAN-2019 17:05:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-004
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,532.0,0.40%,F,T)



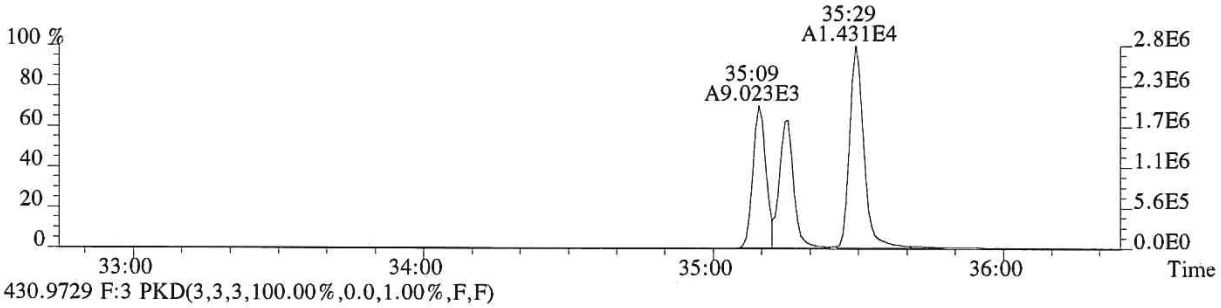
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1380.0,0.40%,F,T)



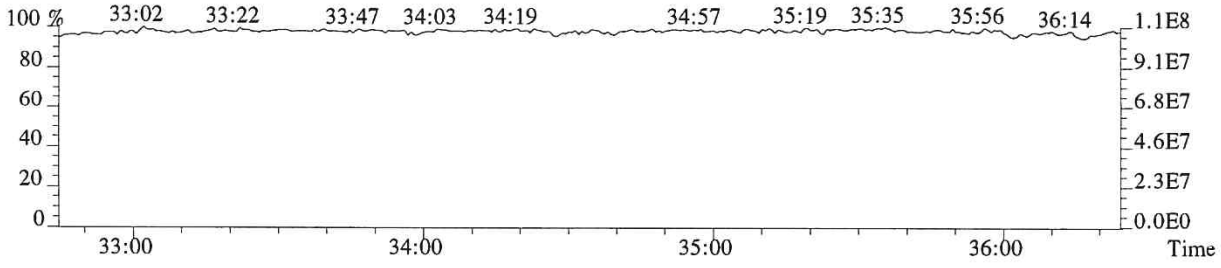
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1040.0,0.40%,F,T)



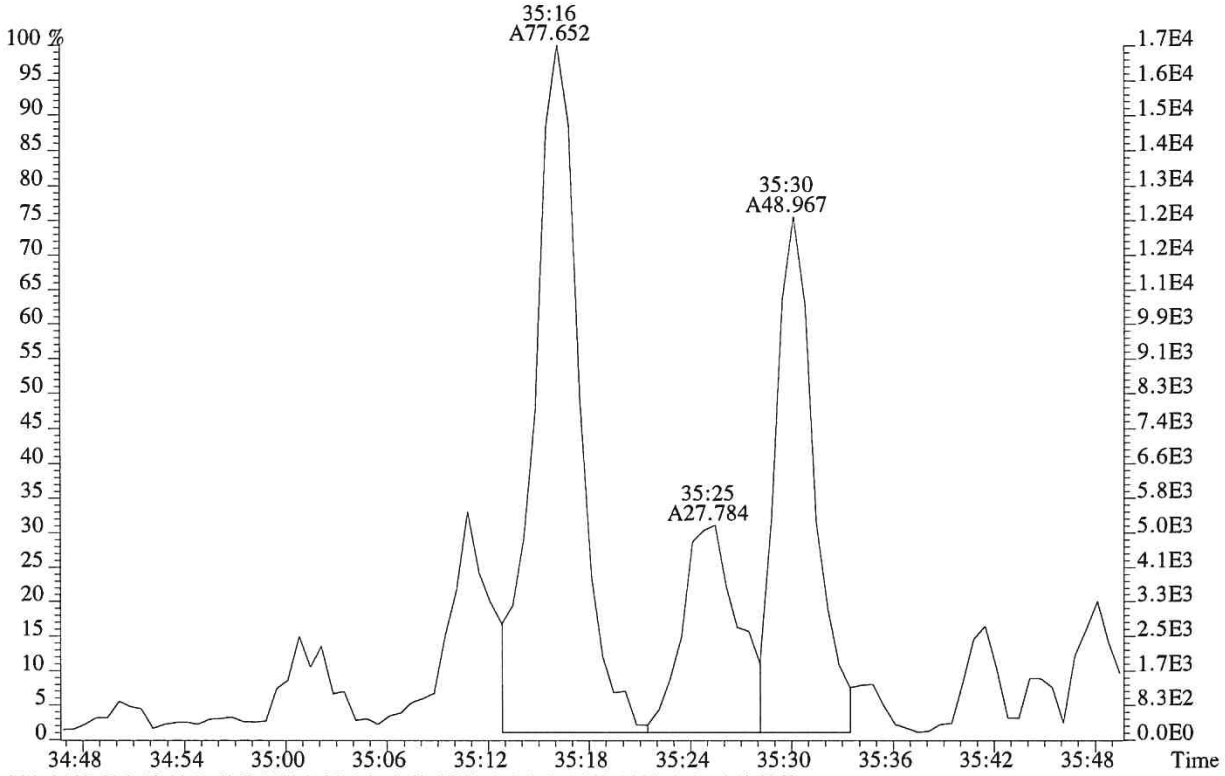
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1412.0,0.40%,F,T)



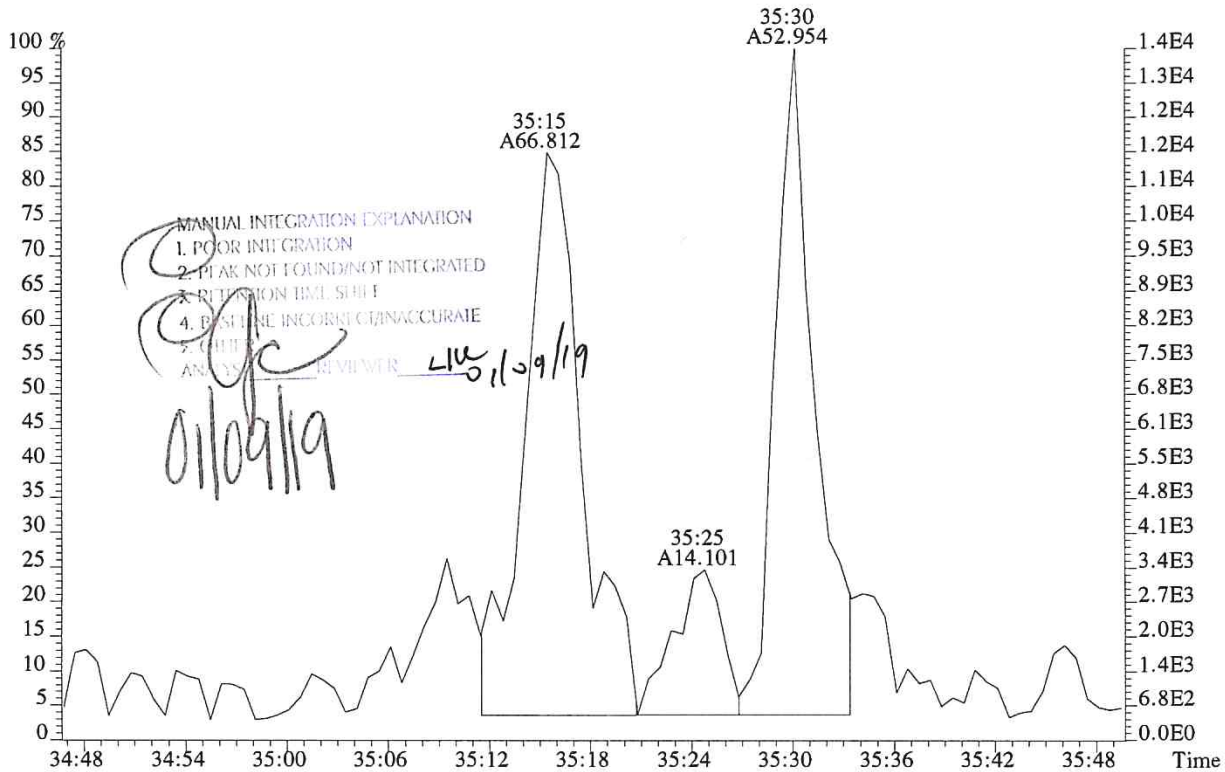
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



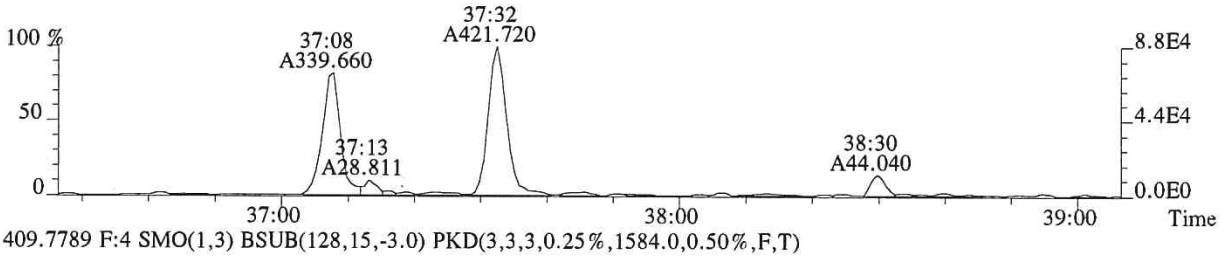
File:P616382 #1-330 Acq: 8-JAN-2019 17:05:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-004
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,532.0,0.40%,F,T)



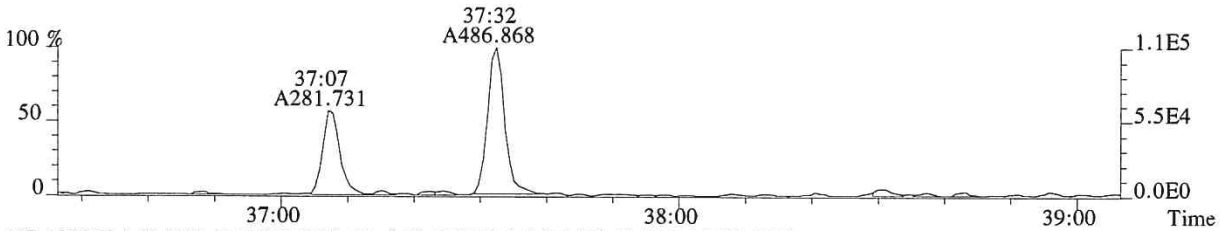
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1380.0,0.40%,F,T)



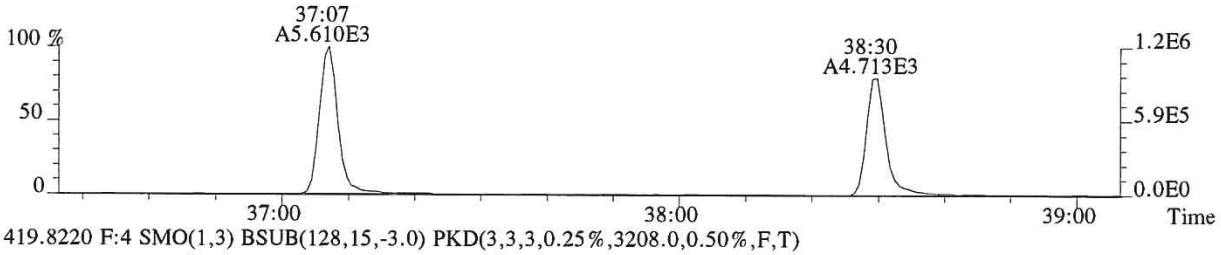
File:P616382 #1-241 Acq: 8-JAN-2019 17:05:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-004
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,692.0,0.50%,F,T)



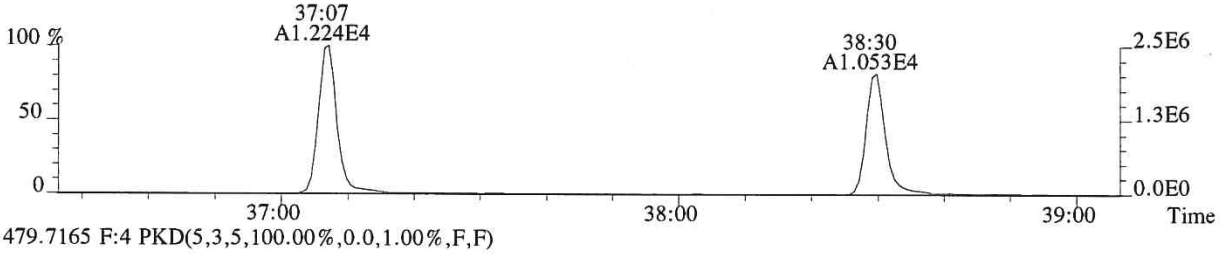
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1584.0,0.50%,F,T)



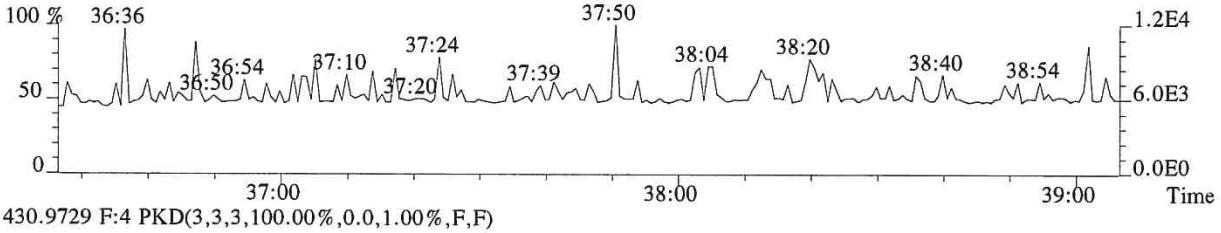
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2212.0,0.50%,F,T)



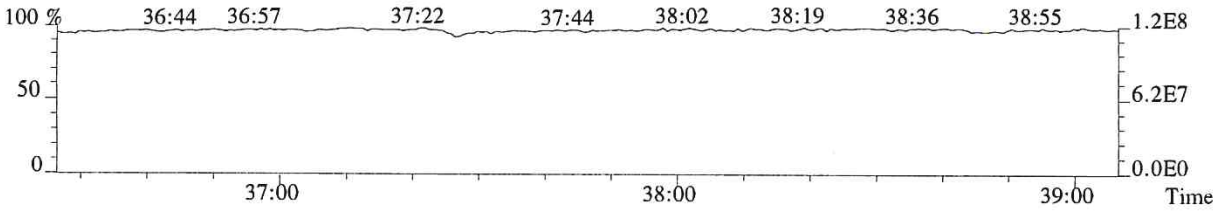
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3208.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

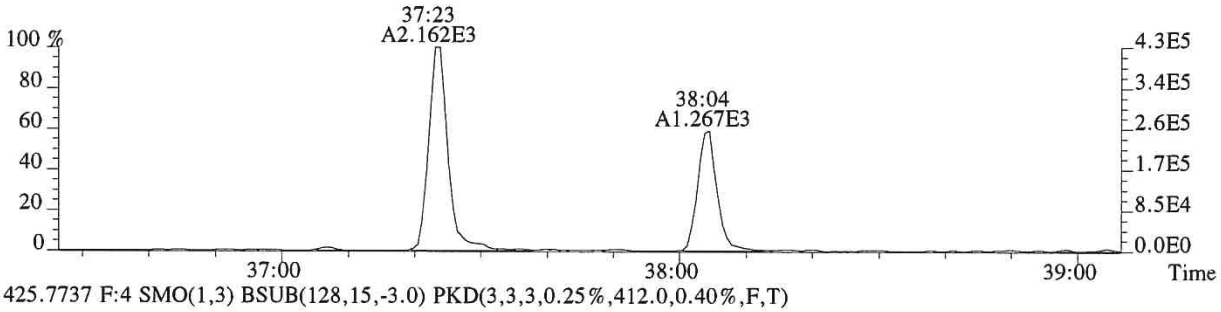


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

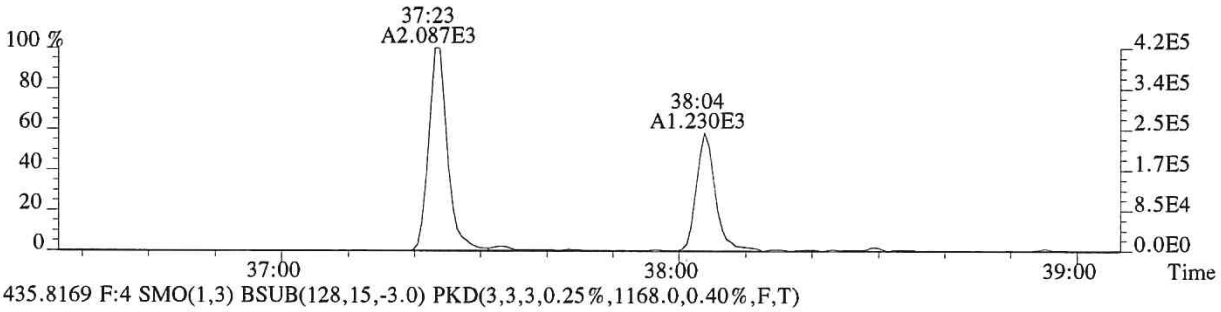


017113

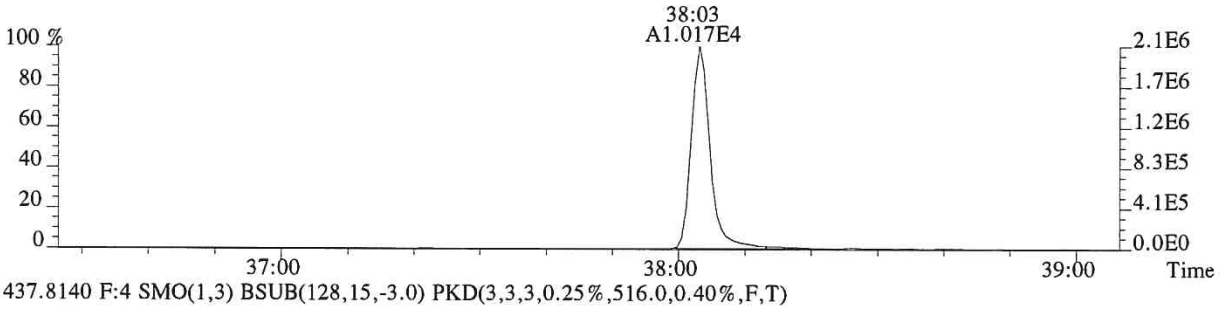
File:P616382 #1-241 Acq: 8-JAN-2019 17:05:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-004
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2012.0,0.40%,F,T)



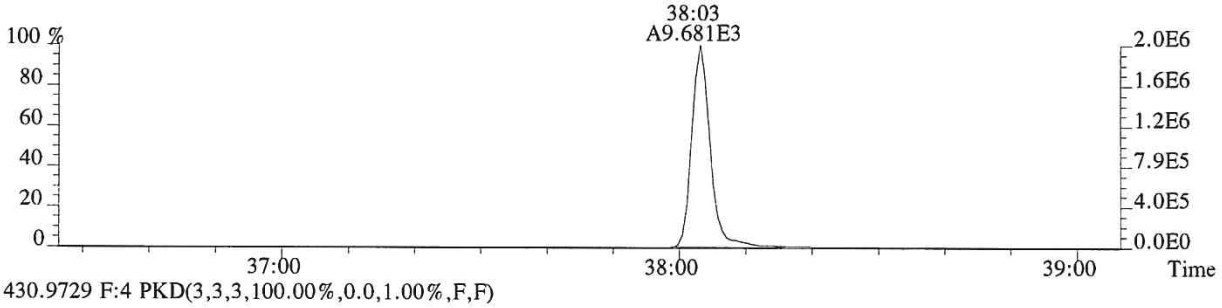
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,412.0,0.40%,F,T)



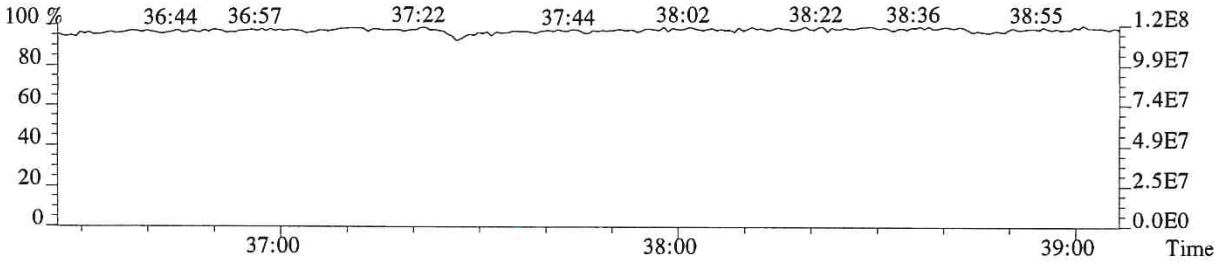
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1168.0,0.40%,F,T)



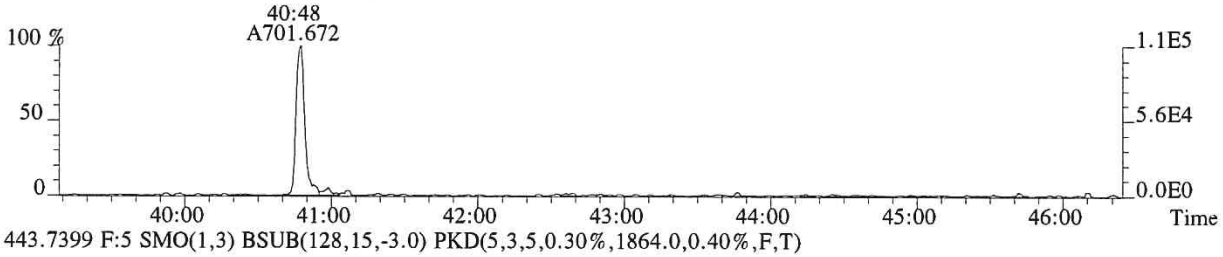
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,516.0,0.40%,F,T)



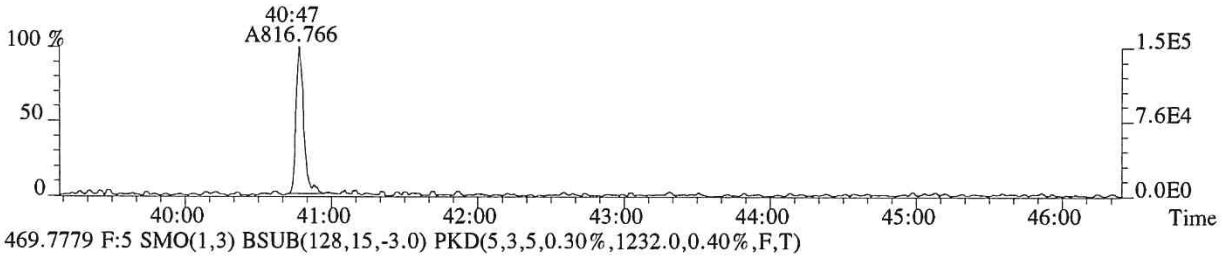
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



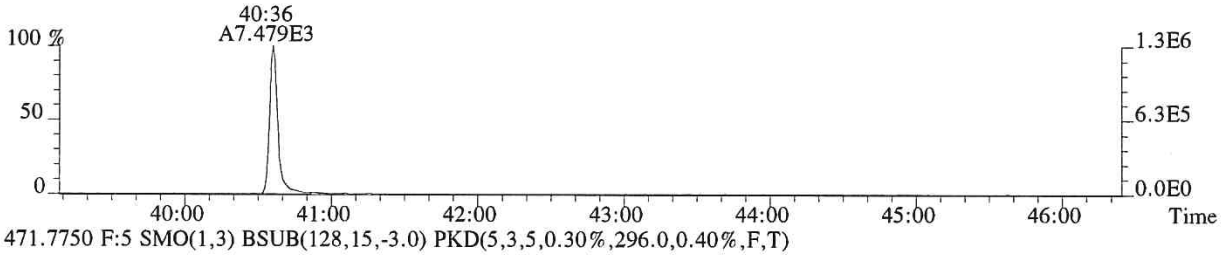
File:P616382 #1-654 Acq: 8-JAN-2019 17:05:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-004
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,372.0,0.40%,F,T)



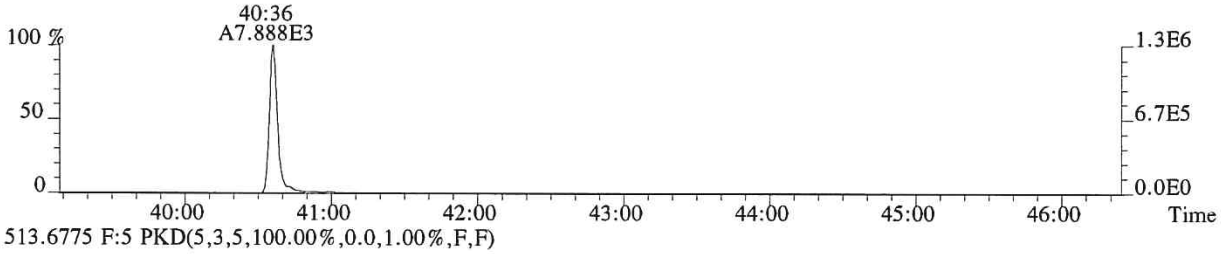
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1864.0,0.40%,F,T)



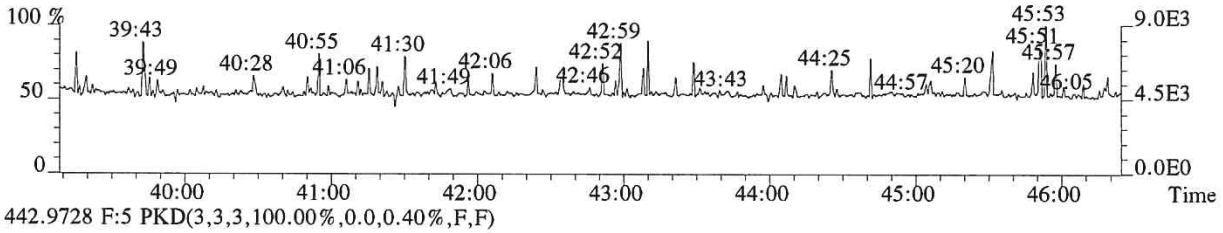
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1232.0,0.40%,F,T)



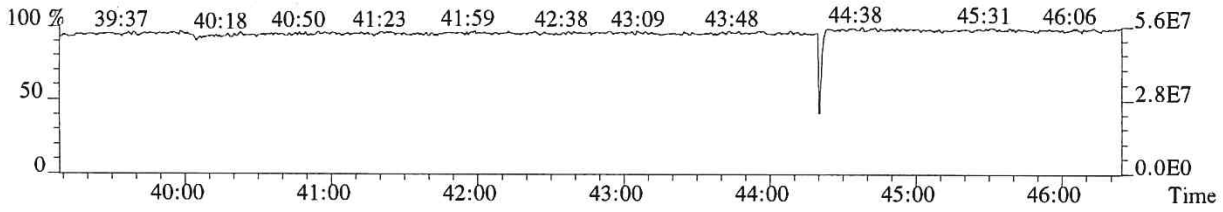
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,296.0,0.40%,F,T)



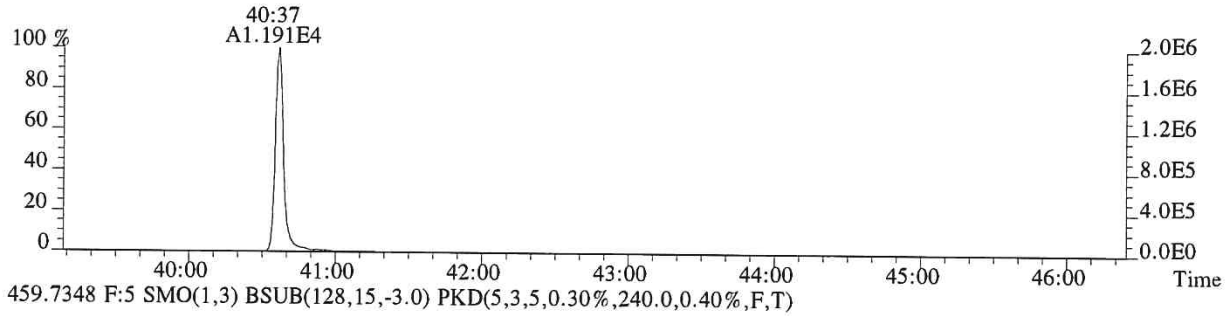
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



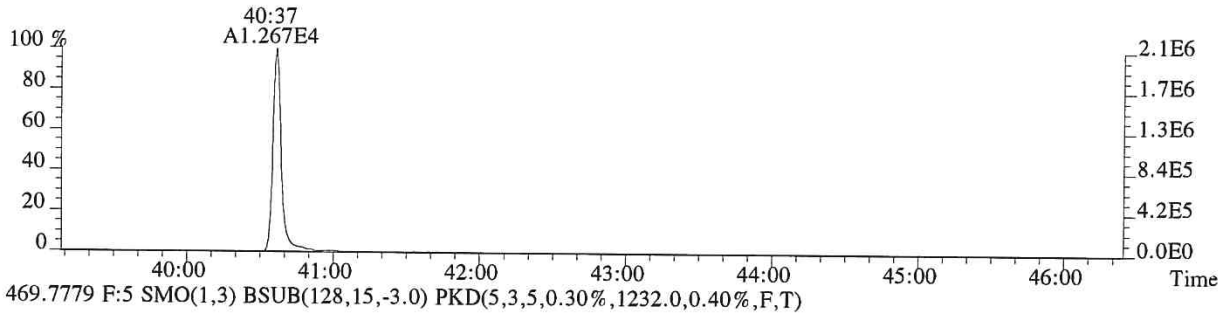
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



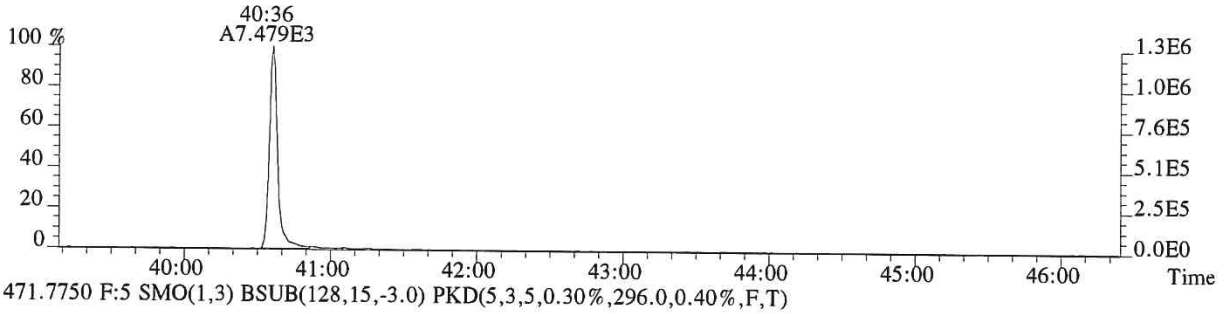
File:P616382 #1-654 Acq: 8-JAN-2019 17:05:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-004
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,264.0,0.40%,F,T)



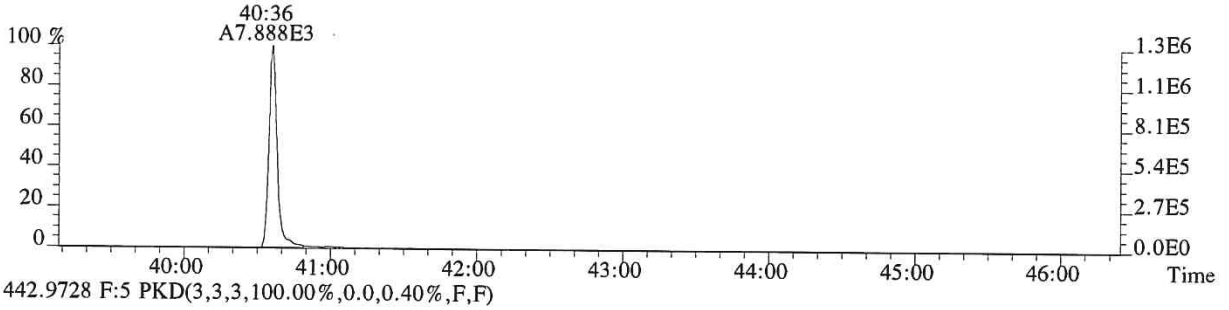
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,240.0,0.40%,F,T)



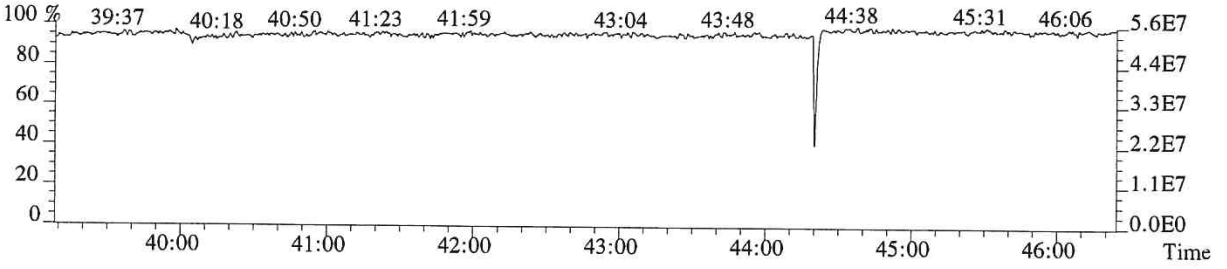
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1232.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,296.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017116

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0172

Run #15 Filename P616383 Samp: 1 Inj: 1 Acquired: 8-JAN-19 17:53:39
Processed: 9-JAN-19 08:58:14 Sample ID: E1801138-005

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:15	9.723e+03	1.252e+04	0.78	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:24	7.681e+02	4.754e+02	1.62	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:28	6.554e+02	4.235e+02	1.55	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	1.146e+03	8.943e+02	1.28	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:28	3.332e+02	2.562e+02	1.30	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	1.694e+02	1.438e+02	1.18	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:51	8.823e+01	8.536e+01	1.03	no	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	1.778e+03	1.789e+03	0.99	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	1.452e+02	1.725e+02	0.84	no	no	1.463
10	Unk	OCDF	40:48	2.548e+03	2.899e+03	0.88	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:17	2.386e+03	3.160e+03	0.76	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:46	1.184e+02	3.191e+01	3.71	no	yes	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:10	7.071e+01	4.500e+01	1.57	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:15	3.091e+02	2.292e+02	1.35	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:31	1.753e+02	1.177e+02	1.49	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	5.486e+03	5.137e+03	1.07	yes	no	1.112
17	Unk	OCDD	40:37	8.991e+04	9.974e+04	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:13	1.195e+04	1.485e+04	0.80	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:23	1.773e+04	1.116e+04	1.59	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	1.776e+04	1.120e+04	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:20	7.084e+03	1.308e+04	0.54	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	8.112e+03	1.535e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	7.079e+03	1.282e+04	0.55	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	6.055e+03	1.173e+04	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	4.092e+03	8.972e+03	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	3.273e+03	7.294e+03	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:16	5.649e+03	7.228e+03	0.78	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:45	1.310e+04	8.080e+03	1.62	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	9.098e+03	6.895e+03	1.32	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	8.927e+03	6.976e+03	1.28	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	7.158e+03	6.659e+03	1.07	yes	no	0.857
32	IS	13C-OCDD	40:36	4.353e+03	4.795e+03	0.91	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:27	1.390e+04	1.798e+04	0.77	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	1.562e+04	1.235e+04	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:17	9.476e+03				no	1.086

$$\text{OCDD} = \frac{(8.991e+04 + 9.974e+04) \times 4000\ \text{pg} \times 1}{(4.353e+03 + 4.795e+03) \times 10.538\ \text{g} \times 38.3\% \times 100 \times 1.157} = 7702\ \text{ng/kg}$$

CW 01/09/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0172

Run #15 Filename P616383 Samp: 1 Inj: 1 Acquired: 8-JAN-19 17:53:39
Processed: 9-JAN-19 08:58:14 LAB. ID: E1801138-005

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.30e+06	1.60e+03	8.1e+02	1.71e+06	4.70e+03	3.6e+02
2	1,2,3,7,8-PeCDF	1.29e+05	2.77e+03	4.6e+01	7.51e+04	4.22e+03	1.8e+01
3	2,3,4,7,8-PeCDF	1.01e+05	2.77e+03	3.7e+01	7.44e+04	4.22e+03	1.8e+01
4	1,2,3,4,7,8-HxCDF	2.23e+05	2.16e+03	1.0e+02	1.79e+05	9.44e+02	1.9e+02
5	1,2,3,6,7,8-HxCDF	7.38e+04	2.16e+03	3.4e+01	5.19e+04	9.44e+02	5.5e+01
6	2,3,4,6,7,8-HxCDF	3.66e+04	2.16e+03	1.7e+01	2.68e+04	9.44e+02	2.8e+01
7	1,2,3,7,8,9-HxCDF	1.67e+04	2.16e+03	7.7e+00	1.64e+04	9.44e+02	1.7e+01
8	1,2,3,4,6,7,8-HpCDF	3.84e+05	1.38e+03	2.8e+02	3.72e+05	9.84e+02	3.8e+02
9	1,2,3,4,7,8,9-HpCDF	2.95e+04	1.38e+03	2.1e+01	3.50e+04	9.84e+02	3.6e+01
10	OCDF	4.28e+05	3.44e+02	1.2e+03	4.97e+05	1.73e+03	2.9e+02
11	2,3,7,8-TCDD	3.72e+05	3.74e+03	9.9e+01	4.89e+05	1.70e+03	2.9e+02
12	1,2,3,7,8-PeCDD	2.27e+04	1.39e+03	1.6e+01	7.66e+03	2.56e+02	3.0e+01
13	1,2,3,4,7,8-HxCDD	1.67e+04	6.60e+02	2.5e+01	8.79e+03	1.16e+03	7.6e+00
14	1,2,3,6,7,8-HxCDD	6.80e+04	6.60e+02	1.0e+02	4.89e+04	1.16e+03	4.2e+01
15	1,2,3,7,8,9-HxCDD	3.51e+04	6.60e+02	5.3e+01	2.67e+04	1.16e+03	2.3e+01
16	1,2,3,4,6,7,8-HpCDD	1.14e+06	1.56e+03	7.3e+02	1.09e+06	1.80e+02	6.1e+03
17	OCDD	1.57e+07	2.08e+02	7.5e+04	1.74e+07	2.32e+02	7.5e+04
18	13C-2,3,7,8-TCDF	1.75e+06	1.42e+04	1.2e+02	2.18e+06	1.14e+04	1.9e+02
19	13C-1,2,3,7,8-PeCDF	3.24e+06	1.10e+03	2.9e+03	2.04e+06	1.18e+03	1.7e+03
20	13C-2,3,4,7,8-PeCDF	3.31e+06	1.10e+03	3.0e+03	2.09e+06	1.18e+03	1.8e+03
21	13C-1,2,3,4,7,8-HxCDF	1.46e+06	1.36e+03	1.1e+03	2.68e+06	1.11e+03	2.4e+03
22	13C-1,2,3,6,7,8-HxCDF	1.62e+06	1.36e+03	1.2e+03	3.03e+06	1.11e+03	2.7e+03
23	13C-2,3,4,6,7,8-HxCDF	1.47e+06	1.36e+03	1.1e+03	2.64e+06	1.11e+03	2.4e+03
24	13C-1,2,3,7,8,9-HxCDF	1.19e+06	1.36e+03	8.8e+02	2.22e+06	1.11e+03	2.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	8.69e+05	2.10e+03	4.1e+02	1.87e+06	1.54e+03	1.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	6.52e+05	2.10e+03	3.1e+02	1.40e+06	1.54e+03	9.1e+02
27	13C-2,3,7,8-TCDD	8.56e+05	1.21e+04	7.1e+01	1.09e+06	4.58e+03	2.4e+02
28	13C-1,2,3,7,8-PeCDD	2.41e+06	1.96e+03	1.2e+03	1.46e+06	3.11e+03	4.7e+02
29	13C-1,2,3,4,7,8-HxCDD	1.96e+06	1.33e+03	1.5e+03	1.48e+06	8.84e+02	1.7e+03
30	13C-1,2,3,6,7,8-HxCDD	1.75e+06	1.33e+03	1.3e+03	1.38e+06	8.84e+02	1.6e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.50e+06	9.96e+02	1.5e+03	1.39e+06	5.28e+02	2.6e+03
32	13C-OCDD	7.37e+05	6.88e+02	1.1e+03	8.32e+05	3.08e+02	2.7e+03
33	13C-1,2,3,4-TCDD	1.97e+06	1.21e+04	1.6e+02	2.52e+06	4.58e+03	5.5e+02
34	13C-1,2,3,7,8,9-HxCDD	3.13e+06	1.33e+03	2.4e+03	2.49e+06	8.84e+02	2.8e+03
35	37Cl-2,3,7,8-TCDD	1.44e+06	1.74e+03	8.2e+02			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0172

Entry: 36 Totals Name: Total Tetra-Furans

Run: 15 File: P616383 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 17:53:39 Processed: 9-JAN-19 08:58:14

Mass: 303.9020 305.8990 Tot Response: 3.66e+04 RRF: 1.081

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:40	1.34e+02	1.75e+02	0.76	yes	3.09e+02		n	n
2	22:06	2.24e+02	3.02e+02	0.74	yes	5.26e+02		n	n
3	22:22	4.26e+02	5.58e+02	0.76	yes	9.85e+02		n	n
4	23:00	3.74e+02	4.72e+02	0.79	yes	8.46e+02		n	n
5	23:39	4.22e+02	4.78e+02	0.88	yes	9.00e+02		n	n
6	23:43	3.42e+02	4.16e+02	0.82	yes	7.58e+02		n	n
7	24:13	2.69e+03	3.28e+03	0.82	yes	5.97e+03		n	n
8	24:32	2.47e+02	3.47e+02	0.71	yes	5.94e+02		n	n
9	25:15	9.72e+03	1.25e+04	0.78	yes	2.22e+04	2,3,7,8-TCDF	n	n
10	25:41	9.90e+02	1.41e+03	0.70	yes	2.40e+03		n	n
11	27:35	5.01e+02	5.90e+02	0.85	yes	1.09e+03		n	n

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Peak List Summary

CLIENT ID.
SL0172

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 15 File: P616383 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 17:53:39 Processed: 9-JAN-19 08:58:14

Mass: 319.8970 321.8940 Tot Response: 5.84e+03 RRF: 1.049

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	23:52	3.40e+01	4.44e+01	0.77	yes	7.85e+01		n	n
2	25:59	8.85e+01	1.24e+02	0.71	yes	2.13e+02		n	n
3	26:17	2.39e+03	3.16e+03	0.76	yes	5.55e+03	2,3,7,8-TCDD	n	n

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Peak List Summary

CLIENT ID.
SL0172

Entry: 38 Totals Name: Total Penta-Furans1

Run: 15 File: P616383 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 17:53:39 Processed: 9-JAN-19 08:58:14

Mass: 339.8600 341.8570 Tot Response: 7.81e+02 RRF: 1.130

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:33	4.90e+02	2.91e+02 1.68	yes	7.81e+02		n	n

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Peak List Summary

CLIENT ID.
SL0172

Entry: 39 Totals Name: Total Penta-Furans2

Run: 15 File: P616383 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 17:53:39 Processed: 9-JAN-19 08:58:14

Mass: 339.8600 341.8570 Tot Response: 3.04e+03 RRF: 1.130

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:11	1.44e+02	8.18e+01	1.76	yes	2.26e+02		n	n
2	30:24	7.68e+02	4.75e+02	1.62	yes	1.24e+03	1,2,3,7,8-PeCDF	n	n
3	30:40	2.35e+02	1.53e+02	1.54	yes	3.89e+02		n	n
4	31:20	6.67e+01	3.85e+01	1.73	yes	1.05e+02		n	n
5	31:28	6.55e+02	4.24e+02	1.55	yes	1.08e+03	2,3,4,7,8-PeCDF	n	n

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Peak List Summary

CLIENT ID.
SL0172

Entry: 41 Totals Name: Total Hexa-Furans

Run: 15 File: P616383 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 17:53:39 Processed: 9-JAN-19 08:58:14

Mass: 373.8210 375.8180 Tot Response: 6.92e+03 RRF: 1.324

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:09	2.58e+02	2.29e+02	1.13	yes	4.87e+02		n	n
2	33:19	9.62e+02	7.54e+02	1.28	yes	1.72e+03		n	n
3	33:53	9.85e+02	7.84e+02	1.26	yes	1.77e+03		n	n
4	34:21	1.15e+03	8.94e+02	1.28	yes	2.04e+03	1,2,3,4,7,8-HxCDF	n	n
5	34:28	3.33e+02	2.56e+02	1.30	yes	5.89e+02	1,2,3,6,7,8-HxCDF	n	n
6	35:01	1.69e+02	1.44e+02	1.18	yes	3.13e+02	2,3,4,6,7,8-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0172

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 15 File: P616383 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 17:53:39 Processed: 9-JAN-19 08:58:14

Mass: 389.8160 391.8130 Tot Response: 4.00e+03 RRF: 1.092

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:43	8.76e+02	7.42e+02	1.18	yes	1.62e+03		n	n
2	34:17	1.51e+02	1.20e+02	1.26	yes	2.71e+02		n	n
3	34:32	8.77e+02	6.98e+02	1.26	yes	1.58e+03		n	n
4	35:15	3.09e+02	2.29e+02	1.35	yes	5.38e+02	1,2,3,6,7,8-HxCDD	n	n

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Peak List Summary

CLIENT ID.
SL0172

Entry: 43 Totals Name: Total Hepta-Furans

Run: 15 File: P616383 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 17:53:39 Processed: 9-JAN-19 08:58:14

Mass: 407.7820 409.7790 Tot Response: 1.03e+04 RRF: 1.495

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:08	1.78e+03	1.79e+03	0.99	yes	3.57e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	37:32	3.48e+03	3.28e+03	1.06	yes	6.76e+03		n	n

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Peak List Summary

CLIENT ID.
SL0172

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 15 File: P616383 Sample:1 Injection:1 Function:4

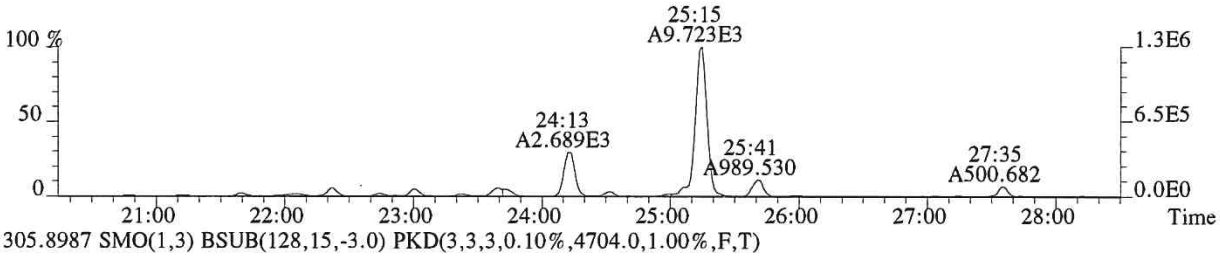
Acquired: 8-JAN-19 17:53:39 Processed: 9-JAN-19 08:58:14

Mass: 423.7770 425.7740 Tot Response: 2.58e+04 RRF: 1.112

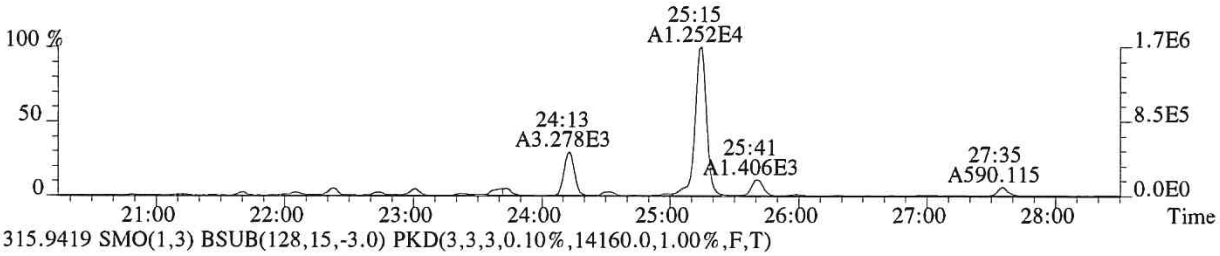
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:24	7.74e+03	7.45e+03	1.04	yes	1.52e+04		n	n
2	38:04	5.49e+03	5.14e+03	1.07	yes	1.06e+04	1,2,3,4,6,7,8-HpCDD	n	n

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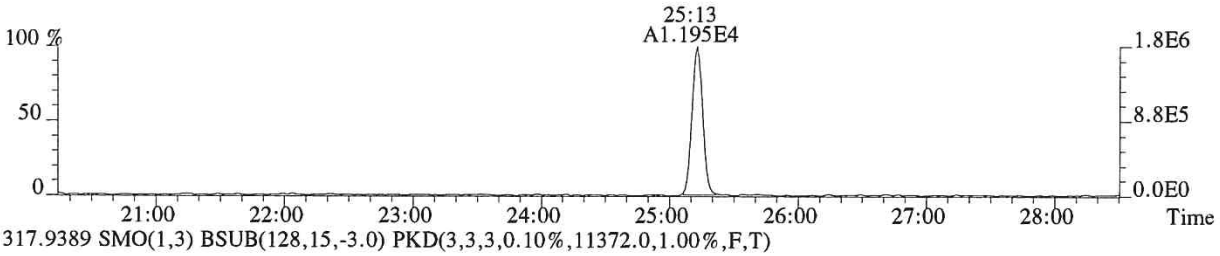
File:P616383 #1-587 Acq: 8-JAN-2019 17:53:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-005
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1600.0,1.00%,F,T)



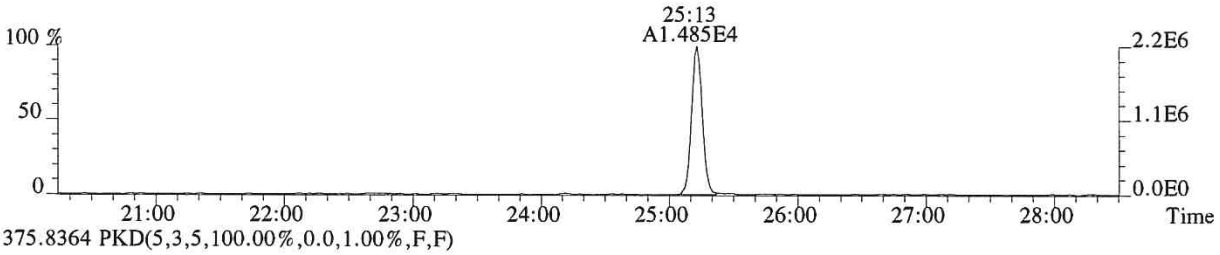
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4704.0,1.00%,F,T)



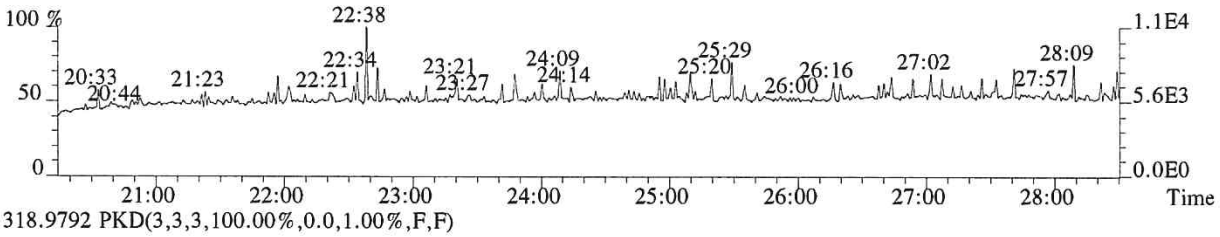
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,14160.0,1.00%,F,T)



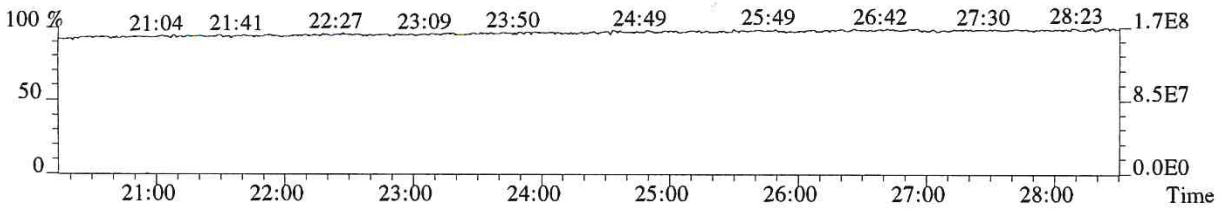
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11372.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

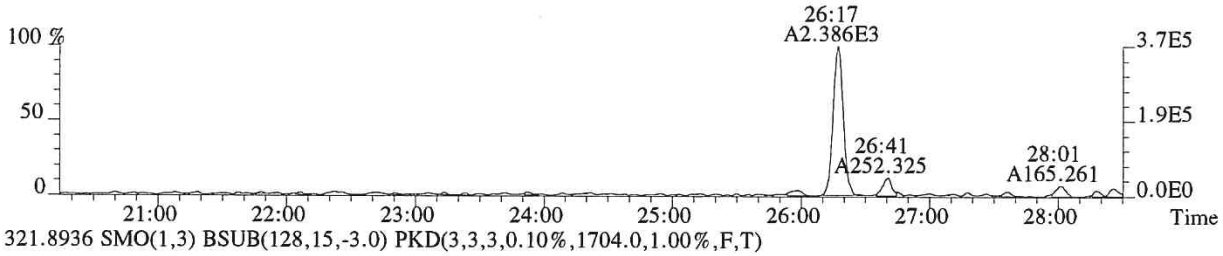


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

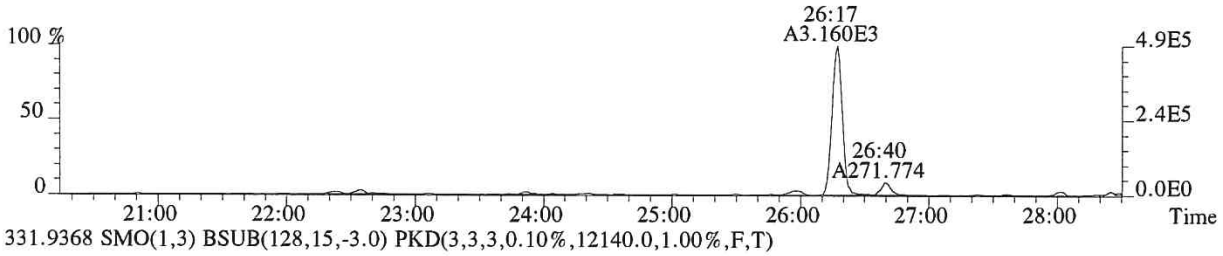


017127

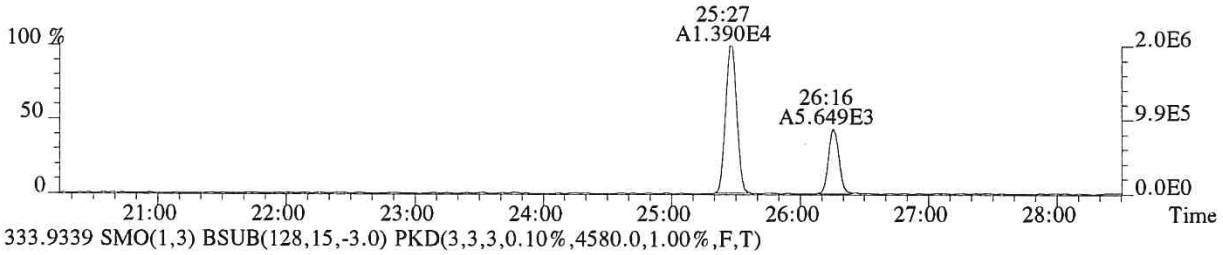
File:P616383 #1-587 Acq: 8-JAN-2019 17:53:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-005
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3736.0,1.00%,F,T)



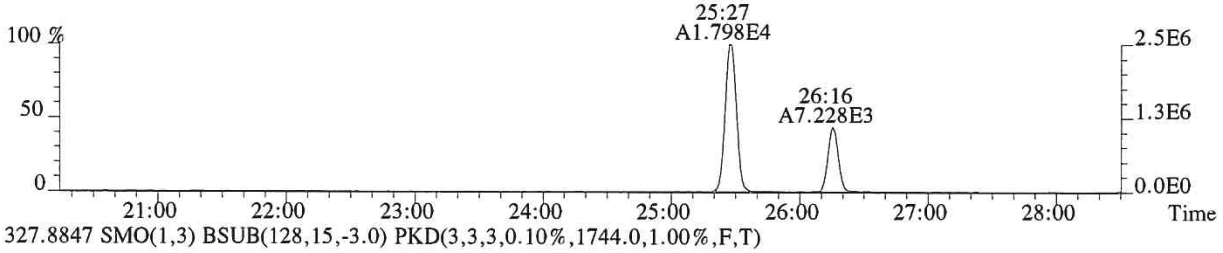
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1704.0,1.00%,F,T)



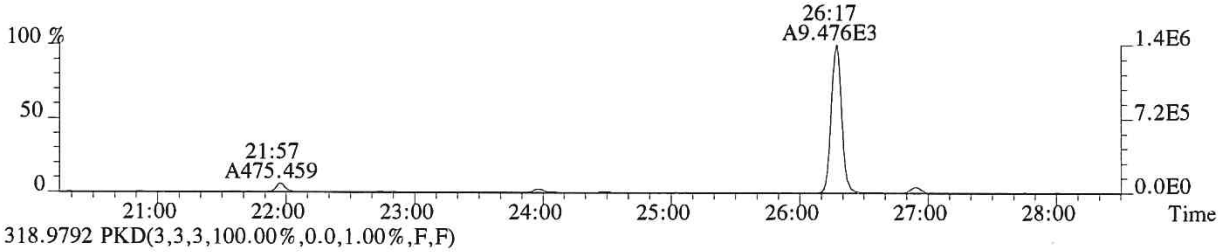
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12140.0,1.00%,F,T)



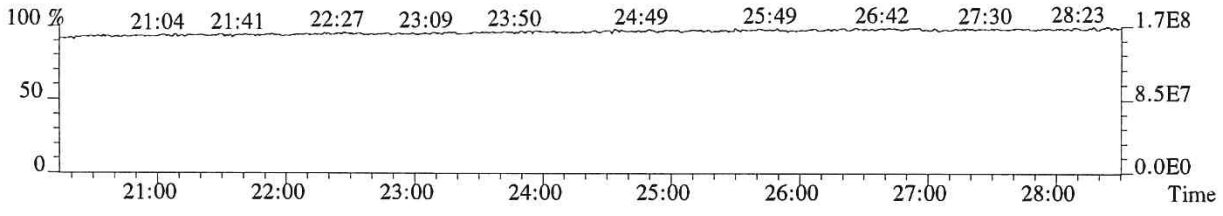
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4580.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1744.0,1.00%,F,T)

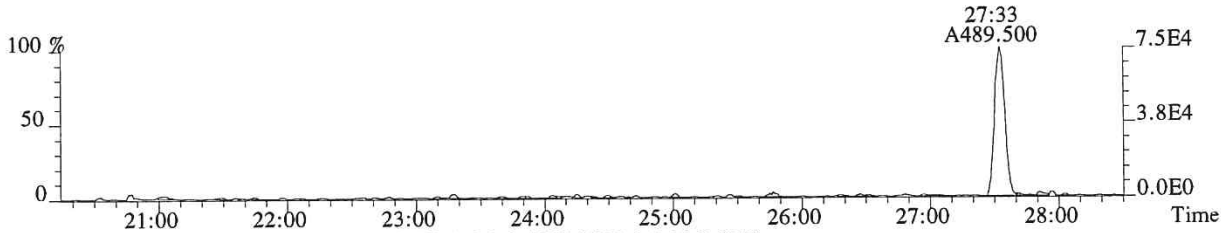


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

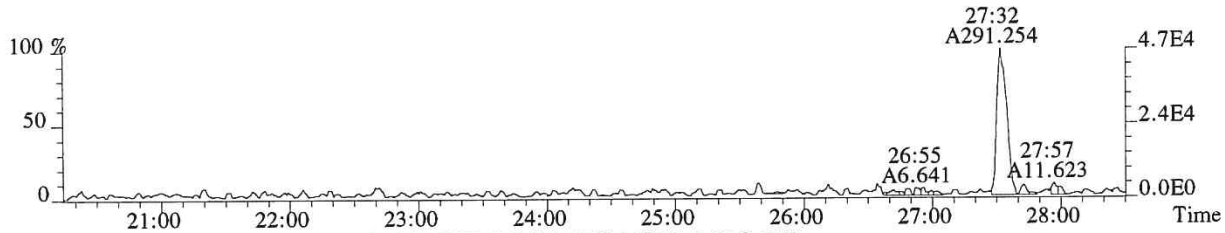


017128

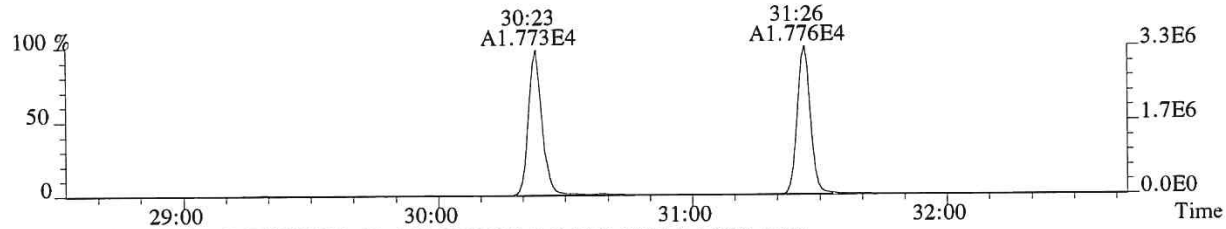
File:P616383 #1-587 Acq: 8-JAN-2019 17:53:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-005
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,492.0,1.00%,F,T)



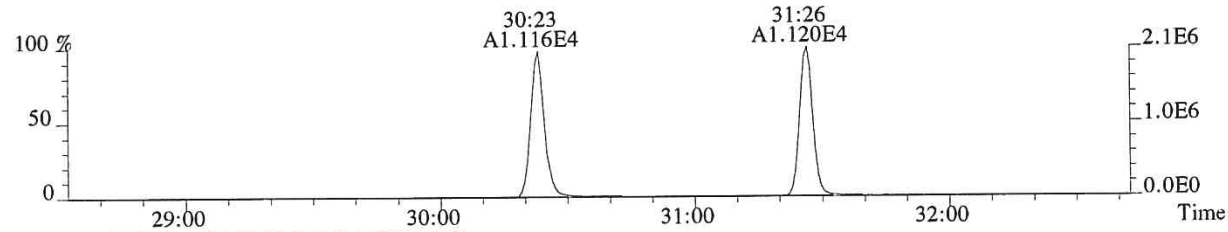
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1836.0,1.00%,F,T)



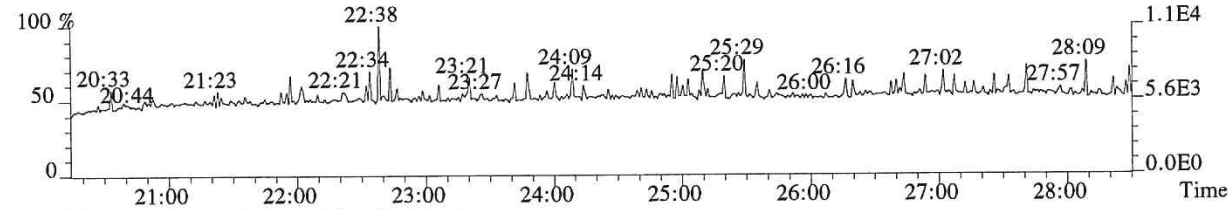
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1104.0,1.00%,F,T)



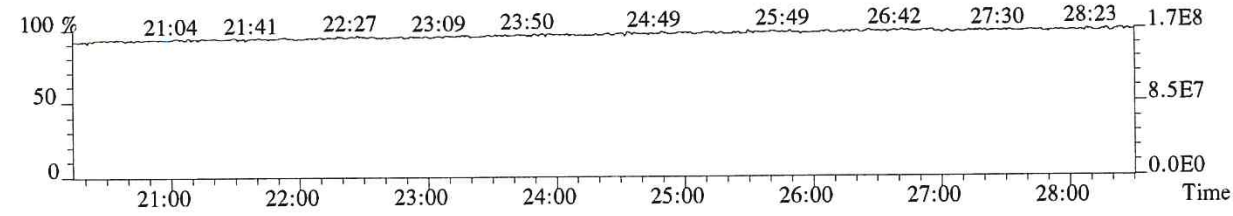
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1184.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

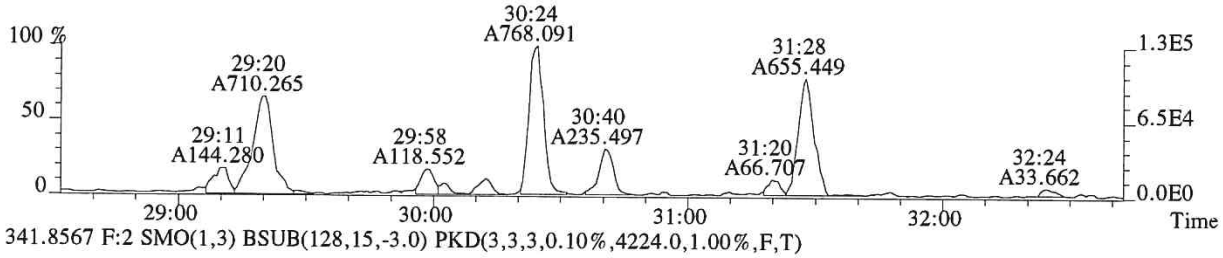


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

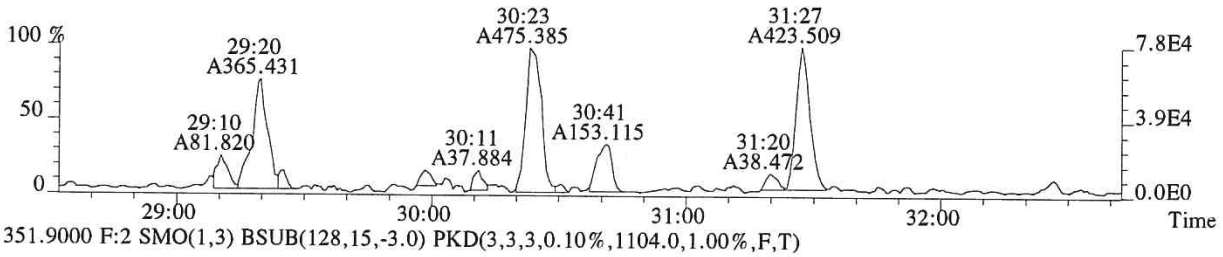


017129

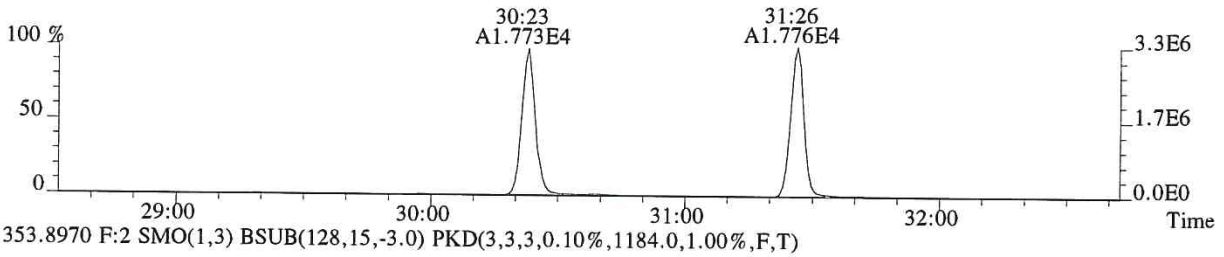
File:P616383 #1-376 Acq: 8-JAN-2019 17:53:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-005
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2772.0,1.00%,F,T)



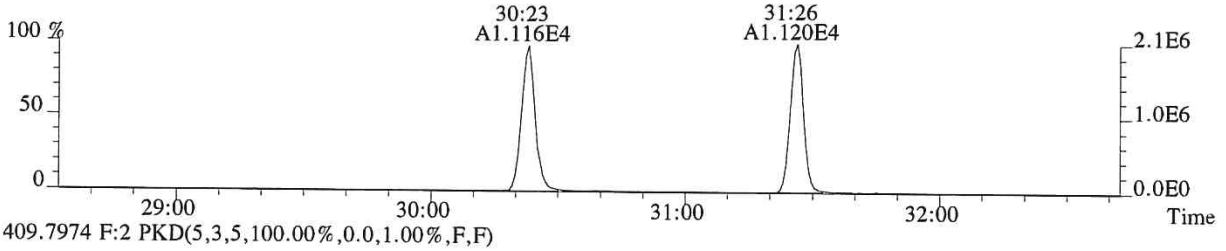
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4224.0,1.00%,F,T)



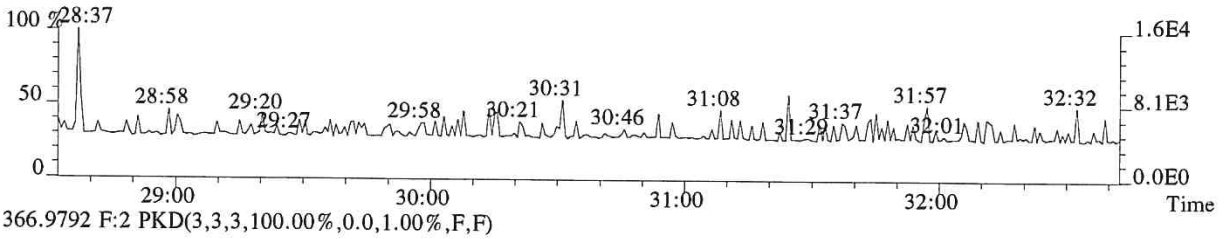
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1104.0,1.00%,F,T)



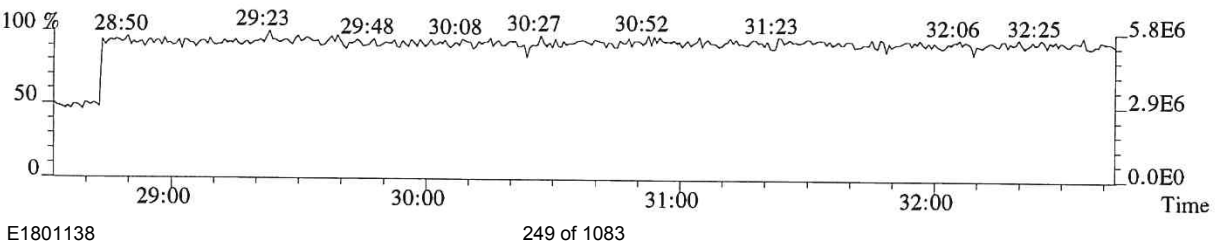
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1184.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

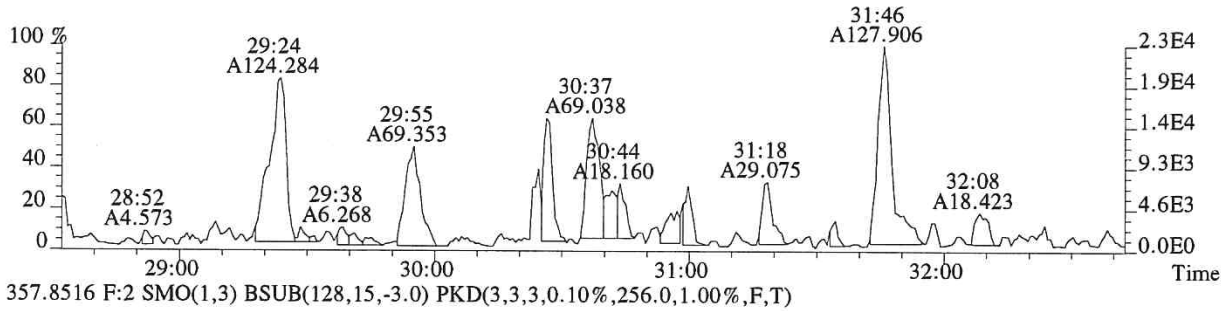


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

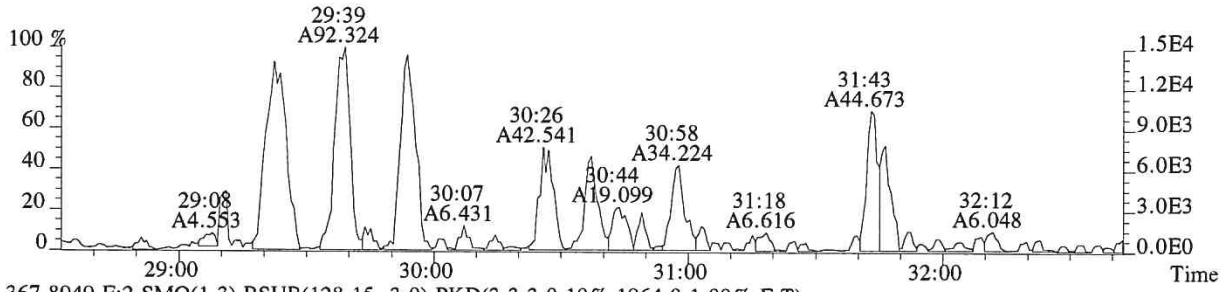


017130

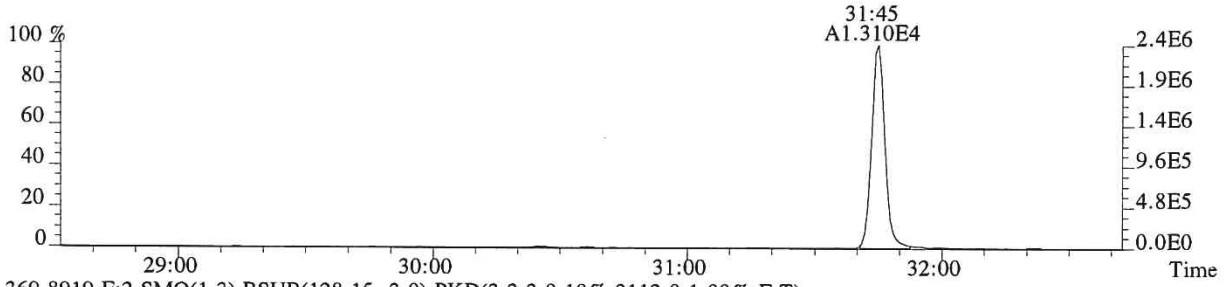
File:P616383 #1-376 Acq: 8-JAN-2019 17:53:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-005
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1392.0,1.00%,F,T)



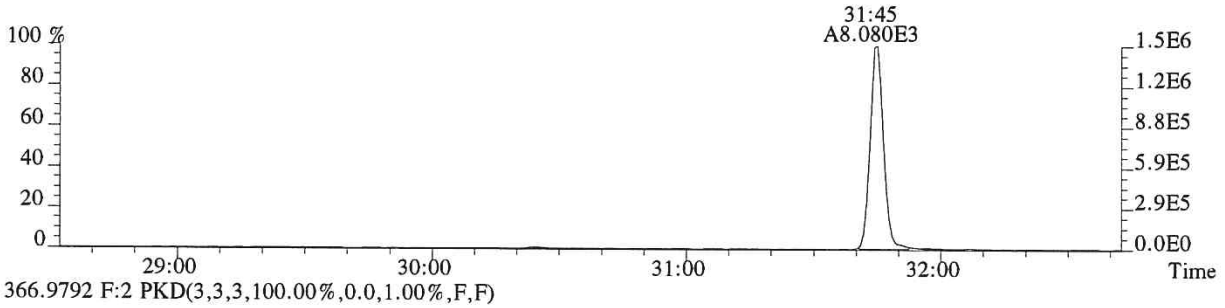
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,256.0,1.00%,F,T)



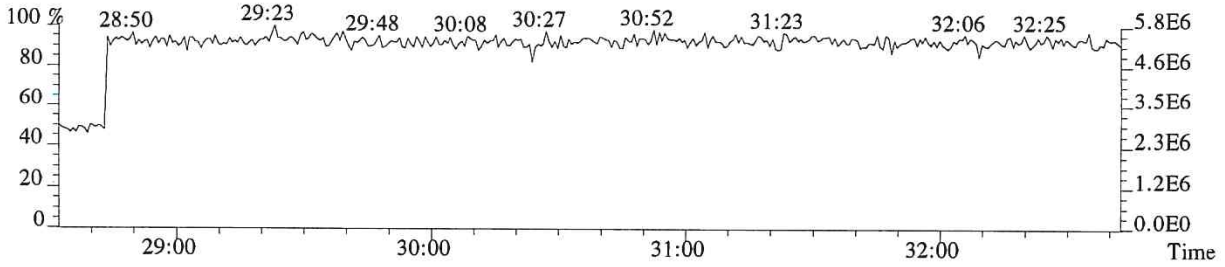
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1964.0,1.00%,F,T)



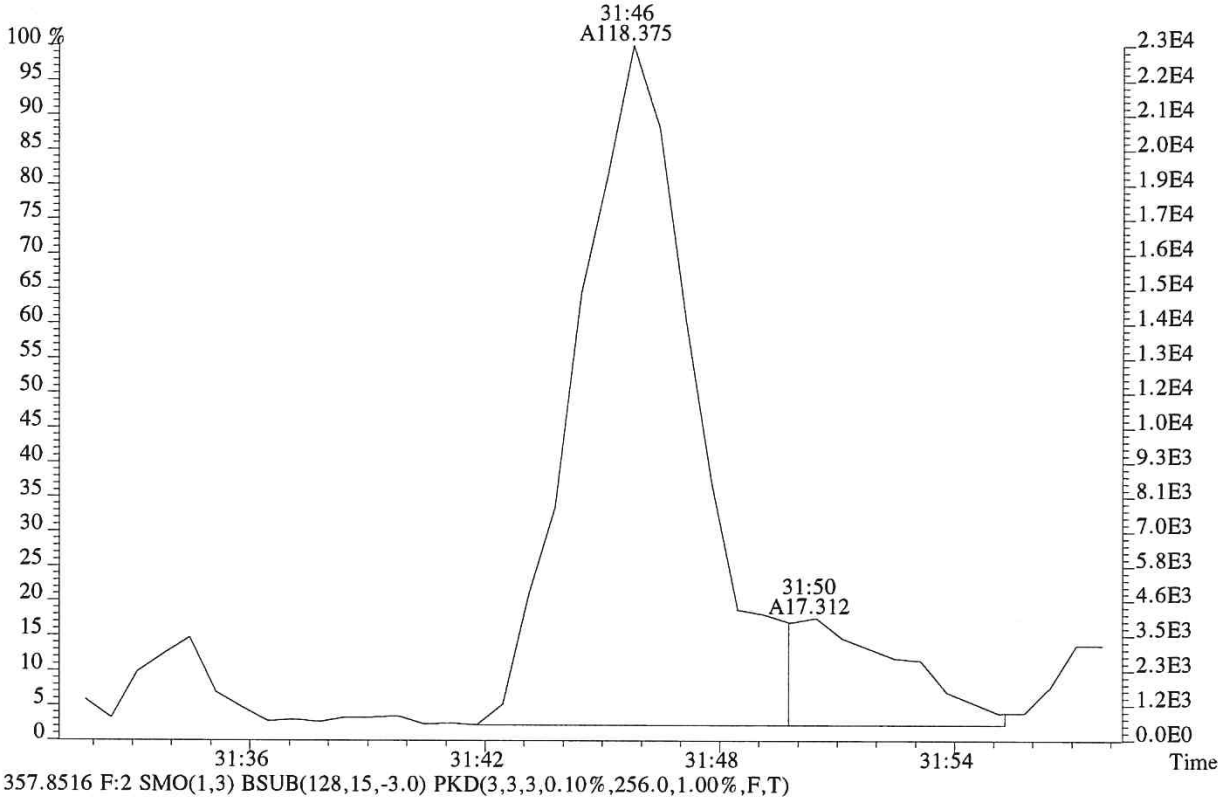
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3112.0,1.00%,F,T)



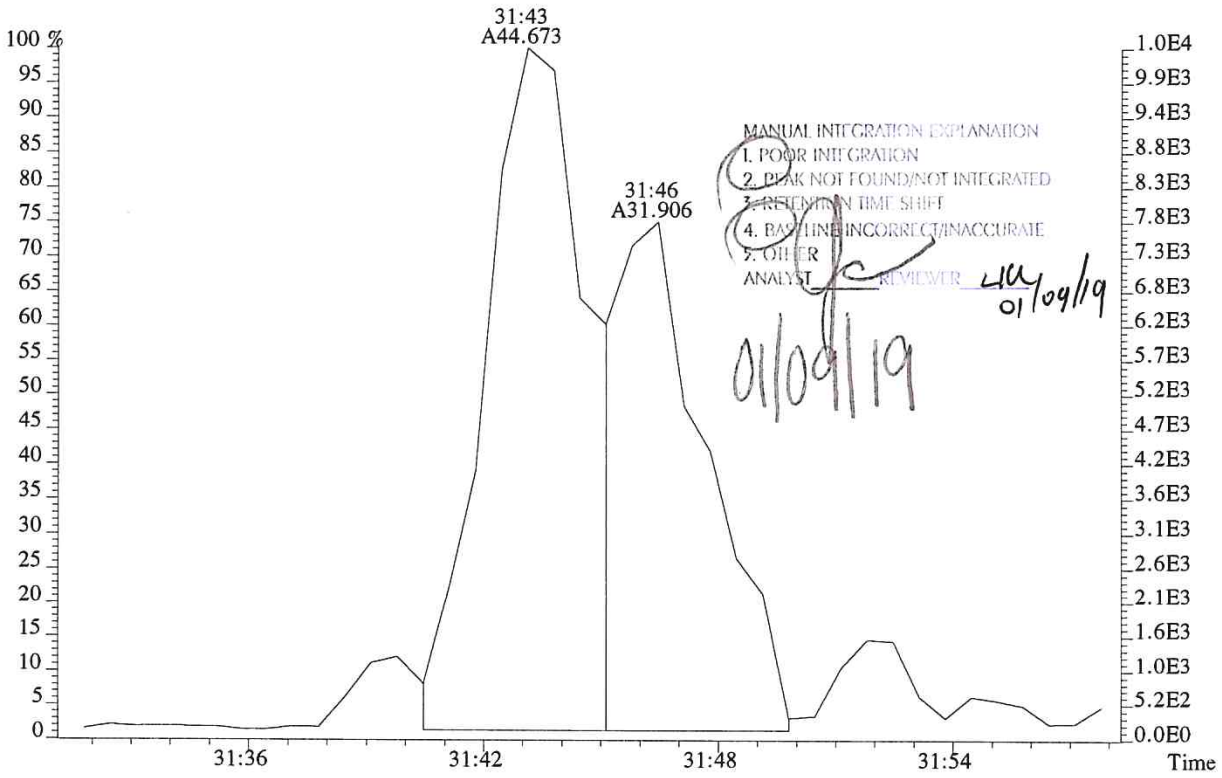
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



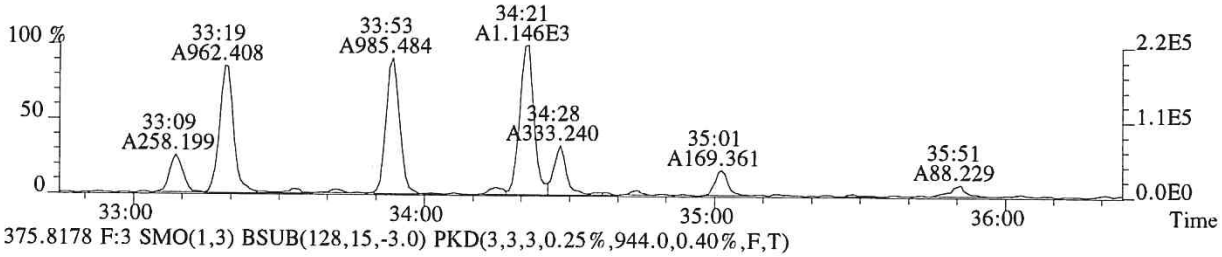
File:P616383 #1-376 Acq: 8-JAN-2019 17:53:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-005
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1392.0,1.00%,F,T)



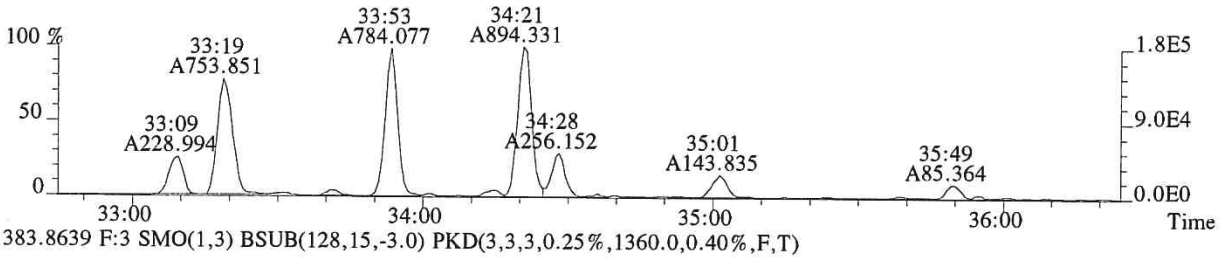
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,256.0,1.00%,F,T)



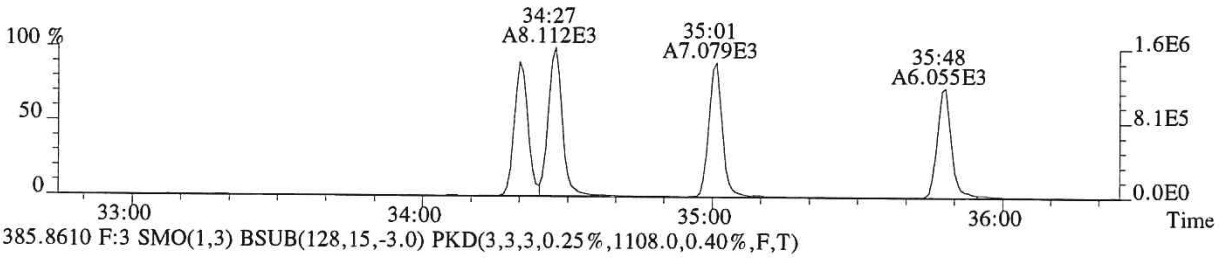
File:P616383 #1-330 Acq: 8-JAN-2019 17:53:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-005
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2164.0,0.40%,F,T)



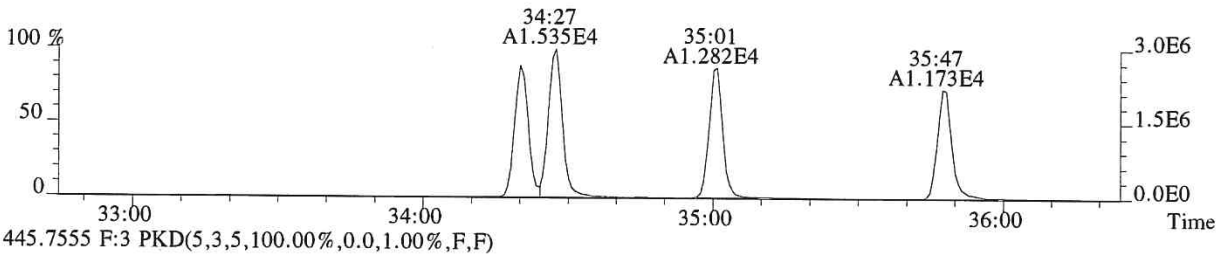
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,944.0,0.40%,F,T)



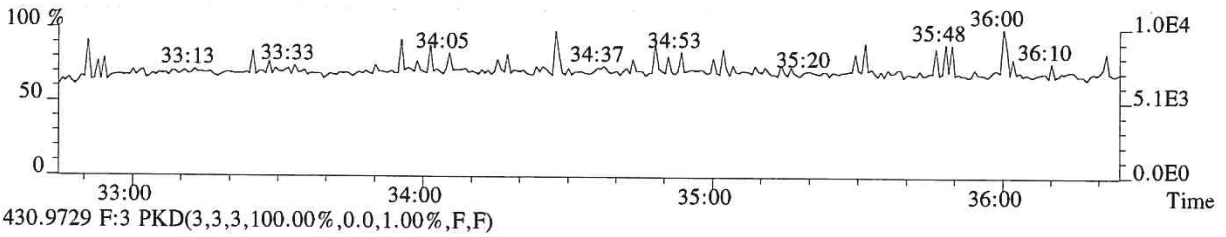
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1360.0,0.40%,F,T)



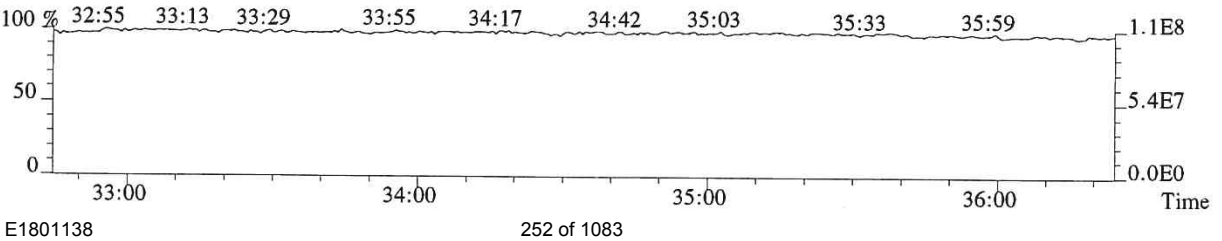
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1108.0,0.40%,F,T)



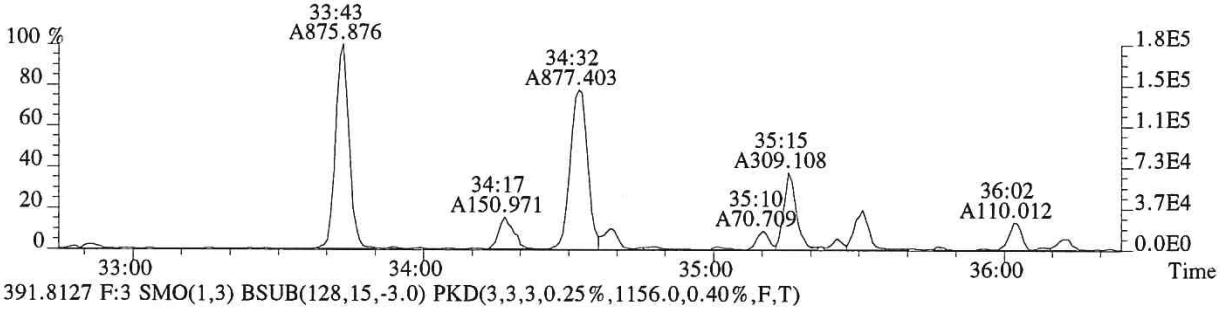
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



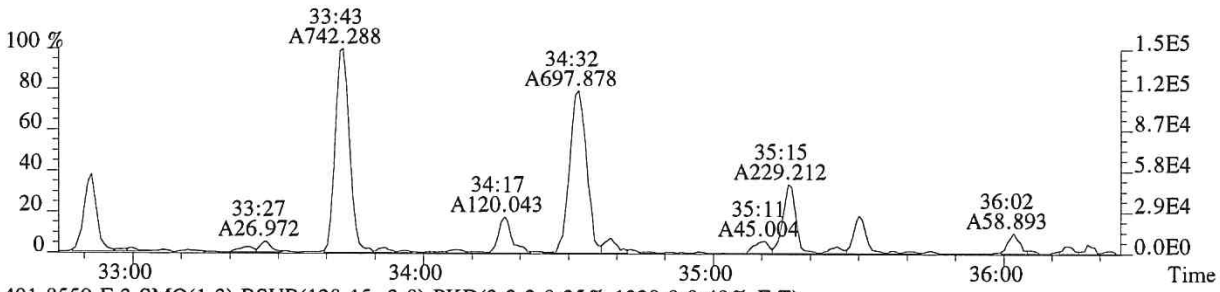
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



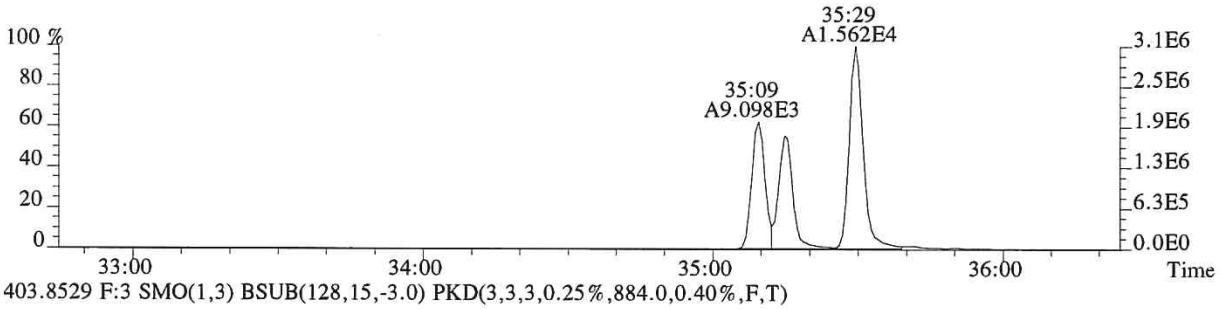
File:P616383 #1-330 Acq: 8-JAN-2019 17:53:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-005
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,660.0,0.40%,F,T)



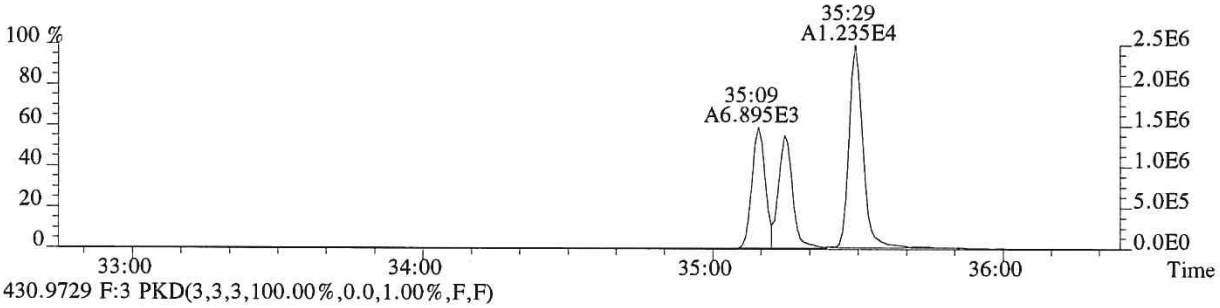
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1156.0,0.40%,F,T)



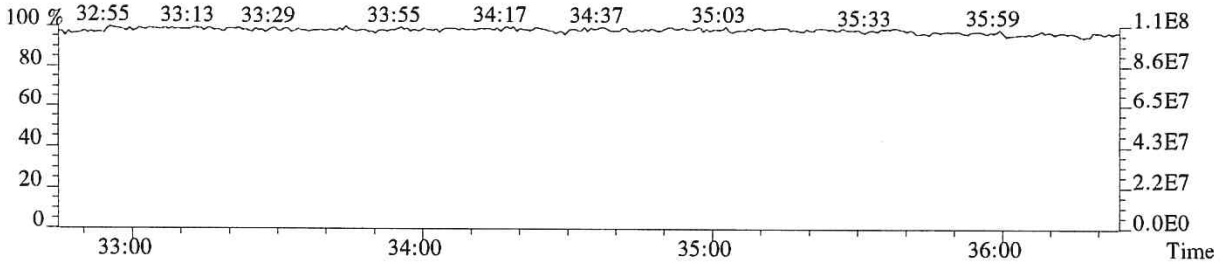
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1328.0,0.40%,F,T)



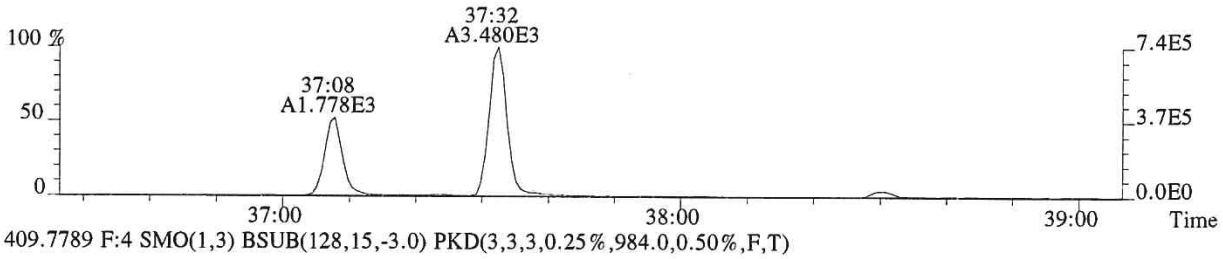
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



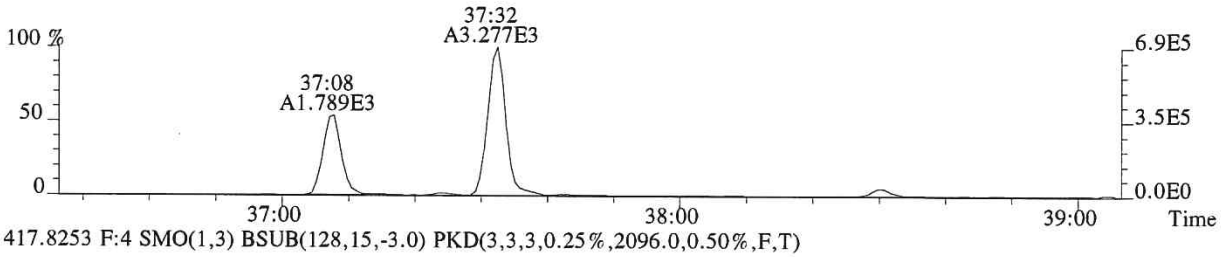
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



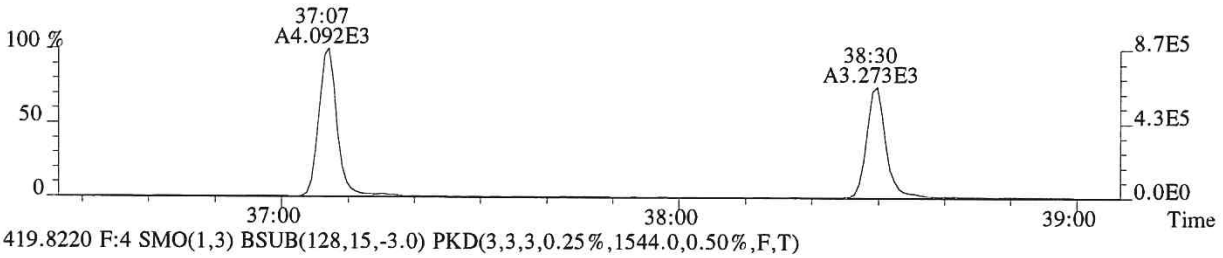
File:P616383 #1-241 Acq: 8-JAN-2019 17:53:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-005
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1376.0,0.50%,F,T)



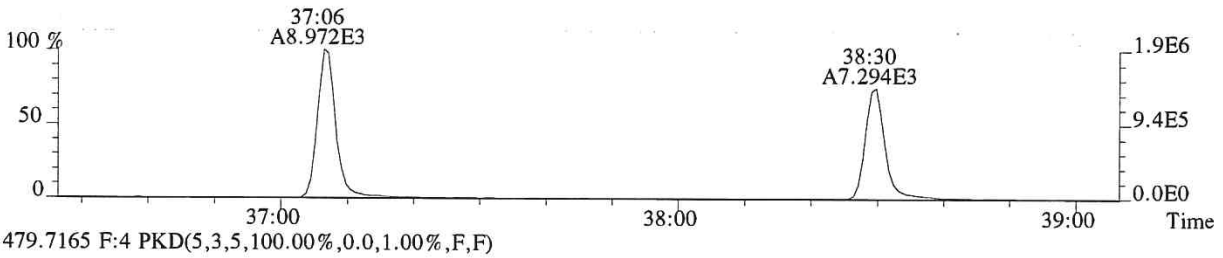
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,984.0,0.50%,F,T)



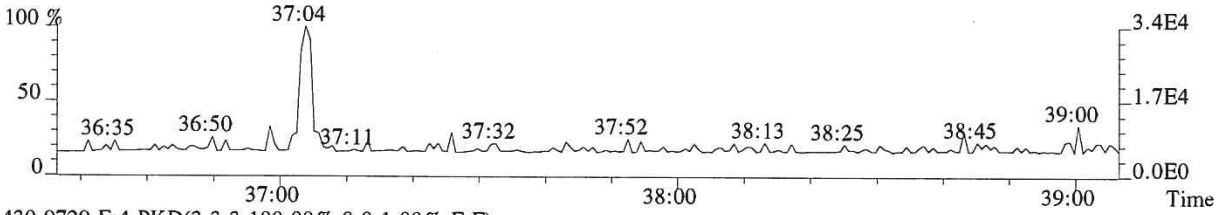
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2096.0,0.50%,F,T)



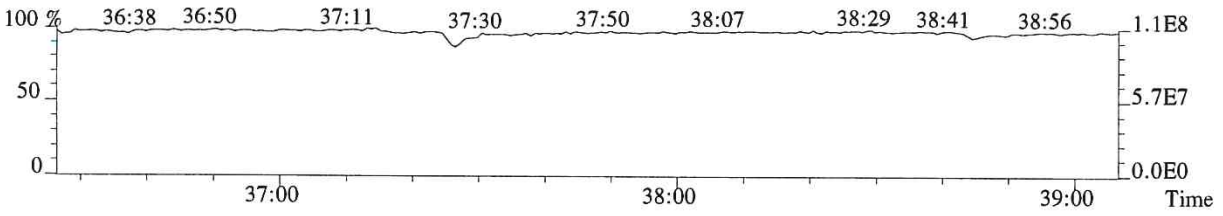
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1544.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

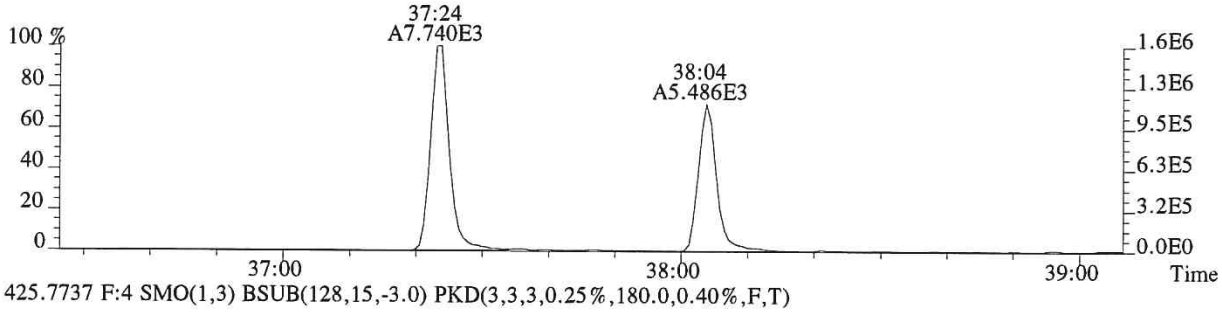


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

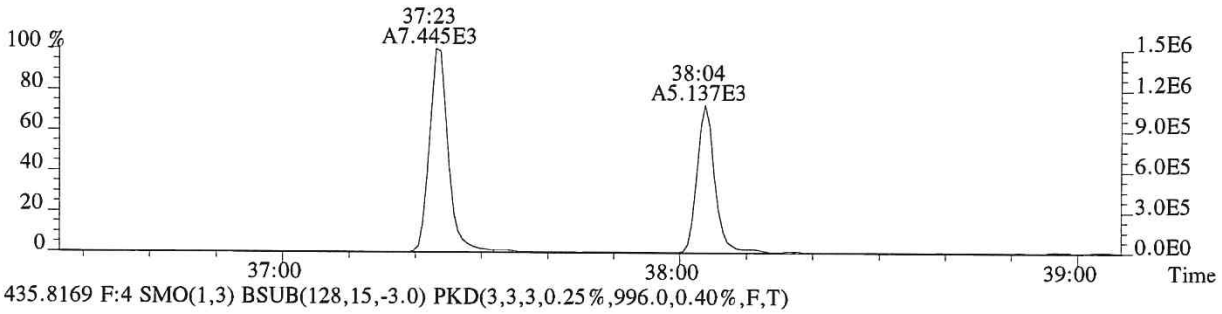


017135

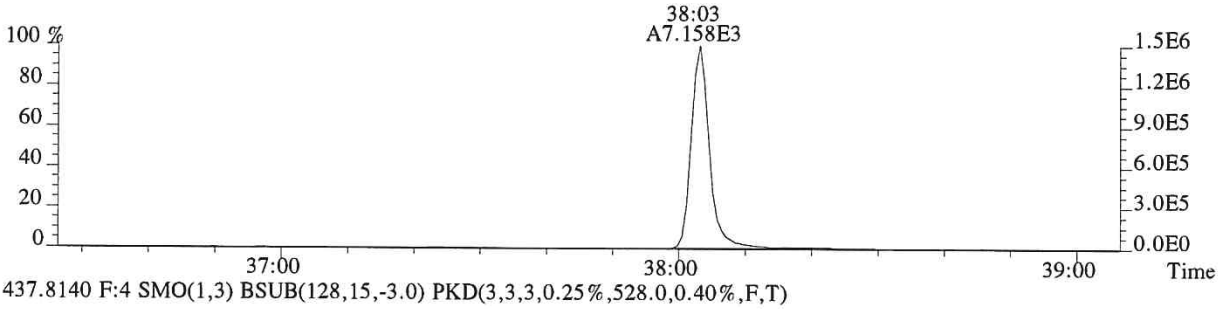
File:P616383 #1-241 Acq: 8-JAN-2019 17:53:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-005
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1560.0,0.40%,F,T)



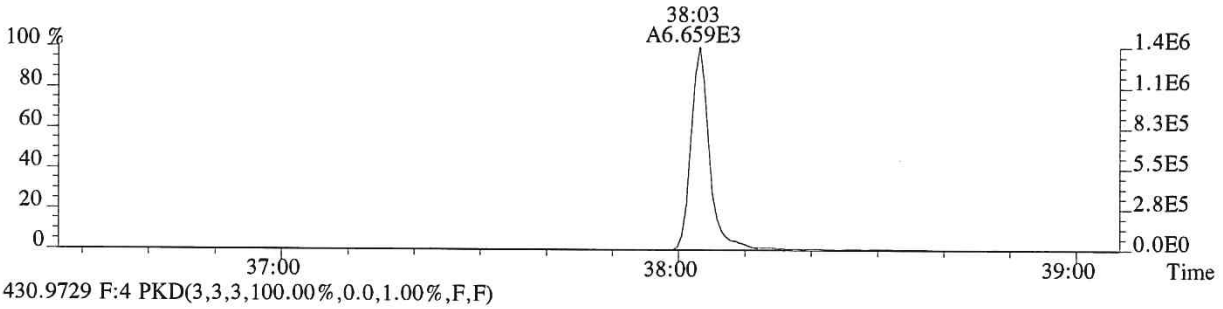
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,180.0,0.40%,F,T)



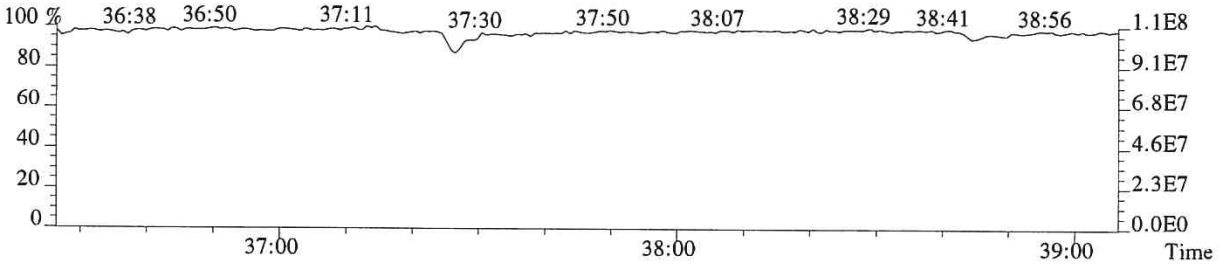
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,996.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,528.0,0.40%,F,T)

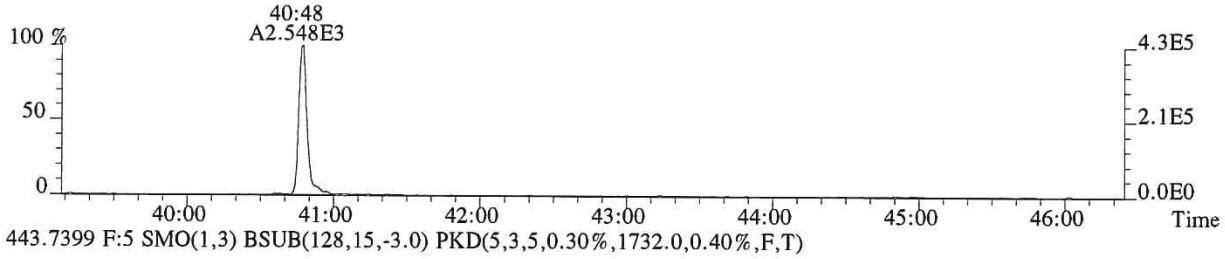


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

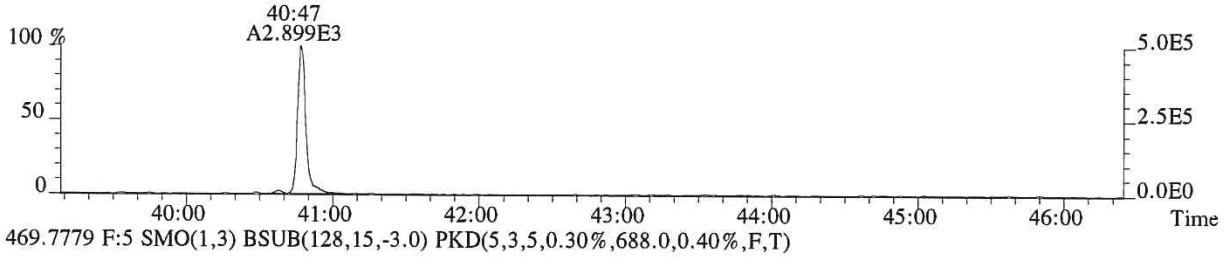


017136

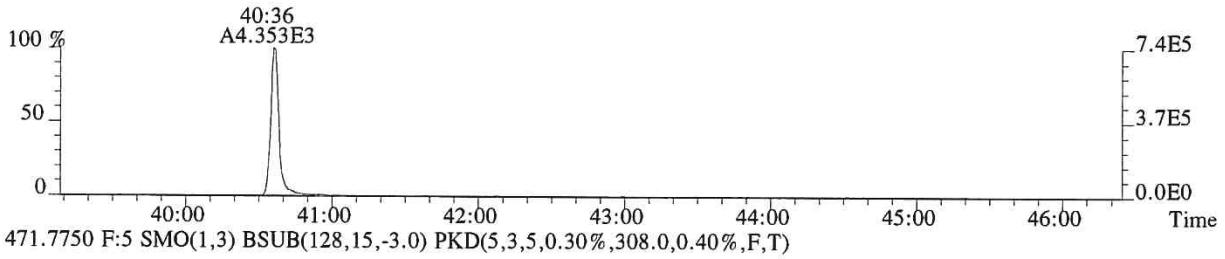
File:P616383 #1-654 Acq: 8-JAN-2019 17:53:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-005
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,344.0,0.40%,F,T)



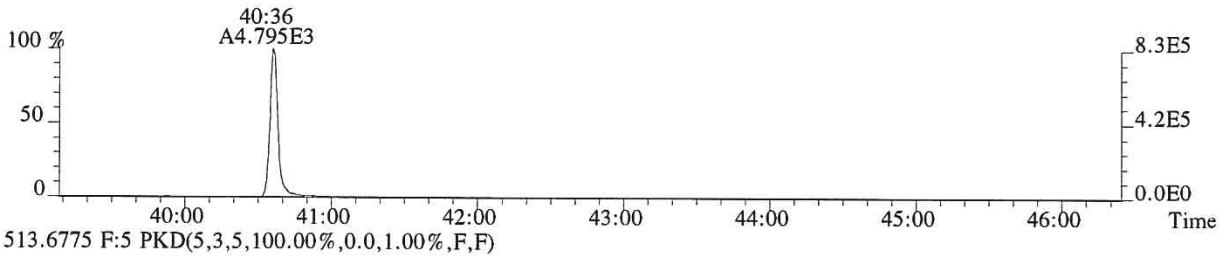
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1732.0,0.40%,F,T)



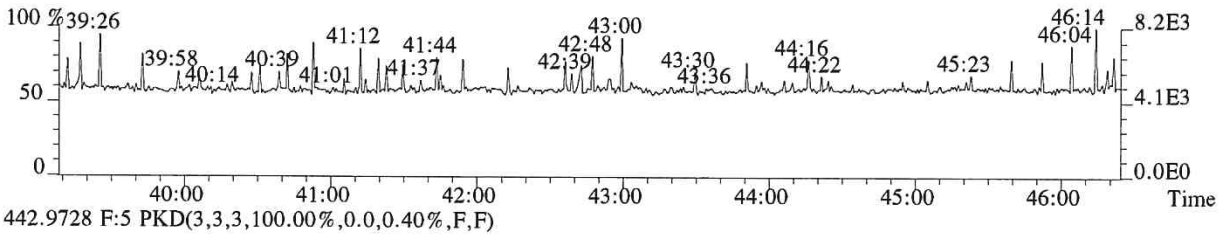
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,688.0,0.40%,F,T)



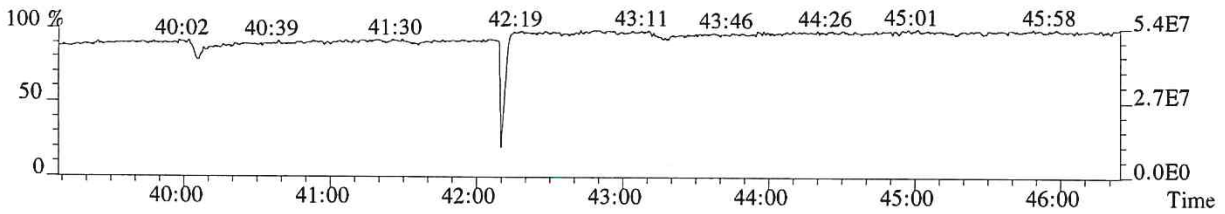
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,308.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

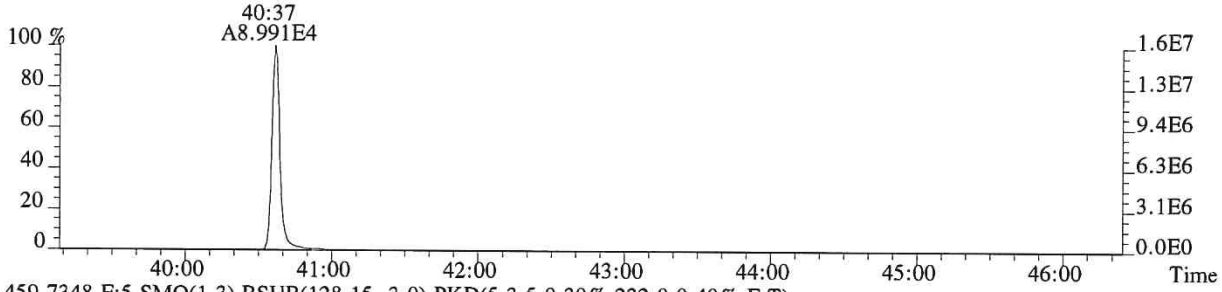


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

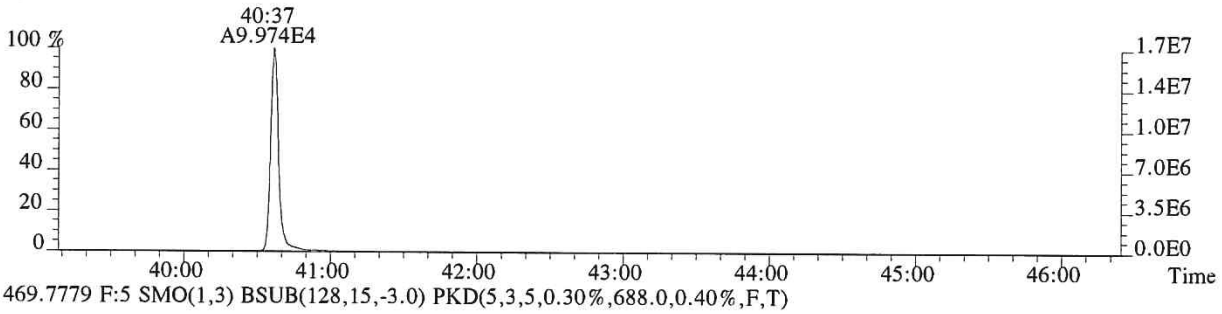


017137

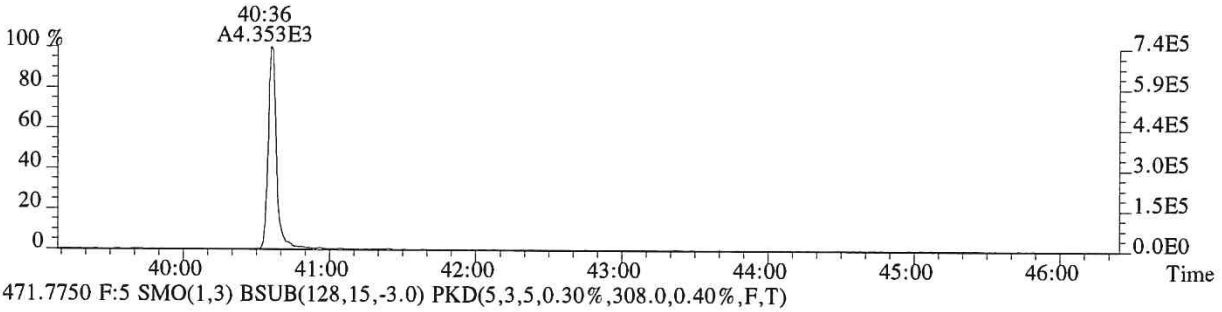
File:P616383 #1-654 Acq: 8-JAN-2019 17:53:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-005
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,208.0,0.40%,F,T)



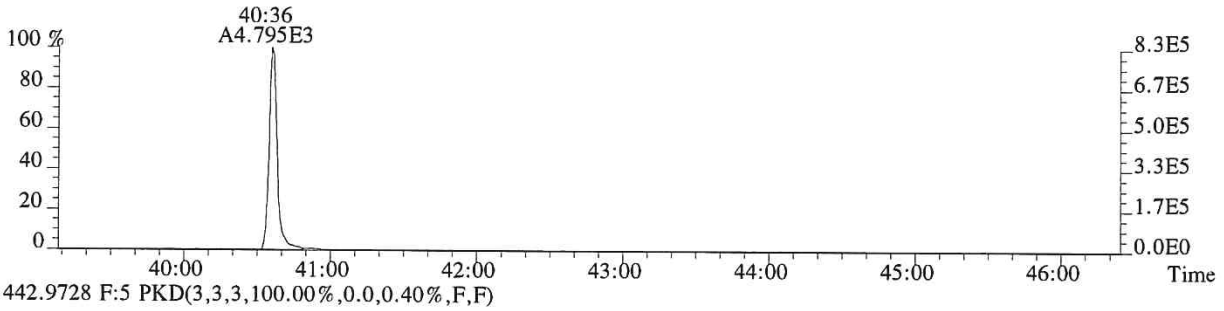
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,232.0,0.40%,F,T)



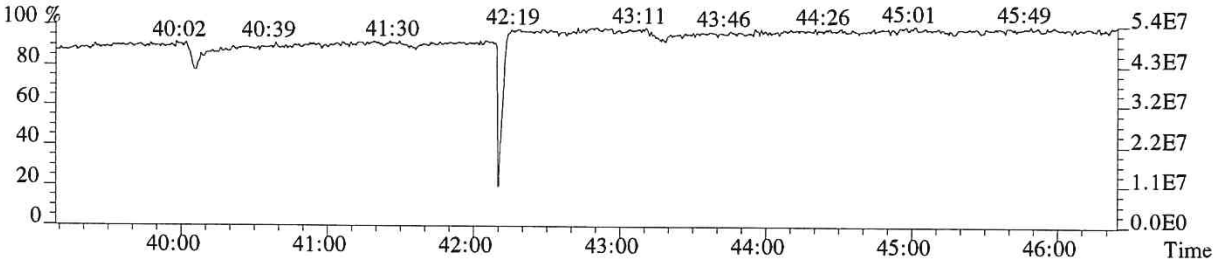
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,688.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,308.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017138

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0173

Run #16 Filename P616384 Samp: 1 Inj: 1 Acquired: 8-JAN-19 18:42:49
Processed: 9-JAN-19 08:58:16 Sample ID: E1801138-006

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:23	1.120e+06	1.411e+06	0.79	yes	yes	1.081
2	Unk	1,2,3,7,8-PeCDF	30:29	7.315e+04	4.585e+04	1.60	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:32	4.955e+04	3.148e+04	1.57	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:23	8.788e+04	7.029e+04	1.25	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:30	2.197e+04	1.736e+04	1.27	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:03	4.246e+03	3.406e+03	1.25	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:51	6.303e+03	5.058e+03	1.25	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	1.931e+04	1.803e+04	1.07	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	4.412e+03	4.320e+03	1.02	yes	no	1.463
10	Unk	OCDF	40:48	4.368e+04	4.956e+04	0.88	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:25	2.705e+05	3.435e+05	0.79	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:50	4.061e+03	2.459e+03	1.65	yes	yes	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:12	1.311e+02	1.485e+02	0.88	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:17	7.955e+02	5.830e+02	1.36	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:32	3.443e+02	2.803e+02	1.23	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	1.685e+04	1.594e+04	1.06	yes	no	1.112
17	Unk	OCDD	40:38	9.674e+04	1.078e+05	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:22	1.498e+04	1.927e+04	0.78	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:28	2.273e+04	1.406e+04	1.62	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:30	2.089e+04	1.317e+04	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:23	8.202e+03	1.542e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	9.155e+03	1.686e+04	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:03	8.562e+03	1.599e+04	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:49	7.460e+03	1.424e+04	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:08	4.568e+03	9.734e+03	0.47	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	3.519e+03	8.158e+03	0.43	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:23	7.091e+03	8.583e+03	0.83	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:48	1.549e+04	9.733e+03	1.59	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:11	1.116e+04	8.656e+03	1.29	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:17	1.002e+04	7.957e+03	1.26	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:04	8.007e+03	7.357e+03	1.09	yes	no	0.857
32	IS	13C-OCDD	40:37	4.808e+03	5.292e+03	0.91	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:38	1.608e+04	2.039e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:31	1.737e+04	1.362e+04	1.28	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:25	1.415e+04				no	1.086

$$\text{OCDD} = \frac{(9.674e+04 + 1.078e+05) \times 4000\ \text{pg} \times 1}{(4.808e+03 + 5.292e+03) \times 10.143\ \text{g} \times 66.0 / 100 \times 1.157} = 10458.59\ \text{pg/kg}$$

LM 01/09/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0173

Run #16 Filename P616384 Samp: 1 Inj: 1 Acquired: 8-JAN-19 18:42:49
Processed: 9-JAN-19 08:58:16 LAB. ID: E1801138-006

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.43e+08	2.37e+03	6.0e+04	1.81e+08	3.67e+03	4.9e+04
2	1,2,3,7,8-PeCDF	1.33e+07	4.04e+03	3.3e+03	8.31e+06	5.84e+03	1.4e+03
3	2,3,4,7,8-PeCDF	7.87e+06	4.04e+03	1.9e+03	4.95e+06	5.84e+03	8.5e+02
4	1,2,3,4,7,8-HxCDF	1.87e+07	3.84e+03	4.9e+03	1.49e+07	2.97e+03	5.0e+03
5	1,2,3,6,7,8-HxCDF	4.47e+06	3.84e+03	1.2e+03	3.54e+06	2.97e+03	1.2e+03
6	2,3,4,6,7,8-HxCDF	9.26e+05	3.84e+03	2.4e+02	7.41e+05	2.97e+03	2.5e+02
7	1,2,3,7,8,9-HxCDF	1.24e+06	3.84e+03	3.2e+02	1.02e+06	2.97e+03	3.4e+02
8	1,2,3,4,6,7,8-HpCDF	4.33e+06	1.18e+03	3.7e+03	4.06e+06	1.00e+03	4.1e+03
9	1,2,3,4,7,8,9-HpCDF	9.55e+05	1.18e+03	8.1e+02	9.38e+05	1.00e+03	9.4e+02
10	OCDF	7.74e+06	2.56e+02	3.0e+04	8.95e+06	2.19e+03	4.1e+03
11	2,3,7,8-TCDD	4.45e+07	6.18e+03	7.2e+03	5.64e+07	2.23e+03	2.5e+04
12	1,2,3,7,8-PeCDD	6.93e+05	1.18e+03	5.9e+02	4.33e+05	8.32e+03	5.2e+01
13	1,2,3,4,7,8-HxCDD	2.70e+04	1.06e+03	2.6e+01	3.07e+04	1.98e+03	1.6e+01
14	1,2,3,6,7,8-HxCDD	1.73e+05	1.06e+03	1.6e+02	1.33e+05	1.98e+03	6.8e+01
15	1,2,3,7,8,9-HxCDD	7.14e+04	1.06e+03	6.8e+01	6.13e+04	1.98e+03	3.1e+01
16	1,2,3,4,6,7,8-HpCDD	3.66e+06	5.28e+02	6.9e+03	3.49e+06	5.66e+03	6.2e+02
17	OCDD	1.78e+07	3.52e+02	5.0e+04	1.98e+07	3.24e+02	6.1e+04
18	13C-2,3,7,8-TCDF	2.02e+06	1.73e+04	1.2e+02	2.54e+06	1.16e+04	2.2e+02
19	13C-1,2,3,7,8-PeCDF	4.12e+06	8.27e+03	5.0e+02	2.52e+06	6.05e+03	4.2e+02
20	13C-2,3,4,7,8-PeCDF	3.63e+06	8.27e+03	4.4e+02	2.30e+06	6.05e+03	3.8e+02
21	13C-1,2,3,4,7,8-HxCDF	1.70e+06	4.21e+03	4.0e+02	3.26e+06	4.38e+03	7.4e+02
22	13C-1,2,3,6,7,8-HxCDF	1.87e+06	4.21e+03	4.4e+02	3.47e+06	4.38e+03	7.9e+02
23	13C-2,3,4,6,7,8-HxCDF	1.76e+06	4.21e+03	4.2e+02	3.32e+06	4.38e+03	7.6e+02
24	13C-1,2,3,7,8,9-HxCDF	1.58e+06	4.21e+03	3.8e+02	2.94e+06	4.38e+03	6.7e+02
25	13C-1,2,3,4,6,7,8-HpCDF	1.02e+06	2.57e+03	4.0e+02	2.15e+06	3.24e+03	6.6e+02
26	13C-1,2,3,4,7,8,9-HpCDF	7.43e+05	2.57e+03	2.9e+02	1.66e+06	3.24e+03	5.1e+02
27	13C-2,3,7,8-TCDD	1.18e+06	1.32e+04	8.9e+01	1.40e+06	3.89e+03	3.6e+02
28	13C-1,2,3,7,8-PeCDD	2.97e+06	3.12e+03	9.5e+02	1.79e+06	3.44e+03	5.2e+02
29	13C-1,2,3,4,7,8-HxCDD	2.41e+06	1.11e+03	2.2e+03	1.84e+06	1.39e+03	1.3e+03
30	13C-1,2,3,6,7,8-HxCDD	2.09e+06	1.11e+03	1.9e+03	1.67e+06	1.39e+03	1.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.75e+06	1.55e+03	1.1e+03	1.60e+06	5.64e+02	2.8e+03
32	13C-OCDD	8.91e+05	8.68e+02	1.0e+03	9.47e+05	2.92e+02	3.2e+03
33	13C-1,2,3,4-TCDD	2.15e+06	1.32e+04	1.6e+02	2.80e+06	3.89e+03	7.2e+02
34	13C-1,2,3,7,8,9-HxCDD	3.69e+06	1.11e+03	3.3e+03	2.82e+06	1.39e+03	2.0e+03
35	37Cl-2,3,7,8-TCDD	2.27e+06	3.37e+03	6.7e+02			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0173

Entry: 36 Totals Name: Total Tetra-Furans

Run: 16 File: P616384 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 18:42:49 Processed: 9-JAN-19 08:58:16

Mass: 303.9020 305.8990 Tot Response: 4.88e+06 RRF: 1.081

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:15	9.82e+03	1.25e+04	0.79	yes	2.23e+04		n	n
2	22:32	5.15e+04	6.52e+04	0.79	yes	1.17e+05		n	n
3	22:52	1.70e+04	2.16e+04	0.79	yes	3.86e+04		n	n
4	22:59	2.22e+03	2.84e+03	0.78	yes	5.06e+03		n	n
5	23:10	4.53e+04	5.67e+04	0.80	yes	1.02e+05		n	n
6	23:32	9.39e+03	1.21e+04	0.78	yes	2.15e+04		n	n
7	23:52	8.50e+04	1.08e+05	0.79	yes	1.93e+05		n	n
8	24:20	5.36e+05	6.72e+05	0.80	yes	1.21e+06		n	n
9	24:39	2.51e+04	3.24e+04	0.77	yes	5.75e+04		n	n
10	25:16	7.12e+04	9.00e+04	0.79	yes	1.61e+05		y	y
11	25:23	1.12e+06	1.41e+06	0.79	yes	2.53e+06	2,3,7,8-TCDF	y	y
12	25:51	8.22e+04	1.03e+05	0.80	yes	1.86e+05		n	n
13	26:08	1.33e+04	1.73e+04	0.77	yes	3.05e+04		n	n
14	27:43	9.17e+04	1.14e+05	0.80	yes	2.06e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0173

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 16 File: P616384 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 18:42:49 Processed: 9-JAN-19 08:58:16

Mass: 319.8970 321.8940 Tot Response: 6.81e+05 RRF: 1.049

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:03	4.07e+03	5.07e+03	0.80	yes	9.14e+03		n	n
2	26:25	2.71e+05	3.43e+05	0.79	yes	6.14e+05	2,3,7,8-TCDD	n	n
3	26:47	2.58e+04	3.15e+04	0.82	yes	5.74e+04		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0173

Entry: 38 Totals Name: Total Penta-Furans1

Run: 16 File: P616384 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 18:42:49 Processed: 9-JAN-19 08:58:16

Mass: 339.8600 341.8570 Tot Response: 4.23e+03 RRF: 1.130

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:42	2.63e+03	1.60e+03 1.64	yes	4.23e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0173

Entry: 39 Totals Name: Total Penta-Furans2

Run: 16 File: P616384 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 18:42:49 Processed: 9-JAN-19 08:58:16

Mass: 339.8600 341.8570 Tot Response: 3.14e+05 RRF: 1.130

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:17	9.85e+02	6.69e+02	1.47	yes	1.65e+03		n	n
2	29:26	3.34e+04	2.16e+04	1.55	yes	5.51e+04		n	n
3	30:04	1.31e+03	9.42e+02	1.39	yes	2.26e+03		n	n
4	30:09	1.16e+03	7.15e+02	1.63	yes	1.88e+03		n	n
5	30:18	6.89e+03	4.38e+03	1.57	yes	1.13e+04		n	n
6	30:29	7.31e+04	4.59e+04	1.60	yes	1.19e+05	1,2,3,7,8-PeCDF	n	n
7	30:46	2.18e+04	1.41e+04	1.54	yes	3.60e+04		n	n
8	31:24	7.15e+02	5.32e+02	1.34	yes	1.25e+03		n	n
9	31:32	4.95e+04	3.15e+04	1.57	yes	8.10e+04	2,3,4,7,8-PeCDF	n	n
10	32:29	2.59e+03	1.82e+03	1.42	yes	4.40e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0173

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 16 File: P616384 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 18:42:49 Processed: 9-JAN-19 08:58:16

Mass: 355.8550 357.8520 Tot Response: 8.69e+03 RRF: 0.9288

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:30	6.38e+02	3.89e+02	1.64	yes	1.03e+03		n	n
2	30:00	1.82e+02	1.33e+02	1.37	yes	3.15e+02		n	n
3	30:42	3.09e+02	1.80e+02	1.71	yes	4.90e+02		n	n
4	30:48	2.06e+02	1.36e+02	1.52	yes	3.42e+02		n	n
5	31:50	4.06e+03	2.46e+03	1.65	yes	6.52e+03	1,2,3,7,8-PeCDD	y	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0173

Entry: 41 Totals Name: Total Hexa-Furans

Run: 16 File: P616384 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 18:42:49 Processed: 9-JAN-19 08:58:16

Mass: 373.8210 375.8180 Tot Response: 2.44e+05 RRF: 1.324

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:12	1.21e+03	1.00e+03	1.21	yes	2.21e+03		n	n
2	33:22	8.76e+03	6.92e+03	1.27	yes	1.57e+04		n	n
3	33:56	5.42e+03	4.35e+03	1.24	yes	9.77e+03		n	n
4	34:23	8.79e+04	7.03e+04	1.25	yes	1.58e+05	1,2,3,4,7,8-HxCDF	n	n
5	34:30	2.20e+04	1.74e+04	1.27	yes	3.93e+04	1,2,3,6,7,8-HxCDF	n	n
6	35:03	4.25e+03	3.41e+03	1.25	yes	7.65e+03	2,3,4,6,7,8-HxCDF	n	n
7	35:51	6.30e+03	5.06e+03	1.25	yes	1.14e+04	1,2,3,7,8,9-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0173

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 16 File: P616384 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 18:42:49 Processed: 9-JAN-19 08:58:16

Mass: 389.8160 391.8130 Tot Response: 1.45e+04 RRF: 1.092

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:46	3.58e+03	2.83e+03	1.27	yes	6.41e+03		n	n
2	34:19	4.12e+02	3.80e+02	1.08	yes	7.91e+02		n	n
3	34:34	2.94e+03	2.33e+03	1.26	yes	5.26e+03		n	n
4	35:17	7.95e+02	5.83e+02	1.36	yes	1.38e+03	1,2,3,6,7,8-HxCDD	n	n
5	35:32	3.44e+02	2.80e+02	1.23	yes	6.25e+02	1,2,3,7,8,9-HxCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0173

Entry: 43 Totals Name: Total Hepta-Furans

Run: 16 File: P616384 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 18:42:49 Processed: 9-JAN-19 08:58:16

Mass: 407.7820 409.7790 Tot Response: 6.59e+04 RRF: 1.495

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:08	1.93e+04	1.80e+04	1.07	yes	3.73e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	37:25	2.69e+02	2.84e+02	0.95	yes	5.53e+02		n	n
3	37:33	9.90e+03	9.40e+03	1.05	yes	1.93e+04		n	n
4	38:30	4.41e+03	4.32e+03	1.02	yes	8.73e+03	1,2,3,4,7,8,9-HpCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0173

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 16 File: P616384 Sample:1 Injection:1 Function:4

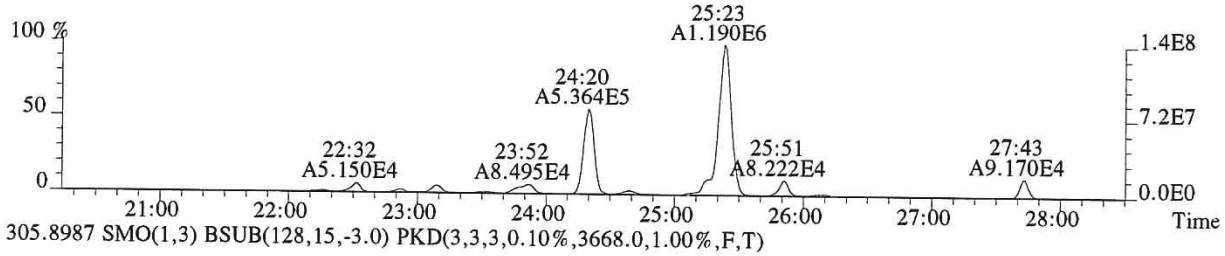
Acquired: 8-JAN-19 18:42:49 Processed: 9-JAN-19 08:58:16

Mass: 423.7770 425.7740 Tot Response: 7.29e+04 RRF: 1.112

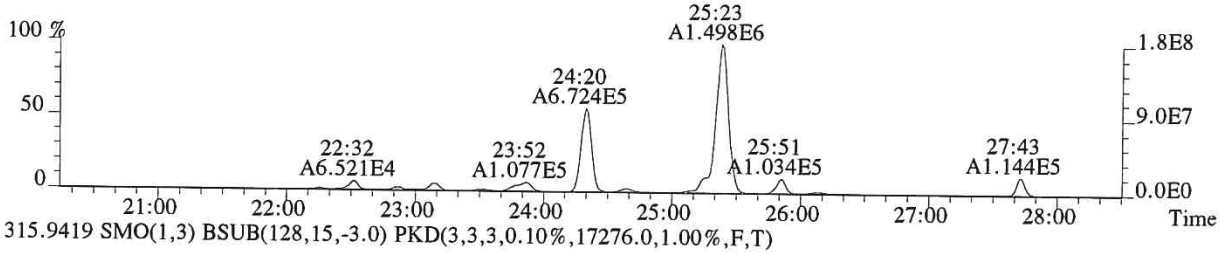
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:24	2.05e+04	1.95e+04	1.05	yes	4.01e+04		n	n
2	38:04	1.68e+04	1.59e+04	1.06	yes	3.28e+04	1,2,3,4,6,7,8-HpCDD	n	n

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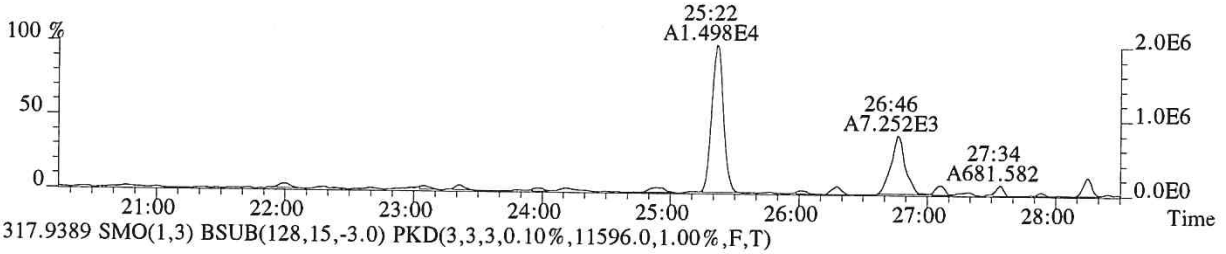
File:P616384 #1-587 Acq: 8-JAN-2019 18:42:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2372.0,1.00%,F,T)



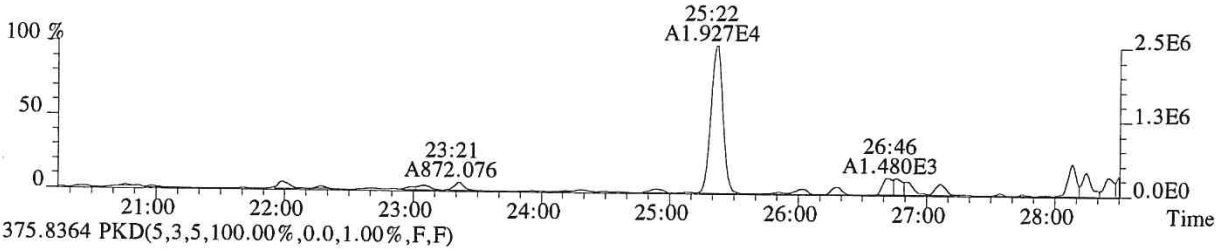
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3668.0,1.00%,F,T)



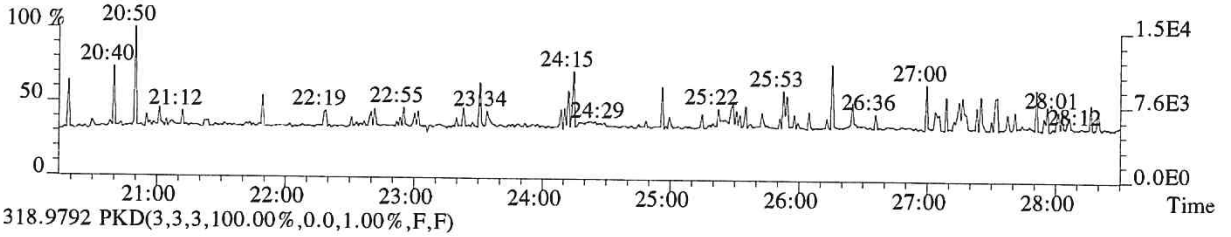
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,17276.0,1.00%,F,T)



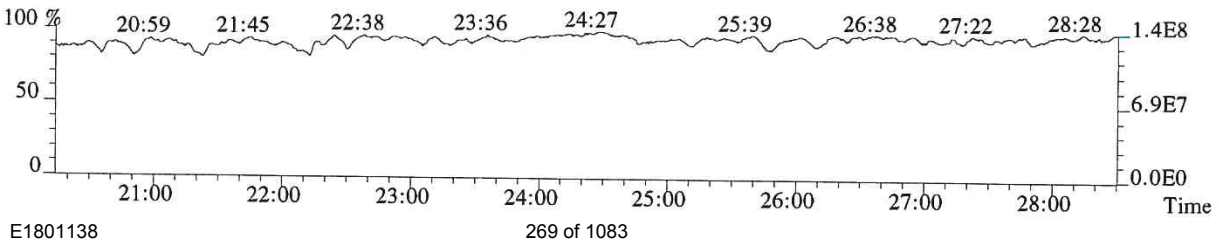
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11596.0,1.00%,F,T)



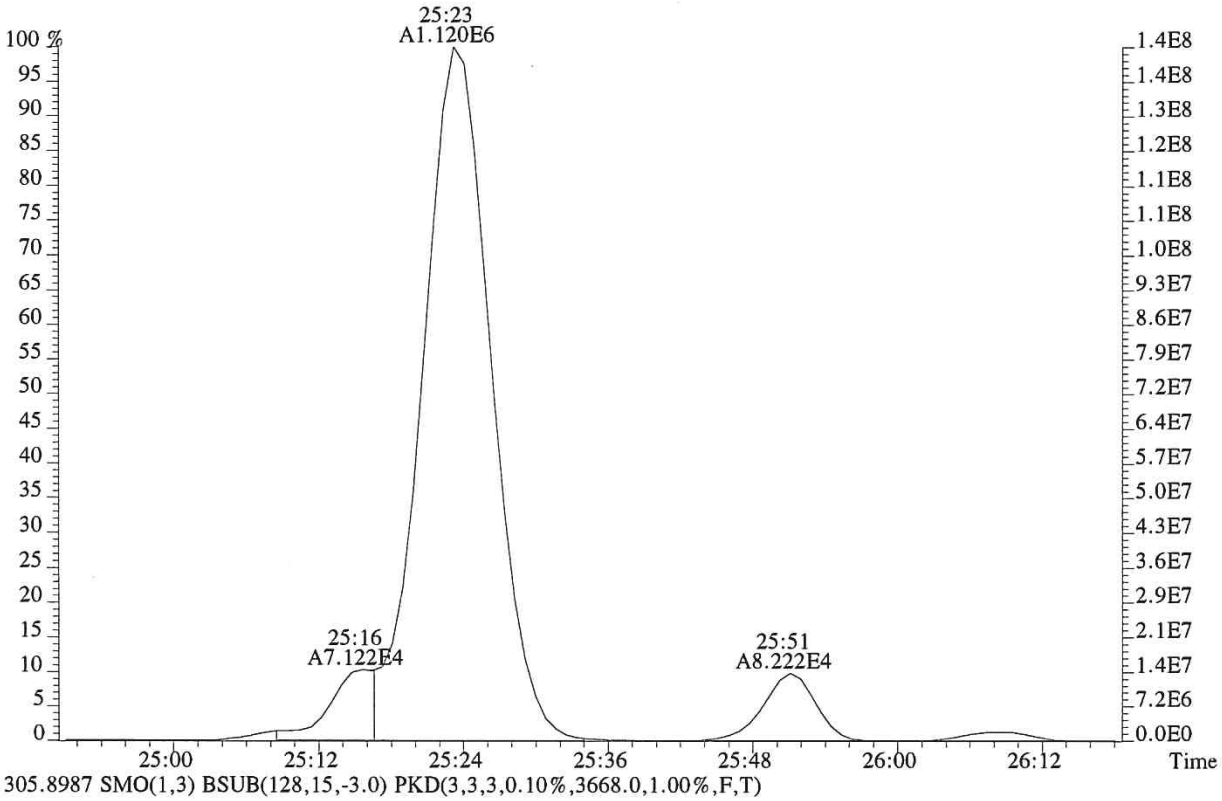
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



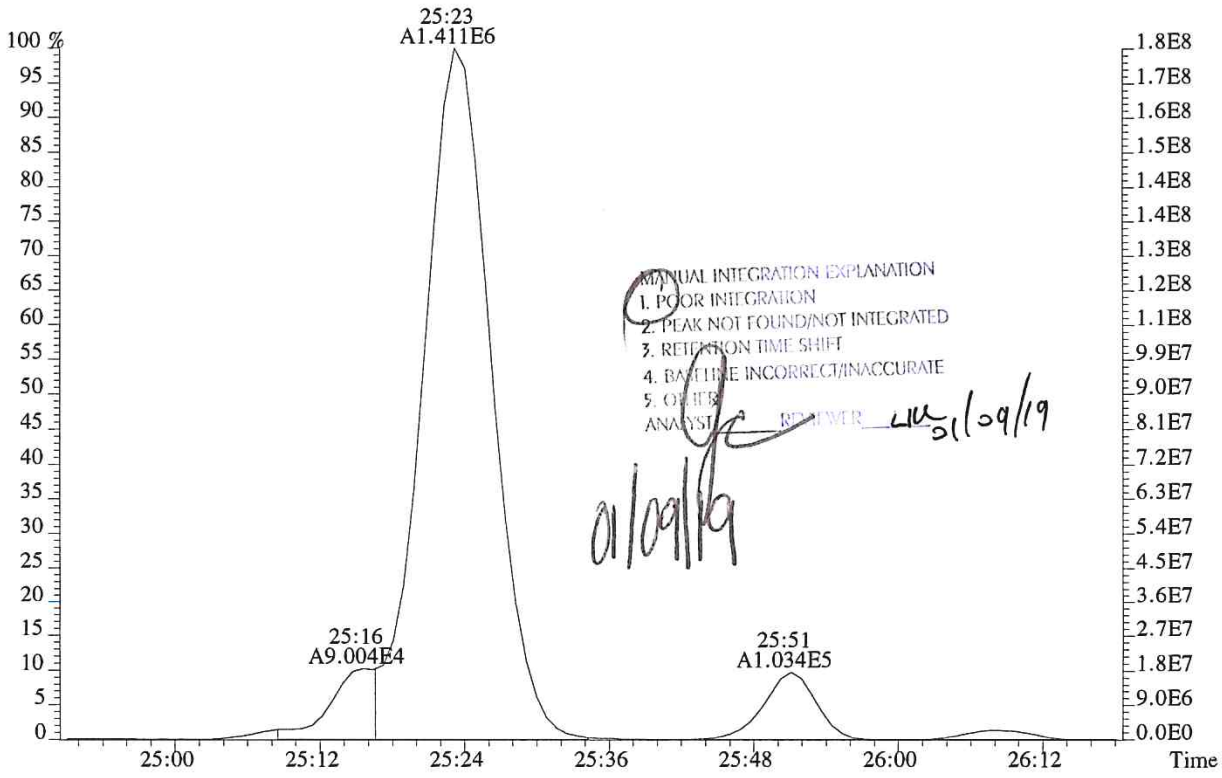
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P616384 #1-587 Acq: 8-JAN-2019 18:42:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2372.0,1.00%,F,T)

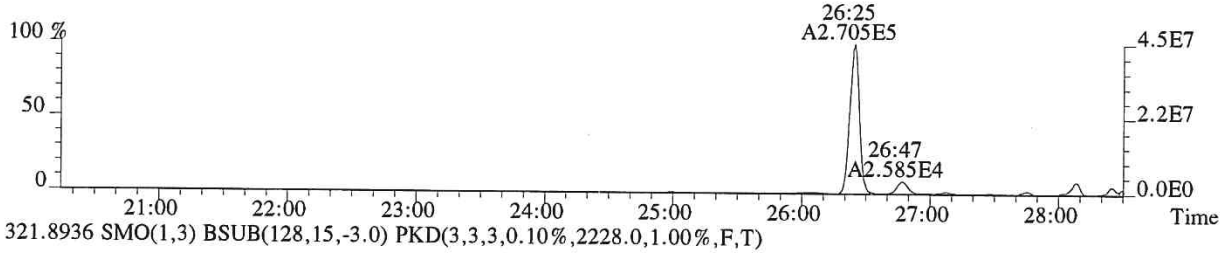


305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3668.0,1.00%,F,T)

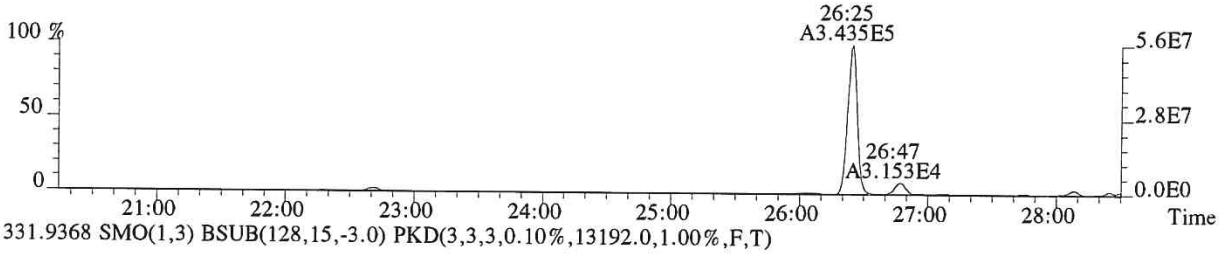


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST [signature] REVIEWER [signature] 01/09/19
01/09/19

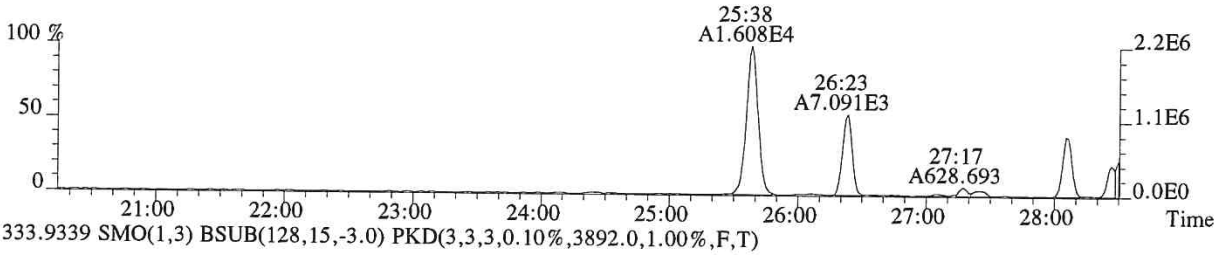
File:P616384 #1-587 Acq: 8-JAN-2019 18:42:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6176.0,1.00%,F,T)



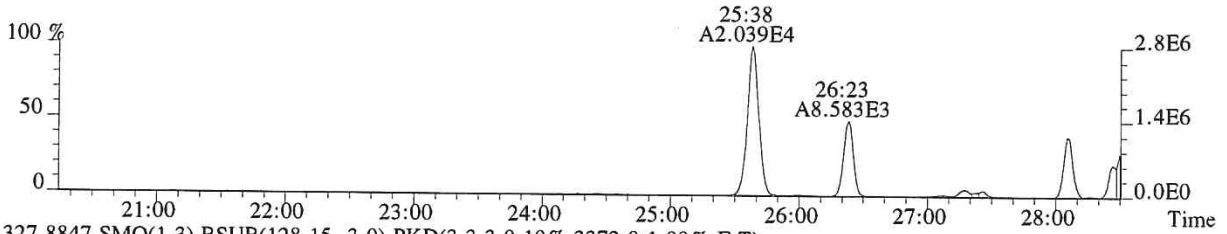
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2228.0,1.00%,F,T)



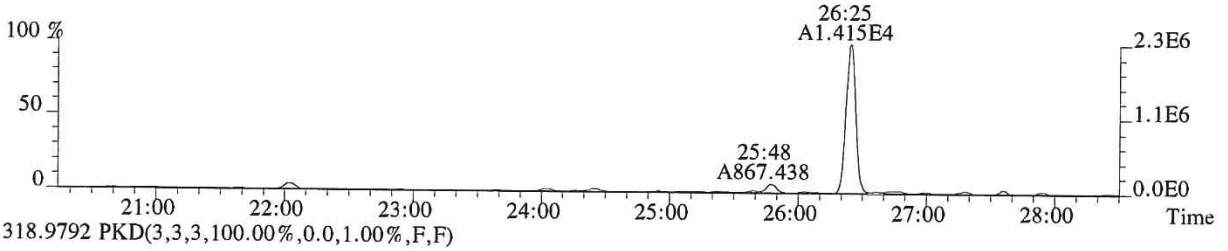
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,13192.0,1.00%,F,T)



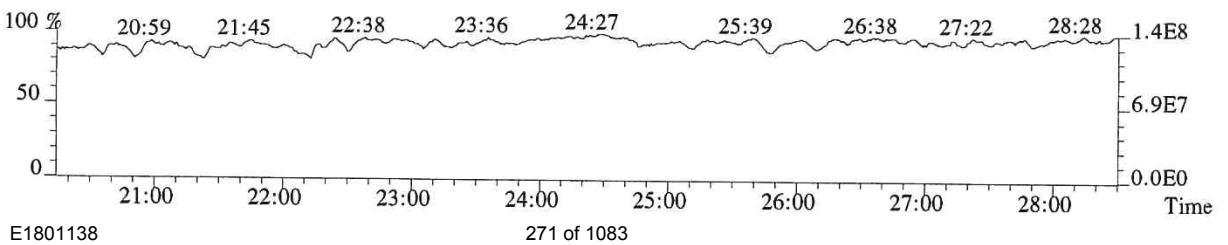
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3892.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3372.0,1.00%,F,T)

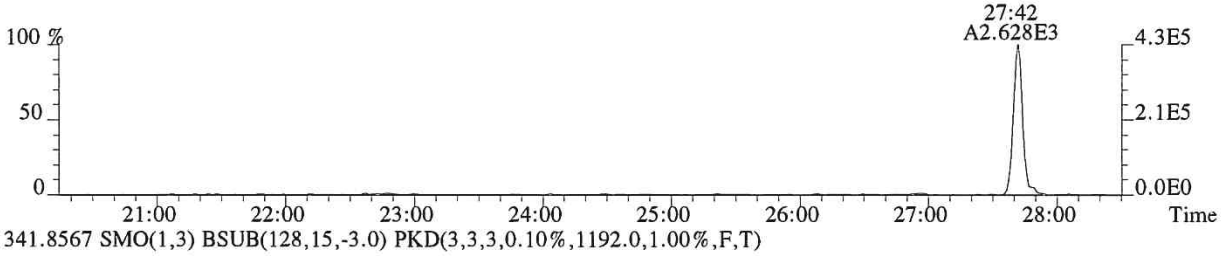


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

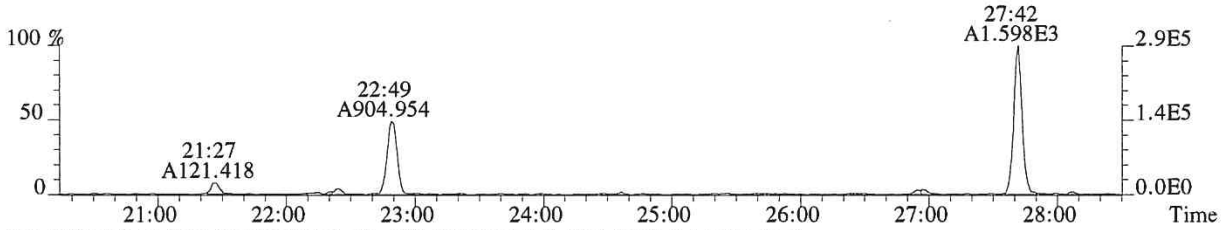


017152

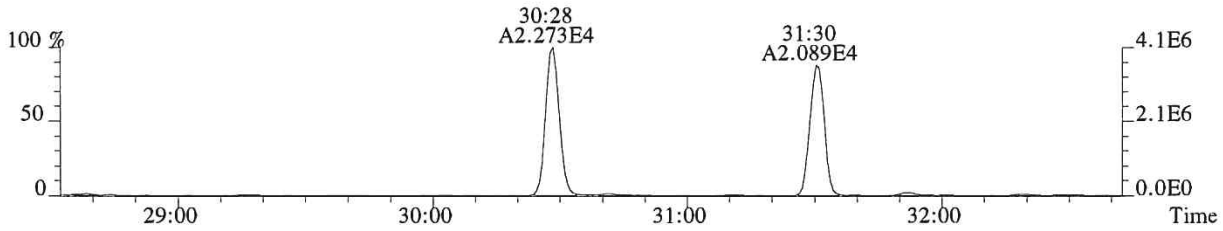
File:P616384 #1-587 Acq: 8-JAN-2019 18:42:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,588.0,1.00%,F,T)



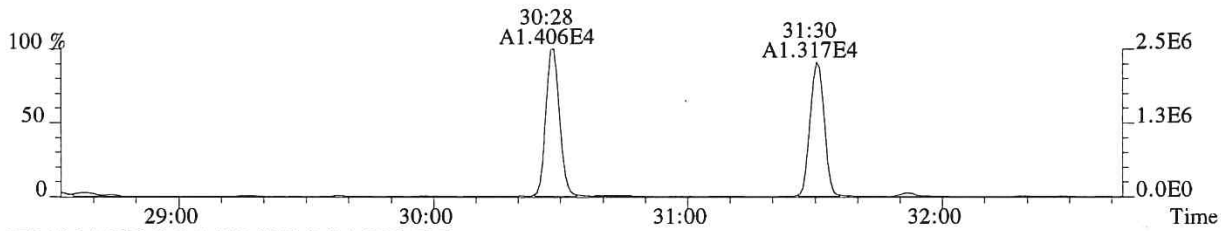
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1192.0,1.00%,F,T)



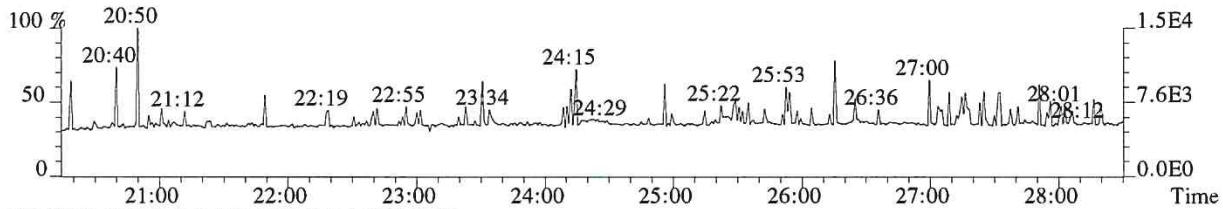
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8268.0,1.00%,F,T)



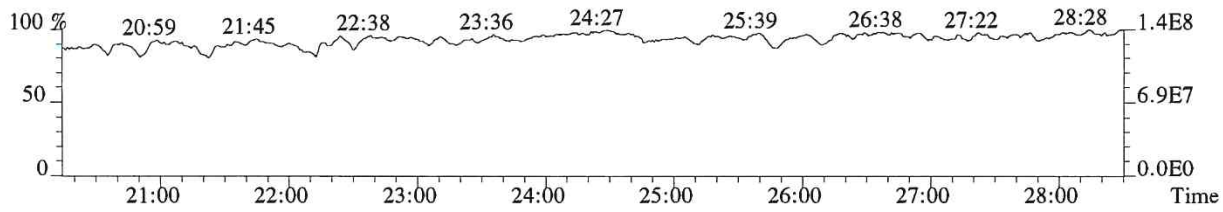
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6052.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

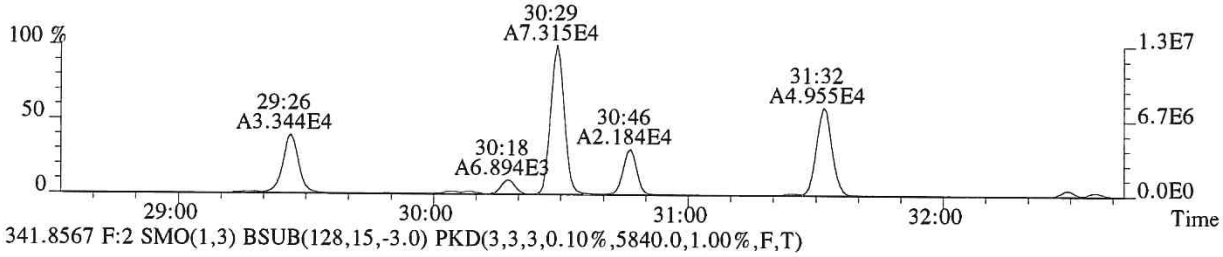


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

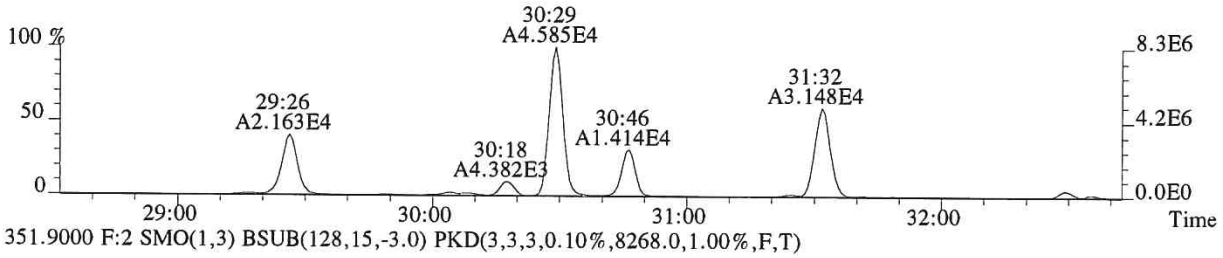


017153

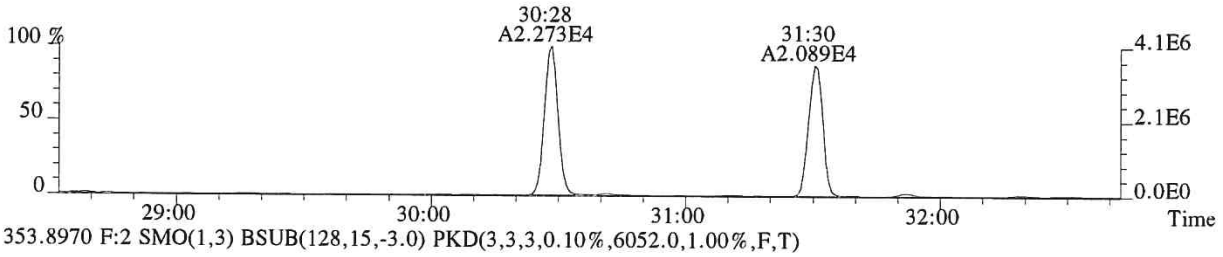
File:P616384 #1-376 Acq: 8-JAN-2019 18:42:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4040.0,1.00%,F,T)



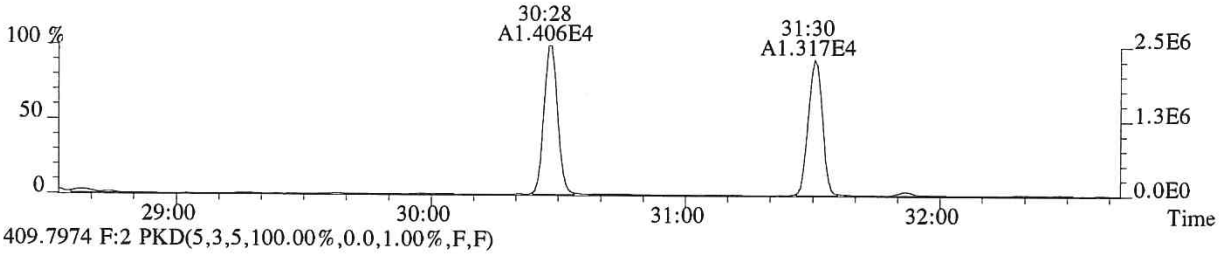
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5840.0,1.00%,F,T)



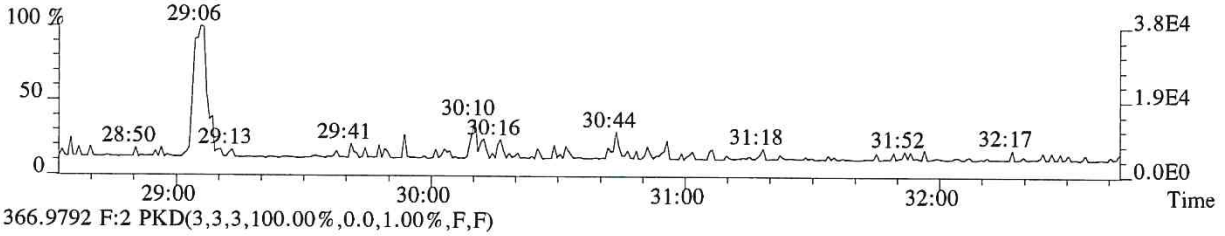
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8268.0,1.00%,F,T)



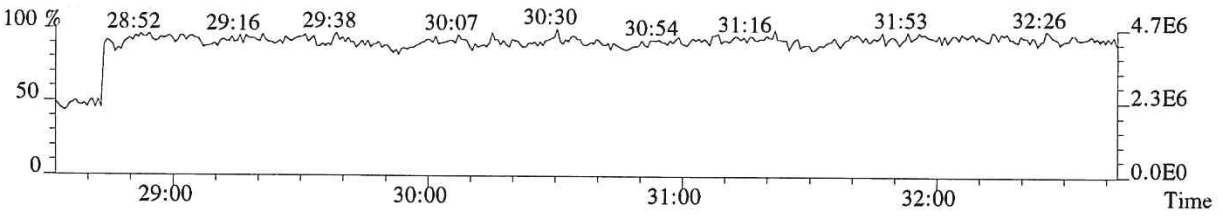
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6052.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

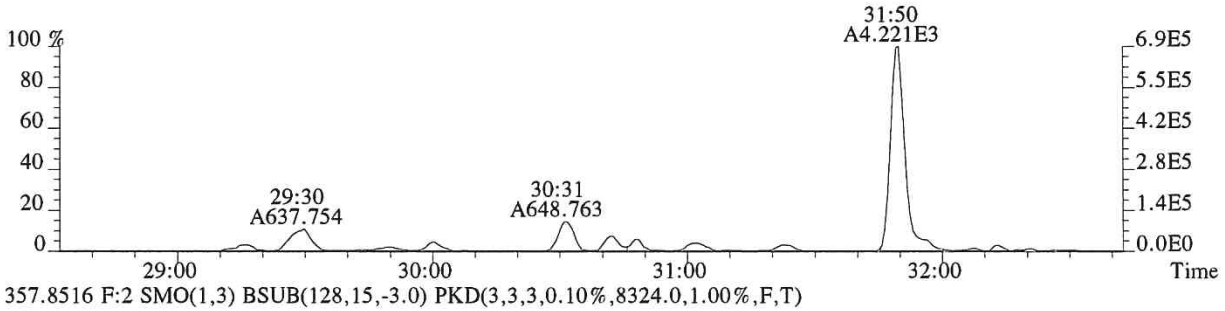


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

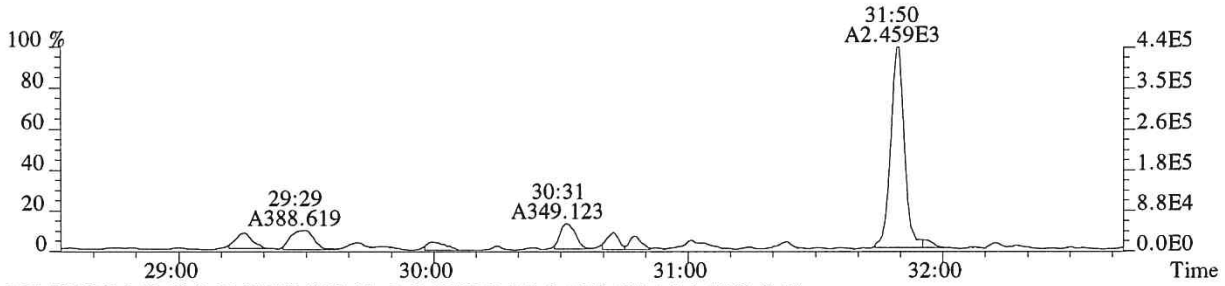


017154

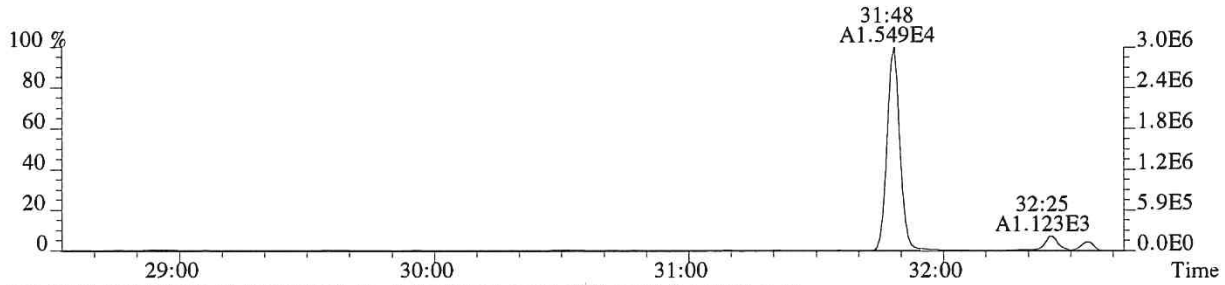
File:P616384 #1-376 Acq: 8-JAN-2019 18:42:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1184.0,1.00%,F,T)



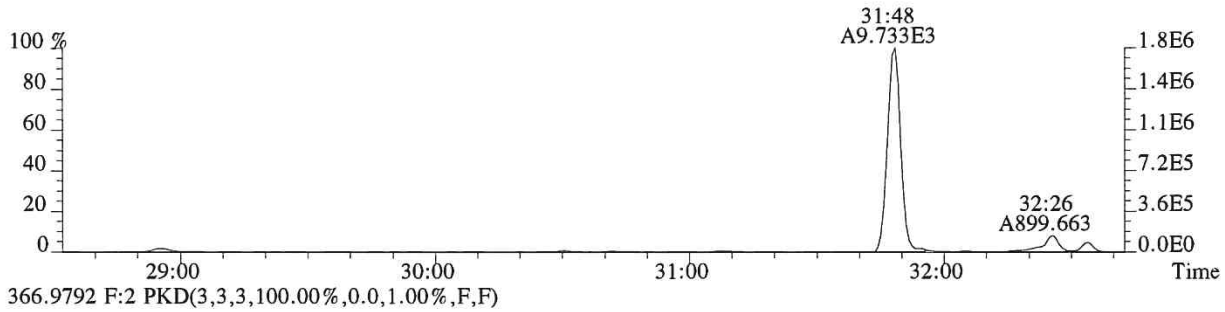
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8324.0,1.00%,F,T)



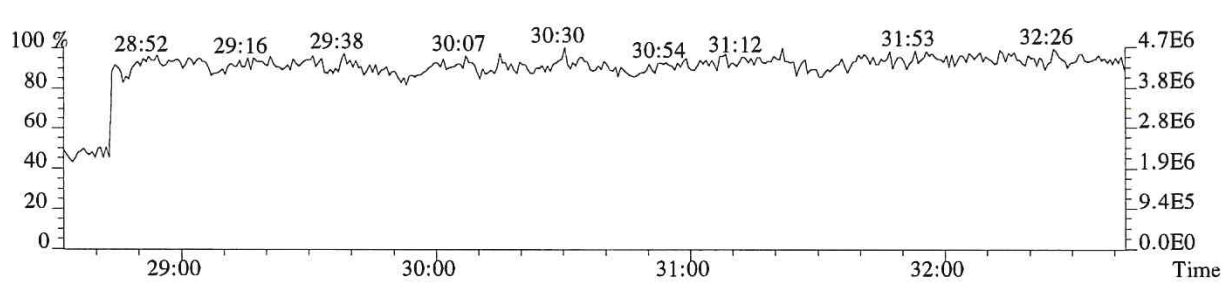
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3124.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3444.0,1.00%,F,T)

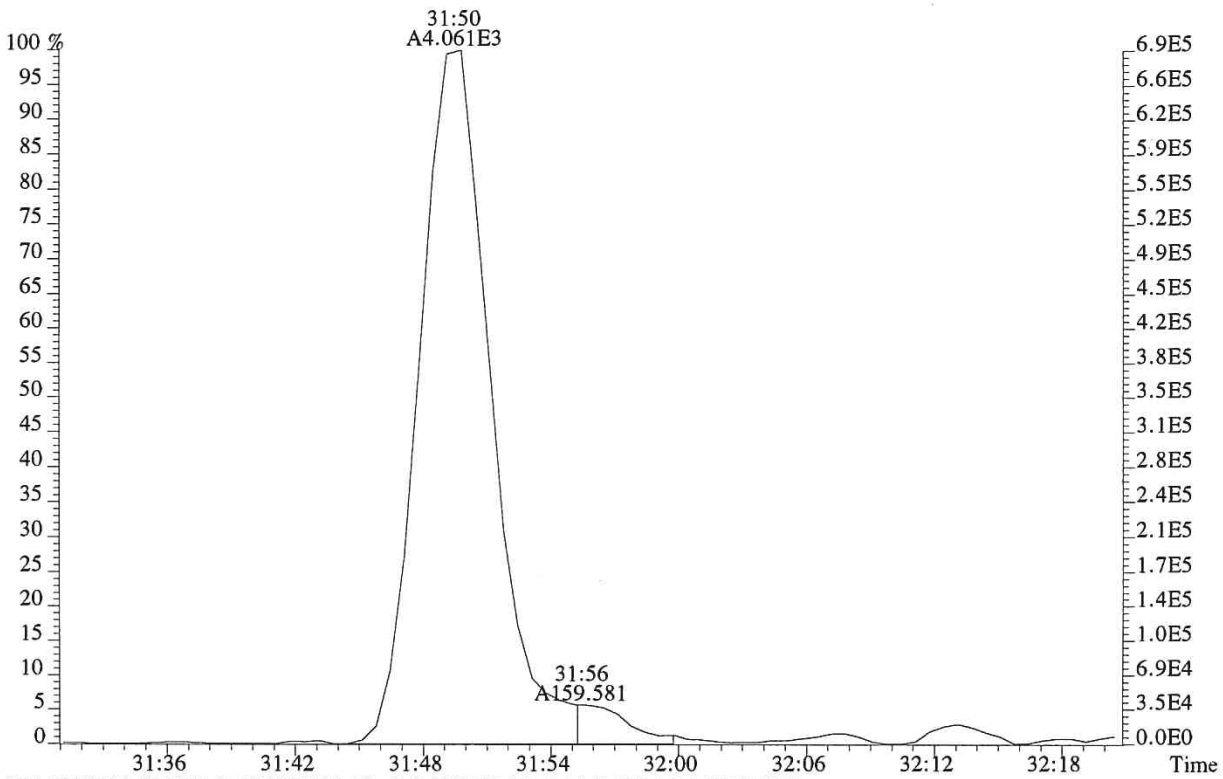


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

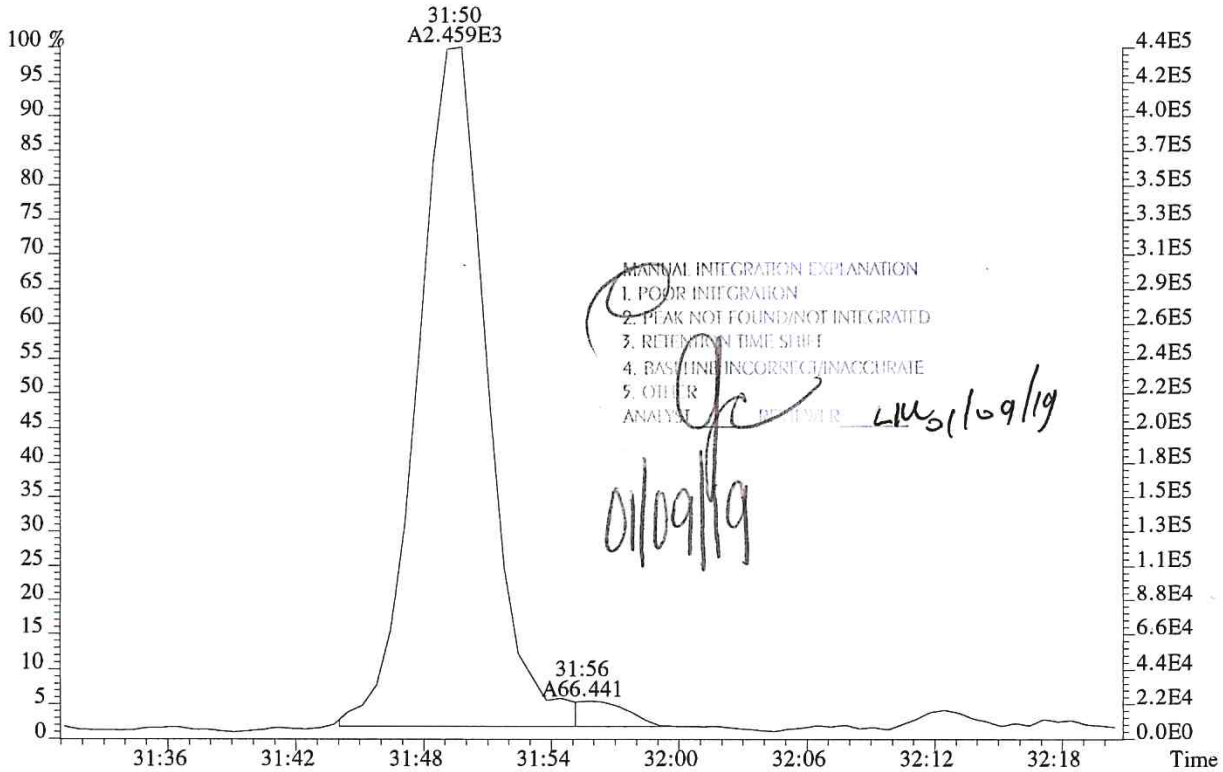


017155

File:P616384 #1-376 Acq: 8-JAN-2019 18:42:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1184.0,1.00%,F,T)



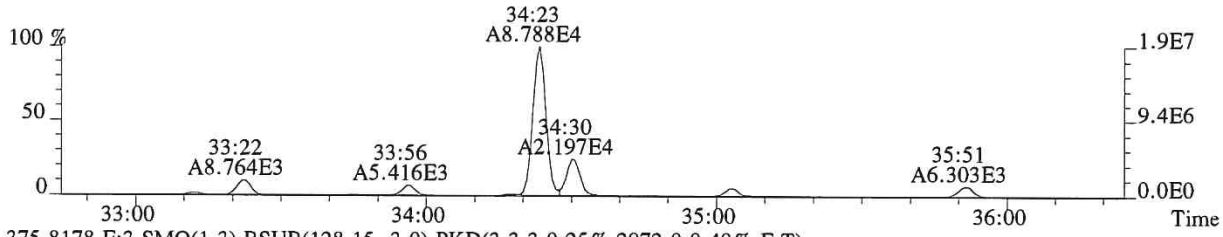
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8324.0,1.00%,F,T)



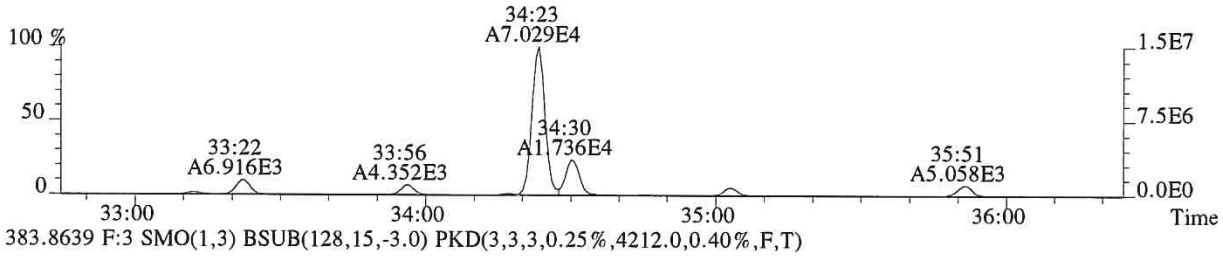
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST [illegible] REVIEWER LMS 01/09/19

01/09/19

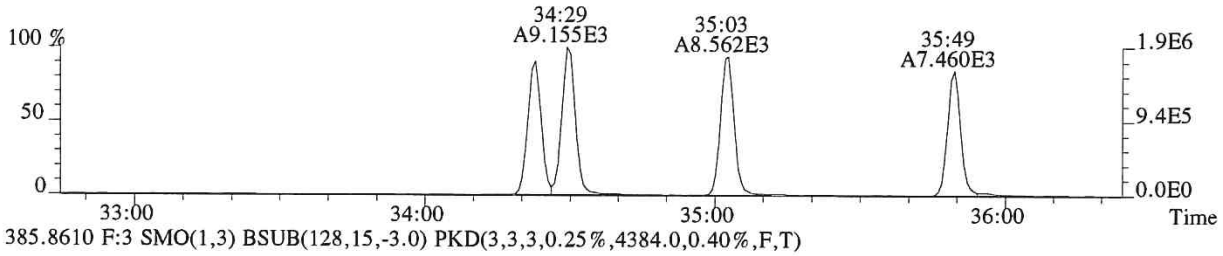
File:P616384 #1-330 Acq: 8-JAN-2019 18:42:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3844.0,0.40%,F,T)



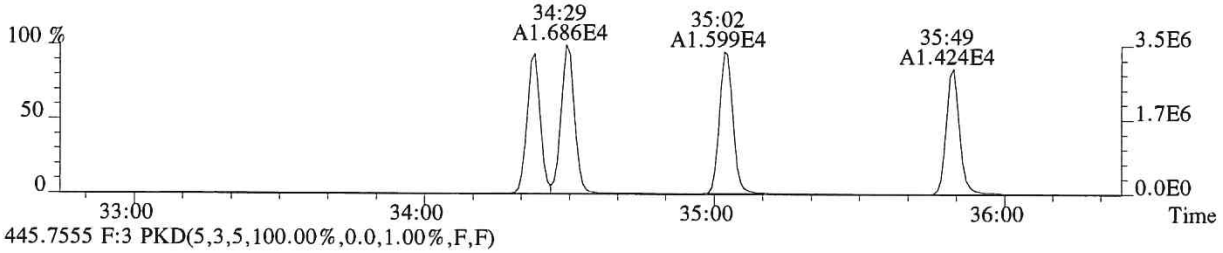
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2972.0,0.40%,F,T)



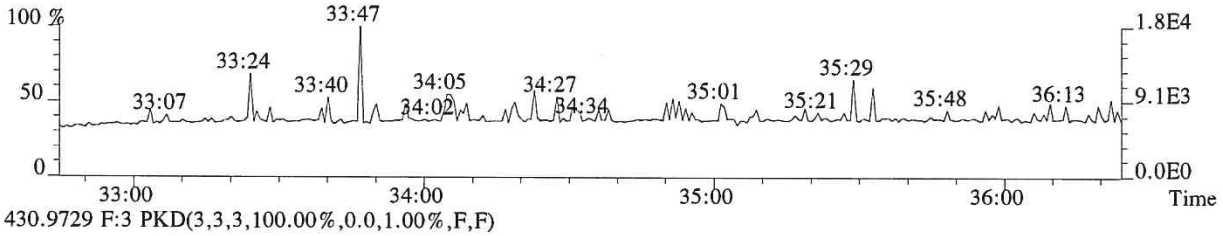
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4212.0,0.40%,F,T)



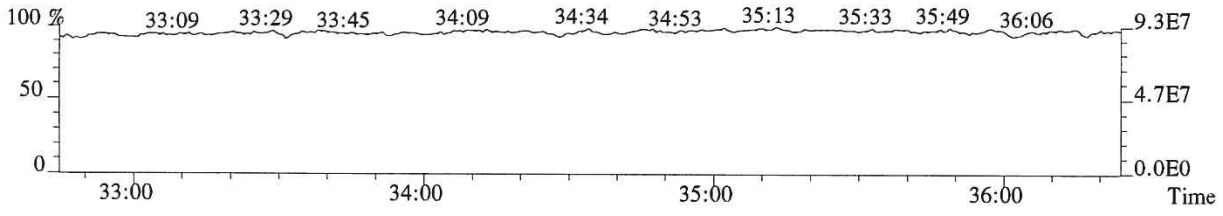
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4384.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

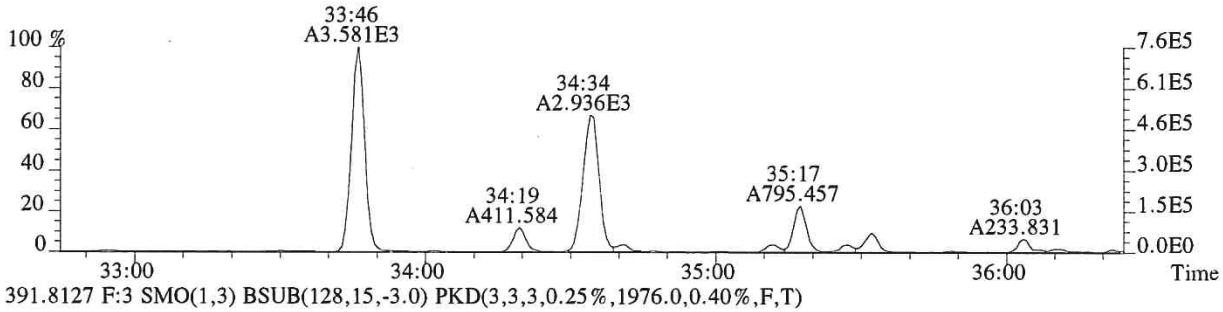


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

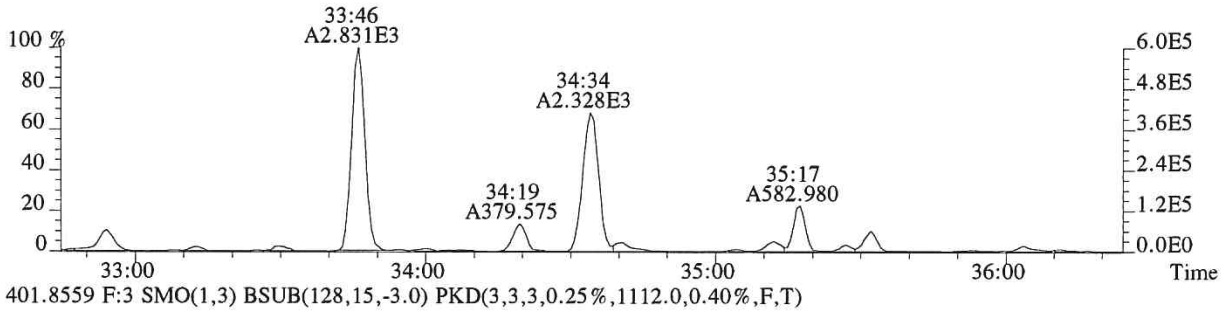


017157

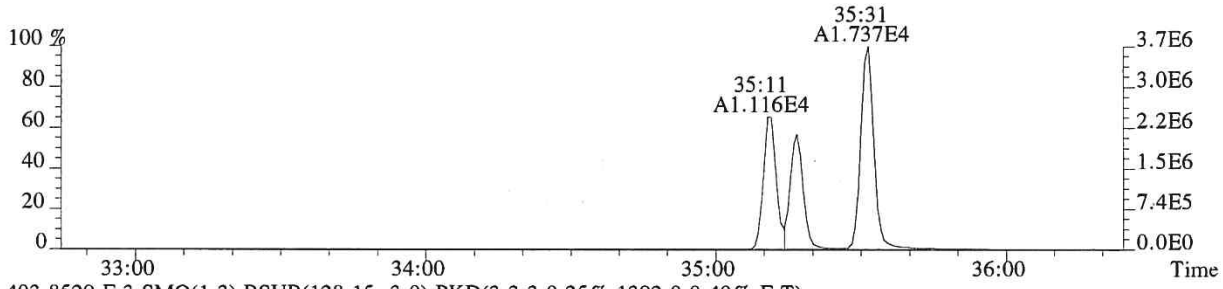
File:P616384 #1-330 Acq: 8-JAN-2019 18:42:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1056.0,0.40%,F,T)



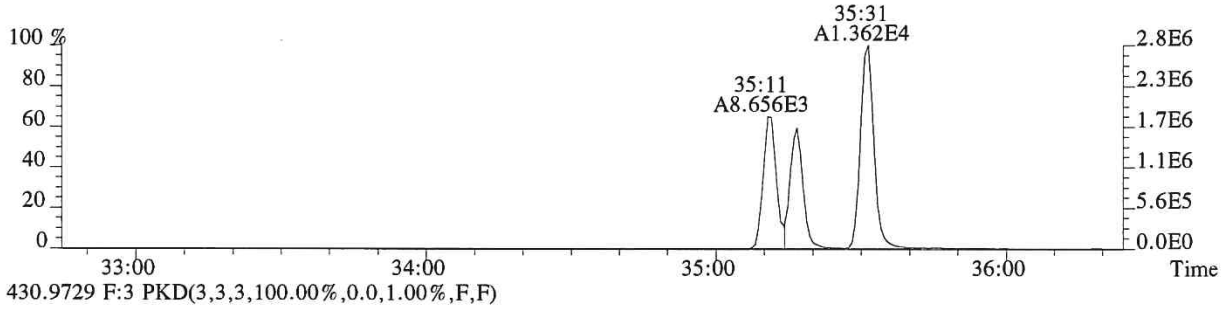
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1976.0,0.40%,F,T)



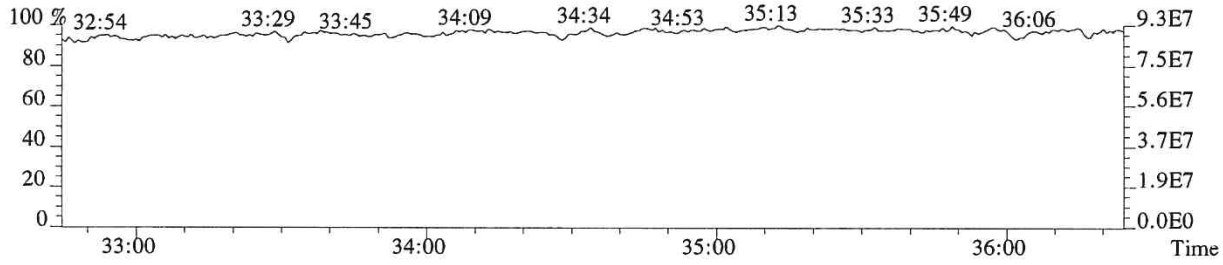
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1112.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1392.0,0.40%,F,T)

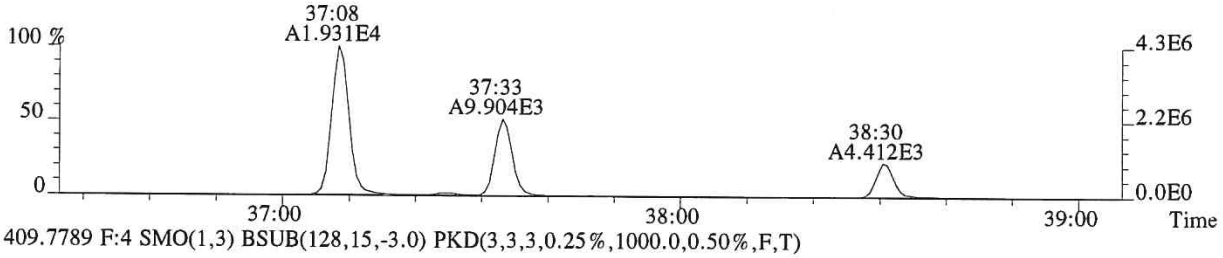


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

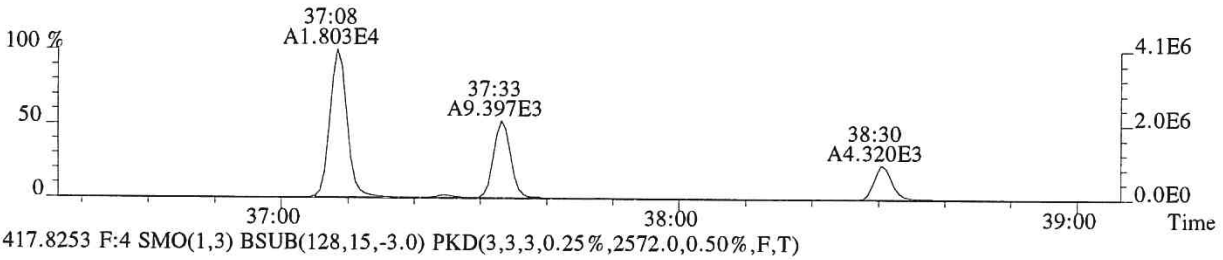


017158

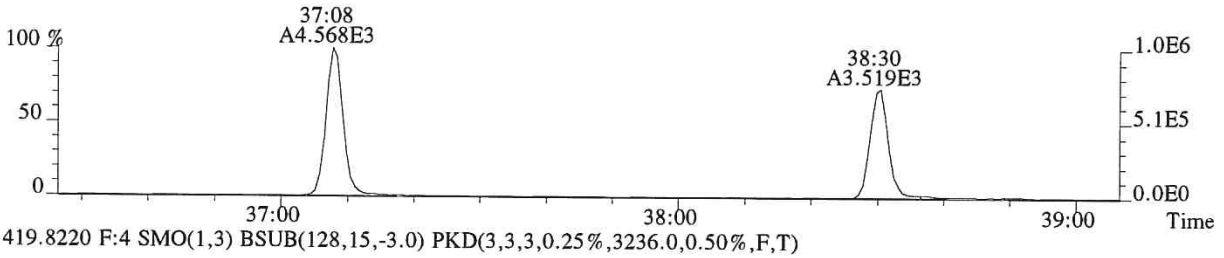
File:P616384 #1-241 Acq: 8-JAN-2019 18:42:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1184.0,0.50%,F,T)



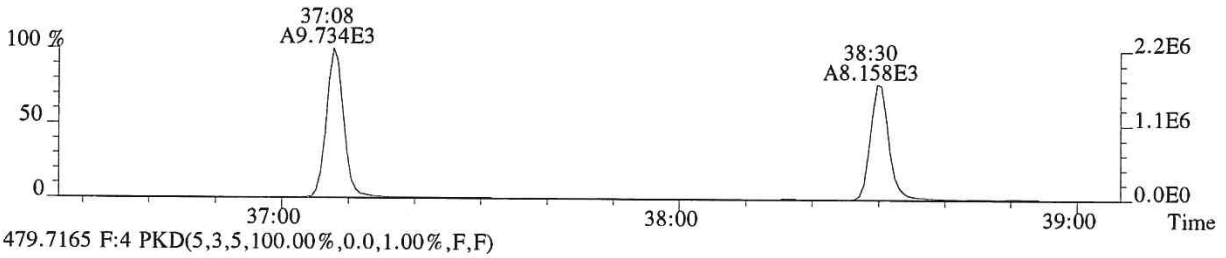
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1000.0,0.50%,F,T)



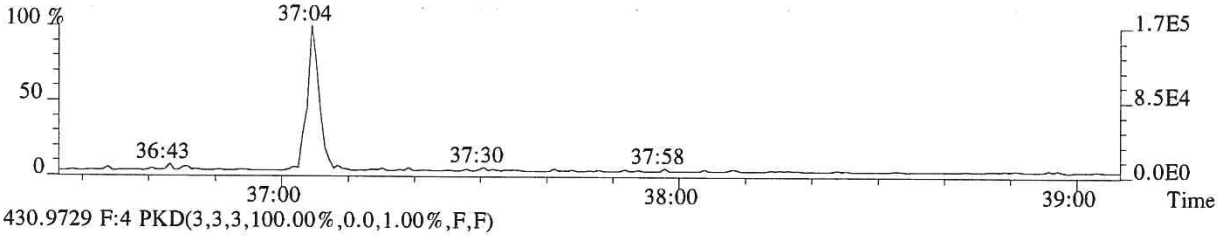
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2572.0,0.50%,F,T)



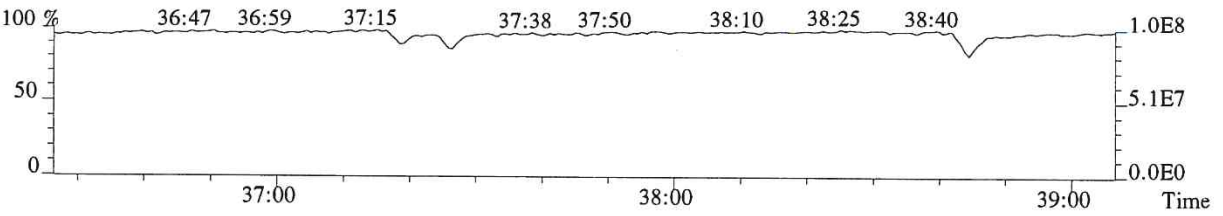
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3236.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

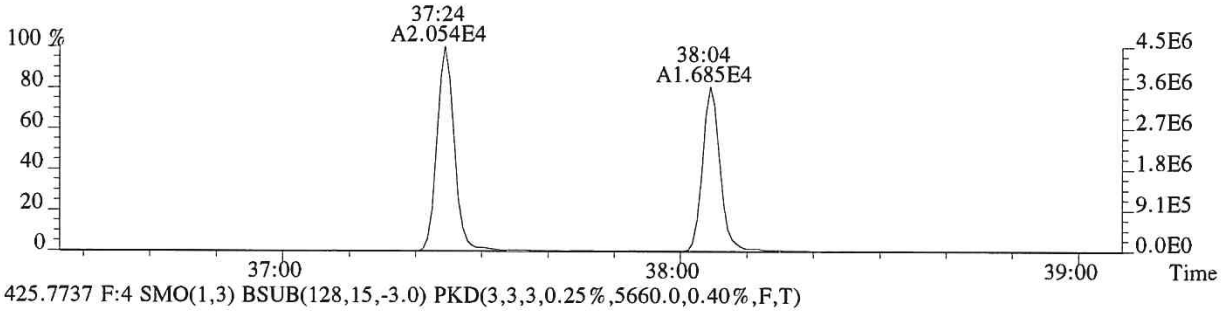


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

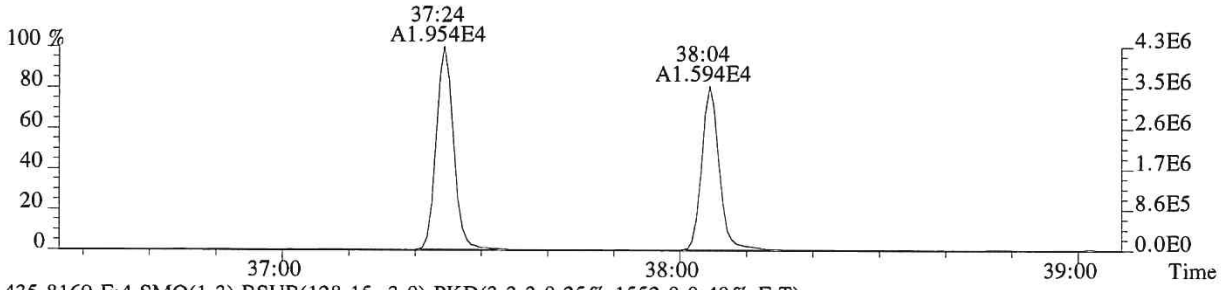


017159

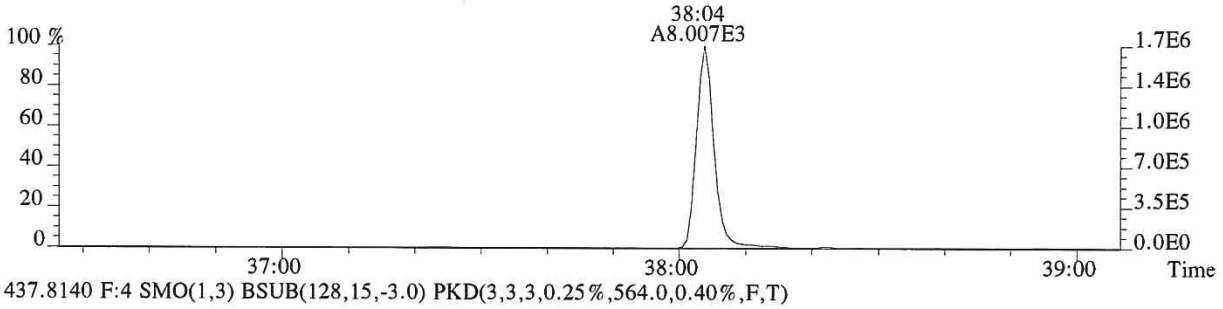
File:P616384 #1-241 Acq: 8-JAN-2019 18:42:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,528.0,0.40%,F,T)



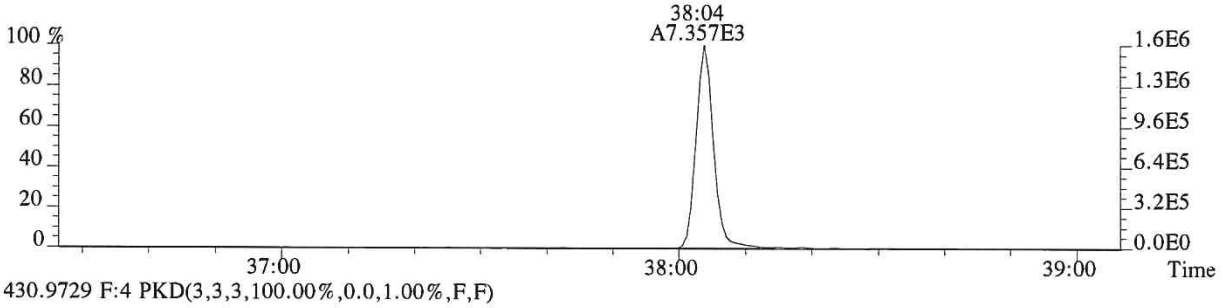
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5660.0,0.40%,F,T)



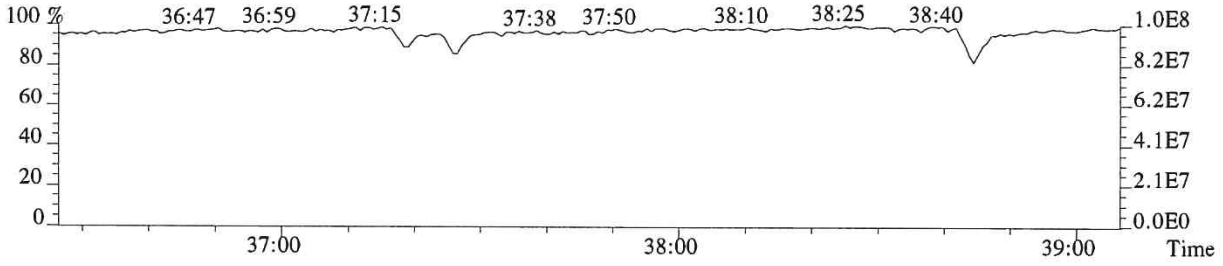
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1552.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,564.0,0.40%,F,T)

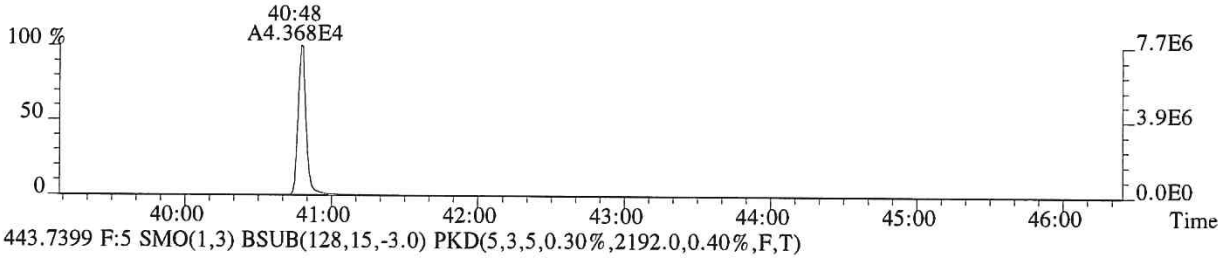


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

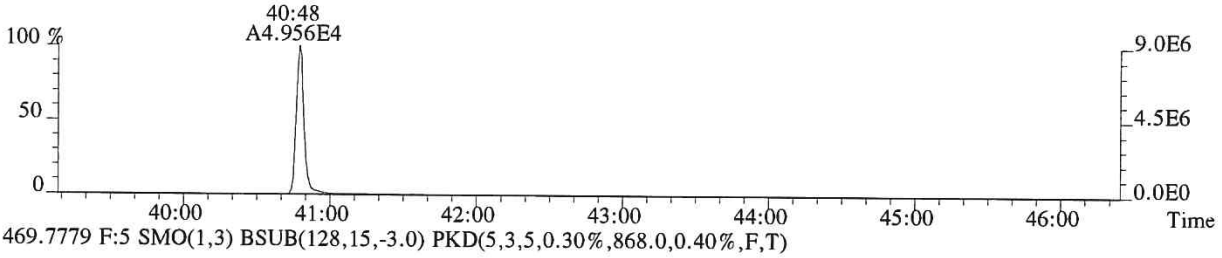


017160

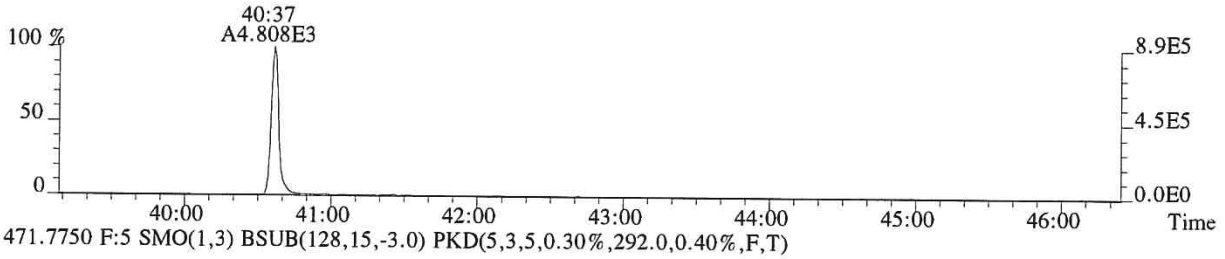
File:P616384 #1-654 Acq: 8-JAN-2019 18:42:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,256.0,0.40%,F,T)



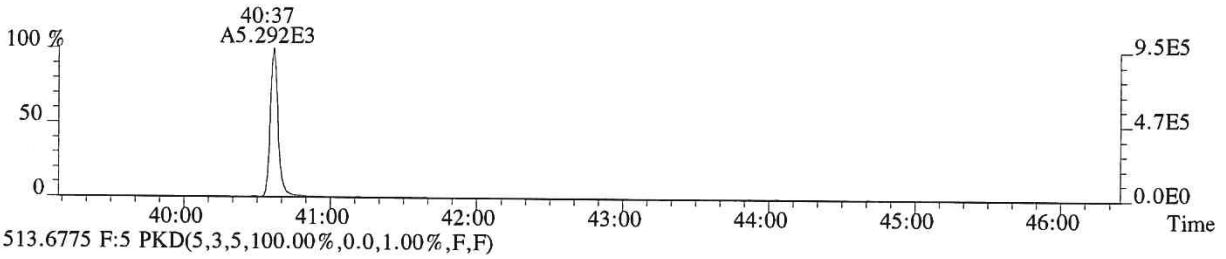
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2192.0,0.40%,F,T)



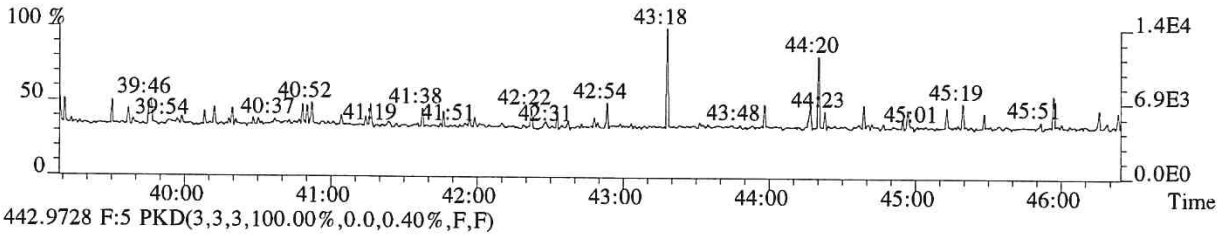
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,868.0,0.40%,F,T)



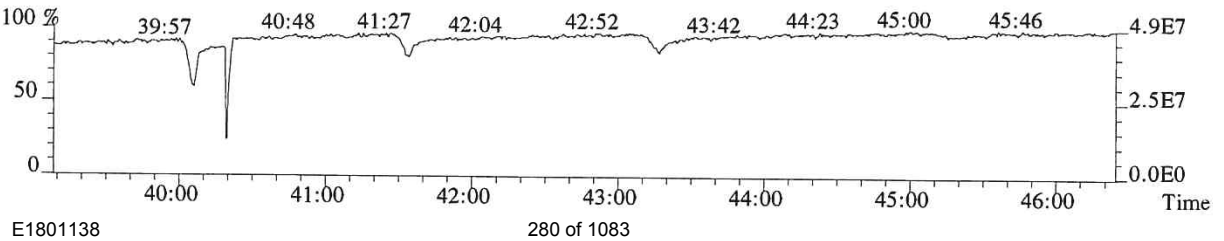
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,292.0,0.40%,F,T)



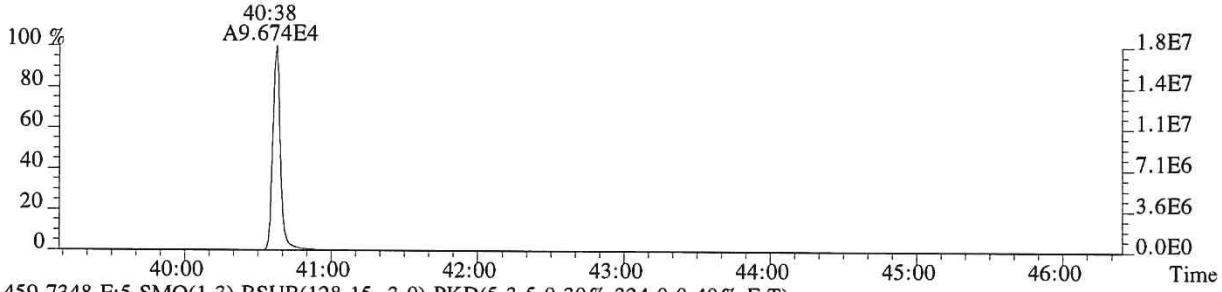
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



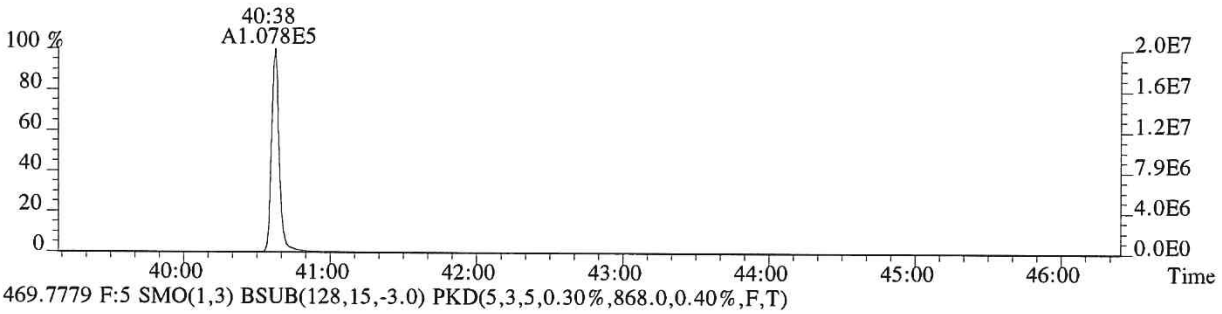
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



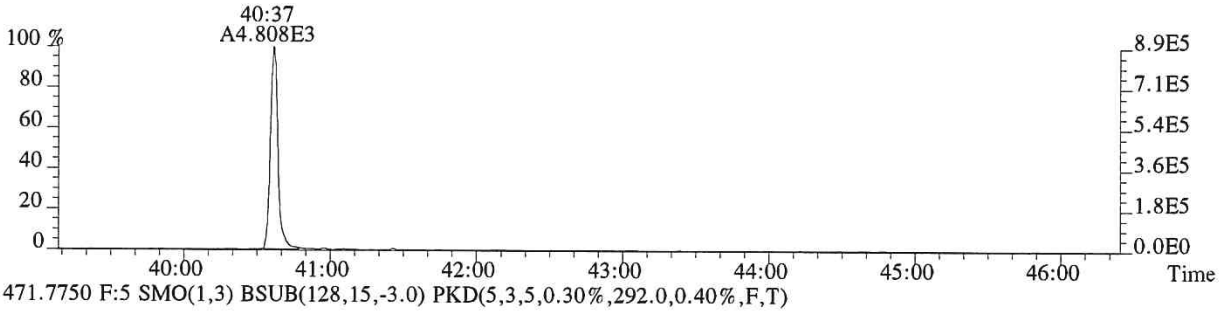
File:P616384 #1-654 Acq: 8-JAN-2019 18:42:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,352.0,0.40%,F,T)



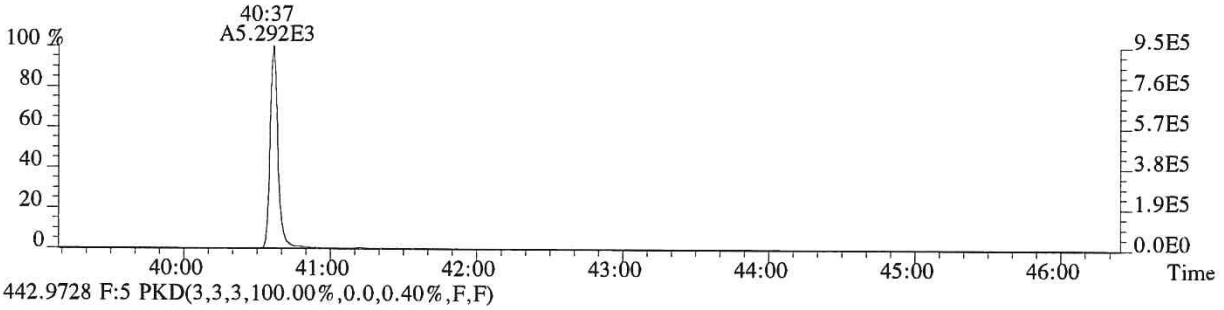
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,324.0,0.40%,F,T)



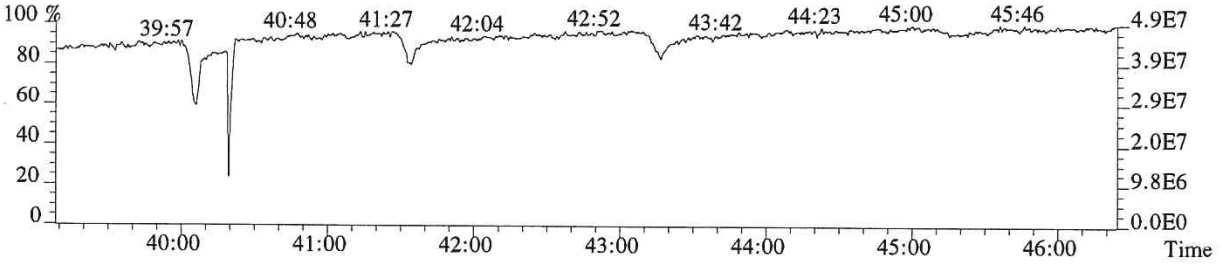
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,868.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,292.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017162

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0173

Run #12 Filename P616409 Samp: 1 Inj: 1 Acquired: 9-JAN-19 15:39:30
Processed: 10-JAN-19 08:31:58 Sample ID: E1801138-006DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:13	5.163e+03	6.632e+03	0.78	yes	yes	1.081
2	Unk	1,2,3,7,8-PeCDF	30:24	3.283e+02	2.070e+02	1.59	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:27	2.576e+02	1.640e+02	1.57	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	4.213e+02	3.474e+02	1.21	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:29	1.700e+02	9.669e+01	1.76	no	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:02	2.352e+01	1.286e+01	1.83	no	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:49	1.255e+01	8.520e+00	1.47	no	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	1.137e+02	9.190e+01	1.24	no	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:31	2.015e+01	3.231e+01	0.62	no	no	1.463
10	Unk	OCDF	40:50	2.922e+02	3.369e+02	0.87	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:16	1.178e+03	1.610e+03	0.73	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:44	1.774e+01	3.763e+00	4.71	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:09	2.391e+00	5.233e+00	0.46	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	8.053e+01	7.181e+01	1.12	yes	no	1.112
17	Unk	OCDD	40:40	6.242e+02	7.127e+02	0.88	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:11	8.271e+03	1.014e+04	0.82	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:22	1.176e+04	7.385e+03	1.59	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	1.132e+04	6.824e+03	1.66	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:20	4.269e+03	8.184e+03	0.52	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	5.404e+03	1.041e+04	0.52	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	4.651e+03	8.701e+03	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	3.801e+03	7.026e+03	0.54	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	2.839e+03	6.462e+03	0.44	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	2.171e+03	4.571e+03	0.47	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:15	3.666e+03	4.491e+03	0.82	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:44	7.559e+03	5.090e+03	1.49	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	5.176e+03	3.941e+03	1.31	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	6.025e+03	4.690e+03	1.28	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:04	4.836e+03	4.467e+03	1.08	yes	no	0.857
32	IS	13C-OCDD	40:38	4.216e+03	4.028e+03	1.05	no	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:27	6.050e+03	7.592e+03	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	6.617e+03	5.307e+03	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:16	1.011e+02				no	1.086

$$\text{OCDD} = \frac{(6.242e+02 + 7.127e+02) \times 4000\ \text{pg} \times 100}{(\cancel{4.216e+03}\ 3.585e+03 + 4.028e+03) \times 10.143\ \text{g} \times 66.0 / 100 \times 1.157 \times 0.25} = 36275\ \text{pg/kg}$$

LW 01/10/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

13C_OCDD = 1.05 / 0.89

A1 = A2 × 0.89 = 3.585e+03

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0173

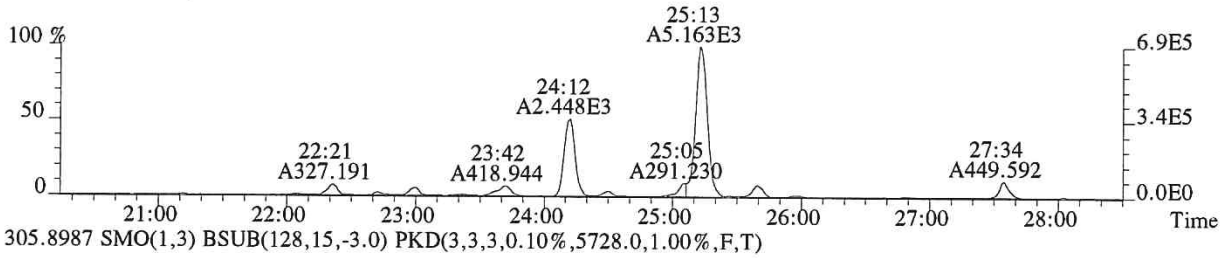
Run #12 Filename P616409 Samp: 1 Inj: 1 Acquired: 9-JAN-19 15:39:30
Processed: 10-JAN-19 08:31:58 LAB. ID: E1801138-006DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.87e+05	1.92e+03	3.6e+02	8.81e+05	5.73e+03	1.5e+02
2	1,2,3,7,8-PeCDF	5.40e+04	6.60e+02	8.2e+01	3.12e+04	3.70e+03	8.4e+00
3	2,3,4,7,8-PeCDF	3.70e+04	6.60e+02	5.6e+01	2.96e+04	3.70e+03	8.0e+00
4	1,2,3,4,7,8-HxCDF	8.74e+04	3.60e+02	2.4e+02	6.29e+04	5.44e+02	1.2e+02
5	1,2,3,6,7,8-HxCDF	2.52e+04	3.60e+02	7.0e+01	1.77e+04	5.44e+02	3.3e+01
6	2,3,4,6,7,8-HxCDF	4.64e+03	3.60e+02	1.3e+01	2.57e+03	5.44e+02	4.7e+00
7	1,2,3,7,8,9-HxCDF	3.51e+03	3.60e+02	9.8e+00	2.87e+03	5.44e+02	5.3e+00
8	1,2,3,4,6,7,8-HpCDF	2.52e+04	8.00e+02	3.2e+01	1.83e+04	4.68e+02	3.9e+01
9	1,2,3,4,7,8,9-HpCDF	5.11e+03	8.00e+02	6.4e+00	8.13e+03	4.68e+02	1.7e+01
10	OCDF	4.91e+04	2.28e+02	2.2e+02	4.86e+04	2.58e+03	1.9e+01
11	2,3,7,8-TCDD	1.73e+05	4.12e+03	4.2e+01	2.37e+05	1.47e+03	1.6e+02
12	1,2,3,7,8-PeCDD	5.13e+03	1.29e+03	4.0e+00	1.48e+03	4.32e+02	3.4e+00
13	1,2,3,4,7,8-HxCDD	6.98e+02	4.24e+02	1.6e+00	1.47e+03	9.40e+02	1.6e+00
14	1,2,3,6,7,8-HxCDD	*	4.24e+02	*	*	9.40e+02	*
15	1,2,3,7,8,9-HxCDD	*	4.24e+02	*	*	9.40e+02	*
16	1,2,3,4,6,7,8-HpCDD	1.56e+04	1.15e+03	1.4e+01	1.61e+04	6.12e+02	2.6e+01
17	OCDD	9.31e+04	2.32e+02	4.0e+02	9.47e+04	2.52e+02	3.8e+02
18	13C-2,3,7,8-TCDF	1.12e+06	1.20e+04	9.3e+01	1.40e+06	8.48e+03	1.7e+02
19	13C-1,2,3,7,8-PeCDF	1.80e+06	8.32e+02	2.2e+03	1.15e+06	1.52e+02	7.6e+03
20	13C-2,3,4,7,8-PeCDF	1.92e+06	8.32e+02	2.3e+03	1.18e+06	1.52e+02	7.7e+03
21	13C-1,2,3,4,7,8-HxCDF	8.19e+05	9.56e+02	8.6e+02	1.61e+06	1.65e+03	9.7e+02
22	13C-1,2,3,6,7,8-HxCDF	9.56e+05	9.56e+02	1.0e+03	1.75e+06	1.65e+03	1.1e+03
23	13C-2,3,4,6,7,8-HxCDF	8.42e+05	9.56e+02	8.8e+02	1.60e+06	1.65e+03	9.7e+02
24	13C-1,2,3,7,8,9-HxCDF	6.16e+05	9.56e+02	6.4e+02	1.17e+06	1.65e+03	7.1e+02
25	13C-1,2,3,4,6,7,8-HpCDF	5.54e+05	2.59e+03	2.1e+02	1.17e+06	6.20e+03	1.9e+02
26	13C-1,2,3,4,7,8,9-HpCDF	3.79e+05	2.59e+03	1.5e+02	8.04e+05	6.20e+03	1.3e+02
27	13C-2,3,7,8-TCDD	5.22e+05	9.69e+03	5.4e+01	6.63e+05	5.02e+03	1.3e+02
28	13C-1,2,3,7,8-PeCDD	1.24e+06	2.65e+03	4.7e+02	8.45e+05	1.80e+03	4.7e+02
29	13C-1,2,3,4,7,8-HxCDD	1.10e+06	1.54e+03	7.1e+02	8.32e+05	1.38e+03	6.0e+02
30	13C-1,2,3,6,7,8-HxCDD	1.03e+06	1.54e+03	6.7e+02	7.77e+05	1.38e+03	5.6e+02
31	13C-1,2,3,4,6,7,8-HpCDD	8.40e+05	1.28e+03	6.6e+02	7.73e+05	3.88e+02	2.0e+03
32	13C-OCDD	5.56e+05	1.42e+03	3.9e+02	5.99e+05	3.24e+02	1.8e+03
33	13C-1,2,3,4-TCDD	8.61e+05	9.69e+03	8.9e+01	1.11e+06	5.02e+03	2.2e+02
34	13C-1,2,3,7,8,9-HxCDD	1.07e+06	1.54e+03	6.9e+02	8.99e+05	1.38e+03	6.5e+02
35	37Cl-2,3,7,8-TCDD	1.73e+04	2.30e+03	7.5e+00			

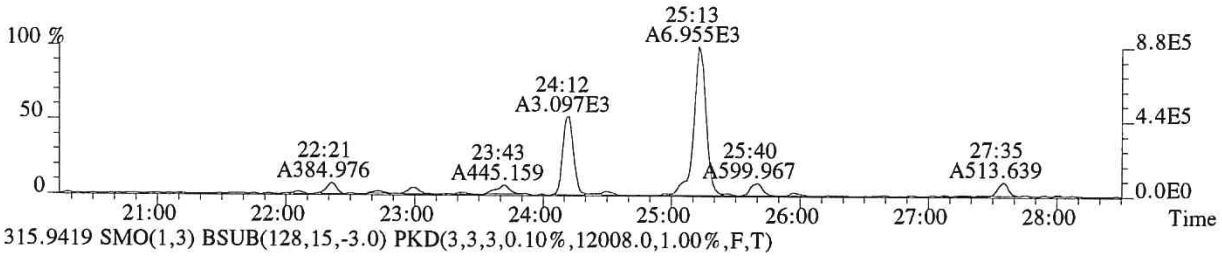
ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office:(713)266-1599. Fax:(713)266-0130

www.alsglobal.com

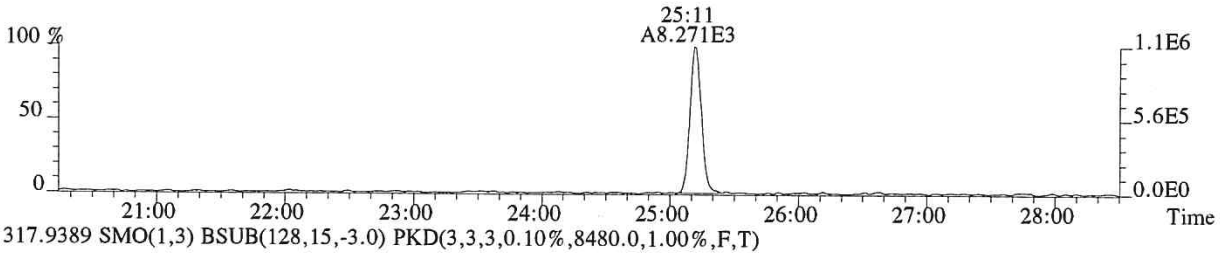
File:P616409 #1-587 Acq: 9-JAN-2019 15:39:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1924.0,1.00%,F,T)



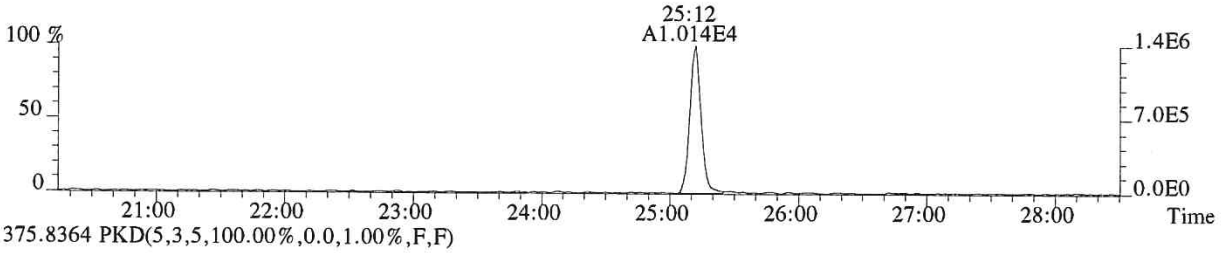
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5728.0,1.00%,F,T)



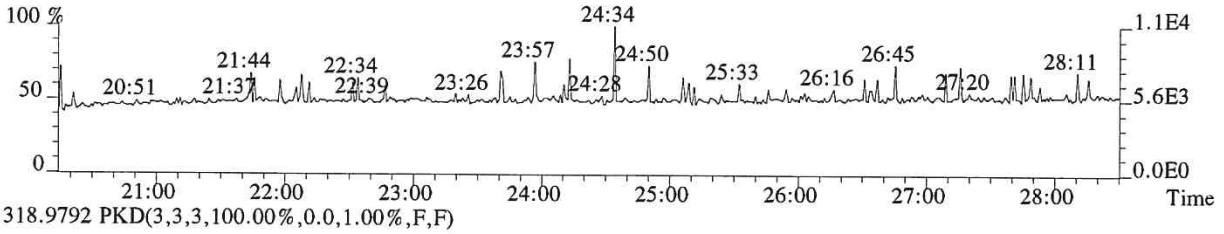
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12008.0,1.00%,F,T)



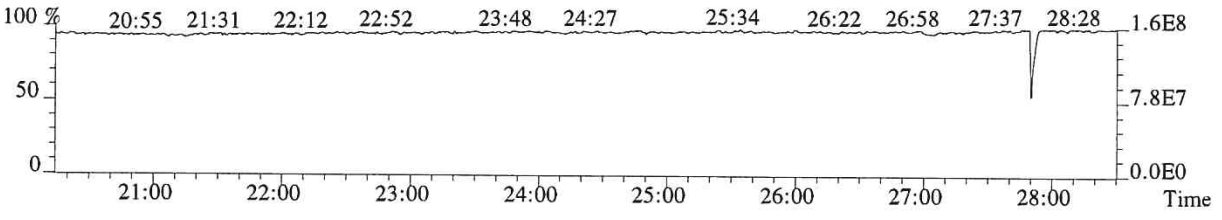
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8480.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

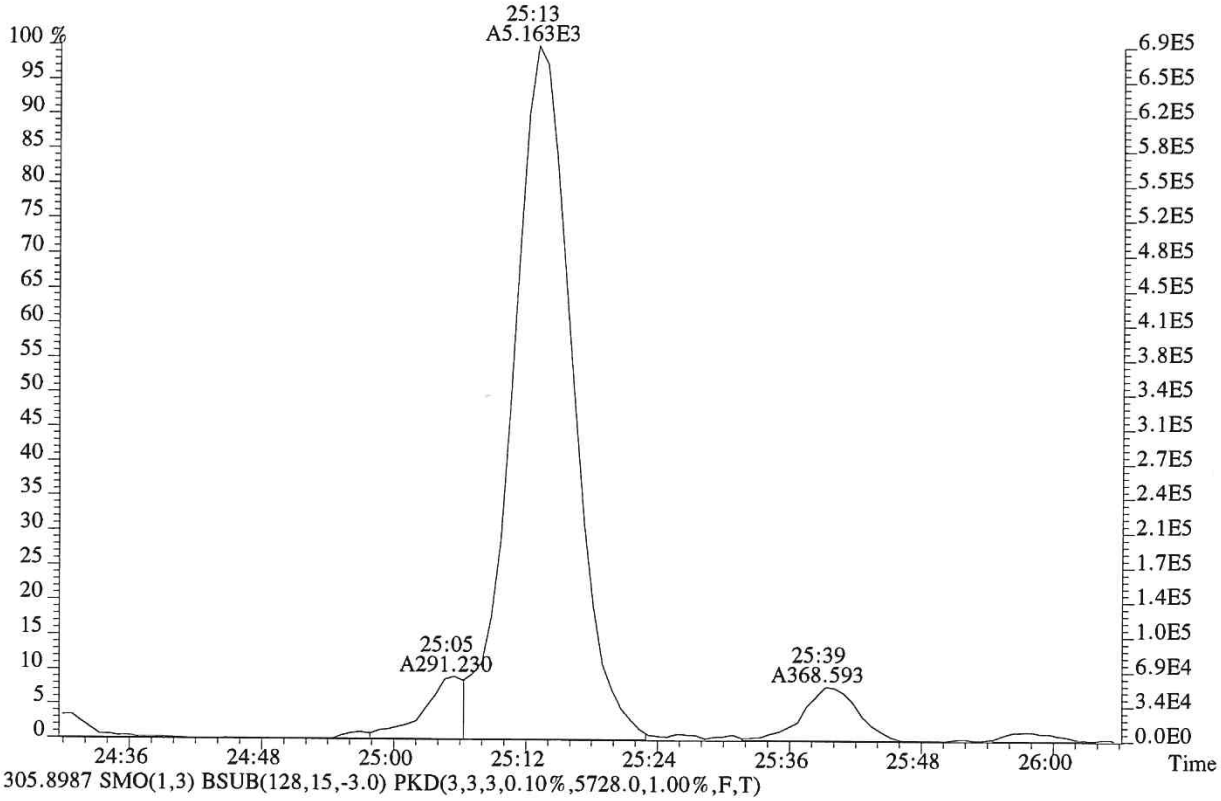


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

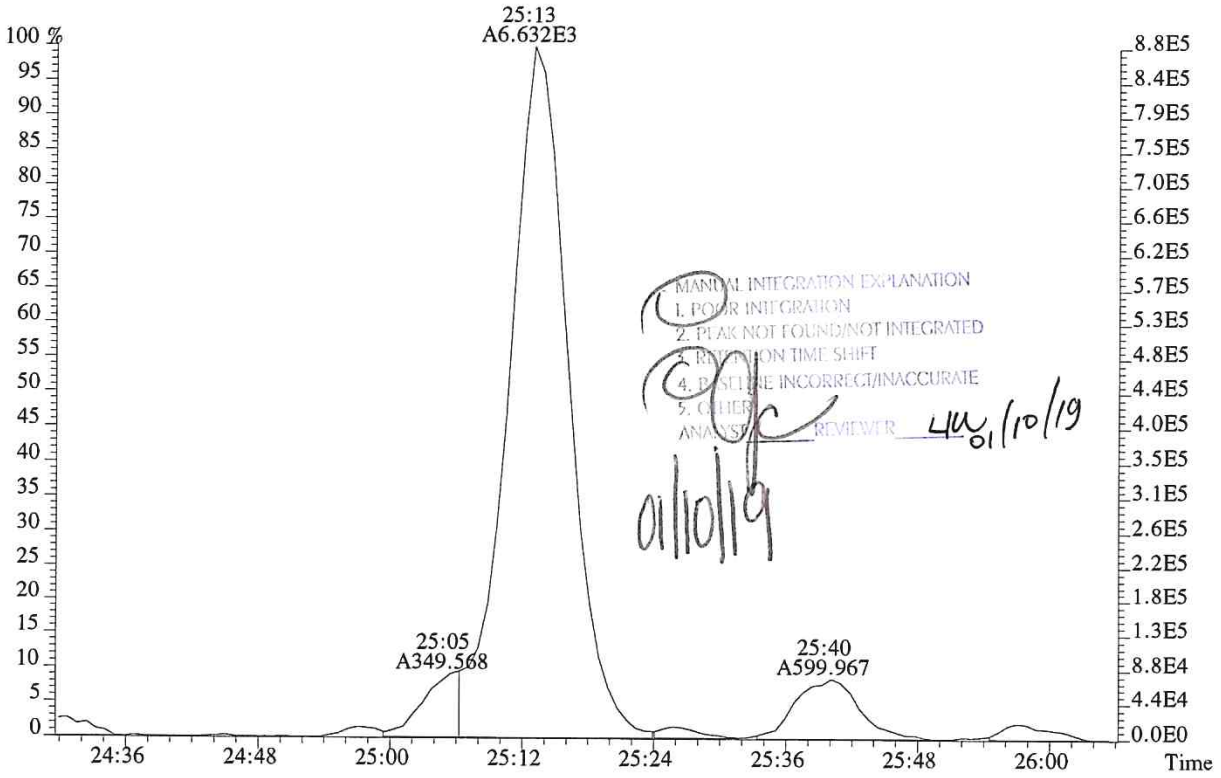


017165

File:P616409 #1-587 Acq: 9-JAN-2019 15:39:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1924.0,1.00%,F,T)

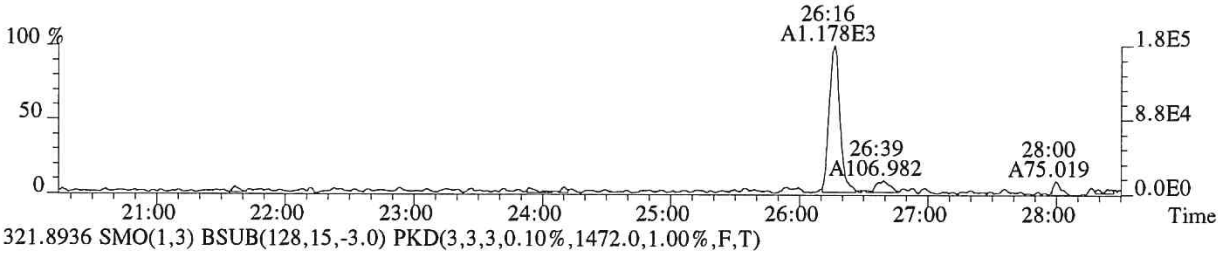


305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5728.0,1.00%,F,T)

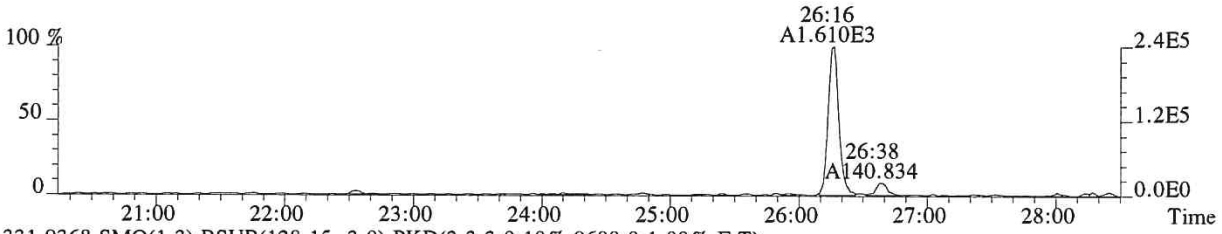


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. PEAK SELECTION INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER 01/10/19
01/10/19

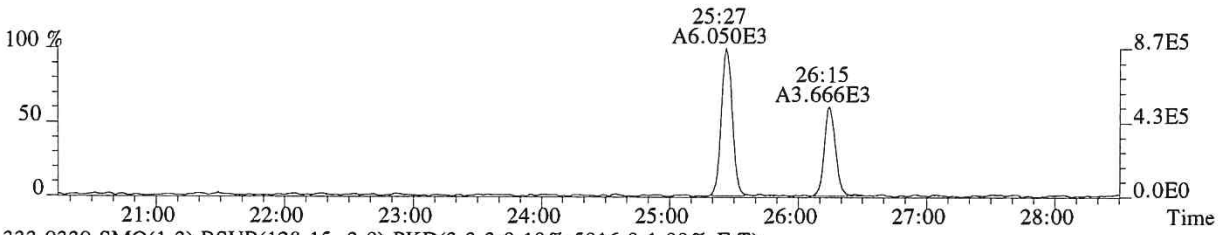
File:P616409 #1-587 Acq: 9-JAN-2019 15:39:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4124.0,1.00%,F,T)



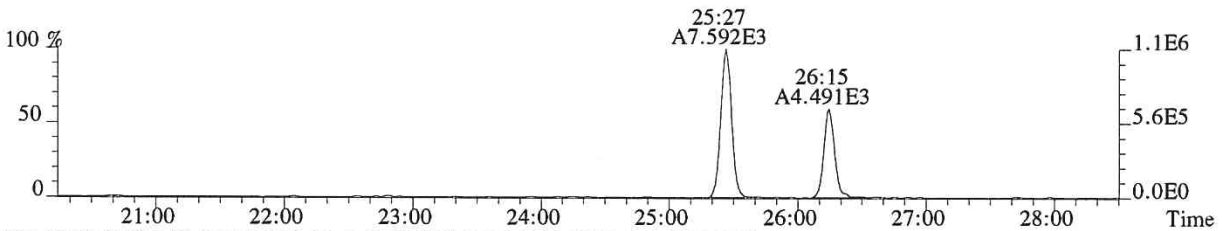
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1472.0,1.00%,F,T)



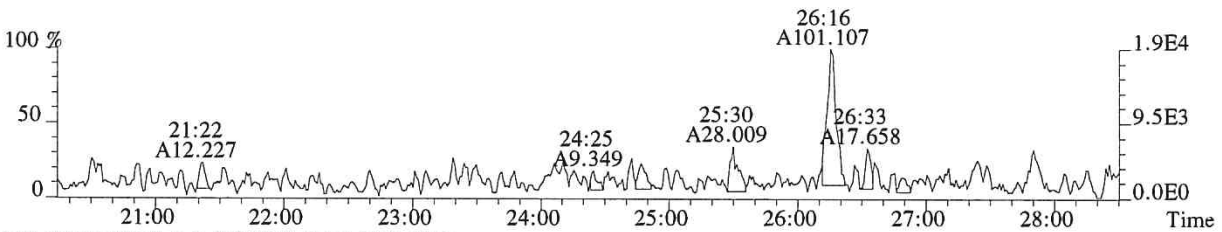
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9688.0,1.00%,F,T)



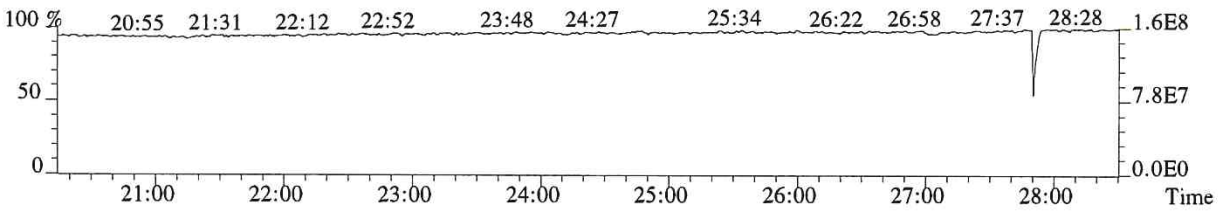
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5016.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2300.0,1.00%,F,T)

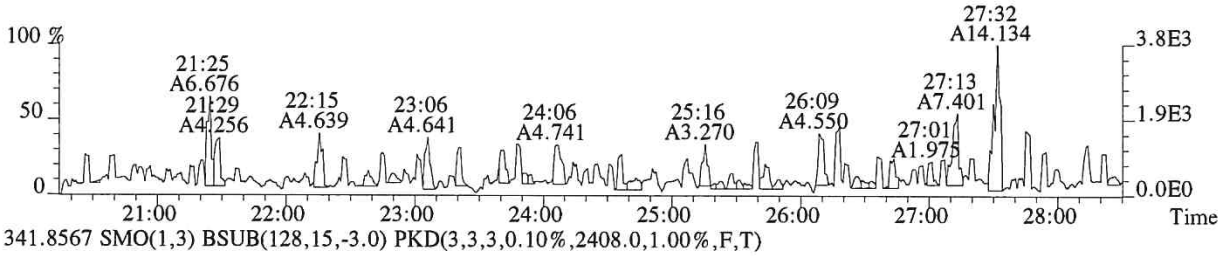


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

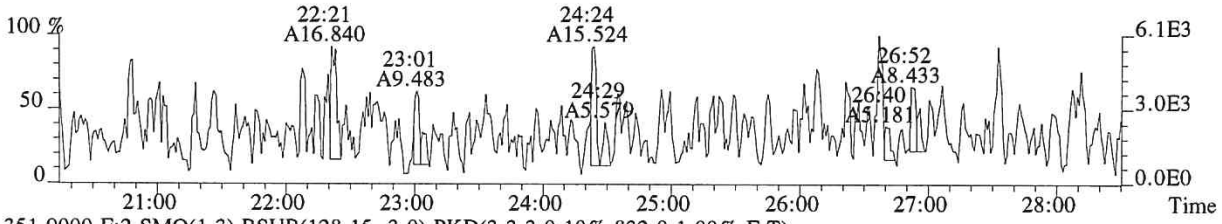


017167

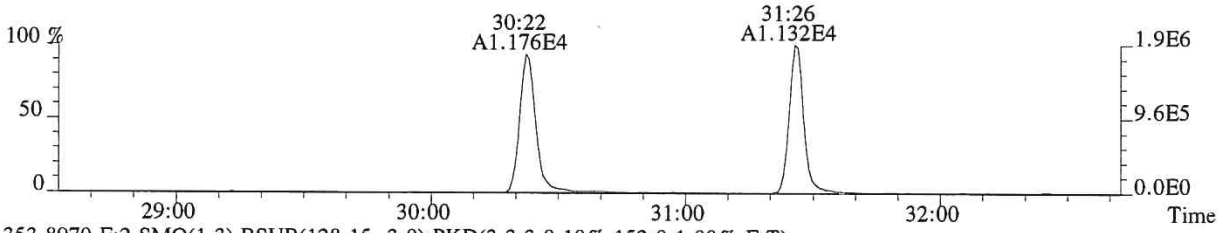
File:P616409 #1-587 Acq: 9-JAN-2019 15:39:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,448.0,1.00%,F,T)



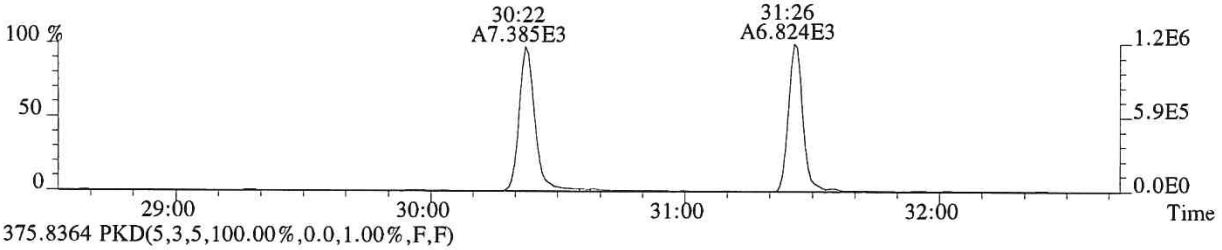
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2408.0,1.00%,F,T)



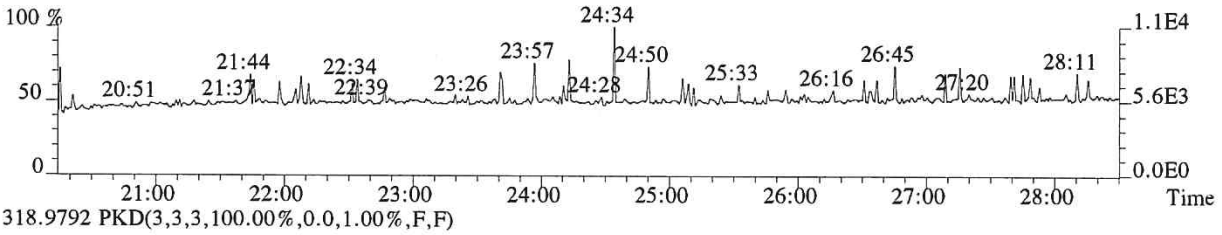
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,832.0,1.00%,F,T)



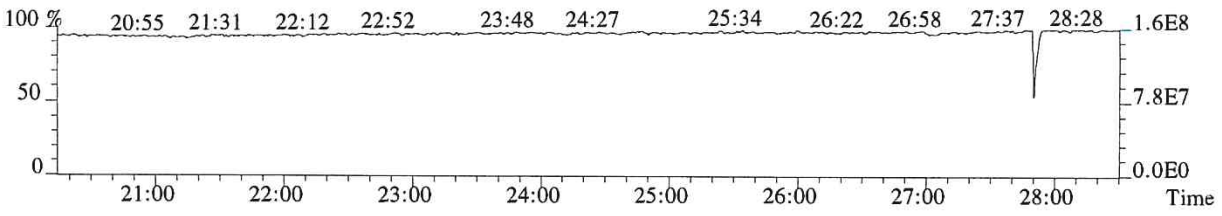
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,152.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

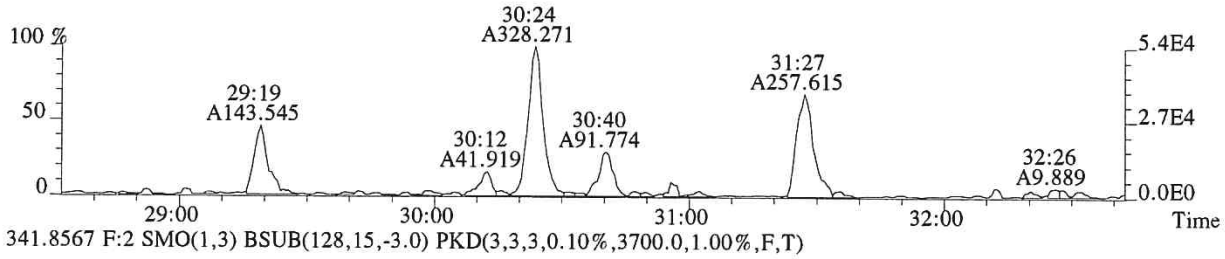


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

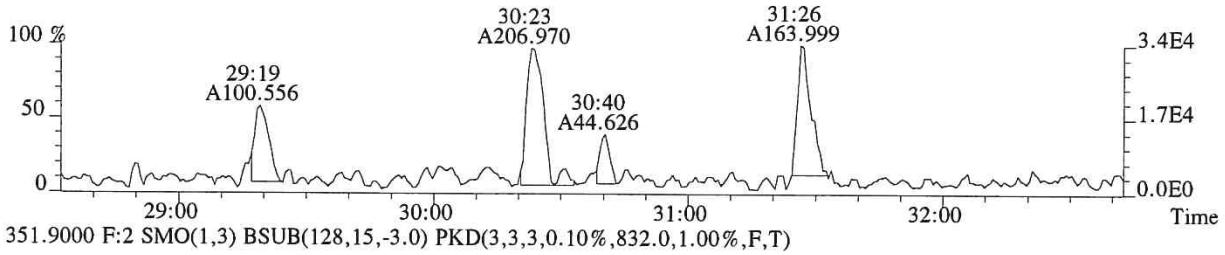


017168

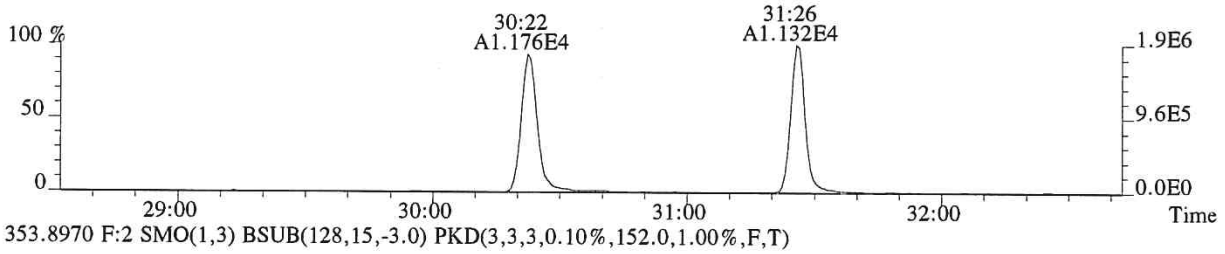
File:P616409 #1-376 Acq: 9-JAN-2019 15:39:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,660.0,1.00%,F,T)



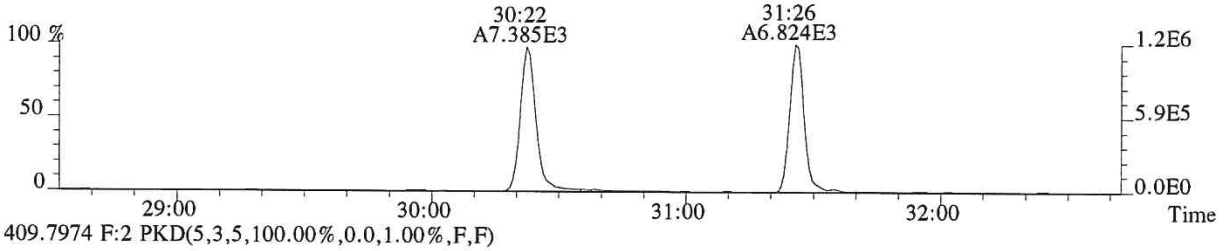
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3700.0,1.00%,F,T)



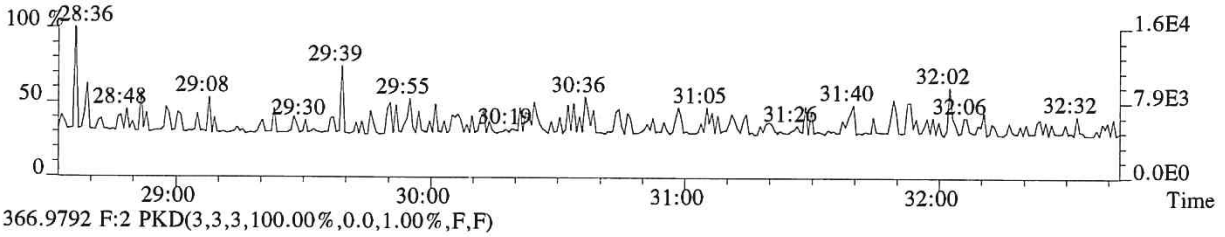
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,832.0,1.00%,F,T)



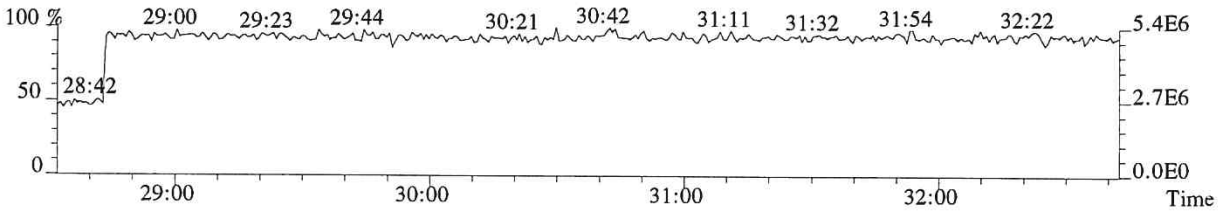
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,152.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

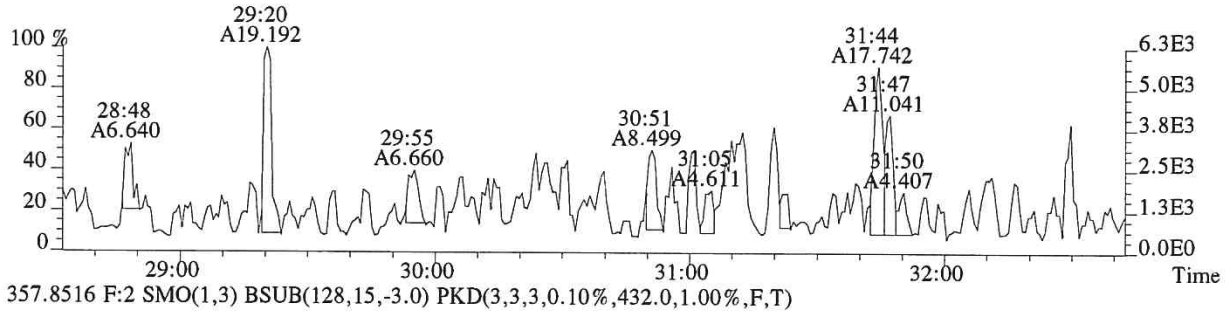


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

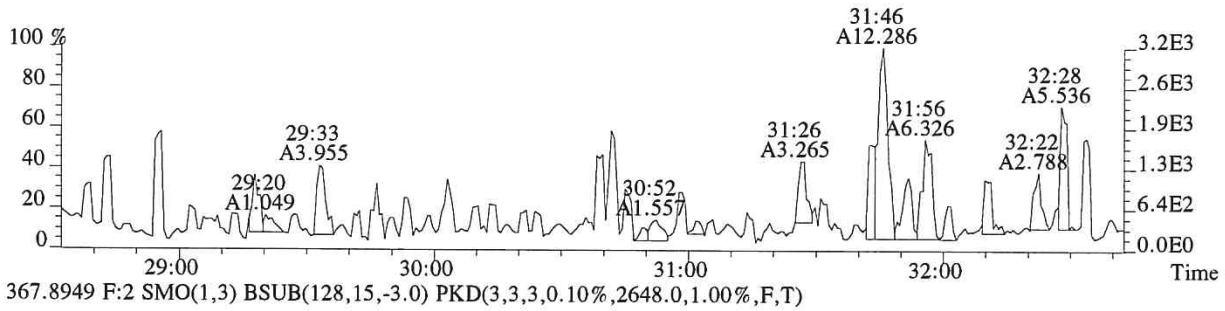


017169

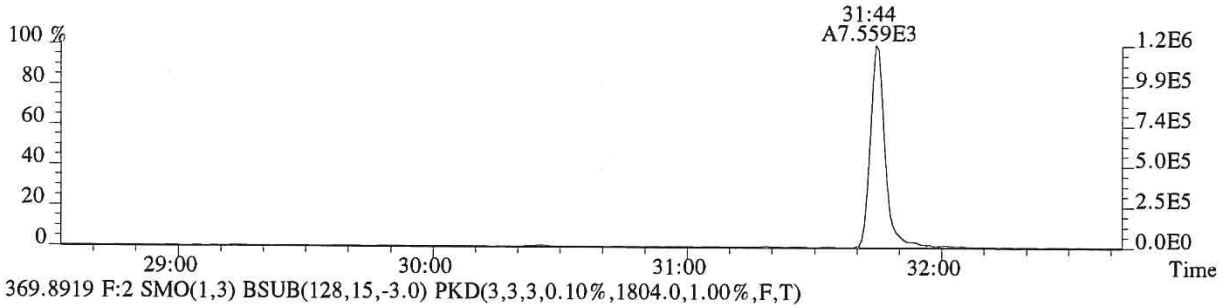
File:P616409 #1-376 Acq: 9-JAN-2019 15:39:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1292.0,1.00%,F,T)



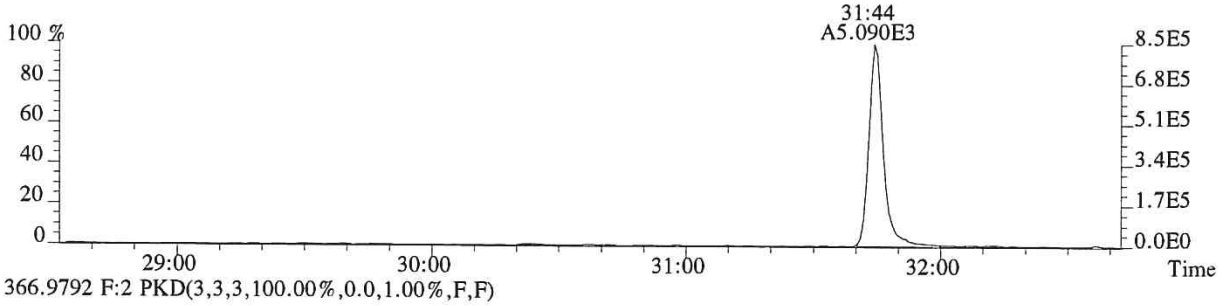
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,432.0,1.00%,F,T)



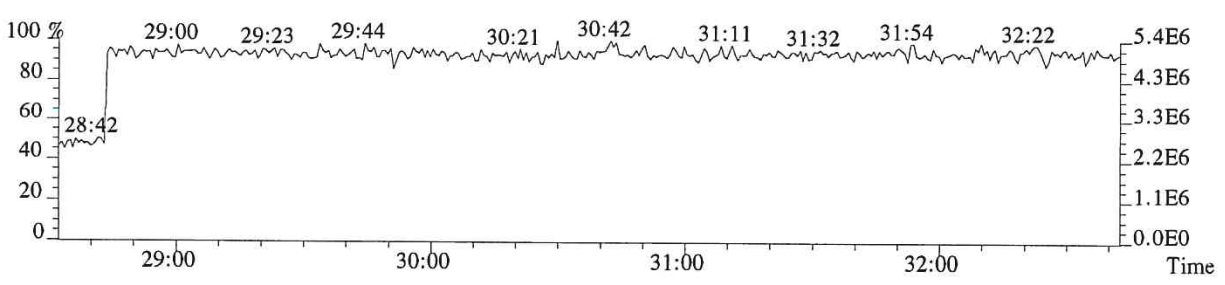
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2648.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1804.0,1.00%,F,T)

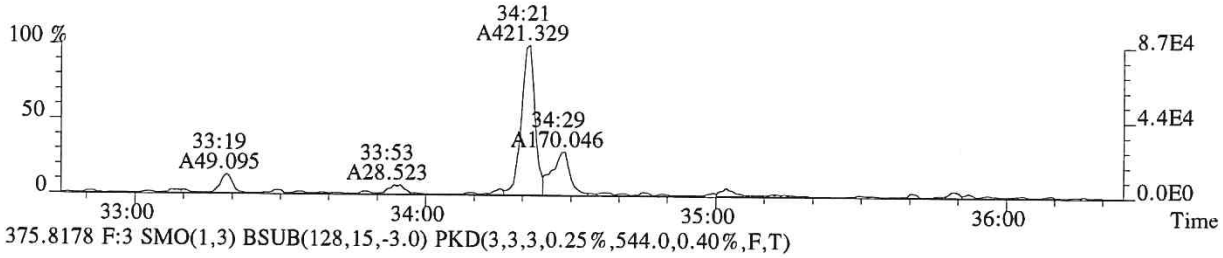


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

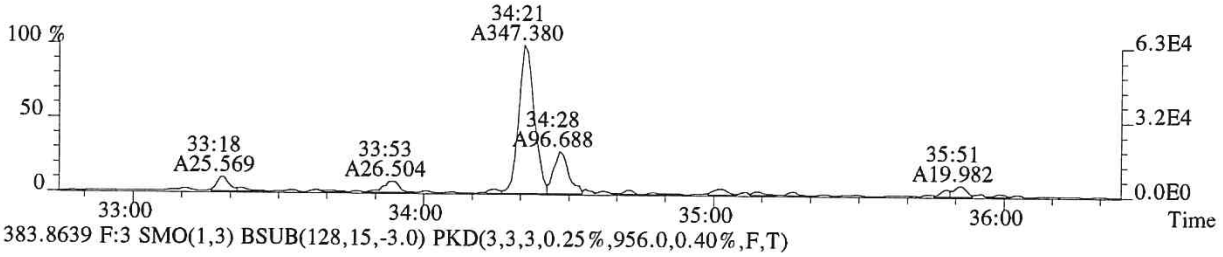


017170

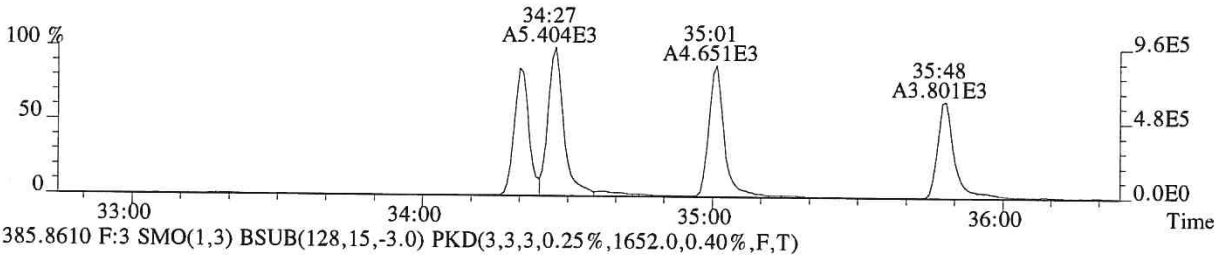
File:P616409 #1-330 Acq: 9-JAN-2019 15:39:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,360.0,0.40%,F,T)



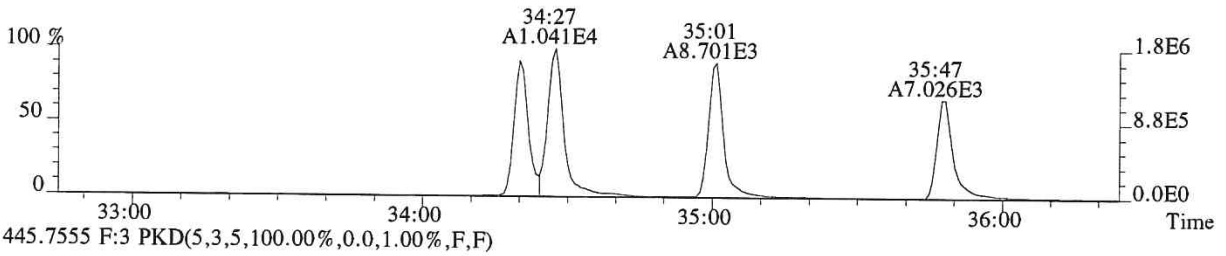
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,544.0,0.40%,F,T)



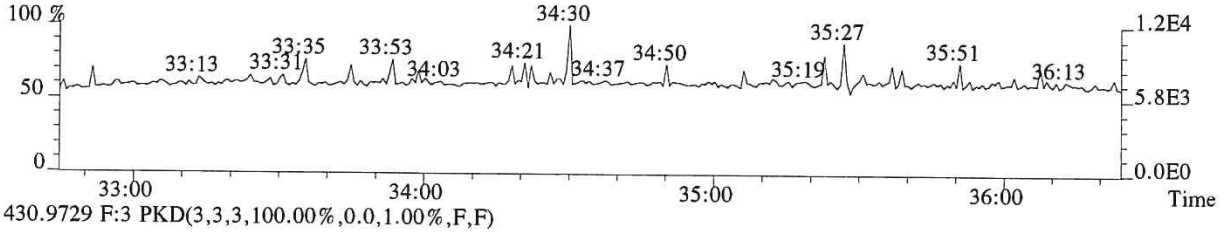
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,956.0,0.40%,F,T)



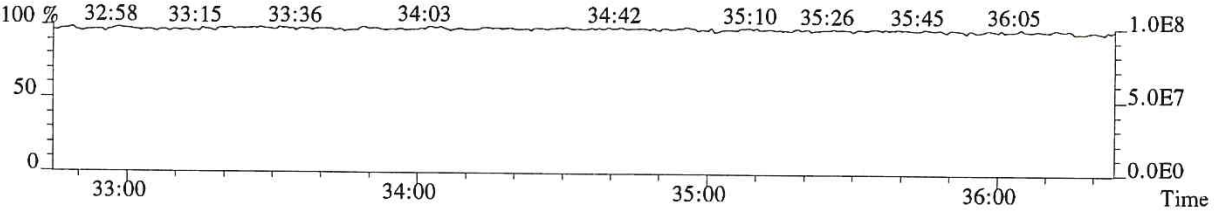
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1652.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

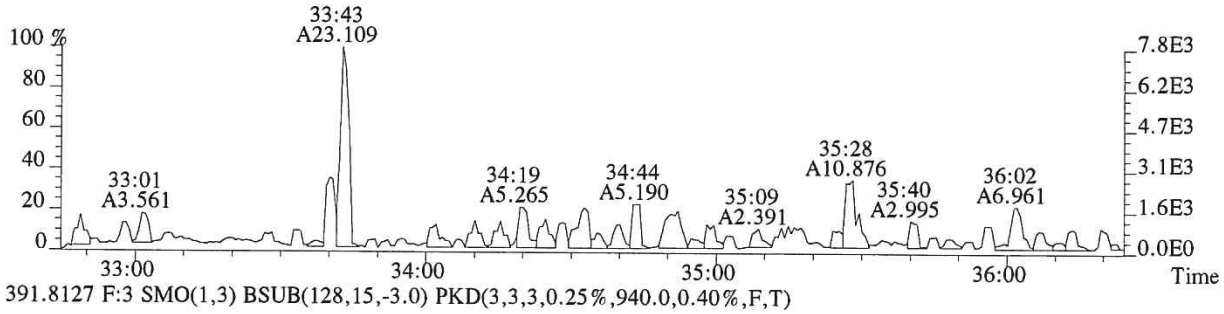


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

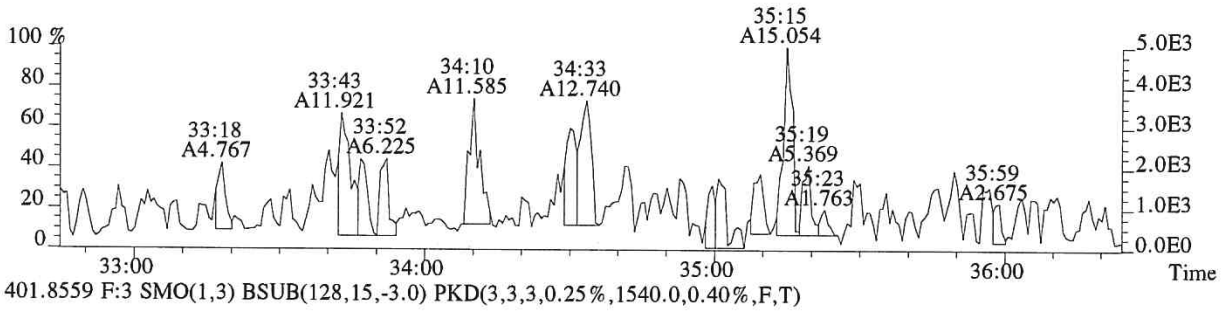


017171

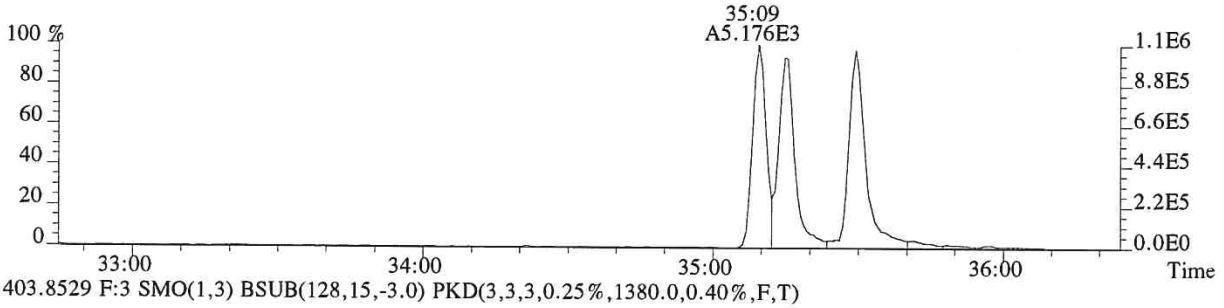
File:P616409 #1-330 Acq: 9-JAN-2019 15:39:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,424.0,0.40%,F,T)



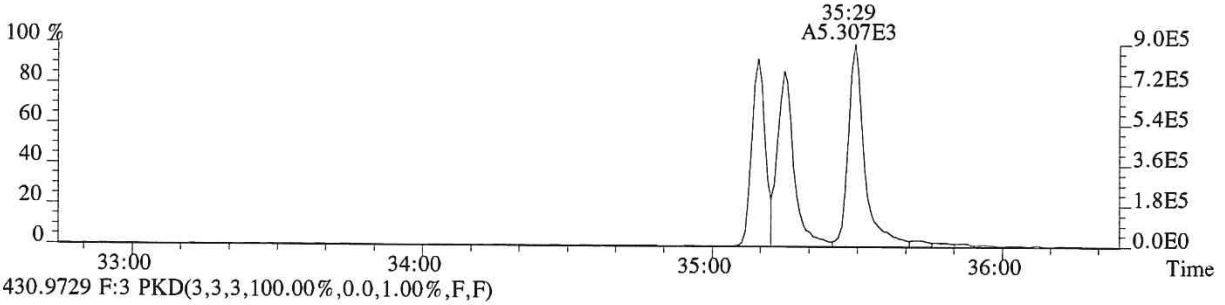
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,940.0,0.40%,F,T)



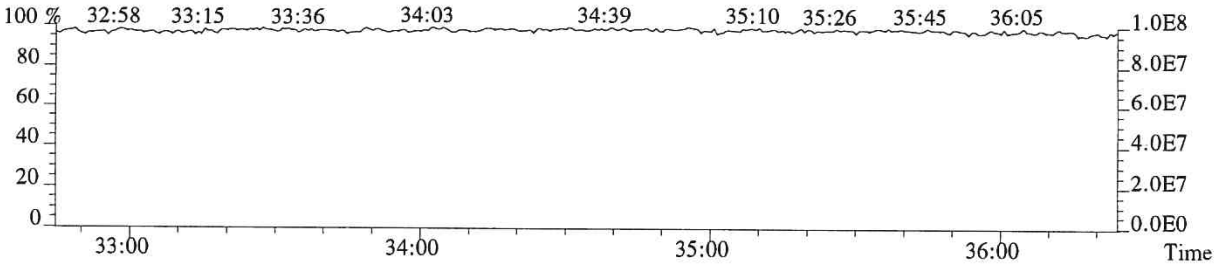
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1540.0,0.40%,F,T)



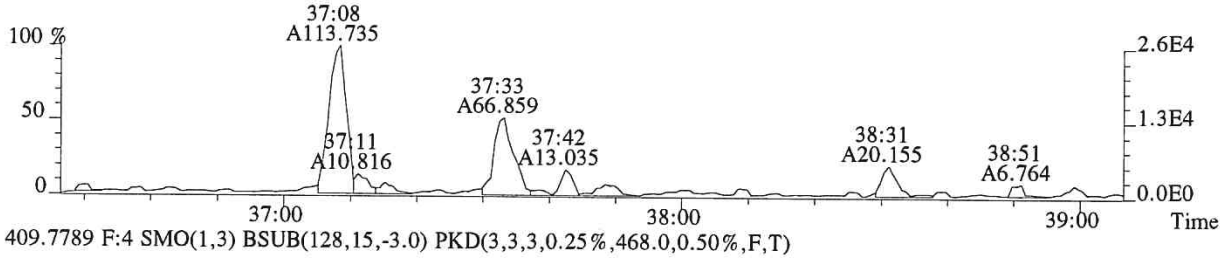
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1380.0,0.40%,F,T)



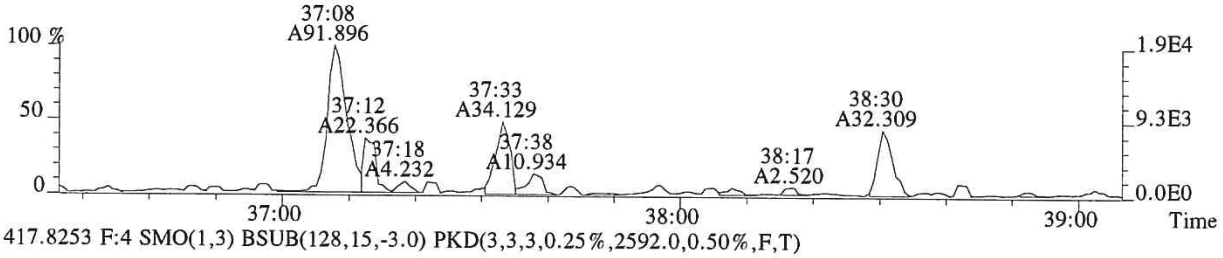
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



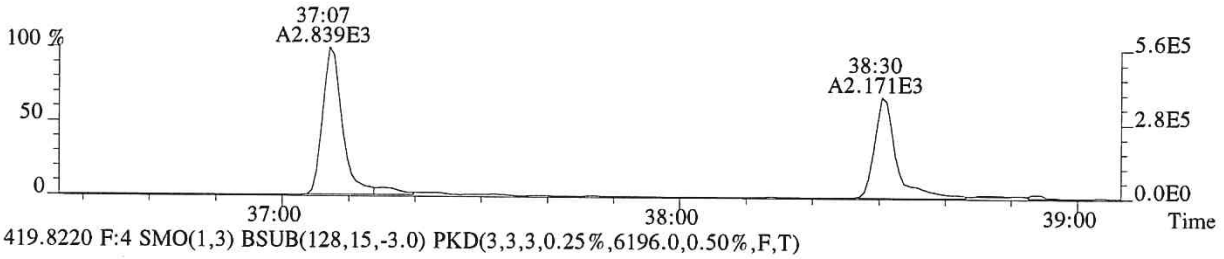
File:P616409 #1-241 Acq: 9-JAN-2019 15:39:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,800.0,0.50%,F,T)



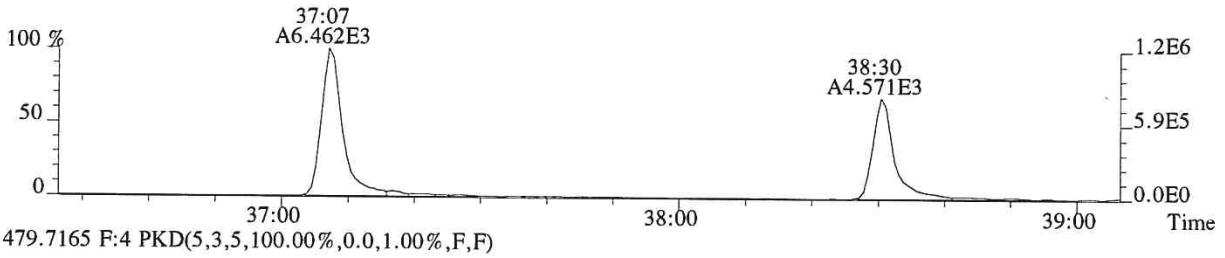
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,468.0,0.50%,F,T)



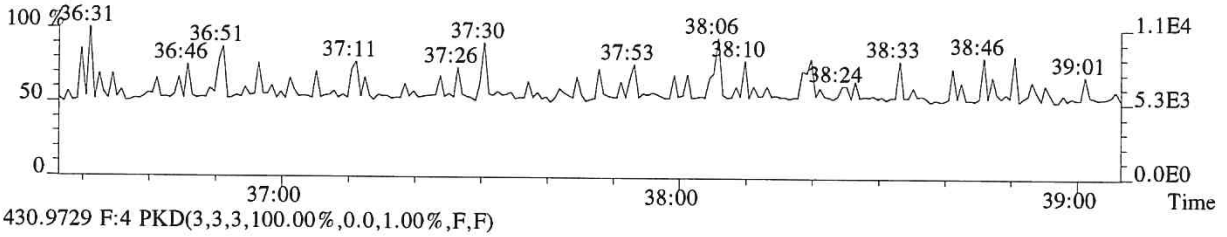
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2592.0,0.50%,F,T)



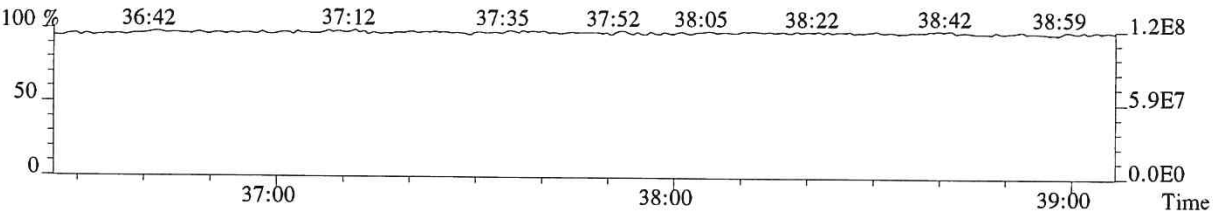
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6196.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

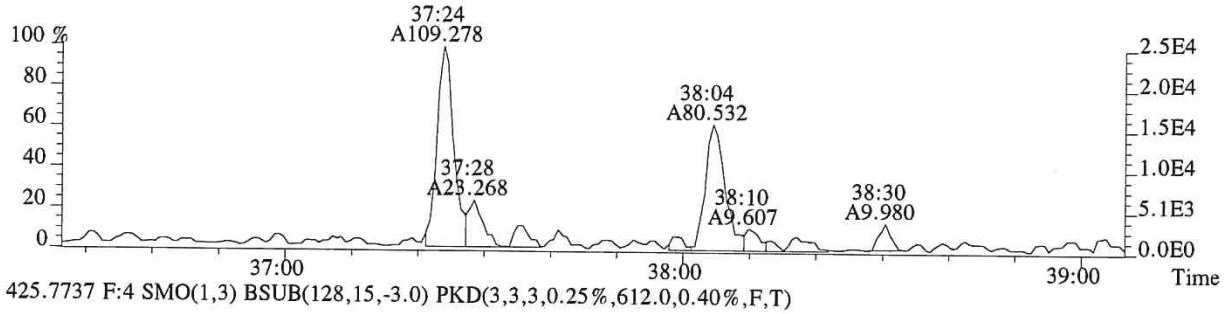


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

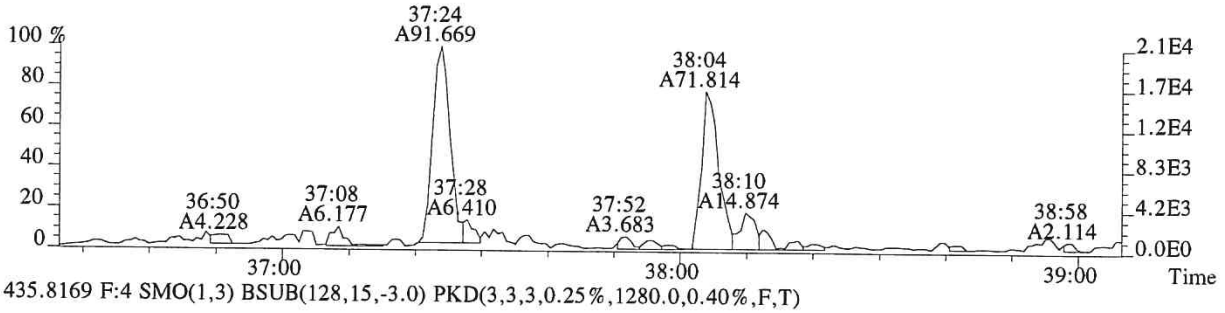


017173

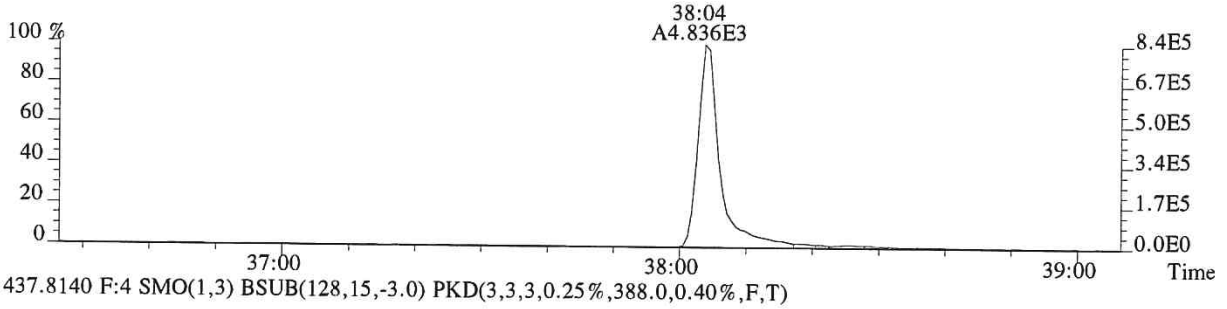
File:P616409 #1-241 Acq: 9-JAN-2019 15:39:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1152.0,0.40%,F,T)



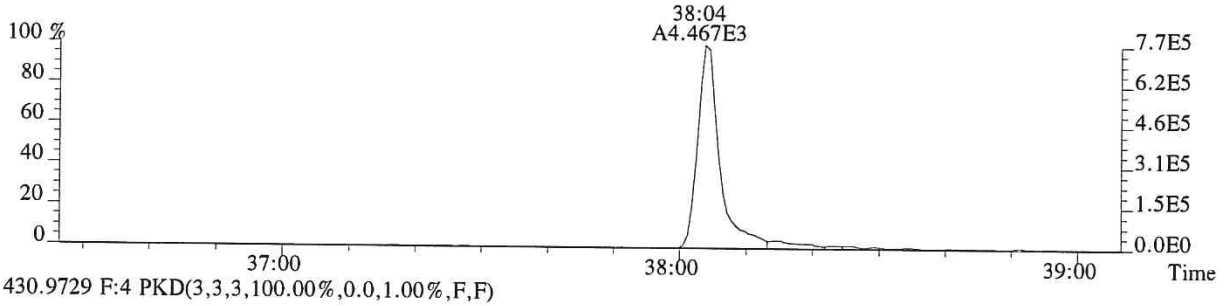
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,612.0,0.40%,F,T)



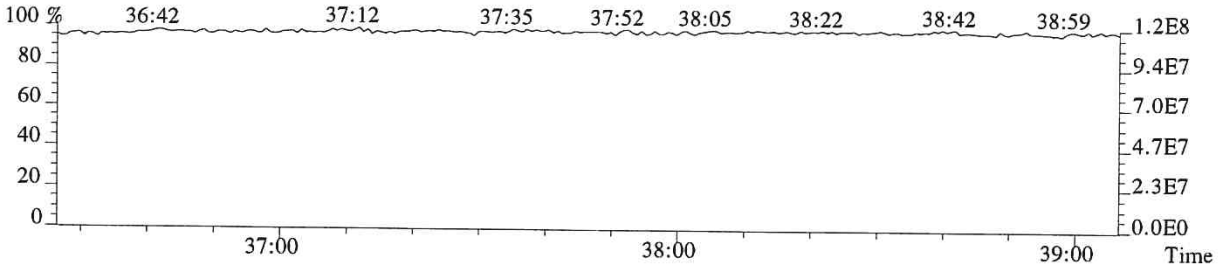
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1280.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,388.0,0.40%,F,T)

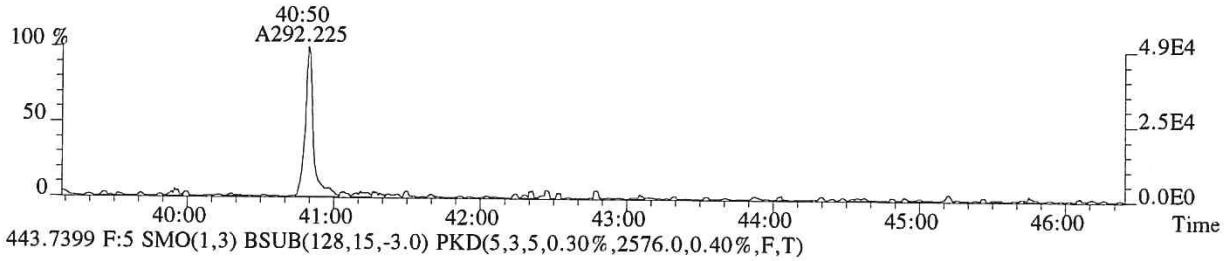


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

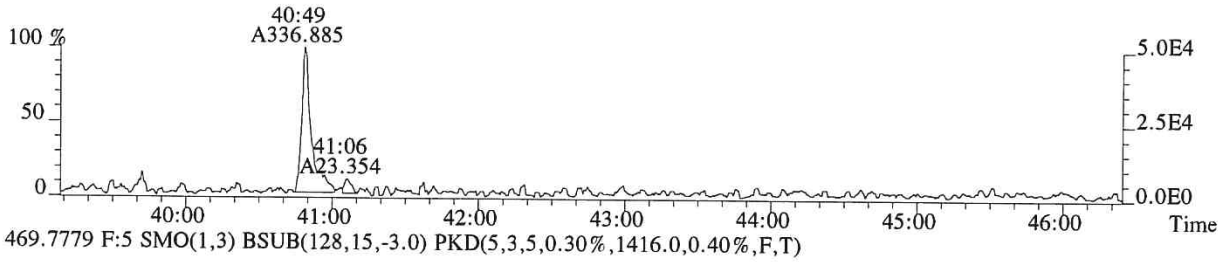


017174

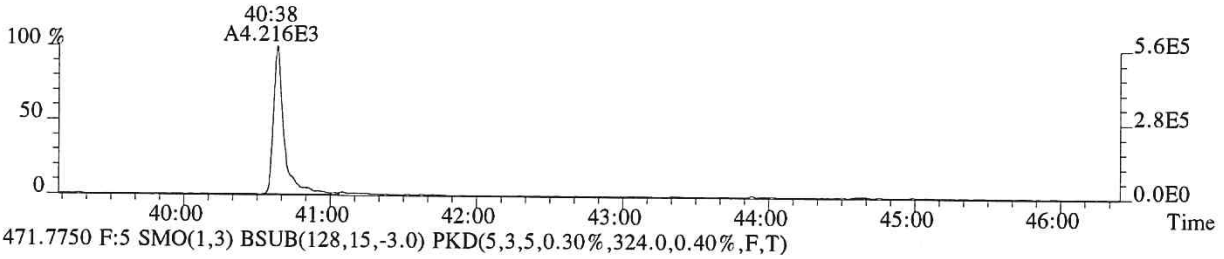
File:P616409 #1-654 Acq: 9-JAN-2019 15:39:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,228.0,0.40%,F,T)



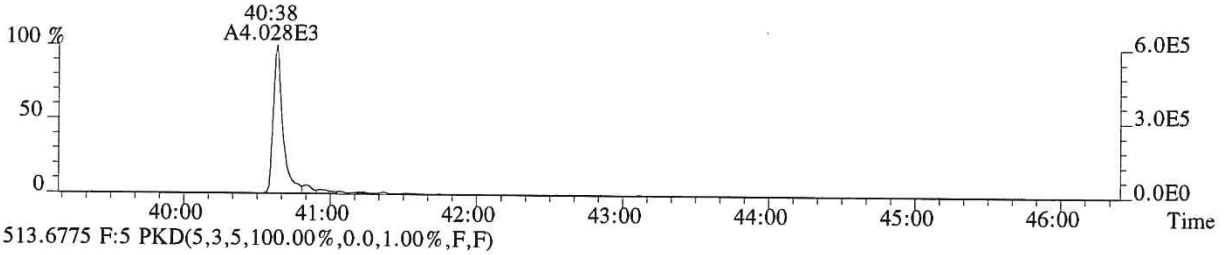
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2576.0,0.40%,F,T)



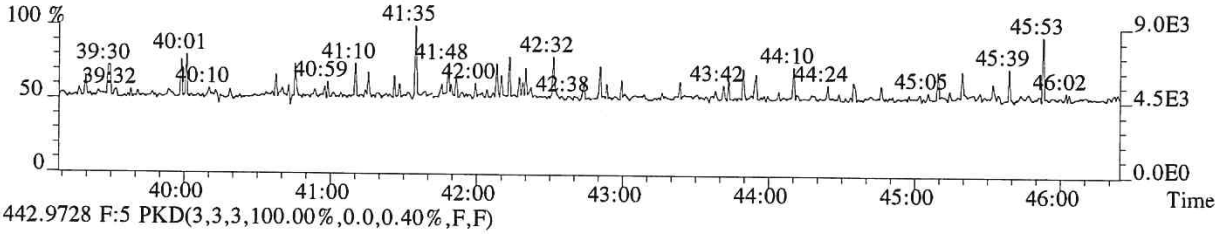
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1416.0,0.40%,F,T)



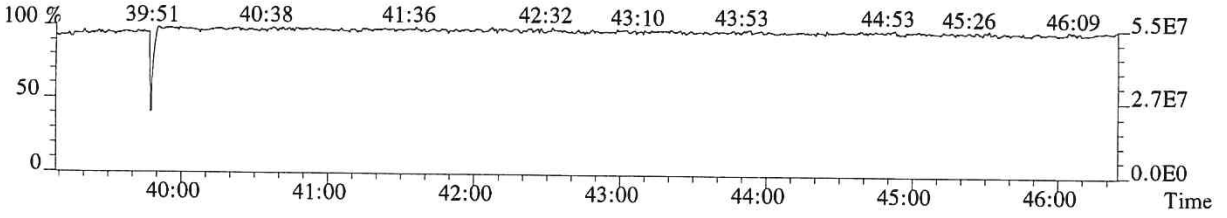
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,324.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

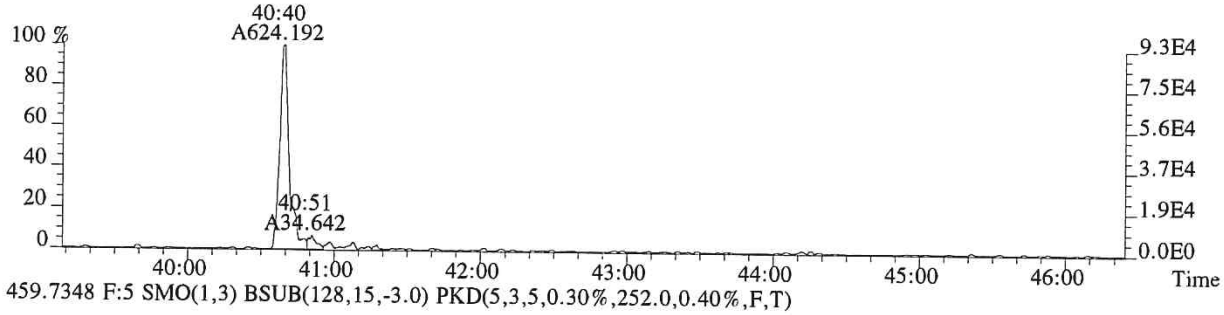


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

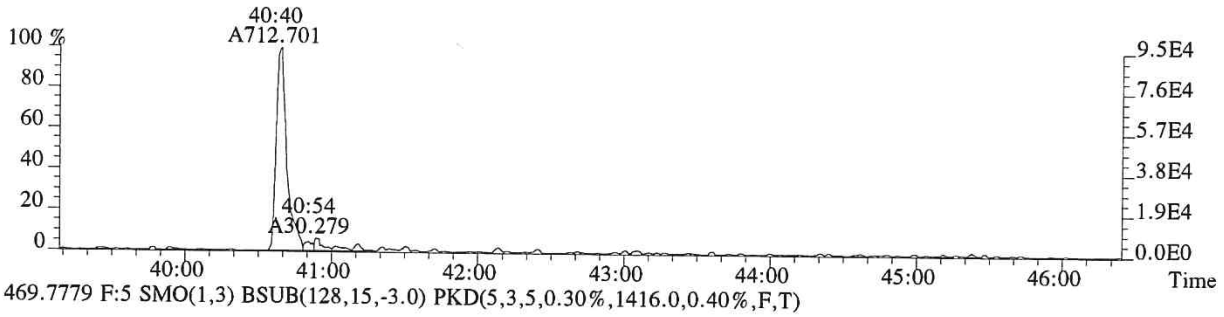


017175

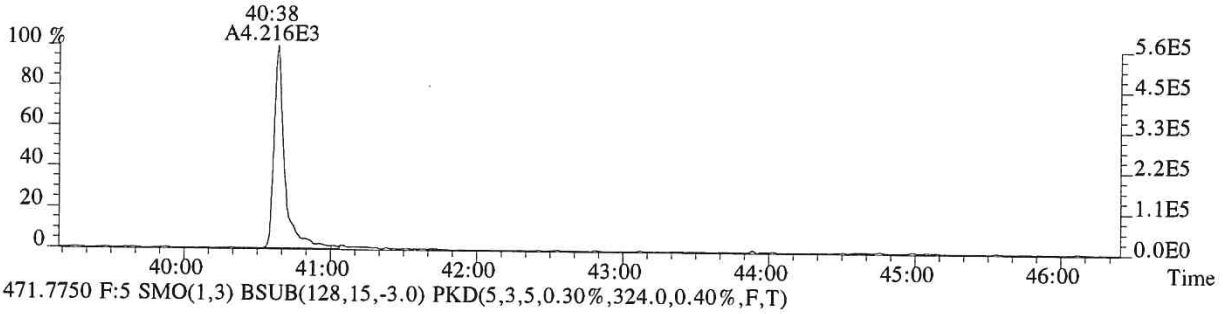
File:P616409 #1-654 Acq: 9-JAN-2019 15:39:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-006DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,232.0,0.40%,F,T)



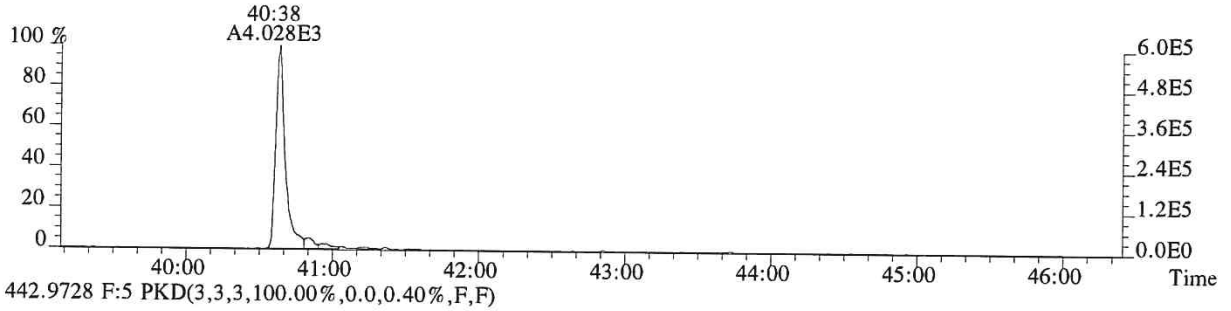
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,252.0,0.40%,F,T)



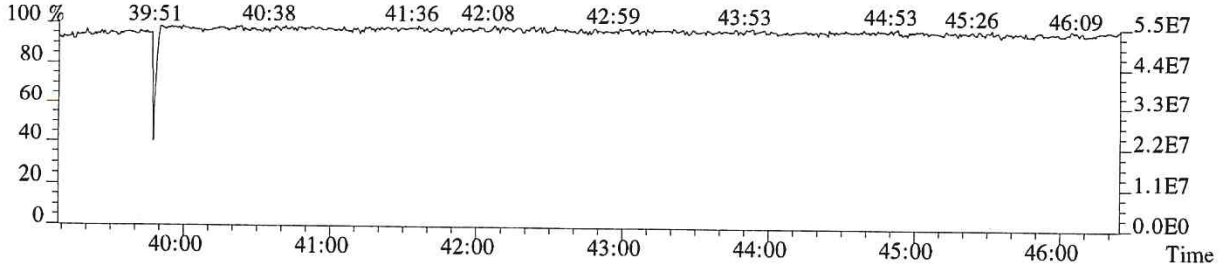
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1416.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,324.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017176

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0174

Run #17 Filename P616385 Samp: 1 Inj: 1 Acquired: 8-JAN-19 19:31:59
Processed: 9-JAN-19 08:58:17 Sample ID: E1801138-007

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:17	4.741e+04	5.938e+04	0.80	yes	yes	1.081
2	Unk	1,2,3,7,8-PeCDF	30:26	1.562e+03	1.090e+03	1.43	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:29	1.724e+03	1.155e+03	1.49	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:22	1.661e+03	1.316e+03	1.26	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:29	5.531e+02	4.071e+02	1.36	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:03	3.334e+02	2.673e+02	1.25	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:51	2.158e+02	1.641e+02	1.31	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	4.255e+03	4.237e+03	1.00	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:31	3.310e+02	3.033e+02	1.09	yes	no	1.463
10	Unk	OCDF	40:48	6.056e+04	6.847e+04	0.88	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:20	1.050e+04	1.333e+04	0.79	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:47	2.445e+02	2.037e+02	1.20	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:11	1.043e+02	7.764e+01	1.34	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:17	3.818e+02	3.437e+02	1.11	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:31	2.412e+02	2.087e+02	1.16	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	5.156e+03	5.158e+03	1.00	yes	no	1.112
17	Unk	OCDD	40:38	3.290e+04	3.653e+04	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:16	1.268e+04	1.563e+04	0.81	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:24	1.892e+04	1.186e+04	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:28	1.770e+04	1.081e+04	1.64	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:21	6.371e+03	1.239e+04	0.51	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	7.232e+03	1.396e+04	0.52	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	6.769e+03	1.254e+04	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:49	6.001e+03	1.112e+04	0.54	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:08	3.626e+03	8.317e+03	0.44	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	2.759e+03	6.272e+03	0.44	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:18	5.817e+03	7.516e+03	0.77	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:46	1.249e+04	8.202e+03	1.52	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:10	8.623e+03	6.845e+03	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:16	7.876e+03	6.371e+03	1.24	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:04	6.223e+03	6.198e+03	1.00	yes	no	0.857
32	IS	13C-OCDD	40:37	3.742e+03	4.023e+03	0.93	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:31	1.559e+04	1.949e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:31	1.649e+04	1.282e+04	1.29	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:20	1.095e+04				no	1.086

$$\text{OCDD} = \frac{(3.290e{+}04 + 3.653e{+}04) \times 4000\ \text{pg} \times 1}{(3.742e{+}03 + 4.023e{+}03) \times 10.583\ \text{g} \times 60.7/100 \times 1.157} = 4812\ \text{ng/kg}$$

LM 01/09/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0174

Run #17 Filename P616385 Samp: 1 Inj: 1 Acquired: 8-JAN-19 19:31:59
Processed: 9-JAN-19 08:58:17 LAB. ID: E1801138-007

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.60e+06	2.24e+03	2.9e+03	8.20e+06	3.49e+03	2.4e+03
2	1,2,3,7,8-PeCDF	2.71e+05	1.70e+03	1.6e+02	1.90e+05	4.00e+03	4.7e+01
3	2,3,4,7,8-PeCDF	2.79e+05	1.70e+03	1.6e+02	1.75e+05	4.00e+03	4.4e+01
4	1,2,3,4,7,8-HxCDF	3.61e+05	2.25e+03	1.6e+02	2.73e+05	2.58e+03	1.1e+02
5	1,2,3,6,7,8-HxCDF	1.05e+05	2.25e+03	4.7e+01	7.95e+04	2.58e+03	3.1e+01
6	2,3,4,6,7,8-HxCDF	7.27e+04	2.25e+03	3.2e+01	5.66e+04	2.58e+03	2.2e+01
7	1,2,3,7,8,9-HxCDF	4.11e+04	2.25e+03	1.8e+01	3.15e+04	2.58e+03	1.2e+01
8	1,2,3,4,6,7,8-HpCDF	9.26e+05	1.99e+03	4.7e+02	9.18e+05	2.60e+03	3.5e+02
9	1,2,3,4,7,8,9-HpCDF	6.74e+04	1.99e+03	3.4e+01	6.72e+04	2.60e+03	2.6e+01
10	OCDF	1.07e+07	9.32e+02	1.1e+04	1.20e+07	2.44e+03	4.9e+03
11	2,3,7,8-TCDD	1.65e+06	5.00e+03	3.3e+02	2.12e+06	2.22e+03	9.5e+02
12	1,2,3,7,8-PeCDD	4.11e+04	2.02e+03	2.0e+01	3.22e+04	1.62e+03	2.0e+01
13	1,2,3,4,7,8-HxCDD	2.37e+04	6.60e+02	3.6e+01	1.91e+04	2.35e+03	8.1e+00
14	1,2,3,6,7,8-HxCDD	8.12e+04	6.60e+02	1.2e+02	7.55e+04	2.35e+03	3.2e+01
15	1,2,3,7,8,9-HxCDD	4.78e+04	6.60e+02	7.2e+01	4.25e+04	2.35e+03	1.8e+01
16	1,2,3,4,6,7,8-HpCDD	1.09e+06	1.49e+03	7.3e+02	1.10e+06	1.64e+03	6.7e+02
17	OCDD	5.65e+06	2.88e+02	2.0e+04	6.33e+06	2.28e+02	2.8e+04
18	13C-2,3,7,8-TCDF	1.81e+06	1.22e+04	1.5e+02	2.23e+06	1.37e+04	1.6e+02
19	13C-1,2,3,7,8-PeCDF	3.36e+06	7.43e+03	4.5e+02	2.15e+06	9.34e+03	2.3e+02
20	13C-2,3,4,7,8-PeCDF	3.39e+06	7.43e+03	4.6e+02	2.08e+06	9.34e+03	2.2e+02
21	13C-1,2,3,4,7,8-HxCDF	1.37e+06	1.52e+03	9.0e+02	2.64e+06	4.24e+03	6.2e+02
22	13C-1,2,3,6,7,8-HxCDF	1.47e+06	1.52e+03	9.6e+02	2.70e+06	4.24e+03	6.4e+02
23	13C-2,3,4,6,7,8-HxCDF	1.41e+06	1.52e+03	9.3e+02	2.65e+06	4.24e+03	6.2e+02
24	13C-1,2,3,7,8,9-HxCDF	1.22e+06	1.52e+03	8.0e+02	2.27e+06	4.24e+03	5.4e+02
25	13C-1,2,3,4,6,7,8-HpCDF	7.78e+05	2.75e+03	2.8e+02	1.80e+06	3.18e+03	5.6e+02
26	13C-1,2,3,4,7,8,9-HpCDF	5.56e+05	2.75e+03	2.0e+02	1.29e+06	3.18e+03	4.1e+02
27	13C-2,3,7,8-TCDD	9.12e+05	1.43e+04	6.4e+01	1.17e+06	4.69e+03	2.5e+02
28	13C-1,2,3,7,8-PeCDD	2.25e+06	3.22e+03	7.0e+02	1.47e+06	2.82e+03	5.2e+02
29	13C-1,2,3,4,7,8-HxCDD	1.81e+06	1.18e+03	1.5e+03	1.45e+06	1.04e+03	1.4e+03
30	13C-1,2,3,6,7,8-HxCDD	1.68e+06	1.18e+03	1.4e+03	1.36e+06	1.04e+03	1.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.32e+06	1.34e+03	9.8e+02	1.31e+06	2.76e+02	4.8e+03
32	13C-OCDD	6.31e+05	7.72e+02	8.2e+02	6.69e+05	2.32e+02	2.9e+03
33	13C-1,2,3,4-TCDD	2.11e+06	1.43e+04	1.5e+02	2.75e+06	4.69e+03	5.9e+02
34	13C-1,2,3,7,8,9-HxCDD	3.26e+06	1.18e+03	2.8e+03	2.51e+06	1.04e+03	2.4e+03
35	37Cl-2,3,7,8-TCDD	1.72e+06	1.67e+03	1.0e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0174

Entry: 36 Totals Name: Total Tetra-Furans

Run: 17 File: P616385 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 19:31:59 Processed: 9-JAN-19 08:58:17

Mass: 303.9020 305.8990 Tot Response: 1.97e+05 RRF: 1.081

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	20:50	5.47e+01	8.17e+01	0.67	yes	1.36e+02		n	n
2	21:42	4.89e+02	7.18e+02	0.68	yes	1.21e+03		n	n
3	22:25	2.68e+03	3.43e+03	0.78	yes	6.11e+03		n	n
4	22:46	1.06e+03	1.34e+03	0.79	yes	2.40e+03		n	n
5	23:03	2.31e+03	2.76e+03	0.84	yes	5.07e+03		n	n
6	24:15	2.21e+04	2.81e+04	0.79	yes	5.02e+04		n	n
7	24:33	1.14e+03	1.34e+03	0.85	yes	2.48e+03		n	n
8	25:10	2.31e+03	2.85e+03	0.81	yes	5.17e+03		y	y
9	25:17	4.74e+04	5.94e+04	0.80	yes	1.07e+05	2,3,7,8-TCDF	y	y
10	25:44	3.59e+03	4.43e+03	0.81	yes	8.03e+03		n	n
11	26:03	4.95e+02	6.86e+02	0.72	yes	1.18e+03		n	n
12	27:37	3.60e+03	4.69e+03	0.77	yes	8.29e+03		n	n

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Peak List Summary

CLIENT ID.
SL0174

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 17 File: P616385 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 19:31:59 Processed: 9-JAN-19 08:58:17

Mass: 319.8970 321.8940 Tot Response: 2.43e+04 RRF: 1.049

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:25	1.81e+02	2.53e+02	0.72	yes	4.33e+02		n	n
2	26:20	1.05e+04	1.33e+04	0.79	yes	2.38e+04	2,3,7,8-TCDD	n	n

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Peak List Summary

CLIENT ID.
SL0174

Entry: 38 Totals Name: Total Penta-Furans1

Run: 17 File: P616385 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 19:31:59 Processed: 9-JAN-19 08:58:17

Mass: 339.8600 341.8570 Tot Response: 3.47e+03 RRF: 1.130

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:36	2.20e+03	1.27e+03 1.73	yes	3.47e+03		n	n

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Peak List Summary

CLIENT ID.
SL0174

Entry: 39 Totals Name: Total Penta-Furans2

Run: 17 File: P616385 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 19:31:59 Processed: 9-JAN-19 08:58:17

Mass: 339.8600 341.8570 Tot Response: 1.19e+04 RRF: 1.130

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:12	2.96e+02	1.76e+02	1.68	yes	4.72e+02		n	n
2	29:22	2.23e+03	1.47e+03	1.52	yes	3.70e+03		n	n
3	30:00	6.20e+02	3.55e+02	1.75	yes	9.76e+02		n	n
4	30:26	1.56e+03	1.09e+03	1.43	yes	2.65e+03	1,2,3,7,8-PeCDF	n	n
5	30:42	6.65e+02	4.56e+02	1.46	yes	1.12e+03		n	n
6	31:22	7.17e+01	5.15e+01	1.39	yes	1.23e+02		n	n
7	31:29	1.72e+03	1.15e+03	1.49	yes	2.88e+03	2,3,4,7,8-PeCDF	n	n

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Peak List Summary

CLIENT ID.
SL0174

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 17 File: P616385 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 19:31:59 Processed: 9-JAN-19 08:58:17

Mass: 355.8550 357.8520 Tot Response: 6.39e+02 RRF: 0.9288

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:25	3.95e+02	2.43e+02 1.62	yes	6.39e+02		n	n

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Peak List Summary

CLIENT ID.
SL0174

Entry: 41 Totals Name: Total Hexa-Furans

Run: 17 File: P616385 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 19:31:59 Processed: 9-JAN-19 08:58:17

Mass: 373.8210 375.8180 Tot Response: 1.37e+04 RRF: 1.324

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:10	6.09e+02	5.00e+02	1.22	yes	1.11e+03		n	n
2	33:20	2.03e+03	1.51e+03	1.34	yes	3.55e+03		n	n
3	33:29	2.95e+01	2.40e+01	1.23	yes	5.35e+01		n	n
4	33:55	2.02e+03	1.74e+03	1.17	yes	3.76e+03		n	n
5	34:16	1.59e+02	1.24e+02	1.28	yes	2.82e+02		n	n
6	34:22	1.66e+03	1.32e+03	1.26	yes	2.98e+03	1,2,3,4,7,8-HxCDF	n	n
7	34:29	5.53e+02	4.07e+02	1.36	yes	9.60e+02	1,2,3,6,7,8-HxCDF	n	n
8	35:03	3.33e+02	2.67e+02	1.25	yes	6.01e+02	2,3,4,6,7,8-HxCDF	n	n
9	35:51	2.16e+02	1.64e+02	1.31	yes	3.80e+02	1,2,3,7,8,9-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0174

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 17 File: P616385 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 19:31:59 Processed: 9-JAN-19 08:58:17

Mass: 389.8160 391.8130 Tot Response: 8.24e+03 RRF: 1.092

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:45	1.98e+03	1.56e+03	1.26	yes	3.54e+03		n	n
2	34:18	3.08e+02	2.37e+02	1.30	yes	5.45e+02		n	n
3	34:33	1.44e+03	1.19e+03	1.21	yes	2.64e+03		n	n
4	35:11	1.04e+02	7.76e+01	1.34	yes	1.82e+02	1,2,3,4,7,8-HxCDD	n	n
5	35:17	3.82e+02	3.44e+02	1.11	yes	7.25e+02	1,2,3,6,7,8-HxCDD	n	n
6	35:26	9.26e+01	7.30e+01	1.27	yes	1.66e+02		n	n
7	35:31	2.41e+02	2.09e+02	1.16	yes	4.50e+02	1,2,3,7,8,9-HxCDD	n	n

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Entry: 43 Totals Name: Total Hepta-Furans

Run: 17 File: P616385 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 19:31:59 Processed: 9-JAN-19 08:58:17

Mass: 407.7820 409.7790 Tot Response: 1.78e+04 RRF: 1.495

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:08	4.25e+03	4.24e+03	1.00	yes	8.49e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	37:24	2.62e+02	2.88e+02	0.91	yes	5.50e+02		n	n
3	37:33	4.13e+03	4.02e+03	1.03	yes	8.16e+03		n	n
4	38:31	3.31e+02	3.03e+02	1.09	yes	6.34e+02	1,2,3,4,7,8,9-HpCDF	n	n

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Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 17 File: P616385 Sample:1 Injection:1 Function:4

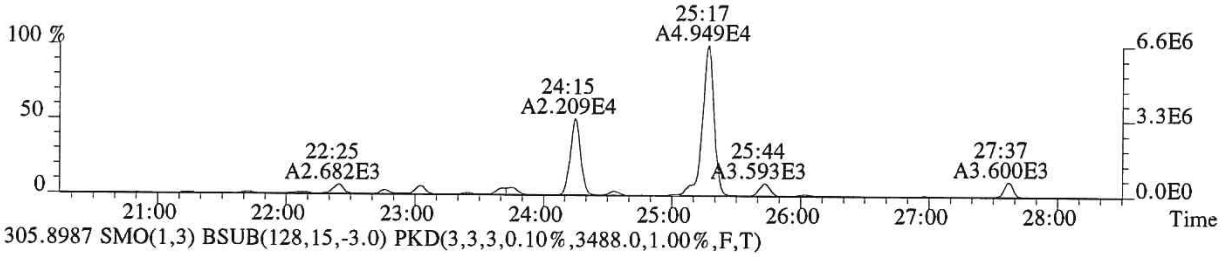
Acquired: 8-JAN-19 19:31:59 Processed: 9-JAN-19 08:58:17

Mass: 423.7770 425.7740 Tot Response: 2.62e+04 RRF: 1.112

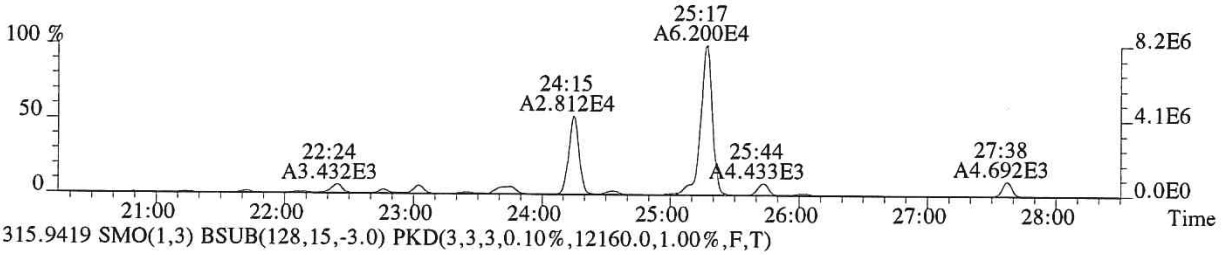
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:24	8.07e+03	7.77e+03	1.04	yes	1.58e+04		n	n
2	38:04	5.16e+03	5.16e+03	1.00	yes	1.03e+04	1,2,3,4,6,7,8-HpCDD	n	n

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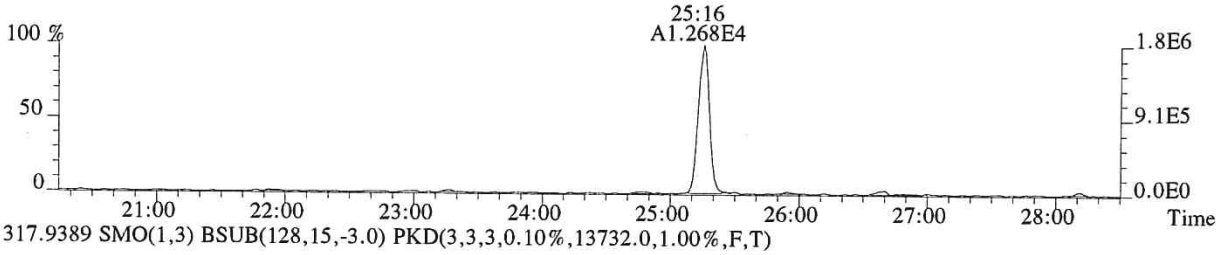
File:P616385 #1-587 Acq: 8-JAN-2019 19:31:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2240.0,1.00%,F,T)



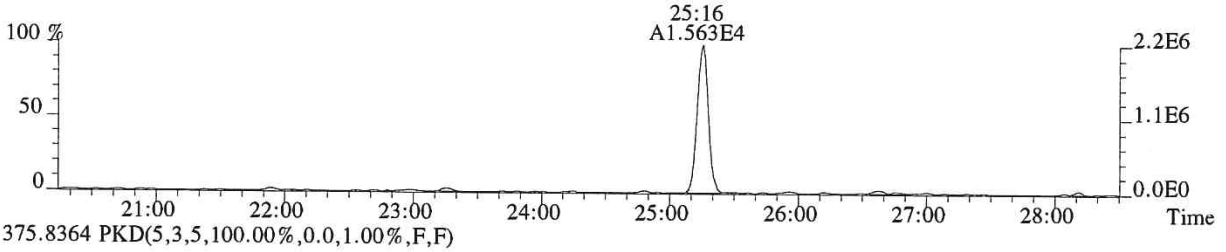
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3488.0,1.00%,F,T)



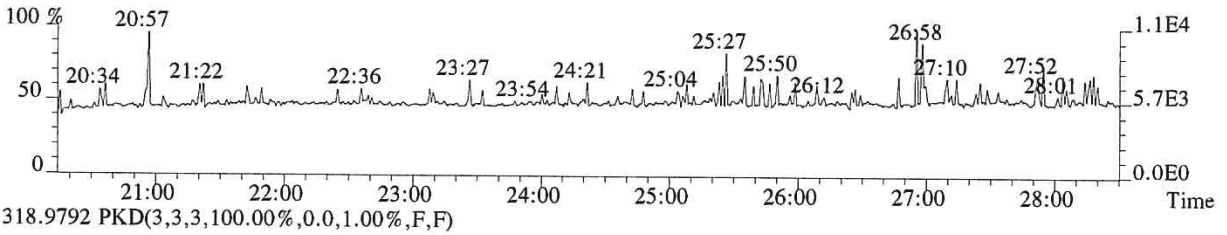
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12160.0,1.00%,F,T)



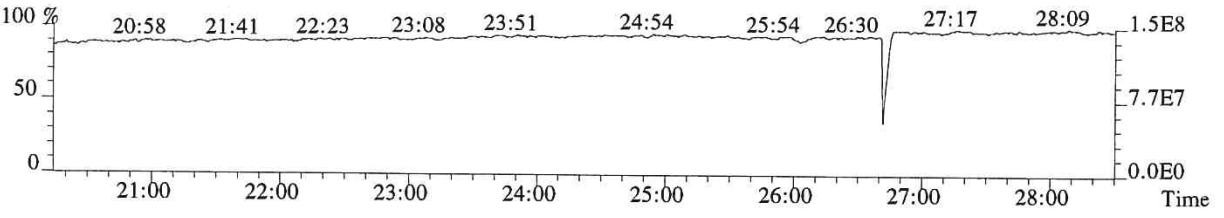
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,13732.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

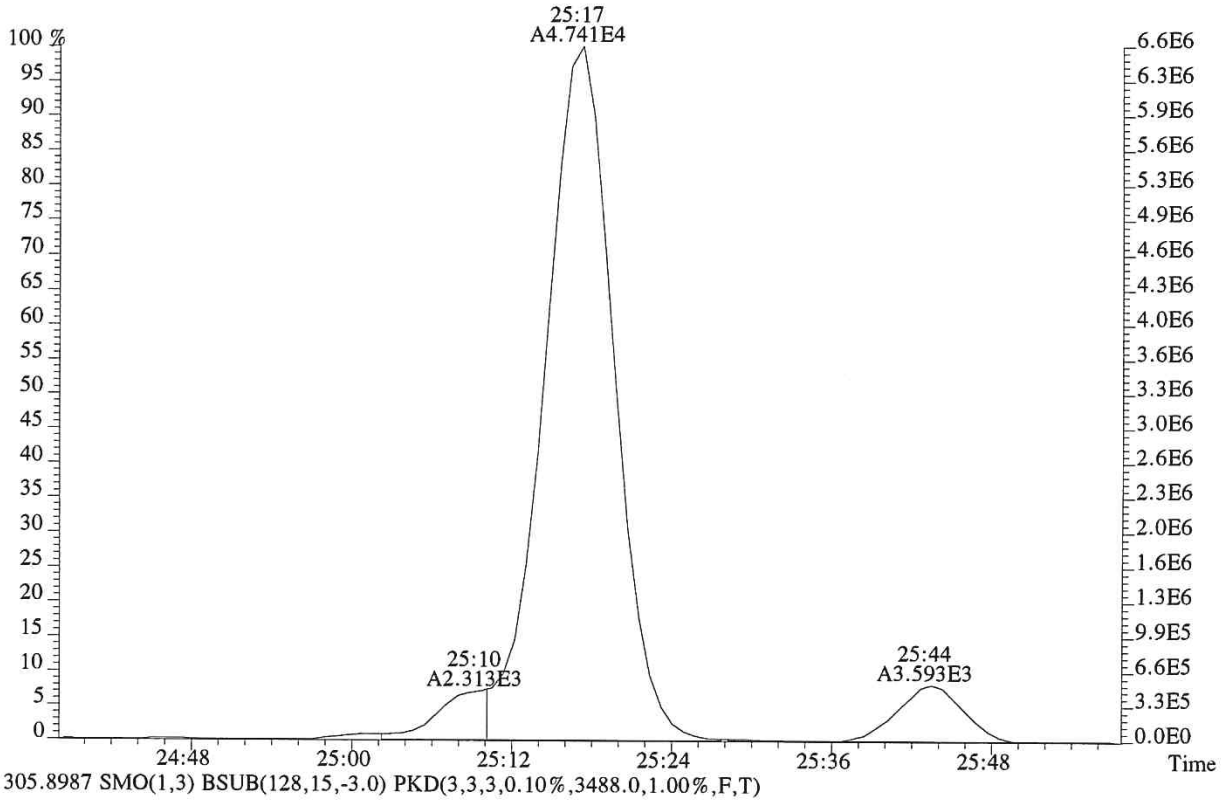


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

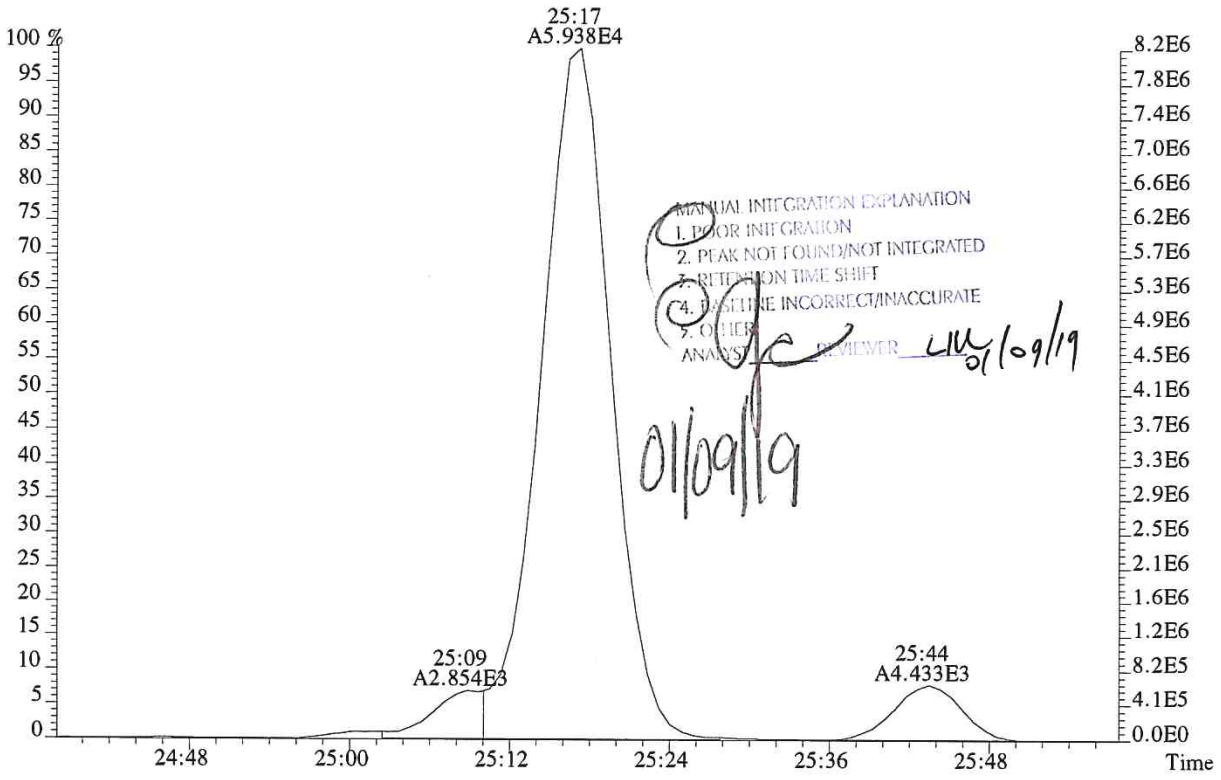


017188

File:P616385 #1-587 Acq: 8-JAN-2019 19:31:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2240.0,1.00%,F,T)



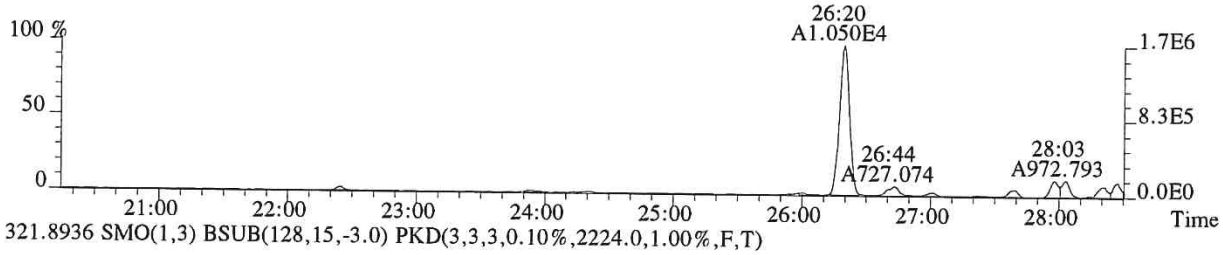
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3488.0,1.00%,F,T)



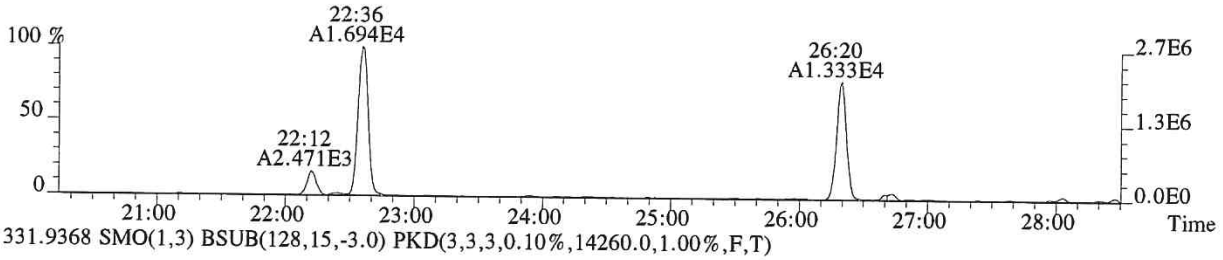
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER 01/09/19

01/09/19

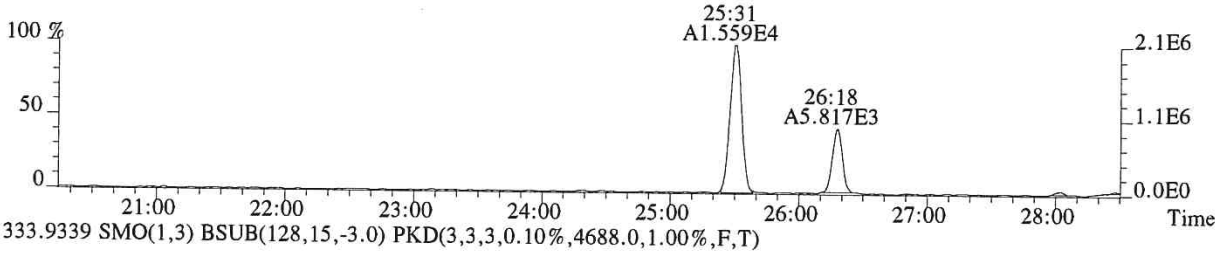
File:P616385 #1-587 Acq: 8-JAN-2019 19:31:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5000.0,1.00%,F,T)



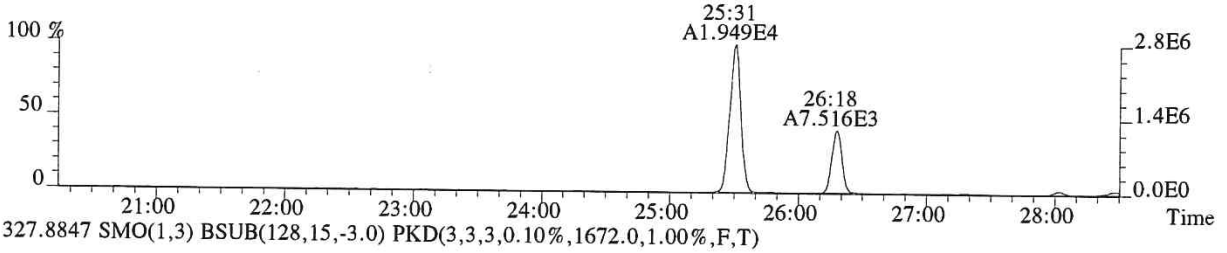
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2224.0,1.00%,F,T)



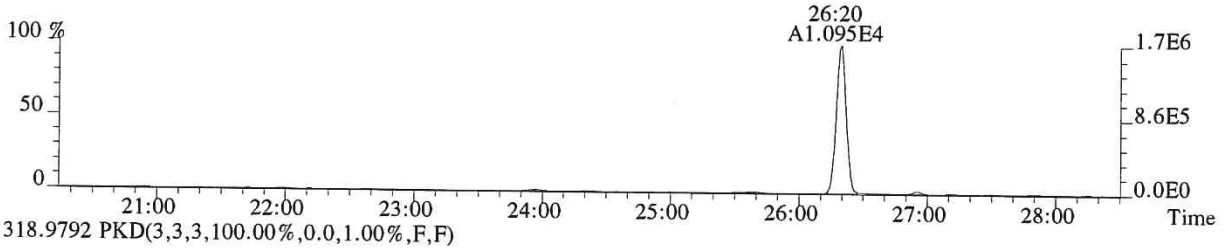
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,14260.0,1.00%,F,T)



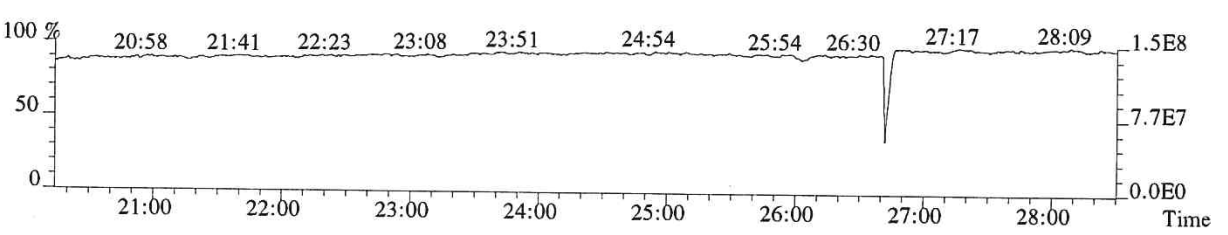
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4688.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1672.0,1.00%,F,T)

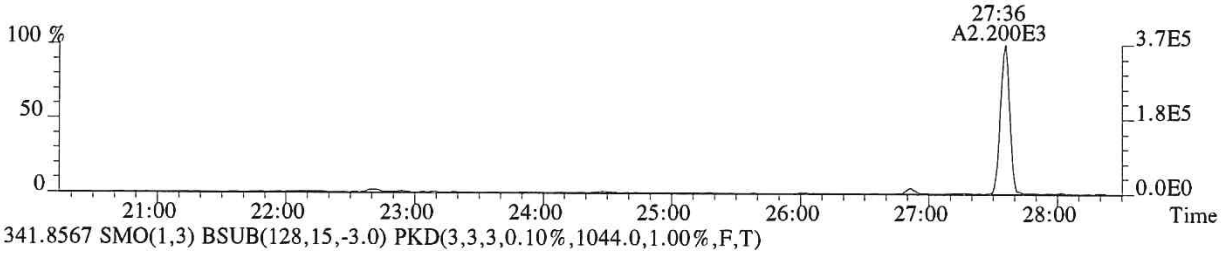


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

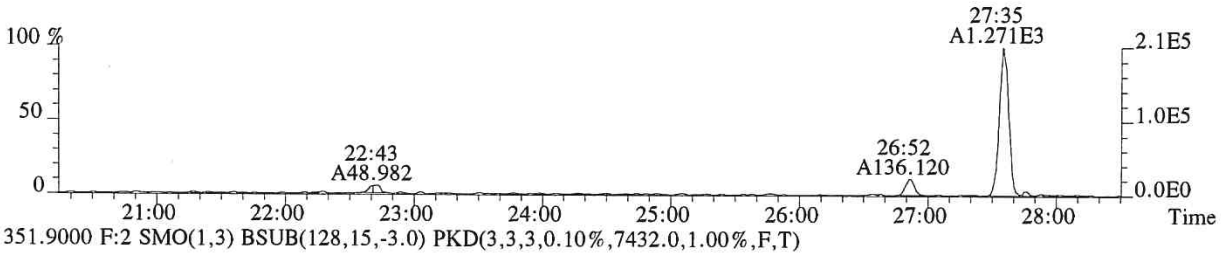


017190

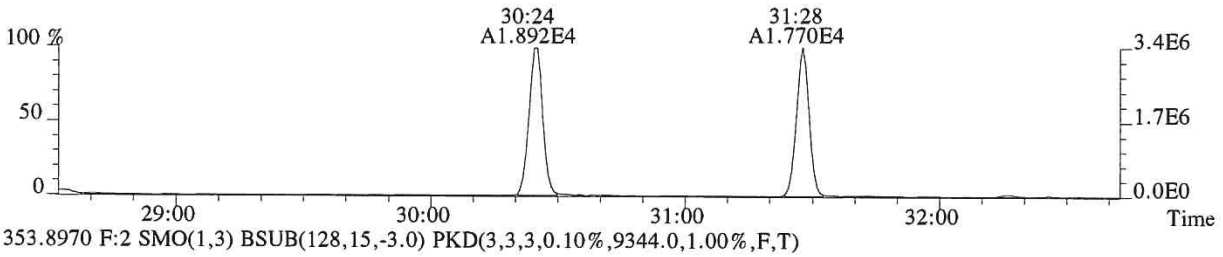
File:P616385 #1-587 Acq: 8-JAN-2019 19:31:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,776.0,1.00%,F,T)



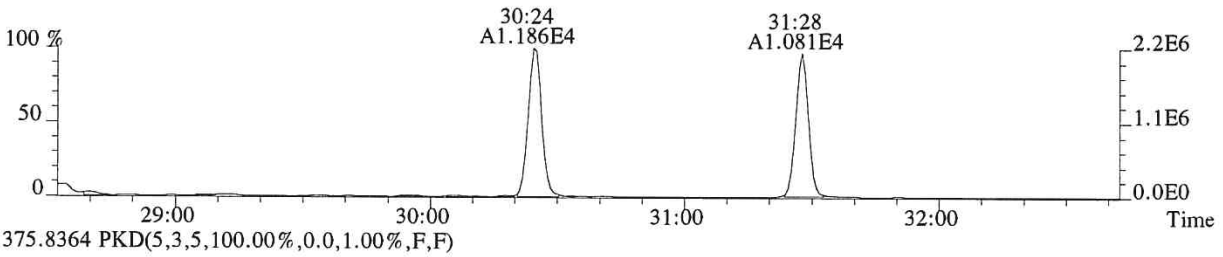
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1044.0,1.00%,F,T)



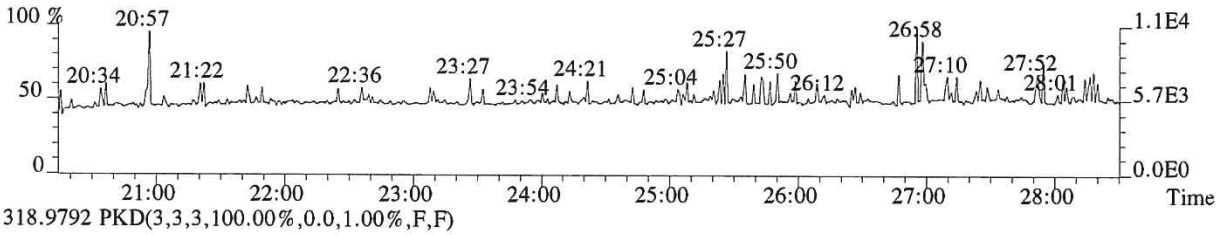
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7432.0,1.00%,F,T)



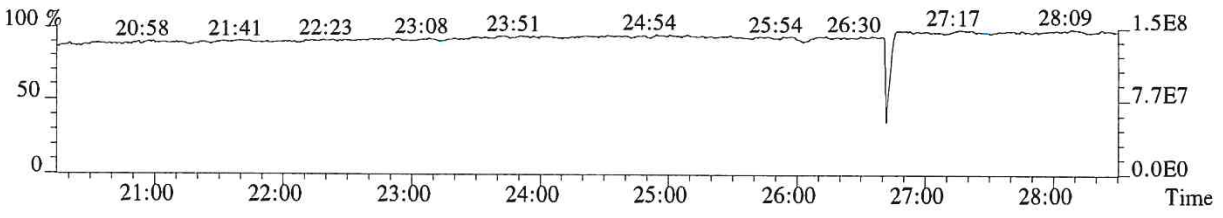
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9344.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

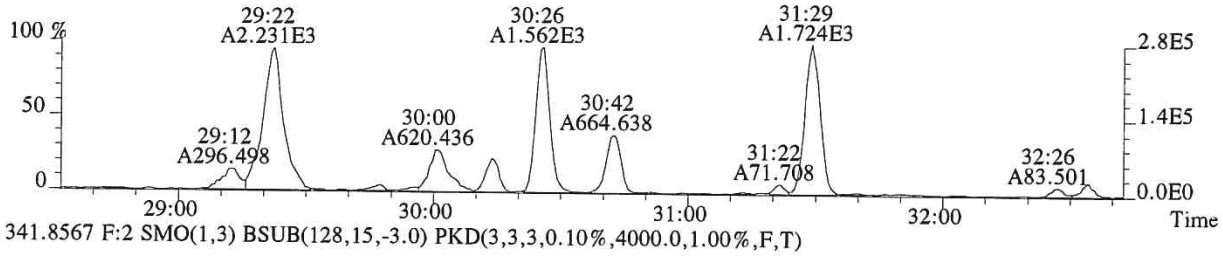


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

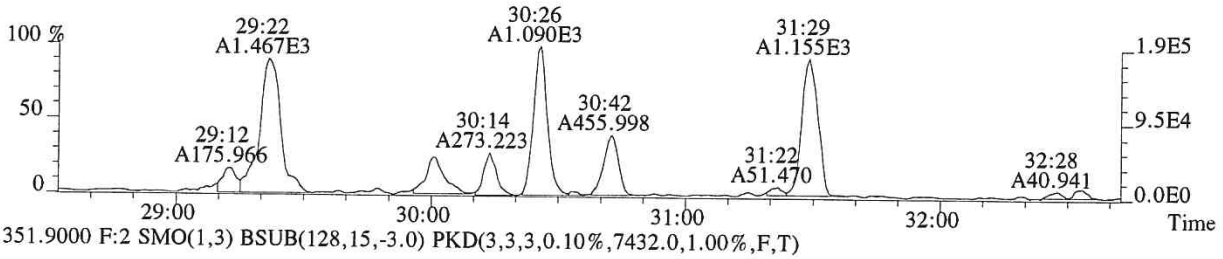


017191

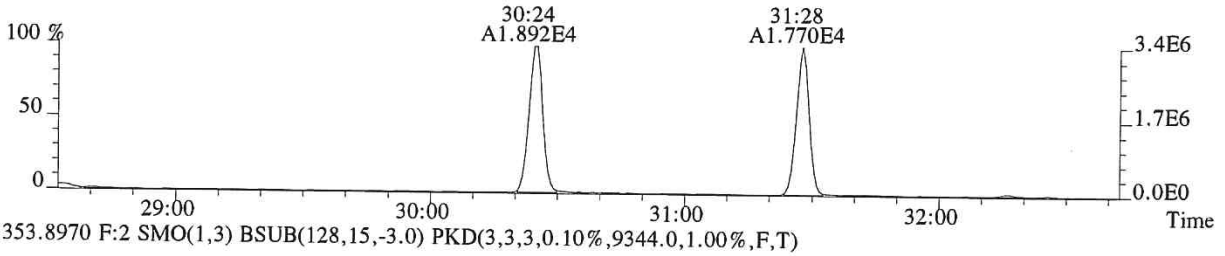
File:P616385 #1-376 Acq: 8-JAN-2019 19:31:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1700.0,1.00%,F,T)



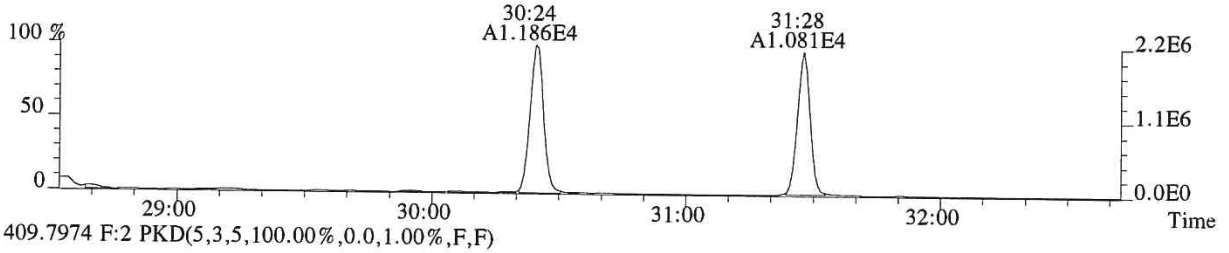
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4000.0,1.00%,F,T)



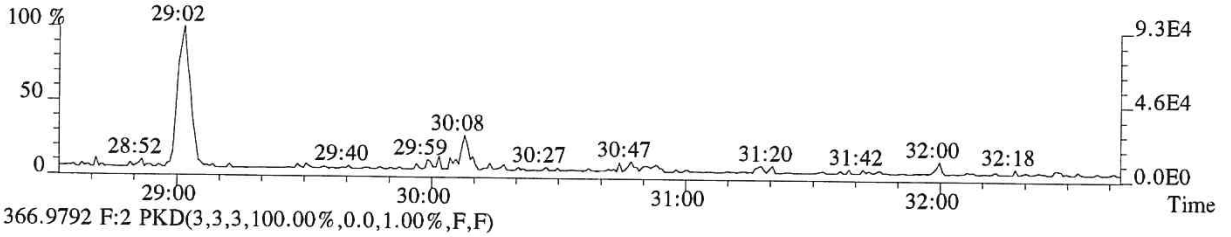
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7432.0,1.00%,F,T)



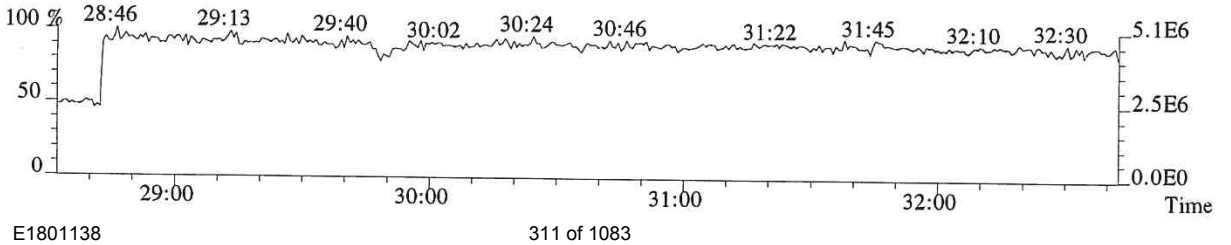
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9344.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

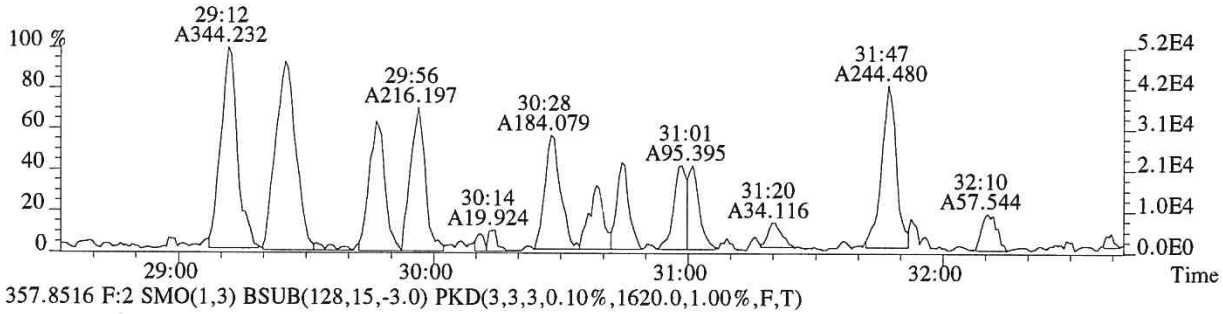


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

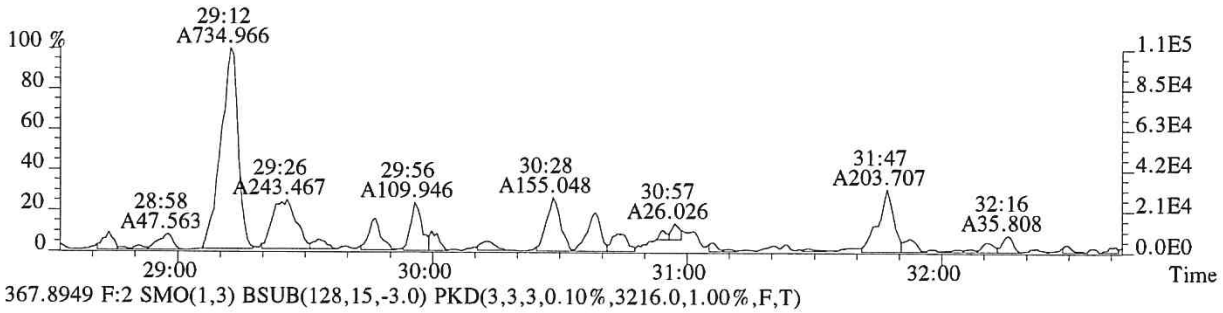


017192

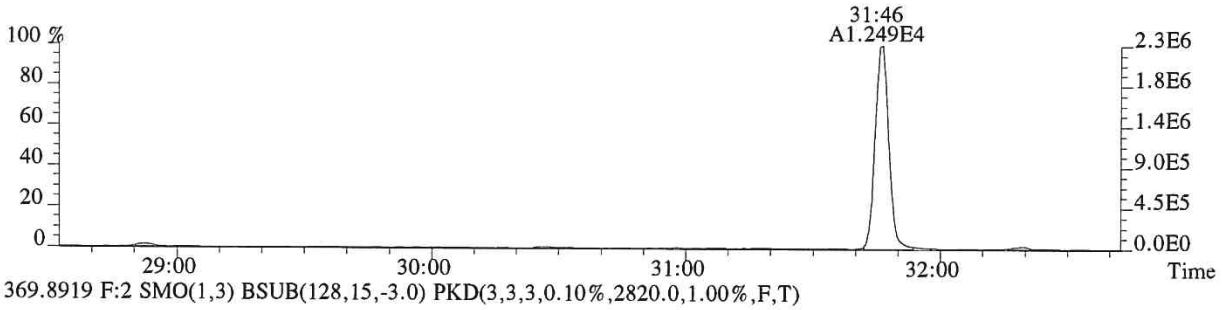
File:P616385 #1-376 Acq: 8-JAN-2019 19:31:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2016.0,1.00%,F,T)



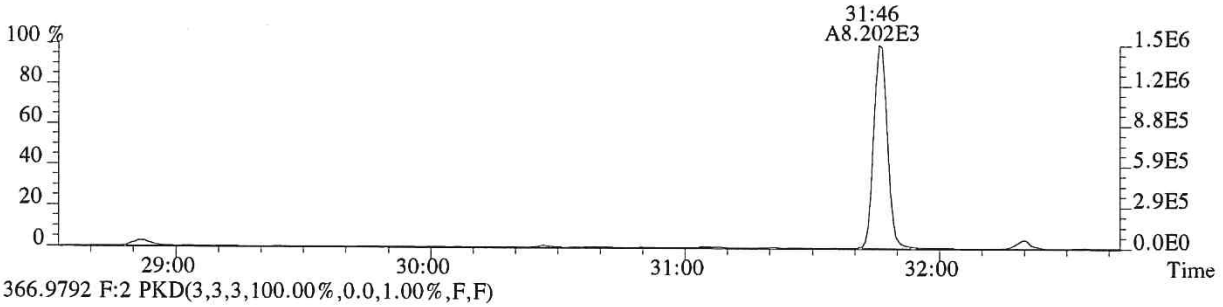
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1620.0,1.00%,F,T)



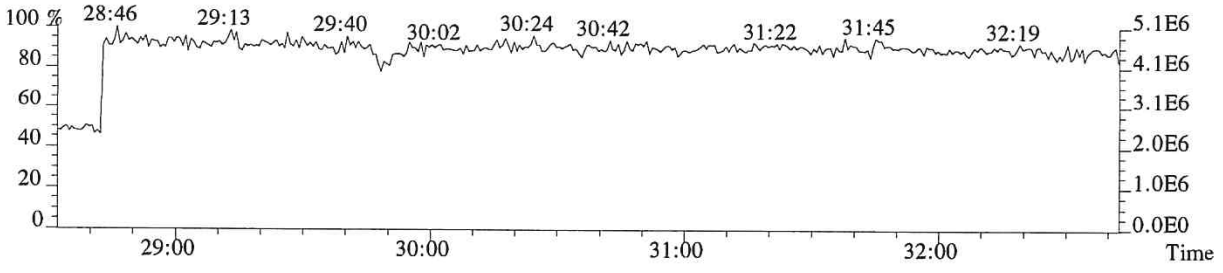
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3216.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2820.0,1.00%,F,T)

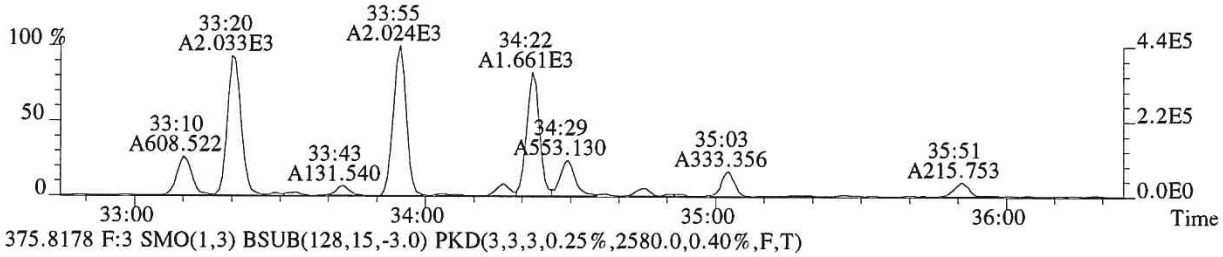


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

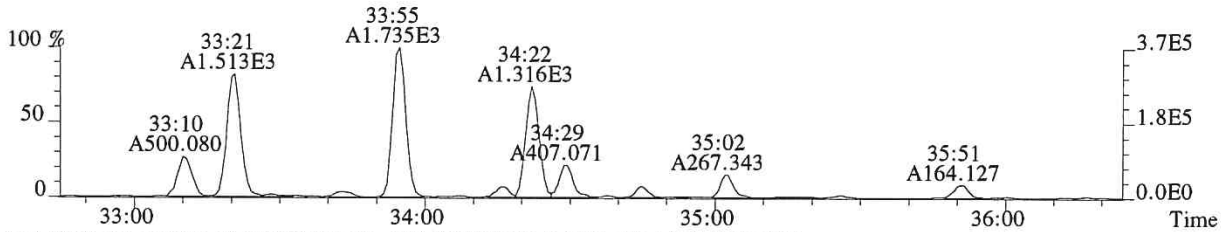


017193

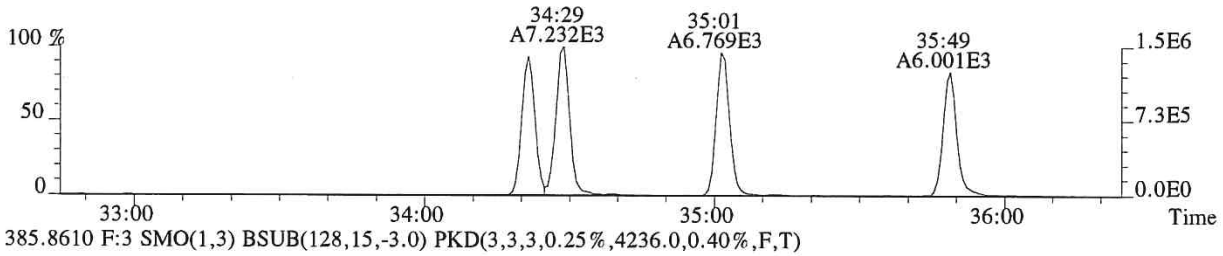
File:P616385 #1-330 Acq: 8-JAN-2019 19:31:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2252.0,0.40%,F,T)



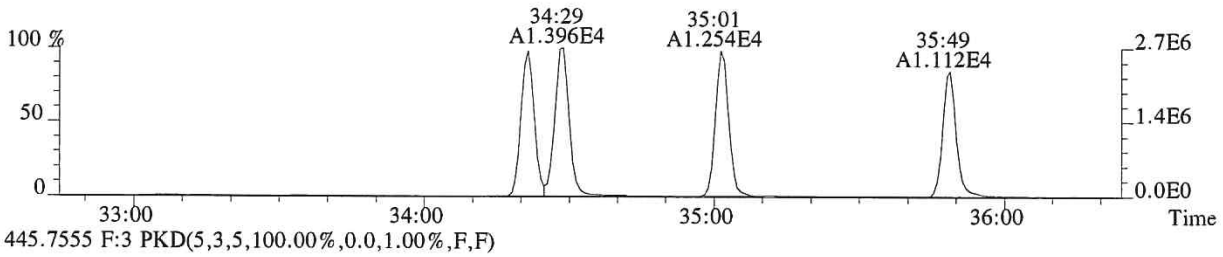
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2580.0,0.40%,F,T)



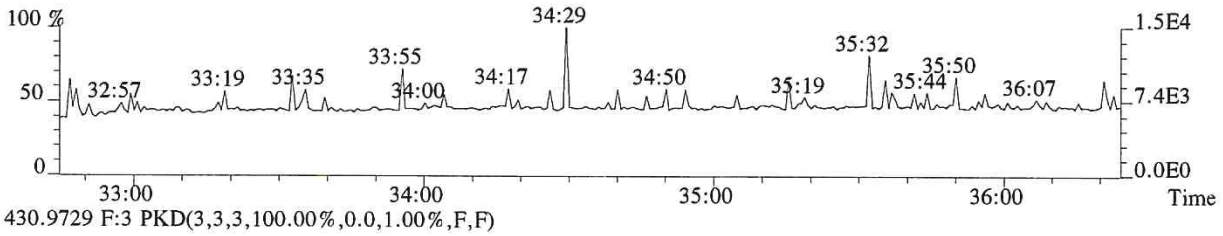
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1524.0,0.40%,F,T)



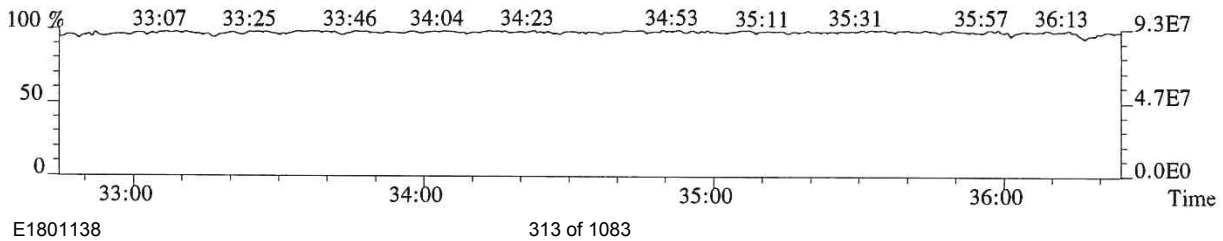
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4236.0,0.40%,F,T)



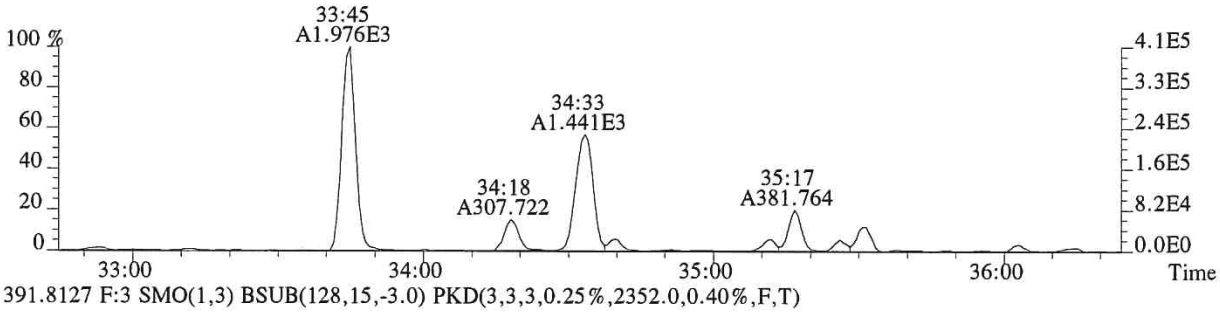
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



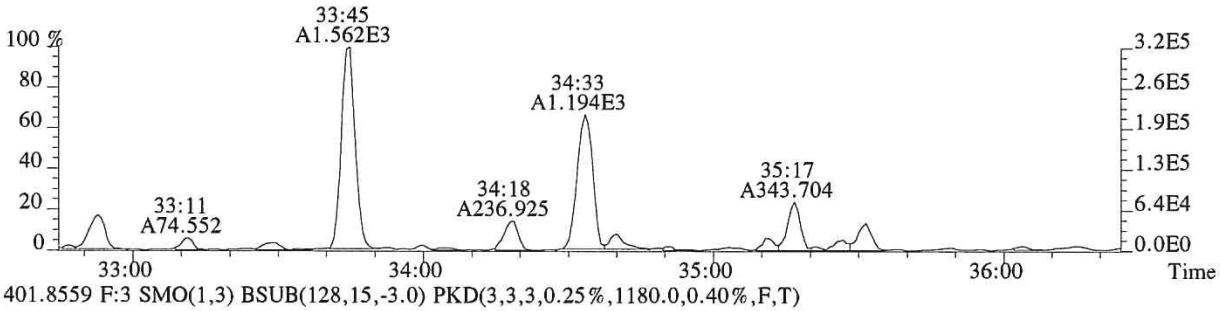
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



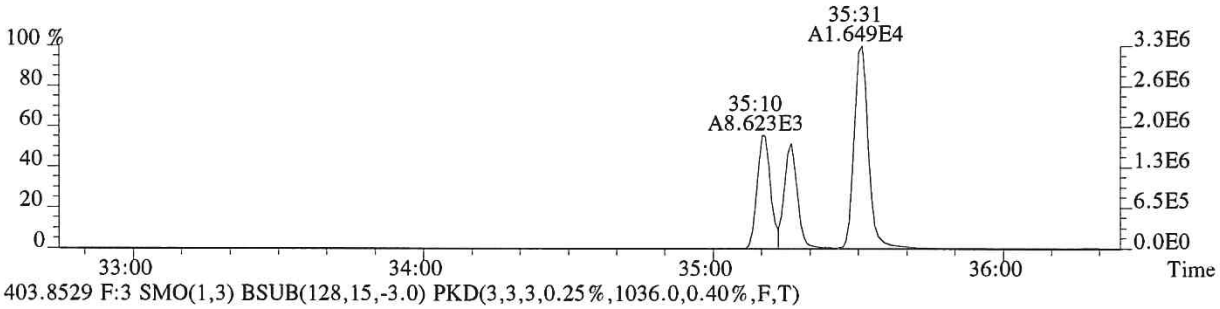
File:P616385 #1-330 Acq: 8-JAN-2019 19:31:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,660.0,0.40%,F,T)



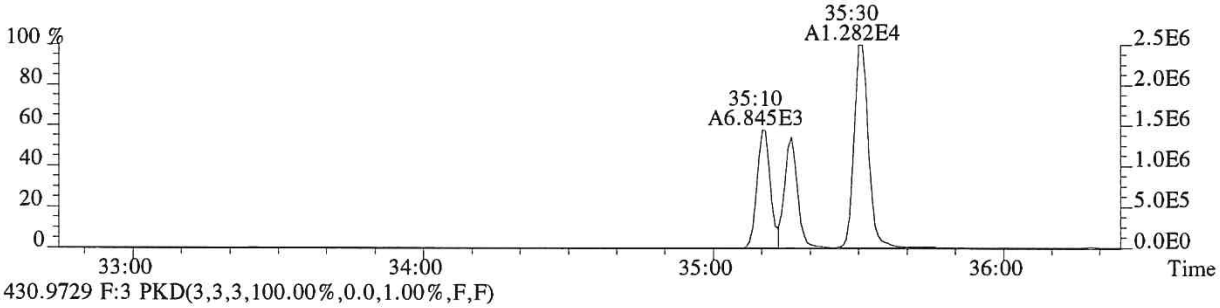
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2352.0,0.40%,F,T)



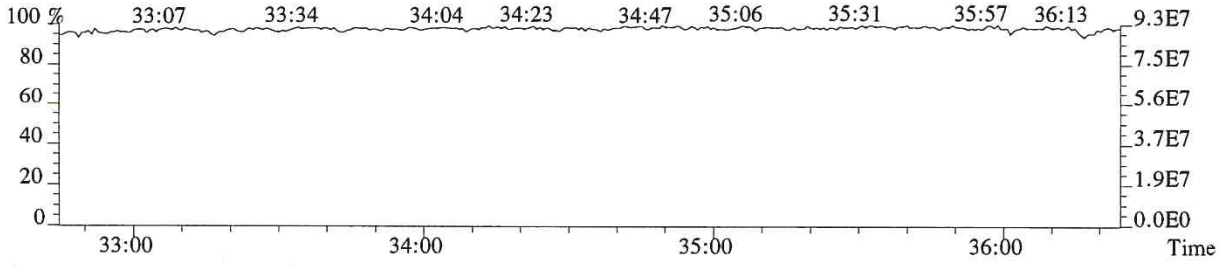
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1180.0,0.40%,F,T)



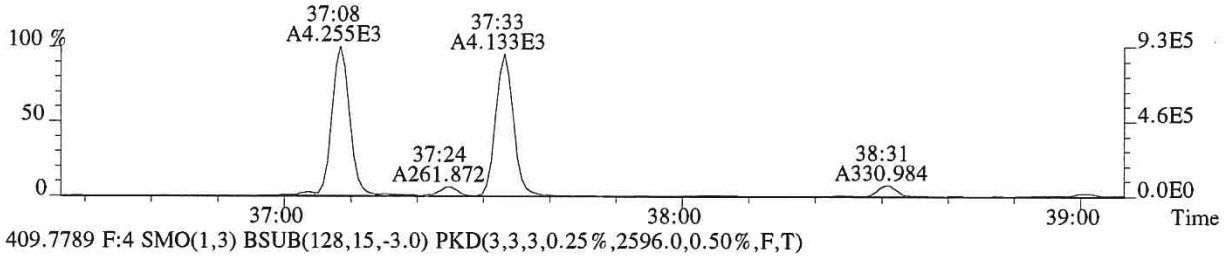
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1036.0,0.40%,F,T)



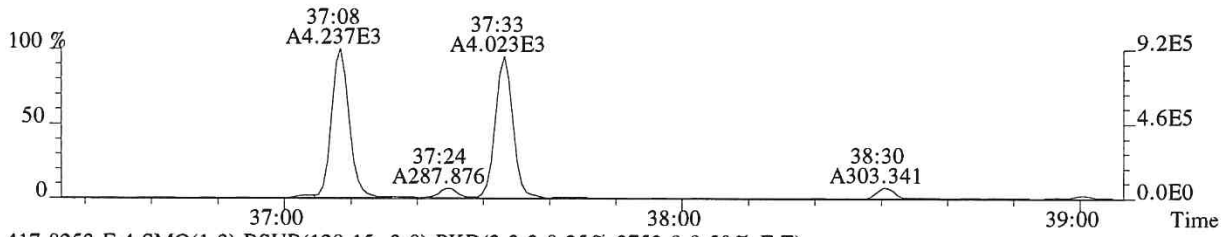
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



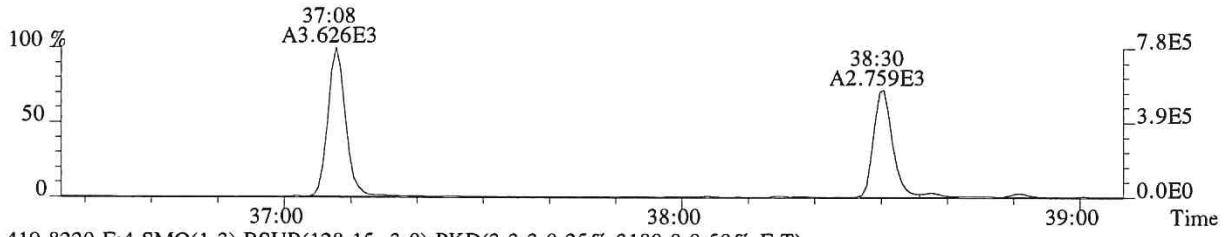
File:P616385 #1-241 Acq: 8-JAN-2019 19:31:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1992.0,0.50%,F,T)



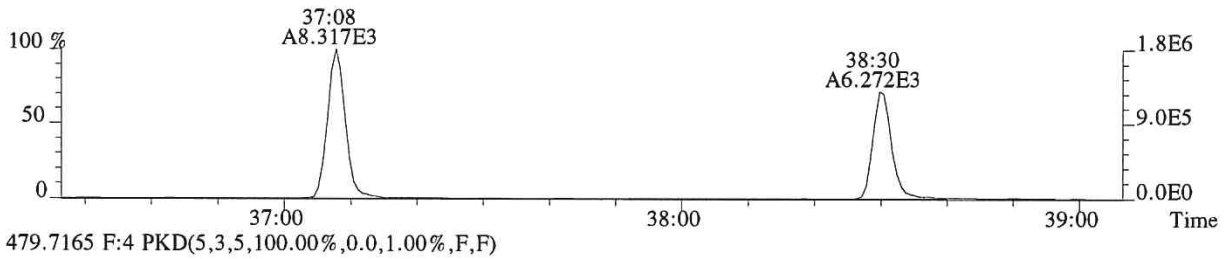
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2596.0,0.50%,F,T)



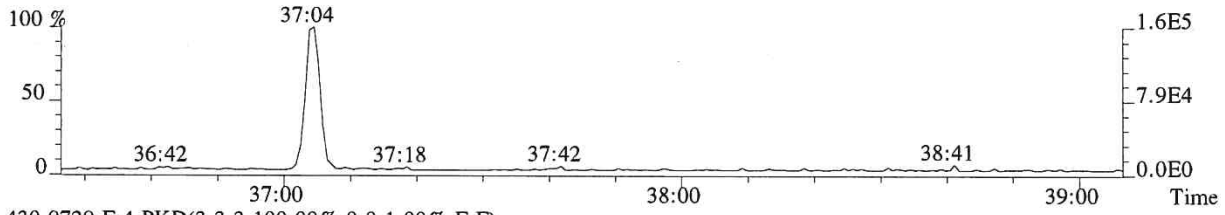
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2752.0,0.50%,F,T)



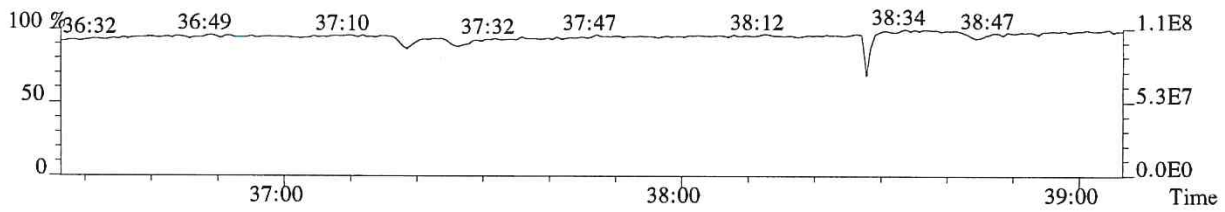
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3180.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

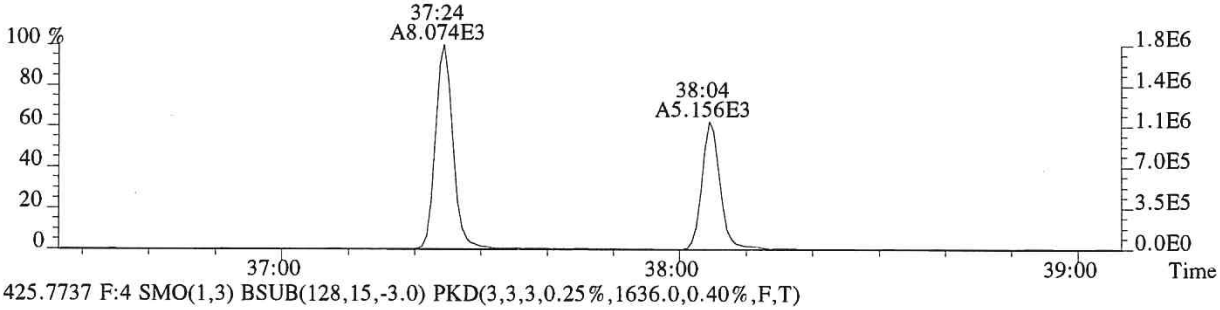


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

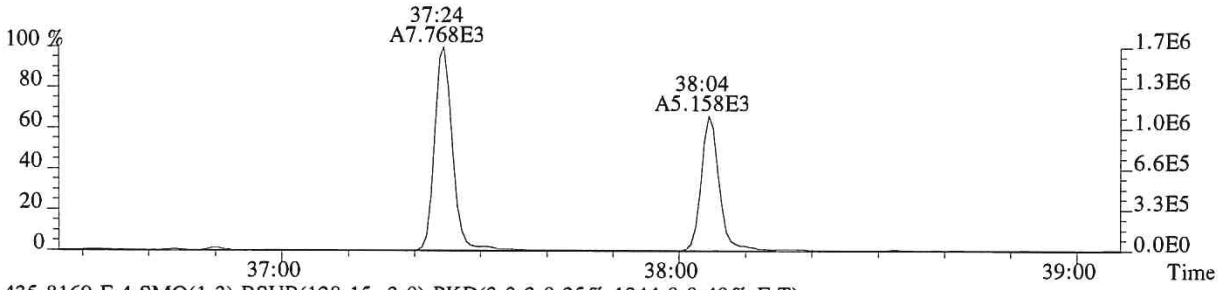


017196

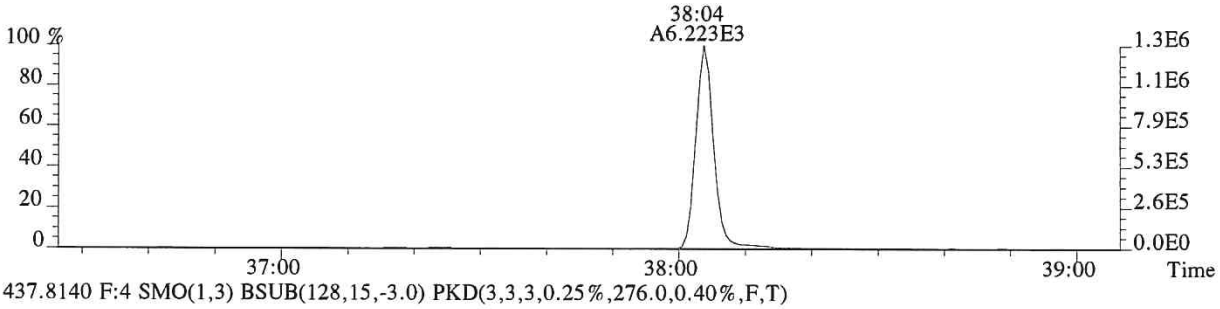
File:P616385 #1-241 Acq: 8-JAN-2019 19:31:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1488.0,0.40%,F,T)



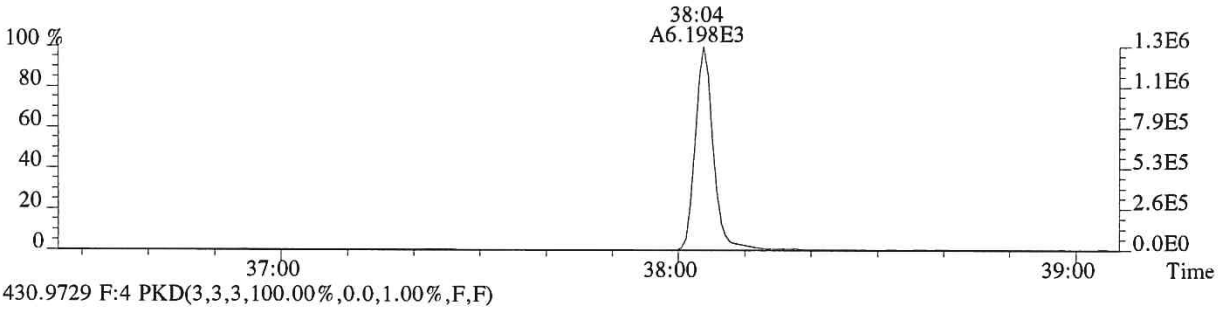
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1636.0,0.40%,F,T)



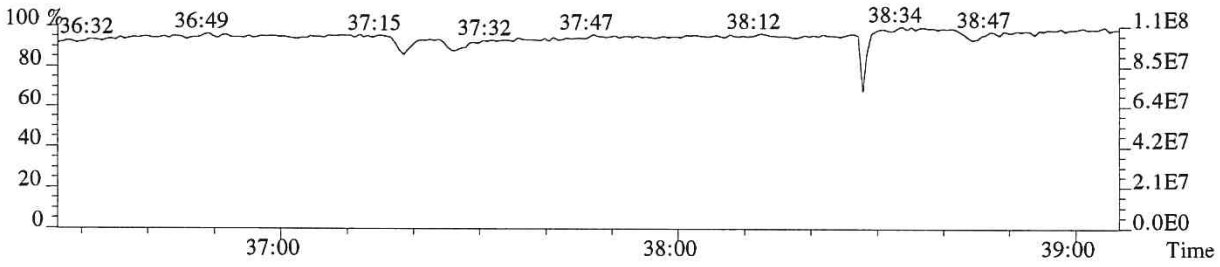
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1344.0,0.40%,F,T)



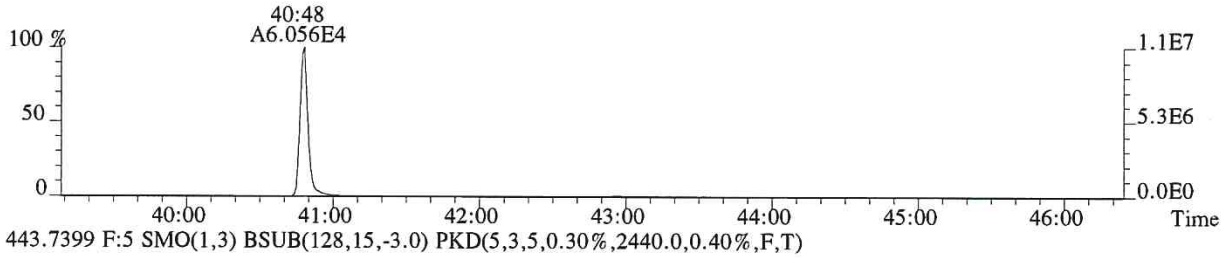
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,276.0,0.40%,F,T)



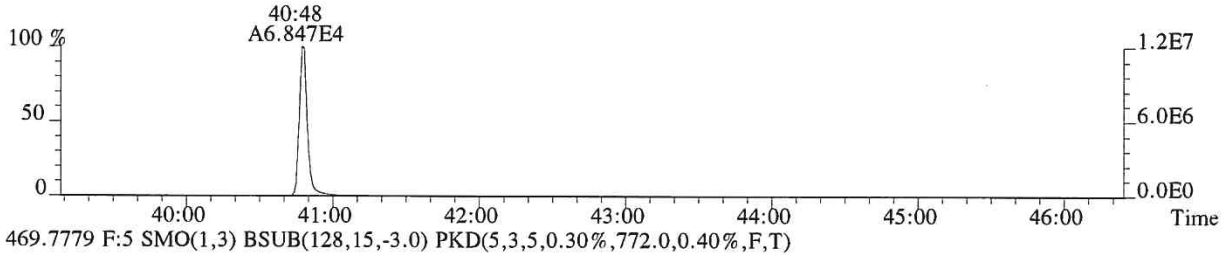
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



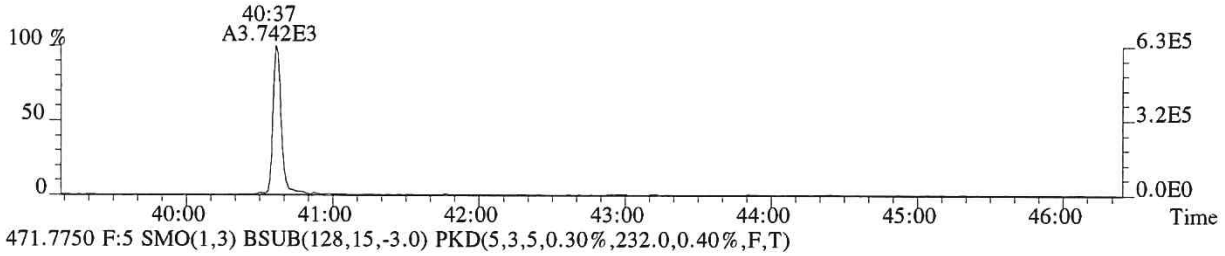
File:P616385 #1-654 Acq: 8-JAN-2019 19:31:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,932.0,0.40%,F,T)



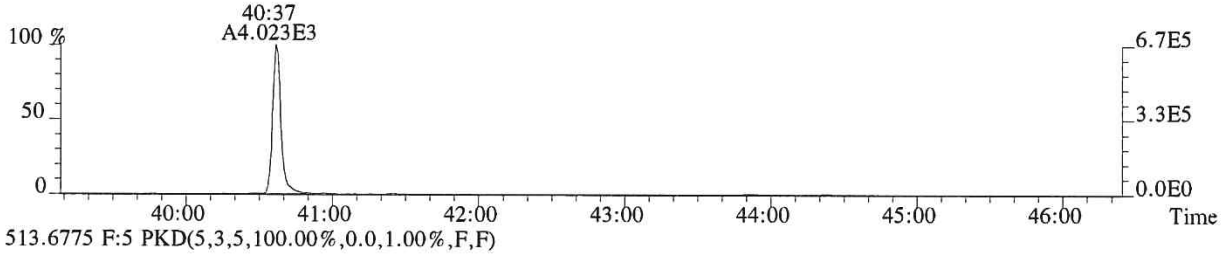
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2440.0,0.40%,F,T)



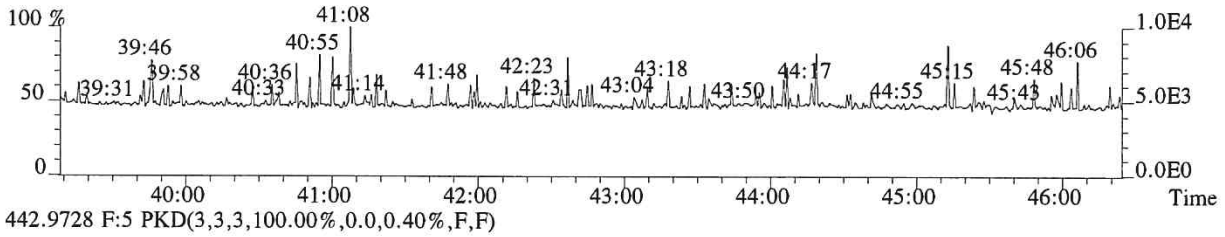
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,772.0,0.40%,F,T)



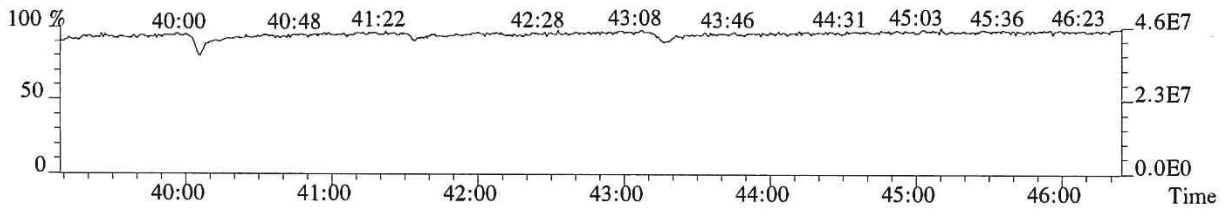
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,232.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

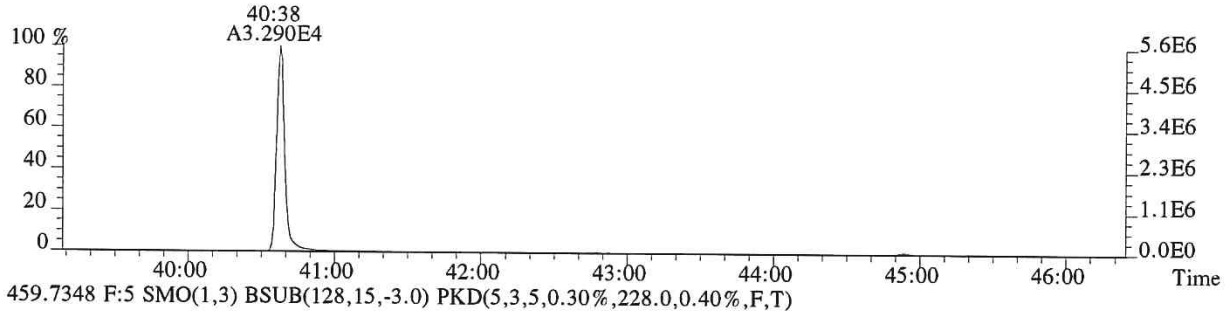


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

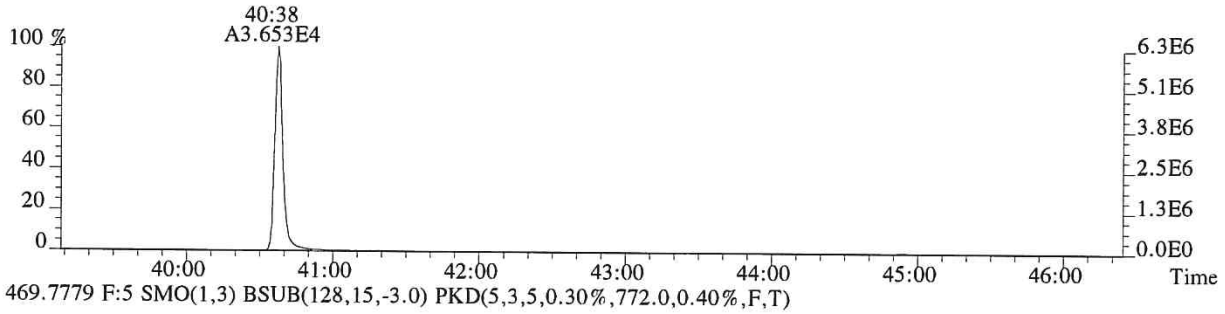


017198

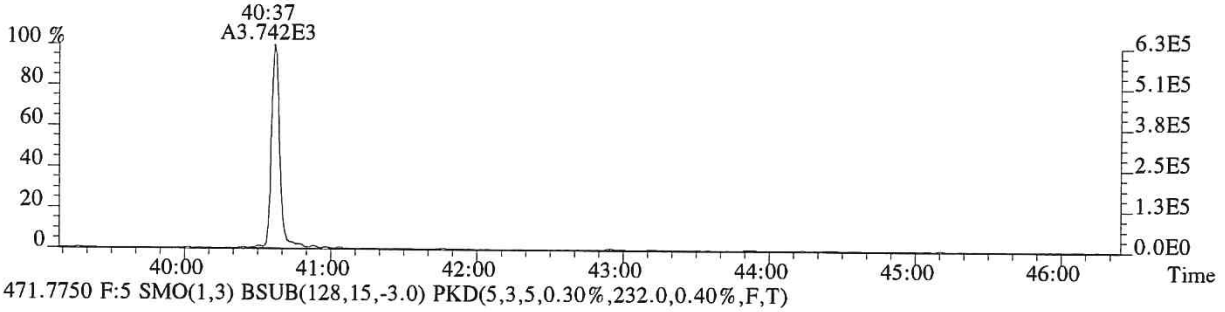
File:P616385 #1-654 Acq: 8-JAN-2019 19:31:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,288.0,0.40%,F,T)



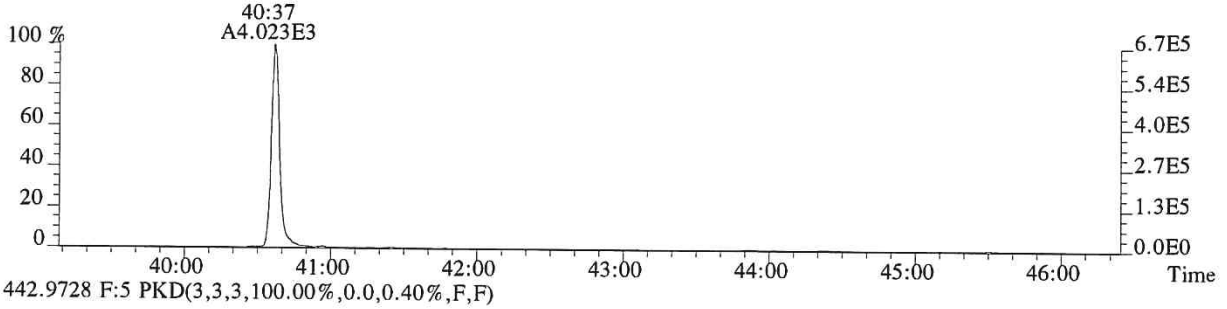
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,228.0,0.40%,F,T)



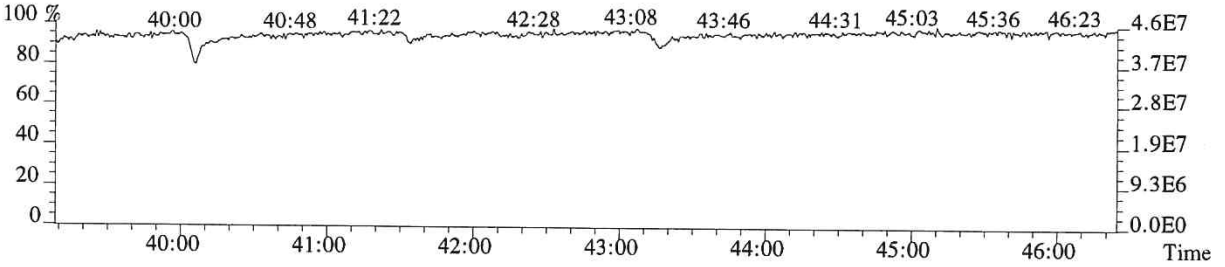
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,772.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,232.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017199

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0174

Run #13 Filename P616410 Samp: 1 Inj: 1 Acquired: 9-JAN-19 16:28:04
Processed: 10-JAN-19 08:32:00 Sample ID: E1801138-007DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:13	1.379e+03	1.659e+03	0.83	yes	yes	1.081
2	Unk	1,2,3,7,8-PeCDF	30:23	6.083e+01	4.571e+01	1.33	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:27	5.581e+01	1.687e+01	3.31	no	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	4.503e+01	4.461e+01	1.01	no	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:27	2.477e+01	1.584e+01	1.56	no	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	NotFnd	*	*	*	no	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	NotFnd	*	*	*	no	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	1.378e+02	1.248e+02	1.10	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	no	1.463
10	Unk	OCDF	40:49	2.971e+03	3.237e+03	0.92	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:16	2.639e+02	3.976e+02	0.66	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:44	2.423e+00	1.008e+01	0.24	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:15	1.506e+01	1.191e+01	1.26	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	1.946e+02	1.698e+02	1.15	yes	no	1.112
17	Unk	OCDD	40:38	1.626e+03	1.640e+03	0.99	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:11	8.694e+03	1.008e+04	0.86	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:22	1.237e+04	7.841e+03	1.58	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	1.107e+04	7.022e+03	1.58	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:20	4.499e+03	8.854e+03	0.51	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	5.954e+03	1.123e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:00	5.181e+03	9.849e+03	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	4.272e+03	8.231e+03	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	3.532e+03	7.976e+03	0.44	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	2.568e+03	5.514e+03	0.47	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:14	3.681e+03	4.584e+03	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:44	7.625e+03	4.725e+03	1.61	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	5.867e+03	4.513e+03	1.30	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	6.237e+03	5.038e+03	1.24	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	5.980e+03	5.561e+03	1.08	yes	no	0.857
32	IS	13C-OCDD	40:38	5.325e+03	5.761e+03	0.92	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:27	6.299e+03	7.829e+03	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	6.586e+03	5.408e+03	1.22	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:16	3.296e+02				no	1.086

$$\text{OCDD} = \frac{(1.626e+03 + 1.640e+03) \times 4000\ \text{pg} \times 10}{(5.325e+03 + 5.761e+03) \times 10.583\ \text{g} \times 60.7/100 \times 1.157 \times 0.20} = 7927\ \text{ng/kg}$$

LM 01/10/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0174

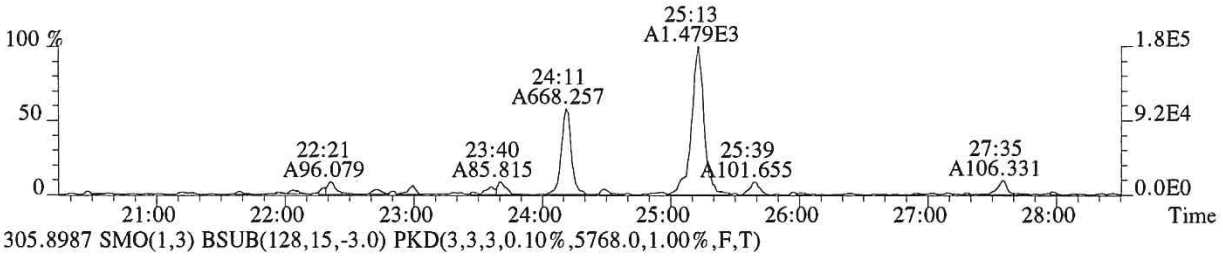
Run #13 Filename P616410 Samp: 1 Inj: 1 Acquired: 9-JAN-19 16:28:04
Processed: 10-JAN-19 08:32:00 LAB. ID: E1801138-007DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.84e+05	1.39e+03	1.3e+02	2.21e+05	5.77e+03	3.8e+01
2	1,2,3,7,8-PeCDF	9.24e+03	7.96e+02	1.2e+01	8.55e+03	3.15e+03	2.7e+00
3	2,3,4,7,8-PeCDF	9.23e+03	7.96e+02	1.2e+01	5.86e+03	3.15e+03	1.9e+00
4	1,2,3,4,7,8-HxCDF	9.66e+03	9.32e+02	1.0e+01	8.62e+03	9.88e+02	8.7e+00
5	1,2,3,6,7,8-HxCDF	4.10e+03	9.32e+02	4.4e+00	3.38e+03	9.88e+02	3.4e+00
6	2,3,4,6,7,8-HxCDF	*	9.32e+02	*	*	9.88e+02	*
7	1,2,3,7,8,9-HxCDF	*	9.32e+02	*	*	9.88e+02	*
8	1,2,3,4,6,7,8-HpCDF	2.63e+04	1.76e+03	1.5e+01	2.73e+04	1.48e+03	1.8e+01
9	1,2,3,4,7,8,9-HpCDF	*	1.76e+03	*	*	1.48e+03	*
10	OCDF	4.29e+05	9.16e+02	4.7e+02	4.64e+05	2.09e+03	2.2e+02
11	2,3,7,8-TCDD	3.57e+04	4.11e+03	8.7e+00	5.81e+04	1.56e+03	3.7e+01
12	1,2,3,7,8-PeCDD	8.86e+02	1.21e+03	7.3e-01	3.07e+03	4.12e+02	7.4e+00
13	1,2,3,4,7,8-HxCDD	*	6.36e+02	*	*	1.74e+03	*
14	1,2,3,6,7,8-HxCDD	4.23e+03	6.36e+02	6.7e+00	3.43e+03	1.74e+03	2.0e+00
15	1,2,3,7,8,9-HxCDD	*	6.36e+02	*	*	1.74e+03	*
16	1,2,3,4,6,7,8-HpCDD	3.55e+04	8.88e+02	4.0e+01	2.81e+04	6.76e+02	4.2e+01
17	OCDD	2.43e+05	3.24e+02	7.5e+02	2.36e+05	3.12e+02	7.6e+02
18	13C-2,3,7,8-TCDF	1.21e+06	9.94e+03	1.2e+02	1.41e+06	1.40e+04	1.0e+02
19	13C-1,2,3,7,8-PeCDF	1.92e+06	1.38e+03	1.4e+03	1.21e+06	1.24e+03	9.8e+02
20	13C-2,3,4,7,8-PeCDF	1.89e+06	1.38e+03	1.4e+03	1.20e+06	1.24e+03	9.7e+02
21	13C-1,2,3,4,7,8-HxCDF	8.66e+05	1.26e+03	6.9e+02	1.73e+06	3.63e+03	4.8e+02
22	13C-1,2,3,6,7,8-HxCDF	1.03e+06	1.26e+03	8.2e+02	1.87e+06	3.63e+03	5.1e+02
23	13C-2,3,4,6,7,8-HxCDF	9.34e+05	1.26e+03	7.4e+02	1.79e+06	3.63e+03	4.9e+02
24	13C-1,2,3,7,8,9-HxCDF	7.19e+05	1.26e+03	5.7e+02	1.36e+06	3.63e+03	3.8e+02
25	13C-1,2,3,4,6,7,8-HpCDF	6.42e+05	1.58e+03	4.1e+02	1.41e+06	4.06e+03	3.5e+02
26	13C-1,2,3,4,7,8,9-HpCDF	4.63e+05	1.58e+03	2.9e+02	9.98e+05	4.06e+03	2.5e+02
27	13C-2,3,7,8-TCDD	5.39e+05	9.82e+03	5.5e+01	6.53e+05	4.58e+03	1.4e+02
28	13C-1,2,3,7,8-PeCDD	1.23e+06	1.95e+03	6.3e+02	7.74e+05	2.46e+03	3.2e+02
29	13C-1,2,3,4,7,8-HxCDD	1.15e+06	2.33e+03	4.9e+02	8.70e+05	1.38e+03	6.3e+02
30	13C-1,2,3,6,7,8-HxCDD	1.09e+06	2.33e+03	4.7e+02	8.66e+05	1.38e+03	6.3e+02
31	13C-1,2,3,4,6,7,8-HpCDD	9.93e+05	6.00e+02	1.7e+03	9.27e+05	4.20e+02	2.2e+03
32	13C-OCDD	7.29e+05	1.48e+03	4.9e+02	7.71e+05	3.64e+02	2.1e+03
33	13C-1,2,3,4-TCDD	9.05e+05	9.82e+03	9.2e+01	1.11e+06	4.58e+03	2.4e+02
34	13C-1,2,3,7,8,9-HxCDD	1.13e+06	2.33e+03	4.8e+02	8.93e+05	1.38e+03	6.5e+02
35	37Cl-2,3,7,8-TCDD	4.77e+04	3.20e+03	1.5e+01			

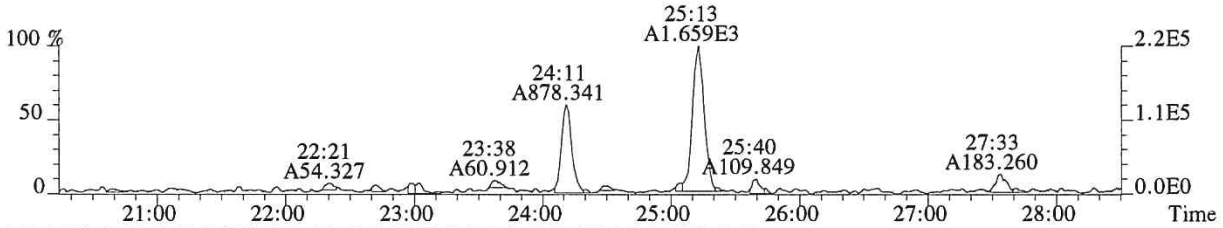
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Houston, TX 77099
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www.alsglobal.com

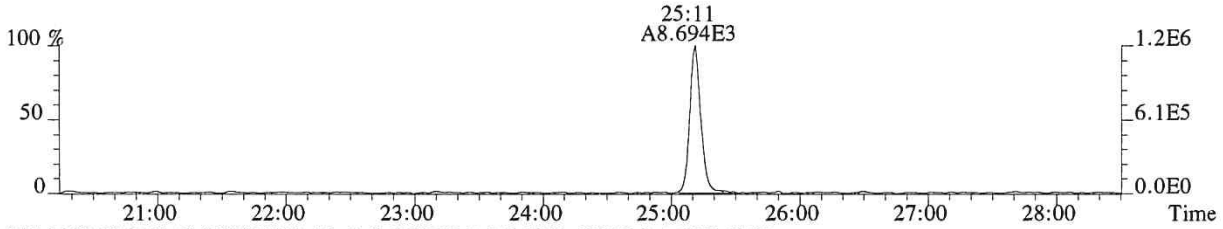
File:P616410 #1-587 Acq: 9-JAN-2019 16:28:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1388.0,1.00%,F,T)



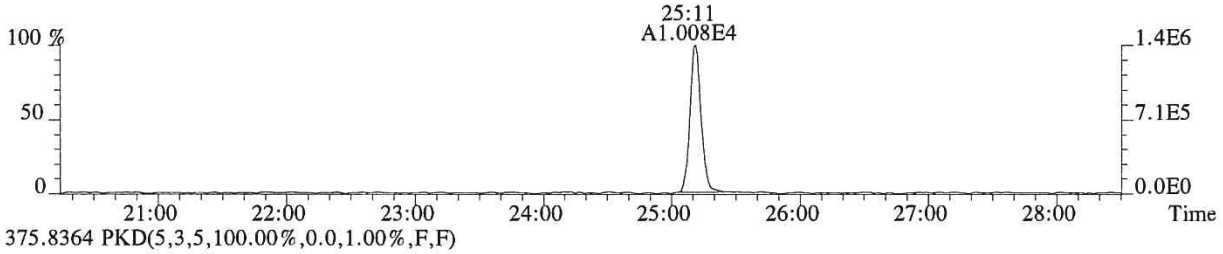
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5768.0,1.00%,F,T)



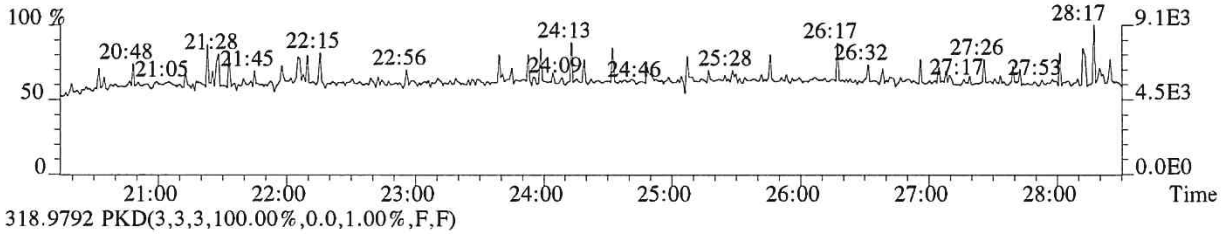
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9940.0,1.00%,F,T)



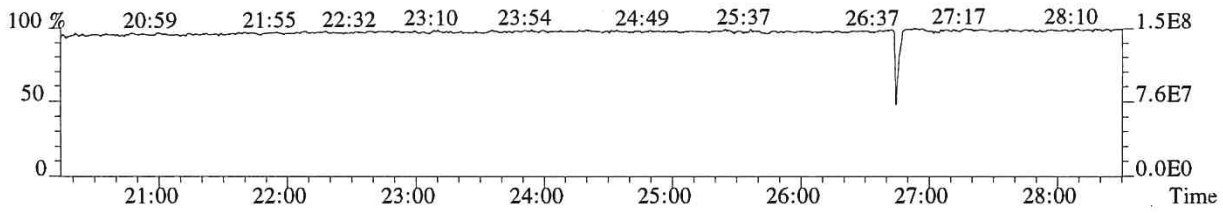
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,13952.0,1.00%,F,T)



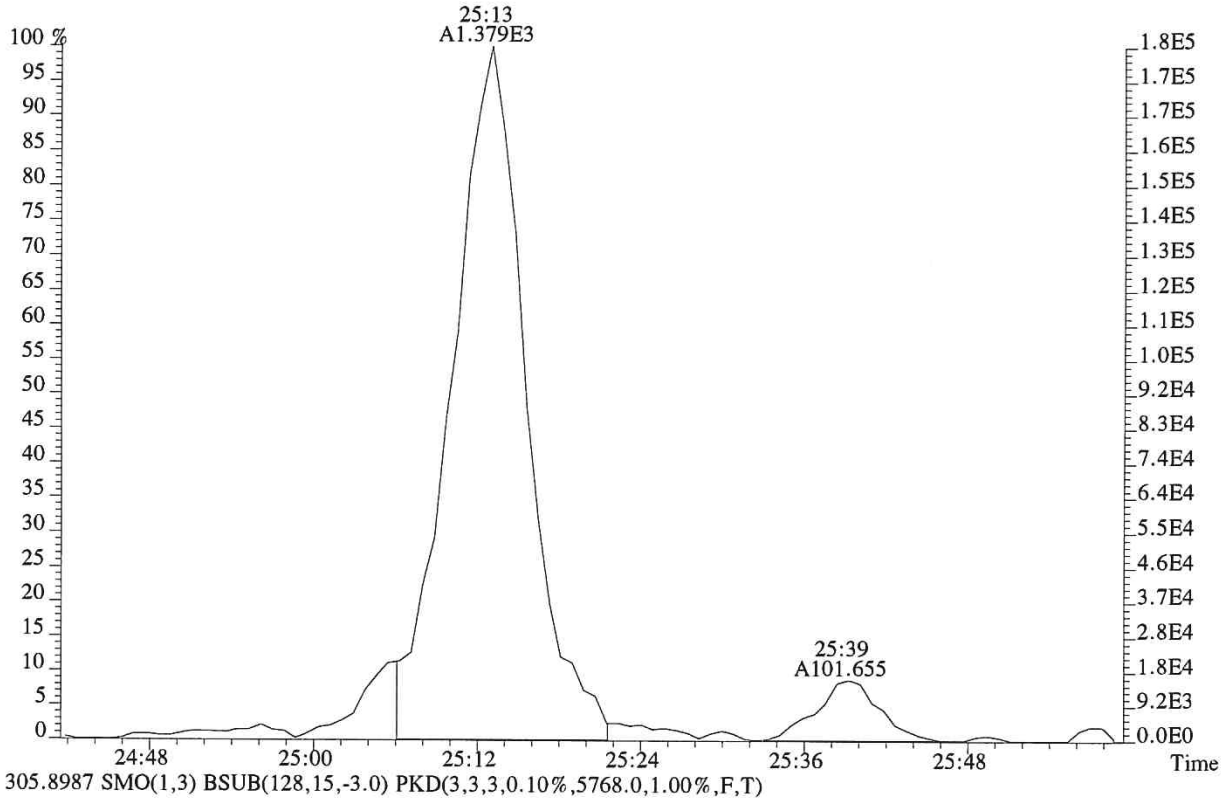
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



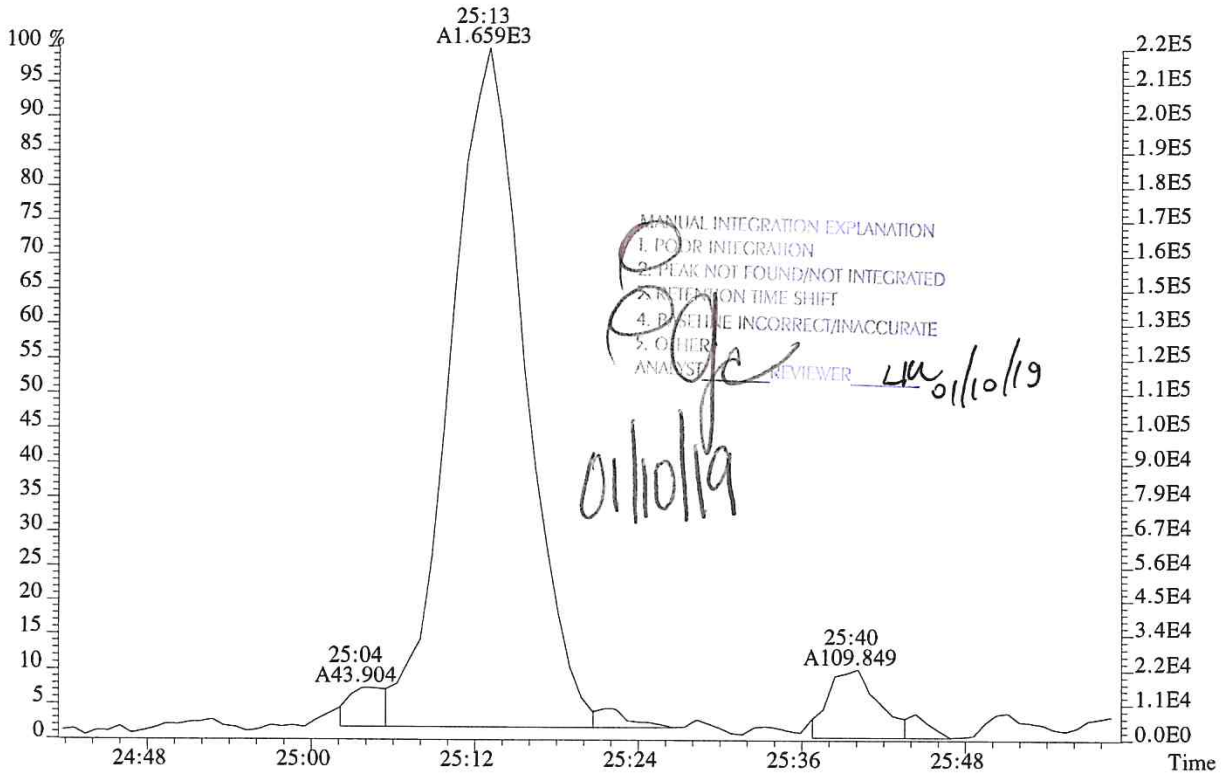
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P616410 #1-587 Acq: 9-JAN-2019 16:28:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1388.0,1.00%,F,T)



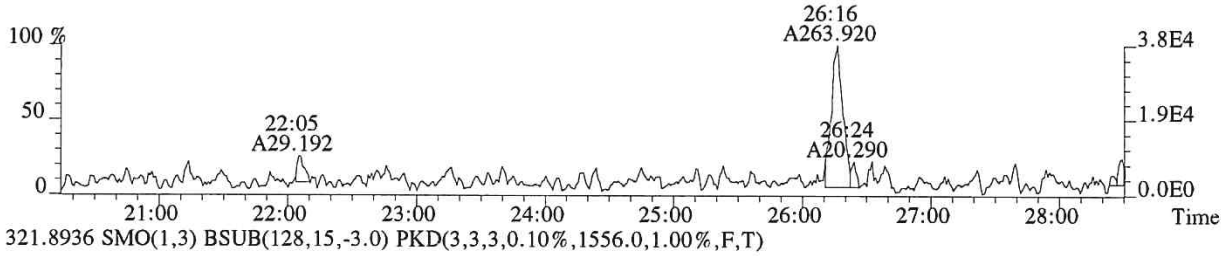
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5768.0,1.00%,F,T)



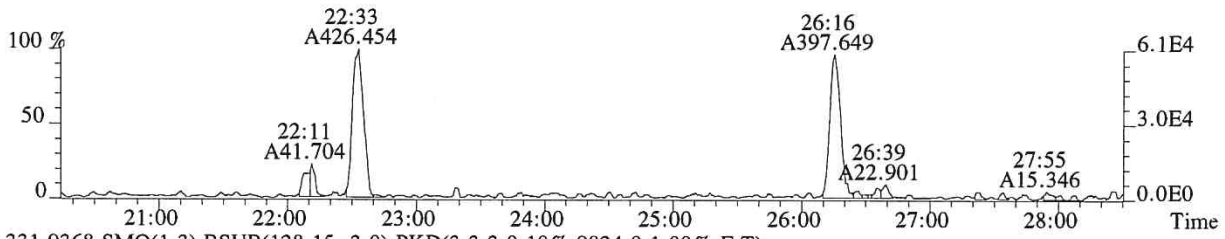
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER 01/10/19
01/10/19

017203

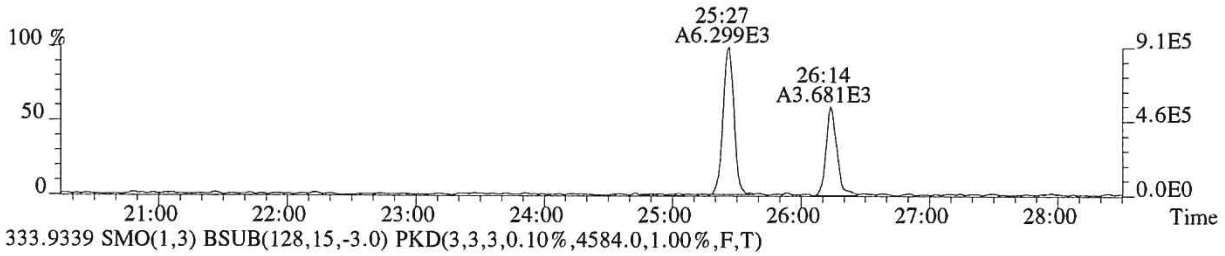
File:P616410 #1-587 Acq: 9-JAN-2019 16:28:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4112.0,1.00%,F,T)



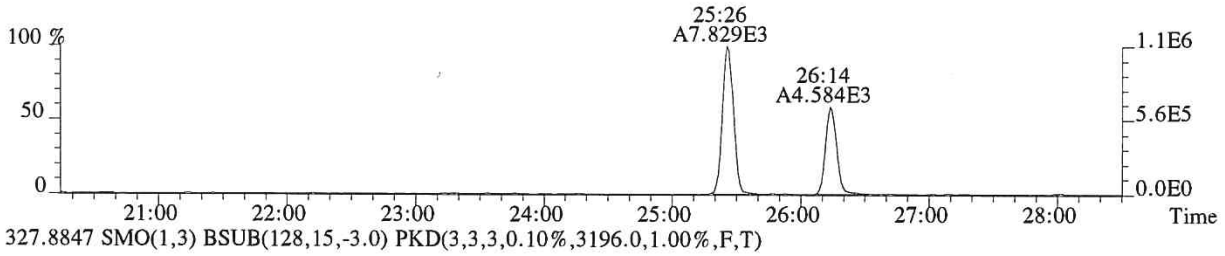
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1556.0,1.00%,F,T)



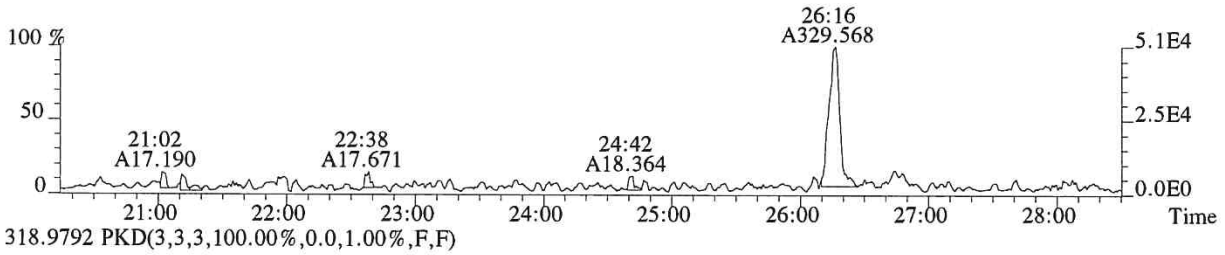
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9824.0,1.00%,F,T)



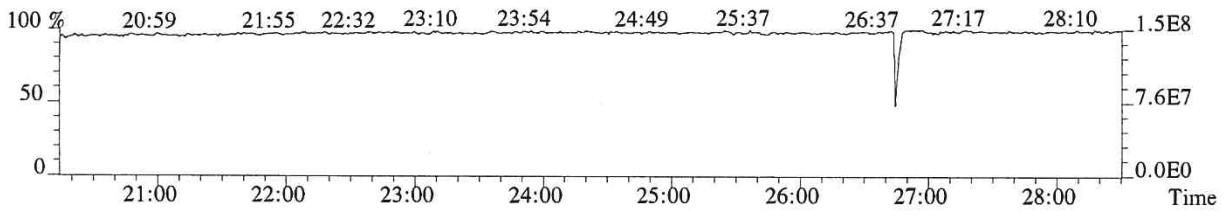
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4584.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3196.0,1.00%,F,T)

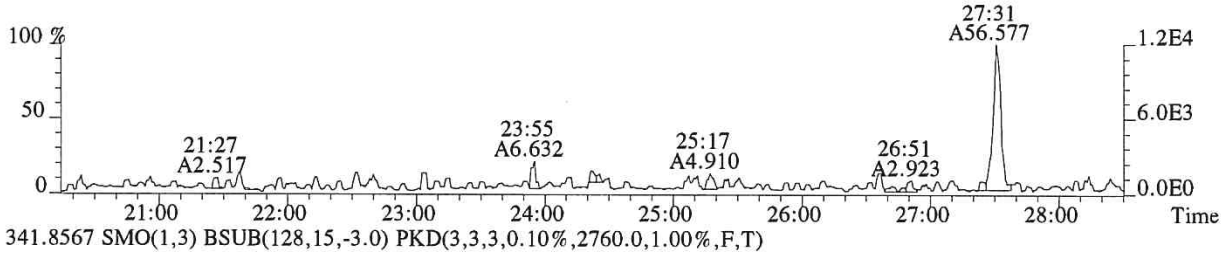


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

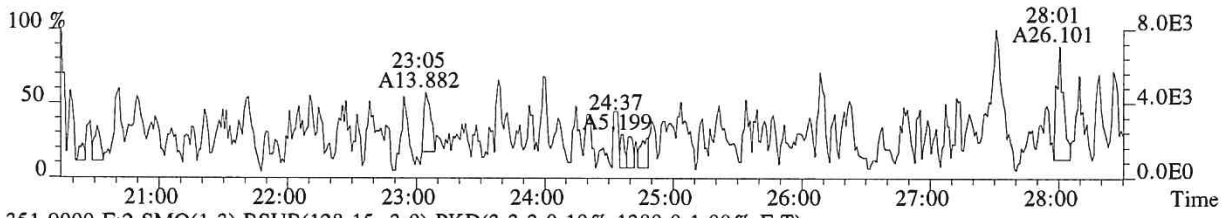


017204

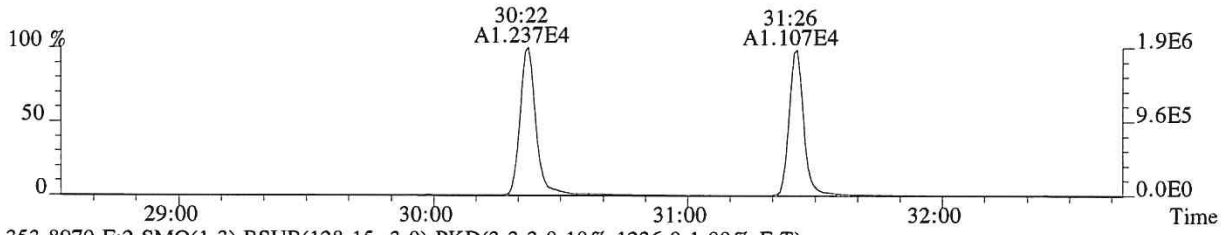
File:P616410 #1-587 Acq: 9-JAN-2019 16:28:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,700.0,1.00%,F,T)



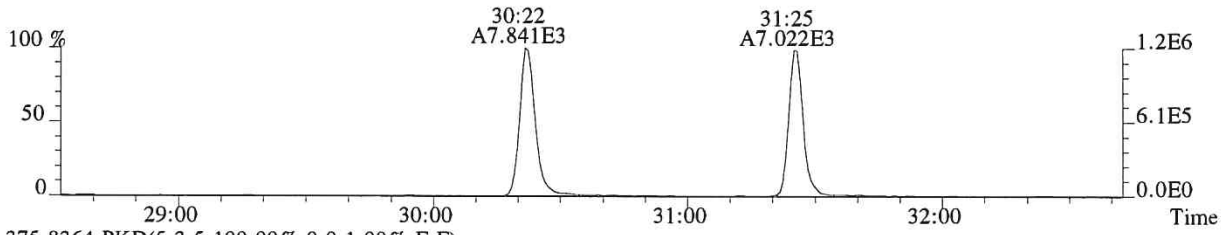
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2760.0,1.00%,F,T)



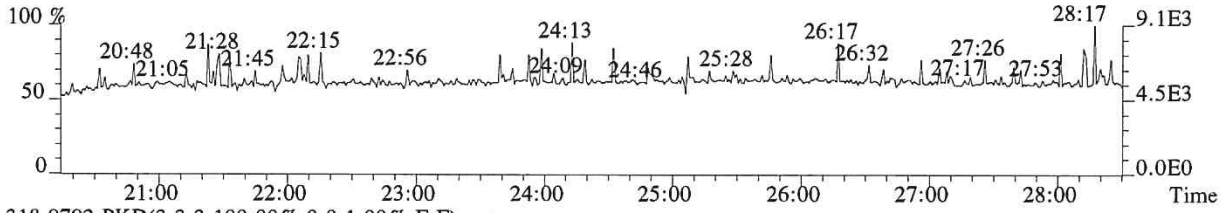
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1380.0,1.00%,F,T)



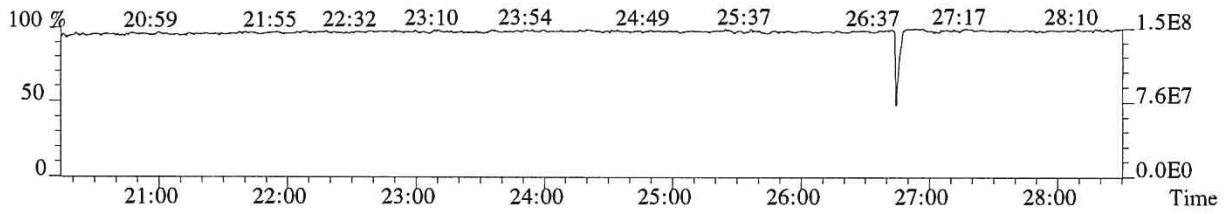
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1236.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

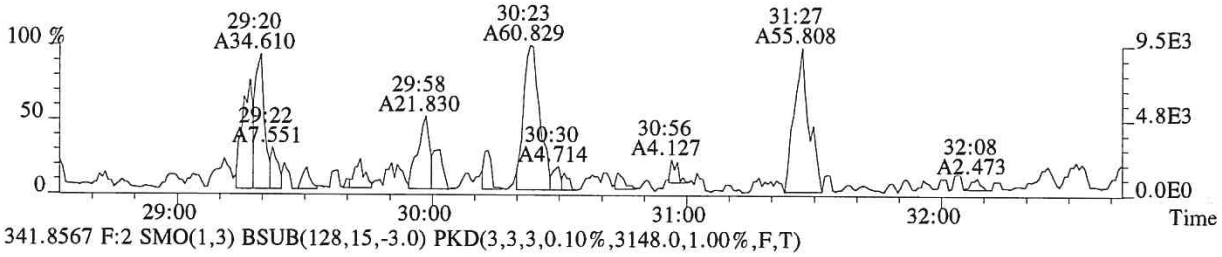


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

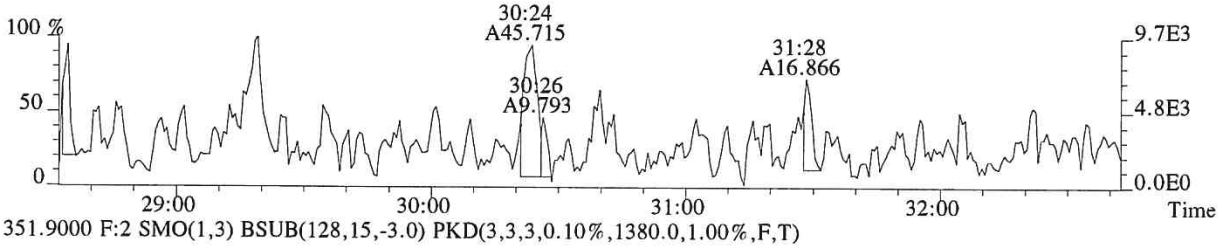


017205

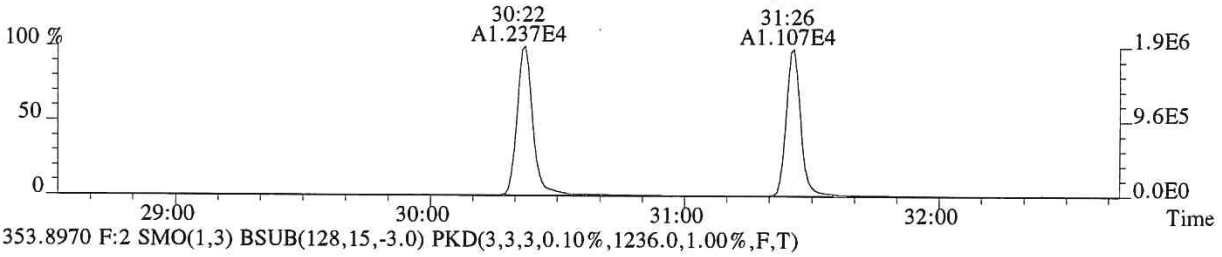
File:P616410 #1-376 Acq: 9-JAN-2019 16:28:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,796.0,1.00%,F,T)



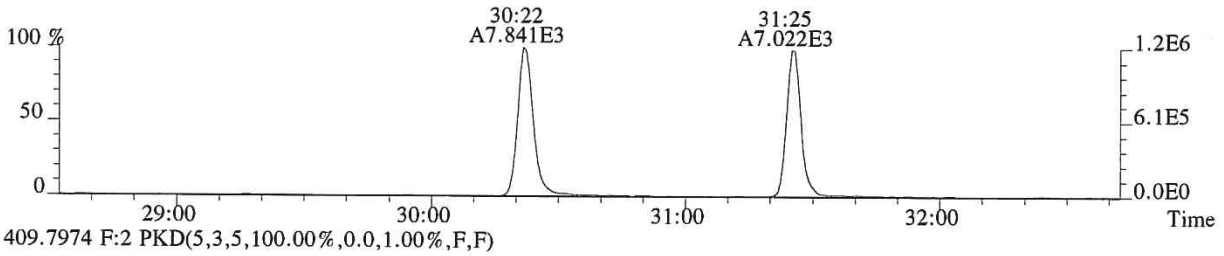
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3148.0,1.00%,F,T)



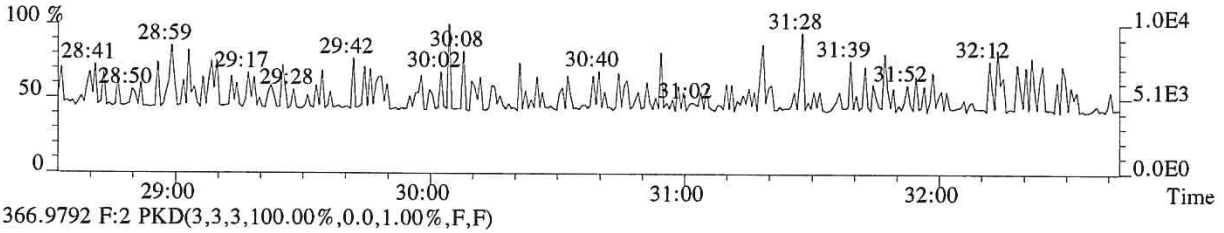
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1380.0,1.00%,F,T)



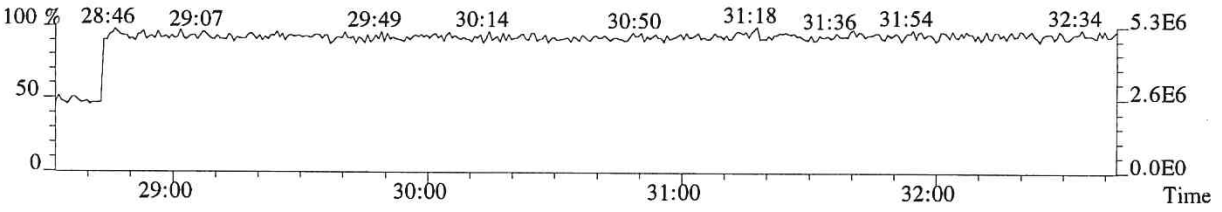
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1236.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

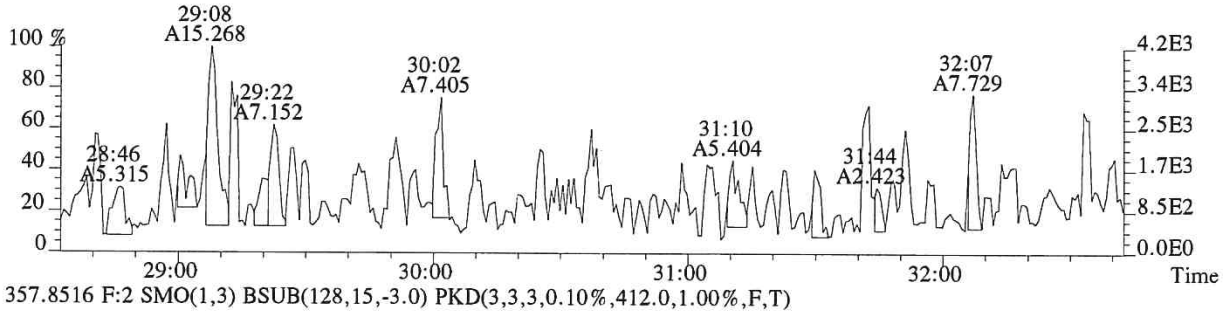


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

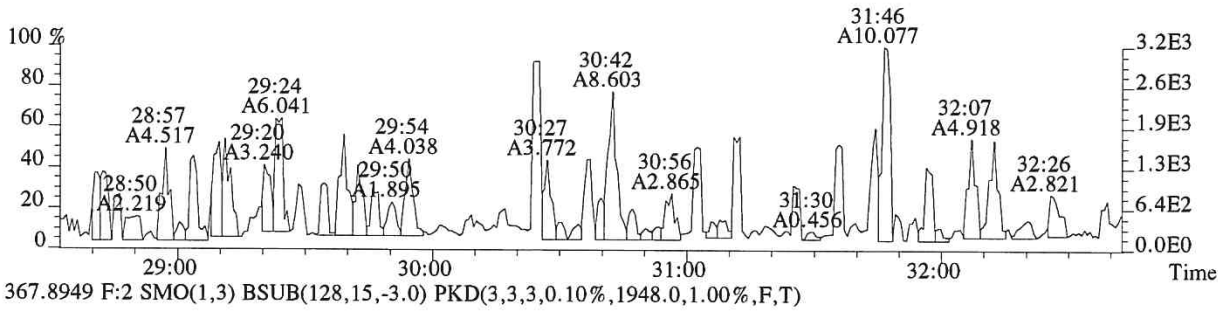


017206

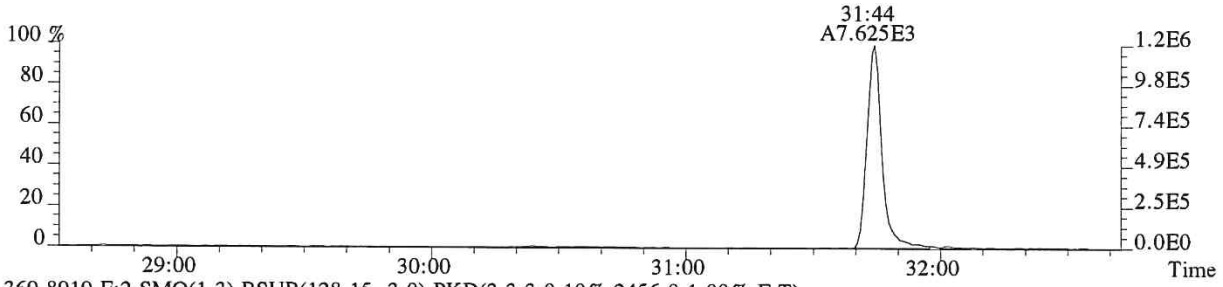
File:P616410 #1-376 Acq: 9-JAN-2019 16:28:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1208.0,1.00%,F,T)



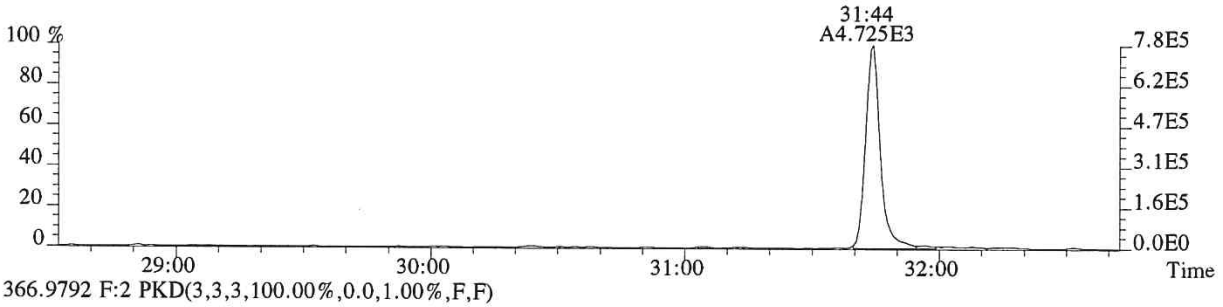
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,412.0,1.00%,F,T)



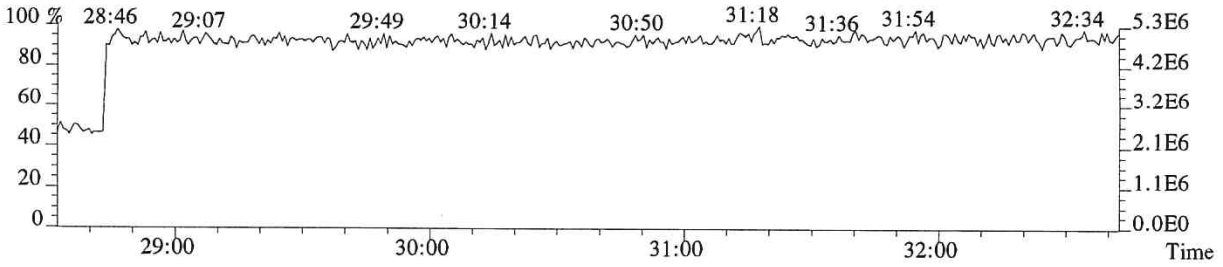
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1948.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2456.0,1.00%,F,T)

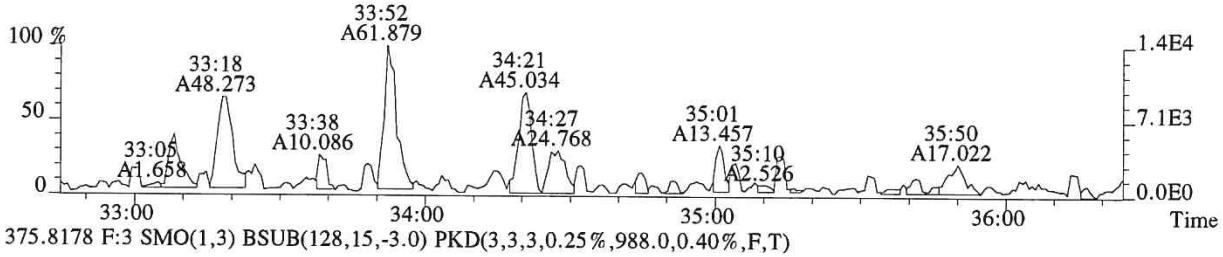


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

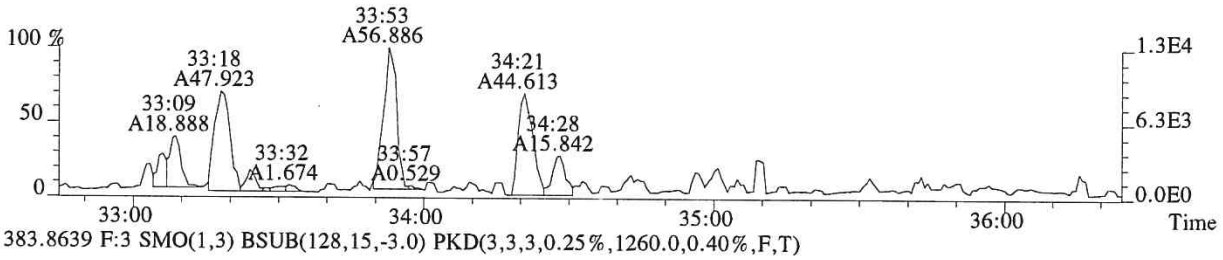


017207

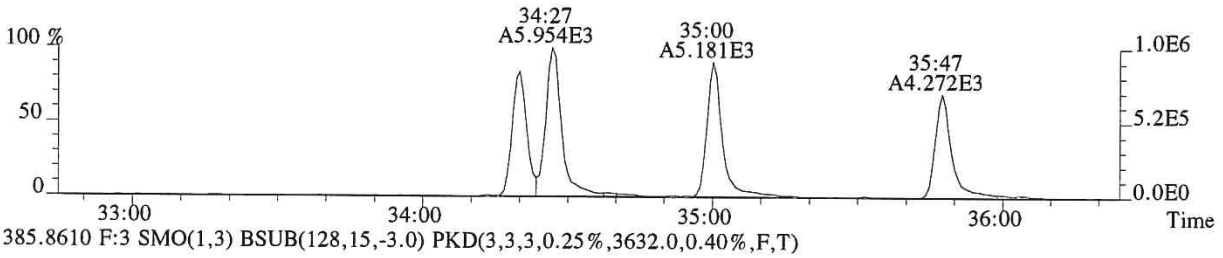
File:P616410 #1-330 Acq: 9-JAN-2019 16:28:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,932.0,0.40%,F,T)



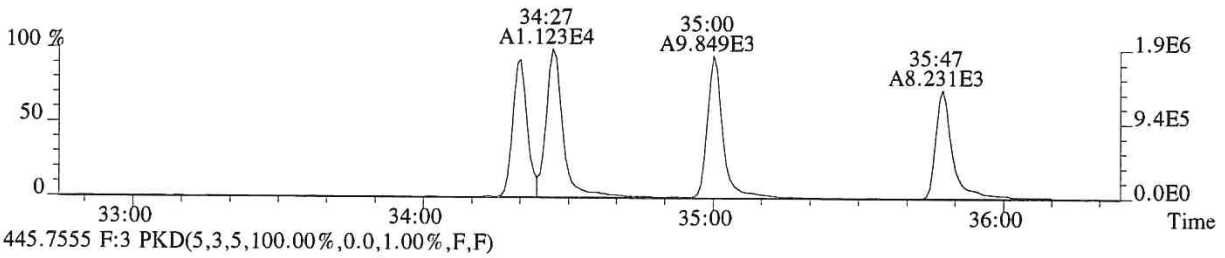
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,988.0,0.40%,F,T)



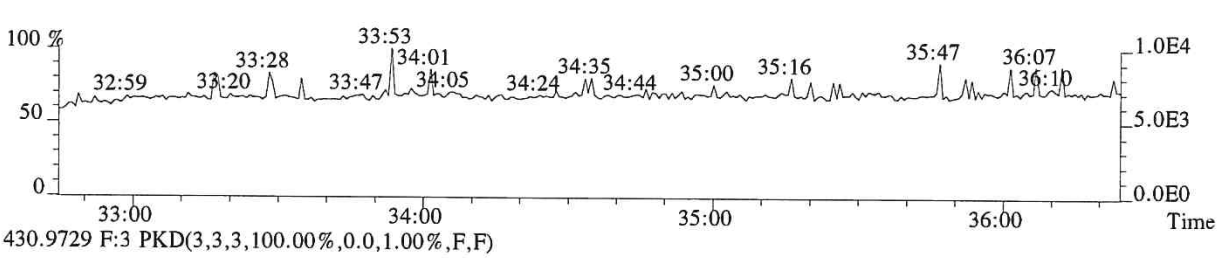
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1260.0,0.40%,F,T)



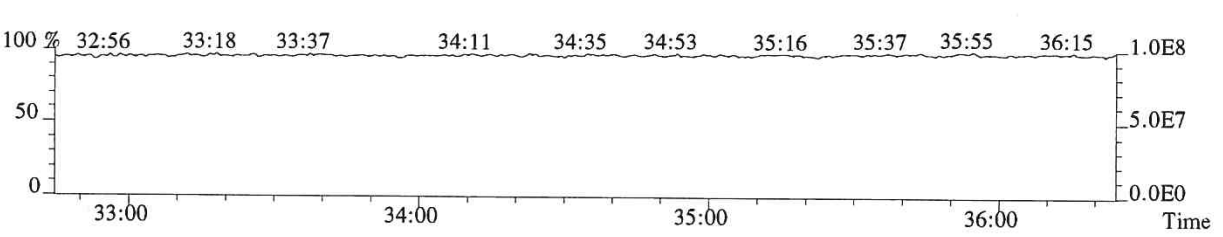
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3632.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

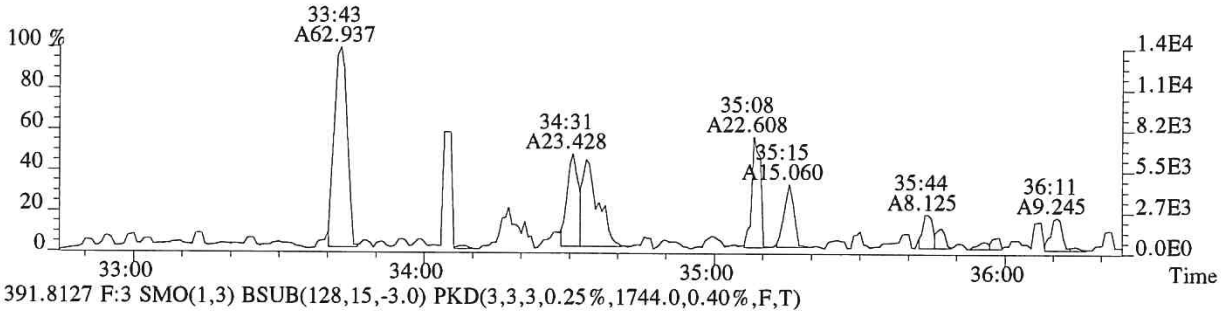


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

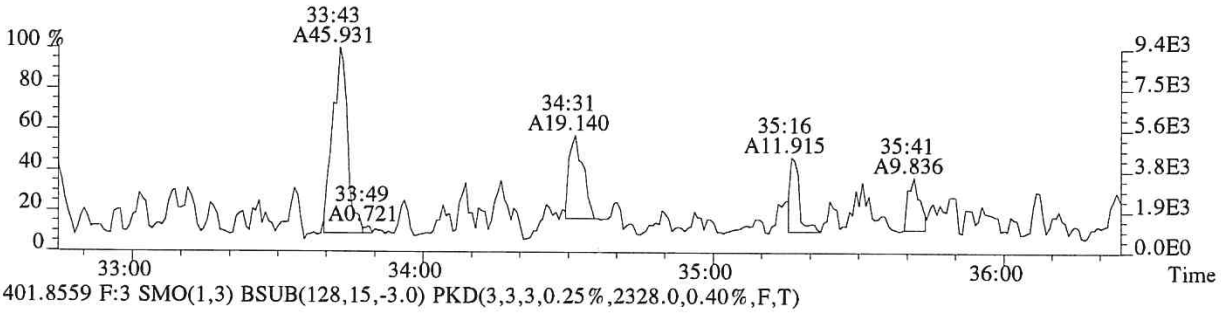


017208

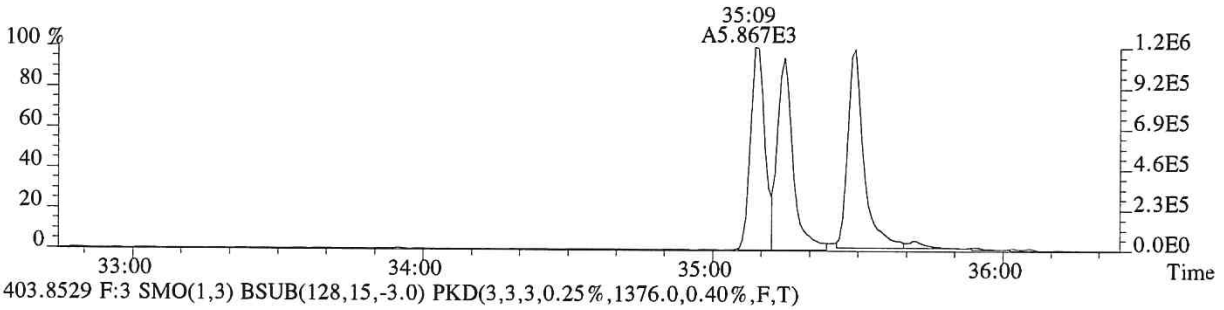
File:P616410 #1-330 Acq: 9-JAN-2019 16:28:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,636.0,0.40%,F,T)



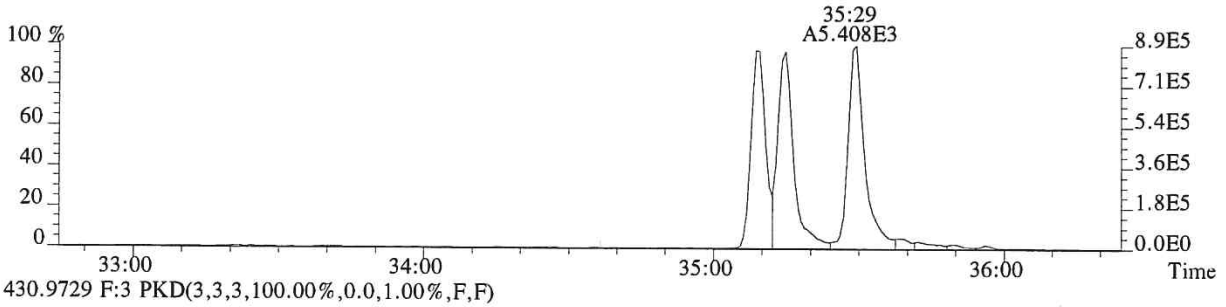
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1744.0,0.40%,F,T)



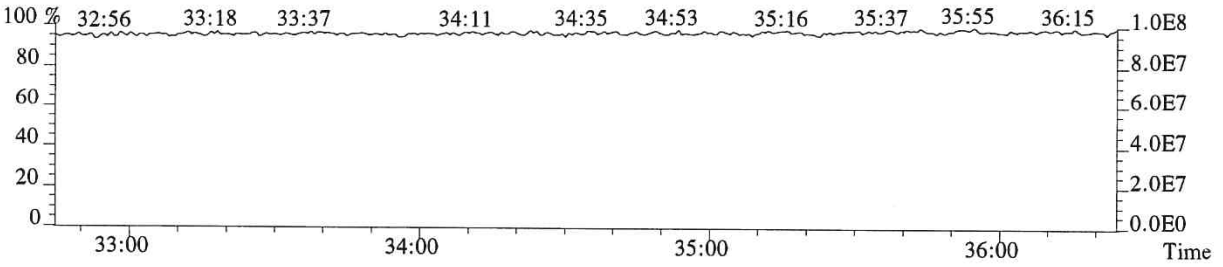
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2328.0,0.40%,F,T)



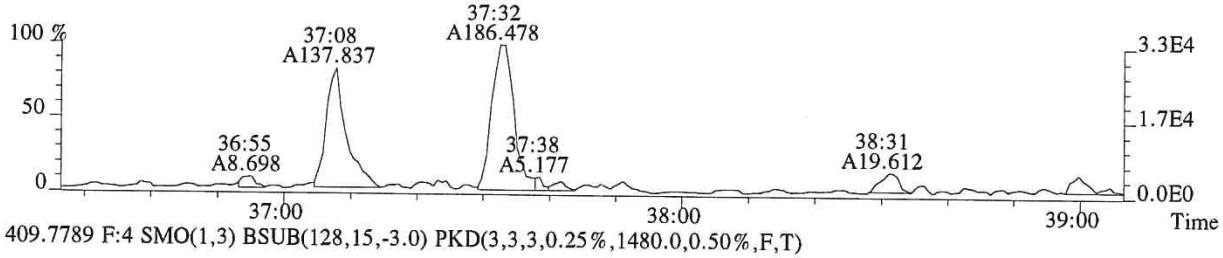
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1376.0,0.40%,F,T)



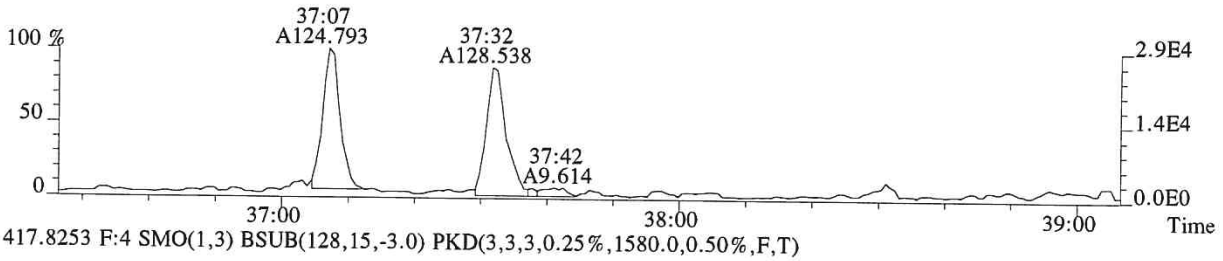
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



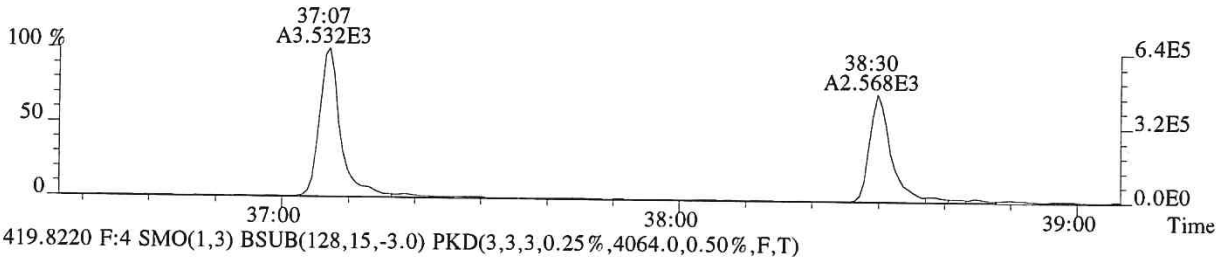
File:P616410 #1-241 Acq: 9-JAN-2019 16:28:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1756.0,0.50%,F,T)



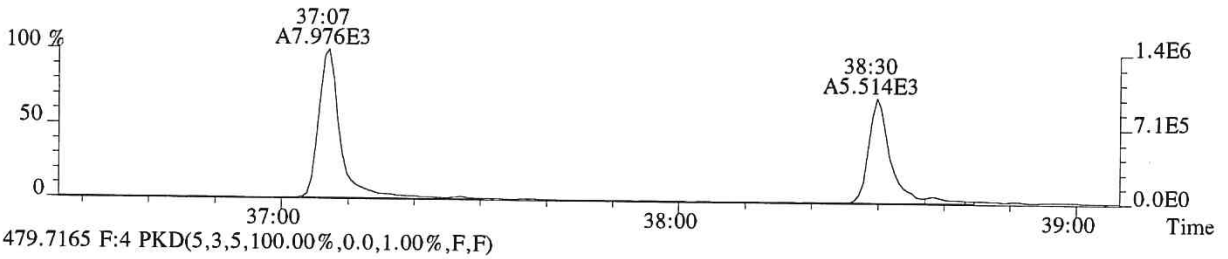
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1480.0,0.50%,F,T)



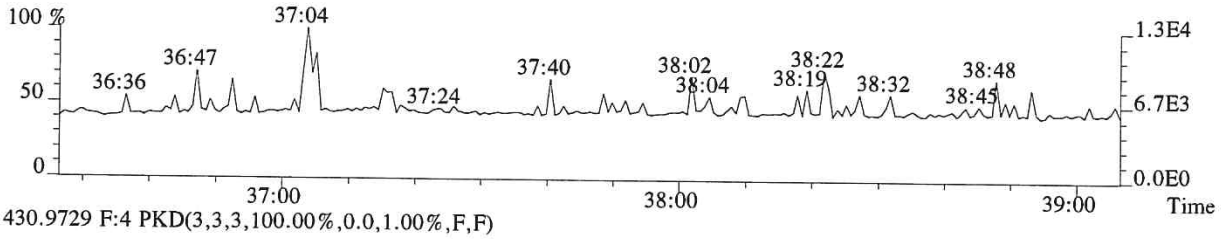
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1580.0,0.50%,F,T)



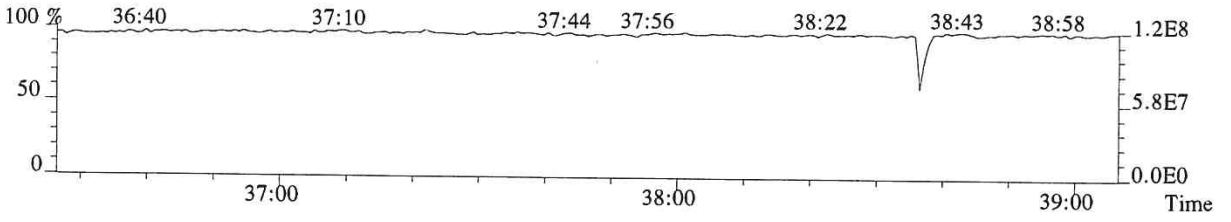
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4064.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

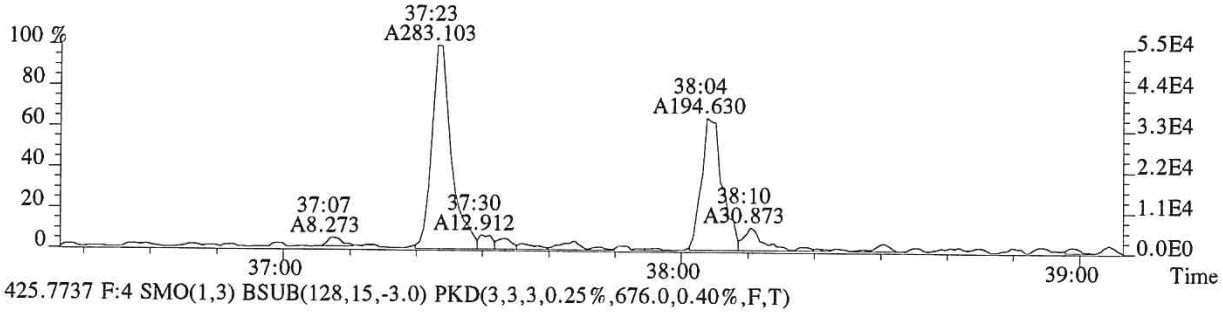


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

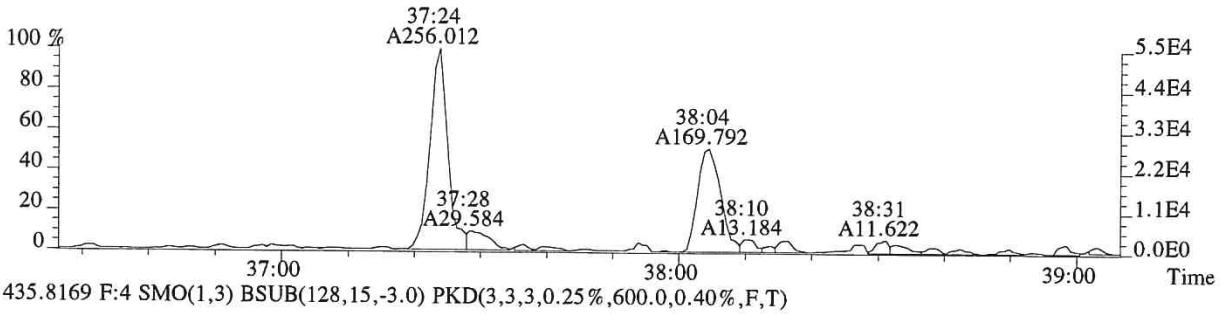


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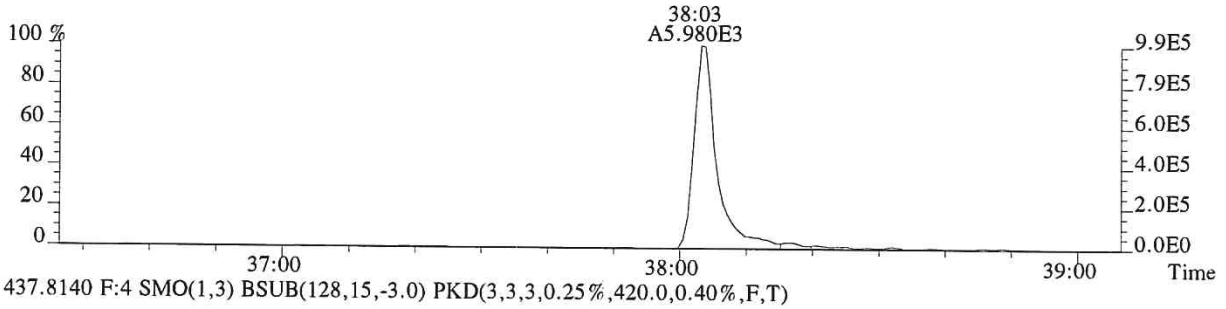
File:P616410 #1-241 Acq: 9-JAN-2019 16:28:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,888.0,0.40%,F,T)



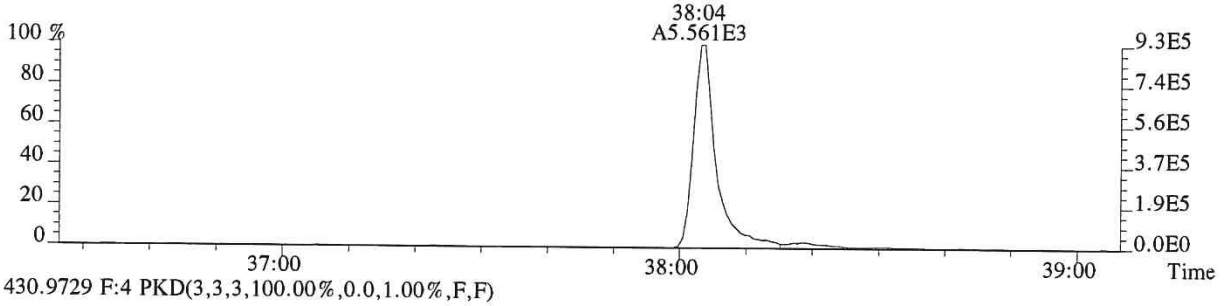
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,676.0,0.40%,F,T)



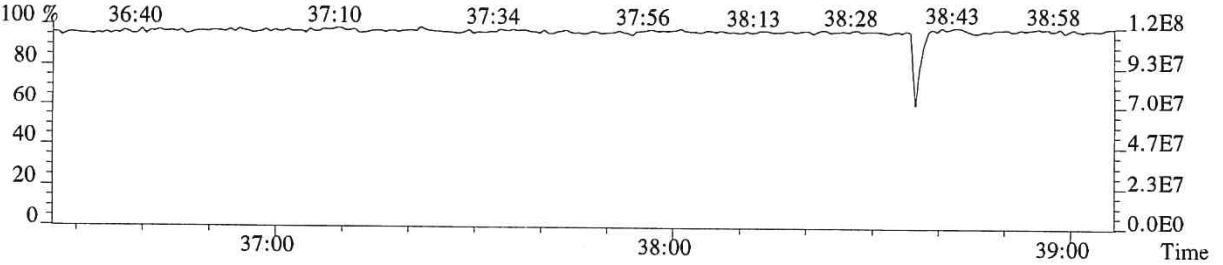
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,600.0,0.40%,F,T)



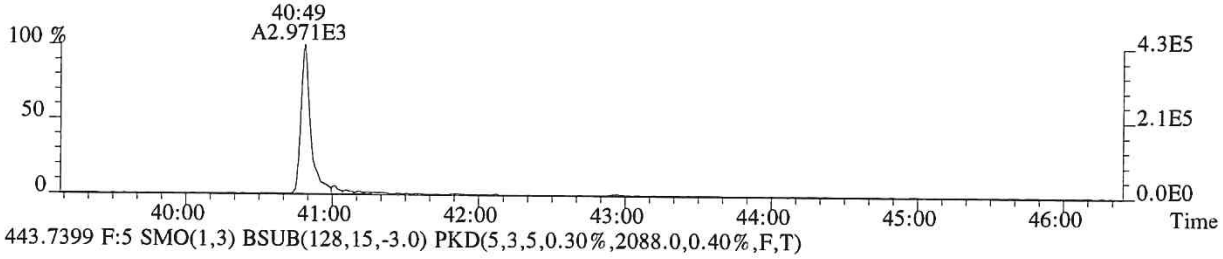
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,420.0,0.40%,F,T)



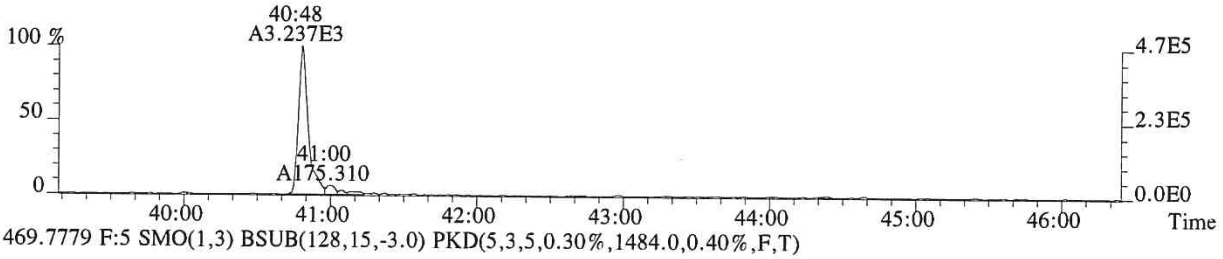
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



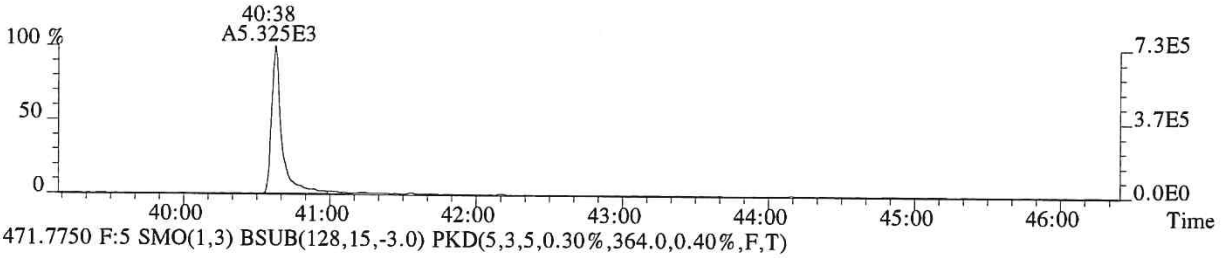
File:P616410 #1-654 Acq: 9-JAN-2019 16:28:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,916.0,0.40%,F,T)



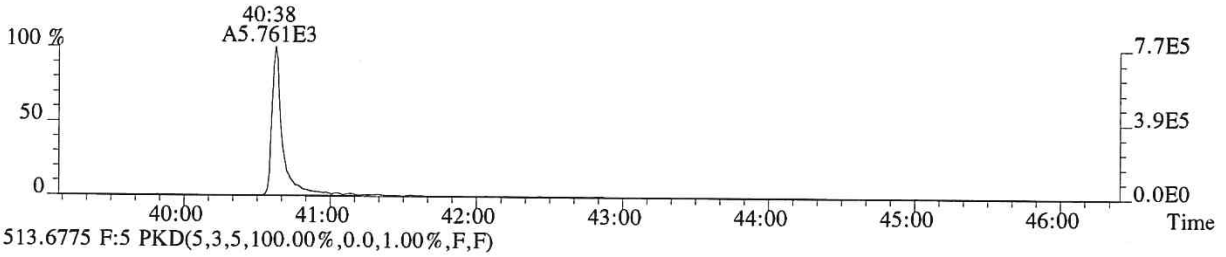
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2088.0,0.40%,F,T)



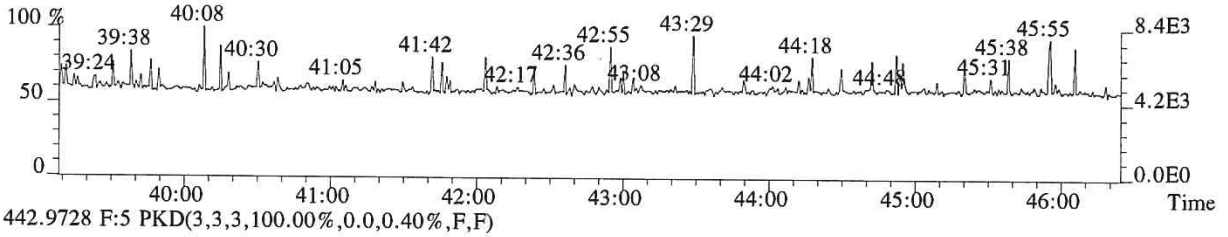
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1484.0,0.40%,F,T)



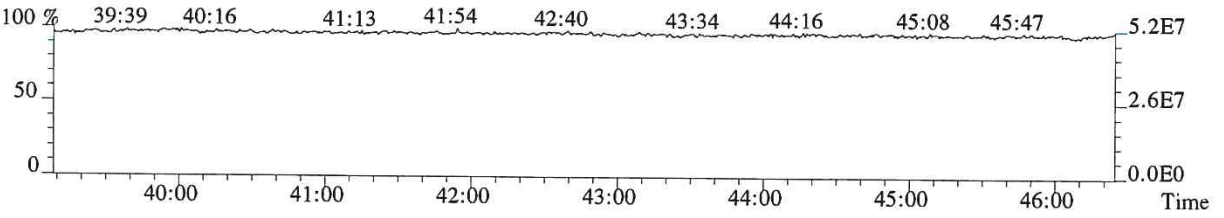
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,364.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

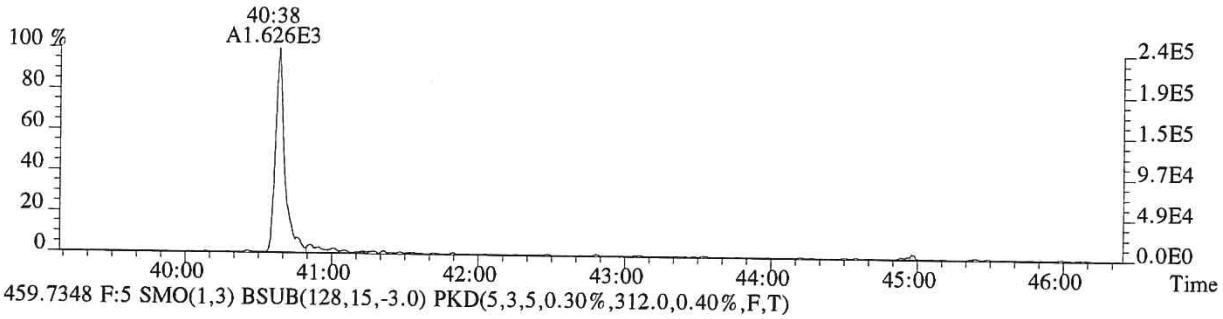


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

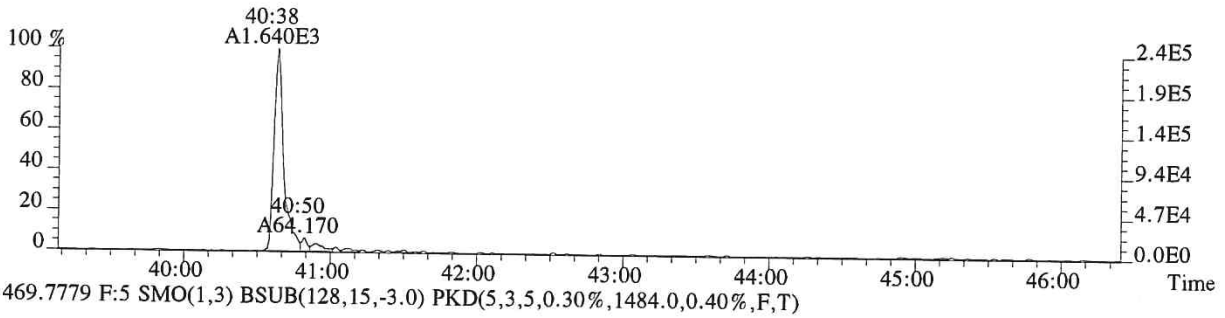


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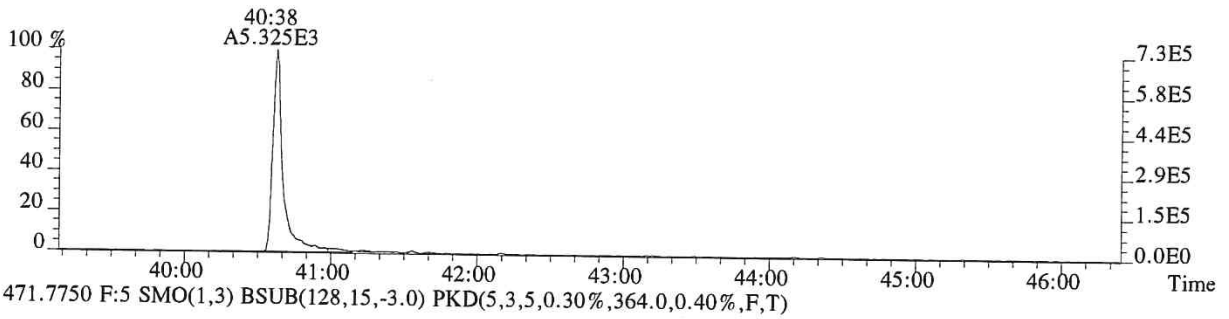
File:P616410 #1-654 Acq: 9-JAN-2019 16:28:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-007DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,324.0,0.40%,F,T)



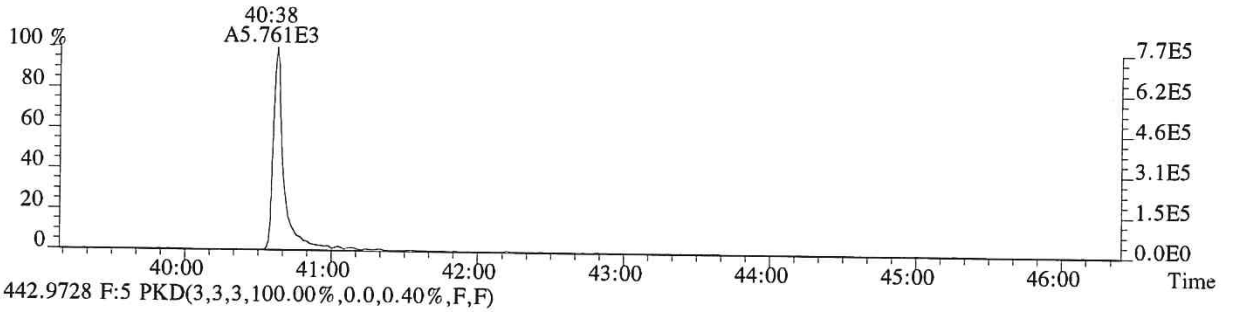
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,312.0,0.40%,F,T)



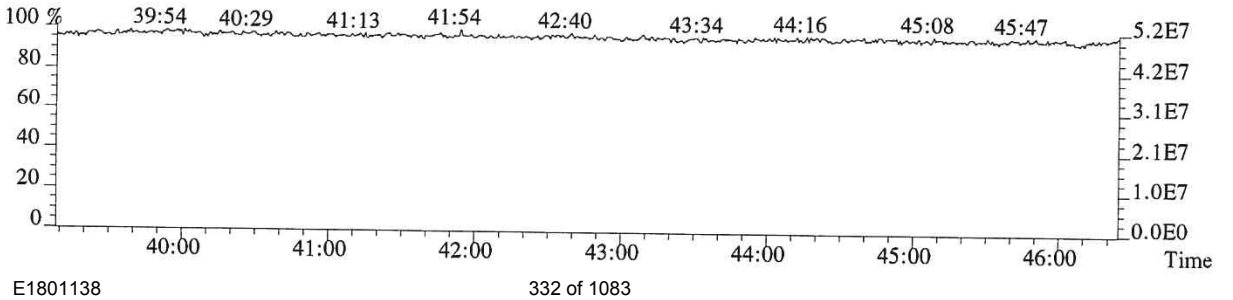
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1484.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,364.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017213

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0176

Run #18 Filename P616386 Samp: 1 Inj: 1 Acquired: 8-JAN-19 20:21:09
Processed: 9-JAN-19 08:58:19 Sample ID: E1801138-008

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:16	2.441e+03	2.939e+03	0.83	yes	yes	1.081
2	Unk	1,2,3,7,8-PeCDF	30:24	3.125e+02	1.887e+02	1.66	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:28	2.551e+02	1.766e+02	1.44	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	5.916e+02	4.575e+02	1.29	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:28	2.205e+02	1.629e+02	1.35	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	1.435e+02	1.181e+02	1.21	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:50	7.165e+01	3.333e+01	2.15	no	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	1.379e+03	1.221e+03	1.13	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	1.258e+02	1.292e+02	0.97	yes	no	1.463
10	Unk	OCDF	40:48	2.303e+03	2.556e+03	0.90	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:18	5.659e+02	6.051e+02	0.94	no	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:47	6.938e+01	6.654e+01	1.04	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:11	8.765e+01	4.248e+01	2.06	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:16	2.655e+02	1.860e+02	1.43	no	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:30	2.093e+02	1.187e+02	1.76	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	3.908e+03	3.807e+03	1.03	yes	no	1.112
17	Unk	OCDD	40:37	2.938e+04	3.261e+04	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:14	1.353e+04	1.652e+04	0.82	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:24	2.176e+04	1.352e+04	1.61	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	1.969e+04	1.243e+04	1.58	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:21	8.006e+03	1.528e+04	0.52	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	9.784e+03	1.890e+04	0.52	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	8.365e+03	1.529e+04	0.55	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	7.305e+03	1.401e+04	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	5.003e+03	1.094e+04	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	4.065e+03	8.962e+03	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:16	6.229e+03	7.635e+03	0.82	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:45	1.419e+04	9.017e+03	1.57	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:10	1.077e+04	8.236e+03	1.31	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	1.006e+04	8.227e+03	1.22	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:04	8.860e+03	8.144e+03	1.09	yes	no	0.857
32	IS	13C-OCDD	40:37	5.950e+03	6.388e+03	0.93	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:28	1.482e+04	1.876e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:30	1.678e+04	1.288e+04	1.30	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:17	9.769e+03				no	1.086

$$\text{OCDD} = \frac{(2.938e+04 + 3.261e+04) \times 4000\ \text{pg} \times 1}{(5.950e+03 + 6.388e+03) \times 10.310\ \text{g} \times 81.6 / 100 \times 1.157} = 2064\ \text{ng/kg}$$

LM 01/09/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0176

Run #18 Filename P616386 Samp: 1 Inj: 1 Acquired: 8-JAN-19 20:21:09
Processed: 9-JAN-19 08:58:19 LAB. ID: E1801138-008

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	3.36e+05	1.60e+03	2.1e+02	3.93e+05	2.22e+03	1.8e+02
2	1,2,3,7,8-PeCDF	5.38e+04	8.12e+02	6.6e+01	3.61e+04	2.10e+03	1.7e+01
3	2,3,4,7,8-PeCDF	3.82e+04	8.12e+02	4.7e+01	2.63e+04	2.10e+03	1.2e+01
4	1,2,3,4,7,8-HxCDF	1.30e+05	2.26e+03	5.7e+01	9.08e+04	7.08e+02	1.3e+02
5	1,2,3,6,7,8-HxCDF	5.23e+04	2.26e+03	2.3e+01	3.41e+04	7.08e+02	4.8e+01
6	2,3,4,6,7,8-HxCDF	3.03e+04	2.26e+03	1.3e+01	2.44e+04	7.08e+02	3.4e+01
7	1,2,3,7,8,9-HxCDF	1.34e+04	2.26e+03	5.9e+00	6.53e+03	7.08e+02	9.2e+00
8	1,2,3,4,6,7,8-HpCDF	2.96e+05	1.12e+03	2.6e+02	2.58e+05	8.88e+02	2.9e+02
9	1,2,3,4,7,8,9-HpCDF	2.50e+04	1.12e+03	2.2e+01	2.66e+04	8.88e+02	3.0e+01
10	OCDF	4.03e+05	2.56e+02	1.6e+03	4.25e+05	1.56e+03	2.7e+02
11	2,3,7,8-TCDD	9.71e+04	4.48e+03	2.2e+01	9.12e+04	1.39e+03	6.6e+01
12	1,2,3,7,8-PeCDD	9.59e+03	1.76e+03	5.4e+00	9.88e+03	2.64e+02	3.7e+01
13	1,2,3,4,7,8-HxCDD	1.62e+04	1.07e+03	1.5e+01	1.01e+04	9.96e+02	1.0e+01
14	1,2,3,6,7,8-HxCDD	5.67e+04	1.07e+03	5.3e+01	4.25e+04	9.96e+02	4.3e+01
15	1,2,3,7,8,9-HxCDD	3.65e+04	1.07e+03	3.4e+01	2.39e+04	9.96e+02	2.4e+01
16	1,2,3,4,6,7,8-HpCDD	8.01e+05	1.31e+03	6.1e+02	7.61e+05	3.68e+02	2.1e+03
17	OCDD	4.98e+06	3.28e+02	1.5e+04	5.56e+06	2.92e+02	1.9e+04
18	13C-2,3,7,8-TCDF	1.90e+06	1.51e+04	1.3e+02	2.35e+06	8.88e+03	2.6e+02
19	13C-1,2,3,7,8-PeCDF	3.65e+06	9.96e+02	3.7e+03	2.28e+06	5.20e+02	4.4e+03
20	13C-2,3,4,7,8-PeCDF	3.58e+06	9.96e+02	3.6e+03	2.31e+06	5.20e+02	4.4e+03
21	13C-1,2,3,4,7,8-HxCDF	1.68e+06	1.45e+03	1.2e+03	3.19e+06	9.24e+02	3.4e+03
22	13C-1,2,3,6,7,8-HxCDF	1.87e+06	1.45e+03	1.3e+03	3.60e+06	9.24e+02	3.9e+03
23	13C-2,3,4,6,7,8-HxCDF	1.74e+06	1.45e+03	1.2e+03	3.24e+06	9.24e+02	3.5e+03
24	13C-1,2,3,7,8,9-HxCDF	1.44e+06	1.45e+03	9.9e+02	2.79e+06	9.24e+02	3.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.08e+06	1.53e+03	7.1e+02	2.36e+06	2.14e+03	1.1e+03
26	13C-1,2,3,4,7,8,9-HpCDF	8.14e+05	1.53e+03	5.3e+02	1.80e+06	2.14e+03	8.4e+02
27	13C-2,3,7,8-TCDD	9.44e+05	1.06e+04	8.9e+01	1.16e+06	2.87e+03	4.0e+02
28	13C-1,2,3,7,8-PeCDD	2.57e+06	2.13e+03	1.2e+03	1.67e+06	2.44e+03	6.8e+02
29	13C-1,2,3,4,7,8-HxCDD	2.22e+06	1.13e+03	2.0e+03	1.75e+06	6.00e+02	2.9e+03
30	13C-1,2,3,6,7,8-HxCDD	2.08e+06	1.13e+03	1.8e+03	1.68e+06	6.00e+02	2.8e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.74e+06	1.26e+03	1.4e+03	1.63e+06	4.48e+02	3.6e+03
32	13C-OCDD	9.73e+05	8.16e+02	1.2e+03	1.06e+06	2.72e+02	3.9e+03
33	13C-1,2,3,4-TCDD	2.13e+06	1.06e+04	2.0e+02	2.72e+06	2.87e+03	9.5e+02
34	13C-1,2,3,7,8,9-HxCDD	3.25e+06	1.13e+03	2.9e+03	2.50e+06	6.00e+02	4.2e+03
35	37Cl-2,3,7,8-TCDD	1.51e+06	2.12e+03	7.1e+02			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0176

Entry: 36 Totals Name: Total Tetra-Furans

Run: 18 File: P616386 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 20:21:09 Processed: 9-JAN-19 08:58:19

Mass: 303.9020 305.8990 Tot Response: 7.38e+03 RRF: 1.081

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:39	1.02e+02	1.51e+02	0.67	yes	2.53e+02		n	n
2	22:23	1.66e+02	2.18e+02	0.76	yes	3.85e+02		n	n
3	23:40	1.74e+02	2.22e+02	0.79	yes	3.96e+02		n	n
4	24:32	6.84e+01	1.00e+02	0.68	yes	1.69e+02		n	n
5	25:16	2.44e+03	2.94e+03	0.83	yes	5.38e+03	2,3,7,8-TCDF	y	n
6	25:41	3.49e+02	4.47e+02	0.78	yes	7.96e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0176

Entry: 38 Totals Name: Total Penta-Furans1

Run: 18 File: P616386 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 20:21:09 Processed: 9-JAN-19 08:58:19

Mass: 339.8600 341.8570 Tot Response: 6.30e+02 RRF: 1.130

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:33	3.94e+02	2.36e+02 1.67	yes	6.30e+02		n	n

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Peak List Summary

CLIENT ID.
SL0176

Entry: 39 Totals Name: Total Penta-Furans2

Run: 18 File: P616386 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 20:21:09 Processed: 9-JAN-19 08:58:19

Mass: 339.8600 341.8570 Tot Response: 2.36e+03 RRF: 1.130

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:10	1.80e+02	1.19e+02	1.52	yes	2.98e+02		n	n
2	29:20	5.45e+02	3.36e+02	1.62	yes	8.81e+02		n	n
3	29:54	2.41e+01	1.37e+01	1.76	yes	3.79e+01		n	n
4	30:24	3.12e+02	1.89e+02	1.66	yes	5.01e+02	1,2,3,7,8-PeCDF	n	n
5	30:40	1.26e+02	8.60e+01	1.47	yes	2.12e+02		n	n
6	31:28	2.55e+02	1.77e+02	1.44	yes	4.32e+02	2,3,4,7,8-PeCDF	n	n

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Peak List Summary

CLIENT ID.
SL0176

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 18 File: P616386 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 20:21:09 Processed: 9-JAN-19 08:58:19

Mass: 355.8550 357.8520 Tot Response: 1.79e+02 RRF: 0.9288

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:26	6.57e+01	4.20e+01 1.56	yes	1.08e+02		n	n
2	30:58	4.55e+01	2.62e+01 1.74	yes	7.17e+01		n	n

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Peak List Summary

CLIENT ID.
SL0176

Entry: 41 Totals Name: Total Hexa-Furans

Run: 18 File: P616386 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 20:21:09 Processed: 9-JAN-19 08:58:19

Mass: 373.8210 375.8180 Tot Response: 4.88e+03 RRF: 1.324

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:09	2.28e+02	2.03e+02	1.12	yes	4.31e+02		n	n
2	33:19	7.90e+02	5.93e+02	1.33	yes	1.38e+03		n	n
3	33:54	6.49e+02	4.90e+02	1.33	yes	1.14e+03		n	n
4	34:15	8.63e+01	7.73e+01	1.12	yes	1.64e+02		n	n
5	34:21	5.92e+02	4.57e+02	1.29	yes	1.05e+03	1,2,3,4,7,8-HxCDF	n	n
6	34:28	2.20e+02	1.63e+02	1.35	yes	3.83e+02	1,2,3,6,7,8-HxCDF	n	n
7	34:43	4.10e+01	3.04e+01	1.35	yes	7.14e+01		n	n
8	35:01	1.43e+02	1.18e+02	1.21	yes	2.62e+02	2,3,4,6,7,8-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0176

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 18 File: P616386 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 20:21:09 Processed: 9-JAN-19 08:58:19

Mass: 389.8160 391.8130 Tot Response: 2.20e+03 RRF: 1.092

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:44	9.11e+02	8.18e+02 1.11	yes	1.73e+03		n	n
2	34:17	1.68e+02	1.48e+02 1.14	yes	3.16e+02		n	n
3	34:39	9.30e+01	6.57e+01 1.41	yes	1.59e+02		n	n

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Peak List Summary

CLIENT ID.
SL0176

Entry: 43 Totals Name: Total Hepta-Furans

Run: 18 File: P616386 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 20:21:09 Processed: 9-JAN-19 08:58:19

Mass: 407.7820 409.7790 Tot Response: 6.32e+03 RRF: 1.495

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:08	1.38e+03	1.22e+03	1.13	yes	2.60e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	37:24	8.48e+01	8.55e+01	0.99	yes	1.70e+02		n	n
3	37:32	1.70e+03	1.59e+03	1.07	yes	3.29e+03		n	n
4	38:30	1.26e+02	1.29e+02	0.97	yes	2.55e+02	1,2,3,4,7,8,9-HpCDF	n	n

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Peak List Summary

CLIENT ID.
SL0176

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 18 File: P616386 Sample:1 Injection:1 Function:4

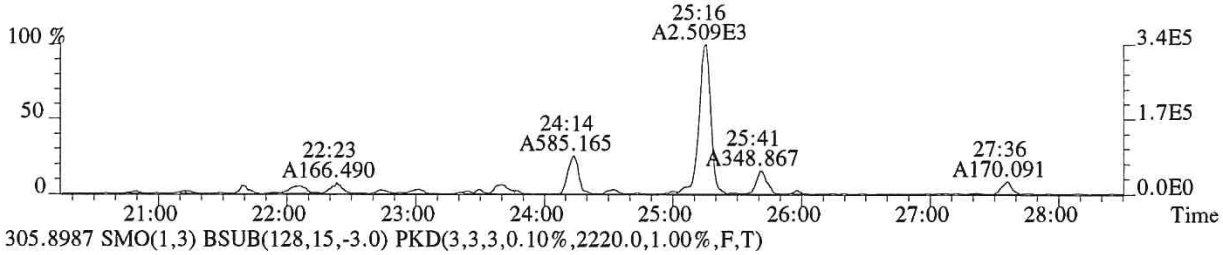
Acquired: 8-JAN-19 20:21:09 Processed: 9-JAN-19 08:58:19

Mass: 423.7770 425.7740 Tot Response: 1.91e+04 RRF: 1.112

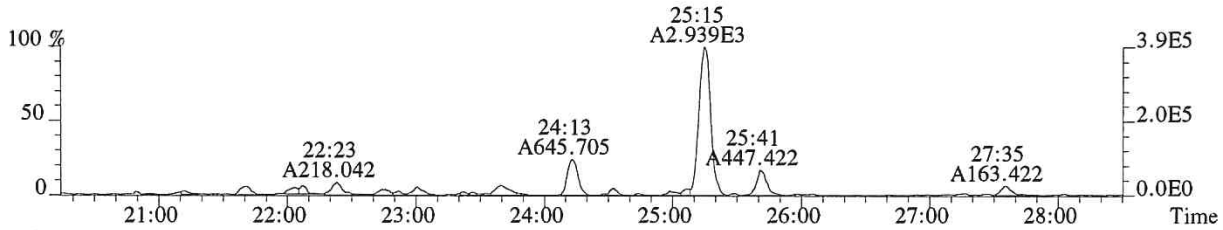
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:24	5.75e+03	5.59e+03	1.03	yes	1.13e+04		n	n
2	38:04	3.91e+03	3.81e+03	1.03	yes	7.72e+03	1,2,3,4,6,7,8-HpCDD	n	n

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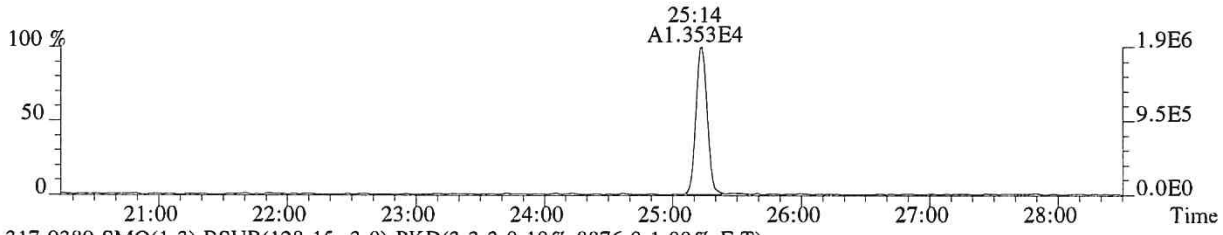
File:P616386 #1-587 Acq: 8-JAN-2019 20:21:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-008
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1596.0,1.00%,F,T)



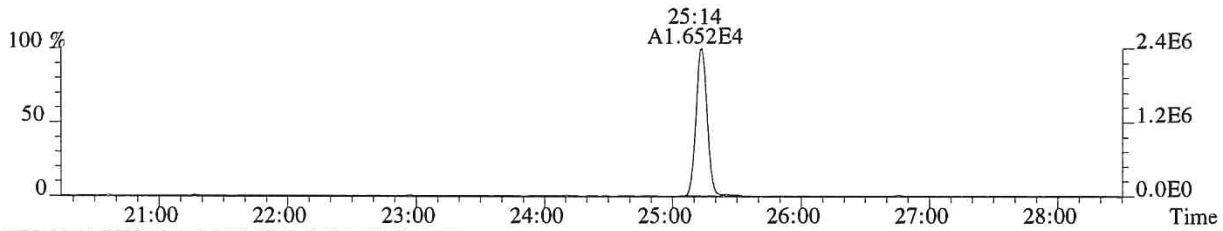
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2220.0,1.00%,F,T)



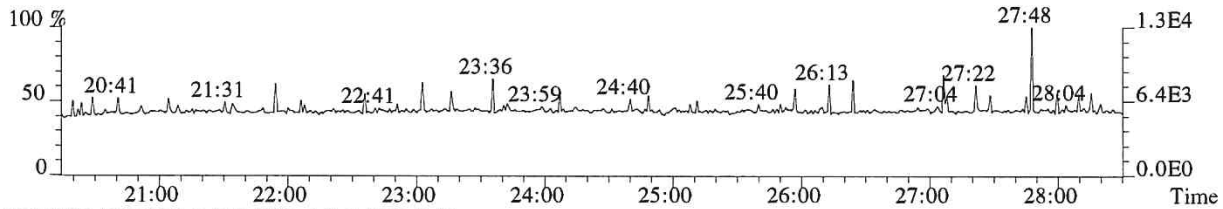
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15072.0,1.00%,F,T)



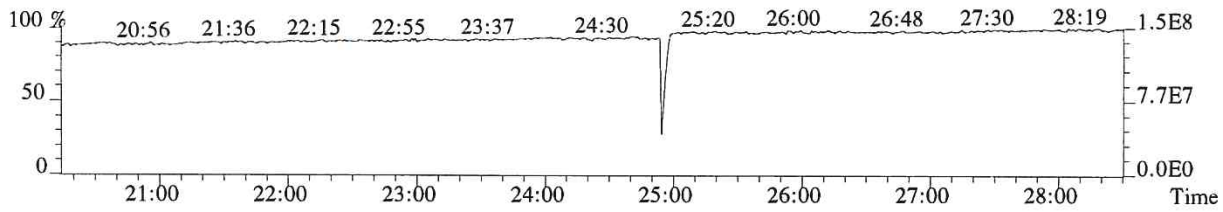
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8876.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

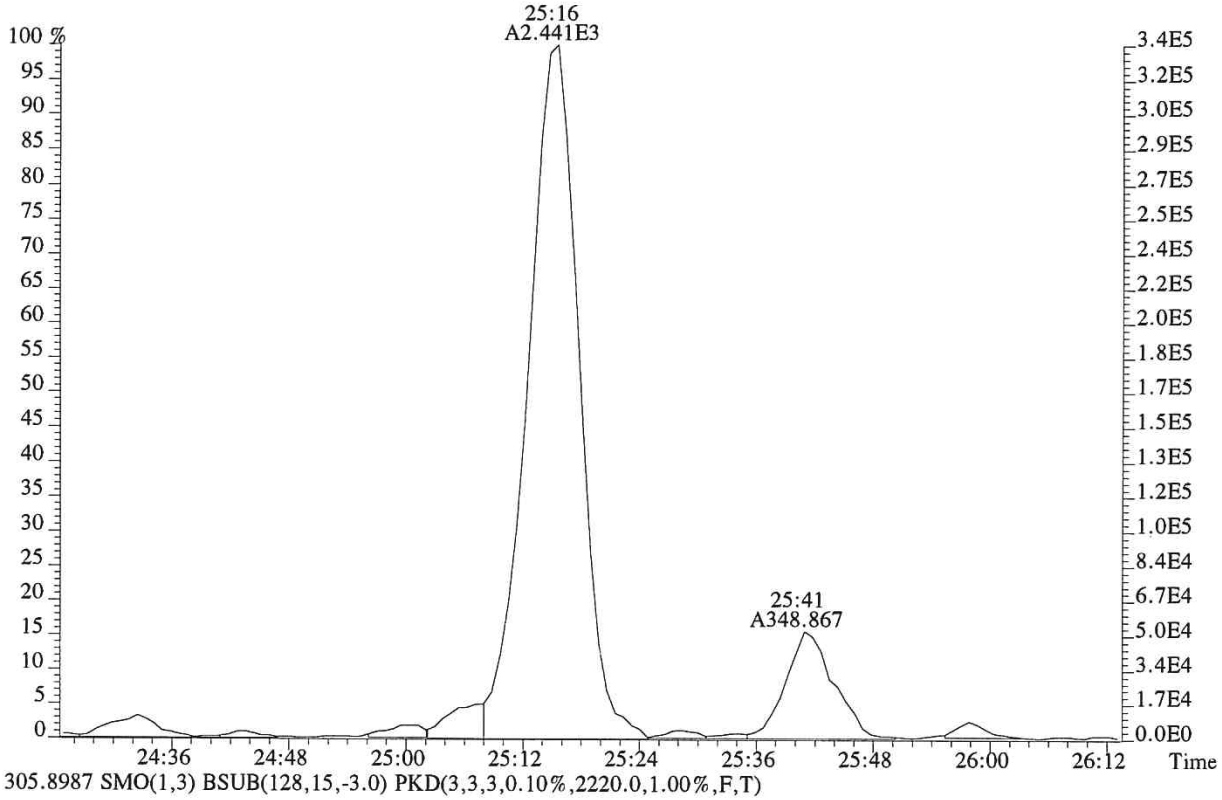


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

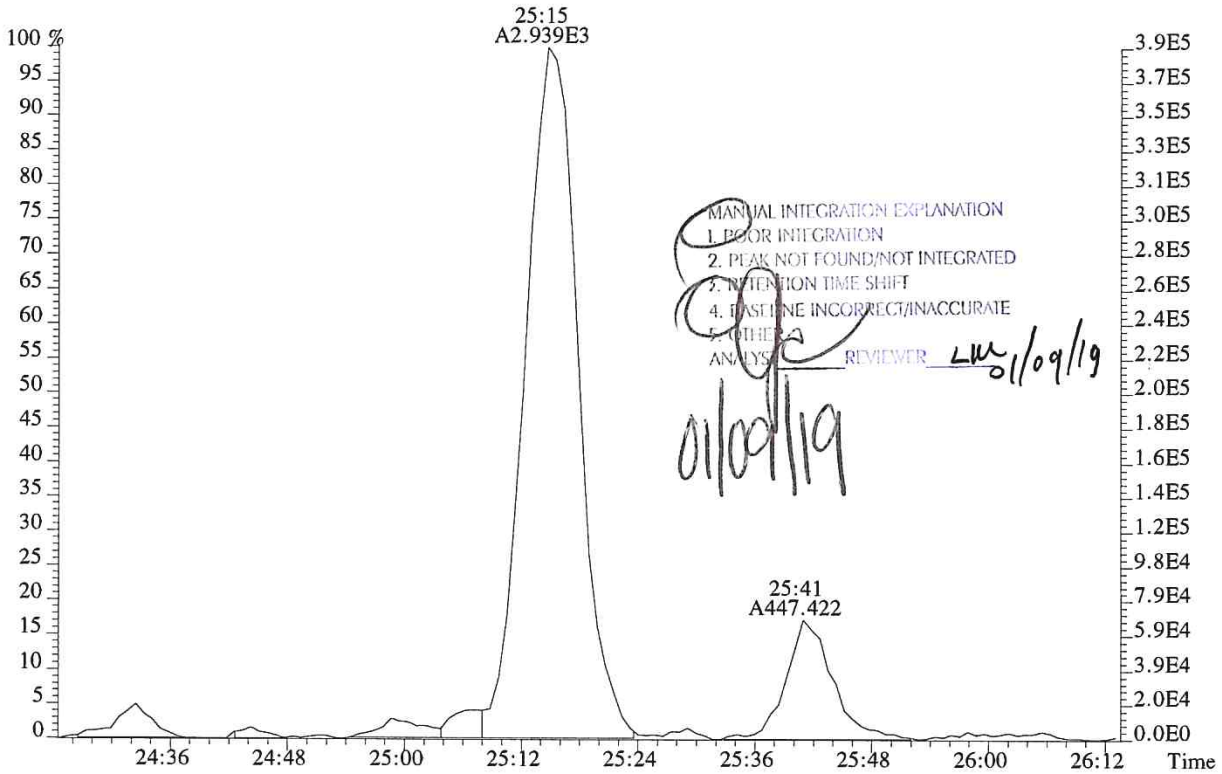


017224

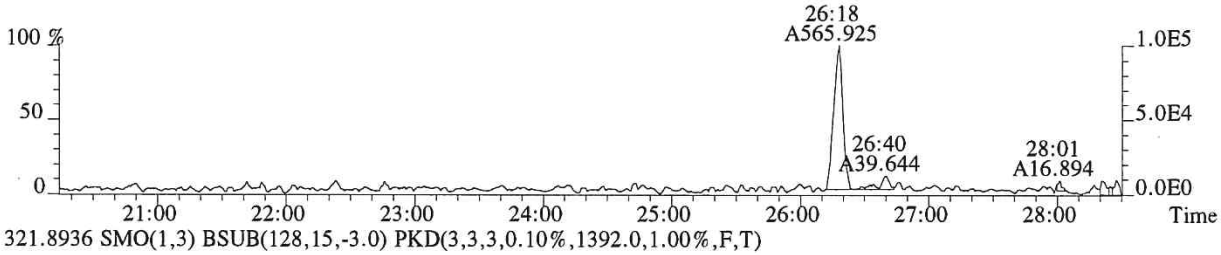
File:P616386 #1-587 Acq: 8-JAN-2019 20:21:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-008
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1596.0,1.00%,F,T)



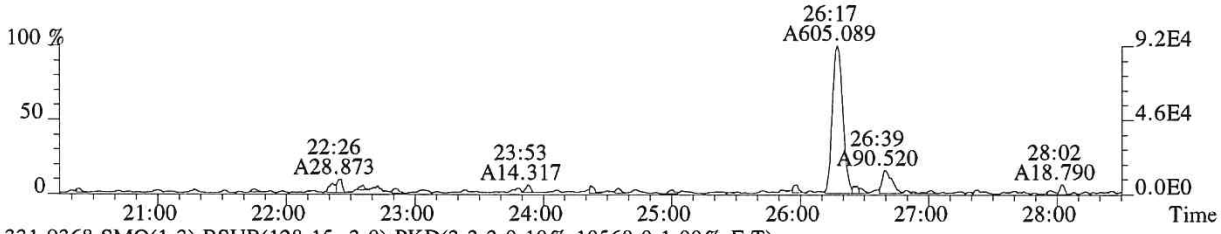
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2220.0,1.00%,F,T)



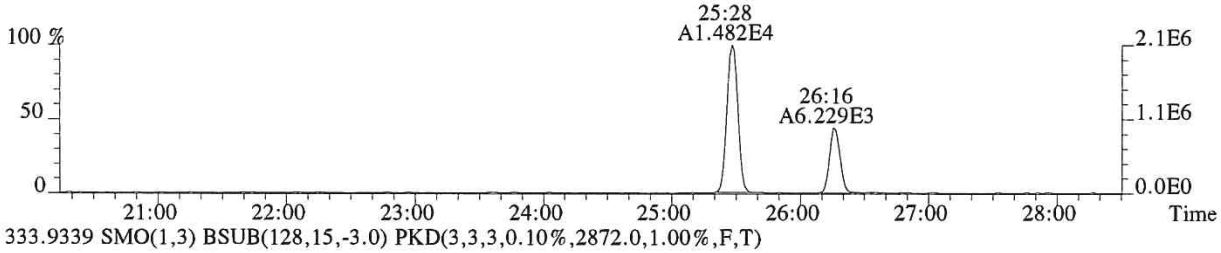
File:P616386 #1-587 Acq: 8-JAN-2019 20:21:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-008
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4476.0,1.00%,F,T)



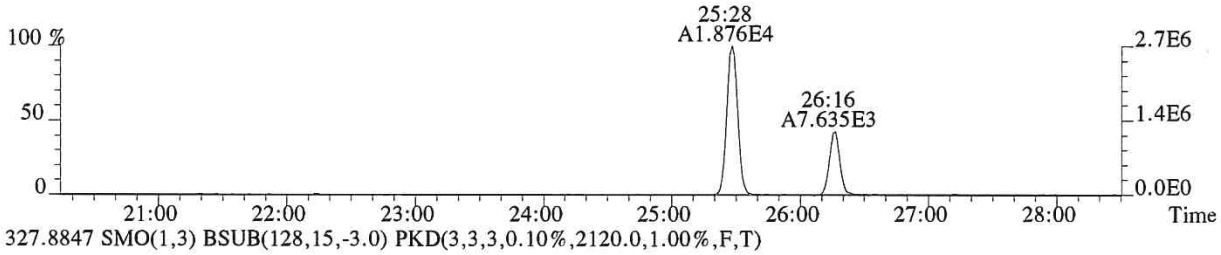
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1392.0,1.00%,F,T)



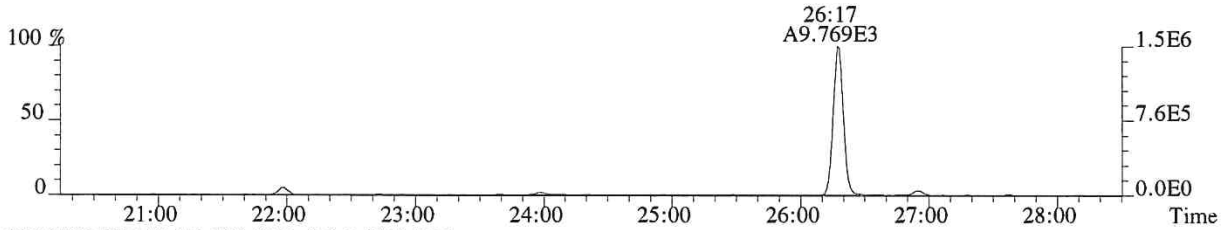
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10568.0,1.00%,F,T)



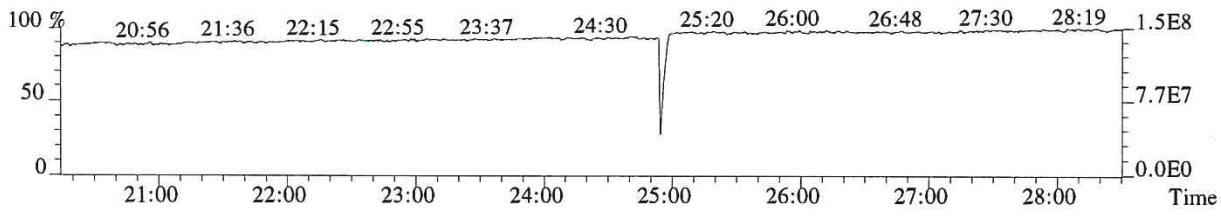
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2872.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2120.0,1.00%,F,T)

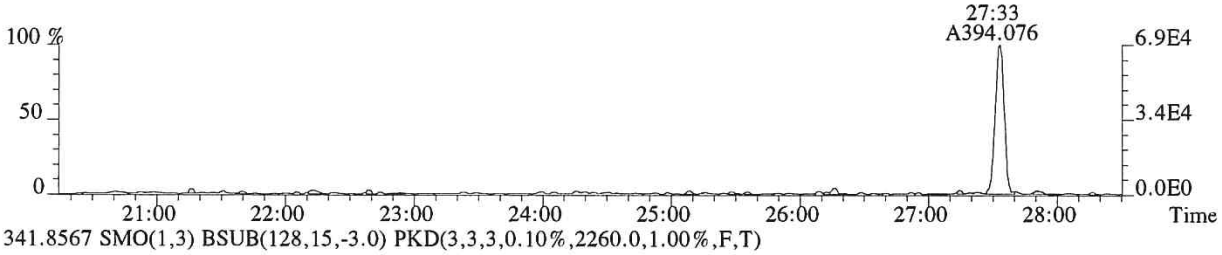


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

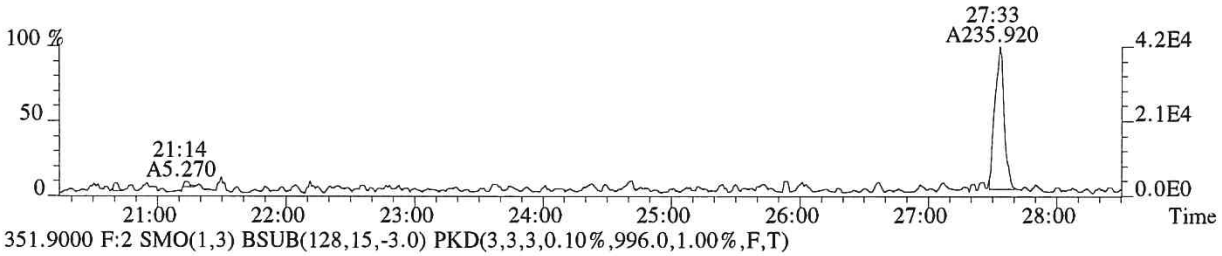


017226

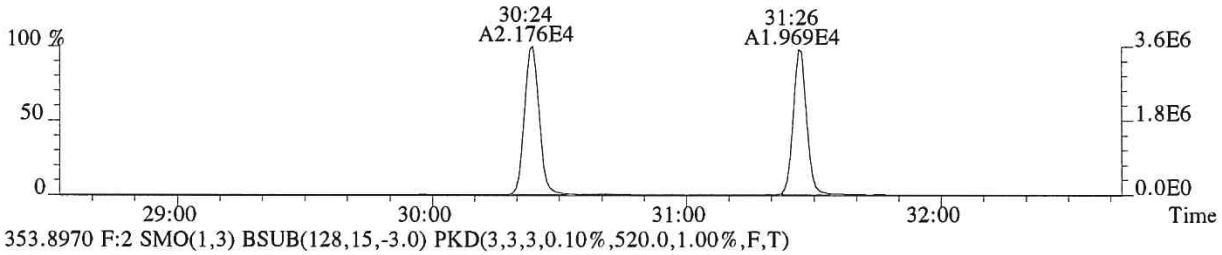
File:P616386 #1-587 Acq: 8-JAN-2019 20:21:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-008
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,672.0,1.00%,F,T)



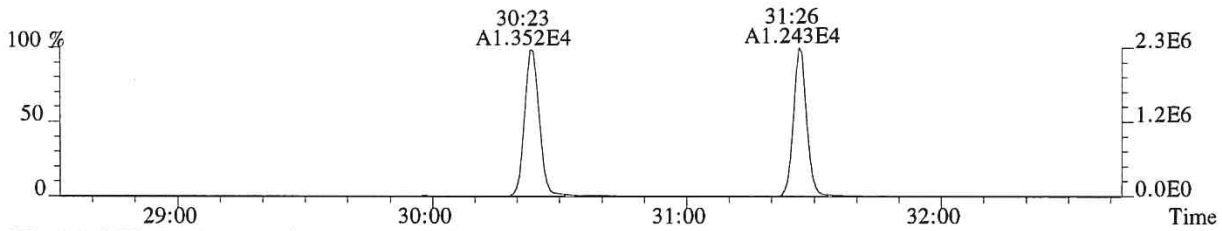
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2260.0,1.00%,F,T)



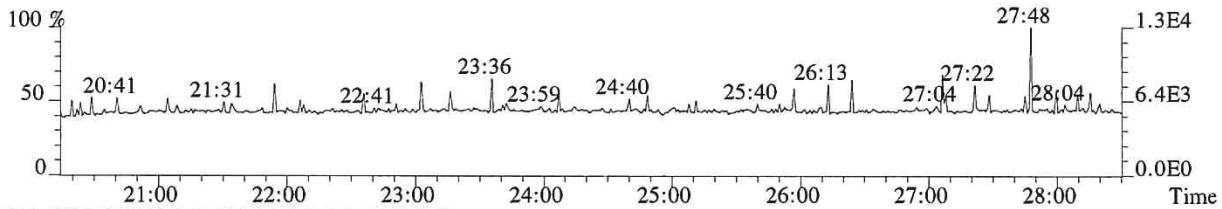
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,996.0,1.00%,F,T)



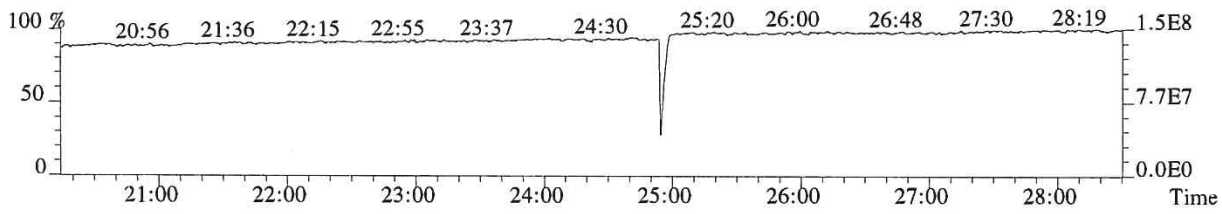
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,520.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

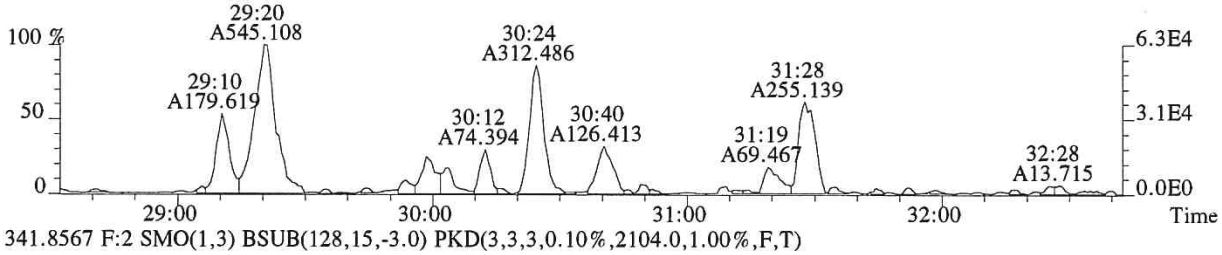


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

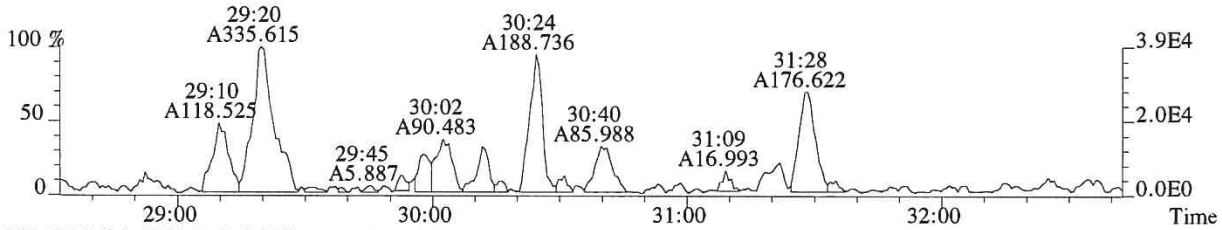


017227

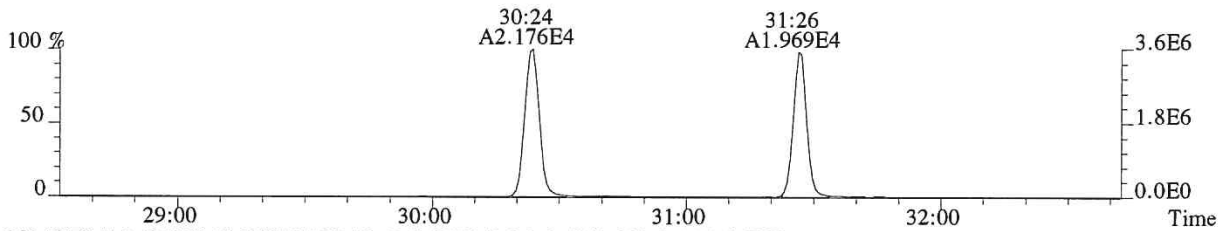
File:P616386 #1-376 Acq: 8-JAN-2019 20:21:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-008
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,812.0,1.00%,F,T)



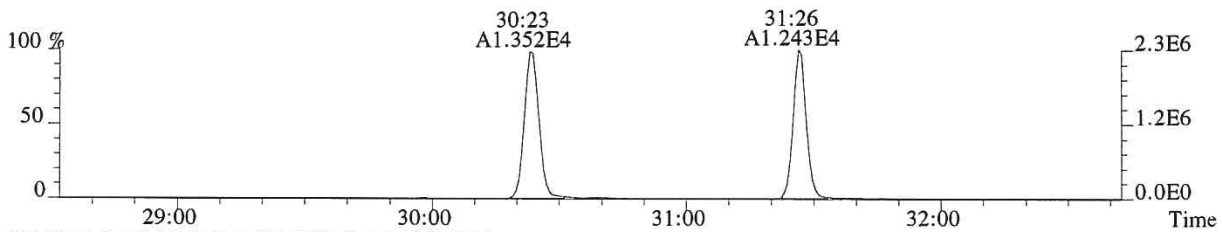
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2104.0,1.00%,F,T)



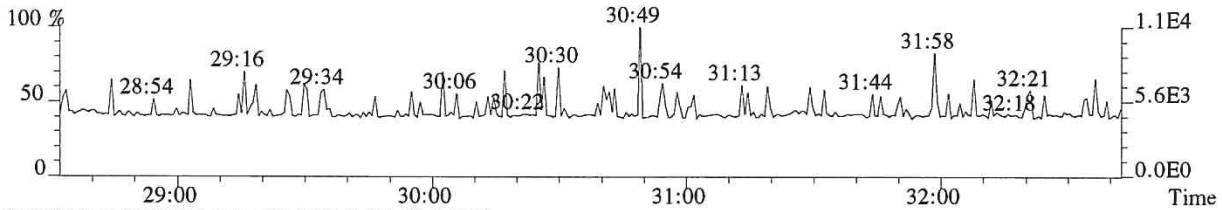
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,996.0,1.00%,F,T)



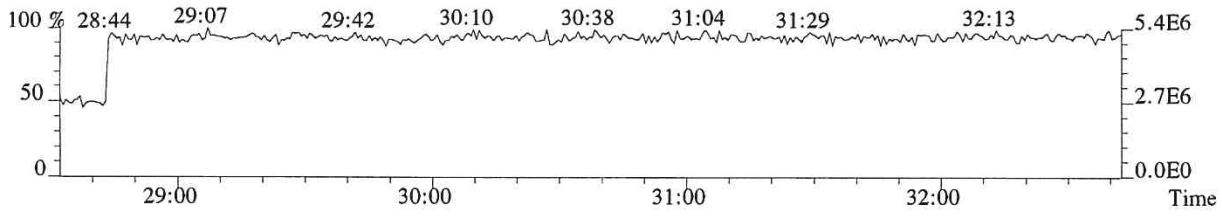
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,520.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

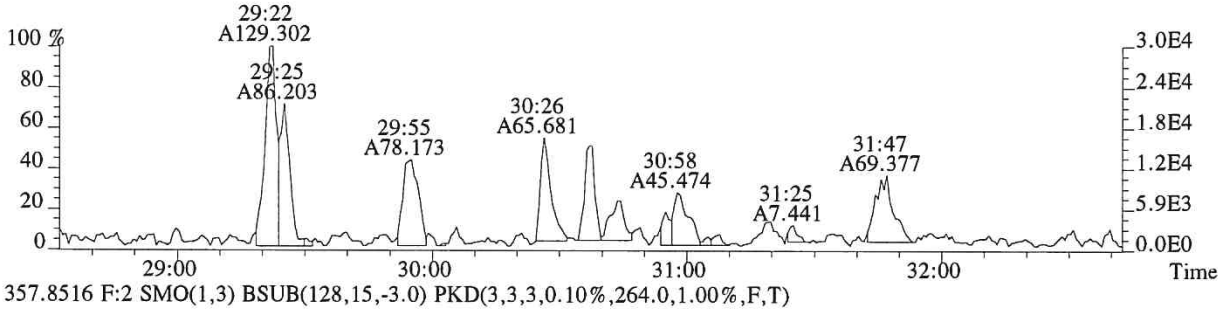


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

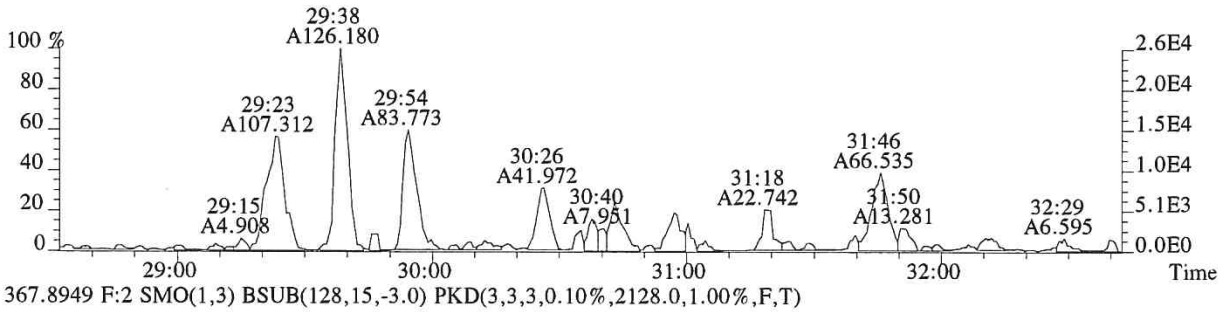


017228

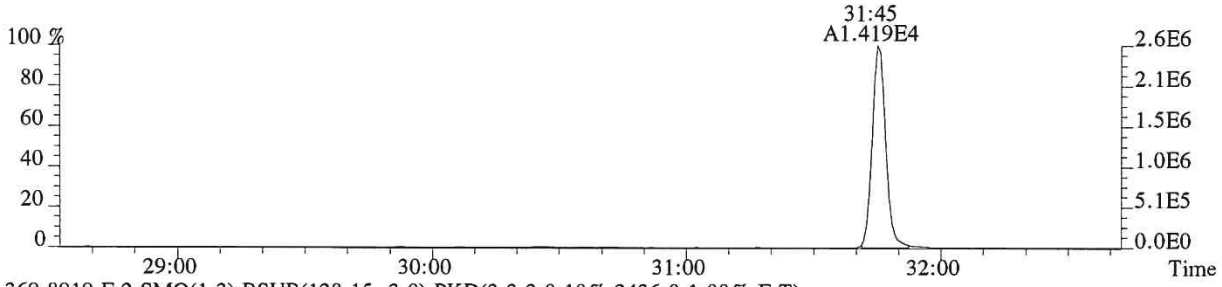
File:P616386 #1-376 Acq: 8-JAN-2019 20:21:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-008
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1760.0,1.00%,F,T)



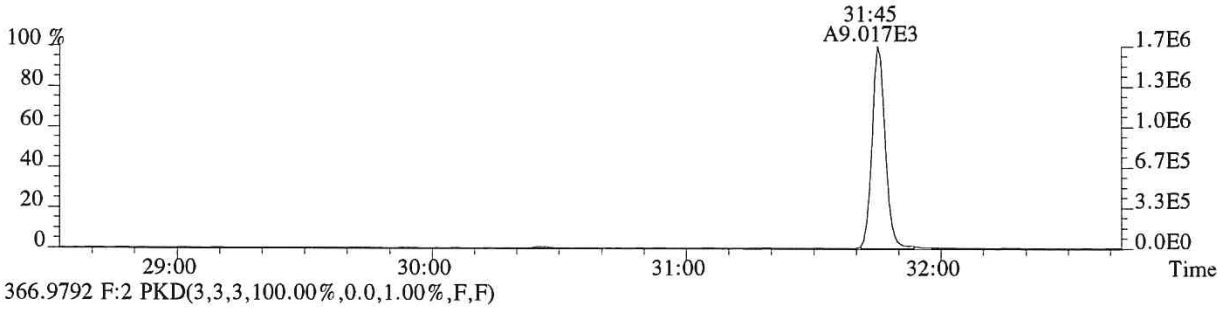
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,264.0,1.00%,F,T)



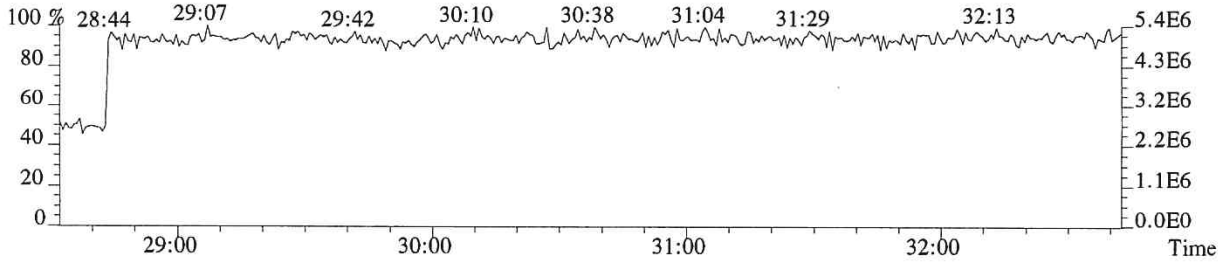
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2128.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2436.0,1.00%,F,T)

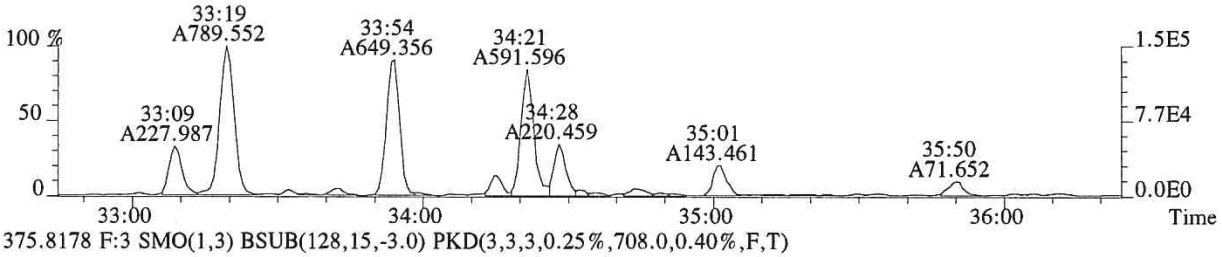


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

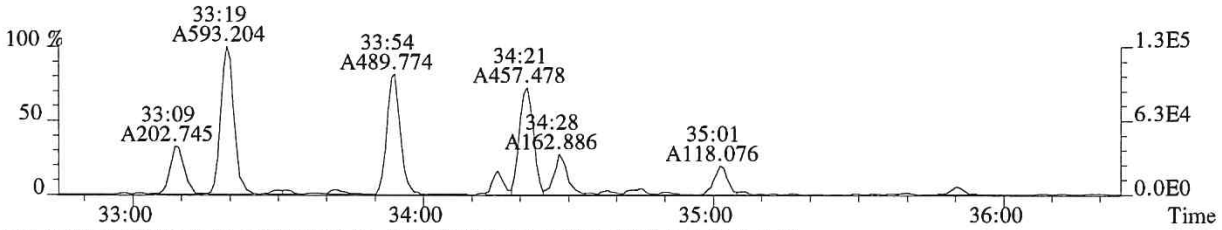


017229

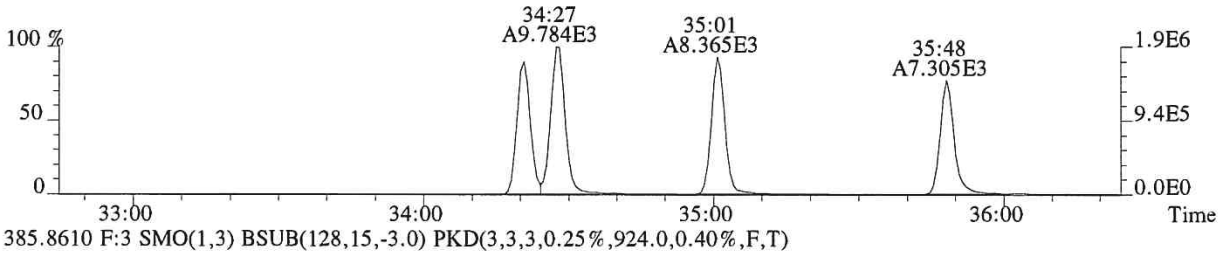
File:P616386 #1-330 Acq: 8-JAN-2019 20:21:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-008
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2260.0,0.40%,F,T)



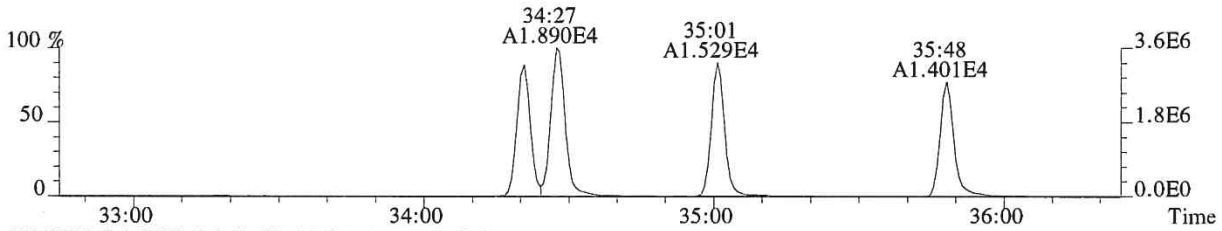
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,708.0,0.40%,F,T)



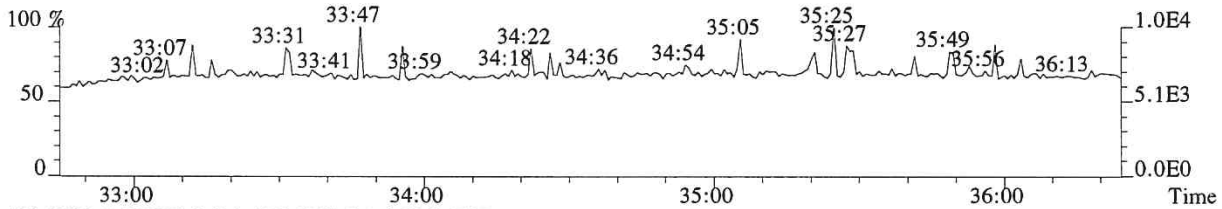
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1452.0,0.40%,F,T)



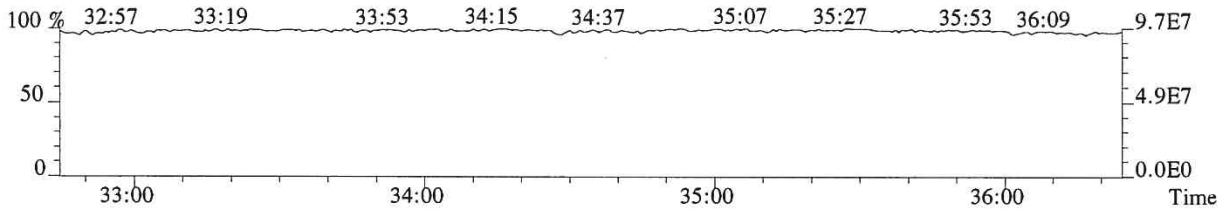
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,924.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

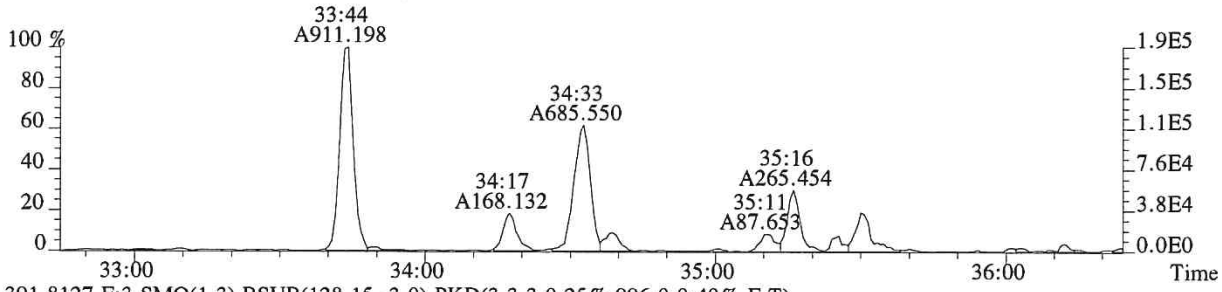


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

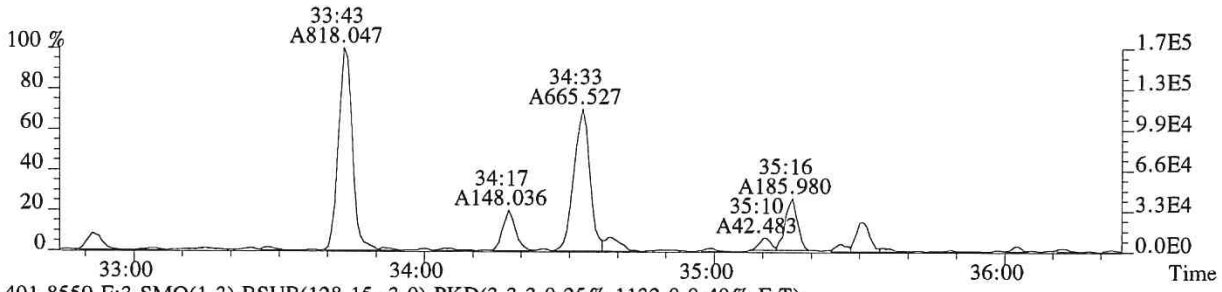


017230

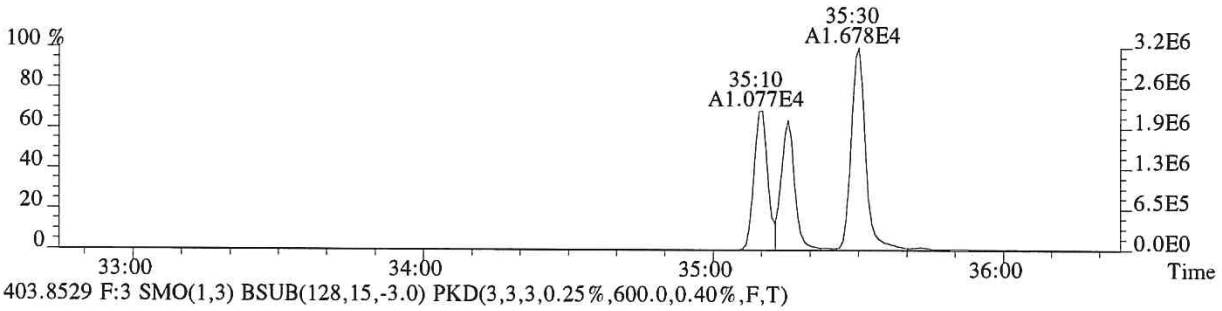
File:P616386 #1-330 Acq: 8-JAN-2019 20:21:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-008
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1068.0,0.40%,F,T)



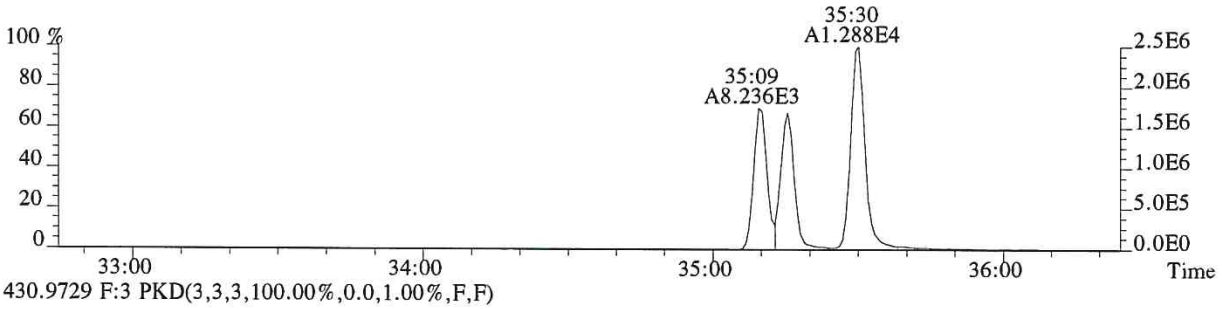
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,996.0,0.40%,F,T)



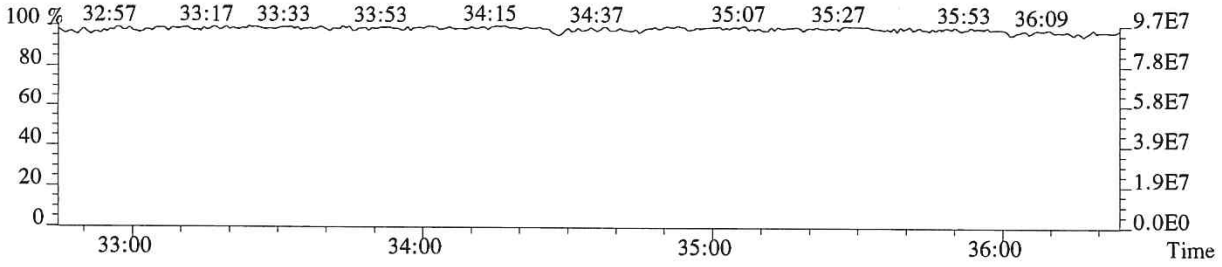
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1132.0,0.40%,F,T)



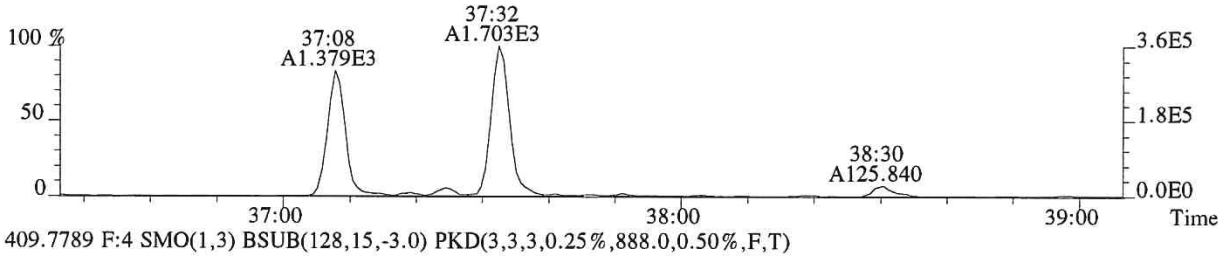
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,600.0,0.40%,F,T)



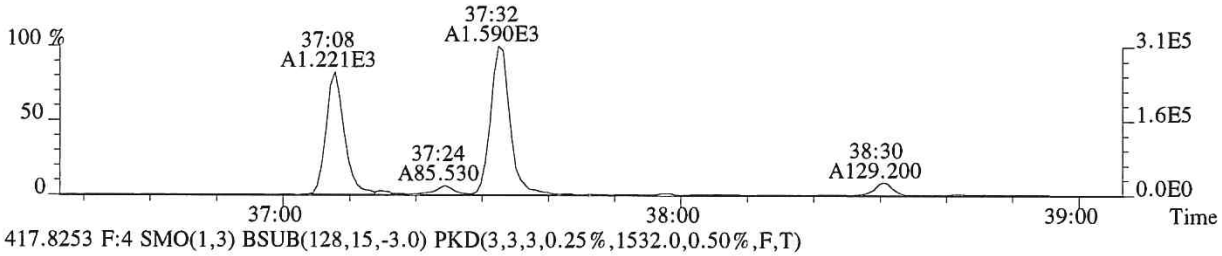
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



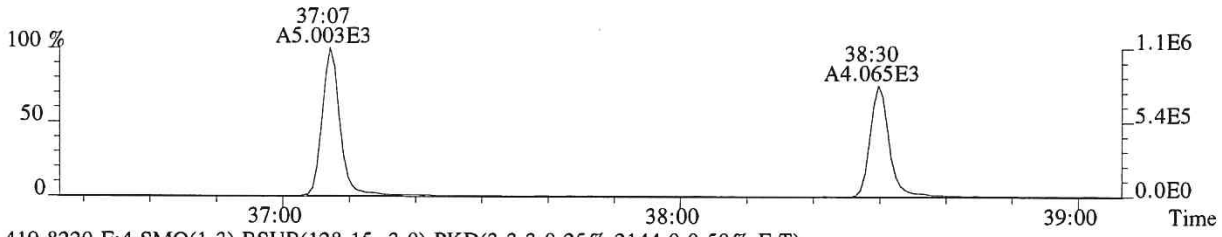
File:P616386 #1-241 Acq: 8-JAN-2019 20:21:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-008
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1116.0,0.50%,F,T)



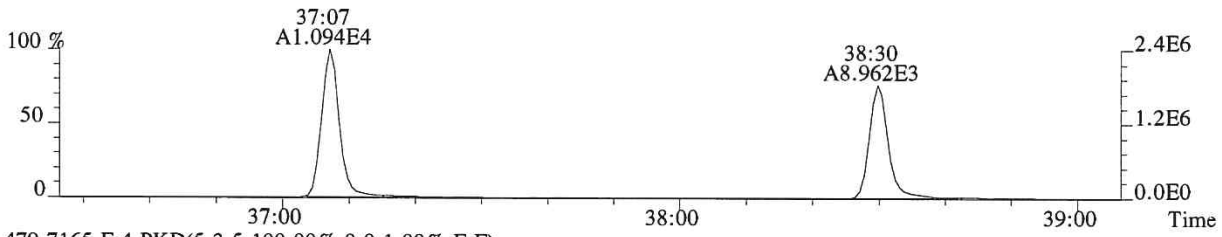
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,888.0,0.50%,F,T)



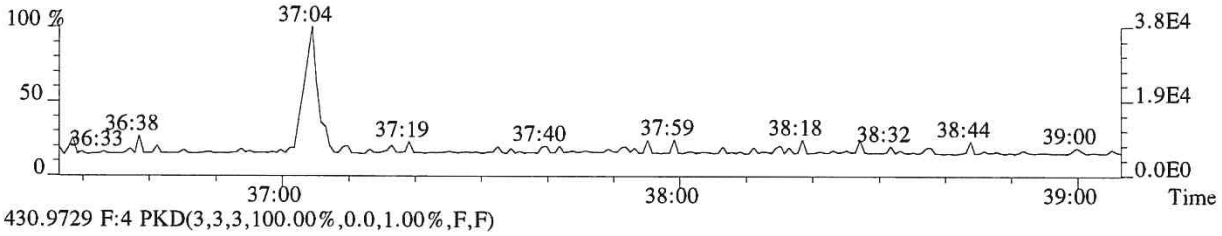
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1532.0,0.50%,F,T)



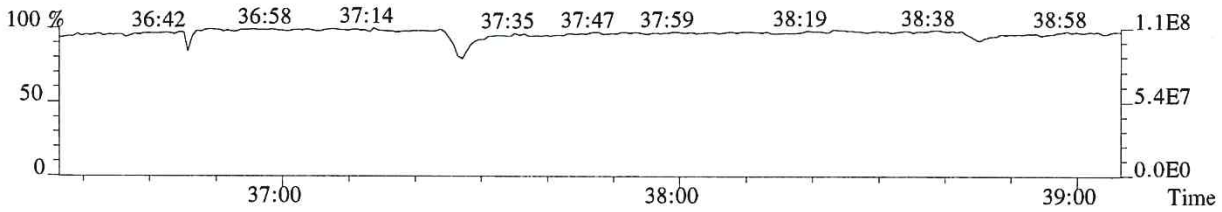
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2144.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

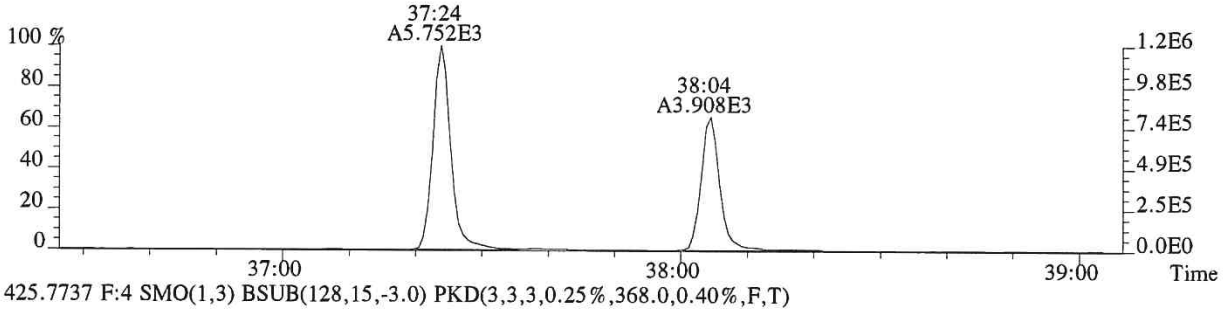


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

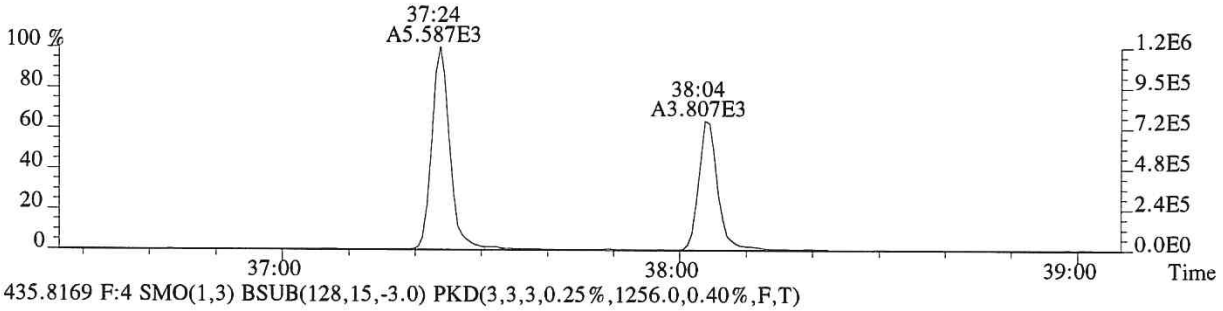


017232

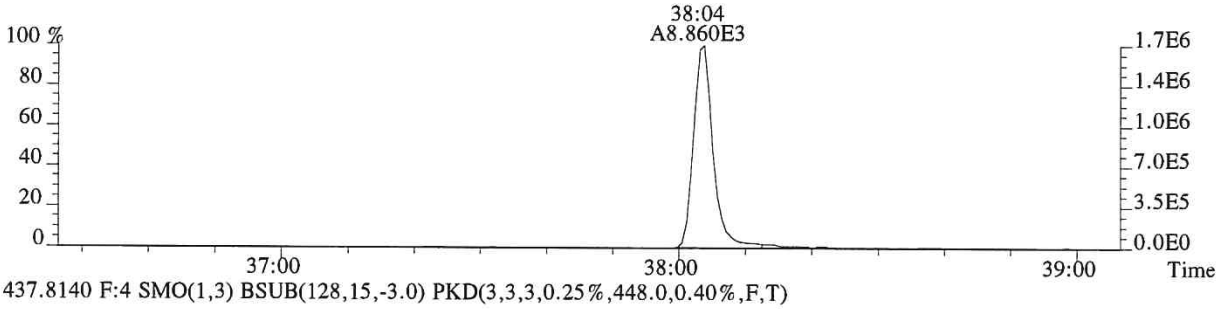
File:P616386 #1-241 Acq: 8-JAN-2019 20:21:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-008
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1308.0,0.40%,F,T)



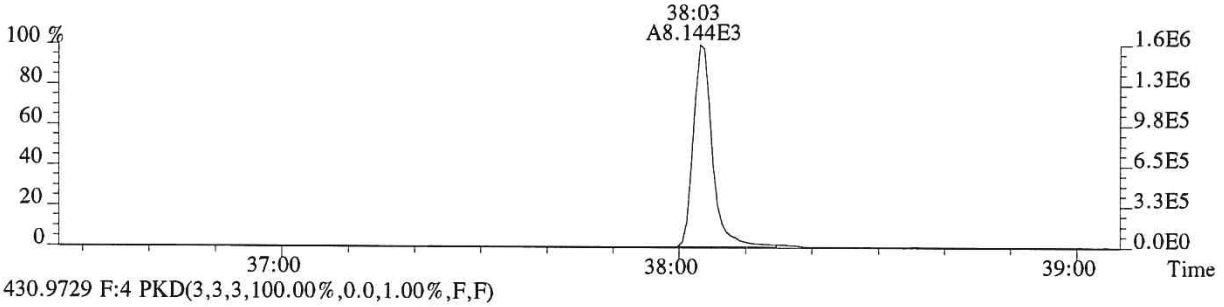
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,368.0,0.40%,F,T)



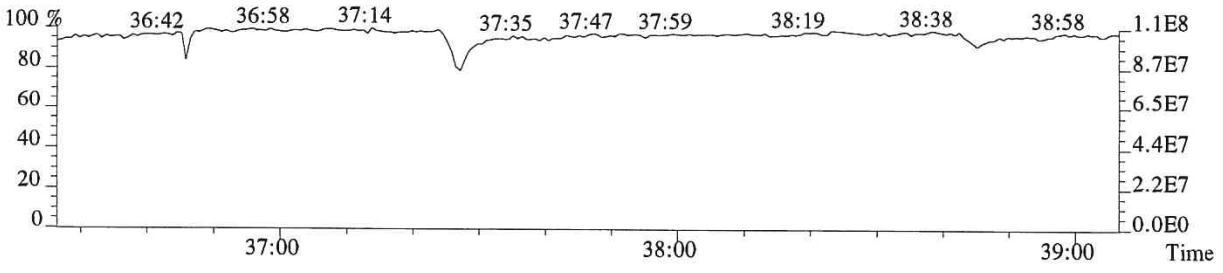
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1256.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,448.0,0.40%,F,T)

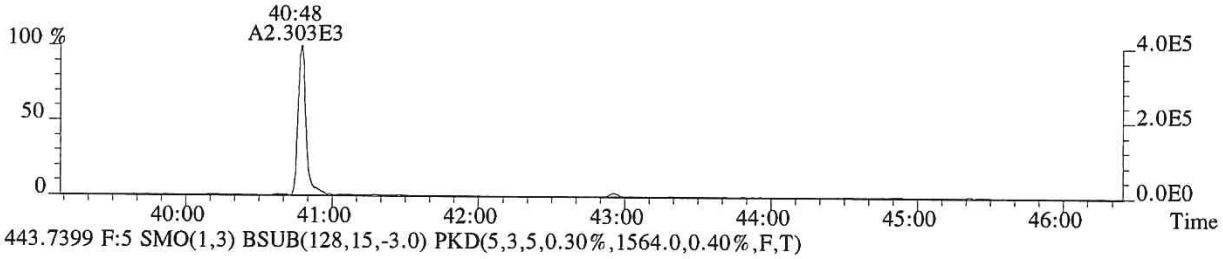


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

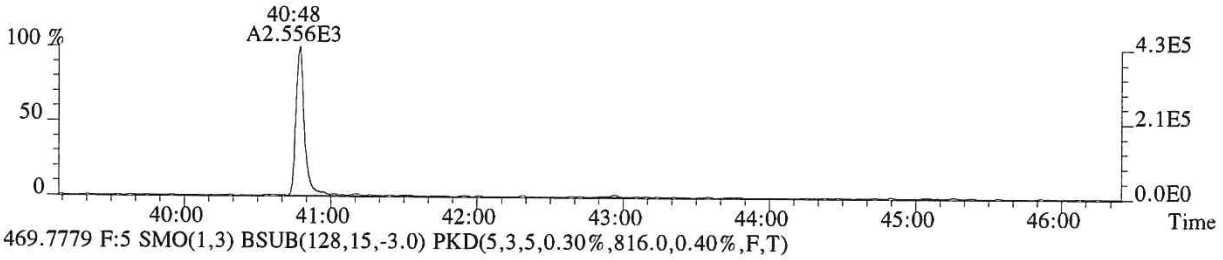


017233

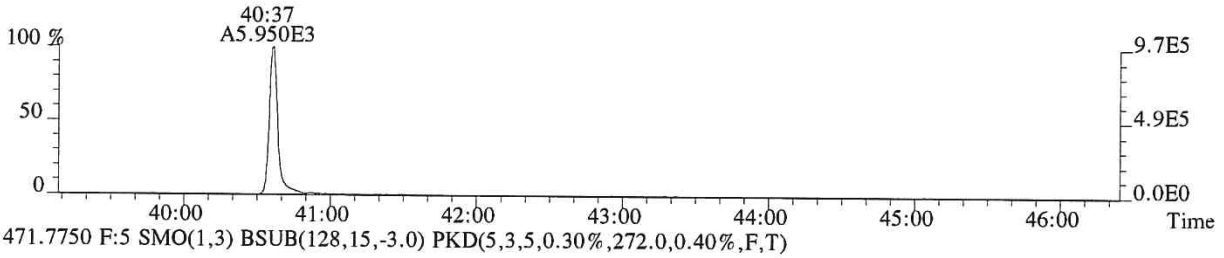
File:P616386 #1-654 Acq: 8-JAN-2019 20:21:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-008
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,256.0,0.40%,F,T)



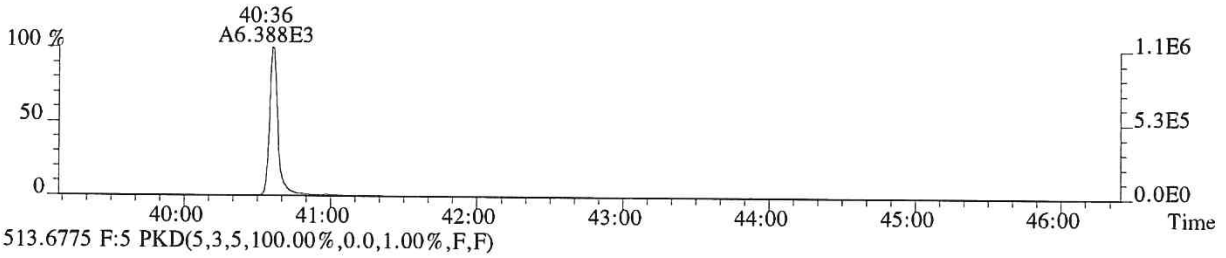
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1564.0,0.40%,F,T)



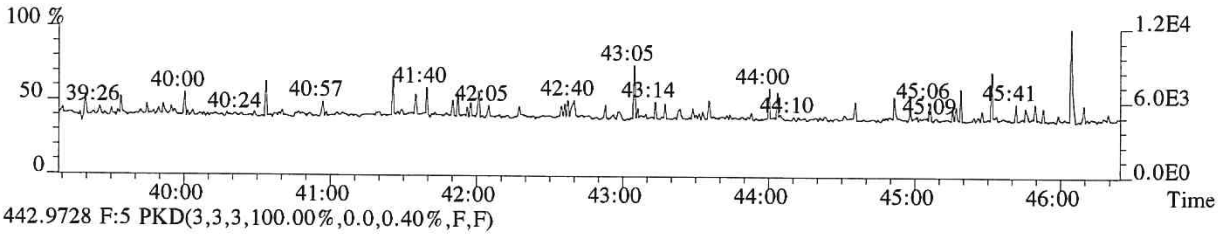
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,816.0,0.40%,F,T)



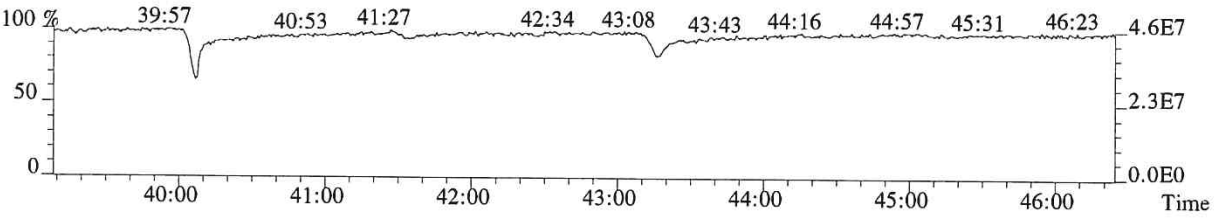
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,272.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

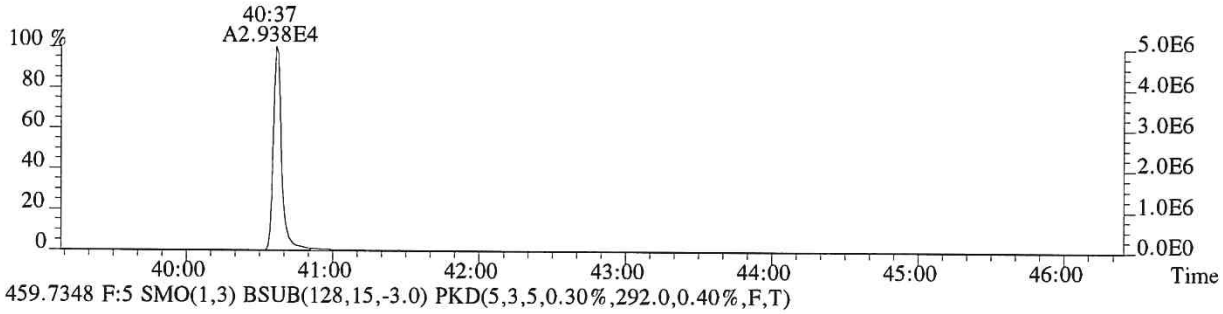


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

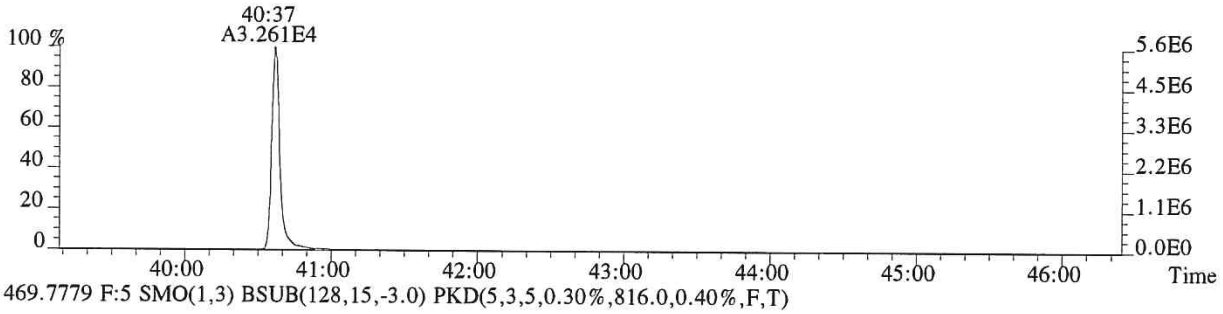


017234

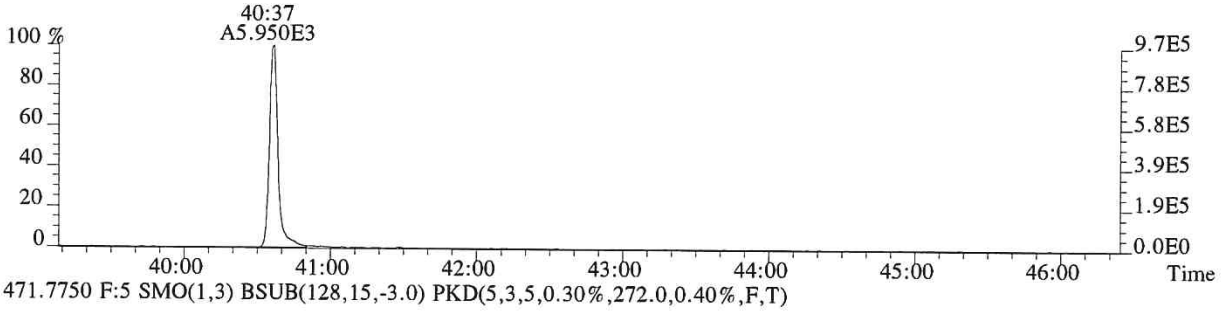
File:P616386 #1-654 Acq: 8-JAN-2019 20:21:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-008
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,328.0,0.40%,F,T)



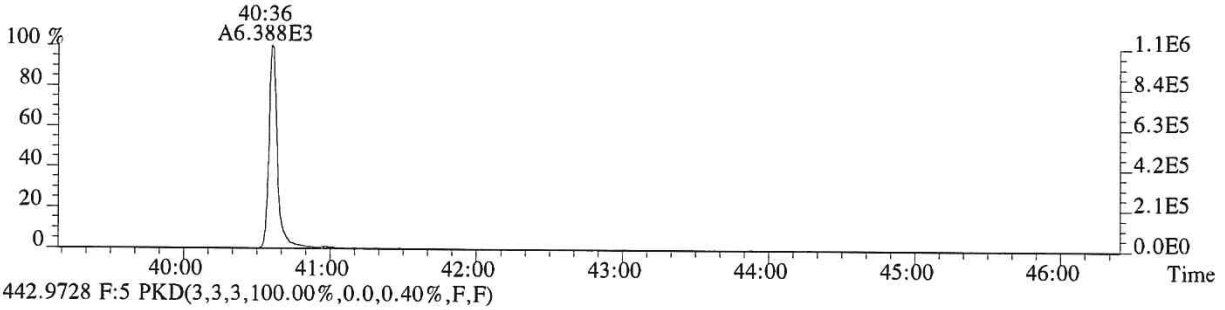
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,292.0,0.40%,F,T)



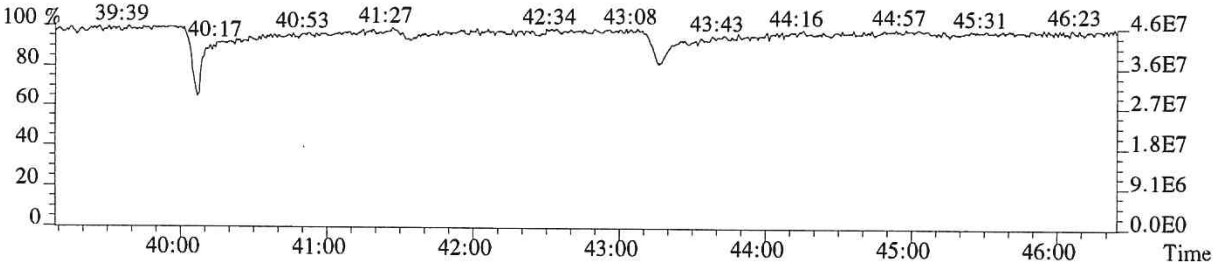
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,816.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,272.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017235

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0177

Run #19 Filename P616387 Samp: 1 Inj: 1 Acquired: 8-JAN-19 21:10:18
Processed: 9-JAN-19 08:58:21 Sample ID: E1801138-009

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:15	1.760e+03	2.379e+03	0.74	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:24	1.367e+02	1.112e+02	1.23	no	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:27	1.409e+02	8.388e+01	1.68	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	1.919e+02	2.016e+02	0.95	no	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:28	1.027e+02	6.566e+01	1.56	no	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	7.878e+01	5.315e+01	1.48	no	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:49	5.320e+01	2.835e+01	1.88	no	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:07	5.133e+02	5.891e+02	0.87	no	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	3.632e+01	4.104e+01	0.88	yes	yes	1.463
10	Unk	OCDF	40:47	1.471e+03	1.666e+03	0.88	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:17	3.397e+02	4.162e+02	0.82	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:45	6.050e+01	5.936e+01	1.02	no	yes	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:09	3.787e+01	4.042e+01	0.94	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:15	1.524e+02	1.234e+02	1.24	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:30	1.096e+02	1.088e+02	1.01	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	2.070e+03	2.011e+03	1.03	yes	no	1.112
17	Unk	OCDD	40:37	1.722e+04	1.960e+04	0.88	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:13	1.303e+04	1.609e+04	0.81	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:22	2.094e+04	1.301e+04	1.61	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	1.932e+04	1.224e+04	1.58	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:20	8.030e+03	1.514e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	9.390e+03	1.803e+04	0.52	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:00	7.766e+03	1.448e+04	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	7.766e+03	1.468e+04	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:06	4.801e+03	1.065e+04	0.45	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	4.203e+03	9.634e+03	0.44	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:16	6.232e+03	7.459e+03	0.84	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:44	1.401e+04	8.808e+03	1.59	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	1.130e+04	8.900e+03	1.27	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	1.037e+04	8.281e+03	1.25	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:02	9.345e+03	8.465e+03	1.10	yes	no	0.857
32	IS	13C-OCDD	40:36	6.559e+03	7.099e+03	0.92	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:27	1.451e+04	1.819e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	1.835e+04	1.421e+04	1.29	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:17	9.751e+03				no	1.086

$$\text{OCDD} = \frac{(1.722e+04 + 1.960e+04) \times 4000\ \text{pg} \times 1}{(6.559e+03 + 7.099e+03) \times 10.970\text{g} \times 82.6/100 \times 1.157} = 1028.6\ \text{ng/kg}$$

LLM 01/09/19

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Signal/Noise Height Ratio Summary

CLIENT ID.
SL0177

Run #19 Filename P616387 Samp: 1 Inj: 1 Acquired: 8-JAN-19 21:10:18
Processed: 9-JAN-19 08:58:21 LAB. ID: E1801138-009

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.23e+05	1.30e+03	1.7e+02	3.44e+05	4.35e+03	7.9e+01
2	1,2,3,7,8-PeCDF	2.76e+04	4.84e+02	5.7e+01	1.73e+04	2.17e+03	8.0e+00
3	2,3,4,7,8-PeCDF	2.36e+04	4.84e+02	4.9e+01	1.53e+04	2.17e+03	7.0e+00
4	1,2,3,4,7,8-HxCDF	4.42e+04	9.72e+02	4.5e+01	3.63e+04	8.72e+02	4.2e+01
5	1,2,3,6,7,8-HxCDF	1.94e+04	9.72e+02	2.0e+01	1.24e+04	8.72e+02	1.4e+01
6	2,3,4,6,7,8-HxCDF	1.27e+04	9.72e+02	1.3e+01	9.11e+03	8.72e+02	1.0e+01
7	1,2,3,7,8,9-HxCDF	8.96e+03	9.72e+02	9.2e+00	5.14e+03	8.72e+02	5.9e+00
8	1,2,3,4,6,7,8-HpCDF	1.11e+05	1.58e+03	7.0e+01	1.14e+05	8.72e+02	1.3e+02
9	1,2,3,4,7,8,9-HpCDF	8.81e+03	1.58e+03	5.6e+00	1.03e+04	8.72e+02	1.2e+01
10	OCDF	2.36e+05	7.00e+02	3.4e+02	2.82e+05	2.22e+03	1.3e+02
11	2,3,7,8-TCDD	5.36e+04	3.68e+03	1.5e+01	6.05e+04	1.42e+03	4.2e+01
12	1,2,3,7,8-PeCDD	1.27e+04	1.12e+03	1.1e+01	1.31e+04	3.28e+02	4.0e+01
13	1,2,3,4,7,8-HxCDD	1.11e+04	3.84e+02	2.9e+01	7.81e+03	1.12e+03	6.9e+00
14	1,2,3,6,7,8-HxCDD	2.83e+04	3.84e+02	7.4e+01	2.79e+04	1.12e+03	2.5e+01
15	1,2,3,7,8,9-HxCDD	2.20e+04	3.84e+02	5.7e+01	2.00e+04	1.12e+03	1.8e+01
16	1,2,3,4,6,7,8-HpCDD	4.18e+05	2.70e+03	1.5e+02	4.02e+05	1.74e+03	2.3e+02
17	OCDD	2.88e+06	4.04e+02	7.1e+03	3.27e+06	3.32e+02	9.9e+03
18	13C-2,3,7,8-TCDF	1.82e+06	1.17e+04	1.6e+02	2.27e+06	1.25e+04	1.8e+02
19	13C-1,2,3,7,8-PeCDF	3.51e+06	2.96e+02	1.2e+04	2.15e+06	8.44e+02	2.5e+03
20	13C-2,3,4,7,8-PeCDF	3.53e+06	2.96e+02	1.2e+04	2.22e+06	8.44e+02	2.6e+03
21	13C-1,2,3,4,7,8-HxCDF	1.65e+06	3.84e+02	4.3e+03	3.04e+06	1.35e+03	2.3e+03
22	13C-1,2,3,6,7,8-HxCDF	1.76e+06	3.84e+02	4.6e+03	3.44e+06	1.35e+03	2.5e+03
23	13C-2,3,4,6,7,8-HxCDF	1.63e+06	3.84e+02	4.2e+03	3.05e+06	1.35e+03	2.3e+03
24	13C-1,2,3,7,8,9-HxCDF	1.54e+06	3.84e+02	4.0e+03	2.85e+06	1.35e+03	2.1e+03
25	13C-1,2,3,4,6,7,8-HpCDF	9.88e+05	1.22e+03	8.1e+02	2.22e+06	2.78e+03	8.0e+02
26	13C-1,2,3,4,7,8,9-HpCDF	8.27e+05	1.22e+03	6.8e+02	1.90e+06	2.78e+03	6.8e+02
27	13C-2,3,7,8-TCDD	9.33e+05	1.19e+04	7.8e+01	1.13e+06	3.76e+03	3.0e+02
28	13C-1,2,3,7,8-PeCDD	2.57e+06	1.64e+03	1.6e+03	1.61e+06	2.07e+03	7.8e+02
29	13C-1,2,3,4,7,8-HxCDD	2.36e+06	1.49e+03	1.6e+03	1.86e+06	1.01e+03	1.8e+03
30	13C-1,2,3,6,7,8-HxCDD	2.08e+06	1.49e+03	1.4e+03	1.61e+06	1.01e+03	1.6e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.78e+06	7.28e+02	2.4e+03	1.68e+06	4.20e+02	4.0e+03
32	13C-OCDD	1.10e+06	3.36e+02	3.3e+03	1.18e+06	2.56e+02	4.6e+03
33	13C-1,2,3,4-TCDD	2.07e+06	1.19e+04	1.7e+02	2.62e+06	3.76e+03	7.0e+02
34	13C-1,2,3,7,8,9-HxCDD	3.40e+06	1.49e+03	2.3e+03	2.66e+06	1.01e+03	2.6e+03
35	37Cl-2,3,7,8-TCDD	1.47e+06	2.10e+03	7.0e+02			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0177

Entry: 36 Totals Name: Total Tetra-Furans

Run: 19 File: P616387 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 21:10:18 Processed: 9-JAN-19 08:58:21

Mass: 303.9020 305.8990 Tot Response: 4.74e+03 RRF: 1.081

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	25:15	1.76e+03	2.38e+03	0.74	yes	4.14e+03	2,3,7,8-TCDF	n	n
2	25:41	2.74e+02	3.31e+02	0.83	yes	6.06e+02		n	n

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Peak List Summary

CLIENT ID.
SL0177

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 19 File: P616387 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 21:10:18 Processed: 9-JAN-19 08:58:21

Mass: 319.8970 321.8940 Tot Response: 7.56e+02 RRF: 1.049

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:17	3.40e+02	4.16e+02	0.82	yes	7.56e+02	2,3,7,8-TCDD	n	n

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Peak List Summary

CLIENT ID.
SL0177

Entry: 38 Totals Name: Total Penta-Furans1

Run: 19 File: P616387 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 21:10:18 Processed: 9-JAN-19 08:58:21

Mass: 339.8600 341.8570 Tot Response: 2.84e+02 RRF: 1.130

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:33	1.73e+02	1.11e+02 1.56	yes	2.84e+02		n	n

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Peak List Summary

CLIENT ID.
SL0177

Entry: 39 Totals Name: Total Penta-Furans2

Run: 19 File: P616387 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 21:10:18 Processed: 9-JAN-19 08:58:21

Mass: 339.8600 341.8570 Tot Response: 2.92e+02 RRF: 1.130

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	31:19	4.15e+01	2.59e+01 1.61	yes	6.74e+01		n	n
2	31:27	1.41e+02	8.39e+01 1.68	yes	2.25e+02	2,3,4,7,8-PeCDF	n	n

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Peak List Summary

CLIENT ID.
SL0177

Entry: 41 Totals Name: Total Hexa-Furans

Run: 19 File: P616387 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 21:10:18 Processed: 9-JAN-19 08:58:21

Mass: 373.8210 375.8180 Tot Response: 8.85e+01 RRF: 1.324

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:15	5.02e+01	3.84e+01 1.31	yes	8.85e+01		n	n

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Peak List Summary

CLIENT ID.
SL0177

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 19 File: P616387 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 21:10:18 Processed: 9-JAN-19 08:58:21

Mass: 389.8160 391.8130 Tot Response: 2.21e+03 RRF: 1.092

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:43	6.11e+02	4.70e+02	1.30	yes	1.08e+03		n	n
2	34:32	4.88e+02	3.63e+02	1.34	yes	8.52e+02		n	n
3	35:15	1.52e+02	1.23e+02	1.24	yes	2.76e+02	1,2,3,6,7,8-HxCDD	n	n

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Peak List Summary

CLIENT ID.
SL0177

Entry: 43 Totals Name: Total Hepta-Furans

Run: 19 File: P616387 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 21:10:18 Processed: 9-JAN-19 08:58:21

Mass: 407.7820 409.7790 Tot Response: 1.85e+03 RRF: 1.495

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:32	8.70e+02	8.98e+02	0.97	yes	1.77e+03		n	n
2	38:30	3.63e+01	4.10e+01	0.88	yes	7.74e+01	1,2,3,4,7,8,9-HpCDF	y	n

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Peak List Summary

CLIENT ID.
SL0177

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 19 File: P616387 Sample:1 Injection:1 Function:4

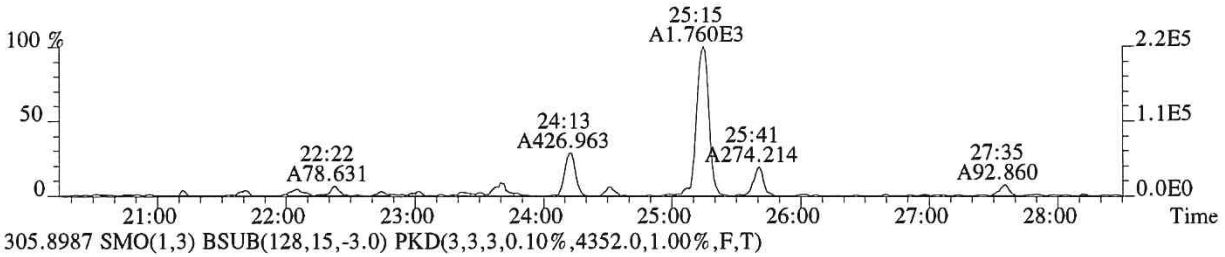
Acquired: 8-JAN-19 21:10:18 Processed: 9-JAN-19 08:58:21

Mass: 423.7770 425.7740 Tot Response: 1.14e+04 RRF: 1.112

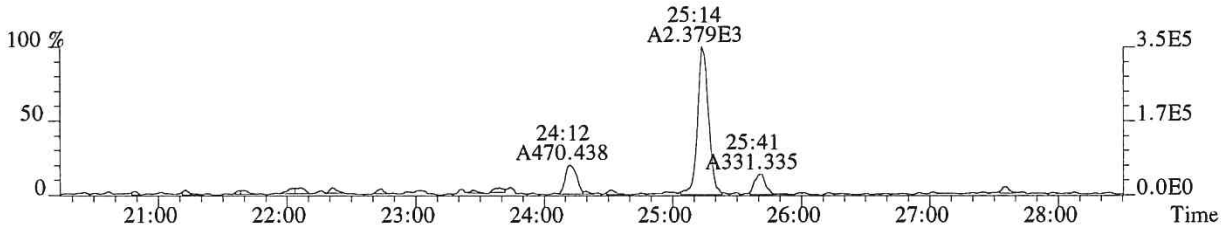
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:23	3.69e+03	3.61e+03	1.02	yes	7.31e+03		n	n
2	38:04	2.07e+03	2.01e+03	1.03	yes	4.08e+03	1,2,3,4,6,7,8-HpCDD	n	n

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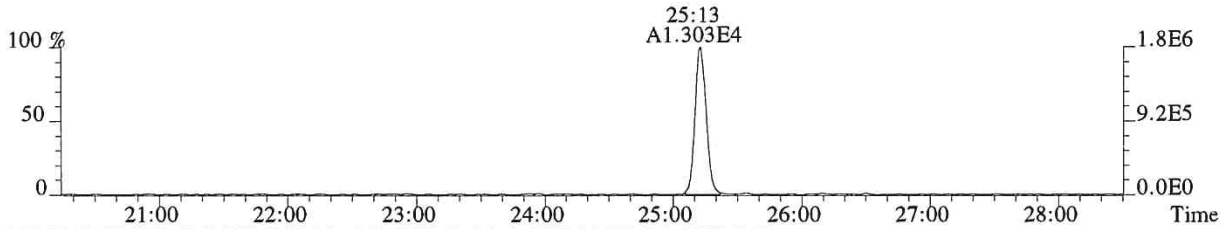
File:P616387 #1-587 Acq: 8-JAN-2019 21:10:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801038-009
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1304.0,1.00%,F,T)



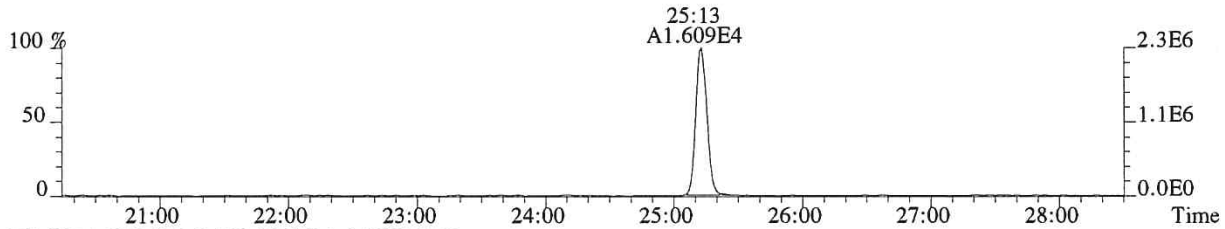
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4352.0,1.00%,F,T)



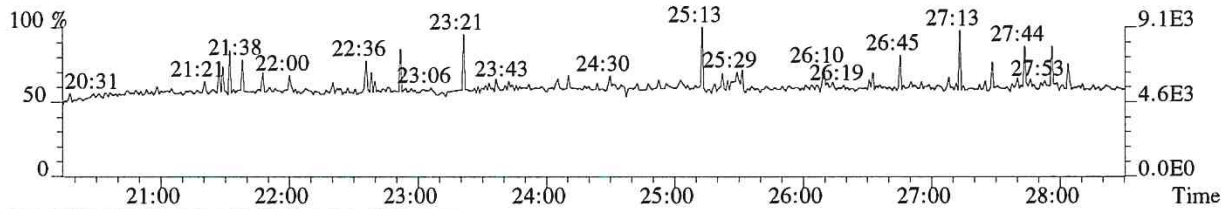
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11720.0,1.00%,F,T)



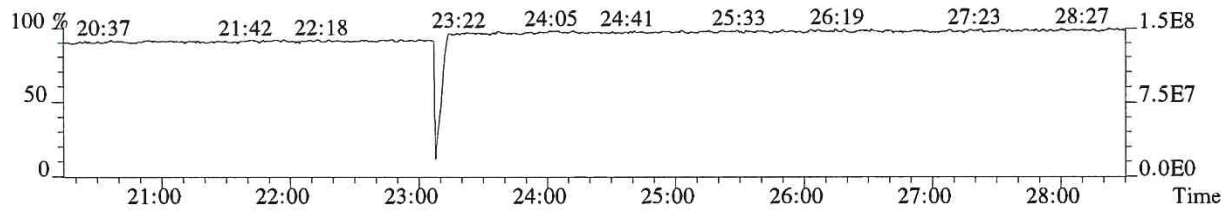
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12472.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

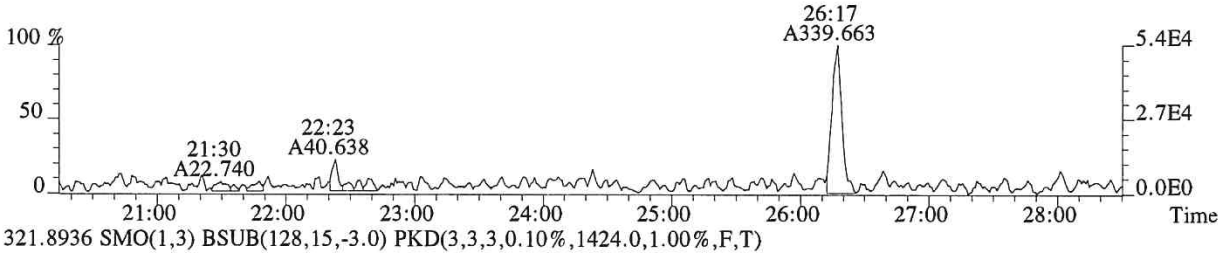


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

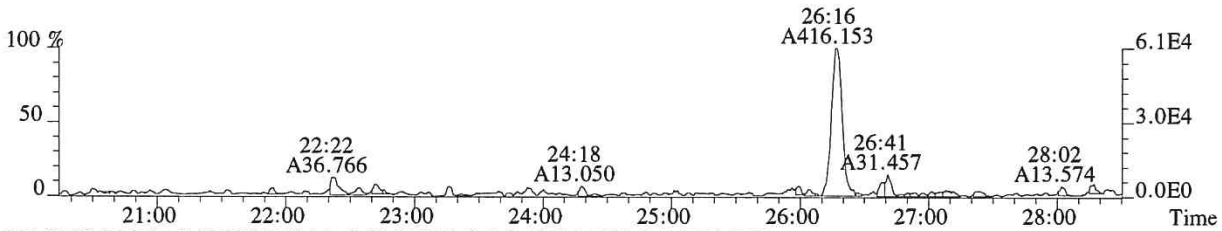


017246

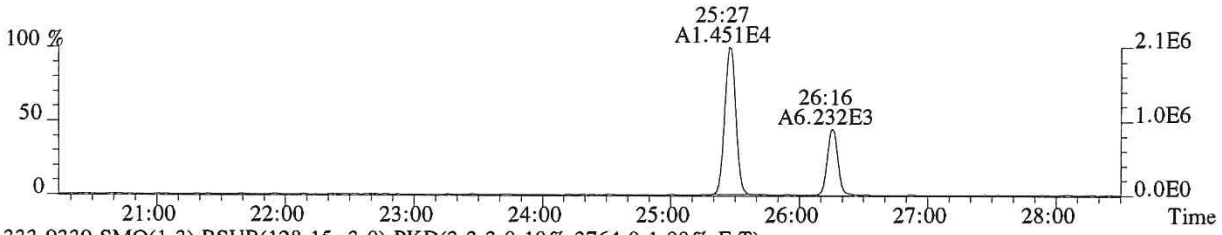
File:P616387 #1-587 Acq: 8-JAN-2019 21:10:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801038-009
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3680.0,1.00%,F,T)



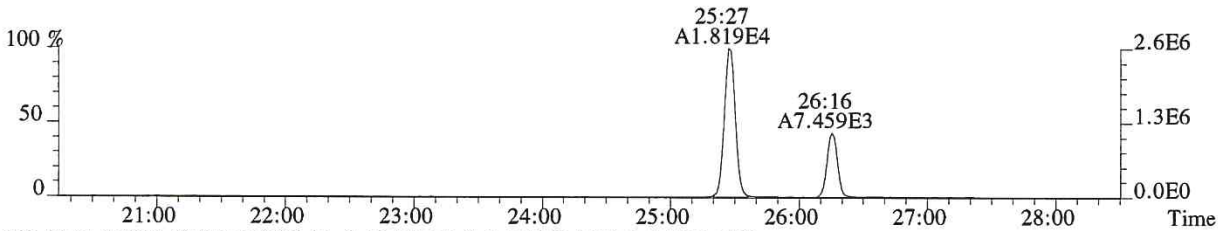
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1424.0,1.00%,F,T)



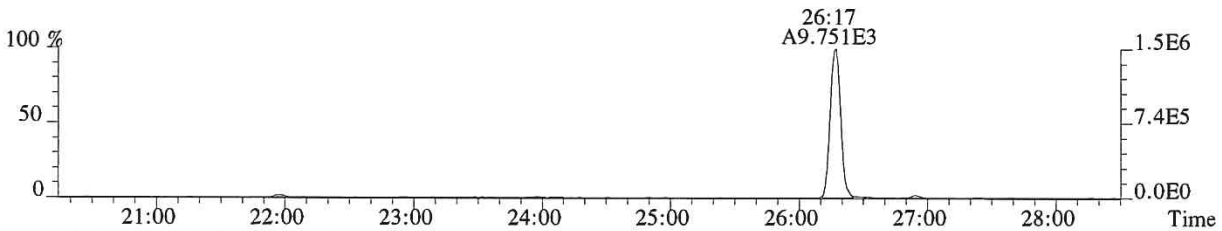
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11908.0,1.00%,F,T)



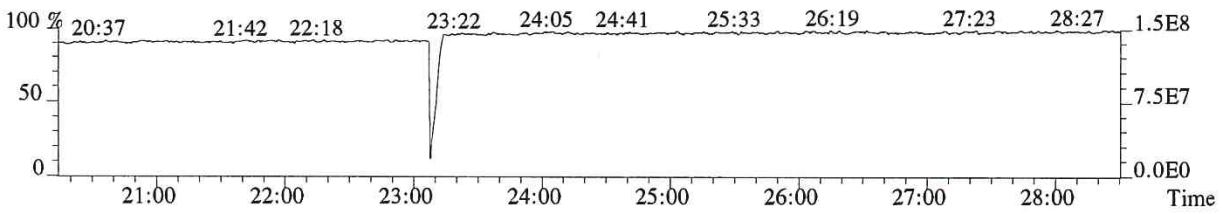
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3764.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2100.0,1.00%,F,T)

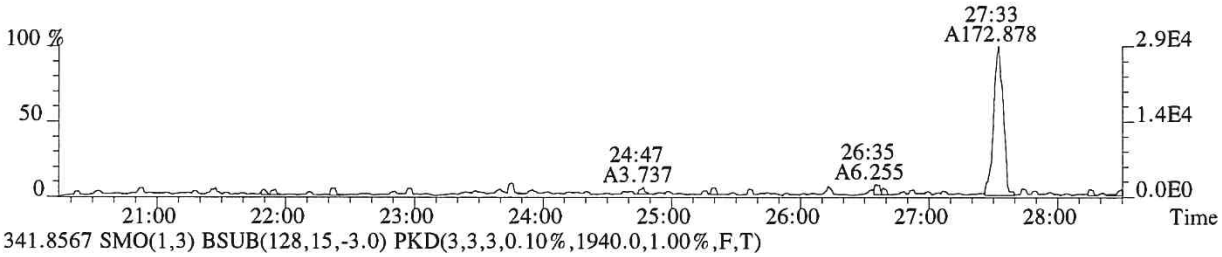


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

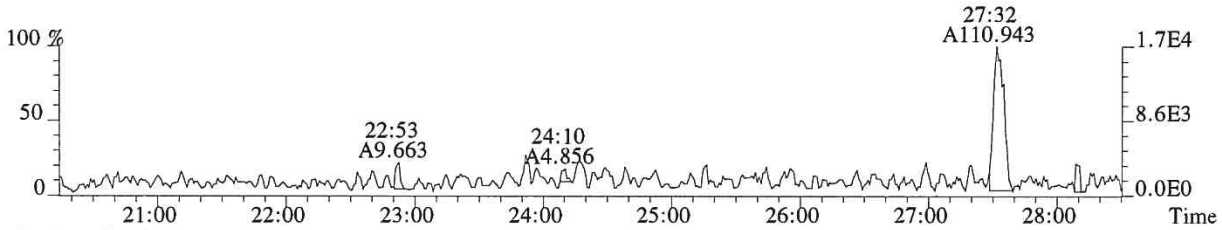


017247

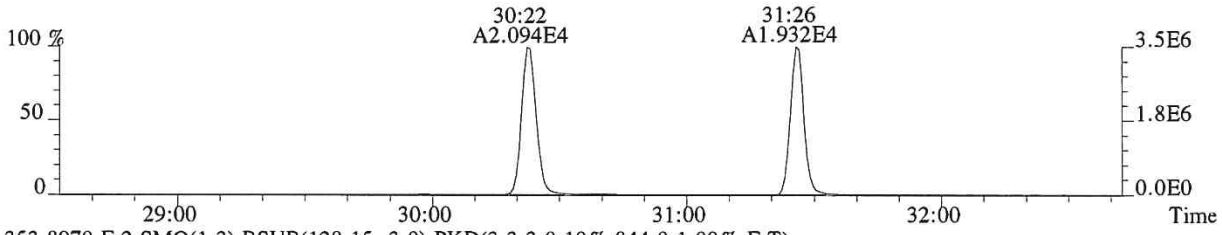
File:P616387 #1-587 Acq: 8-JAN-2019 21:10:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801038-009
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,728.0,1.00%,F,T)



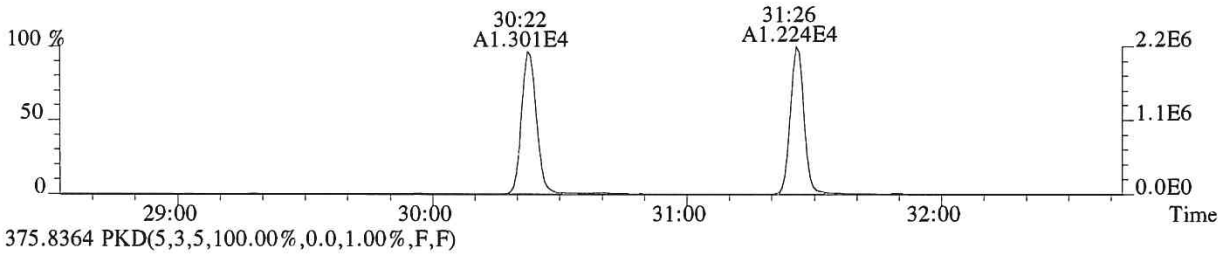
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1940.0,1.00%,F,T)



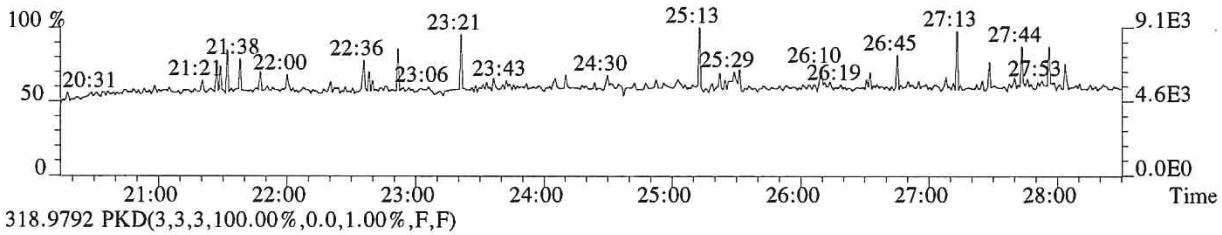
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,296.0,1.00%,F,T)



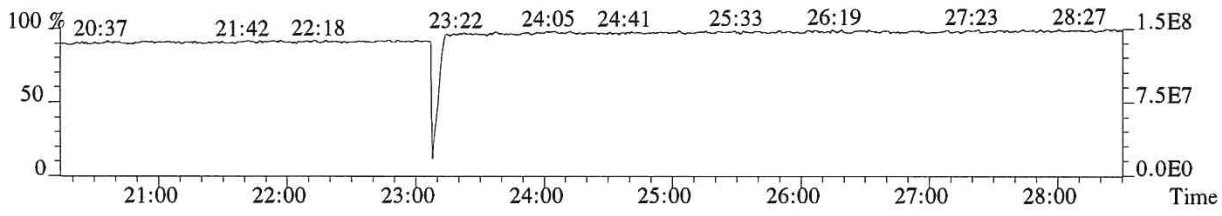
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,844.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

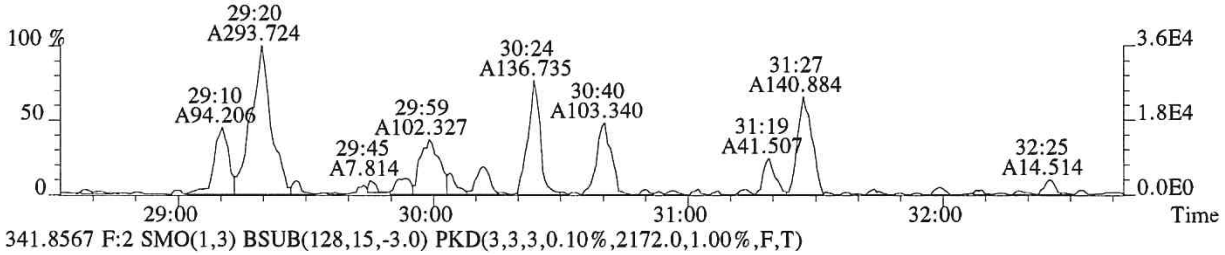


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

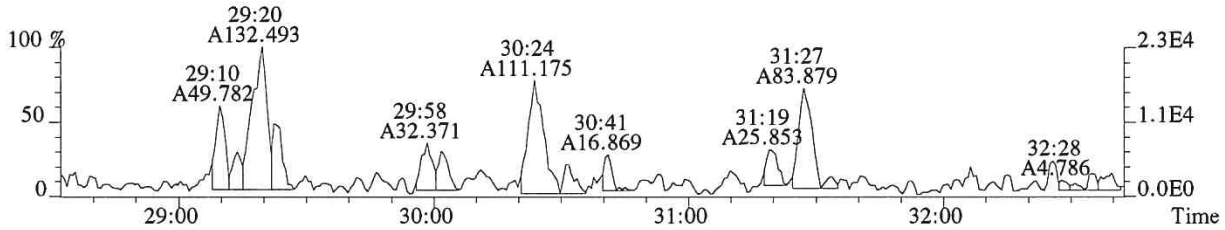


017248

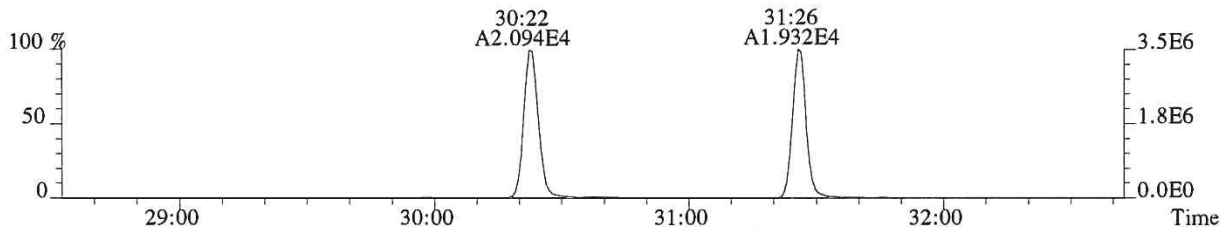
File:P616387 #1-376 Acq: 8-JAN-2019 21:10:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801038-009
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,484.0,1.00%,F,T)



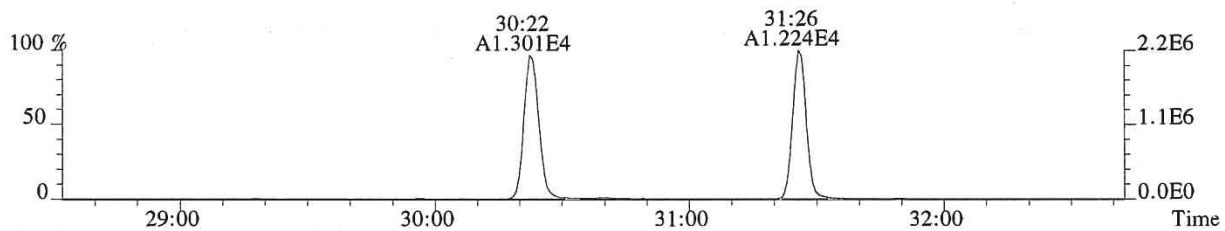
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2172.0,1.00%,F,T)



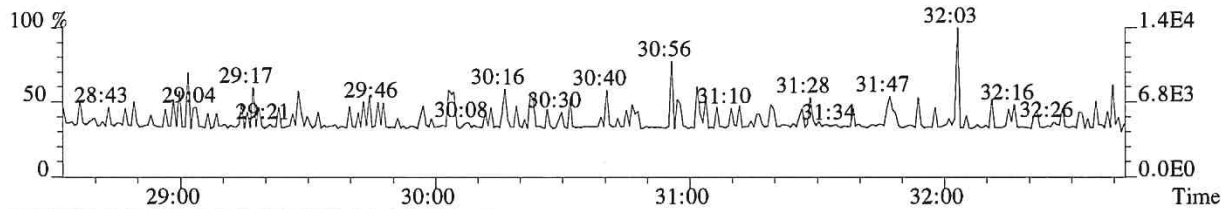
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,296.0,1.00%,F,T)



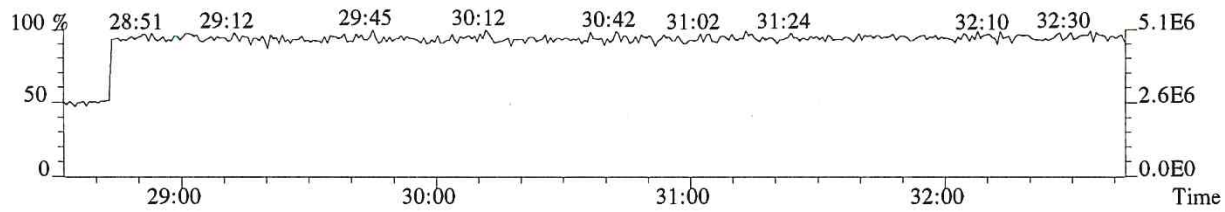
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,844.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

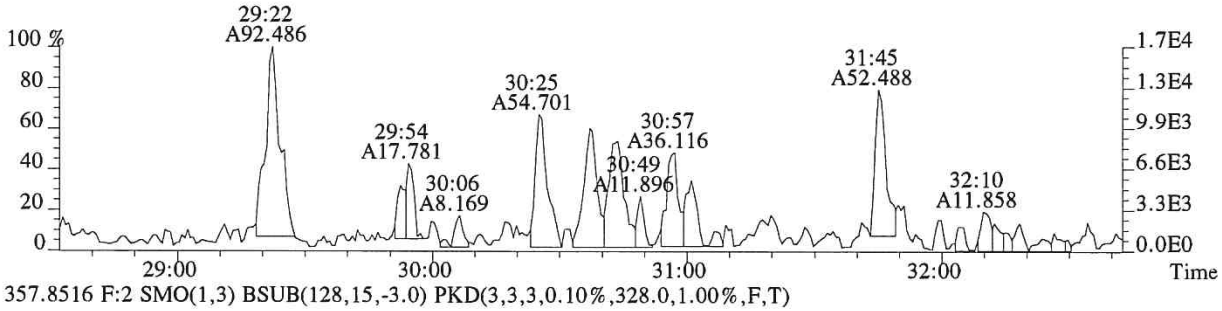


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

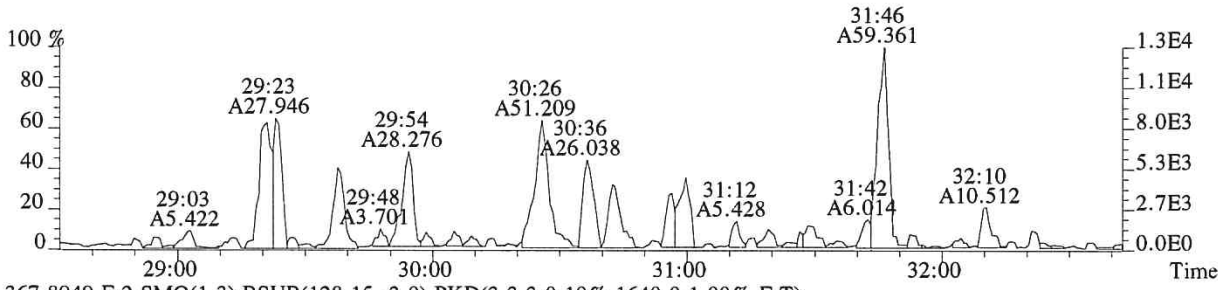


017249

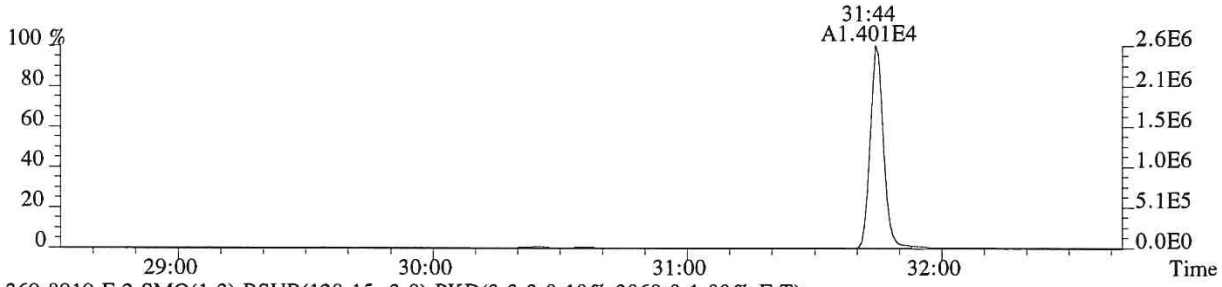
File:P616387 #1-376 Acq: 8-JAN-2019 21:10:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801038-009
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1120.0,1.00%,F,T)



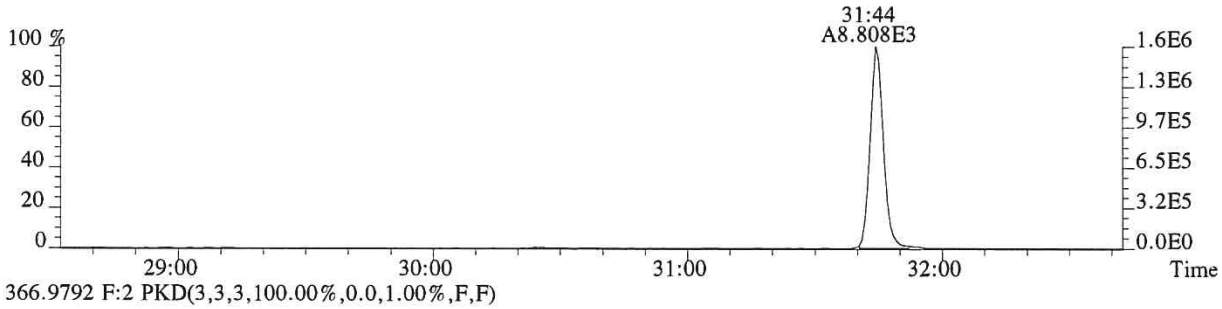
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,328.0,1.00%,F,T)



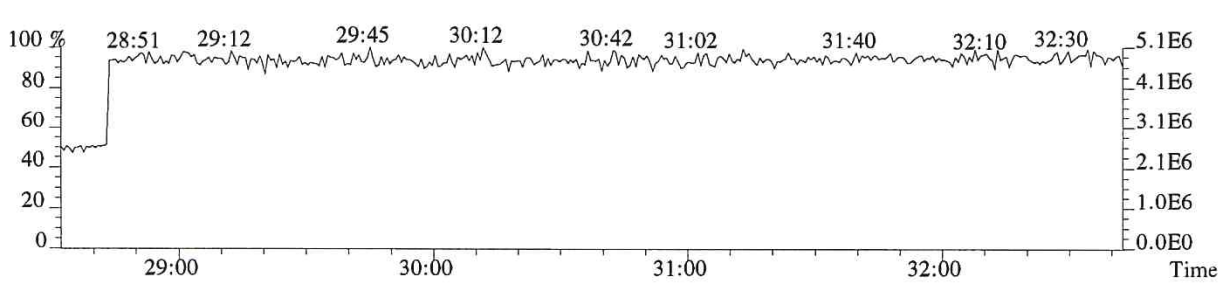
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1640.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2068.0,1.00%,F,T)

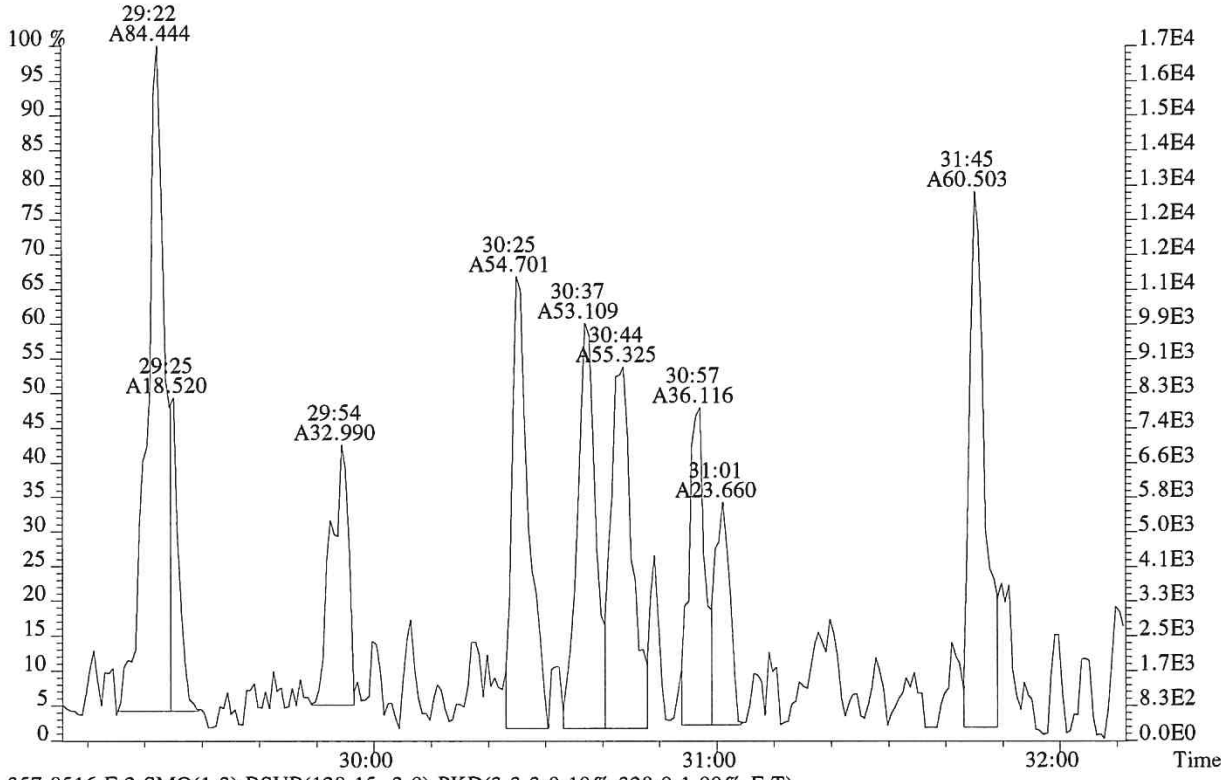


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

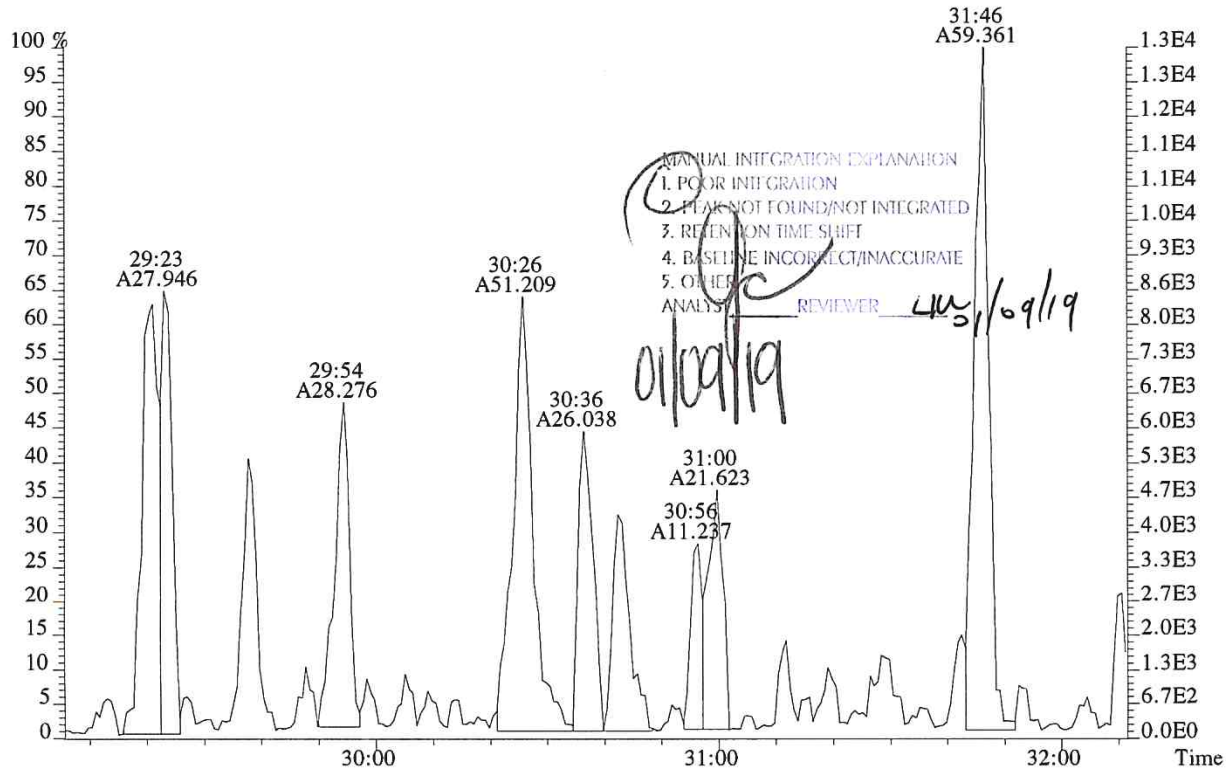


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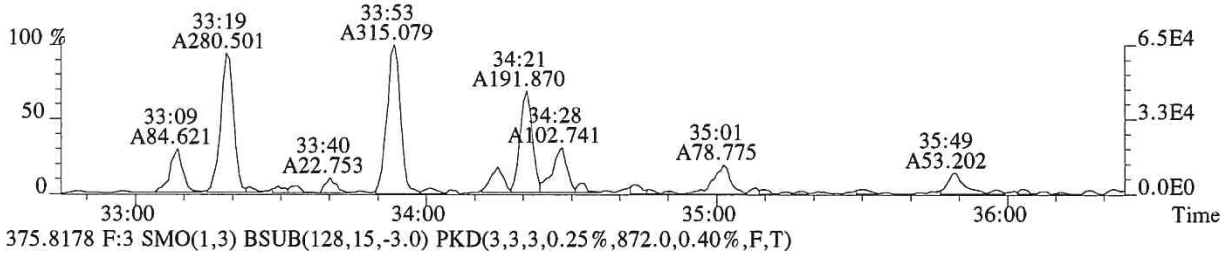
File:P616387 #1-376 Acq: 8-JAN-2019 21:10:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801038-009
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1120.0,1.00%,F,T)



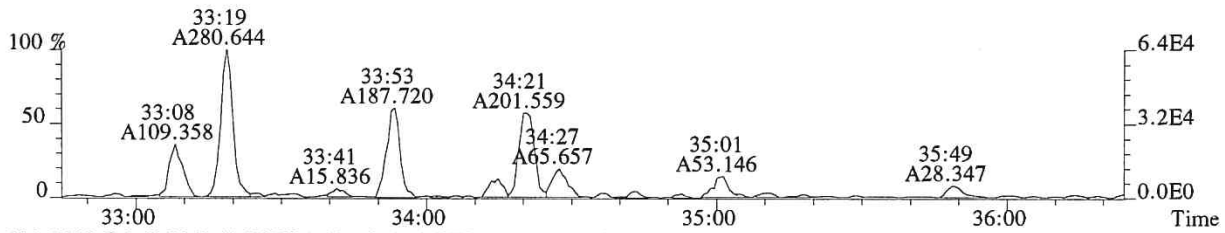
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,328.0,1.00%,F,T)



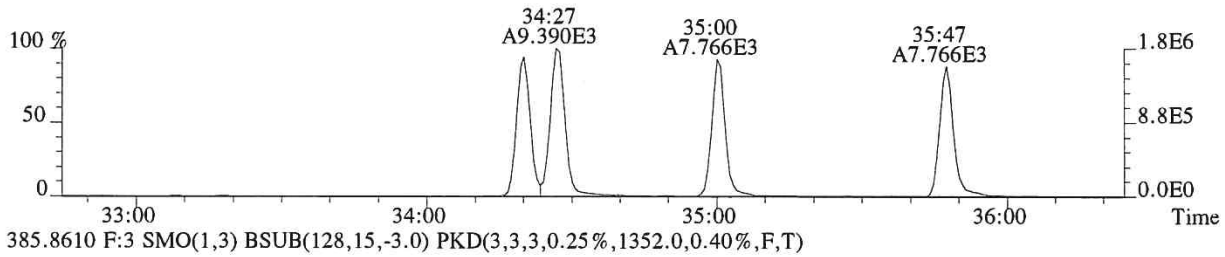
File:P616387 #1-330 Acq: 8-JAN-2019 21:10:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801038-009
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,972.0,0.40%,F,T)



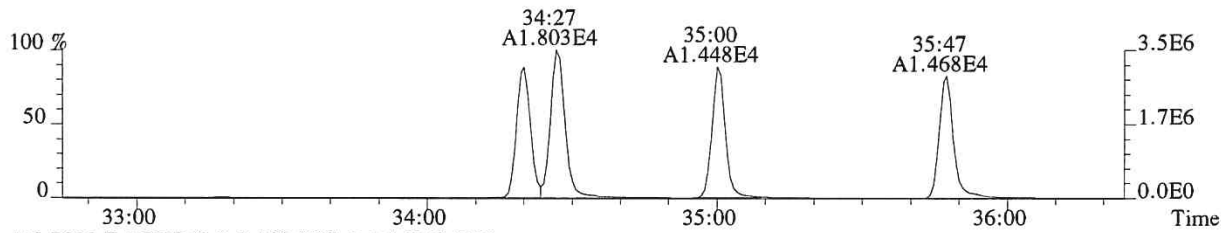
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,872.0,0.40%,F,T)



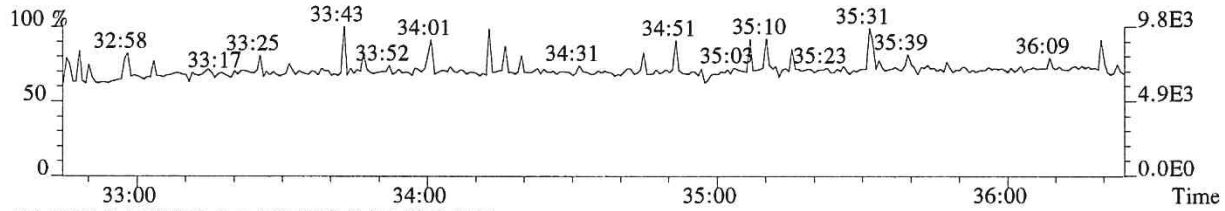
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,384.0,0.40%,F,T)



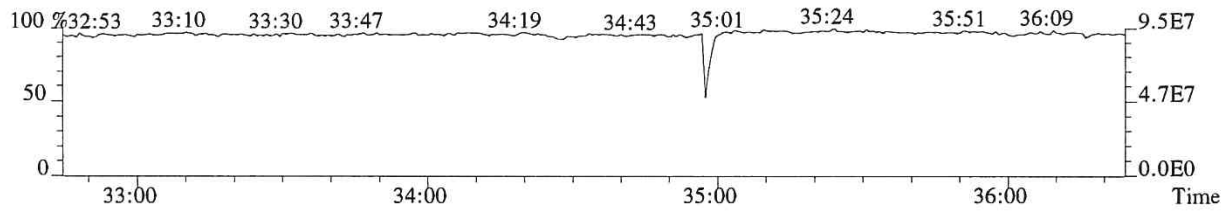
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1352.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

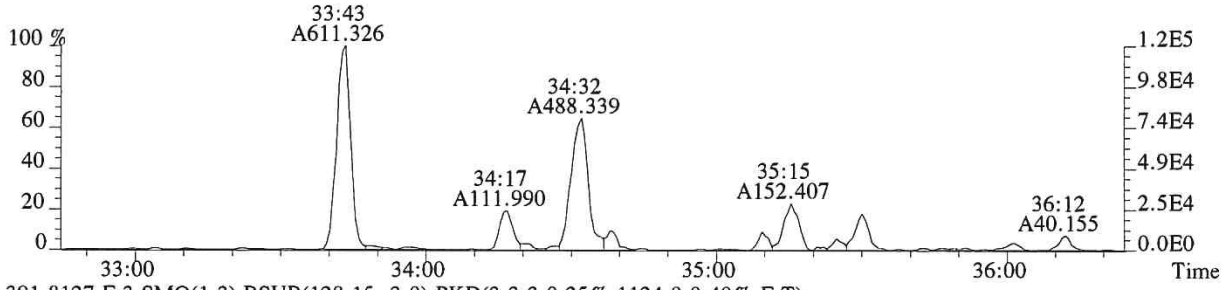


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

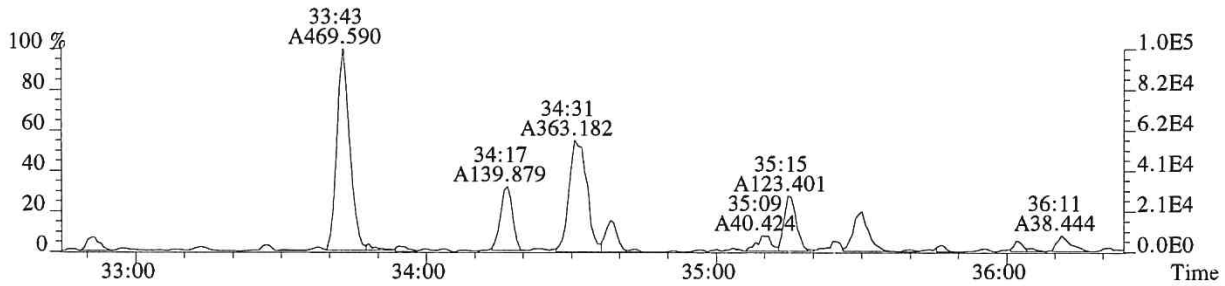


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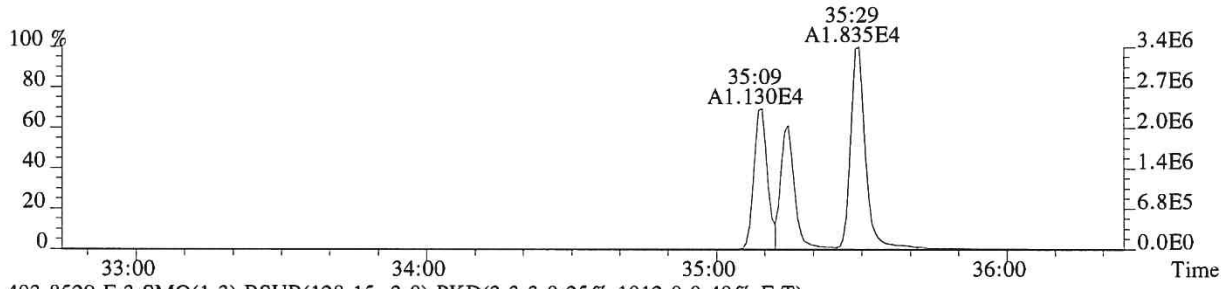
File:P616387 #1-330 Acq: 8-JAN-2019 21:10:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801038-009
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,384.0,0.40%,F,T)



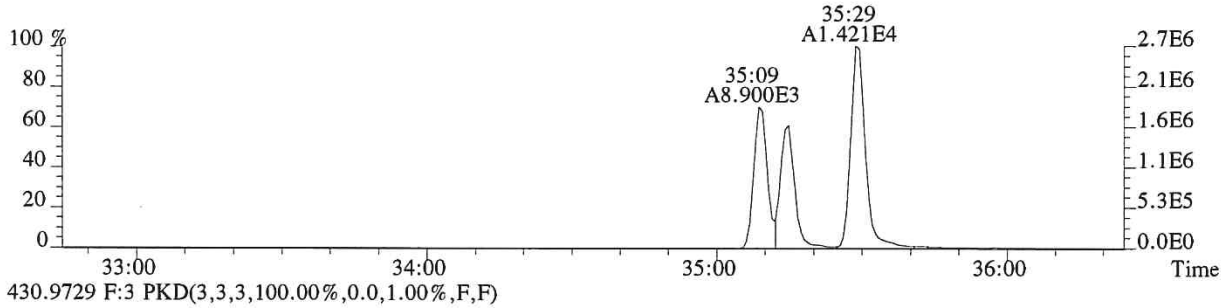
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1124.0,0.40%,F,T)



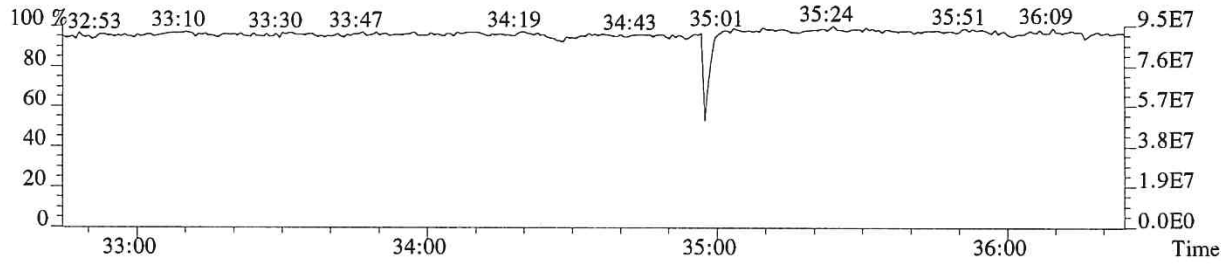
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1492.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1012.0,0.40%,F,T)

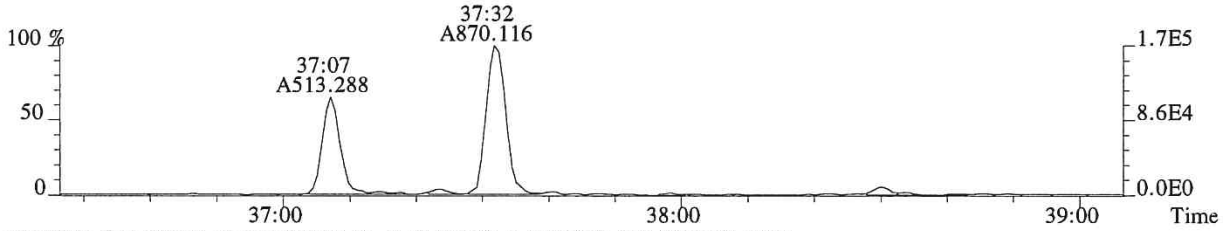


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

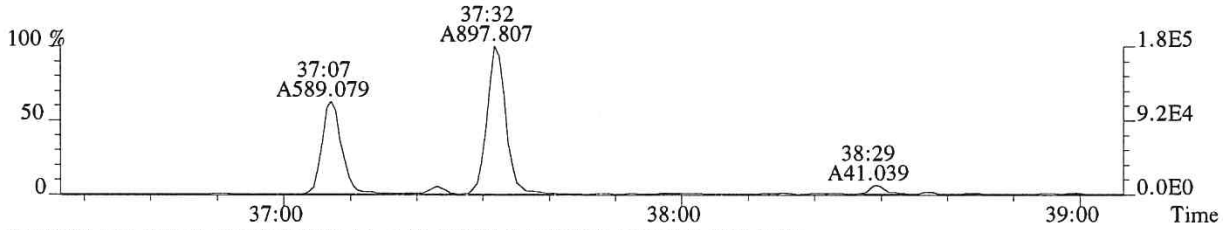


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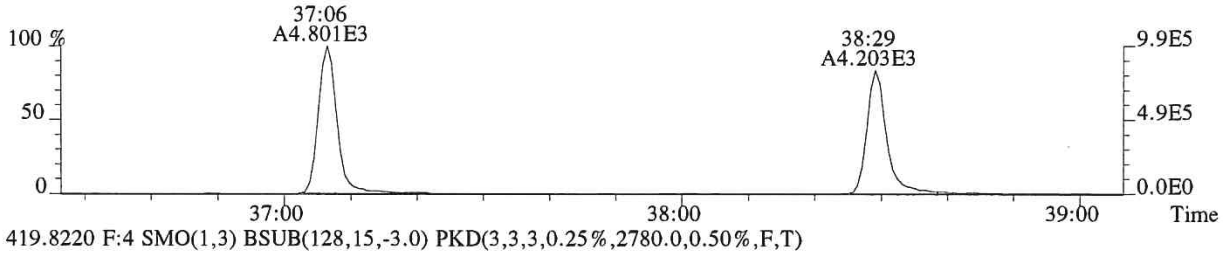
File:P616387 #1-241 Acq: 8-JAN-2019 21:10:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801038-009
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1584.0,0.50%,F,T)



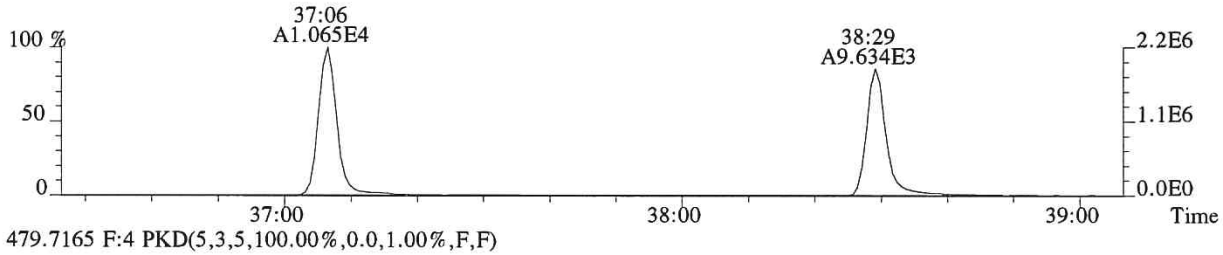
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,872.0,0.50%,F,T)



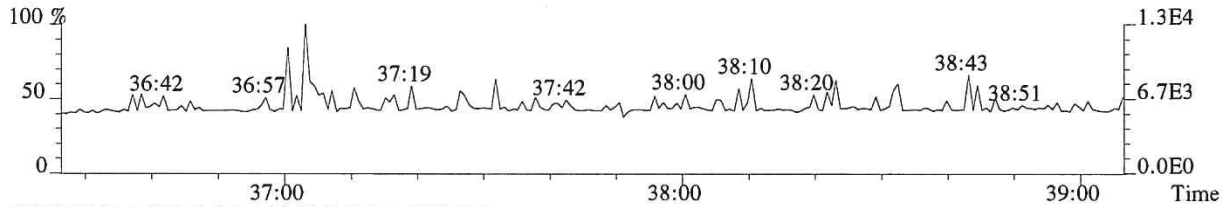
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1216.0,0.50%,F,T)



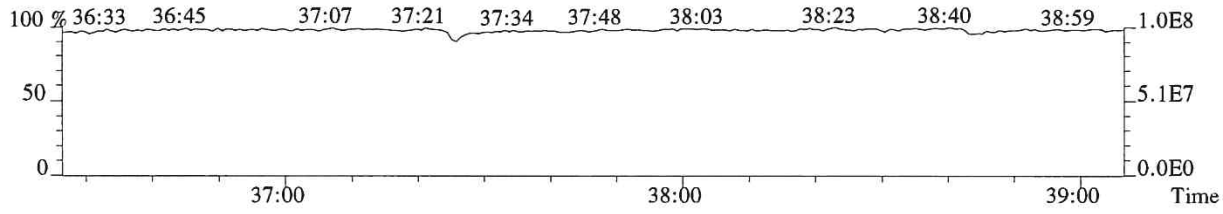
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2780.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

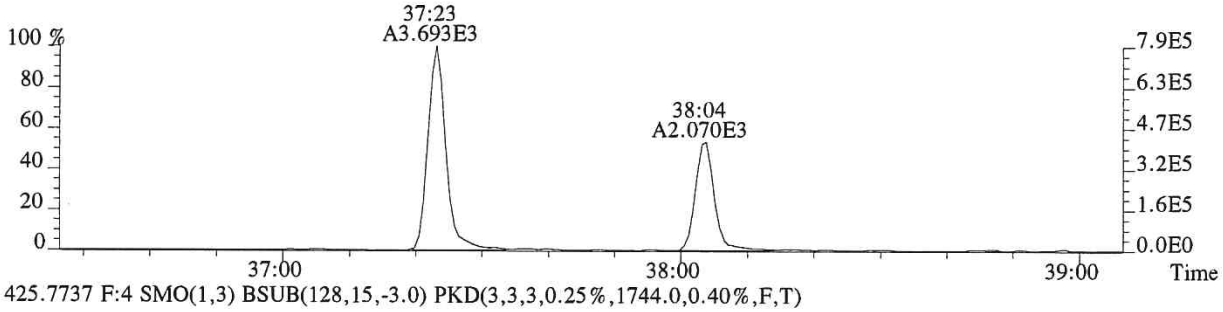


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

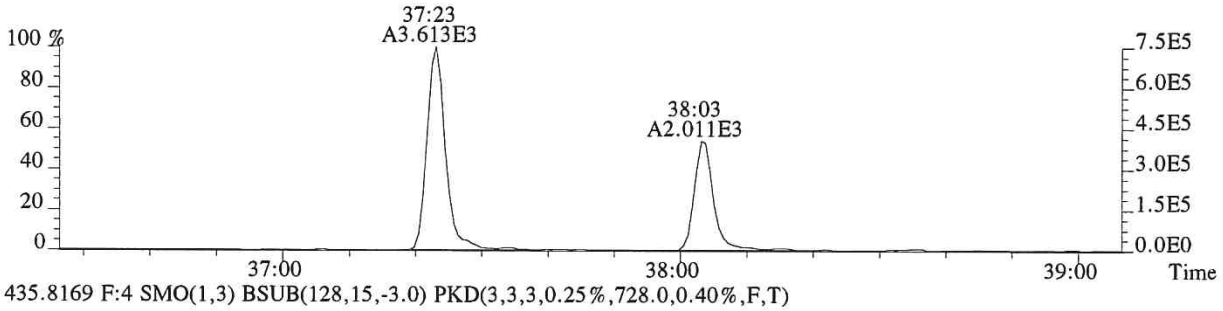


017254

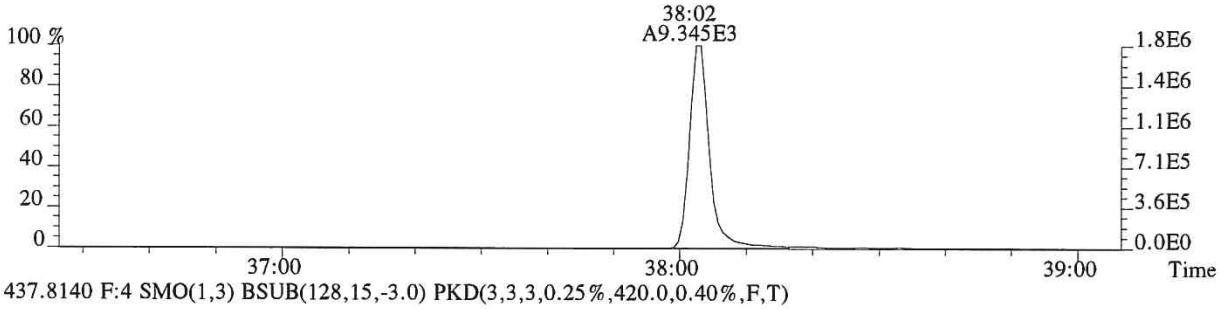
File:P616387 #1-241 Acq: 8-JAN-2019 21:10:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801038-009
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2700.0,0.40%,F,T)



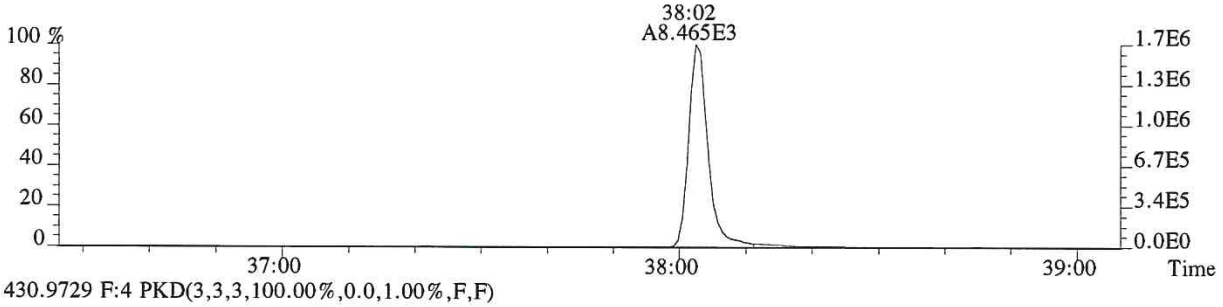
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1744.0,0.40%,F,T)



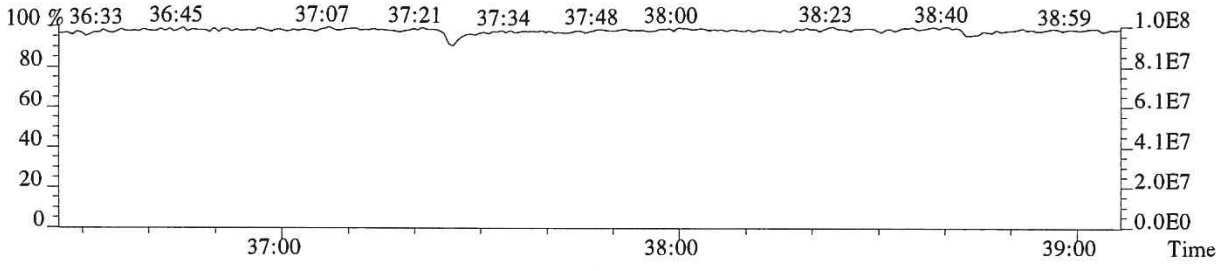
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,728.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,420.0,0.40%,F,T)

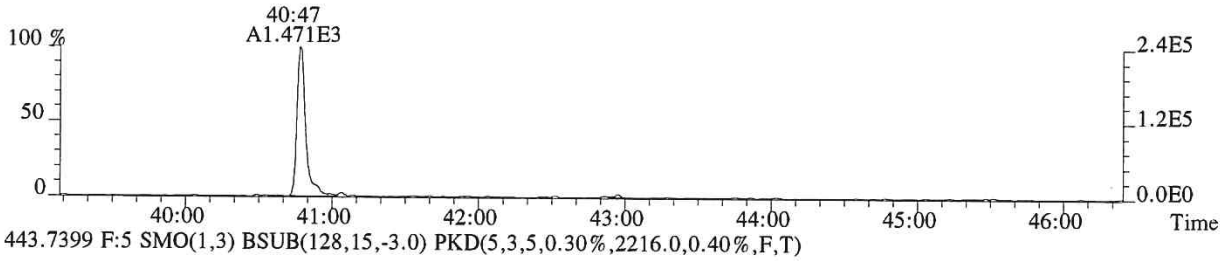


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

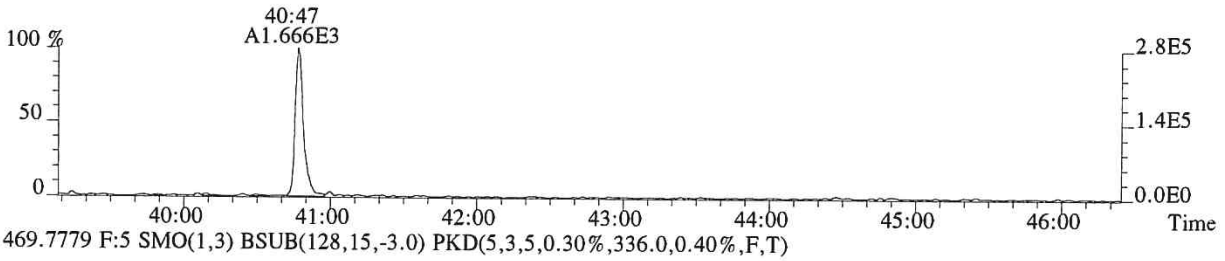


017255

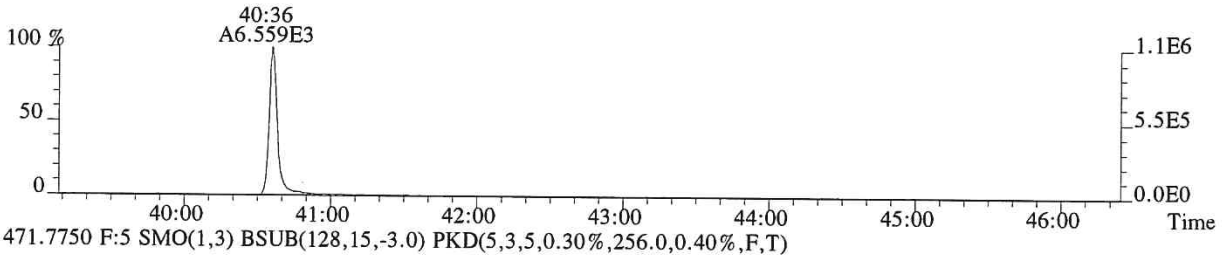
File:P616387 #1-654 Acq: 8-JAN-2019 21:10:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801038-009
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,700.0,0.40%,F,T)



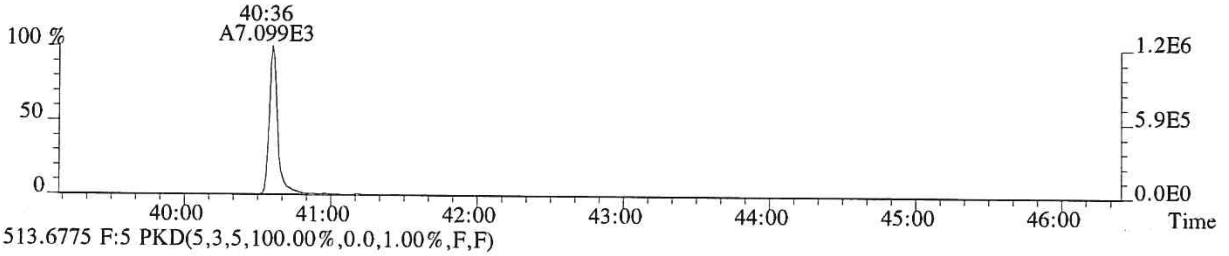
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2216.0,0.40%,F,T)



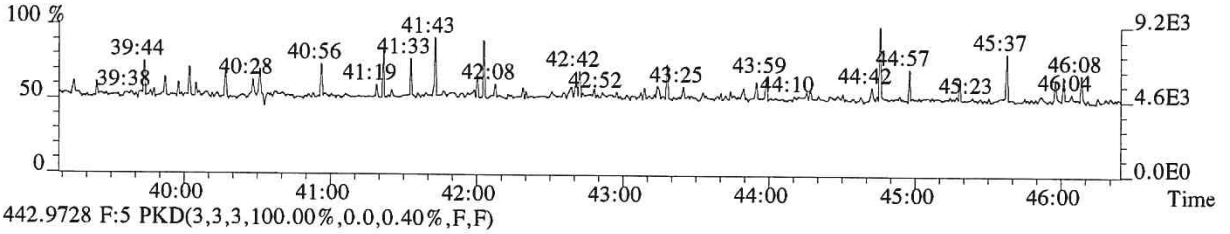
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,336.0,0.40%,F,T)



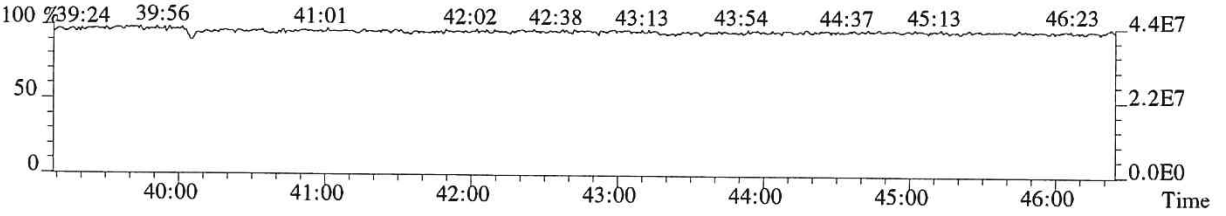
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,256.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

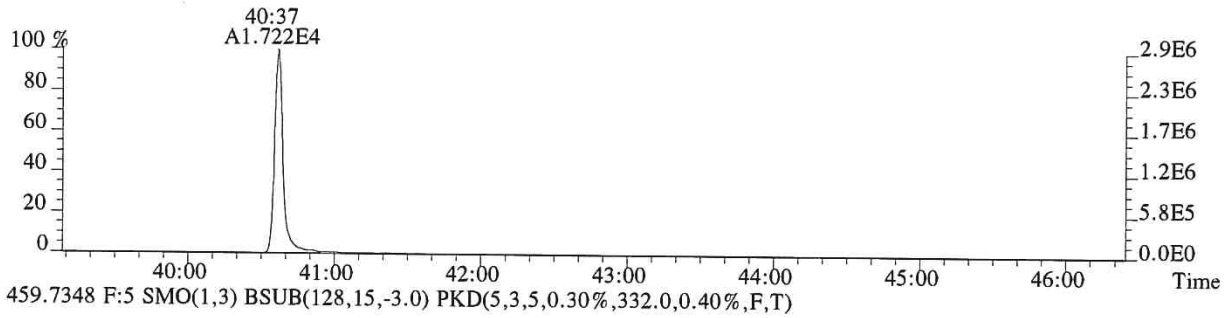


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

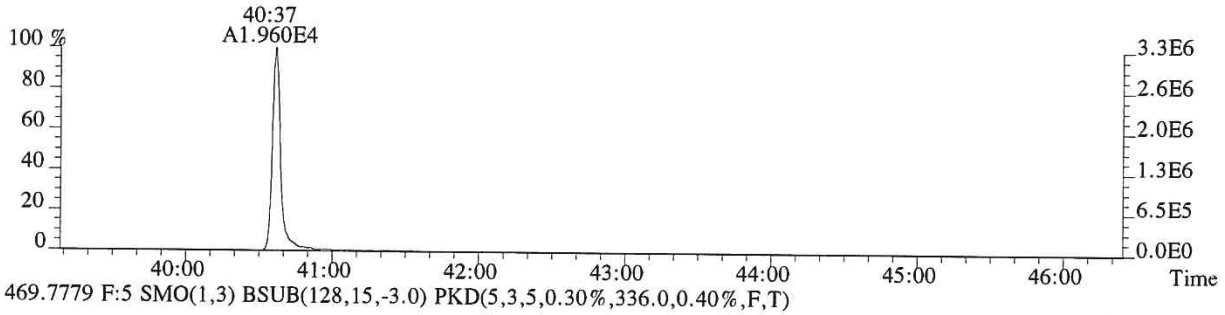


017256

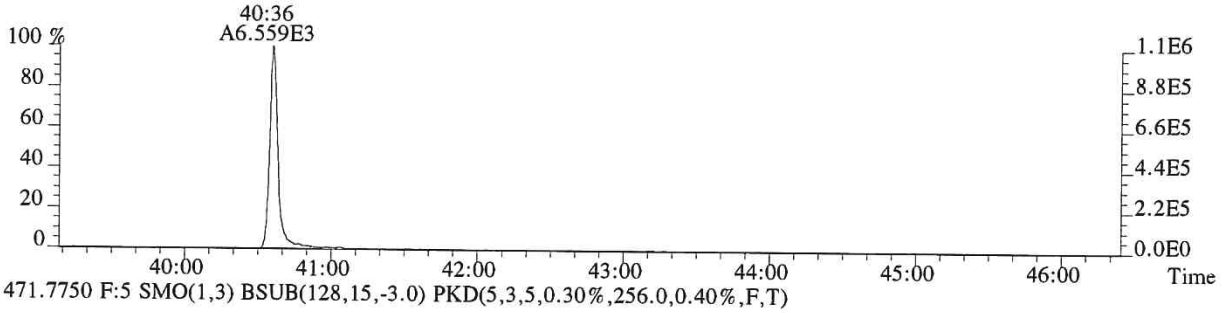
File:P616387 #1-654 Acq: 8-JAN-2019 21:10:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801038-009
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,404.0,0.40%,F,T)



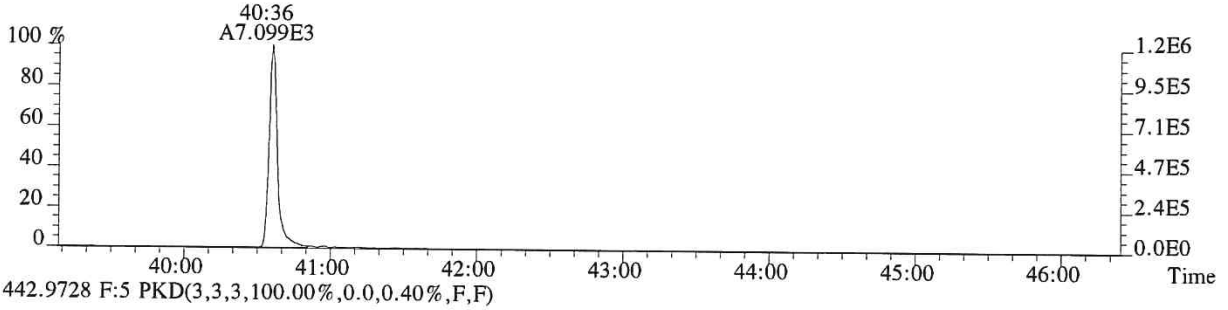
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,332.0,0.40%,F,T)



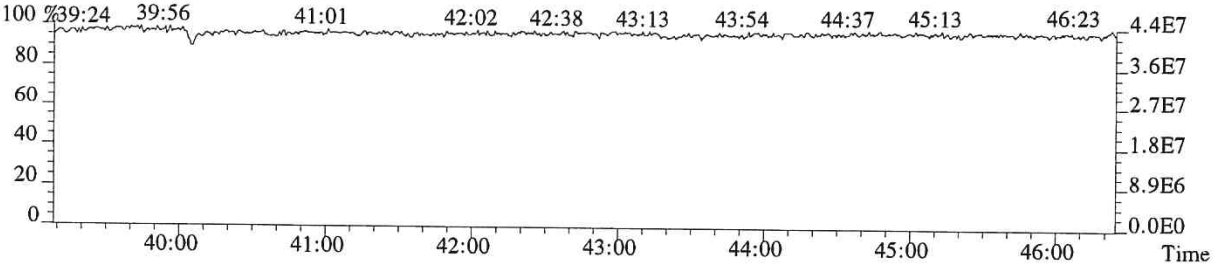
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,336.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,256.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017257

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0178

Run #12 Filename P519836 Samp: 1 Inj: 1 Acquired: 8-JAN-19 14:15:10
Processed: 9-JAN-19 11:56:30 Sample ID: E1801138-010

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:54	5.564e+03	7.369e+03	0.76	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:52	5.314e+02	3.146e+02	1.69	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:53	4.072e+02	3.022e+02	1.35	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:51	6.736e+02	5.645e+02	1.19	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:58	2.232e+02	2.257e+02	0.99	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:31	1.833e+02	1.680e+02	1.09	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:20	1.416e+02	1.034e+02	1.37	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:46	2.264e+03	2.229e+03	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	no	1.258
10	Unk	OCDF	41:59	6.513e+03	7.157e+03	0.91	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:53	1.690e+03	2.199e+03	0.77	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:12	1.792e+02	1.564e+02	1.15	no	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:41	1.129e+02	9.246e+01	1.22	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:47	4.619e+02	3.816e+02	1.21	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:01	3.484e+02	2.708e+02	1.29	yes	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:48	1.165e+04	1.081e+04	1.08	yes	no	1.025
17	Unk	OCDD	41:49	1.406e+05	1.566e+05	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:52	3.159e+04	4.018e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:51	5.069e+04	3.237e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:52	4.759e+04	3.007e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:50	1.955e+04	3.739e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:57	2.471e+04	4.811e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:31	2.102e+04	4.175e+04	0.50	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:19	2.027e+04	3.987e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:46	1.532e+04	3.401e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:15	1.376e+04	3.186e+04	0.43	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:52	1.531e+04	1.900e+04	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:12	3.609e+04	2.264e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:41	2.752e+04	2.138e+04	1.29	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:46	3.243e+04	2.514e+04	1.29	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:47	3.201e+04	2.974e+04	1.08	yes	no	0.858
32	IS	13C-OCDD	41:48	2.772e+04	3.080e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:10	3.846e+04	4.829e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:01	5.232e+04	4.012e+04	1.30	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:53	2.425e+04				no	1.014

$$\text{OCDD} = \frac{(1.406e+05 + 1.566e+05) \times 4000\ \text{pg} \times 1}{(2.772e+04 + 3.080e+04) \times 10.445\ \text{g} \times 80.5 / 100 \times 1.118} = 2161\ \text{ng/kg}$$

4u 01/10/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0178

Run #12 Filename P519836 Samp: 1 Inj: 1 Acquired: 8-JAN-19 14:15:10
Processed: 9-JAN-19 11:56:30 LAB. ID: E1801138-010

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	7.80e+05	1.39e+03	5.6e+02	9.99e+05	2.27e+03	4.4e+02
2	1,2,3,7,8-PeCDF	7.84e+04	1.52e+03	5.1e+01	4.39e+04	2.76e+03	1.6e+01
3	2,3,4,7,8-PeCDF	5.20e+04	1.52e+03	3.4e+01	3.86e+04	2.76e+03	1.4e+01
4	1,2,3,4,7,8-HxCDF	1.12e+05	3.00e+03	3.7e+01	9.50e+04	1.57e+03	6.1e+01
5	1,2,3,6,7,8-HxCDF	3.73e+04	3.00e+03	1.2e+01	3.00e+04	1.57e+03	1.9e+01
6	2,3,4,6,7,8-HxCDF	2.82e+04	3.00e+03	9.4e+00	2.95e+04	1.57e+03	1.9e+01
7	1,2,3,7,8,9-HxCDF	2.13e+04	3.00e+03	7.1e+00	1.33e+04	1.57e+03	8.5e+00
8	1,2,3,4,6,7,8-HpCDF	2.68e+05	3.37e+03	8.0e+01	2.55e+05	1.96e+03	1.3e+02
9	1,2,3,4,7,8,9-HpCDF	*	3.37e+03	*	*	1.96e+03	*
10	OCDF	3.12e+05	7.92e+02	3.9e+02	3.70e+05	1.44e+03	2.6e+02
11	2,3,7,8-TCDD	2.67e+05	2.97e+03	9.0e+01	3.62e+05	1.30e+03	2.8e+02
12	1,2,3,7,8-PeCDD	2.45e+04	1.64e+03	1.5e+01	2.03e+04	6.96e+02	2.9e+01
13	1,2,3,4,7,8-HxCDD	2.05e+04	1.20e+03	1.7e+01	2.07e+04	1.70e+03	1.2e+01
14	1,2,3,6,7,8-HxCDD	6.79e+04	1.20e+03	5.6e+01	5.96e+04	1.70e+03	3.5e+01
15	1,2,3,7,8,9-HxCDD	3.74e+04	1.20e+03	3.1e+01	3.90e+04	1.70e+03	2.3e+01
16	1,2,3,4,6,7,8-HpCDD	1.07e+06	7.08e+02	1.5e+03	1.01e+06	6.96e+02	1.5e+03
17	OCDD	6.86e+06	4.64e+02	1.5e+04	7.73e+06	6.40e+02	1.2e+04
18	13C-2,3,7,8-TCDF	4.57e+06	8.30e+03	5.5e+02	5.81e+06	6.14e+03	9.5e+02
19	13C-1,2,3,7,8-PeCDF	7.91e+06	1.29e+03	6.1e+03	5.05e+06	1.14e+03	4.4e+03
20	13C-2,3,4,7,8-PeCDF	7.88e+06	1.29e+03	6.1e+03	4.92e+06	1.14e+03	4.3e+03
21	13C-1,2,3,4,7,8-HxCDF	3.29e+06	1.11e+03	3.0e+03	6.19e+06	1.74e+03	3.6e+03
22	13C-1,2,3,6,7,8-HxCDF	3.46e+06	1.11e+03	3.1e+03	6.84e+06	1.74e+03	3.9e+03
23	13C-2,3,4,6,7,8-HxCDF	3.14e+06	1.11e+03	2.8e+03	6.31e+06	1.74e+03	3.6e+03
24	13C-1,2,3,7,8,9-HxCDF	2.71e+06	1.11e+03	2.4e+03	5.38e+06	1.74e+03	3.1e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.75e+06	2.51e+03	7.0e+02	3.82e+06	3.31e+03	1.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.18e+06	2.51e+03	4.7e+02	2.68e+06	3.31e+03	8.1e+02
27	13C-2,3,7,8-TCDD	2.36e+06	5.40e+03	4.4e+02	3.01e+06	3.33e+03	9.0e+02
28	13C-1,2,3,7,8-PeCDD	5.76e+06	1.16e+03	5.0e+03	3.62e+06	1.68e+03	2.2e+03
29	13C-1,2,3,4,7,8-HxCDD	4.60e+06	1.73e+03	2.7e+03	3.57e+06	7.68e+02	4.7e+03
30	13C-1,2,3,6,7,8-HxCDD	4.42e+06	1.73e+03	2.6e+03	3.49e+06	7.68e+02	4.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.83e+06	5.88e+02	4.8e+03	2.74e+06	7.20e+02	3.8e+03
32	13C-OCDD	1.38e+06	1.02e+03	1.4e+03	1.52e+06	5.92e+02	2.6e+03
33	13C-1,2,3,4-TCDD	5.99e+06	5.40e+03	1.1e+03	7.42e+06	3.33e+03	2.2e+03
34	13C-1,2,3,7,8,9-HxCDD	6.91e+06	1.73e+03	4.0e+03	5.37e+06	7.68e+02	7.0e+03
35	37Cl-2,3,7,8-TCDD	3.83e+06	1.69e+03	2.3e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0178

Entry: 36 Totals Name: Total Tetra-Furans

Run: 12 File: P519836 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 14:15:10 Processed: 9-JAN-19 11:56:30

Mass: 303.9020 305.8990 Tot Response: 2.26e+04 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:49	5.13e+01	6.39e+01	0.80	yes	1.15e+02		n	n
2	22:16	1.53e+02	1.80e+02	0.85	yes	3.33e+02		n	n
3	22:43	2.82e+02	3.36e+02	0.84	yes	6.18e+02		n	n
4	23:01	3.58e+02	5.35e+02	0.67	yes	8.93e+02		n	n
5	23:38	2.25e+02	3.28e+02	0.69	yes	5.53e+02		n	n
6	24:17	2.71e+02	3.34e+02	0.81	yes	6.05e+02		n	n
7	24:24	1.86e+02	2.44e+02	0.76	yes	4.30e+02		n	n
8	24:54	1.40e+03	1.91e+03	0.73	yes	3.31e+03		n	n
9	25:12	1.47e+02	2.21e+02	0.66	yes	3.67e+02		n	n
10	25:54	5.56e+03	7.37e+03	0.76	yes	1.29e+04	2,3,7,8-TCDF	n	n
11	26:19	7.55e+02	9.77e+02	0.77	yes	1.73e+03		n	n
12	28:06	3.29e+02	4.01e+02	0.82	yes	7.30e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0178

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 12 File: P519836 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 14:15:10 Processed: 9-JAN-19 11:56:30

Mass: 319.8970 321.8940 Tot Response: 4.32e+03 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:50	6.53e+00	9.78e+00	0.67	yes	1.63e+01		n	n
2	26:53	1.69e+03	2.20e+03	0.77	yes	3.89e+03	2,3,7,8-TCDD	n	n
3	27:15	1.92e+02	2.21e+02	0.87	yes	4.13e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0178

Entry: 38 Totals Name: Total Penta-Furans1

Run: 12 File: P519836 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 14:15:10 Processed: 9-JAN-19 11:56:30

Mass: 339.8600 341.8570 Tot Response: 8.91e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:08	5.69e+02	3.21e+02 1.77	yes	8.91e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0178

Entry: 39 Totals Name: Total Penta-Furans2

Run: 12 File: P519836 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 14:15:10 Processed: 9-JAN-19 11:56:30

Mass: 339.8600 341.8570 Tot Response: 3.32e+03 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:50	6.44e+02	4.24e+02	1.52	yes	1.07e+03		n	y
2	30:26	1.57e+02	1.10e+02	1.43	yes	2.68e+02		n	y
3	30:40	7.04e+01	5.12e+01	1.37	yes	1.22e+02		n	n
4	30:52	5.31e+02	3.15e+02	1.69	yes	8.46e+02	1,2,3,7,8-PeCDF	n	n
5	31:08	1.78e+02	1.26e+02	1.41	yes	3.04e+02		n	n
6	31:53	4.07e+02	3.02e+02	1.35	yes	7.09e+02	2,3,4,7,8-PeCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0178

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 12 File: P519836 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 14:15:10 Processed: 9-JAN-19 11:56:30

Mass: 355.8550 357.8520 Tot Response: 9.02e+02 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:52	2.06e+02	1.38e+02	1.49	yes	3.44e+02		y	n
2	30:54	9.01e+01	5.71e+01	1.58	yes	1.47e+02		n	n
3	31:05	9.79e+01	6.67e+01	1.47	yes	1.65e+02		n	n
4	31:10	6.59e+01	4.60e+01	1.43	yes	1.12e+02		n	n
5	31:46	3.78e+01	2.15e+01	1.76	yes	5.93e+01		n	n
6	32:37	4.28e+01	3.17e+01	1.35	yes	7.45e+01		y	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0178

Entry: 41 Totals Name: Total Hexa-Furans

Run: 12 File: P519836 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 14:15:10 Processed: 9-JAN-19 11:56:30

Mass: 373.8210 375.8180 Tot Response: 6.26e+03 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:38	2.77e+02	2.19e+02	1.26	yes	4.97e+02		n	n
2	33:48	8.78e+02	8.02e+02	1.10	yes	1.68e+03		n	n
3	34:23	1.17e+03	1.08e+03	1.09	yes	2.25e+03		n	n
4	34:51	6.74e+02	5.64e+02	1.19	yes	1.24e+03	1,2,3,4,7,8-HxCDF	n	n
5	35:31	1.83e+02	1.68e+02	1.09	yes	3.51e+02	2,3,4,6,7,8-HxCDF	n	n
6	36:20	1.42e+02	1.03e+02	1.37	yes	2.45e+02	1,2,3,7,8,9-HxCDF	n	n

ALS ENVIRONMENTAL
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Peak List Summary

CLIENT ID.
SL0178

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 12 File: P519836 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 14:15:10 Processed: 9-JAN-19 11:56:30

Mass: 389.8160 391.8130 Tot Response: 8.85e+03 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:13	2.11e+03	1.64e+03	1.29	yes	3.76e+03		n	n
2	35:03	1.59e+03	1.27e+03	1.25	yes	2.86e+03		y	n
3	35:08	2.11e+02	1.80e+02	1.17	yes	3.92e+02		y	n
4	35:41	1.13e+02	9.25e+01	1.22	yes	2.05e+02	1,2,3,4,7,8-HxCDD	n	n
5	35:47	4.62e+02	3.82e+02	1.21	yes	8.43e+02	1,2,3,6,7,8-HxCDD	n	n
6	35:57	9.82e+01	7.73e+01	1.27	yes	1.75e+02		y	n
7	36:01	3.48e+02	2.71e+02	1.29	yes	6.19e+02	1,2,3,7,8,9-HxCDD	y	n

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Peak List Summary

CLIENT ID.
SL0178

Entry: 43 Totals Name: Total Hepta-Furans

Run: 12 File: P519836 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 14:15:10 Processed: 9-JAN-19 11:56:30

Mass: 407.7820 409.7790 Tot Response: 1.40e+04 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:46	2.26e+03	2.23e+03	1.02	yes	4.49e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	38:12	4.89e+03	4.66e+03	1.05	yes	9.54e+03		n	n

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Peak List Summary

CLIENT ID.
SL0178

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 12 File: P519836 Sample:1 Injection:1 Function:4

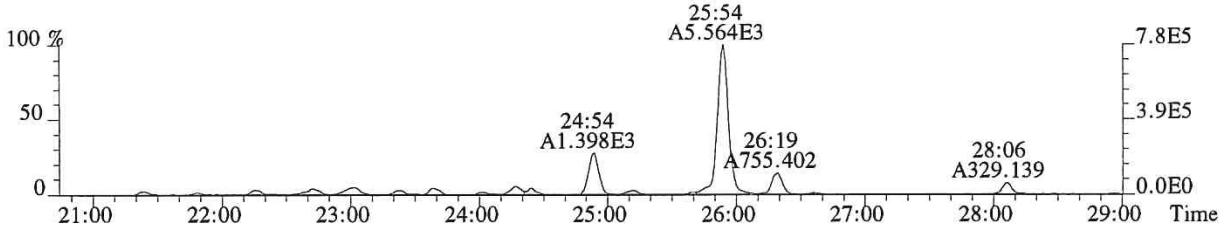
Acquired: 8-JAN-19 14:15:10 Processed: 9-JAN-19 11:56:30

Mass: 423.7770 425.7740 Tot Response: 6.35e+04 RRF: 1.025

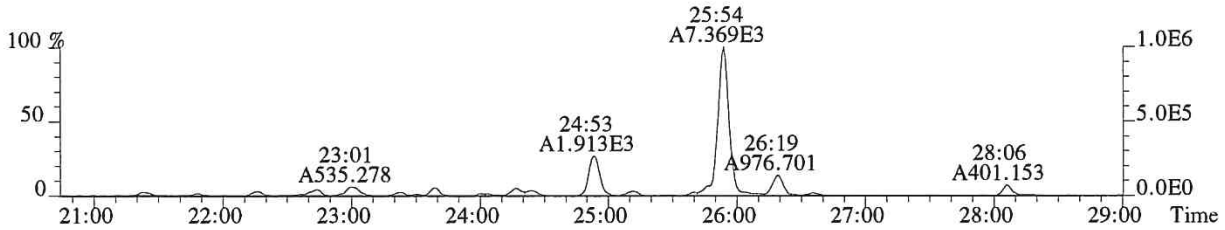
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:04	2.10e+04	2.00e+04 1.05	yes	4.10e+04		n	n
2	38:48	1.16e+04	1.08e+04 1.08	yes	2.25e+04	1,2,3,4,6,7,8-HpCDD	n	n

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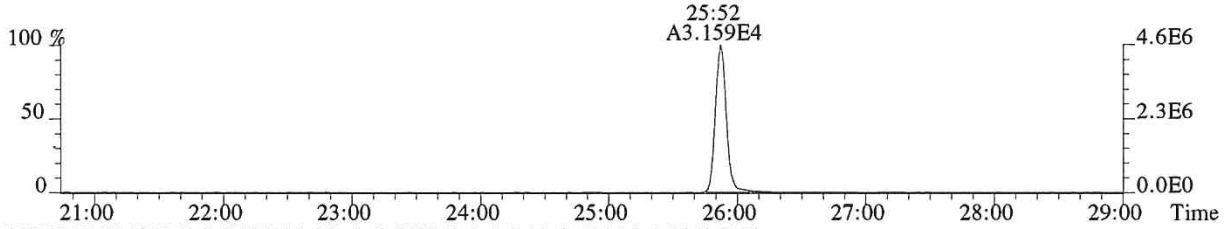
File:P519836 #1-587 Acq: 8-JAN-2019 14:15:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-010
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1392.0,1.00%,F,T)



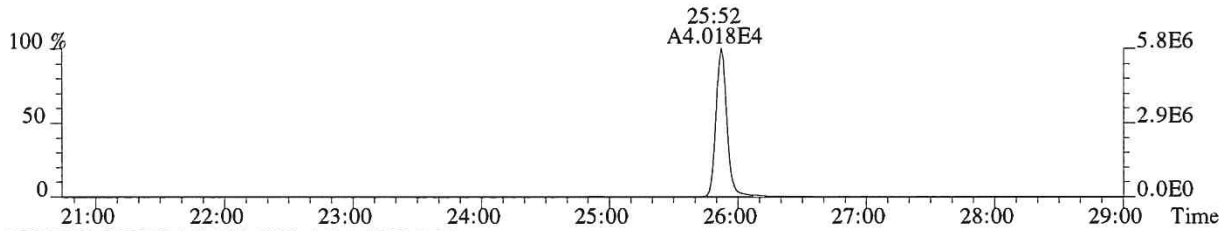
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2272.0,1.00%,F,T)



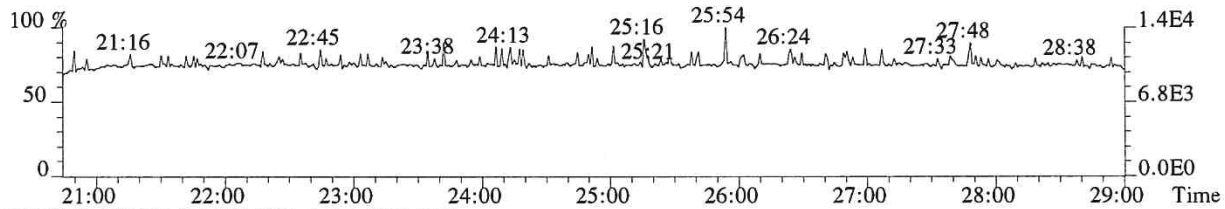
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8300.0,1.00%,F,T)



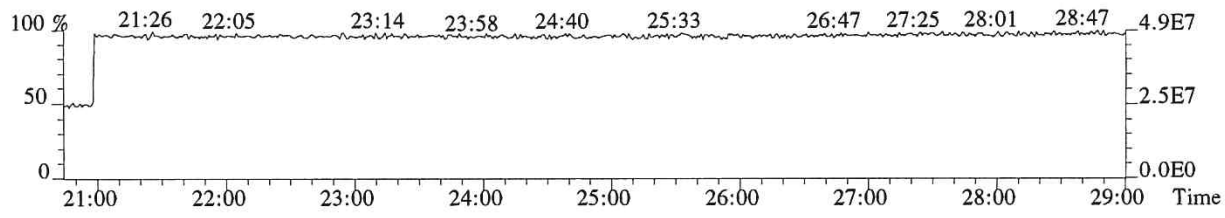
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6144.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

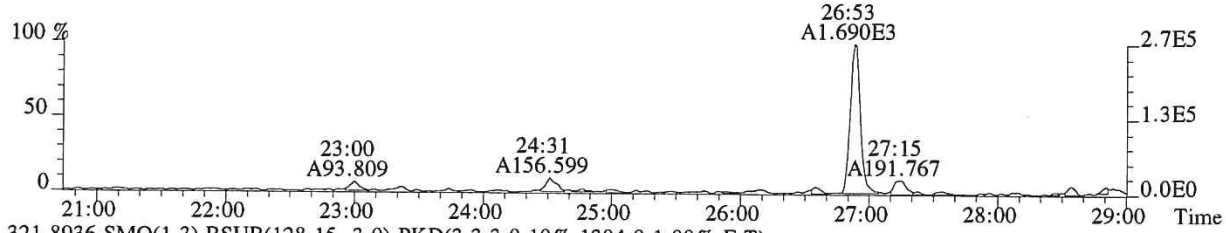


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

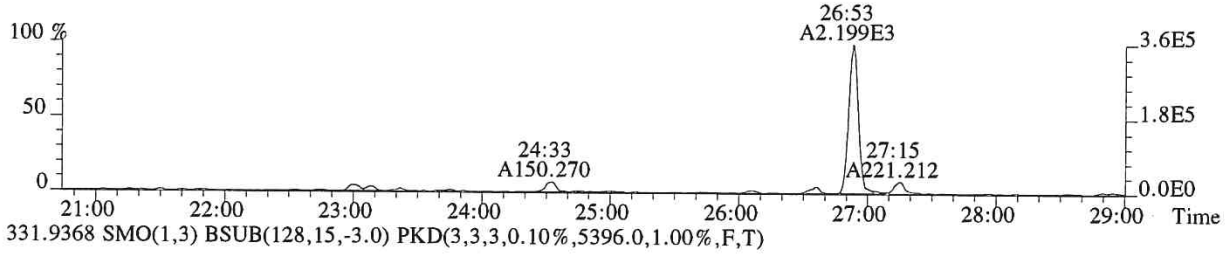


017269

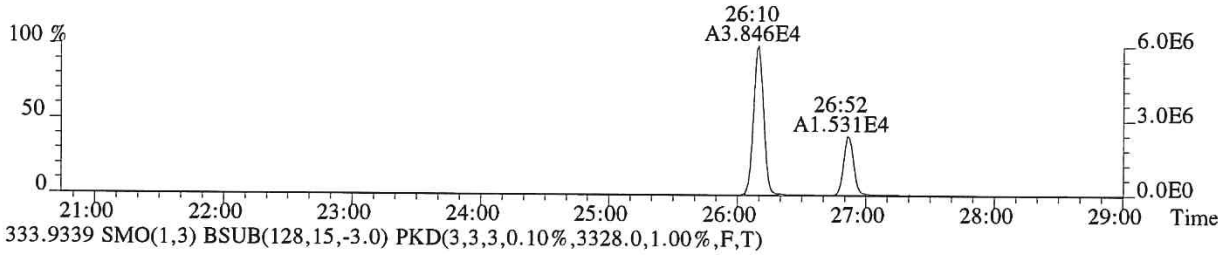
File:P519836 #1-587 Acq: 8-JAN-2019 14:15:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-010
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2968.0,1.00%,F,T)



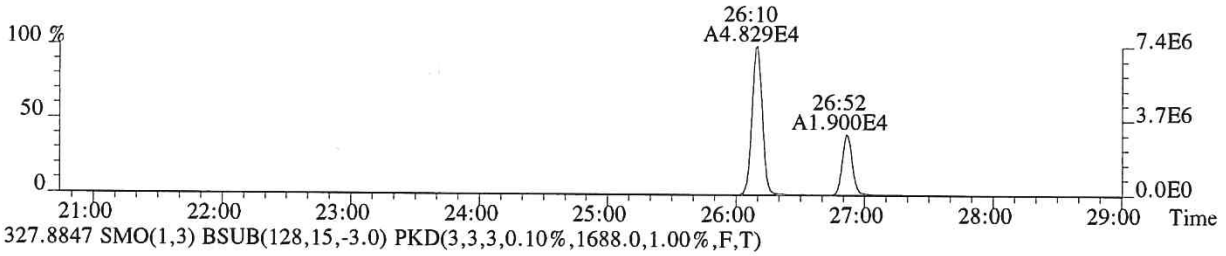
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1304.0,1.00%,F,T)



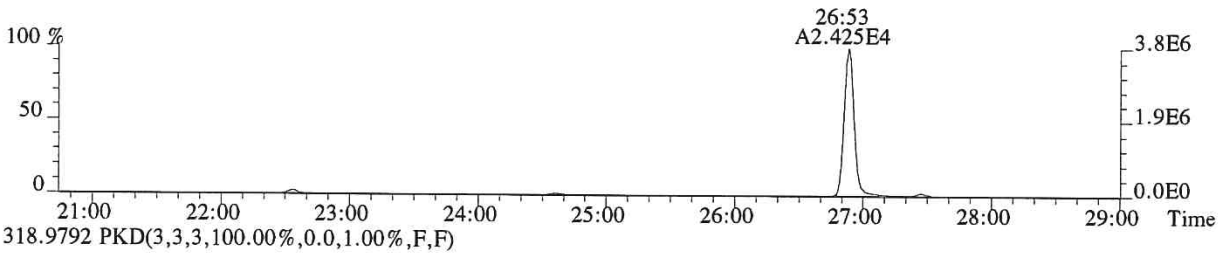
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5396.0,1.00%,F,T)



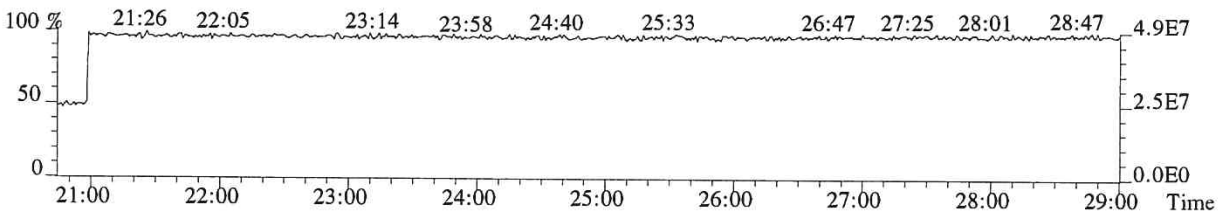
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3328.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1688.0,1.00%,F,T)

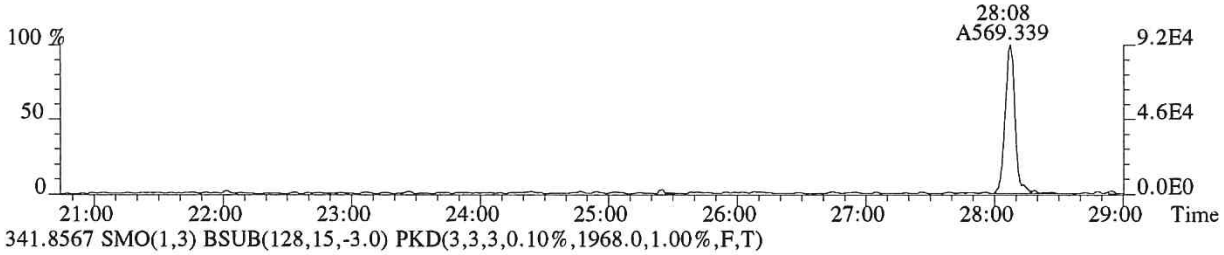


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

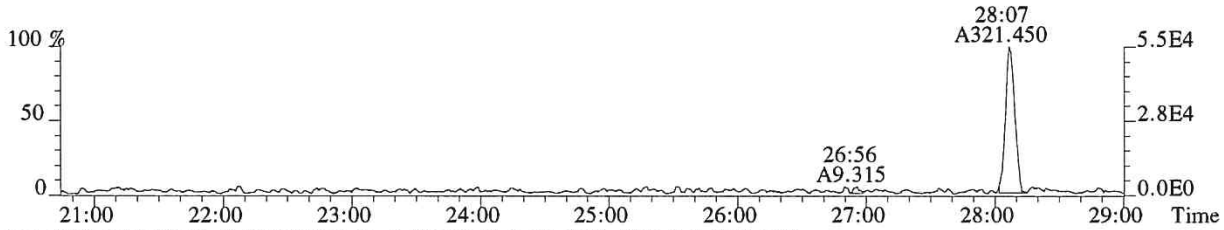


017270

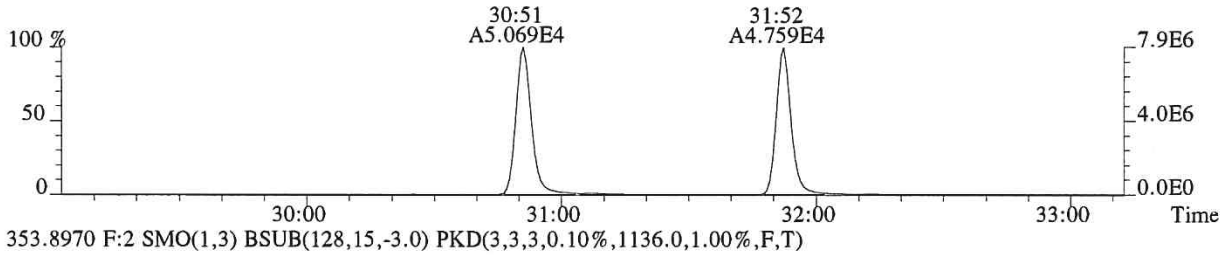
File:P519836 #1-587 Acq: 8-JAN-2019 14:15:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-010
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1028.0,1.00%,F,T)



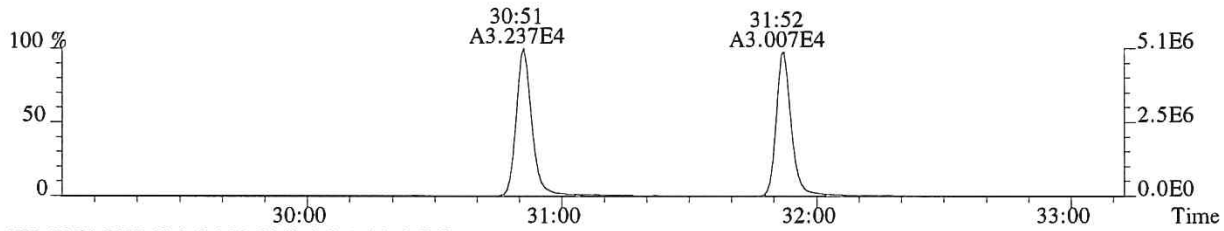
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1968.0,1.00%,F,T)



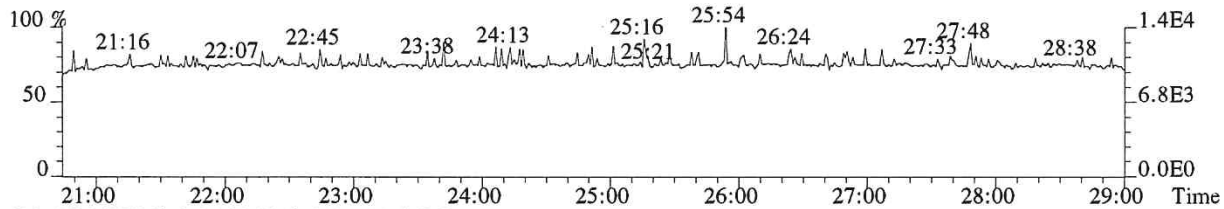
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1292.0,1.00%,F,T)



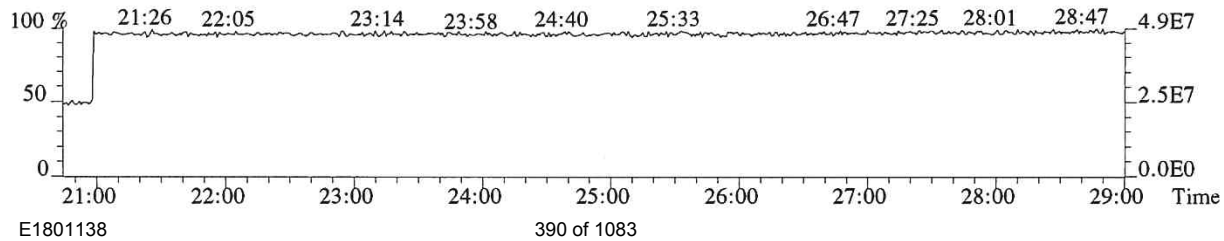
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1136.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

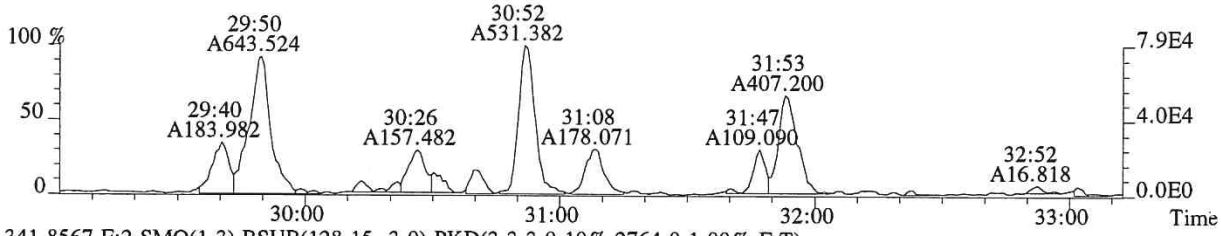


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

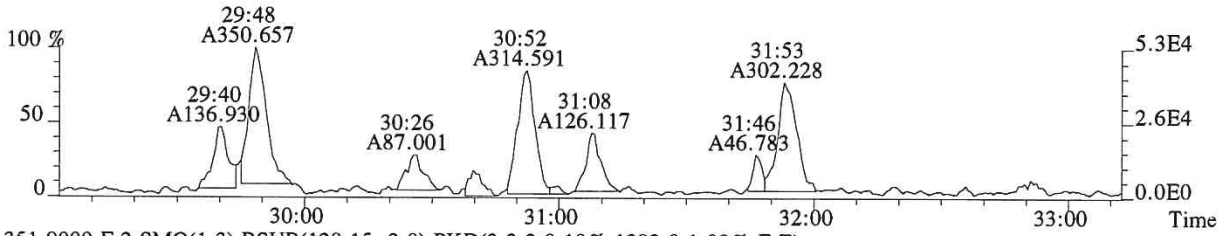


017271

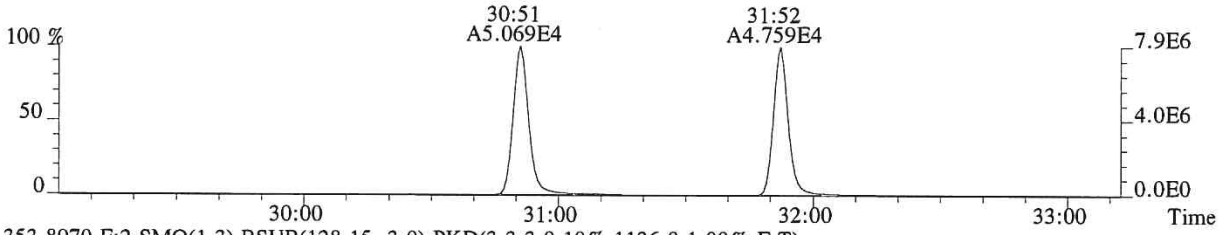
File:P519836 #1-376 Acq: 8-JAN-2019 14:15:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-010
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1524.0,1.00%,F,T)



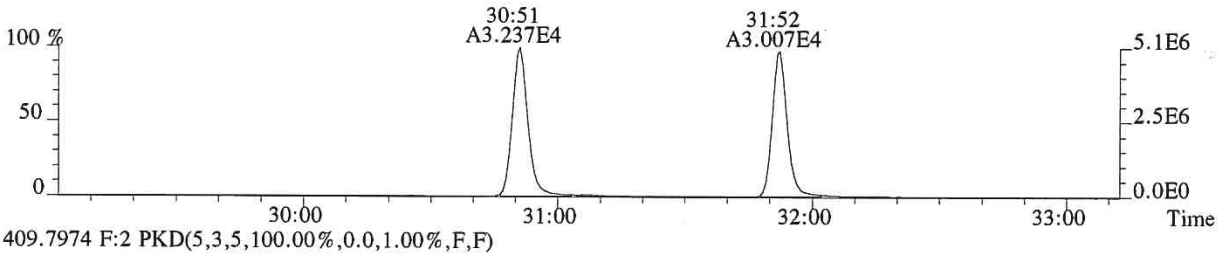
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2764.0,1.00%,F,T)



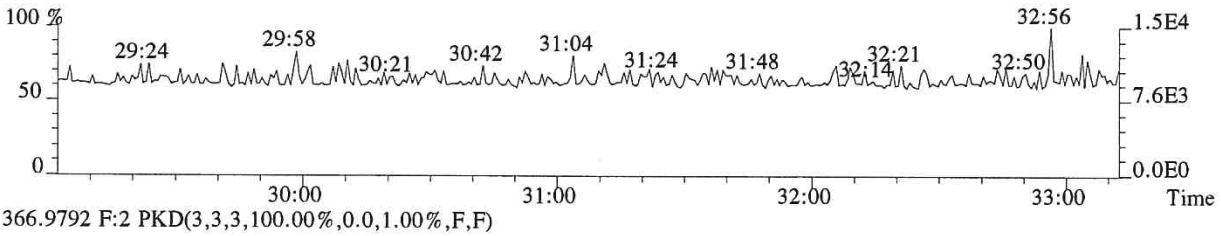
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1292.0,1.00%,F,T)



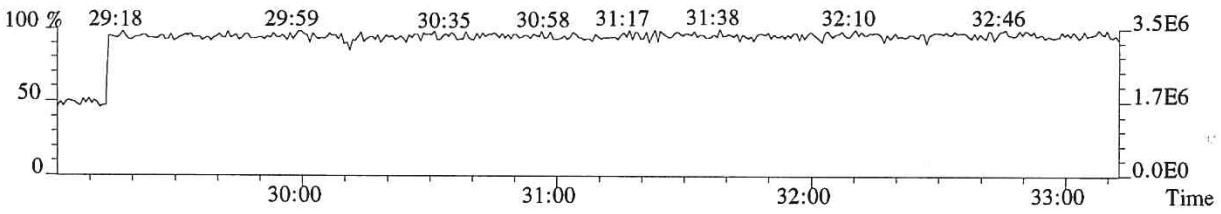
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1136.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

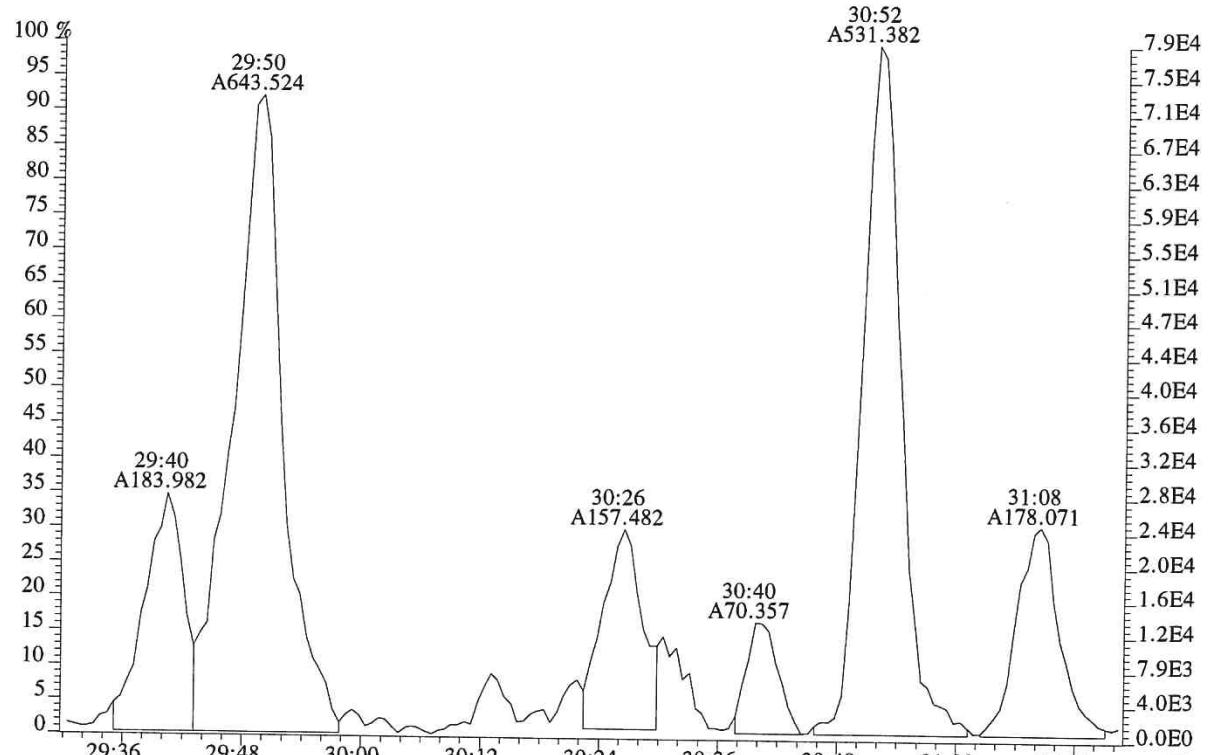


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

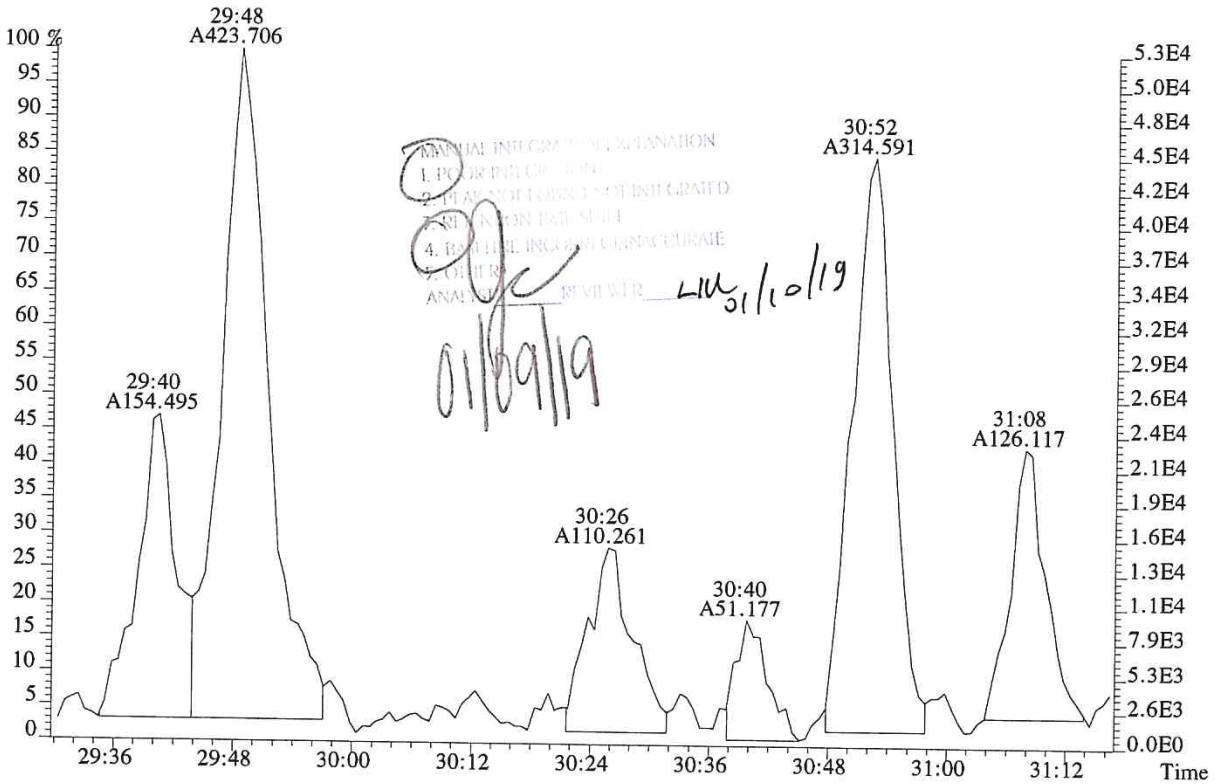


017272

File:P519836 #1-376 Acq: 8-JAN-2019 14:15:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-010
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1524.0,1.00%,F,T)

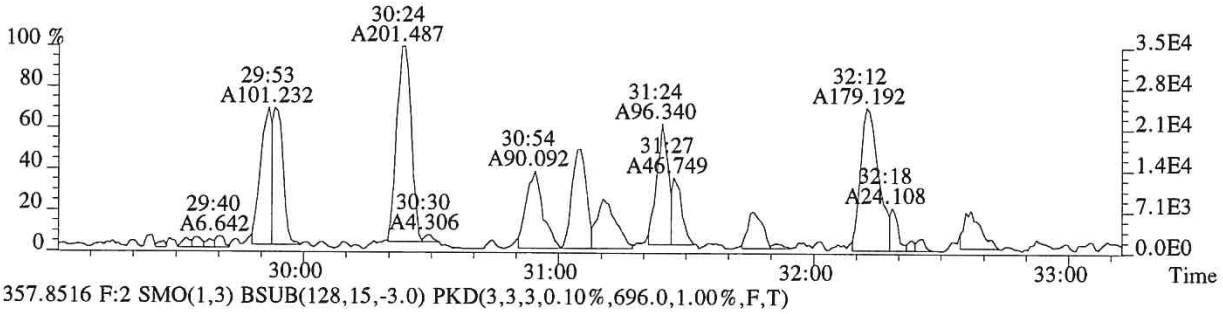


341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2764.0,1.00%,F,T)

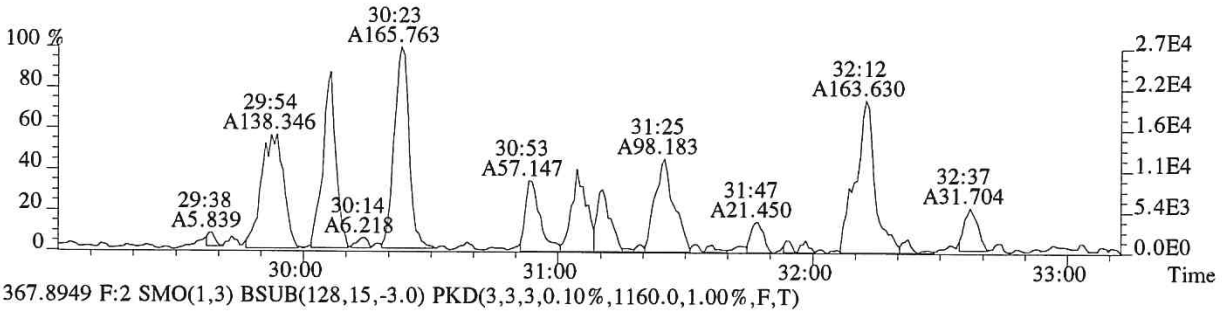


017273

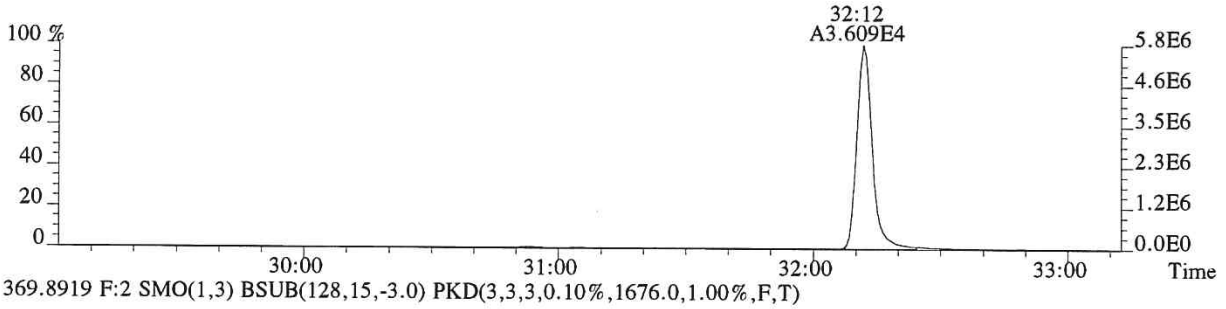
File:P519836 #1-376 Acq: 8-JAN-2019 14:15:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-010
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1636.0,1.00%,F,T)



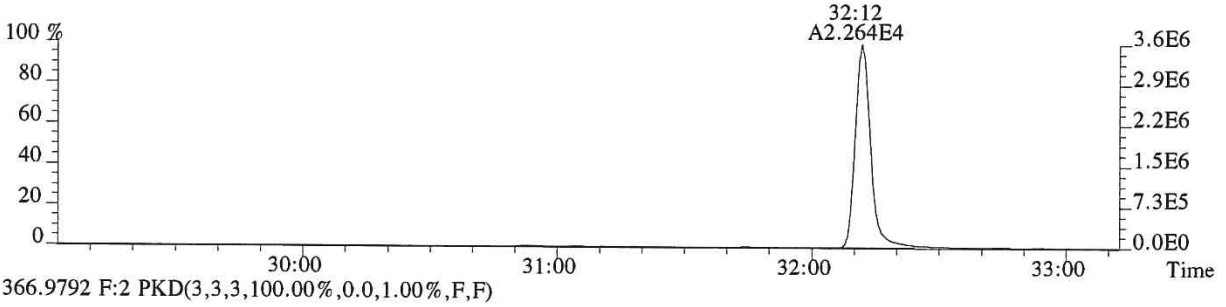
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,696.0,1.00%,F,T)



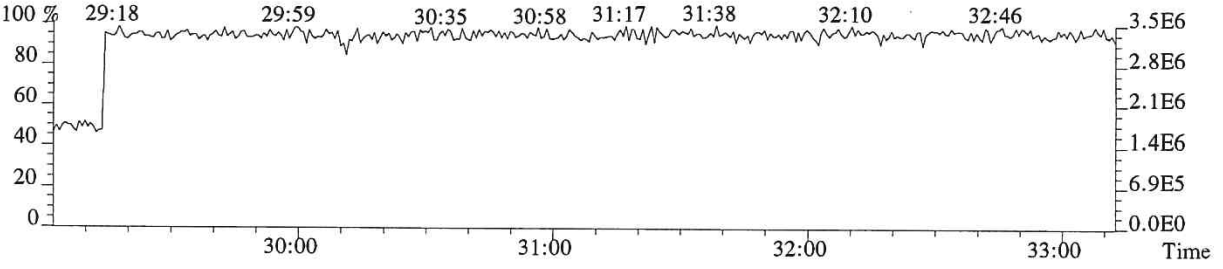
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1160.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1676.0,1.00%,F,T)

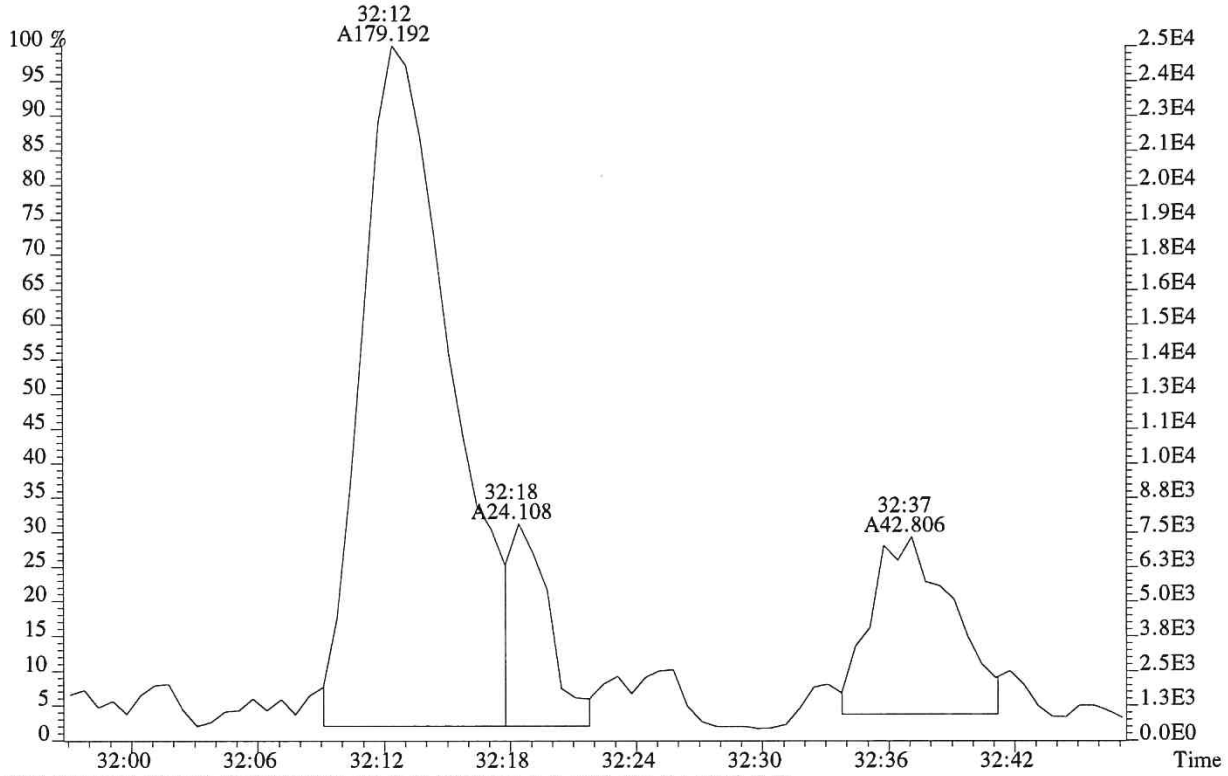


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

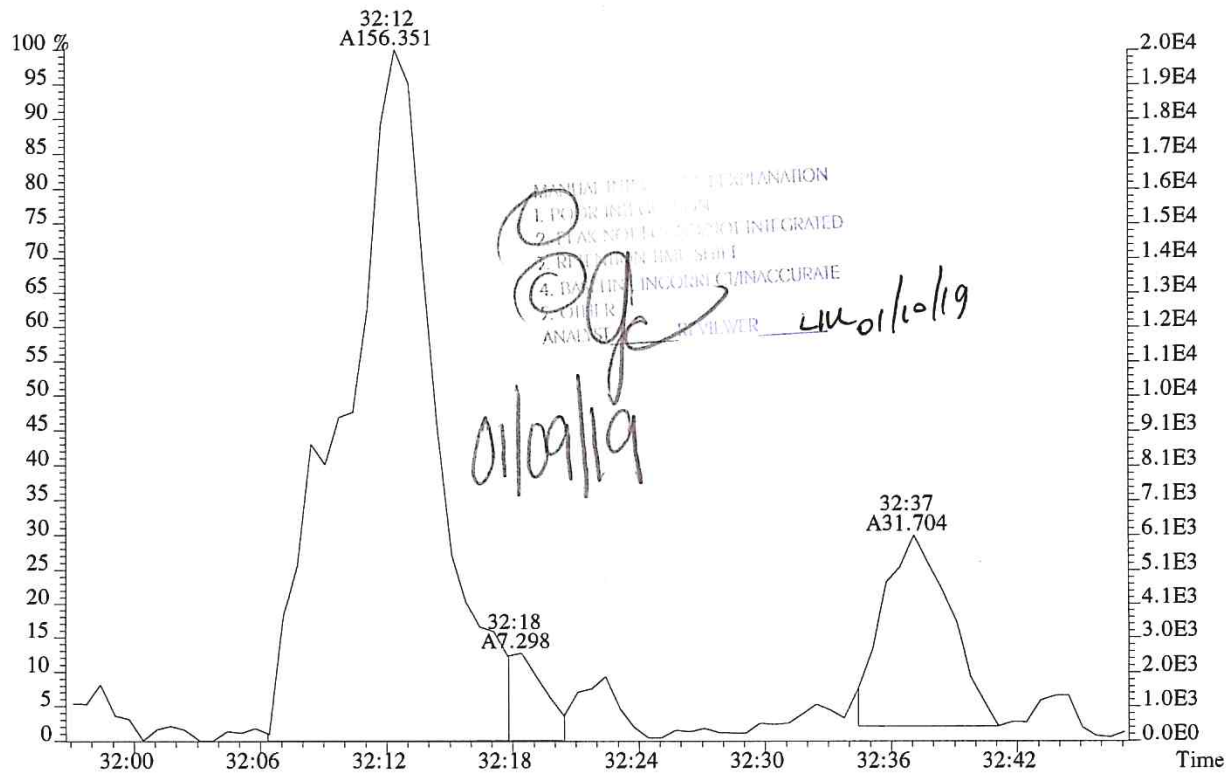


017274

File:P519836 #1-376 Acq: 8-JAN-2019 14:15:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-010
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1636.0,1.00%,F,T)



357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,696.0,1.00%,F,T)

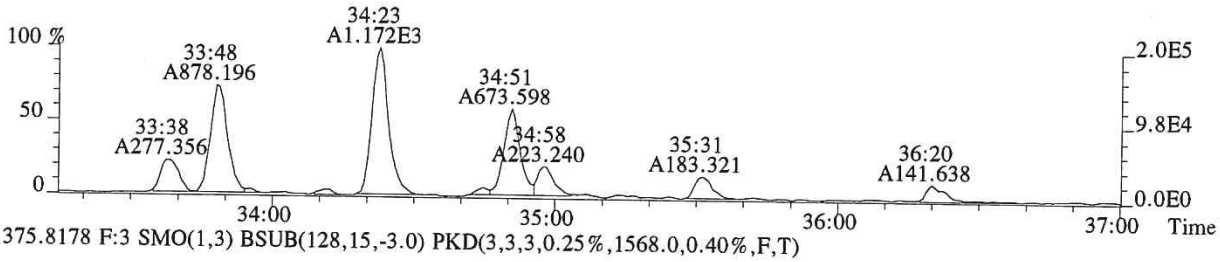


01/09/19

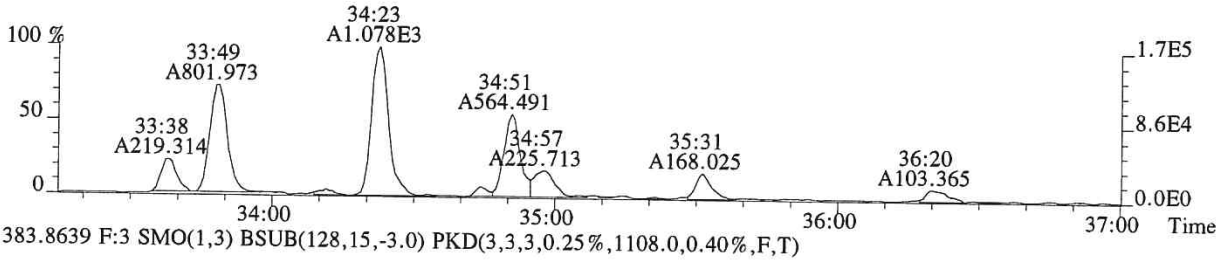
01/10/19

017275

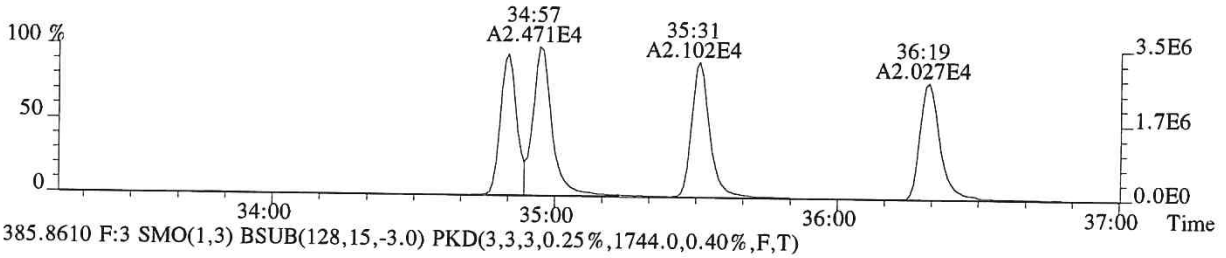
File:P519836 #1-339 Acq: 8-JAN-2019 14:15:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-010
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3004.0,0.40%,F,T)



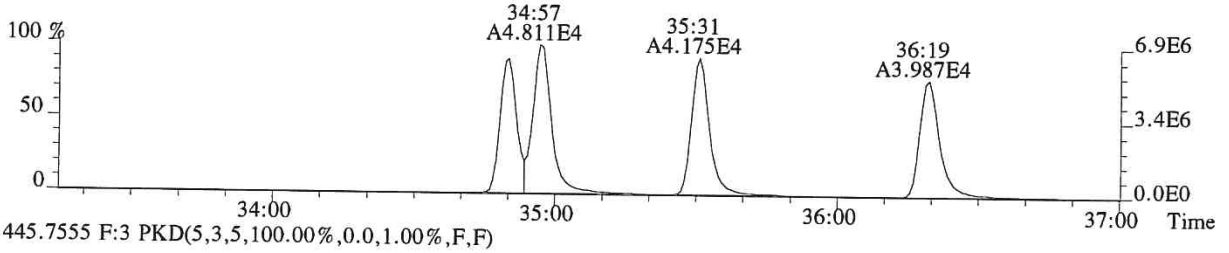
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1568.0,0.40%,F,T)



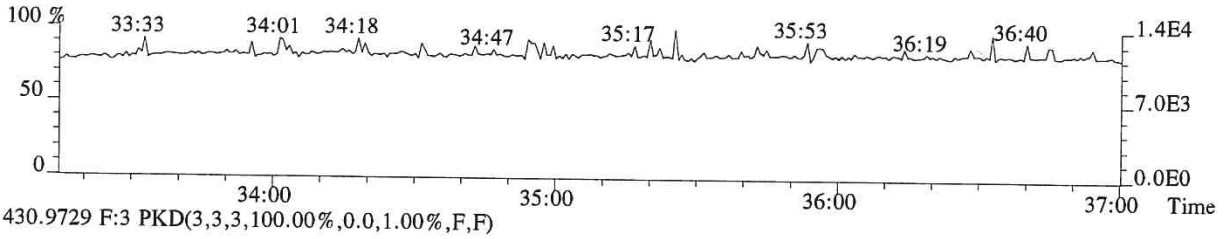
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1108.0,0.40%,F,T)



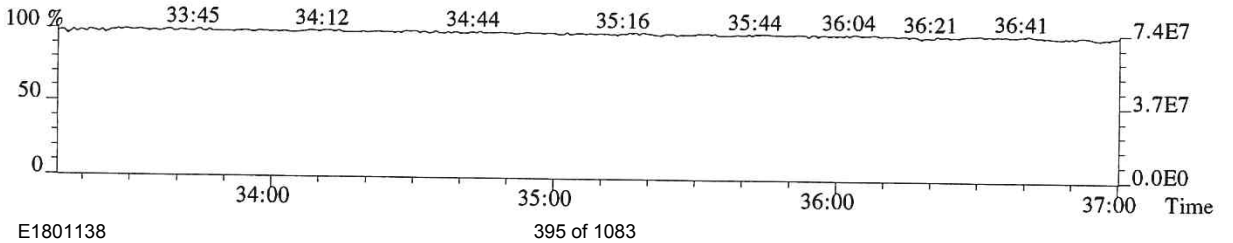
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1744.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

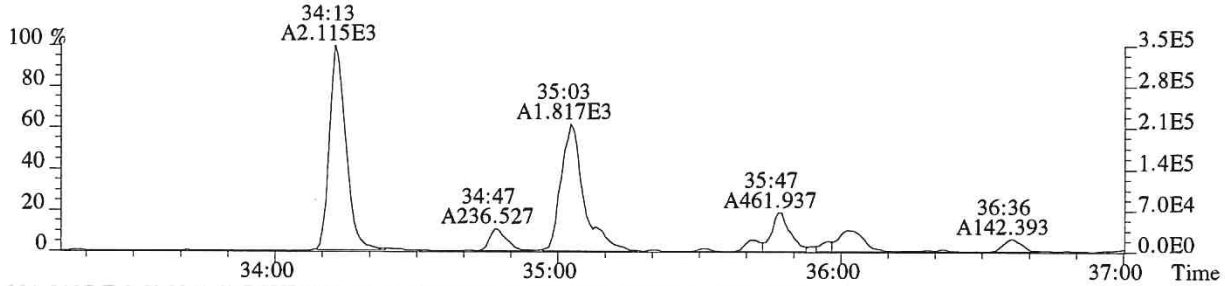


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

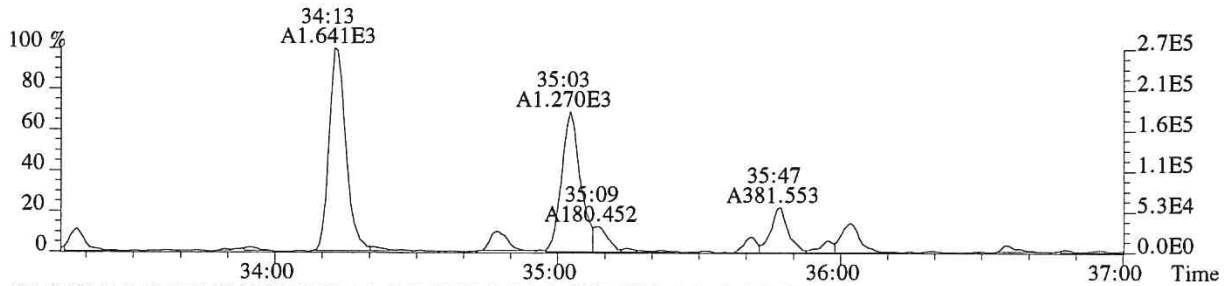


017276

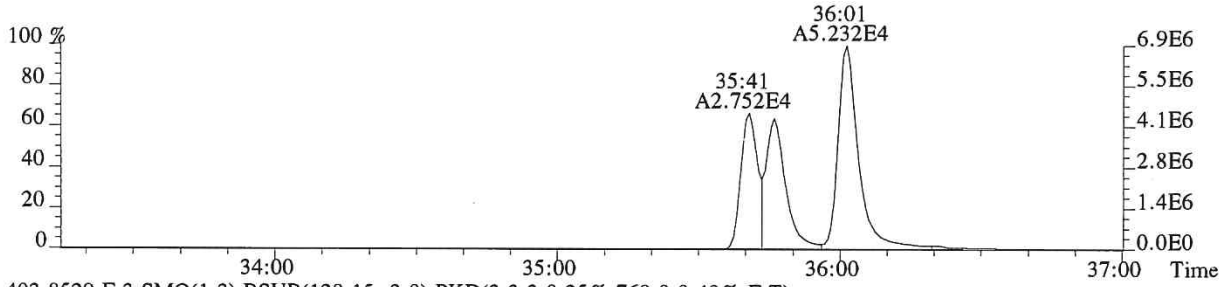
File:P519836 #1-339 Acq: 8-JAN-2019 14:15:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-010
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1204.0,0.40%,F,T)



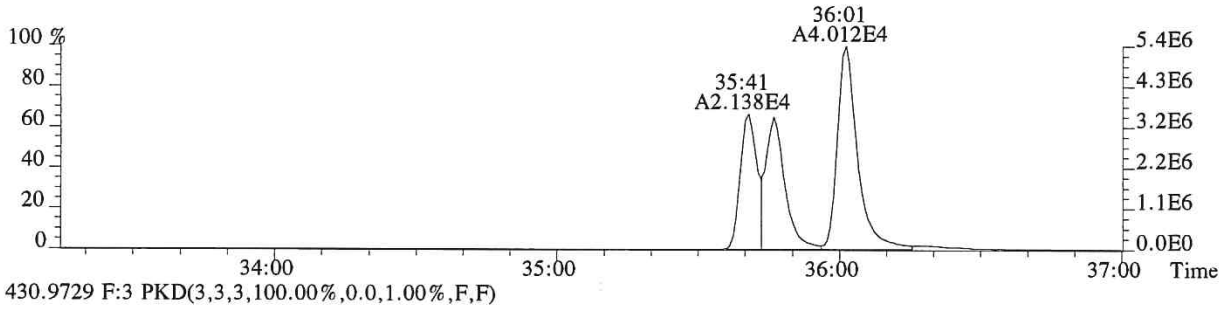
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1704.0,0.40%,F,T)



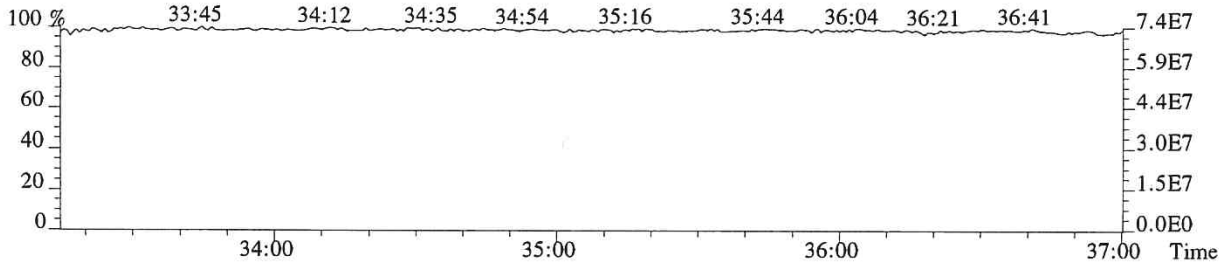
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1728.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,768.0,0.40%,F,T)

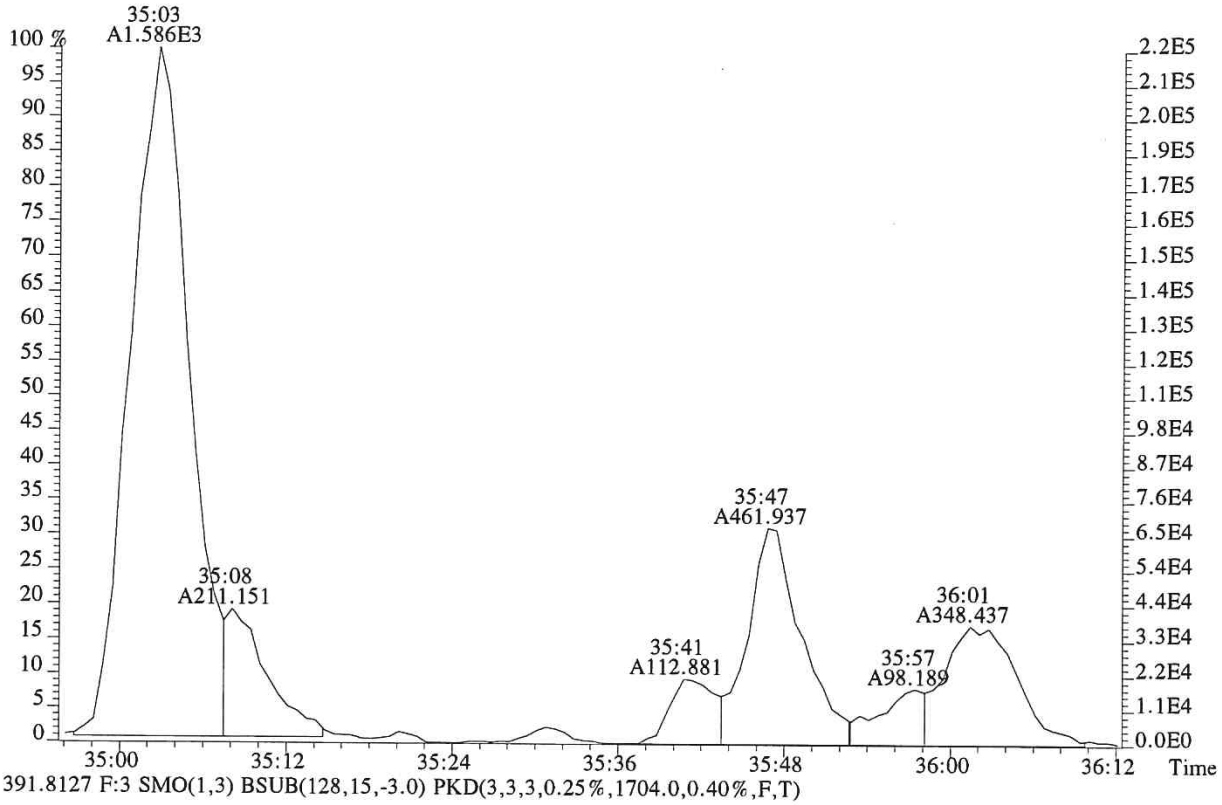


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

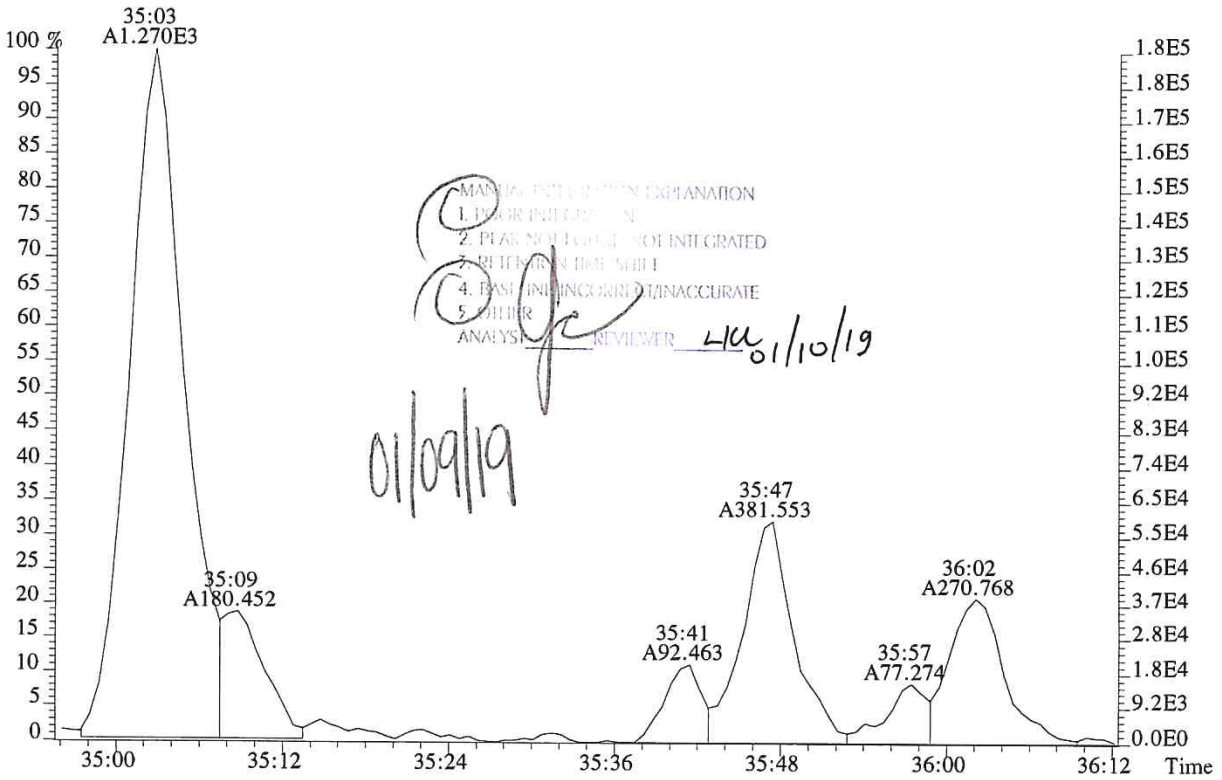


017277

File:P519836 #1-339 Acq: 8-JAN-2019 14:15:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-010
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1204.0,0.40%,F,T)

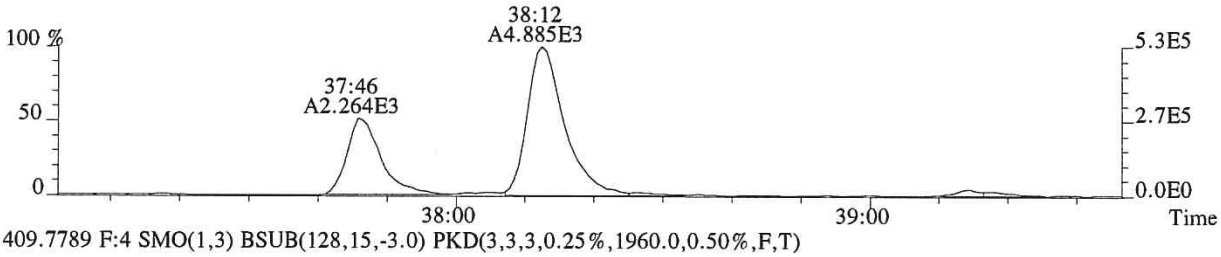


391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1704.0,0.40%,F,T)

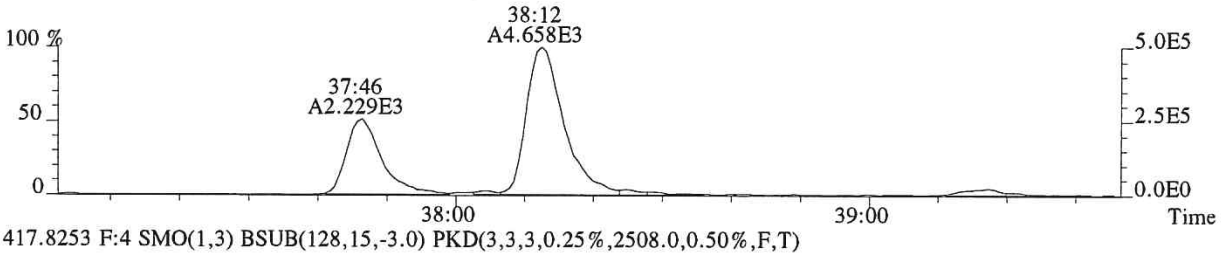


EXPLANATION
2. PEAK NOT INTEGRATED
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER 01/10/19
01/09/19

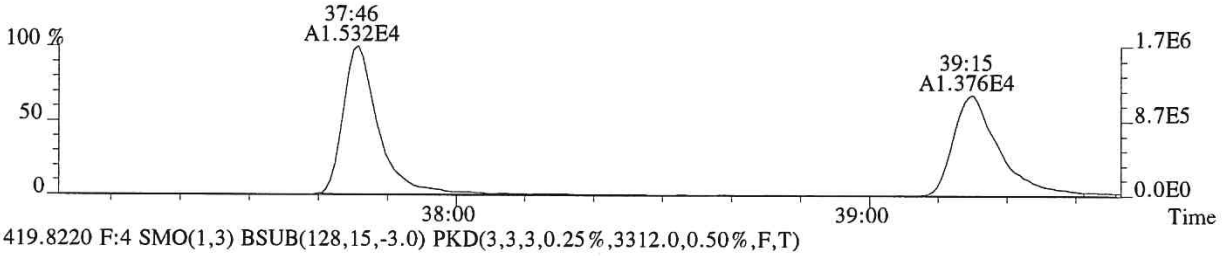
File:P519836 #1-232 Acq: 8-JAN-2019 14:15:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-010
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3368.0,0.50%,F,T)



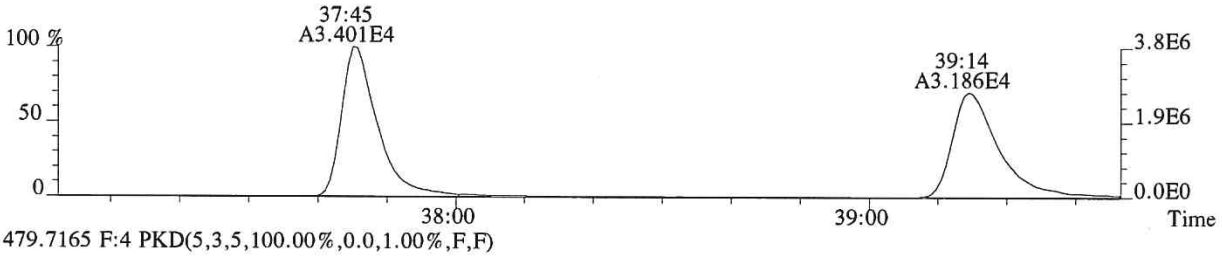
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1960.0,0.50%,F,T)



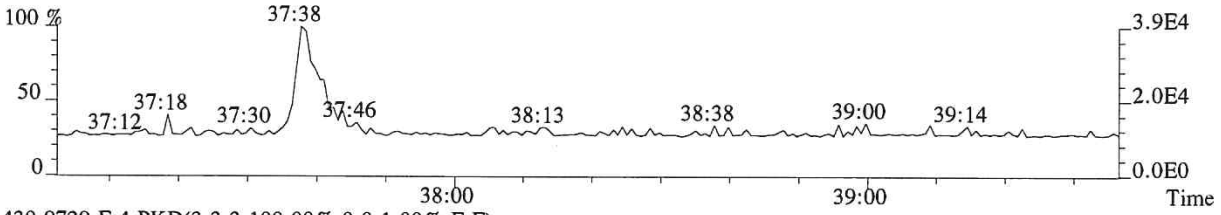
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2508.0,0.50%,F,T)



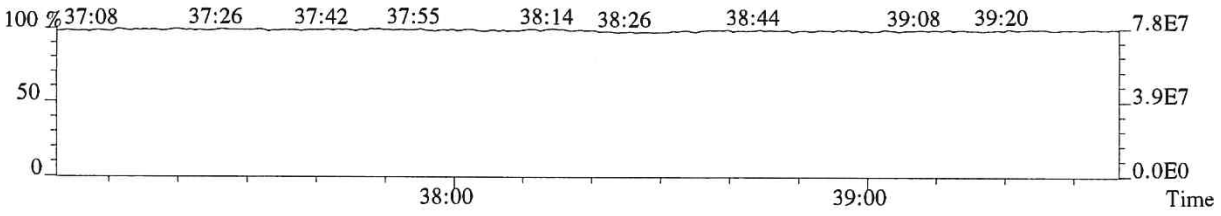
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3312.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

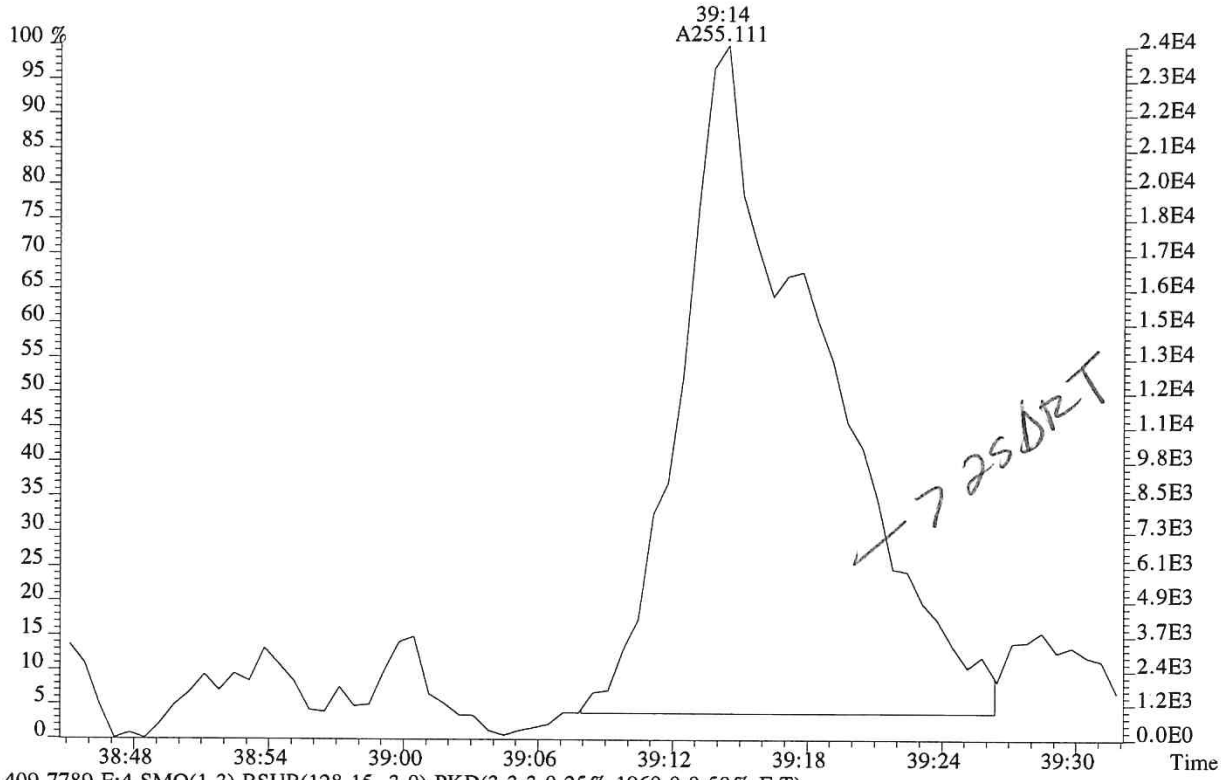


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

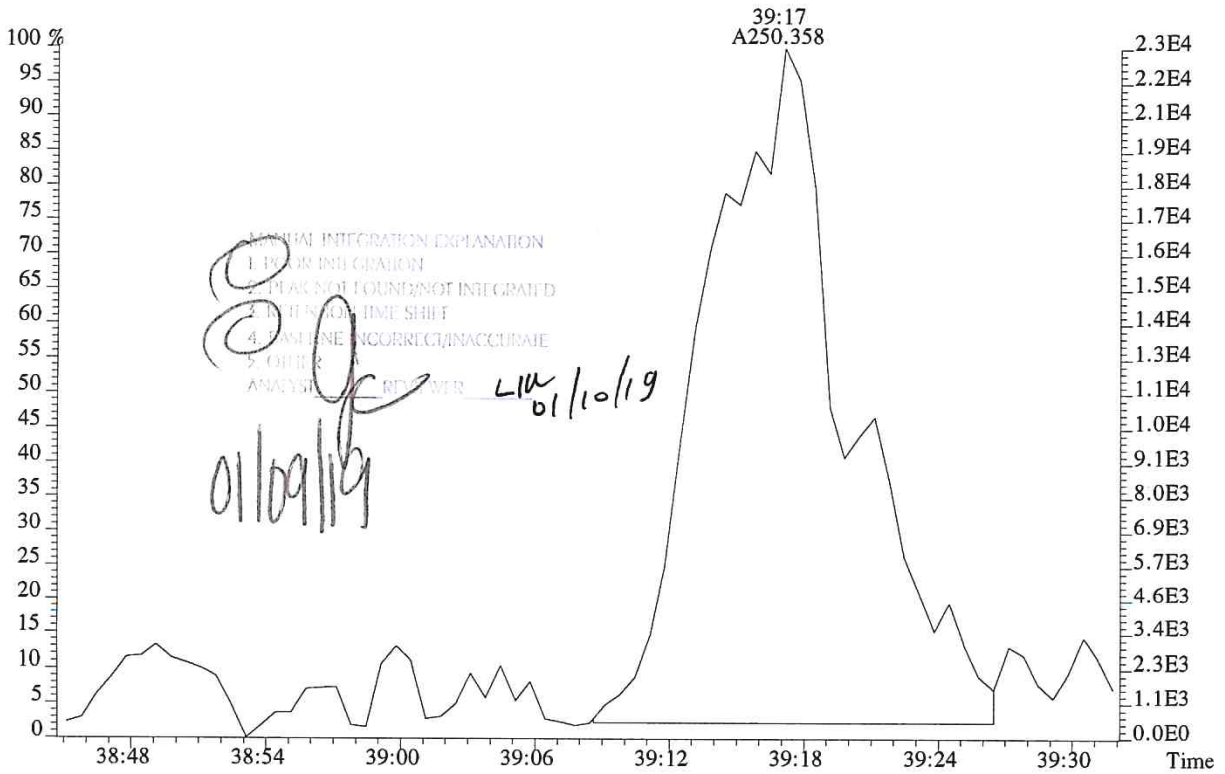


017279

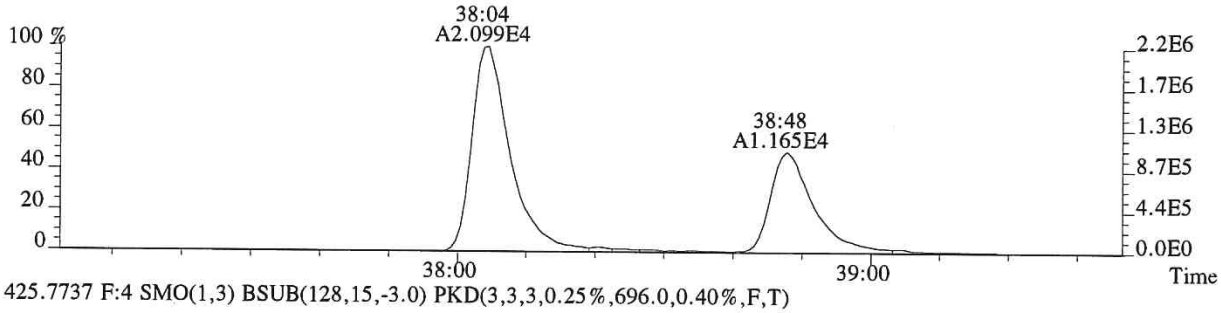
File:P519836 #1-232 Acq: 8-JAN-2019 14:15:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-010
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3368.0,0.50%,F,T)



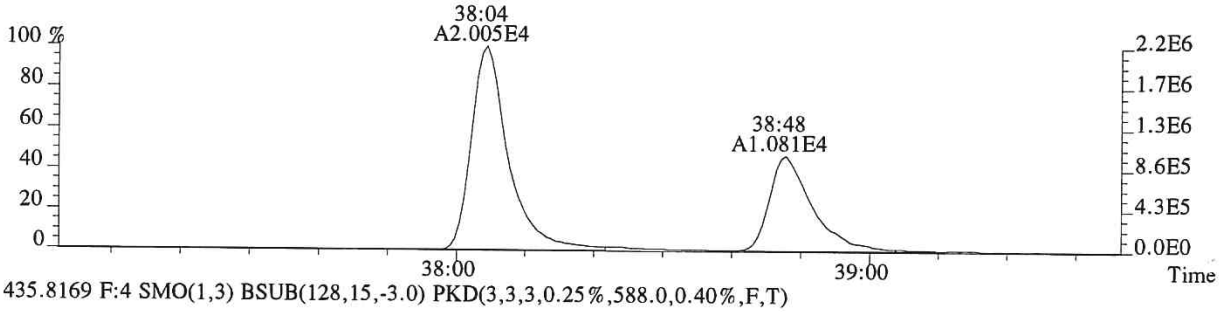
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1960.0,0.50%,F,T)



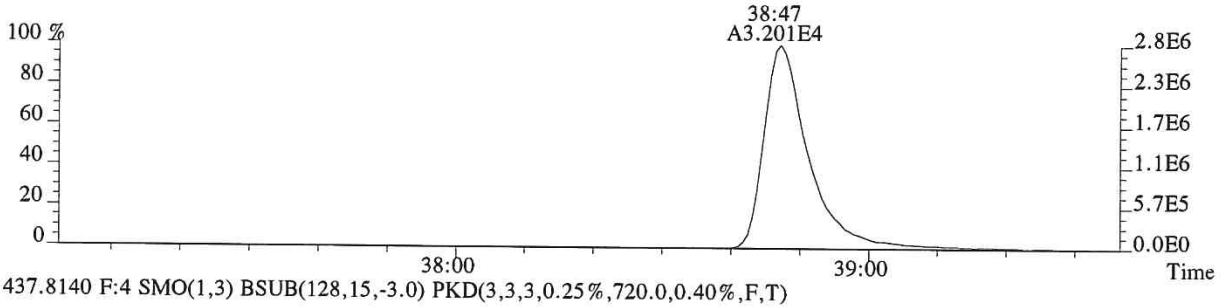
File:P519836 #1-232 Acq: 8-JAN-2019 14:15:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-010
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,708.0,0.40%,F,T)



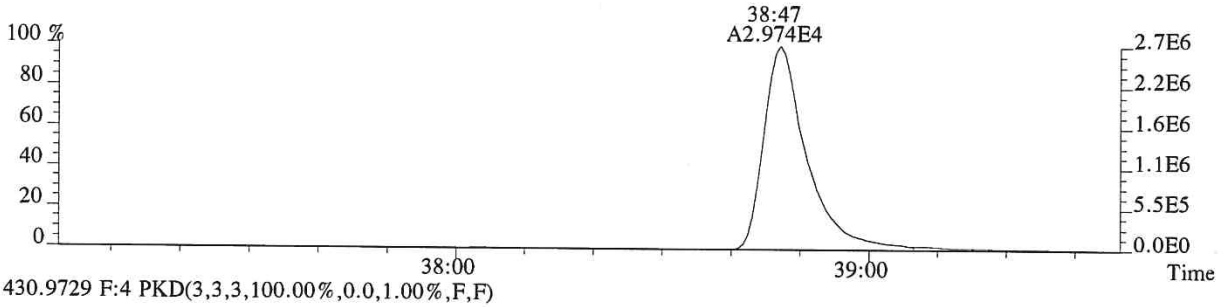
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,696.0,0.40%,F,T)



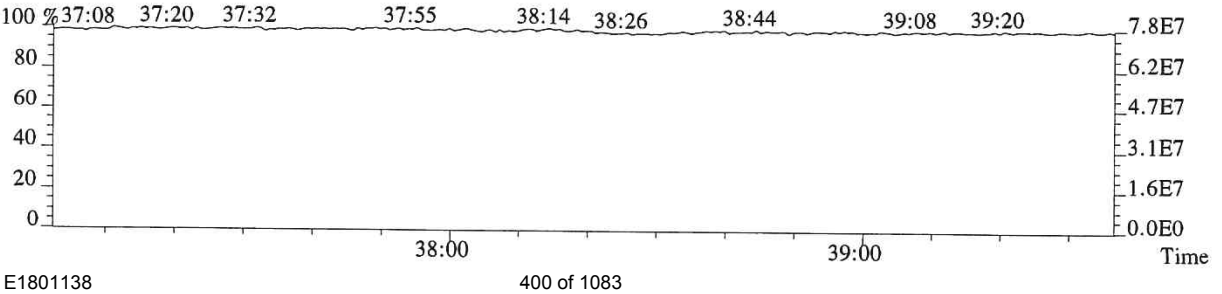
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,588.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,720.0,0.40%,F,T)

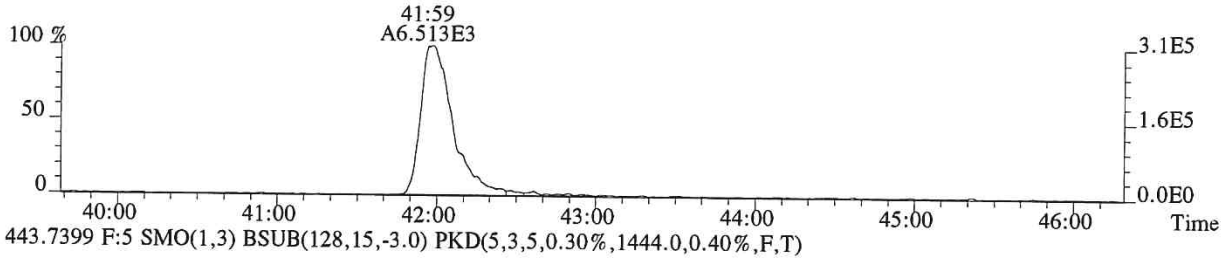


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

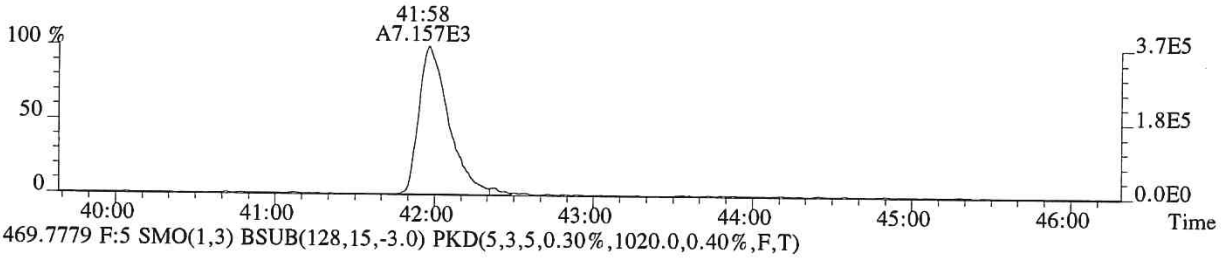


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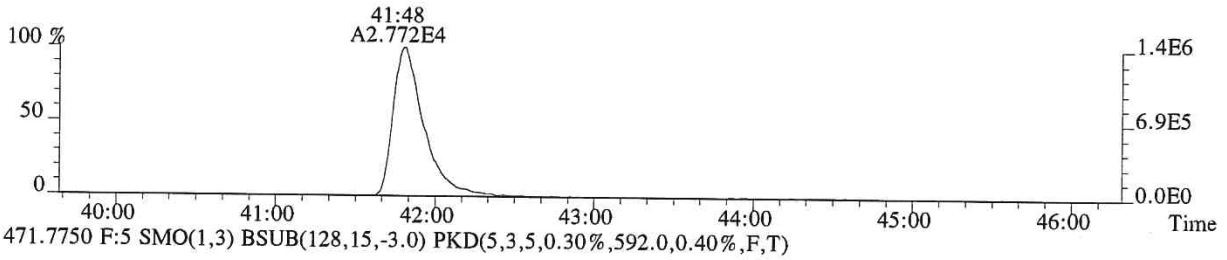
File:P519836 #1-601 Acq: 8-JAN-2019 14:15:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-010
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,792.0,0.40%,F,T)



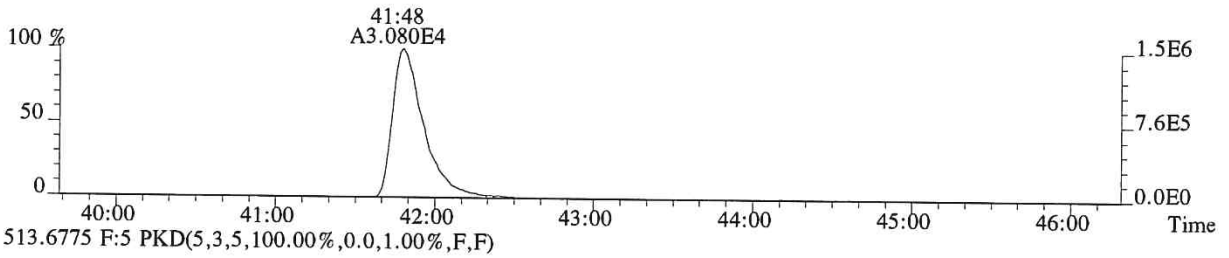
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1444.0,0.40%,F,T)



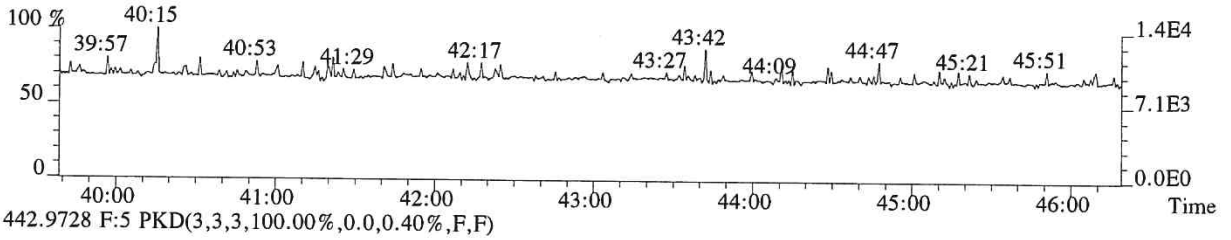
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1020.0,0.40%,F,T)



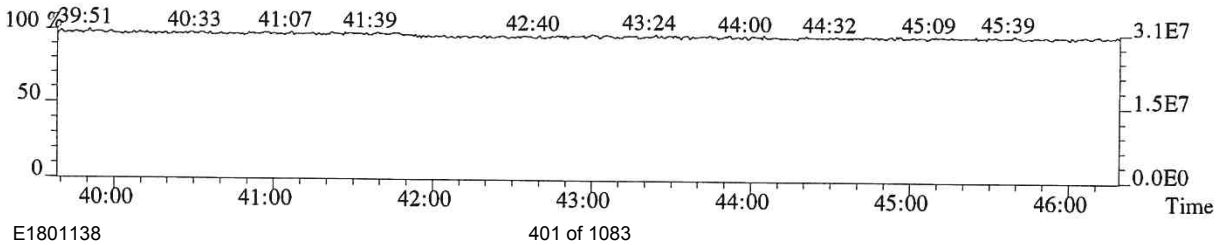
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,592.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

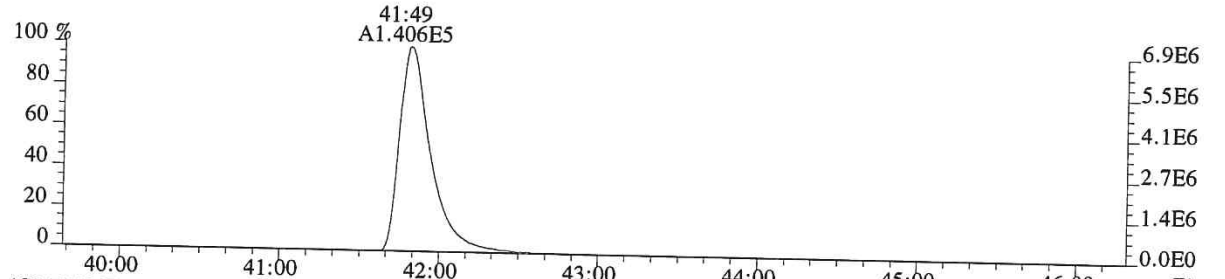


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

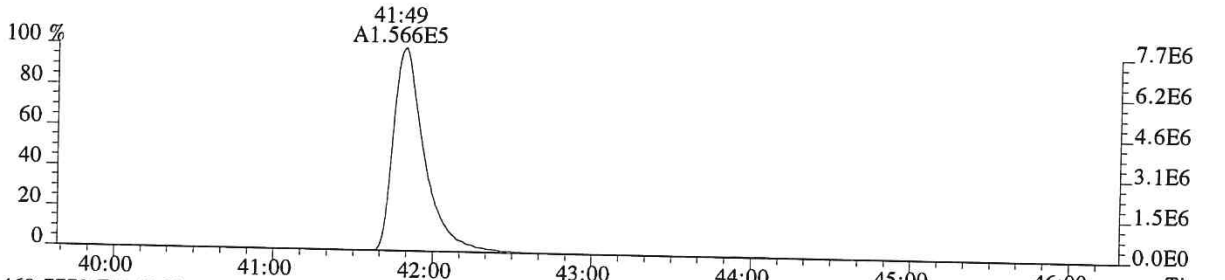


017282

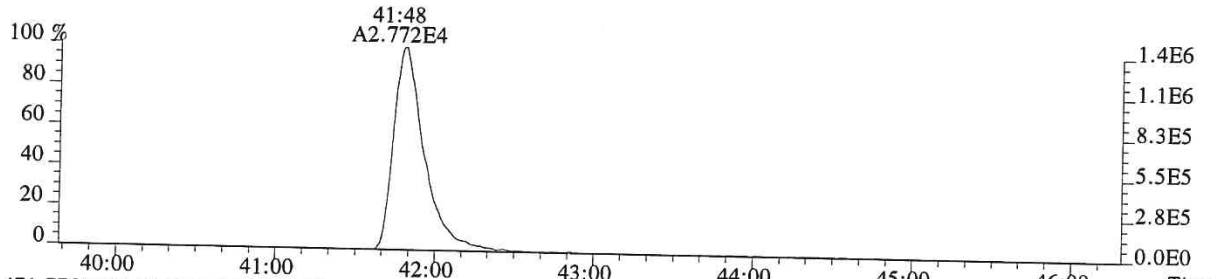
File:P519836 #1-601 Acq: 8-JAN-2019 14:15:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-010
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,464.0,0.40%,F,T)



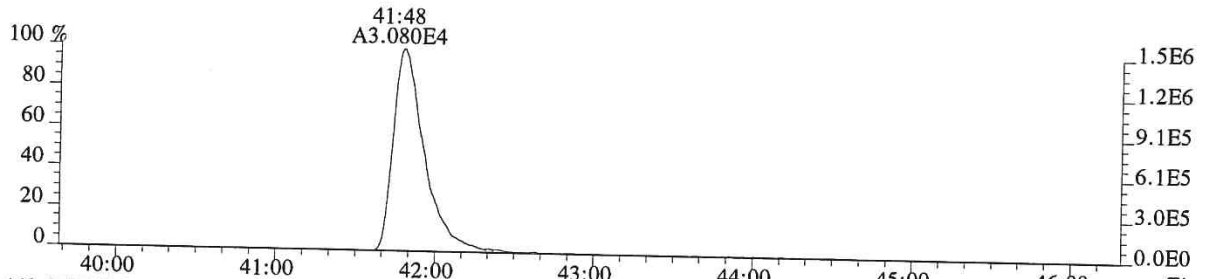
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,640.0,0.40%,F,T)



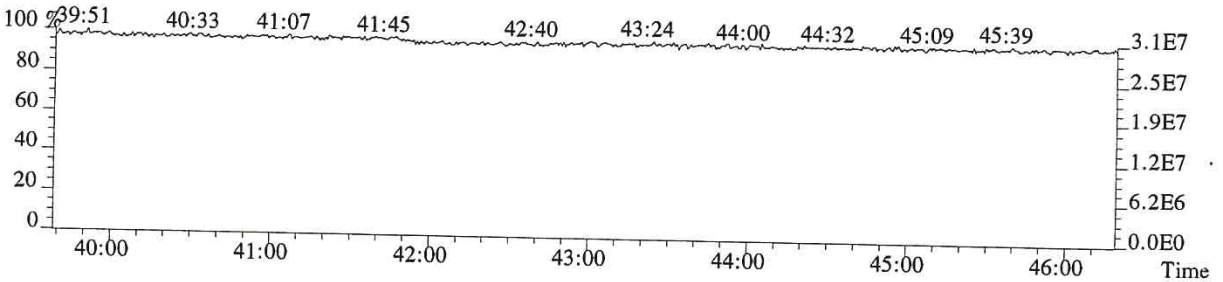
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1020.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,592.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017283

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0179

Run #13 Filename P519837 Samp: 1 Inj: 1 Acquired: 8-JAN-19 15:02:56
Processed: 9-JAN-19 11:56:31 Sample ID: E1801138-011

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:55	4.271e+02	5.288e+02	0.81	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:52	1.362e+02	1.048e+02	1.30	no	yes	1.012
3	Unk	2,3,4,7,8-PeCDF	31:56	1.432e+02	1.188e+02	1.21	no	yes	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:51	1.399e+02	1.172e+02	1.19	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:59	1.213e+02	1.362e+02	0.89	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:33	1.186e+02	9.220e+01	1.29	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:21	6.803e+01	4.512e+01	1.51	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:48	6.968e+02	7.231e+02	0.96	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	no	1.258
10	Unk	OCDF	41:59	2.120e+03	2.589e+03	0.82	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:53	1.381e+02	1.642e+02	0.84	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:13	1.675e+02	1.333e+02	1.26	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:42	1.447e+02	1.013e+02	1.43	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:47	5.827e+02	4.737e+02	1.23	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:03	4.572e+02	4.528e+02	1.01	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:49	2.772e+04	2.616e+04	1.06	yes	no	1.025
17	Unk	OCDD	41:53	3.585e+06	4.005e+06	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:53	3.441e+04	4.284e+04	0.80	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:52	5.268e+04	3.356e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:53	5.070e+04	3.168e+04	1.60	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:51	1.900e+04	3.662e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:58	2.250e+04	4.298e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:31	1.976e+04	3.792e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:20	1.631e+04	3.227e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:47	1.124e+04	2.590e+04	0.43	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:16	8.545e+03	1.942e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:52	1.627e+04	2.029e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:12	3.746e+04	2.357e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:41	2.406e+04	1.896e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:47	3.016e+04	2.355e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:48	2.114e+04	1.981e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	41:51	1.485e+04	1.641e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:10	3.511e+04	4.413e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:02	4.123e+04	3.241e+04	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:54	2.539e+04				no	1.014

$$\text{OCDD} = \frac{(3.585e+06 + 4.005e+06) \times 4000\ \text{pg} \times 1}{(1.485e+04 + 1.641e+04) \times 10.35^{8}\ \text{g} \times 77.7/100 \times 1.118} = 107937\ \text{ng/kg}$$

LM 01/10/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0179

Run #13 Filename P519837 Samp: 1 Inj: 1 Acquired: 8-JAN-19 15:02:56
Processed: 9-JAN-19 11:56:31 LAB. ID: E1801138-011

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.72e+04	1.21e+03	4.7e+01	6.78e+04	1.94e+03	3.5e+01
2	1,2,3,7,8-PeCDF	2.19e+04	1.41e+03	1.6e+01	1.76e+04	2.54e+03	6.9e+00
3	2,3,4,7,8-PeCDF	1.70e+04	1.41e+03	1.2e+01	1.78e+04	2.54e+03	7.0e+00
4	1,2,3,4,7,8-HxCDF	2.01e+04	1.27e+03	1.6e+01	2.24e+04	1.72e+03	1.3e+01
5	1,2,3,6,7,8-HxCDF	1.87e+04	1.27e+03	1.5e+01	1.99e+04	1.72e+03	1.2e+01
6	2,3,4,6,7,8-HxCDF	1.93e+04	1.27e+03	1.5e+01	1.49e+04	1.72e+03	8.6e+00
7	1,2,3,7,8,9-HxCDF	7.16e+03	1.27e+03	5.6e+00	7.88e+03	1.72e+03	4.6e+00
8	1,2,3,4,6,7,8-HpCDF	9.56e+04	2.21e+03	4.3e+01	8.07e+04	3.20e+03	2.5e+01
9	1,2,3,4,7,8,9-HpCDF	*	2.21e+03	*	*	3.20e+03	*
10	OCDF	9.08e+04	3.76e+02	2.4e+02	1.12e+05	1.22e+03	9.2e+01
11	2,3,7,8-TCDD	1.86e+04	2.97e+03	6.3e+00	2.45e+04	1.06e+03	2.3e+01
12	1,2,3,7,8-PeCDD	2.81e+04	1.49e+03	1.9e+01	1.59e+04	3.60e+02	4.4e+01
13	1,2,3,4,7,8-HxCDD	3.07e+04	6.64e+02	4.6e+01	2.44e+04	3.84e+03	6.4e+00
14	1,2,3,6,7,8-HxCDD	8.73e+04	6.64e+02	1.3e+02	6.70e+04	3.84e+03	1.7e+01
15	1,2,3,7,8,9-HxCDD	6.89e+04	6.64e+02	1.0e+02	5.94e+04	3.84e+03	1.5e+01
16	1,2,3,4,6,7,8-HpCDD	2.58e+06	7.92e+02	3.3e+03	2.52e+06	3.49e+04	7.2e+01
17	OCDD	1.82e+08	6.28e+02	2.9e+05	2.02e+08	6.68e+02	3.0e+05
18	13C-2,3,7,8-TCDF	4.86e+06	7.75e+03	6.3e+02	6.08e+06	5.08e+03	1.2e+03
19	13C-1,2,3,7,8-PeCDF	8.26e+06	8.36e+02	9.9e+03	5.18e+06	1.15e+03	4.5e+03
20	13C-2,3,4,7,8-PeCDF	8.27e+06	8.36e+02	9.9e+03	5.15e+06	1.15e+03	4.5e+03
21	13C-1,2,3,4,7,8-HxCDF	3.11e+06	1.09e+03	2.9e+03	6.05e+06	1.21e+03	5.0e+03
22	13C-1,2,3,6,7,8-HxCDF	3.29e+06	1.09e+03	3.0e+03	6.31e+06	1.21e+03	5.2e+03
23	13C-2,3,4,6,7,8-HxCDF	3.02e+06	1.09e+03	2.8e+03	5.85e+06	1.21e+03	4.8e+03
24	13C-1,2,3,7,8,9-HxCDF	2.22e+06	1.09e+03	2.0e+03	4.25e+06	1.21e+03	3.5e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.24e+06	2.14e+03	5.8e+02	2.82e+06	9.94e+03	2.8e+02
26	13C-1,2,3,4,7,8,9-HpCDF	7.28e+05	2.14e+03	3.4e+02	1.70e+06	9.94e+03	1.7e+02
27	13C-2,3,7,8-TCDD	2.53e+06	6.41e+03	3.9e+02	3.20e+06	2.86e+03	1.1e+03
28	13C-1,2,3,7,8-PeCDD	5.97e+06	1.09e+03	5.5e+03	3.76e+06	1.68e+03	2.2e+03
29	13C-1,2,3,4,7,8-HxCDD	4.17e+06	1.48e+03	2.8e+03	3.30e+06	9.68e+02	3.4e+03
30	13C-1,2,3,6,7,8-HxCDD	3.92e+06	1.48e+03	2.6e+03	3.16e+06	9.68e+02	3.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.90e+06	6.64e+02	2.9e+03	1.77e+06	3.88e+02	4.6e+03
32	13C-OCDD	7.72e+05	6.96e+02	1.1e+03	8.52e+05	4.20e+02	2.0e+03
33	13C-1,2,3,4-TCDD	5.35e+06	6.41e+03	8.4e+02	6.79e+06	2.86e+03	2.4e+03
34	13C-1,2,3,7,8,9-HxCDD	5.44e+06	1.48e+03	3.7e+03	4.27e+06	9.68e+02	4.4e+03
35	37Cl-2,3,7,8-TCDD	3.93e+06	1.39e+03	2.8e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0179

Entry: 36 Totals Name: Total Tetra-Furans

Run: 13 File: P519837 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 15:02:56 Processed: 9-JAN-19 11:56:31

Mass: 303.9020 305.8990 Tot Response: 3.23e+03 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:17	6.95e+02	9.82e+02	0.71	yes	1.68e+03		n	n
2	23:05	1.50e+02	1.87e+02	0.81	yes	3.37e+02		n	n
3	25:55	4.27e+02	5.29e+02	0.81	yes	9.56e+02	2,3,7,8-TCDF	n	n
4	26:19	1.05e+02	1.59e+02	0.66	yes	2.64e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0179

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 13 File: P519837 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 15:02:56 Processed: 9-JAN-19 11:56:31

Mass: 319.8970 321.8940 Tot Response: 6.95e+02 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	23:00	1.08e+02	1.35e+02 0.80	yes	2.44e+02		n	n
2	26:09	6.67e+01	8.20e+01 0.81	yes	1.49e+02		y	n
3	26:53	1.38e+02	1.64e+02 0.84	yes	3.02e+02	2,3,7,8-TCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0179

Entry: 38 Totals Name: Total Penta-Furans1

Run: 13 File: P519837 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 15:02:56 Processed: 9-JAN-19 11:56:31

Mass: 339.8600 341.8570 Tot Response: 4.44e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:09	2.62e+02	1.83e+02 1.43	yes	4.44e+02		n	n

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Peak List Summary

CLIENT ID.
SL0179

Entry: 39 Totals Name: Total Penta-Furans2

Run: 13 File: P519837 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 15:02:56 Processed: 9-JAN-19 11:56:31

Mass: 339.8600 341.8570 Tot Response: 9.34e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:40	1.36e+02	9.44e+01 1.44	yes	2.30e+02		y	y
2	29:48	3.26e+02	2.09e+02 1.56	yes	5.35e+02		y	y
3	30:27	1.02e+02	6.72e+01 1.52	yes	1.70e+02		y	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0179

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 13 File: P519837 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 15:02:56 Processed: 9-JAN-19 11:56:31

Mass: 355.8550 357.8520 Tot Response: 3.27e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:54	5.88e+02	3.88e+02	1.52	yes	9.76e+02		n	n
2	30:24	1.03e+03	5.90e+02	1.74	yes	1.62e+03		n	n
3	30:55	1.23e+02	8.77e+01	1.41	yes	2.11e+02		n	n
4	31:11	1.21e+02	7.07e+01	1.71	yes	1.91e+02		n	n
5	31:28	1.14e+02	8.57e+01	1.33	yes	2.00e+02		n	y
6	32:18	4.18e+01	2.62e+01	1.60	yes	6.80e+01		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0179

Entry: 41 Totals Name: Total Hexa-Furans

Run: 13 File: P519837 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 15:02:56 Processed: 9-JAN-19 11:56:31

Mass: 373.8210 375.8180 Tot Response: 2.50e+03 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:50	4.73e+02	3.59e+02	1.32	yes	8.32e+02		n	n
2	34:23	6.36e+02	5.63e+02	1.13	yes	1.20e+03		n	n
3	34:51	1.40e+02	1.17e+02	1.19	yes	2.57e+02	1,2,3,4,7,8-HxCDF	n	n
4	35:33	1.19e+02	9.22e+01	1.29	yes	2.11e+02	2,3,4,6,7,8-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0179

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 13 File: P519837 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 15:02:56 Processed: 9-JAN-19 11:56:31

Mass: 389.8160 391.8130 Tot Response: 4.32e+04 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:14	2.01e+04	1.63e+04	1.23	yes	3.64e+04		n	n
2	35:03	3.06e+03	2.64e+03	1.16	yes	5.70e+03		n	n
3	35:47	5.83e+02	4.74e+02	1.23	yes	1.06e+03	1,2,3,6,7,8-HxCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0179

Entry: 43 Totals Name: Total Hepta-Furans

Run: 13 File: P519837 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 15:02:56 Processed: 9-JAN-19 11:56:31

Mass: 407.7820 409.7790 Tot Response: 5.03e+03 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:48	6.97e+02	7.23e+02	0.96	yes	1.42e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	38:14	1.84e+03	1.77e+03	1.04	yes	3.61e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0179

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 13 File: P519837 Sample:1 Injection:1 Function:4

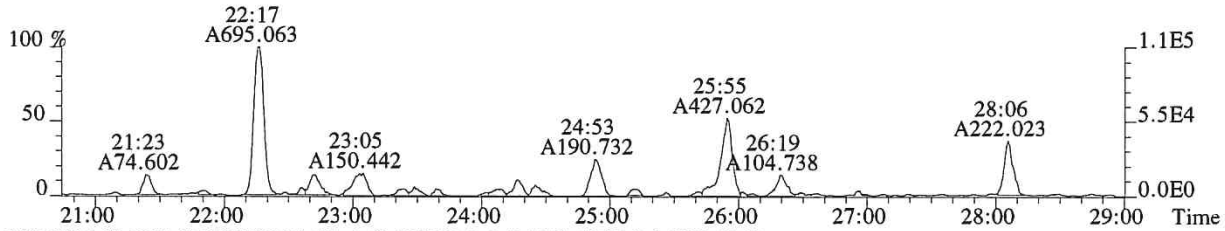
Acquired: 8-JAN-19 15:02:56 Processed: 9-JAN-19 11:56:31

Mass: 423.7770 425.7740 Tot Response: 1.75e+05 RRF: 1.025

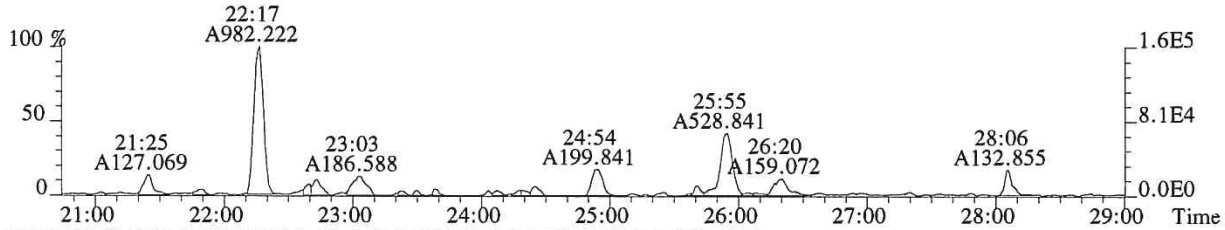
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:06	6.24e+04	5.82e+04	1.07	yes	1.21e+05		n	n
2	38:49	2.77e+04	2.62e+04	1.06	yes	5.39e+04	1,2,3,4,6,7,8-HpCDD	n	n

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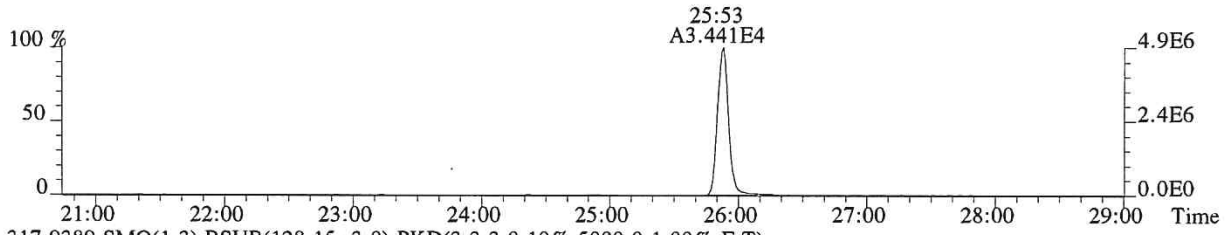
File:P519837 #1-587 Acq: 8-JAN-2019 15:02:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-011
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1212.0,1.00%,F,T)



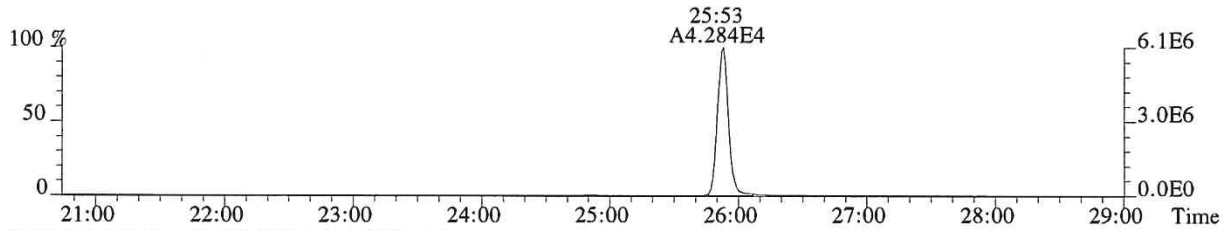
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1936.0,1.00%,F,T)



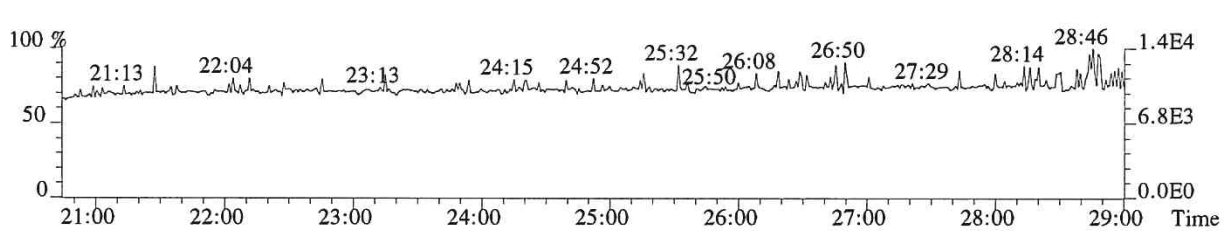
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7748.0,1.00%,F,T)



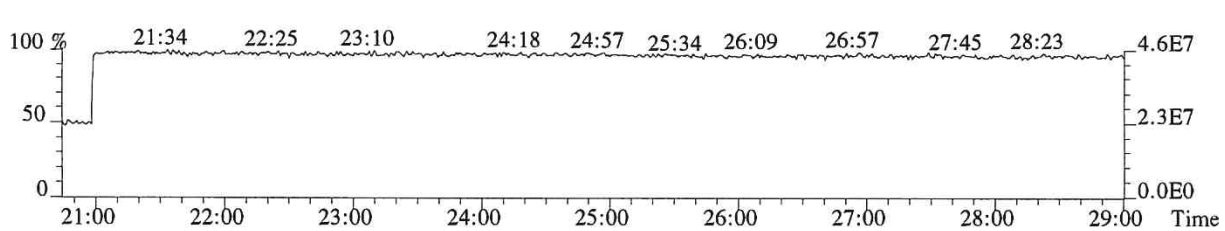
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5080.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

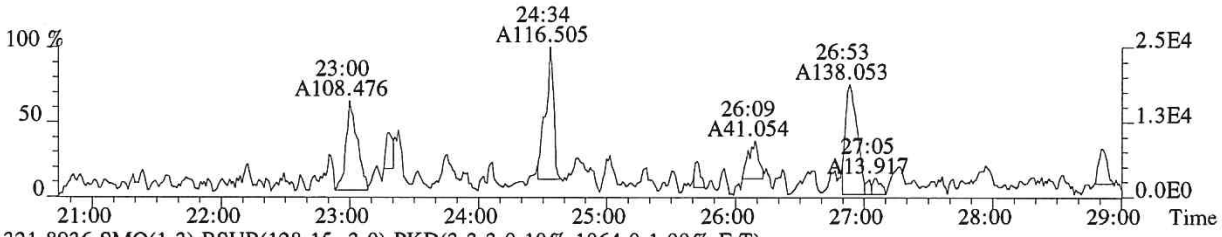


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

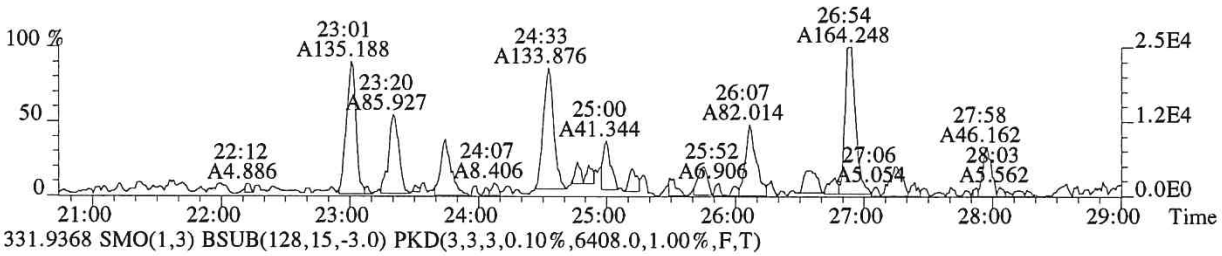


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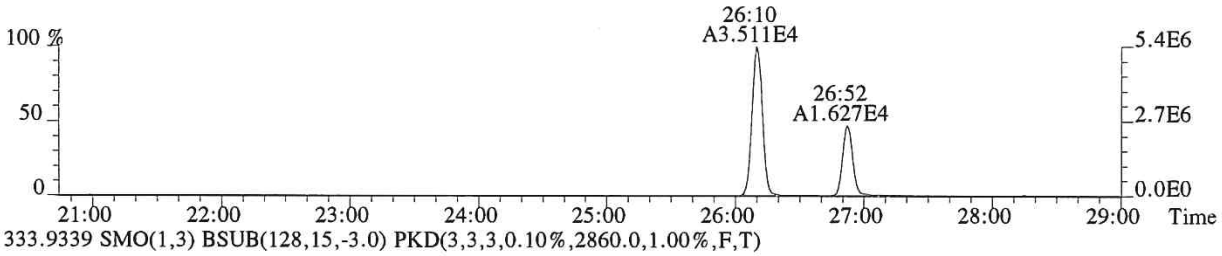
File:P519837 #1-587 Acq: 8-JAN-2019 15:02:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-011
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2968.0,1.00%,F,T)



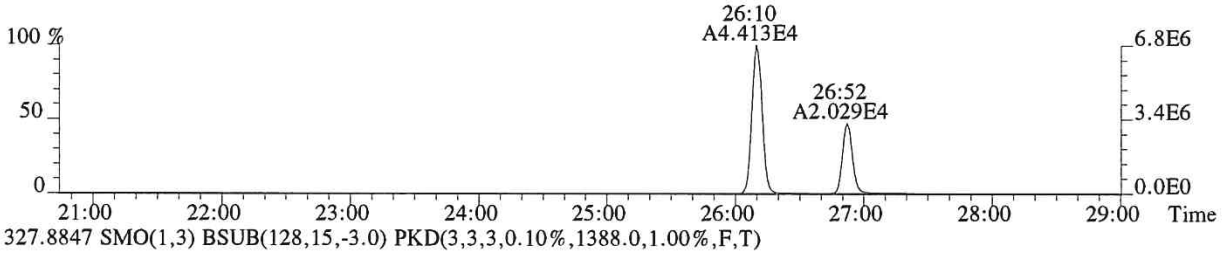
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1064.0,1.00%,F,T)



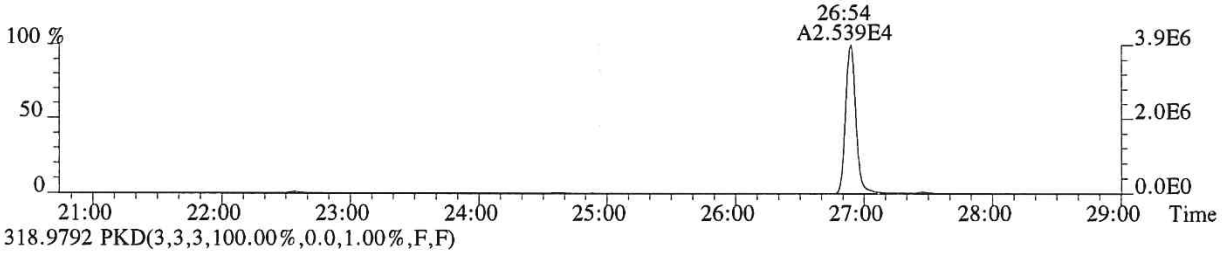
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6408.0,1.00%,F,T)



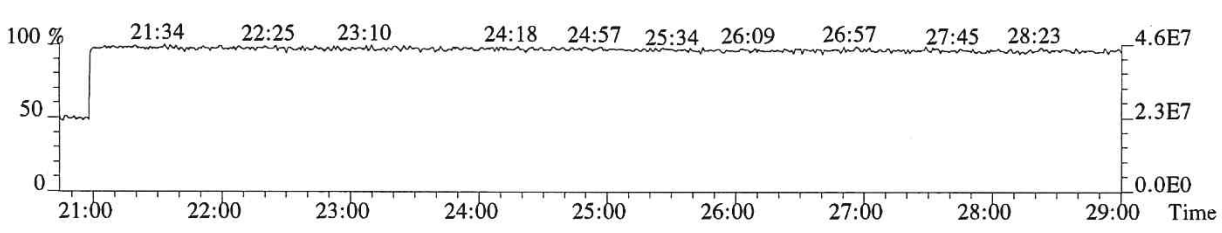
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2860.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1388.0,1.00%,F,T)

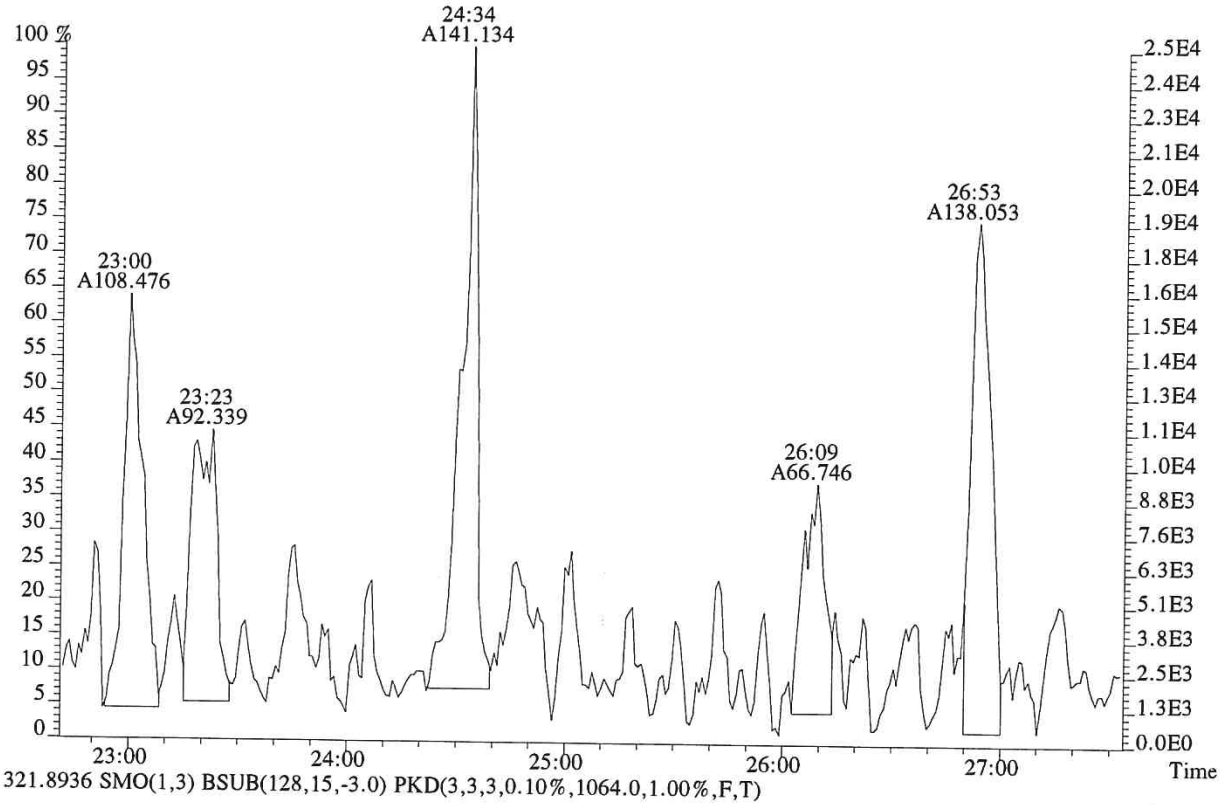


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

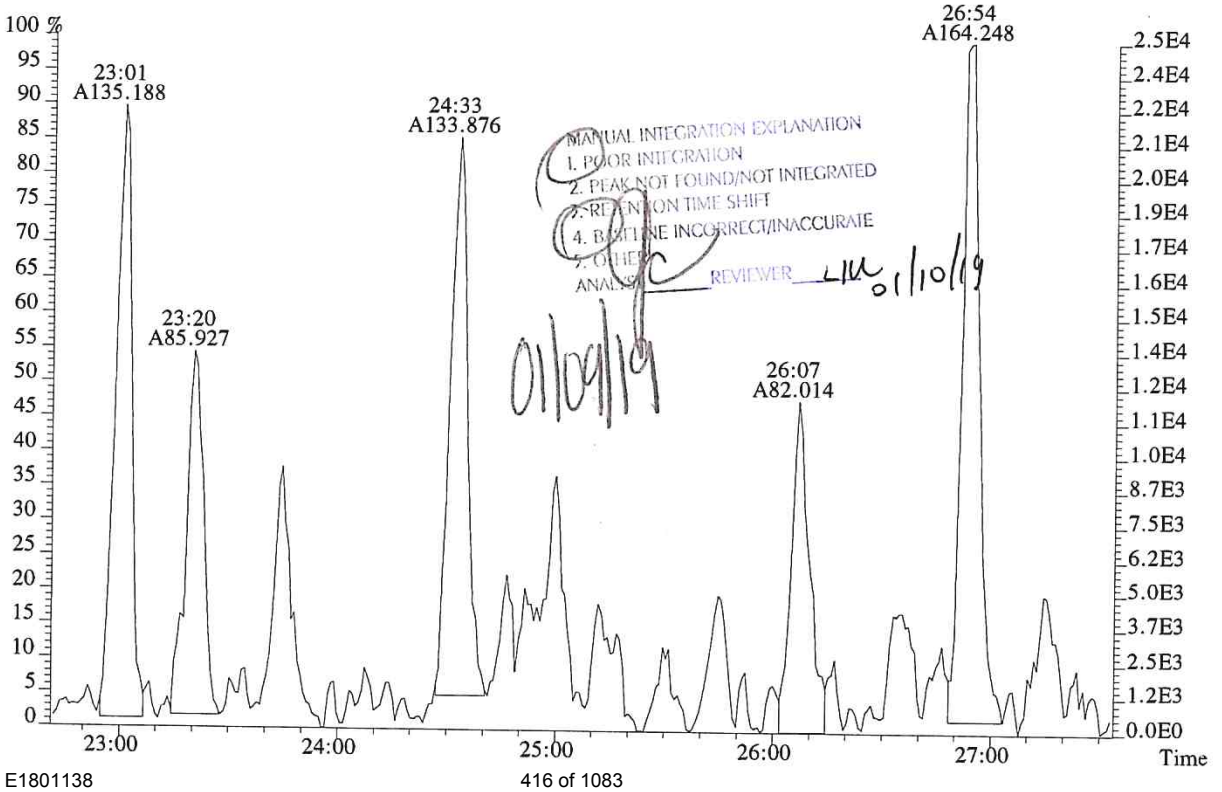


017296

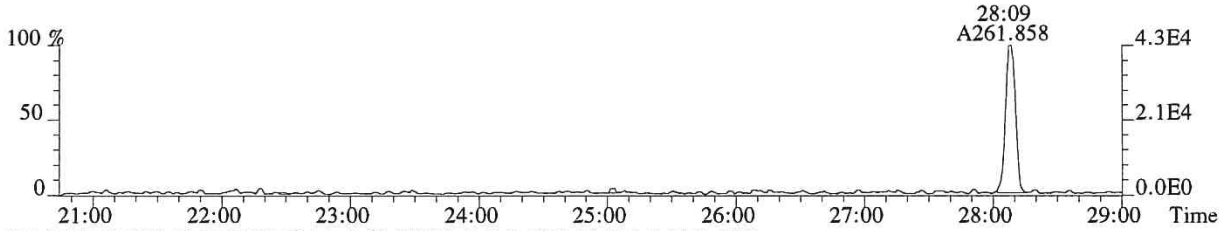
File:P519837 #1-587 Acq: 8-JAN-2019 15:02:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-011
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2968.0,1.00%,F,T)



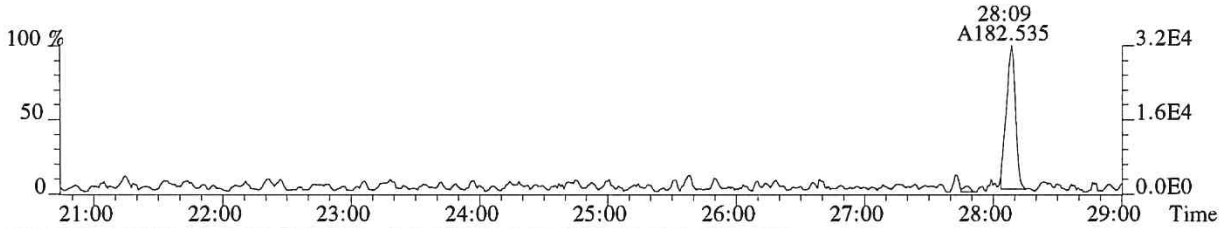
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1064.0,1.00%,F,T)



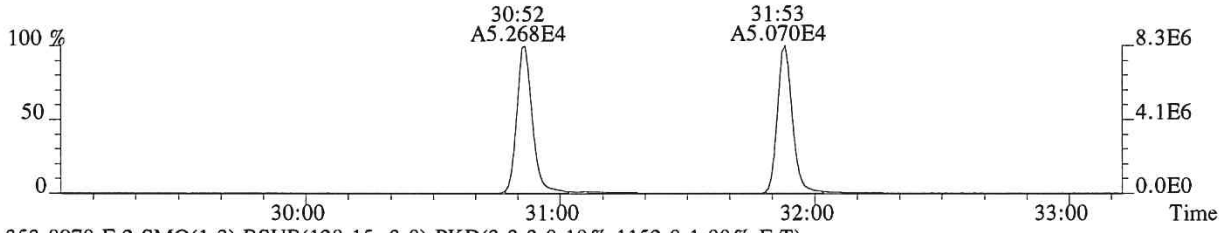
File:P519837 #1-587 Acq: 8-JAN-2019 15:02:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-011
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



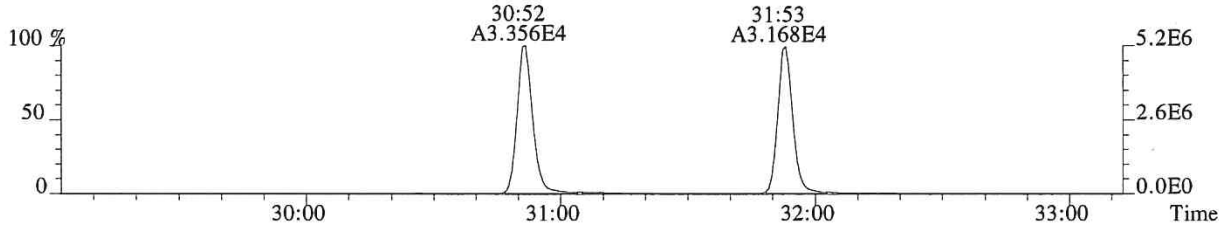
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1944.0,1.00%,F,T)



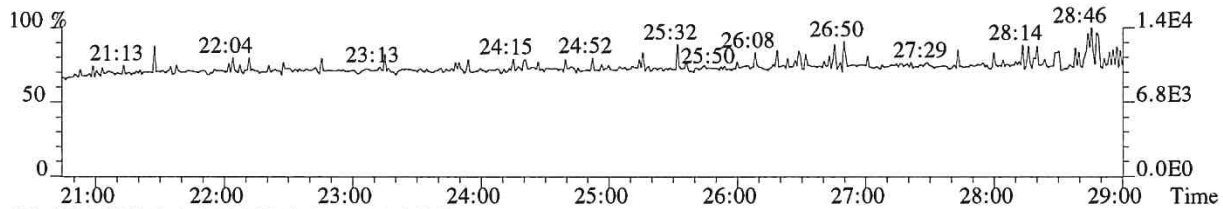
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,836.0,1.00%,F,T)



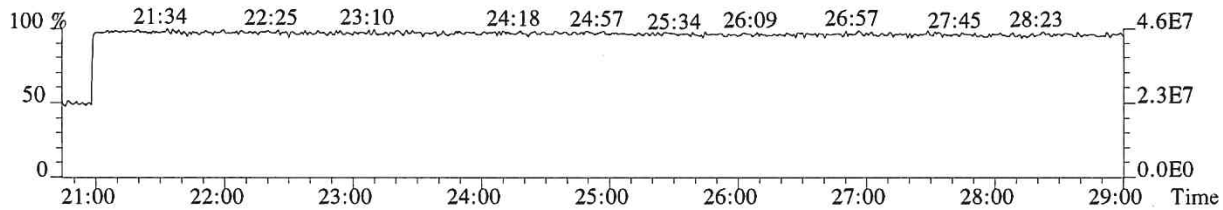
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1152.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

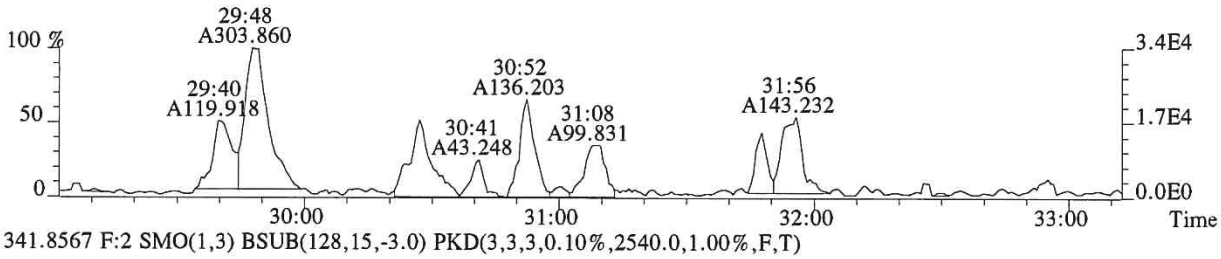


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

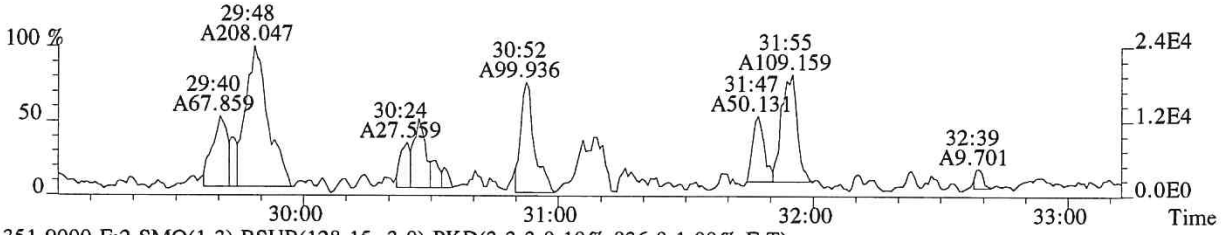


017298

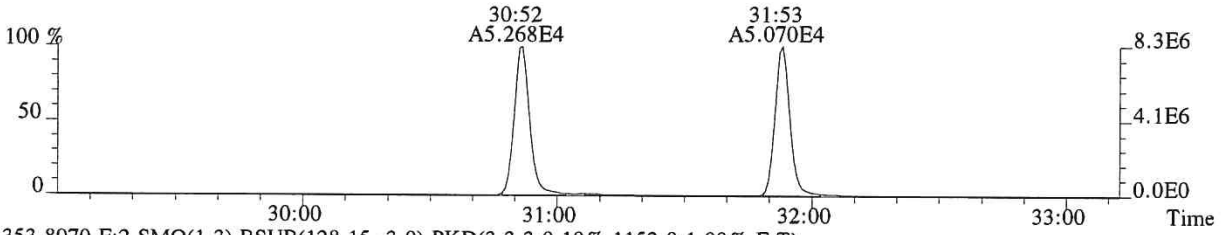
File:P519837 #1-376 Acq: 8-JAN-2019 15:02:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-011
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1412.0,1.00%,F,T)



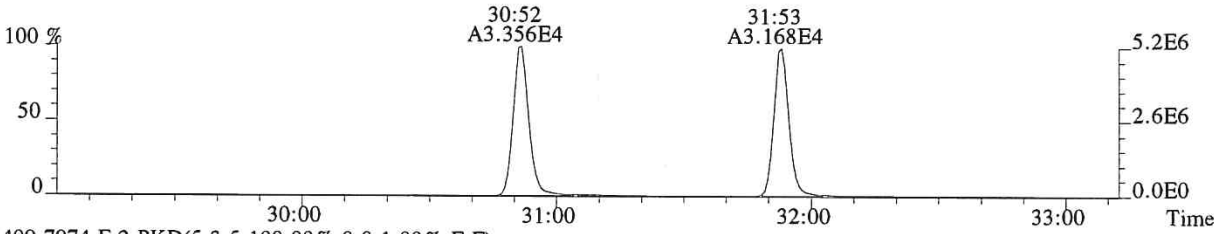
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2540.0,1.00%,F,T)



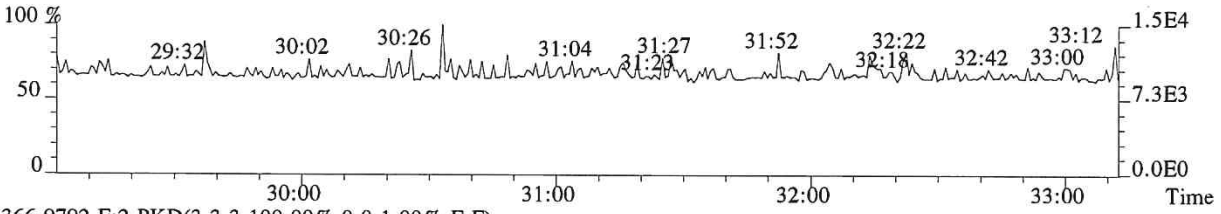
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,836.0,1.00%,F,T)



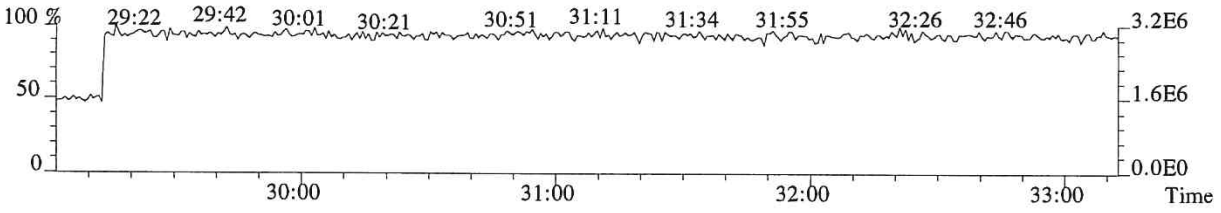
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1152.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

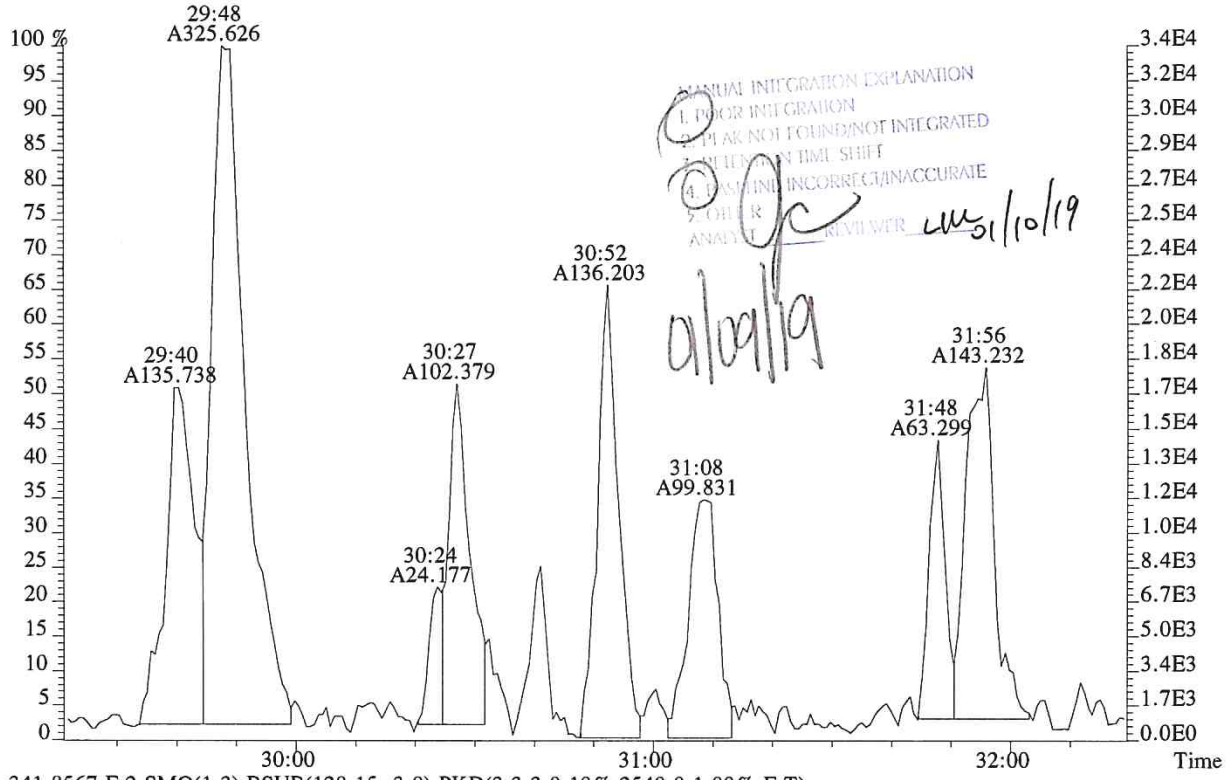


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

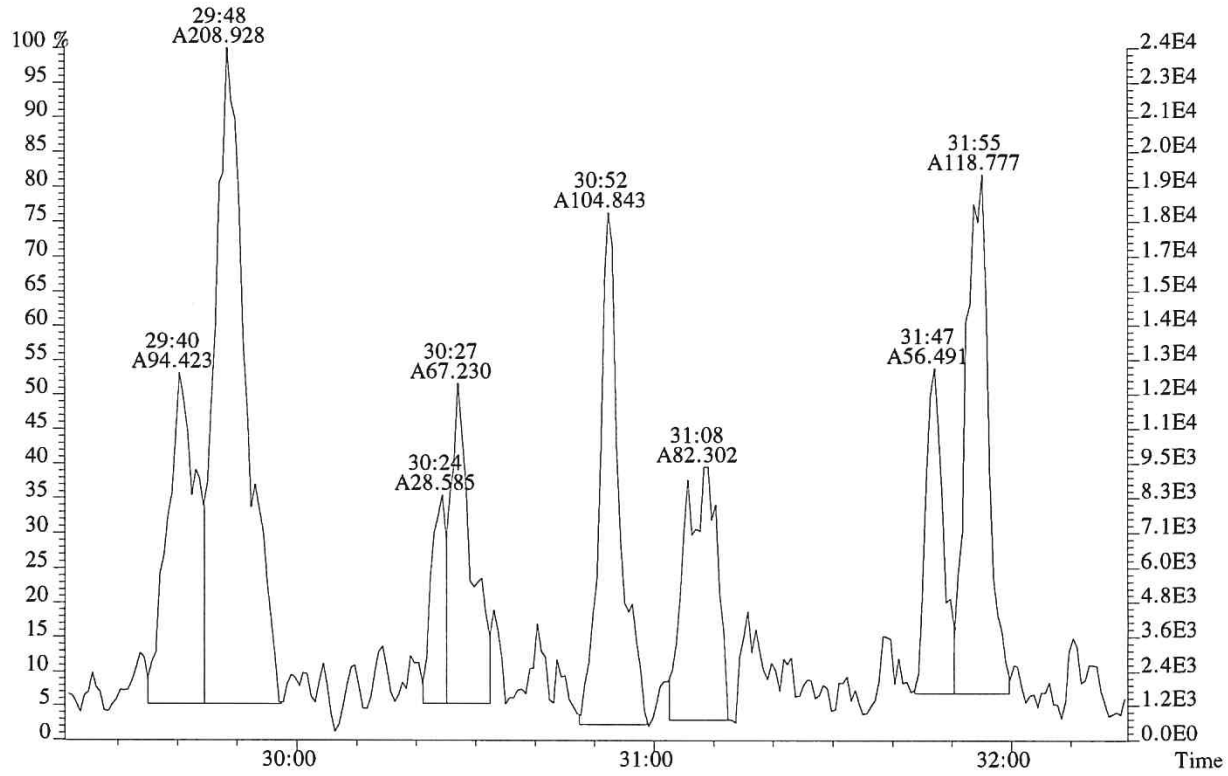


017299

File:P519837 #1-376 Acq: 8-JAN-2019 15:02:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-011
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1412.0,1.00%,F,T)

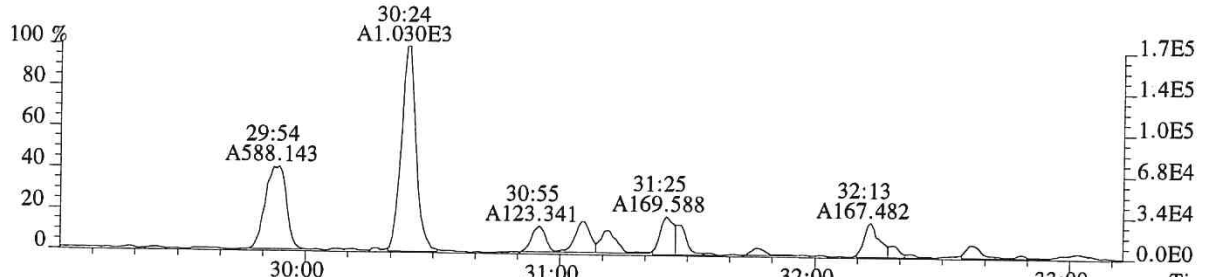


341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2540.0,1.00%,F,T)

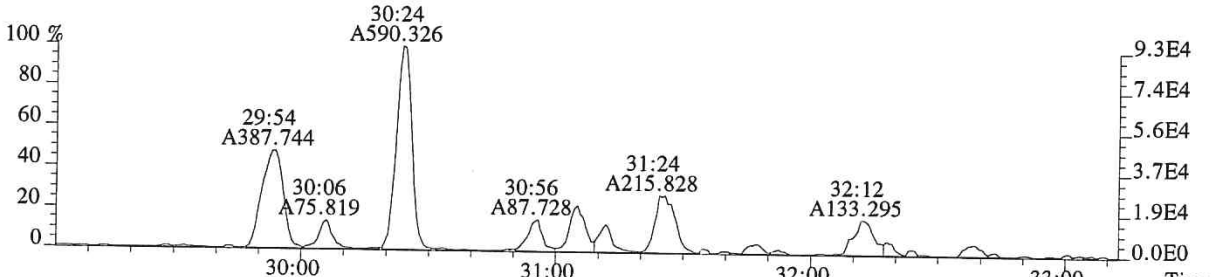


017300

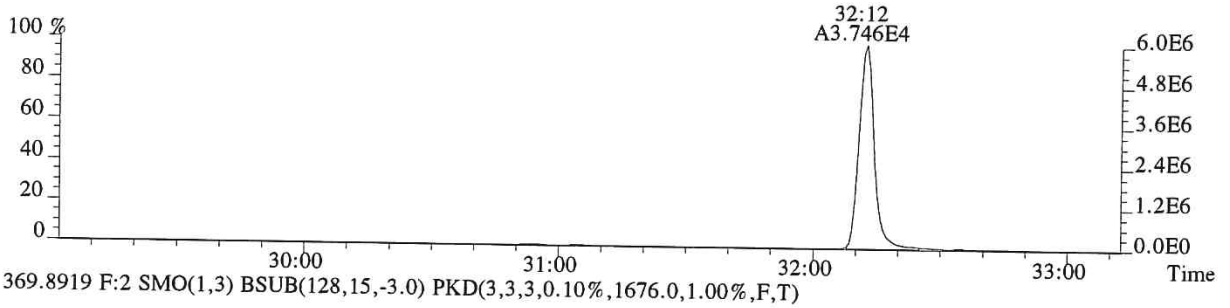
File:P519837 #1-376 Acq: 8-JAN-2019 15:02:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-011
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1492.0,1.00%,F,T)



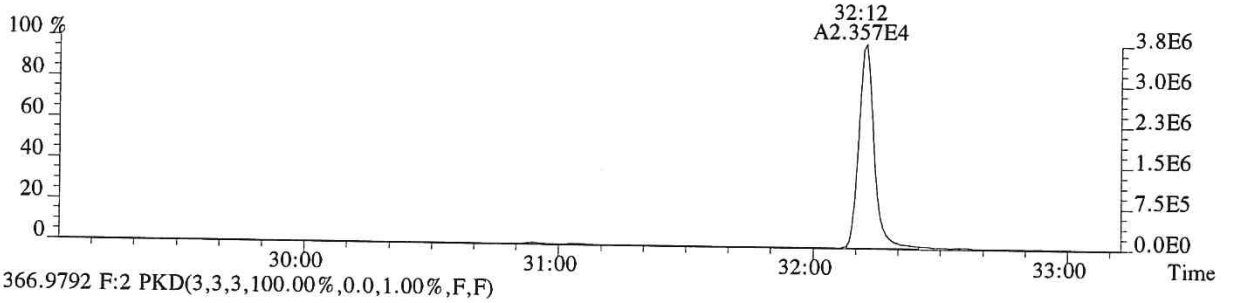
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,360.0,1.00%,F,T)



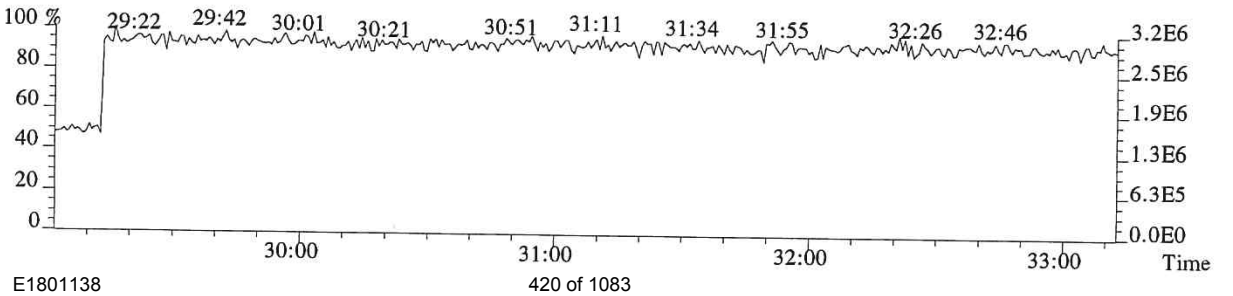
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1092.0,1.00%,F,T)



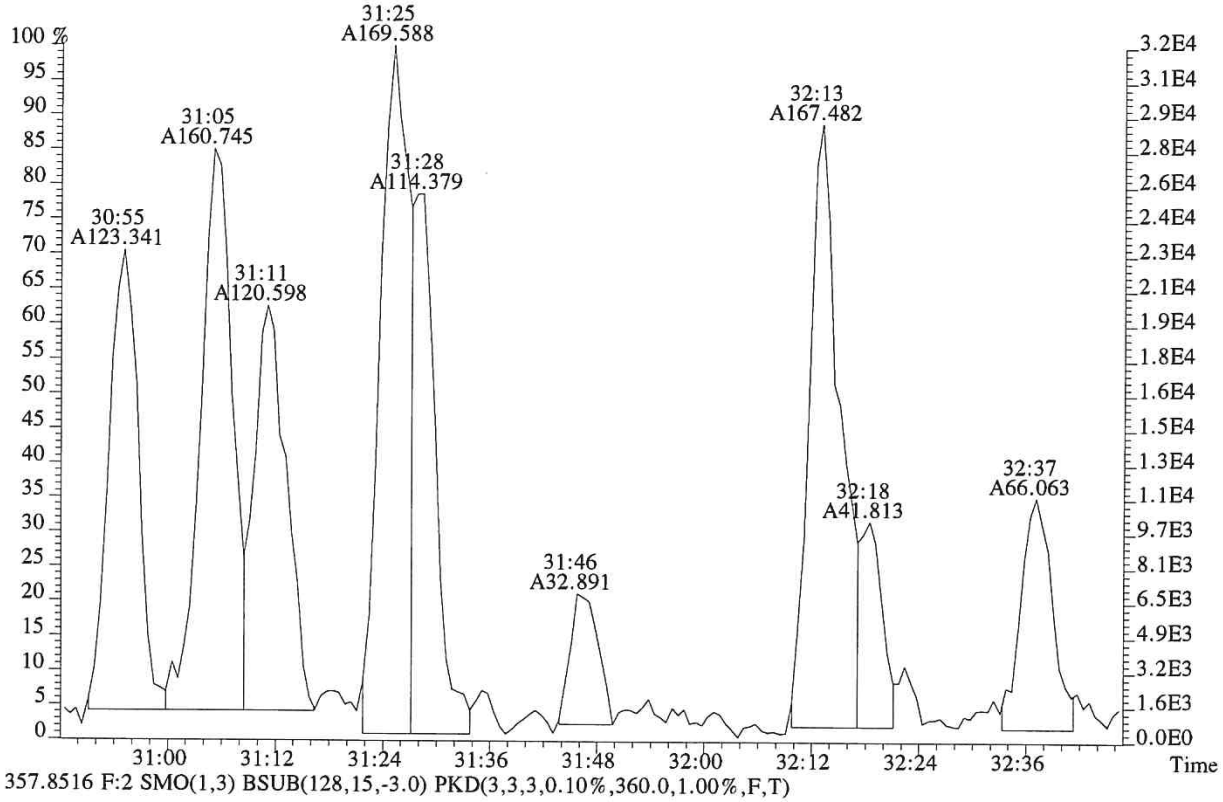
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1676.0,1.00%,F,T)



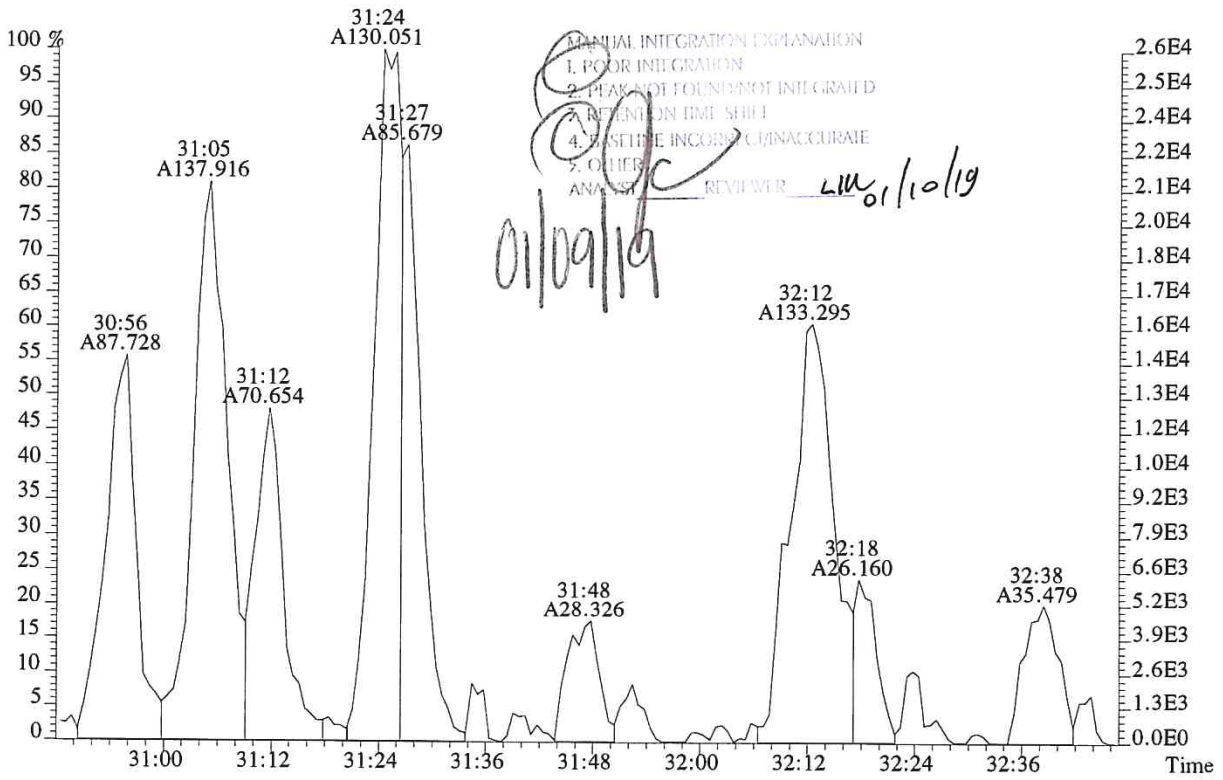
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519837 #1-376 Acq: 8-JAN-2019 15:02:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-011
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1492.0,1.00%,F,T)

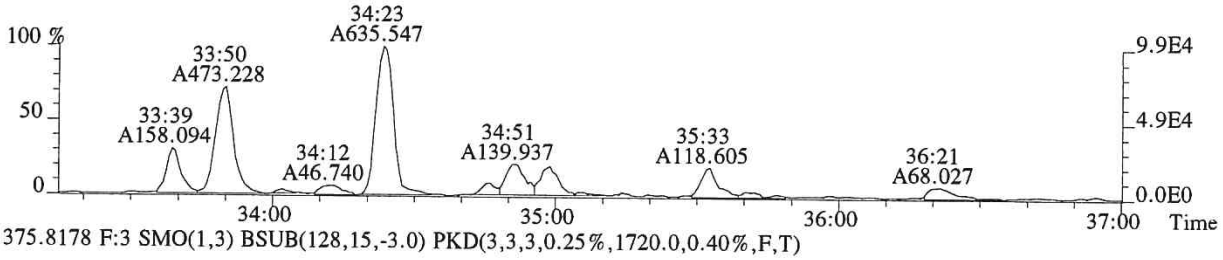


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,360.0,1.00%,F,T)

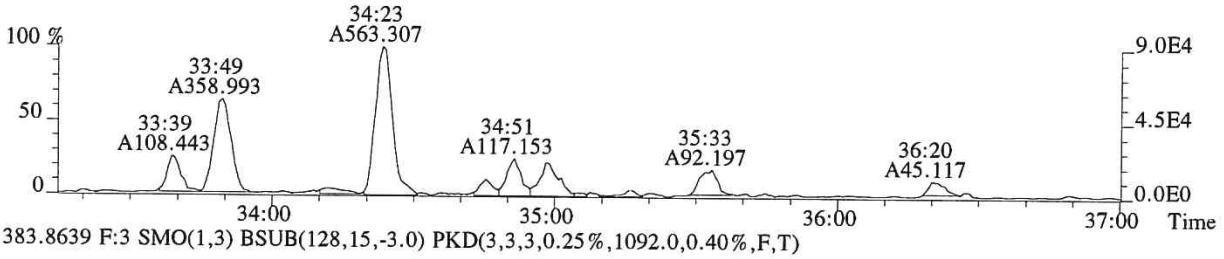


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LMW 01/10/19
01/09/19

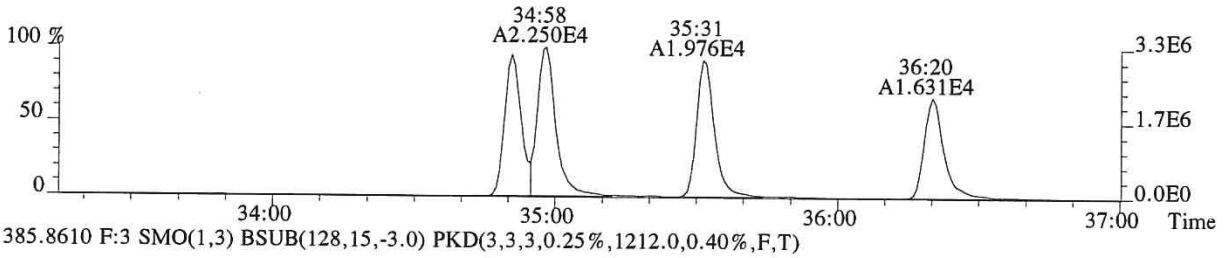
File:P519837 #1-339 Acq: 8-JAN-2019 15:02:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-011
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1272.0,0.40%,F,T)



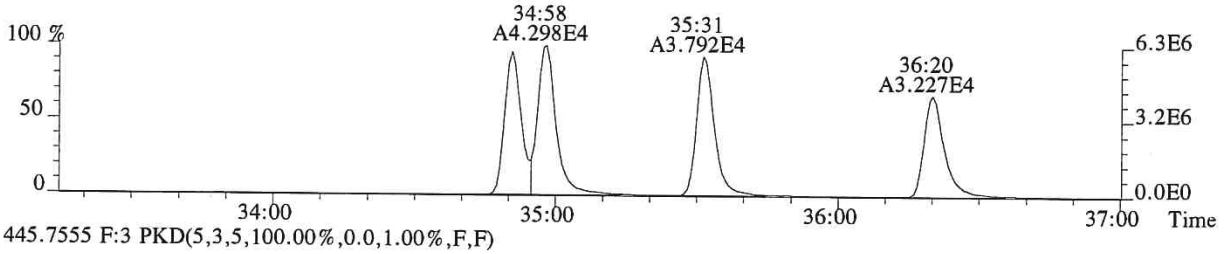
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1720.0,0.40%,F,T)



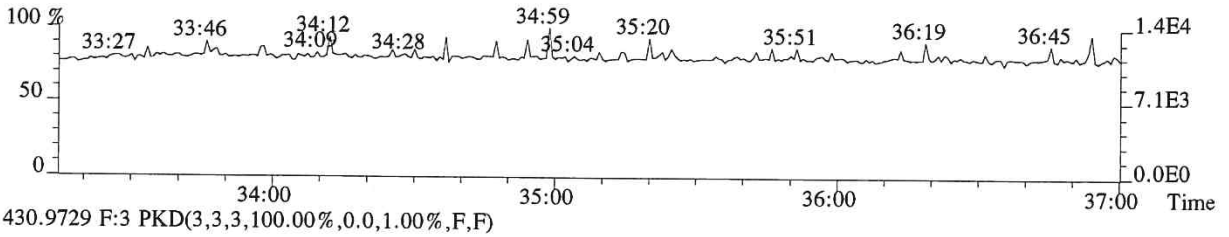
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1092.0,0.40%,F,T)



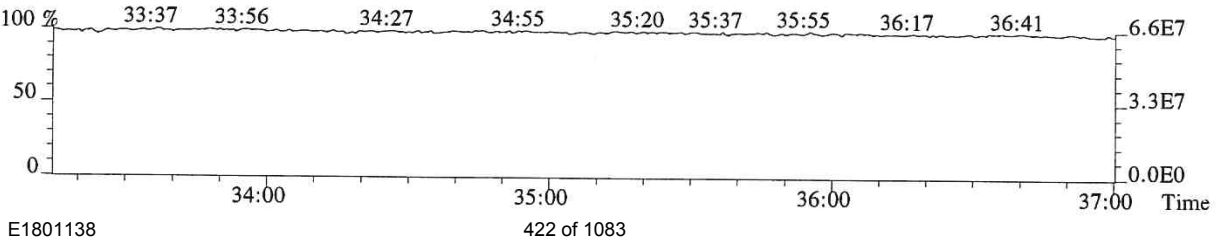
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1212.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

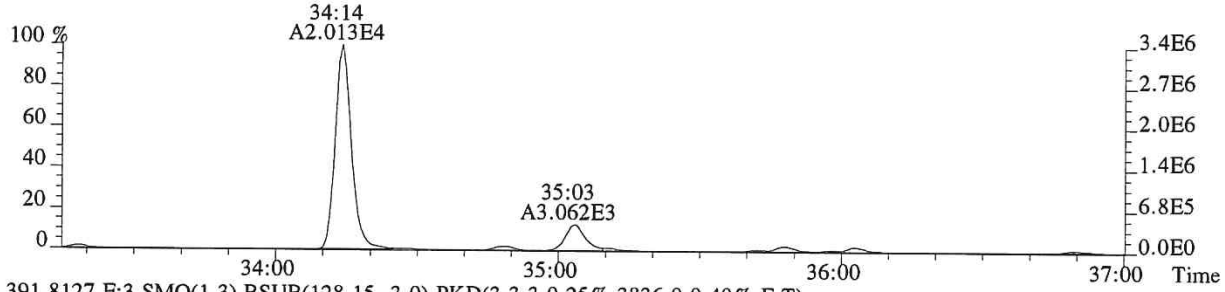


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

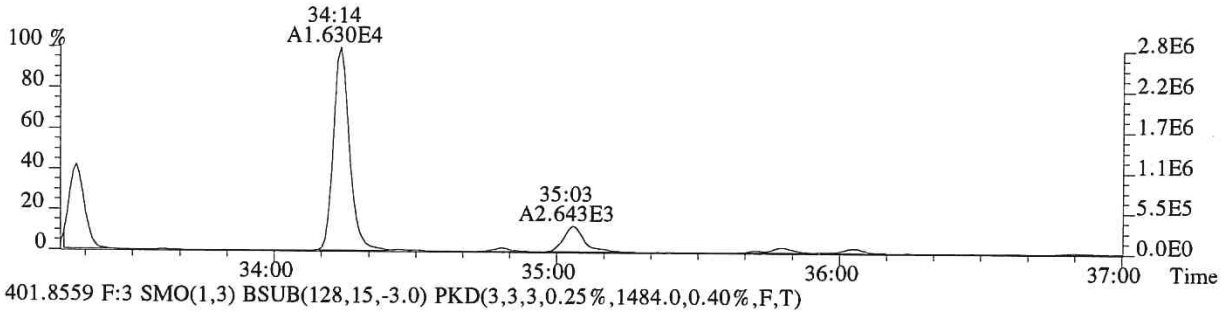


017303

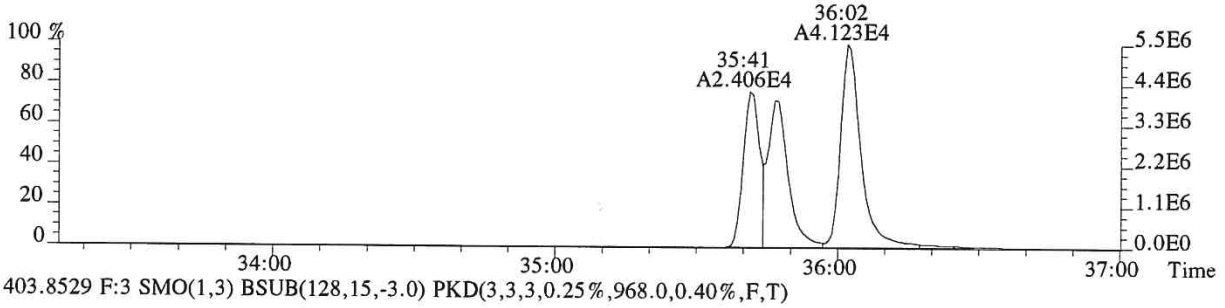
File:P519837 #1-339 Acq: 8-JAN-2019 15:02:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-011
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,664.0,0.40%,F,T)



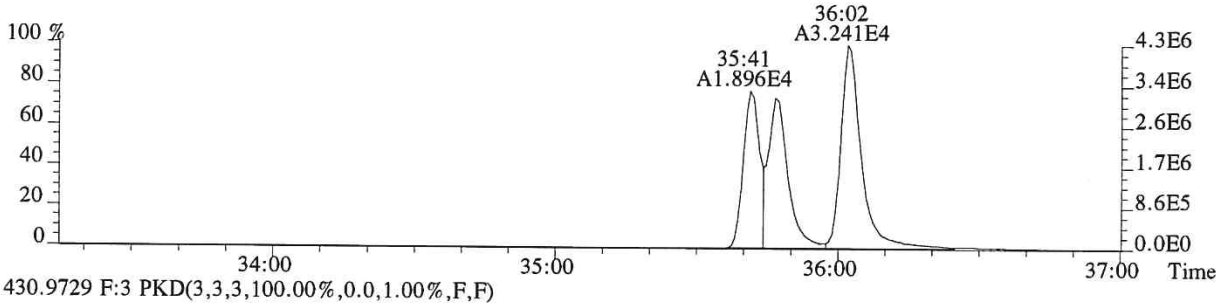
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3836.0,0.40%,F,T)



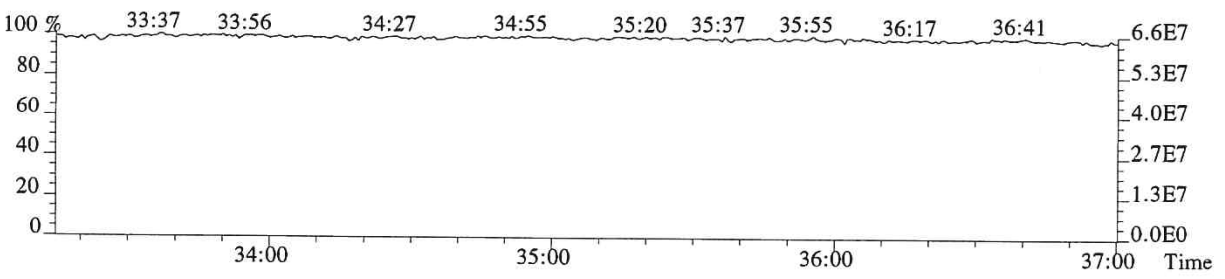
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1484.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,968.0,0.40%,F,T)

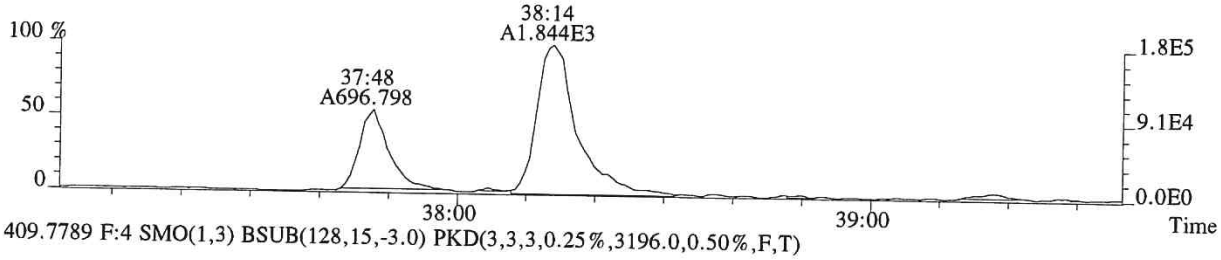


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

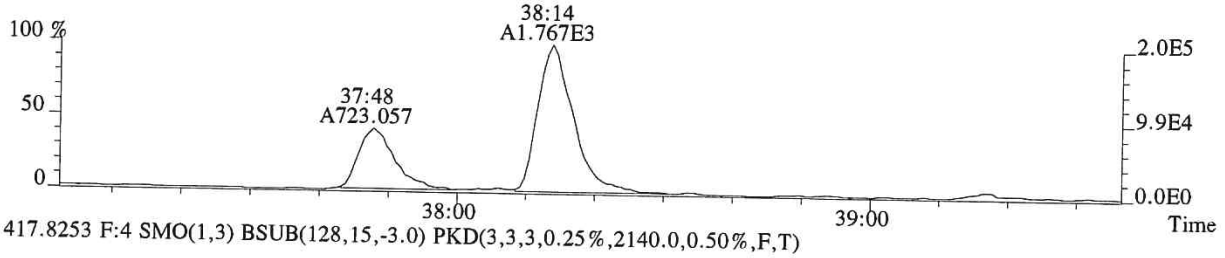


017304

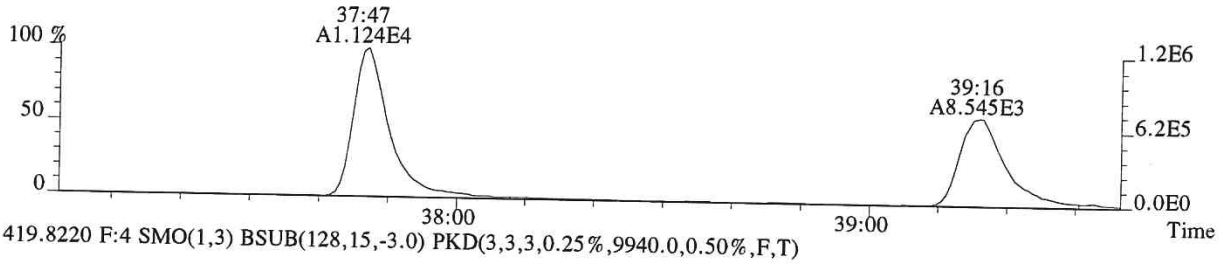
File:P519837 #1-232 Acq: 8-JAN-2019 15:02:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-011
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2208.0,0.50%,F,T)



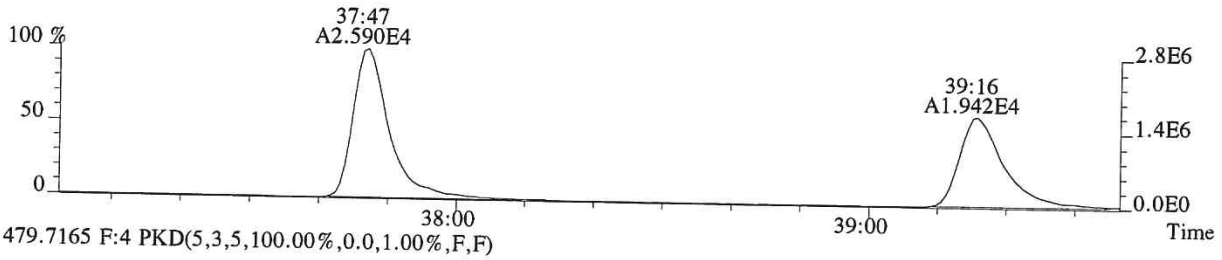
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3196.0,0.50%,F,T)



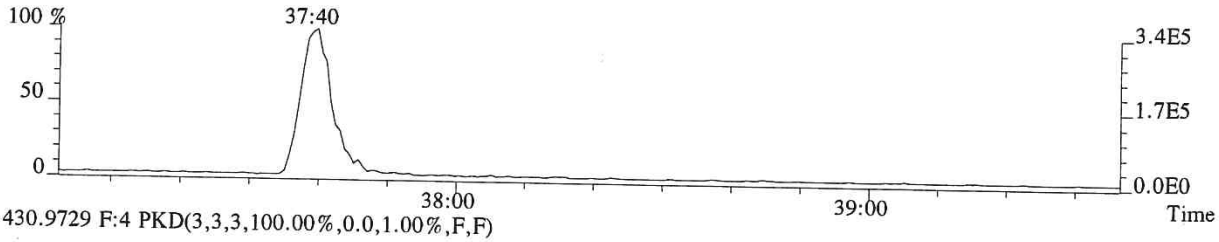
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2140.0,0.50%,F,T)



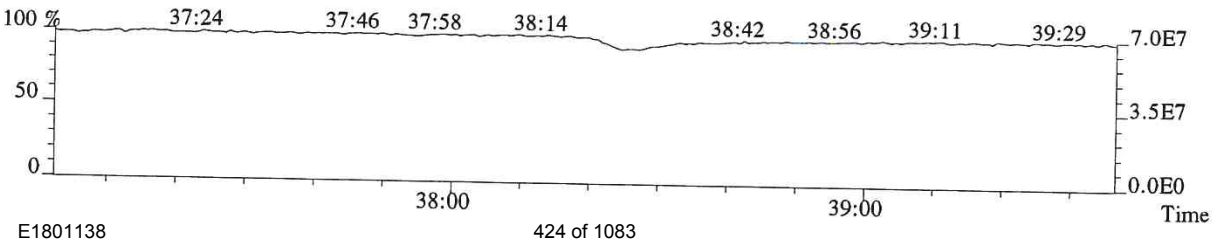
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,9940.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

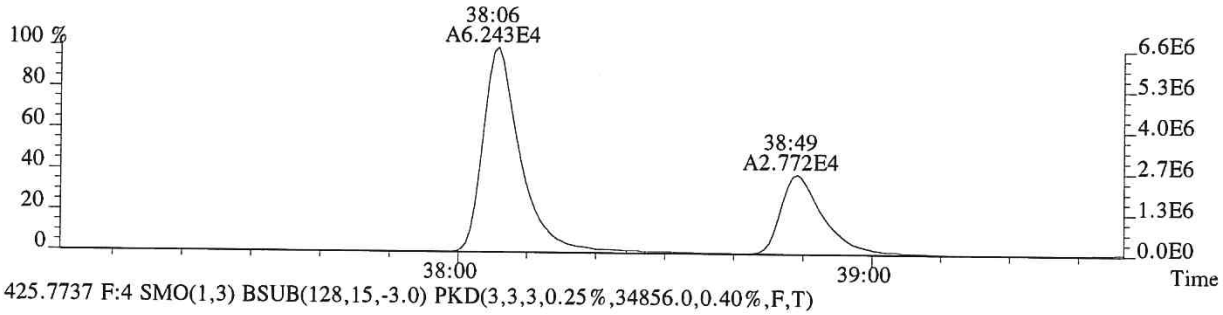


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

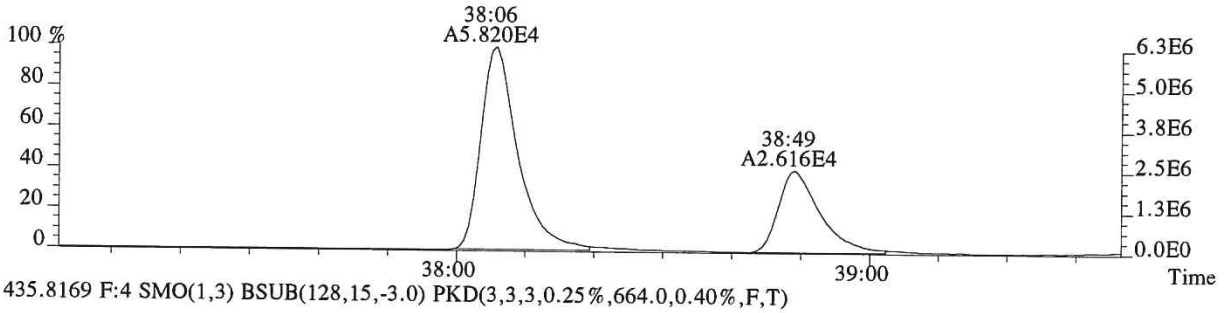


017305

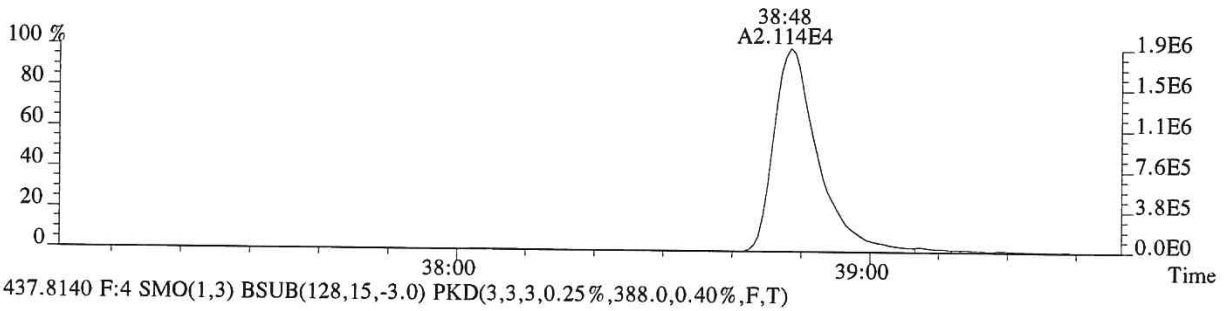
File:P519837 #1-232 Acq: 8-JAN-2019 15:02:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-011
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,792.0,0.40%,F,T)



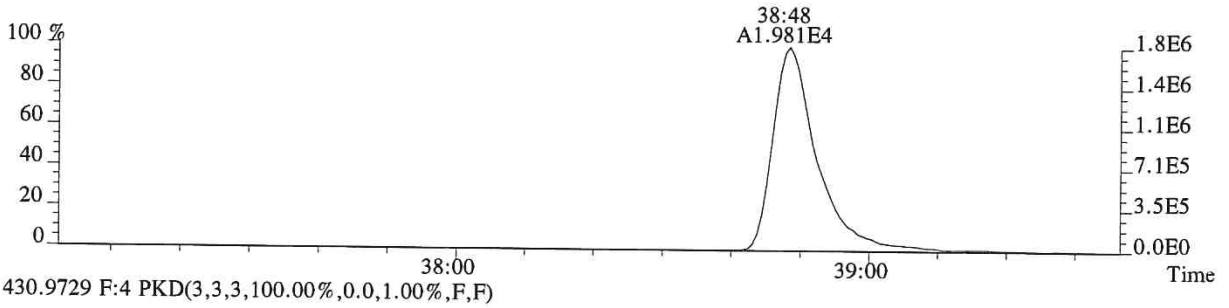
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,34856.0,0.40%,F,T)



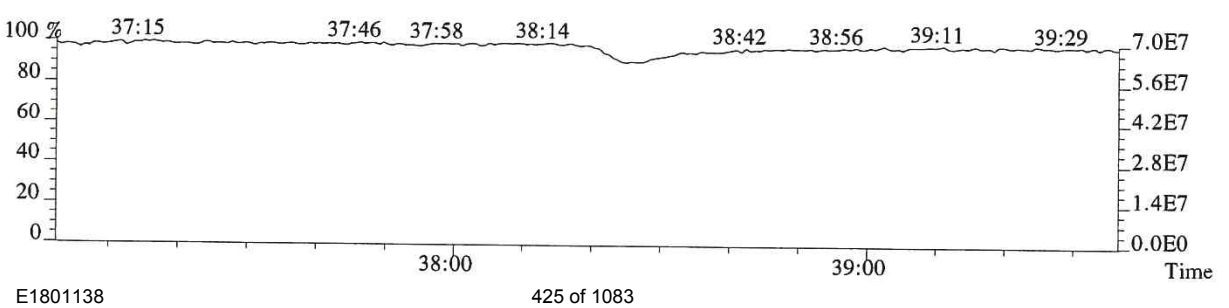
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,664.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,388.0,0.40%,F,T)

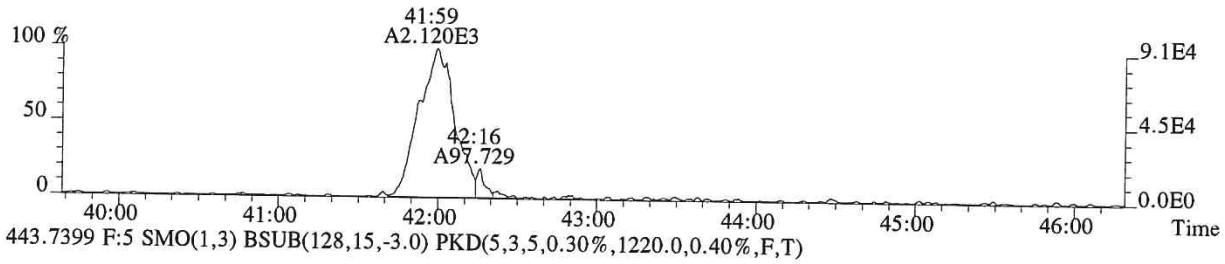


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

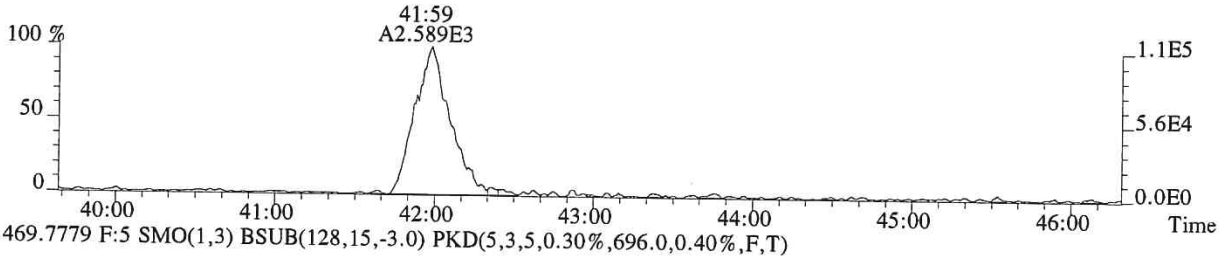


017306

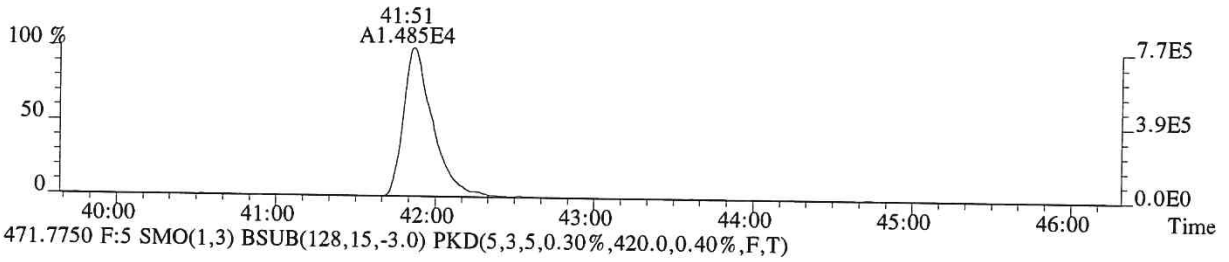
File:P519837 #1-601 Acq: 8-JAN-2019 15:02:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-011
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,376.0,0.40%,F,T)



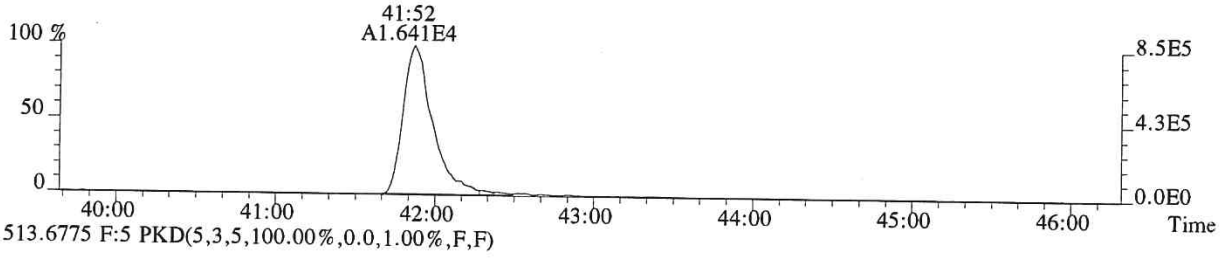
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1220.0,0.40%,F,T)



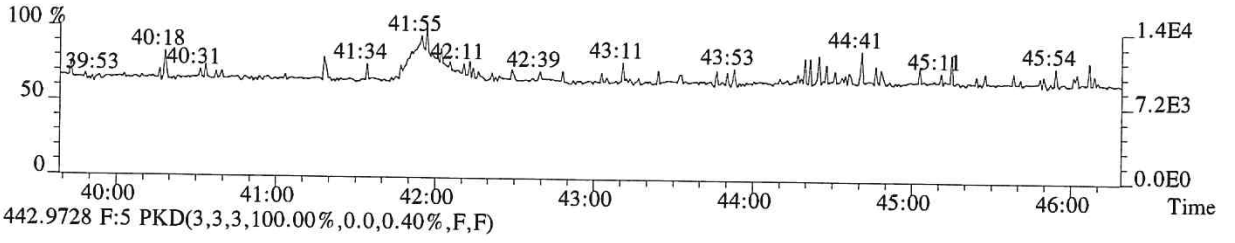
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,696.0,0.40%,F,T)



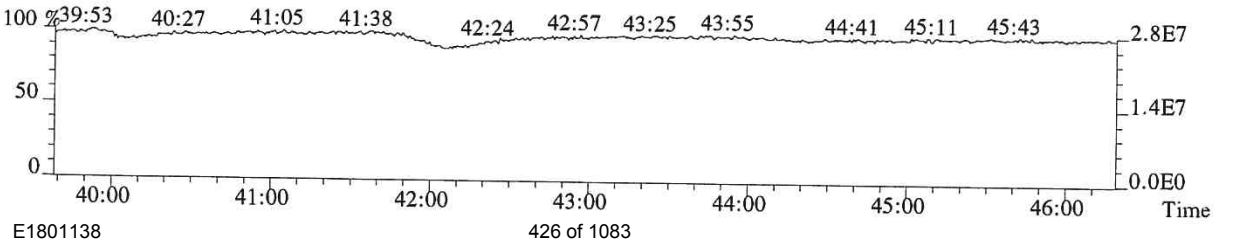
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,420.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

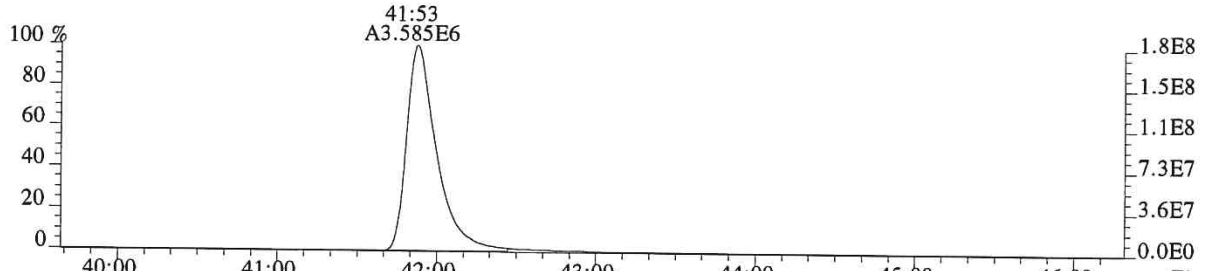


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

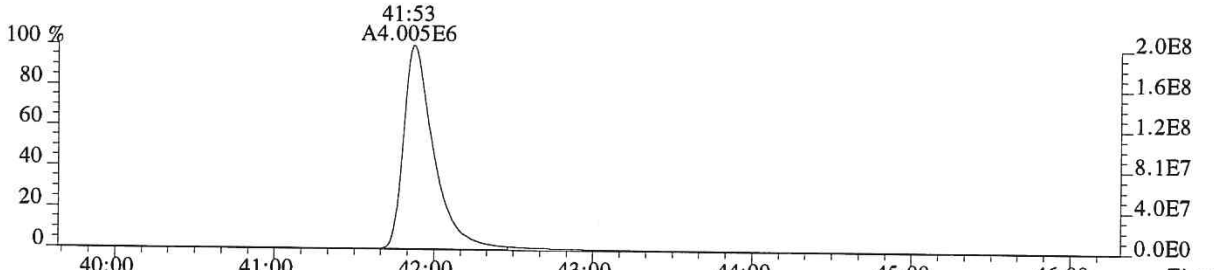


017307

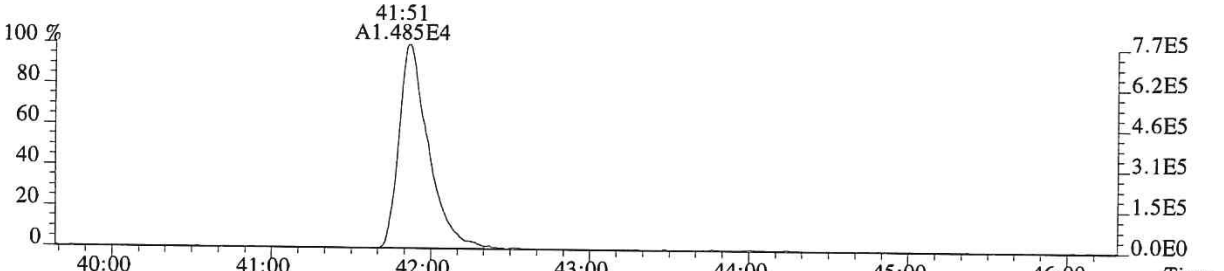
File:P519837 #1-601 Acq: 8-JAN-2019 15:02:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-011
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,628.0,0.40%,F,T)



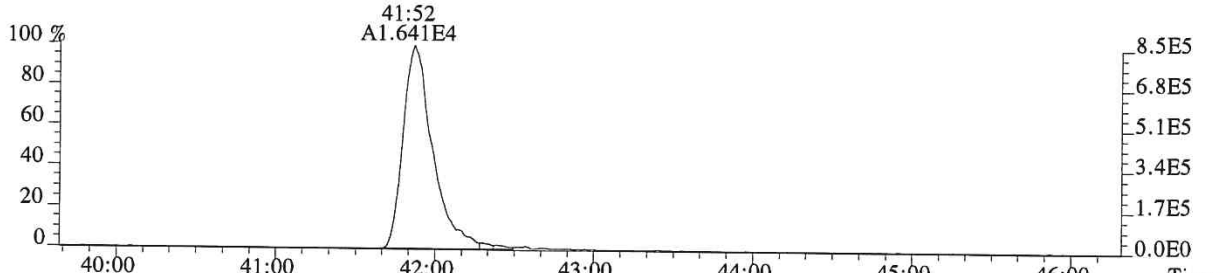
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,668.0,0.40%,F,T)



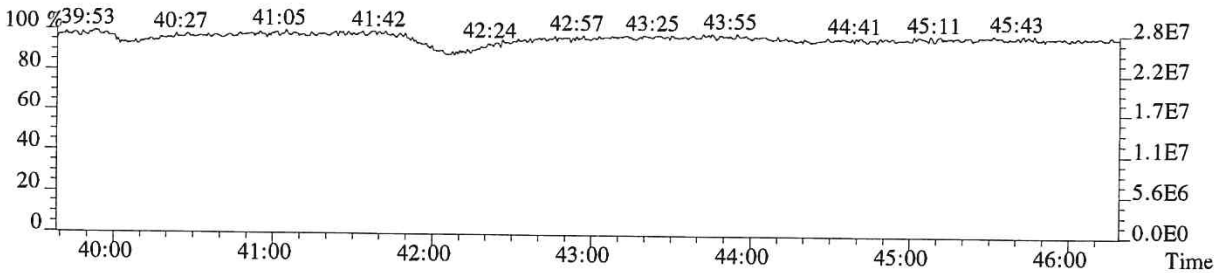
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,696.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,420.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017308

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0180

Run #14 Filename P519838 Samp: 1 Inj: 1 Acquired: 8-JAN-19 15:51:38
Processed: 9-JAN-19 11:56:32 Sample ID: E1801138-012

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:02	3.143e+06	3.984e+06	0.79	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:56	2.173e+05	1.416e+05	1.53	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:57	1.416e+05	9.209e+04	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:53	2.581e+05	2.111e+05	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:00	7.273e+04	5.905e+04	1.23	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:33	1.130e+04	9.086e+03	1.24	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:23	2.009e+04	1.649e+04	1.22	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:48	4.194e+04	4.160e+04	1.01	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:16	1.452e+04	1.436e+04	1.01	yes	no	1.258
10	Unk	OCDF	42:01	9.394e+03	1.122e+04	0.84	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:59	7.557e+05	9.612e+05	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:16	9.860e+03	6.397e+03	1.54	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:43	1.093e+02	6.662e+01	1.64	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:49	6.496e+02	4.859e+02	1.34	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:03	2.490e+02	2.175e+02	1.14	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:50	1.895e+04	1.746e+04	1.09	yes	no	1.025
17	Unk	OCDD	41:52	4.640e+05	5.091e+05	0.91	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:00	2.843e+04	3.491e+04	0.81	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:56	4.306e+04	2.761e+04	1.56	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:56	4.072e+04	2.550e+04	1.60	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:52	1.623e+04	3.011e+04	0.54	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:59	1.888e+04	3.778e+04	0.50	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:32	1.651e+04	3.218e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:21	1.493e+04	2.941e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:47	1.033e+04	2.313e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:16	8.820e+03	1.995e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:58	1.322e+04	1.647e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:14	3.119e+04	1.942e+04	1.61	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:42	2.201e+04	1.567e+04	1.40	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:48	2.344e+04	2.006e+04	1.17	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:48	1.995e+04	1.893e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	41:51	1.464e+04	1.615e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:19	3.903e+04	4.893e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:03	4.973e+04	3.886e+04	1.28	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:59	3.549e+04				no	1.014

$$\text{OCDD} = \frac{(4.640e+05 + 5.091e+05) \times 4000\ \text{pg} \times 1}{(1.464e+04 + 1.615e+04) \times 10.178\ \text{g} \times 46.8 / 100 \times 1.118} = 23738\ \text{ng/kg}$$

LW 01/10/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0180

Run #14 Filename P519838 Samp: 1 Inj: 1 Acquired: 8-JAN-19 15:51:38
Processed: 9-JAN-19 11:56:32 LAB. ID: E1801138-012

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	4.16e+08	4.58e+03	9.1e+04	5.24e+08	3.04e+03	1.7e+05
2	1,2,3,7,8-PeCDF	3.50e+07	4.36e+04	8.0e+02	2.28e+07	8.18e+03	2.8e+03
3	2,3,4,7,8-PeCDF	1.89e+07	4.36e+04	4.3e+02	1.24e+07	8.18e+03	1.5e+03
4	1,2,3,4,7,8-HxCDF	4.19e+07	1.19e+04	3.5e+03	3.45e+07	9.28e+02	3.7e+04
5	1,2,3,6,7,8-HxCDF	1.05e+07	1.19e+04	8.8e+02	8.54e+06	9.28e+02	9.2e+03
6	2,3,4,6,7,8-HxCDF	1.78e+06	1.19e+04	1.5e+02	1.51e+06	9.28e+02	1.6e+03
7	1,2,3,7,8,9-HxCDF	2.75e+06	1.19e+04	2.3e+02	2.30e+06	9.28e+02	2.5e+03
8	1,2,3,4,6,7,8-HpCDF	4.77e+06	1.23e+04	3.9e+02	4.66e+06	1.06e+04	4.4e+02
9	1,2,3,4,7,8,9-HpCDF	1.25e+06	1.23e+04	1.0e+02	1.27e+06	1.06e+04	1.2e+02
10	OCDF	4.97e+05	4.96e+02	1.0e+03	5.63e+05	1.29e+03	4.4e+02
11	2,3,7,8-TCDD	1.27e+08	3.56e+03	3.6e+04	1.61e+08	2.83e+03	5.7e+04
12	1,2,3,7,8-PeCDD	1.48e+06	2.55e+03	5.8e+02	9.91e+05	3.25e+03	3.1e+02
13	1,2,3,4,7,8-HxCDD	2.36e+04	2.69e+03	8.8e+00	1.40e+04	2.71e+03	5.2e+00
14	1,2,3,6,7,8-HxCDD	8.84e+04	2.69e+03	3.3e+01	7.47e+04	2.71e+03	2.8e+01
15	1,2,3,7,8,9-HxCDD	3.48e+04	2.69e+03	1.3e+01	3.27e+04	2.71e+03	1.2e+01
16	1,2,3,4,6,7,8-HpCDD	1.74e+06	1.67e+03	1.0e+03	1.61e+06	2.23e+03	7.2e+02
17	OCDD	2.26e+07	2.22e+03	1.0e+04	2.51e+07	3.00e+03	8.4e+03
18	13C-2,3,7,8-TCDF	4.13e+06	1.31e+04	3.1e+02	5.06e+06	2.05e+04	2.5e+02
19	13C-1,2,3,7,8-PeCDF	6.90e+06	4.63e+03	1.5e+03	4.40e+06	3.26e+03	1.3e+03
20	13C-2,3,4,7,8-PeCDF	6.93e+06	4.63e+03	1.5e+03	4.28e+06	3.26e+03	1.3e+03
21	13C-1,2,3,4,7,8-HxCDF	2.67e+06	4.97e+03	5.4e+02	5.19e+06	4.06e+03	1.3e+03
22	13C-1,2,3,6,7,8-HxCDF	2.80e+06	4.97e+03	5.6e+02	5.51e+06	4.06e+03	1.4e+03
23	13C-2,3,4,6,7,8-HxCDF	2.49e+06	4.97e+03	5.0e+02	4.89e+06	4.06e+03	1.2e+03
24	13C-1,2,3,7,8,9-HxCDF	2.01e+06	4.97e+03	4.0e+02	3.93e+06	4.06e+03	9.7e+02
25	13C-1,2,3,4,6,7,8-HpCDF	1.17e+06	2.70e+03	4.3e+02	2.63e+06	5.73e+03	4.6e+02
26	13C-1,2,3,4,7,8,9-HpCDF	7.60e+05	2.70e+03	2.8e+02	1.68e+06	5.73e+03	2.9e+02
27	13C-2,3,7,8-TCDD	2.26e+06	7.49e+03	3.0e+02	2.82e+06	3.50e+03	8.1e+02
28	13C-1,2,3,7,8-PeCDD	5.04e+06	1.33e+03	3.8e+03	3.16e+06	1.28e+03	2.5e+03
29	13C-1,2,3,4,7,8-HxCDD	3.52e+06	1.72e+03	2.0e+03	2.74e+06	7.84e+02	3.5e+03
30	13C-1,2,3,6,7,8-HxCDD	3.26e+06	1.72e+03	1.9e+03	2.64e+06	7.84e+02	3.4e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.83e+06	1.21e+03	1.5e+03	1.75e+06	1.01e+03	1.7e+03
32	13C-OCDD	7.48e+05	1.20e+03	6.2e+02	8.02e+05	3.68e+02	2.2e+03
33	13C-1,2,3,4-TCDD	5.92e+06	7.49e+03	7.9e+02	7.44e+06	3.50e+03	2.1e+03
34	13C-1,2,3,7,8,9-HxCDD	6.61e+06	1.72e+03	3.8e+03	5.24e+06	7.84e+02	6.7e+03
35	37Cl-2,3,7,8-TCDD	5.99e+06	3.28e+03	1.8e+03			

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Peak List Summary

CLIENT ID.
SL0180

Entry: 36 Totals Name: Total Tetra-Furans

Run: 14 File: P519838 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 15:51:38 Processed: 9-JAN-19 11:56:32

Mass: 303.9020 305.8990 Tot Response: 1.31e+07 RRF: 0.9417

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:52	2.34e+04	3.06e+04 0.76	yes	5.40e+04		n	n
2	23:09	1.37e+05	1.77e+05 0.77	yes	3.13e+05		n	n
3	23:29	4.34e+04	5.81e+04 0.75	yes	1.01e+05		n	n
4	23:37	4.94e+03	6.74e+03 0.73	yes	1.17e+04		n	n
5	23:47	1.17e+05	1.53e+05 0.77	yes	2.71e+05		n	n
6	24:10	2.62e+04	3.36e+04 0.78	yes	5.98e+04		n	n
7	24:24	7.50e+04	9.88e+04 0.76	yes	1.74e+05		n	n
8	24:32	1.49e+05	1.92e+05 0.78	yes	3.41e+05		n	n
9	25:00	1.45e+06	1.84e+06 0.79	yes	3.29e+06		n	n
10	25:19	7.48e+04	9.72e+04 0.77	yes	1.72e+05		n	n
11	26:02	3.14e+06	3.98e+06 0.79	yes	7.13e+06	2,3,7,8-TCDF	n	n
12	26:28	2.14e+05	2.73e+05 0.78	yes	4.88e+05		n	n
13	26:43	4.13e+04	5.48e+04 0.75	yes	9.61e+04		n	n
14	28:13	2.47e+05	3.15e+05 0.78	yes	5.62e+05		n	n

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Peak List Summary

CLIENT ID.
SL0180

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 14 File: P519838 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 15:51:38 Processed: 9-JAN-19 11:56:32

Mass: 319.8970 321.8940 Tot Response: 1.93e+06 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:41	1.11e+04	1.37e+04	0.81	yes	2.48e+04		n	n
2	26:59	7.56e+05	9.61e+05	0.79	yes	1.72e+06	2,3,7,8-TCDD	n	n
3	27:20	8.15e+04	1.05e+05	0.77	yes	1.87e+05		n	n

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Peak List Summary

CLIENT ID.
SL0180

Entry: 39 Totals Name: Total Penta-Furans2

Run: 14 File: P519838 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 15:51:38 Processed: 9-JAN-19 11:56:32

Mass: 339.8600 341.8570 Tot Response: 9.10e+05 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:54	9.71e+04	6.17e+04	1.57	yes	1.59e+05		n	n
2	30:31	1.80e+03	1.30e+03	1.38	yes	3.10e+03		n	n
3	30:36	2.33e+03	1.66e+03	1.40	yes	3.99e+03		n	n
4	30:45	1.81e+04	1.18e+04	1.53	yes	2.99e+04		n	n
5	30:56	2.17e+05	1.42e+05	1.53	yes	3.59e+05	1,2,3,7,8-PeCDF	n	n
6	31:13	6.52e+04	4.26e+04	1.53	yes	1.08e+05		n	n
7	31:50	1.15e+03	7.40e+02	1.55	yes	1.89e+03		n	n
8	31:57	1.42e+05	9.21e+04	1.54	yes	2.34e+05	2,3,4,7,8-PeCDF	n	n
9	32:55	6.91e+03	4.71e+03	1.47	yes	1.16e+04		n	n

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Peak List Summary

CLIENT ID.
SL0180

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 14 File: P519838 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 15:51:38 Processed: 9-JAN-19 11:56:32

Mass: 355.8550 357.8520 Tot Response: 2.02e+04 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:58	5.13e+02	3.03e+02	1.69	yes	8.16e+02		n	n
2	30:28	2.36e+02	1.62e+02	1.46	yes	3.98e+02		n	n
3	30:58	7.29e+02	4.81e+02	1.52	yes	1.21e+03		n	n
4	31:09	5.22e+02	2.94e+02	1.77	yes	8.16e+02		n	n
5	31:15	2.37e+02	1.74e+02	1.37	yes	4.11e+02		n	n
6	31:29	1.67e+02	9.36e+01	1.78	yes	2.60e+02		n	n
7	32:16	9.86e+03	6.40e+03	1.54	yes	1.63e+04	1,2,3,7,8-PeCDD	n	n

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Peak List Summary

CLIENT ID.
SL0180

Entry: 41 Totals Name: Total Hexa-Furans

Run: 14 File: P519838 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 15:51:38 Processed: 9-JAN-19 11:56:32

Mass: 373.8210 375.8180 Tot Response: 7.11e+05 RRF: 1.141

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:41	1.36e+03	1.11e+03 1.23	yes	2.47e+03		n	n
2	33:51	1.82e+04	1.51e+04 1.20	yes	3.33e+04		n	n
3	34:25	9.74e+03	7.94e+03 1.23	yes	1.77e+04		n	n
4	34:53	2.58e+05	2.11e+05 1.22	yes	4.69e+05	1,2,3,4,7,8-HxCDF	n	n
5	35:00	7.27e+04	5.91e+04 1.23	yes	1.32e+05	1,2,3,6,7,8-HxCDF	n	n
6	35:33	1.13e+04	9.09e+03 1.24	yes	2.04e+04	2,3,4,6,7,8-HxCDF	n	n
7	36:23	2.01e+04	1.65e+04 1.22	yes	3.66e+04	1,2,3,7,8,9-HxCDF	n	n

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Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 14 File: P519838 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 15:51:38 Processed: 9-JAN-19 11:56:32

Mass: 389.8160 391.8130 Tot Response: 1.33e+04 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:15	4.11e+03	3.15e+03	1.31	yes	7.26e+03		n	n
2	34:50	2.87e+02	2.27e+02	1.27	yes	5.14e+02		n	n
3	35:05	2.29e+03	1.68e+03	1.36	yes	3.97e+03		n	n
4	35:49	6.50e+02	4.86e+02	1.34	yes	1.14e+03	1,2,3,6,7,8-HxCDD	n	n
5	36:03	2.49e+02	2.18e+02	1.14	yes	4.67e+02	1,2,3,7,8,9-HxCDD	n	n

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Entry: 43 Totals Name: Total Hepta-Furans

Run: 14 File: P519838 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 15:51:38 Processed: 9-JAN-19 11:56:32

Mass: 407.7820 409.7790 Tot Response: 1.41e+05 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:48	4.19e+04	4.16e+04	1.01	yes	8.35e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	38:14	1.41e+04	1.42e+04	0.99	yes	2.84e+04		n	n
3	39:16	1.45e+04	1.44e+04	1.01	yes	2.89e+04	1,2,3,4,7,8,9-HpCDF	n	n

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Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 14 File: P519838 Sample:1 Injection:1 Function:4

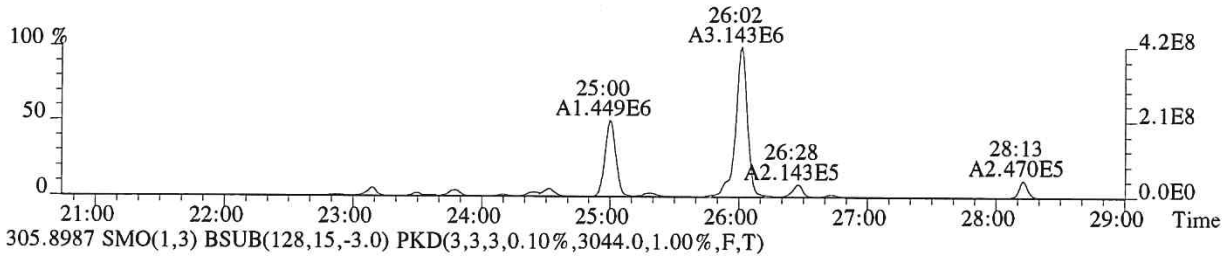
Acquired: 8-JAN-19 15:51:38 Processed: 9-JAN-19 11:56:32

Mass: 423.7770 425.7740 Tot Response: 7.81e+04 RRF: 1.025

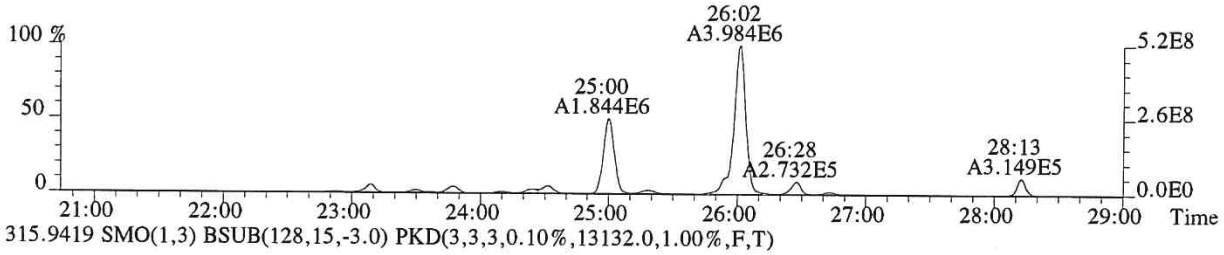
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:06	2.11e+04	2.06e+04	1.02	yes	4.17e+04		n	n
2	38:50	1.89e+04	1.75e+04	1.09	yes	3.64e+04	1,2,3,4,6,7,8-HpCDD	n	n

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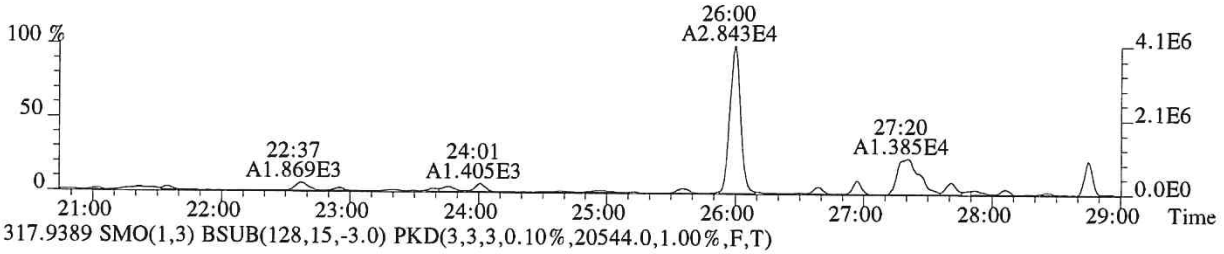
File:P519838 #1-587 Acq: 8-JAN-2019 15:51:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4576.0,1.00%,F,T)



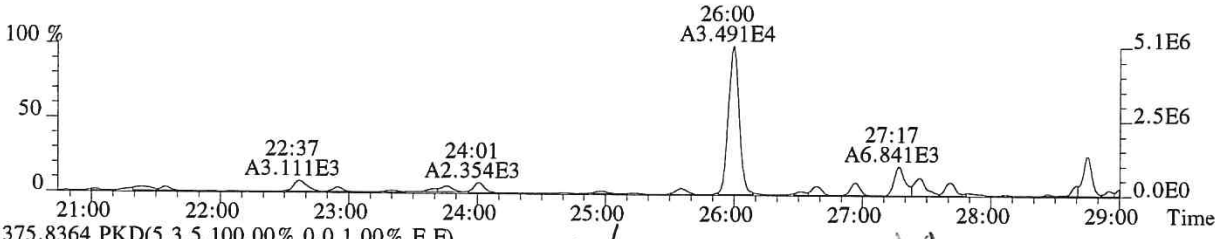
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3044.0,1.00%,F,T)



315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,13132.0,1.00%,F,T)

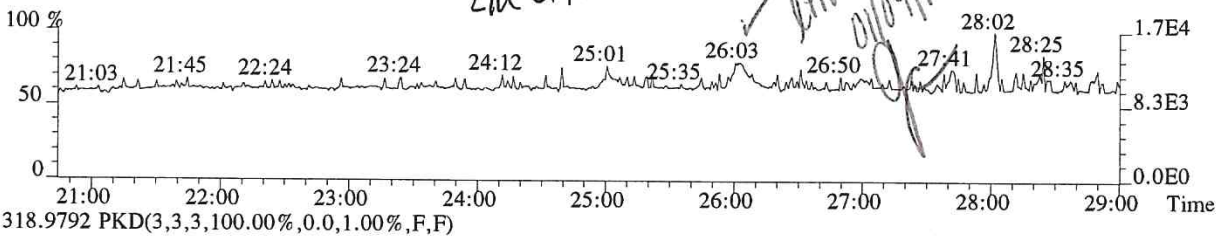


317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,20544.0,1.00%,F,T)

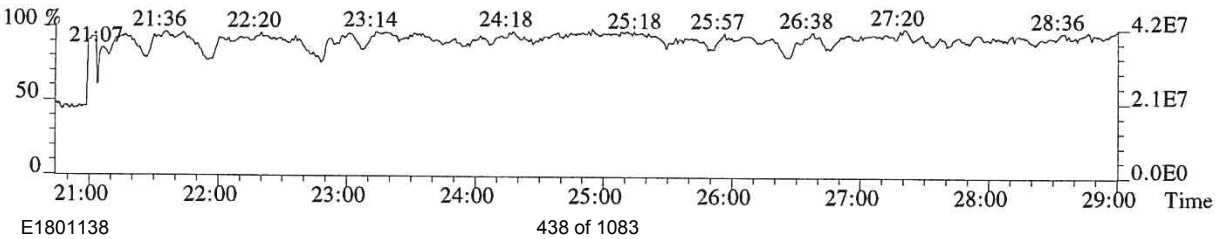


375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

LW 01/10/19

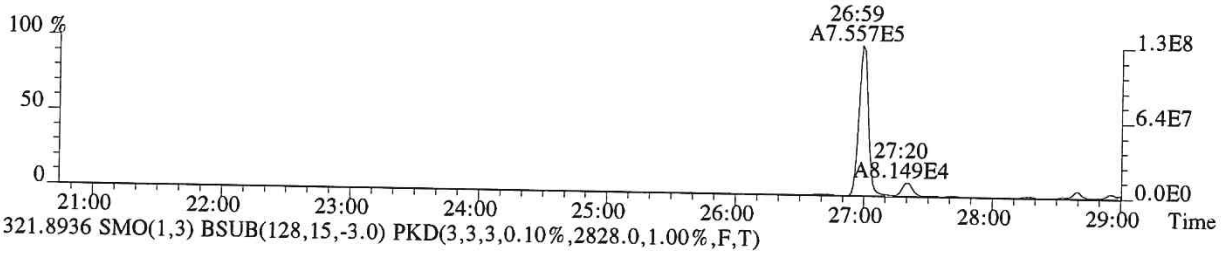


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

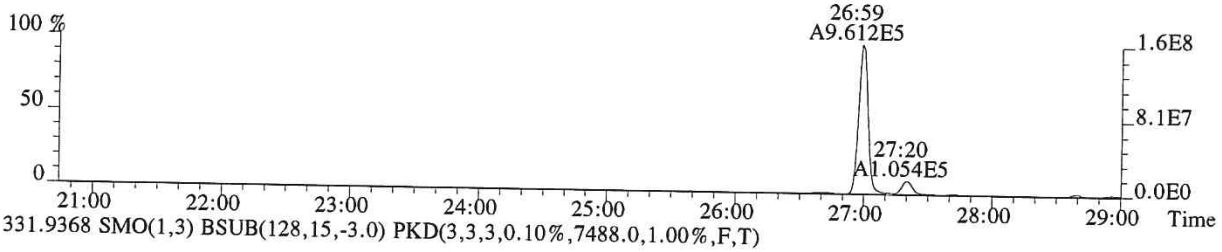


017319

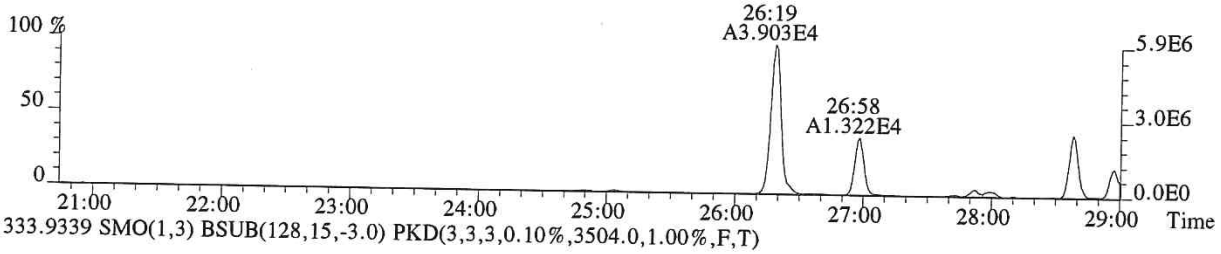
File:P519838 #1-587 Acq: 8-JAN-2019 15:51:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3556.0,1.00%,F,T)



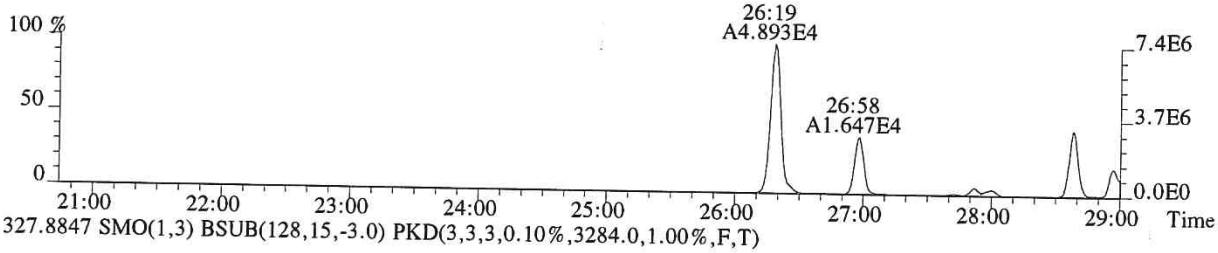
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2828.0,1.00%,F,T)



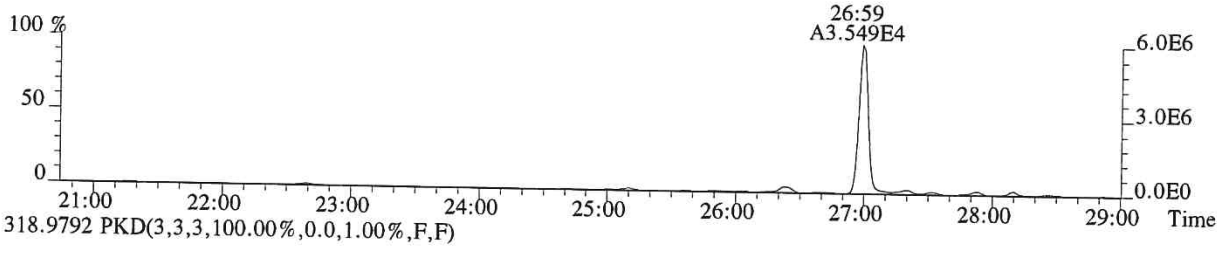
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7488.0,1.00%,F,T)



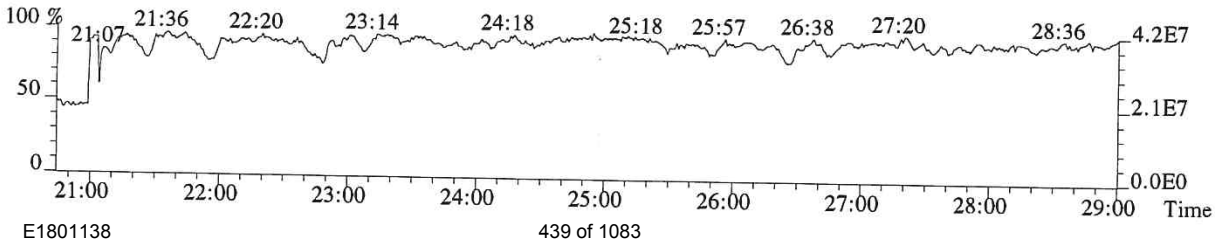
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3504.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3284.0,1.00%,F,T)

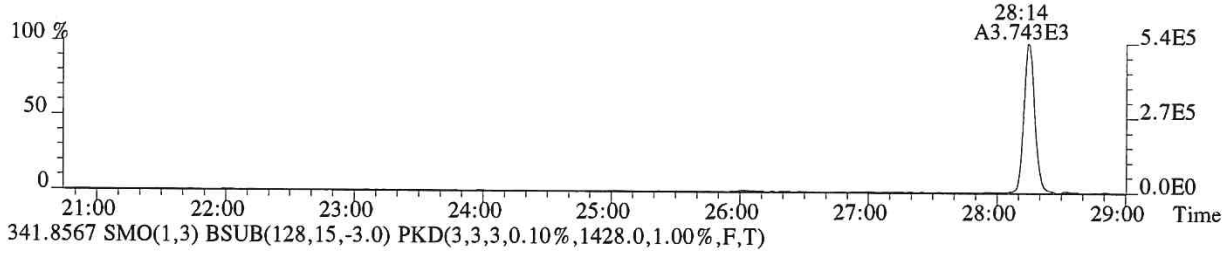


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

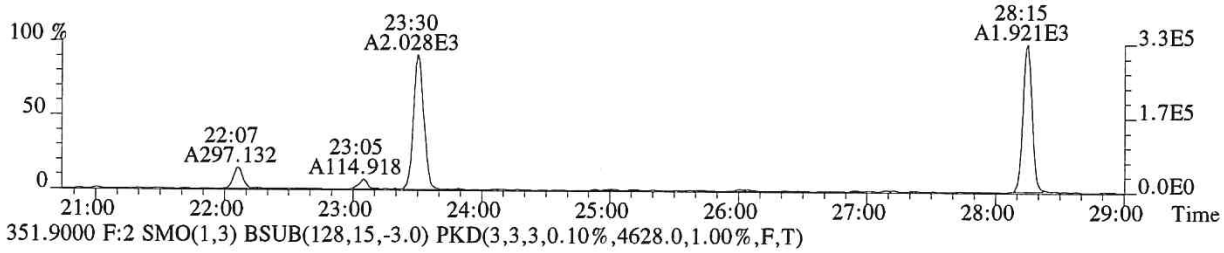


017320

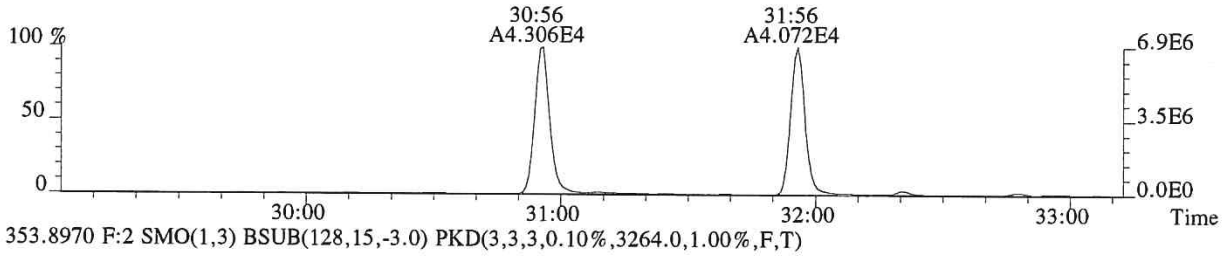
File:P519838 #1-587 Acq: 8-JAN-2019 15:51:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,916.0,1.00%,F,T)



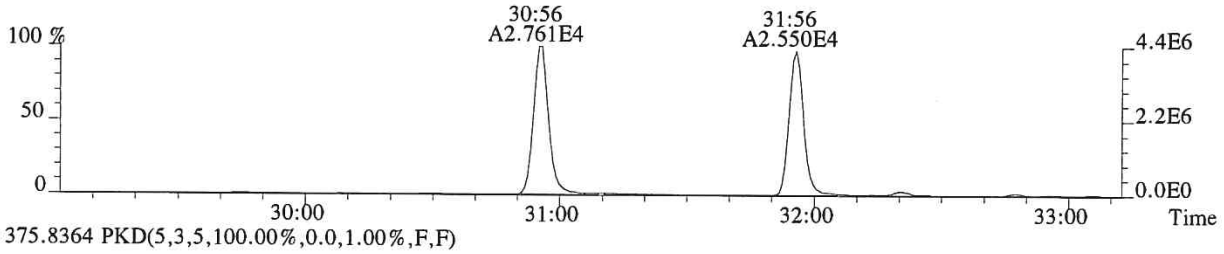
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1428.0,1.00%,F,T)



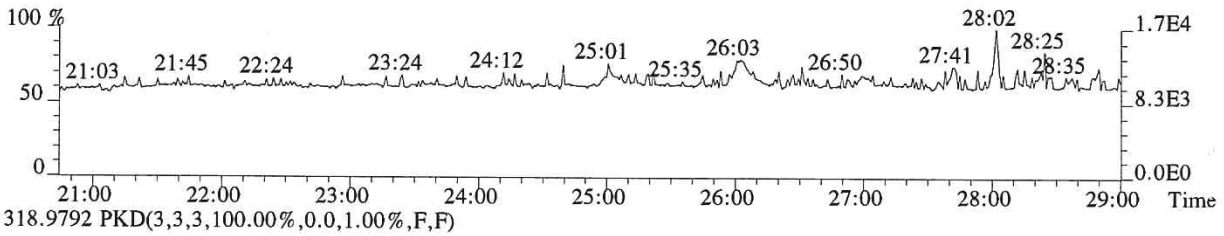
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4628.0,1.00%,F,T)



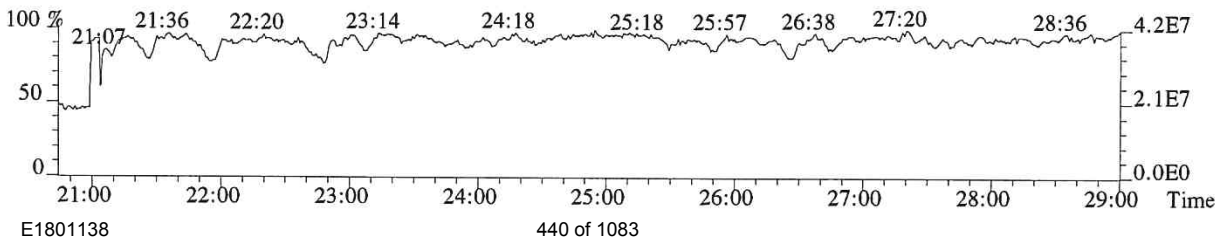
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3264.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

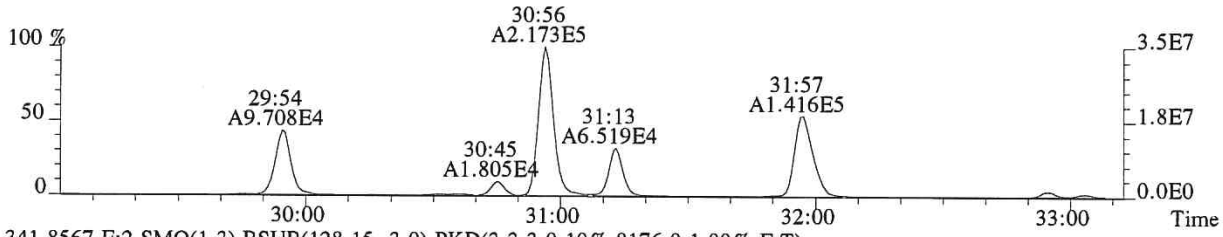


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

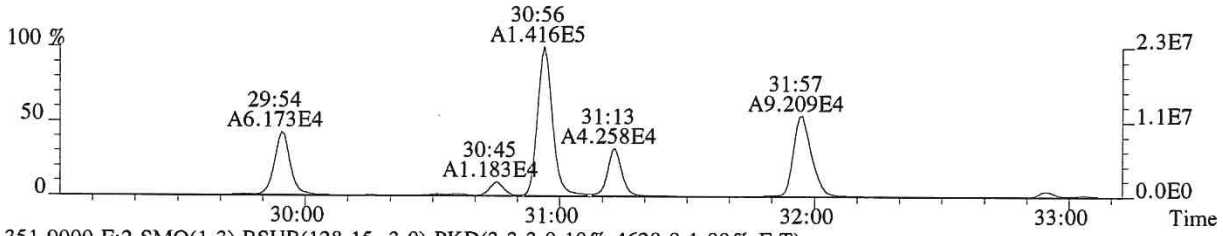


017321

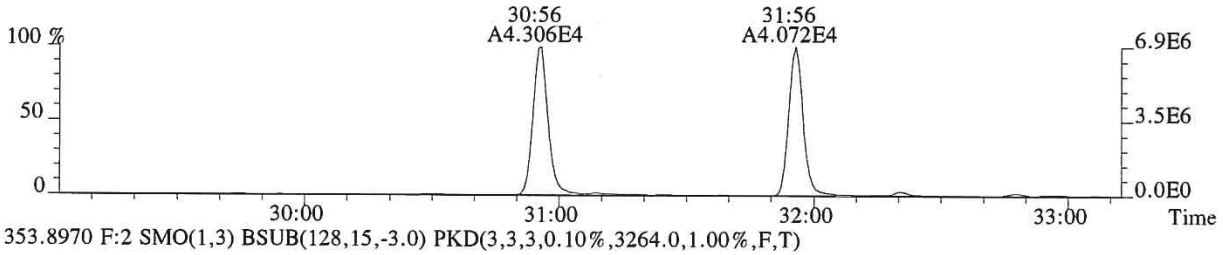
File:P519838 #1-376 Acq: 8-JAN-2019 15:51:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,43592.0,1.00%,F,T)



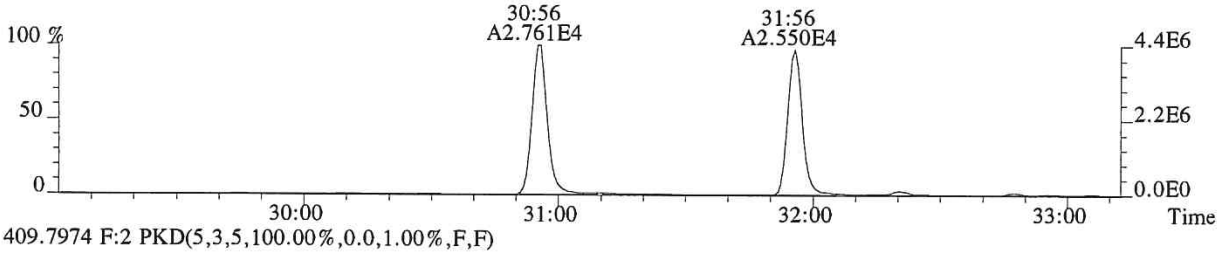
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8176.0,1.00%,F,T)



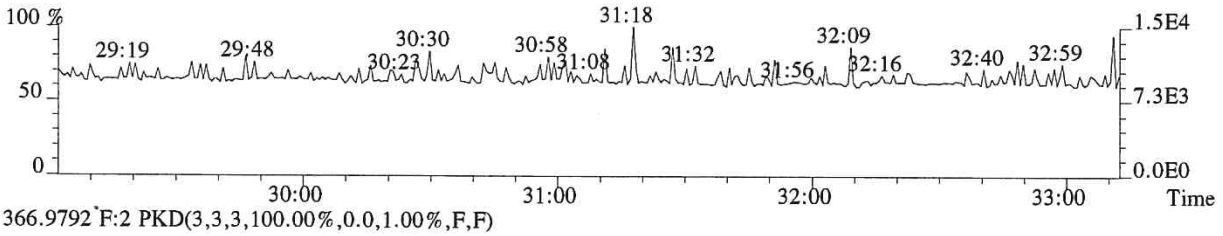
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4628.0,1.00%,F,T)



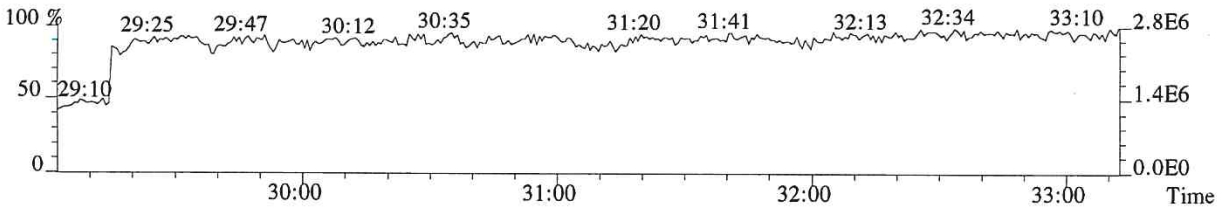
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3264.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

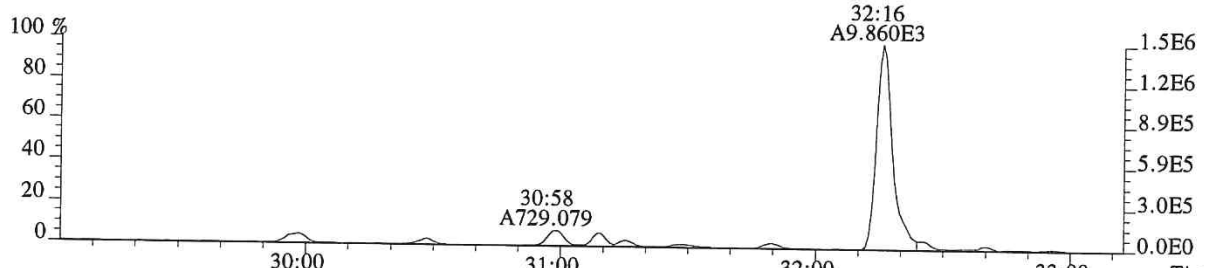


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

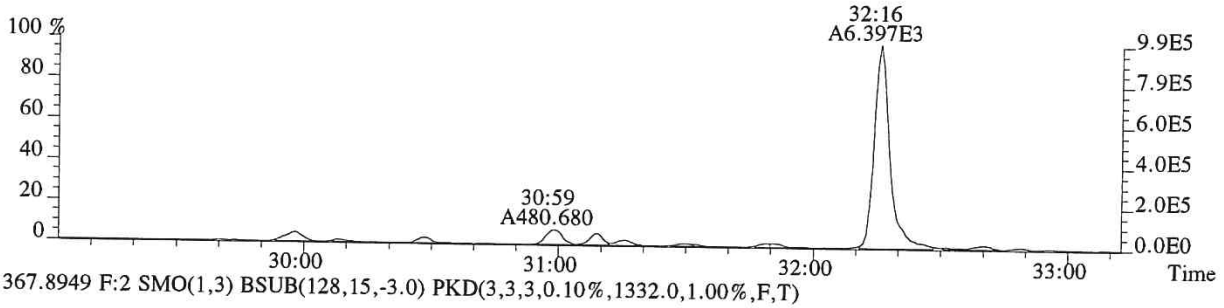


017322

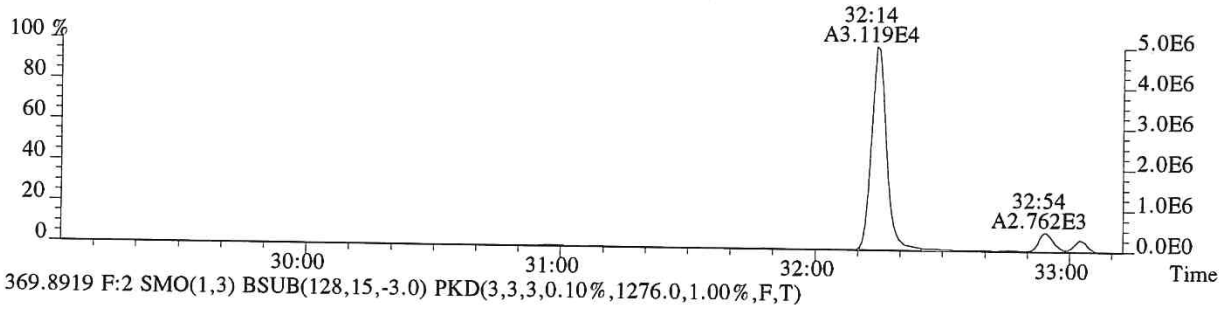
File:P519838 #1-376 Acq: 8-JAN-2019 15:51:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2552.0,1.00%,F,T)



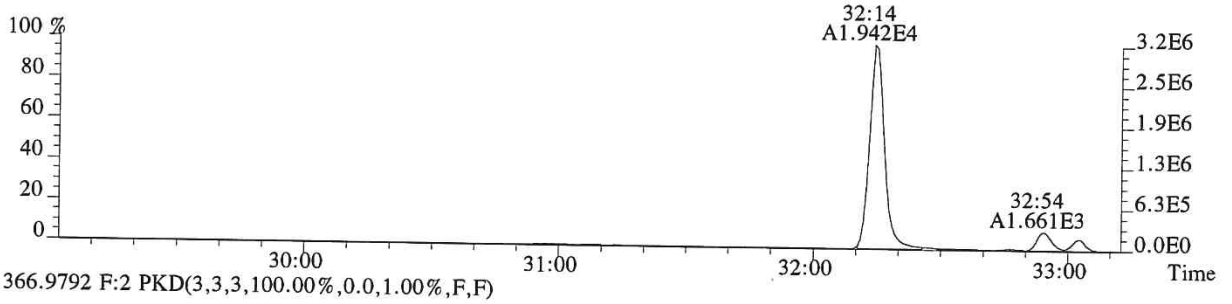
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3248.0,1.00%,F,T)



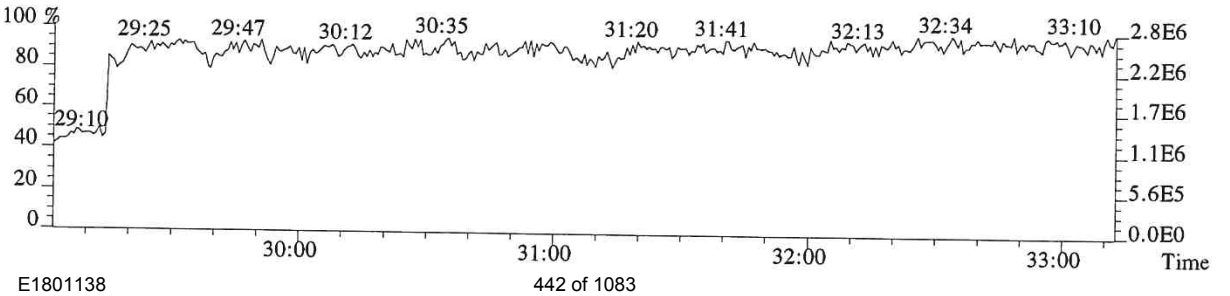
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1332.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1276.0,1.00%,F,T)

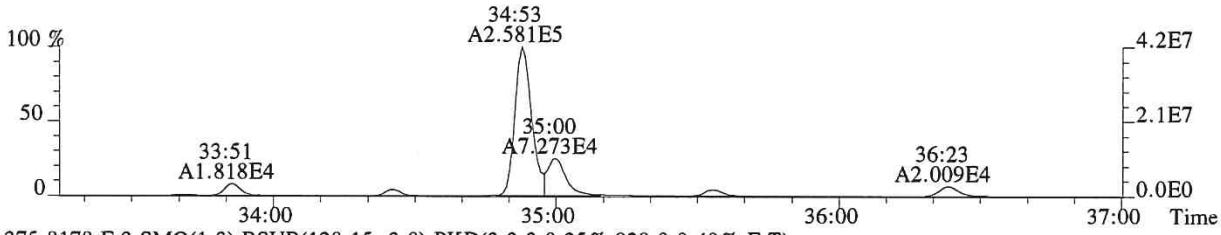


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

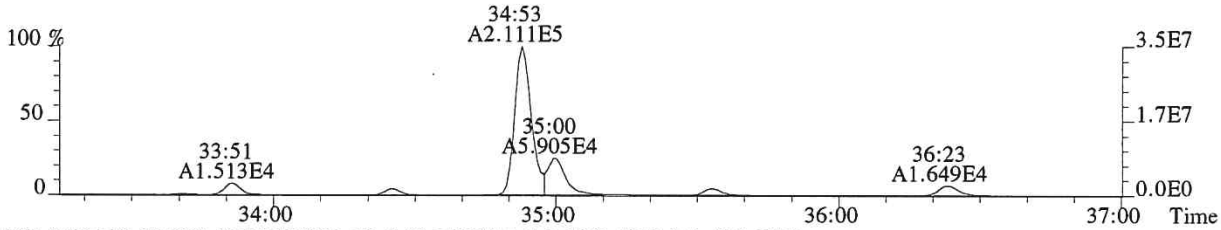


017323

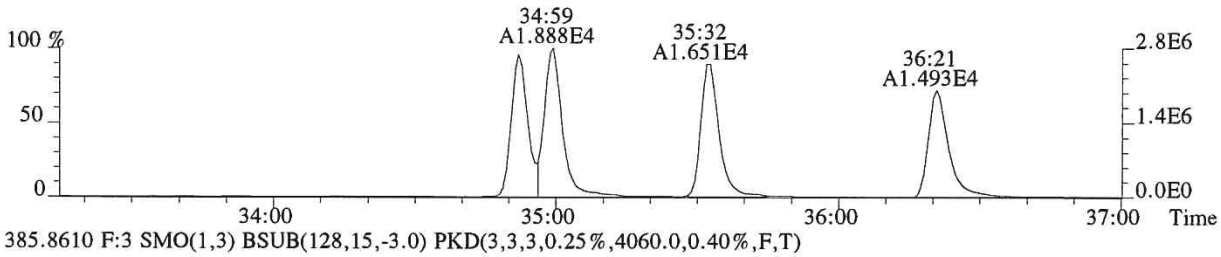
File:P519838 #1-339 Acq: 8-JAN-2019 15:51:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11880.0,0.40%,F,T)



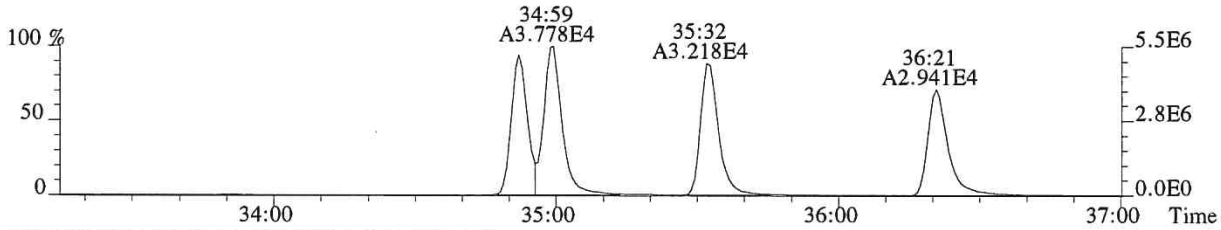
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,928.0,0.40%,F,T)



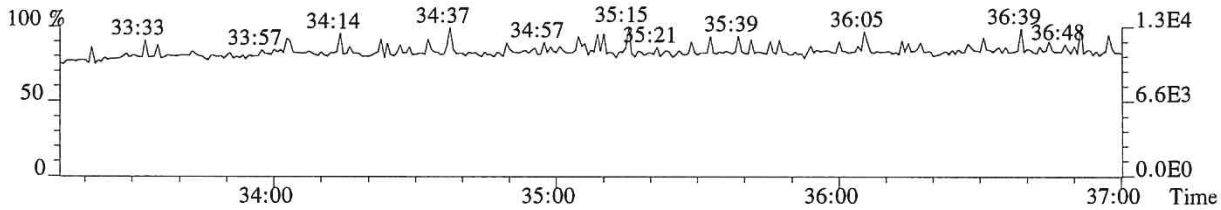
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4972.0,0.40%,F,T)



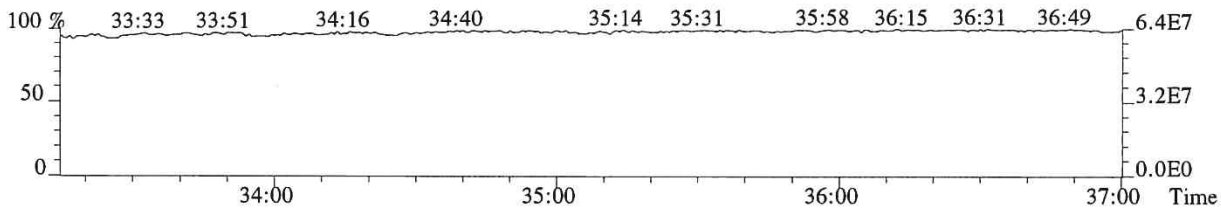
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4060.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

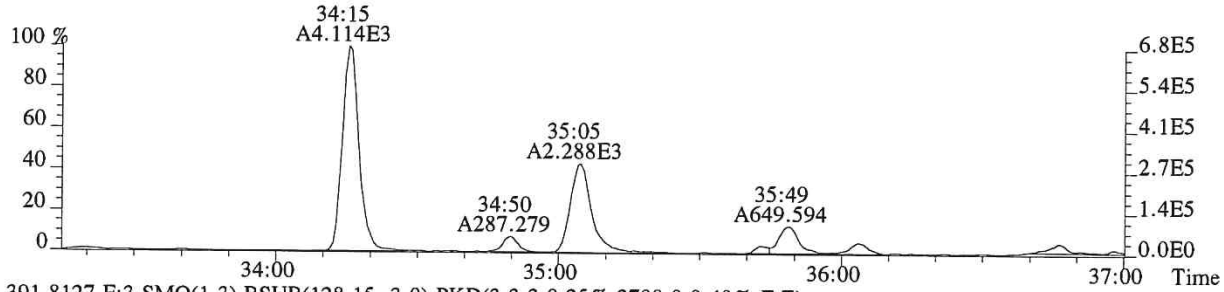


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

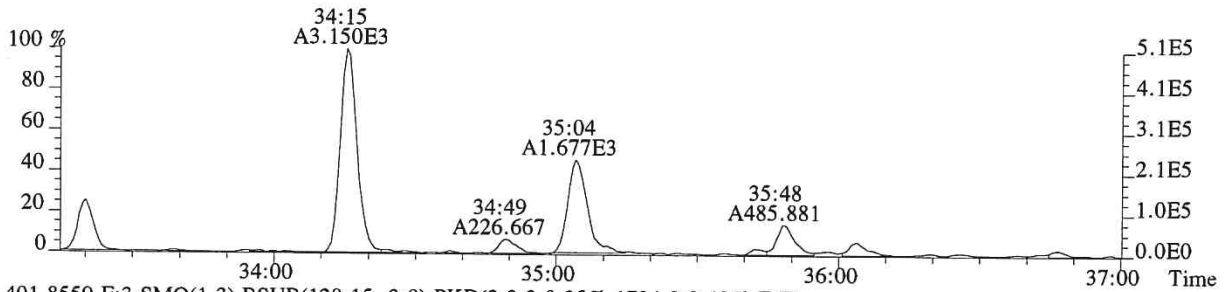


017324

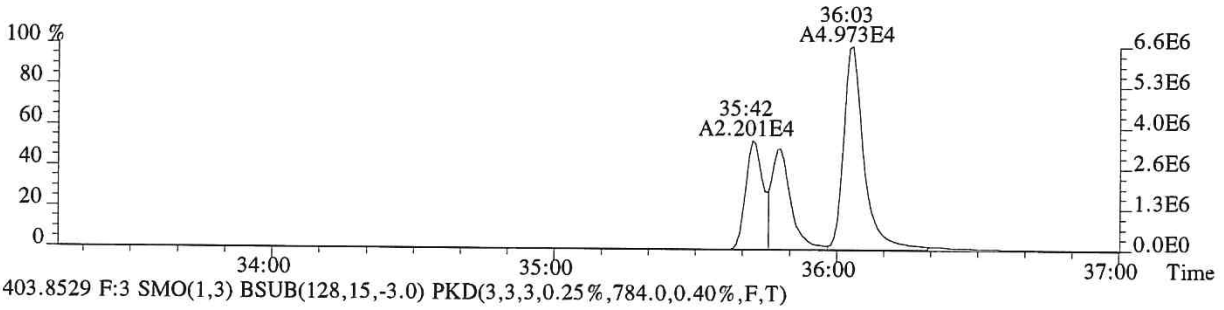
File:P519838 #1-339 Acq: 8-JAN-2019 15:51:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2688.0,0.40%,F,T)



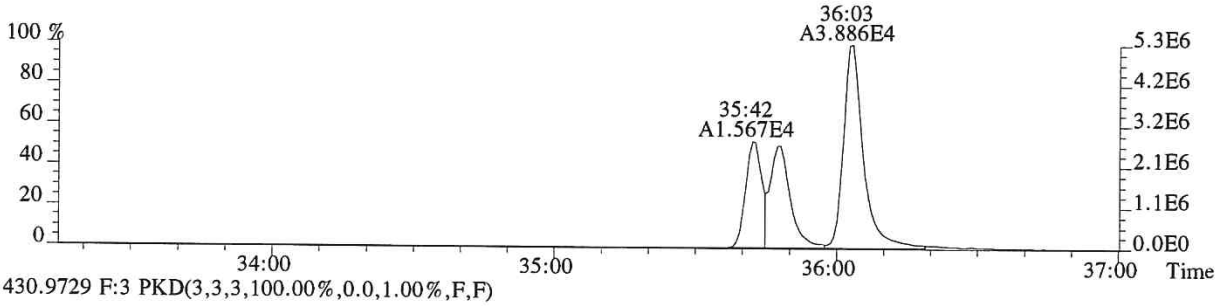
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2708.0,0.40%,F,T)



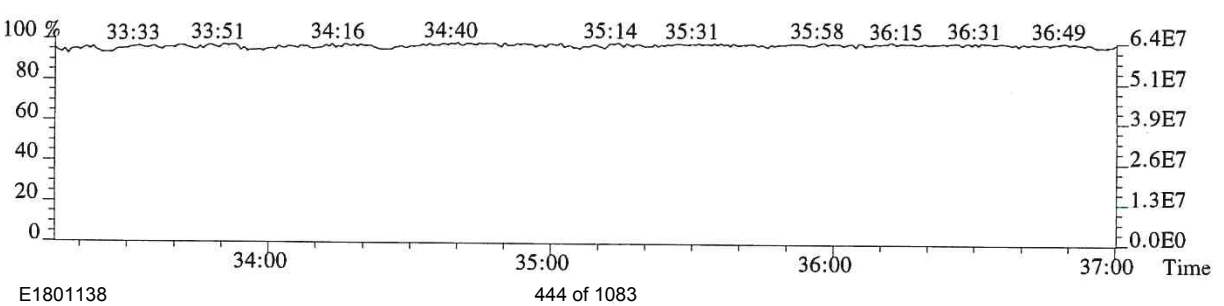
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1724.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,784.0,0.40%,F,T)

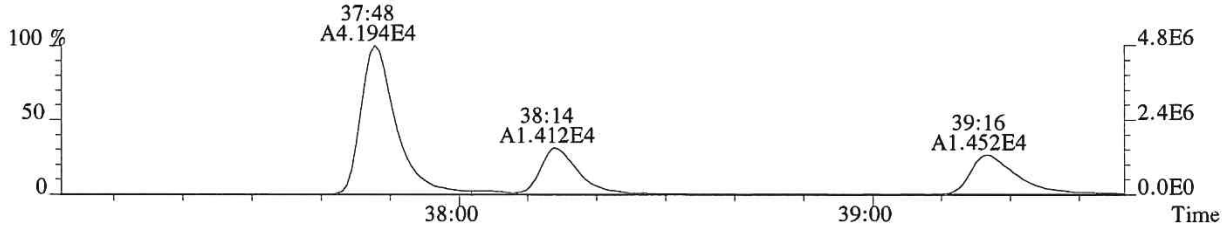


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

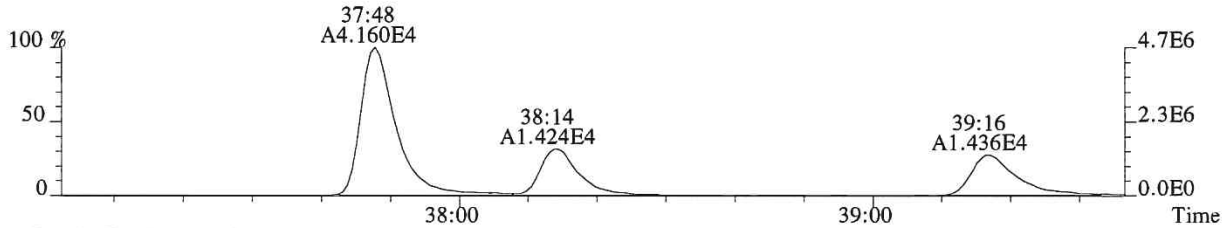


017325

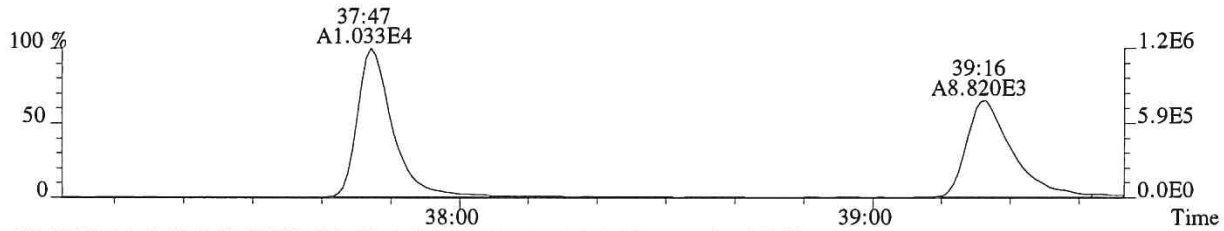
File:P519838 #1-232 Acq: 8-JAN-2019 15:51:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,12316.0,0.50%,F,T)



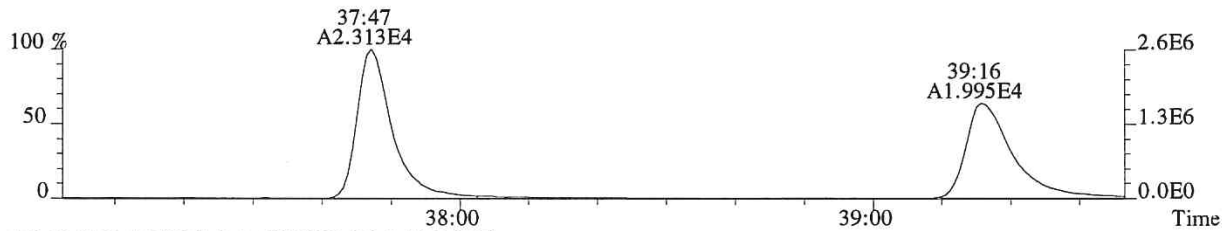
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10616.0,0.50%,F,T)



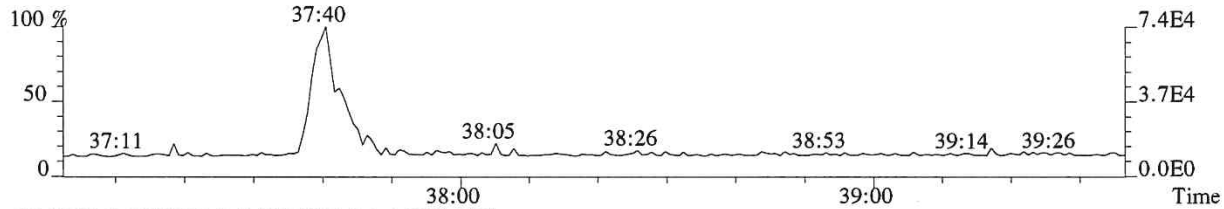
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2700.0,0.50%,F,T)



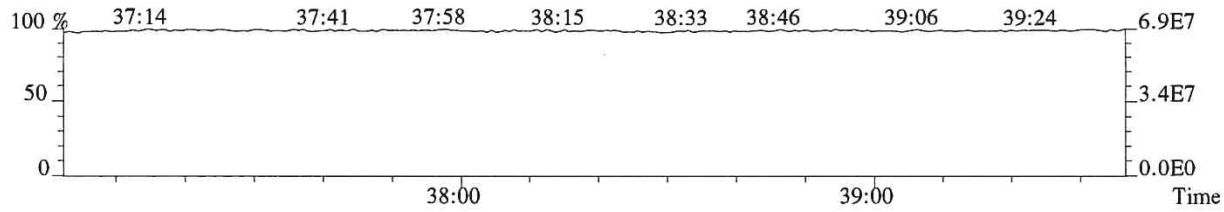
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5728.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

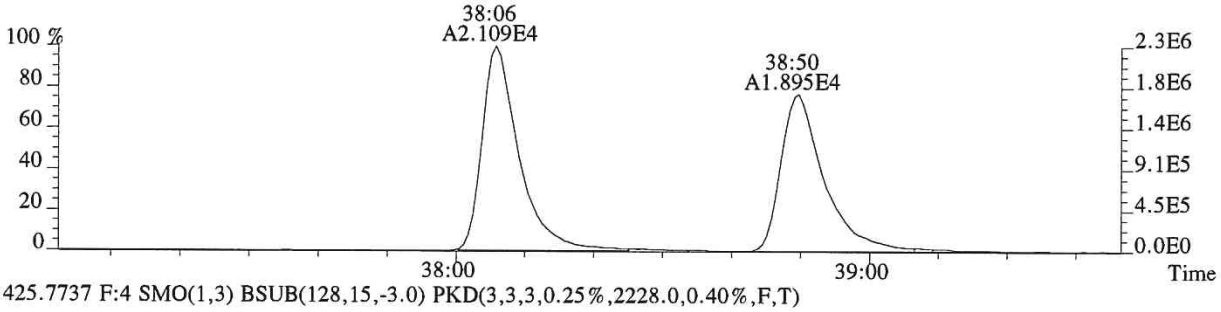


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

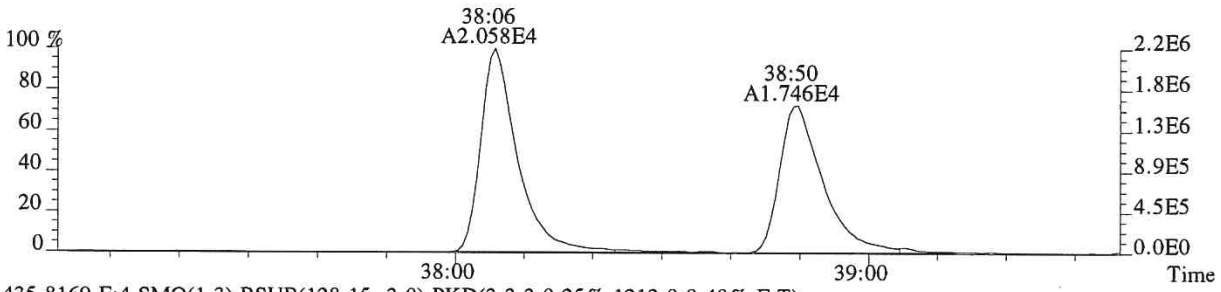


017326

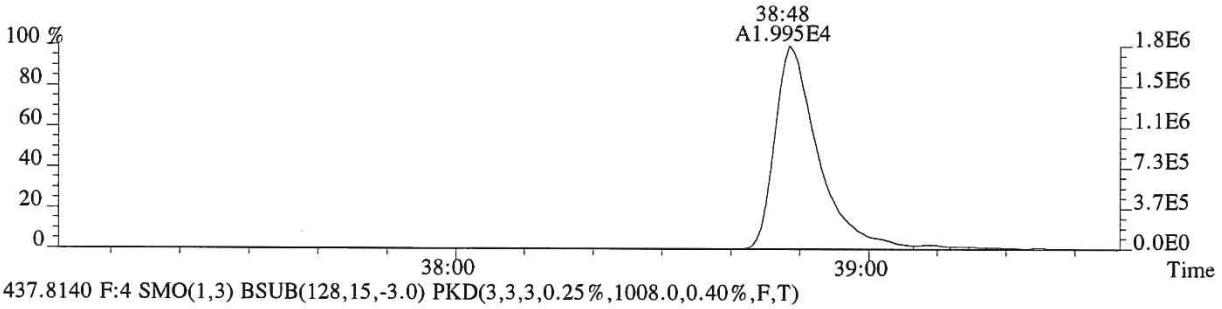
File:P519838 #1-232 Acq: 8-JAN-2019 15:51:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1668.0,0.40%,F,T)



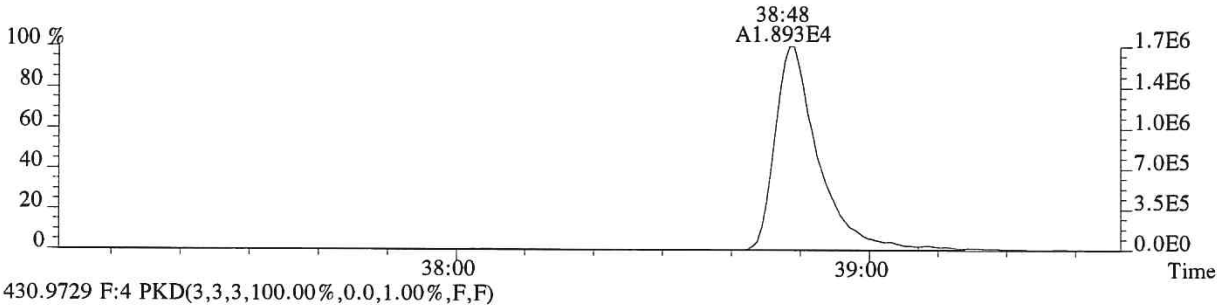
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2228.0,0.40%,F,T)



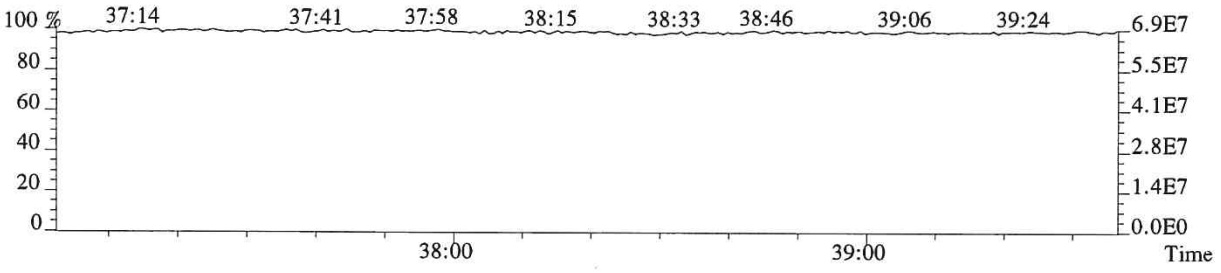
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1212.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1008.0,0.40%,F,T)

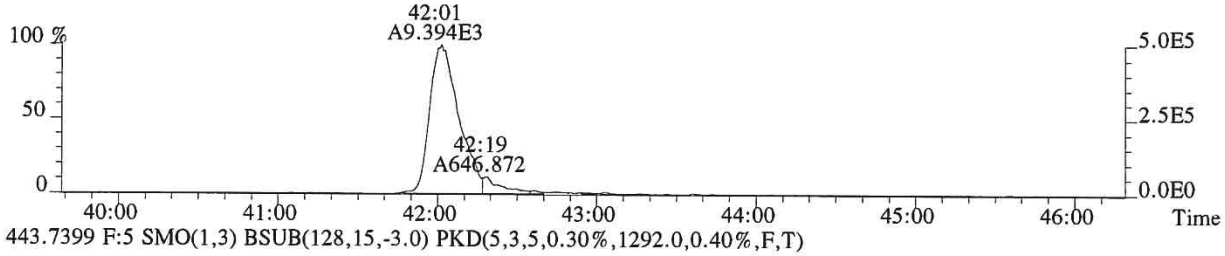


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

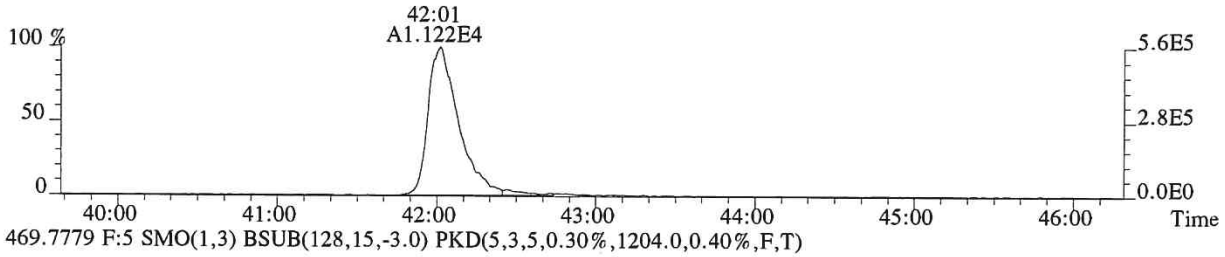


017327

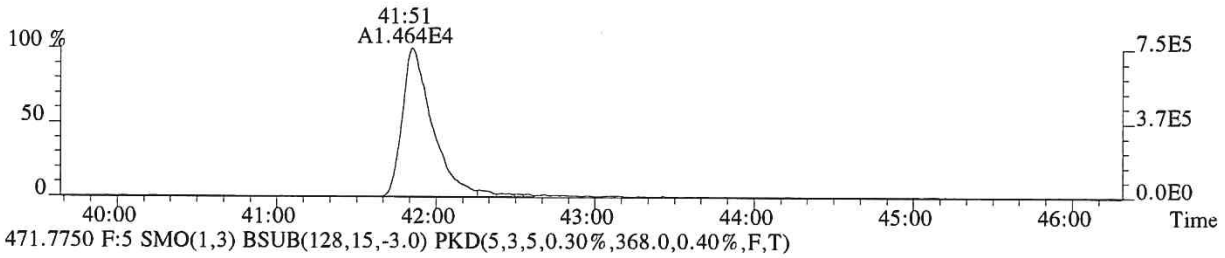
File:P519838 #1-601 Acq: 8-JAN-2019 15:51:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,496.0,0.40%,F,T)



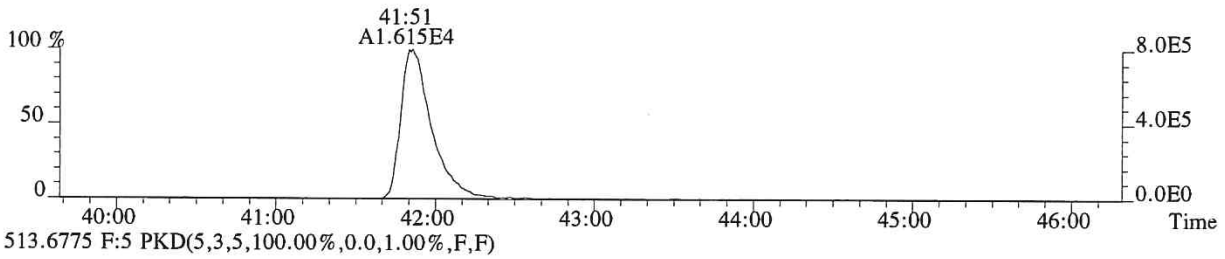
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1292.0,0.40%,F,T)



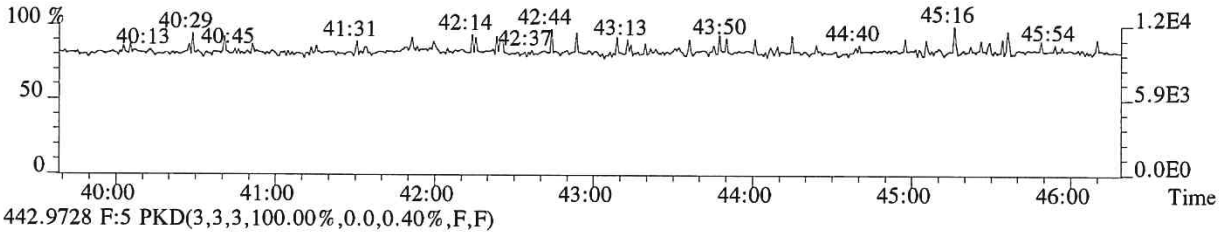
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1204.0,0.40%,F,T)



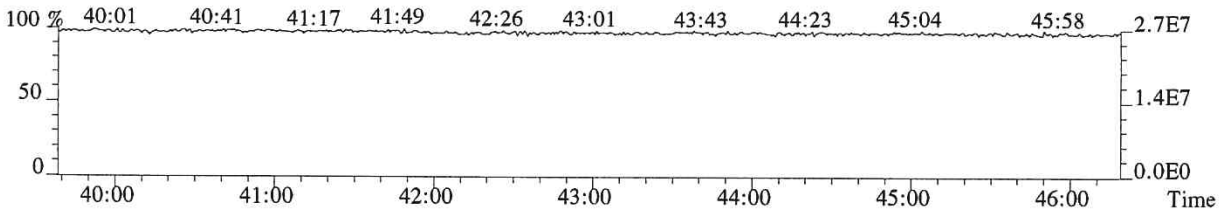
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,368.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

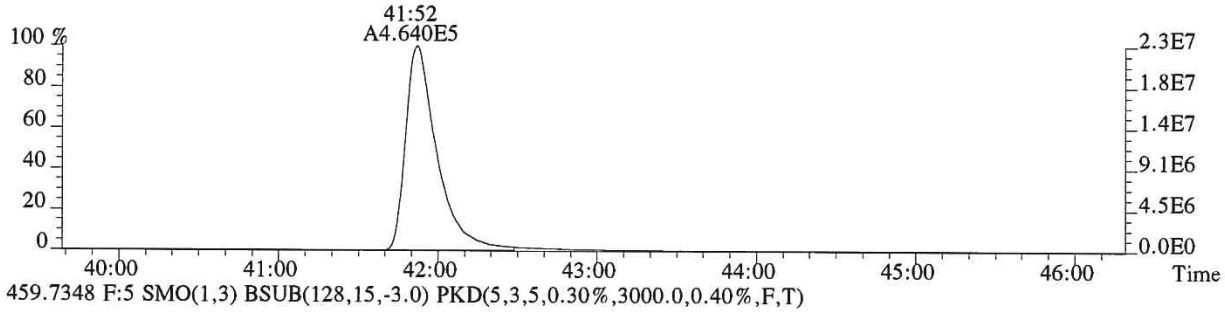


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

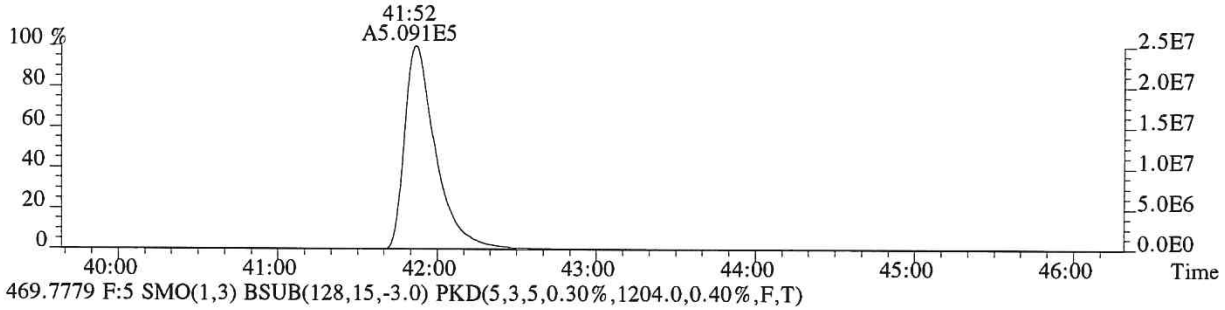


017328

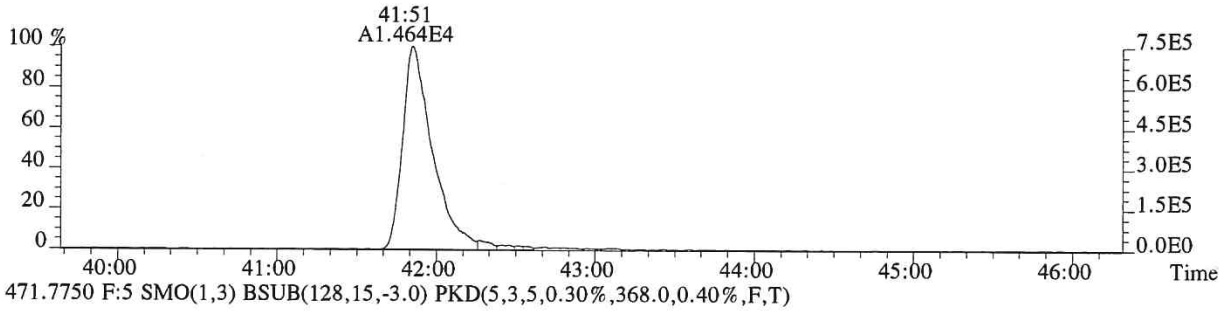
File:P519838 #1-601 Acq: 8-JAN-2019 15:51:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2220.0,0.40%,F,T)



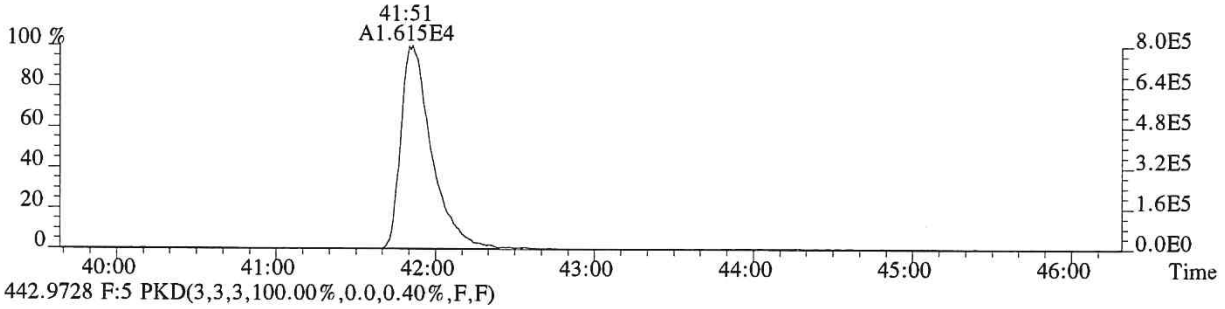
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3000.0,0.40%,F,T)



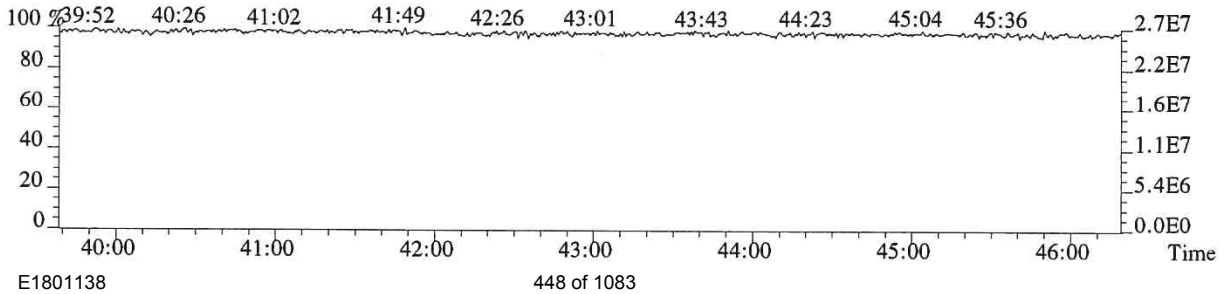
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1204.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,368.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017329

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0180

Run #15 Filename P616412 Samp: 1 Inj: 1 Acquired: 9-JAN-19 18:07:09
Processed: 10-JAN-19 08:32:03 Sample ID: E1801138-012DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:13	4.045e+03	4.964e+03	0.81	yes	yes	1.081
2	Unk	1,2,3,7,8-PeCDF	30:23	2.939e+02	1.415e+02	2.08	no	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:27	1.921e+02	1.115e+02	1.72	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	3.500e+02	2.668e+02	1.31	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:27	1.109e+02	7.098e+01	1.56	no	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	3.051e+01	2.797e+01	1.09	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:48	4.477e+01	2.798e+01	1.60	no	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	4.532e+01	6.206e+01	0.73	no	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	7.216e+00	1.320e+01	0.55	no	no	1.463
10	Unk	OCDF	NotFnd	*	*	*	no	no	1.571
11	Unk	2,3,7,8-TCDD	26:16	9.114e+02	1.139e+03	0.80	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:46	9.203e+00	8.375e+00	1.10	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:09	9.797e-01	7.123e+00	0.14	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	1.554e+01	5.226e+00	2.97	no	no	1.112
17	Unk	OCDD	40:38	3.841e+02	4.884e+02	0.79	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:11	1.041e+04	1.292e+04	0.81	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:22	1.554e+04	9.747e+03	1.59	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	1.414e+04	8.917e+03	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:20	5.634e+03	1.062e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	7.130e+03	1.373e+04	0.52	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:00	6.071e+03	1.210e+04	0.50	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	4.925e+03	9.391e+03	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	4.124e+03	9.258e+03	0.45	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	2.808e+03	6.474e+03	0.43	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:14	4.692e+03	5.977e+03	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:44	9.617e+03	6.095e+03	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	6.848e+03	5.387e+03	1.27	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	7.650e+03	6.171e+03	1.24	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	6.653e+03	5.980e+03	1.11	yes	no	0.857
32	IS	13C-OCDD	40:38	5.329e+03	5.915e+03	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:27	6.990e+03	8.421e+03	0.83	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	7.626e+03	5.669e+03	1.35	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	NotFnd	*				no	1.086

$$\text{OCDD} = \frac{(3.841e{+}02 + 4.884e{+}02) \times 4000\ \text{pg} \times 200}{(5.329e{+}03 + 5.915e{+}03) \times 10.178\ \text{g} \times 46.8 / 100 \times 1.157 \times 0.30} = 37546\ \text{ng/kg}$$

LLW 01/10/19

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10450 Stancliff Rd., Suite 115
Houston, TX 77099
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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0180

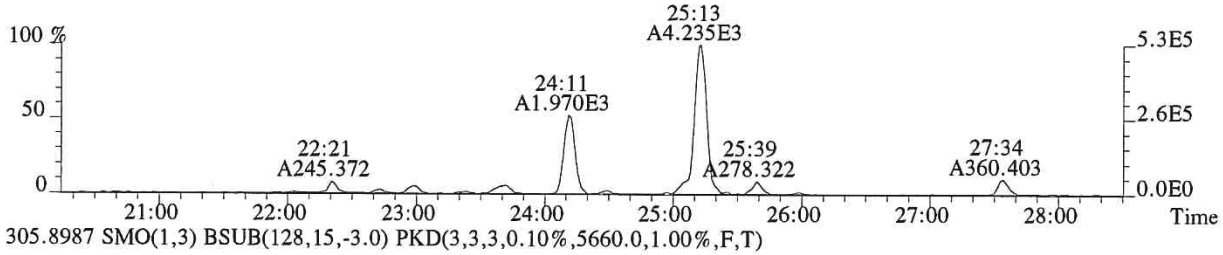
Run #15 Filename P616412 Samp: 1 Inj: 1 Acquired: 9-JAN-19 18:07:09
Processed: 10-JAN-19 08:32:03 LAB. ID: E1801138-012DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.29e+05	9.44e+02	5.6e+02	6.93e+05	5.66e+03	1.2e+02
2	1,2,3,7,8-PeCDF	5.37e+04	1.02e+03	5.3e+01	2.51e+04	3.04e+03	8.3e+00
3	2,3,4,7,8-PeCDF	3.19e+04	1.02e+03	3.1e+01	2.19e+04	3.04e+03	7.2e+00
4	1,2,3,4,7,8-HxCDF	7.20e+04	6.60e+02	1.1e+02	5.24e+04	5.48e+02	9.6e+01
5	1,2,3,6,7,8-HxCDF	2.11e+04	6.60e+02	3.2e+01	1.67e+04	5.48e+02	3.0e+01
6	2,3,4,6,7,8-HxCDF	7.30e+03	6.60e+02	1.1e+01	6.80e+03	5.48e+02	1.2e+01
7	1,2,3,7,8,9-HxCDF	6.33e+03	6.60e+02	9.6e+00	5.37e+03	5.48e+02	9.8e+00
8	1,2,3,4,6,7,8-HpCDF	9.57e+03	4.60e+02	2.1e+01	9.63e+03	3.00e+02	3.2e+01
9	1,2,3,4,7,8,9-HpCDF	2.80e+03	4.60e+02	6.1e+00	3.46e+03	3.00e+02	1.2e+01
10	OCDF	*	4.32e+02	*	*	2.02e+03	*
11	2,3,7,8-TCDD	1.34e+05	3.89e+03	3.5e+01	1.73e+05	1.46e+03	1.2e+02
12	1,2,3,7,8-PeCDD	1.96e+03	1.19e+03	1.6e+00	2.04e+03	2.32e+02	8.8e+00
13	1,2,3,4,7,8-HxCDD	3.16e+02	2.48e+02	1.3e+00	2.15e+03	1.40e+03	1.5e+00
14	1,2,3,6,7,8-HxCDD	*	2.48e+02	*	*	1.40e+03	*
15	1,2,3,7,8,9-HxCDD	*	2.48e+02	*	*	1.40e+03	*
16	1,2,3,4,6,7,8-HpCDD	2.94e+03	8.64e+02	3.4e+00	1.70e+03	5.60e+02	3.0e+00
17	OCDD	6.26e+04	3.36e+02	1.9e+02	7.78e+04	3.16e+02	2.5e+02
18	13C-2,3,7,8-TCDF	1.46e+06	1.39e+04	1.1e+02	1.82e+06	8.96e+03	2.0e+02
19	13C-1,2,3,7,8-PeCDF	2.43e+06	7.12e+02	3.4e+03	1.55e+06	4.40e+02	3.5e+03
20	13C-2,3,4,7,8-PeCDF	2.47e+06	7.12e+02	3.5e+03	1.56e+06	4.40e+02	3.6e+03
21	13C-1,2,3,4,7,8-HxCDF	1.14e+06	1.14e+03	1.0e+03	2.10e+06	1.78e+03	1.2e+03
22	13C-1,2,3,6,7,8-HxCDF	1.18e+06	1.14e+03	1.0e+03	2.34e+06	1.78e+03	1.3e+03
23	13C-2,3,4,6,7,8-HxCDF	1.12e+06	1.14e+03	9.9e+02	2.19e+06	1.78e+03	1.2e+03
24	13C-1,2,3,7,8,9-HxCDF	8.19e+05	1.14e+03	7.2e+02	1.68e+06	1.78e+03	9.4e+02
25	13C-1,2,3,4,6,7,8-HpCDF	7.46e+05	2.98e+03	2.5e+02	1.64e+06	1.94e+03	8.5e+02
26	13C-1,2,3,4,7,8,9-HpCDF	4.80e+05	2.98e+03	1.6e+02	1.08e+06	1.94e+03	5.6e+02
27	13C-2,3,7,8-TCDD	7.13e+05	1.51e+04	4.7e+01	8.68e+05	3.98e+03	2.2e+02
28	13C-1,2,3,7,8-PeCDD	1.68e+06	2.21e+03	7.6e+02	1.04e+06	2.45e+03	4.2e+02
29	13C-1,2,3,4,7,8-HxCDD	1.38e+06	2.71e+03	5.1e+02	1.10e+06	1.45e+03	7.6e+02
30	13C-1,2,3,6,7,8-HxCDD	1.30e+06	2.71e+03	4.8e+02	1.08e+06	1.45e+03	7.5e+02
31	13C-1,2,3,4,6,7,8-HpCDD	1.11e+06	1.11e+03	1.0e+03	1.07e+06	5.20e+02	2.1e+03
32	13C-OCDD	7.61e+05	1.88e+03	4.1e+02	8.43e+05	5.08e+02	1.7e+03
33	13C-1,2,3,4-TCDD	9.68e+05	1.51e+04	6.4e+01	1.18e+06	3.98e+03	3.0e+02
34	13C-1,2,3,7,8,9-HxCDD	1.23e+06	2.71e+03	4.5e+02	9.31e+05	1.45e+03	6.4e+02
35	37Cl-2,3,7,8-TCDD	*	1.77e+03	*			

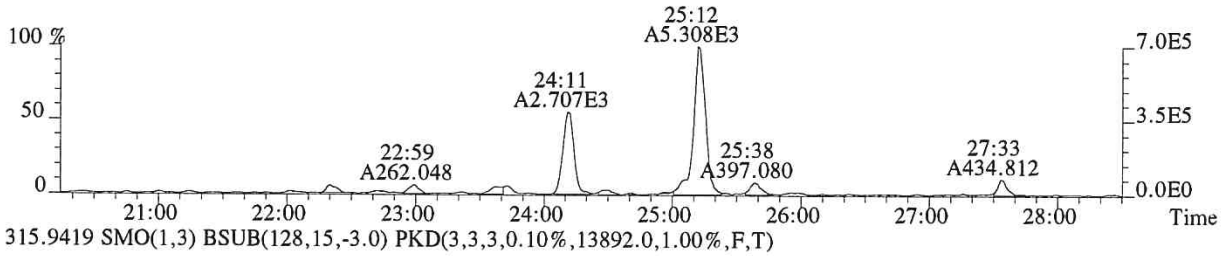
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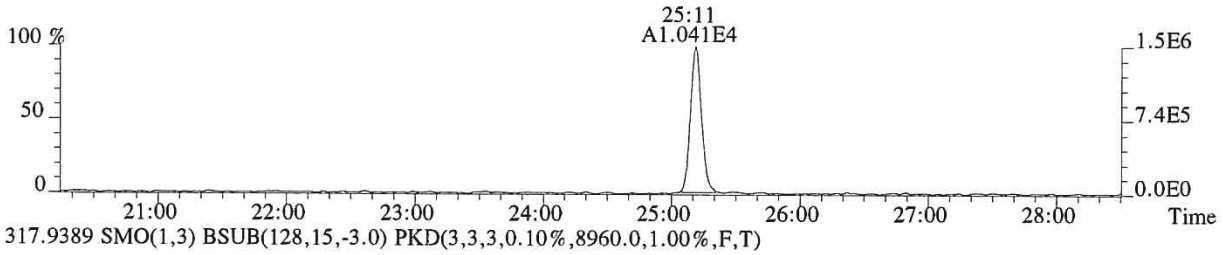
File:P616412 #1-587 Acq: 9-JAN-2019 18:07:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



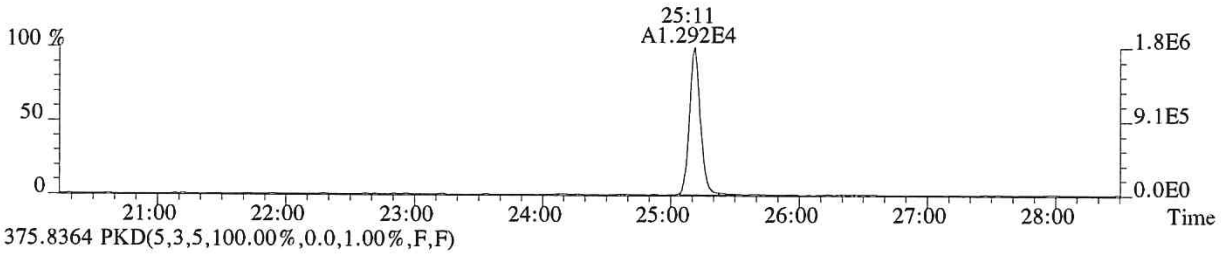
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5660.0,1.00%,F,T)



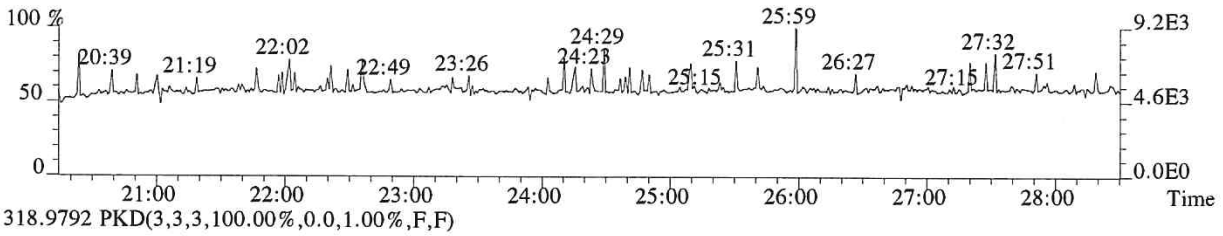
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,13892.0,1.00%,F,T)



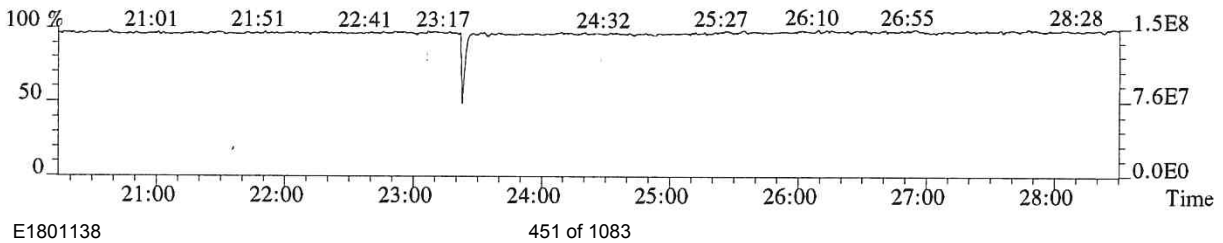
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8960.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

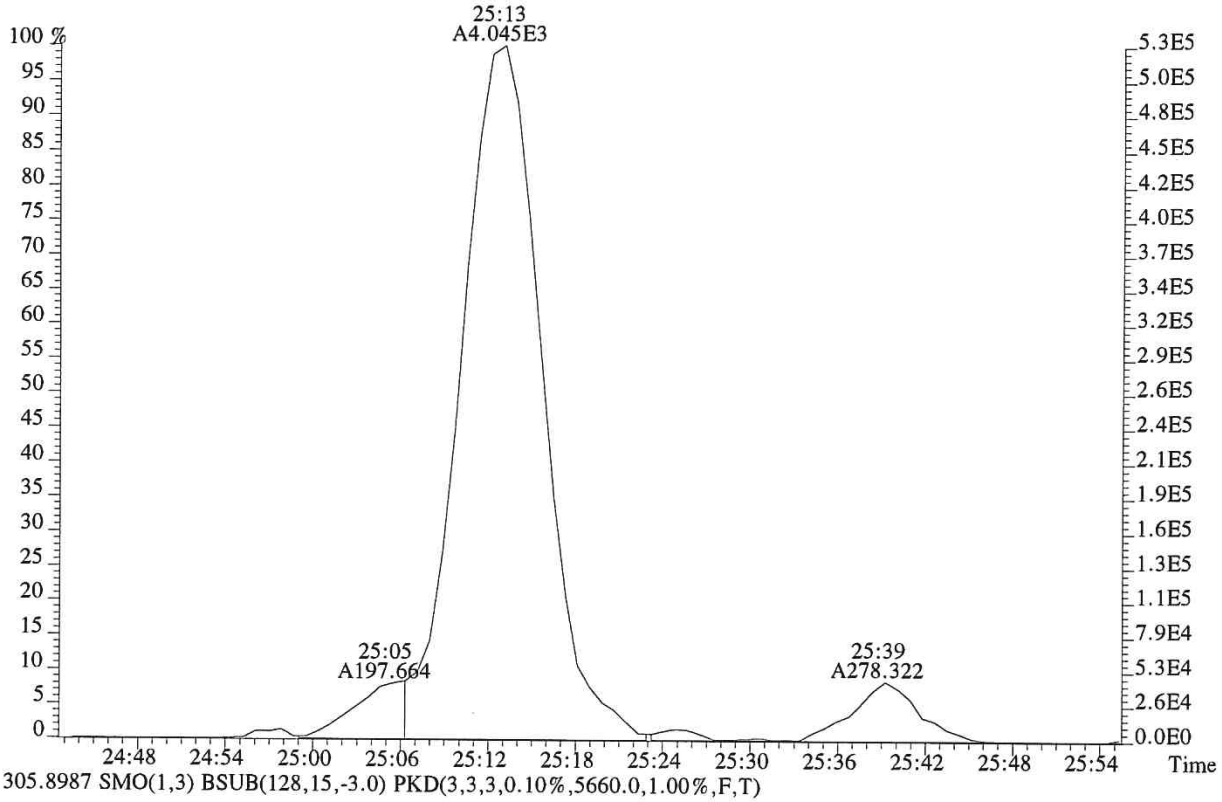


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

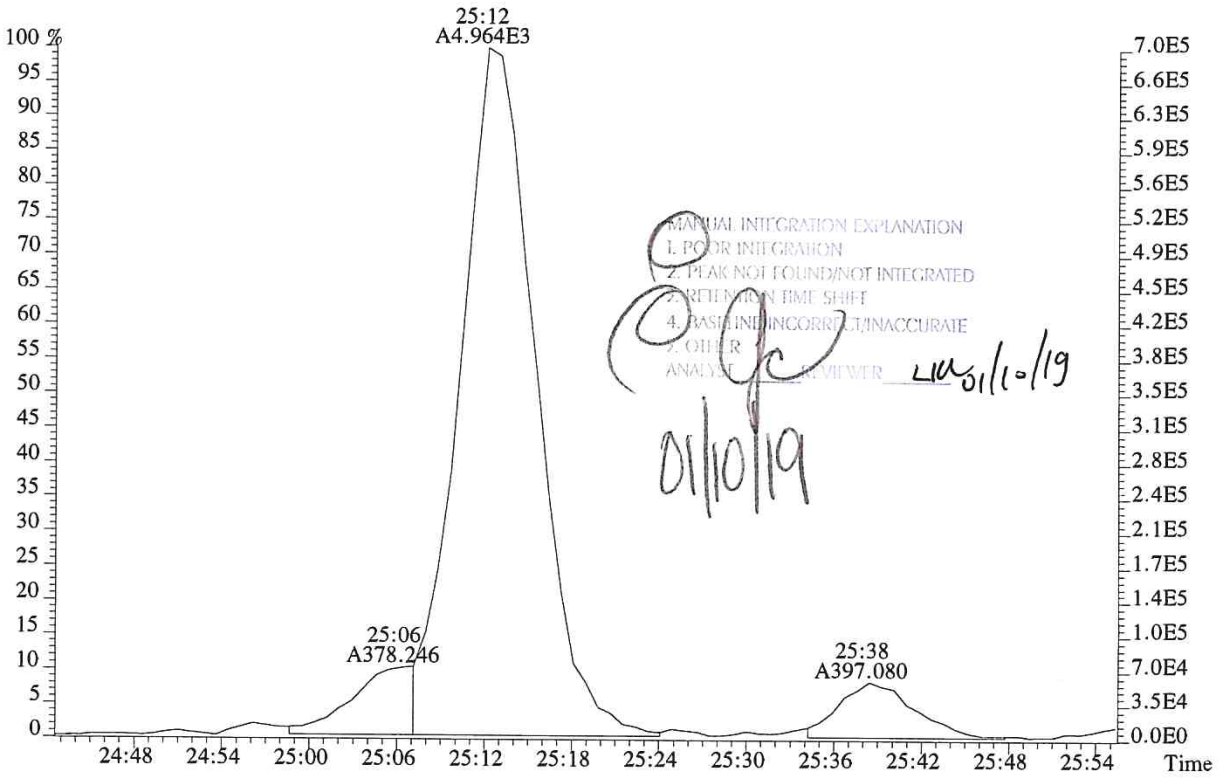


017332

File:P616412 #1-587 Acq: 9-JAN-2019 18:07:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5660.0,1.00%,F,T)

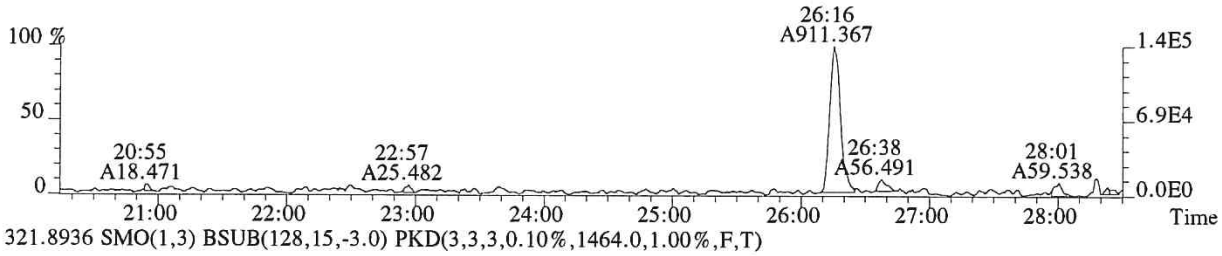


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER

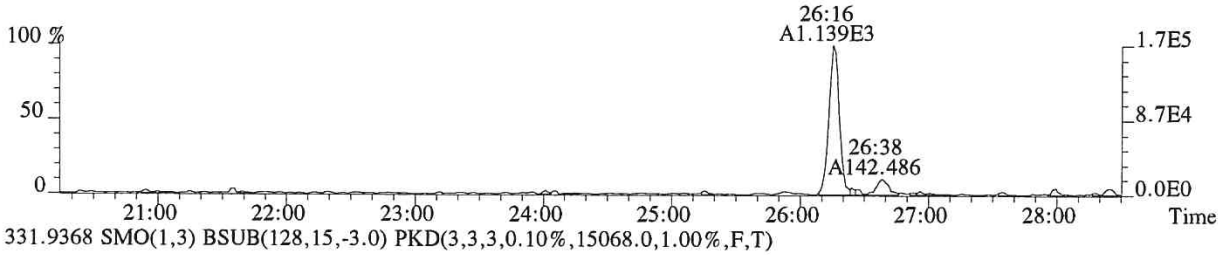
01/10/19

01/10/19

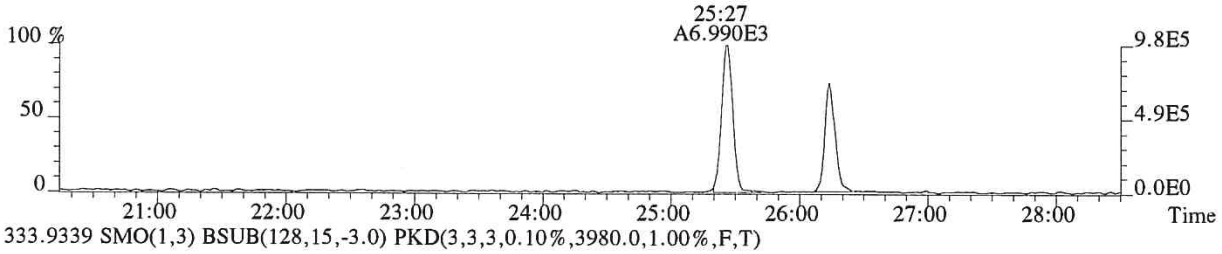
File:P616412 #1-587 Acq: 9-JAN-2019 18:07:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3888.0,1.00%,F,T)



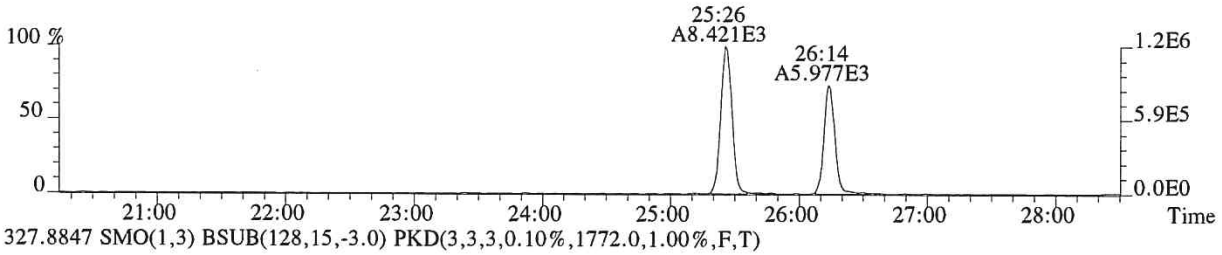
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1464.0,1.00%,F,T)



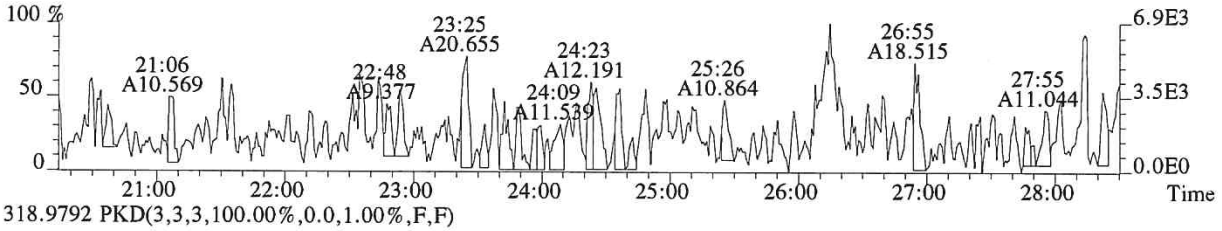
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15068.0,1.00%,F,T)



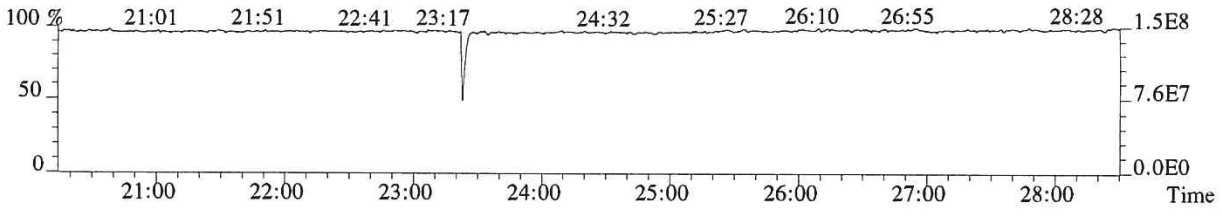
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3980.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1772.0,1.00%,F,T)

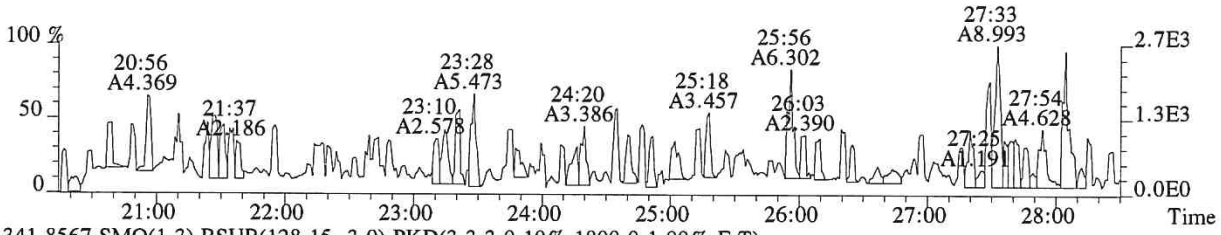


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

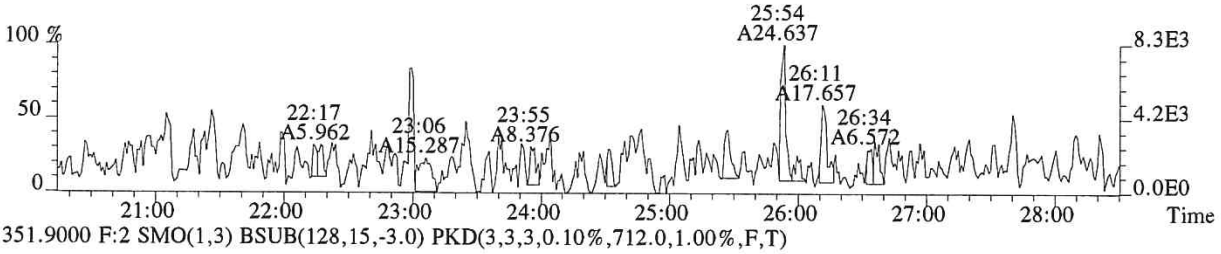


017334

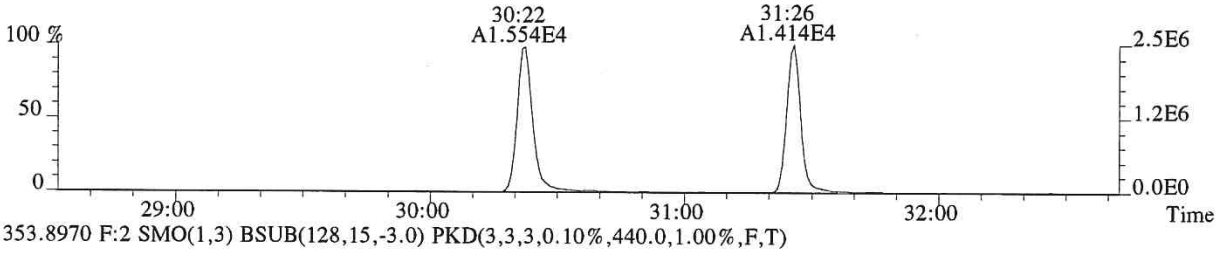
File:P616412 #1-587 Acq: 9-JAN-2019 18:07:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,508.0,1.00%,F,T)



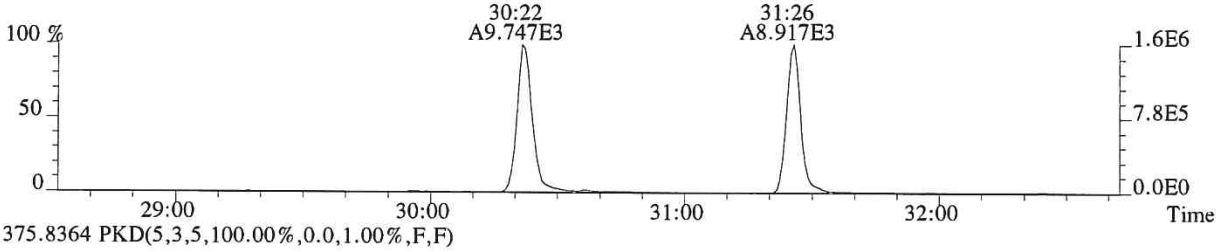
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1800.0,1.00%,F,T)



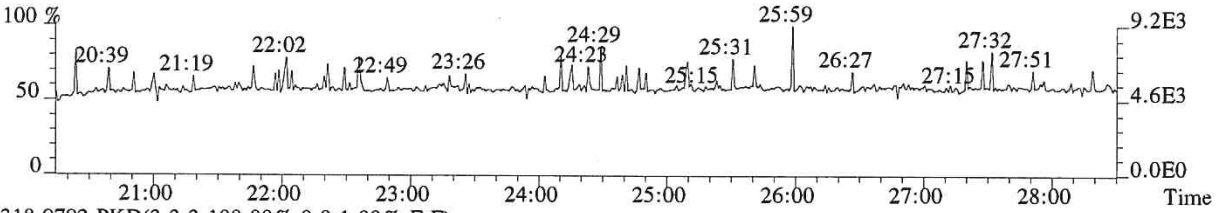
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,712.0,1.00%,F,T)



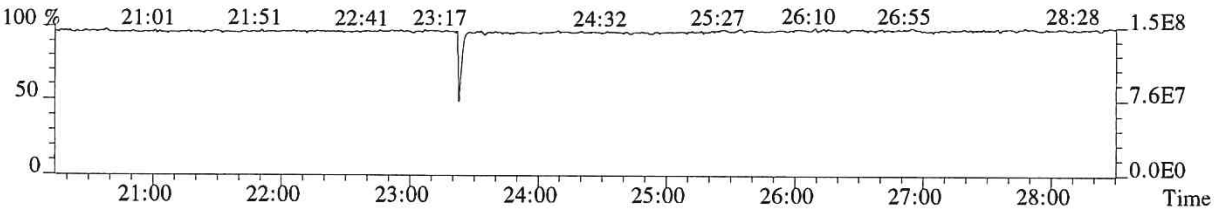
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,440.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

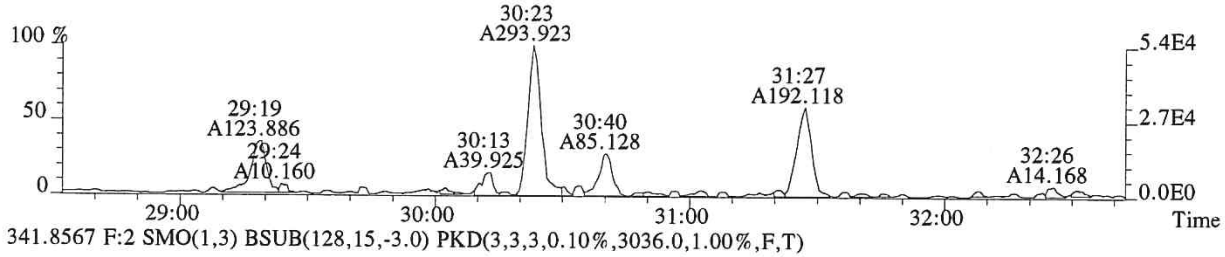


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

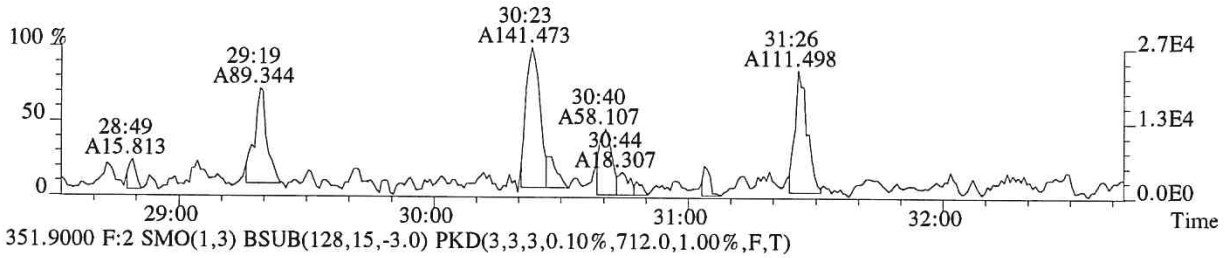


017335

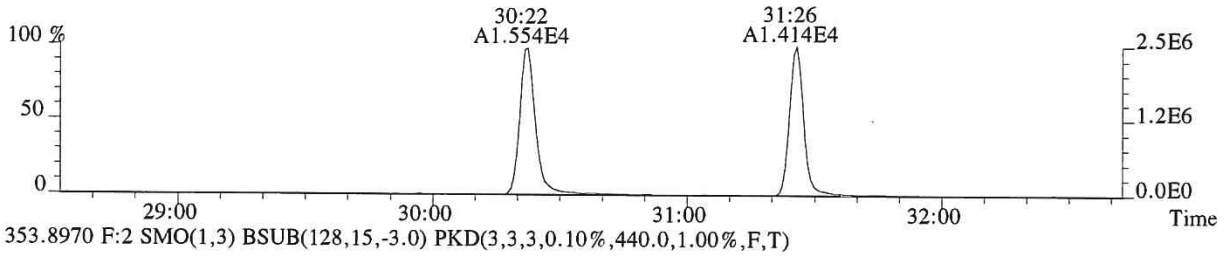
File:P616412 #1-376 Acq: 9-JAN-2019 18:07:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1016.0,1.00%,F,T)



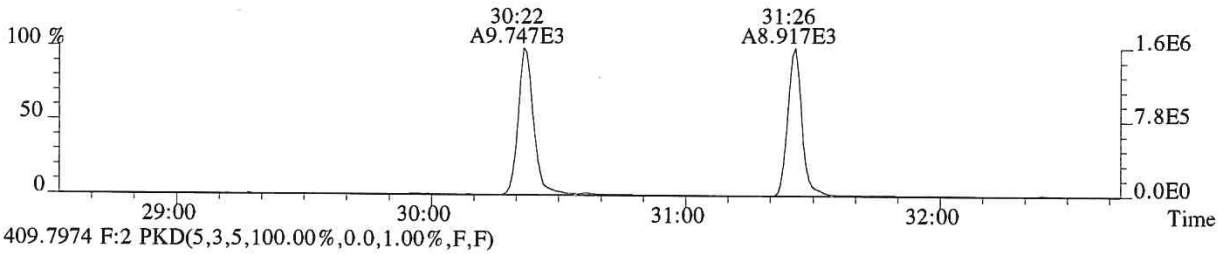
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3036.0,1.00%,F,T)



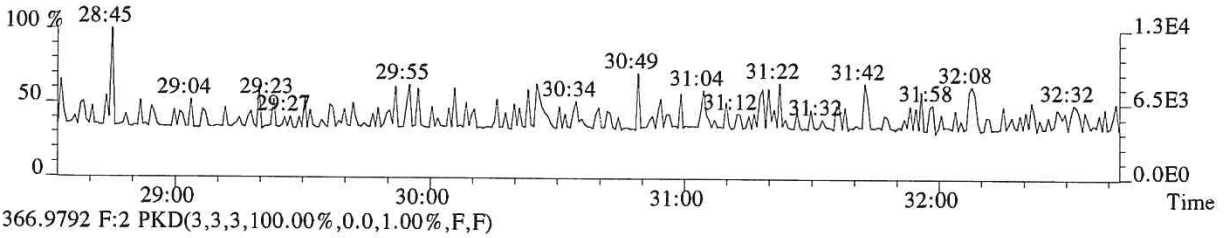
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,712.0,1.00%,F,T)



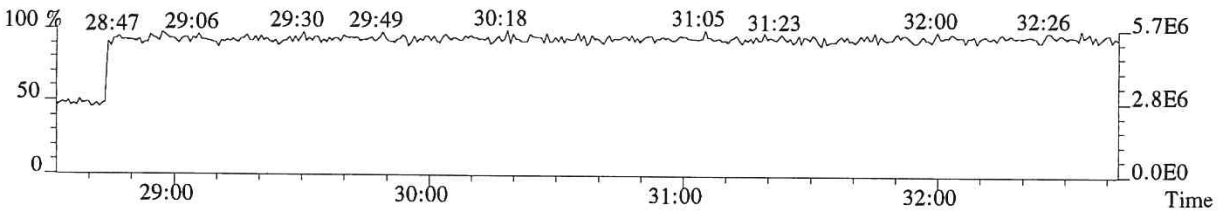
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,440.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

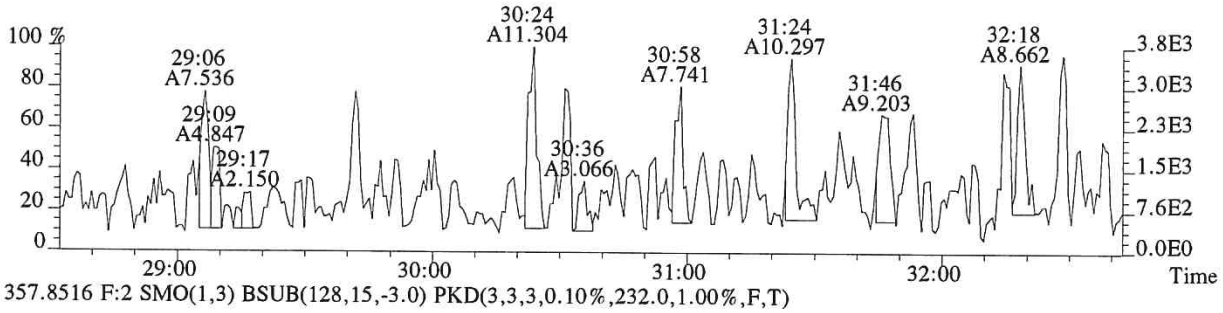


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

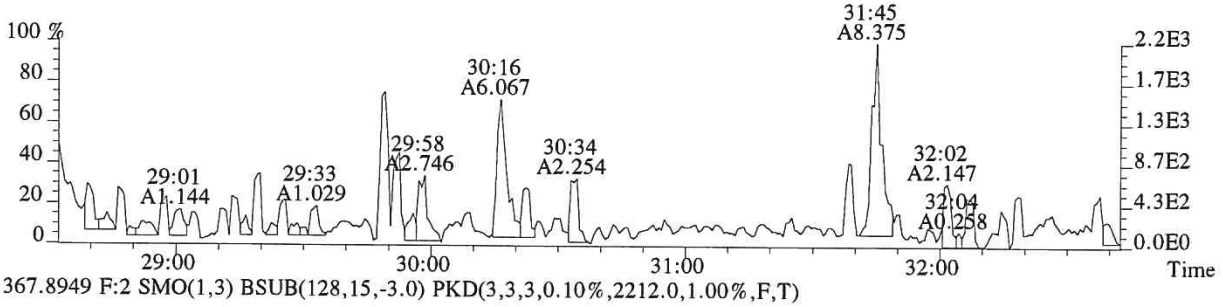


017336

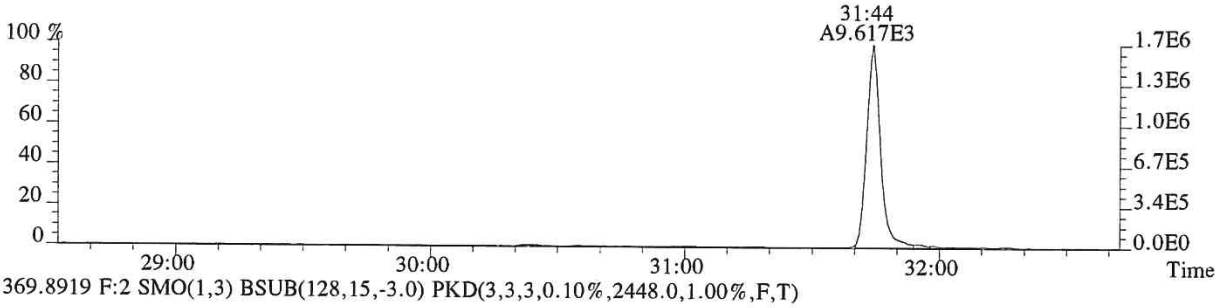
File:P616412 #1-376 Acq: 9-JAN-2019 18:07:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1188.0,1.00%,F,T)



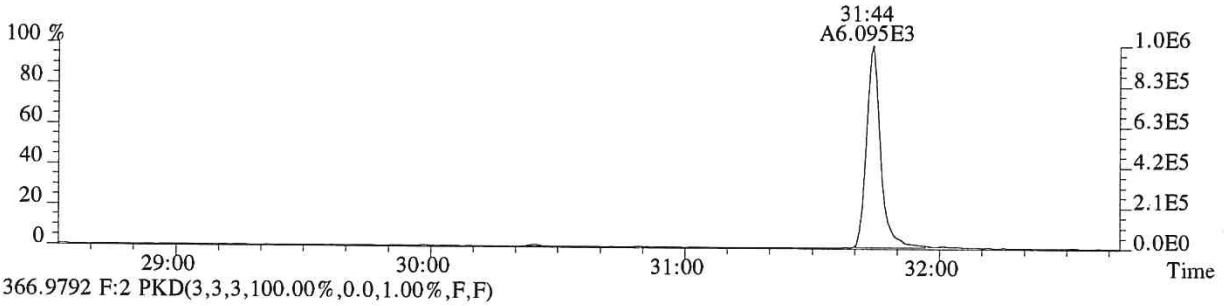
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,232.0,1.00%,F,T)



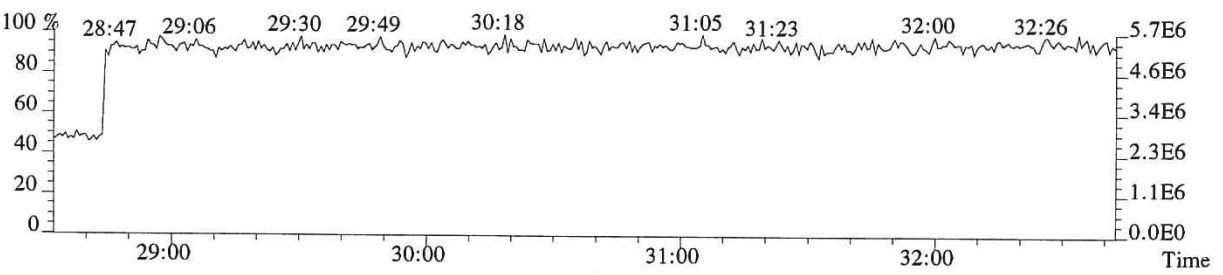
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2212.0,1.00%,F,T)



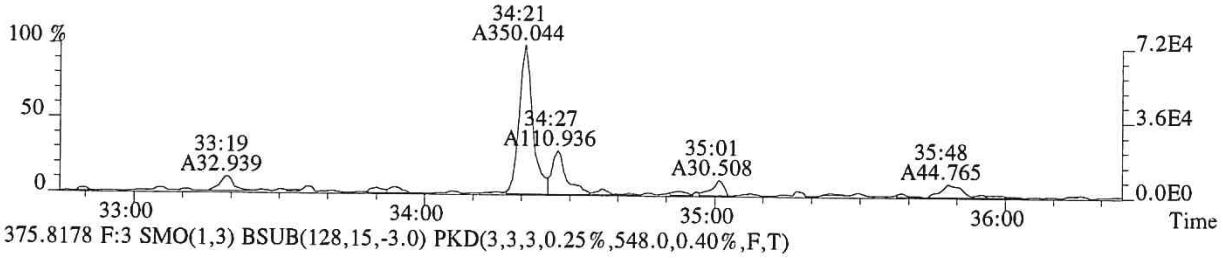
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2448.0,1.00%,F,T)



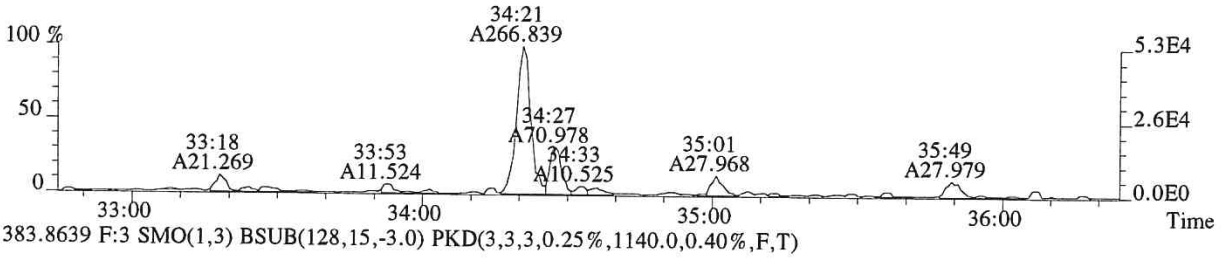
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



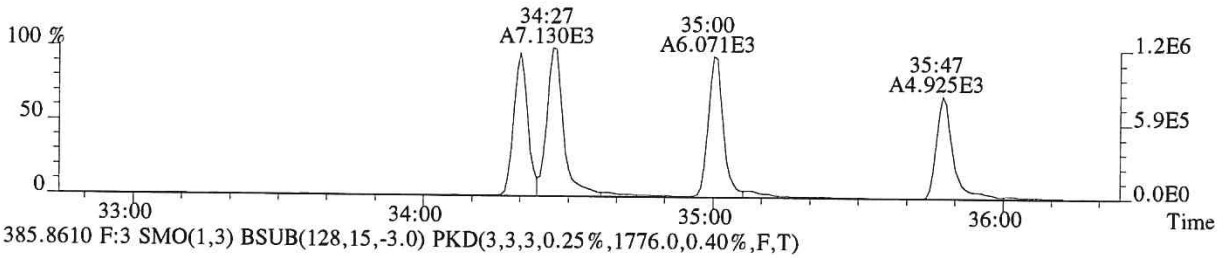
File:P616412 #1-330 Acq: 9-JAN-2019 18:07:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,660.0,0.40%,F,T)



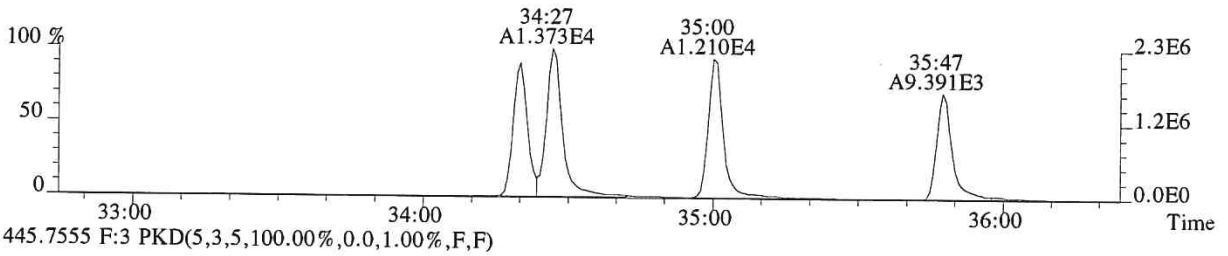
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,548.0,0.40%,F,T)



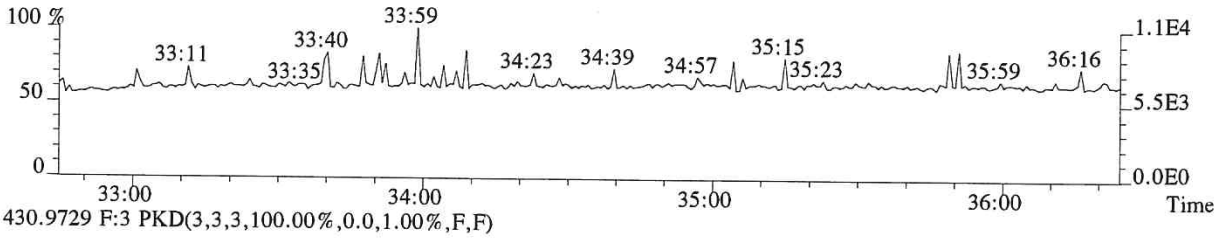
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1140.0,0.40%,F,T)



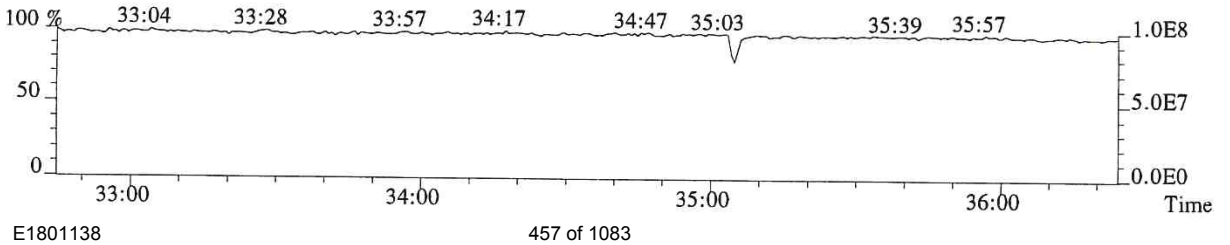
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1776.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

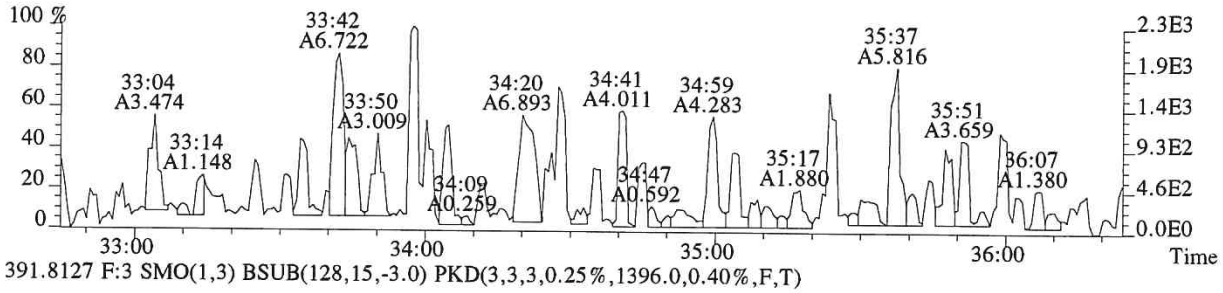


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

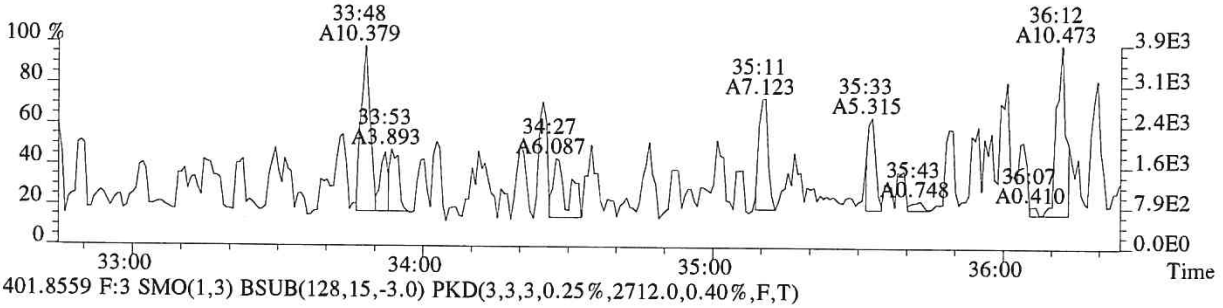


017338

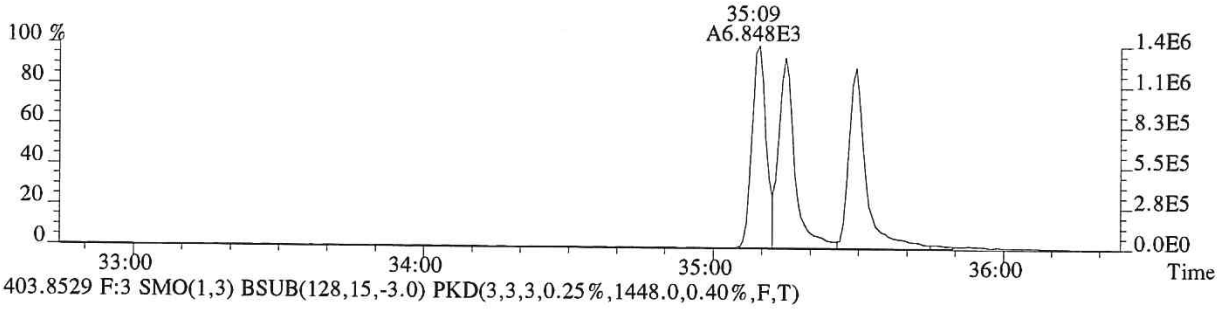
File:P616412 #1-330 Acq: 9-JAN-2019 18:07:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,248.0,0.40%,F,T)



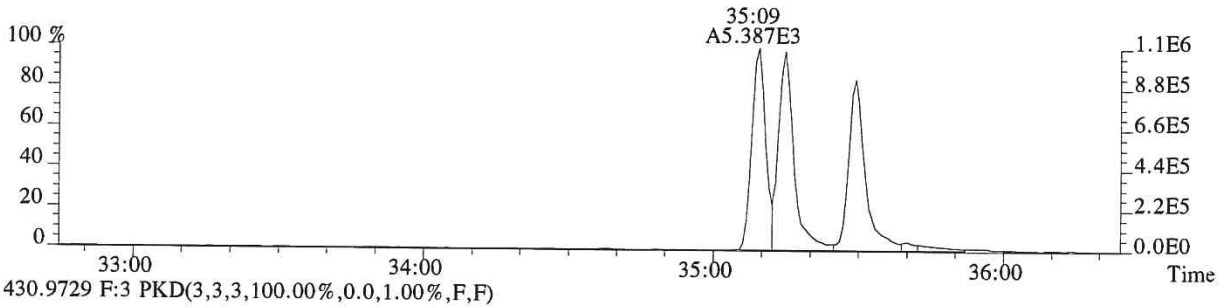
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1396.0,0.40%,F,T)



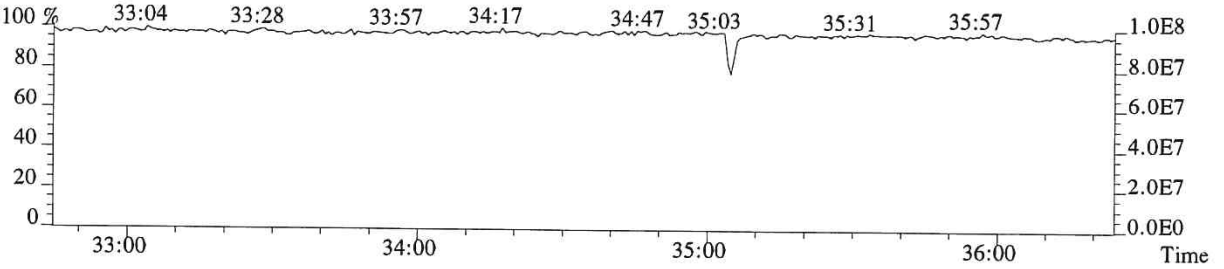
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2712.0,0.40%,F,T)



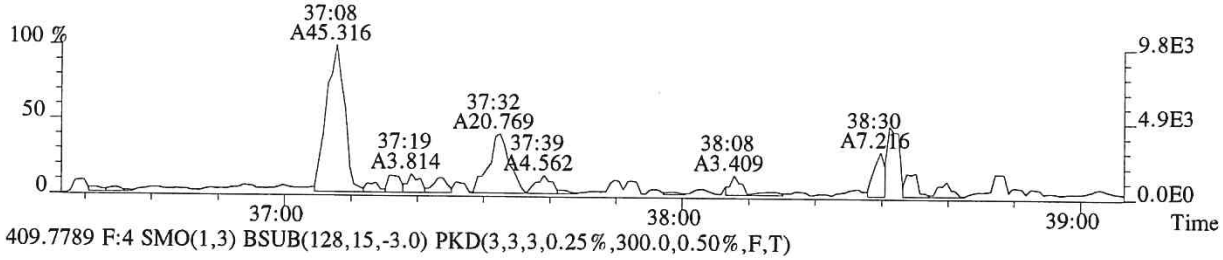
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1448.0,0.40%,F,T)



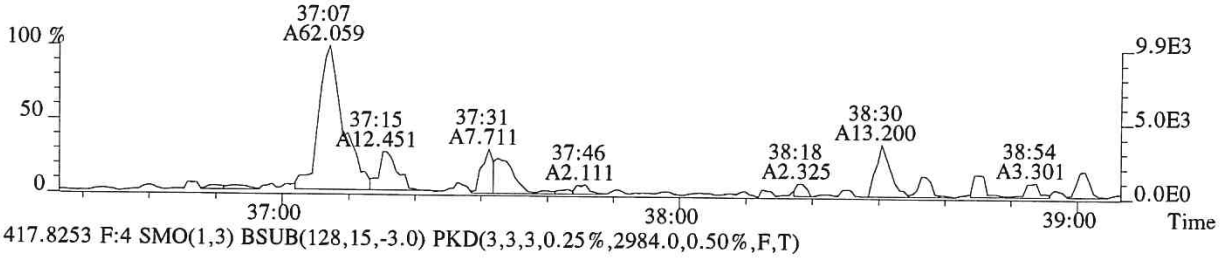
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



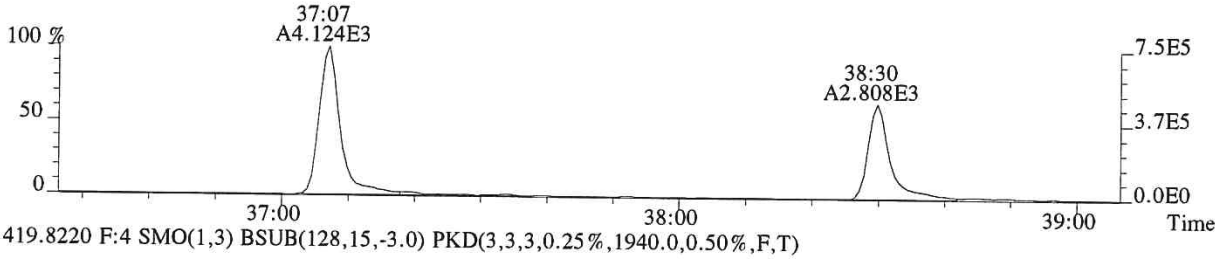
File:P616412 #1-241 Acq: 9-JAN-2019 18:07:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,460.0,0.50%,F,T)



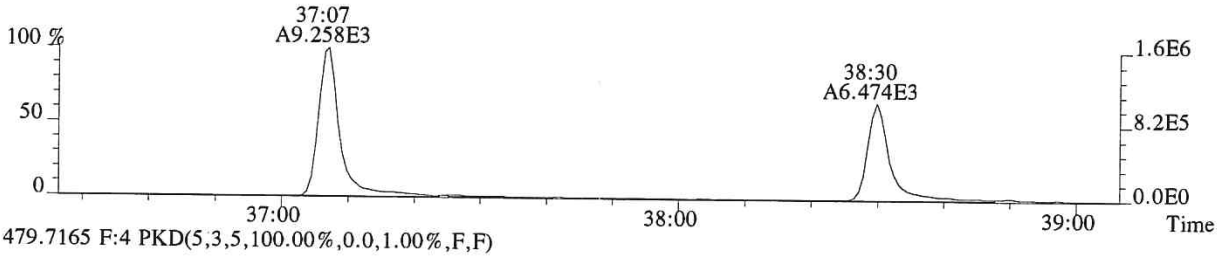
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,300.0,0.50%,F,T)



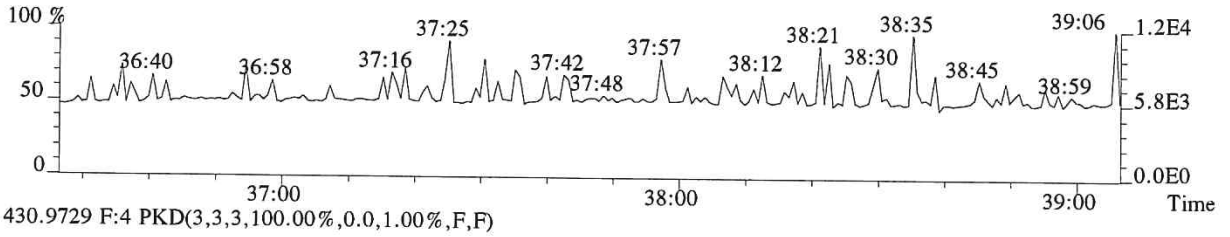
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2984.0,0.50%,F,T)



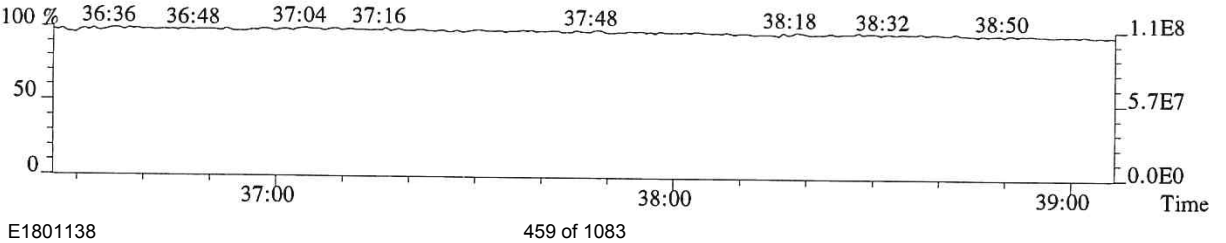
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1940.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

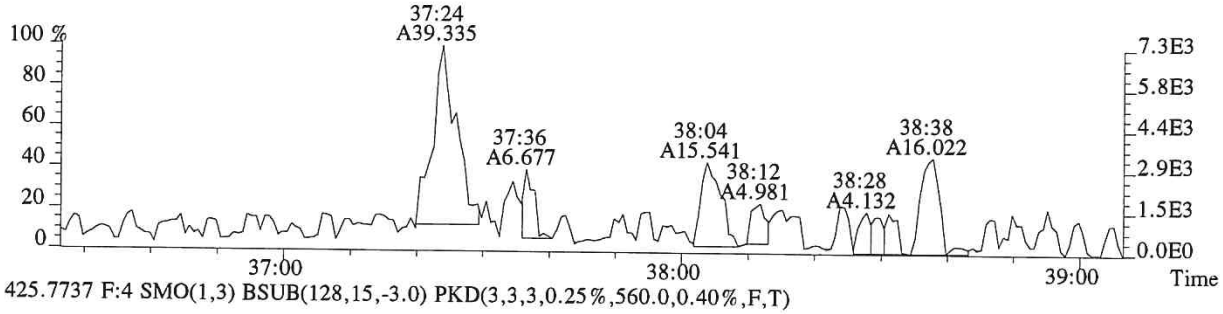


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

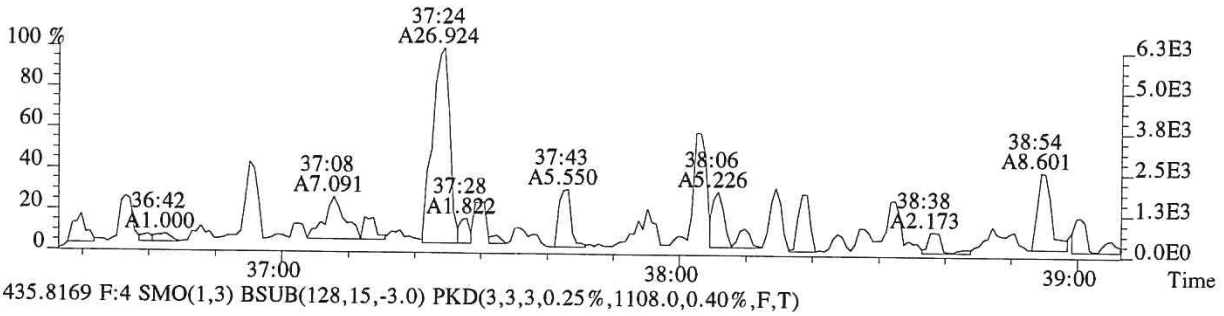


017340

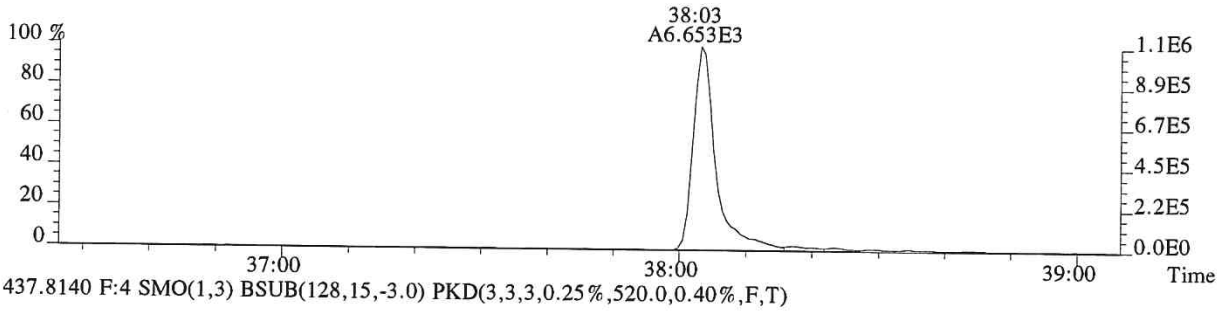
File:P616412 #1-241 Acq: 9-JAN-2019 18:07:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,864.0,0.40%,F,T)



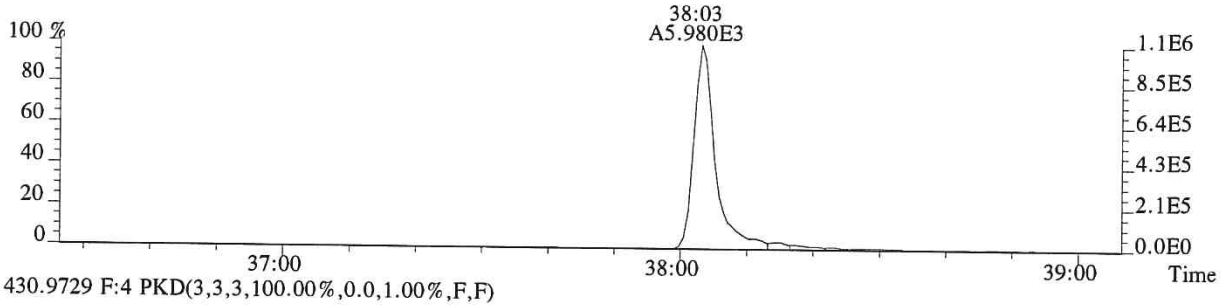
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,560.0,0.40%,F,T)



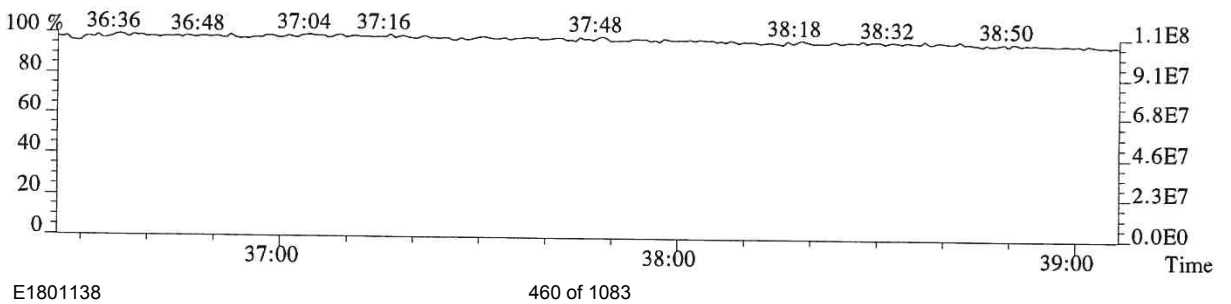
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1108.0,0.40%,F,T)



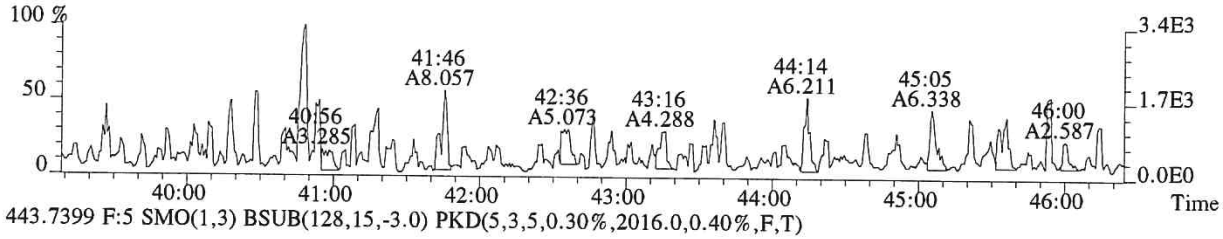
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,520.0,0.40%,F,T)



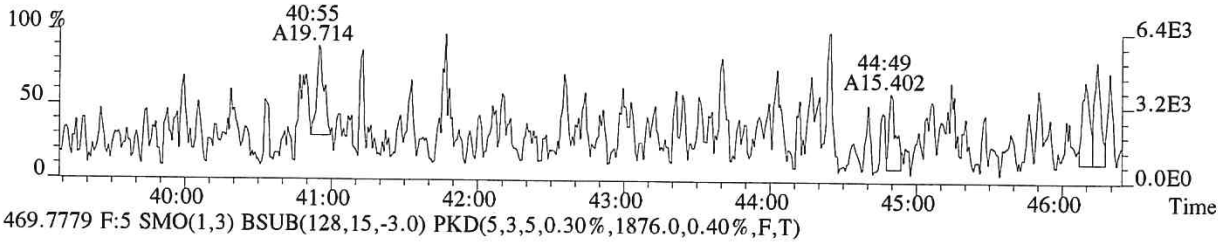
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



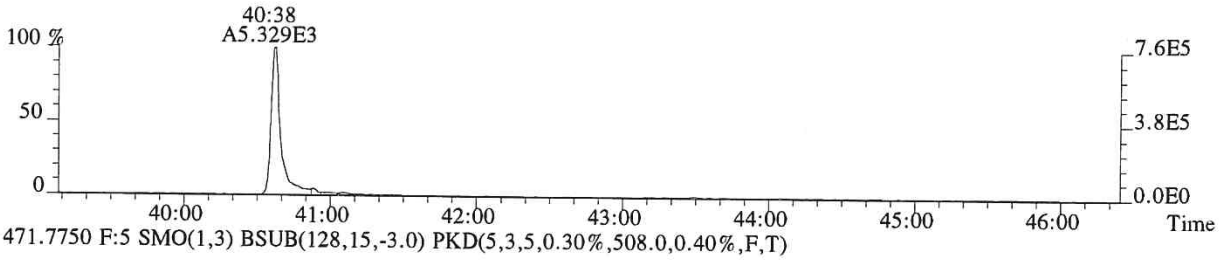
File:P616412 #1-654 Acq: 9-JAN-2019 18:07:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,432.0,0.40%,F,T)



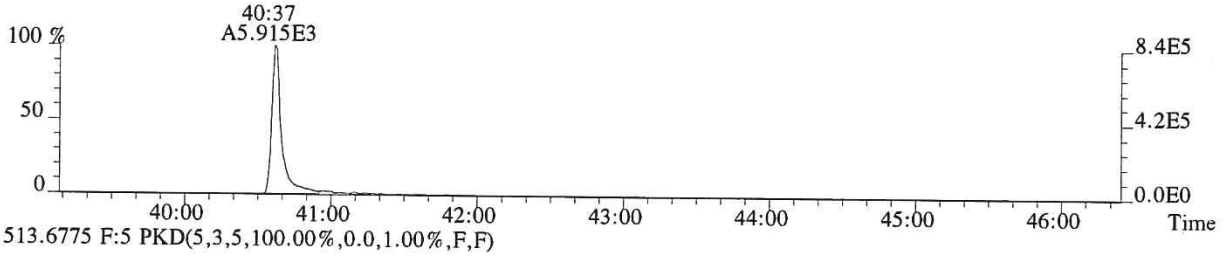
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2016.0,0.40%,F,T)



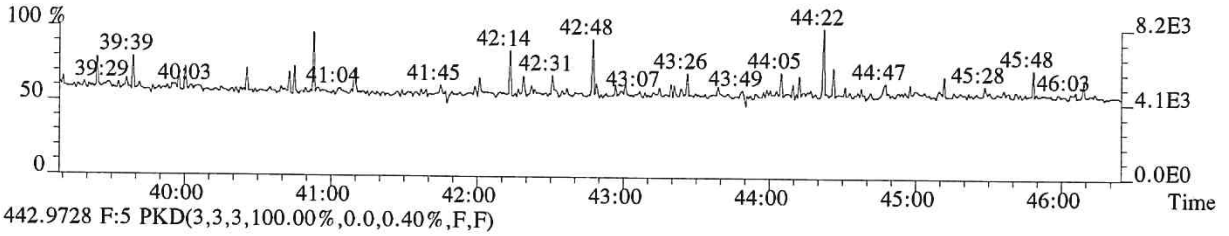
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1876.0,0.40%,F,T)



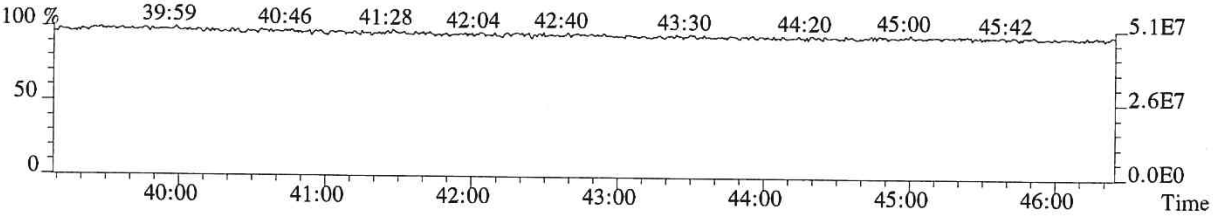
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,508.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

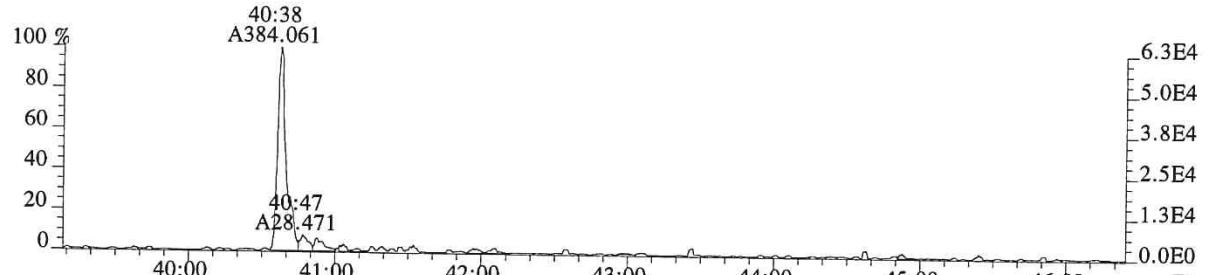


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

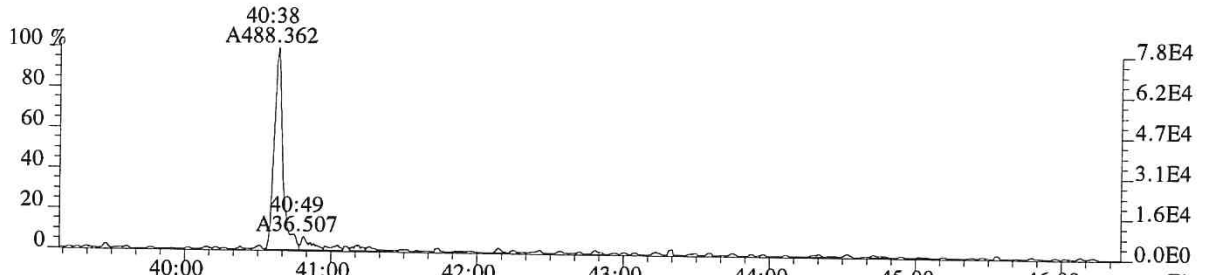


017342

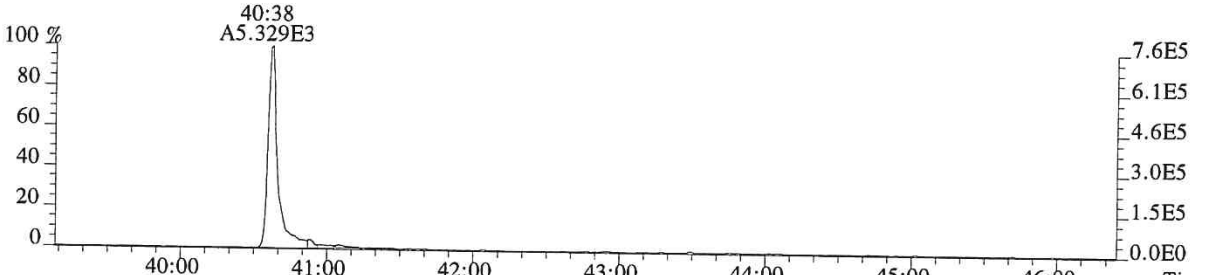
File:P616412 #1-654 Acq: 9-JAN-2019 18:07:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-012DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,336.0,0.40%,F,T)



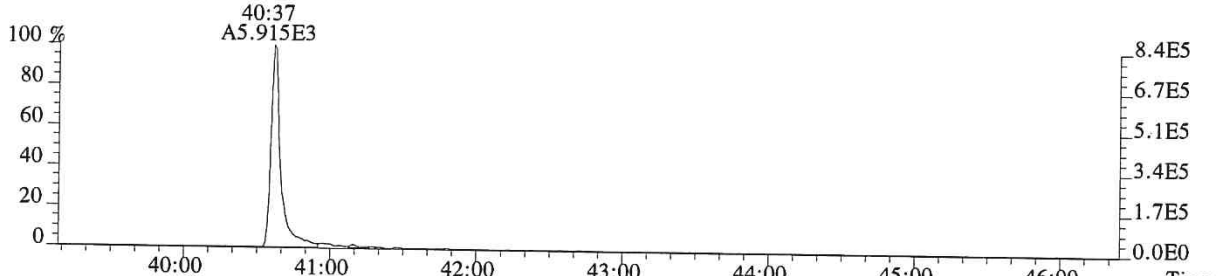
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,316.0,0.40%,F,T)



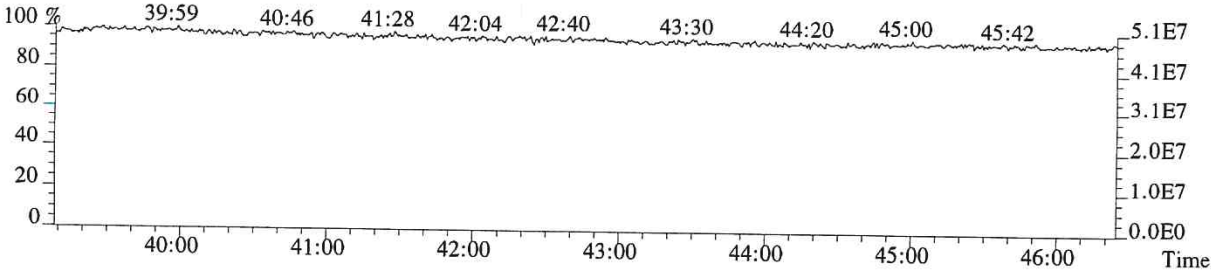
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1876.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,508.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0198

Run #14 Filename P616411 Samp: 1 Inj: 1 Acquired: 9-JAN-19 17:18:50
Processed: 10-JAN-19 08:32:01 Sample ID: E1801138-013

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:13	1.207e+03	1.421e+03	0.85	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:23	2.344e+02	1.634e+02	1.44	yes	yes	1.156
3	Unk	2,3,4,7,8-PeCDF	31:27	3.520e+02	1.796e+02	1.96	no	yes	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	5.033e+02	3.892e+02	1.29	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:27	2.893e+02	2.149e+02	1.35	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	2.338e+02	1.907e+02	1.23	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:50	8.023e+01	7.233e+01	1.11	yes	yes	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	2.009e+03	1.872e+03	1.07	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	1.219e+02	1.198e+02	1.02	yes	no	1.463
10	Unk	OCDF	40:48	1.807e+03	1.845e+03	0.98	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:16	2.689e+02	3.250e+02	0.83	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:44	7.175e+01	2.255e+01	3.18	no	yes	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:10	9.641e+01	6.823e+01	1.41	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:15	3.038e+02	2.721e+02	1.12	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:30	1.431e+02	1.457e+02	0.98	no	yes	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	5.601e+03	5.304e+03	1.06	yes	no	1.112
17	Unk	OCDD	40:38	3.009e+04	3.272e+04	0.92	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:11	1.099e+04	1.344e+04	0.82	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:22	1.882e+04	1.152e+04	1.63	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	1.751e+04	1.080e+04	1.62	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:19	6.876e+03	1.312e+04	0.52	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	8.958e+03	1.681e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:00	7.031e+03	1.342e+04	0.52	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	6.068e+03	1.108e+04	0.55	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	3.766e+03	9.065e+03	0.42	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	2.994e+03	6.216e+03	0.48	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:14	5.005e+03	6.646e+03	0.75	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:44	1.206e+04	7.531e+03	1.60	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	8.704e+03	6.988e+03	1.25	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	9.424e+03	7.424e+03	1.27	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:04	6.355e+03	5.993e+03	1.06	yes	no	0.857
32	IS	13C-OCDD	40:38	3.330e+03	3.516e+03	0.95	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:27	1.397e+04	1.705e+04	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	1.700e+04	1.347e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:16	8.735e+03				no	1.086

$$\text{OCDD} = \frac{(3.009e+04 + 3.272e+04) \times 4000 \text{ pg} \times 1}{(3.330e+03 + 3.516e+03) \times 10.378 \text{ g} \times 82.6 / 100 \times 1.157} = 3700 \text{ ng/kg}$$

LW 01/10/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0198

Run #14 Filename P616411 Samp: 1 Inj: 1 Acquired: 9-JAN-19 17:18:50
Processed: 10-JAN-19 08:32:01 LAB. ID: E1801138-013

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.63e+05	1.52e+03	1.1e+02	1.87e+05	6.21e+03	3.0e+01
2	1,2,3,7,8-PeCDF	3.77e+04	1.57e+03	2.4e+01	2.53e+04	4.52e+03	5.6e+00
3	2,3,4,7,8-PeCDF	5.25e+04	1.57e+03	3.3e+01	2.73e+04	4.52e+03	6.1e+00
4	1,2,3,4,7,8-HxCDF	9.46e+04	6.32e+03	1.5e+01	7.67e+04	2.73e+03	2.8e+01
5	1,2,3,6,7,8-HxCDF	5.46e+04	6.32e+03	8.6e+00	3.50e+04	2.73e+03	1.3e+01
6	2,3,4,6,7,8-HxCDF	4.81e+04	6.32e+03	7.6e+00	4.02e+04	2.73e+03	1.5e+01
7	1,2,3,7,8,9-HxCDF	1.76e+04	6.32e+03	2.8e+00	1.27e+04	2.73e+03	4.6e+00
8	1,2,3,4,6,7,8-HpCDF	3.45e+05	1.59e+03	2.2e+02	3.39e+05	4.40e+02	7.7e+02
9	1,2,3,4,7,8,9-HpCDF	2.39e+04	1.59e+03	1.5e+01	2.08e+04	4.40e+02	4.7e+01
10	OCDF	2.37e+05	3.84e+02	6.2e+02	2.79e+05	1.80e+03	1.5e+02
11	2,3,7,8-TCDD	4.32e+04	4.83e+03	8.9e+00	4.63e+04	1.30e+03	3.6e+01
12	1,2,3,7,8-PeCDD	1.39e+04	1.70e+03	8.2e+00	8.00e+03	7.56e+02	1.1e+01
13	1,2,3,4,7,8-HxCDD	2.03e+04	4.72e+02	4.3e+01	1.28e+04	3.18e+03	4.0e+00
14	1,2,3,6,7,8-HxCDD	5.89e+04	4.72e+02	1.2e+02	5.29e+04	3.18e+03	1.7e+01
15	1,2,3,7,8,9-HxCDD	2.46e+04	4.72e+02	5.2e+01	2.68e+04	3.18e+03	8.4e+00
16	1,2,3,4,6,7,8-HpCDD	9.30e+05	4.72e+02	2.0e+03	8.54e+05	4.36e+02	2.0e+03
17	OCDD	3.95e+06	2.96e+02	1.3e+04	4.30e+06	2.20e+02	2.0e+04
18	13C-2,3,7,8-TCDF	1.56e+06	1.28e+04	1.2e+02	1.92e+06	1.02e+04	1.9e+02
19	13C-1,2,3,7,8-PeCDF	2.85e+06	5.12e+02	5.6e+03	1.79e+06	8.08e+02	2.2e+03
20	13C-2,3,4,7,8-PeCDF	2.96e+06	5.12e+02	5.8e+03	1.80e+06	8.08e+02	2.2e+03
21	13C-1,2,3,4,7,8-HxCDF	1.32e+06	1.30e+03	1.0e+03	2.54e+06	1.44e+03	1.8e+03
22	13C-1,2,3,6,7,8-HxCDF	1.51e+06	1.30e+03	1.2e+03	2.83e+06	1.44e+03	2.0e+03
23	13C-2,3,4,6,7,8-HxCDF	1.27e+06	1.30e+03	9.7e+02	2.48e+06	1.44e+03	1.7e+03
24	13C-1,2,3,7,8,9-HxCDF	9.81e+05	1.30e+03	7.5e+02	1.86e+06	1.44e+03	1.3e+03
25	13C-1,2,3,4,6,7,8-HpCDF	7.21e+05	2.20e+03	3.3e+02	1.62e+06	3.41e+03	4.7e+02
26	13C-1,2,3,4,7,8,9-HpCDF	4.85e+05	2.20e+03	2.2e+02	1.13e+06	3.41e+03	3.3e+02
27	13C-2,3,7,8-TCDD	7.33e+05	1.27e+04	5.8e+01	9.51e+05	3.72e+03	2.6e+02
28	13C-1,2,3,7,8-PeCDD	1.92e+06	2.56e+03	7.5e+02	1.22e+06	1.92e+03	6.4e+02
29	13C-1,2,3,4,7,8-HxCDD	1.69e+06	1.94e+03	8.7e+02	1.37e+06	1.59e+03	8.6e+02
30	13C-1,2,3,6,7,8-HxCDD	1.59e+06	1.94e+03	8.2e+02	1.25e+06	1.59e+03	7.8e+02
31	13C-1,2,3,4,6,7,8-HpCDD	1.06e+06	1.14e+03	9.3e+02	1.00e+06	4.40e+02	2.3e+03
32	13C-OCDD	4.47e+05	9.52e+02	4.7e+02	4.95e+05	3.16e+02	1.6e+03
33	13C-1,2,3,4-TCDD	1.99e+06	1.27e+04	1.6e+02	2.39e+06	3.72e+03	6.4e+02
34	13C-1,2,3,7,8,9-HxCDD	2.62e+06	1.94e+03	1.4e+03	2.02e+06	1.59e+03	1.3e+03
35	37Cl-2,3,7,8-TCDD	1.25e+06	3.79e+03	3.3e+02			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0198

Entry: 36 Totals Name: Total Tetra-Furans

Run: 14 File: P616411 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 17:18:50 Processed: 10-JAN-19 08:32:01

Mass: 303.9020 305.8990 Tot Response: 4.59e+03 RRF: 1.081

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:39	1.57e+02	1.97e+02	0.80	yes	3.53e+02		n	n
2	23:37	1.46e+02	1.84e+02	0.79	yes	3.30e+02		n	n
3	24:10	3.17e+02	4.00e+02	0.79	yes	7.17e+02		n	n
4	25:13	1.21e+03	1.42e+03	0.85	yes	2.63e+03	2,3,7,8-TCDF	n	n
5	25:38	2.28e+02	3.29e+02	0.69	yes	5.57e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0198

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 14 File: P616411 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 17:18:50 Processed: 10-JAN-19 08:32:01

Mass: 319.8970 321.8940 Tot Response: 5.94e+02 RRF: 1.049

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:16	2.69e+02	3.25e+02 0.83	yes	5.94e+02	2,3,7,8-TCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0198

Entry: 38 Totals Name: Total Penta-Furans1

Run: 14 File: P616411 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 17:18:50 Processed: 10-JAN-19 08:32:01

Mass: 339.8600 341.8570 Tot Response: 9.71e+02 RRF: 1.130

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:32	6.04e+02	3.67e+02 1.65	yes	9.71e+02		n	n

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Peak List Summary

CLIENT ID.
SL0198

Entry: 39 Totals Name: Total Penta-Furans2

Run: 14 File: P616411 Sample:1 Injection:1 Function:2

Acquired: 9-JAN-19 17:18:50 Processed: 10-JAN-19 08:32:01

Mass: 339.8600 341.8570 Tot Response: 2.64e+03 RRF: 1.130

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:18	8.51e+02	5.19e+02	1.64	yes	1.37e+03		n	y
2	29:58	1.77e+02	1.34e+02	1.32	yes	3.11e+02		y	y
3	30:12	8.11e+01	5.42e+01	1.50	yes	1.35e+02		y	y
4	30:23	2.34e+02	1.63e+02	1.44	yes	3.98e+02	1,2,3,7,8-PeCDF	y	y
5	30:40	2.63e+02	1.59e+02	1.66	yes	4.22e+02		y	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0198

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 14 File: P616411 Sample:1 Injection:1 Function:2

Acquired: 9-JAN-19 17:18:50 Processed: 10-JAN-19 08:32:01

Mass: 355.8550 357.8520 Tot Response: 7.95e+02 RRF: 0.9288

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:23	2.67e+02	1.90e+02	1.41	yes	4.58e+02	n	n
2	30:25	1.14e+02	6.56e+01	1.75	yes	1.80e+02	n	n
3	30:42	5.43e+01	3.62e+01	1.50	yes	9.04e+01	n	n
4	30:56	4.23e+01	2.44e+01	1.73	yes	6.67e+01	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0198

Entry: 41 Totals Name: Total Hexa-Furans

Run: 14 File: P616411 Sample:1 Injection:1 Function:3

Acquired: 9-JAN-19 17:18:50 Processed: 10-JAN-19 08:32:01

Mass: 373.8210 375.8180 Tot Response: 5.18e+03 RRF: 1.324

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:09	3.65e+02	3.23e+02	1.13	yes	6.88e+02		n	n
2	33:19	1.40e+03	1.12e+03	1.24	yes	2.52e+03		n	n
3	34:21	5.03e+02	3.89e+02	1.29	yes	8.93e+02	1,2,3,4,7,8-HxCDF	n	n
4	34:27	2.89e+02	2.15e+02	1.35	yes	5.04e+02	1,2,3,6,7,8-HxCDF	n	n
5	35:01	2.34e+02	1.91e+02	1.23	yes	4.24e+02	2,3,4,6,7,8-HxCDF	n	n
6	35:50	8.02e+01	7.23e+01	1.11	yes	1.53e+02	1,2,3,7,8,9-HxCDF	y	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0198

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 14 File: P616411 Sample:1 Injection:1 Function:3

Acquired: 9-JAN-19 17:18:50 Processed: 10-JAN-19 08:32:01

Mass: 389.8160 391.8130 Tot Response: 5.23e+03 RRF: 1.092

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:43	1.42e+03	1.08e+03 1.31	yes	2.50e+03		n	n
2	34:31	1.06e+03	9.35e+02 1.13	yes	1.99e+03		n	n
3	35:10	9.64e+01	6.82e+01 1.41	yes	1.65e+02	1,2,3,4,7,8-HxCDD	n	n
4	35:15	3.04e+02	2.72e+02 1.12	yes	5.76e+02	1,2,3,6,7,8-HxCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0198

Entry: 43 Totals Name: Total Hepta-Furans

Run: 14 File: P616411 Sample:1 Injection:1 Function:4

Acquired: 9-JAN-19 17:18:50 Processed: 10-JAN-19 08:32:01

Mass: 407.7820 409.7790 Tot Response: 9.90e+03 RRF: 1.495

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:08	2.01e+03	1.87e+03	1.07	yes	3.88e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	37:25	1.05e+02	1.12e+02	0.94	yes	2.17e+02		n	n
3	37:32	2.85e+03	2.70e+03	1.06	yes	5.56e+03		n	n
4	38:30	1.22e+02	1.20e+02	1.02	yes	2.42e+02	1,2,3,4,7,8,9-HpCDF	n	n

ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0198

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 14 File: P616411 Sample:1 Injection:1 Function:4

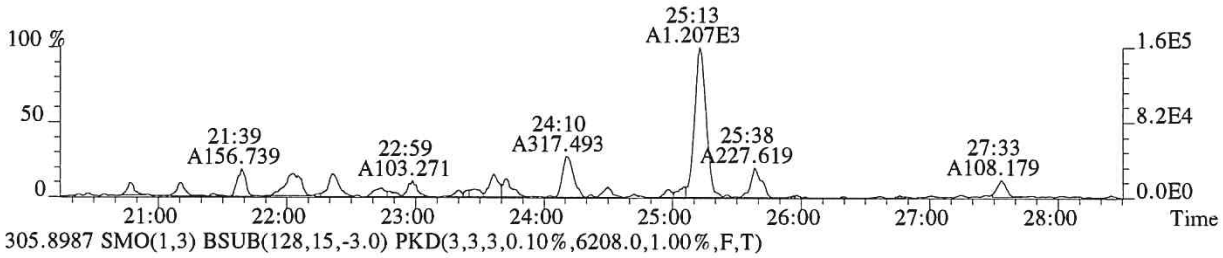
Acquired: 9-JAN-19 17:18:50 Processed: 10-JAN-19 08:32:01

Mass: 423.7770 425.7740 Tot Response: 2.74e+04 RRF: 1.112

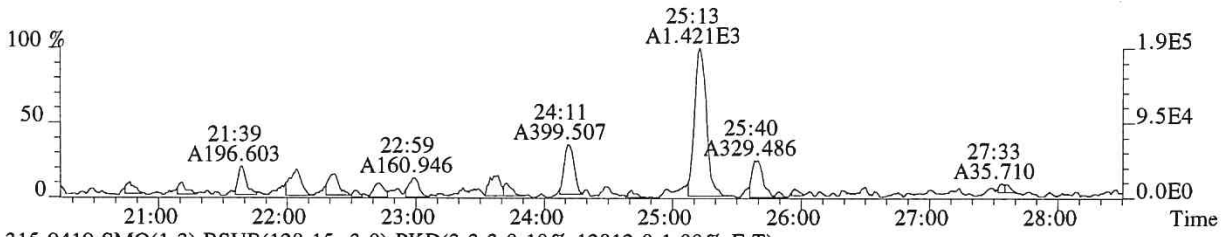
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:24	8.38e+03	8.07e+03	1.04	yes	1.65e+04		n	n
2	38:04	5.60e+03	5.30e+03	1.06	yes	1.09e+04	1,2,3,4,6,7,8-HpCDD	n	n

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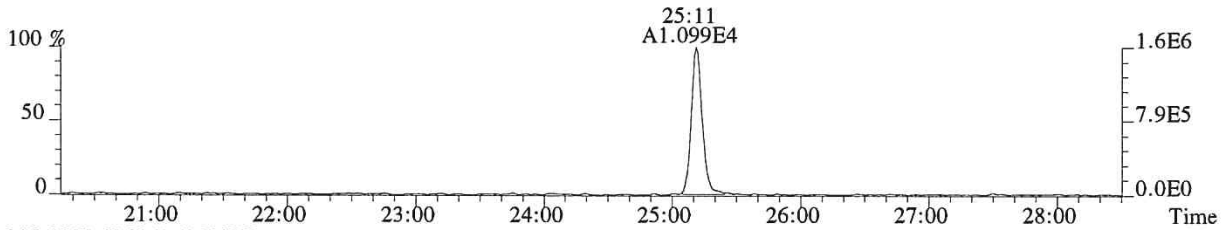
File:P616411 #1-587 Acq: 9-JAN-2019 17:18:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-013
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1520.0,1.00%,F,T)



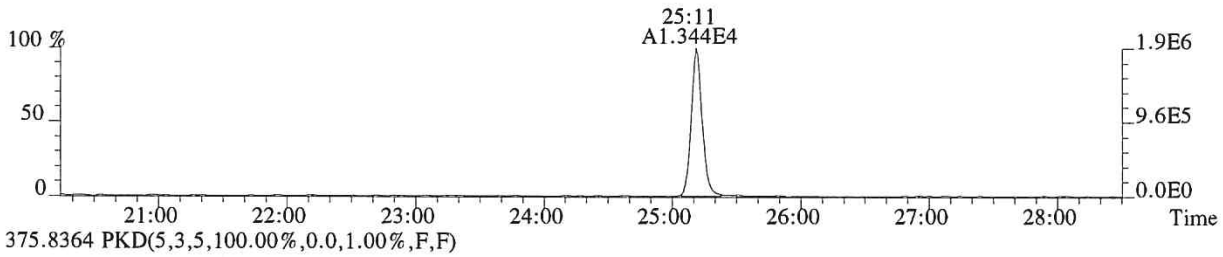
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6208.0,1.00%,F,T)



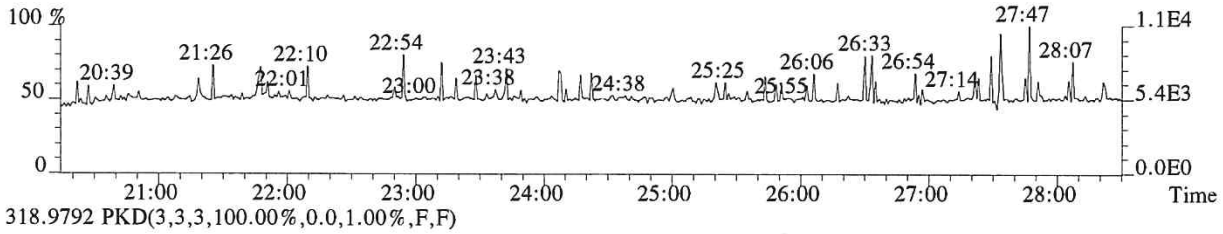
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12812.0,1.00%,F,T)



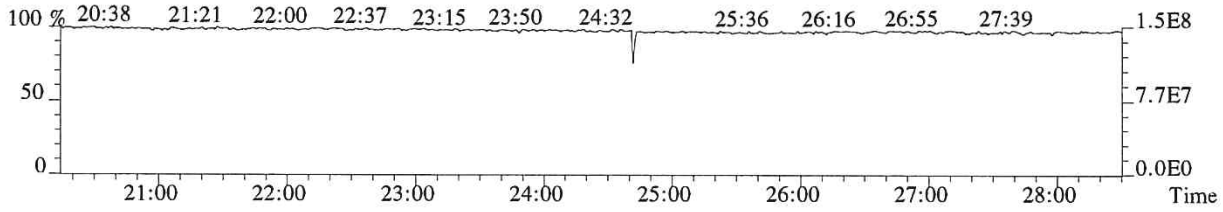
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10204.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

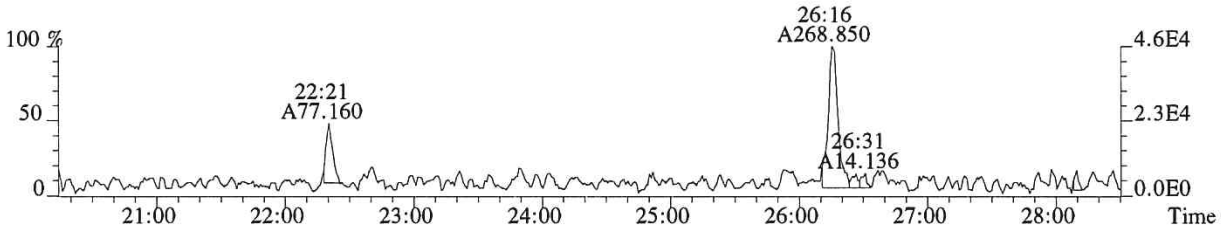


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

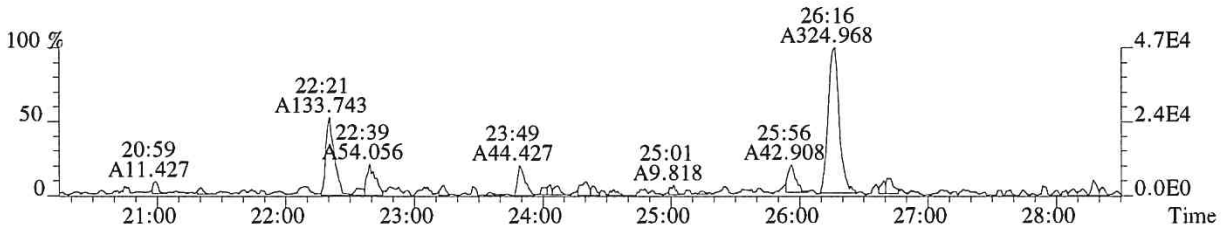


017355

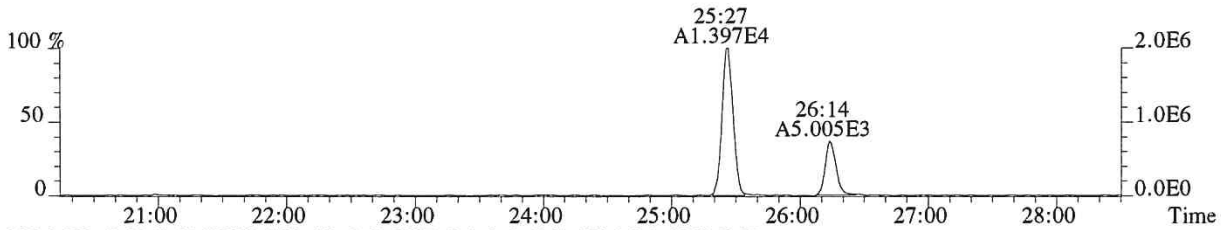
File:P616411 #1-587 Acq: 9-JAN-2019 17:18:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-013
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4832.0,1.00%,F,T)



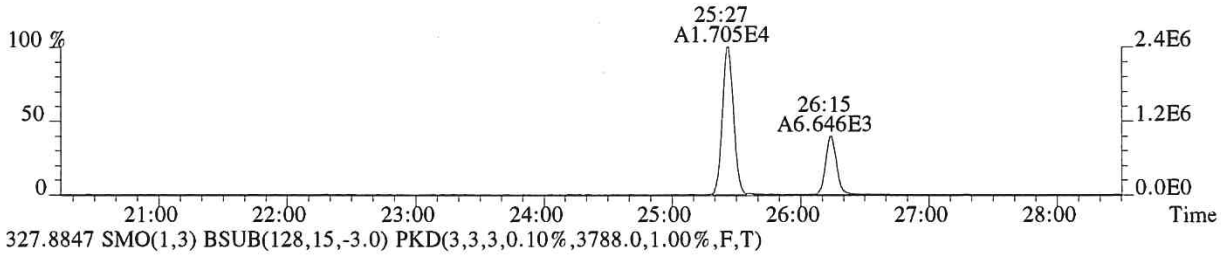
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1296.0,1.00%,F,T)



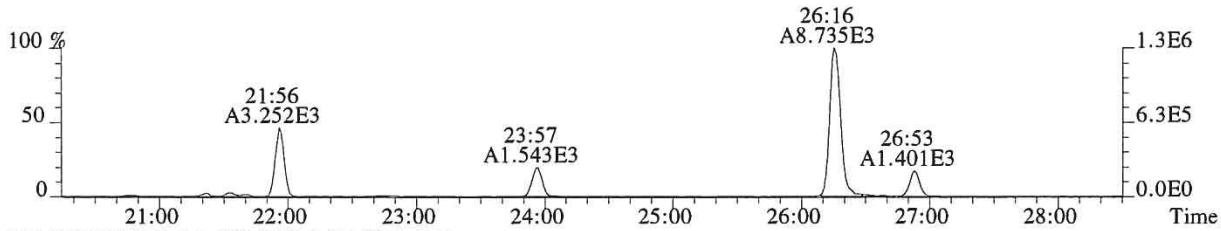
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12728.0,1.00%,F,T)



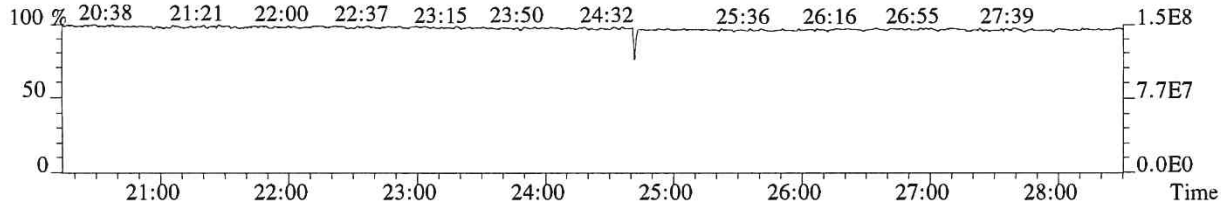
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3720.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3788.0,1.00%,F,T)

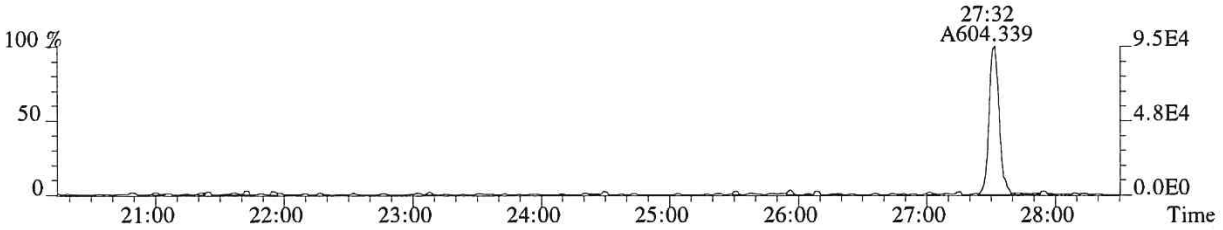


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

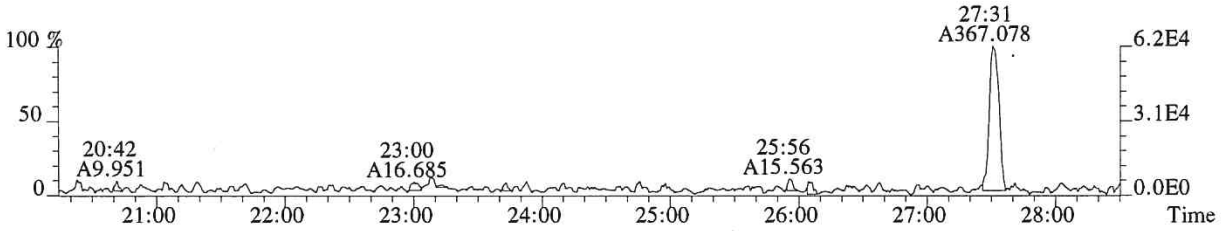


017356

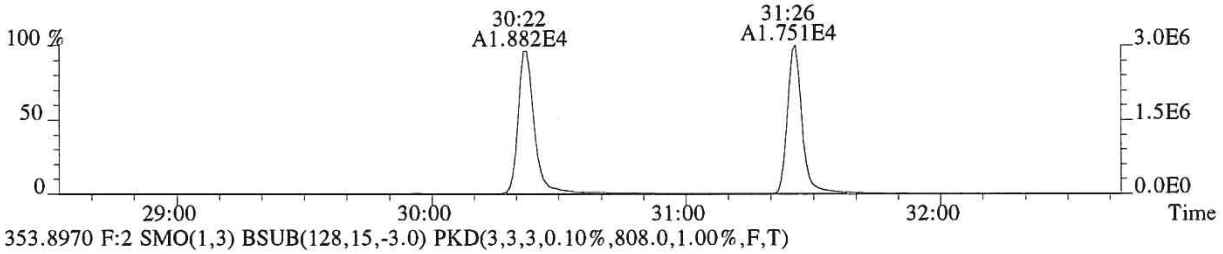
File:P616411 #1-587 Acq: 9-JAN-2019 17:18:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-013
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,612.0,1.00%,F,T)



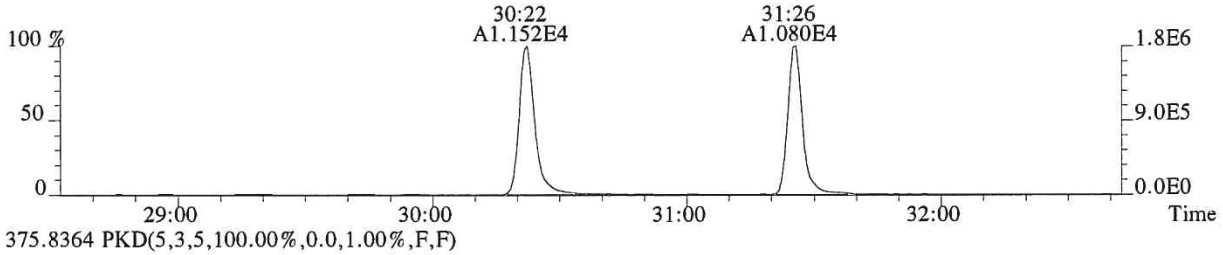
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3060.0,1.00%,F,T)



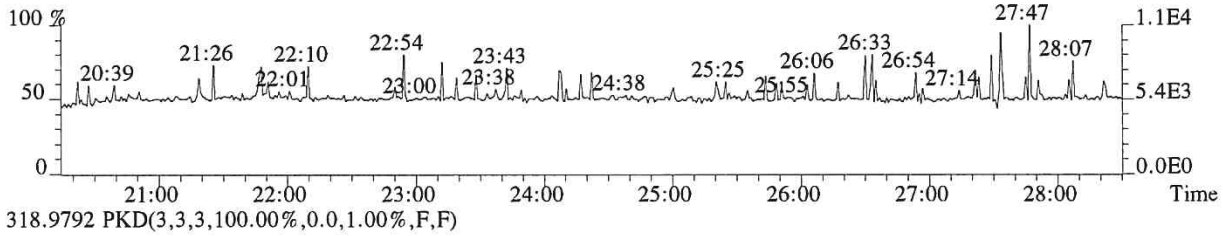
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,512.0,1.00%,F,T)



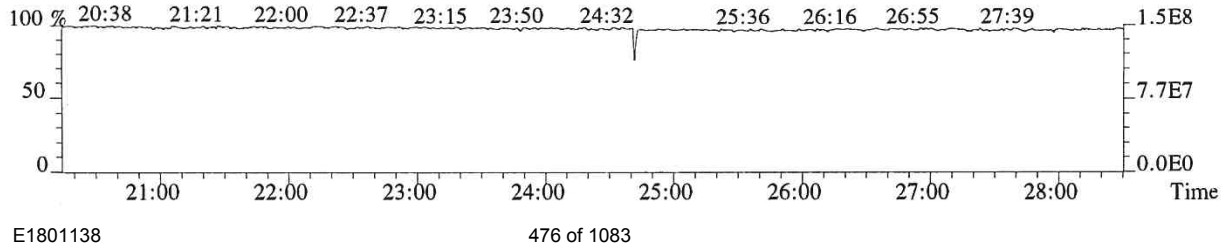
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,808.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

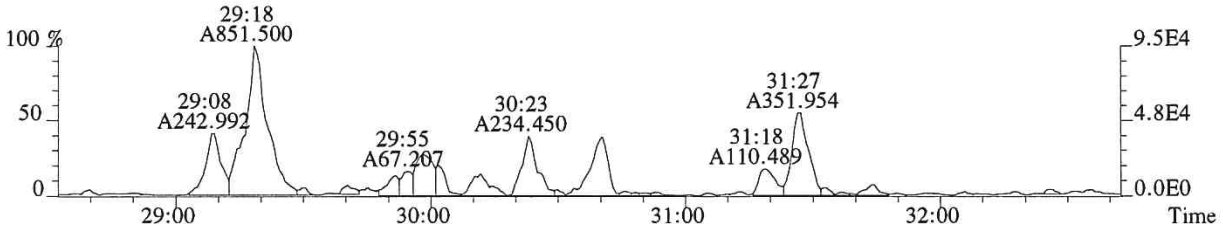


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

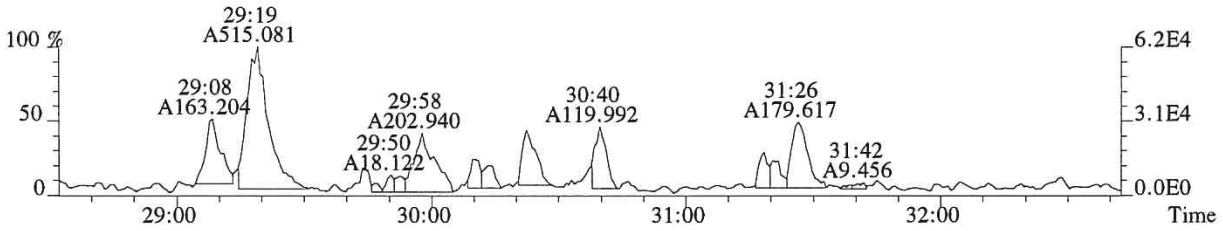


017357

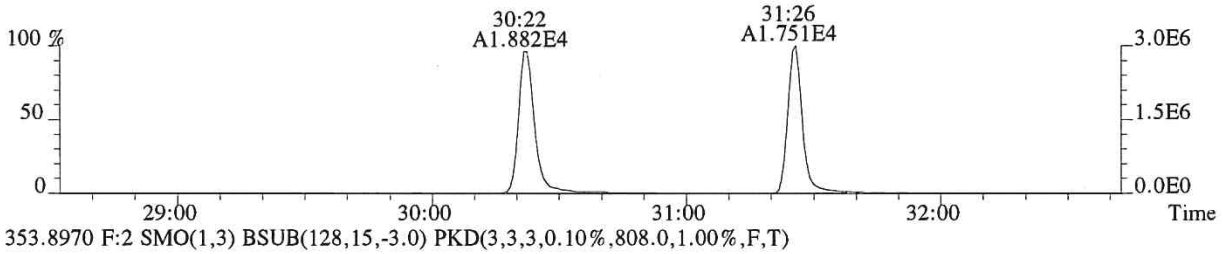
File:P616411 #1-376 Acq: 9-JAN-2019 17:18:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-013
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1568.0,1.00%,F,T)



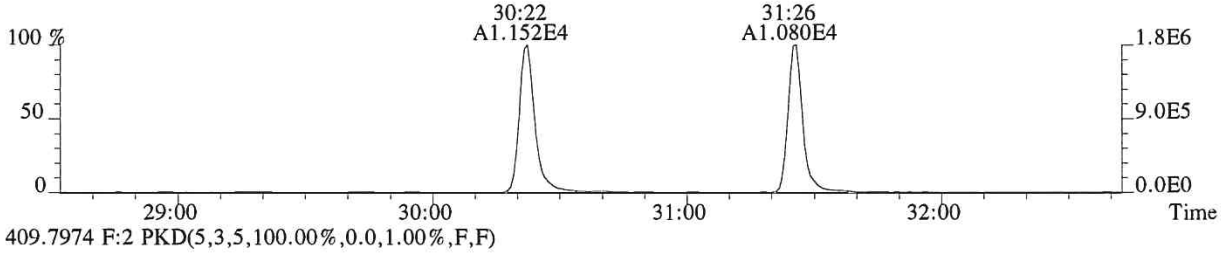
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4516.0,1.00%,F,T)



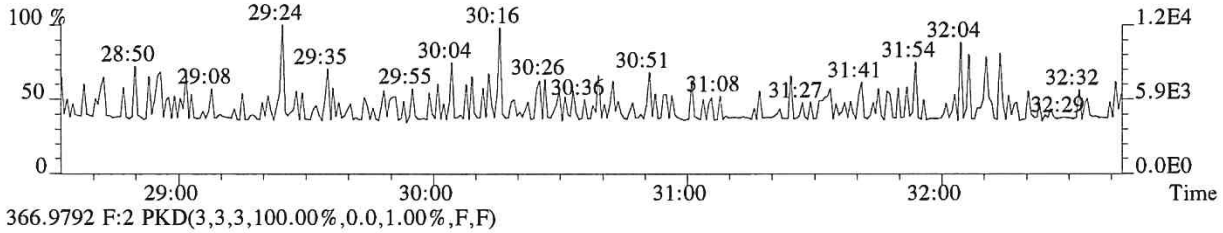
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,512.0,1.00%,F,T)



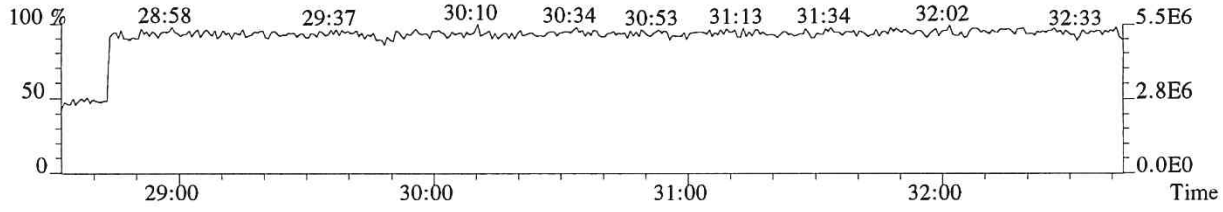
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,808.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

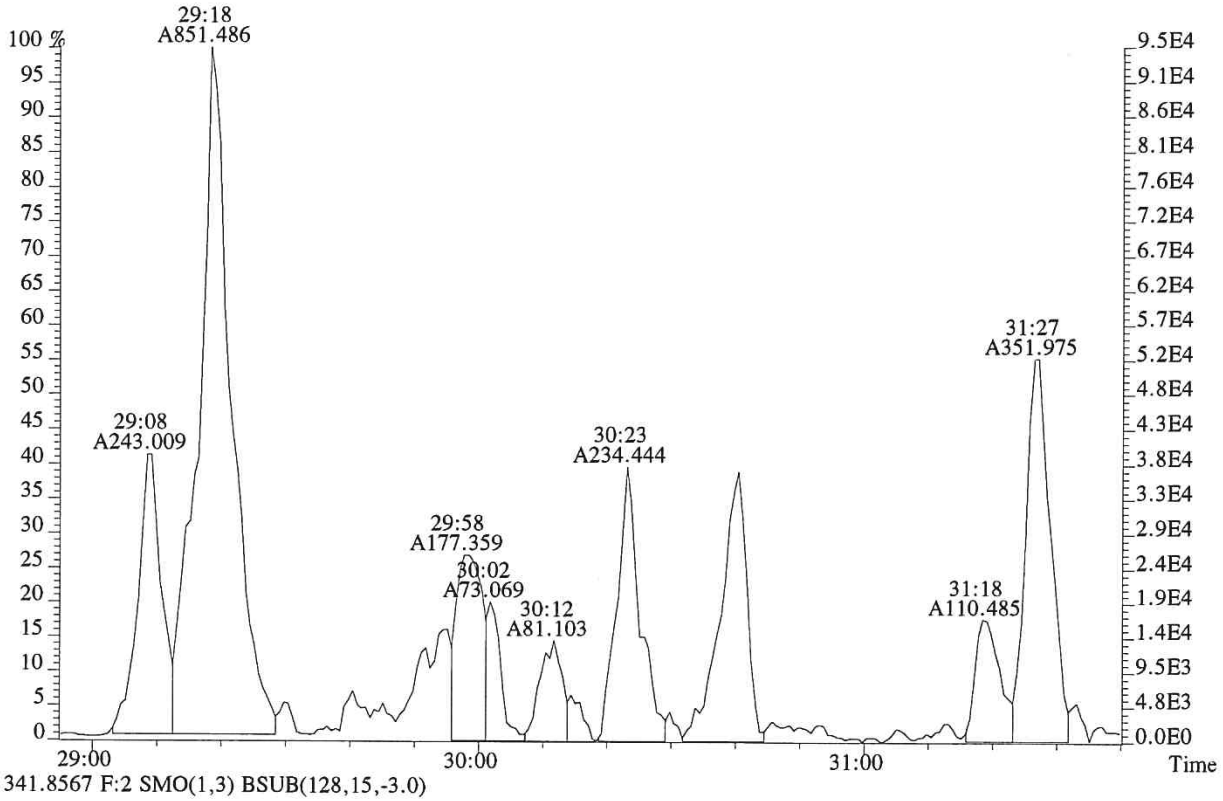


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

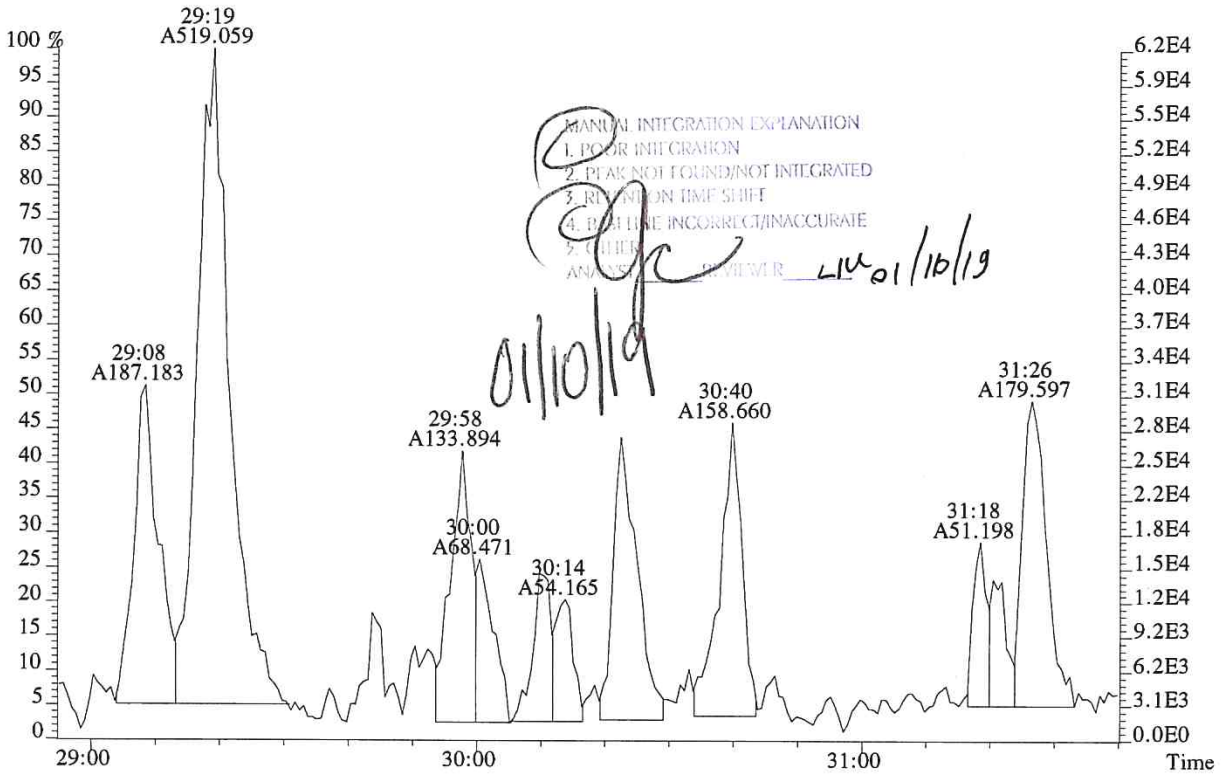


017358

File:P616411 #1-376 Acq: 9-JAN-2019 17:18:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-013
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0)



341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0)

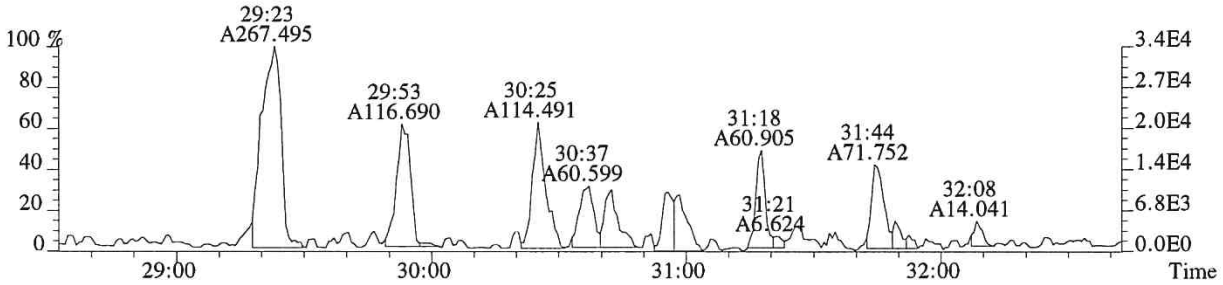


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. PEAK TIME INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER

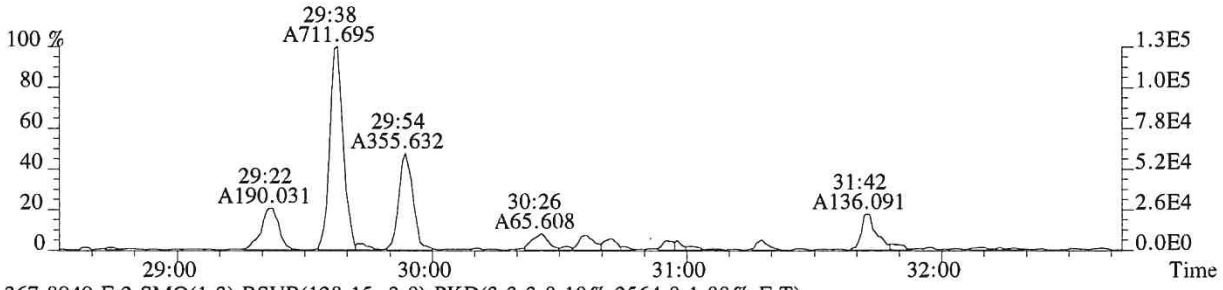
01/10/19

01/10/19

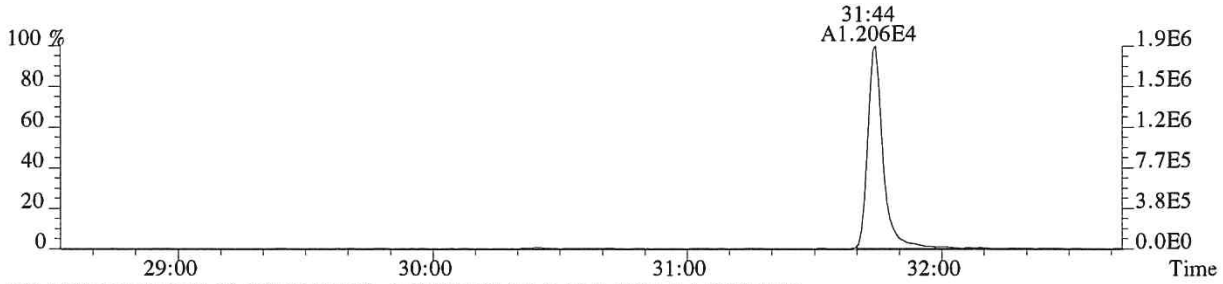
File:P616411 #1-376 Acq: 9-JAN-2019 17:18:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-013
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1700.0,1.00%,F,T)



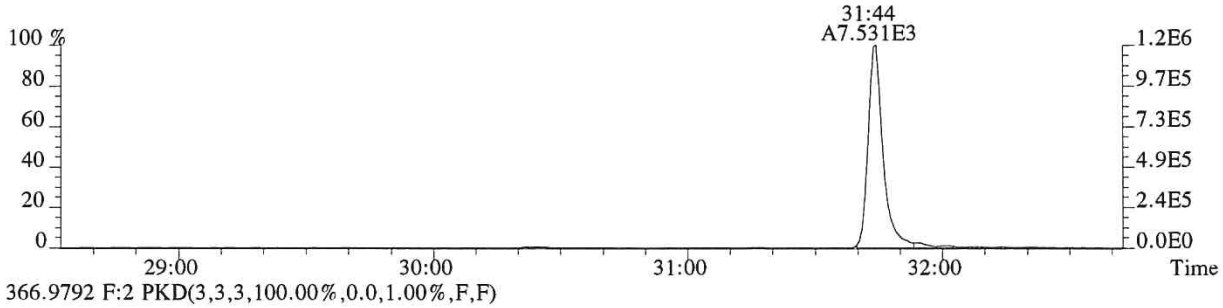
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,756.0,1.00%,F,T)



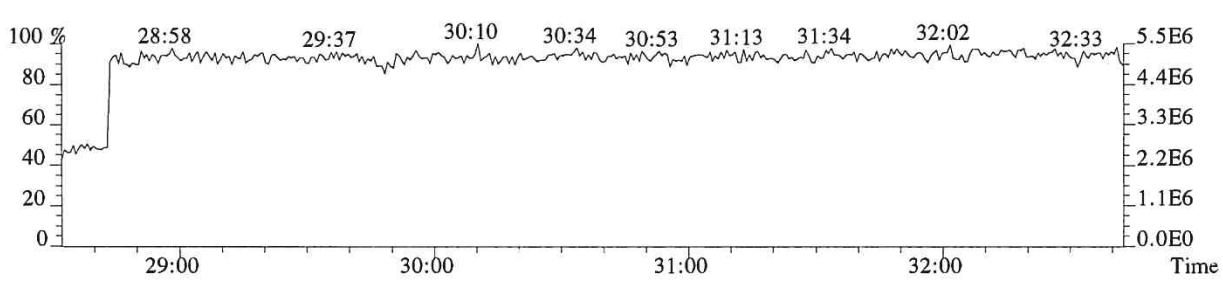
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2564.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1916.0,1.00%,F,T)

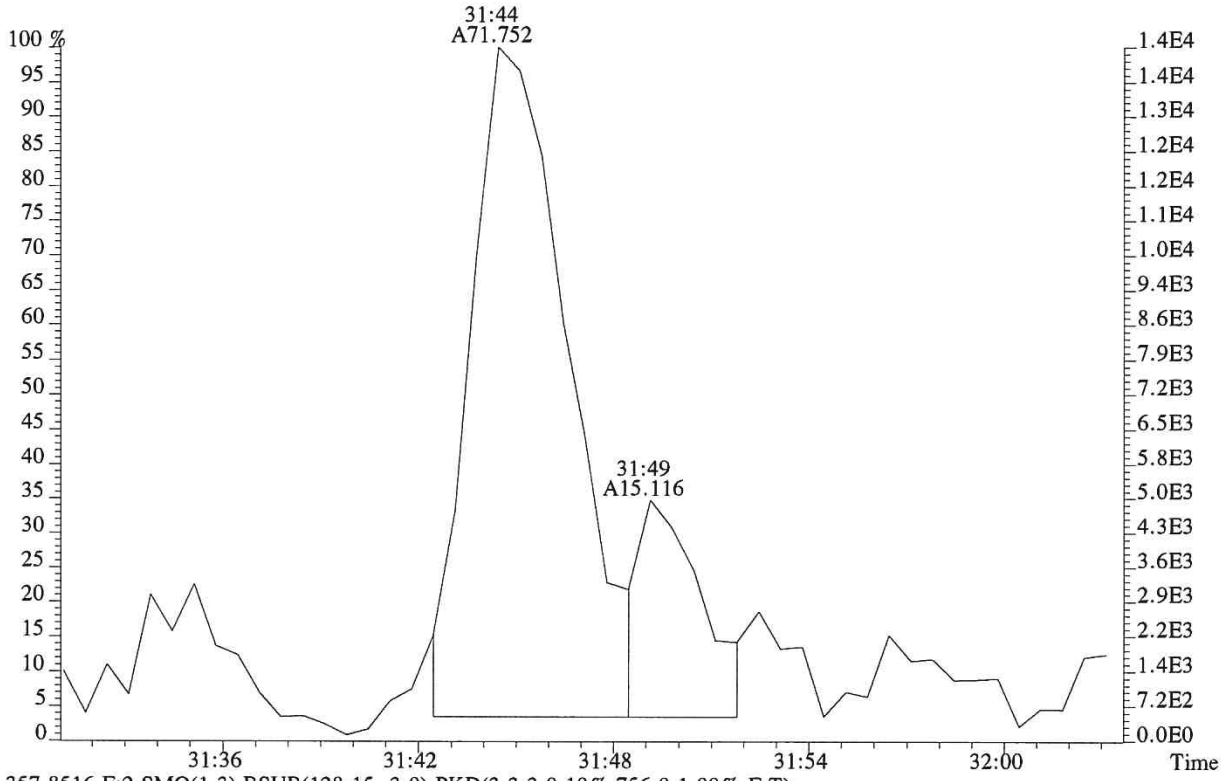


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

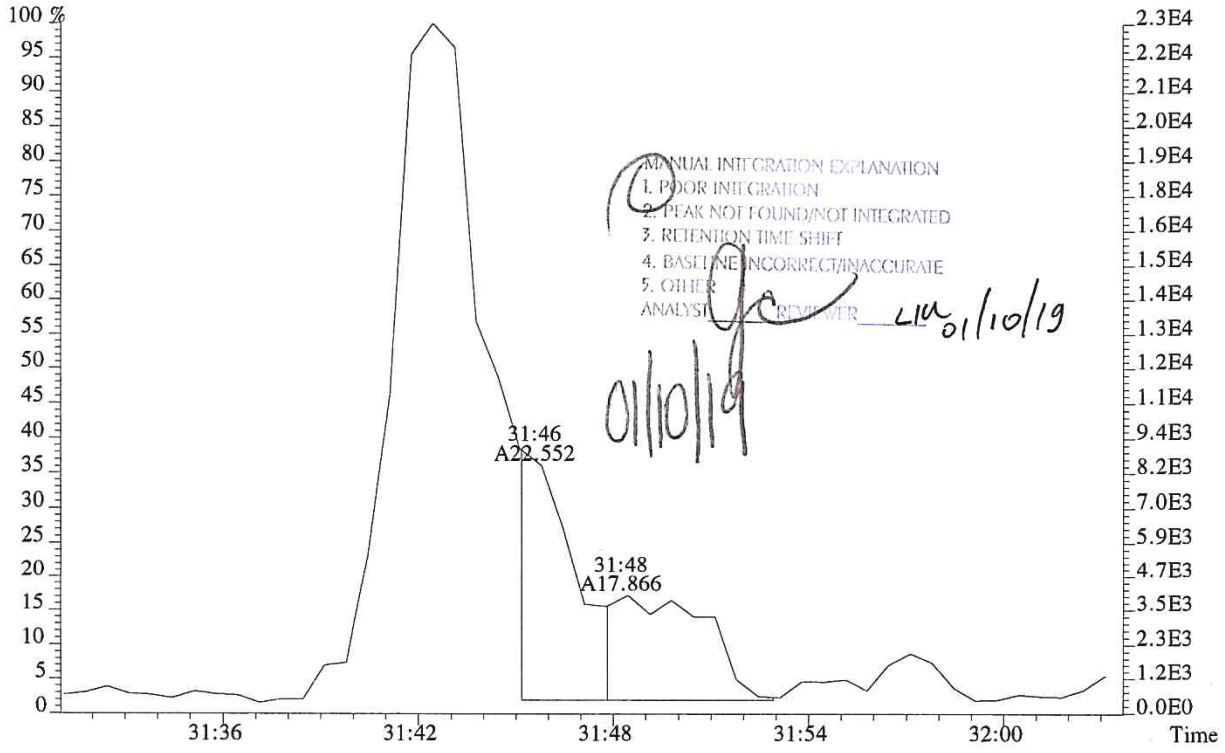


017360

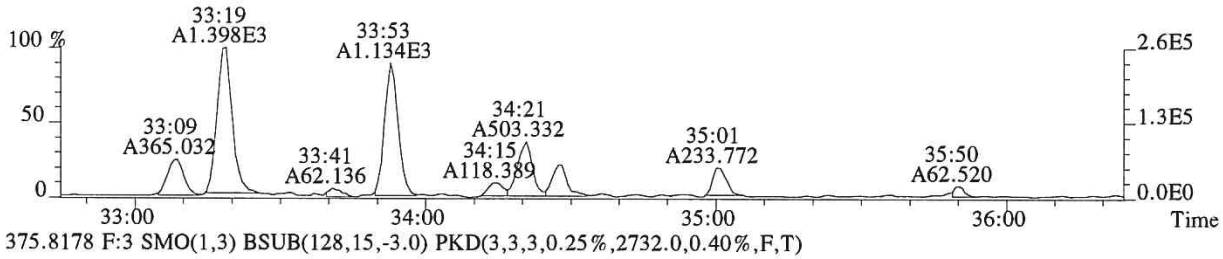
File:P616411 #1-376 Acq: 9-JAN-2019 17:18:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-013
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1700.0,1.00%,F,T)



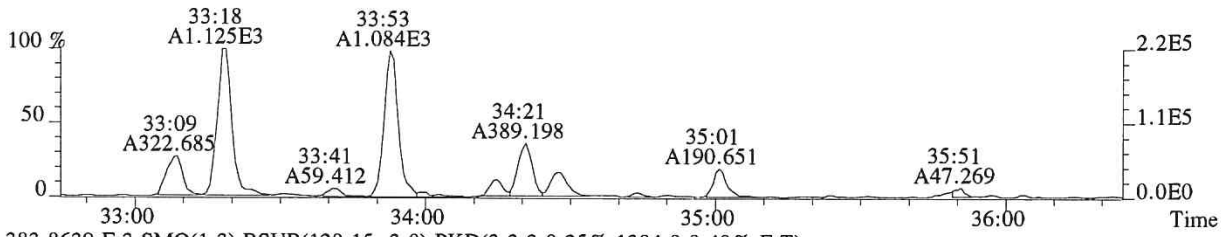
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,756.0,1.00%,F,T)



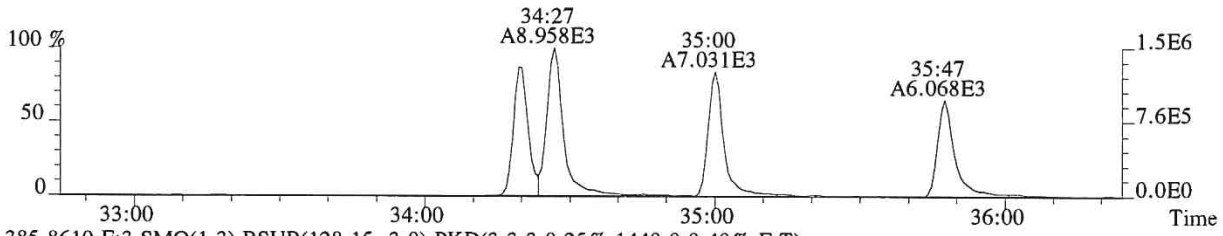
File:P616411 #1-330 Acq: 9-JAN-2019 17:18:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-013
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6324.0,0.40%,F,T)



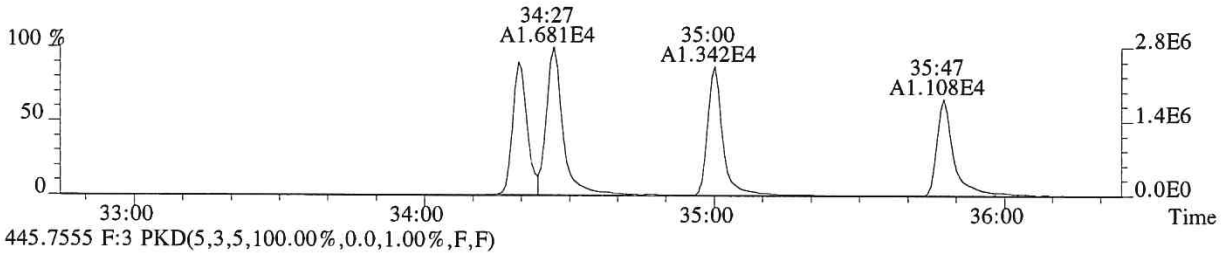
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2732.0,0.40%,F,T)



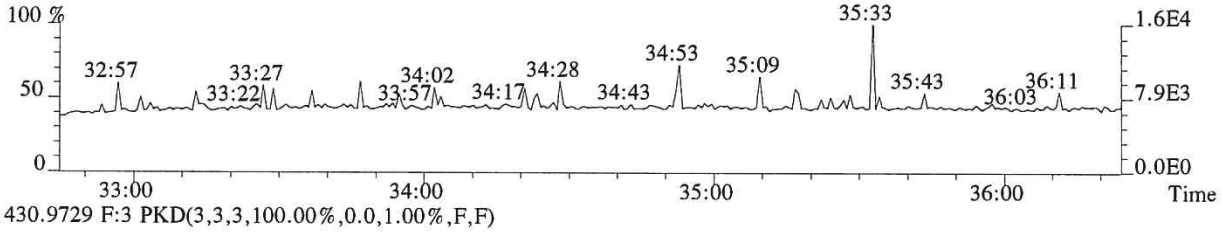
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1304.0,0.40%,F,T)



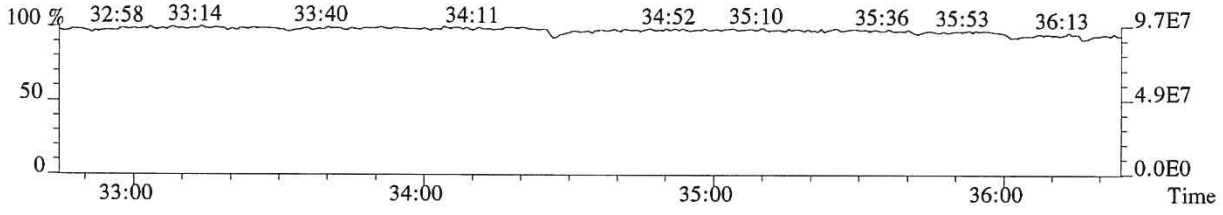
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1440.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

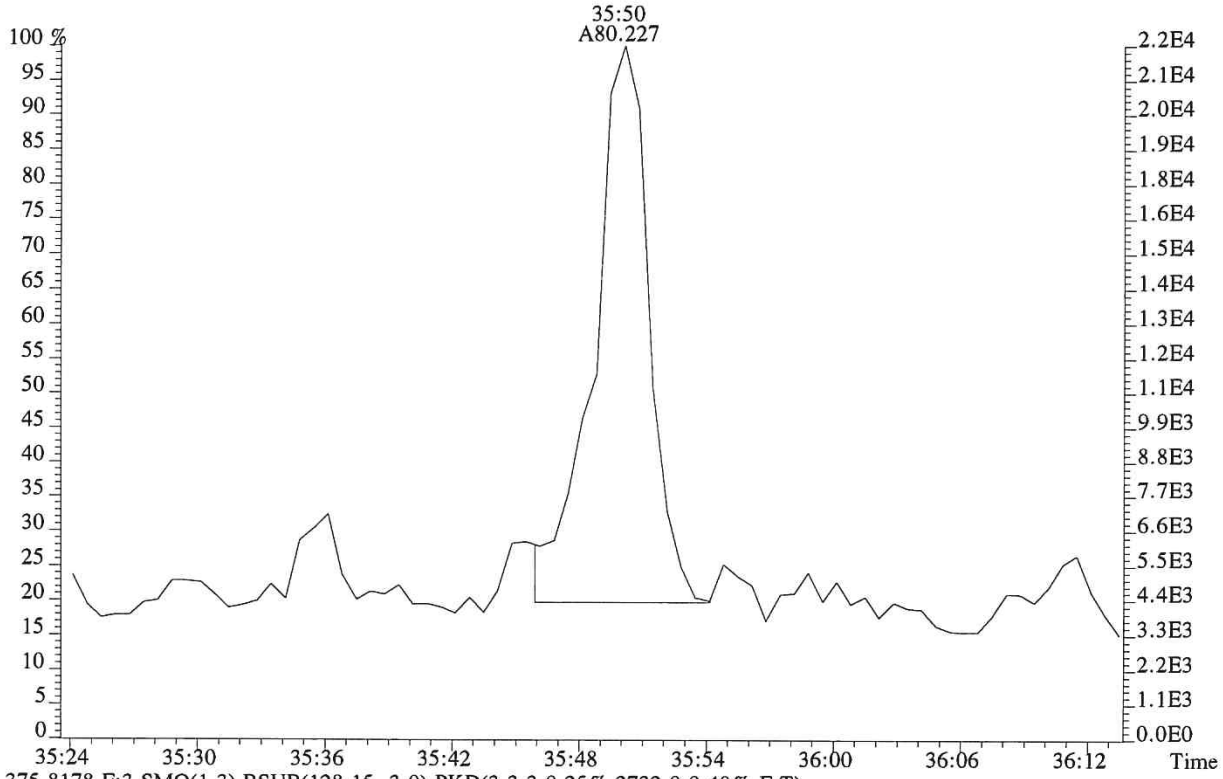


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

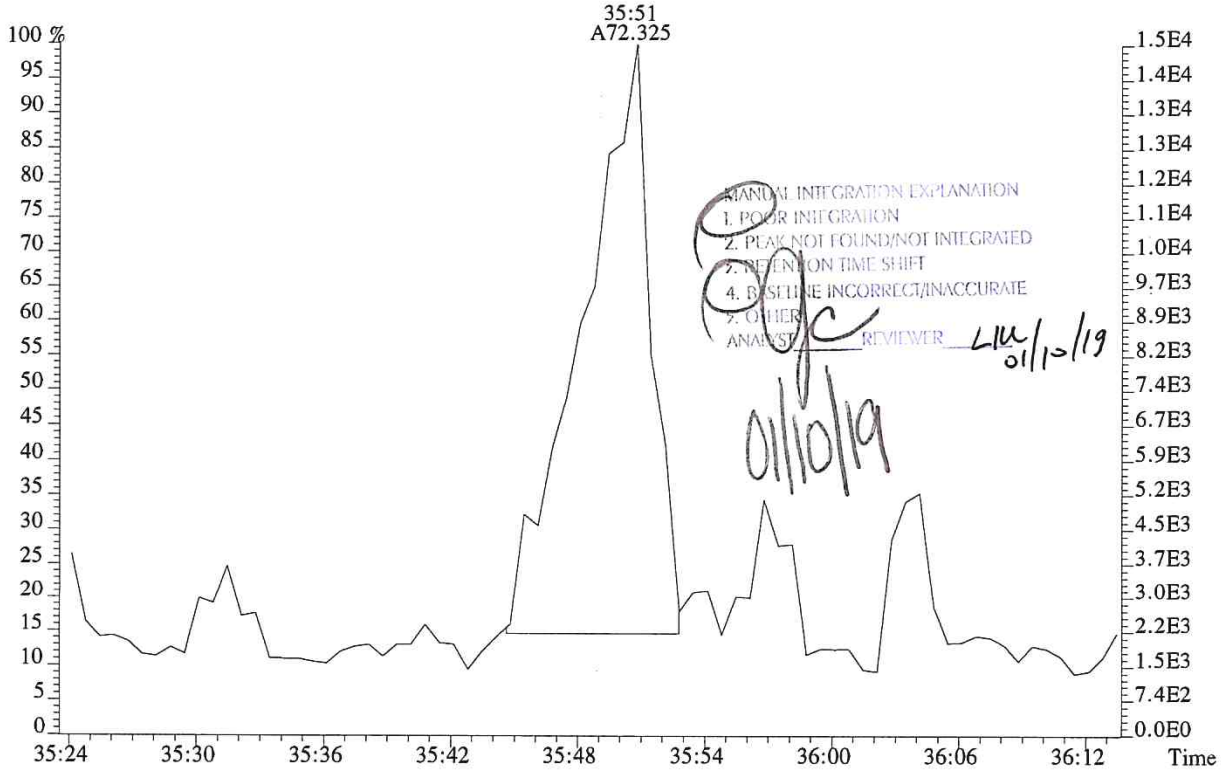


017362

File:P616411 #1-330 Acq: 9-JAN-2019 17:18:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-013
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6324.0,0.40%,F,T)

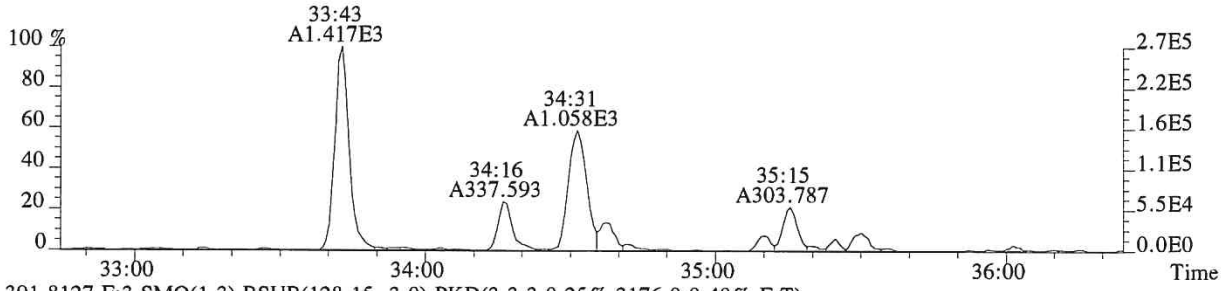


375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2732.0,0.40%,F,T)

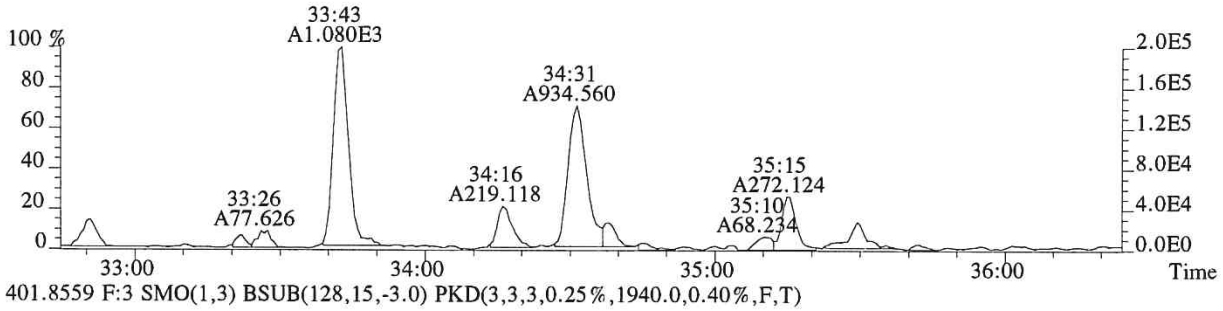


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LLW 01/10/19
01/10/19

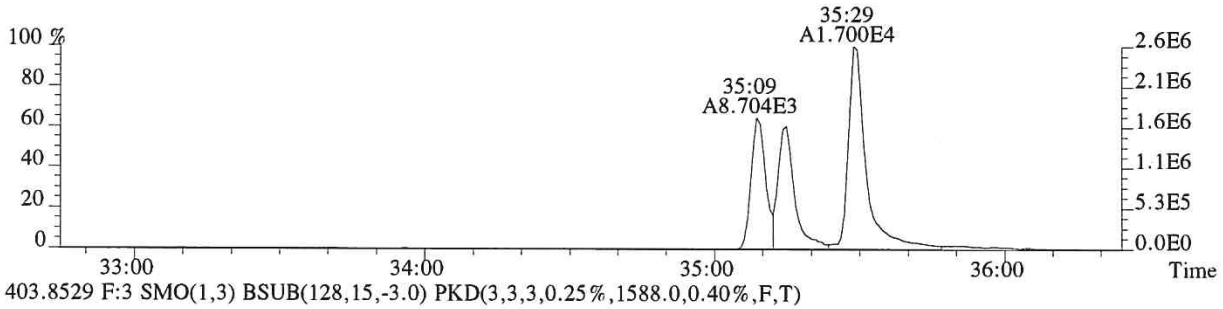
File:P616411 #1-330 Acq: 9-JAN-2019 17:18:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-013
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,472.0,0.40%,F,T)



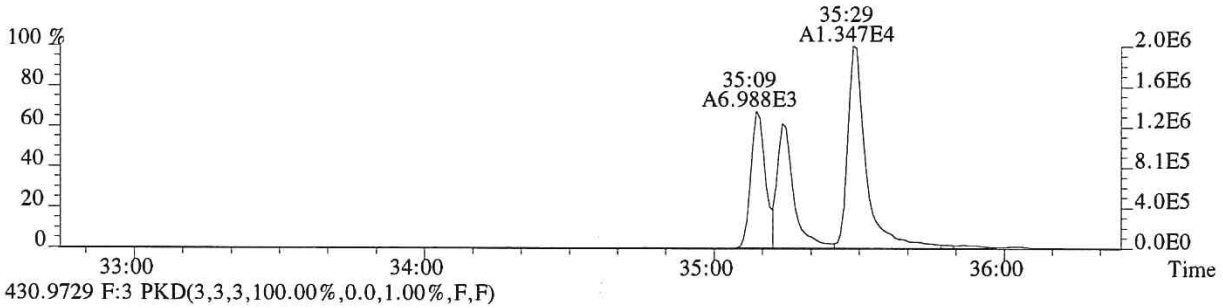
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3176.0,0.40%,F,T)



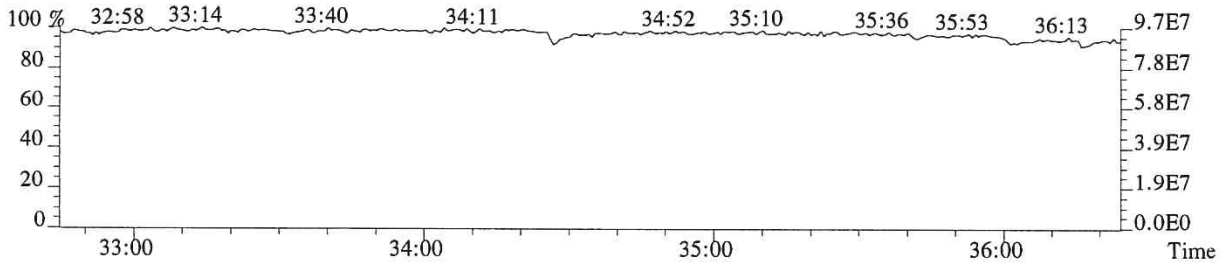
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1940.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1588.0,0.40%,F,T)

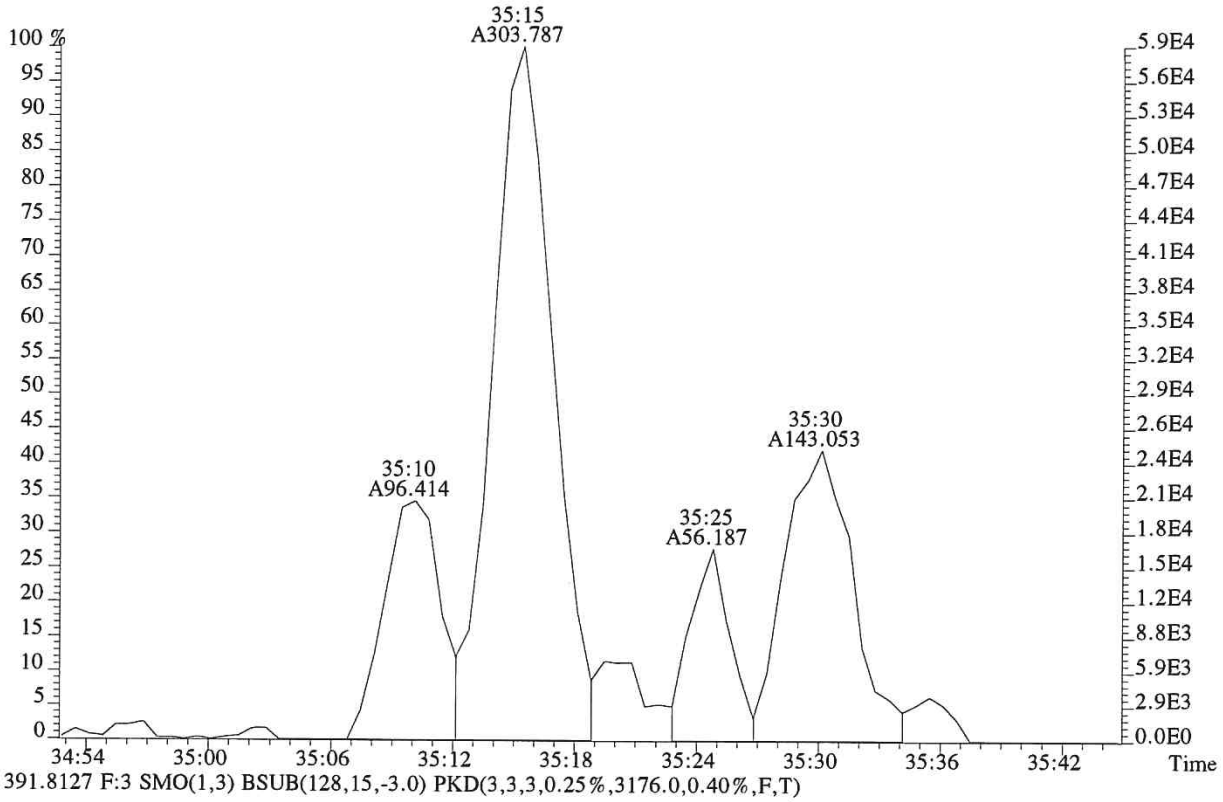


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

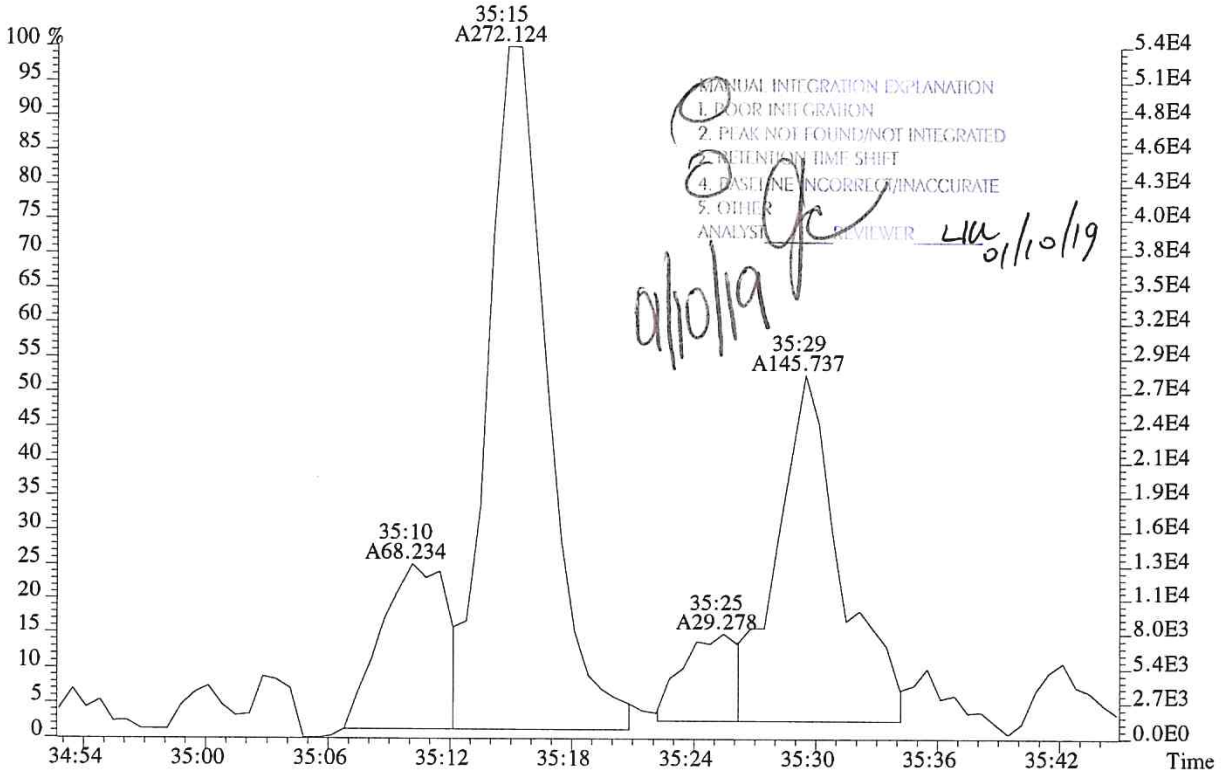


017364

File:P616411 #1-330 Acq: 9-JAN-2019 17:18:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-013
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,472.0,0.40%,F,T)

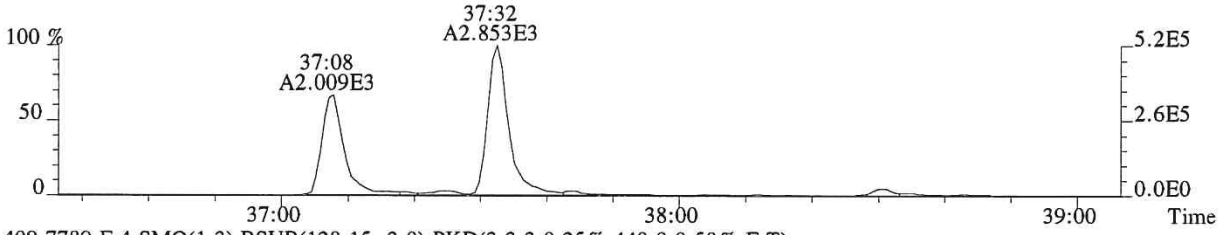


391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3176.0,0.40%,F,T)

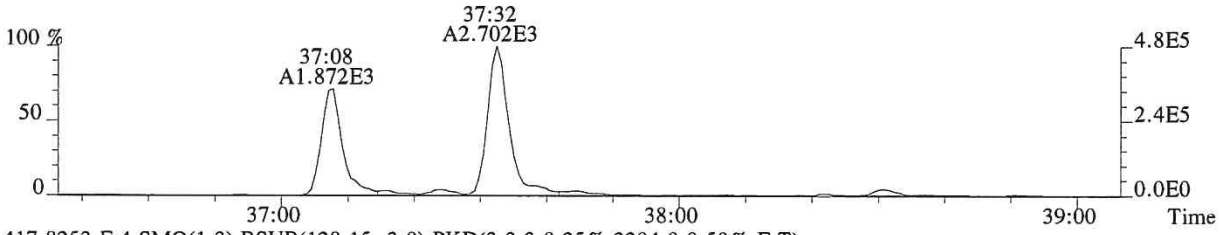


MANUAL INTEGRATION EXPLANATION
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5. OTHER
ANALYST REVIEWER 01/10/19
01/10/19

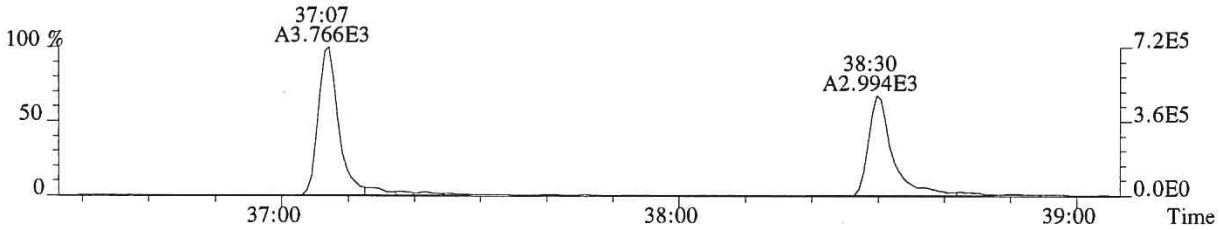
File:P616411 #1-241 Acq: 9-JAN-2019 17:18:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-013
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1592.0,0.50%,F,T)



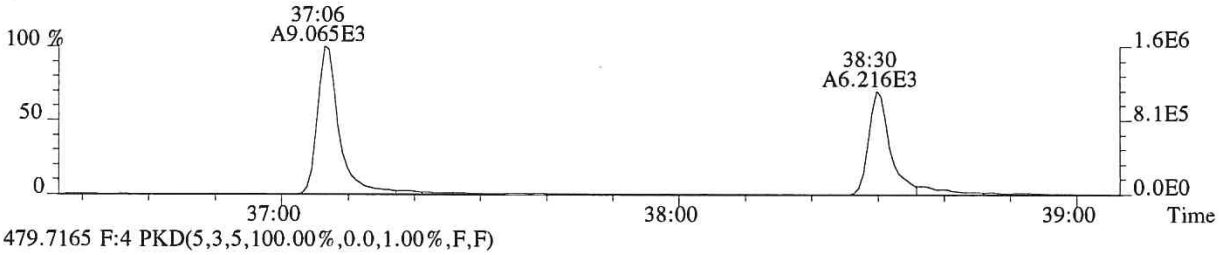
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,440.0,0.50%,F,T)



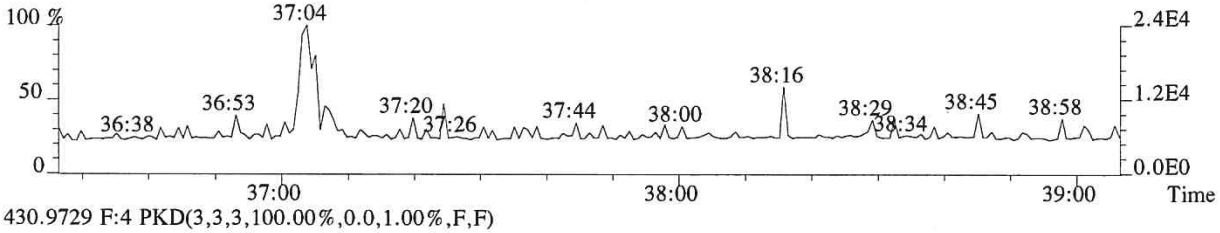
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2204.0,0.50%,F,T)



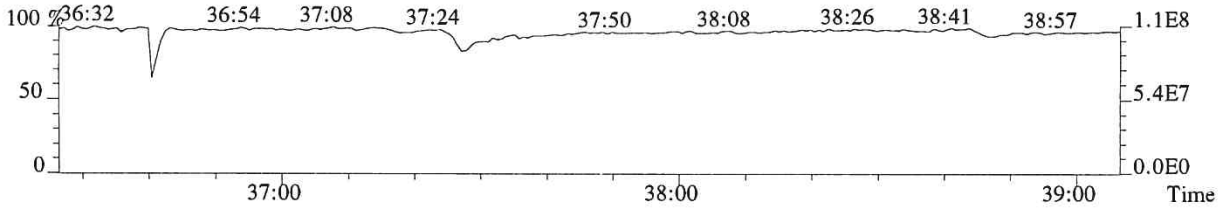
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3412.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

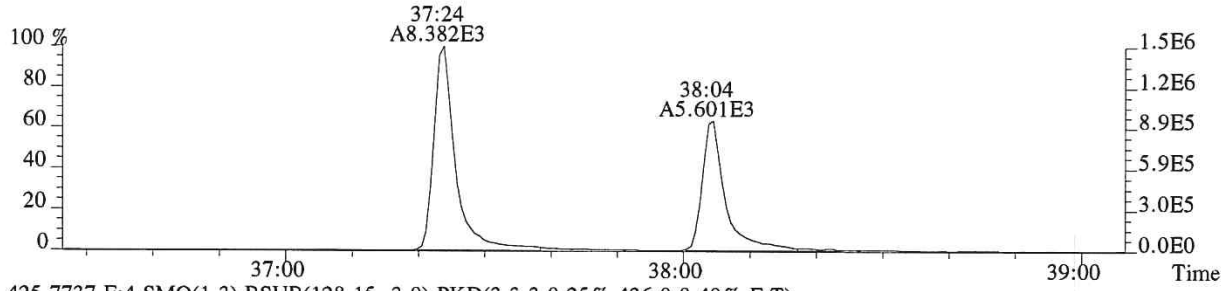


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

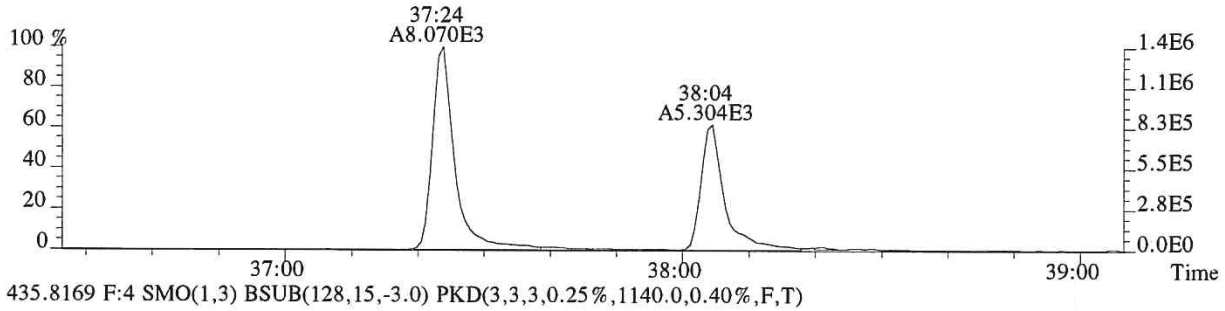


017366

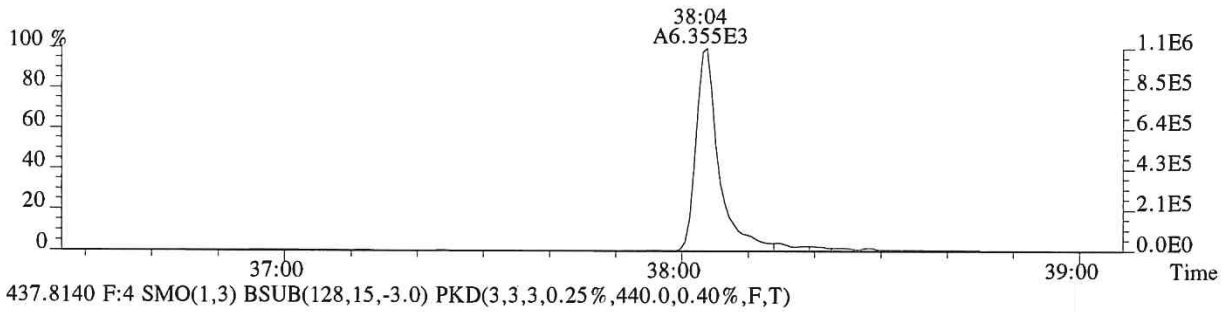
File:P616411 #1-241 Acq: 9-JAN-2019 17:18:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-013
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,472.0,0.40%,F,T)



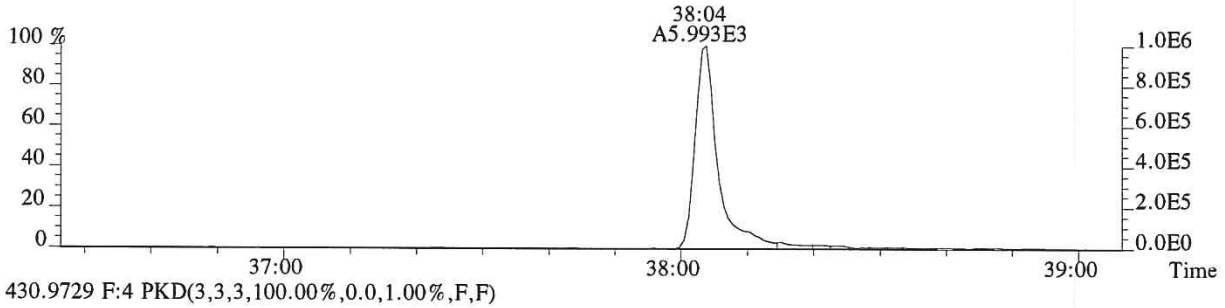
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,436.0,0.40%,F,T)



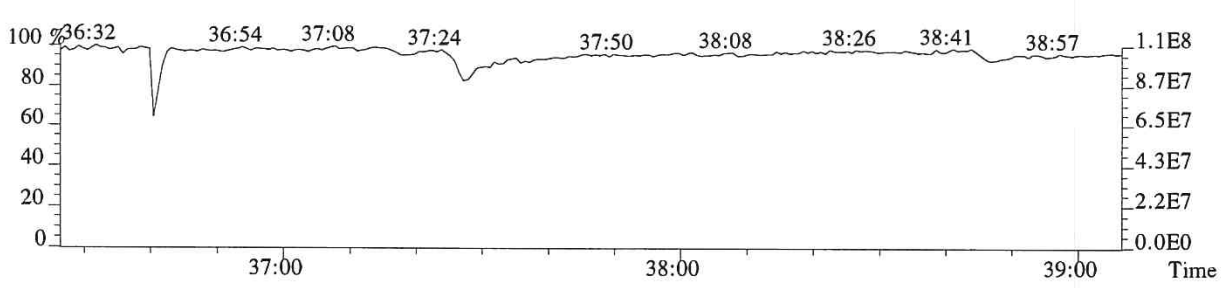
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1140.0,0.40%,F,T)



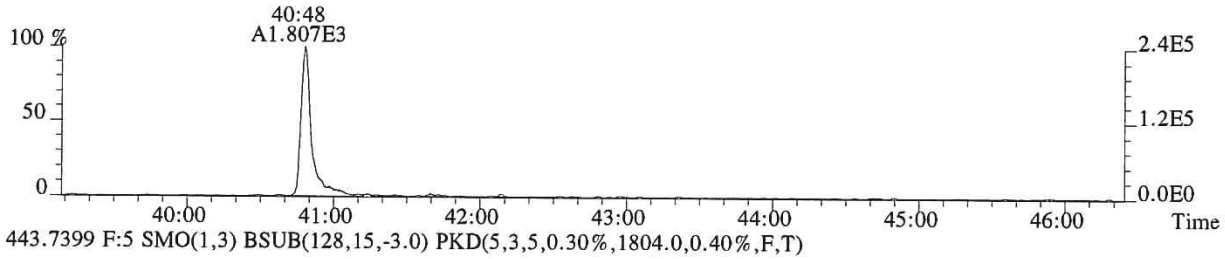
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,440.0,0.40%,F,T)



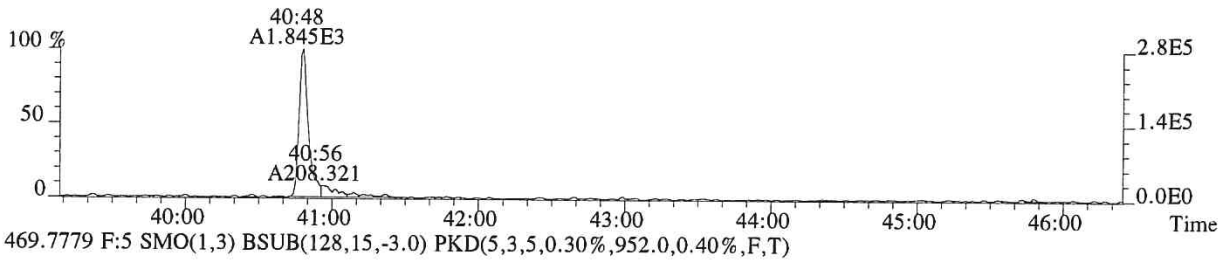
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



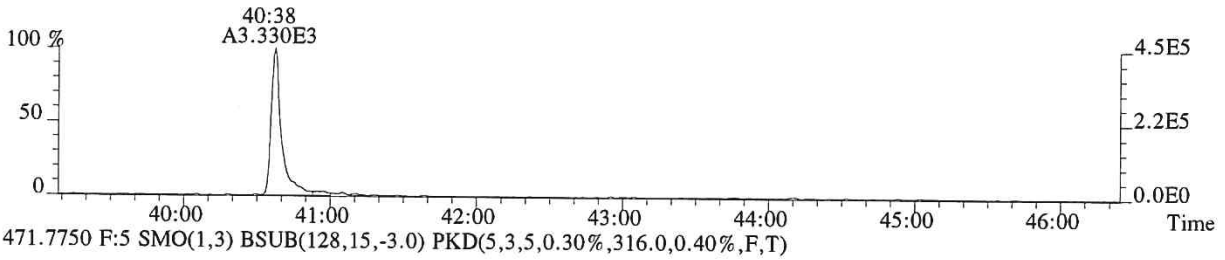
File:P616411 #1-654 Acq: 9-JAN-2019 17:18:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-013
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,384.0,0.40%,F,T)



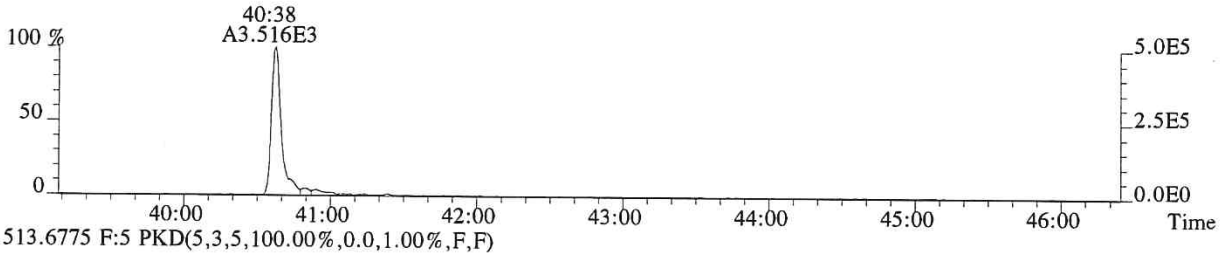
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1804.0,0.40%,F,T)



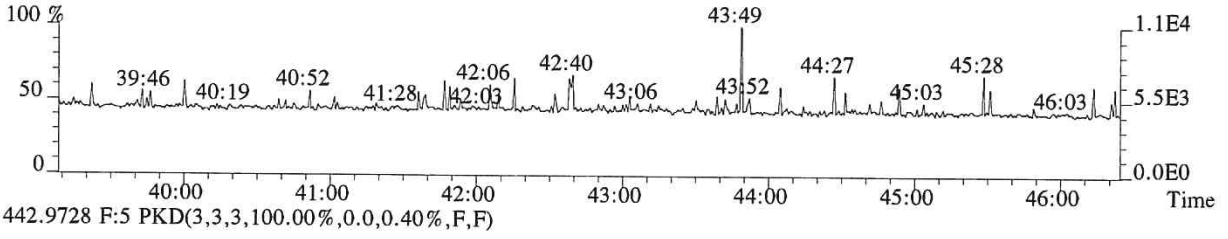
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,952.0,0.40%,F,T)



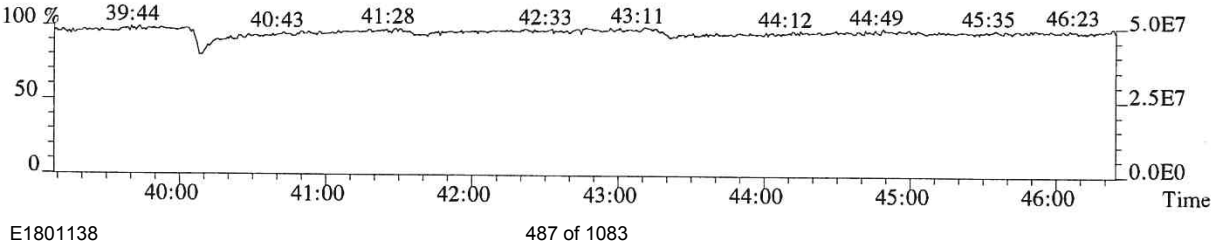
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,316.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

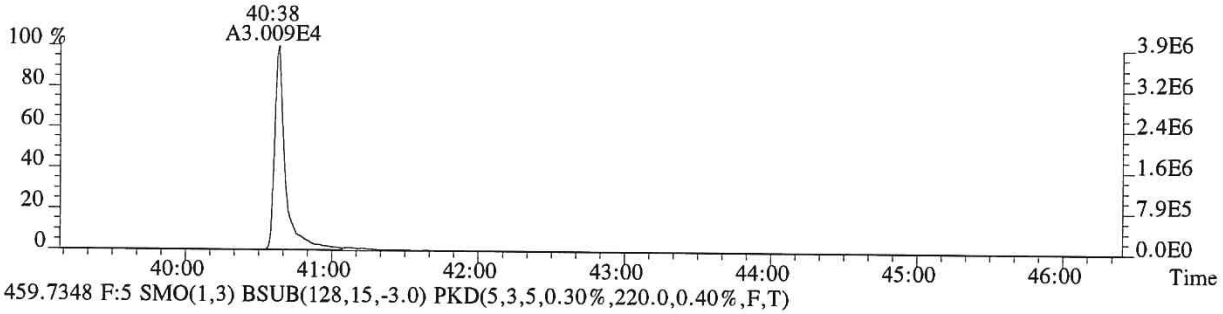


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

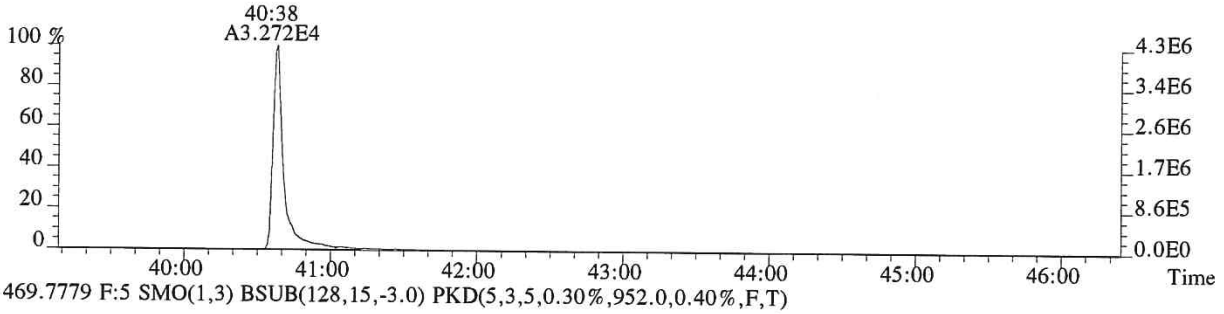


017368

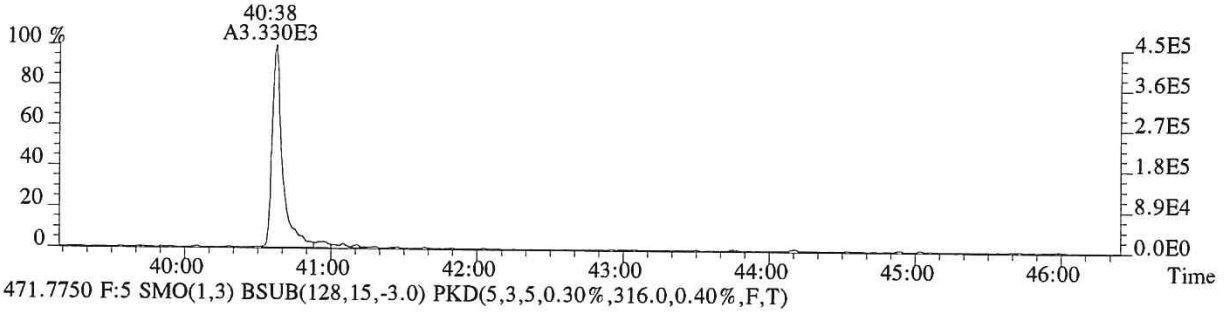
File:P616411 #1-654 Acq: 9-JAN-2019 17:18:50 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-013
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,296.0,0.40%,F,T)



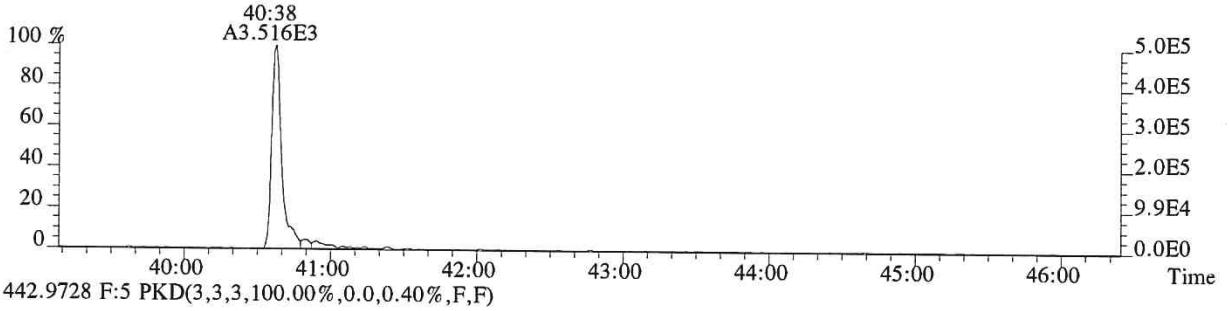
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,220.0,0.40%,F,T)



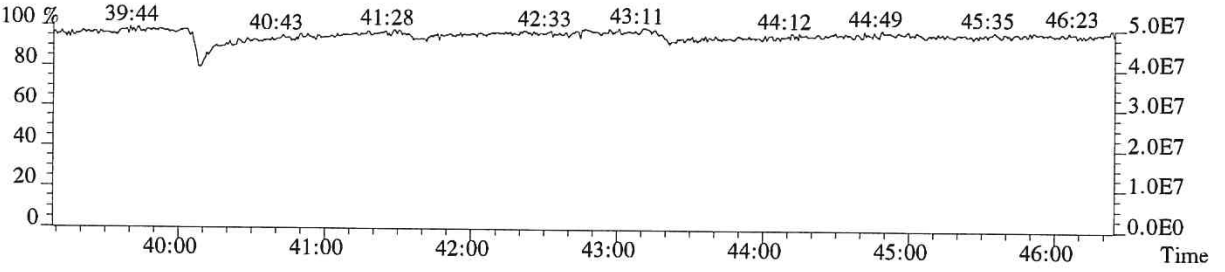
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,952.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,316.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0199

Run #16 Filename P519840 Samp: 1 Inj: 1 Acquired: 8-JAN-19 17:28:57
Processed: 9-JAN-19 11:56:33 Sample ID: E1801138-014

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:14	2.096e+06	2.662e+06	0.79	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	31:02	1.103e+05	7.133e+04	1.55	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	32:03	7.278e+04	4.741e+04	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:57	1.309e+05	1.071e+05	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:05	3.325e+04	2.752e+04	1.21	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:38	4.982e+03	4.105e+03	1.21	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:27	6.717e+03	5.893e+03	1.14	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:51	2.445e+04	2.435e+04	1.00	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:19	6.403e+03	6.289e+03	1.02	yes	no	1.258
10	Unk	OCDF	42:03	4.772e+03	5.344e+03	0.89	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:11	4.253e+05	5.425e+05	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:22	6.860e+03	4.214e+03	1.63	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:47	1.043e+02	7.367e+01	1.42	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:54	8.306e+02	6.035e+02	1.38	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:09	3.119e+02	2.267e+02	1.38	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:52	1.584e+04	1.531e+04	1.03	yes	no	1.025
17	Unk	OCDD	41:54	8.223e+04	9.235e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	26:12	3.431e+04	4.338e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	31:01	5.276e+04	3.267e+04	1.61	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	32:02	4.526e+04	2.871e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:57	1.796e+04	3.467e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	35:04	2.098e+04	4.031e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:37	1.845e+04	3.512e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:25	1.350e+04	2.621e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:50	1.023e+04	2.297e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:18	7.828e+03	1.816e+04	0.43	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:10	1.393e+04	1.751e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:21	3.711e+04	2.343e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:47	2.488e+04	1.786e+04	1.39	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:53	2.541e+04	2.168e+04	1.17	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:51	1.894e+04	1.771e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	41:53	9.965e+03	1.118e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:27	3.585e+04	4.481e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:08	4.284e+04	3.319e+04	1.29	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:11	2.665e+04				no	1.014

$$\text{OCDD} = \frac{(8.223e+04 + 9.235e+04) \times 4000\ \text{pg} \times 1}{(9.965e+03 + 1.118e+04) \times 10.247\ \text{g} \times 71.2 / 100 \times 1.118} = 4048\ \text{ng/Kg}$$

LM 01/10/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0199

Run #16 Filename P519840 Samp: 1 Inj: 1 Acquired: 8-JAN-19 17:28:57
Processed: 9-JAN-19 11:56:33 LAB. ID: E1801138-014

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.48e+08	3.18e+03	7.8e+04	3.16e+08	2.91e+03	1.1e+05
2	1,2,3,7,8-PeCDF	1.73e+07	2.39e+03	7.2e+03	1.12e+07	2.45e+03	4.6e+03
3	2,3,4,7,8-PeCDF	1.19e+07	2.39e+03	5.0e+03	7.63e+06	2.45e+03	3.1e+03
4	1,2,3,4,7,8-HxCDF	2.06e+07	6.62e+03	3.1e+03	1.67e+07	8.48e+03	2.0e+03
5	1,2,3,6,7,8-HxCDF	5.18e+06	6.62e+03	7.8e+02	4.29e+06	8.48e+03	5.1e+02
6	2,3,4,6,7,8-HxCDF	8.05e+05	6.62e+03	1.2e+02	6.61e+05	8.48e+03	7.8e+01
7	1,2,3,7,8,9-HxCDF	1.08e+06	6.62e+03	1.6e+02	9.93e+05	8.48e+03	1.2e+02
8	1,2,3,4,6,7,8-HpCDF	2.88e+06	1.02e+03	2.8e+03	2.83e+06	7.69e+03	3.7e+02
9	1,2,3,4,7,8,9-HpCDF	5.83e+05	1.02e+03	5.7e+02	5.73e+05	7.69e+03	7.4e+01
10	OCDF	2.40e+05	3.08e+02	7.8e+02	2.71e+05	1.10e+03	2.5e+02
11	2,3,7,8-TCDD	7.49e+07	2.97e+03	2.5e+04	9.60e+07	2.13e+03	4.5e+04
12	1,2,3,7,8-PeCDD	9.51e+05	1.95e+03	4.9e+02	6.06e+05	7.60e+02	8.0e+02
13	1,2,3,4,7,8-HxCDD	1.98e+04	1.51e+03	1.3e+01	1.62e+04	1.29e+03	1.3e+01
14	1,2,3,6,7,8-HxCDD	1.21e+05	1.51e+03	8.0e+01	8.46e+04	1.29e+03	6.6e+01
15	1,2,3,7,8,9-HxCDD	4.09e+04	1.51e+03	2.7e+01	2.99e+04	1.29e+03	2.3e+01
16	1,2,3,4,6,7,8-HpCDD	1.46e+06	5.92e+02	2.5e+03	1.41e+06	1.61e+03	8.7e+02
17	OCDD	4.02e+06	1.26e+03	3.2e+03	4.54e+06	1.28e+03	3.5e+03
18	13C-2,3,7,8-TCDF	4.45e+06	7.36e+03	6.0e+02	5.76e+06	1.15e+04	5.0e+02
19	13C-1,2,3,7,8-PeCDF	8.45e+06	1.63e+03	5.2e+03	5.21e+06	2.04e+03	2.6e+03
20	13C-2,3,4,7,8-PeCDF	7.98e+06	1.63e+03	4.9e+03	5.07e+06	2.04e+03	2.5e+03
21	13C-1,2,3,4,7,8-HxCDF	2.90e+06	4.35e+03	6.7e+02	5.60e+06	2.52e+03	2.2e+03
22	13C-1,2,3,6,7,8-HxCDF	3.17e+06	4.35e+03	7.3e+02	5.98e+06	2.52e+03	2.4e+03
23	13C-2,3,4,6,7,8-HxCDF	2.83e+06	4.35e+03	6.5e+02	5.36e+06	2.52e+03	2.1e+03
24	13C-1,2,3,7,8,9-HxCDF	1.81e+06	4.35e+03	4.2e+02	3.55e+06	2.52e+03	1.4e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.18e+06	2.03e+03	5.8e+02	2.66e+06	4.94e+03	5.4e+02
26	13C-1,2,3,4,7,8,9-HpCDF	6.96e+05	2.03e+03	3.4e+02	1.57e+06	4.94e+03	3.2e+02
27	13C-2,3,7,8-TCDD	2.44e+06	7.92e+03	3.1e+02	3.06e+06	4.22e+03	7.2e+02
28	13C-1,2,3,7,8-PeCDD	5.72e+06	1.03e+03	5.5e+03	3.59e+06	1.53e+03	2.3e+03
29	13C-1,2,3,4,7,8-HxCDD	3.98e+06	1.44e+03	2.8e+03	3.07e+06	7.68e+02	4.0e+03
30	13C-1,2,3,6,7,8-HxCDD	3.66e+06	1.44e+03	2.5e+03	2.82e+06	7.68e+02	3.7e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.72e+06	1.16e+03	1.5e+03	1.66e+06	5.32e+02	3.1e+03
32	13C-OCDD	4.92e+05	1.18e+03	4.2e+02	5.63e+05	5.32e+02	1.1e+03
33	13C-1,2,3,4-TCDD	5.83e+06	7.92e+03	7.4e+02	7.34e+06	4.22e+03	1.7e+03
34	13C-1,2,3,7,8,9-HxCDD	5.54e+06	1.44e+03	3.9e+03	4.30e+06	7.68e+02	5.6e+03
35	37Cl-2,3,7,8-TCDD	4.67e+06	2.25e+03	2.1e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0199

Entry: 36 Totals Name: Total Tetra-Furans

Run: 16 File: P519840 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 17:28:57 Processed: 9-JAN-19 11:56:33

Mass: 303.9020 305.8990 Tot Response: 8.47e+06 RRF: 0.9417

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	23:04	1.49e+04	0.76	yes	3.43e+04		n	n
2	23:22	8.45e+04	0.77	yes	1.95e+05		n	n
3	23:44	2.62e+04	0.76	yes	6.05e+04		n	n
4	23:51	2.15e+03	0.77	yes	4.94e+03		n	n
5	23:58	8.33e+04	0.77	yes	1.91e+05		n	n
6	24:19	1.78e+04	0.77	yes	4.08e+04		n	n
7	24:40	1.52e+05	0.78	yes	3.48e+05		n	n
8	25:09	1.02e+06	0.78	yes	2.32e+06		n	n
9	25:29	5.05e+04	0.76	yes	1.17e+05		n	n
10	26:14	2.10e+06	0.79	yes	4.76e+06	2,3,7,8-TCDF	n	n
11	26:36	1.46e+05	0.78	yes	3.34e+05		n	n
12	26:52	2.97e+04	0.74	yes	6.97e+04		n	n

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Peak List Summary

CLIENT ID.
SL0199

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 16 File: P519840 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 17:28:57 Processed: 9-JAN-19 11:56:33

Mass: 319.8970 321.8940 Tot Response: 1.09e+06 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:52	6.01e+03	7.42e+03	0.81	yes	1.34e+04		n	n
2	27:11	4.25e+05	5.42e+05	0.78	yes	9.68e+05	2,3,7,8-TCDD	n	n
3	27:29	4.81e+04	6.11e+04	0.79	yes	1.09e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0199

Entry: 38 Totals Name: Total Penta-Furans1

Run: 16 File: P519840 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 17:28:57 Processed: 9-JAN-19 11:56:33

Mass: 339.8600 341.8570 Tot Response: 2.83e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:25	1.73e+03	1.10e+03 1.58	yes	2.83e+03		n	n

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Entry: 39 Totals Name: Total Penta-Furans2

Run: 16 File: P519840 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 17:28:57 Processed: 9-JAN-19 11:56:33

Mass: 339.8600 341.8570 Tot Response: 4.52e+05 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:04	9.33e+02	1.43	yes	1.59e+03		n	n
2	30:15	4.40e+04	1.54	yes	7.26e+04		n	n
3	30:38	1.75e+03	1.40	yes	3.00e+03		n	n
4	30:42	1.65e+03	1.53	yes	2.73e+03		n	n
5	30:52	9.66e+03	1.55	yes	1.59e+04		n	n
6	31:02	1.10e+05	1.55	yes	1.82e+05	1,2,3,7,8-PeCDF	n	n
7	31:18	3.30e+04	1.55	yes	5.44e+04		n	n
8	32:03	7.28e+04	1.54	yes	1.20e+05	2,3,4,7,8-PeCDF	n	n

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Peak List Summary

CLIENT ID.
SL0199

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 16 File: P519840 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 17:28:57 Processed: 9-JAN-19 11:56:33

Mass: 355.8550 357.8520 Tot Response: 1.49e+04 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:17	4.08e+02	2.87e+02	1.42	yes	6.95e+02		n	n
2	31:04	7.80e+02	5.26e+02	1.48	yes	1.31e+03		n	n
3	31:14	3.67e+02	2.57e+02	1.43	yes	6.23e+02		n	n
4	31:21	2.30e+02	1.71e+02	1.34	yes	4.01e+02		n	n
5	31:34	1.46e+02	1.07e+02	1.37	yes	2.54e+02		n	n
6	31:55	1.88e+02	1.14e+02	1.64	yes	3.02e+02		n	n
7	32:22	6.86e+03	4.21e+03	1.63	yes	1.11e+04	1,2,3,7,8-PeCDD	n	n
8	32:47	1.27e+02	8.11e+01	1.57	yes	2.09e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0199

Entry: 41 Totals Name: Total Hexa-Furans

Run: 16 File: P519840 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 17:28:57 Processed: 9-JAN-19 11:56:33

Mass: 373.8210 375.8180 Tot Response: 3.50e+05 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:46	7.37e+02	5.32e+02	1.38	yes	1.27e+03		n	n
2	33:56	9.81e+03	8.15e+03	1.20	yes	1.80e+04		n	n
3	34:29	5.33e+03	4.53e+03	1.18	yes	9.86e+03		n	n
4	34:57	1.31e+05	1.07e+05	1.22	yes	2.38e+05	1,2,3,4,7,8-HxCDF	n	n
5	35:05	3.32e+04	2.75e+04	1.21	yes	6.08e+04	1,2,3,6,7,8-HxCDF	n	n
6	35:38	4.98e+03	4.11e+03	1.21	yes	9.09e+03	2,3,4,6,7,8-HxCDF	n	n
7	36:27	6.72e+03	5.89e+03	1.14	yes	1.26e+04	1,2,3,7,8,9-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0199

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 16 File: P519840 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 17:28:57 Processed: 9-JAN-19 11:56:33

Mass: 389.8160 391.8130 Tot Response: 9.64e+03 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:20	1.73e+03	1.38e+03	1.25	yes	3.11e+03		n	n
2	34:54	3.19e+02	2.58e+02	1.24	yes	5.76e+02		n	n
3	35:09	2.08e+03	1.73e+03	1.20	yes	3.80e+03		y	y
4	35:47	1.04e+02	7.37e+01	1.42	yes	1.78e+02	1,2,3,4,7,8-HxCDD	n	n
5	35:54	8.31e+02	6.03e+02	1.38	yes	1.43e+03	1,2,3,6,7,8-HxCDD	n	n
6	36:09	3.12e+02	2.27e+02	1.38	yes	5.39e+02	1,2,3,7,8,9-HxCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0199

Entry: 43 Totals Name: Total Hepta-Furans

Run: 16 File: P519840 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 17:28:57 Processed: 9-JAN-19 11:56:33

Mass: 407.7820 409.7790 Tot Response: 8.00e+04 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:51	2.44e+04	1.00	yes	4.88e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	38:17	9.30e+03	1.01	yes	1.85e+04		n	n
3	39:19	6.40e+03	1.02	yes	1.27e+04	1,2,3,4,7,8,9-HpCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0199

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 16 File: P519840 Sample:1 Injection:1 Function:4

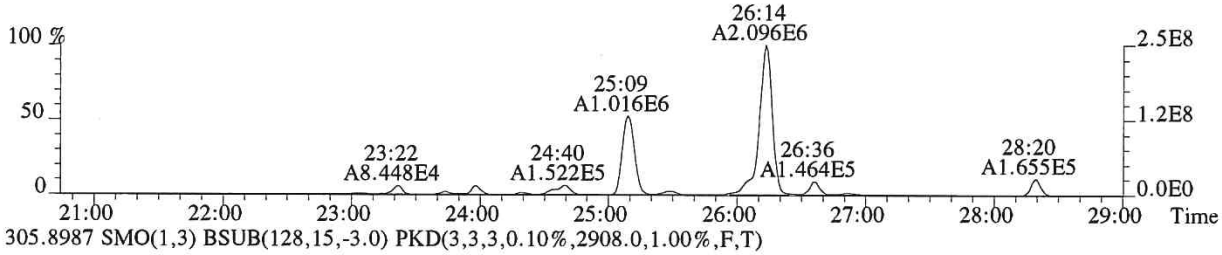
Acquired: 8-JAN-19 17:28:57 Processed: 9-JAN-19 11:56:33

Mass: 423.7770 425.7740 Tot Response: 6.35e+04 RRF: 1.025

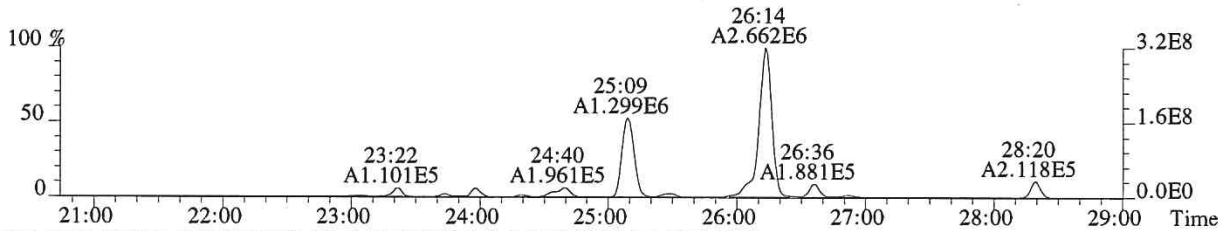
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:09	1.66e+04	1.58e+04	1.05	yes	3.24e+04		n	n
2	38:52	1.58e+04	1.53e+04	1.03	yes	3.11e+04	1,2,3,4,6,7,8-HpCDD	n	n

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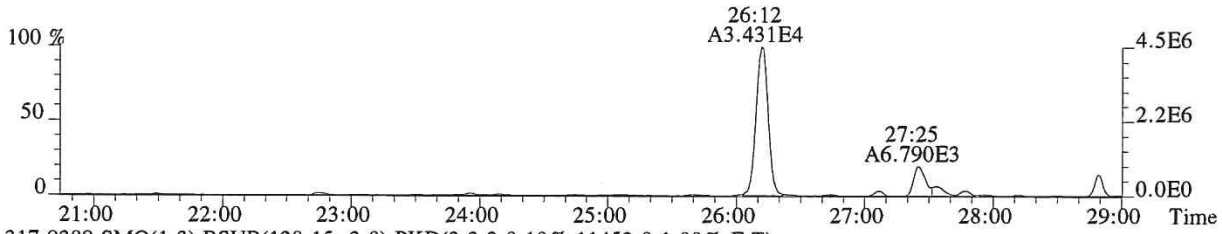
File:P519840 #1-587 Acq: 8-JAN-2019 17:28:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3180.0,1.00%,F,T)



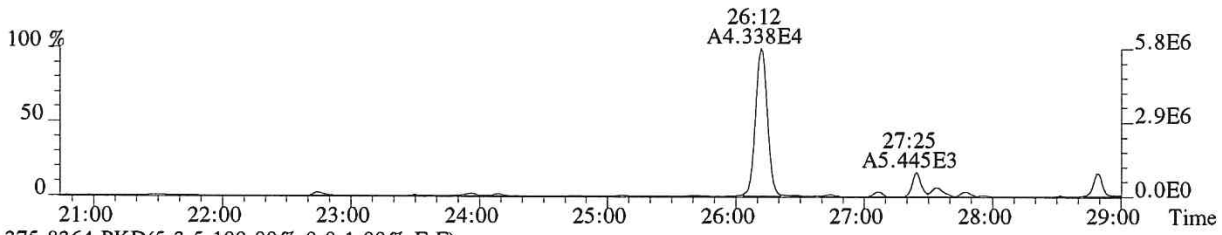
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2908.0,1.00%,F,T)



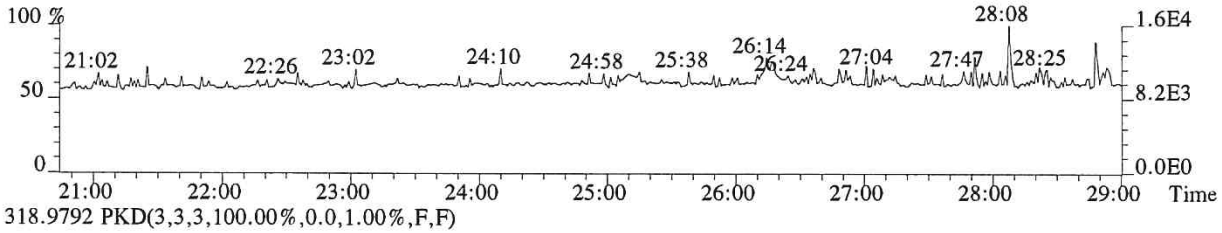
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7364.0,1.00%,F,T)



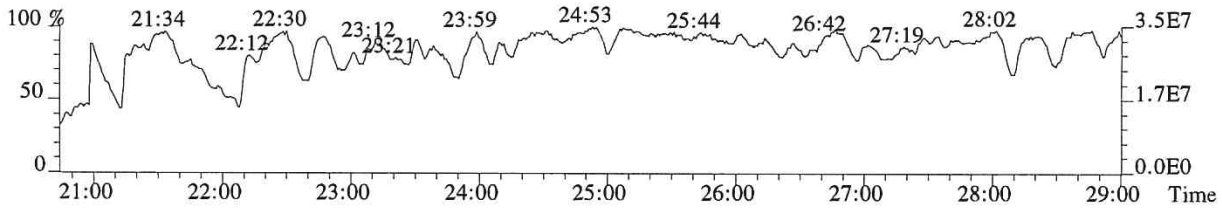
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11452.0,1.00%,F,T)



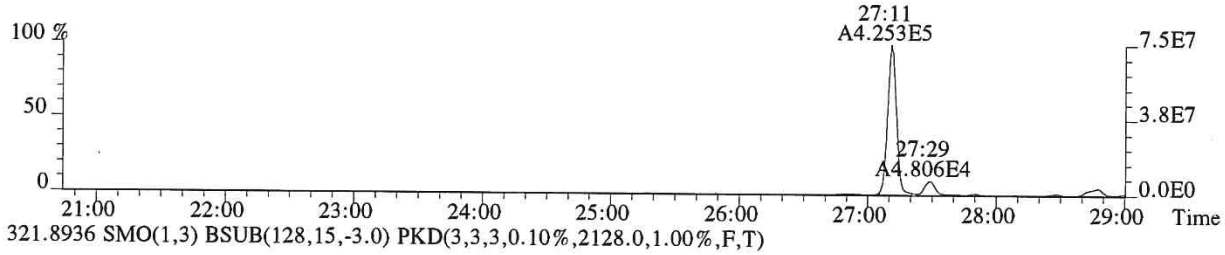
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



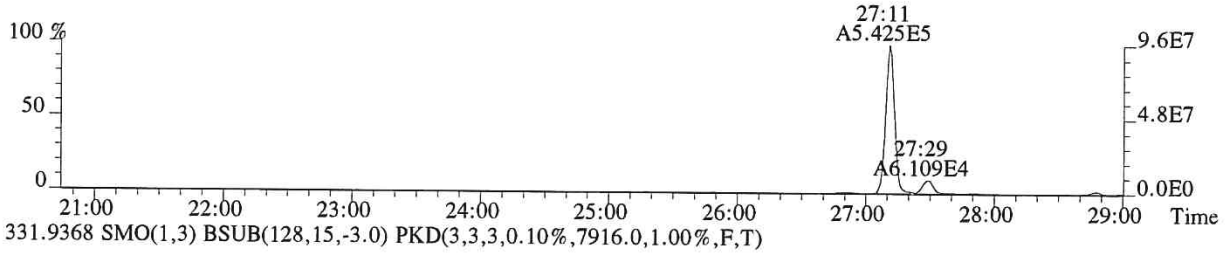
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



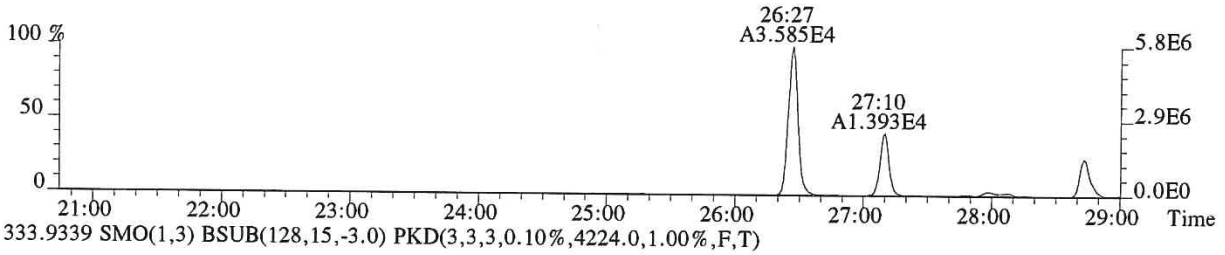
File:P519840 #1-587 Acq: 8-JAN-2019 17:28:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2972.0,1.00%,F,T)



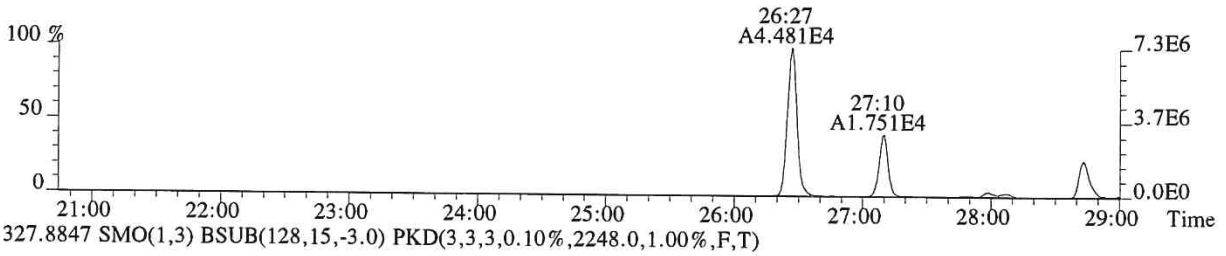
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2128.0,1.00%,F,T)



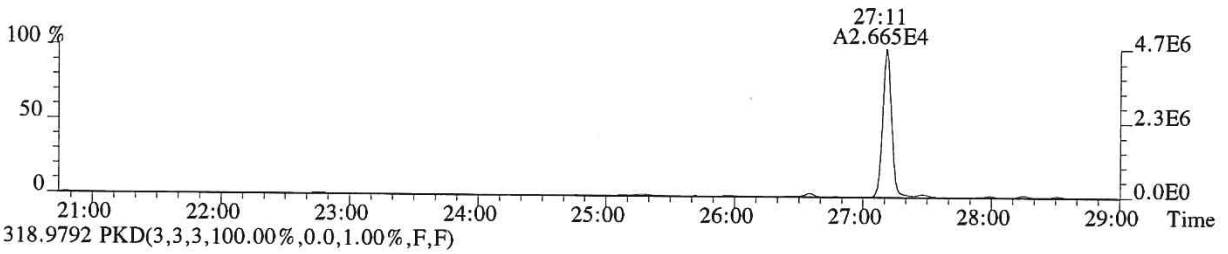
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7916.0,1.00%,F,T)



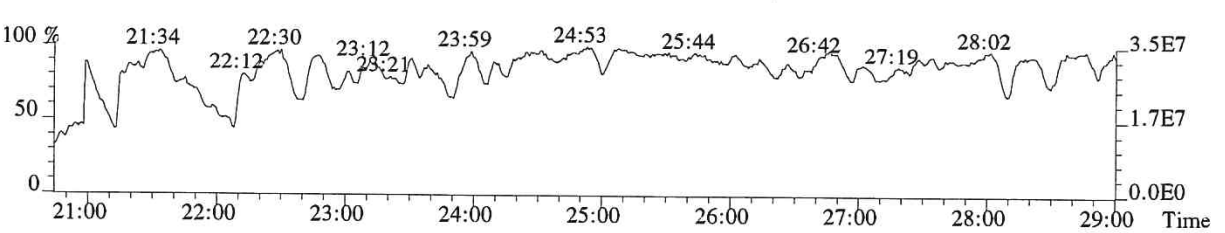
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4224.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2248.0,1.00%,F,T)

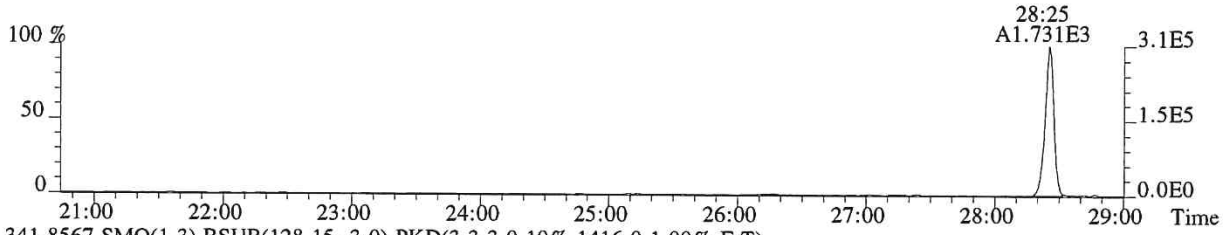


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

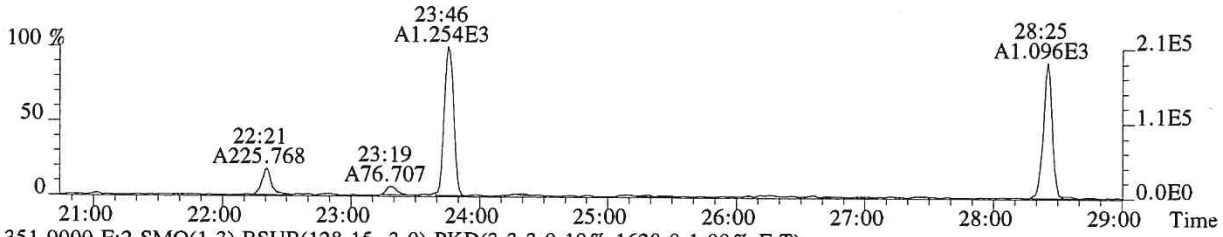


017382

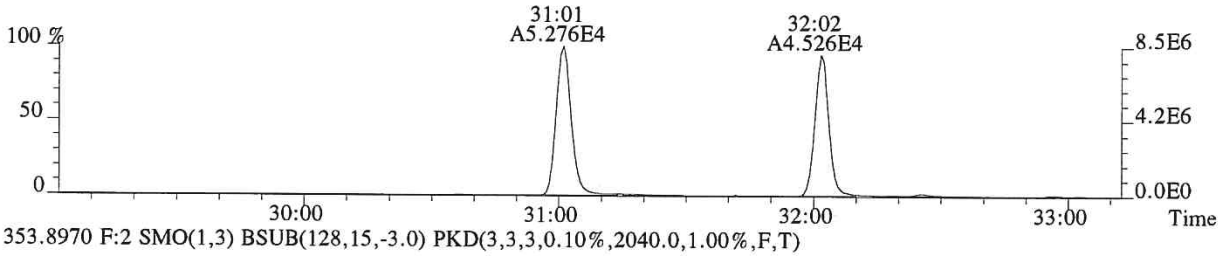
File:P519840 #1-587 Acq: 8-JAN-2019 17:28:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,996.0,1.00%,F,T)



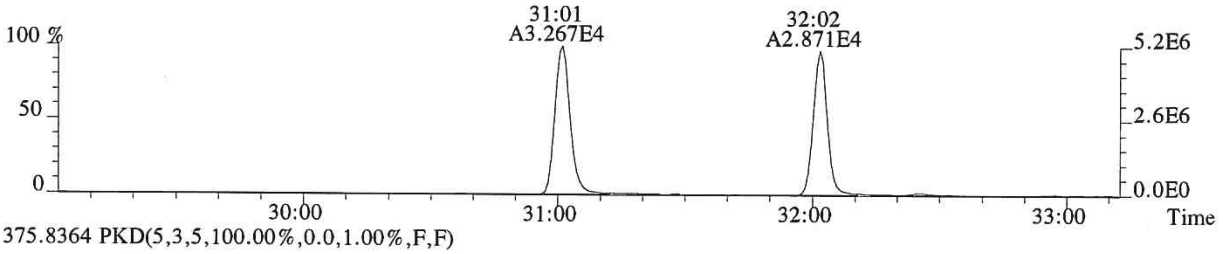
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1416.0,1.00%,F,T)



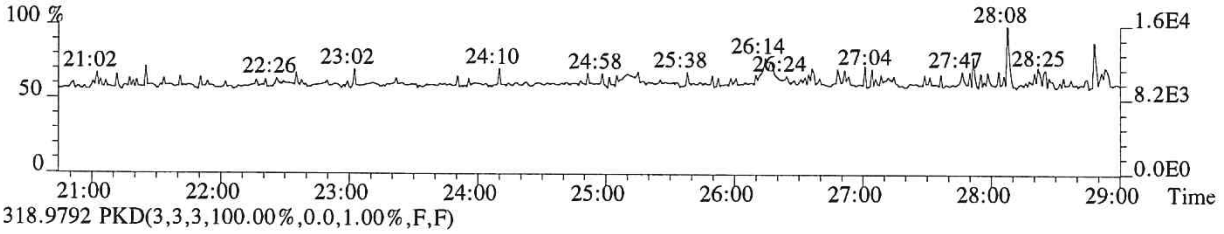
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1628.0,1.00%,F,T)



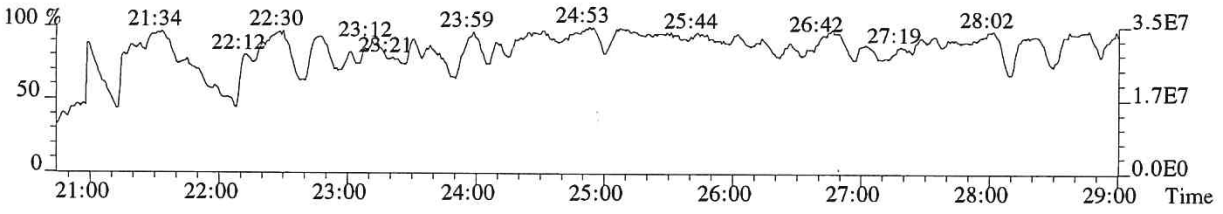
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2040.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

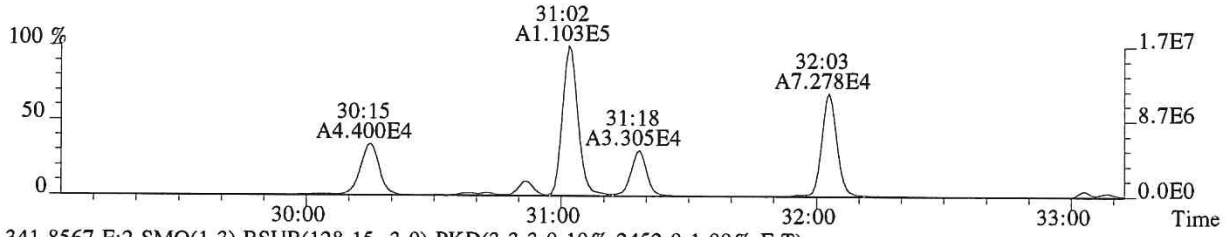


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

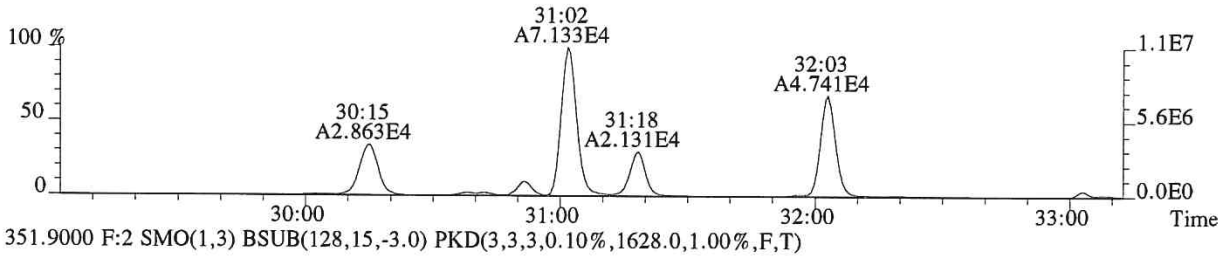


017383

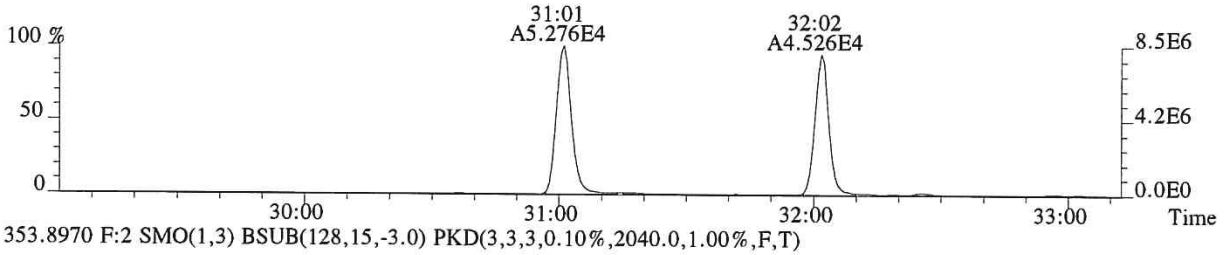
File:P519840 #1-376 Acq: 8-JAN-2019 17:28:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2392.0,1.00%,F,T)



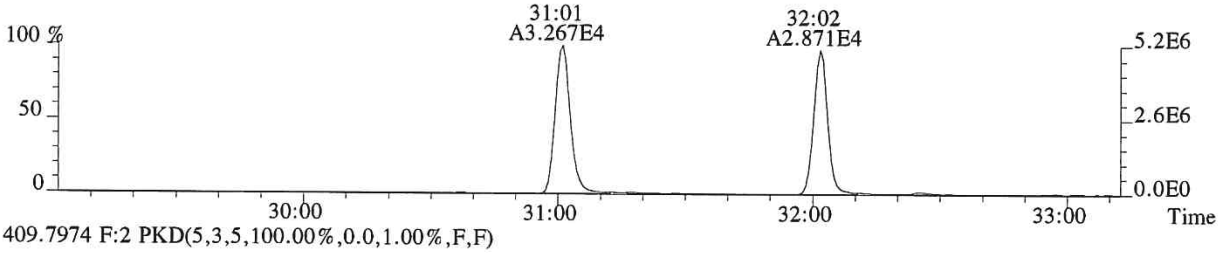
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2452.0,1.00%,F,T)



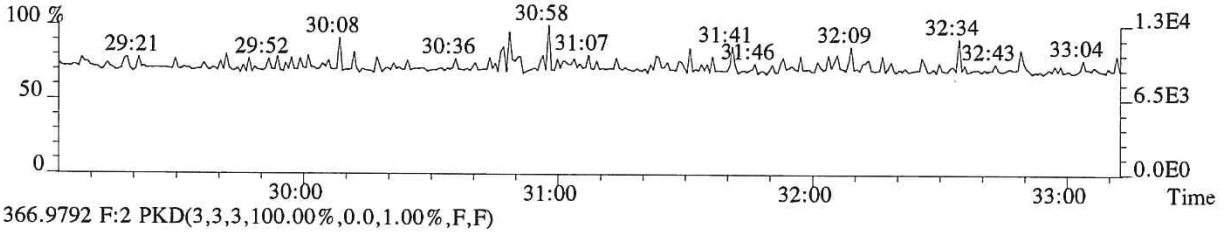
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1628.0,1.00%,F,T)



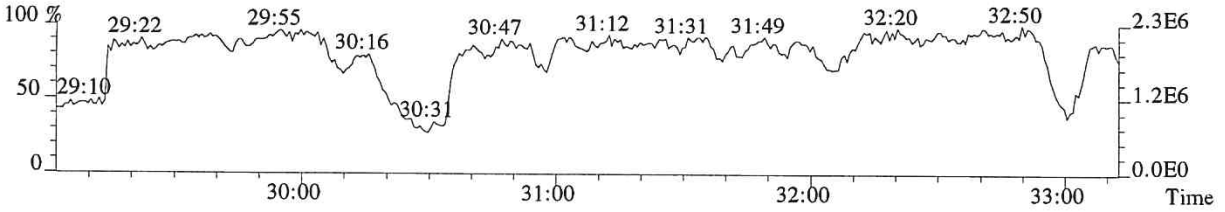
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2040.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

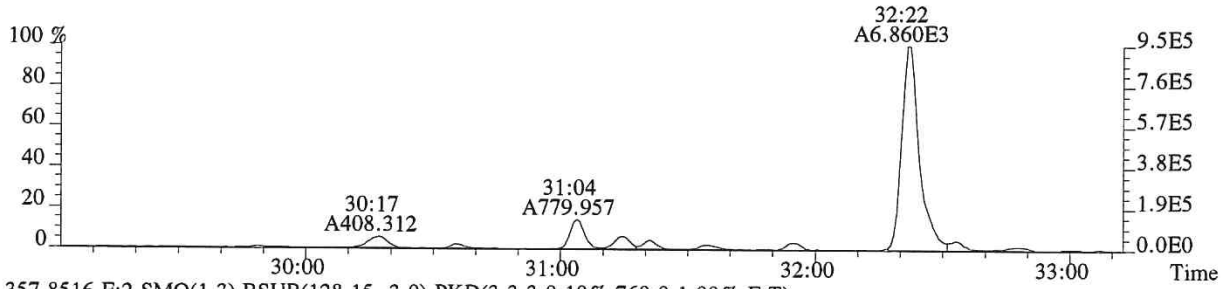


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

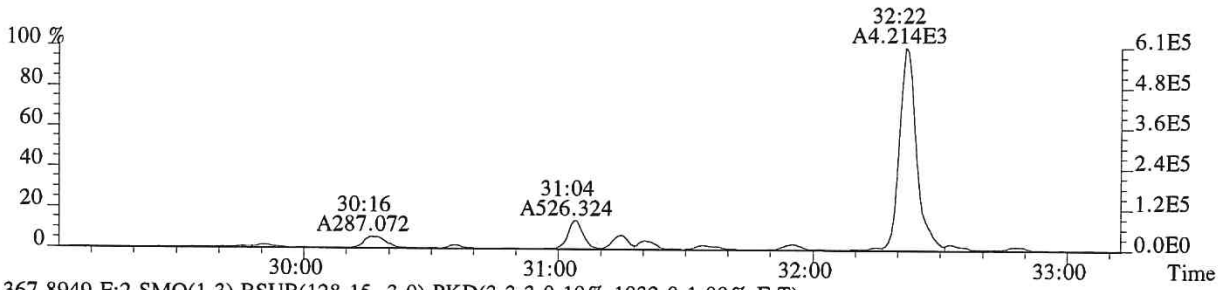


017384

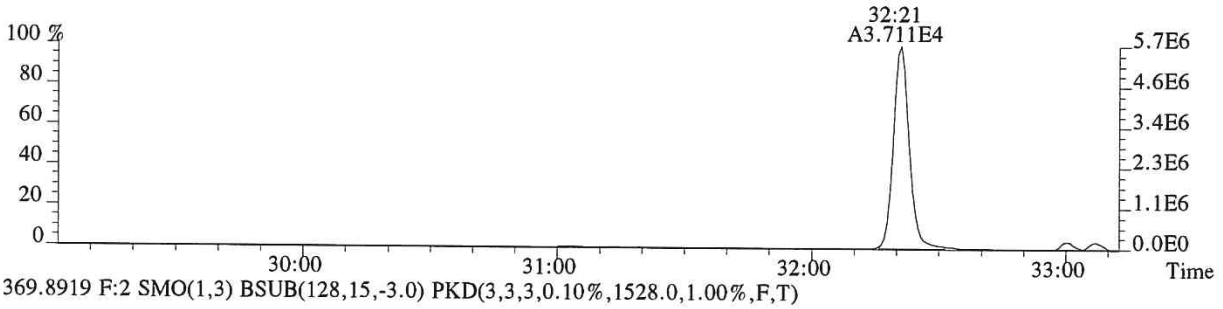
File:P519840 #1-376 Acq: 8-JAN-2019 17:28:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1948.0,1.00%,F,T)



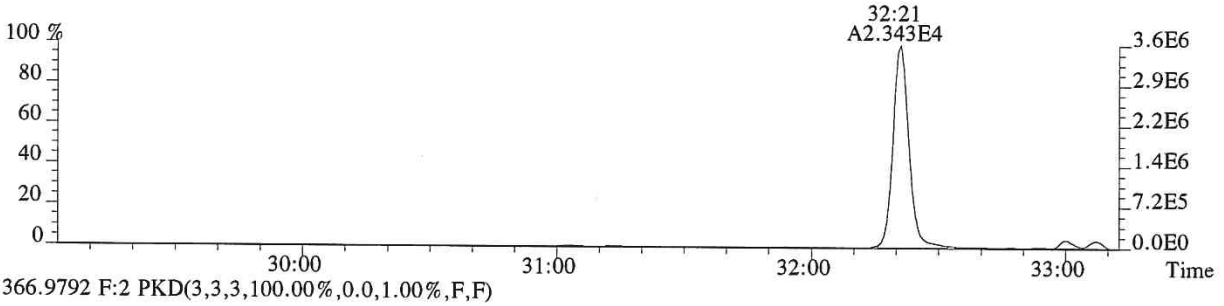
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,760.0,1.00%,F,T)



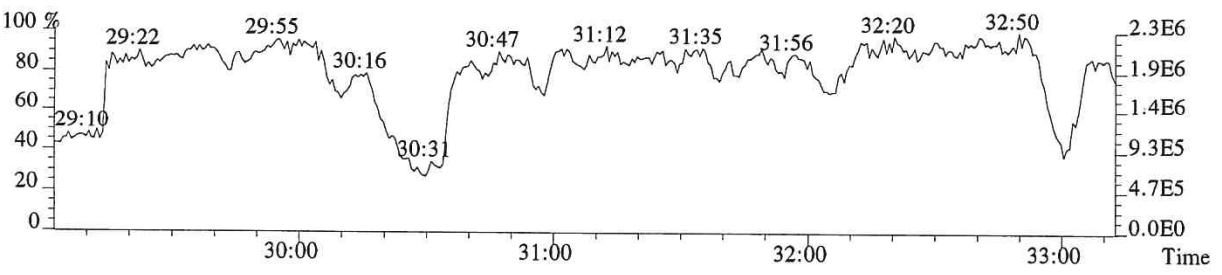
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1528.0,1.00%,F,T)

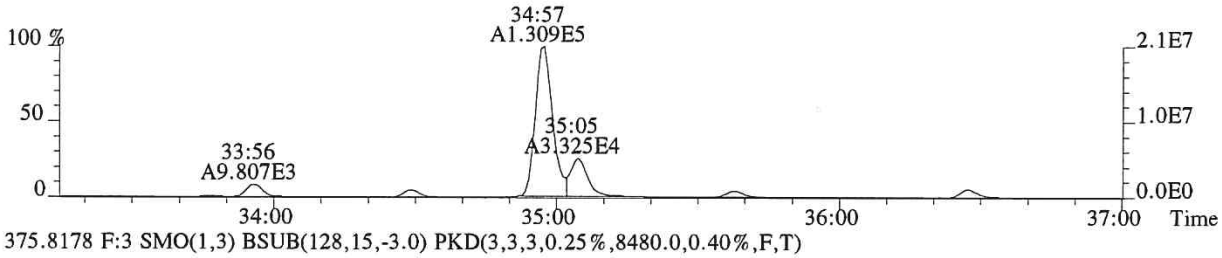


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

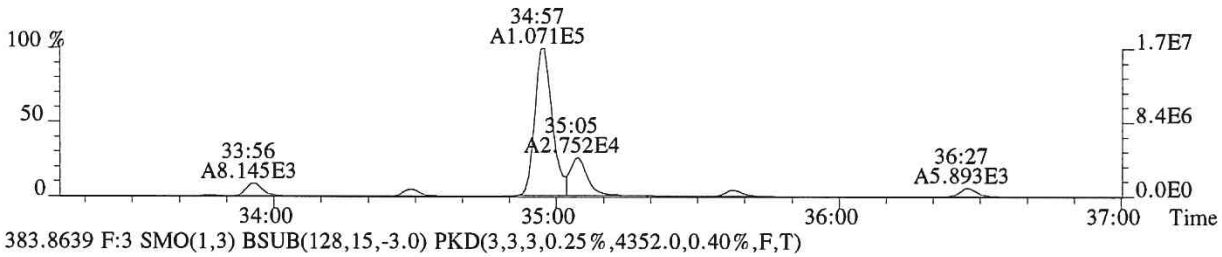


017385

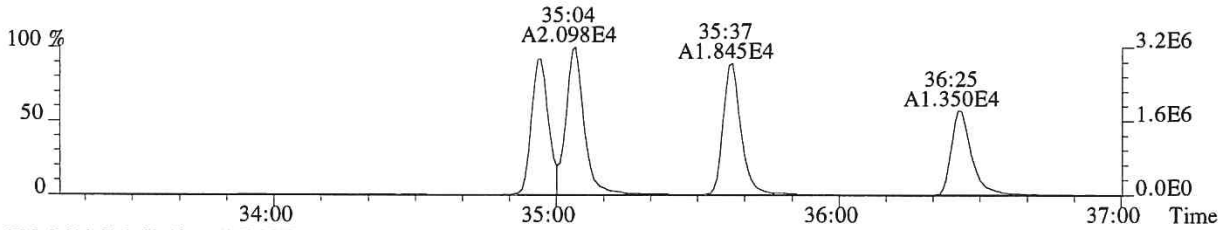
File:P519840 #1-339 Acq: 8-JAN-2019 17:28:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6616.0,0.40%,F,T)



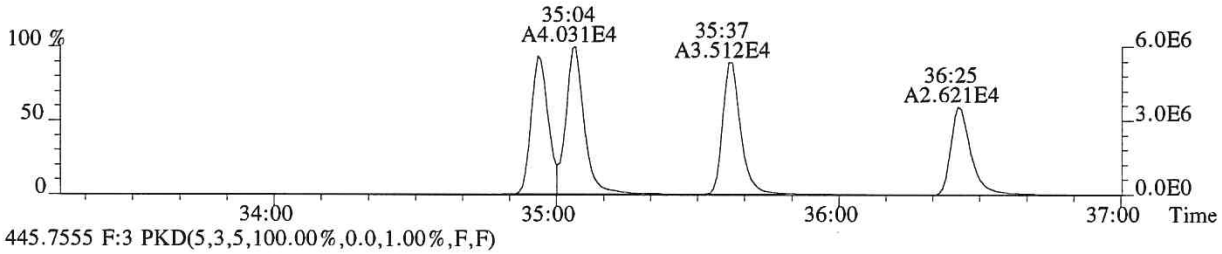
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8480.0,0.40%,F,T)



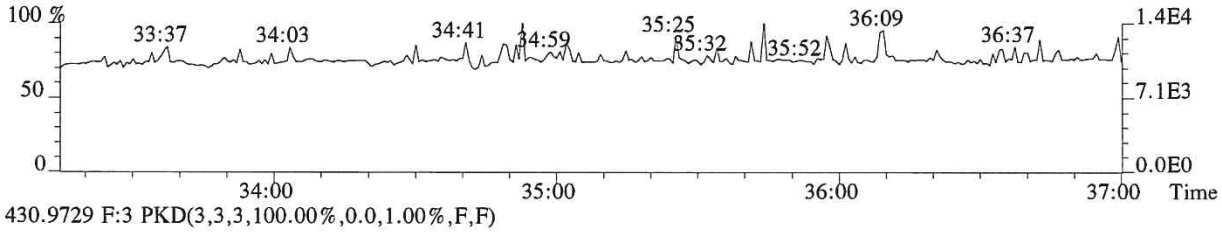
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4352.0,0.40%,F,T)



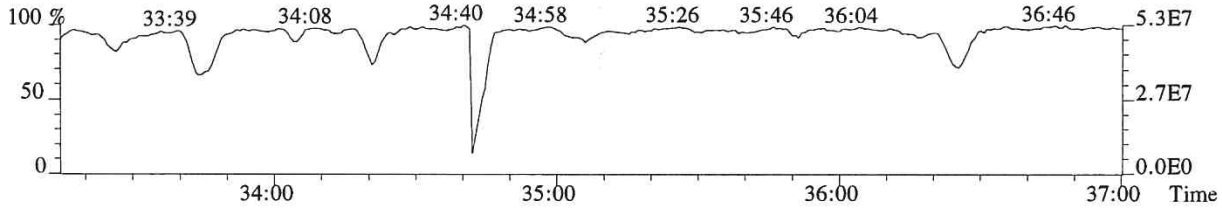
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2520.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

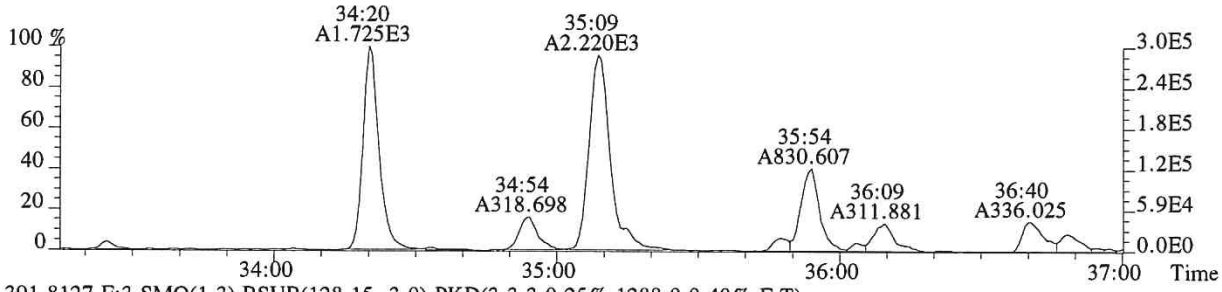


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

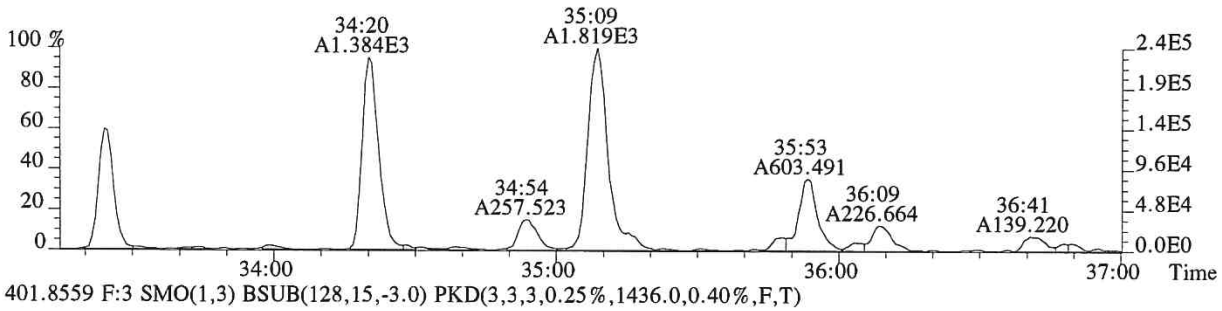


017386

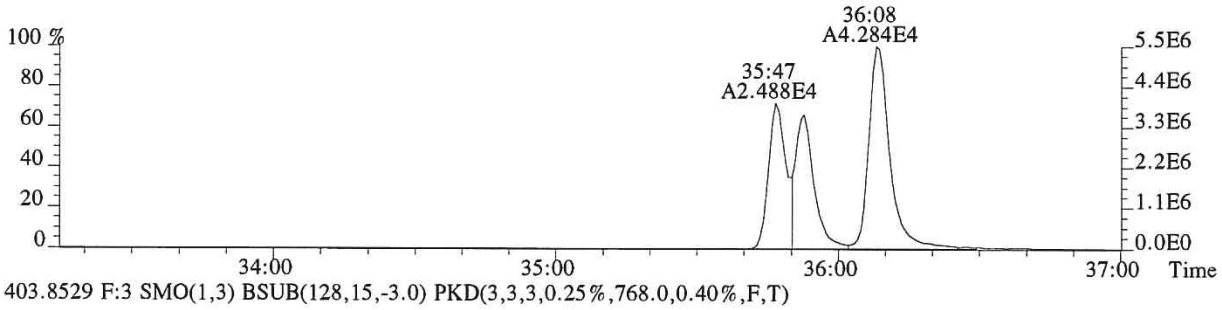
File:P519840 #1-339 Acq: 8-JAN-2019 17:28:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1508.0,0.40%,F,T)



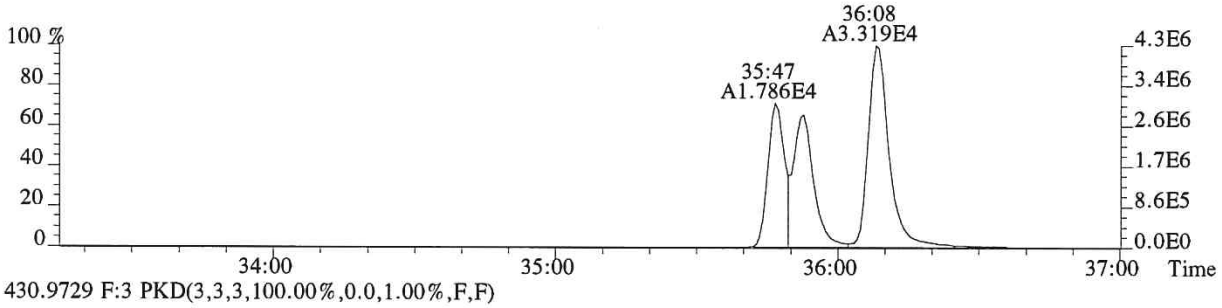
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1288.0,0.40%,F,T)



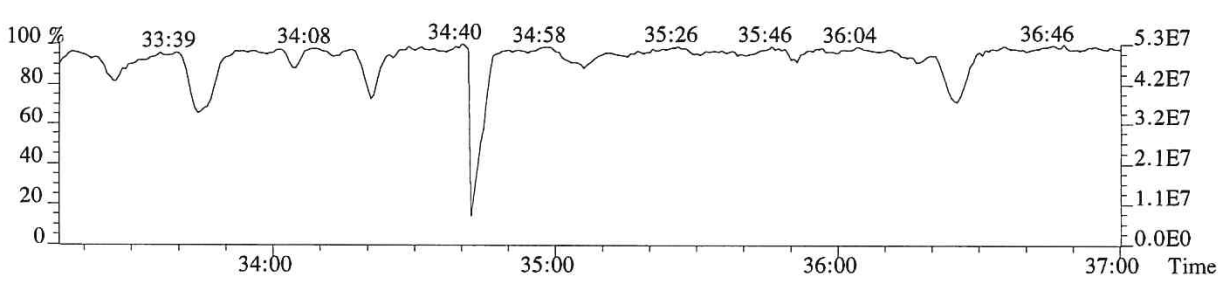
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1436.0,0.40%,F,T)



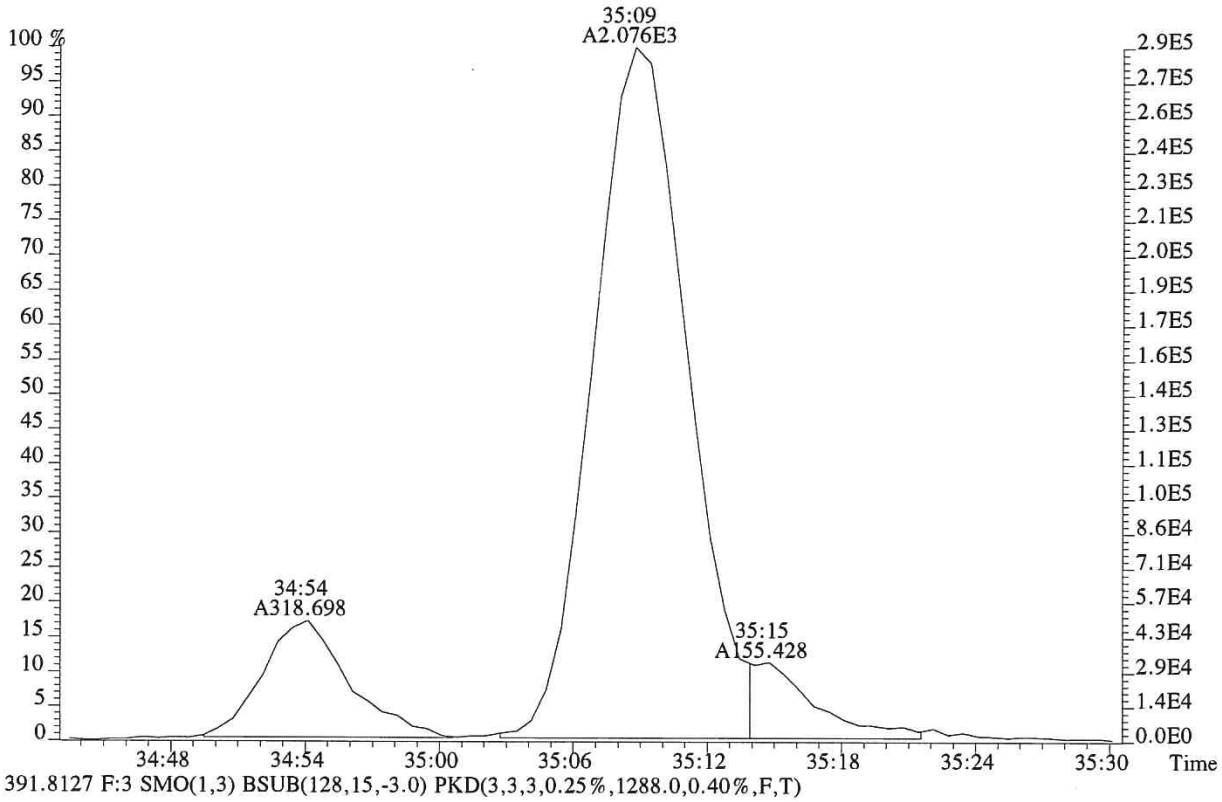
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,768.0,0.40%,F,T)



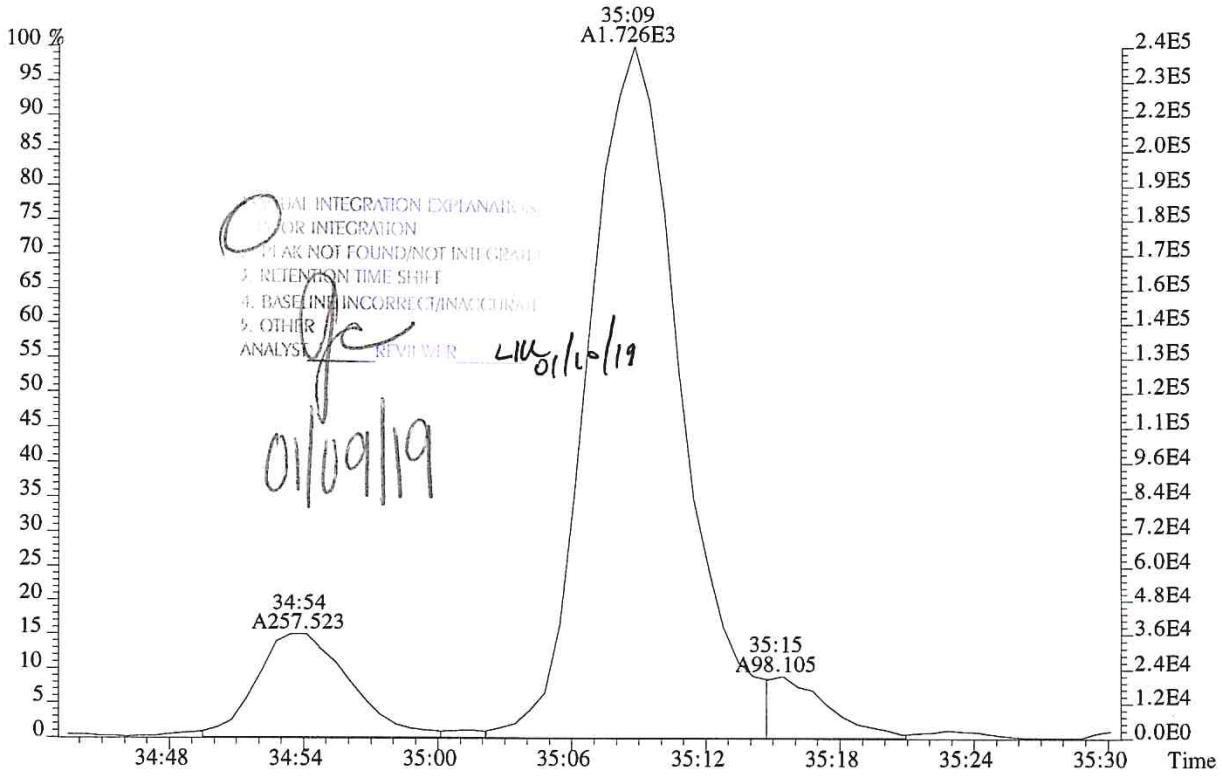
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519840 #1-339 Acq: 8-JAN-2019 17:28:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1508.0,0.40%,F,T)

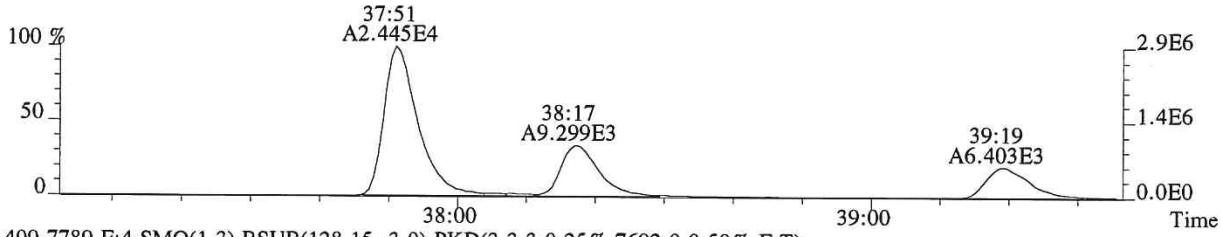


391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1288.0,0.40%,F,T)

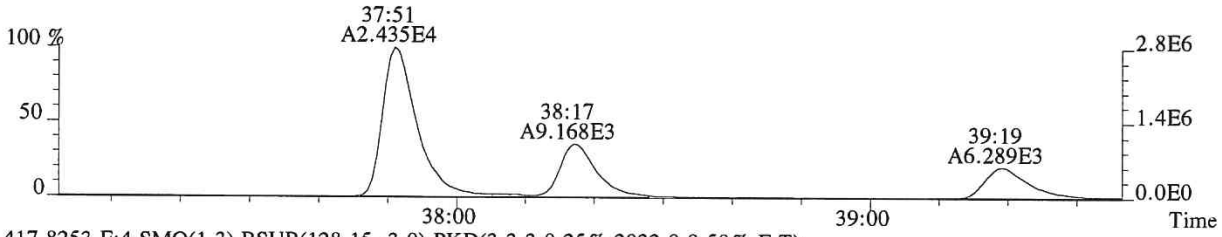


OR INTEGRATION
3. RETENTION TIME SHIFT
5. OTHER
ANALYST REVIEWER
01/09/19
01/10/19

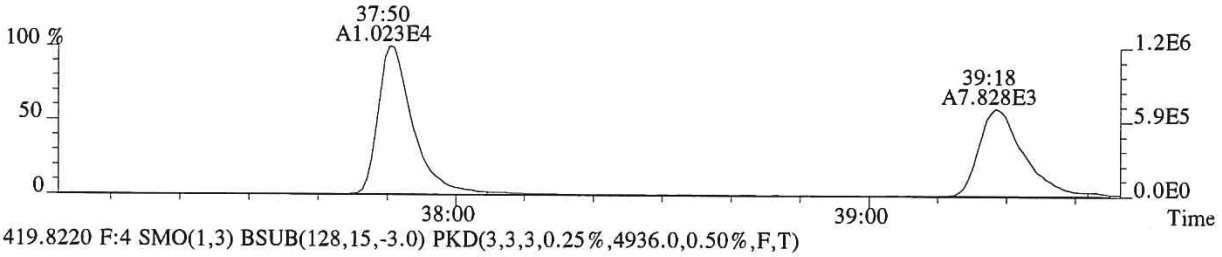
File:P519840 #1-232 Acq: 8-JAN-2019 17:28:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1024.0,0.50%,F,T)



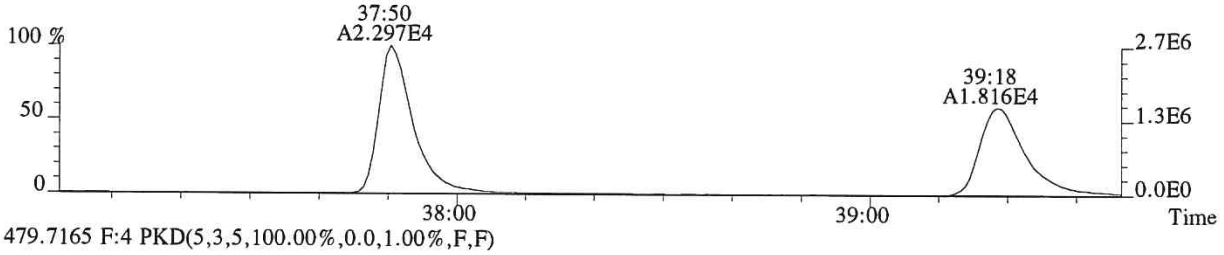
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7692.0,0.50%,F,T)



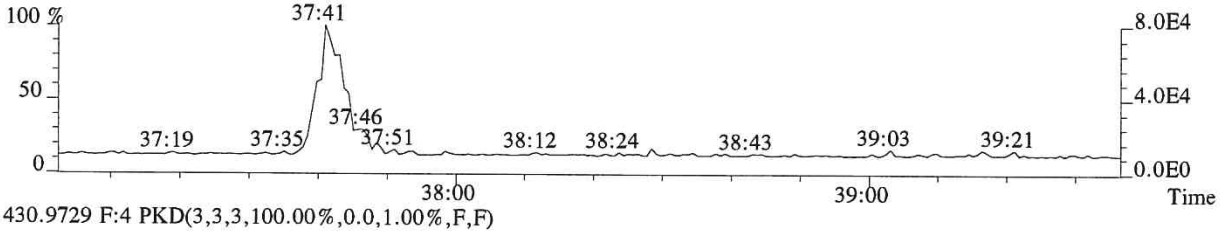
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2032.0,0.50%,F,T)



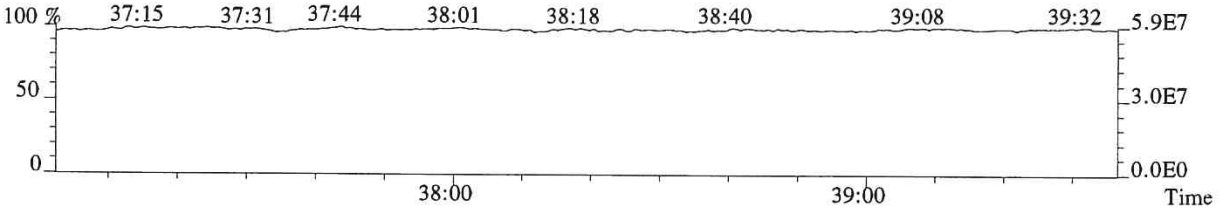
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4936.0,0.50%,F,T)



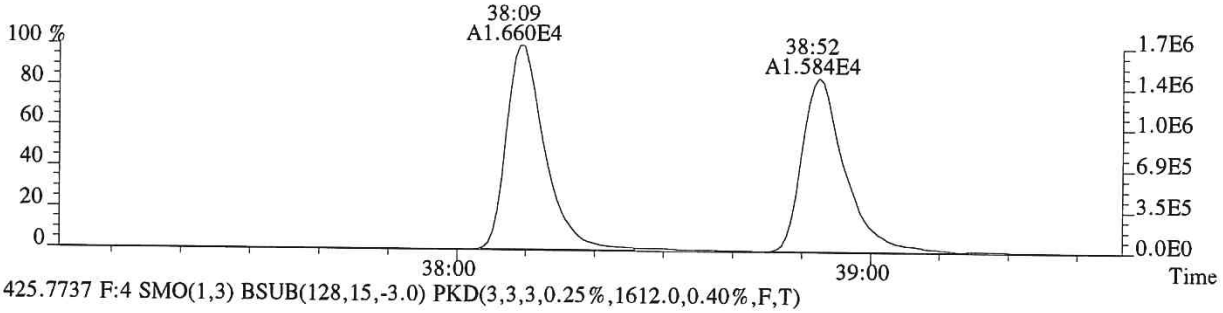
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



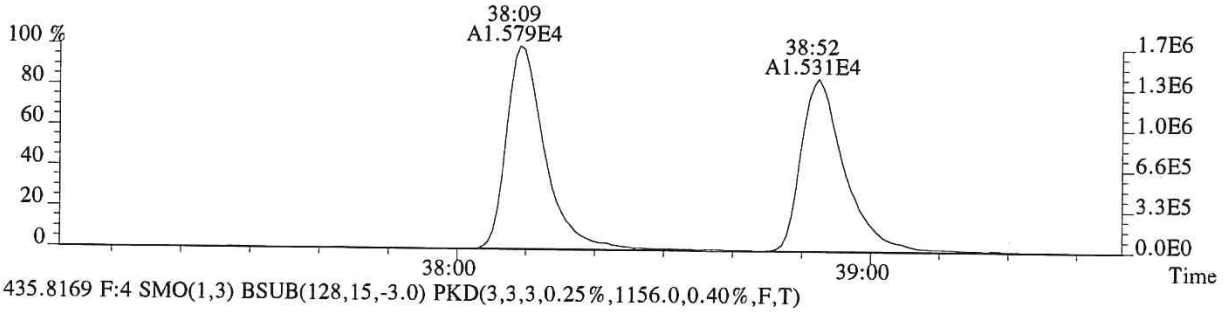
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



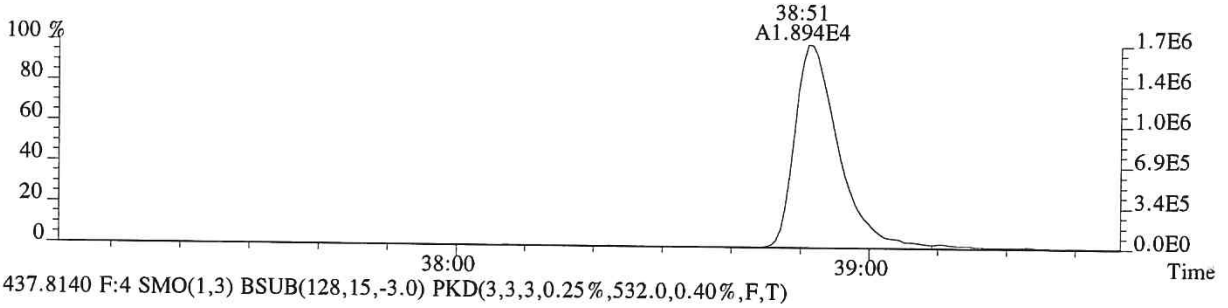
File:P519840 #1-232 Acq: 8-JAN-2019 17:28:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,592.0,0.40%,F,T)



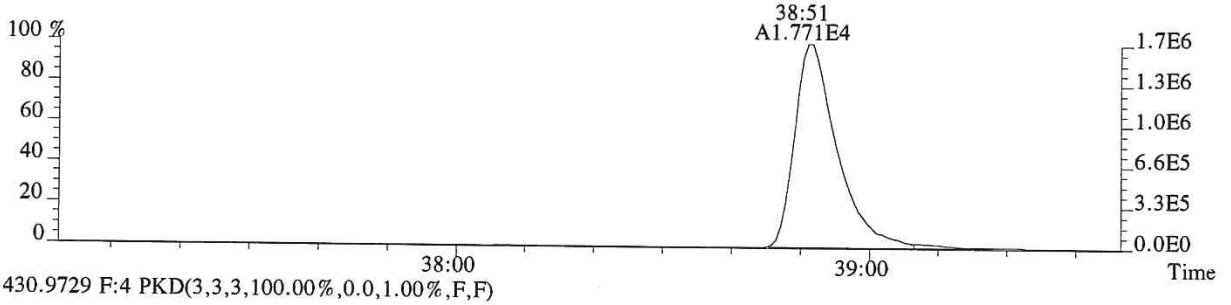
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1612.0,0.40%,F,T)



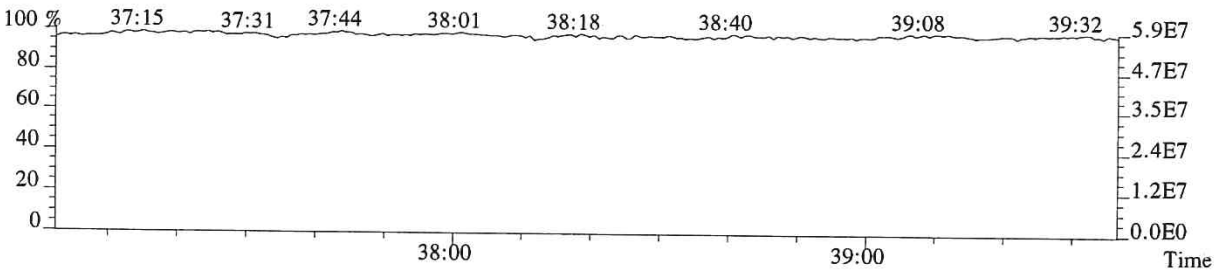
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1156.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,532.0,0.40%,F,T)

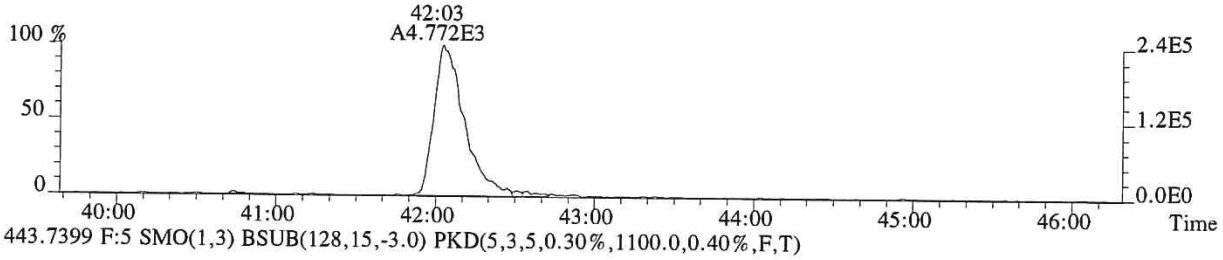


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

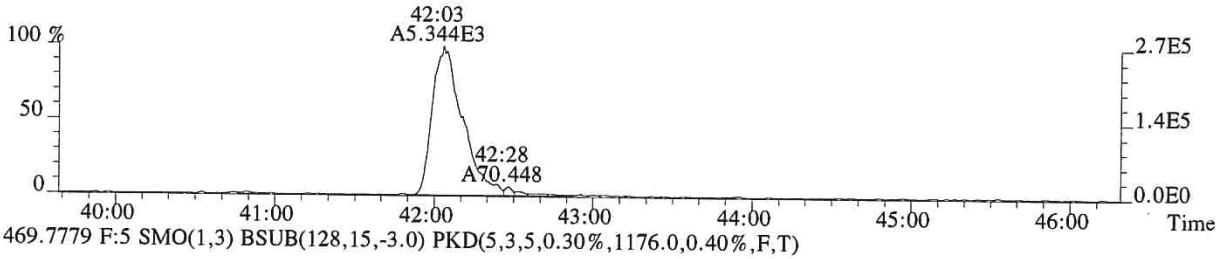


017390

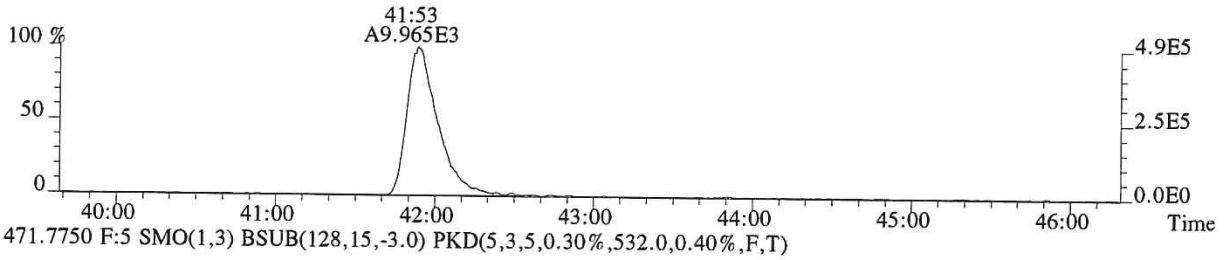
File:P519840 #1-601 Acq: 8-JAN-2019 17:28:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,308.0,0.40%,F,T)



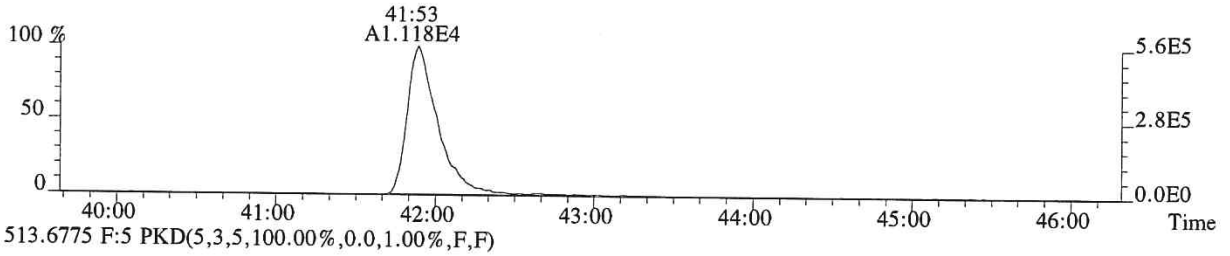
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1100.0,0.40%,F,T)



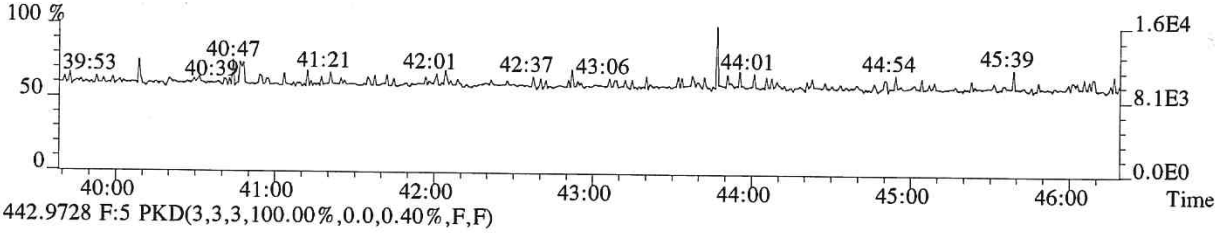
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1176.0,0.40%,F,T)



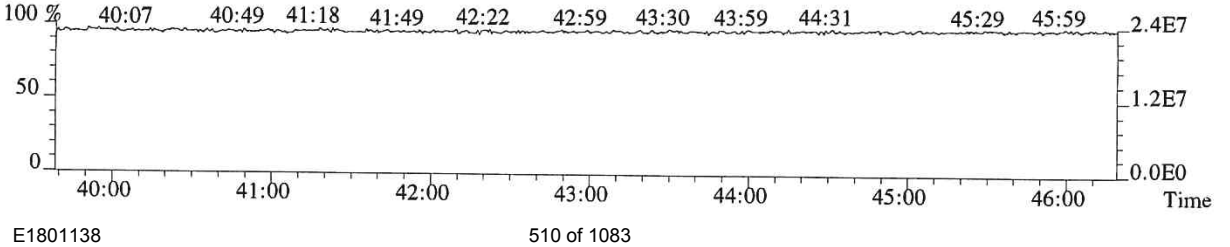
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,532.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

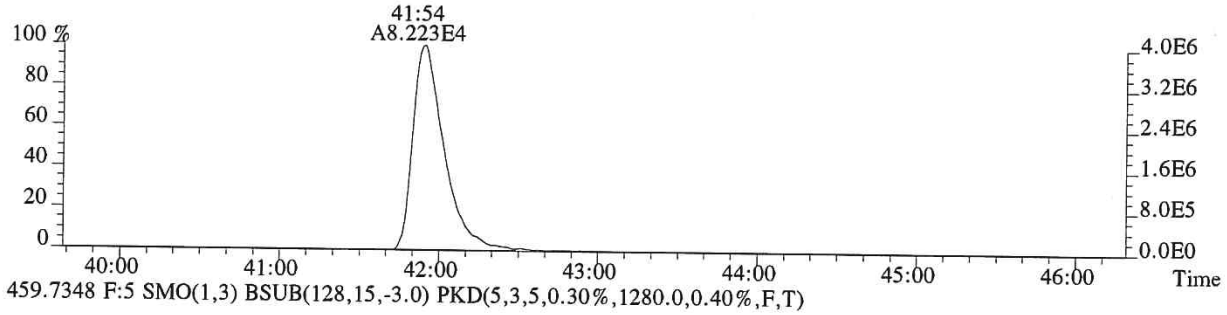


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

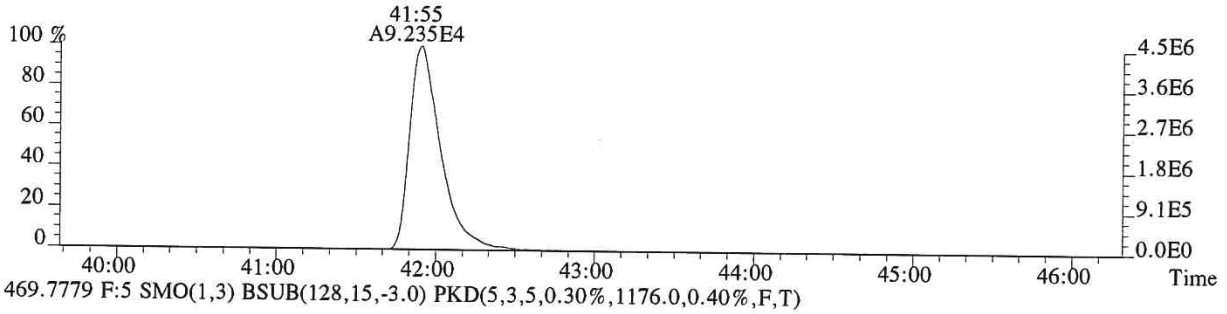


017391

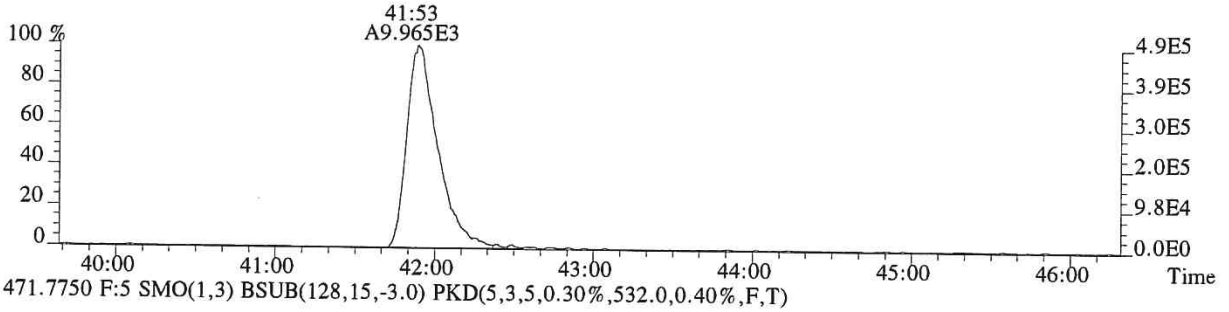
File:P519840 #1-601 Acq: 8-JAN-2019 17:28:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1264.0,0.40%,F,T)



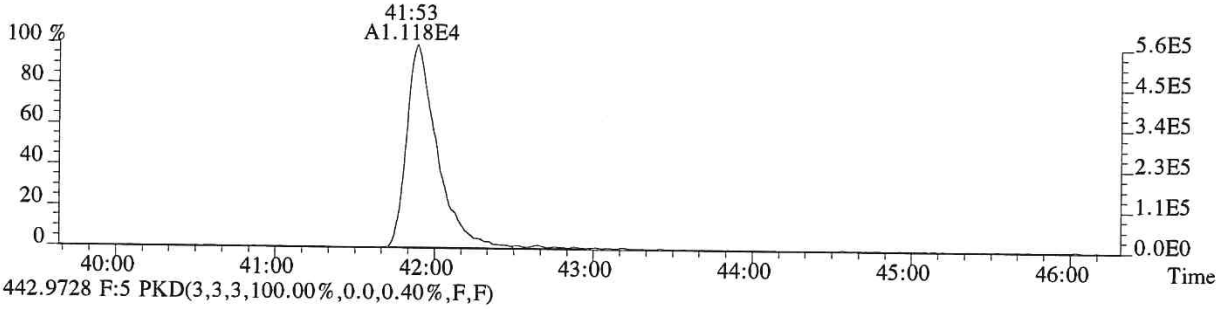
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1280.0,0.40%,F,T)



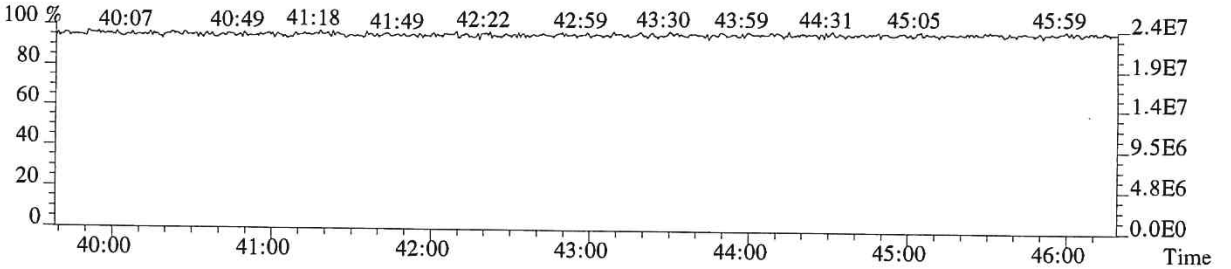
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1176.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,532.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017392

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0199

Run #16 Filename P616413 Samp: 1 Inj: 1 Acquired: 9-JAN-19 18:56:19
Processed: 10-JAN-19 08:32:05 Sample ID: E1801138-014DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:12	6.051e+03	7.175e+03	0.84	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:22	3.391e+02	2.388e+02	1.42	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:26	2.520e+02	1.825e+02	1.38	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:20	4.084e+02	2.681e+02	1.52	no	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:27	1.165e+02	1.433e+02	0.81	no	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	3.640e+01	1.796e+01	2.03	no	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:49	2.910e+01	2.672e+01	1.09	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:06	1.132e+02	7.524e+01	1.50	no	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:28	2.033e+01	6.499e+00	3.13	no	no	1.463
10	Unk	OCDF	40:48	2.638e+01	1.856e+01	1.42	no	no	1.571
11	Unk	2,3,7,8-TCDD	26:15	1.256e+03	1.478e+03	0.85	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:46	2.295e+01	1.347e+00	17.04	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:26	1.822e+00	4.326e+00	0.42	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	4.581e+01	3.420e+01	1.34	no	no	1.112
17	Unk	OCDD	40:38	2.500e+02	2.990e+02	0.84	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:11	9.795e+03	1.250e+04	0.78	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:22	1.486e+04	9.456e+03	1.57	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:25	1.365e+04	8.272e+03	1.65	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:19	5.161e+03	9.412e+03	0.55	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	7.106e+03	1.322e+04	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:00	5.790e+03	1.064e+04	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	4.434e+03	8.649e+03	0.51	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:06	3.466e+03	8.002e+03	0.43	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	2.527e+03	5.529e+03	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:14	4.526e+03	5.611e+03	0.81	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:44	9.082e+03	5.839e+03	1.56	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	6.278e+03	5.006e+03	1.25	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:14	7.405e+03	5.944e+03	1.25	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	5.723e+03	5.221e+03	1.10	yes	no	0.857
32	IS	13C-OCDD	40:37	4.465e+03	4.937e+03	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:26	6.752e+03	8.441e+03	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	7.248e+03	5.788e+03	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:16	1.036e+02				no	1.086

$$\text{OCDD} = \frac{(2.500e+02 + 2.990e+02) \times 4000\ \text{pg} \times 100}{(4.465e+03 + 4.937e+03) \times 10.247\ \text{g} \times 71.2 / 100 \times 1.157 \times 0.24} = 11528\ \text{ng/kg}$$

LM 01/10/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0199

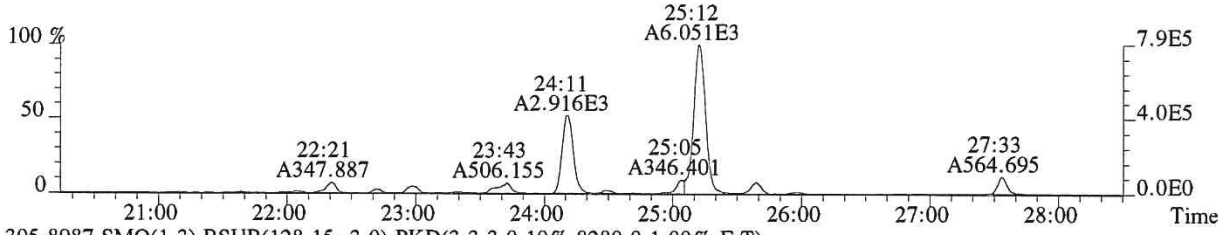
Run #16 Filename P616413 Samp: 1 Inj: 1 Acquired: 9-JAN-19 18:56:19
Processed: 10-JAN-19 08:32:05 LAB. ID: E1801138-014DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	7.93e+05	2.29e+03	3.5e+02	9.67e+05	8.28e+03	1.2e+02
2	1,2,3,7,8-PeCDF	4.62e+04	9.32e+02	5.0e+01	3.27e+04	3.15e+03	1.0e+01
3	2,3,4,7,8-PeCDF	3.75e+04	9.32e+02	4.0e+01	2.90e+04	3.15e+03	9.2e+00
4	1,2,3,4,7,8-HxCDF	7.76e+04	7.52e+02	1.0e+02	5.26e+04	1.22e+03	4.3e+01
5	1,2,3,6,7,8-HxCDF	2.22e+04	7.52e+02	3.0e+01	2.82e+04	1.22e+03	2.3e+01
6	2,3,4,6,7,8-HxCDF	6.93e+03	7.52e+02	9.2e+00	5.04e+03	1.22e+03	4.1e+00
7	1,2,3,7,8,9-HxCDF	5.79e+03	7.52e+02	7.7e+00	6.06e+03	1.22e+03	5.0e+00
8	1,2,3,4,6,7,8-HpCDF	2.15e+04	7.24e+02	3.0e+01	1.47e+04	6.84e+02	2.1e+01
9	1,2,3,4,7,8,9-HpCDF	3.60e+03	7.24e+02	5.0e+00	1.99e+03	6.84e+02	2.9e+00
10	OCDF	4.30e+03	4.04e+02	1.1e+01	4.39e+03	1.68e+03	2.6e+00
11	2,3,7,8-TCDD	1.72e+05	4.73e+03	3.6e+01	2.17e+05	1.78e+03	1.2e+02
12	1,2,3,7,8-PeCDD	6.34e+03	1.02e+03	6.2e+00	4.12e+02	1.80e+02	2.3e+00
13	1,2,3,4,7,8-HxCDD	*	4.84e+02	*	*	8.80e+02	*
14	1,2,3,6,7,8-HxCDD	*	4.84e+02	*	*	8.80e+02	*
15	1,2,3,7,8,9-HxCDD	4.87e+02	4.84e+02	1.0e+00	1.30e+03	8.80e+02	1.5e+00
16	1,2,3,4,6,7,8-HpCDD	7.73e+03	2.60e+02	3.0e+01	6.32e+03	5.00e+02	1.3e+01
17	OCDD	3.90e+04	2.92e+02	1.3e+02	4.43e+04	2.60e+02	1.7e+02
18	13C-2,3,7,8-TCDF	1.35e+06	1.60e+04	8.4e+01	1.73e+06	1.12e+04	1.5e+02
19	13C-1,2,3,7,8-PeCDF	2.33e+06	2.48e+02	9.4e+03	1.48e+06	1.21e+03	1.2e+03
20	13C-2,3,4,7,8-PeCDF	2.29e+06	2.48e+02	9.2e+03	1.42e+06	1.21e+03	1.2e+03
21	13C-1,2,3,4,7,8-HxCDF	1.04e+06	1.13e+03	9.2e+02	1.88e+06	1.48e+03	1.3e+03
22	13C-1,2,3,6,7,8-HxCDF	1.15e+06	1.13e+03	1.0e+03	2.15e+06	1.48e+03	1.5e+03
23	13C-2,3,4,6,7,8-HxCDF	1.01e+06	1.13e+03	9.0e+02	1.94e+06	1.48e+03	1.3e+03
24	13C-1,2,3,7,8,9-HxCDF	7.33e+05	1.13e+03	6.5e+02	1.39e+06	1.48e+03	9.4e+02
25	13C-1,2,3,4,6,7,8-HpCDF	5.97e+05	3.48e+03	1.7e+02	1.47e+06	2.56e+03	5.7e+02
26	13C-1,2,3,4,7,8,9-HpCDF	4.28e+05	3.48e+03	1.2e+02	9.02e+05	2.56e+03	3.5e+02
27	13C-2,3,7,8-TCDD	6.64e+05	1.34e+04	5.0e+01	8.14e+05	4.37e+03	1.9e+02
28	13C-1,2,3,7,8-PeCDD	1.49e+06	1.96e+03	7.6e+02	9.57e+05	1.94e+03	4.9e+02
29	13C-1,2,3,4,7,8-HxCDD	1.26e+06	2.48e+03	5.1e+02	1.03e+06	1.20e+03	8.6e+02
30	13C-1,2,3,6,7,8-HxCDD	1.21e+06	2.48e+03	4.9e+02	9.37e+05	1.20e+03	7.8e+02
31	13C-1,2,3,4,6,7,8-HpCDD	9.16e+05	1.18e+03	7.7e+02	8.60e+05	5.16e+02	1.7e+03
32	13C-OCDD	6.10e+05	1.08e+03	5.7e+02	6.85e+05	2.92e+02	2.3e+03
33	13C-1,2,3,4-TCDD	9.67e+05	1.34e+04	7.2e+01	1.20e+06	4.37e+03	2.7e+02
34	13C-1,2,3,7,8,9-HxCDD	1.21e+06	2.48e+03	4.9e+02	8.89e+05	1.20e+03	7.4e+02
35	37Cl-2,3,7,8-TCDD	1.53e+04	1.94e+03	7.9e+00			

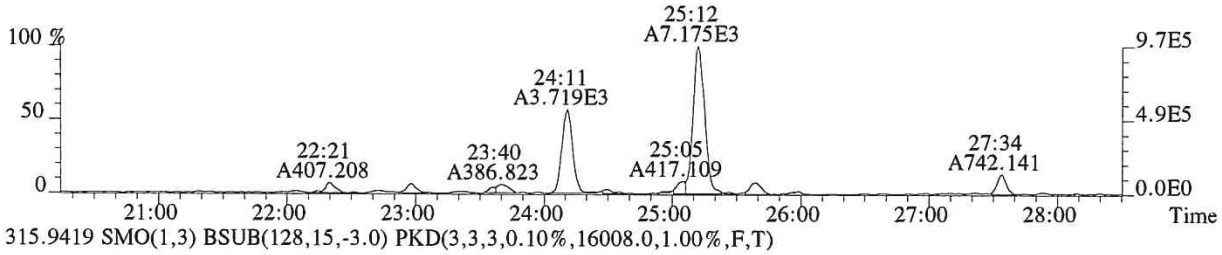
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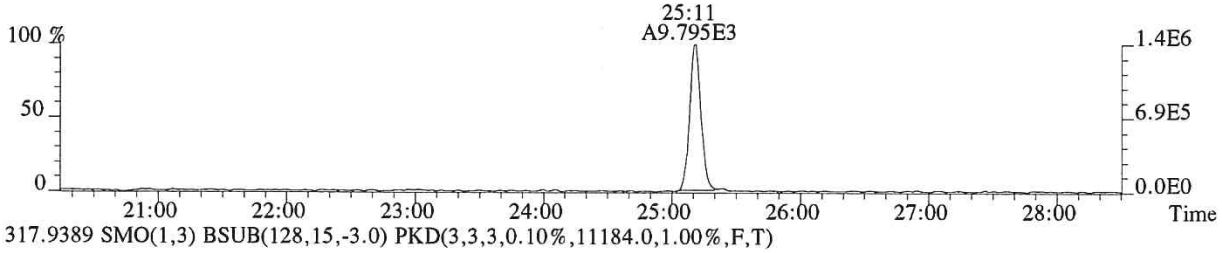
File:P616413 #1-587 Acq: 9-JAN-2019 18:56:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2292.0,1.00%,F,T)



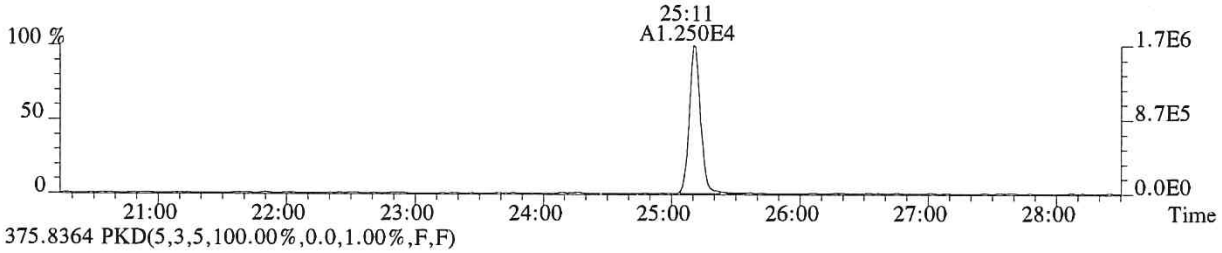
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8280.0,1.00%,F,T)



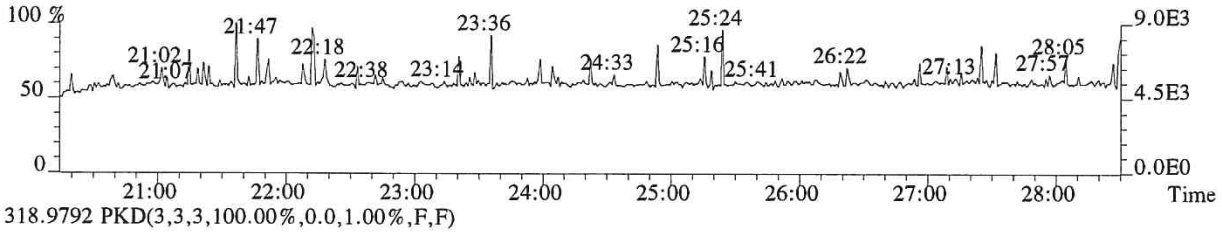
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,16008.0,1.00%,F,T)



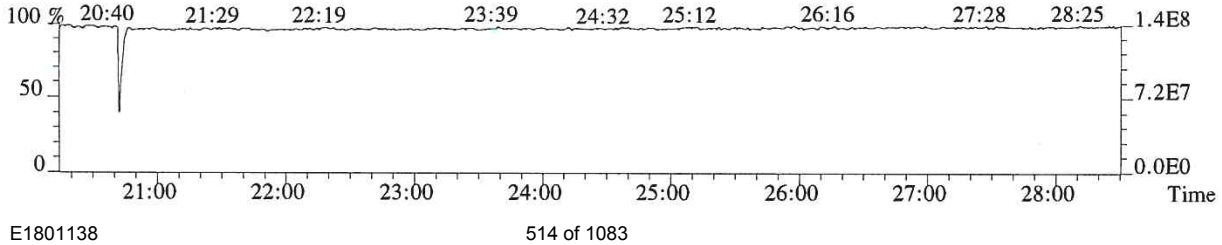
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11184.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

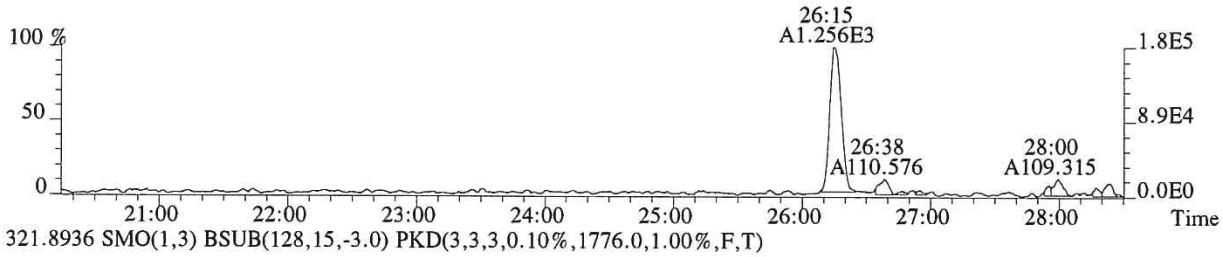


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

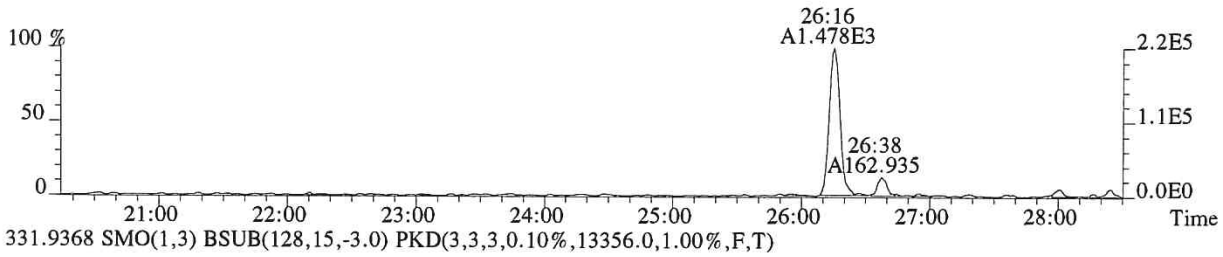


017395

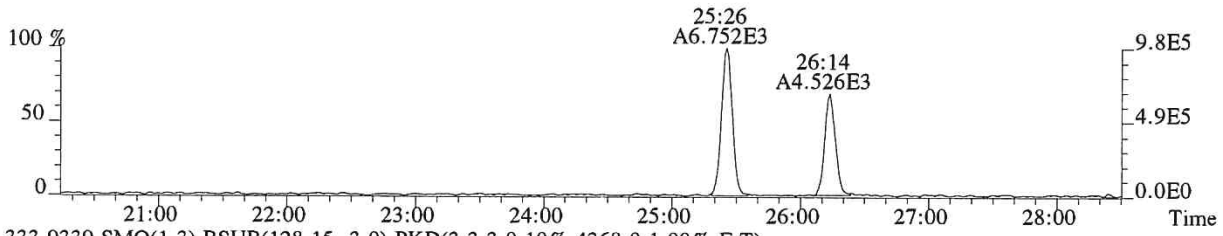
File:P616413 #1-587 Acq: 9-JAN-2019 18:56:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4732.0,1.00%,F,T)



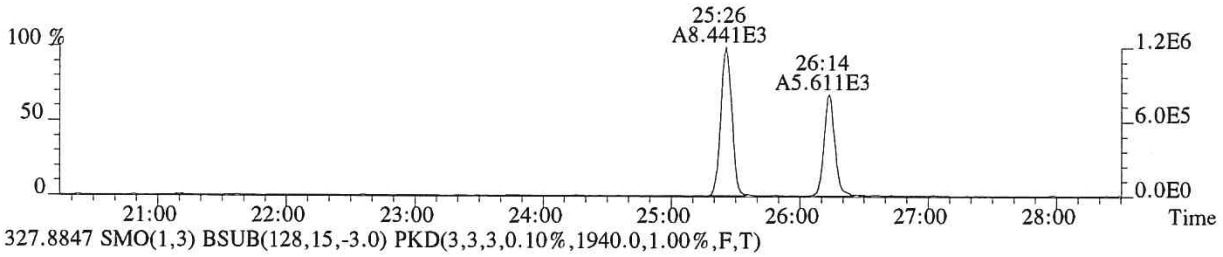
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1776.0,1.00%,F,T)



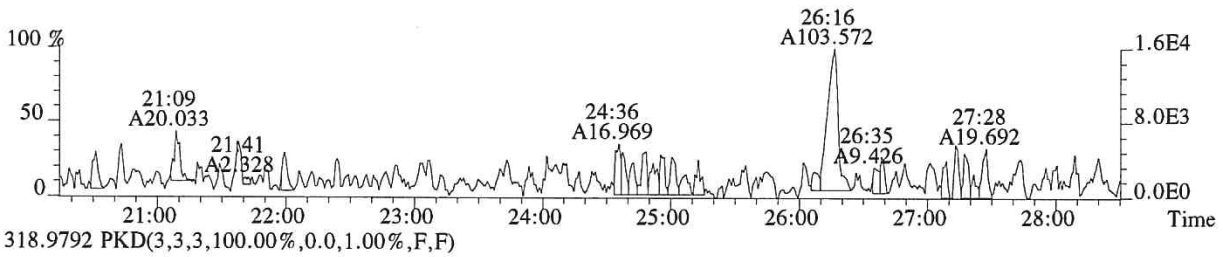
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,13356.0,1.00%,F,T)



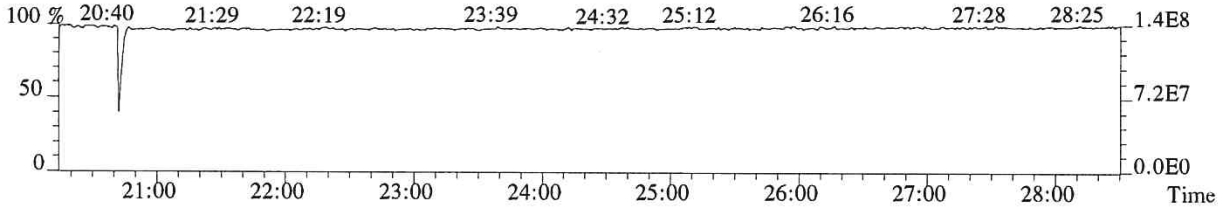
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4368.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1940.0,1.00%,F,T)

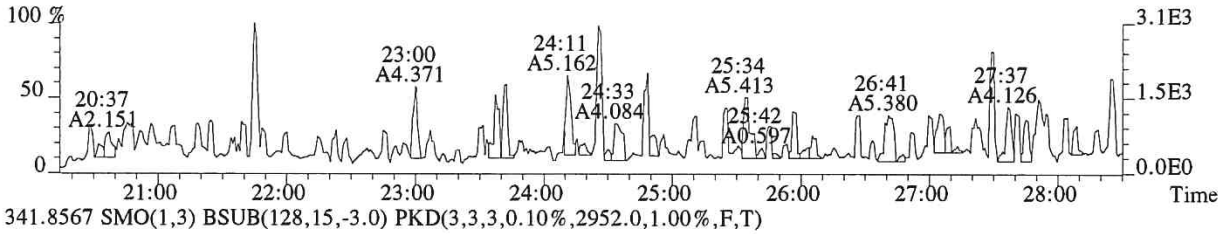


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

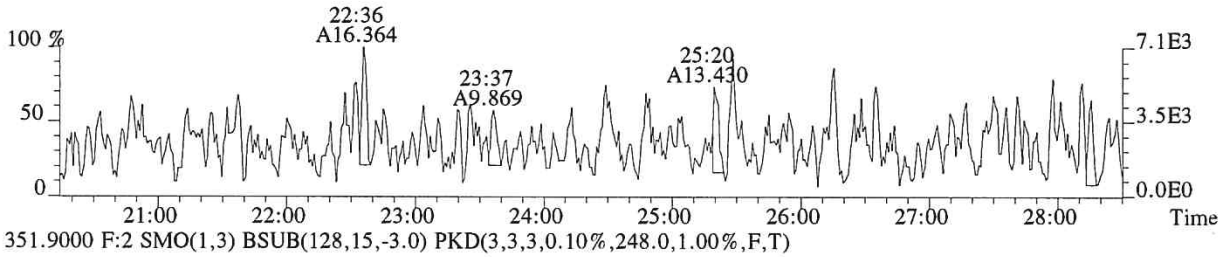


017396

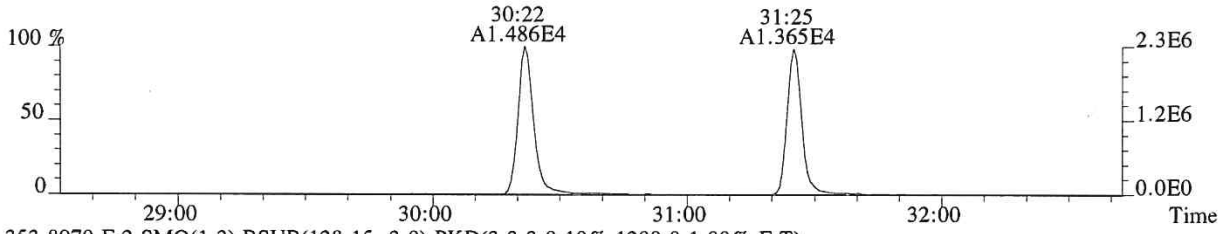
File:P616413 #1-587 Acq: 9-JAN-2019 18:56:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,580.0,1.00%,F,T)



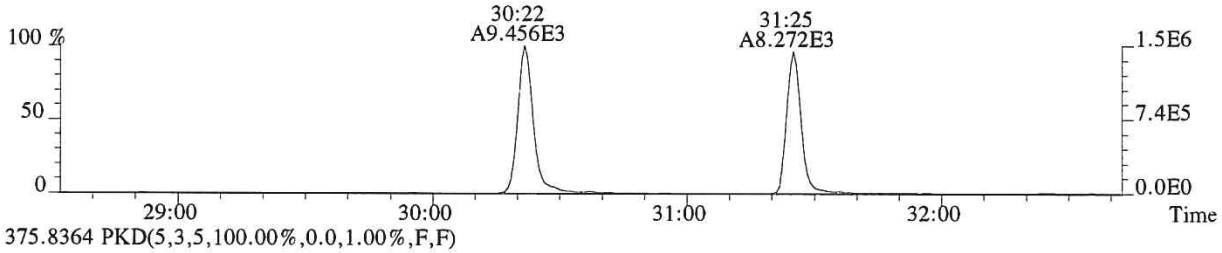
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2952.0,1.00%,F,T)



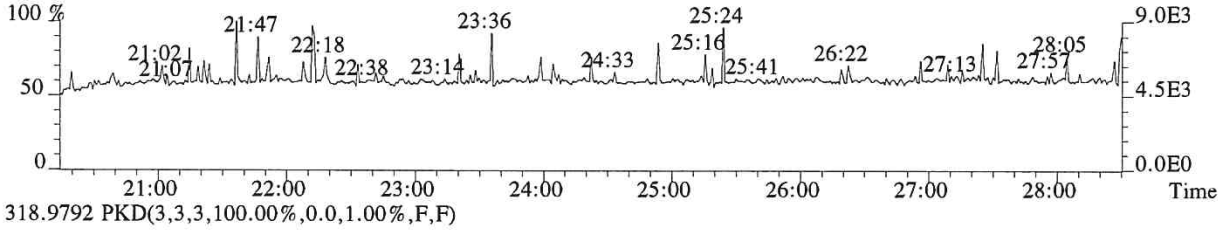
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,248.0,1.00%,F,T)



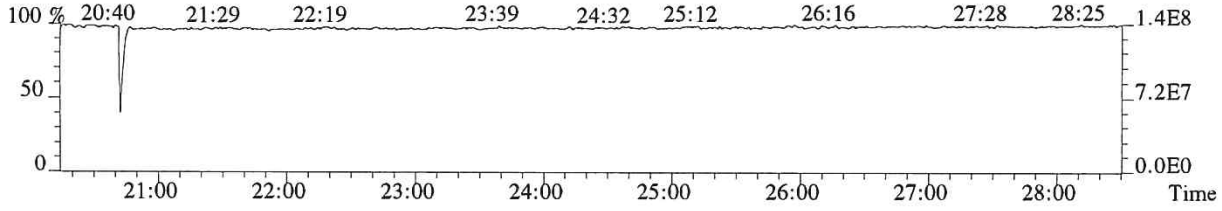
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1208.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

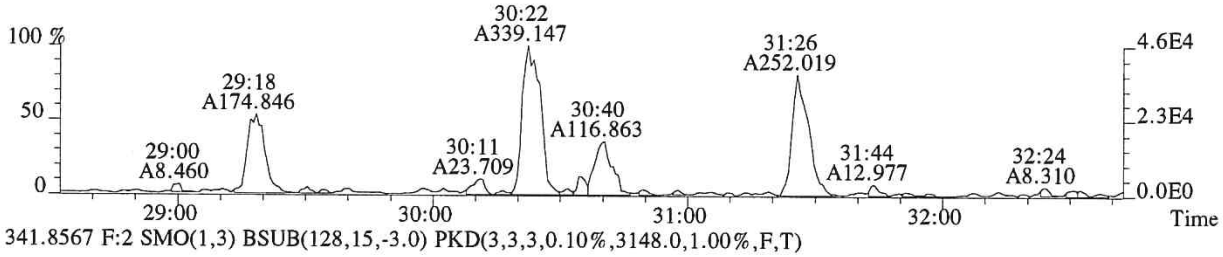


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

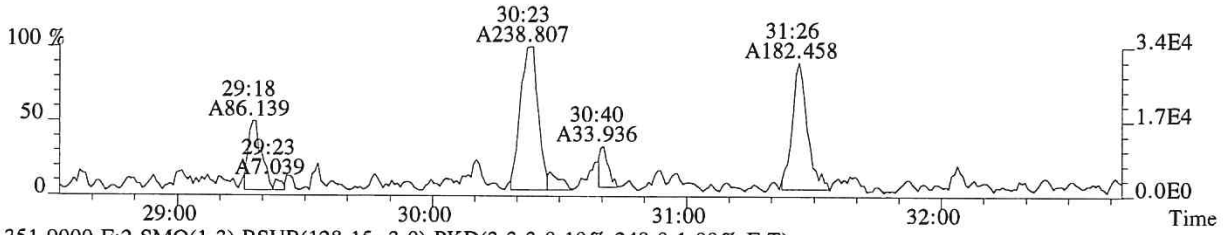


017397

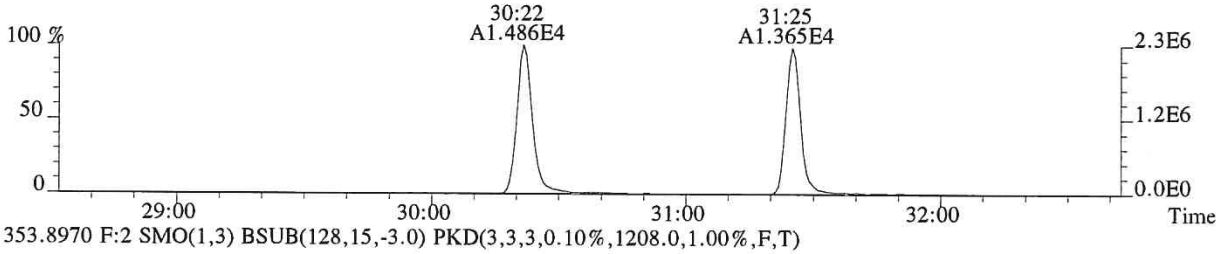
File:P616413 #1-376 Acq: 9-JAN-2019 18:56:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,932.0,1.00%,F,T)



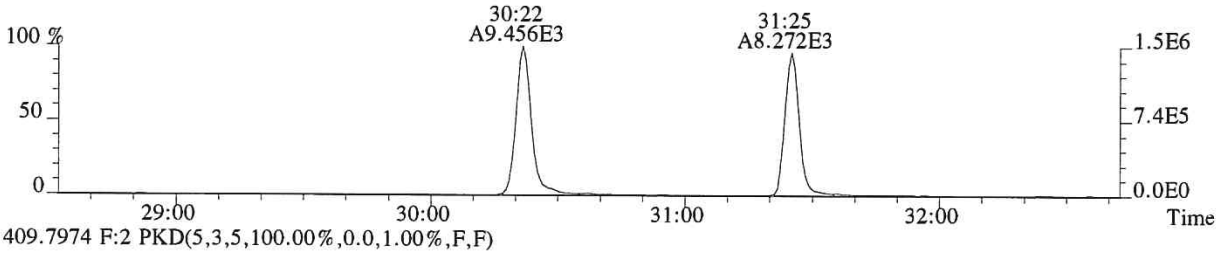
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3148.0,1.00%,F,T)



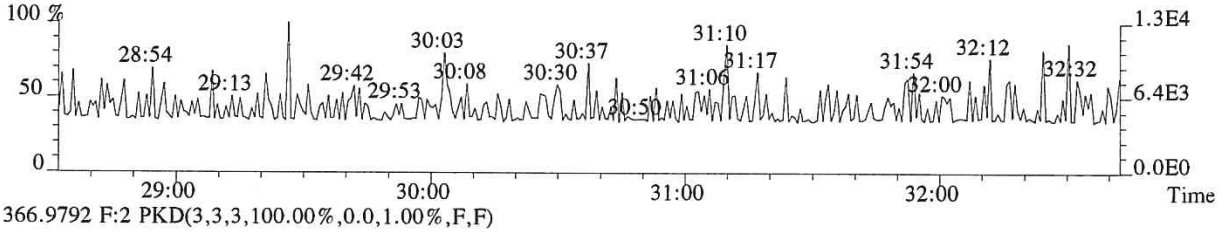
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,248.0,1.00%,F,T)



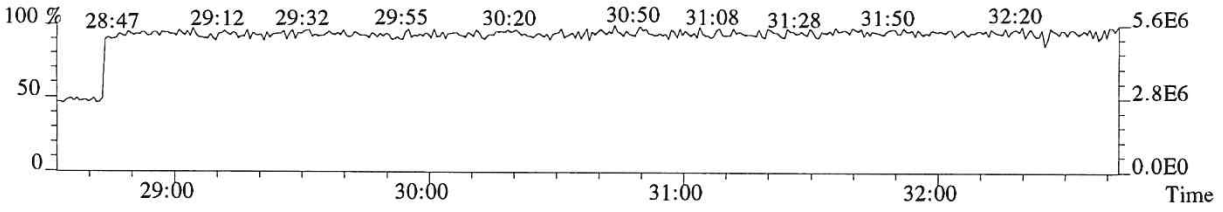
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1208.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

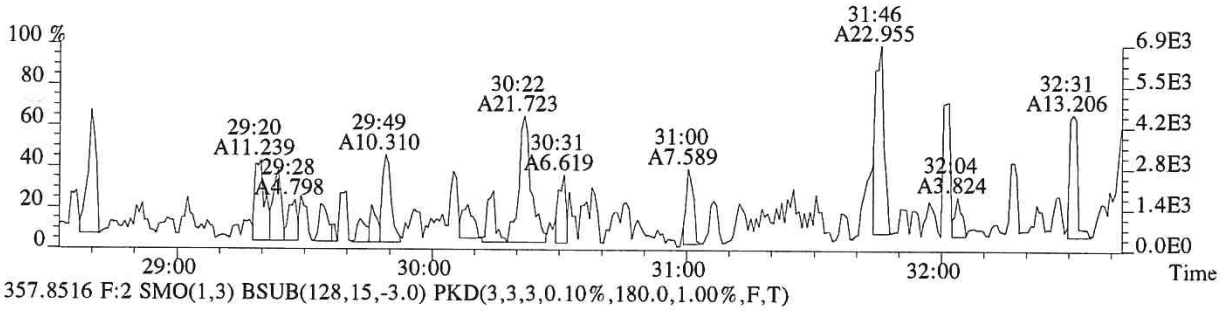


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

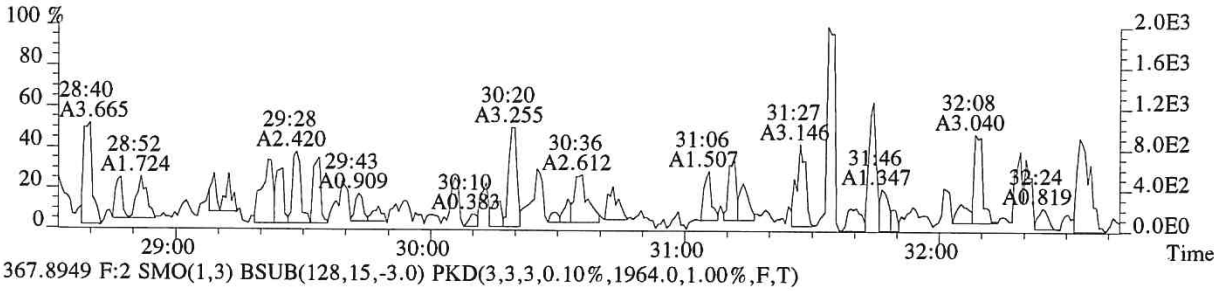


017398

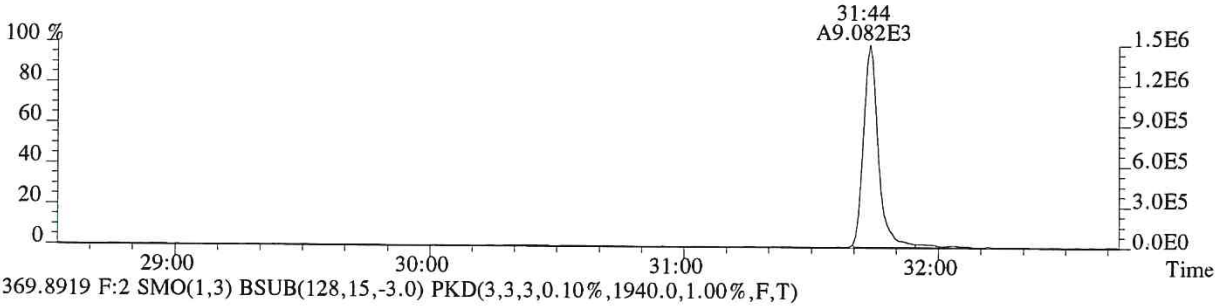
File:P616413 #1-376 Acq: 9-JAN-2019 18:56:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1016.0,1.00%,F,T)



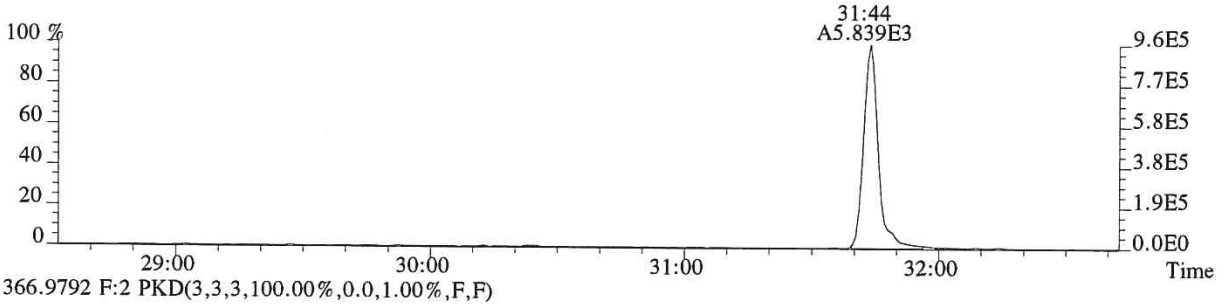
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,180.0,1.00%,F,T)



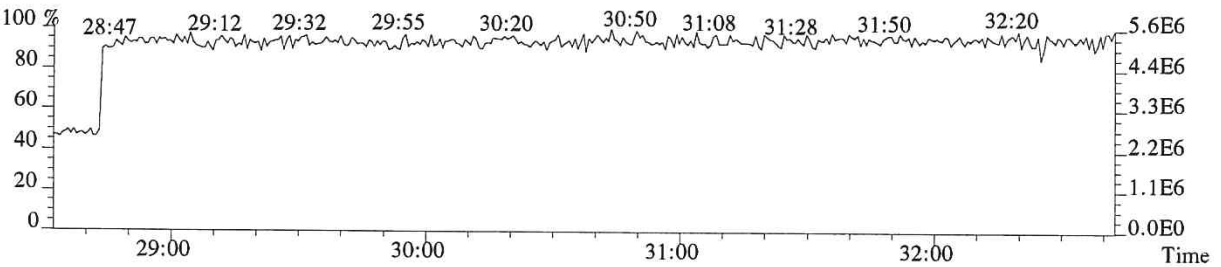
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1964.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1940.0,1.00%,F,T)

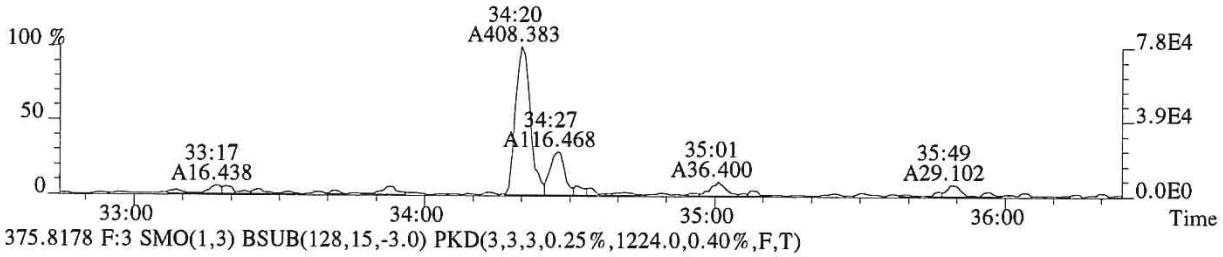


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

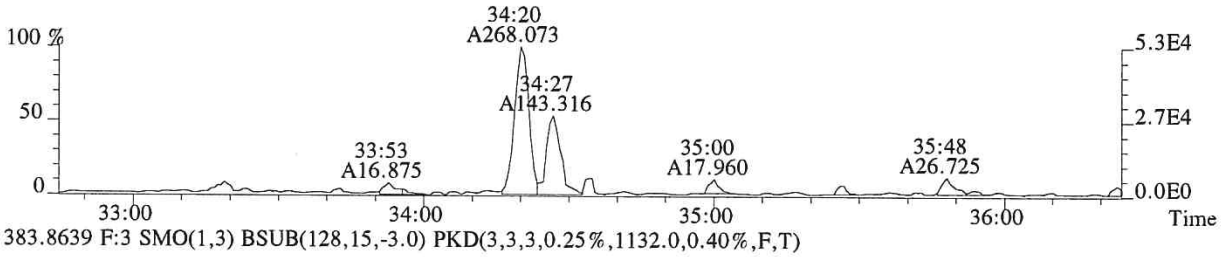


017399

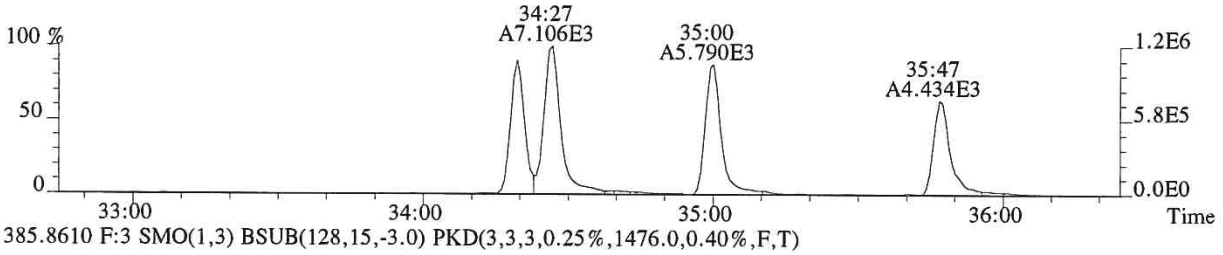
File:P616413 #1-330 Acq: 9-JAN-2019 18:56:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,752.0,0.40%,F,T)



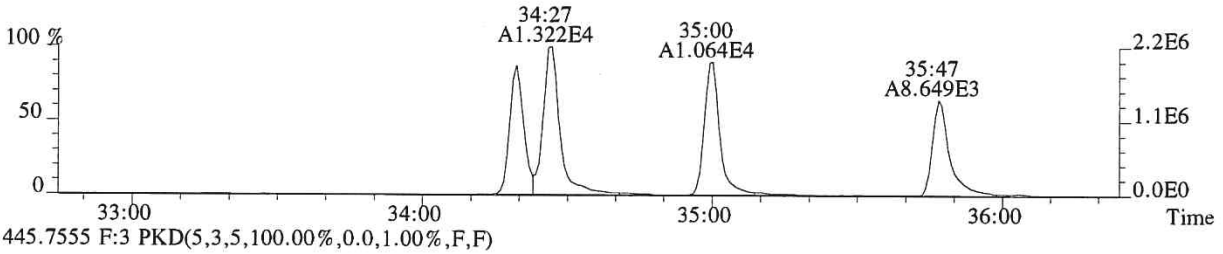
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1224.0,0.40%,F,T)



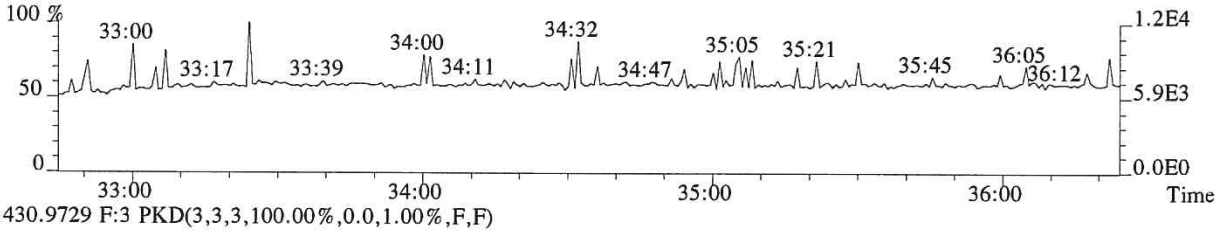
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1132.0,0.40%,F,T)



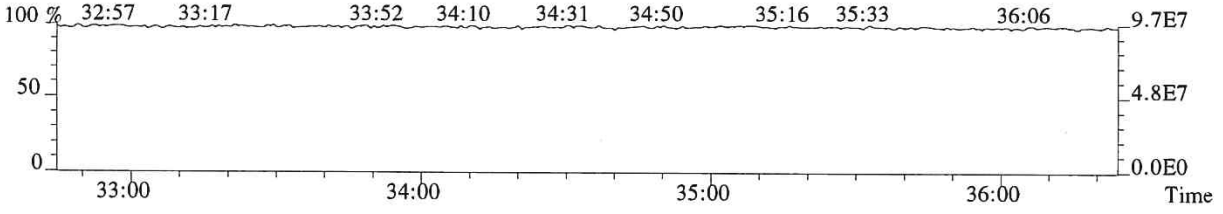
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1476.0,0.40%,F,T)



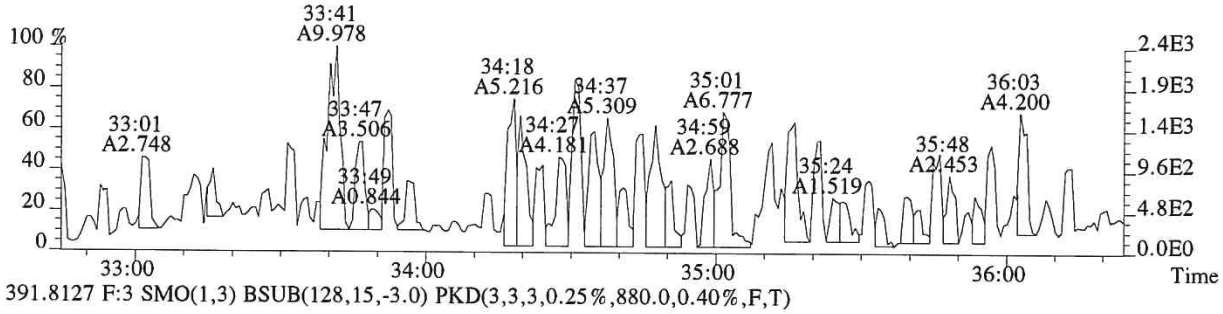
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



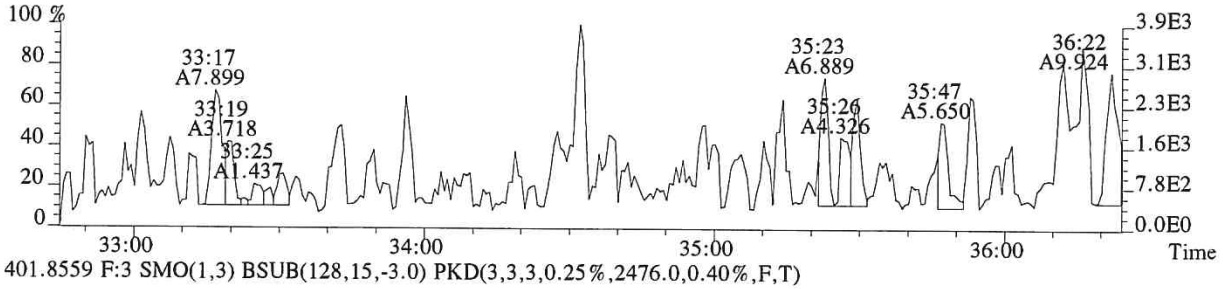
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



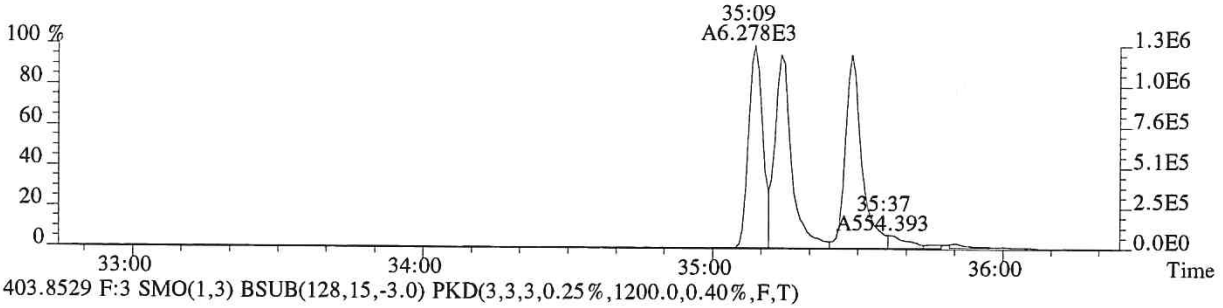
File:P616413 #1-330 Acq: 9-JAN-2019 18:56:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,484.0,0.40%,F,T)



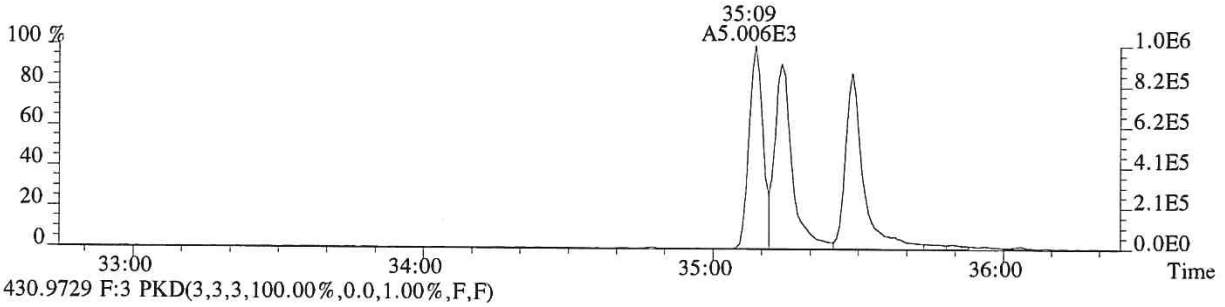
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,880.0,0.40%,F,T)



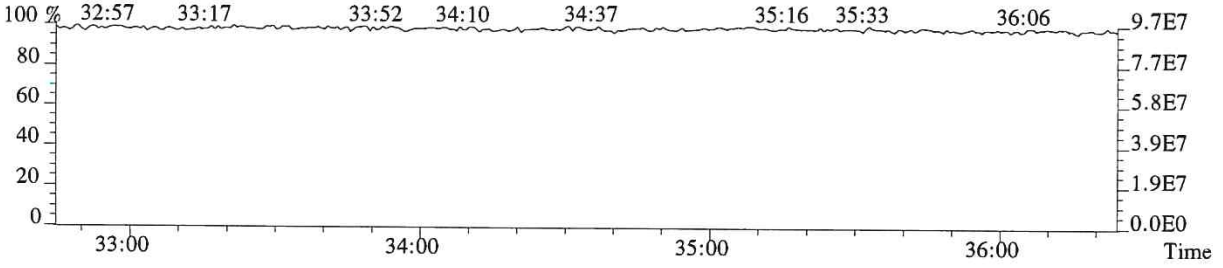
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2476.0,0.40%,F,T)



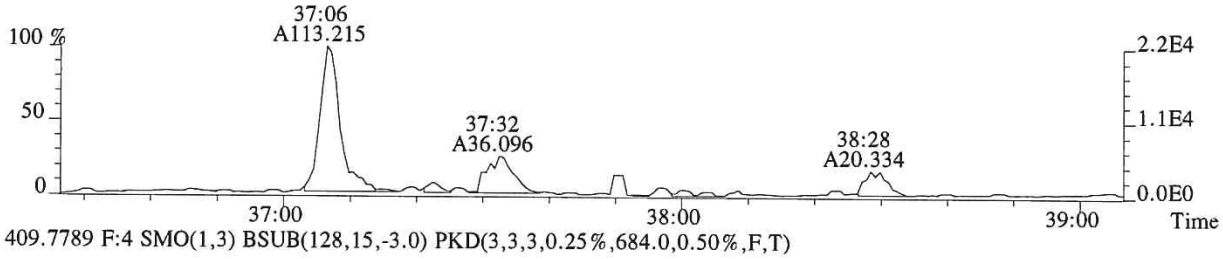
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1200.0,0.40%,F,T)



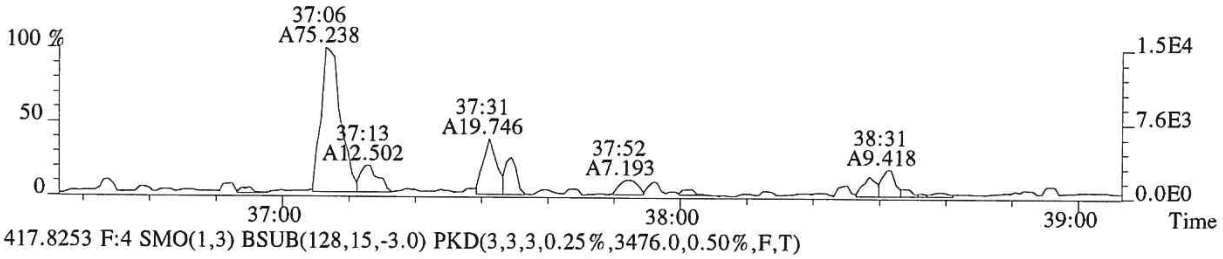
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



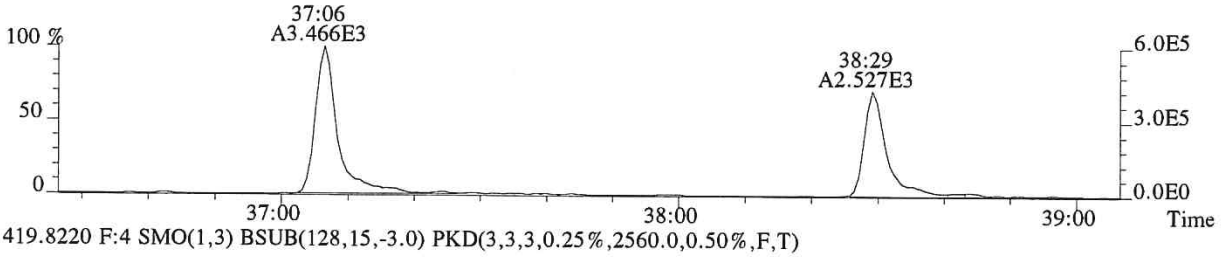
File:P616413 #1-241 Acq: 9-JAN-2019 18:56:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,724.0,0.50%,F,T)



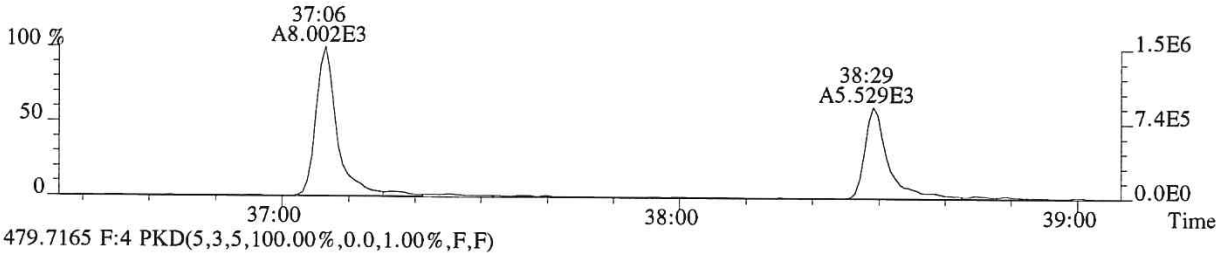
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,684.0,0.50%,F,T)



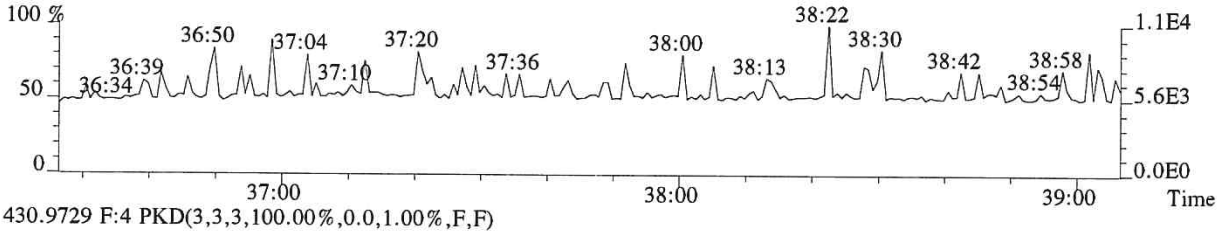
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3476.0,0.50%,F,T)



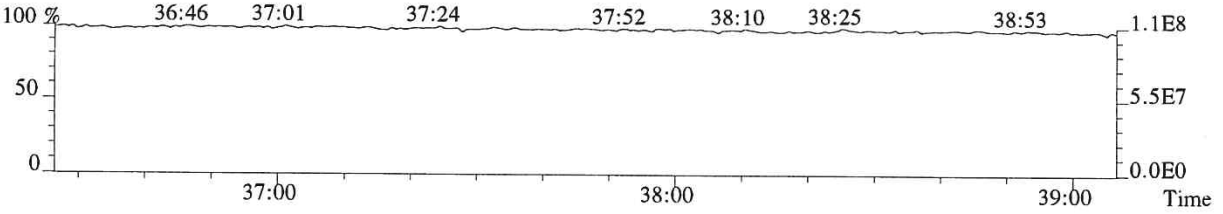
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2560.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

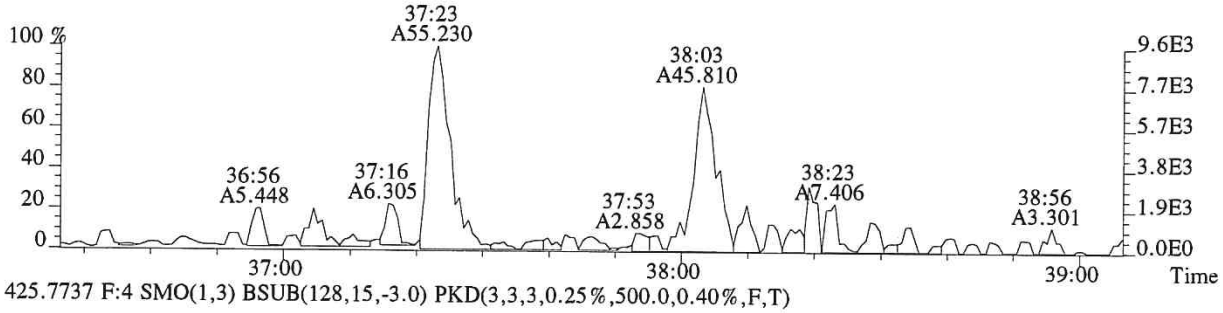


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

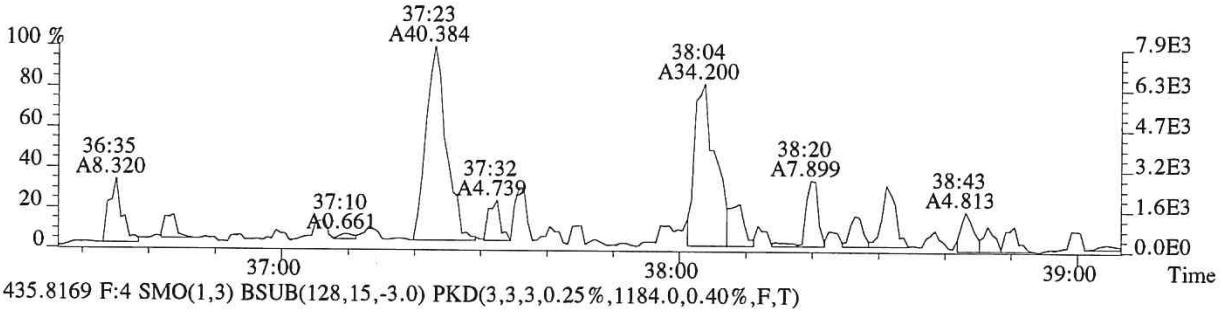


017402

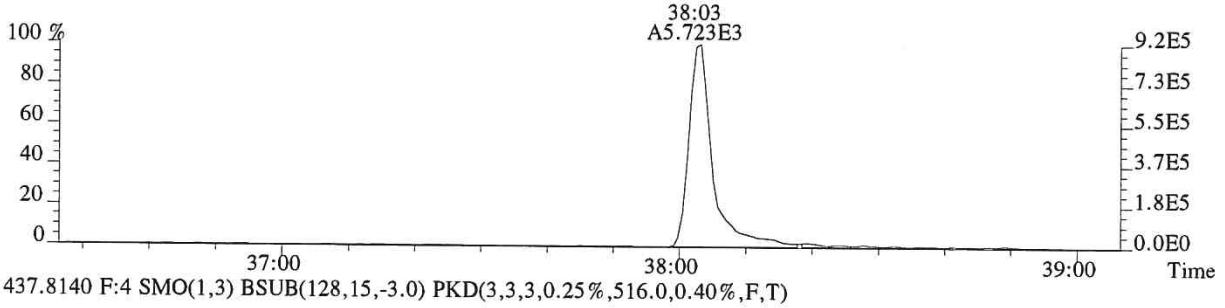
File:P616413 #1-241 Acq: 9-JAN-2019 18:56:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,260.0,0.40%,F,T)



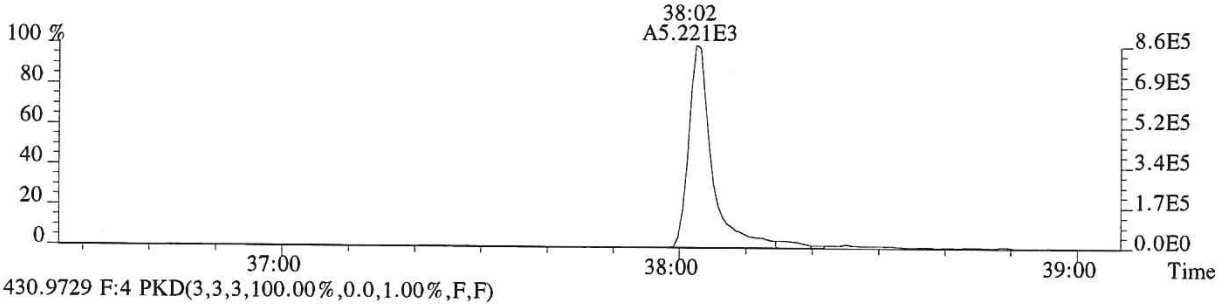
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,500.0,0.40%,F,T)



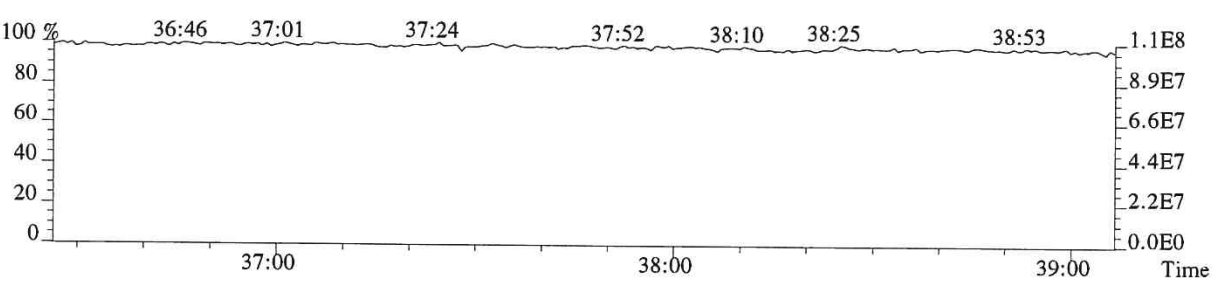
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1184.0,0.40%,F,T)



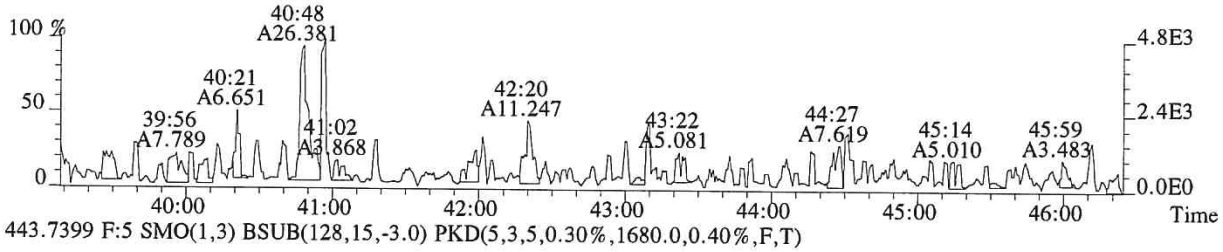
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,516.0,0.40%,F,T)



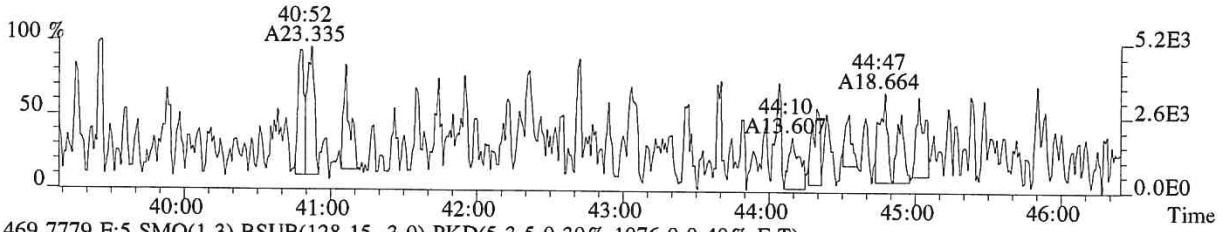
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



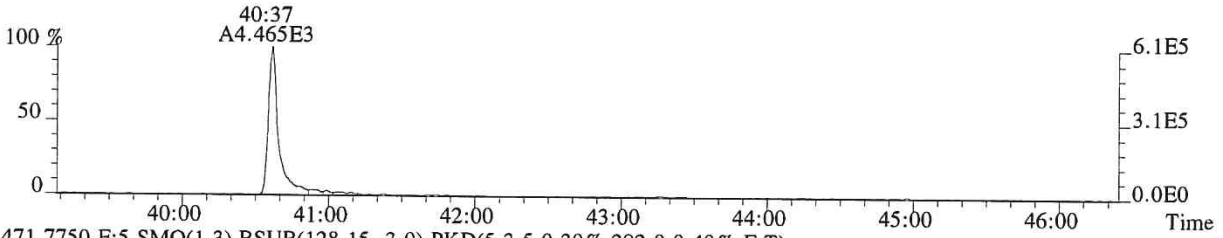
File:P616413 #1-654 Acq: 9-JAN-2019 18:56:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,404.0,0.40%,F,T)



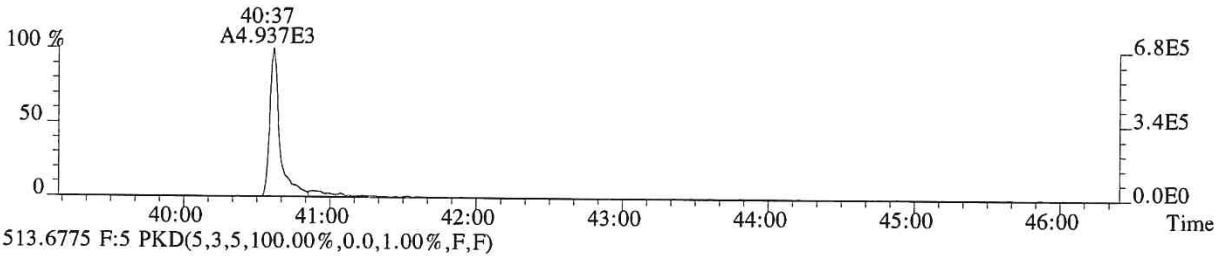
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1680.0,0.40%,F,T)



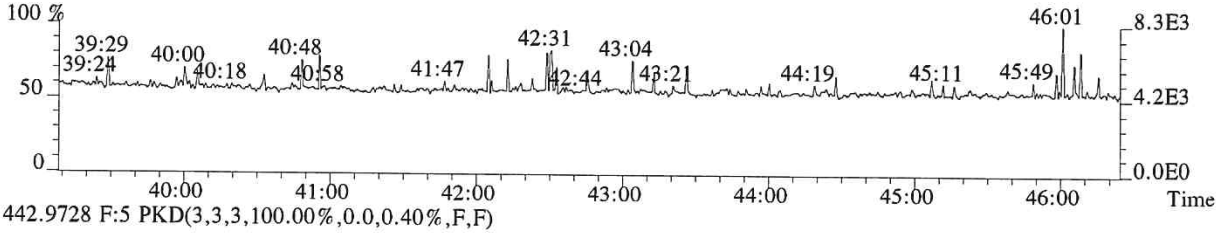
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1076.0,0.40%,F,T)



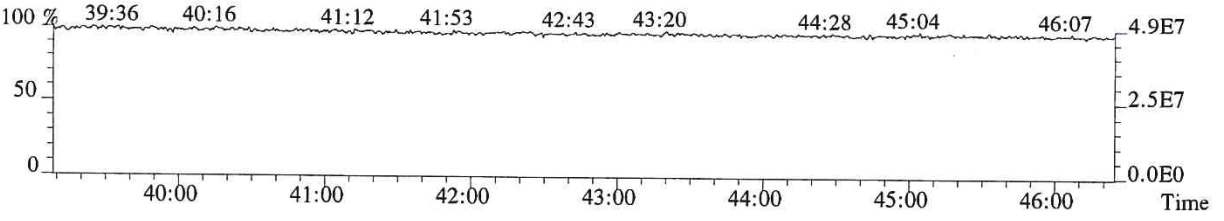
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,292.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

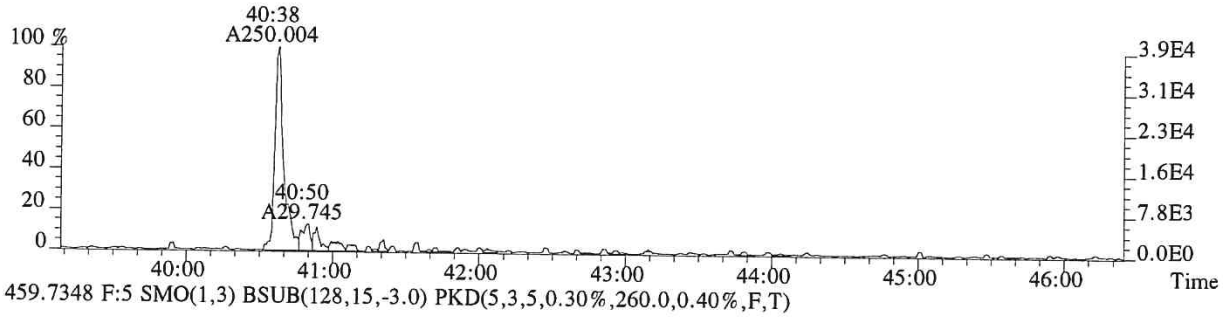


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

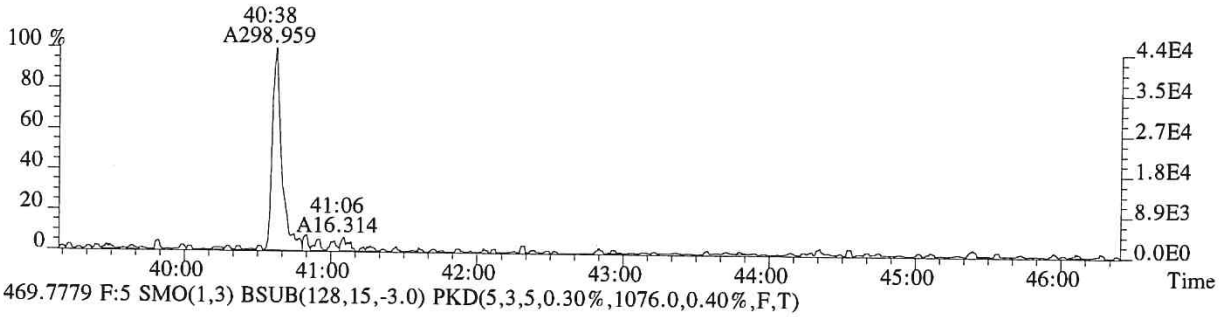


017404

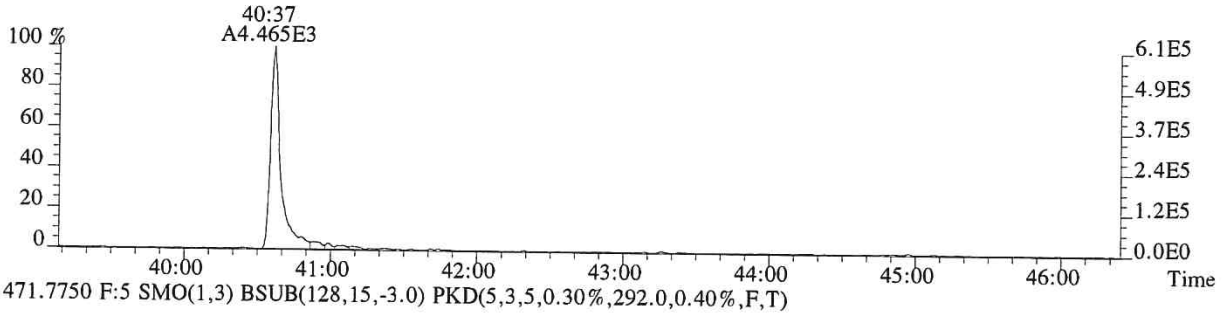
File:P616413 #1-654 Acq: 9-JAN-2019 18:56:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-014DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,292.0,0.40%,F,T)



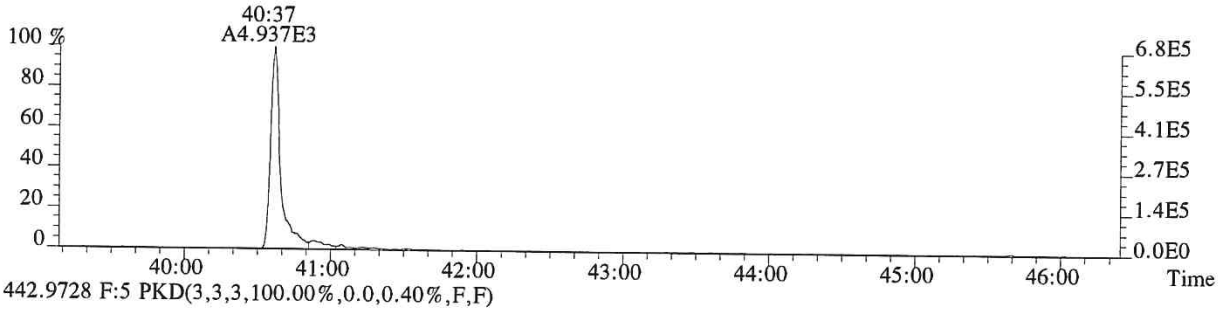
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,260.0,0.40%,F,T)



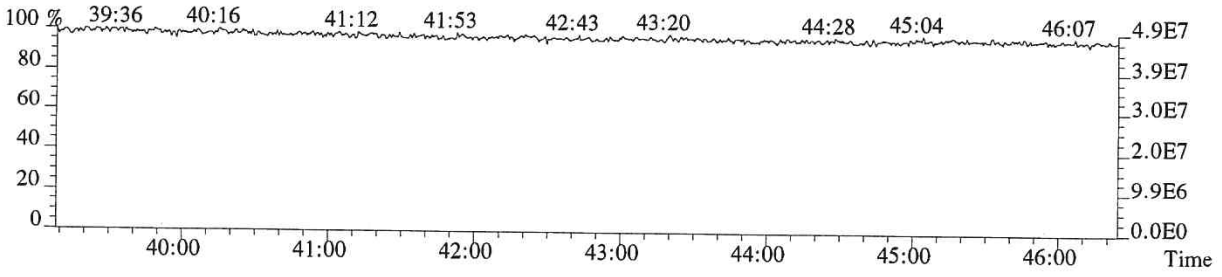
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1076.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,292.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0200

Run #17 Filename P519841 Samp: 1 Inj: 1 Acquired: 8-JAN-19 18:17:34
Processed: 9-JAN-19 11:56:34 Sample ID: E1801138-015

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:56	6.572e+05	8.450e+05	0.78	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:54	5.154e+04	3.343e+04	1.54	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:55	3.083e+04	2.025e+04	1.52	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:51	6.094e+04	5.084e+04	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:59	1.726e+04	1.459e+04	1.18	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:32	2.669e+03	2.042e+03	1.31	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:23	4.037e+03	3.312e+03	1.22	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:47	1.094e+04	1.064e+04	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:16	3.144e+03	3.208e+03	0.98	yes	no	1.258
10	Unk	OCDF	42:00	1.333e+04	1.518e+04	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:56	1.605e+05	2.035e+05	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:14	2.211e+03	1.395e+03	1.59	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:43	7.363e+01	5.590e+01	1.32	yes	yes	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:48	3.589e+02	3.128e+02	1.15	yes	yes	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:03	2.180e+02	2.137e+02	1.02	no	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:49	8.004e+03	7.545e+03	1.06	yes	no	1.025
17	Unk	OCDD	41:51	6.773e+04	7.634e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:55	3.736e+04	4.725e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:52	5.521e+04	3.487e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:54	5.149e+04	3.256e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:51	1.983e+04	3.884e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:58	2.397e+04	4.607e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:31	2.046e+04	3.979e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:20	1.824e+04	3.517e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:47	1.282e+04	2.906e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:16	1.067e+04	2.390e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:54	1.749e+04	2.243e+04	0.78	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:13	3.861e+04	2.404e+04	1.61	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:41	2.749e+04	2.148e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:47	2.921e+04	2.332e+04	1.25	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:48	2.529e+04	2.352e+04	1.08	yes	no	0.858
32	IS	13C-OCDD	41:50	1.769e+04	1.965e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:13	4.358e+04	5.515e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:03	5.168e+04	4.105e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:55	3.002e+04				no	1.014

$$\text{OCDD} = \frac{(6.773e+04 + 7.634e+04) \times 4000\ \text{pg} \times 1}{(1.769e+04 + 1.965e+04) \times 10.094\ \text{g} \times 74.6 / 100 \times 1.118} = 1833\ \text{ng/kg}$$

LHW 01/10/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0200

Run #17 Filename P519841 Samp: 1 Inj: 1 Acquired: 8-JAN-19 18:17:34
Processed: 9-JAN-19 11:56:34 LAB. ID: E1801138-015

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.78e+07	2.78e+03	3.2e+04	1.13e+08	3.55e+03	3.2e+04
2	1,2,3,7,8-PeCDF	8.35e+06	6.61e+03	1.3e+03	5.41e+06	8.95e+03	6.0e+02
3	2,3,4,7,8-PeCDF	4.30e+06	6.61e+03	6.5e+02	2.84e+06	8.95e+03	3.2e+02
4	1,2,3,4,7,8-HxCDF	9.96e+06	4.66e+03	2.1e+03	8.45e+06	2.75e+03	3.1e+03
5	1,2,3,6,7,8-HxCDF	2.49e+06	4.66e+03	5.3e+02	2.05e+06	2.75e+03	7.4e+02
6	2,3,4,6,7,8-HxCDF	4.31e+05	4.66e+03	9.3e+01	3.50e+05	2.75e+03	1.3e+02
7	1,2,3,7,8,9-HxCDF	5.60e+05	4.66e+03	1.2e+02	4.80e+05	2.75e+03	1.7e+02
8	1,2,3,4,6,7,8-HpCDF	1.25e+06	9.64e+02	1.3e+03	1.25e+06	5.98e+03	2.1e+02
9	1,2,3,4,7,8,9-HpCDF	2.82e+05	9.64e+02	2.9e+02	2.88e+05	5.98e+03	4.8e+01
10	OCDF	6.73e+05	4.80e+02	1.4e+03	7.30e+05	1.12e+03	6.5e+02
11	2,3,7,8-TCDD	2.61e+07	3.63e+03	7.2e+03	3.28e+07	2.48e+03	1.3e+04
12	1,2,3,7,8-PeCDD	3.24e+05	1.42e+03	2.3e+02	2.08e+05	1.83e+03	1.1e+02
13	1,2,3,4,7,8-HxCDD	1.32e+04	1.50e+03	8.8e+00	1.10e+04	3.52e+03	3.1e+00
14	1,2,3,6,7,8-HxCDD	5.69e+04	1.50e+03	3.8e+01	4.18e+04	3.52e+03	1.2e+01
15	1,2,3,7,8,9-HxCDD	3.76e+04	1.50e+03	2.5e+01	2.95e+04	3.52e+03	8.4e+00
16	1,2,3,4,6,7,8-HpCDD	7.38e+05	8.84e+02	8.3e+02	6.99e+05	1.31e+03	5.3e+02
17	OCDD	3.36e+06	6.40e+02	5.2e+03	3.76e+06	6.28e+02	6.0e+03
18	13C-2,3,7,8-TCDF	5.44e+06	1.03e+04	5.3e+02	6.84e+06	4.38e+03	1.6e+03
19	13C-1,2,3,7,8-PeCDF	8.92e+06	1.48e+03	6.0e+03	5.65e+06	3.02e+03	1.9e+03
20	13C-2,3,4,7,8-PeCDF	8.68e+06	1.48e+03	5.8e+03	5.50e+06	3.02e+03	1.8e+03
21	13C-1,2,3,4,7,8-HxCDF	3.33e+06	2.07e+03	1.6e+03	6.52e+06	2.52e+03	2.6e+03
22	13C-1,2,3,6,7,8-HxCDF	3.66e+06	2.07e+03	1.8e+03	7.05e+06	2.52e+03	2.8e+03
23	13C-2,3,4,6,7,8-HxCDF	3.15e+06	2.07e+03	1.5e+03	6.14e+06	2.52e+03	2.4e+03
24	13C-1,2,3,7,8,9-HxCDF	2.47e+06	2.07e+03	1.2e+03	4.80e+06	2.52e+03	1.9e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.44e+06	2.06e+03	7.0e+02	3.33e+06	7.45e+03	4.5e+02
26	13C-1,2,3,4,7,8,9-HpCDF	9.09e+05	2.06e+03	4.4e+02	2.03e+06	7.45e+03	2.7e+02
27	13C-2,3,7,8-TCDD	2.89e+06	8.22e+03	3.5e+02	3.68e+06	5.20e+03	7.1e+02
28	13C-1,2,3,7,8-PeCDD	6.42e+06	1.03e+03	6.2e+03	3.95e+06	1.84e+03	2.1e+03
29	13C-1,2,3,4,7,8-HxCDD	4.47e+06	1.29e+03	3.5e+03	3.44e+06	7.36e+02	4.7e+03
30	13C-1,2,3,6,7,8-HxCDD	4.16e+06	1.29e+03	3.2e+03	3.31e+06	7.36e+02	4.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.29e+06	6.96e+02	3.3e+03	2.17e+06	4.44e+02	4.9e+03
32	13C-OCDD	8.78e+05	5.96e+02	1.5e+03	9.90e+05	3.96e+02	2.5e+03
33	13C-1,2,3,4-TCDD	6.88e+06	8.22e+03	8.4e+02	8.65e+06	5.20e+03	1.7e+03
34	13C-1,2,3,7,8,9-HxCDD	6.80e+06	1.29e+03	5.3e+03	5.38e+06	7.36e+02	7.3e+03
35	37Cl-2,3,7,8-TCDD	4.88e+06	1.25e+03	3.9e+03			

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Office:(713)266-1599. Fax:(713)266-0130

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0200

Entry: 36 Totals Name: Total Tetra-Furans

Run: 17 File: P519841 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 18:17:34 Processed: 9-JAN-19 11:56:34

Mass: 303.9020 305.8990 Tot Response: 2.73e+06 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:45	5.91e+03	7.75e+03	0.76	yes	1.37e+04		n	n
2	23:02	3.09e+04	4.03e+04	0.77	yes	7.12e+04		n	n
3	23:24	9.49e+03	1.17e+04	0.81	yes	2.12e+04		n	n
4	23:41	2.57e+04	3.37e+04	0.76	yes	5.94e+04		n	n
5	24:04	5.17e+03	6.94e+03	0.74	yes	1.21e+04		n	n
6	24:18	1.67e+04	2.21e+04	0.76	yes	3.89e+04		n	n
7	24:25	2.85e+04	3.75e+04	0.76	yes	6.59e+04		n	n
8	24:56	2.94e+05	3.80e+05	0.77	yes	6.74e+05		n	n
9	25:13	1.47e+04	1.97e+04	0.75	yes	3.44e+04		n	n
10	25:56	6.57e+05	8.45e+05	0.78	yes	1.50e+06	2,3,7,8-TCDF	n	n
11	26:21	4.43e+04	5.82e+04	0.76	yes	1.03e+05		n	n
12	26:38	8.45e+03	1.16e+04	0.73	yes	2.00e+04		n	n
13	28:09	4.84e+04	6.25e+04	0.77	yes	1.11e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0200

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 17 File: P519841 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 18:17:34 Processed: 9-JAN-19 11:56:34

Mass: 319.8970 321.8940 Tot Response: 4.04e+05 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:36	2.18e+03	2.69e+03	0.81	yes	4.87e+03		n	n
2	26:56	1.60e+05	2.03e+05	0.79	yes	3.64e+05	2,3,7,8-TCDD	n	n
3	27:16	1.59e+04	1.94e+04	0.82	yes	3.53e+04		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0200

Entry: 38 Totals Name: Total Penta-Furans1

Run: 17 File: P519841 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 18:17:34 Processed: 9-JAN-19 11:56:34

Mass: 339.8600 341.8570 Tot Response: 1.78e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:09	1.13e+03	6.52e+02 1.73	yes	1.78e+03		n	n

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Peak List Summary

CLIENT ID.
SL0200

Entry: 39 Totals Name: Total Penta-Furans2

Run: 17 File: P519841 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 18:17:34 Processed: 9-JAN-19 11:56:34

Mass: 339.8600 341.8570 Tot Response: 2.06e+05 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:42	3.64e+02	1.67	yes	5.81e+02		n	n
2	29:52	2.19e+04	1.59	yes	3.56e+04		n	n
3	30:28	5.43e+02	1.72	yes	8.59e+02		n	n
4	30:32	5.13e+02	1.33	yes	8.99e+02		n	n
5	30:42	3.57e+03	1.59	yes	5.82e+03		n	n
6	30:54	5.15e+04	1.54	yes	8.50e+04	1,2,3,7,8-PeCDF	n	n
7	31:10	1.44e+04	1.59	yes	2.34e+04		n	n
8	31:48	2.86e+02	1.47	yes	4.80e+02		n	n
9	31:55	3.08e+04	1.52	yes	5.11e+04	2,3,4,7,8-PeCDF	n	n
10	32:54	1.50e+03	1.59	yes	2.44e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0200

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 17 File: P519841 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 18:17:34 Processed: 9-JAN-19 11:56:34

Mass: 355.8550 357.8520 Tot Response: 5.90e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:55	2.87e+02	1.99e+02	1.44	yes	4.86e+02		n	n
2	30:25	4.51e+02	3.40e+02	1.33	yes	7.91e+02		n	n
3	31:07	1.72e+02	1.29e+02	1.33	yes	3.02e+02		n	n
4	31:13	1.07e+02	7.41e+01	1.44	yes	1.81e+02		n	n
5	31:26	2.18e+02	1.35e+02	1.61	yes	3.53e+02		n	n
6	32:14	2.21e+03	1.39e+03	1.59	yes	3.61e+03	1,2,3,7,8-PeCDD	n	n
7	32:24	6.58e+01	3.72e+01	1.77	yes	1.03e+02		n	n
8	32:38	4.83e+01	2.78e+01	1.74	yes	7.61e+01		n	n

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Entry: 41 Totals Name: Total Hexa-Furans

Run: 17 File: P519841 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 18:17:34 Processed: 9-JAN-19 11:56:34

Mass: 373.8210 375.8180 Tot Response: 1.69e+05 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:39	4.25e+02	3.25e+02	1.31	yes	7.50e+02		n	n
2	33:49	4.53e+03	3.64e+03	1.25	yes	8.17e+03		n	n
3	34:24	2.57e+03	2.06e+03	1.25	yes	4.63e+03		n	n
4	34:51	6.09e+04	5.08e+04	1.20	yes	1.12e+05	1,2,3,4,7,8-HxCDF	n	n
5	34:59	1.73e+04	1.46e+04	1.18	yes	3.18e+04	1,2,3,6,7,8-HxCDF	n	n
6	35:32	2.67e+03	2.04e+03	1.31	yes	4.71e+03	2,3,4,6,7,8-HxCDF	n	n
7	36:23	4.04e+03	3.31e+03	1.22	yes	7.35e+03	1,2,3,7,8,9-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0200

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 17 File: P519841 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 18:17:34 Processed: 9-JAN-19 11:56:34

Mass: 389.8160 391.8130 Tot Response: 9.05e+03 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:14	3.05e+03	2.55e+03	1.19	yes	5.60e+03		n	n
2	35:03	1.22e+03	1.04e+03	1.18	yes	2.26e+03		y	y
3	35:08	1.43e+02	1.02e+02	1.40	yes	2.45e+02		y	y
4	35:43	7.36e+01	5.59e+01	1.32	yes	1.30e+02	1,2,3,4,7,8-HxCDD	y	y
5	35:48	3.59e+02	3.13e+02	1.15	yes	6.72e+02	1,2,3,6,7,8-HxCDD	y	y
6	35:58	8.43e+01	6.21e+01	1.36	yes	1.46e+02		y	y

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Entry: 43 Totals Name: Total Hepta-Furans

Run: 17 File: P519841 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 18:17:34 Processed: 9-JAN-19 11:56:34

Mass: 407.7820 409.7790 Tot Response: 3.69e+04 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:47	1.09e+04	1.06e+04	1.03	yes	2.16e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	38:14	4.55e+03	4.38e+03	1.04	yes	8.93e+03		n	n
3	39:16	3.14e+03	3.21e+03	0.98	yes	6.35e+03	1,2,3,4,7,8,9-HpCDF	n	n

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Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 17 File: P519841 Sample:1 Injection:1 Function:4

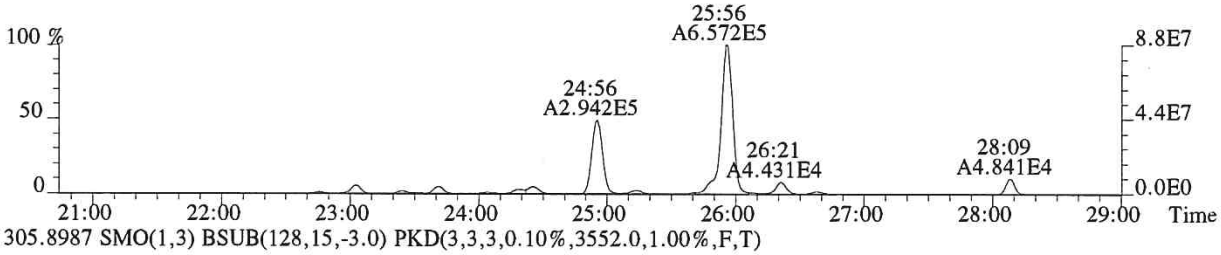
Acquired: 8-JAN-19 18:17:34 Processed: 9-JAN-19 11:56:34

Mass: 423.7770 425.7740 Tot Response: 3.87e+04 RRF: 1.025

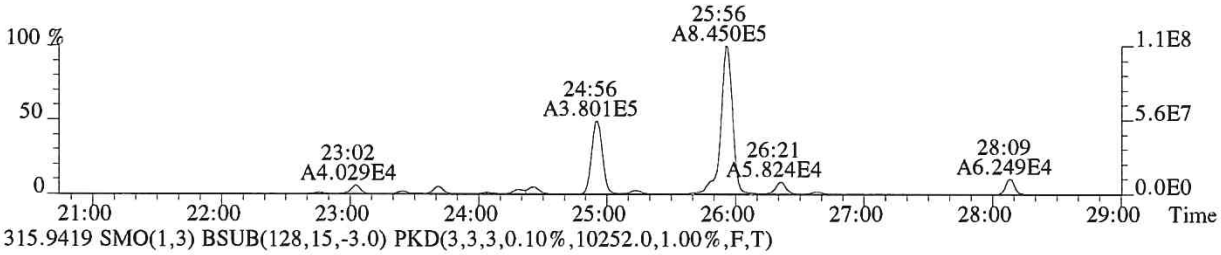
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:06	1.20e+04	1.12e+04 1.07	yes	2.31e+04		n	n
2	38:49	8.00e+03	7.55e+03 1.06	yes	1.55e+04	1,2,3,4,6,7,8-HpCDD	n	n

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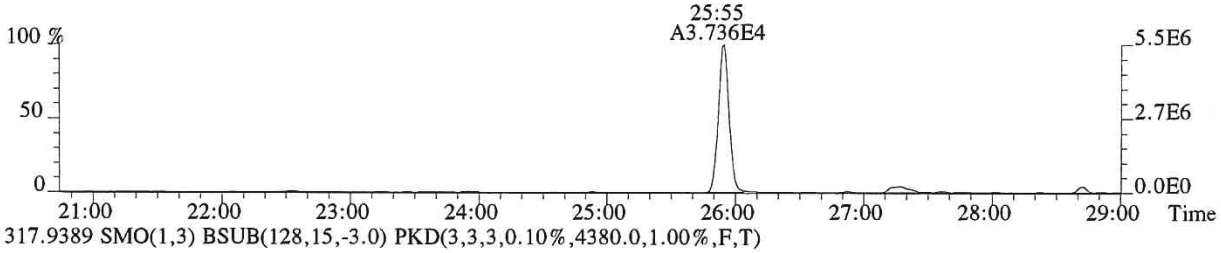
File:P519841 #1-587 Acq: 8-JAN-2019 18:17:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2784.0,1.00%,F,T)



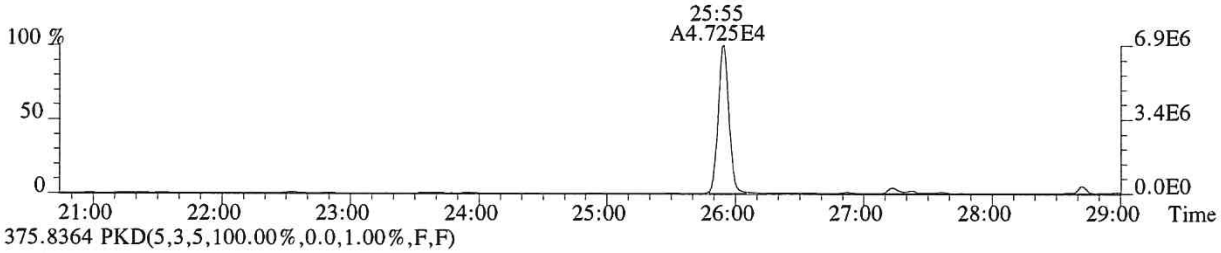
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3552.0,1.00%,F,T)



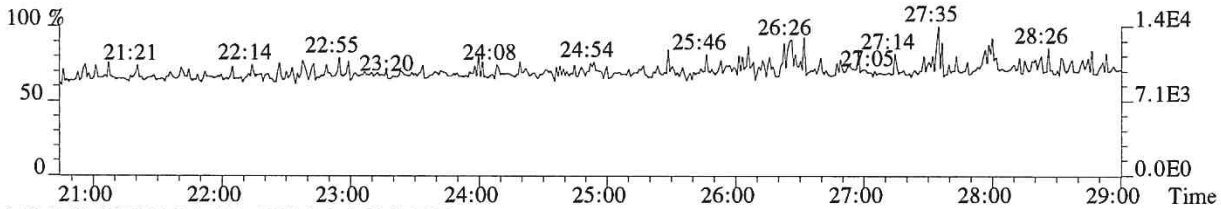
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10252.0,1.00%,F,T)



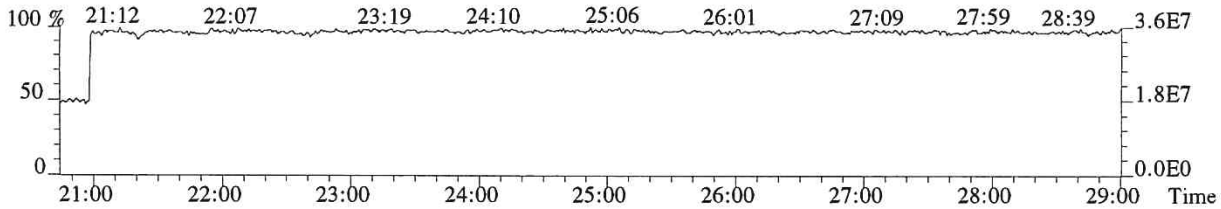
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4380.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

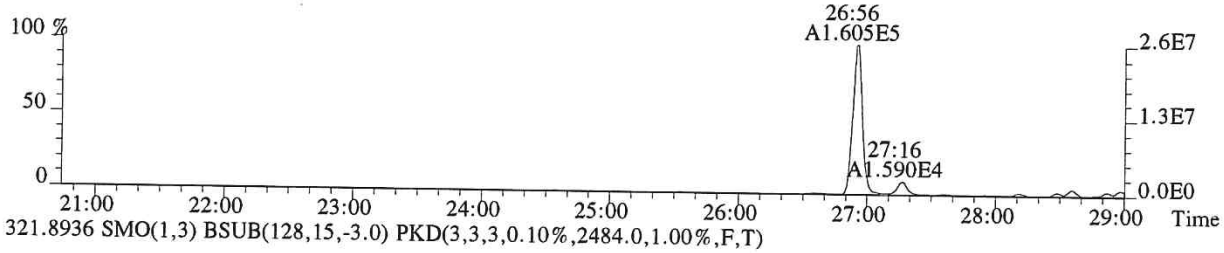


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

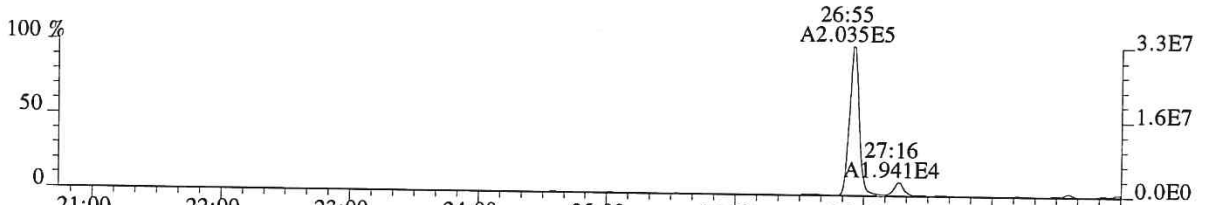


017417

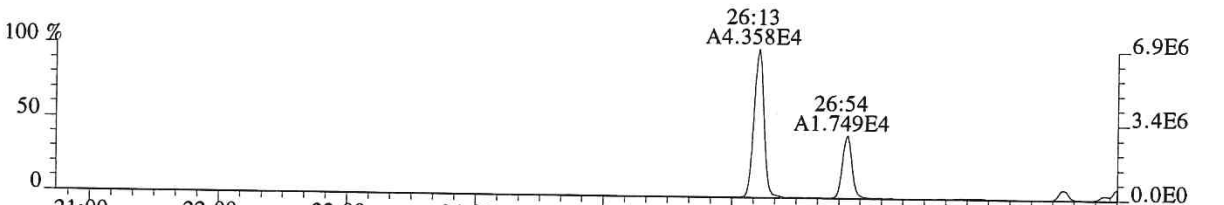
File:P519841 #1-587 Acq: 8-JAN-2019 18:17:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3628.0,1.00%,F,T)



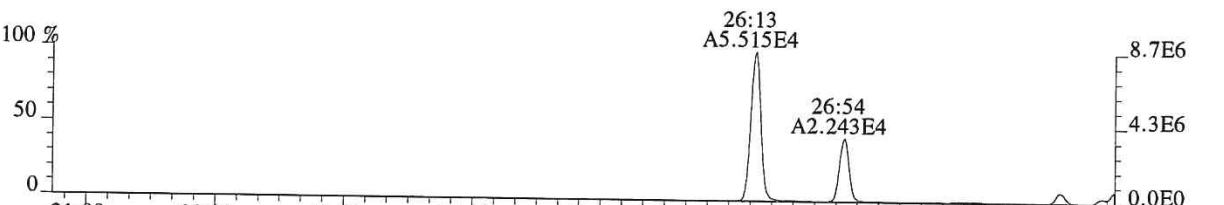
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2484.0,1.00%,F,T)



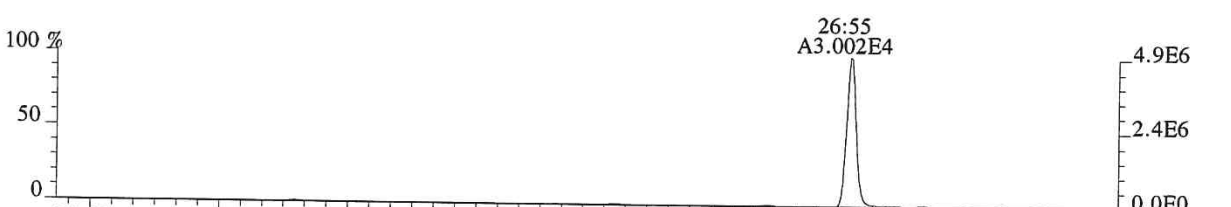
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8220.0,1.00%,F,T)



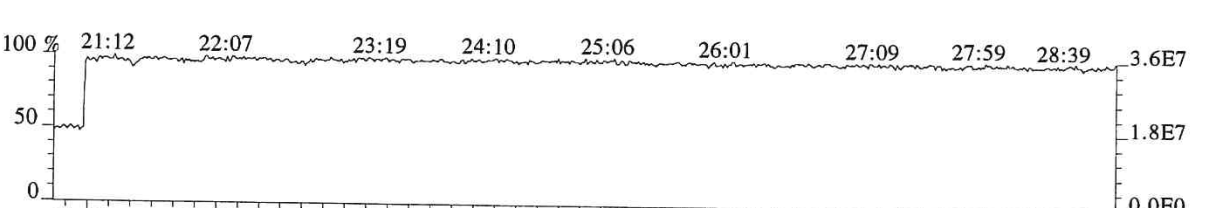
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5204.0,1.00%,F,T)



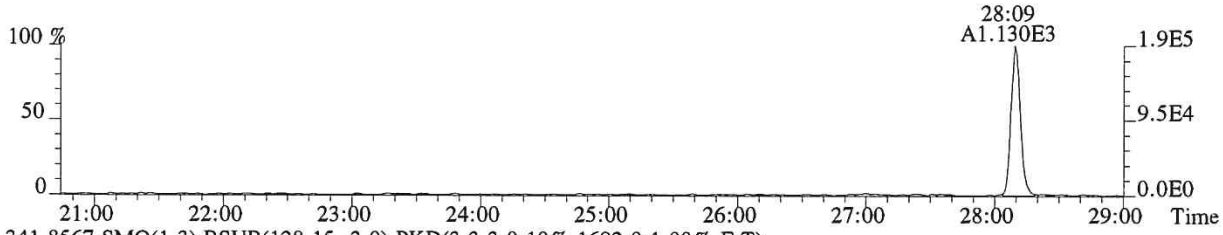
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1248.0,1.00%,F,T)



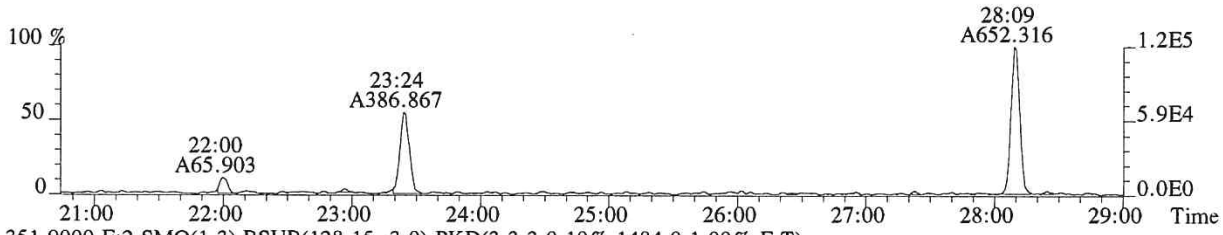
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



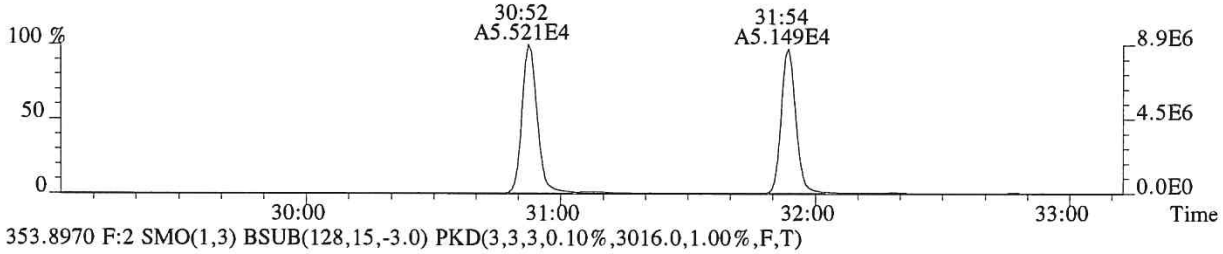
File:P519841 #1-587 Acq: 8-JAN-2019 18:17:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1144.0,1.00%,F,T)



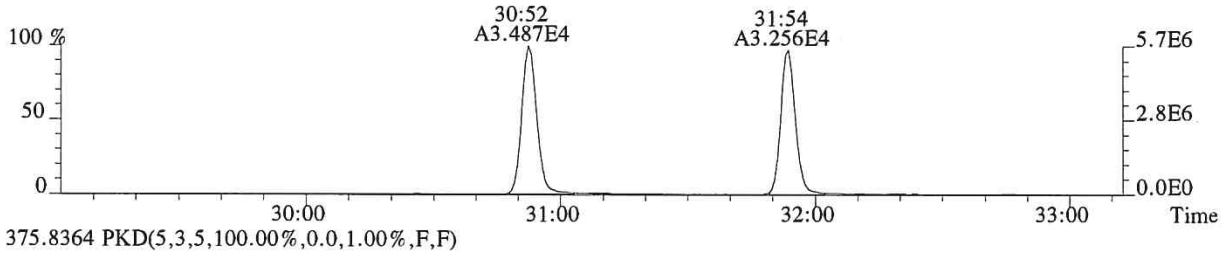
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1692.0,1.00%,F,T)



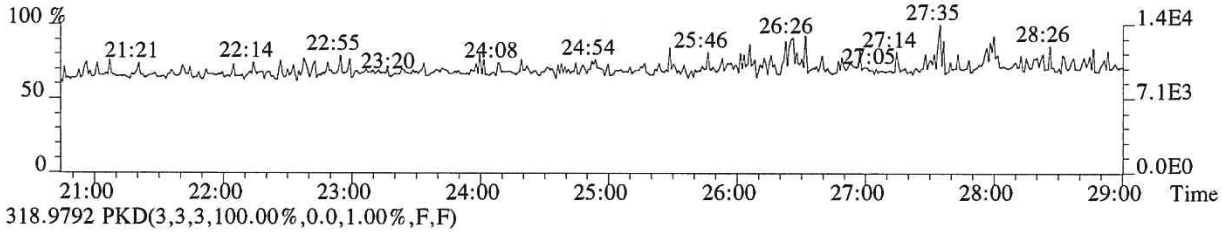
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1484.0,1.00%,F,T)



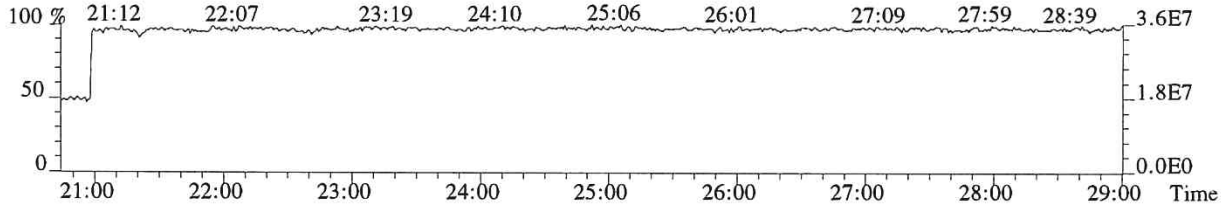
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3016.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

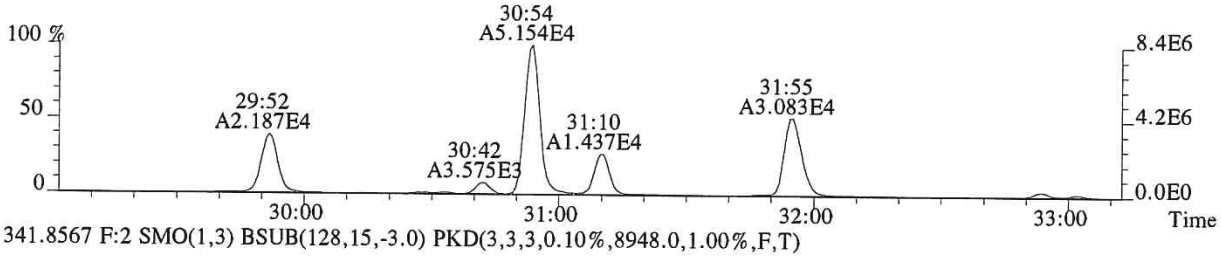


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

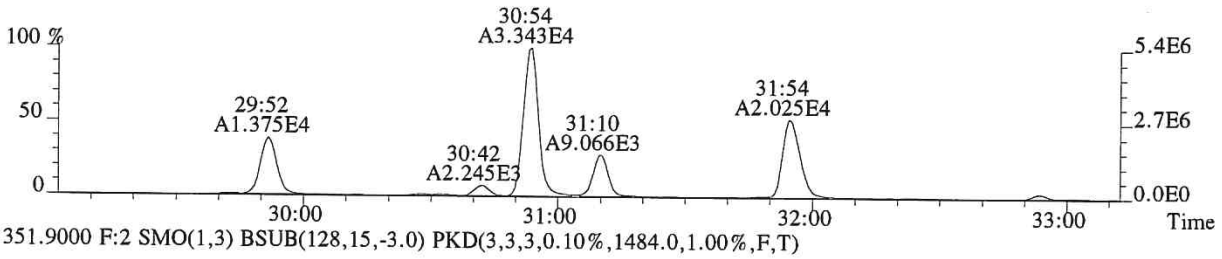


017419

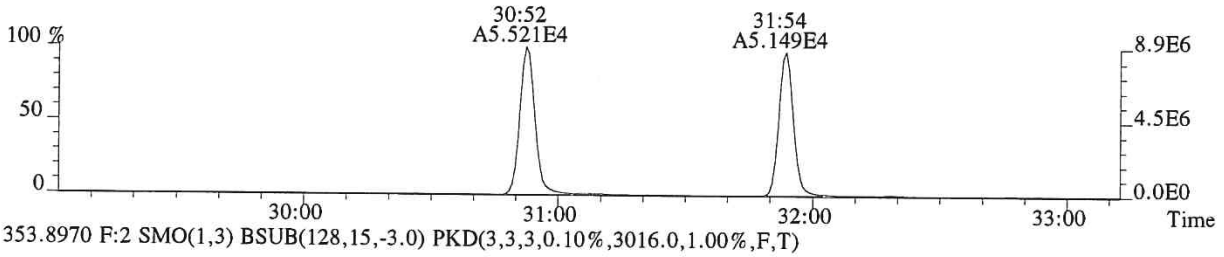
File:P519841 #1-376 Acq: 8-JAN-2019 18:17:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6612.0,1.00%,F,T)



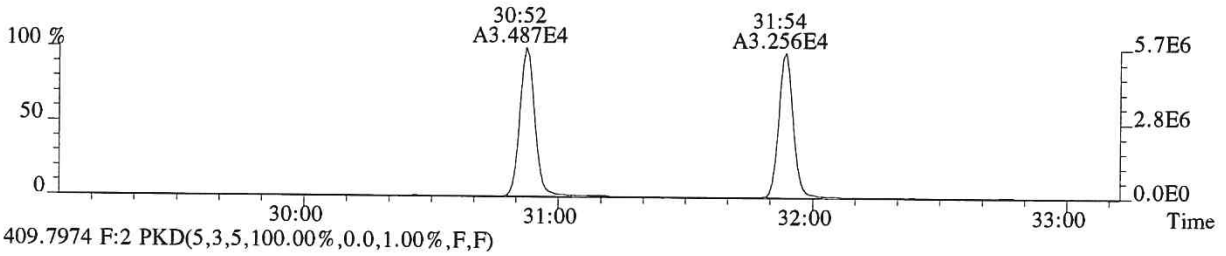
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8948.0,1.00%,F,T)



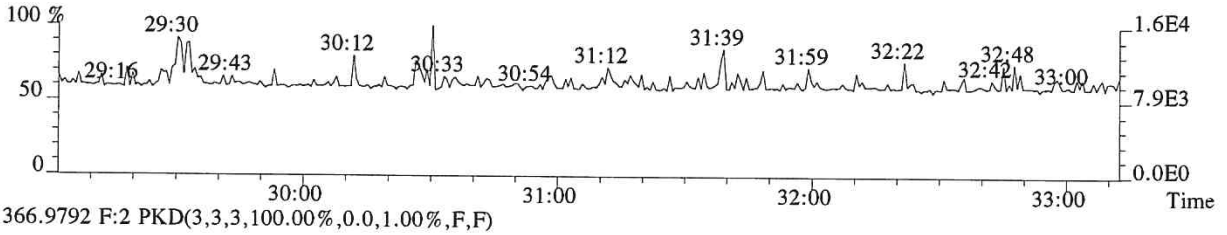
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1484.0,1.00%,F,T)



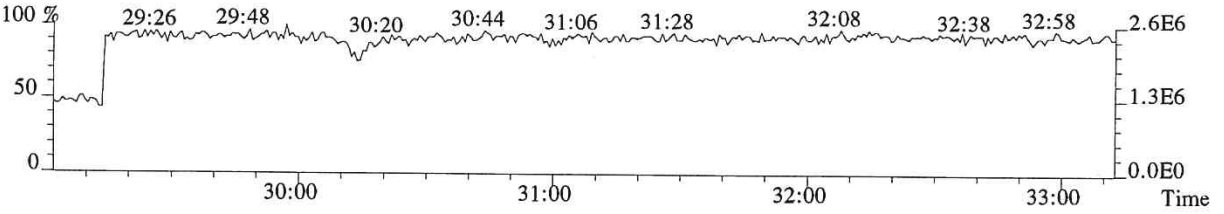
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3016.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

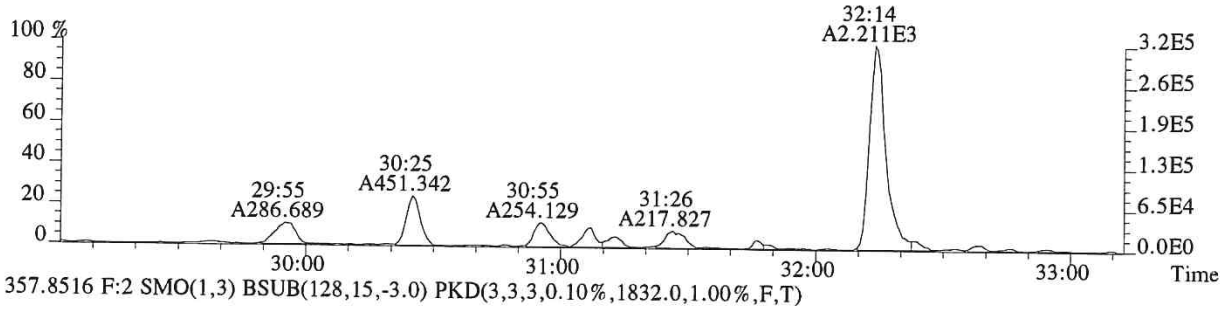


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

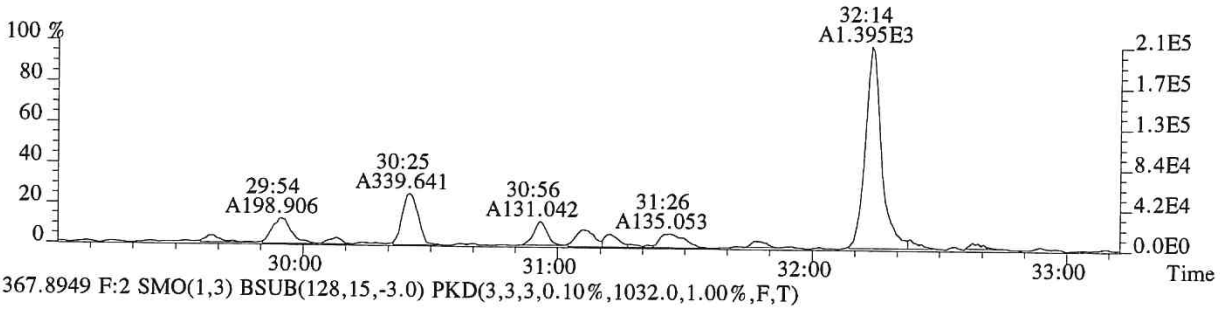


017420

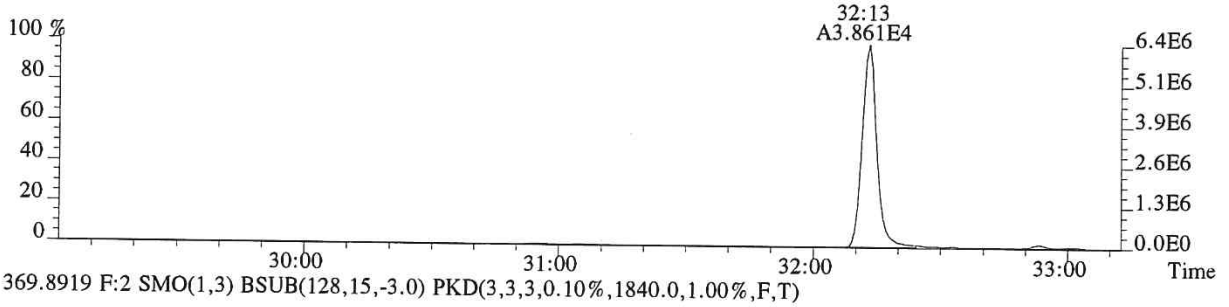
File:P519841 #1-376 Acq: 8-JAN-2019 18:17:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1420.0,1.00%,F,T)



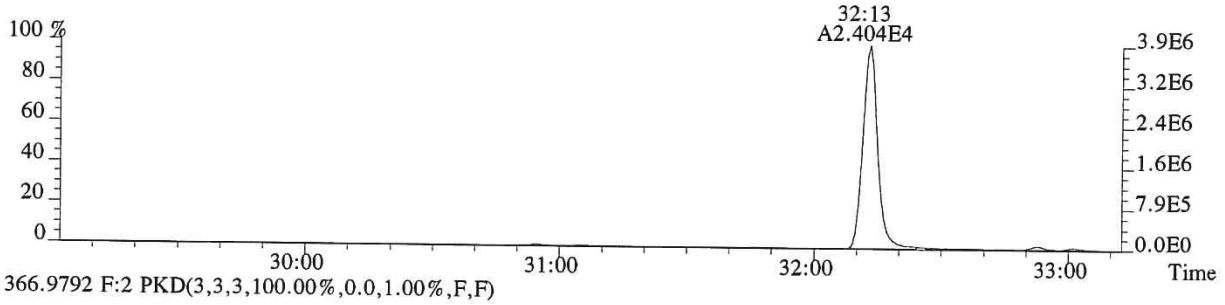
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1832.0,1.00%,F,T)



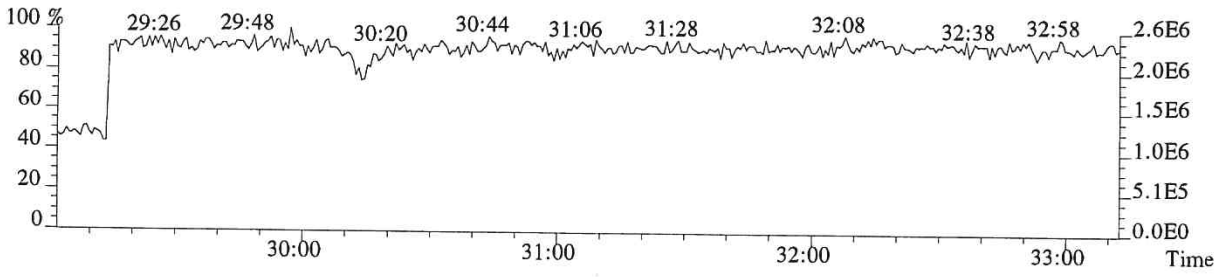
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1840.0,1.00%,F,T)

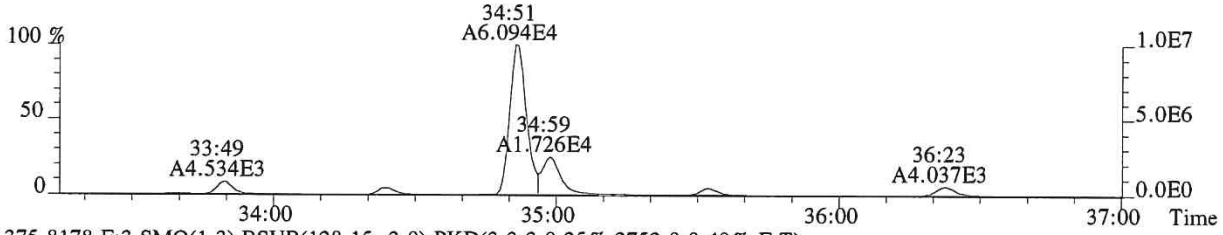


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

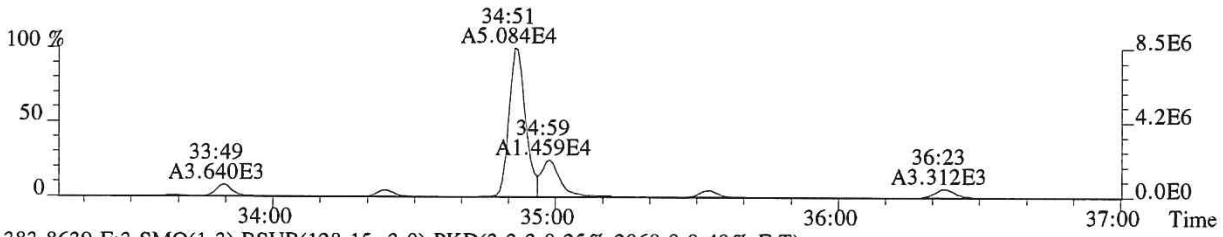


017421

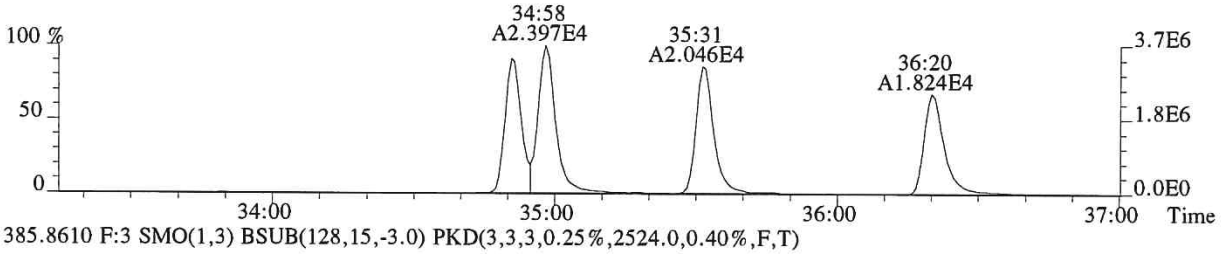
File:P519841 #1-339 Acq: 8-JAN-2019 18:17:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4660.0,0.40%,F,T)



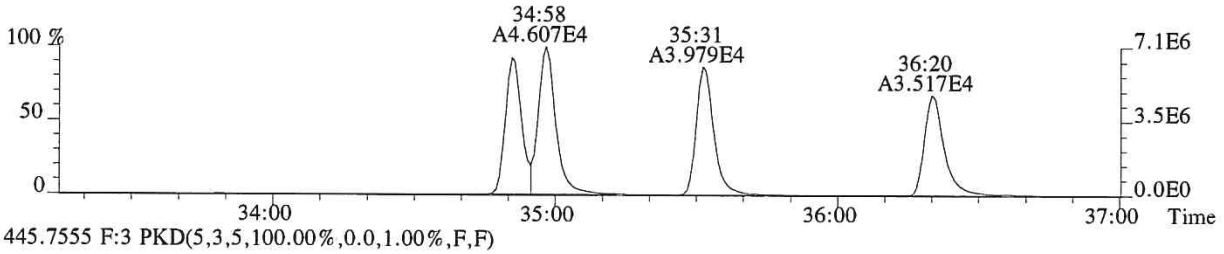
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2752.0,0.40%,F,T)



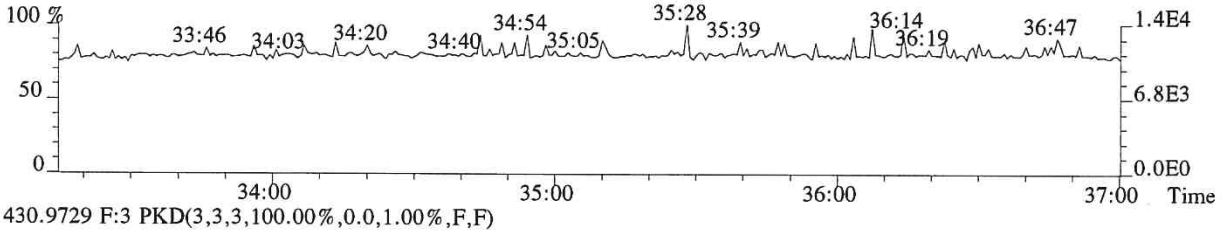
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2068.0,0.40%,F,T)



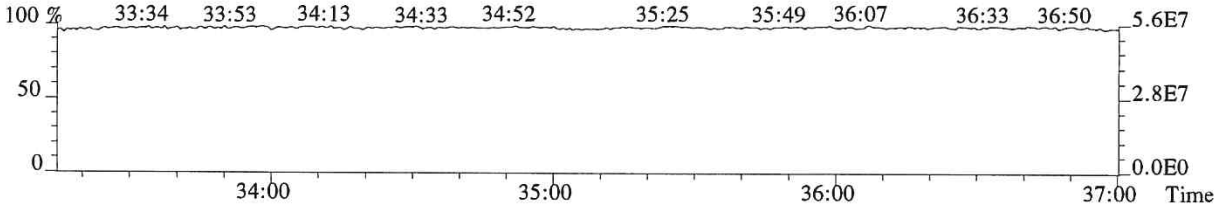
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2524.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

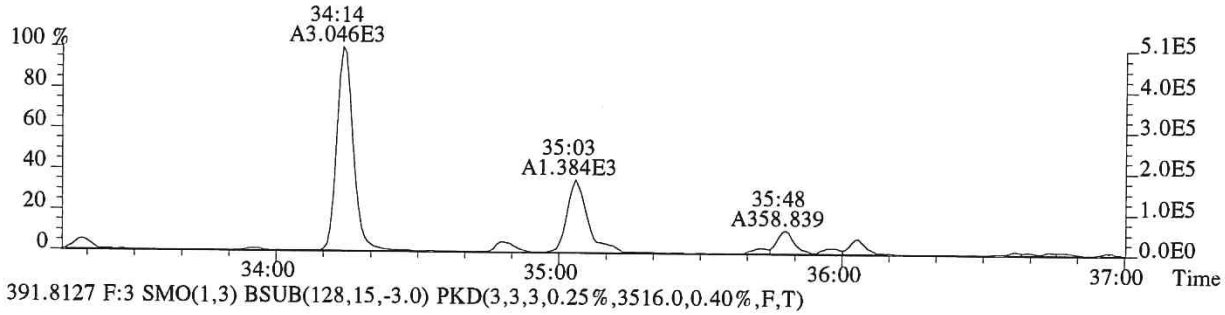


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

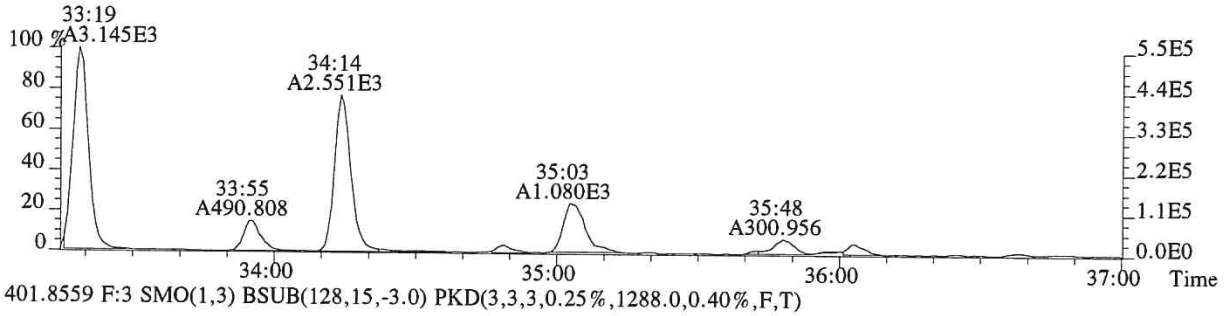


017422

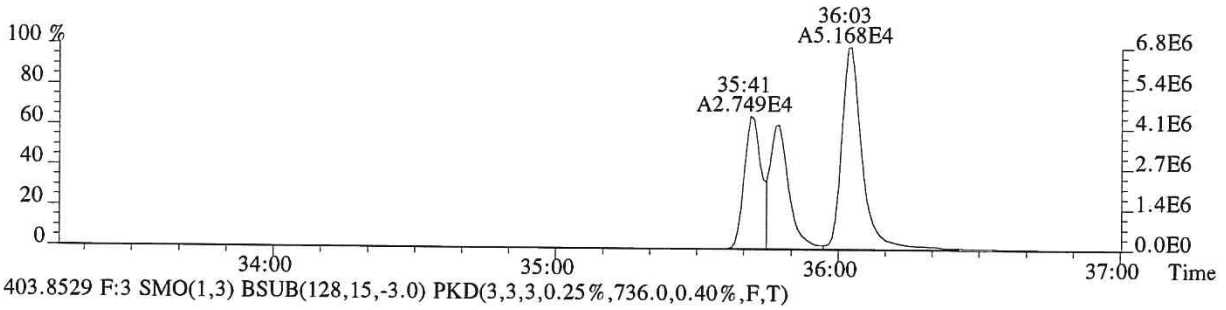
File:P519841 #1-339 Acq: 8-JAN-2019 18:17:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1504.0,0.40%,F,T)



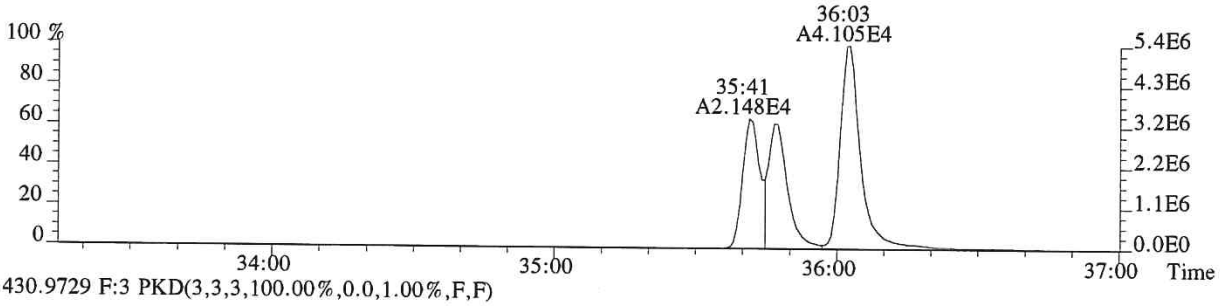
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3516.0,0.40%,F,T)



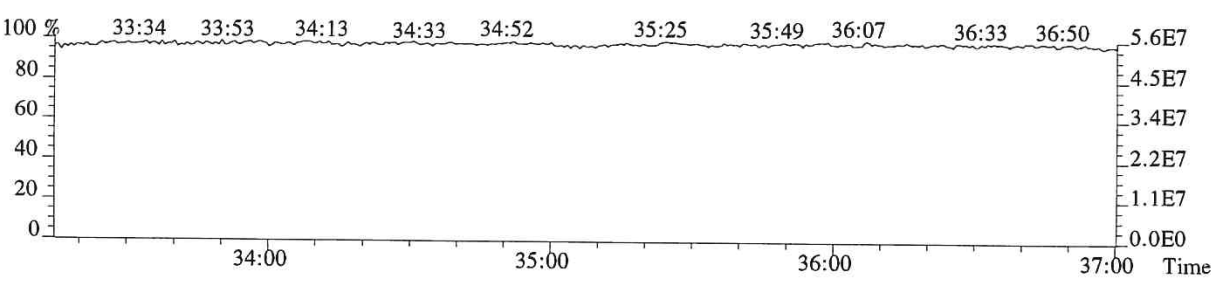
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1288.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,736.0,0.40%,F,T)

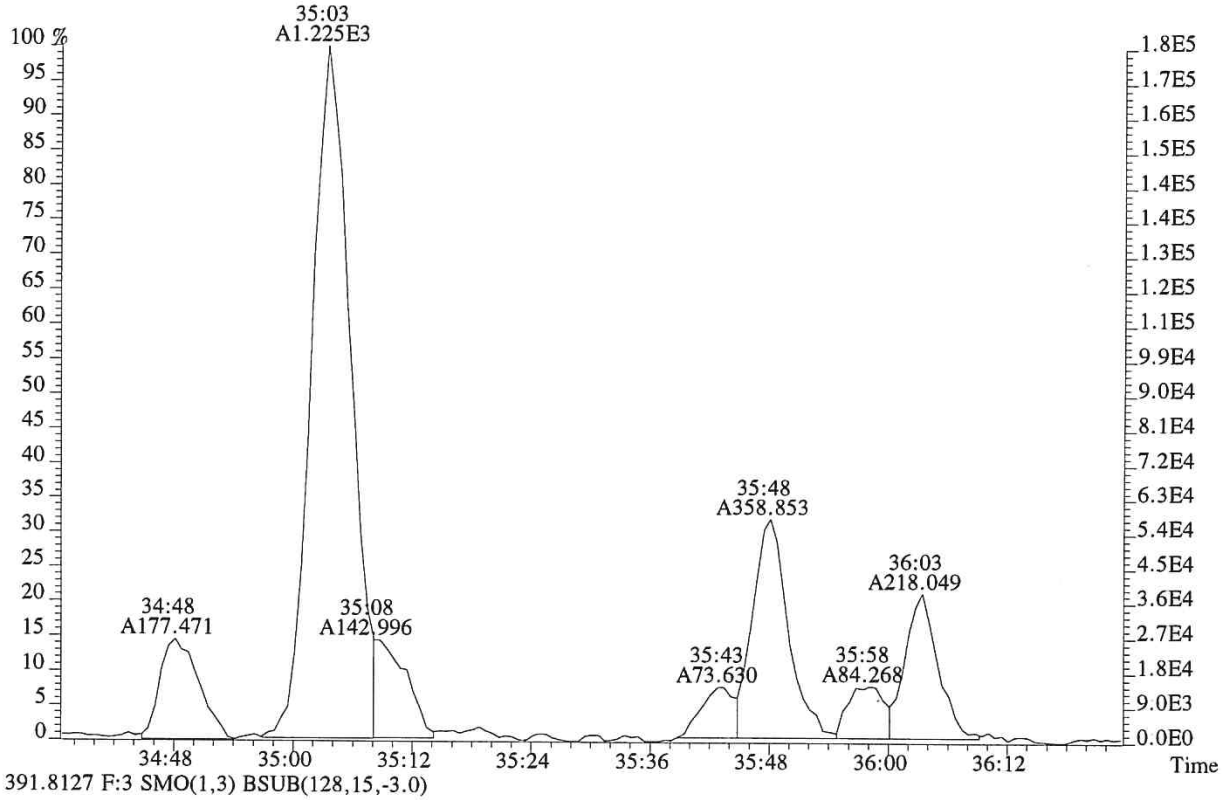


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

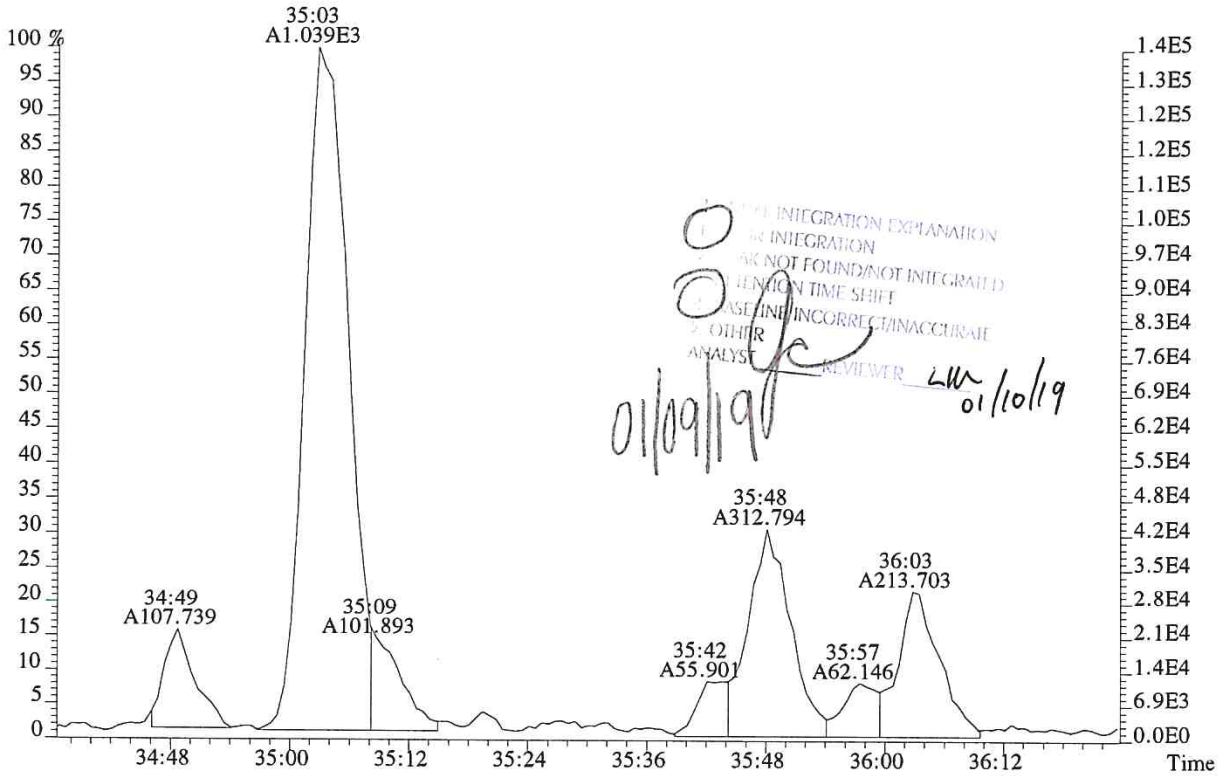


017423

File:P519841 #1-339 Acq: 8-JAN-2019 18:17:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0)

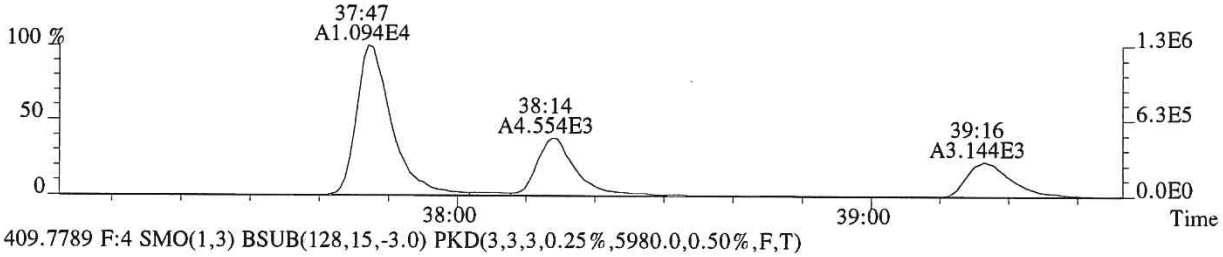


391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0)

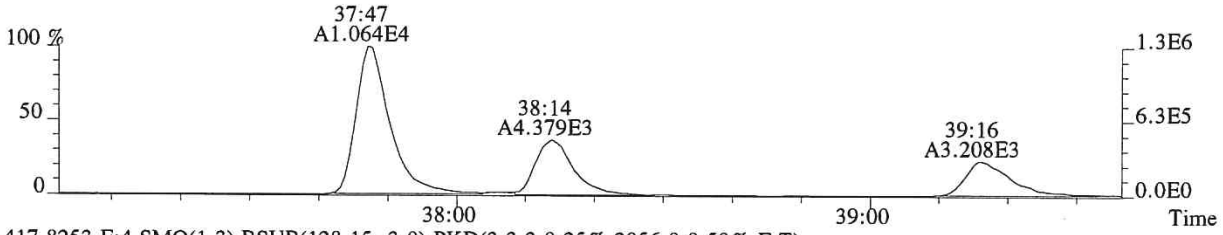


INTEGRATION EXPLANATION
INTEGRATION
NOT FOUND/NOT INTEGRATED
RETENTION TIME SHIFT
BASELINE INCORRECT/INACCURATE
OTHER
ANALYST
REVIEWER
01/09/19
01/10/19

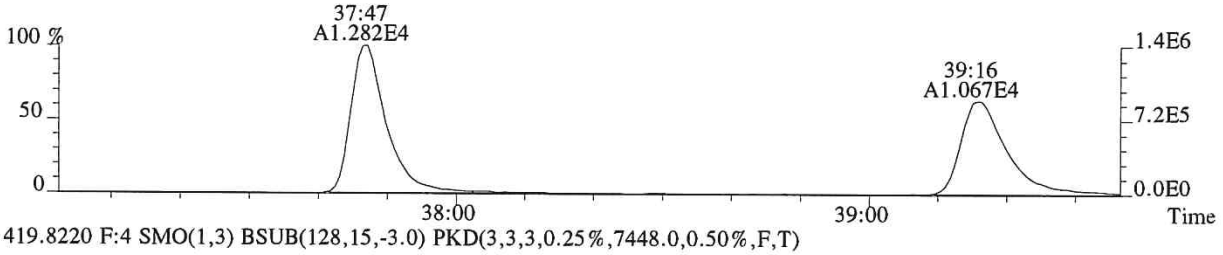
File:P519841 #1-232 Acq: 8-JAN-2019 18:17:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,964.0,0.50%,F,T)



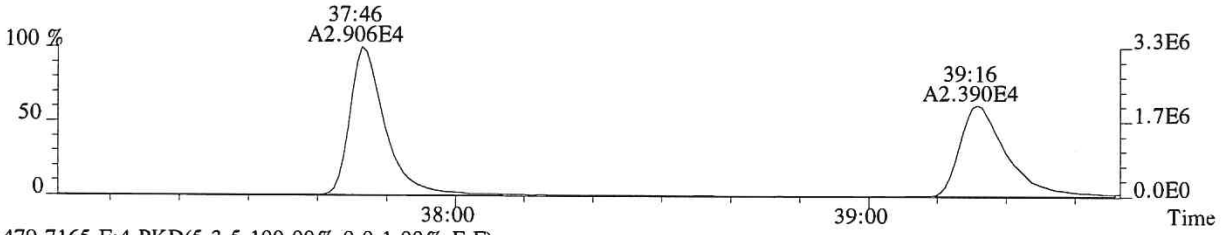
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5980.0,0.50%,F,T)



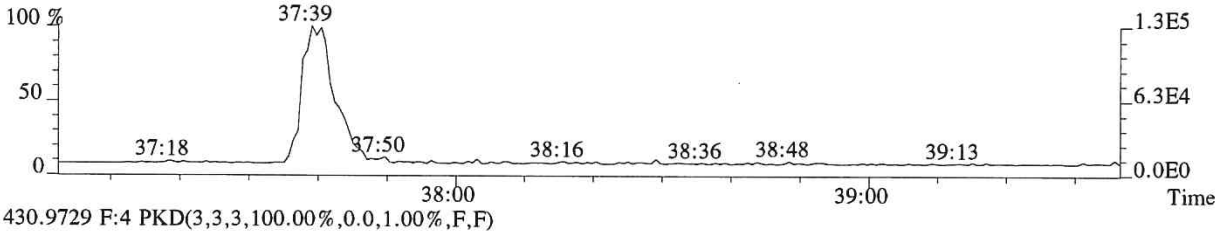
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2056.0,0.50%,F,T)



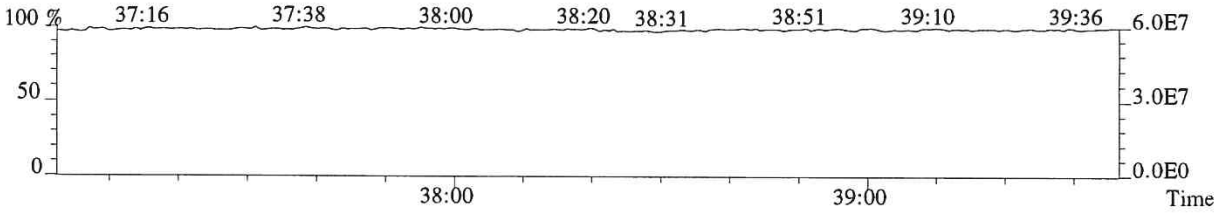
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7448.0,0.50%,F,T)



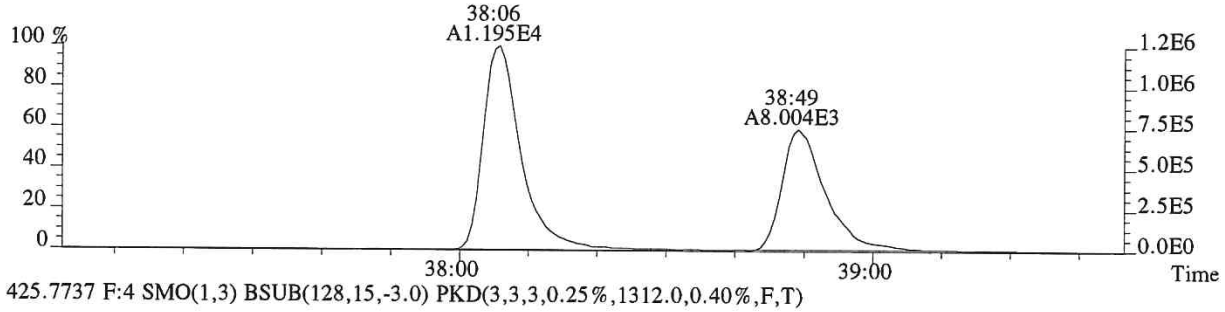
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



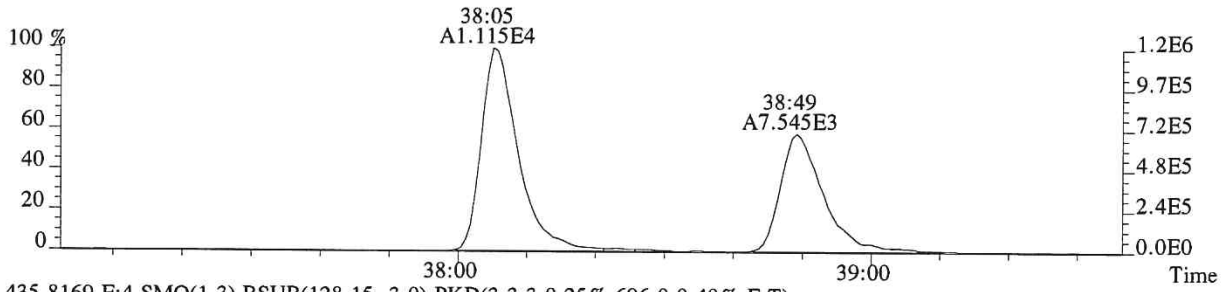
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



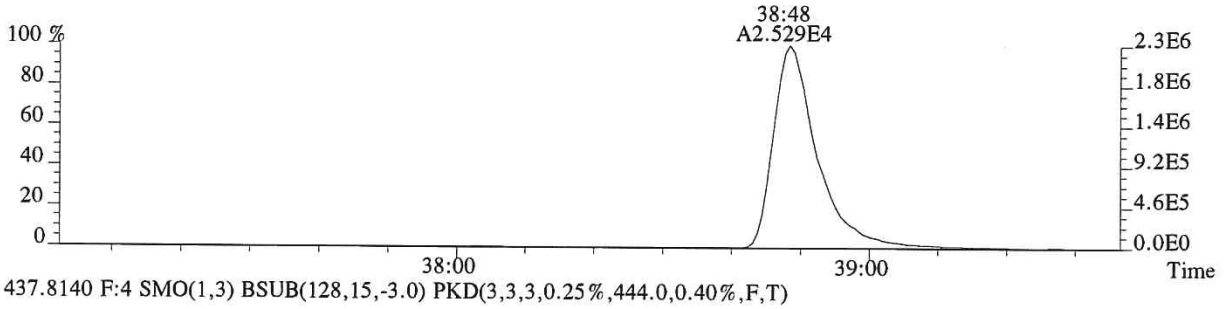
File:P519841 #1-232 Acq: 8-JAN-2019 18:17:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



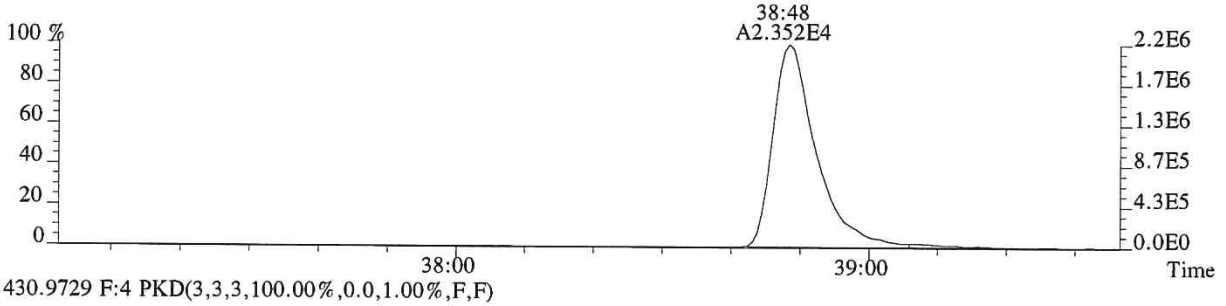
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1312.0,0.40%,F,T)



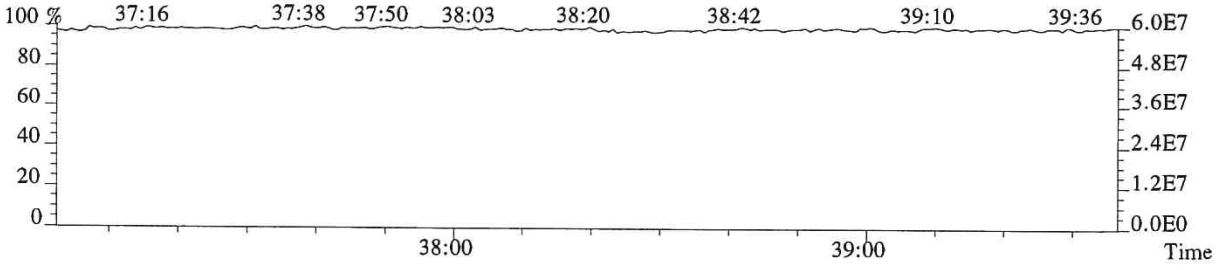
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,696.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,444.0,0.40%,F,T)

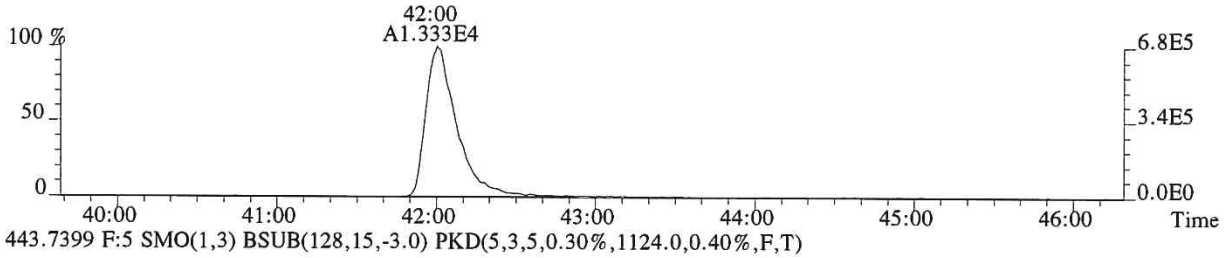


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

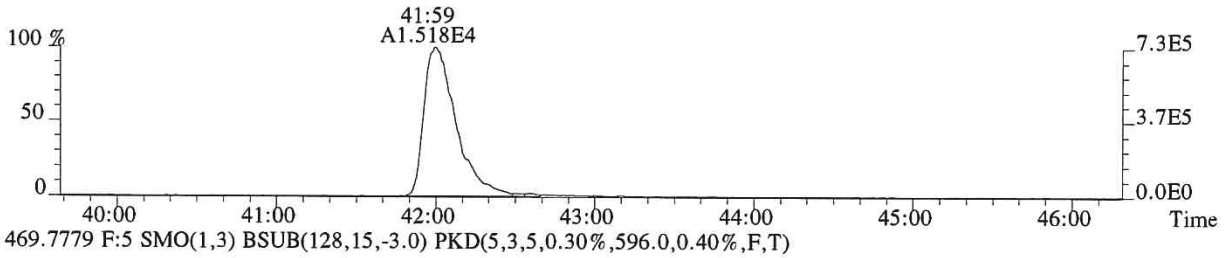


017426

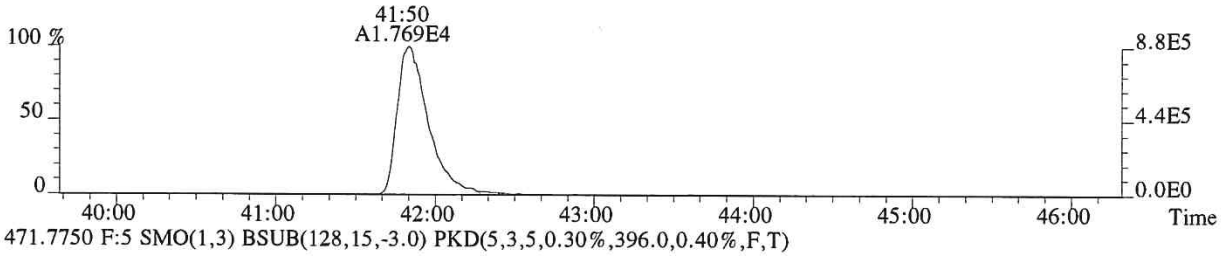
File:P519841 #1-601 Acq: 8-JAN-2019 18:17:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,480.0,0.40%,F,T)



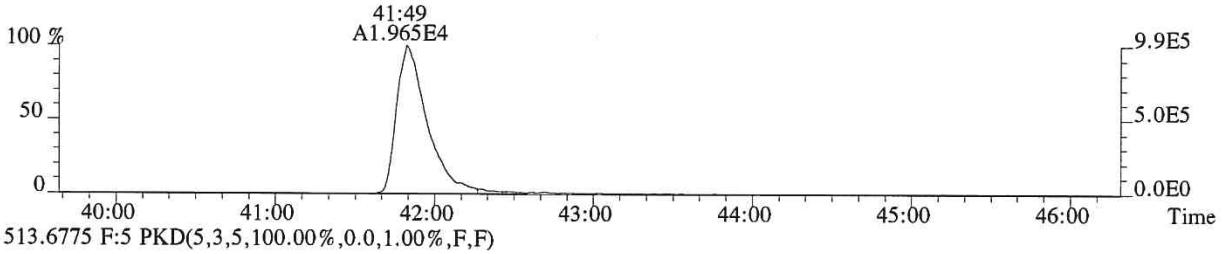
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1124.0,0.40%,F,T)



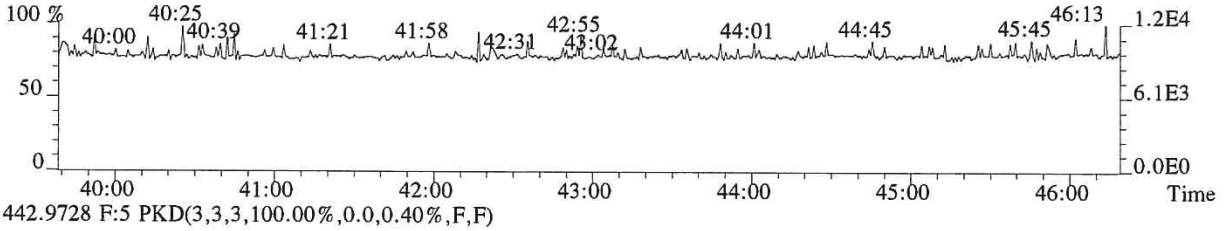
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,596.0,0.40%,F,T)



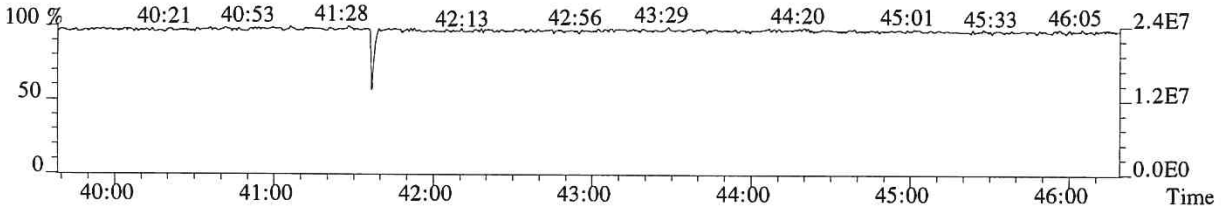
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,396.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

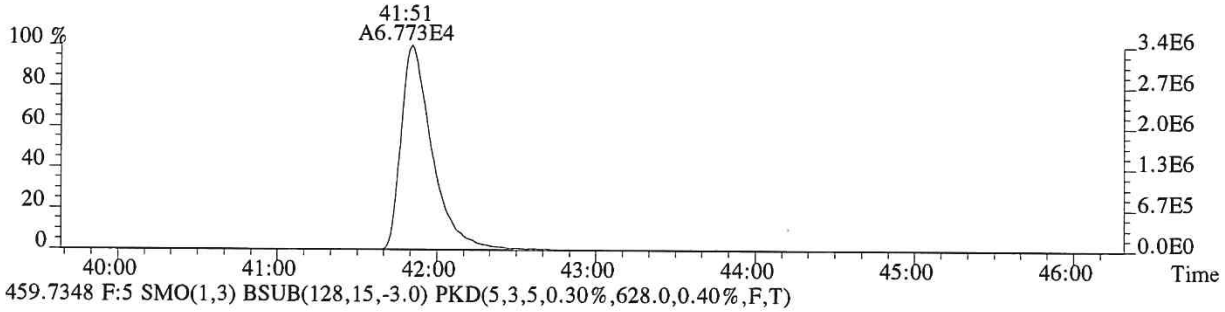


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

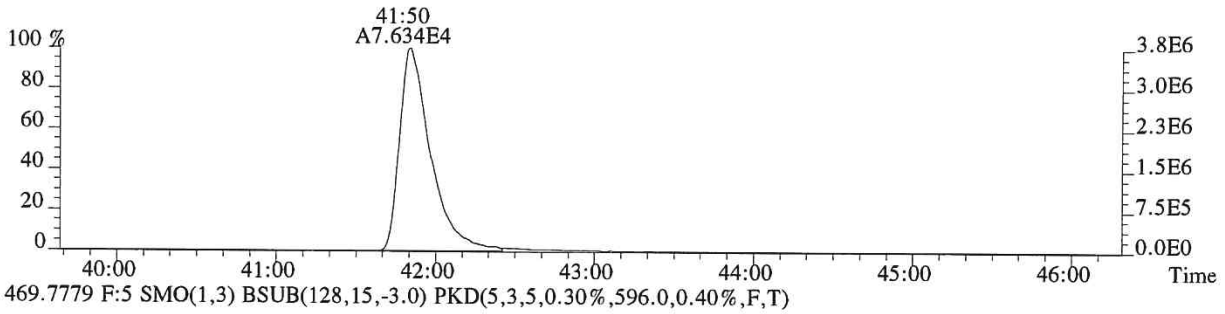


017427

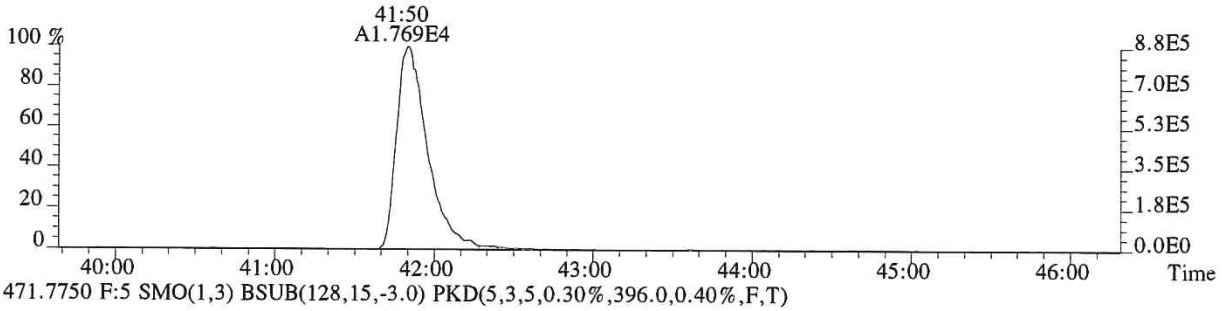
File:P519841 #1-601 Acq: 8-JAN-2019 18:17:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,640.0,0.40%,F,T)



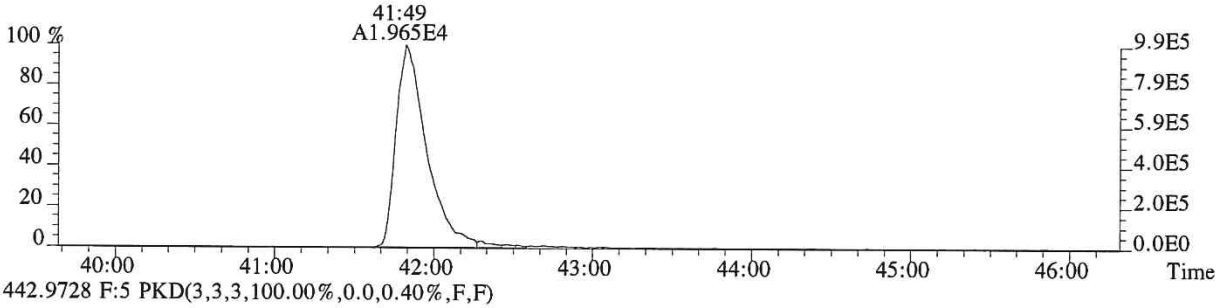
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,628.0,0.40%,F,T)



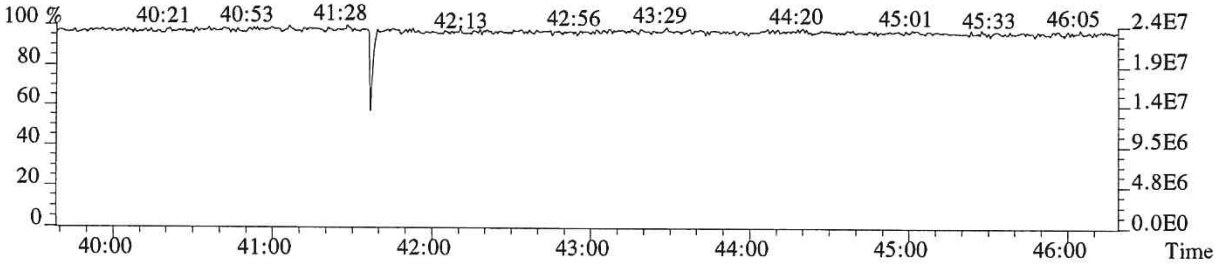
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,596.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,396.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017428

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0200

Run #17 Filename P616414 Samp: 1 Inj: 1 Acquired: 9-JAN-19 19:45:29
Processed: 10-JAN-19 08:32:07 Sample ID: E1801138-015DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:13	7.205e+03	9.094e+03	0.79	yes	yes	1.081
2	Unk	1,2,3,7,8-PeCDF	30:23	5.657e+02	3.609e+02	1.57	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:27	3.632e+02	1.864e+02	1.95	no	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	6.980e+02	5.820e+02	1.20	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:27	2.491e+02	2.047e+02	1.22	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	4.338e+01	1.331e+01	3.26	no	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:50	5.413e+01	3.070e+01	1.76	no	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	1.157e+02	9.743e+01	1.19	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	2.772e+01	4.325e+01	0.64	no	no	1.463
10	Unk	OCDF	40:50	1.200e+02	9.550e+01	1.26	no	no	1.571
11	Unk	2,3,7,8-TCDD	26:16	1.620e+03	2.057e+03	0.79	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:46	2.472e+01	2.072e+01	1.19	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	7.927e+01	4.873e+01	1.63	no	no	1.112
17	Unk	OCDD	40:39	5.818e+02	7.353e+02	0.79	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:11	1.128e+04	1.432e+04	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:22	1.660e+04	1.046e+04	1.59	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	1.537e+04	9.337e+03	1.65	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:20	5.646e+03	1.061e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	7.755e+03	1.466e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	6.584e+03	1.224e+04	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	5.121e+03	9.777e+03	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	4.139e+03	9.420e+03	0.44	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	2.662e+03	6.137e+03	0.43	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:14	5.141e+03	6.489e+03	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:44	1.031e+04	6.700e+03	1.54	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	6.900e+03	5.497e+03	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	8.220e+03	6.365e+03	1.29	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:04	6.312e+03	5.714e+03	1.10	yes	no	0.857
32	IS	13C-OCDD	40:38	5.246e+03	5.682e+03	0.92	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:27	7.924e+03	1.029e+04	0.77	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	8.793e+03	6.658e+03	1.32	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:16	3.257e+02				no	1.086

$$\text{OCDD} = \frac{(5.818e+02 + 7.353e+02) \times 4000\ \text{pg} \times 20}{(5.246e+03 + 5.682e+03) \times 10.094\ \text{g} \times 74.6 / 100 \times 1.157} \times 0.35 = 3162\ \text{ng/kg}$$

LW 01/10/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0200

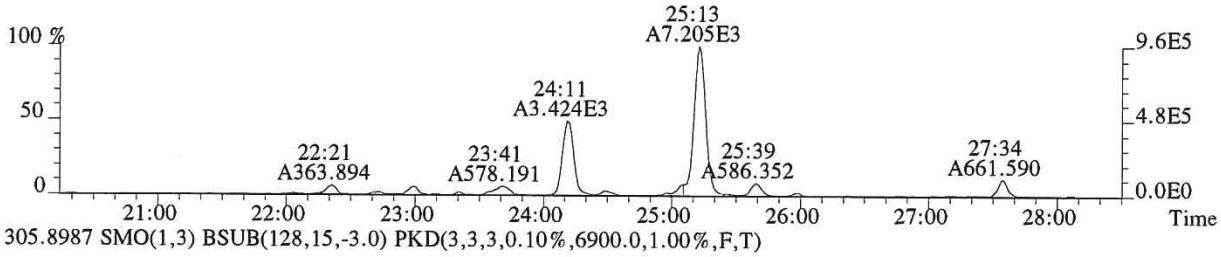
Run #17 Filename P616414 Samp: 1 Inj: 1 Acquired: 9-JAN-19 19:45:29
Processed: 10-JAN-19 08:32:07 LAB. ID: E1801138-015DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	9.64e+05	2.15e+03	4.5e+02	1.22e+06	6.90e+03	1.8e+02
2	1,2,3,7,8-PeCDF	8.67e+04	1.59e+03	5.4e+01	5.79e+04	2.60e+03	2.2e+01
3	2,3,4,7,8-PeCDF	6.48e+04	1.59e+03	4.1e+01	2.96e+04	2.60e+03	1.1e+01
4	1,2,3,4,7,8-HxCDF	1.27e+05	6.80e+02	1.9e+02	1.09e+05	7.72e+02	1.4e+02
5	1,2,3,6,7,8-HxCDF	4.48e+04	6.80e+02	6.6e+01	3.30e+04	7.72e+02	4.3e+01
6	2,3,4,6,7,8-HxCDF	8.05e+03	6.80e+02	1.2e+01	3.41e+03	7.72e+02	4.4e+00
7	1,2,3,7,8,9-HxCDF	1.27e+04	6.80e+02	1.9e+01	7.27e+03	7.72e+02	9.4e+00
8	1,2,3,4,6,7,8-HpCDF	2.12e+04	4.24e+02	5.0e+01	2.42e+04	1.12e+03	2.2e+01
9	1,2,3,4,7,8,9-HpCDF	4.34e+03	4.24e+02	1.0e+01	8.34e+03	1.12e+03	7.5e+00
10	OCDF	1.72e+04	6.12e+02	2.8e+01	1.60e+04	2.52e+03	6.4e+00
11	2,3,7,8-TCDD	2.33e+05	3.61e+03	6.4e+01	2.99e+05	1.58e+03	1.9e+02
12	1,2,3,7,8-PeCDD	4.98e+03	5.52e+02	9.0e+00	2.69e+03	4.84e+02	5.6e+00
13	1,2,3,4,7,8-HxCDD	*	4.32e+02	*	*	8.28e+02	*
14	1,2,3,6,7,8-HxCDD	*	4.32e+02	*	*	8.28e+02	*
15	1,2,3,7,8,9-HxCDD	*	4.32e+02	*	*	8.28e+02	*
16	1,2,3,4,6,7,8-HpCDD	1.57e+04	6.96e+02	2.3e+01	8.76e+03	4.80e+02	1.8e+01
17	OCDD	8.13e+04	3.04e+02	2.7e+02	1.02e+05	3.12e+02	3.3e+02
18	13C-2,3,7,8-TCDF	1.57e+06	1.28e+04	1.2e+02	2.00e+06	1.07e+04	1.9e+02
19	13C-1,2,3,7,8-PeCDF	2.51e+06	1.80e+02	1.4e+04	1.60e+06	3.12e+02	5.1e+03
20	13C-2,3,4,7,8-PeCDF	2.61e+06	1.80e+02	1.5e+04	1.56e+06	3.12e+02	5.0e+03
21	13C-1,2,3,4,7,8-HxCDF	1.11e+06	1.54e+03	7.2e+02	2.07e+06	1.48e+03	1.4e+03
22	13C-1,2,3,6,7,8-HxCDF	1.19e+06	1.54e+03	7.8e+02	2.28e+06	1.48e+03	1.5e+03
23	13C-2,3,4,6,7,8-HxCDF	1.09e+06	1.54e+03	7.1e+02	2.14e+06	1.48e+03	1.4e+03
24	13C-1,2,3,7,8,9-HxCDF	8.41e+05	1.54e+03	5.5e+02	1.57e+06	1.48e+03	1.1e+03
25	13C-1,2,3,4,6,7,8-HpCDF	7.40e+05	2.94e+03	2.5e+02	1.64e+06	5.11e+03	3.2e+02
26	13C-1,2,3,4,7,8,9-HpCDF	4.43e+05	2.94e+03	1.5e+02	9.63e+05	5.11e+03	1.9e+02
27	13C-2,3,7,8-TCDD	7.49e+05	1.14e+04	6.5e+01	9.38e+05	4.24e+03	2.2e+02
28	13C-1,2,3,7,8-PeCDD	1.69e+06	2.05e+03	8.2e+02	1.09e+06	1.44e+03	7.5e+02
29	13C-1,2,3,4,7,8-HxCDD	1.40e+06	2.59e+03	5.4e+02	1.11e+06	1.22e+03	9.1e+02
30	13C-1,2,3,6,7,8-HxCDD	1.35e+06	2.59e+03	5.2e+02	1.04e+06	1.22e+03	8.5e+02
31	13C-1,2,3,4,6,7,8-HpCDD	1.04e+06	6.80e+02	1.5e+03	9.22e+05	5.20e+02	1.8e+03
32	13C-OCDD	6.90e+05	1.16e+03	5.9e+02	7.64e+05	2.56e+02	3.0e+03
33	13C-1,2,3,4-TCDD	1.13e+06	1.14e+04	9.9e+01	1.40e+06	4.24e+03	3.3e+02
34	13C-1,2,3,7,8,9-HxCDD	1.30e+06	2.59e+03	5.0e+02	1.01e+06	1.22e+03	8.3e+02
35	37Cl-2,3,7,8-TCDD	4.48e+04	2.30e+03	1.9e+01			

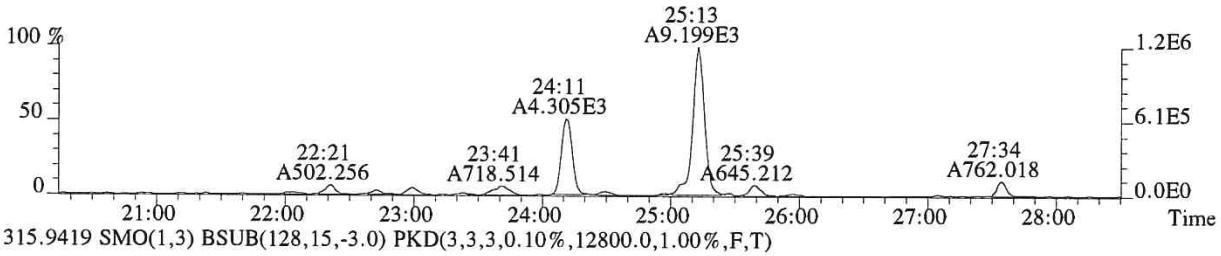
ALS ENVIRONMENTAL
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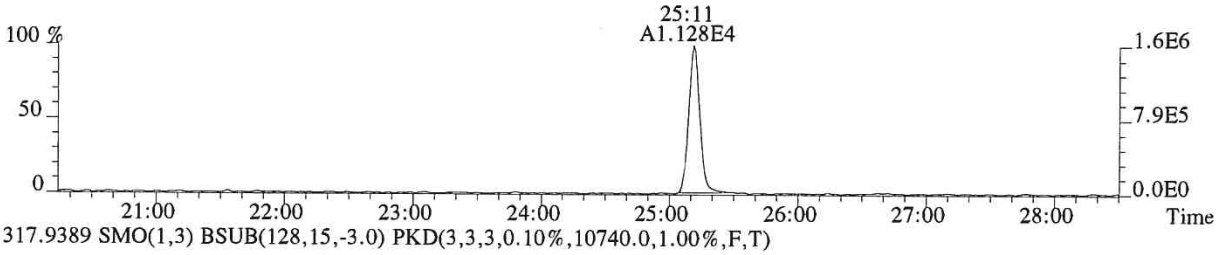
File:P616414 #1-587 Acq: 9-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2152.0,1.00%,F,T)



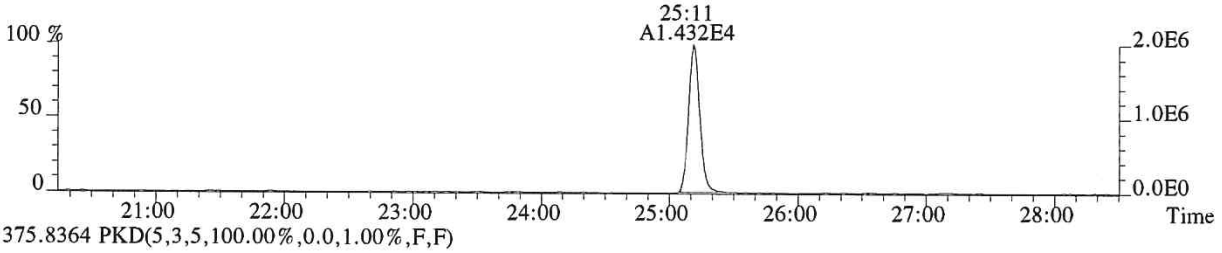
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6900.0,1.00%,F,T)



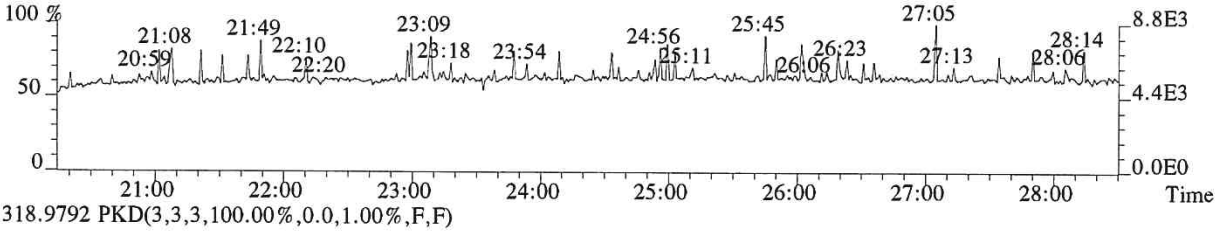
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12800.0,1.00%,F,T)



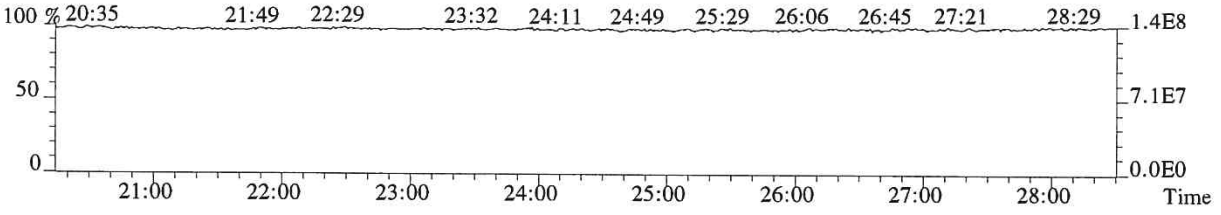
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10740.0,1.00%,F,T)



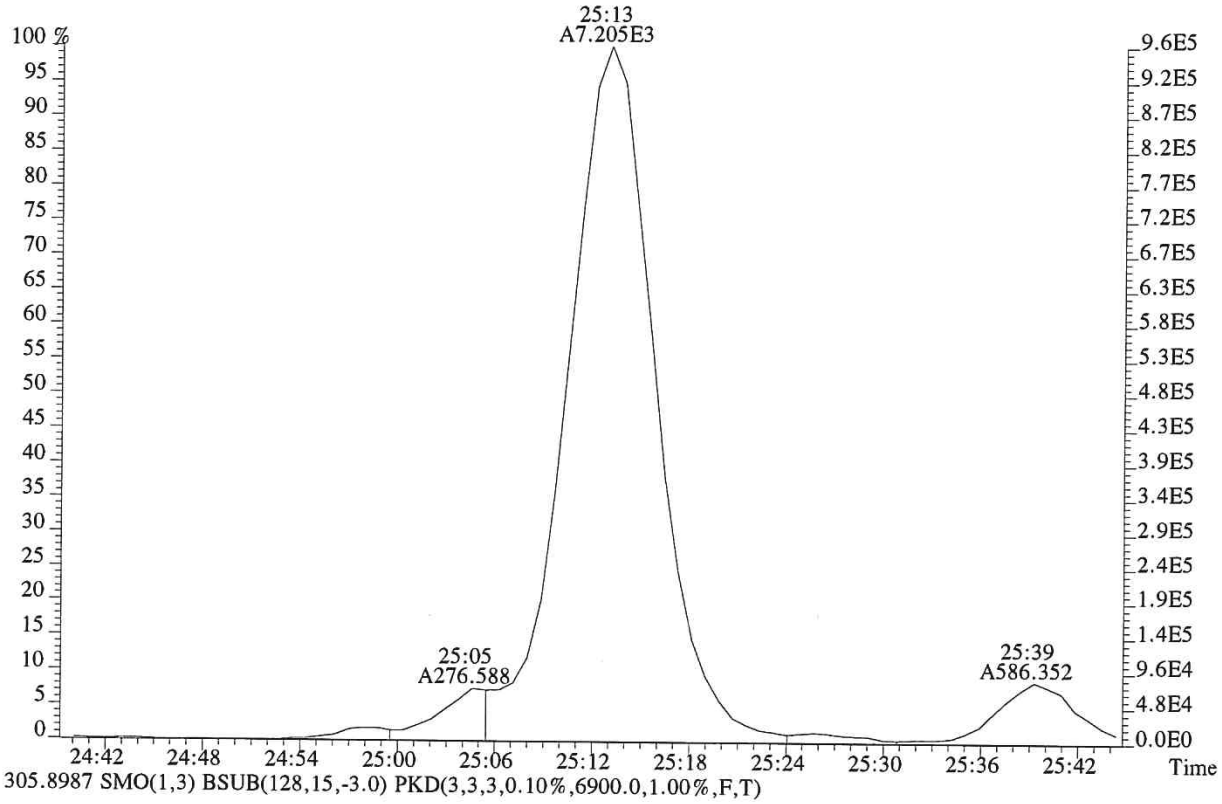
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



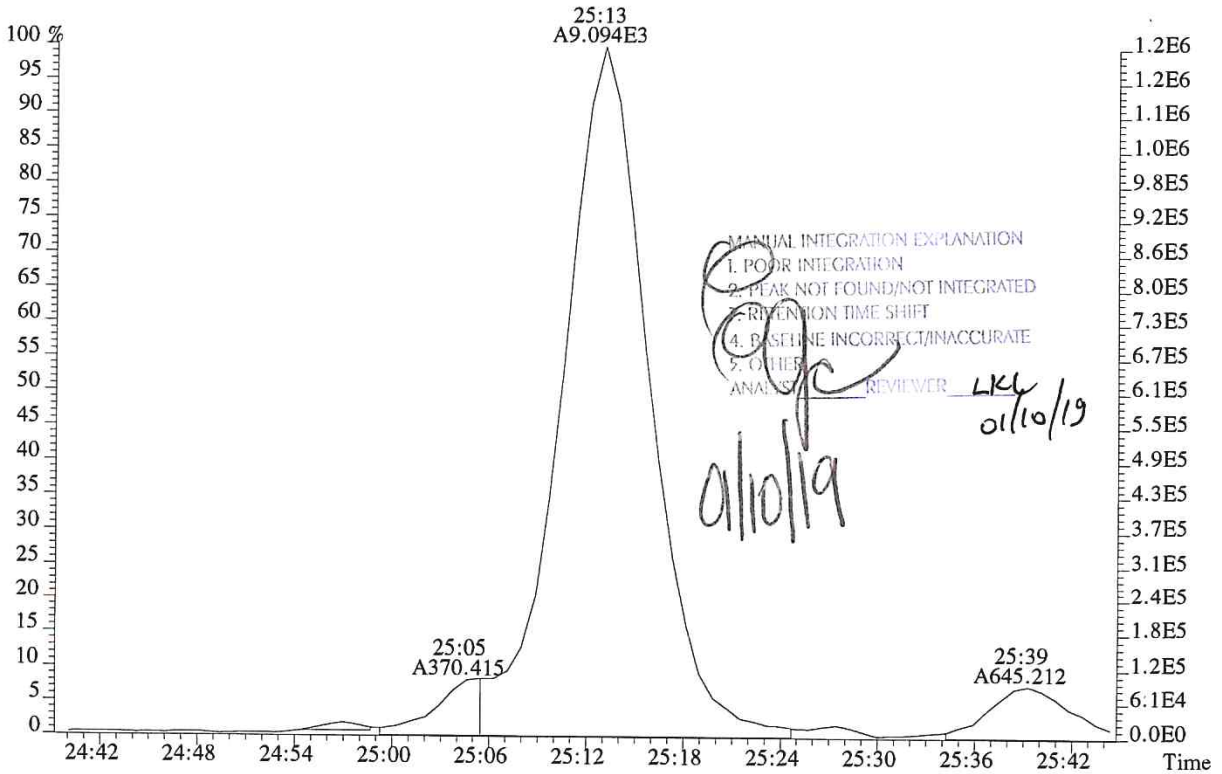
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P616414 #1-587 Acq: 9-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2152.0,1.00%,F,T)

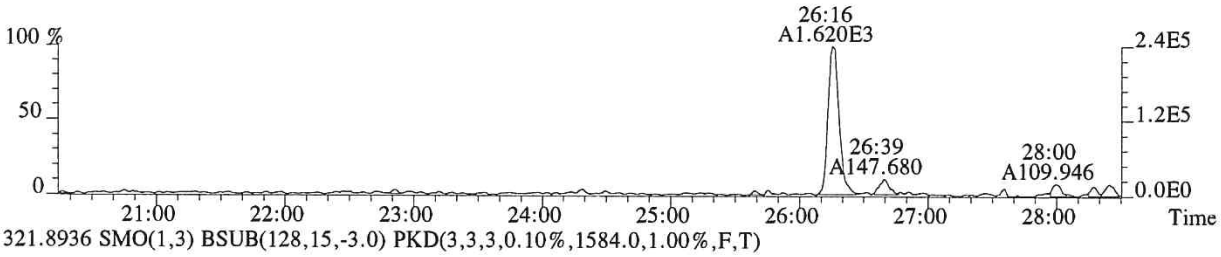


305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6900.0,1.00%,F,T)

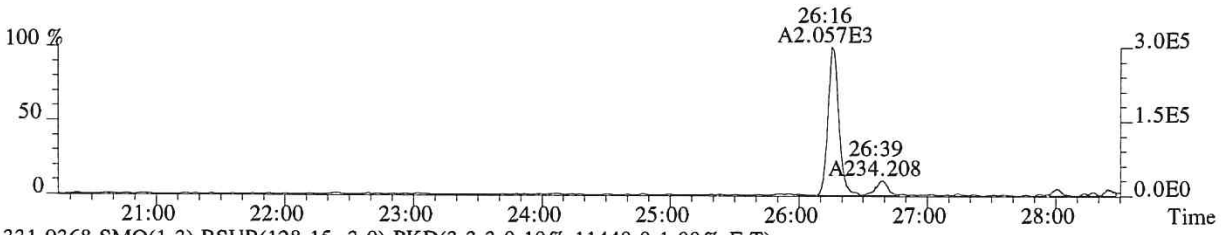


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LKY 01/10/19
01/10/19

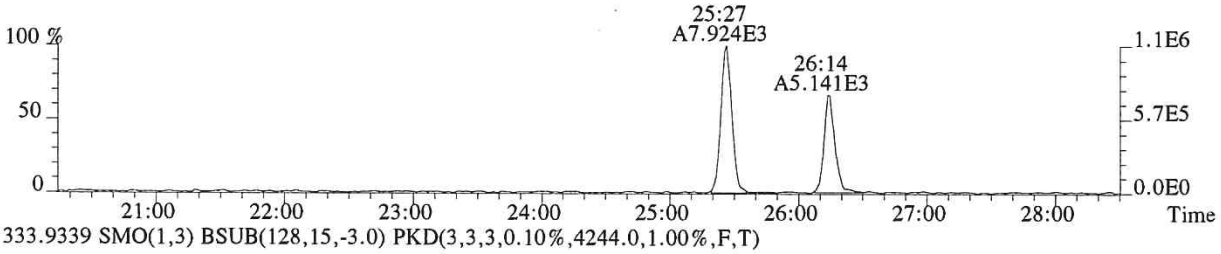
File:P616414 #1-587 Acq: 9-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3612.0,1.00%,F,T)



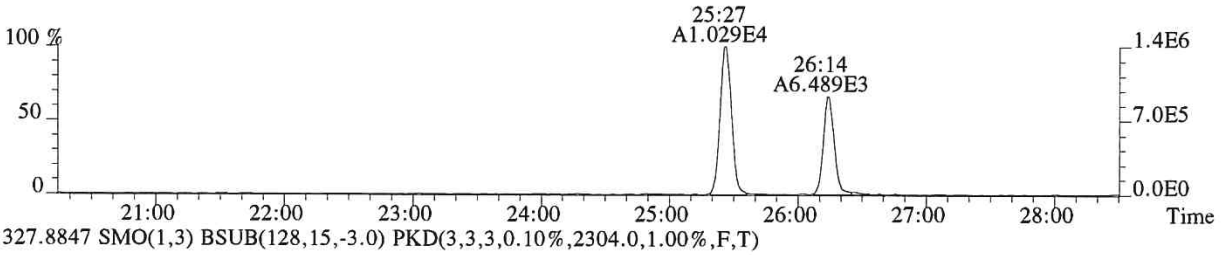
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1584.0,1.00%,F,T)



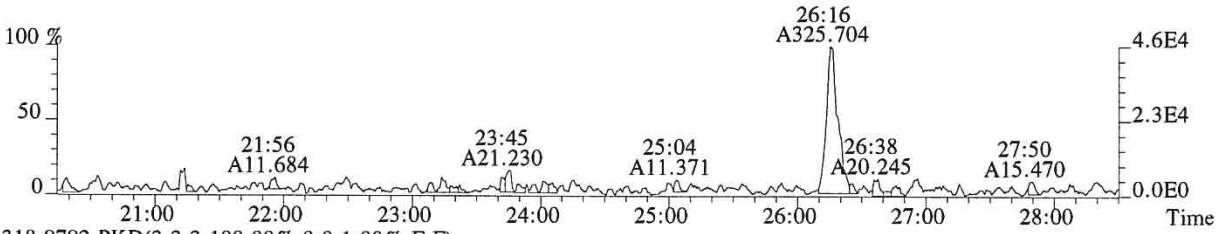
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11440.0,1.00%,F,T)



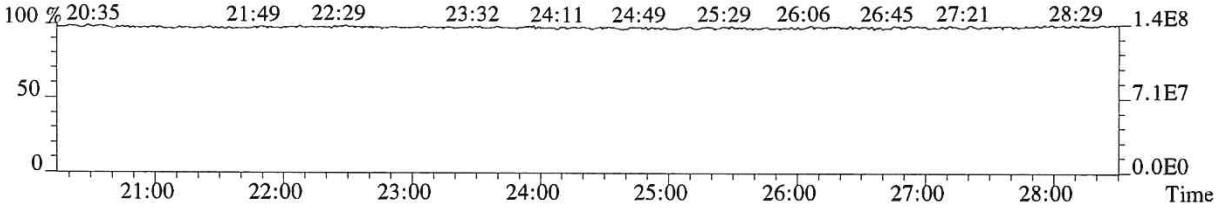
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4244.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2304.0,1.00%,F,T)

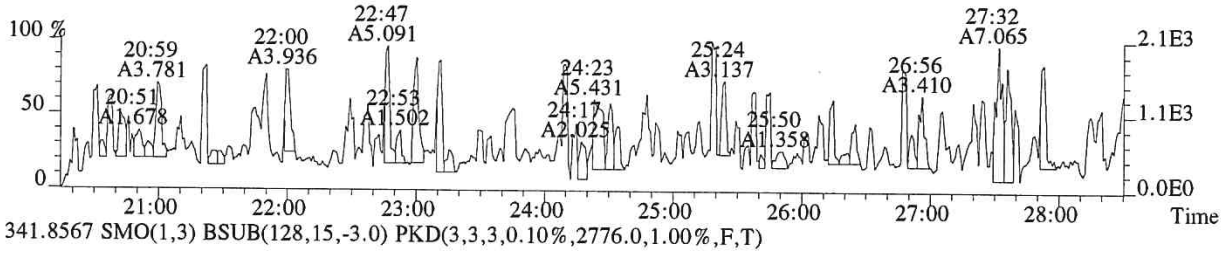


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

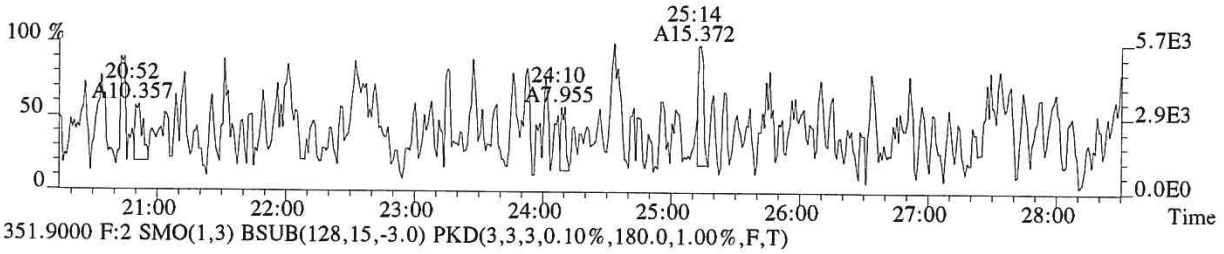


017433

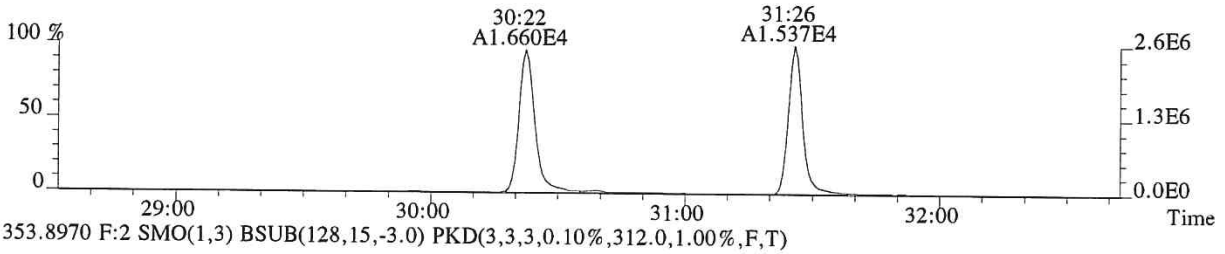
File:P616414 #1-587 Acq: 9-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,672.0,1.00%,F,T)



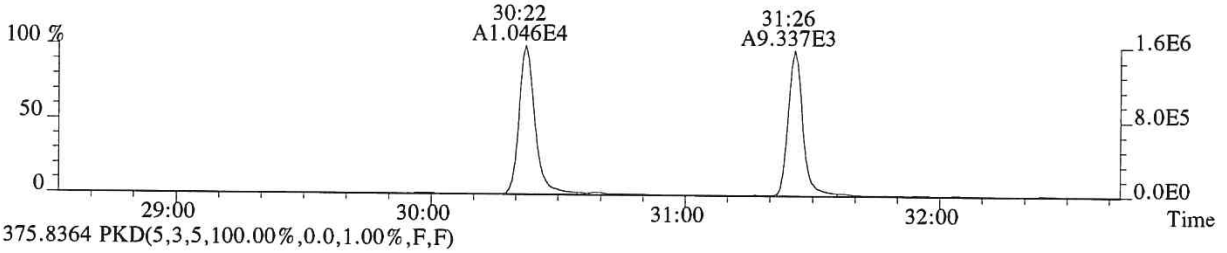
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2776.0,1.00%,F,T)



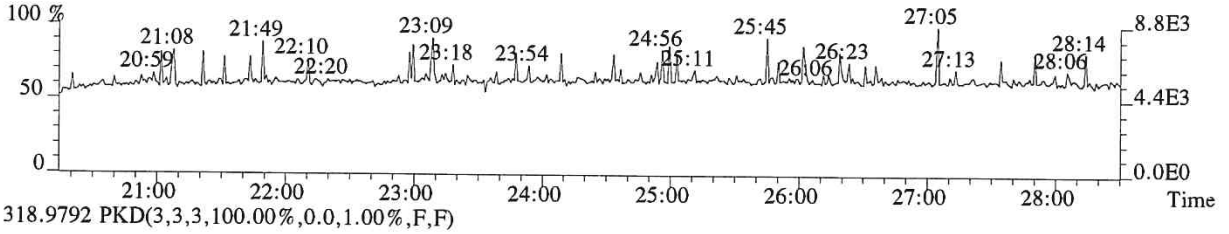
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,180.0,1.00%,F,T)



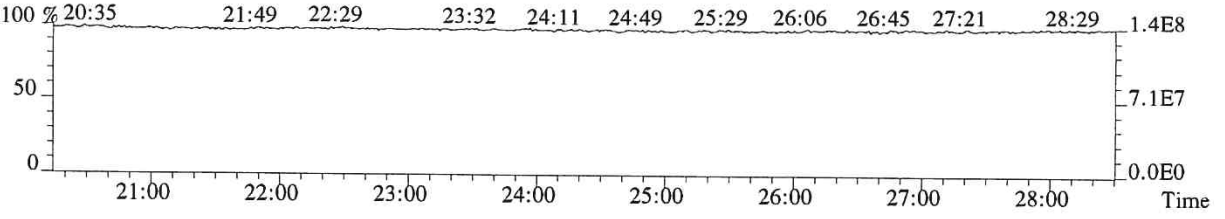
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,312.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

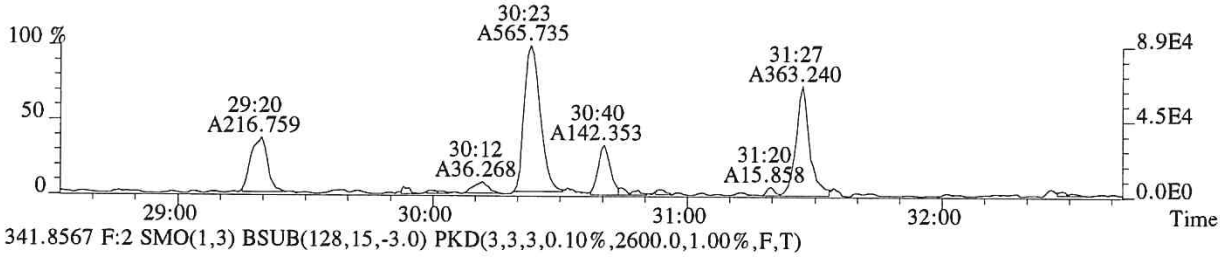


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

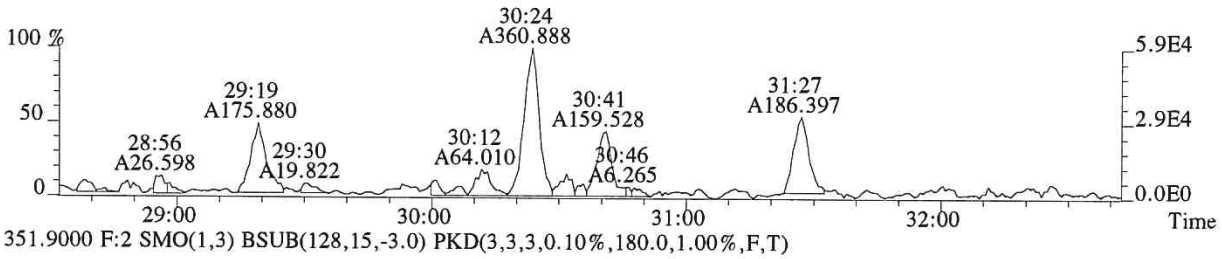


017434

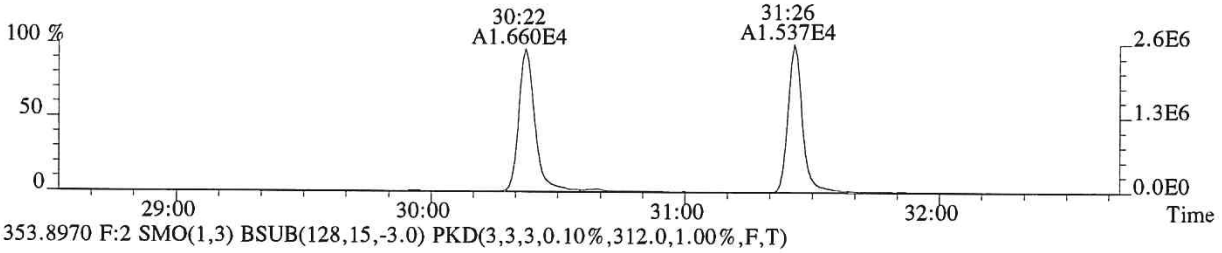
File:P616414 #1-376 Acq: 9-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1592.0,1.00%,F,T)



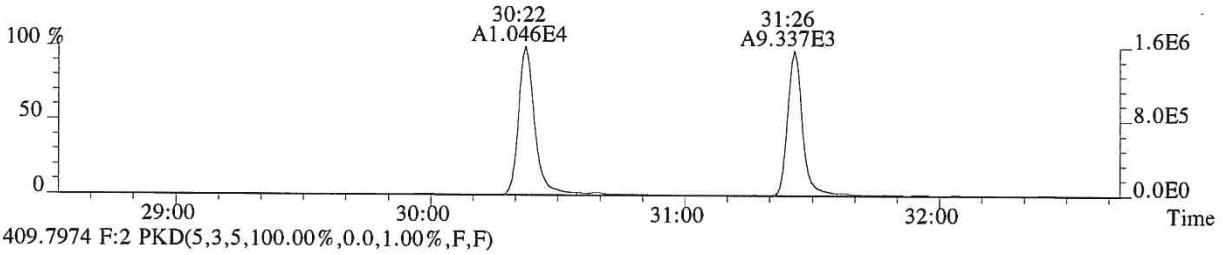
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2600.0,1.00%,F,T)



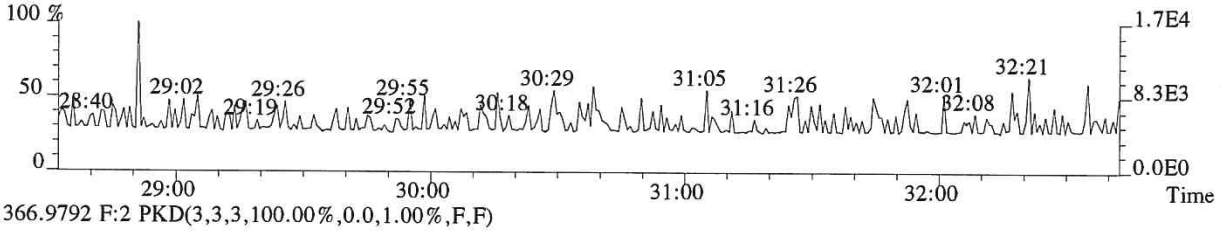
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,180.0,1.00%,F,T)



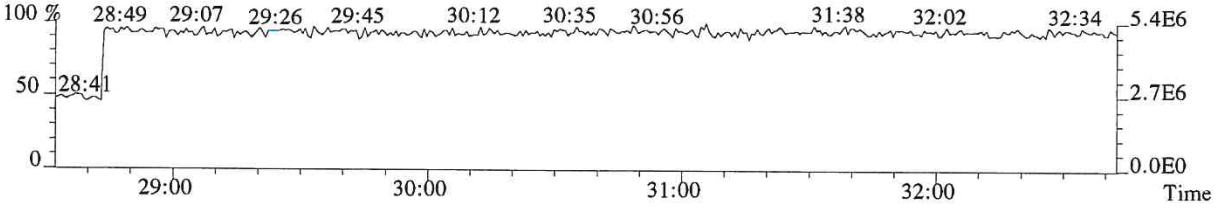
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,312.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

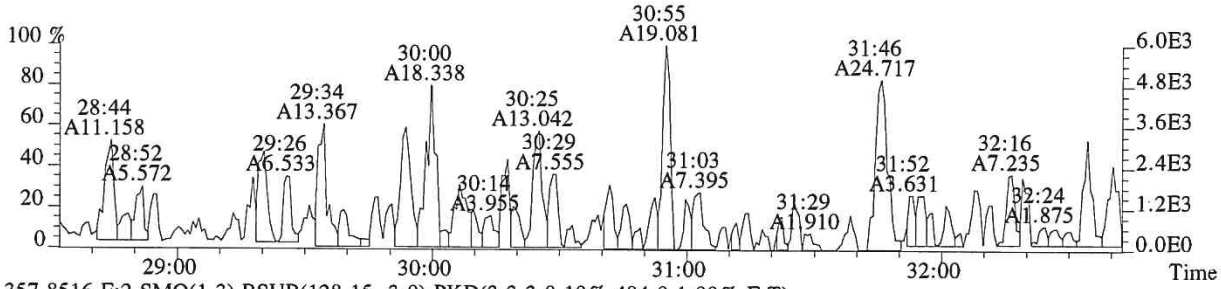


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

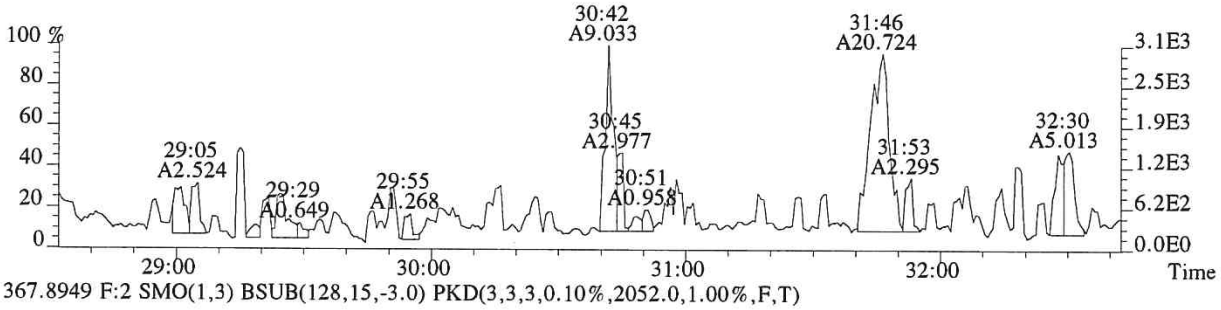


017435

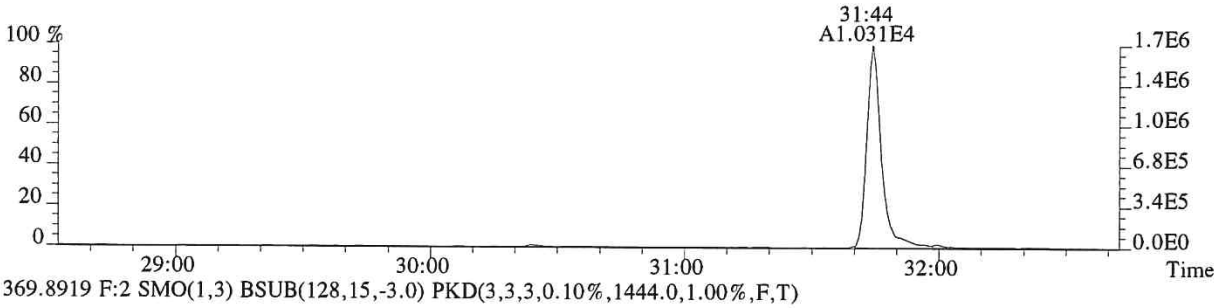
File:P616414 #1-376 Acq: 9-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,552.0,1.00%,F,T)



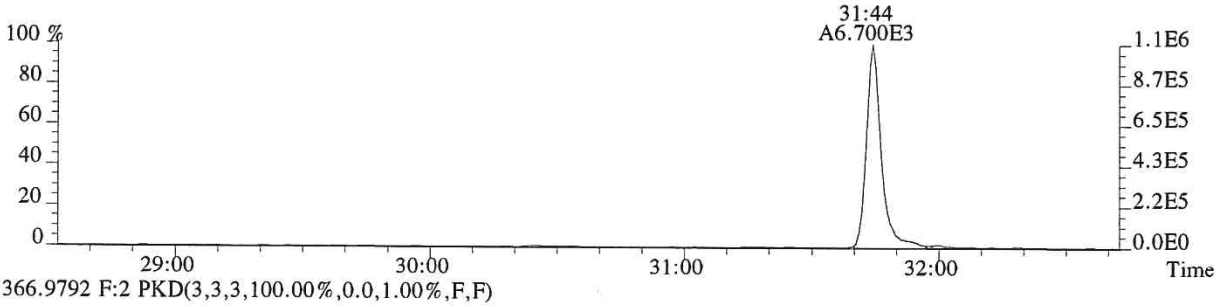
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,484.0,1.00%,F,T)



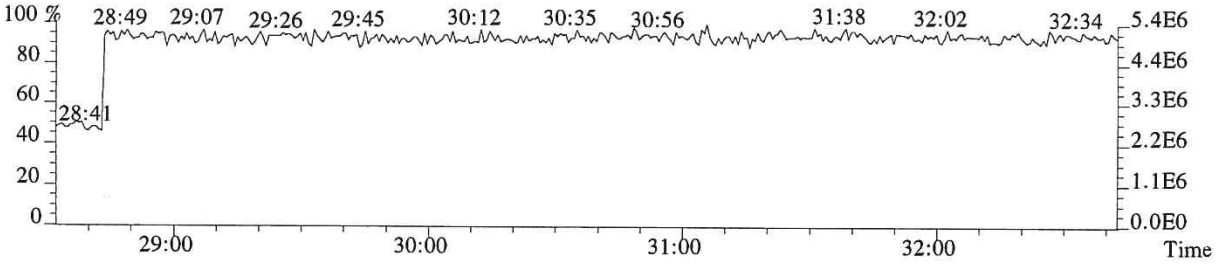
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2052.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1444.0,1.00%,F,T)

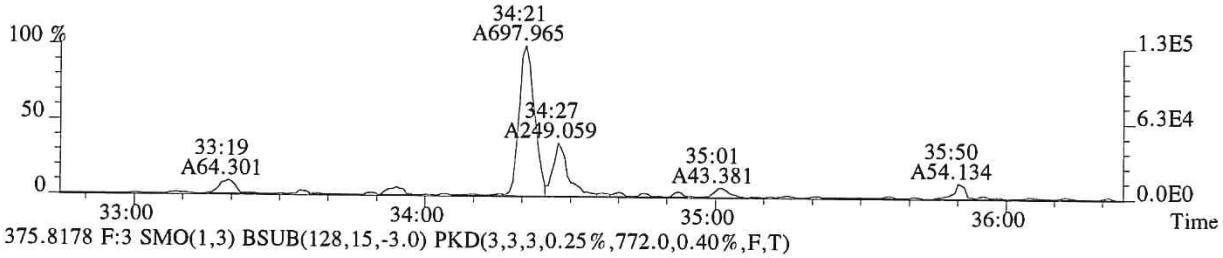


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

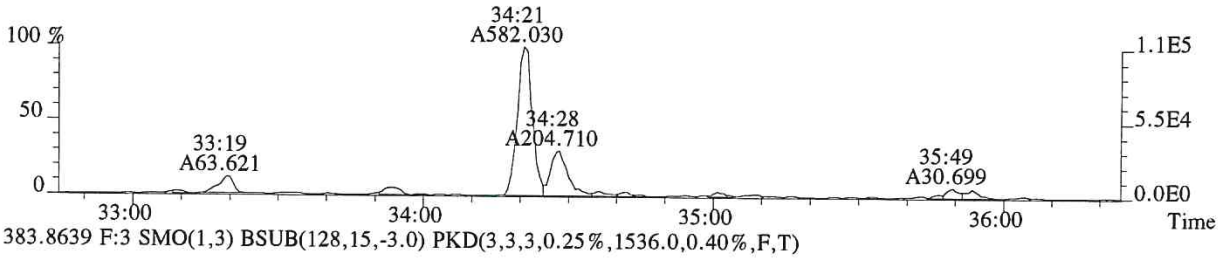


017436

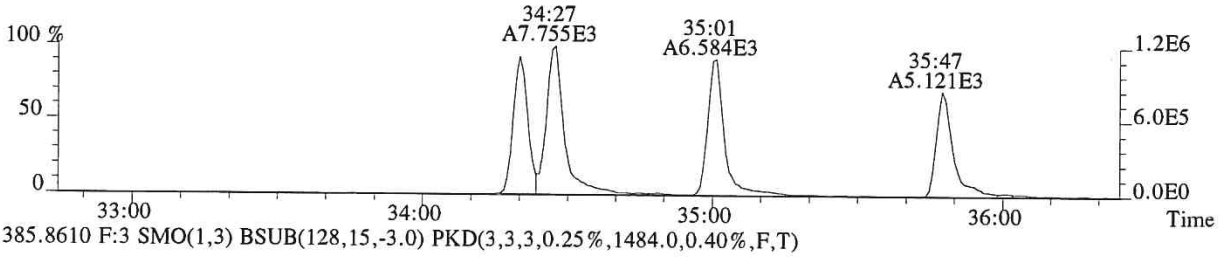
File:P616414 #1-330 Acq: 9-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,680.0,0.40%,F,T)



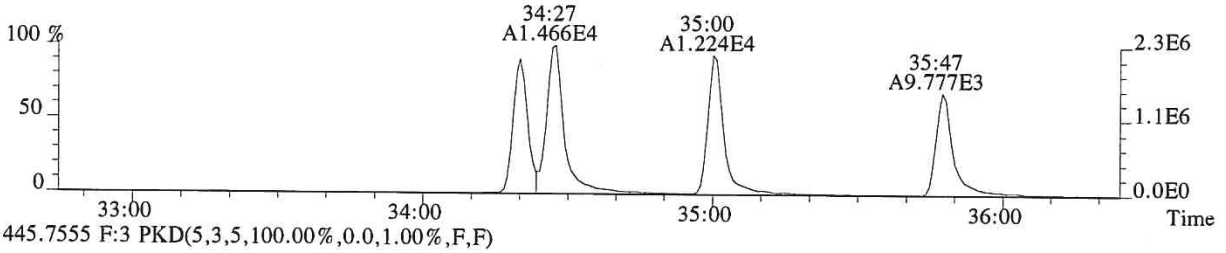
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,772.0,0.40%,F,T)



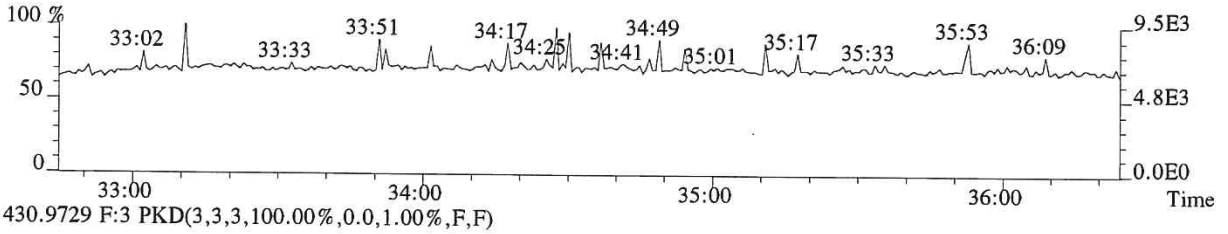
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1536.0,0.40%,F,T)



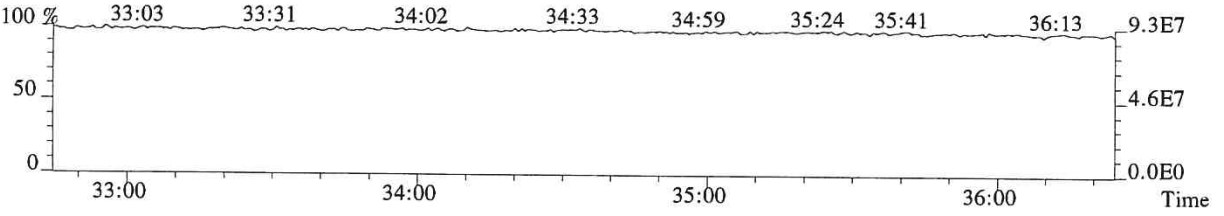
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1484.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

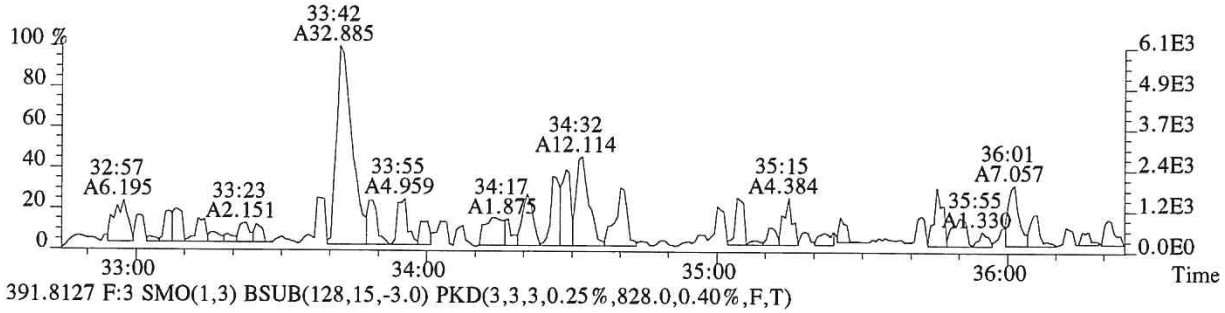


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

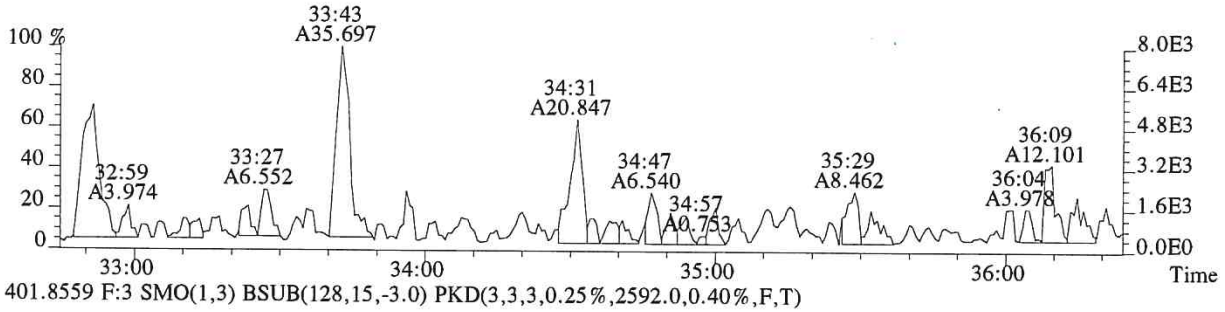


017437

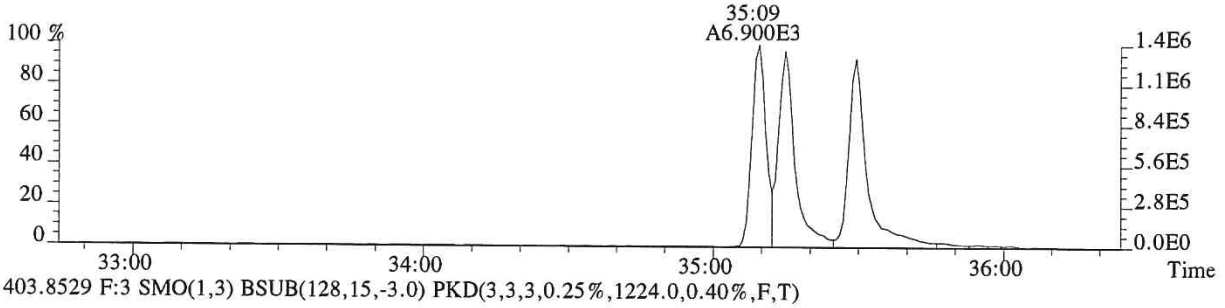
File:P616414 #1-330 Acq: 9-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,432.0,0.40%,F,T)



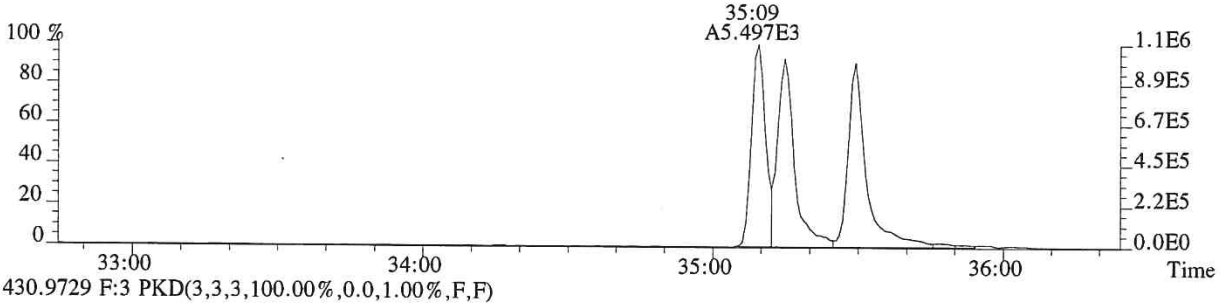
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,828.0,0.40%,F,T)



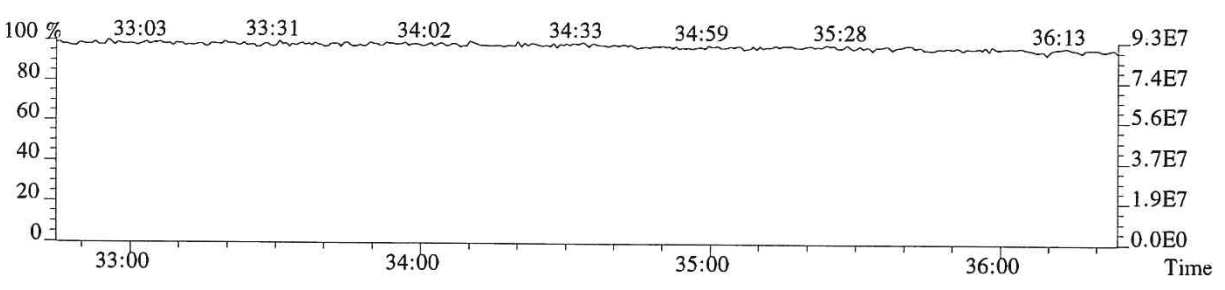
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2592.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1224.0,0.40%,F,T)

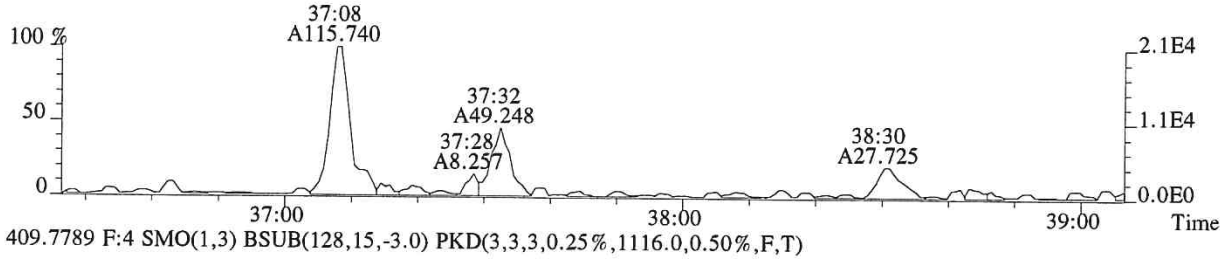


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

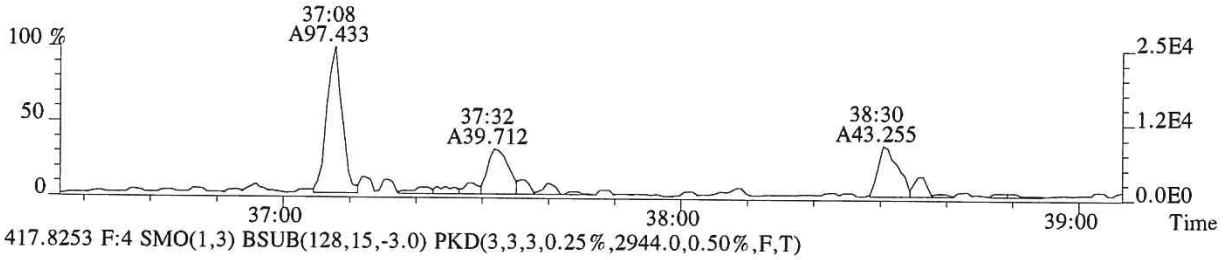


017438

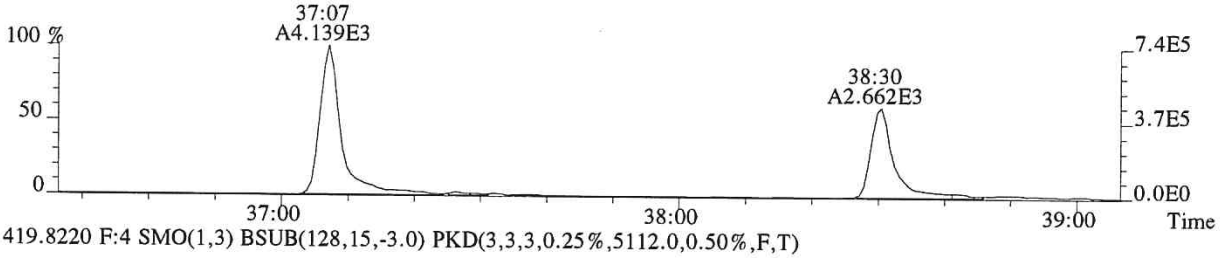
File:P616414 #1-241 Acq: 9-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,424.0,0.50%,F,T)



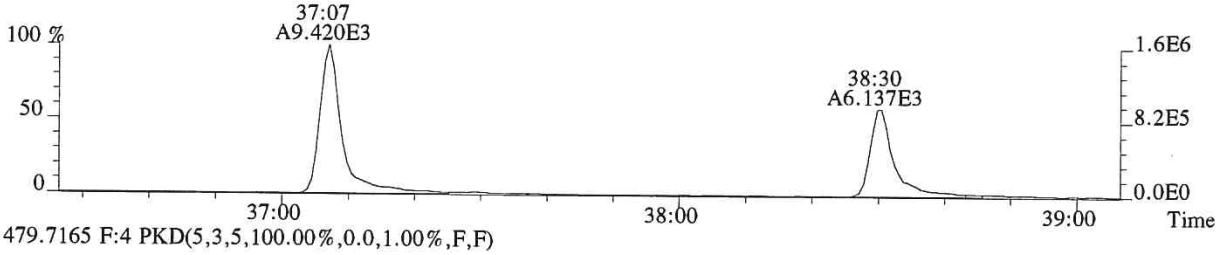
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1116.0,0.50%,F,T)



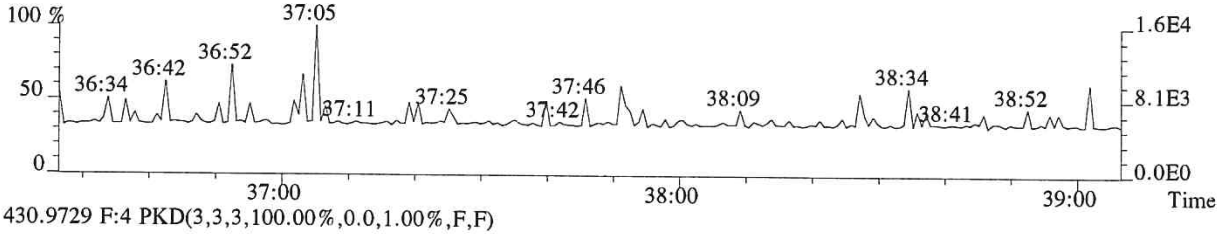
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2944.0,0.50%,F,T)



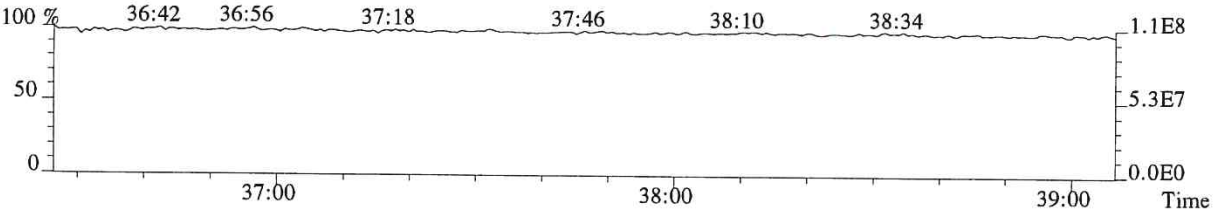
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5112.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

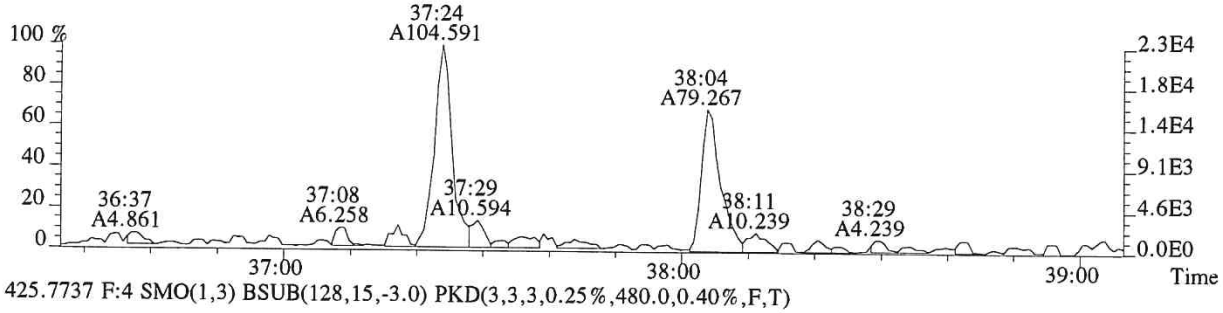


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

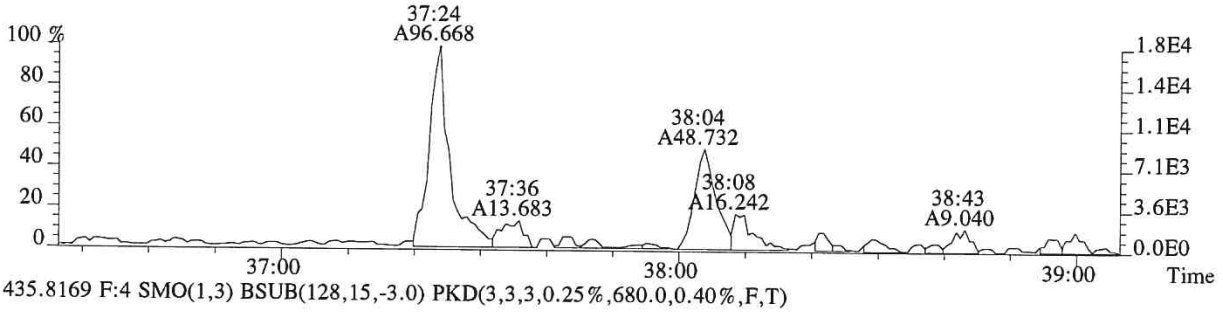


017439

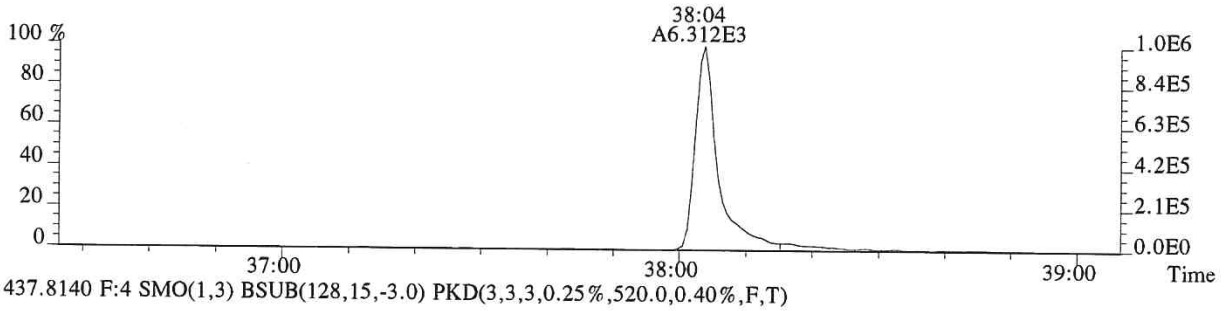
File:P616414 #1-241 Acq: 9-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,696.0,0.40%,F,T)



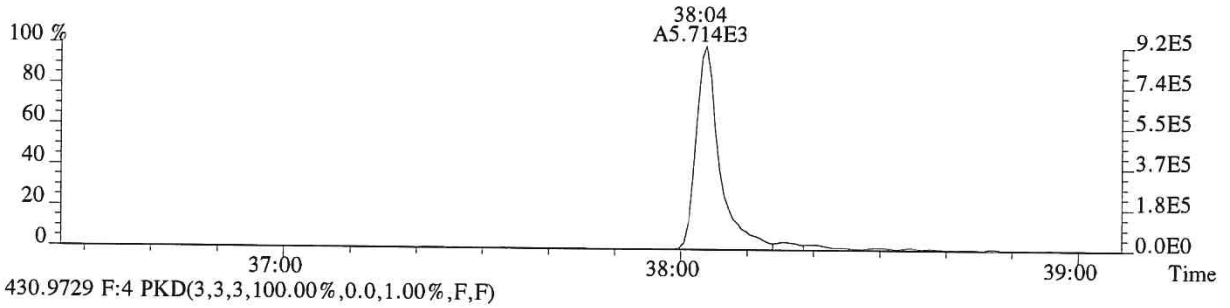
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,480.0,0.40%,F,T)



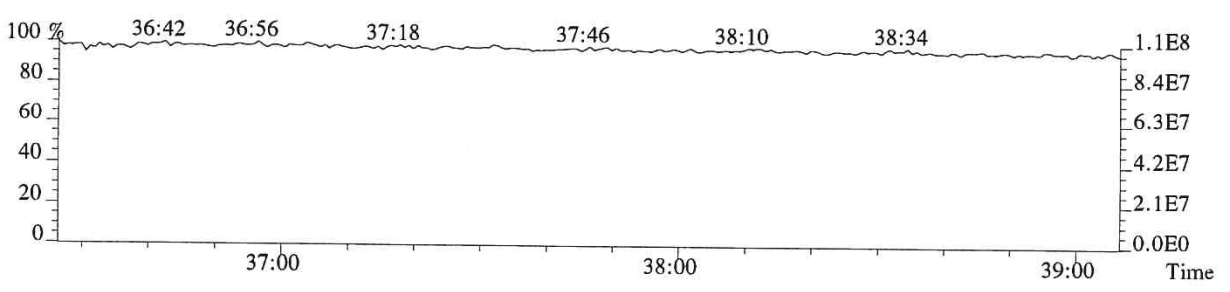
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,680.0,0.40%,F,T)



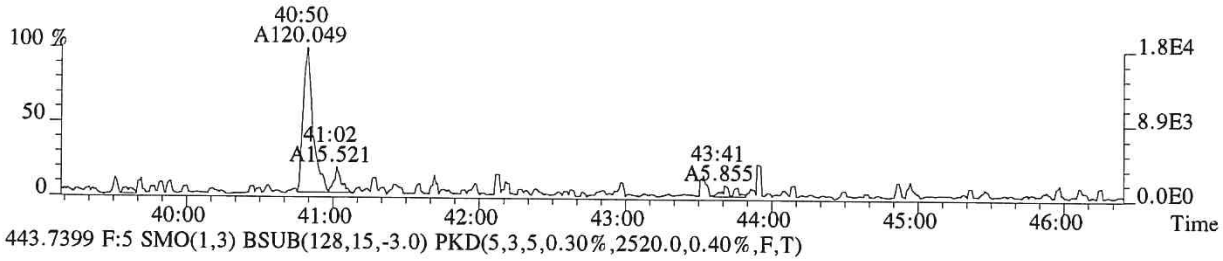
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,520.0,0.40%,F,T)



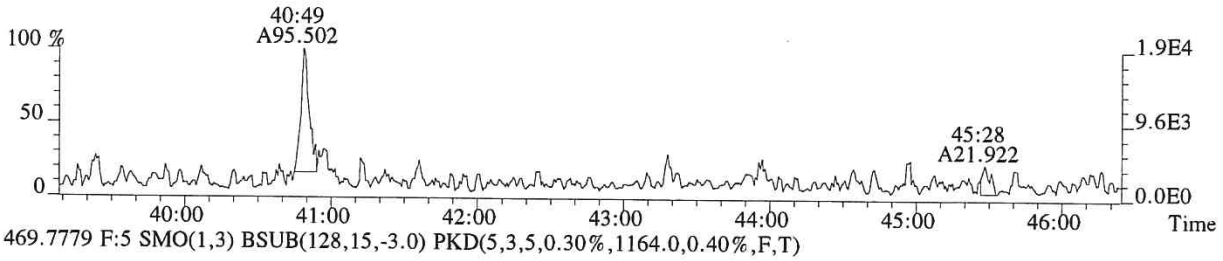
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



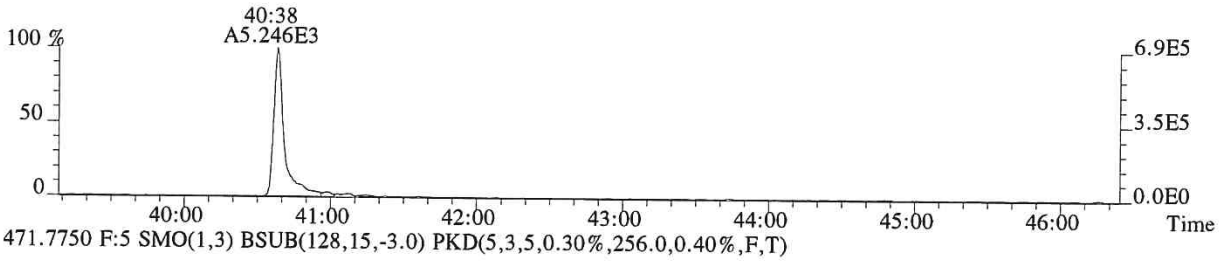
File:P616414 #1-654 Acq: 9-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,612.0,0.40%,F,T)



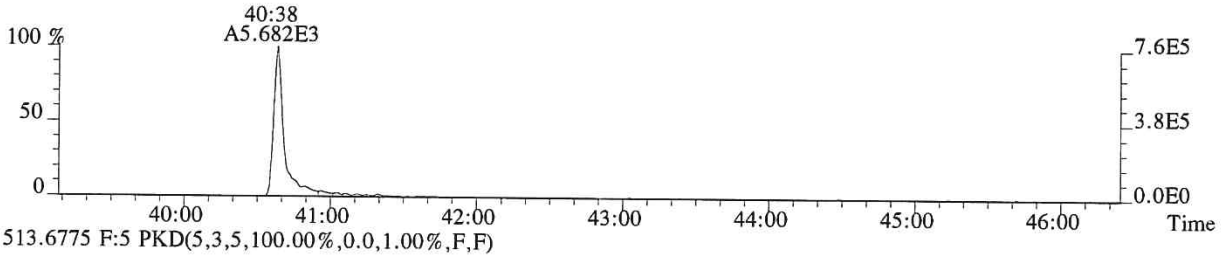
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2520.0,0.40%,F,T)



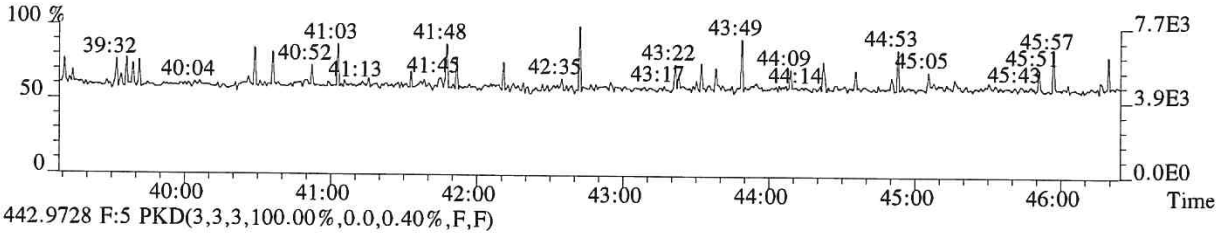
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1164.0,0.40%,F,T)



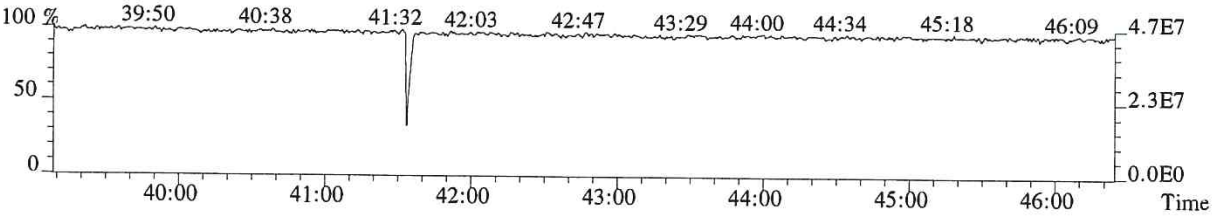
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,256.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

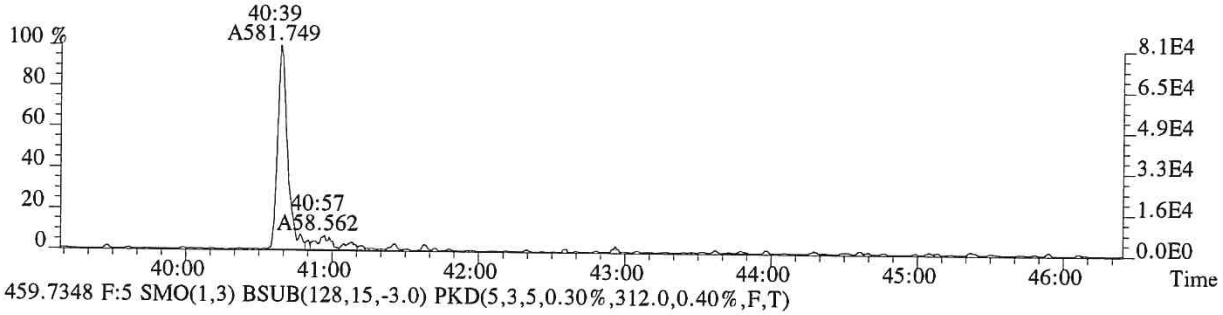


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

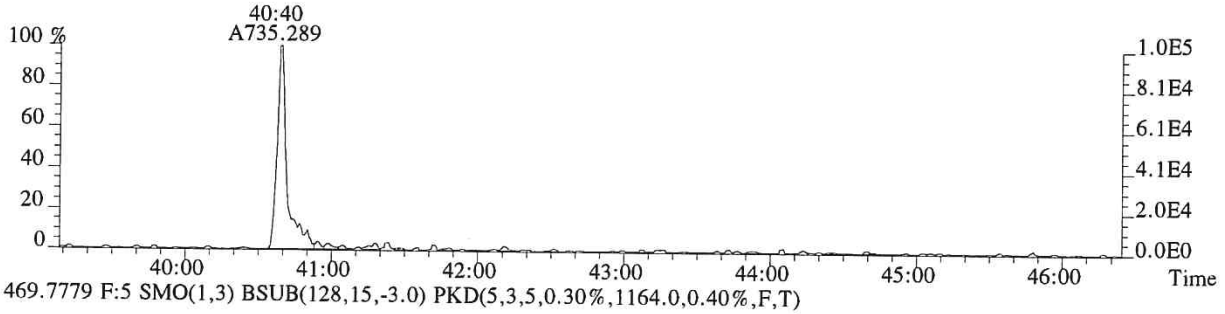


017441

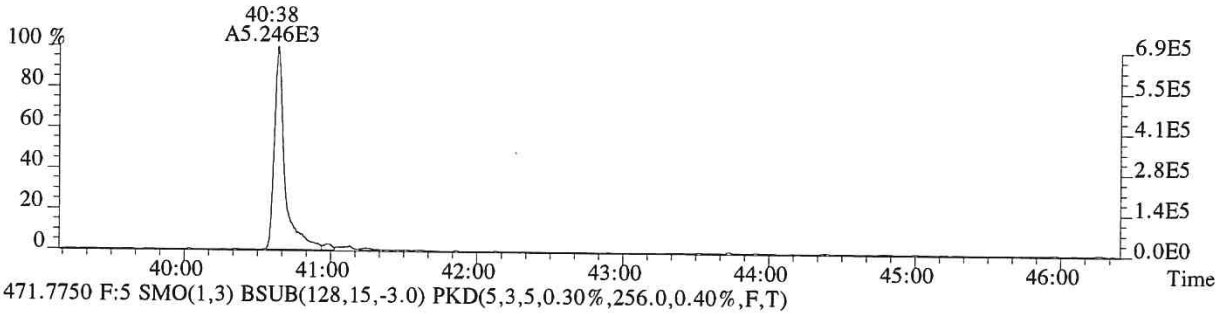
File:P616414 #1-654 Acq: 9-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-015DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,304.0,0.40%,F,T)



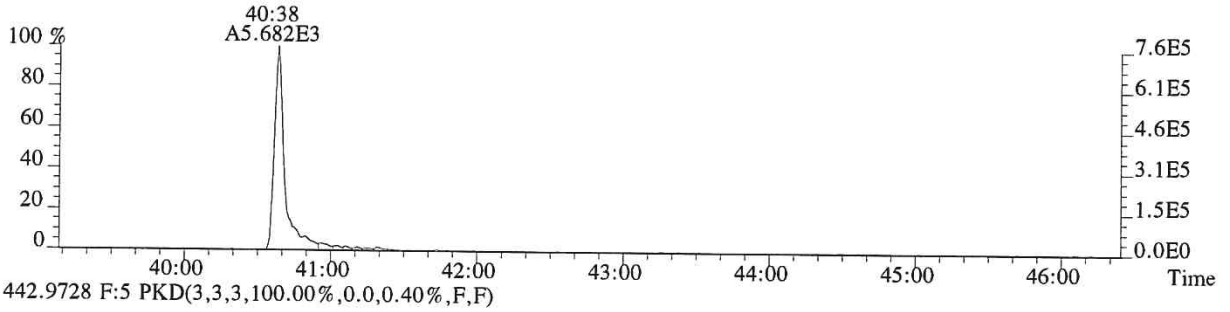
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,312.0,0.40%,F,T)



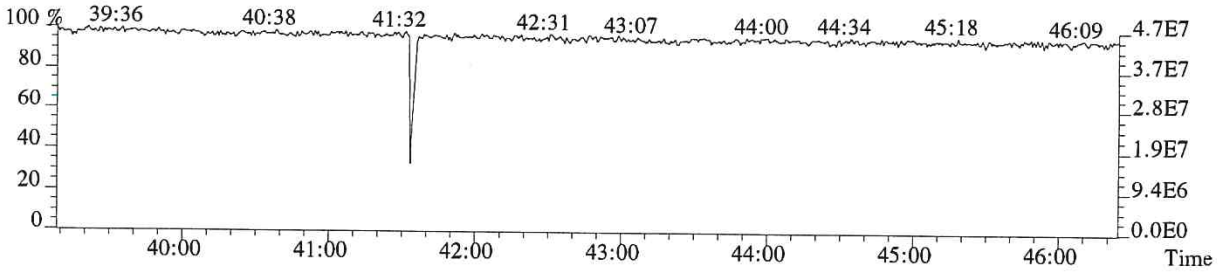
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1164.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,256.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017442

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0201

Run #18 Filename P519842 Samp: 1 Inj: 1 Acquired: 8-JAN-19 19:06:12
Processed: 9-JAN-19 11:56:35 Sample ID: E1801138-016

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:55	1.037e+04	1.400e+04	0.74	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:53	6.668e+02	4.568e+02	1.46	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:54	4.919e+02	3.306e+02	1.49	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:52	9.183e+02	7.907e+02	1.16	yes	yes	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:59	2.632e+02	1.897e+02	1.39	yes	yes	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:31	5.578e+01	3.975e+01	1.40	yes	yes	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:22	7.857e+01	7.866e+01	1.00	no	yes	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:48	2.539e+02	2.247e+02	1.13	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:17	5.453e+01	6.039e+01	0.90	yes	yes	1.258
10	Unk	OCDF	NotFnd	*	*	*	no	no	1.359
11	Unk	2,3,7,8-TCDD	26:54	2.677e+03	3.326e+03	0.80	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:14	1.078e+02	5.937e+01	1.82	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:43	3.240e+01	4.160e+01	0.78	no	yes	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:47	6.549e+01	7.656e+01	0.86	no	yes	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:03	1.210e+02	9.415e+01	1.29	yes	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:50	1.275e+03	1.367e+03	0.93	yes	no	1.025
17	Unk	OCDD	41:51	1.829e+04	2.100e+04	0.87	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:53	2.545e+04	3.253e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:52	4.405e+04	2.780e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:53	4.170e+04	2.627e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:51	1.737e+04	3.420e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:58	2.094e+04	4.046e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:31	1.818e+04	3.486e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:20	1.648e+04	3.183e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:47	1.245e+04	2.817e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:16	1.127e+04	2.538e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:52	1.244e+04	1.554e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:12	3.121e+04	2.000e+04	1.56	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:41	2.478e+04	1.782e+04	1.39	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:47	2.665e+04	2.256e+04	1.18	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:49	2.505e+04	2.366e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	41:51	2.034e+04	2.272e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:11	3.629e+04	4.600e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:03	4.930e+04	3.827e+04	1.29	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:54	2.061e+04				no	1.014

$$\text{OCDD} = \frac{(1.829e+04 + 2.100e+04) \times 4000 \text{ pg} \times 1}{(2.034e+04 + 2.272e+04) \times 10.827 \text{ g} \times 76.7 / 100 \times 1.118} = 393 \text{ ng/kg}$$

LM 01/10/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0201

Run #18 Filename P519842 Samp: 1 Inj: 1 Acquired: 8-JAN-19 19:06:12
Processed: 9-JAN-19 11:56:35 LAB. ID: E1801138-016

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.40e+06	1.66e+03	8.5e+02	1.92e+06	1.72e+03	1.1e+03
2	1,2,3,7,8-PeCDF	1.10e+05	1.68e+03	6.6e+01	7.82e+04	1.85e+03	4.2e+01
3	2,3,4,7,8-PeCDF	7.78e+04	1.68e+03	4.6e+01	4.43e+04	1.85e+03	2.4e+01
4	1,2,3,4,7,8-HxCDF	1.43e+05	9.24e+02	1.6e+02	1.41e+05	9.12e+02	1.5e+02
5	1,2,3,6,7,8-HxCDF	3.71e+04	9.24e+02	4.0e+01	3.25e+04	9.12e+02	3.6e+01
6	2,3,4,6,7,8-HxCDF	8.48e+03	9.24e+02	9.2e+00	6.73e+03	9.12e+02	7.4e+00
7	1,2,3,7,8,9-HxCDF	1.16e+04	9.24e+02	1.3e+01	1.03e+04	9.12e+02	1.1e+01
8	1,2,3,4,6,7,8-HpCDF	3.08e+04	6.04e+02	5.1e+01	2.48e+04	6.72e+02	3.7e+01
9	1,2,3,4,7,8,9-HpCDF	1.02e+04	6.04e+02	1.7e+01	6.98e+03	6.72e+02	1.0e+01
10	OCDF	*	5.12e+02	*	*	8.00e+02	*
11	2,3,7,8-TCDD	4.12e+05	2.99e+03	1.4e+02	5.39e+05	1.84e+03	2.9e+02
12	1,2,3,7,8-PeCDD	1.59e+04	1.19e+03	1.3e+01	8.13e+03	4.68e+02	1.7e+01
13	1,2,3,4,7,8-HxCDD	6.56e+03	8.04e+02	8.2e+00	5.67e+03	1.87e+03	3.0e+00
14	1,2,3,6,7,8-HxCDD	8.46e+03	8.04e+02	1.1e+01	1.06e+04	1.87e+03	5.6e+00
15	1,2,3,7,8,9-HxCDD	1.93e+04	8.04e+02	2.4e+01	1.46e+04	1.87e+03	7.8e+00
16	1,2,3,4,6,7,8-HpCDD	1.17e+05	7.08e+02	1.6e+02	1.19e+05	4.00e+02	3.0e+02
17	OCDD	9.13e+05	4.80e+02	1.9e+03	1.03e+06	7.00e+02	1.5e+03
18	13C-2,3,7,8-TCDF	3.69e+06	6.60e+03	5.6e+02	4.69e+06	3.77e+03	1.2e+03
19	13C-1,2,3,7,8-PeCDF	6.90e+06	7.28e+02	9.5e+03	4.45e+06	9.80e+02	4.5e+03
20	13C-2,3,4,7,8-PeCDF	6.96e+06	7.28e+02	9.6e+03	4.38e+06	9.80e+02	4.5e+03
21	13C-1,2,3,4,7,8-HxCDF	2.91e+06	9.80e+02	3.0e+03	5.69e+06	1.68e+03	3.4e+03
22	13C-1,2,3,6,7,8-HxCDF	3.11e+06	9.80e+02	3.2e+03	5.99e+06	1.68e+03	3.6e+03
23	13C-2,3,4,6,7,8-HxCDF	2.78e+06	9.80e+02	2.8e+03	5.41e+06	1.68e+03	3.2e+03
24	13C-1,2,3,7,8,9-HxCDF	2.20e+06	9.80e+02	2.2e+03	4.24e+06	1.68e+03	2.5e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.41e+06	3.29e+03	4.3e+02	3.13e+06	5.09e+03	6.1e+02
26	13C-1,2,3,4,7,8,9-HpCDF	9.91e+05	3.29e+03	3.0e+02	2.22e+06	5.09e+03	4.4e+02
27	13C-2,3,7,8-TCDD	1.90e+06	6.51e+03	2.9e+02	2.42e+06	4.22e+03	5.7e+02
28	13C-1,2,3,7,8-PeCDD	5.05e+06	1.34e+03	3.8e+03	3.30e+06	1.47e+03	2.2e+03
29	13C-1,2,3,4,7,8-HxCDD	3.93e+06	1.08e+03	3.6e+03	3.11e+06	1.06e+03	2.9e+03
30	13C-1,2,3,6,7,8-HxCDD	3.75e+06	1.08e+03	3.5e+03	2.92e+06	1.06e+03	2.8e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.32e+06	9.12e+02	2.5e+03	2.15e+06	4.48e+02	4.8e+03
32	13C-OCDD	9.98e+05	1.02e+03	9.7e+02	1.10e+06	4.16e+02	2.6e+03
33	13C-1,2,3,4-TCDD	5.61e+06	6.51e+03	8.6e+02	7.04e+06	4.22e+03	1.7e+03
34	13C-1,2,3,7,8,9-HxCDD	6.56e+06	1.08e+03	6.1e+03	5.06e+06	1.06e+03	4.8e+03
35	37Cl-2,3,7,8-TCDD	3.22e+06	1.46e+03	2.2e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0201

Entry: 36 Totals Name: Total Tetra-Furans

Run: 18 File: P519842 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 19:06:12 Processed: 9-JAN-19 11:56:35

Mass: 303.9020 305.8990 Tot Response: 4.28e+04 RRF: 0.9417

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:24	1.42e+02	1.81e+02	0.79	yes	3.23e+02		n n
2	22:16	6.04e+01	7.04e+01	0.86	yes	1.31e+02		n n
3	23:02	5.57e+02	7.34e+02	0.76	yes	1.29e+03		n n
4	23:23	1.43e+02	1.91e+02	0.75	yes	3.34e+02		n n
5	23:40	3.96e+02	4.50e+02	0.88	yes	8.47e+02		n n
6	24:18	2.43e+02	3.24e+02	0.75	yes	5.67e+02		n n
7	24:24	4.53e+02	5.98e+02	0.76	yes	1.05e+03		n n
8	24:54	4.24e+03	5.78e+03	0.73	yes	1.00e+04		n n
9	25:55	1.04e+04	1.40e+04	0.74	yes	2.44e+04	2,3,7,8-TCDF	n n
10	26:10	2.75e+01	3.62e+01	0.76	yes	6.37e+01		n n
11	26:19	6.74e+02	9.71e+02	0.69	yes	1.64e+03		n n
12	26:37	9.58e+01	1.32e+02	0.73	yes	2.28e+02		n n
13	28:08	8.70e+02	1.05e+03	0.82	yes	1.92e+03		n n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0201

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 18 File: P519842 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 19:06:12 Processed: 9-JAN-19 11:56:35

Mass: 319.8970 321.8940 Tot Response: 8.31e+03 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:33	7.72e+02	1.00e+03	0.77	yes	1.77e+03		n	n
2	26:54	2.68e+03	3.33e+03	0.80	yes	6.00e+03	2,3,7,8-TCDD	n	n
3	27:15	2.35e+02	3.00e+02	0.78	yes	5.35e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0201

Entry: 39 Totals Name: Total Penta-Furans2

Run: 18 File: P519842 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 19:06:12 Processed: 9-JAN-19 11:56:35

Mass: 339.8600 341.8570 Tot Response: 1.95e+03 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:53	6.67e+02	4.57e+02	1.46	yes	1.12e+03	1,2,3,7,8-PeCDF	n	n
2	31:54	4.92e+02	3.31e+02	1.49	yes	8.23e+02	2,3,4,7,8-PeCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0201

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 18 File: P519842 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 19:06:12 Processed: 9-JAN-19 11:56:35

Mass: 355.8550 357.8520 Tot Response: 1.29e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:53	9.62e+01	5.57e+01	1.73	yes	1.52e+02		n	n
2	30:24	6.63e+02	4.05e+02	1.64	yes	1.07e+03		n	n
3	31:05	4.02e+01	2.58e+01	1.56	yes	6.60e+01		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0201

Entry: 41 Totals Name: Total Hexa-Furans

Run: 18 File: P519842 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 19:06:12 Processed: 9-JAN-19 11:56:35

Mass: 373.8210 375.8180 Tot Response: 2.40e+03 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:49	7.99e+01	6.00e+01	1.33	yes	1.40e+02		y	y
2	34:52	9.18e+02	7.91e+02	1.16	yes	1.71e+03	1,2,3,4,7,8-HxCDF	y	y
3	34:59	2.63e+02	1.90e+02	1.39	yes	4.53e+02	1,2,3,6,7,8-HxCDF	y	y
4	35:31	5.58e+01	3.98e+01	1.40	yes	9.55e+01	2,3,4,6,7,8-HxCDF	n	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0201

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 18 File: P519842 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 19:06:12 Processed: 9-JAN-19 11:56:35

Mass: 389.8160 391.8130 Tot Response: 7.05e+03 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:14	3.28e+03	2.59e+03	1.26	yes	5.87e+03		n	n
2	35:03	4.67e+02	3.79e+02	1.23	yes	8.45e+02		n	n
3	35:11	6.70e+01	5.58e+01	1.20	yes	1.23e+02		n	n
4	36:03	1.21e+02	9.42e+01	1.29	yes	2.15e+02	1,2,3,7,8,9-HxCDD	n	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0201

Entry: 43 Totals Name: Total Hepta-Furans

Run: 18 File: P519842 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 19:06:12 Processed: 9-JAN-19 11:56:35

Mass: 407.7820 409.7790 Tot Response: 5.94e+02 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:48	2.54e+02	2.25e+02	1.13	yes	4.79e+02	1,2,3,4,6,7,8-HpCDF	n	n
2	39:17	5.45e+01	6.04e+01	0.90	yes	1.15e+02	1,2,3,4,7,8,9-HpCDF	n	y

ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0201

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 18 File: P519842 Sample:1 Injection:1 Function:4

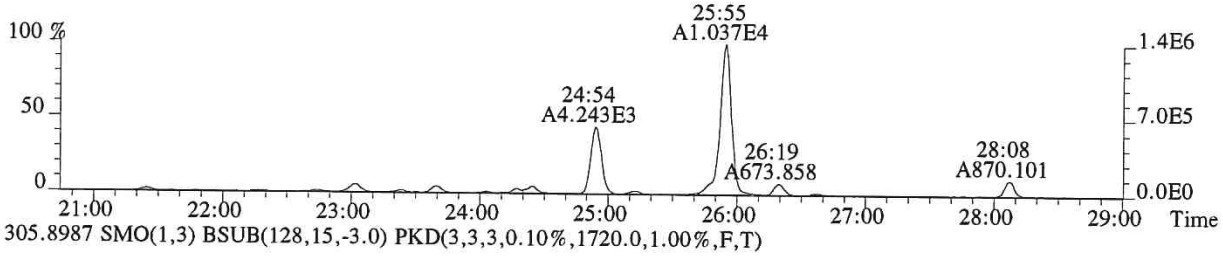
Acquired: 8-JAN-19 19:06:12 Processed: 9-JAN-19 11:56:35

Mass: 423.7770 425.7740 Tot Response: 1.27e+04 RRF: 1.025

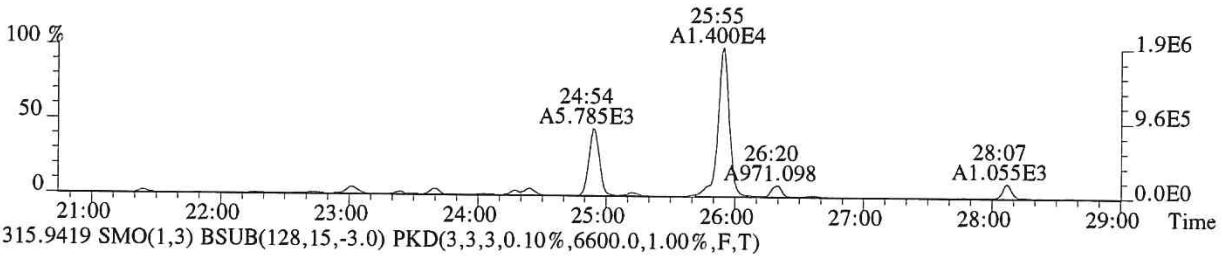
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:06	5.21e+03	4.88e+03	1.07	yes	1.01e+04		n	n
2	38:50	1.28e+03	1.37e+03	0.93	yes	2.64e+03	1,2,3,4,6,7,8-HpCDD	n	n

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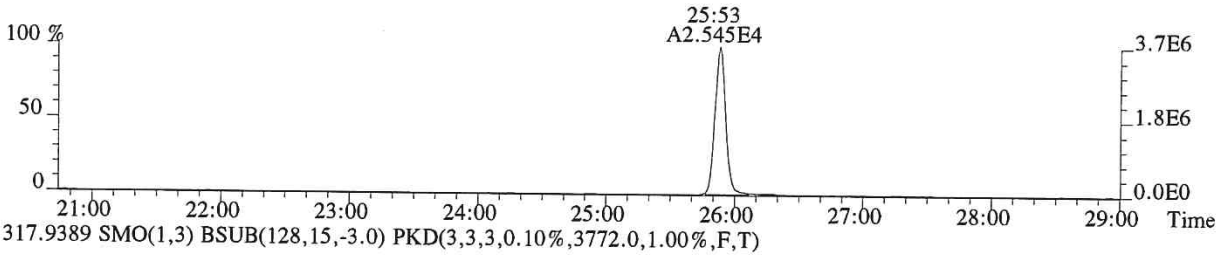
File:P519842 #1-587 Acq: 8-JAN-2019 19:06:12 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-016
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1660.0,1.00%,F,T)



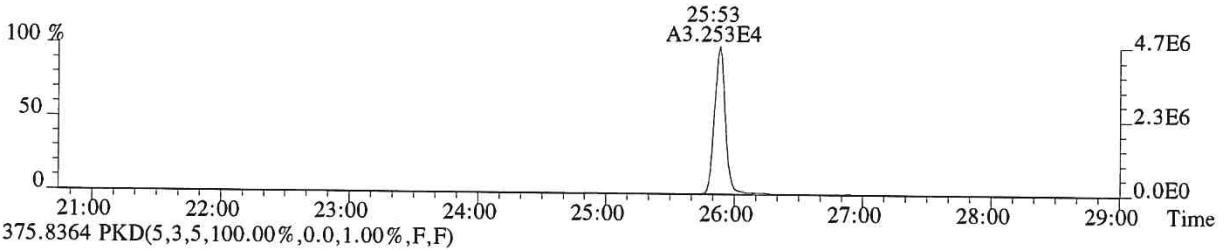
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1720.0,1.00%,F,T)



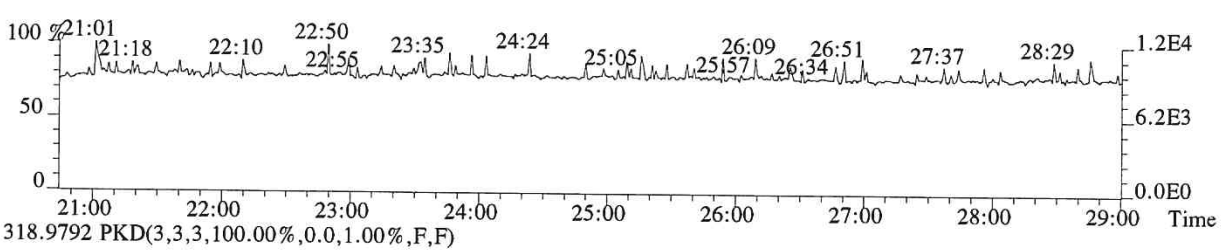
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6600.0,1.00%,F,T)



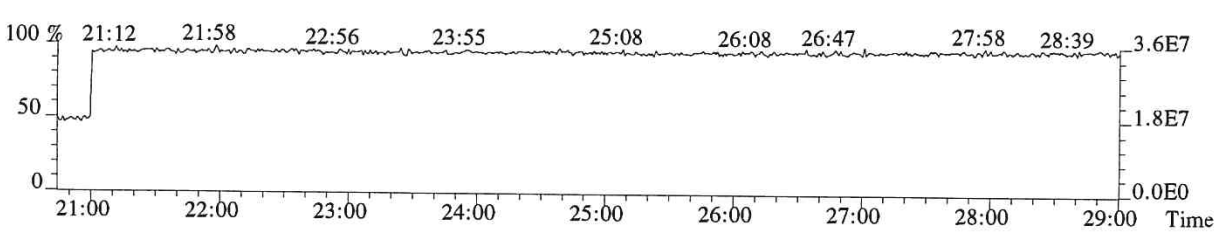
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3772.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

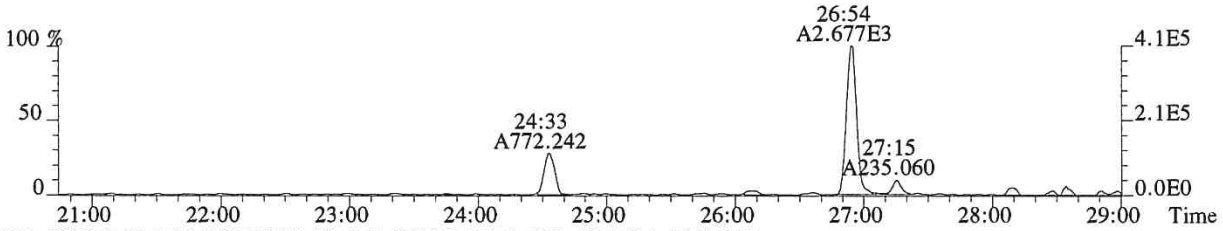


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

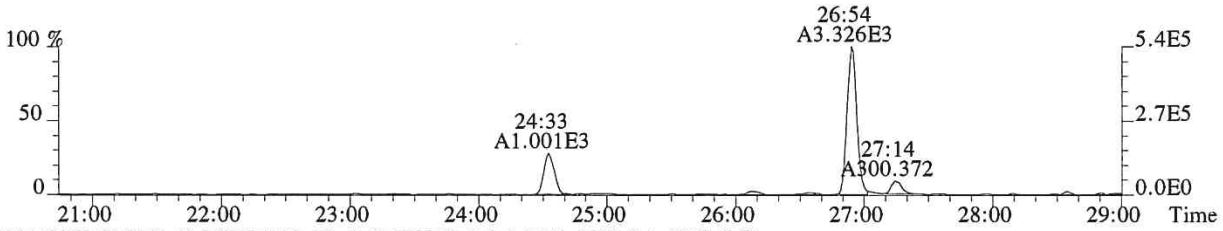


017453

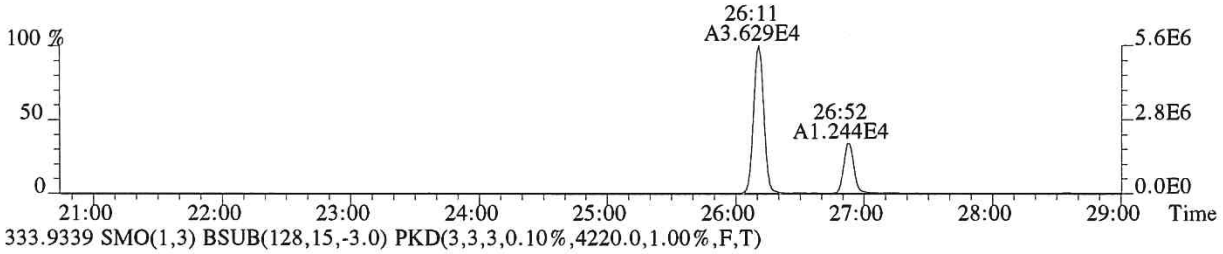
File:P519842 #1-587 Acq: 8-JAN-2019 19:06:12 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-016
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2988.0,1.00%,F,T)



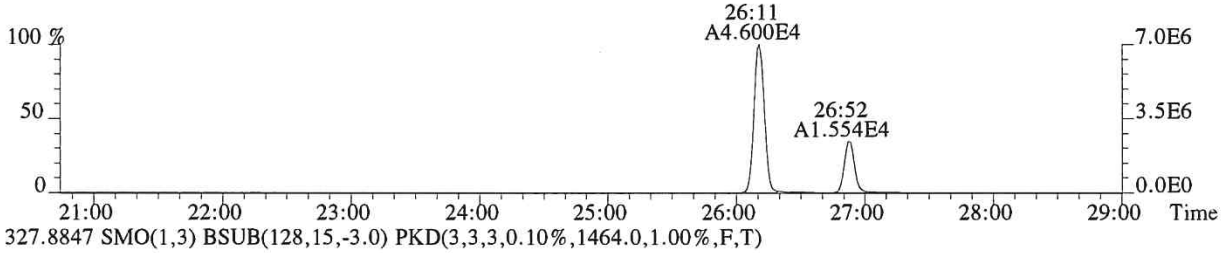
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1844.0,1.00%,F,T)



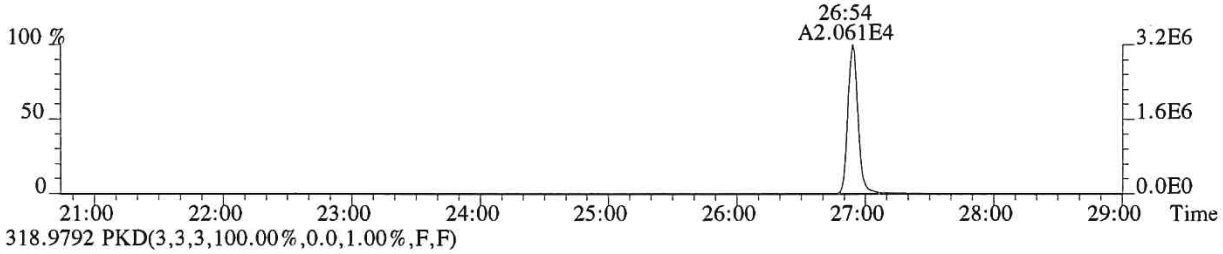
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6508.0,1.00%,F,T)



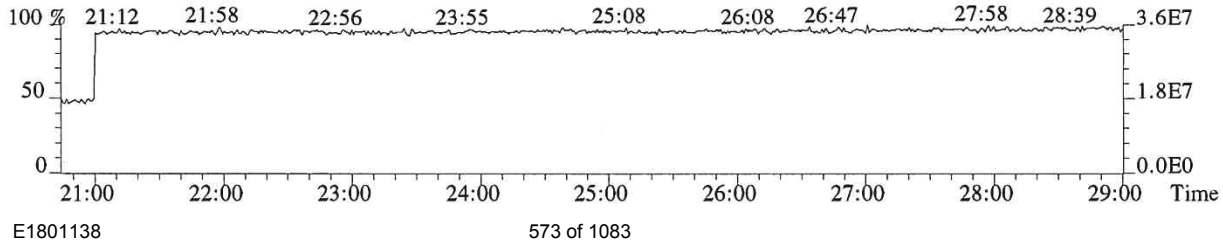
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4220.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1464.0,1.00%,F,T)

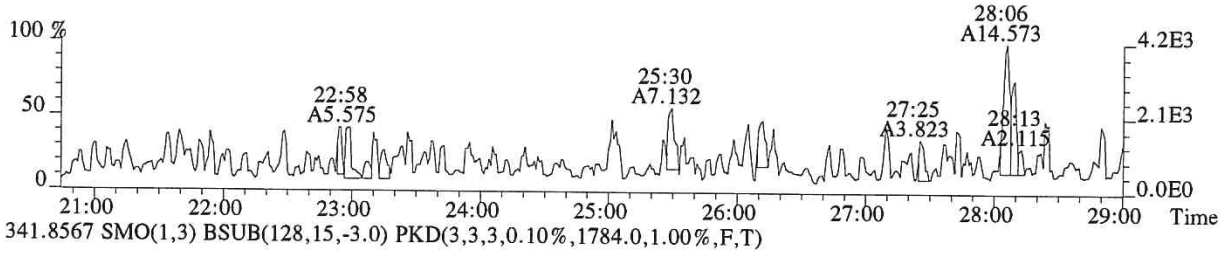


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

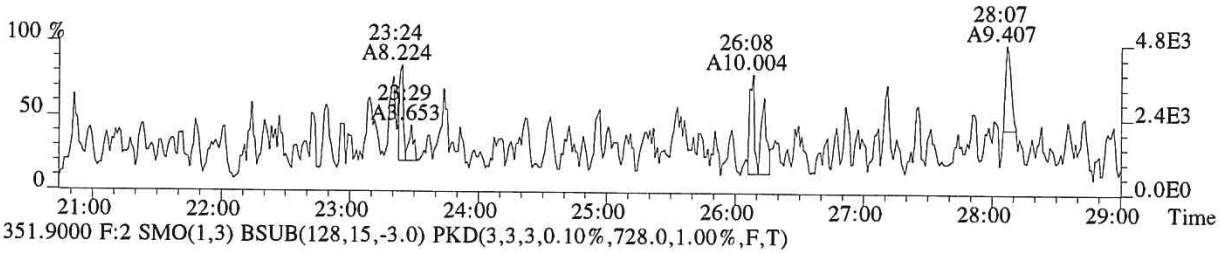


017454

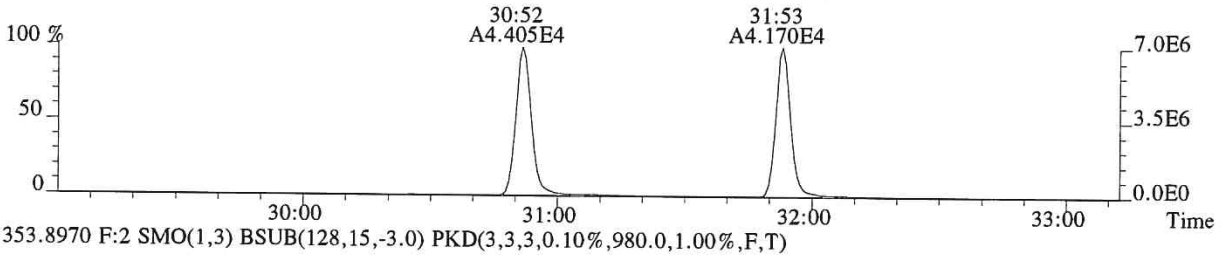
File:P519842 #1-587 Acq: 8-JAN-2019 19:06:12 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-016
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,904.0,1.00%,F,T)



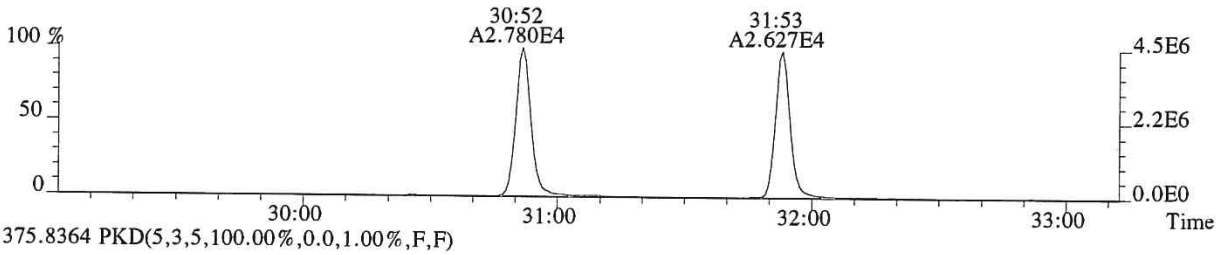
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1784.0,1.00%,F,T)



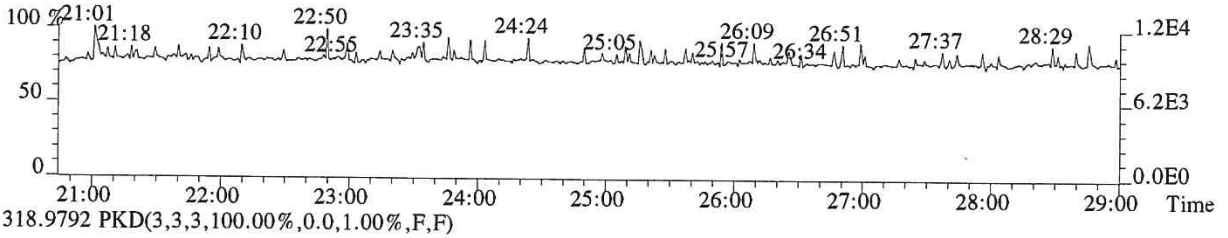
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,728.0,1.00%,F,T)



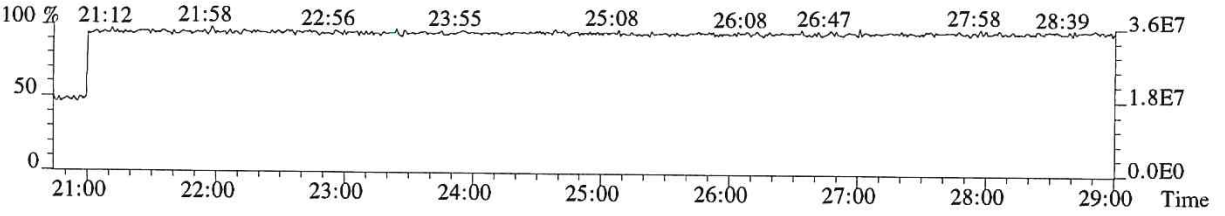
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,980.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

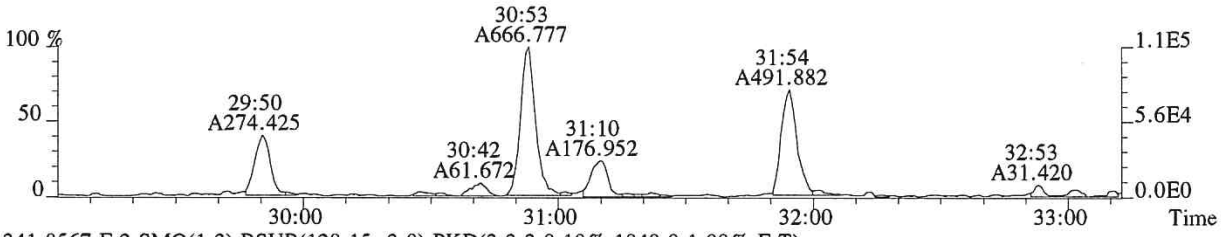


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

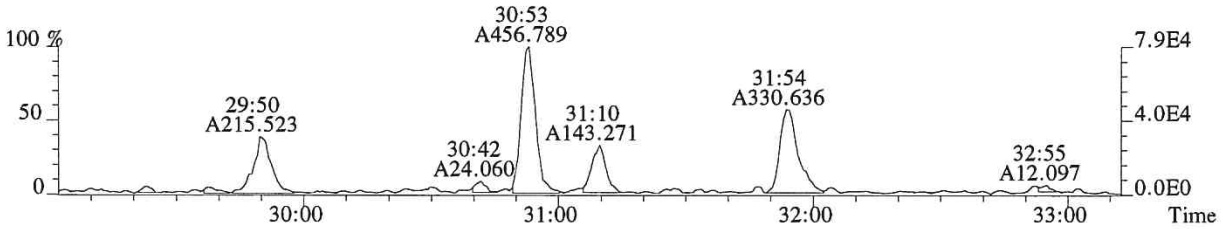


017455

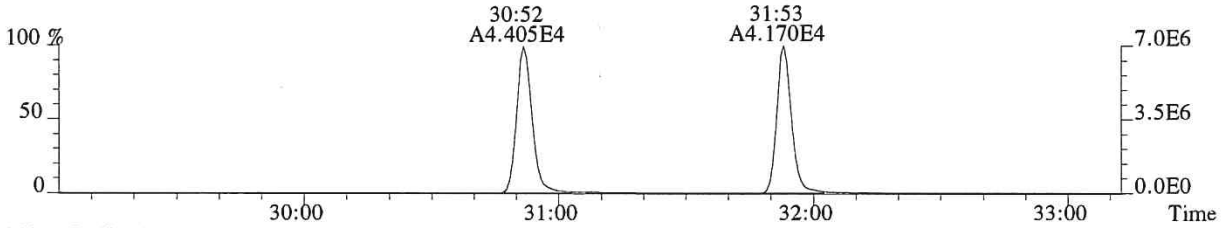
File:P519842 #1-376 Acq: 8-JAN-2019 19:06:12 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-016
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1676.0,1.00%,F,T)



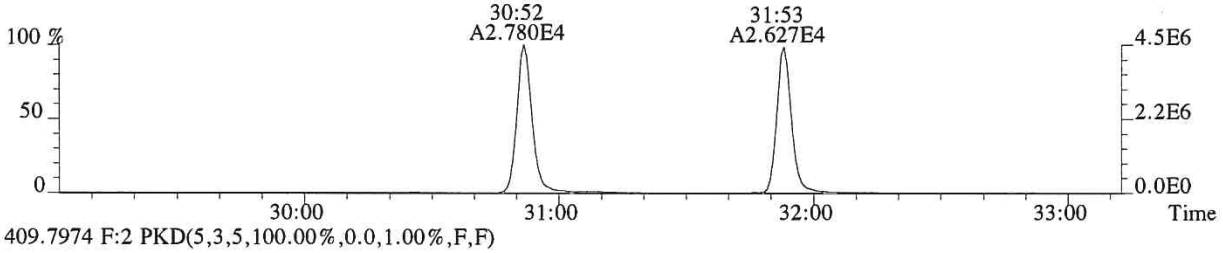
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1848.0,1.00%,F,T)



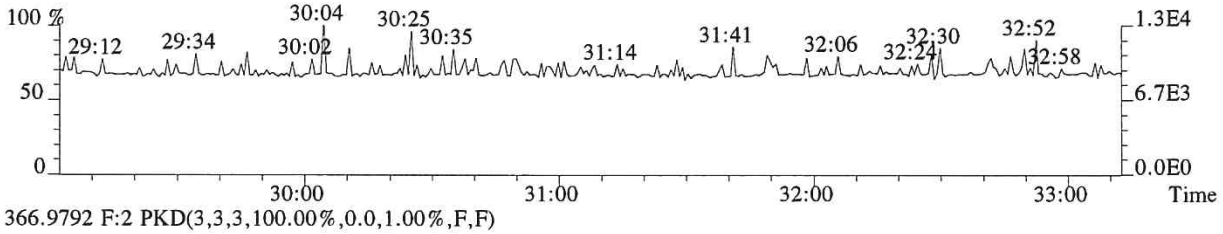
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,728.0,1.00%,F,T)



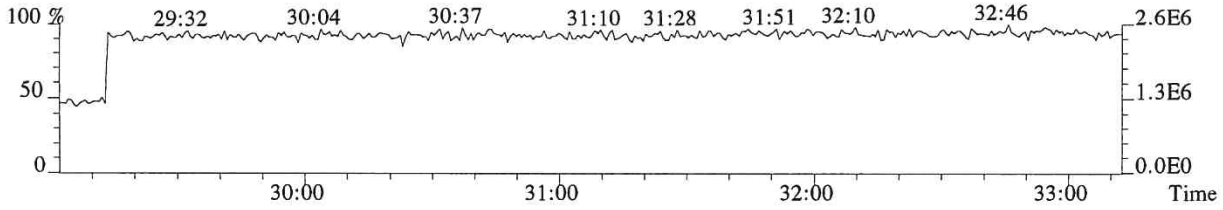
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,980.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

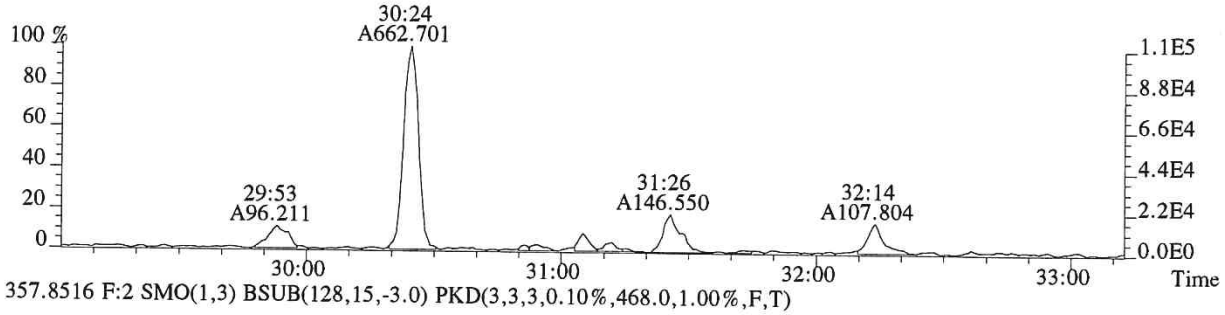


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

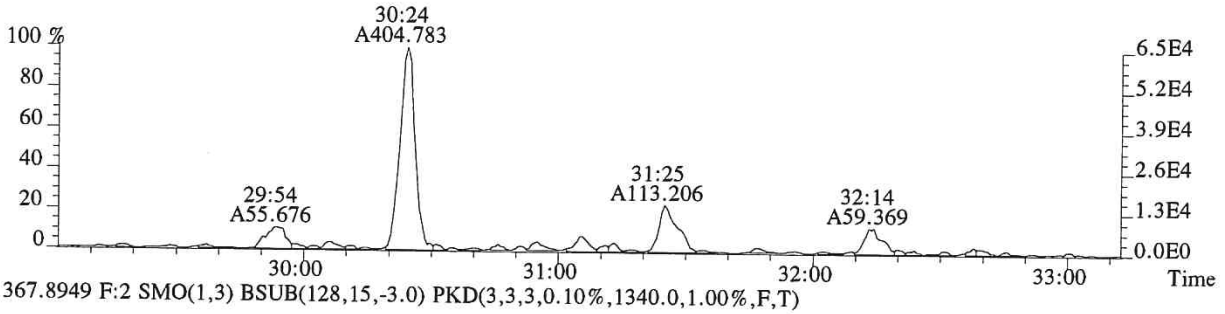


017456

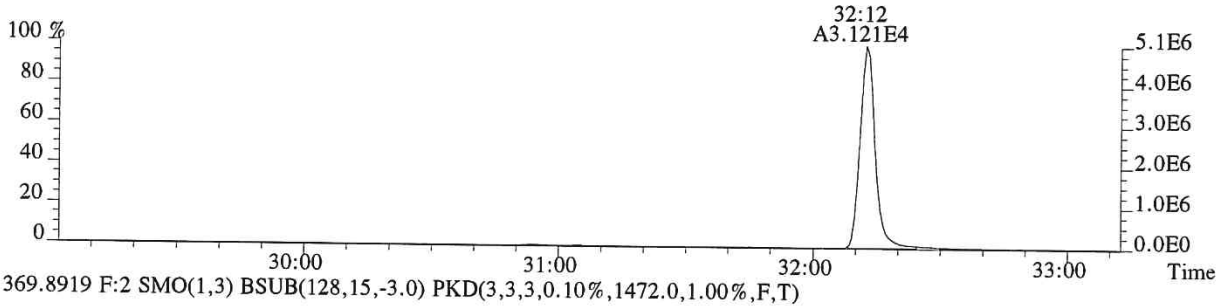
File:P519842 #1-376 Acq: 8-JAN-2019 19:06:12 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-016
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1188.0,1.00%,F,T)



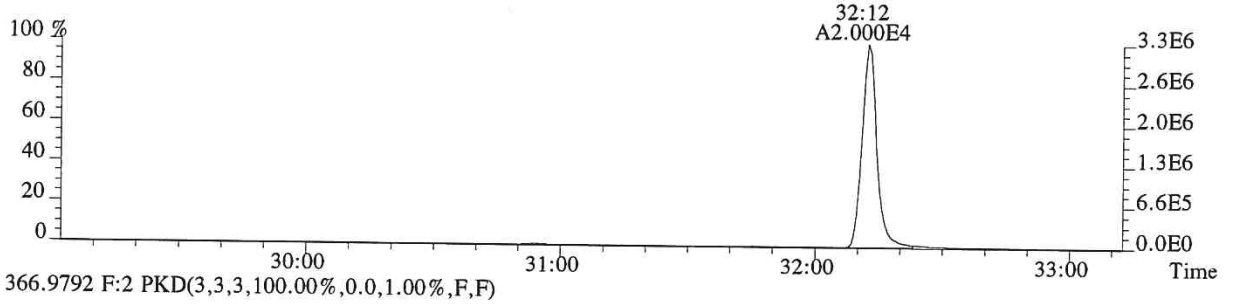
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,468.0,1.00%,F,T)



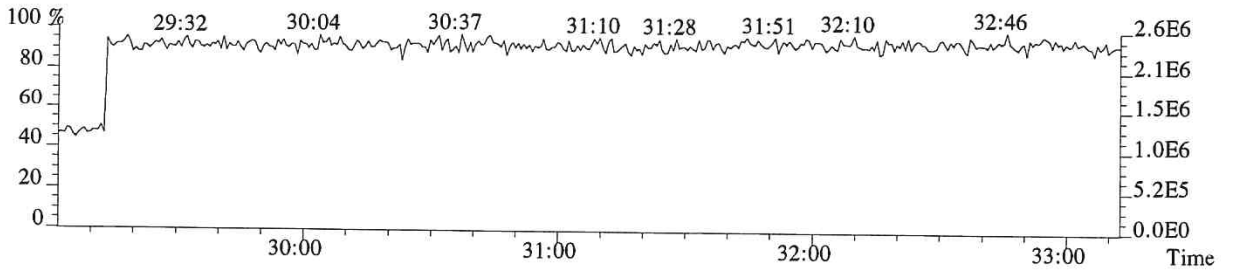
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1340.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1472.0,1.00%,F,T)

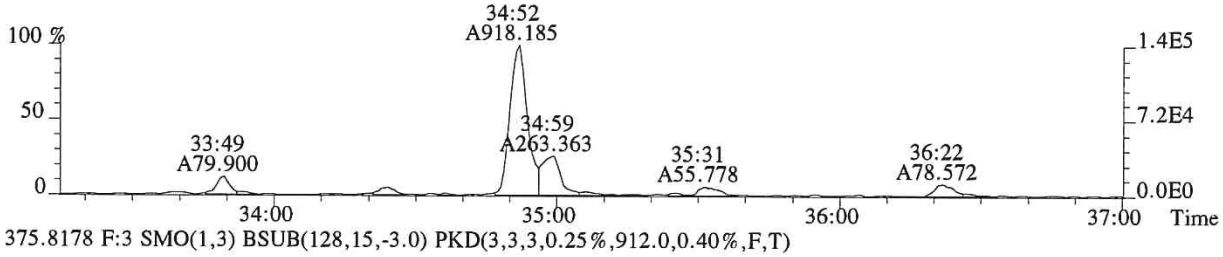


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

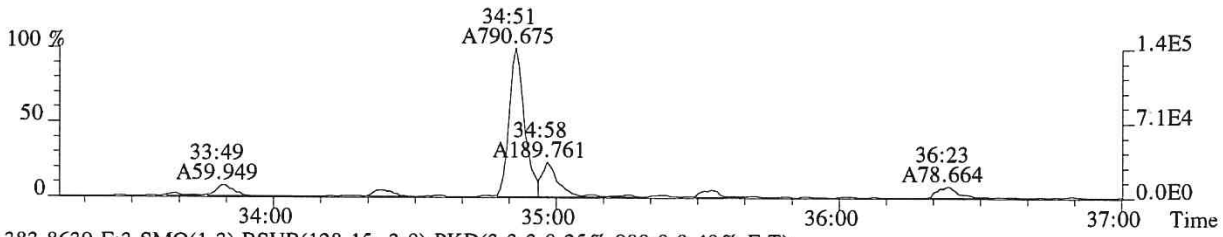


017457

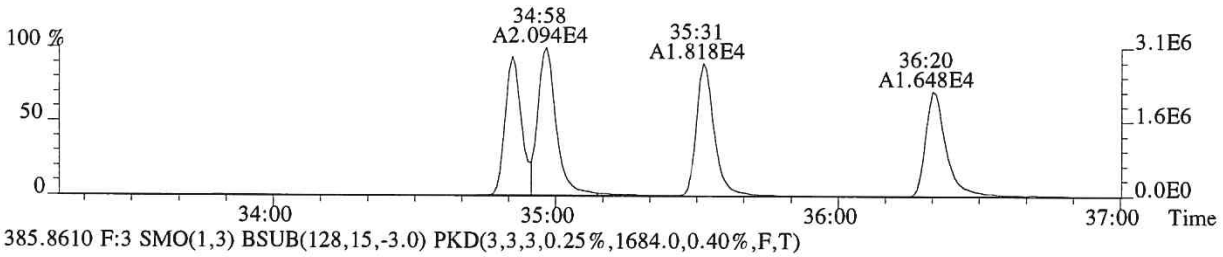
File:P519842 #1-339 Acq: 8-JAN-2019 19:06:12 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-016
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,924.0,0.40%,F,T)



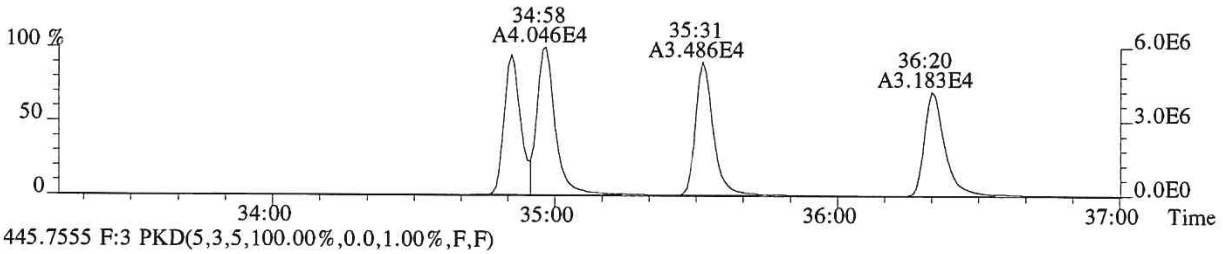
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,912.0,0.40%,F,T)



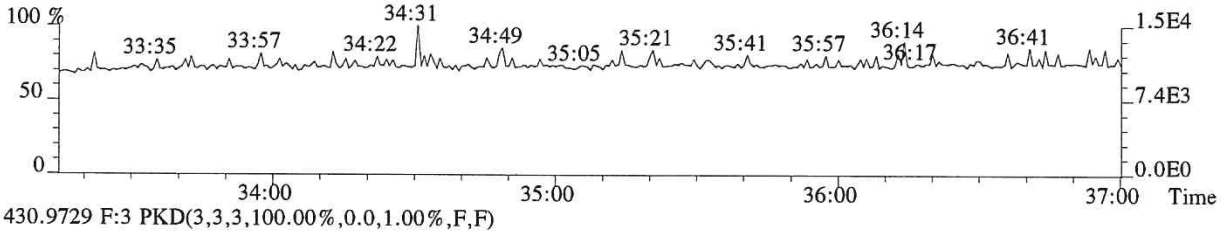
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,980.0,0.40%,F,T)



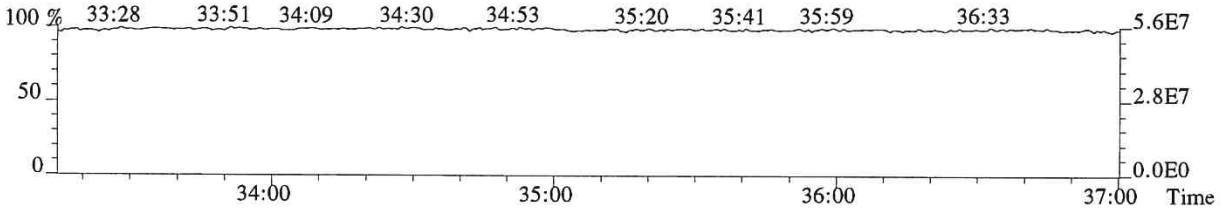
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1684.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

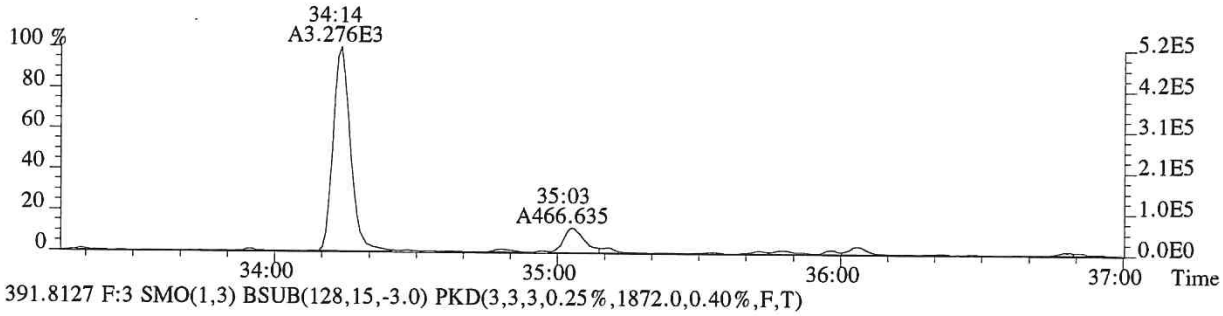


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

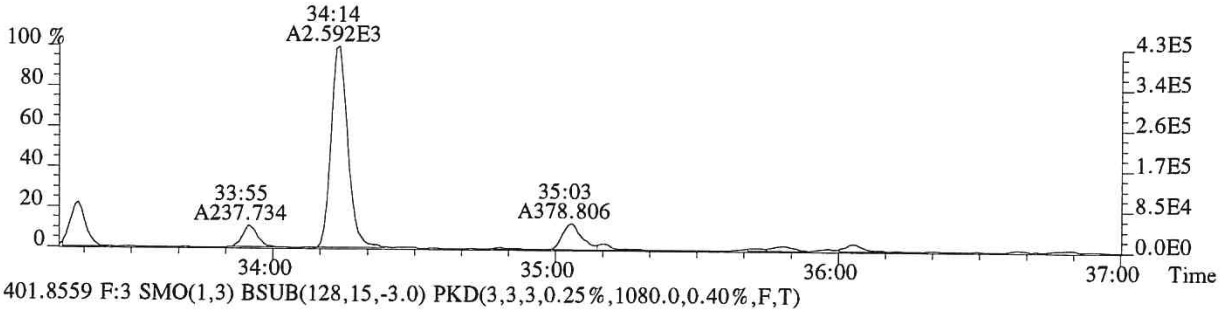


017458

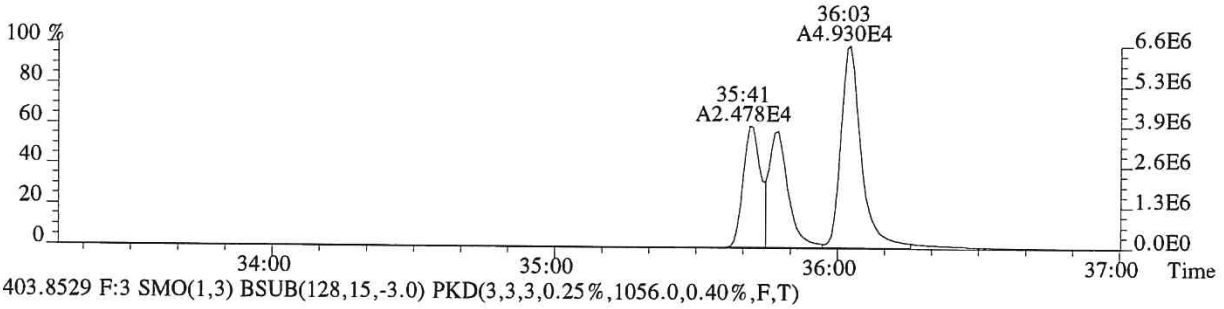
File:P519842 #1-339 Acq: 8-JAN-2019 19:06:12 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-016
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,804.0,0.40%,F,T)



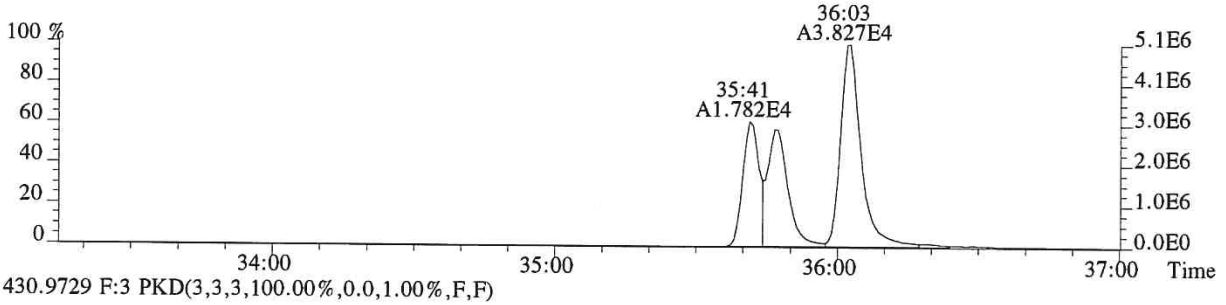
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1872.0,0.40%,F,T)



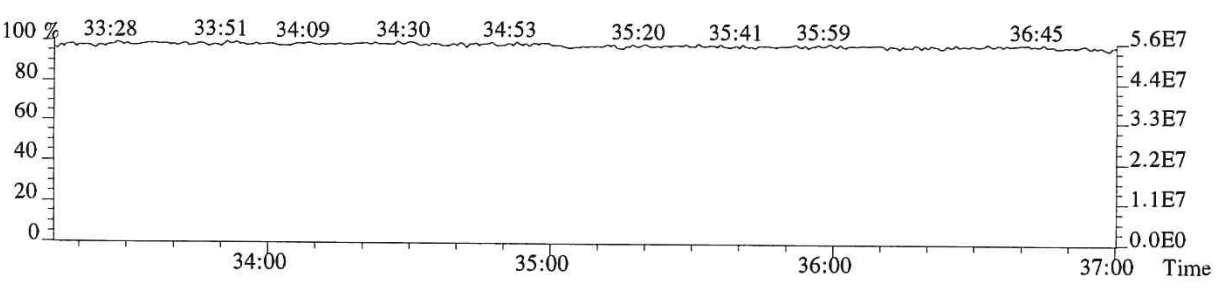
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1080.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1056.0,0.40%,F,T)

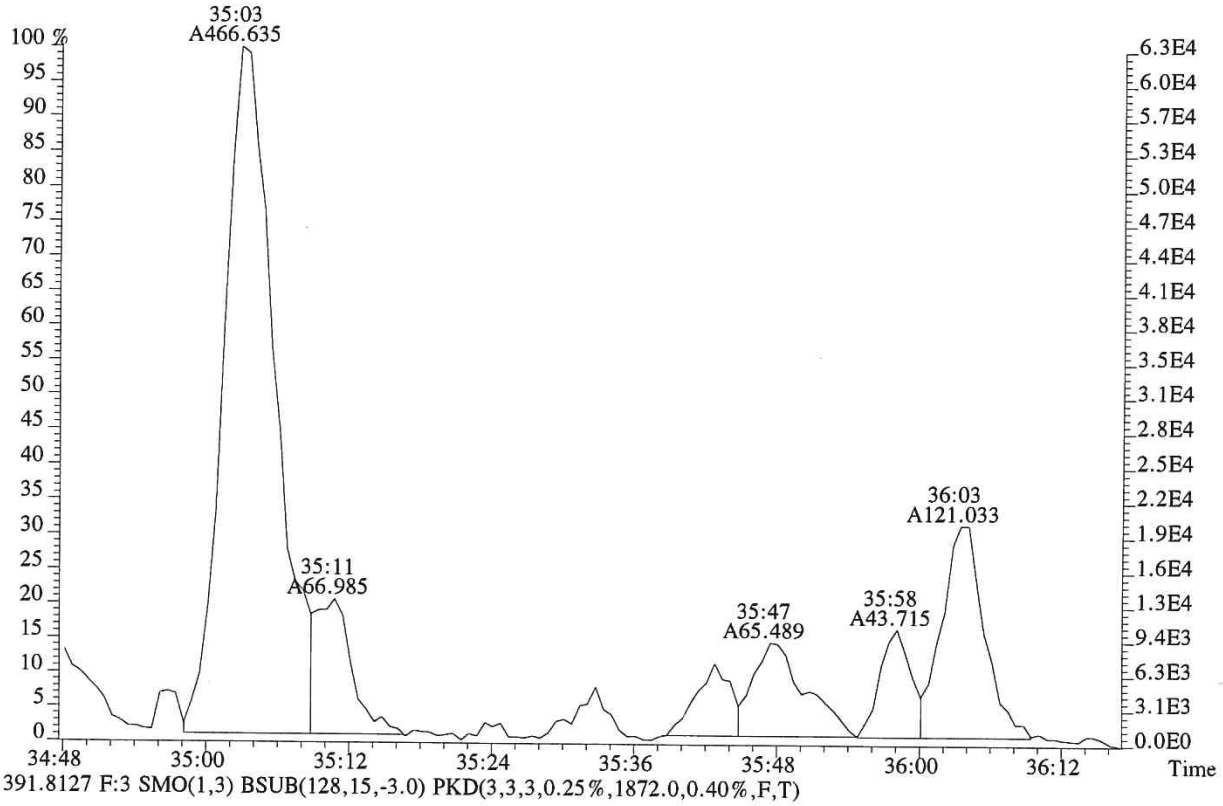


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

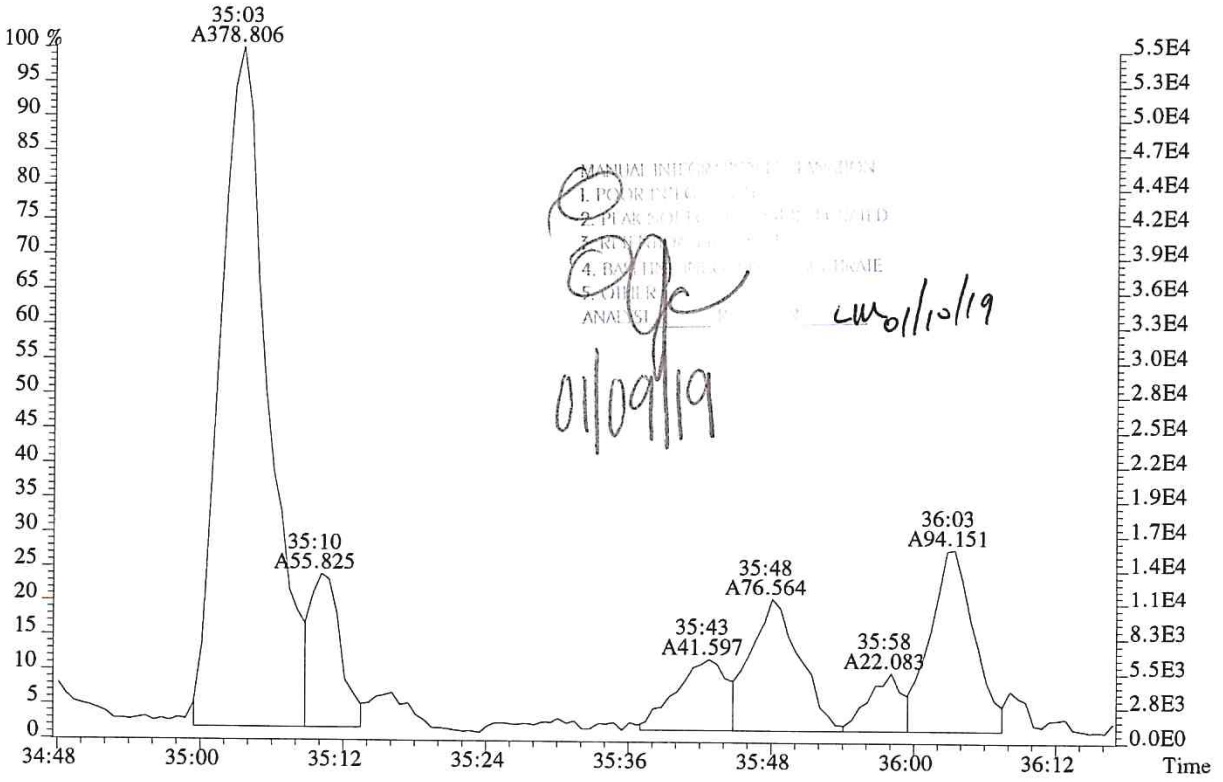


017459

File:P519842 #1-339 Acq: 8-JAN-2019 19:06:12 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-016
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,804.0,0.40%,F,T)



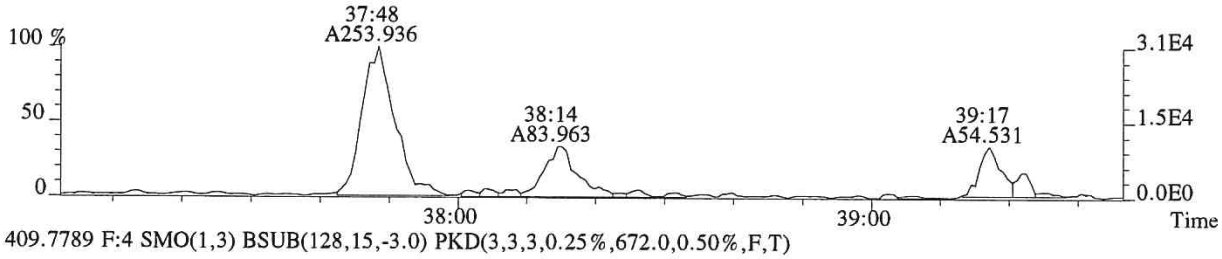
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1872.0,0.40%,F,T)



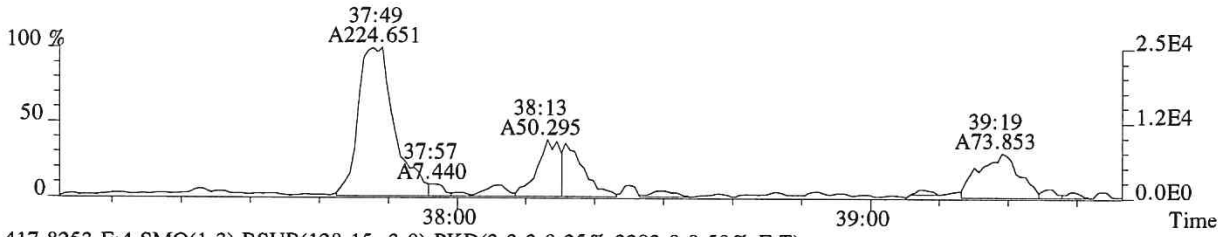
01/09/19

LW 01/10/19

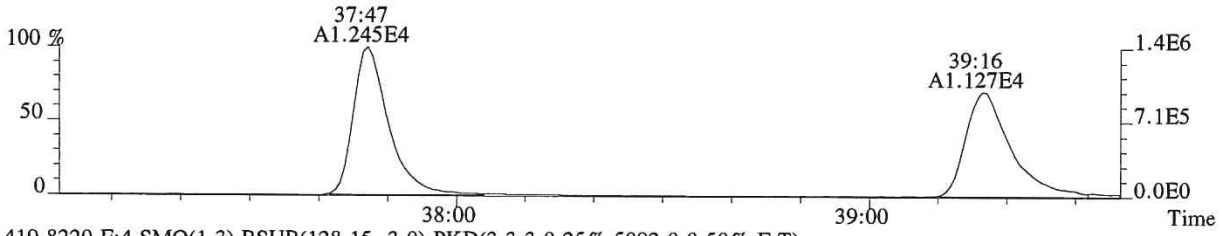
File:P519842 #1-232 Acq: 8-JAN-2019 19:06:12 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-016
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,604.0,0.50%,F,T)



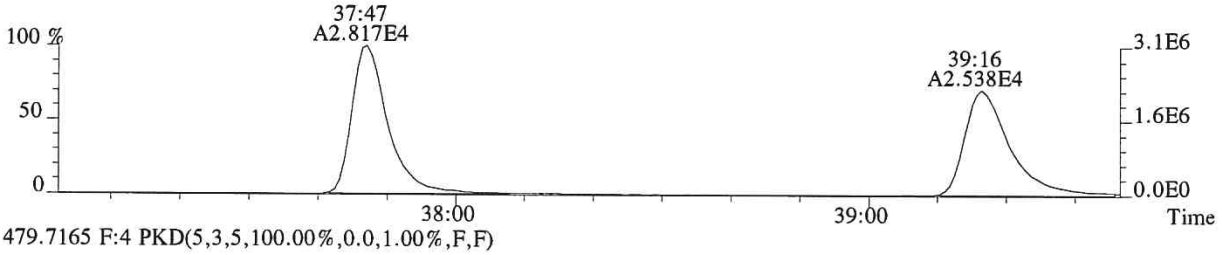
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,672.0,0.50%,F,T)



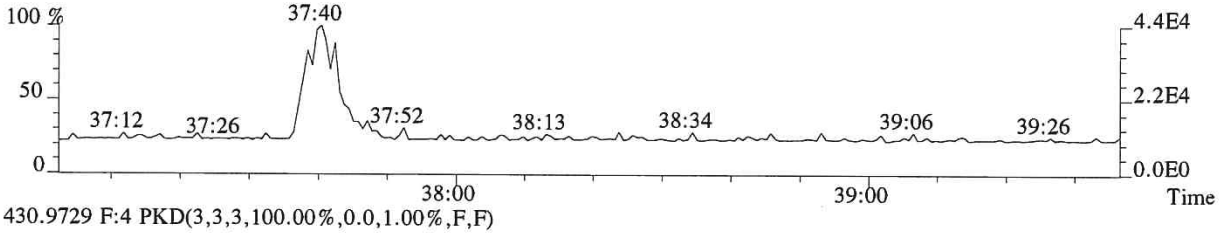
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3292.0,0.50%,F,T)



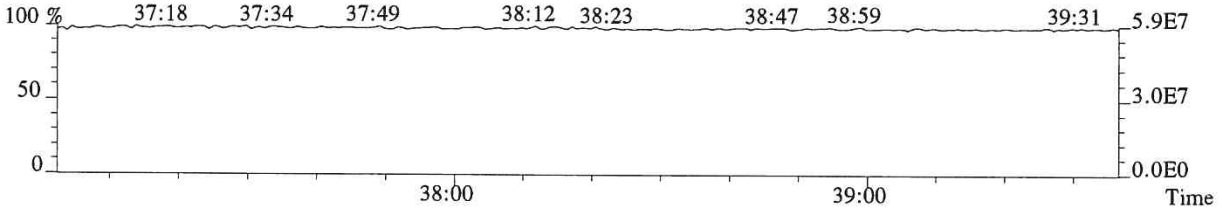
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5092.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

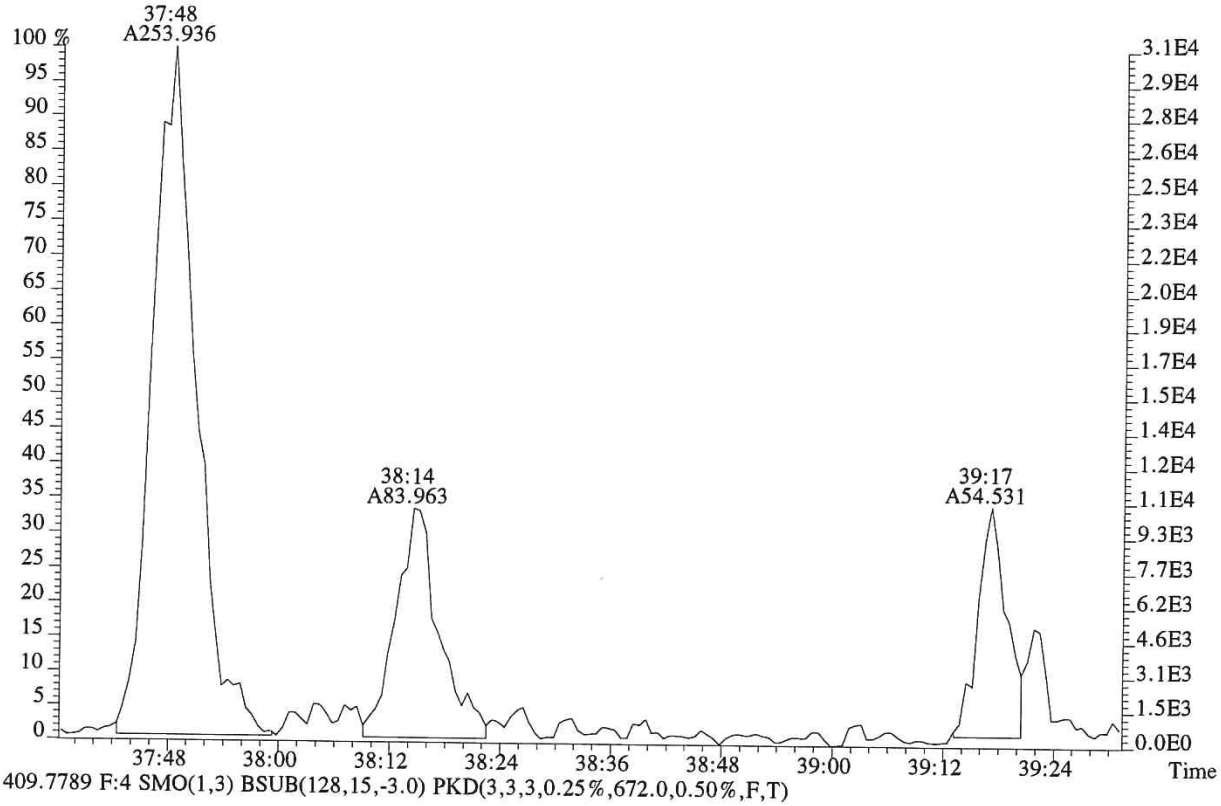


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

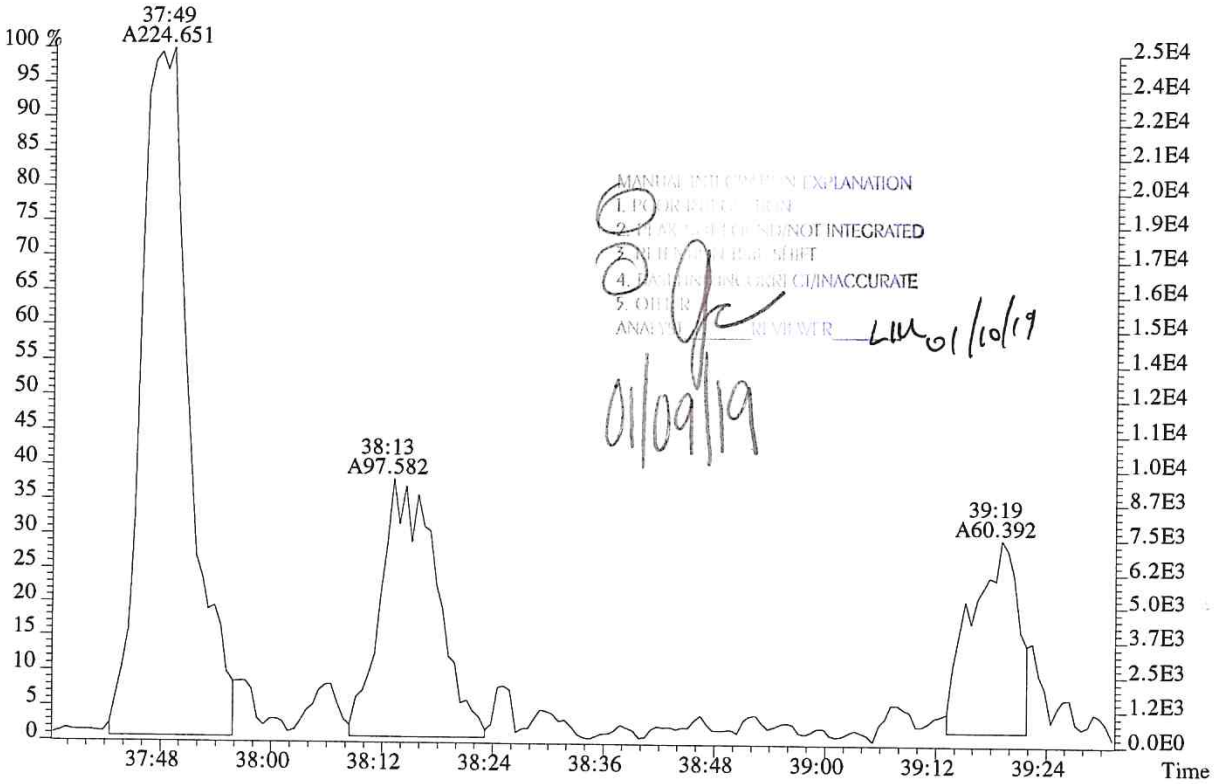


017461

File:P519842 #1-232 Acq: 8-JAN-2019 19:06:12 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-016
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,604.0,0.50%,F,T)

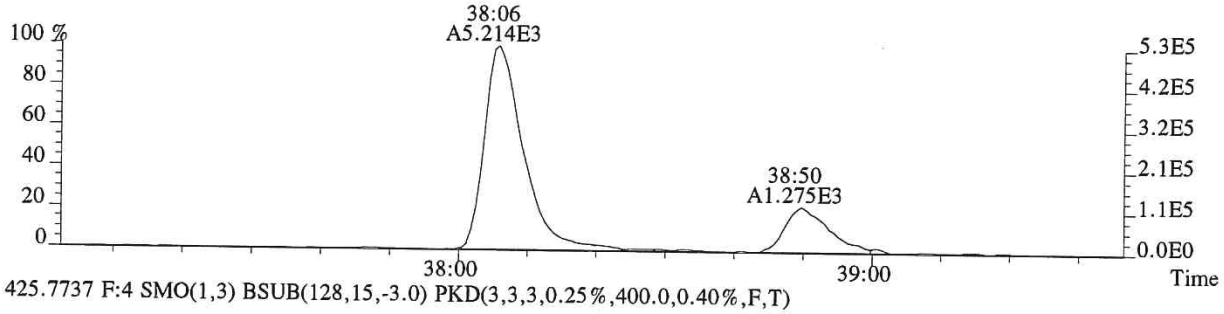


409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,672.0,0.50%,F,T)

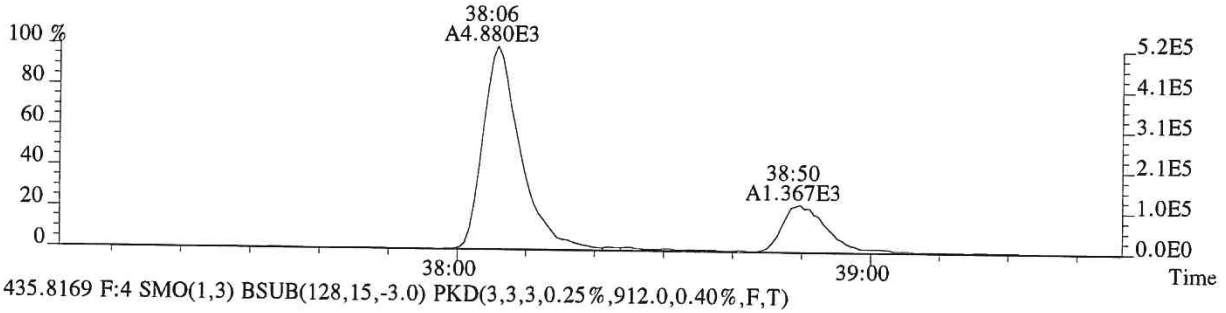


MANUAL INTEGRATION EXPLANATION
1. PO
2. PEAK NOT INTEGRATED/NOT INTEGRATED
3. BLEED
4. INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LLM 01/10/19
01/09/19

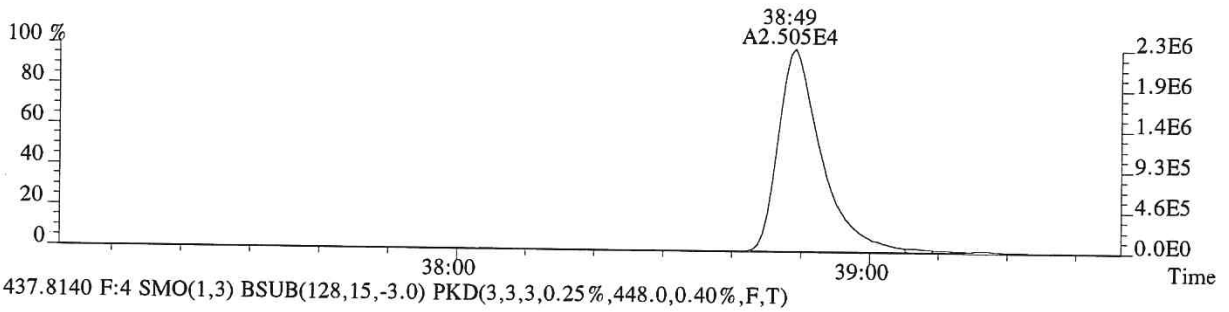
File:P519842 #1-232 Acq: 8-JAN-2019 19:06:12 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-016
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,708.0,0.40%,F,T)



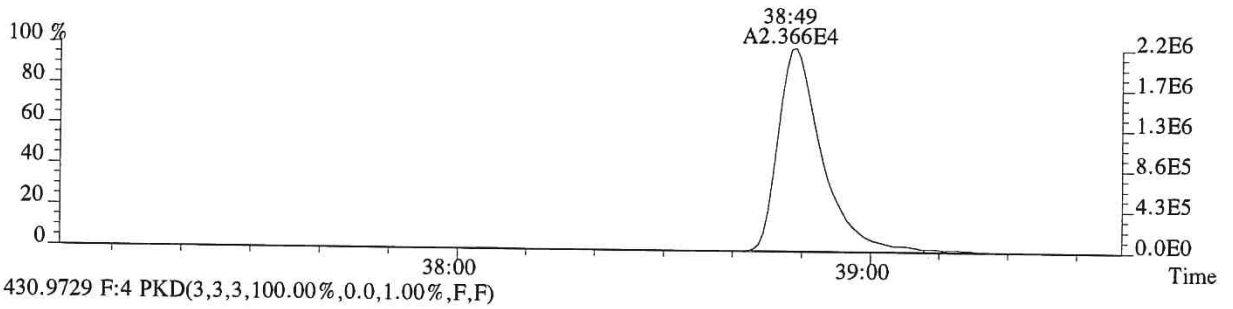
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,400.0,0.40%,F,T)



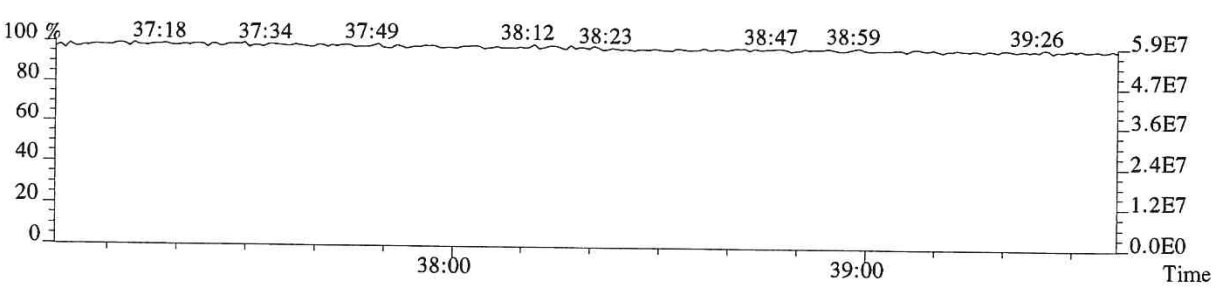
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,912.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,448.0,0.40%,F,T)

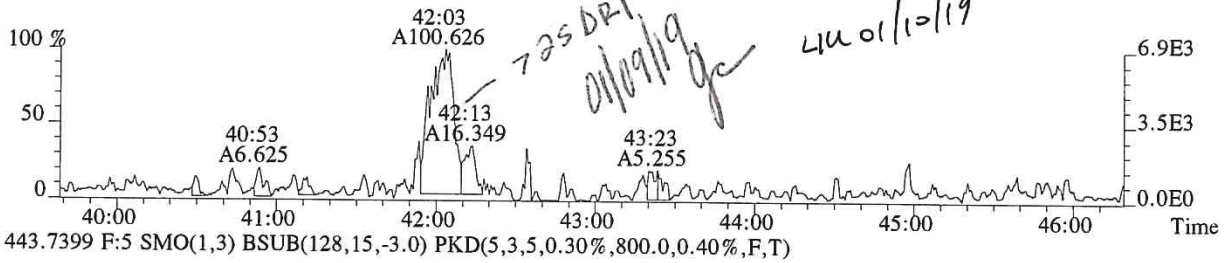


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

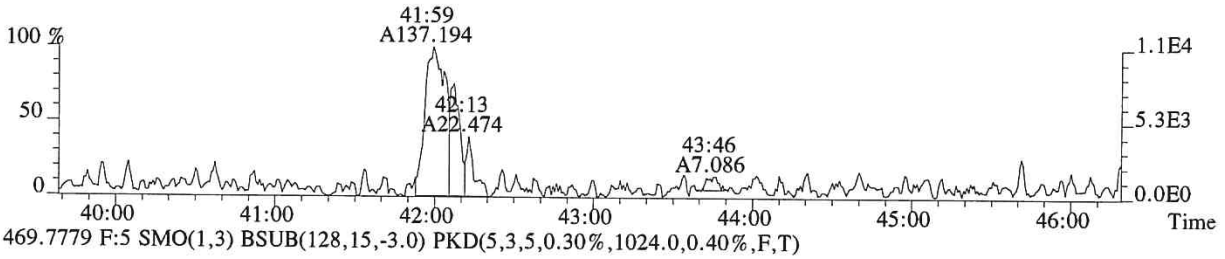


017463

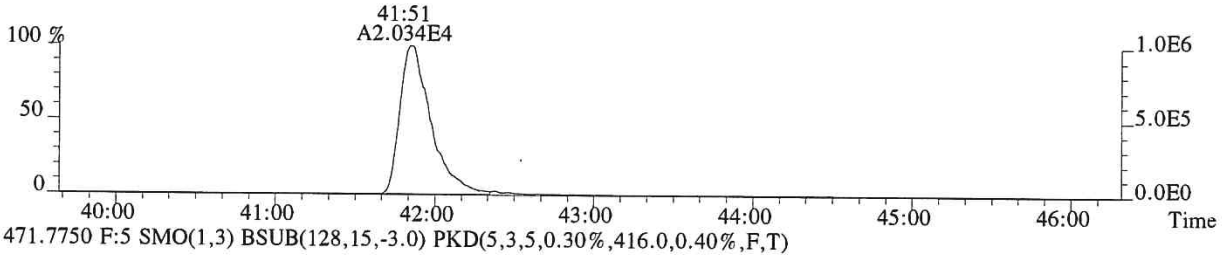
File:P519842 #1-601 Acq: 8-JAN-2019 19:06:12 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-016
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,512.0,0.40%,F,T)



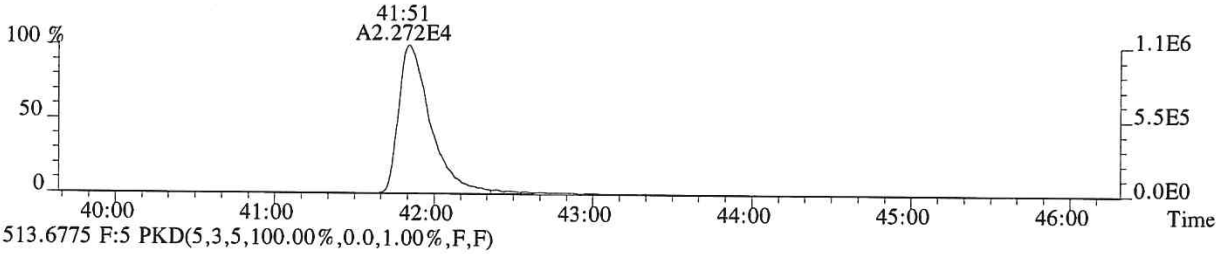
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,800.0,0.40%,F,T)



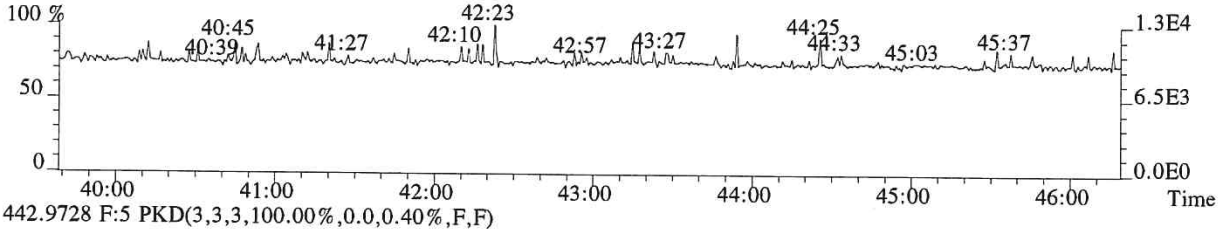
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1024.0,0.40%,F,T)



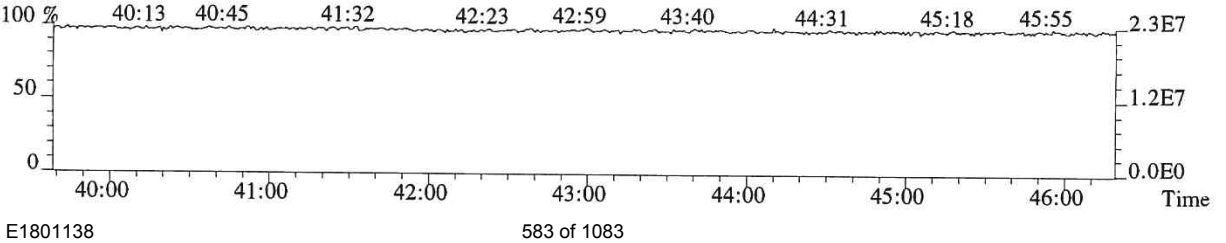
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,416.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

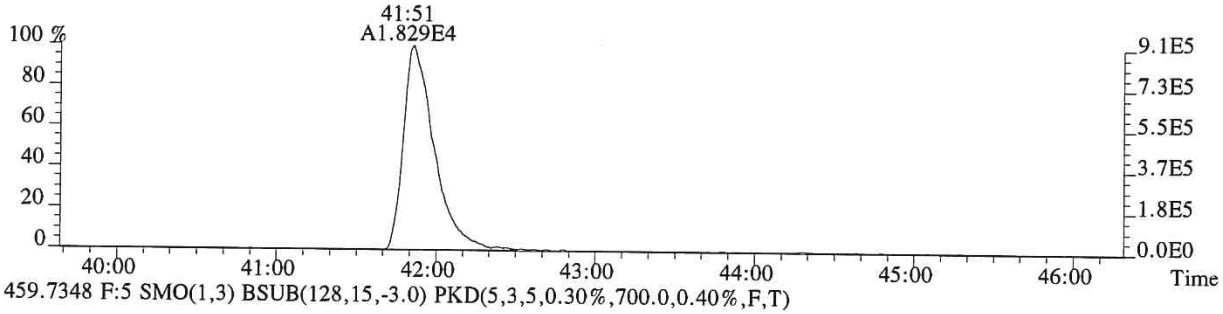


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

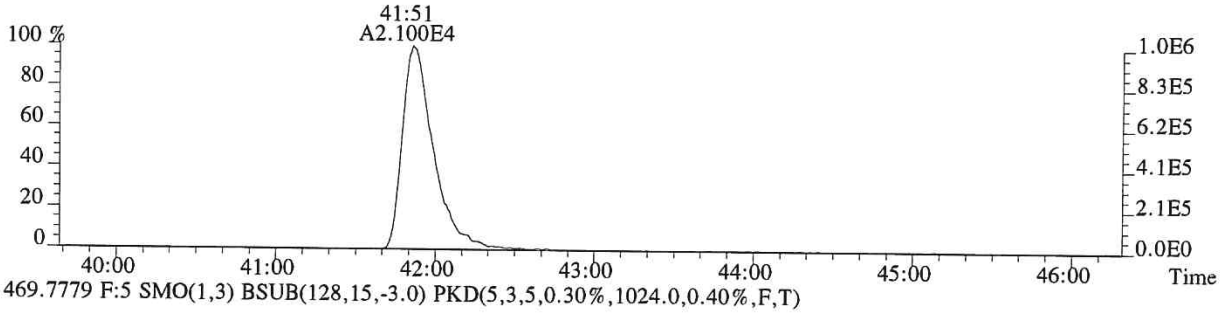


017464

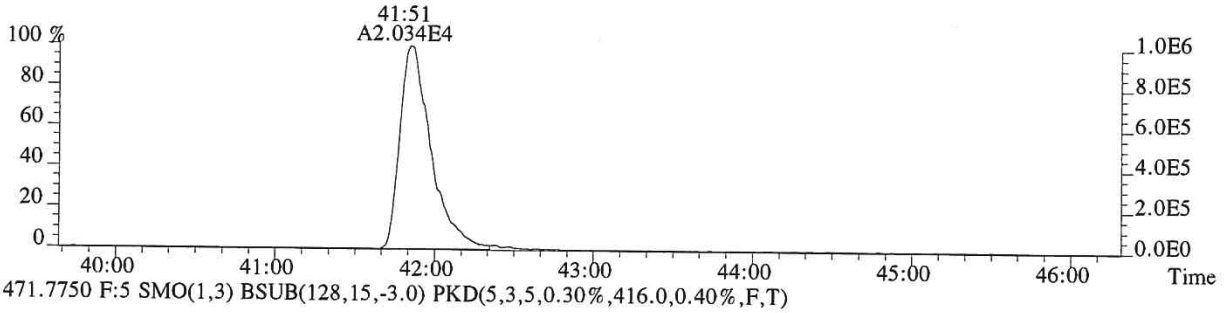
File:P519842 #1-601 Acq: 8-JAN-2019 19:06:12 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-016
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,480.0,0.40%,F,T)



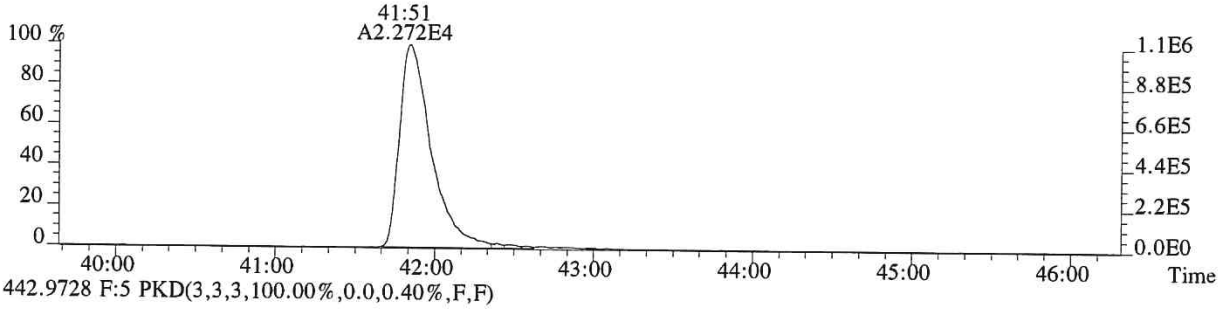
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,700.0,0.40%,F,T)



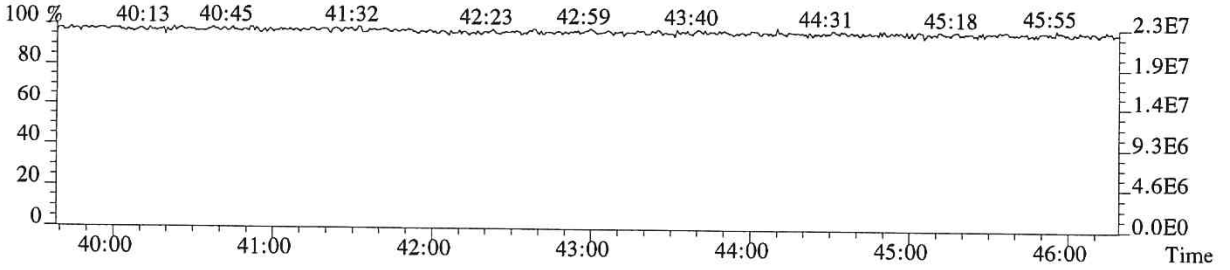
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1024.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,416.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017465

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0202

Run #19 Filename P519843 Samp: 1 Inj: 1 Acquired: 8-JAN-19 19:54:48
Processed: 9-JAN-19 11:56:36 Sample ID: E1801138-017

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:54	1.860e+04	2.418e+04	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:52	9.685e+02	6.454e+02	1.50	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:54	7.077e+02	4.507e+02	1.57	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:51	1.248e+03	1.060e+03	1.18	yes	yes	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:58	3.787e+02	2.860e+02	1.32	yes	yes	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:31	7.427e+01	4.590e+01	1.62	no	yes	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:21	9.022e+01	8.121e+01	1.11	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:47	2.669e+02	2.712e+02	0.98	yes	yes	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:16	6.975e+01	7.252e+01	0.96	yes	yes	1.258
10	Unk	OCDF	42:02	1.922e+02	1.936e+02	0.99	yes	yes	1.359
11	Unk	2,3,7,8-TCDD	26:54	4.397e+03	5.617e+03	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:13	1.056e+02	6.223e+01	1.70	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:47	4.629e+01	4.641e+01	1.00	no	yes	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:02	4.923e+01	5.033e+01	0.98	no	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:49	9.968e+02	9.555e+02	1.04	yes	no	1.025
17	Unk	OCDD	41:51	1.131e+04	1.281e+04	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:53	3.014e+04	3.838e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:51	4.635e+04	2.968e+04	1.56	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:52	4.286e+04	2.684e+04	1.60	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:50	1.754e+04	3.474e+04	0.50	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:57	2.120e+04	4.123e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:31	1.572e+04	3.057e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:19	1.630e+04	3.183e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:46	1.165e+04	2.584e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:16	1.039e+04	2.368e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:52	1.409e+04	1.785e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:12	3.299e+04	2.054e+04	1.61	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:41	2.516e+04	1.931e+04	1.30	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:47	2.700e+04	2.112e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:48	2.259e+04	2.135e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	41:50	1.593e+04	1.778e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:10	3.675e+04	4.533e+04	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:02	4.893e+04	3.799e+04	1.29	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:54	2.330e+04				no	1.014

$$\text{OCDD} = \frac{(1.131e+04 + 1.281e+04) \times 4000 \text{ pg} \times 1}{(1.593e+04 + 1.778e+04) \times 10.926 \text{ g} \times 78.4 / 100 \times 1.118} = 298.8 \text{ ng/kg}$$

LM 01/10/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0202

Run #19 Filename P519843 Samp: 1 Inj: 1 Acquired: 8-JAN-19 19:54:48
Processed: 9-JAN-19 11:56:36 LAB. ID: E1801138-017

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.53e+06	1.61e+03	1.6e+03	3.24e+06	2.20e+03	1.5e+03
2	1,2,3,7,8-PeCDF	1.54e+05	1.09e+03	1.4e+02	1.03e+05	1.90e+03	5.4e+01
3	2,3,4,7,8-PeCDF	1.06e+05	1.09e+03	9.7e+01	6.36e+04	1.90e+03	3.3e+01
4	1,2,3,4,7,8-HxCDF	2.04e+05	5.24e+02	3.9e+02	1.78e+05	5.20e+02	3.4e+02
5	1,2,3,6,7,8-HxCDF	5.44e+04	5.24e+02	1.0e+02	4.54e+04	5.20e+02	8.7e+01
6	2,3,4,6,7,8-HxCDF	9.08e+03	5.24e+02	1.7e+01	6.22e+03	5.20e+02	1.2e+01
7	1,2,3,7,8,9-HxCDF	1.32e+04	5.24e+02	2.5e+01	9.35e+03	5.20e+02	1.8e+01
8	1,2,3,4,6,7,8-HpCDF	3.55e+04	9.52e+02	3.7e+01	3.57e+04	3.16e+02	1.1e+02
9	1,2,3,4,7,8,9-HpCDF	9.50e+03	9.52e+02	1.0e+01	7.73e+03	3.16e+02	2.4e+01
10	OCDF	1.16e+04	3.04e+02	3.8e+01	1.23e+04	1.26e+03	9.8e+00
11	2,3,7,8-TCDD	7.16e+05	2.56e+03	2.8e+02	9.08e+05	1.77e+03	5.1e+02
12	1,2,3,7,8-PeCDD	1.42e+04	1.56e+03	9.1e+00	9.82e+03	5.72e+02	1.7e+01
13	1,2,3,4,7,8-HxCDD	*	1.47e+03	*	*	1.88e+03	*
14	1,2,3,6,7,8-HxCDD	7.26e+03	1.47e+03	4.9e+00	5.56e+03	1.88e+03	3.0e+00
15	1,2,3,7,8,9-HxCDD	7.80e+03	1.47e+03	5.3e+00	6.18e+03	1.88e+03	3.3e+00
16	1,2,3,4,6,7,8-HpCDD	9.66e+04	2.24e+03	4.3e+01	9.04e+04	5.24e+02	1.7e+02
17	OCDD	5.52e+05	5.04e+02	1.1e+03	6.51e+05	5.44e+02	1.2e+03
18	13C-2,3,7,8-TCDF	4.41e+06	7.18e+03	6.1e+02	5.53e+06	3.96e+03	1.4e+03
19	13C-1,2,3,7,8-PeCDF	7.54e+06	8.12e+02	9.3e+03	4.84e+06	3.88e+02	1.2e+04
20	13C-2,3,4,7,8-PeCDF	7.30e+06	8.12e+02	9.0e+03	4.57e+06	3.88e+02	1.2e+04
21	13C-1,2,3,4,7,8-HxCDF	2.96e+06	7.36e+02	4.0e+03	5.81e+06	1.53e+03	3.8e+03
22	13C-1,2,3,6,7,8-HxCDF	3.22e+06	7.36e+02	4.4e+03	6.22e+06	1.53e+03	4.1e+03
23	13C-2,3,4,6,7,8-HxCDF	2.42e+06	7.36e+02	3.3e+03	4.77e+06	1.53e+03	3.1e+03
24	13C-1,2,3,7,8,9-HxCDF	2.24e+06	7.36e+02	3.0e+03	4.31e+06	1.53e+03	2.8e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.33e+06	1.56e+03	8.5e+02	3.00e+06	5.41e+03	5.5e+02
26	13C-1,2,3,4,7,8,9-HpCDF	8.86e+05	1.56e+03	5.7e+02	2.06e+06	5.41e+03	3.8e+02
27	13C-2,3,7,8-TCDD	2.26e+06	7.09e+03	3.2e+02	2.84e+06	3.22e+03	8.8e+02
28	13C-1,2,3,7,8-PeCDD	5.37e+06	1.23e+03	4.4e+03	3.32e+06	1.50e+03	2.2e+03
29	13C-1,2,3,4,7,8-HxCDD	4.07e+06	1.12e+03	3.7e+03	3.14e+06	1.21e+03	2.6e+03
30	13C-1,2,3,6,7,8-HxCDD	3.80e+06	1.12e+03	3.4e+03	2.99e+06	1.21e+03	2.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.10e+06	3.20e+02	6.6e+03	1.96e+06	7.16e+02	2.7e+03
32	13C-OCDD	7.81e+05	6.72e+02	1.2e+03	8.71e+05	5.16e+02	1.7e+03
33	13C-1,2,3,4-TCDD	5.69e+06	7.09e+03	8.0e+02	7.01e+06	3.22e+03	2.2e+03
34	13C-1,2,3,7,8,9-HxCDD	6.59e+06	1.12e+03	5.9e+03	5.17e+06	1.21e+03	4.3e+03
35	37Cl-2,3,7,8-TCDD	3.75e+06	1.46e+03	2.6e+03			

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Peak List Summary

CLIENT ID.
SL0202

Entry: 36 Totals Name: Total Tetra-Furans

Run: 19 File: P519843 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 19:54:48 Processed: 9-JAN-19 11:56:36

Mass: 303.9020 305.8990 Tot Response: 7.43e+04 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:43	1.85e+02	2.48e+02	0.75	yes	4.34e+02		n	n
2	23:01	9.48e+02	1.23e+03	0.77	yes	2.18e+03		n	n
3	23:23	3.03e+02	3.51e+02	0.86	yes	6.53e+02		n	n
4	23:40	7.37e+02	1.02e+03	0.73	yes	1.75e+03		n	n
5	24:54	8.35e+03	1.10e+04	0.76	yes	1.93e+04		n	n
6	25:12	4.28e+02	6.01e+02	0.71	yes	1.03e+03		n	n
7	25:54	1.86e+04	2.42e+04	0.77	yes	4.28e+04	2,3,7,8-TCDF	n	n
8	26:19	1.26e+03	1.70e+03	0.74	yes	2.96e+03		n	n
9	28:07	1.43e+03	1.76e+03	0.81	yes	3.19e+03		n	n

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Peak List Summary

CLIENT ID.
SL0202

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 19 File: P519843 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 19:54:48 Processed: 9-JAN-19 11:56:36

Mass: 319.8970 321.8940 Tot Response: 1.48e+04 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:33	1.53e+03	1.92e+03	0.80	yes	3.44e+03		n	n
2	26:08	1.64e+02	1.91e+02	0.86	yes	3.55e+02		n	n
3	26:54	4.40e+03	5.62e+03	0.78	yes	1.00e+04	2,3,7,8-TCDD	n	n
4	27:14	4.55e+02	5.55e+02	0.82	yes	1.01e+03		n	n

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SL0202

Entry: 39 Totals Name: Total Penta-Furans2

Run: 19 File: P519843 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 19:54:48 Processed: 9-JAN-19 11:56:36

Mass: 339.8600 341.8570 Tot Response: 4.16e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:50	4.28e+02	2.97e+02	1.44	yes	7.25e+02		n	n
2	30:40	9.23e+01	6.57e+01	1.40	yes	1.58e+02		n	n
3	30:52	9.68e+02	6.45e+02	1.50	yes	1.61e+03	1,2,3,7,8-PeCDF	n	n
4	31:09	3.20e+02	1.81e+02	1.77	yes	5.01e+02		n	n
5	31:54	7.08e+02	4.51e+02	1.57	yes	1.16e+03	2,3,4,7,8-PeCDF	n	n

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Peak List Summary

CLIENT ID.
SL0202

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 19 File: P519843 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 19:54:48 Processed: 9-JAN-19 11:56:36

Mass: 355.8550 357.8520 Tot Response: 3.13e+03 RRF: 0.9565

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:52	1.36e+02	9.85e+01	1.38	yes	2.34e+02		n	n
2	30:24	1.43e+03	8.91e+02	1.61	yes	2.32e+03		n	n
3	31:26	2.58e+02	1.48e+02	1.74	yes	4.06e+02		n	n
4	32:13	1.06e+02	6.22e+01	1.70	yes	1.68e+02	1,2,3,7,8-PeCDD	n	n

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Peak List Summary

CLIENT ID.
SL0202

Entry: 41 Totals Name: Total Hexa-Furans

Run: 19 File: P519843 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 19:54:48 Processed: 9-JAN-19 11:56:36

Mass: 373.8210 375.8180 Tot Response: 3.32e+03 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:49	9.40e+01	7.65e+01	1.23	yes	1.70e+02		n	n
2	34:51	1.25e+03	1.06e+03	1.18	yes	2.31e+03	1,2,3,4,7,8-HxCDF	y	y
3	34:58	3.79e+02	2.86e+02	1.32	yes	6.65e+02	1,2,3,6,7,8-HxCDF	y	y
4	36:21	9.02e+01	8.12e+01	1.11	yes	1.71e+02	1,2,3,7,8,9-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0202

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 19 File: P519843 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 19:54:48 Processed: 9-JAN-19 11:56:36

Mass: 389.8160 391.8130 Tot Response: 1.18e+04 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:13	6.24e+03	5.02e+03 1.24	yes	1.13e+04		n	n
2	35:02	2.94e+02	2.68e+02 1.10	yes	5.62e+02		n	n

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Entry: 43 Totals Name: Total Hepta-Furans

Run: 19 File: P519843 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 19:54:48 Processed: 9-JAN-19 11:56:36

Mass: 407.7820 409.7790 Tot Response: 9.28e+02 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:47	2.67e+02	2.71e+02	0.98	yes	5.38e+02	1,2,3,4,6,7,8-HpCDF	y	y
2	38:13	1.17e+02	1.31e+02	0.89	yes	2.48e+02		y	y
3	39:16	6.98e+01	7.25e+01	0.96	yes	1.42e+02	1,2,3,4,7,8,9-HpCDF	y	y

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Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 19 File: P519843 Sample:1 Injection:1 Function:4

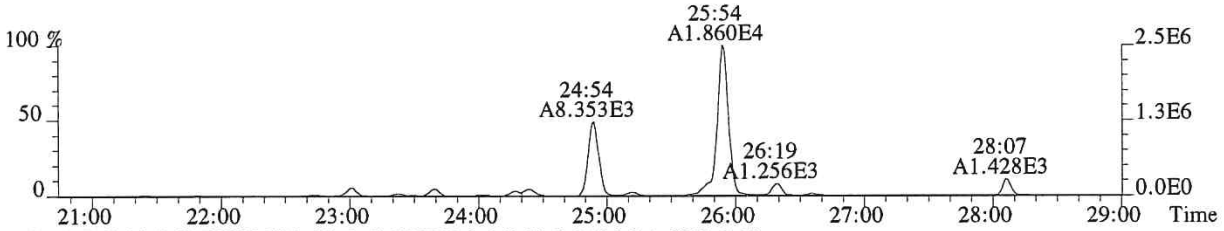
Acquired: 8-JAN-19 19:54:48 Processed: 9-JAN-19 11:56:36

Mass: 423.7770 425.7740 Tot Response: 1.14e+04 RRF: 1.025

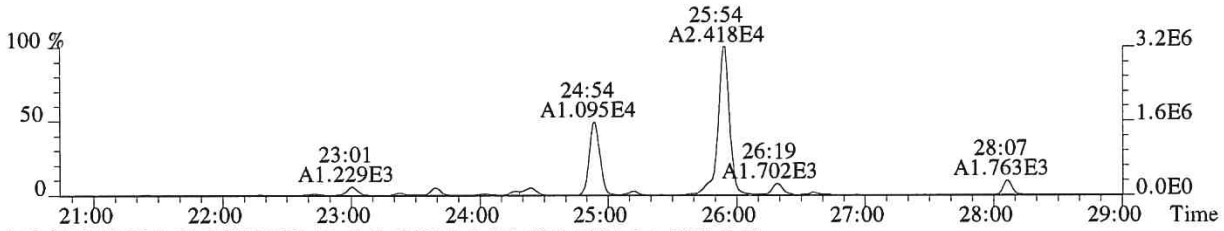
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:05	4.81e+03	4.63e+03	1.04	yes	9.44e+03		n	n
2	38:49	9.97e+02	9.55e+02	1.04	yes	1.95e+03	1,2,3,4,6,7,8-HpCDD	n	n

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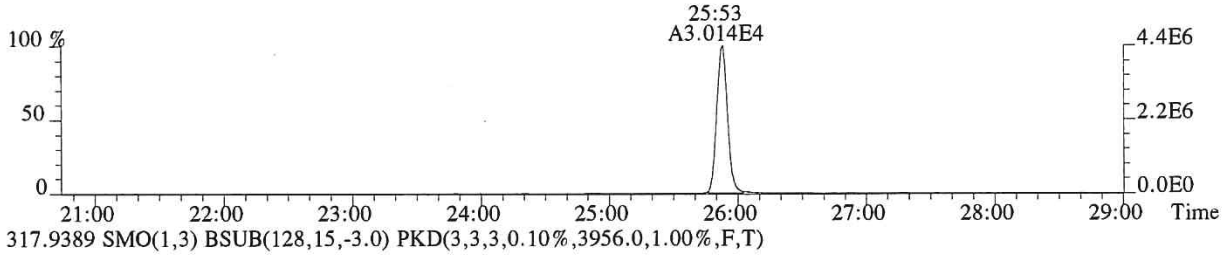
File:P519843 #1-587 Acq: 8-JAN-2019 19:54:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-017
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1612.0,1.00%,F,T)



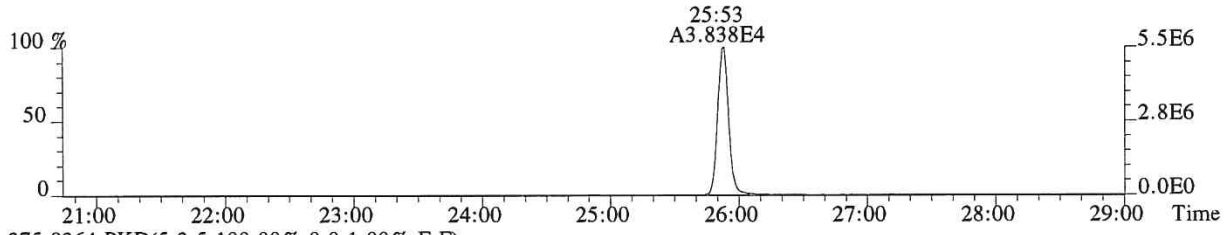
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2196.0,1.00%,F,T)



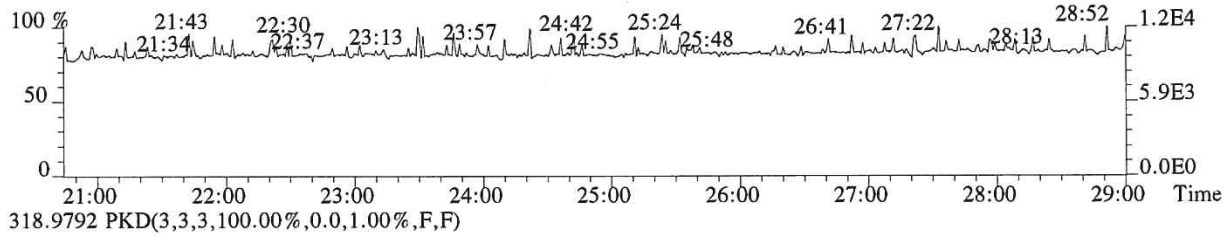
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7184.0,1.00%,F,T)



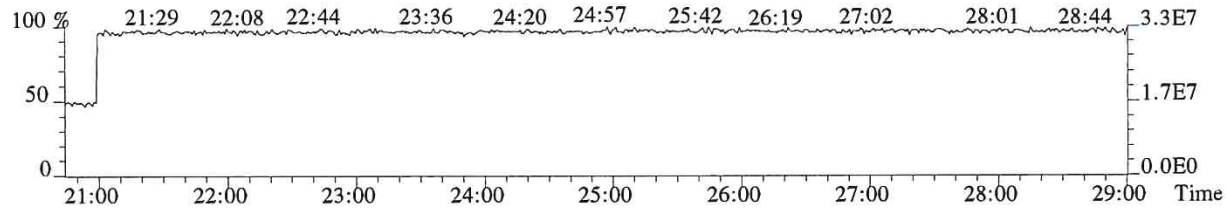
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3956.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

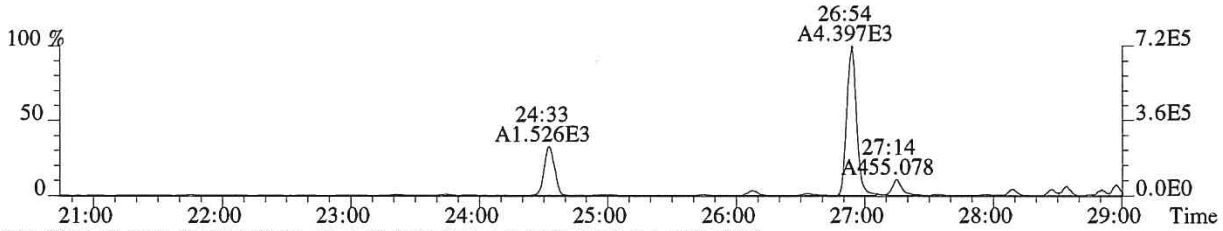


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

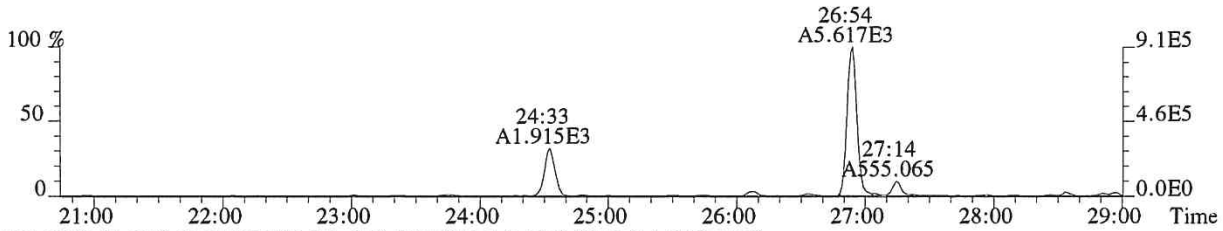


017476

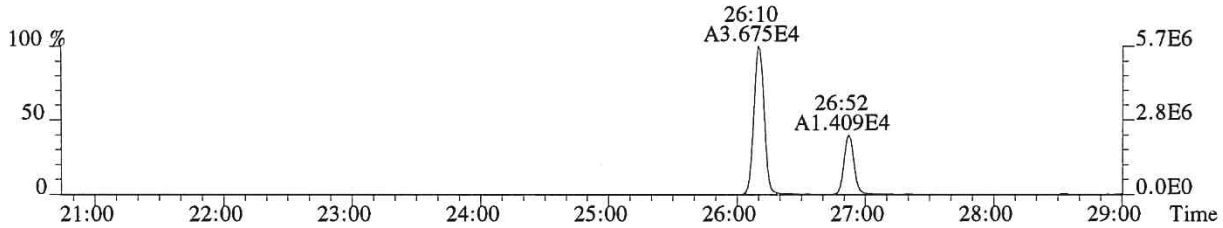
File:P519843 #1-587 Acq: 8-JAN-2019 19:54:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-017
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2564.0,1.00%,F,T)



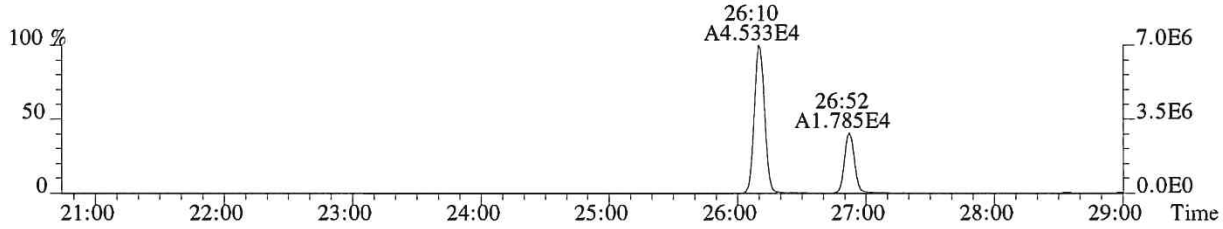
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1768.0,1.00%,F,T)



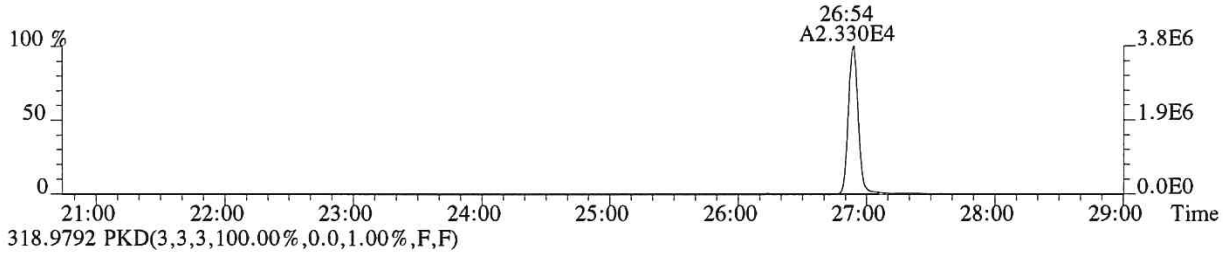
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7092.0,1.00%,F,T)



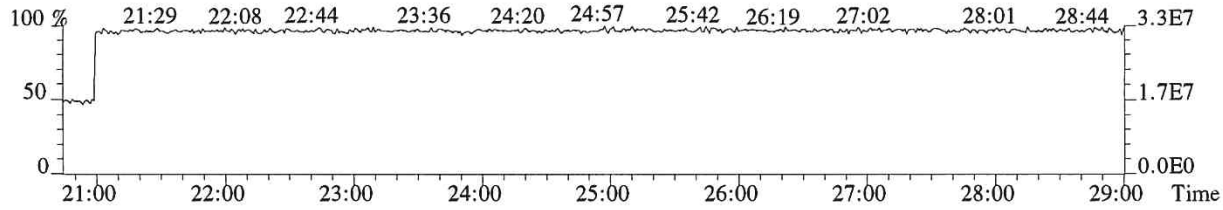
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3220.0,1.00%,F,T)



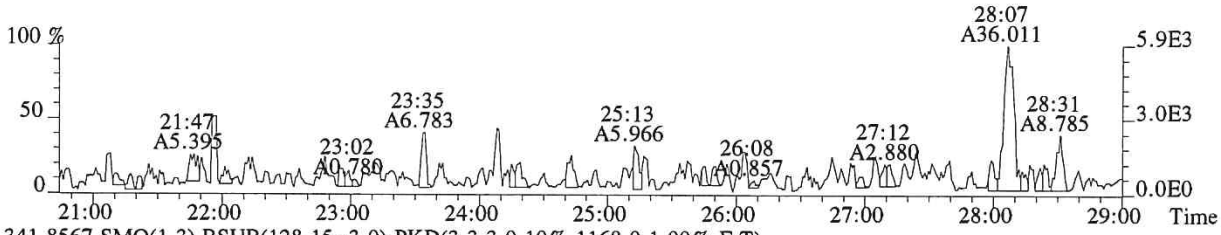
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1456.0,1.00%,F,T)



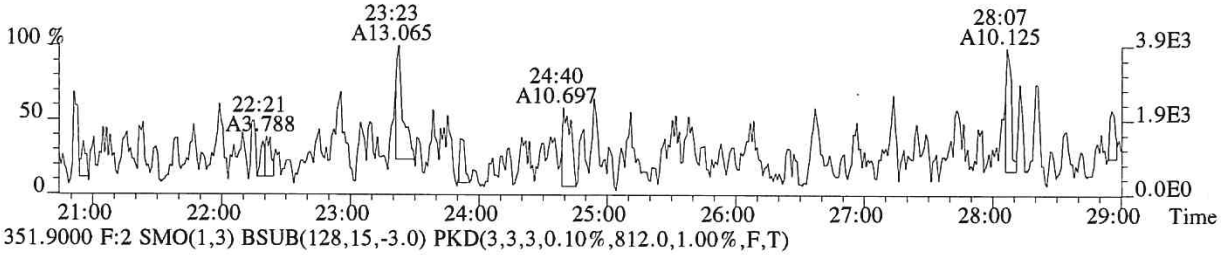
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



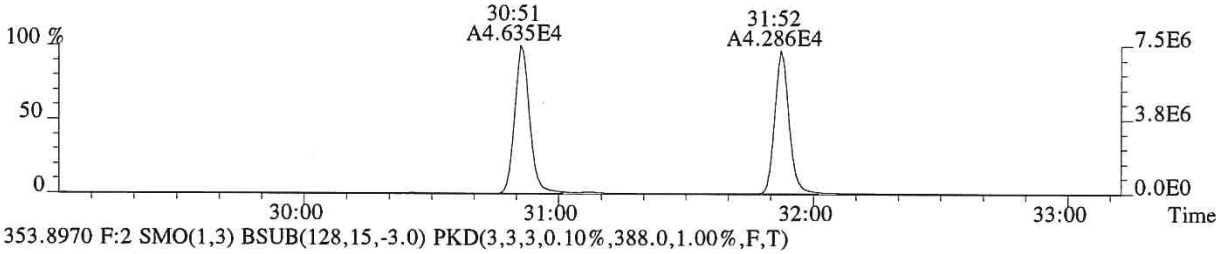
File:P519843 #1-587 Acq: 8-JAN-2019 19:54:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-017
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,672.0,1.00%,F,T)



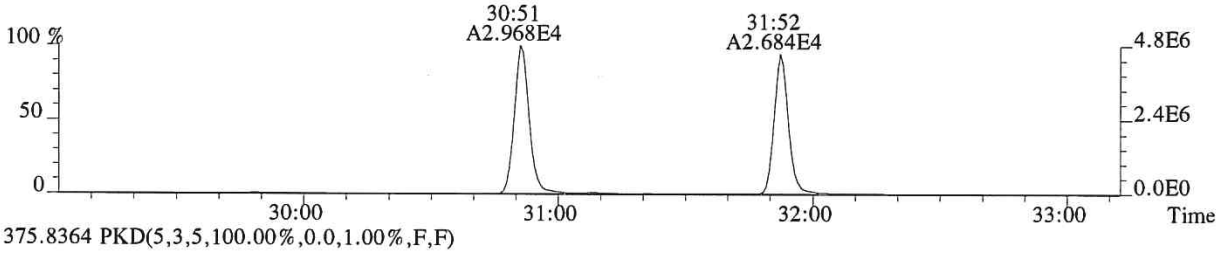
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1168.0,1.00%,F,T)



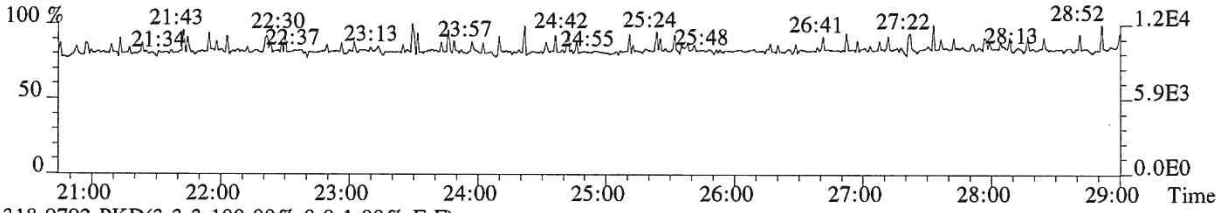
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,812.0,1.00%,F,T)



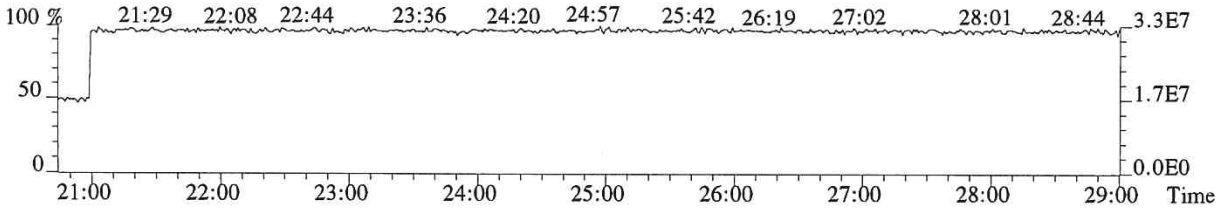
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,388.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

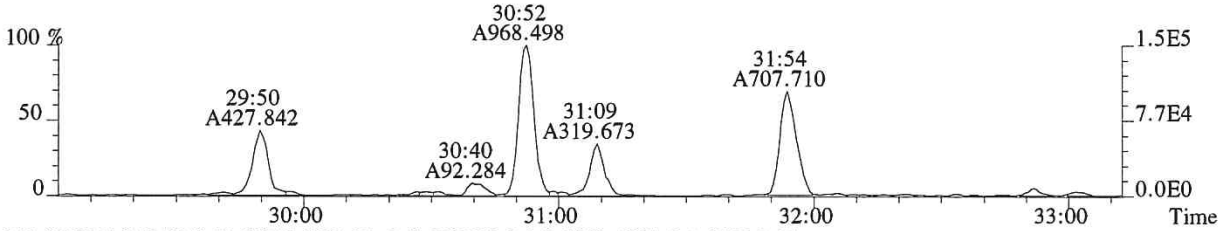


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

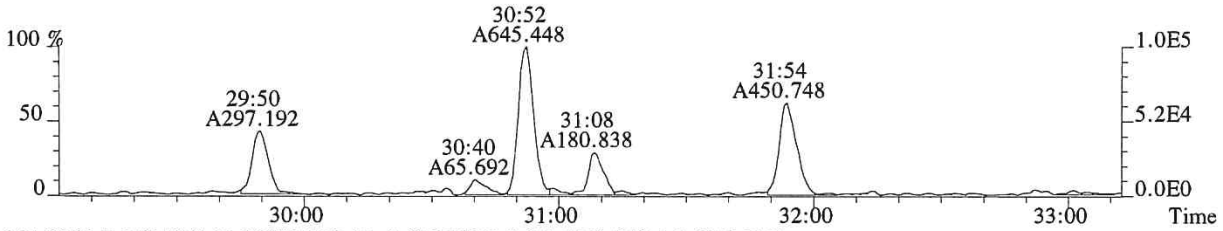


017478

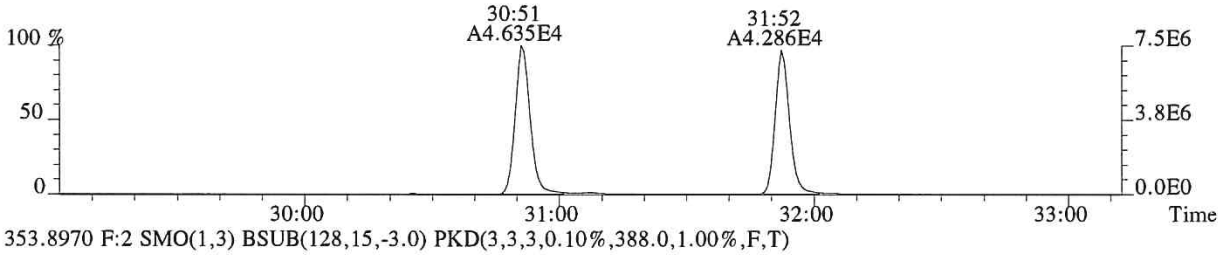
File:P519843 #1-376 Acq: 8-JAN-2019 19:54:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-017
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1092.0,1.00%,F,T)



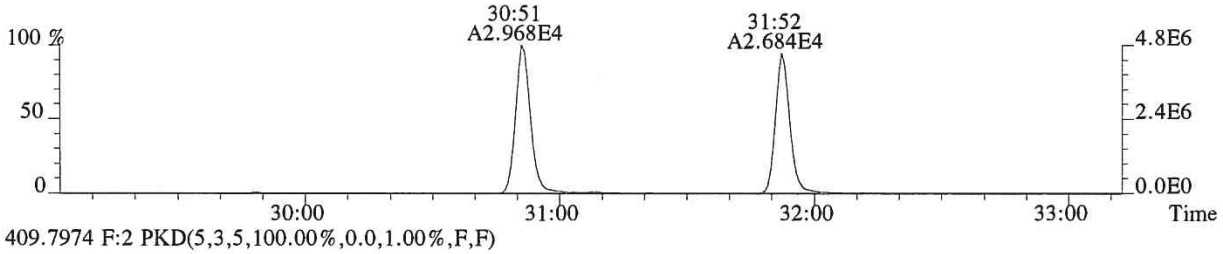
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1904.0,1.00%,F,T)



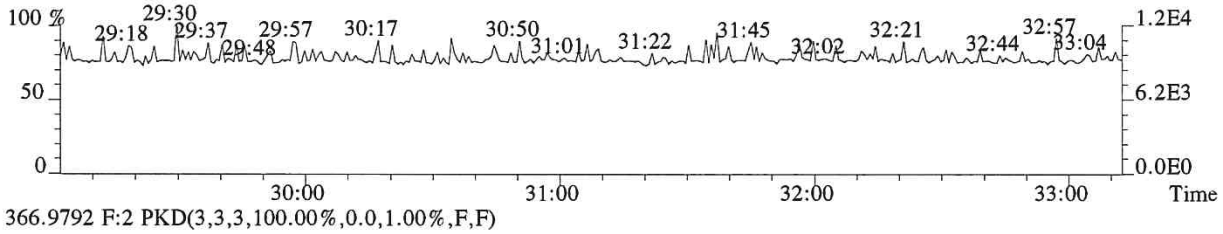
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,812.0,1.00%,F,T)



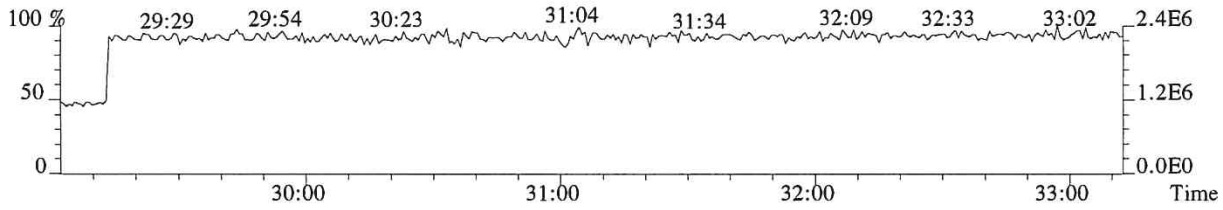
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,388.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

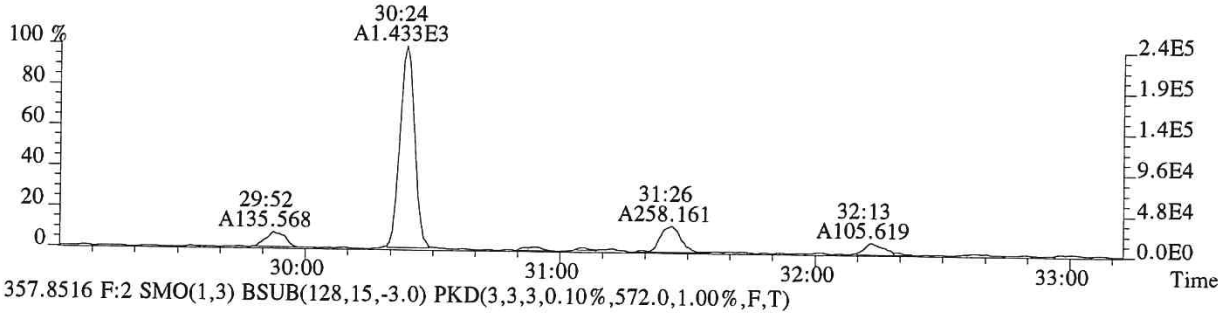


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

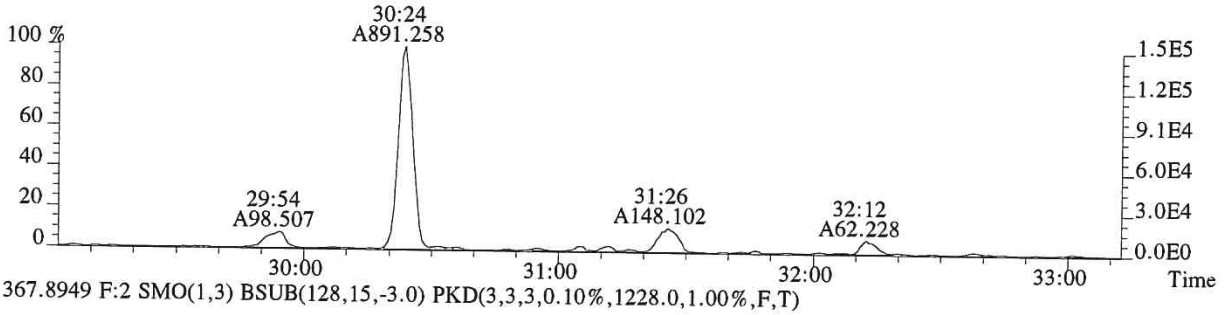


017479

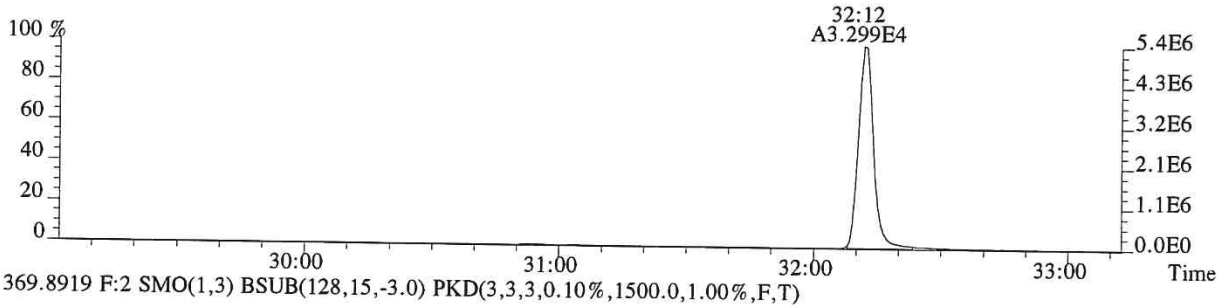
File:P519843 #1-376 Acq: 8-JAN-2019 19:54:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-017
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1560.0,1.00%,F,T)



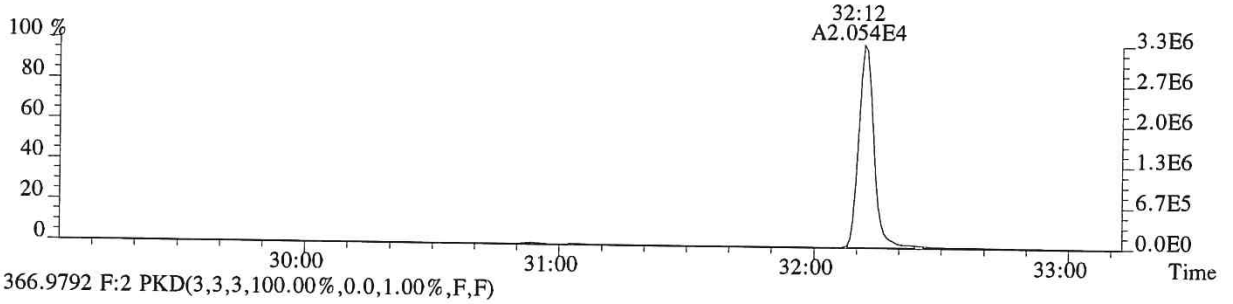
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,572.0,1.00%,F,T)



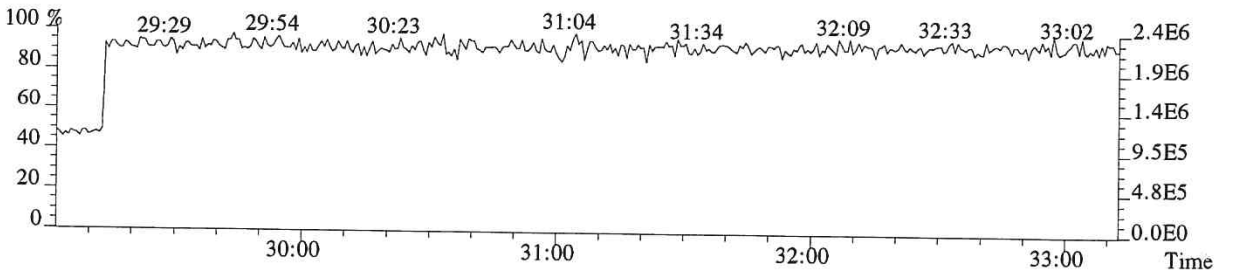
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1228.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1500.0,1.00%,F,T)

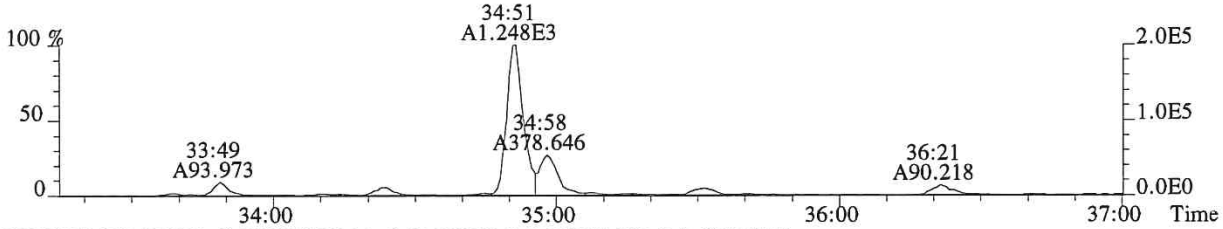


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

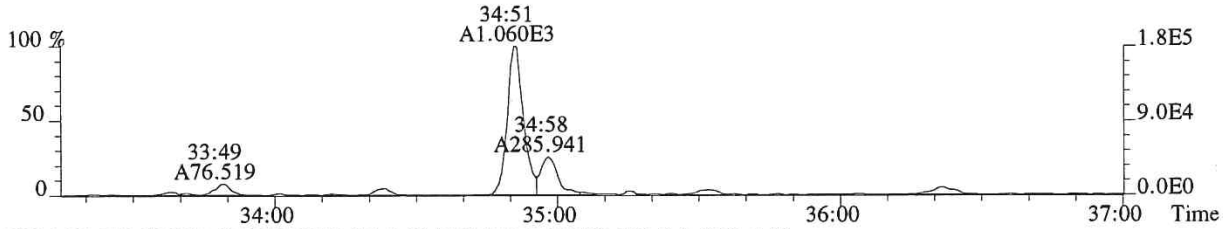


017480

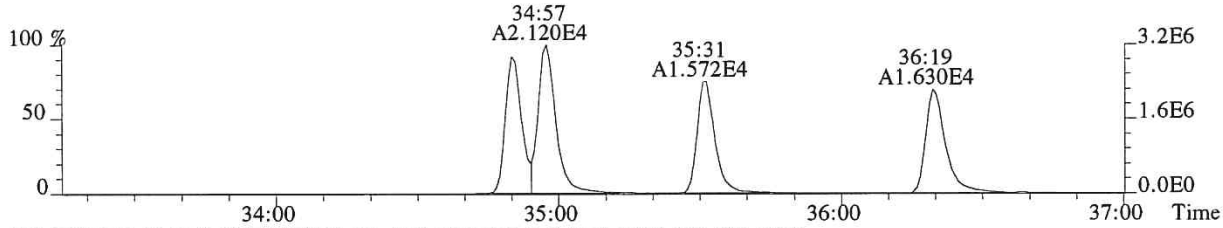
File:P519843 #1-339 Acq: 8-JAN-2019 19:54:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-017
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,524.0,0.40%,F,T)



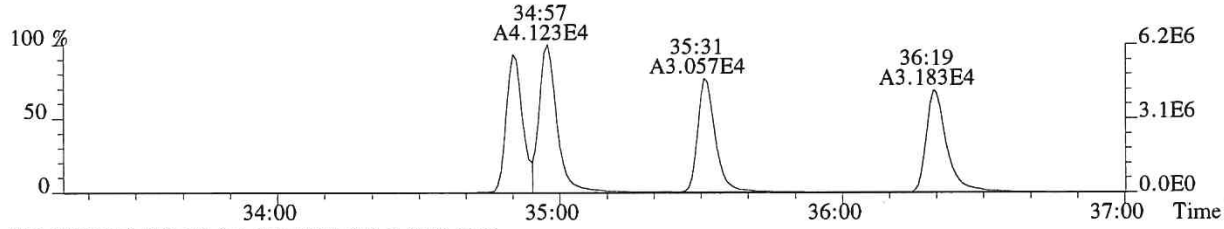
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,520.0,0.40%,F,T)



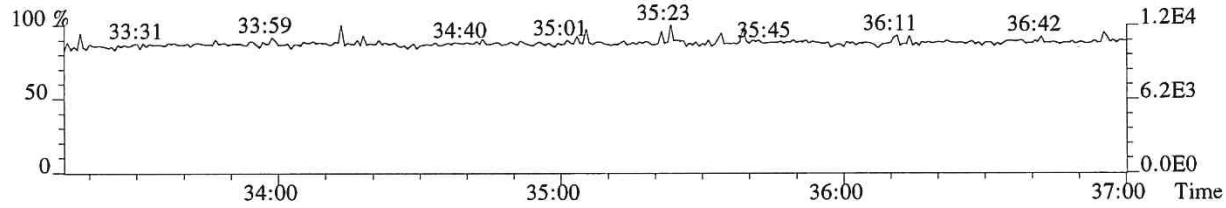
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,736.0,0.40%,F,T)



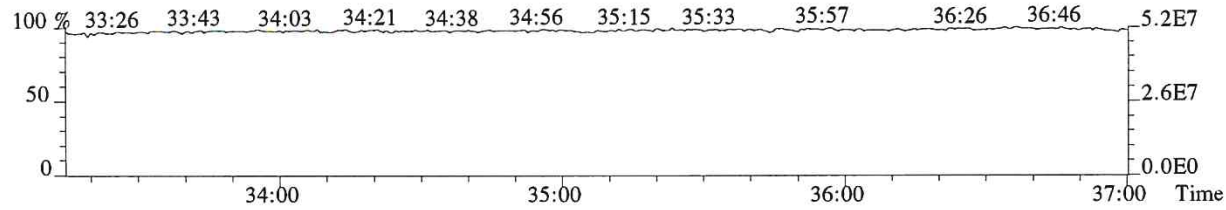
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1528.0,0.40%,F,T)



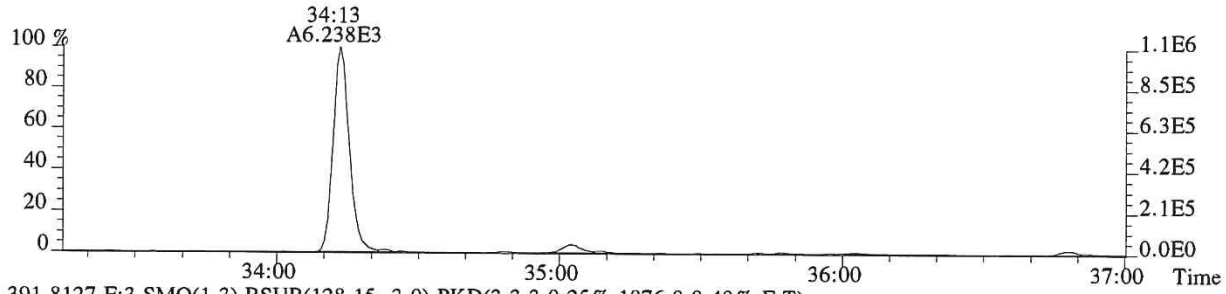
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



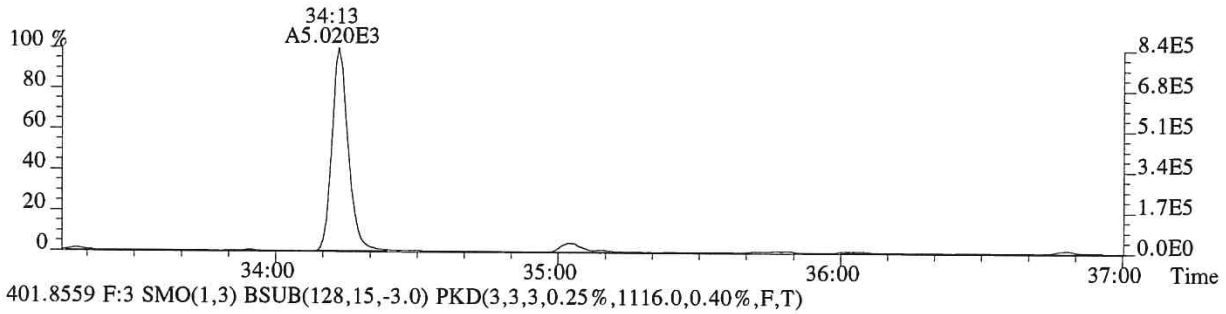
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



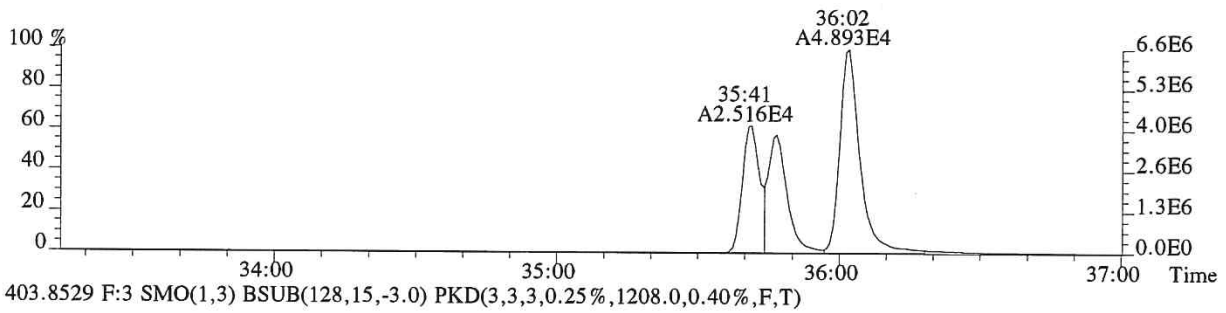
File:P519843 #1-339 Acq: 8-JAN-2019 19:54:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-017
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1468.0,0.40%,F,T)



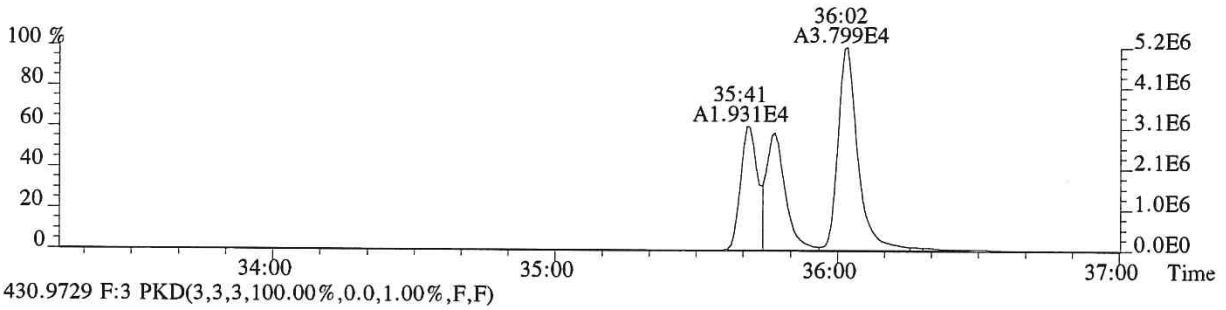
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1876.0,0.40%,F,T)



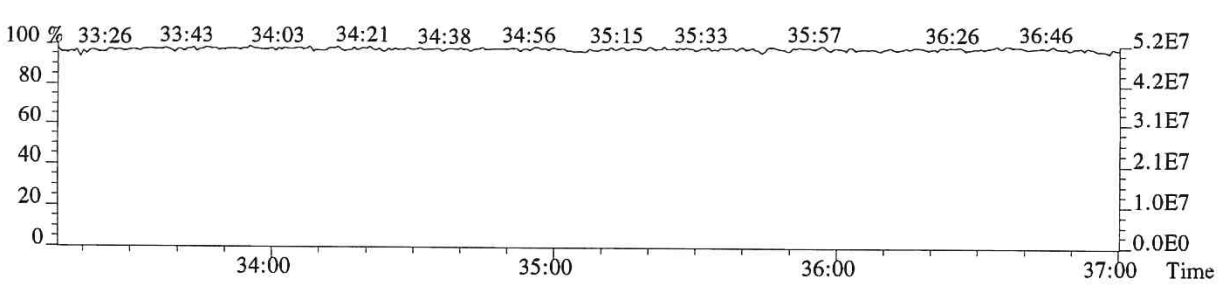
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1116.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1208.0,0.40%,F,T)

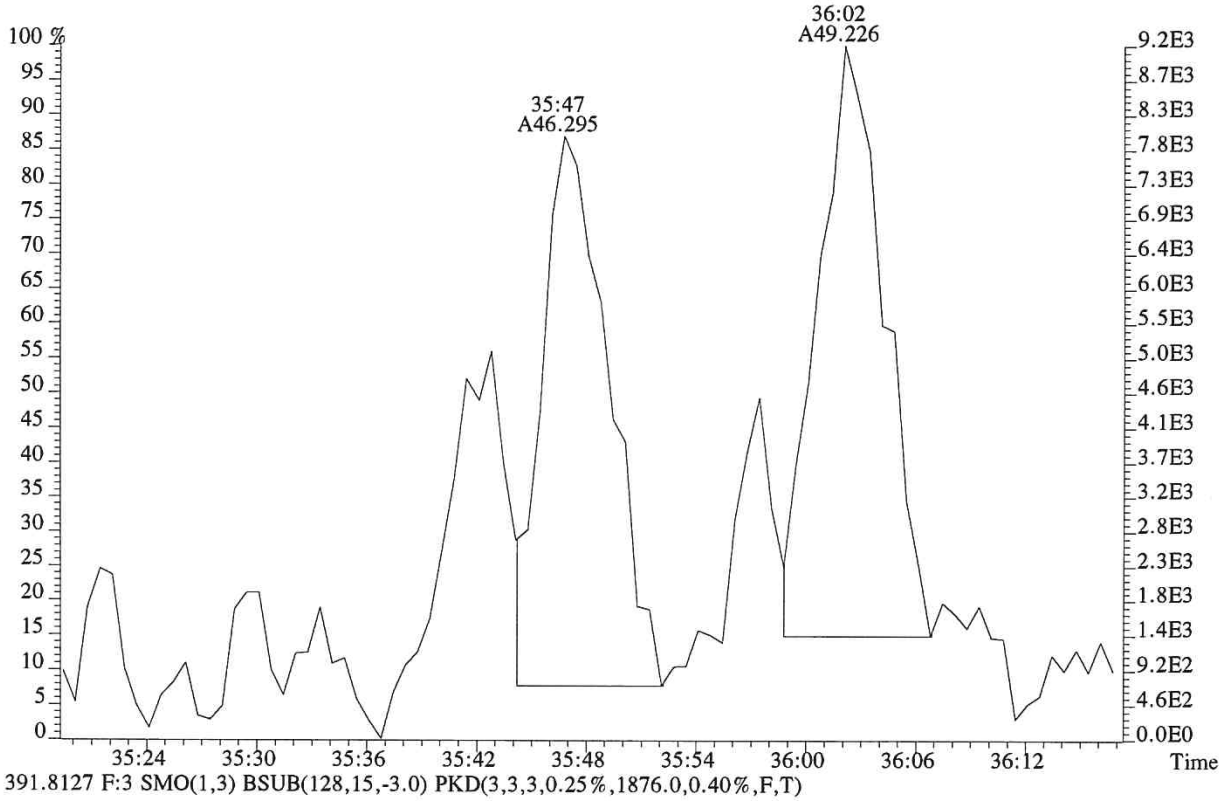


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

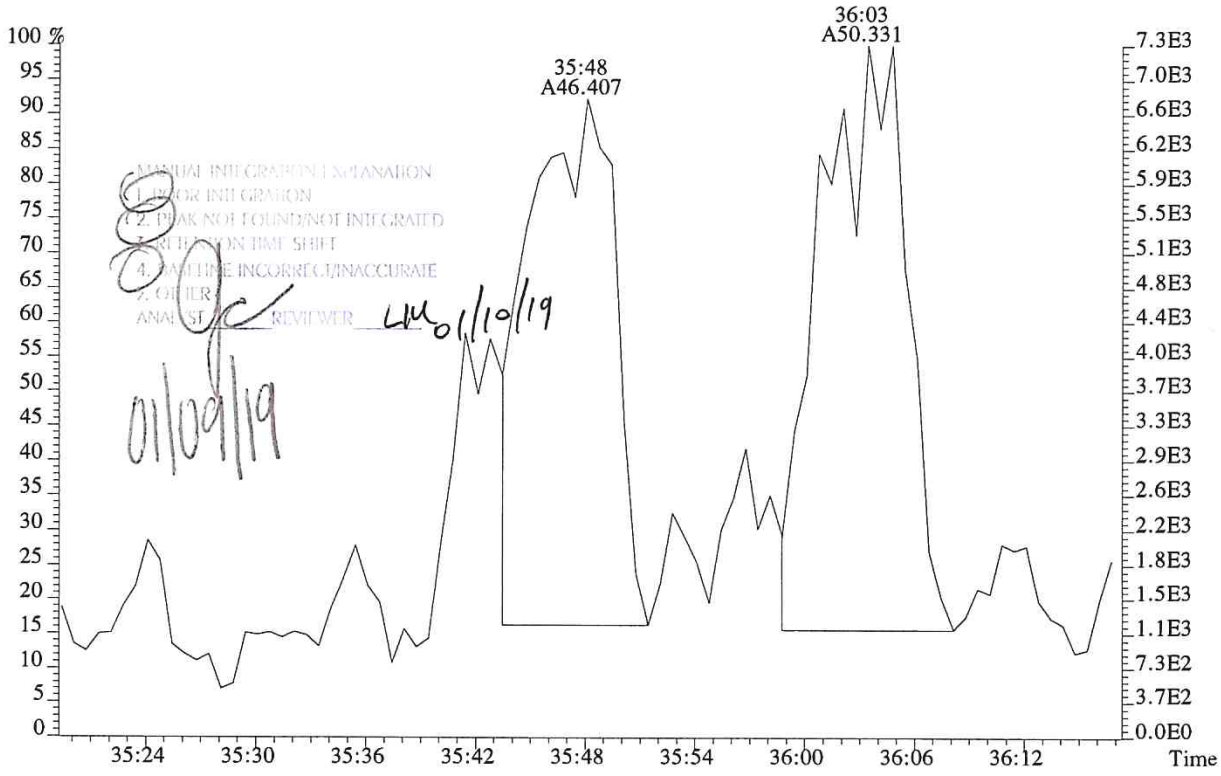


017482

File:P519843 #1-339 Acq: 8-JAN-2019 19:54:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-017
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1468.0,0.40%,F,T)

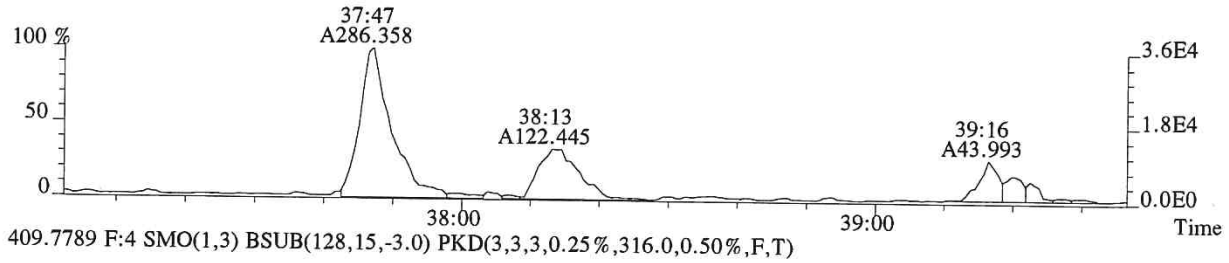


391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1876.0,0.40%,F,T)

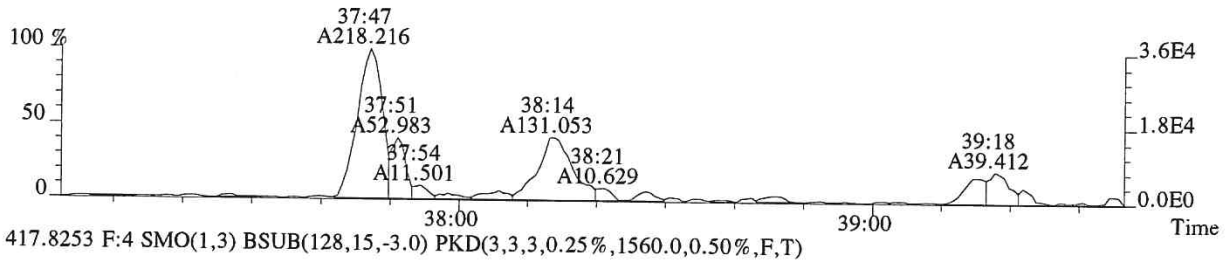


MANUAL INTEGRATION EXPLANATION
1. MINOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER 01/10/19
01/09/19

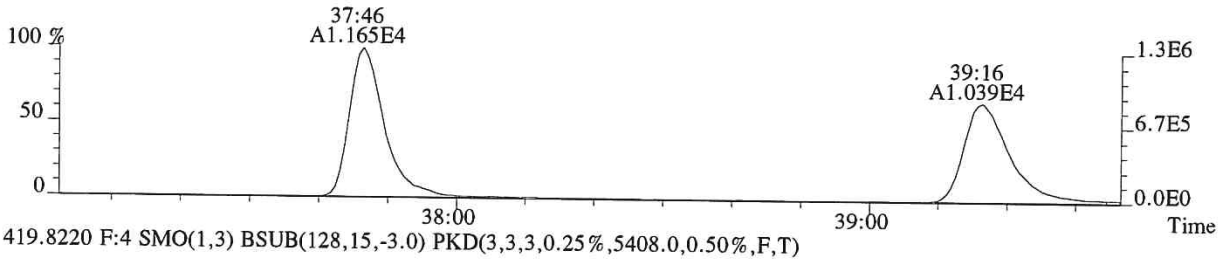
File:P519843 #1-232 Acq: 8-JAN-2019 19:54:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-017
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,952.0,0.50%,F,T)



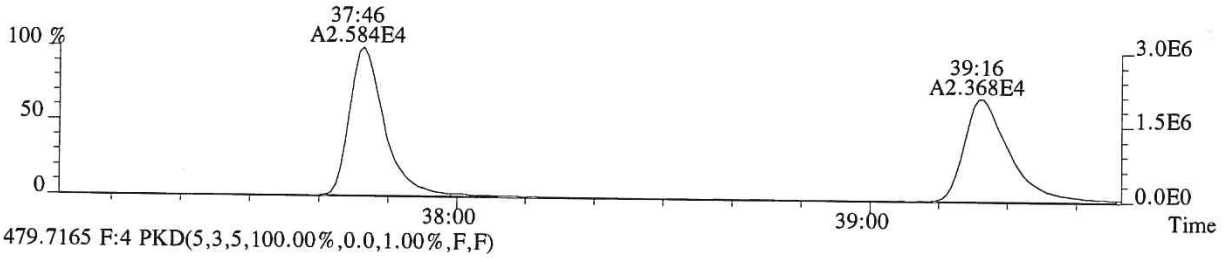
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,316.0,0.50%,F,T)



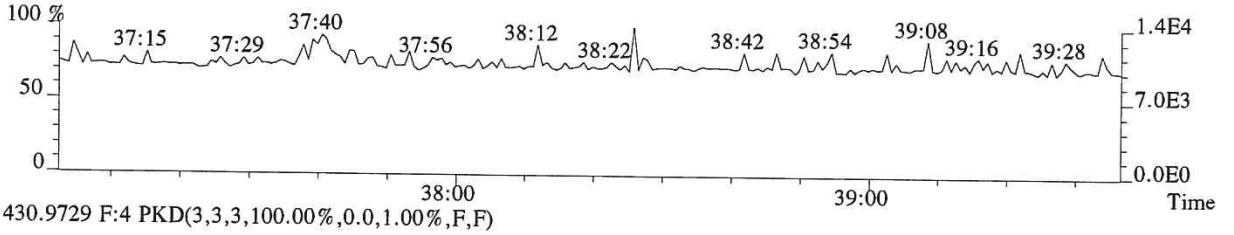
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1560.0,0.50%,F,T)



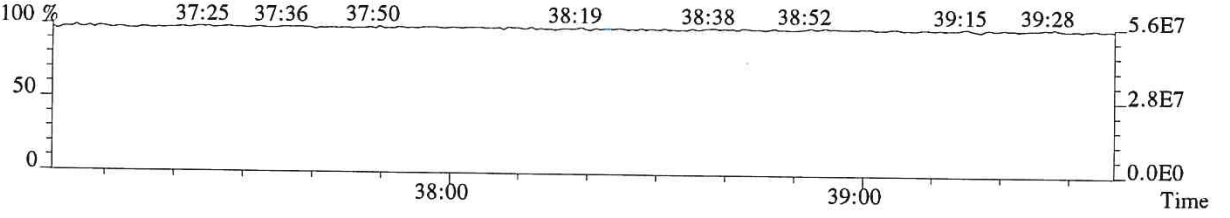
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5408.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

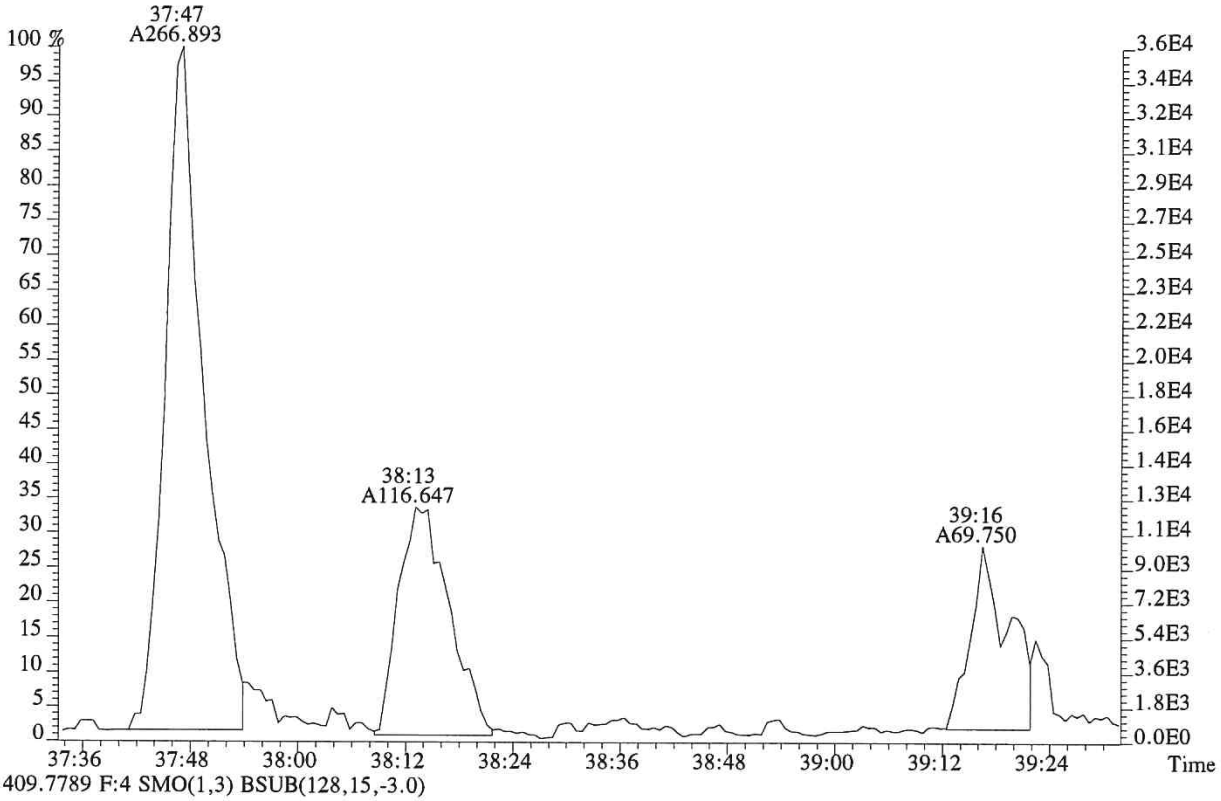


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

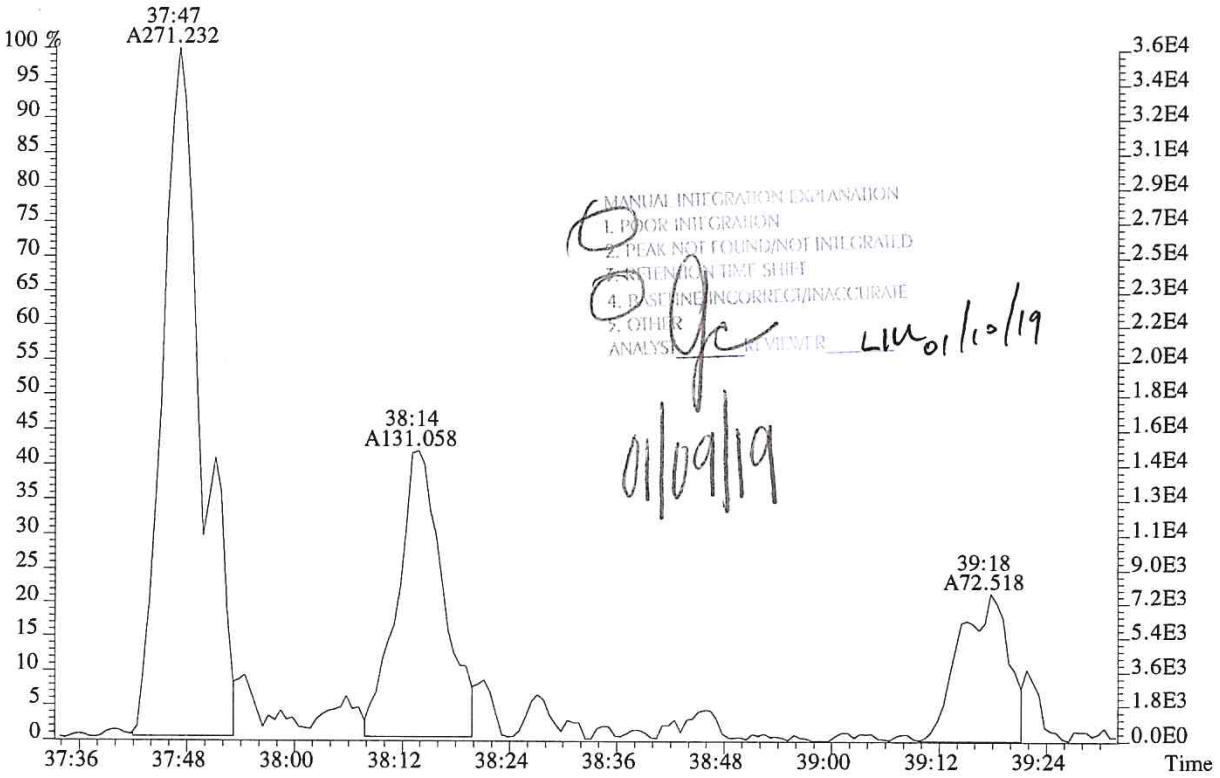


017484

File:P519843 #1-232 Acq: 8-JAN-2019 19:54:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-017
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0)

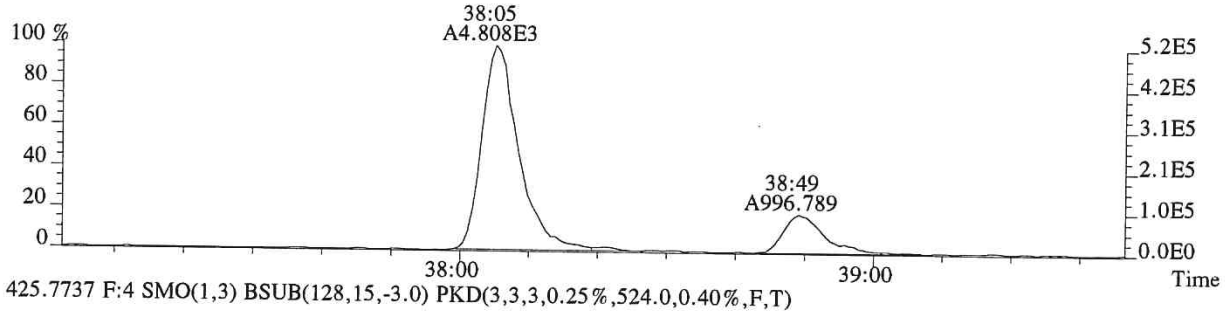


409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0)

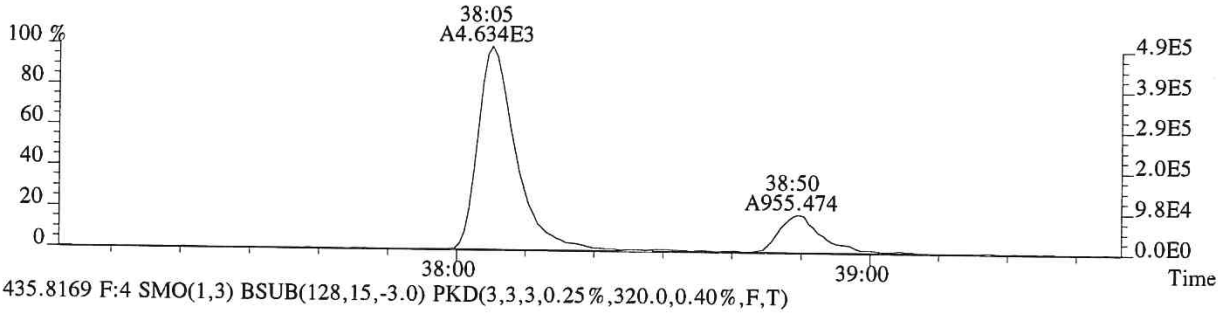


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST/REVIEWER LLM 01/10/19
01/09/19

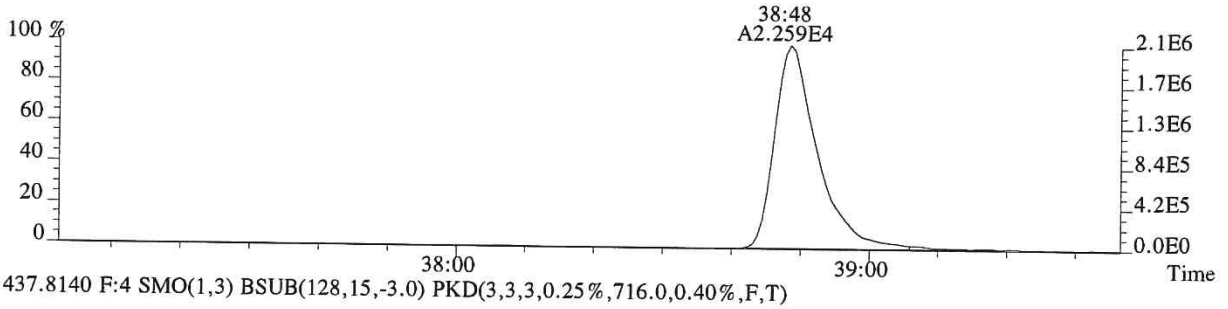
File:P519843 #1-232 Acq: 8-JAN-2019 19:54:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-017
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2236.0,0.40%,F,T)



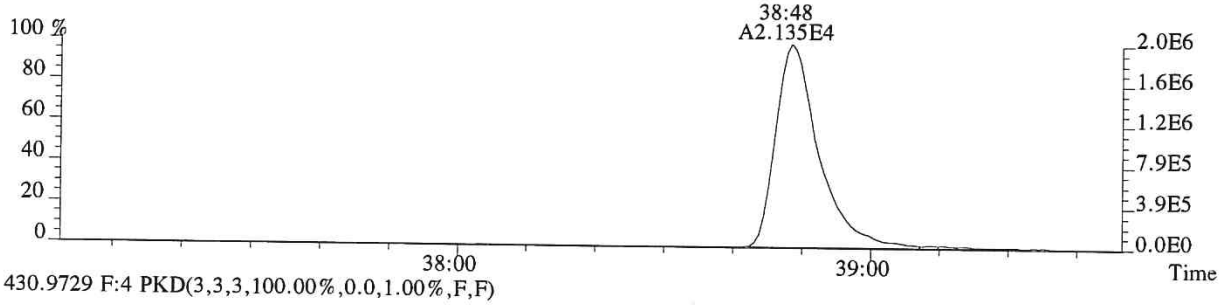
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,524.0,0.40%,F,T)



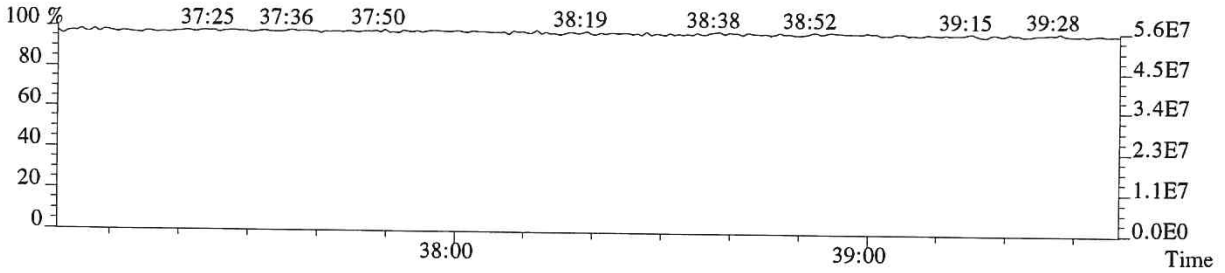
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,320.0,0.40%,F,T)



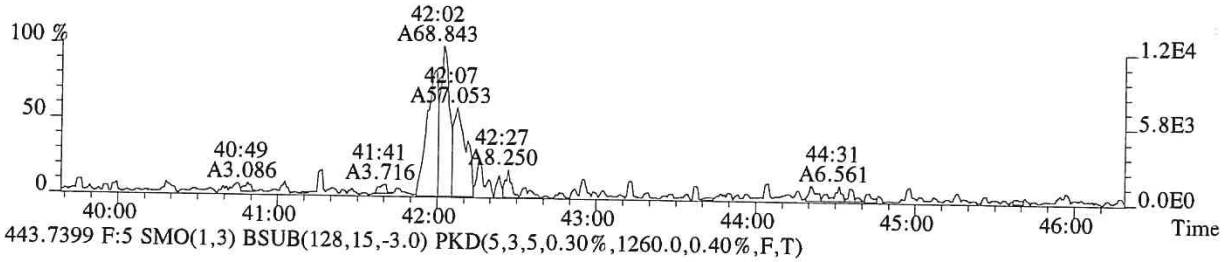
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,716.0,0.40%,F,T)



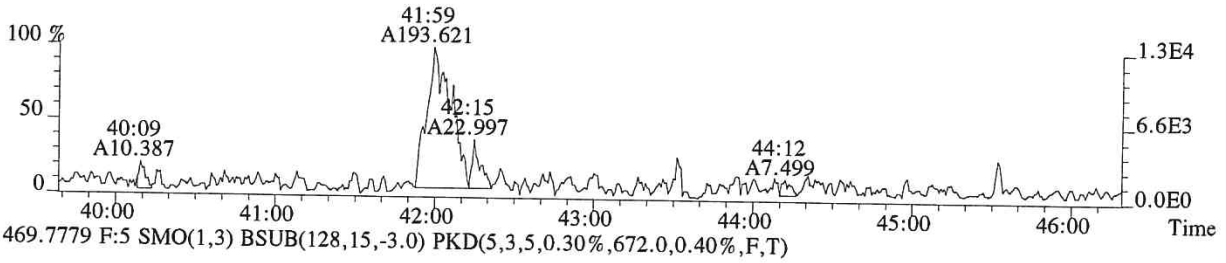
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



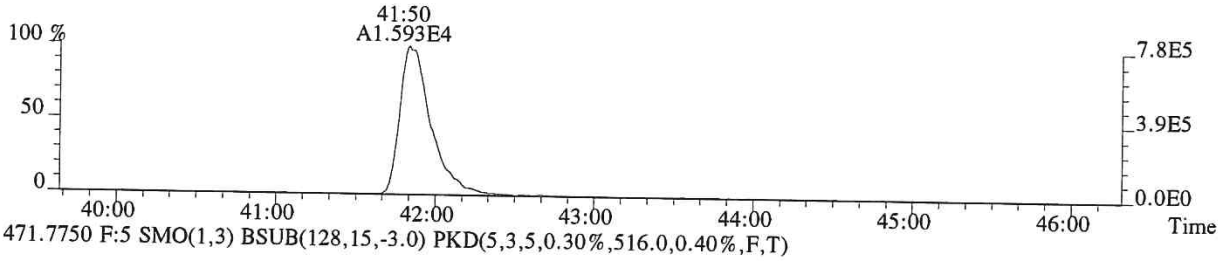
File:P519843 #1-601 Acq: 8-JAN-2019 19:54:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-017
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,304.0,0.40%,F,T)



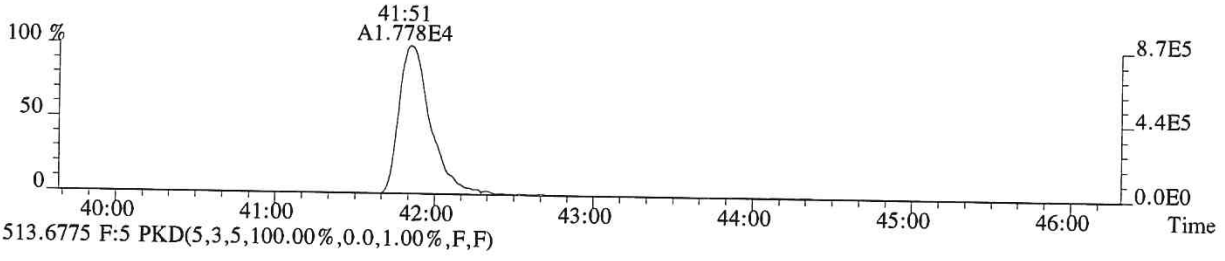
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1260.0,0.40%,F,T)



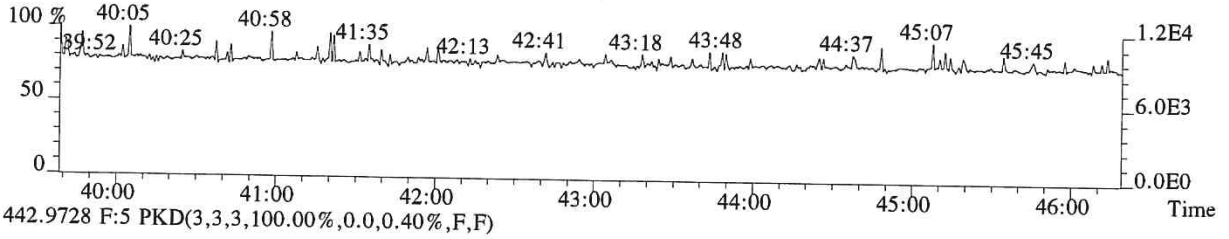
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,672.0,0.40%,F,T)



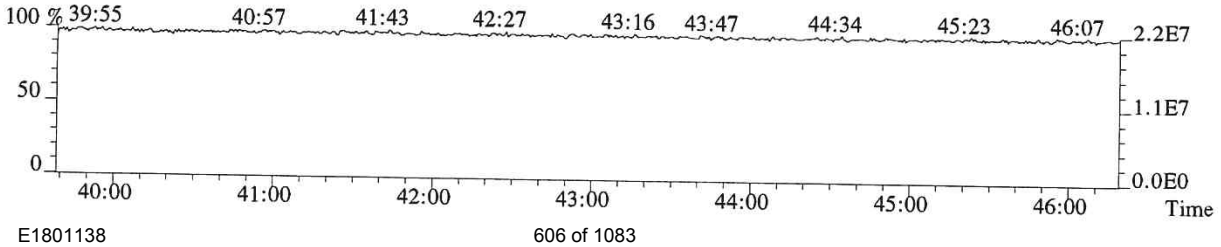
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,516.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

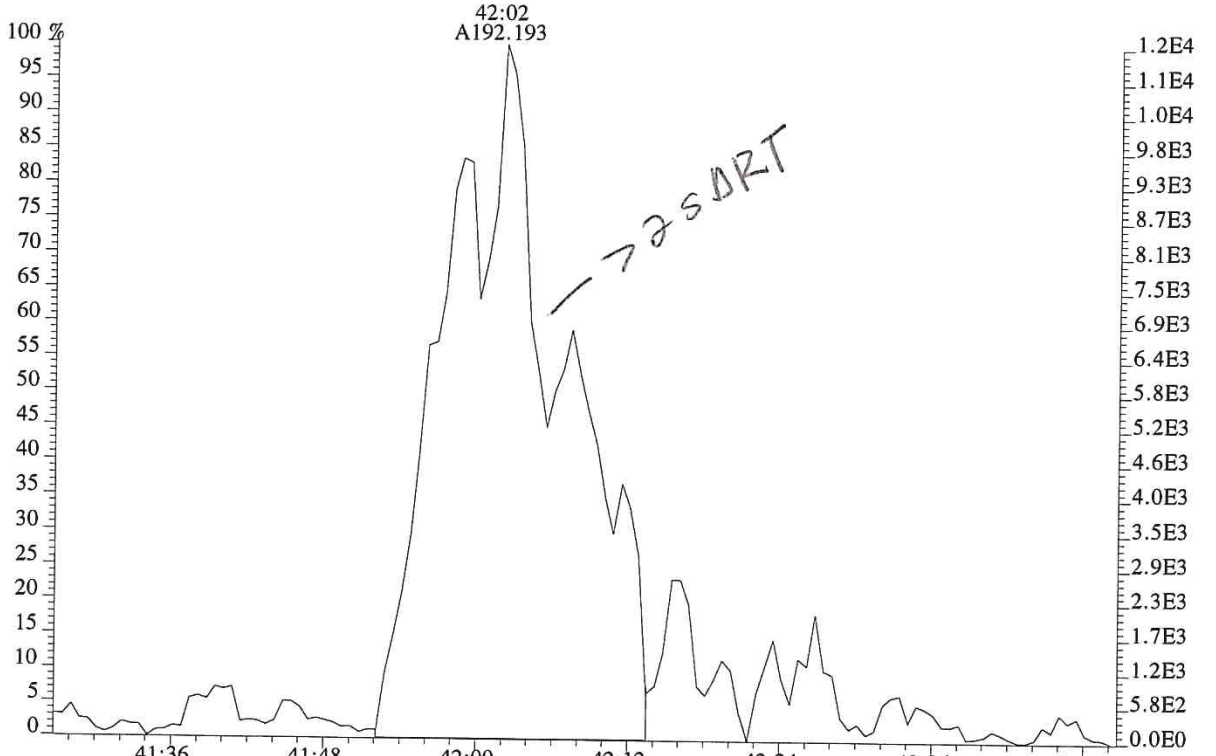


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

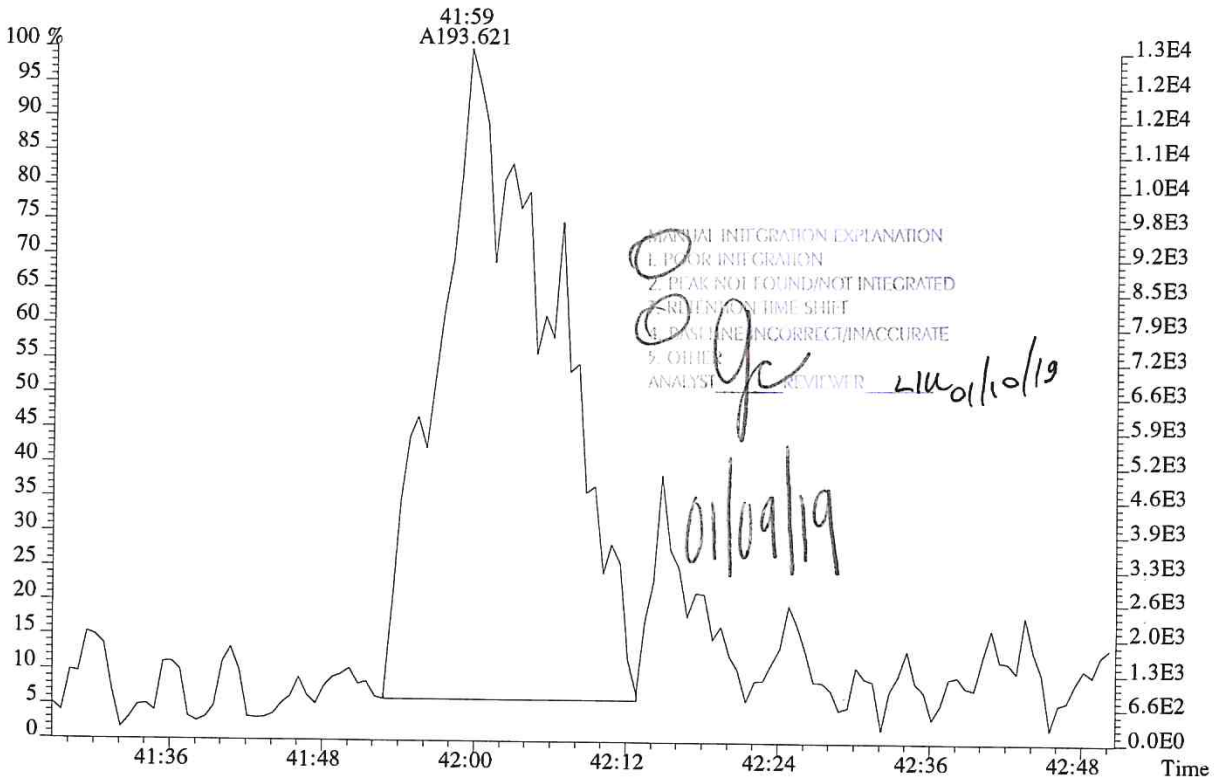


017487

File:P519843 #1-601 Acq: 8-JAN-2019 19:54:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-017
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,304.0,0.40%,F,T)



443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1260.0,0.40%,F,T)



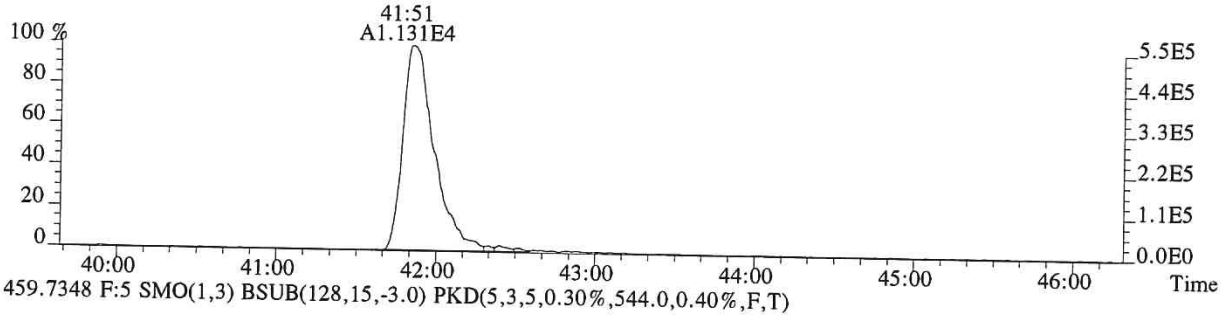
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER

01/10/19

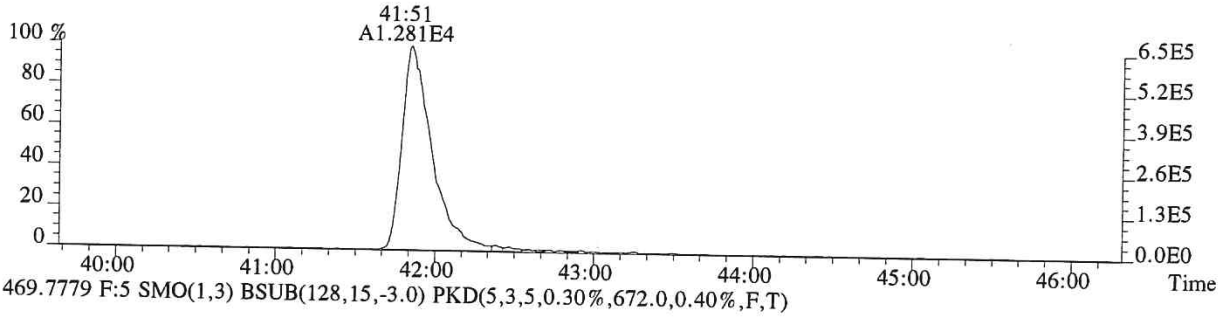
01/09/19

017488

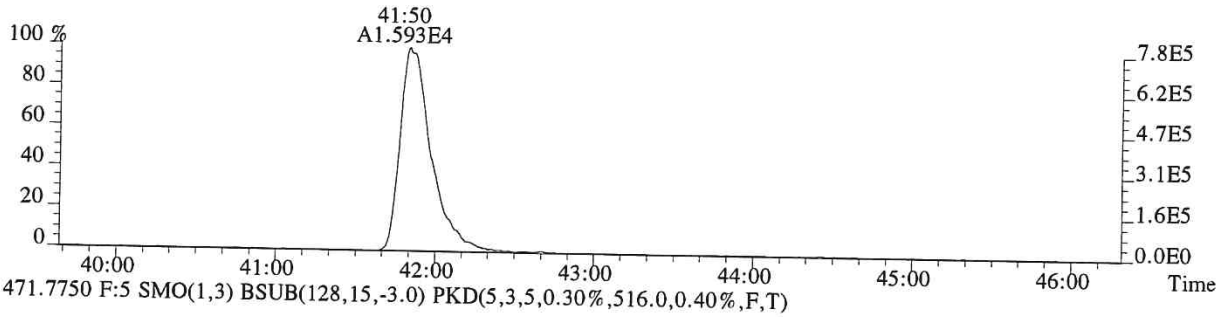
File:P519843 #1-601 Acq: 8-JAN-2019 19:54:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-017
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,504.0,0.40%,F,T)



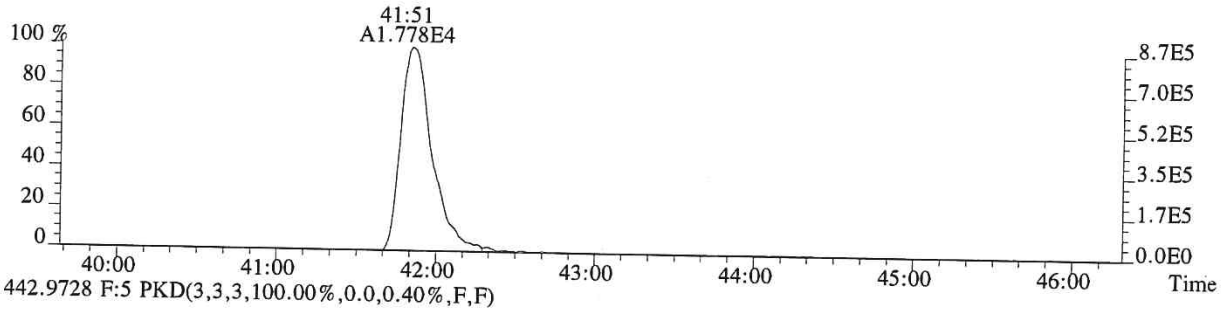
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,544.0,0.40%,F,T)



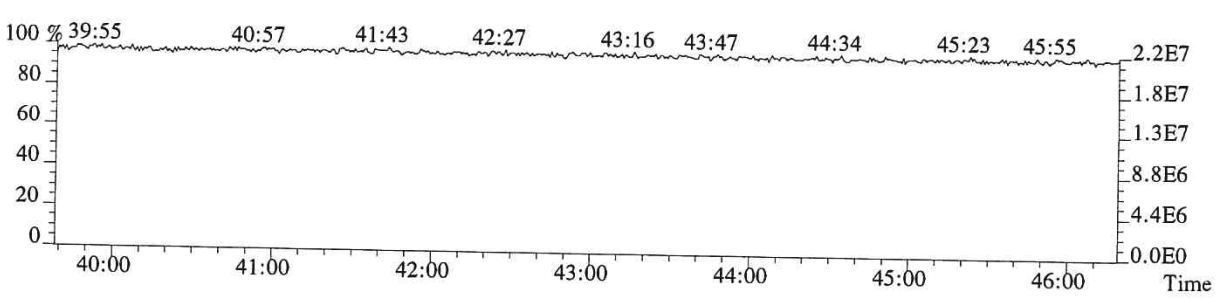
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,672.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,516.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0211

Run #20 Filename P519844 Samp: 1 Inj: 1 Acquired: 8-JAN-19 20:43:26
Processed: 9-JAN-19 11:56:37 Sample ID: E1801138-018

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:56	1.047e+06	1.335e+06	0.78	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:53	6.117e+04	3.942e+04	1.55	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:54	4.445e+04	2.862e+04	1.55	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:51	7.667e+04	6.425e+04	1.19	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:58	2.022e+04	1.713e+04	1.18	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:32	3.138e+03	2.658e+03	1.18	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:22	4.961e+03	4.412e+03	1.12	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:47	1.545e+04	1.565e+04	0.99	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:16	4.902e+03	4.975e+03	0.99	yes	no	1.258
10	Unk	OCDF	42:01	5.166e+03	5.848e+03	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:55	2.755e+05	3.485e+05	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:14	3.698e+03	2.449e+03	1.51	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:42	9.963e+01	7.855e+01	1.27	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:47	5.326e+02	4.203e+02	1.27	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:03	3.630e+02	2.899e+02	1.25	yes	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:49	1.638e+04	1.569e+04	1.04	yes	no	1.025
17	Unk	OCDD	41:51	1.570e+05	1.749e+05	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:54	3.125e+04	3.901e+04	0.80	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:52	4.930e+04	3.120e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:53	4.678e+04	2.946e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:51	1.810e+04	3.474e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:57	2.212e+04	4.190e+04	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:31	1.894e+04	3.662e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:19	1.760e+04	3.424e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:46	1.184e+04	2.664e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:15	1.091e+04	2.531e+04	0.43	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:53	1.507e+04	1.835e+04	0.82	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:12	3.520e+04	2.194e+04	1.60	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:41	2.476e+04	1.998e+04	1.24	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:47	2.837e+04	2.182e+04	1.30	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:48	2.432e+04	2.268e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	41:50	1.937e+04	2.198e+04	0.88	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:13	3.856e+04	4.829e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:02	5.134e+04	4.059e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:55	2.592e+04				no	1.014

$$\text{OCDD} = \frac{(1.570e+05 + 1.749e+05) \times 4000 \text{ pg} \times 1}{(1.937e+04 + 2.198e+04) \times 10.223 \text{ g} \times 85.9 / 100 \times 1.118} = 3270 \text{ ng/kg}$$

LMM 01/10/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0211

Run #20 Filename P519844 Samp: 1 Inj: 1 Acquired: 8-JAN-19 20:43:26
Processed: 9-JAN-19 11:56:37 LAB. ID: E1801138-018

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.43e+08	2.18e+03	6.6e+04	1.82e+08	2.58e+03	7.1e+04
2	1,2,3,7,8-PeCDF	1.01e+07	9.33e+03	1.1e+03	6.50e+06	3.64e+03	1.8e+03
3	2,3,4,7,8-PeCDF	6.40e+06	9.33e+03	6.9e+02	4.11e+06	3.64e+03	1.1e+03
4	1,2,3,4,7,8-HxCDF	1.27e+07	4.96e+03	2.6e+03	1.05e+07	1.74e+03	6.1e+03
5	1,2,3,6,7,8-HxCDF	3.04e+06	4.96e+03	6.1e+02	2.61e+06	1.74e+03	1.5e+03
6	2,3,4,6,7,8-HxCDF	5.36e+05	4.96e+03	1.1e+02	4.28e+05	1.74e+03	2.5e+02
7	1,2,3,7,8,9-HxCDF	7.13e+05	4.96e+03	1.4e+02	6.20e+05	1.74e+03	3.6e+02
8	1,2,3,4,6,7,8-HpCDF	1.77e+06	9.60e+02	1.8e+03	1.75e+06	4.24e+02	4.1e+03
9	1,2,3,4,7,8,9-HpCDF	4.38e+05	9.60e+02	4.6e+02	4.28e+05	4.24e+02	1.0e+03
10	OCDF	2.56e+05	4.64e+02	5.5e+02	3.12e+05	8.28e+02	3.8e+02
11	2,3,7,8-TCDD	4.46e+07	1.78e+03	2.5e+04	5.62e+07	1.28e+03	4.4e+04
12	1,2,3,7,8-PeCDD	5.68e+05	1.04e+03	5.5e+02	3.74e+05	1.00e+03	3.7e+02
13	1,2,3,4,7,8-HxCDD	1.91e+04	1.81e+03	1.1e+01	1.64e+04	3.22e+03	5.1e+00
14	1,2,3,6,7,8-HxCDD	7.72e+04	1.81e+03	4.3e+01	6.33e+04	3.22e+03	2.0e+01
15	1,2,3,7,8,9-HxCDD	4.66e+04	1.81e+03	2.6e+01	3.76e+04	3.22e+03	1.2e+01
16	1,2,3,4,6,7,8-HpCDD	1.45e+06	5.88e+02	2.5e+03	1.47e+06	9.44e+02	1.6e+03
17	OCDD	7.71e+06	5.96e+02	1.3e+04	8.76e+06	6.04e+02	1.5e+04
18	13C-2,3,7,8-TCDF	4.60e+06	7.92e+03	5.8e+02	5.74e+06	7.97e+03	7.2e+02
19	13C-1,2,3,7,8-PeCDF	8.05e+06	2.53e+03	3.2e+03	5.07e+06	3.19e+03	1.6e+03
20	13C-2,3,4,7,8-PeCDF	7.90e+06	2.53e+03	3.1e+03	5.02e+06	3.19e+03	1.6e+03
21	13C-1,2,3,4,7,8-HxCDF	3.12e+06	2.07e+03	1.5e+03	5.94e+06	1.82e+03	3.3e+03
22	13C-1,2,3,6,7,8-HxCDF	3.23e+06	2.07e+03	1.6e+03	6.24e+06	1.82e+03	3.4e+03
23	13C-2,3,4,6,7,8-HxCDF	2.94e+06	2.07e+03	1.4e+03	5.63e+06	1.82e+03	3.1e+03
24	13C-1,2,3,7,8,9-HxCDF	2.33e+06	2.07e+03	1.1e+03	4.55e+06	1.82e+03	2.5e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.35e+06	2.98e+03	4.5e+02	3.05e+06	3.86e+03	7.9e+02
26	13C-1,2,3,4,7,8,9-HpCDF	9.81e+05	2.98e+03	3.3e+02	2.19e+06	3.86e+03	5.7e+02
27	13C-2,3,7,8-TCDD	2.46e+06	6.16e+03	4.0e+02	2.98e+06	3.53e+03	8.4e+02
28	13C-1,2,3,7,8-PeCDD	5.86e+06	1.04e+03	5.6e+03	3.68e+06	1.54e+03	2.4e+03
29	13C-1,2,3,4,7,8-HxCDD	4.16e+06	1.35e+03	3.1e+03	3.33e+06	1.04e+03	3.2e+03
30	13C-1,2,3,6,7,8-HxCDD	3.99e+06	1.35e+03	3.0e+03	3.04e+06	1.04e+03	2.9e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.20e+06	1.12e+03	2.0e+03	2.06e+06	4.64e+02	4.4e+03
32	13C-OCDD	9.72e+05	1.07e+03	9.1e+02	1.06e+06	5.44e+02	1.9e+03
33	13C-1,2,3,4-TCDD	5.90e+06	6.16e+03	9.6e+02	7.45e+06	3.53e+03	2.1e+03
34	13C-1,2,3,7,8,9-HxCDD	7.02e+06	1.35e+03	5.2e+03	5.56e+06	1.04e+03	5.3e+03
35	37Cl-2,3,7,8-TCDD	4.17e+06	1.86e+03	2.2e+03			

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Peak List Summary

CLIENT ID.
SL0211

Entry: 36 Totals Name: Total Tetra-Furans

Run: 20 File: P519844 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 20:43:26 Processed: 9-JAN-19 11:56:37

Mass: 303.9020 305.8990 Tot Response: 4.28e+06 RRF: 0.9417

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:45	7.70e+03	1.03e+04	0.75	yes	1.80e+04		n	n
2	23:02	4.34e+04	5.62e+04	0.77	yes	9.97e+04		n	n
3	23:24	1.33e+04	1.77e+04	0.75	yes	3.10e+04		n	n
4	23:32	1.43e+03	1.94e+03	0.74	yes	3.38e+03		n	n
5	23:41	3.61e+04	4.72e+04	0.76	yes	8.33e+04		n	n
6	24:04	8.05e+03	1.08e+04	0.75	yes	1.88e+04		n	n
7	24:18	2.46e+04	3.19e+04	0.77	yes	5.65e+04		n	n
8	24:25	4.94e+04	6.45e+04	0.77	yes	1.14e+05		n	n
9	24:55	4.56e+05	5.87e+05	0.78	yes	1.04e+06		n	n
10	25:13	2.12e+04	2.83e+04	0.75	yes	4.95e+04		n	n
11	25:56	1.05e+06	1.33e+06	0.78	yes	2.38e+06	2,3,7,8-TCDF	n	n
12	26:21	7.30e+04	9.48e+04	0.77	yes	1.68e+05		n	n
13	26:38	1.20e+04	1.57e+04	0.76	yes	2.76e+04		n	n
14	28:08	8.00e+04	1.03e+05	0.78	yes	1.83e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0211

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 20 File: P519844 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 20:43:26 Processed: 9-JAN-19 11:56:37

Mass: 319.8970 321.8940 Tot Response: 6.94e+05 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:35	3.91e+03	4.82e+03	0.81	yes	8.73e+03		n	n
2	26:55	2.76e+05	3.48e+05	0.79	yes	6.24e+05	2,3,7,8-TCDD	n	n
3	27:16	2.73e+04	3.39e+04	0.81	yes	6.12e+04		n	n

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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0211

Entry: 38 Totals Name: Total Penta-Furans1

Run: 20 File: P519844 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 20:43:26 Processed: 9-JAN-19 11:56:37

Mass: 339.8600 341.8570 Tot Response: 1.69e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:09	1.05e+03	6.32e+02 1.67	yes	1.69e+03		n	n

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Peak List Summary

CLIENT ID.
SL0211

Entry: 39 Totals Name: Total Penta-Furans2

Run: 20 File: P519844 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 20:43:26 Processed: 9-JAN-19 11:56:37

Mass: 339.8600 341.8570 Tot Response: 2.64e+05 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:42	5.22e+02	3.53e+02	1.48	yes	8.76e+02		n	n
2	29:51	2.60e+04	1.69e+04	1.54	yes	4.29e+04		n	n
3	30:28	8.43e+02	4.99e+02	1.69	yes	1.34e+03		n	n
4	30:32	9.59e+02	7.01e+02	1.37	yes	1.66e+03		n	n
5	30:42	5.28e+03	3.49e+03	1.51	yes	8.77e+03		n	n
6	30:53	6.12e+04	3.94e+04	1.55	yes	1.01e+05	1,2,3,7,8-PeCDF	n	n
7	31:10	1.82e+04	1.20e+04	1.52	yes	3.02e+04		n	n
8	31:48	4.32e+02	2.92e+02	1.48	yes	7.24e+02		n	n
9	31:54	4.45e+04	2.86e+04	1.55	yes	7.31e+04	2,3,4,7,8-PeCDF	n	n
10	32:53	2.23e+03	1.41e+03	1.58	yes	3.64e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0211

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 20 File: P519844 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 20:43:26 Processed: 9-JAN-19 11:56:37

Mass: 355.8550 357.8520 Tot Response: 9.87e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:53	3.50e+02	2.51e+02	1.39	yes	6.01e+02		n	n
2	30:25	7.17e+02	4.75e+02	1.51	yes	1.19e+03		n	n
3	30:56	4.78e+02	2.99e+02	1.60	yes	7.76e+02		n	n
4	31:06	2.08e+02	1.46e+02	1.43	yes	3.54e+02		n	n
5	31:12	1.73e+02	1.20e+02	1.44	yes	2.92e+02		n	n
6	31:26	2.97e+02	2.11e+02	1.41	yes	5.08e+02		n	n
7	32:14	3.70e+03	2.45e+03	1.51	yes	6.15e+03	1,2,3,7,8-PeCDD	n	n

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Peak List Summary

CLIENT ID.
SL0211

Entry: 41 Totals Name: Total Hexa-Furans

Run: 20 File: P519844 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 20:43:26 Processed: 9-JAN-19 11:56:37

Mass: 373.8210 375.8180 Tot Response: 2.10e+05 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:39	5.02e+02	4.51e+02	1.11	yes	9.53e+02		n	n
2	33:49	5.37e+03	4.57e+03	1.17	yes	9.94e+03		n	n
3	34:23	3.12e+03	2.63e+03	1.18	yes	5.75e+03		n	n
4	34:51	7.67e+04	6.42e+04	1.19	yes	1.41e+05	1,2,3,4,7,8-HxCDF	n	n
5	34:58	2.02e+04	1.71e+04	1.18	yes	3.74e+04	1,2,3,6,7,8-HxCDF	n	n
6	35:32	3.14e+03	2.66e+03	1.18	yes	5.80e+03	2,3,4,6,7,8-HxCDF	n	n
7	36:22	4.96e+03	4.41e+03	1.12	yes	9.37e+03	1,2,3,7,8,9-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0211

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 20 File: P519844 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 20:43:26 Processed: 9-JAN-19 11:56:37

Mass: 389.8160 391.8130 Tot Response: 1.43e+04 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:14	5.14e+03	4.08e+03 1.26	yes	9.22e+03		n	n
2	35:03	1.82e+03	1.43e+03 1.27	yes	3.26e+03		y	y
3	35:42	9.96e+01	7.86e+01 1.27	yes	1.78e+02	1,2,3,4,7,8-HxCDD	n	n
4	35:47	5.33e+02	4.20e+02 1.27	yes	9.53e+02	1,2,3,6,7,8-HxCDD	n	n
5	36:03	3.63e+02	2.90e+02 1.25	yes	6.53e+02	1,2,3,7,8,9-HxCDD	n	y

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Peak List Summary

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SL0211

Entry: 43 Totals Name: Total Hepta-Furans

Run: 20 File: P519844 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 20:43:26 Processed: 9-JAN-19 11:56:37

Mass: 407.7820 409.7790 Tot Response: 5.45e+04 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:47	1.55e+04	1.56e+04	0.99	yes	3.11e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	38:13	6.77e+03	6.79e+03	1.00	yes	1.36e+04		n	n
3	39:16	4.90e+03	4.97e+03	0.99	yes	9.88e+03	1,2,3,4,7,8,9-HpCDF	n	n

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Peak List Summary

CLIENT ID.
SL0211

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 20 File: P519844 Sample:1 Injection:1 Function:4

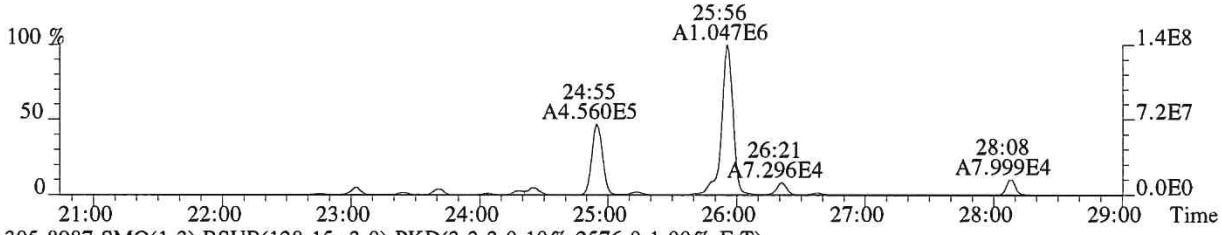
Acquired: 8-JAN-19 20:43:26 Processed: 9-JAN-19 11:56:37

Mass: 423.7770 425.7740 Tot Response: 7.00e+04 RRF: 1.025

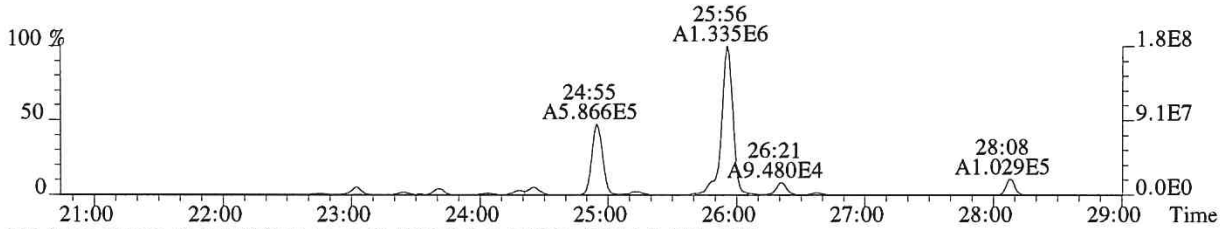
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:05	1.93e+04	1.86e+04 1.04	yes	3.79e+04		n	n
2	38:49	1.64e+04	1.57e+04 1.04	yes	3.21e+04	1,2,3,4,6,7,8-HpCDD	n	n

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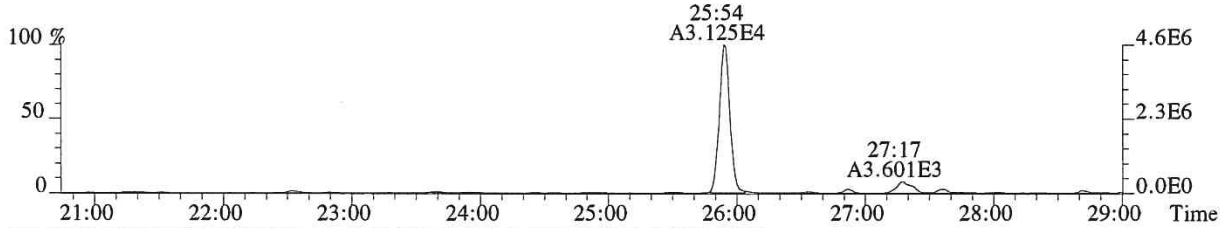
File:P519844 #1-587 Acq: 8-JAN-2019 20:43:26 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2180.0,1.00%,F,T)



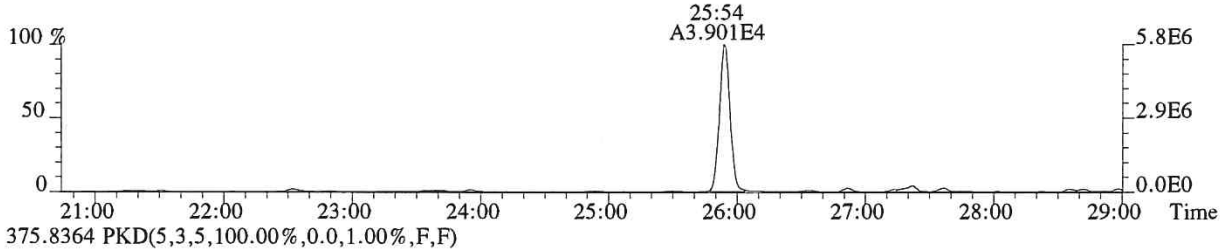
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2576.0,1.00%,F,T)



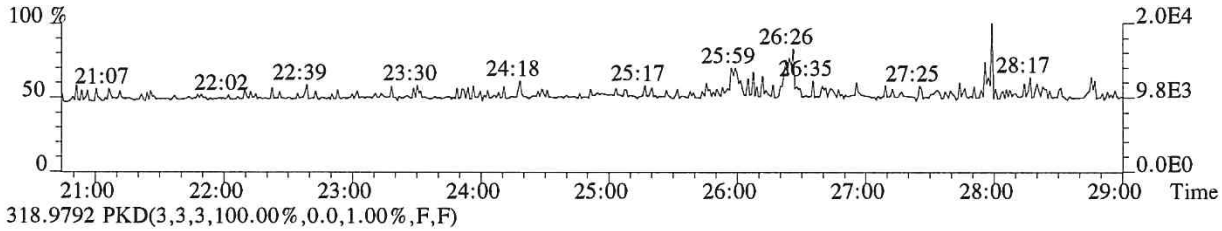
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7924.0,1.00%,F,T)



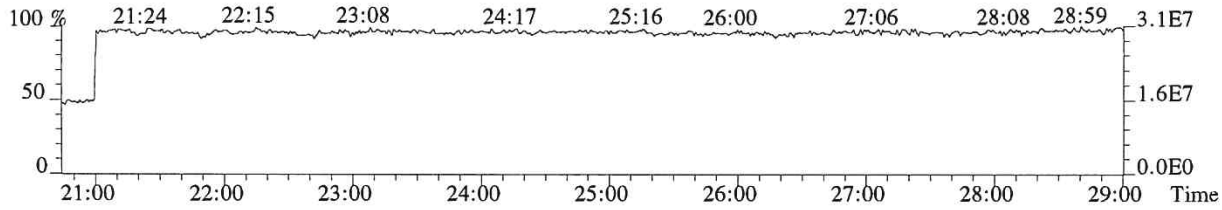
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7972.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

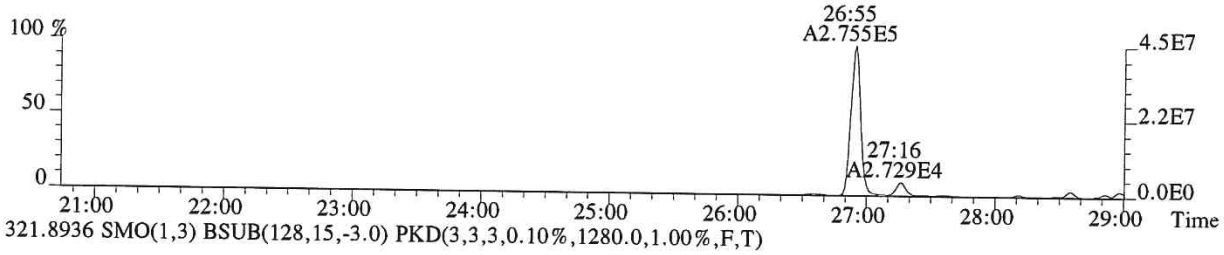


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

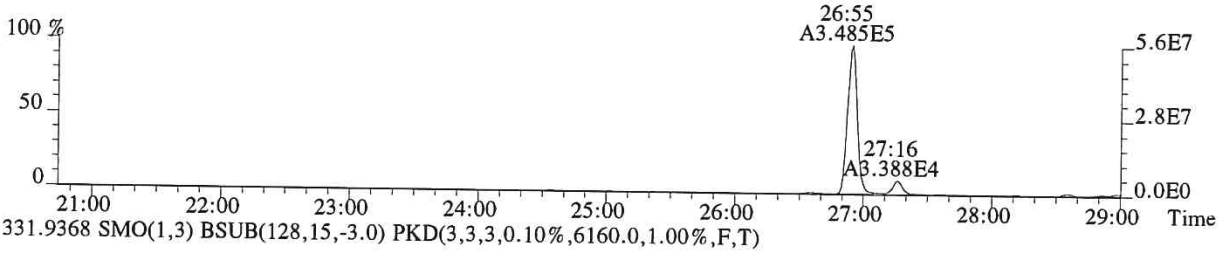


017501

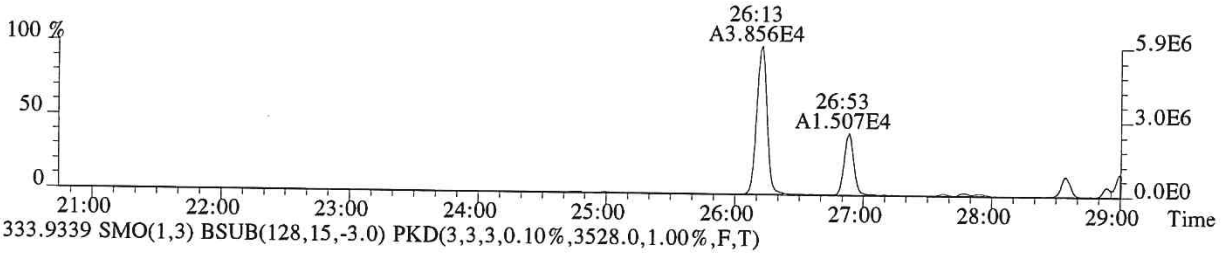
File:P519844 #1-587 Acq: 8-JAN-2019 20:43:26 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1784.0,1.00%,F,T)



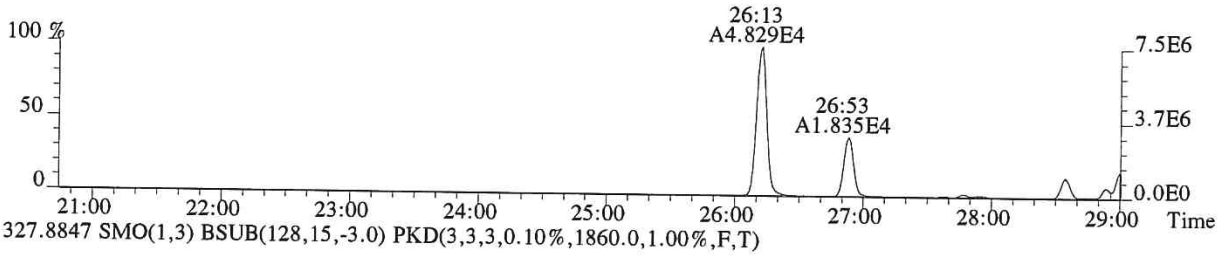
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1280.0,1.00%,F,T)



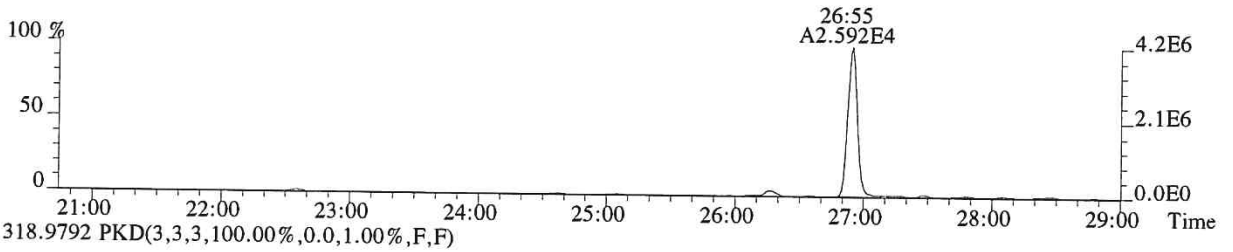
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6160.0,1.00%,F,T)



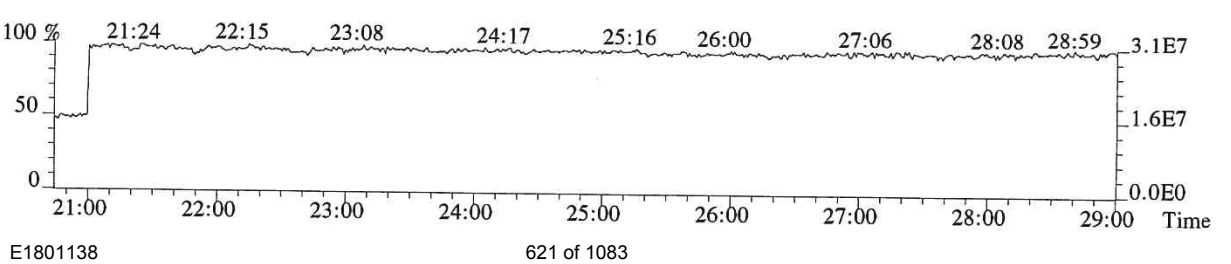
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3528.0,1.00%,F,T)



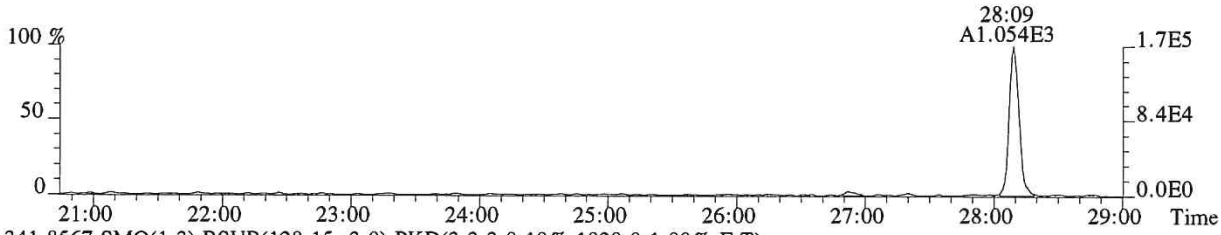
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1860.0,1.00%,F,T)



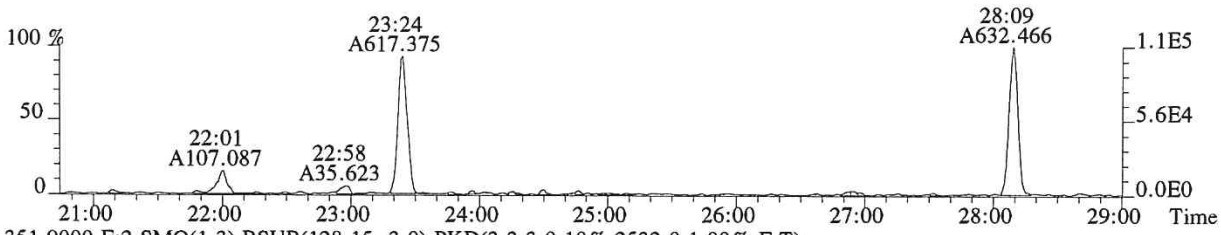
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



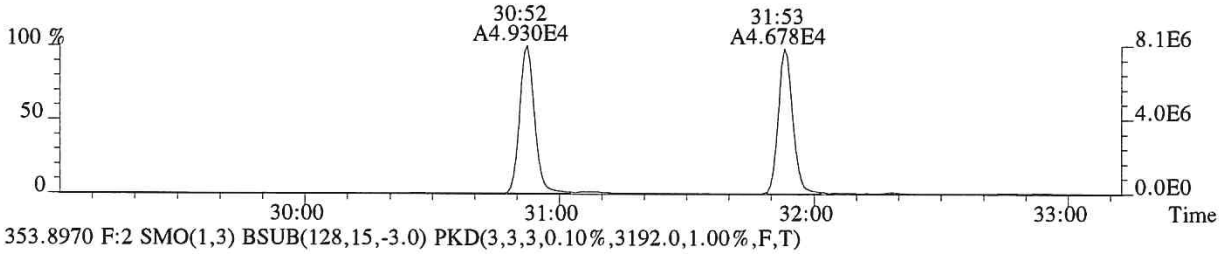
File:P519844 #1-587 Acq: 8-JAN-2019 20:43:26 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1168.0,1.00%,F,T)



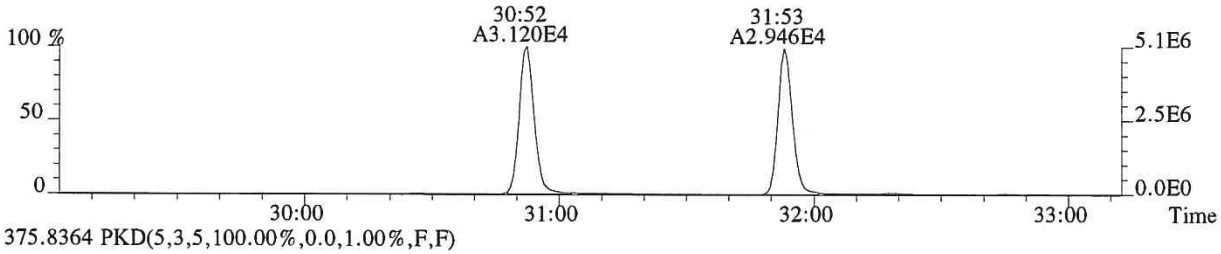
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1020.0,1.00%,F,T)



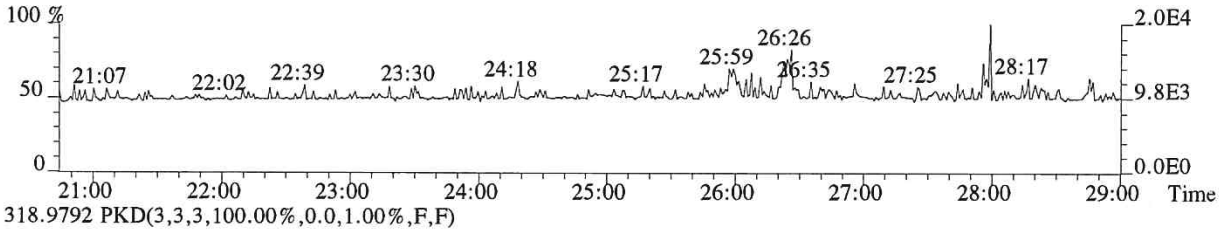
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2532.0,1.00%,F,T)



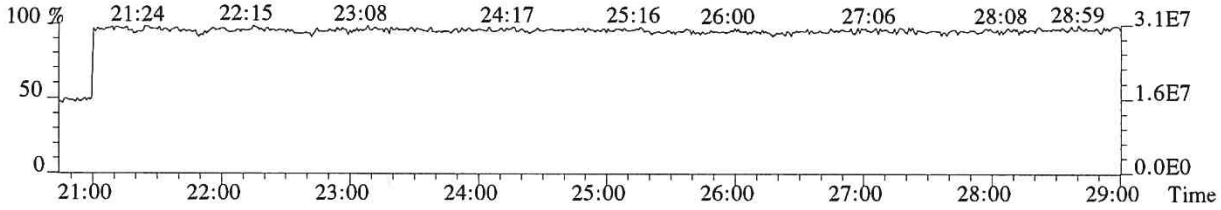
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3192.0,1.00%,F,T)



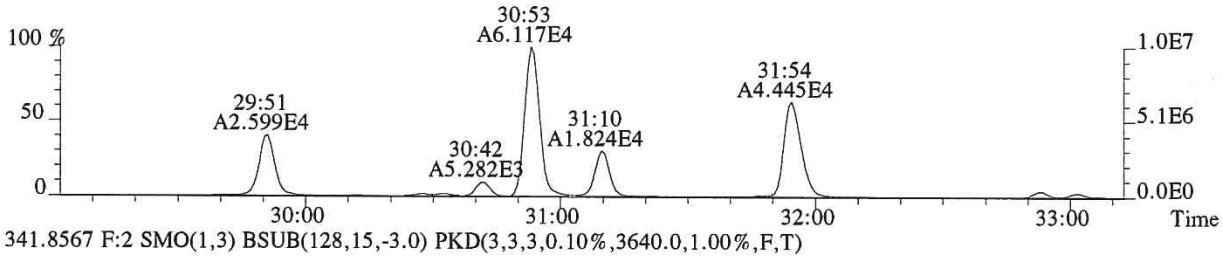
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



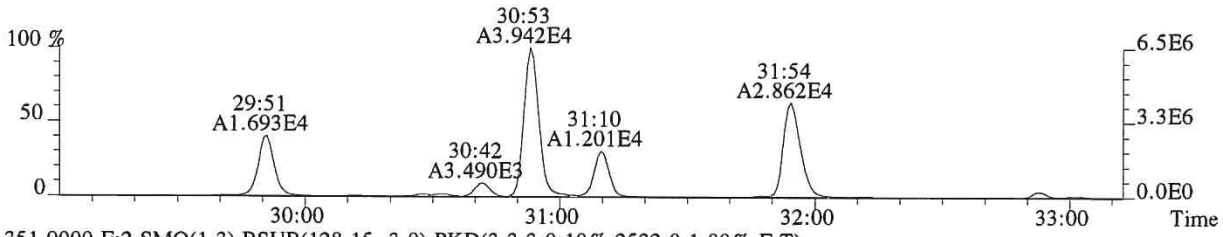
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



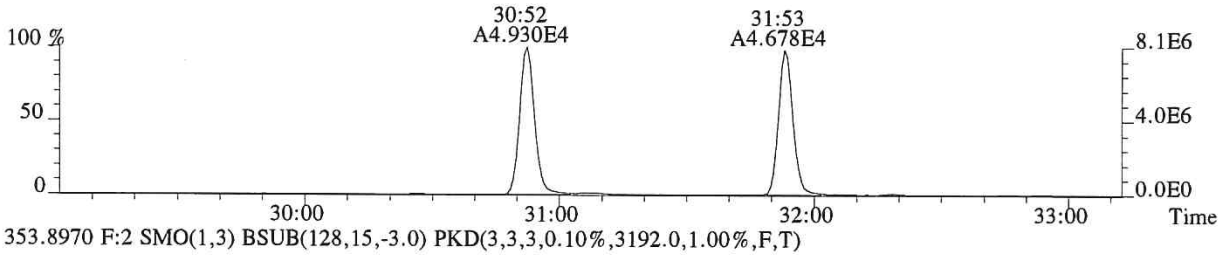
File:P519844 #1-376 Acq: 8-JAN-2019 20:43:26 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9332.0,1.00%,F,T)



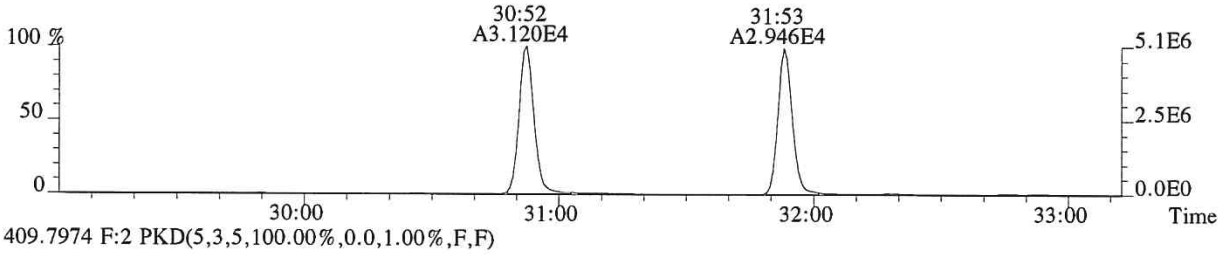
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3640.0,1.00%,F,T)



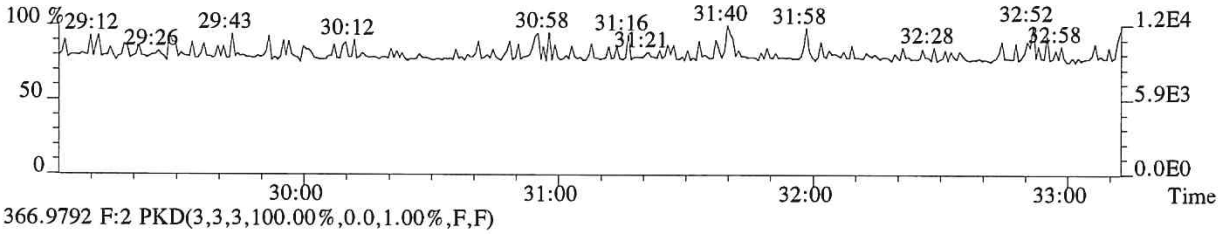
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2532.0,1.00%,F,T)



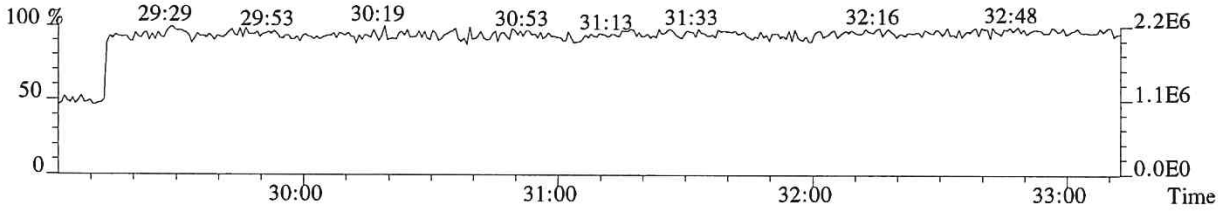
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3192.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

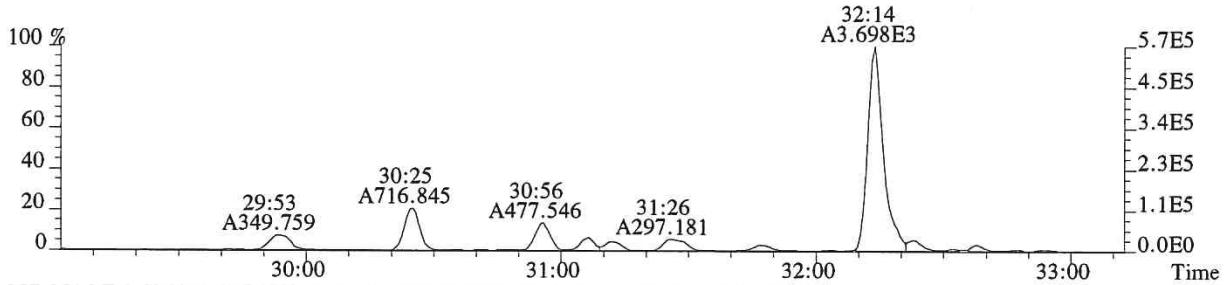


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

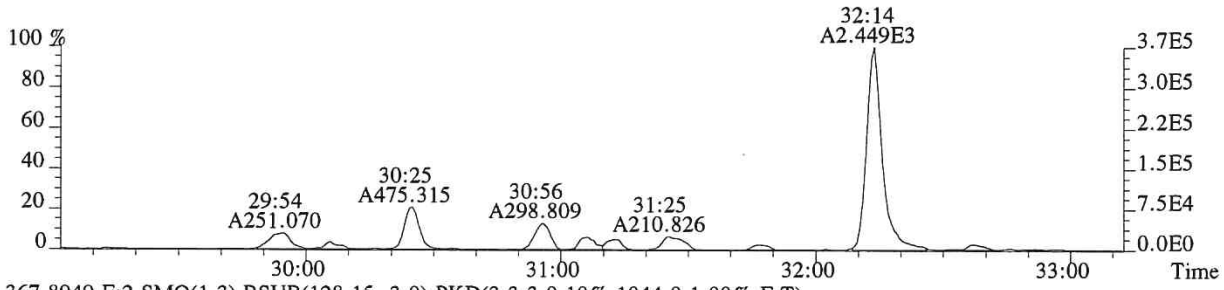


017504

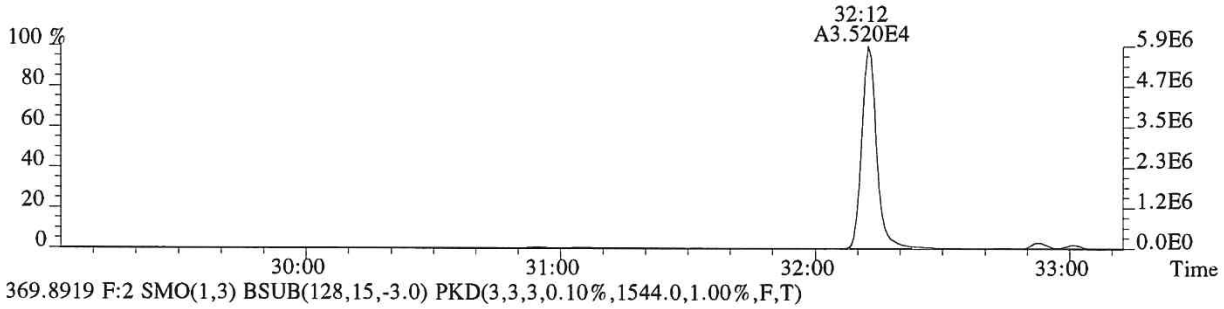
File:P519844 #1-376 Acq: 8-JAN-2019 20:43:26 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1036.0,1.00%,F,T)



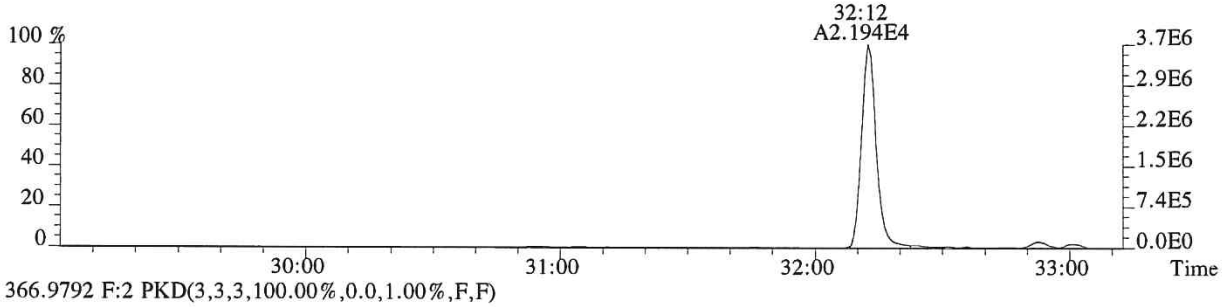
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1004.0,1.00%,F,T)



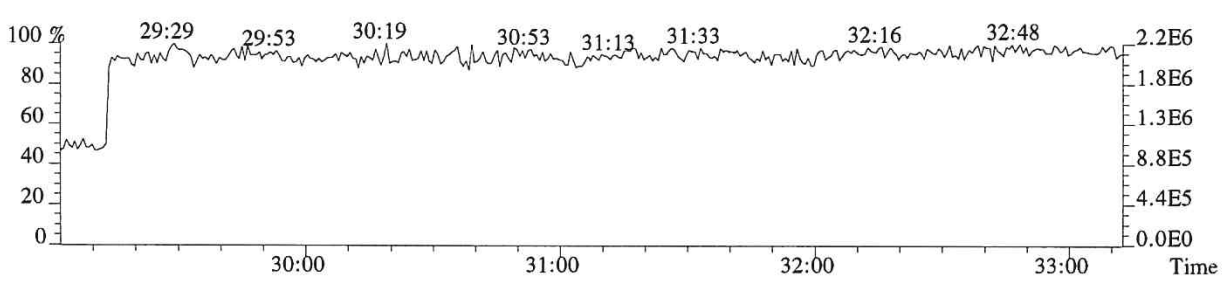
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1044.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1544.0,1.00%,F,T)

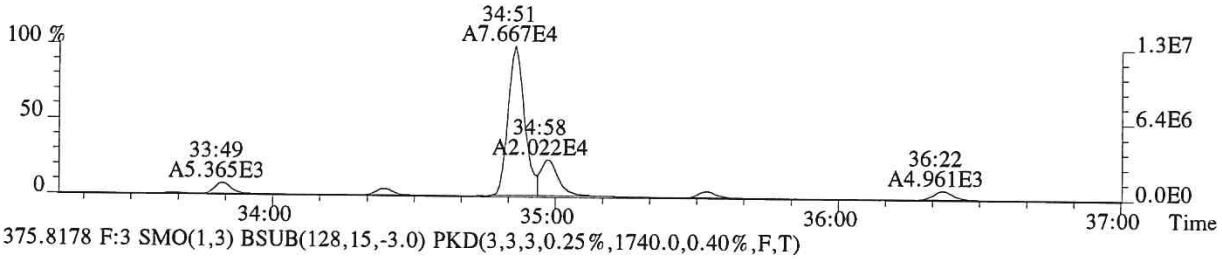


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

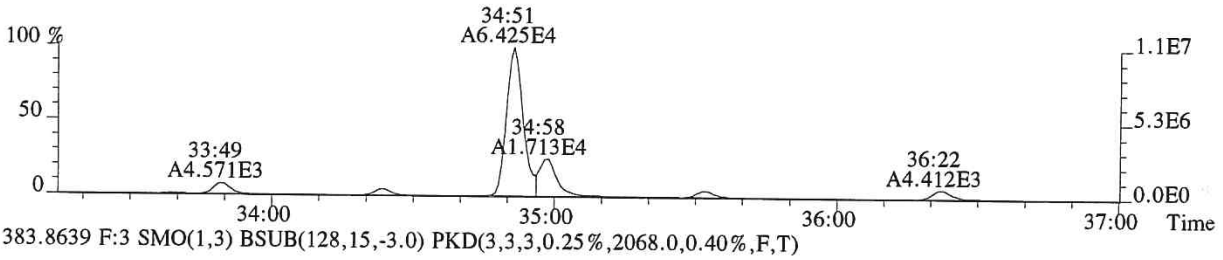


017505

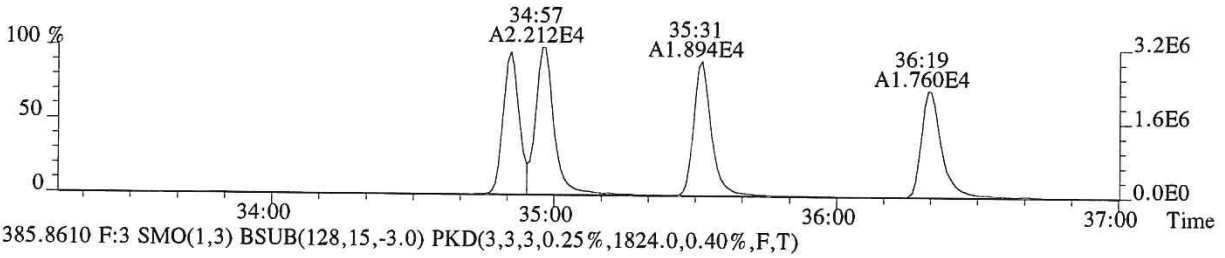
File:P519844 #1-339 Acq: 8-JAN-2019 20:43:26 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4956.0,0.40%,F,T)



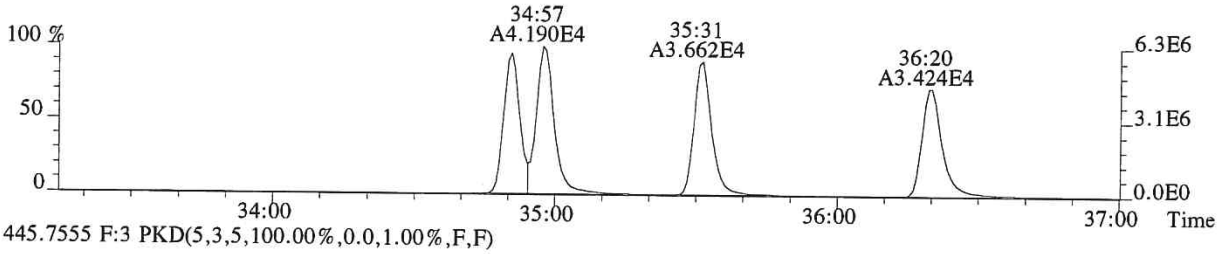
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1740.0,0.40%,F,T)



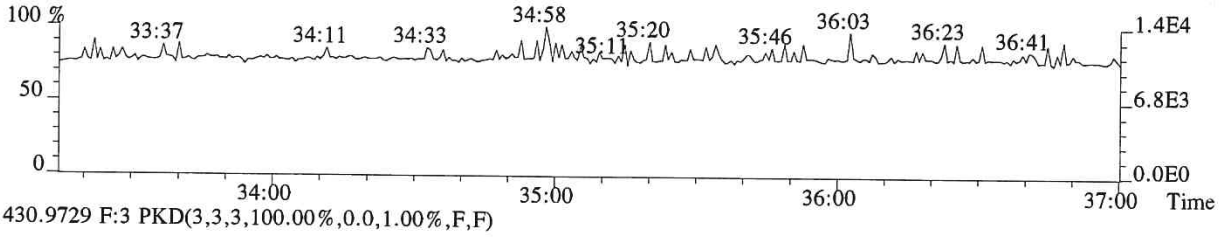
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2068.0,0.40%,F,T)



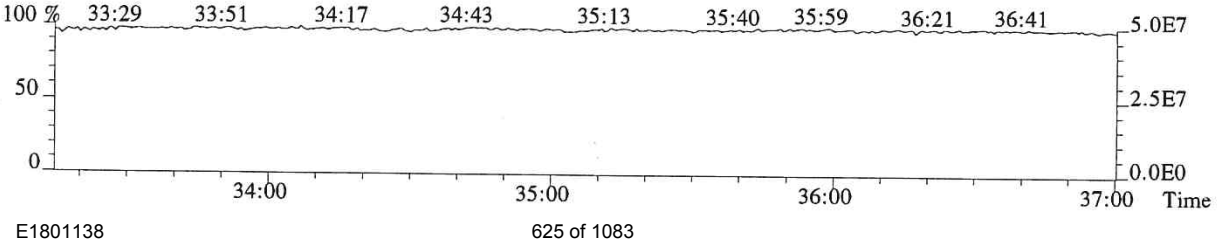
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1824.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

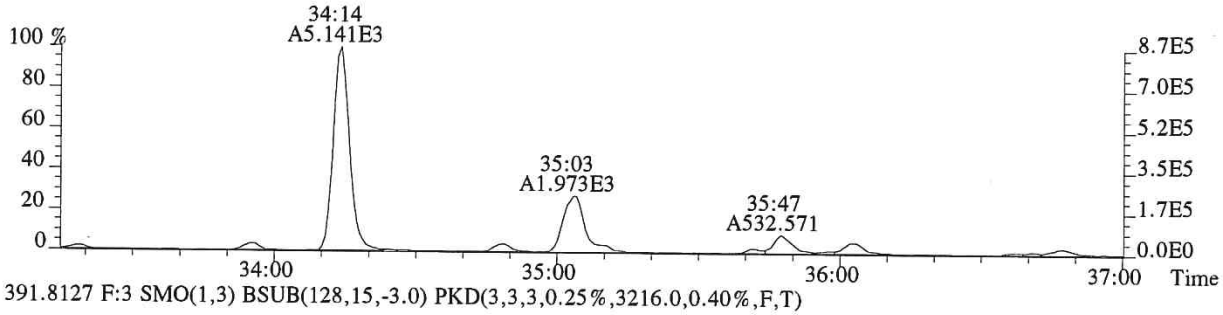


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

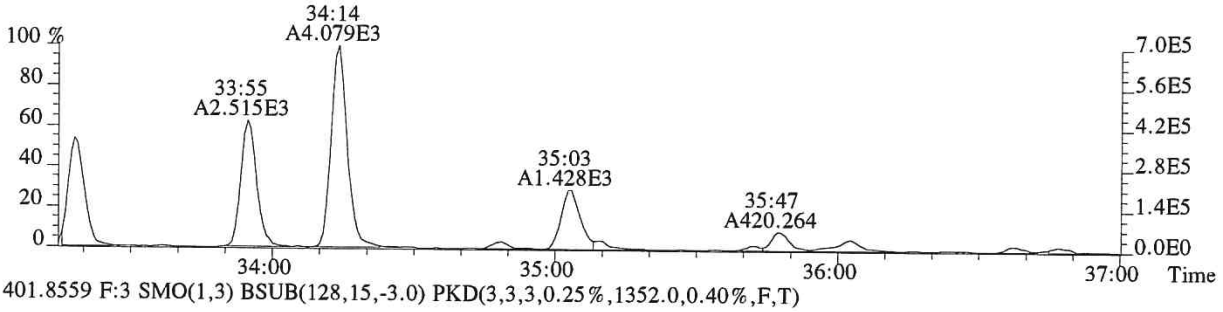


017506

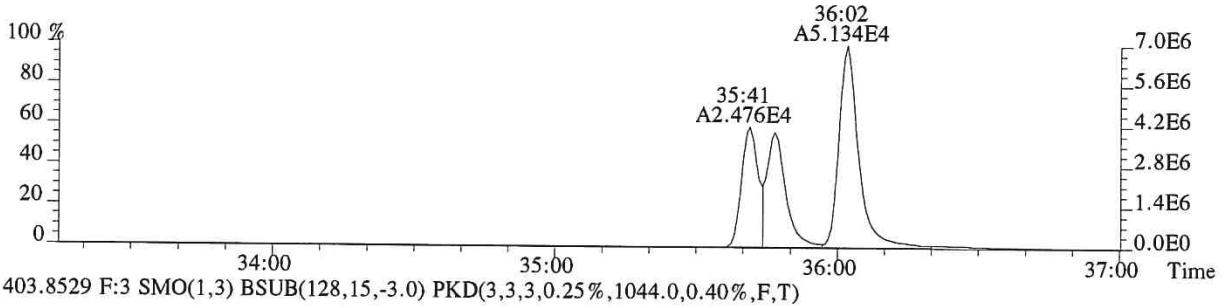
File:P519844 #1-339 Acq: 8-JAN-2019 20:43:26 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1808.0,0.40%,F,T)



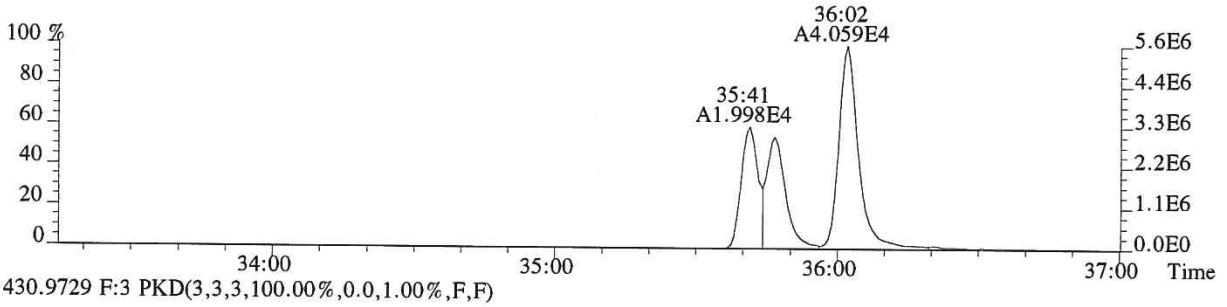
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3216.0,0.40%,F,T)



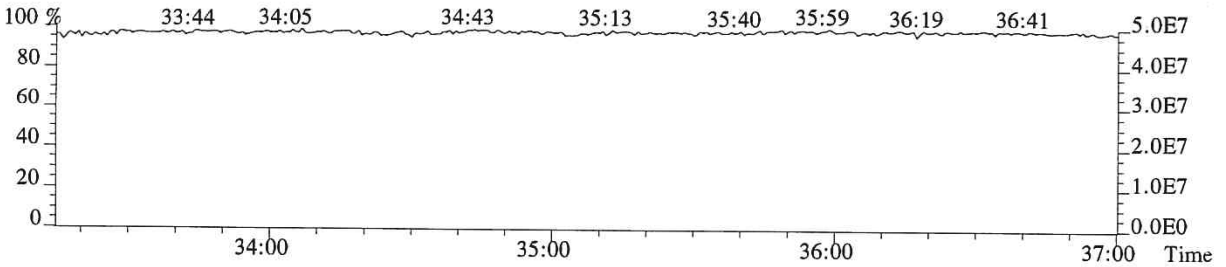
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1352.0,0.40%,F,T)



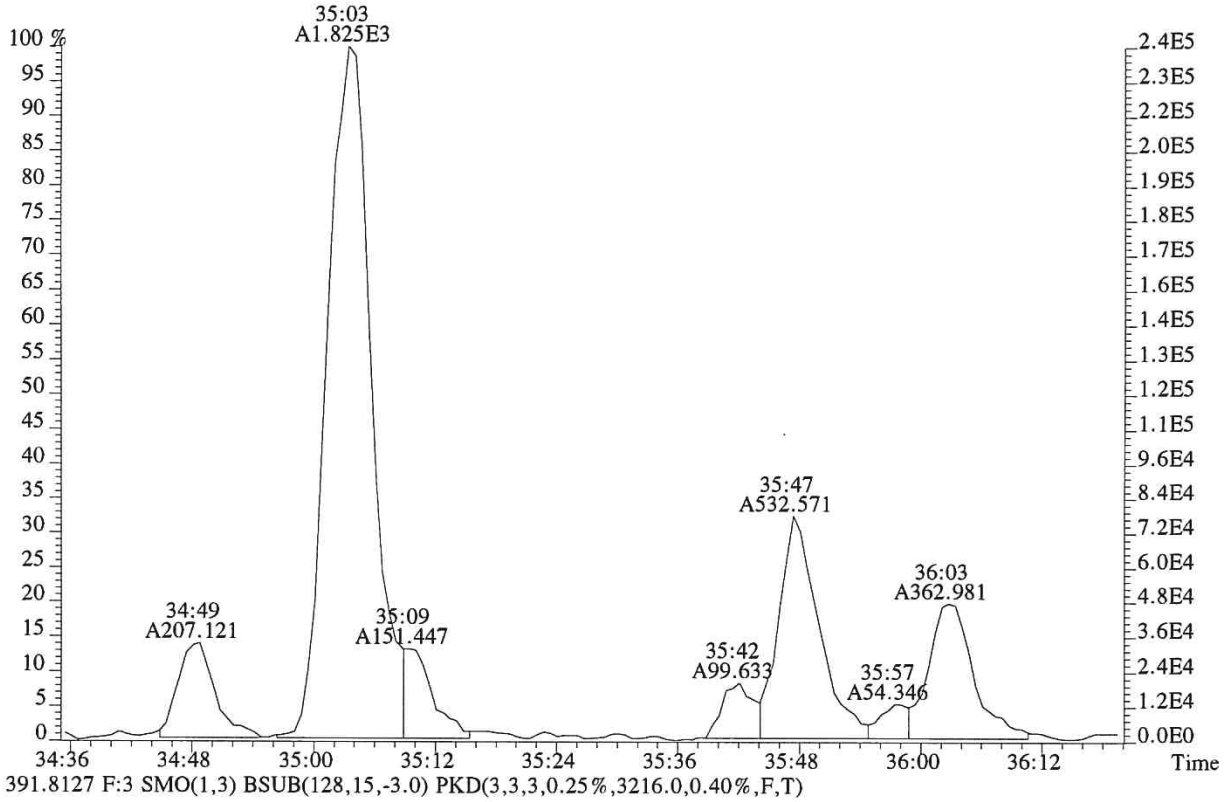
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1044.0,0.40%,F,T)



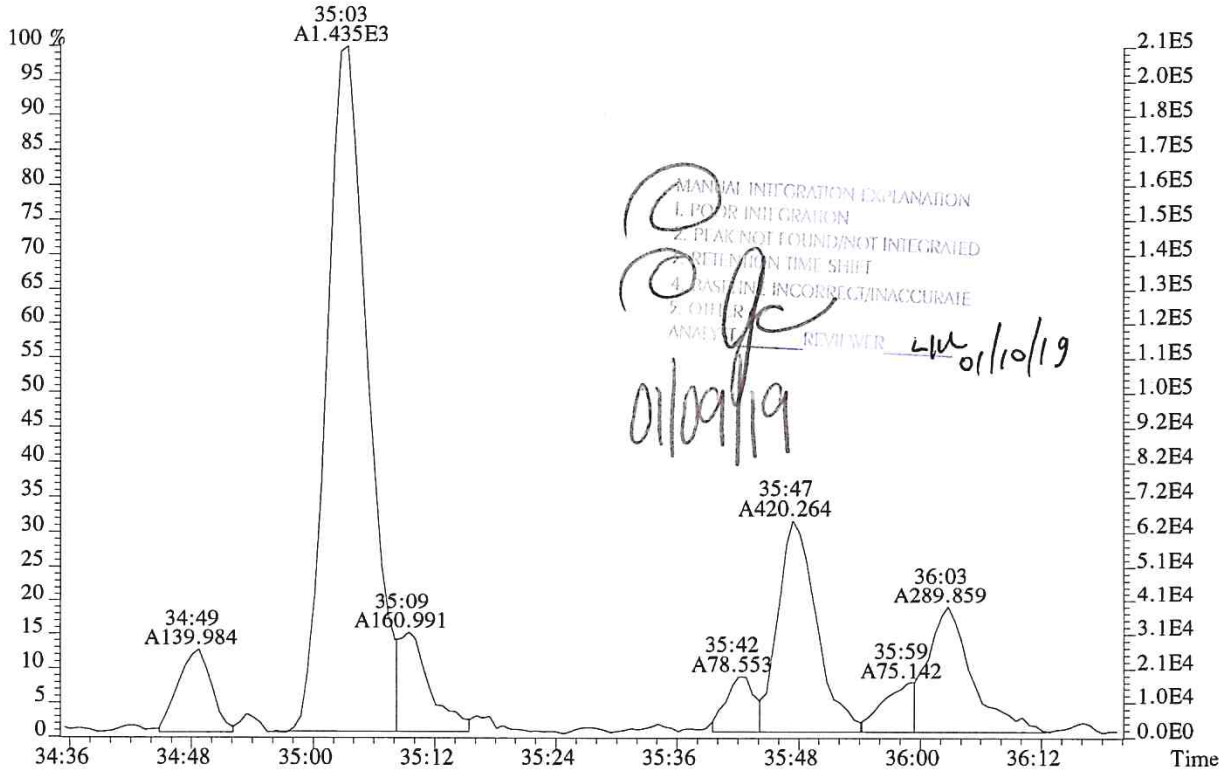
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519844 #1-339 Acq: 8-JAN-2019 20:43:26 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1808.0,0.40%,F,T)

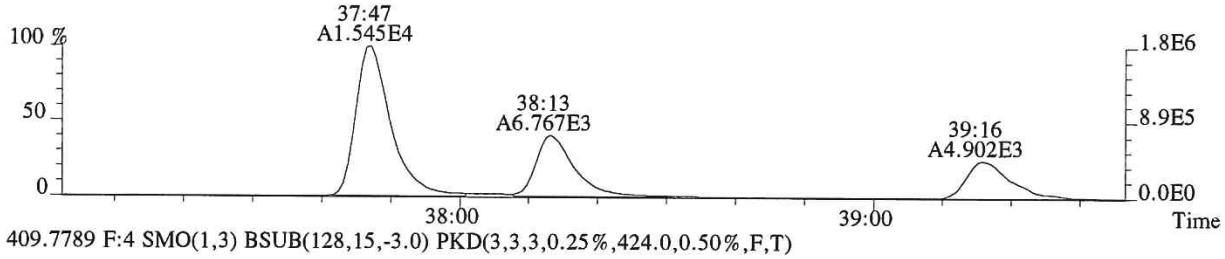


391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3216.0,0.40%,F,T)

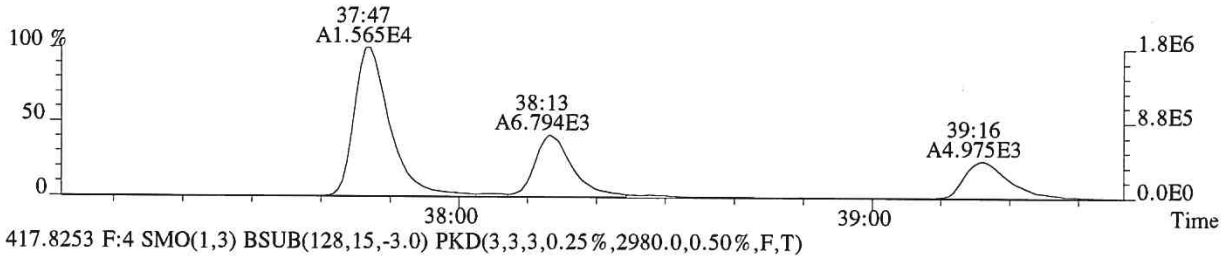


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LW 01/10/19
01/09/19

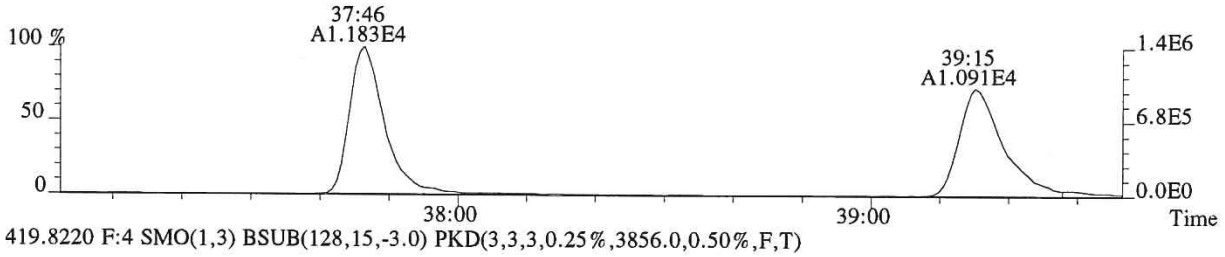
File:P519844 #1-232 Acq: 8-JAN-2019 20:43:26 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,960.0,0.50%,F,T)



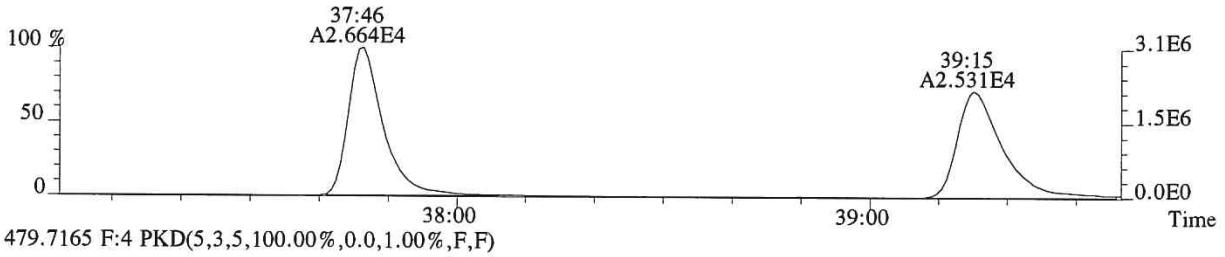
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,424.0,0.50%,F,T)



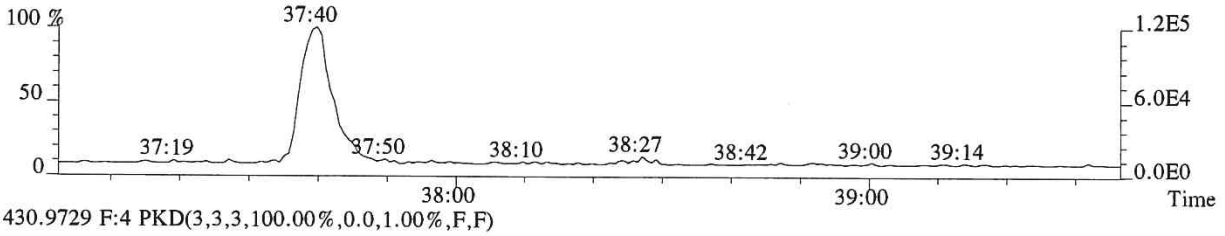
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2980.0,0.50%,F,T)



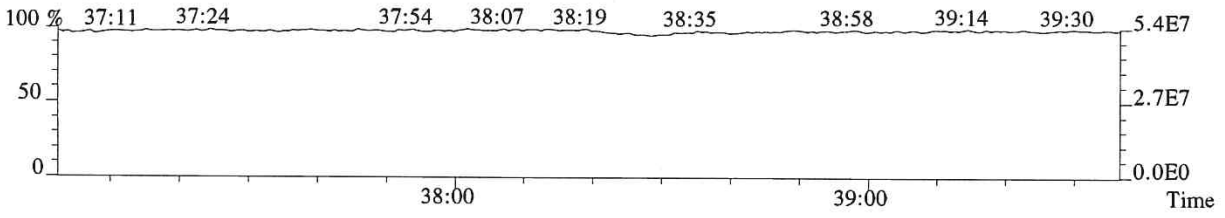
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3856.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

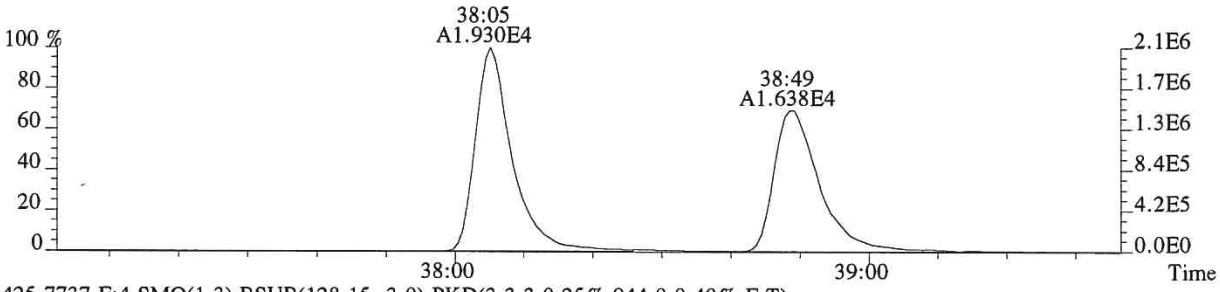


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

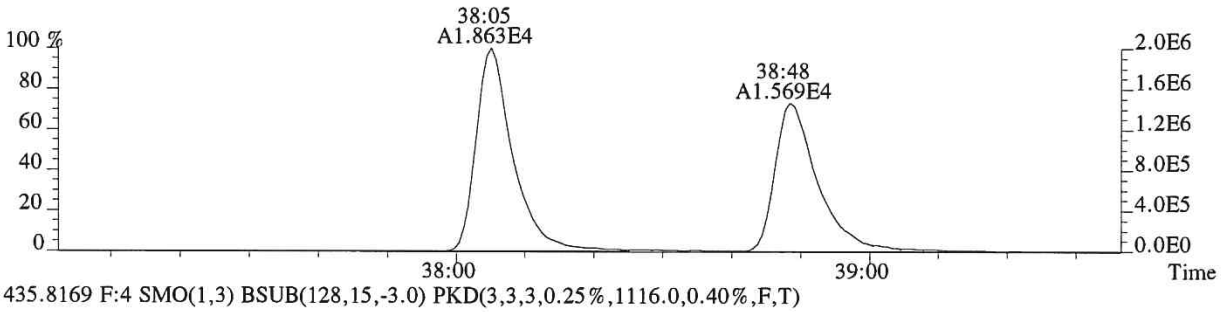


017509

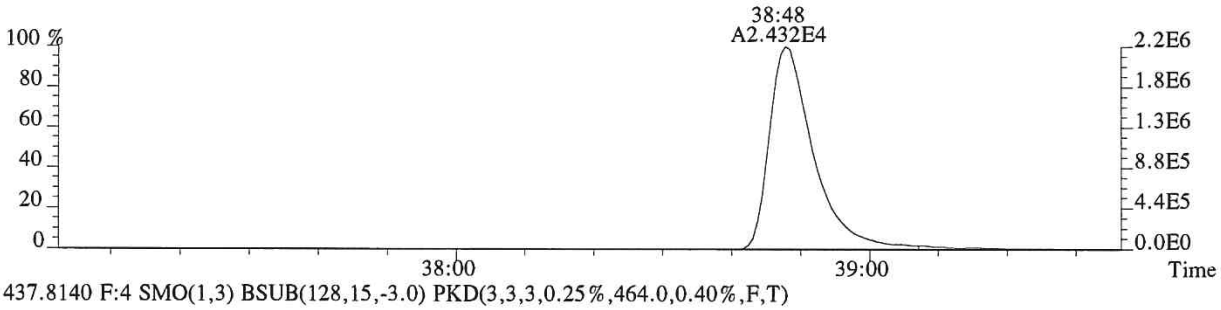
File:P519844 #1-232 Acq: 8-JAN-2019 20:43:26 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,588.0,0.40%,F,T)



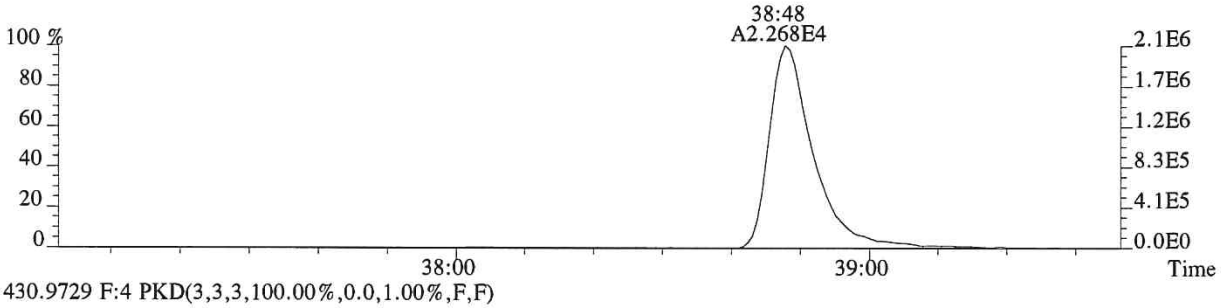
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,944.0,0.40%,F,T)



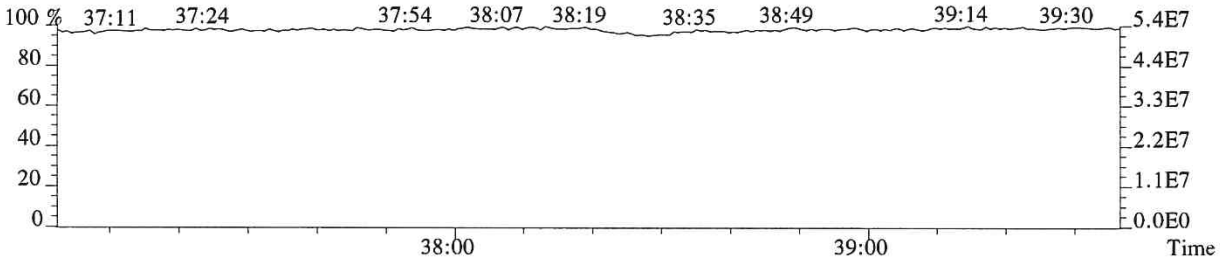
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1116.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,464.0,0.40%,F,T)

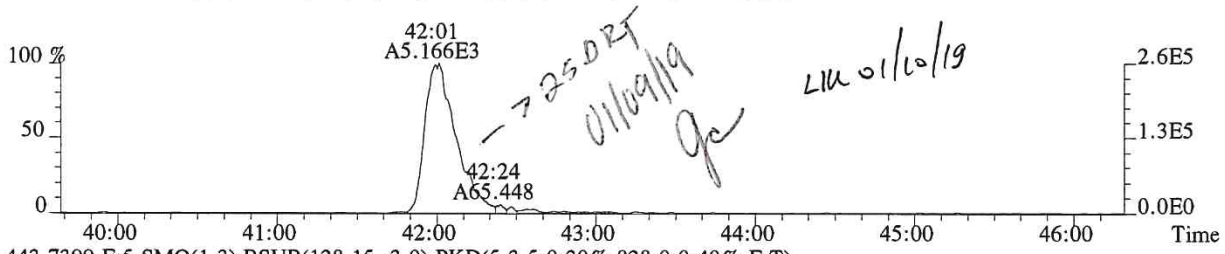


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

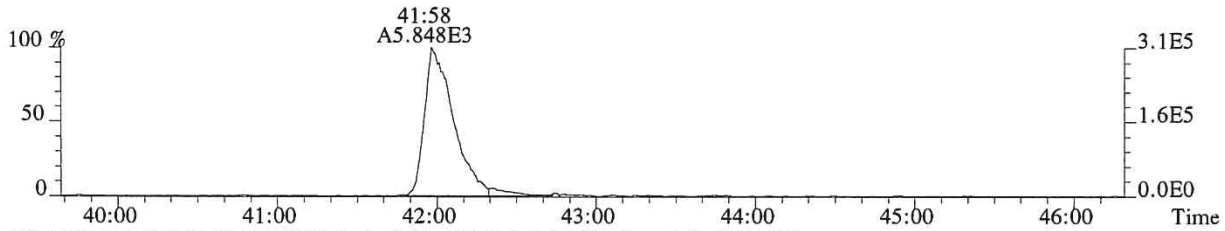


017510

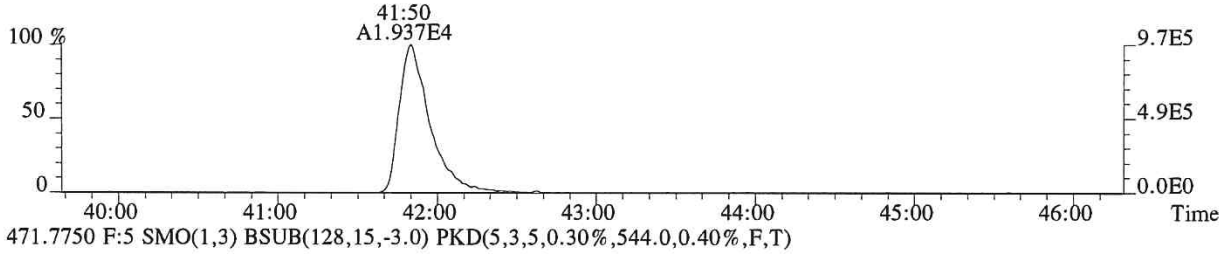
File:P519844 #1-601 Acq: 8-JAN-2019 20:43:26 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,464.0,0.40%,F,T)



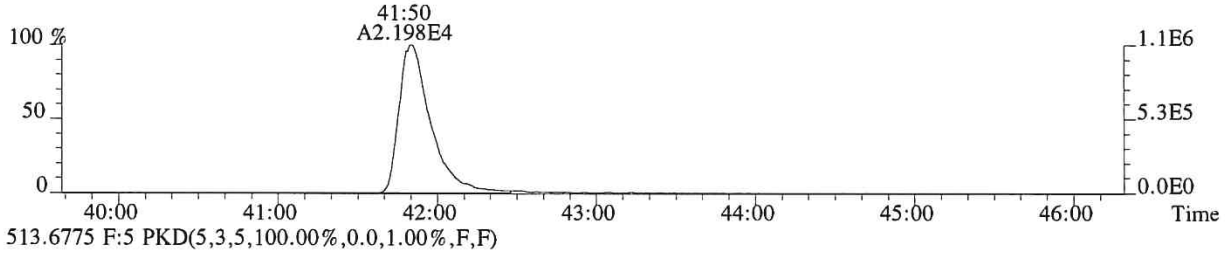
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,828.0,0.40%,F,T)



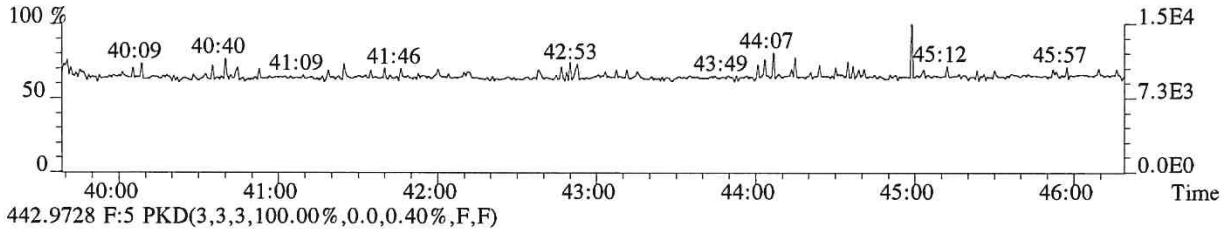
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1068.0,0.40%,F,T)



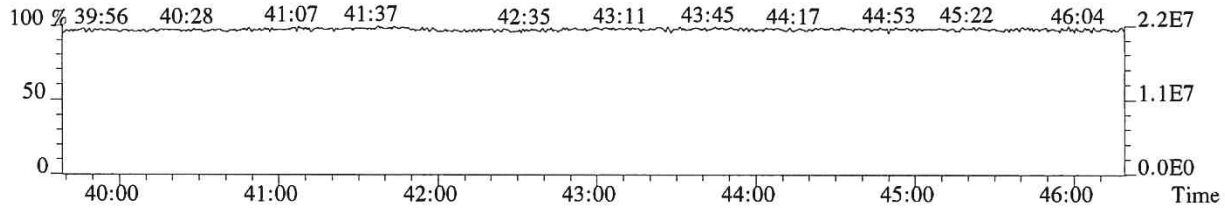
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,544.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

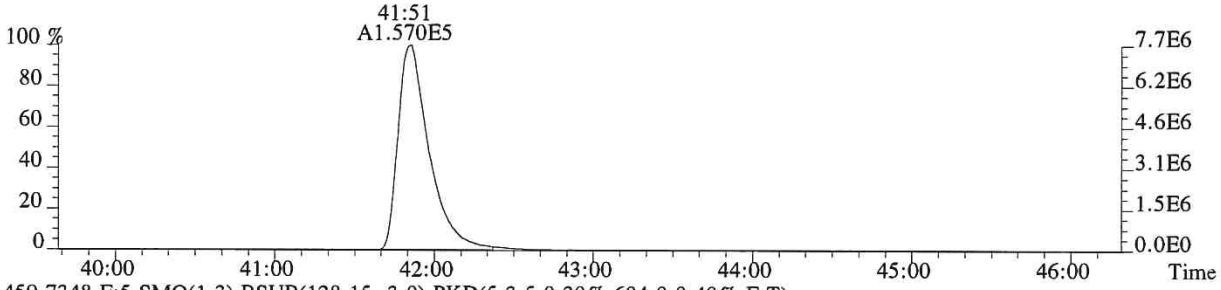


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

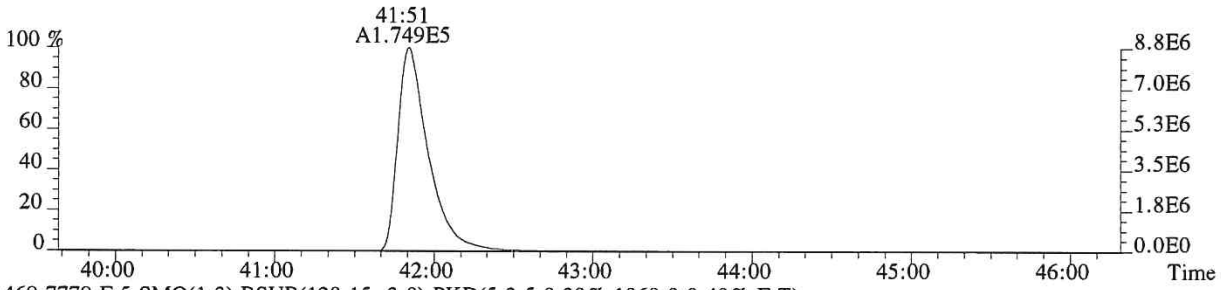


017511

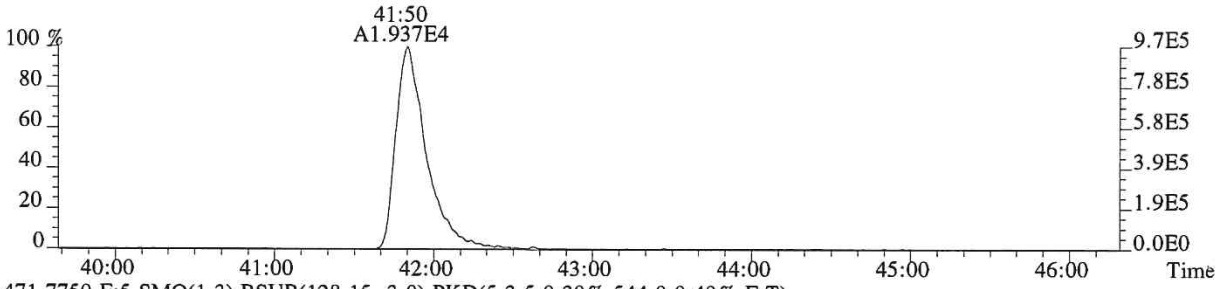
File:P519844 #1-601 Acq: 8-JAN-2019 20:43:26 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,596.0,0.40%,F,T)



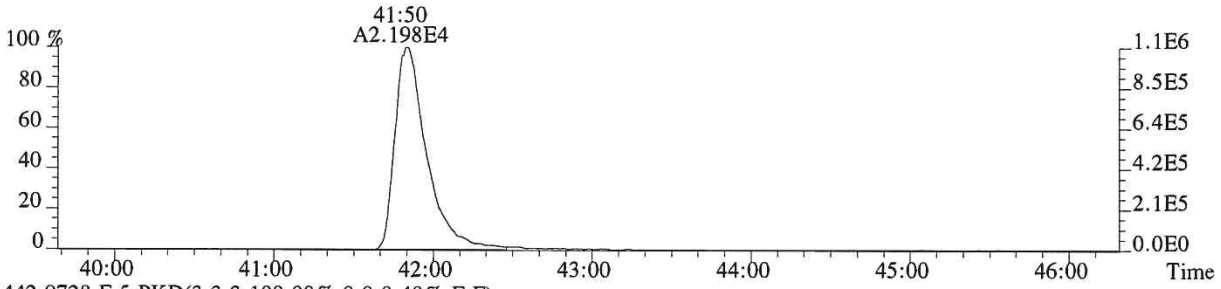
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,604.0,0.40%,F,T)



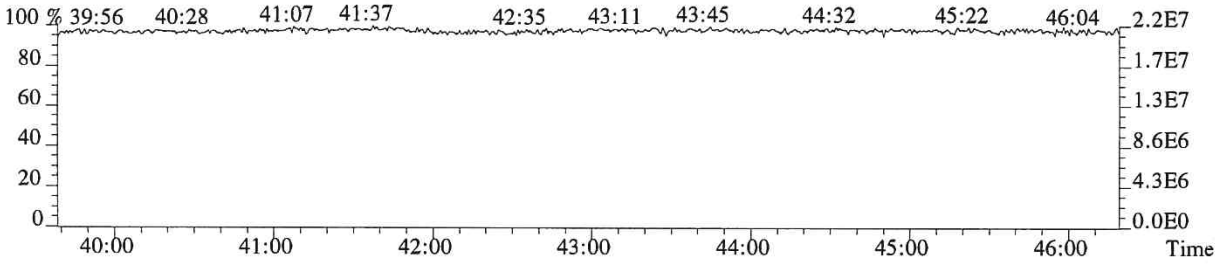
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1068.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,544.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0211

Run #18 Filename P616415 Samp: 1 Inj: 1 Acquired: 9-JAN-19 20:34:39
Processed: 10-JAN-19 08:32:08 Sample ID: E1801138-018DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:13	5.495e+03	7.055e+03	0.78	yes	yes	1.081
2	Unk	1,2,3,7,8-PeCDF	30:22	3.275e+02	2.077e+02	1.58	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:27	2.072e+02	1.607e+02	1.29	no	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	3.157e+02	3.176e+02	0.99	no	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:28	1.137e+02	9.992e+01	1.14	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	2.631e+01	1.661e+01	1.58	no	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:51	2.543e+01	2.138e+01	1.19	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	6.375e+01	7.494e+01	0.85	no	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	1.317e+01	1.268e+01	1.04	yes	no	1.463
10	Unk	OCDF	NotFnd	*	*	*	no	no	1.571
11	Unk	2,3,7,8-TCDD	26:16	1.244e+03	1.650e+03	0.75	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:45	1.558e+01	2.103e+00	7.41	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:05	6.661e+01	5.092e+01	1.31	no	no	1.112
17	Unk	OCDD	40:38	4.141e+02	4.797e+02	0.86	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:11	1.008e+04	1.284e+04	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:22	1.476e+04	9.240e+03	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	1.322e+04	8.269e+03	1.60	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:20	4.880e+03	9.428e+03	0.52	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	6.687e+03	1.266e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:00	5.619e+03	1.077e+04	0.52	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	4.278e+03	8.421e+03	0.51	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	3.350e+03	7.847e+03	0.43	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	2.167e+03	4.789e+03	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:14	4.393e+03	5.811e+03	0.76	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:44	9.403e+03	5.844e+03	1.61	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	6.040e+03	4.752e+03	1.27	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	7.188e+03	5.639e+03	1.27	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:04	5.602e+03	5.397e+03	1.04	yes	no	0.857
32	IS	13C-OCDD	40:38	4.682e+03	4.873e+03	0.96	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:26	7.326e+03	9.066e+03	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	7.183e+03	6.059e+03	1.19	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:16	1.236e+02				no	1.086

$$\text{OCDD} = \frac{(4.141e+02 + 4.797e+02) \times 4000\ \text{pg} \times 50}{(4.682e+03 + 4.873e+03) \times 10.223\ \text{g} \times 85.9/100 \times 1.157 \times 0.39} = 4721\ \text{ng/kg}$$

LW 01/10/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0211

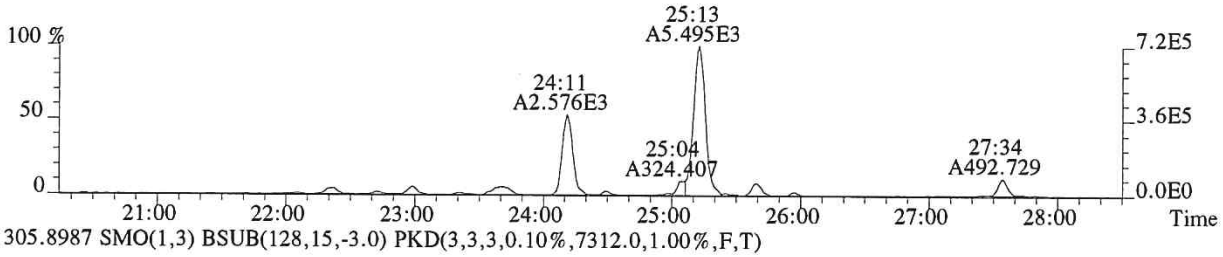
Run #18 Filename P616415 Samp: 1 Inj: 1 Acquired: 9-JAN-19 20:34:39
Processed: 10-JAN-19 08:32:08 LAB. ID: E1801138-018DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	7.20e+05	1.74e+03	4.1e+02	9.33e+05	7.31e+03	1.3e+02
2	1,2,3,7,8-PeCDF	4.14e+04	4.32e+02	9.6e+01	3.47e+04	3.24e+03	1.1e+01
3	2,3,4,7,8-PeCDF	2.90e+04	4.32e+02	6.7e+01	2.41e+04	3.24e+03	7.4e+00
4	1,2,3,4,7,8-HxCDF	6.23e+04	1.00e+03	6.2e+01	5.78e+04	4.28e+02	1.4e+02
5	1,2,3,6,7,8-HxCDF	2.03e+04	1.00e+03	2.0e+01	1.89e+04	4.28e+02	4.4e+01
6	2,3,4,6,7,8-HxCDF	5.19e+03	1.00e+03	5.2e+00	3.21e+03	4.28e+02	7.5e+00
7	1,2,3,7,8,9-HxCDF	7.40e+03	1.00e+03	7.4e+00	6.43e+03	4.28e+02	1.5e+01
8	1,2,3,4,6,7,8-HpCDF	1.22e+04	6.16e+02	2.0e+01	1.43e+04	4.48e+02	3.2e+01
9	1,2,3,4,7,8,9-HpCDF	3.73e+03	6.16e+02	6.1e+00	3.58e+03	4.48e+02	8.0e+00
10	OCDF	*	6.04e+02	*	*	2.05e+03	*
11	2,3,7,8-TCDD	1.79e+05	4.80e+03	3.7e+01	2.18e+05	1.27e+03	1.7e+02
12	1,2,3,7,8-PeCDD	3.78e+03	1.08e+03	3.5e+00	5.88e+02	2.60e+02	2.3e+00
13	1,2,3,4,7,8-HxCDD	*	6.64e+02	*	*	1.24e+03	*
14	1,2,3,6,7,8-HxCDD	*	6.64e+02	*	*	1.24e+03	*
15	1,2,3,7,8,9-HxCDD	*	6.64e+02	*	*	1.24e+03	*
16	1,2,3,4,6,7,8-HpCDD	1.38e+04	7.40e+02	1.9e+01	9.72e+03	4.40e+02	2.2e+01
17	OCDD	6.18e+04	3.32e+02	1.9e+02	6.10e+04	2.56e+02	2.4e+02
18	13C-2,3,7,8-TCDF	1.39e+06	1.39e+04	1.0e+02	1.77e+06	9.54e+03	1.9e+02
19	13C-1,2,3,7,8-PeCDF	2.26e+06	5.00e+02	4.5e+03	1.40e+06	1.92e+02	7.3e+03
20	13C-2,3,4,7,8-PeCDF	2.23e+06	5.00e+02	4.5e+03	1.36e+06	1.92e+02	7.1e+03
21	13C-1,2,3,4,7,8-HxCDF	9.50e+05	1.03e+03	9.2e+02	1.83e+06	2.19e+03	8.4e+02
22	13C-1,2,3,6,7,8-HxCDF	1.07e+06	1.03e+03	1.0e+03	1.98e+06	2.19e+03	9.0e+02
23	13C-2,3,4,6,7,8-HxCDF	9.70e+05	1.03e+03	9.4e+02	1.87e+06	2.19e+03	8.6e+02
24	13C-1,2,3,7,8,9-HxCDF	7.13e+05	1.03e+03	6.9e+02	1.36e+06	2.19e+03	6.2e+02
25	13C-1,2,3,4,6,7,8-HpCDF	6.35e+05	3.04e+03	2.1e+02	1.41e+06	5.08e+03	2.8e+02
26	13C-1,2,3,4,7,8,9-HpCDF	3.72e+05	3.04e+03	1.2e+02	7.98e+05	5.08e+03	1.6e+02
27	13C-2,3,7,8-TCDD	6.43e+05	9.78e+03	6.6e+01	8.35e+05	4.70e+03	1.8e+02
28	13C-1,2,3,7,8-PeCDD	1.52e+06	1.82e+03	8.4e+02	9.36e+05	1.80e+03	5.2e+02
29	13C-1,2,3,4,7,8-HxCDD	1.24e+06	2.33e+03	5.3e+02	9.59e+05	1.37e+03	7.0e+02
30	13C-1,2,3,6,7,8-HxCDD	1.19e+06	2.33e+03	5.1e+02	9.54e+05	1.37e+03	7.0e+02
31	13C-1,2,3,4,6,7,8-HpCDD	9.30e+05	7.84e+02	1.2e+03	8.33e+05	4.48e+02	1.9e+03
32	13C-OCDD	5.95e+05	1.60e+03	3.7e+02	6.54e+05	3.92e+02	1.7e+03
33	13C-1,2,3,4-TCDD	9.99e+05	9.78e+03	1.0e+02	1.26e+06	4.70e+03	2.7e+02
34	13C-1,2,3,7,8,9-HxCDD	1.16e+06	2.33e+03	5.0e+02	8.91e+05	1.37e+03	6.5e+02
35	37Cl-2,3,7,8-TCDD	2.04e+04	2.36e+03	8.7e+00			

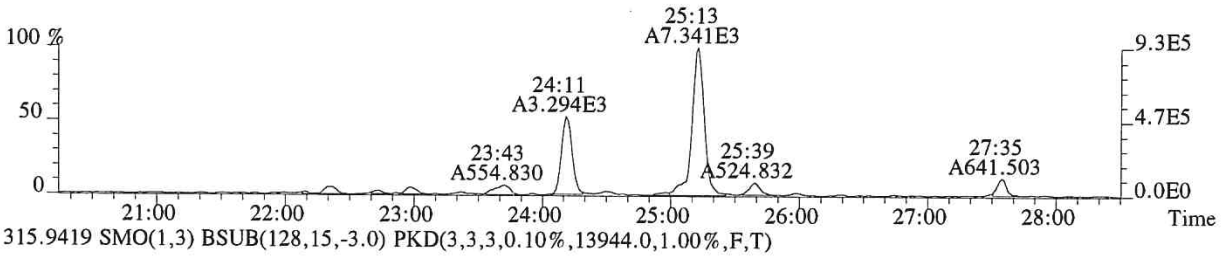
ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office:(713)266-1599. Fax:(713)266-0130

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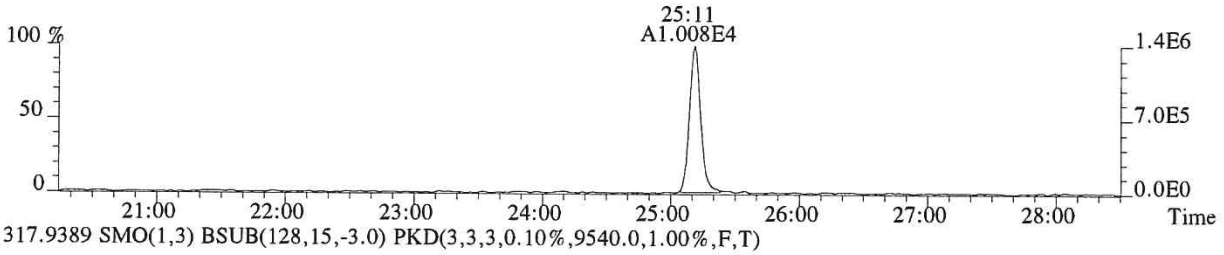
File:P616415 #1-587 Acq: 9-JAN-2019 20:34:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1736.0,1.00%,F,T)



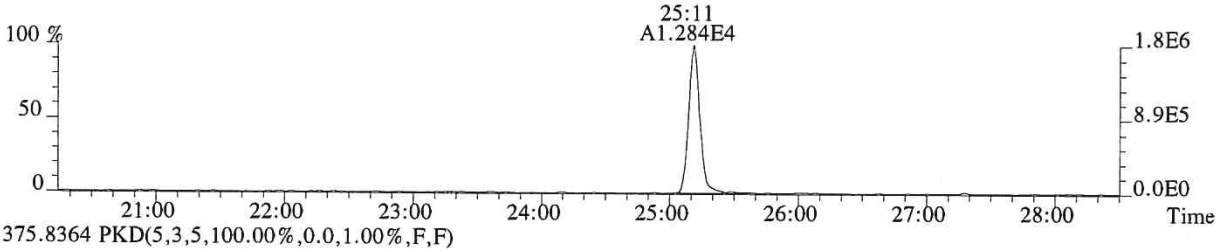
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7312.0,1.00%,F,T)



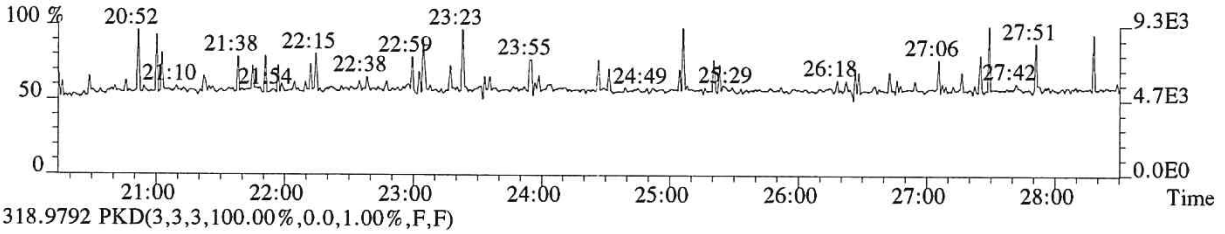
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,13944.0,1.00%,F,T)



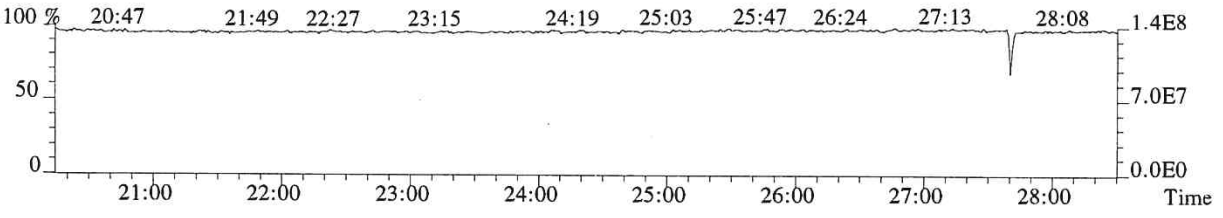
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9540.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

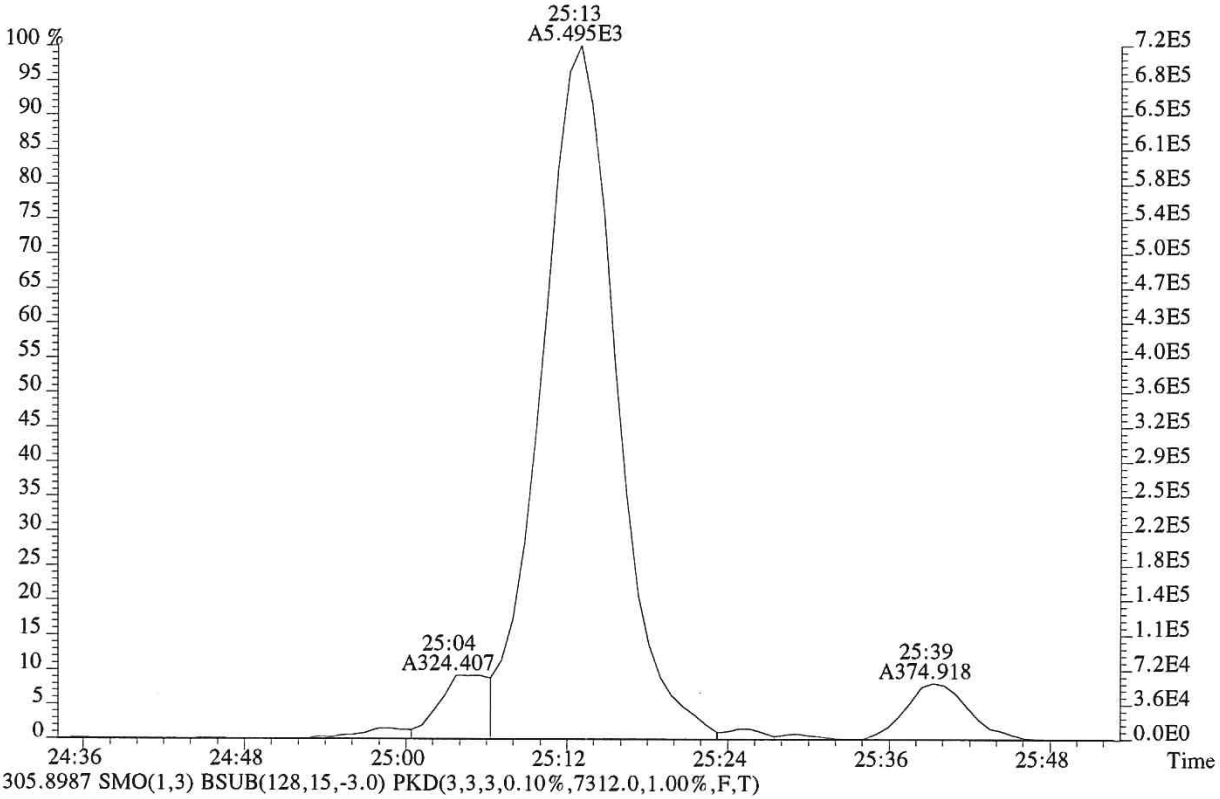


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

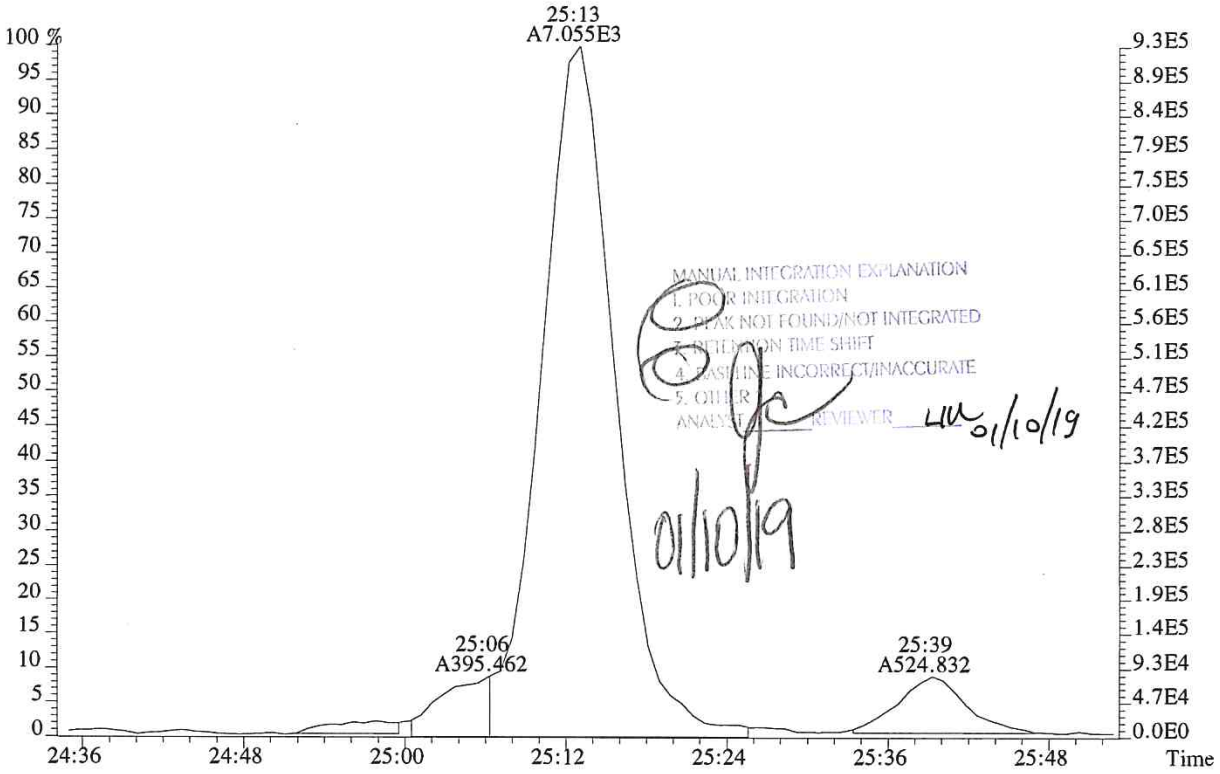


017515

File:P616415 #1-587 Acq: 9-JAN-2019 20:34:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1736.0,1.00%,F,T)

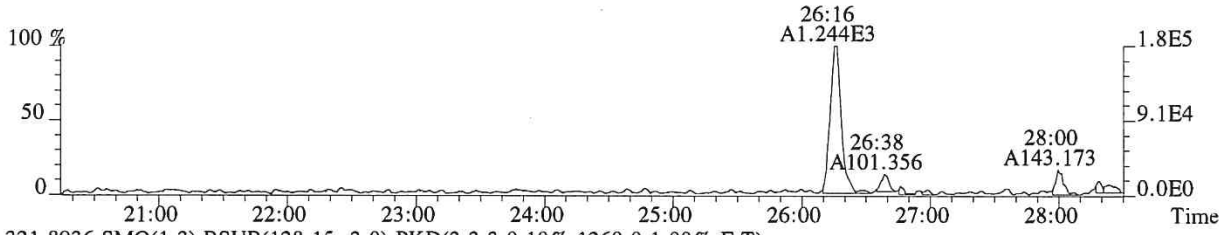


305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7312.0,1.00%,F,T)

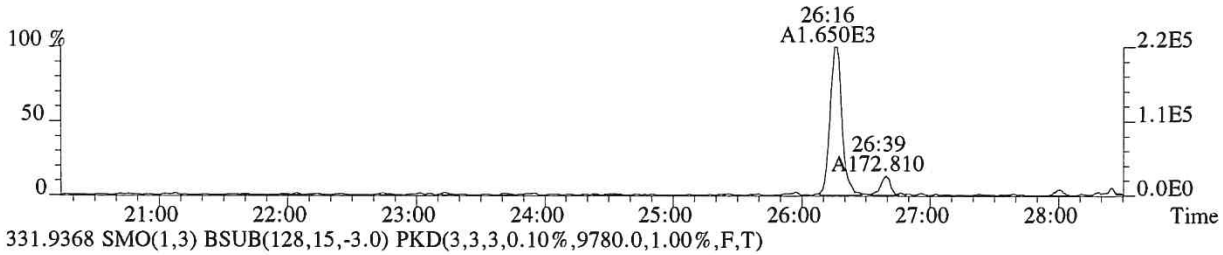


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. DETECTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER 01/10/19
01/10/19

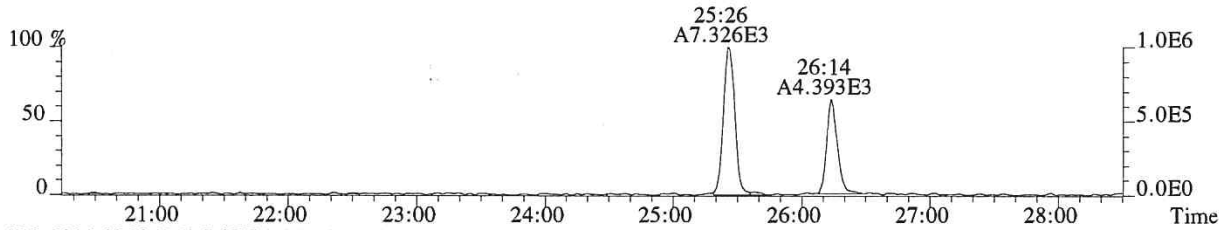
File:P616415 #1-587 Acq: 9-JAN-2019 20:34:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4796.0,1.00%,F,T)



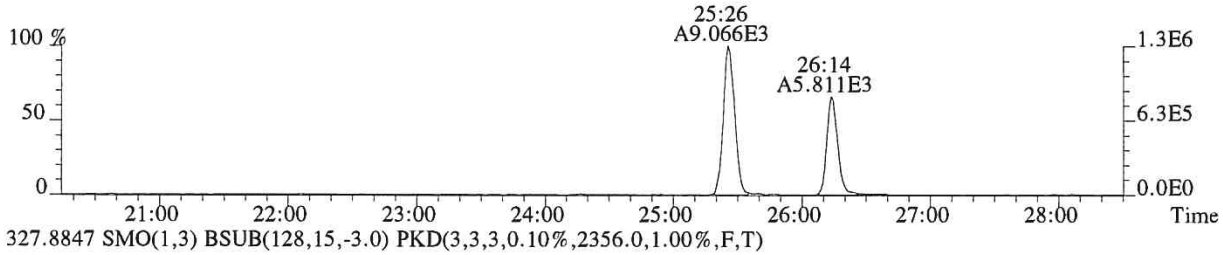
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1268.0,1.00%,F,T)



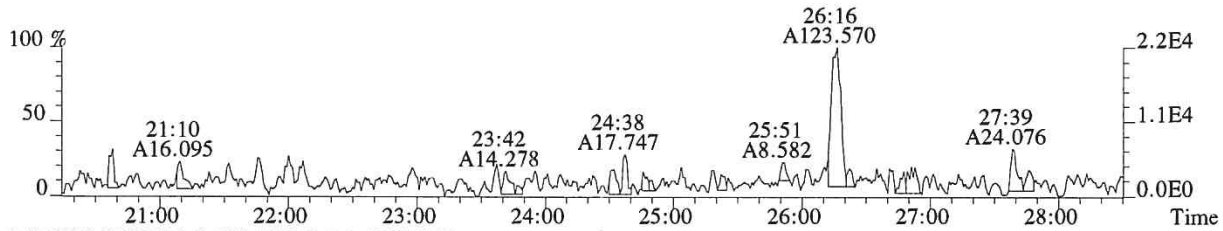
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9780.0,1.00%,F,T)



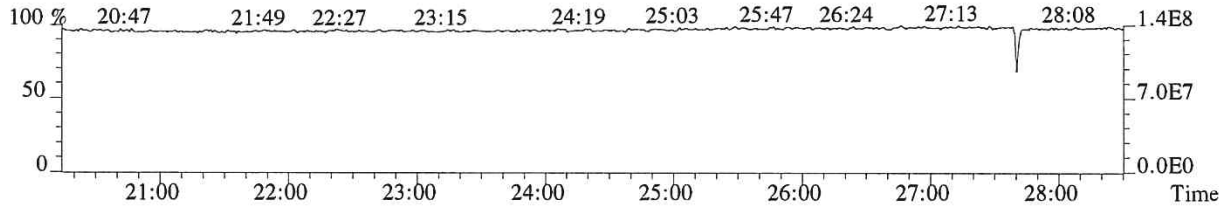
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4704.0,1.00%,F,T)



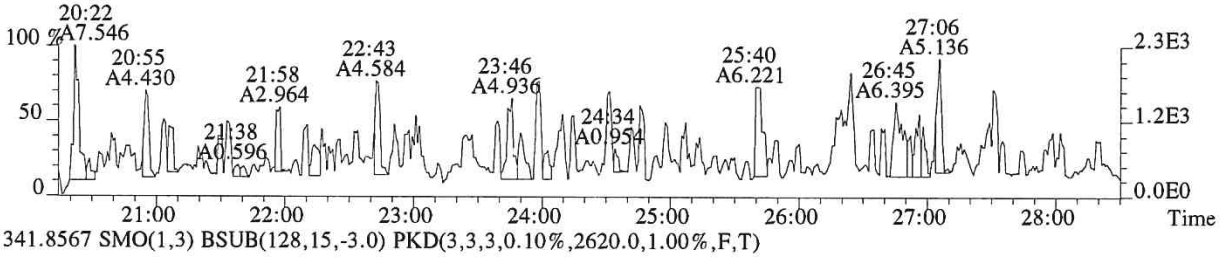
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2356.0,1.00%,F,T)



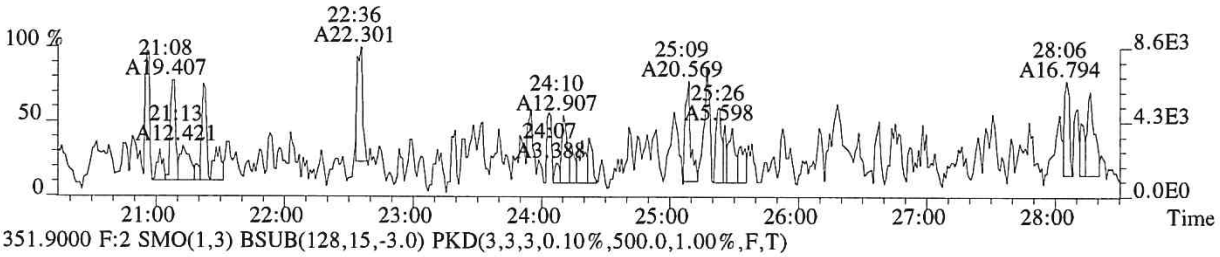
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



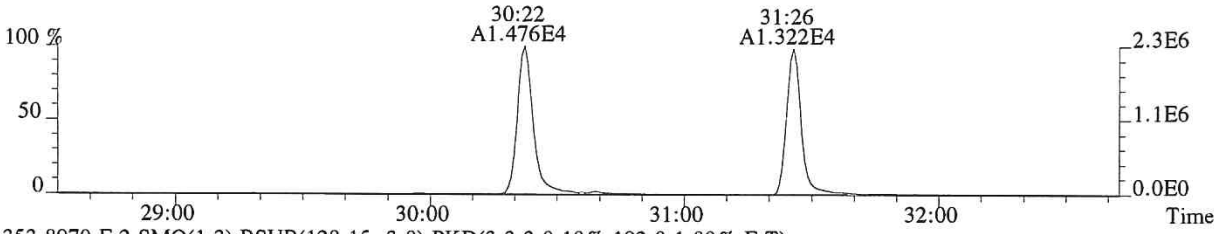
File:P616415 #1-587 Acq: 9-JAN-2019 20:34:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,628.0,1.00%,F,T)



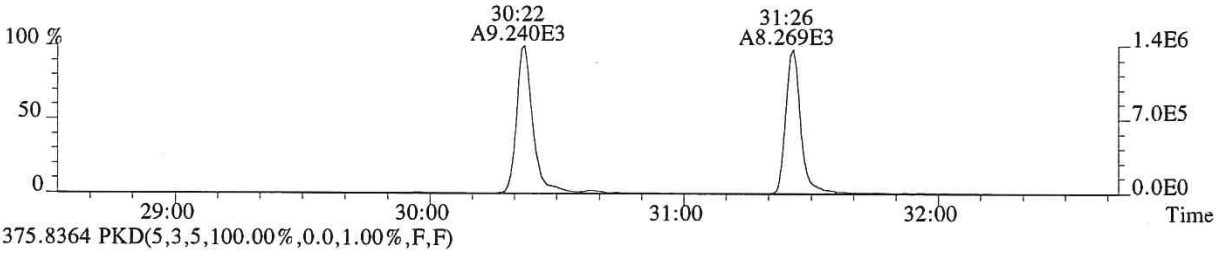
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2620.0,1.00%,F,T)



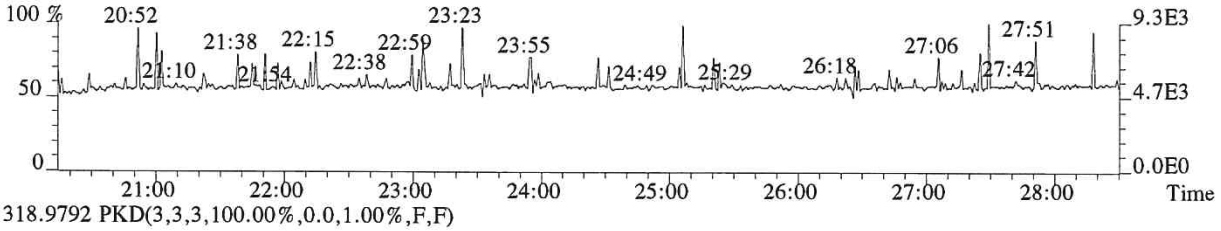
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,500.0,1.00%,F,T)



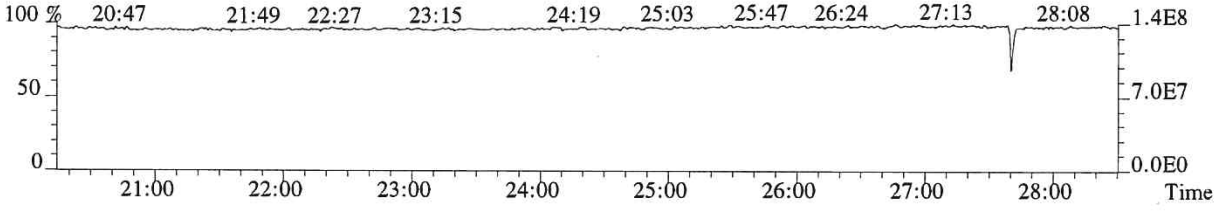
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,192.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

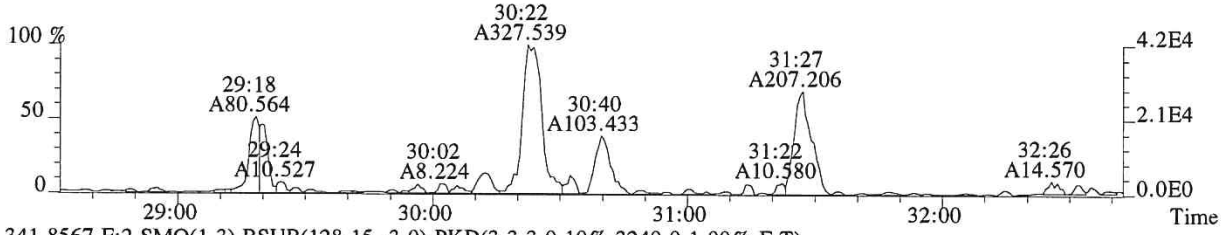


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

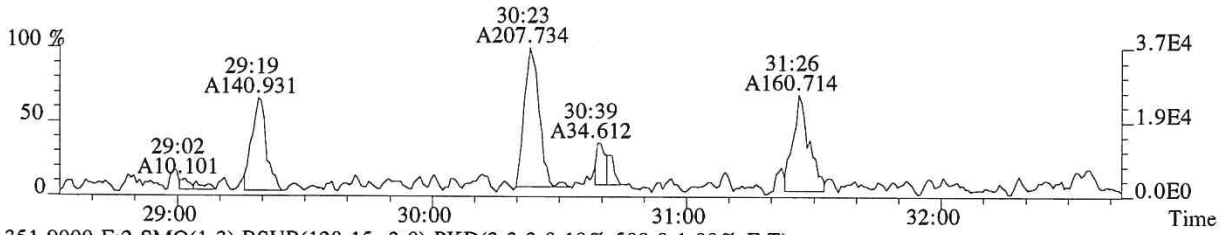


017518

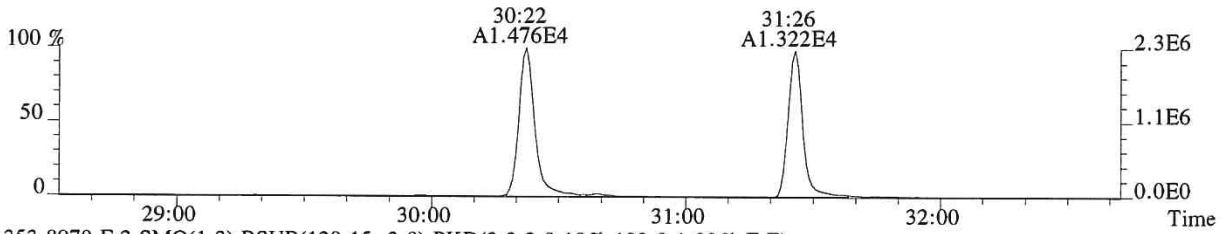
File:P616415 #1-376 Acq: 9-JAN-2019 20:34:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,432.0,1.00%,F,T)



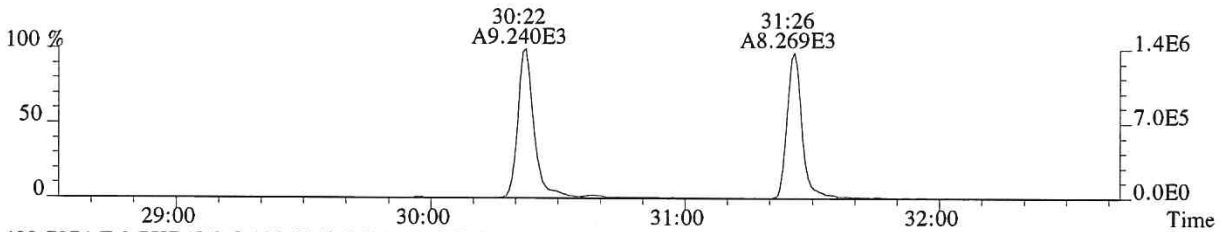
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3240.0,1.00%,F,T)



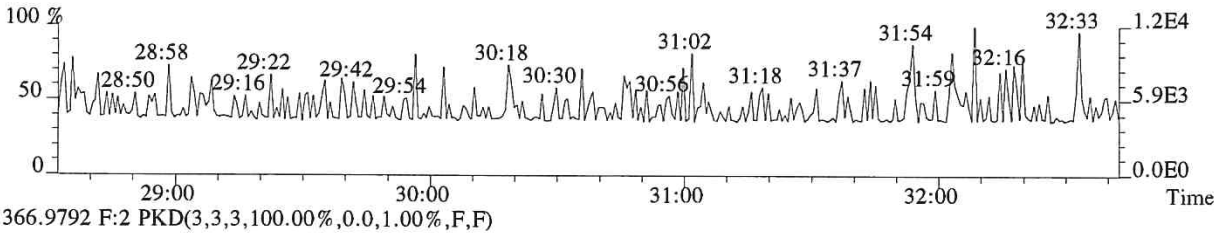
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,500.0,1.00%,F,T)



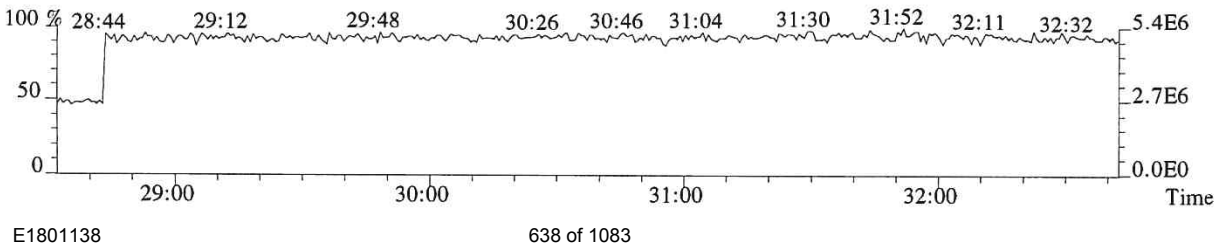
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,192.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

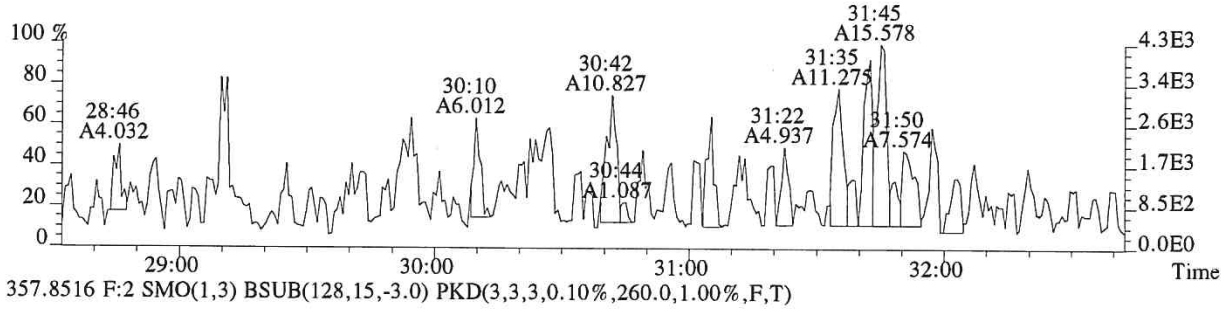


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

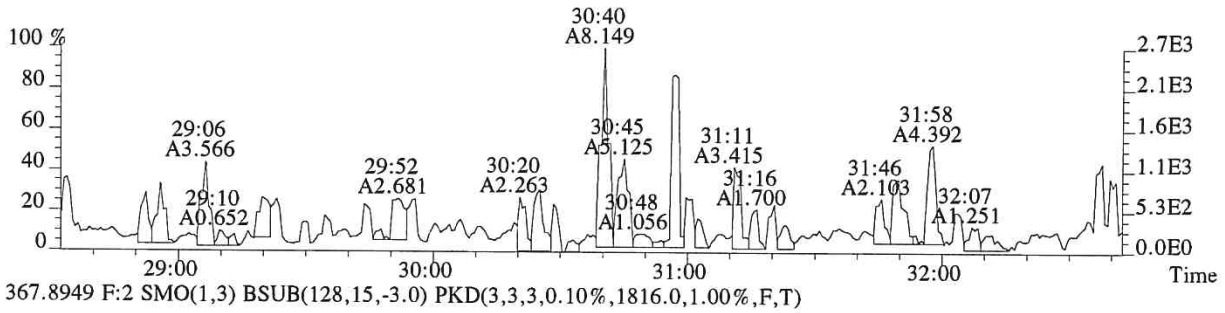


017519

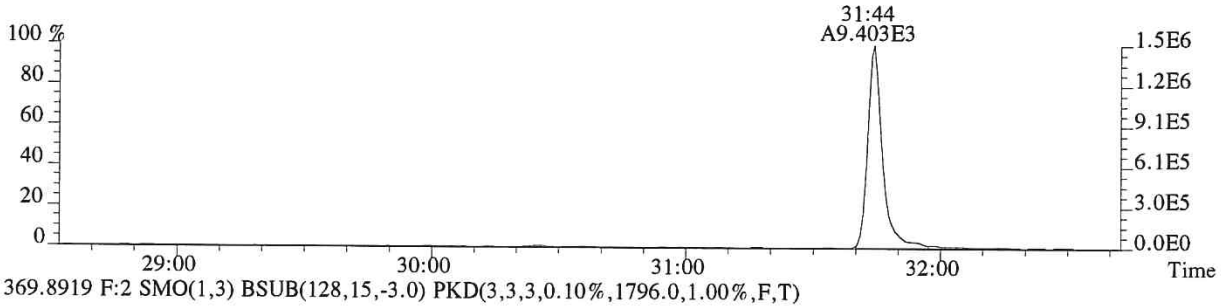
File:P616415 #1-376 Acq: 9-JAN-2019 20:34:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1076.0,1.00%,F,T)



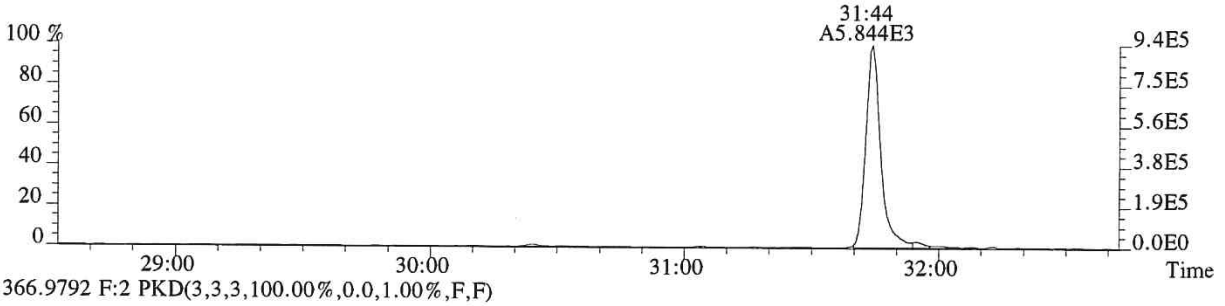
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,260.0,1.00%,F,T)



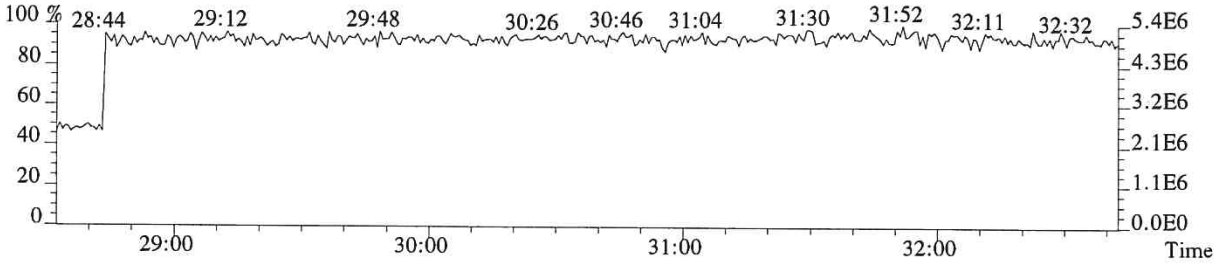
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1816.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1796.0,1.00%,F,T)

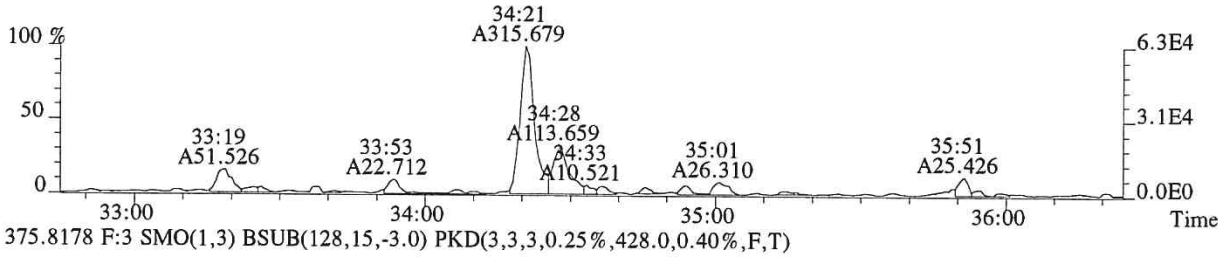


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

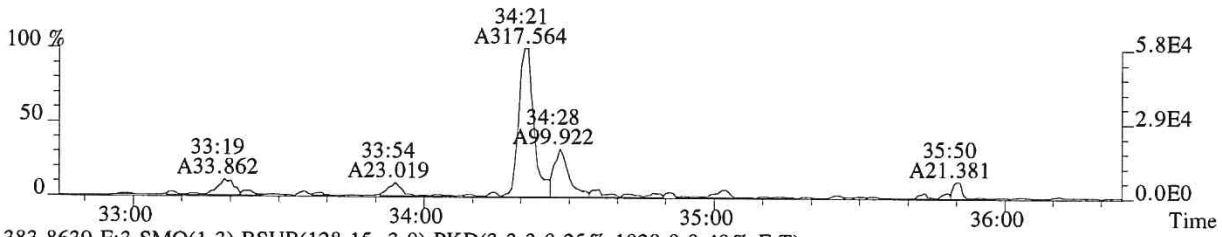


017520

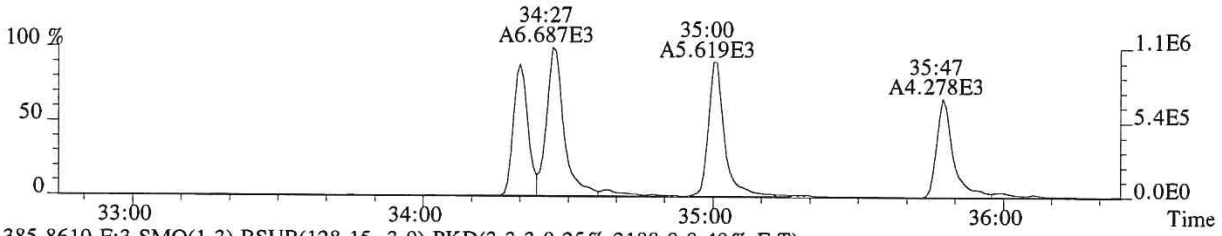
File:P616415 #1-330 Acq: 9-JAN-2019 20:34:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1000.0,0.40%,F,T)



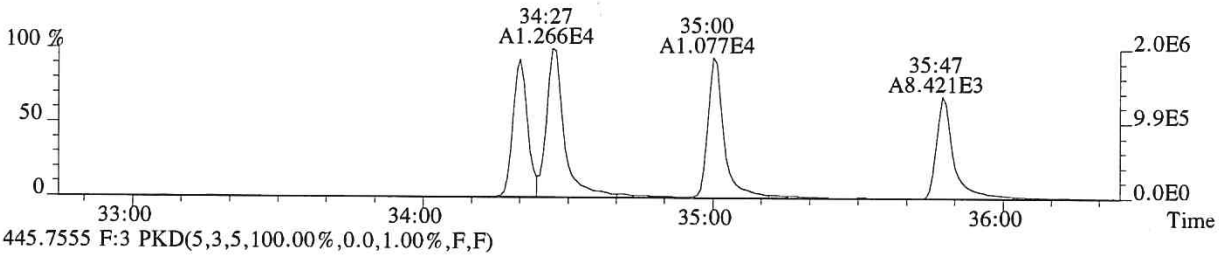
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,428.0,0.40%,F,T)



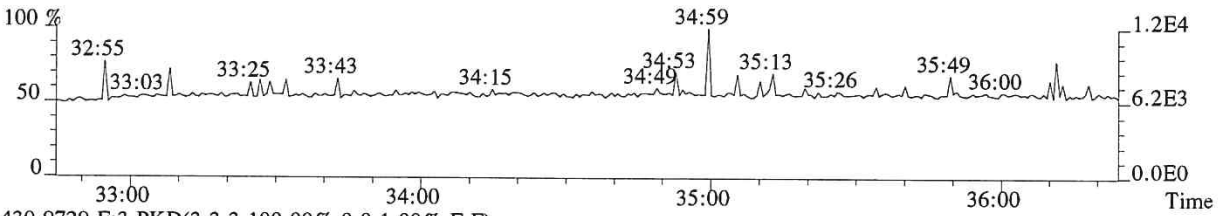
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1028.0,0.40%,F,T)



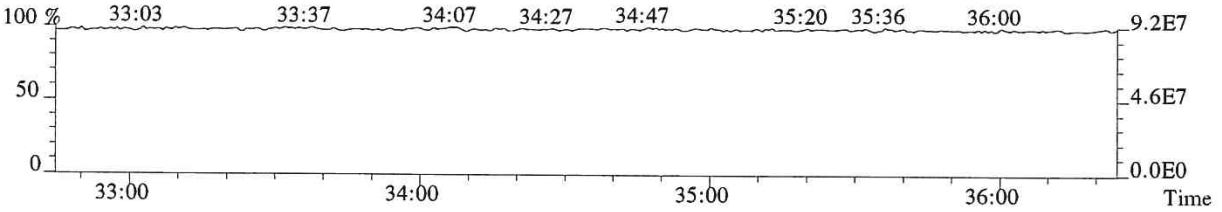
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2188.0,0.40%,F,T)



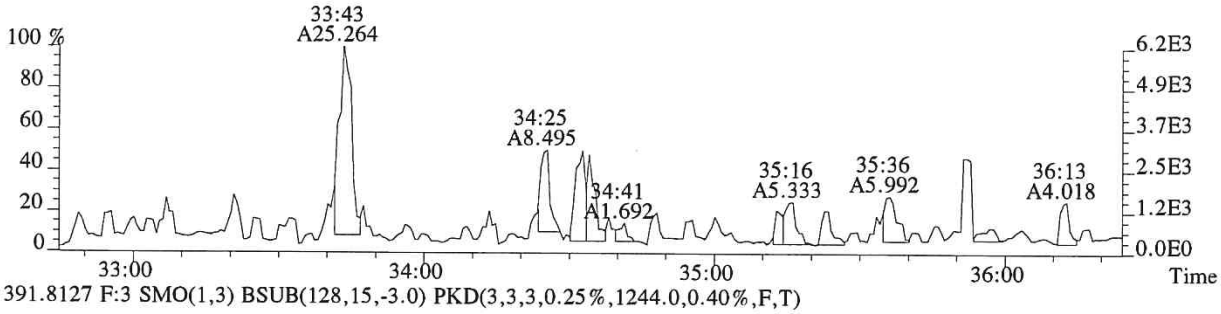
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



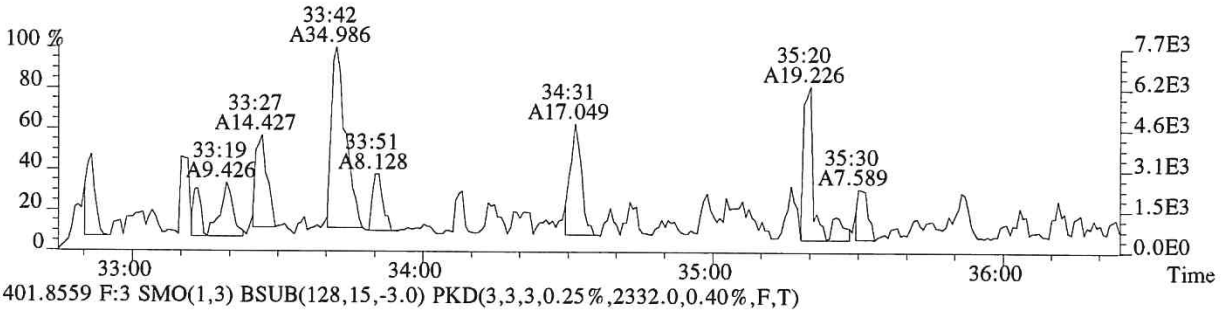
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



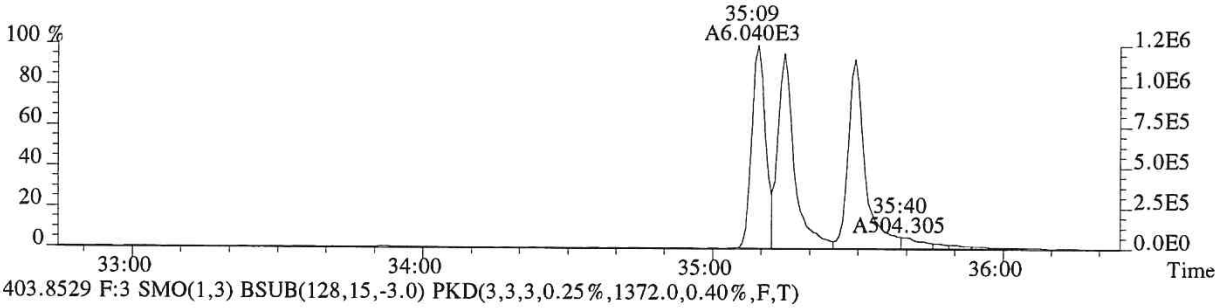
File:P616415 #1-330 Acq: 9-JAN-2019 20:34:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,664.0,0.40%,F,T)



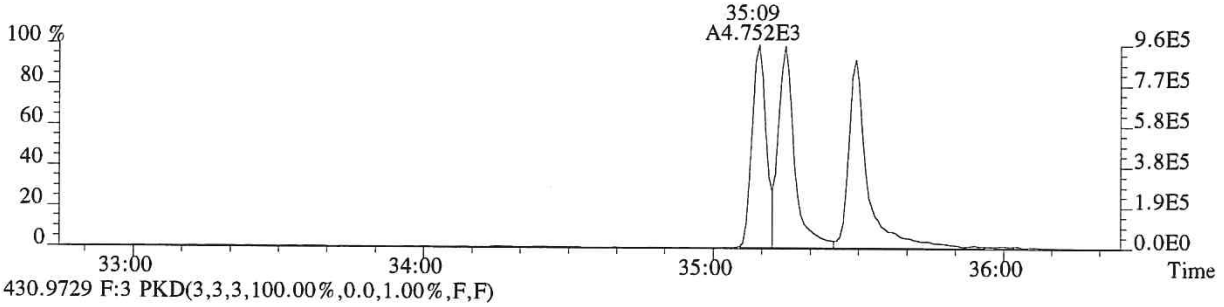
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1244.0,0.40%,F,T)



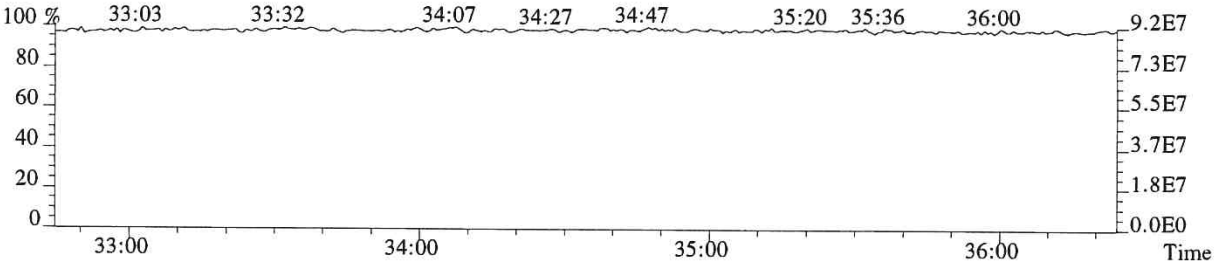
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2332.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1372.0,0.40%,F,T)

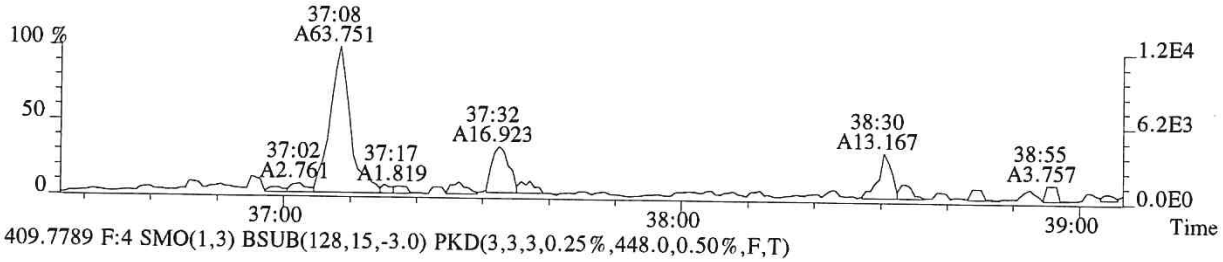


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

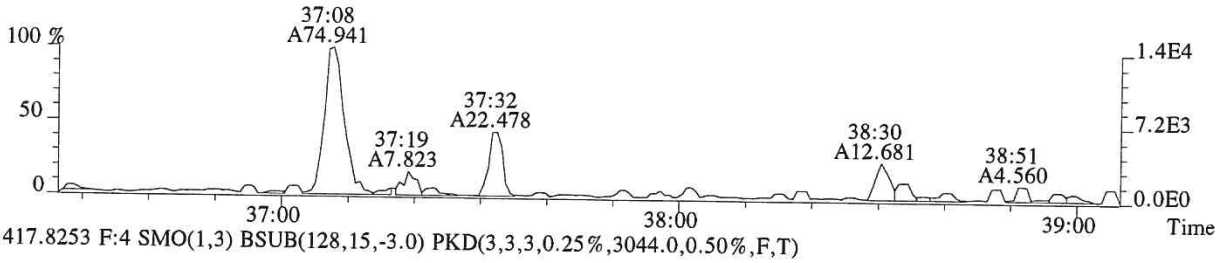


017522

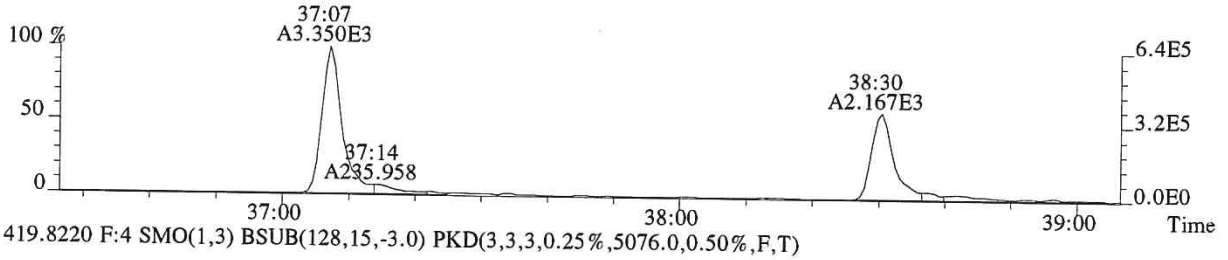
File:P616415 #1-241 Acq: 9-JAN-2019 20:34:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,616.0,0.50%,F,T)



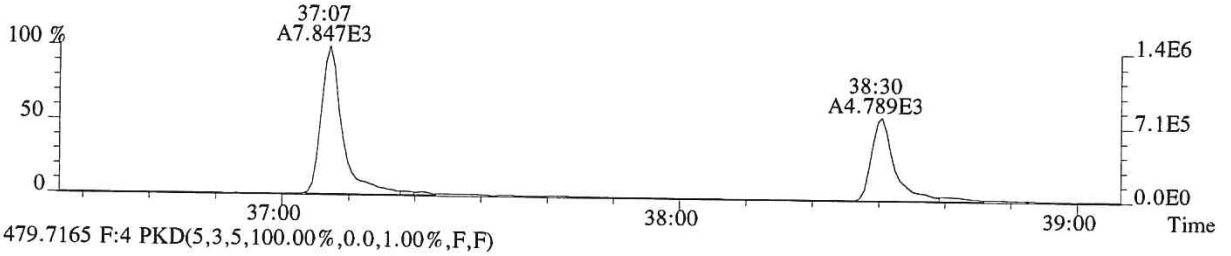
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,448.0,0.50%,F,T)



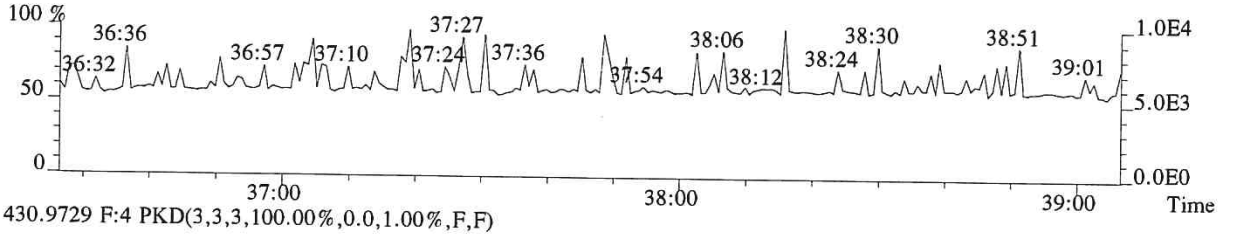
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3044.0,0.50%,F,T)



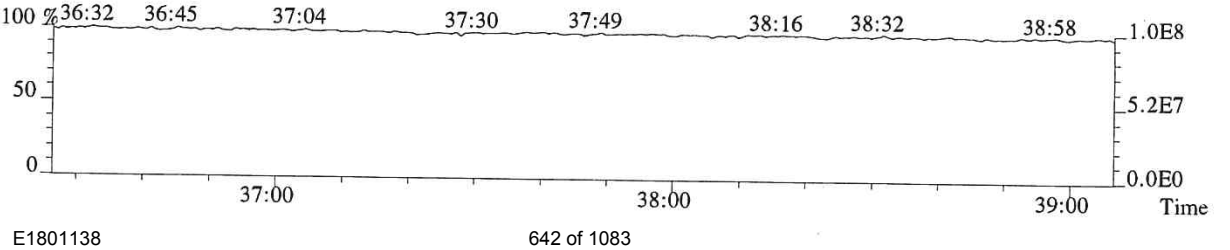
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5076.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

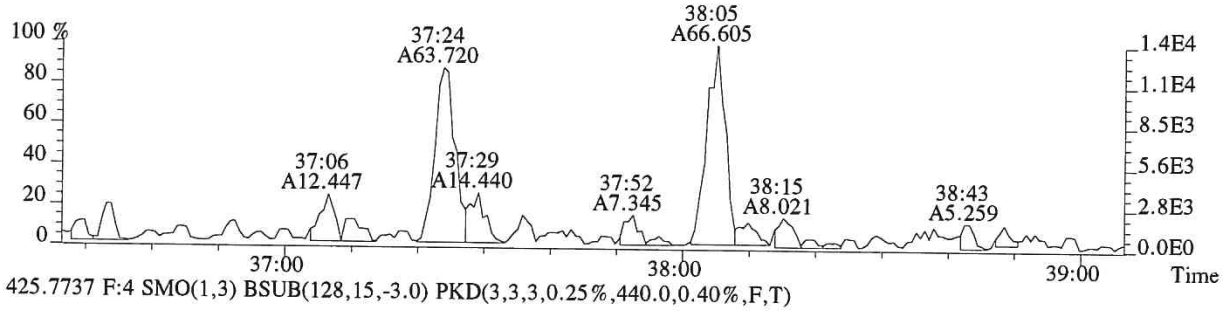


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

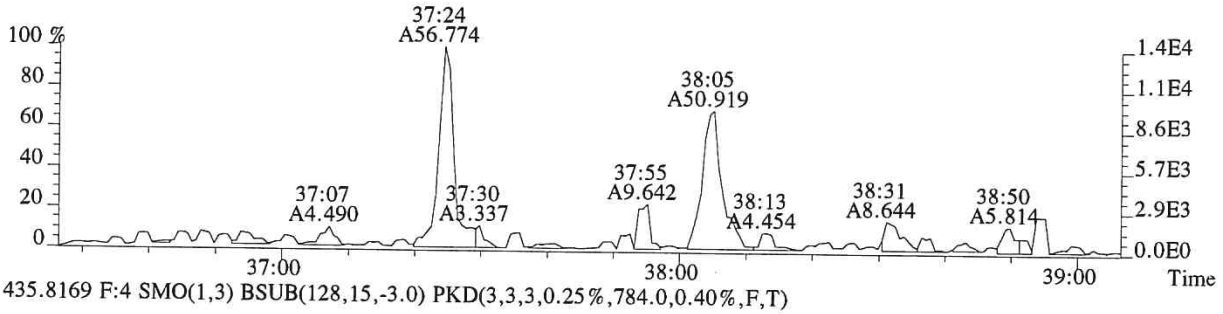


017523

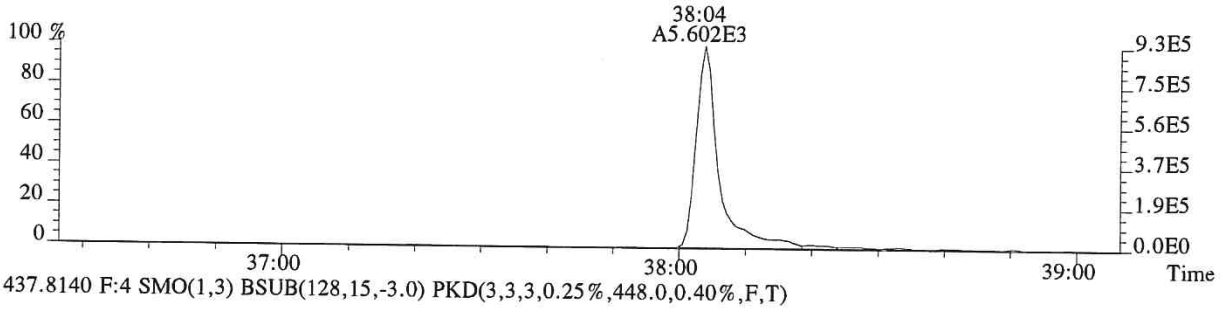
File:P616415 #1-241 Acq: 9-JAN-2019 20:34:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,740.0,0.40%,F,T)



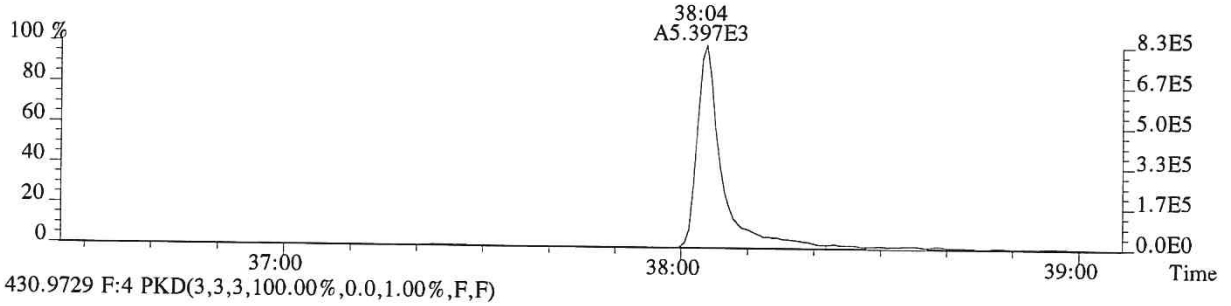
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,440.0,0.40%,F,T)



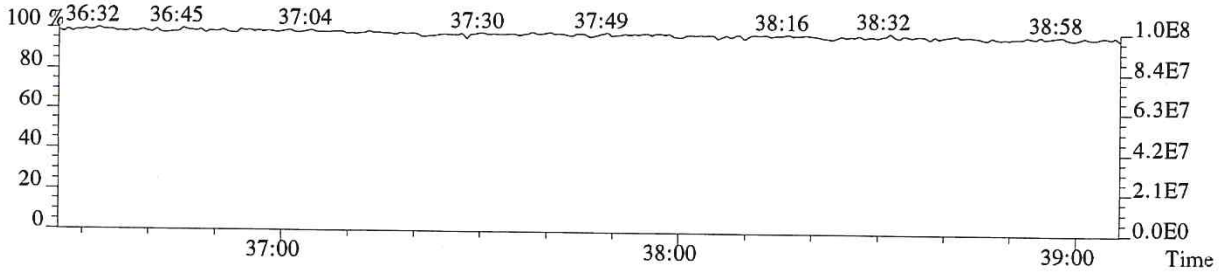
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,784.0,0.40%,F,T)



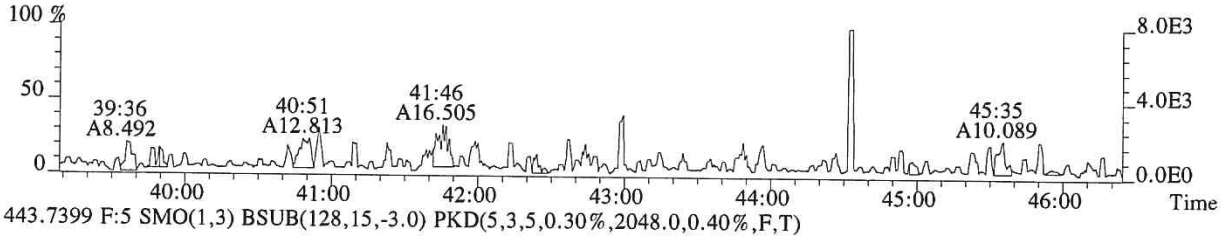
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,448.0,0.40%,F,T)



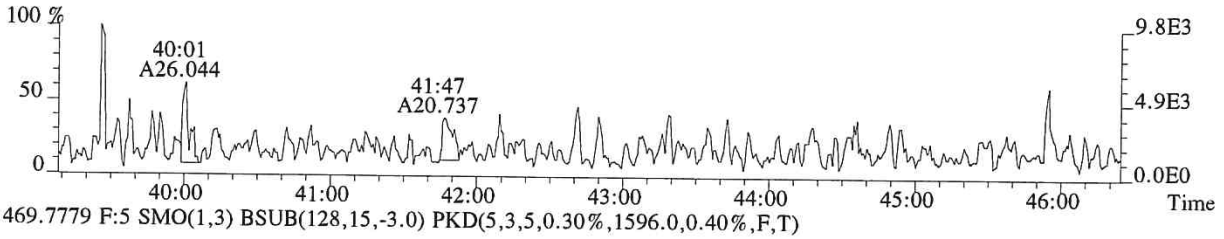
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



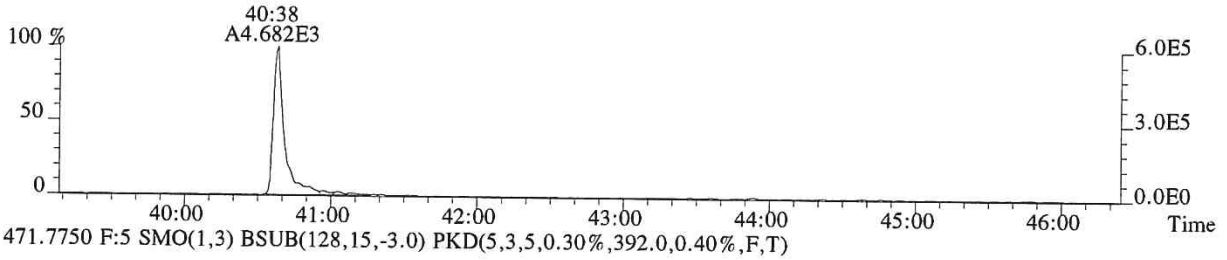
File:P616415 #1-654 Acq: 9-JAN-2019 20:34:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,604.0,0.40%,F,T)



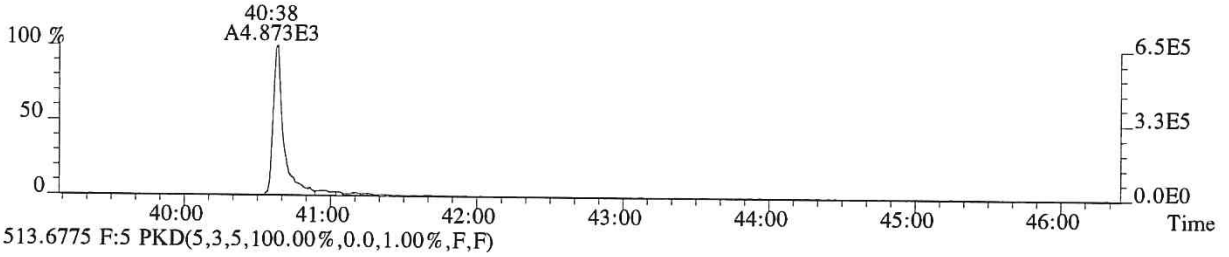
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2048.0,0.40%,F,T)



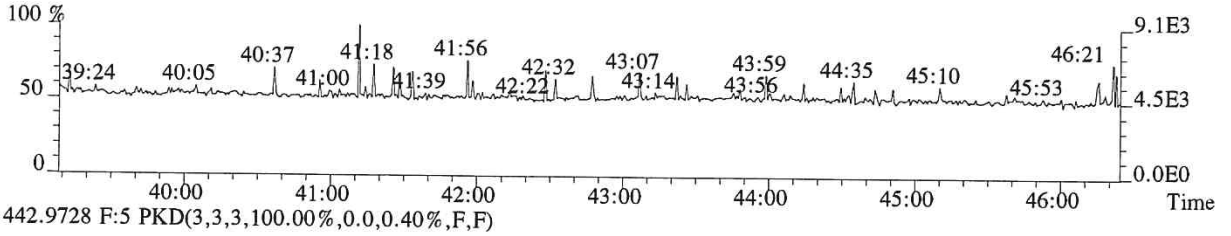
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1596.0,0.40%,F,T)



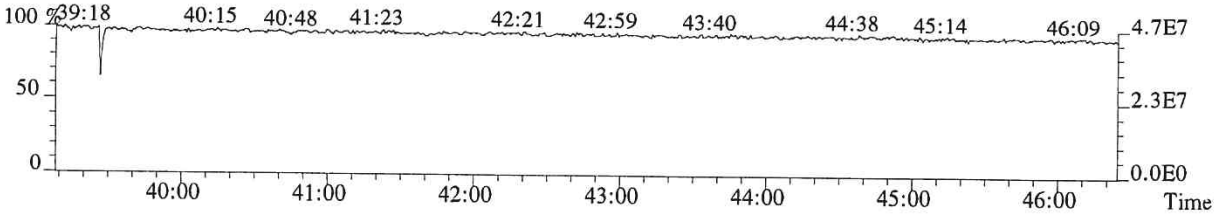
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,392.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

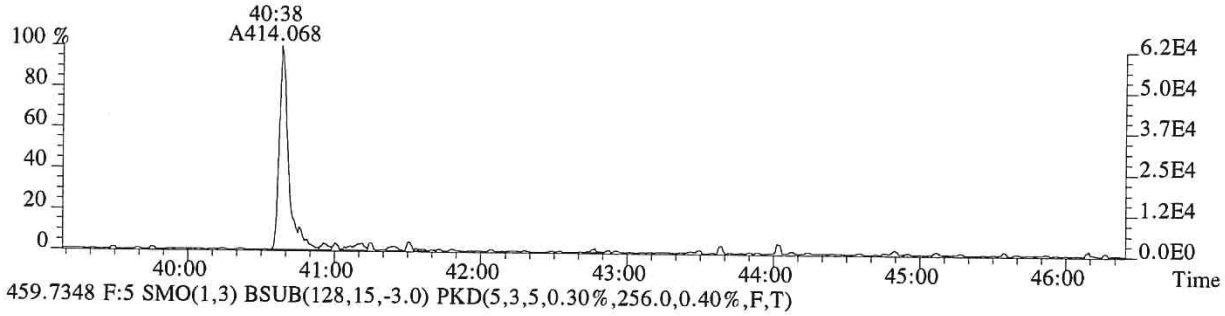


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

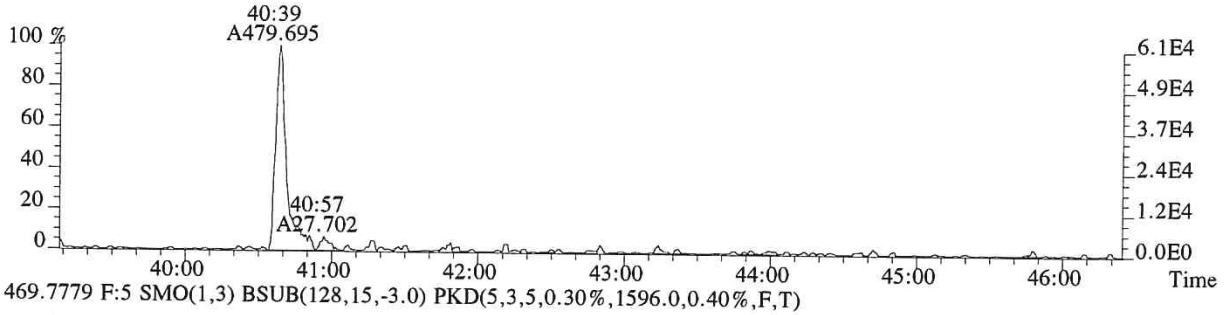


017525

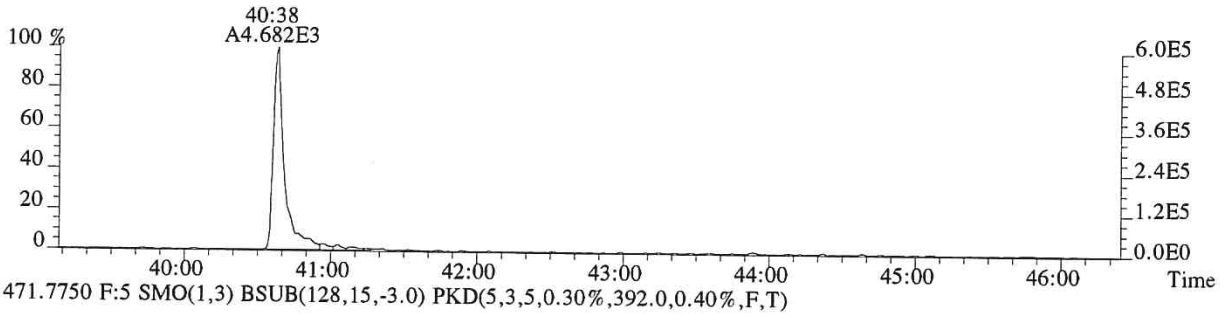
File:P616415 #1-654 Acq: 9-JAN-2019 20:34:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-018DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,332.0,0.40%,F,T)



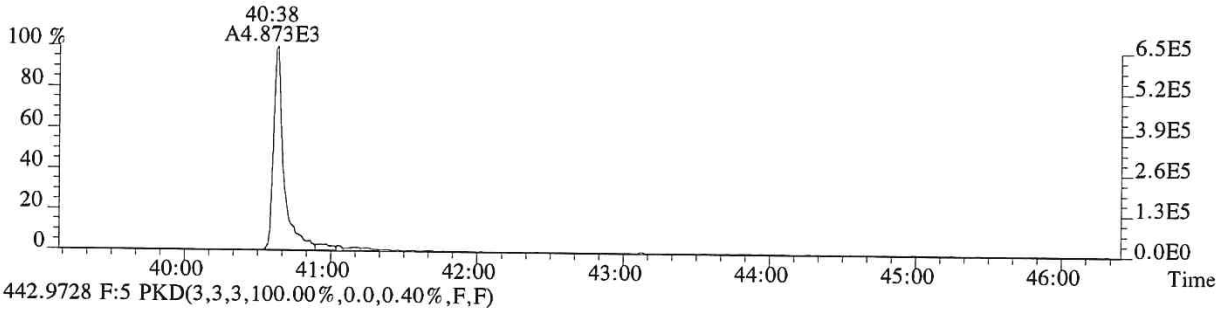
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,256.0,0.40%,F,T)



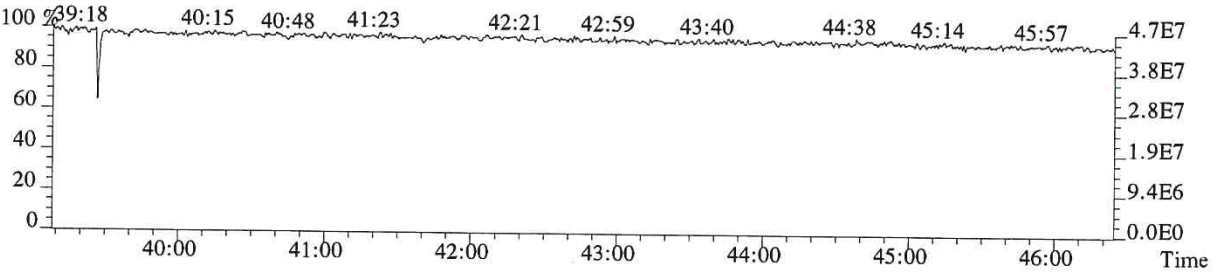
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1596.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,392.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017526

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0212

Run #21 Filename P519845 Samp: 1 Inj: 1 Acquired: 8-JAN-19 21:32:04
Processed: 9-JAN-19 11:56:38 Sample ID: E1801138-019

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	26:00	2.406e+06	3.062e+06	0.79	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:56	1.394e+05	8.984e+04	1.55	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:56	1.014e+05	6.551e+04	1.55	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:53	1.749e+05	1.449e+05	1.21	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	35:00	4.884e+04	4.045e+04	1.21	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:33	7.833e+03	6.035e+03	1.30	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:23	1.211e+04	9.666e+03	1.25	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:48	3.380e+04	3.324e+04	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:18	9.695e+03	9.612e+03	1.01	yes	no	1.258
10	Unk	OCDF	42:03	8.428e+03	9.862e+03	0.85	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:58	6.095e+05	7.724e+05	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:16	8.028e+03	5.109e+03	1.57	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:43	1.227e+02	1.040e+02	1.18	yes	yes	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:49	1.053e+03	8.620e+02	1.22	yes	yes	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:04	4.357e+02	2.952e+02	1.48	no	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:50	3.111e+04	3.004e+04	1.04	yes	no	1.025
17	Unk	OCDD	41:52	2.215e+05	2.502e+05	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:58	3.587e+04	4.546e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:55	5.510e+04	3.481e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:56	5.178e+04	3.222e+04	1.61	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:52	2.060e+04	4.049e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:59	2.451e+04	4.758e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:33	2.189e+04	4.258e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:21	2.018e+04	3.891e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:48	1.382e+04	3.045e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:17	1.161e+04	2.580e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:57	1.691e+04	2.151e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:14	3.863e+04	2.467e+04	1.57	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:43	2.761e+04	2.167e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:48	3.239e+04	2.526e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:49	2.684e+04	2.471e+04	1.09	yes	no	0.858
32	IS	13C-OCDD	41:51	1.835e+04	2.064e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:17	4.228e+04	5.265e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:03	5.478e+04	4.365e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:58	3.392e+04				no	1.014

$$\text{OCDD} = \frac{(2.215e+05 + 2.502e+05) \times 4000\ \text{pg} \times 1}{(1.835e+04 + 2.064e+04) \times 10.250\ \text{g} \times 83.4 / 100 \times 1.118} = 5063\ \text{ng/Kg}$$

LMM 01/10/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0212

Run #21 Filename P519845 Samp: 1 Inj: 1 Acquired: 8-JAN-19 21:32:04
Processed: 9-JAN-19 11:56:38 LAB. ID: E1801138-019

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	3.31e+08	5.46e+03	6.1e+04	4.16e+08	5.62e+03	7.4e+04
2	1,2,3,7,8-PeCDF	2.29e+07	5.59e+03	4.1e+03	1.47e+07	3.70e+03	4.0e+03
3	2,3,4,7,8-PeCDF	1.44e+07	5.59e+03	2.6e+03	9.31e+06	3.70e+03	2.5e+03
4	1,2,3,4,7,8-HxCDF	2.86e+07	9.14e+03	3.1e+03	2.36e+07	9.76e+03	2.4e+03
5	1,2,3,6,7,8-HxCDF	7.22e+06	9.14e+03	7.9e+02	6.00e+06	9.76e+03	6.1e+02
6	2,3,4,6,7,8-HxCDF	1.25e+06	9.14e+03	1.4e+02	9.84e+05	9.76e+03	1.0e+02
7	1,2,3,7,8,9-HxCDF	1.71e+06	9.14e+03	1.9e+02	1.40e+06	9.76e+03	1.4e+02
8	1,2,3,4,6,7,8-HpCDF	3.80e+06	1.14e+03	3.3e+03	3.79e+06	1.82e+03	2.1e+03
9	1,2,3,4,7,8,9-HpCDF	8.62e+05	1.14e+03	7.6e+02	8.53e+05	1.82e+03	4.7e+02
10	OCDF	4.26e+05	5.32e+02	8.0e+02	4.80e+05	9.68e+02	5.0e+02
11	2,3,7,8-TCDD	9.82e+07	4.60e+03	2.1e+04	1.24e+08	2.28e+03	5.4e+04
12	1,2,3,7,8-PeCDD	1.23e+06	1.45e+03	8.5e+02	8.15e+05	2.39e+03	3.4e+02
13	1,2,3,4,7,8-HxCDD	2.67e+04	2.92e+03	9.2e+00	1.67e+04	5.61e+03	3.0e+00
14	1,2,3,6,7,8-HxCDD	1.58e+05	2.92e+03	5.4e+01	1.32e+05	5.61e+03	2.4e+01
15	1,2,3,7,8,9-HxCDD	5.82e+04	2.92e+03	2.0e+01	4.74e+04	5.61e+03	8.4e+00
16	1,2,3,4,6,7,8-HpCDD	2.82e+06	9.80e+02	2.9e+03	2.71e+06	1.39e+03	2.0e+03
17	OCDD	1.09e+07	5.16e+02	2.1e+04	1.23e+07	8.92e+02	1.4e+04
18	13C-2,3,7,8-TCDF	5.29e+06	5.62e+03	9.4e+02	6.77e+06	7.52e+03	9.0e+02
19	13C-1,2,3,7,8-PeCDF	9.04e+06	4.53e+03	2.0e+03	5.69e+06	1.50e+03	3.8e+03
20	13C-2,3,4,7,8-PeCDF	8.55e+06	4.53e+03	1.9e+03	5.35e+06	1.50e+03	3.6e+03
21	13C-1,2,3,4,7,8-HxCDF	3.43e+06	7.86e+03	4.4e+02	6.72e+06	2.74e+03	2.5e+03
22	13C-1,2,3,6,7,8-HxCDF	3.78e+06	7.86e+03	4.8e+02	7.25e+06	2.74e+03	2.6e+03
23	13C-2,3,4,6,7,8-HxCDF	3.40e+06	7.86e+03	4.3e+02	6.54e+06	2.74e+03	2.4e+03
24	13C-1,2,3,7,8,9-HxCDF	2.68e+06	7.86e+03	3.4e+02	5.15e+06	2.74e+03	1.9e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.59e+06	6.32e+03	2.5e+02	3.45e+06	8.57e+03	4.0e+02
26	13C-1,2,3,4,7,8,9-HpCDF	9.84e+05	6.32e+03	1.6e+02	2.22e+06	8.57e+03	2.6e+02
27	13C-2,3,7,8-TCDD	2.75e+06	5.47e+03	5.0e+02	3.52e+06	4.14e+03	8.5e+02
28	13C-1,2,3,7,8-PeCDD	6.51e+06	1.57e+03	4.2e+03	4.11e+06	1.41e+03	2.9e+03
29	13C-1,2,3,4,7,8-HxCDD	4.71e+06	1.49e+03	3.2e+03	3.65e+06	1.00e+03	3.6e+03
30	13C-1,2,3,6,7,8-HxCDD	4.41e+06	1.49e+03	3.0e+03	3.49e+06	1.00e+03	3.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.43e+06	1.06e+03	2.3e+03	2.24e+06	7.88e+02	2.8e+03
32	13C-OCDD	8.96e+05	8.48e+02	1.1e+03	1.04e+06	5.84e+02	1.8e+03
33	13C-1,2,3,4-TCDD	6.45e+06	5.47e+03	1.2e+03	7.97e+06	4.14e+03	1.9e+03
34	13C-1,2,3,7,8,9-HxCDD	7.44e+06	1.49e+03	5.0e+03	5.81e+06	1.00e+03	5.8e+03
35	37Cl-2,3,7,8-TCDD	5.39e+06	2.15e+03	2.5e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0212

Entry: 36 Totals Name: Total Tetra-Furans

Run: 21 File: P519845 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 21:32:04 Processed: 9-JAN-19 11:56:38

Mass: 303.9020 305.8990 Tot Response: 9.96e+06 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:51	1.89e+04	2.52e+04	0.75	yes	4.41e+04		n	n
2	23:07	1.10e+05	1.43e+05	0.77	yes	2.53e+05		n	n
3	23:28	3.55e+04	4.59e+04	0.77	yes	8.14e+04		n	n
4	23:45	9.34e+04	1.22e+05	0.76	yes	2.15e+05		n	n
5	24:07	2.12e+04	2.77e+04	0.76	yes	4.89e+04		n	n
6	24:22	6.69e+04	8.69e+04	0.77	yes	1.54e+05		n	n
7	24:29	1.14e+05	1.47e+05	0.78	yes	2.61e+05		n	n
8	24:58	1.08e+06	1.38e+06	0.78	yes	2.46e+06		n	n
9	25:17	5.50e+04	7.27e+04	0.76	yes	1.28e+05		n	n
10	26:00	2.41e+06	3.06e+06	0.79	yes	5.47e+06	2,3,7,8-TCDF	n	n
11	26:26	1.65e+05	2.08e+05	0.79	yes	3.73e+05		n	n
12	26:41	3.17e+04	4.06e+04	0.78	yes	7.24e+04		n	n
13	28:12	1.80e+05	2.31e+05	0.78	yes	4.11e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0212

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 21 File: P519845 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 21:32:04 Processed: 9-JAN-19 11:56:38

Mass: 319.8970 321.8940 Tot Response: 1.53e+06 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:39	8.53e+03	1.09e+04	0.78	yes	1.95e+04		n	n
2	26:58	6.09e+05	7.72e+05	0.79	yes	1.38e+06	2,3,7,8-TCDD	n	n
3	27:19	5.70e+04	7.38e+04	0.77	yes	1.31e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0212

Entry: 39 Totals Name: Total Penta-Furans2

Run: 21 File: P519845 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 21:32:04 Processed: 9-JAN-19 11:56:38

Mass: 339.8600 341.8570 Tot Response: 6.04e+05 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:45	9.58e+02	6.64e+02 1.44	yes	1.62e+03		n	n
2	29:54	5.97e+04	3.88e+04 1.54	yes	9.86e+04		n	n
3	30:30	1.78e+03	1.20e+03 1.49	yes	2.98e+03		n	n
4	30:35	2.24e+03	1.40e+03 1.60	yes	3.64e+03		n	n
5	30:44	1.26e+04	8.05e+03 1.56	yes	2.06e+04		n	n
6	30:56	1.39e+05	8.98e+04 1.55	yes	2.29e+05	1,2,3,7,8-PeCDF	n	n
7	31:12	4.28e+04	2.76e+04 1.55	yes	7.03e+04		n	n
8	31:50	1.03e+03	7.42e+02 1.40	yes	1.78e+03		n	n
9	31:56	1.01e+05	6.55e+04 1.55	yes	1.67e+05	2,3,4,7,8-PeCDF	n	n
10	32:54	4.95e+03	3.24e+03 1.53	yes	8.20e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0212

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 21 File: P519845 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 21:32:04 Processed: 9-JAN-19 11:56:38

Mass: 355.8550 357.8520 Tot Response: 1.86e+04 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:57	5.75e+02	3.69e+02	1.56	yes	9.44e+02		n	n
2	30:28	5.77e+02	4.20e+02	1.37	yes	9.96e+02		n	n
3	30:58	1.02e+03	7.13e+02	1.43	yes	1.73e+03		n	n
4	31:08	4.57e+02	2.73e+02	1.67	yes	7.30e+02		n	n
5	31:15	3.72e+02	2.27e+02	1.64	yes	5.98e+02		n	n
6	31:28	2.66e+02	1.78e+02	1.50	yes	4.44e+02		n	n
7	32:16	8.03e+03	5.11e+03	1.57	yes	1.31e+04	1,2,3,7,8-PeCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0212

Entry: 41 Totals Name: Total Hexa-Furans

Run: 21 File: P519845 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 21:32:04 Processed: 9-JAN-19 11:56:38

Mass: 373.8210 375.8180 Tot Response: 4.82e+05 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:41	1.09e+03	9.19e+02	1.19	yes	2.01e+03		n	n
2	33:51	1.22e+04	1.02e+04	1.20	yes	2.24e+04		n	n
3	34:25	6.93e+03	5.76e+03	1.20	yes	1.27e+04		n	n
4	34:53	1.75e+05	1.45e+05	1.21	yes	3.20e+05	1,2,3,4,7,8-HxCDF	n	n
5	35:00	4.88e+04	4.05e+04	1.21	yes	8.93e+04	1,2,3,6,7,8-HxCDF	n	n
6	35:33	7.83e+03	6.04e+03	1.30	yes	1.39e+04	2,3,4,6,7,8-HxCDF	n	n
7	36:23	1.21e+04	9.67e+03	1.25	yes	2.18e+04	1,2,3,7,8,9-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0212

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 21 File: P519845 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 21:32:04 Processed: 9-JAN-19 11:56:38

Mass: 389.8160 391.8130 Tot Response: 1.65e+04 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:16	4.56e+03	3.64e+03	1.25	yes	8.20e+03		n	n
2	34:50	3.59e+02	2.53e+02	1.42	yes	6.12e+02		n	n
3	35:05	3.07e+03	2.44e+03	1.26	yes	5.51e+03		n	n
4	35:43	1.23e+02	1.04e+02	1.18	yes	2.27e+02	1,2,3,4,7,8-HxCDD	n	y
5	35:49	1.05e+03	8.62e+02	1.22	yes	1.91e+03	1,2,3,6,7,8-HxCDD	n	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0212

Entry: 43 Totals Name: Total Hepta-Furans

Run: 21 File: P519845 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 21:32:04 Processed: 9-JAN-19 11:56:38

Mass: 407.7820 409.7790 Tot Response: 1.14e+05 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:48	3.38e+04	3.32e+04	1.02	yes	6.70e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	38:15	1.38e+04	1.43e+04	0.97	yes	2.81e+04		n	n
3	39:18	9.70e+03	9.61e+03	1.01	yes	1.93e+04	1,2,3,4,7,8,9-HpCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0212

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 21 File: P519845 Sample:1 Injection:1 Function:4

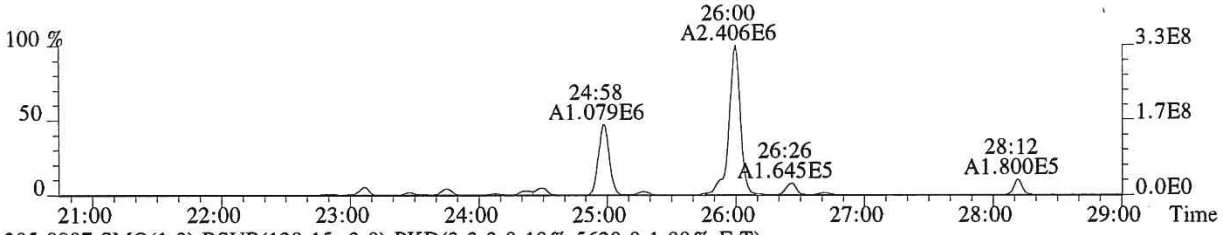
Acquired: 8-JAN-19 21:32:04 Processed: 9-JAN-19 11:56:38

Mass: 423.7770 425.7740 Tot Response: 1.18e+05 RRF: 1.025

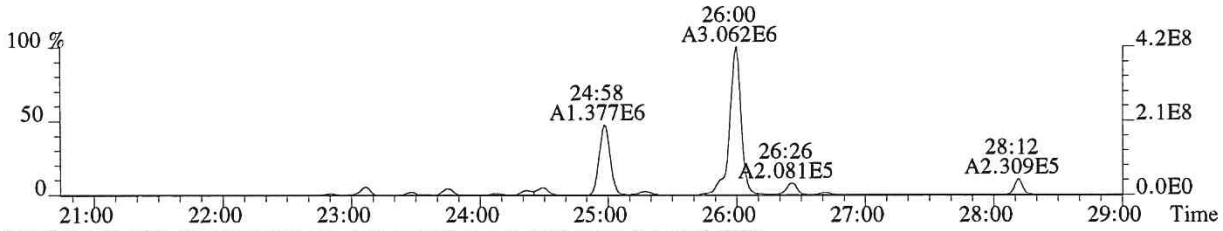
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:06	2.92e+04	1.06	yes	5.67e+04		n	n
2	38:50	3.11e+04	1.04	yes	6.11e+04	1,2,3,4,6,7,8-HpCDD	n	n

ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

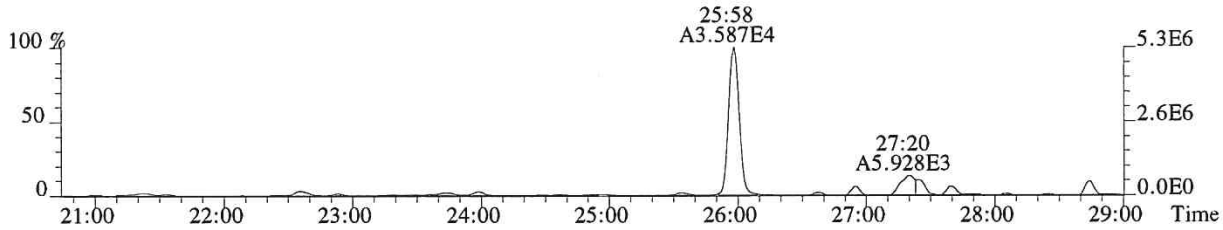
File:P519845 #1-587 Acq: 8-JAN-2019 21:32:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5456.0,1.00%,F,T)



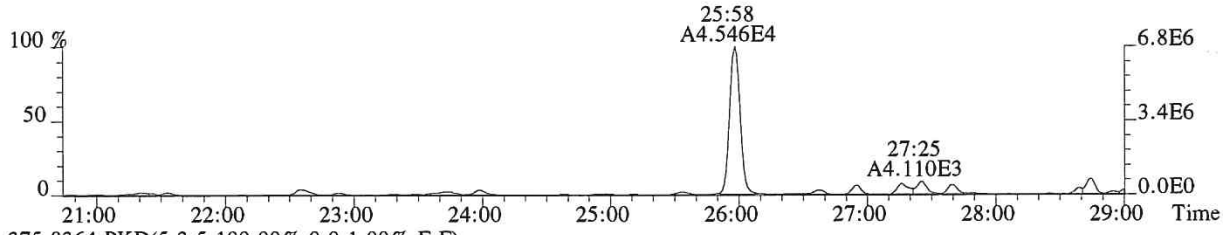
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5620.0,1.00%,F,T)



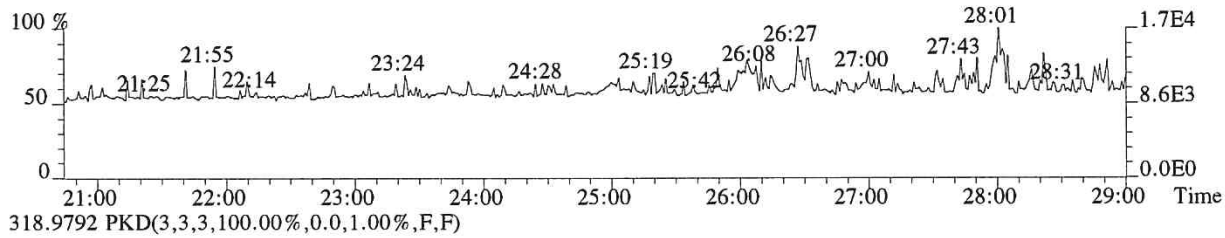
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5620.0,1.00%,F,T)



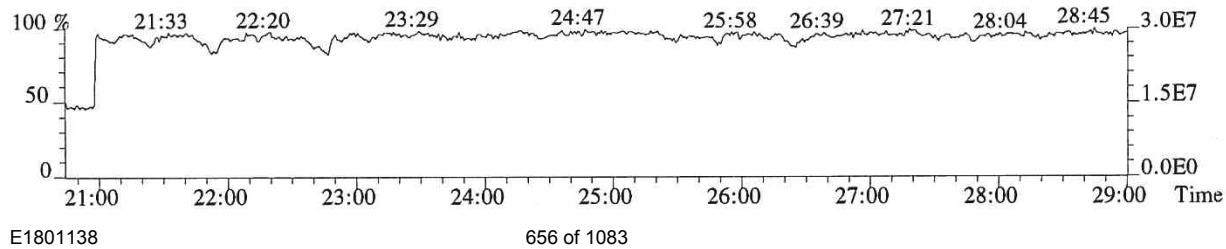
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7520.0,1.00%,F,T)



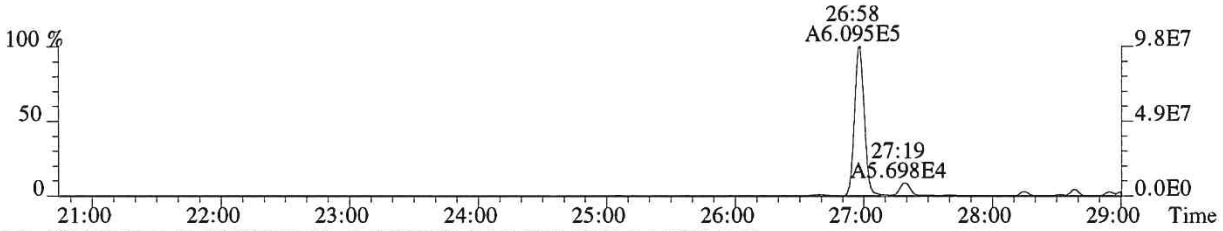
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



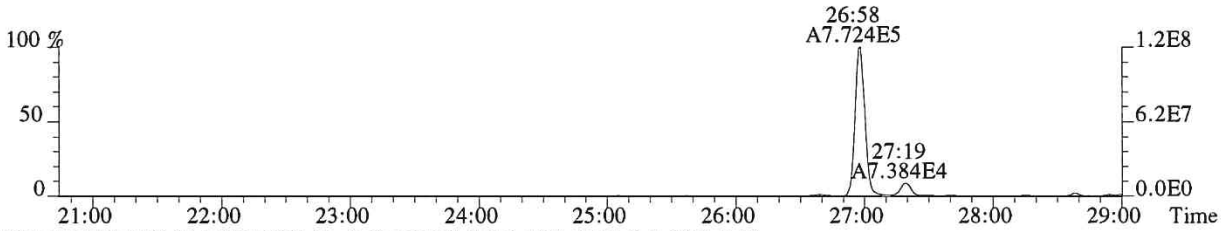
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



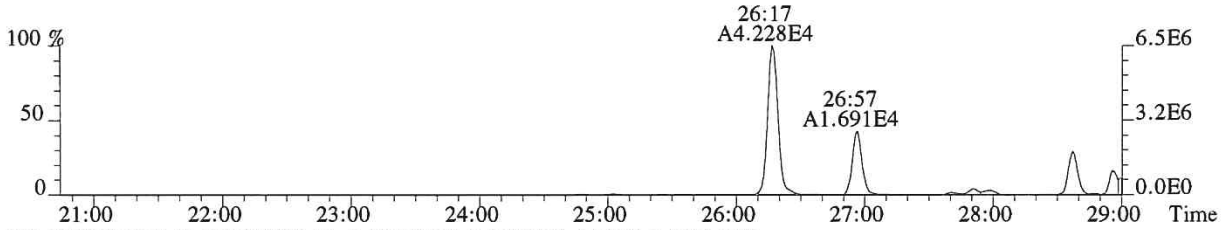
File:P519845 #1-587 Acq: 8-JAN-2019 21:32:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4596.0,1.00%,F,T)



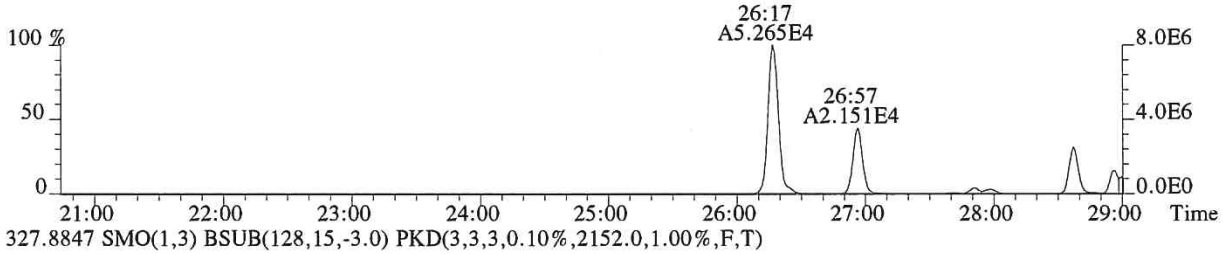
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2276.0,1.00%,F,T)



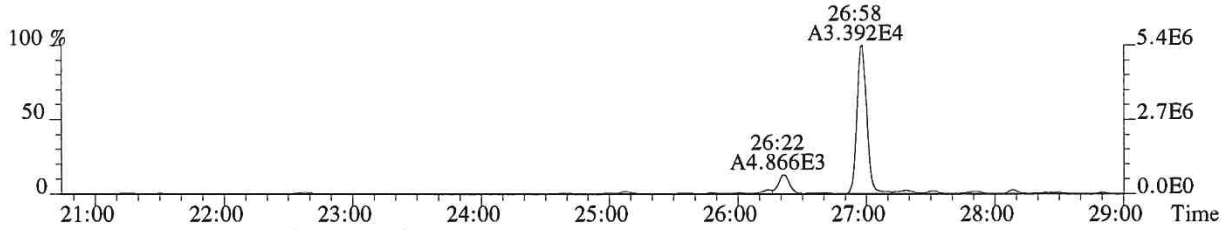
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5472.0,1.00%,F,T)



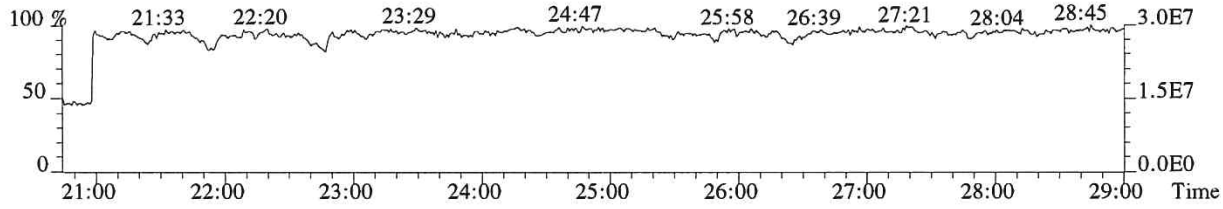
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4140.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2152.0,1.00%,F,T)

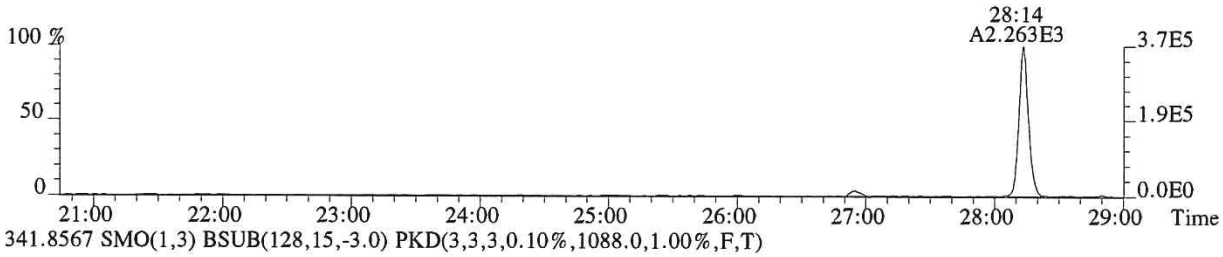


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

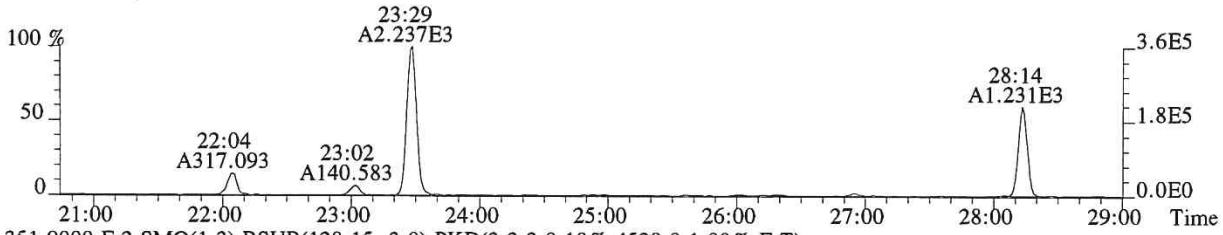


017538

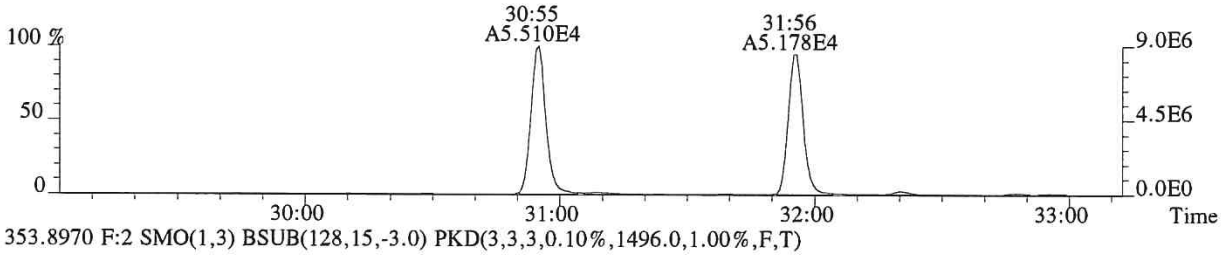
File:P519845 #1-587 Acq: 8-JAN-2019 21:32:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,836.0,1.00%,F,T)



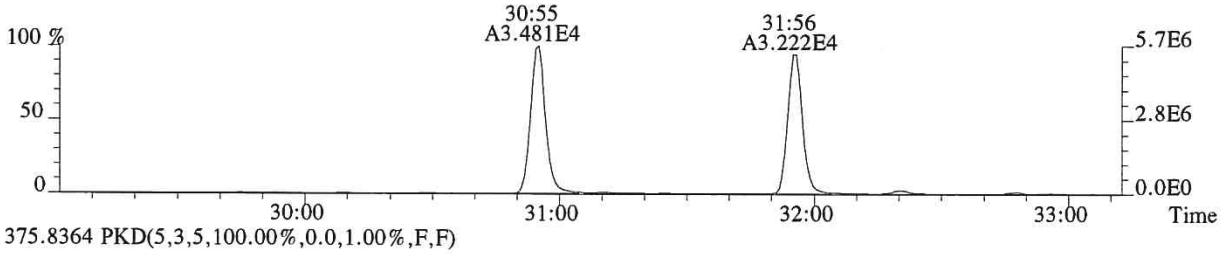
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1088.0,1.00%,F,T)



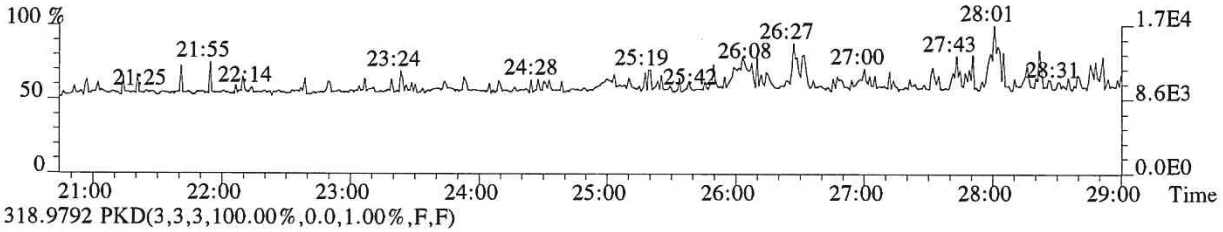
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4528.0,1.00%,F,T)



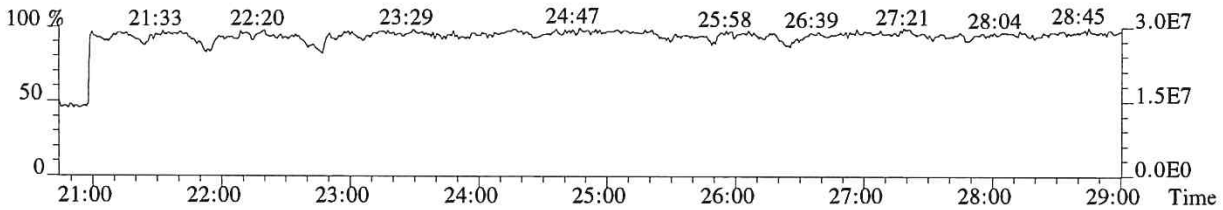
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1496.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

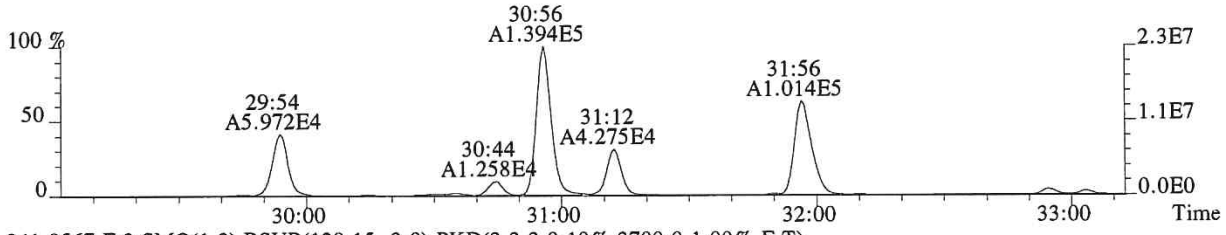


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

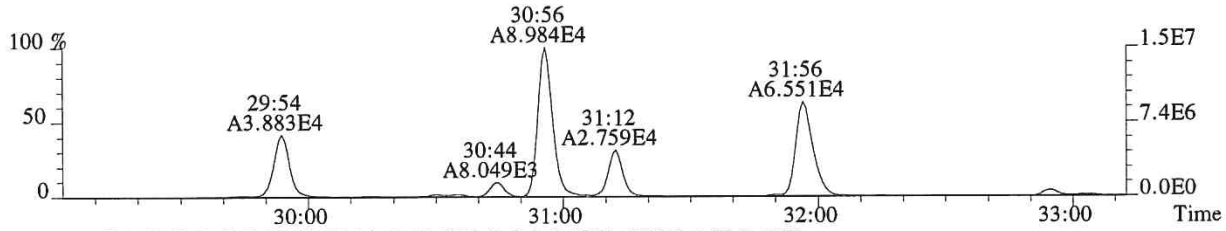


017539

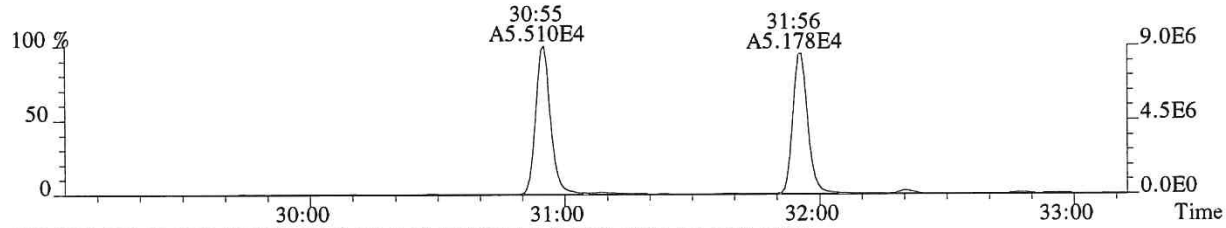
File:P519845 #1-376 Acq: 8-JAN-2019 21:32:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5592.0,1.00%,F,T)



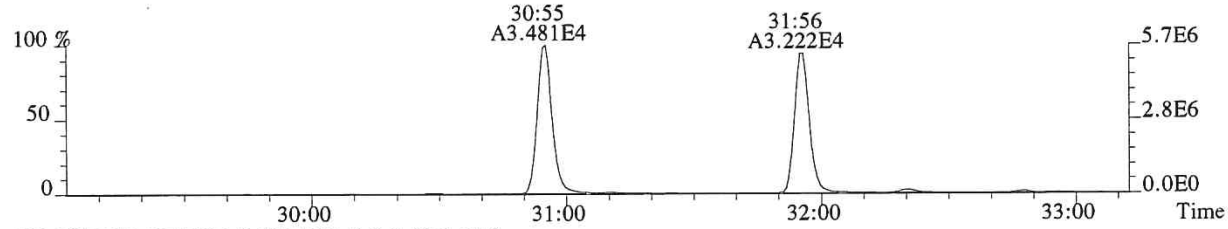
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3700.0,1.00%,F,T)



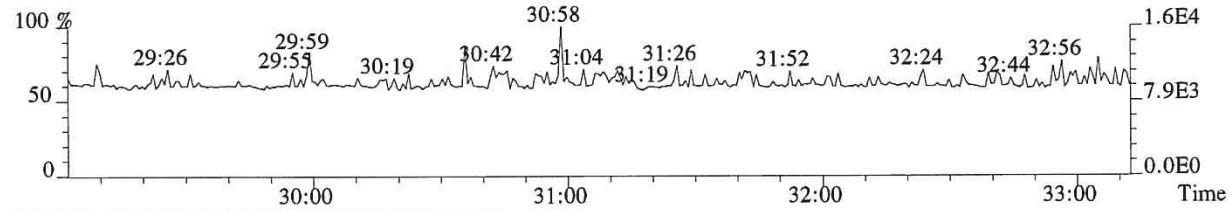
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4528.0,1.00%,F,T)



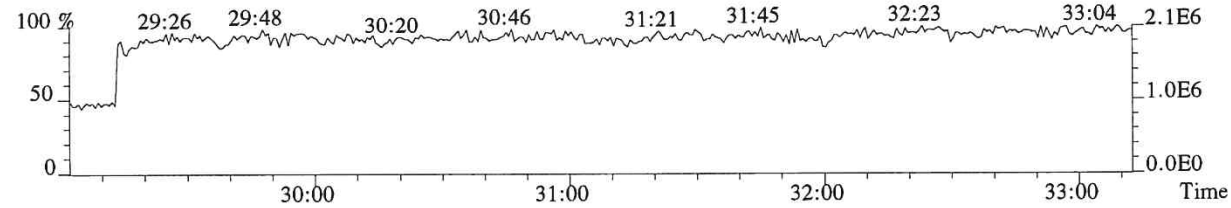
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1496.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

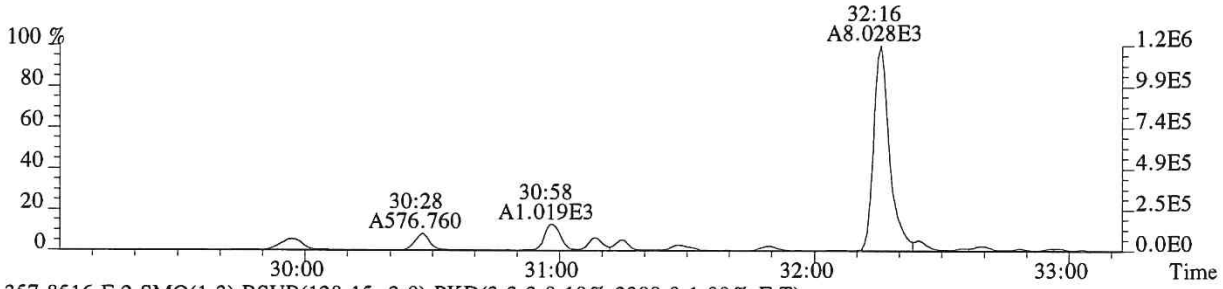


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

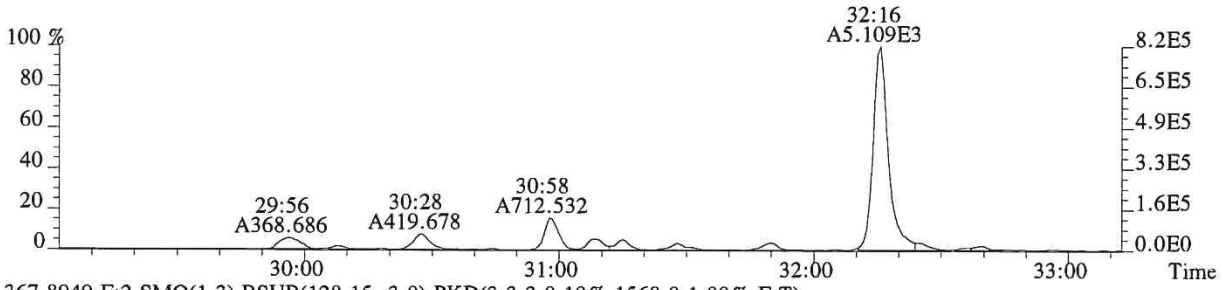


017540

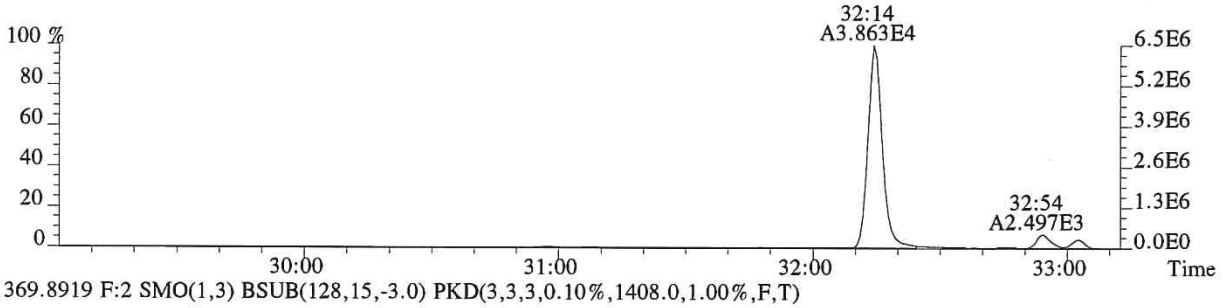
File:P519845 #1-376 Acq: 8-JAN-2019 21:32:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1452.0,1.00%,F,T)



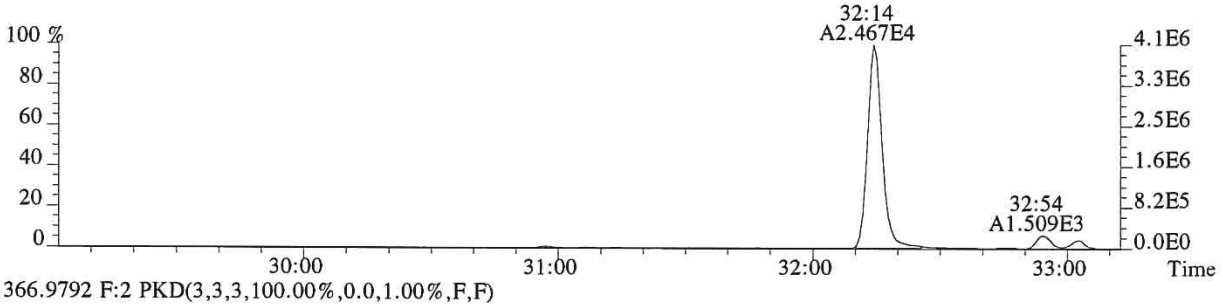
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2388.0,1.00%,F,T)



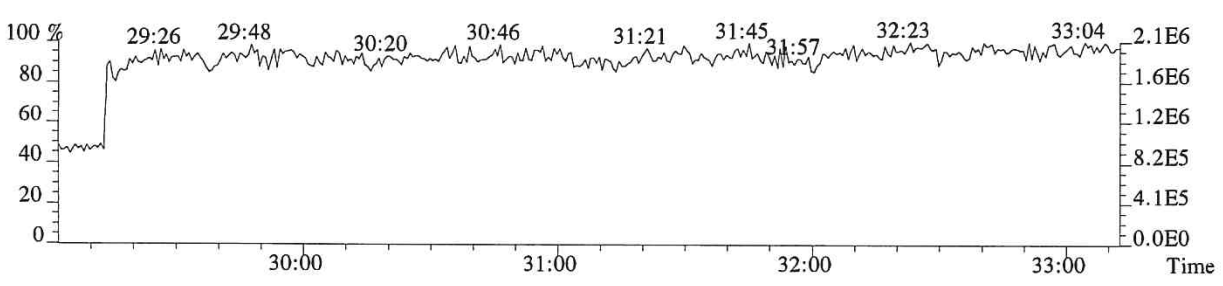
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1568.0,1.00%,F,T)



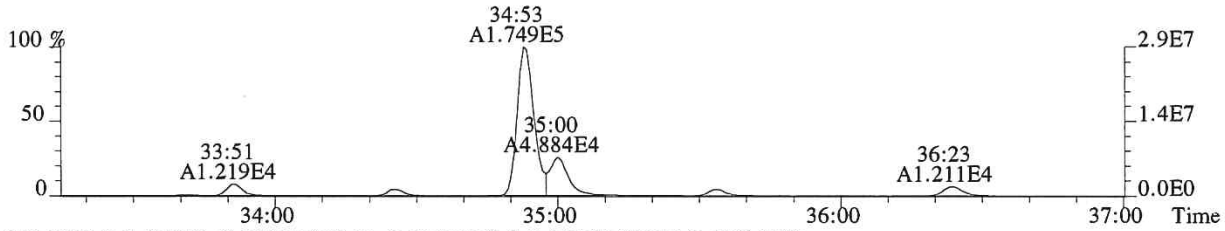
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1408.0,1.00%,F,T)



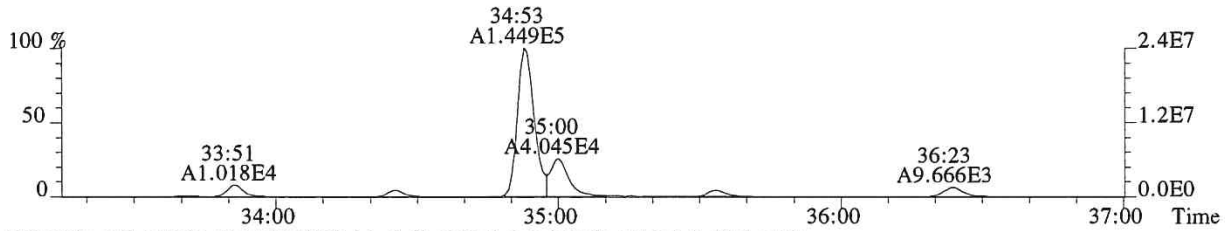
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



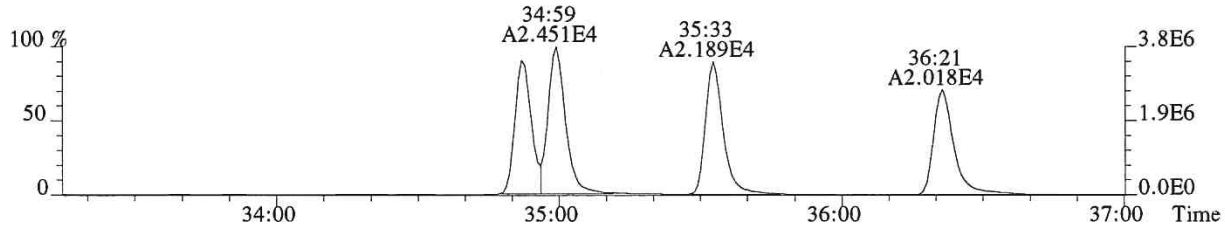
File:P519845 #1-339 Acq: 8-JAN-2019 21:32:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,9136.0,0.40%,F,T)



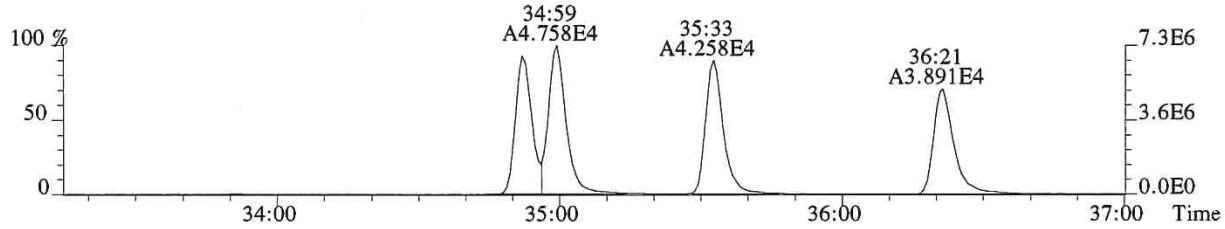
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,9764.0,0.40%,F,T)



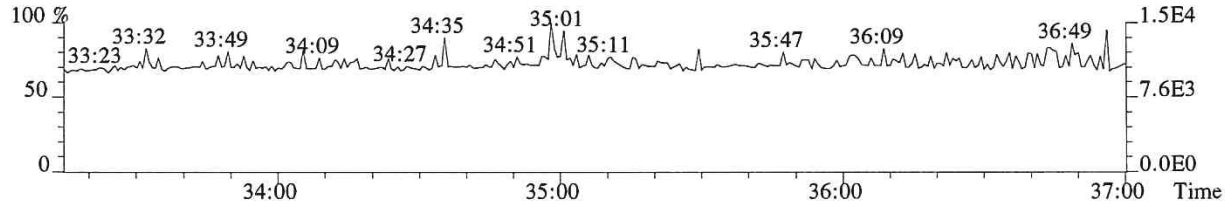
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7856.0,0.40%,F,T)



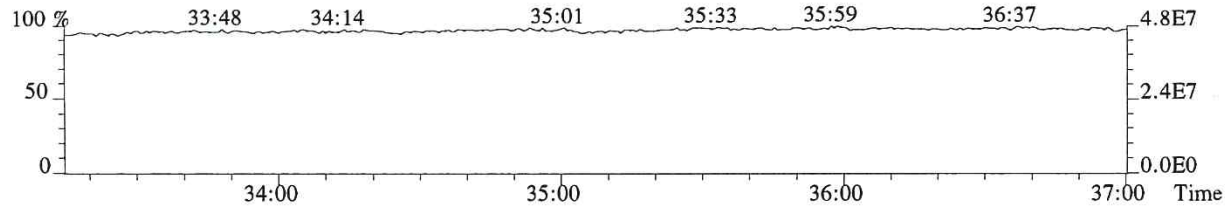
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2740.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

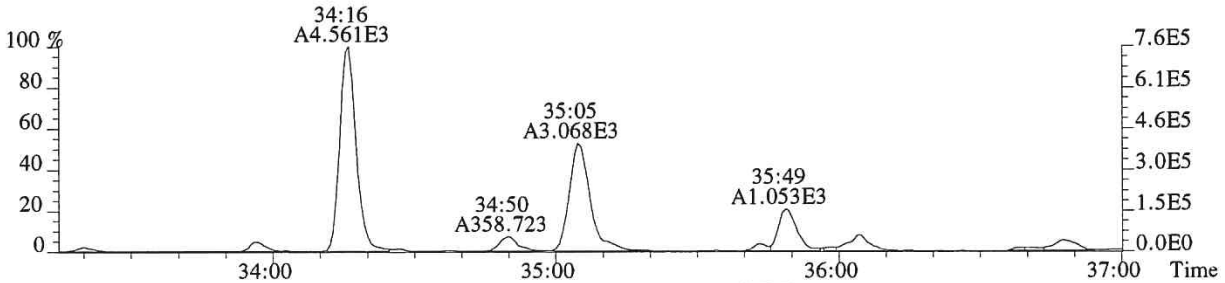


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

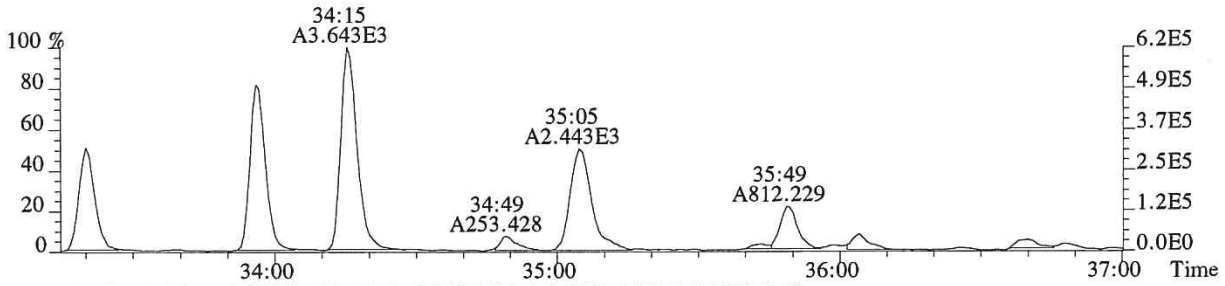


017542

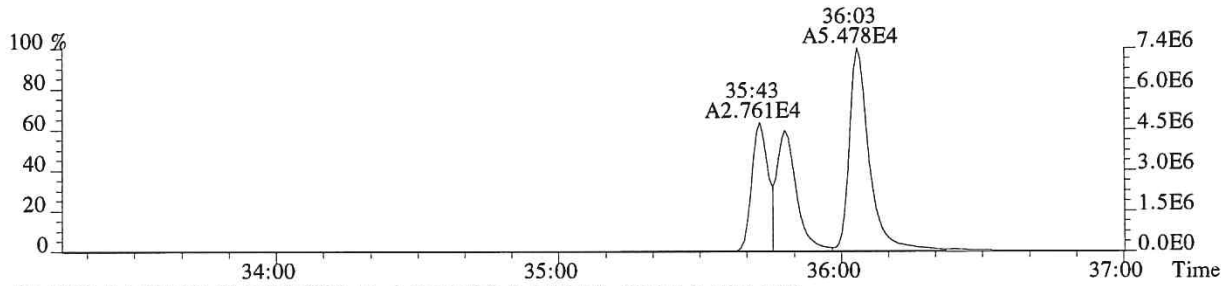
File:P519845 #1-339 Acq: 8-JAN-2019 21:32:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2916.0,0.40%,F,T)



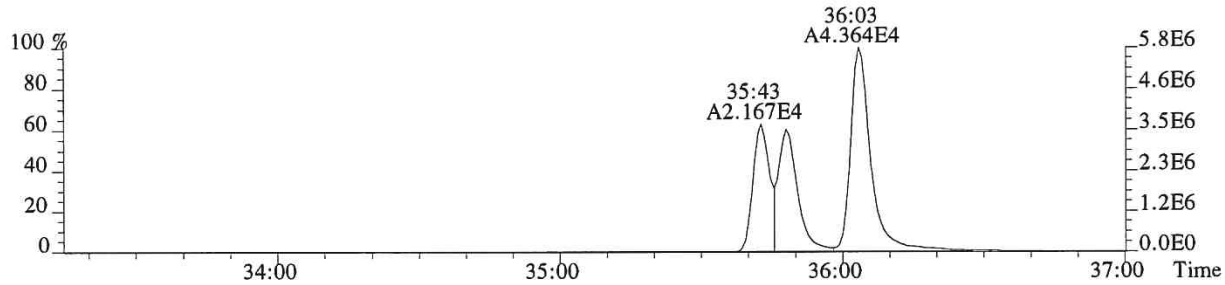
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5612.0,0.40%,F,T)



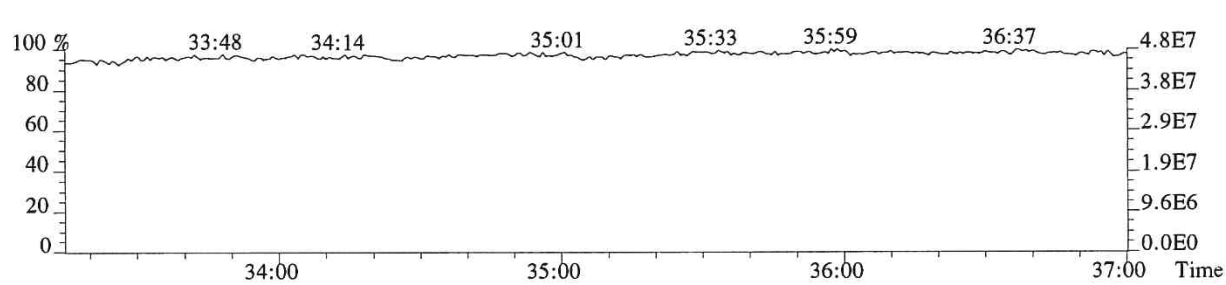
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1488.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1000.0,0.40%,F,T)

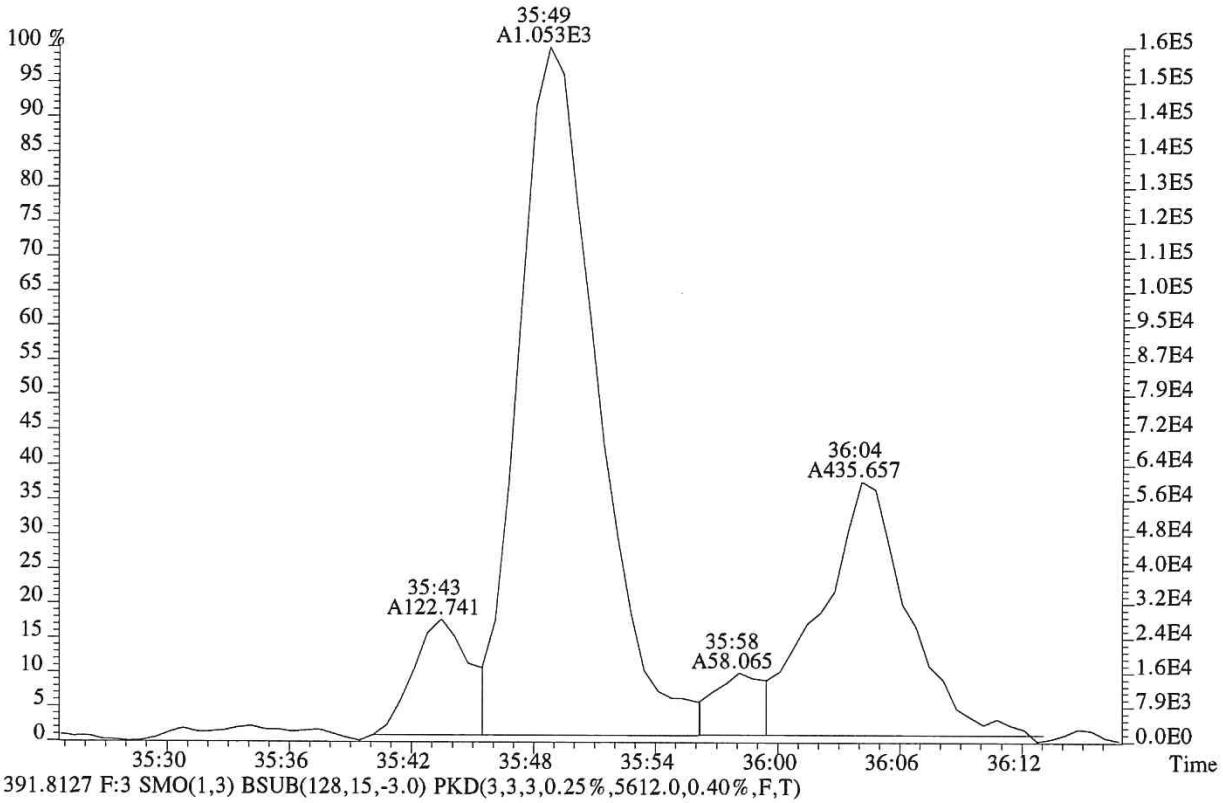


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

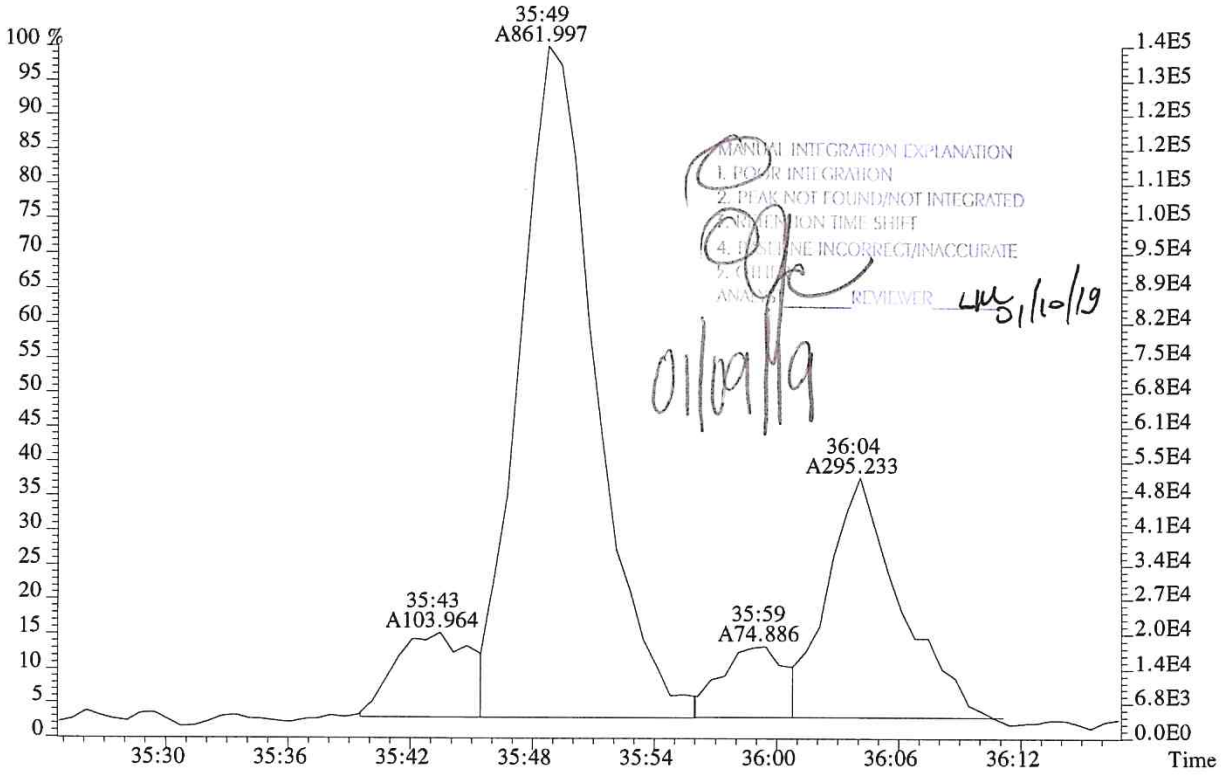


017543

File:P519845 #1-339 Acq: 8-JAN-2019 21:32:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2916.0,0.40%,F,T)

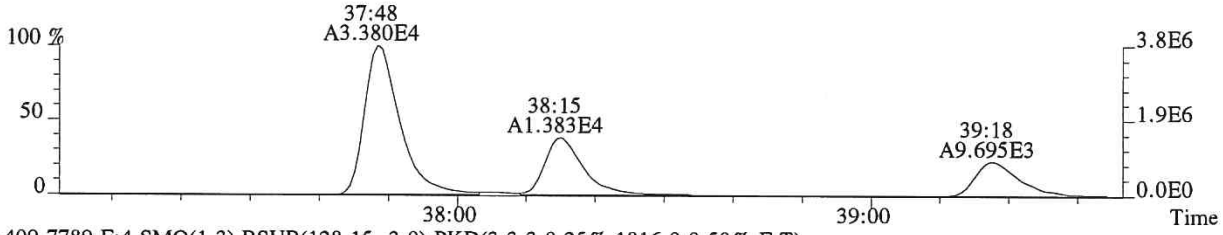


391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5612.0,0.40%,F,T)

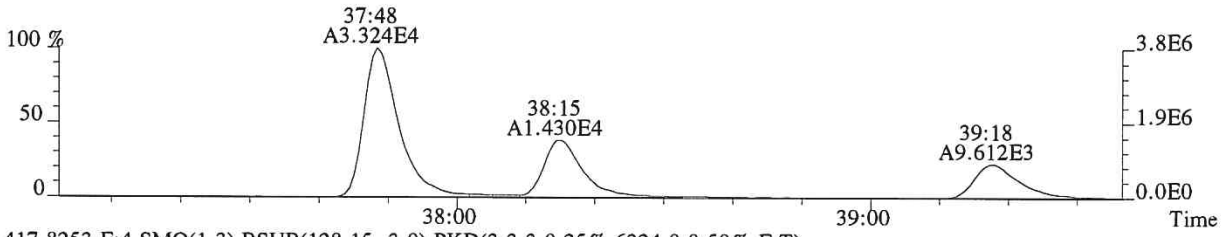


017544

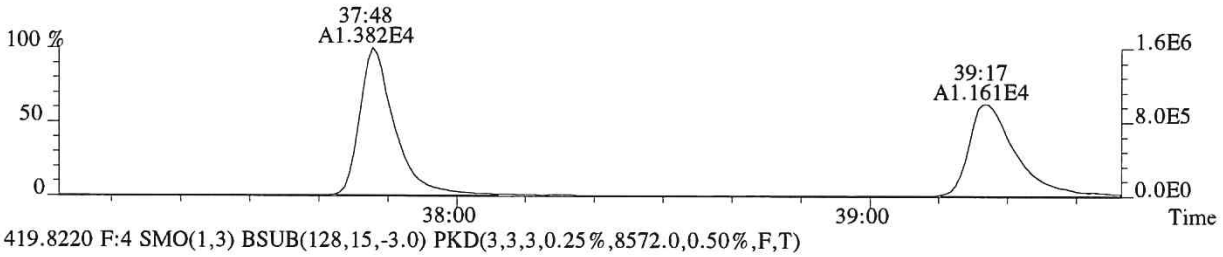
File:P519845 #1-232 Acq: 8-JAN-2019 21:32:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1136.0,0.50%,F,T)



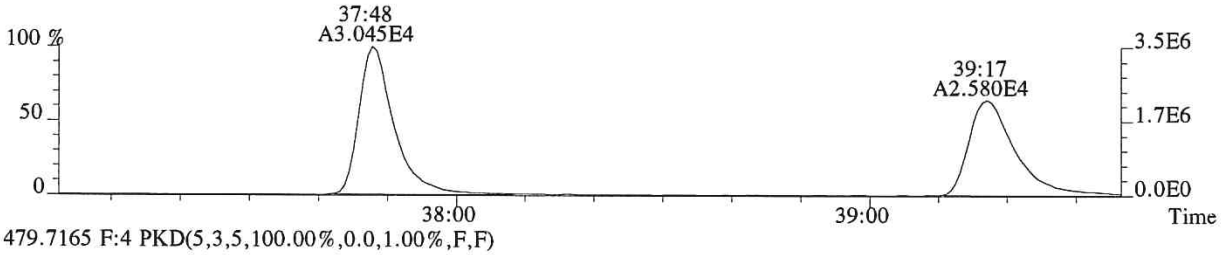
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1816.0,0.50%,F,T)



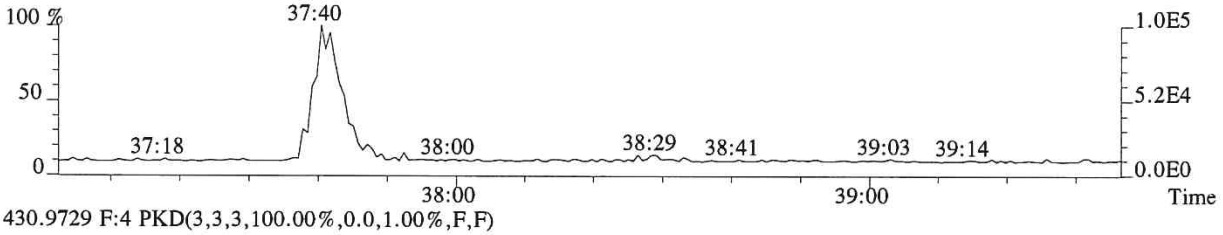
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6324.0,0.50%,F,T)



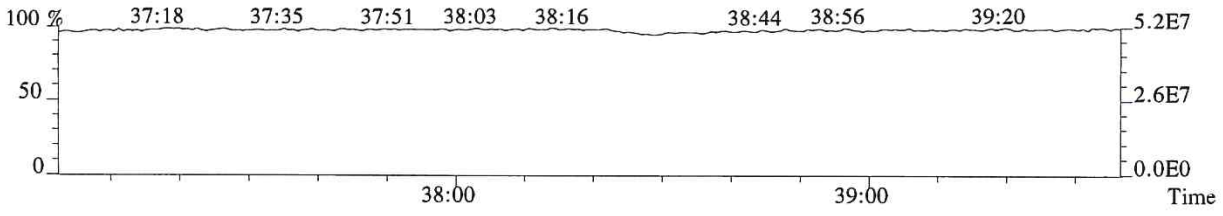
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8572.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

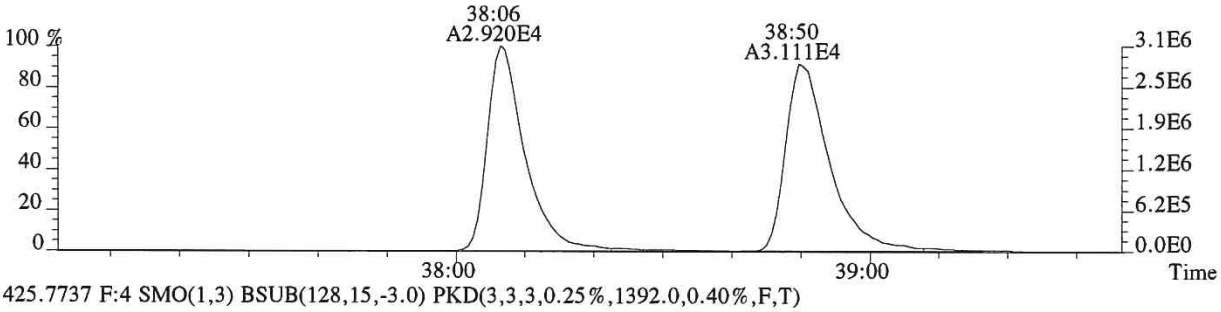


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

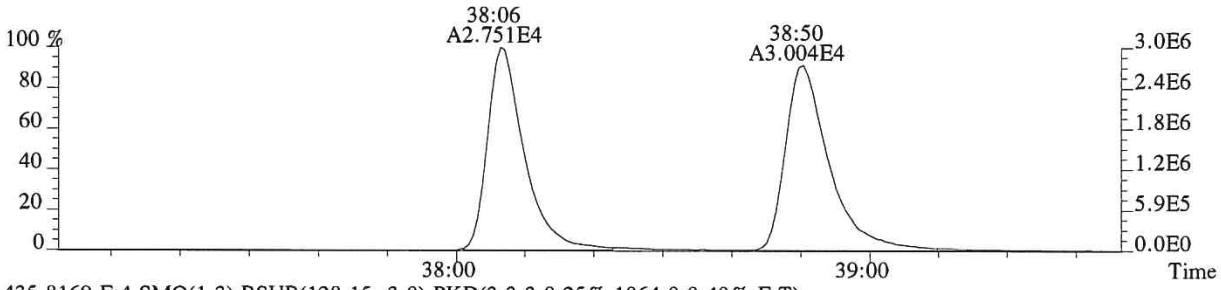


017545

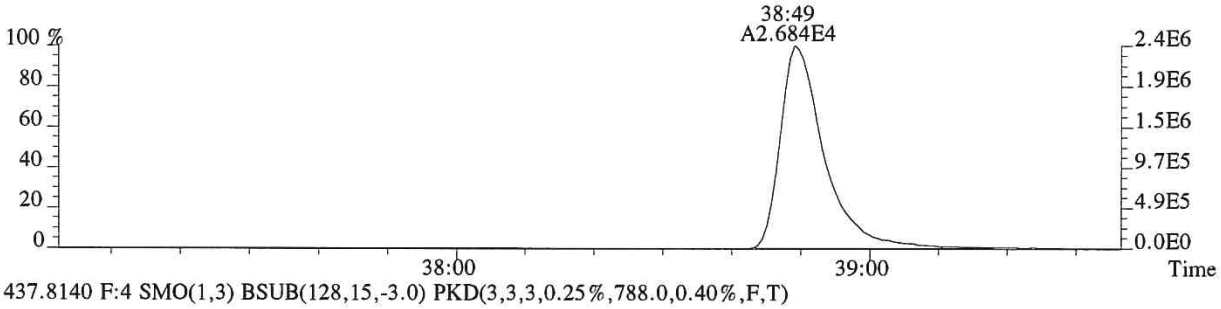
File:P519845 #1-232 Acq: 8-JAN-2019 21:32:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,980.0,0.40%,F,T)



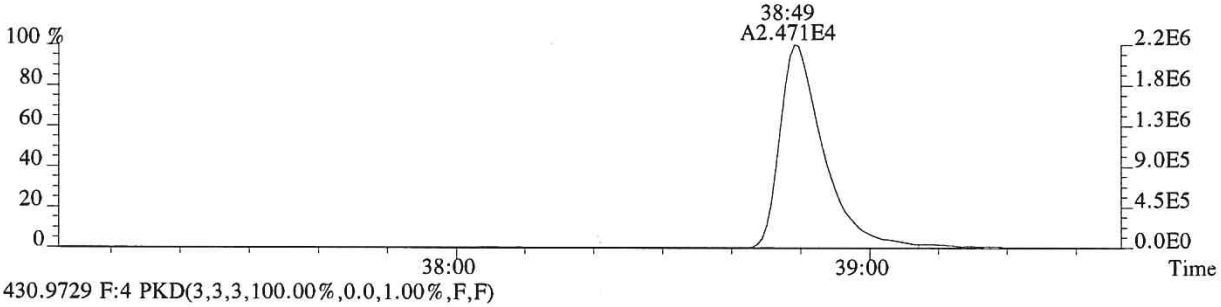
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1392.0,0.40%,F,T)



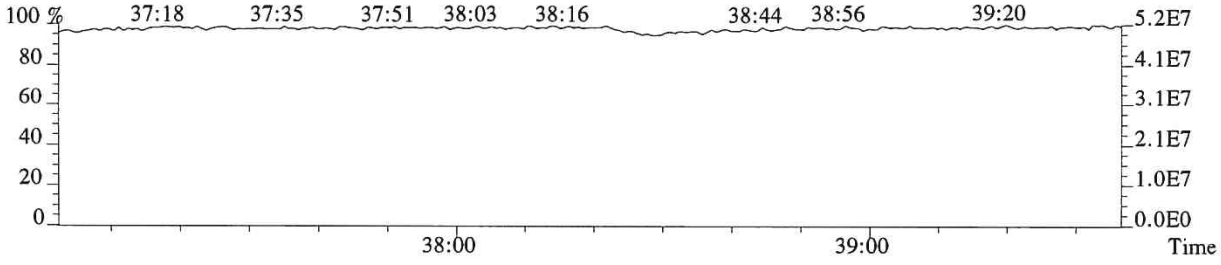
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1064.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,788.0,0.40%,F,T)

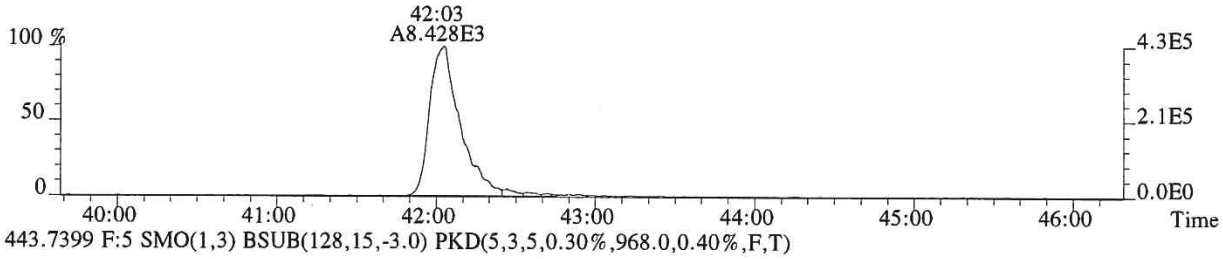


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

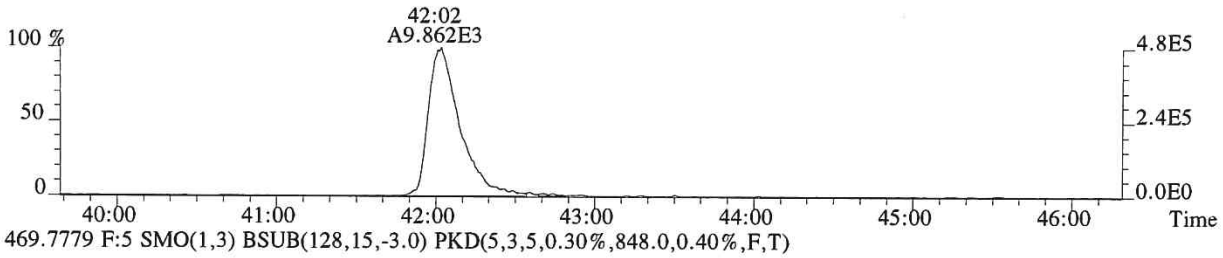


017546

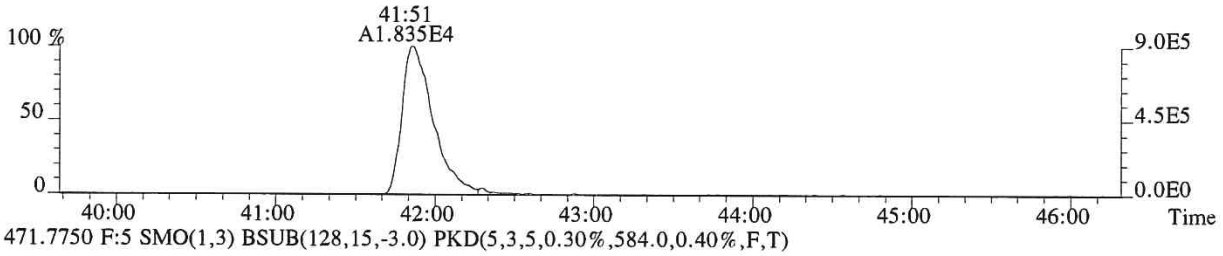
File:P519845 #1-601 Acq: 8-JAN-2019 21:32:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,532.0,0.40%,F,T)



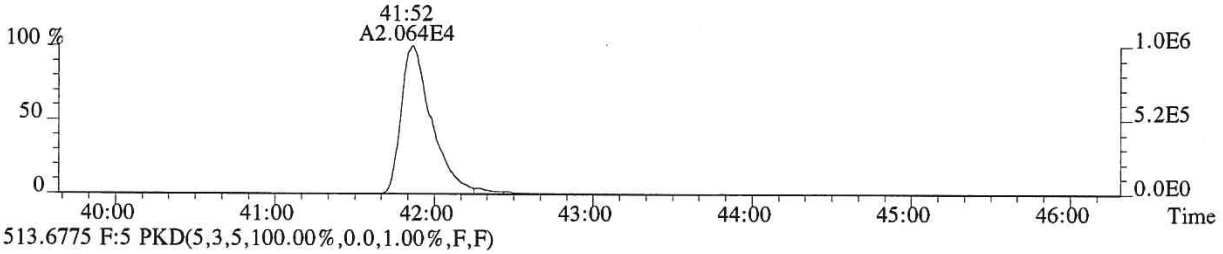
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,968.0,0.40%,F,T)



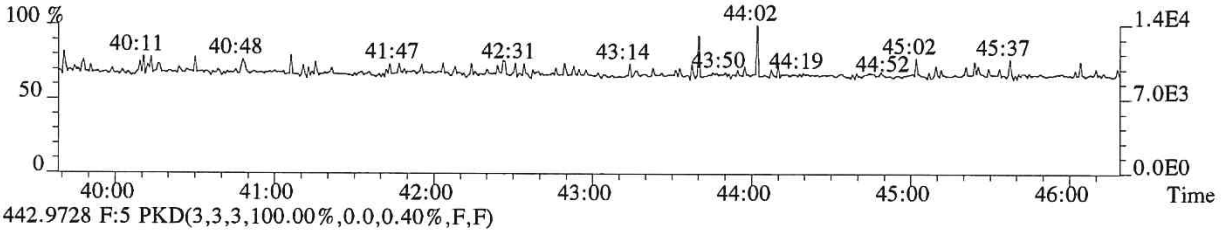
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,848.0,0.40%,F,T)



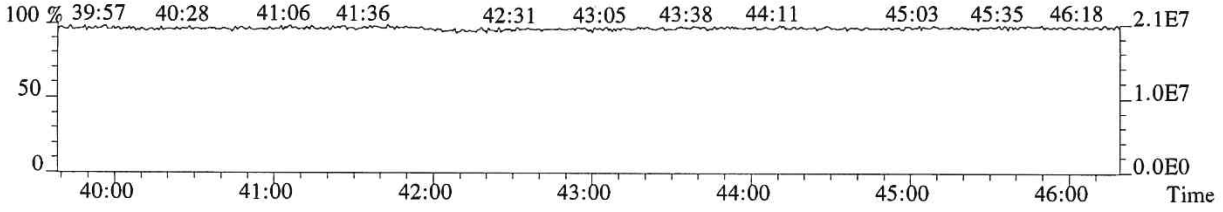
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,584.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

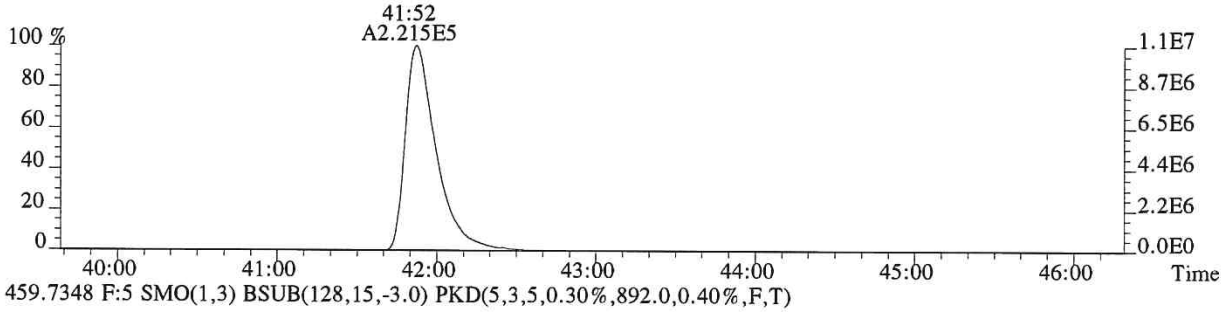


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

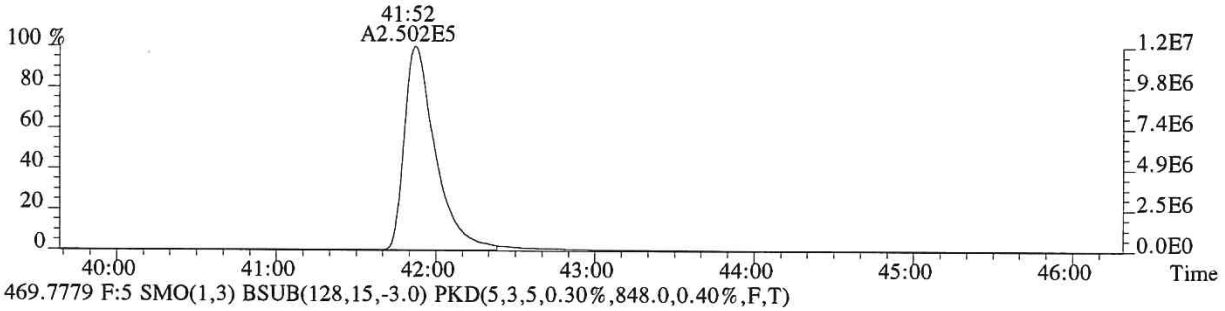


017547

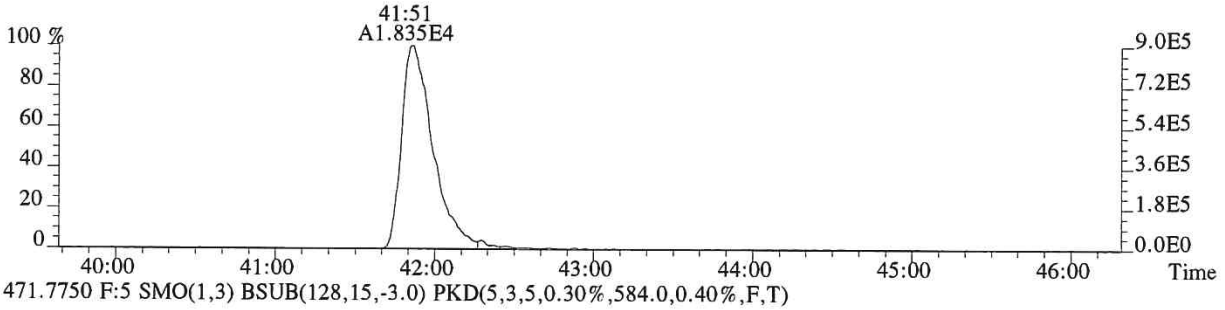
File:P519845 #1-601 Acq: 8-JAN-2019 21:32:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,516.0,0.40%,F,T)



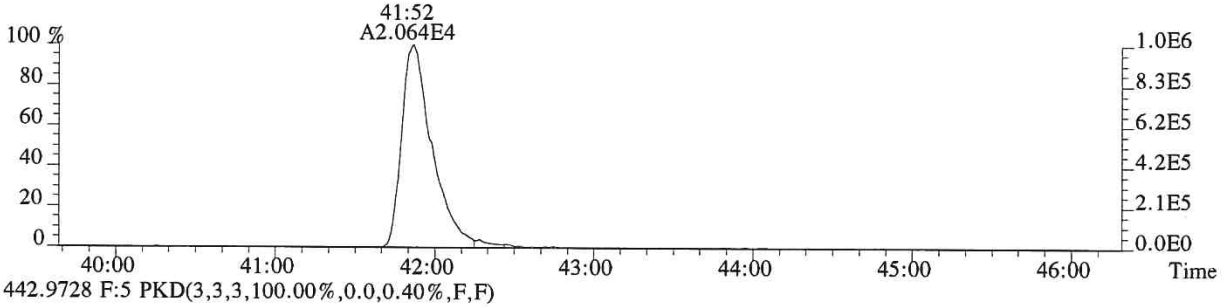
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,892.0,0.40%,F,T)



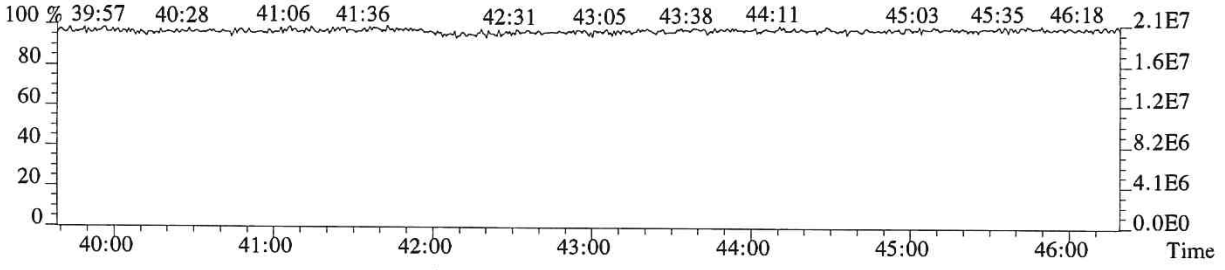
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,848.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,584.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017548

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0212

Run #19 Filename P616416 Samp: 1 Inj: 1 Acquired: 9-JAN-19 21:23:49
Processed: 10-JAN-19 08:32:10 Sample ID: E1801138-019DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:13	6.386e+03	7.630e+03	0.84	yes	yes	1.081
2	Unk	1,2,3,7,8-PeCDF	30:23	3.283e+02	2.636e+02	1.25	no	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:27	2.994e+02	1.131e+02	2.65	no	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	3.898e+02	3.122e+02	1.25	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:28	1.432e+02	1.081e+02	1.33	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	1.407e+01	1.862e+01	0.76	no	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:50	2.811e+01	1.708e+01	1.65	no	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	5.830e+01	7.274e+01	0.80	no	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:31	1.575e+01	1.287e+01	1.22	no	no	1.463
10	Unk	OCDF	NotFnd	*	*	*	no	no	1.571
11	Unk	2,3,7,8-TCDD	26:16	1.449e+03	1.831e+03	0.79	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:46	3.099e+01	1.014e+01	3.06	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	6.333e+01	3.816e+01	1.66	no	no	1.112
17	Unk	OCDD	40:38	2.779e+02	2.972e+02	0.94	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:11	1.161e+04	1.403e+04	0.83	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:22	1.670e+04	1.052e+04	1.59	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	1.565e+04	9.293e+03	1.68	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:20	5.588e+03	1.049e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	7.659e+03	1.412e+04	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:00	6.294e+03	1.169e+04	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	4.669e+03	8.992e+03	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	3.767e+03	8.489e+03	0.44	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	2.365e+03	5.522e+03	0.43	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:14	5.066e+03	6.382e+03	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:44	1.047e+04	6.466e+03	1.62	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	6.727e+03	5.302e+03	1.27	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	8.154e+03	6.356e+03	1.28	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:04	5.400e+03	5.570e+03	0.97	yes	no	0.857
32	IS	13C-OCDD	40:38	4.524e+03	4.950e+03	0.91	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:26	8.009e+03	1.007e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	8.619e+03	5.961e+03	1.45	no	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:16	4.709e+01				no	1.086

$$\text{OCDD} = \frac{(2.779e+02 + 2.972e+02) \times 4000 \text{ pg} \times 100}{(4.524e+03 + 4.950e+03) \times 10.250 \text{ g} \times 83.4/100 \times 1.157 \times 0.34} = 7220 \text{ ng/kg}$$

LLM 01/10/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0212

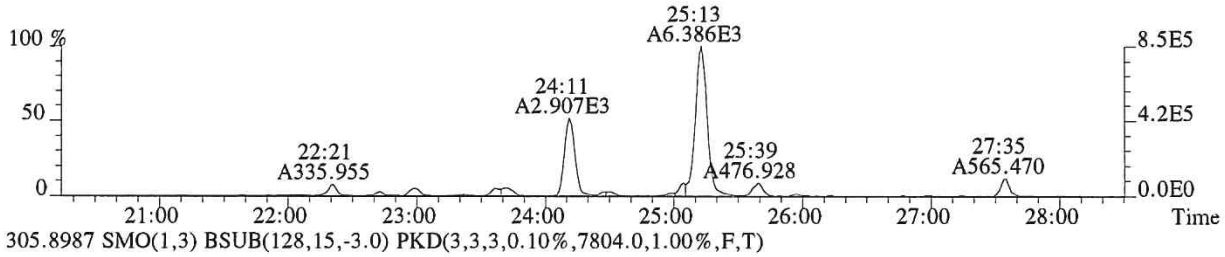
Run #19 Filename P616416 Samp: 1 Inj: 1 Acquired: 9-JAN-19 21:23:49
Processed: 10-JAN-19 08:32:10 LAB. ID: E1801138-019DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.45e+05	1.32e+03	6.4e+02	1.02e+06	7.80e+03	1.3e+02
2	1,2,3,7,8-PeCDF	5.18e+04	5.76e+02	9.0e+01	4.42e+04	3.42e+03	1.3e+01
3	2,3,4,7,8-PeCDF	4.61e+04	5.76e+02	8.0e+01	1.90e+04	3.42e+03	5.6e+00
4	1,2,3,4,7,8-HxCDF	8.25e+04	1.04e+03	7.9e+01	6.20e+04	6.04e+02	1.0e+02
5	1,2,3,6,7,8-HxCDF	2.18e+04	1.04e+03	2.1e+01	1.45e+04	6.04e+02	2.4e+01
6	2,3,4,6,7,8-HxCDF	3.72e+03	1.04e+03	3.6e+00	3.81e+03	6.04e+02	6.3e+00
7	1,2,3,7,8,9-HxCDF	7.04e+03	1.04e+03	6.8e+00	3.02e+03	6.04e+02	5.0e+00
8	1,2,3,4,6,7,8-HpCDF	1.14e+04	4.60e+02	2.5e+01	1.32e+04	4.60e+02	2.9e+01
9	1,2,3,4,7,8,9-HpCDF	3.41e+03	4.60e+02	7.4e+00	2.85e+03	4.60e+02	6.2e+00
10	OCDF	*	2.36e+02	*	*	1.75e+03	*
11	2,3,7,8-TCDD	2.19e+05	3.56e+03	6.1e+01	2.48e+05	8.60e+02	2.9e+02
12	1,2,3,7,8-PeCDD	6.50e+03	1.24e+03	5.2e+00	2.40e+03	3.92e+02	6.1e+00
13	1,2,3,4,7,8-HxCDD	*	8.08e+02	*	*	1.02e+03	*
14	1,2,3,6,7,8-HxCDD	*	8.08e+02	*	*	1.02e+03	*
15	1,2,3,7,8,9-HxCDD	*	8.08e+02	*	*	1.02e+03	*
16	1,2,3,4,6,7,8-HpCDD	1.40e+04	4.44e+02	3.2e+01	7.23e+03	5.24e+02	1.4e+01
17	OCDD	4.29e+04	2.24e+02	1.9e+02	4.91e+04	2.56e+02	1.9e+02
18	13C-2,3,7,8-TCDF	1.59e+06	1.38e+04	1.2e+02	1.93e+06	7.13e+03	2.7e+02
19	13C-1,2,3,7,8-PeCDF	2.48e+06	7.56e+02	3.3e+03	1.60e+06	7.76e+02	2.1e+03
20	13C-2,3,4,7,8-PeCDF	2.59e+06	7.56e+02	3.4e+03	1.53e+06	7.76e+02	2.0e+03
21	13C-1,2,3,4,7,8-HxCDF	1.08e+06	1.49e+03	7.2e+02	1.96e+06	1.52e+03	1.3e+03
22	13C-1,2,3,6,7,8-HxCDF	1.16e+06	1.49e+03	7.7e+02	2.24e+06	1.52e+03	1.5e+03
23	13C-2,3,4,6,7,8-HxCDF	1.06e+06	1.49e+03	7.1e+02	2.03e+06	1.52e+03	1.3e+03
24	13C-1,2,3,7,8,9-HxCDF	7.80e+05	1.49e+03	5.2e+02	1.49e+06	1.52e+03	9.8e+02
25	13C-1,2,3,4,6,7,8-HpCDF	6.79e+05	3.23e+03	2.1e+02	1.48e+06	2.24e+03	6.6e+02
26	13C-1,2,3,4,7,8,9-HpCDF	3.93e+05	3.23e+03	1.2e+02	8.77e+05	2.24e+03	3.9e+02
27	13C-2,3,7,8-TCDD	7.17e+05	1.11e+04	6.5e+01	9.22e+05	3.94e+03	2.3e+02
28	13C-1,2,3,7,8-PeCDD	1.67e+06	2.04e+03	8.2e+02	1.04e+06	1.70e+03	6.1e+02
29	13C-1,2,3,4,7,8-HxCDD	1.34e+06	2.58e+03	5.2e+02	1.05e+06	1.06e+03	9.9e+02
30	13C-1,2,3,6,7,8-HxCDD	1.30e+06	2.58e+03	5.0e+02	1.03e+06	1.06e+03	9.7e+02
31	13C-1,2,3,4,6,7,8-HpCDD	9.44e+05	9.20e+02	1.0e+03	9.23e+05	7.00e+02	1.3e+03
32	13C-OCDD	6.09e+05	1.34e+03	4.5e+02	6.28e+05	5.60e+02	1.1e+03
33	13C-1,2,3,4-TCDD	1.15e+06	1.11e+04	1.0e+02	1.38e+06	3.94e+03	3.5e+02
34	13C-1,2,3,7,8,9-HxCDD	1.26e+06	2.58e+03	4.9e+02	9.59e+05	1.06e+03	9.0e+02
35	37Cl-2,3,7,8-TCDD	8.86e+03	3.34e+03	2.7e+00			

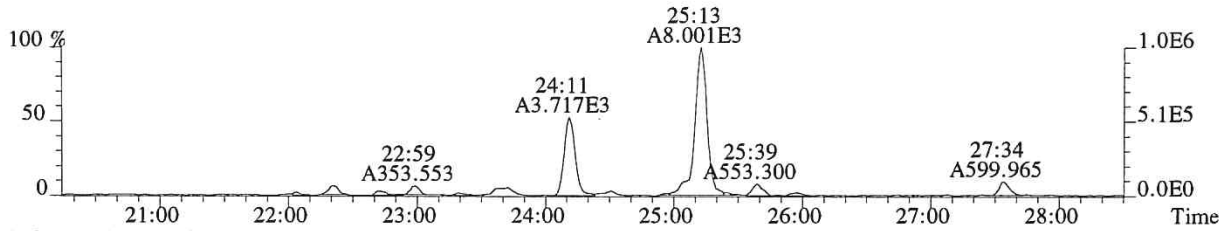
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10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office:(713)266-1599. Fax:(713)266-0130

www.alsglobal.com

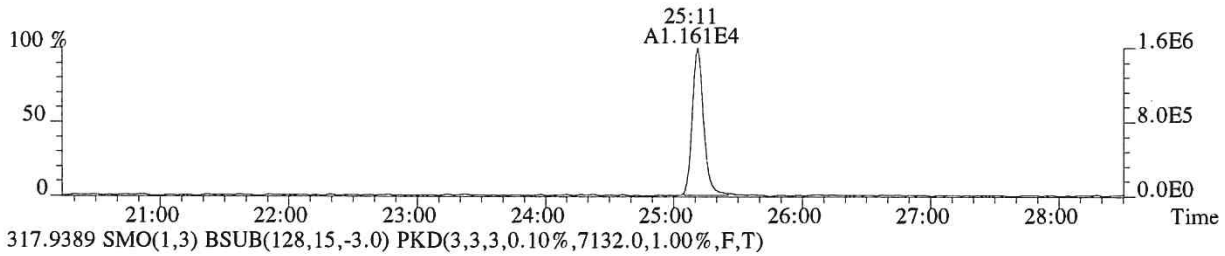
File:P616416 #1-587 Acq: 9-JAN-2019 21:23:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1316.0,1.00%,F,T)



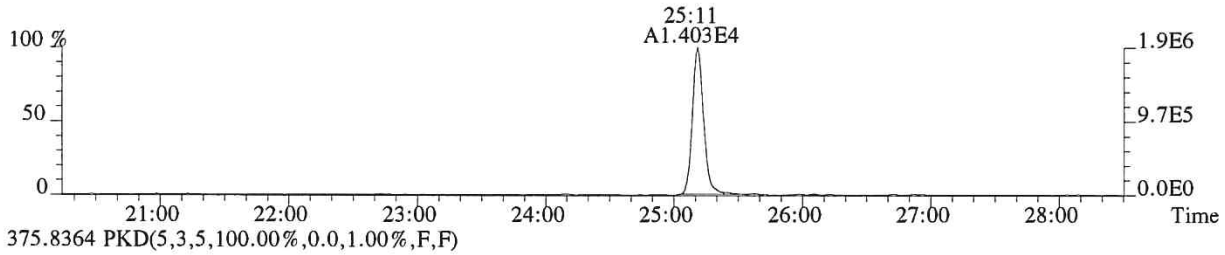
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7804.0,1.00%,F,T)



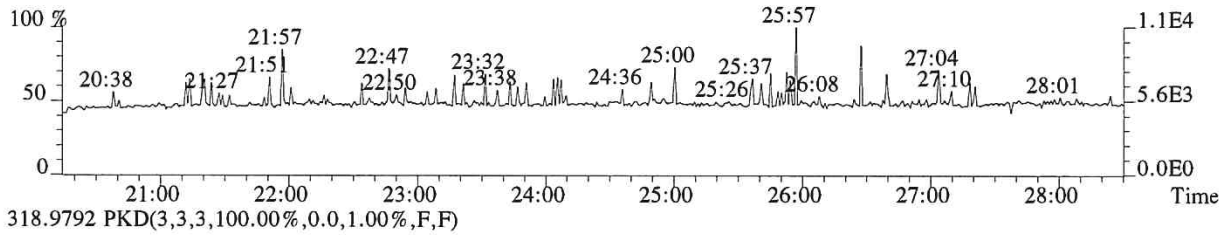
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,13844.0,1.00%,F,T)



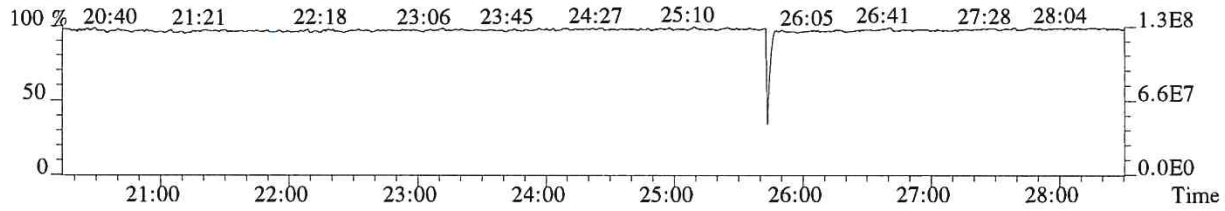
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7132.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

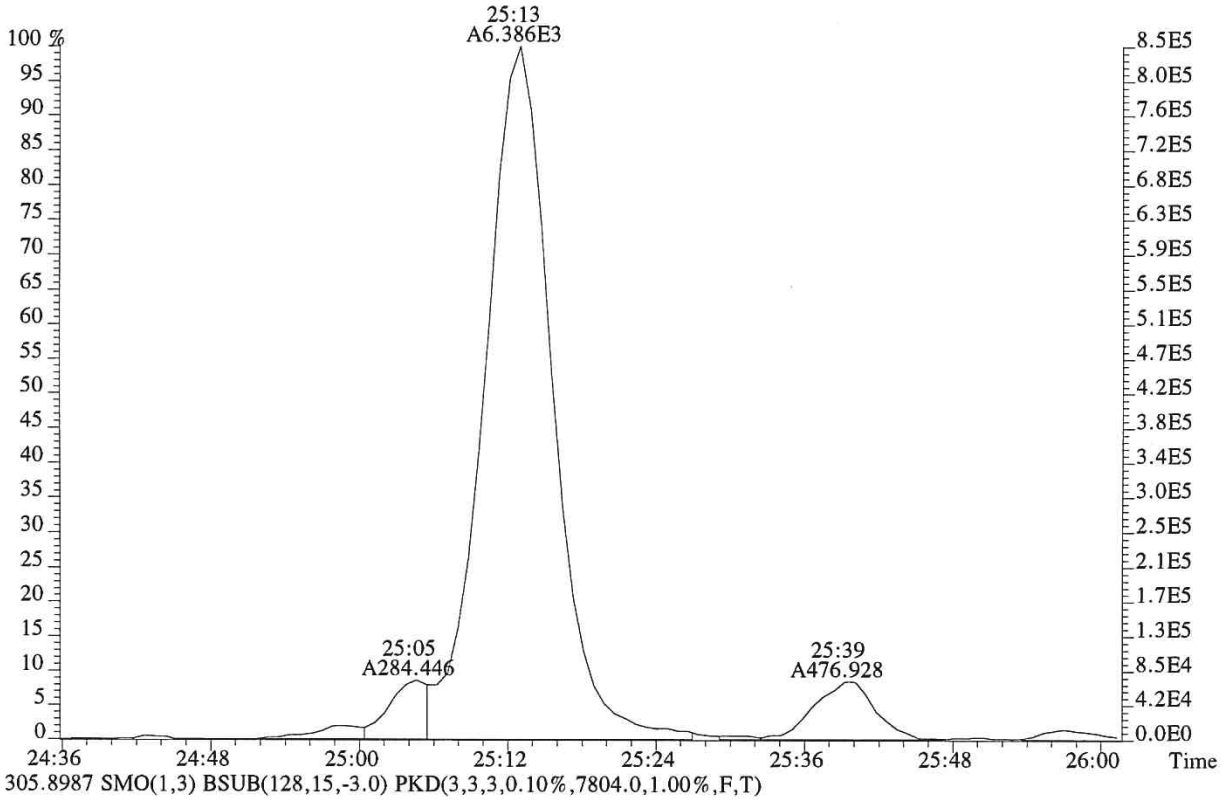


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

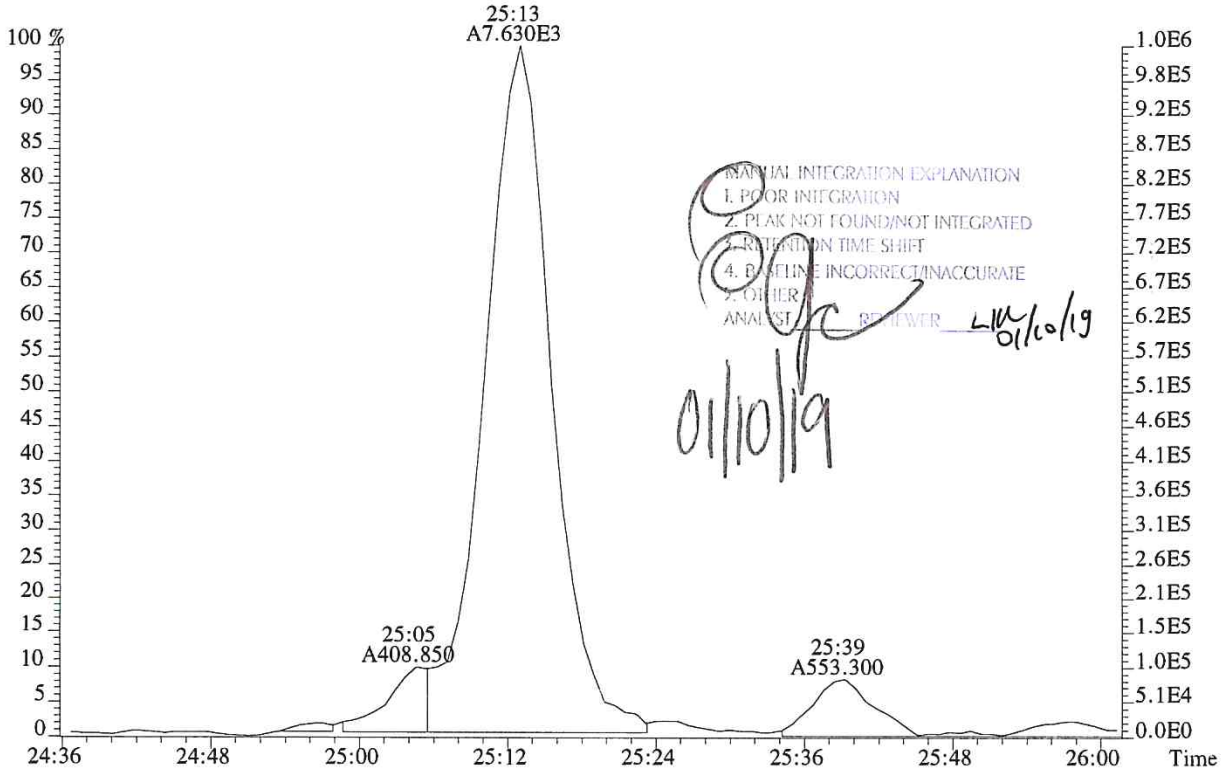


017551

File:P616416 #1-587 Acq: 9-JAN-2019 21:23:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1316.0,1.00%,F,T)

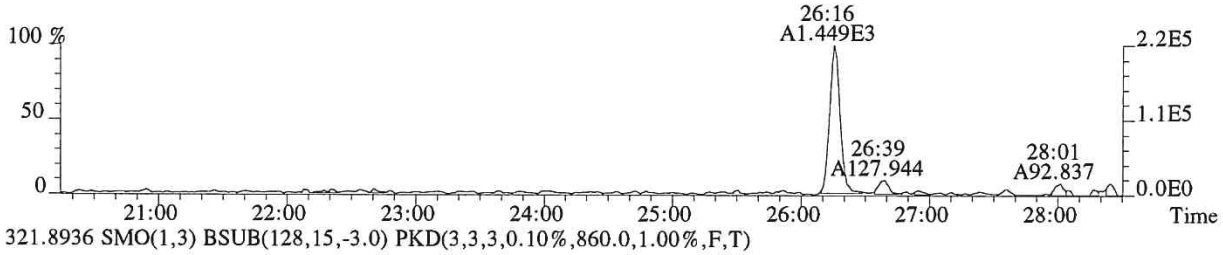


305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7804.0,1.00%,F,T)

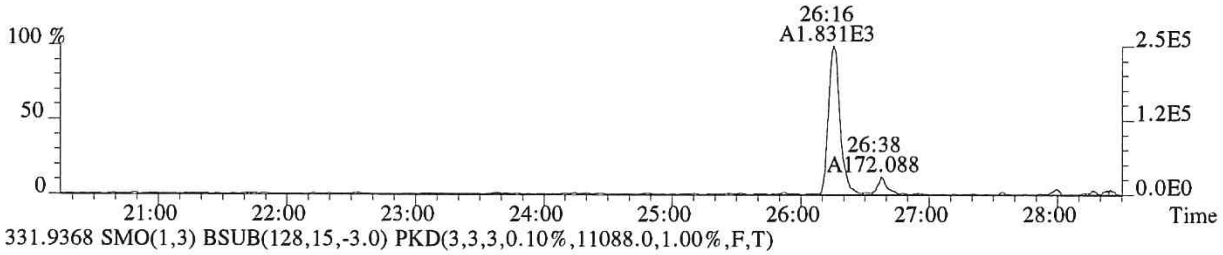


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST RE VIEWER LW 01/10/19
01/10/19

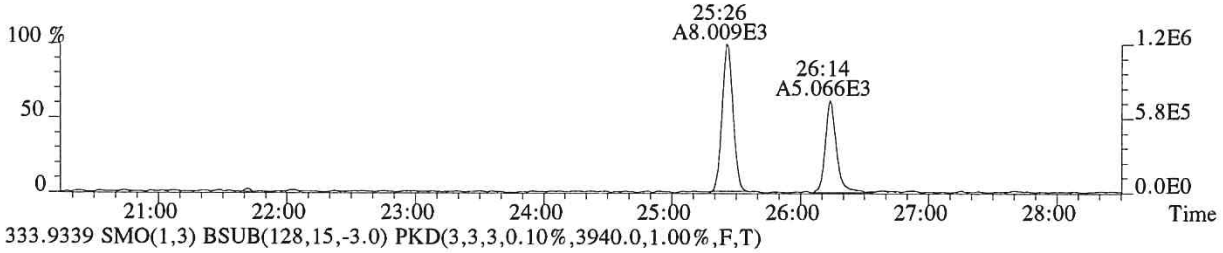
File:P616416 #1-587 Acq: 9-JAN-2019 21:23:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3564.0,1.00%,F,T)



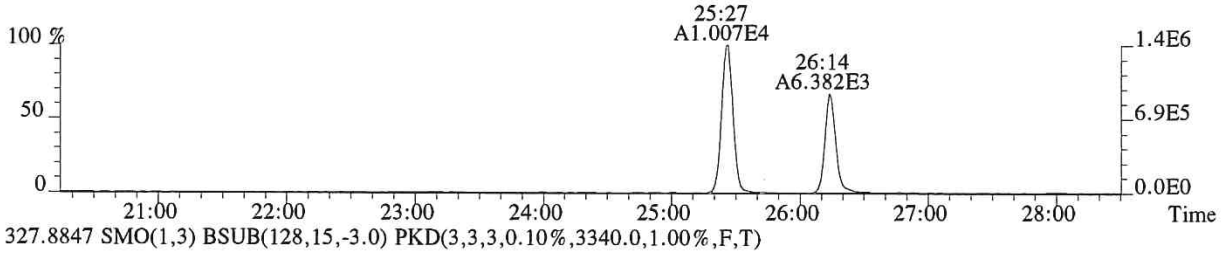
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,860.0,1.00%,F,T)



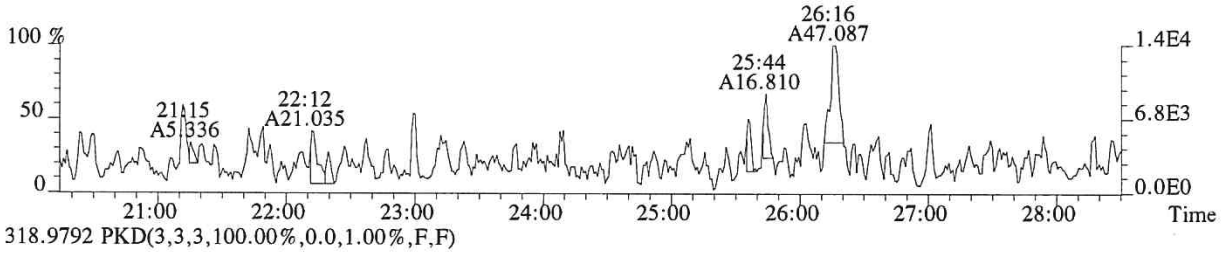
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11088.0,1.00%,F,T)



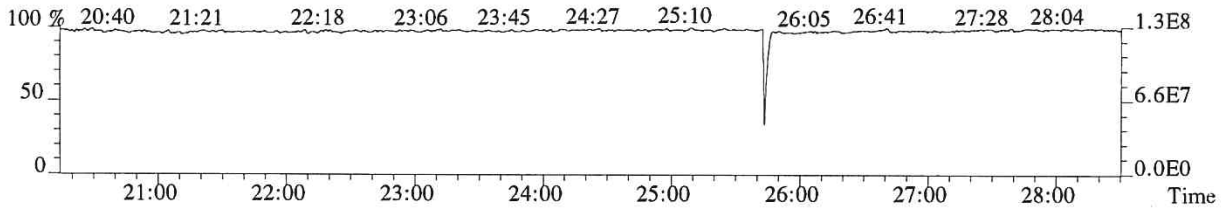
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3940.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3340.0,1.00%,F,T)

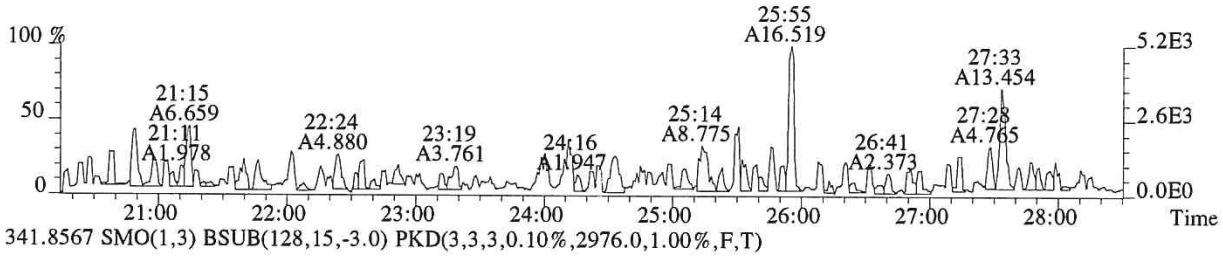


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

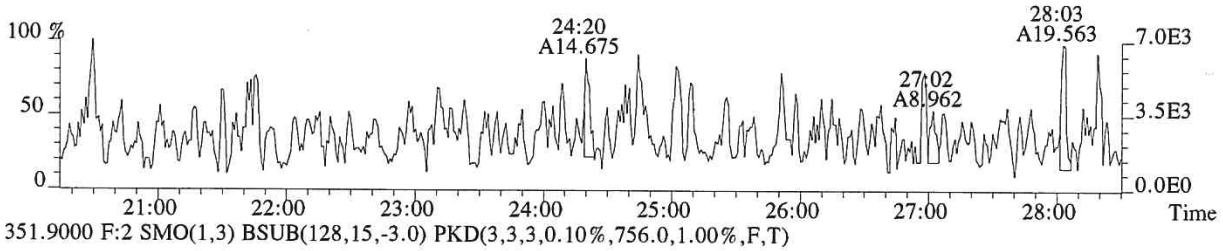


017553

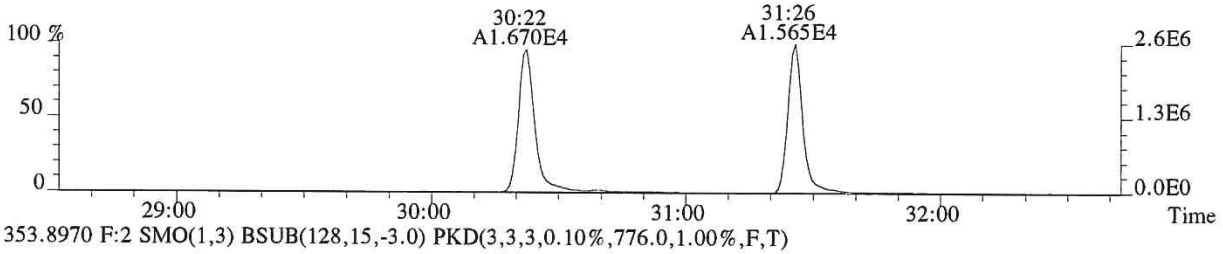
File:P616416 #1-587 Acq: 9-JAN-2019 21:23:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,424.0,1.00%,F,T)



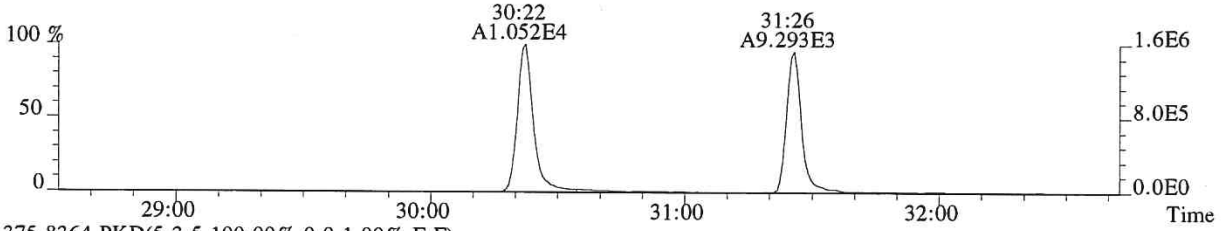
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2976.0,1.00%,F,T)



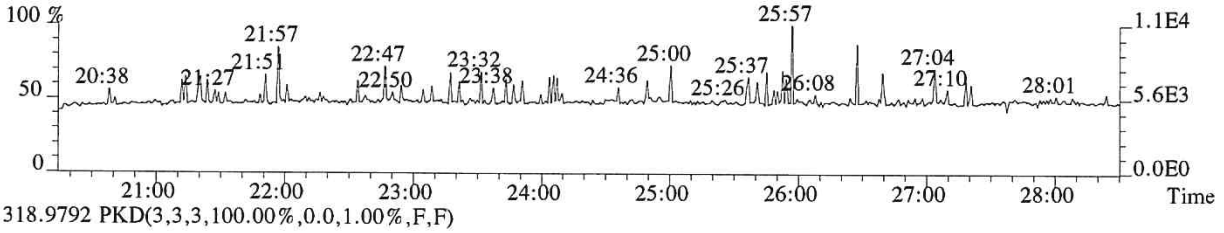
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,756.0,1.00%,F,T)



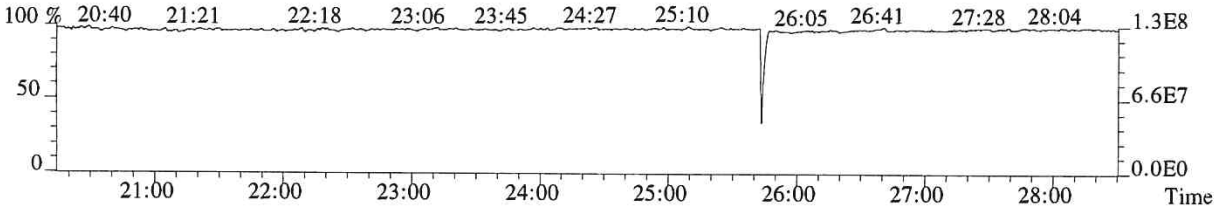
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,776.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

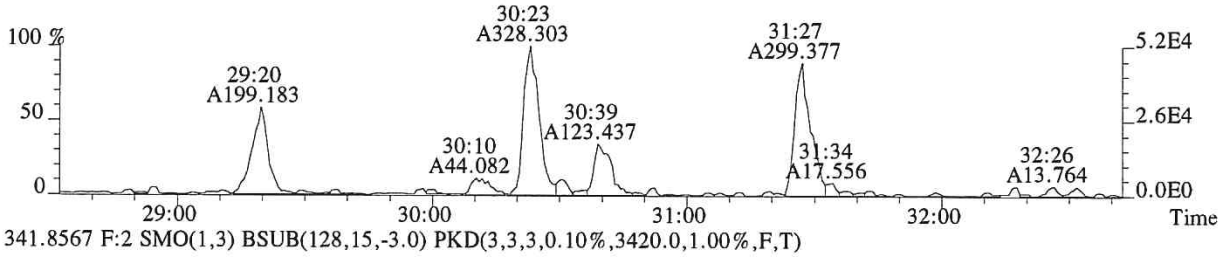


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

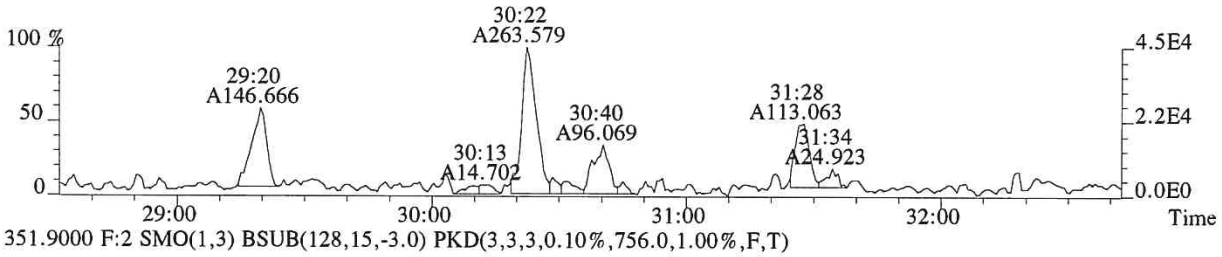


017554

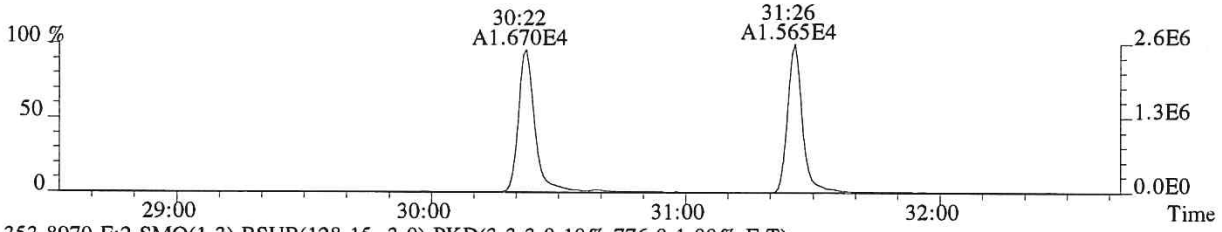
File:P616416 #1-376 Acq: 9-JAN-2019 21:23:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,576.0,1.00%,F,T)



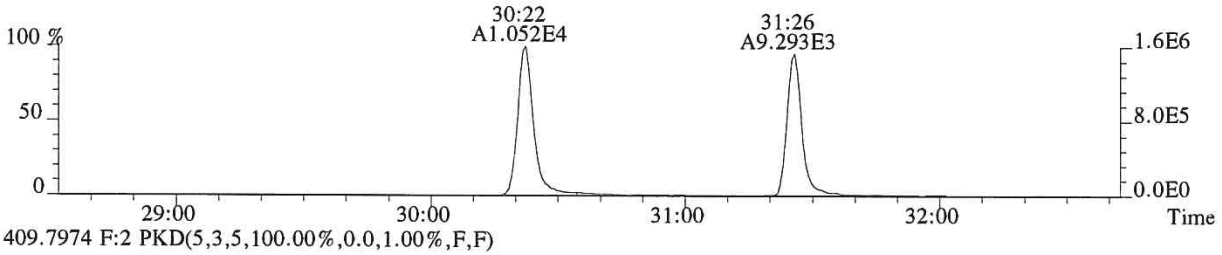
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3420.0,1.00%,F,T)



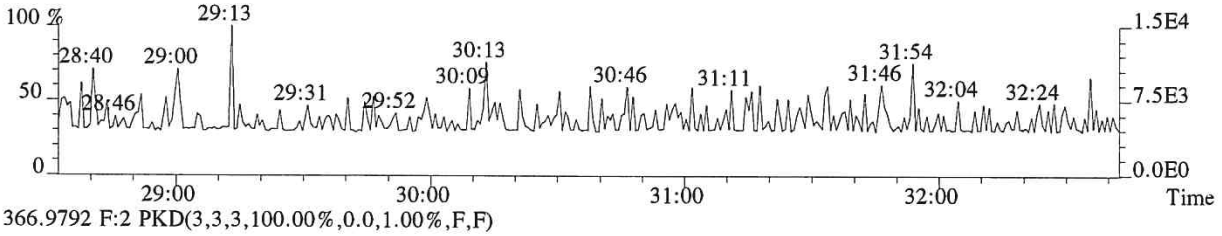
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,756.0,1.00%,F,T)



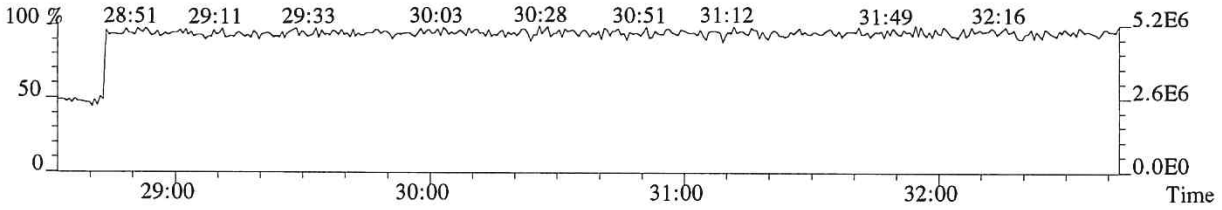
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,776.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

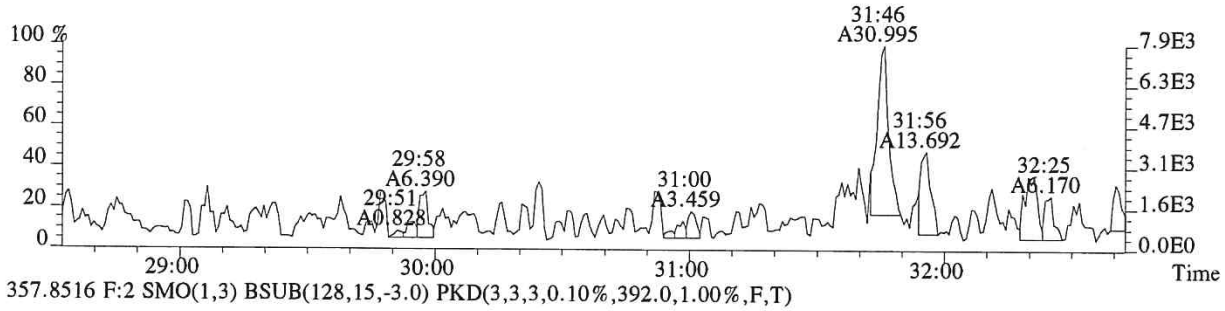


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

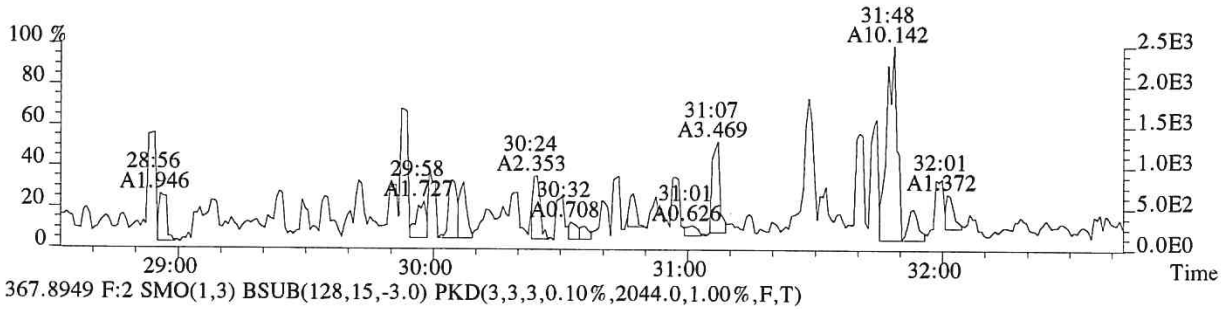


017555

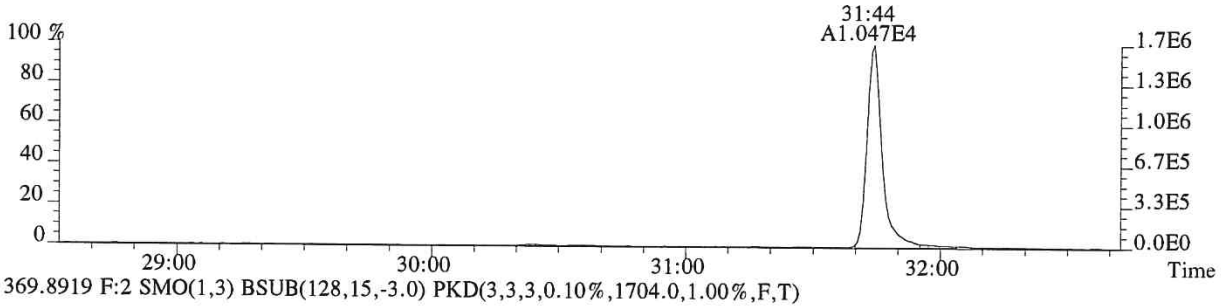
File:P616416 #1-376 Acq: 9-JAN-2019 21:23:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1240.0,1.00%,F,T)



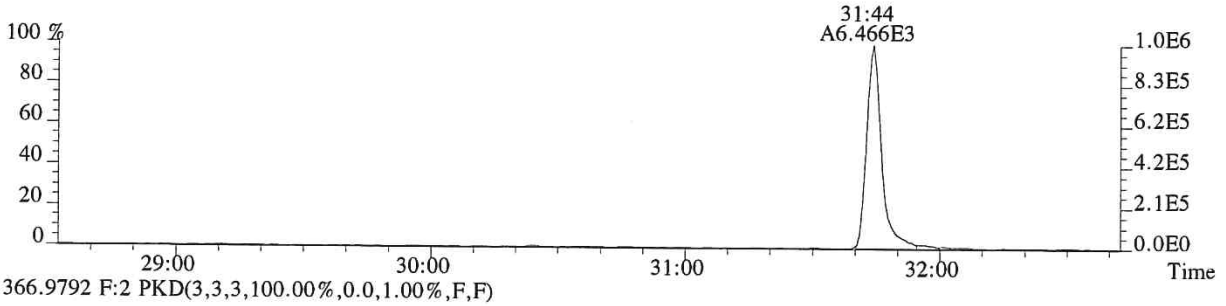
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,392.0,1.00%,F,T)



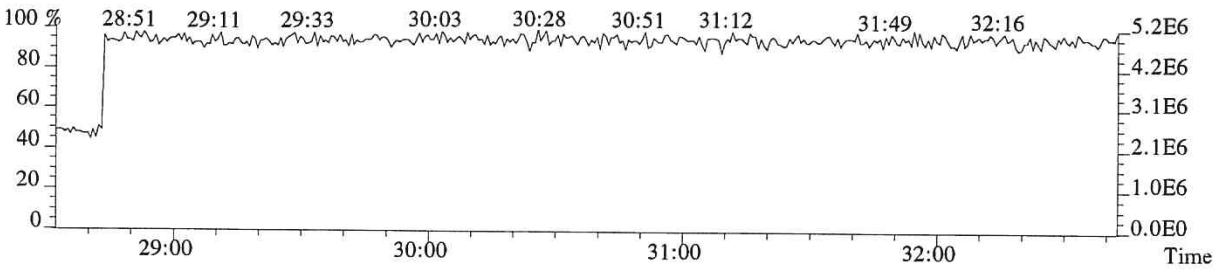
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2044.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1704.0,1.00%,F,T)

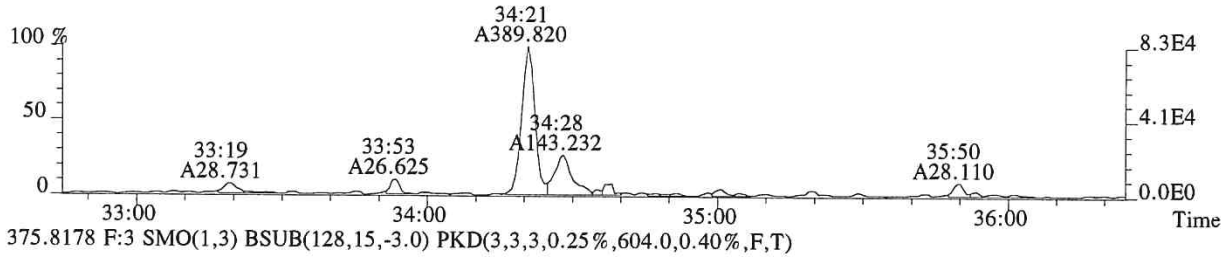


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

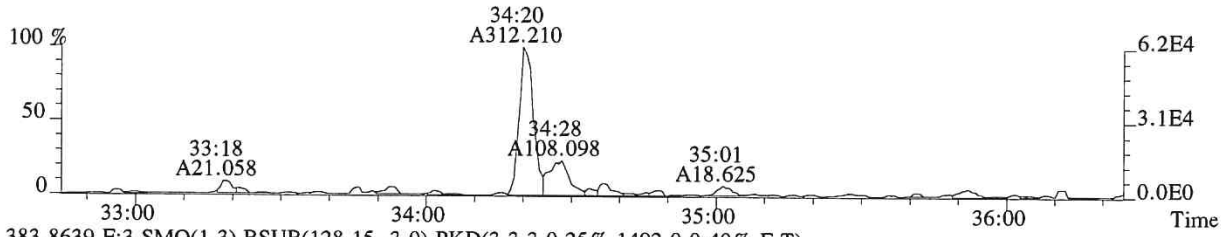


017556

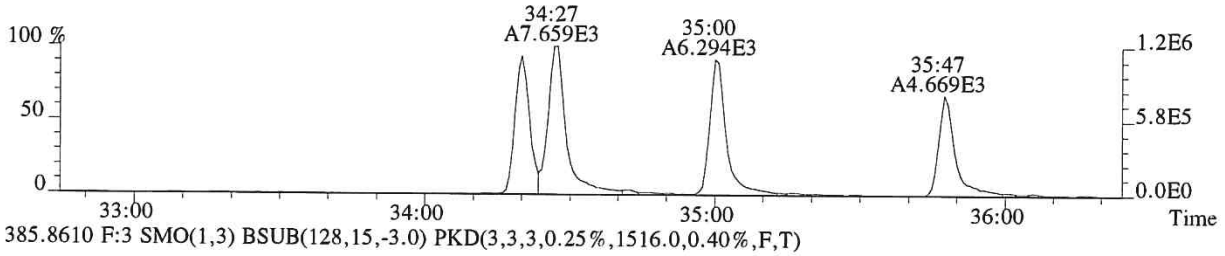
File:P616416 #1-330 Acq: 9-JAN-2019 21:23:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1040.0,0.40%,F,T)



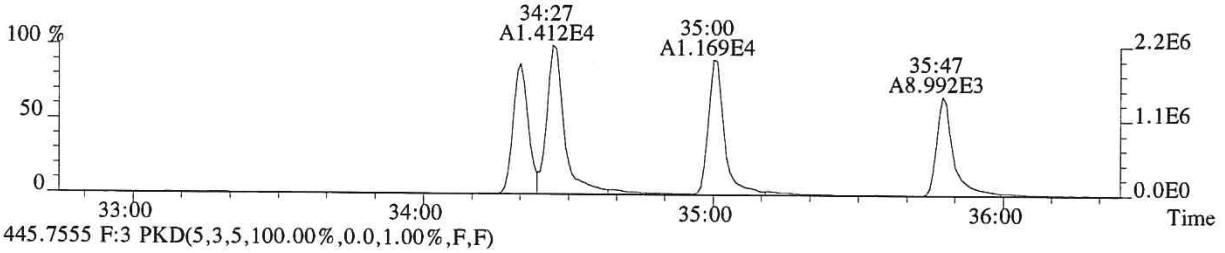
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,604.0,0.40%,F,T)



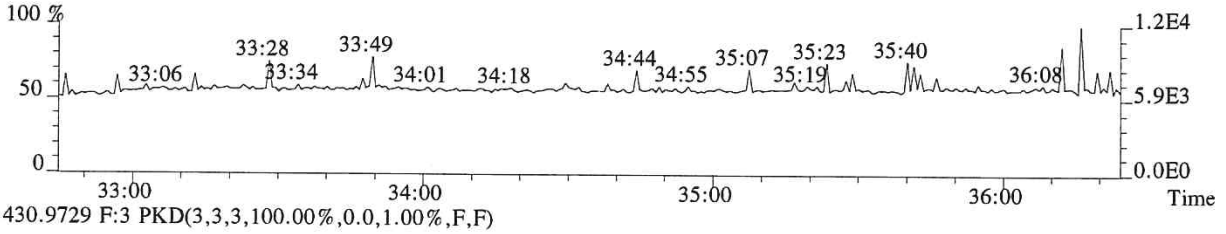
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1492.0,0.40%,F,T)



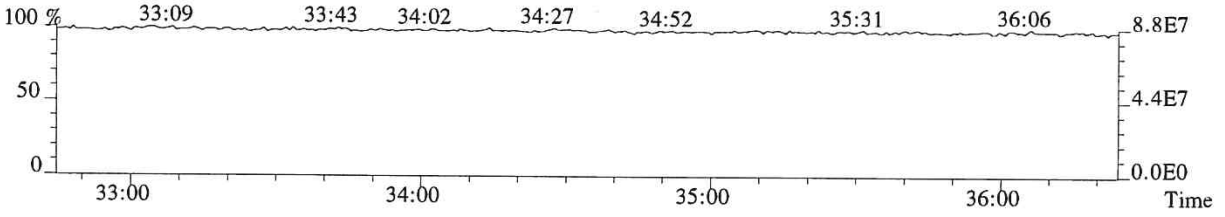
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1516.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

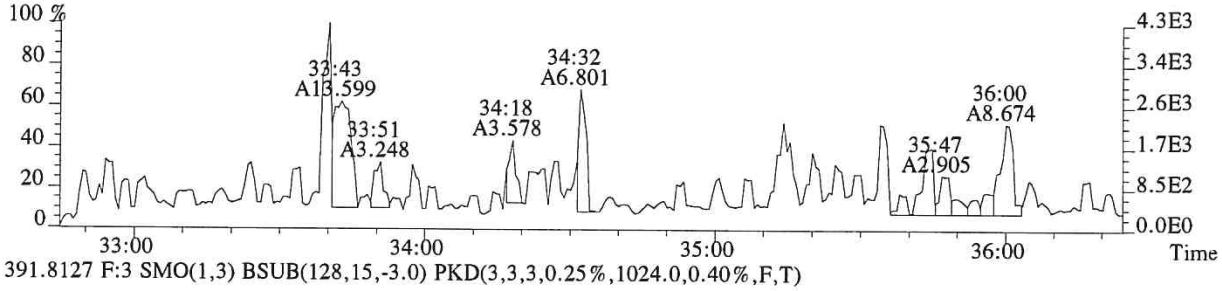


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

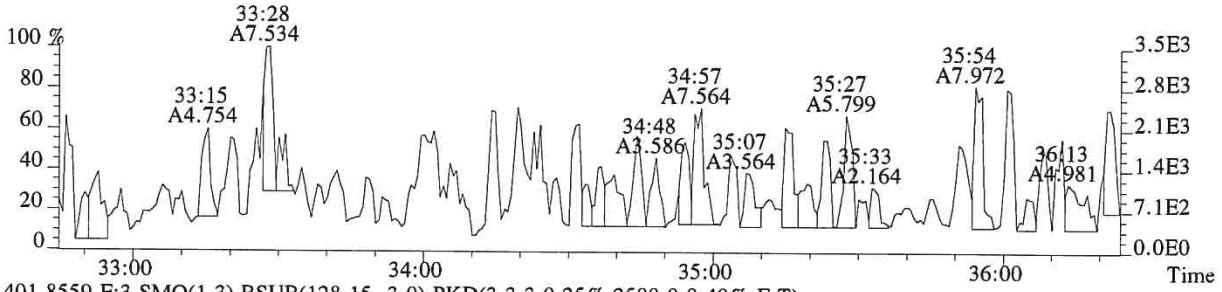


017557

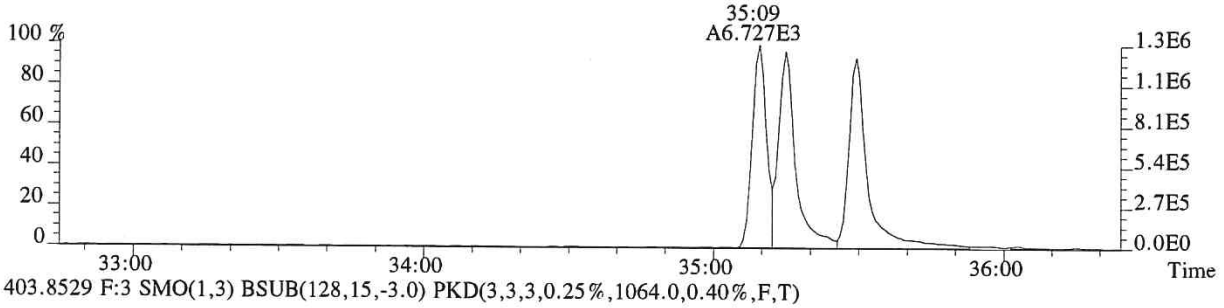
File:P616416 #1-330 Acq: 9-JAN-2019 21:23:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,808.0,0.40%,F,T)



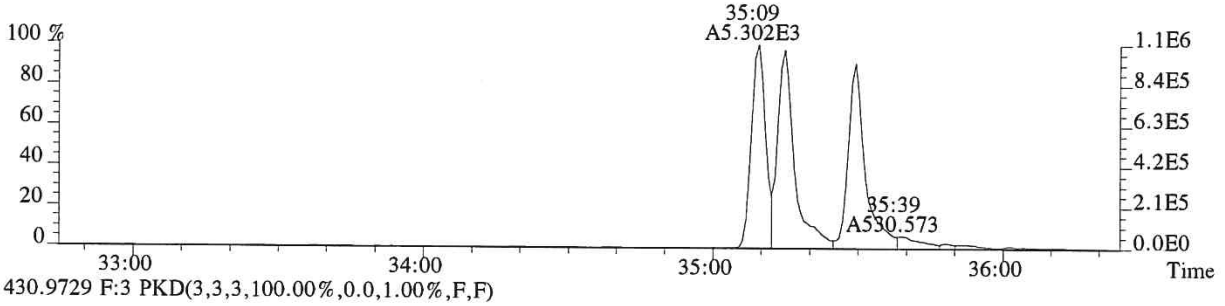
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1024.0,0.40%,F,T)



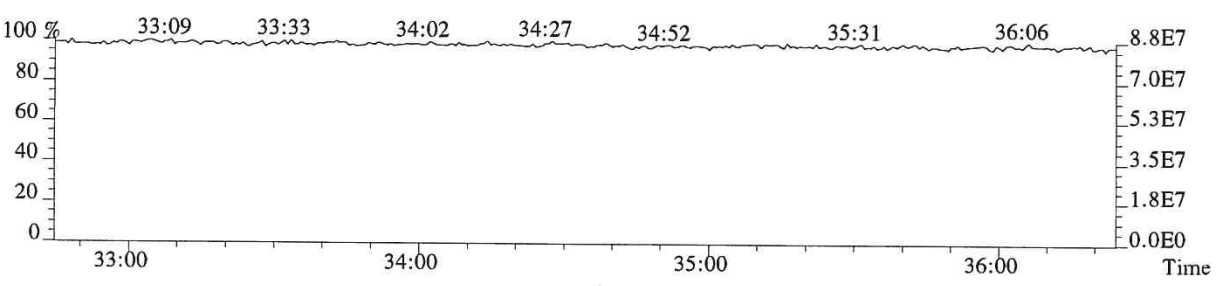
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2580.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1064.0,0.40%,F,T)

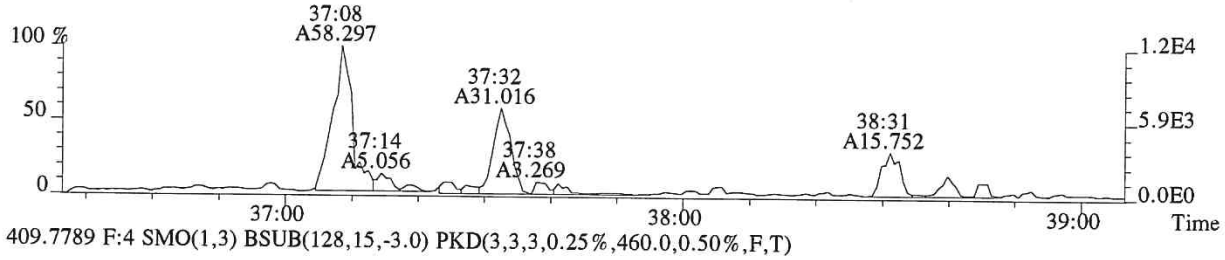


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

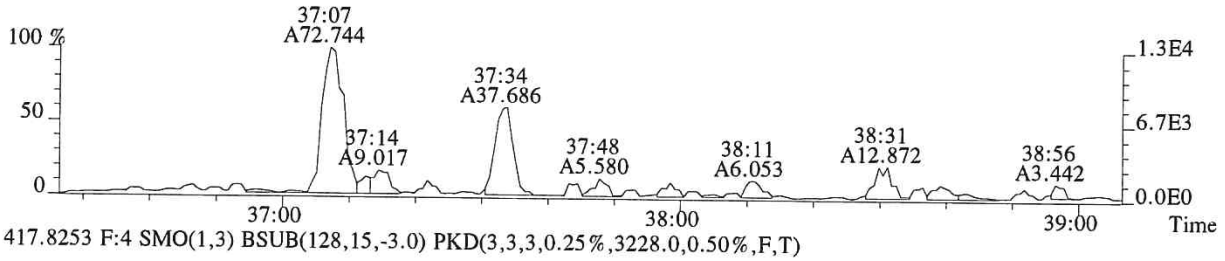


017558

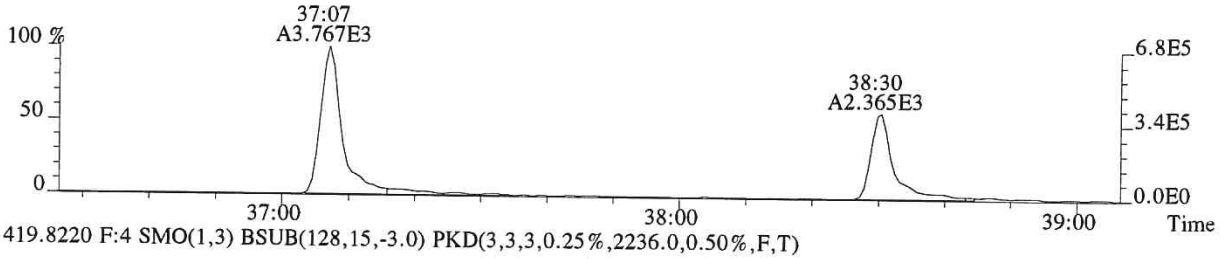
File:P616416 #1-241 Acq: 9-JAN-2019 21:23:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,460.0,0.50%,F,T)



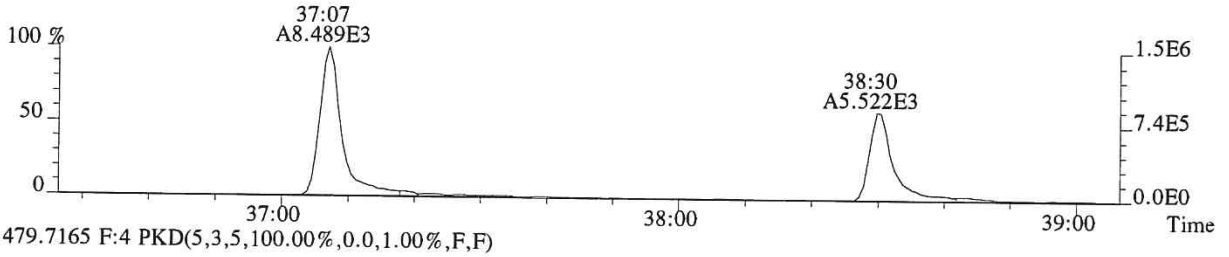
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,460.0,0.50%,F,T)



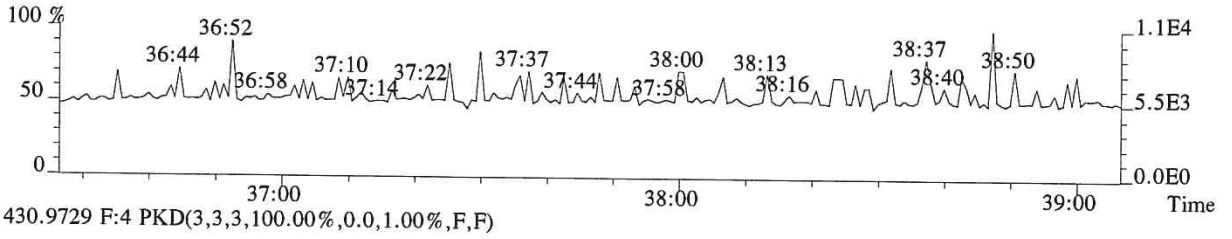
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3228.0,0.50%,F,T)



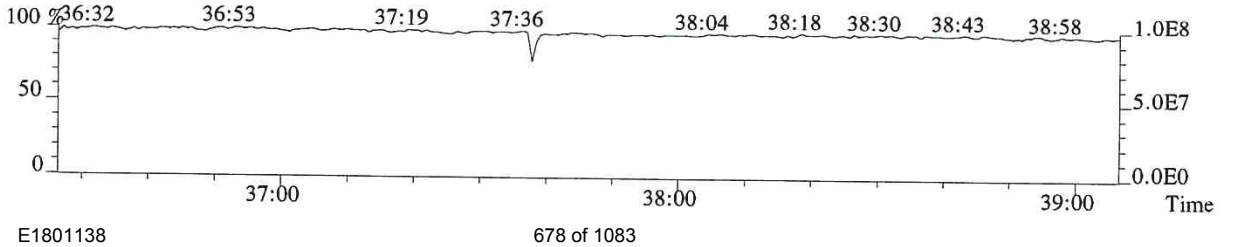
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2236.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

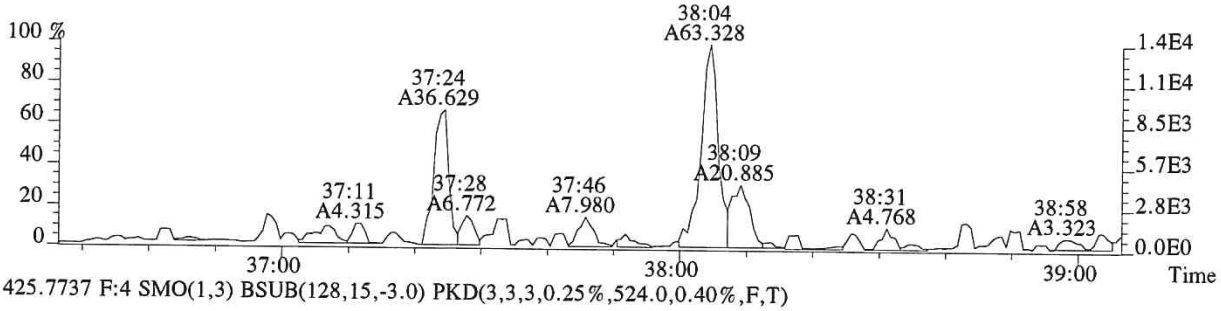


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

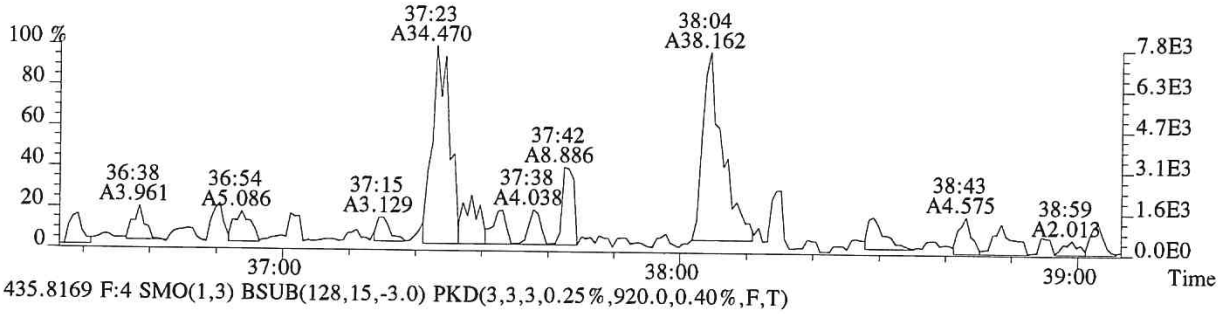


017559

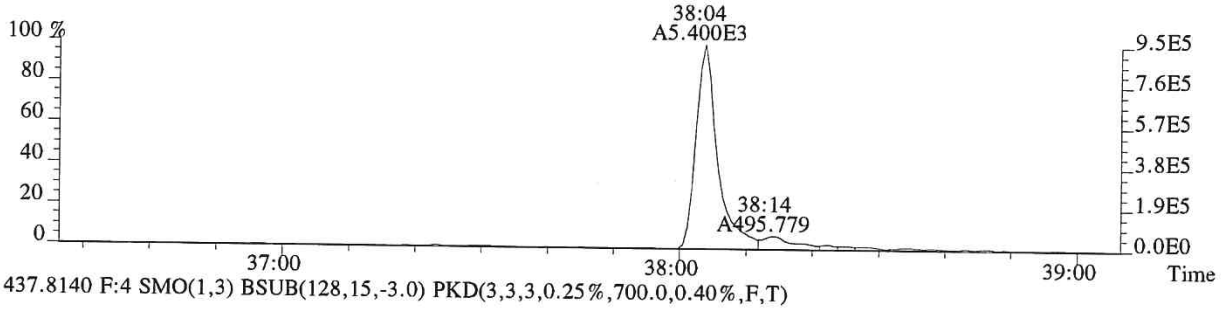
File:P616416 #1-241 Acq: 9-JAN-2019 21:23:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,444.0,0.40%,F,T)



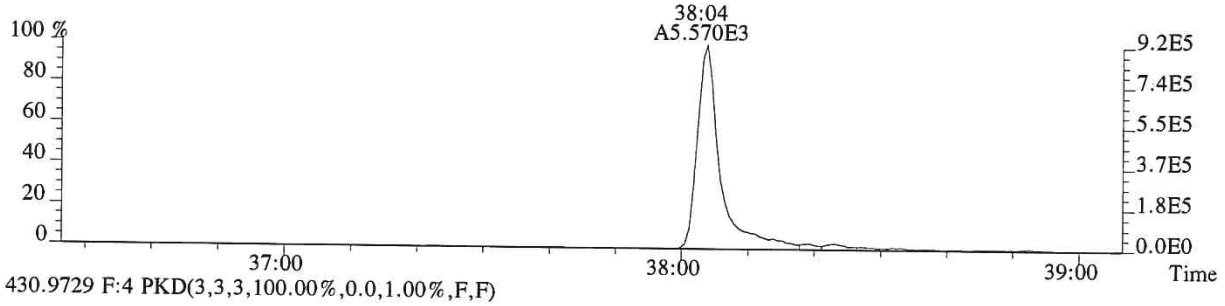
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,524.0,0.40%,F,T)



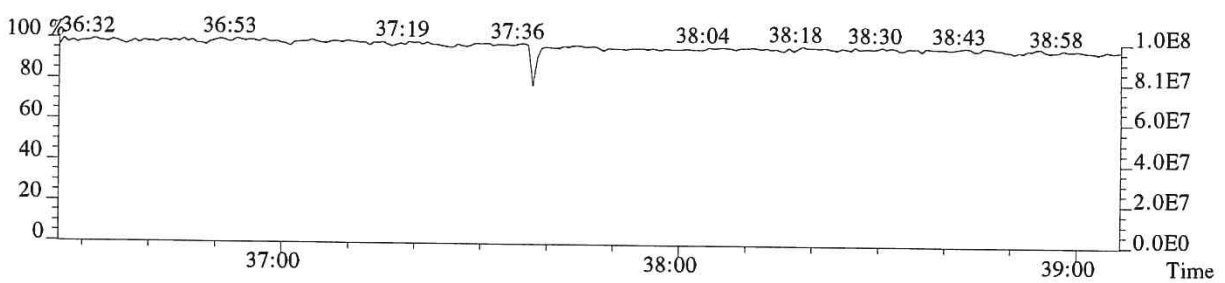
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,920.0,0.40%,F,T)



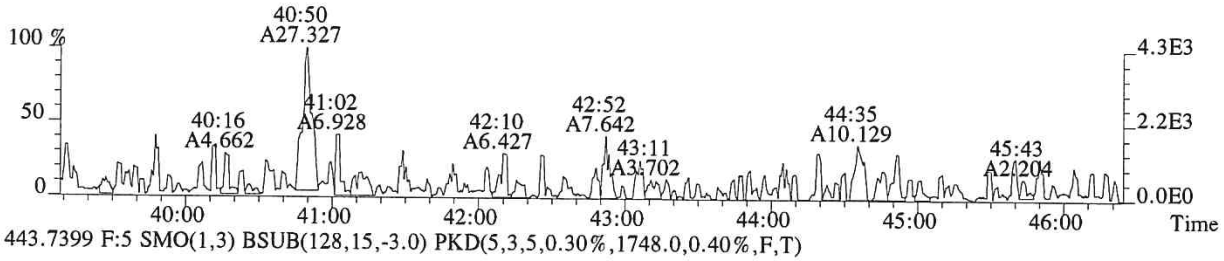
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,700.0,0.40%,F,T)



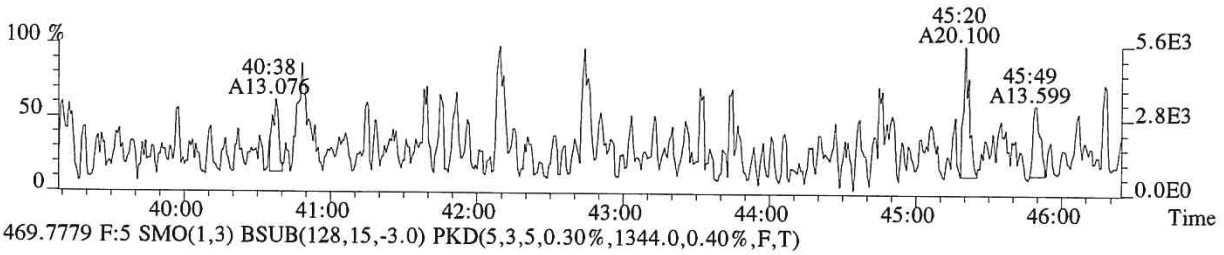
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



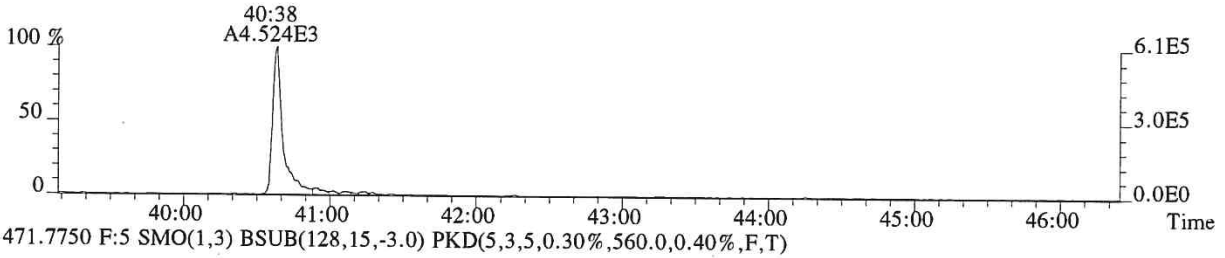
File:P616416 #1-654 Acq: 9-JAN-2019 21:23:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,236.0,0.40%,F,T)



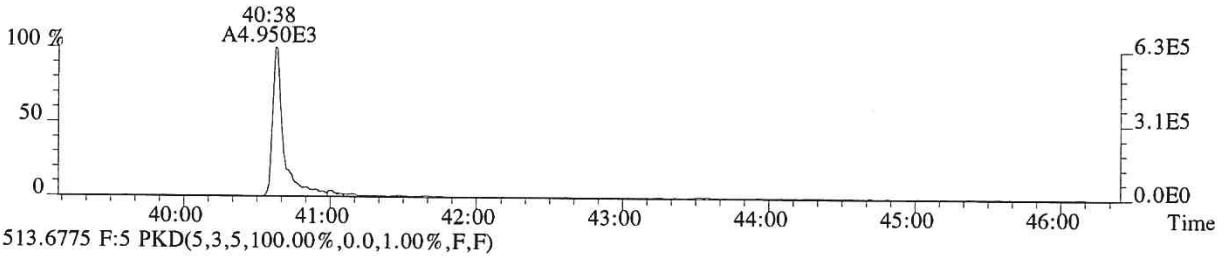
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1748.0,0.40%,F,T)



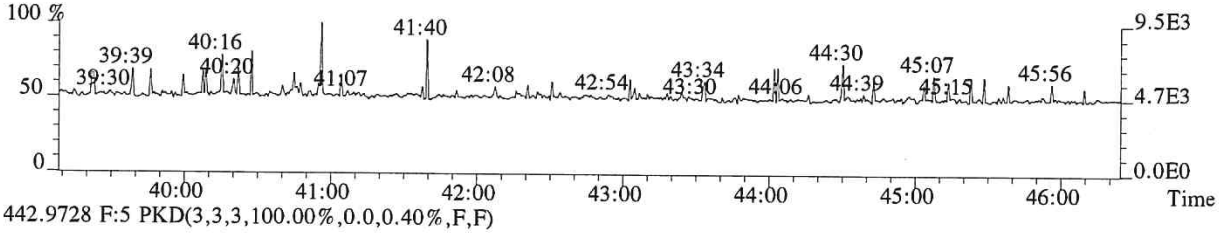
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1344.0,0.40%,F,T)



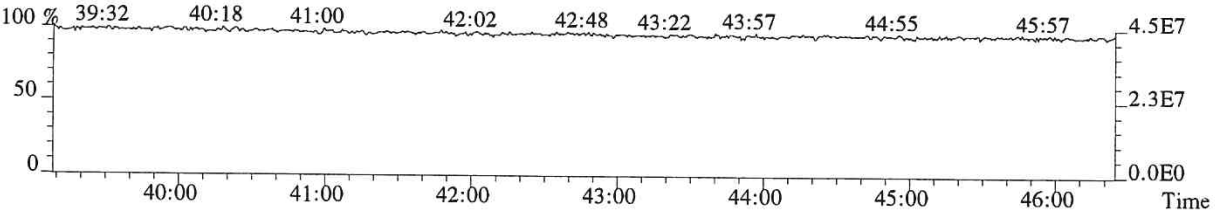
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,560.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

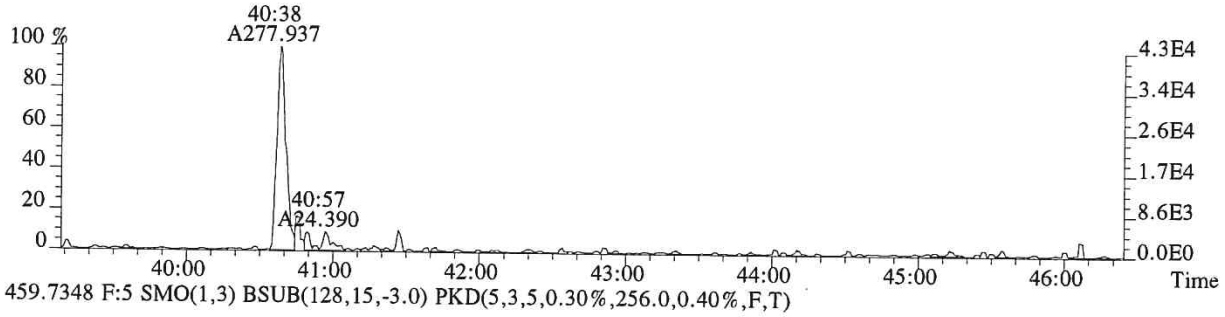


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

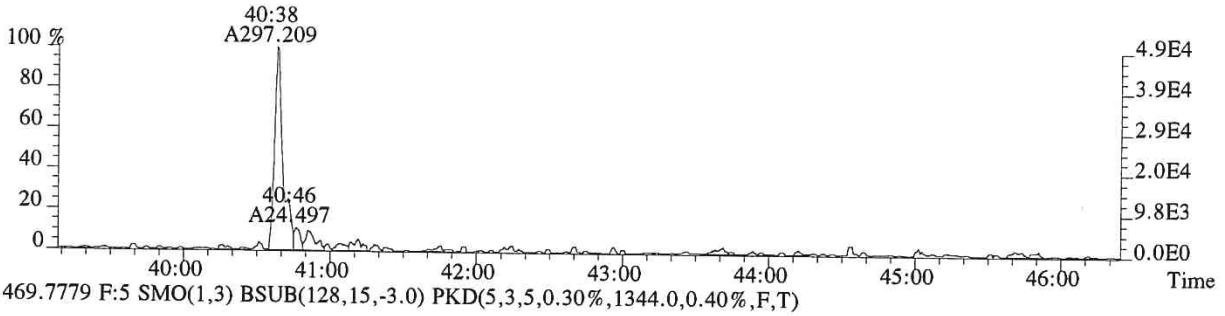


017561

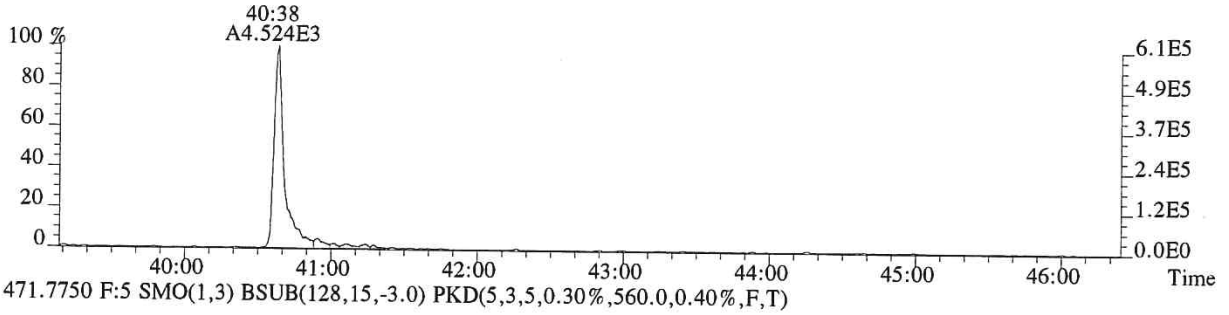
File:P616416 #1-654 Acq: 9-JAN-2019 21:23:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-019DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,224.0,0.40%,F,T)



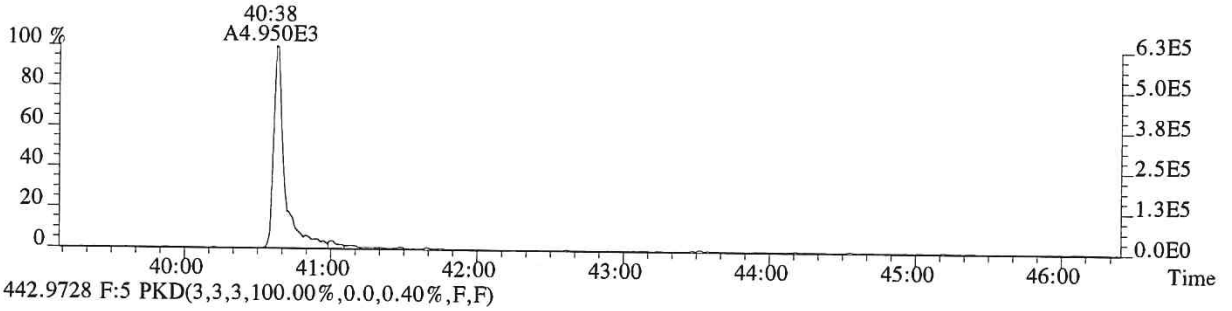
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,256.0,0.40%,F,T)



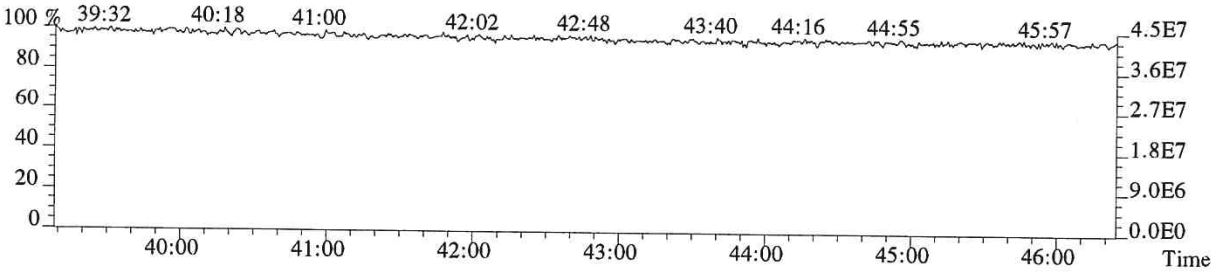
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1344.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,560.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017562

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0213

Run #22 Filename P519846 Samp: 1 Inj: 1 Acquired: 8-JAN-19 22:20:40
Processed: 9-JAN-19 11:56:39 Sample ID: E1801138-020

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:55	1.449e+05	1.879e+05	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:53	7.758e+03	5.195e+03	1.49	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:54	5.965e+03	3.965e+03	1.50	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:51	1.115e+04	9.441e+03	1.18	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:59	3.165e+03	2.735e+03	1.16	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:33	5.091e+02	4.516e+02	1.13	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:23	7.720e+02	6.392e+02	1.21	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:48	2.931e+03	2.832e+03	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:17	9.175e+02	9.155e+02	1.00	yes	no	1.258
10	Unk	OCDF	42:02	1.031e+03	1.119e+03	0.92	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:55	3.650e+04	4.677e+04	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:14	5.830e+02	3.854e+02	1.51	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	yes	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:48	9.587e+01	9.002e+01	1.07	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:03	1.852e+02	1.331e+02	1.39	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:50	4.090e+03	3.955e+03	1.03	yes	no	1.025
17	Unk	OCDD	41:53	7.488e+04	8.286e+04	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:53	2.627e+04	3.332e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:52	4.386e+04	2.756e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:53	4.096e+04	2.597e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:51	1.731e+04	3.391e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:58	2.079e+04	4.028e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:31	1.818e+04	3.532e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:20	1.690e+04	3.286e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:47	1.269e+04	2.853e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:17	1.172e+04	2.726e+04	0.43	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:53	1.230e+04	1.579e+04	0.78	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:13	3.049e+04	1.921e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:41	2.475e+04	1.797e+04	1.38	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:47	2.614e+04	2.189e+04	1.19	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:49	2.702e+04	2.483e+04	1.09	yes	no	0.858
32	IS	13C-OCDD	41:52	2.386e+04	2.680e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:11	3.587e+04	4.493e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:02	4.946e+04	3.841e+04	1.29	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:54	2.106e+04				no	1.014

$$\text{OCDD} = \frac{(7.488e+04 + 8.286e+04) \times 4000 \text{ pg} \times 1}{(2.386e+04 + 2.680e+04) \times 10.412 \text{ g} \times 77.2 / 100 \times 1.118} = 1385.6 \text{ ng/kg}$$

LM 01/10/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0213

Run #22 Filename P519846 Samp: 1 Inj: 1 Acquired: 8-JAN-19 22:20:40
Processed: 9-JAN-19 11:56:39 LAB. ID: E1801138-020

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.96e+07	2.23e+03	8.8e+03	2.52e+07	3.28e+03	7.7e+03
2	1,2,3,7,8-PeCDF	1.27e+06	1.80e+03	7.1e+02	8.32e+05	1.68e+03	5.0e+02
3	2,3,4,7,8-PeCDF	8.68e+05	1.80e+03	4.8e+02	5.93e+05	1.68e+03	3.5e+02
4	1,2,3,4,7,8-HxCDF	1.85e+06	2.63e+03	7.0e+02	1.54e+06	1.72e+03	9.0e+02
5	1,2,3,6,7,8-HxCDF	4.65e+05	2.63e+03	1.8e+02	3.82e+05	1.72e+03	2.2e+02
6	2,3,4,6,7,8-HxCDF	7.17e+04	2.63e+03	2.7e+01	6.23e+04	1.72e+03	3.6e+01
7	1,2,3,7,8,9-HxCDF	1.04e+05	2.63e+03	4.0e+01	8.86e+04	1.72e+03	5.1e+01
8	1,2,3,4,6,7,8-HpCDF	3.31e+05	7.36e+02	4.5e+02	3.32e+05	9.04e+02	3.7e+02
9	1,2,3,4,7,8,9-HpCDF	7.36e+04	7.36e+02	1.0e+02	8.65e+04	9.04e+02	9.6e+01
10	OCDF	5.78e+04	4.96e+02	1.2e+02	6.76e+04	1.04e+03	6.5e+01
11	2,3,7,8-TCDD	5.78e+06	3.04e+03	1.9e+03	7.36e+06	2.04e+03	3.6e+03
12	1,2,3,7,8-PeCDD	9.46e+04	1.17e+03	8.1e+01	5.78e+04	9.52e+02	6.1e+01
13	1,2,3,4,7,8-HxCDD	*	1.76e+02	*	*	1.00e+03	*
14	1,2,3,6,7,8-HxCDD	1.47e+04	1.76e+02	8.3e+01	1.44e+04	1.00e+03	1.4e+01
15	1,2,3,7,8,9-HxCDD	2.27e+04	1.76e+02	1.3e+02	1.70e+04	1.00e+03	1.7e+01
16	1,2,3,4,6,7,8-HpCDD	3.57e+05	8.24e+02	4.3e+02	3.64e+05	7.04e+02	5.2e+02
17	OCDD	3.66e+06	6.52e+02	5.6e+03	4.05e+06	6.04e+02	6.7e+03
18	13C-2,3,7,8-TCDF	3.90e+06	7.62e+03	5.1e+02	4.92e+06	6.76e+03	7.3e+02
19	13C-1,2,3,7,8-PeCDF	6.92e+06	1.21e+03	5.7e+03	4.35e+06	6.92e+02	6.3e+03
20	13C-2,3,4,7,8-PeCDF	6.97e+06	1.21e+03	5.8e+03	4.37e+06	6.92e+02	6.3e+03
21	13C-1,2,3,4,7,8-HxCDF	2.88e+06	8.96e+02	3.2e+03	5.73e+06	1.30e+03	4.4e+03
22	13C-1,2,3,6,7,8-HxCDF	3.15e+06	8.96e+02	3.5e+03	6.19e+06	1.30e+03	4.8e+03
23	13C-2,3,4,6,7,8-HxCDF	2.84e+06	8.96e+02	3.2e+03	5.45e+06	1.30e+03	4.2e+03
24	13C-1,2,3,7,8,9-HxCDF	2.25e+06	8.96e+02	2.5e+03	4.46e+06	1.30e+03	3.4e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.46e+06	2.38e+03	6.1e+02	3.29e+06	4.28e+03	7.7e+02
26	13C-1,2,3,4,7,8,9-HpCDF	9.79e+05	2.38e+03	4.1e+02	2.26e+06	4.28e+03	5.3e+02
27	13C-2,3,7,8-TCDD	1.99e+06	6.94e+03	2.9e+02	2.52e+06	6.10e+03	4.1e+02
28	13C-1,2,3,7,8-PeCDD	5.02e+06	1.28e+03	3.9e+03	3.12e+06	1.30e+03	2.4e+03
29	13C-1,2,3,4,7,8-HxCDD	3.94e+06	1.28e+03	3.1e+03	3.11e+06	1.01e+03	3.1e+03
30	13C-1,2,3,6,7,8-HxCDD	3.74e+06	1.28e+03	2.9e+03	2.88e+06	1.01e+03	2.9e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.47e+06	8.76e+02	2.8e+03	2.31e+06	4.84e+02	4.8e+03
32	13C-OCDD	1.17e+06	4.24e+02	2.7e+03	1.33e+06	3.48e+02	3.8e+03
33	13C-1,2,3,4-TCDD	5.55e+06	6.94e+03	8.0e+02	6.95e+06	6.10e+03	1.1e+03
34	13C-1,2,3,7,8,9-HxCDD	6.57e+06	1.28e+03	5.2e+03	5.13e+06	1.01e+03	5.1e+03
35	37Cl-2,3,7,8-TCDD	3.36e+06	1.15e+03	2.9e+03			

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Peak List Summary

CLIENT ID.
SL0213

Entry: 36 Totals Name: Total Tetra-Furans

Run: 22 File: P519846 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 22:20:40 Processed: 9-JAN-19 11:56:39

Mass: 303.9020 305.8990 Tot Response: 5.99e+05 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:45	1.26e+03	1.71e+03	0.74	yes	2.96e+03		n	n
2	23:02	6.45e+03	8.57e+03	0.75	yes	1.50e+04		n	n
3	23:24	1.88e+03	2.60e+03	0.72	yes	4.48e+03		n	n
4	23:40	5.35e+03	7.20e+03	0.74	yes	1.26e+04		n	n
5	24:18	3.36e+03	4.73e+03	0.71	yes	8.08e+03		n	n
6	24:24	6.78e+03	9.21e+03	0.74	yes	1.60e+04		n	n
7	24:55	6.40e+04	8.28e+04	0.77	yes	1.47e+05		n	n
8	25:13	2.75e+03	3.96e+03	0.69	yes	6.71e+03		n	n
9	25:55	1.45e+05	1.88e+05	0.77	yes	3.33e+05	2,3,7,8-TCDF	n	n
10	26:20	1.01e+04	1.36e+04	0.74	yes	2.37e+04		n	n
11	26:37	1.65e+03	2.45e+03	0.67	yes	4.10e+03		n	n
12	28:08	1.12e+04	1.42e+04	0.79	yes	2.55e+04		n	n

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Peak List Summary

CLIENT ID.
SL0213

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 22 File: P519846 Sample:1 Injection:1 Function:1

Acquired: 8-JAN-19 22:20:40 Processed: 9-JAN-19 11:56:39

Mass: 319.8970 321.8940 Tot Response: 9.25e+04 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:34	4.87e+02	5.81e+02	0.84	yes	1.07e+03		n	n
2	25:01	8.52e+01	9.88e+01	0.86	yes	1.84e+02		n	n
3	26:55	3.65e+04	4.68e+04	0.78	yes	8.33e+04	2,3,7,8-TCDD	n	n
4	27:16	3.52e+03	4.44e+03	0.79	yes	7.96e+03		n	n

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SL0213

Entry: 39 Totals Name: Total Penta-Furans2

Run: 22 File: P519846 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 22:20:40 Processed: 9-JAN-19 11:56:39

Mass: 339.8600 341.8570 Tot Response: 3.50e+04 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:43	1.03e+02	7.68e+01	1.34	yes	1.80e+02	n	n
2	29:50	3.46e+03	2.30e+03	1.50	yes	5.76e+03	n	n
3	30:27	1.31e+02	8.14e+01	1.61	yes	2.12e+02	n	n
4	30:42	7.79e+02	4.90e+02	1.59	yes	1.27e+03	n	n
5	30:53	7.76e+03	5.19e+03	1.49	yes	1.30e+04	1,2,3,7,8-PeCDF	n	n
6	31:10	2.50e+03	1.58e+03	1.58	yes	4.09e+03	n	n
7	31:48	8.15e+01	5.75e+01	1.42	yes	1.39e+02	n	n
8	31:54	5.96e+03	3.97e+03	1.50	yes	9.93e+03	2,3,4,7,8-PeCDF	n	n
9	32:53	2.98e+02	1.99e+02	1.50	yes	4.96e+02	n	n

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SL0213

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 22 File: P519846 Sample:1 Injection:1 Function:2

Acquired: 8-JAN-19 22:20:40 Processed: 9-JAN-19 11:56:39

Mass: 355.8550 357.8520 Tot Response: 2.73e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:54	1.93e+02	1.12e+02	1.72	yes	3.05e+02		n	n
2	30:24	5.69e+02	3.41e+02	1.67	yes	9.09e+02		n	n
3	30:56	8.79e+01	5.59e+01	1.57	yes	1.44e+02		n	n
4	31:26	2.23e+02	1.34e+02	1.66	yes	3.57e+02		n	n
5	31:47	3.00e+01	1.82e+01	1.65	yes	4.81e+01		n	n
6	32:14	5.83e+02	3.85e+02	1.51	yes	9.68e+02	1,2,3,7,8-PeCDD	n	n

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Peak List Summary

CLIENT ID.
SL0213

Entry: 41 Totals Name: Total Hexa-Furans

Run: 22 File: P519846 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 22:20:40 Processed: 9-JAN-19 11:56:39

Mass: 373.8210 375.8180 Tot Response: 3.11e+04 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:49	7.91e+02	6.99e+02	1.13	yes	1.49e+03		n	n
2	34:24	4.22e+02	3.76e+02	1.12	yes	7.98e+02		n	n
3	34:51	1.11e+04	9.44e+03	1.18	yes	2.06e+04	1,2,3,4,7,8-HxCDF	n	n
4	34:59	3.16e+03	2.73e+03	1.16	yes	5.90e+03	1,2,3,6,7,8-HxCDF	n	n
5	35:33	5.09e+02	4.52e+02	1.13	yes	9.61e+02	2,3,4,6,7,8-HxCDF	n	n
6	36:23	7.72e+02	6.39e+02	1.21	yes	1.41e+03	1,2,3,7,8,9-HxCDF	n	n

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Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 22 File: P519846 Sample:1 Injection:1 Function:3

Acquired: 8-JAN-19 22:20:40 Processed: 9-JAN-19 11:56:39

Mass: 389.8160 391.8130 Tot Response: 1.05e+04 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:14	4.64e+03	3.73e+03	1.25	yes	8.37e+03		n	n
2	35:03	7.29e+02	6.01e+02	1.21	yes	1.33e+03		y	n
3	35:09	1.07e+02	9.20e+01	1.16	yes	1.99e+02		y	n
4	35:48	9.59e+01	9.00e+01	1.07	yes	1.86e+02	1,2,3,6,7,8-HxCDD	n	n
5	35:57	5.19e+01	4.76e+01	1.09	yes	9.95e+01		n	n
6	36:03	1.85e+02	1.33e+02	1.39	yes	3.18e+02	1,2,3,7,8,9-HxCDD	n	n

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Entry: 43 Totals Name: Total Hepta-Furans

Run: 22 File: P519846 Sample:1 Injection:1 Function:4

Acquired: 8-JAN-19 22:20:40 Processed: 9-JAN-19 11:56:39

Mass: 407.7820 409.7790 Tot Response: 9.84e+03 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:48	2.93e+03	2.83e+03	1.03	yes	5.76e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	38:14	1.12e+03	1.13e+03	0.99	yes	2.25e+03		n	n
3	39:17	9.18e+02	9.16e+02	1.00	yes	1.83e+03	1,2,3,4,7,8,9-HpCDF	n	n

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Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 22 File: P519846 Sample:1 Injection:1 Function:4

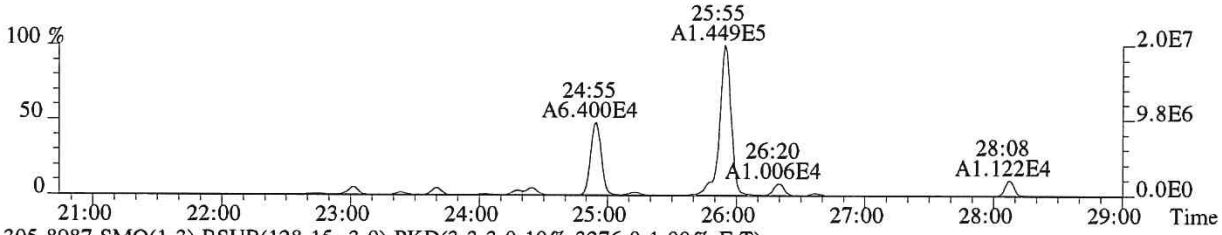
Acquired: 8-JAN-19 22:20:40 Processed: 9-JAN-19 11:56:39

Mass: 423.7770 425.7740 Tot Response: 2.30e+04 RRF: 1.025

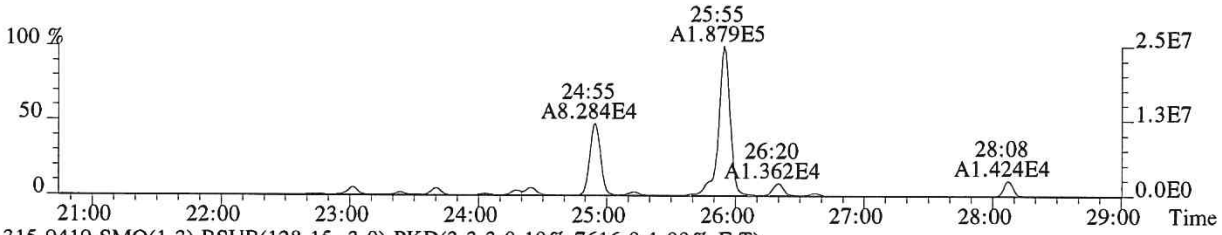
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:06	7.52e+03	7.48e+03	1.01	yes	1.50e+04		n	n
2	38:50	4.09e+03	3.96e+03	1.03	yes	8.04e+03	1,2,3,4,6,7,8-HpCDD	n	n

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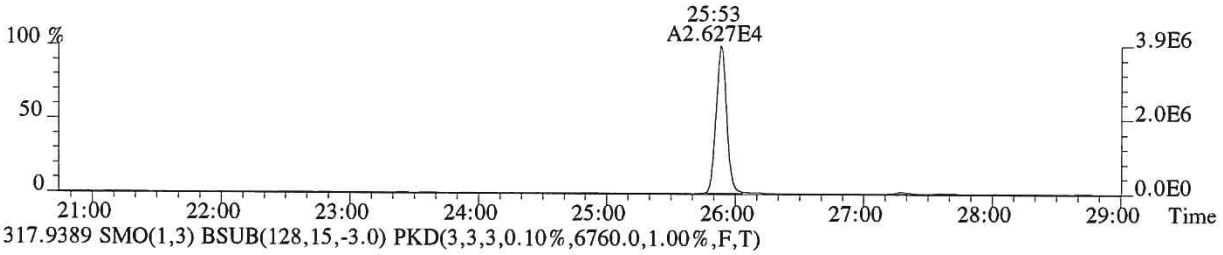
File:P519846 #1-587 Acq: 8-JAN-2019 22:20:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2232.0,1.00%,F,T)



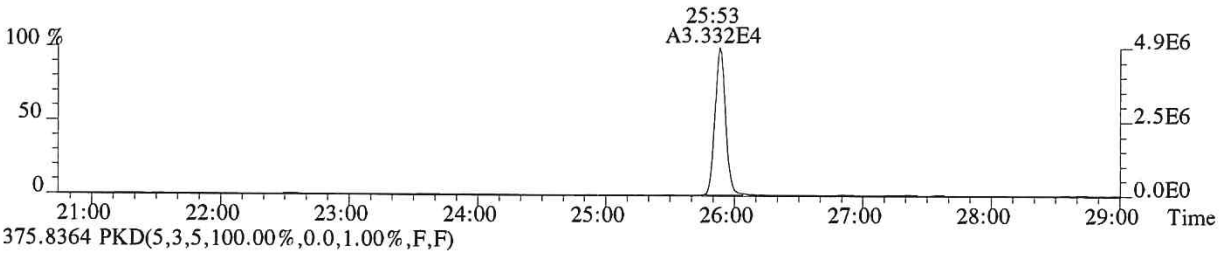
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3276.0,1.00%,F,T)



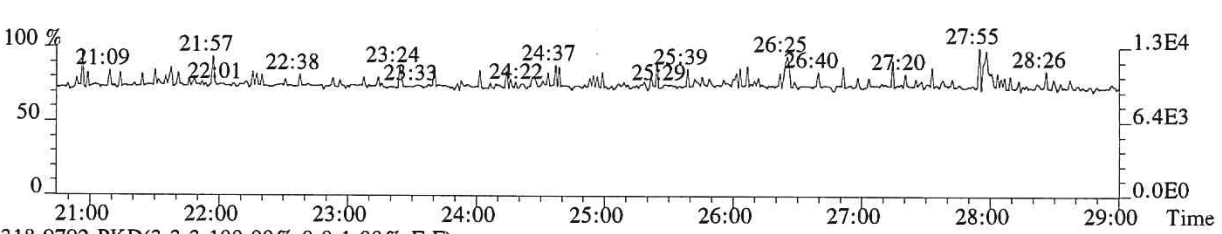
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7616.0,1.00%,F,T)



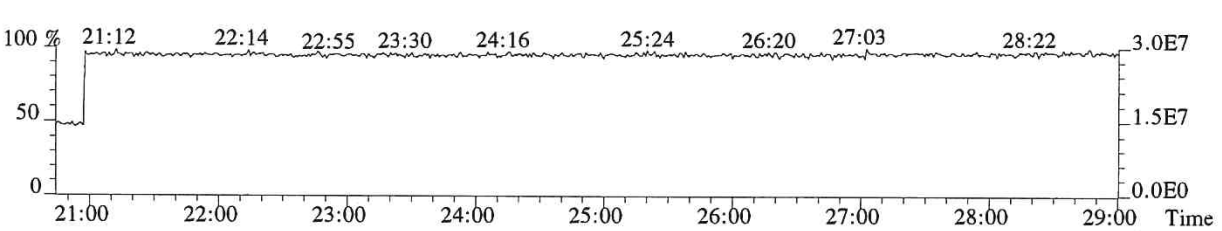
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6760.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

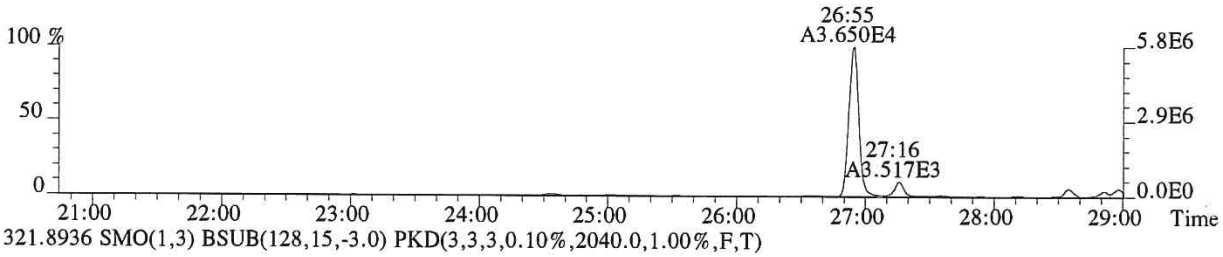


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

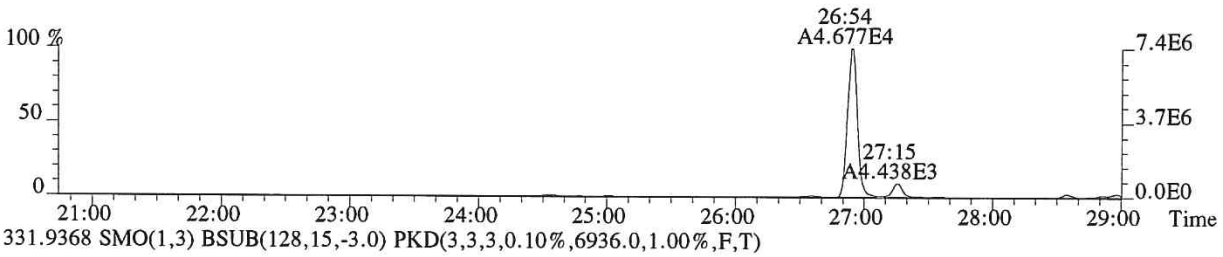


017573

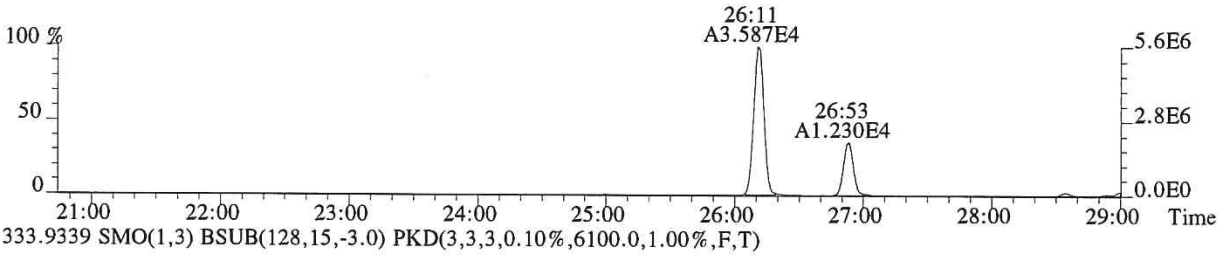
File:P519846 #1-587 Acq: 8-JAN-2019 22:20:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3044.0,1.00%,F,T)



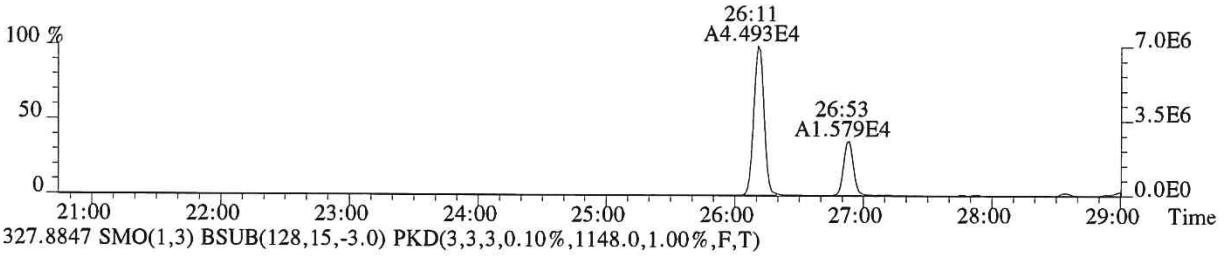
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2040.0,1.00%,F,T)



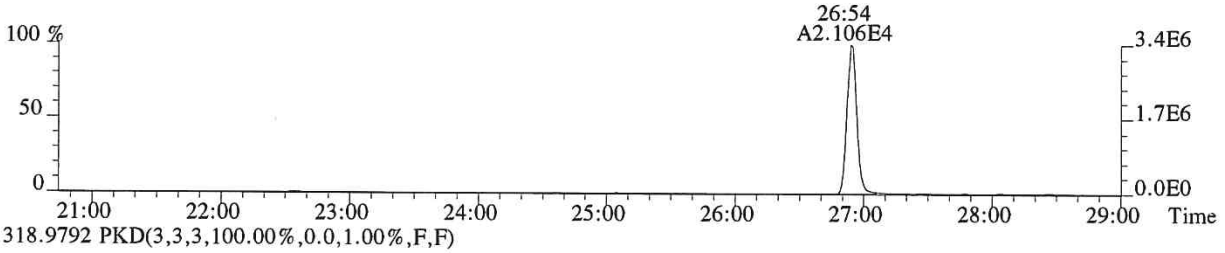
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6936.0,1.00%,F,T)



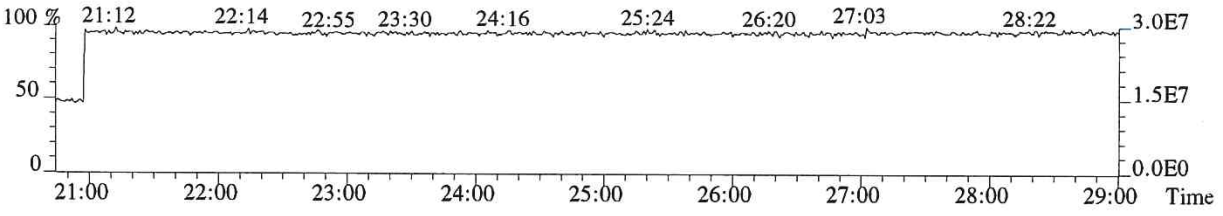
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6100.0,1.00%,F,T)



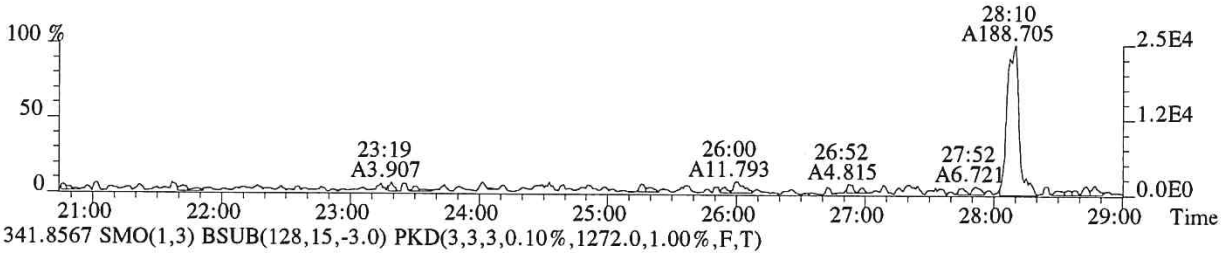
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1148.0,1.00%,F,T)



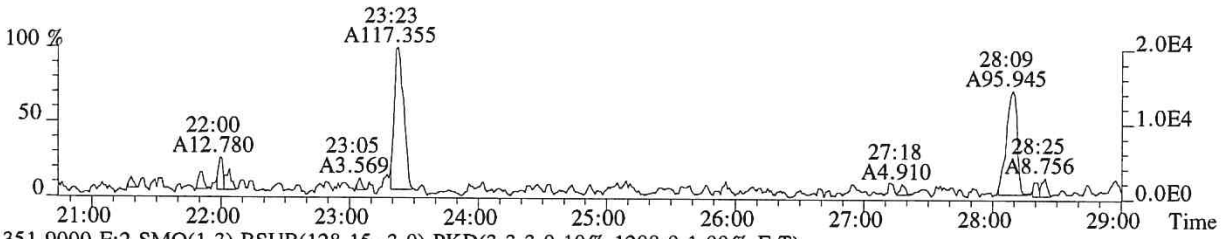
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



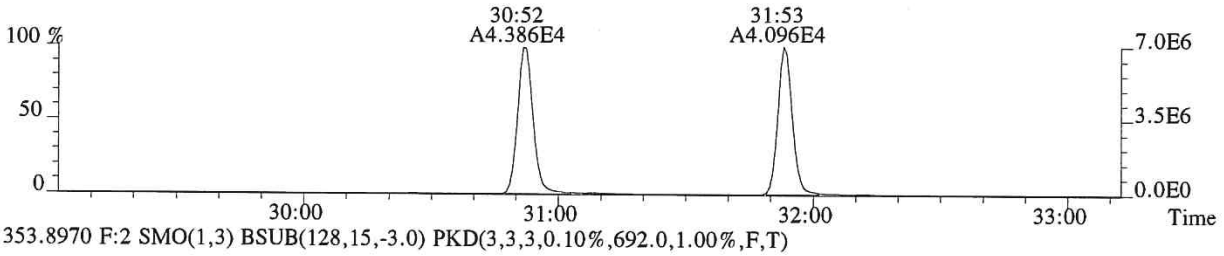
File:P519846 #1-587 Acq: 8-JAN-2019 22:20:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,768.0,1.00%,F,T)



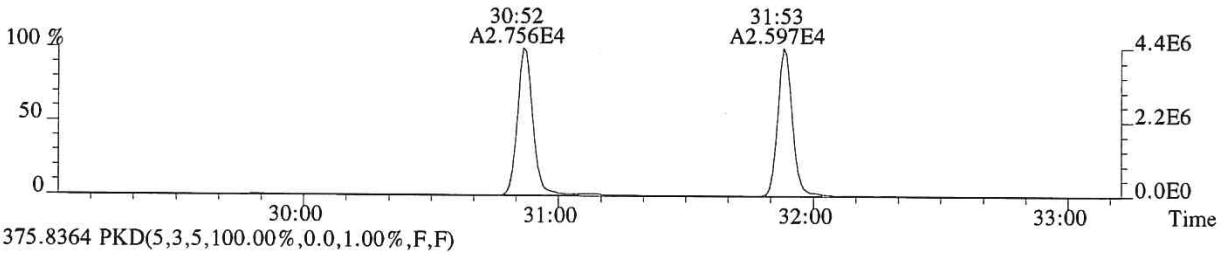
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1272.0,1.00%,F,T)



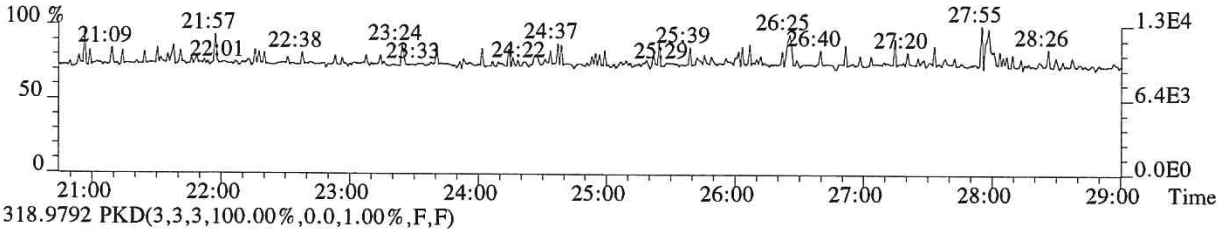
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1208.0,1.00%,F,T)



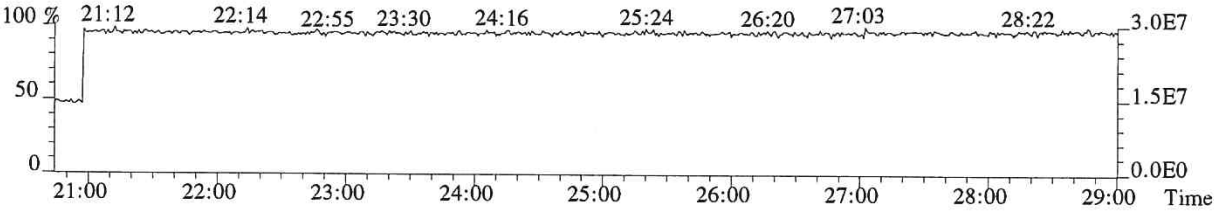
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,692.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

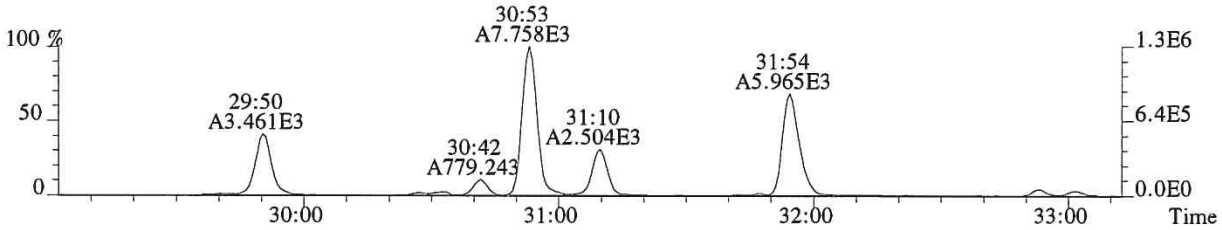


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

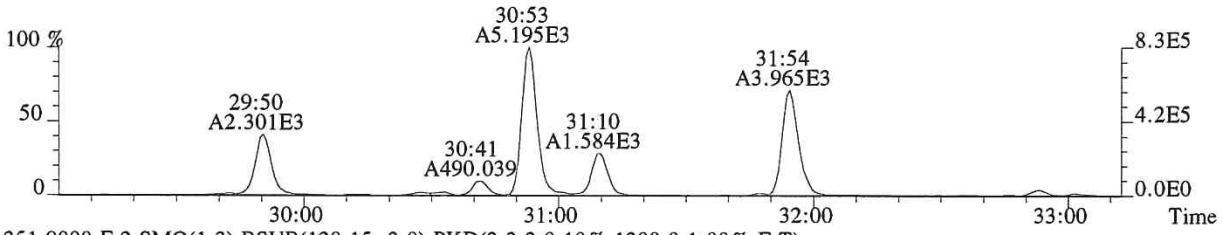


017575

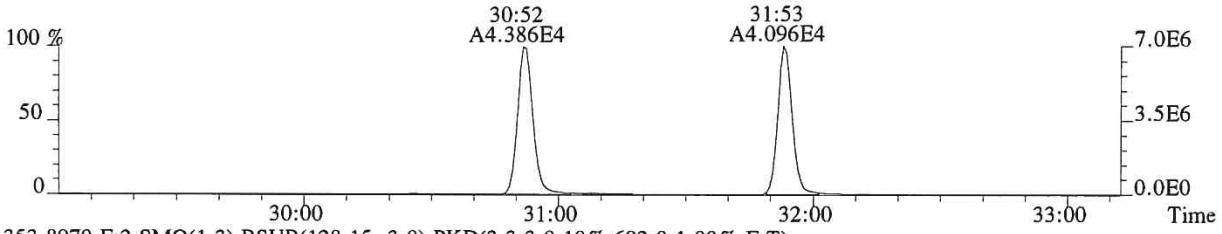
File:P519846 #1-376 Acq: 8-JAN-2019 22:20:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1796.0,1.00%,F,T)



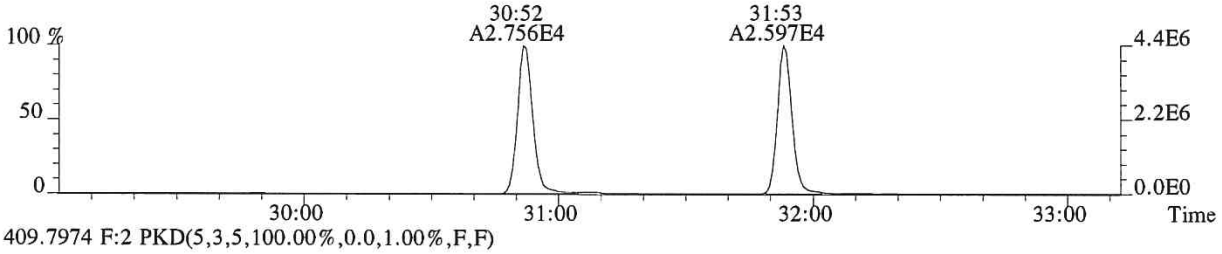
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1676.0,1.00%,F,T)



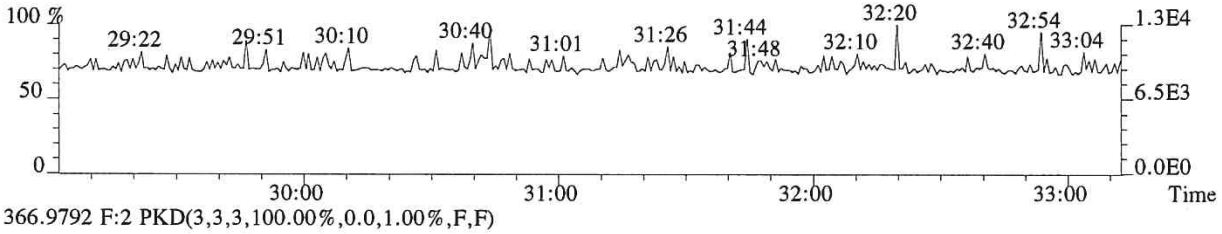
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1208.0,1.00%,F,T)



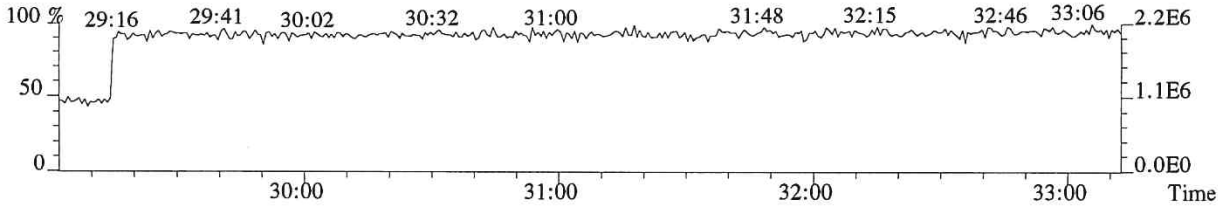
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,692.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

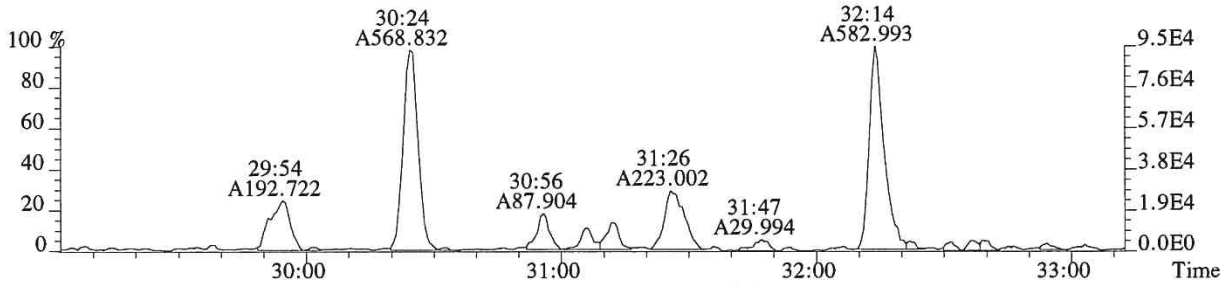


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

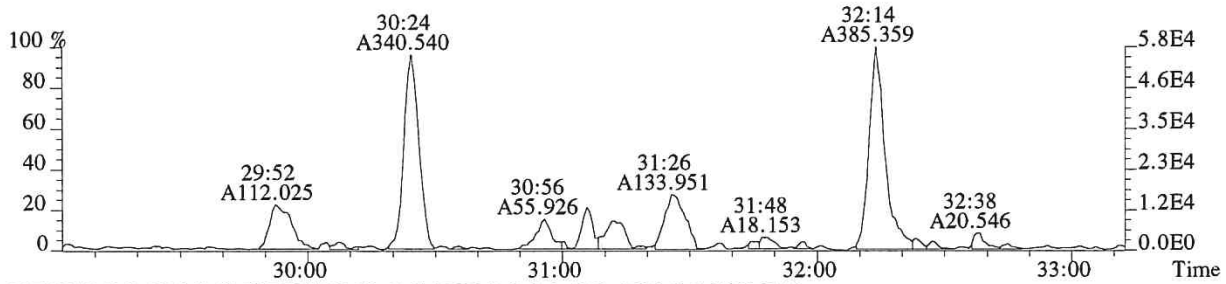


017576

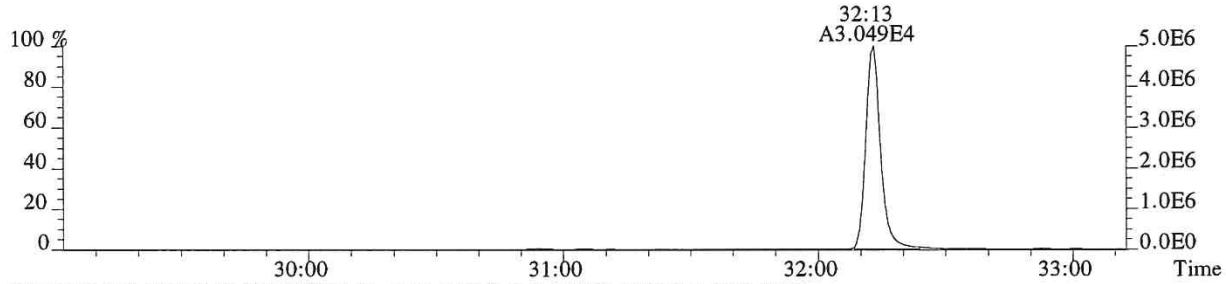
File:P519846 #1-376 Acq: 8-JAN-2019 22:20:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1168.0,1.00%,F,T)



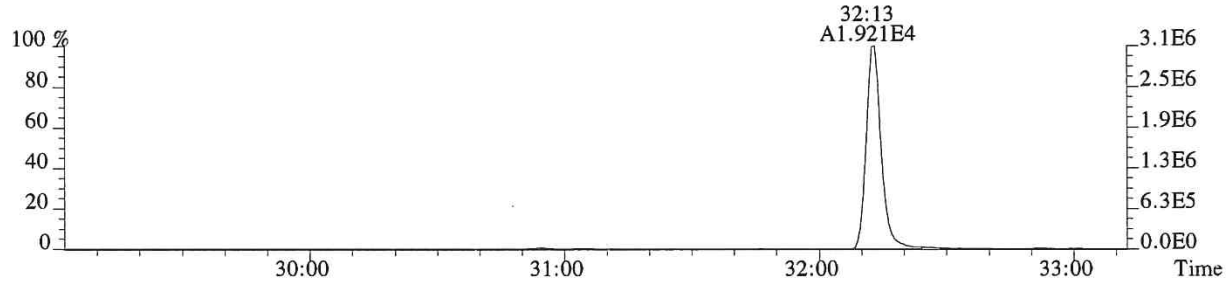
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,952.0,1.00%,F,T)



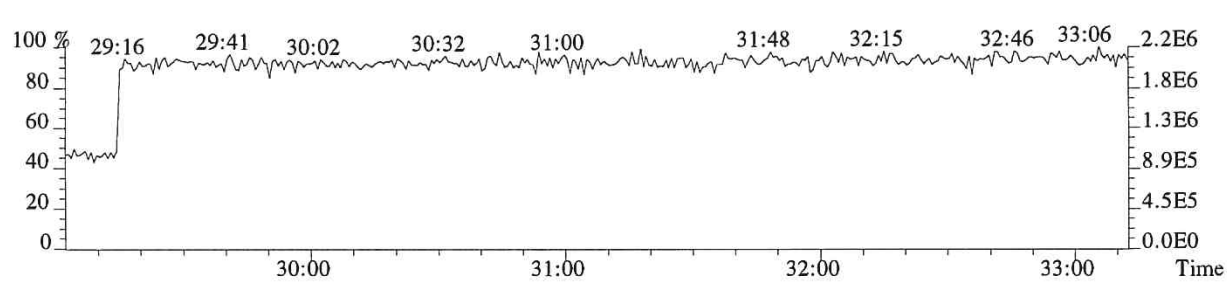
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1280.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1300.0,1.00%,F,T)

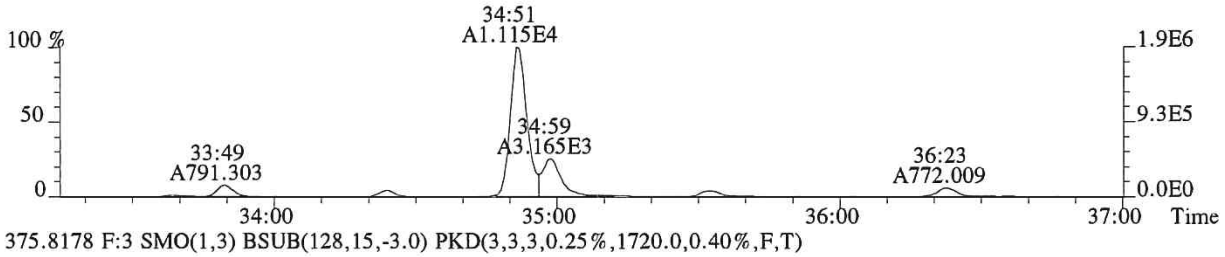


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

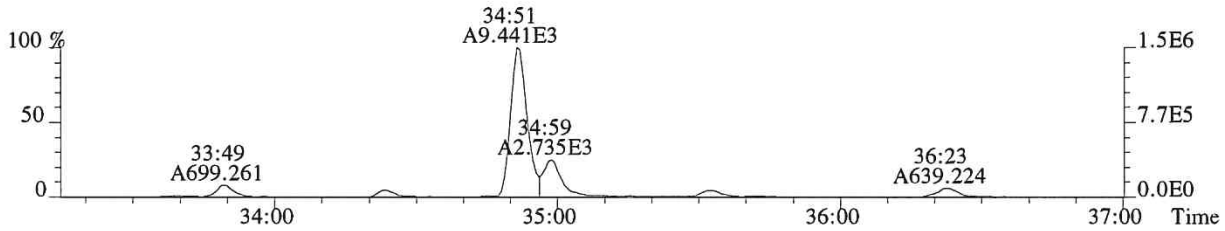


017577

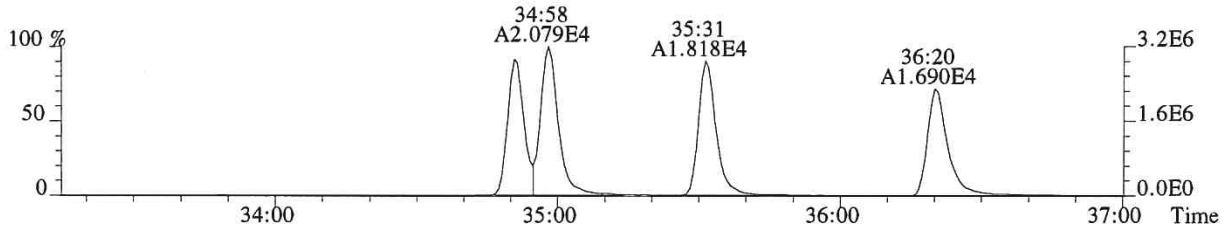
File:P519846 #1-339 Acq: 8-JAN-2019 22:20:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2628.0,0.40%,F,T)



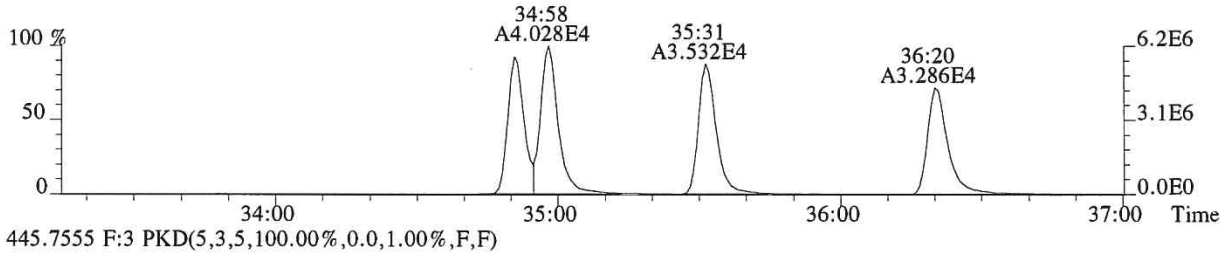
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1720.0,0.40%,F,T)



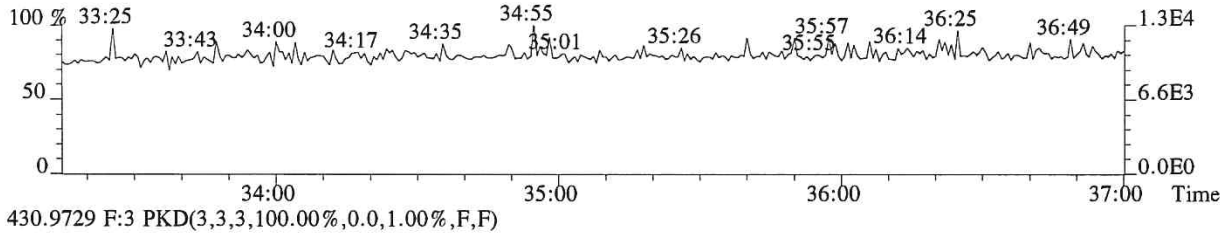
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,896.0,0.40%,F,T)



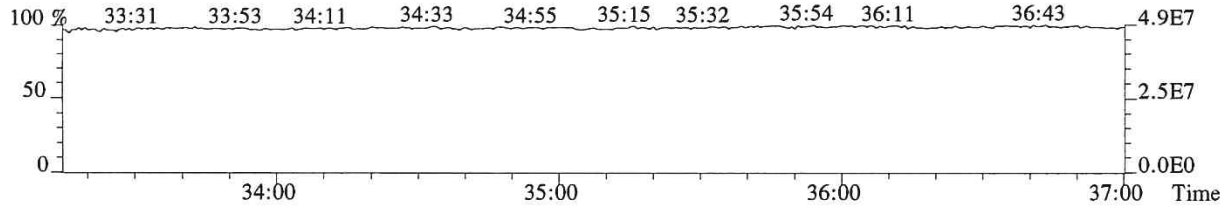
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1300.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

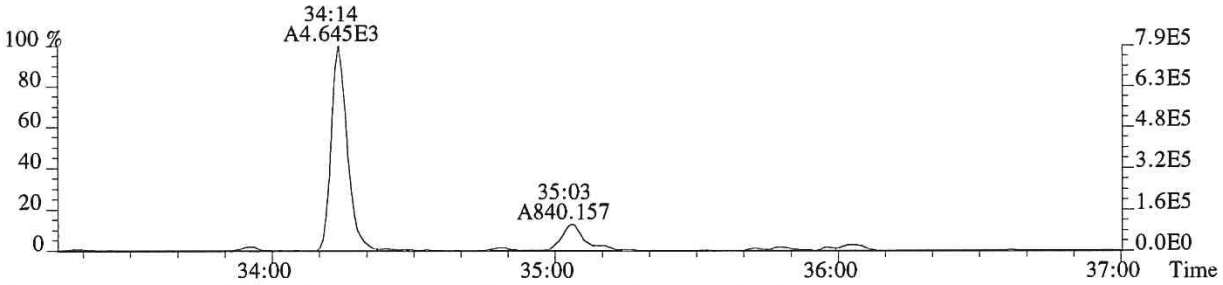


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

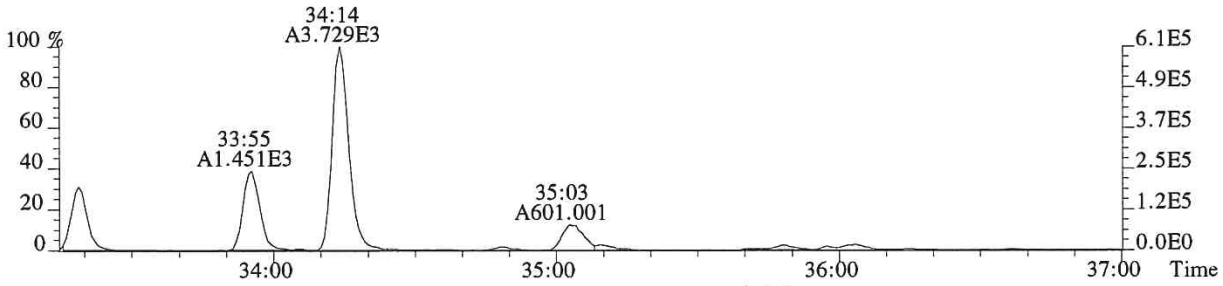


017578

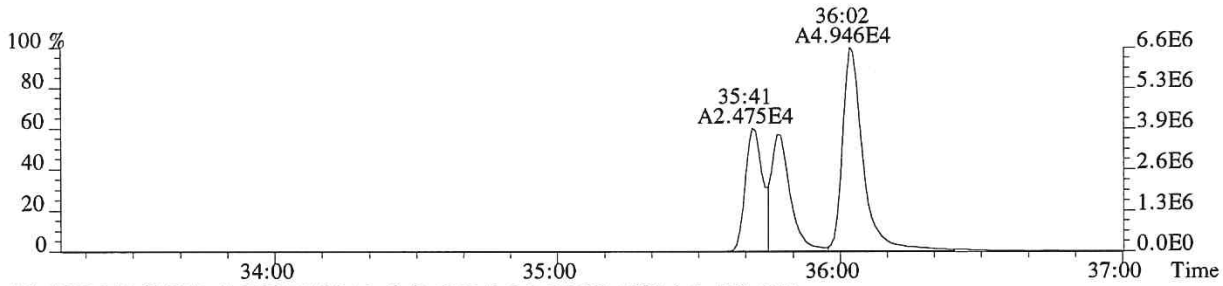
File:P519846 #1-339 Acq: 8-JAN-2019 22:20:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,176.0,0.40%,F,T)



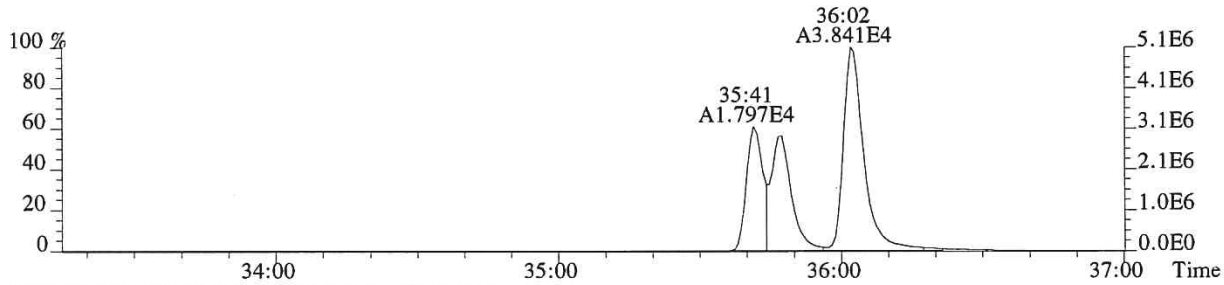
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1000.0,0.40%,F,T)



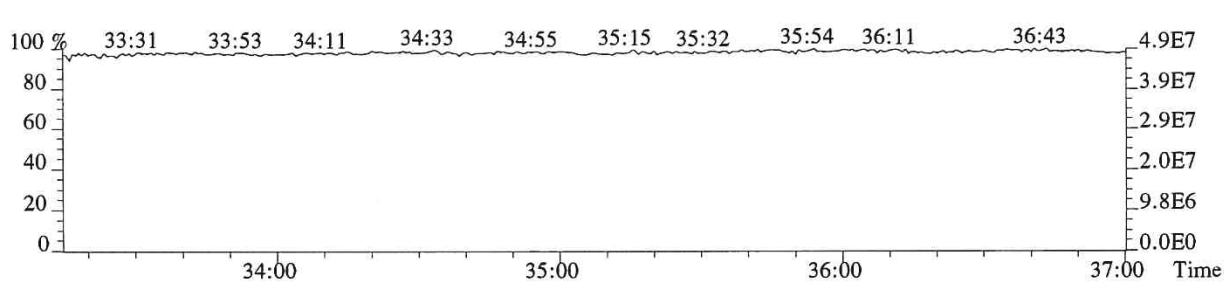
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1276.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1008.0,0.40%,F,T)

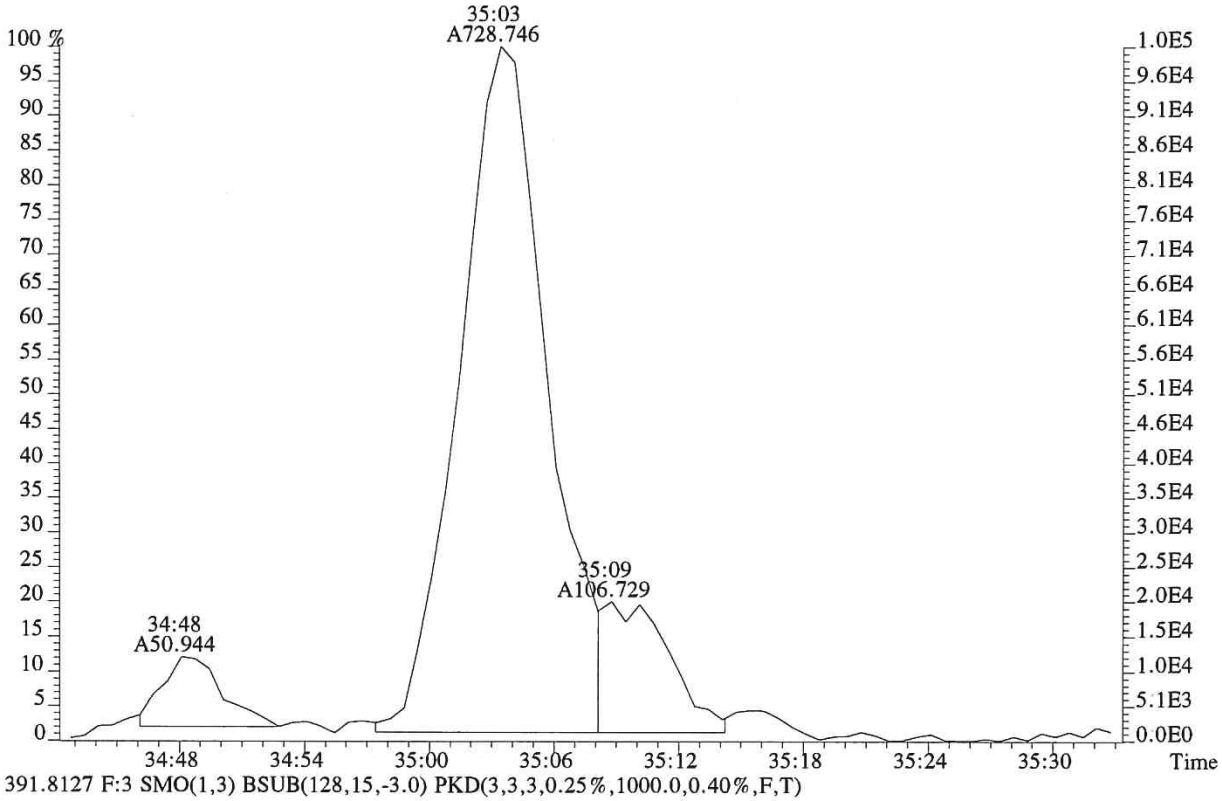


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

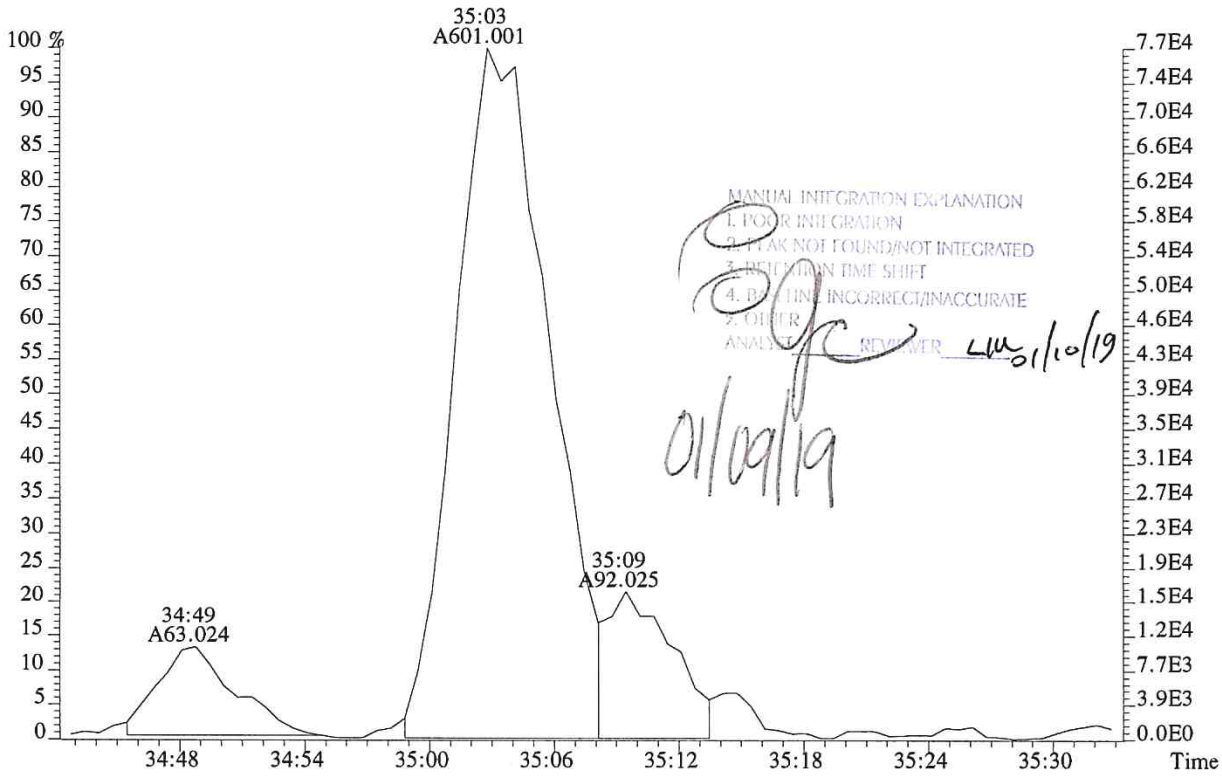


017579

File:P519846 #1-339 Acq: 8-JAN-2019 22:20:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,176.0,0.40%,F,T)

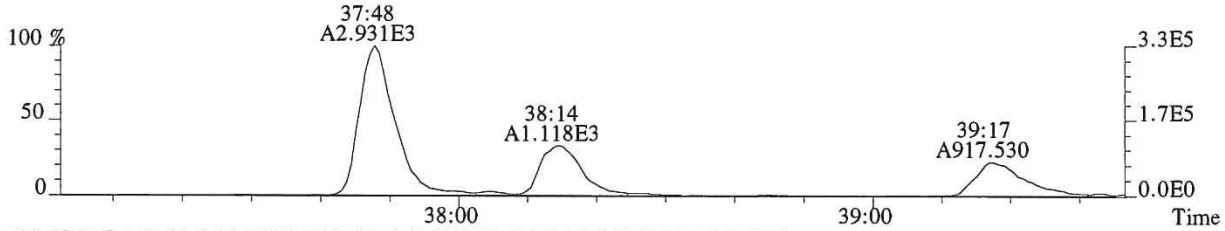


391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1000.0,0.40%,F,T)

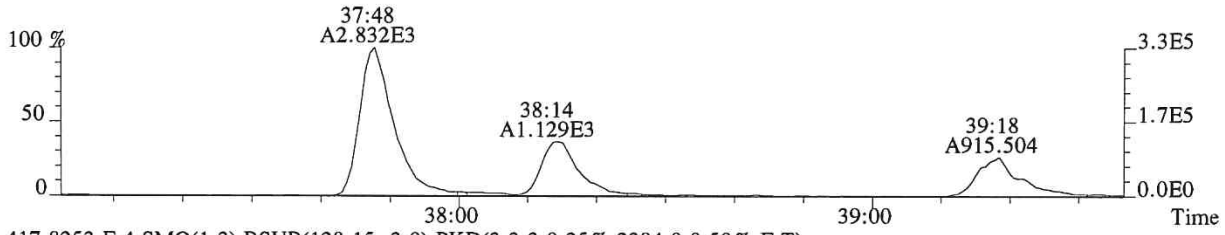


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. INJECTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LW 01/10/19
01/09/19

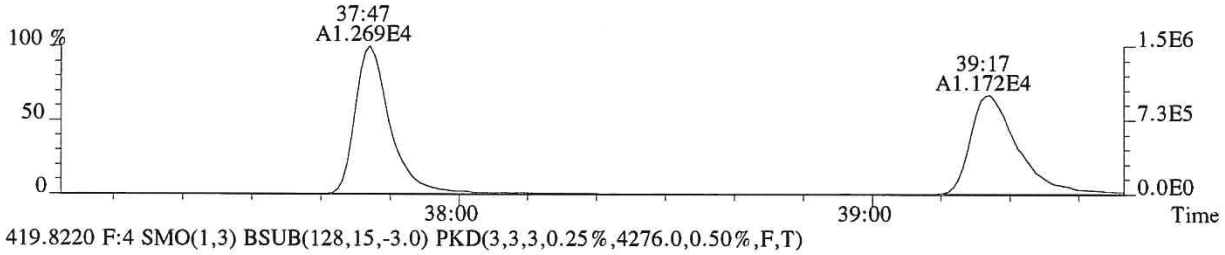
File:P519846 #1-232 Acq: 8-JAN-2019 22:20:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,736.0,0.50%,F,T)



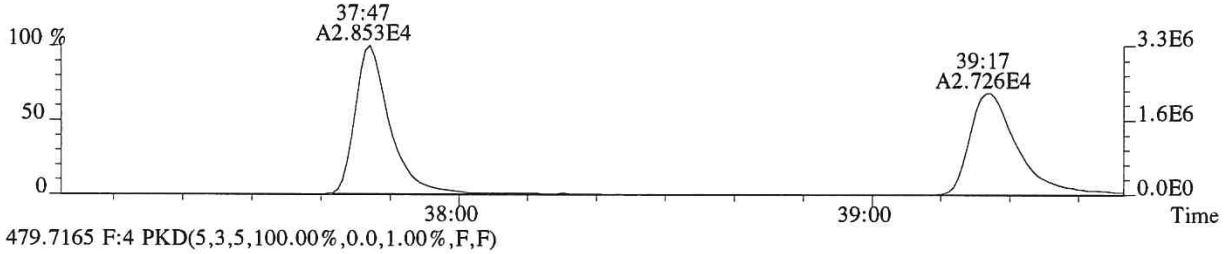
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,904.0,0.50%,F,T)



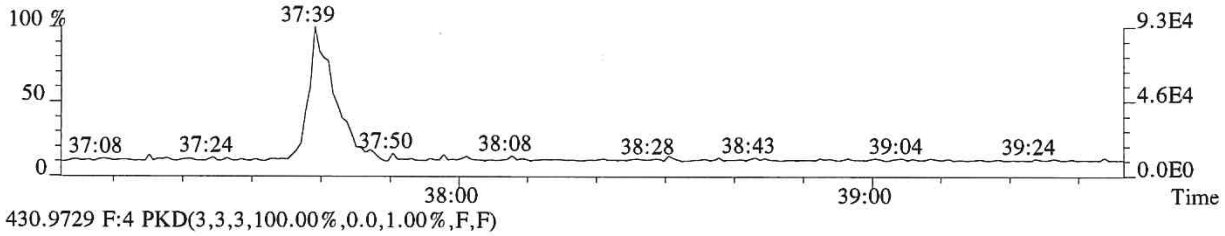
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2384.0,0.50%,F,T)



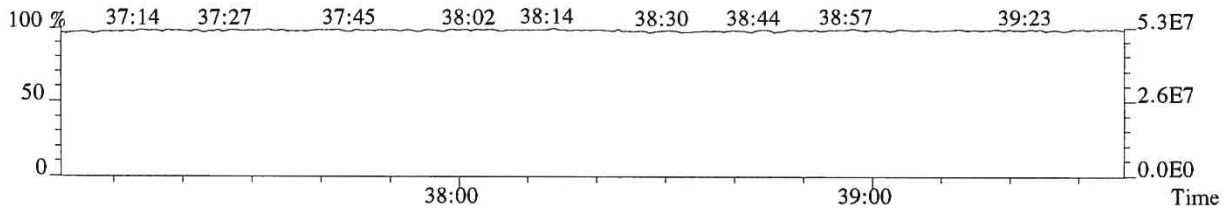
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4276.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

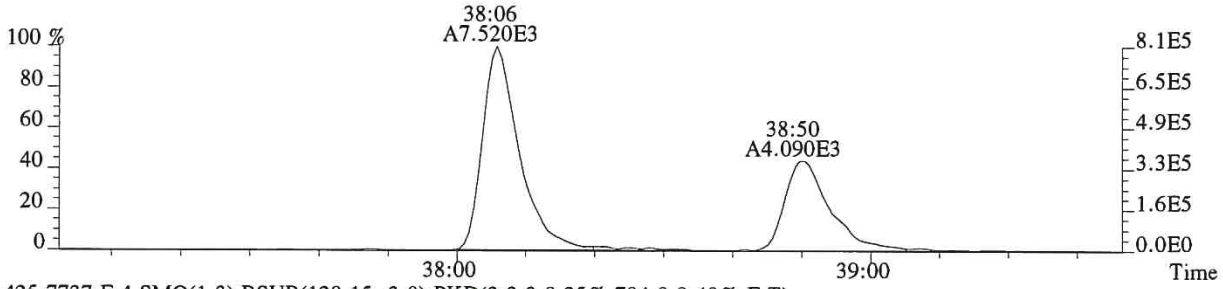


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

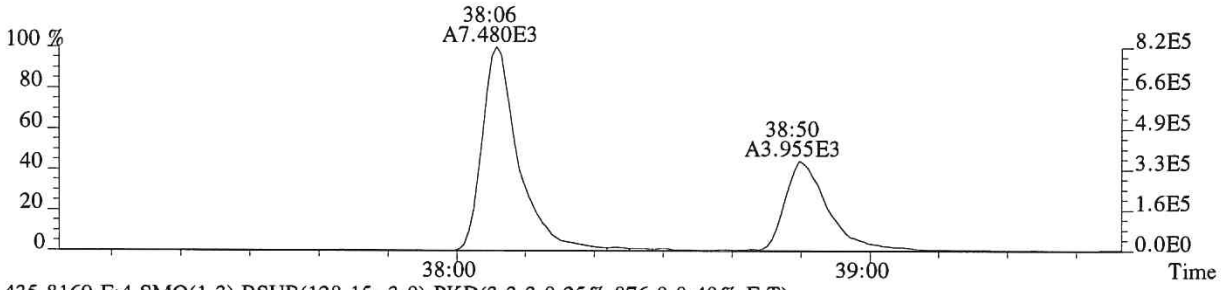


017581

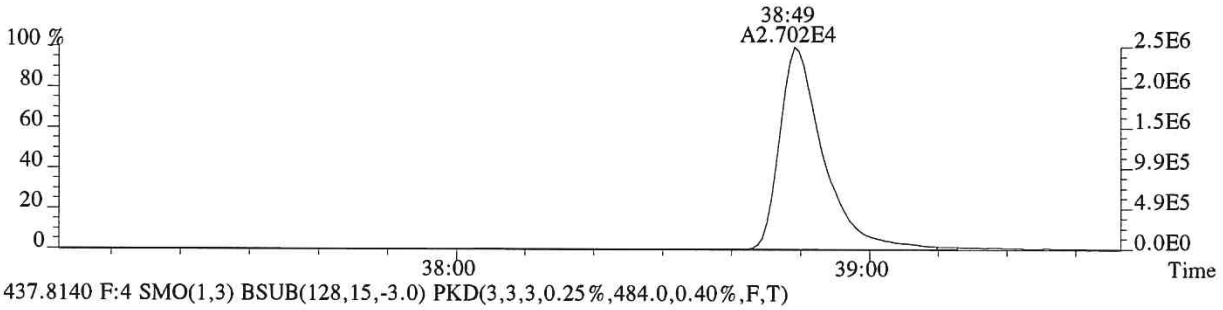
File:P519846 #1-232 Acq: 8-JAN-2019 22:20:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,824.0,0.40%,F,T)



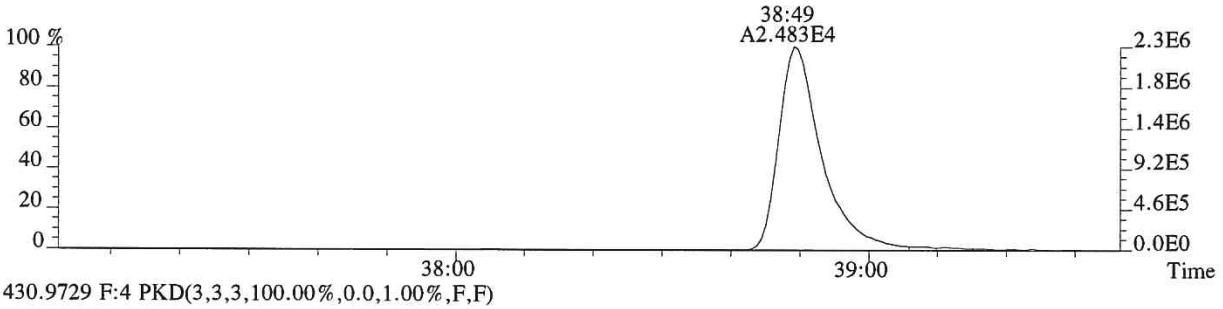
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,704.0,0.40%,F,T)



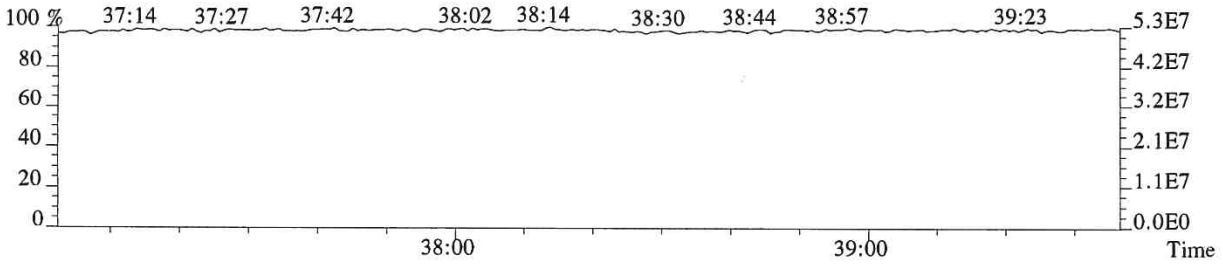
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,876.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,484.0,0.40%,F,T)

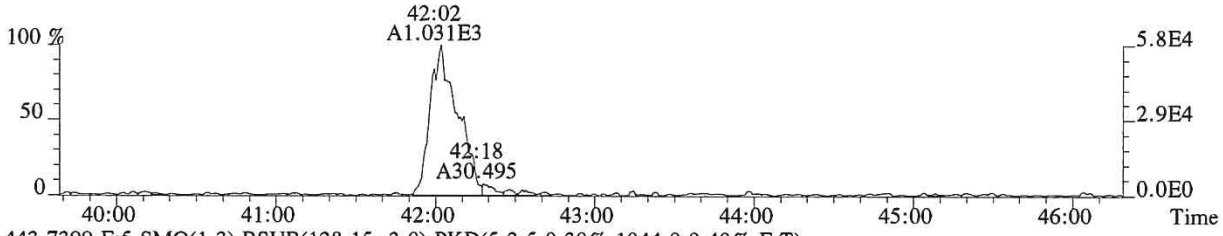


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

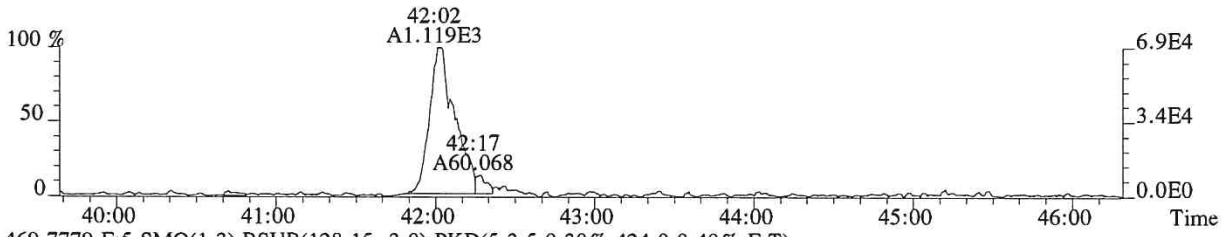


017582

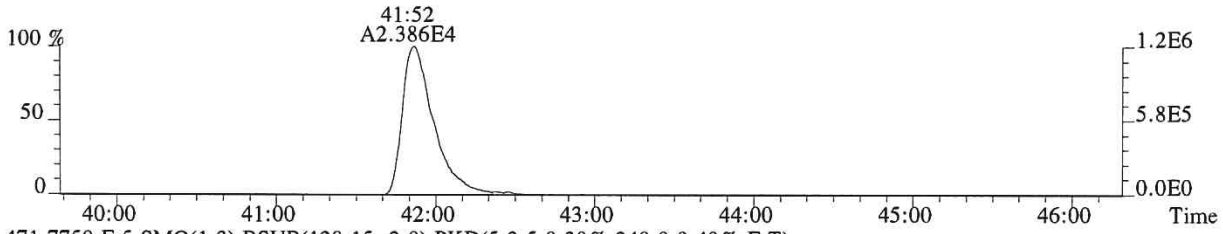
File:P519846 #1-601 Acq: 8-JAN-2019 22:20:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,496.0,0.40%,F,T)



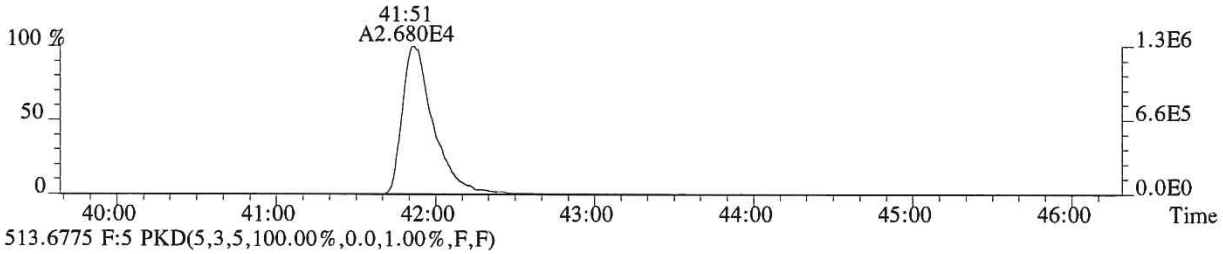
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1044.0,0.40%,F,T)



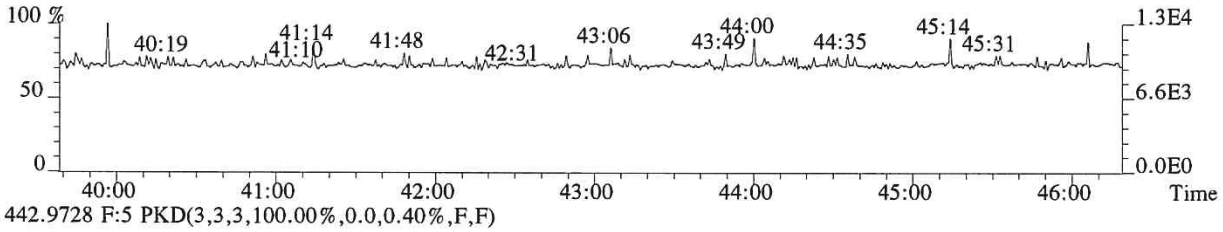
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,424.0,0.40%,F,T)



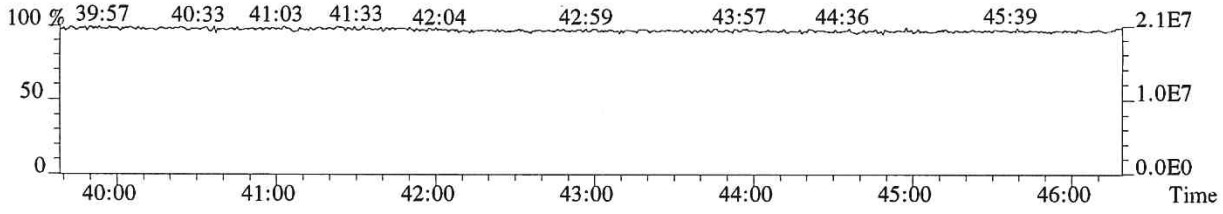
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,348.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

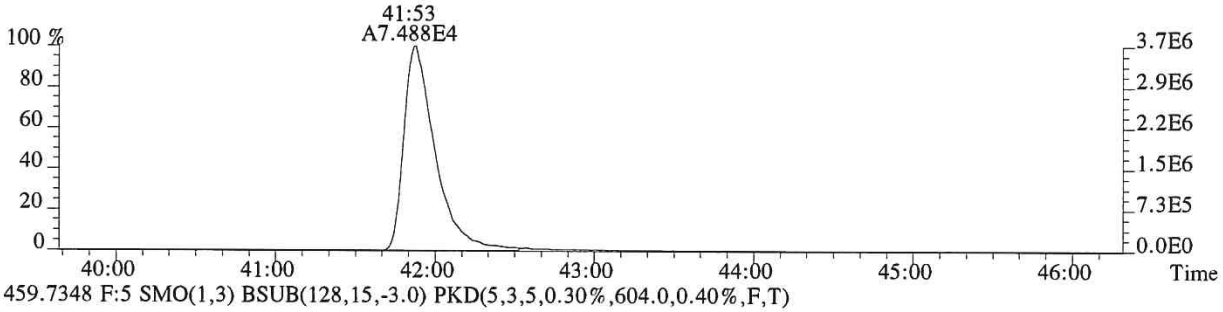


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

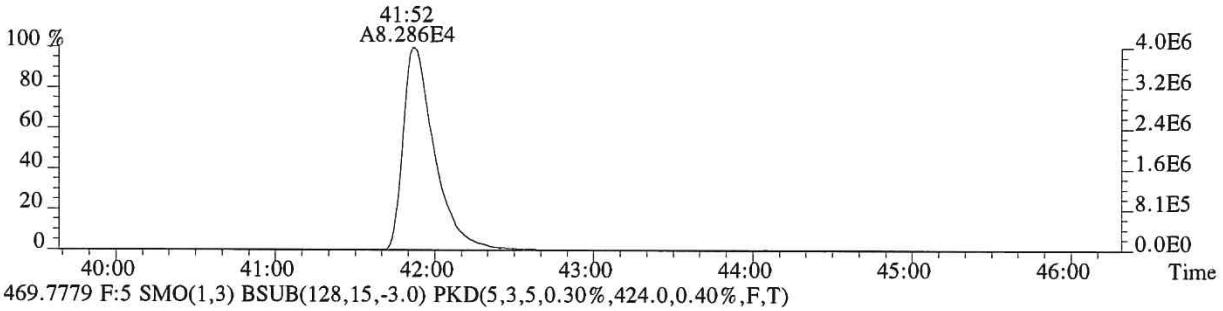


017583

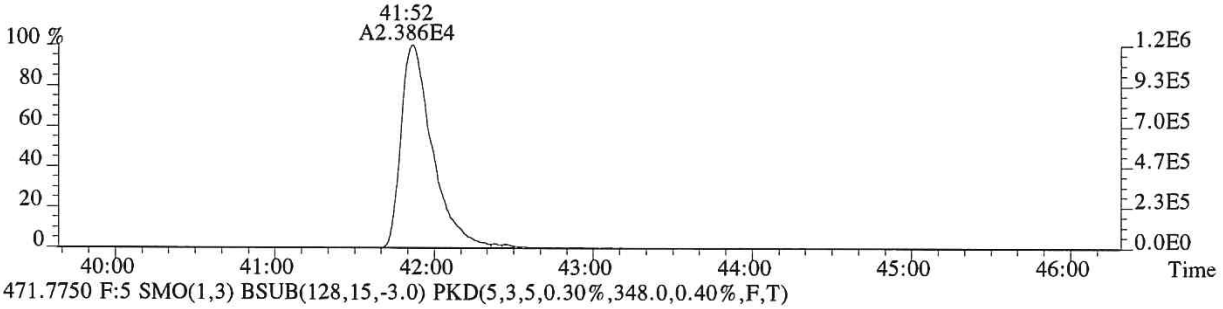
File:P519846 #1-601 Acq: 8-JAN-2019 22:20:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,652.0,0.40%,F,T)



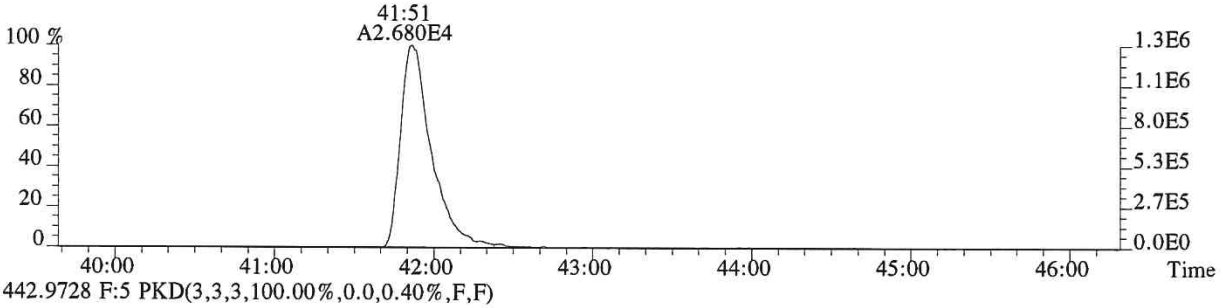
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,604.0,0.40%,F,T)



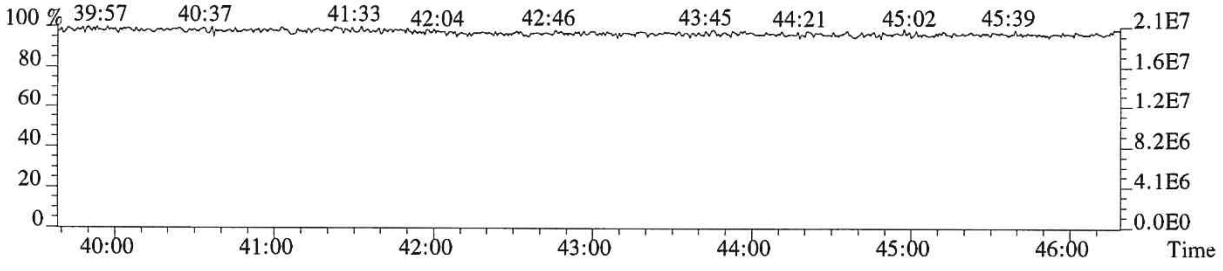
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,424.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,348.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



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Sample Response Summary

CLIENT ID.
SL0213

Run #20 Filename P616417 Samp: 1 Inj: 1 Acquired: 9-JAN-19 22:12:59
Processed: 10-JAN-19 08:32:12 Sample ID: E1801138-020DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:12	3.504e+03	4.575e+03	0.77	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:22	2.002e+02	1.457e+02	1.37	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:26	1.352e+02	9.159e+01	1.48	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	2.718e+02	2.001e+02	1.36	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:27	5.192e+01	5.912e+01	0.88	no	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	8.194e+00	7.693e+00	1.07	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:51	1.710e+01	6.304e+00	2.71	no	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	5.292e+01	4.977e+01	1.06	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	no	1.463
10	Unk	OCDF	NotFnd	*	*	*	no	no	1.571
11	Unk	2,3,7,8-TCDD	26:15	7.947e+02	1.013e+03	0.78	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	NotFnd	*	*	*	no	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:07	7.198e+00	9.093e+00	0.79	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	7.288e+01	5.760e+01	1.27	no	no	1.112
17	Unk	OCDD	40:38	8.484e+02	1.001e+03	0.85	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:11	1.086e+04	1.384e+04	0.78	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:22	1.624e+04	1.023e+04	1.59	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:25	1.463e+04	9.347e+03	1.57	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:19	5.647e+03	1.057e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:26	7.696e+03	1.473e+04	0.52	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	34:59	6.219e+03	1.201e+04	0.52	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	4.739e+03	8.712e+03	0.54	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:06	3.924e+03	8.996e+03	0.44	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	2.628e+03	6.331e+03	0.42	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:13	4.920e+03	6.172e+03	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:44	9.946e+03	6.429e+03	1.55	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	6.975e+03	5.459e+03	1.28	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:14	7.813e+03	6.363e+03	1.23	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	6.545e+03	5.497e+03	1.19	yes	no	0.857
32	IS	13C-OCDD	40:38	4.874e+03	5.472e+03	0.89	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:25	8.042e+03	1.041e+04	0.77	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	8.403e+03	7.261e+03	1.16	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:15	4.725e+02				no	1.086

$$\text{OCDD} = \frac{(8.484e{+}02 + 1.001e{+}03) \times 4000\ \text{pg} \times 10}{(4.874e{+}03 + 5.472e{+}03) \times 10.412\ \text{g} \times 77.2/100 \times 1.157 \times 0.50} = 1537.6\ \text{ng/kg}$$

LM 01/10/19

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Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0213

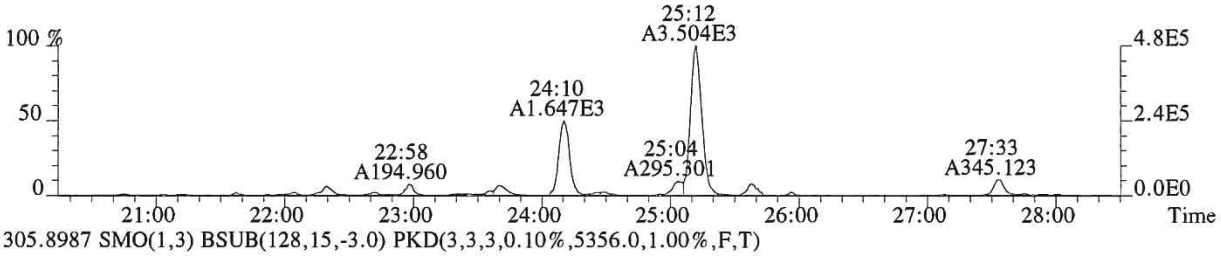
Run #20 Filename P616417 Samp: 1 Inj: 1 Acquired: 9-JAN-19 22:12:59
Processed: 10-JAN-19 08:32:12 LAB. ID: E1801138-020DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	4.78e+05	1.36e+03	3.5e+02	6.02e+05	5.36e+03	1.1e+02
2	1,2,3,7,8-PeCDF	3.21e+04	6.08e+02	5.3e+01	2.53e+04	2.60e+03	9.8e+00
3	2,3,4,7,8-PeCDF	2.24e+04	6.08e+02	3.7e+01	1.80e+04	2.60e+03	6.9e+00
4	1,2,3,4,7,8-HxCDF	4.99e+04	9.84e+02	5.1e+01	3.61e+04	3.88e+02	9.3e+01
5	1,2,3,6,7,8-HxCDF	1.01e+04	9.84e+02	1.0e+01	7.79e+03	3.88e+02	2.0e+01
6	2,3,4,6,7,8-HxCDF	2.49e+03	9.84e+02	2.5e+00	2.45e+03	3.88e+02	6.3e+00
7	1,2,3,7,8,9-HxCDF	3.87e+03	9.84e+02	3.9e+00	1.37e+03	3.88e+02	3.5e+00
8	1,2,3,4,6,7,8-HpCDF	1.06e+04	5.68e+02	1.9e+01	1.02e+04	3.36e+02	3.0e+01
9	1,2,3,4,7,8,9-HpCDF	*	5.68e+02	*	*	3.36e+02	*
10	OCDF	*	3.48e+02	*	*	2.11e+03	*
11	2,3,7,8-TCDD	1.08e+05	3.44e+03	3.1e+01	1.41e+05	1.95e+03	7.2e+01
12	1,2,3,7,8-PeCDD	*	8.52e+02	*	*	3.28e+02	*
13	1,2,3,4,7,8-HxCDD	2.21e+03	7.68e+02	2.9e+00	3.07e+03	1.00e+03	3.1e+00
14	1,2,3,6,7,8-HxCDD	*	7.68e+02	*	*	1.00e+03	*
15	1,2,3,7,8,9-HxCDD	*	7.68e+02	*	*	1.00e+03	*
16	1,2,3,4,6,7,8-HpCDD	1.29e+04	3.48e+02	3.7e+01	1.48e+04	4.48e+02	3.3e+01
17	OCDD	1.14e+05	3.28e+02	3.5e+02	1.34e+05	2.12e+02	6.3e+02
18	13C-2,3,7,8-TCDF	1.47e+06	1.09e+04	1.3e+02	1.87e+06	8.27e+03	2.3e+02
19	13C-1,2,3,7,8-PeCDF	2.43e+06	3.28e+02	7.4e+03	1.49e+06	5.52e+02	2.7e+03
20	13C-2,3,4,7,8-PeCDF	2.41e+06	3.28e+02	7.3e+03	1.49e+06	5.52e+02	2.7e+03
21	13C-1,2,3,4,7,8-HxCDF	1.08e+06	1.11e+03	9.7e+02	2.02e+06	2.09e+03	9.7e+02
22	13C-1,2,3,6,7,8-HxCDF	1.21e+06	1.11e+03	1.1e+03	2.32e+06	2.09e+03	1.1e+03
23	13C-2,3,4,6,7,8-HxCDF	1.07e+06	1.11e+03	9.6e+02	2.08e+06	2.09e+03	1.0e+03
24	13C-1,2,3,7,8,9-HxCDF	7.74e+05	1.11e+03	7.0e+02	1.41e+06	2.09e+03	6.7e+02
25	13C-1,2,3,4,6,7,8-HpCDF	6.83e+05	1.63e+03	4.2e+02	1.53e+06	2.52e+03	6.1e+02
26	13C-1,2,3,4,7,8,9-HpCDF	4.35e+05	1.63e+03	2.7e+02	9.96e+05	2.52e+03	4.0e+02
27	13C-2,3,7,8-TCDD	6.96e+05	8.68e+03	8.0e+01	8.35e+05	4.85e+03	1.7e+02
28	13C-1,2,3,7,8-PeCDD	1.56e+06	1.56e+03	1.0e+03	1.00e+06	1.44e+03	7.0e+02
29	13C-1,2,3,4,7,8-HxCDD	1.42e+06	2.18e+03	6.5e+02	1.06e+06	1.07e+03	1.0e+03
30	13C-1,2,3,6,7,8-HxCDD	1.28e+06	2.18e+03	5.9e+02	1.01e+06	1.07e+03	9.5e+02
31	13C-1,2,3,4,6,7,8-HpCDD	1.07e+06	3.52e+02	3.1e+03	9.32e+05	3.96e+02	2.4e+03
32	13C-OCDD	6.83e+05	1.02e+03	6.7e+02	7.24e+05	2.36e+02	3.1e+03
33	13C-1,2,3,4-TCDD	1.13e+06	8.68e+03	1.3e+02	1.45e+06	4.85e+03	3.0e+02
34	13C-1,2,3,7,8,9-HxCDD	1.33e+06	2.18e+03	6.1e+02	1.08e+06	1.07e+03	1.0e+03
35	37Cl-2,3,7,8-TCDD	6.83e+04	2.36e+03	2.9e+01			

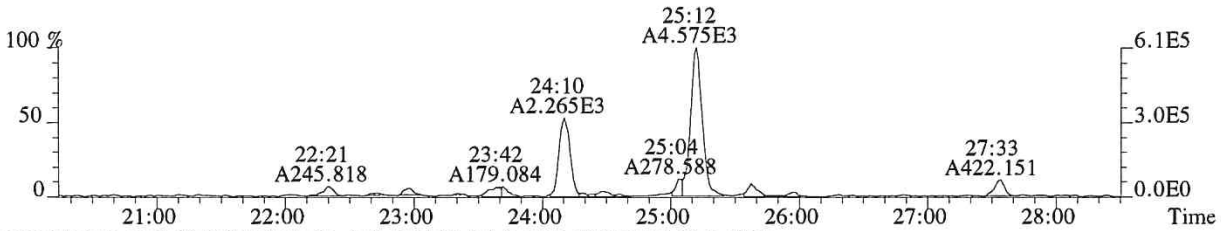
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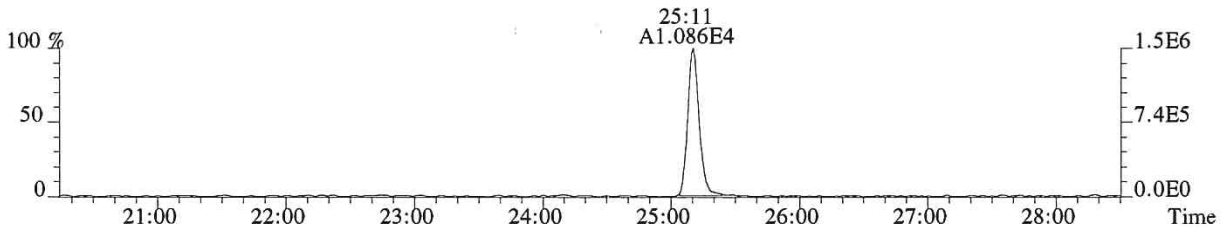
File:P616417 #1-587 Acq: 9-JAN-2019 22:12:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1360.0,1.00%,F,T)



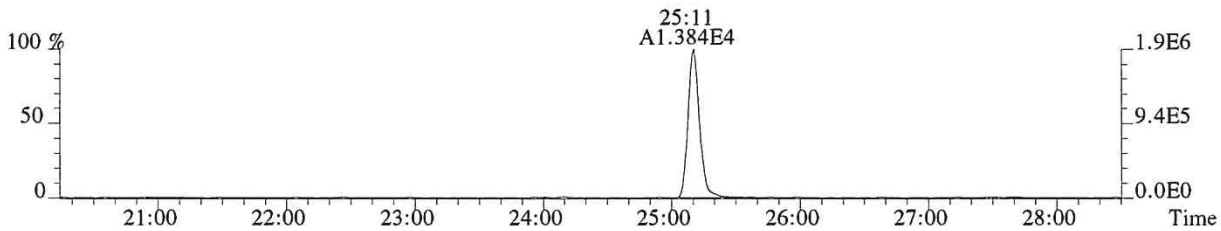
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5356.0,1.00%,F,T)



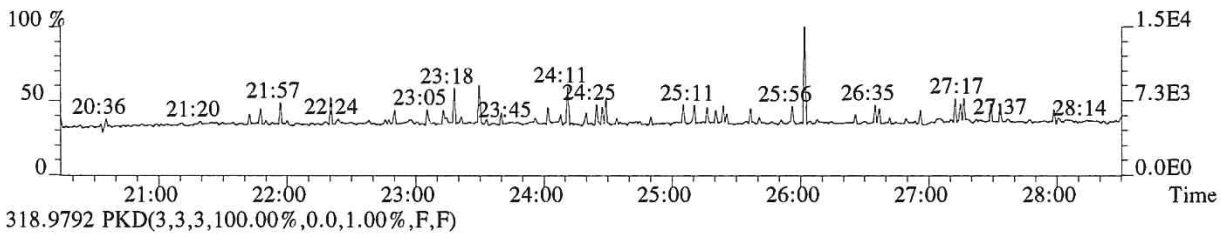
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10908.0,1.00%,F,T)



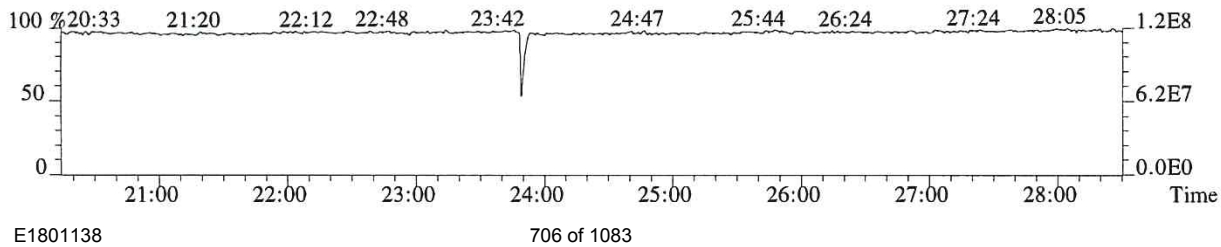
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8268.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

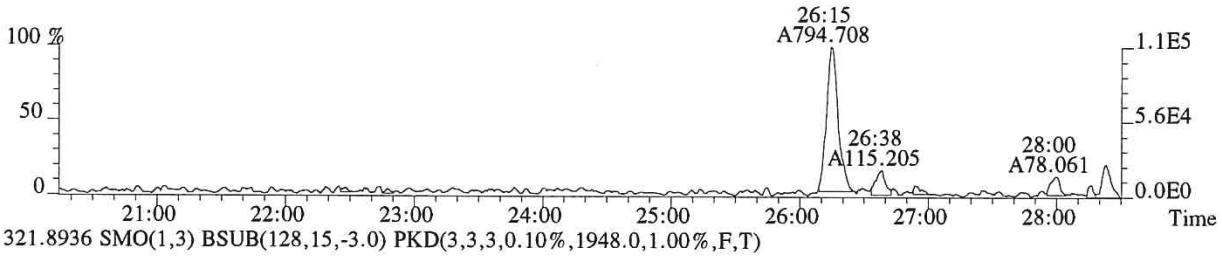


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

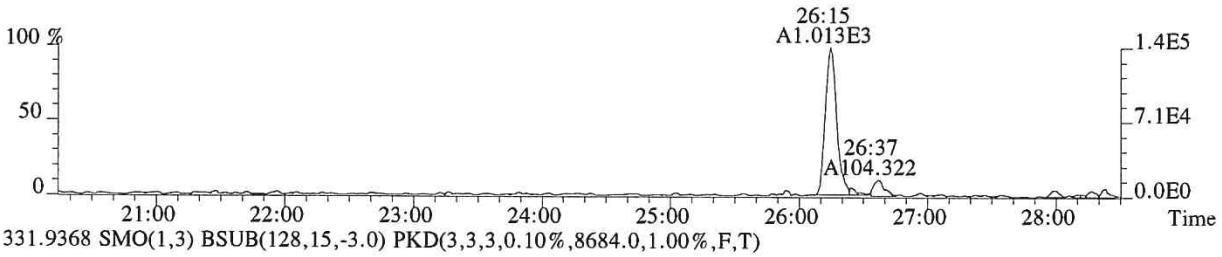


017587

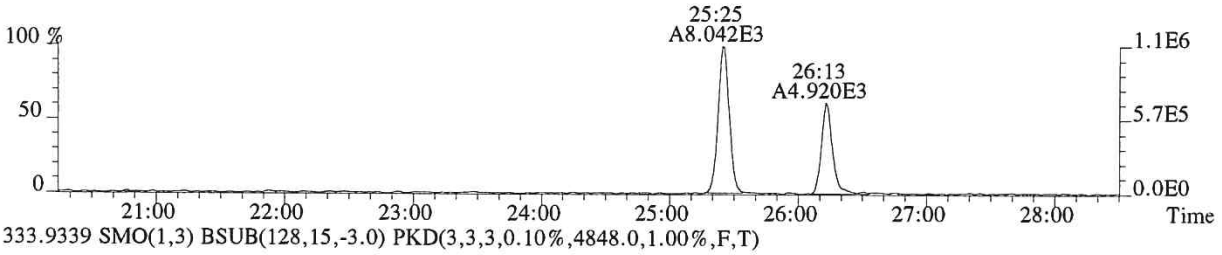
File:P616417 #1-587 Acq: 9-JAN-2019 22:12:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3436.0,1.00%,F,T)



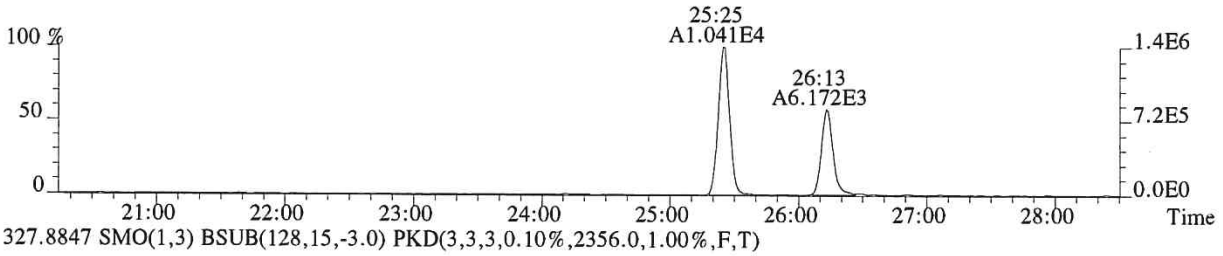
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1948.0,1.00%,F,T)



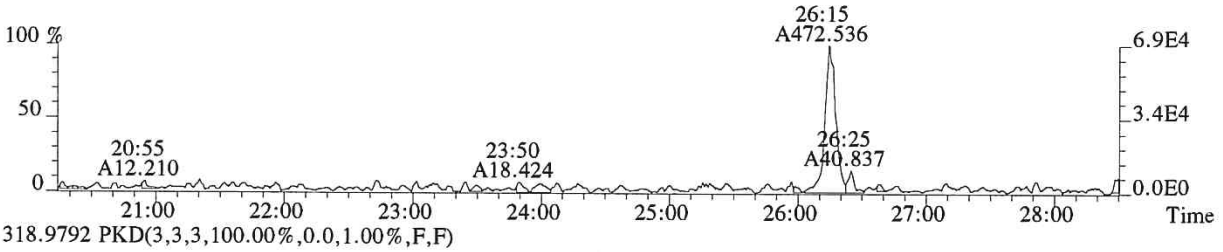
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8684.0,1.00%,F,T)



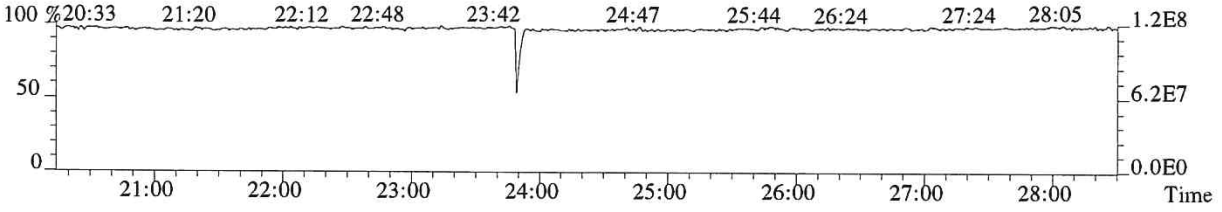
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4848.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2356.0,1.00%,F,T)

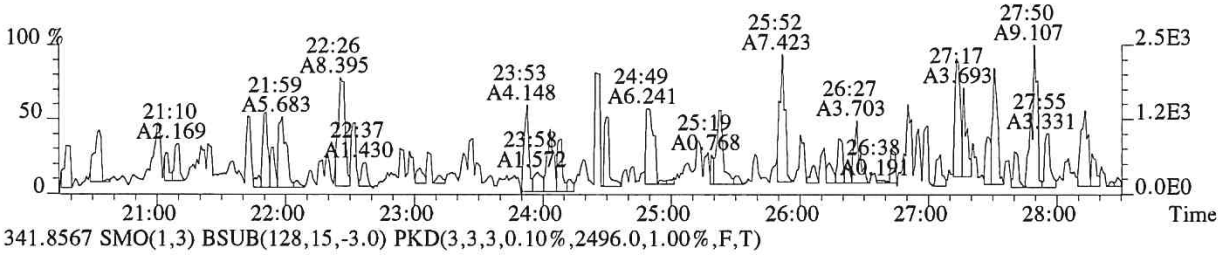


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

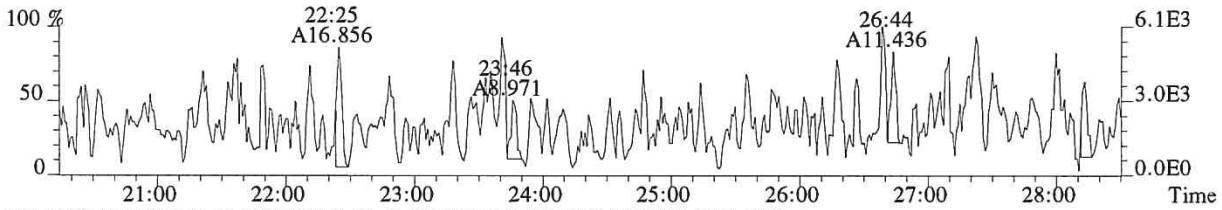


017588

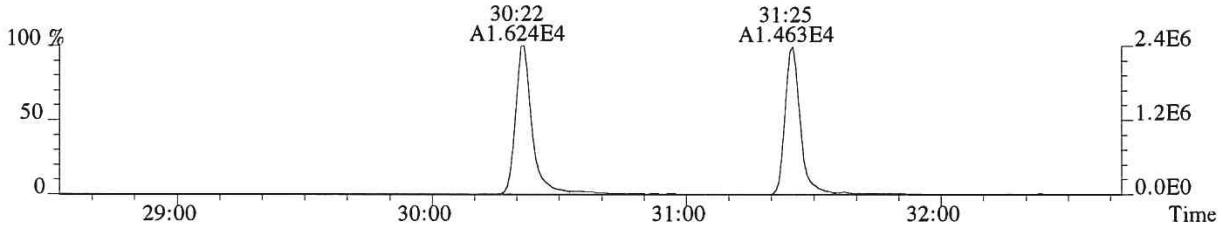
File:P616417 #1-587 Acq: 9-JAN-2019 22:12:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,348.0,1.00%,F,T)



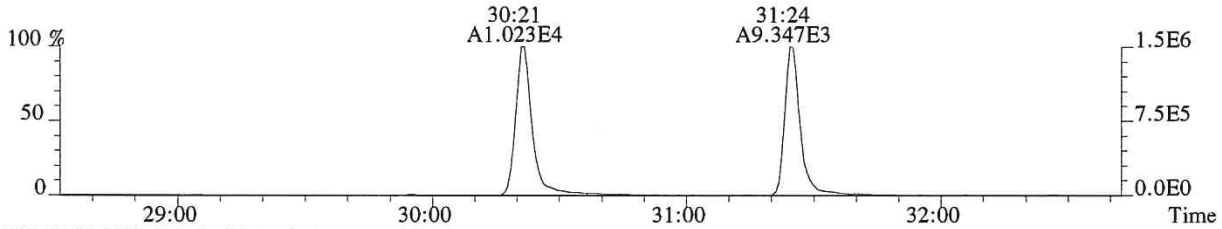
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2496.0,1.00%,F,T)



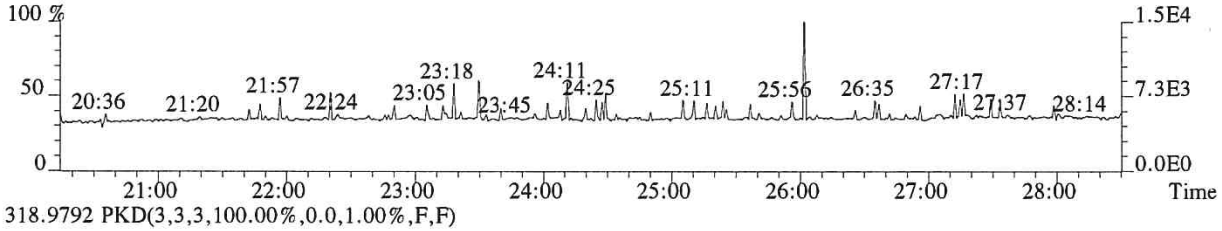
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,328.0,1.00%,F,T)



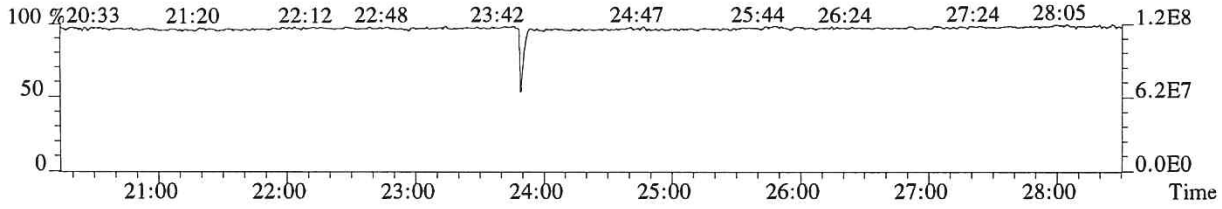
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,552.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

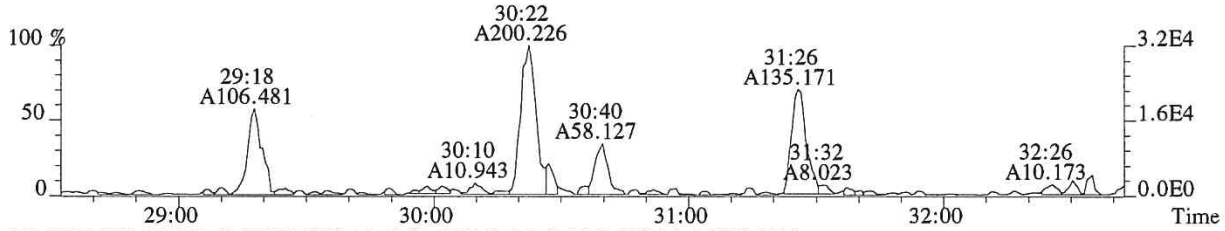


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

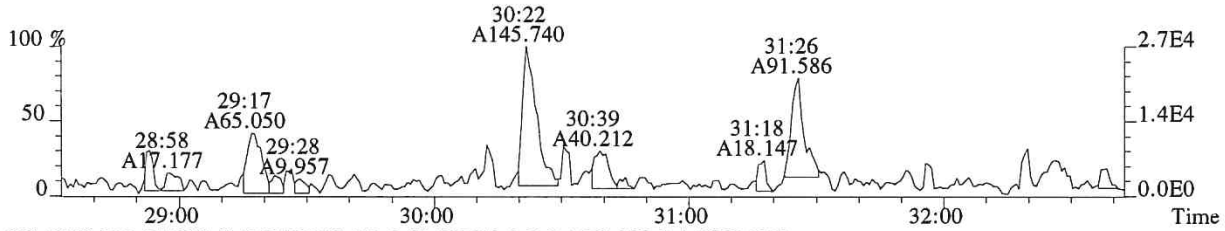


017589

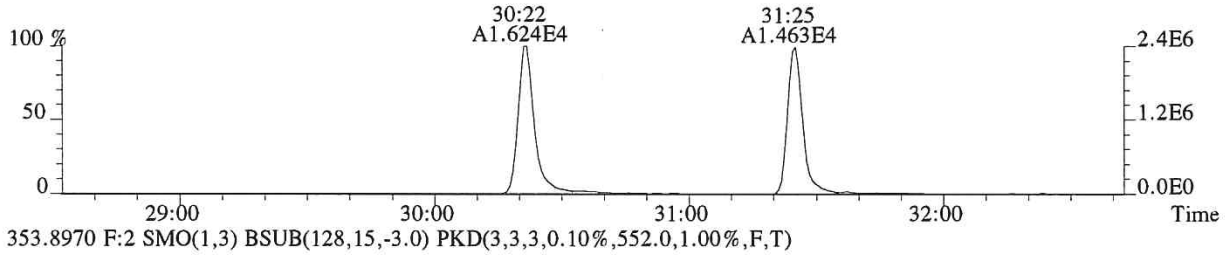
File:P616417 #1-376 Acq: 9-JAN-2019 22:12:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,608.0,1.00%,F,T)



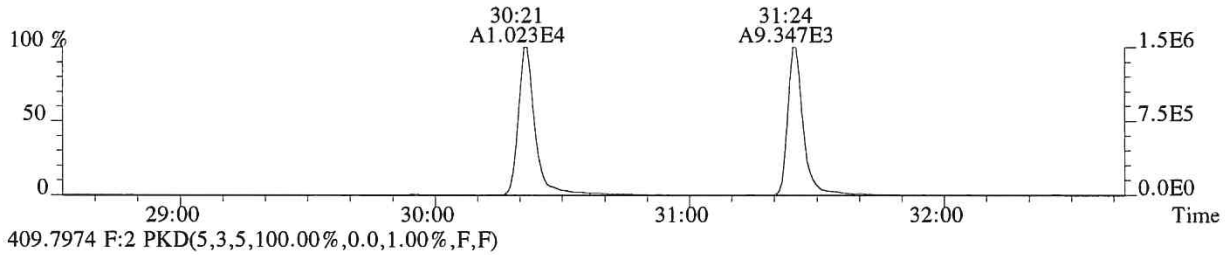
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2596.0,1.00%,F,T)



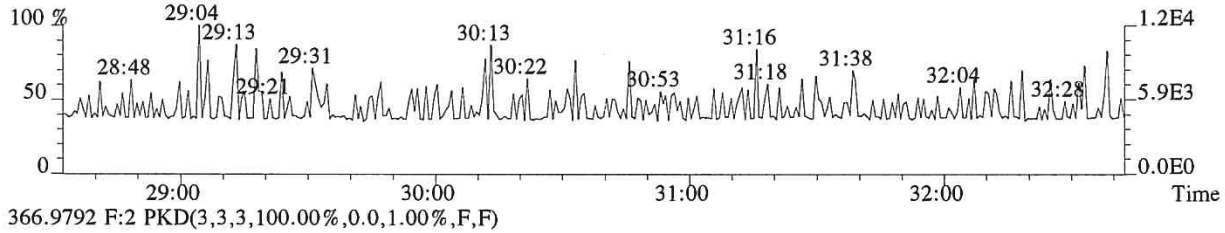
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,328.0,1.00%,F,T)



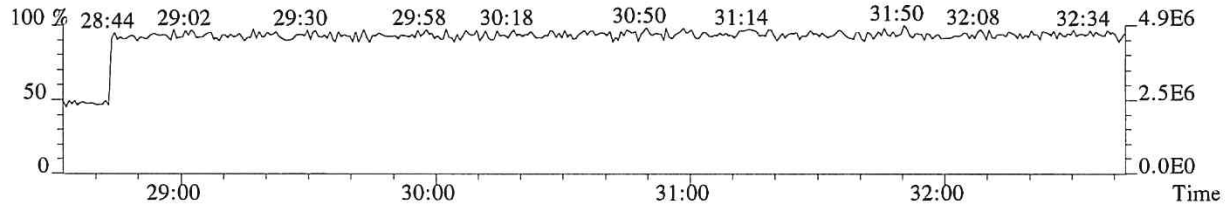
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,552.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

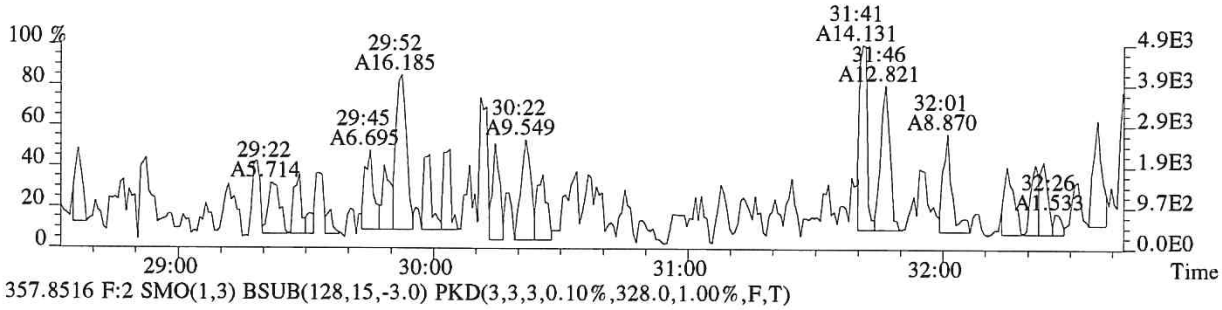


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

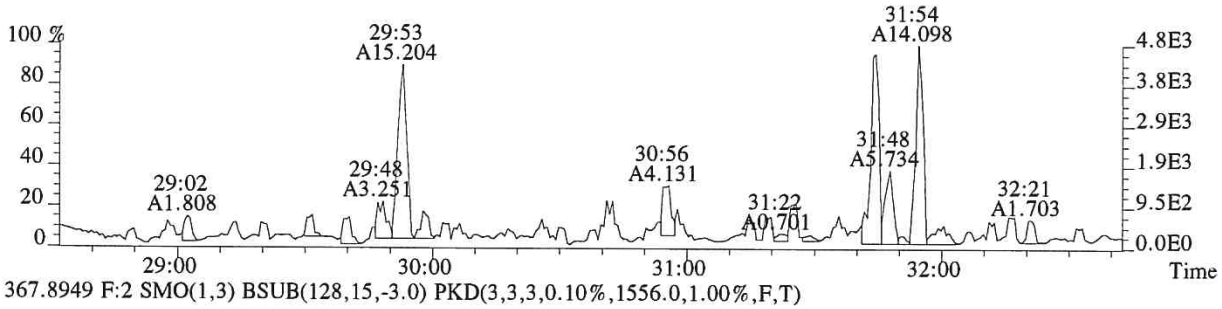


017590

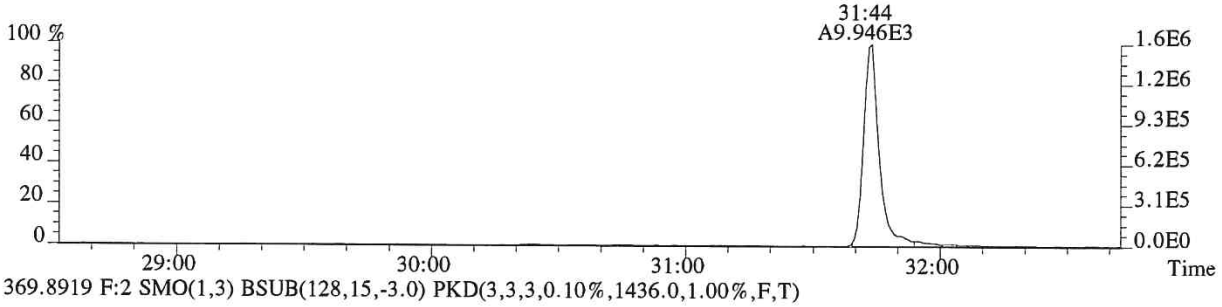
File:P616417 #1-376 Acq: 9-JAN-2019 22:12:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,852.0,1.00%,F,T)



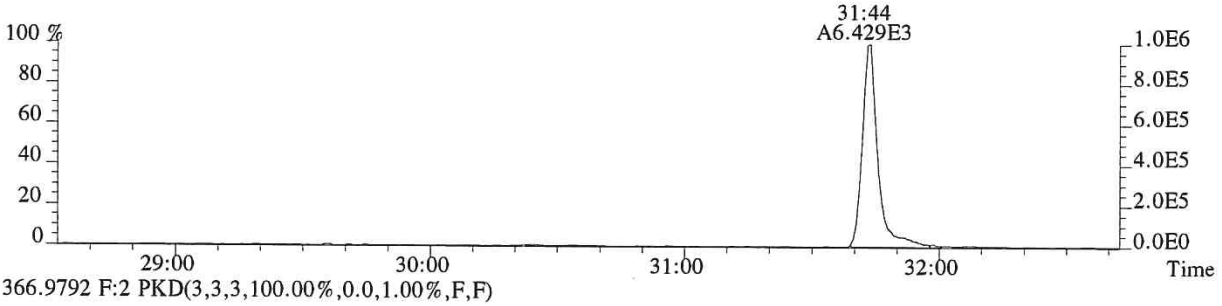
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,328.0,1.00%,F,T)



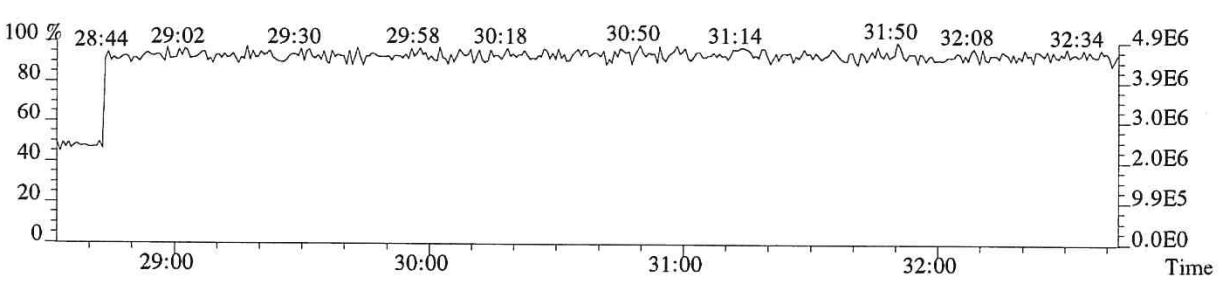
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1556.0,1.00%,F,T)



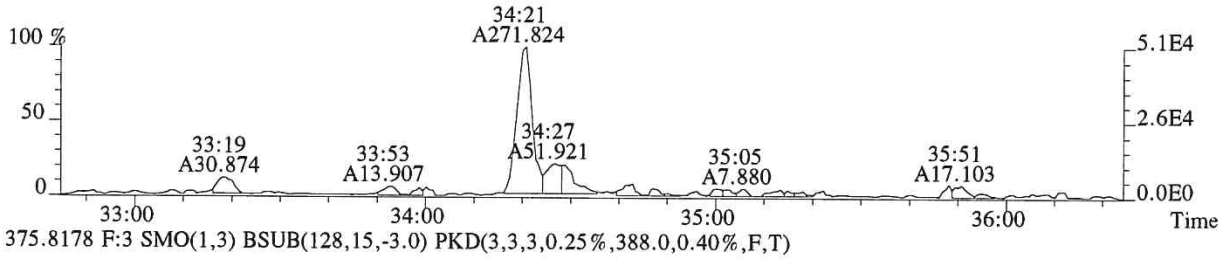
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1436.0,1.00%,F,T)



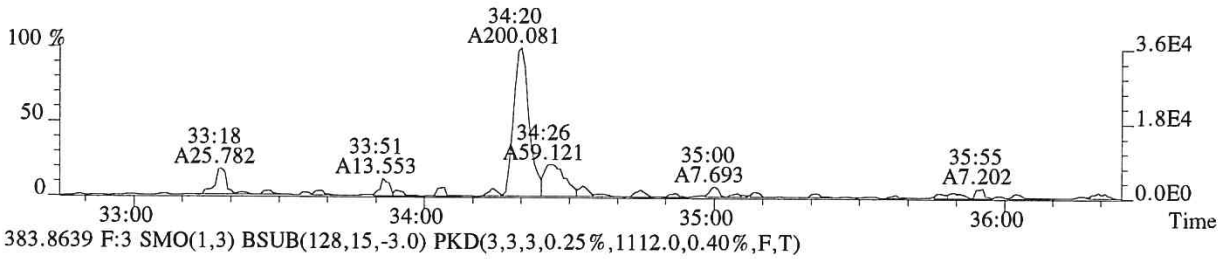
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



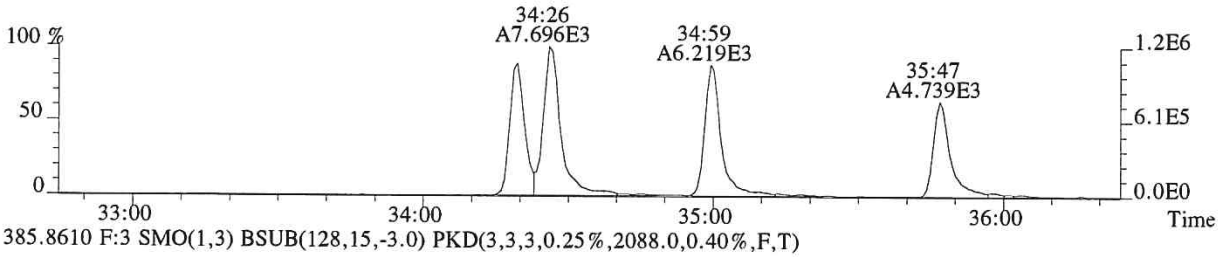
File:P616417 #1-330 Acq: 9-JAN-2019 22:12:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,984.0,0.40%,F,T)



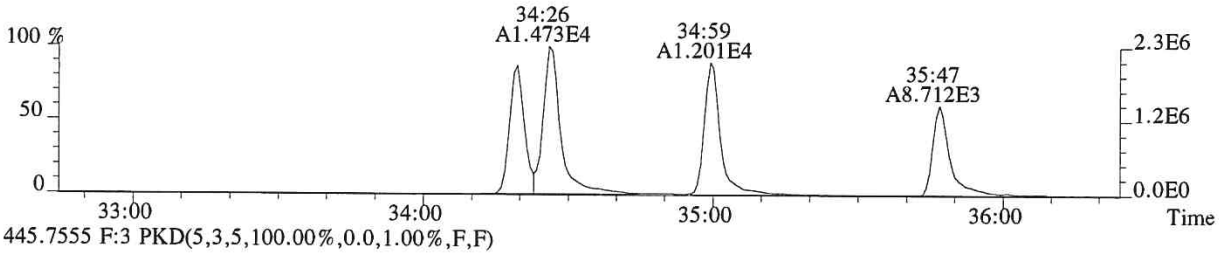
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,388.0,0.40%,F,T)



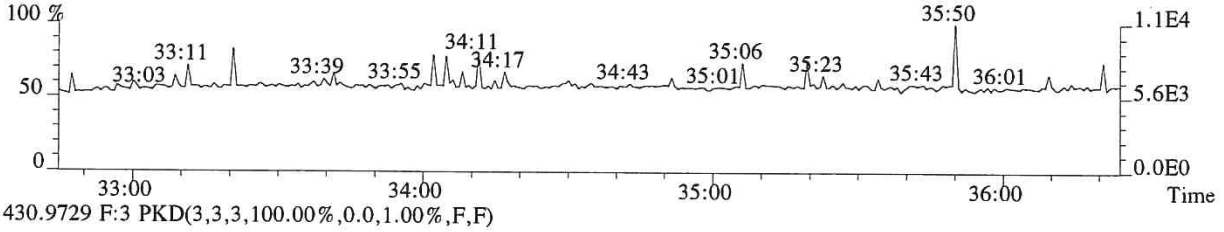
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1112.0,0.40%,F,T)



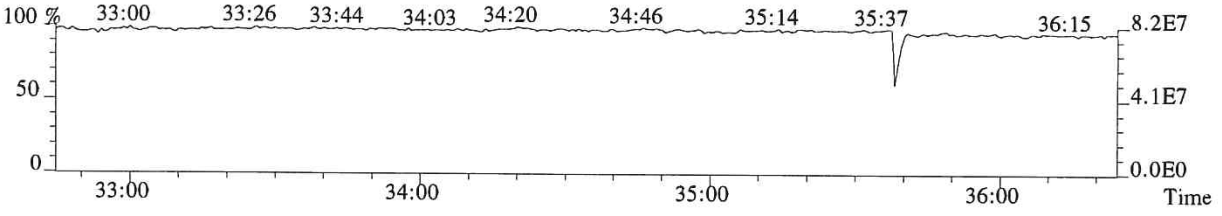
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2088.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

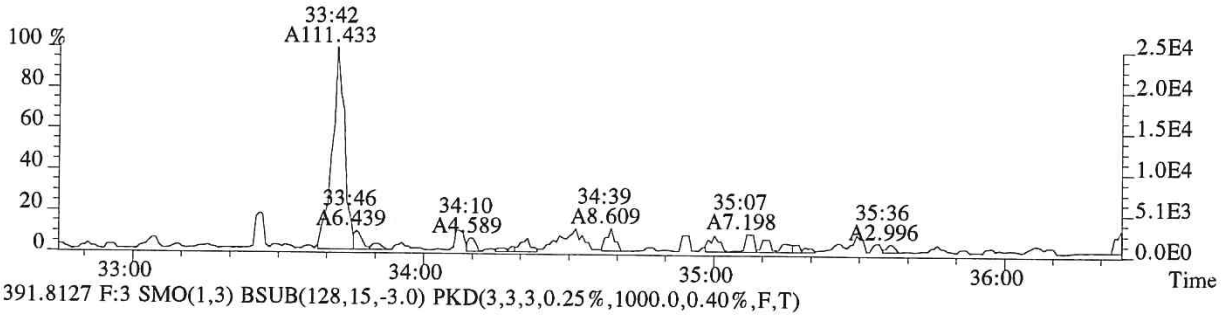


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

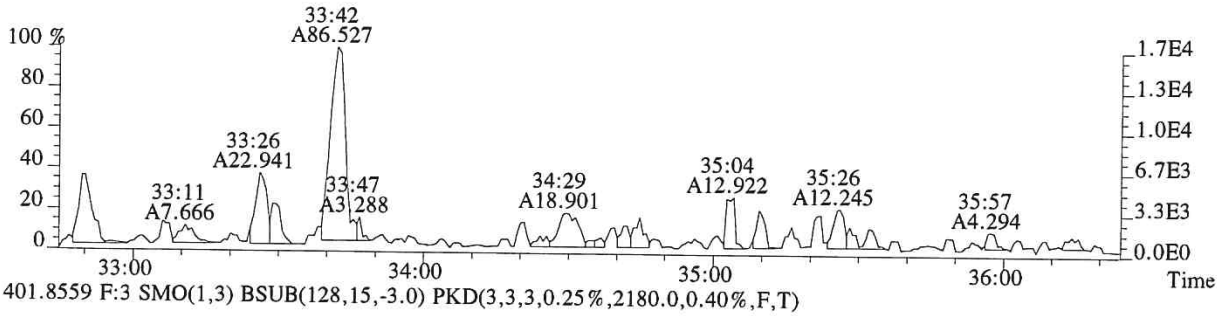


017592

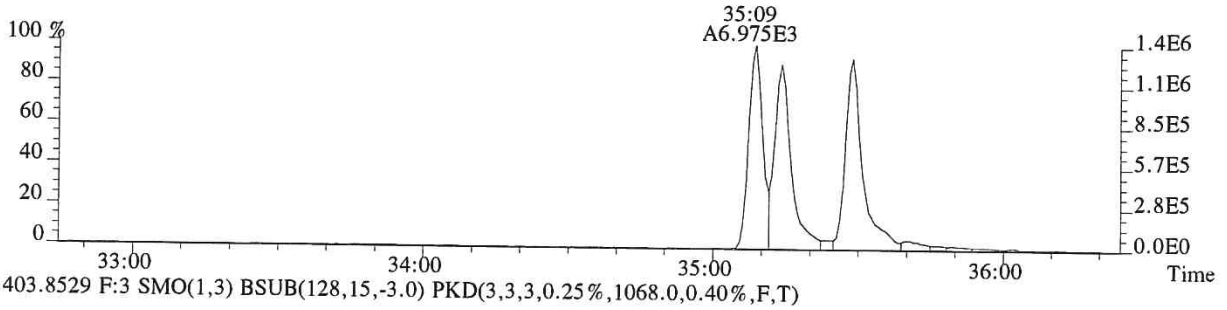
File:P616417 #1-330 Acq: 9-JAN-2019 22:12:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,768.0,0.40%,F,T)



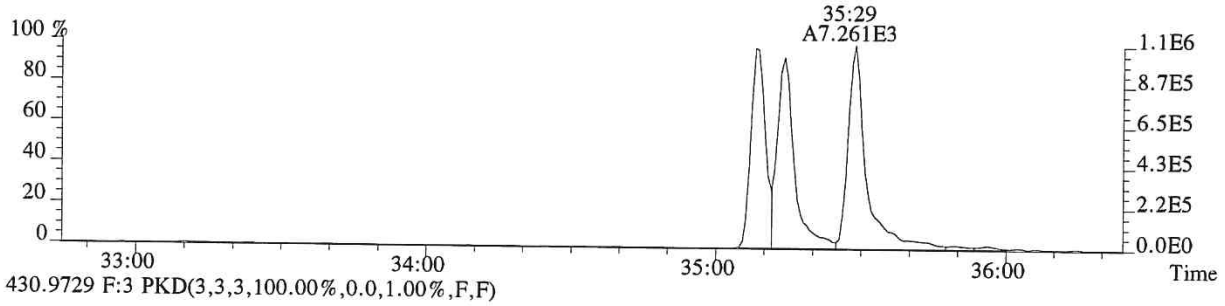
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1000.0,0.40%,F,T)



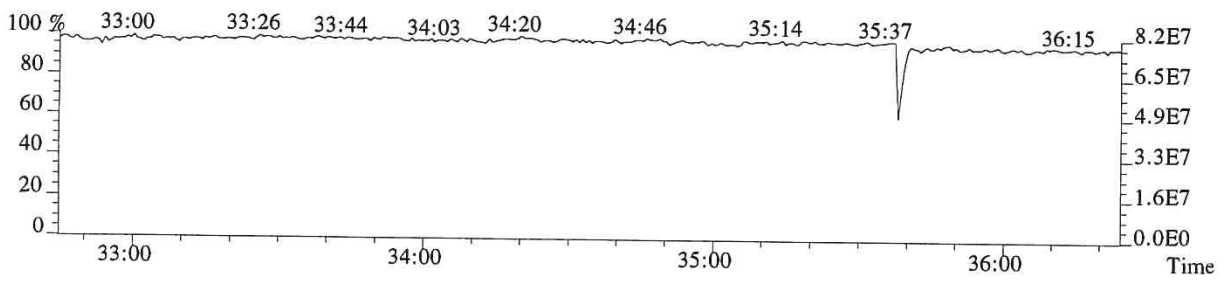
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2180.0,0.40%,F,T)



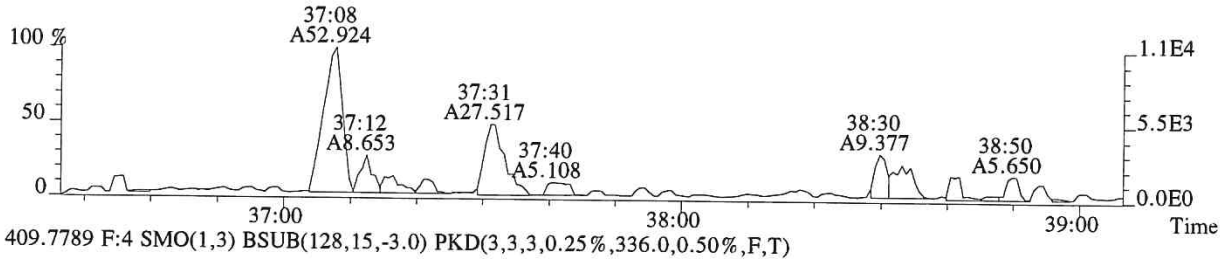
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1068.0,0.40%,F,T)



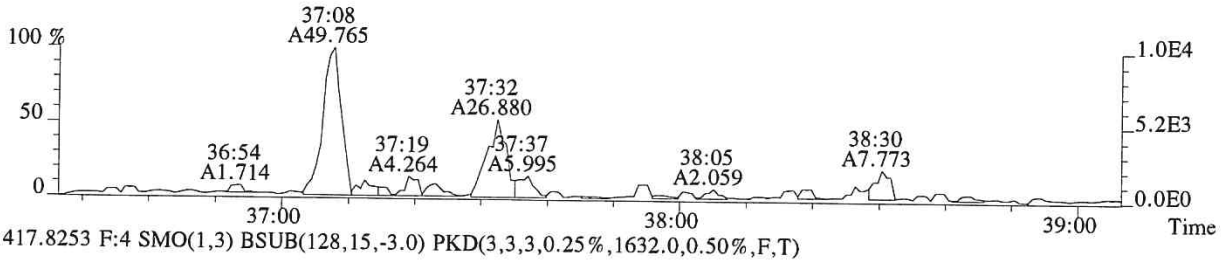
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



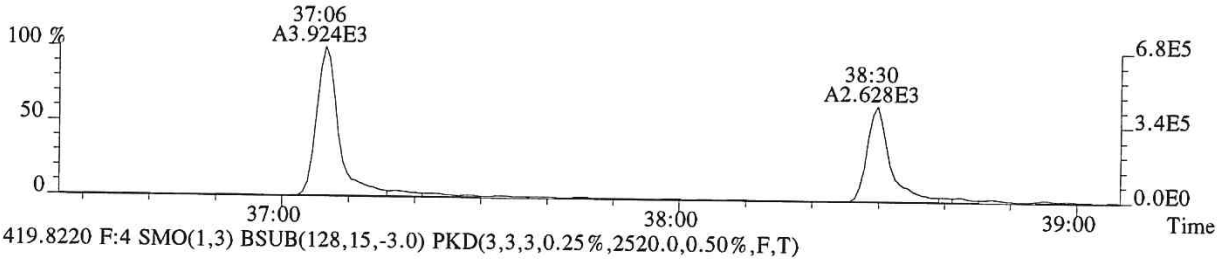
File:P616417 #1-241 Acq: 9-JAN-2019 22:12:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,568.0,0.50%,F,T)



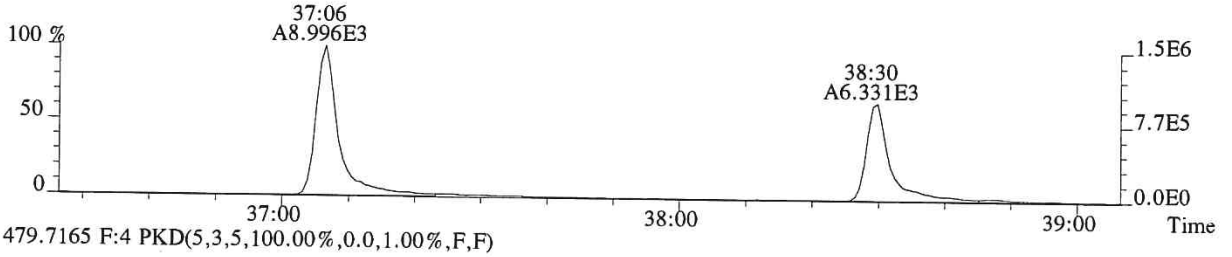
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,336.0,0.50%,F,T)



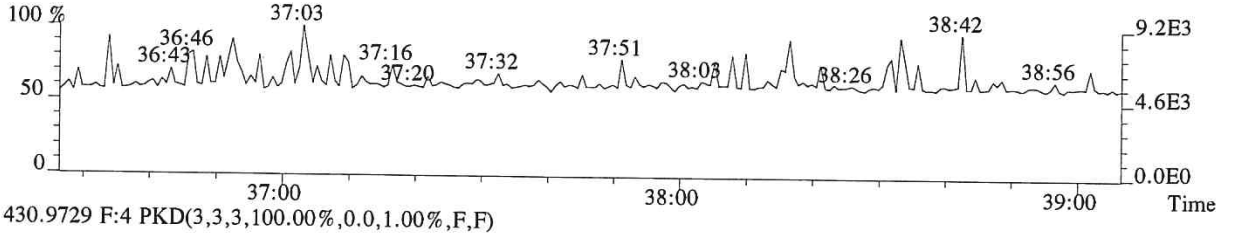
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1632.0,0.50%,F,T)



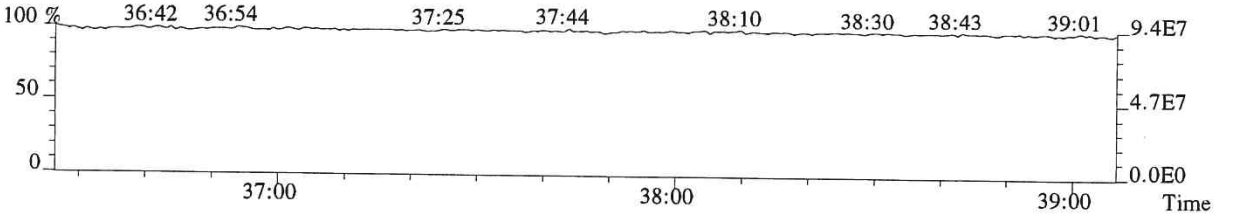
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2520.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

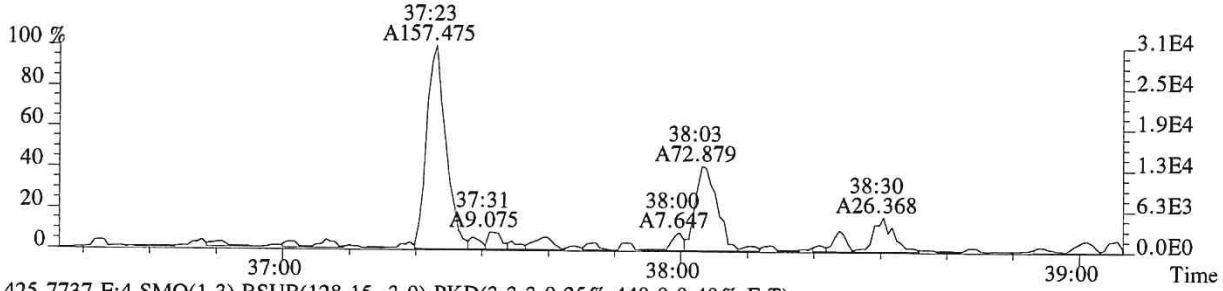


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

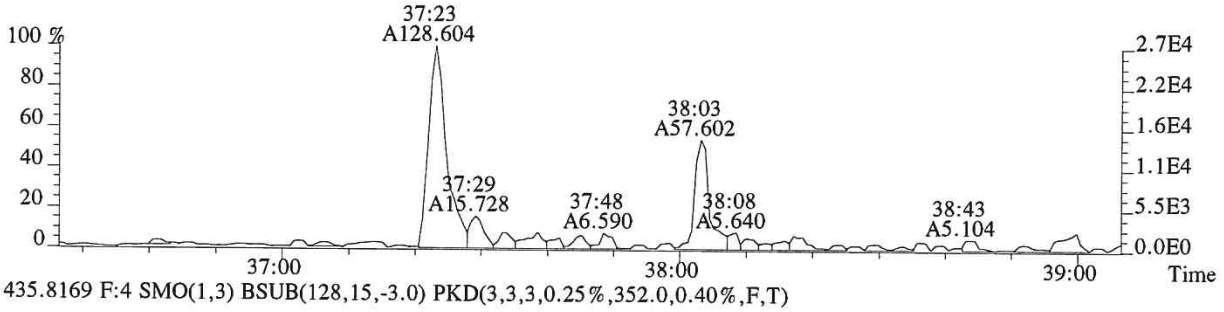


017594

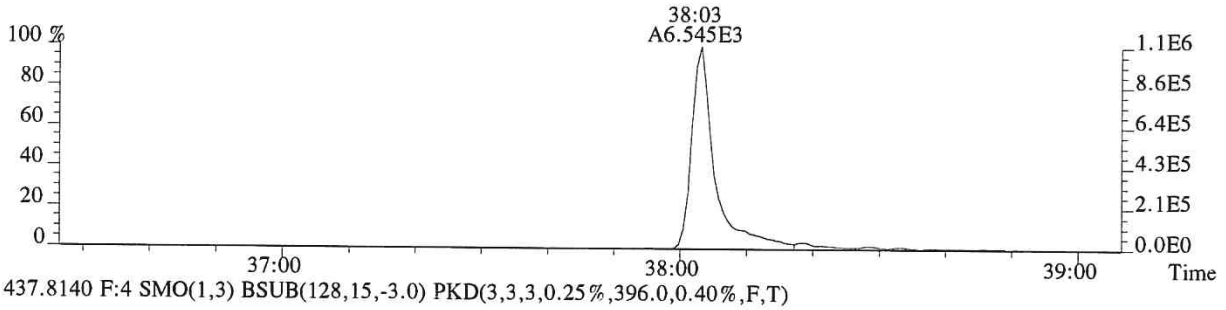
File:P616417 #1-241 Acq: 9-JAN-2019 22:12:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,348.0,0.40%,F,T)



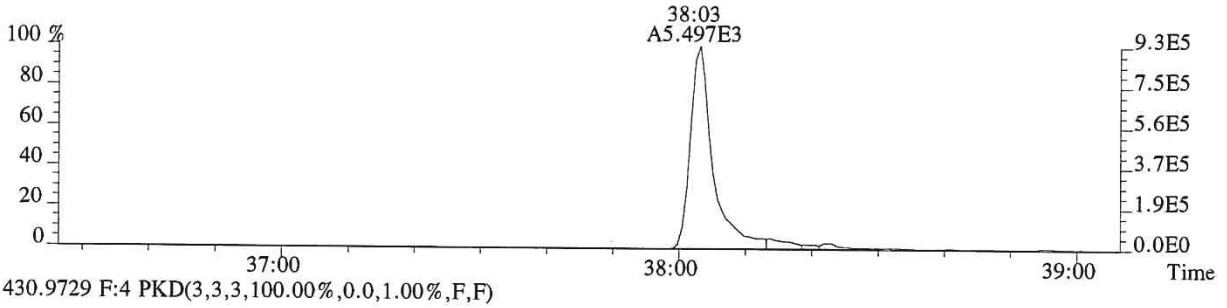
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,448.0,0.40%,F,T)



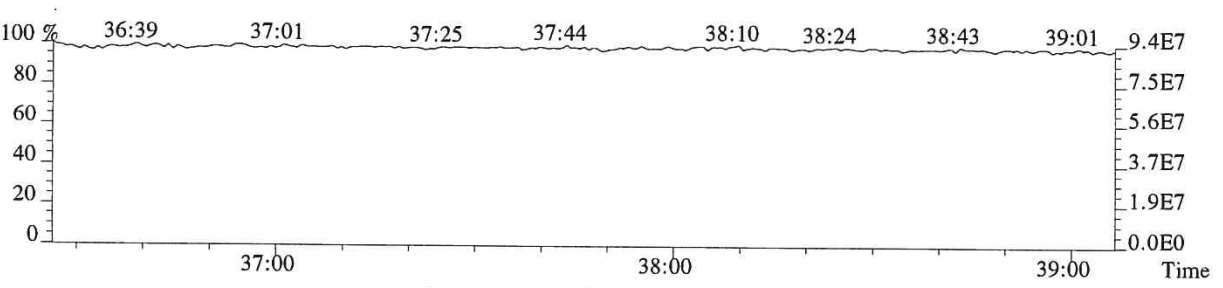
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,352.0,0.40%,F,T)



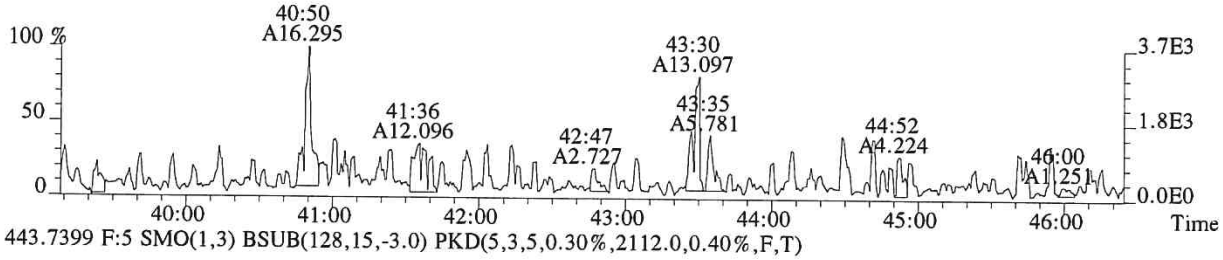
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,396.0,0.40%,F,T)



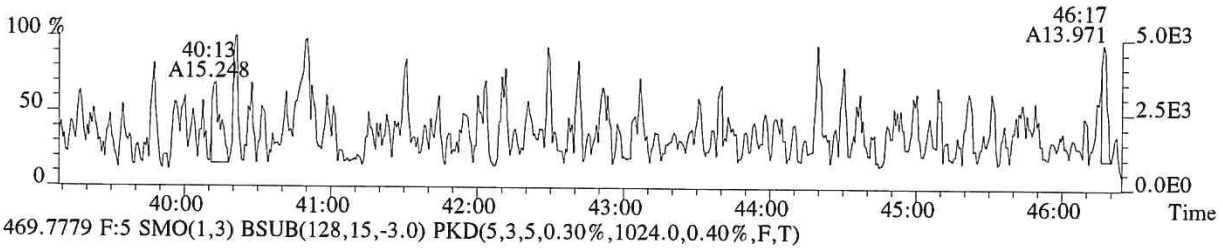
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



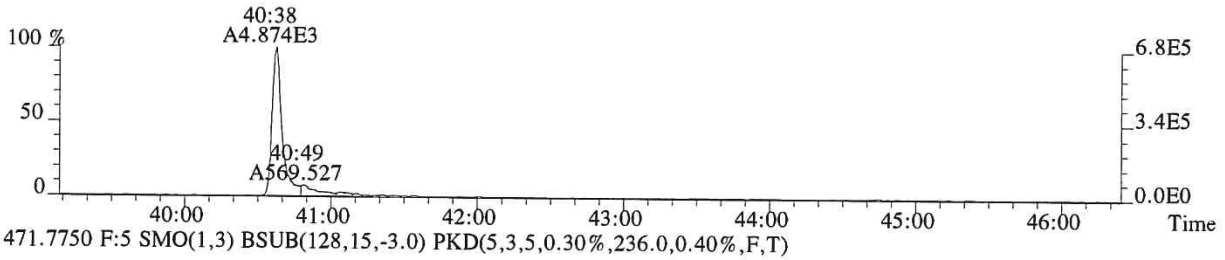
File:P616417 #1-654 Acq: 9-JAN-2019 22:12:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,348.0,0.40%,F,T)



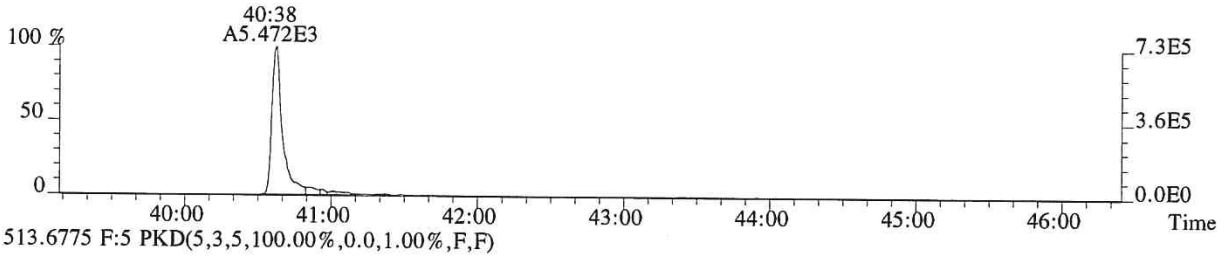
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2112.0,0.40%,F,T)



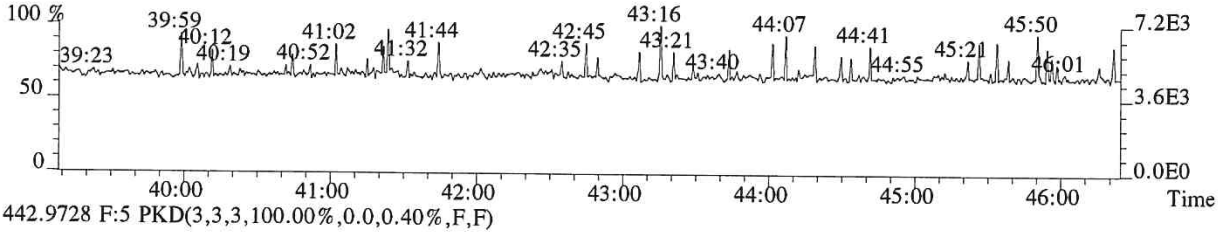
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1024.0,0.40%,F,T)



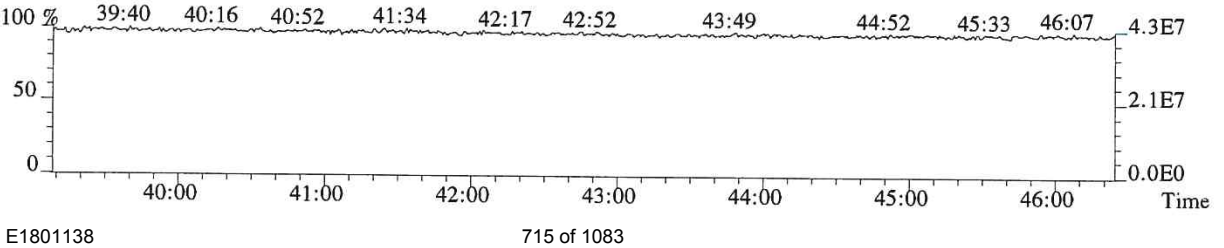
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,236.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

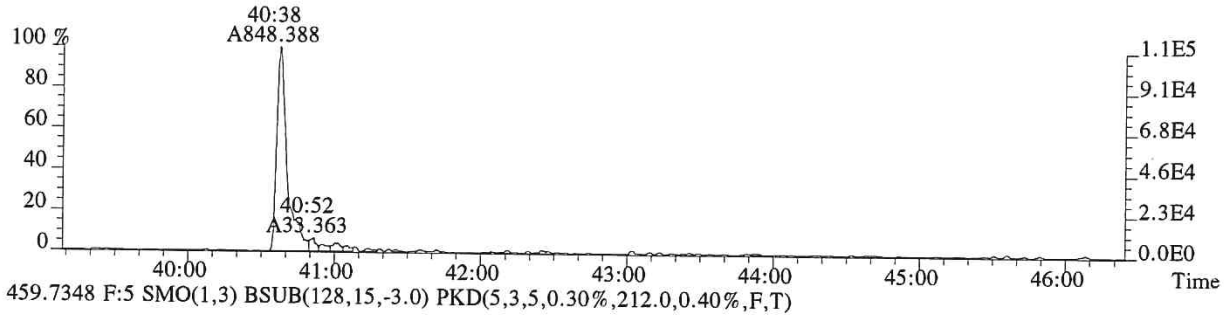


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

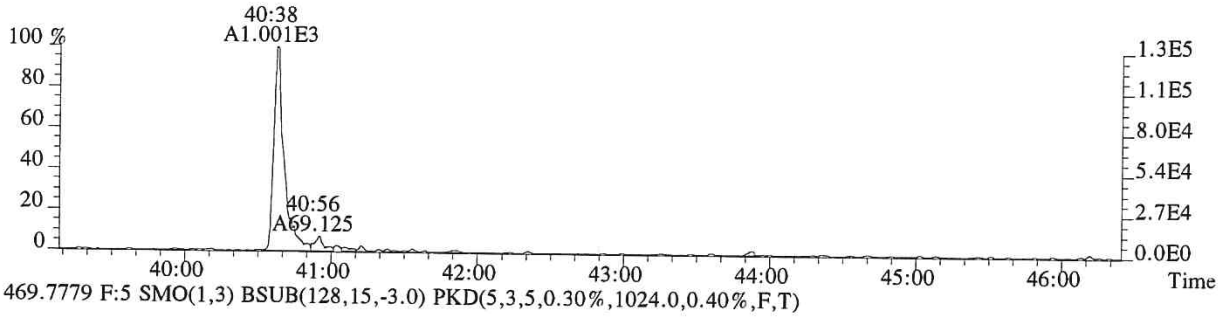


017596

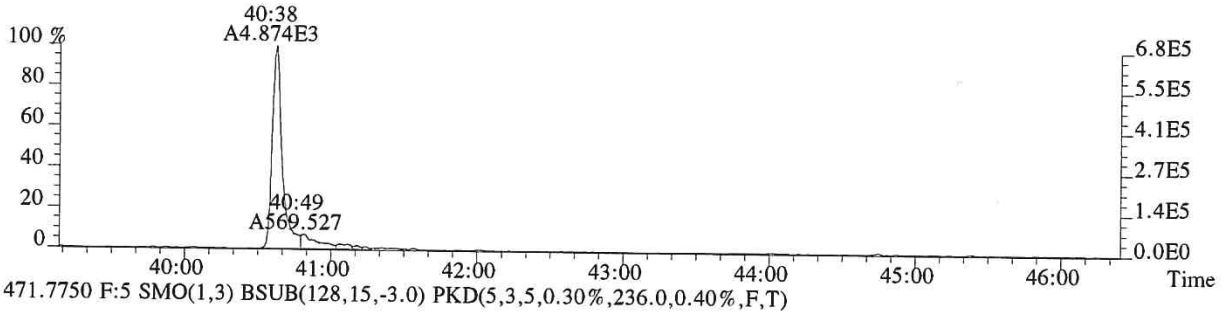
File:P616417 #1-654 Acq: 9-JAN-2019 22:12:59 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801138-020DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,328.0,0.40%,F,T)



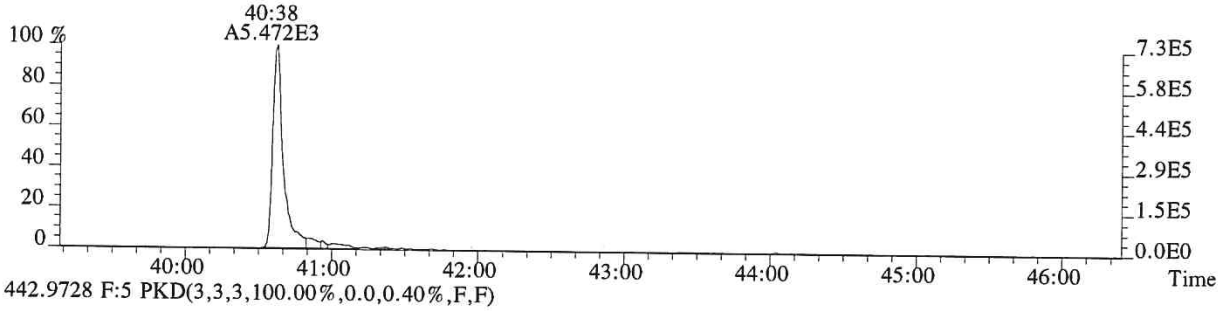
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,212.0,0.40%,F,T)



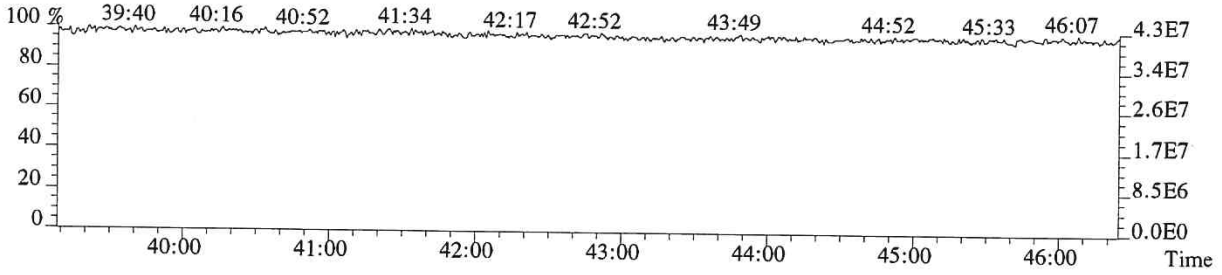
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1024.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,236.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
METHOD BLANK

Run #10 Filename P616378 Samp: 1 Inj: 1 Acquired: 8-JAN-19 13:46:05
Processed: 9-JAN-19 08:58:05 Sample ID: EQ1900001-01

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	NotFnd	*	*	*	no	no	1.081
2	Unk	1,2,3,7,8-PeCDF	NotFnd	*	*	*	no	no	1.156
3	Unk	2,3,4,7,8-PeCDF	NotFnd	*	*	*	no	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	NotFnd	*	*	*	no	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	NotFnd	*	*	*	no	yes	1.293
6	Unk	2,3,4,6,7,8-HxCDF	NotFnd	*	*	*	no	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:49	6.478e+00	5.097e+00	1.27	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:07	1.124e+01	8.353e+00	1.35	no	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	no	1.463
10	Unk	OCDF	NotFnd	*	*	*	no	no	1.571
11	Unk	2,3,7,8-TCDD	NotFnd	*	*	*	no	no	1.049
12	Unk	1,2,3,7,8-PeCDD	NotFnd	*	*	*	no	yes	0.929
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:16	5.102e+00	5.615e+00	0.91	no	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	NotFnd	*	*	*	no	yes	1.112
17	Unk	OCDD	40:35	1.325e+01	2.274e+01	0.58	no	yes	1.157
18	IS	13C-2,3,7,8-TCDF	25:12	1.516e+04	1.914e+04	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:23	2.549e+04	1.623e+04	1.57	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	2.226e+04	1.417e+04	1.57	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:20	1.084e+04	2.039e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	1.229e+04	2.303e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:00	1.134e+04	2.155e+04	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	1.041e+04	1.937e+04	0.54	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:06	7.406e+03	1.587e+04	0.47	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	5.844e+03	1.276e+04	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:15	7.022e+03	8.850e+03	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:44	1.771e+04	1.135e+04	1.56	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	1.510e+04	1.184e+04	1.28	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	1.357e+04	1.092e+04	1.24	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:02	1.352e+04	1.253e+04	1.08	yes	no	0.857
32	IS	13C-OCDD	40:35	9.101e+03	1.020e+04	0.89	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:27	1.443e+04	1.903e+04	0.76	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	1.990e+04	1.619e+04	1.23	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:16	1.007e+04				no	1.086

$$\text{OCDD} = \frac{(1.325e+01 + 2.274e+01) \times 4000\ \text{pg} \times 1}{(9.101e+03 + 1.020e+04) \times \text{g} \times / 100 \times 1.157}$$

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
METHOD BLANK

Run #10 Filename P616378 Samp: 1 Inj: 1 Acquired: 8-JAN-19 13:46:05
Processed: 9-JAN-19 08:58:05 LAB. ID: EQ1900001-01

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	*	4.20e+02	*	*	2.03e+03	*
2	1,2,3,7,8-PeCDF	*	1.68e+02	*	*	9.72e+02	*
3	2,3,4,7,8-PeCDF	*	1.68e+02	*	*	9.72e+02	*
4	1,2,3,4,7,8-HxCDF	*	4.20e+02	*	*	3.08e+02	*
5	1,2,3,6,7,8-HxCDF	*	4.20e+02	*	*	3.08e+02	*
6	2,3,4,6,7,8-HxCDF	*	4.20e+02	*	*	3.08e+02	*
7	1,2,3,7,8,9-HxCDF	2.05e+03	4.20e+02	4.9e+00	9.77e+02	3.08e+02	3.2e+00
8	1,2,3,4,6,7,8-HpCDF	2.93e+03	3.72e+02	7.9e+00	1.69e+03	3.32e+02	5.1e+00
9	1,2,3,4,7,8,9-HpCDF	*	3.72e+02	*	*	3.32e+02	*
10	OCDF	*	3.40e+02	*	*	1.50e+03	*
11	2,3,7,8-TCDD	*	2.14e+03	*	*	8.80e+02	*
12	1,2,3,7,8-PeCDD	*	8.48e+02	*	*	2.48e+02	*
13	1,2,3,4,7,8-HxCDD	*	2.68e+02	*	*	2.56e+02	*
14	1,2,3,6,7,8-HxCDD	1.28e+03	2.68e+02	4.8e+00	1.16e+03	2.56e+02	4.5e+00
15	1,2,3,7,8,9-HxCDD	*	2.68e+02	*	*	2.56e+02	*
16	1,2,3,4,6,7,8-HpCDD	*	3.72e+02	*	*	2.44e+02	*
17	OCDD	3.67e+03	3.12e+02	1.2e+01	4.40e+03	2.76e+02	1.6e+01
18	13C-2,3,7,8-TCDF	2.17e+06	9.32e+03	2.3e+02	2.87e+06	7.48e+03	3.8e+02
19	13C-1,2,3,7,8-PeCDF	4.31e+06	2.16e+02	2.0e+04	2.81e+06	1.92e+02	1.5e+04
20	13C-2,3,4,7,8-PeCDF	4.49e+06	2.16e+02	2.1e+04	2.87e+06	1.92e+02	1.5e+04
21	13C-1,2,3,4,7,8-HxCDF	2.33e+06	7.56e+02	3.1e+03	4.40e+06	1.30e+03	3.4e+03
22	13C-1,2,3,6,7,8-HxCDF	2.52e+06	7.56e+02	3.3e+03	4.75e+06	1.30e+03	3.7e+03
23	13C-2,3,4,6,7,8-HxCDF	2.52e+06	7.56e+02	3.3e+03	4.68e+06	1.30e+03	3.6e+03
24	13C-1,2,3,7,8,9-HxCDF	2.13e+06	7.56e+02	2.8e+03	3.96e+06	1.30e+03	3.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.65e+06	7.84e+02	2.1e+03	3.51e+06	1.47e+03	2.4e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.19e+06	7.84e+02	1.5e+03	2.61e+06	1.47e+03	1.8e+03
27	13C-2,3,7,8-TCDD	1.07e+06	9.18e+03	1.2e+02	1.37e+06	3.53e+03	3.9e+02
28	13C-1,2,3,7,8-PeCDD	3.35e+06	2.52e+02	1.3e+04	2.20e+06	6.92e+02	3.2e+03
29	13C-1,2,3,4,7,8-HxCDD	3.21e+06	8.76e+02	3.7e+03	2.57e+06	2.08e+02	1.2e+04
30	13C-1,2,3,6,7,8-HxCDD	2.92e+06	8.76e+02	3.3e+03	2.34e+06	2.08e+02	1.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	2.97e+06	3.68e+02	8.1e+03	2.75e+06	2.40e+02	1.1e+04
32	13C-OCDD	1.70e+06	6.16e+02	2.8e+03	1.89e+06	3.04e+02	6.2e+03
33	13C-1,2,3,4-TCDD	2.17e+06	9.18e+03	2.4e+02	2.82e+06	3.53e+03	8.0e+02
34	13C-1,2,3,7,8,9-HxCDD	4.15e+06	8.76e+02	4.7e+03	3.40e+06	2.08e+02	1.6e+04
35	37Cl-2,3,7,8-TCDD	1.49e+06	9.32e+02	1.6e+03			

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Peak List Summary

CLIENT ID.
METHOD BLANK

Entry: 41 Totals Name: Total Hexa-Furans

Run: 10 File: P616378 Sample:1 Injection:1 Function:3

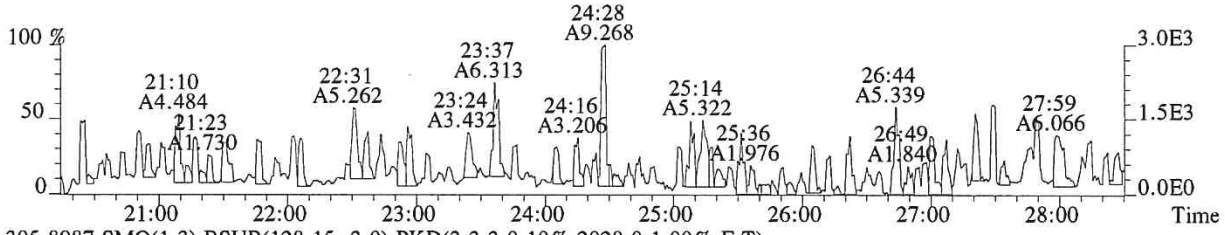
Acquired: 8-JAN-19 13:46:05 Processed: 9-JAN-19 08:58:05

Mass: 373.8210 375.8180 Tot Response: 1.16e+01 RRF: 1.324

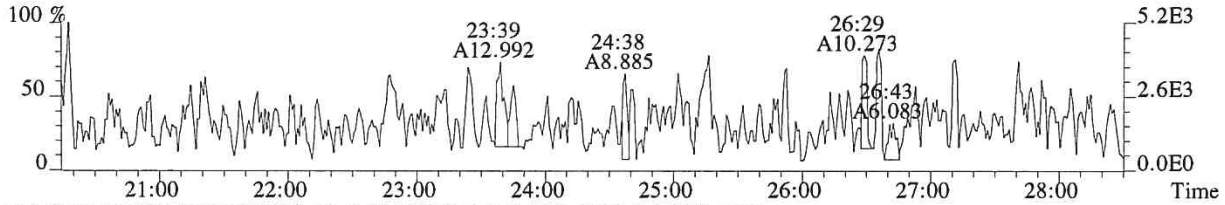
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	35:49	6.48e+00	5.10e+00 1.27	yes	1.16e+01	1,2,3,7,8,9-HxCDF	n	n

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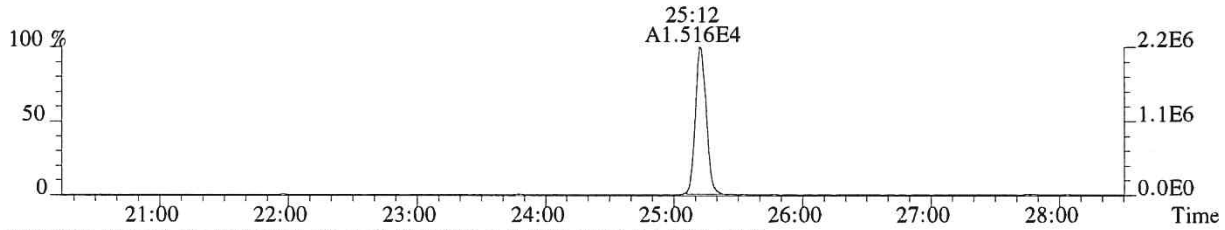
File:P616378 #1-587 Acq: 8-JAN-2019 13:46:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,420.0,1.00%,F,T)



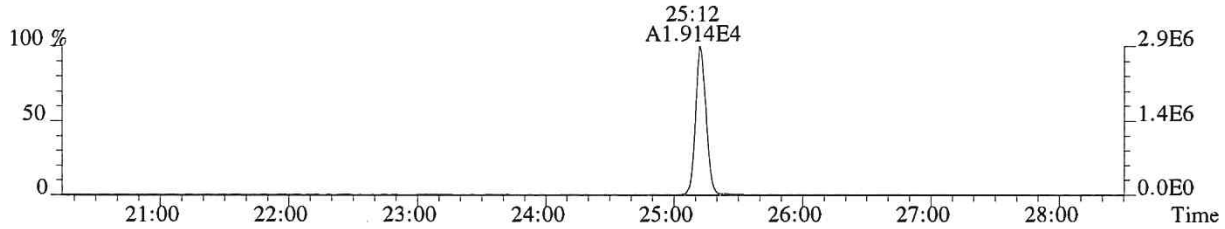
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2028.0,1.00%,F,T)



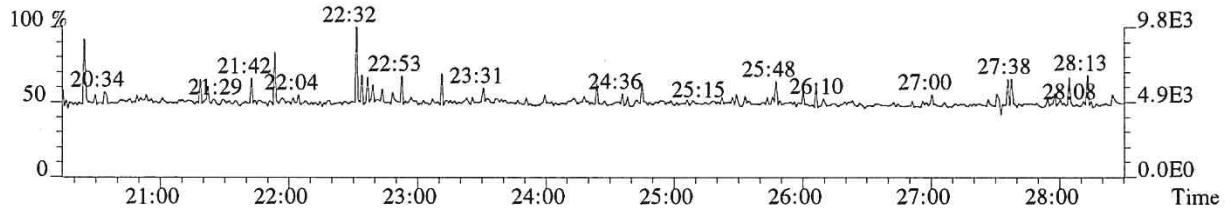
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9320.0,1.00%,F,T)



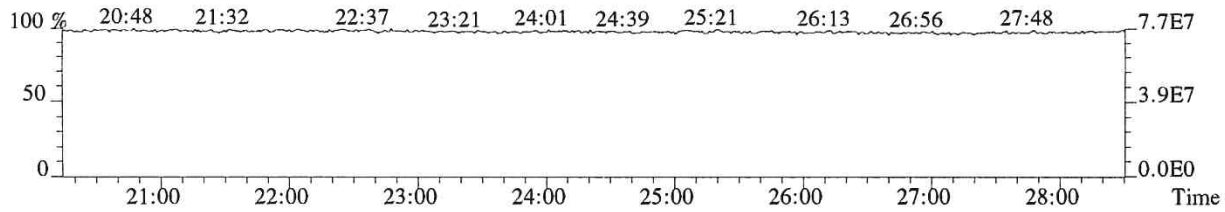
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7484.0,1.00%,F,T)



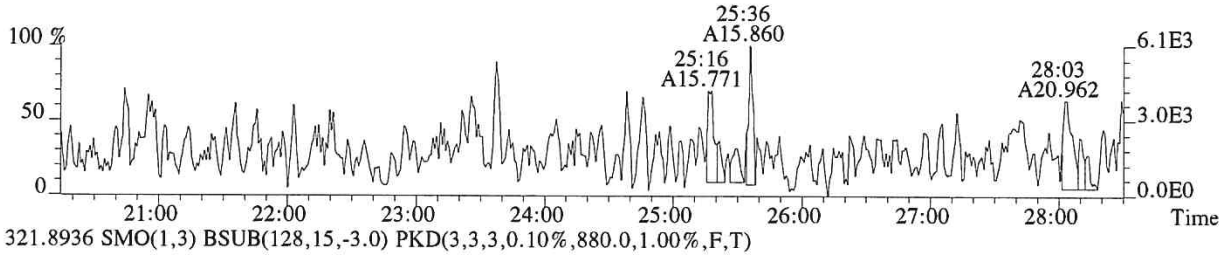
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



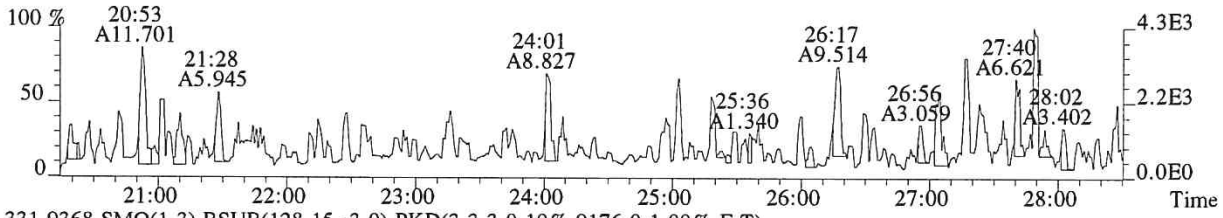
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



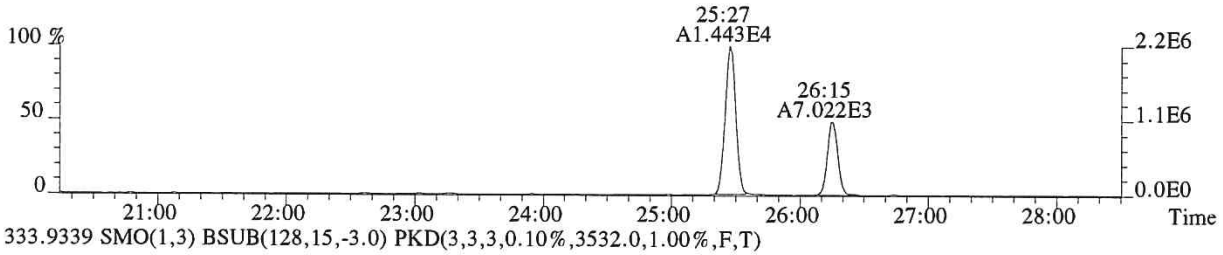
File:P616378 #1-587 Acq: 8-JAN-2019 13:46:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2144.0,1.00%,F,T)



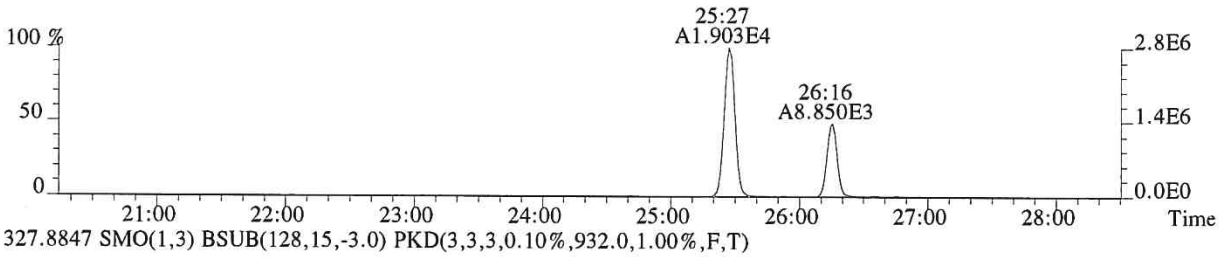
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,880.0,1.00%,F,T)



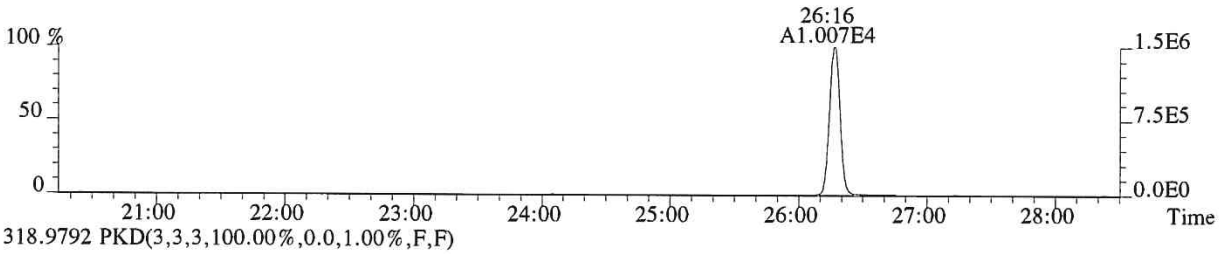
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9176.0,1.00%,F,T)



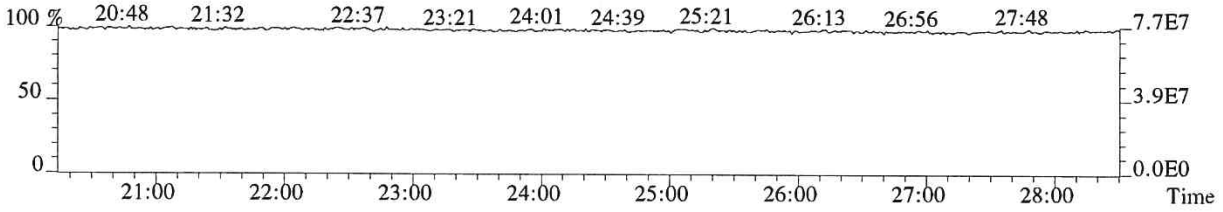
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3532.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,932.0,1.00%,F,T)

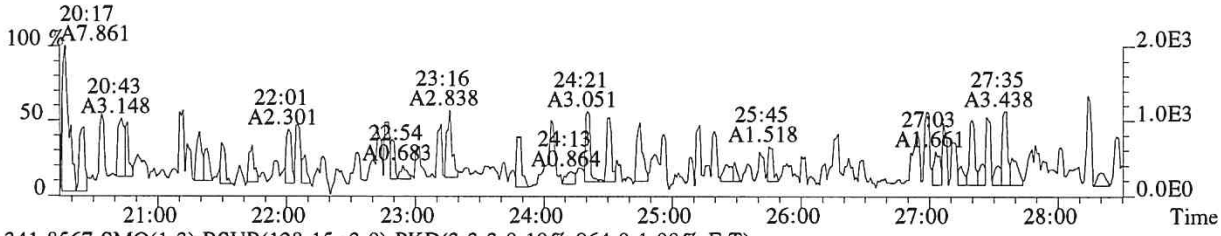


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

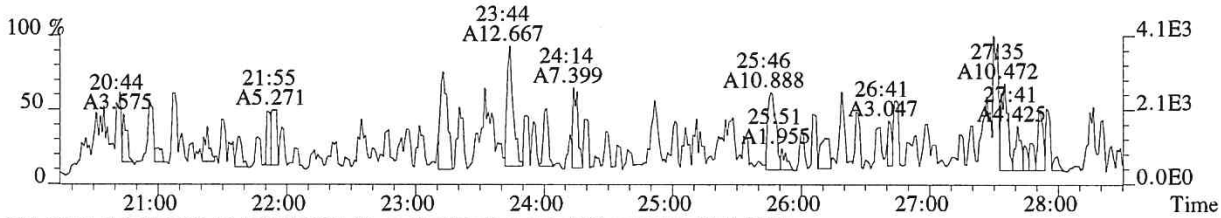


017602

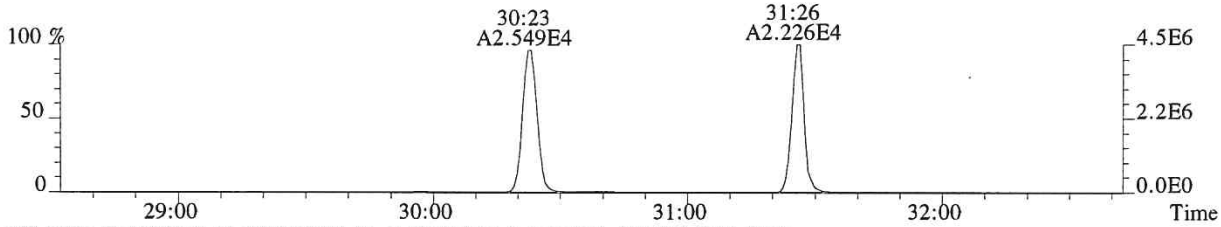
File:P616378 #1-587 Acq: 8-JAN-2019 13:46:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,396.0,1.00%,F,T)



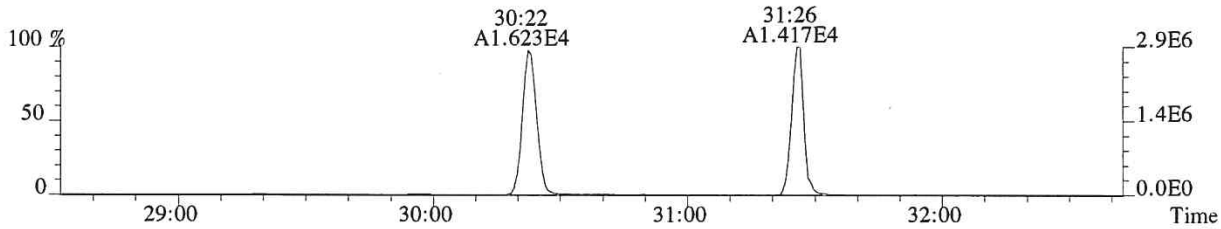
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,964.0,1.00%,F,T)



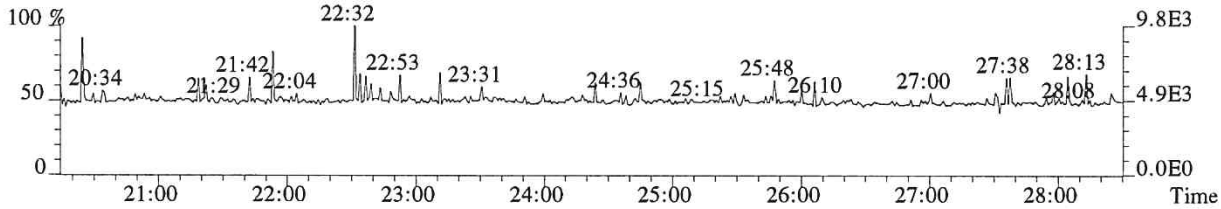
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,216.0,1.00%,F,T)



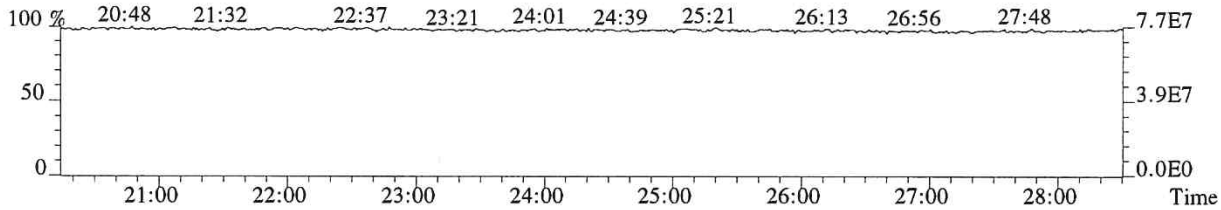
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,192.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

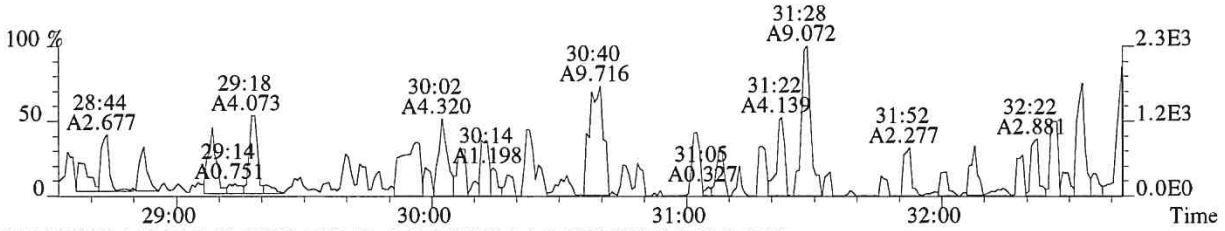


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

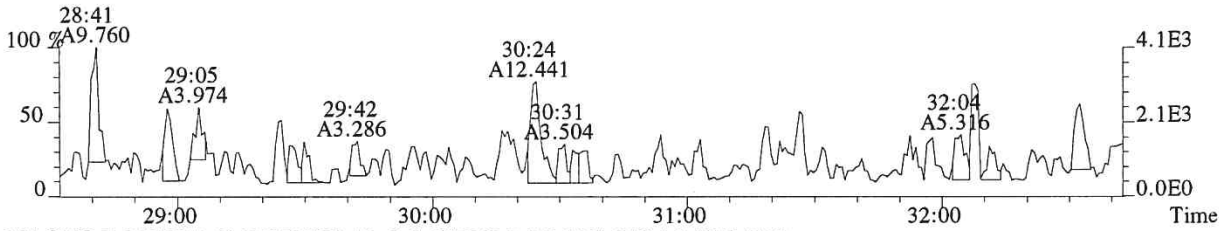


017603

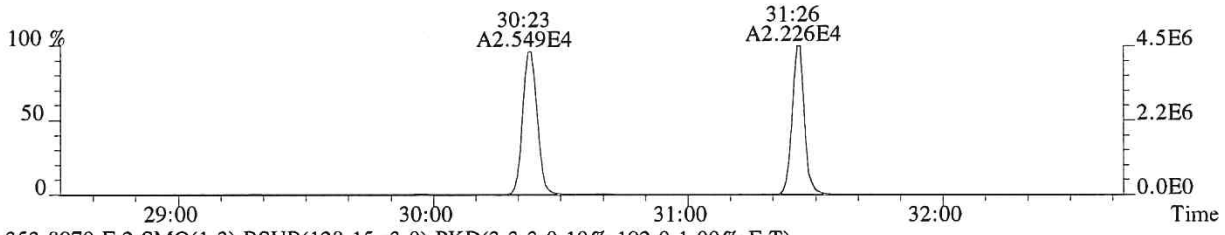
File:P616378 #1-376 Acq: 8-JAN-2019 13:46:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,168.0,1.00%,F,T)



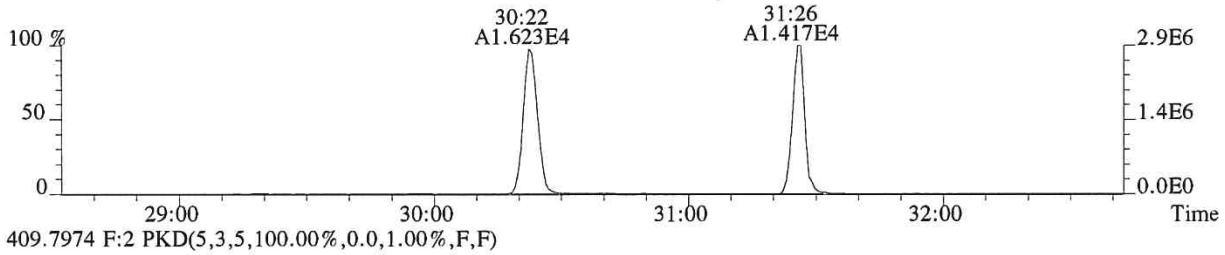
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,972.0,1.00%,F,T)



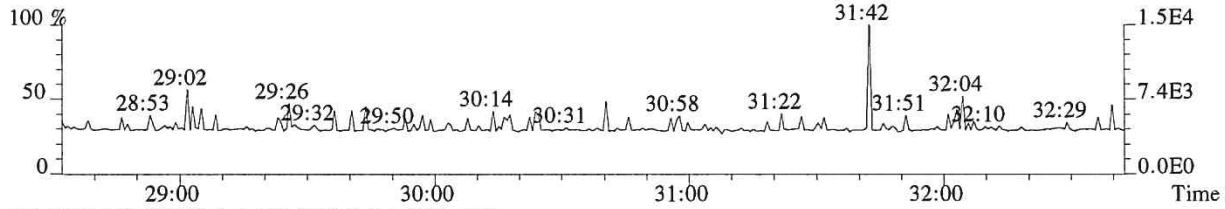
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,216.0,1.00%,F,T)



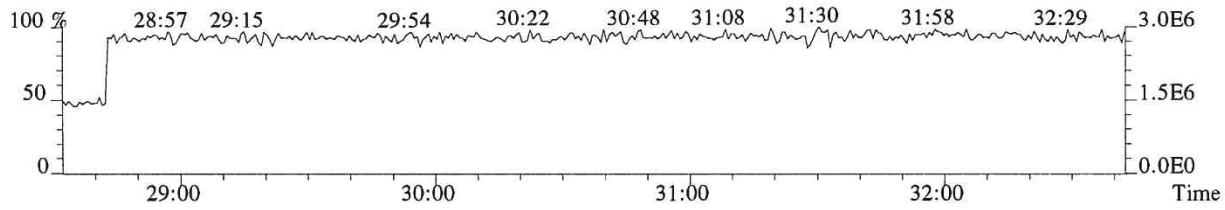
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,192.0,1.00%,F,T)



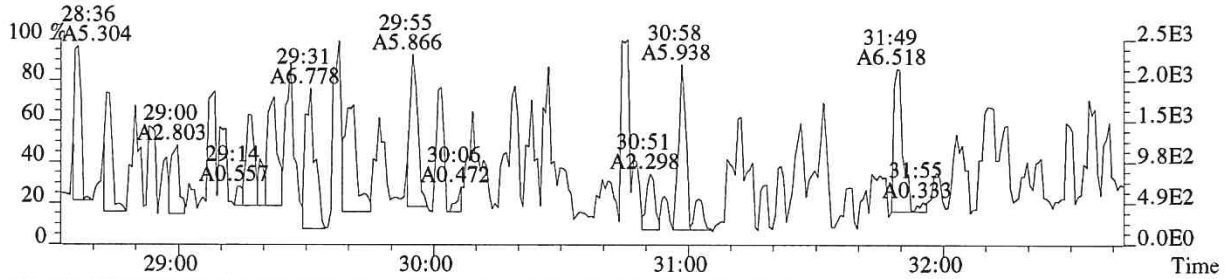
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



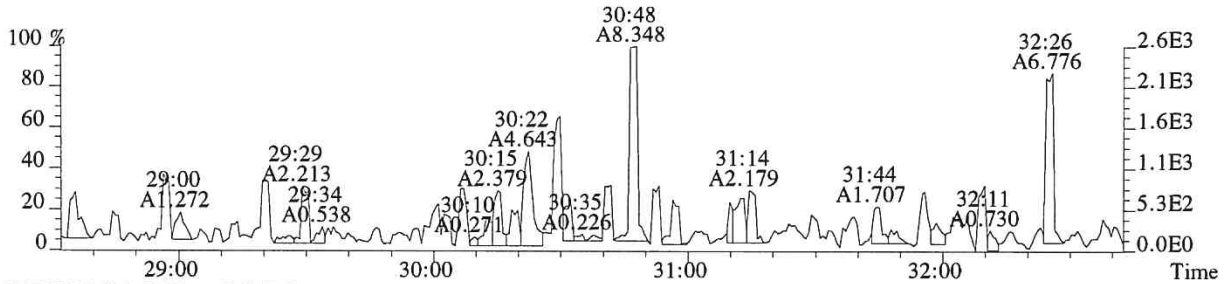
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



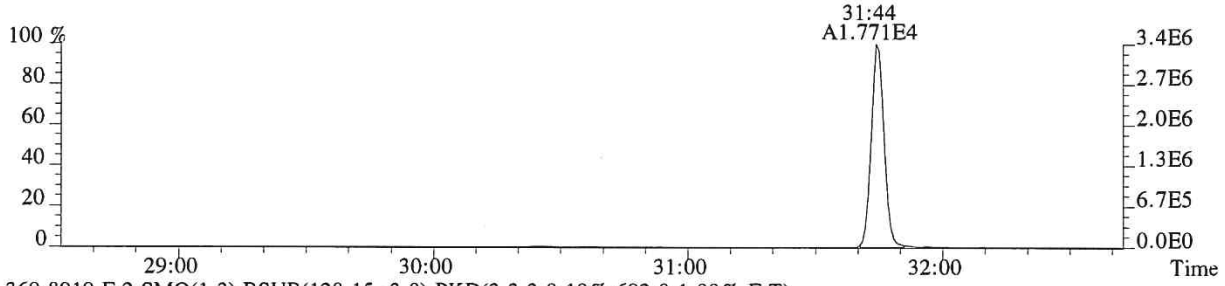
File:P616378 #1-376 Acq: 8-JAN-2019 13:46:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,848.0,1.00%,F,T)



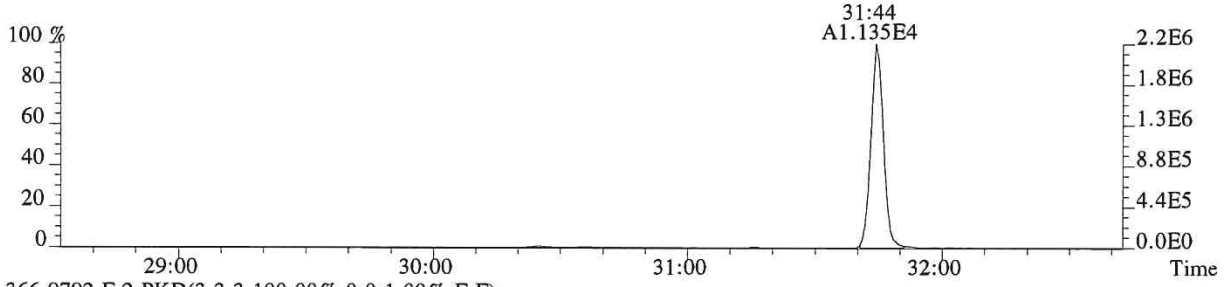
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,248.0,1.00%,F,T)



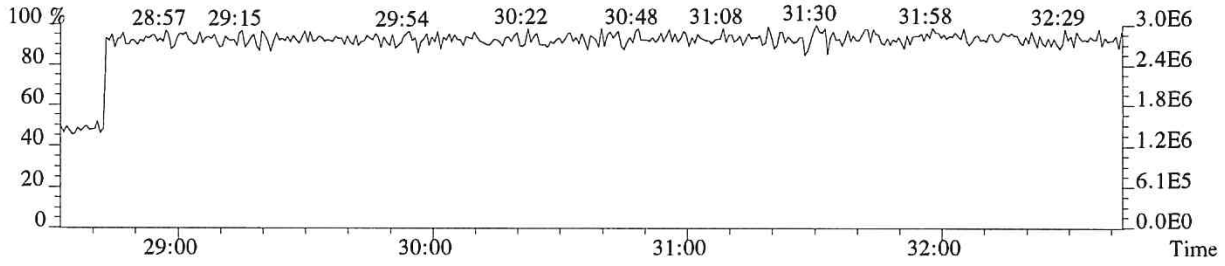
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,252.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,692.0,1.00%,F,T)



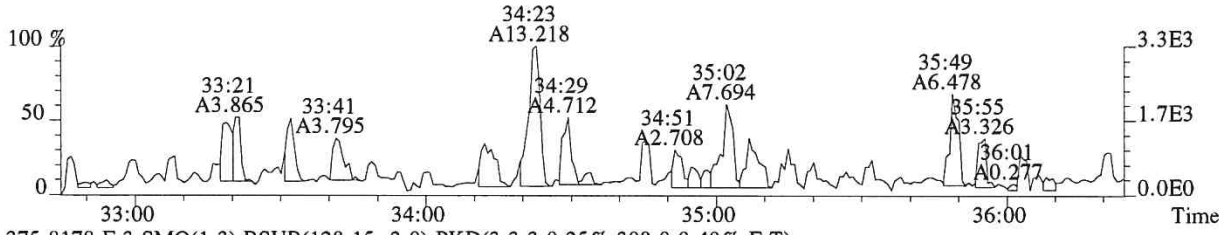
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



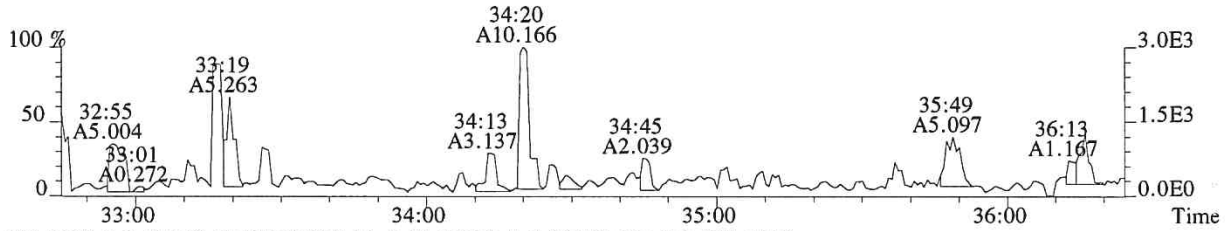
017605

File:P616378 #1-330 Acq: 8-JAN-2019 13:46:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB

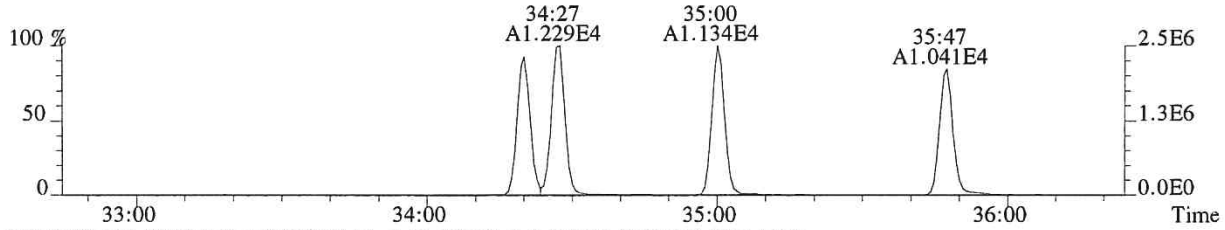
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,420.0,0.40%,F,T)



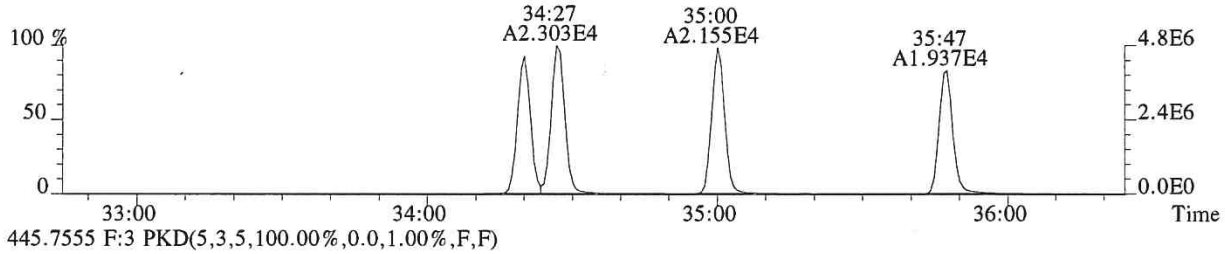
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,308.0,0.40%,F,T)



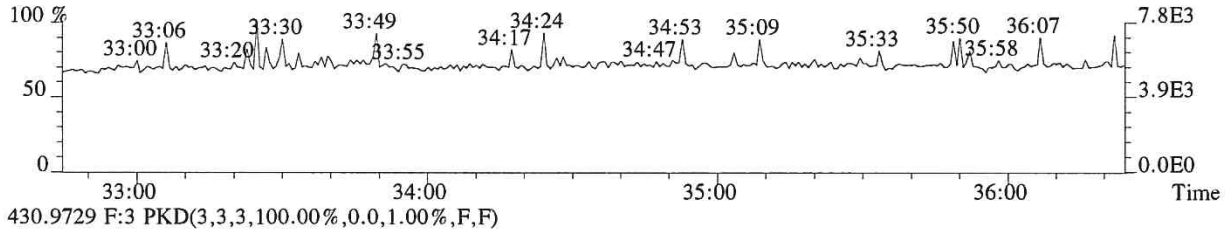
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,756.0,0.40%,F,T)



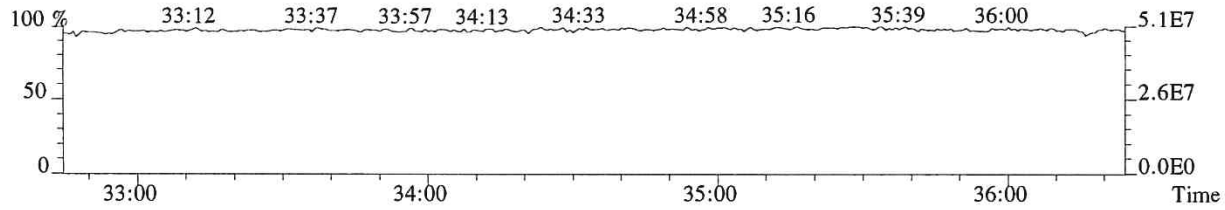
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1300.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

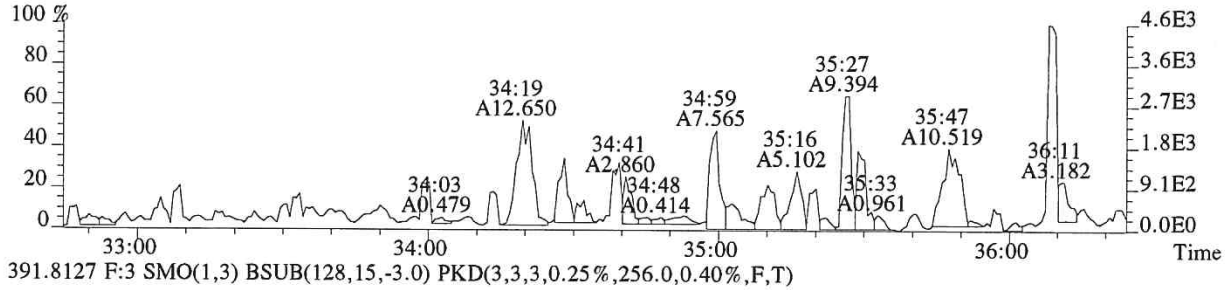


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

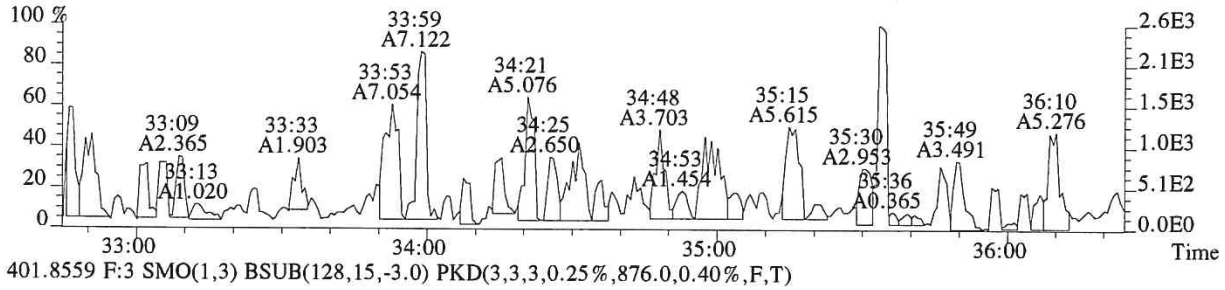


017606

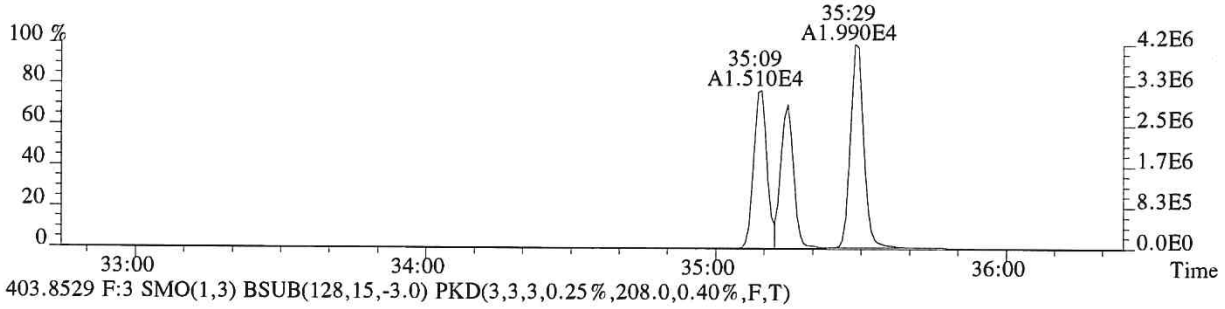
File:P616378 #1-330 Acq: 8-JAN-2019 13:46:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,268.0,0.40%,F,T)



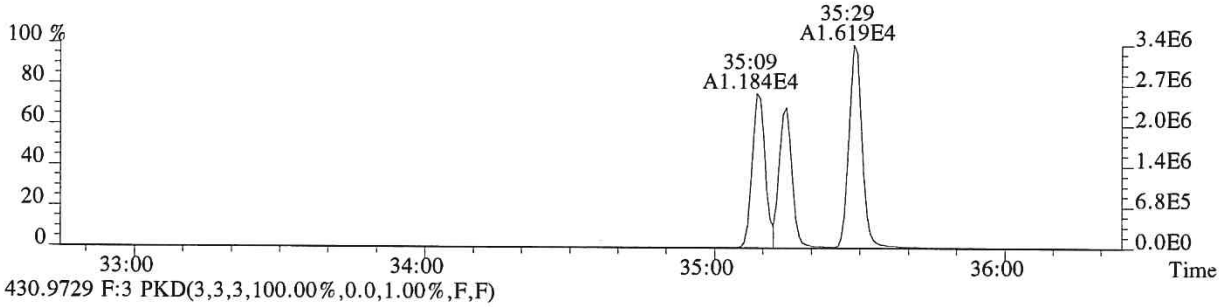
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,256.0,0.40%,F,T)



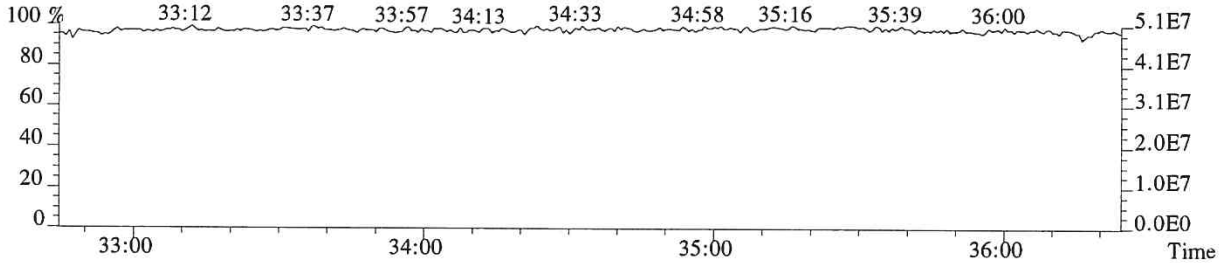
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,876.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,208.0,0.40%,F,T)

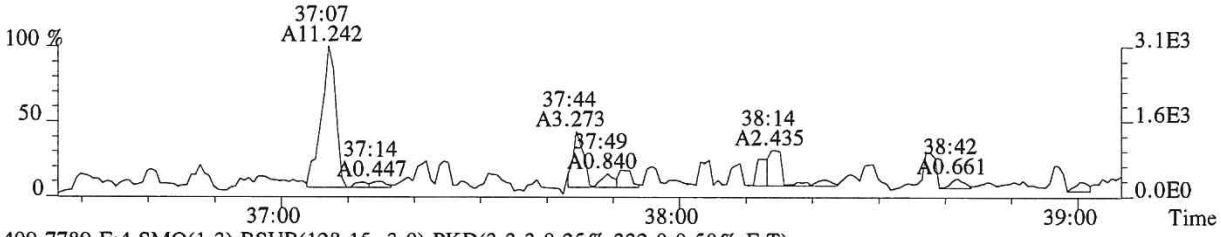


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

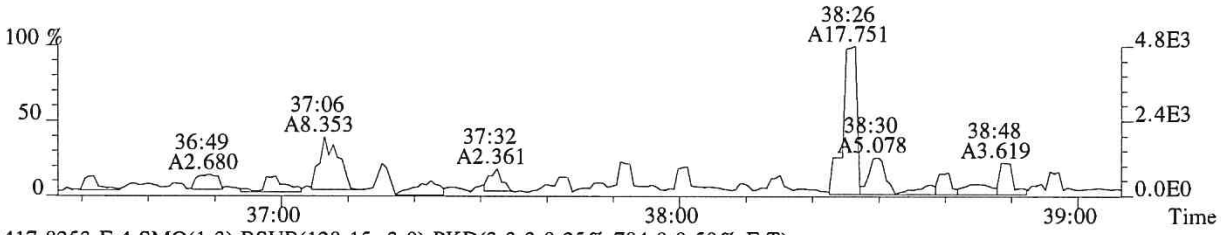


017607

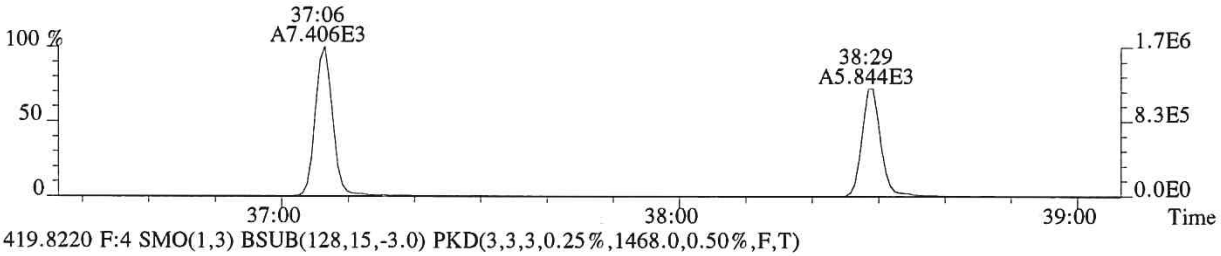
File:P616378 #1-241 Acq: 8-JAN-2019 13:46:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,372.0,0.50%,F,T)



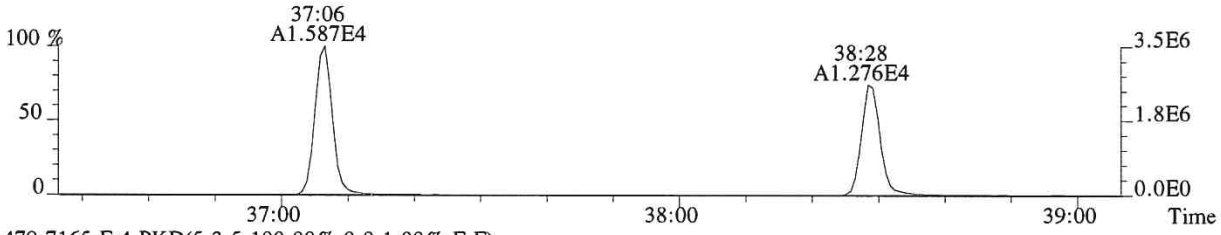
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,332.0,0.50%,F,T)



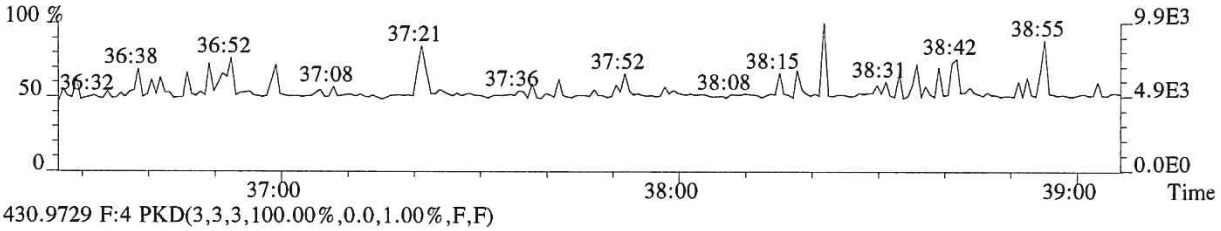
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,784.0,0.50%,F,T)



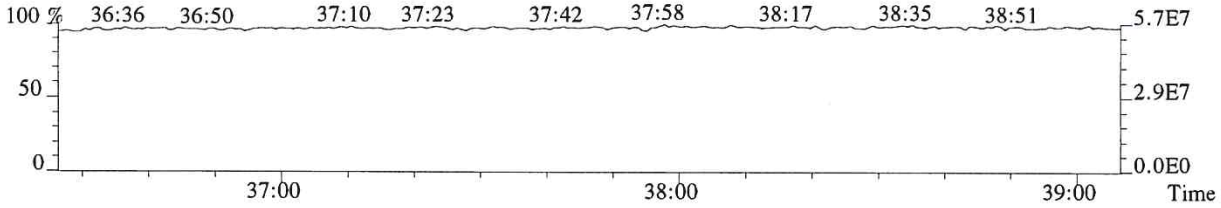
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1468.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

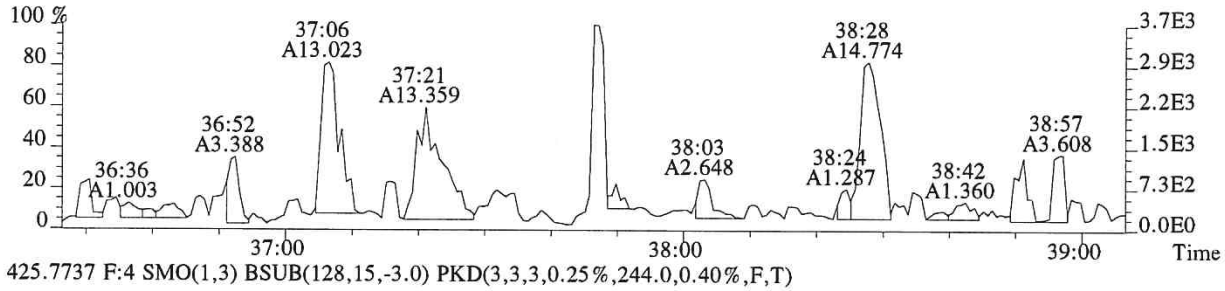


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

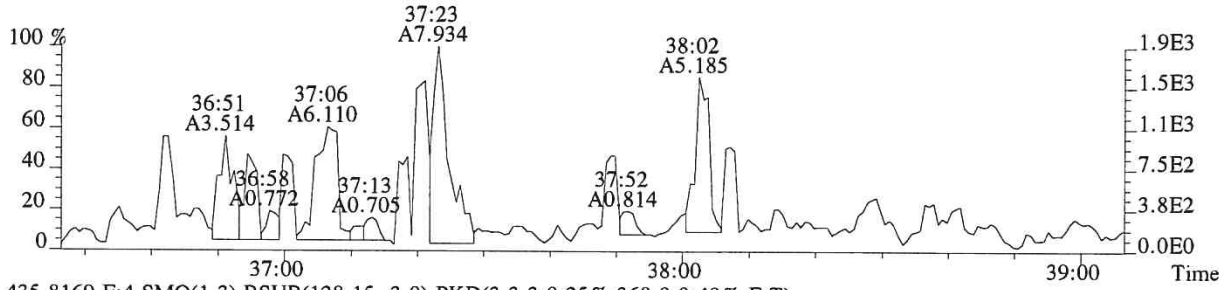


017608

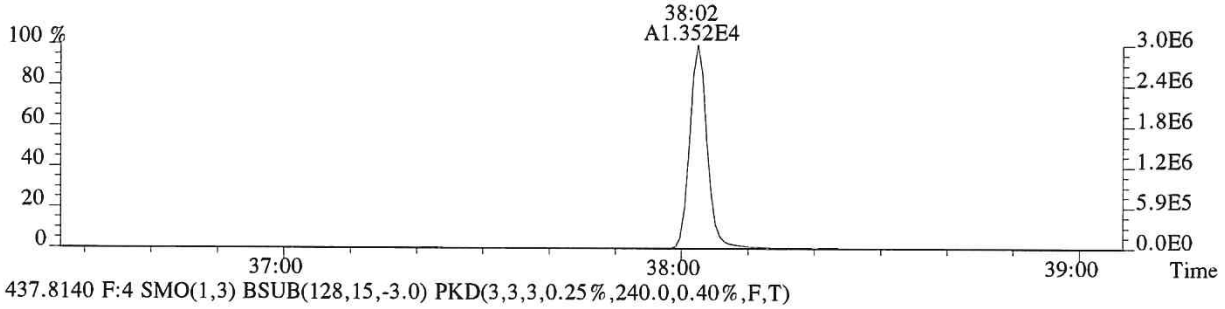
File:P616378 #1-241 Acq: 8-JAN-2019 13:46:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,372.0,0.40%,F,T)



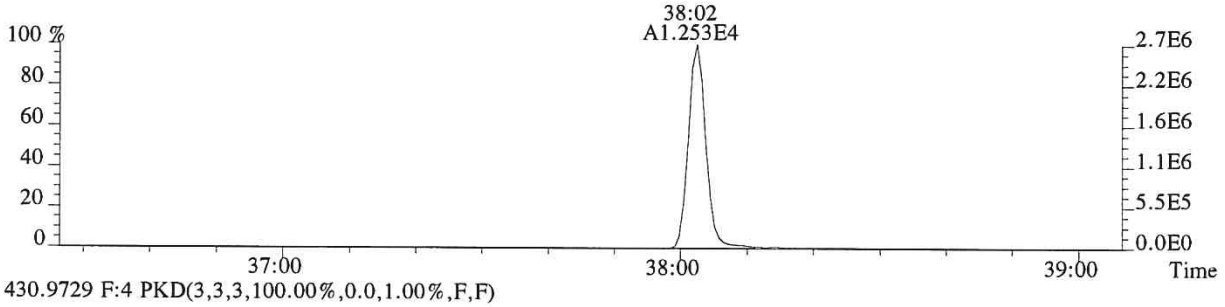
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,244.0,0.40%,F,T)



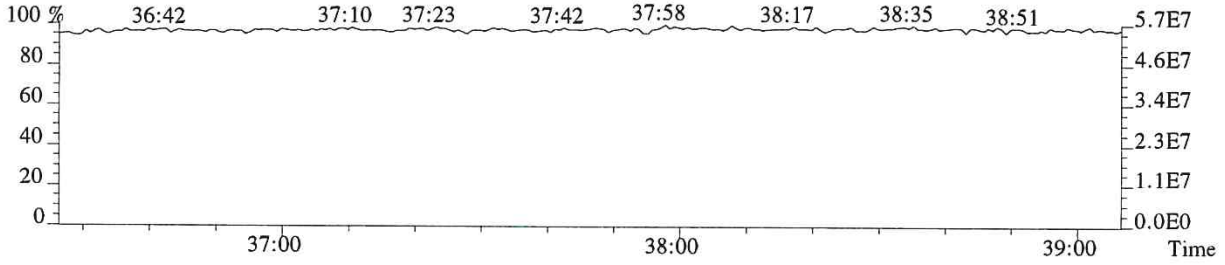
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,368.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,240.0,0.40%,F,T)

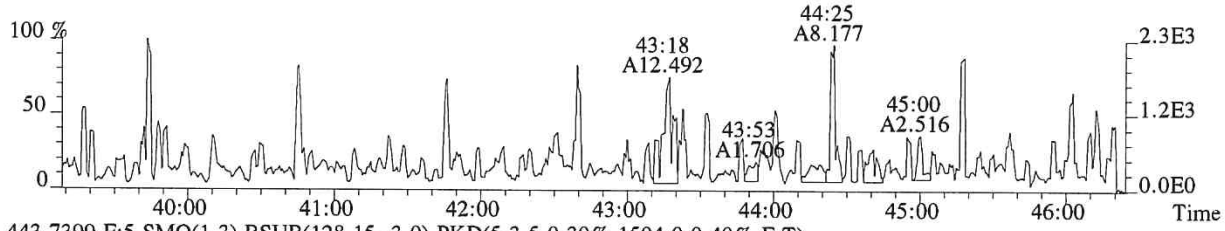


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

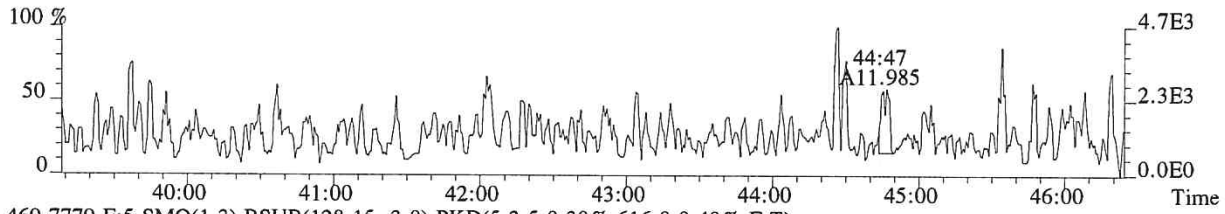


017609

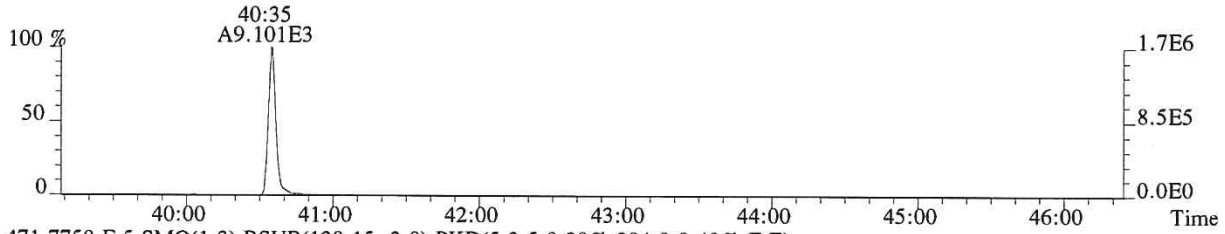
File:P616378 #1-654 Acq: 8-JAN-2019 13:46:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,340.0,0.40%,F,T)



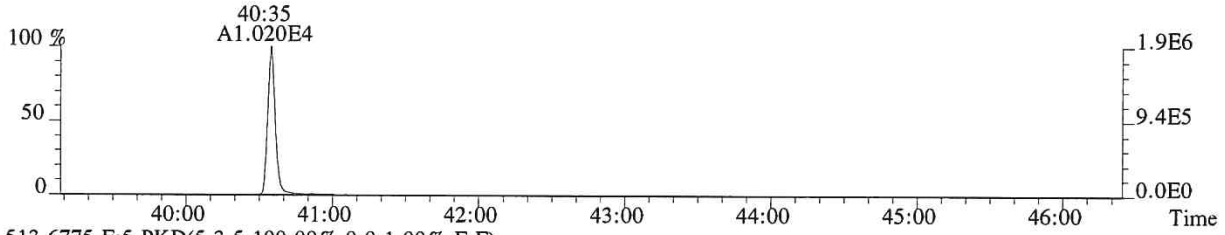
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1504.0,0.40%,F,T)



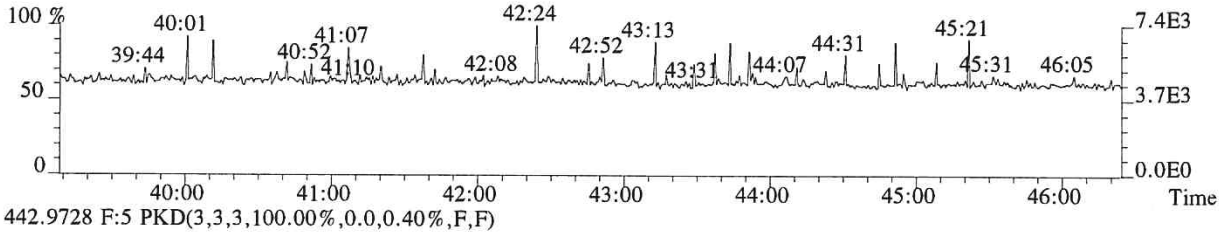
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,616.0,0.40%,F,T)



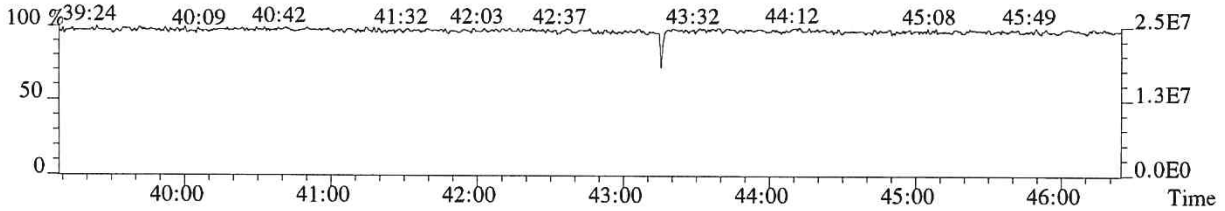
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,304.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

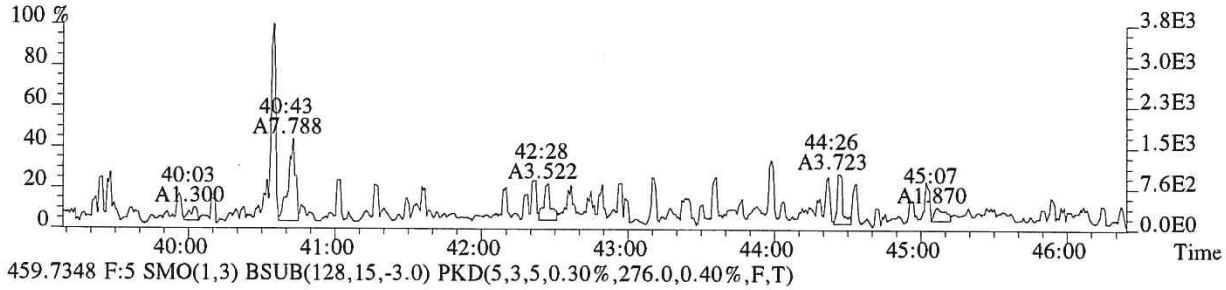


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

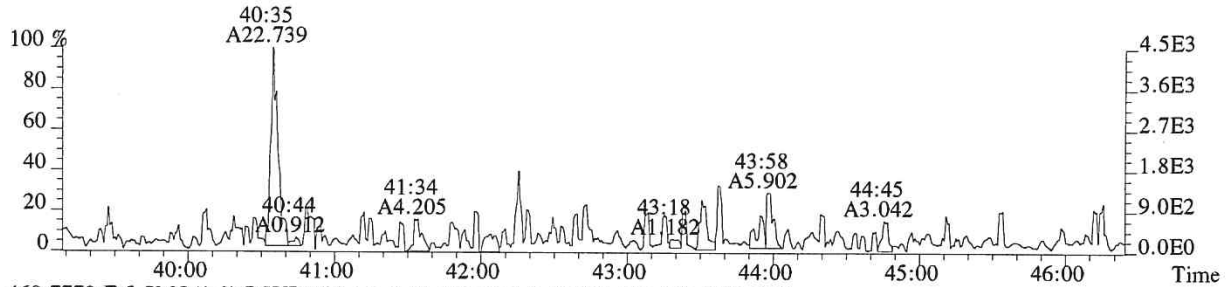


017610

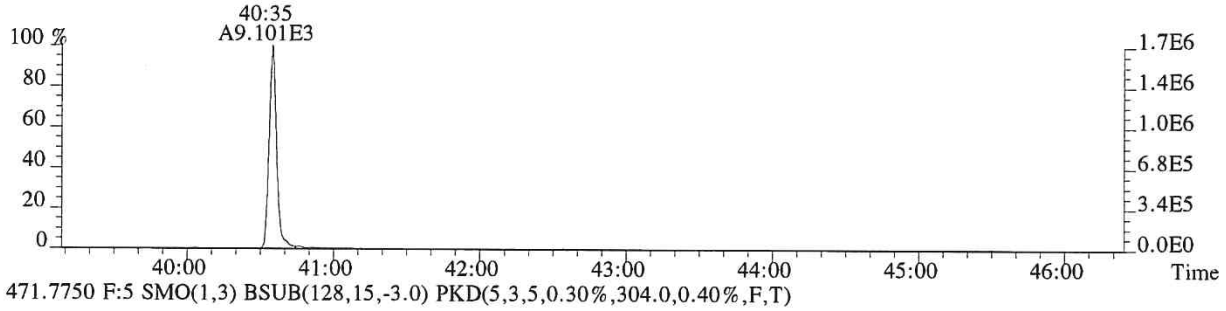
File:P616378 #1-654 Acq: 8-JAN-2019 13:46:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,312.0,0.40%,F,T)



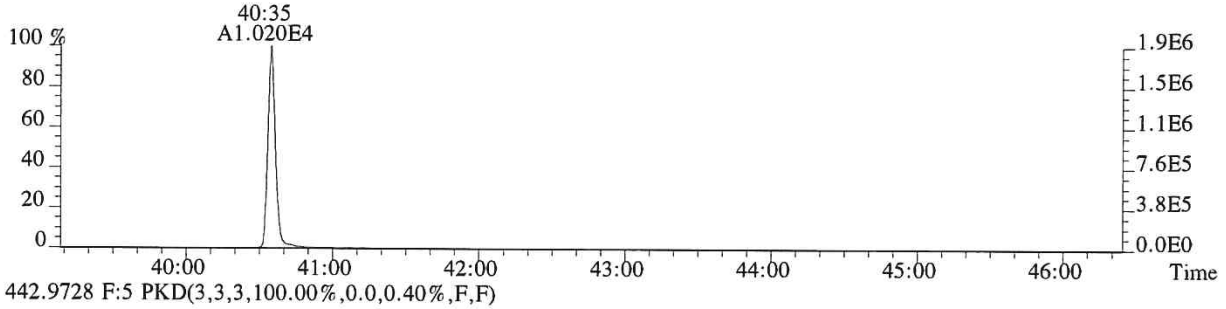
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,276.0,0.40%,F,T)



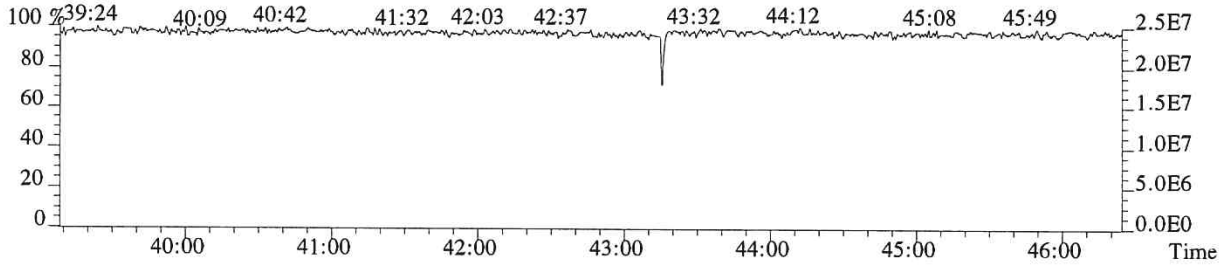
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,616.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,304.0,0.40%,F,T)

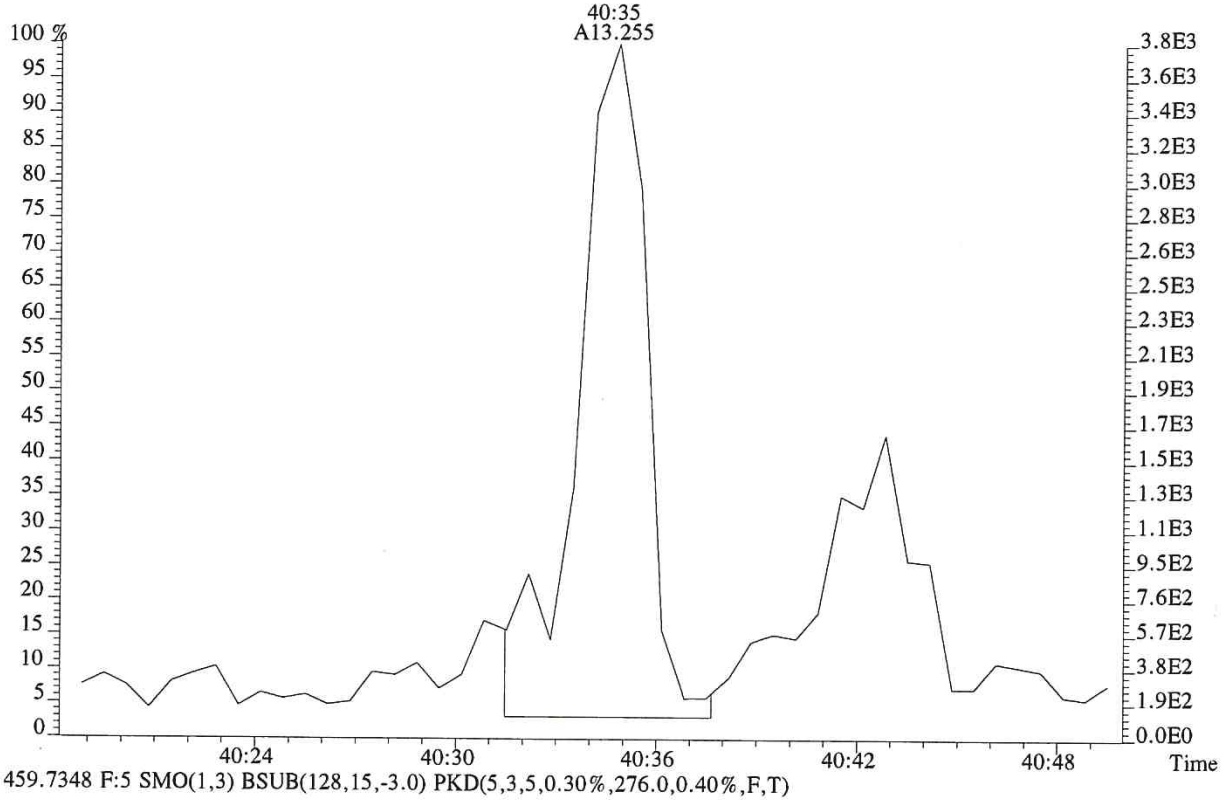


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

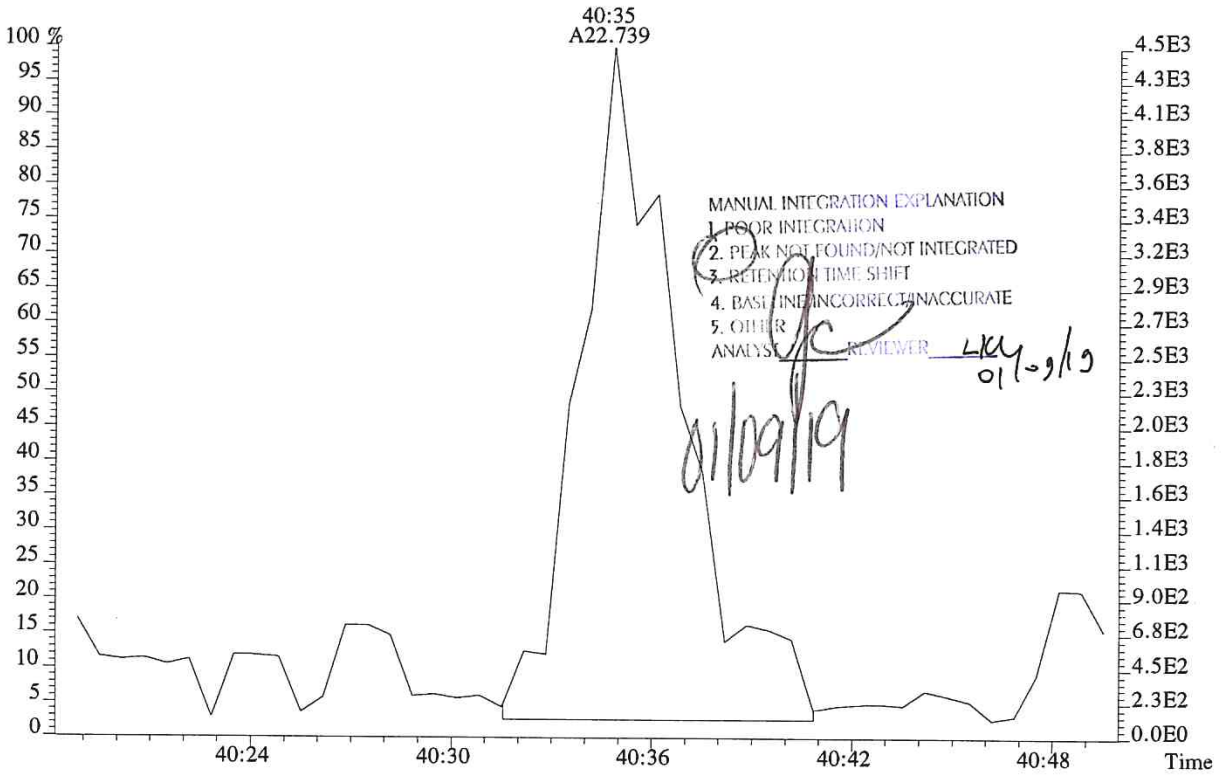


017611

File:P616378 #1-654 Acq: 8-JAN-2019 13:46:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:MB
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,312.0,0.40%,F,T)



459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,276.0,0.40%,F,T)



MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST _____ REVIEWER LKY 01-9/19

01/09/19

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
LCS

Run #20 Filename P616388 Samp: 1 Inj: 1 Acquired: 8-JAN-19 21:59:29
Processed: 9-JAN-19 08:58:23 Sample ID: EQ1900001-02

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:15	1.806e+03	2.142e+03	0.84	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:24	1.366e+04	8.700e+03	1.57	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:28	1.296e+04	8.481e+03	1.53	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	1.152e+04	9.251e+03	1.24	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:29	1.281e+04	9.998e+03	1.28	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	1.145e+04	8.929e+03	1.28	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:49	1.014e+04	7.950e+03	1.28	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	8.215e+03	8.027e+03	1.02	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	6.412e+03	5.760e+03	1.11	yes	no	1.463
10	Unk	OCDF	40:48	6.798e+03	7.978e+03	0.85	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:17	1.119e+03	1.442e+03	0.78	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:46	8.668e+03	5.640e+03	1.54	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:11	6.977e+03	5.379e+03	1.30	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:16	7.771e+03	6.040e+03	1.29	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:31	7.451e+03	6.164e+03	1.21	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	5.007e+03	4.739e+03	1.06	yes	no	1.112
17	Unk	OCDD	40:38	5.519e+03	5.961e+03	0.93	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:13	1.657e+04	2.025e+04	0.82	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:24	2.714e+04	1.704e+04	1.59	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	2.604e+04	1.576e+04	1.65	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:21	1.102e+04	2.122e+04	0.52	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:28	1.333e+04	2.507e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	1.166e+04	2.250e+04	0.52	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	1.038e+04	1.974e+04	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	7.256e+03	1.592e+04	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	5.709e+03	1.290e+04	0.44	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:16	7.315e+03	9.662e+03	0.76	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:45	1.788e+04	1.153e+04	1.55	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:10	1.462e+04	1.115e+04	1.31	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	1.412e+04	1.124e+04	1.26	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:04	1.263e+04	1.220e+04	1.04	yes	no	0.857
32	IS	13C-OCDD	40:37	9.648e+03	1.072e+04	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:28	1.782e+04	2.237e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:30	2.043e+04	1.647e+04	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:17	1.150e+04				no	1.086

$$\text{OCDD} = \frac{(5.519e+03 + 5.961e+03) \times 4000\ \text{pg} \times 1}{(9.648e+03 + 1.072e+04) \times \quad \text{g} \times \quad / 100 \times 1.157} =$$

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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
LCS

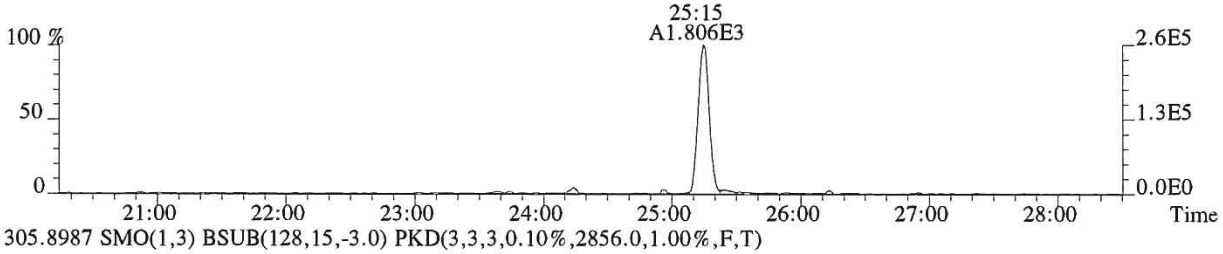
Run #20 Filename P616388 Samp: 1 Inj: 1 Acquired: 8-JAN-19 21:59:29
Processed: 9-JAN-19 08:58:23 LAB. ID: EQ1900001-02

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.58e+05	5.44e+02	4.7e+02	2.92e+05	2.86e+03	1.0e+02
2	1,2,3,7,8-PeCDF	2.24e+06	2.28e+02	9.8e+03	1.47e+06	1.86e+03	7.9e+02
3	2,3,4,7,8-PeCDF	2.35e+06	2.28e+02	1.0e+04	1.58e+06	1.86e+03	8.5e+02
4	1,2,3,4,7,8-HxCDF	2.38e+06	3.36e+02	7.1e+03	1.91e+06	2.68e+02	7.1e+03
5	1,2,3,6,7,8-HxCDF	2.47e+06	3.36e+02	7.3e+03	1.94e+06	2.68e+02	7.2e+03
6	2,3,4,6,7,8-HxCDF	2.22e+06	3.36e+02	6.6e+03	1.77e+06	2.68e+02	6.6e+03
7	1,2,3,7,8,9-HxCDF	1.88e+06	3.36e+02	5.6e+03	1.50e+06	2.68e+02	5.6e+03
8	1,2,3,4,6,7,8-HpCDF	1.70e+06	1.45e+03	1.2e+03	1.65e+06	9.84e+02	1.7e+03
9	1,2,3,4,7,8,9-HpCDF	1.21e+06	1.45e+03	8.3e+02	1.14e+06	9.84e+02	1.2e+03
10	OCDF	1.10e+06	2.52e+02	4.3e+03	1.29e+06	1.82e+03	7.1e+02
11	2,3,7,8-TCDD	1.67e+05	4.63e+03	3.6e+01	2.10e+05	1.13e+03	1.9e+02
12	1,2,3,7,8-PeCDD	1.56e+06	8.60e+02	1.8e+03	1.03e+06	4.64e+02	2.2e+03
13	1,2,3,4,7,8-HxCDD	1.49e+06	3.52e+02	4.2e+03	1.16e+06	2.48e+02	4.7e+03
14	1,2,3,6,7,8-HxCDD	1.52e+06	3.52e+02	4.3e+03	1.18e+06	2.48e+02	4.8e+03
15	1,2,3,7,8,9-HxCDD	1.47e+06	3.52e+02	4.2e+03	1.17e+06	2.48e+02	4.7e+03
16	1,2,3,4,6,7,8-HpCDD	9.65e+05	3.40e+02	2.8e+03	9.18e+05	4.80e+02	1.9e+03
17	OCDD	8.65e+05	2.64e+02	3.3e+03	9.53e+05	2.44e+02	3.9e+03
18	13C-2,3,7,8-TCDF	2.36e+06	1.79e+04	1.3e+02	2.88e+06	1.24e+04	2.3e+02
19	13C-1,2,3,7,8-PeCDF	4.42e+06	4.92e+02	9.0e+03	2.84e+06	2.80e+02	1.0e+04
20	13C-2,3,4,7,8-PeCDF	4.72e+06	4.92e+02	9.6e+03	2.84e+06	2.80e+02	1.0e+04
21	13C-1,2,3,4,7,8-HxCDF	2.35e+06	5.72e+02	4.1e+03	4.44e+06	7.24e+02	6.1e+03
22	13C-1,2,3,6,7,8-HxCDF	2.57e+06	5.72e+02	4.5e+03	4.67e+06	7.24e+02	6.4e+03
23	13C-2,3,4,6,7,8-HxCDF	2.32e+06	5.72e+02	4.0e+03	4.52e+06	7.24e+02	6.2e+03
24	13C-1,2,3,7,8,9-HxCDF	2.03e+06	5.72e+02	3.5e+03	3.74e+06	7.24e+02	5.2e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.49e+06	6.32e+02	2.4e+03	3.31e+06	5.26e+03	6.3e+02
26	13C-1,2,3,4,7,8,9-HpCDF	1.10e+06	6.32e+02	1.7e+03	2.41e+06	5.26e+03	4.6e+02
27	13C-2,3,7,8-TCDD	1.11e+06	1.02e+04	1.1e+02	1.49e+06	3.90e+03	3.8e+02
28	13C-1,2,3,7,8-PeCDD	3.25e+06	1.90e+03	1.7e+03	2.12e+06	1.52e+03	1.4e+03
29	13C-1,2,3,4,7,8-HxCDD	3.05e+06	8.92e+02	3.4e+03	2.35e+06	1.10e+03	2.1e+03
30	13C-1,2,3,6,7,8-HxCDD	2.80e+06	8.92e+02	3.1e+03	2.24e+06	1.10e+03	2.0e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.48e+06	8.12e+02	3.1e+03	2.31e+06	4.68e+02	4.9e+03
32	13C-OCDD	1.51e+06	3.48e+02	4.3e+03	1.68e+06	3.24e+02	5.2e+03
33	13C-1,2,3,4-TCDD	2.55e+06	1.02e+04	2.5e+02	3.23e+06	3.90e+03	8.3e+02
34	13C-1,2,3,7,8,9-HxCDD	3.96e+06	8.92e+02	4.4e+03	3.10e+06	1.10e+03	2.8e+03
35	37Cl-2,3,7,8-TCDD	1.75e+06	1.24e+03	1.4e+03			

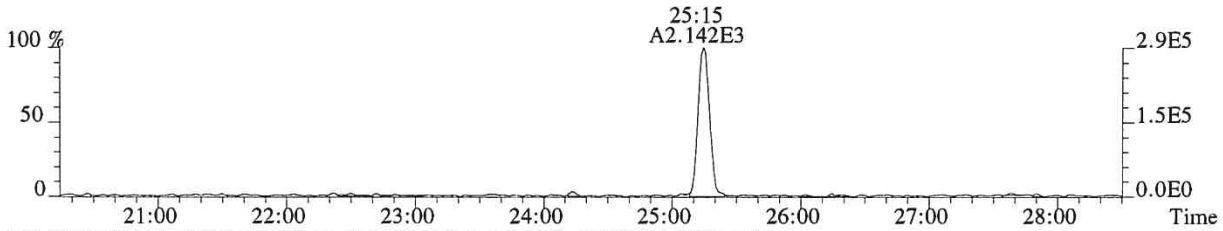
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www.alsglobal.com

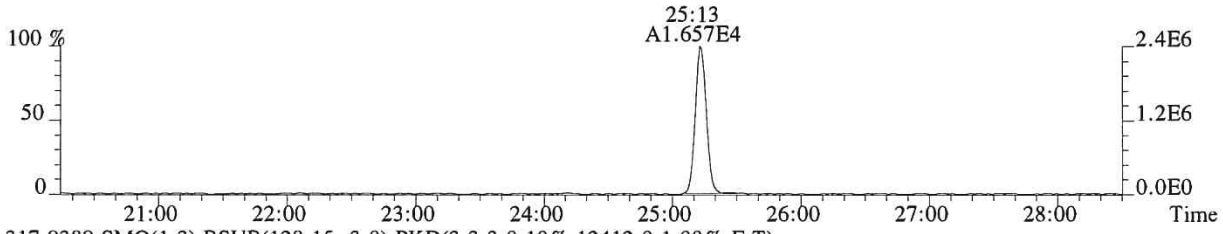
File:P616388 #1-587 Acq: 8-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,544.0,1.00%,F,T)



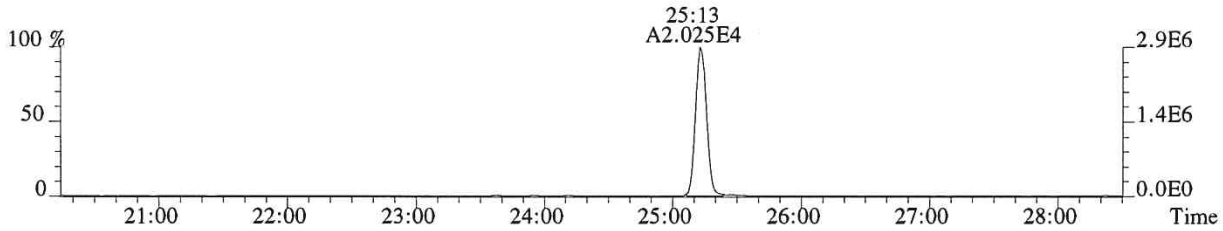
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2856.0,1.00%,F,T)



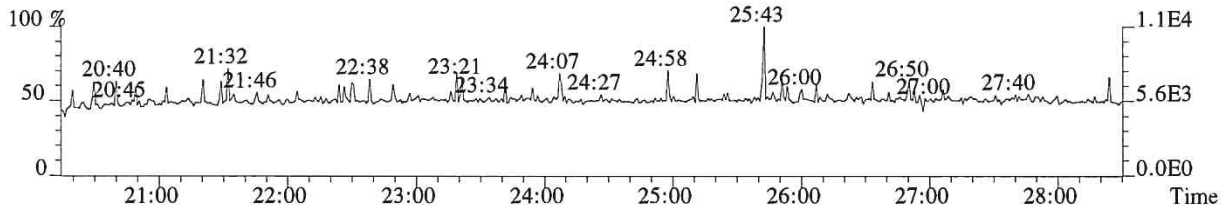
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,17900.0,1.00%,F,T)



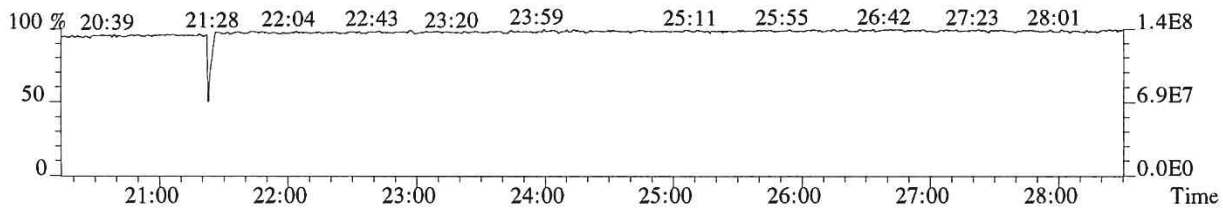
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12412.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

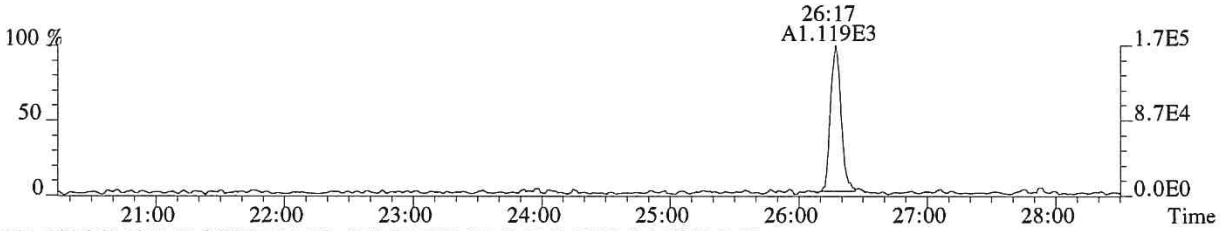


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

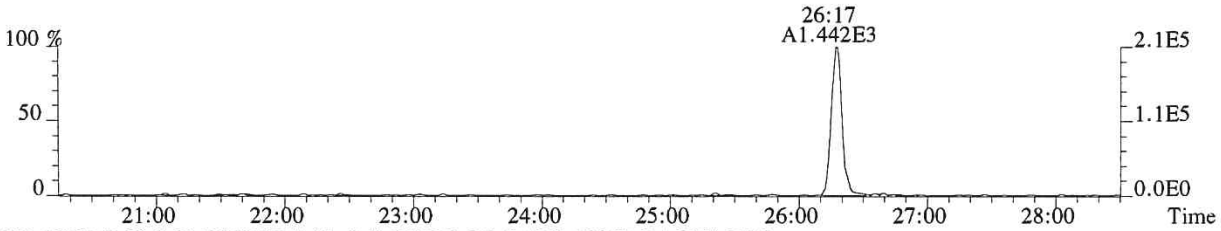


017615

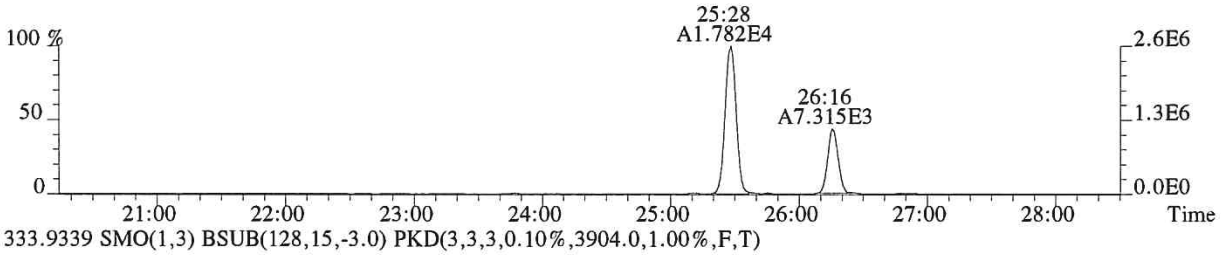
File:P616388 #1-587 Acq: 8-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4632.0,1.00%,F,T)



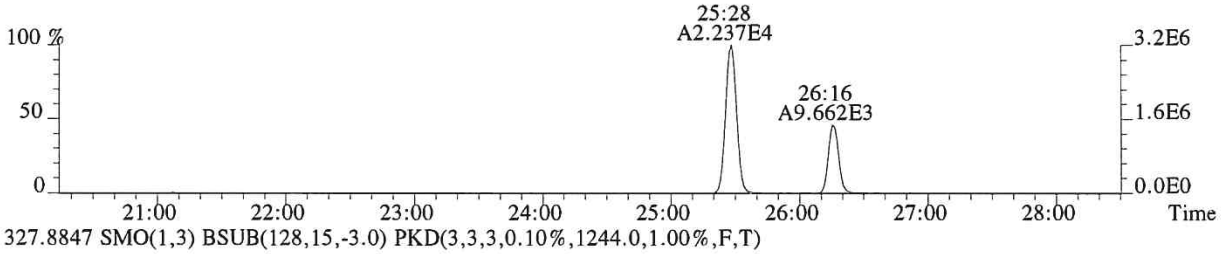
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1132.0,1.00%,F,T)



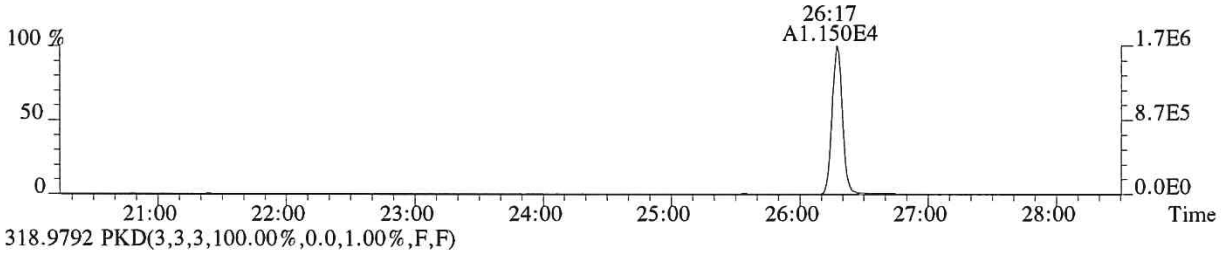
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10200.0,1.00%,F,T)



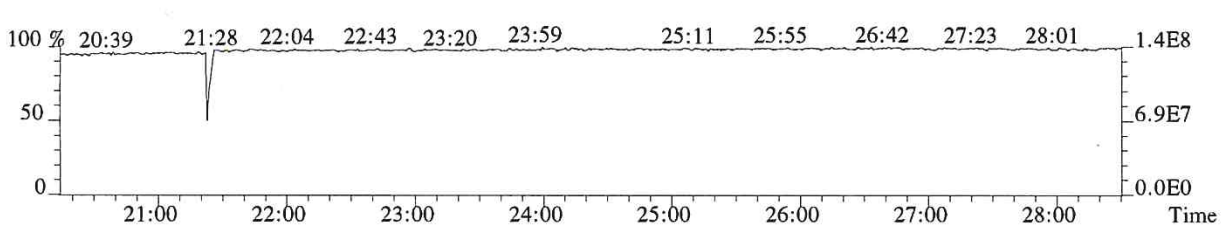
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3904.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1244.0,1.00%,F,T)

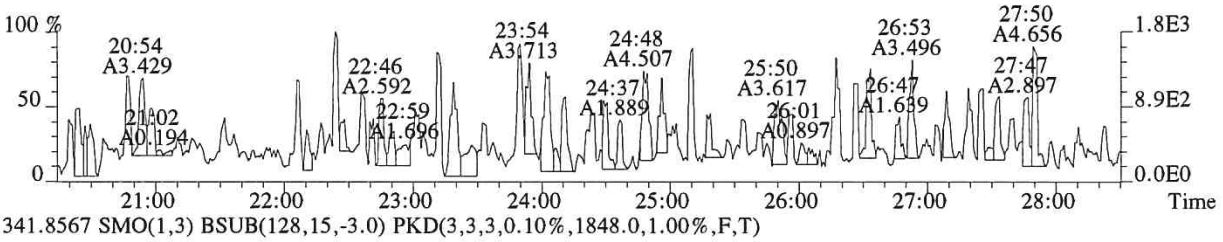


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

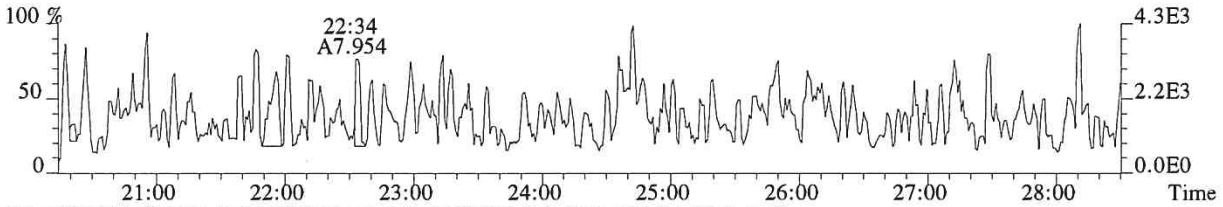


017616

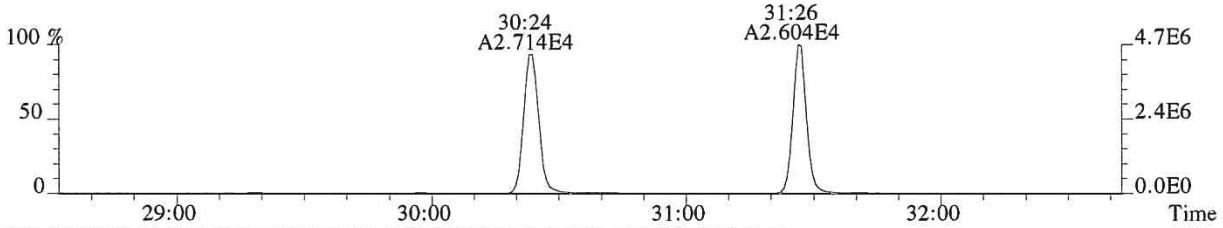
File:P616388 #1-587 Acq: 8-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,464.0,1.00%,F,T)



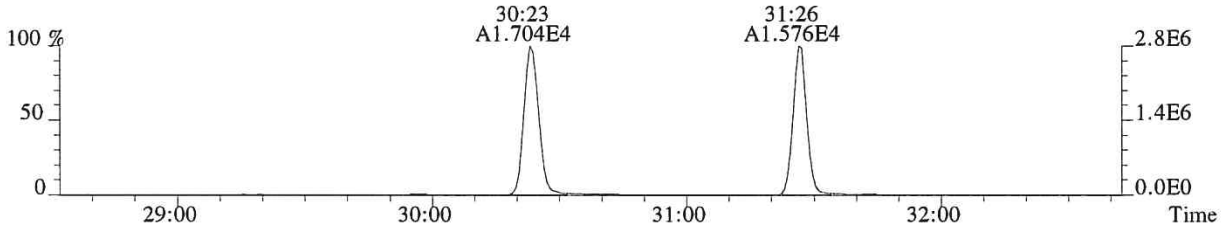
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1848.0,1.00%,F,T)



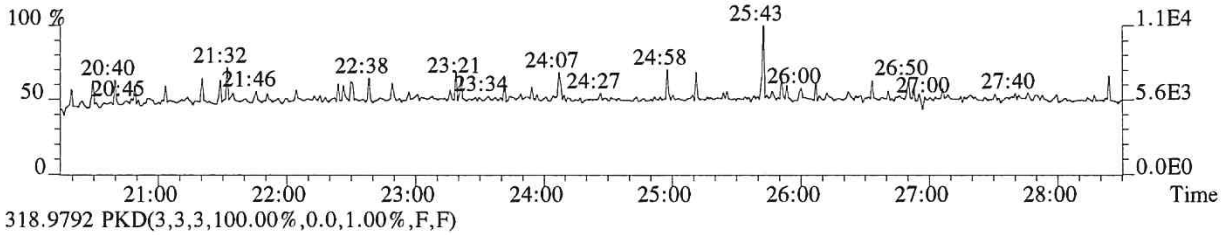
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,492.0,1.00%,F,T)



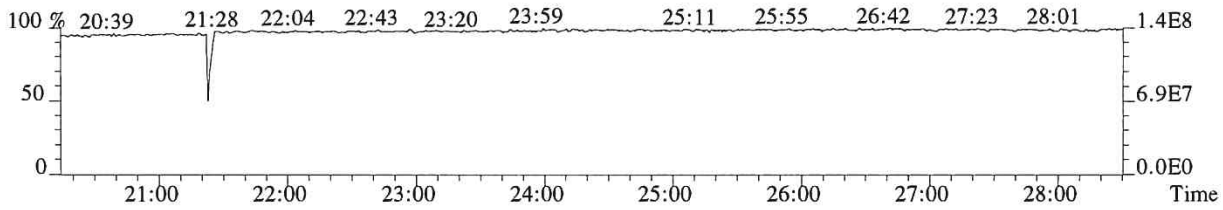
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,280.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

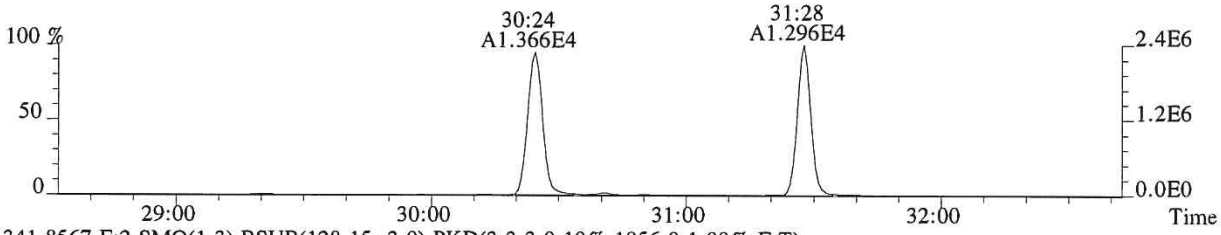


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

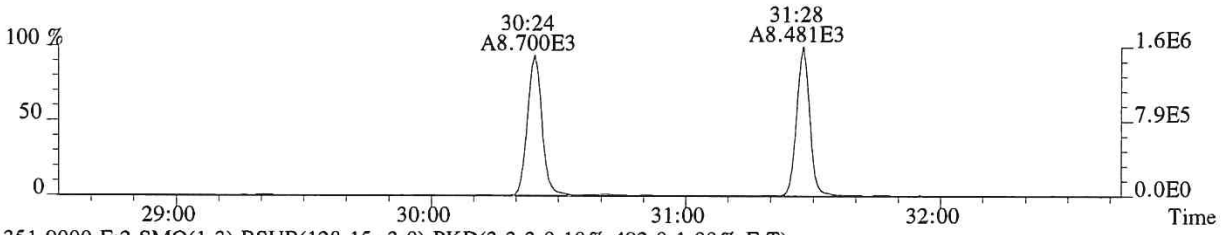


017617

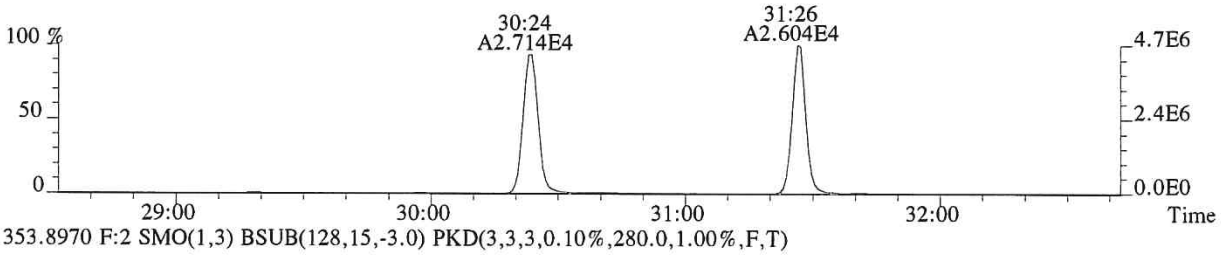
File:P616388 #1-376 Acq: 8-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,228.0,1.00%,F,T)



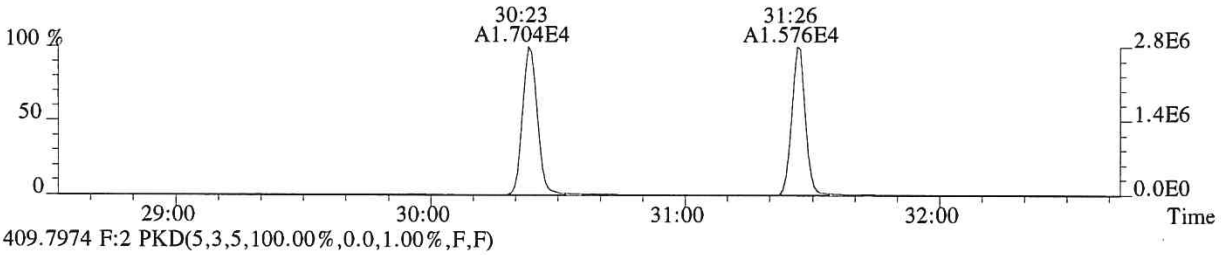
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1856.0,1.00%,F,T)



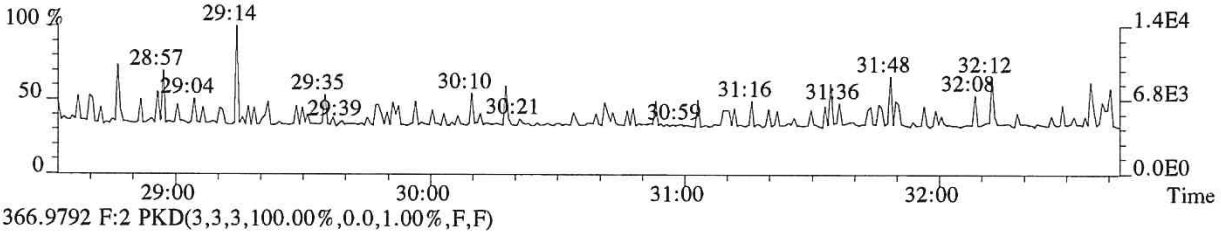
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,492.0,1.00%,F,T)



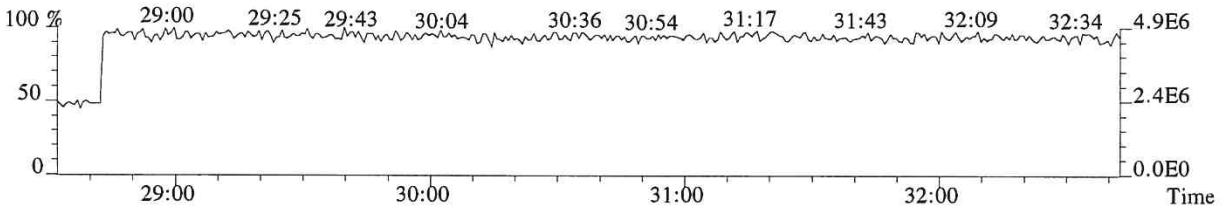
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,280.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

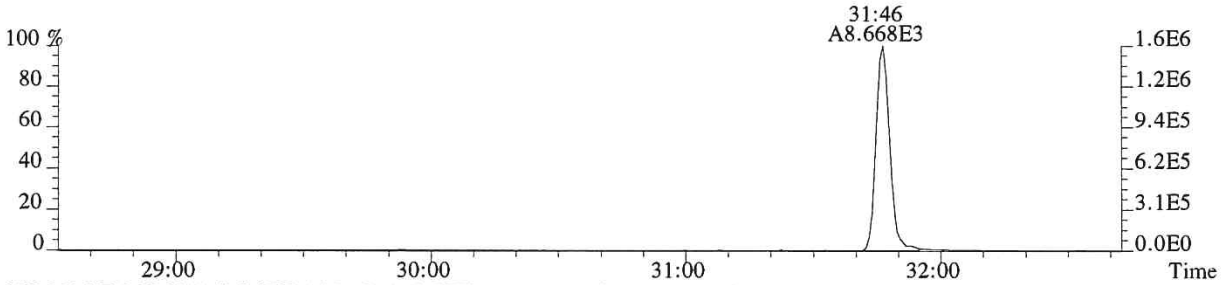


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

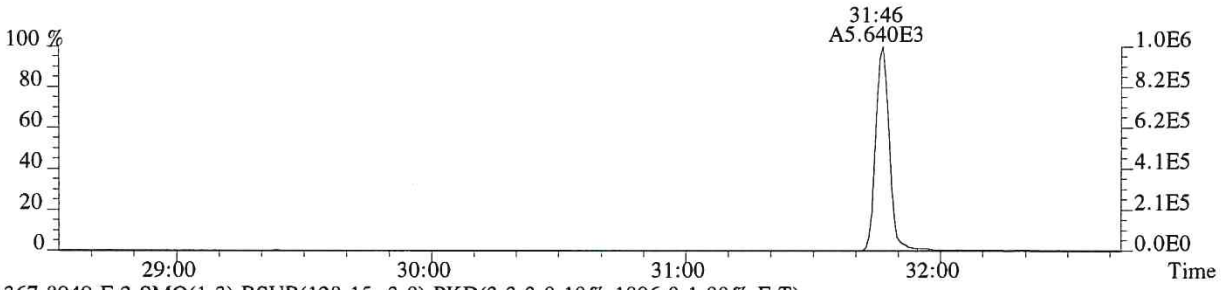


017618

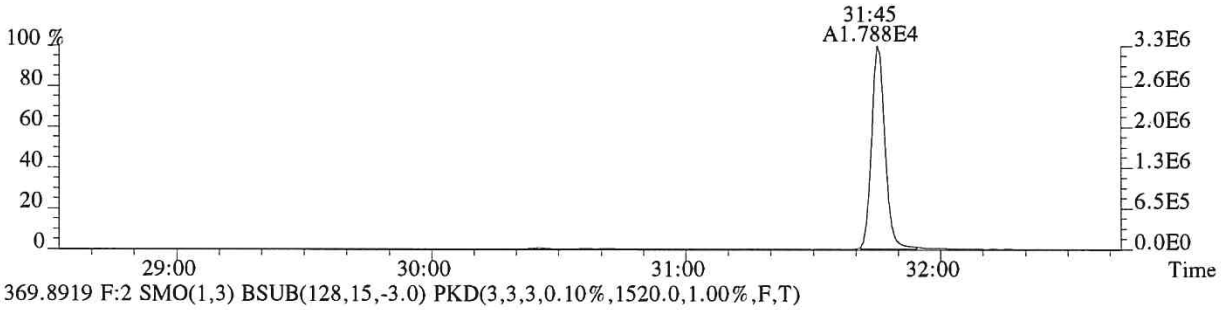
File:P616388 #1-376 Acq: 8-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,860.0,1.00%,F,T)



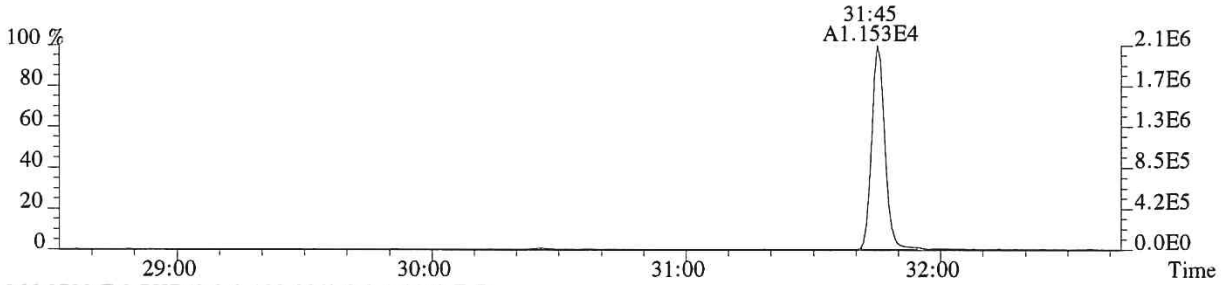
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,464.0,1.00%,F,T)



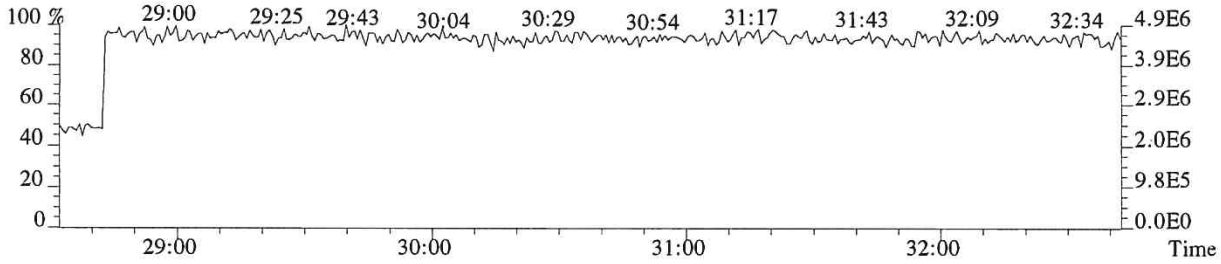
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1896.0,1.00%,F,T)



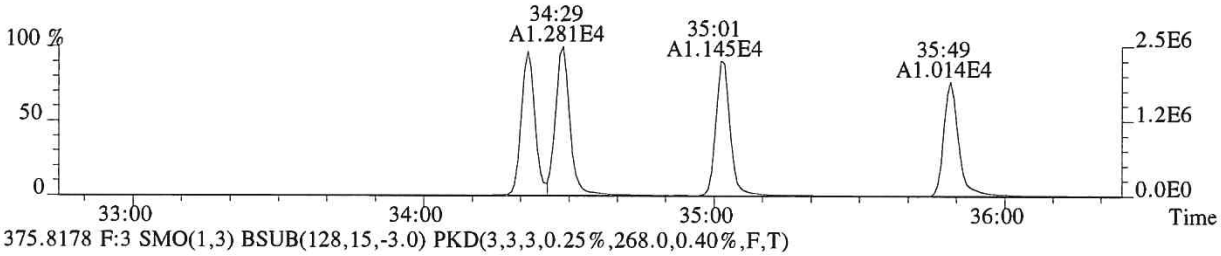
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1520.0,1.00%,F,T)



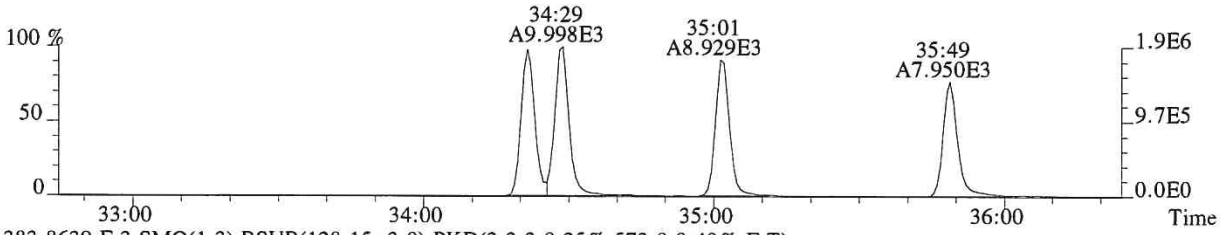
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



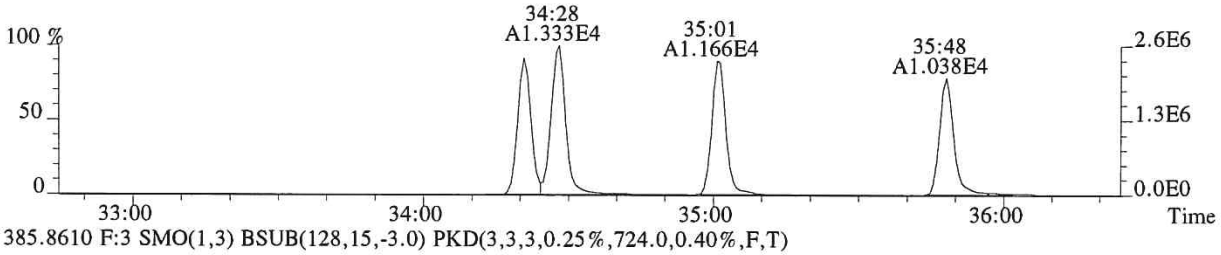
File:P616388 #1-330 Acq: 8-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,336.0,0.40%,F,T)



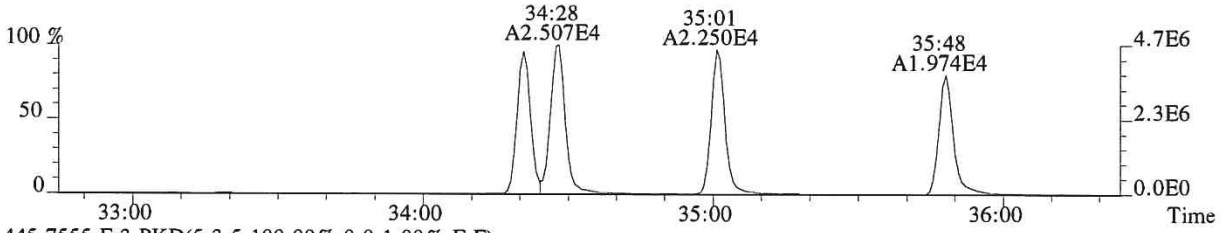
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,268.0,0.40%,F,T)



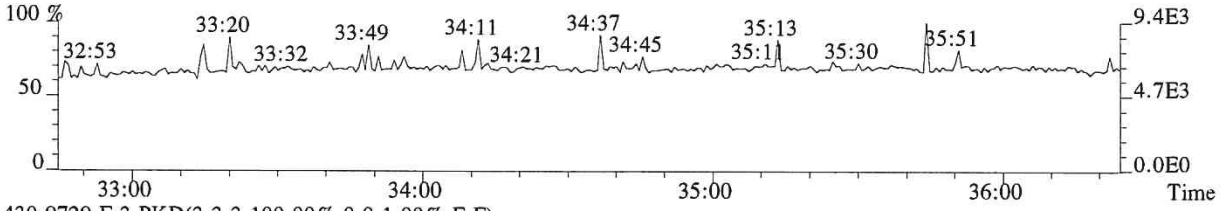
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,572.0,0.40%,F,T)



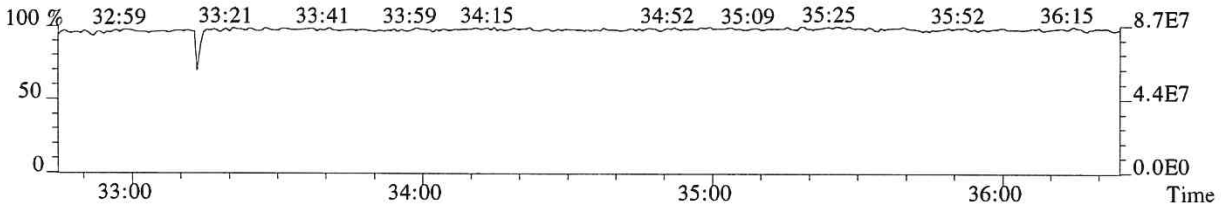
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,724.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

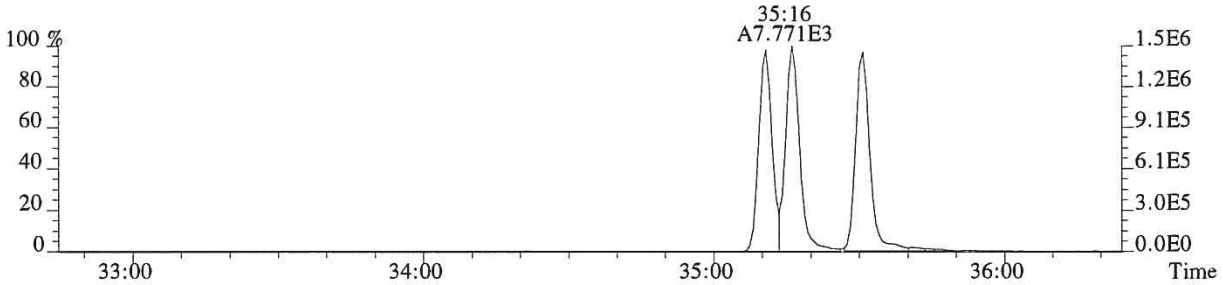


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

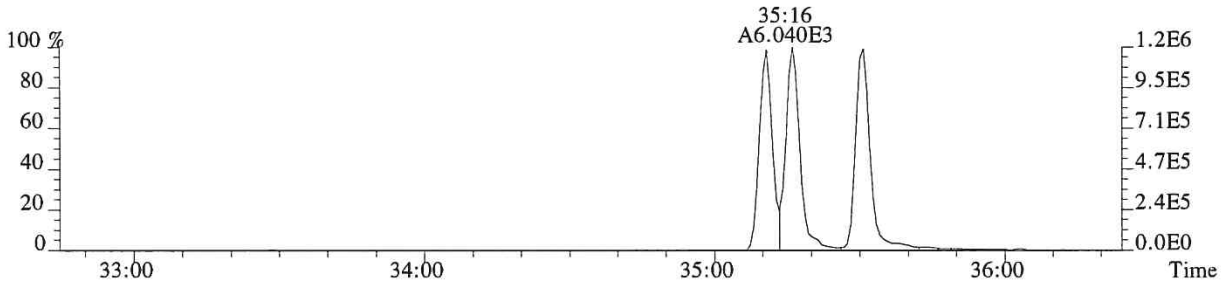


017620

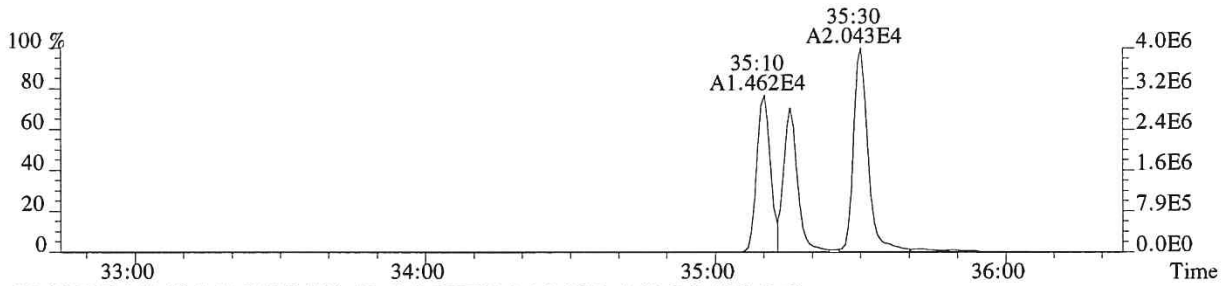
File:P616388 #1-330 Acq: 8-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,352.0,0.40%,F,T)



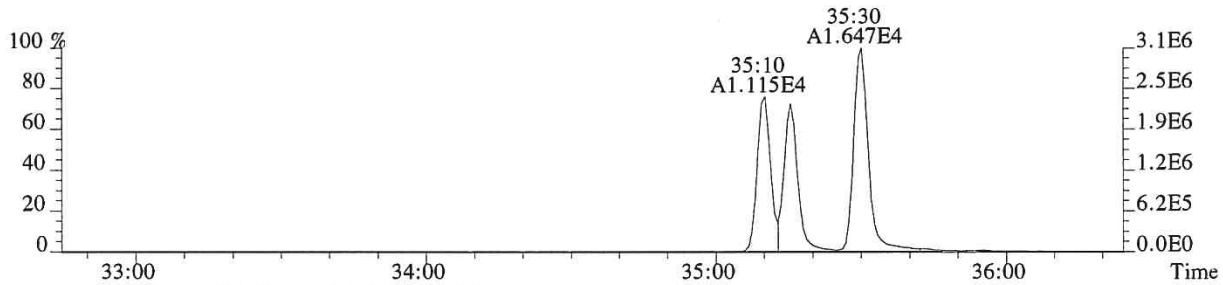
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,248.0,0.40%,F,T)



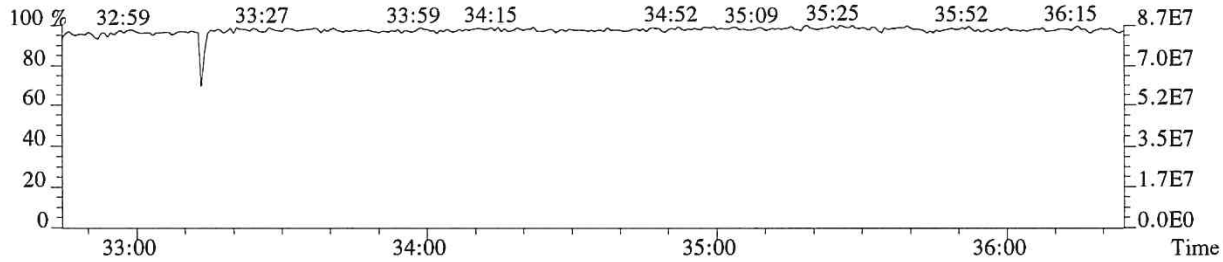
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,892.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1100.0,0.40%,F,T)

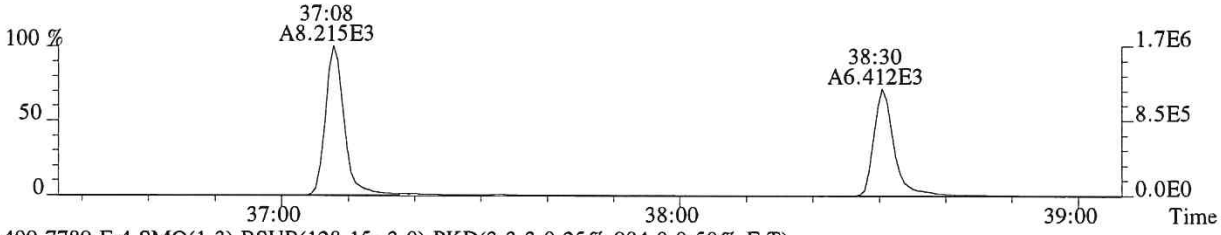


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

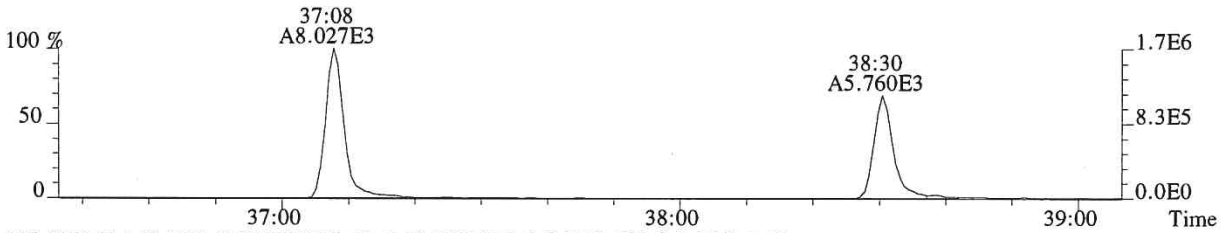


017621

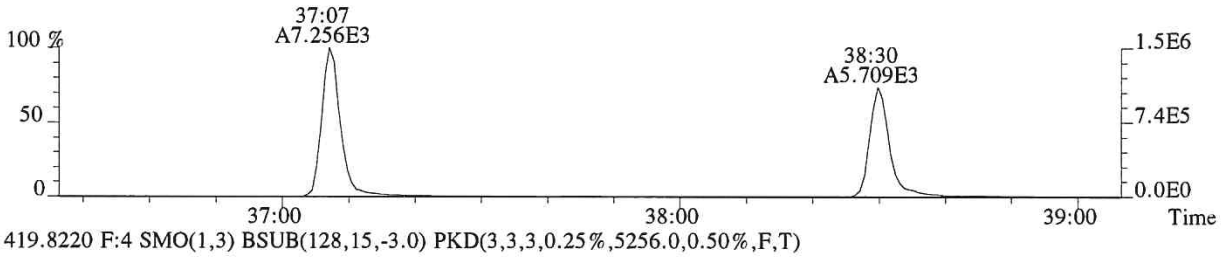
File:P616388 #1-241 Acq: 8-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1452.0,0.50%,F,T)



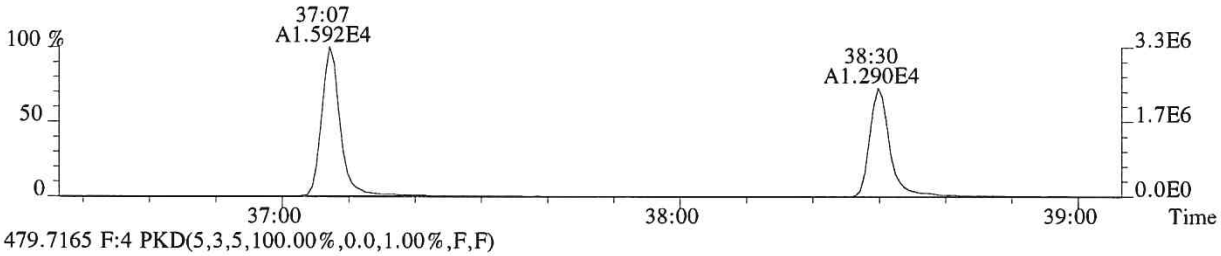
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,984.0,0.50%,F,T)



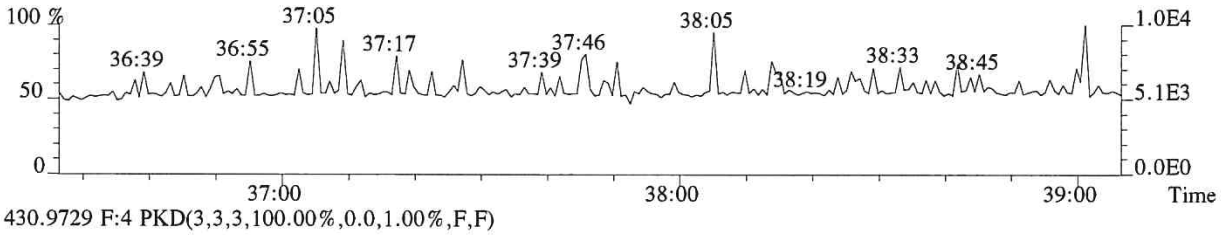
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,632.0,0.50%,F,T)



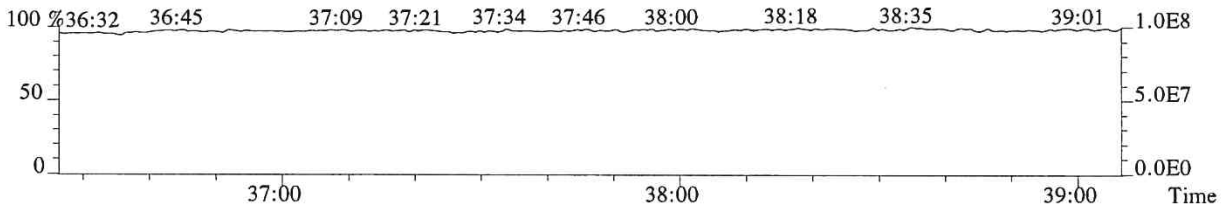
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5256.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

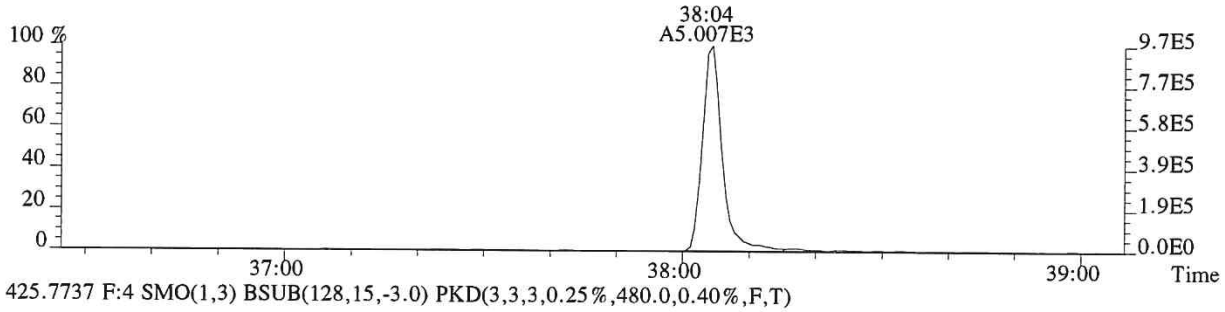


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

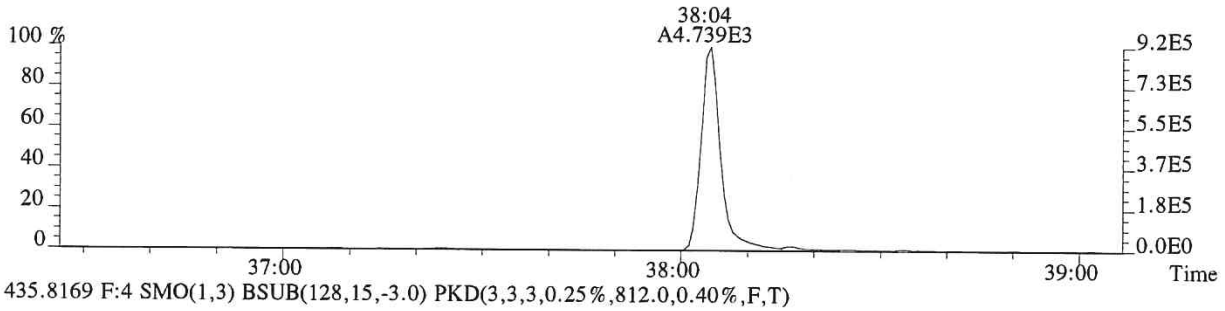


017622

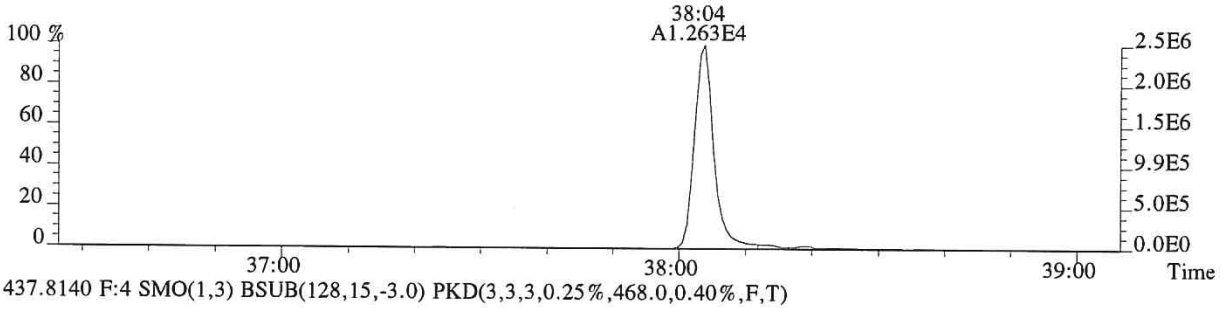
File:P616388 #1-241 Acq: 8-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,340.0,0.40%,F,T)



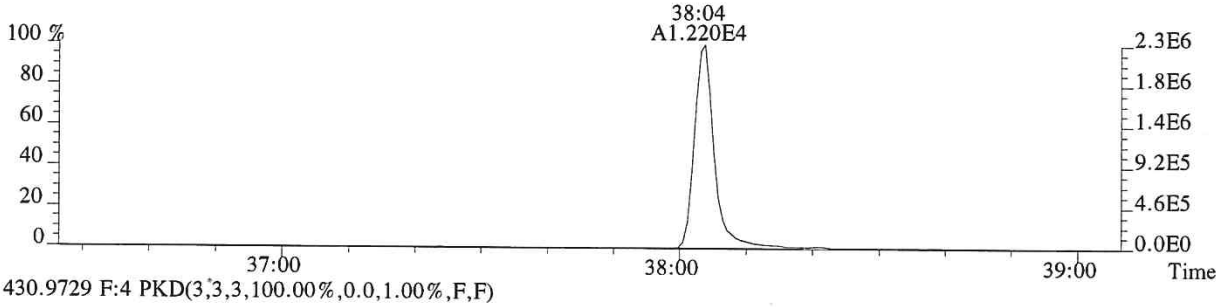
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,480.0,0.40%,F,T)



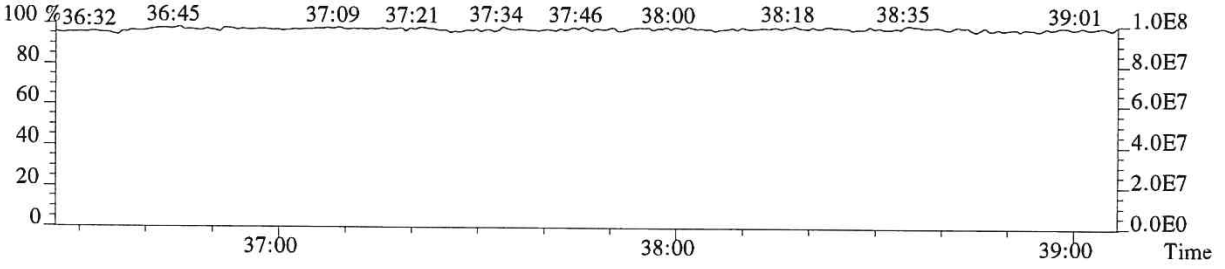
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,812.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,468.0,0.40%,F,T)

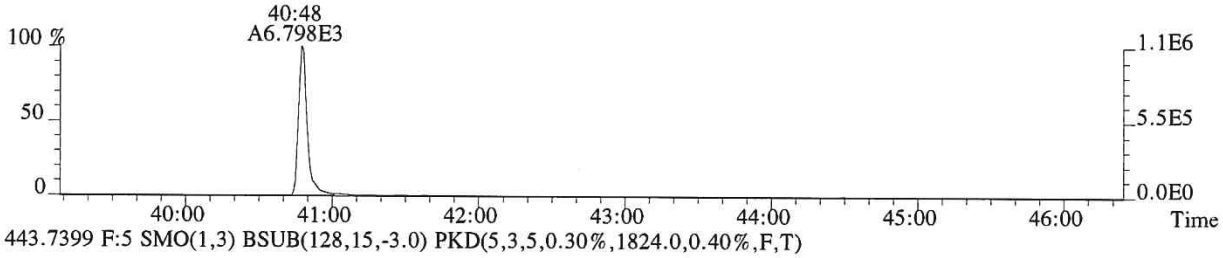


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

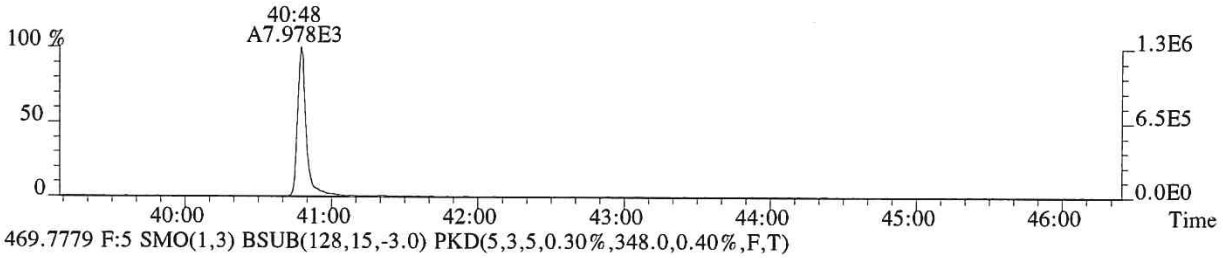


017623

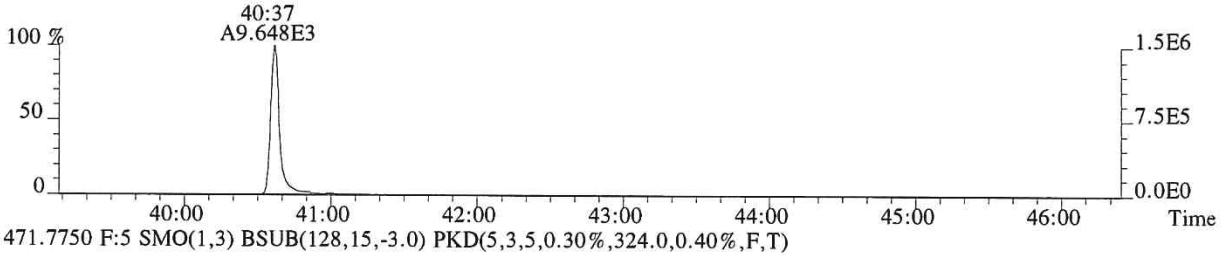
File:P616388 #1-654 Acq: 8-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,252.0,0.40%,F,T)



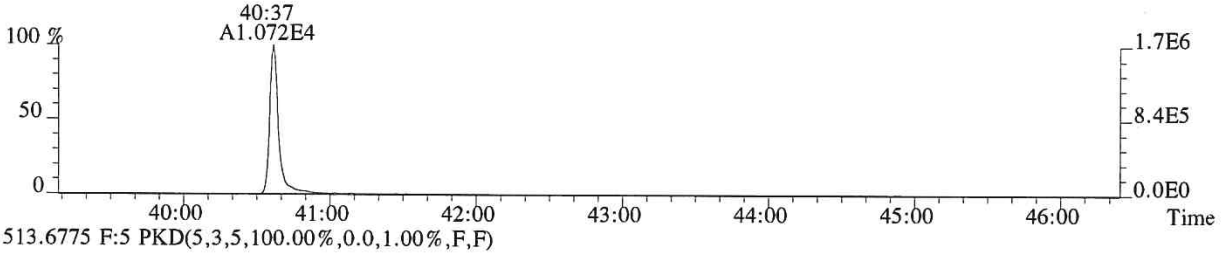
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1824.0,0.40%,F,T)



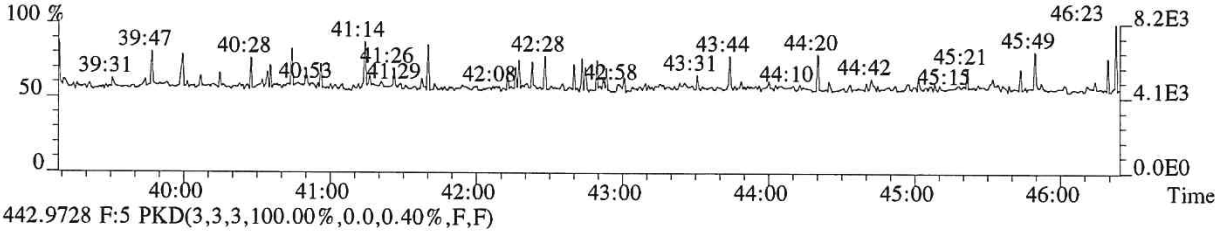
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,348.0,0.40%,F,T)



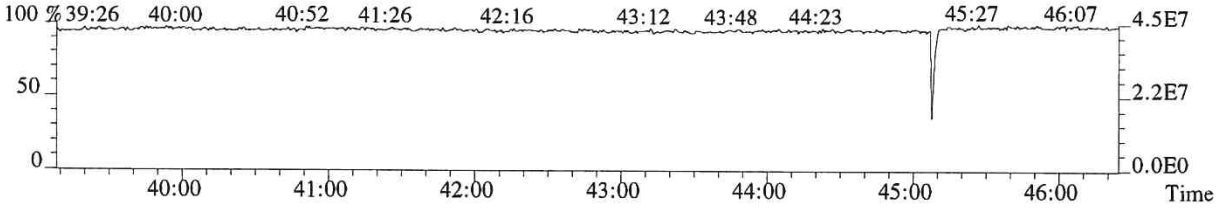
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,324.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

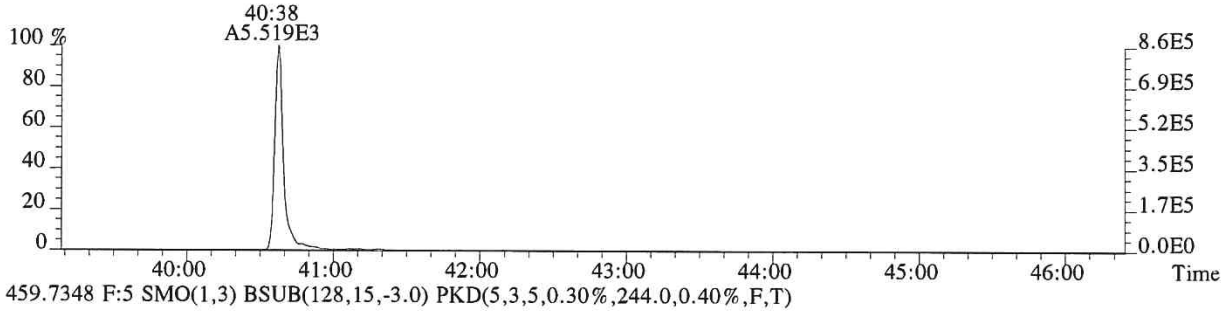


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

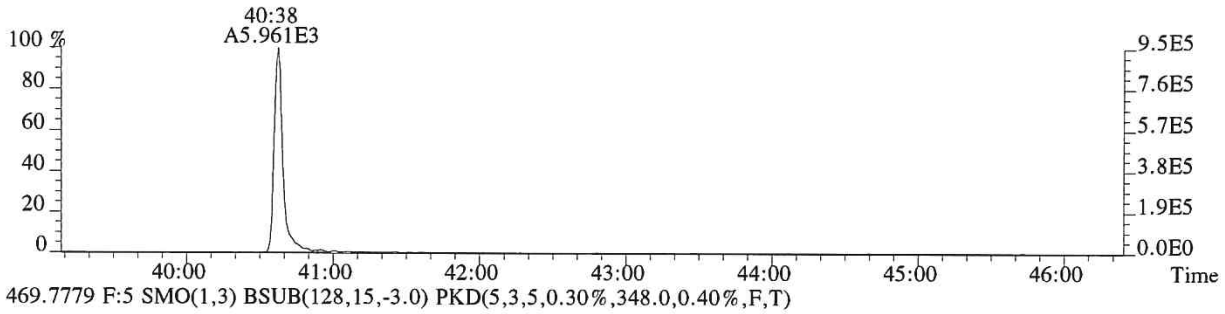


017624

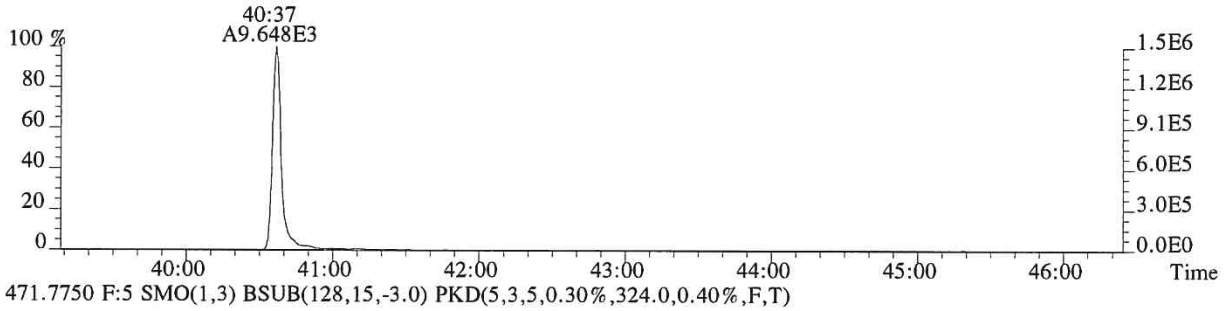
File:P616388 #1-654 Acq: 8-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:LCS
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,264.0,0.40%,F,T)



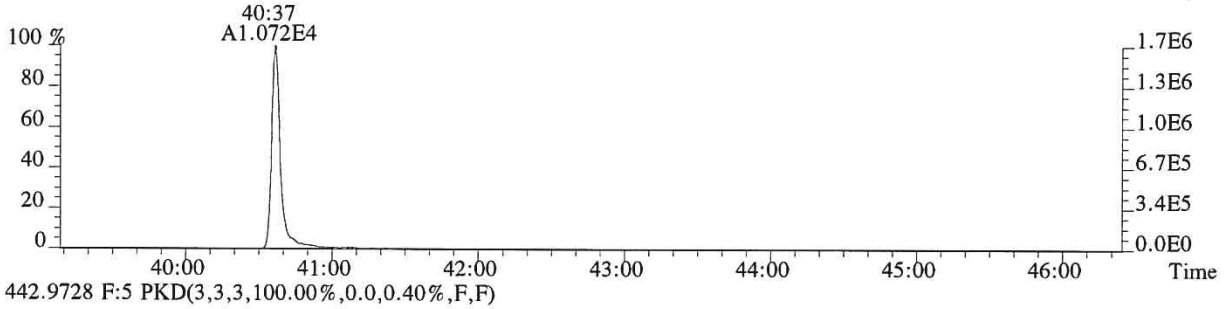
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,244.0,0.40%,F,T)



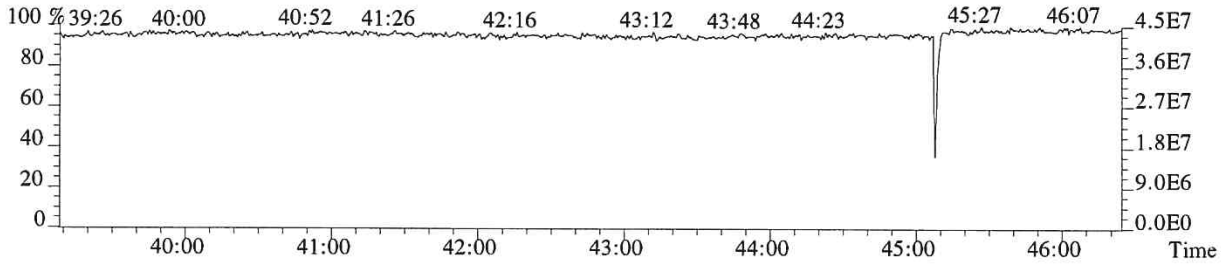
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,348.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,324.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017625

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
DLCS

Run #21 Filename P616389 Samp: 1 Inj: 1 Acquired: 8-JAN-19 22:48:40
Processed: 9-JAN-19 08:58:24 Sample ID: EQ1900001-03

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:14	1.617e+03	2.039e+03	0.79	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:24	1.265e+04	8.116e+03	1.56	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:27	1.230e+04	7.959e+03	1.55	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	9.872e+03	7.764e+03	1.27	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:28	1.094e+04	8.914e+03	1.23	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	9.753e+03	7.764e+03	1.26	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:48	8.134e+03	6.468e+03	1.26	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:07	6.923e+03	6.348e+03	1.09	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	5.141e+03	4.701e+03	1.09	yes	no	1.463
10	Unk	OCDF	40:47	4.740e+03	5.241e+03	0.90	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:16	1.033e+03	1.402e+03	0.74	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:46	7.304e+03	4.604e+03	1.59	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:10	6.164e+03	4.836e+03	1.27	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:15	6.585e+03	5.212e+03	1.26	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:30	6.198e+03	5.474e+03	1.13	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	3.941e+03	3.731e+03	1.06	yes	no	1.112
17	Unk	OCDD	40:36	3.706e+03	4.191e+03	0.88	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:12	1.551e+04	1.885e+04	0.82	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:23	2.530e+04	1.643e+04	1.54	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	2.380e+04	1.482e+04	1.61	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:20	9.663e+03	1.847e+04	0.52	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	1.179e+04	2.223e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:00	1.051e+04	1.945e+04	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	8.511e+03	1.631e+04	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:06	5.757e+03	1.297e+04	0.44	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	4.642e+03	1.007e+04	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:15	6.940e+03	8.647e+03	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:44	1.584e+04	9.882e+03	1.60	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	1.279e+04	1.004e+04	1.27	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	1.249e+04	9.778e+03	1.28	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:02	9.817e+03	9.476e+03	1.04	yes	no	0.857
32	IS	13C-OCDD	40:36	6.694e+03	7.011e+03	0.95	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:27	1.690e+04	2.121e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	1.838e+04	1.465e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:16	1.048e+04				no	1.086

$$\text{OCDD} = \frac{(3.706e+03 + 4.191e+03) \times 4000\ \text{pg} \times 1}{(6.694e+03 + 7.011e+03) \times \text{g} \times / 100 \times 1.157}$$

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
DLCS

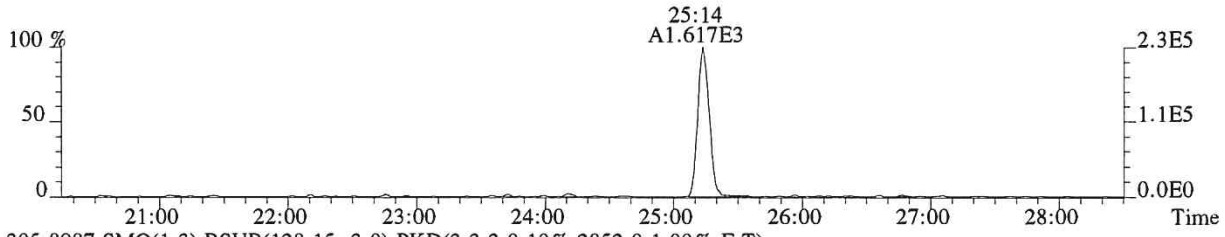
Run #21 Filename P616389 Samp: 1 Inj: 1 Acquired: 8-JAN-19 22:48:40
Processed: 9-JAN-19 08:58:24 LAB. ID: EQ1900001-03

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.24e+05	1.09e+03	2.1e+02	2.70e+05	2.85e+03	9.5e+01
2	1,2,3,7,8-PeCDF	2.13e+06	2.84e+02	7.5e+03	1.33e+06	1.32e+03	1.0e+03
3	2,3,4,7,8-PeCDF	2.23e+06	2.84e+02	7.8e+03	1.41e+06	1.32e+03	1.1e+03
4	1,2,3,4,7,8-HxCDF	2.03e+06	9.80e+02	2.1e+03	1.57e+06	5.36e+02	2.9e+03
5	1,2,3,6,7,8-HxCDF	2.10e+06	9.80e+02	2.1e+03	1.64e+06	5.36e+02	3.1e+03
6	2,3,4,6,7,8-HxCDF	1.96e+06	9.80e+02	2.0e+03	1.59e+06	5.36e+02	3.0e+03
7	1,2,3,7,8,9-HxCDF	1.53e+06	9.80e+02	1.6e+03	1.21e+06	5.36e+02	2.3e+03
8	1,2,3,4,6,7,8-HpCDF	1.40e+06	1.62e+03	8.7e+02	1.32e+06	1.53e+03	8.6e+02
9	1,2,3,4,7,8,9-HpCDF	9.91e+05	1.62e+03	6.1e+02	8.75e+05	1.53e+03	5.7e+02
10	OCDF	7.80e+05	2.16e+02	3.6e+03	7.95e+05	1.90e+03	4.2e+02
11	2,3,7,8-TCDD	1.57e+05	2.74e+03	5.7e+01	2.09e+05	1.78e+03	1.2e+02
12	1,2,3,7,8-PeCDD	1.20e+06	3.24e+02	3.7e+03	7.47e+05	3.04e+02	2.5e+03
13	1,2,3,4,7,8-HxCDD	1.29e+06	3.80e+02	3.4e+03	1.00e+06	5.52e+02	1.8e+03
14	1,2,3,6,7,8-HxCDD	1.31e+06	3.80e+02	3.4e+03	1.03e+06	5.52e+02	1.9e+03
15	1,2,3,7,8,9-HxCDD	1.19e+06	3.80e+02	3.1e+03	1.03e+06	5.52e+02	1.9e+03
16	1,2,3,4,6,7,8-HpCDD	7.61e+05	4.20e+02	1.8e+03	7.48e+05	2.68e+02	2.8e+03
17	OCDD	5.67e+05	1.92e+02	3.0e+03	6.81e+05	1.84e+02	3.7e+03
18	13C-2,3,7,8-TCDF	2.14e+06	9.12e+03	2.3e+02	2.71e+06	7.72e+03	3.5e+02
19	13C-1,2,3,7,8-PeCDF	4.21e+06	1.88e+02	2.2e+04	2.75e+06	4.08e+02	6.7e+03
20	13C-2,3,4,7,8-PeCDF	4.32e+06	1.88e+02	2.3e+04	2.73e+06	4.08e+02	6.7e+03
21	13C-1,2,3,4,7,8-HxCDF	1.99e+06	1.00e+03	2.0e+03	3.79e+06	8.96e+02	4.2e+03
22	13C-1,2,3,6,7,8-HxCDF	2.25e+06	1.00e+03	2.3e+03	4.09e+06	8.96e+02	4.6e+03
23	13C-2,3,4,6,7,8-HxCDF	2.11e+06	1.00e+03	2.1e+03	3.95e+06	8.96e+02	4.4e+03
24	13C-1,2,3,7,8,9-HxCDF	1.61e+06	1.00e+03	1.6e+03	3.07e+06	8.96e+02	3.4e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.16e+06	2.10e+03	5.5e+02	2.64e+06	3.98e+03	6.6e+02
26	13C-1,2,3,4,7,8,9-HpCDF	8.70e+05	2.10e+03	4.1e+02	1.88e+06	3.98e+03	4.7e+02
27	13C-2,3,7,8-TCDD	1.02e+06	1.03e+04	1.0e+02	1.34e+06	3.08e+03	4.3e+02
28	13C-1,2,3,7,8-PeCDD	2.91e+06	1.26e+03	2.3e+03	1.66e+06	1.68e+03	9.9e+02
29	13C-1,2,3,4,7,8-HxCDD	2.68e+06	4.56e+02	5.9e+03	2.11e+06	5.32e+02	4.0e+03
30	13C-1,2,3,6,7,8-HxCDD	2.44e+06	4.56e+02	5.3e+03	1.90e+06	5.32e+02	3.6e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.96e+06	5.16e+02	3.8e+03	1.81e+06	5.68e+02	3.2e+03
32	13C-OCDD	1.03e+06	8.96e+02	1.2e+03	1.11e+06	2.40e+02	4.6e+03
33	13C-1,2,3,4-TCDD	2.48e+06	1.03e+04	2.4e+02	3.15e+06	3.08e+03	1.0e+03
34	13C-1,2,3,7,8,9-HxCDD	3.47e+06	4.56e+02	7.6e+03	2.69e+06	5.32e+02	5.1e+03
35	37Cl-2,3,7,8-TCDD	1.55e+06	1.24e+03	1.2e+03			

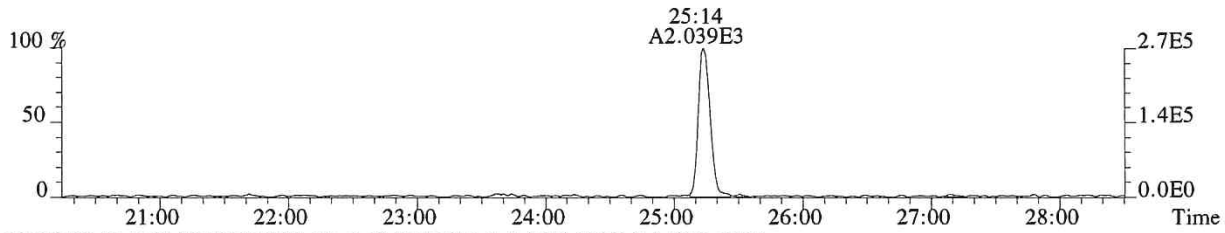
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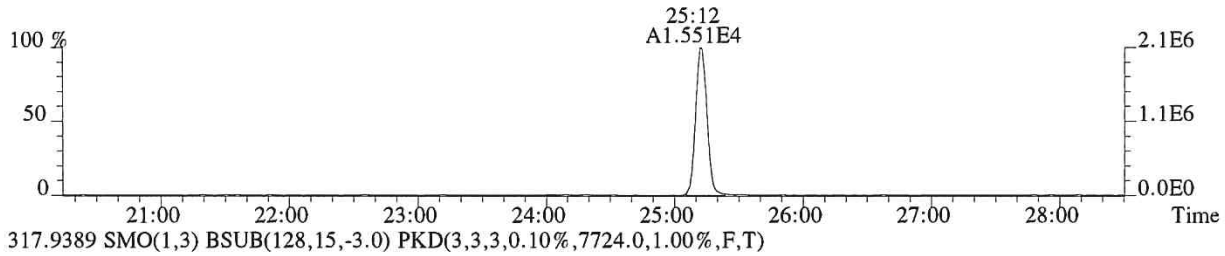
File:P616389 #1-587 Acq: 8-JAN-2019 22:48:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1088.0,1.00%,F,T)



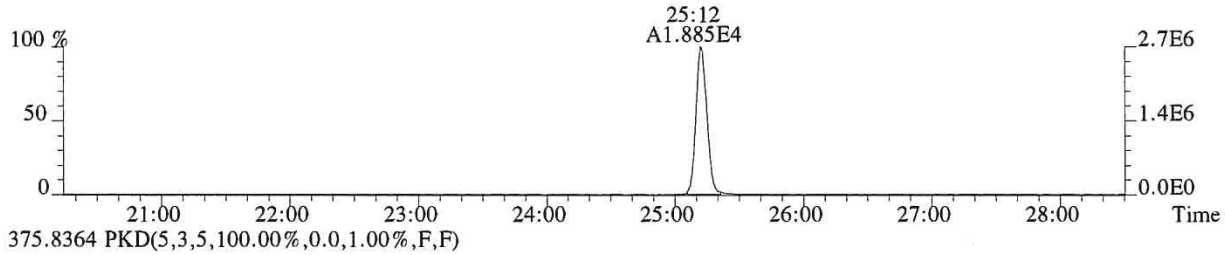
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2852.0,1.00%,F,T)



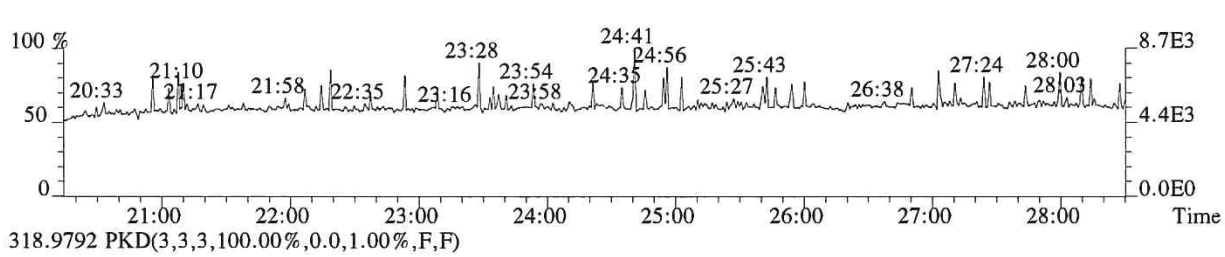
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9120.0,1.00%,F,T)



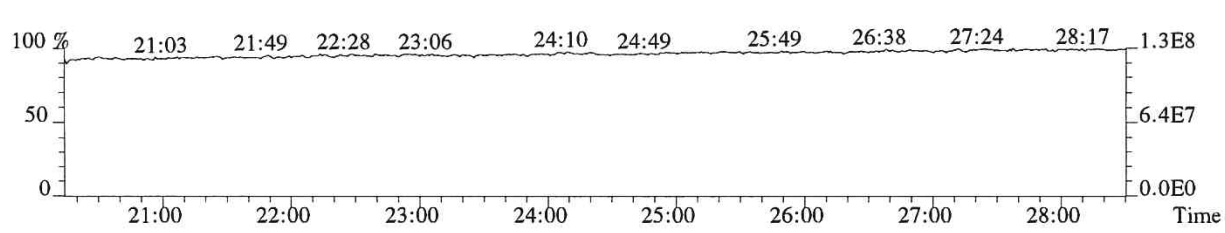
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7724.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

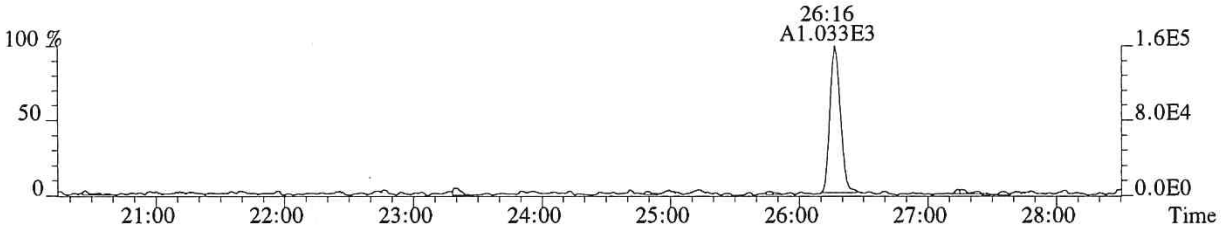


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

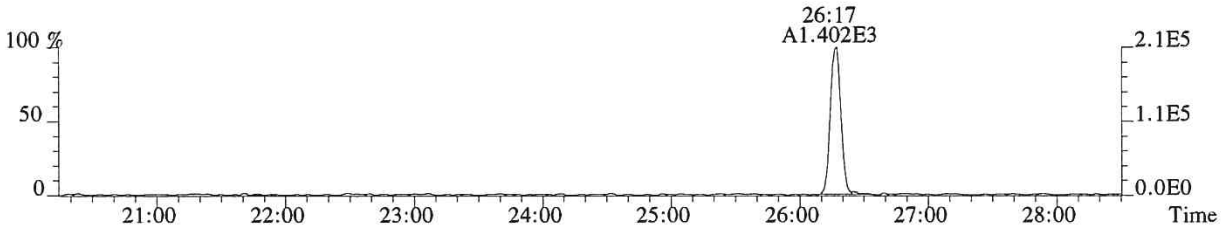


017628

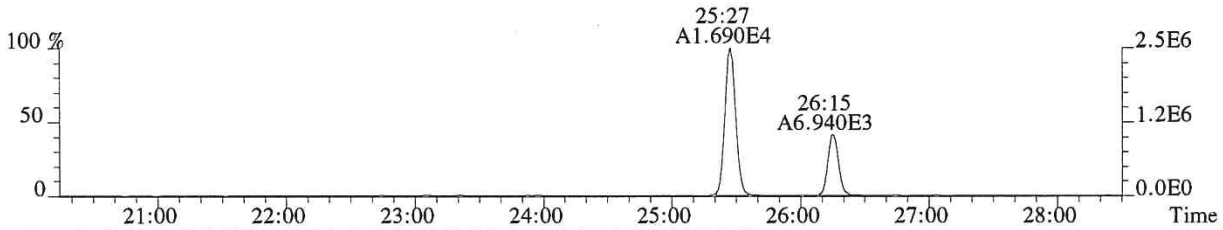
File:P616389 #1-587 Acq: 8-JAN-2019 22:48:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2744.0,1.00%,F,T)



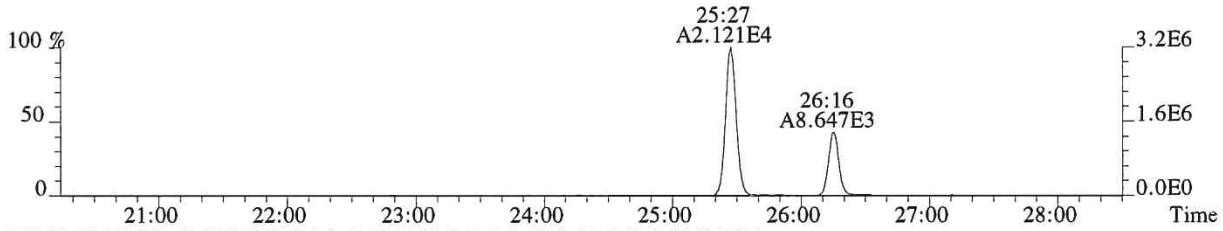
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1776.0,1.00%,F,T)



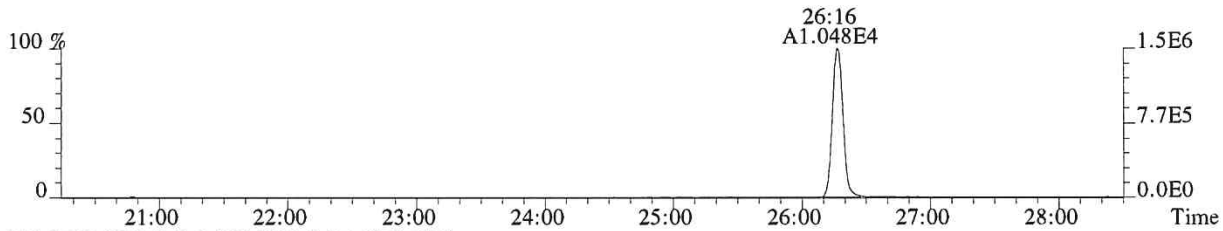
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10272.0,1.00%,F,T)



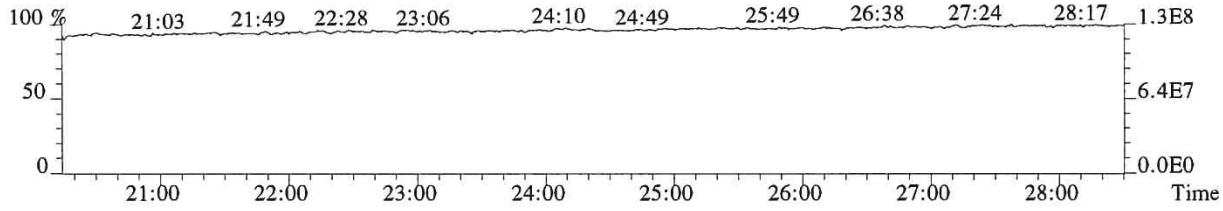
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3084.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1240.0,1.00%,F,T)

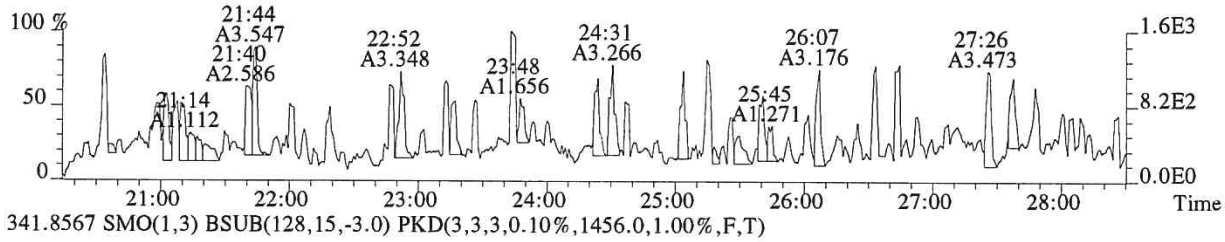


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

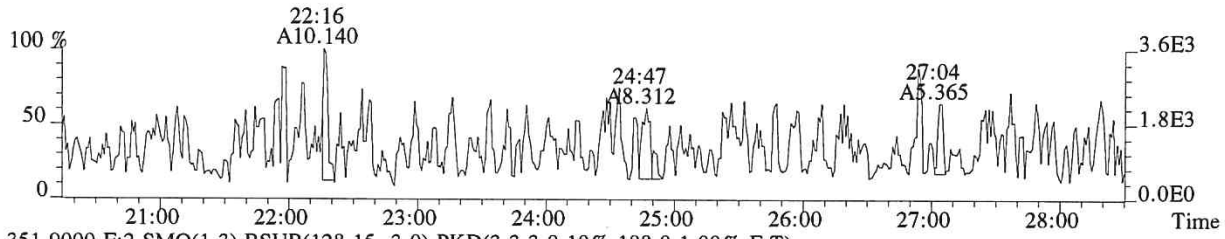


017629

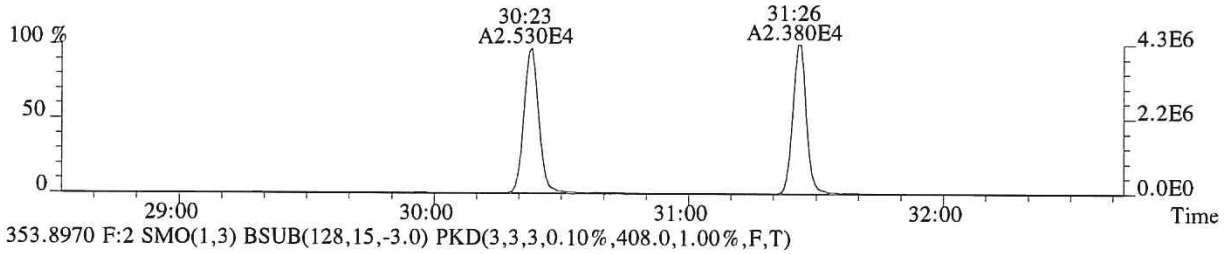
File:P616389 #1-587 Acq: 8-JAN-2019 22:48:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,472.0,1.00%,F,T)



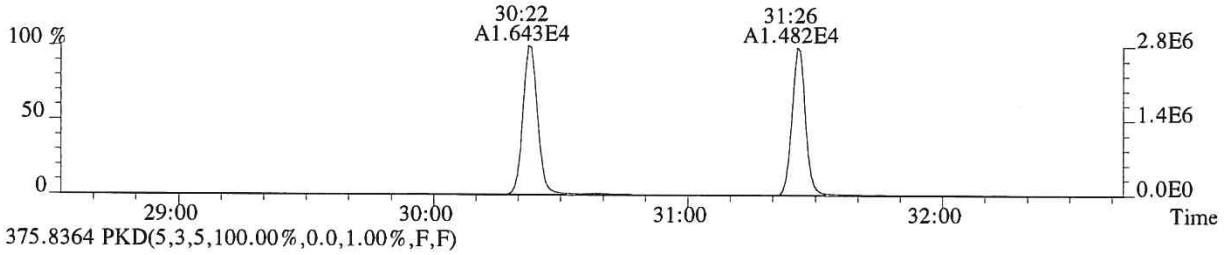
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1456.0,1.00%,F,T)



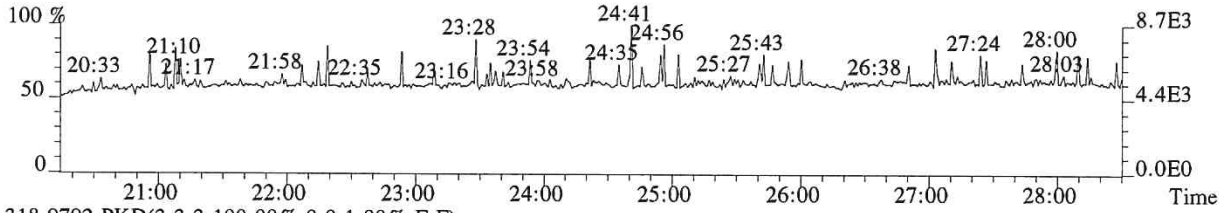
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,188.0,1.00%,F,T)



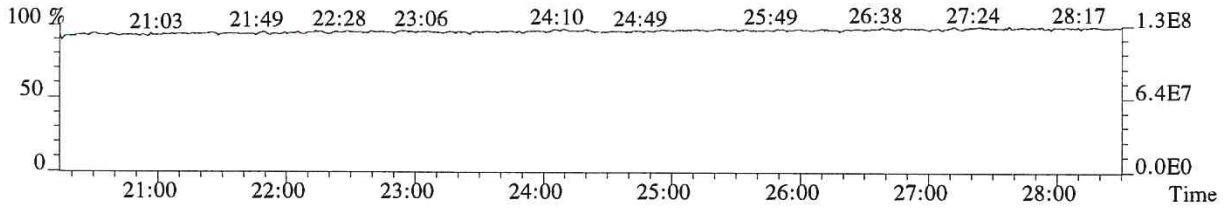
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,408.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

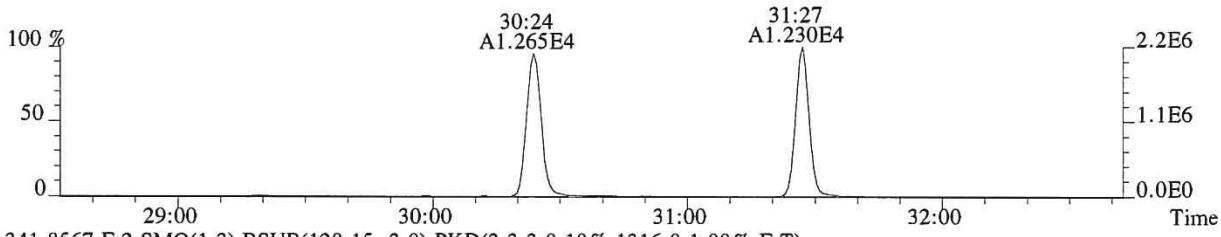


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

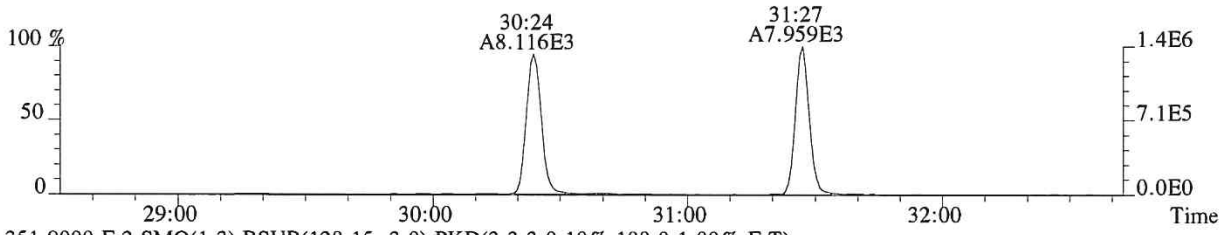


017630

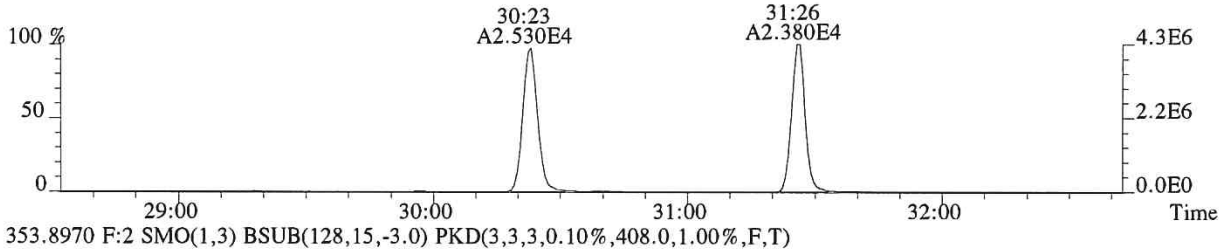
File:P616389 #1-376 Acq: 8-JAN-2019 22:48:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,284.0,1.00%,F,T)



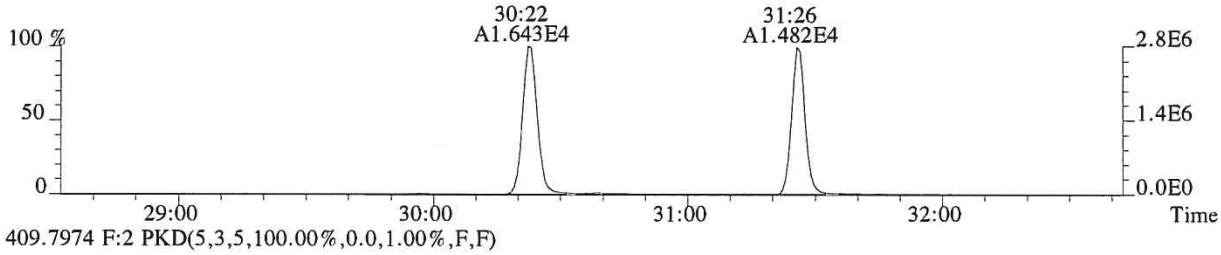
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1316.0,1.00%,F,T)



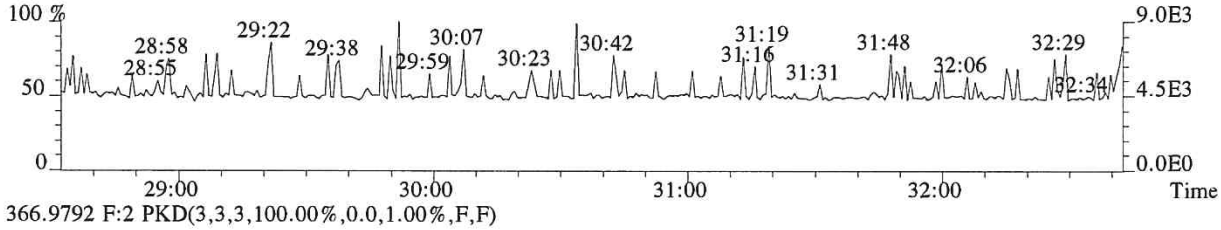
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,188.0,1.00%,F,T)



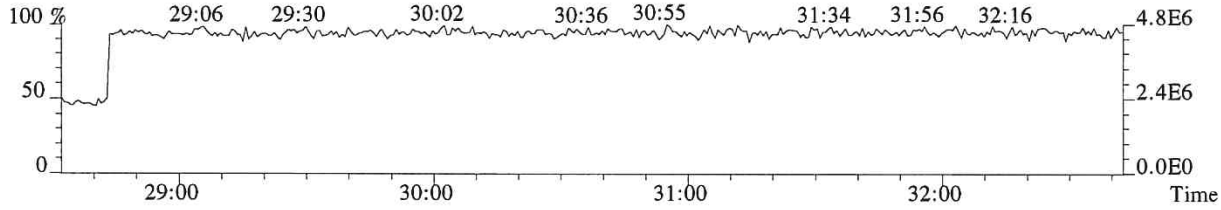
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,408.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

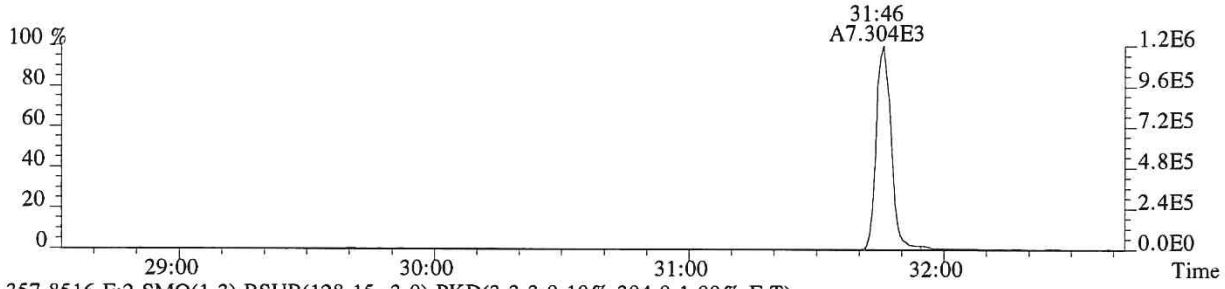


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

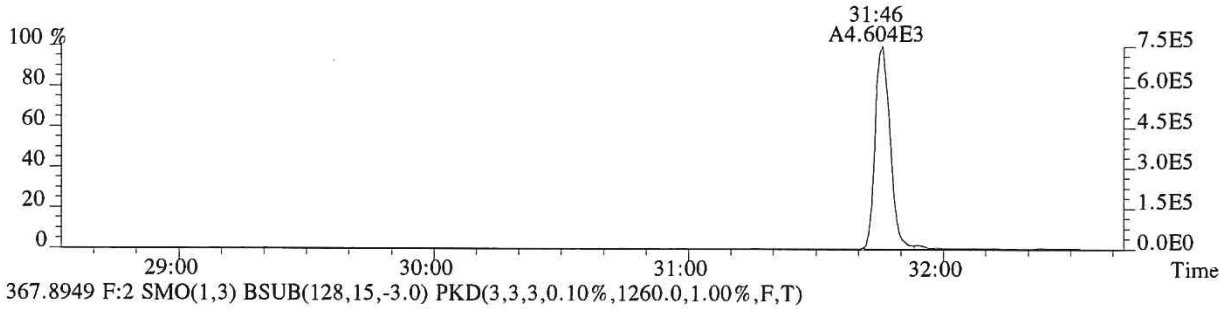


017631

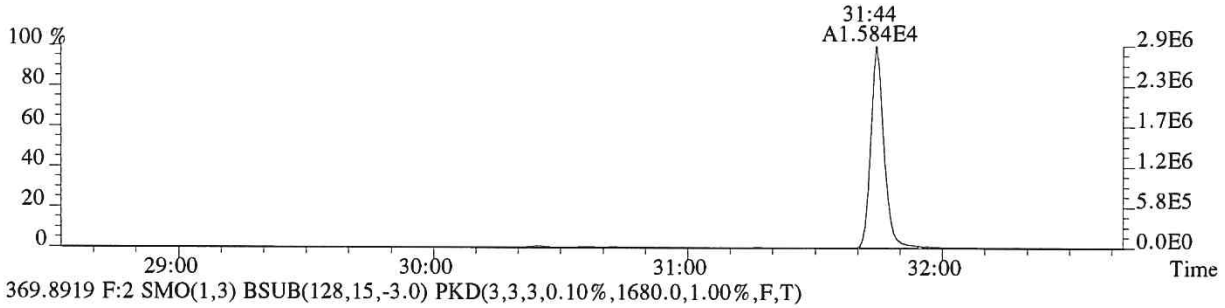
File:P616389 #1-376 Acq: 8-JAN-2019 22:48:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,324.0,1.00%,F,T)



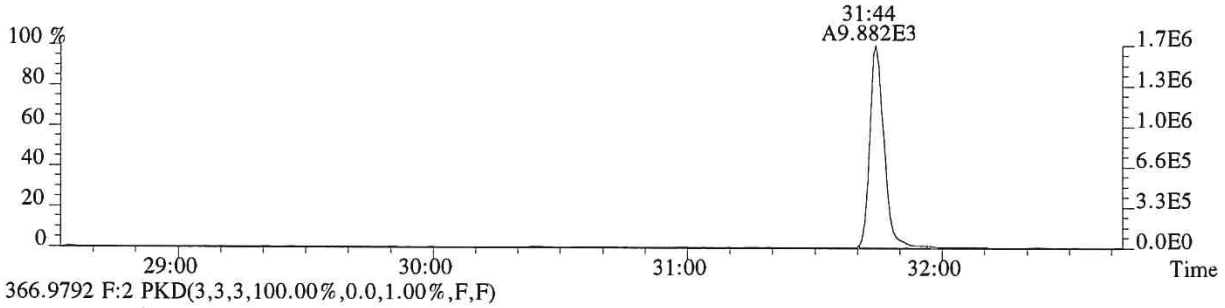
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,304.0,1.00%,F,T)



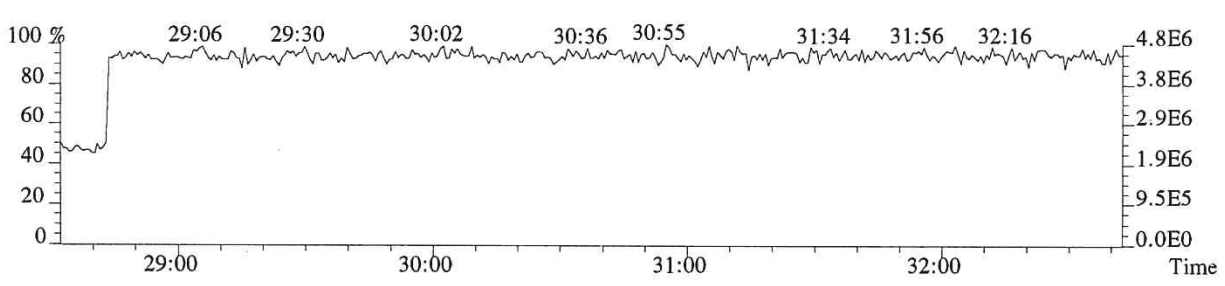
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1260.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1680.0,1.00%,F,T)



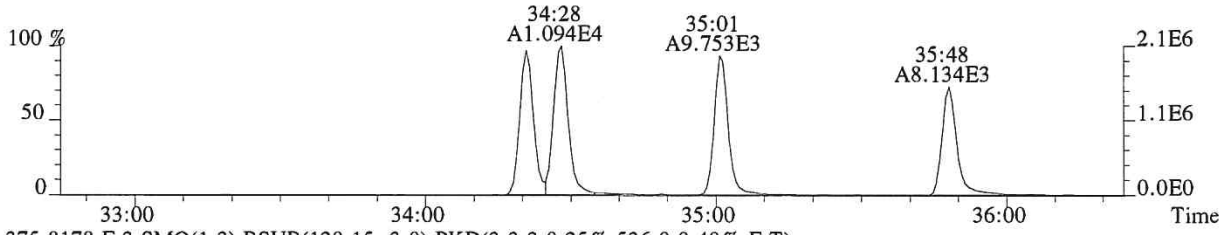
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



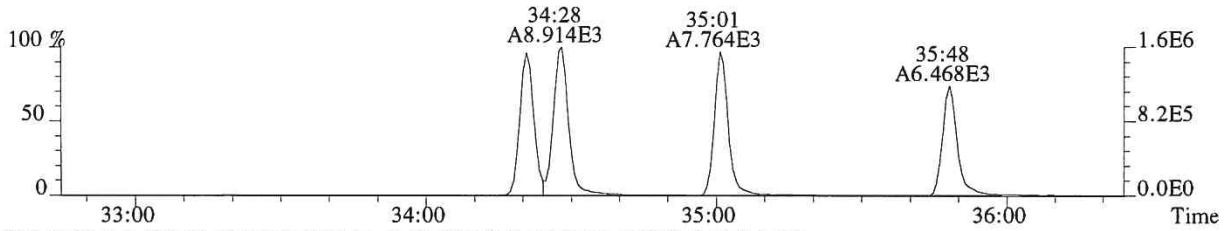
017632

File:P616389 #1-330 Acq: 8-JAN-2019 22:48:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS

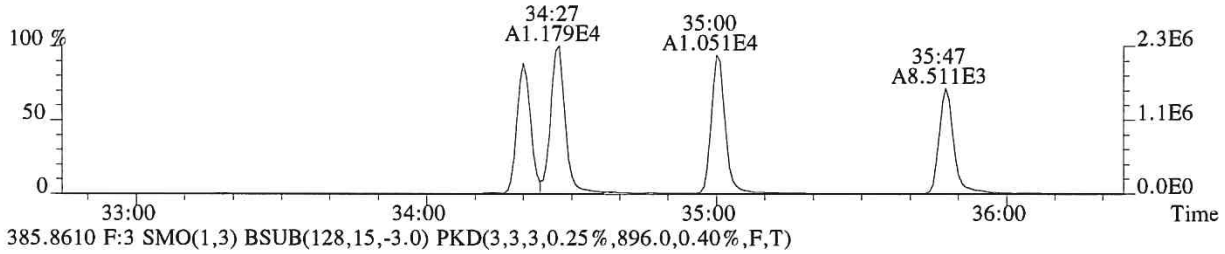
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,980.0,0.40%,F,T)



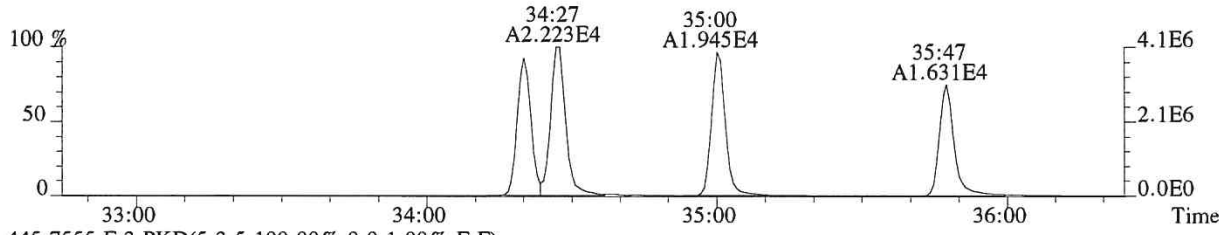
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,536.0,0.40%,F,T)



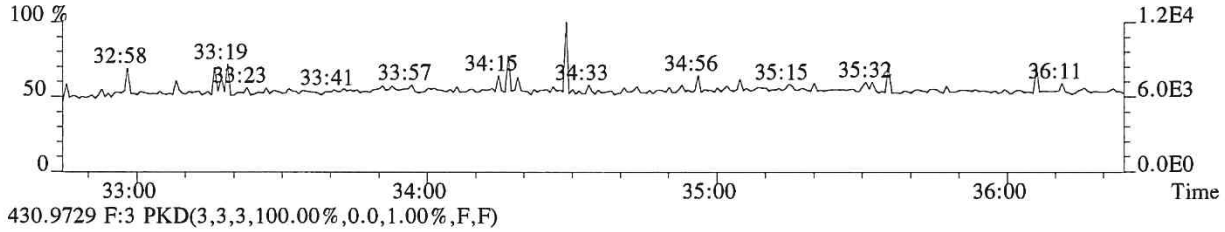
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1000.0,0.40%,F,T)



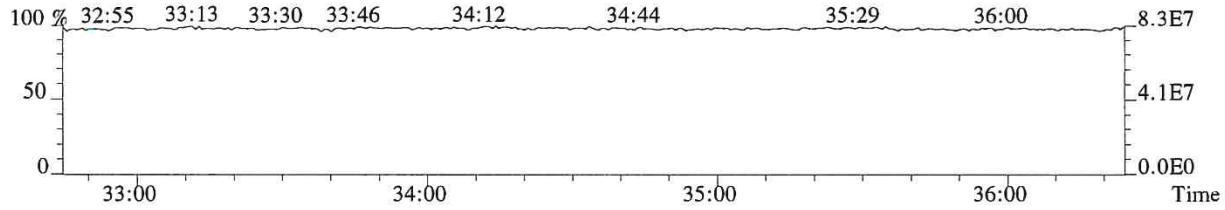
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,896.0,0.40%,F,T)



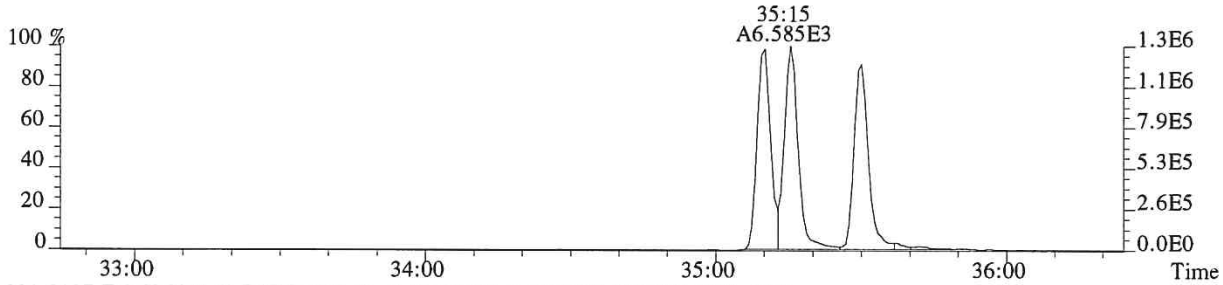
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



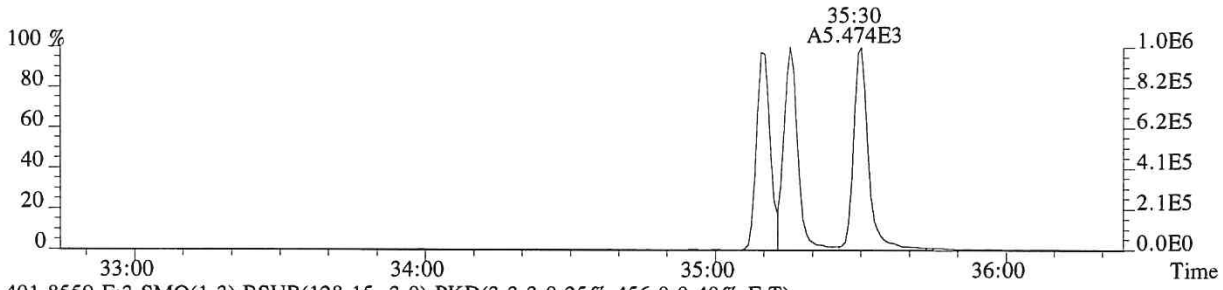
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



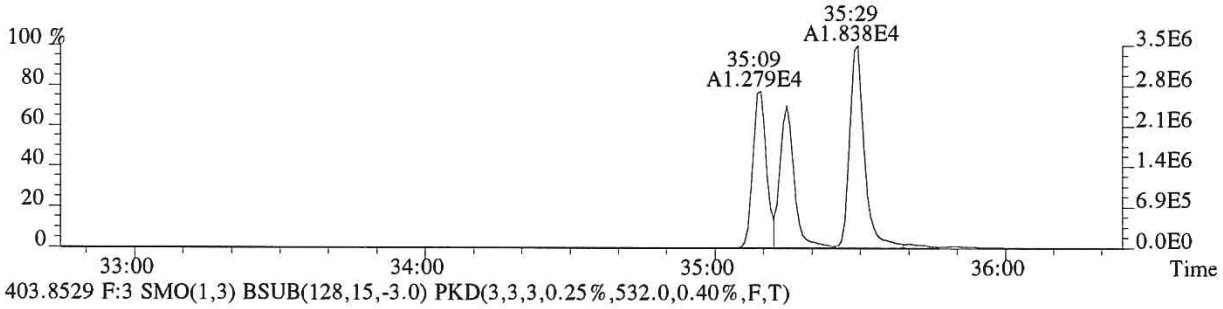
File:P616389 #1-330 Acq: 8-JAN-2019 22:48:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,380.0,0.40%,F,T)



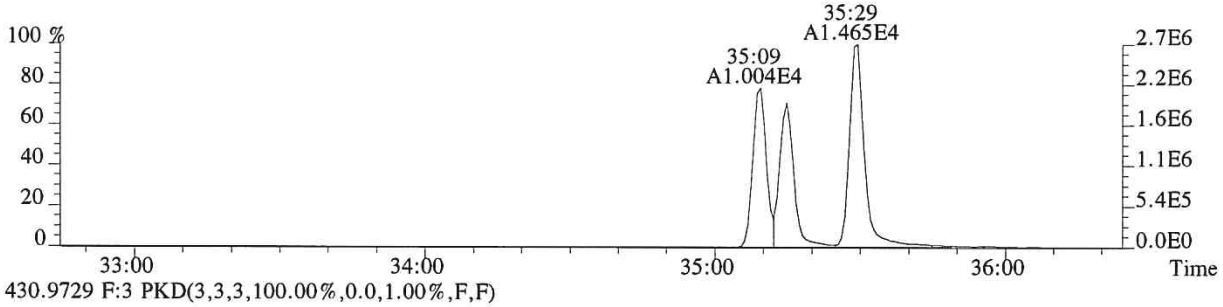
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,552.0,0.40%,F,T)



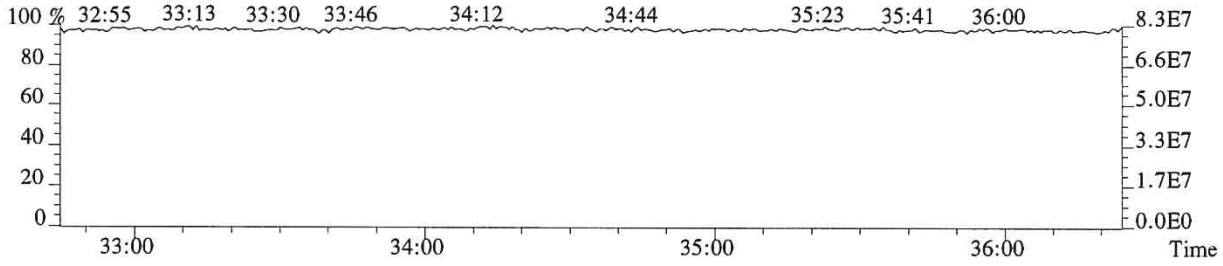
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,456.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,532.0,0.40%,F,T)

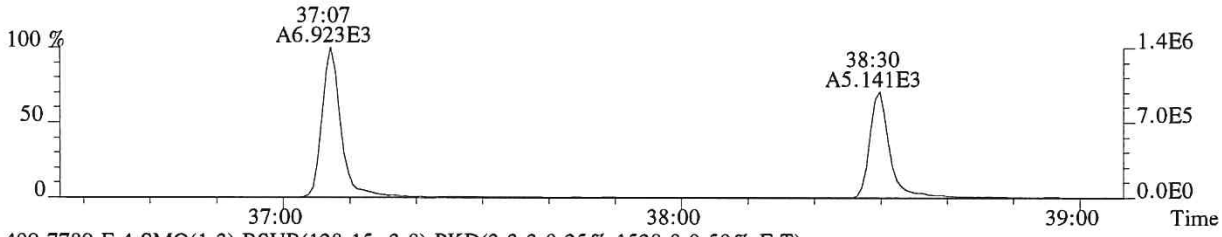


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

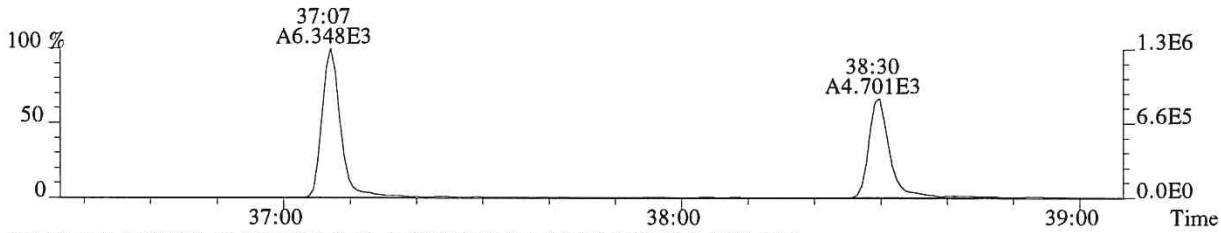


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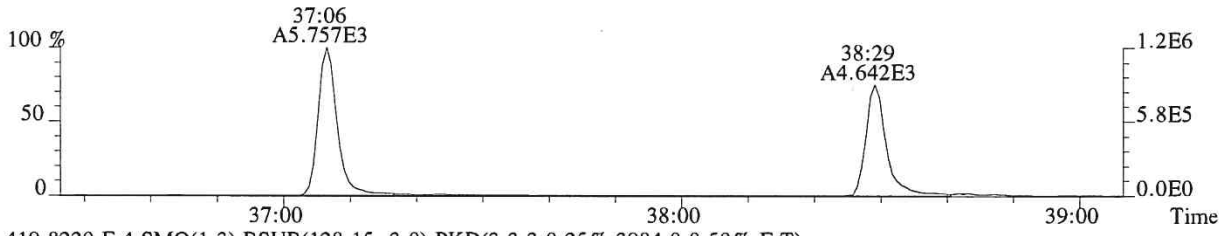
File:P616389 #1-241 Acq: 8-JAN-2019 22:48:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1616.0,0.50%,F,T)



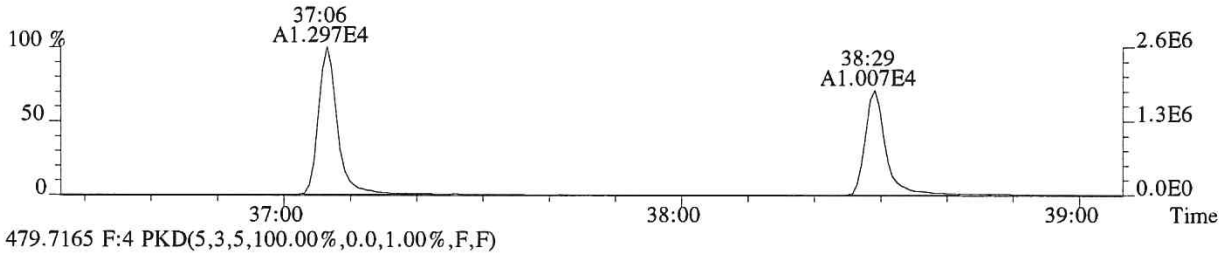
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1528.0,0.50%,F,T)



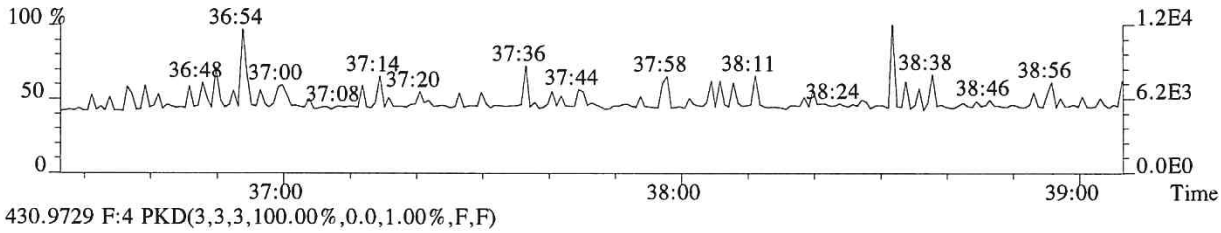
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2096.0,0.50%,F,T)



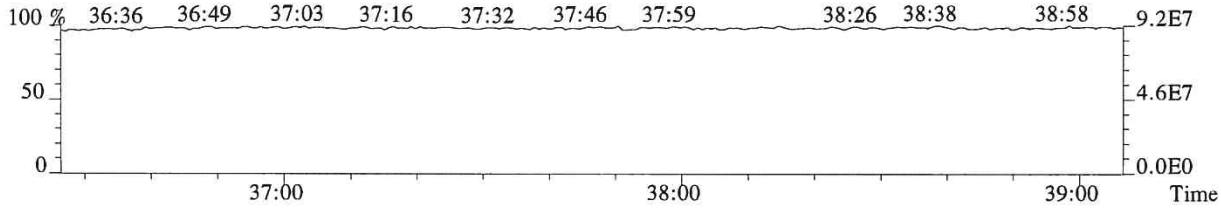
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3984.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

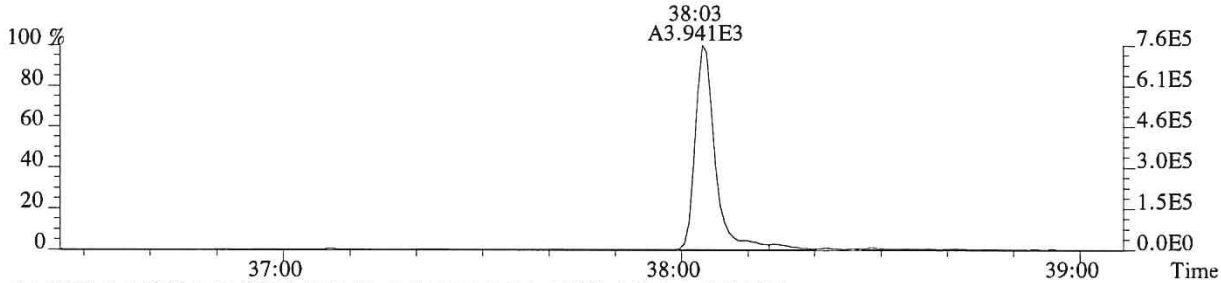


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

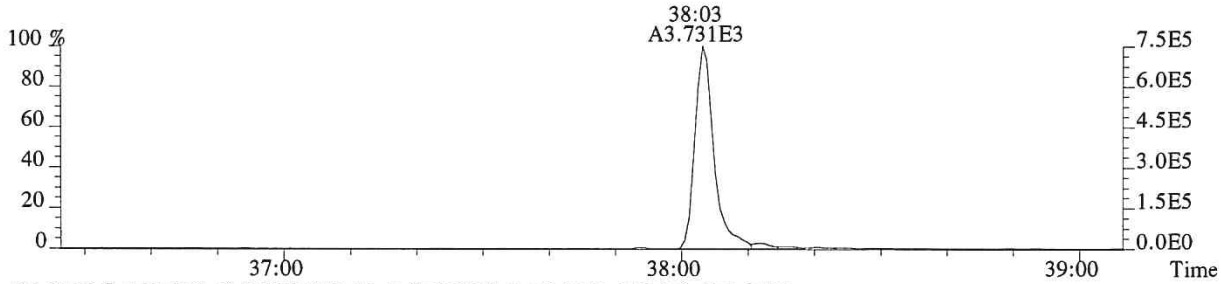


017635

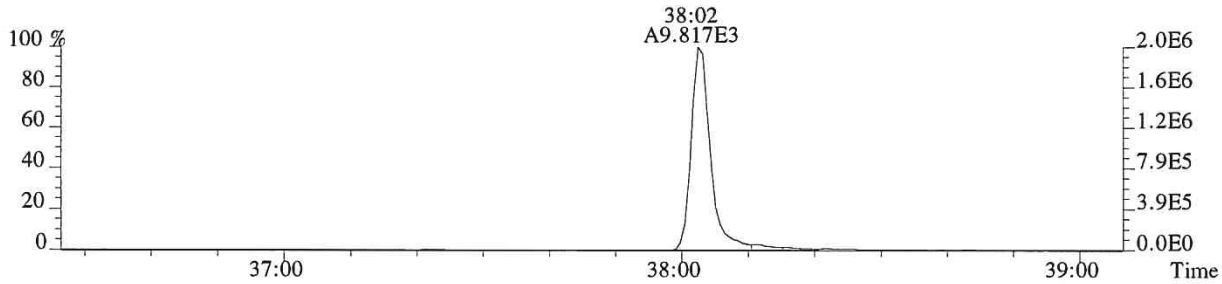
File:P616389 #1-241 Acq: 8-JAN-2019 22:48:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,420.0,0.40%,F,T)



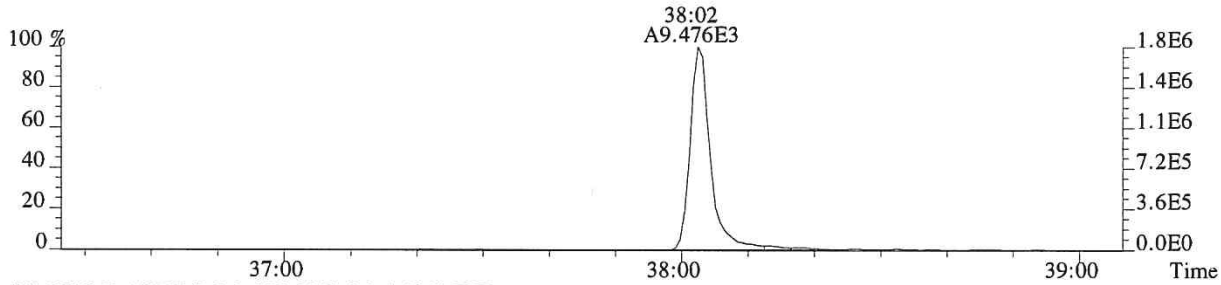
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,268.0,0.40%,F,T)



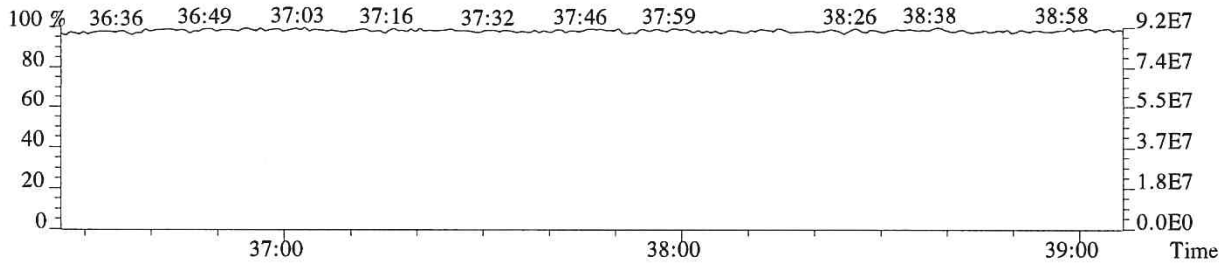
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,516.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,568.0,0.40%,F,T)

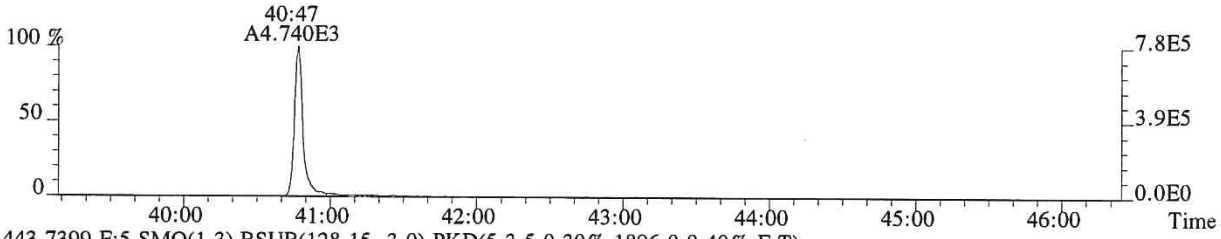


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

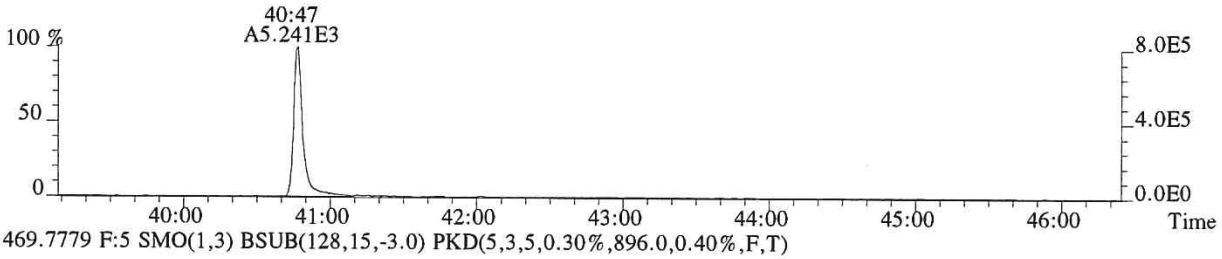


017636

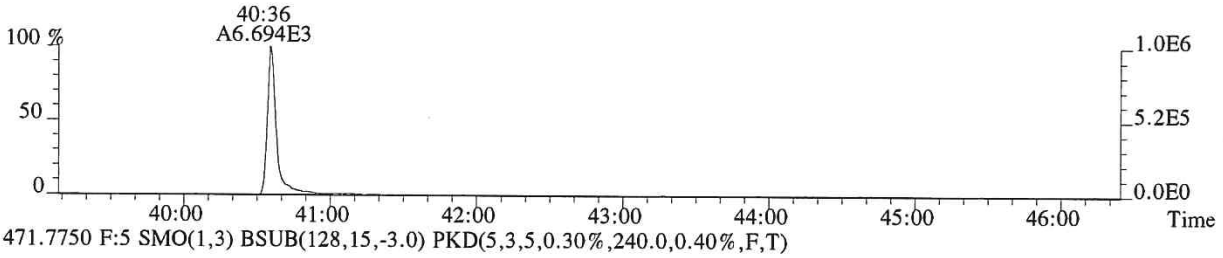
File:P616389 #1-654 Acq: 8-JAN-2019 22:48:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,216.0,0.40%,F,T)



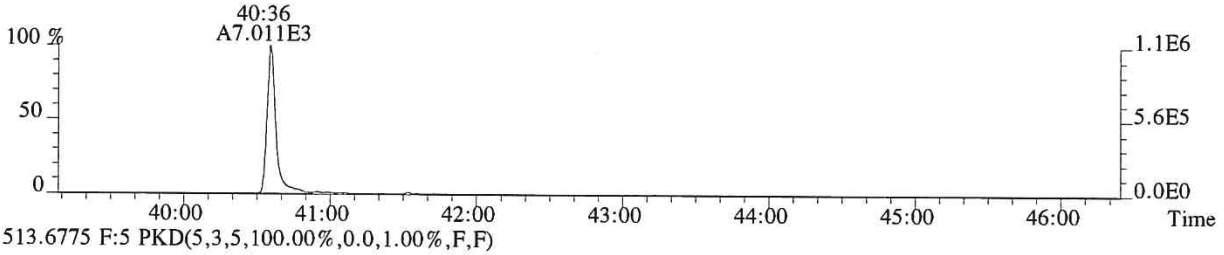
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1896.0,0.40%,F,T)



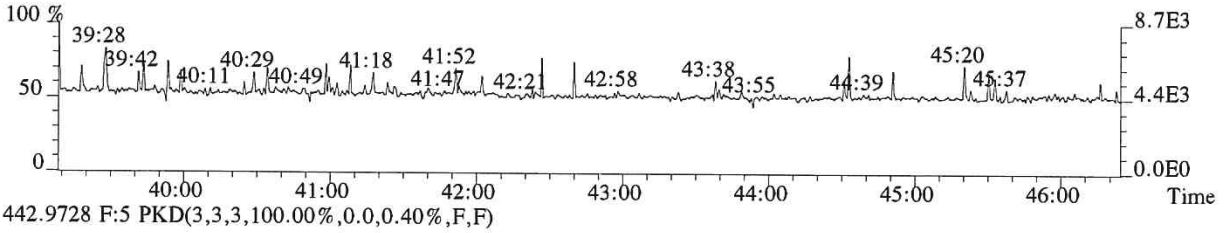
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,896.0,0.40%,F,T)



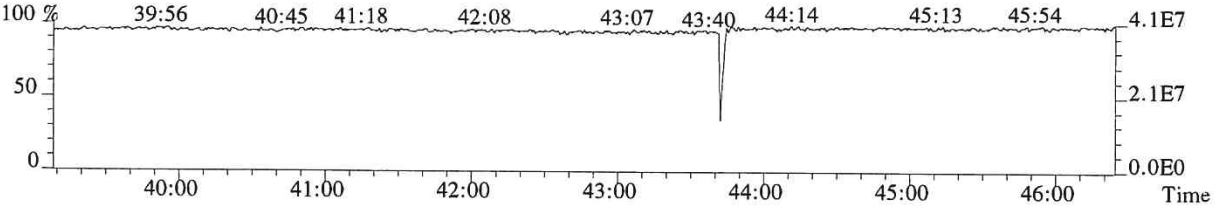
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,240.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

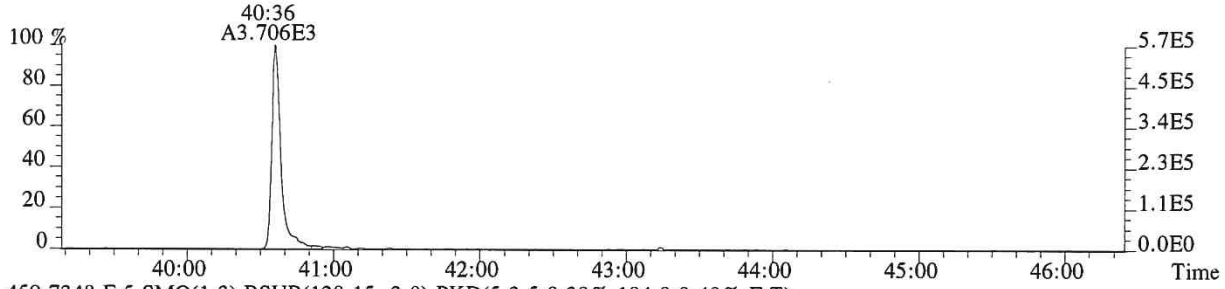


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

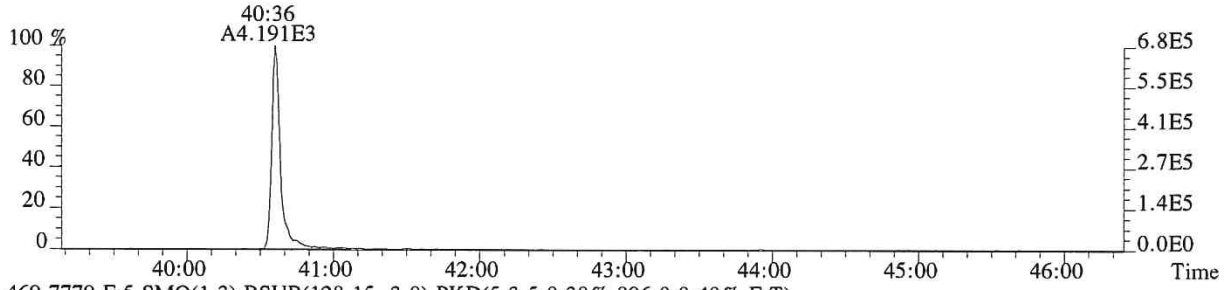


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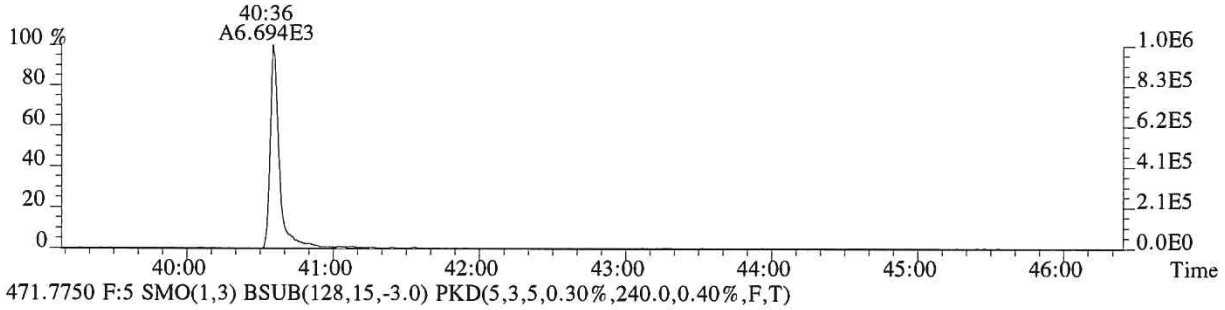
File:P616389 #1-654 Acq: 8-JAN-2019 22:48:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:DLCS
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,192.0,0.40%,F,T)



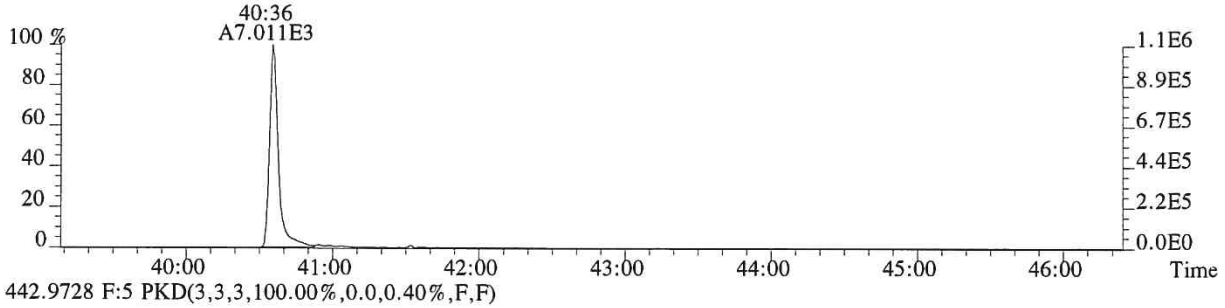
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,184.0,0.40%,F,T)



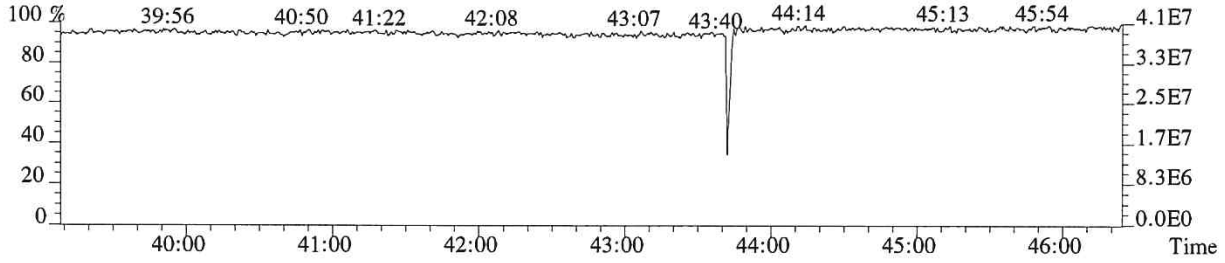
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,896.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,240.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017638

Continuing Calibration

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P519832

Date: 01/08/19

Circle one: Beginning / Ending

Method: 1613 / 1613E / 8290/ VCP / Tetra / TCDD Only / TCDF Conf / VCP Conf / 8280 / M23 / TO-9A

Retention Window/Column Performance Check:	Analyst	Second Check
Windows in and first and last eluters labeled	✓	✓
Column Performance shows less than or equal to 25% valley between column specific 2378 isomer and its closest eluters	✓	✓
No QC ion deflections affect column specific 2378 isomer or its closest eluters (HRMS Only)	✓	✓

CS3 Continuing Calibration	Analyst	Second Check
Percent RSD within method criteria	✓	✓
All relative abundance ratios meet method criteria	✓	✓
No QC ion deflections of greater than 20% (HRMS Only)	✓	✓
Mass spectrometer resolution greater than or equal to 10,000 and documented (HRMS Only)	✓	✓
2378-TCDD elutes at 25 minutes or later on the DB-5 column / DB-5MSUI column	✓	✓
Signal-to-noise of all target analytes and their labeled standards at least 10:1	✓	✓
Valley between labeled 123478 and 123678 HxCDD peaks less than or equal to 50% (LRMS Only)	N/A	N/A
Ending Calibration injected prior to end of 12 hour clock	N/A	N/A

Analyst: _____ Second QC: LKL

ccalqc.xls 07/17/12

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: Case No.: Client No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm)

Init. Calib. Date: 01/24/18

Init. Calib.Times: 11:44

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
195556	DO NOT USE	P519831	8-JAN-19	09:52:19
195556	CS3	P519832	8-JAN-19	10:56:56
192977	WINDOW DEFINE	P519833	8-JAN-19	11:48:08
METHOD BLANK	EQ1800527-01	P519834	8-JAN-19	12:37:00
METHOD BLANK	EQ1900008-01	P519835	8-JAN-19	13:24:47
SL0178	E1801138-010	P519836	8-JAN-19	14:15:10
SL0179	E1801138-011	P519837	8-JAN-19	15:02:56
SL0180	E1801138-012	P519838	8-JAN-19	15:51:38
SL0198	E1801138-013	P519839	8-JAN-19	16:40:36
SL0199	E1801138-014	P519840	8-JAN-19	17:28:57
SL0200	E1801138-015	P519841	8-JAN-19	18:17:34
SL0201	E1801138-016	P519842	8-JAN-19	19:06:12
SL0202	E1801138-017	P519843	8-JAN-19	19:54:48
SL0211	E1801138-018	P519844	8-JAN-19	20:43:26
SL0212	E1801138-019	P519845	8-JAN-19	21:32:04
SL0213	E1801138-020	P519846	8-JAN-19	22:20:40

E1801138

Sample List Report — **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS07.PRO\SampleDB\20190108A.SPL
Last Modified: Wednesday, January 09, 2019 06:54:21 Central Standard Time
Printed: Wednesday, January 09, 2019 06:54:23 Central Standard Time

Page Position (1, 1)

OPUS 4. P519832res

	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	1/8/19	09:52	P519831	CS3	195556	EPA1613_ALS	Dioxin_ALS	Tray1:2	LG	unit user
2		10:56	P519832	CS3	195556	EPA1613_ALS	Dioxin_ALS	Tray1:2		HRMS check 09:47
3		11:48	P519833	WINDOWDEFINE	192977	EPA1613_ALS	Dioxin_ALS	Tray1:1		
4		12:37	P519834	MB	EQ1800527-01	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		13:24	P519835	MB	EQ1900008-01	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		14:15	P519836	E1801138-010	E1801138-010	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		15:07	P519837	E1801138-011	E1801138-011	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		15:51	P519838	E1801138-012	E1801138-012	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		16:40	P519839	E1801138-013	E1801138-013	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		17:28	P519840	E1801138-014	E1801138-014	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		18:17	P519841	E1801138-015	E1801138-015	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		19:06	P519842	E1801138-016	E1801138-016	EPA1613_ALS	Dioxin_ALS	Tray1:12		
13		19:54	P519843	E1801138-017	E1801138-017	EPA1613_ALS	Dioxin_ALS	Tray1:13		
14		20:43	P519844	E1801138-018	E1801138-018	EPA1613_ALS	Dioxin_ALS	Tray1:14		
15		21:32	P519845	E1801138-019	E1801138-019	EPA1613_ALS	Dioxin_ALS	Tray1:15		
16		22:20	P519846	E1801138-020	E1801138-020	EPA1613_ALS	Dioxin_ALS	Tray1:16		HRMS check 23:17
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---
21	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:21	---	---

761 of 1083

JC 01/09/19

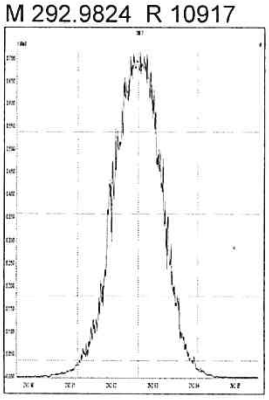
087

017642

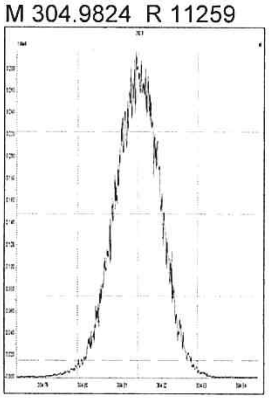
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Printed: Tuesday, January 08, 2019 09:47:44 Central Standard Time

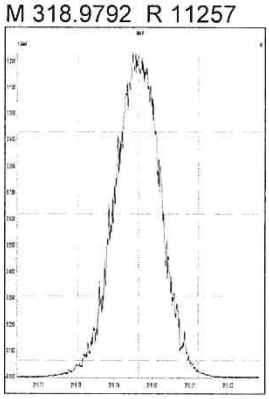
M 292.9824 R 10917



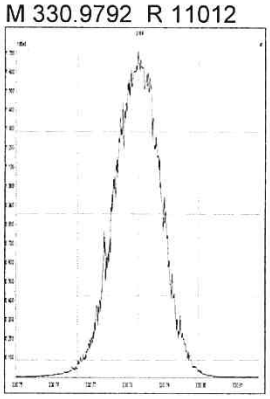
M 304.9824 R 11259



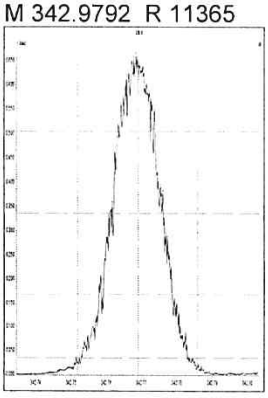
M 318.9792 R 11257



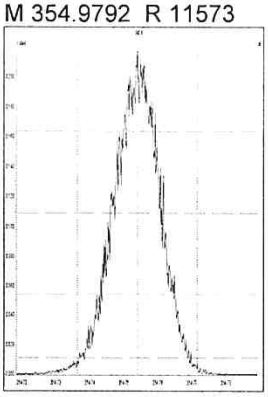
M 330.9792 R 11012



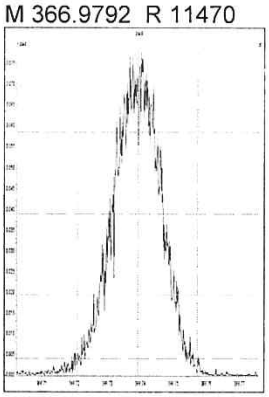
M 342.9792 R 11365



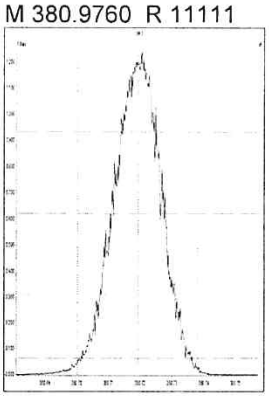
M 354.9792 R 11573



M 366.9792 R 11470



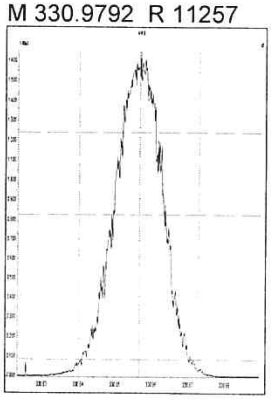
M 380.9760 R 11111



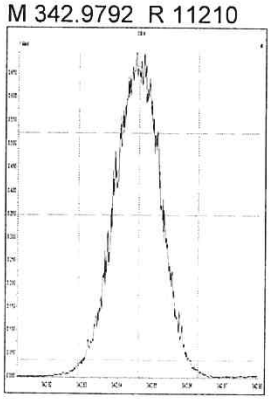
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Printed: Tuesday, January 08, 2019 09:48:32 Central Standard Time

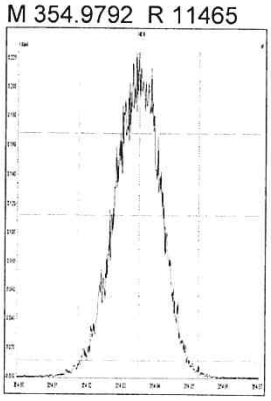
M 330.9792 R 11257



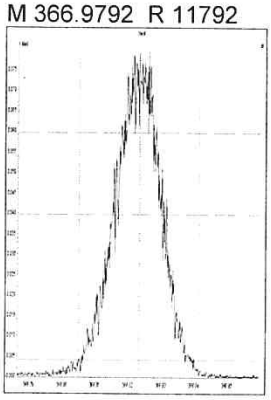
M 342.9792 R 11210



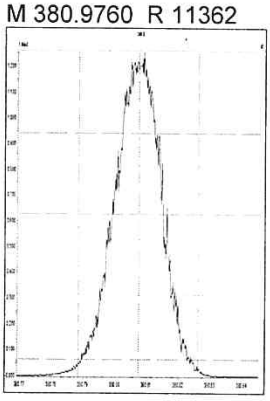
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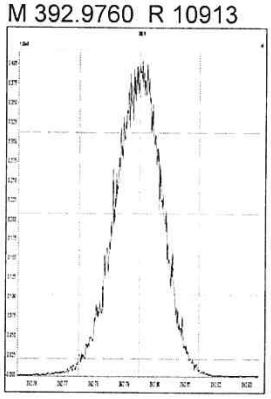
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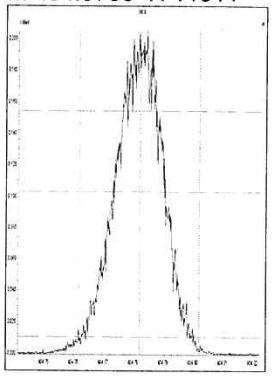
M 380.9760 R 11362



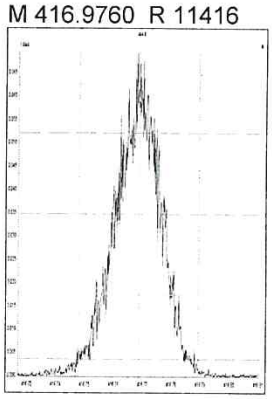
M 392.9760 R 10913



M 404.9760 R 11311



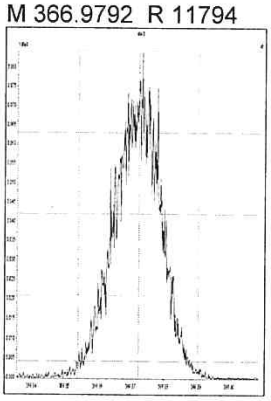
M 416.9760 R 11416



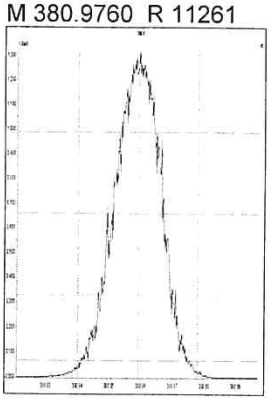
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Tuesday, January 08, 2019 09:49:33 Central Standard Time

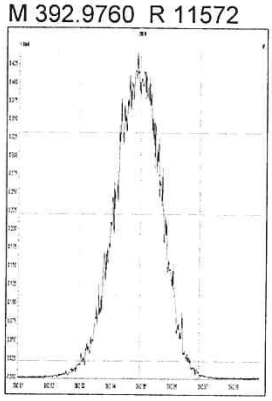
M 366.9792 R 11794



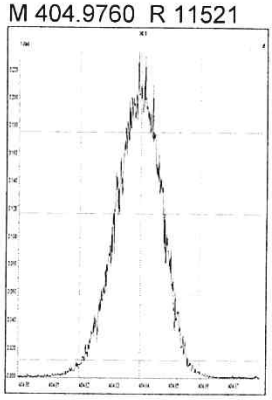
M 380.9760 R 11261



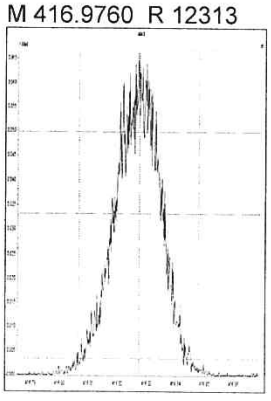
M 392.9760 R 11572



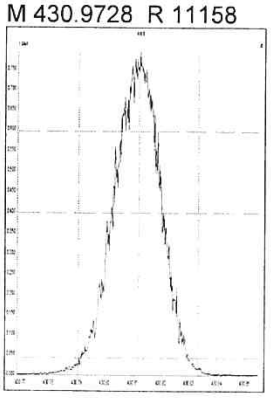
M 404.9760 R 11521



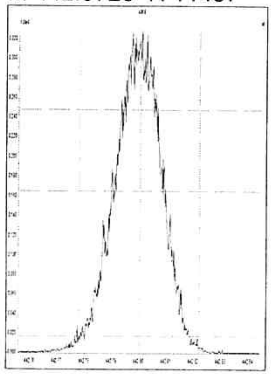
M 416.9760 R 12313



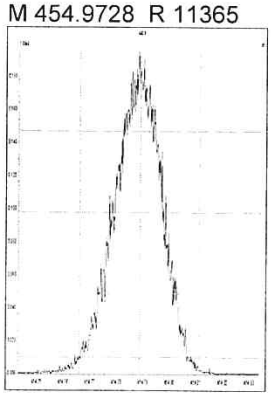
M 430.9728 R 11158



M 442.9728 R 11467



M 454.9728 R 11365

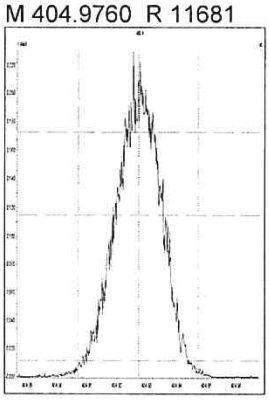


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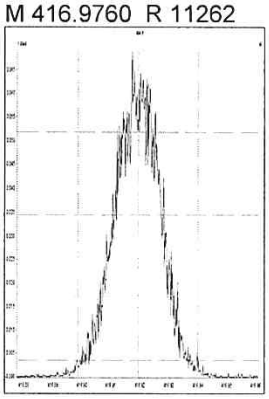
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

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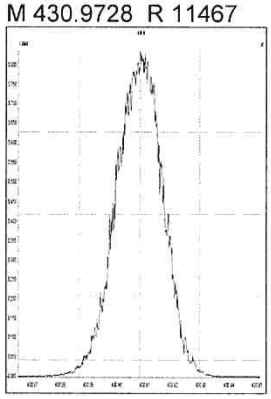
M 404.9760 R 11681



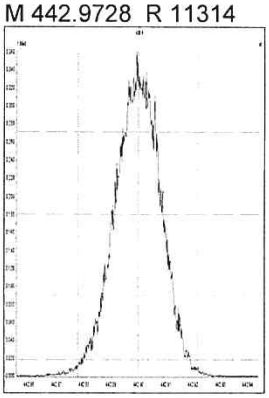
M 416.9760 R 11262



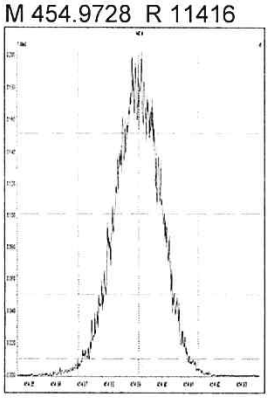
M 430.9728 R 11467



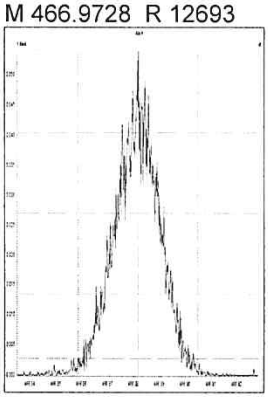
M 442.9728 R 11314



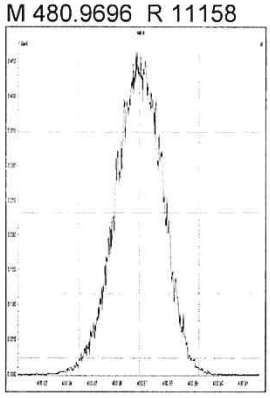
M 454.9728 R 11416



M 466.9728 R 12693



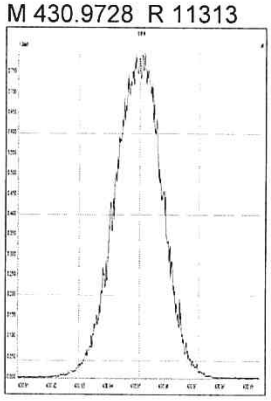
M 480.9696 R 11158



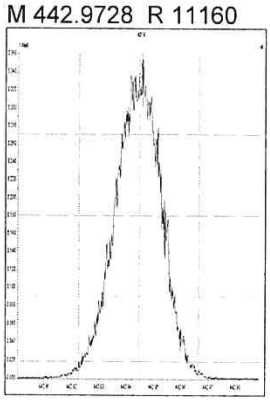
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Tuesday, January 08, 2019 09:51:29 Central Standard Time

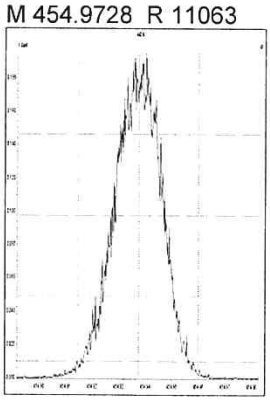
M 430.9728 R 11313



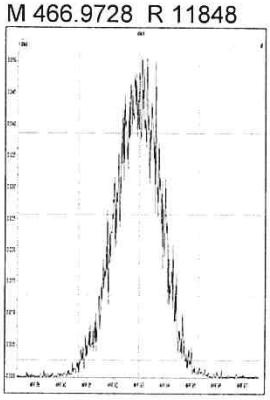
M 442.9728 R 11160



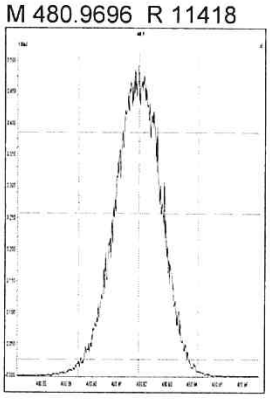
M 454.9728 R 11063



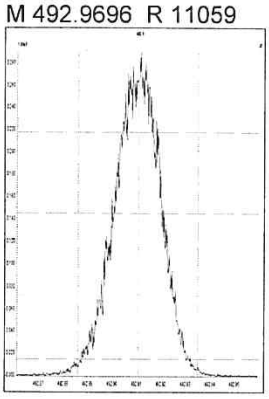
M 466.9728 R 11848



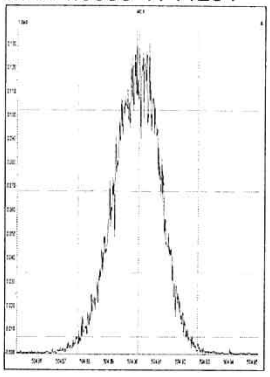
M 480.9696 R 11418



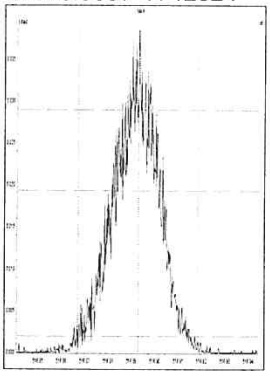
M 492.9696 R 11059



M 504.9696 R 11264

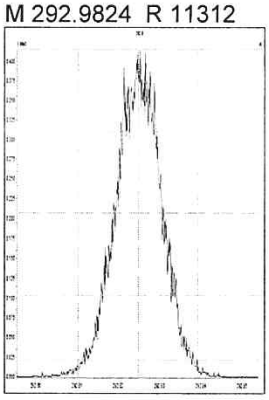


M 516.9697 R 12624

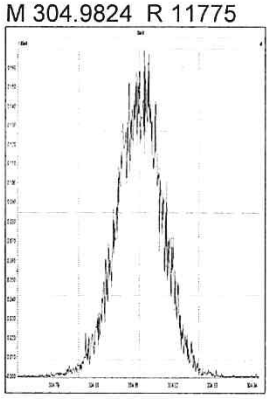


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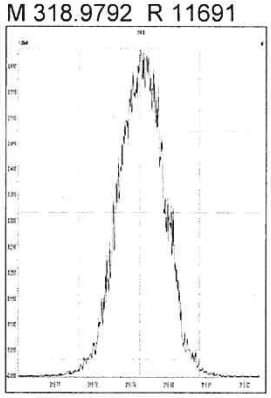
M 292.9824 R 11312



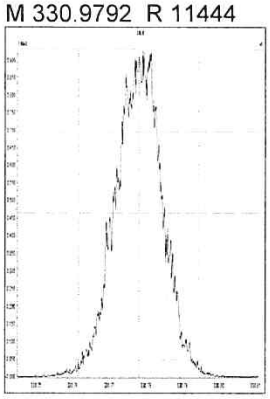
M 304.9824 R 11775



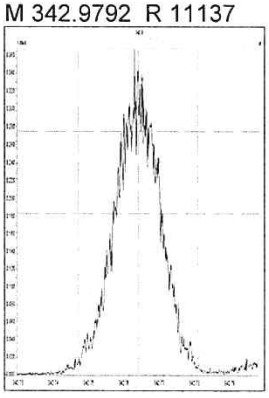
M 318.9792 R 11691



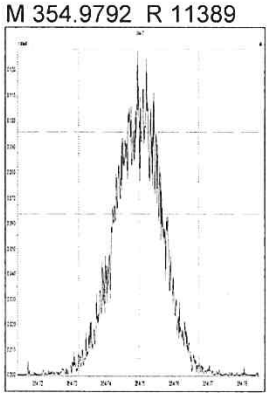
M 330.9792 R 11444



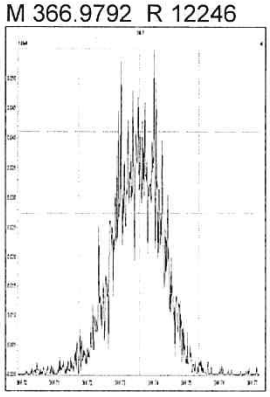
M 342.9792 R 11137



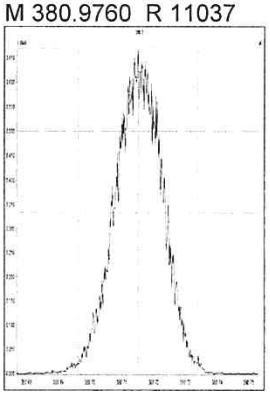
M 354.9792 R 11389



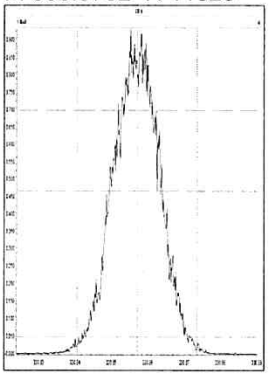
M 366.9792 R 12246



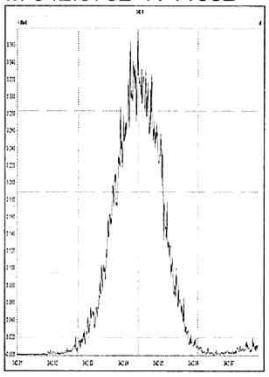
M 380.9760 R 11037



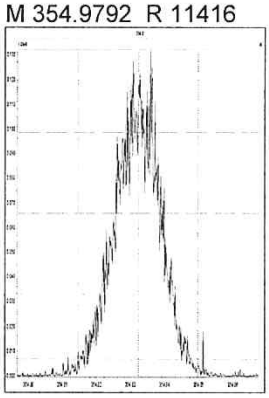
M 330.9792 R 11520



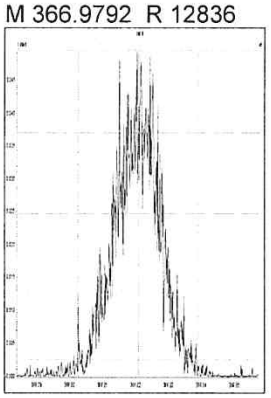
M 342.9792 R 11682



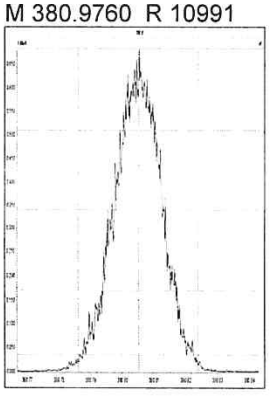
M 354.9792 R 11416



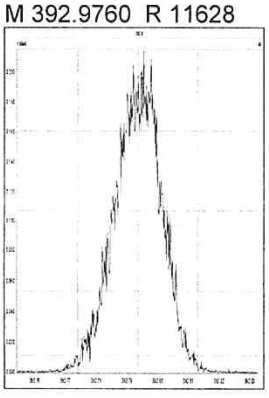
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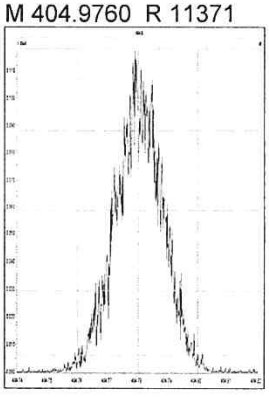
M 380.9760 R 10991



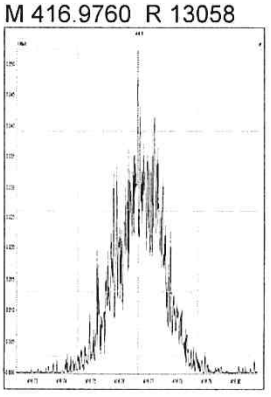
M 392.9760 R 11628



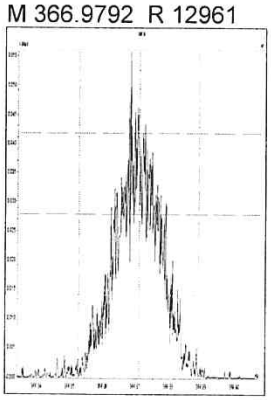
M 404.9760 R 11371



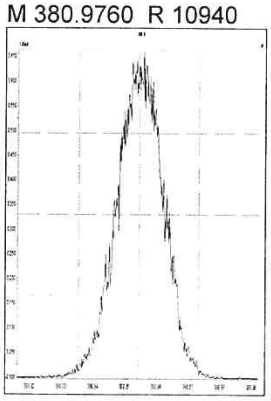
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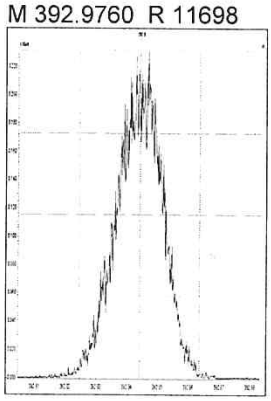
M 366.9792 R 12961



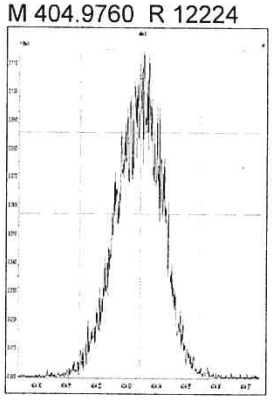
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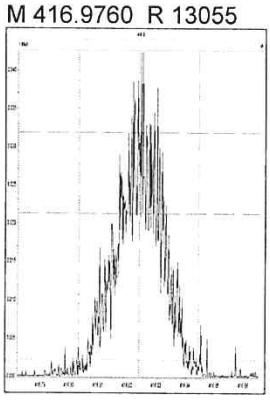
M 392.9760 R 11698



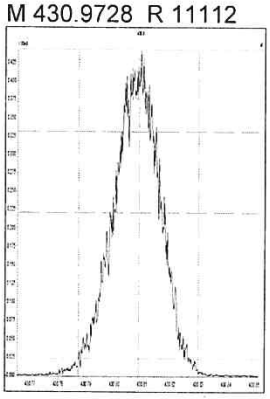
M 404.9760 R 12224



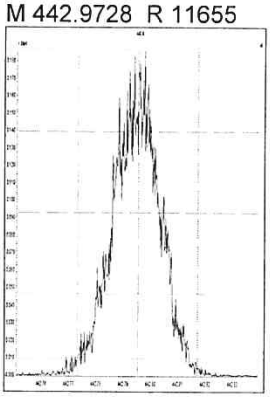
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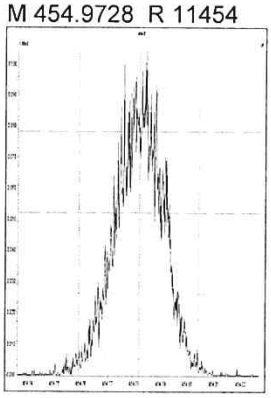
M 430.9728 R 11112



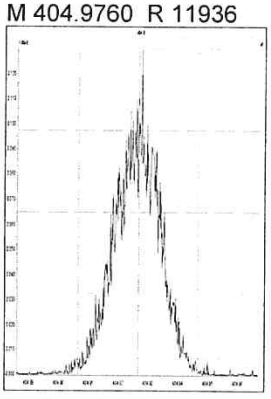
M 442.9728 R 11655



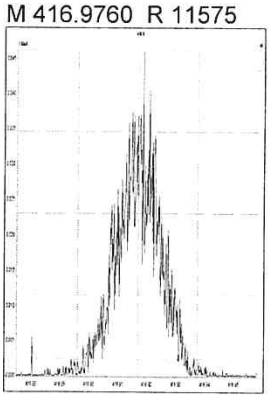
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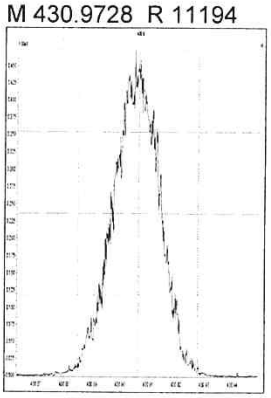
M 404.9760 R 11936



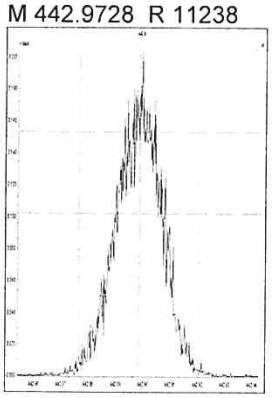
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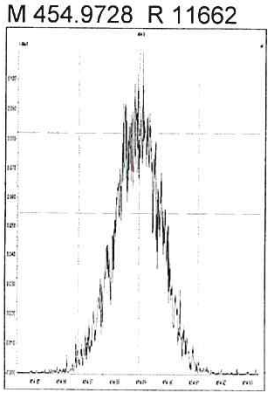
M 430.9728 R 11194



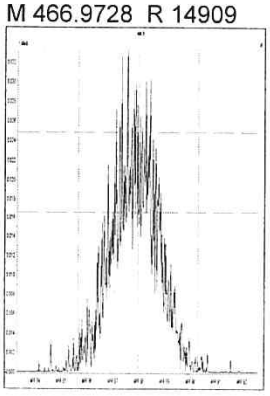
M 442.9728 R 11238



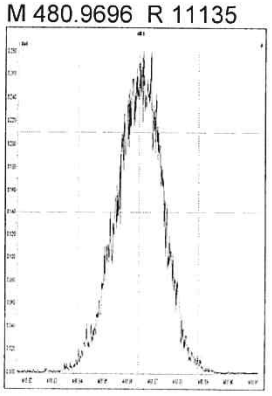
M 454.9728 R 11662



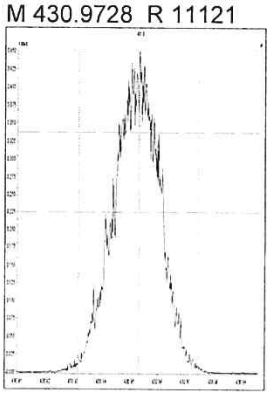
M 466.9728 R 14909



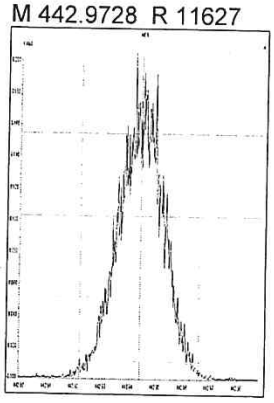
M 480.9696 R 11135



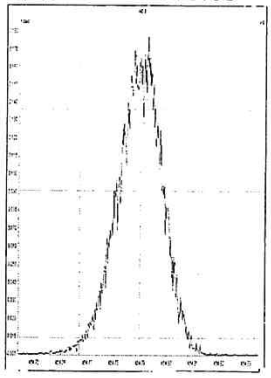
M 430.9728 R 11121



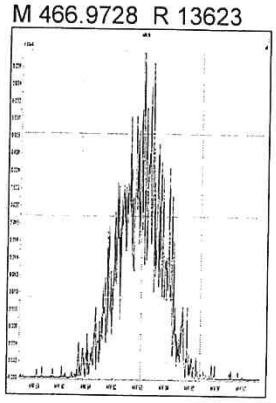
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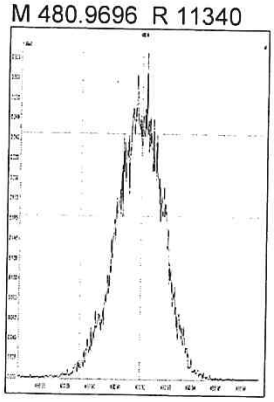
M 454.9728 R 12106



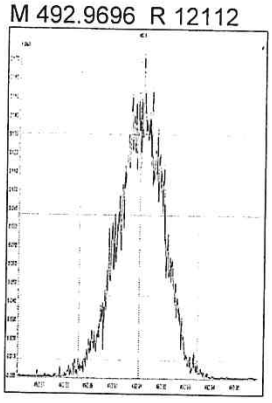
M 466.9728 R 13623



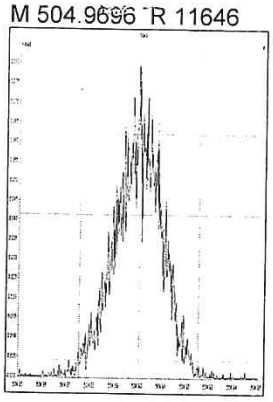
M 480.9696 R 11340



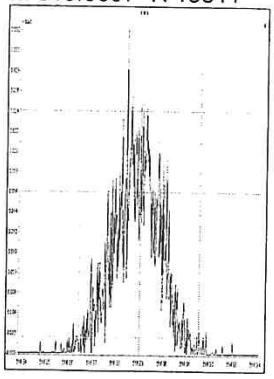
M 492.9696 R 12112



M 504.9696 R 11646



M 516.9697 R 13811



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

Lab Name: ALS Environmental
Lab Code: ALSTX
GC Column: DB-5MSUI

Case No.: _____ SDG No.:
ID: 0.25 (mm)

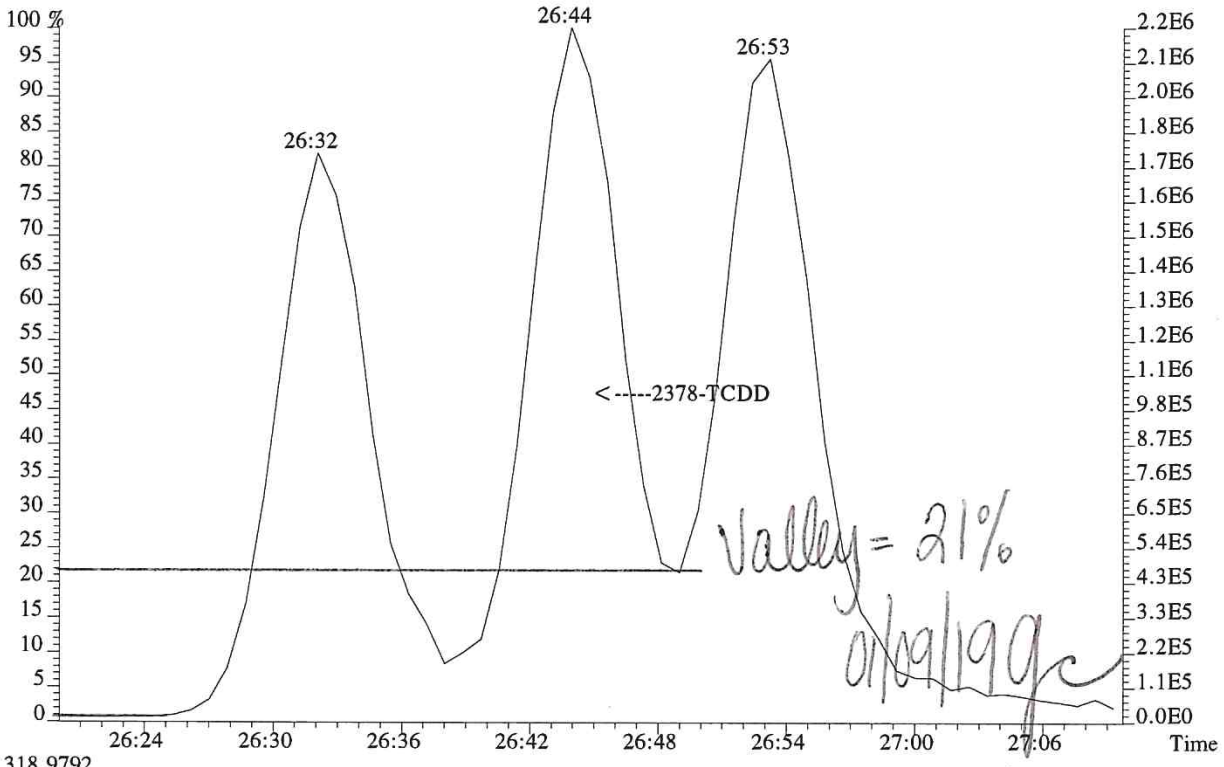
Lab File ID: P519833
Date Analyzed: 8-JAN-2019
Time Analyzed: 11:48:08

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	21:23	28:06
TCDD	23:00	27:57
PeCDF	28:05	32:52
PeCDD	29:52	32:36
HxCDF	33:37	36:21
HxCDD	34:12	35:56
HpCDF	37:44	39:14
HpCDD	38:02	38:46

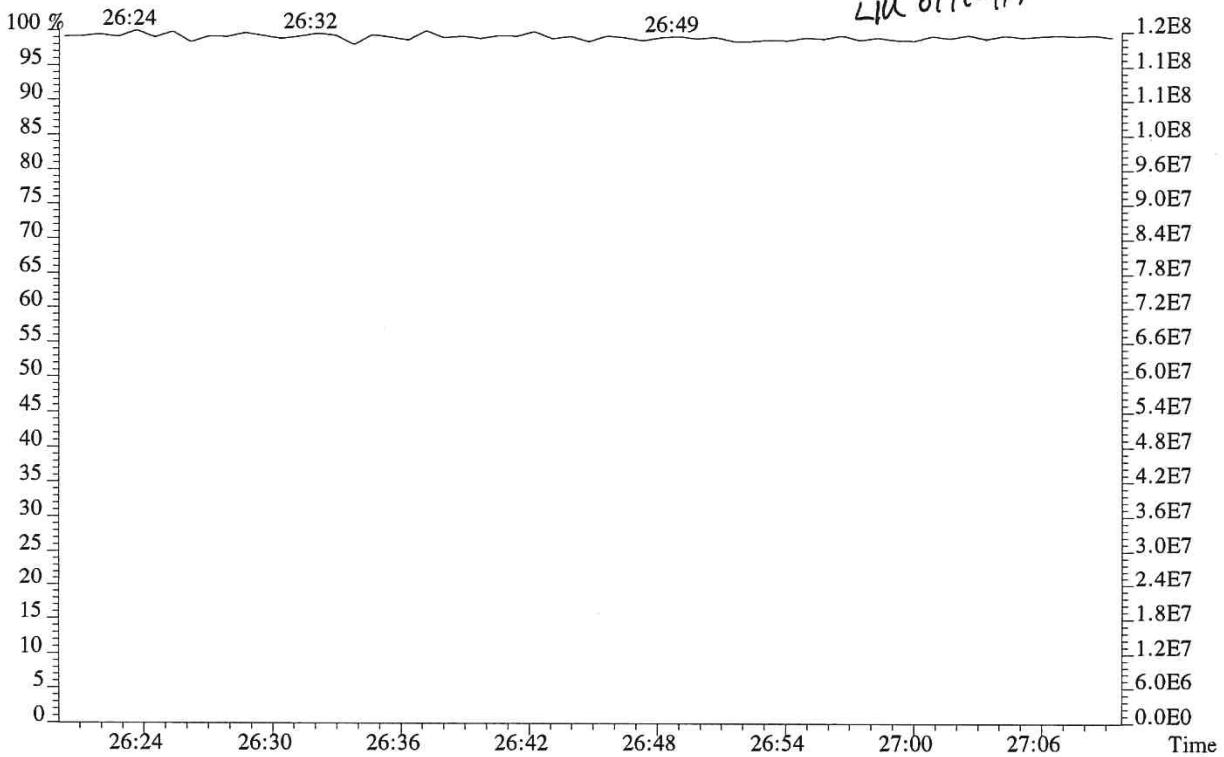
% Valley 2378-TCDD: 21 %

017651

File:P519833 #1-587 Acq: 8-JAN-2019 11:48:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
319.8965

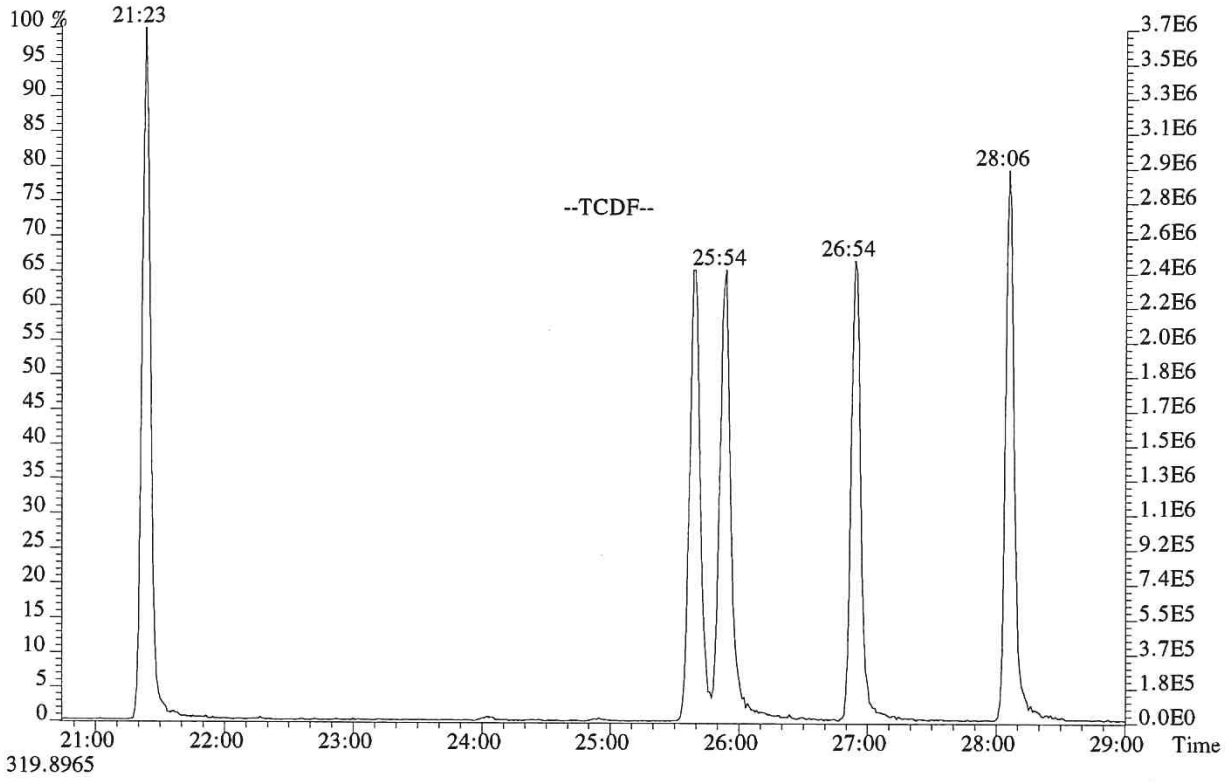


318.9792

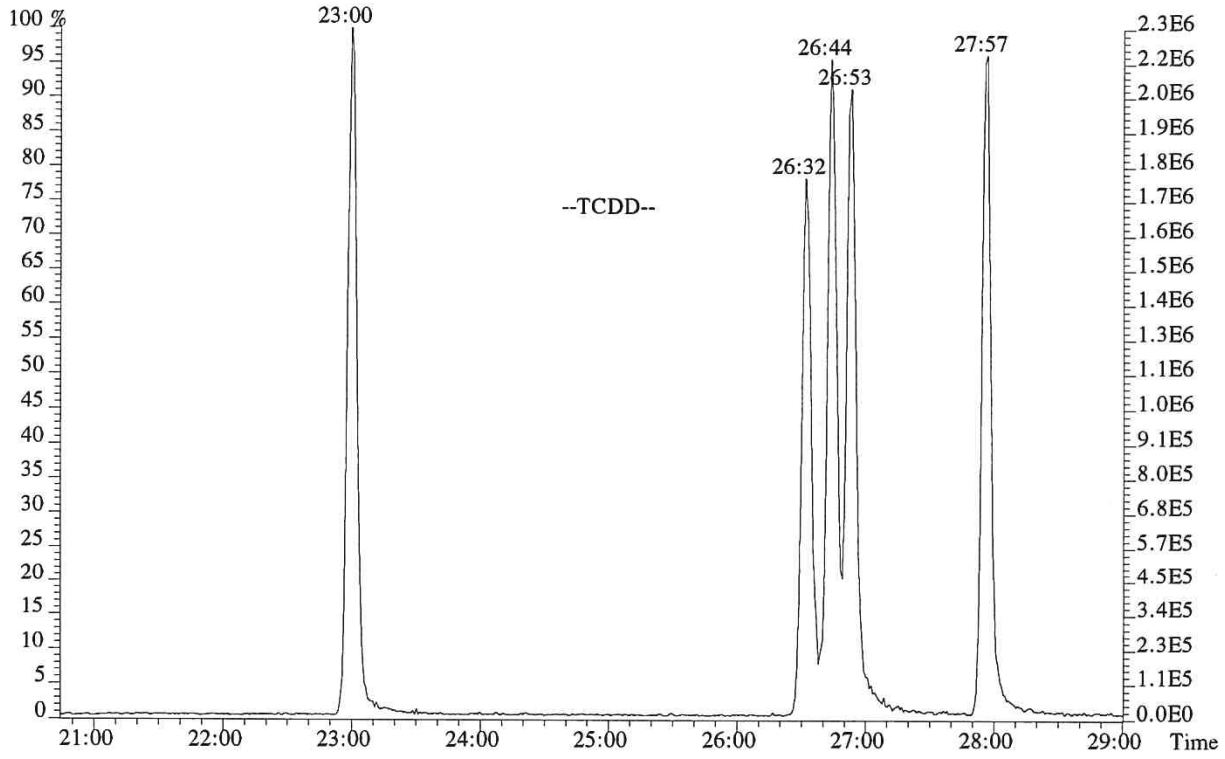


017652

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Sample#1 Exp:192977
303.9016

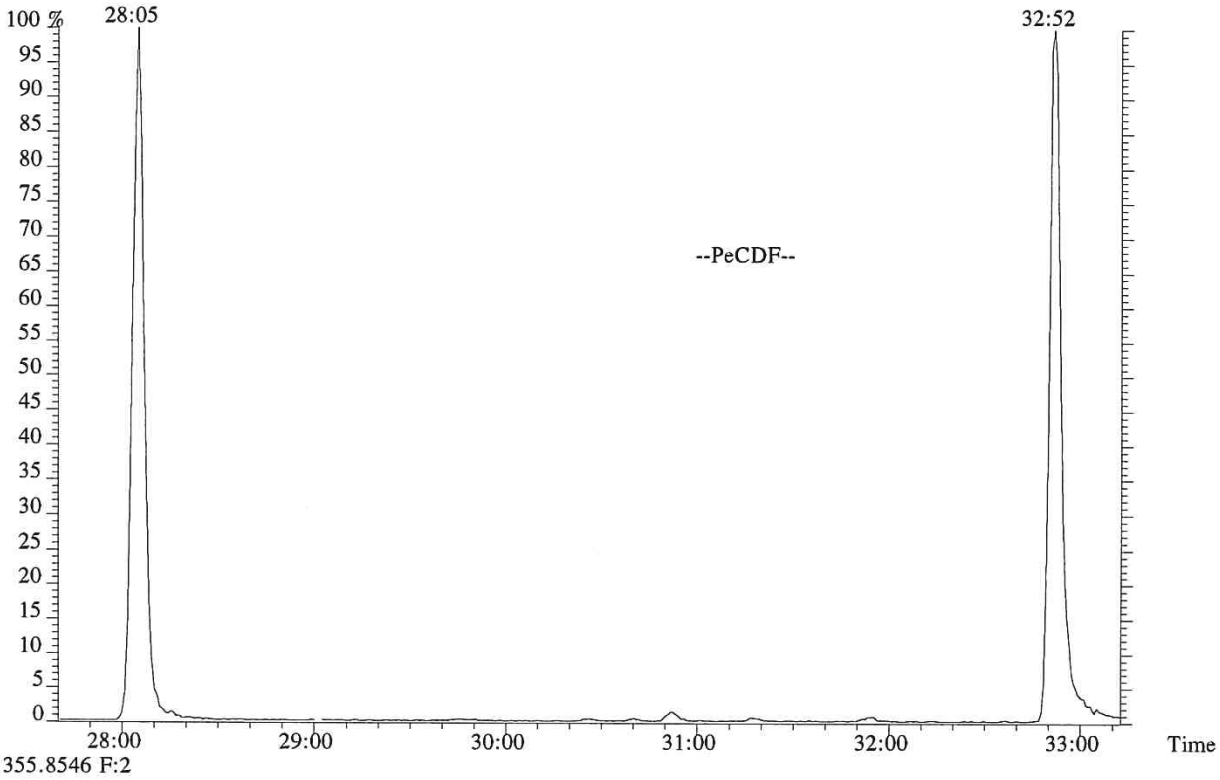


319.8965

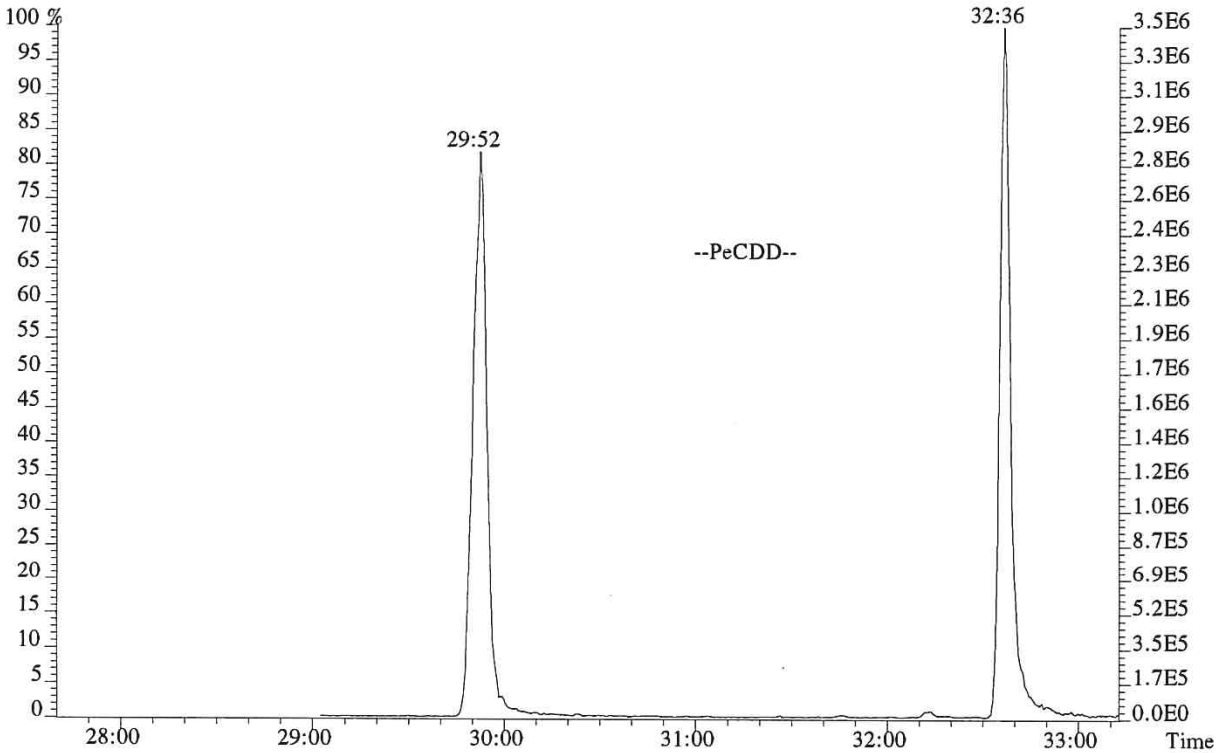


017653

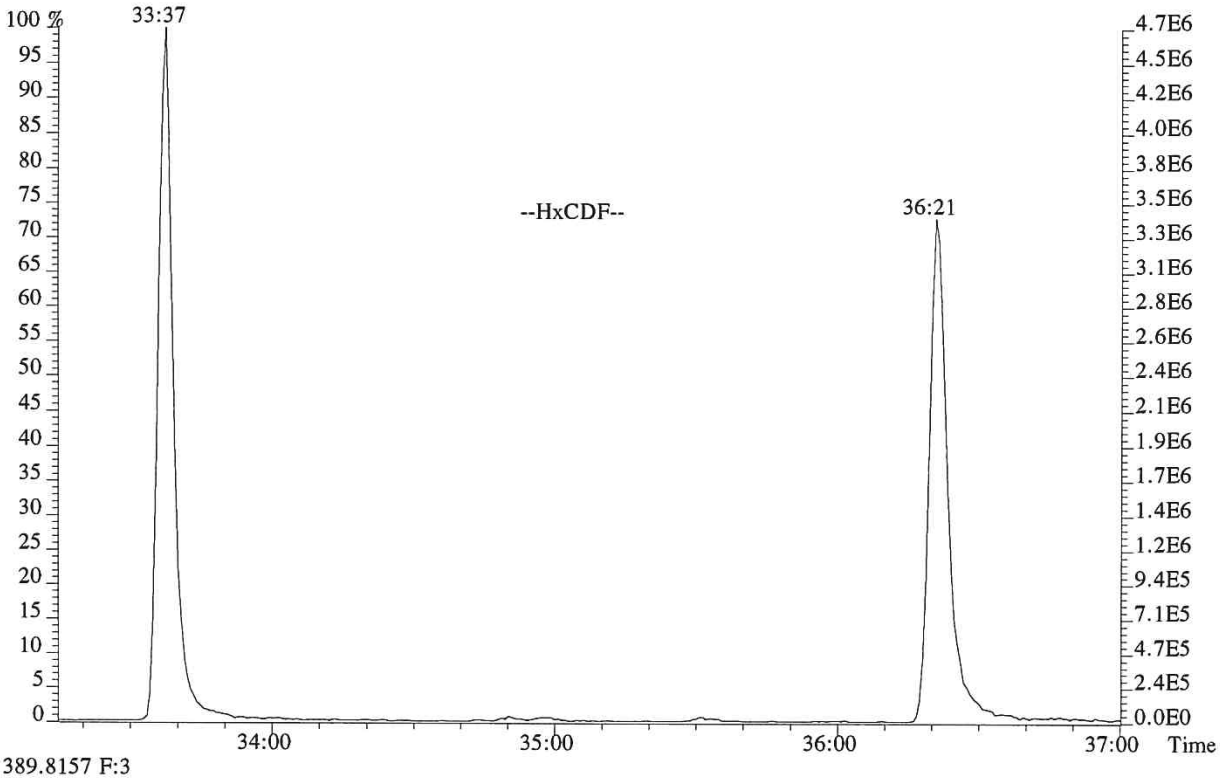
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Sample#1 Exp:192977
339.8597,339.8597 F:2



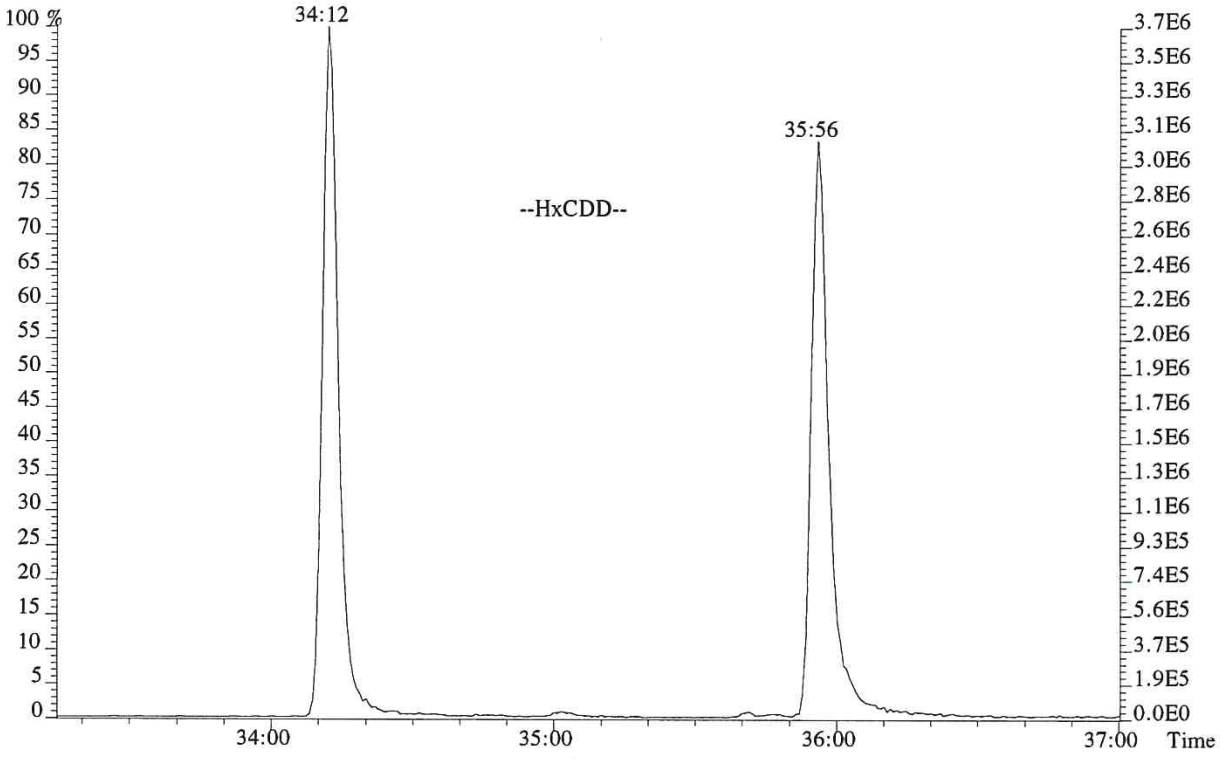
355.8546 F:2



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Sample#1 Exp:192977
373.8208 F:3

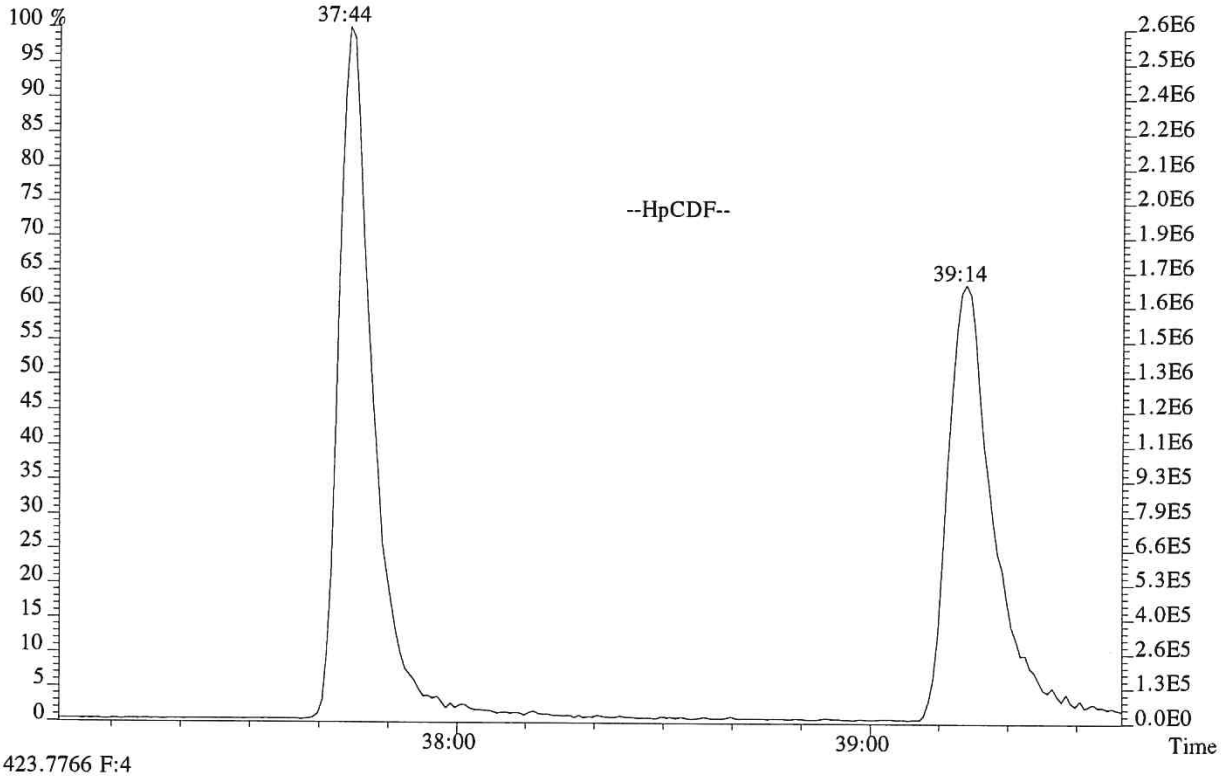


389.8157 F:3

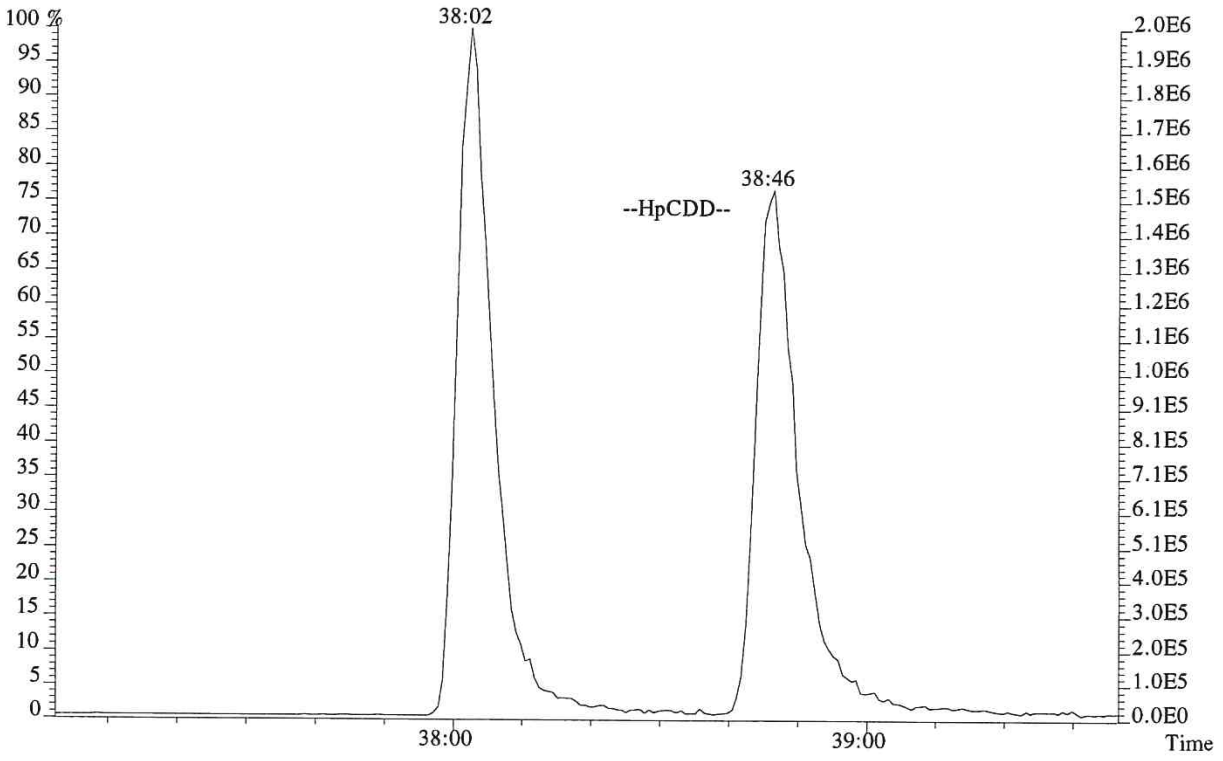


017655

File:P519833 #1-232 Acq: 8-JAN-2019 11:48:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
407.7818 F:4



423.7766 F:4



017656

USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519832 Analysis Date: 8-JAN-19 Time: 10:56:56

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	9.7	7.8 - 12.9	-3.3
1,2,3,7,8-PeCDD	M+2/M+4	1.57	1.32-1.78	50	39 - 65	0.6
1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	50	39 - 64	-0.7
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	50	39 - 64	0.8
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	55	41 - 61	9.1
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	51	43 - 58	2.6
OCDD	M+2/M+4	0.87	0.76-1.02	101	79 - 126	0.8
2,3,7,8-TCDF	M/M+2	0.72	0.65-0.89	10.0	8.4 - 12.0	-0.3
1,2,3,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	50	41 - 60	0.9
2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	50	41 - 61	0.3
1,2,3,4,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	52	45 - 56	3.1
1,2,3,6,7,8-HxCDF	M+2/M+4	1.18	1.05-1.43	49	44 - 57	-1.3
1,2,3,7,8,9-HxCDF	M+2/M+4	1.22	1.05-1.43	50	45 - 56	0.2
2,3,4,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	50	44 - 57	0.8
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.01	0.88-1.20	51	45 - 55	1.8
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.03	0.88-1.20	51	43 - 58	1.6
OCDF	M+2/M+4	0.88	0.76-1.02	100	63 - 159	-0.2

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519832 Analysis Date: 8-JAN-19 Time: 10:56:56

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	103	82 - 121	2.9
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.59	1.32-1.78	112	62 - 160	12.1
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	87	85 - 117	-13.2
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	103	85 - 118	3.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	102	72 - 138	1.6
13C-OCDD	M+2/M+4	0.91	0.76-1.02	245	96 - 415	22.5
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	92	71 - 140	-8.4
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	105	76 - 130	5.1
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	106	77 - 130	6.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	80	76 - 131	-19.6
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	92	70 - 143	-8.4
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	90	74 - 135	-9.9
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	91	73 - 137	-9.4
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	95	78 - 129	-4.7
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	98	77 - 129	-1.7
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				10.0	7.8 - 12.7	-0.2

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
195556

Run #8 Filename P519832 Samp: 1 Inj: 1 Acquired: 8-JAN-19 10:56:56
Processed: 9-JAN-19 11:56:26 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:54	4.037e+03	5.589e+03	0.72	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:52	3.530e+04	2.316e+04	1.52	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:52	3.335e+04	2.159e+04	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:50	2.749e+04	2.216e+04	1.24	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:57	3.137e+04	2.659e+04	1.18	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:31	2.838e+04	2.360e+04	1.20	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:19	2.512e+04	2.061e+04	1.22	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:45	2.602e+04	2.566e+04	1.01	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:14	2.137e+04	2.065e+04	1.03	yes	no	1.258
10	Unk	OCDF	41:55	3.697e+04	4.195e+04	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:53	3.277e+03	4.108e+03	0.80	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:12	2.376e+04	1.517e+04	1.57	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:41	1.893e+04	1.483e+04	1.28	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:46	2.316e+04	1.857e+04	1.25	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:01	2.366e+04	1.849e+04	1.28	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:46	1.920e+04	1.816e+04	1.06	yes	no	1.025
17	Unk	OCDD	41:45	3.059e+04	3.505e+04	0.87	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:52	4.520e+04	5.734e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:50	7.050e+04	4.400e+04	1.60	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:52	7.004e+04	4.427e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:49	2.752e+04	5.342e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:56	3.559e+04	6.897e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:30	3.176e+04	6.117e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:19	2.748e+04	5.235e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:45	2.318e+04	5.198e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:13	2.035e+04	4.543e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:52	3.103e+04	3.936e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:11	4.968e+04	3.121e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:40	3.691e+04	2.861e+04	1.29	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:45	4.476e+04	3.498e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:46	3.677e+04	3.432e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	41:45	5.548e+04	6.098e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:09	3.295e+04	4.107e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:01	4.580e+04	3.581e+04	1.28	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:53	7.487e+03				no	1.014

ALS ENVIRONMENTAL
10450 Stancliff Rd, Suite 115
Houston, TX 77099
Office(713)266-1599. Fax(713)266-0130

www.alsglobal.com

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
195556

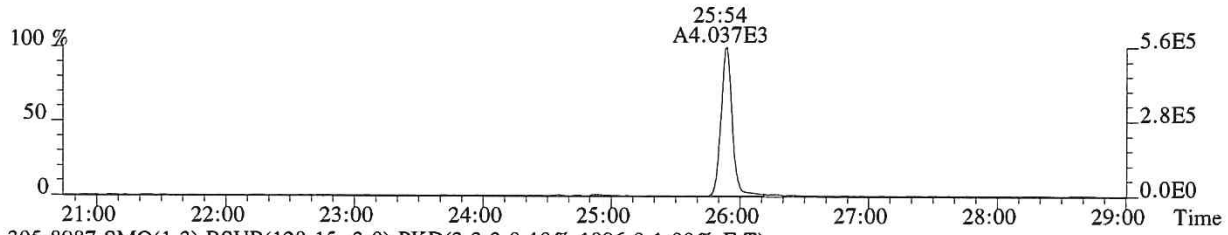
Run #8 Filename P519832 Samp: 1 Inj: 1 Acquired: 8-JAN-19 10:56:56
Processed: 9-JAN-19 11:56:26 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.63e+05	1.21e+03	4.6e+02	7.74e+05	1.90e+03	4.1e+02
2	1,2,3,7,8-PeCDF	5.55e+06	1.55e+03	3.6e+03	3.61e+06	1.88e+03	1.9e+03
3	2,3,4,7,8-PeCDF	5.48e+06	1.55e+03	3.5e+03	3.59e+06	1.88e+03	1.9e+03
4	1,2,3,4,7,8-HxCDF	4.57e+06	1.41e+03	3.2e+03	3.87e+06	1.96e+03	2.0e+03
5	1,2,3,6,7,8-HxCDF	4.78e+06	1.41e+03	3.4e+03	3.93e+06	1.96e+03	2.0e+03
6	2,3,4,6,7,8-HxCDF	4.47e+06	1.41e+03	3.2e+03	3.72e+06	1.96e+03	1.9e+03
7	1,2,3,7,8,9-HxCDF	3.39e+06	1.41e+03	2.4e+03	2.82e+06	1.96e+03	1.4e+03
8	1,2,3,4,6,7,8-HpCDF	3.05e+06	2.75e+03	1.1e+03	2.93e+06	8.38e+03	3.5e+02
9	1,2,3,4,7,8,9-HpCDF	1.95e+06	2.75e+03	7.1e+02	1.84e+06	8.38e+03	2.2e+02
10	OCDF	1.91e+06	3.16e+02	6.0e+03	2.23e+06	1.36e+03	1.6e+03
11	2,3,7,8-TCDD	4.96e+05	3.40e+03	1.5e+02	6.42e+05	2.11e+03	3.0e+02
12	1,2,3,7,8-PeCDD	3.88e+06	1.38e+03	2.8e+03	2.44e+06	3.84e+02	6.4e+03
13	1,2,3,4,7,8-HxCDD	3.25e+06	8.00e+02	4.1e+03	2.53e+06	1.05e+03	2.4e+03
14	1,2,3,6,7,8-HxCDD	3.21e+06	8.00e+02	4.0e+03	2.59e+06	1.05e+03	2.5e+03
15	1,2,3,7,8,9-HxCDD	3.22e+06	8.00e+02	4.0e+03	2.56e+06	1.05e+03	2.4e+03
16	1,2,3,4,6,7,8-HpCDD	1.79e+06	1.20e+03	1.5e+03	1.73e+06	6.08e+02	2.8e+03
17	OCDD	1.60e+06	3.84e+02	4.2e+03	1.82e+06	6.60e+02	2.8e+03
18	13C-2,3,7,8-TCDF	6.34e+06	7.34e+03	8.6e+02	8.08e+06	6.82e+03	1.2e+03
19	13C-1,2,3,7,8-PeCDF	1.11e+07	9.48e+02	1.2e+04	6.94e+06	1.26e+03	5.5e+03
20	13C-2,3,4,7,8-PeCDF	1.17e+07	9.48e+02	1.2e+04	7.45e+06	1.26e+03	5.9e+03
21	13C-1,2,3,4,7,8-HxCDF	4.75e+06	1.02e+03	4.6e+03	9.22e+06	8.92e+02	1.0e+04
22	13C-1,2,3,6,7,8-HxCDF	5.25e+06	1.02e+03	5.1e+03	1.02e+07	8.92e+02	1.1e+04
23	13C-2,3,4,6,7,8-HxCDF	4.90e+06	1.02e+03	4.8e+03	9.51e+06	8.92e+02	1.1e+04
24	13C-1,2,3,7,8,9-HxCDF	3.73e+06	1.02e+03	3.6e+03	7.06e+06	8.92e+02	7.9e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.66e+06	1.86e+03	1.4e+03	6.07e+06	1.02e+04	6.0e+02
26	13C-1,2,3,4,7,8,9-HpCDF	1.78e+06	1.86e+03	9.5e+02	4.02e+06	1.02e+04	4.0e+02
27	13C-2,3,7,8-TCDD	4.90e+06	8.47e+03	5.8e+02	6.23e+06	3.25e+03	1.9e+03
28	13C-1,2,3,7,8-PeCDD	7.98e+06	1.46e+03	5.5e+03	4.96e+06	1.65e+03	3.0e+03
29	13C-1,2,3,4,7,8-HxCDD	6.27e+06	1.28e+03	4.9e+03	4.86e+06	1.16e+03	4.2e+03
30	13C-1,2,3,6,7,8-HxCDD	6.30e+06	1.28e+03	4.9e+03	5.00e+06	1.16e+03	4.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	3.42e+06	1.01e+03	3.4e+03	3.23e+06	6.04e+02	5.3e+03
32	13C-OCDD	2.86e+06	1.24e+03	2.3e+03	3.23e+06	4.96e+02	6.5e+03
33	13C-1,2,3,4-TCDD	4.96e+06	8.47e+03	5.9e+02	6.19e+06	3.25e+03	1.9e+03
34	13C-1,2,3,7,8,9-HxCDD	6.12e+06	1.28e+03	4.8e+03	4.83e+06	1.16e+03	4.2e+03
35	37Cl-2,3,7,8-TCDD	1.14e+06	1.26e+03	9.0e+02			

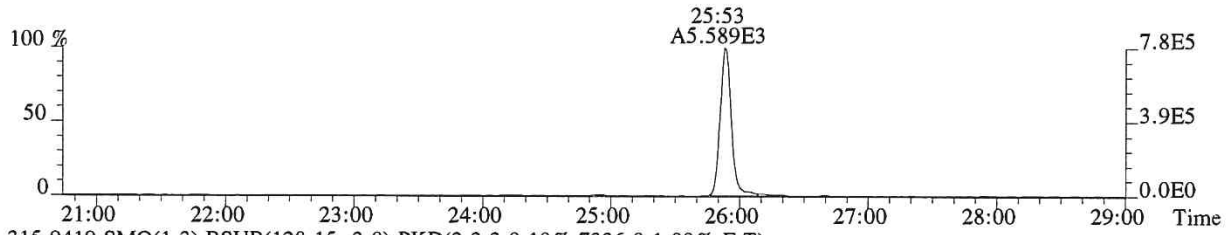
ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office:(713)266-1599. Fax:(713)266-0130

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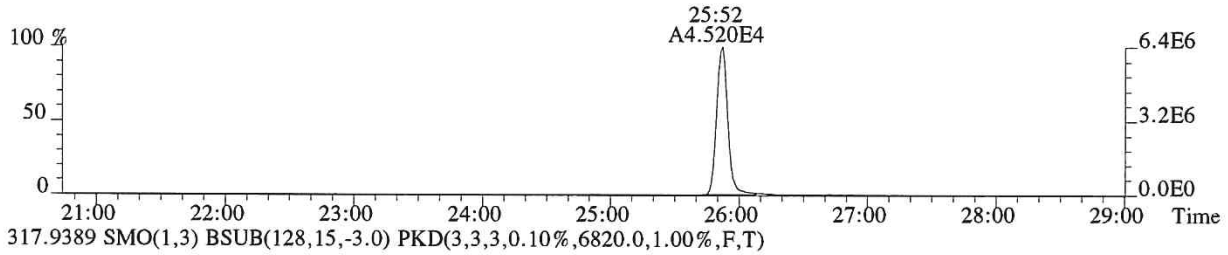
File:P519832 #1-587 Acq: 8-JAN-2019 10:56:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1212.0,1.00%,F,T)



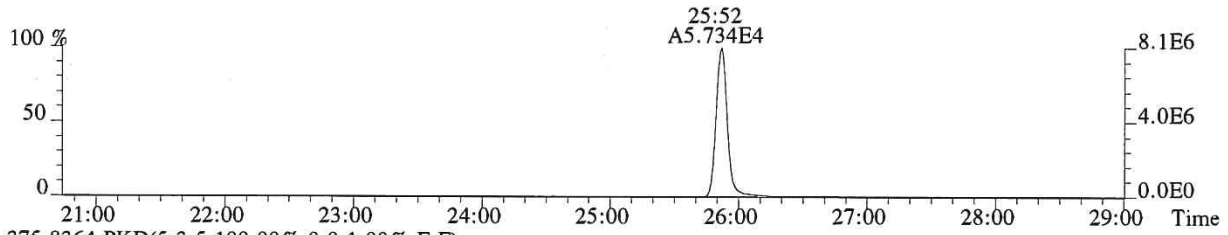
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1896.0,1.00%,F,T)



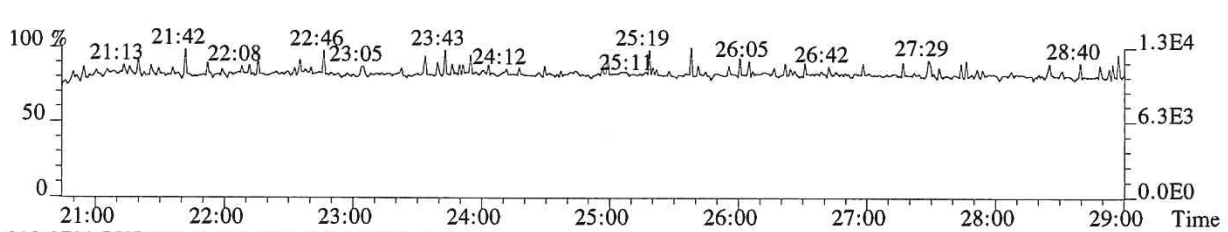
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7336.0,1.00%,F,T)



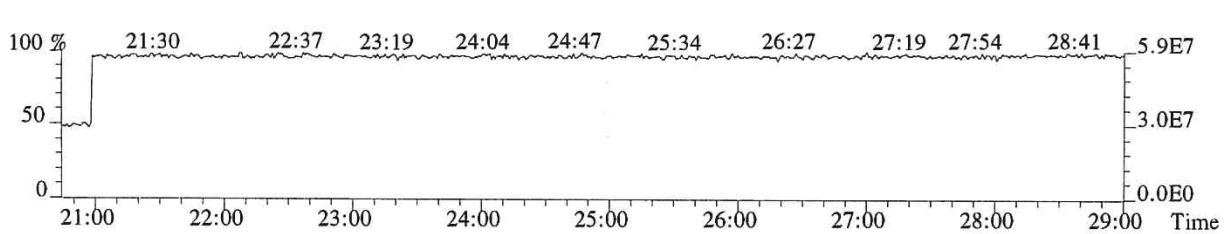
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6820.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

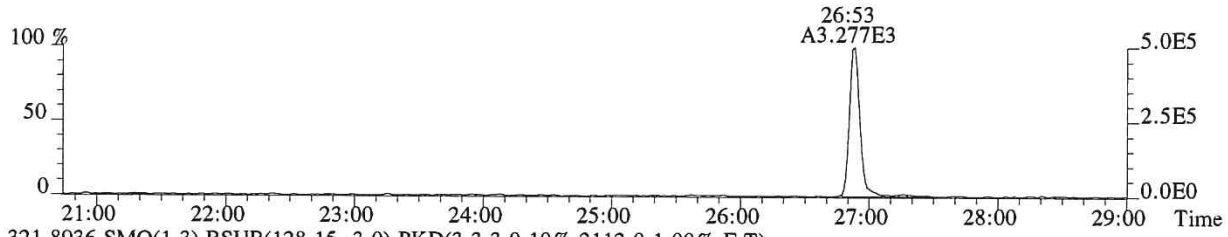


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

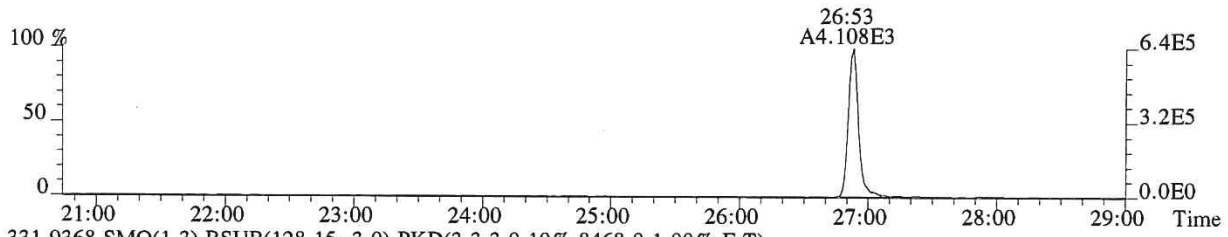


017661

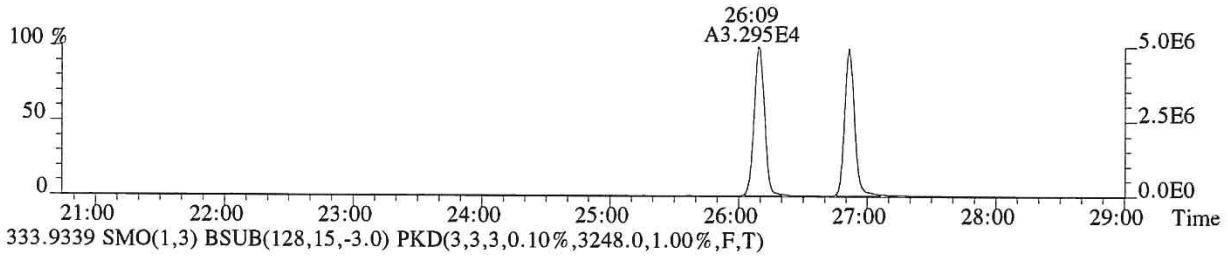
File:P519832 #1-587 Acq: 8-JAN-2019 10:56:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3400.0,1.00%,F,T)



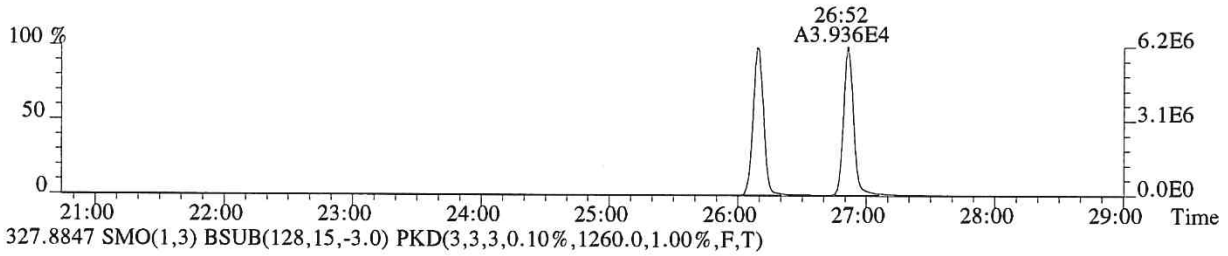
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2112.0,1.00%,F,T)



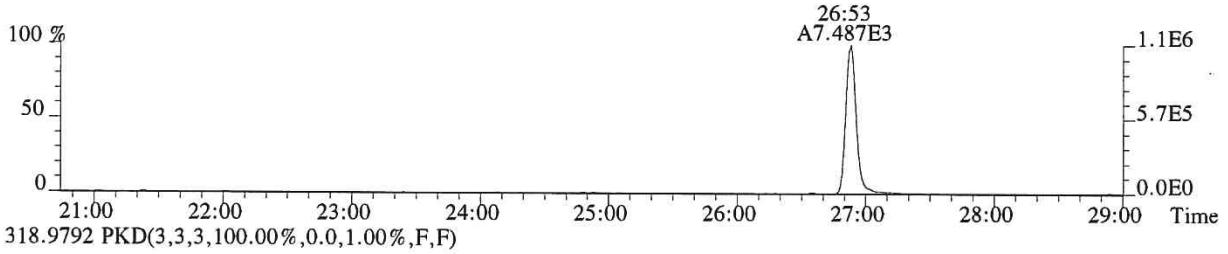
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8468.0,1.00%,F,T)



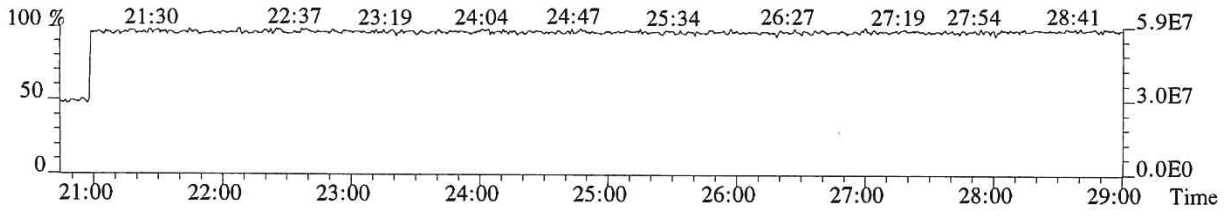
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3248.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1260.0,1.00%,F,T)

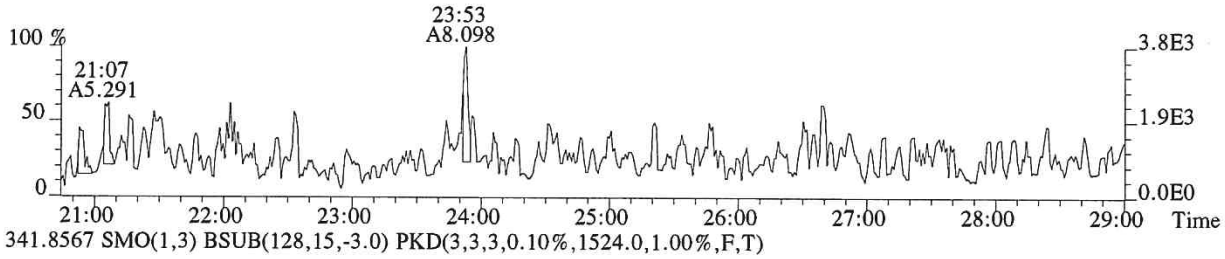


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

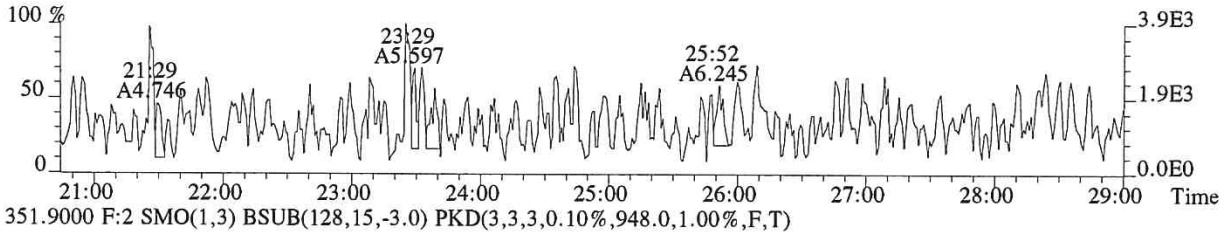


017662

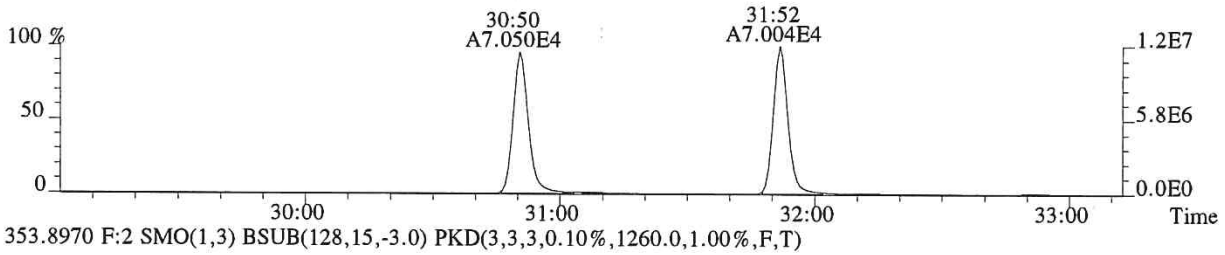
File:P519832 #1-587 Acq: 8-JAN-2019 10:56:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1208.0,1.00%,F,T)



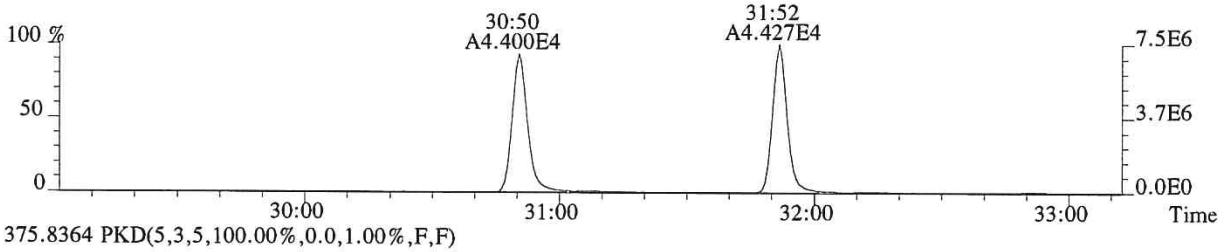
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1524.0,1.00%,F,T)



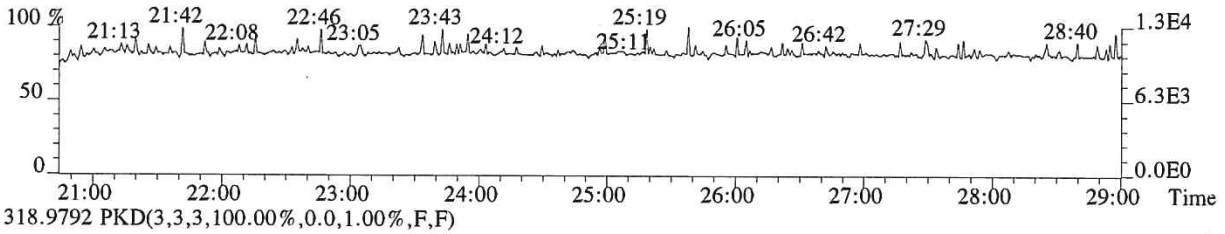
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,948.0,1.00%,F,T)



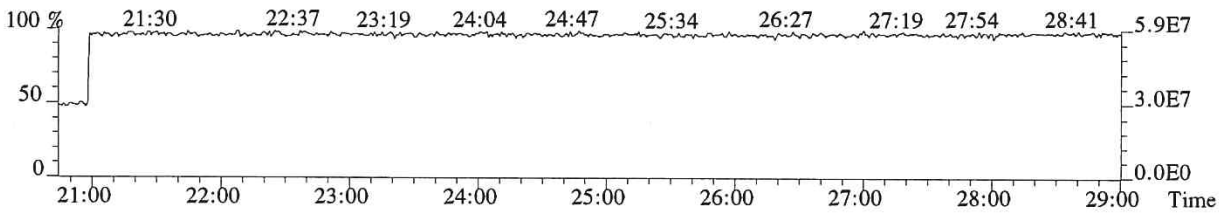
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1260.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

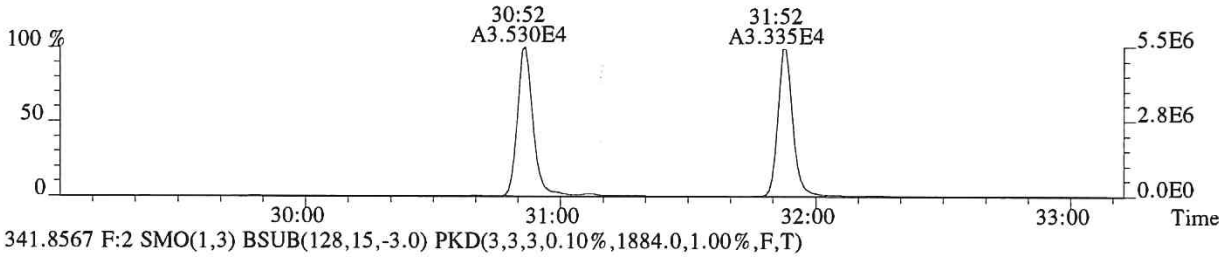


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

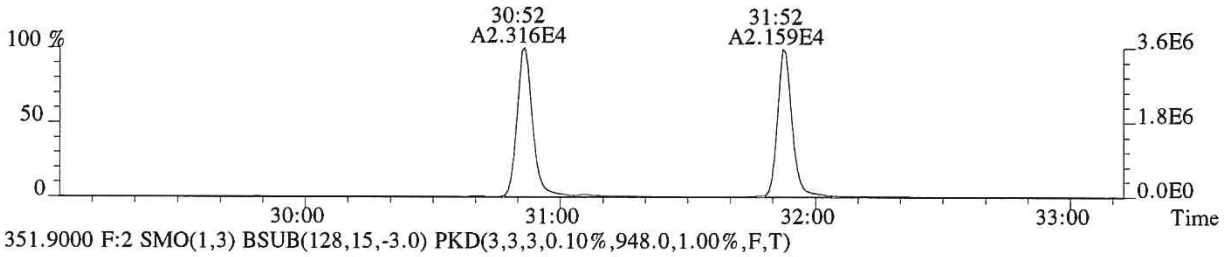


017663

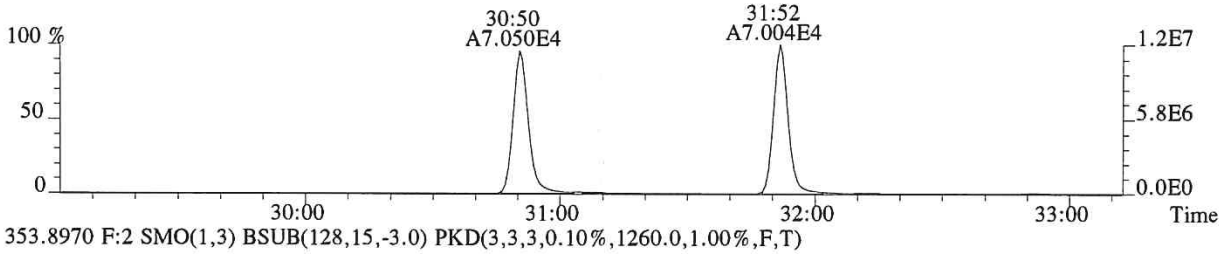
File:P519832 #1-376 Acq: 8-JAN-2019 10:56:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1548.0,1.00%,F,T)



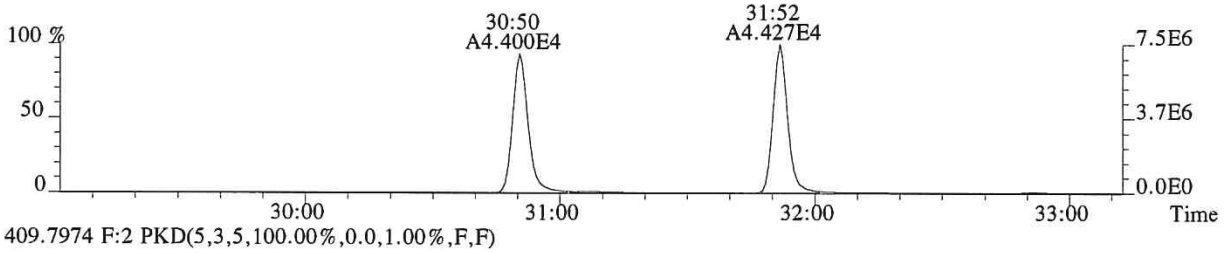
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1884.0,1.00%,F,T)



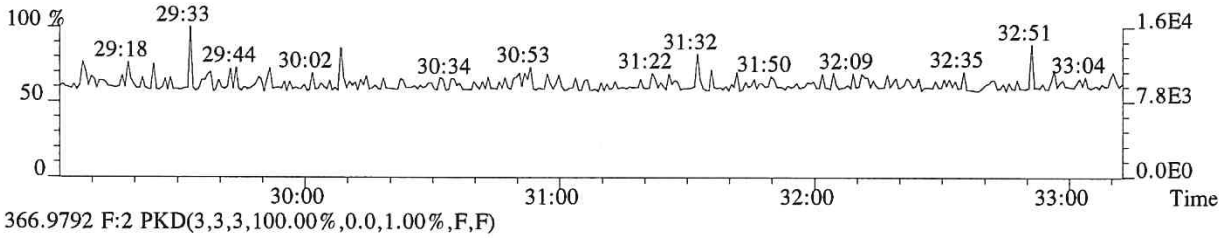
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,948.0,1.00%,F,T)



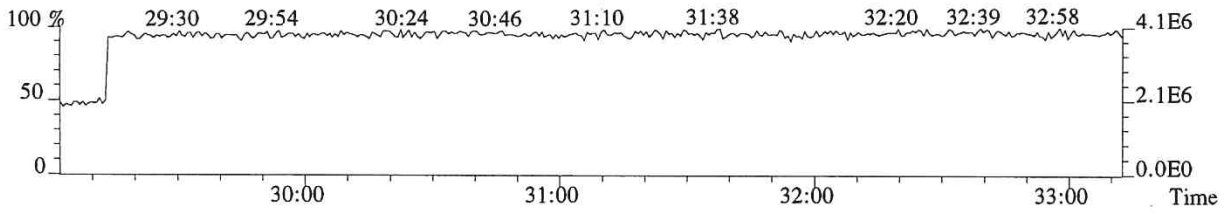
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1260.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

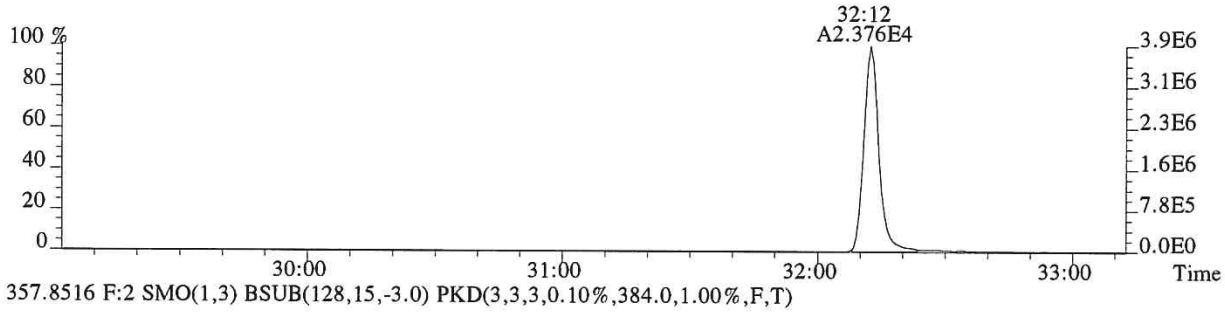


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

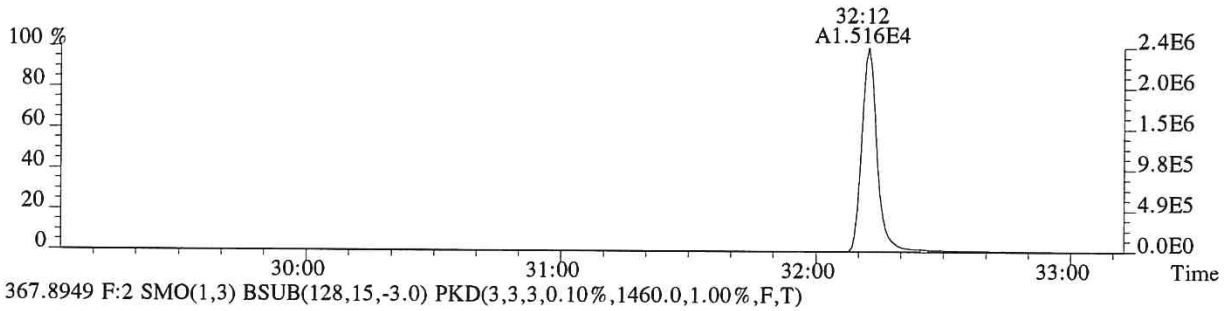


017664

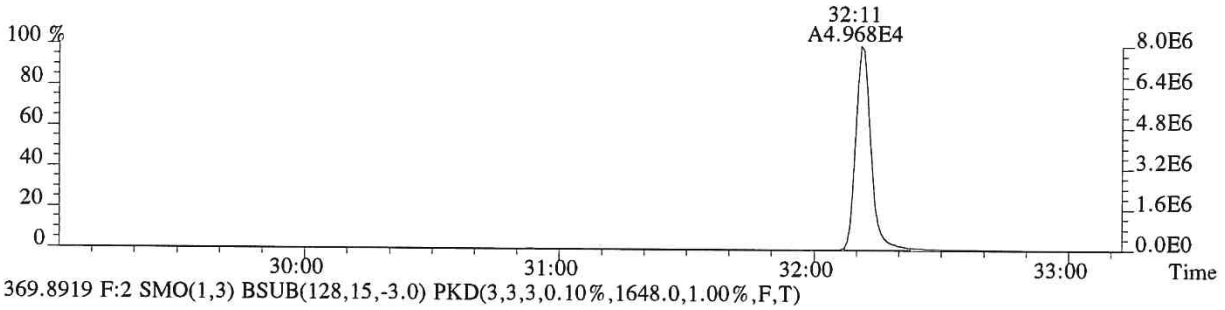
File:P519832 #1-376 Acq: 8-JAN-2019 10:56:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1380.0,1.00%,F,T)



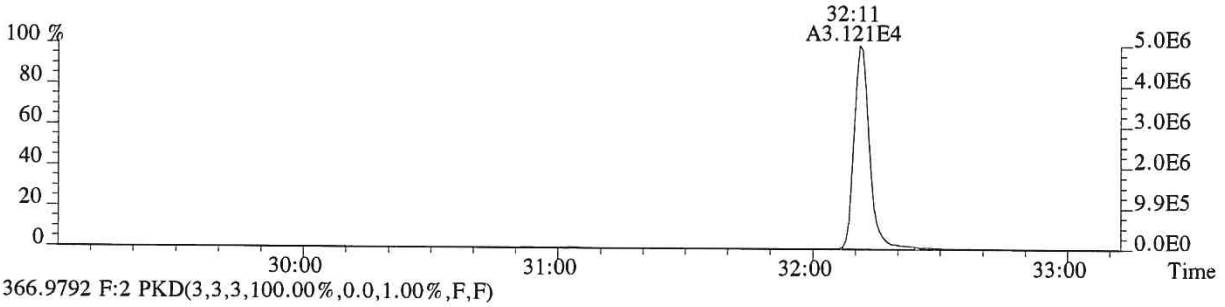
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,384.0,1.00%,F,T)



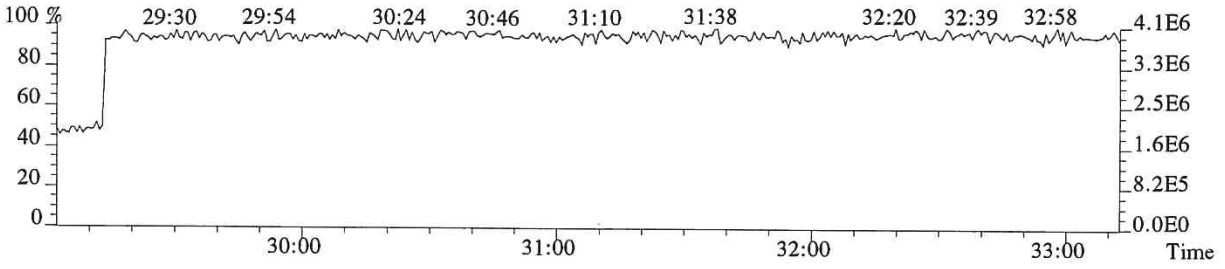
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1460.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1648.0,1.00%,F,T)

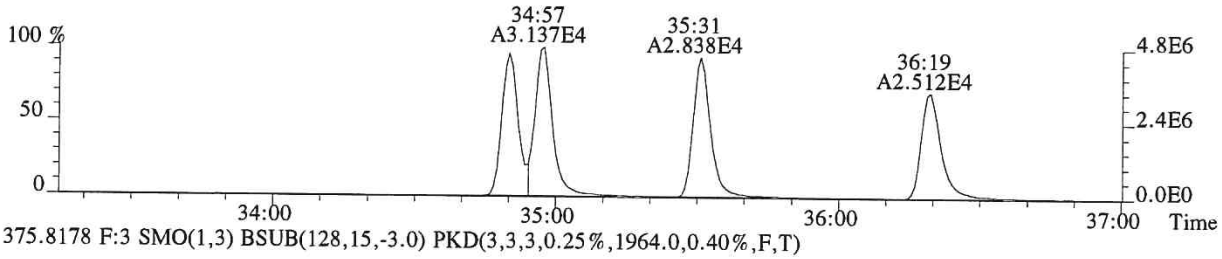


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

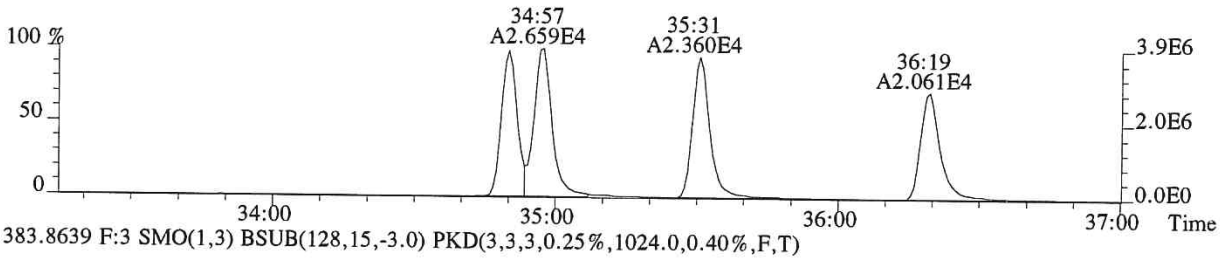


017665

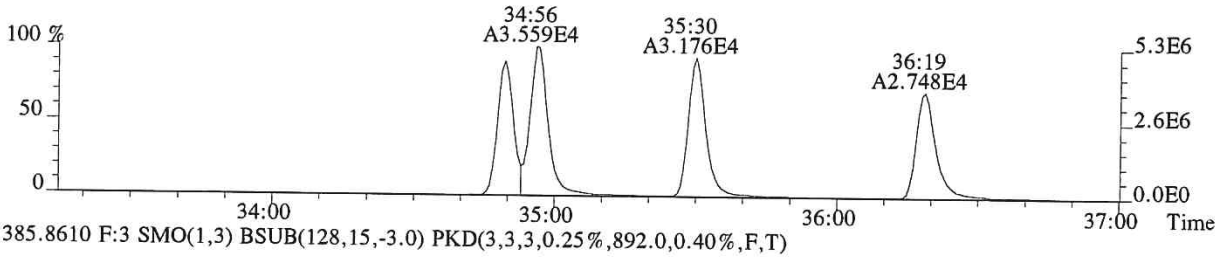
File:P519832 #1-339 Acq: 8-JAN-2019 10:56:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1412.0,0.40%,F,T)



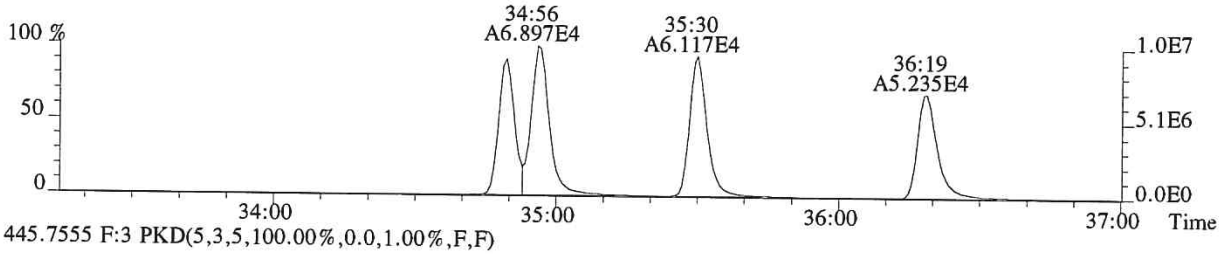
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1964.0,0.40%,F,T)



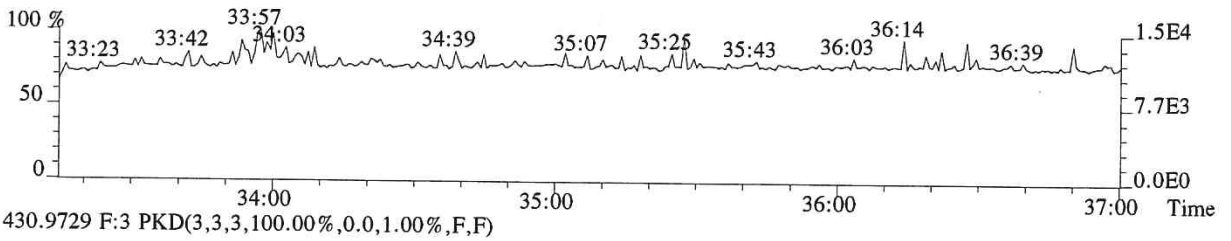
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1024.0,0.40%,F,T)



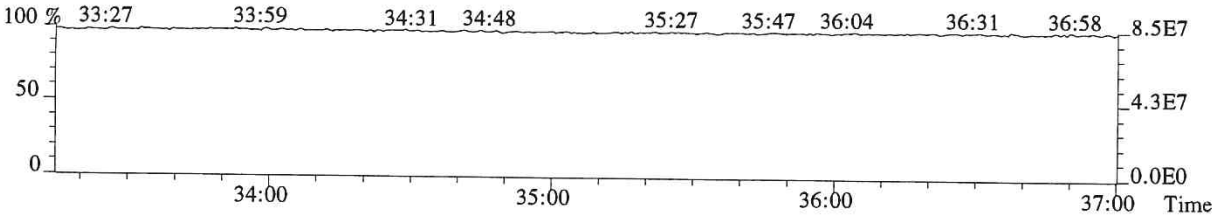
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,892.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

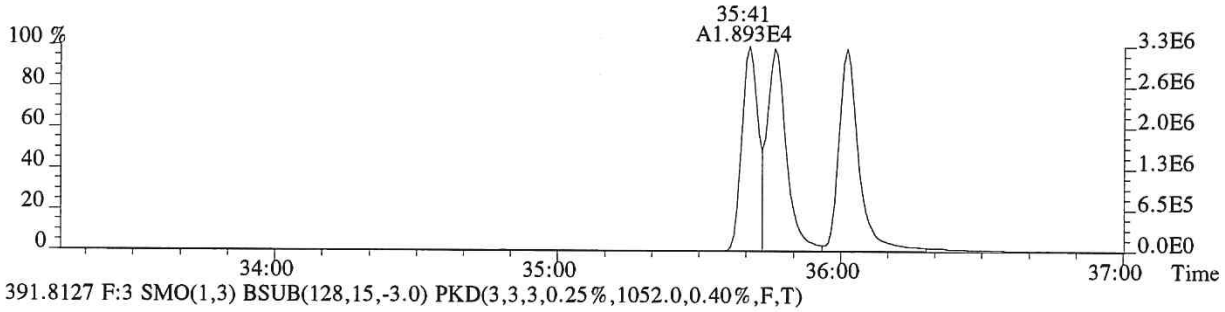


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

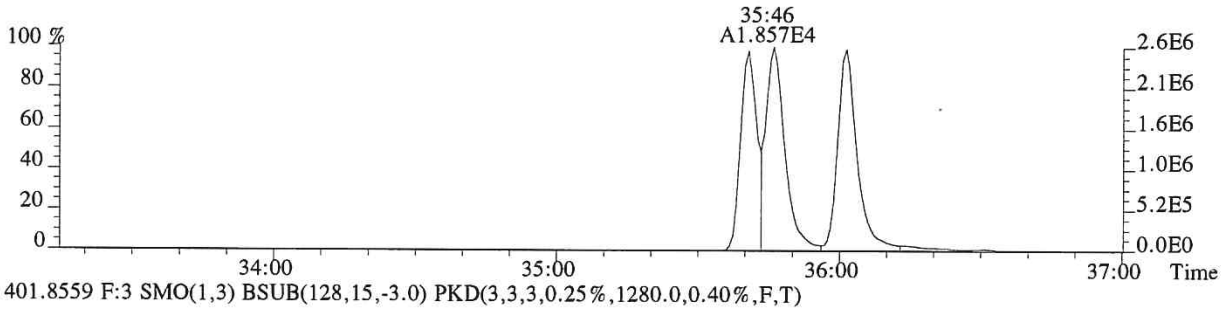


017666

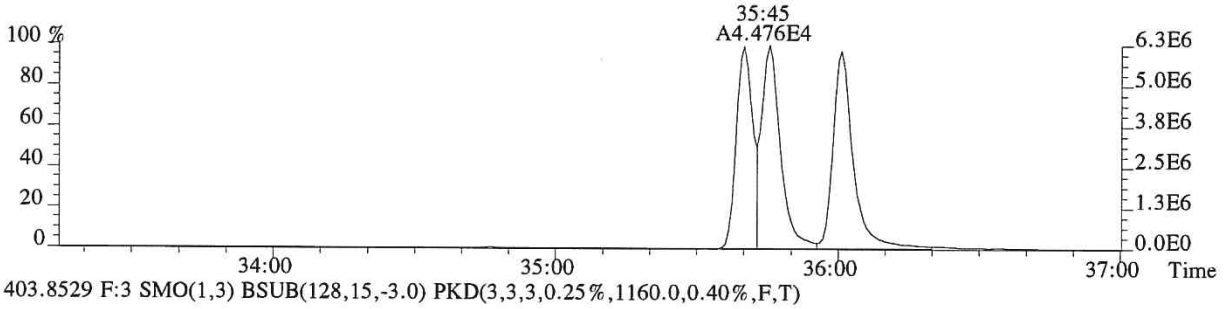
File:P519832 #1-339 Acq: 8-JAN-2019 10:56:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,800.0,0.40%,F,T)



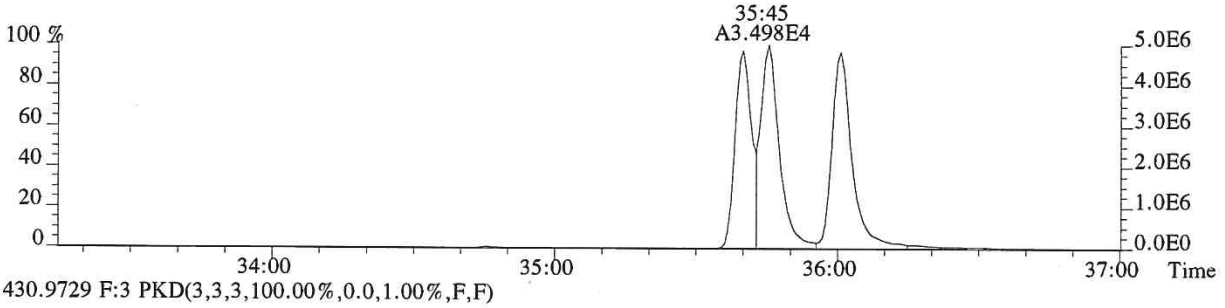
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1052.0,0.40%,F,T)



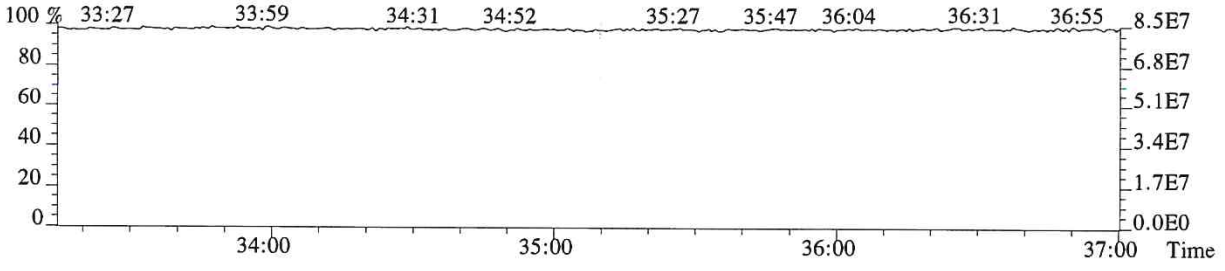
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1280.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1160.0,0.40%,F,T)

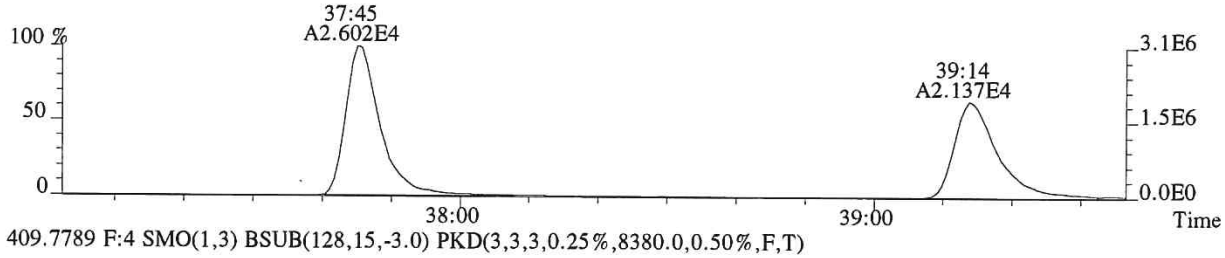


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

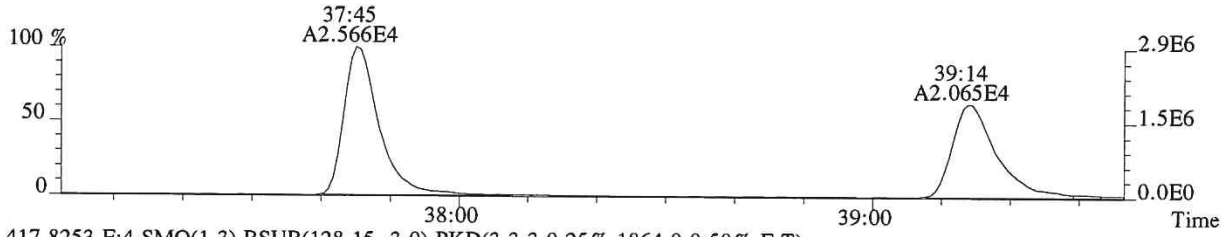


017667

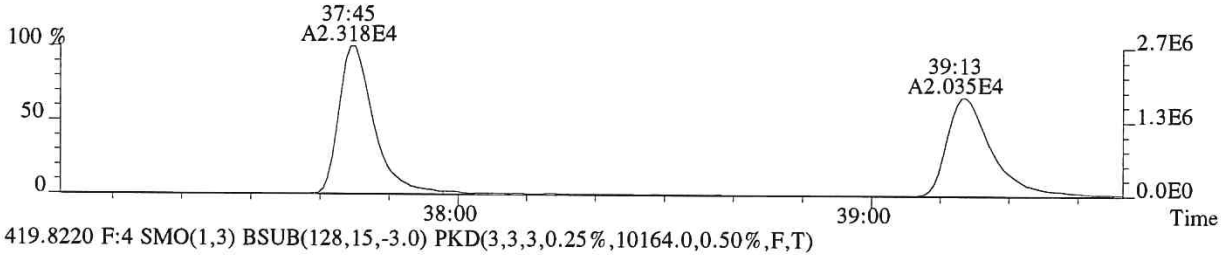
File:P519832 #1-232 Acq: 8-JAN-2019 10:56:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2748.0,0.50%,F,T)



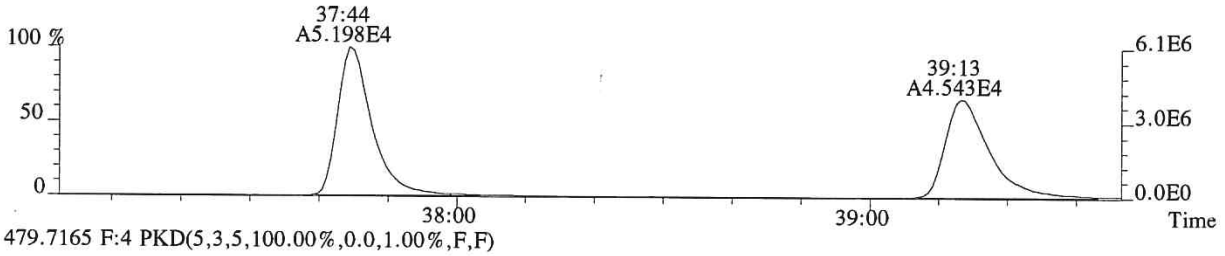
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8380.0,0.50%,F,T)



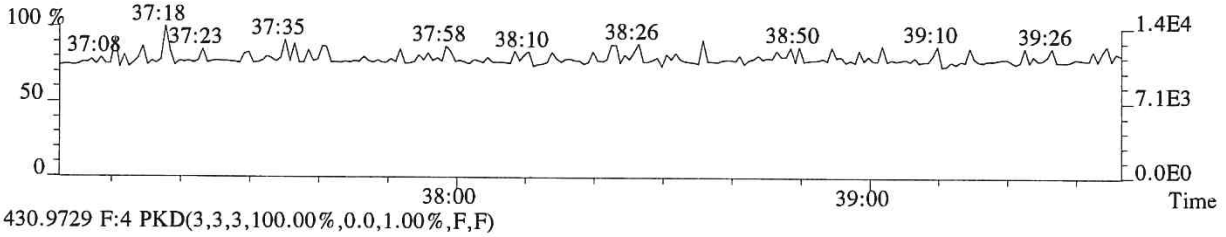
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1864.0,0.50%,F,T)



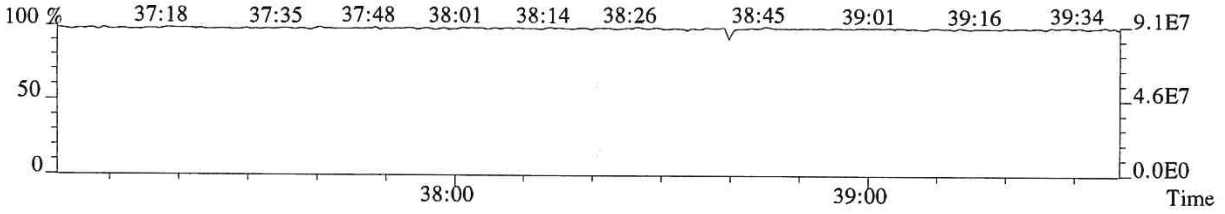
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10164.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

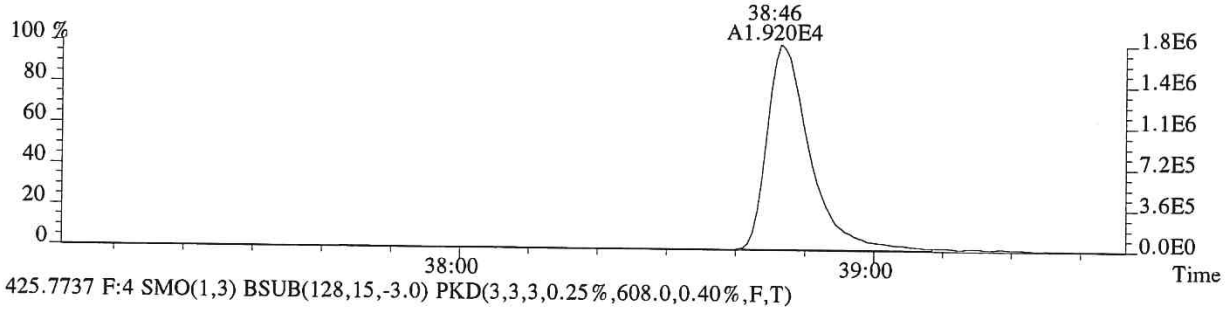


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

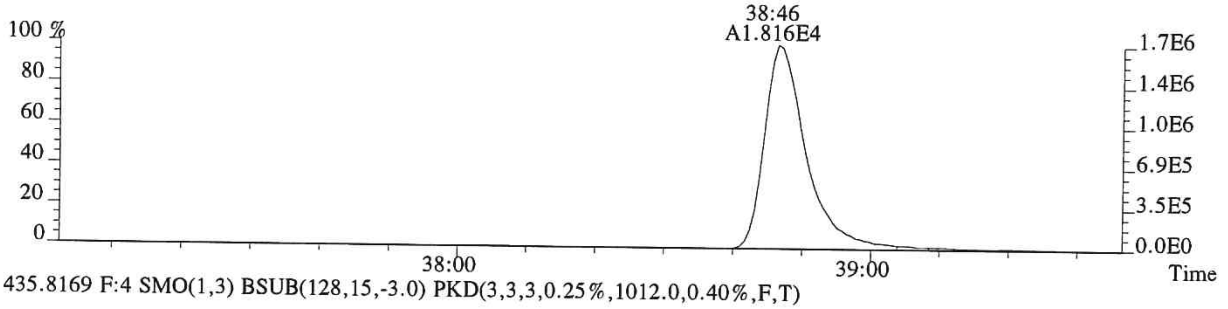


017668

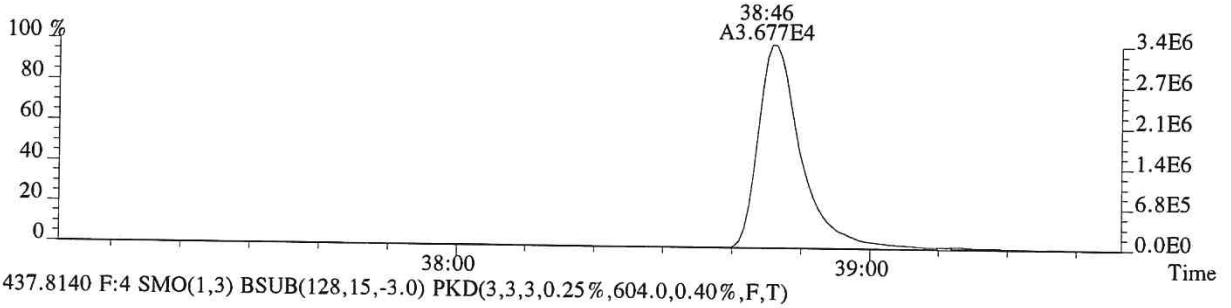
File:P519832 #1-232 Acq: 8-JAN-2019 10:56:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1196.0,0.40%,F,T)



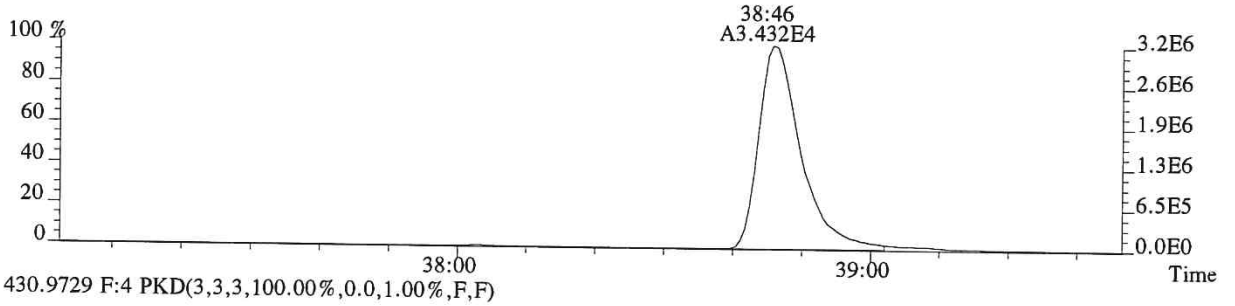
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,608.0,0.40%,F,T)



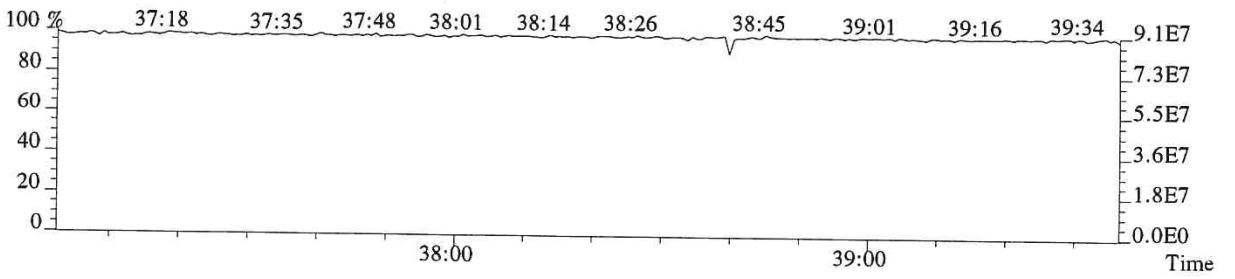
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1012.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,604.0,0.40%,F,T)

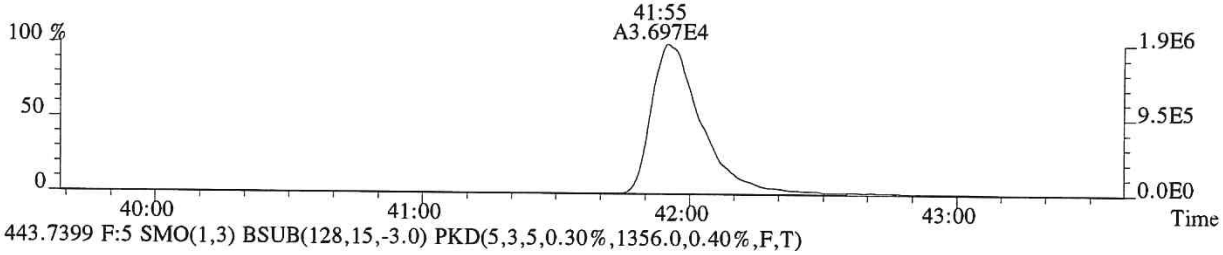


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

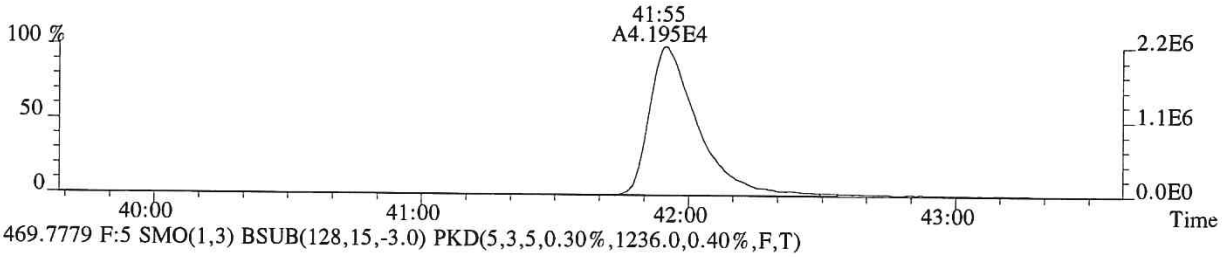


017669

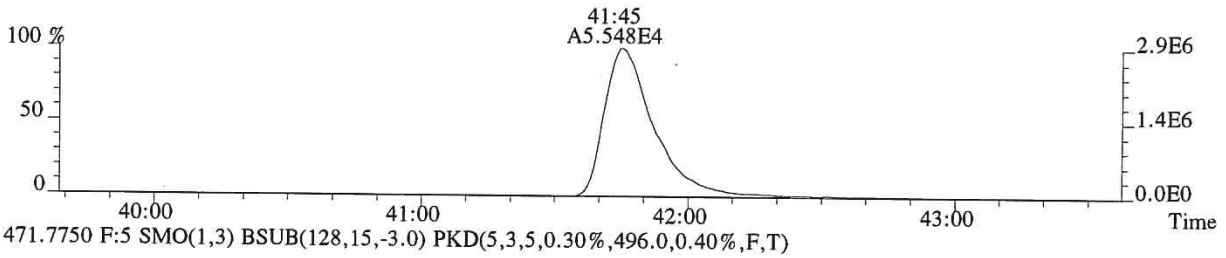
File:P519832 #1-359 Acq: 8-JAN-2019 10:56:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,316.0,0.40%,F,T)



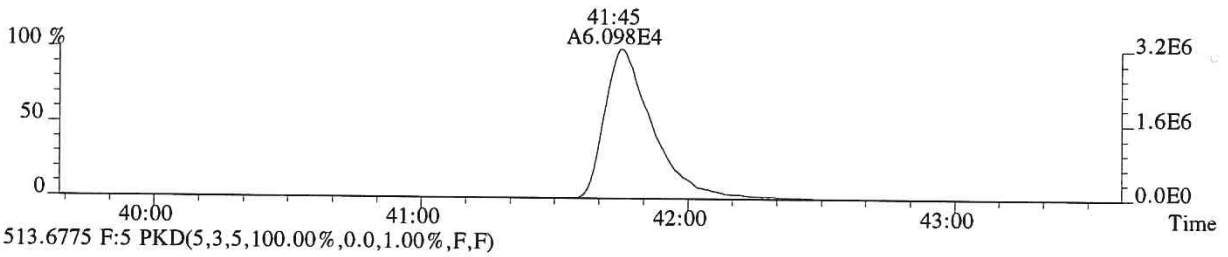
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1356.0,0.40%,F,T)



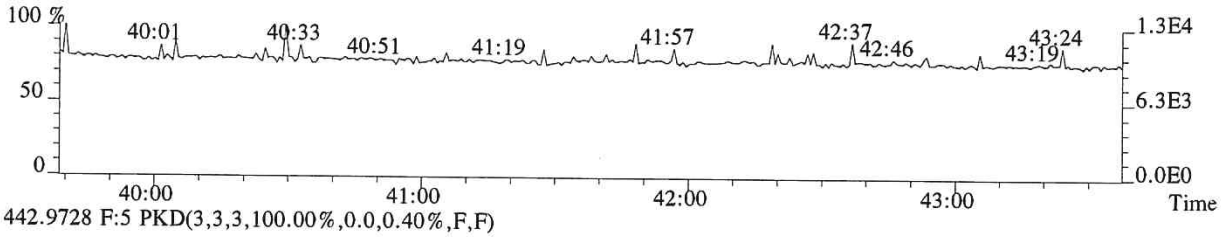
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1236.0,0.40%,F,T)



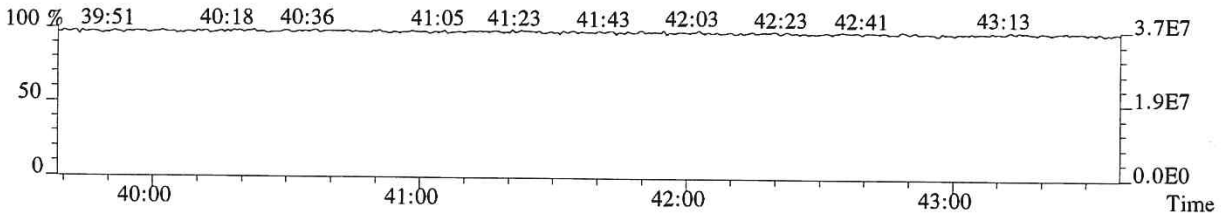
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,496.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

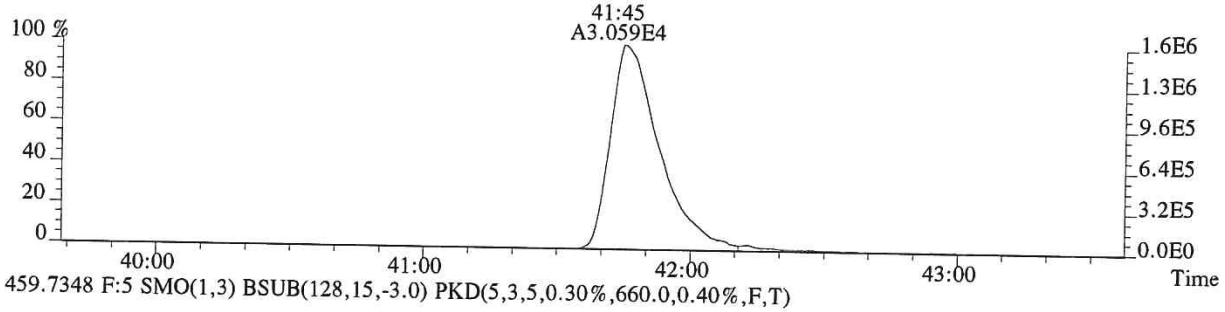


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

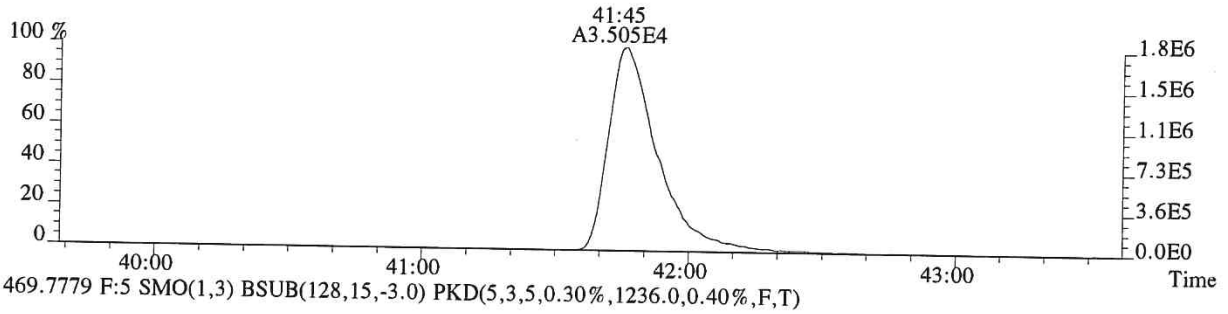


017670

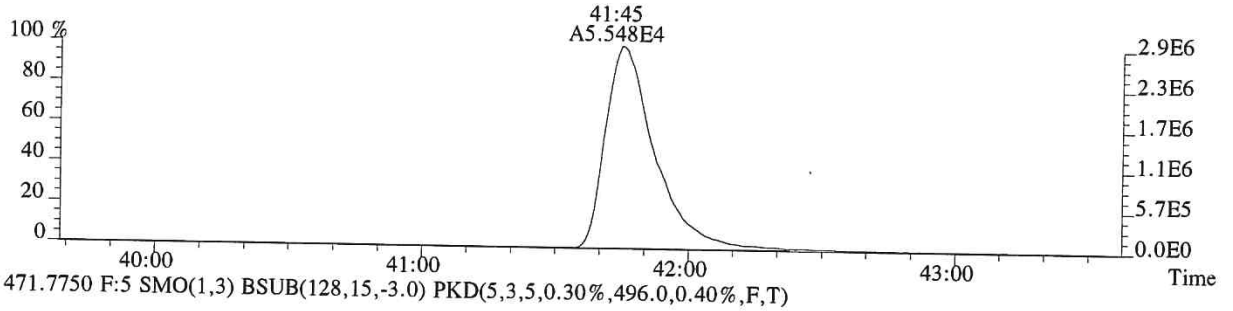
File:P519832 #1-359 Acq: 8-JAN-2019 10:56:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:194503
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,384.0,0.40%,F,T)



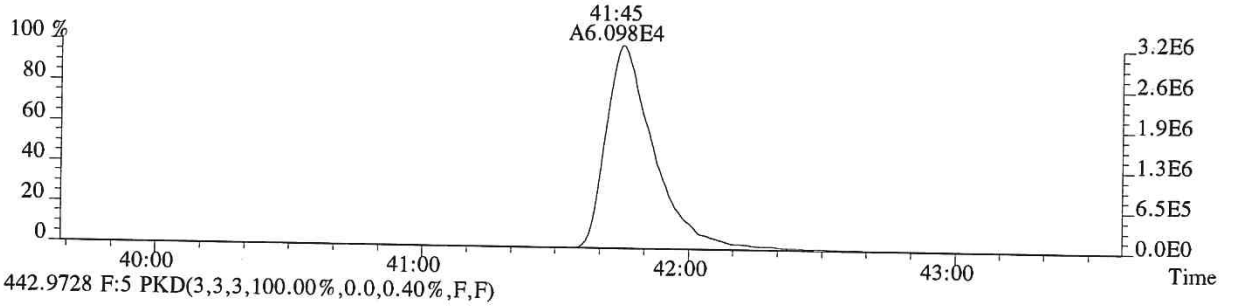
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,660.0,0.40%,F,T)



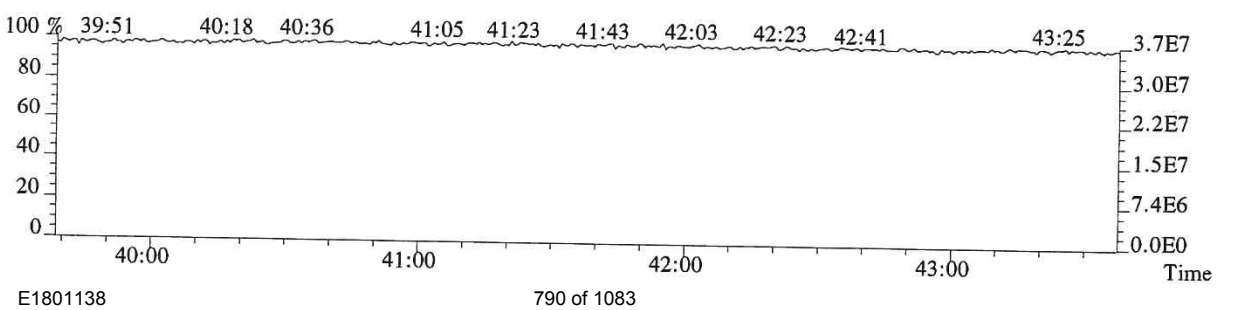
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1236.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,496.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: D0163T5

Date: 01/08/19

Circle one: Beginning / Ending

Method: (1613) 1613E / 8290/ VCP / Tetra / TCDD Only / TCDF Conf / VCP Conf / 8280 / M23 / TO-9A

Retention Window/Column Performance Check:	Analyst	Second Check
Windows in and first and last eluters labeled	✓	✓
Column Performance shows less than or equal to 25% valley between column specific 2378 isomer and its closest eluters	✓	✓
No QC ion deflections affect column specific 2378 isomer or its closest eluters (HRMS Only)	✓	✓

CS3 Continuing Calibration	Analyst	Second Check
Percent RSD within method criteria	✓	✓
All relative abundance ratios meet method criteria	✓	✓
No QC ion deflections of greater than 20% (HRMS Only)	✓	✓
Mass spectrometer resolution greater than or equal to 10,000 and documented (HRMS Only)	✓	✓
2378-TCDD elutes at 25 minutes or later on the DB-5 column / DB-5MSUI column	✓	✓
Signal-to-noise of all target analytes and their labeled standards at least 10:1	✓	✓
Valley between labeled 123478 and 123678 HxCDD peaks less than or equal to 50% (LRMS Only)	N/A	N/A
Ending Calibration injected prior to end of 12 hour clock	N/A	N/A

Analyst: JC

Second QC: LKL

ccalqc.xls 07/17/12

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: Case No.: Client No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm)

Init. Calib. Date: 09/25/18

Init. Calib.Times: 12:13

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
194503	CS3	P616375	8-JAN-19	11:14:39
192977	WINDOW DEFINE	P616376	8-JAN-19	12:08:34
METHOD BLANK	EQ1800529-01	P616377	8-JAN-19	12:56:54
METHOD BLANK	EQ1900001-01	P616378	8-JAN-19	13:46:05
SL0195	E1801138-001	P616379	8-JAN-19	14:37:21
SL0196	E1801138-002	P616380	8-JAN-19	15:25:39
SL0170	E1801138-003	P616381	8-JAN-19	16:16:14
SL0171	E1801138-004	P616382	8-JAN-19	17:05:05
SL0172	E1801138-005	P616383	8-JAN-19	17:53:39
SL0173	E1801138-006	P616384	8-JAN-19	18:42:49
SL0174	E1801138-007	P616385	8-JAN-19	19:31:59
SL0176	E1801138-008	P616386	8-JAN-19	20:21:09
SL0177	E1801138-009	P616387	8-JAN-19	21:10:18
LCS	EQ1900001-02	P616388	8-JAN-19	21:59:29
DLCS	EQ1900001-03	P616389	8-JAN-19	22:48:40

E1801138

Sample List Report — **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS08.PRO\SampleDB\20190108A.SPL
Last Modified: Wednesday, January 09, 2019 09:04:10 Central Standard Time
Printed: Wednesday, January 09, 2019 09:04:12 Central Standard Time

Page Position (1, 1)

opus 4: P616375res

	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	1/8/19	11:14	P616375	194503	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:2	LG	HRMS check 11:09
2		12:08	P616376	192977	WINDOW DEFINE	EPA1613_ALS	Dioxin_ALS	Tray1:1		
3		12:56	P616377	EQ1800529-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:3		
4		13:46	P616378	EQ1900001-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		14:37	P616379	E1801138-001	E1801138-001	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		15:25	P616380	E1801138-002	E1801138-002	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		16:16	P616381	E1801138-003	E1801138-003	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		17:05	P616382	E1801138-004	E1801138-004	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		17:53	P616383	E1801138-005	E1801138-005	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		18:42	P616384	E1801138-006	E1801138-006	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		19:31	P616385	E1801138-007	E1801138-007	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		20:21	P616386	E1801138-008	E1801138-008	EPA1613_ALS	Dioxin_ALS	Tray1:12		
13		21:10	P616387	E1801138-009	E1801138-009	EPA1613_ALS	Dioxin_ALS	Tray1:13		
14		21:59	P616388	EQ1900001-02	LCS	EPA1613_ALS	Dioxin_ALS	Tray1:14		
15		22:48	P616389	EQ1900001-03	DLCS	EPA1613_ALS	Dioxin_ALS	Tray1:15		
16		23:46	P616390	194503	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:2		HRMS check 23:46
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---

793 of 1083

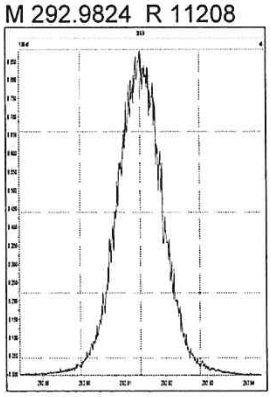
LG 01/09/19

017674

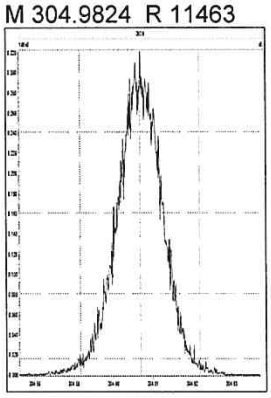
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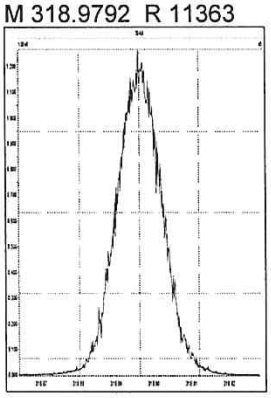
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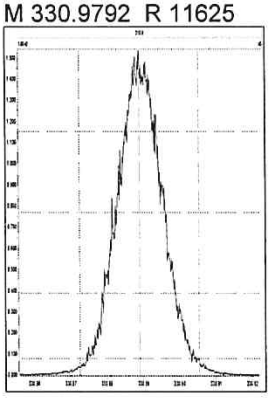
M 304.9824 R 11463



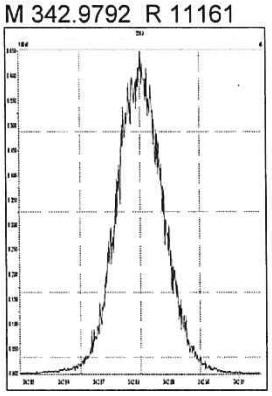
M 318.9792 R 11363



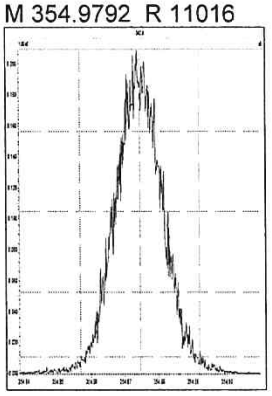
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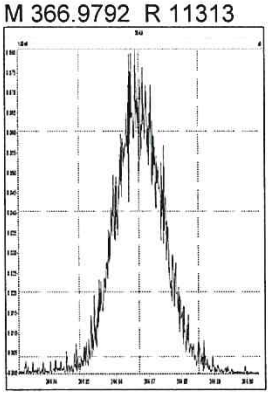
M 342.9792 R 11161



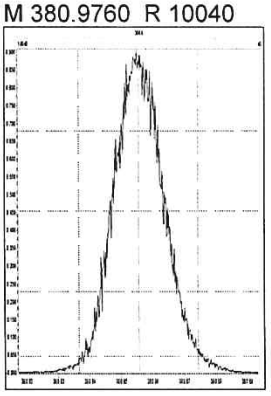
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M 366.9792 R 11313



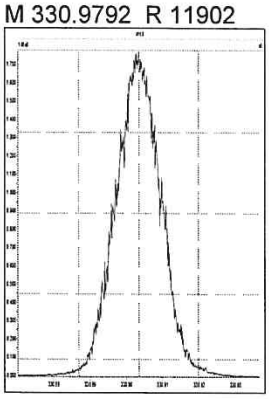
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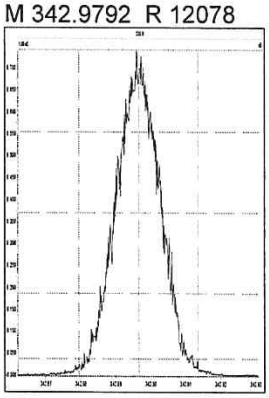
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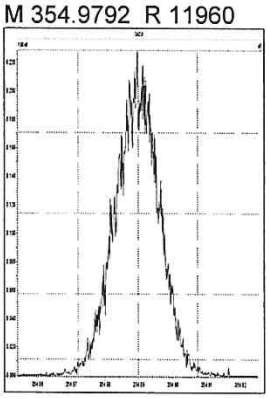
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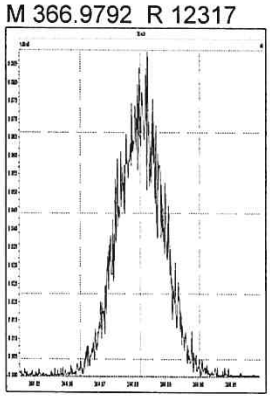
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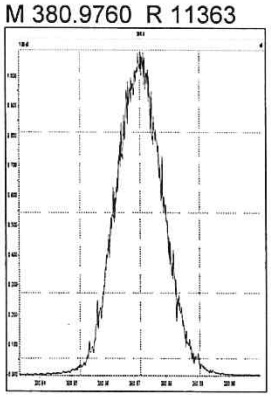
M 354.9792 R 11960



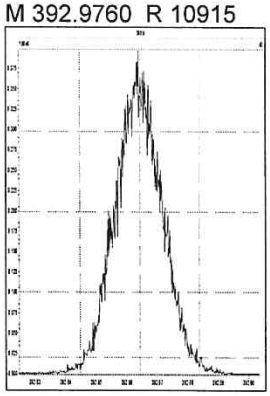
M 366.9792 R 12317



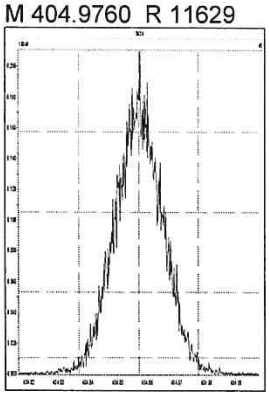
M 380.9760 R 11363



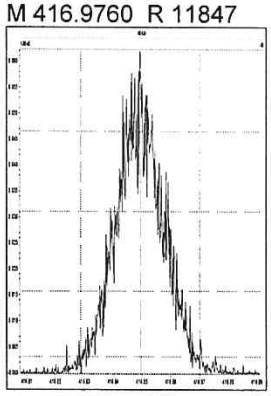
M 392.9760 R 10915



M 404.9760 R 11629



M 416.9760 R 11847

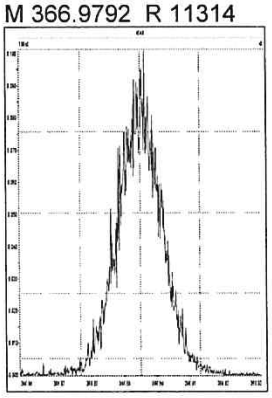


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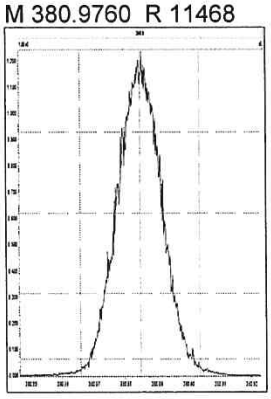
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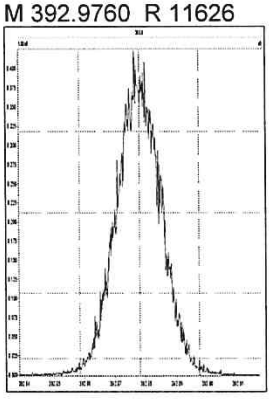
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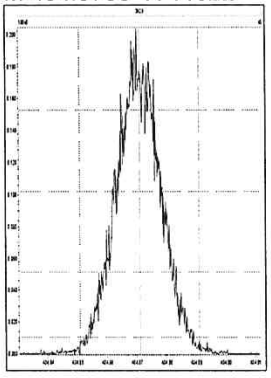
M 380.9760 R 11468



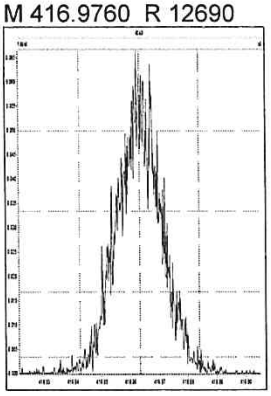
M 392.9760 R 11626



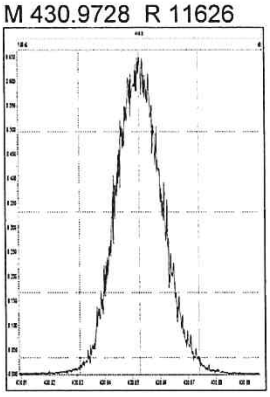
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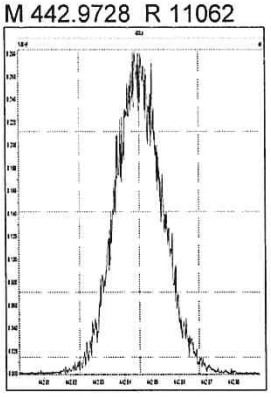
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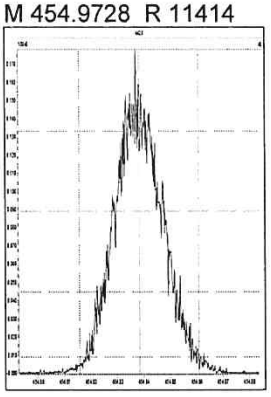
M 430.9728 R 11626



M 442.9728 R 11062



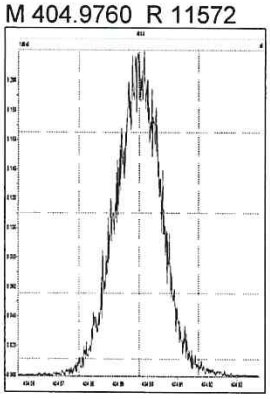
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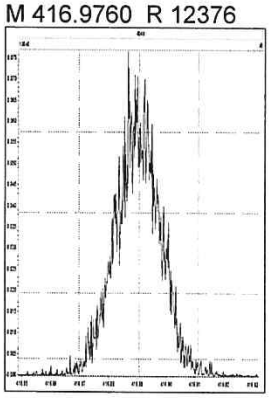
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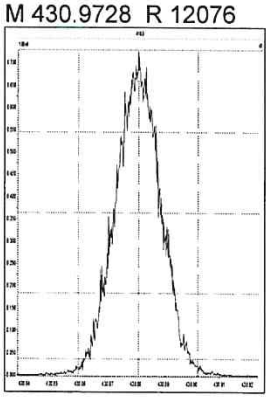
M 404.9760 R 11572



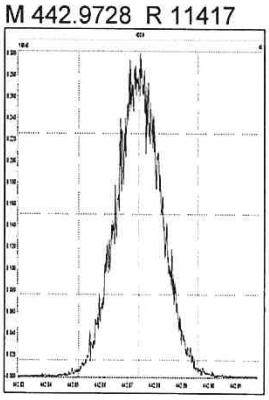
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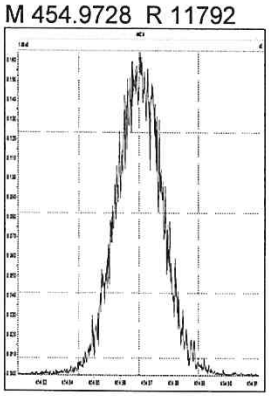
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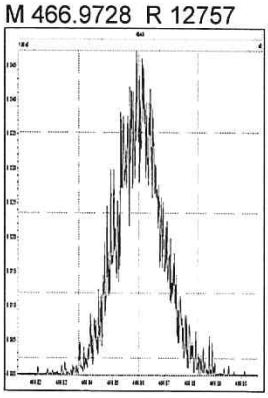
M 442.9728 R 11417



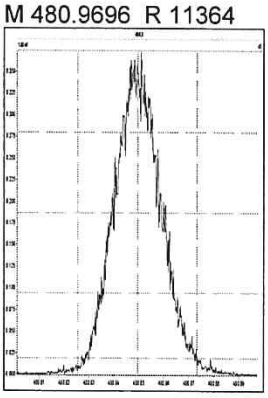
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M 466.9728 R 12757



M 480.9696 R 11364

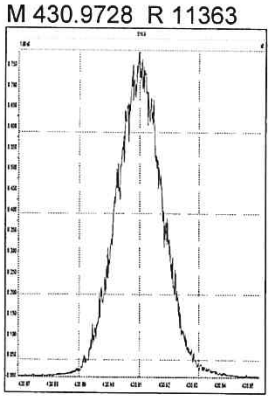


Experiment Calibration Report **MassLynx 4.1 SCN815 SCN795**

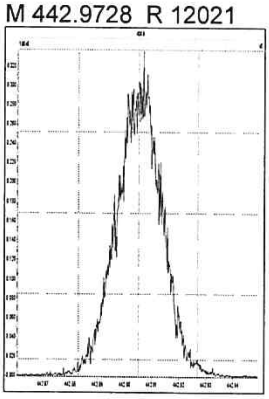
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Printed: Tuesday, January 08, 2019 11:13:15 Central Standard Time

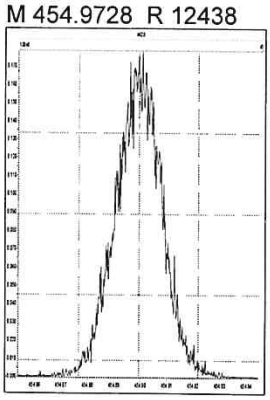
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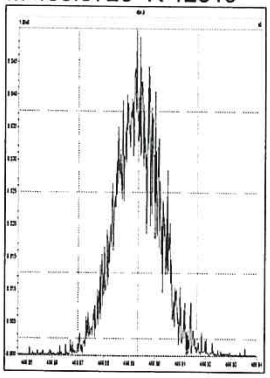
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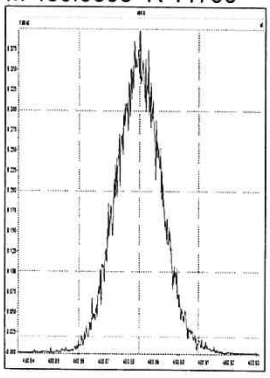
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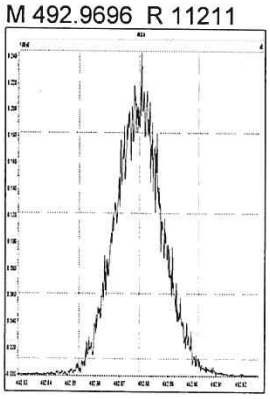
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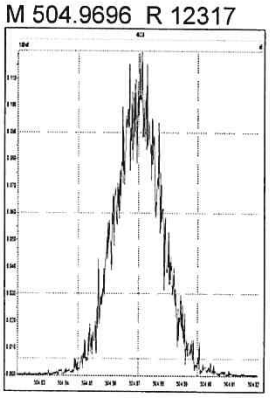
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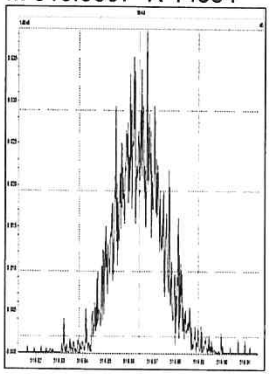
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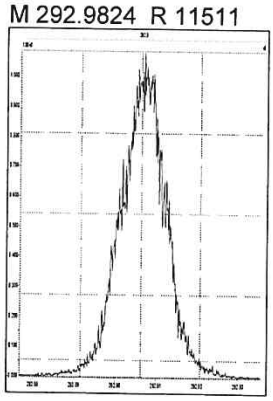
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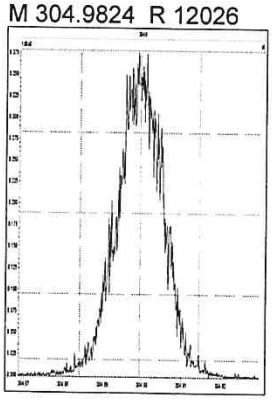
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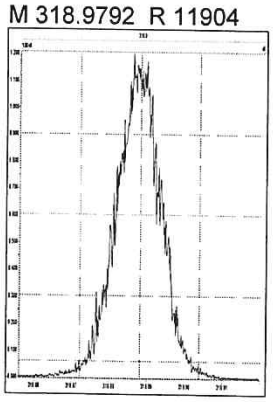
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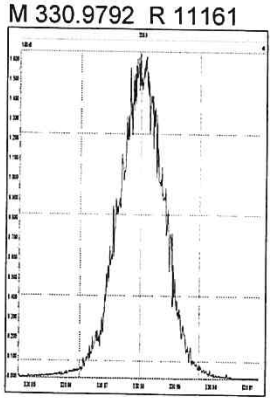
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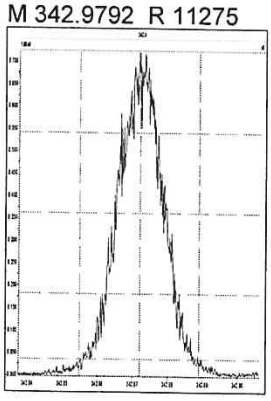
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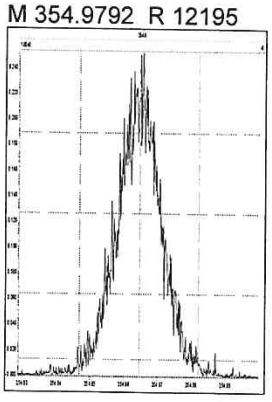
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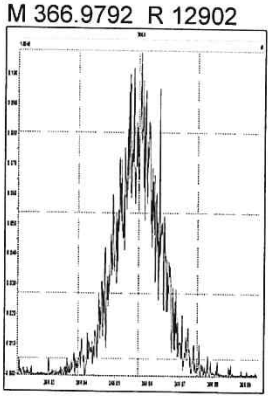
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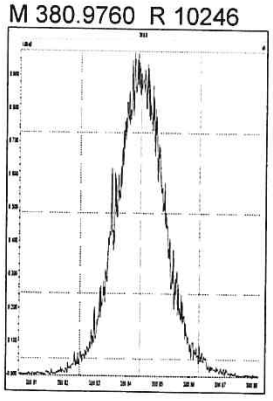
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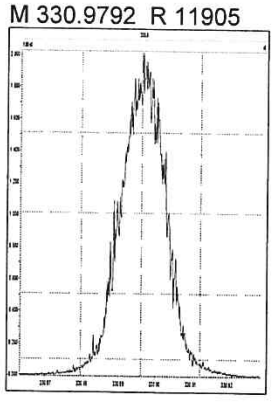
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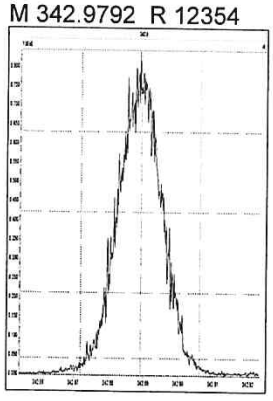
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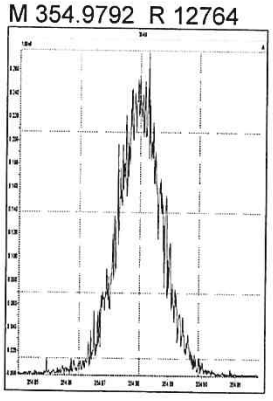
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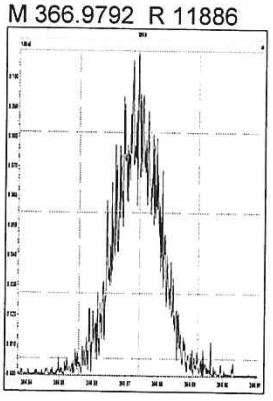
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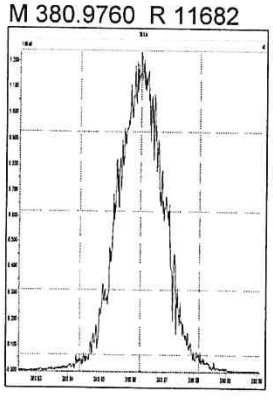
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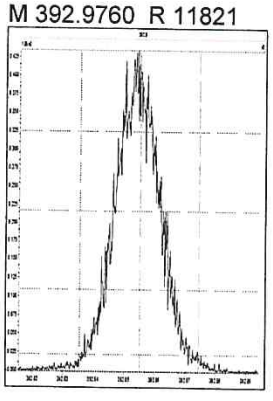
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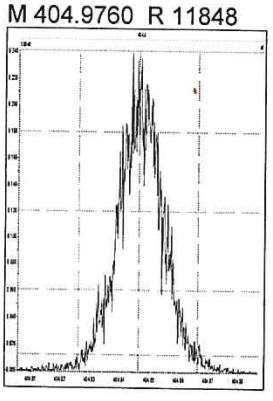
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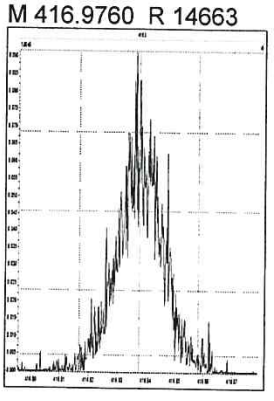
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M 404.9760 R 11848

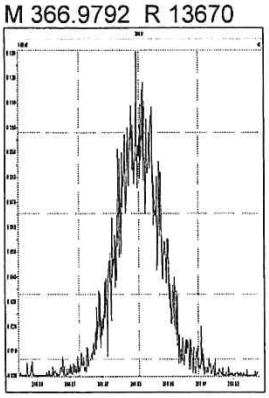


M 416.9760 R 14663

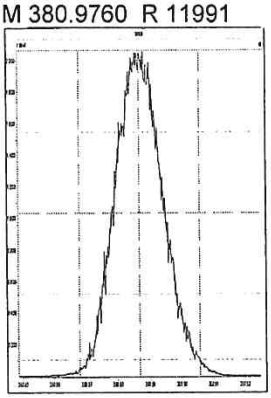


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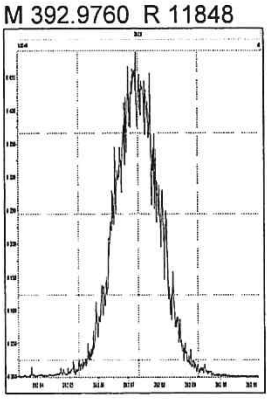
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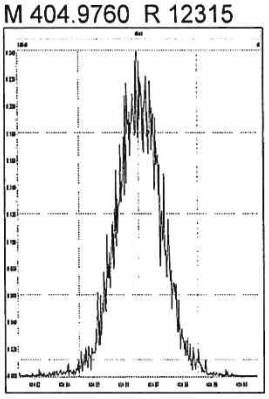
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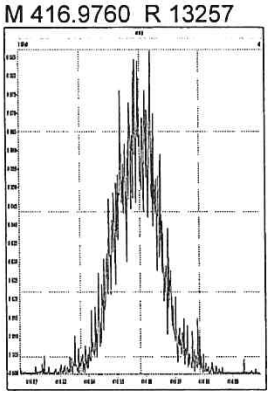
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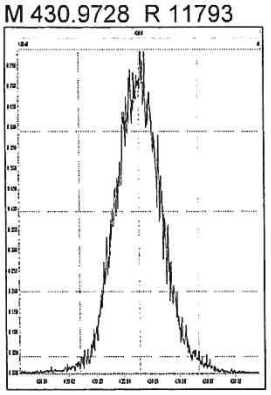
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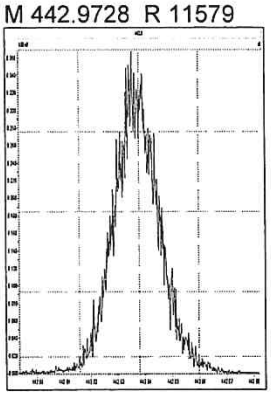
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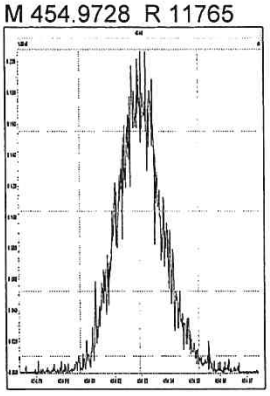
M 430.9728 R 11793



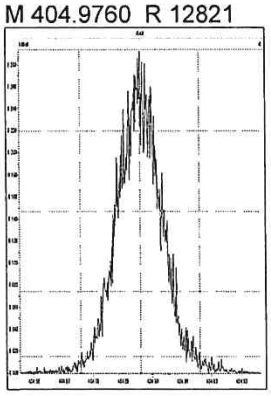
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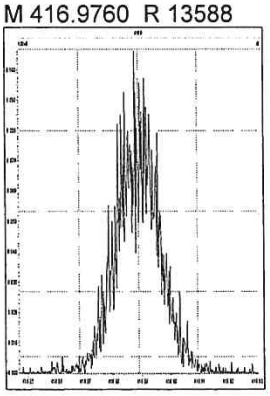
M 454.9728 R 11765



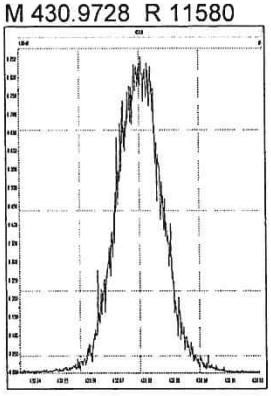
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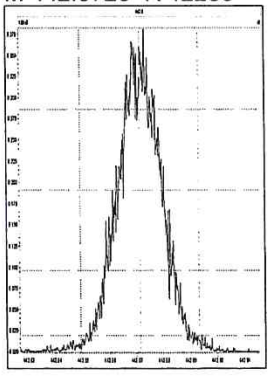
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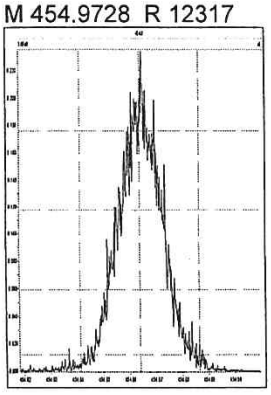
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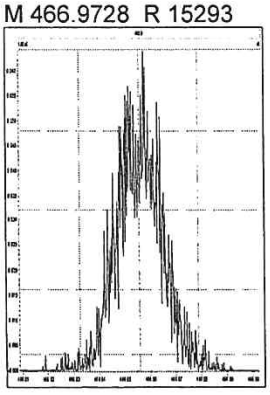
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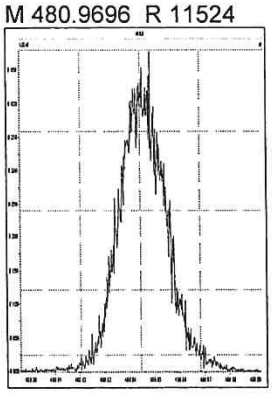
M 454.9728 R 12317



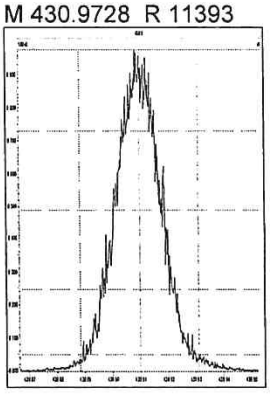
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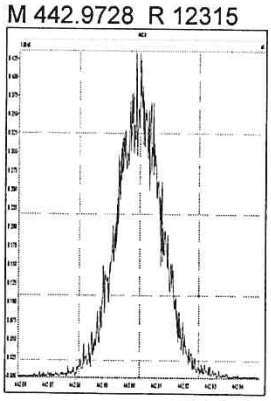
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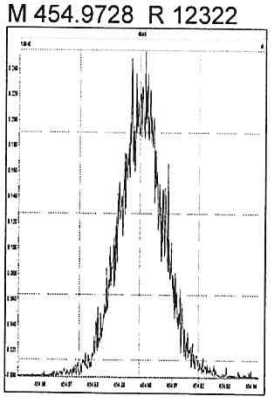
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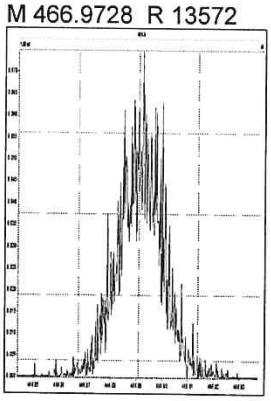
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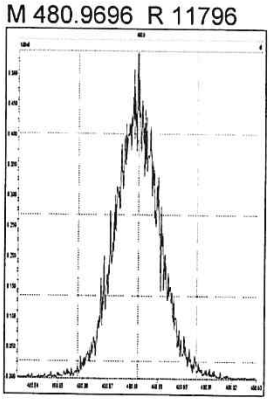
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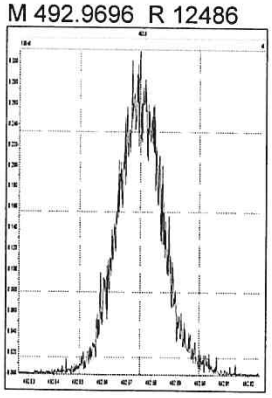
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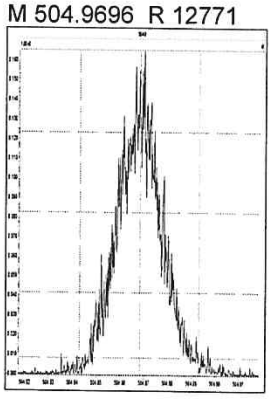
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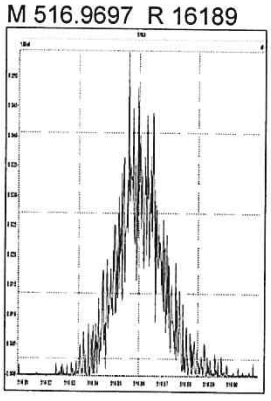
M 492.9696 R 12486



M 504.9696 R 12771



M 516.9697 R 16189



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

Lab Name: ALS Environmental
Lab Code: ALSTX
GC Column: DB-5MSUI

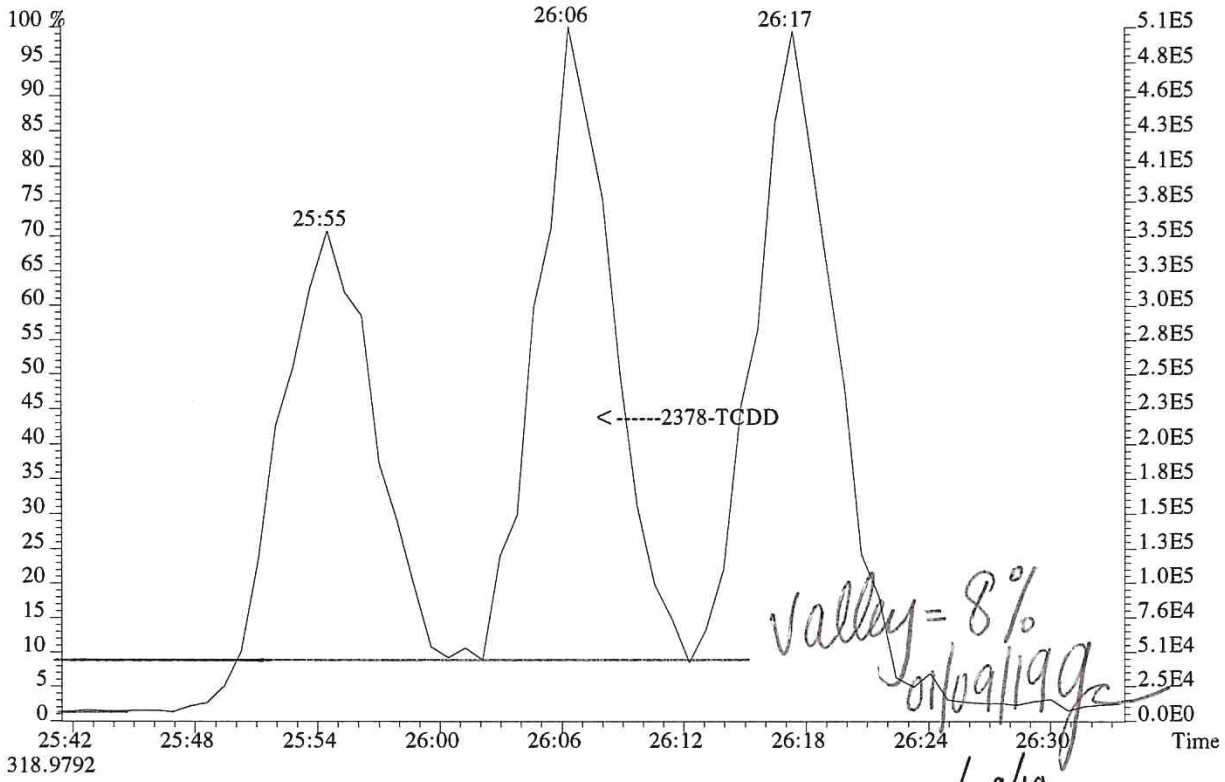
Case No.: _____ SDG No.:
ID: 0.25 (mm)

Lab File ID: P616376
Date Analyzed: 8-JAN-19
Time Analyzed: 12:08:34

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	20:48	27:36
TCDD	22:23	27:23
PeCDF	27:31	32:26
PeCDD	29:23	32:10
HxCDF	33:09	35:50
HxCDD	33:43	35:25
HpCDF	37:06	38:29
HpCDD	37:22	38:03

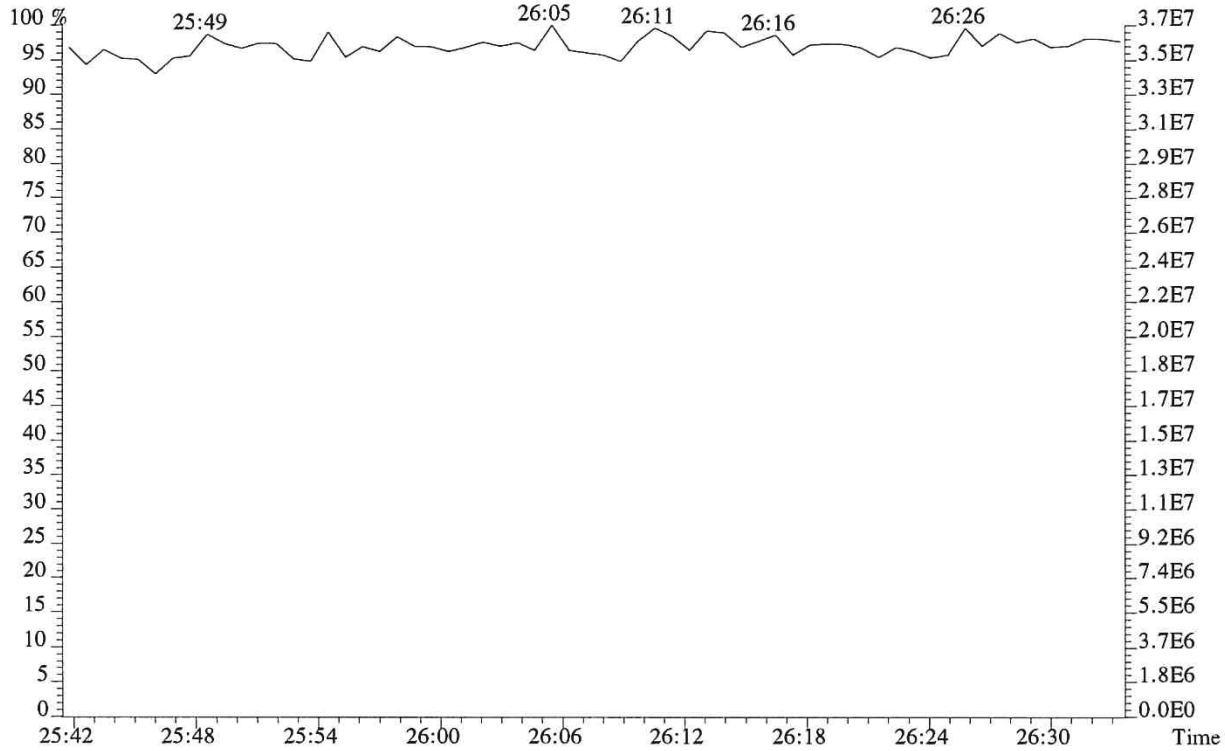
% Valley 2378-TCDD: 8 %

File:P616376 #1-587 Acq: 8-JAN-2019 12:08:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
319.8965



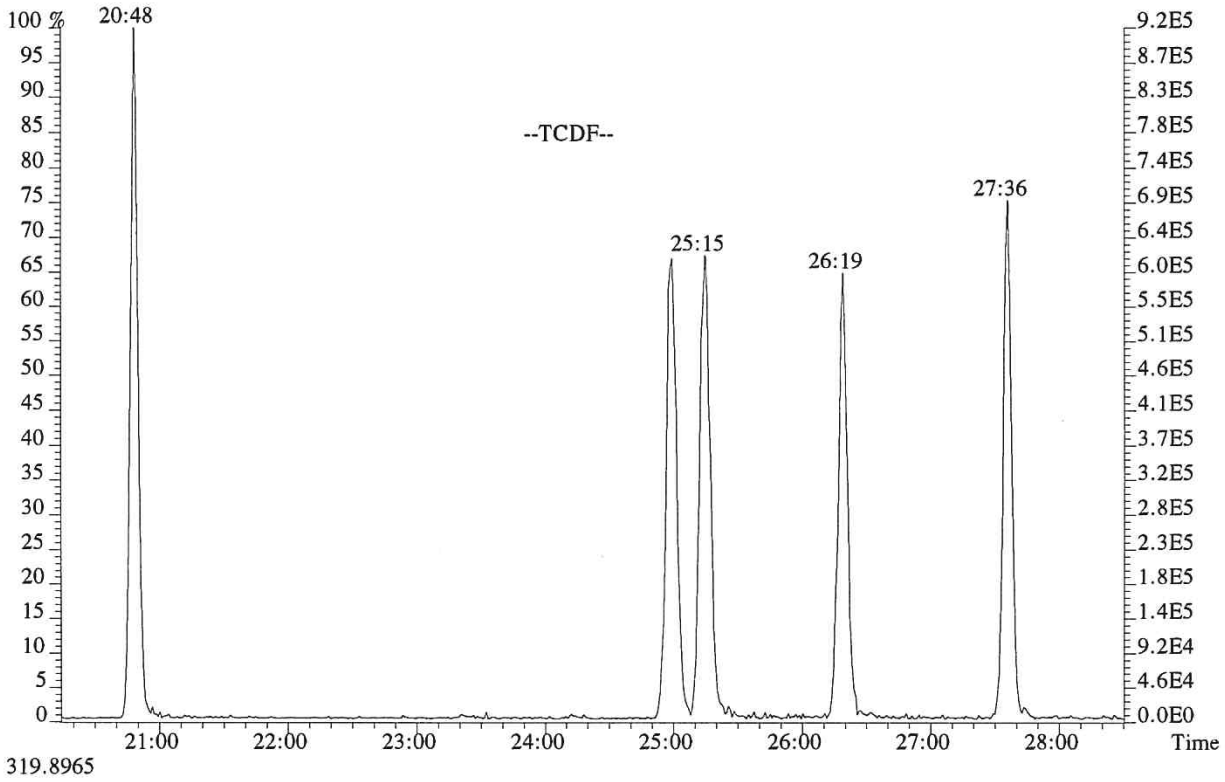
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LW 01/09/19

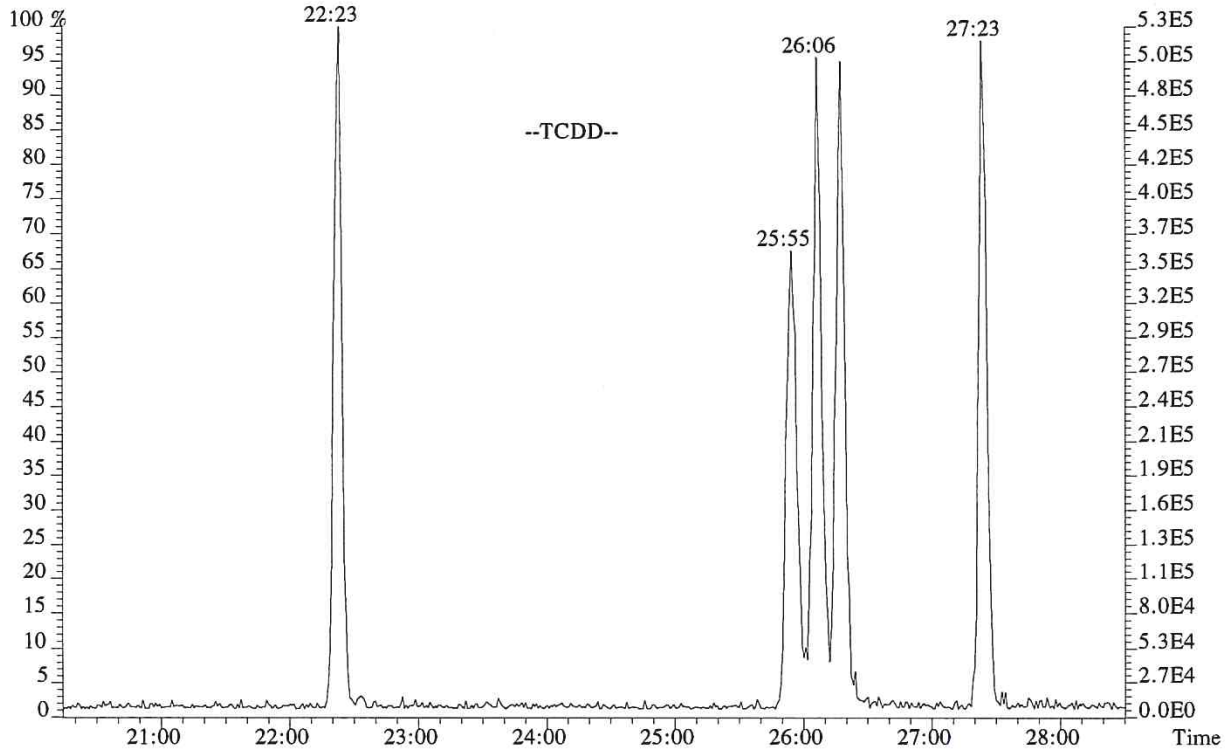


017684

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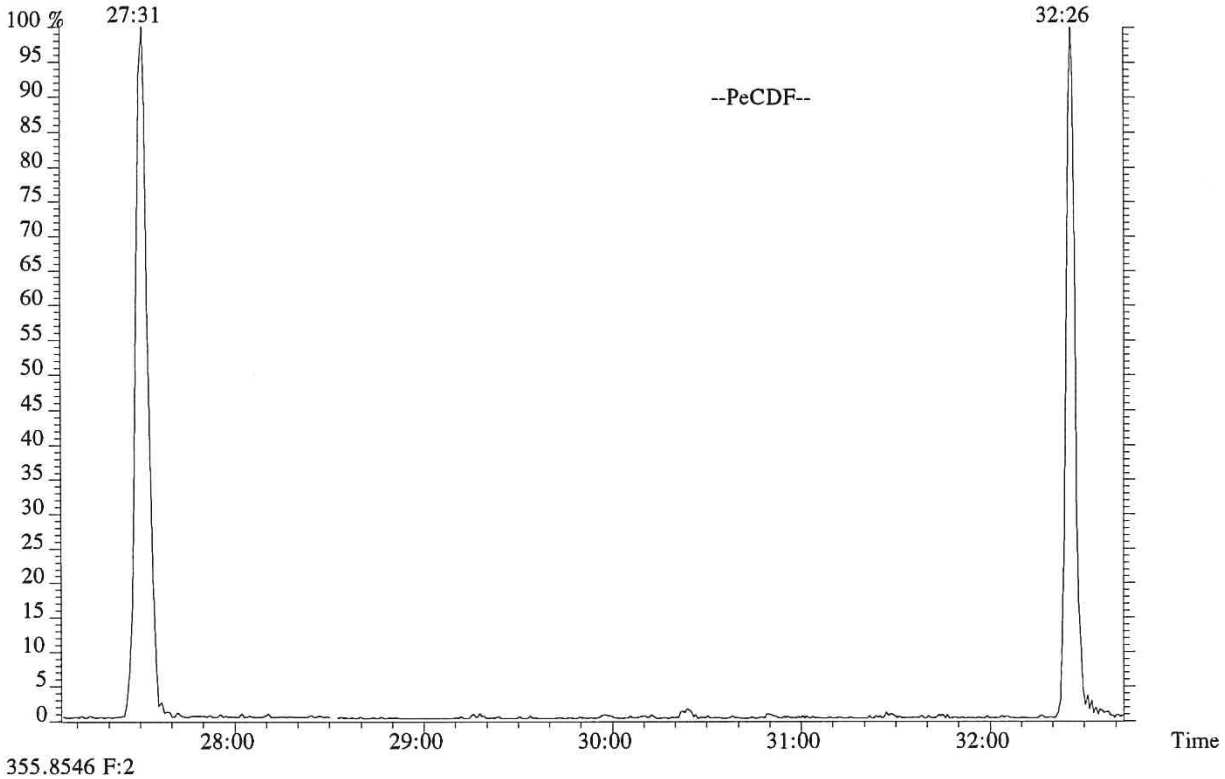


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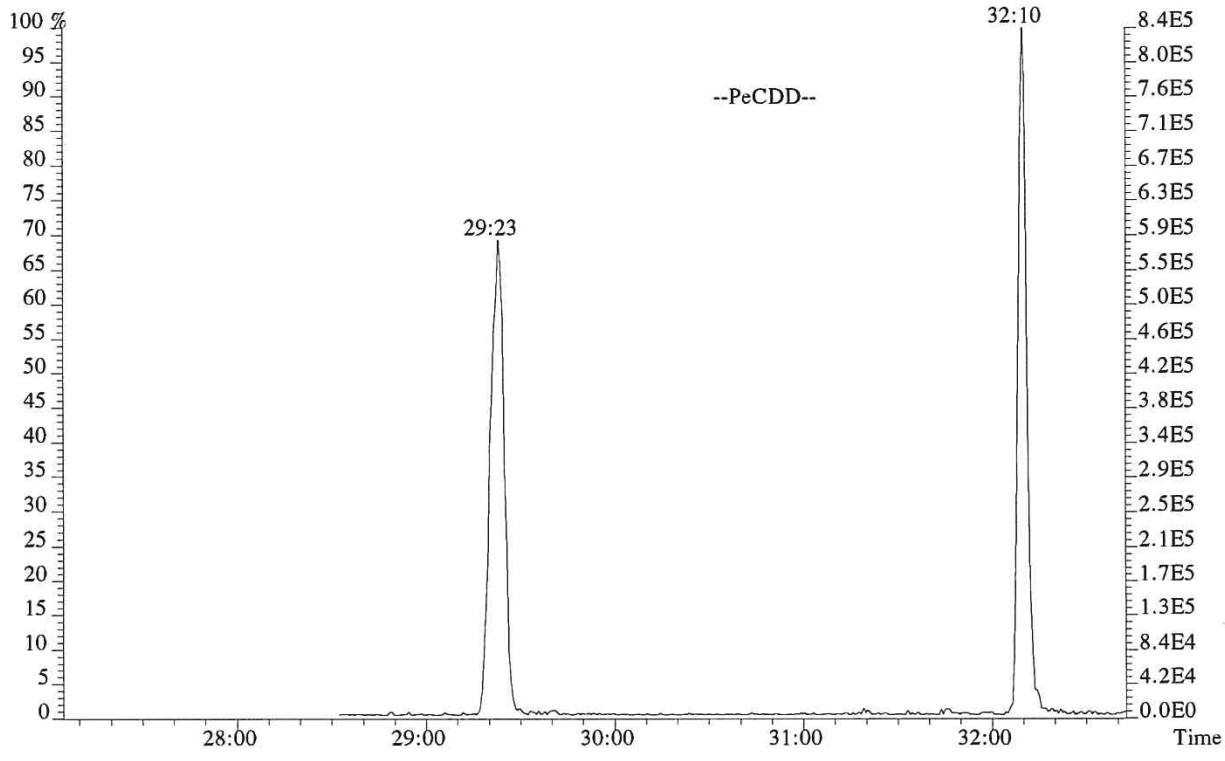


017685

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Sample#1 Exp:WINDOW DEFINE
339.8597,339.8597 F:2

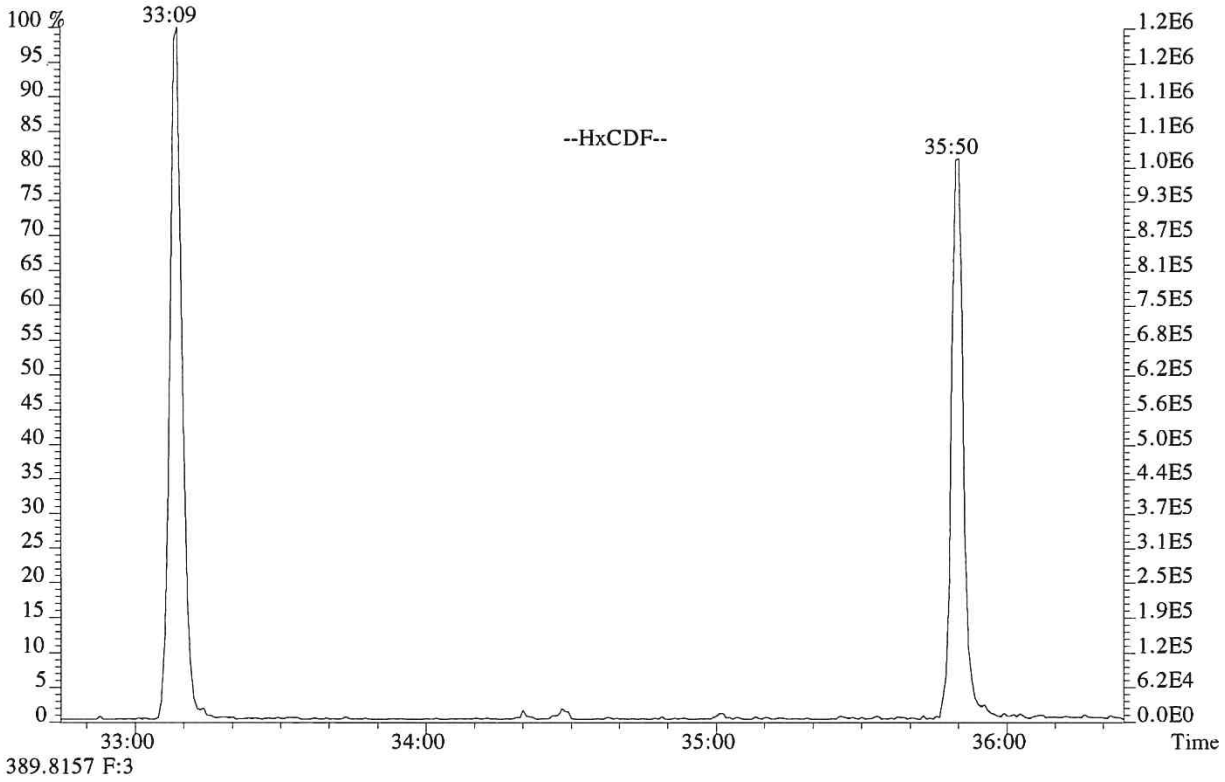


355.8546 F:2

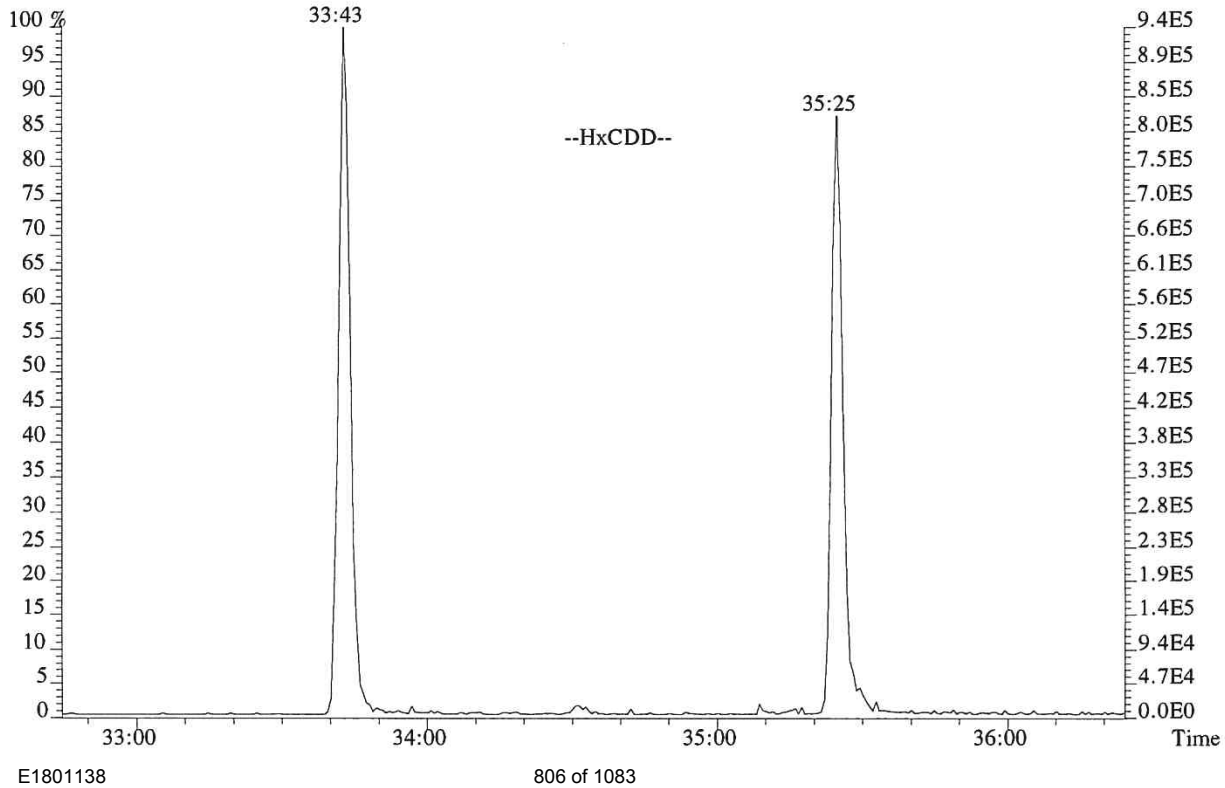


017686

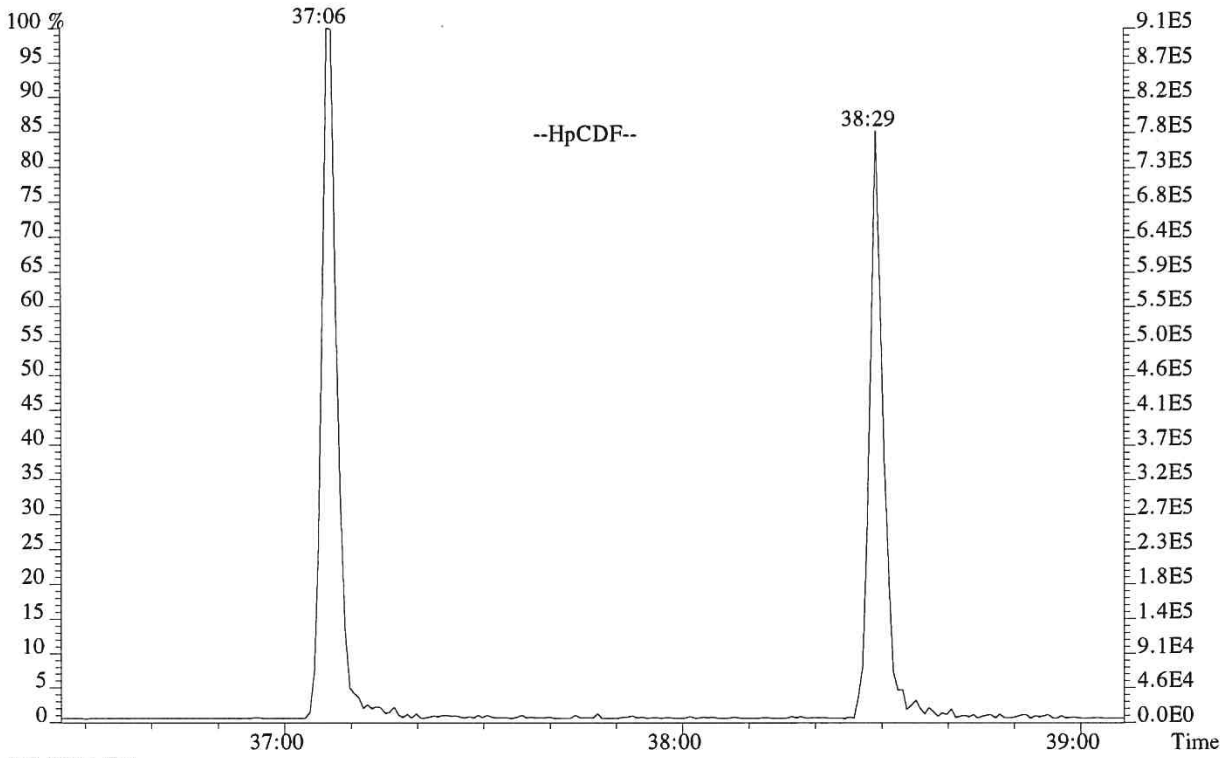
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Sample#1 Exp:WINDOW DEFINE
373.8208 F:3



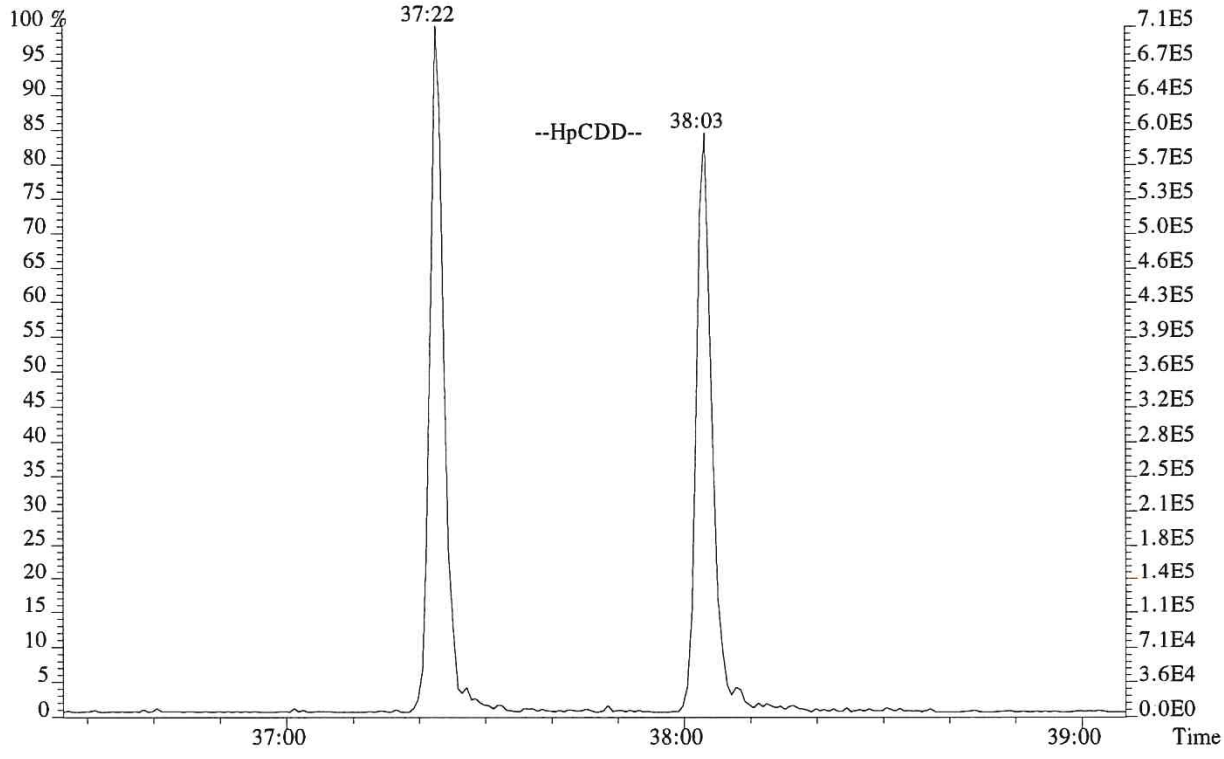
389.8157 F:3



File:P616376 #1-241 Acq: 8-JAN-2019 12:08:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
407.7818 F:4



423.7766 F:4



USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P616375 Analysis Date: 8-JAN-19 Time: 11:14:39

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	10.6	7.8 - 12.9	5.9
1,2,3,7,8-PeCDD	M+2/M+4	1.59	1.32-1.78	54	39 - 65	7.1
1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	51	39 - 64	2.4
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	52	39 - 64	3.5
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	50	41 - 61	-0.1
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	49	43 - 58	-1.1
OCDD	M+2/M+4	0.89	0.76-1.02	101	79 - 126	1.1
2,3,7,8-TCDF	M/M+2	0.82	0.65-0.89	9.7	8.4 - 12.0	-3.3
1,2,3,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	48	41 - 60	-3.1
2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	48	41 - 61	-4.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	48	45 - 56	-4.5
1,2,3,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	48	44 - 57	-3.1
1,2,3,7,8,9-HxCDF	M+2/M+4	1.29	1.05-1.43	48	45 - 56	-3.9
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	48	44 - 57	-3.8
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	48	45 - 55	-3.1
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	48	43 - 58	-4.7
OCDF	M+2/M+4	0.91	0.76-1.02	90	63 - 159	-10.2

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P616375 Analysis Date: 8-JAN-19 Time: 11:14:39

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	102	82 - 121	1.9
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.56	1.32-1.78	101	62 - 160	0.7
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	100	85 - 117	0.2
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	105	85 - 118	5.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	91	72 - 138	-9.0
13C-OCDD	M+2/M+4	0.91	0.76-1.02	145	96 - 415	-27.5
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	104	71 - 140	3.6
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	105	76 - 130	4.7
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	106	77 - 130	6.3
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	101	76 - 131	1.4
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	103	70 - 143	3.3
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	94	74 - 135	-5.7
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	101	73 - 137	1.3
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	89	78 - 129	-10.5
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.47	0.37-0.51	79	77 - 129	-20.7
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				10.2	7.8 - 12.7	1.7

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
194503

Run #7 Filename P616375 Samp: 1 Inj: 1 Acquired: 8-JAN-19 11:14:39
Processed: 9-JAN-19 08:58:00 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:16	4.755e+03	5.776e+03	0.82	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:24	3.899e+04	2.525e+04	1.54	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:28	3.712e+04	2.363e+04	1.57	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	3.232e+04	2.518e+04	1.28	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:28	3.520e+04	2.728e+04	1.29	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	3.130e+04	2.517e+04	1.24	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:48	2.743e+04	2.124e+04	1.29	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:07	2.518e+04	2.396e+04	1.05	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	1.861e+04	1.762e+04	1.06	yes	no	1.463
10	Unk	OCDF	40:46	2.324e+04	2.551e+04	0.91	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:18	3.349e+03	4.293e+03	0.78	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:46	2.372e+04	1.496e+04	1.59	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:10	1.990e+04	1.598e+04	1.25	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:15	2.097e+04	1.662e+04	1.26	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:30	2.154e+04	1.680e+04	1.28	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	1.588e+04	1.518e+04	1.05	yes	no	1.112
17	Unk	OCDD	40:36	1.900e+04	2.144e+04	0.89	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:14	4.493e+04	5.584e+04	0.80	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:24	7.088e+04	4.382e+04	1.62	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:27	7.042e+04	4.427e+04	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:21	2.958e+04	5.546e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	3.479e+04	6.498e+04	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	3.181e+04	5.979e+04	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	2.672e+04	5.043e+04	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:06	2.067e+04	4.595e+04	0.45	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	1.650e+04	3.548e+04	0.47	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:16	3.039e+04	3.840e+04	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:45	4.742e+04	3.037e+04	1.56	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	3.639e+04	2.906e+04	1.25	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	3.828e+04	3.029e+04	1.26	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:02	2.900e+04	2.746e+04	1.06	yes	no	0.857
32	IS	13C-OCDD	40:36	3.289e+04	3.621e+04	0.91	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:29	3.096e+04	3.772e+04	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	4.056e+04	3.177e+04	1.28	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:18	7.589e+03				no	1.086

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Signal/Noise Height Ratio Summary

CLIENT ID.
194503

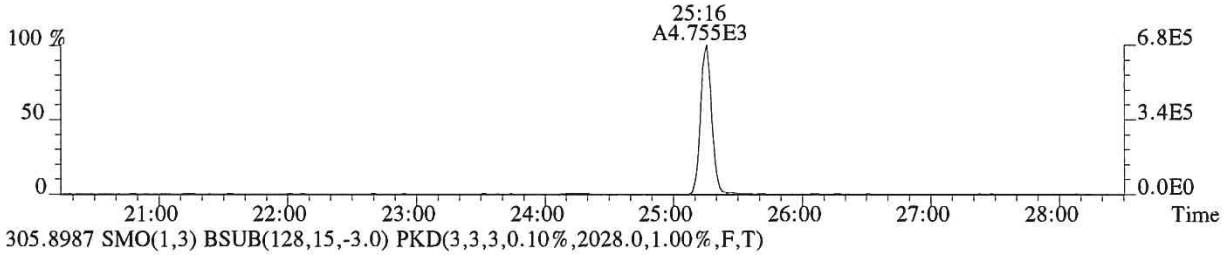
Run #7 Filename P616375 Samp: 1 Inj: 1 Acquired: 8-JAN-19 11:14:39
Processed: 9-JAN-19 08:58:00 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.78e+05	4.36e+02	1.6e+03	8.47e+05	2.03e+03	4.2e+02
2	1,2,3,7,8-PeCDF	6.85e+06	3.84e+02	1.8e+04	4.44e+06	8.64e+02	5.1e+03
3	2,3,4,7,8-PeCDF	7.17e+06	3.84e+02	1.9e+04	4.46e+06	8.64e+02	5.2e+03
4	1,2,3,4,7,8-HxCDF	6.84e+06	8.84e+02	7.7e+03	5.25e+06	4.08e+02	1.3e+04
5	1,2,3,6,7,8-HxCDF	7.20e+06	8.84e+02	8.1e+03	5.61e+06	4.08e+02	1.4e+04
6	2,3,4,6,7,8-HxCDF	6.76e+06	8.84e+02	7.7e+03	5.37e+06	4.08e+02	1.3e+04
7	1,2,3,7,8,9-HxCDF	5.68e+06	8.84e+02	6.4e+03	4.33e+06	4.08e+02	1.1e+04
8	1,2,3,4,6,7,8-HpCDF	5.57e+06	2.86e+03	2.0e+03	5.30e+06	4.69e+03	1.1e+03
9	1,2,3,4,7,8,9-HpCDF	3.88e+06	2.86e+03	1.4e+03	3.64e+06	4.69e+03	7.8e+02
10	OCDF	4.18e+06	4.92e+02	8.5e+03	4.55e+06	1.25e+03	3.6e+03
11	2,3,7,8-TCDD	5.08e+05	2.83e+03	1.8e+02	6.76e+05	9.48e+02	7.1e+02
12	1,2,3,7,8-PeCDD	4.51e+06	9.36e+02	4.8e+03	2.86e+06	3.04e+02	9.4e+03
13	1,2,3,4,7,8-HxCDD	4.41e+06	2.64e+02	1.7e+04	3.53e+06	3.44e+02	1.0e+04
14	1,2,3,6,7,8-HxCDD	4.24e+06	2.64e+02	1.6e+04	3.48e+06	3.44e+02	1.0e+04
15	1,2,3,7,8,9-HxCDD	4.51e+06	2.64e+02	1.7e+04	3.49e+06	3.44e+02	1.0e+04
16	1,2,3,4,6,7,8-HpCDD	3.25e+06	4.72e+02	6.9e+03	3.16e+06	6.76e+02	4.7e+03
17	OCDD	3.38e+06	2.60e+02	1.3e+04	3.83e+06	3.56e+02	1.1e+04
18	13C-2,3,7,8-TCDF	6.65e+06	7.20e+03	9.2e+02	8.25e+06	6.60e+03	1.2e+03
19	13C-1,2,3,7,8-PeCDF	1.21e+07	6.48e+02	1.9e+04	7.48e+06	5.28e+02	1.4e+04
20	13C-2,3,4,7,8-PeCDF	1.29e+07	6.48e+02	2.0e+04	8.15e+06	5.28e+02	1.5e+04
21	13C-1,2,3,4,7,8-HxCDF	6.12e+06	1.00e+03	6.1e+03	1.15e+07	1.36e+03	8.4e+03
22	13C-1,2,3,6,7,8-HxCDF	7.12e+06	1.00e+03	7.1e+03	1.33e+07	1.36e+03	9.8e+03
23	13C-2,3,4,6,7,8-HxCDF	6.80e+06	1.00e+03	6.8e+03	1.27e+07	1.36e+03	9.4e+03
24	13C-1,2,3,7,8,9-HxCDF	5.50e+06	1.00e+03	5.5e+03	1.04e+07	1.36e+03	7.7e+03
25	13C-1,2,3,4,6,7,8-HpCDF	4.54e+06	1.52e+03	3.0e+03	1.01e+07	1.46e+03	6.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	3.42e+06	1.52e+03	2.2e+03	7.31e+06	1.46e+03	5.0e+03
27	13C-2,3,7,8-TCDD	4.82e+06	1.03e+04	4.7e+02	6.14e+06	2.04e+03	3.0e+03
28	13C-1,2,3,7,8-PeCDD	8.82e+06	7.44e+02	1.2e+04	5.61e+06	1.19e+03	4.7e+03
29	13C-1,2,3,4,7,8-HxCDD	8.01e+06	7.28e+02	1.1e+04	6.35e+06	3.20e+02	2.0e+04
30	13C-1,2,3,6,7,8-HxCDD	7.92e+06	7.28e+02	1.1e+04	6.30e+06	3.20e+02	2.0e+04
31	13C-1,2,3,4,6,7,8-HpCDD	6.06e+06	9.08e+02	6.7e+03	5.73e+06	8.44e+02	6.8e+03
32	13C-OCDD	5.83e+06	3.28e+02	1.8e+04	6.28e+06	2.64e+02	2.4e+04
33	13C-1,2,3,4-TCDD	4.56e+06	1.03e+04	4.4e+02	5.44e+06	2.04e+03	2.7e+03
34	13C-1,2,3,7,8,9-HxCDD	8.43e+06	7.28e+02	1.2e+04	6.65e+06	3.20e+02	2.1e+04
35	37Cl-2,3,7,8-TCDD	1.18e+06	8.48e+02	1.4e+03			

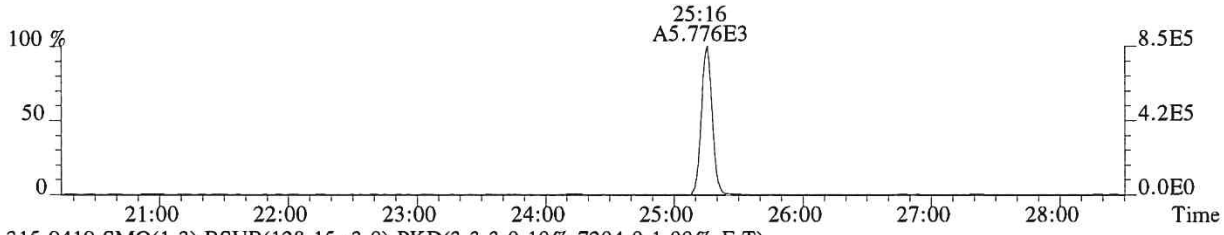
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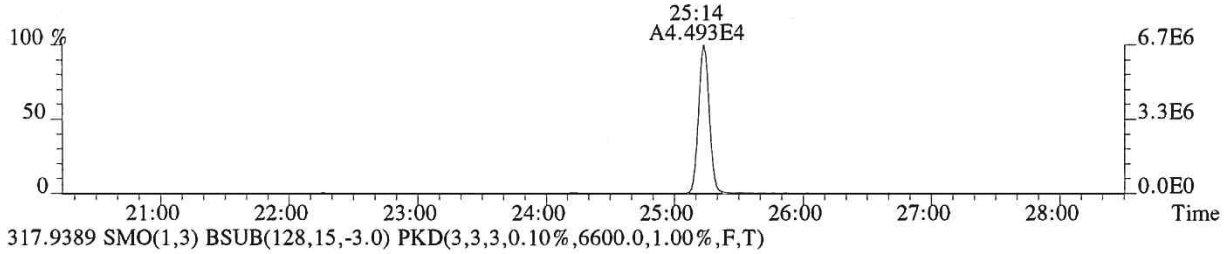
File:P616375 #1-587 Acq: 8-JAN-2019 11:14:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,436.0,1.00%,F,T)



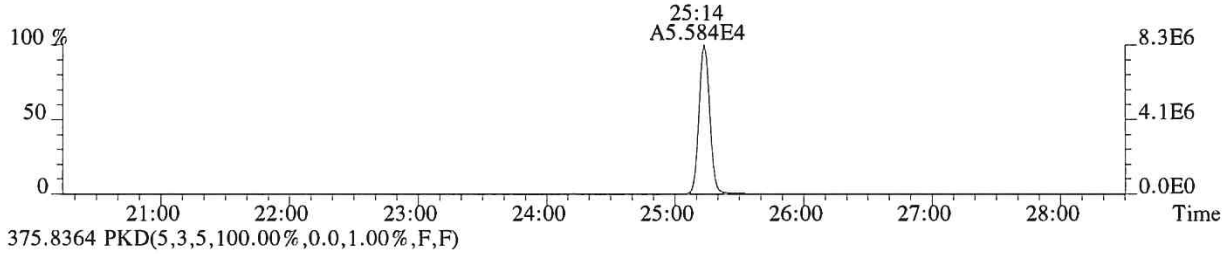
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2028.0,1.00%,F,T)



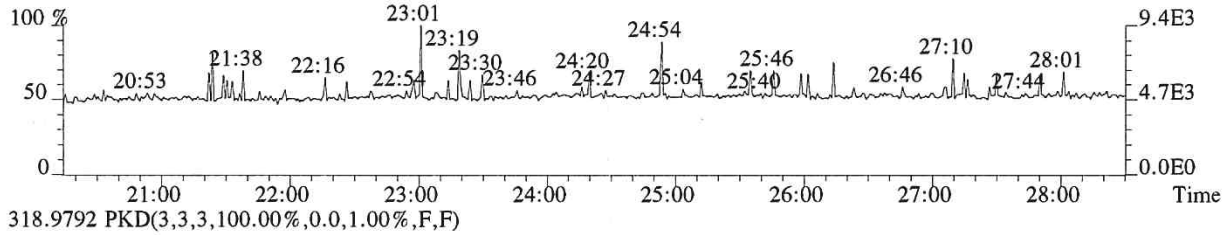
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7204.0,1.00%,F,T)



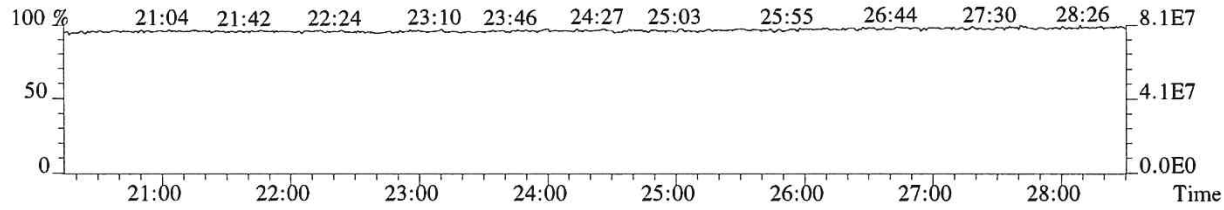
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6600.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

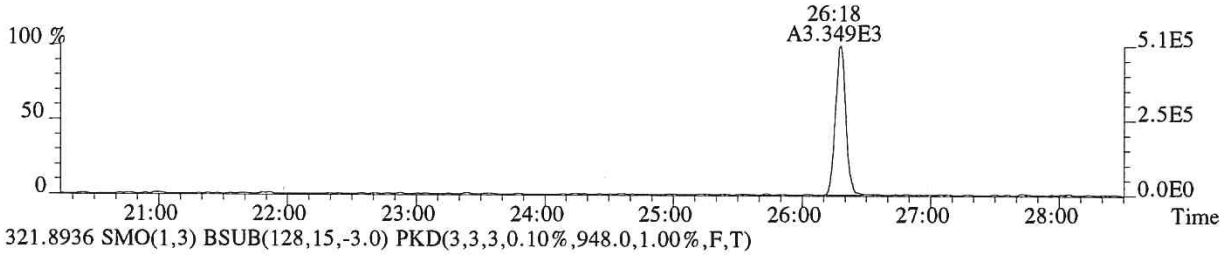


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

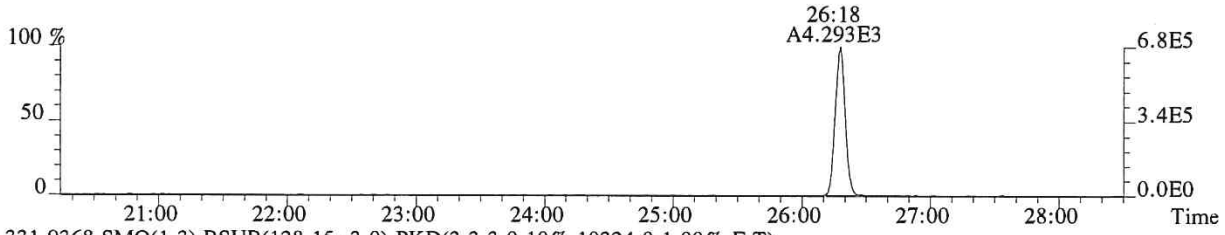


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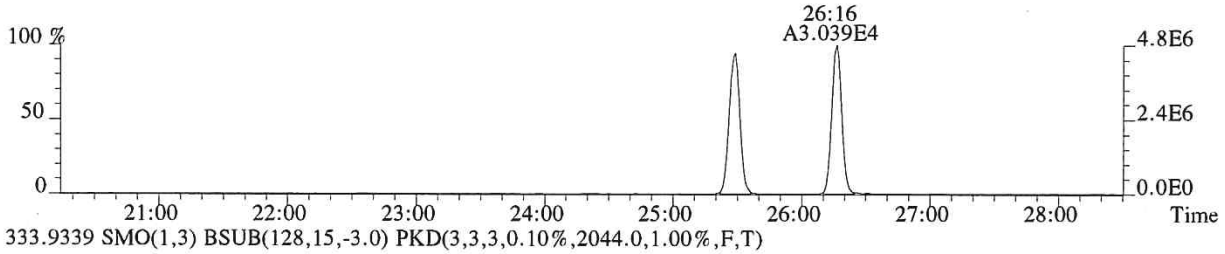
File:P616375 #1-587 Acq: 8-JAN-2019 11:14:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2828.0,1.00%,F,T)



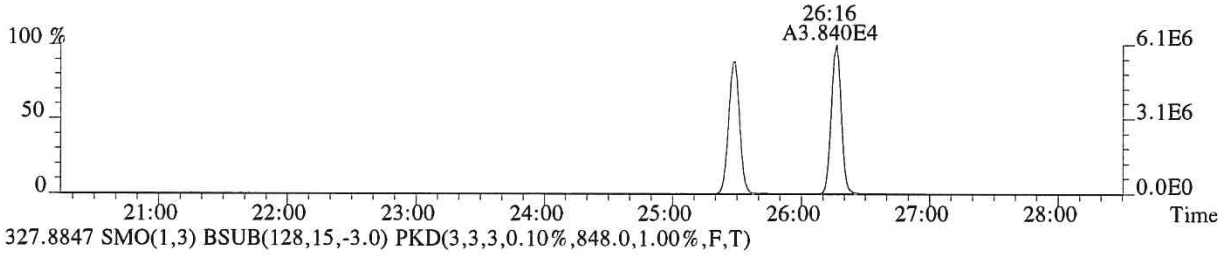
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,948.0,1.00%,F,T)



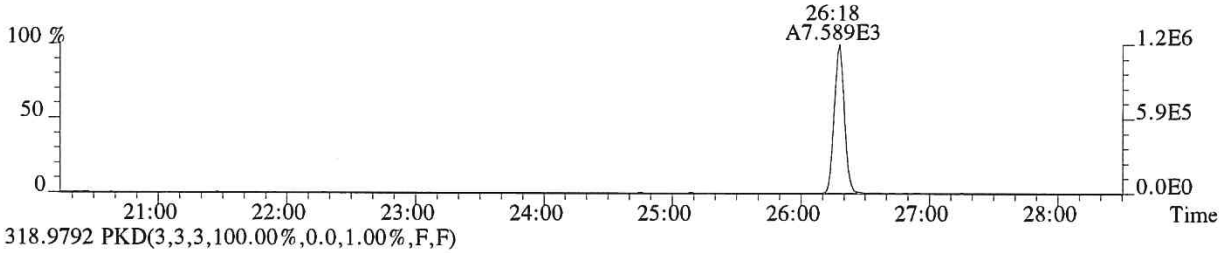
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10324.0,1.00%,F,T)



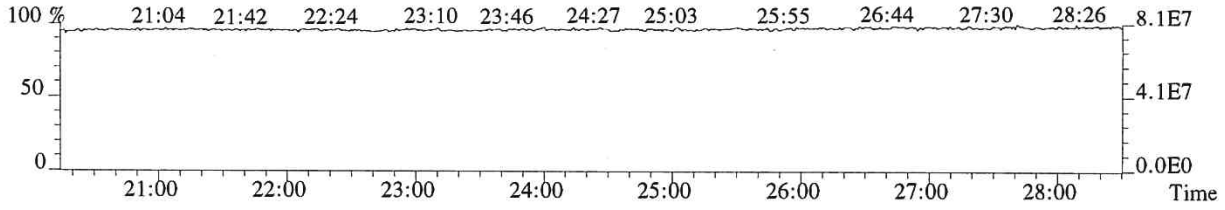
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2044.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,848.0,1.00%,F,T)

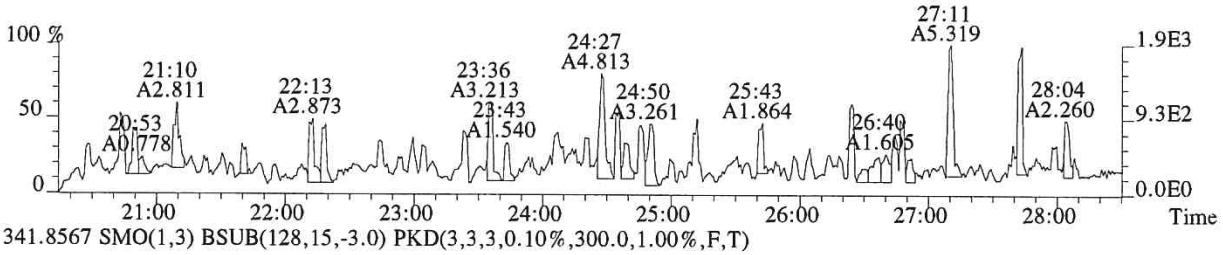


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

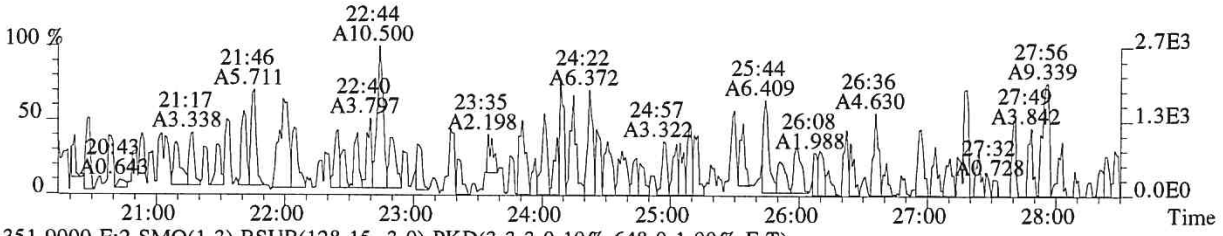


017694

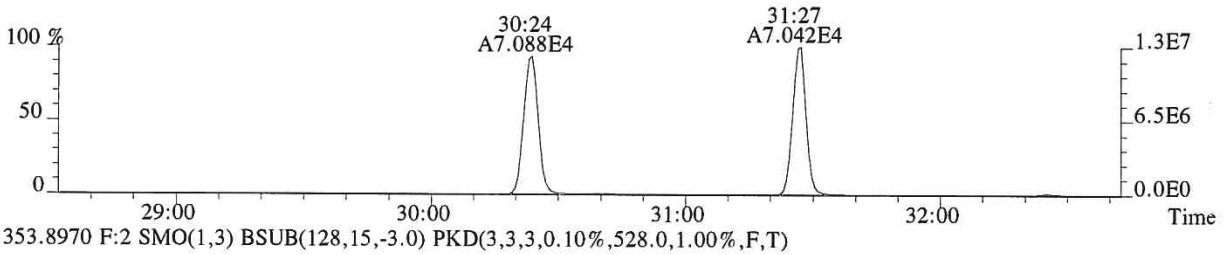
File:P616375 #1-587 Acq: 8-JAN-2019 11:14:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,388.0,1.00%,F,T)



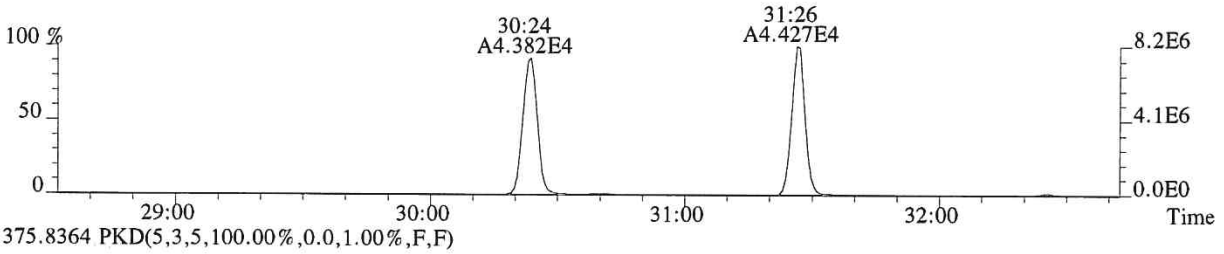
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,300.0,1.00%,F,T)



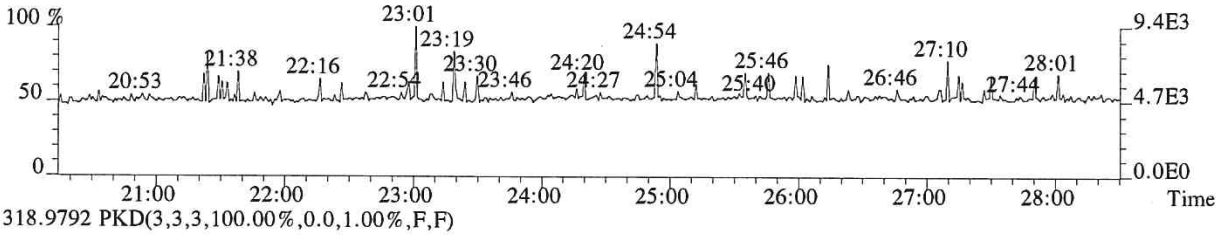
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,648.0,1.00%,F,T)



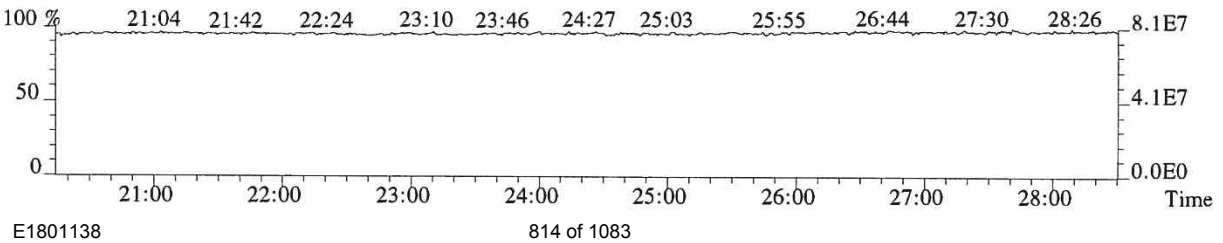
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,528.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

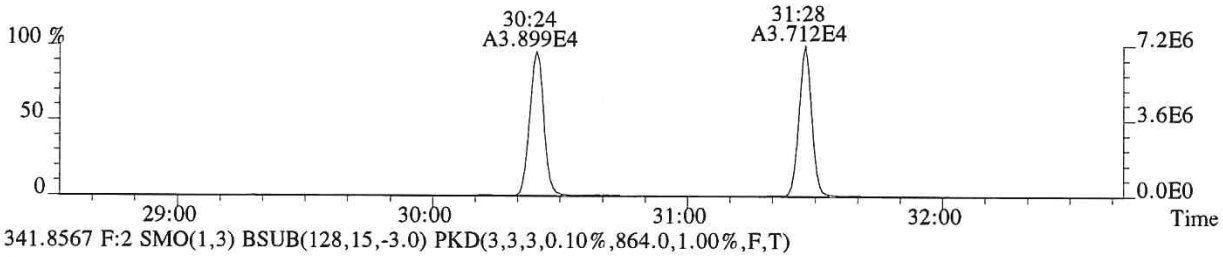


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

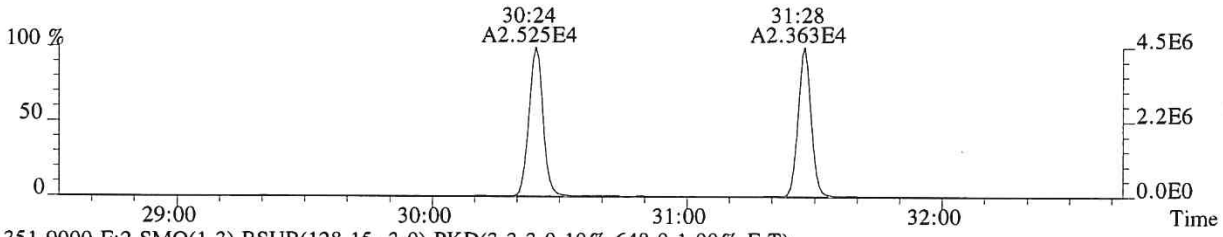


017695

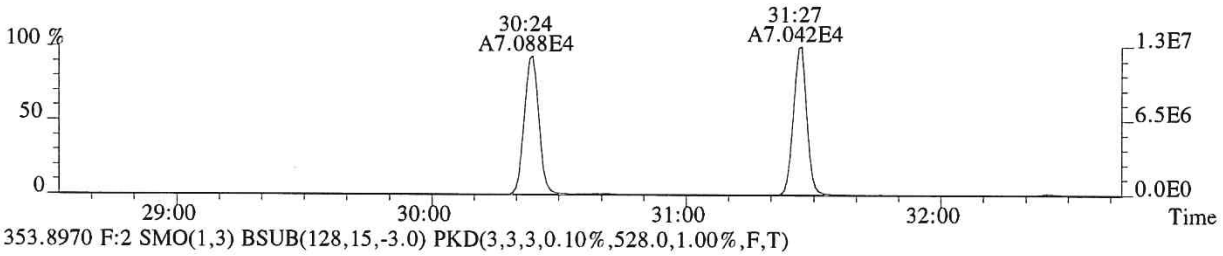
File:P616375 #1-376 Acq: 8-JAN-2019 11:14:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,384.0,1.00%,F,T)



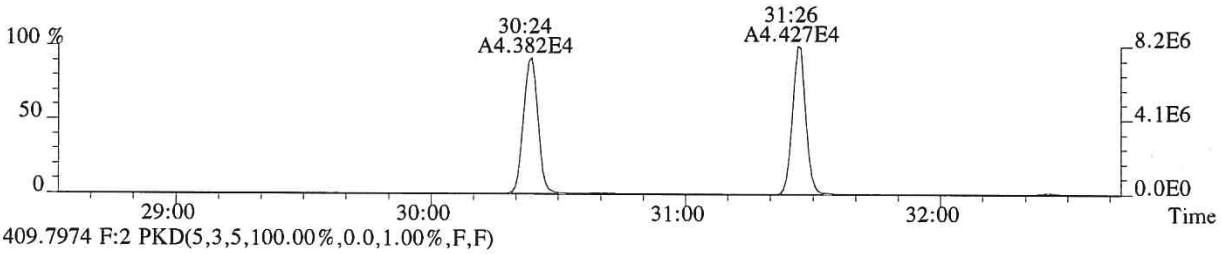
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,864.0,1.00%,F,T)



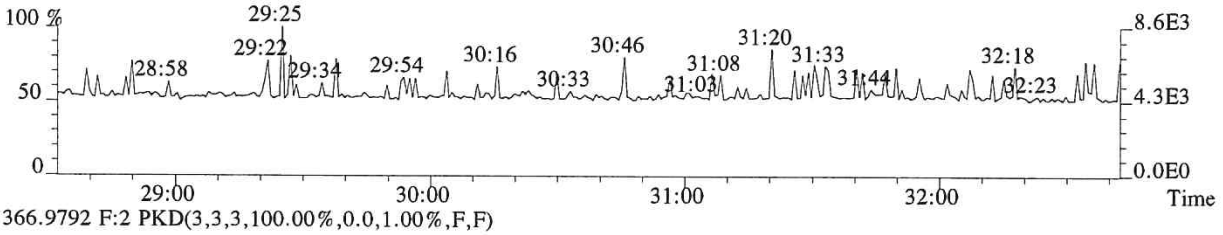
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,648.0,1.00%,F,T)



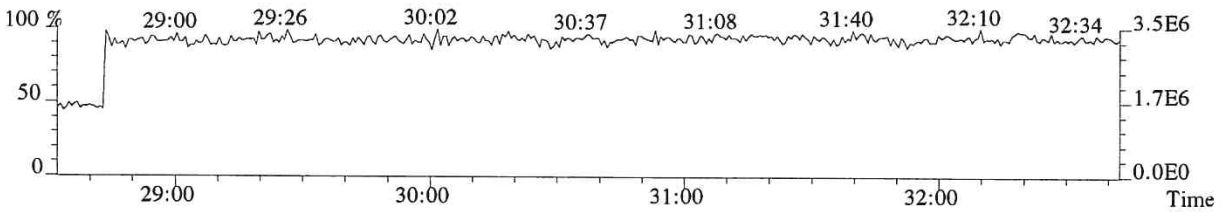
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,528.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

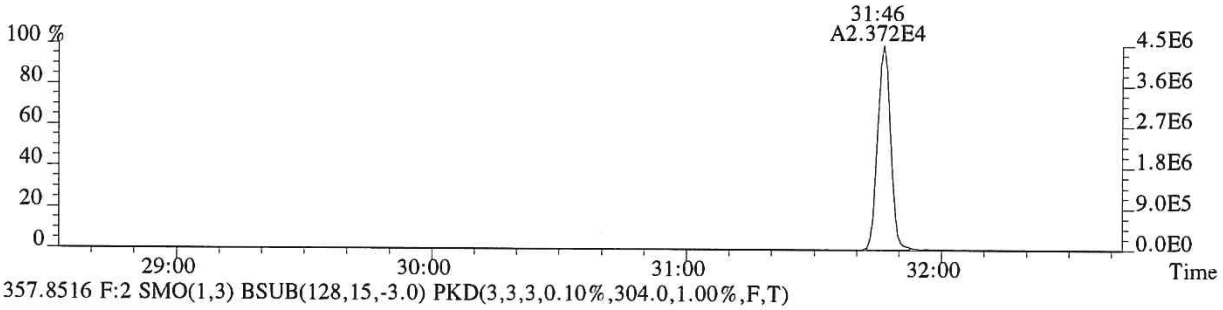


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

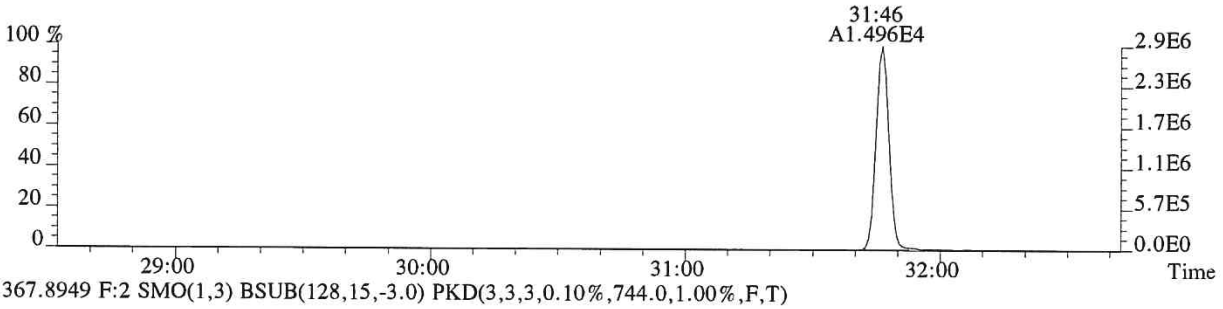


017696

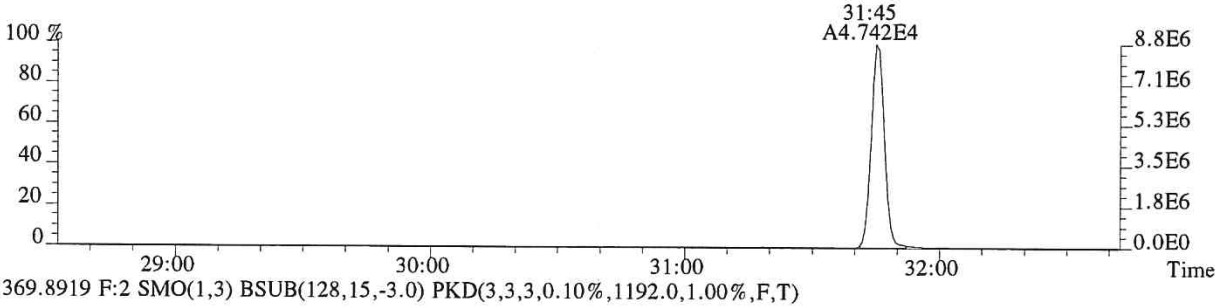
File:P616375 #1-376 Acq: 8-JAN-2019 11:14:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,936.0,1.00%,F,T)



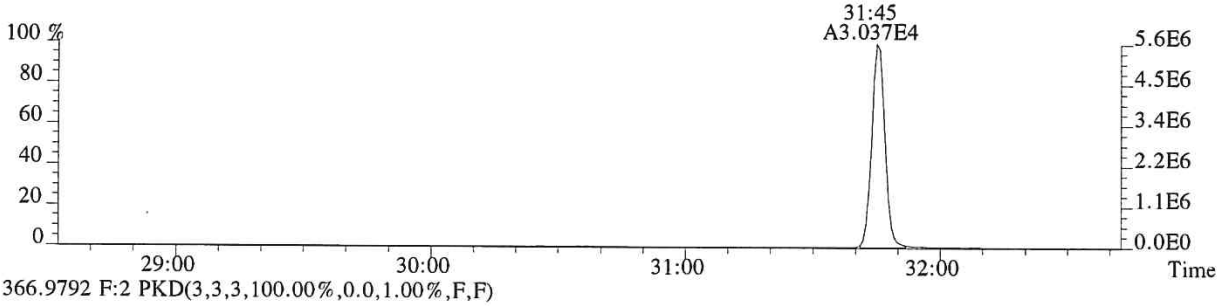
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,304.0,1.00%,F,T)



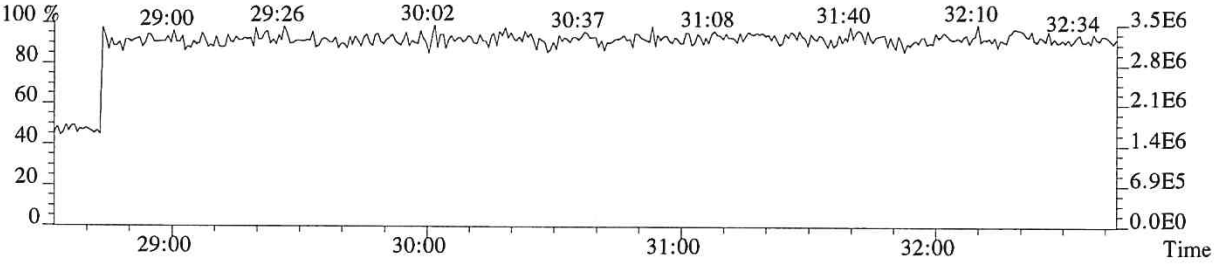
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,744.0,1.00%,F,T)



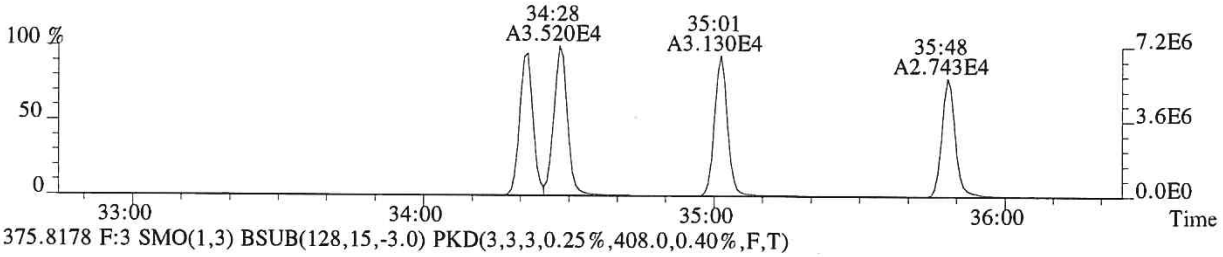
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1192.0,1.00%,F,T)



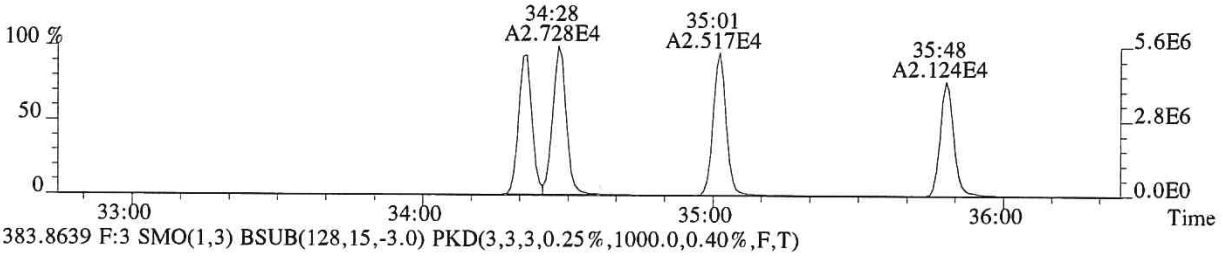
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



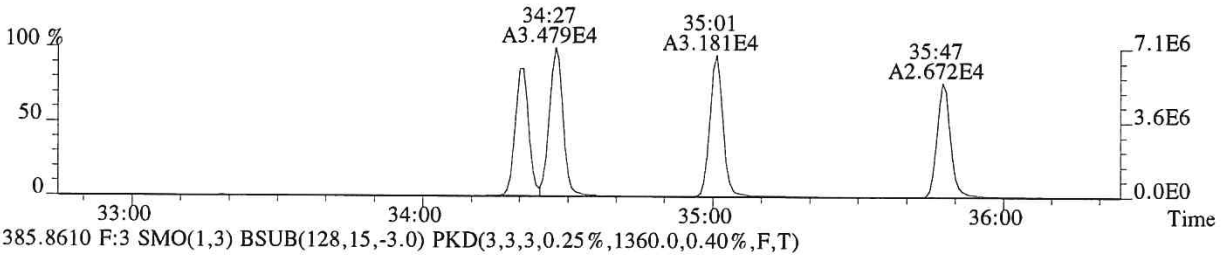
File:P616375 #1-330 Acq: 8-JAN-2019 11:14:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



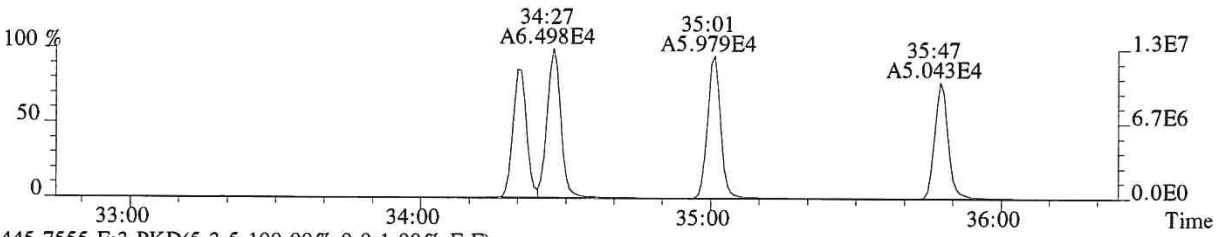
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,408.0,0.40%,F,T)



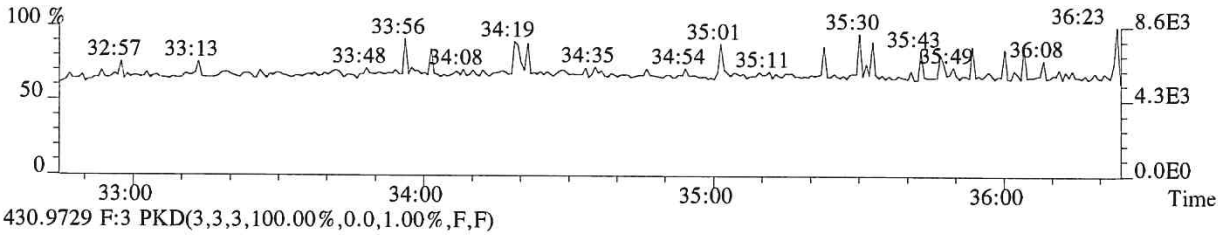
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1000.0,0.40%,F,T)



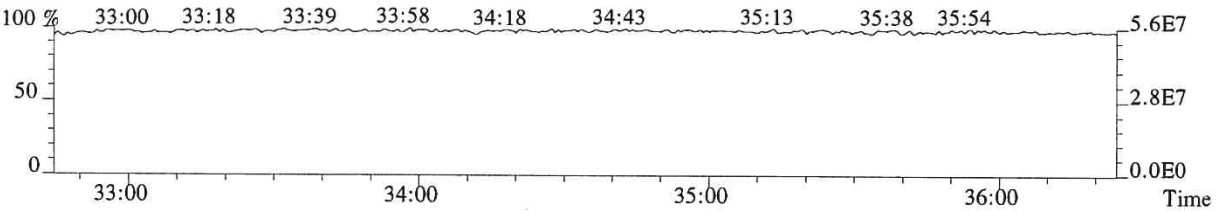
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1360.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

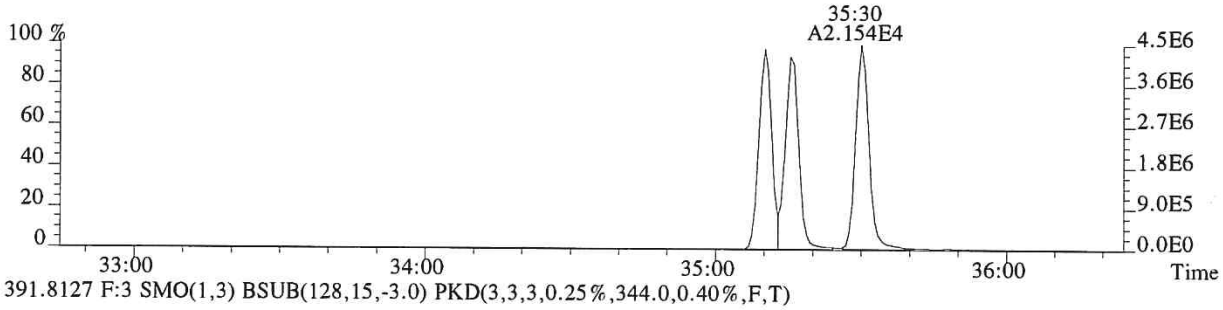


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

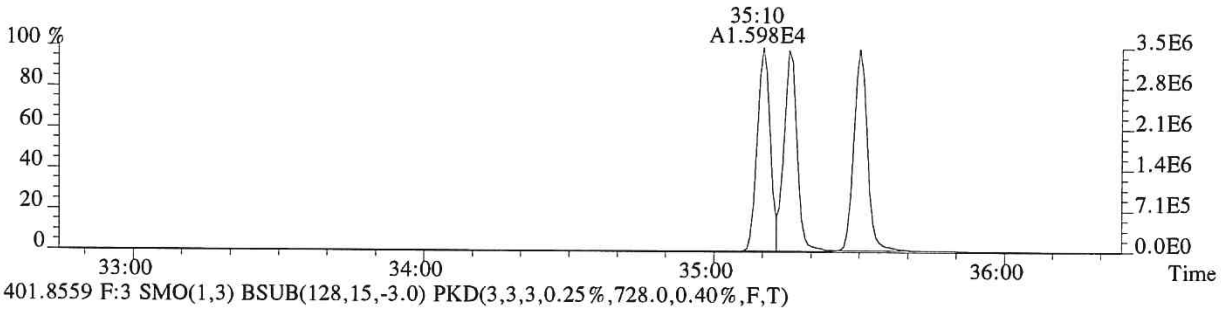


017698

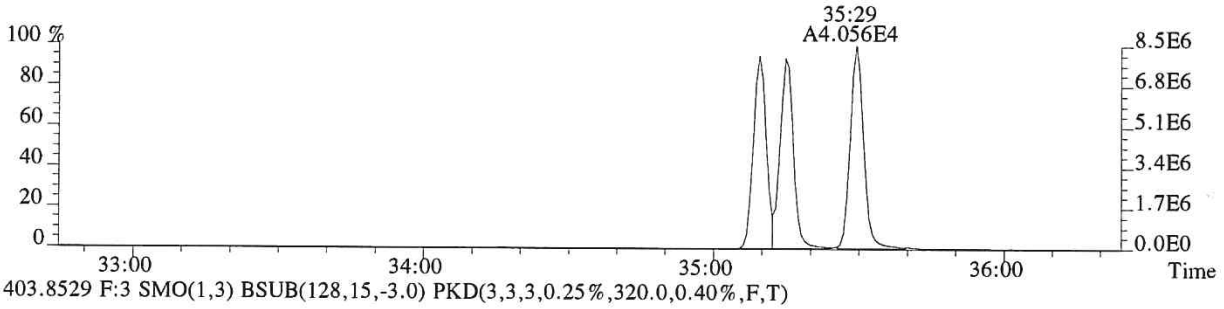
File:P616375 #1-330 Acq: 8-JAN-2019 11:14:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,264.0,0.40%,F,T)



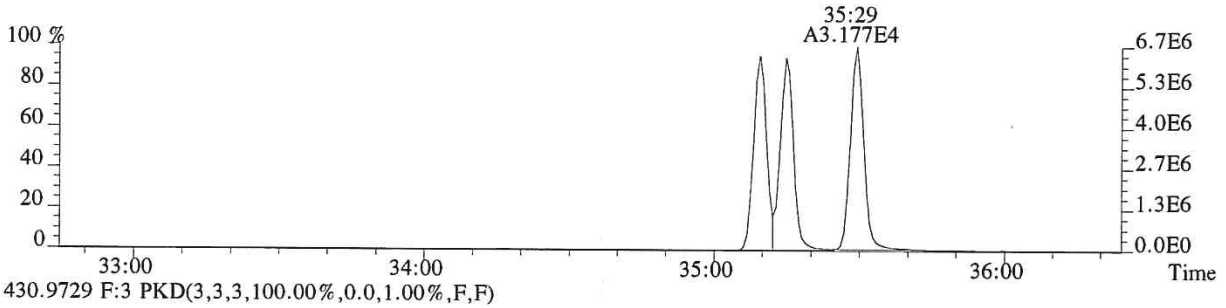
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,344.0,0.40%,F,T)



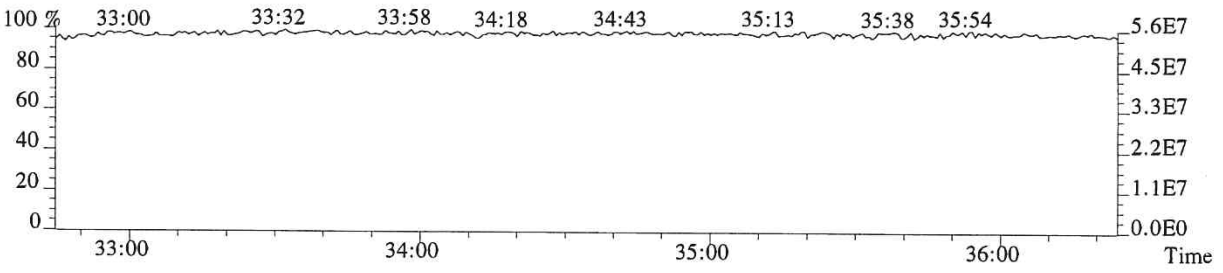
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,728.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,320.0,0.40%,F,T)

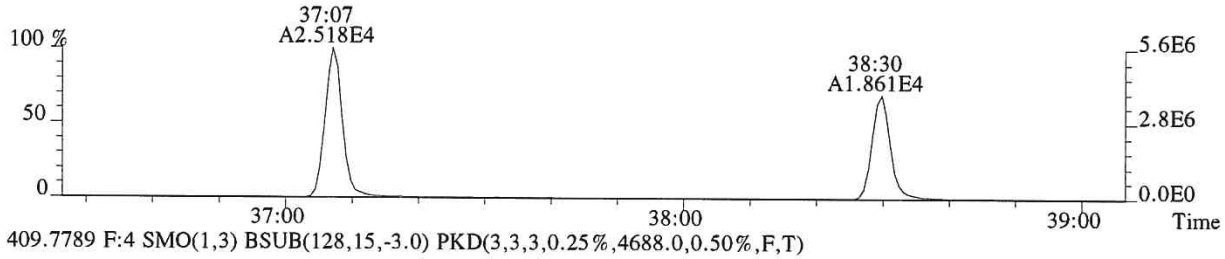


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

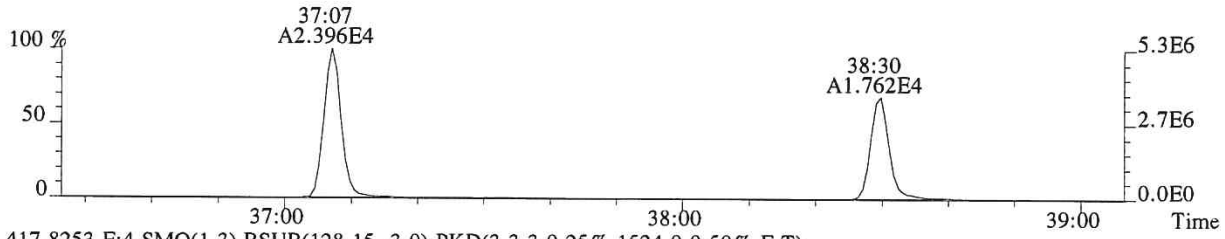


017699

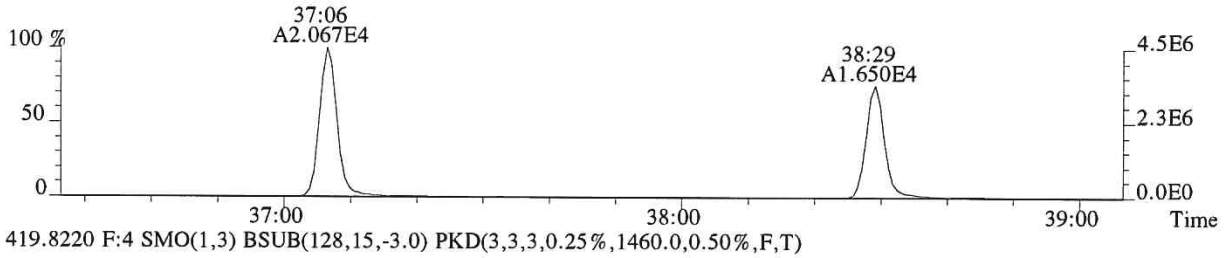
File:P616375 #1-241 Acq: 8-JAN-2019 11:14:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2856.0,0.50%,F,T)



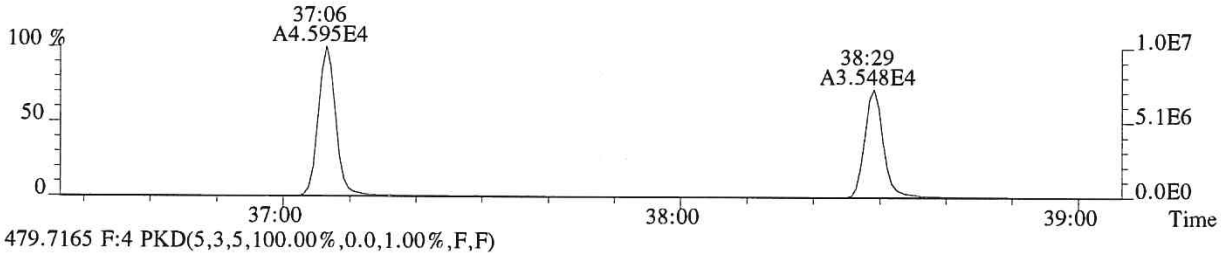
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4688.0,0.50%,F,T)



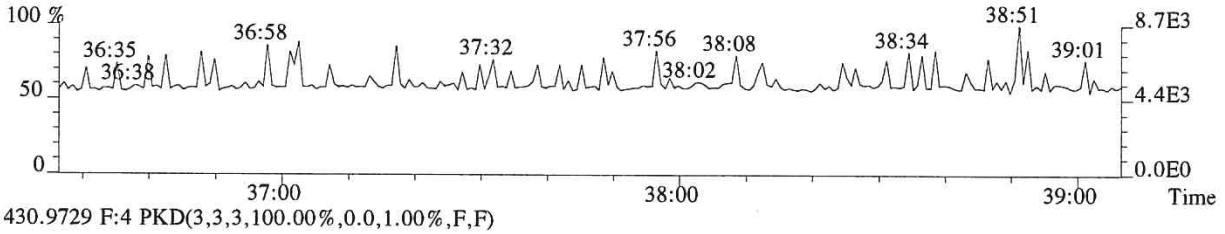
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1524.0,0.50%,F,T)



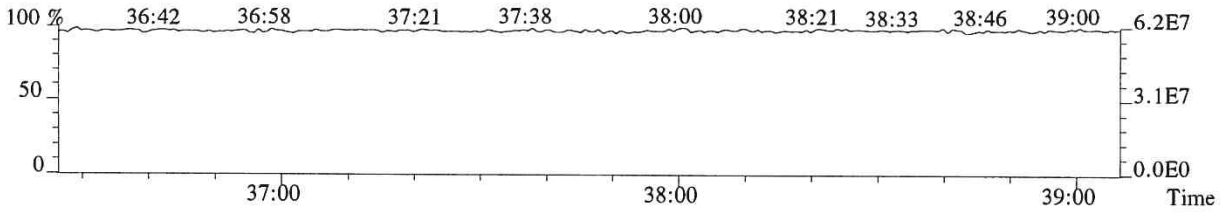
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1460.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

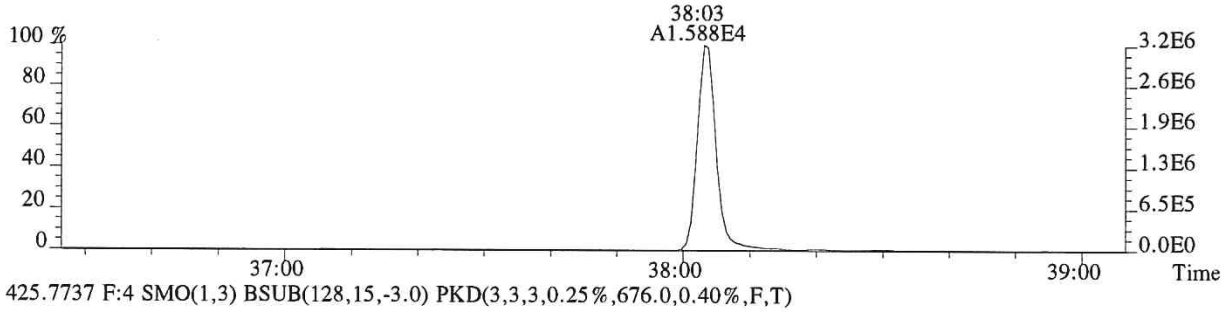


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

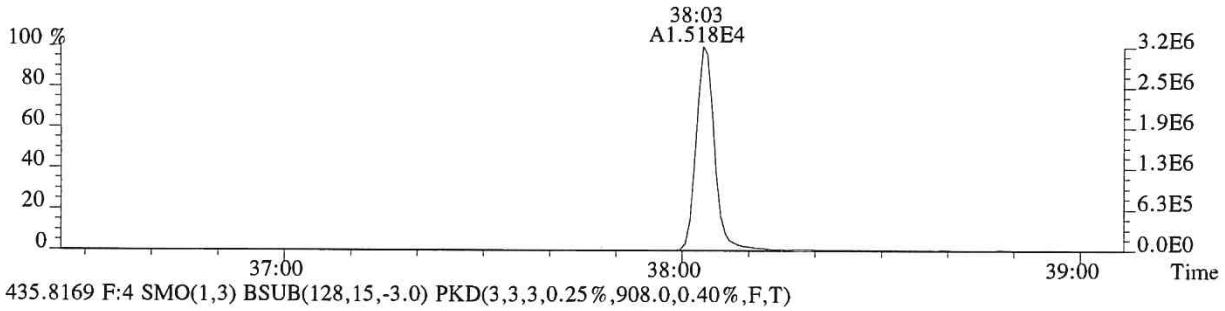


017700

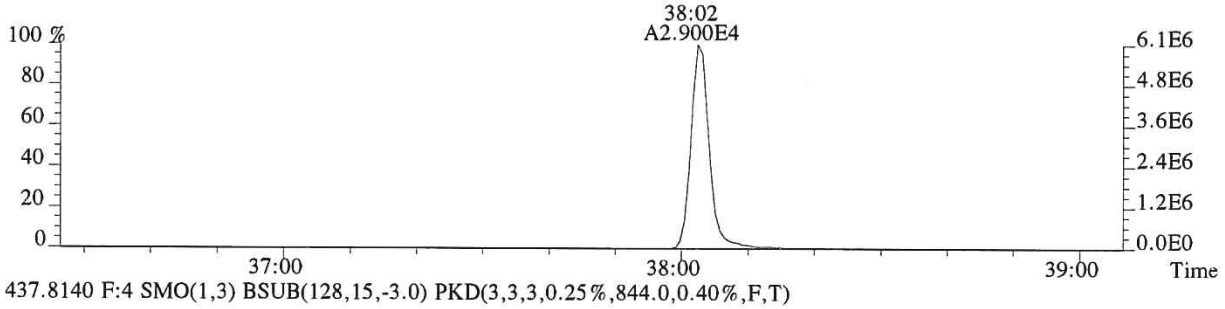
File:P616375 #1-241 Acq: 8-JAN-2019 11:14:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,472.0,0.40%,F,T)



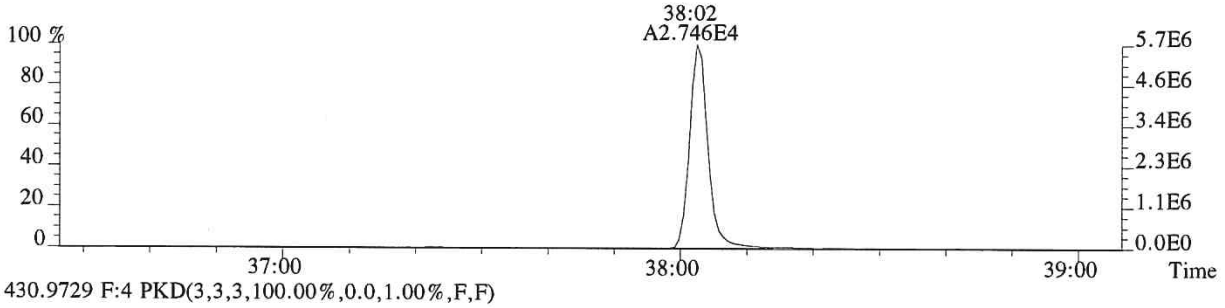
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,676.0,0.40%,F,T)



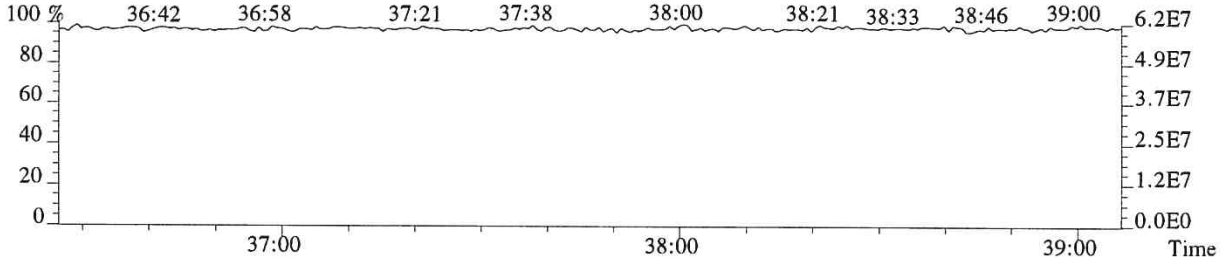
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,908.0,0.40%,F,T)



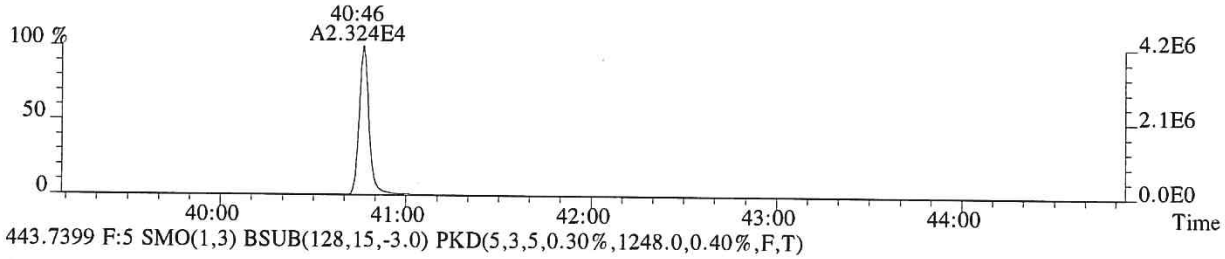
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,844.0,0.40%,F,T)



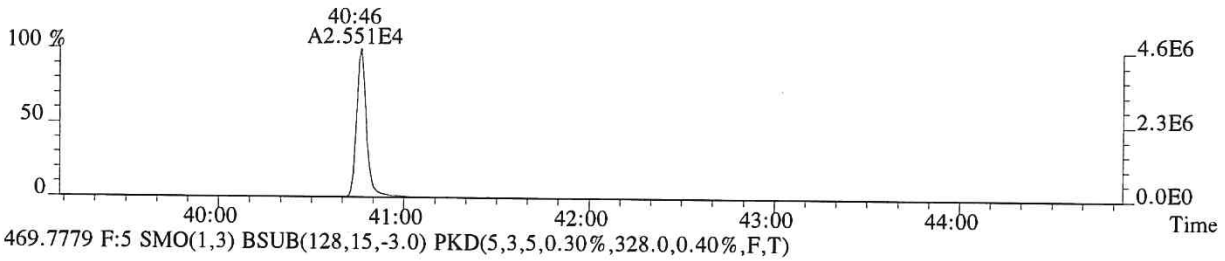
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



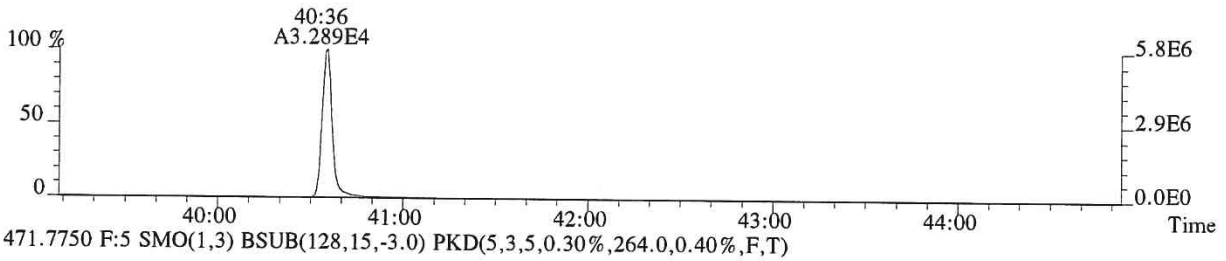
File:P616375 #1-517 Acq: 8-JAN-2019 11:14:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,492.0,0.40%,F,T)



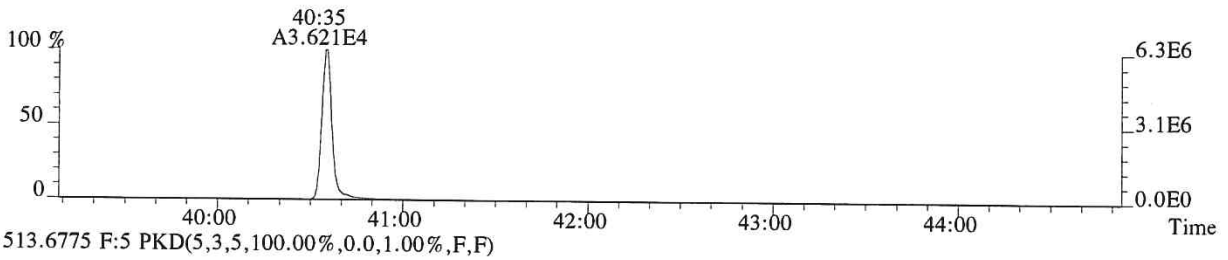
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1248.0,0.40%,F,T)



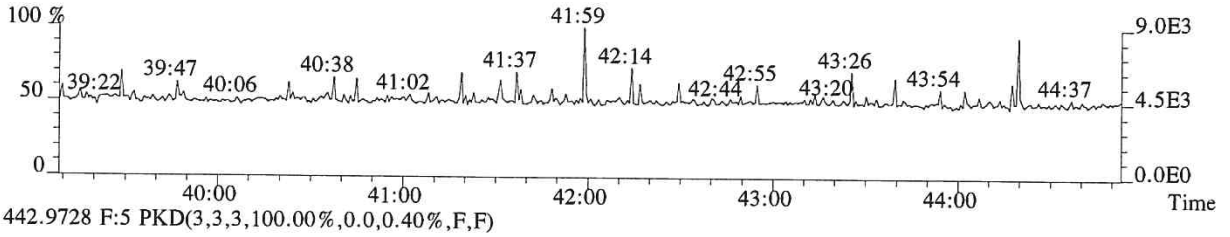
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,328.0,0.40%,F,T)



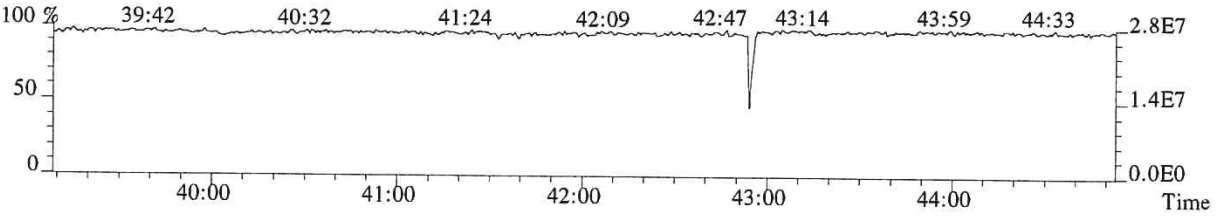
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,264.0,0.40%,F,T)



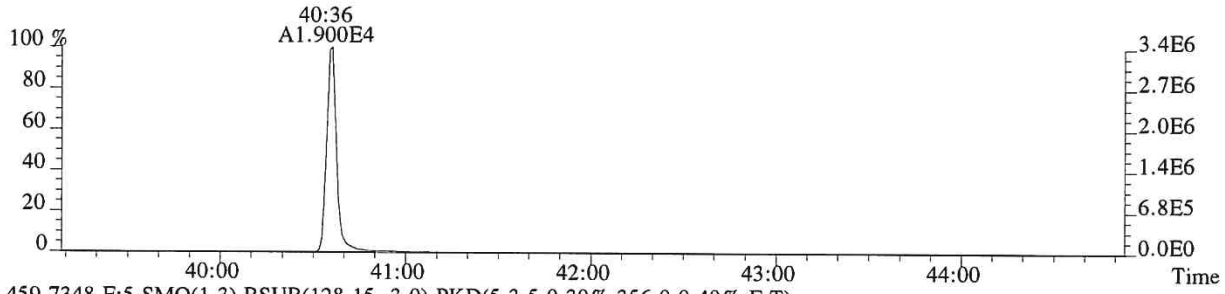
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



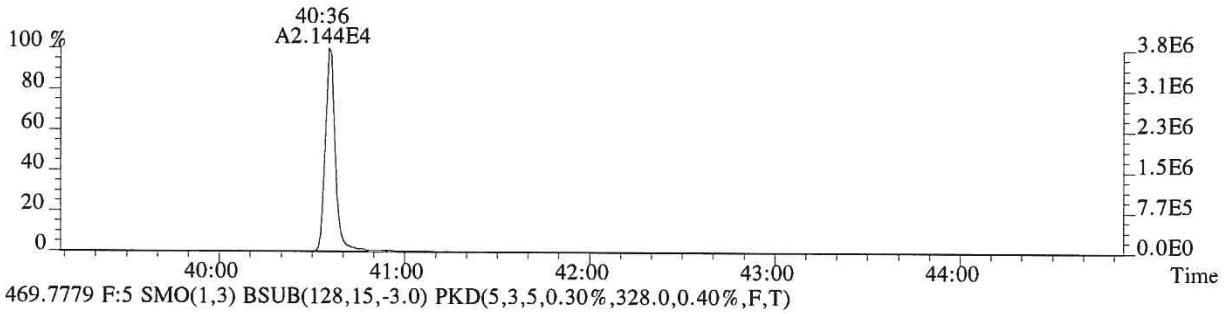
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



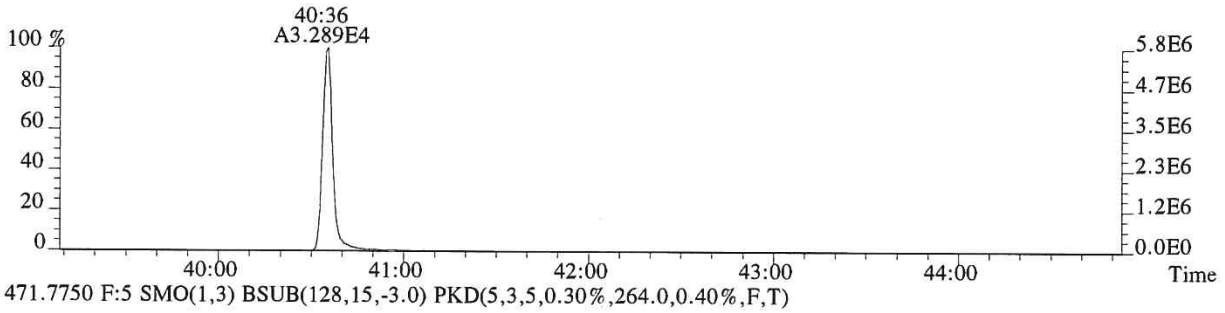
File:P616375 #1-517 Acq: 8-JAN-2019 11:14:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,260.0,0.40%,F,T)



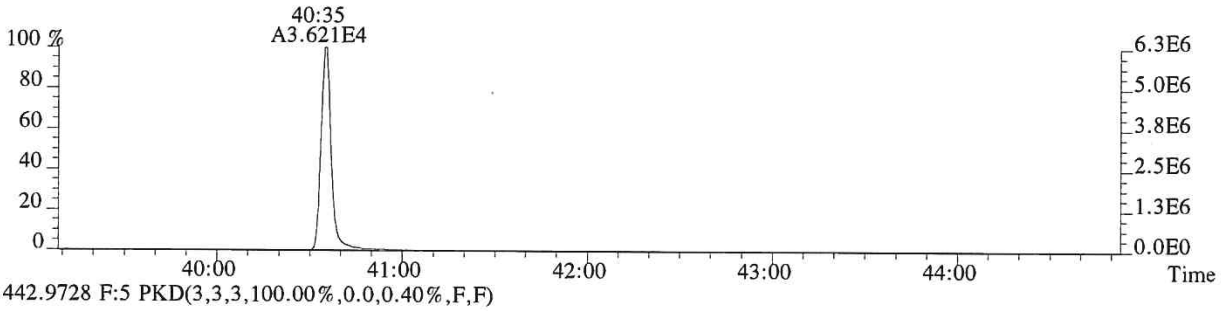
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,356.0,0.40%,F,T)



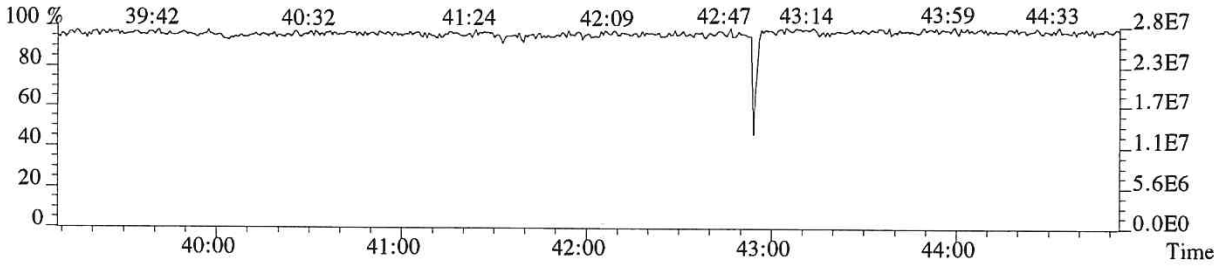
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,328.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,264.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P6162404

Date: 01/09/19

Circle one: (Beginning) / Ending

Method: (1613) / 1613E / 8290/ VCP / Tetra / TCDD Only / TCDF Conf / VCP Conf / 8280 / M23 / TO-9A

Retention Window/Column Performance Check:	Analyst	Second Check
Windows in and first and last eluters labeled	✓	✓
Column Performance shows less than or equal to 25% valley between column specific 2378 isomer and its closest eluters	✓	✓
No QC ion deflections affect column specific 2378 isomer or its closest eluters (HRMS Only)	✓	✓

CS3 Continuing Calibration	Analyst	Second Check
Percent RSD within method criteria	✓	✓
All relative abundance ratios meet method criteria	✓	✓
No QC ion deflections of greater than 20% (HRMS Only)	✓	✓
Mass spectrometer resolution greater than or equal to 10,000 and documented (HRMS Only)	✓	✓
2378-TCDD elutes at 25 minutes or later on the DB-5 column / DB-5MSUI column	✓	✓
Signal-to-noise of all target analytes and their labeled standards at least 10:1	✓	✓
Valley between labeled 123478 and 123678 HxCDD peaks less than or equal to 50% (LRMS Only)	N/A	N/A
Ending Calibration injected prior to end of 12 hour clock	N/A	N/A

Analyst: JC

Second QC: LKL

ccalqc.xls 07/17/12

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: Case No.: Client No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm)

Init. Calib. Date: 09/25/18

Init. Calib.Times: 12:13

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
194503	CS3	P616404	9-JAN-19	11:32:09
192977	WINDOW DEFINE	P616405	9-JAN-19	12:22:40
METHOD BLANK	EQ1800529-01	P616406	9-JAN-19	13:11:01
METHOD BLANK	EQ1900003-01	P616407	9-JAN-19	14:00:10
SL0196	E1801138-002DL	P616408	9-JAN-19	14:50:42
SL0173	E1801138-006DL	P616409	9-JAN-19	15:39:30
SL0174	E1801138-007DL	P616410	9-JAN-19	16:28:04
SL0198	E1801138-013	P616411	9-JAN-19	17:18:50
SL0180	E1801138-012DL	P616412	9-JAN-19	18:07:09
SL0199	E1801138-014DL	P616413	9-JAN-19	18:56:19
SL0200	E1801138-015DL	P616414	9-JAN-19	19:45:29
SL0211	E1801138-018DL	P616415	9-JAN-19	20:34:39
SL0212	E1801138-019DL	P616416	9-JAN-19	21:23:49
SL0213	E1801138-020DL	P616417	9-JAN-19	22:12:59
SL0214	E1801139-001	P616418	9-JAN-19	23:02:09

Sample List Report — **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS08.PRO\SampleDB\20190109A.SPL
Last Modified: Thursday, January 10, 2019 06:37:14 Central Standard Time
Printed: Thursday, January 10, 2019 06:37:16 Central Standard Time

Page Position (1, 1)

OPUS 4: P616404 res
01/10/19 gc

	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	1/9/18	11:32	P616404	194503	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:2	LG	HRMScheck 11:27
2		12:22	P616405	192977	WINDOW DEFINE	EPA1613_ALS	Dioxin_ALS	Tray1:1		
3		13:11	P616406	EQ1800529-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:3		
4		14:00	P616407	EQ1900003-01	MB	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		14:50	P616408	E1801138-002DL	E1801138-002DL	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		15:39	P616409	E1801138-006DL	E1801138-006DL	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		16:28	P616410	E1801138-007DL	E1801138-007DL	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		17:18	P616411	E1801138-013	E1801138-013	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		18:07	P616412	E1801138-012DL	E1801138-012DL	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		18:56	P616413	E1801138-014DL	E1801138-014DL	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		19:45	P616414	E1801138-015DL	E1801138-015DL	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		20:34	P616415	E1801138-018DL	E1801138-018DL	EPA1613_ALS	Dioxin_ALS	Tray1:12		
13		21:23	P616416	E1801138-019DL	E1801138-019DL	EPA1613_ALS	Dioxin_ALS	Tray1:13		
14		22:10	P616417	E1801138-020DL	E1801138-020DL	EPA1613_ALS	Dioxin_ALS	Tray1:14		
15		23:02	P616418	E1801139-001	E1801139-001	EPA1613_ALS	Dioxin_ALS	Tray1:15		HRMScheck 23:59
16	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2	---	---
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---
21	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:21	---	---

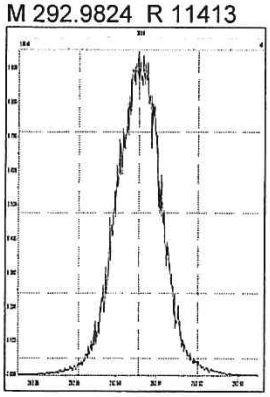
needs reinjection

01/10/19
gc

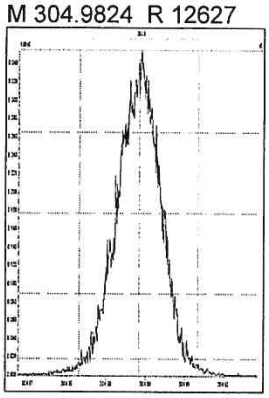
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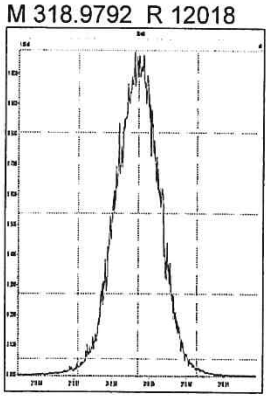
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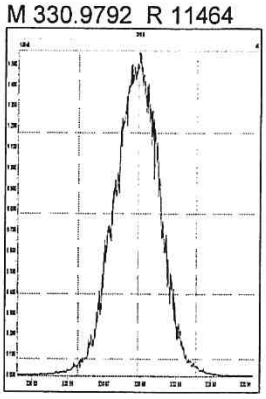
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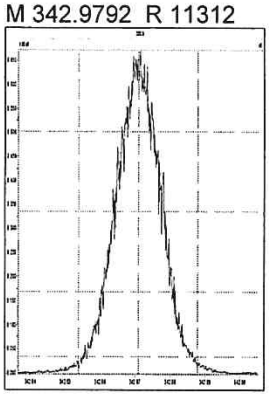
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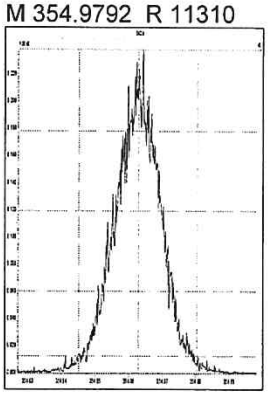
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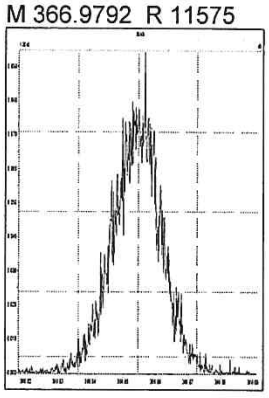
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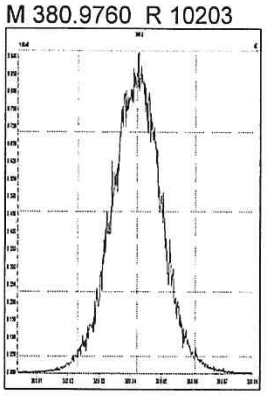
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M 366.9792 R 11575



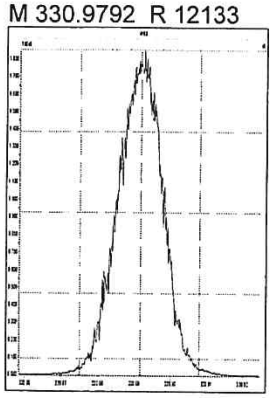
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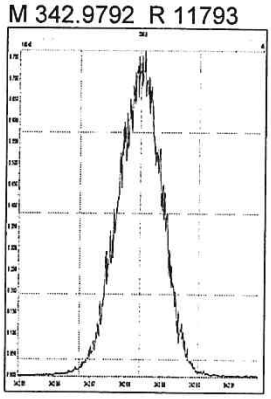
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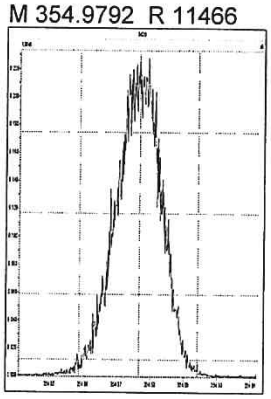
M 330.9792 R 12133



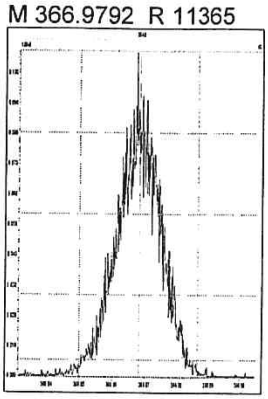
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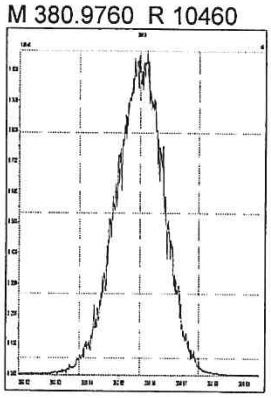
M 354.9792 R 11466



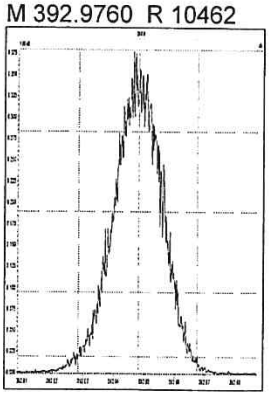
M 366.9792 R 11365



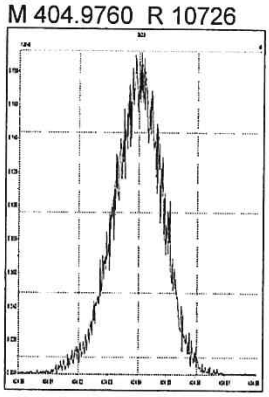
M 380.9760 R 10460



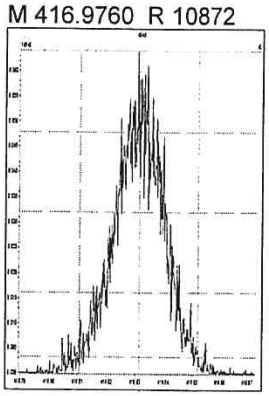
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M 404.9760 R 10726



M 416.9760 R 10872

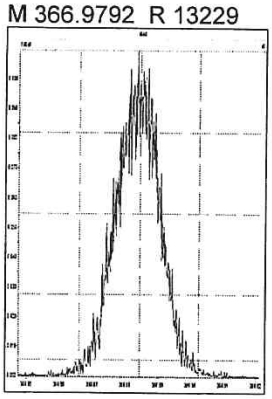


Experiment Calibration Report **MassLynx 4.1 SCN815 SCN795**

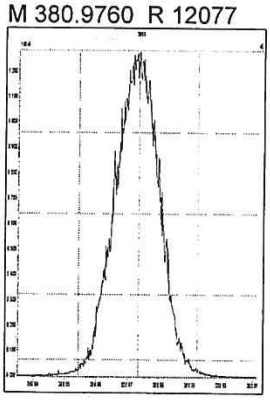
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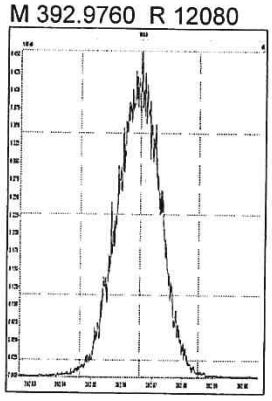
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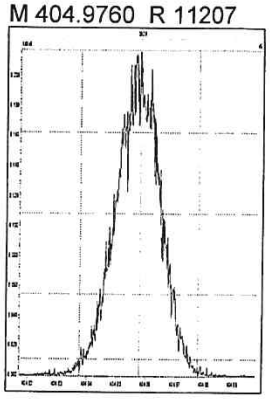
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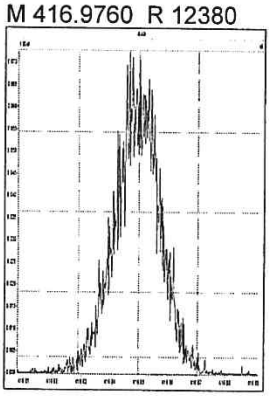
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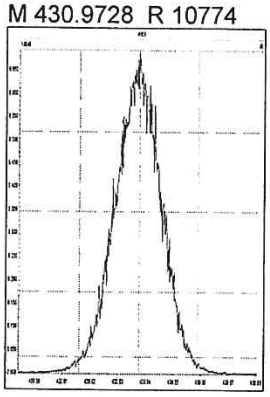
M 404.9760 R 11207



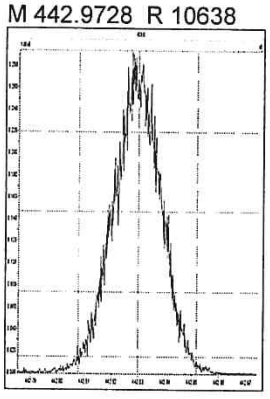
M 416.9760 R 12380



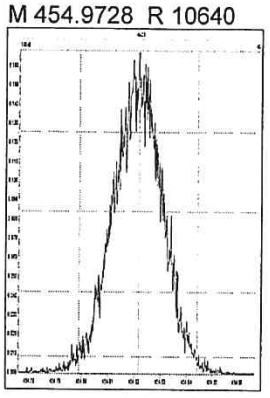
M 430.9728 R 10774



M 442.9728 R 10638



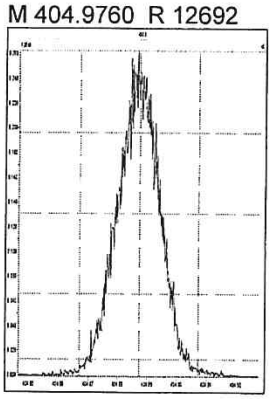
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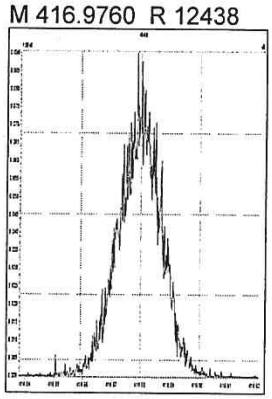
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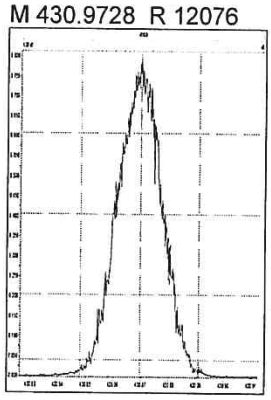
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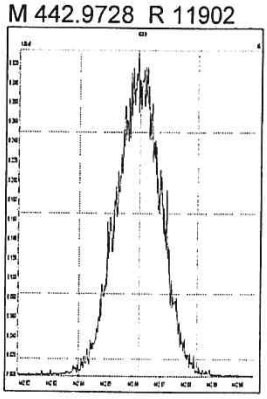
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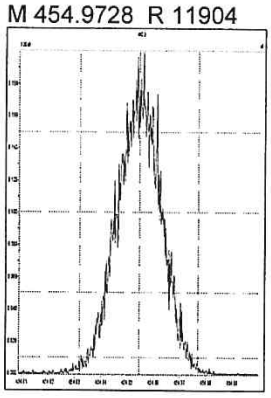
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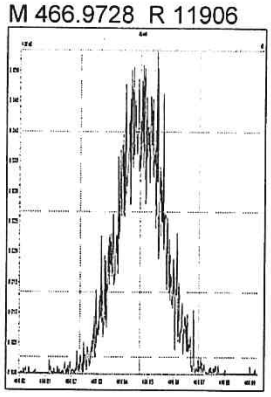
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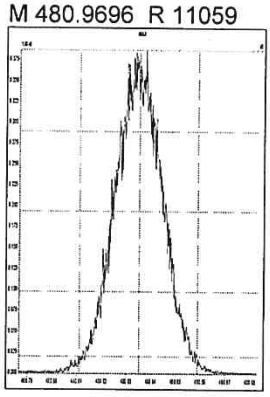
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M 466.9728 R 11906



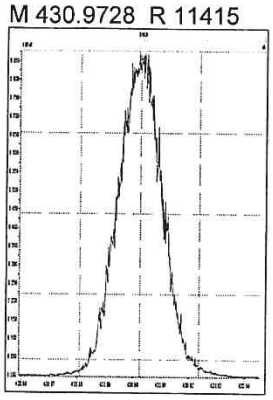
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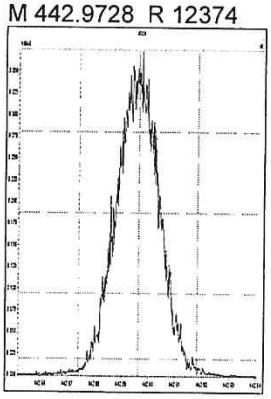
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Printed: Wednesday, January 09, 2019 11:30:50 Central Standard Time

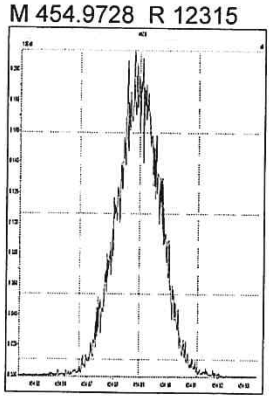
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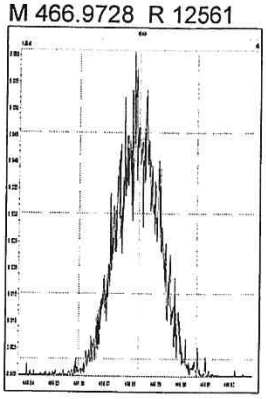
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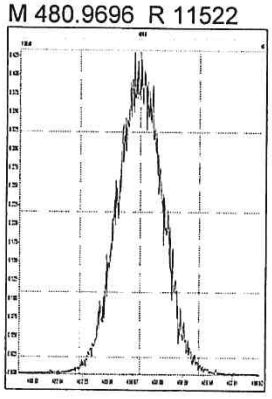
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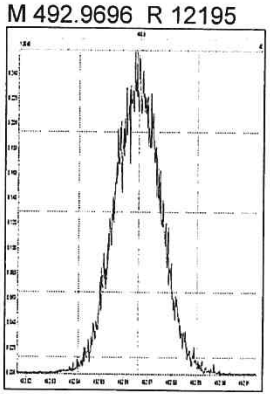
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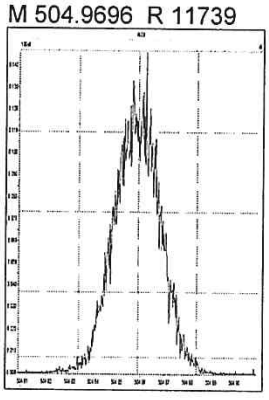
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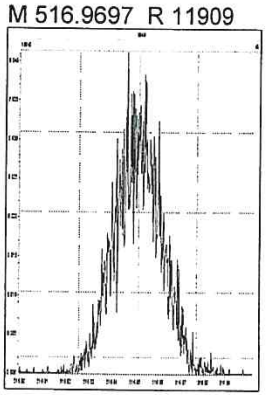
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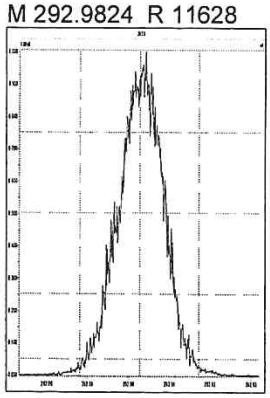
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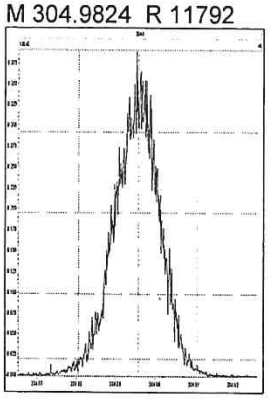
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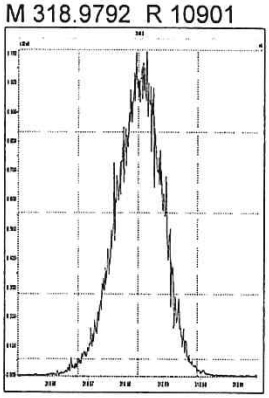
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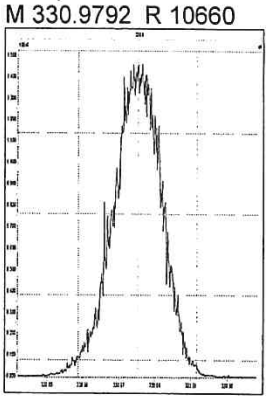
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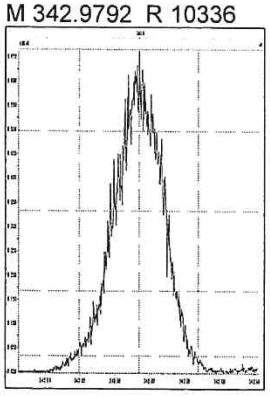
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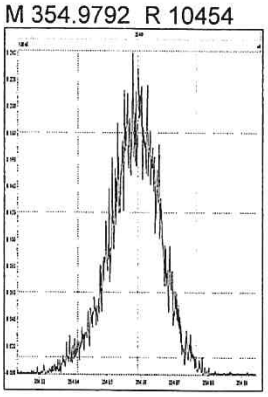
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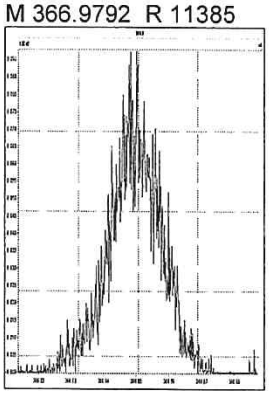
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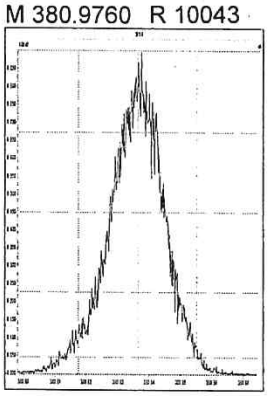
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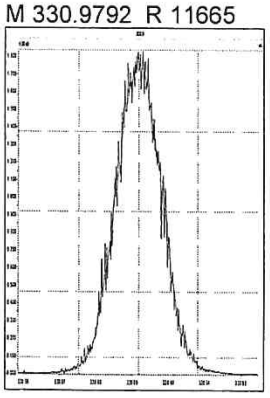
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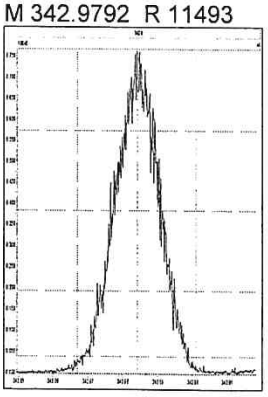
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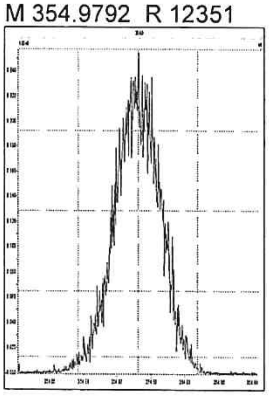
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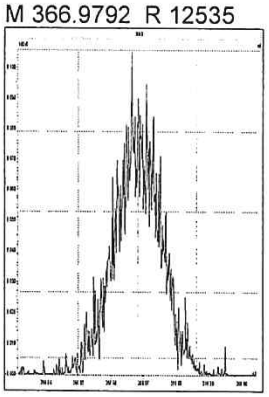
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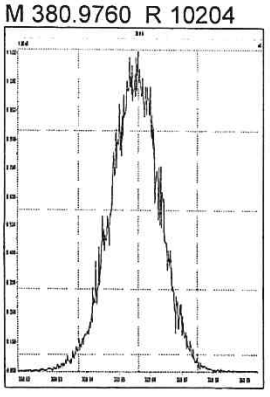
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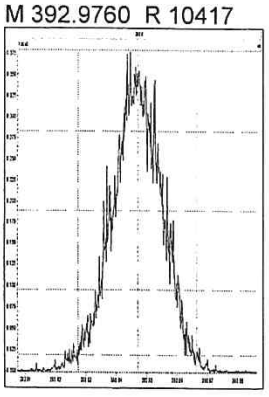
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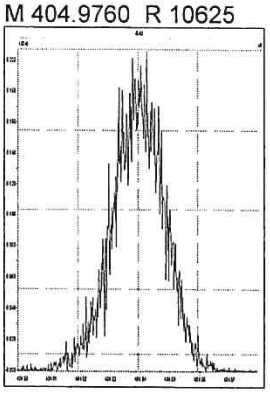
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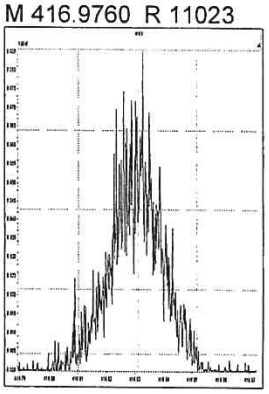
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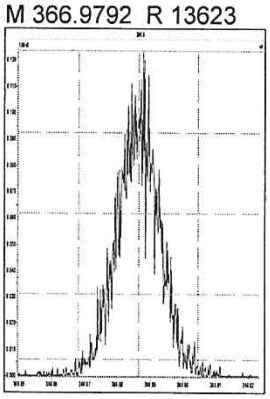
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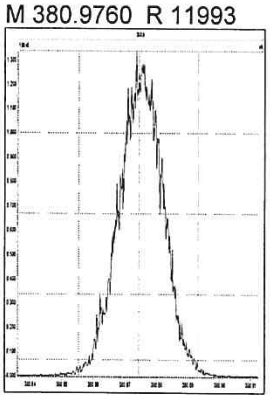
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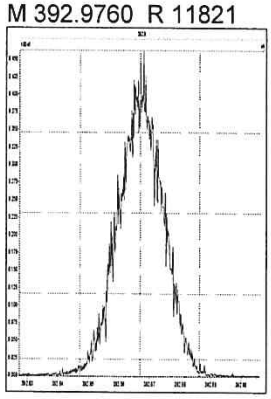
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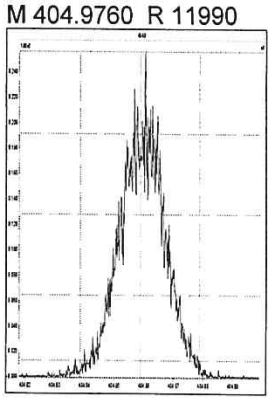
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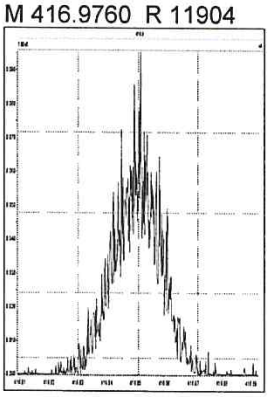
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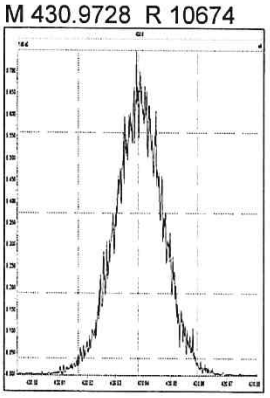
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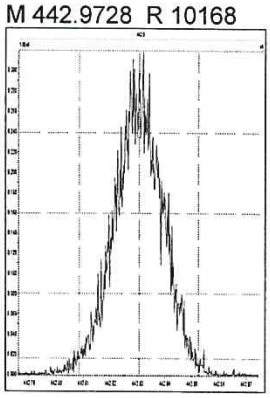
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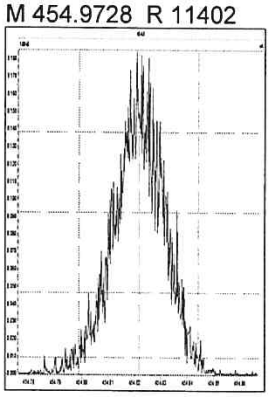
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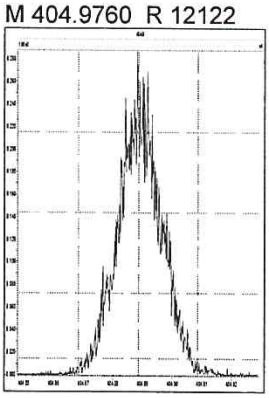
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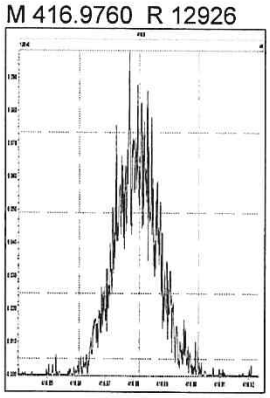
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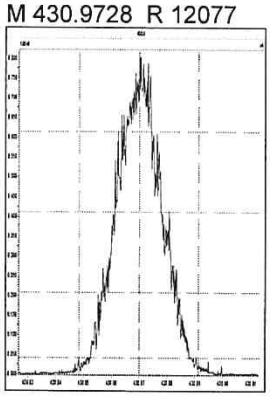
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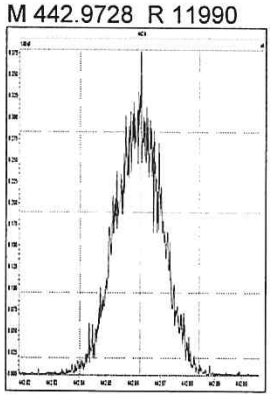
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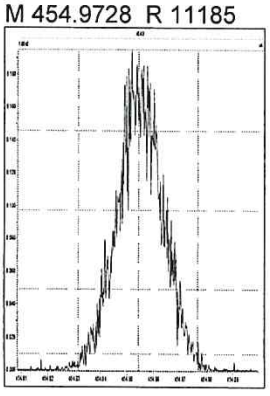
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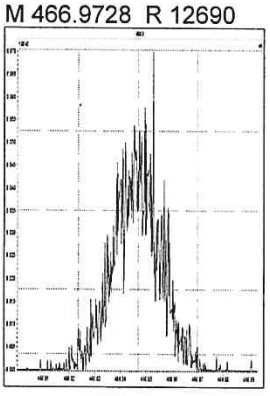
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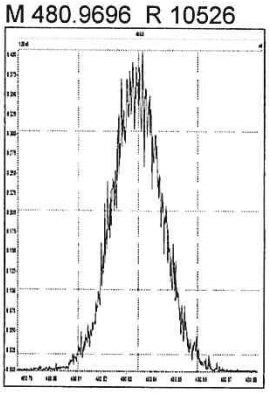
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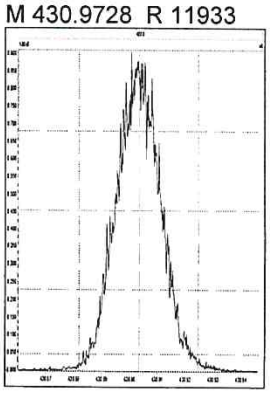
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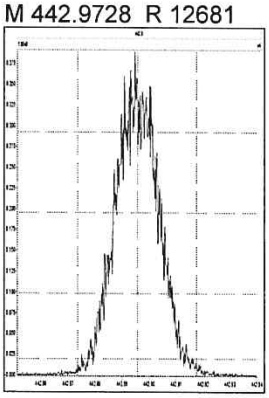
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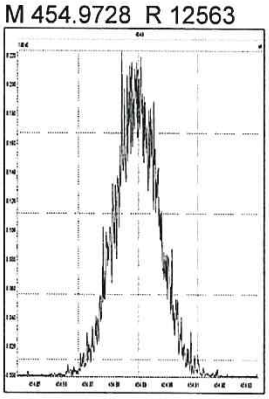
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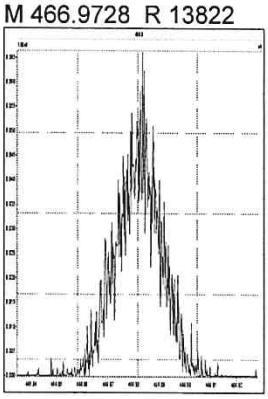
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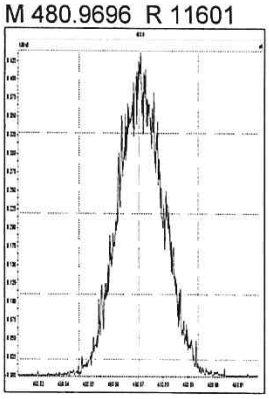
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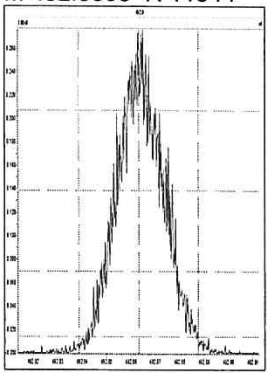
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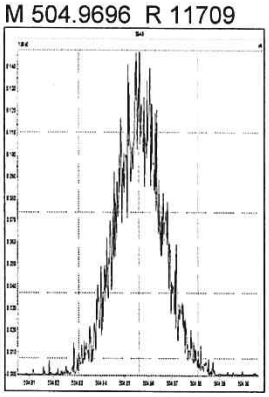
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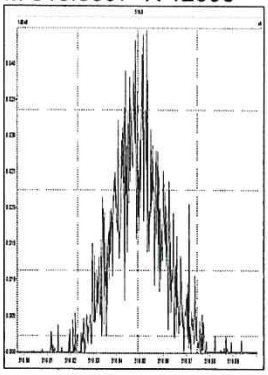
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M 504.9696 R 11709



M 516.9697 R 12698



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

Lab Name: ALS Environmental
Lab Code: ALSTX
GC Column: DB-5MSUI

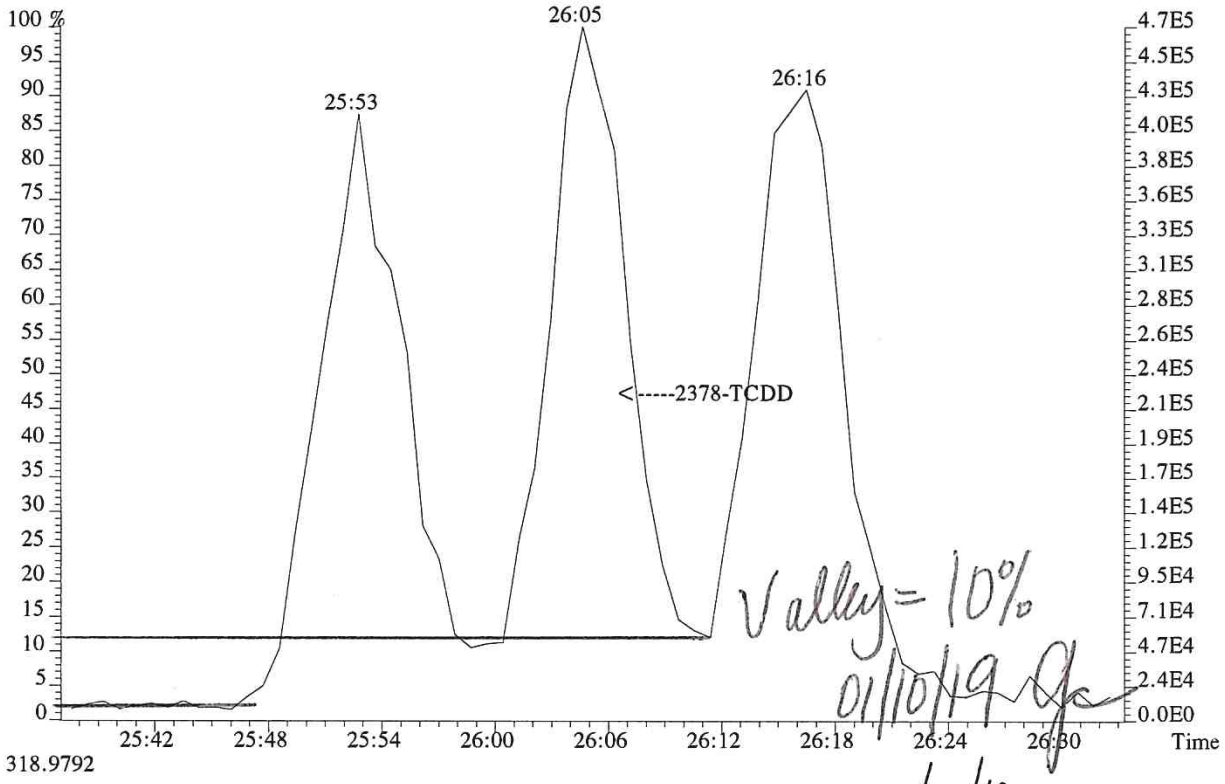
Case No.: _____ SDG No.:
ID: 0.25 (mm)

Lab File ID: P616405
Date Analyzed: 9-JAN-19
Time Analyzed: 12:22:40

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	20:48	27:34
TCDD	22:21	27:22
PeCDF	27:29	32:25
PeCDD	29:22	32:09
HxCDF	33:08	35:50
HxCDD	33:43	35:25
HpCDF	37:07	38:30
HpCDD	37:23	38:04

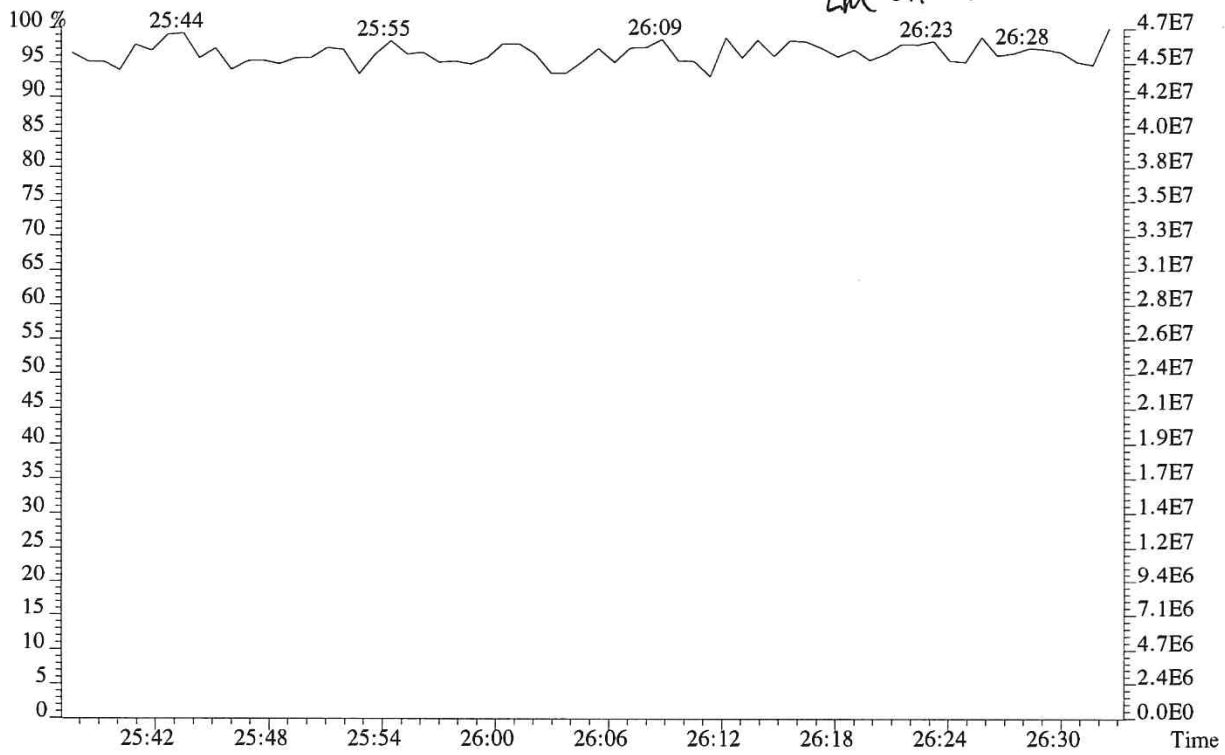
% Valley 2378-TCDD: 10 %

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Sample#1 Exp:WINDOW DEFINE
319.8965



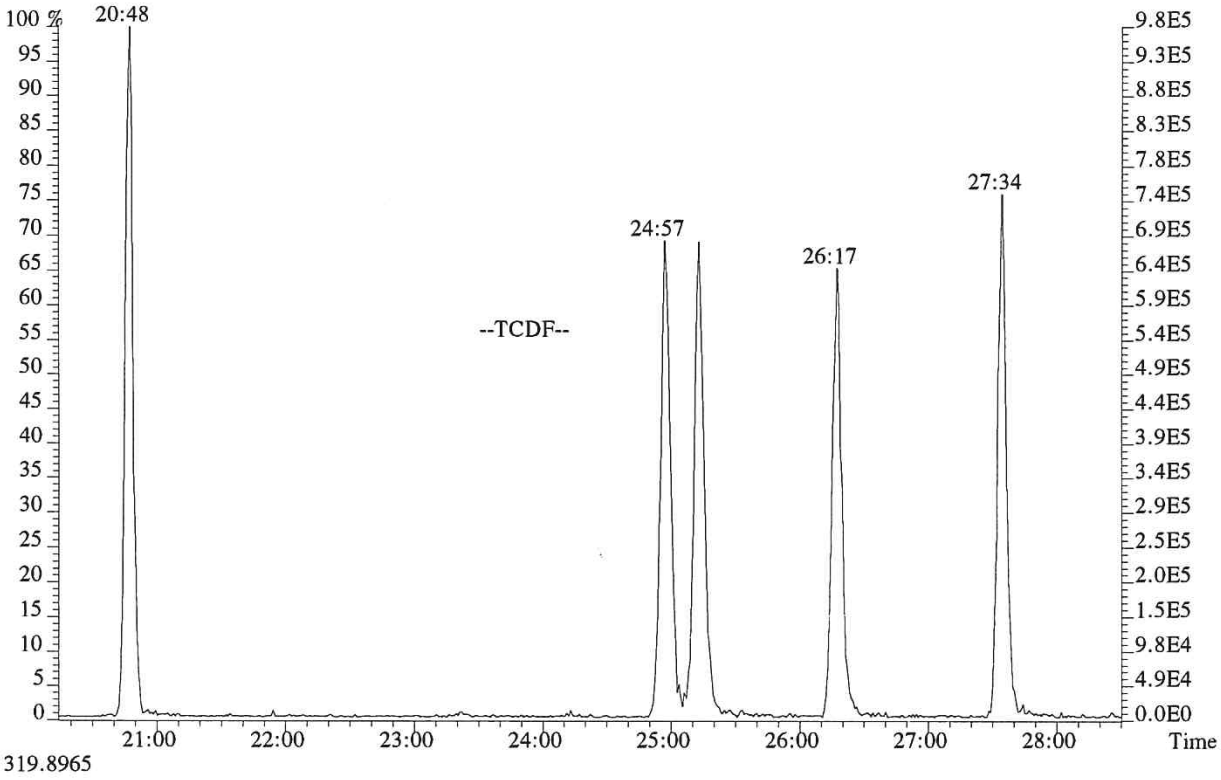
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LM 01/10/19

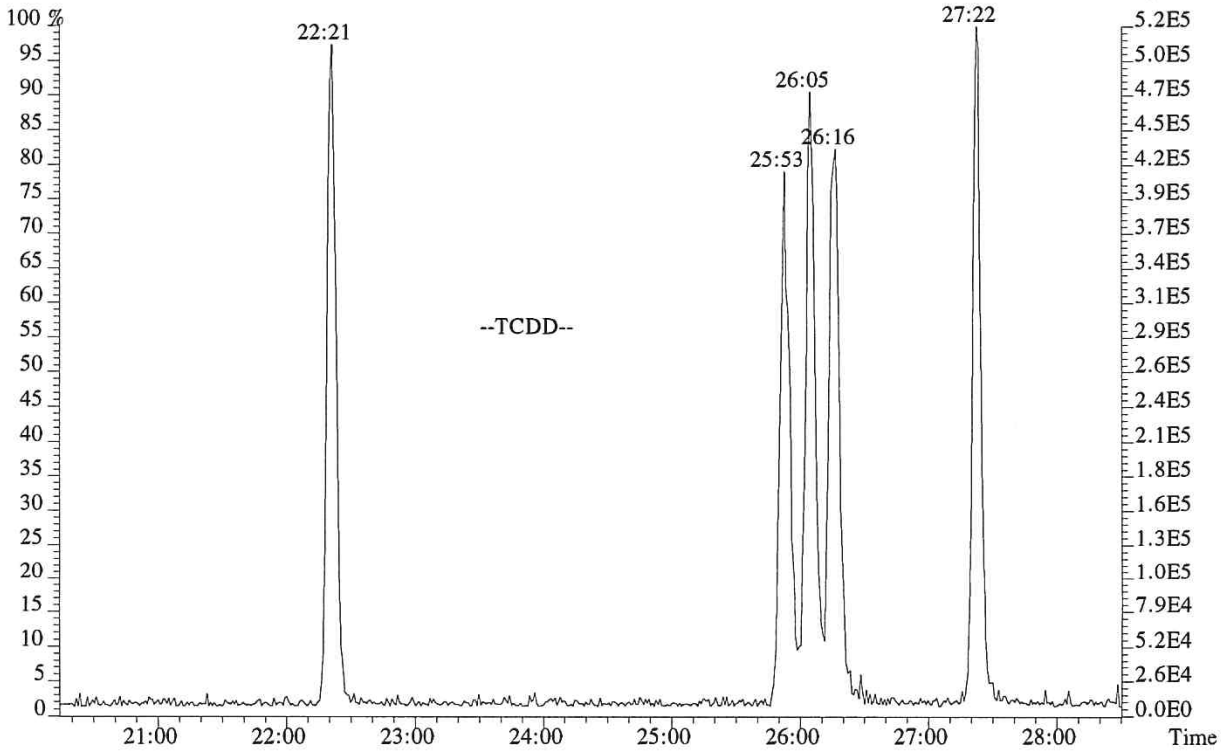


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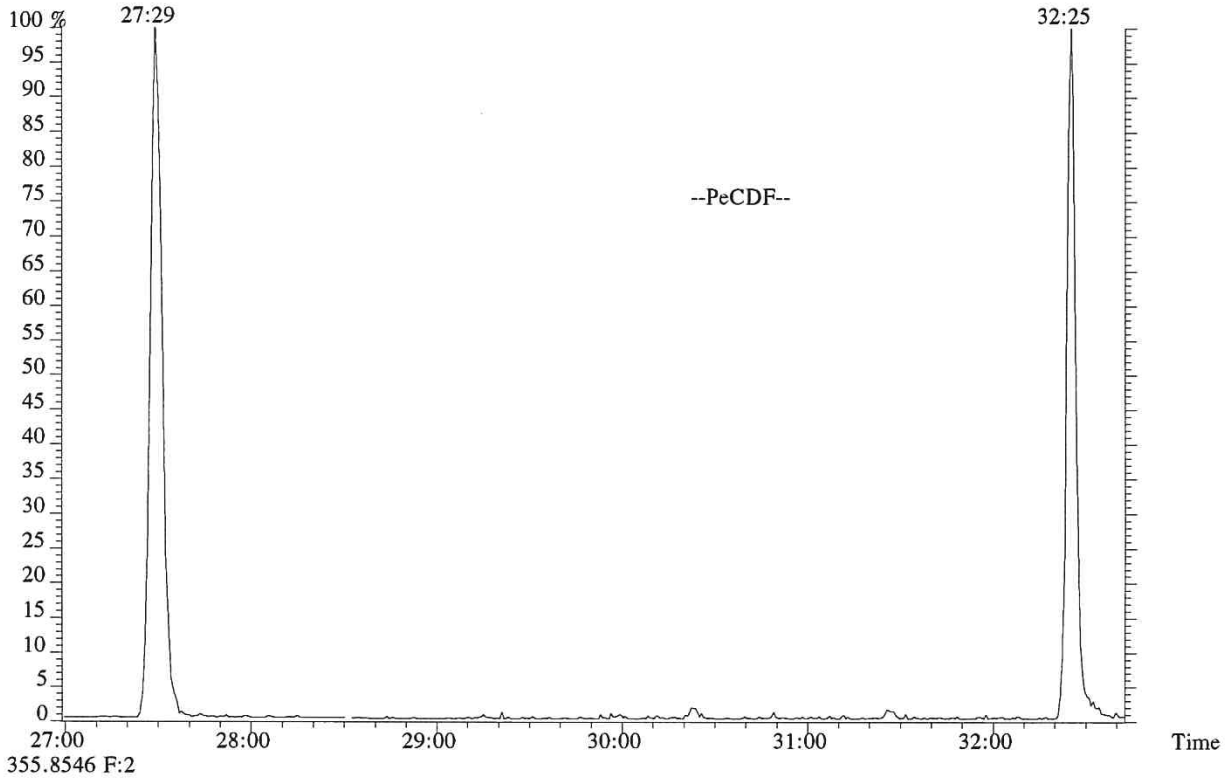


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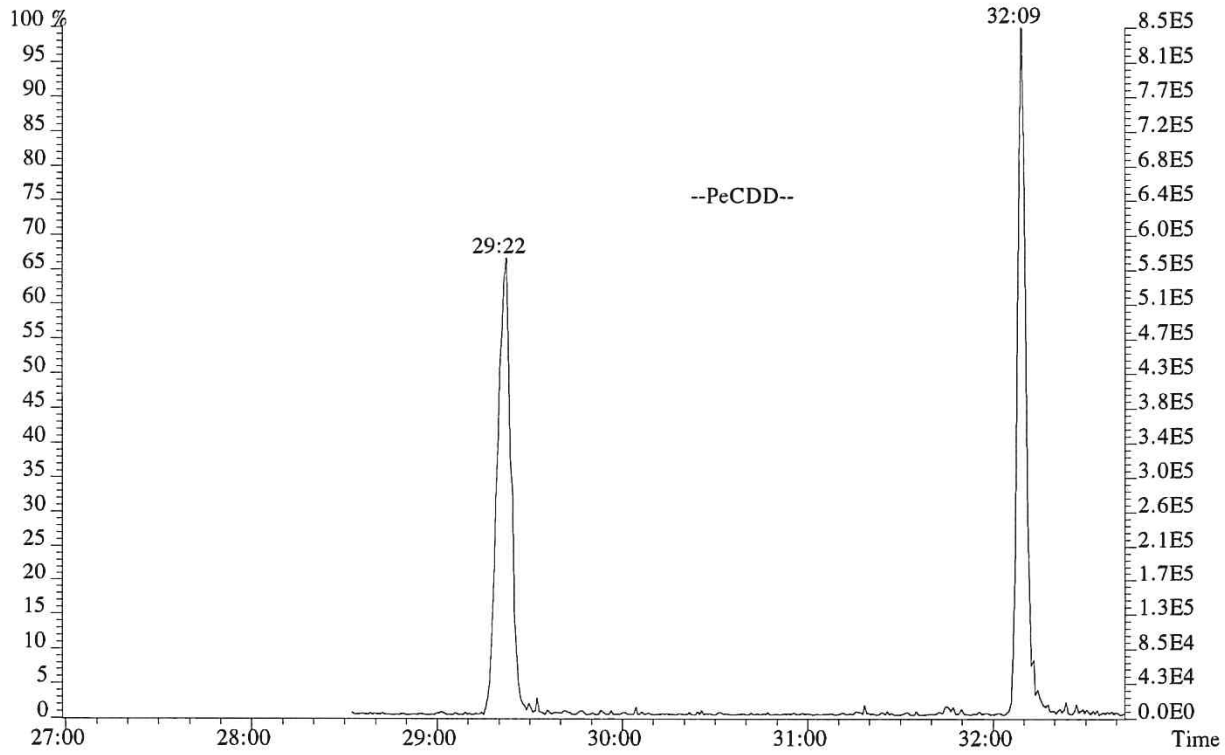


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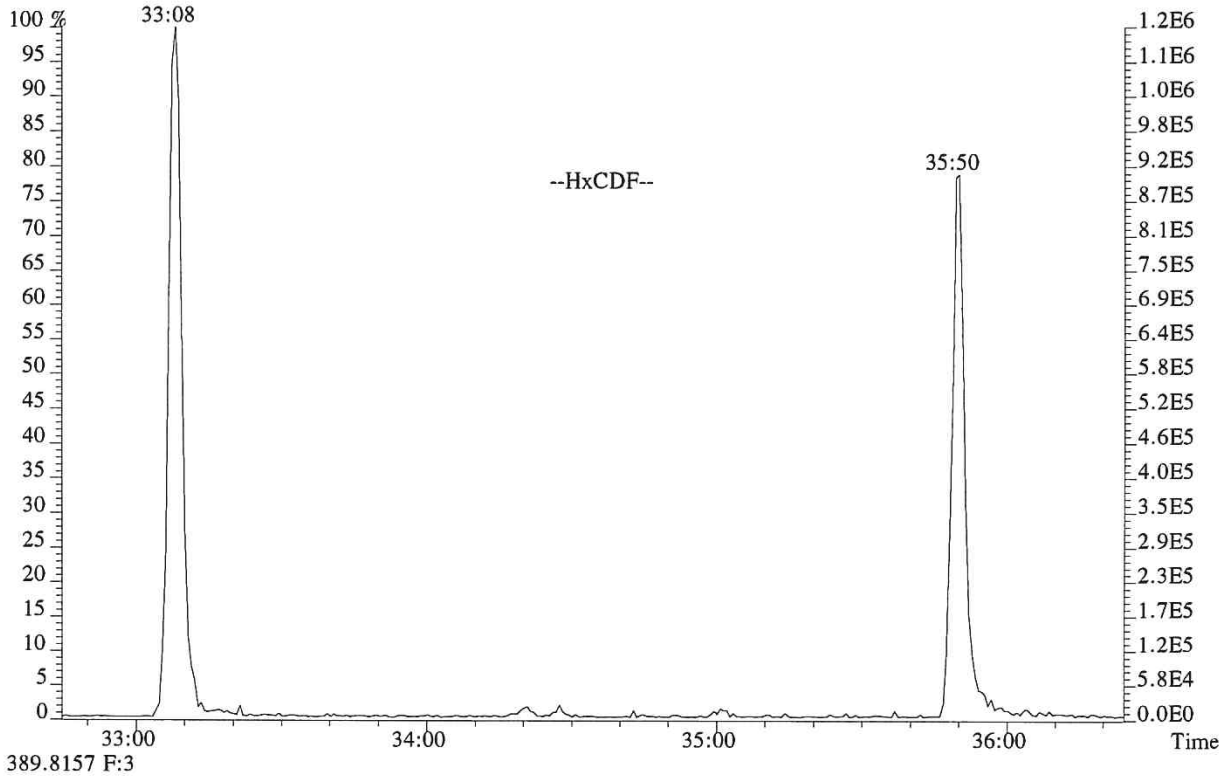
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Sample#1 Exp:WINDOW DEFINE
339.8597,339.8597 F:2



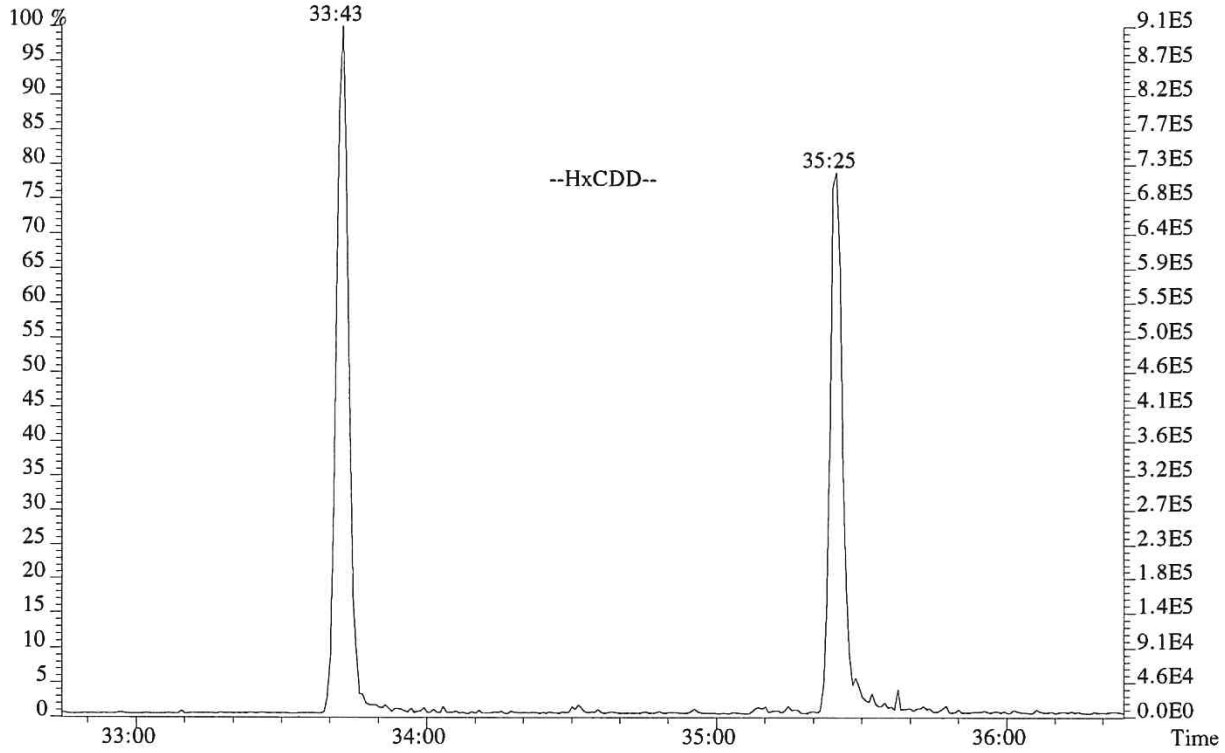
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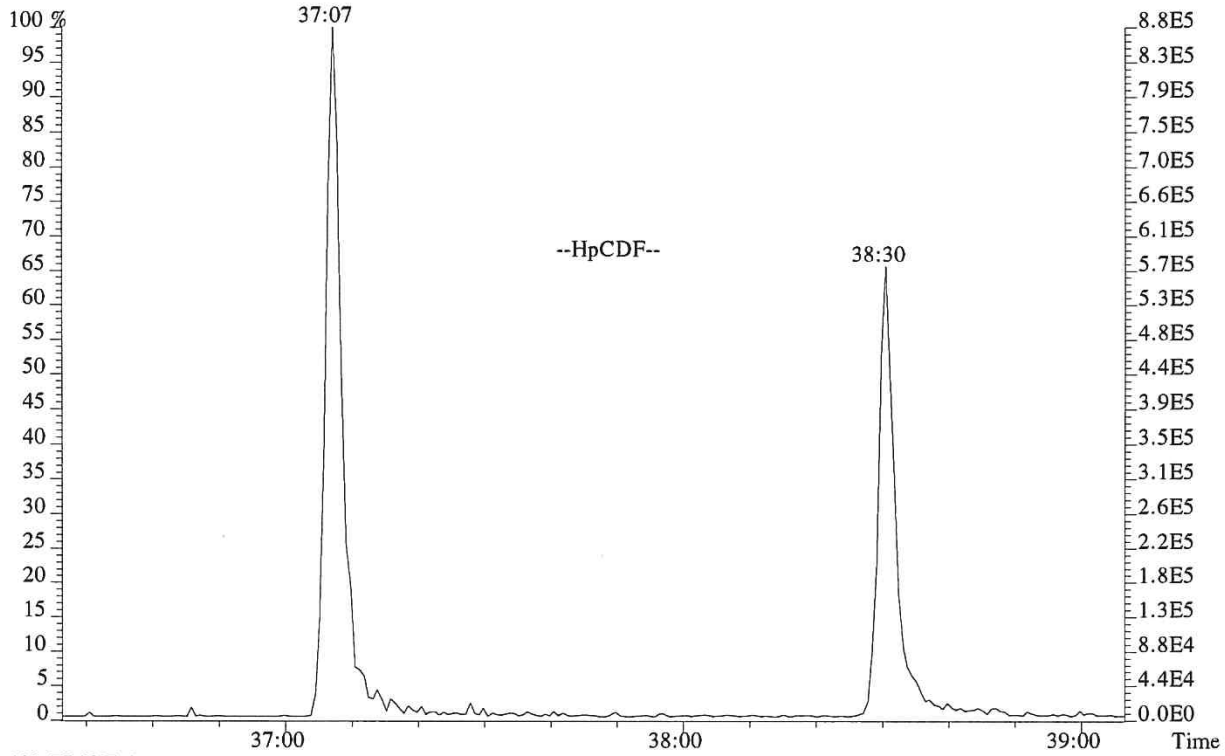
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Sample#1 Exp:WINDOW DEFINE
373.8208 F:3



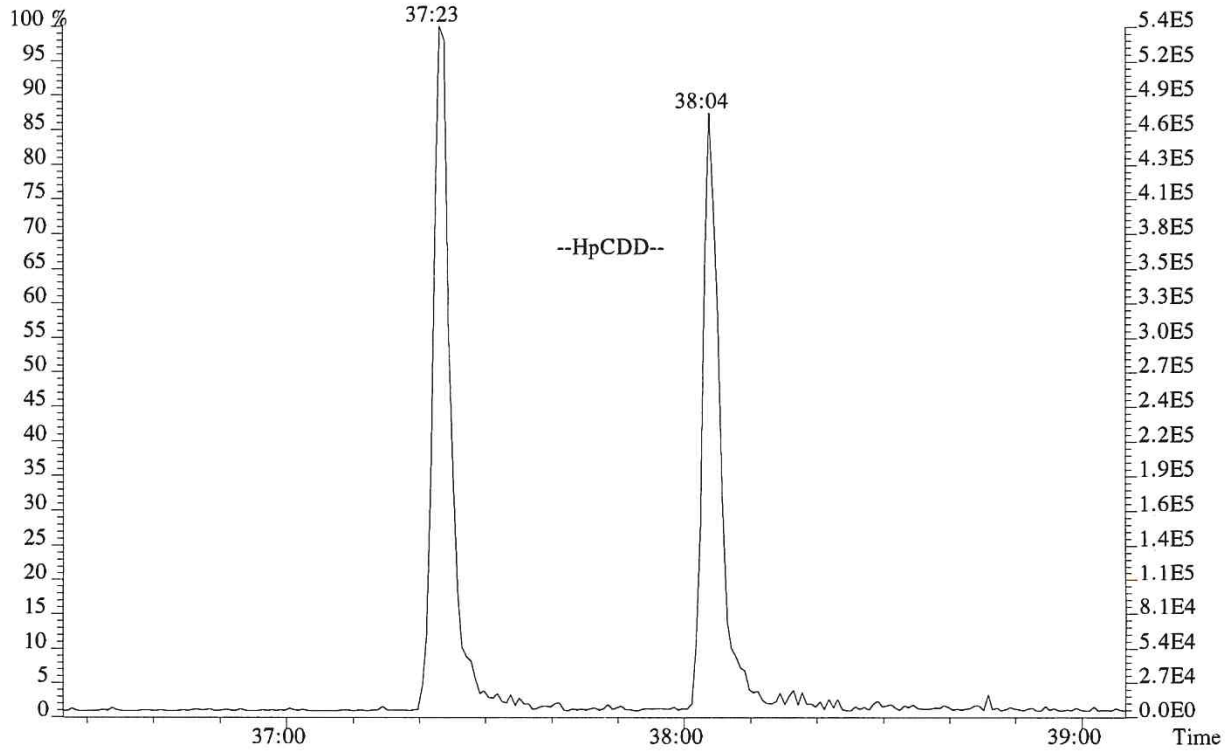
389.8157 F:3



File:P616405 #1-241 Acq: 9-JAN-2019 12:22:40 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
407.7818 F:4



423.7766 F:4



017720

USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P616404 Analysis Date: 9-JAN-19 Time: 11:32:09

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	10.6	7.8 - 12.9	6.2
1,2,3,7,8-PeCDD	M+2/M+4	1.56	1.32-1.78	53	39 - 65	6.5
1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	52	39 - 64	3.7
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	53	39 - 64	5.5
1,2,3,7,8,9-HxCDD	M+2/M+4	1.31	1.05-1.43	49	41 - 61	-1.8
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	49	43 - 58	-2.3
OCDD	M+2/M+4	0.88	0.76-1.02	101	79 - 126	1.2
2,3,7,8-TCDF	M/M+2	0.81	0.65-0.89	10.0	8.4 - 12.0	-0.5
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	49	41 - 60	-2.9
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	48	41 - 61	-4.5
1,2,3,4,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	46	45 - 56	-7.6
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	49	44 - 57	-2.1
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	48	45 - 56	-3.3
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	48	44 - 57	-4.5
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	49	45 - 55	-1.9
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	49	43 - 58	-2.8
OCDF	M+2/M+4	0.92	0.76-1.02	92	63 - 159	-8.0

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P616404 Analysis Date: 9-JAN-19 Time: 11:32:09

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	99	82 - 121	-1.4
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.58	1.32-1.78	98	62 - 160	-2.2
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	101	85 - 117	1.2
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	112	85 - 118	12.2
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	102	72 - 138	2.1
13C-OCDD	M+2/M+4	0.93	0.76-1.02	186	96 - 415	-7.0
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	105	71 - 140	4.5
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	105	76 - 130	4.7
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	104	77 - 130	4.4
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	108	76 - 131	8.3
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	116	70 - 143	15.8
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.54	0.43-0.59	99	74 - 135	-1.5
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	107	73 - 137	7.1
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.47	0.37-0.51	100	78 - 129	0.4
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	91	77 - 129	-9.5
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				10.0	7.8 - 12.7	0.0

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
194503

Run #7 Filename P616404 Samp: 1 Inj: 1 Acquired: 9-JAN-19 11:32:09
Processed: 10-JAN-19 08:31:49 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:14	5.345e+03	6.564e+03	0.81	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	30:24	4.308e+04	2.711e+04	1.59	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	31:27	3.968e+04	2.493e+04	1.59	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	34:21	3.275e+04	2.653e+04	1.23	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	34:28	3.925e+04	3.135e+04	1.25	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	35:01	3.274e+04	2.635e+04	1.24	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	35:48	2.842e+04	2.265e+04	1.25	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	2.851e+04	2.721e+04	1.05	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	38:31	2.168e+04	2.041e+04	1.06	yes	no	1.463
10	Unk	OCDF	40:49	3.063e+04	3.330e+04	0.92	yes	no	1.571
11	Unk	2,3,7,8-TCDD	26:16	3.609e+03	4.464e+03	0.81	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	31:46	2.481e+04	1.588e+04	1.56	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	35:10	2.032e+04	1.628e+04	1.25	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	35:15	2.282e+04	1.803e+04	1.27	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	35:30	2.214e+04	1.693e+04	1.31	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	1.777e+04	1.656e+04	1.07	yes	no	1.112
17	Unk	OCDD	40:38	2.426e+04	2.749e+04	0.88	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	25:13	4.927e+04	6.145e+04	0.80	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	30:23	7.703e+04	4.793e+04	1.61	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	31:26	7.535e+04	4.728e+04	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	34:20	3.122e+04	5.938e+04	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	34:27	3.866e+04	7.291e+04	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	3.312e+04	6.345e+04	0.52	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	2.826e+04	5.217e+04	0.54	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	2.372e+04	5.083e+04	0.47	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:30	1.835e+04	4.087e+04	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	26:16	3.203e+04	4.041e+04	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	31:45	5.037e+04	3.187e+04	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	35:09	3.703e+04	2.885e+04	1.28	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	4.097e+04	3.211e+04	1.28	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:04	3.257e+04	3.058e+04	1.06	yes	no	0.857
32	IS	13C-OCDD	40:38	4.272e+04	4.570e+04	0.93	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	25:27	3.332e+04	4.146e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:29	3.999e+04	3.214e+04	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:16	8.119e+03				no	1.086

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Signal/Noise Height Ratio Summary

CLIENT ID.
194503

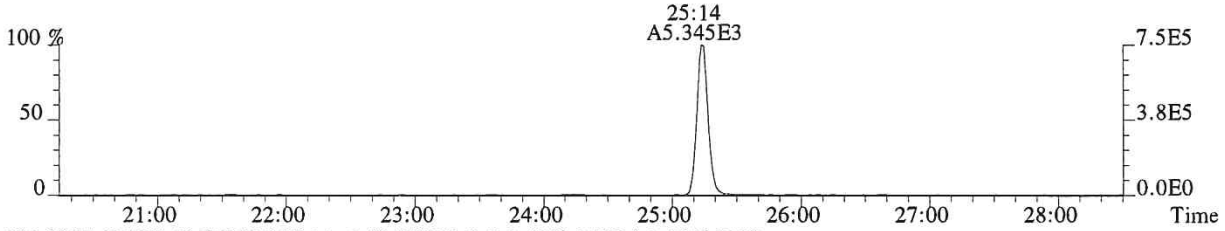
Run #7 Filename P616404 Samp: 1 Inj: 1 Acquired: 9-JAN-19 11:32:09
Processed: 10-JAN-19 08:31:49 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	7.54e+05	9.88e+02	7.6e+02	9.37e+05	3.50e+03	2.7e+02
2	1,2,3,7,8-PeCDF	7.24e+06	4.80e+02	1.5e+04	4.56e+06	2.15e+03	2.1e+03
3	2,3,4,7,8-PeCDF	7.22e+06	4.80e+02	1.5e+04	4.53e+06	2.15e+03	2.1e+03
4	1,2,3,4,7,8-HxCDF	6.61e+06	6.92e+02	9.5e+03	5.31e+06	6.56e+02	8.1e+03
5	1,2,3,6,7,8-HxCDF	7.56e+06	6.92e+02	1.1e+04	5.97e+06	6.56e+02	9.1e+03
6	2,3,4,6,7,8-HxCDF	6.57e+06	6.92e+02	9.5e+03	5.26e+06	6.56e+02	8.0e+03
7	1,2,3,7,8,9-HxCDF	5.21e+06	6.92e+02	7.5e+03	4.22e+06	6.56e+02	6.4e+03
8	1,2,3,4,6,7,8-HpCDF	5.68e+06	5.58e+03	1.0e+03	5.44e+06	4.91e+03	1.1e+03
9	1,2,3,4,7,8,9-HpCDF	3.84e+06	5.58e+03	6.9e+02	3.66e+06	4.91e+03	7.4e+02
10	OCDF	4.58e+06	3.28e+02	1.4e+04	4.96e+06	1.68e+03	3.0e+03
11	2,3,7,8-TCDD	5.18e+05	2.74e+03	1.9e+02	6.81e+05	1.79e+03	3.8e+02
12	1,2,3,7,8-PeCDD	4.47e+06	1.30e+03	3.5e+03	2.91e+06	2.48e+02	1.2e+04
13	1,2,3,4,7,8-HxCDD	4.43e+06	5.20e+02	8.5e+03	3.50e+06	5.96e+02	5.9e+03
14	1,2,3,6,7,8-HxCDD	4.21e+06	5.20e+02	8.1e+03	3.34e+06	5.96e+02	5.6e+03
15	1,2,3,7,8,9-HxCDD	3.96e+06	5.20e+02	7.6e+03	3.12e+06	5.96e+02	5.2e+03
16	1,2,3,4,6,7,8-HpCDD	3.30e+06	3.72e+02	8.9e+03	3.11e+06	3.80e+02	8.2e+03
17	OCDD	3.64e+06	2.08e+02	1.8e+04	4.10e+06	2.24e+02	1.8e+04
18	13C-2,3,7,8-TCDF	6.95e+06	1.15e+04	6.1e+02	8.65e+06	8.21e+03	1.1e+03
19	13C-1,2,3,7,8-PeCDF	1.29e+07	5.16e+02	2.5e+04	7.98e+06	2.84e+02	2.8e+04
20	13C-2,3,4,7,8-PeCDF	1.38e+07	5.16e+02	2.7e+04	8.52e+06	2.84e+02	3.0e+04
21	13C-1,2,3,4,7,8-HxCDF	6.33e+06	8.48e+02	7.5e+03	1.21e+07	1.25e+03	9.6e+03
22	13C-1,2,3,6,7,8-HxCDF	7.47e+06	8.48e+02	8.8e+03	1.40e+07	1.25e+03	1.1e+04
23	13C-2,3,4,6,7,8-HxCDF	6.52e+06	8.48e+02	7.7e+03	1.25e+07	1.25e+03	1.0e+04
24	13C-1,2,3,7,8,9-HxCDF	5.10e+06	8.48e+02	6.0e+03	9.56e+06	1.25e+03	7.6e+03
25	13C-1,2,3,4,6,7,8-HpCDF	4.72e+06	5.06e+03	9.3e+02	1.01e+07	4.25e+03	2.4e+03
26	13C-1,2,3,4,7,8,9-HpCDF	3.37e+06	5.06e+03	6.6e+02	7.36e+06	4.25e+03	1.7e+03
27	13C-2,3,7,8-TCDD	4.77e+06	9.80e+03	4.9e+02	6.01e+06	3.01e+03	2.0e+03
28	13C-1,2,3,7,8-PeCDD	8.92e+06	1.05e+03	8.5e+03	5.66e+06	1.18e+03	4.8e+03
29	13C-1,2,3,4,7,8-HxCDD	8.06e+06	1.29e+03	6.3e+03	6.26e+06	5.72e+02	1.1e+04
30	13C-1,2,3,6,7,8-HxCDD	7.58e+06	1.29e+03	5.9e+03	6.02e+06	5.72e+02	1.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	6.17e+06	7.68e+02	8.0e+03	5.77e+06	3.84e+02	1.5e+04
32	13C-OCDD	6.20e+06	1.07e+03	5.8e+03	6.74e+06	2.00e+02	3.4e+04
33	13C-1,2,3,4-TCDD	4.73e+06	9.80e+03	4.8e+02	5.94e+06	3.01e+03	2.0e+03
34	13C-1,2,3,7,8,9-HxCDD	7.23e+06	1.29e+03	5.6e+03	5.77e+06	5.72e+02	1.0e+04
35	37Cl-2,3,7,8-TCDD	1.22e+06	1.40e+03	8.7e+02			

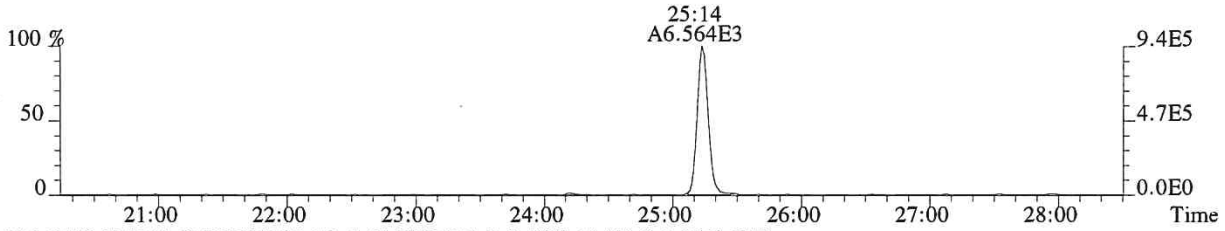
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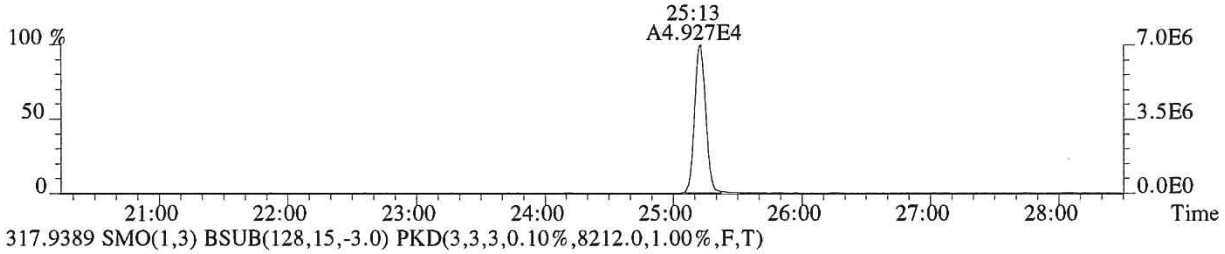
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Sample#1 Exp:CS3
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,988.0,1.00%,F,T)



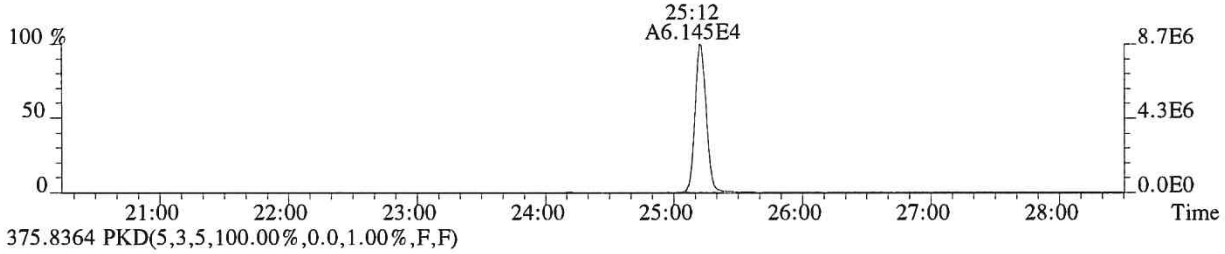
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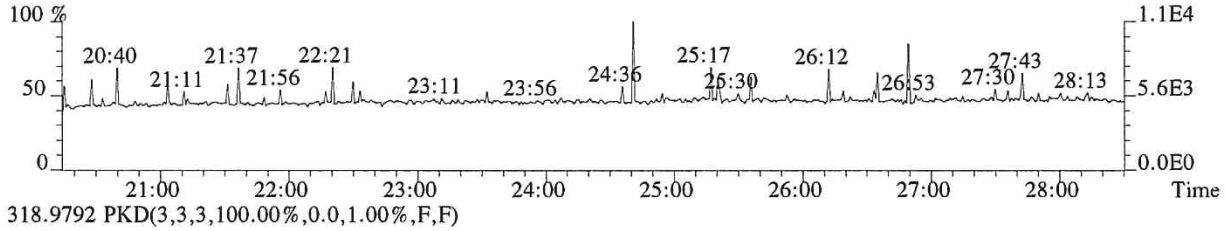
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11452.0,1.00%,F,T)



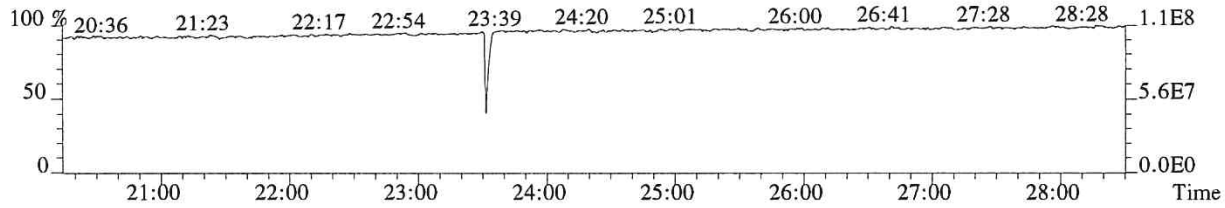
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8212.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

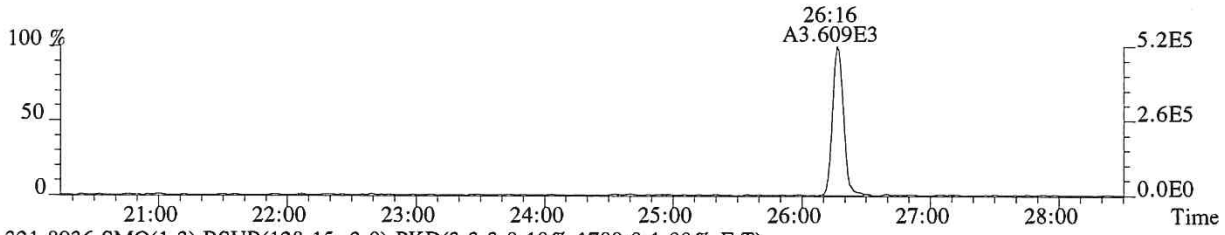


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

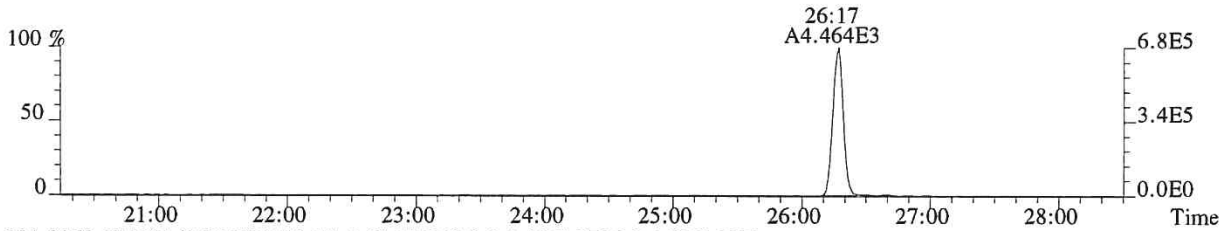


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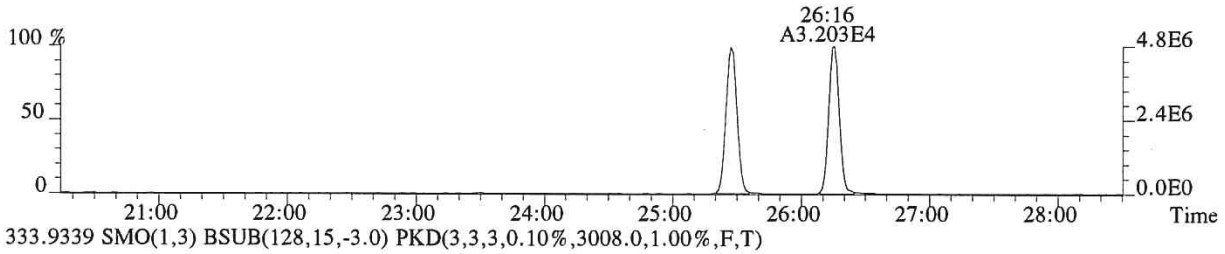
File:P616404 #1-587 Acq: 9-JAN-2019 11:32:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2736.0,1.00%,F,T)



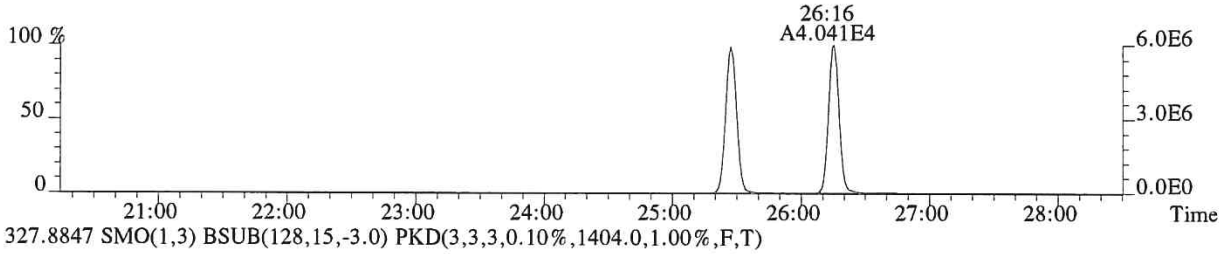
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1788.0,1.00%,F,T)



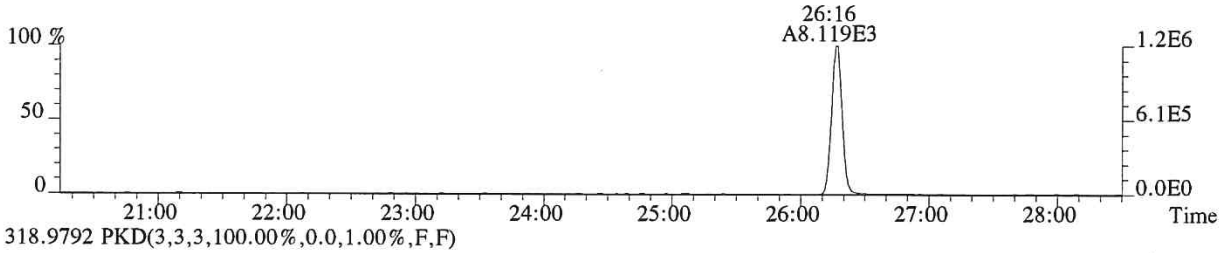
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9796.0,1.00%,F,T)



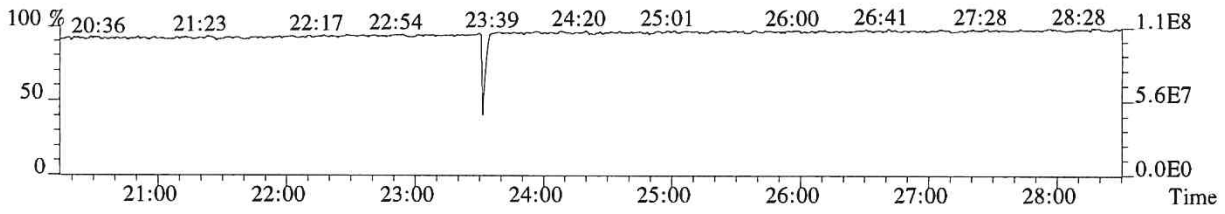
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3008.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1404.0,1.00%,F,T)

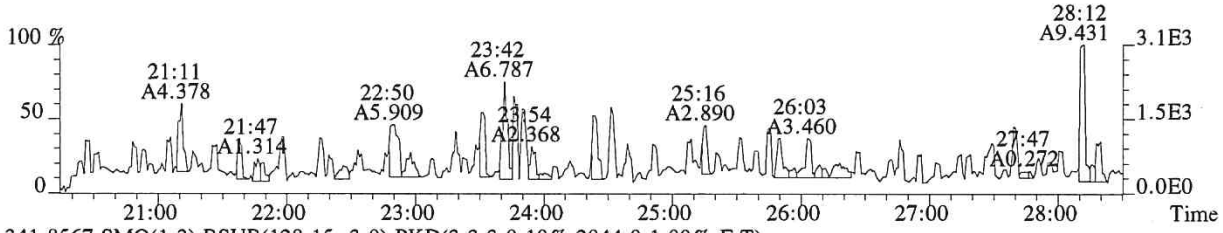


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

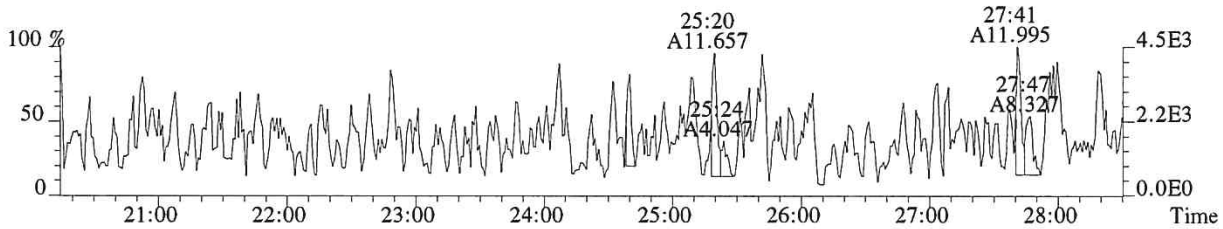


017726

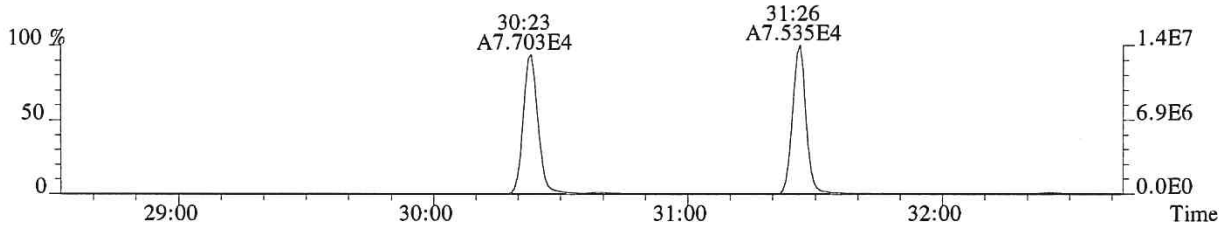
File:P616404 #1-587 Acq: 9-JAN-2019 11:32:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,612.0,1.00%,F,T)



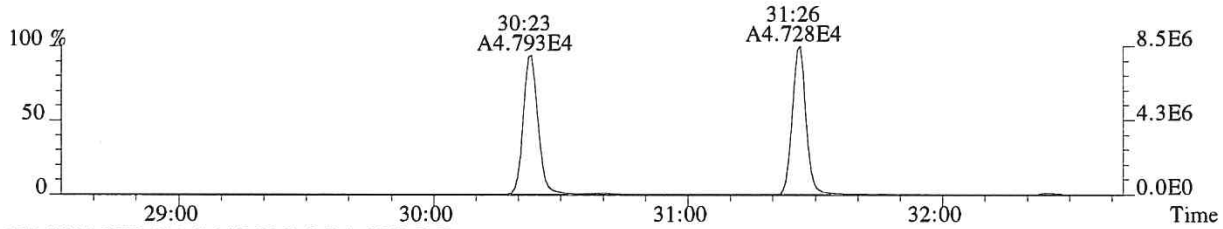
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2044.0,1.00%,F,T)



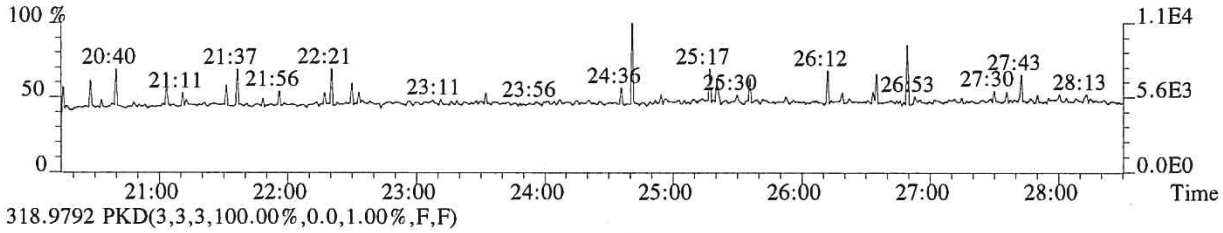
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,516.0,1.00%,F,T)



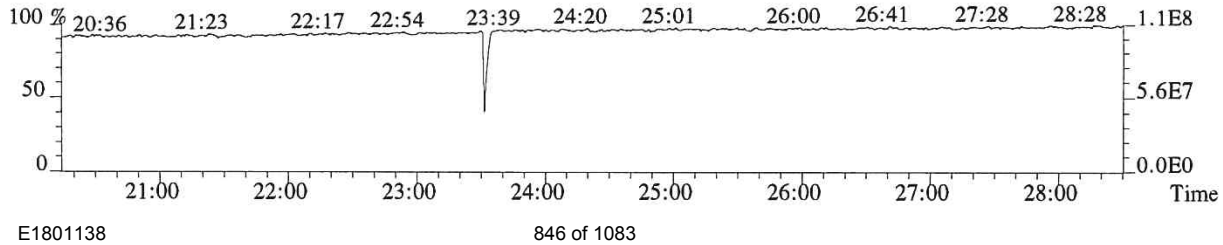
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,284.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

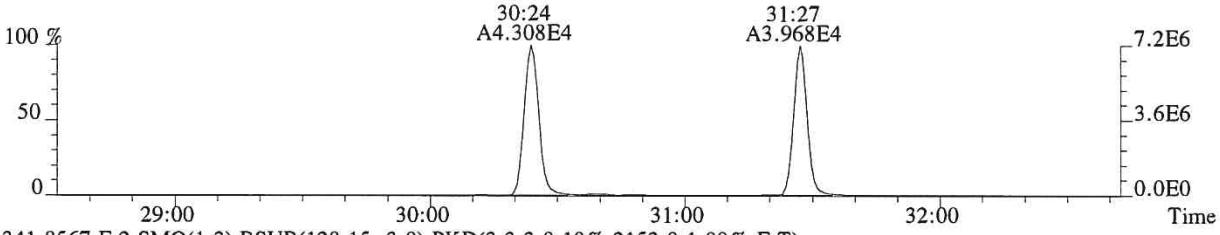


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

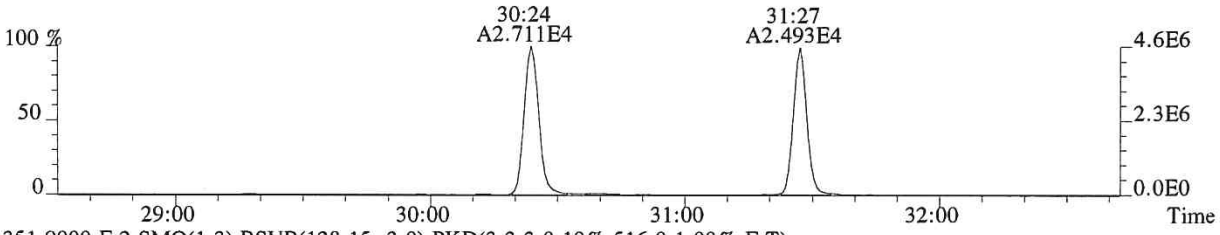


017727

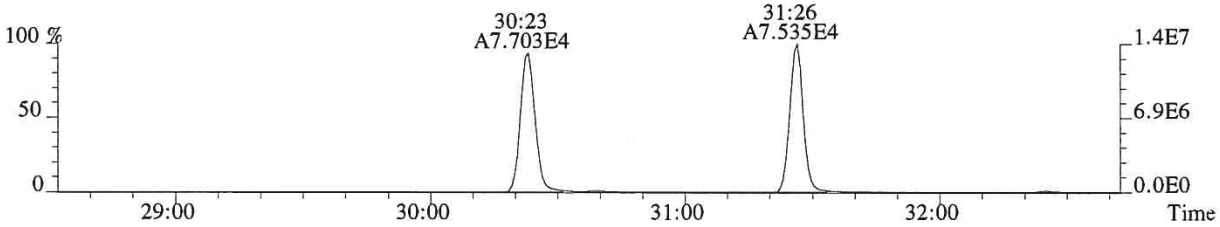
File:P616404 #1-376 Acq: 9-JAN-2019 11:32:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,480.0,1.00%,F,T)



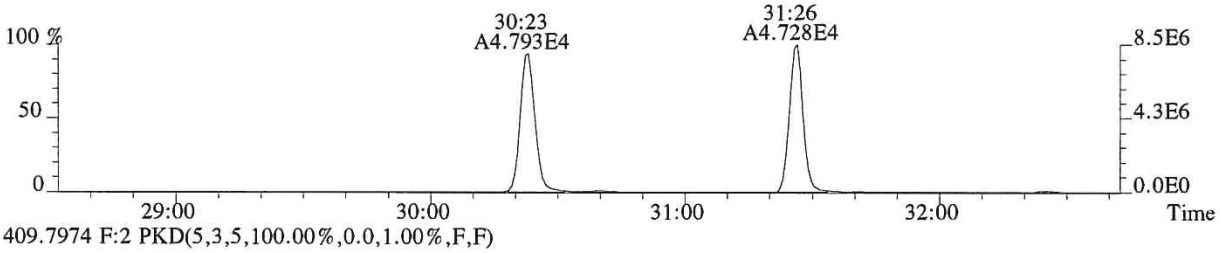
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2152.0,1.00%,F,T)



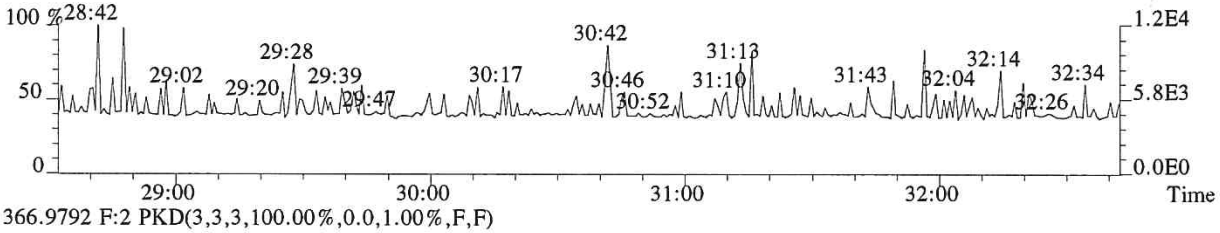
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,516.0,1.00%,F,T)



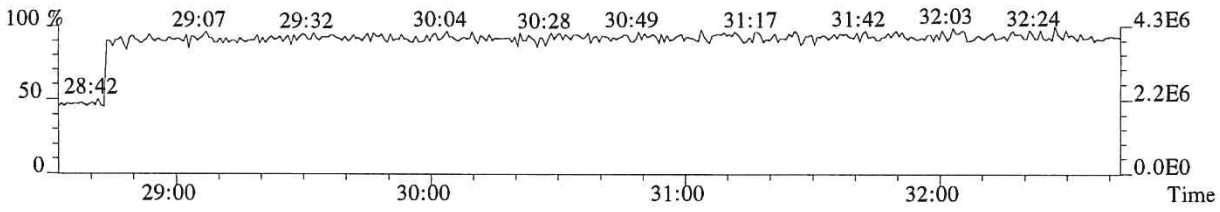
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,284.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

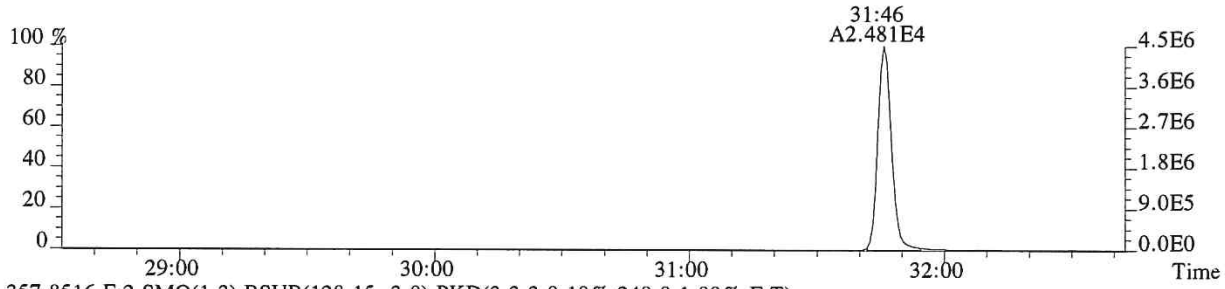


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

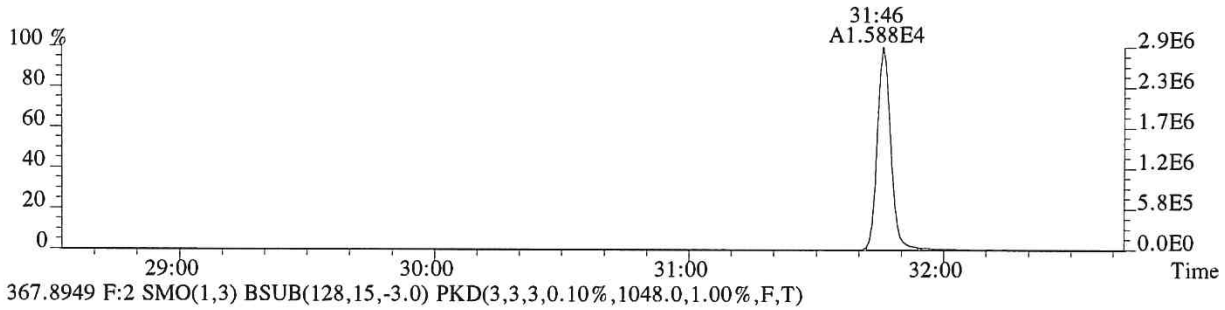


017728

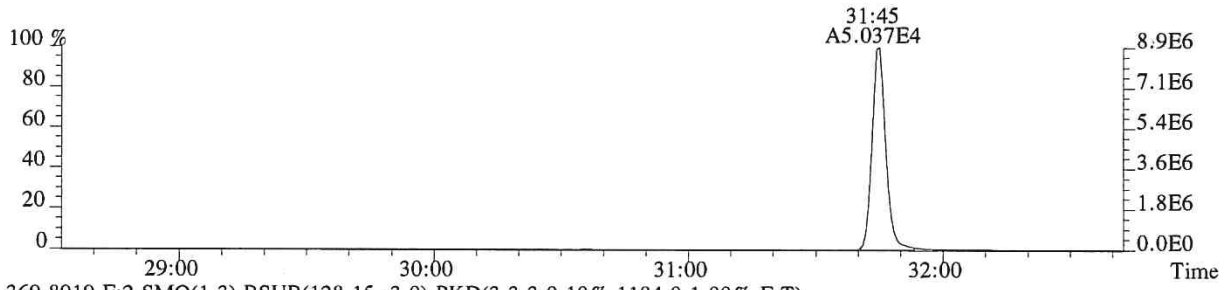
File:P616404 #1-376 Acq: 9-JAN-2019 11:32:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1296.0,1.00%,F,T)



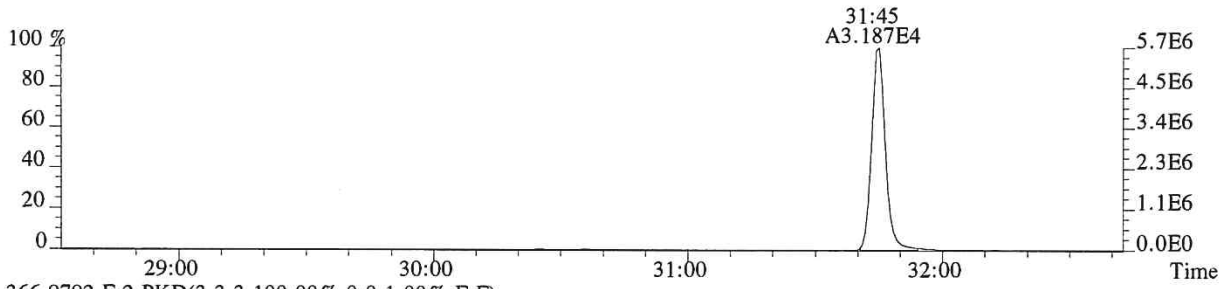
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,248.0,1.00%,F,T)



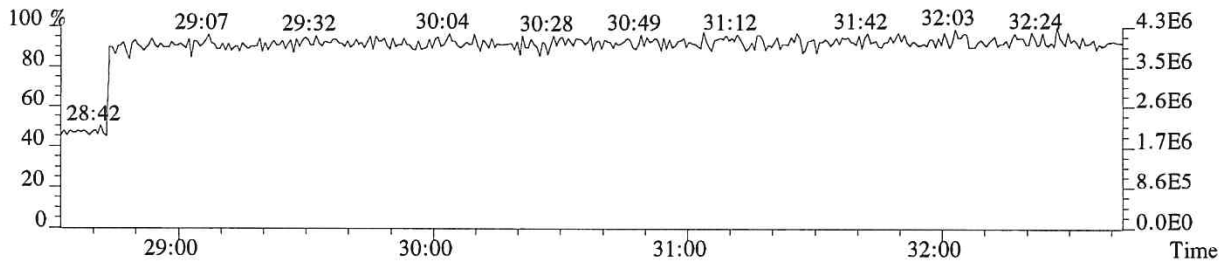
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1048.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1184.0,1.00%,F,T)



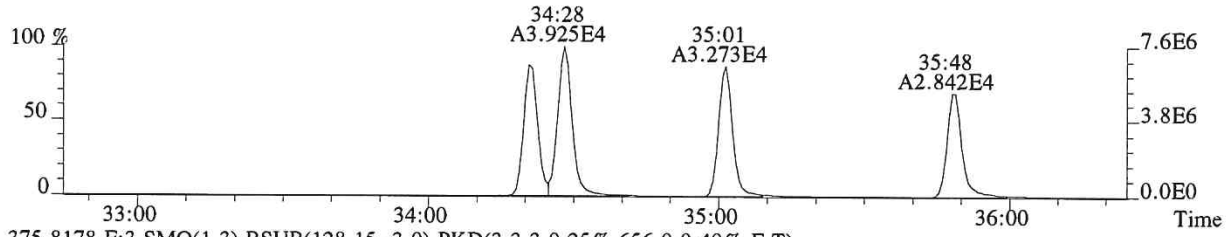
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



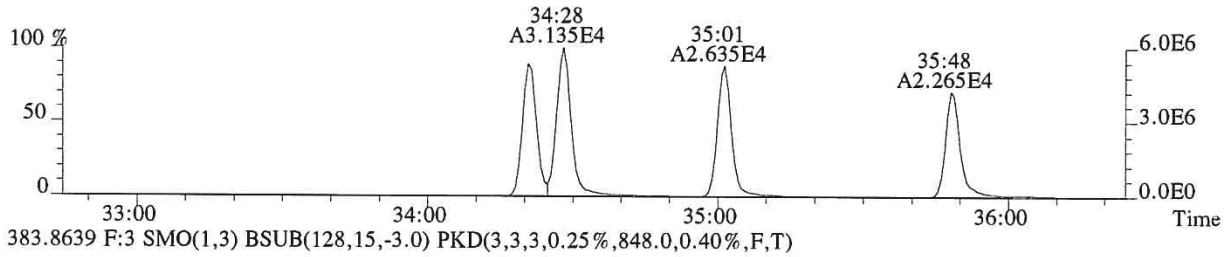
017729

File:P616404 #1-330 Acq: 9-JAN-2019 11:32:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3

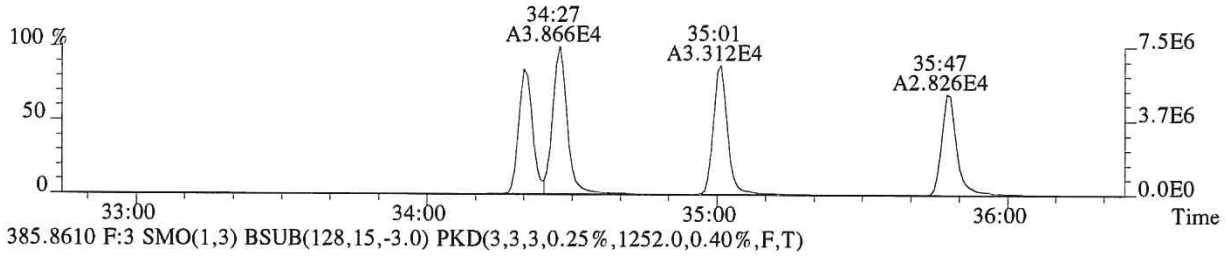
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,692.0,0.40%,F,T)



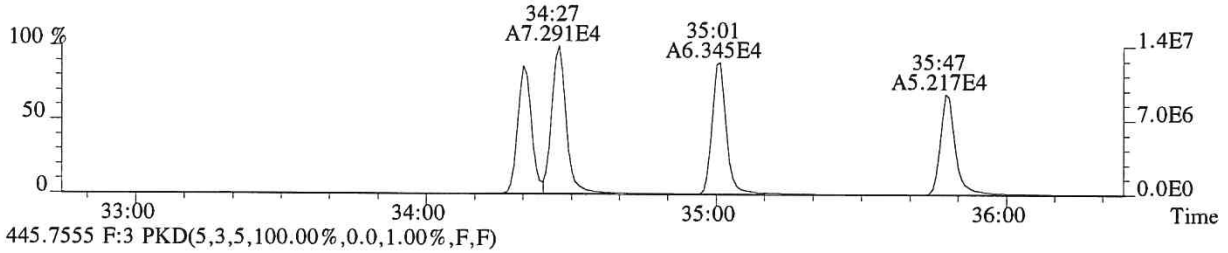
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,656.0,0.40%,F,T)



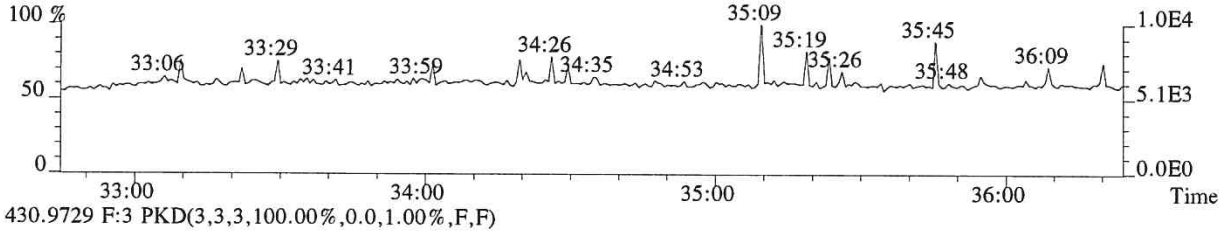
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,848.0,0.40%,F,T)



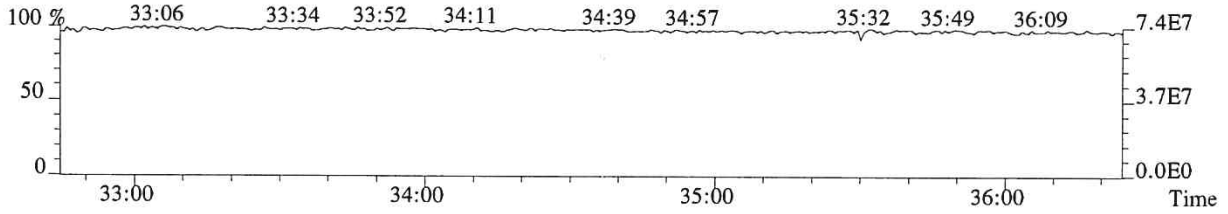
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1252.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

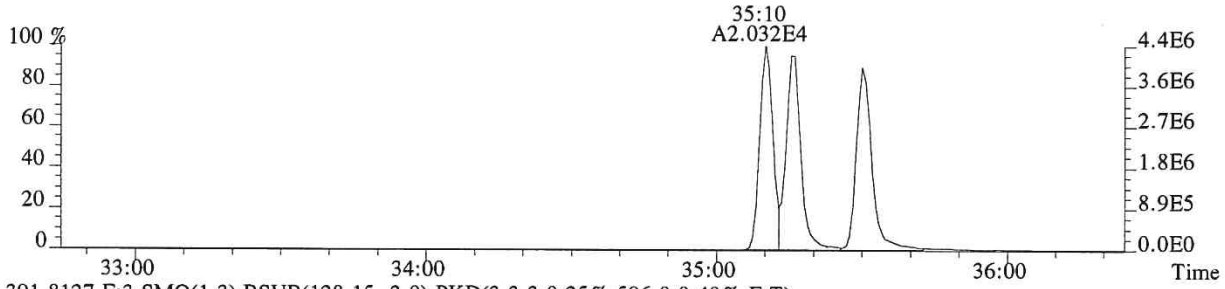


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

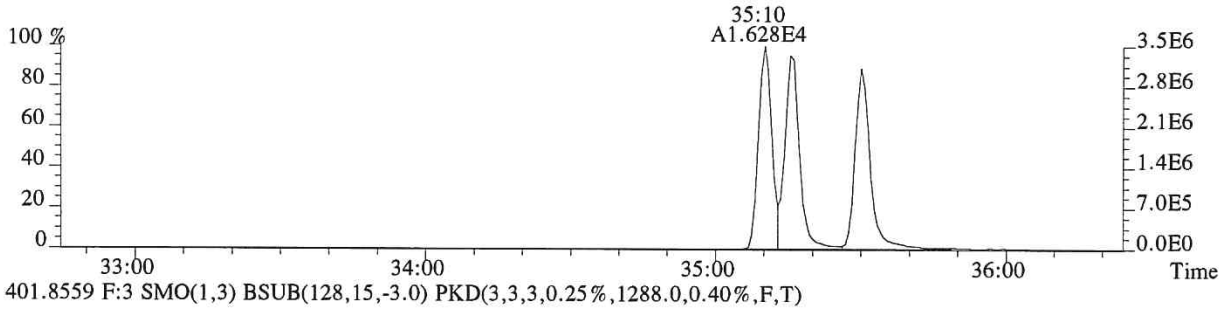


017730

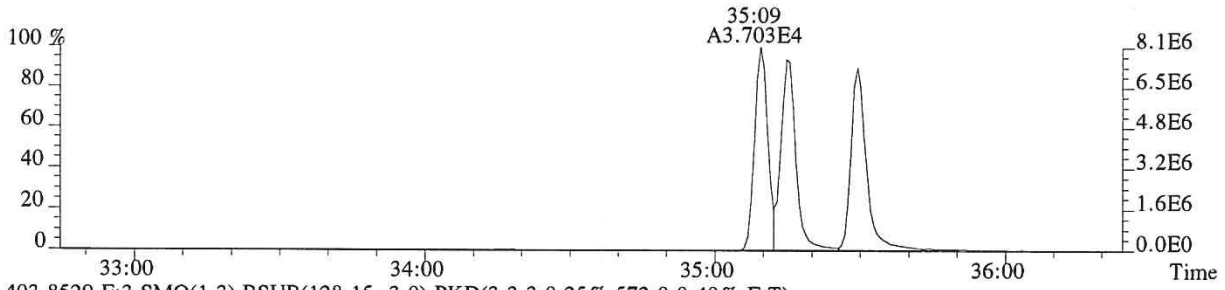
File:P616404 #1-330 Acq: 9-JAN-2019 11:32:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,520.0,0.40%,F,T)



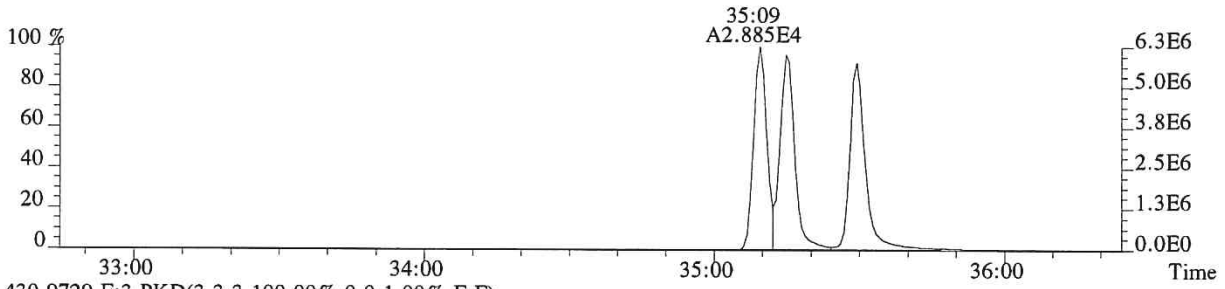
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,596.0,0.40%,F,T)



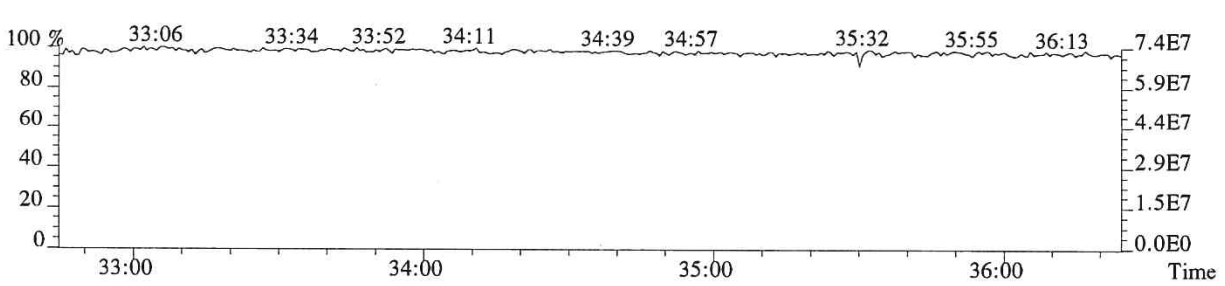
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1288.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,572.0,0.40%,F,T)

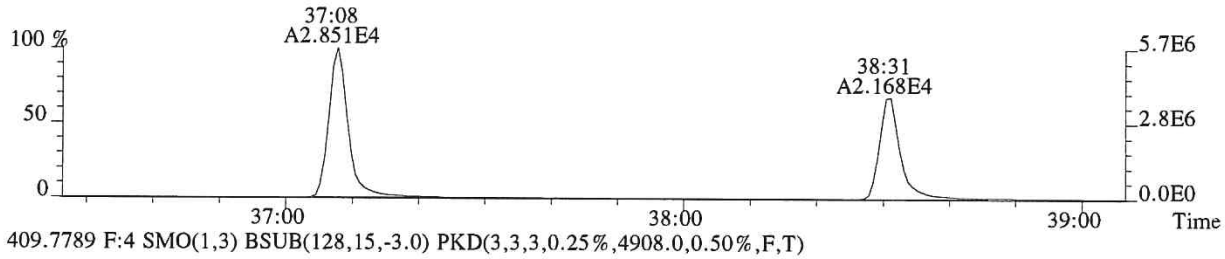


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

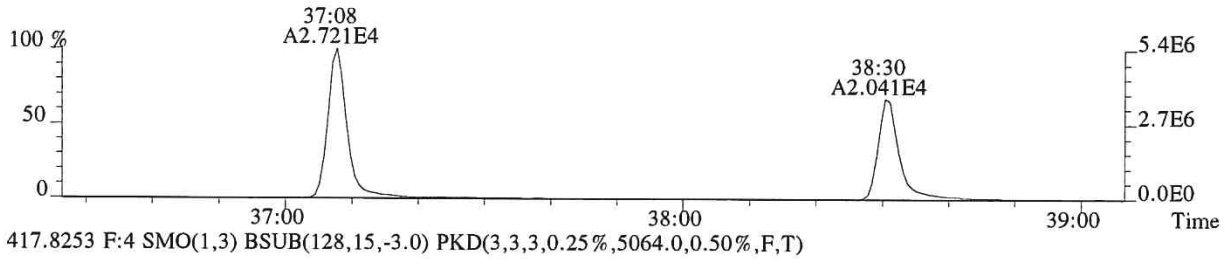


017731

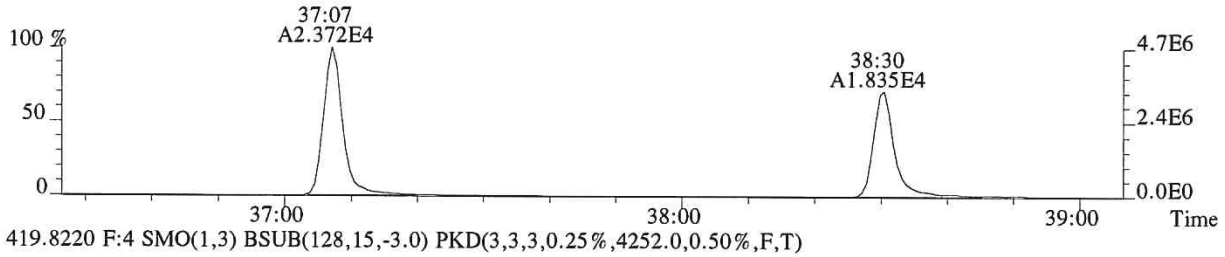
File:P616404 #1-241 Acq: 9-JAN-2019 11:32:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5584.0,0.50%,F,T)



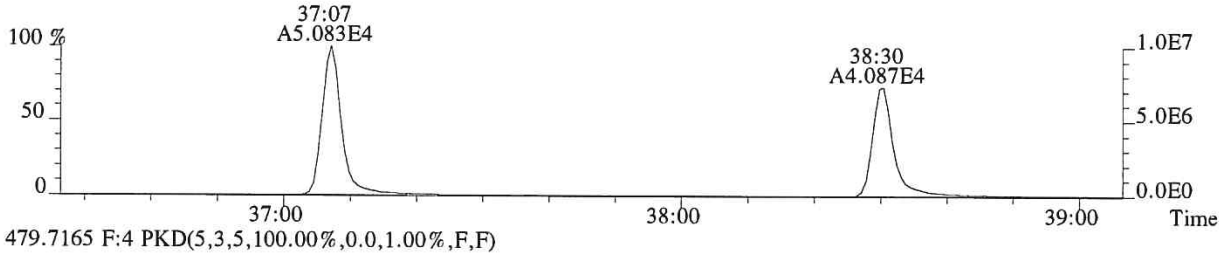
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4908.0,0.50%,F,T)



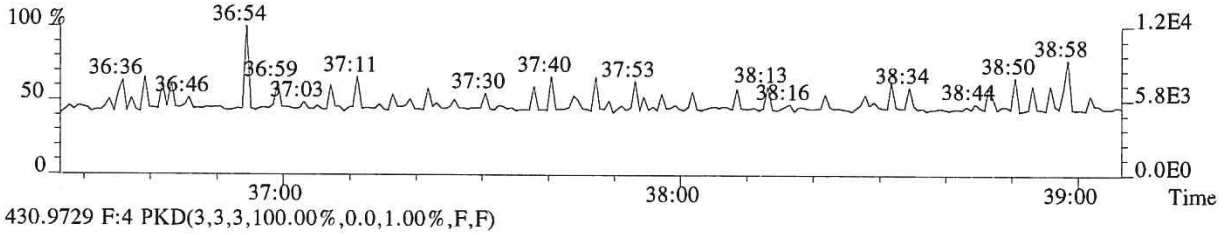
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5064.0,0.50%,F,T)



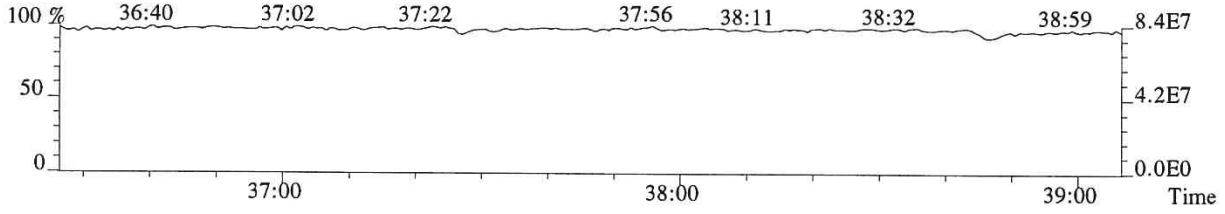
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4252.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

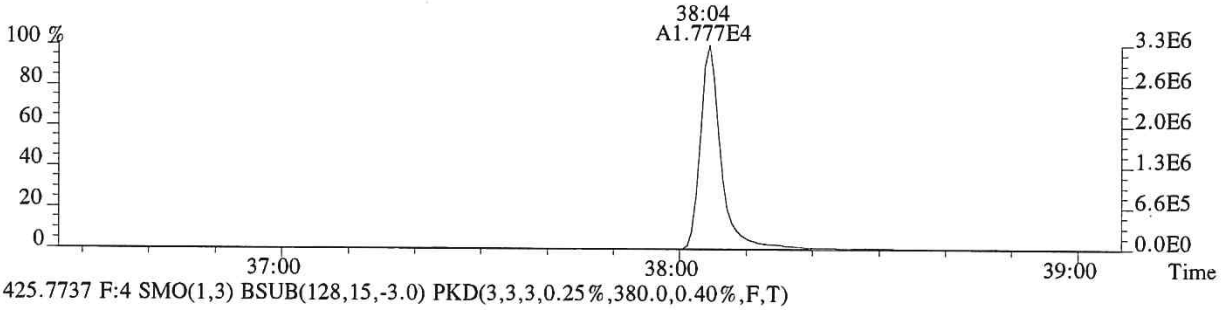


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

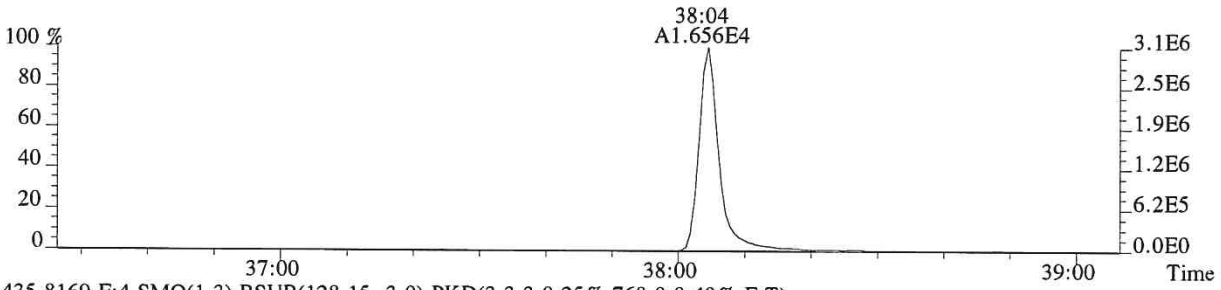


017732

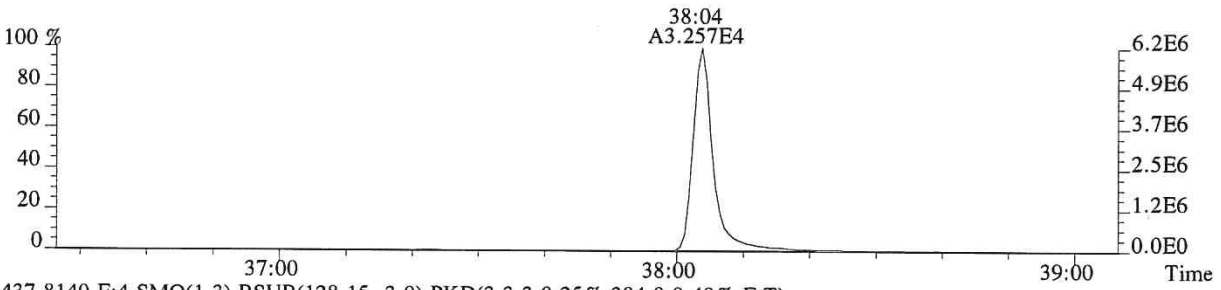
File:P616404 #1-241 Acq: 9-JAN-2019 11:32:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,372.0,0.40%,F,T)



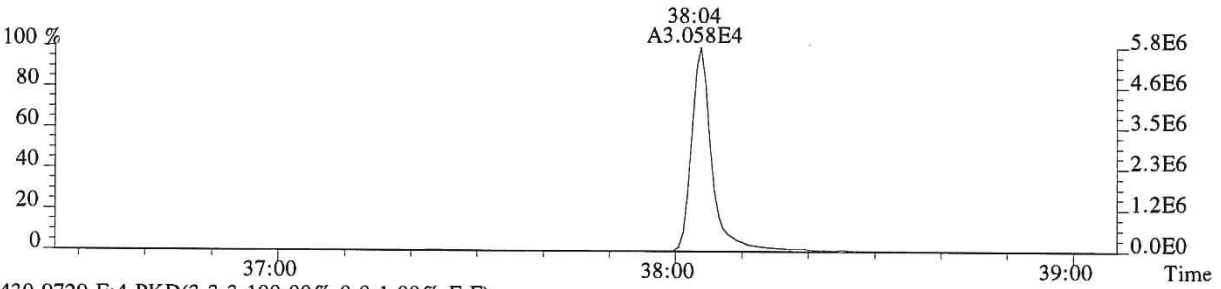
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,380.0,0.40%,F,T)



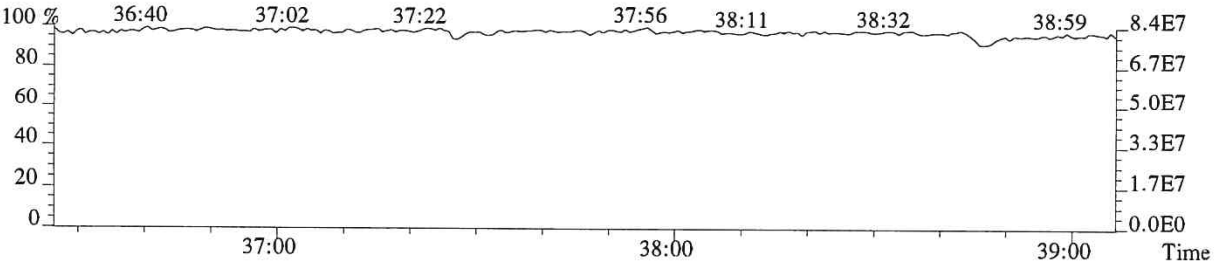
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,768.0,0.40%,F,T)



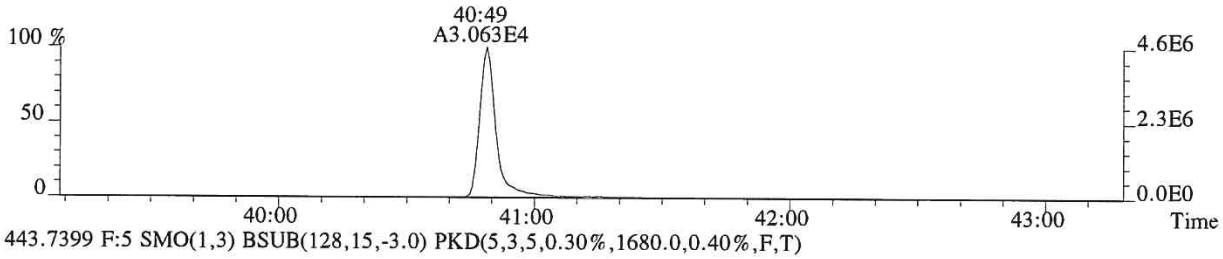
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,384.0,0.40%,F,T)



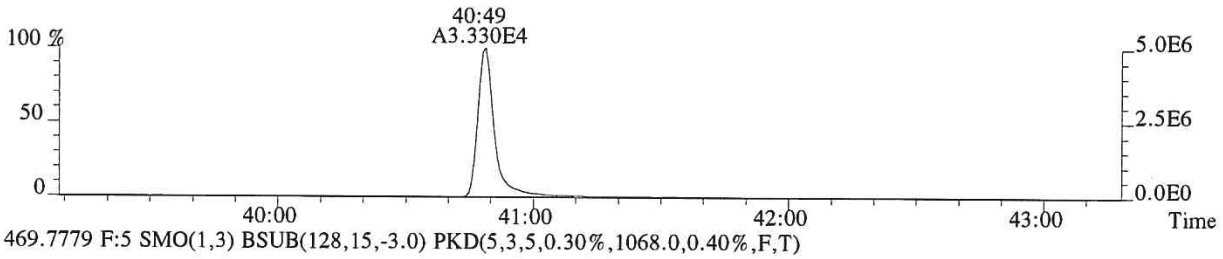
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



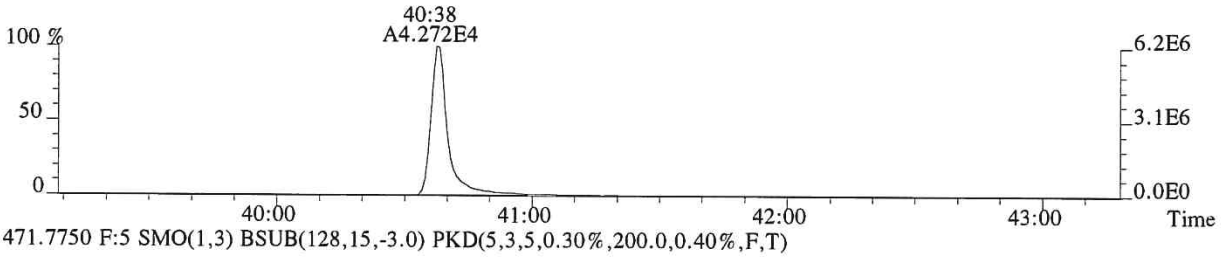
File:P616404 #1-375 Acq: 9-JAN-2019 11:32:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,328.0,0.40%,F,T)



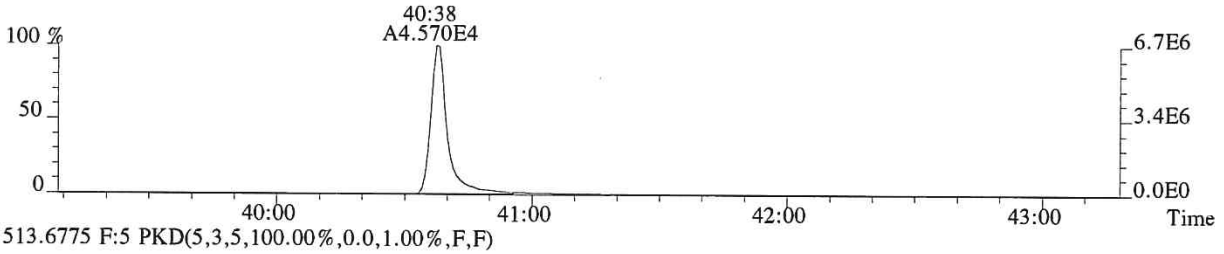
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1680.0,0.40%,F,T)



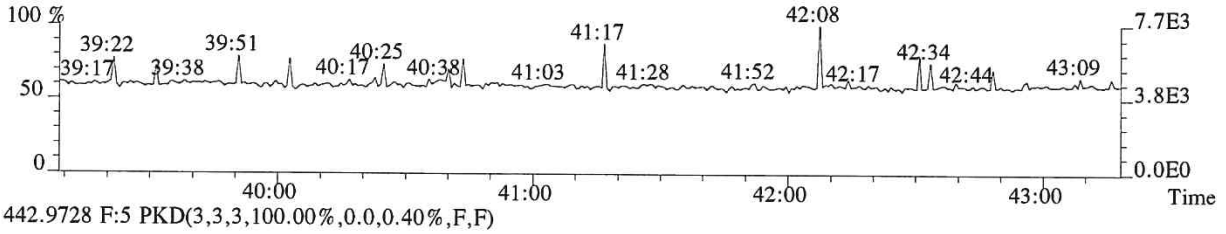
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1068.0,0.40%,F,T)



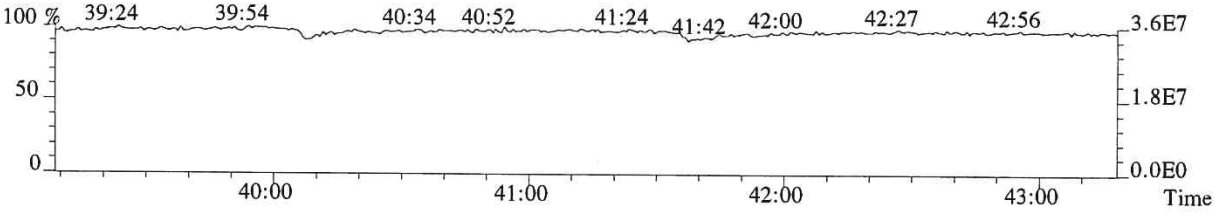
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,200.0,0.40%,F,T)



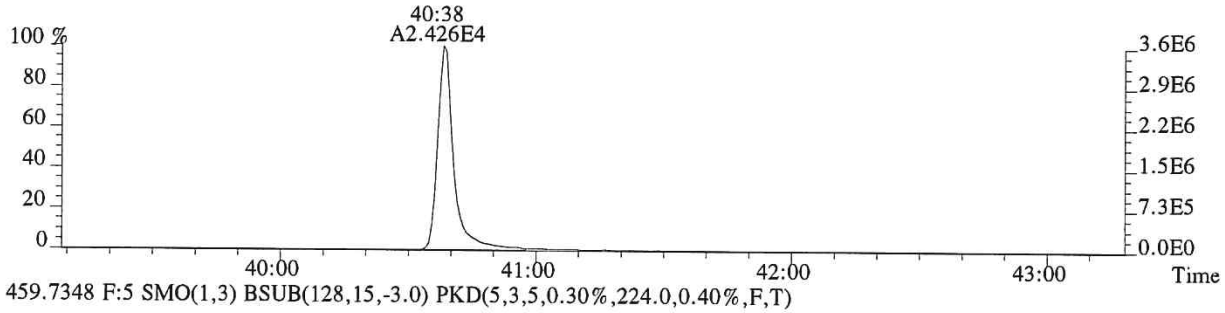
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



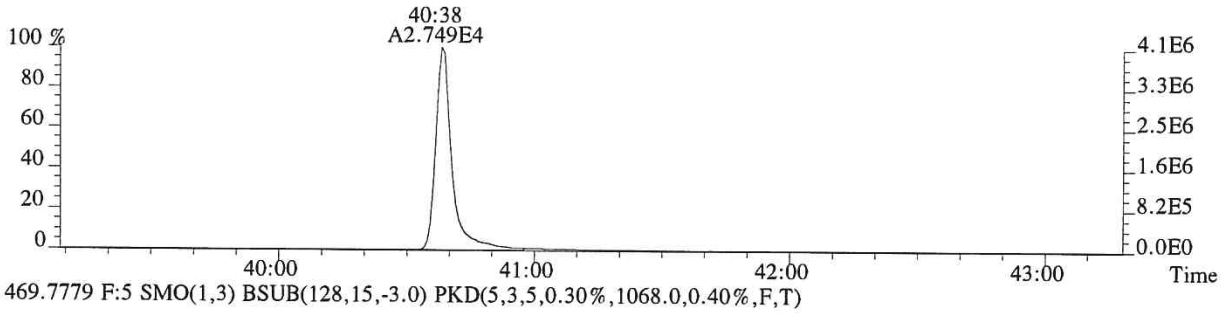
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



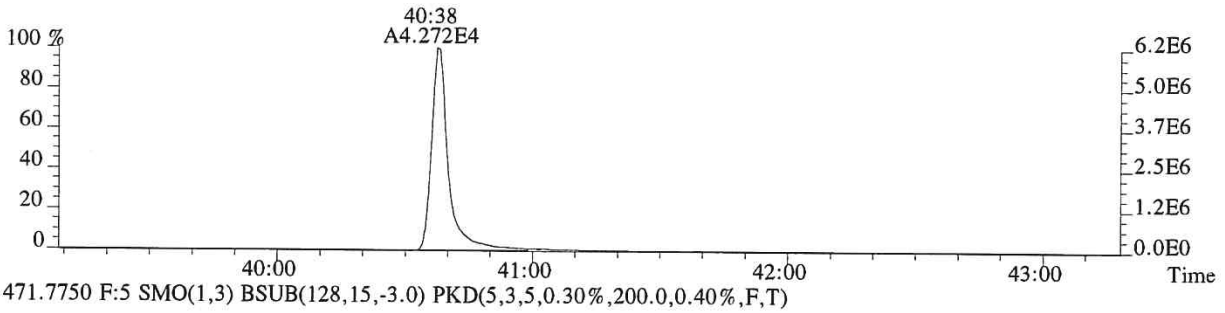
File:P616404 #1-375 Acq: 9-JAN-2019 11:32:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,208.0,0.40%,F,T)



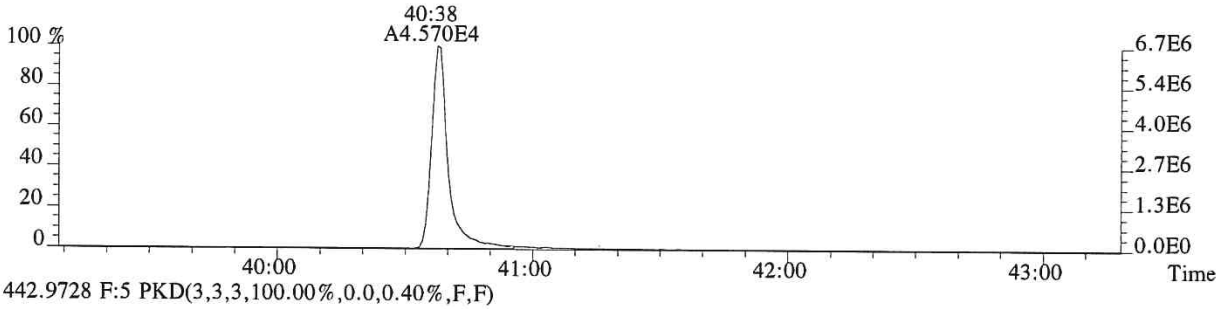
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,224.0,0.40%,F,T)



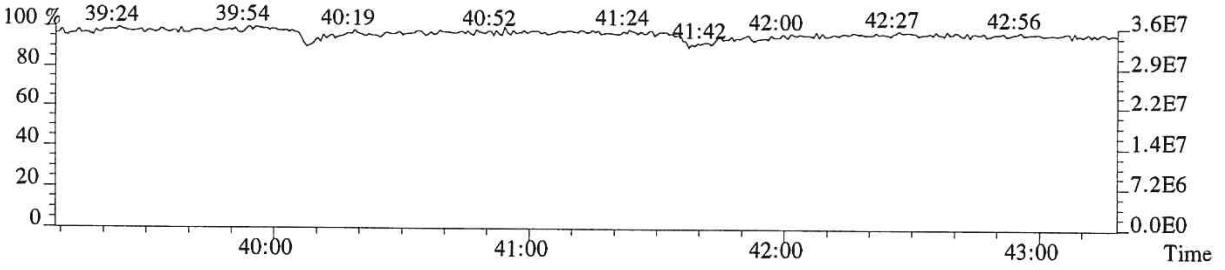
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1068.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,200.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017735

Initial Calibration

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Laboratory Review Checklist: HRMS Initial Calibration

Method: 1613/8290	Process Date: 01/25/18
Instrument Name: E-HRMS-07	Calibration File Name: P5-1801241613I
Processor Name: Gisela Cruz	Reviewer Name: Loan Leung
Supervisor: Kristin Neir	

Description	Yes	No	NA	NR	ER#
Analytical Sequence					
Does the analytical sequence summary accurately reflect the instrument run log, including ICV?	√				
Was a Mass Resolution Check performed at the beginning and end of the 12-hour sequence?	√				
Were all calibration standards and the ICV analyzed within the same 12-hour sequence?	√				
Were all calibration standards analyzed only once?	√				
Was the ICV analyzed after the ICAL, before analyzing samples?	√				
	√				
Mass Resolution Check					
Are beginning and ending resolution checks provided and legible?	√				
Were all target masses >10,000 resolving power at the beginning of the sequence?	√				
Were all target masses >10,000 resolving power at the end of the sequence?	√				
For PCB analysis, were masses at the low and high end of each function mass range >8,000?			√		
Where automatic printout of the mass resolution were not >10,000, was the resolution inspected by a trained analyst, including manual calculation of the resolution, if warranted?			√		
Window Define/209					
Is the window defining mix summary present, and accompanied by SICPs/Chromatograms for the WDM?	√				
Was the WDM/Column Performance/209 solution analyzed prior to the analysis of the calibration standards?	√				
Was 2,3,7,8-TCDD peak valley <25% to any other TCDD?	√				
Were all first and last eluters adequately resolved in each function?	√				
If first and last eluters were not resolved, was corrective action performed and documented, followed by a reanalysis of the WDM?			√		
Was the retention time of PCB 209 >55 min?			√		
Were the following congeners uniquely resolved (valley height <40% of the shortest peak)? PCB-34 and PCB-23 PCB-187 and PCB-182			√		
Did PCB 156/157 co-elute within 2 seconds at peak maximum?			√		
Calibration Standards					
Were there at least 5 calibration standards analyzed?	√				
If not all calibration standards were used, were the omitted standards either the lowest or highest calibration standard?			√		

Laboratory Review Checklist: HRMS Initial Calibration

Method: 1613/8290	Process Date: 01/25/18
Instrument Name: E-HRMS-07	Calibration File Name: P5-180124161 3I
Processor Name: Gisela Cruz	Reviewer Name: Loan Luong
Supervisor: Kristin Neir	

Description	Yes	No	NA	NR	ER#
Are all sample response summaries, S/N height summaries, and SICPs included (and legible) for the entire sequence?	√				
Did each calibration point meet method criteria for Ion Abundance Ratio for all analytes and labeled standards?	√				
Did each calibration point meet method criteria for signal-to-noise ratios (S/N)?	√				
Were area counts for the highest calibration standard below levels of saturation?	√				
Were manual integrations technically justified to correct for poor software integration?		√			
Response Factors					
Is the ICAL Response Factor Summary present, including RR/RF values for each native/labeled analyte at each level of calibration?	√				
Were all calibration standards used in determining response factors?	√				
Were relative response factors (RR) for each native analyte calculated at each calibration point?	√				
Did the RSD for RRFs for each native analyte meet method criteria?	√				
Were response factors (RF) for each native analyte not having a corresponding labeled compound calculated at each calibration point?	√				
Were RFs for each labeled compound calculated for each calibration point?	√				
Did the RSD for RF for each labeled compound meet method criteria?	√				
Initial Calibration Verification					
Is the calibration verification present, including form 4A/B reflecting results for the ICV (Conc. or %D)	√				
Did all analytes meet method criteria for the ICV.	√				

Laboratory Review Checklist: Initial Calibration

Method: 1613/8290	Process Date: 01/25/18
Instrument Name: E-HRMS-07	Calibration File Name: P5-180124161 3I
Processor Name: Gisela Cruz	Reviewer Name: Loan Luong

ER#[5]	Description

NA = Not Applicable;
NR = Not Reviewed;
R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: TX01411 Episode No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm) Instrument ID: E-HRMS-07

Init. Calib. Date: 01/24/18

Init. Calib.Times: 11:44

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, SPIKES AND DUPLICATES IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
183360	WINDOW DEFINE	P513848	24-JAN-18	11:44:47
76554	CS0.5	P513850	24-JAN-18	13:32:06
76555	CS1	P513851	24-JAN-18	14:23:56
76556	CS2	P513852	24-JAN-18	15:18:44
76557	CS3	P513853	24-JAN-18	16:06:29
76558	CS4	P513854	24-JAN-18	16:55:09
185657	CS5	P513855	24-JAN-18	17:43:48
75080	2ND SOURCE	P513857	24-JAN-18	19:21:06

Sample List Report — **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS07.PRO\SampleDB\20180124A.SPL
Last Modified: Thursday, January 25, 2018 07:09:10 Eastern Standard Time
Printed: Thursday, January 25, 2018 07:24:00 Eastern Standard Time

Page Position (1, 1)

Opus 4: P5-180124I613I P513857res

*Opus 4: P5-180124m23I P513857resm23

	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	1/24/18	10:39	P513847	CS3	186061	EPA1613_ALS	Dioxin_ALS	Tray1:1	YY	not used
2		11:44	P513848	WINDOWDEFINE	183360	EPA1613_ALS	Dioxin_ALS	Tray1:2		HRMS check 11:10
3		12:35	P513849	CS0.5	76554	EPA1613_ALS	Dioxin_ALS	Tray1:3		not used
4		13:32	P513850	CS0.5	76554	EPA1613_ALS	Dioxin_ALS	Tray1:4		~~not used~~ YY 1/25/18
5		14:23	P513851	CS1	76555	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		15:18	P513852	CS2	76556	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		16:06	P513853	CS3	76557	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		16:55	P513854	CS4	76558	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		17:43	P513855	CS5	185657	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		18:32	P513856	NONANE	NONANE	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		19:21	P513857	2ND SOURCE	75080	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12			---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1		
13			---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1		
14			---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2		
15			---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:15		HRMS check 1/25/18 00:51
16		19:21	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:16	---	---
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:17	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:18	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---
21	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:21	---	---
22	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:22	---	---
23	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:23	---	---
24	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:24	---	---
25	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:25	---	---

gc 01/25/18

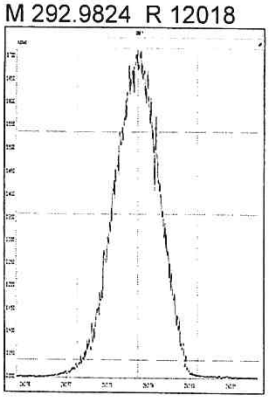
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Experiment Calibration Report **MassLynx 4.1 SCN815 SCN795** Page 1 of 1

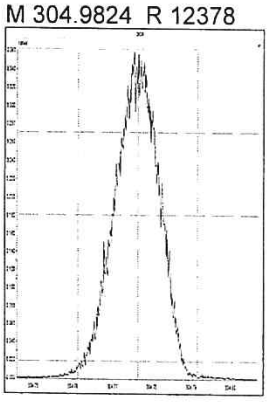
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Printed: Wednesday, January 24, 2018 11:40:23 Eastern Standard Time

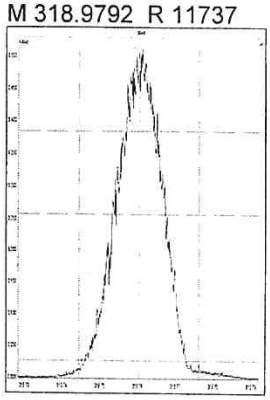
M 292.9824 R 12018



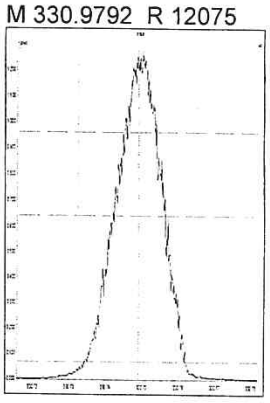
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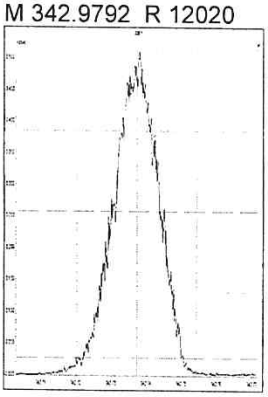
M 318.9792 R 11737



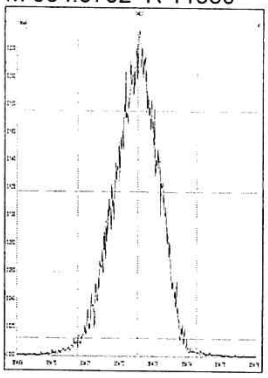
M 330.9792 R 12075



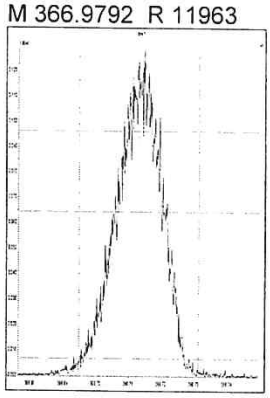
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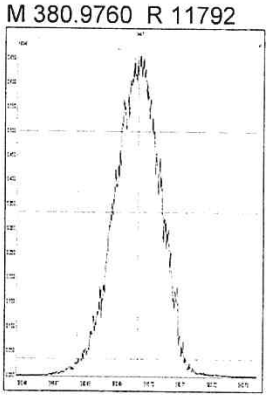
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M 366.9792 R 11963



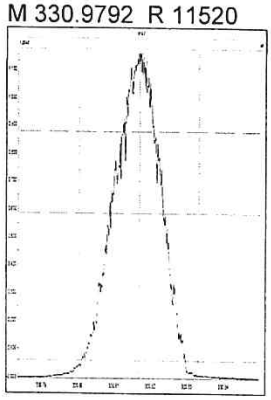
M 380.9760 R 11792



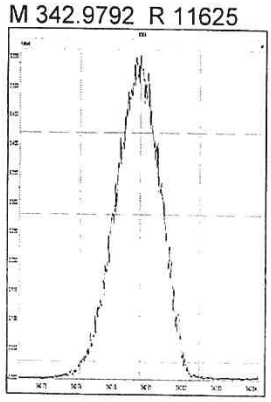
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Printed: Wednesday, January 24, 2018 11:41:23 Eastern Standard Time

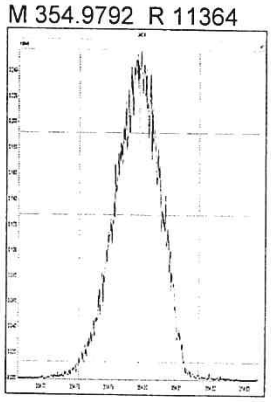
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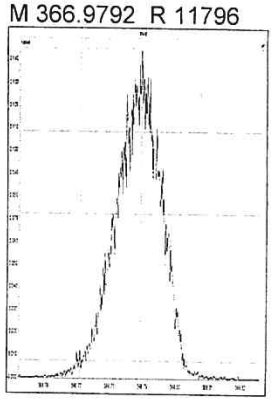
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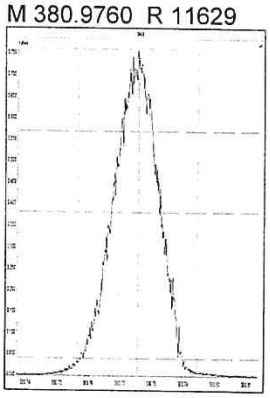
M 354.9792 R 11364



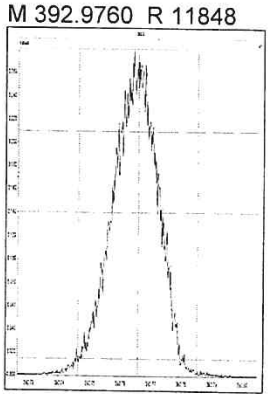
M 366.9792 R 11796



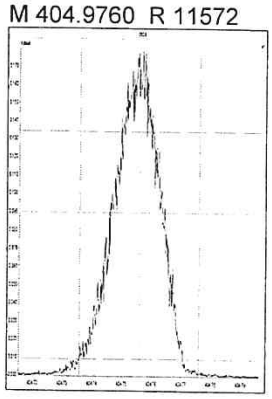
M 380.9760 R 11629



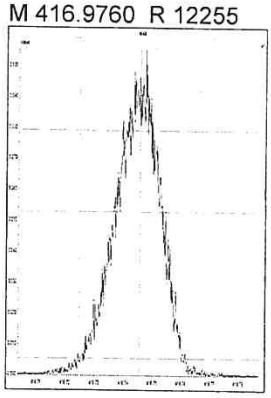
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M 404.9760 R 11572



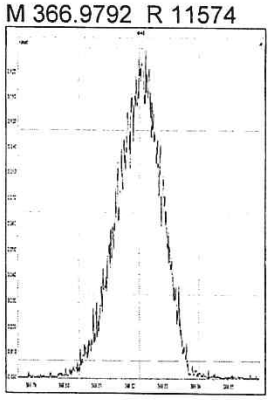
M 416.9760 R 12255



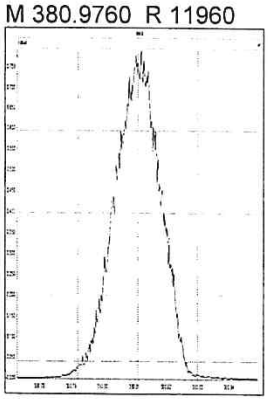
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Printed: Wednesday, January 24, 2018 11:42:15 Eastern Standard Time

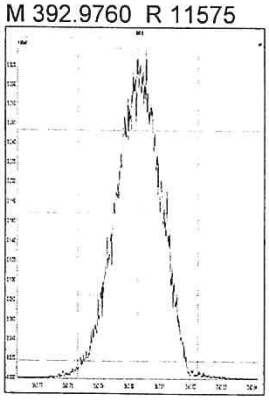
M 366.9792 R 11574



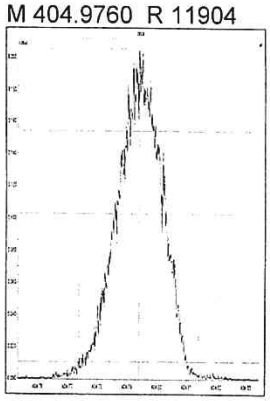
M 380.9760 R 11960



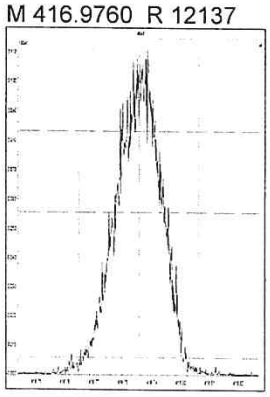
M 392.9760 R 11575



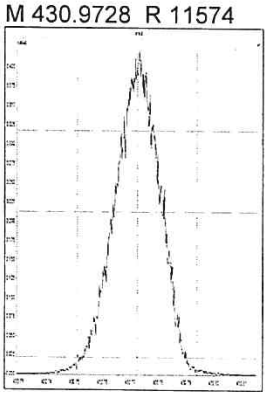
M 404.9760 R 11904



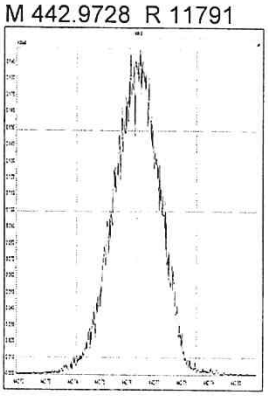
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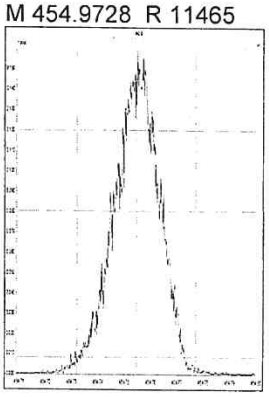
M 430.9728 R 11574



M 442.9728 R 11791



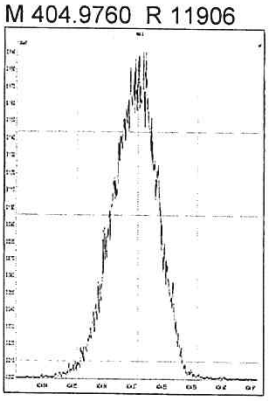
M 454.9728 R 11465



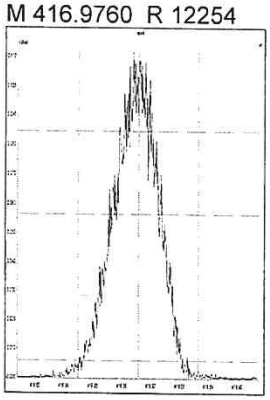
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

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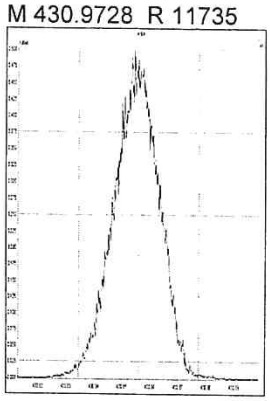
M 404.9760 R 11906



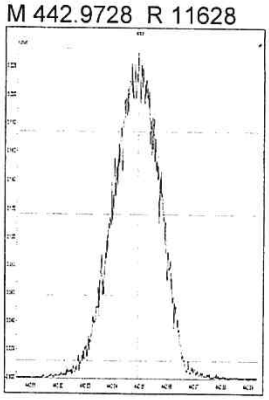
M 416.9760 R 12254



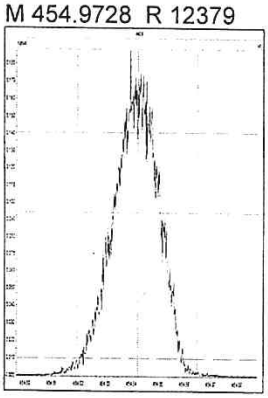
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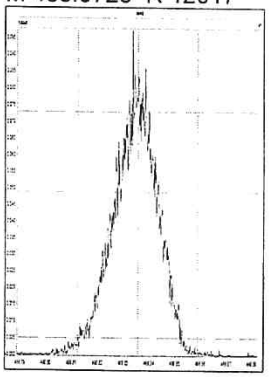
M 442.9728 R 11628



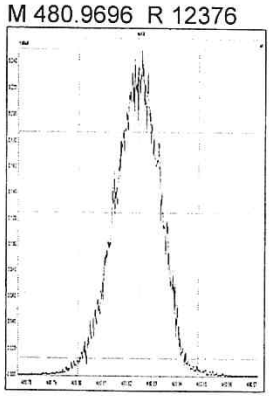
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M 466.9728 R 12017



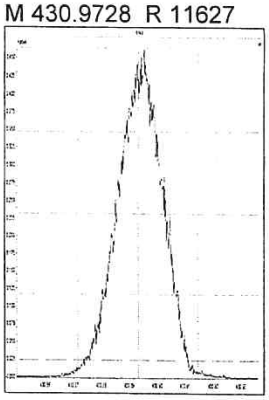
M 480.9696 R 12376



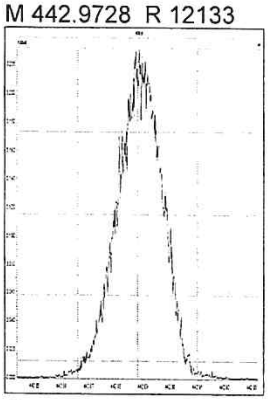
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

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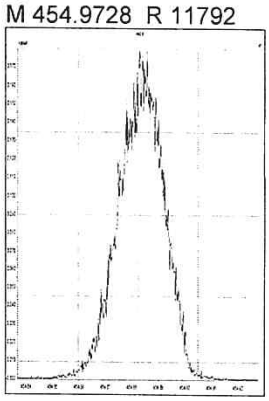
M 430.9728 R 11627



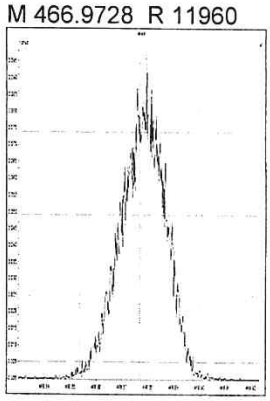
M 442.9728 R 12133



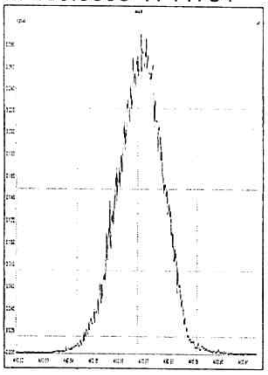
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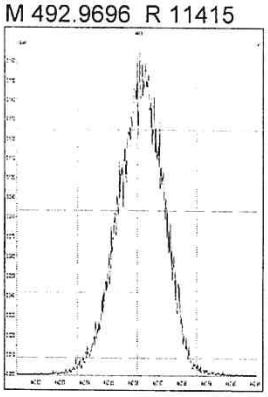
M 466.9728 R 11960



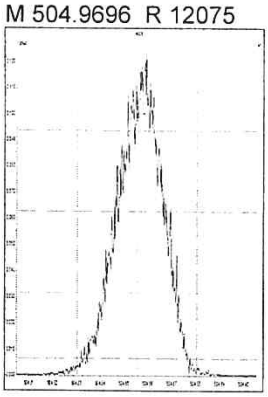
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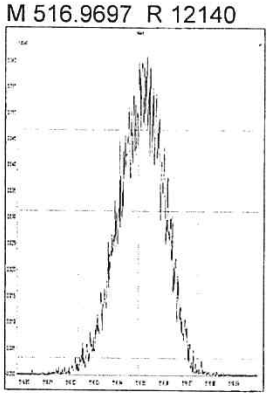
M 492.9696 R 11415



M 504.9696 R 12075



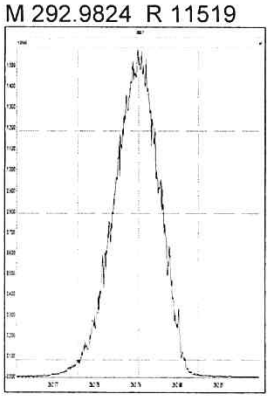
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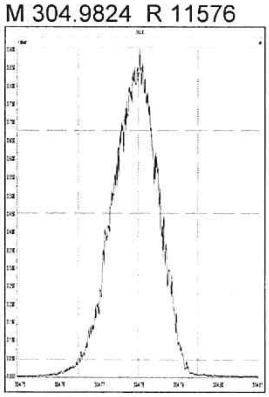
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Printed: Thursday, January 25, 2018 06:51:19 Eastern Standard Time

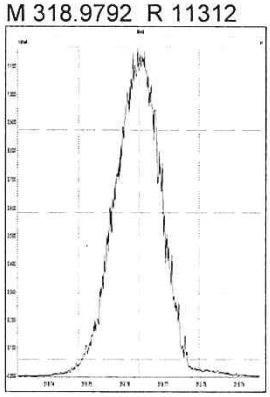
M 292.9824 R 11519



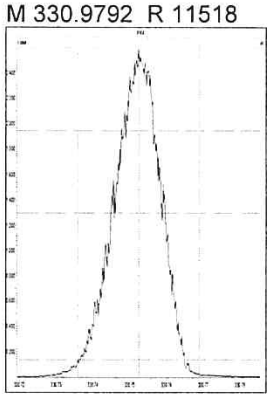
M 304.9824 R 11576



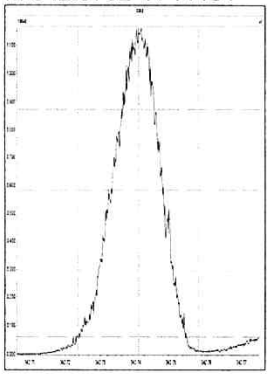
M 318.9792 R 11312



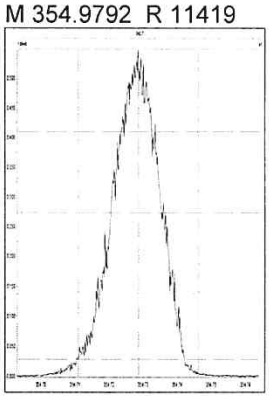
M 330.9792 R 11518



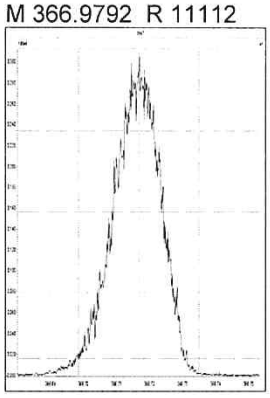
M 342.9792 R 11161



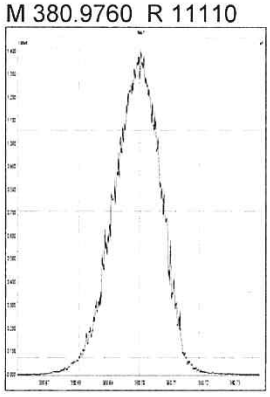
M 354.9792 R 11419



M 366.9792 R 11112



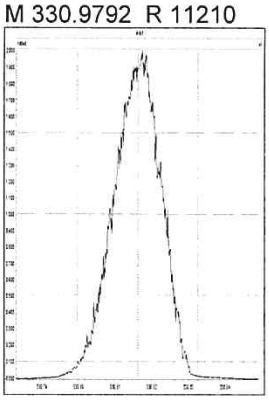
M 380.9760 R 11110



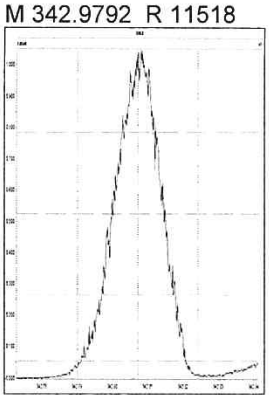
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Printed: Thursday, January 25, 2018 06:52:11 Eastern Standard Time

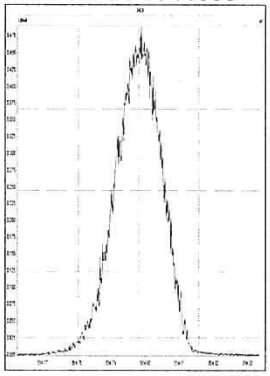
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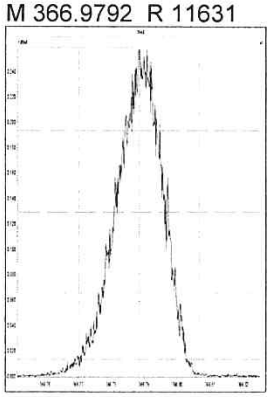
M 342.9792 R 11518



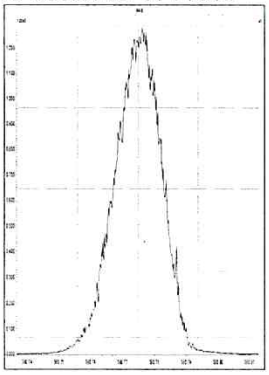
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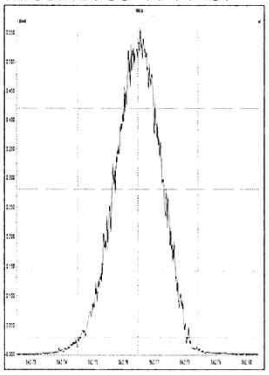
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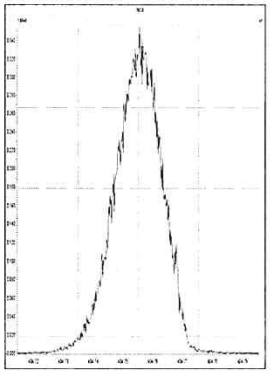
M 380.9760 R 11314



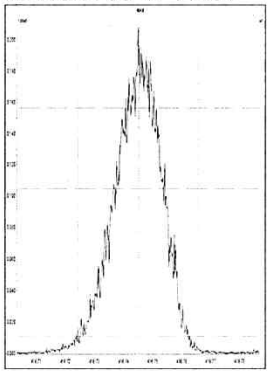
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M 404.9760 R 11518



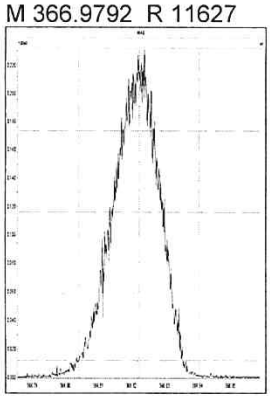
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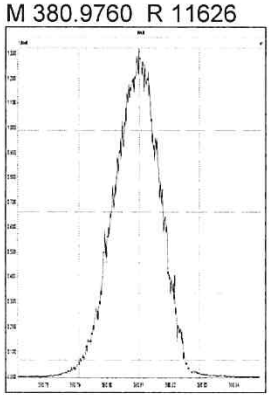
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

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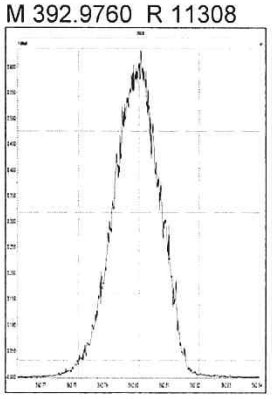
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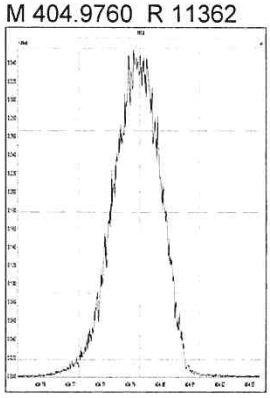
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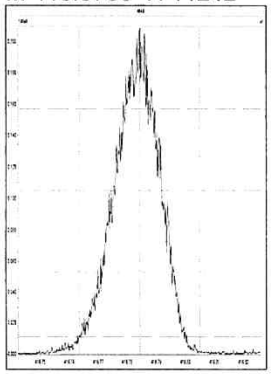
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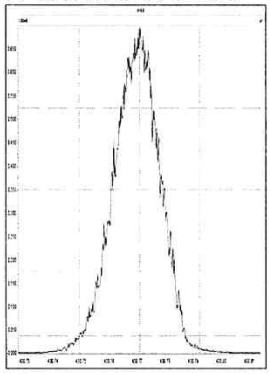
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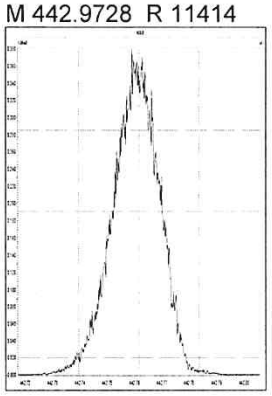
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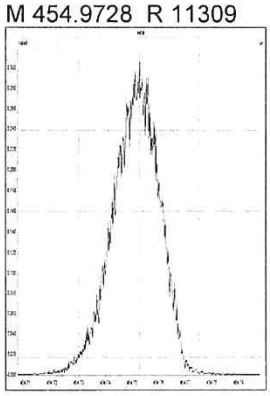
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M 442.9728 R 11414



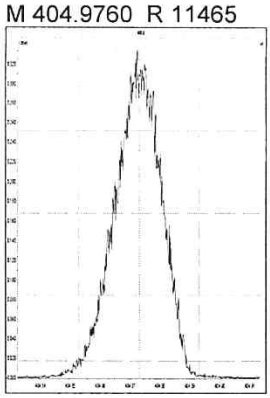
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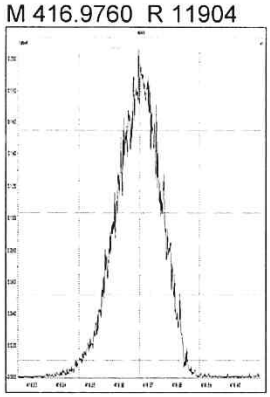
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, January 25, 2018 06:53:26 Eastern Standard Time

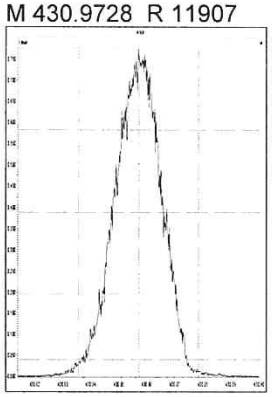
M 404.9760 R 11465



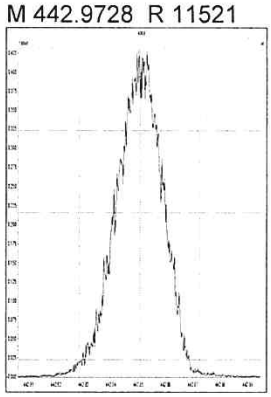
M 416.9760 R 11904



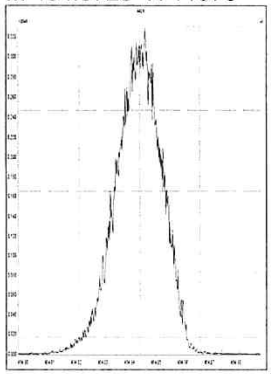
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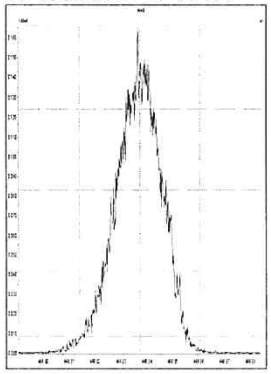
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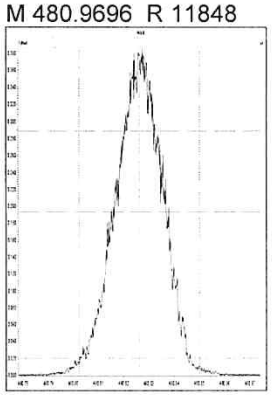
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M 466.9728 R 11417



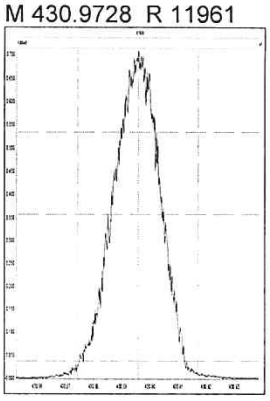
M 480.9696 R 11848



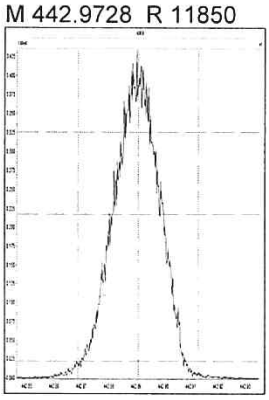
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, January 25, 2018 06:53:57 Eastern Standard Time

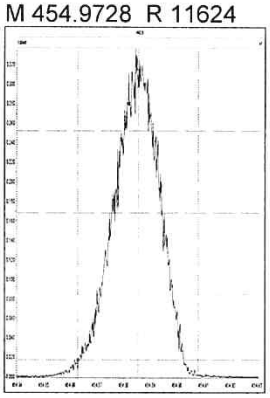
M 430.9728 R 11961



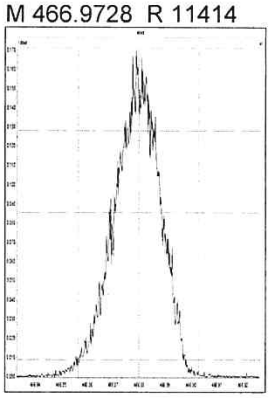
M 442.9728 R 11850



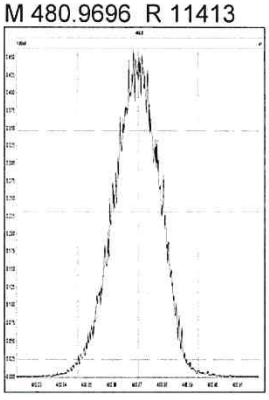
M 454.9728 R 11624



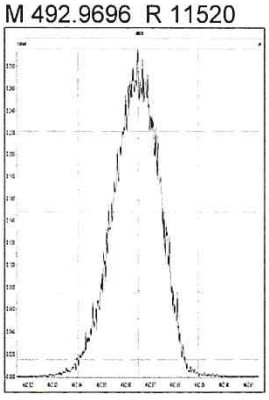
M 466.9728 R 11414



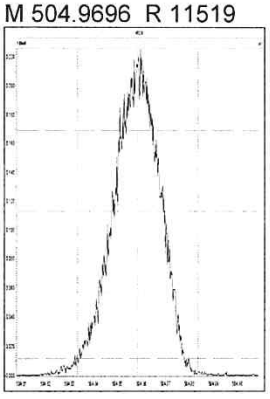
M 480.9696 R 11413



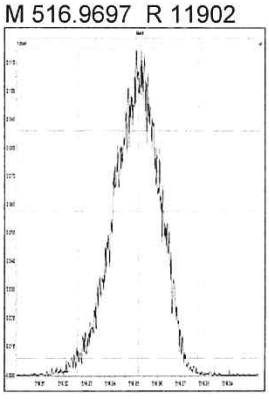
M 492.9696 R 11520



M 504.9696 R 11519



M 516.9697 R 11902



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

Lab Name: ALS Environmental
Lab Code: ALSTX
GC Column: DB-5MSUI

Case No.: _____ SDG No.:
ID: 0.25 (mm)

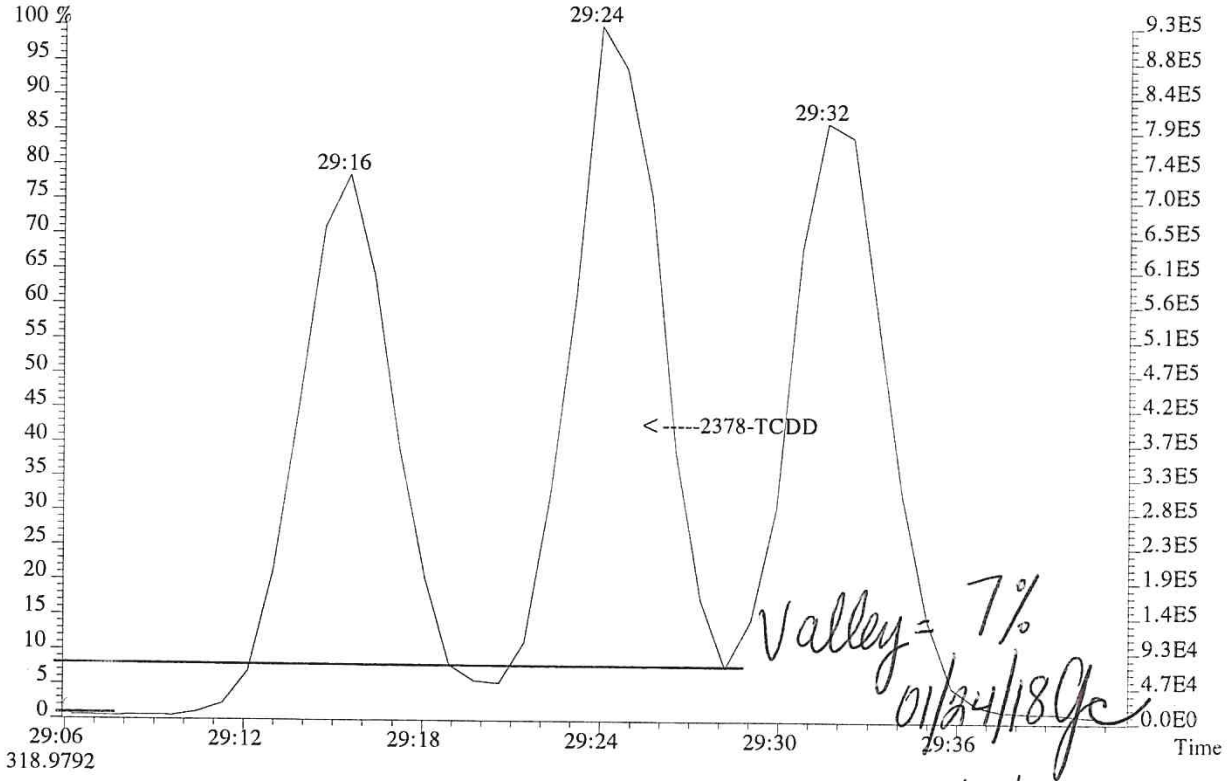
Lab File ID: P513848
Date Analyzed: 24-JAN-2018
Time Analyzed: 11:44:47

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	24:25	30:32
TCDD	26:17	30:22
PeCDF	30:27	34:34
PeCDD	31:55	34:19
HxCDF	35:11	37:38
HxCDD	35:41	37:14
HpCDF	38:49	40:14
HpCDD	39:04	39:44

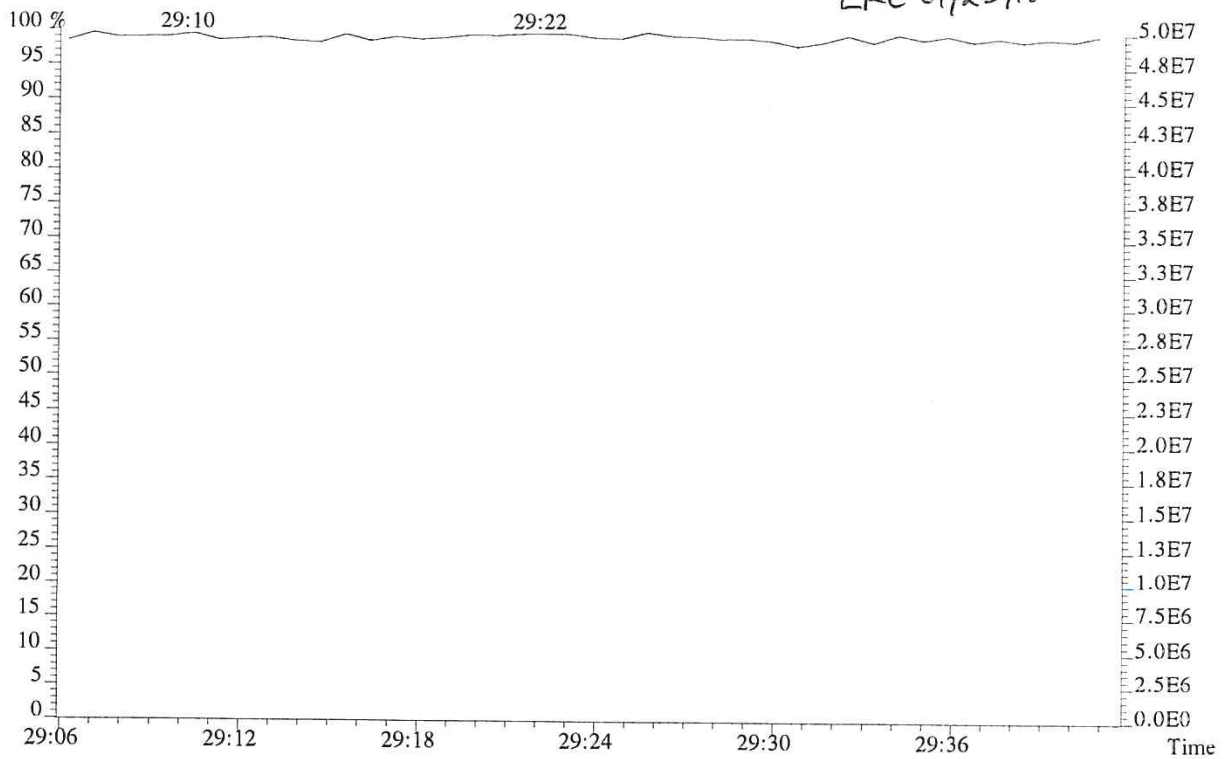
% Valley 2378-TCDD: 7 %

017751

File:P513848 #1-665 Acq:24-JAN-2018 11:44:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:183360
319.8965

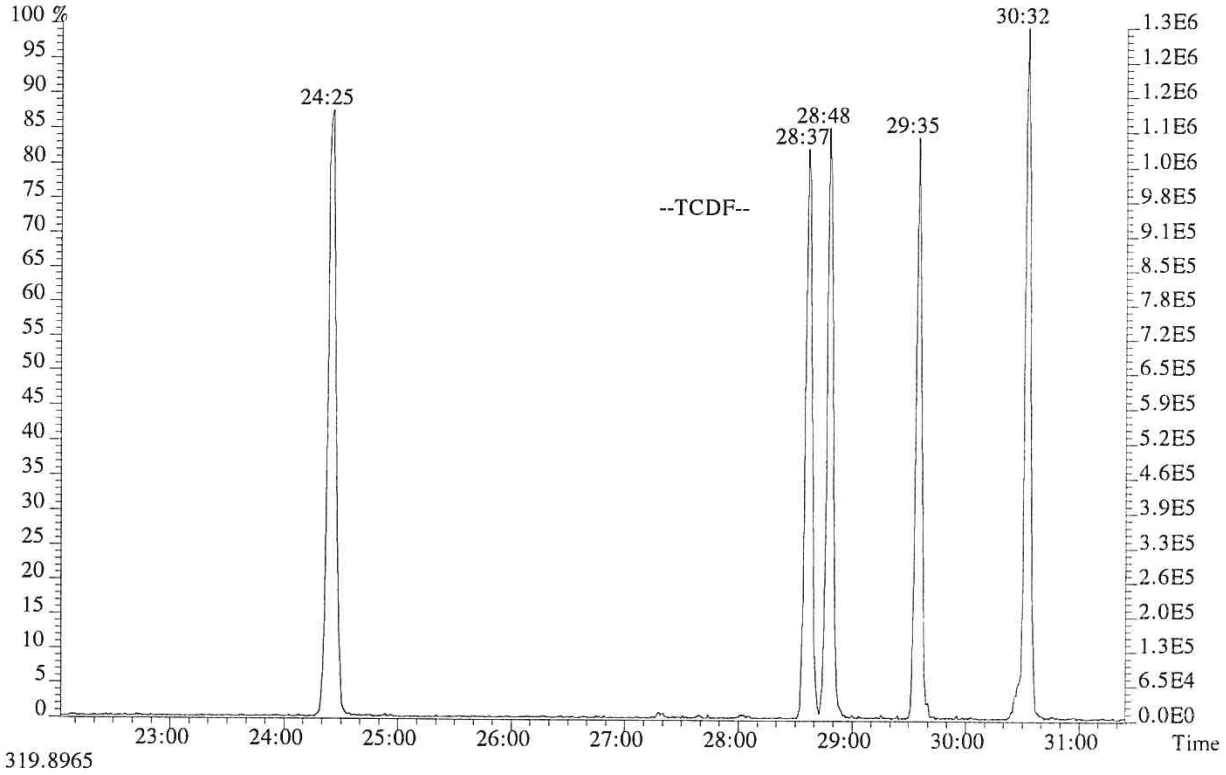


LKL 01/25/18

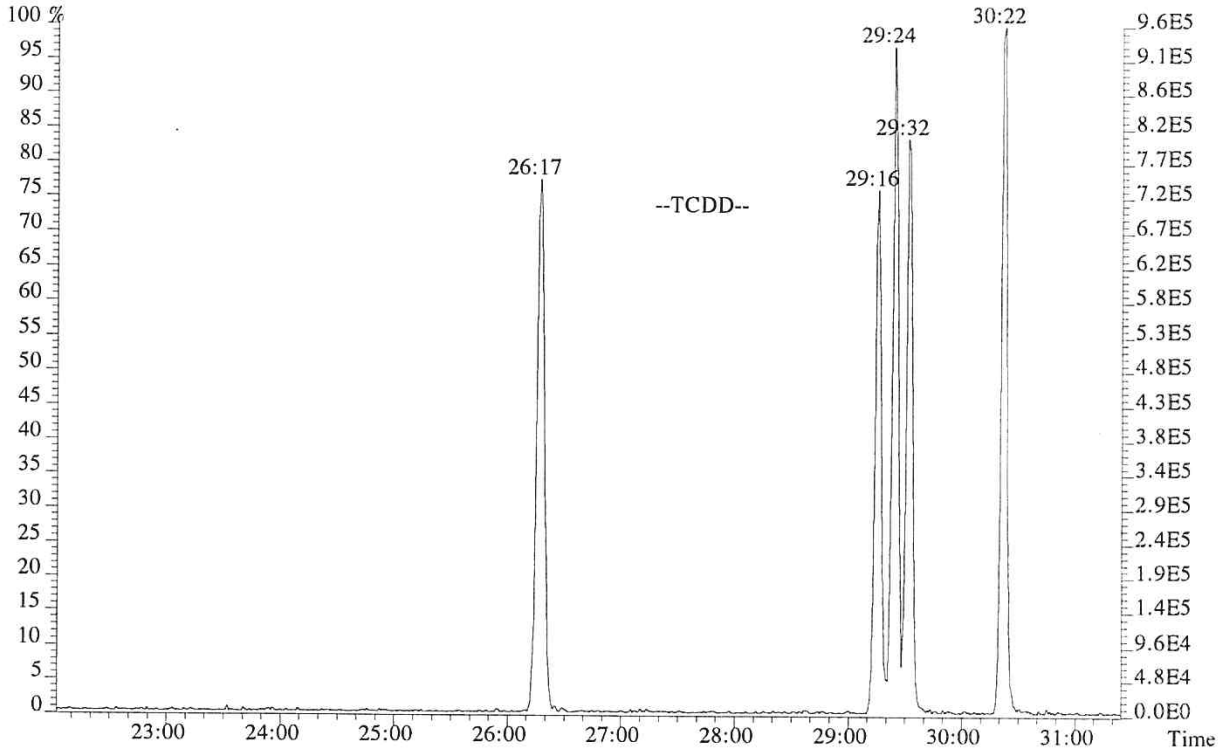


017752

File:P513848 #1-665 Acq:24-JAN-2018 11:44:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:183360
303.9016

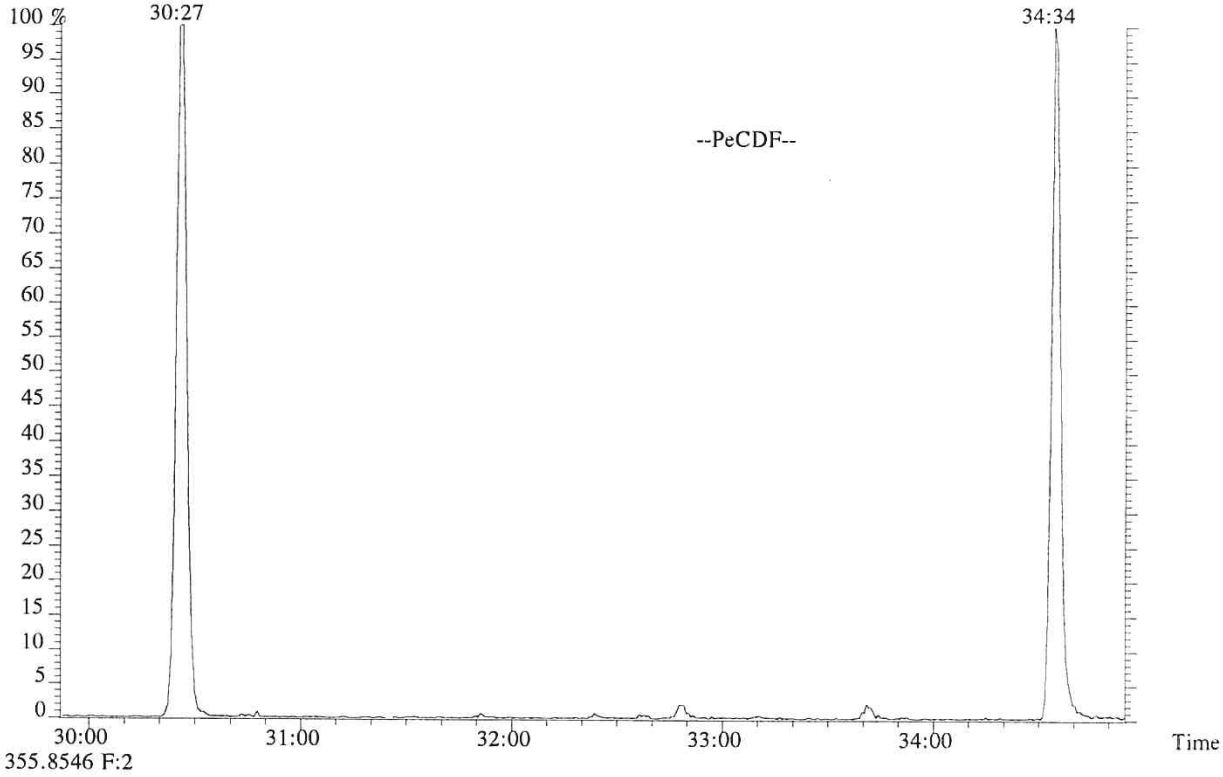


319.8965

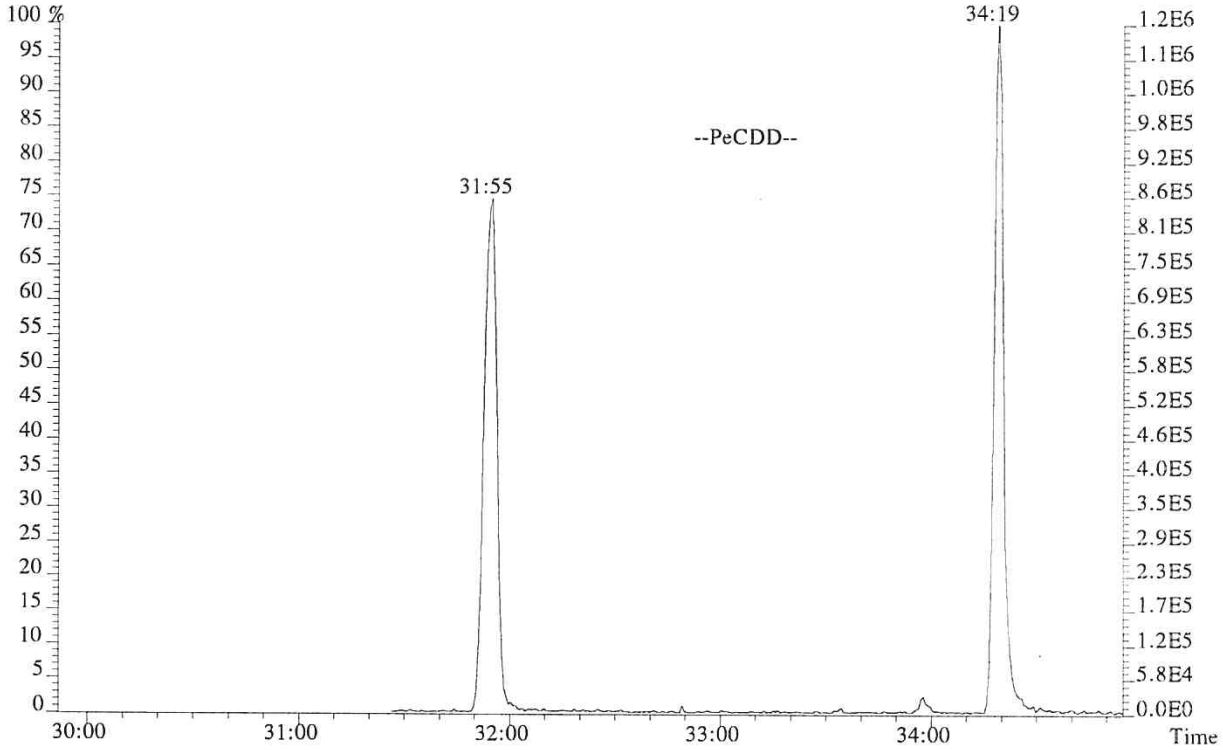


017753

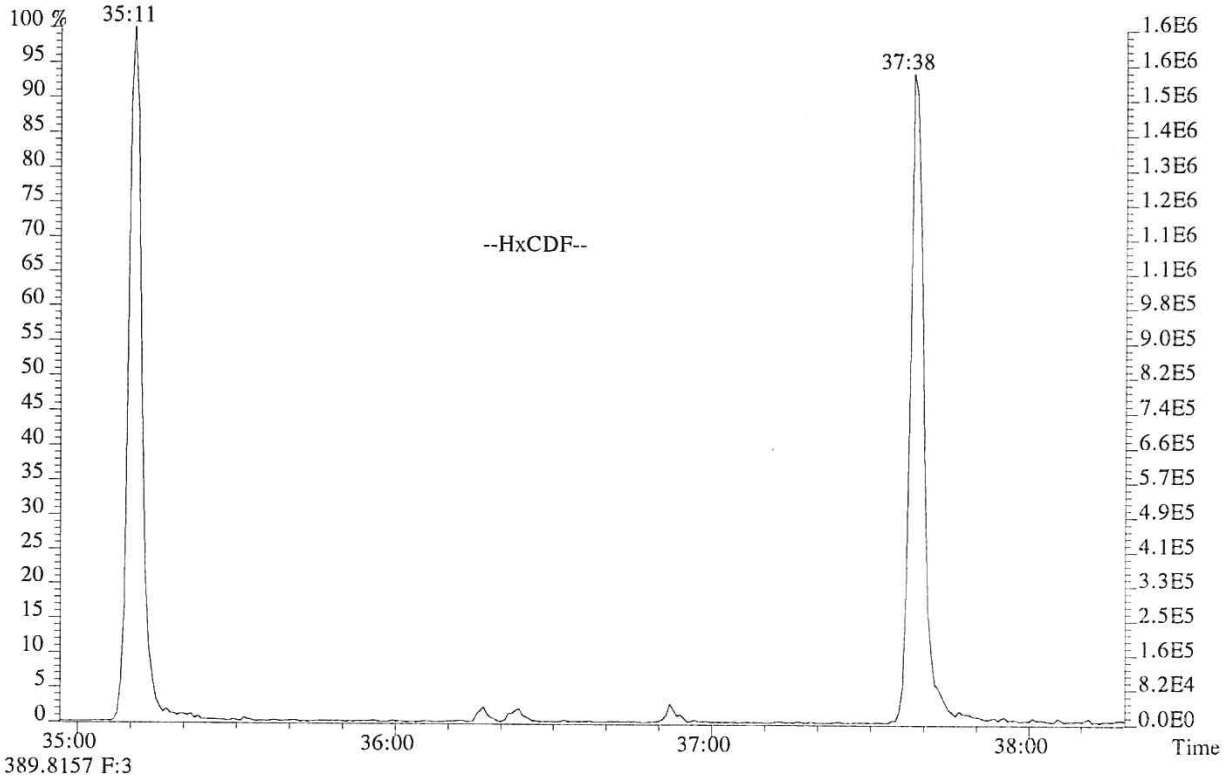
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Sample#1 Exp:183360
339.8597,339.8597 F:2



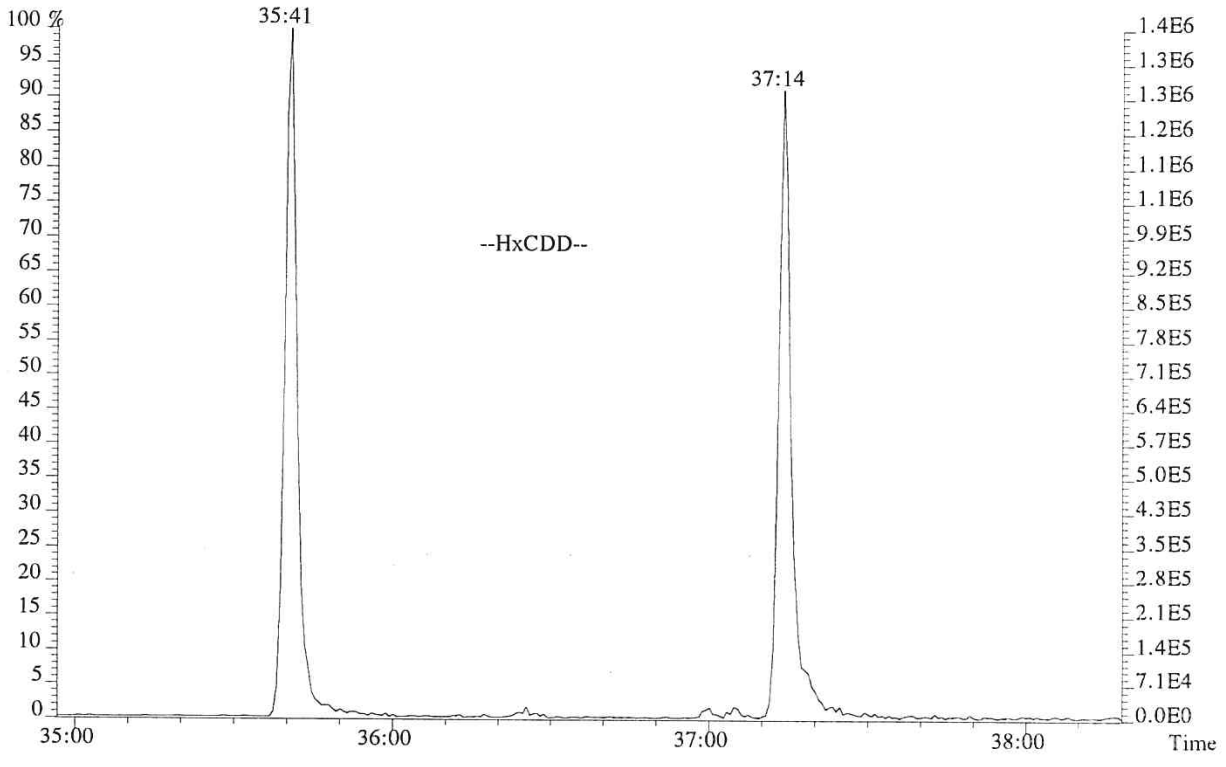
355.8546 F:2



File:P513848 #1-303 Acq:24-JAN-2018 11:44:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:183360
373.8208 F:3

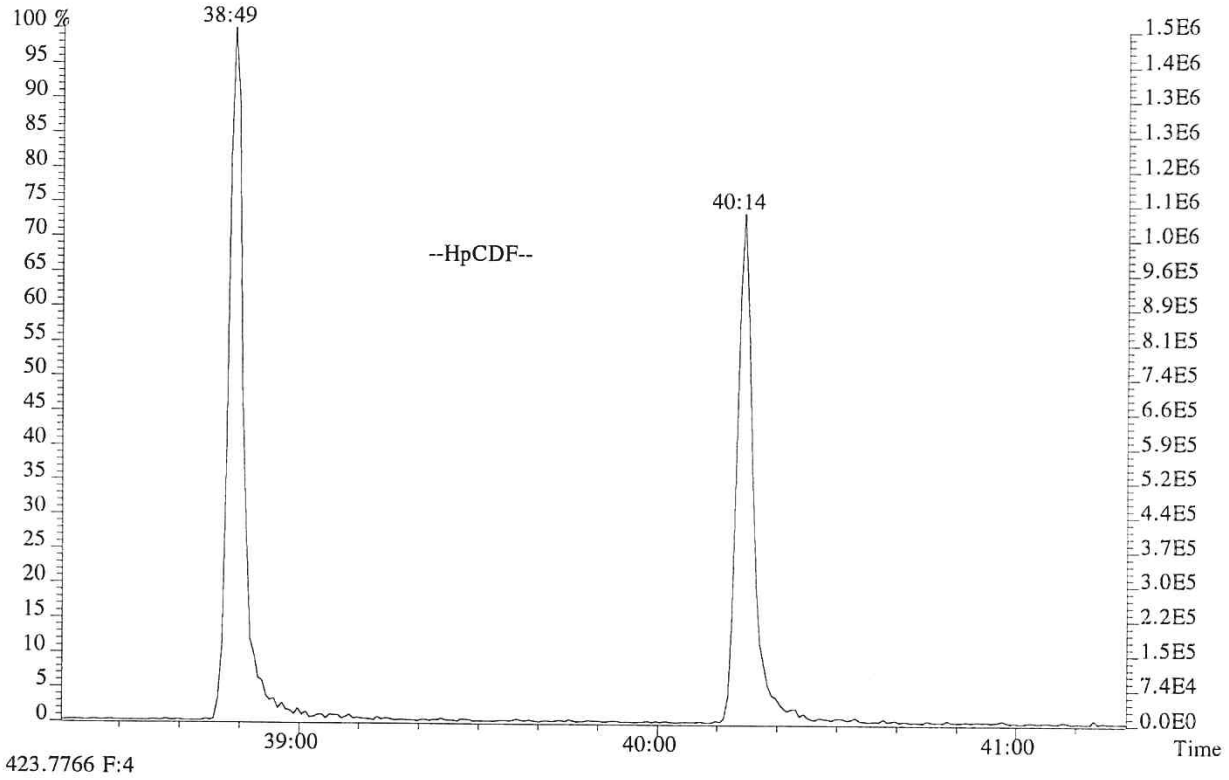


389.8157 F:3

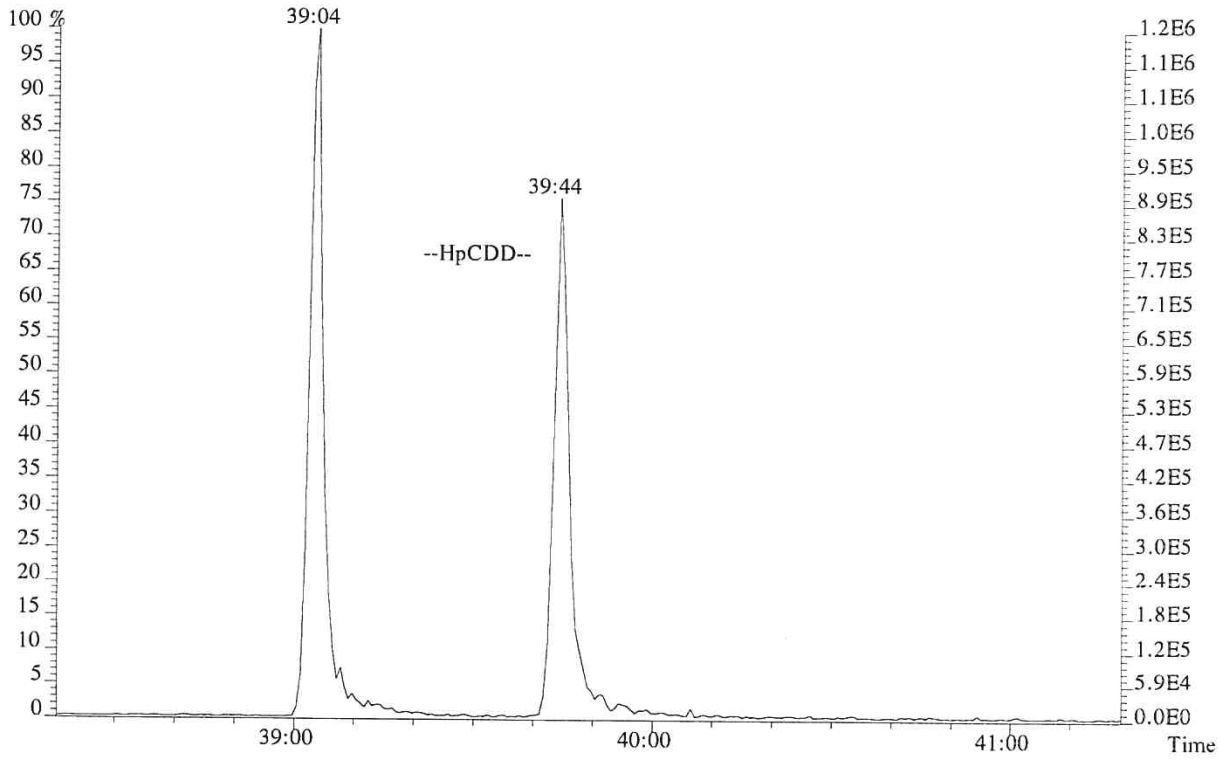


017755

File:P513848 #1-268 Acq:24-JAN-2018 11:44:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:183360
407.7818 F:4



423.7766 F:4



017756

USEPA - CLP
6DFA6
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name: ALS Environmental Contract No.:
Lab Code: ALSTX Case No.: TO No.: SDG No.:
GC Column: DB-5MSUI ID: 0.25(mm) Instrument ID: E-HRMS-07
Init. Calib. Date(s).: 01/24/18 Method 1613/8290
Init. Calib. Time.: 11:44

RR/RRF

Target Analytes	CS0.5	CS1	CS2	CS3	CS4	CS5	MEAN RR/RRF	%RSD	QC LIMITS
2,3,7,8-TCDD	1.10	1.07	1.06	1.07	1.10	1.11	1.09	1.96	+/-20%
2,3,7,8-TCDF	0.89	0.96	0.91	0.94	0.96	0.99	0.94	4.09	+/-20%
1,2,3,7,8-PeCDF	0.93	0.98	1.02	1.03	1.06	1.06	1.01	5.02	+/-20%
1,2,3,7,8-PeCDD	0.92	0.97	0.96	0.95	0.97	0.97	0.96	2.08	+/-20%
2,3,4,7,8-PeCDF	0.87	0.94	0.98	0.97	0.99	1.00	0.96	4.97	+/-20%
1,2,3,4,7,8-HxCDF	1.07	1.13	1.22	1.21	1.25	1.26	1.19	6.34	+/-20%
1,2,3,6,7,8-HxCDF	1.06	1.07	1.13	1.13	1.17	1.17	1.12	4.28	+/-20%
1,2,3,4,7,8-HxCDD	0.96	1.04	1.03	1.06	1.06	1.07	1.04	3.78	+/-20%
1,2,3,6,7,8-HxCDD	1.00	1.06	1.03	1.03	1.05	1.06	1.04	2.33	+/-20%
1,2,3,7,8,9-HxCDD	0.98	1.06	1.10	1.06	1.07	1.10	1.06	4.09	+/-20%
2,3,4,6,7,8-HxCDF	1.01	1.09	1.12	1.13	1.15	1.17	1.11	5.18	+/-20%
1,2,3,7,8,9-HxCDF	1.08	1.10	1.15	1.17	1.18	1.18	1.14	3.94	+/-20%
1,2,3,4,6,7,8-HpCDF	1.31	1.32	1.36	1.37	1.37	1.38	1.35	2.22	+/-20%
1,2,3,4,6,7,8-HpCDD	1.00	0.98	1.05	1.03	1.05	1.04	1.02	2.88	+/-20%
1,2,3,4,7,8,9-HpCDF	1.18	1.23	1.29	1.30	1.28	1.27	1.26	3.68	+/-20%
OCDD	1.05	1.14	1.14	1.13	1.12	1.12	1.12	2.97	+/-20%
OCDF	1.26	1.39	1.35	1.33	1.39	1.43	1.36	4.36	+/-20%
Labeled Compounds									
13C-2,3,7,8-TCDD	0.91	0.87	0.93	0.90	0.94	0.98	0.92	4.14	+/-35%
13C-1,2,3,7,8-PeCDD	0.91	0.83	1.03	0.99	1.01	1.08	0.98	9.21	+/-35%
13C-1,2,3,4,7,8-HxCDD	0.94	0.90	0.90	0.95	0.93	0.92	0.92	2.06	+/-35%
13C-1,2,3,6,7,8-HxCDD	0.96	0.96	0.94	0.97	0.97	0.91	0.95	2.50	+/-35%
13C-1,2,3,4,6,7,8-HpCDD	0.81	0.92	0.79	0.88	0.90	0.85	0.86	5.83	+/-35%
13C-OCDD	0.52	0.63	0.58	0.58	0.62	0.57	0.58	6.90	+/-35%
13C-2,3,7,8-TCDF	1.45	1.48	1.53	1.60	1.53	1.49	1.51	3.54	+/-35%
13C-1,2,3,7,8-PeCDF	1.37	1.32	1.50	1.50	1.52	1.62	1.47	7.34	+/-35%
13C-2,3,4,7,8-PeCDF	1.36	1.29	1.50	1.46	1.52	1.61	1.46	7.94	+/-35%
13C-1,2,3,4,7,8-HxCDF	1.22	1.27	1.18	1.29	1.25	1.19	1.23	3.63	+/-35%
13C-1,2,3,6,7,8-HxCDF	1.40	1.48	1.34	1.42	1.41	1.34	1.40	3.84	+/-35%
13C-2,3,4,6,7,8-HxCDF	1.26	1.26	1.23	1.27	1.28	1.23	1.26	1.87	+/-35%
13C-1,2,3,7,8,9-HxCDF	1.03	1.17	1.06	1.00	1.17	1.08	1.09	6.47	+/-35%
13C-1,2,3,4,6,7,8-HpCDF	0.96	1.02	0.92	0.99	0.98	0.93	0.97	3.83	+/-35%
13C-1,2,3,4,7,8,9-HpCDF	0.76	0.95	0.79	0.74	0.86	0.82	0.82	9.19	+/-35%
37Cl-2,3,7,8-TCDD	0.93	0.96	1.03	1.00	1.05	1.11	1.01	6.21	+/-35%

1.123789-HxCDD Relative Response (RR) is calculated based on the labeled analog of the other two HxCDDs.
2. OCDF RR is calculated based on the labeled analog of OCDD

USEPA - CLP
6DFB6
CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY
HIGH RESOLUTION

Lab Name: ALS Environmental Contract No.:
Lab Code: ALSTX Case No.: TO No.: SDG No.:
GC Column: DB-5MSUI ID: 0.25(mm) Instrument ID: E-HRMS-07
Init. Calib. Date(s).: 01/24/18 Method 1613/8290
Init. Calib. Time.: 11:44

Target Analytes	SELECTED IONS	ION ABUNDANCE RATIO CS0.5	CS1	CS2	CS3	CS4	CS5	FLAG	ION RATIO QC LIMITS
2,3,7,8-TCDF	304/306	0.76	0.72	0.74	0.75	0.77	0.77		0.65-0.89
2,3,7,8-TCDD	320/322	0.73	0.88	0.76	0.79	0.78	0.78		0.65-0.89
1,2,3,7,8-PeCDF	340/342	1.42	1.54	1.48	1.53	1.54	1.55		1.32-1.78
2,3,4,7,8-PeCDF	340/342	1.48	1.46	1.50	1.52	1.53	1.54		1.32-1.78
1,2,3,7,8-PeCDD	356/358	1.64	1.66	1.58	1.56	1.56	1.57		1.32-1.78
1,2,3,4,7,8-HxCDF	374/376	1.18	1.20	1.20	1.22	1.22	1.23		1.05-1.43
1,2,3,6,7,8-HxCDF	374/376	1.28	1.17	1.21	1.21	1.22	1.24		1.05-1.43
2,3,4,6,7,8-HxCDF	374/376	1.12	1.24	1.22	1.22	1.21	1.22		1.05-1.43
1,2,3,7,8,9-HxCDF	374/376	1.19	1.33	1.22	1.21	1.24	1.23		1.05-1.43
1,2,3,4,7,8-HxCDD	390/392	1.32	1.26	1.25	1.25	1.25	1.26		1.05-1.43
1,2,3,6,7,8-HxCDD	390/392	1.09	1.35	1.26	1.26	1.26	1.26		1.05-1.43
1,2,3,7,8,9-HxCDD	390/392	1.23	1.21	1.24	1.28	1.26	1.25		1.05-1.43
1,2,3,4,6,7,8-HpCDF	408/410	0.98	1.03	1.02	1.02	1.03	1.04		0.88-1.20
1,2,3,4,7,8,9-HpCDF	408/410	1.03	0.96	1.01	1.03	1.03	1.04		0.88-1.20
1,2,3,4,6,7,8-HpCDD	424/426	0.99	1.11	1.04	1.05	1.05	1.05		0.88-1.20
OCDF	442/444	0.88	0.95	0.89	0.90	0.91	0.91		0.76-1.02
OCDD	458/460	0.86	0.88	0.89	0.89	0.89	0.89		0.76-1.02
13C-2,3,7,8-TCDD	332/334	0.81	0.80	0.80	0.80	0.81	0.80		0.65-0.89
13C-1,2,3,7,8-PeCDD	368/370	1.60	1.59	1.59	1.58	1.59	1.59		1.32-1.78
13C-1,2,3,4,7,8-HxCDD	402/404	1.29	1.27	1.26	1.33	1.27	1.28		1.05-1.43
13C-1,2,3,6,7,8-HxCDD	402/404	1.26	1.28	1.27	1.20	1.26	1.26		1.05-1.43
13C-1,2,3,4,6,7,8-HpCDD	436/438	1.06	1.04	1.06	1.06	1.08	1.06		0.88-1.20
13C-OCDD	470/472	0.90	0.91	0.90	0.89	0.90	0.89		0.76-1.02
13C-2,3,7,8-TCDF	316/318	0.79	0.79	0.80	0.79	0.79	0.79		0.65-0.89
13C-1,2,3,7,8-PeCDF	352/354	1.58	1.60	1.59	1.58	1.58	1.59		1.32-1.78
13C-2,3,4,7,8-PeCDF	352/354	1.58	1.58	1.58	1.58	1.58	1.58		1.32-1.78
13C-1,2,3,4,7,8-HxCDF	384/386	0.53	0.52	0.52	0.53	0.53	0.53		0.43-0.59
13C-1,2,3,6,7,8-HxCDF	384/386	0.53	0.53	0.53	0.53	0.53	0.53		0.43-0.59
13C-2,3,4,6,7,8-HxCDF	384/386	0.52	0.52	0.52	0.52	0.53	0.52		0.43-0.59
13C-1,2,3,7,8,9-HxCDF	384/386	0.52	0.52	0.53	0.53	0.52	0.52		0.43-0.59
13C-1,2,3,4,6,7,8-HpCDF	418/420	0.45	0.45	0.45	0.45	0.45	0.45		0.37-0.51
13C-1,2,3,4,7,8,9-HpCDF	418/420	0.45	0.44	0.45	0.45	0.45	0.45		0.37-0.51
13C-1,2,3,4-TCDD	332/334	0.81	0.82	0.81	0.81	0.82	0.82		0.65-0.89
13C-1,2,3,7,8,9-HxCDD	402/404	1.26	1.25	1.27	1.23	1.25	1.25		1.05-1.43

Quality Control (QC) limits represent +/- 15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76554

Run #1 Filename P513850 Samp: 1 Inj: 1 Acquired: 24-JAN-18 13:32:06
Processed: 24-JAN-18 15:49:37 Sample ID: CS0.5

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	3.276e+02	4.332e+02	0.76	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	2.212e+03	1.557e+03	1.42	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:42	2.093e+03	1.410e+03	1.48	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:17	1.728e+03	1.459e+03	1.18	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	2.025e+03	1.584e+03	1.28	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:53	1.636e+03	1.459e+03	1.12	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.473e+03	1.234e+03	1.19	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	1.513e+03	1.543e+03	0.98	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.104e+03	1.067e+03	1.03	yes	no	1.258
10	Unk	OCDF	42:45	1.481e+03	1.680e+03	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	2.508e+02	3.419e+02	0.73	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:58	1.543e+03	9.381e+02	1.64	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	37:00	1.247e+03	9.443e+02	1.32	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	1.208e+03	1.105e+03	1.09	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	1.245e+03	1.015e+03	1.23	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	9.700e+02	9.817e+02	0.99	yes	no	1.025
17	Unk	OCDD	42:31	1.223e+03	1.416e+03	0.86	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	1.518e+05	1.920e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:48	1.987e+05	1.259e+05	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:41	1.969e+05	1.249e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:16	8.196e+04	1.558e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:23	9.429e+04	1.782e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:52	8.377e+04	1.622e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:37	6.829e+04	1.322e+05	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	5.778e+04	1.288e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	4.552e+04	1.019e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	9.630e+04	1.195e+05	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	1.330e+05	8.317e+04	1.60	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	1.026e+05	7.962e+04	1.29	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	1.036e+05	8.231e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	8.056e+04	7.625e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	9.520e+04	1.052e+05	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:58	1.055e+05	1.310e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	1.085e+05	8.606e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	5.518e+02				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
76554

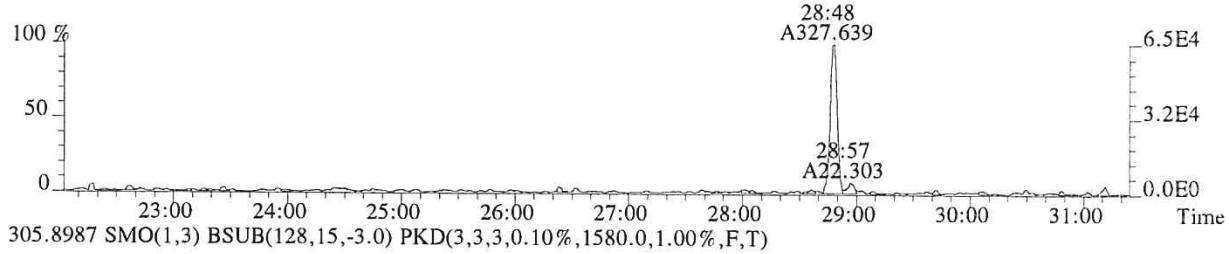
Run #1 Filename P513850 Samp: 1 Inj: 1 Acquired: 24-JAN-18 13:32:06
Processed: 24-JAN-18 15:49:37 LAB. ID: CS0.5

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.43e+04	7.40e+02	8.7e+01	8.19e+04	1.58e+03	5.2e+01
2	1,2,3,7,8-PeCDF	4.30e+05	1.01e+03	4.3e+02	3.00e+05	2.96e+03	1.0e+02
3	2,3,4,7,8-PeCDF	4.25e+05	1.01e+03	4.2e+02	2.98e+05	2.96e+03	1.0e+02
4	1,2,3,4,7,8-HxCDF	3.96e+05	8.76e+02	4.5e+02	3.10e+05	2.44e+02	1.3e+03
5	1,2,3,6,7,8-HxCDF	4.08e+05	8.76e+02	4.7e+02	3.20e+05	2.44e+02	1.3e+03
6	2,3,4,6,7,8-HxCDF	3.56e+05	8.76e+02	4.1e+02	3.17e+05	2.44e+02	1.3e+03
7	1,2,3,7,8,9-HxCDF	3.08e+05	8.76e+02	3.5e+02	2.40e+05	2.44e+02	9.9e+02
8	1,2,3,4,6,7,8-HpCDF	3.07e+05	8.60e+02	3.6e+02	3.29e+05	5.36e+02	6.1e+02
9	1,2,3,4,7,8,9-HpCDF	2.09e+05	8.60e+02	2.4e+02	1.94e+05	5.36e+02	3.6e+02
10	OCDF	2.59e+05	6.40e+02	4.0e+02	2.85e+05	1.05e+03	2.7e+02
11	2,3,7,8-TCDD	4.96e+04	1.22e+03	4.1e+01	7.37e+04	7.32e+02	1.0e+02
12	1,2,3,7,8-PeCDD	3.05e+05	1.17e+03	2.6e+02	1.78e+05	1.88e+02	9.5e+02
13	1,2,3,4,7,8-HxCDD	2.70e+05	5.20e+02	5.2e+02	2.09e+05	4.64e+02	4.5e+02
14	1,2,3,6,7,8-HxCDD	2.52e+05	5.20e+02	4.8e+02	2.26e+05	4.64e+02	4.9e+02
15	1,2,3,7,8,9-HxCDD	2.55e+05	5.20e+02	4.9e+02	2.09e+05	4.64e+02	4.5e+02
16	1,2,3,4,6,7,8-HpCDD	1.84e+05	1.72e+02	1.1e+03	2.04e+05	1.92e+02	1.1e+03
17	OCDD	1.95e+05	1.24e+02	1.6e+03	2.29e+05	1.76e+03	1.3e+02
18	13C-2,3,7,8-TCDF	2.97e+07	7.00e+03	4.2e+03	3.74e+07	3.24e+03	1.2e+04
19	13C-1,2,3,7,8-PeCDF	3.75e+07	6.04e+02	6.2e+04	2.38e+07	1.03e+03	2.3e+04
20	13C-2,3,4,7,8-PeCDF	3.92e+07	6.04e+02	6.5e+04	2.45e+07	1.03e+03	2.4e+04
21	13C-1,2,3,4,7,8-HxCDF	1.77e+07	4.00e+02	4.4e+04	3.34e+07	1.14e+03	2.9e+04
22	13C-1,2,3,6,7,8-HxCDF	1.91e+07	4.00e+02	4.8e+04	3.65e+07	1.14e+03	3.2e+04
23	13C-2,3,4,6,7,8-HxCDF	1.78e+07	4.00e+02	4.5e+04	3.38e+07	1.14e+03	3.0e+04
24	13C-1,2,3,7,8,9-HxCDF	1.38e+07	4.00e+02	3.5e+04	2.65e+07	1.14e+03	2.3e+04
25	13C-1,2,3,4,6,7,8-HpCDF	1.16e+07	1.44e+03	8.1e+03	2.60e+07	5.60e+03	4.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	8.60e+06	1.44e+03	6.0e+03	1.92e+07	5.60e+03	3.4e+03
27	13C-2,3,7,8-TCDD	1.97e+07	6.10e+03	3.2e+03	2.45e+07	2.10e+03	1.2e+04
28	13C-1,2,3,7,8-PeCDD	2.62e+07	9.88e+02	2.7e+04	1.65e+07	6.72e+02	2.4e+04
29	13C-1,2,3,4,7,8-HxCDD	2.25e+07	4.24e+03	5.3e+03	1.74e+07	9.28e+02	1.9e+04
30	13C-1,2,3,6,7,8-HxCDD	2.12e+07	4.24e+03	5.0e+03	1.71e+07	9.28e+02	1.8e+04
31	13C-1,2,3,4,6,7,8-HpCDD	1.57e+07	9.20e+02	1.7e+04	1.49e+07	8.32e+02	1.8e+04
32	13C-OCDD	1.56e+07	1.68e+02	9.3e+04	1.71e+07	3.40e+02	5.0e+04
33	13C-1,2,3,4-TCDD	2.11e+07	6.10e+03	3.5e+03	2.60e+07	2.10e+03	1.2e+04
34	13C-1,2,3,7,8,9-HxCDD	2.13e+07	4.24e+03	5.0e+03	1.71e+07	9.28e+02	1.8e+04
35	37Cl-2,3,7,8-TCDD	1.10e+05	1.04e+03	1.1e+02			

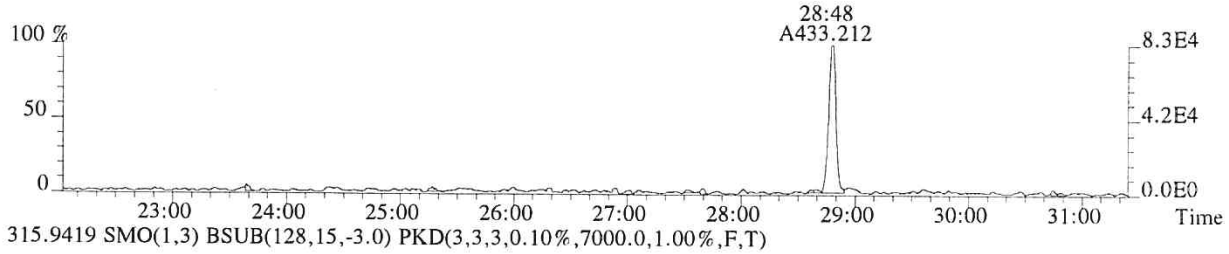
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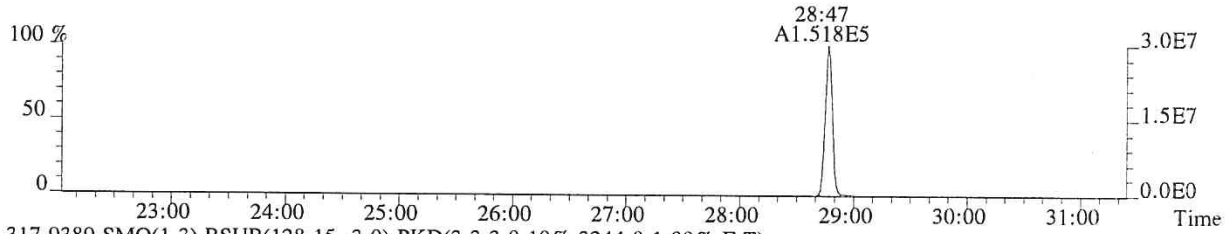
File:P513850 #1-665 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,740.0,1.00%,F,T)



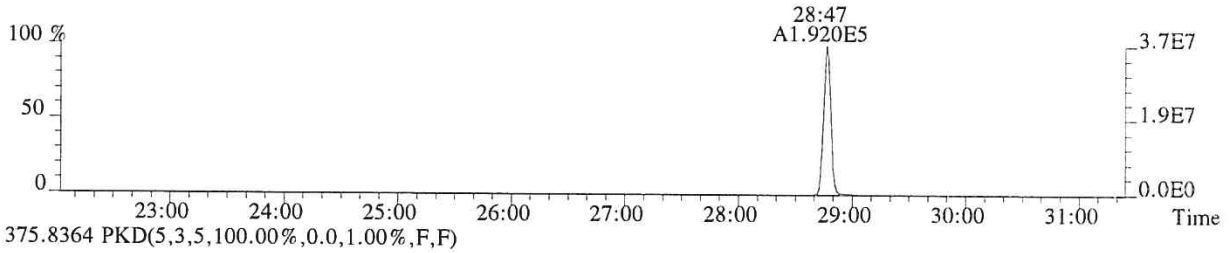
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1580.0,1.00%,F,T)



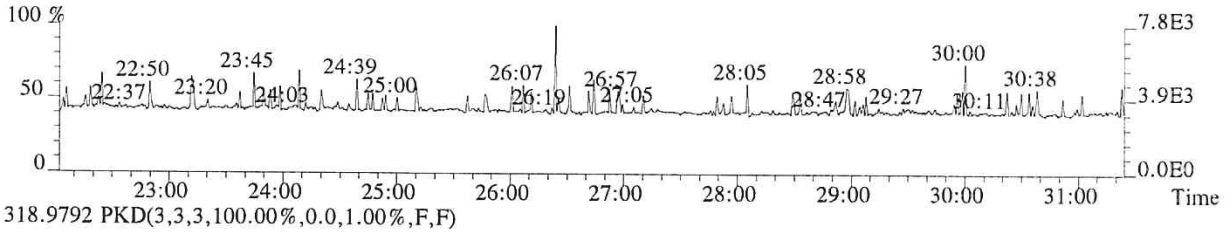
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7000.0,1.00%,F,T)



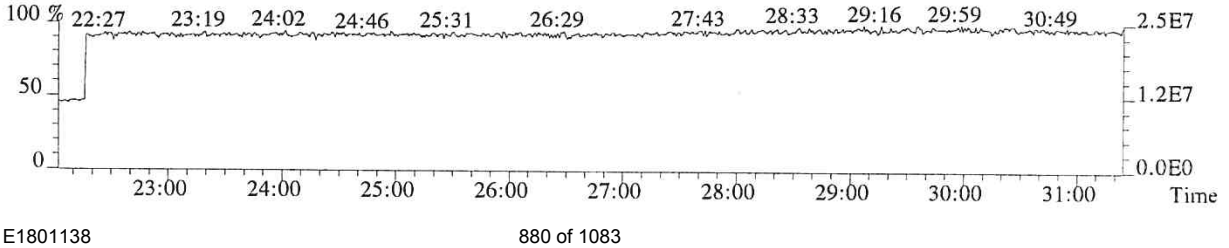
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3244.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

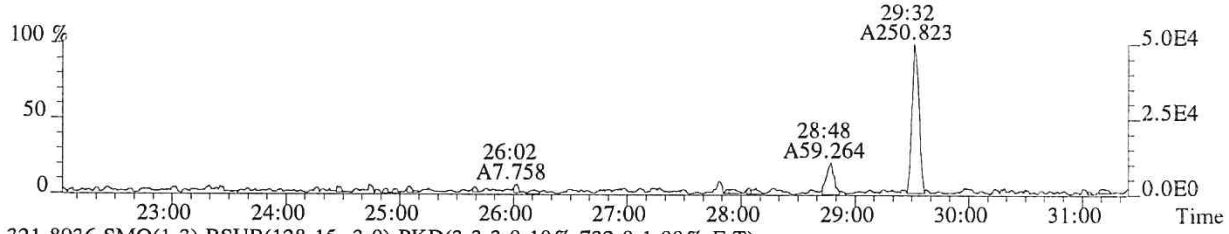


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

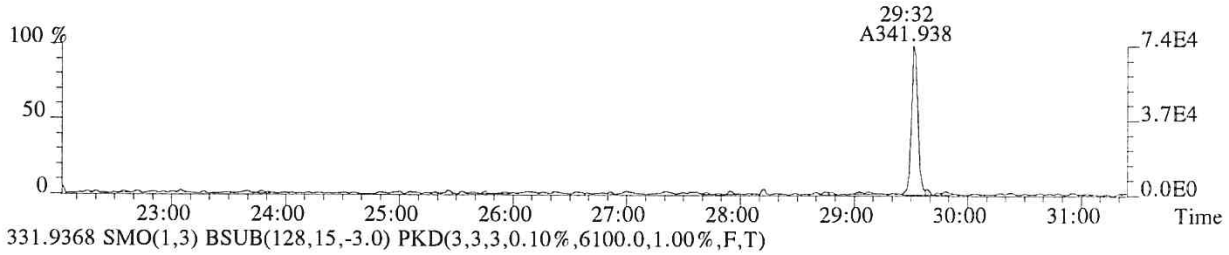


017761

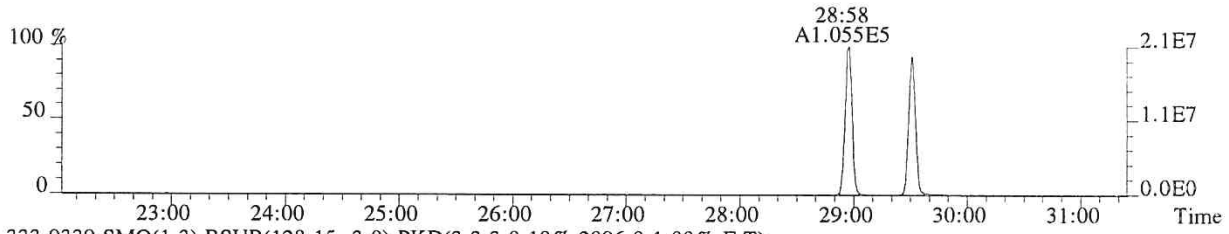
File:P513850 #1-665 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1220.0,1.00%,F,T)



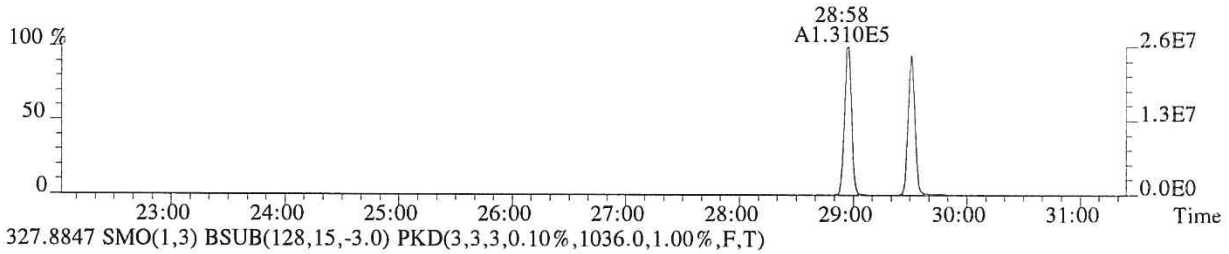
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,732.0,1.00%,F,T)



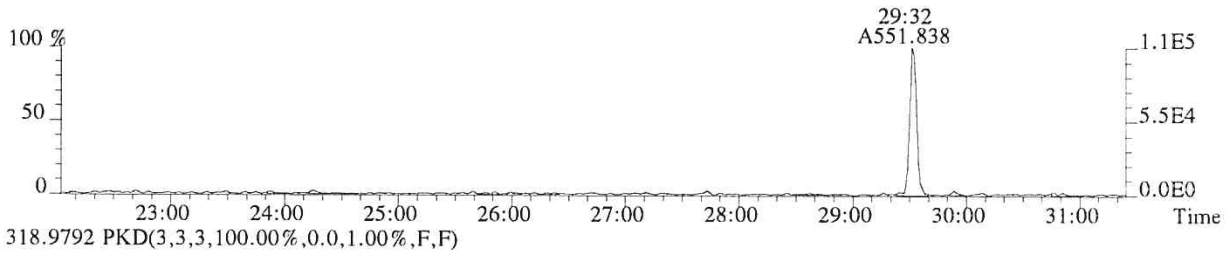
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6100.0,1.00%,F,T)



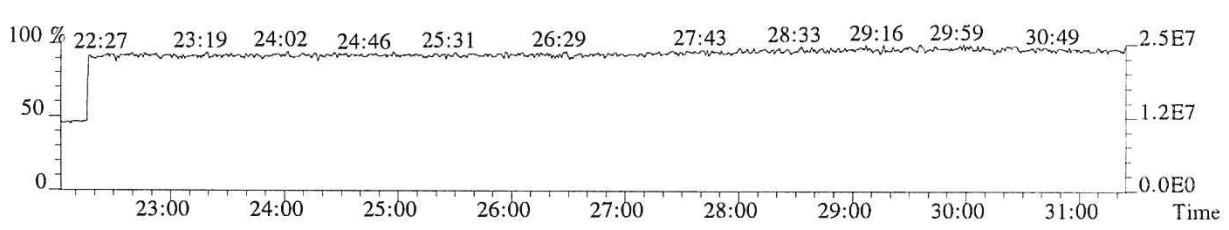
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2096.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1036.0,1.00%,F,T)

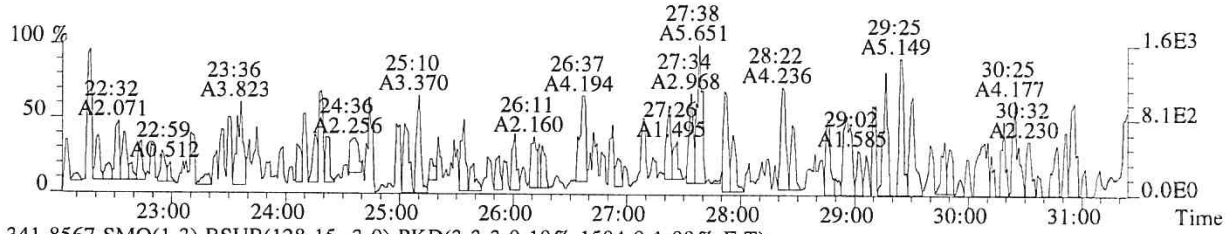


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

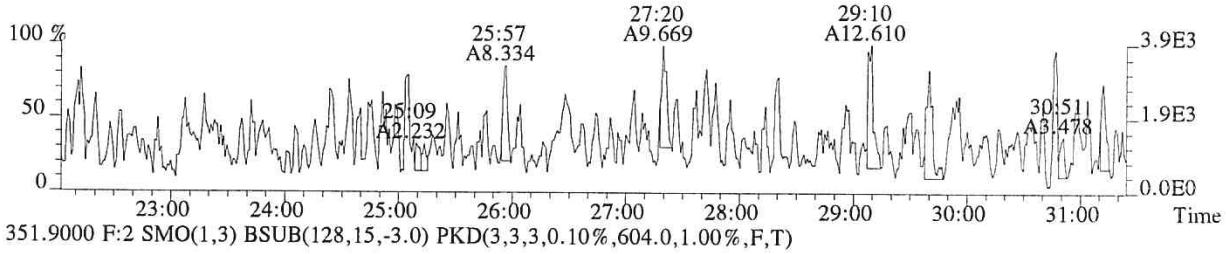


017762

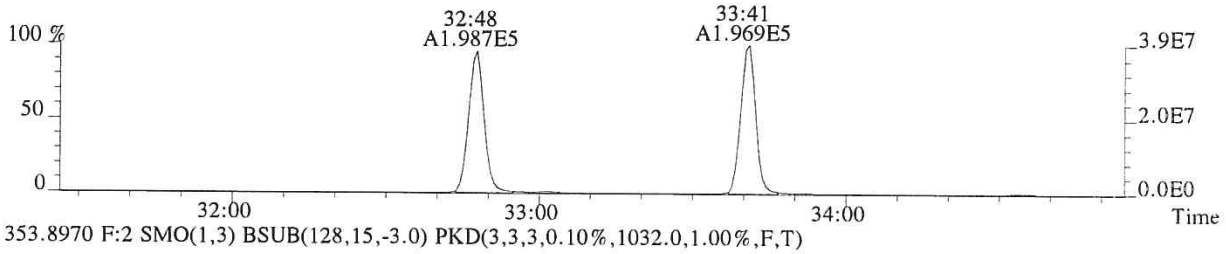
File:P513850 #1-665 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,244.0,1.00%,F,T)



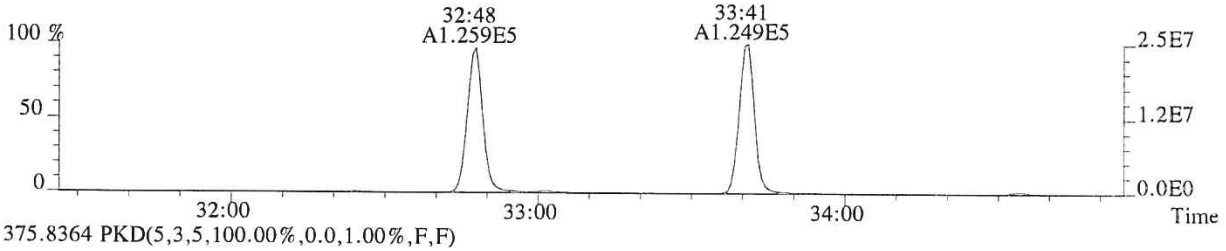
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1504.0,1.00%,F,T)



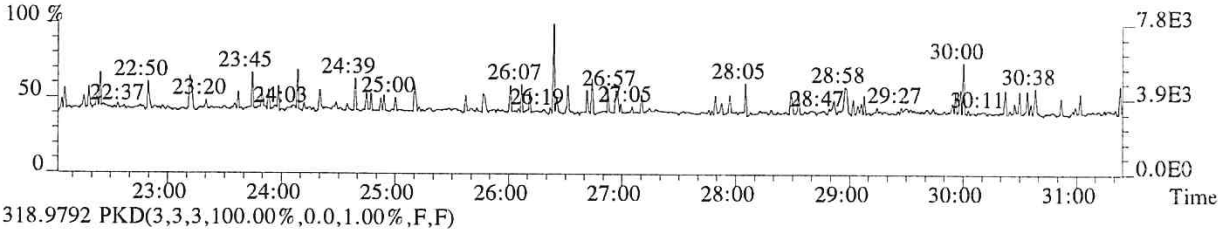
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,604.0,1.00%,F,T)



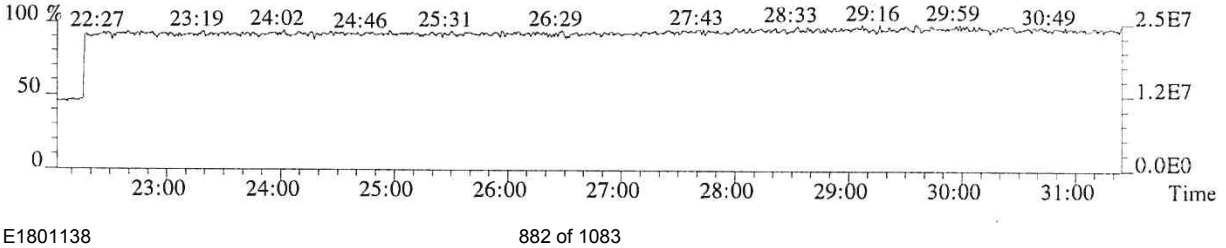
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

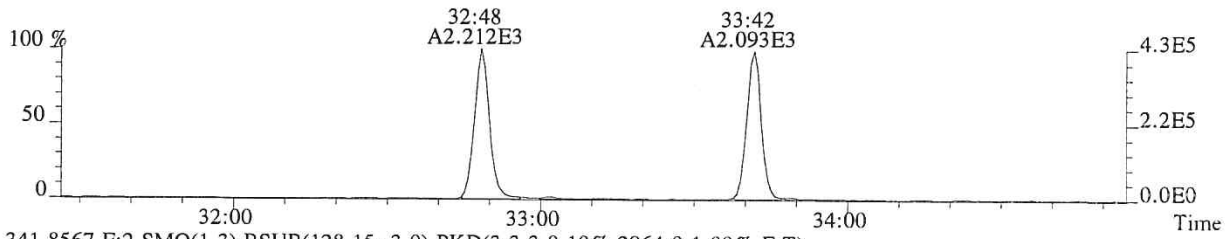


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

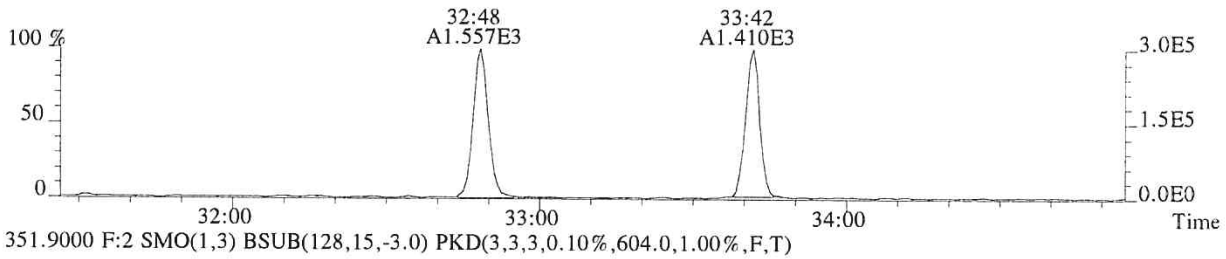


017763

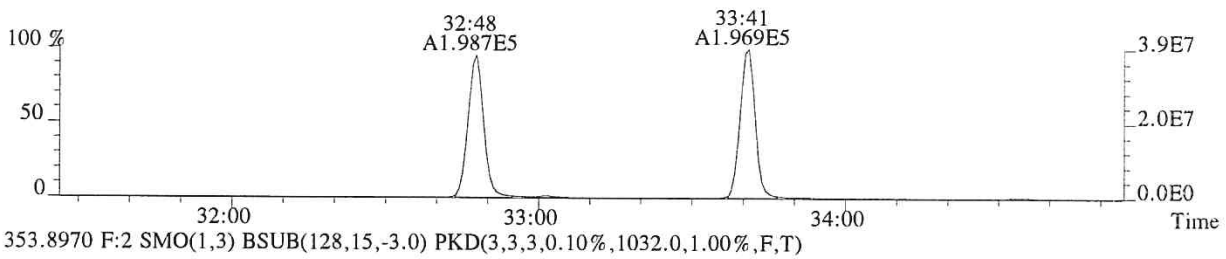
File:P513850 #1-313 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1008.0,1.00%,F,T)



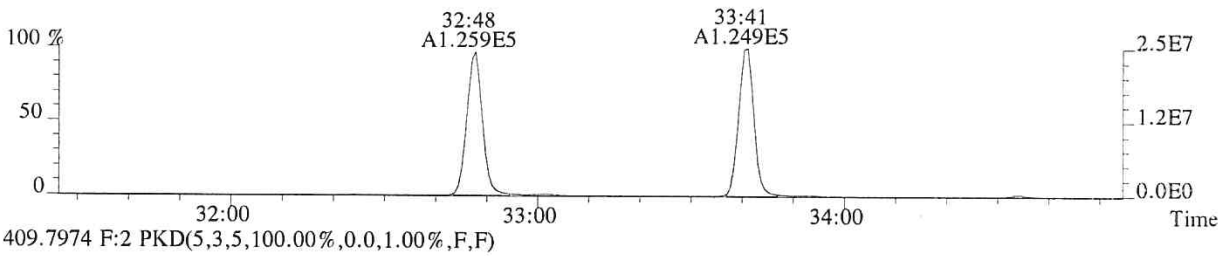
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2964.0,1.00%,F,T)



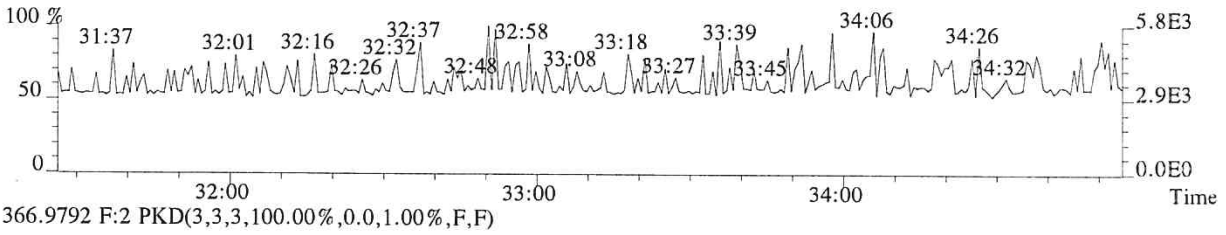
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,604.0,1.00%,F,T)



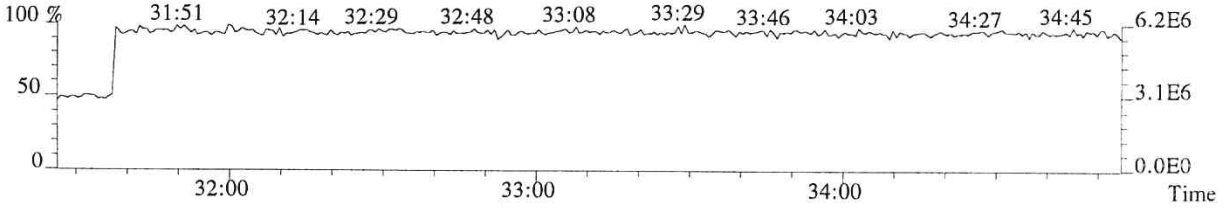
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

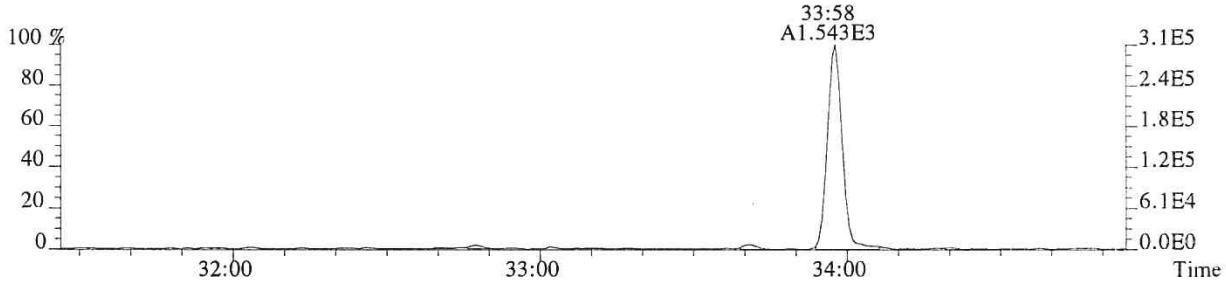


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

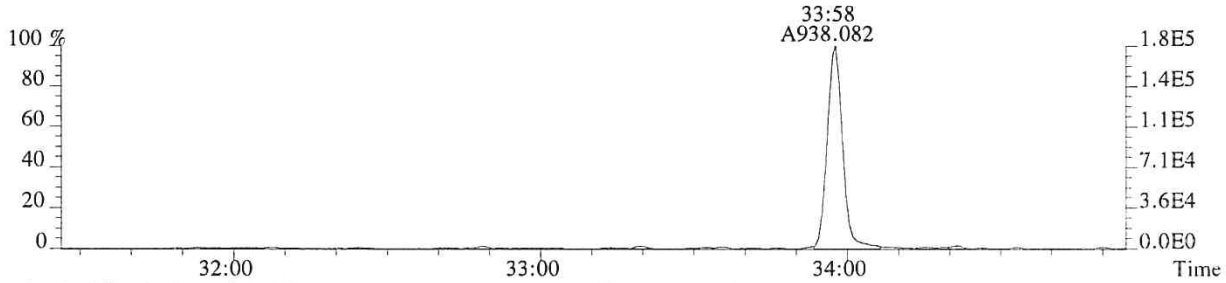


017764

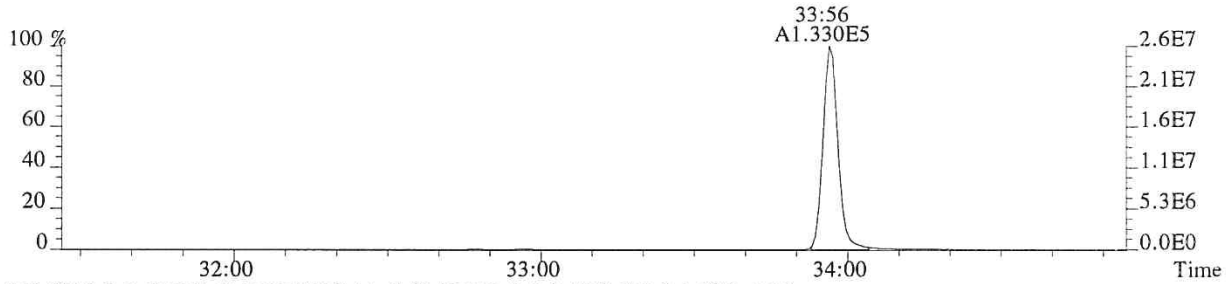
File:P513850 #1-313 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1172.0,1.00%,F,T)



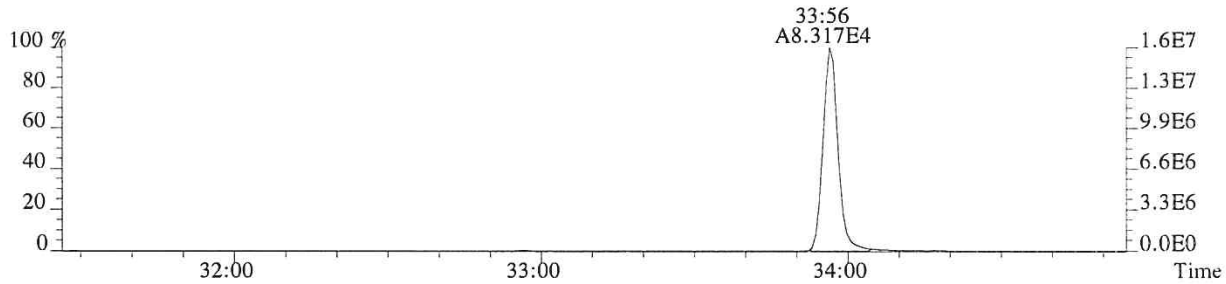
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,188.0,1.00%,F,T)



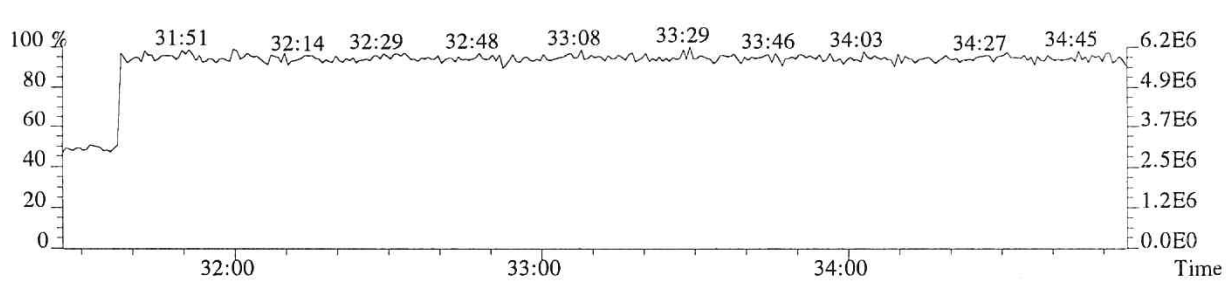
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,988.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,672.0,1.00%,F,T)

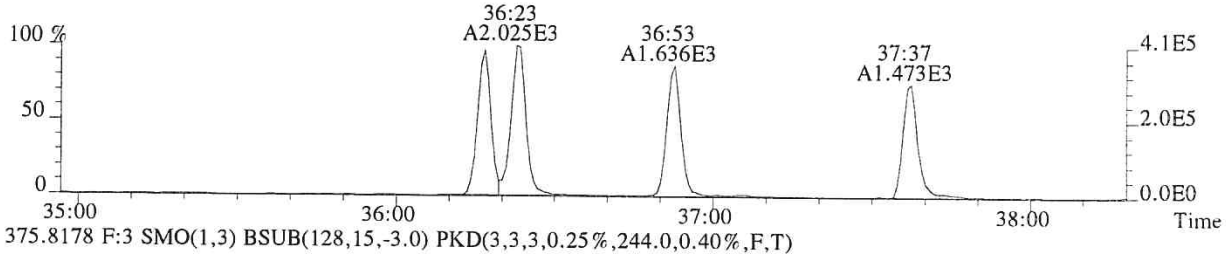


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

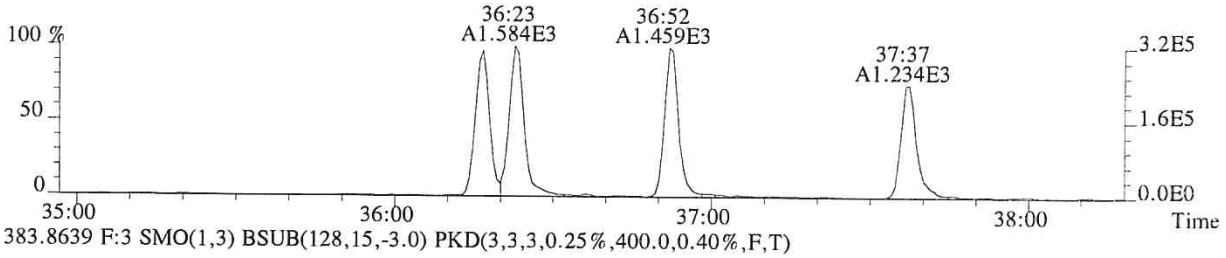


017765

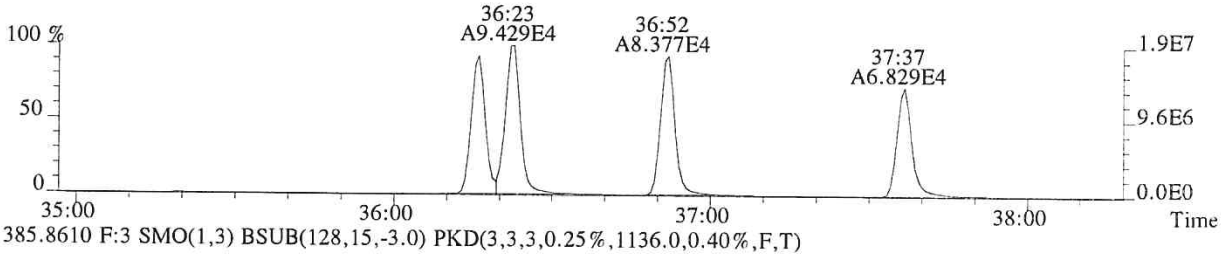
File:P513850 #1-303 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,876.0,0.40%,F,T)



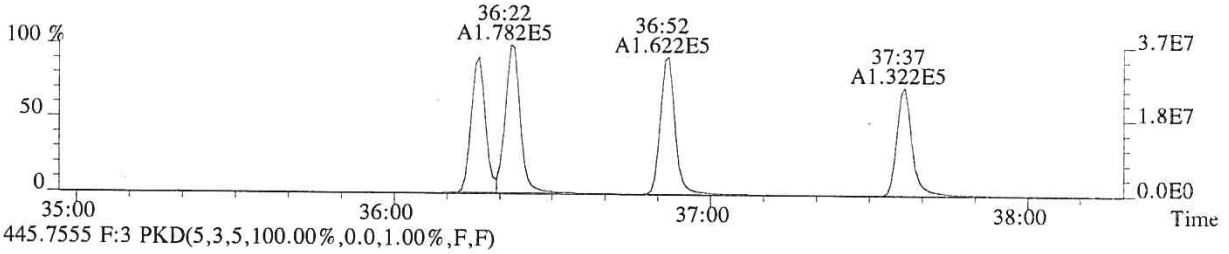
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,244.0,0.40%,F,T)



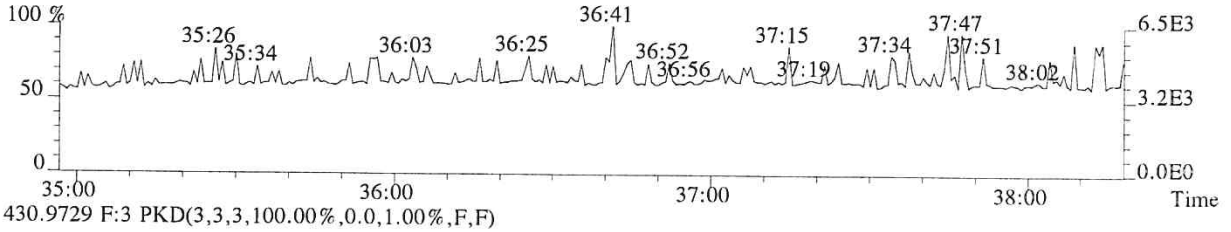
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,400.0,0.40%,F,T)



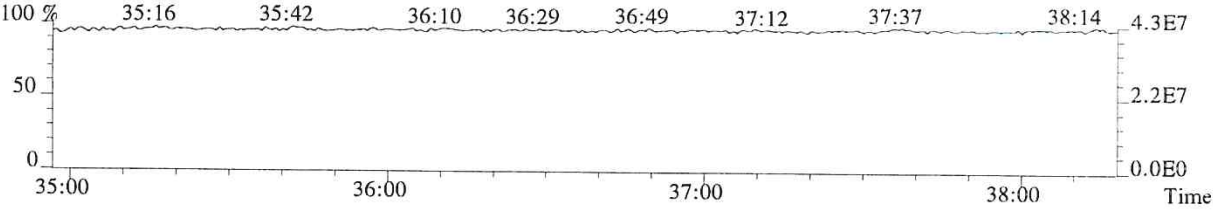
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1136.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

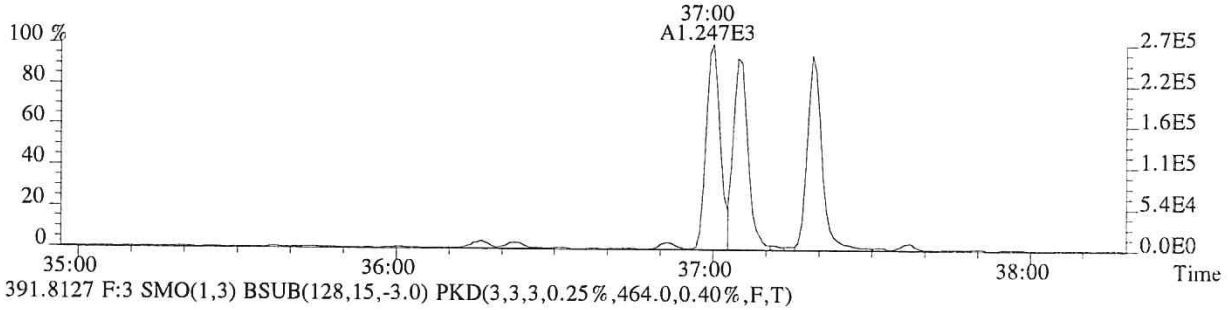


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

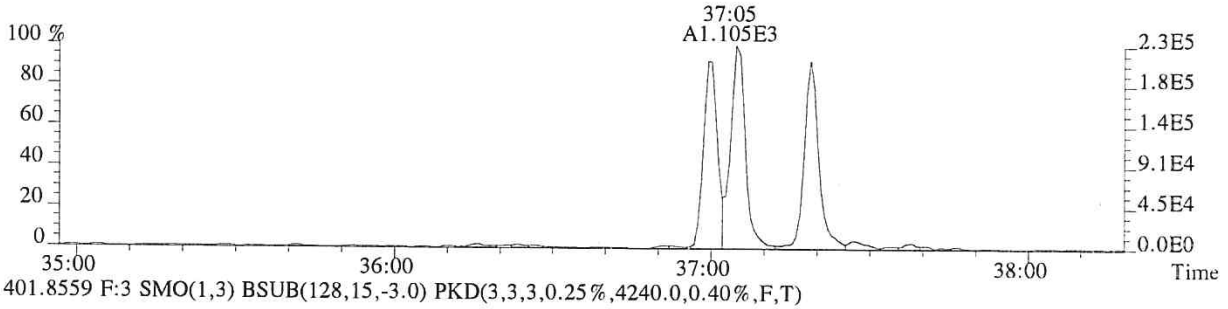


017766

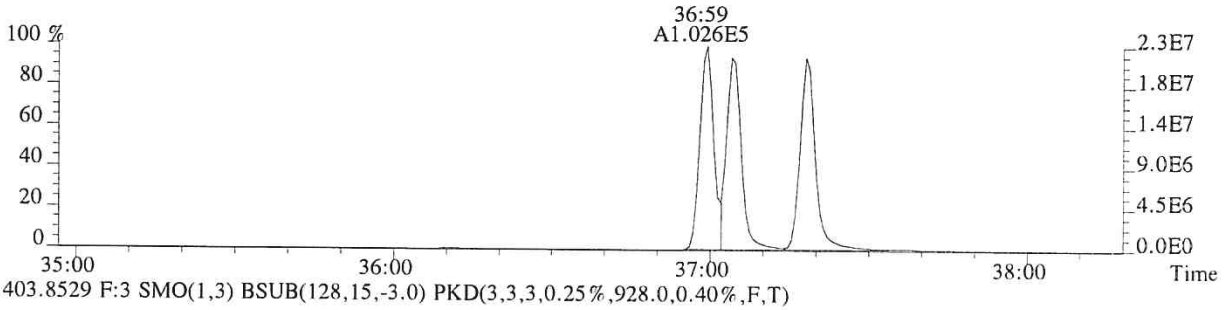
File:P513850 #1-303 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,520.0,0.40%,F,T)



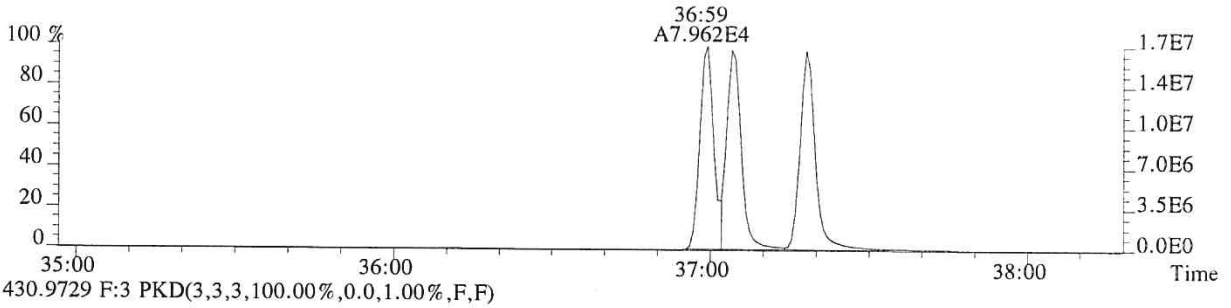
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,464.0,0.40%,F,T)



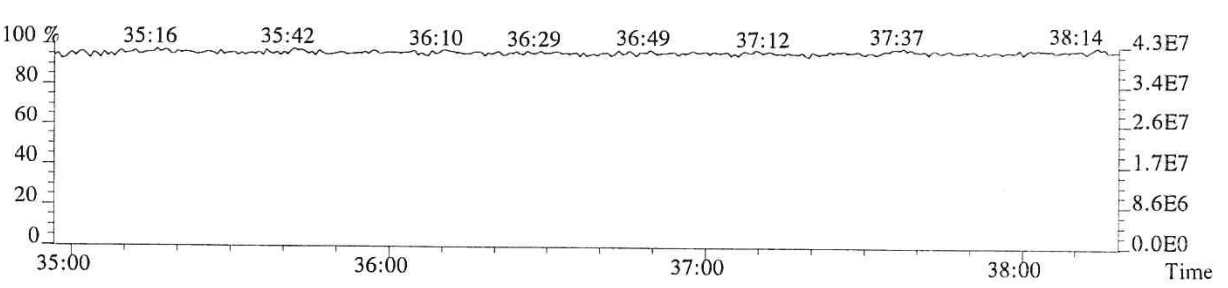
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4240.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,928.0,0.40%,F,T)

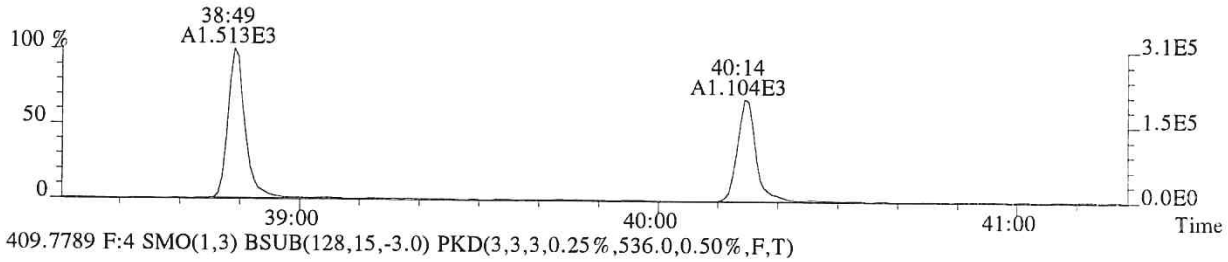


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

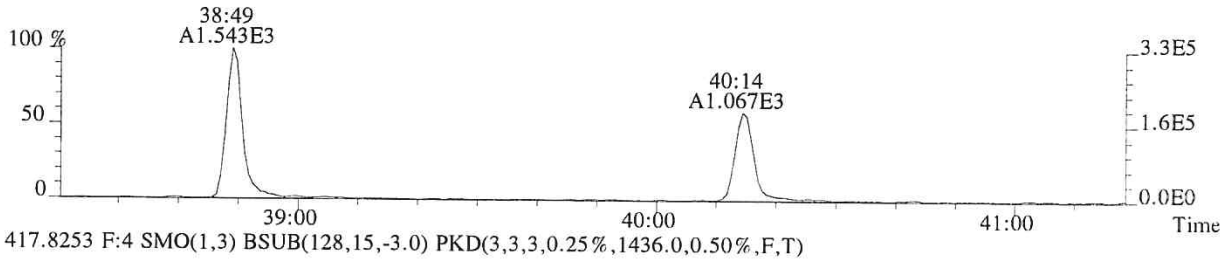


017767

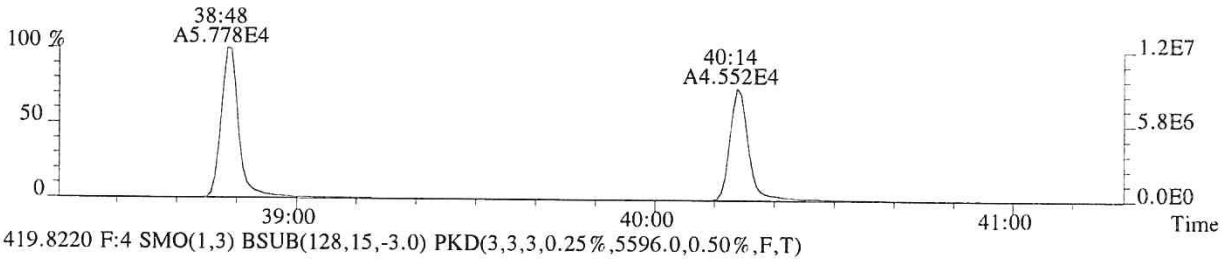
File:P513850 #1-268 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,860.0,0.50%,F,T)



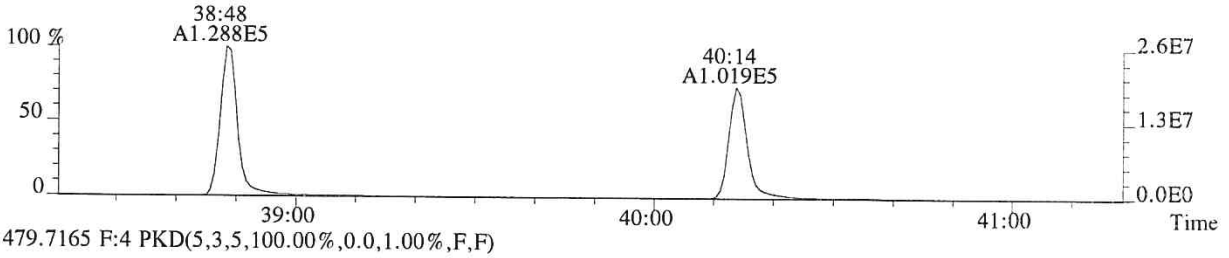
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,536.0,0.50%,F,T)



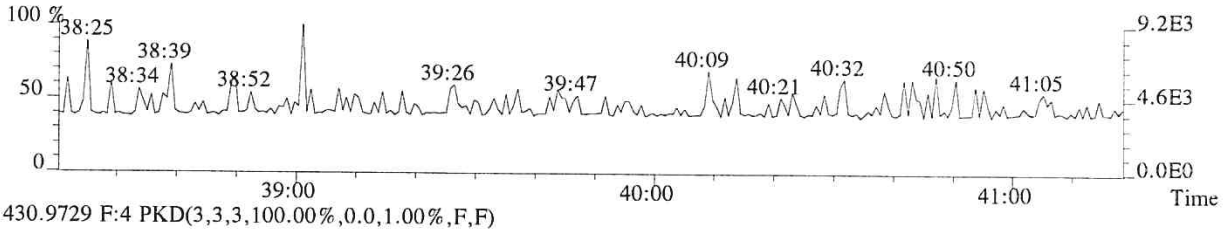
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1436.0,0.50%,F,T)



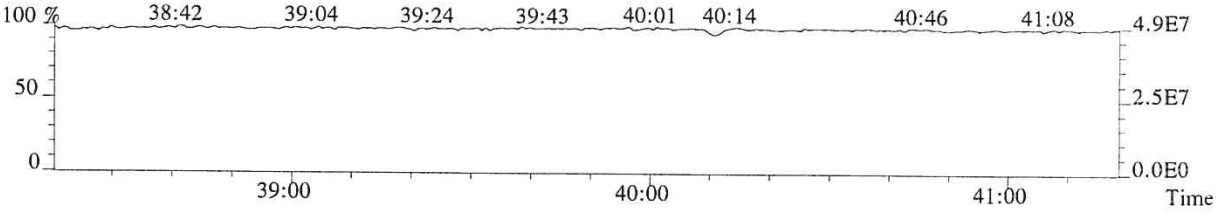
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5596.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

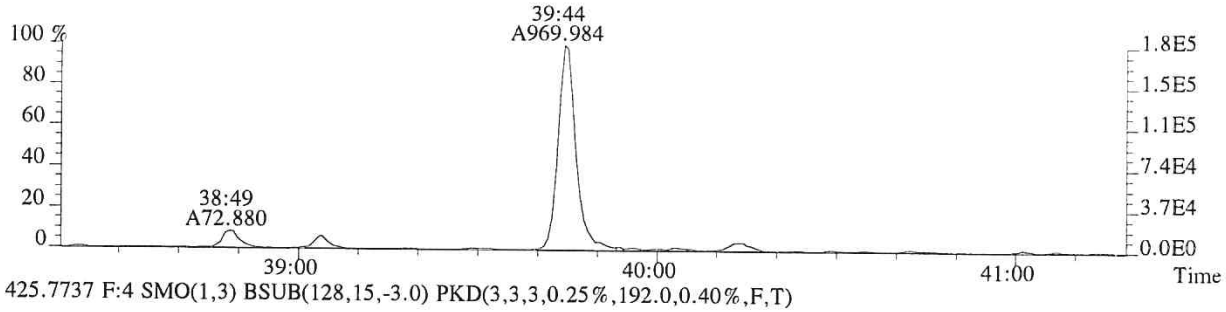


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

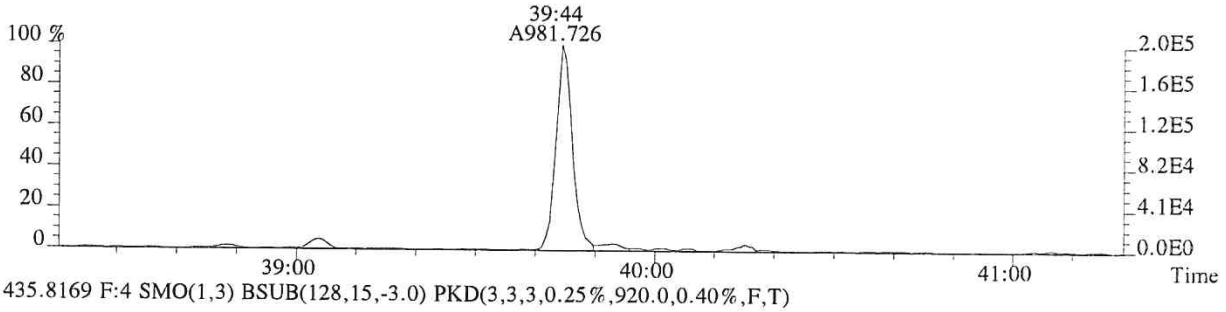


017768

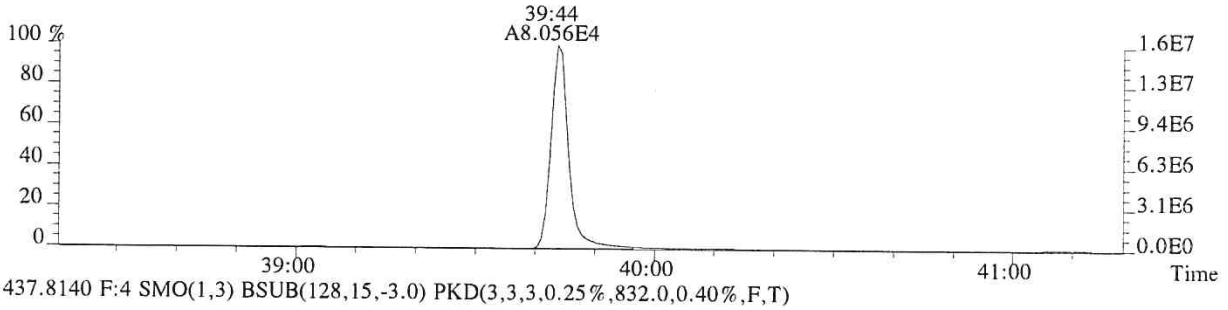
File:P513850 #1-268 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,172.0,0.40%,F,T)



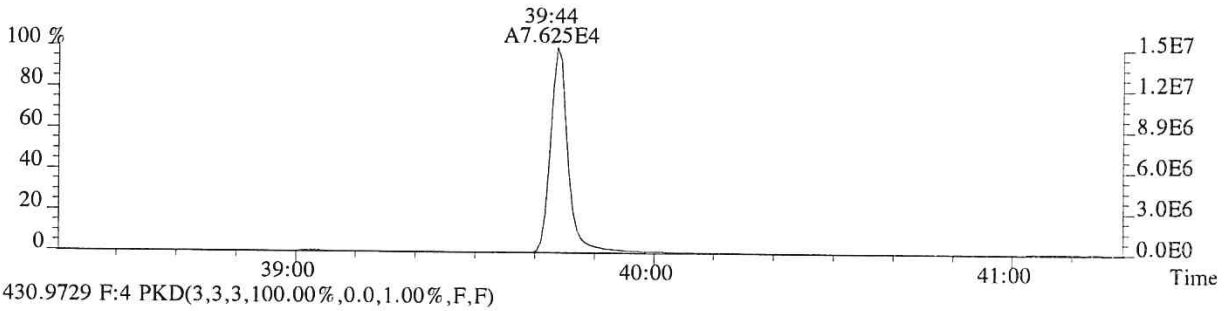
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,192.0,0.40%,F,T)



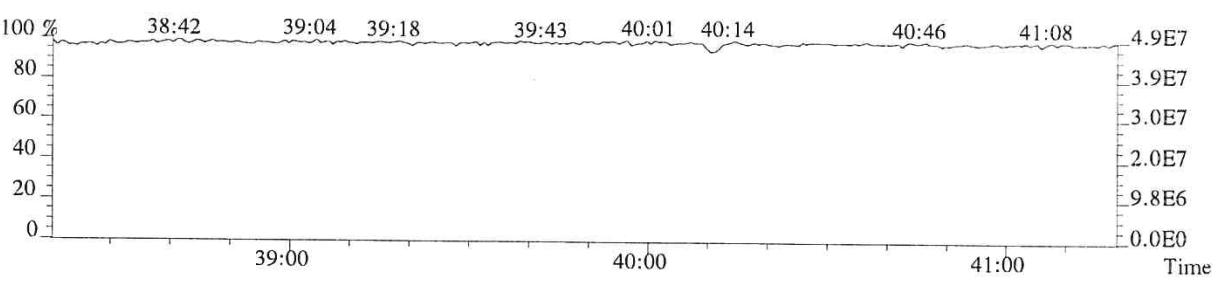
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,920.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,832.0,0.40%,F,T)

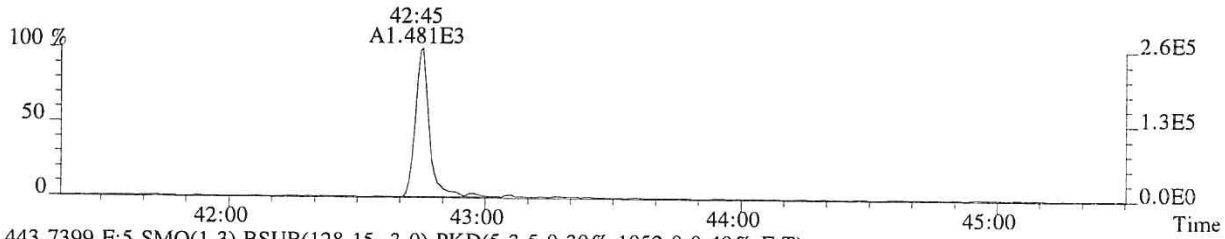


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

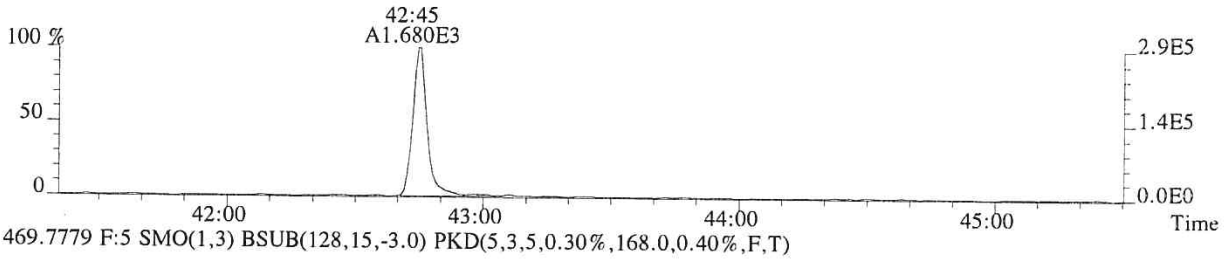


017769

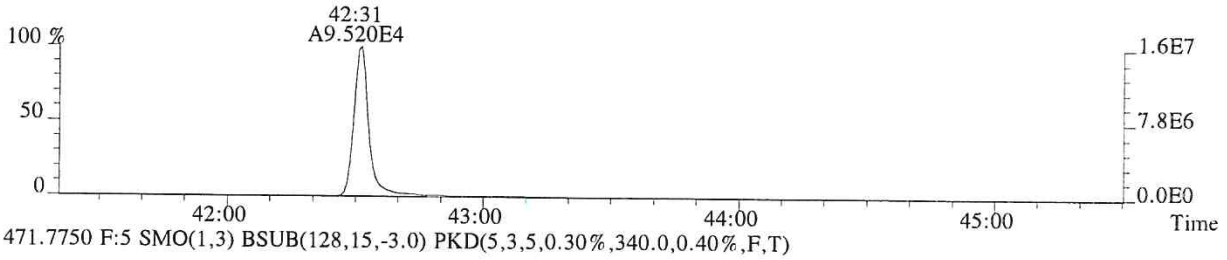
File:P513850 #1-375 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,640.0,0.40%,F,T)



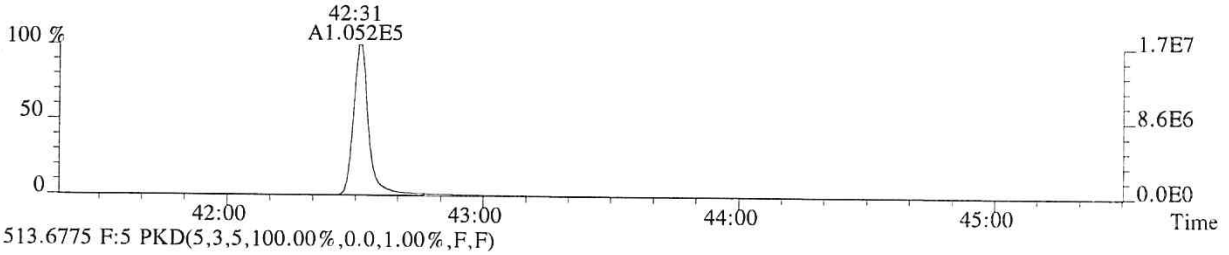
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1052.0,0.40%,F,T)



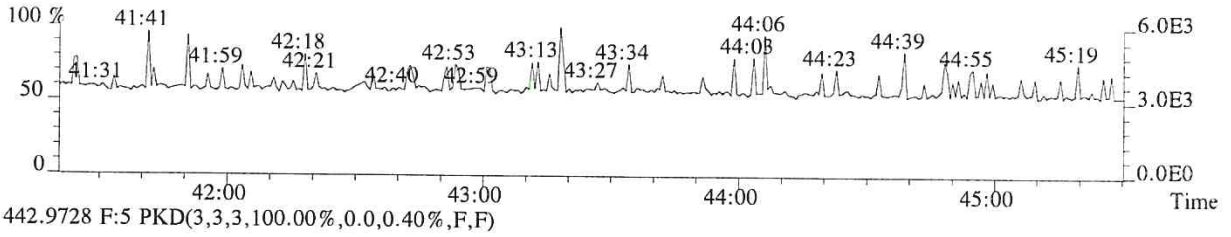
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,168.0,0.40%,F,T)



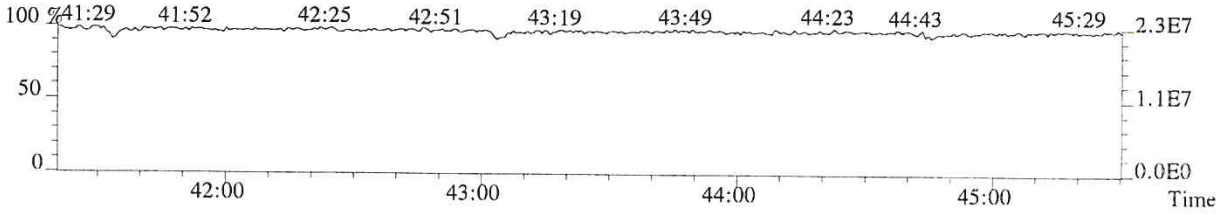
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,340.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

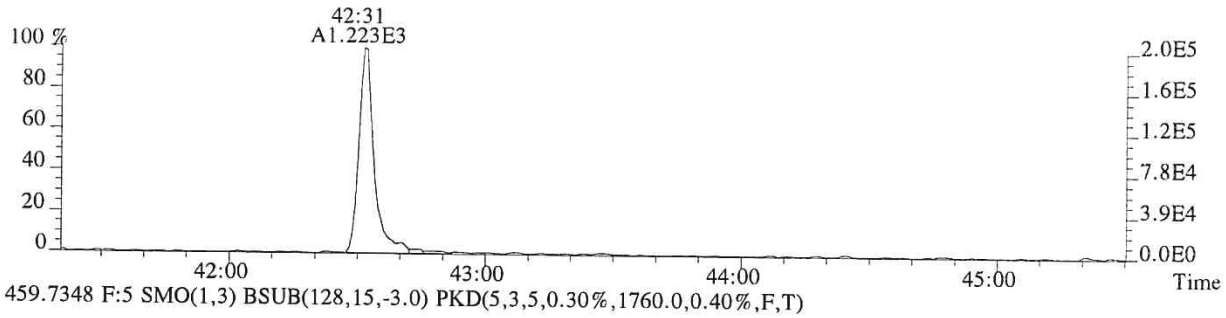


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

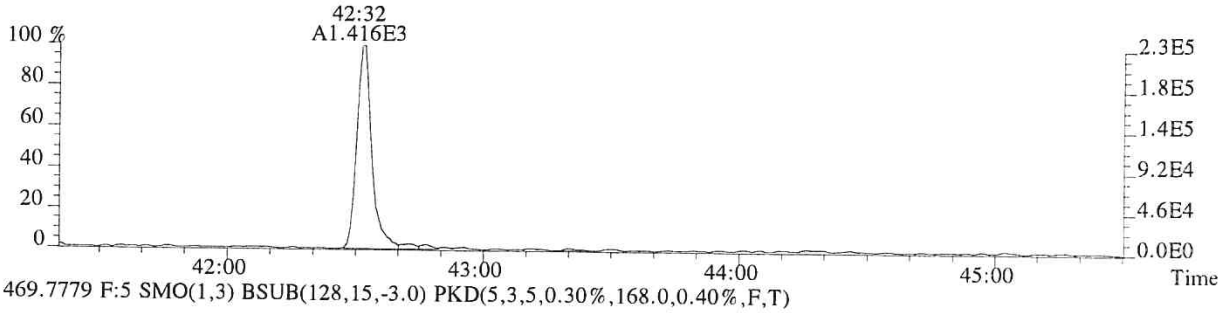


017770

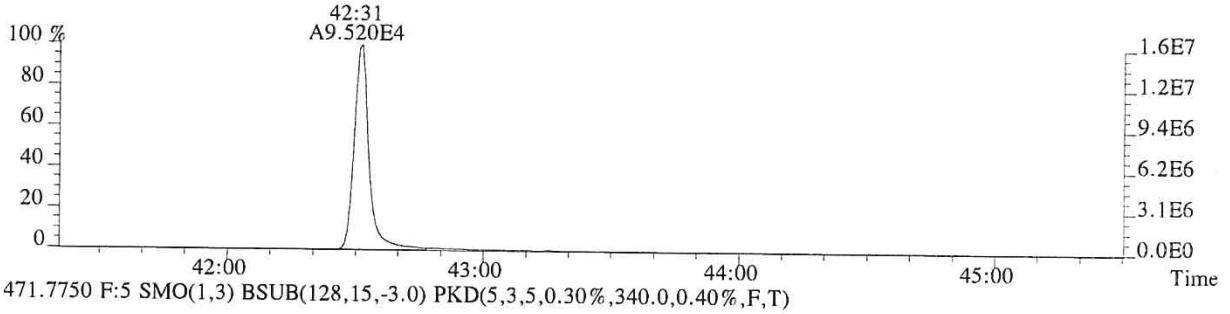
File:P513850 #1-375 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,124.0,0.40%,F,T)



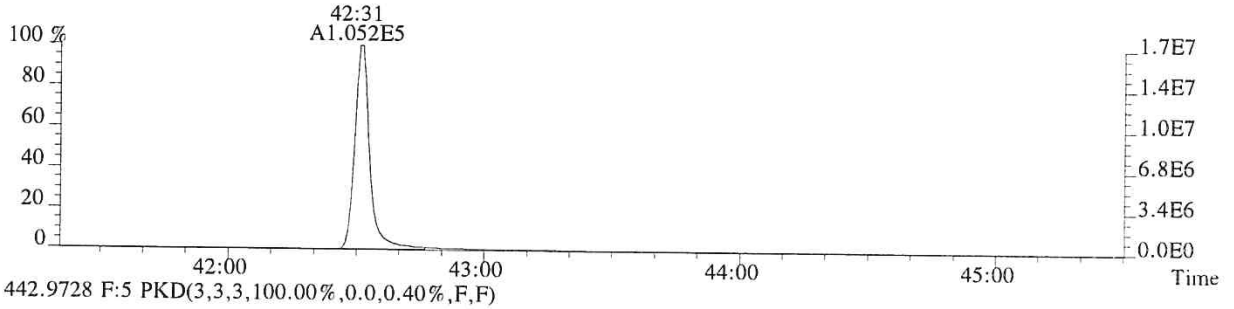
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1760.0,0.40%,F,T)



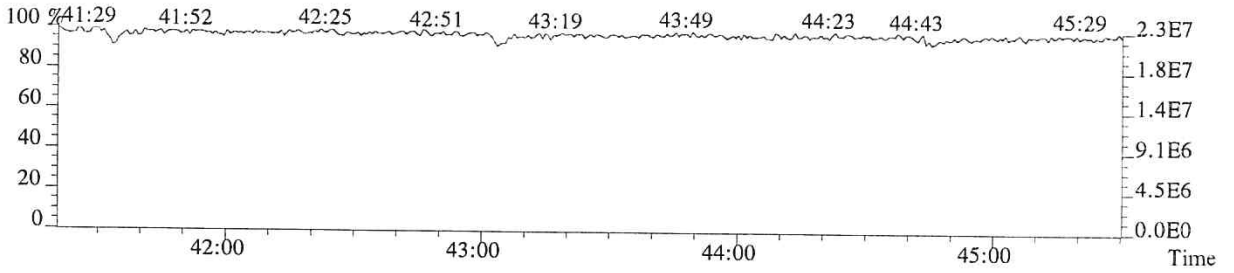
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,168.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,340.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017771

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76555

Run #2 Filename P513851 Samp: 1 Inj: 1 Acquired: 24-JAN-18 14:23:56
Processed: 24-JAN-18 15:49:38 Sample ID: CS1

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	3.265e+02	4.510e+02	0.72	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	2.143e+03	1.390e+03	1.54	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:41	1.966e+03	1.345e+03	1.46	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:16	1.692e+03	1.406e+03	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	1.851e+03	1.586e+03	1.17	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:52	1.642e+03	1.320e+03	1.24	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.587e+03	1.193e+03	1.33	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	1.464e+03	1.425e+03	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.230e+03	1.277e+03	0.96	yes	no	1.258
10	Unk	OCDF	42:45	1.832e+03	1.936e+03	0.95	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	2.385e+02	2.700e+02	0.88	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:57	1.365e+03	8.234e+02	1.66	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	1.134e+03	9.001e+02	1.26	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	1.250e+03	9.288e+02	1.35	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	1.168e+03	9.616e+02	1.21	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	1.020e+03	9.210e+02	1.11	yes	no	1.025
17	Unk	OCDD	42:31	1.446e+03	1.652e+03	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	7.137e+04	9.000e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:47	8.867e+04	5.547e+04	1.60	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	8.638e+04	5.480e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	3.777e+04	7.232e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:22	4.414e+04	8.392e+04	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	3.753e+04	7.150e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	3.488e+04	6.647e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	2.710e+04	6.070e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	2.509e+04	5.658e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	4.231e+04	5.302e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	5.560e+04	3.503e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	4.358e+04	3.432e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	4.635e+04	3.621e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	4.039e+04	3.882e+04	1.04	yes	no	0.858
32	IS	13C-OCDD	42:31	5.166e+04	5.687e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	4.919e+04	6.018e+04	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	4.800e+04	3.836e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	5.257e+02				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
76555

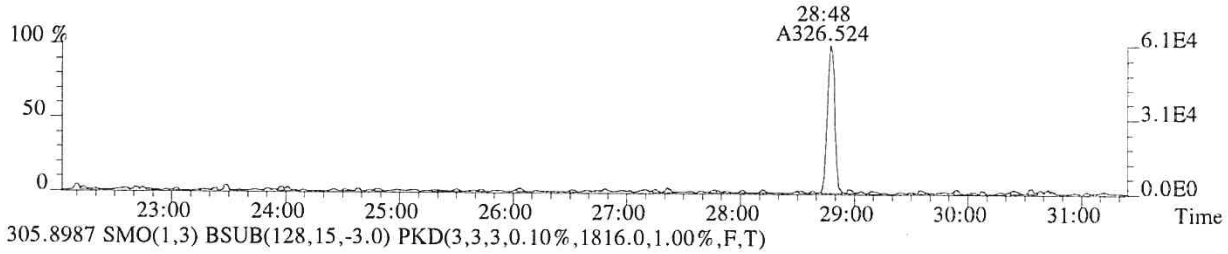
Run #2 Filename P513851 Samp: 1 Inj: 1 Acquired: 24-JAN-18 14:23:56
Processed: 24-JAN-18 15:49:38 LAB. ID: CS1

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.11e+04	5.52e+02	1.1e+02	8.10e+04	1.82e+03	4.5e+01
2	1,2,3,7,8-PeCDF	4.20e+05	1.32e+03	3.2e+02	2.59e+05	1.41e+03	1.8e+02
3	2,3,4,7,8-PeCDF	4.04e+05	1.32e+03	3.1e+02	2.67e+05	1.41e+03	1.9e+02
4	1,2,3,4,7,8-HxCDF	3.58e+05	5.32e+02	6.7e+02	3.14e+05	1.28e+02	2.5e+03
5	1,2,3,6,7,8-HxCDF	3.97e+05	5.32e+02	7.5e+02	3.35e+05	1.28e+02	2.6e+03
6	2,3,4,6,7,8-HxCDF	3.52e+05	5.32e+02	6.6e+02	2.91e+05	1.28e+02	2.3e+03
7	1,2,3,7,8,9-HxCDF	3.28e+05	5.32e+02	6.2e+02	2.40e+05	1.28e+02	1.9e+03
8	1,2,3,4,6,7,8-HpCDF	3.00e+05	3.04e+02	9.9e+02	3.07e+05	7.12e+02	4.3e+02
9	1,2,3,4,7,8,9-HpCDF	2.35e+05	3.04e+02	7.7e+02	2.45e+05	7.12e+02	3.4e+02
10	OCDF	3.05e+05	4.12e+02	7.4e+02	3.13e+05	8.20e+02	3.8e+02
11	2,3,7,8-TCDD	5.05e+04	1.50e+03	3.4e+01	5.68e+04	1.02e+03	5.5e+01
12	1,2,3,7,8-PeCDD	2.75e+05	9.88e+02	2.8e+02	1.65e+05	1.80e+02	9.2e+02
13	1,2,3,4,7,8-HxCDD	2.60e+05	5.96e+02	4.4e+02	2.09e+05	7.60e+02	2.7e+02
14	1,2,3,6,7,8-HxCDD	2.55e+05	5.96e+02	4.3e+02	1.96e+05	7.60e+02	2.6e+02
15	1,2,3,7,8,9-HxCDD	2.36e+05	5.96e+02	4.0e+02	1.94e+05	7.60e+02	2.6e+02
16	1,2,3,4,6,7,8-HpCDD	1.99e+05	6.88e+02	2.9e+02	1.95e+05	5.68e+02	3.4e+02
17	OCDD	2.63e+05	1.92e+02	1.4e+03	2.88e+05	1.59e+03	1.8e+02
18	13C-2,3,7,8-TCDF	1.42e+07	6.97e+03	2.0e+03	1.79e+07	2.86e+03	6.3e+03
19	13C-1,2,3,7,8-PeCDF	1.70e+07	6.48e+02	2.6e+04	1.08e+07	1.59e+03	6.8e+03
20	13C-2,3,4,7,8-PeCDF	1.78e+07	6.48e+02	2.7e+04	1.13e+07	1.59e+03	7.1e+03
21	13C-1,2,3,4,7,8-HxCDF	8.20e+06	9.16e+02	9.0e+03	1.58e+07	1.42e+03	1.1e+04
22	13C-1,2,3,6,7,8-HxCDF	9.34e+06	9.16e+02	1.0e+04	1.79e+07	1.42e+03	1.3e+04
23	13C-2,3,4,6,7,8-HxCDF	8.09e+06	9.16e+02	8.8e+03	1.56e+07	1.42e+03	1.1e+04
24	13C-1,2,3,7,8,9-HxCDF	7.17e+06	9.16e+02	7.8e+03	1.36e+07	1.42e+03	9.6e+03
25	13C-1,2,3,4,6,7,8-HpCDF	5.66e+06	2.69e+03	2.1e+03	1.28e+07	9.09e+03	1.4e+03
26	13C-1,2,3,4,7,8,9-HpCDF	4.79e+06	2.69e+03	1.8e+03	1.07e+07	9.09e+03	1.2e+03
27	13C-2,3,7,8-TCDD	8.84e+06	4.39e+03	2.0e+03	1.11e+07	2.59e+03	4.3e+03
28	13C-1,2,3,7,8-PeCDD	1.13e+07	1.11e+03	1.0e+04	7.15e+06	7.88e+02	9.1e+03
29	13C-1,2,3,4,7,8-HxCDD	9.90e+06	2.00e+03	4.9e+03	7.79e+06	1.42e+03	5.5e+03
30	13C-1,2,3,6,7,8-HxCDD	9.60e+06	2.00e+03	4.8e+03	7.47e+06	1.42e+03	5.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	7.95e+06	1.15e+03	6.9e+03	7.67e+06	8.88e+02	8.6e+03
32	13C-OCDD	8.56e+06	6.00e+01	1.4e+05	9.50e+06	8.00e+02	1.2e+04
33	13C-1,2,3,4-TCDD	9.96e+06	4.39e+03	2.3e+03	1.22e+07	2.59e+03	4.7e+03
34	13C-1,2,3,7,8,9-HxCDD	9.63e+06	2.00e+03	4.8e+03	7.67e+06	1.42e+03	5.4e+03
35	37Cl-2,3,7,8-TCDD	1.07e+05	1.30e+03	8.2e+01			

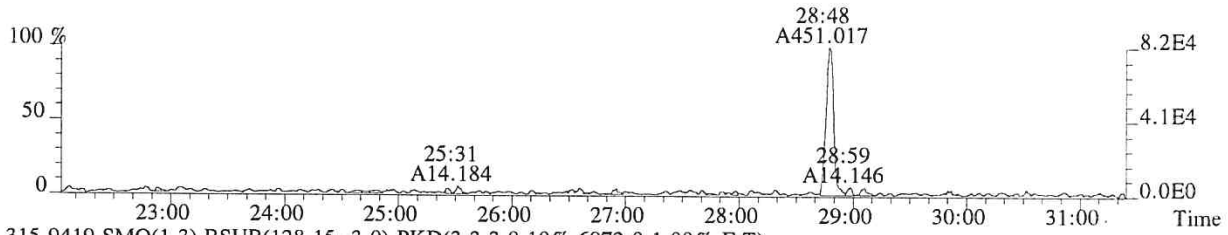
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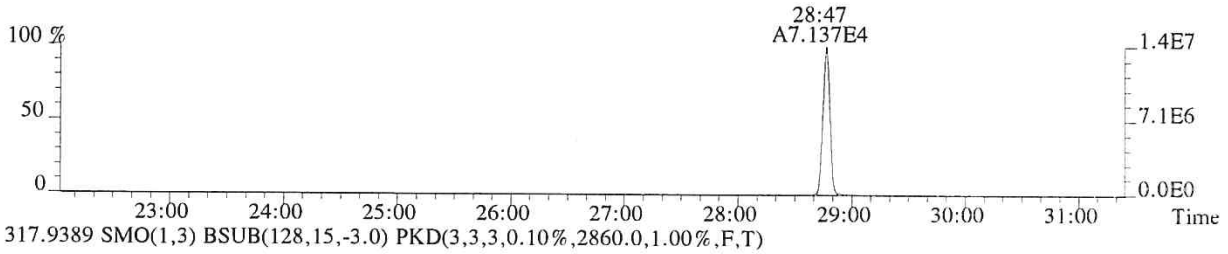
File:P513851 #1-665 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,552.0,1.00%,F,T)



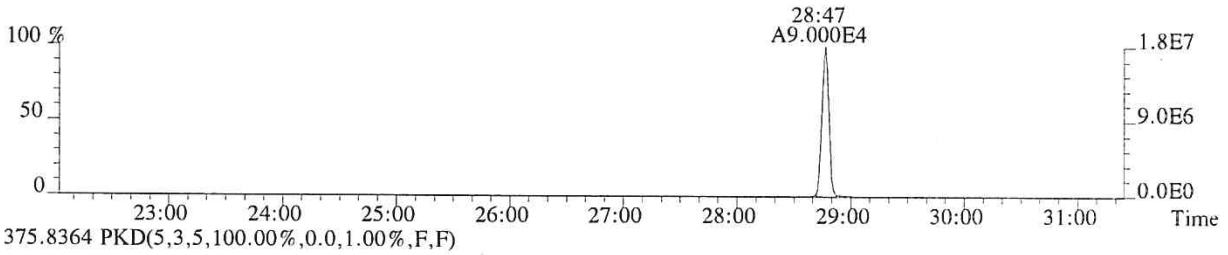
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1816.0,1.00%,F,T)



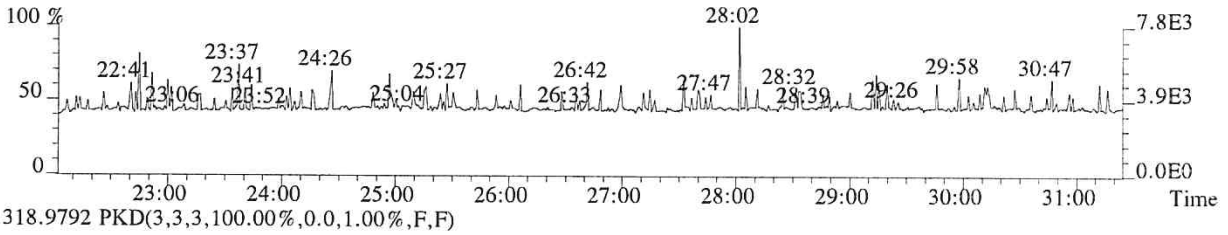
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6972.0,1.00%,F,T)



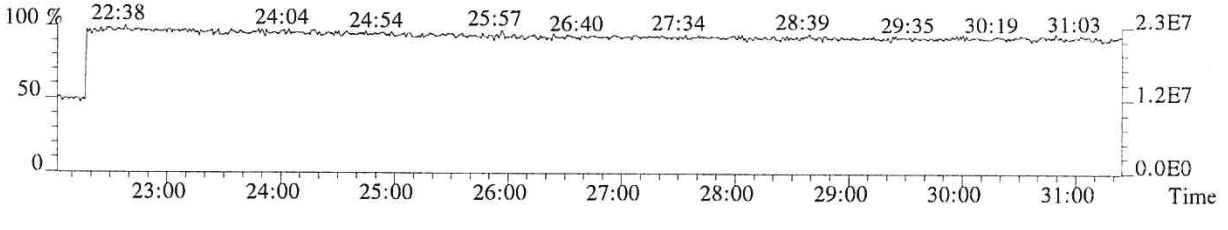
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2860.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

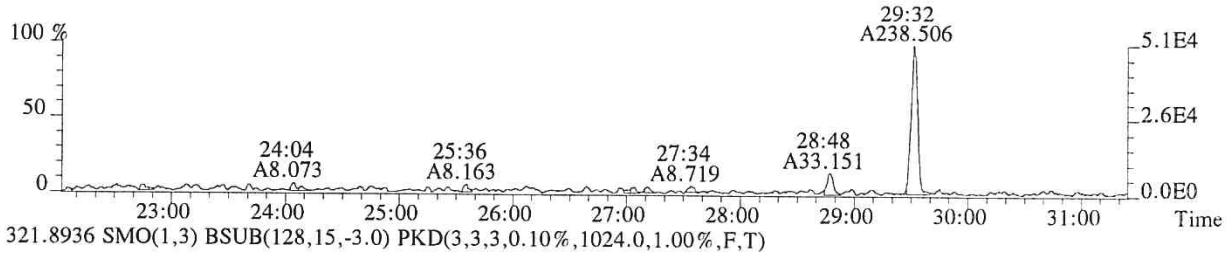


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

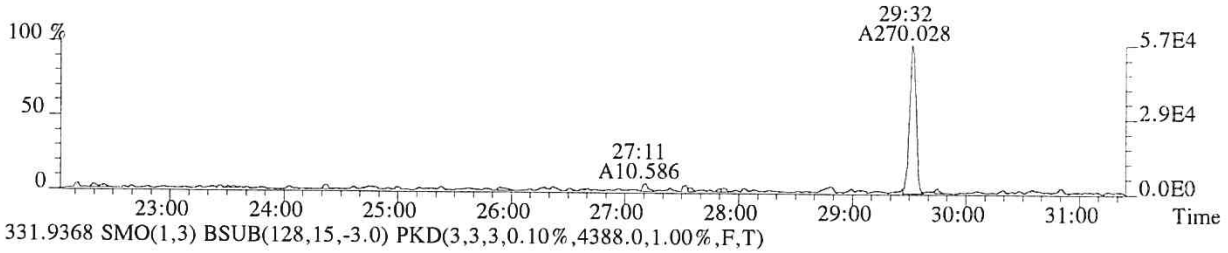


017774

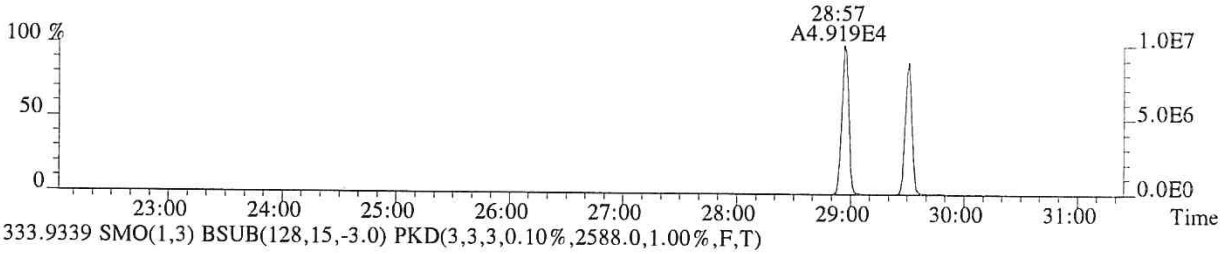
File:P513851 #1-665 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:76555
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1496.0,1.00%,F,T)



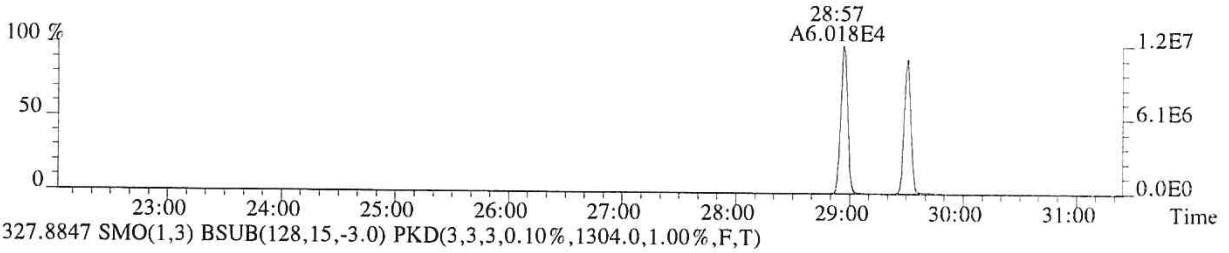
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



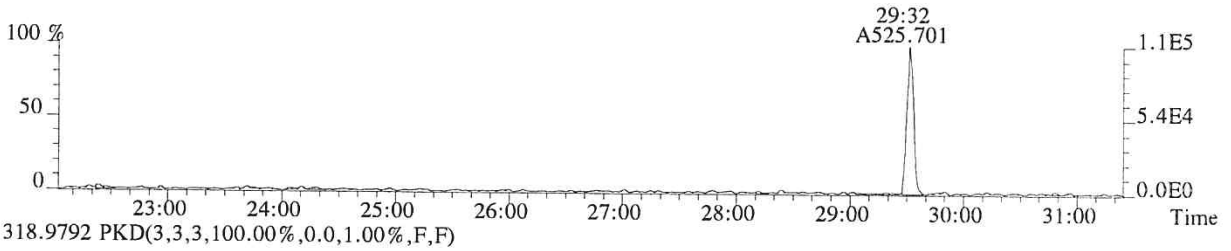
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4388.0,1.00%,F,T)



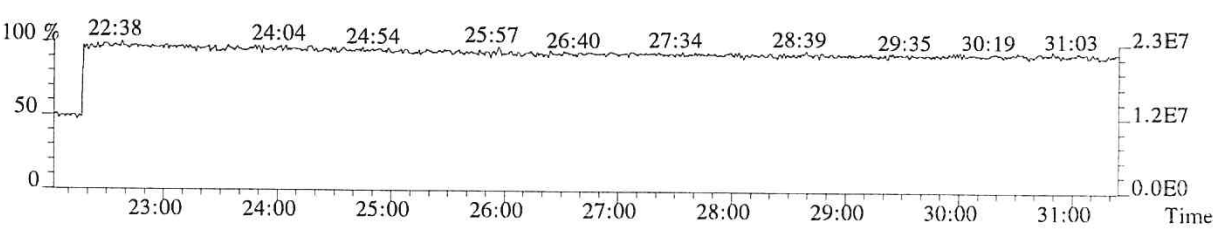
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2588.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1304.0,1.00%,F,T)

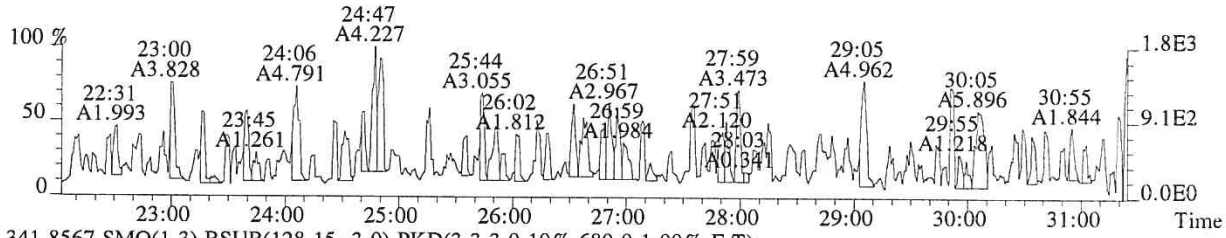


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

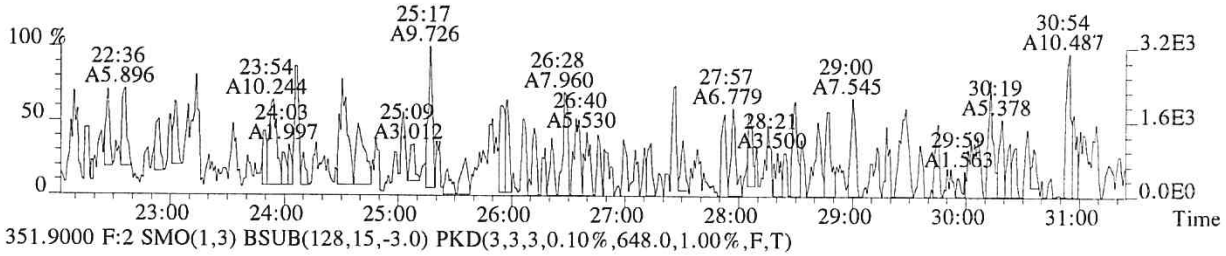


017775

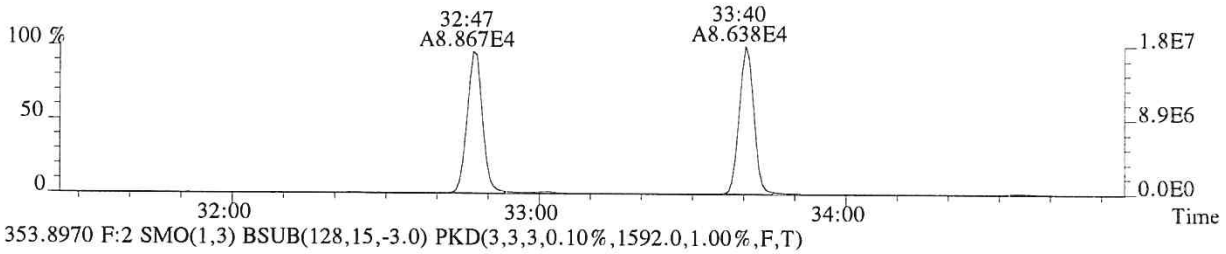
File:P513851 #1-665 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:76555
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,388.0,1.00%,F,T)



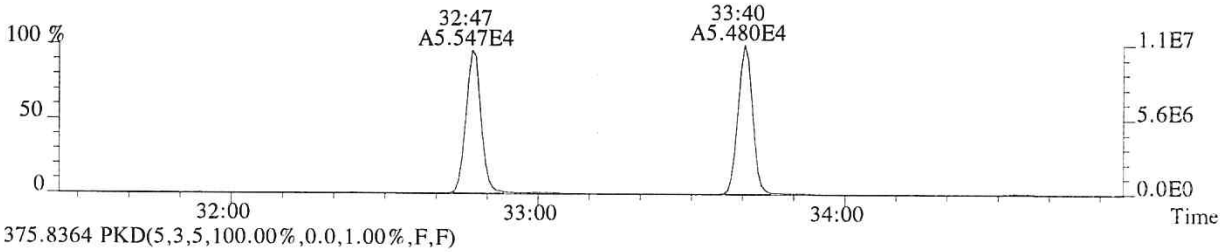
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,680.0,1.00%,F,T)



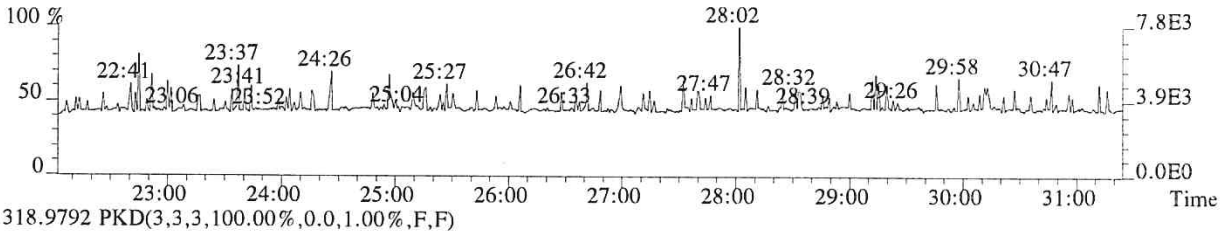
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,648.0,1.00%,F,T)



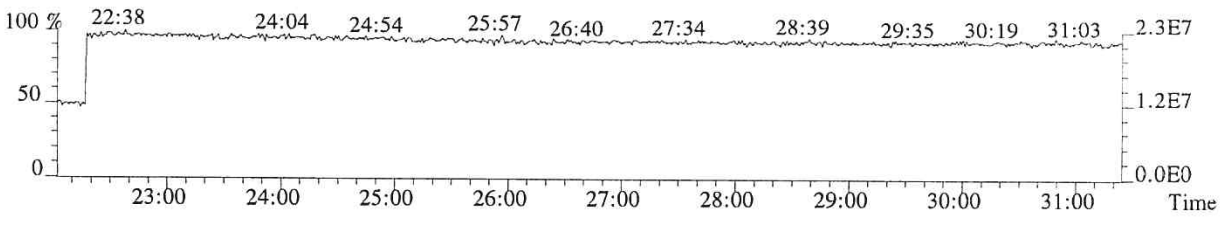
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1592.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

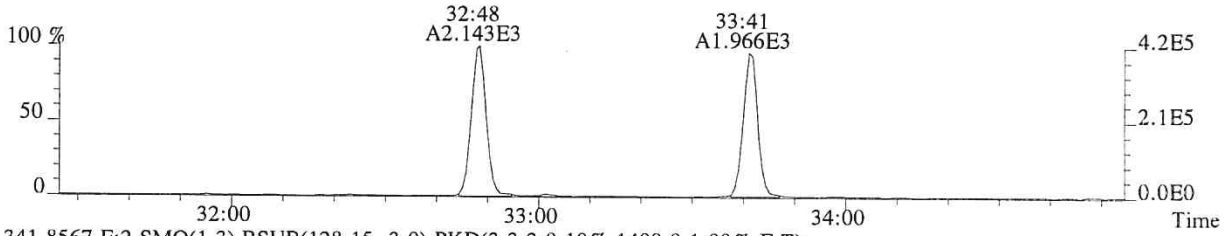


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

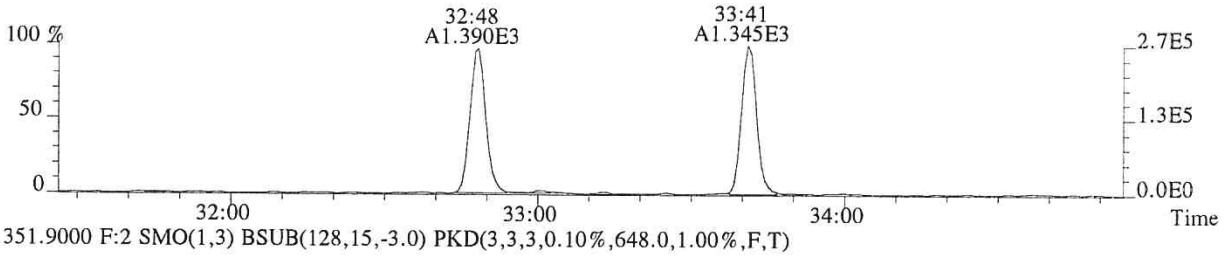


017776

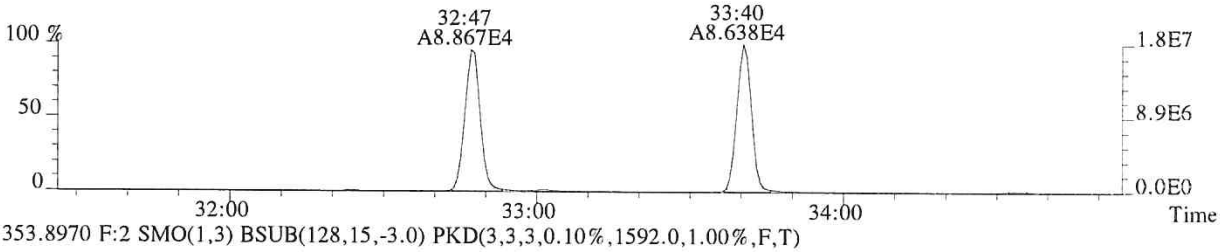
File:P513851 #1-313 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1316.0,1.00%,F,T)



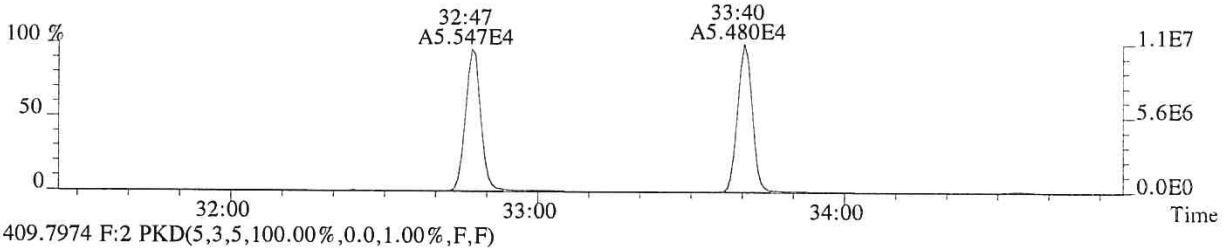
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1408.0,1.00%,F,T)



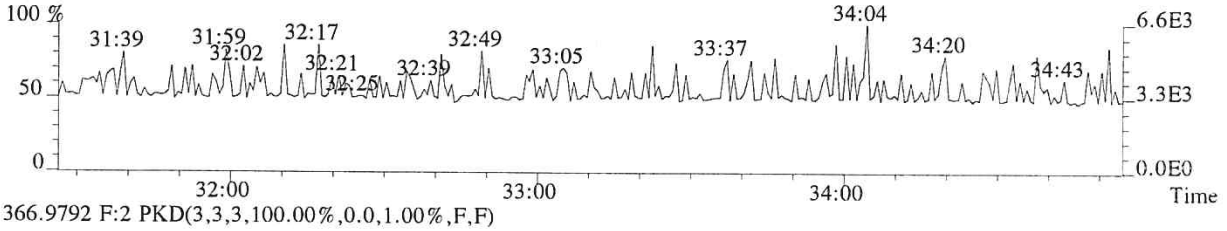
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,648.0,1.00%,F,T)



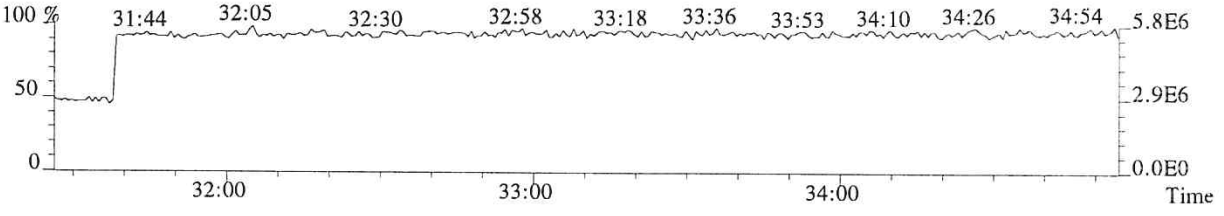
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1592.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

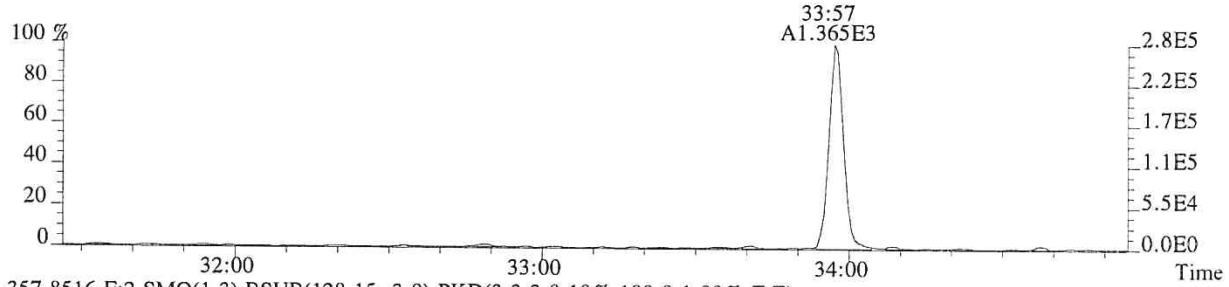


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

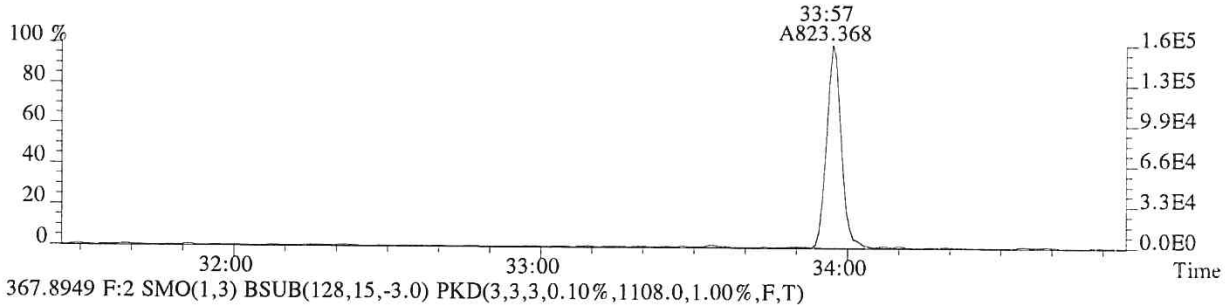


017777

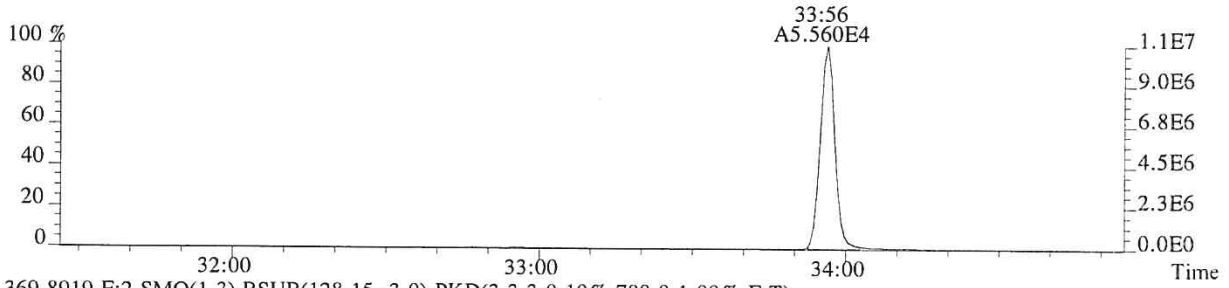
File:P513851 #1-313 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,988.0,1.00%,F,T)



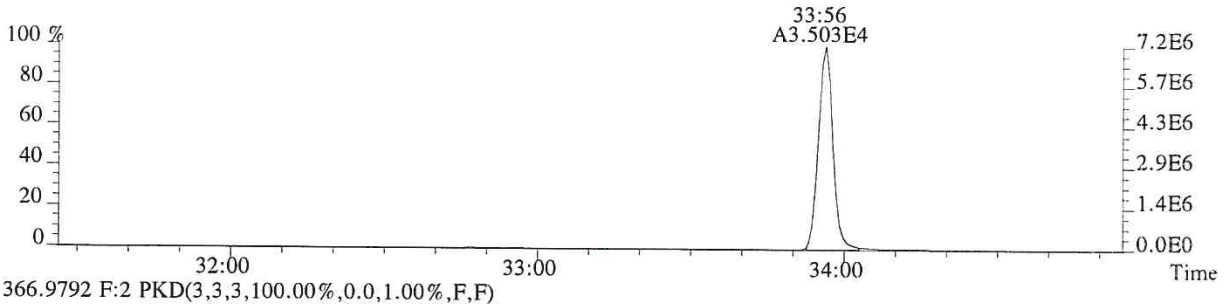
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,180.0,1.00%,F,T)



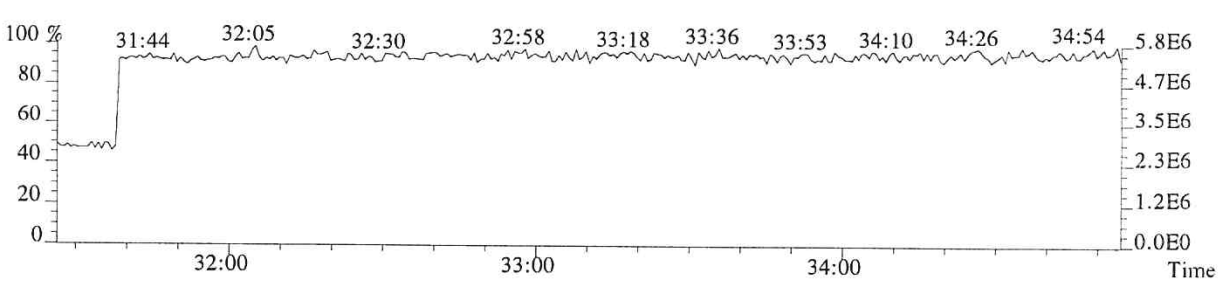
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1108.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,788.0,1.00%,F,T)



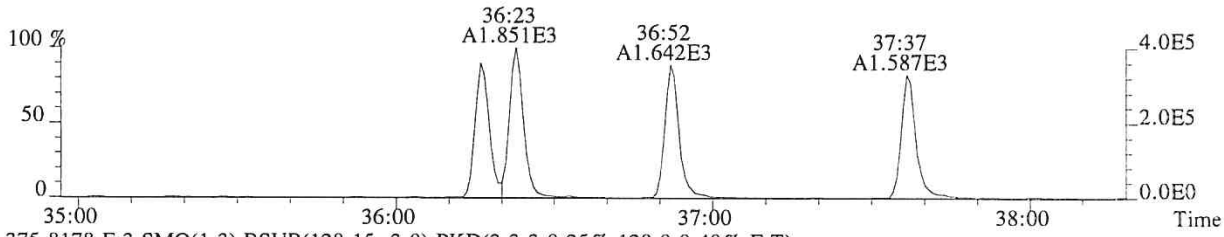
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



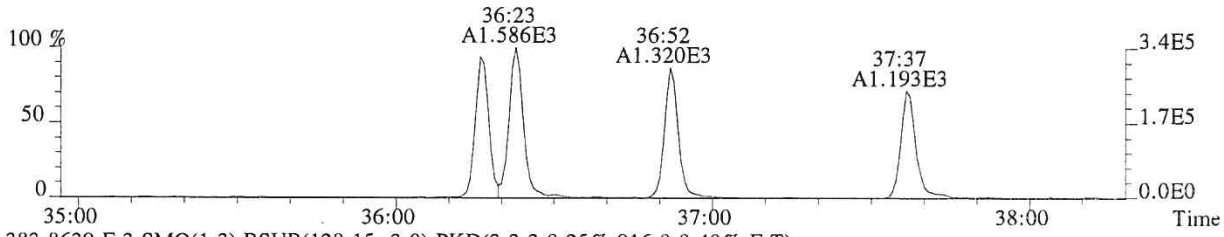
017778

File:P513851 #1-303 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555

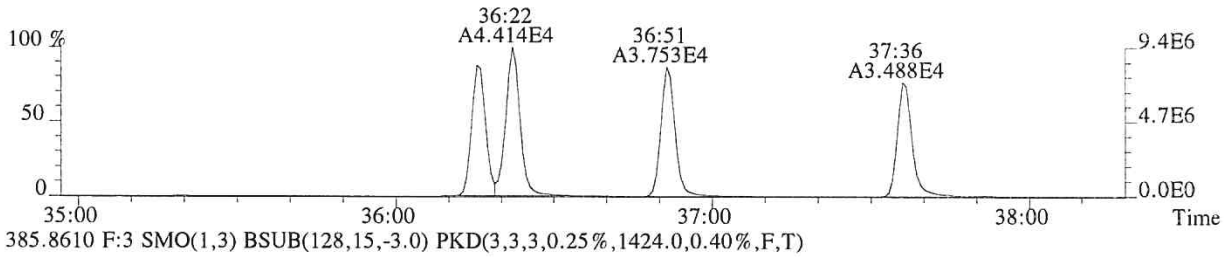
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,532.0,0.40%,F,T)



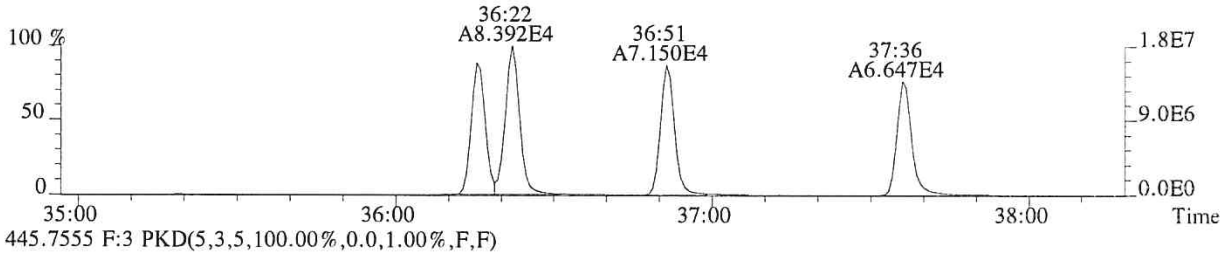
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,128.0,0.40%,F,T)



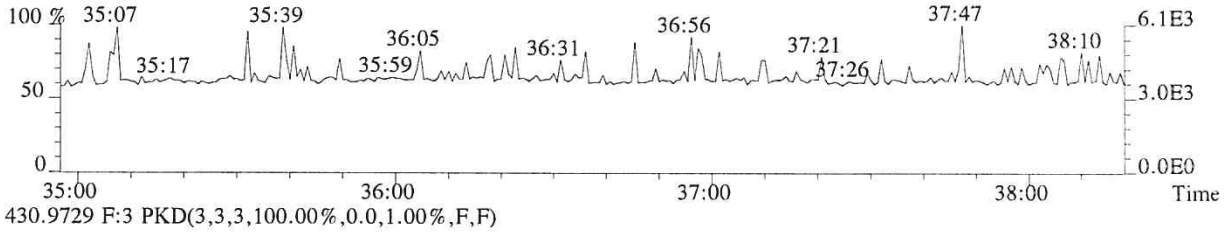
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,916.0,0.40%,F,T)



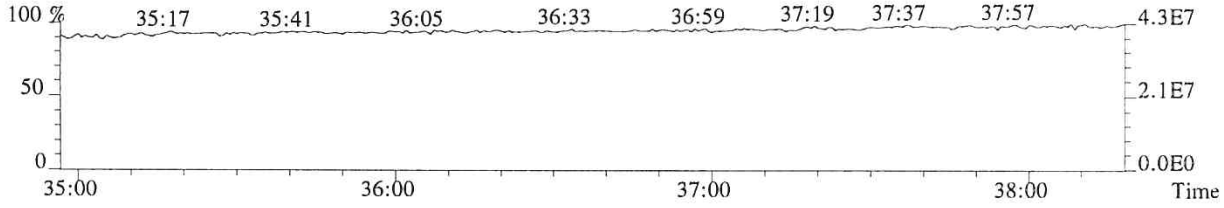
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1424.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

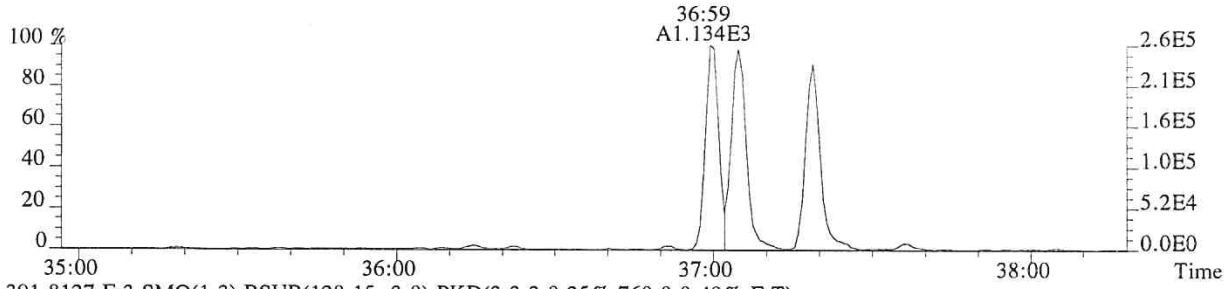


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

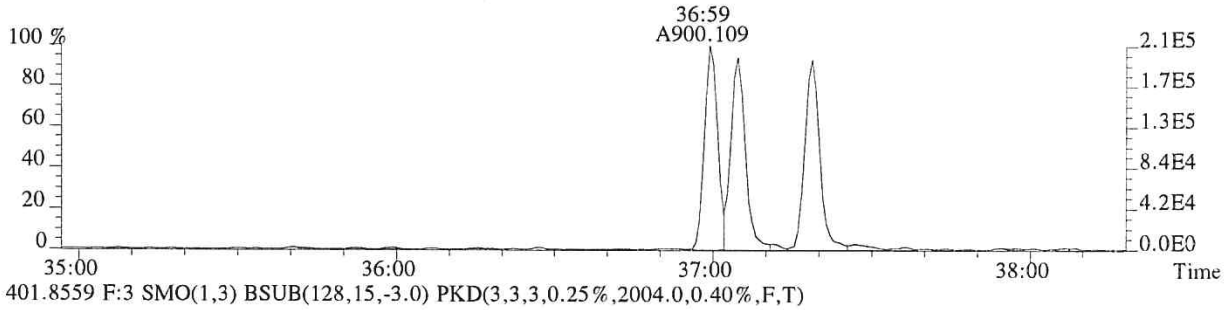


017779

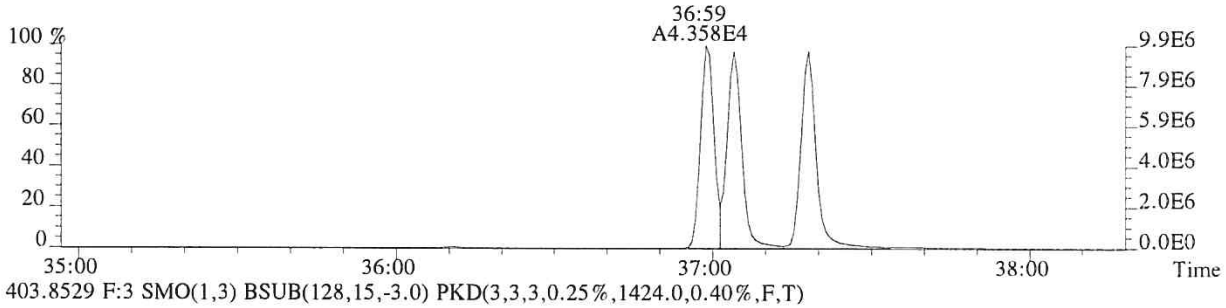
File:P513851 #1-303 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,596.0,0.40%,F,T)



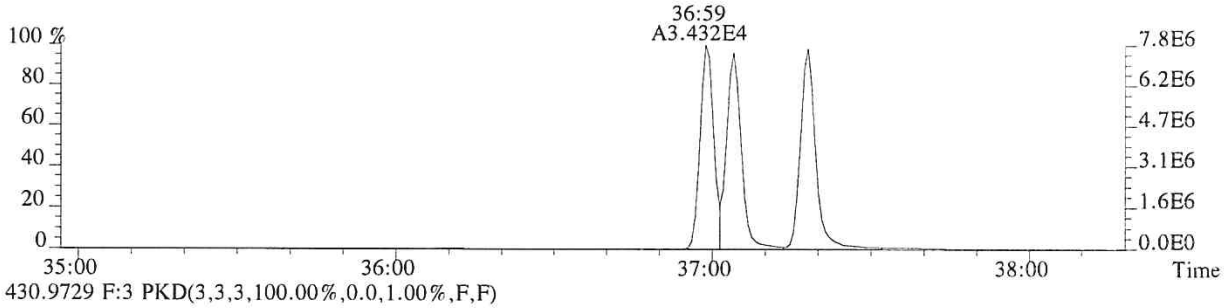
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,760.0,0.40%,F,T)



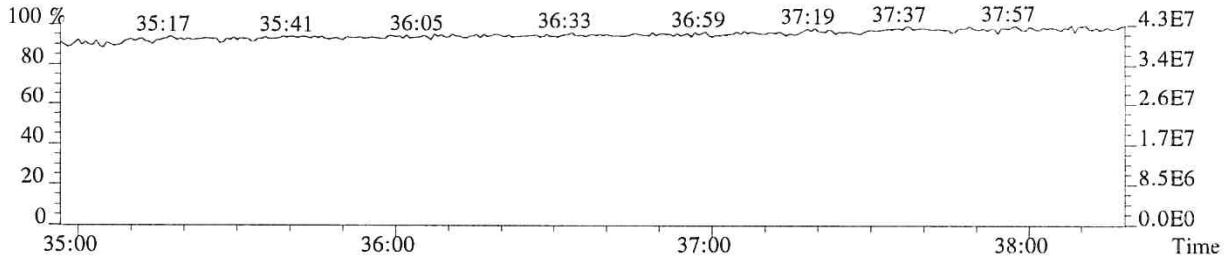
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2004.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1424.0,0.40%,F,T)

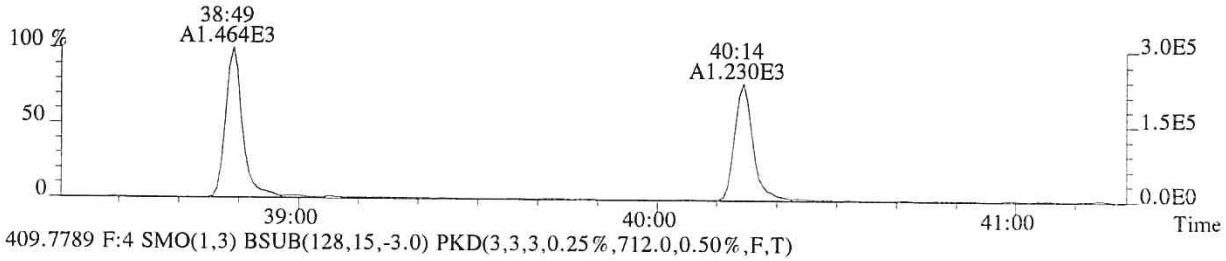


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

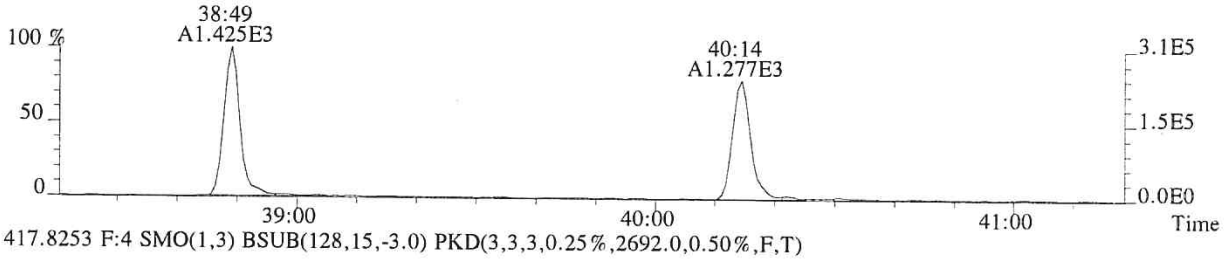


017780

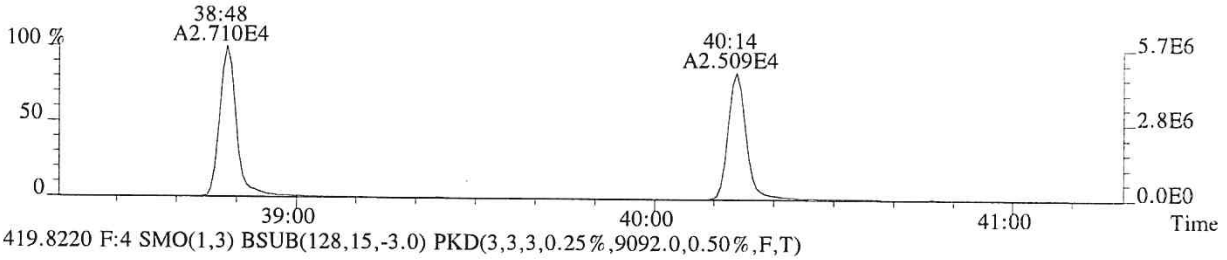
File:P513851 #1-268 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,304.0,0.50%,F,T)



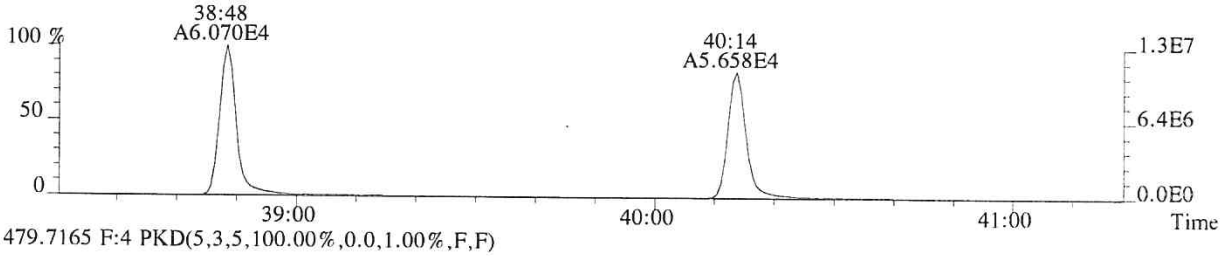
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,712.0,0.50%,F,T)



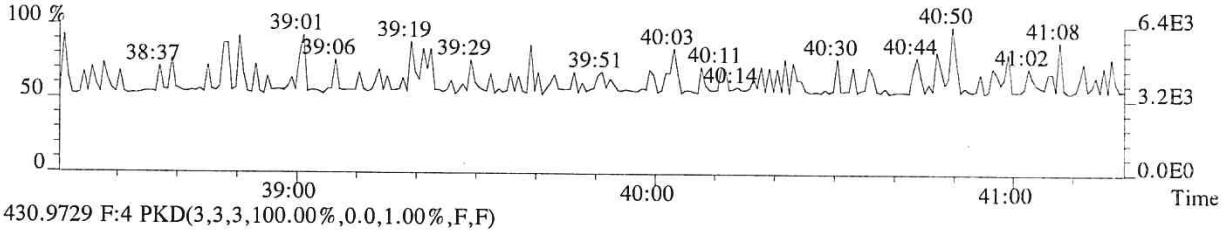
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2692.0,0.50%,F,T)



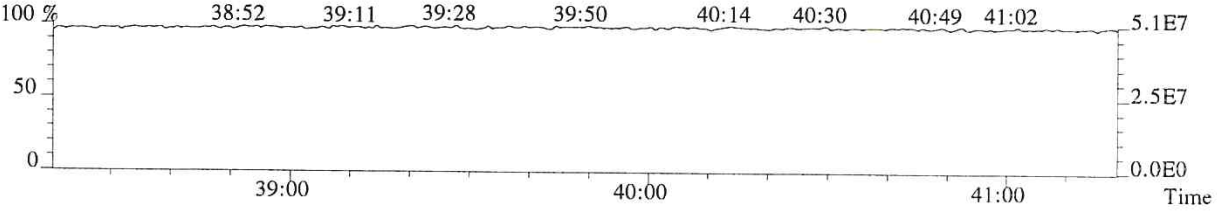
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,9092.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

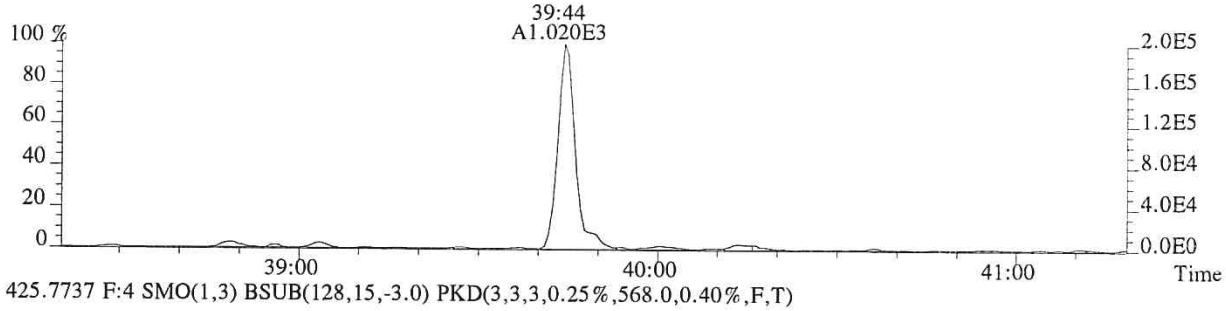


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

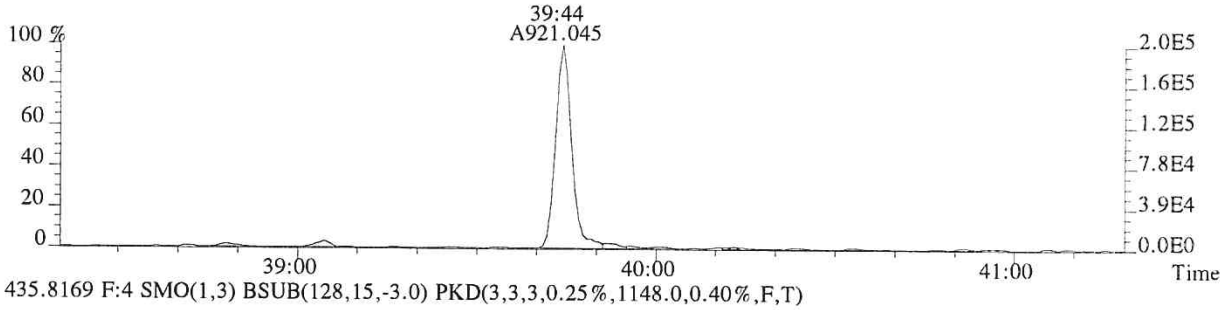


017781

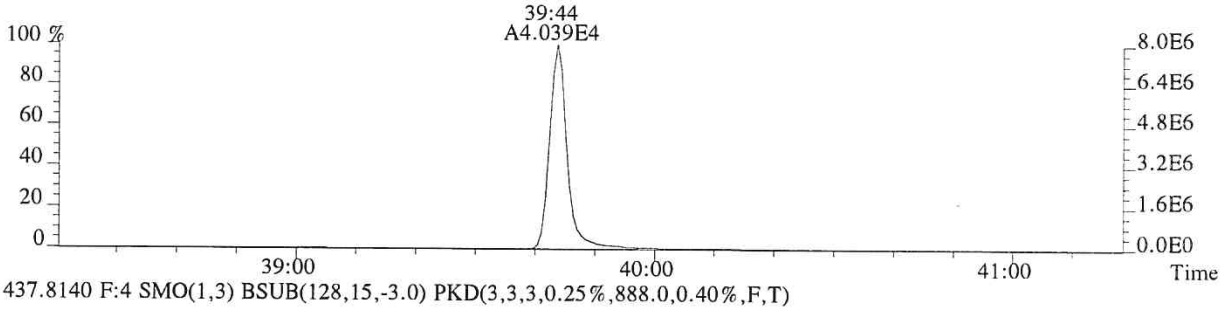
File:P513851 #1-268 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,688.0,0.40%,F,T)



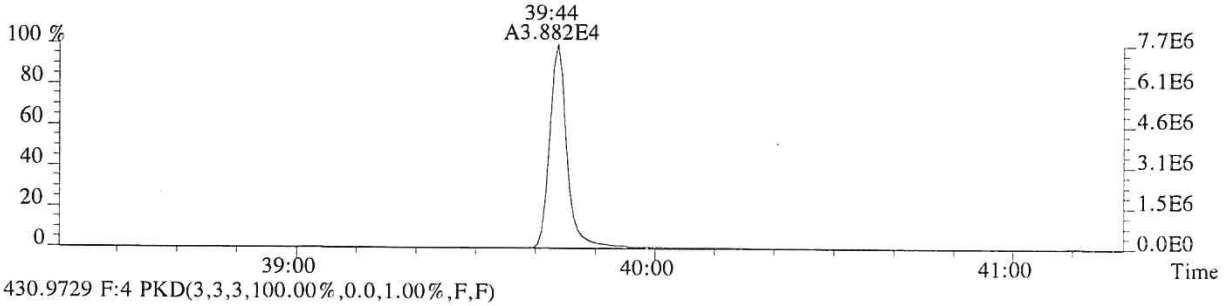
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,568.0,0.40%,F,T)



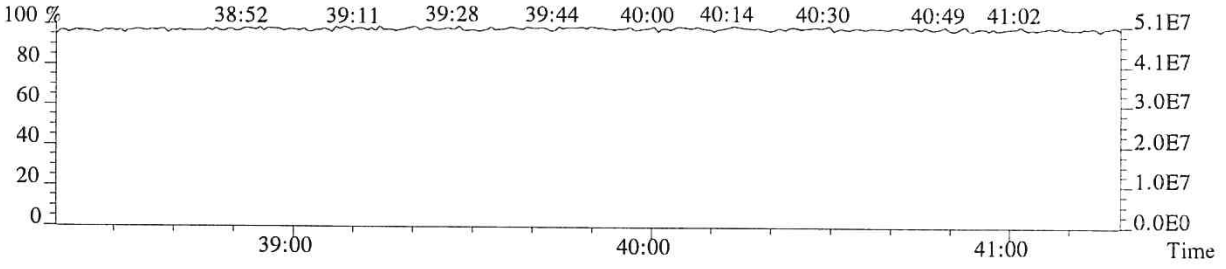
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1148.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,888.0,0.40%,F,T)

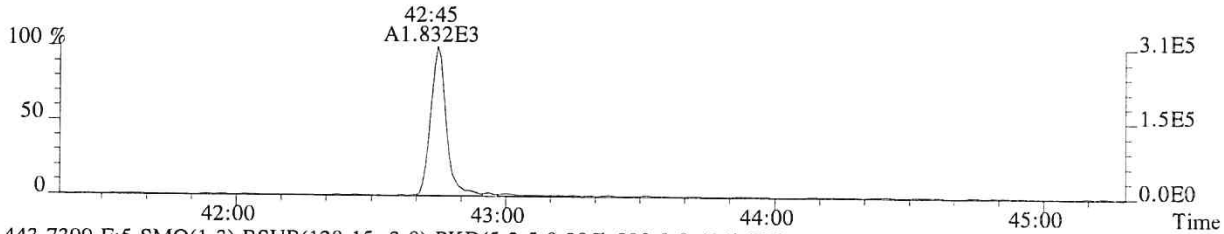


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

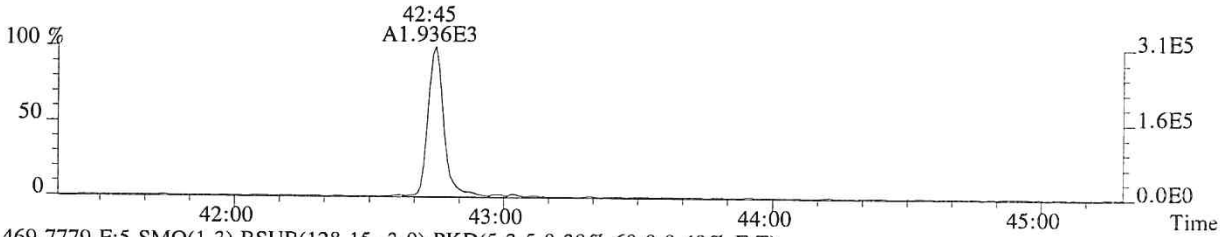


017782

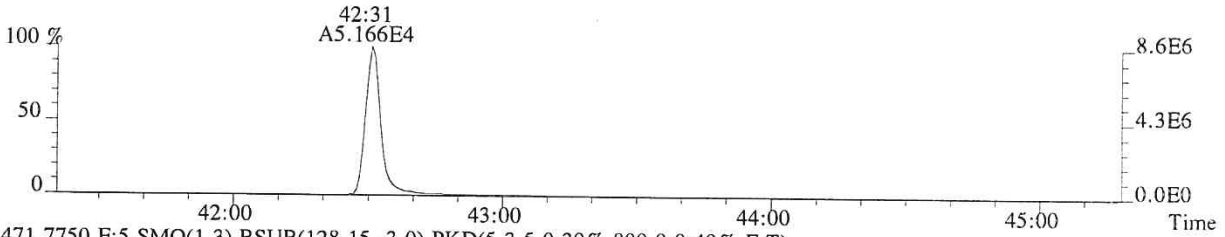
File:P513851 #1-357 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,412.0,0.40%,F,T)



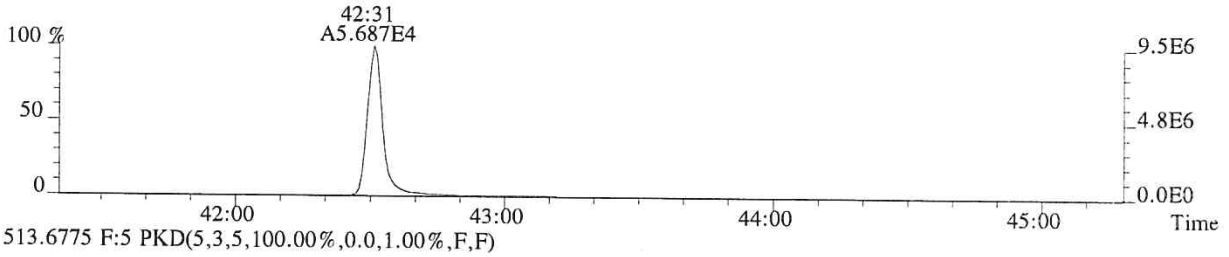
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,820.0,0.40%,F,T)



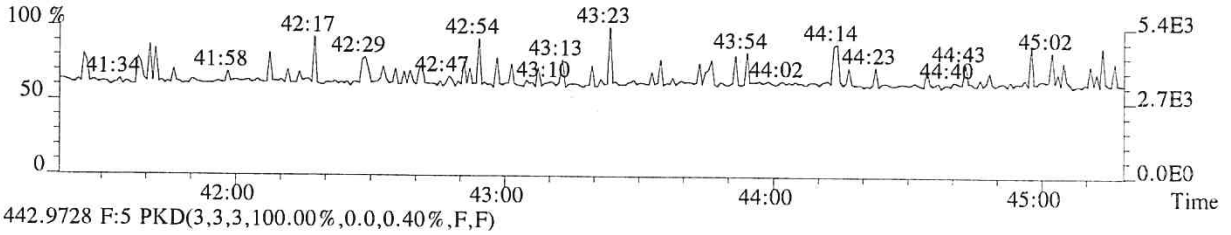
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,60.0,0.40%,F,T)



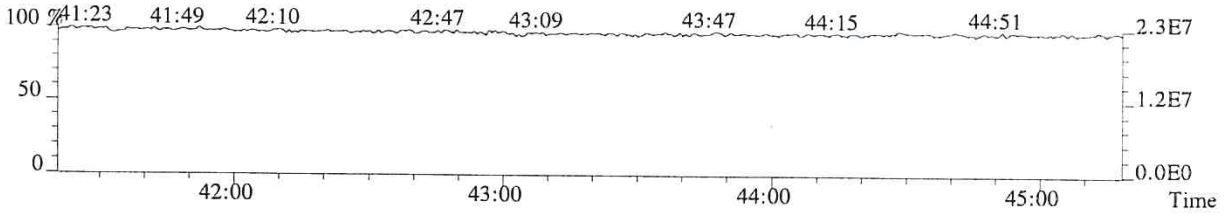
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,800.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

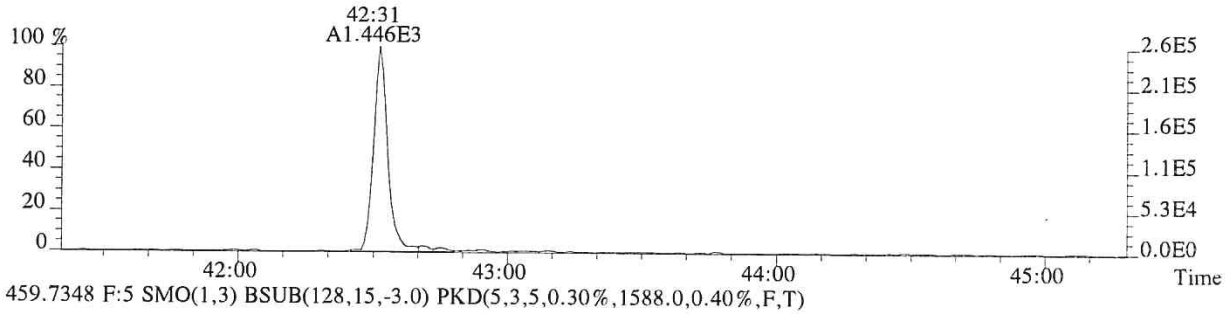


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

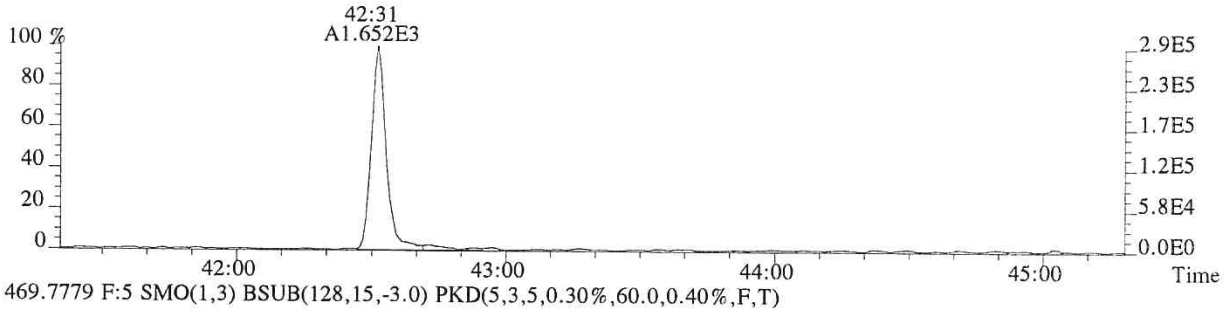


017783

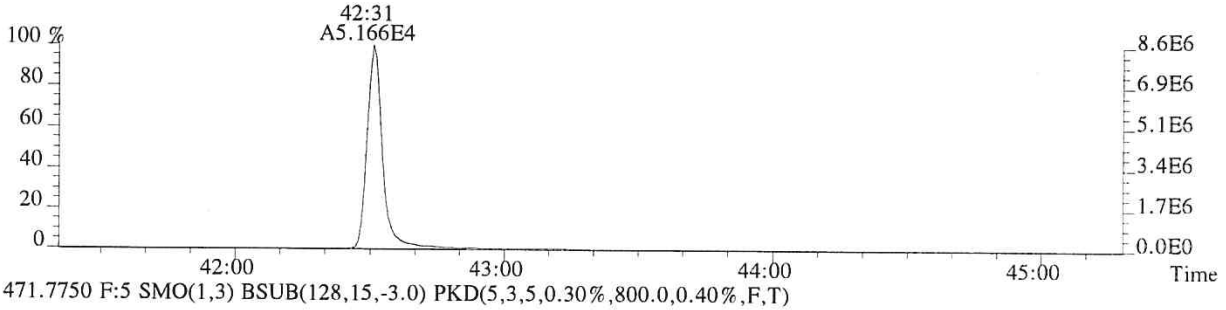
File:P513851 #1-357 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,192.0,0.40%,F,T)



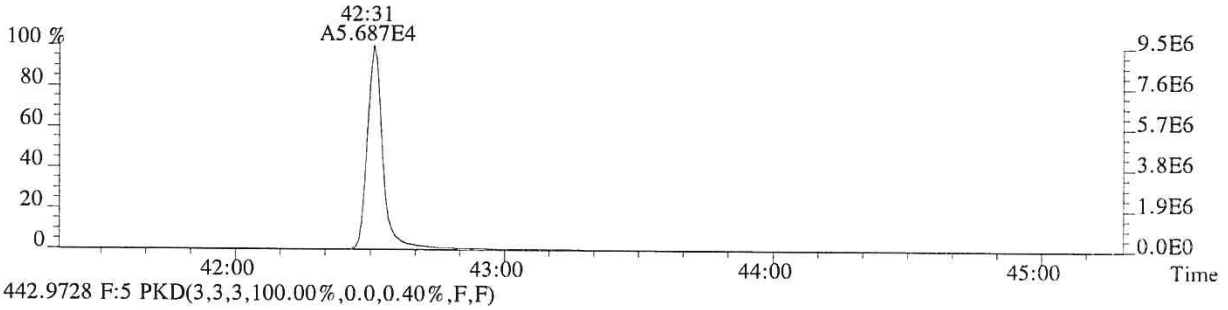
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1588.0,0.40%,F,T)



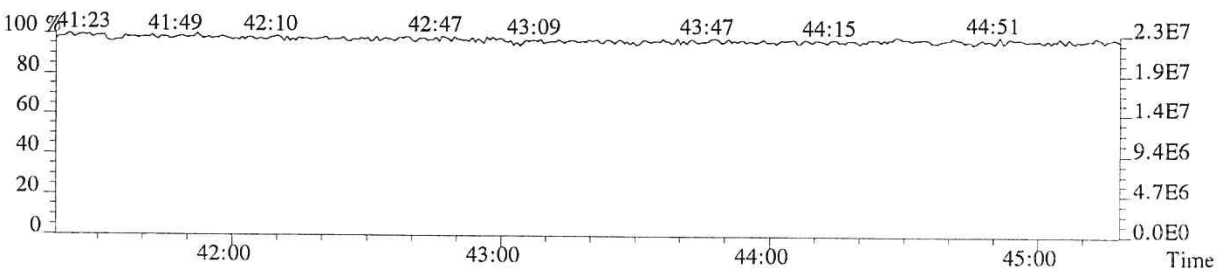
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,60.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,800.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017784

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76556

Run #3 Filename P513852 Samp: 1 Inj: 1 Acquired: 24-JAN-18 15:18:44
Processed: 24-JAN-18 16:27:06 Sample ID: CS2

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	5.859e+03	7.932e+03	0.74	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	4.499e+04	3.047e+04	1.48	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:42	4.356e+04	2.901e+04	1.50	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:17	4.061e+04	3.382e+04	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	4.295e+04	3.562e+04	1.21	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:53	3.905e+04	3.212e+04	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	3.479e+04	2.862e+04	1.22	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	3.262e+04	3.207e+04	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	2.654e+04	2.632e+04	1.01	yes	no	1.258
10	Unk	OCDF	42:45	3.789e+04	4.247e+04	0.89	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	4.192e+03	5.525e+03	0.76	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:58	2.973e+04	1.886e+04	1.58	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	37:00	2.687e+04	2.156e+04	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	2.801e+04	2.223e+04	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	2.898e+04	2.343e+04	1.24	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:45	2.194e+04	2.114e+04	1.04	yes	no	1.025
17	Unk	OCDD	42:32	3.213e+04	3.615e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	3.357e+05	4.220e+05	0.80	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:48	4.551e+05	2.871e+05	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	4.534e+05	2.868e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:16	2.091e+05	4.014e+05	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:23	2.405e+05	4.554e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:52	2.176e+05	4.192e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:37	1.900e+05	3.615e+05	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:49	1.476e+05	3.275e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	1.279e+05	2.823e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	2.035e+05	2.546e+05	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	3.112e+05	1.963e+05	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	2.611e+05	2.071e+05	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:05	2.721e+05	2.137e+05	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	2.118e+05	1.999e+05	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	2.824e+05	3.150e+05	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	2.212e+05	2.732e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:19	2.902e+05	2.282e+05	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	1.018e+04				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
76556

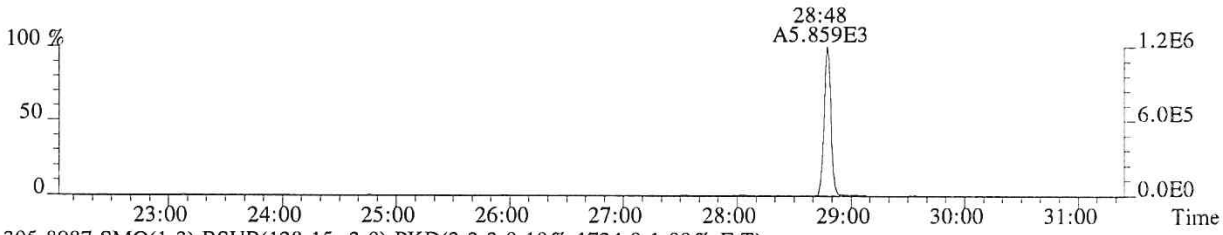
Run #3 Filename P513852 Samp: 1 Inj: 1 Acquired: 24-JAN-18 15:18:44
Processed: 24-JAN-18 16:27:06 LAB. ID: CS2

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.20e+06	7.00e+02	1.7e+03	1.59e+06	1.72e+03	9.3e+02
2	1,2,3,7,8-PeCDF	9.02e+06	1.92e+02	4.7e+04	6.06e+06	3.56e+03	1.7e+03
3	2,3,4,7,8-PeCDF	8.94e+06	1.92e+02	4.7e+04	5.88e+06	3.56e+03	1.7e+03
4	1,2,3,4,7,8-HxCDF	9.11e+06	1.02e+03	9.0e+03	7.52e+06	1.04e+03	7.2e+03
5	1,2,3,6,7,8-HxCDF	8.86e+06	1.02e+03	8.7e+03	7.32e+06	1.04e+03	7.0e+03
6	2,3,4,6,7,8-HxCDF	8.62e+06	1.02e+03	8.5e+03	6.97e+06	1.04e+03	6.7e+03
7	1,2,3,7,8,9-HxCDF	7.31e+06	1.02e+03	7.2e+03	6.00e+06	1.04e+03	5.7e+03
8	1,2,3,4,6,7,8-HpCDF	6.83e+06	3.67e+03	1.9e+03	6.77e+06	3.04e+03	2.2e+03
9	1,2,3,4,7,8,9-HpCDF	5.23e+06	3.67e+03	1.4e+03	5.30e+06	3.04e+03	1.7e+03
10	OCDF	6.47e+06	1.08e+03	6.0e+03	7.24e+06	1.74e+03	4.2e+03
11	2,3,7,8-TCDD	8.47e+05	1.35e+03	6.3e+02	1.14e+06	7.40e+02	1.5e+03
12	1,2,3,7,8-PeCDD	6.05e+06	5.16e+02	1.2e+04	3.80e+06	5.04e+02	7.5e+03
13	1,2,3,4,7,8-HxCDD	6.06e+06	7.48e+02	8.1e+03	4.85e+06	1.29e+03	3.8e+03
14	1,2,3,6,7,8-HxCDD	5.88e+06	7.48e+02	7.9e+03	4.64e+06	1.29e+03	3.6e+03
15	1,2,3,7,8,9-HxCDD	5.73e+06	7.48e+02	7.7e+03	4.69e+06	1.29e+03	3.6e+03
16	1,2,3,4,6,7,8-HpCDD	4.40e+06	1.68e+03	2.6e+03	4.18e+06	7.28e+02	5.7e+03
17	OCDD	5.55e+06	1.60e+02	3.5e+04	6.20e+06	1.07e+03	5.8e+03
18	13C-2,3,7,8-TCDF	6.63e+07	8.64e+03	7.7e+03	8.31e+07	4.36e+03	1.9e+04
19	13C-1,2,3,7,8-PeCDF	8.82e+07	9.44e+02	9.3e+04	5.54e+07	2.55e+03	2.2e+04
20	13C-2,3,4,7,8-PeCDF	9.11e+07	9.44e+02	9.6e+04	5.80e+07	2.55e+03	2.3e+04
21	13C-1,2,3,4,7,8-HxCDF	4.63e+07	1.33e+03	3.5e+04	8.84e+07	3.58e+03	2.5e+04
22	13C-1,2,3,6,7,8-HxCDF	4.97e+07	1.33e+03	3.7e+04	9.31e+07	3.58e+03	2.6e+04
23	13C-2,3,4,6,7,8-HxCDF	4.74e+07	1.33e+03	3.6e+04	9.03e+07	3.58e+03	2.5e+04
24	13C-1,2,3,7,8,9-HxCDF	3.91e+07	1.33e+03	2.9e+04	7.44e+07	3.58e+03	2.1e+04
25	13C-1,2,3,4,6,7,8-HpCDF	3.05e+07	5.18e+03	5.9e+03	6.68e+07	7.38e+03	9.0e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.48e+07	5.18e+03	4.8e+03	5.51e+07	7.38e+03	7.5e+03
27	13C-2,3,7,8-TCDD	4.21e+07	6.43e+03	6.5e+03	5.22e+07	3.34e+03	1.6e+04
28	13C-1,2,3,7,8-PeCDD	6.30e+07	1.05e+03	6.0e+04	3.99e+07	1.24e+03	3.2e+04
29	13C-1,2,3,4,7,8-HxCDD	5.84e+07	4.36e+03	1.3e+04	4.60e+07	2.04e+03	2.3e+04
30	13C-1,2,3,6,7,8-HxCDD	5.57e+07	4.36e+03	1.3e+04	4.34e+07	2.04e+03	2.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	4.12e+07	2.07e+03	2.0e+04	3.91e+07	2.18e+03	1.8e+04
32	13C-OCDD	4.87e+07	6.80e+01	7.2e+05	5.40e+07	9.12e+02	5.9e+04
33	13C-1,2,3,4-TCDD	4.48e+07	6.43e+03	7.0e+03	5.57e+07	3.34e+03	1.7e+04
34	13C-1,2,3,7,8,9-HxCDD	5.61e+07	4.36e+03	1.3e+04	4.47e+07	2.04e+03	2.2e+04
35	37Cl-2,3,7,8-TCDD	2.10e+06	1.00e+03	2.1e+03			

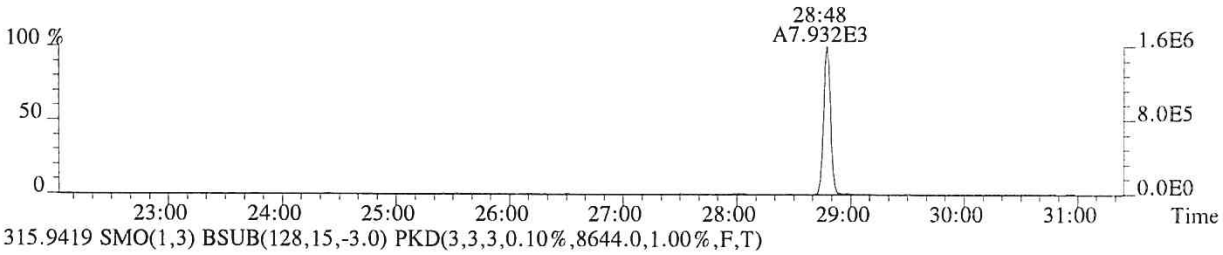
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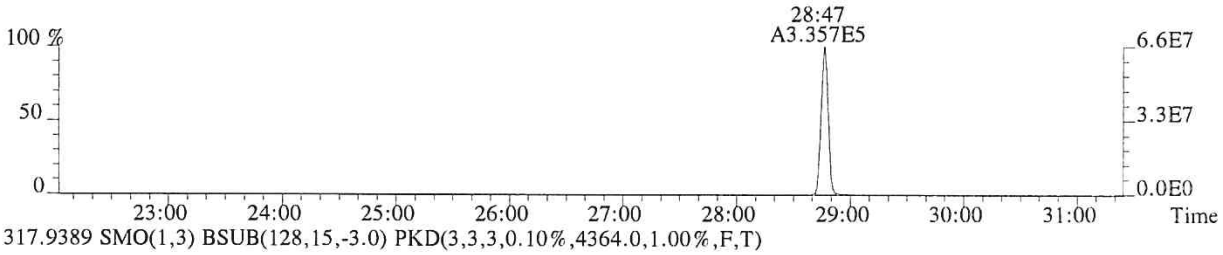
File:P513852 #1-665 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,700.0,1.00%,F,T)



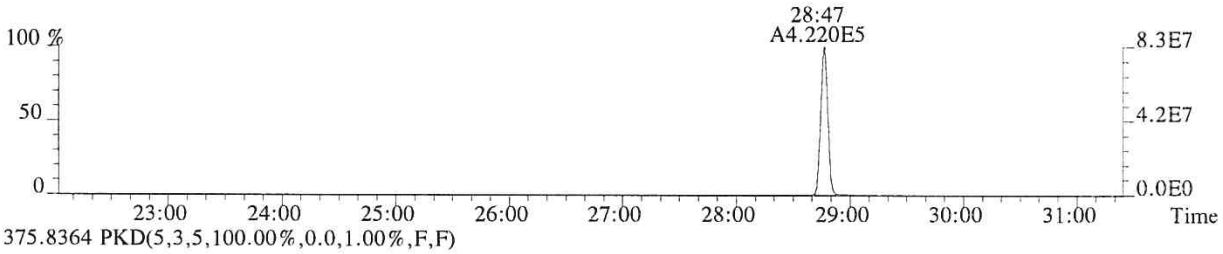
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1724.0,1.00%,F,T)



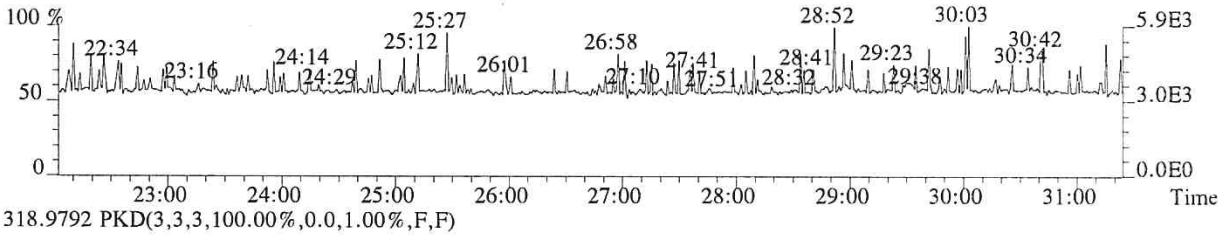
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8644.0,1.00%,F,T)



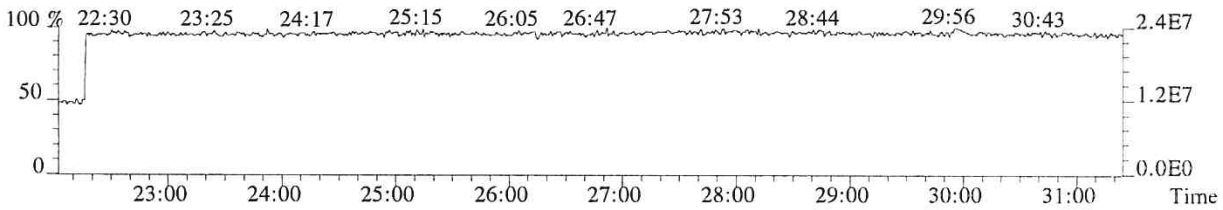
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4364.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

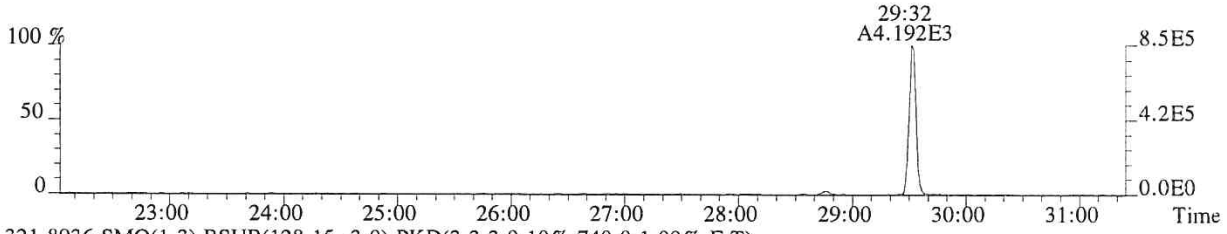


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

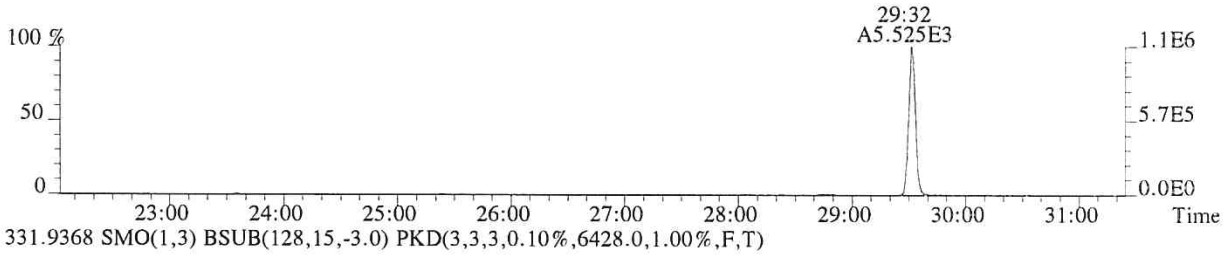


017787

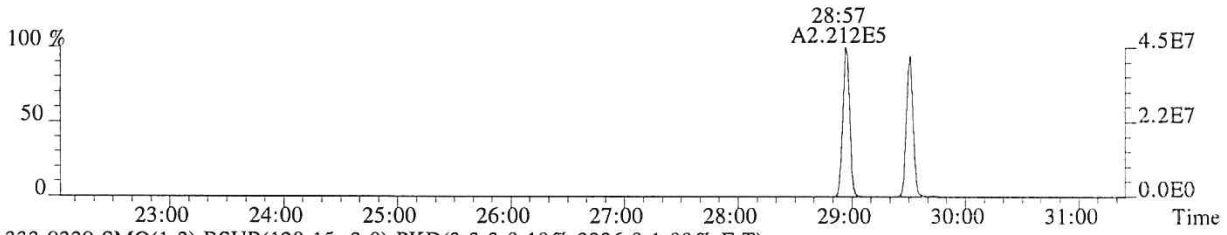
File:P513852 #1-665 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1348.0,1.00%,F,T)



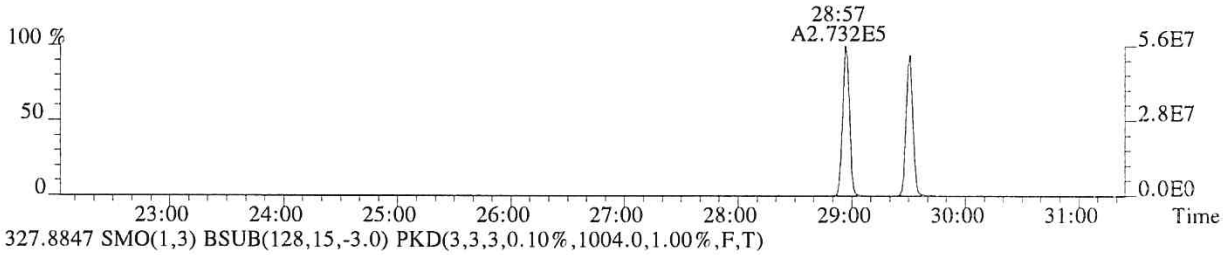
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,740.0,1.00%,F,T)



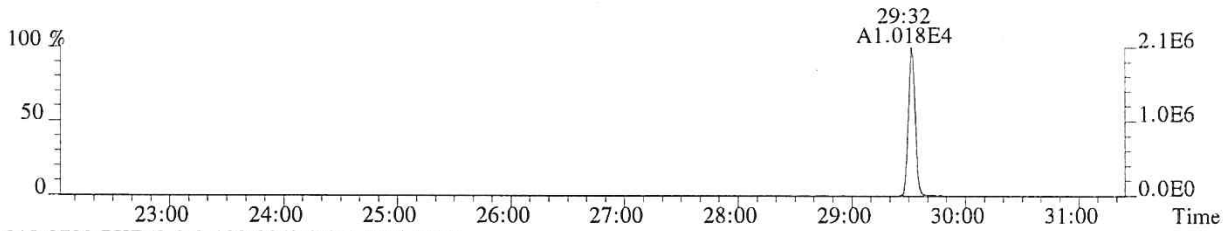
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6428.0,1.00%,F,T)



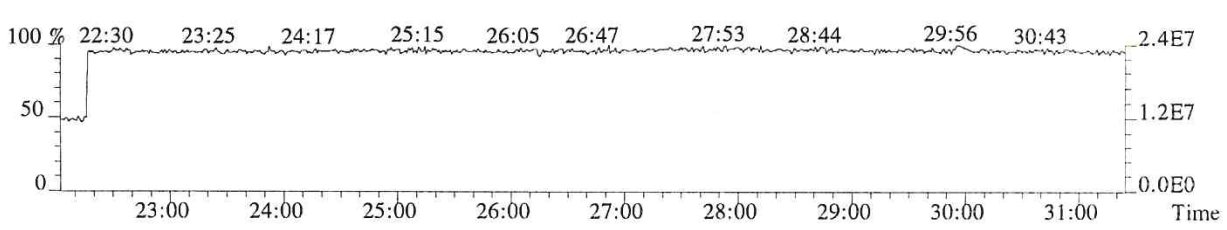
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3336.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1004.0,1.00%,F,T)

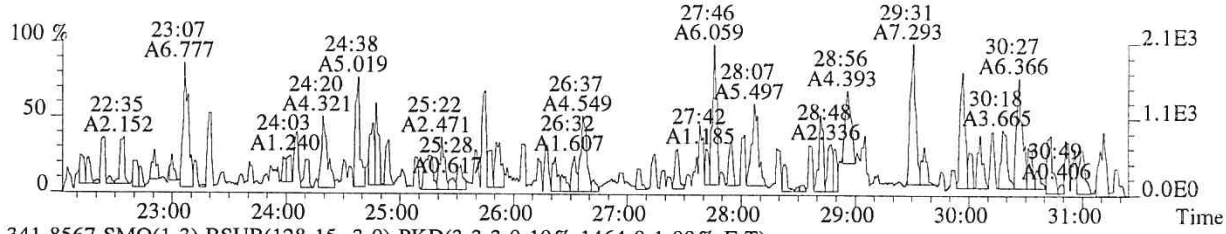


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

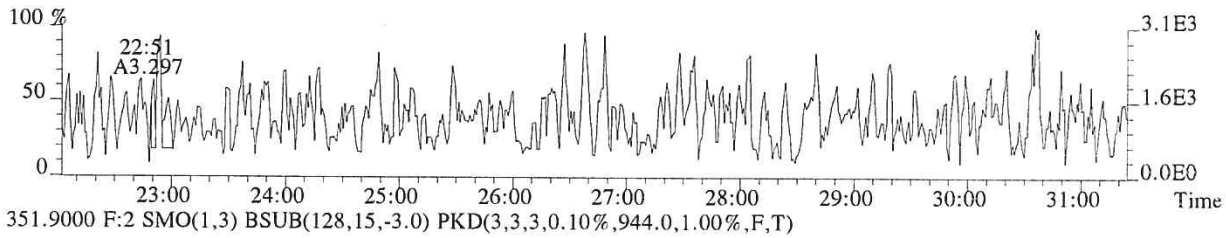


017788

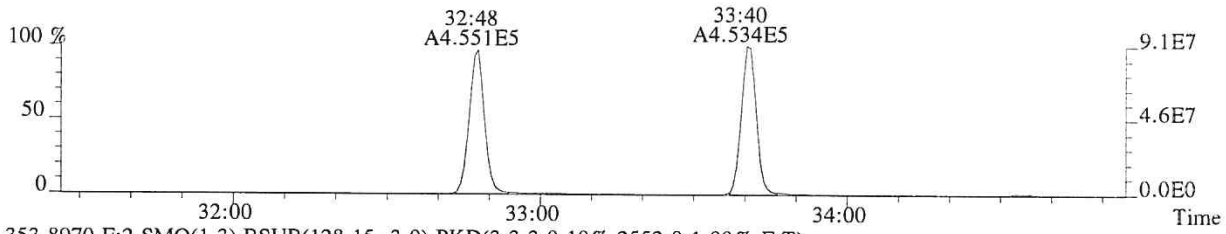
File:P513852 #1-665 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,196.0,1.00%,F,T)



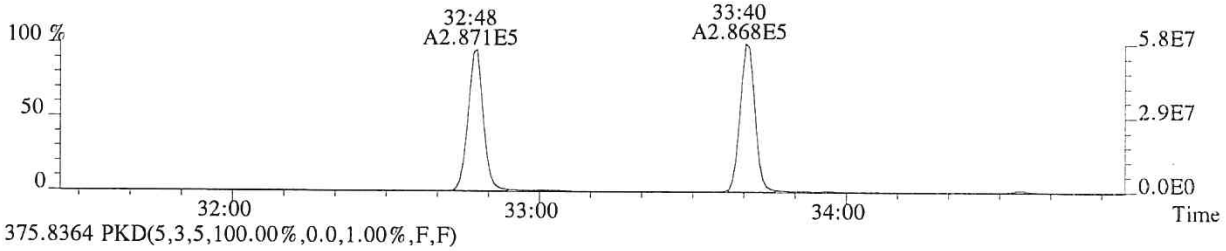
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1464.0,1.00%,F,T)



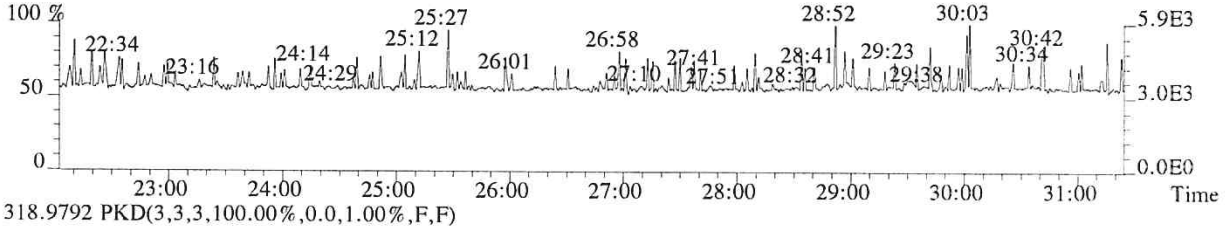
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



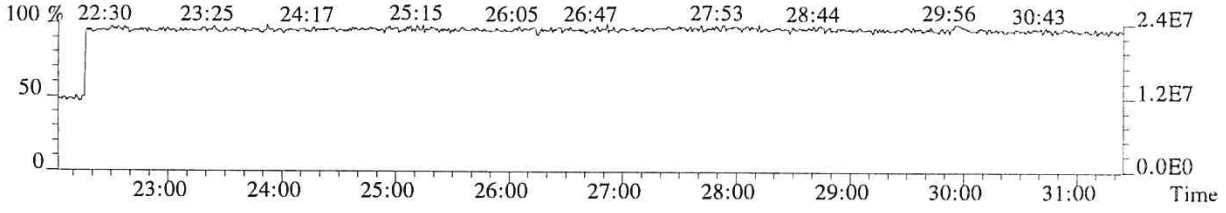
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2552.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

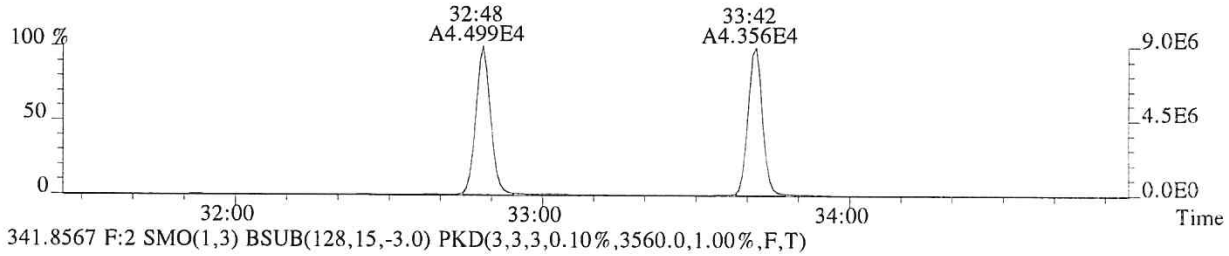


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

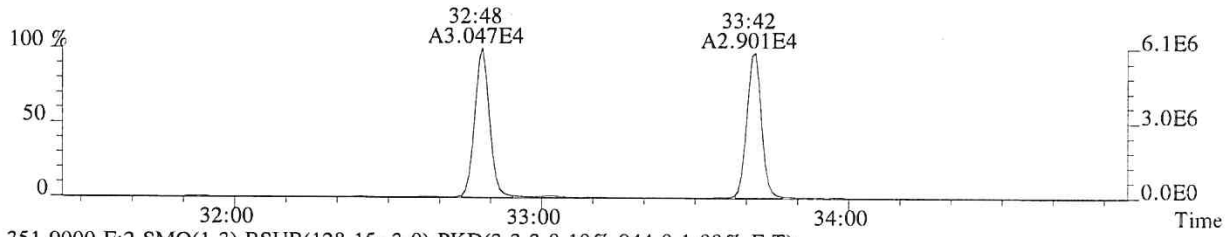


017789

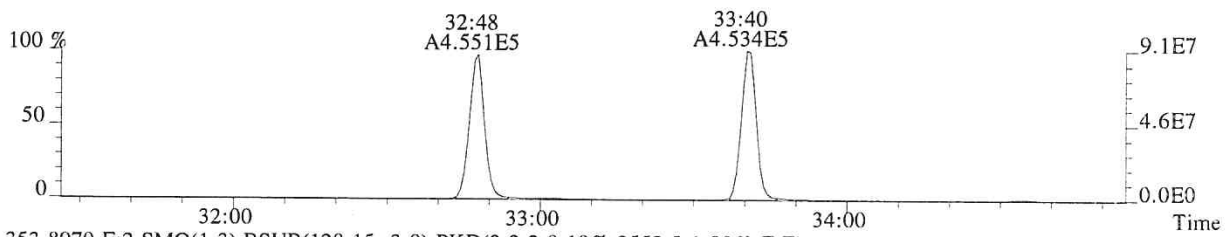
File:P513852 #1-313 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,192.0,1.00%,F,T)



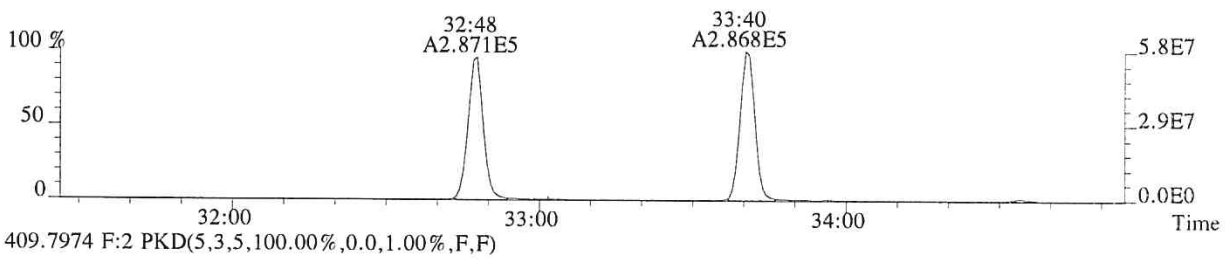
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3560.0,1.00%,F,T)



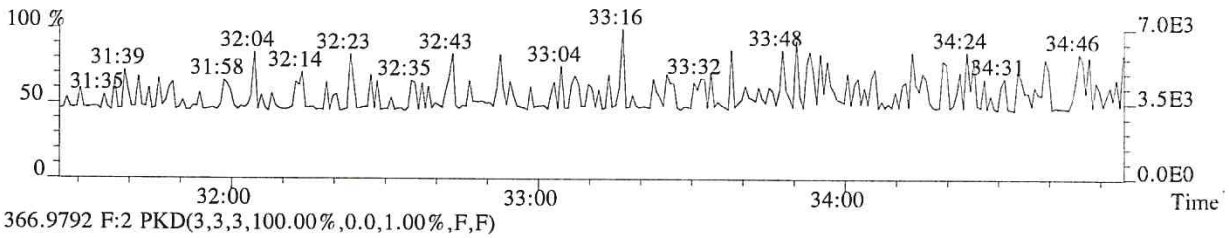
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



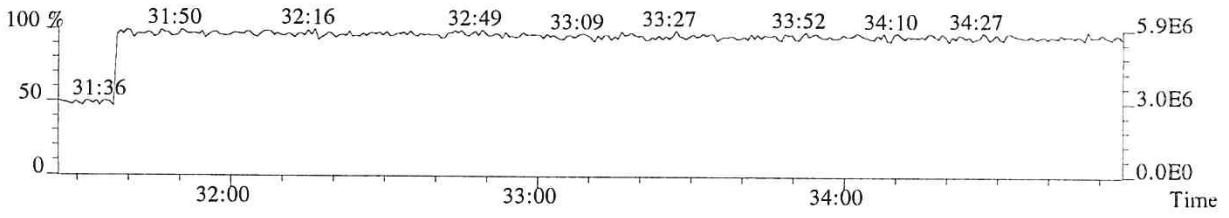
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2552.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

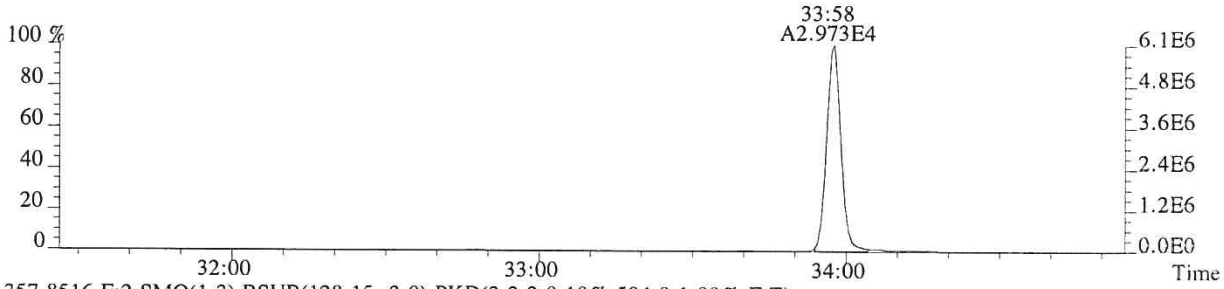


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

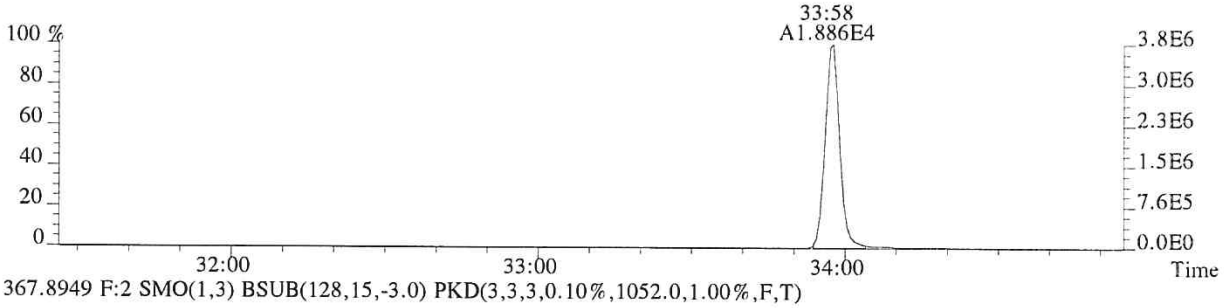


017790

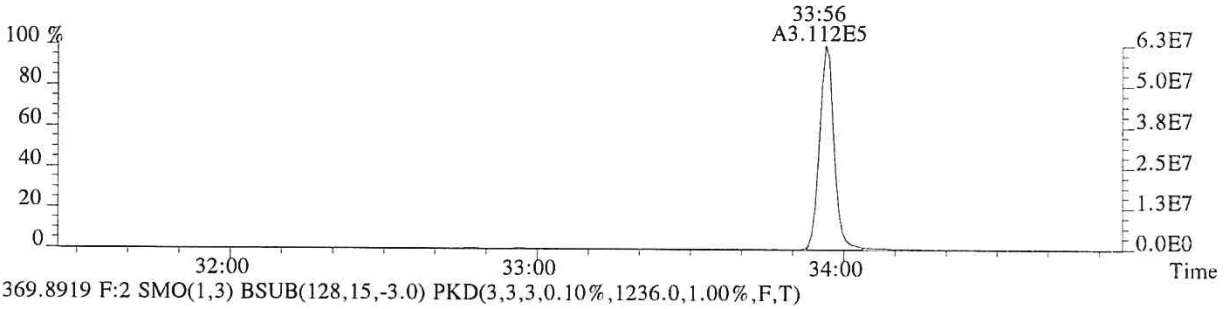
File:P513852 #1-313 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,516.0,1.00%,F,T)



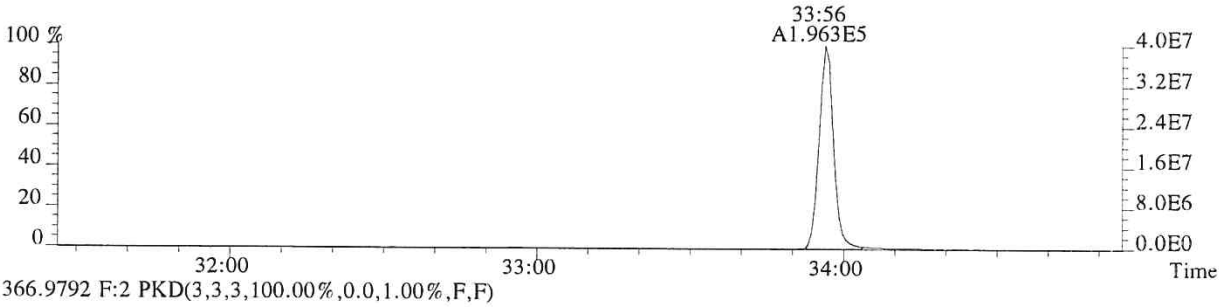
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,504.0,1.00%,F,T)



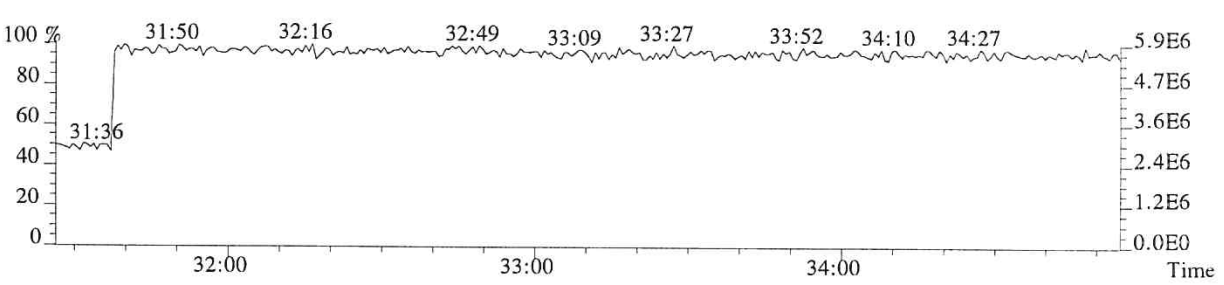
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1052.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1236.0,1.00%,F,T)

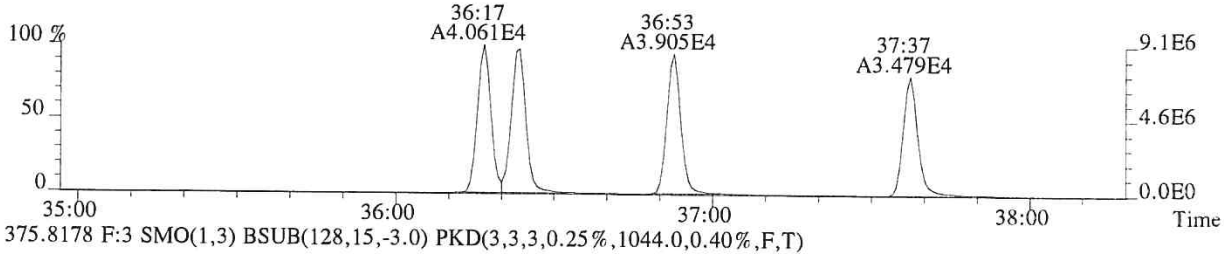


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

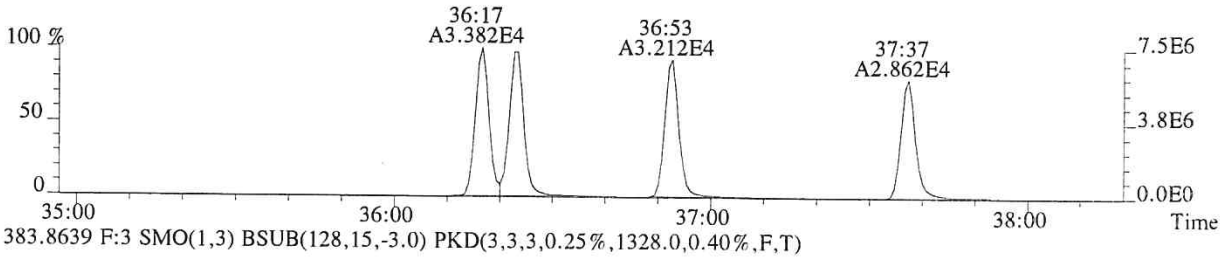


017791

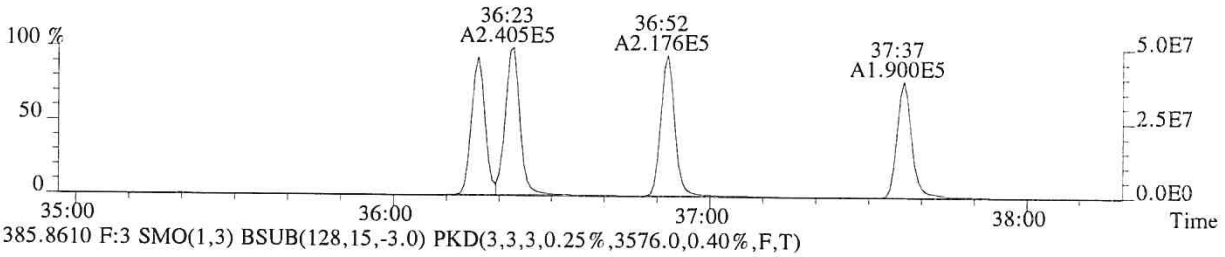
File:P513852 #1-303 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:76556
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1016.0,0.40%,F,T)



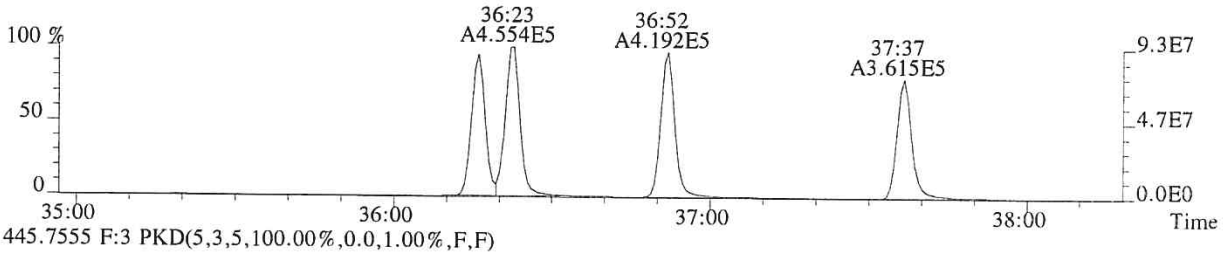
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1044.0,0.40%,F,T)



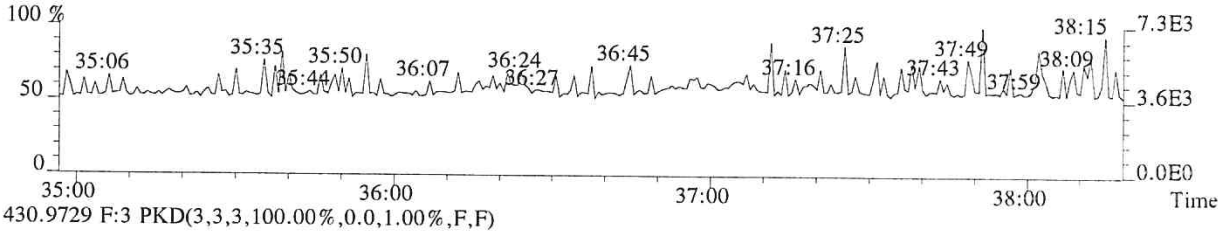
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1328.0,0.40%,F,T)



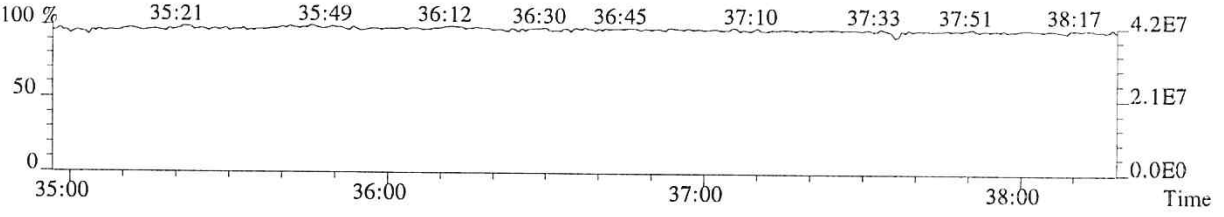
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3576.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

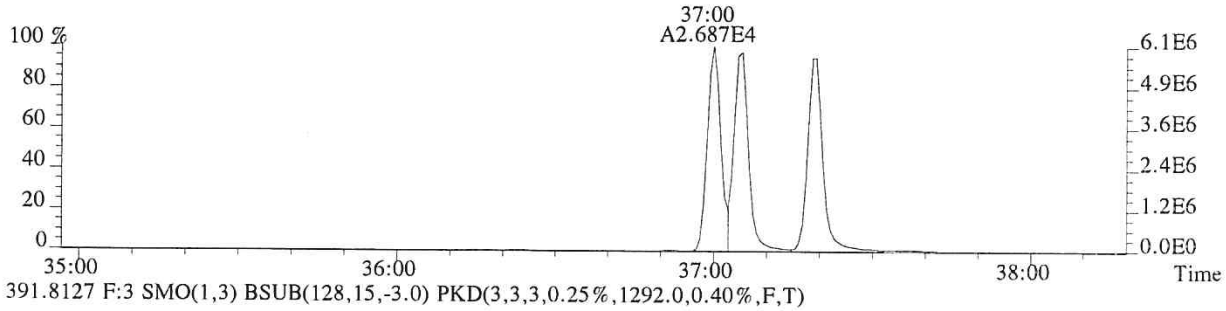


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

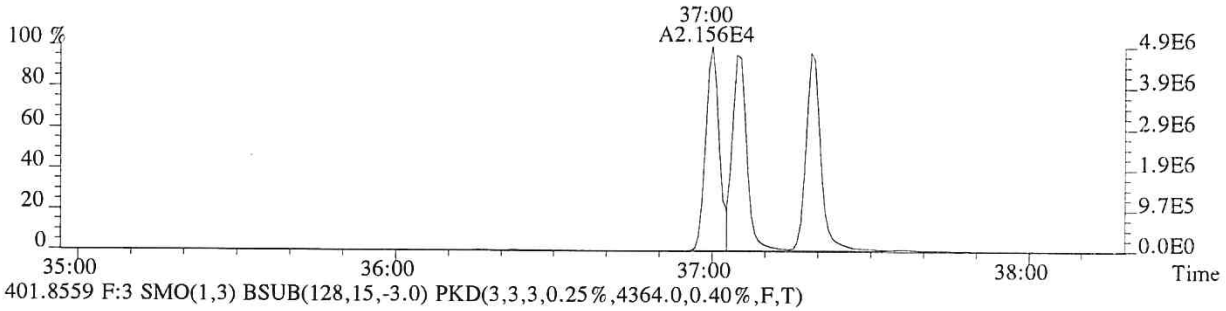


017792

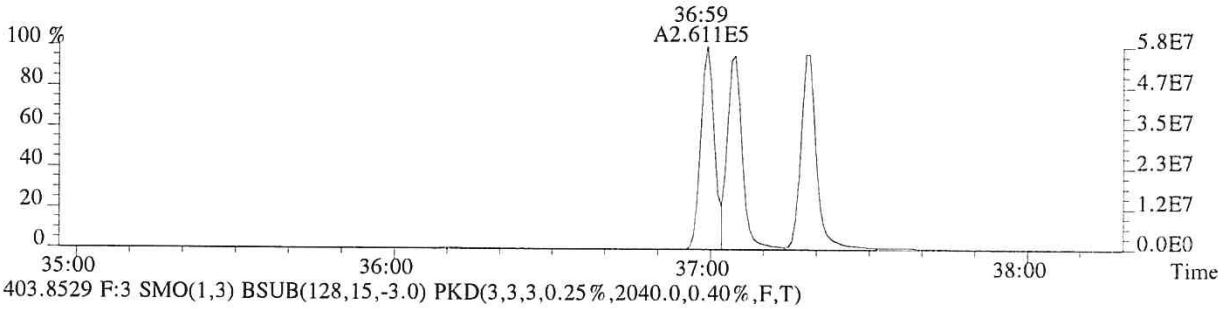
File:P513852 #1-303 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,748.0,0.40%,F,T)



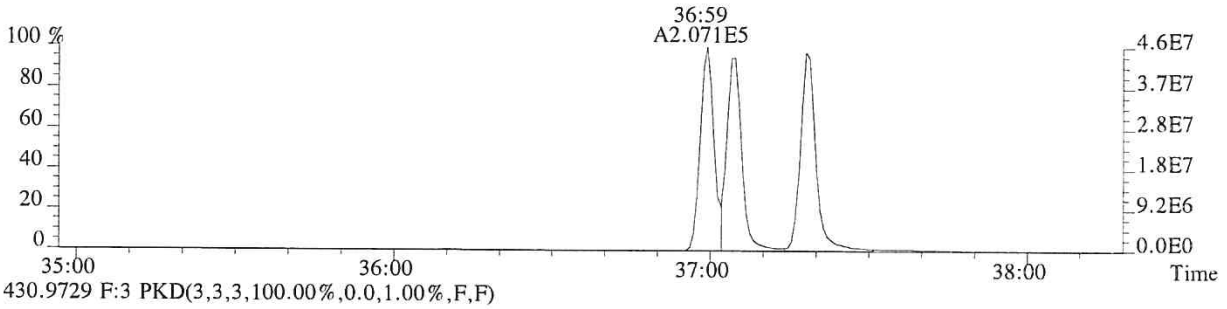
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1292.0,0.40%,F,T)



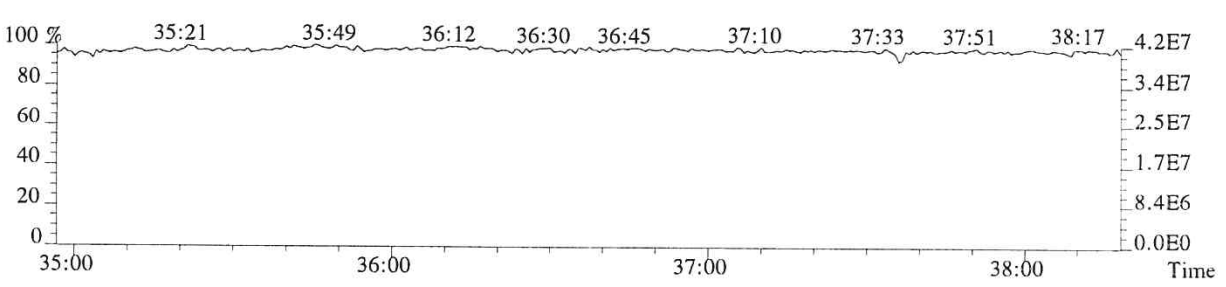
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4364.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2040.0,0.40%,F,T)

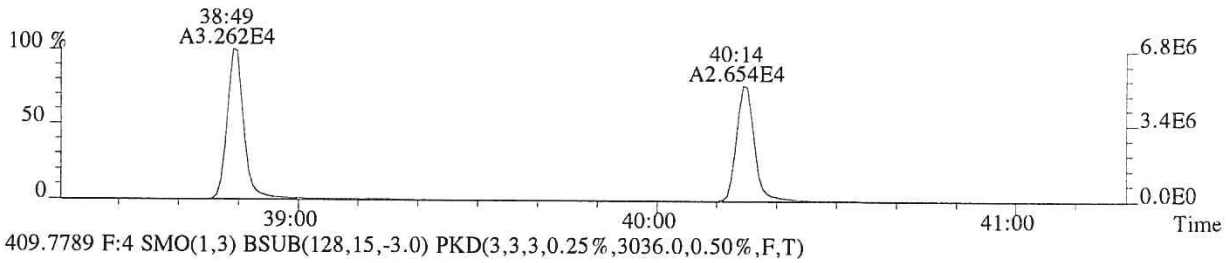


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

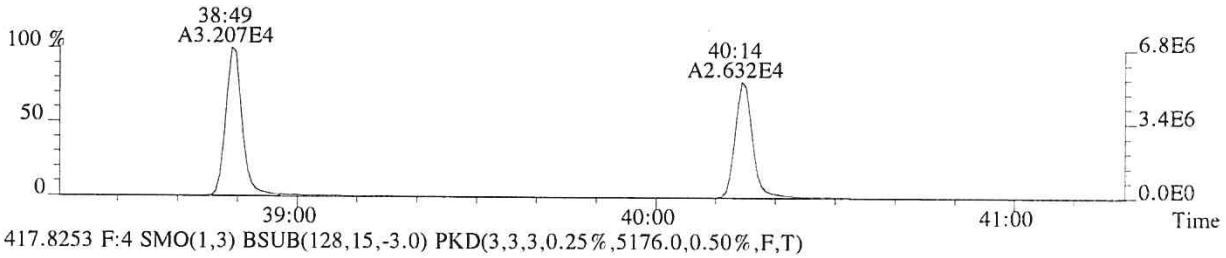


017793

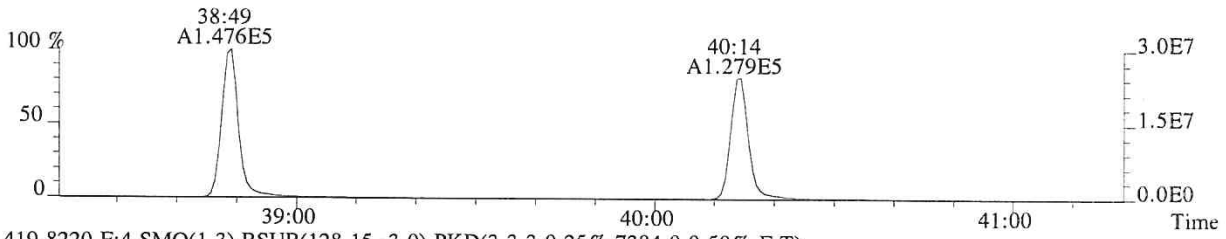
File:P513852 #1-268 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3668.0,0.50%,F,T)



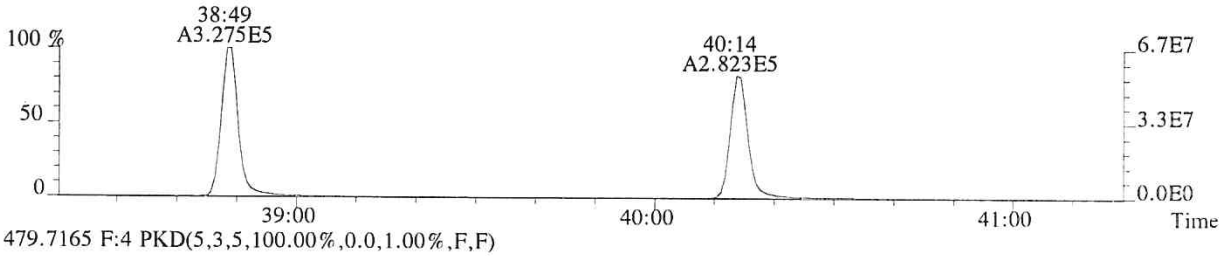
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3036.0,0.50%,F,T)



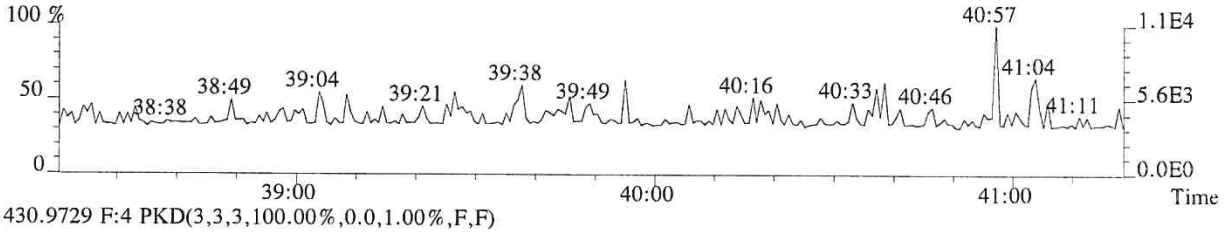
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5176.0,0.50%,F,T)



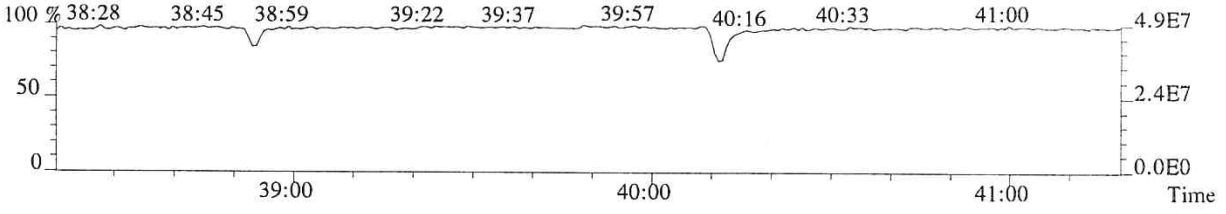
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7384.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

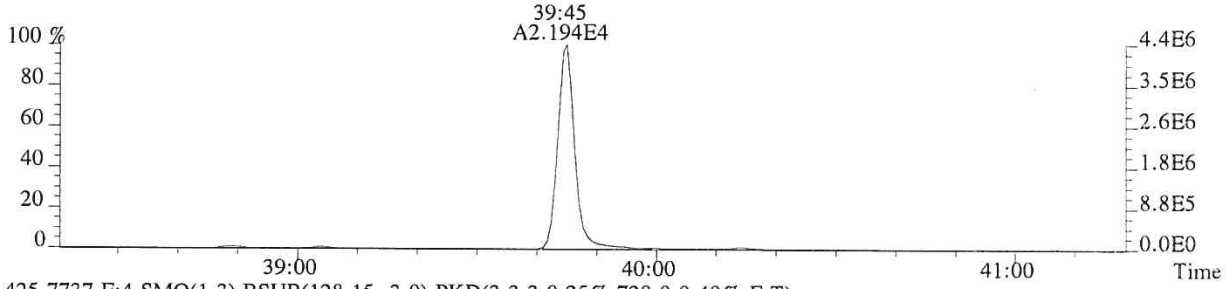


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

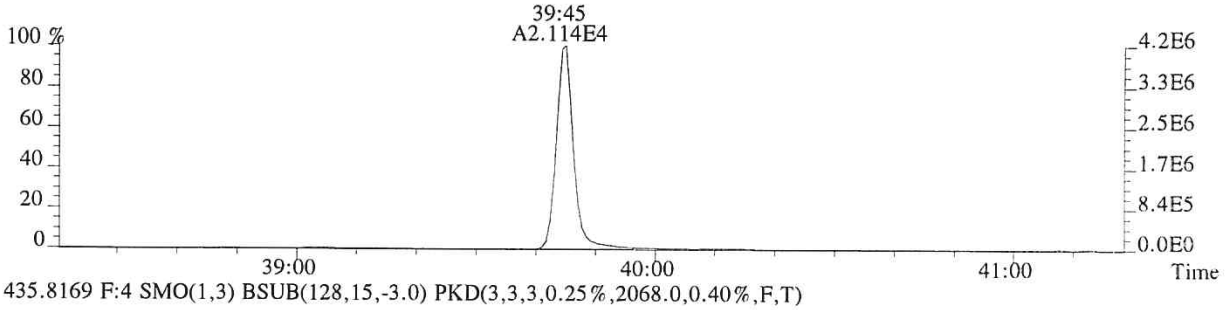


017794

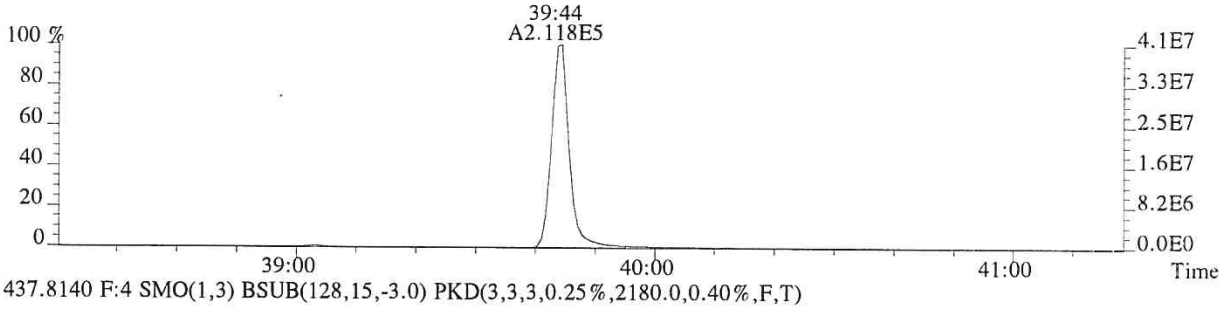
File:P513852 #1-268 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spectŁ
Sample#1 Exp:76556
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1676.0,0.40%,F,T)



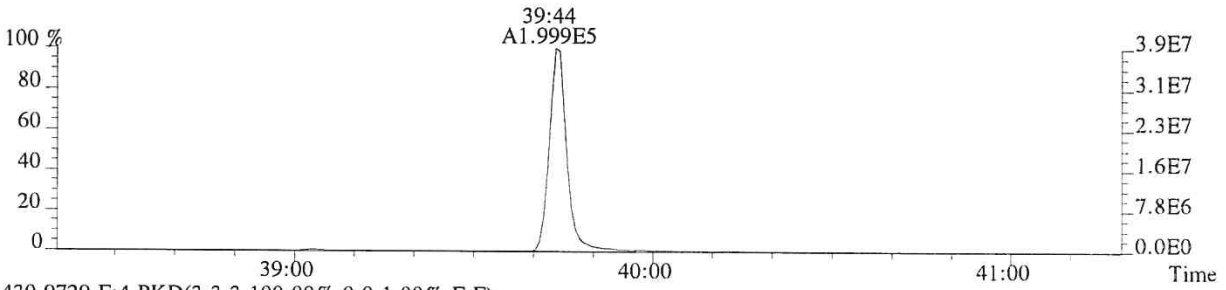
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,728.0,0.40%,F,T)



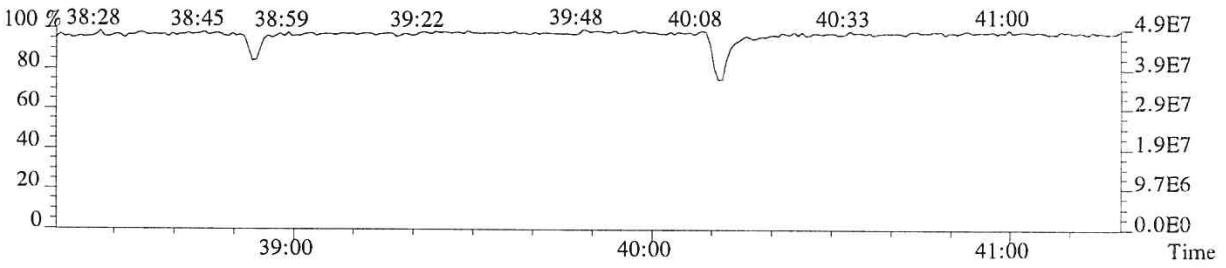
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2068.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2180.0,0.40%,F,T)

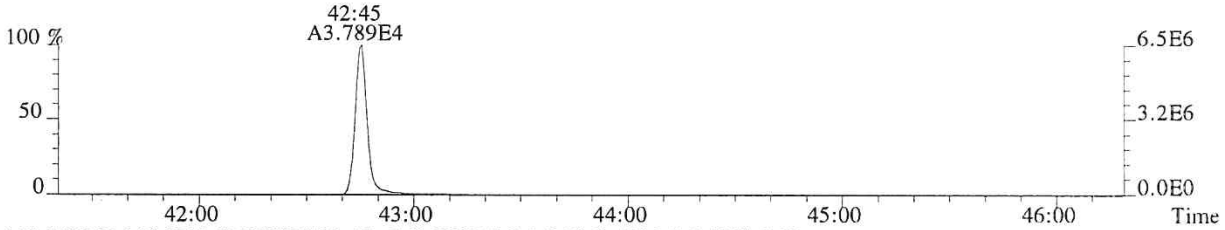


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

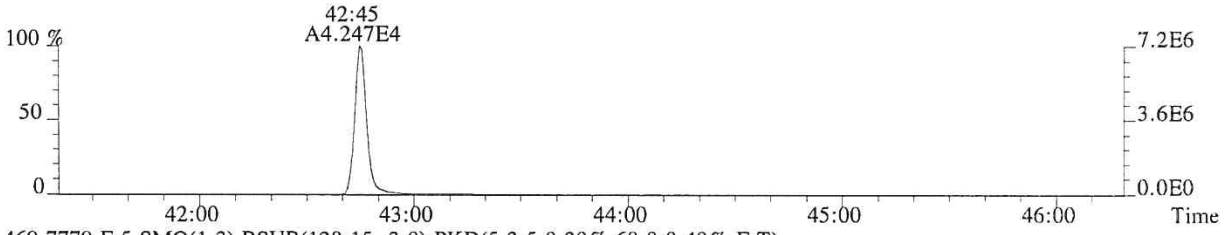


017795

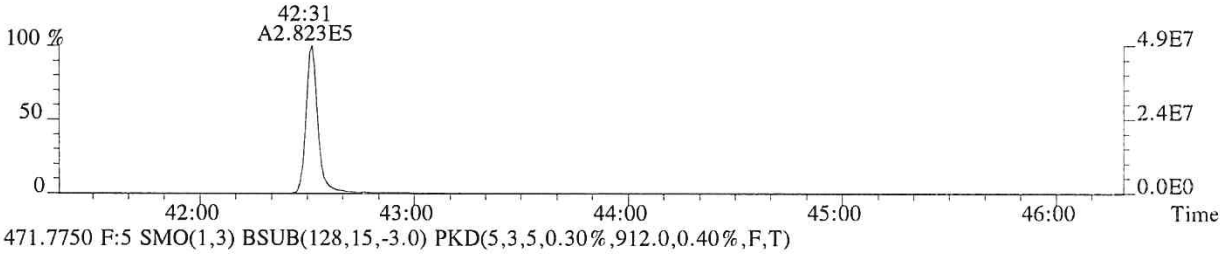
File:P513852 #1-448 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1076.0,0.40%,F,T)



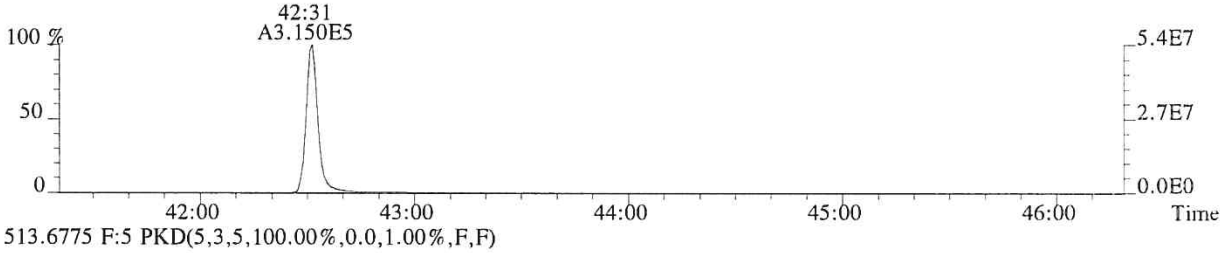
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1736.0,0.40%,F,T)



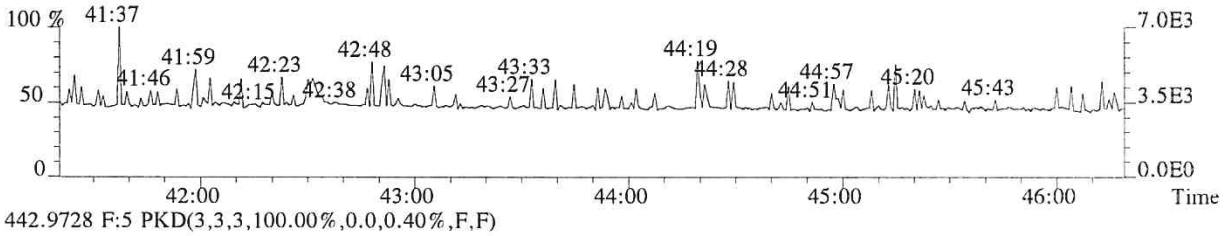
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,68.0,0.40%,F,T)



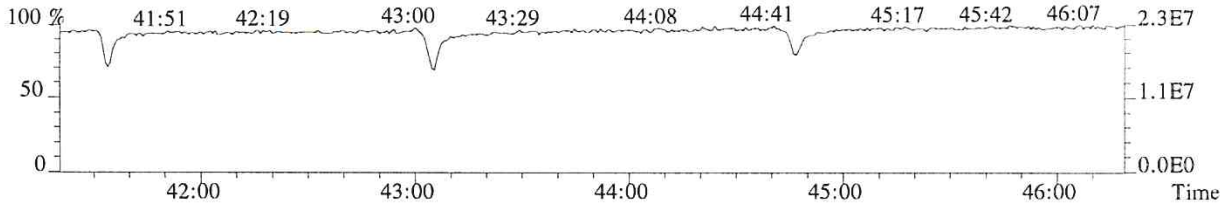
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,912.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

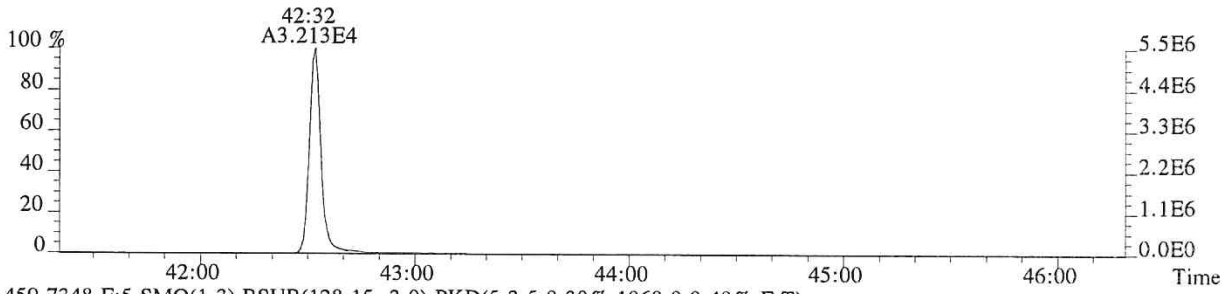


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

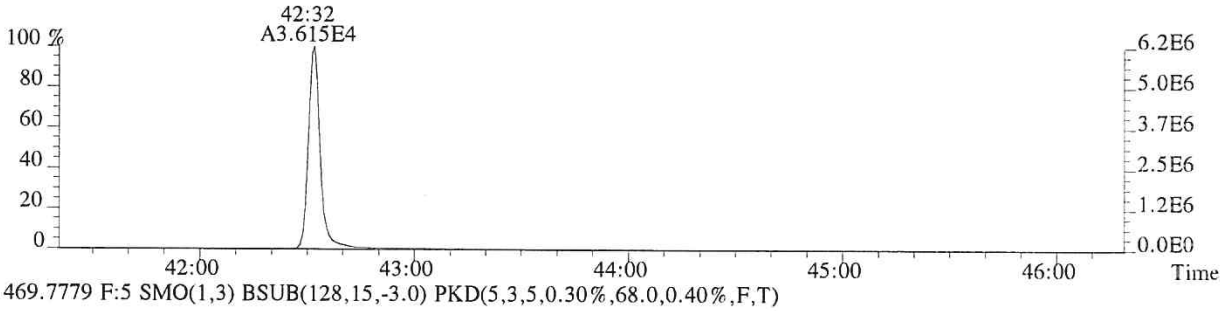


017796

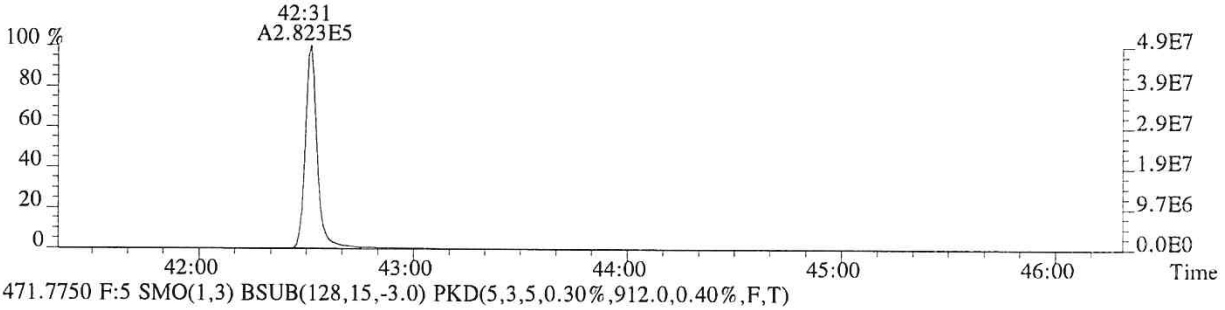
File:P513852 #1-448 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,160.0,0.40%,F,T)



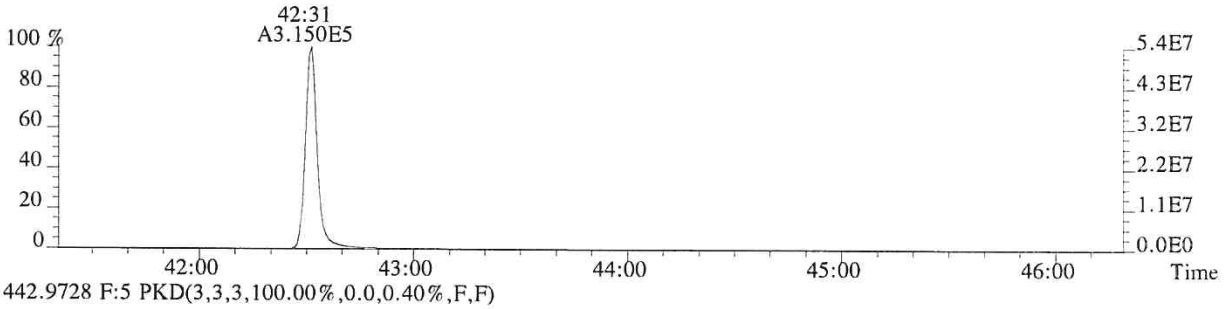
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1068.0,0.40%,F,T)



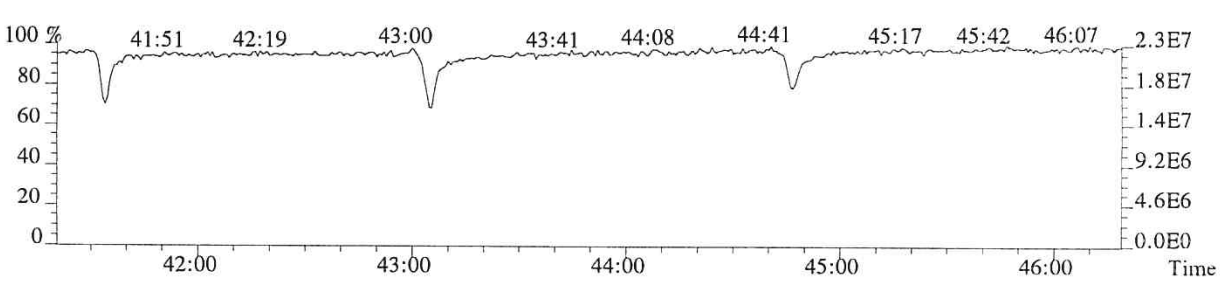
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,68.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,912.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017797

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76557

Run #4 Filename P513853 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:06:29
Processed: 24-JAN-18 17:13:42 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:47	4.270e+04	5.692e+04	0.75	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	3.077e+05	2.016e+05	1.53	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:41	2.833e+05	1.864e+05	1.52	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:16	2.625e+05	2.158e+05	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:22	2.702e+05	2.228e+05	1.21	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:52	2.439e+05	2.001e+05	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.977e+05	1.631e+05	1.21	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:48	2.099e+05	2.057e+05	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.509e+05	1.470e+05	1.03	yes	no	1.258
10	Unk	OCDF	42:45	2.260e+05	2.525e+05	0.90	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:31	2.824e+04	3.588e+04	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:57	1.903e+05	1.221e+05	1.56	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	1.727e+05	1.384e+05	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:04	1.705e+05	1.356e+05	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:18	1.758e+05	1.371e+05	1.28	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	1.431e+05	1.365e+05	1.05	yes	no	1.025
17	Unk	OCDD	42:31	1.906e+05	2.140e+05	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:46	4.689e+05	5.926e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:47	6.073e+05	3.832e+05	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	5.900e+05	3.740e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	2.738e+05	5.189e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:21	3.023e+05	5.708e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	2.671e+05	5.167e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	2.133e+05	4.042e+05	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	1.882e+05	4.188e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	1.419e+05	3.155e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:30	2.668e+05	3.316e+05	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	4.009e+05	2.534e+05	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	3.335e+05	2.508e+05	1.33	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:03	3.244e+05	2.699e+05	1.20	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:43	2.779e+05	2.632e+05	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	3.375e+05	3.799e+05	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:56	2.956e+05	3.663e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:17	3.390e+05	2.761e+05	1.23	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:31	6.612e+04				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
76557

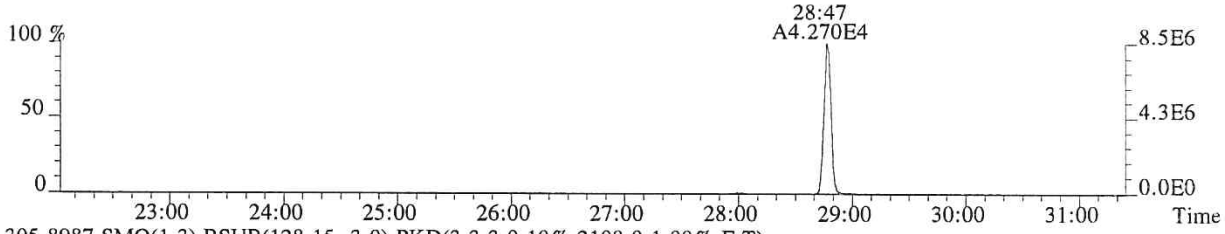
Run #4 Filename P513853 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:06:29
Processed: 24-JAN-18 17:13:42 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.50e+06	6.40e+02	1.3e+04	1.14e+07	2.11e+03	5.4e+03
2	1,2,3,7,8-PeCDF	6.16e+07	1.61e+03	3.8e+04	4.01e+07	2.10e+03	1.9e+04
3	2,3,4,7,8-PeCDF	5.79e+07	1.61e+03	3.6e+04	3.78e+07	2.10e+03	1.8e+04
4	1,2,3,4,7,8-HxCDF	5.83e+07	1.86e+03	3.1e+04	4.74e+07	2.55e+03	1.9e+04
5	1,2,3,6,7,8-HxCDF	5.80e+07	1.86e+03	3.1e+04	4.80e+07	2.55e+03	1.9e+04
6	2,3,4,6,7,8-HxCDF	5.37e+07	1.86e+03	2.9e+04	4.34e+07	2.55e+03	1.7e+04
7	1,2,3,7,8,9-HxCDF	4.12e+07	1.86e+03	2.2e+04	3.39e+07	2.55e+03	1.3e+04
8	1,2,3,4,6,7,8-HpCDF	4.57e+07	4.44e+03	1.0e+04	4.52e+07	1.05e+04	4.3e+03
9	1,2,3,4,7,8,9-HpCDF	3.06e+07	4.44e+03	6.9e+03	2.99e+07	1.05e+04	2.8e+03
10	OCDF	3.93e+07	1.44e+02	2.7e+05	4.34e+07	1.38e+03	3.1e+04
11	2,3,7,8-TCDD	5.83e+06	1.92e+03	3.0e+03	7.39e+06	1.30e+03	5.7e+03
12	1,2,3,7,8-PeCDD	3.83e+07	1.45e+03	2.6e+04	2.46e+07	7.04e+02	3.5e+04
13	1,2,3,4,7,8-HxCDD	3.89e+07	5.12e+02	7.6e+04	3.08e+07	1.23e+03	2.5e+04
14	1,2,3,6,7,8-HxCDD	3.74e+07	5.12e+02	7.3e+04	3.02e+07	1.23e+03	2.5e+04
15	1,2,3,7,8,9-HxCDD	3.75e+07	5.12e+02	7.3e+04	3.01e+07	1.23e+03	2.5e+04
16	1,2,3,4,6,7,8-HpCDD	2.89e+07	1.84e+03	1.6e+04	2.78e+07	1.41e+03	2.0e+04
17	OCDD	3.41e+07	6.32e+02	5.4e+04	3.81e+07	1.31e+03	2.9e+04
18	13C-2,3,7,8-TCDF	9.47e+07	6.52e+03	1.5e+04	1.19e+08	4.12e+03	2.9e+04
19	13C-1,2,3,7,8-PeCDF	1.17e+08	1.28e+03	9.1e+04	7.33e+07	8.08e+02	9.1e+04
20	13C-2,3,4,7,8-PeCDF	1.21e+08	1.28e+03	9.4e+04	7.72e+07	8.08e+02	9.6e+04
21	13C-1,2,3,4,7,8-HxCDF	6.01e+07	1.97e+03	3.1e+04	1.13e+08	1.75e+03	6.5e+04
22	13C-1,2,3,6,7,8-HxCDF	6.52e+07	1.97e+03	3.3e+04	1.24e+08	1.75e+03	7.1e+04
23	13C-2,3,4,6,7,8-HxCDF	5.86e+07	1.97e+03	3.0e+04	1.11e+08	1.75e+03	6.4e+04
24	13C-1,2,3,7,8,9-HxCDF	4.44e+07	1.97e+03	2.3e+04	8.35e+07	1.75e+03	4.8e+04
25	13C-1,2,3,4,6,7,8-HpCDF	4.03e+07	8.48e+03	4.8e+03	9.01e+07	6.21e+03	1.5e+04
26	13C-1,2,3,4,7,8,9-HpCDF	2.83e+07	8.48e+03	3.3e+03	6.33e+07	6.21e+03	1.0e+04
27	13C-2,3,7,8-TCDD	5.56e+07	5.87e+03	9.5e+03	6.88e+07	2.90e+03	2.4e+04
28	13C-1,2,3,7,8-PeCDD	8.27e+07	1.46e+03	5.7e+04	5.24e+07	1.17e+03	4.5e+04
29	13C-1,2,3,4,7,8-HxCDD	7.51e+07	3.07e+03	2.4e+04	5.90e+07	2.67e+03	2.2e+04
30	13C-1,2,3,6,7,8-HxCDD	7.07e+07	3.07e+03	2.3e+04	5.69e+07	2.67e+03	2.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	5.63e+07	2.93e+03	1.9e+04	5.39e+07	1.32e+03	4.1e+04
32	13C-OCDD	5.98e+07	1.07e+03	5.6e+04	6.69e+07	9.36e+02	7.1e+04
33	13C-1,2,3,4-TCDD	5.97e+07	5.87e+03	1.0e+04	7.42e+07	2.90e+03	2.6e+04
34	13C-1,2,3,7,8,9-HxCDD	7.31e+07	3.07e+03	2.4e+04	5.89e+07	2.67e+03	2.2e+04
35	37Cl-2,3,7,8-TCDD	1.36e+07	1.25e+03	1.1e+04			

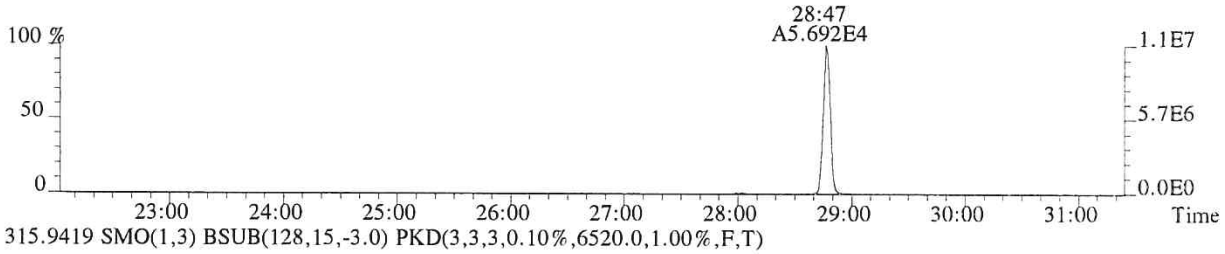
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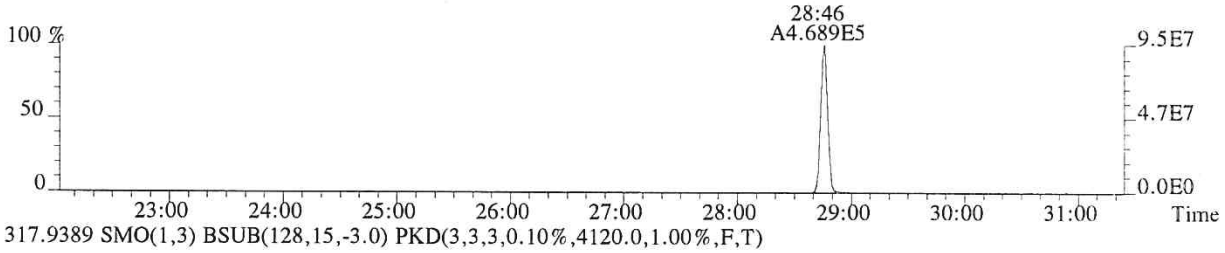
File:P513853 #1-665 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,640.0,1.00%,F,T)



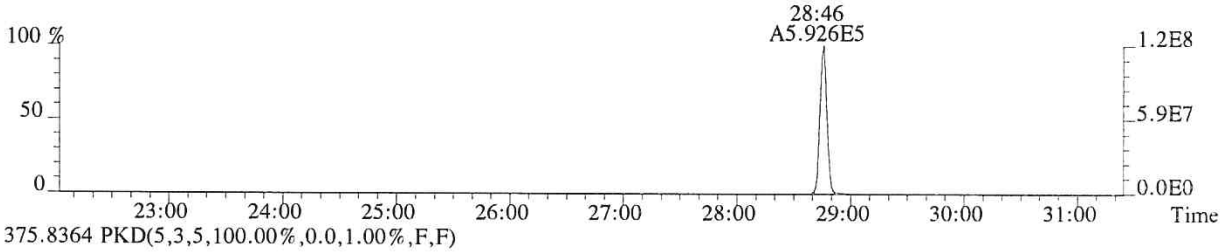
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2108.0,1.00%,F,T)



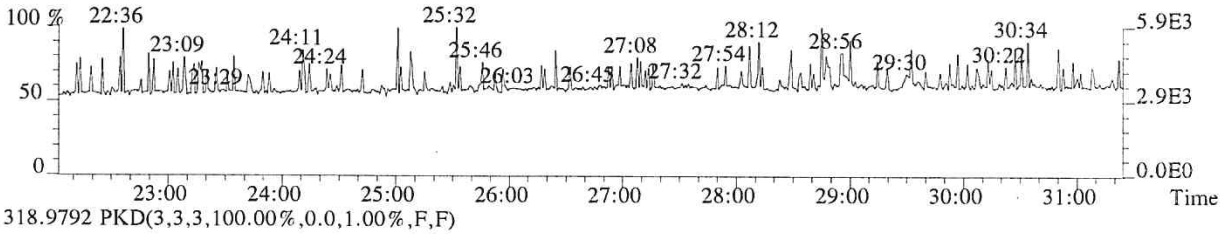
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6520.0,1.00%,F,T)



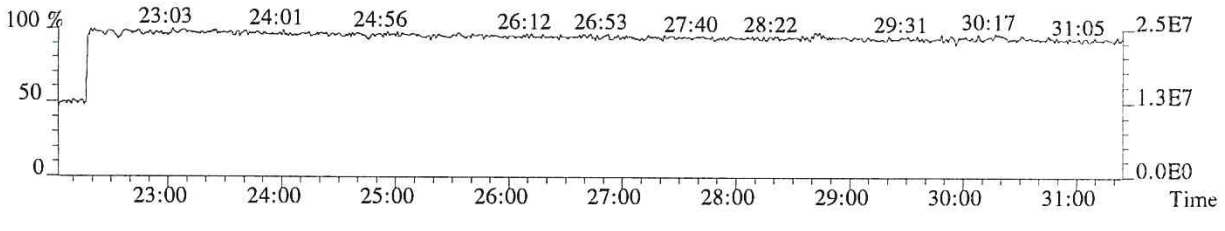
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4120.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

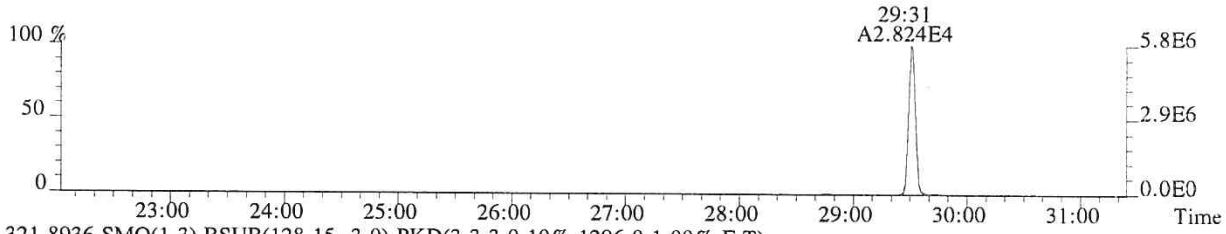


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

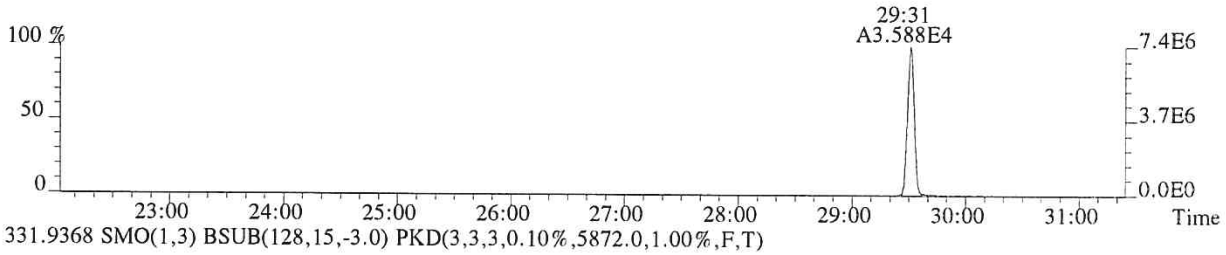


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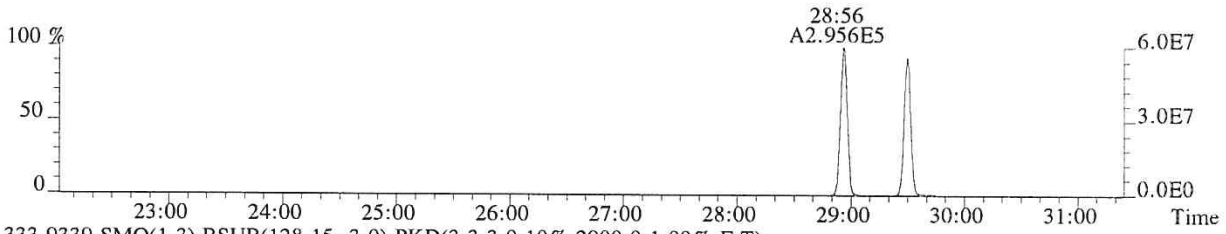
File:P513853 #1-665 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1924.0,1.00%,F,T)



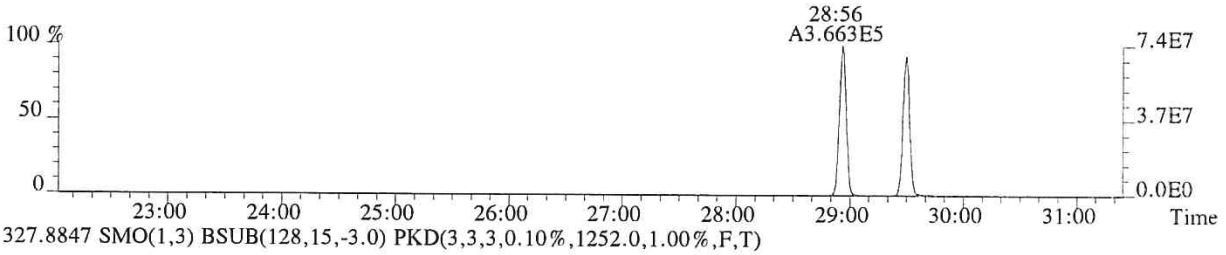
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1296.0,1.00%,F,T)



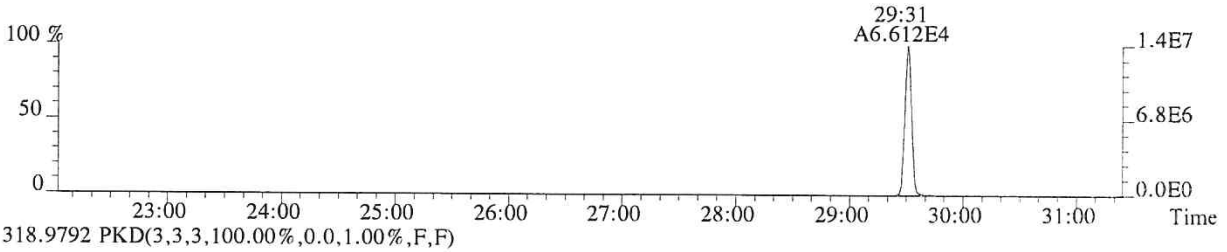
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5872.0,1.00%,F,T)



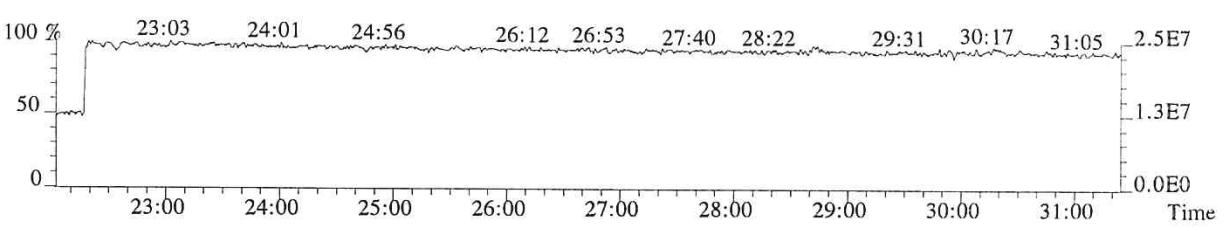
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2900.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1252.0,1.00%,F,T)

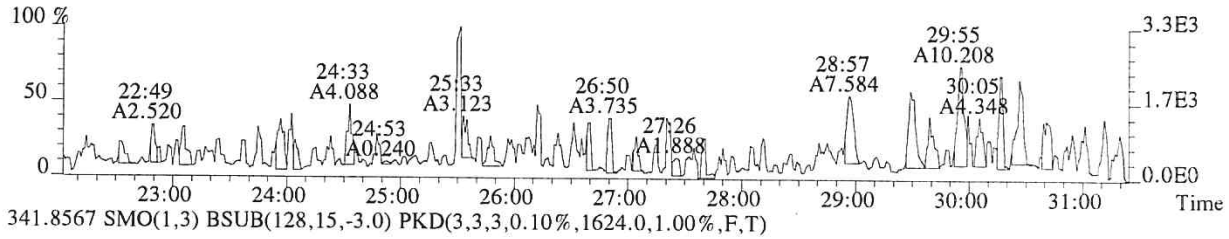


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

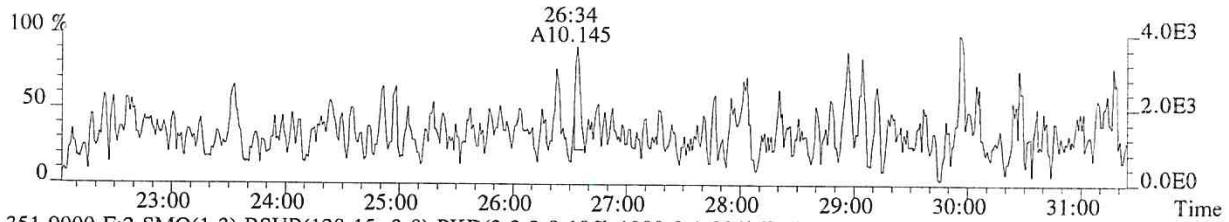


017801

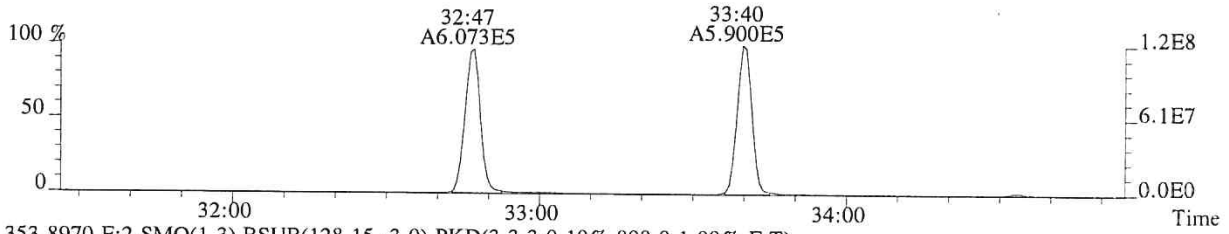
File:P513853 #1-665 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,452.0,1.00%,F,T)



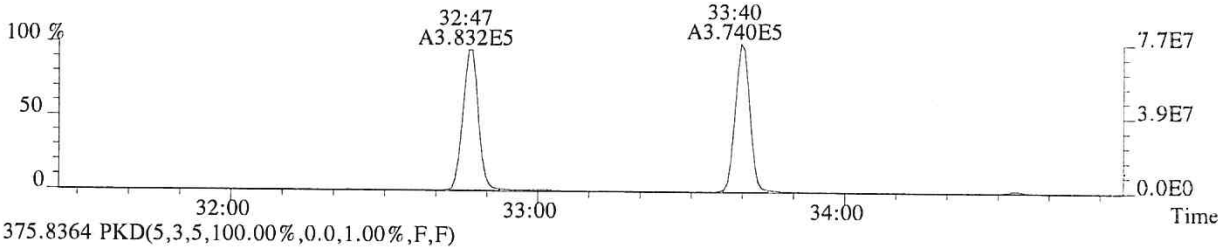
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1624.0,1.00%,F,T)



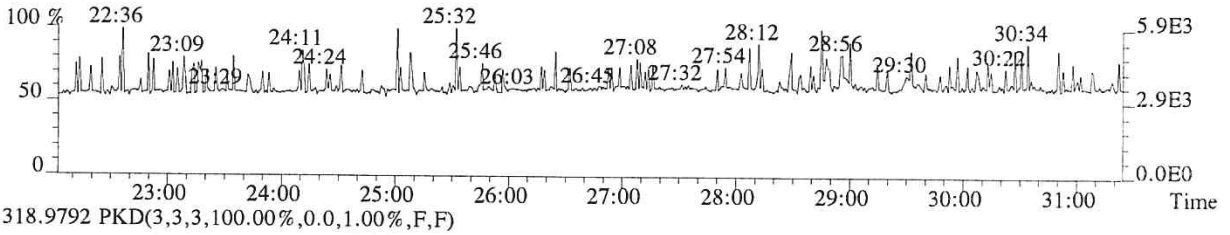
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1280.0,1.00%,F,T)



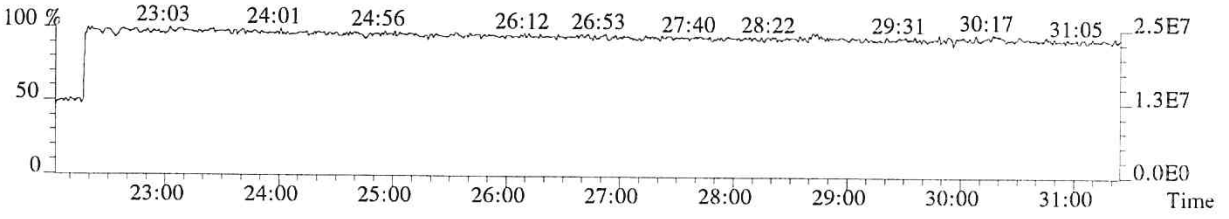
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,808.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

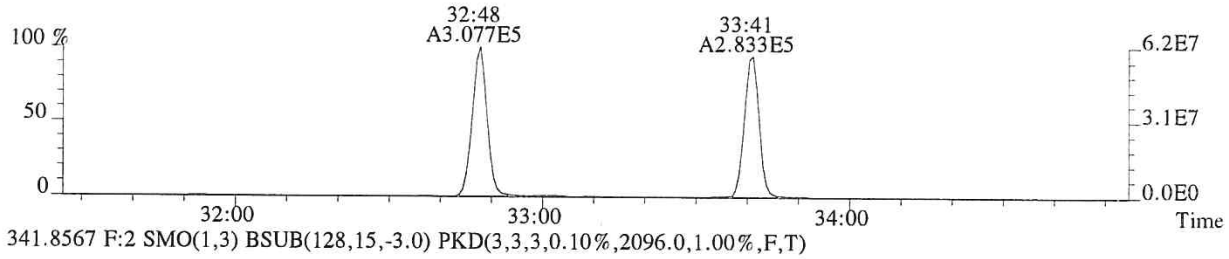


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

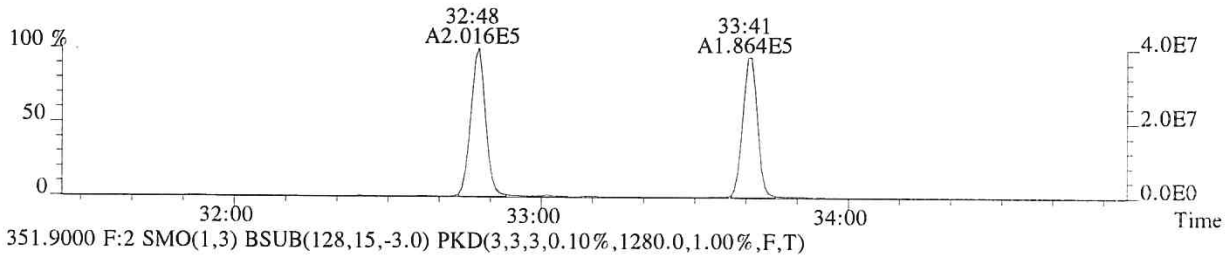


017802

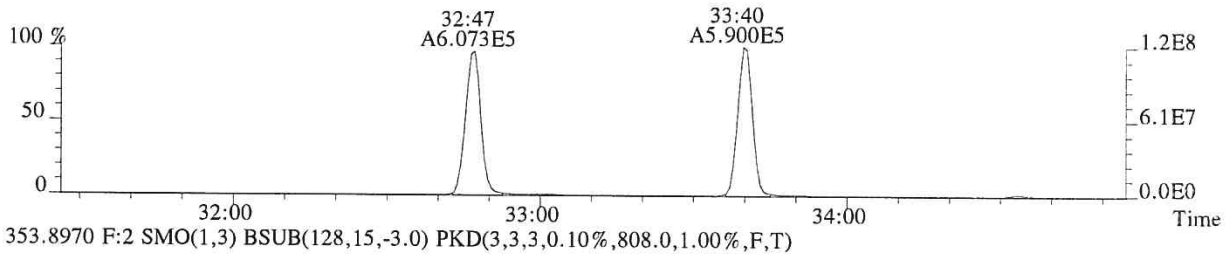
File:P513853 #1-313 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1612.0,1.00%,F,T)



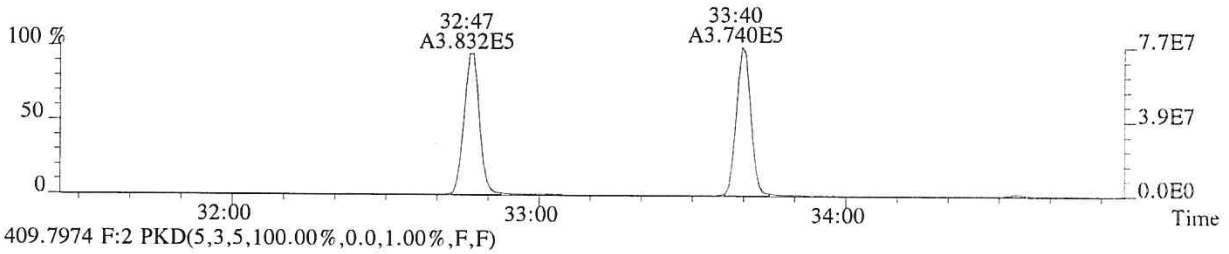
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2096.0,1.00%,F,T)



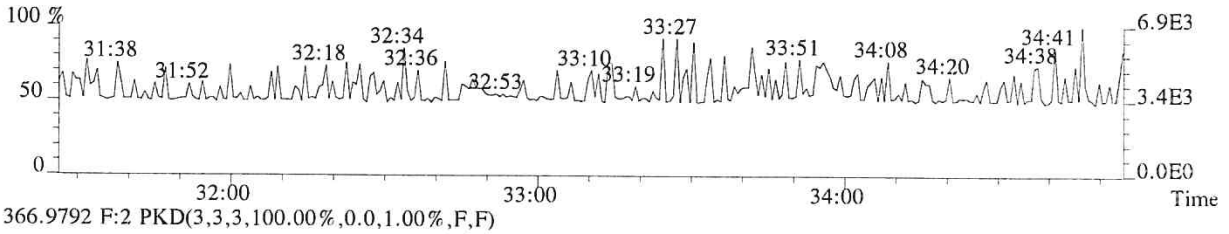
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1280.0,1.00%,F,T)



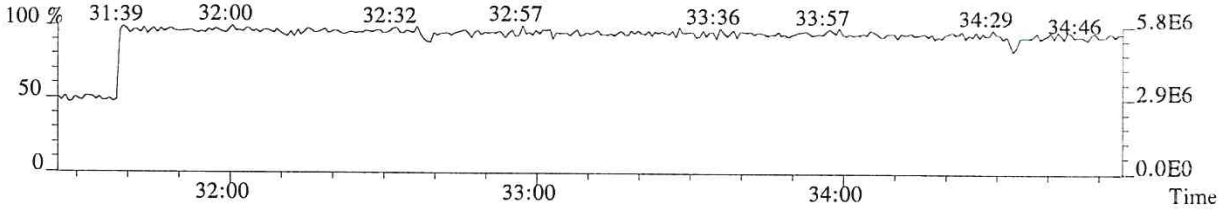
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,808.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

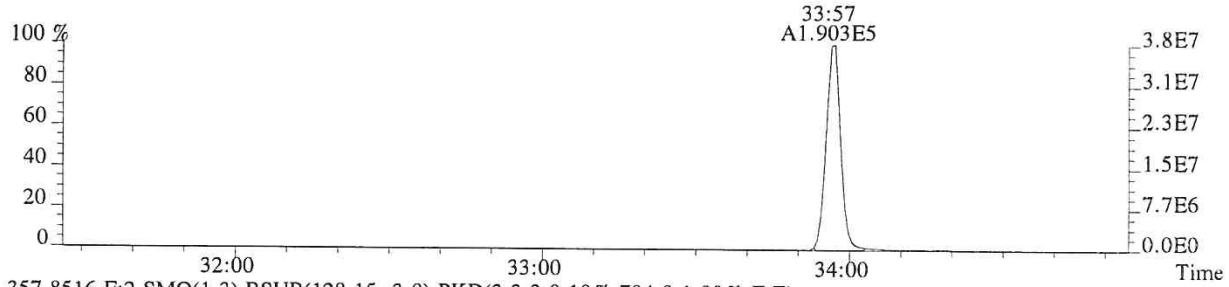


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

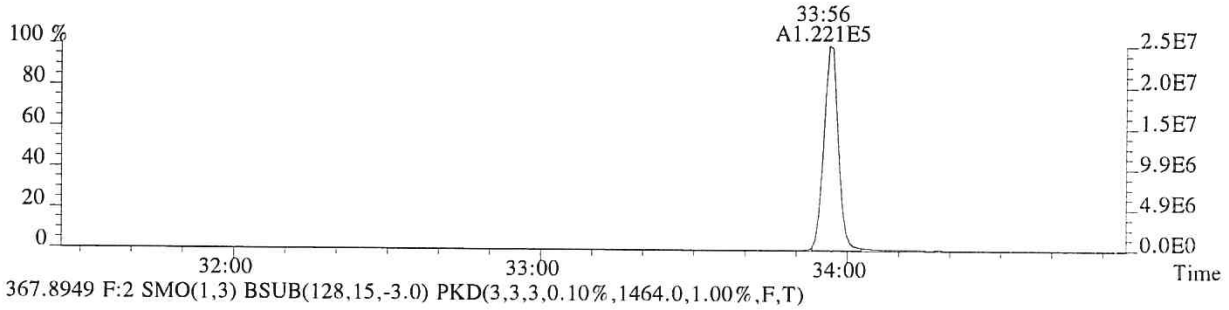


017803

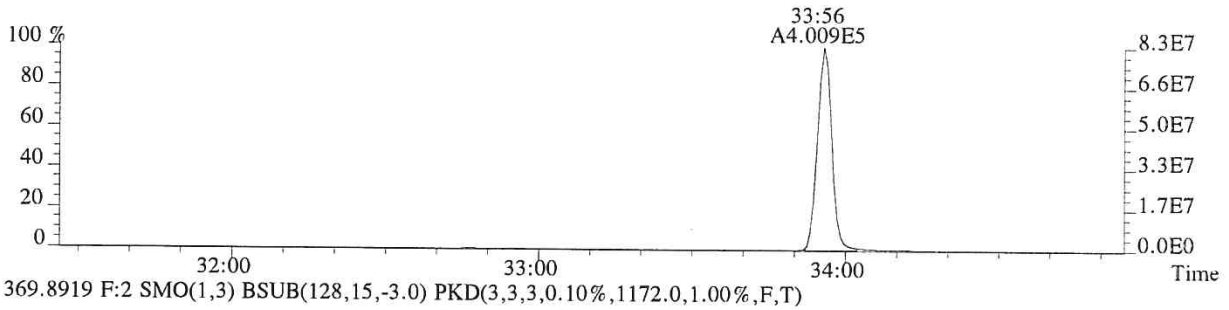
File:P513853 #1-313 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1452.0,1.00%,F,T)



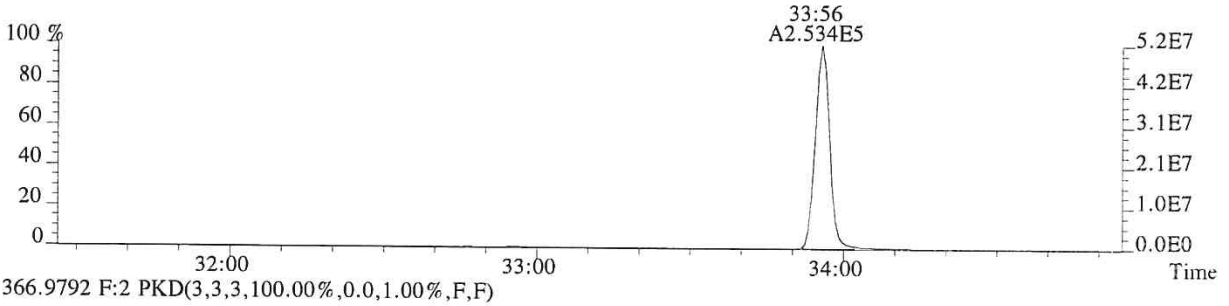
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,704.0,1.00%,F,T)



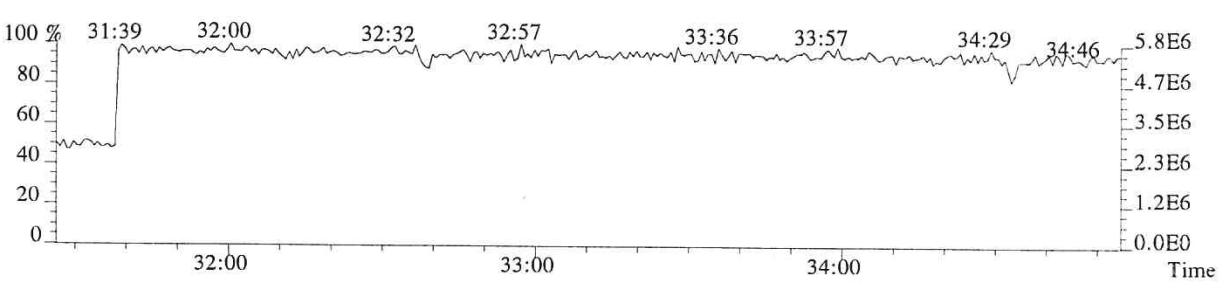
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1464.0,1.00%,F,T)



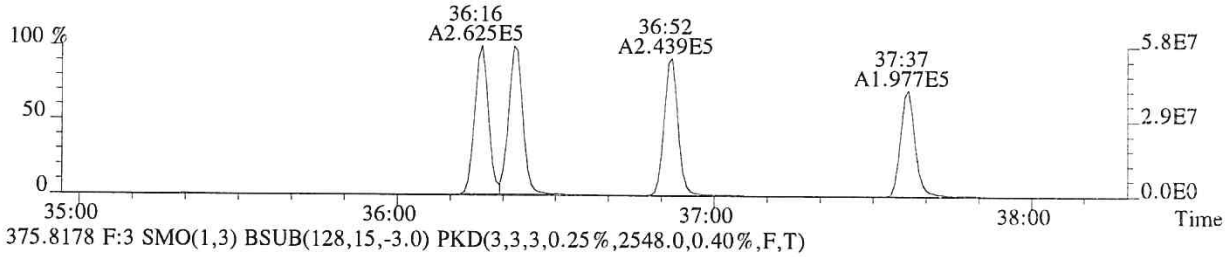
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1172.0,1.00%,F,T)



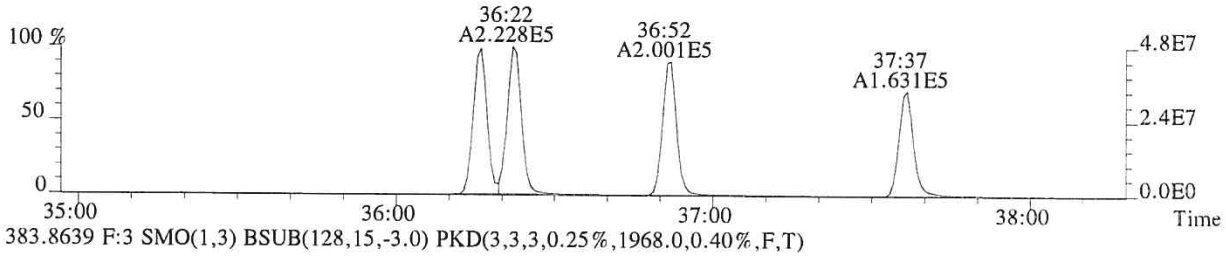
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



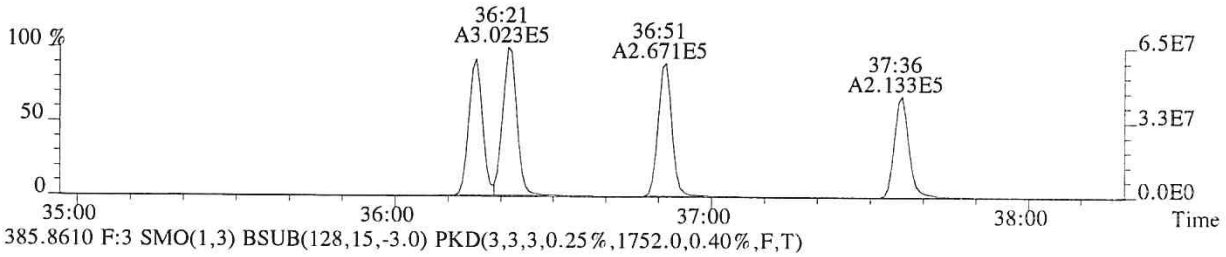
File:P513853 #1-303 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:76557
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1856.0,0.40%,F,T)



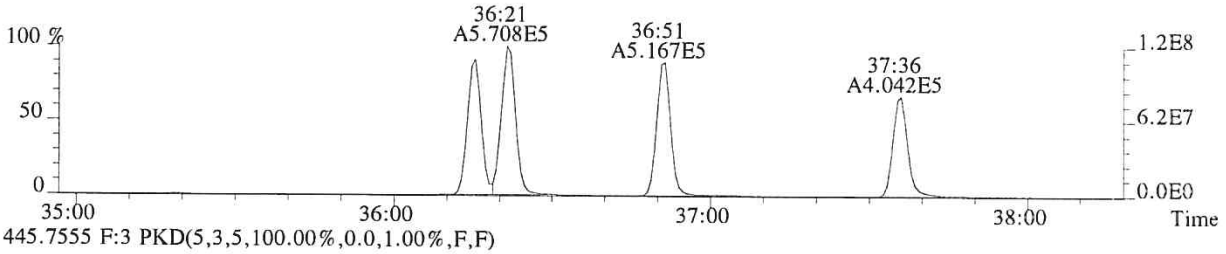
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2548.0,0.40%,F,T)



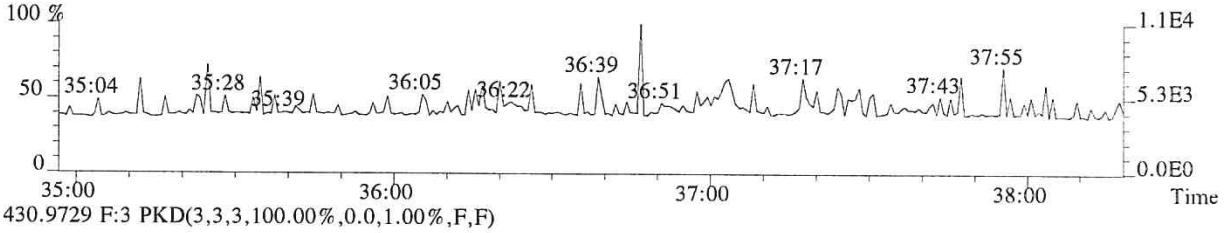
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1968.0,0.40%,F,T)



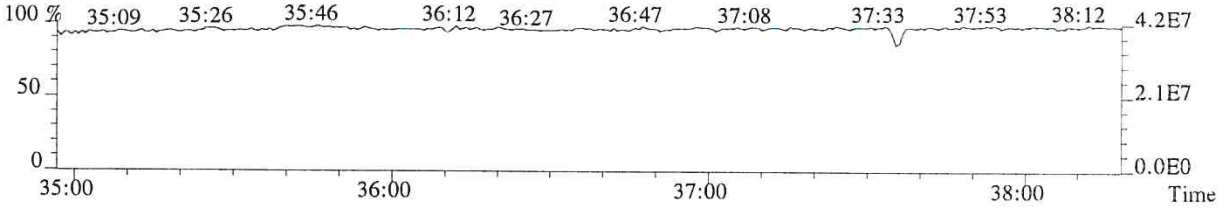
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1752.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

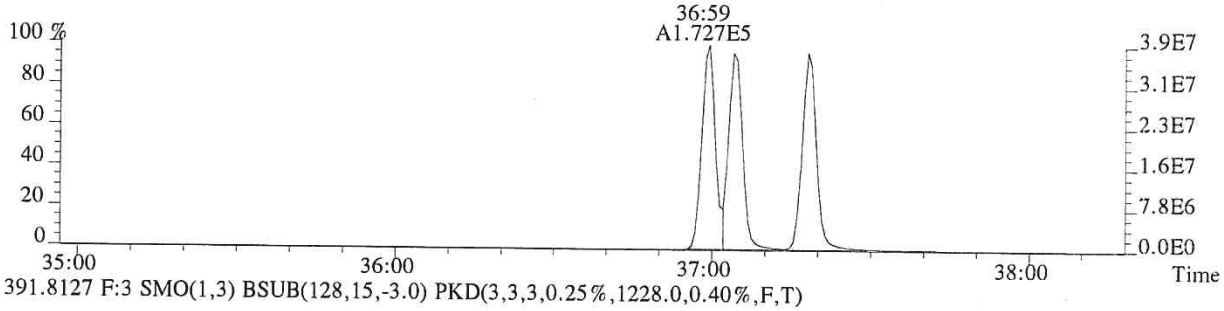


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

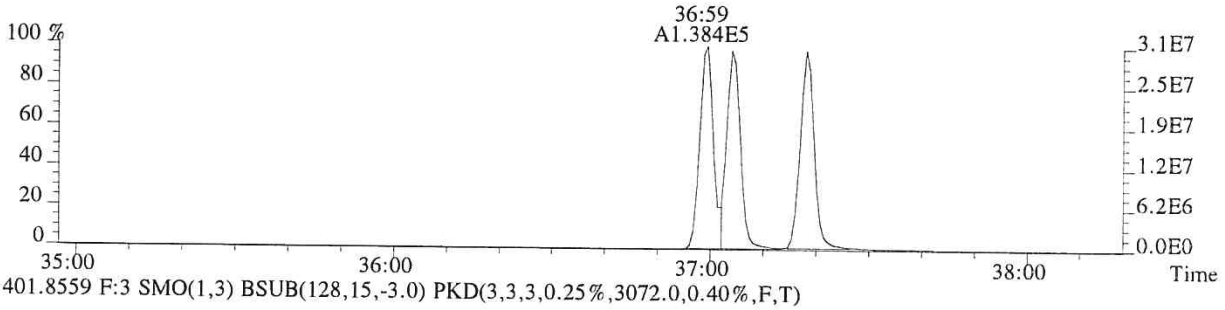


017805

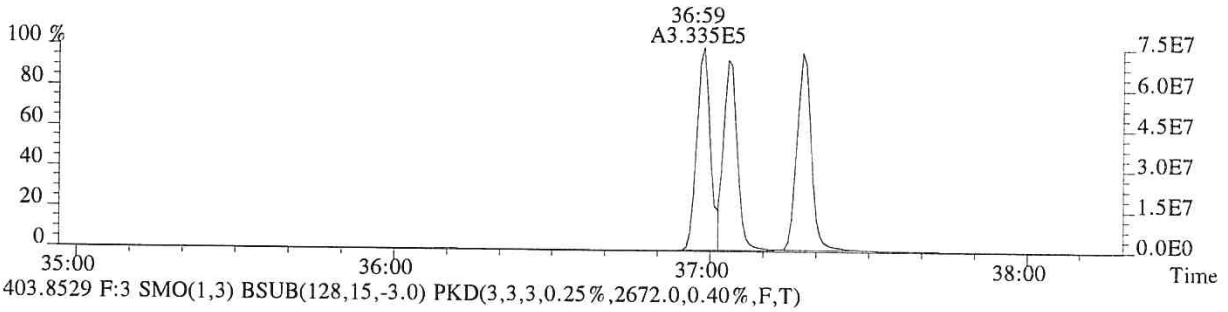
File:P513853 #1-303 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,512.0,0.40%,F,T)



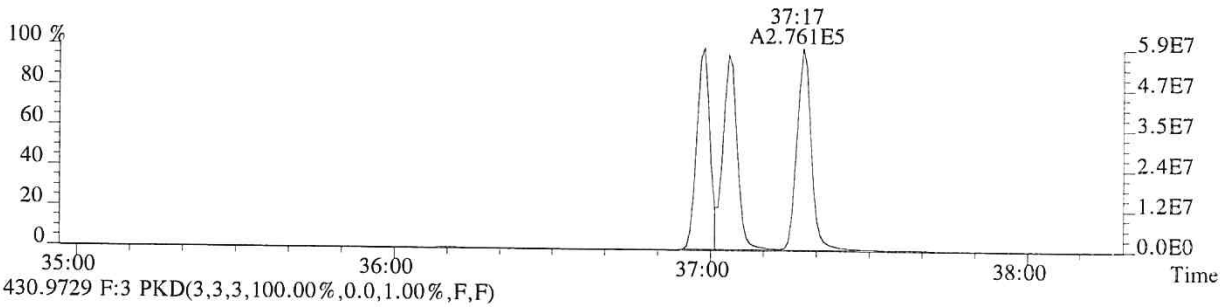
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1228.0,0.40%,F,T)



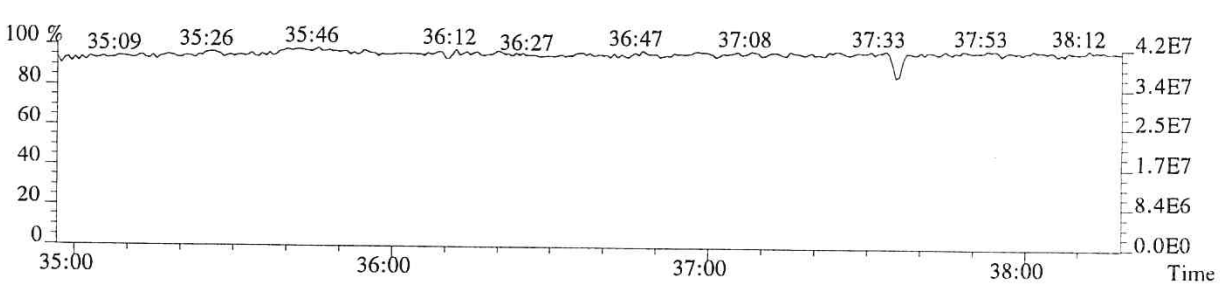
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3072.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2672.0,0.40%,F,T)

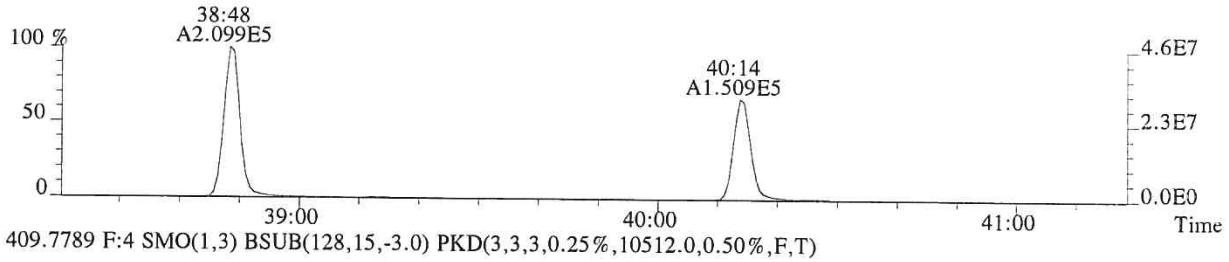


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

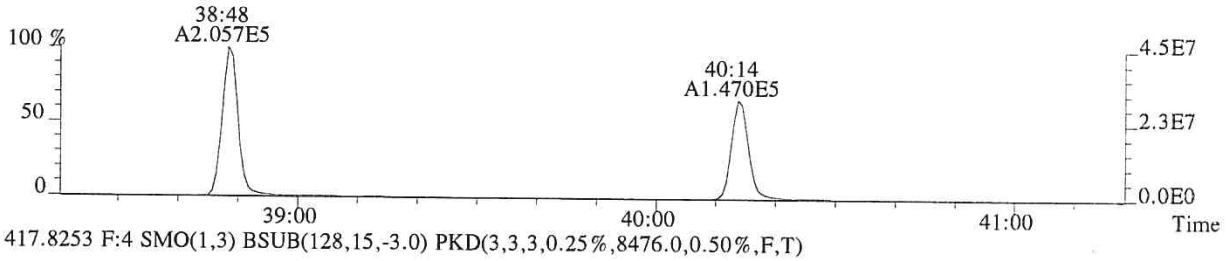


017806

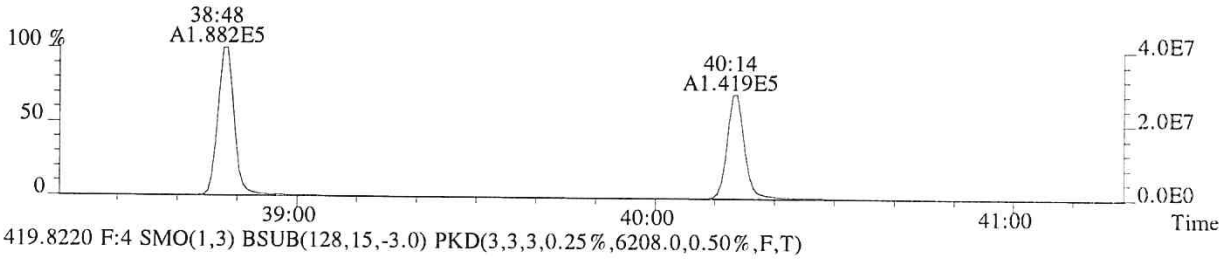
File:P513853 #1-268 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4436.0,0.50%,F,T)



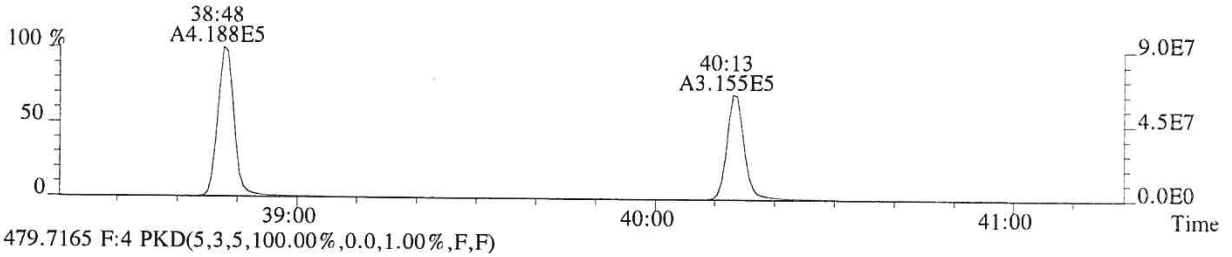
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10512.0,0.50%,F,T)



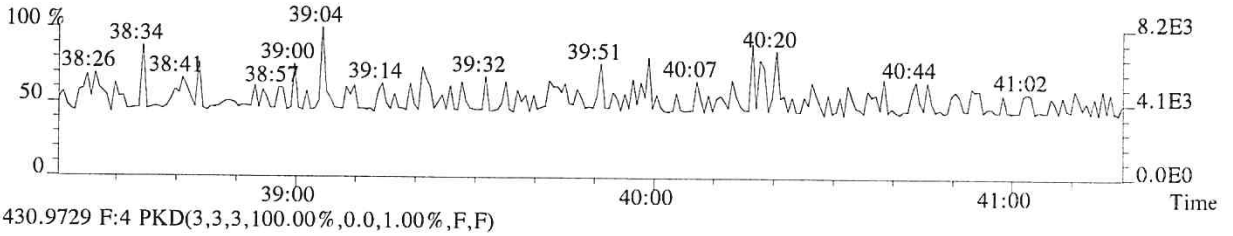
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8476.0,0.50%,F,T)



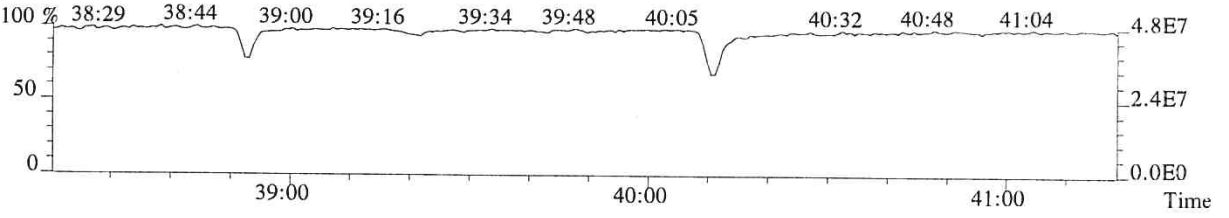
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6208.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

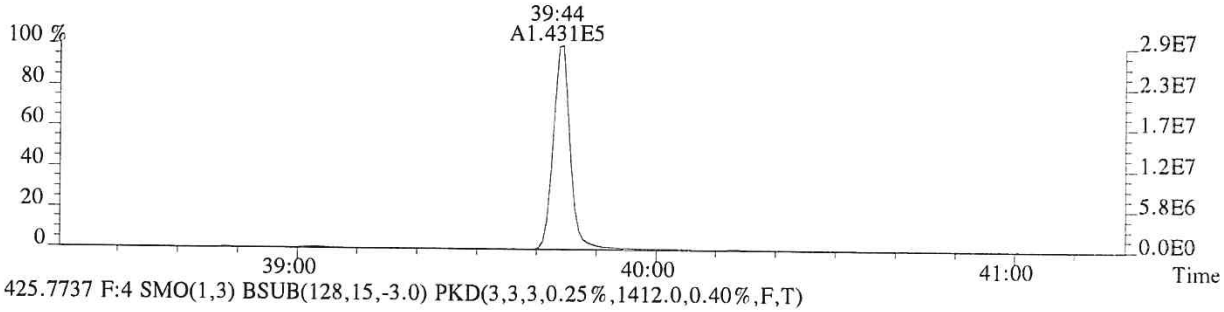


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

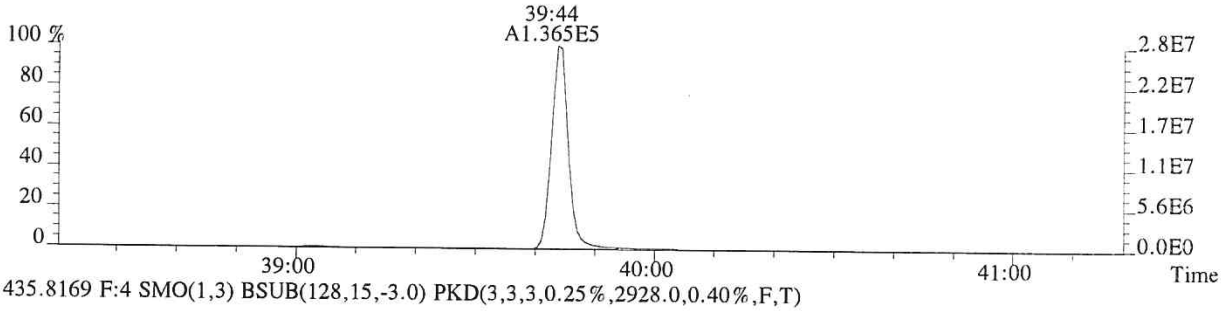


017807

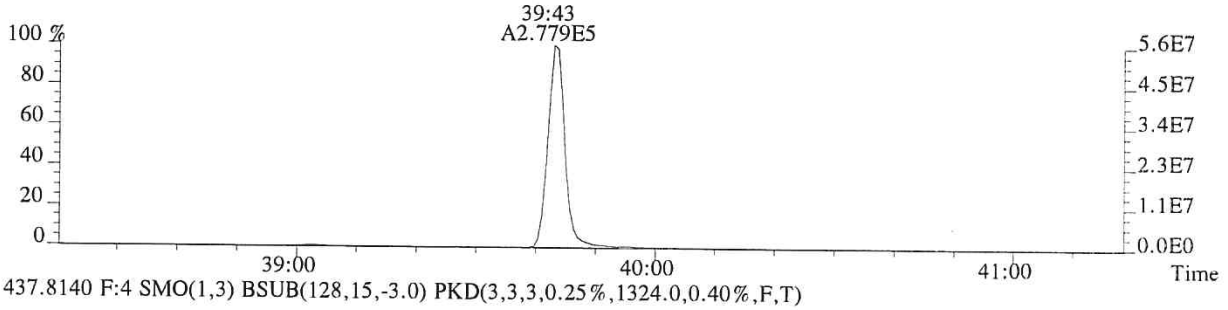
File:P513853 #1-268 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1840.0,0.40%,F,T)



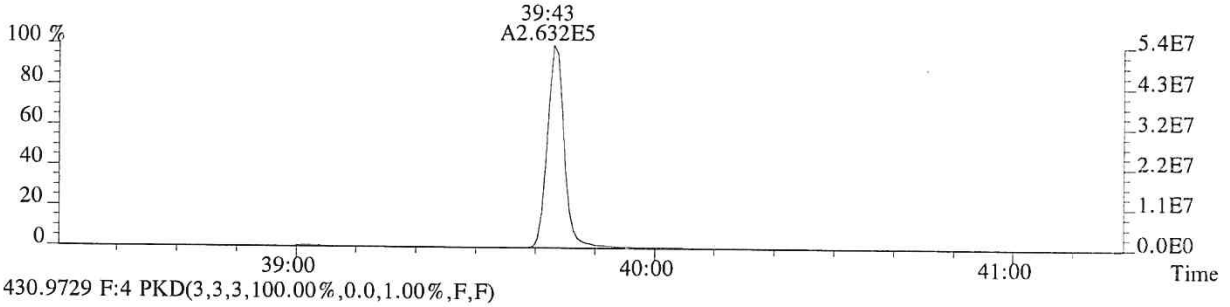
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1412.0,0.40%,F,T)



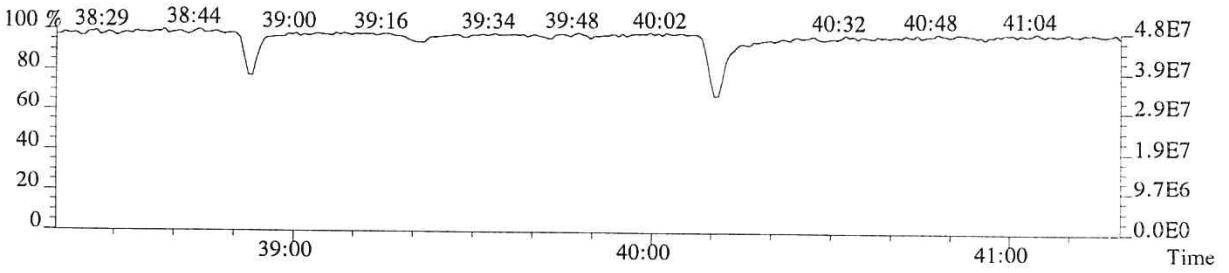
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2928.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1324.0,0.40%,F,T)

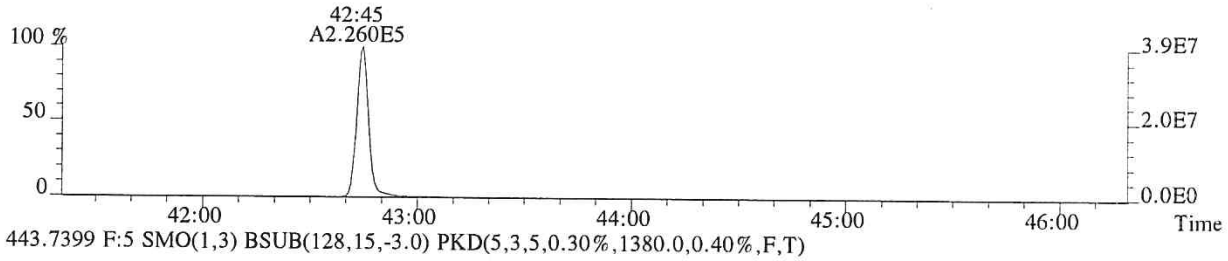


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

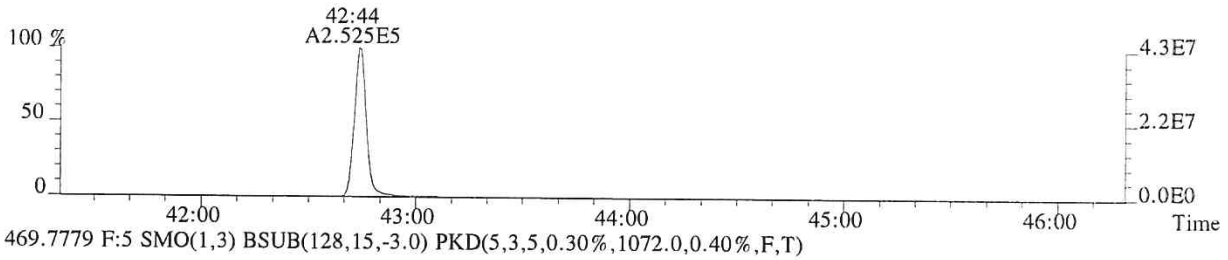


017808

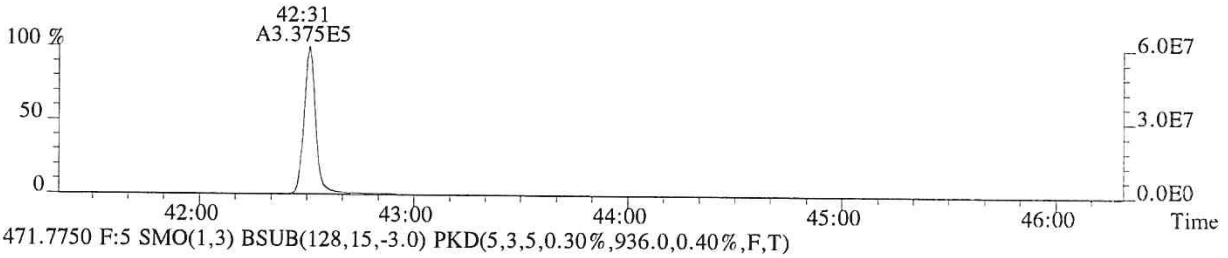
File:P513853 #1-448 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,144.0,0.40%,F,T)



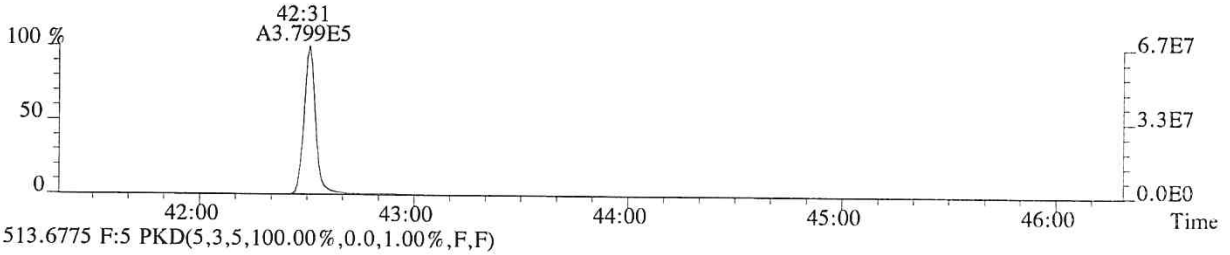
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1380.0,0.40%,F,T)



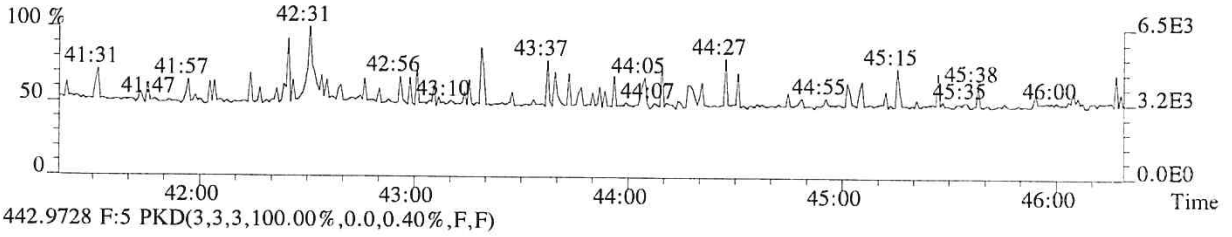
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1072.0,0.40%,F,T)



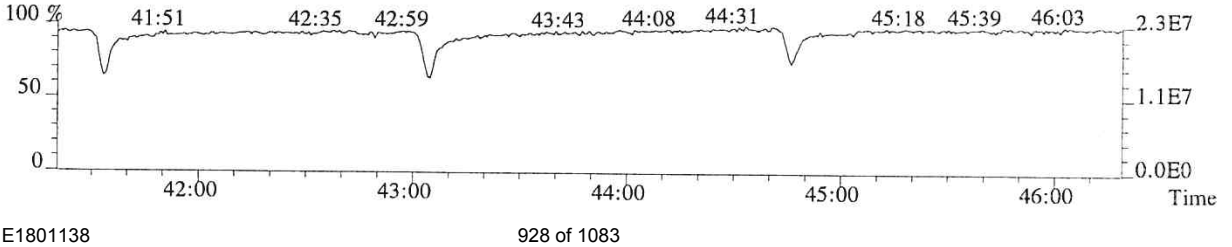
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,936.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

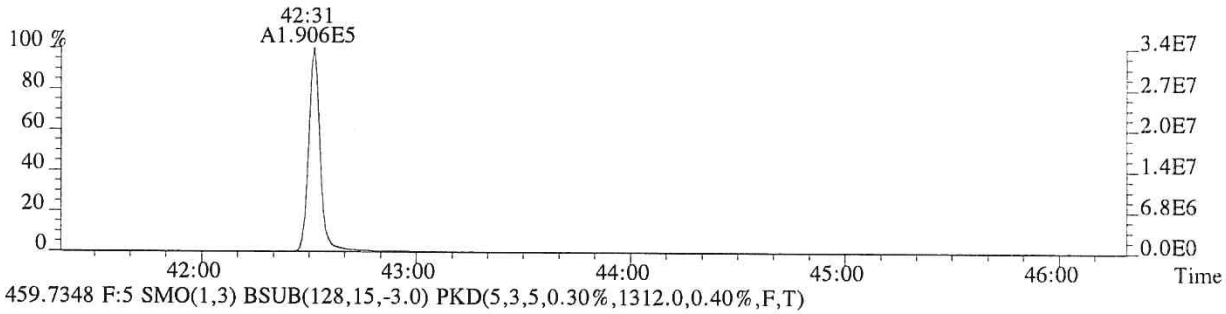


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

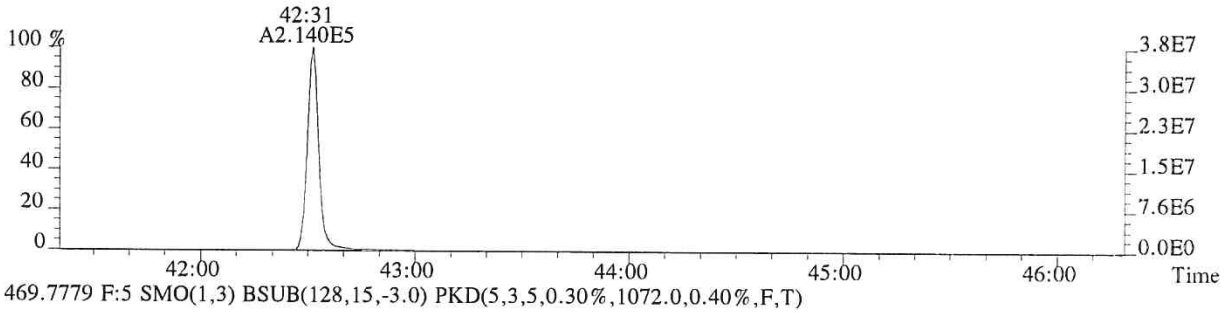


017809

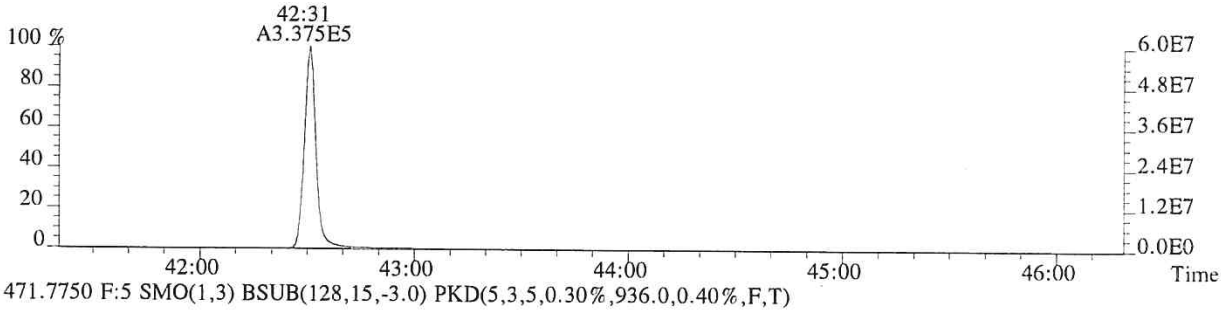
File:P513853 #1-448 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,632.0,0.40%,F,T)



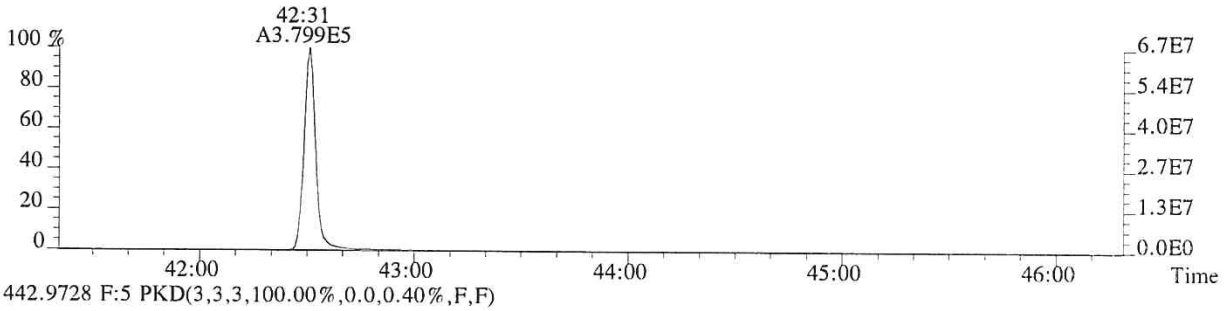
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1312.0,0.40%,F,T)



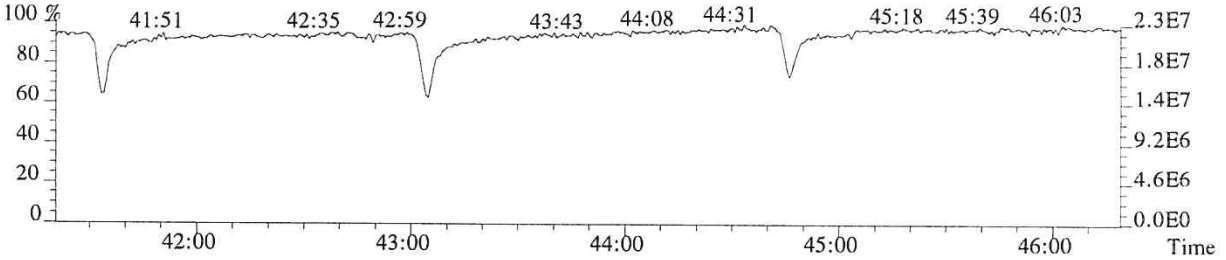
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1072.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,936.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76558

Run #5 Filename P513854 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:55:09
Processed: 24-JAN-18 17:50:33 Sample ID: CS4

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:47	9.367e+04	1.218e+05	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:47	7.158e+05	4.652e+05	1.54	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:40	6.668e+05	4.362e+05	1.53	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:15	6.097e+05	4.979e+05	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:22	6.415e+05	5.246e+05	1.22	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:51	5.685e+05	4.706e+05	1.21	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:36	5.397e+05	4.367e+05	1.24	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:48	4.833e+05	4.698e+05	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	3.955e+05	3.845e+05	1.03	yes	no	1.258
10	Unk	OCDF	42:44	5.770e+05	6.374e+05	0.91	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:31	6.699e+04	8.569e+04	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:56	4.394e+05	2.817e+05	1.56	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	3.869e+05	3.085e+05	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:04	4.031e+05	3.210e+05	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:18	4.024e+05	3.196e+05	1.26	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	3.425e+05	3.252e+05	1.05	yes	no	1.025
17	Unk	OCDD	42:31	4.623e+05	5.191e+05	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:46	2.467e+05	3.121e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:46	3.414e+05	2.167e+05	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	3.412e+05	2.161e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	1.522e+05	2.895e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:21	1.720e+05	3.253e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	1.562e+05	2.969e+05	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	1.406e+05	2.715e+05	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	1.081e+05	2.395e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:13	9.438e+04	2.110e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:30	1.544e+05	1.910e+05	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	2.282e+05	1.431e+05	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	1.841e+05	1.451e+05	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:03	1.915e+05	1.516e+05	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:43	1.646e+05	1.528e+05	1.08	yes	no	0.858
32	IS	13C-OCDD	42:31	2.072e+05	2.298e+05	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:56	1.645e+05	2.018e+05	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:17	1.964e+05	1.566e+05	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:31	1.545e+05				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
76558

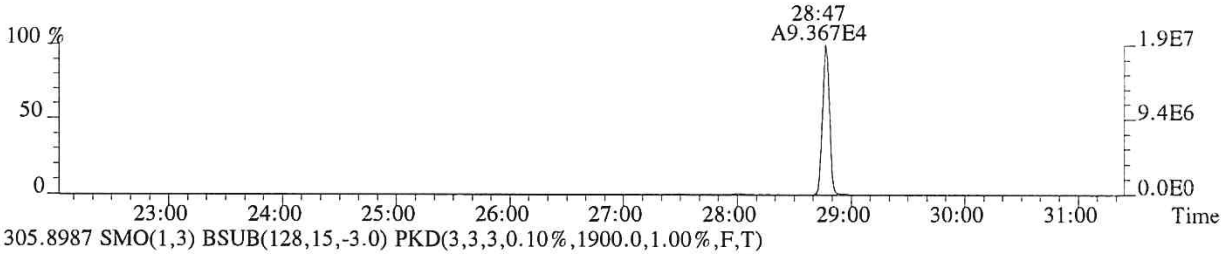
Run #5 Filename P513854 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:55:09
Processed: 24-JAN-18 17:50:33 LAB. ID: CS4

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.89e+07	1.00e+03	1.9e+04	2.44e+07	1.90e+03	1.3e+04
2	1,2,3,7,8-PeCDF	1.40e+08	2.03e+03	6.9e+04	9.16e+07	1.47e+03	6.2e+04
3	2,3,4,7,8-PeCDF	1.39e+08	2.03e+03	6.9e+04	9.17e+07	1.47e+03	6.2e+04
4	1,2,3,4,7,8-HxCDF	1.35e+08	1.80e+03	7.5e+04	1.11e+08	2.10e+03	5.3e+04
5	1,2,3,6,7,8-HxCDF	1.41e+08	1.80e+03	7.8e+04	1.16e+08	2.10e+03	5.5e+04
6	2,3,4,6,7,8-HxCDF	1.27e+08	1.80e+03	7.0e+04	1.06e+08	2.10e+03	5.0e+04
7	1,2,3,7,8,9-HxCDF	1.14e+08	1.80e+03	6.3e+04	9.30e+07	2.10e+03	4.4e+04
8	1,2,3,4,6,7,8-HpCDF	1.07e+08	1.75e+04	6.1e+03	1.05e+08	2.93e+04	3.6e+03
9	1,2,3,4,7,8,9-HpCDF	8.10e+07	1.75e+04	4.6e+03	7.89e+07	2.93e+04	2.7e+03
10	OCDF	1.02e+08	5.04e+02	2.0e+05	1.14e+08	1.72e+03	6.6e+04
11	2,3,7,8-TCDD	1.41e+07	2.20e+03	6.4e+03	1.80e+07	1.38e+03	1.3e+04
12	1,2,3,7,8-PeCDD	9.08e+07	1.42e+03	6.4e+04	5.86e+07	1.44e+02	4.1e+05
13	1,2,3,4,7,8-HxCDD	8.77e+07	1.20e+03	7.3e+04	7.06e+07	1.58e+03	4.5e+04
14	1,2,3,6,7,8-HxCDD	8.80e+07	1.20e+03	7.3e+04	7.05e+07	1.58e+03	4.5e+04
15	1,2,3,7,8,9-HxCDD	8.97e+07	1.20e+03	7.5e+04	7.13e+07	1.58e+03	4.5e+04
16	1,2,3,4,6,7,8-HpCDD	7.19e+07	1.52e+03	4.7e+04	6.86e+07	1.50e+03	4.6e+04
17	OCDD	8.05e+07	7.36e+02	1.1e+05	9.09e+07	1.16e+03	7.8e+04
18	13C-2,3,7,8-TCDF	4.92e+07	8.28e+03	5.9e+03	6.18e+07	3.78e+03	1.6e+04
19	13C-1,2,3,7,8-PeCDF	6.78e+07	1.09e+03	6.2e+04	4.35e+07	7.12e+02	6.1e+04
20	13C-2,3,4,7,8-PeCDF	7.11e+07	1.09e+03	6.5e+04	4.54e+07	7.12e+02	6.4e+04
21	13C-1,2,3,4,7,8-HxCDF	3.32e+07	1.94e+03	1.7e+04	6.39e+07	1.54e+03	4.2e+04
22	13C-1,2,3,6,7,8-HxCDF	3.76e+07	1.94e+03	1.9e+04	7.17e+07	1.54e+03	4.7e+04
23	13C-2,3,4,6,7,8-HxCDF	3.46e+07	1.94e+03	1.8e+04	6.63e+07	1.54e+03	4.3e+04
24	13C-1,2,3,7,8,9-HxCDF	2.97e+07	1.94e+03	1.5e+04	5.66e+07	1.54e+03	3.7e+04
25	13C-1,2,3,4,6,7,8-HpCDF	2.37e+07	7.11e+03	3.3e+03	5.25e+07	1.03e+04	5.1e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.95e+07	7.11e+03	2.7e+03	4.34e+07	1.03e+04	4.2e+03
27	13C-2,3,7,8-TCDD	3.25e+07	6.40e+03	5.1e+03	3.99e+07	2.77e+03	1.4e+04
28	13C-1,2,3,7,8-PeCDD	4.73e+07	1.13e+03	4.2e+04	2.97e+07	8.40e+02	3.5e+04
29	13C-1,2,3,4,7,8-HxCDD	4.15e+07	3.03e+03	1.4e+04	3.28e+07	2.40e+03	1.4e+04
30	13C-1,2,3,6,7,8-HxCDD	4.14e+07	3.03e+03	1.4e+04	3.31e+07	2.40e+03	1.4e+04
31	13C-1,2,3,4,6,7,8-HpCDD	3.45e+07	1.55e+03	2.2e+04	3.21e+07	1.32e+03	2.4e+04
32	13C-OCDD	3.61e+07	1.25e+03	2.9e+04	4.00e+07	1.19e+03	3.4e+04
33	13C-1,2,3,4-TCDD	3.34e+07	6.40e+03	5.2e+03	4.12e+07	2.77e+03	1.5e+04
34	13C-1,2,3,7,8,9-HxCDD	4.34e+07	3.03e+03	1.4e+04	3.46e+07	2.40e+03	1.4e+04
35	37Cl-2,3,7,8-TCDD	3.25e+07	1.28e+03	2.5e+04			

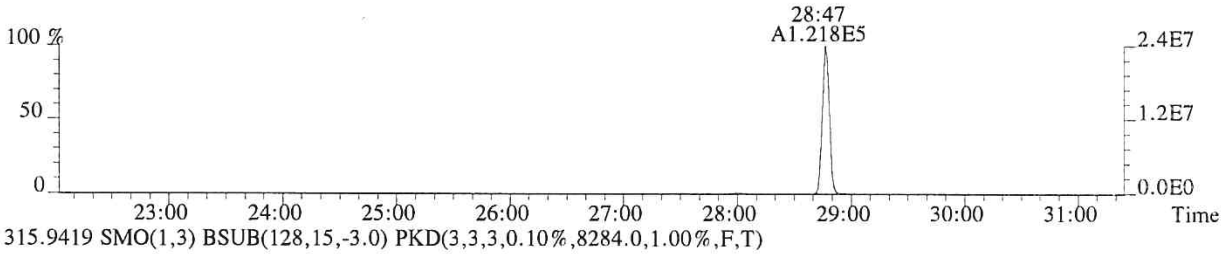
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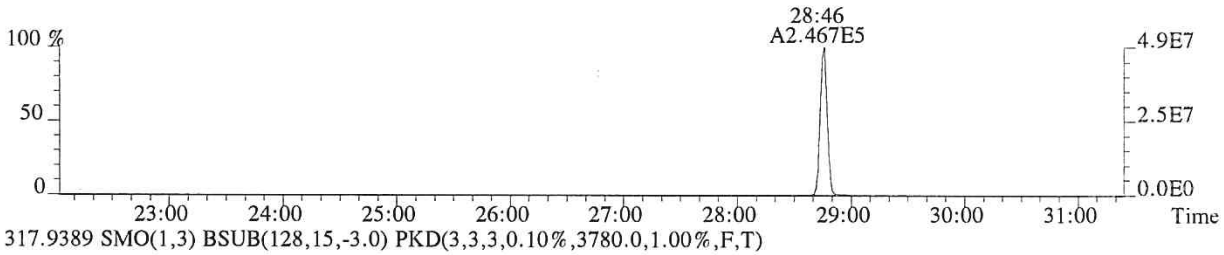
File:P513854 #1-665 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1004.0,1.00%,F,T)



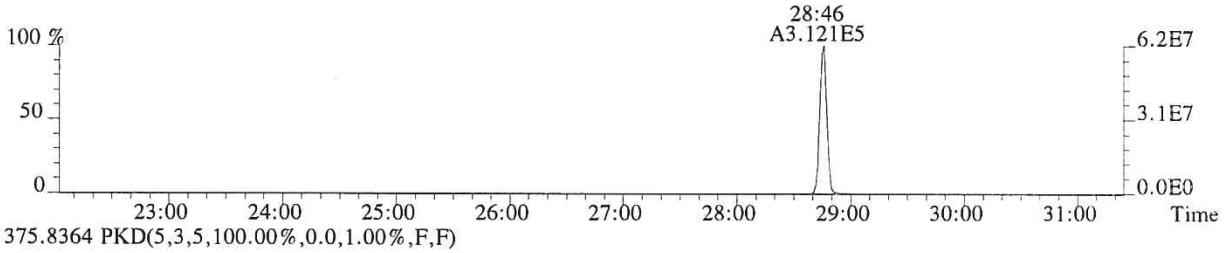
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1900.0,1.00%,F,T)



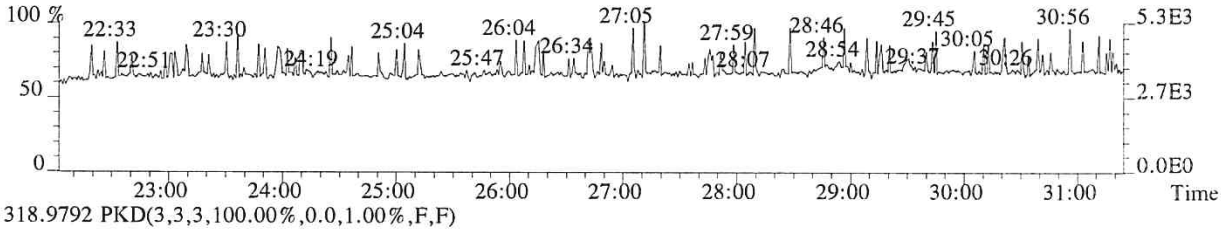
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8284.0,1.00%,F,T)



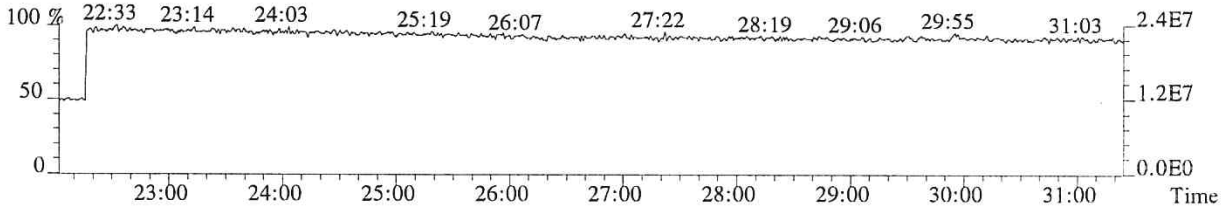
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3780.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

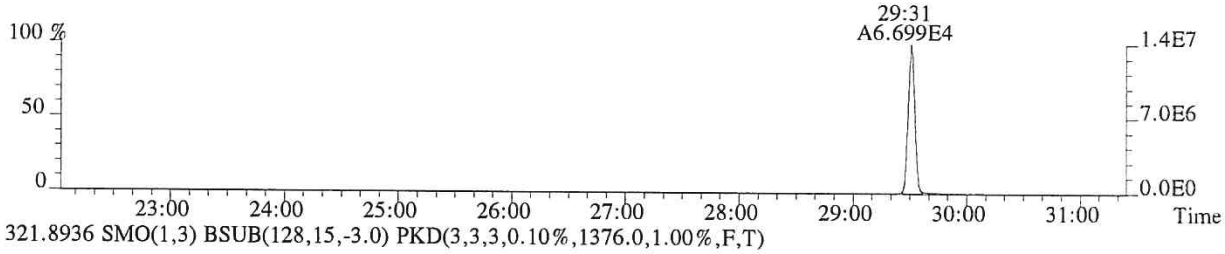


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

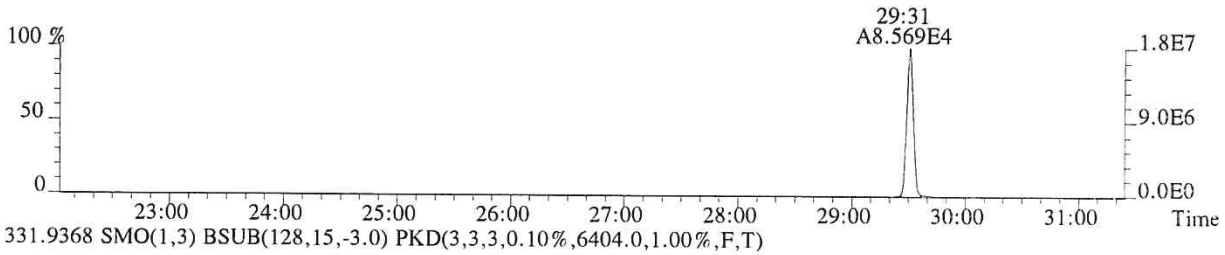


017813

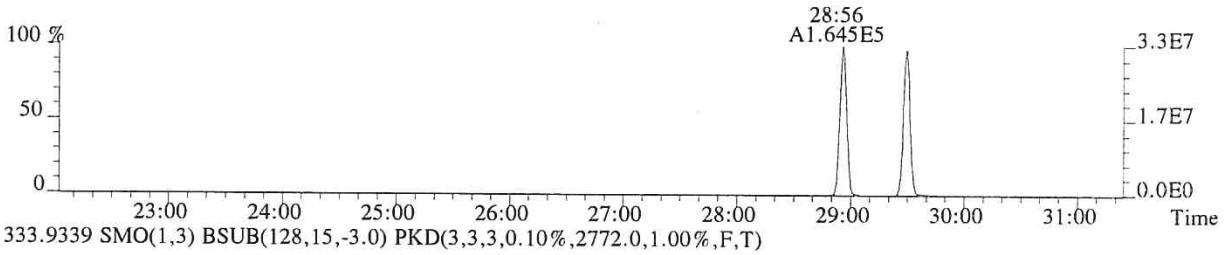
File:P513854 #1-665 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2200.0,1.00%,F,T)



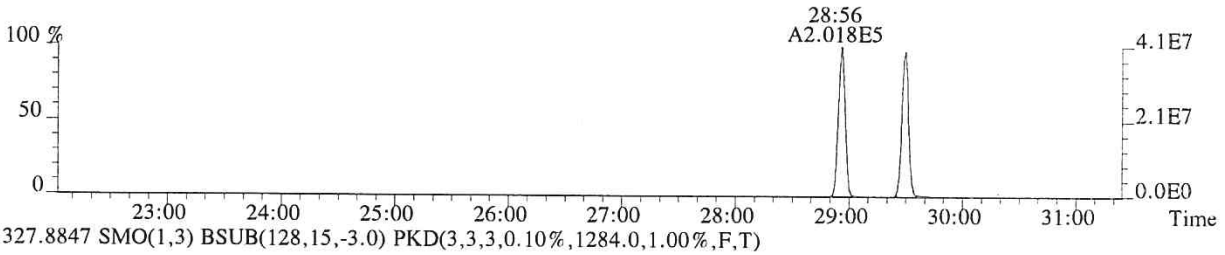
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1376.0,1.00%,F,T)



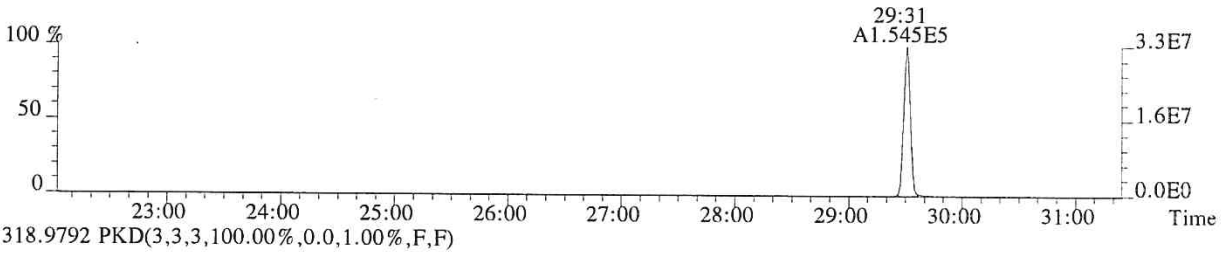
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6404.0,1.00%,F,T)



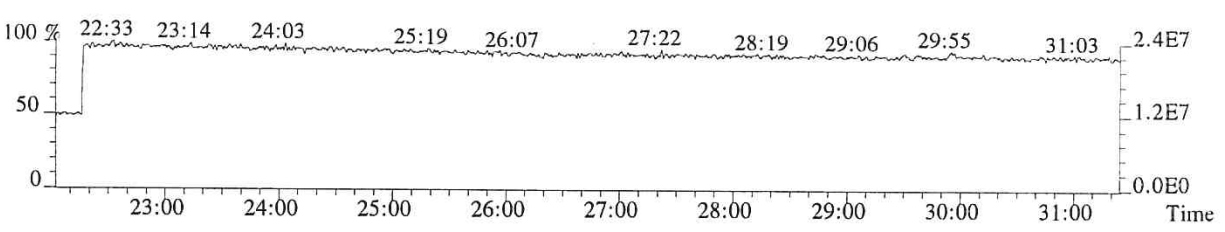
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2772.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1284.0,1.00%,F,T)

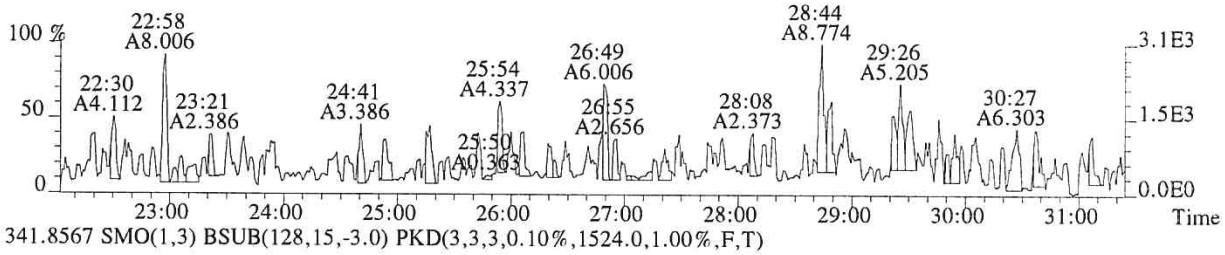


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

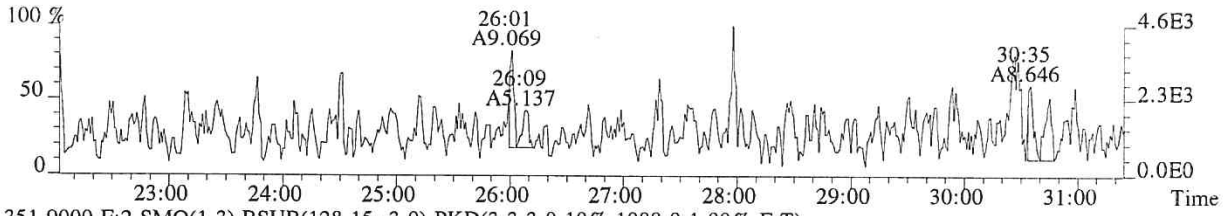


017814

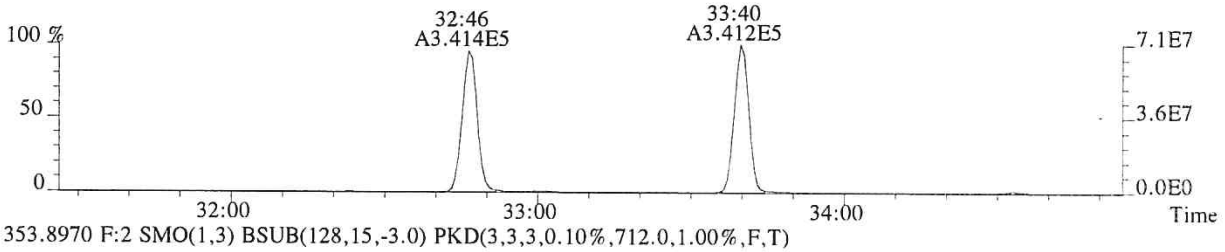
File:P513854 #1-665 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,600.0,1.00%,F,T)



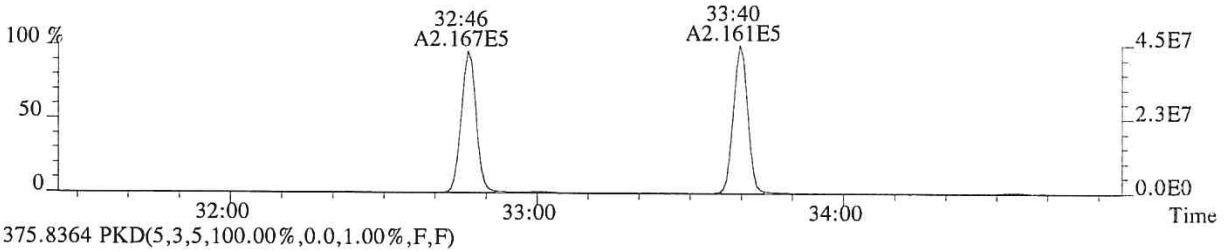
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1524.0,1.00%,F,T)



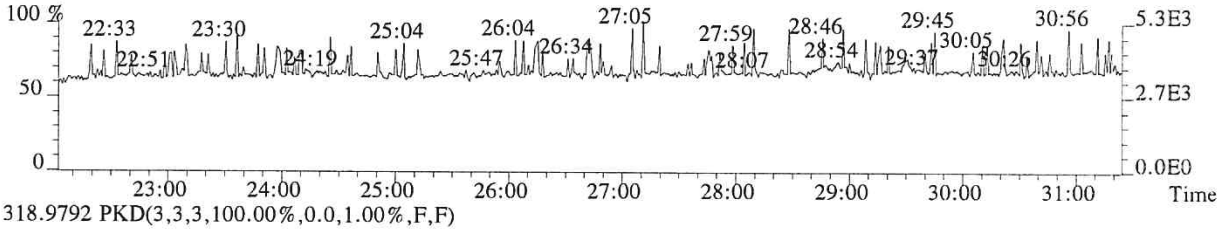
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1088.0,1.00%,F,T)



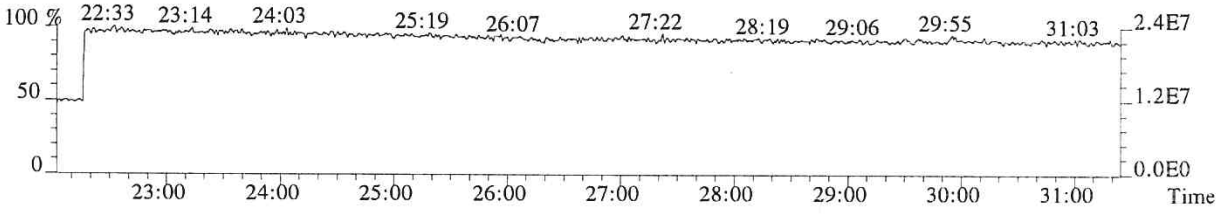
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,712.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

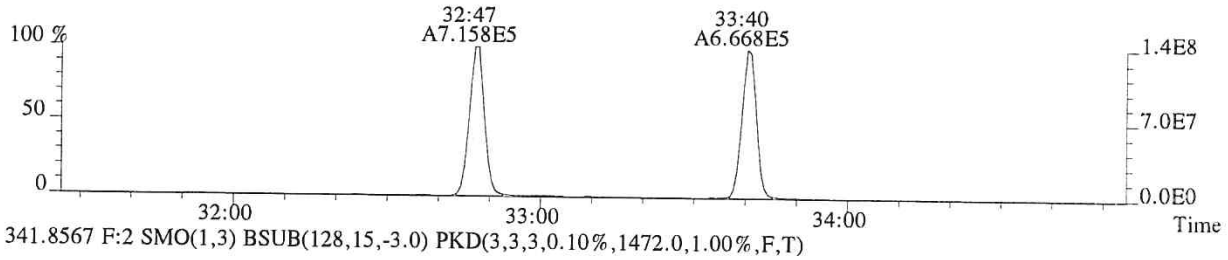


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

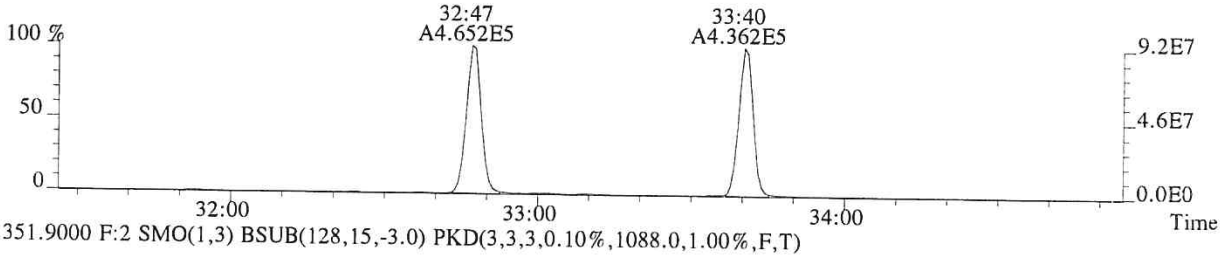


017815

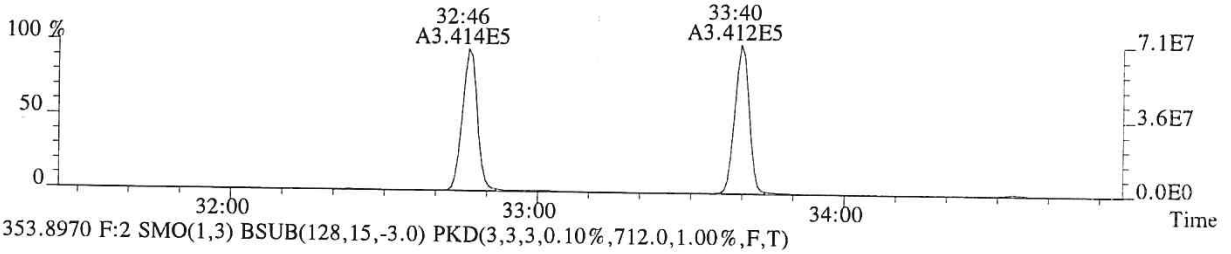
File:P513854 #1-313 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2028.0,1.00%,F,T)



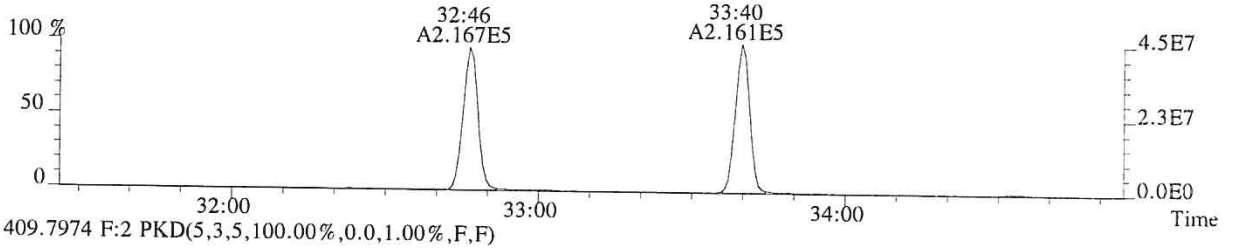
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1472.0,1.00%,F,T)



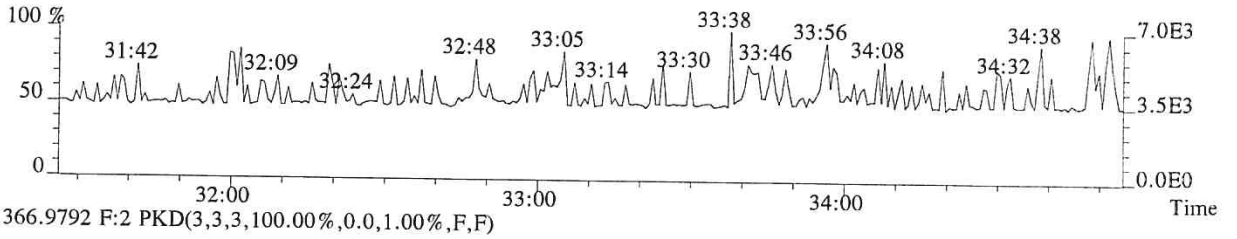
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1088.0,1.00%,F,T)



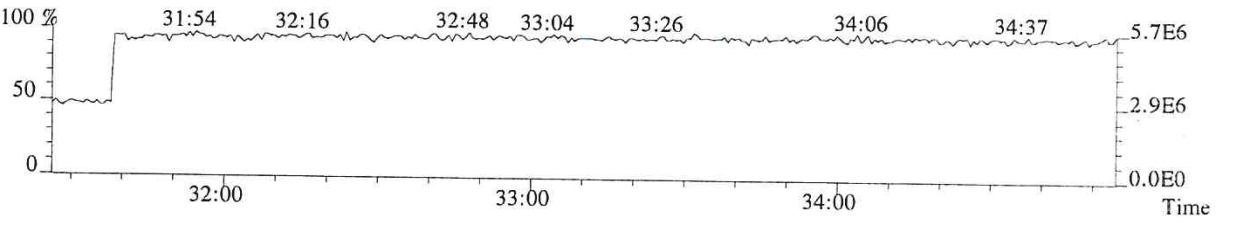
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,712.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

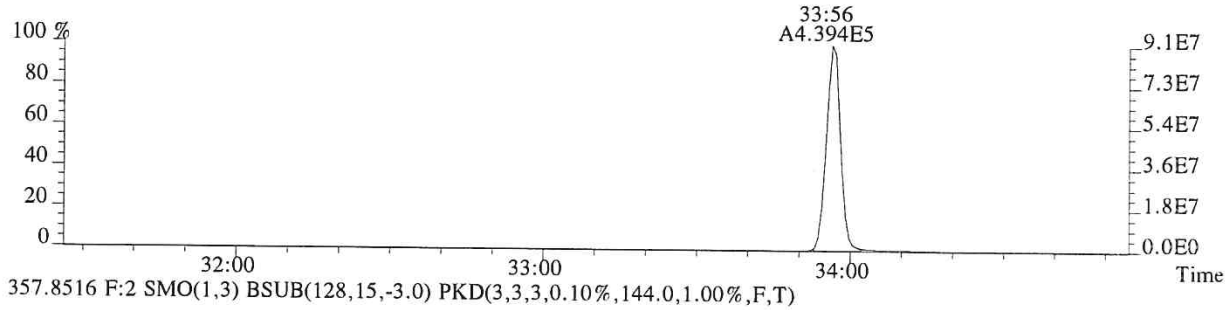


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

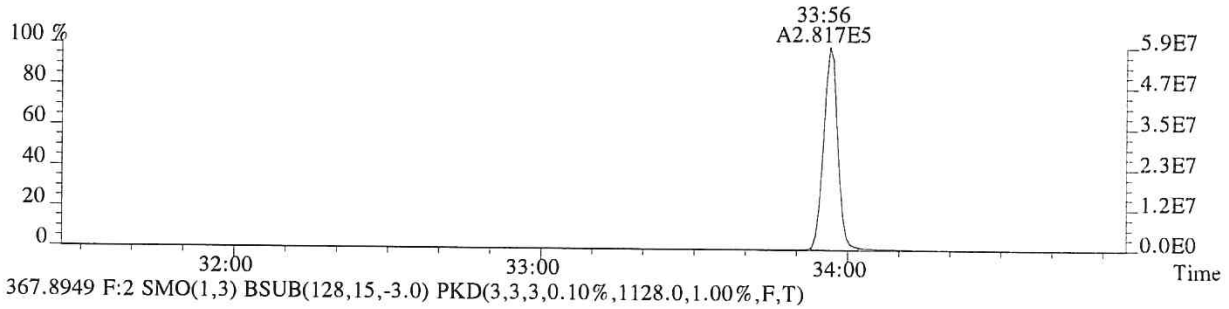


017816

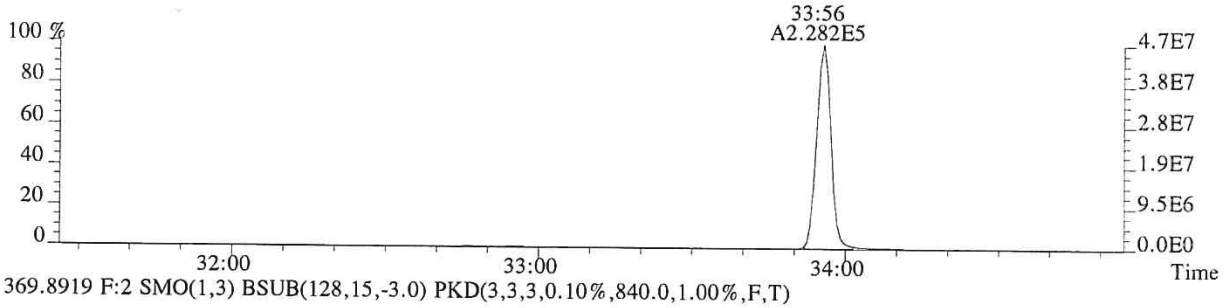
File:P513854 #1-313 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1420.0,1.00%,F,T)



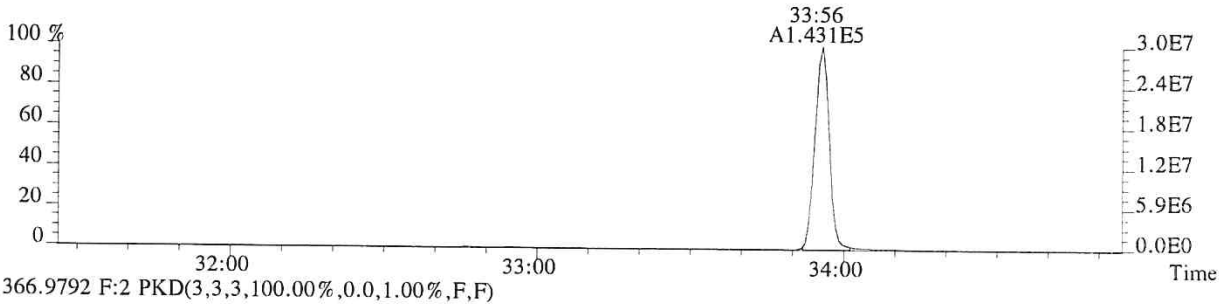
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,144.0,1.00%,F,T)



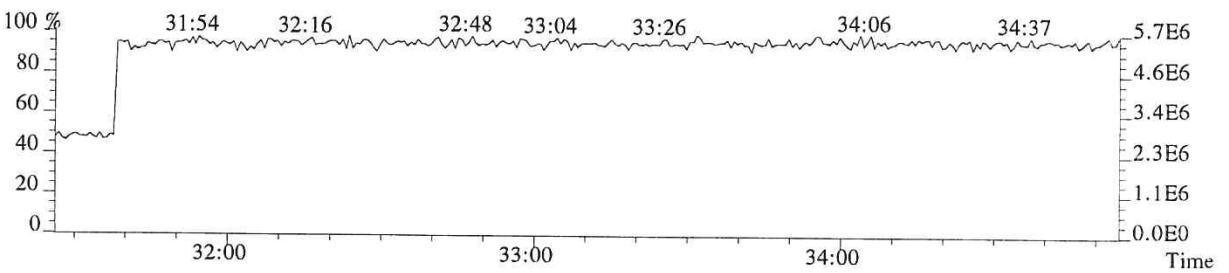
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1128.0,1.00%,F,T)



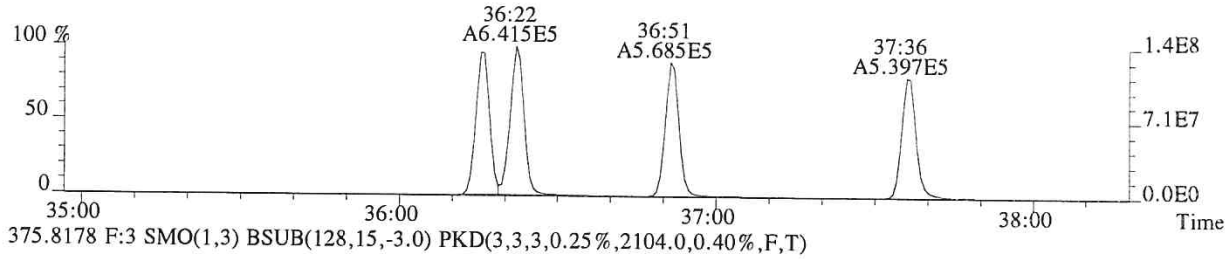
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,840.0,1.00%,F,T)



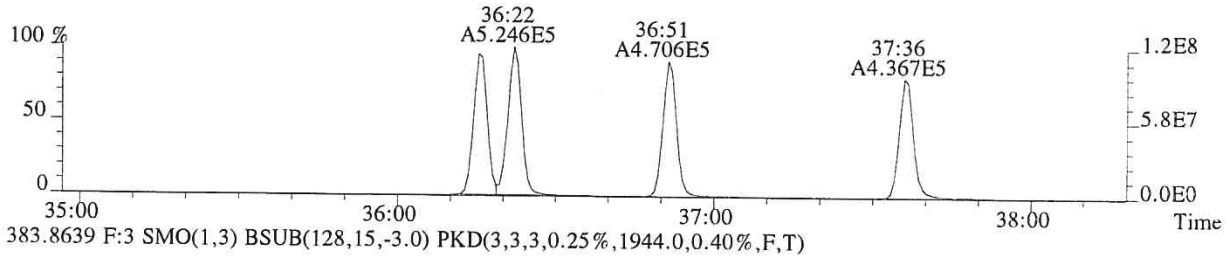
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



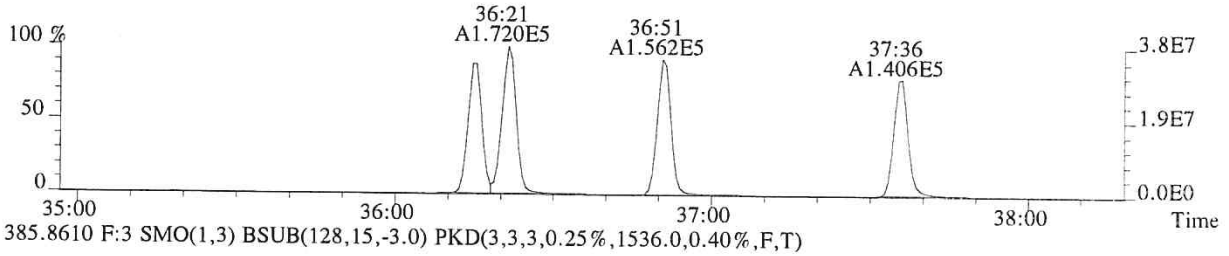
File:P513854 #1-303 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1804.0,0.40%,F,T)



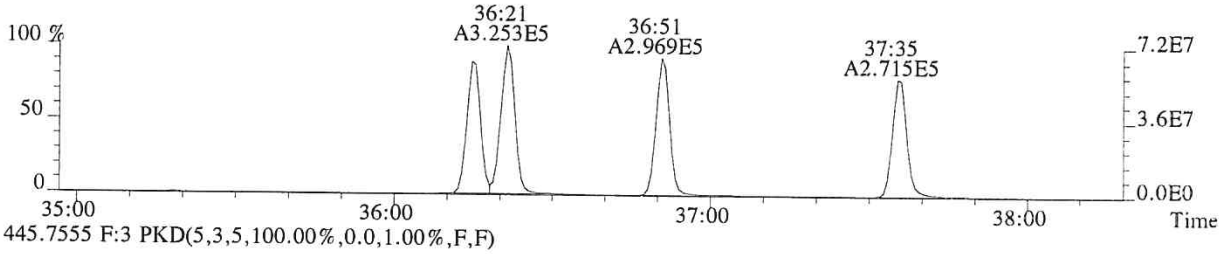
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2104.0,0.40%,F,T)



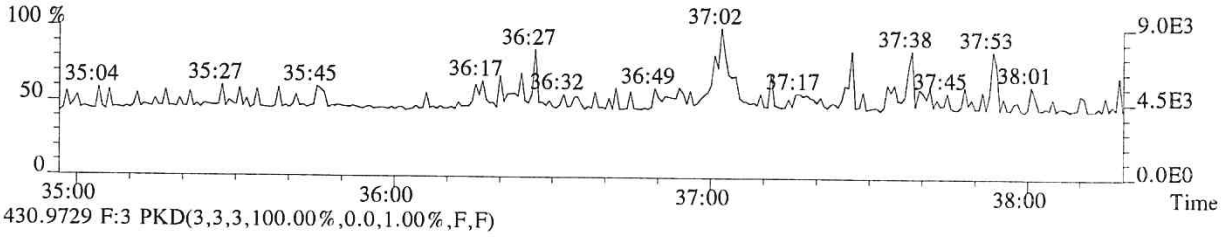
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1944.0,0.40%,F,T)



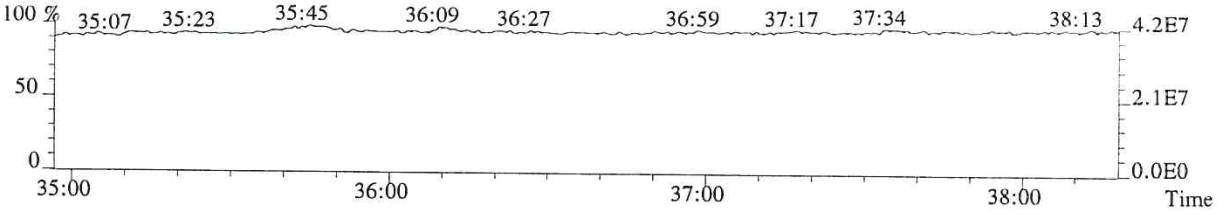
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1536.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

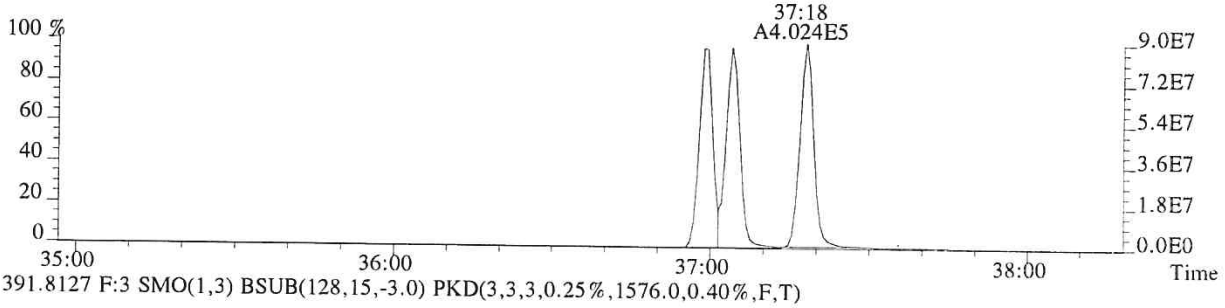


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

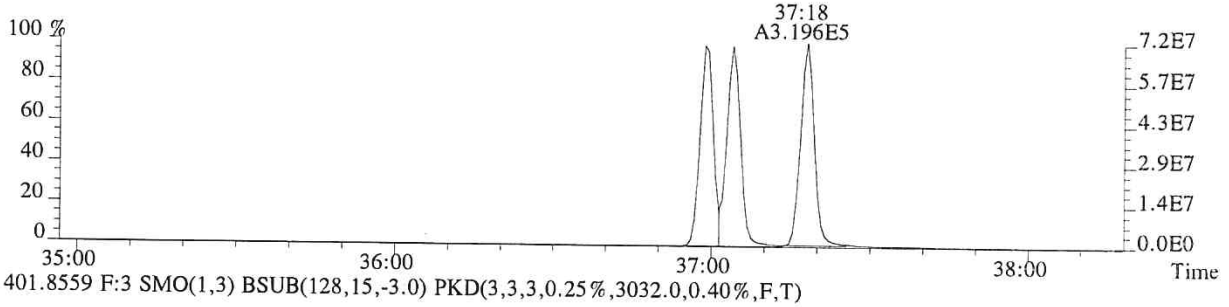


017818

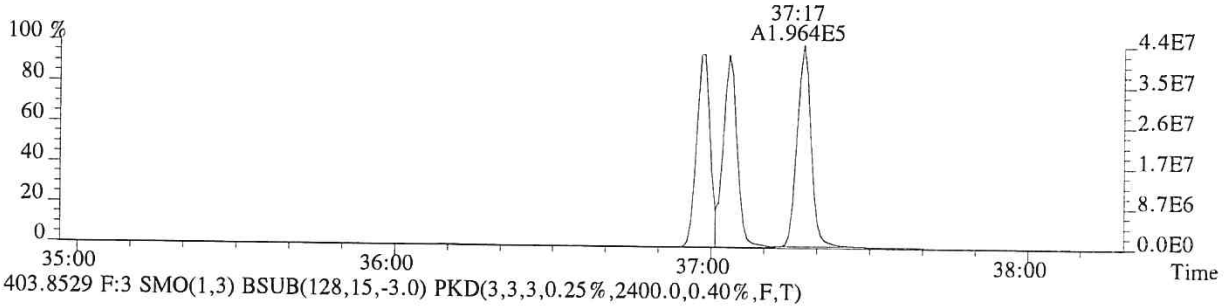
File:P513854 #1-303 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1200.0,0.40%,F,T)



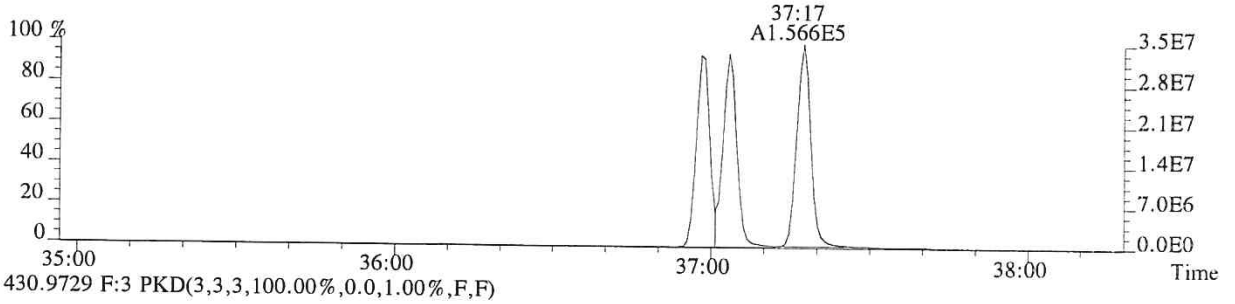
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1576.0,0.40%,F,T)



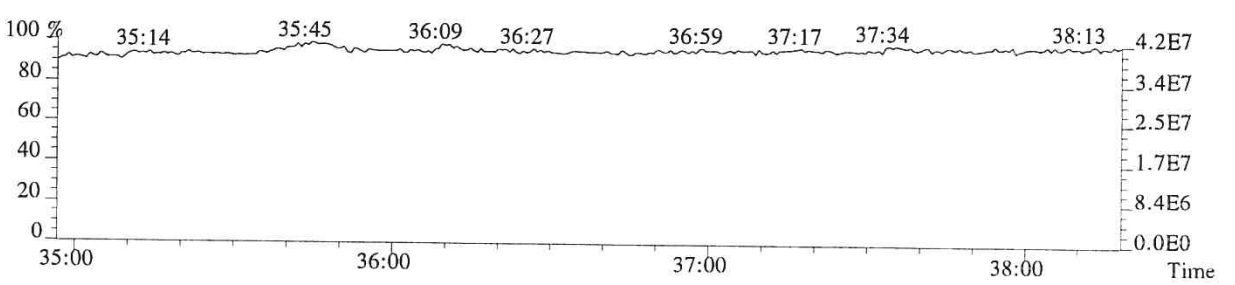
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3032.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2400.0,0.40%,F,T)

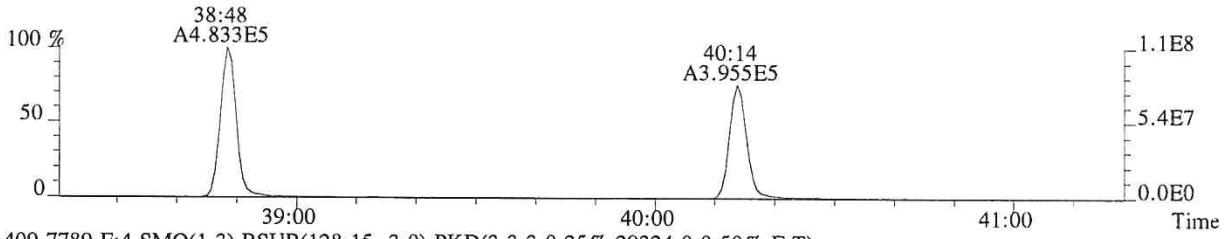


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

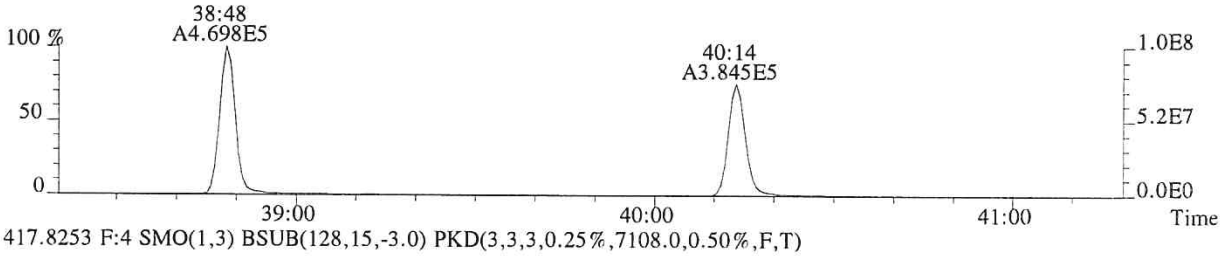


017819

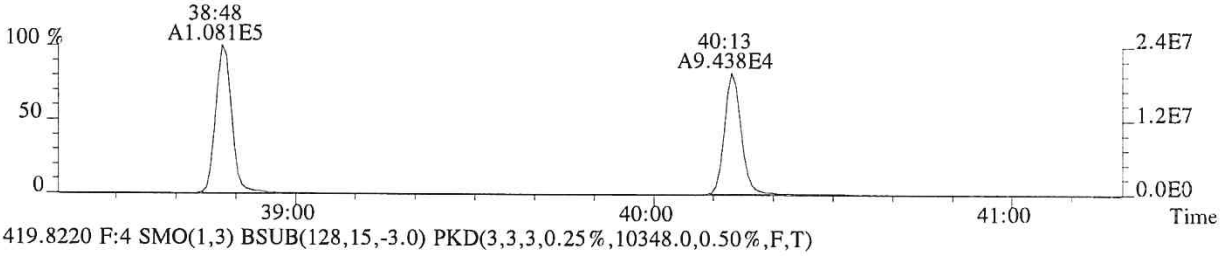
File:P513854 #1-268 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,17516.0,0.50%,F,T)



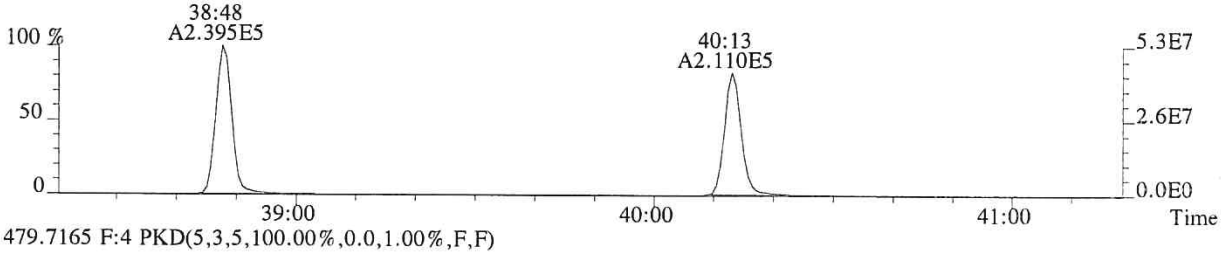
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,29324.0,0.50%,F,T)



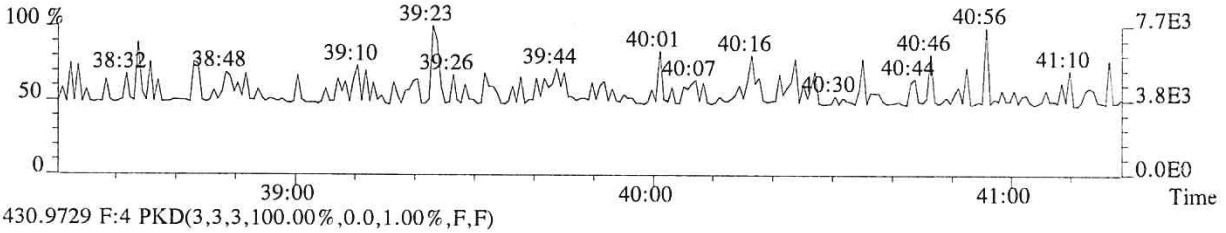
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7108.0,0.50%,F,T)



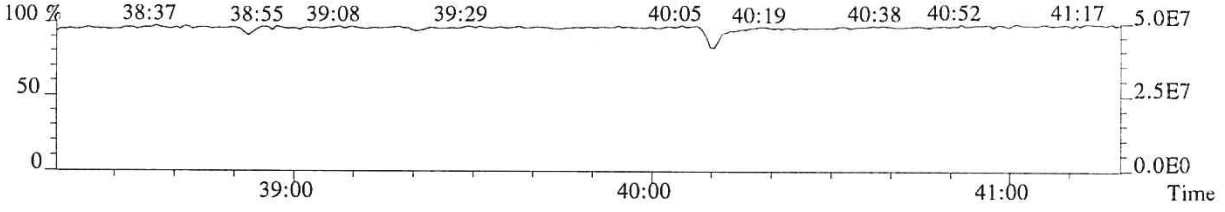
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10348.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

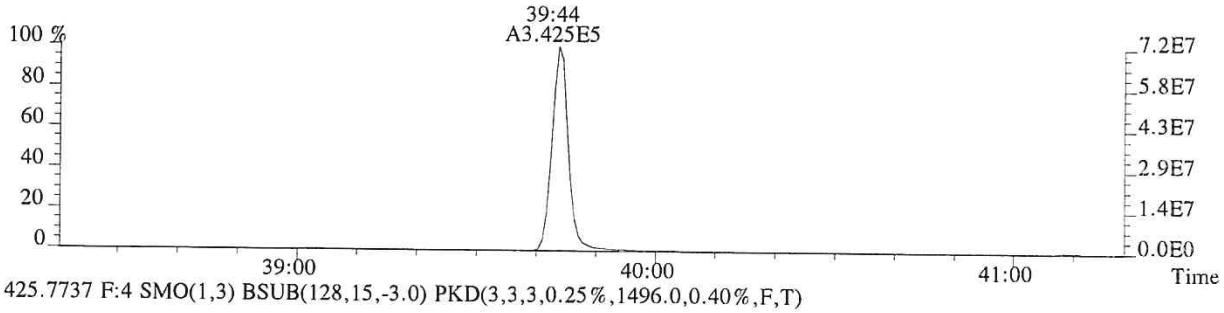


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

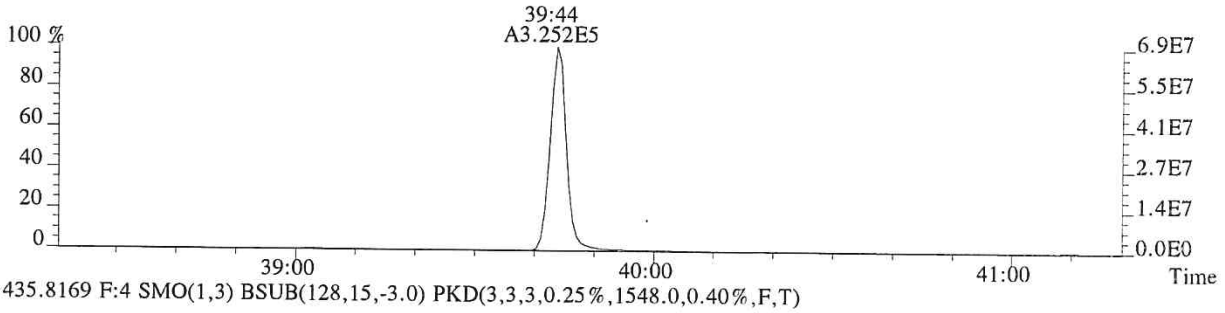


017820

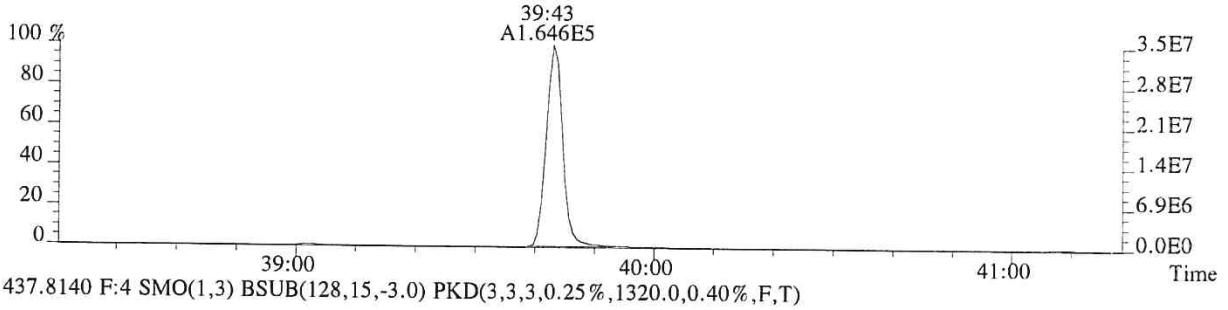
File:P513854 #1-268 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1516.0,0.40%,F,T)



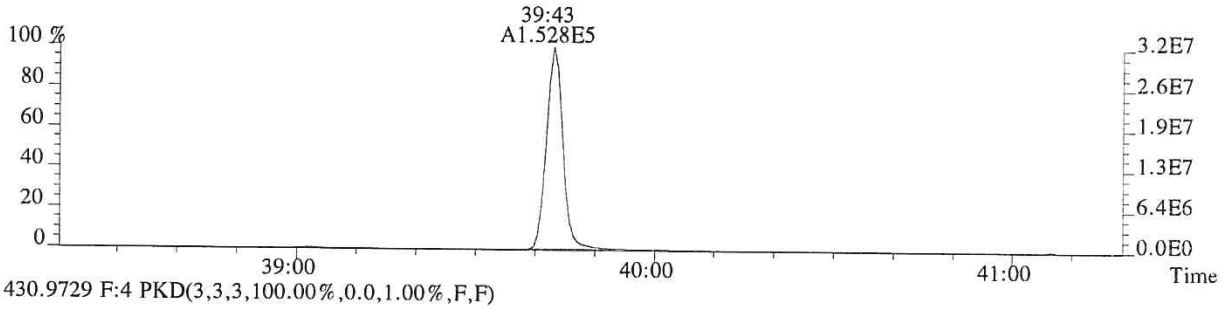
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1496.0,0.40%,F,T)



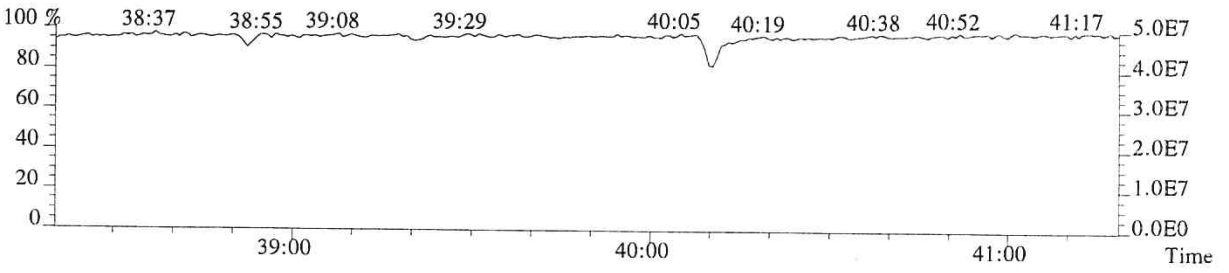
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1548.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1320.0,0.40%,F,T)

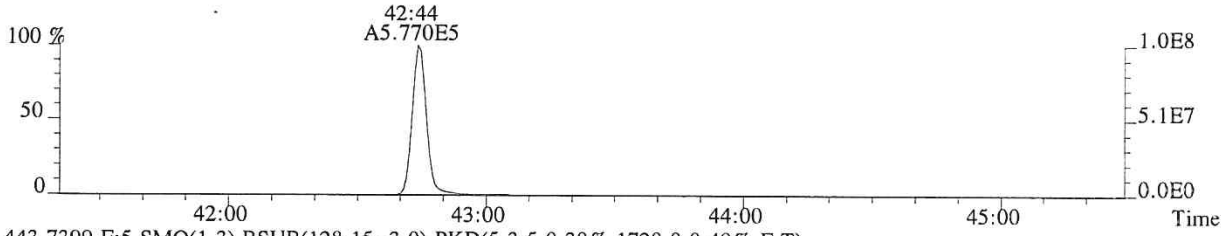


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

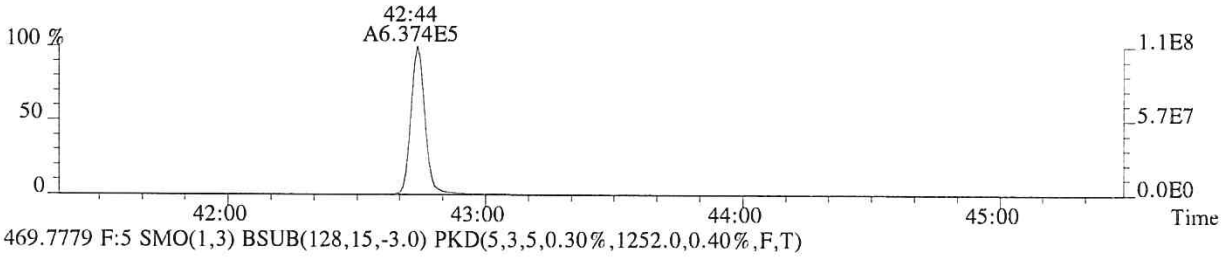


017821

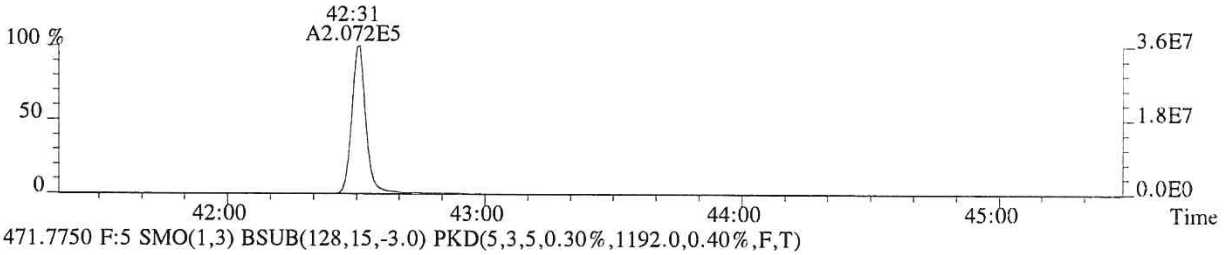
File:P513854 #1-373 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,504.0,0.40%,F,T)



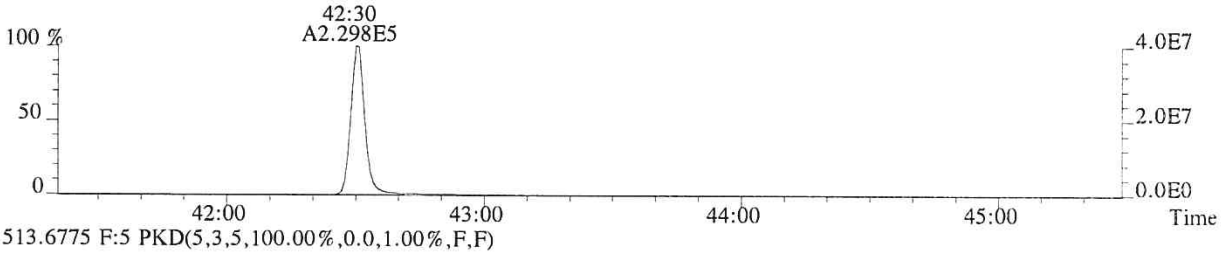
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1720.0,0.40%,F,T)



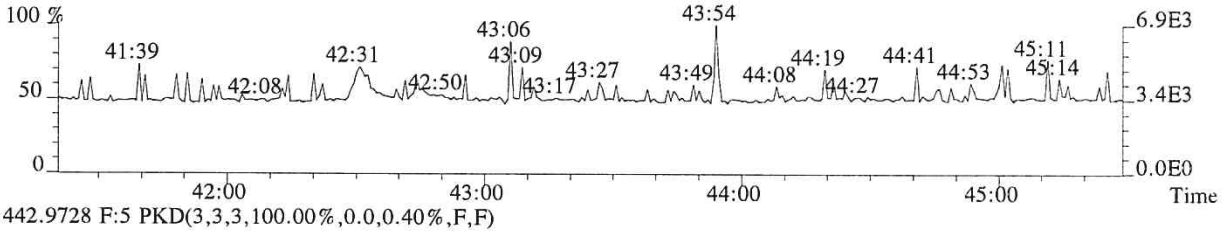
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1252.0,0.40%,F,T)



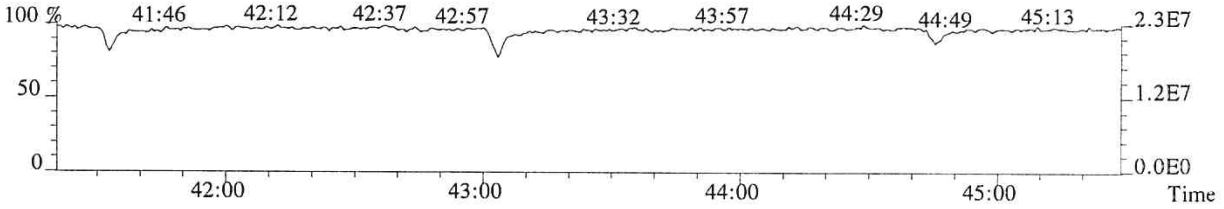
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1192.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

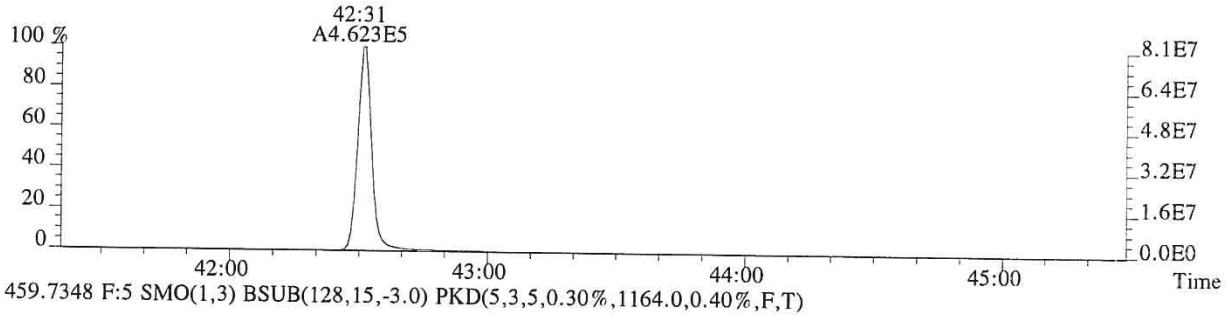


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

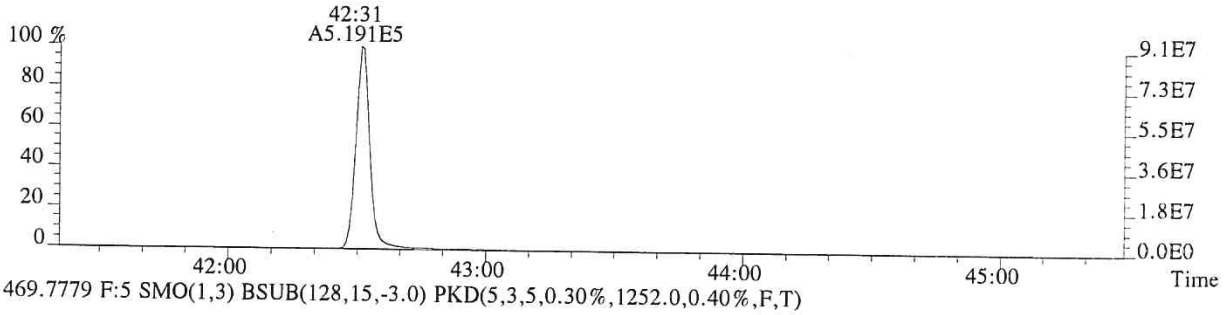


017822

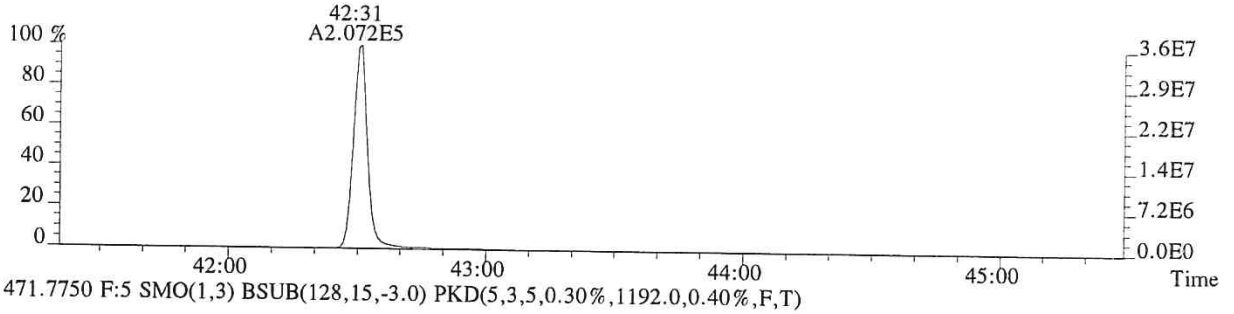
File:P513854 #1-373 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,736.0,0.40%,F,T)



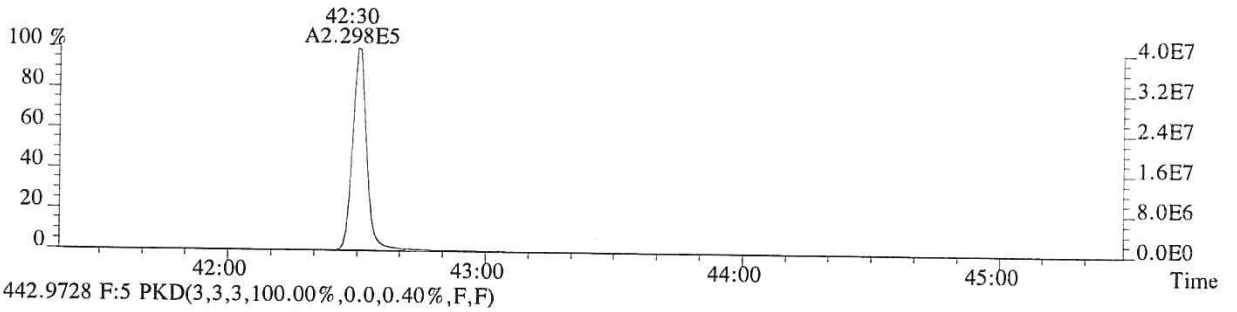
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1164.0,0.40%,F,T)



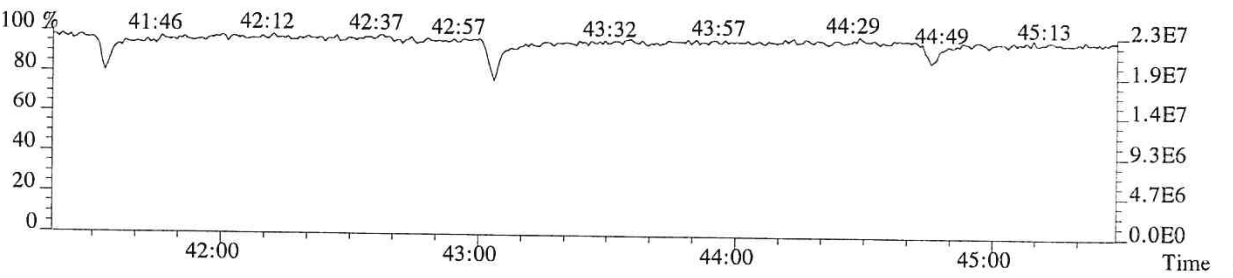
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1252.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1192.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
185657

Run #6 Filename P513855 Samp: 1 Inj: 1 Acquired: 24-JAN-18 17:43:48
Processed: 25-JAN-18 08:12:42 Sample ID: CS5

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	2.519e+05	3.290e+05	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	2.059e+06	1.330e+06	1.55	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:42	1.928e+06	1.251e+06	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:17	1.692e+06	1.377e+06	1.23	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	1.772e+06	1.434e+06	1.24	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:53	1.608e+06	1.317e+06	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.433e+06	1.167e+06	1.23	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	1.339e+06	1.290e+06	1.04	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.080e+06	1.042e+06	1.04	yes	no	1.258
10	Unk	OCDF	42:45	1.595e+06	1.756e+06	0.91	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	1.888e+05	2.423e+05	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:58	1.263e+06	8.057e+05	1.57	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	37:00	1.121e+06	8.925e+05	1.26	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	1.092e+06	8.671e+05	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	1.145e+06	9.139e+05	1.25	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:45	9.236e+05	8.810e+05	1.05	yes	no	1.025
17	Unk	OCDD	42:32	1.236e+06	1.384e+06	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	1.298e+05	1.639e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:48	1.958e+05	1.231e+05	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	1.948e+05	1.236e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:16	8.374e+04	1.594e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:23	9.521e+04	1.780e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:52	8.554e+04	1.650e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:37	7.556e+04	1.441e+05	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:49	5.927e+04	1.314e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	5.166e+04	1.153e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	8.633e+04	1.080e+05	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	1.308e+05	8.218e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	1.058e+05	8.279e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	1.031e+05	8.205e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	8.934e+04	8.409e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	1.103e+05	1.236e+05	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	8.893e+04	1.085e+05	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	1.136e+05	9.051e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	4.366e+05				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
185657

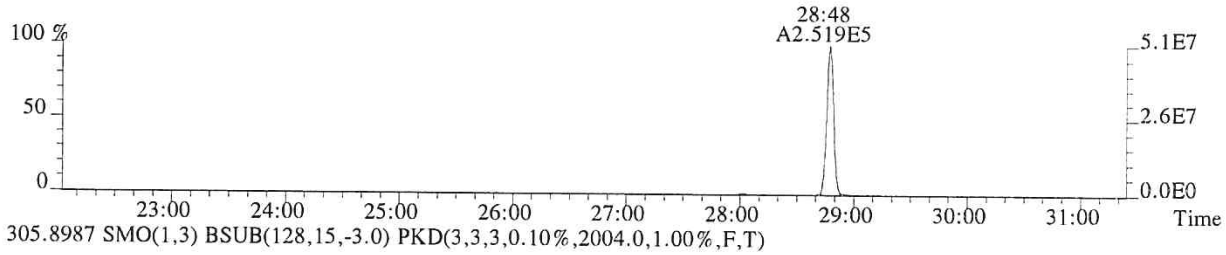
Run #6 Filename P513855 Samp: 1 Inj: 1 Acquired: 24-JAN-18 17:43:48
Processed: 25-JAN-18 08:12:42 LAB. ID: CS5

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.13e+07	1.02e+03	5.0e+04	6.69e+07	2.00e+03	3.3e+04
2	1,2,3,7,8-PeCDF	4.18e+08	1.72e+03	2.4e+05	2.69e+08	4.25e+03	6.3e+04
3	2,3,4,7,8-PeCDF	4.06e+08	1.72e+03	2.4e+05	2.60e+08	4.25e+03	6.1e+04
4	1,2,3,4,7,8-HxCDF	3.87e+08	3.18e+03	1.2e+05	3.12e+08	2.28e+03	1.4e+05
5	1,2,3,6,7,8-HxCDF	3.87e+08	3.18e+03	1.2e+05	3.14e+08	2.28e+03	1.4e+05
6	2,3,4,6,7,8-HxCDF	3.59e+08	3.18e+03	1.1e+05	2.88e+08	2.28e+03	1.3e+05
7	1,2,3,7,8,9-HxCDF	3.14e+08	3.18e+03	9.9e+04	2.53e+08	2.28e+03	1.1e+05
8	1,2,3,4,6,7,8-HpCDF	2.94e+08	4.87e+04	6.0e+03	2.86e+08	4.51e+04	6.3e+03
9	1,2,3,4,7,8,9-HpCDF	2.17e+08	4.87e+04	4.5e+03	2.12e+08	4.51e+04	4.7e+03
10	OCDF	2.95e+08	6.68e+02	4.4e+05	3.20e+08	1.53e+03	2.1e+05
11	2,3,7,8-TCDD	4.01e+07	1.56e+03	2.6e+04	5.16e+07	1.78e+03	2.9e+04
12	1,2,3,7,8-PeCDD	2.63e+08	1.48e+03	1.8e+05	1.68e+08	6.04e+02	2.8e+05
13	1,2,3,4,7,8-HxCDD	2.57e+08	1.76e+03	1.5e+05	2.02e+08	1.10e+03	1.8e+05
14	1,2,3,6,7,8-HxCDD	2.40e+08	1.76e+03	1.4e+05	1.94e+08	1.10e+03	1.8e+05
15	1,2,3,7,8,9-HxCDD	2.55e+08	1.76e+03	1.5e+05	2.05e+08	1.10e+03	1.9e+05
16	1,2,3,4,6,7,8-HpCDD	1.92e+08	4.16e+03	4.6e+04	1.82e+08	2.40e+03	7.6e+04
17	OCDD	2.24e+08	1.92e+02	1.2e+06	2.52e+08	1.77e+03	1.4e+05
18	13C-2,3,7,8-TCDF	2.56e+07	8.72e+03	2.9e+03	3.23e+07	4.65e+03	7.0e+03
19	13C-1,2,3,7,8-PeCDF	3.90e+07	1.47e+03	2.7e+04	2.42e+07	1.14e+03	2.1e+04
20	13C-2,3,4,7,8-PeCDF	3.95e+07	1.47e+03	2.7e+04	2.53e+07	1.14e+03	2.2e+04
21	13C-1,2,3,4,7,8-HxCDF	1.87e+07	1.28e+03	1.5e+04	3.55e+07	3.08e+03	1.2e+04
22	13C-1,2,3,6,7,8-HxCDF	2.06e+07	1.28e+03	1.6e+04	3.85e+07	3.08e+03	1.3e+04
23	13C-2,3,4,6,7,8-HxCDF	1.90e+07	1.28e+03	1.5e+04	3.60e+07	3.08e+03	1.2e+04
24	13C-1,2,3,7,8,9-HxCDF	1.65e+07	1.28e+03	1.3e+04	3.12e+07	3.08e+03	1.0e+04
25	13C-1,2,3,4,6,7,8-HpCDF	1.32e+07	1.18e+04	1.1e+03	2.87e+07	5.77e+03	5.0e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.03e+07	1.18e+04	8.7e+02	2.29e+07	5.77e+03	4.0e+03
27	13C-2,3,7,8-TCDD	1.81e+07	7.00e+03	2.6e+03	2.26e+07	3.08e+03	7.3e+03
28	13C-1,2,3,7,8-PeCDD	2.76e+07	1.47e+03	1.9e+04	1.74e+07	7.76e+02	2.2e+04
29	13C-1,2,3,4,7,8-HxCDD	2.40e+07	2.43e+03	9.9e+03	1.87e+07	1.70e+03	1.1e+04
30	13C-1,2,3,6,7,8-HxCDD	2.24e+07	2.43e+03	9.2e+03	1.82e+07	1.70e+03	1.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	1.84e+07	1.79e+03	1.0e+04	1.72e+07	1.40e+03	1.2e+04
32	13C-OCDD	1.97e+07	1.62e+03	1.2e+04	2.22e+07	1.42e+03	1.6e+04
33	13C-1,2,3,4-TCDD	1.83e+07	7.00e+03	2.6e+03	2.22e+07	3.08e+03	7.2e+03
34	13C-1,2,3,7,8,9-HxCDD	2.50e+07	2.43e+03	1.0e+04	1.99e+07	1.70e+03	1.2e+04
35	37Cl-2,3,7,8-TCDD	9.29e+07	1.57e+03	5.9e+04			

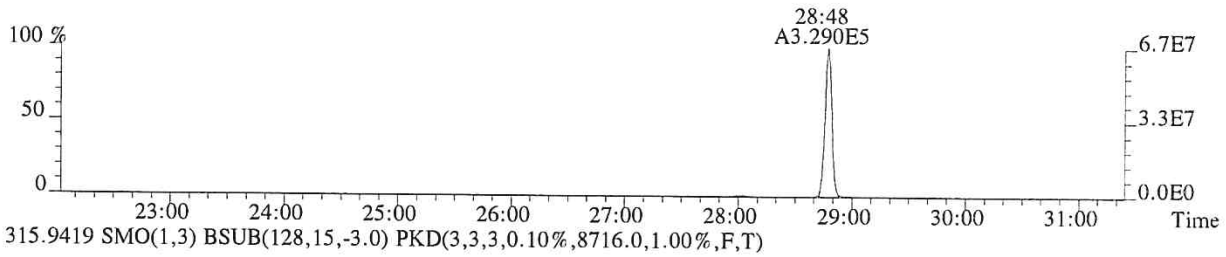
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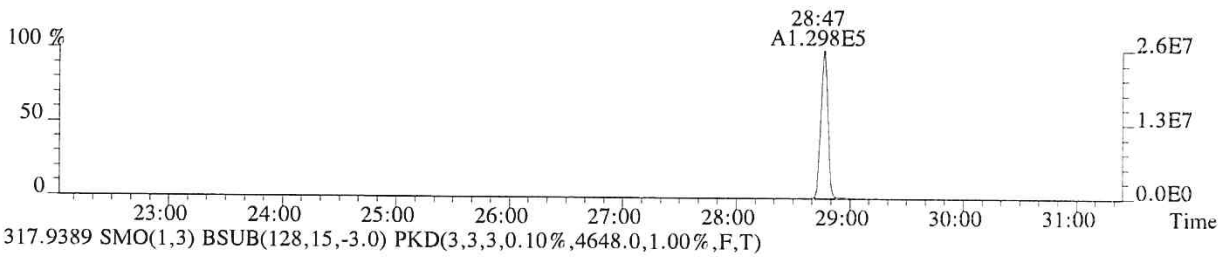
File:P513855 #1-665 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



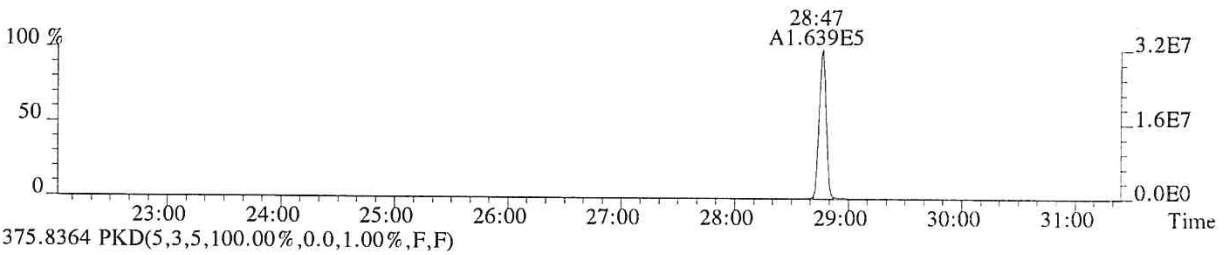
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2004.0,1.00%,F,T)



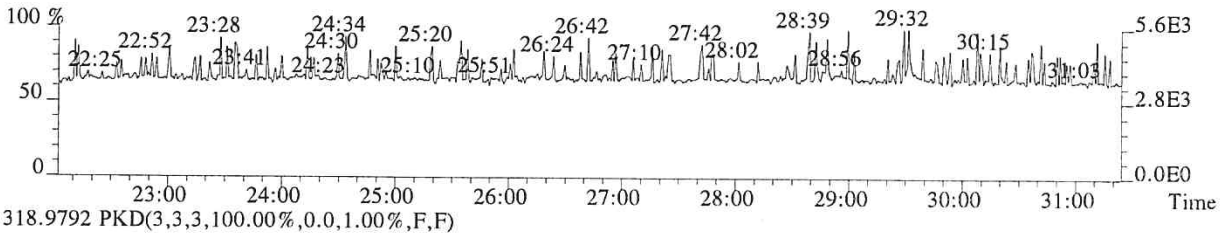
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8716.0,1.00%,F,T)



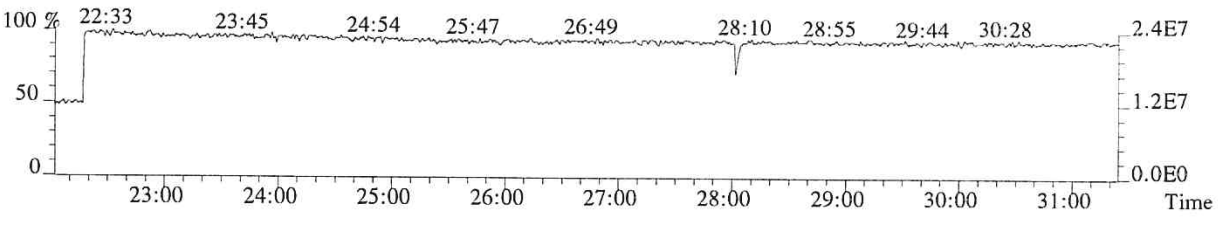
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4648.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

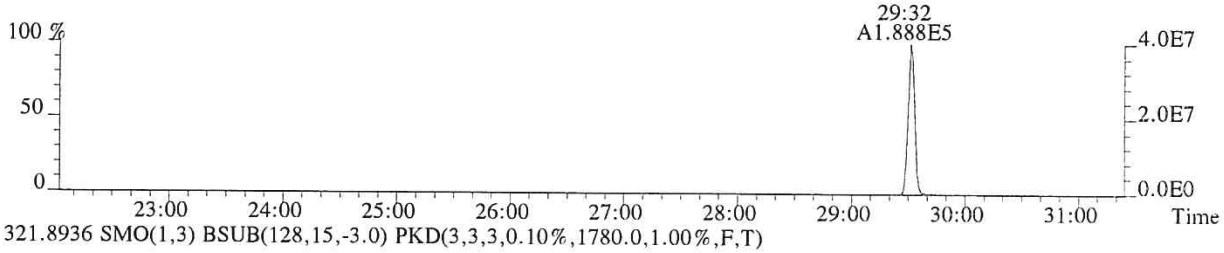


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

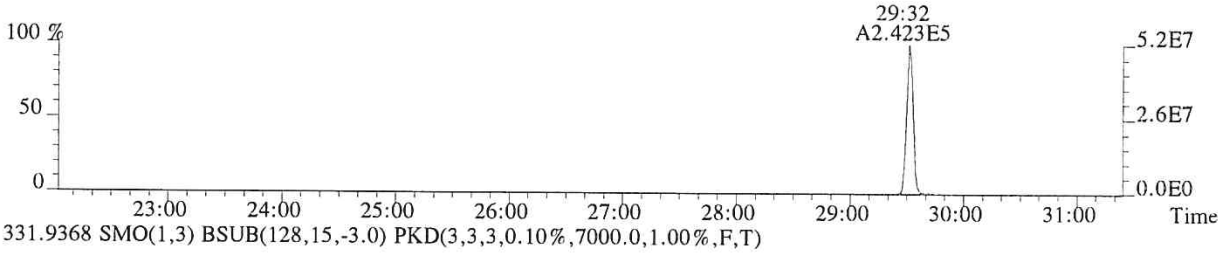


017826

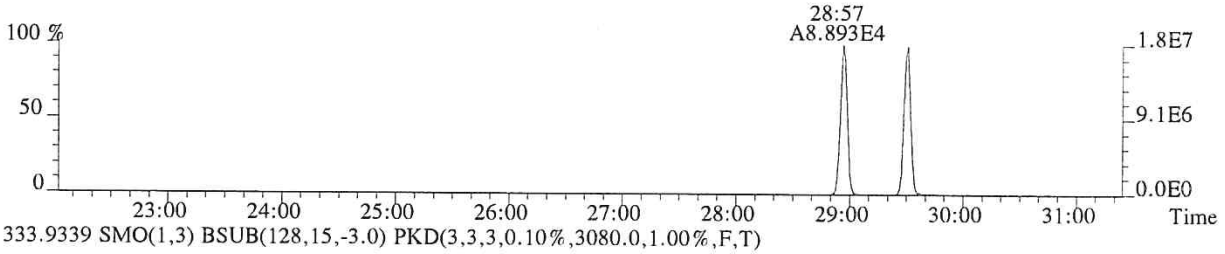
File:P513855 #1-665 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1556.0,1.00%,F,T)



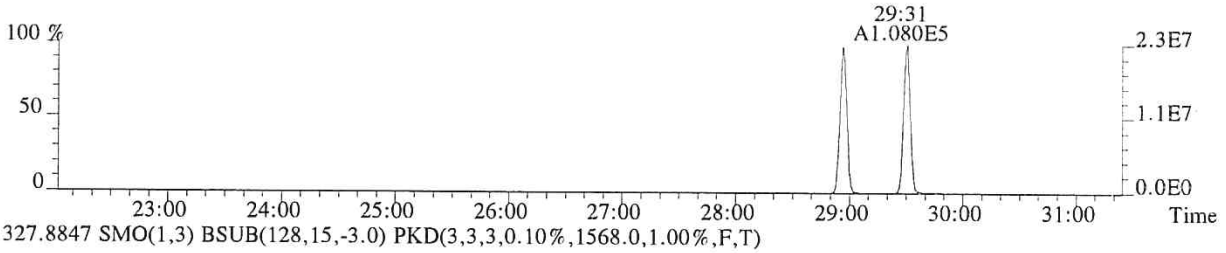
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1780.0,1.00%,F,T)



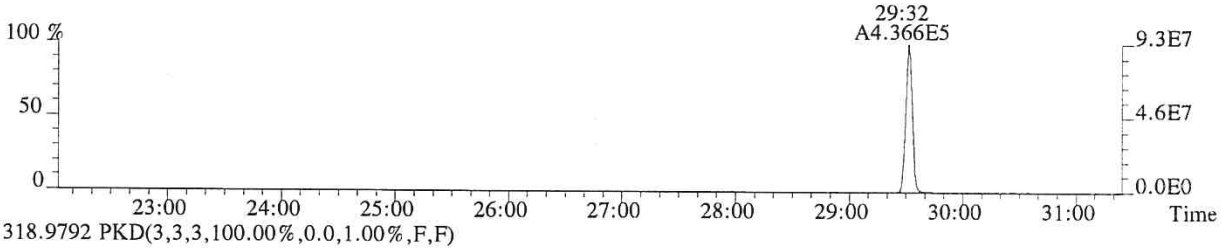
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7000.0,1.00%,F,T)



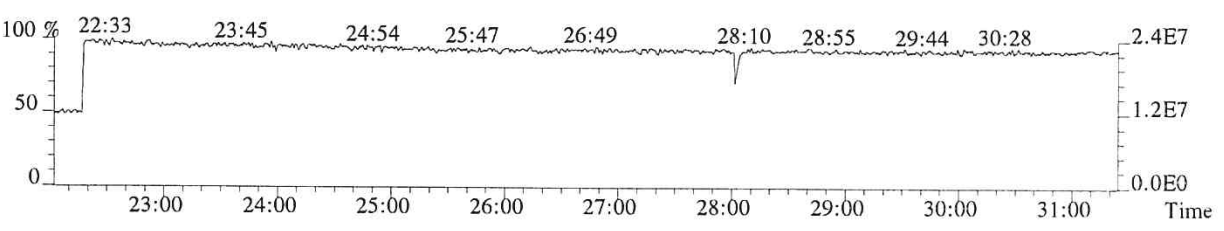
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3080.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1568.0,1.00%,F,T)

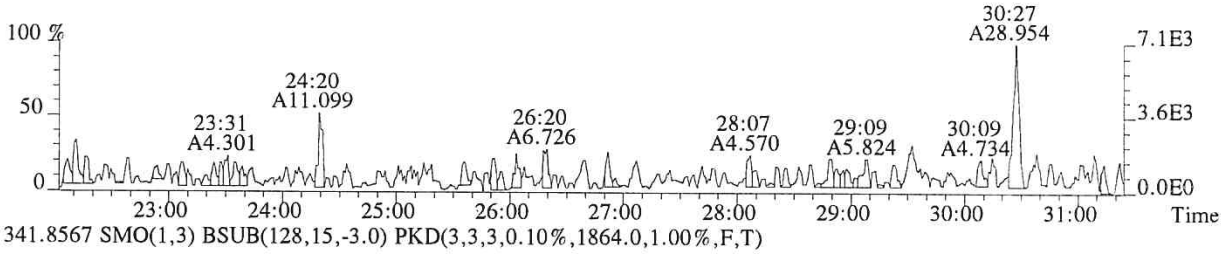


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

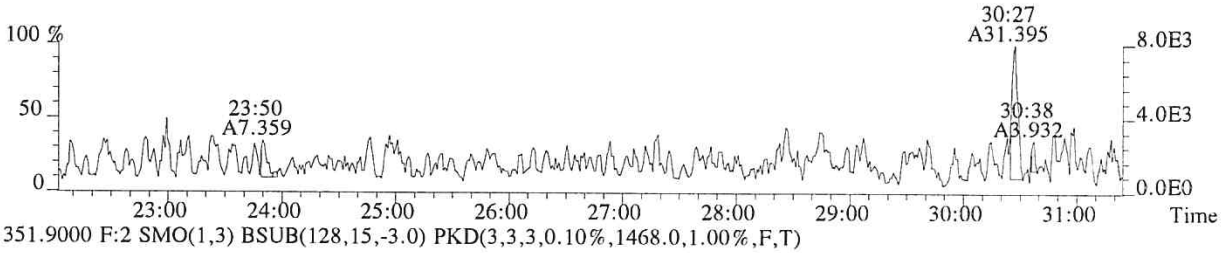


017827

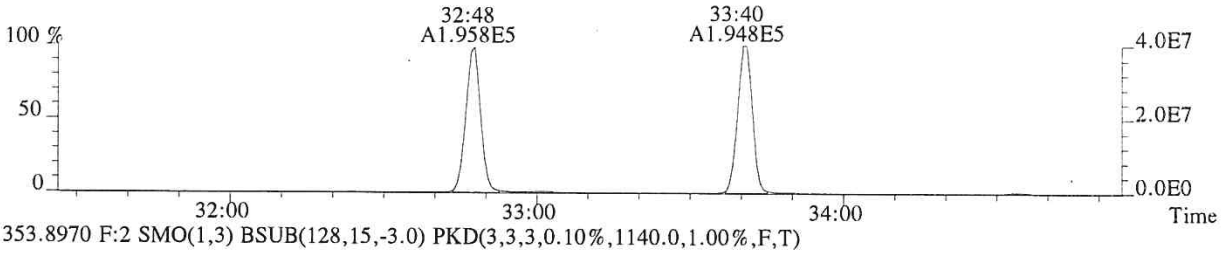
File:P513855 #1-665 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,696.0,1.00%,F,T)



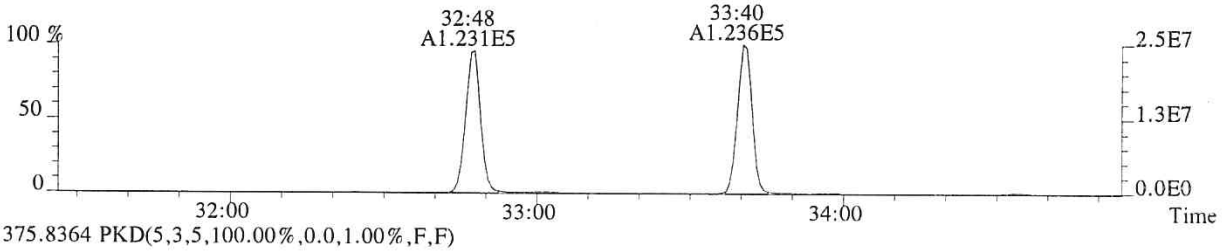
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1864.0,1.00%,F,T)



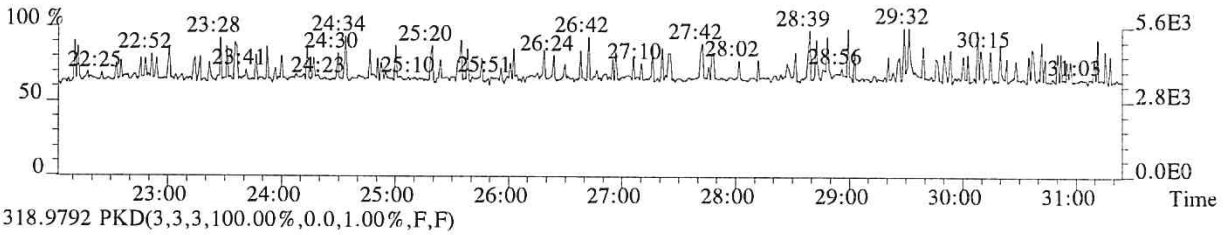
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1468.0,1.00%,F,T)



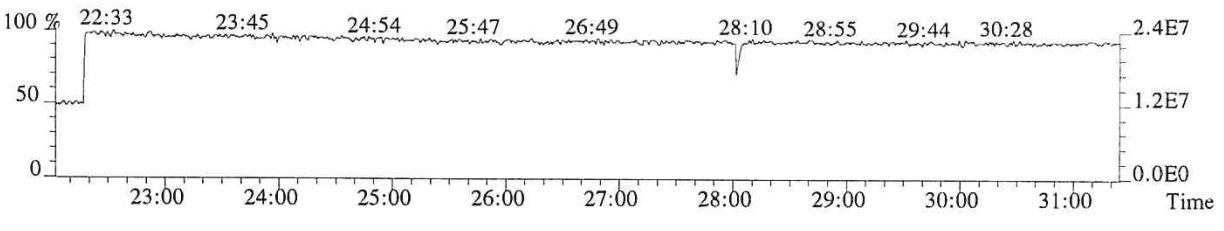
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1140.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

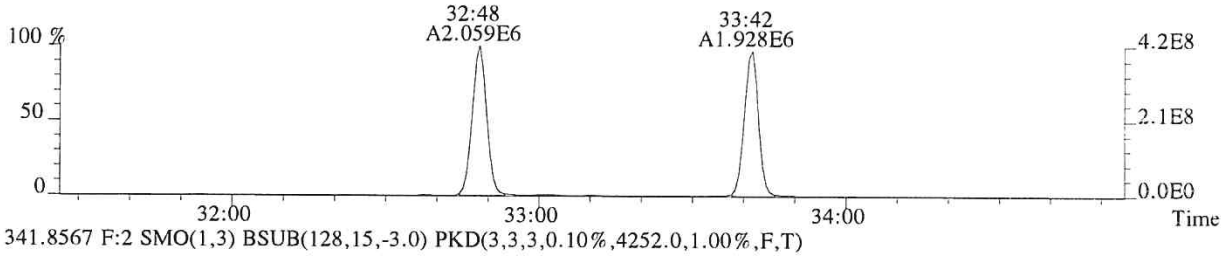


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

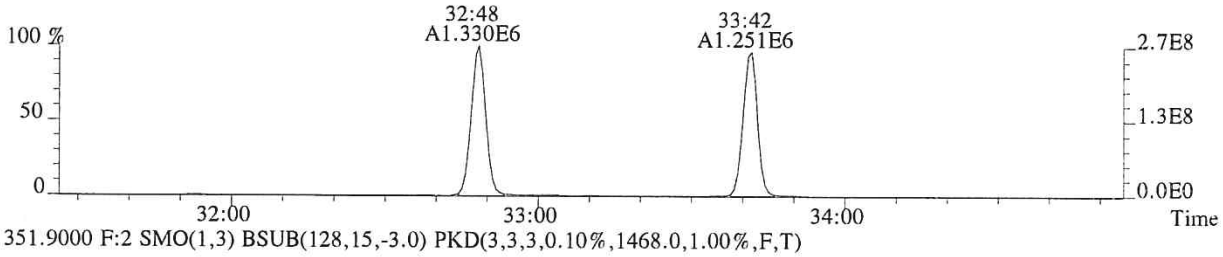


017828

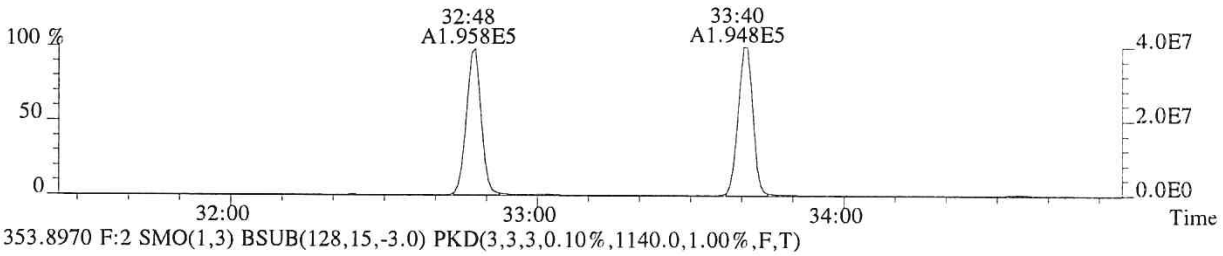
File:P513855 #1-313 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1724.0,1.00%,F,T)



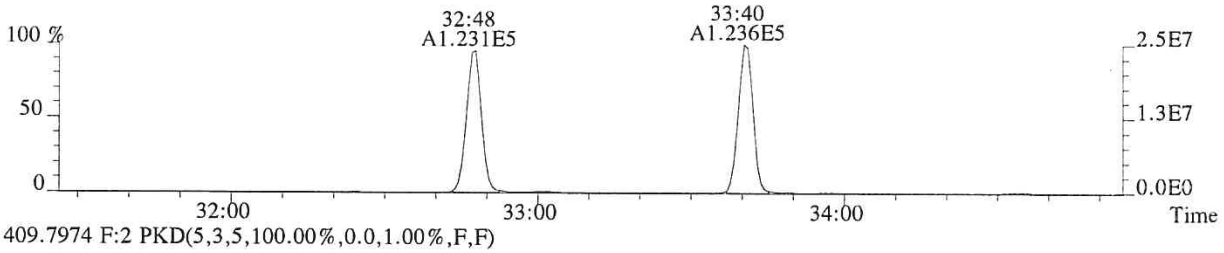
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4252.0,1.00%,F,T)



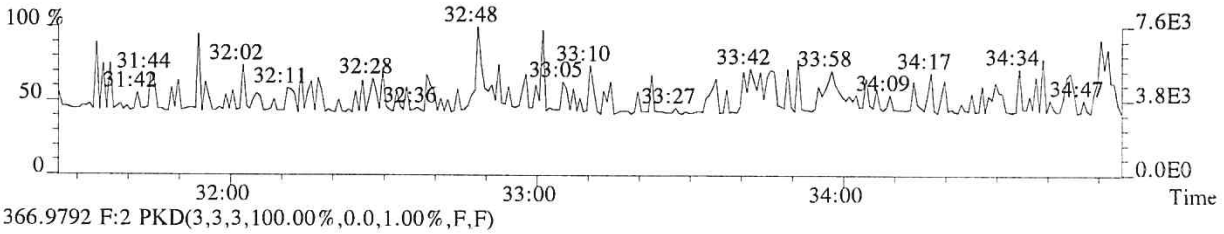
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1468.0,1.00%,F,T)



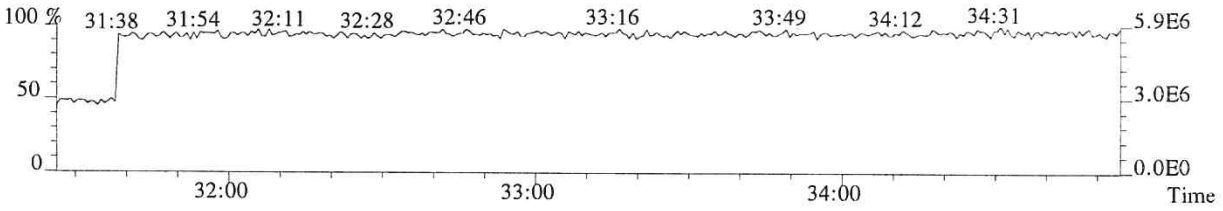
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1140.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

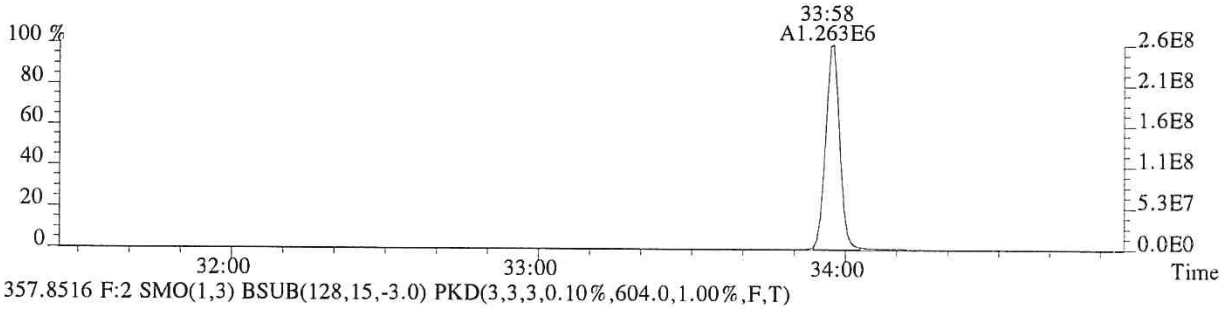


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

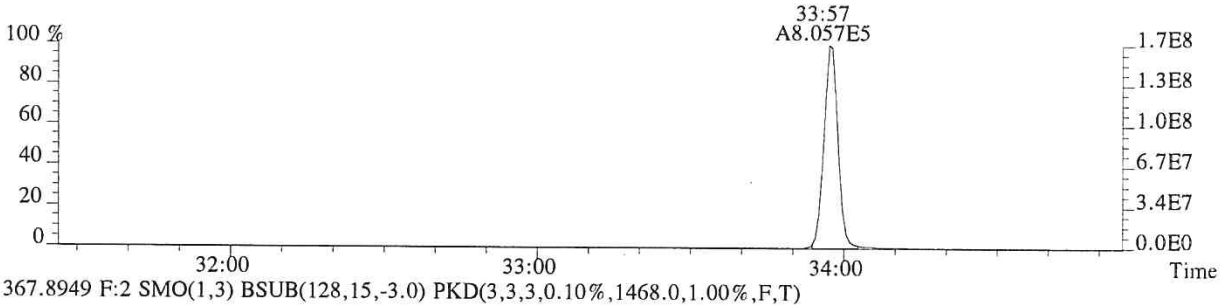


017829

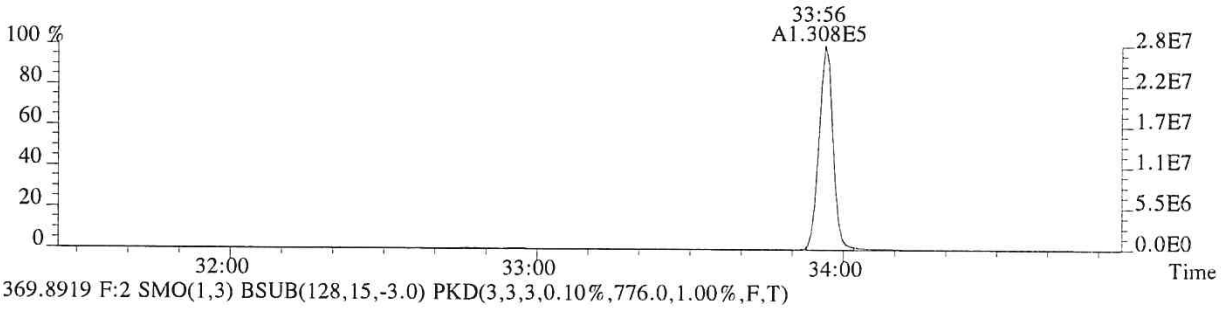
File:P513855 #1-313 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1476.0,1.00%,F,T)



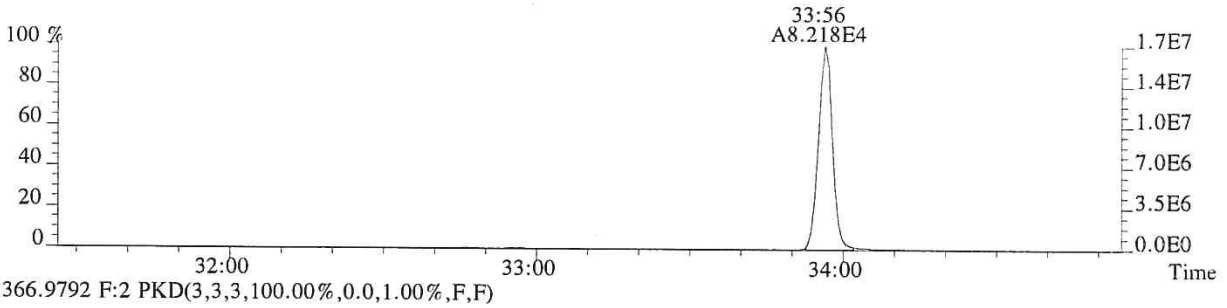
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,604.0,1.00%,F,T)



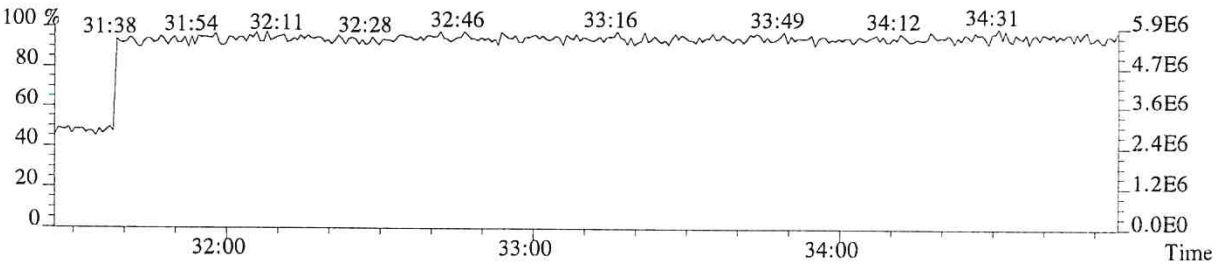
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1468.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,776.0,1.00%,F,T)



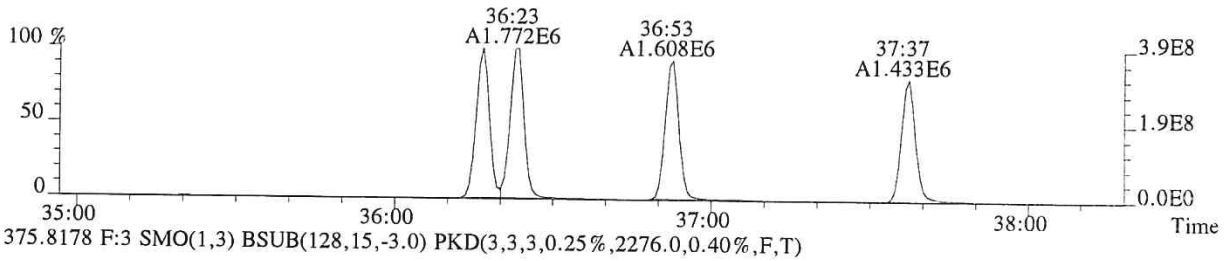
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



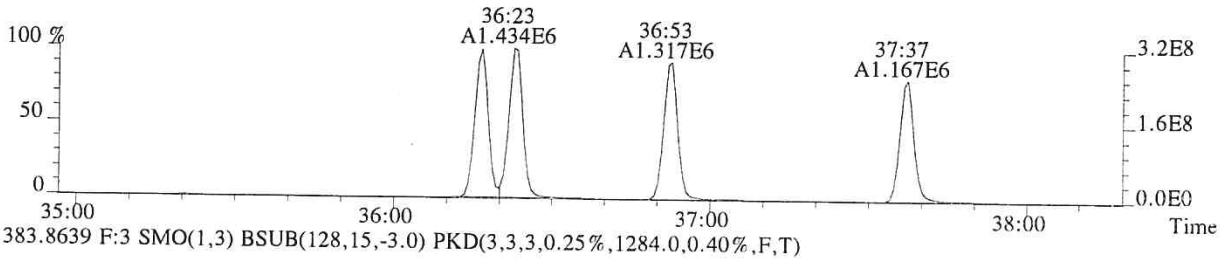
017830

File:P513855 #1-303 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:185657

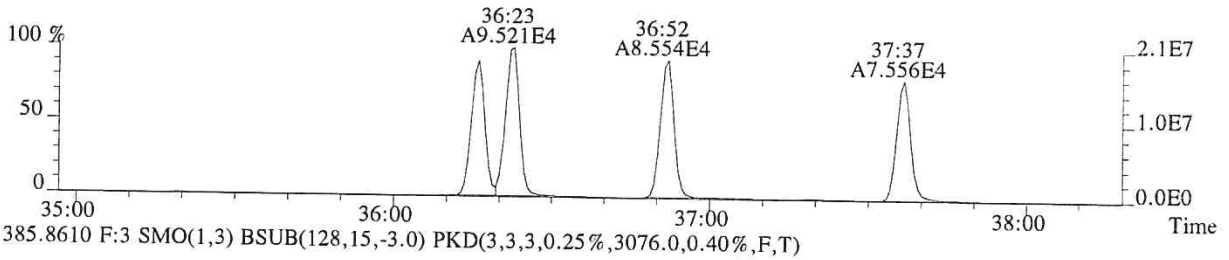
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3180.0,0.40%,F,T)



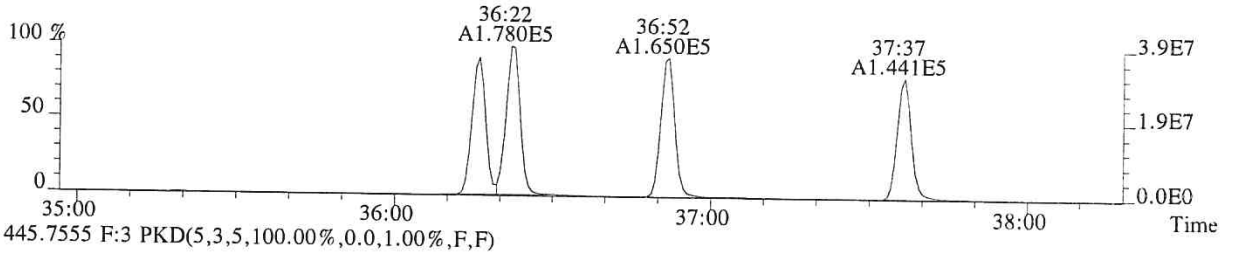
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2276.0,0.40%,F,T)



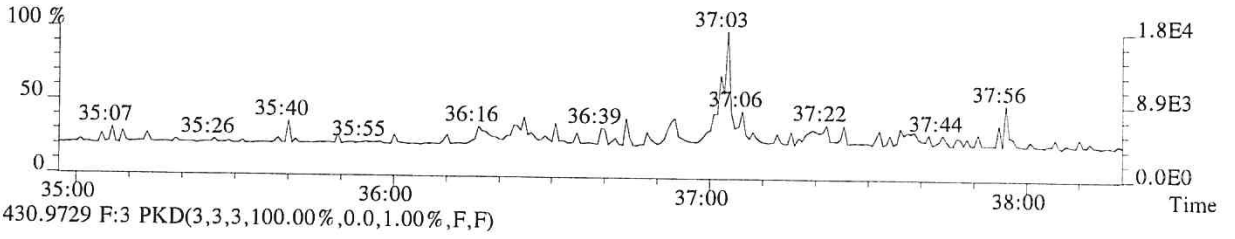
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1284.0,0.40%,F,T)



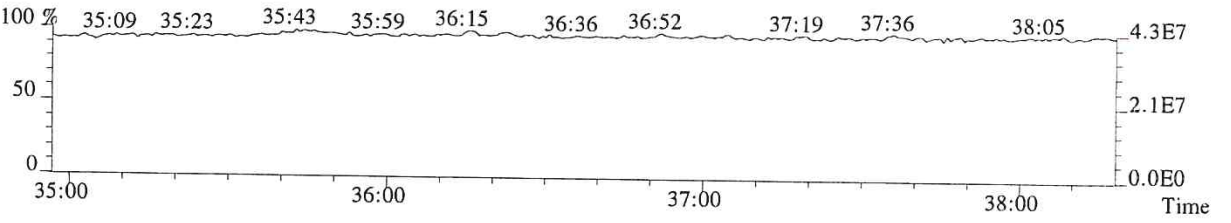
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3076.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

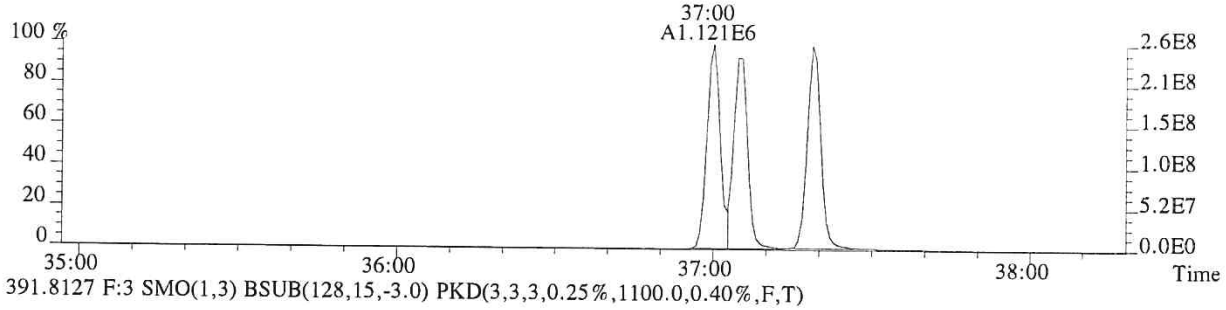


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

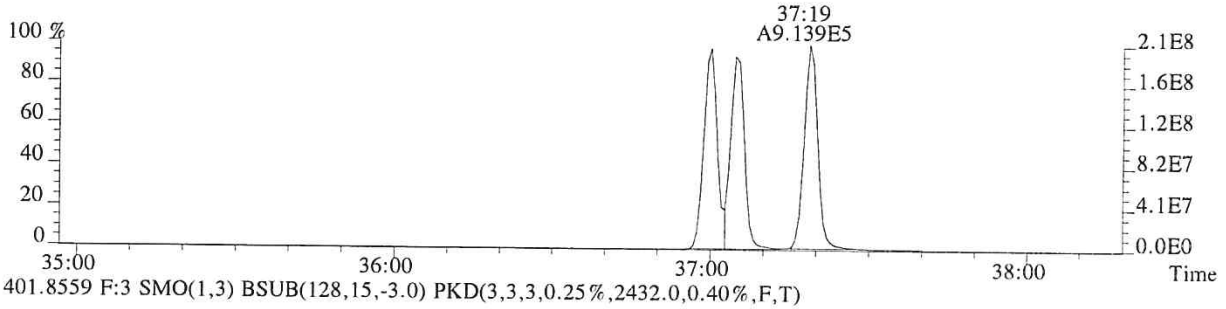


017831

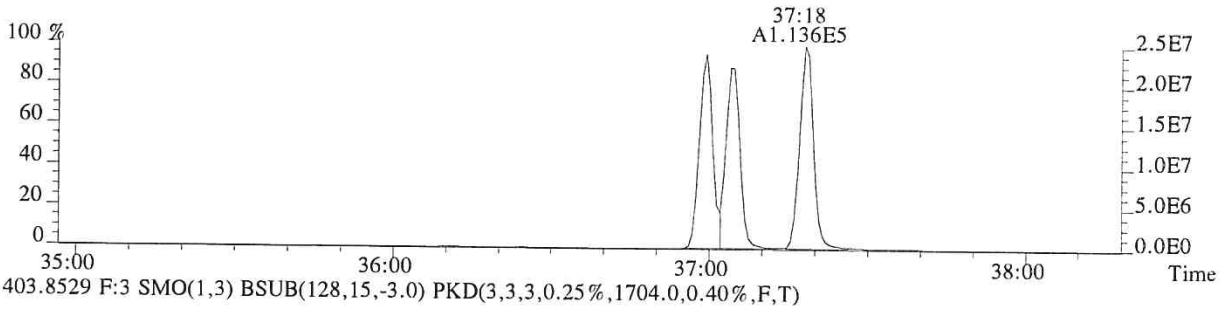
File:P513855 #1-303 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1760.0,0.40%,F,T)



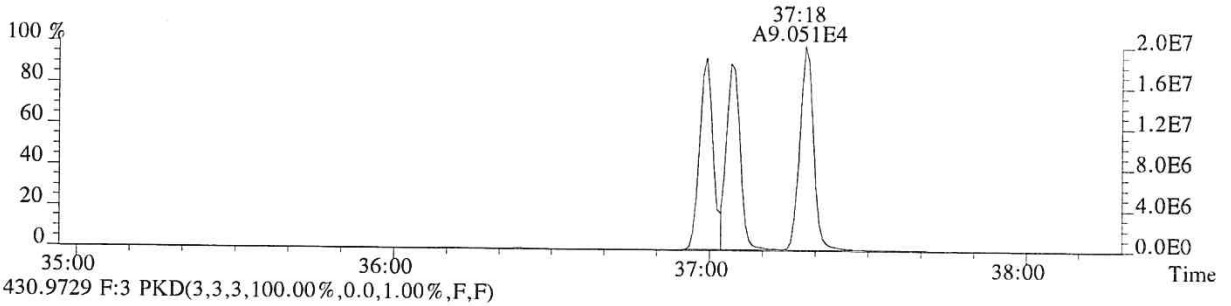
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1100.0,0.40%,F,T)



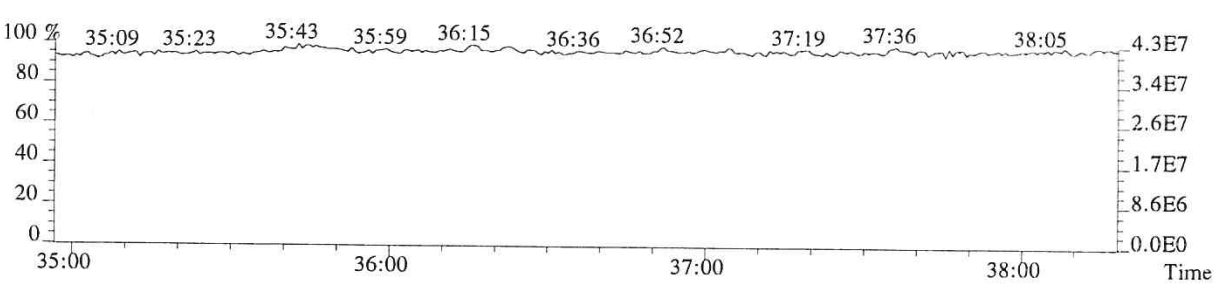
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2432.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1704.0,0.40%,F,T)

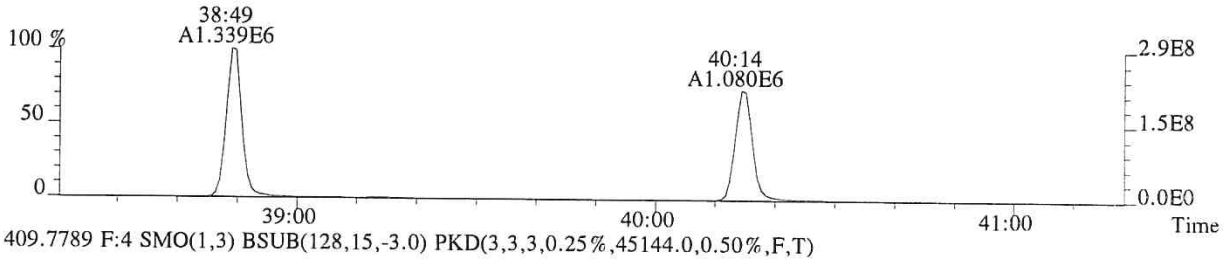


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

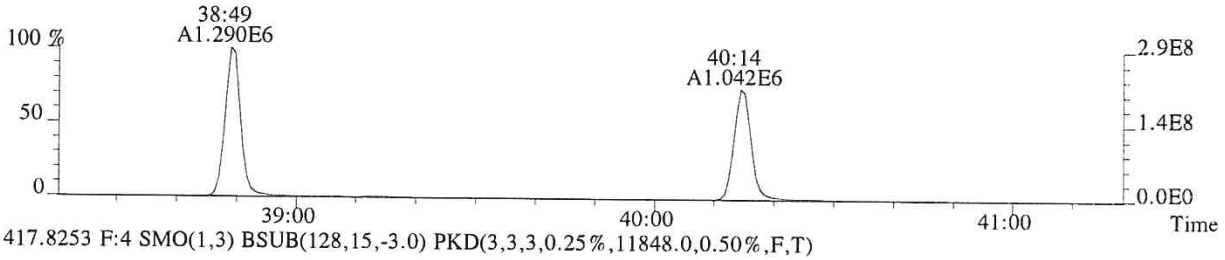


017832

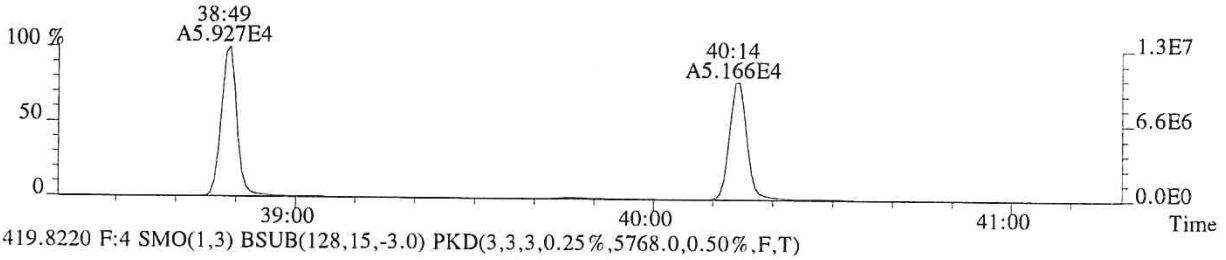
File:P513855 #1-268 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,48736.0,0.50%,F,T)



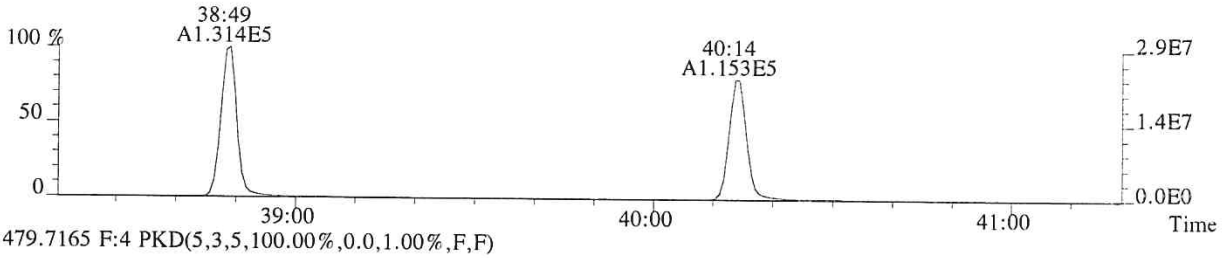
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,45144.0,0.50%,F,T)



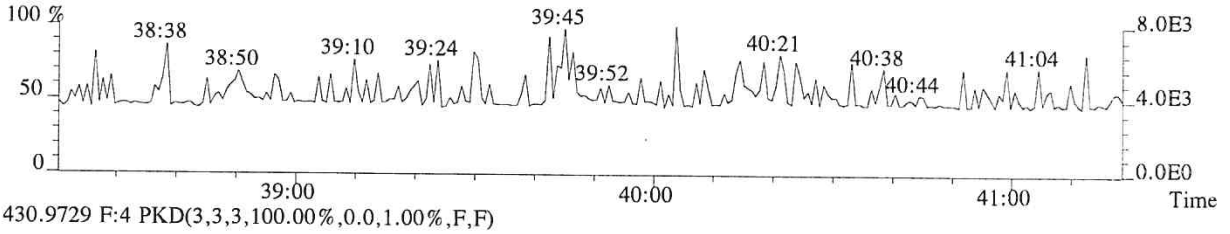
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11848.0,0.50%,F,T)



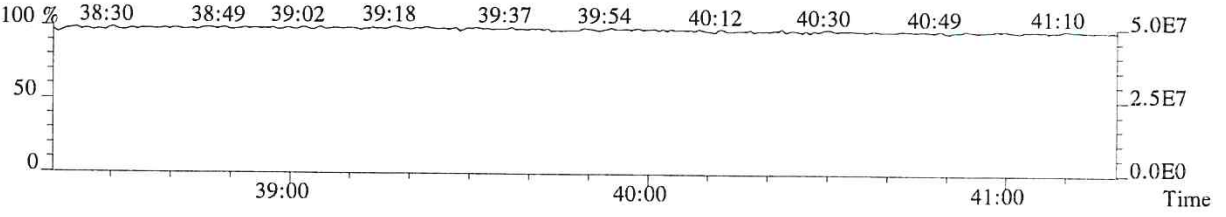
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5768.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

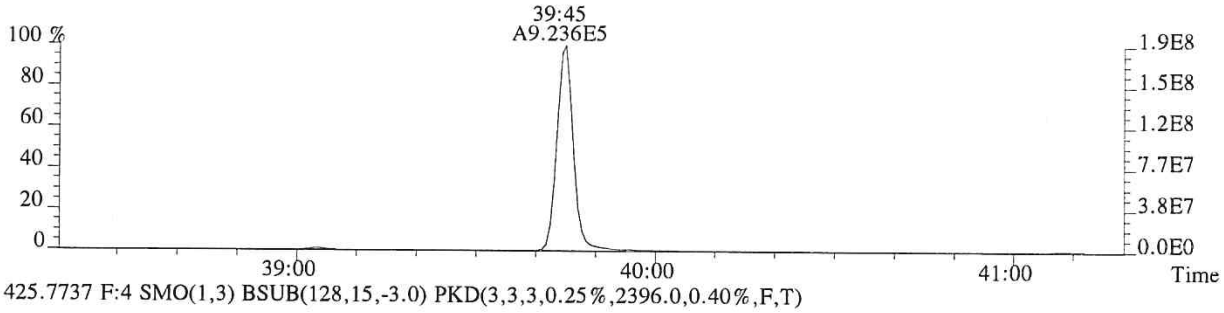


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

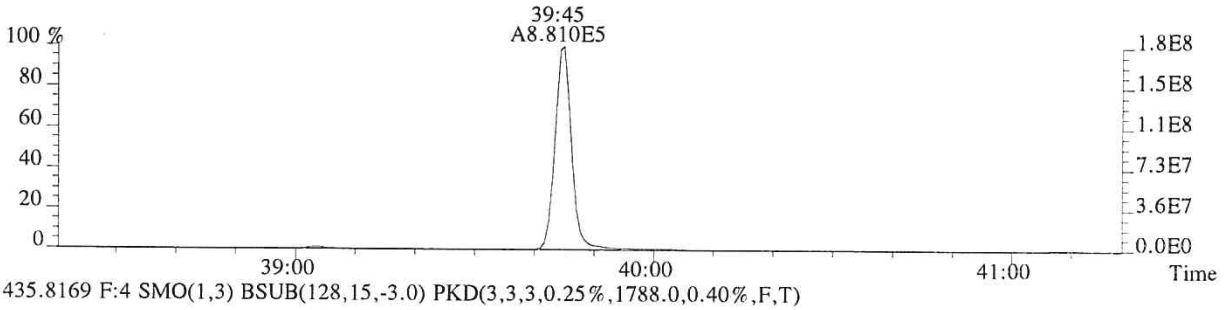


017833

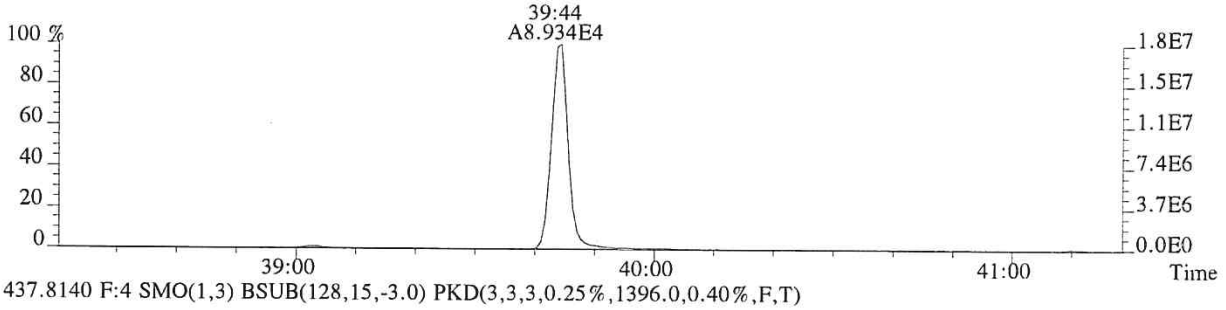
File:P513855 #1-268 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4156.0,0.40%,F,T)



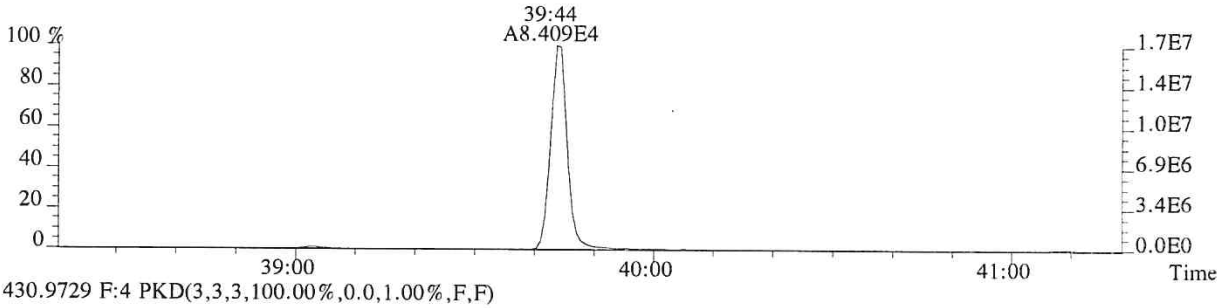
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2396.0,0.40%,F,T)



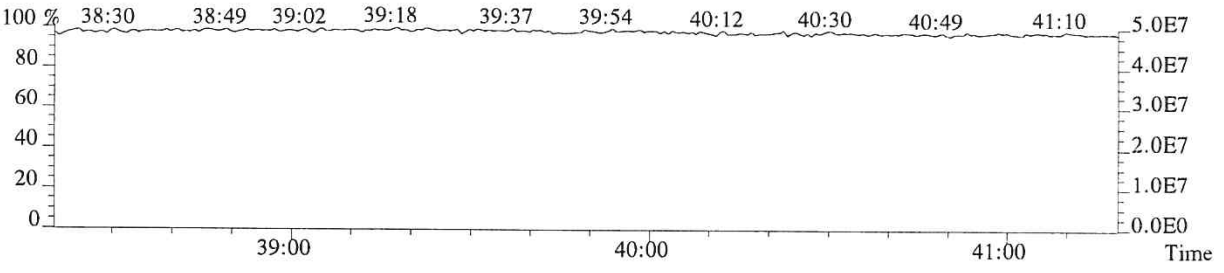
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1788.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1396.0,0.40%,F,T)

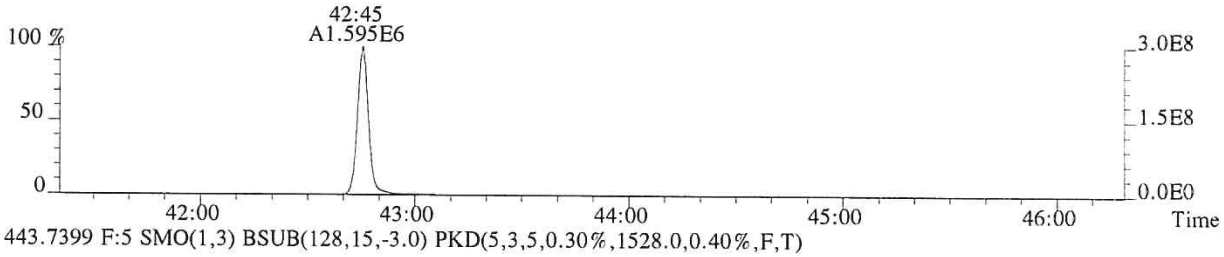


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

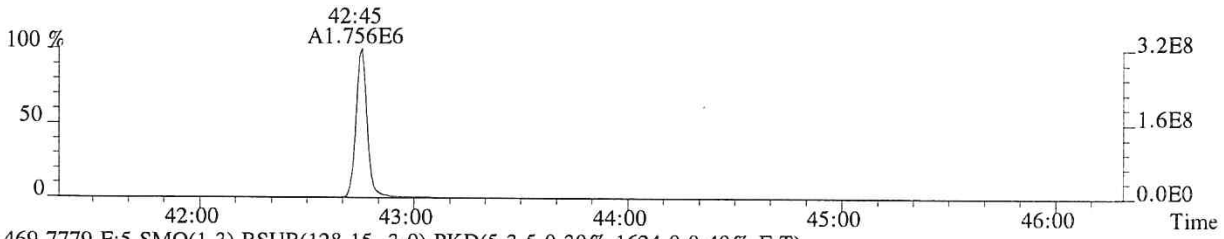


017834

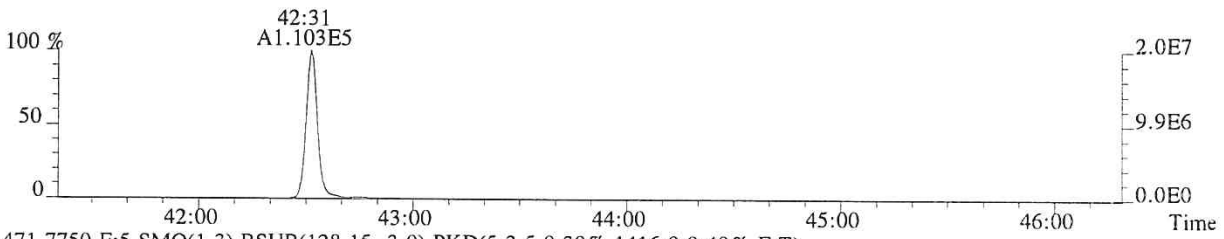
File:P513855 #1-448 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,668.0,0.40%,F,T)



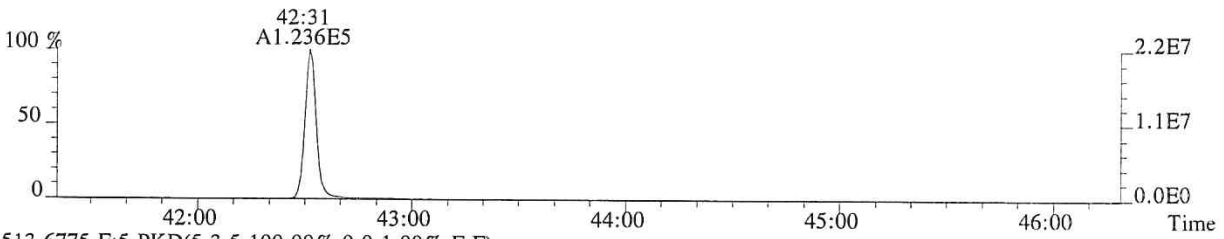
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1528.0,0.40%,F,T)



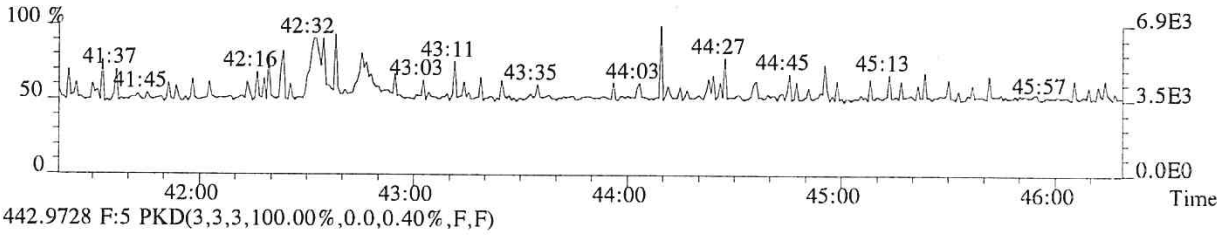
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1624.0,0.40%,F,T)



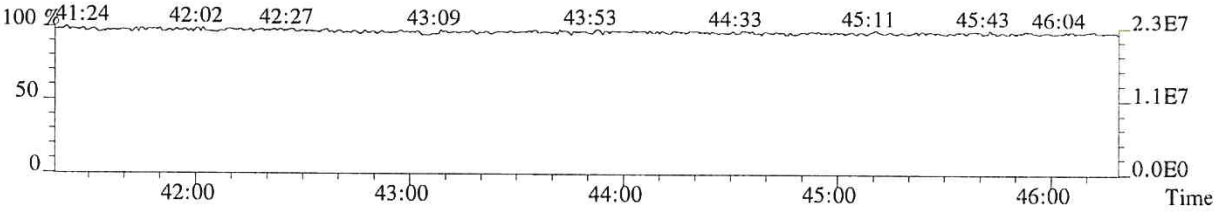
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1416.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

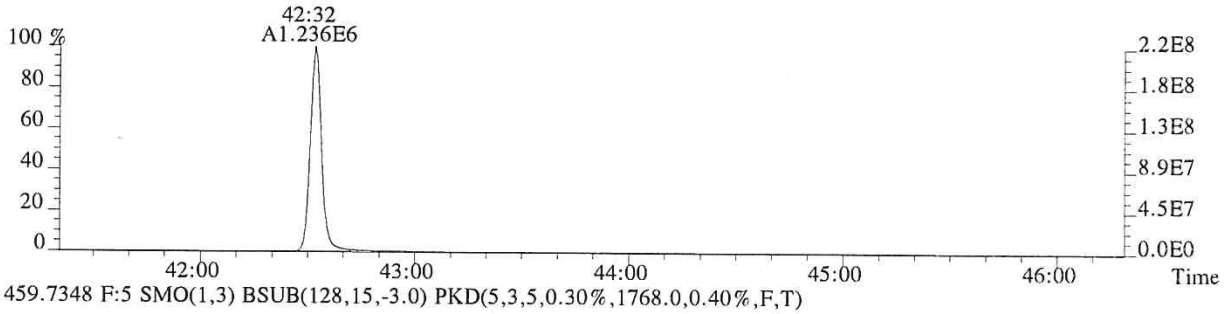


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

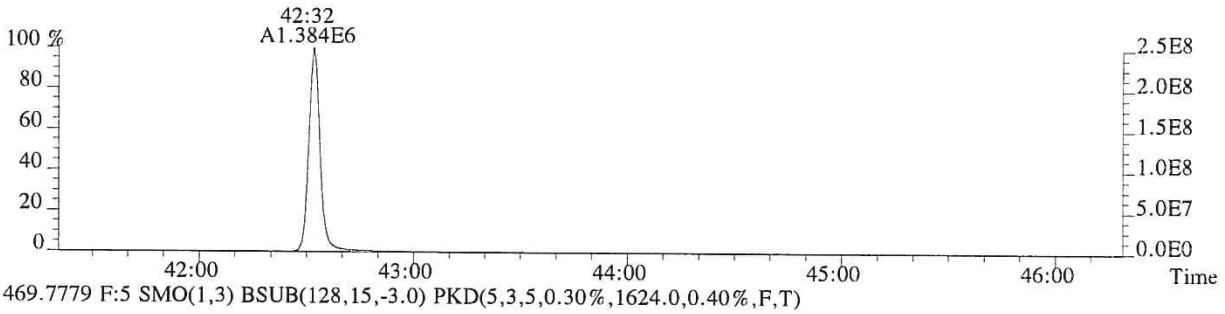


017835

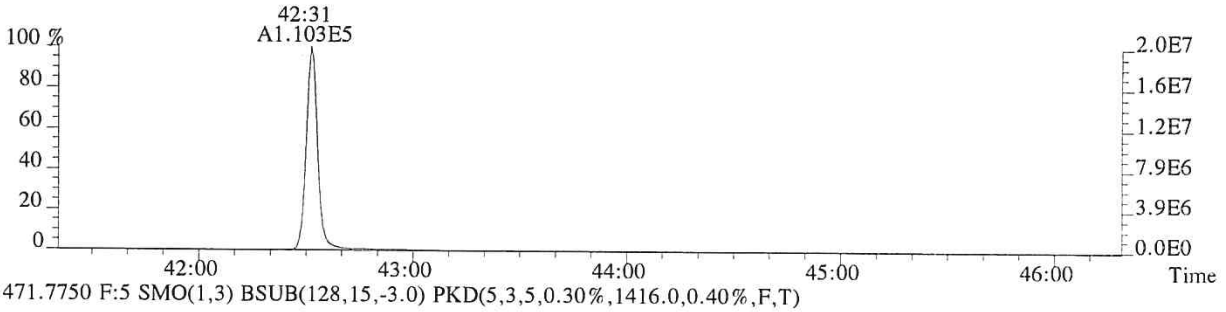
File:P513855 #1-448 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,192.0,0.40%,F,T)



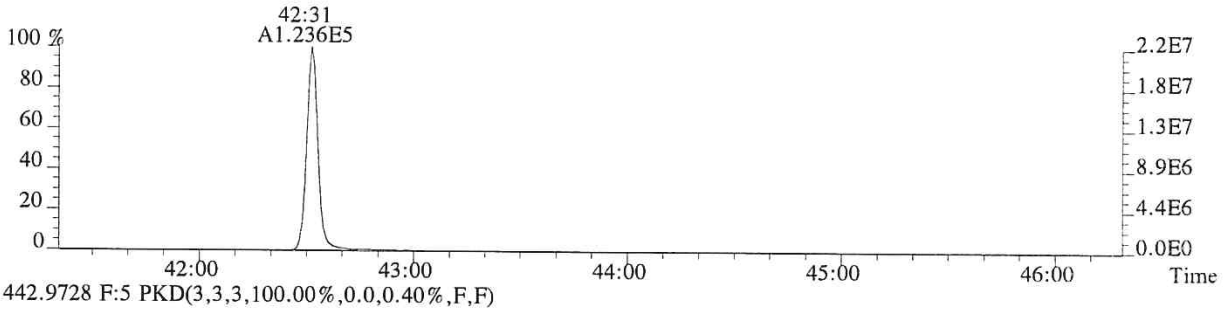
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1768.0,0.40%,F,T)



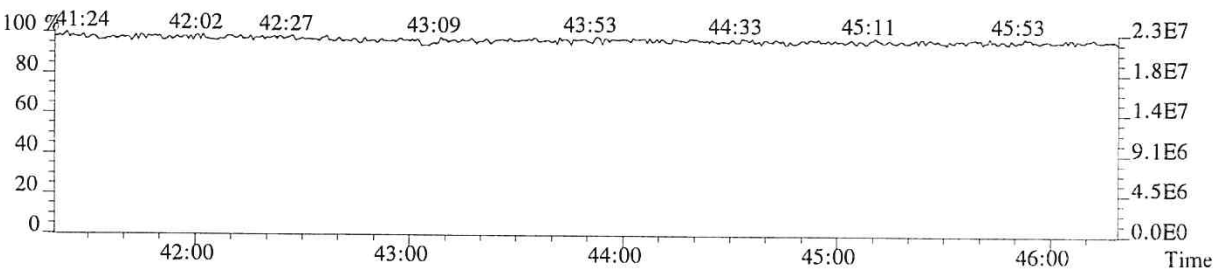
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1624.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1416.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017836

USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P513857 Analysis Date: 24-JAN-18 Time: 19:21:06

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	9.9	7.8 - 12.9	-0.8
1,2,3,7,8-PeCDD	M+2/M+4	1.55	1.32-1.78	50	39 - 65	0.9
1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	50	39 - 64	0.2
1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	50	39 - 64	0.8
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	50	41 - 61	-0.7
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	51	43 - 58	1.6
OCDD	M+2/M+4	0.89	0.76-1.02	101	79 - 126	1.5
2,3,7,8-TCDF	M/M+2	0.71	0.65-0.89	10.2	8.4 - 12.0	2.1
1,2,3,7,8-PeCDF	M+2/M+4	1.51	1.32-1.78	51	41 - 60	2.7
2,3,4,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	50	41 - 61	0.8
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	52	45 - 56	4.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	50	44 - 57	-0.1
1,2,3,7,8,9-HxCDF	M+2/M+4	1.23	1.05-1.43	51	45 - 56	2.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	50	44 - 57	0.8
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.00	0.88-1.20	50	45 - 55	0.3
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.00	0.88-1.20	50	43 - 58	0.1
OCDF	M+2/M+4	0.89	0.76-1.02	100	63 - 159	0.0

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P513857 Analysis Date: 24-JAN-18 Time: 19:21:06

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	98	82 - 121	-1.7
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.59	1.32-1.78	92	62 - 160	-8.5
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	101	85 - 117	1.4
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	103	85 - 118	2.7
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	113	72 - 138	13.3
13C-OCDD	M+2/M+4	0.89	0.76-1.02	253	96 - 415	26.3
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	94	71 - 140	-6.2
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	94	76 - 130	-6.3
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	94	77 - 130	-6.4
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	97	76 - 131	-2.6
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	102	70 - 143	1.7
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	104	74 - 135	3.6
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	105	73 - 137	4.9
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	112	78 - 129	11.6
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	116	77 - 129	16.1
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				10.1	7.8 - 12.7	0.9

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
75080

Run #7 Filename P513857 Samp: 1 Inj: 1 Acquired: 24-JAN-18 19:21:06
Processed: 25-JAN-18 08:41:26 Sample ID: 2ND SOURCE

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	5.152e+03	7.223e+03	0.71	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	3.916e+04	2.586e+04	1.51	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:41	3.607e+04	2.366e+04	1.52	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:16	3.202e+04	2.632e+04	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	3.416e+04	2.839e+04	1.20	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:52	3.150e+04	2.633e+04	1.20	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	2.836e+04	2.314e+04	1.23	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	2.874e+04	2.862e+04	1.00	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	2.352e+04	2.346e+04	1.00	yes	no	1.258
10	Unk	OCDF	42:45	3.688e+04	4.148e+04	0.89	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	3.845e+03	5.032e+03	0.76	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:57	2.377e+04	1.531e+04	1.55	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	2.145e+04	1.680e+04	1.28	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	2.240e+04	1.756e+04	1.28	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	2.219e+04	1.741e+04	1.27	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	2.034e+04	1.933e+04	1.05	yes	no	1.025
17	Unk	OCDD	42:31	3.083e+04	3.462e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:46	5.681e+04	7.189e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:47	7.678e+04	4.833e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	7.550e+04	4.814e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	3.216e+04	6.216e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:22	3.808e+04	7.348e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	3.589e+04	6.747e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	3.054e+04	5.771e+04	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	2.616e+04	5.845e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	2.287e+04	5.181e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:30	3.654e+04	4.587e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	4.972e+04	3.125e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	4.147e+04	3.207e+04	1.29	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	4.264e+04	3.379e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	3.921e+04	3.703e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	5.445e+04	6.090e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	4.052e+04	5.019e+04	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	4.325e+04	3.518e+04	1.23	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	9.276e+03				no	1.014

ALS ENVIRONMENTAL
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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
75080

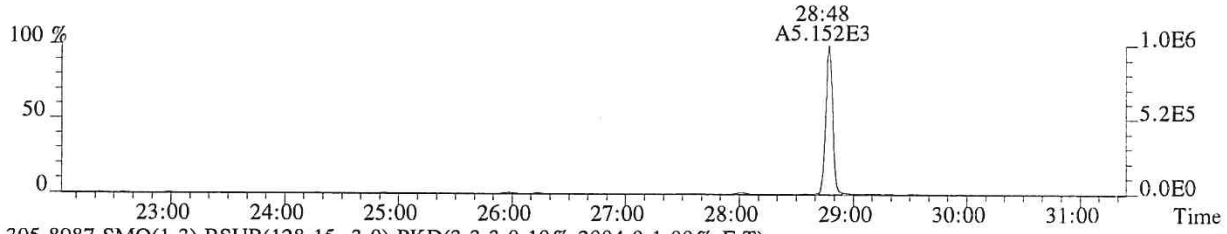
Run #7 Filename P513857 Samp: 1 Inj: 1 Acquired: 24-JAN-18 19:21:06
Processed: 25-JAN-18 08:41:26 LAB. ID: 2ND SOURCE

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.04e+06	1.03e+03	1.0e+03	1.42e+06	2.00e+03	7.1e+02
2	1,2,3,7,8-PeCDF	7.88e+06	8.44e+02	9.3e+03	5.19e+06	1.52e+03	3.4e+03
3	2,3,4,7,8-PeCDF	7.53e+06	8.44e+02	8.9e+03	4.93e+06	1.52e+03	3.2e+03
4	1,2,3,4,7,8-HxCDF	7.21e+06	1.53e+03	4.7e+03	5.89e+06	1.36e+03	4.3e+03
5	1,2,3,6,7,8-HxCDF	7.34e+06	1.53e+03	4.8e+03	6.08e+06	1.36e+03	4.5e+03
6	2,3,4,6,7,8-HxCDF	7.02e+06	1.53e+03	4.6e+03	5.88e+06	1.36e+03	4.3e+03
7	1,2,3,7,8,9-HxCDF	6.10e+06	1.53e+03	4.0e+03	4.95e+06	1.36e+03	3.6e+03
8	1,2,3,4,6,7,8-HpCDF	6.16e+06	5.00e+03	1.2e+03	6.13e+06	6.59e+03	9.3e+02
9	1,2,3,4,7,8,9-HpCDF	4.58e+06	5.00e+03	9.1e+02	4.45e+06	6.59e+03	6.7e+02
10	OCDF	6.54e+06	1.44e+02	4.5e+04	7.12e+06	8.36e+02	8.5e+03
11	2,3,7,8-TCDD	8.13e+05	1.92e+03	4.2e+02	1.05e+06	1.26e+03	8.3e+02
12	1,2,3,7,8-PeCDD	4.95e+06	8.52e+02	5.8e+03	3.18e+06	2.84e+02	1.1e+04
13	1,2,3,4,7,8-HxCDD	4.98e+06	7.64e+02	6.5e+03	3.93e+06	4.12e+02	9.5e+03
14	1,2,3,6,7,8-HxCDD	4.78e+06	7.64e+02	6.3e+03	3.77e+06	4.12e+02	9.2e+03
15	1,2,3,7,8,9-HxCDD	4.67e+06	7.64e+02	6.1e+03	3.64e+06	4.12e+02	8.8e+03
16	1,2,3,4,6,7,8-HpCDD	4.20e+06	1.17e+03	3.6e+03	3.99e+06	7.20e+01	5.5e+04
17	OCDD	5.25e+06	1.60e+02	3.3e+04	5.90e+06	1.22e+03	4.8e+03
18	13C-2,3,7,8-TCDF	1.11e+07	9.00e+03	1.2e+03	1.40e+07	3.76e+03	3.7e+03
19	13C-1,2,3,7,8-PeCDF	1.52e+07	6.36e+02	2.4e+04	9.62e+06	1.34e+03	7.2e+03
20	13C-2,3,4,7,8-PeCDF	1.56e+07	6.36e+02	2.5e+04	9.99e+06	1.34e+03	7.5e+03
21	13C-1,2,3,4,7,8-HxCDF	7.22e+06	7.60e+02	9.5e+03	1.40e+07	1.60e+03	8.8e+03
22	13C-1,2,3,6,7,8-HxCDF	8.16e+06	7.60e+02	1.1e+04	1.57e+07	1.60e+03	9.8e+03
23	13C-2,3,4,6,7,8-HxCDF	7.92e+06	7.60e+02	1.0e+04	1.49e+07	1.60e+03	9.3e+03
24	13C-1,2,3,7,8,9-HxCDF	6.41e+06	7.60e+02	8.4e+03	1.22e+07	1.60e+03	7.6e+03
25	13C-1,2,3,4,6,7,8-HpCDF	5.67e+06	2.84e+03	2.0e+03	1.26e+07	6.70e+03	1.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	4.44e+06	2.84e+03	1.6e+03	1.00e+07	6.70e+03	1.5e+03
27	13C-2,3,7,8-TCDD	7.51e+06	5.77e+03	1.3e+03	9.42e+06	2.25e+03	4.2e+03
28	13C-1,2,3,7,8-PeCDD	1.01e+07	1.06e+03	9.5e+03	6.31e+06	5.88e+02	1.1e+04
29	13C-1,2,3,4,7,8-HxCDD	9.57e+06	2.66e+03	3.6e+03	7.40e+06	1.57e+03	4.7e+03
30	13C-1,2,3,6,7,8-HxCDD	9.03e+06	2.66e+03	3.4e+03	7.14e+06	1.57e+03	4.6e+03
31	13C-1,2,3,4,6,7,8-HpCDD	7.97e+06	1.17e+03	6.8e+03	7.51e+06	7.00e+02	1.1e+04
32	13C-OCDD	9.30e+06	2.60e+02	3.6e+04	1.03e+07	4.00e+02	2.6e+04
33	13C-1,2,3,4-TCDD	8.25e+06	5.77e+03	1.4e+03	1.02e+07	2.25e+03	4.5e+03
34	13C-1,2,3,7,8,9-HxCDD	9.23e+06	2.66e+03	3.5e+03	7.29e+06	1.57e+03	4.6e+03
35	37Cl-2,3,7,8-TCDD	1.94e+06	1.18e+03	1.6e+03			

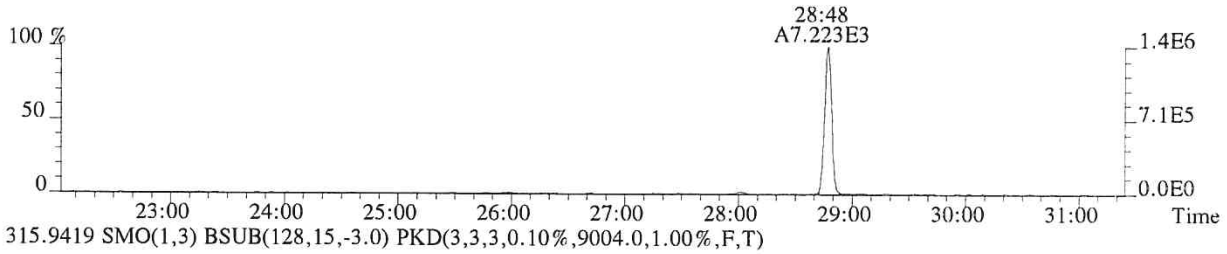
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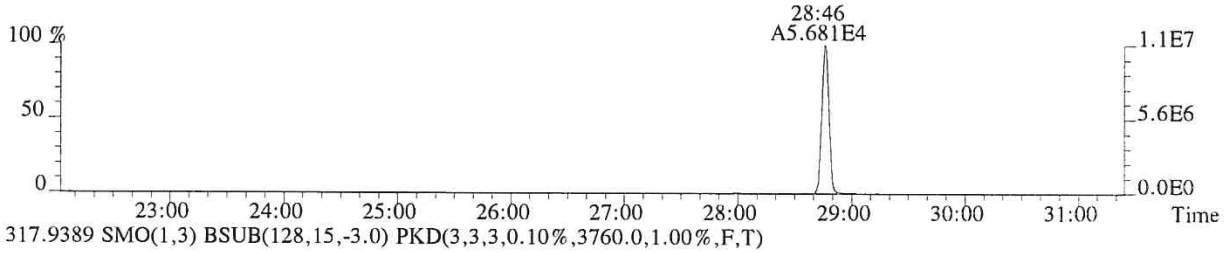
File:P513857 #1-665 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



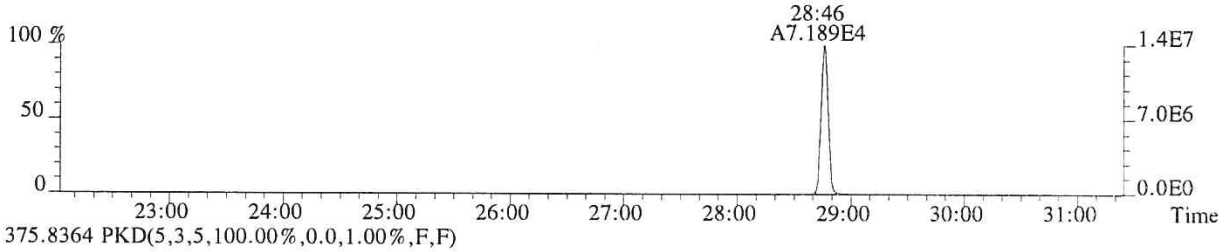
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2004.0,1.00%,F,T)



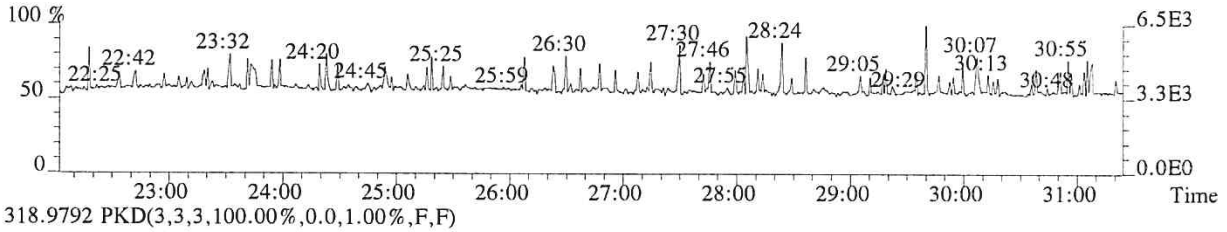
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9004.0,1.00%,F,T)



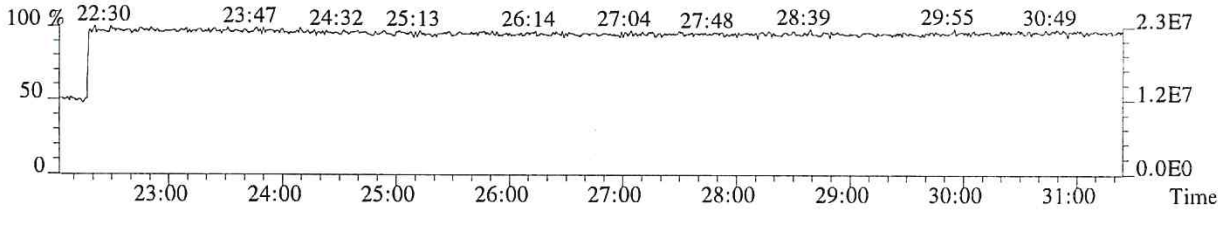
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3760.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

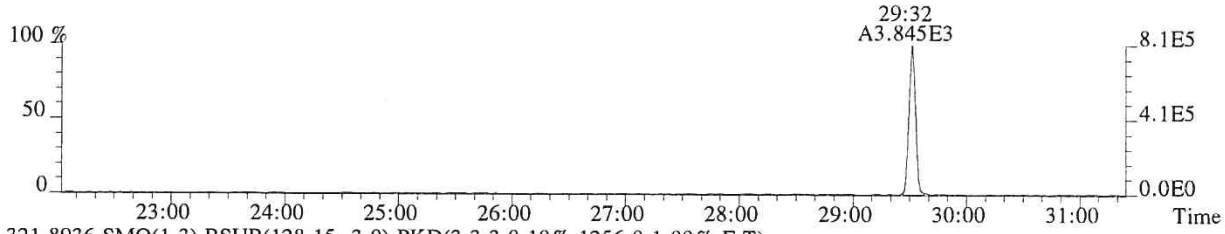


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

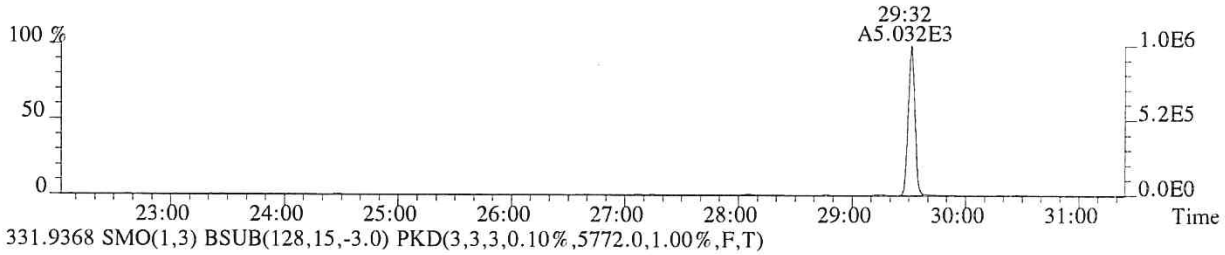


017841

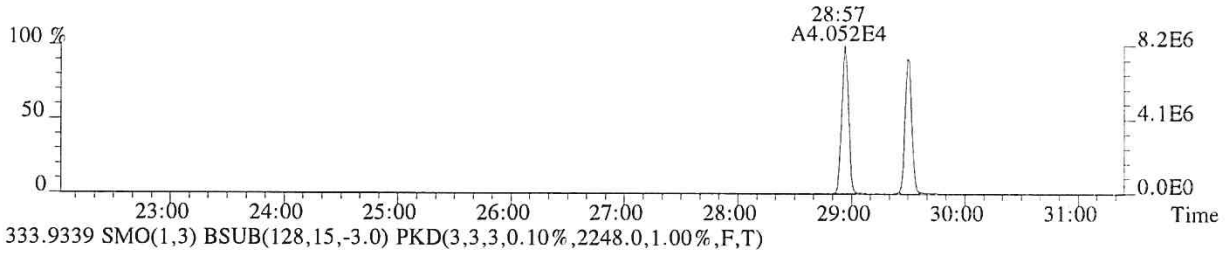
File:P513857 #1-665 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1924.0,1.00%,F,T)



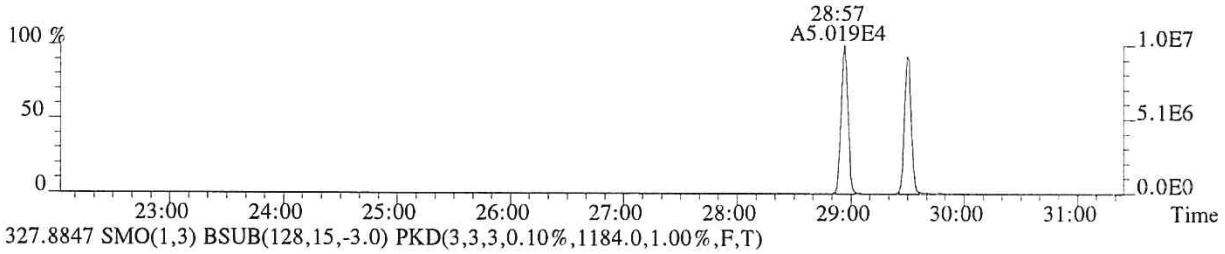
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1256.0,1.00%,F,T)



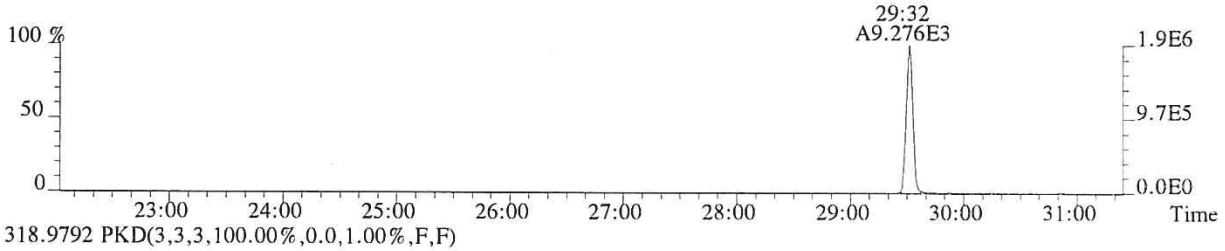
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5772.0,1.00%,F,T)



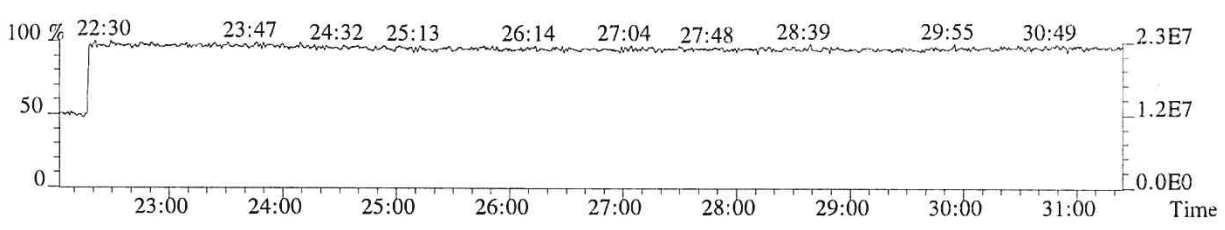
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2248.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1184.0,1.00%,F,T)

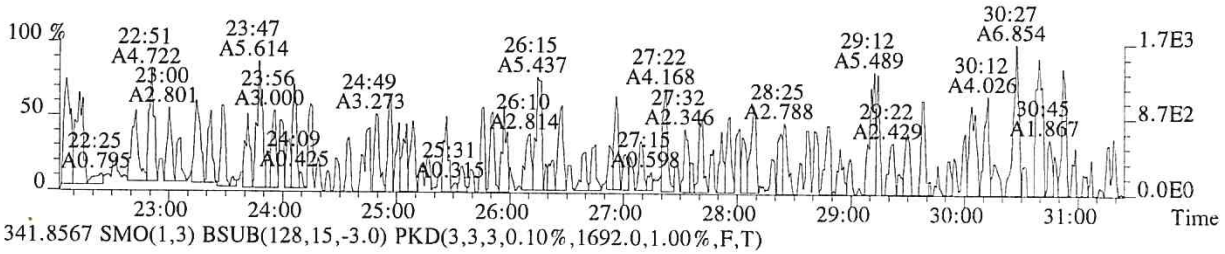


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

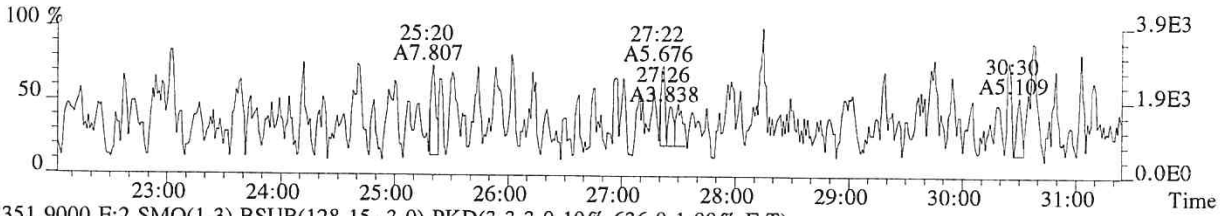


017842

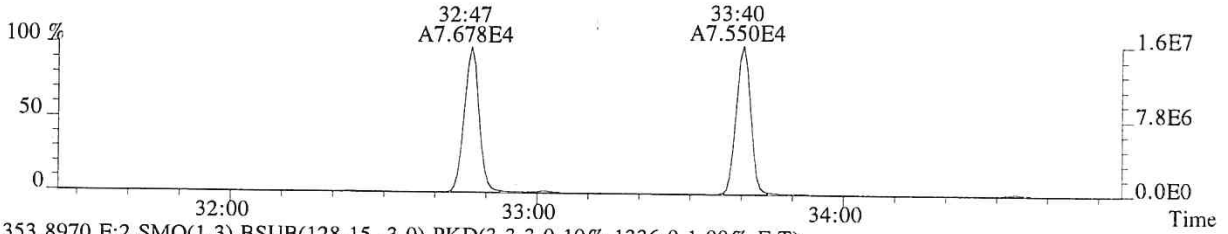
File:P513857 #1-665 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,188.0,1.00%,F,T)



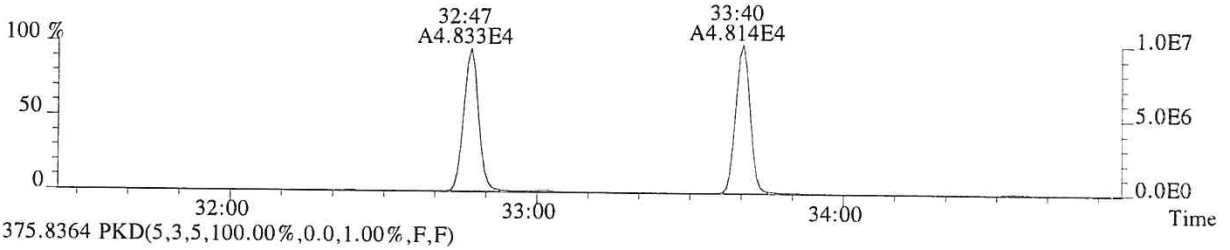
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1692.0,1.00%,F,T)



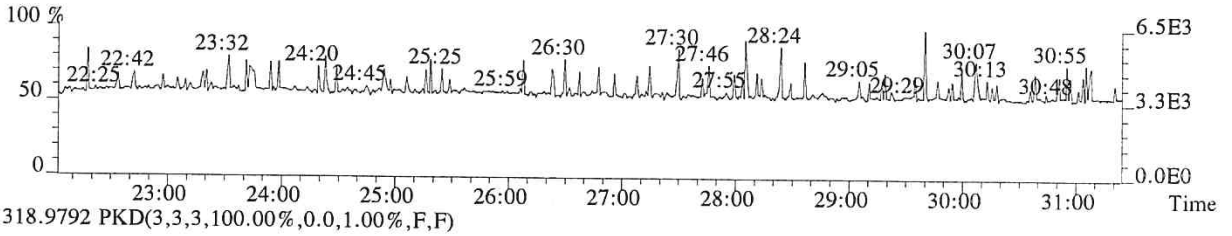
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,636.0,1.00%,F,T)



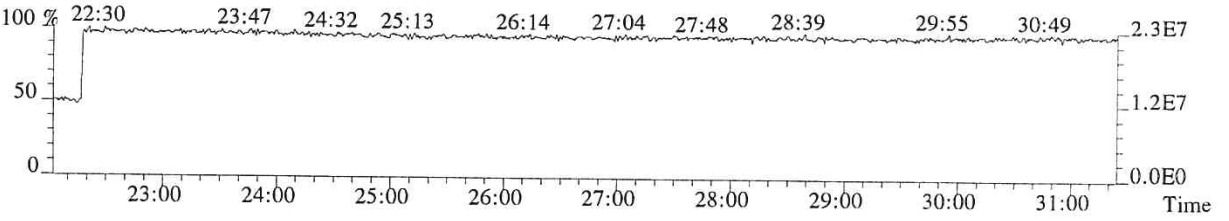
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1336.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

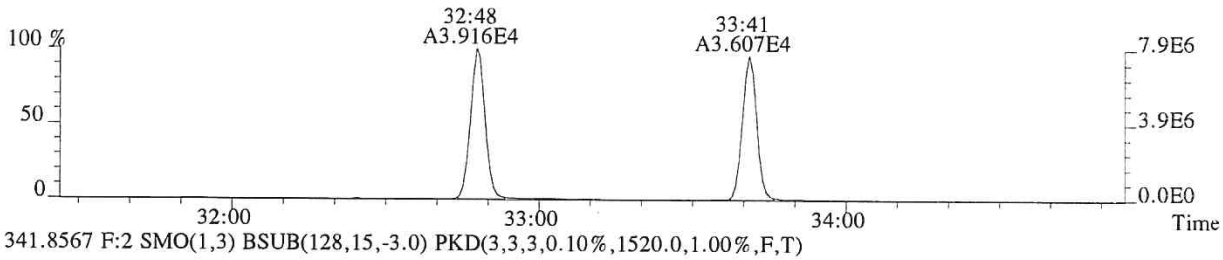


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

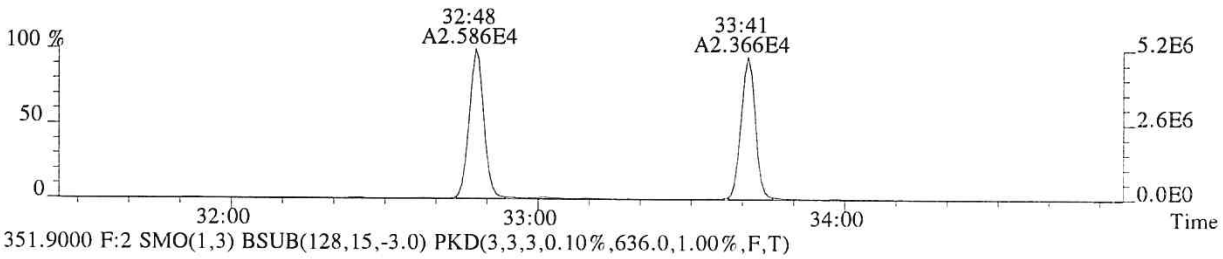


017843

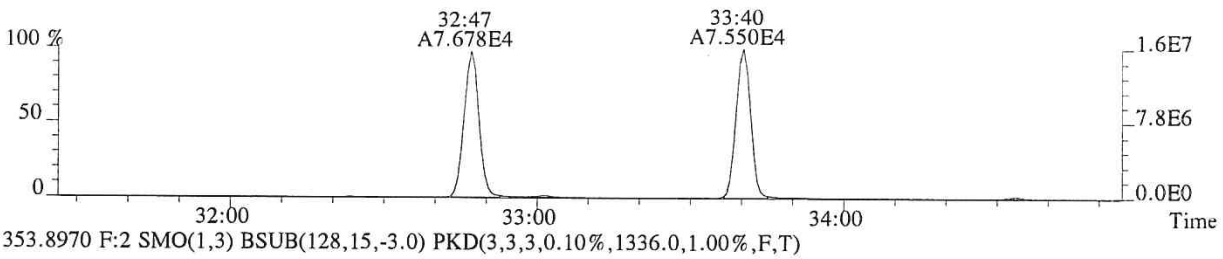
File:P513857 #1-313 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,844.0,1.00%,F,T)



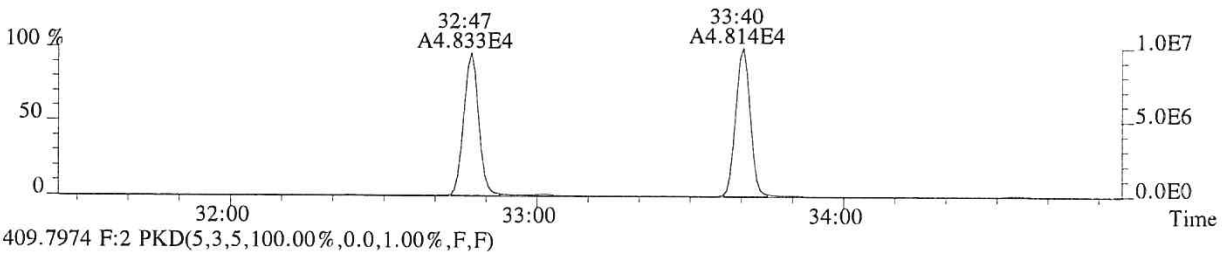
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1520.0,1.00%,F,T)



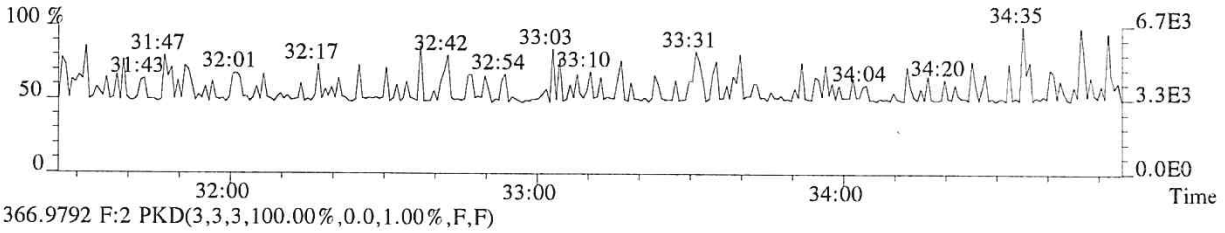
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,636.0,1.00%,F,T)



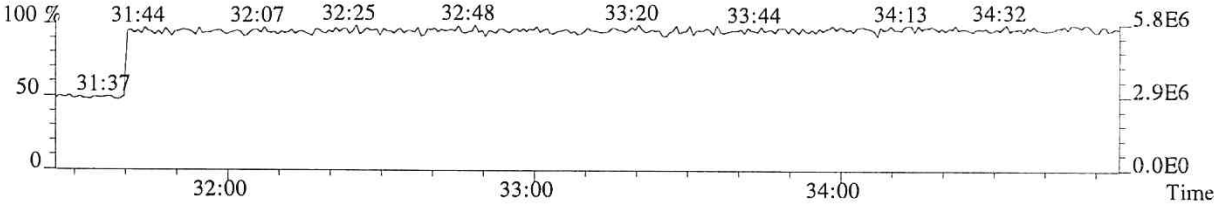
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1336.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

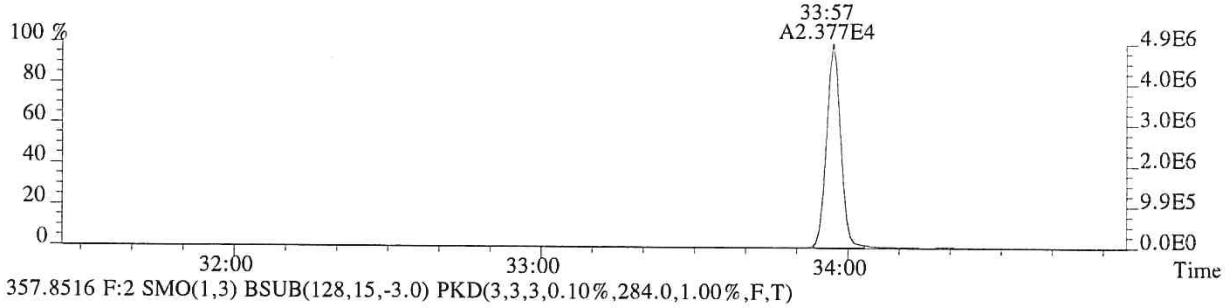


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

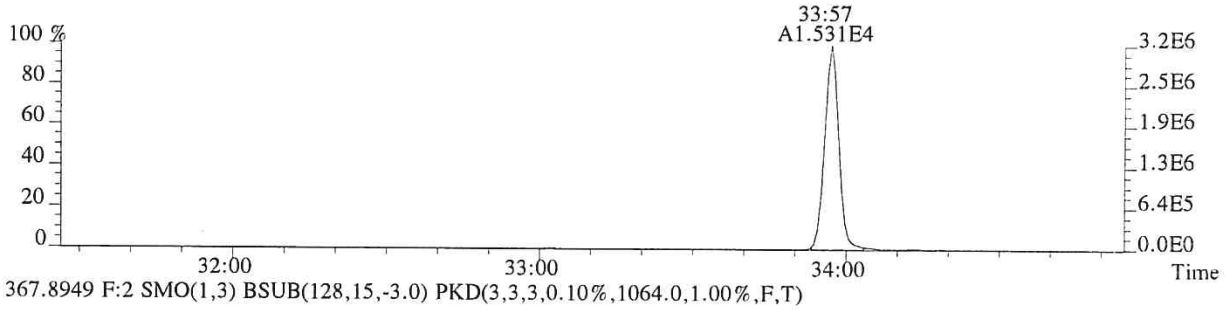


017844

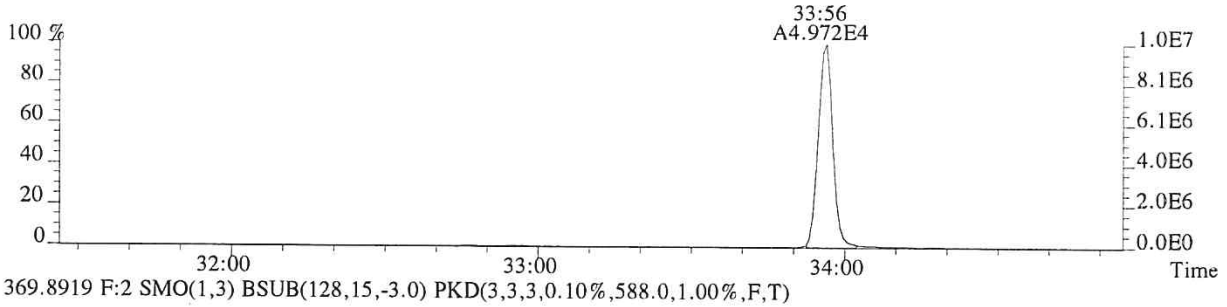
File:P513857 #1-313 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,852.0,1.00%,F,T)



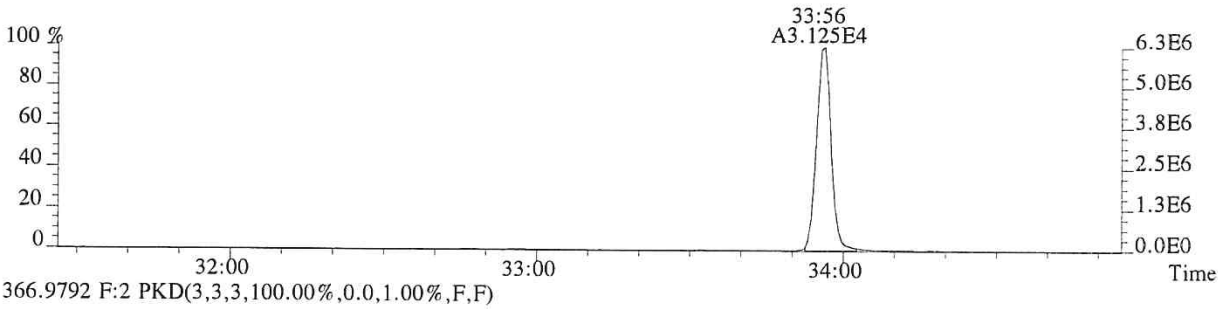
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,284.0,1.00%,F,T)



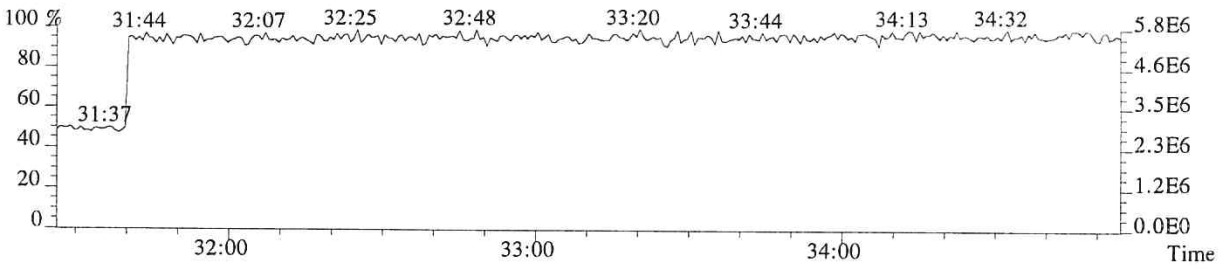
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1064.0,1.00%,F,T)



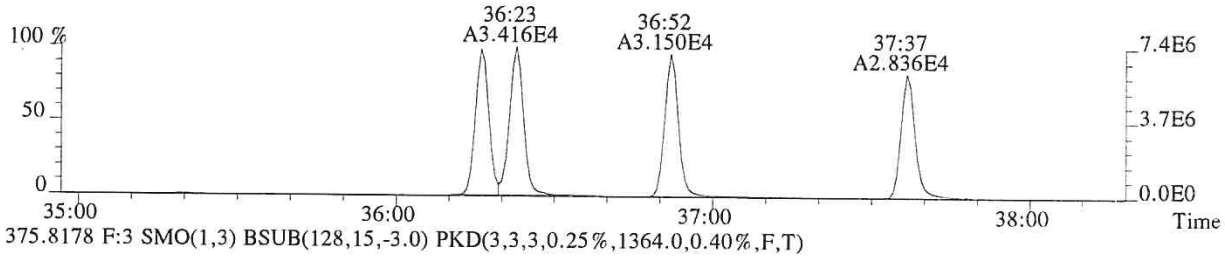
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,588.0,1.00%,F,T)



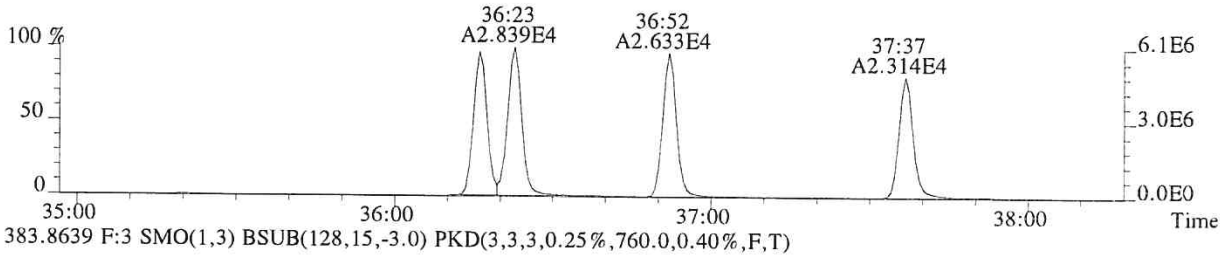
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



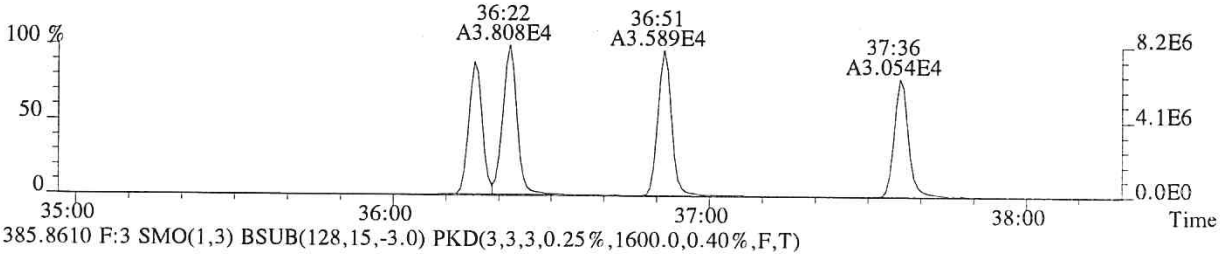
File:P513857 #1-303 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1528.0,0.40%,F,T)



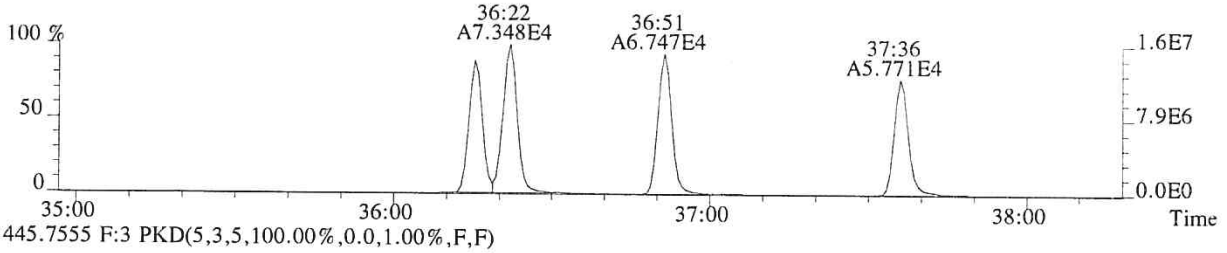
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1364.0,0.40%,F,T)



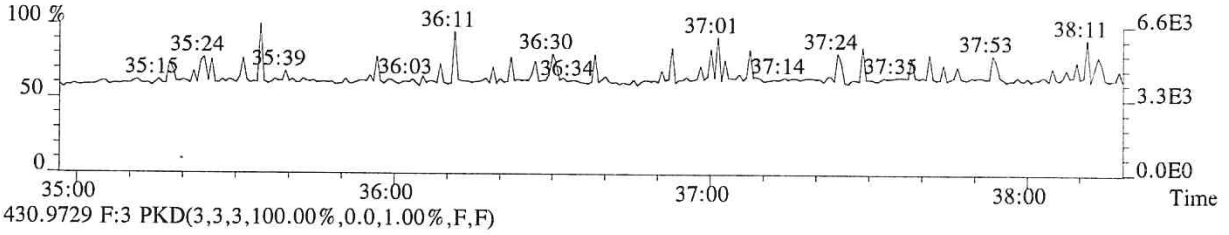
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,760.0,0.40%,F,T)



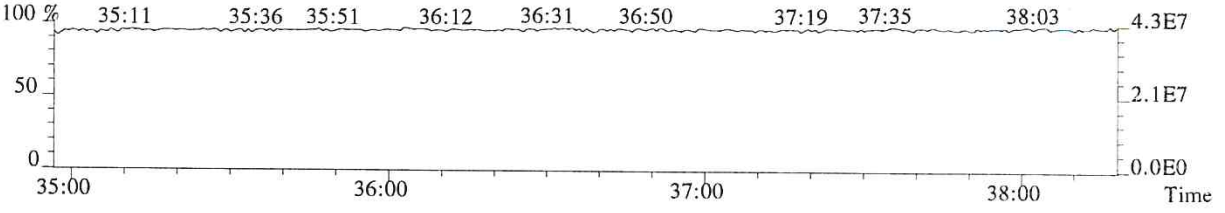
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1600.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

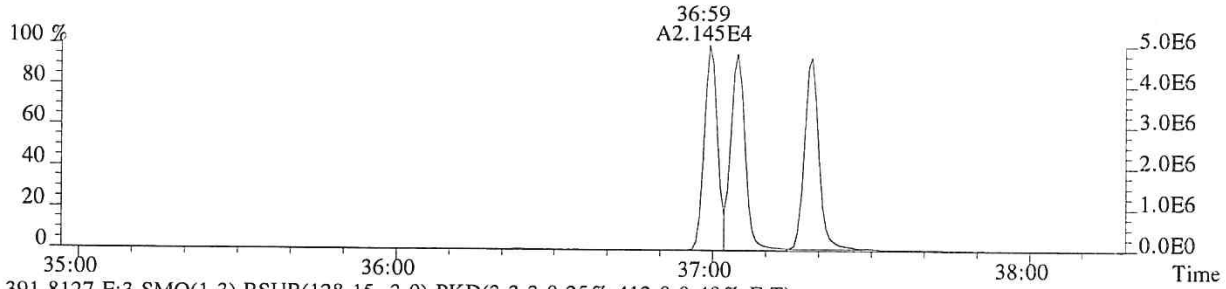


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

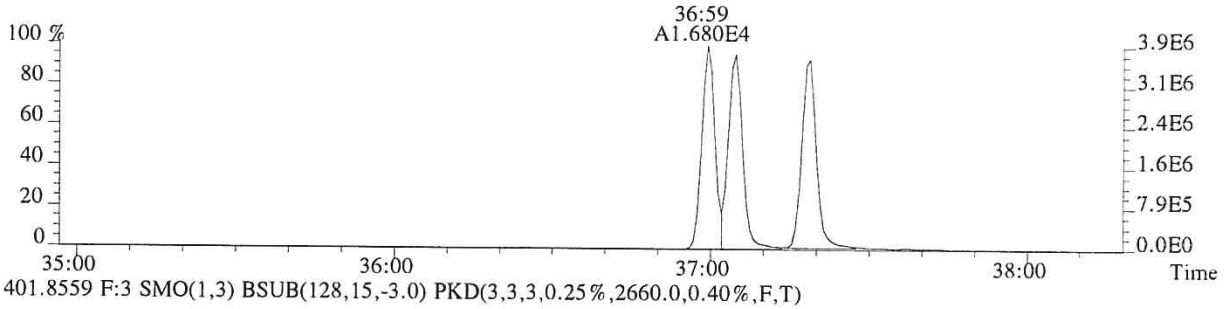


017846

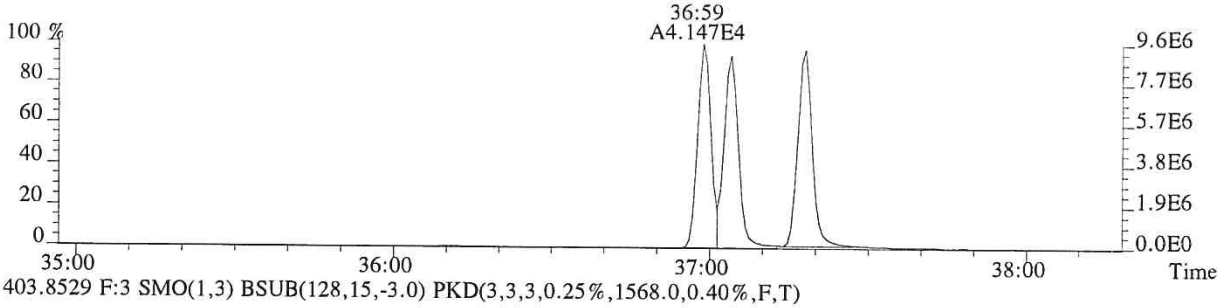
File:P513857 #1-303 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,764.0,0.40%,F,T)



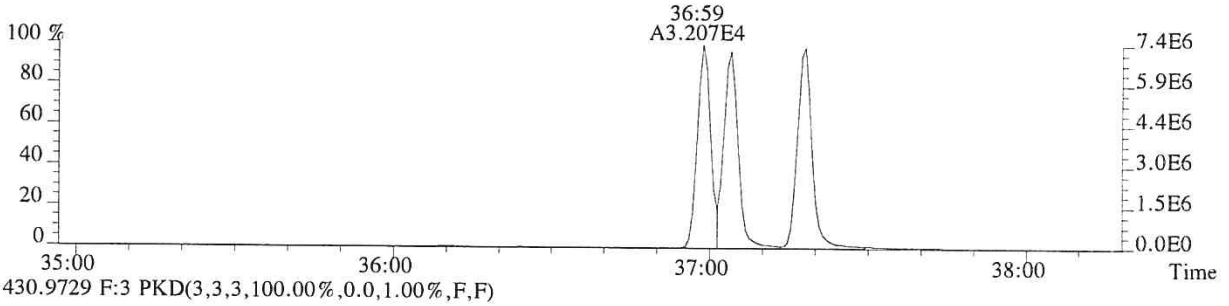
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,412.0,0.40%,F,T)



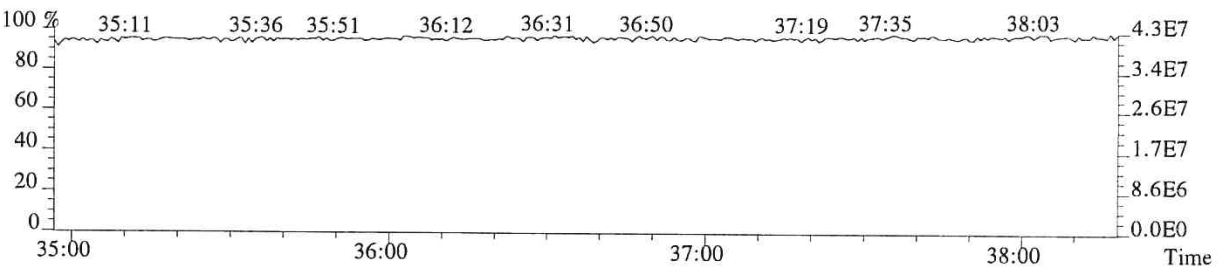
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2660.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1568.0,0.40%,F,T)

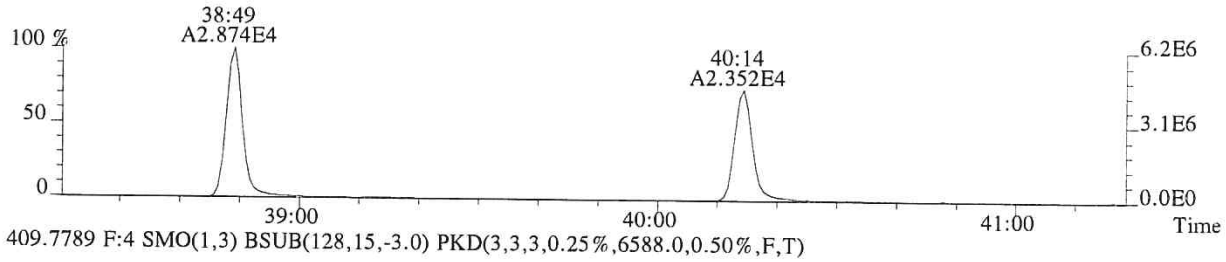


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

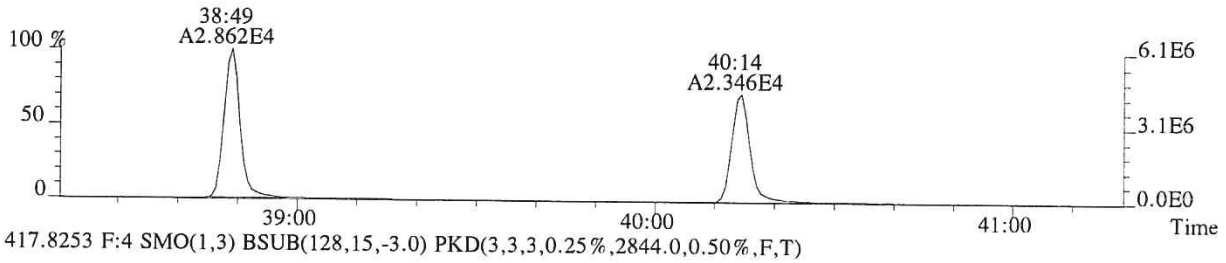


017847

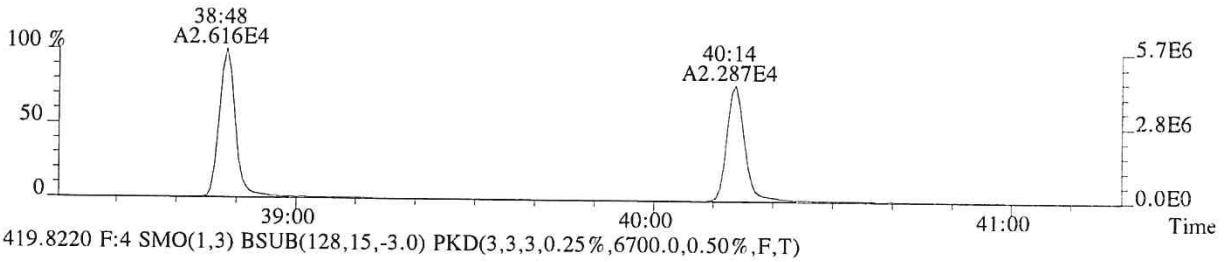
File:P513857 #1-268 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5004.0,0.50%,F,T)



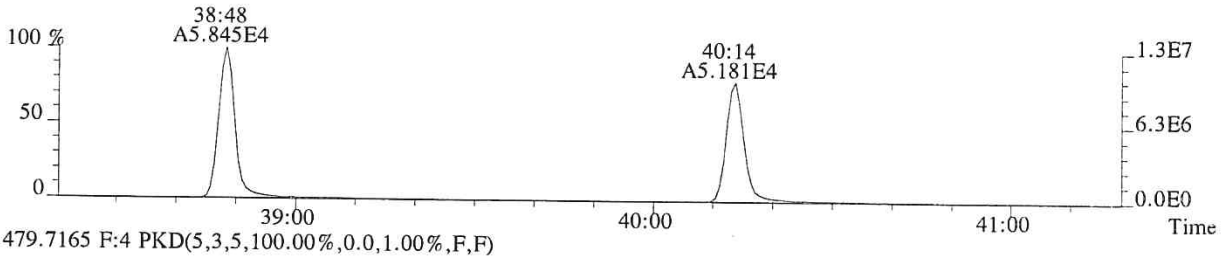
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6588.0,0.50%,F,T)



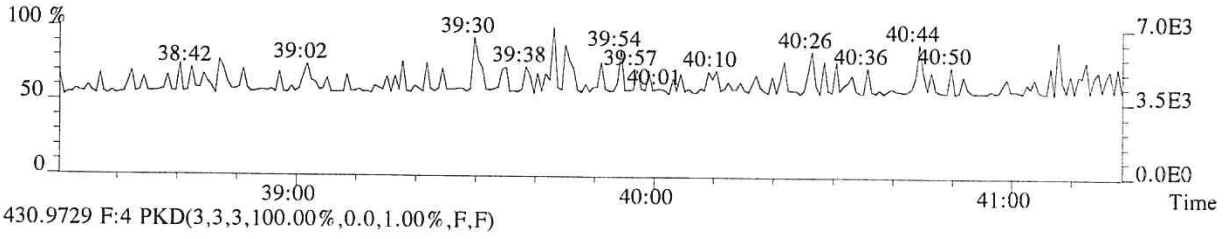
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2844.0,0.50%,F,T)



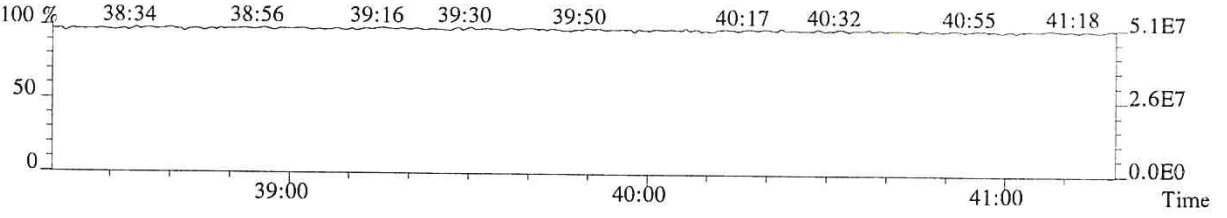
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6700.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

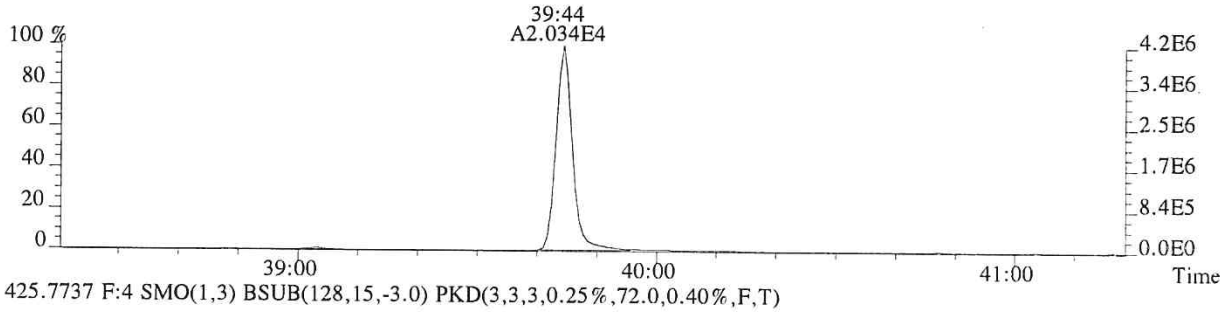


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

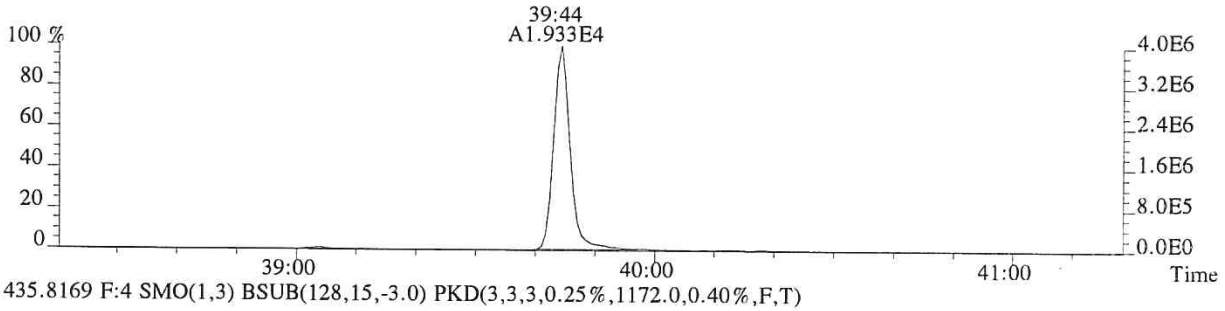


017848

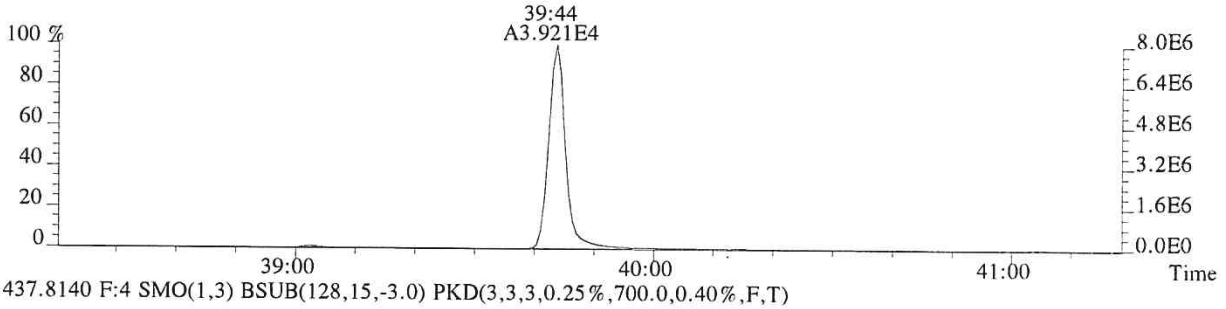
File:P513857 #1-268 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1168.0,0.40%,F,T)



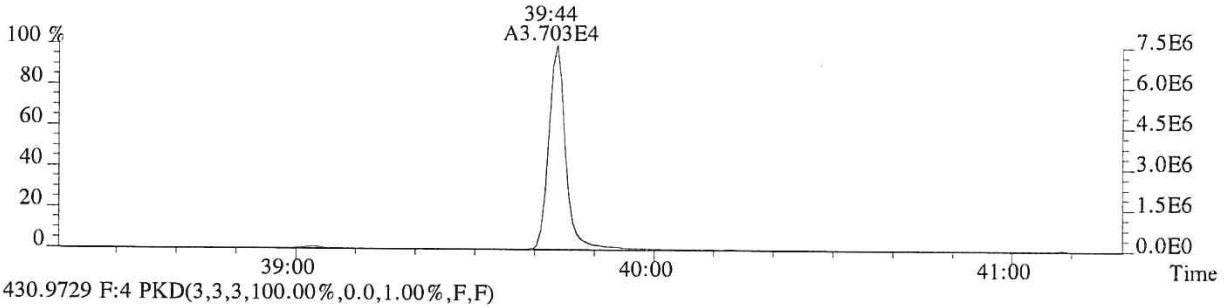
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,72.0,0.40%,F,T)



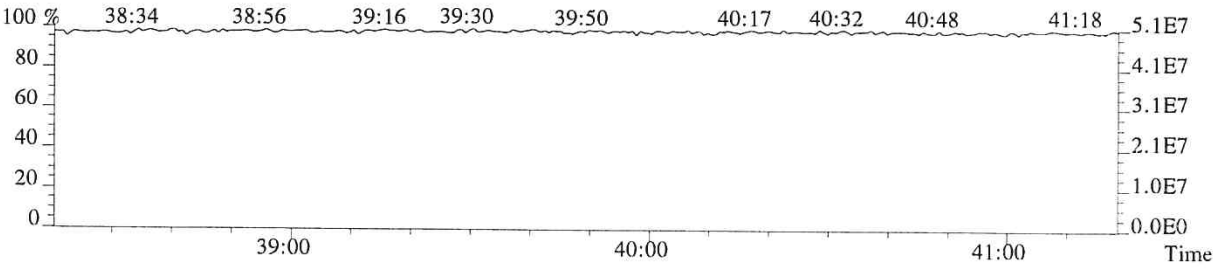
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1172.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,700.0,0.40%,F,T)

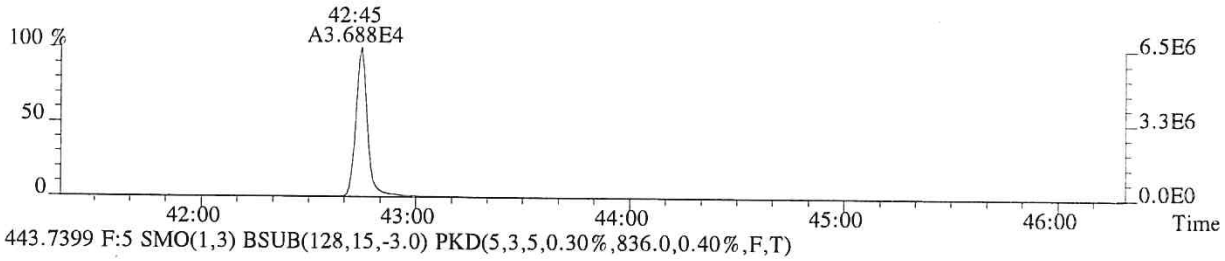


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

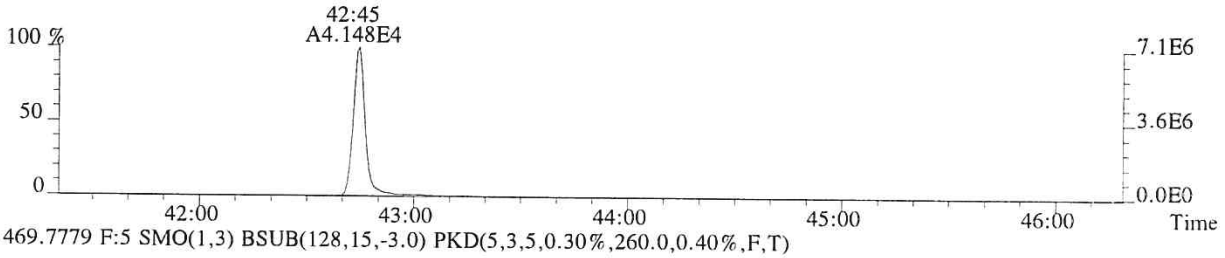


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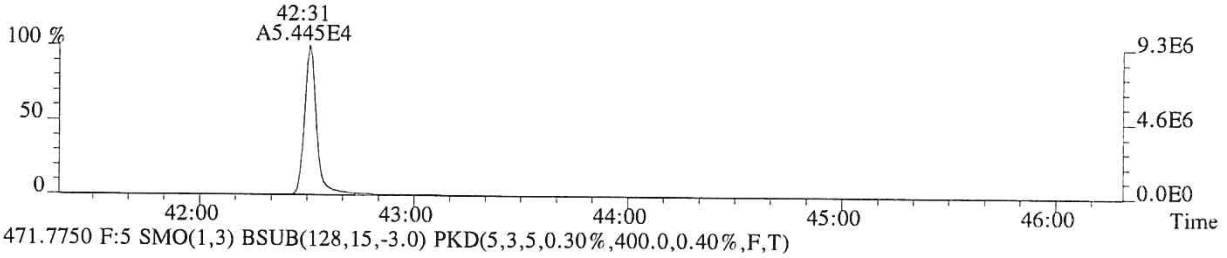
File:P513857 #1-448 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,144.0,0.40%,F,T)



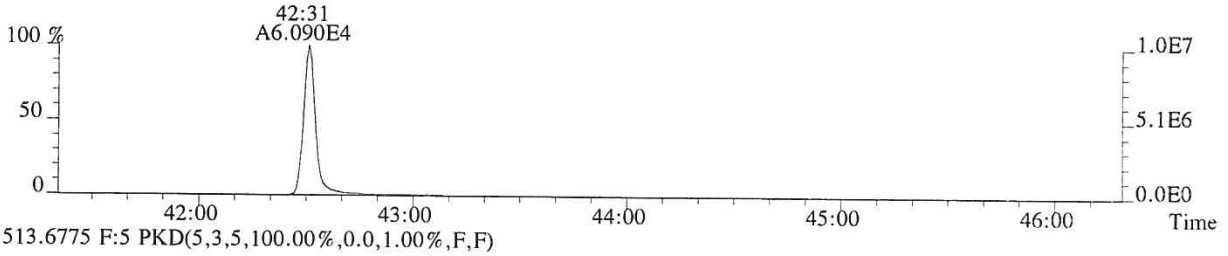
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,836.0,0.40%,F,T)



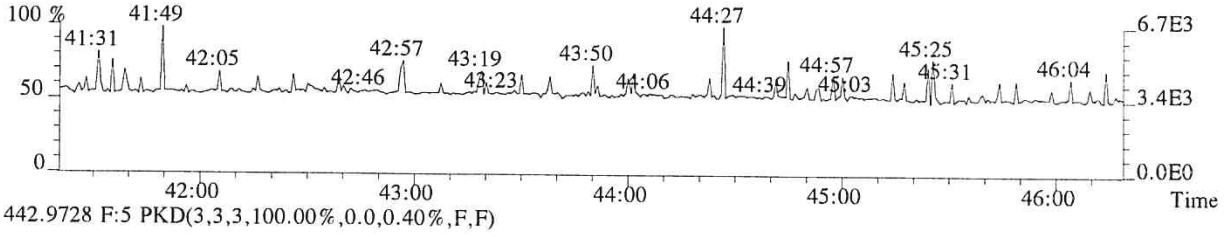
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,260.0,0.40%,F,T)



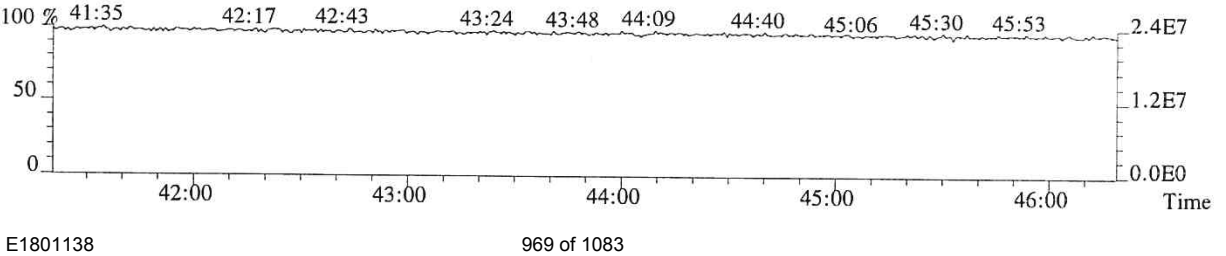
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,400.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

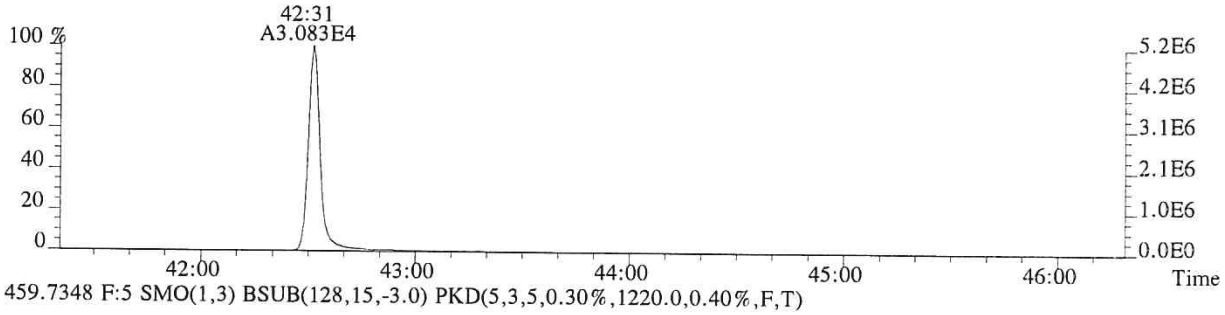


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

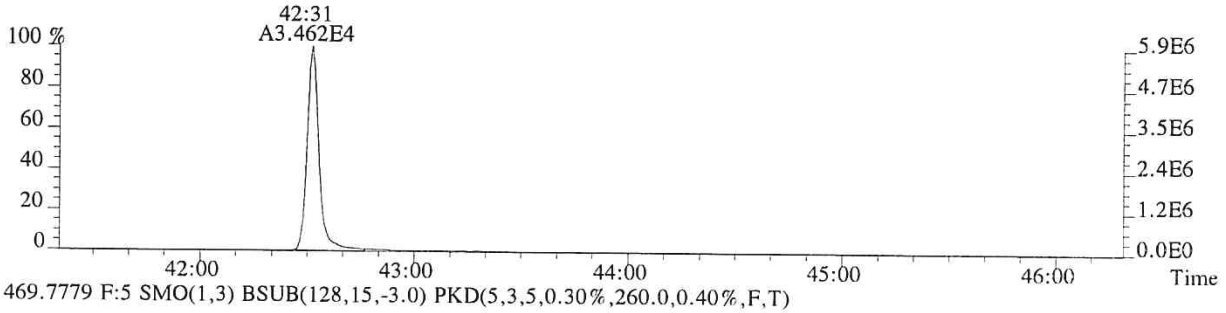


017850

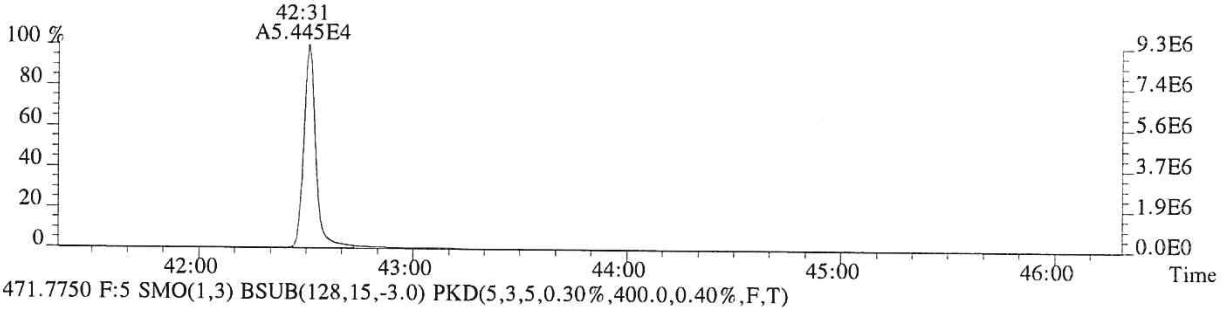
File:P513857 #1-448 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,160.0,0.40%,F,T)



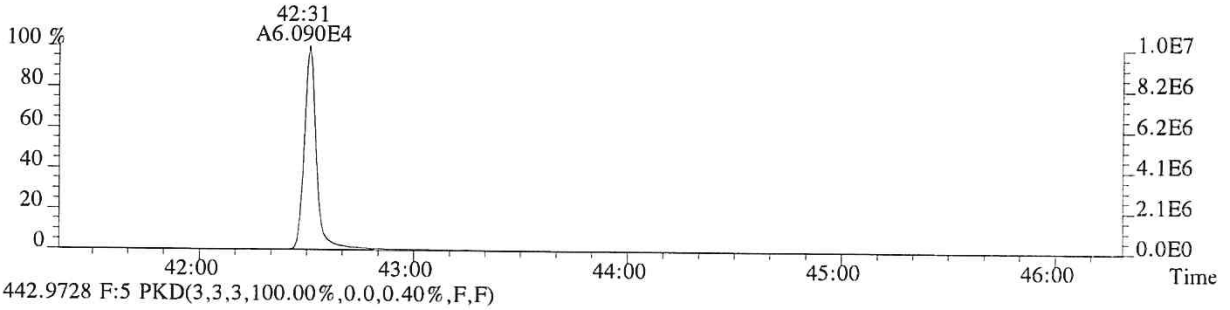
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1220.0,0.40%,F,T)



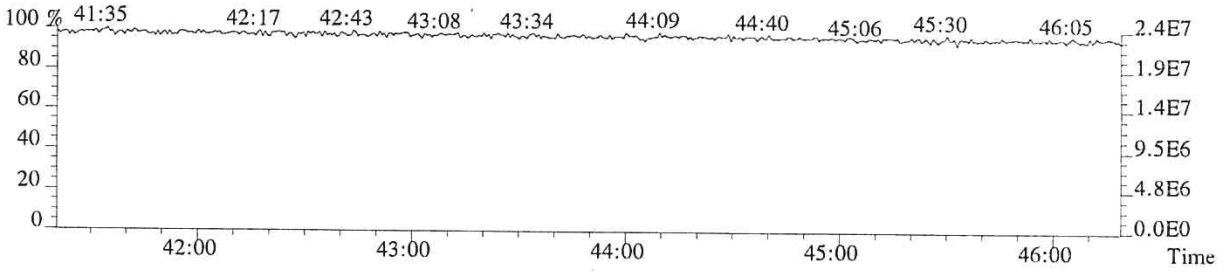
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,260.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,400.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



Laboratory Review Checklist: HRMS Initial Calibration

Method: 1613/8290		Process Date: 09/26/2018				
Instrument Name: E-HRMS-08		Calibration File Name: P6-18092516131				
Processor Name: Gisela Cruz		Reviewer Name: Loan Luong				
Supervisor Signature: Kristin Neir						
Description		**Yes**	**No**	**NA**	**NR**	**ER#**
Analytical Sequence						
Does the analytical sequence summary accurately reflect the instrument run log, including ICV?		√				
Was a Mass Resolution Check performed at the beginning and end of the 12-hour sequence?		√				
Were all calibration standards and the ICV analyzed within the same 12-hour sequence?		√				
Were all calibration standards analyzed only once?		√				
Was the ICV analyzed after the ICAL, before analyzing samples?		√				
Mass Resolution Check						
Are beginning and ending resolution checks provided and legible?		√				
Were all target masses >10,000 resolving power at the beginning of the sequence?		√				
Were all target masses >10,000 resolving power at the end of the sequence?		√				
For PCB analysis, were masses at the low and high end of each function mass range >8,000?				√		
Where automatic printout of the mass resolution were not >10,000, was the resolution inspected by a trained analyst, including manual calculation of the resolution, if warranted?				√		
Window Define/209						
Is the window defining mix summary present, and accompanied by SICPs/Chromatograms for the WDM?		√				
Was the WDM/Column Performance/209 solution analyzed prior to the analysis of the calibration standards?		√				
Was 2,3,7,8-TCDD peak valley <25% to any other TCDD?		√				
Were all first and last eluters adequately resolved in each function?		√				
If first and last eluters were not resolved, was corrective action performed and documented, followed by a reanalysis of the WDM?				√		
Was the retention time of PCB 209 >55 min?				√		
Were the following congeners uniquely resolved (valley height <40% of the shortest peak)? PCB-34 and PCB-23 PCB-187 and PCB-182				√		
Did PCB 156/157 co-elute within 2 seconds at peak maximum?				√		
Calibration Standards						
Were there at least 5 calibration standards analyzed?		√				
If not all calibration standards were used, were the omitted standards either the lowest or highest calibration standard?				√		
Are all sample response summaries, S/N height summaries, and SICPs included (and legible) for the entire sequence?		√				

Laboratory Review Checklist: HRMS Initial Calibration

Method: 1613/8290		Process Date: 09/26/2018				
Instrument Name: E-HRMS-08		Calibration File Name: P6-18092516131				
Processor Name: Gisela Cruz		Reviewer Name: Loan Luong				
Supervisor Signature: Kristin Neir		Yes	No	NA	NR	ER#
Description						
Did each calibration point meet method criteria for Ion Abundance Ratio for all analytes and labeled standards?		√				
Did each calibration point meet method criteria for signal-to-noise ratios (S/N)?		√				
Were area counts for the highest calibration standard below levels of saturation?		√				
Were manual integrations technically justified to correct for poor software integration?				√		
Response Factors						
Is the ICAL Response Factor Summary present, including RR/RF values for each native/labeled analyte at each level of calibration?		√				
Were all calibration standards used in determining response factors?		√				
Were relative response factors (RR) for each native analyte calculated at each calibration point?		√				
Did the RSD for RRFs for each native analyte meet method criteria?		√				
Were response factors (RF) for each native analyte not having a corresponding labeled compound calculated at each calibration point?		√				
Were RFs for each labeled compound calculated for each calibration point?		√				
Did the RSD for RF for each labeled compound meet method criteria?		√				
Initial Calibration Verification						
Is the calibration verification present, including form 4A/B reflecting results for the ICV (Conc. or %D)		√				
Did all analytes meet method criteria for the ICV.		√				

Laboratory Review Checklist: Initial Calibration			
Method: 1613/8290		Process Date: 09/26/2018	
Instrument Name: E-HRMS-08		Calibration File Name: P6-18092516131	
Processor Name: Gisela Cruz		Reviewer Name: Loan Luong	
ER#[5]	**Description**		

NA = Not Applicable;
NR = Not Reviewed;
R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: TX01411 Episode No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm) Instrument ID: E-HRMS-08

Init. Calib. Date: 09/25/18

Init. Calib.Times: 12:13

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, SPIKES AND DUPLICATES IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
192977	WINDOW DEFINE	P614680	25-SEP-18	12:13:01
76554	CS0.5	P614682	25-SEP-18	14:18:27
82614	CS1	P614683	25-SEP-18	15:08:49
193434	CS2	P614684	25-SEP-18	15:59:37
76557	CS3	P614685	25-SEP-18	16:52:47
82167	CS4	P614686	25-SEP-18	17:41:03
185657	CS5	P614687	25-SEP-18	18:30:08
188969	2ND SOURCE	P614690	25-SEP-18	20:57:19

Sample List Report **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS08.PRO\SampleDB\20180925A.SPL
Last Modified: Wednesday, September 26, 2018 06:14:12 Central Daylight Time
Printed: Wednesday, September 26, 2018 06:14:14 Central Daylight Time

Page Position (1, 1)

OPUS4: P6-180925161 3I
P614690 res

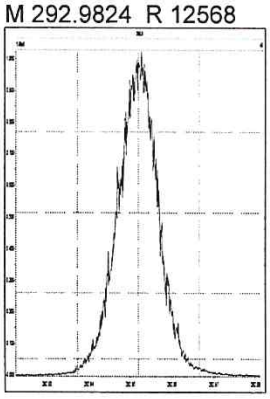
	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	9/25/18	12:13	P614680	192977	WINDOW DEFINE	EPA1613_ALS	Dioxin_ALS	Tray1:1	LG	HRMScheck 12:08
2		13:01	P614681	192807	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:2		
3		14:18	P614682	76554	CS0.5	EPA1613_ALS	Dioxin_ALS	Tray1:3		
4		15:08	P614683	82614	CS1	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		15:59	P614684	193434	CS2	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		16:52	P614685	76557	CS3	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		17:41	P614686	82167	CS4	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		18:30	P614687	185657	CS5	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		19:19	P614688	NONANE	NONANE	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		20:08	P614689	188969	2ND SOURCE	EPA1613_ALS	Dioxin_ALS	Tray1:10		Do not use
11		20:57	P614690	188969	2ND SOURCE	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		21:52	P614691	NONANE	NONANE	EPA1613_ALS	Dioxin_ALS	Tray1:12		HRMScheck 22:51
13	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:13	---	---
14	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:14	---	---
15	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:15	---	---
16	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:16	---	---
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:17	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:18	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---
21	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:21	---	---

LG 09/26/18

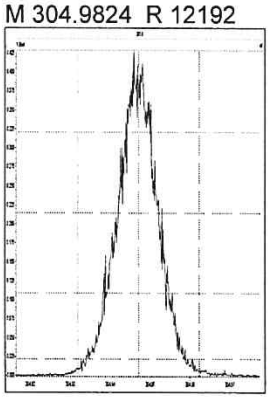
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Printed: Tuesday, September 25, 2018 12:08:26 Central Daylight Time

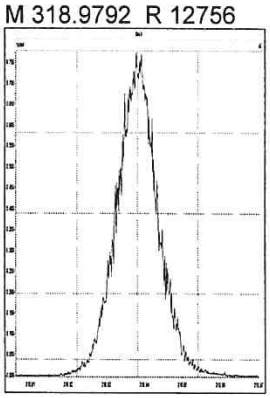
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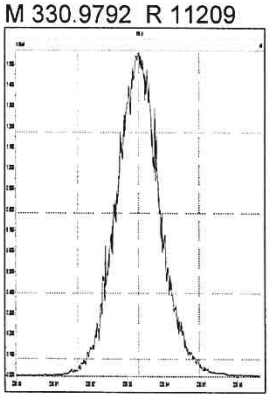
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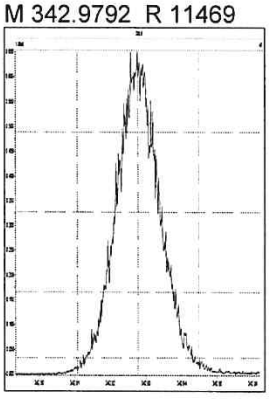
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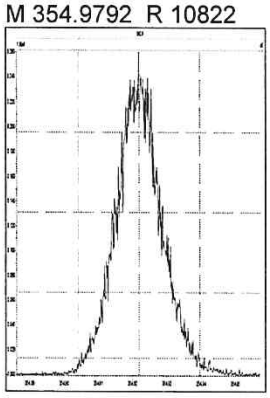
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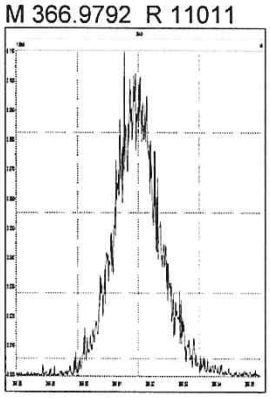
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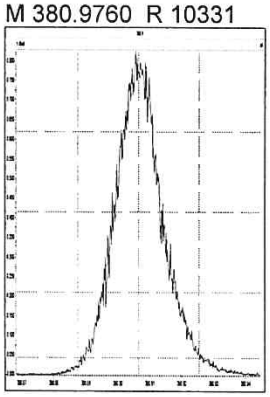
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M 366.9792 R 11011



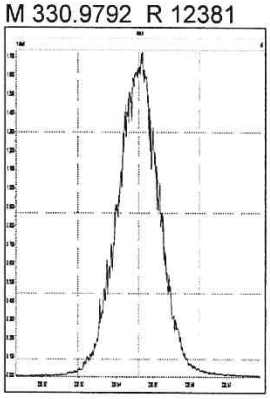
M 380.9760 R 10331



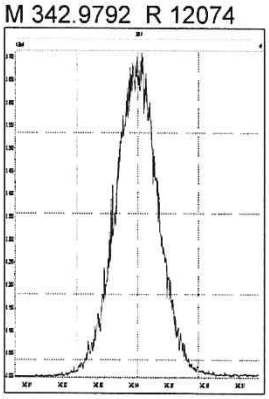
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Printed: Tuesday, September 25, 2018 12:09:22 Central Daylight Time

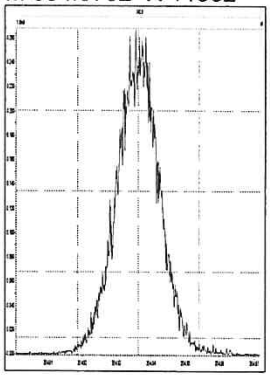
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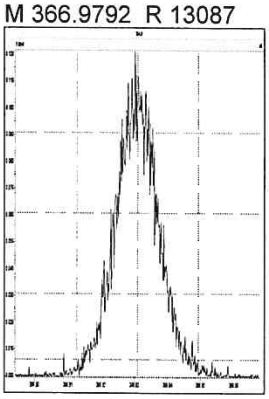
M 342.9792 R 12074



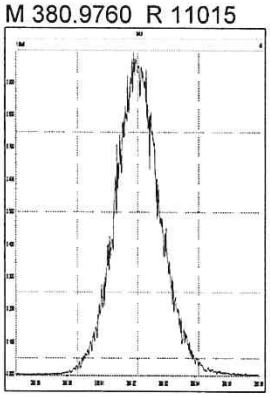
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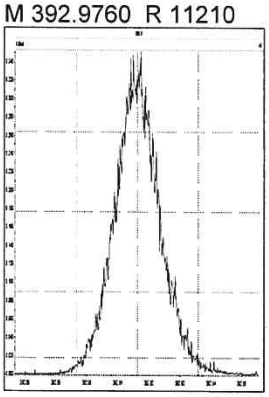
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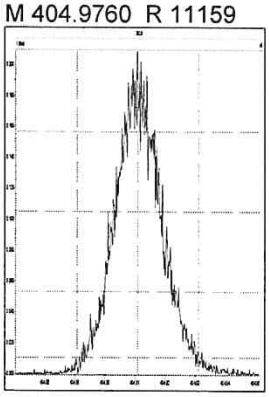
M 380.9760 R 11015



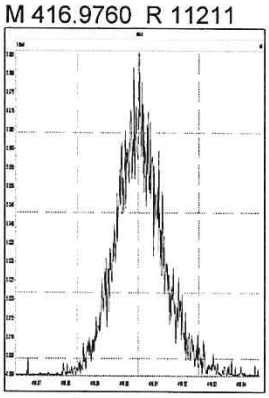
M 392.9760 R 11210



M 404.9760 R 11159



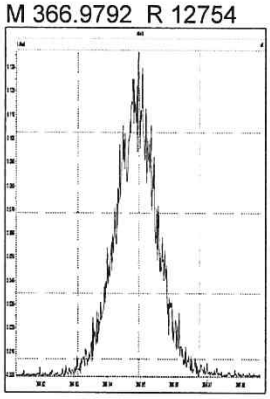
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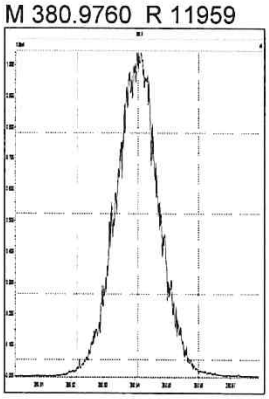
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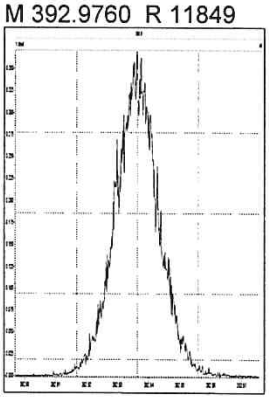
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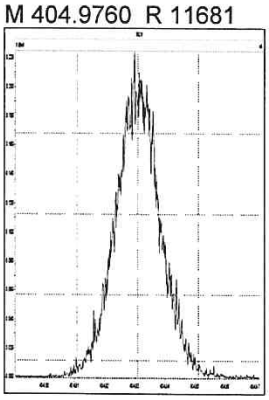
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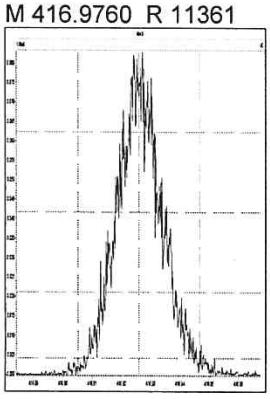
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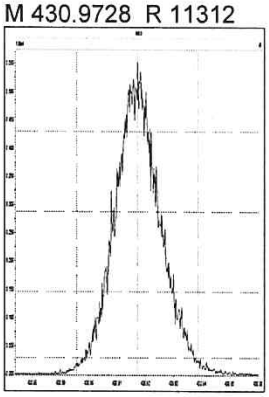
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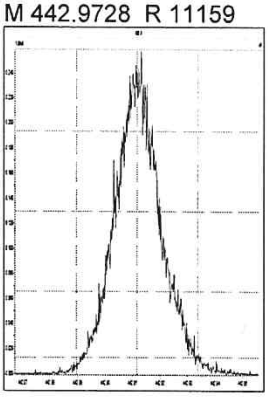
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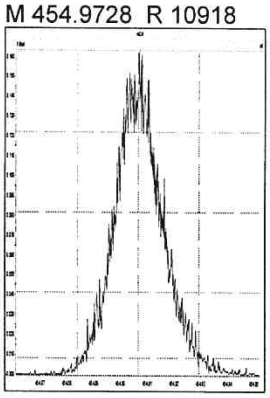
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M 442.9728 R 11159



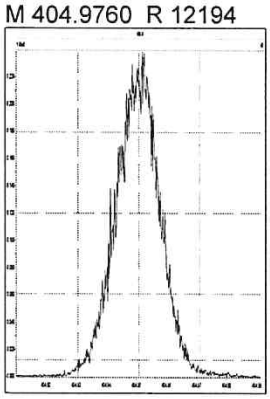
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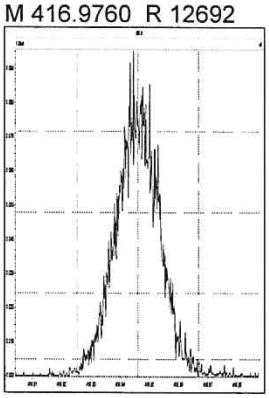
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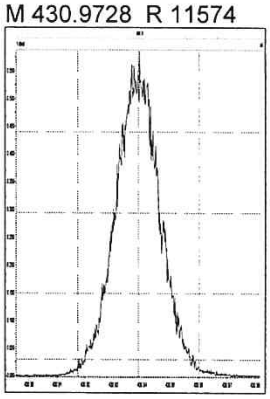
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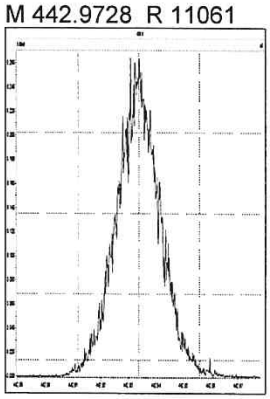
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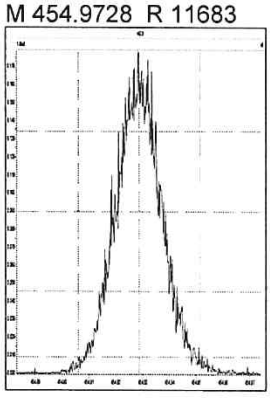
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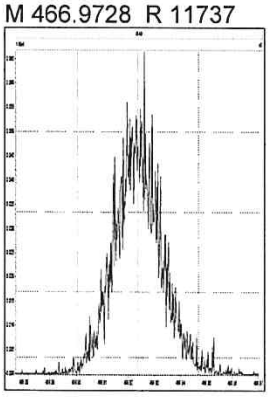
M 442.9728 R 11061



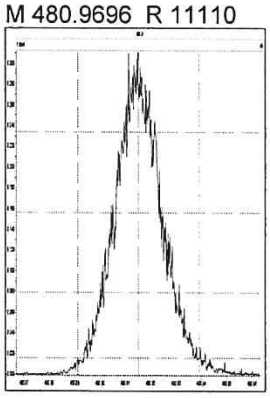
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M 466.9728 R 11737



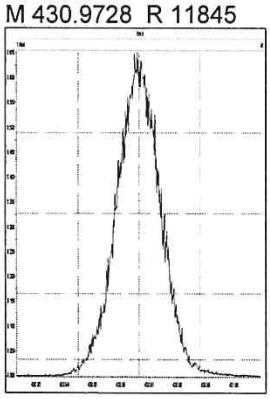
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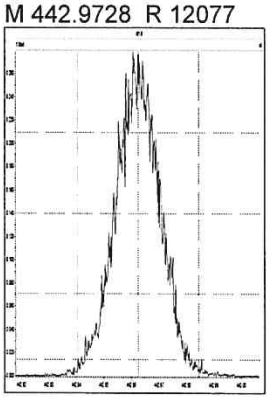
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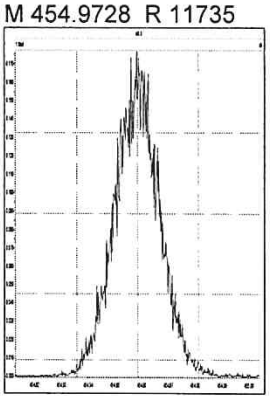
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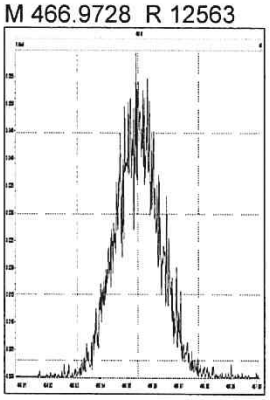
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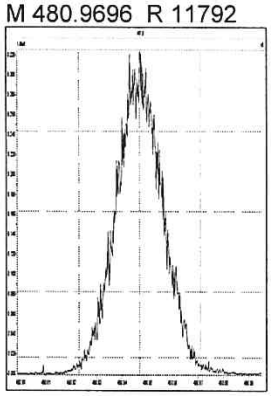
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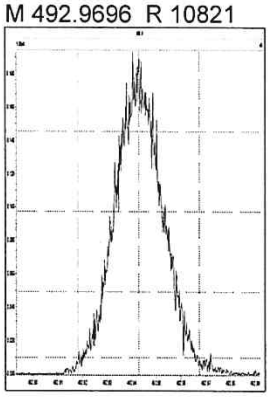
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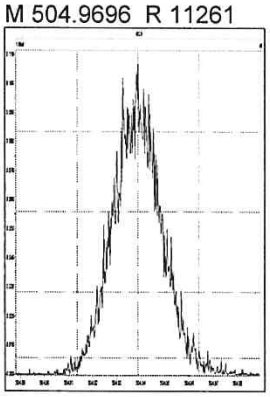
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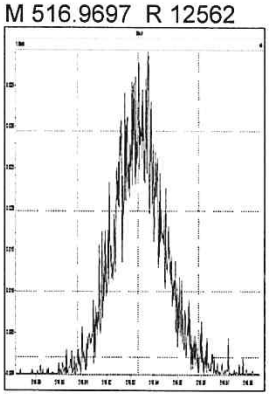
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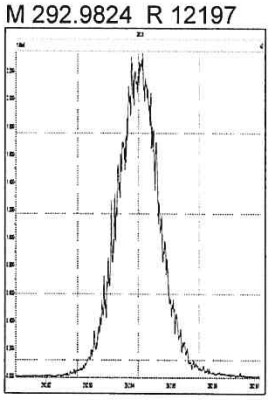
M 504.9696 R 11261



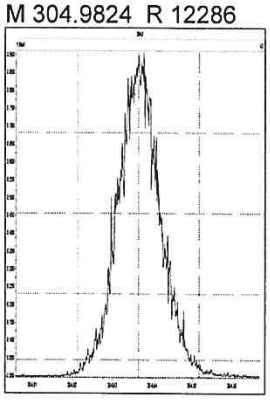
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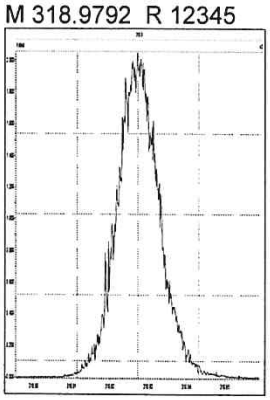
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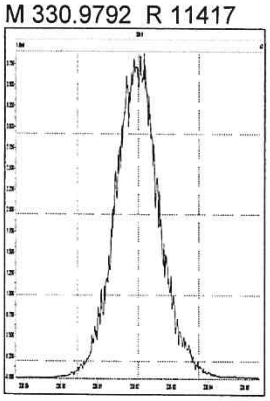
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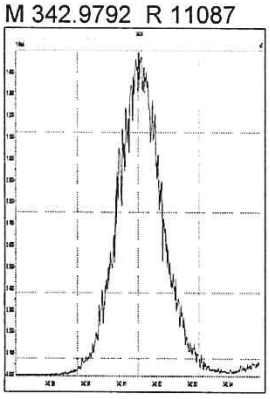
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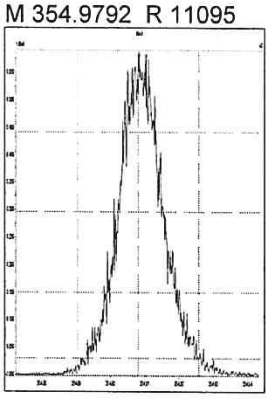
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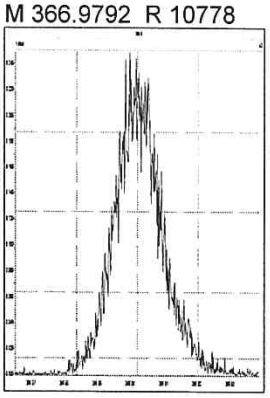
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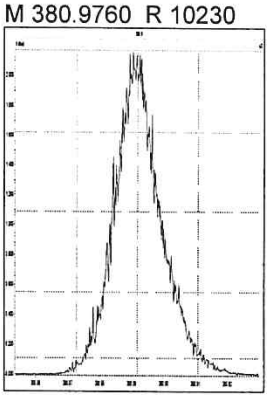
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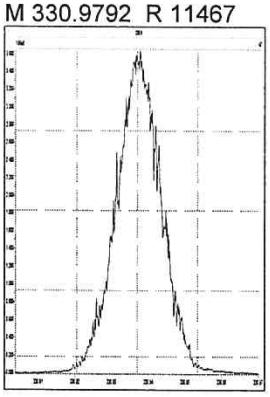
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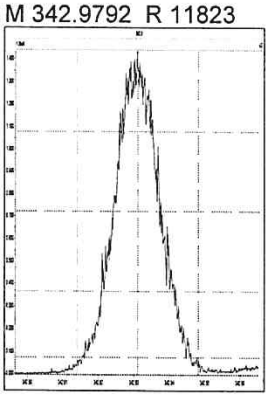
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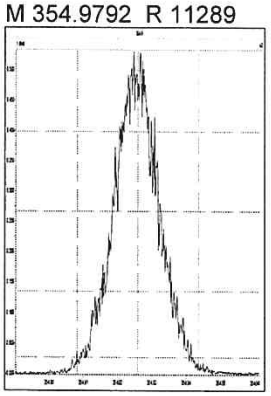
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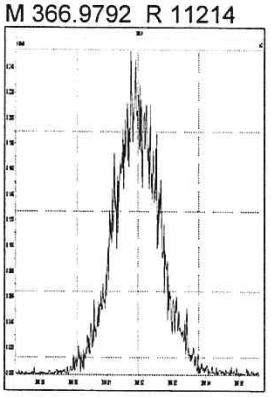
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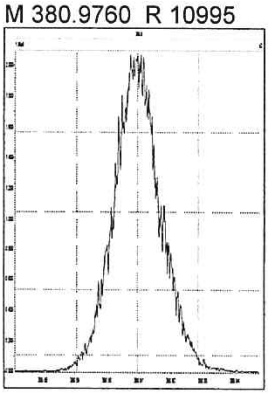
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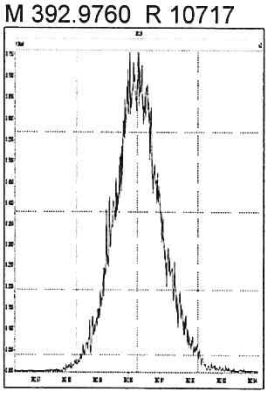
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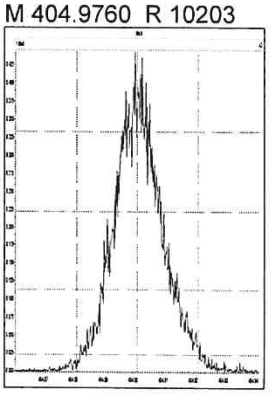
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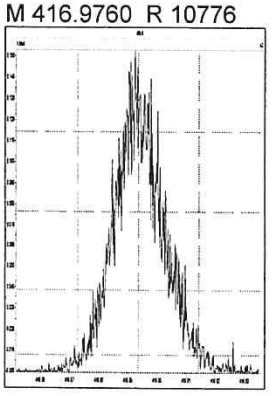
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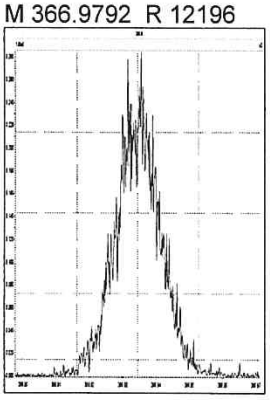
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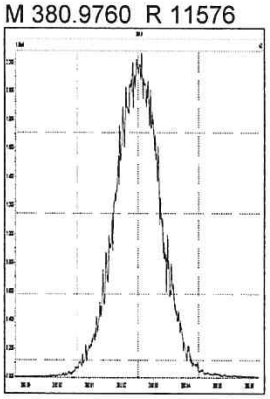
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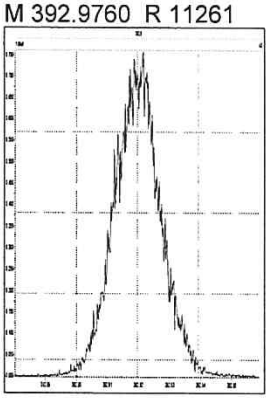
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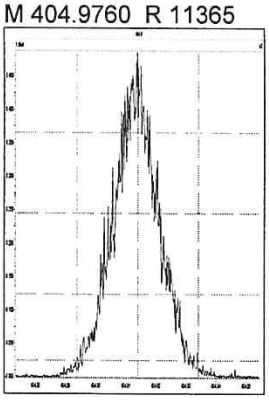
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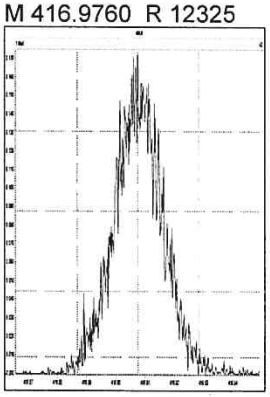
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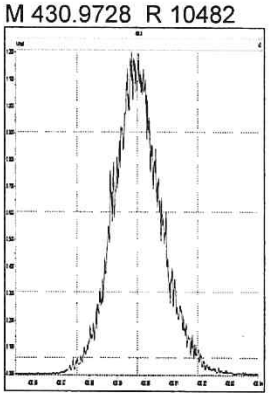
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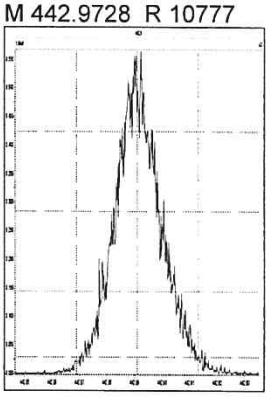
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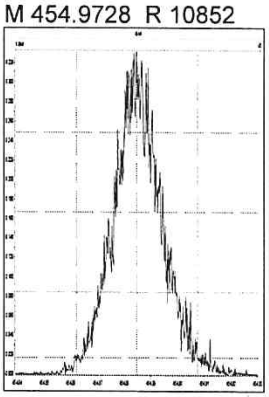
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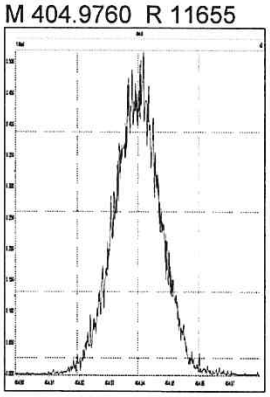
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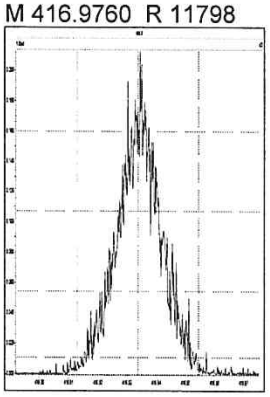
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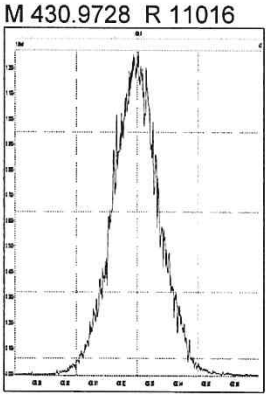
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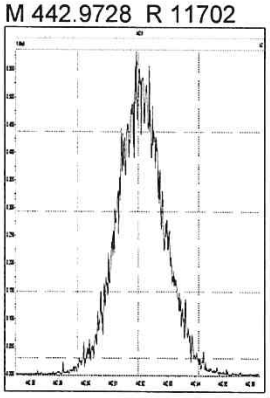
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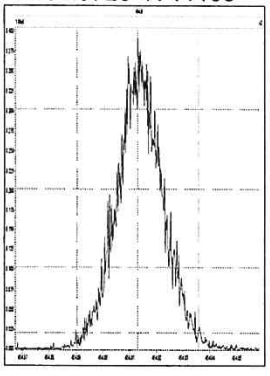
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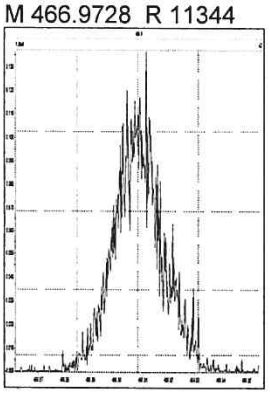
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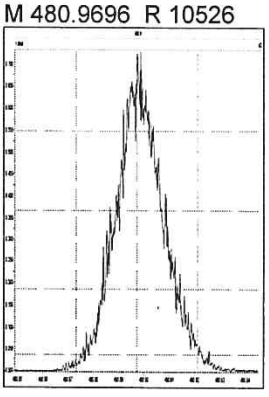
M 454.9728 R 11188



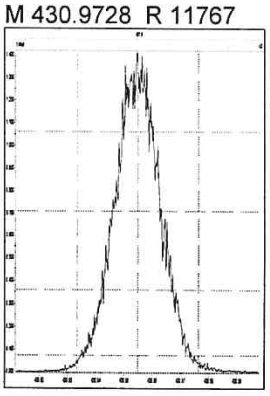
M 466.9728 R 11344



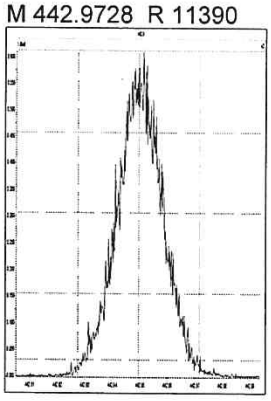
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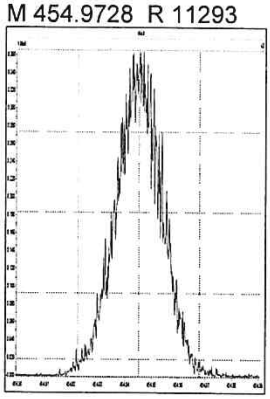
M 430.9728 R 11767



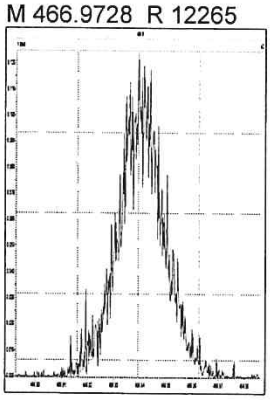
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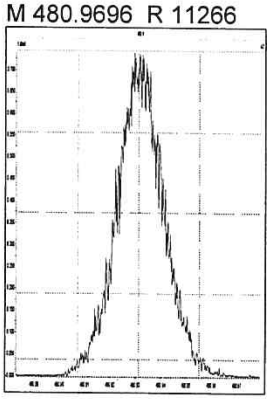
M 454.9728 R 11293



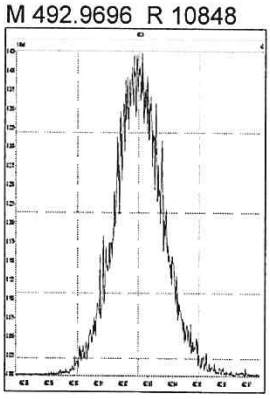
M 466.9728 R 12265



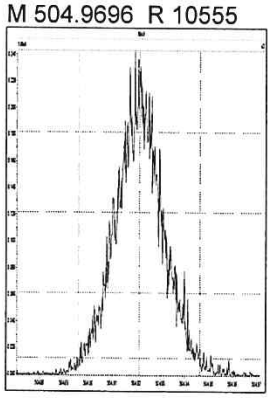
M 480.9696 R 11266



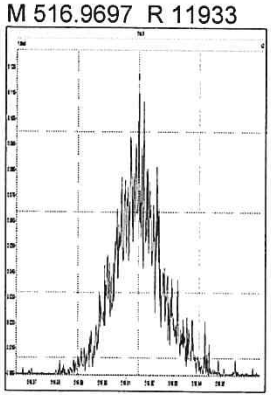
M 492.9696 R 10848



M 504.9696 R 10555



M 516.9697 R 11933



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

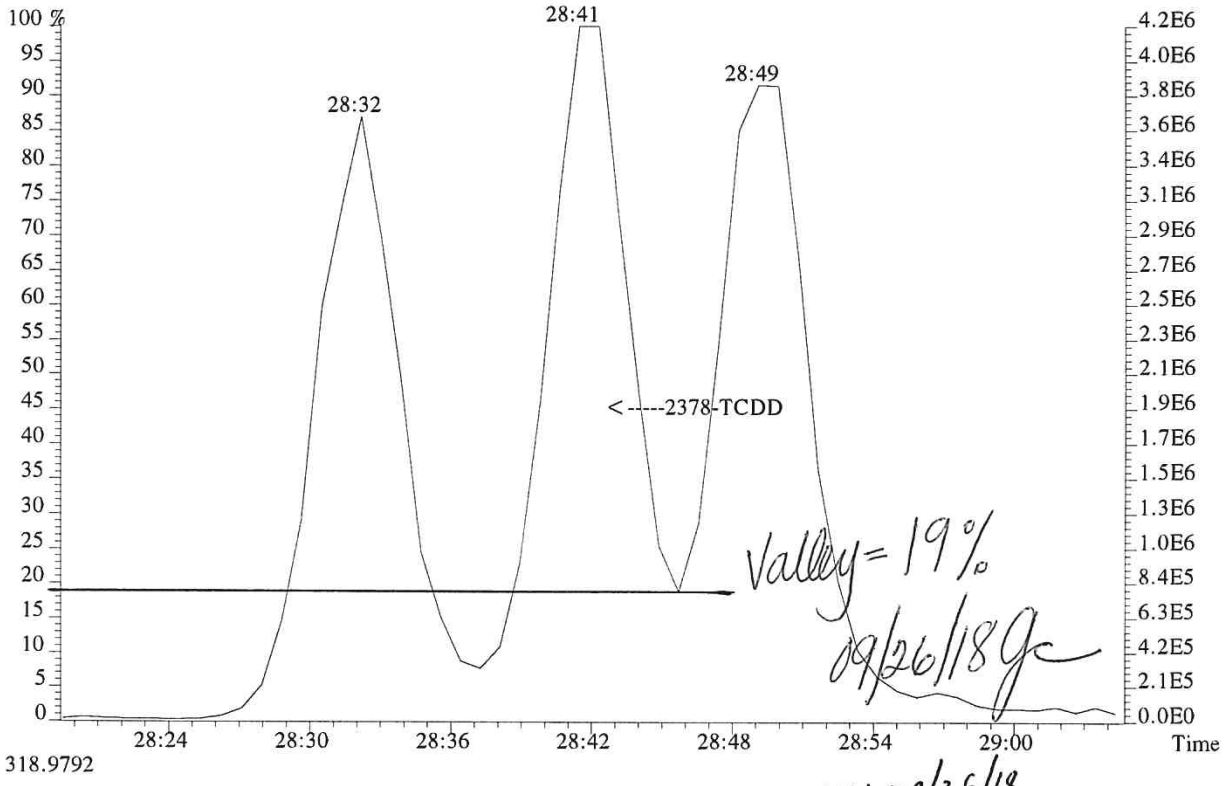
WDM

Lab Name: ALS Environmental
Lab Code: ALSTX Case No.: _____ SDG No.:
GC Column: DB-5MSUI ID: 0.25 (mm) Lab File ID: P614680
Date Analyzed: 25-SEP-18
Time Analyzed: 12:13:01

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	23:28	29:52
TCDD	25:18	29:42
PeCDF	29:48	34:04
PeCDD	31:21	33:49
HxCDF	34:43	37:12
HxCDD	35:14	36:49
HpCDF	38:24	39:46
HpCDD	38:39	39:18

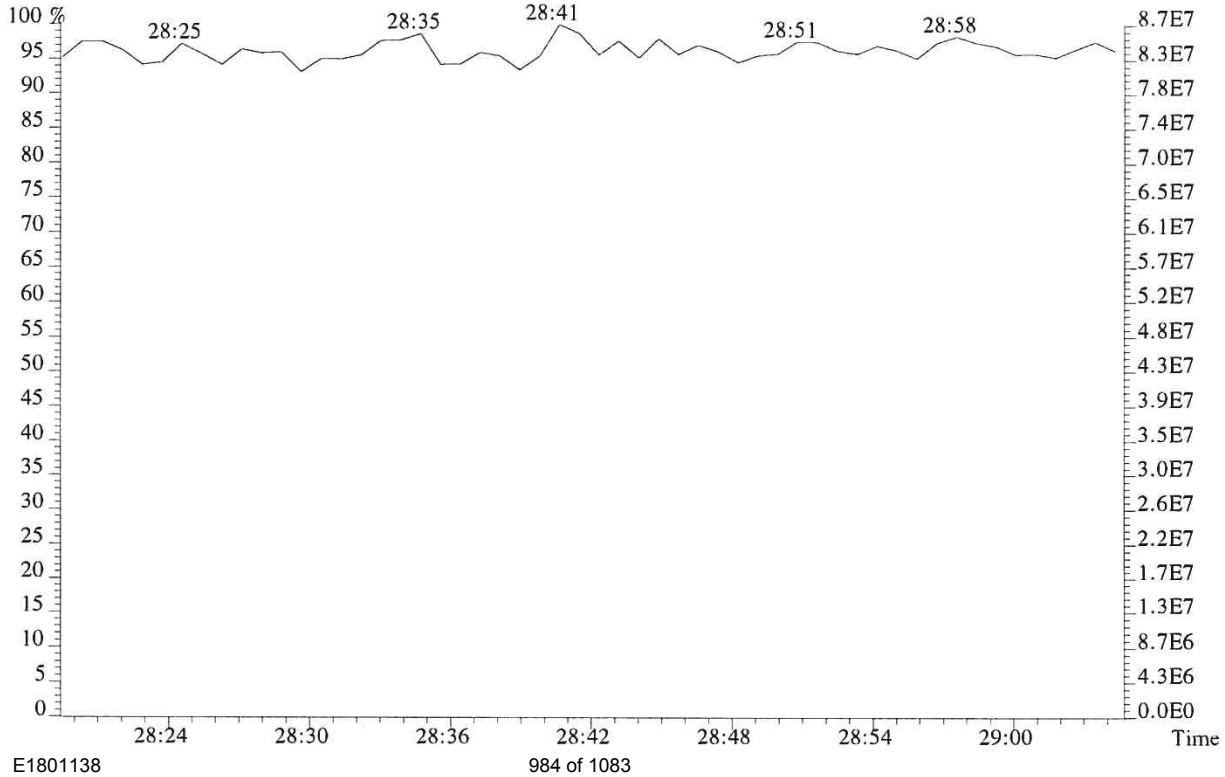
% Valley 2378-TCDD: 19 %

File:P614680 #1-552 Acq:25-SEP-2018 12:13:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
319.8965



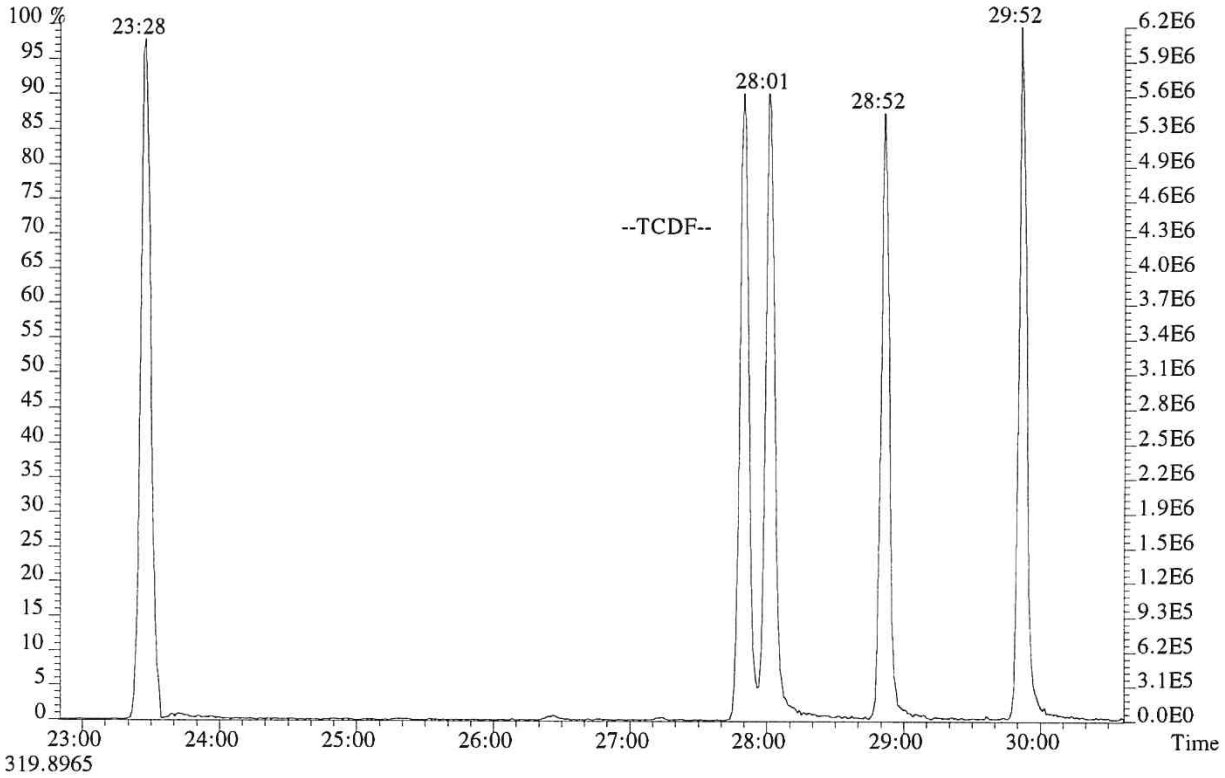
318.9792

LKL 09/26/18

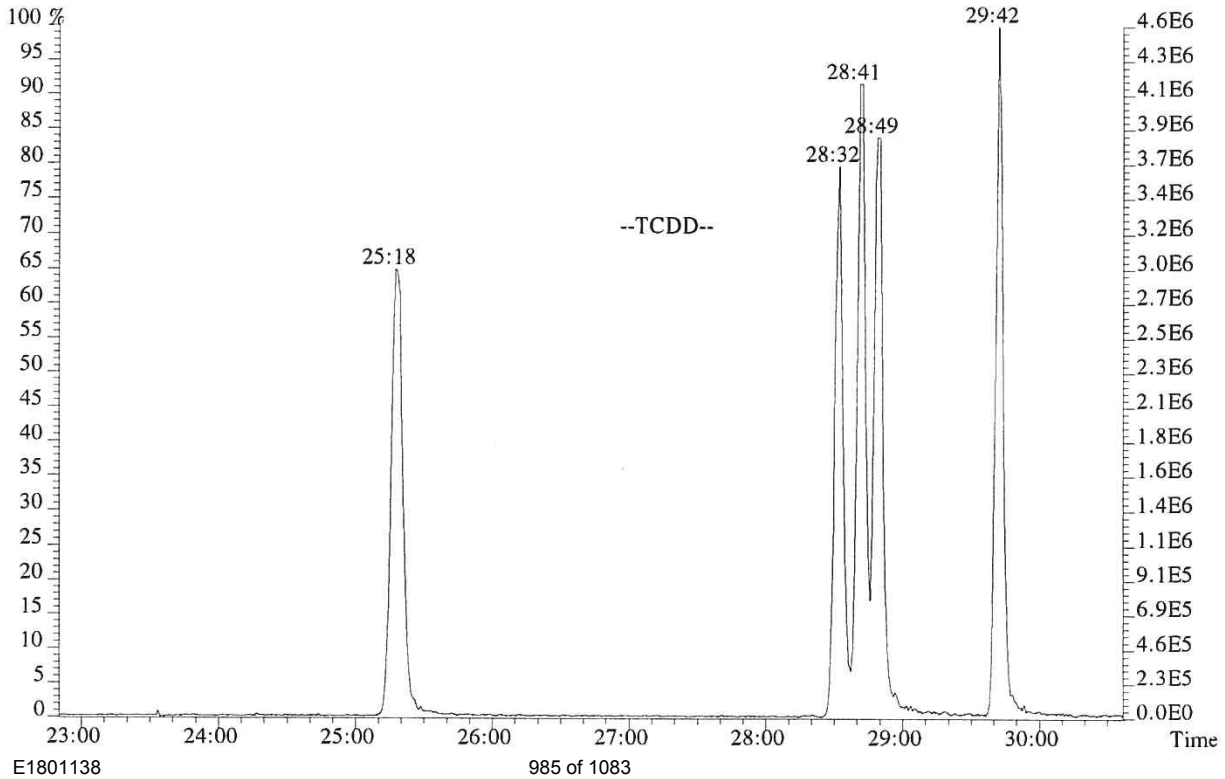


017865

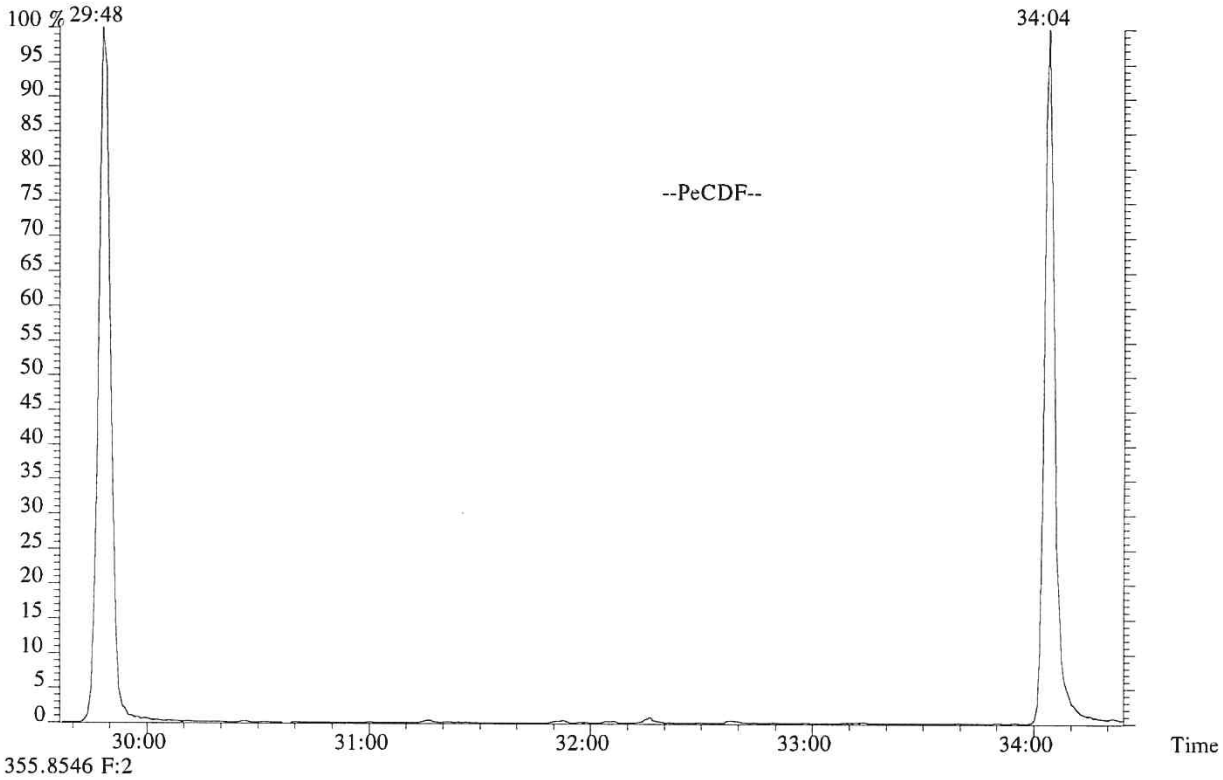
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Sample#1 Exp:WINDOW DEFINE
303.9016



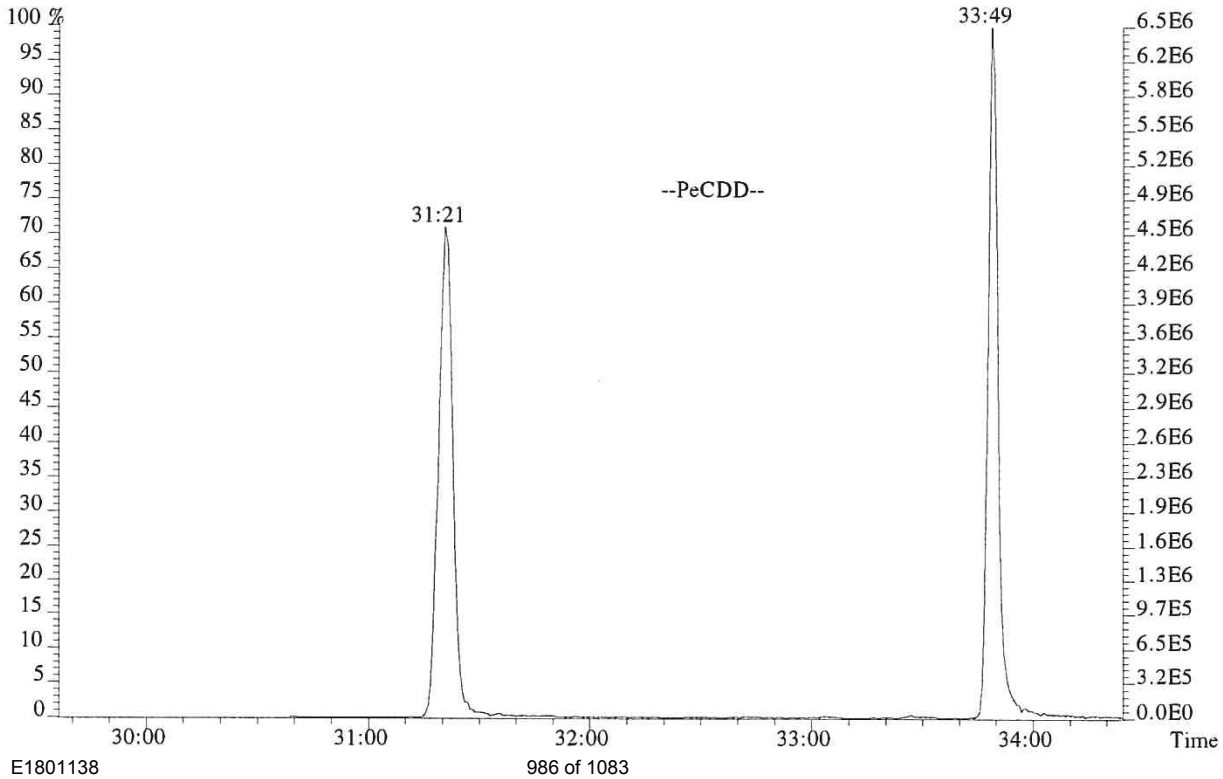
319.8965



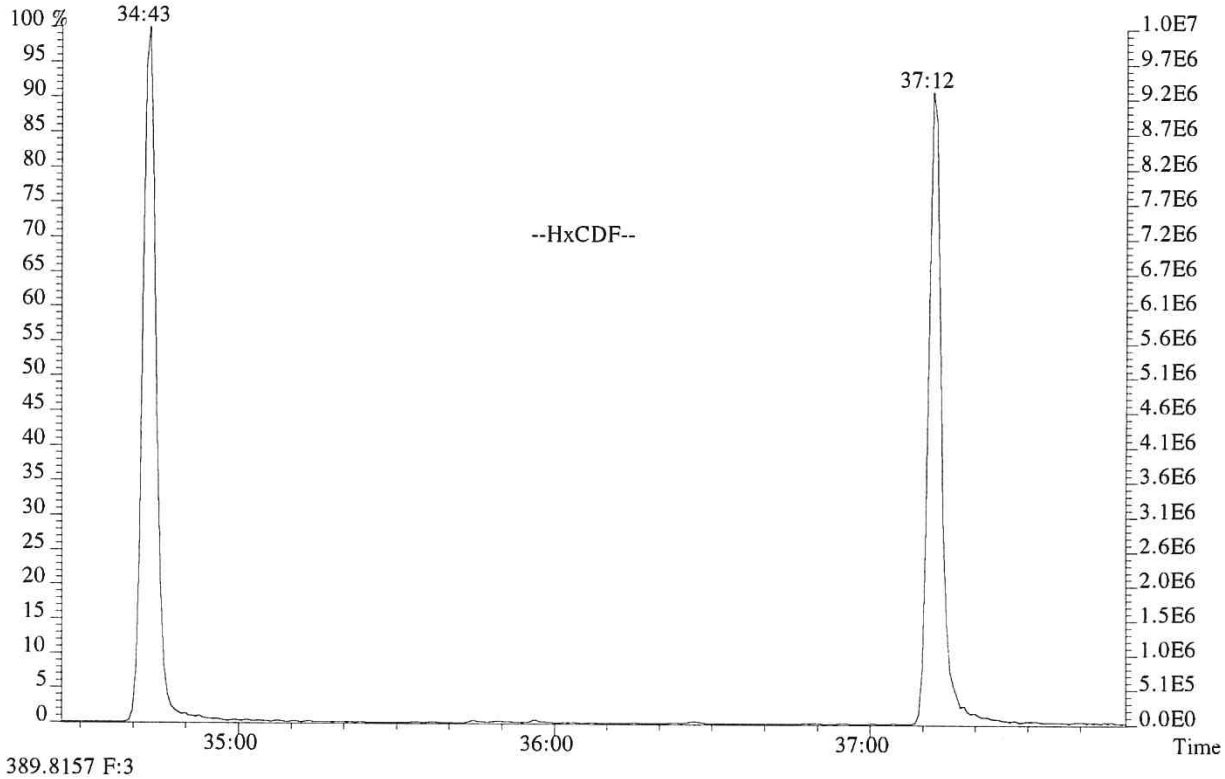
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Sample#1 Exp:WINDOW DEFINE
339.8597,339.8597 F:2



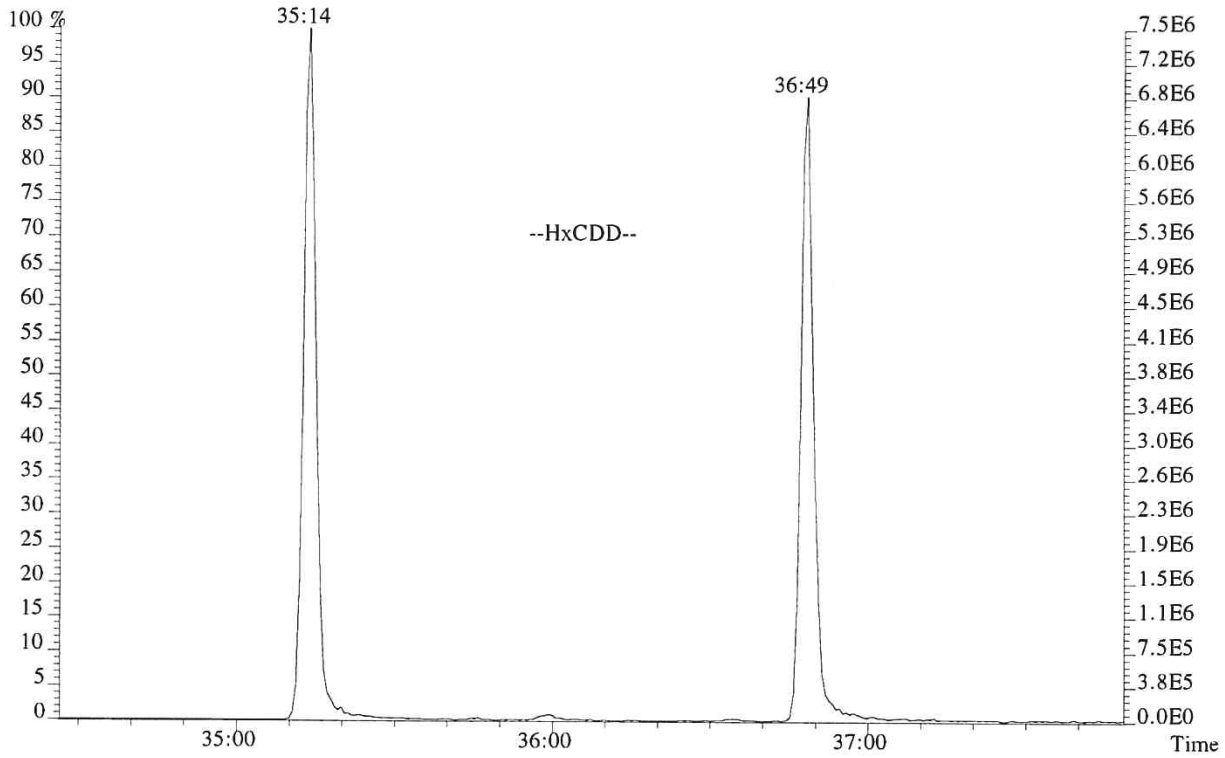
355.8546 F:2



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Sample#1 Exp:WINDOW DEFINE
373.8208 F:3

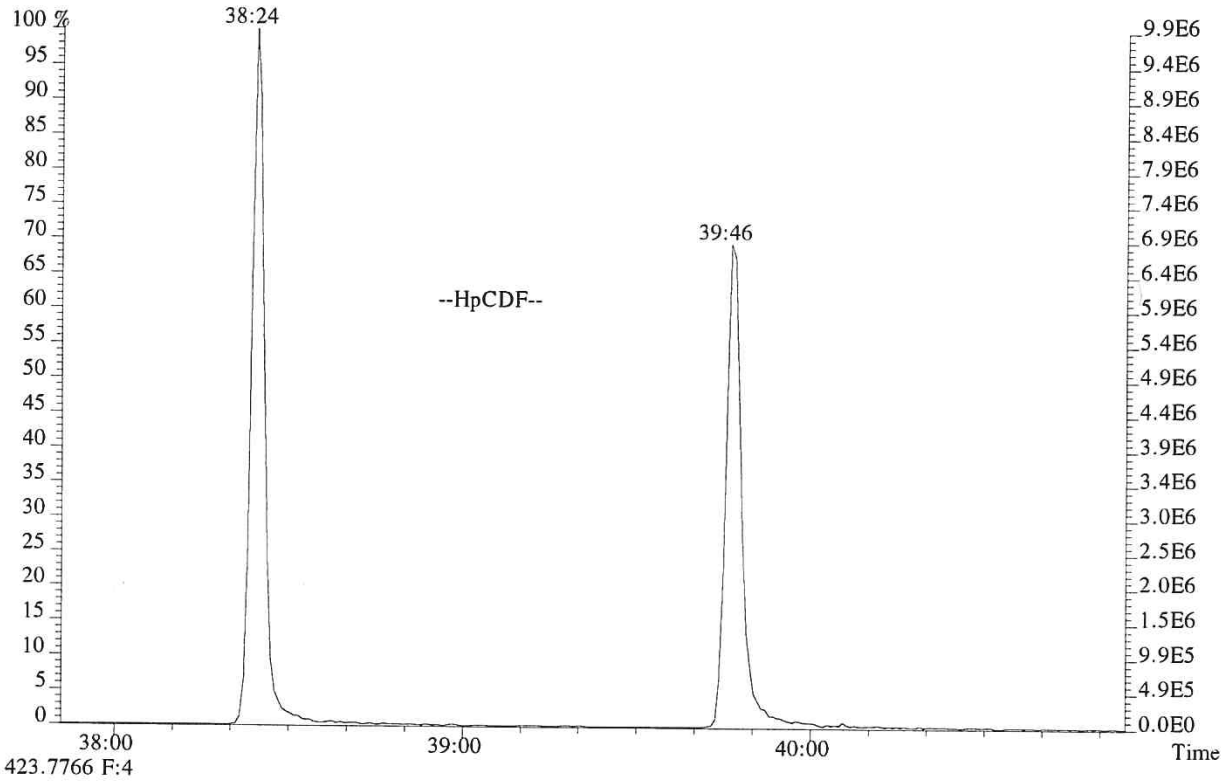


389.8157 F:3

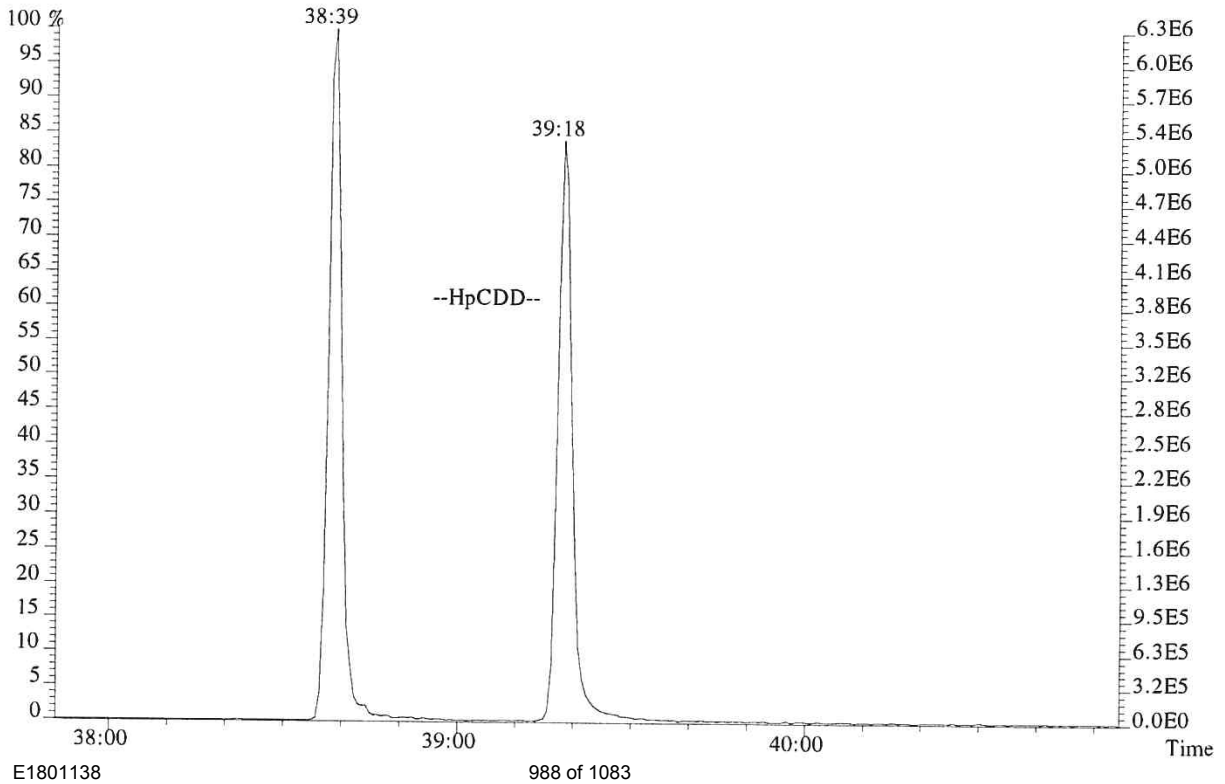


017868

File:P614680 #1-276 Acq:25-SEP-2018 12:13:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:WINDOW DEFINE
407.7818 F:4



423.7766 F:4



USEPA - CLP
6DFA6
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name: ALS Environmental Contract No.:
Lab Code: ALSTX Case No.: TO No.: SDG No.:
GC Column: DB-5MSUI ID: 0.25(mm) Instrument ID: E-HRMS-08
Init. Calib. Date(s).: 09/25/18 Method 1613/8290
Init. Calib. Time.: 12:13

	RR/RRF						MEAN		
Target Analytes	CS0.5	CS1	CS2	CS3	CS4	CS5	RR/RRF	%RSD	QC LIMITS
2,3,7,8-TCDD	1.15	1.00	1.00	1.03	1.05	1.06	1.05	5.38	+/-20%
2,3,7,8-TCDF	1.13	1.08	1.12	1.05	1.06	1.05	1.08	3.07	+/-20%
1,2,3,7,8-PeCDF	1.16	1.17	1.12	1.15	1.16	1.18	1.16	1.72	+/-20%
1,2,3,7,8-PeCDD	0.89	0.95	0.95	0.91	0.93	0.93	0.93	2.61	+/-20%
2,3,4,7,8-PeCDF	1.10	1.13	1.10	1.08	1.10	1.11	1.10	1.49	+/-20%
1,2,3,4,7,8-HxCDF	1.47	1.46	1.39	1.36	1.38	1.42	1.42	3.10	+/-20%
1,2,3,6,7,8-HxCDF	1.27	1.36	1.30	1.28	1.28	1.28	1.29	2.52	+/-20%
1,2,3,4,7,8-HxCDD	1.11	1.11	1.04	1.06	1.05	1.06	1.07	3.00	+/-20%
1,2,3,6,7,8-HxCDD	1.06	1.07	1.06	1.06	1.06	1.05	1.06	0.70	+/-20%
1,2,3,7,8,9-HxCDD	1.17	1.18	1.12	1.13	1.14	1.12	1.15	2.24	+/-20%
2,3,4,6,7,8-HxCDF	1.27	1.32	1.29	1.28	1.27	1.27	1.28	1.52	+/-20%
1,2,3,7,8,9-HxCDF	1.34	1.34	1.29	1.30	1.30	1.30	1.31	1.68	+/-20%
1,2,3,4,6,7,8-HpCDF	1.56	1.60	1.46	1.50	1.51	1.51	1.52	3.15	+/-20%
1,2,3,4,6,7,8-HpCDD	1.14	1.13	1.09	1.10	1.10	1.11	1.11	1.85	+/-20%
1,2,3,4,7,8,9-HpCDF	1.47	1.54	1.46	1.45	1.43	1.43	1.46	2.80	+/-20%
OCDD	1.22	1.21	1.10	1.14	1.14	1.14	1.16	4.23	+/-20%
OCDF	1.60	1.61	1.49	1.57	1.57	1.59	1.57	2.60	+/-20%
Labeled Compounds									
13C-2,3,7,8-TCDD	0.96	0.98	0.97	0.97	1.00	1.01	0.98	2.13	+/-35%
13C-1,2,3,7,8-PeCDD	1.09	1.05	1.16	1.13	1.16	1.15	1.12	3.77	+/-35%
13C-1,2,3,4,7,8-HxCDD	0.91	0.90	0.91	0.90	0.90	0.89	0.90	0.67	+/-35%
13C-1,2,3,6,7,8-HxCDD	0.92	0.92	0.89	0.89	0.91	0.90	0.90	1.52	+/-35%
13C-1,2,3,4,6,7,8-HpCDD	0.86	0.88	0.85	0.86	0.84	0.84	0.86	1.91	+/-35%
13C-OCDD	0.65	0.69	0.65	0.67	0.65	0.65	0.66	2.45	+/-35%
13C-2,3,7,8-TCDF	1.40	1.41	1.42	1.44	1.40	1.43	1.42	1.24	+/-35%
13C-1,2,3,7,8-PeCDF	1.52	1.54	1.61	1.61	1.65	1.63	1.60	3.24	+/-35%
13C-2,3,4,7,8-PeCDF	1.52	1.49	1.60	1.57	1.63	1.61	1.57	3.42	+/-35%
13C-1,2,3,4,7,8-HxCDF	1.18	1.19	1.14	1.21	1.18	1.06	1.16	4.58	+/-35%
13C-1,2,3,6,7,8-HxCDF	1.39	1.34	1.33	1.35	1.31	1.29	1.34	2.46	+/-35%
13C-2,3,4,6,7,8-HxCDF	1.27	1.25	1.24	1.24	1.25	1.24	1.25	1.06	+/-35%
13C-1,2,3,7,8,9-HxCDF	1.13	1.13	1.12	1.15	1.15	1.10	1.13	1.66	+/-35%
13C-1,2,3,4,6,7,8-HpCDF	1.04	1.06	1.02	1.04	1.01	1.01	1.03	1.93	+/-35%
13C-1,2,3,4,7,8,9-HpCDF	0.94	0.95	0.90	0.86	0.90	0.88	0.91	3.64	+/-35%
37Cl-2,3,7,8-TCDD	1.06	1.11	1.07	1.05	1.11	1.13	1.09	3.15	+/-35%

1.123789-HxCDD Relative Response (RR) is calculated based on the labeled analog of the other two HxCDDs.
2. OCDF RR is calculated based on the labeled analog of OCDD

USEPA - CLP

6DFB6

CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY

HIGH RESOLUTION

Lab Name: ALS Environmental Contract No.:
Lab Code: ALSTX Case No.: TO No.: SDG No.:
GC Column: DB-5MSUI ID: 0.25(mm) Instrument ID: E-HRMS-08
Init. Calib. Date(s).: 09/25/18 Method 1613/8290
Init. Calib. Time.: 12:13

Target Analytes	SELECTED IONS	ION ABUNDANCE RATIO CS0.5	CS1	CS2	CS3	CS4	CS5	FLAG	ION RATIO QC lIMITS
2,3,7,8-TCDF	304/306	0.75	0.75	0.83	0.80	0.79	0.80		0.65-0.89
2,3,7,8-TCDD	320/322	0.78	0.83	0.80	0.78	0.79	0.77		0.65-0.89
1,2,3,7,8-PeCDF	340/342	1.65	1.58	1.57	1.58	1.60	1.60		1.32-1.78
2,3,4,7,8-PeCDF	340/342	1.57	1.61	1.57	1.58	1.59	1.59		1.32-1.78
1,2,3,7,8-PeCDD	356/358	1.56	1.52	1.53	1.55	1.55	1.57		1.32-1.78
1,2,3,4,7,8-HxCDF	374/376	1.26	1.29	1.25	1.26	1.28	1.29		1.05-1.43
1,2,3,6,7,8-HxCDF	374/376	1.29	1.24	1.25	1.27	1.27	1.27		1.05-1.43
2,3,4,6,7,8-HxCDF	374/376	1.29	1.25	1.28	1.28	1.26	1.26		1.05-1.43
1,2,3,7,8,9-HxCDF	374/376	1.22	1.29	1.23	1.28	1.28	1.27		1.05-1.43
1,2,3,4,7,8-HxCDD	390/392	1.21	1.20	1.26	1.33	1.26	1.27		1.05-1.43
1,2,3,6,7,8-HxCDD	390/392	1.41	1.27	1.25	1.23	1.27	1.26		1.05-1.43
1,2,3,7,8,9-HxCDD	390/392	1.20	1.22	1.25	1.24	1.27	1.26		1.05-1.43
1,2,3,4,6,7,8-HpCDF	408/410	1.04	1.02	1.06	1.05	1.04	1.05		0.88-1.20
1,2,3,4,7,8,9-HpCDF	408/410	0.89	1.07	1.05	1.04	1.05	1.05		0.88-1.20
1,2,3,4,6,7,8-HpCDD	424/426	1.10	1.07	1.07	1.06	1.06	1.06		0.88-1.20
OCDF	442/444	0.90	0.87	0.91	0.92	0.93	0.92		0.76-1.02
OCDD	458/460	0.93	0.89	0.88	0.90	0.90	0.90		0.76-1.02
13C-2,3,7,8-TCDD	332/334	0.79	0.80	0.80	0.80	0.80	0.79		0.65-0.89
13C-1,2,3,7,8-PeCDD	368/370	1.58	1.58	1.57	1.58	1.56	1.57		1.32-1.78
13C-1,2,3,4,7,8-HxCDD	402/404	1.27	1.26	1.26	1.32	1.25	1.26		1.05-1.43
13C-1,2,3,6,7,8-HxCDD	402/404	1.27	1.26	1.26	1.20	1.25	1.26		1.05-1.43
13C-1,2,3,4,6,7,8-HpCDD	436/438	1.06	1.06	1.04	1.06	1.05	1.05		0.88-1.20
13C-OCDD	470/472	0.90	0.90	0.90	0.91	0.90	0.89		0.76-1.02
13C-2,3,7,8-TCDF	316/318	0.78	0.80	0.79	0.79	0.79	0.79		0.65-0.89
13C-1,2,3,7,8-PeCDF	352/354	1.61	1.62	1.60	1.60	1.60	1.60		1.32-1.78
13C-2,3,4,7,8-PeCDF	352/354	1.59	1.59	1.62	1.61	1.59	1.61		1.32-1.78
13C-1,2,3,4,7,8-HxCDF	384/386	0.54	0.53	0.53	0.53	0.53	0.54		0.43-0.59
13C-1,2,3,6,7,8-HxCDF	384/386	0.53	0.54	0.53	0.54	0.54	0.54		0.43-0.59
13C-2,3,4,6,7,8-HxCDF	384/386	0.54	0.54	0.53	0.54	0.54	0.53		0.43-0.59
13C-1,2,3,7,8,9-HxCDF	384/386	0.52	0.53	0.53	0.54	0.53	0.53		0.43-0.59
13C-1,2,3,4,6,7,8-HpCDF	418/420	0.46	0.46	0.46	0.46	0.46	0.46		0.37-0.51
13C-1,2,3,4,7,8,9-HpCDF	418/420	0.46	0.46	0.45	0.46	0.45	0.46		0.37-0.51
13C-1,2,3,4-TCDD	332/334	0.81	0.81	0.81	0.80	0.79	0.81		0.65-0.89
13C-1,2,3,7,8,9-HxCDD	402/404	1.24	1.26	1.26	1.24	1.25	1.25		1.05-1.43

Quality Control (QC) limits represent +/- 15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76554

Run #1 Filename P614682 Samp: 1 Inj: 1 Acquired: 25-SEP-18 14:18:27
Processed: 26-SEP-18 07:39:04 Sample ID: CS0.5

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:01	3.991e+02	5.332e+02	0.75	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:15	3.245e+03	1.970e+03	1.65	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:10	3.017e+03	1.917e+03	1.57	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	2.964e+03	2.360e+03	1.26	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	3.032e+03	2.349e+03	1.29	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	2.788e+03	2.154e+03	1.29	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:10	2.544e+03	2.080e+03	1.22	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	2.520e+03	2.421e+03	1.04	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	1.988e+03	2.226e+03	0.89	yes	no	1.463
10	Unk	OCDF	42:13	3.006e+03	3.322e+03	0.90	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:49	2.873e+02	3.690e+02	0.78	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	1.757e+03	1.126e+03	1.56	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	1.695e+03	1.402e+03	1.21	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:39	1.736e+03	1.234e+03	1.41	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:53	1.790e+03	1.494e+03	1.20	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	1.575e+03	1.438e+03	1.10	yes	no	1.112
17	Unk	OCDD	42:01	2.333e+03	2.510e+03	0.93	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	28:00	1.453e+05	1.860e+05	0.78	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	2.225e+05	1.378e+05	1.61	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	2.208e+05	1.389e+05	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:49	1.017e+05	1.873e+05	0.54	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:55	1.172e+05	2.227e+05	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:25	1.097e+05	2.020e+05	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	9.463e+04	1.814e+05	0.52	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:24	7.990e+04	1.736e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:46	7.243e+04	1.569e+05	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	1.005e+05	1.270e+05	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:26	1.588e+05	1.004e+05	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:33	1.251e+05	9.838e+04	1.27	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:38	1.252e+05	9.893e+04	1.27	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:18	1.083e+05	1.026e+05	1.06	yes	no	0.857
32	IS	13C-OCDD	42:01	1.503e+05	1.668e+05	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:14	1.058e+05	1.311e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:52	1.355e+05	1.094e+05	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:49	6.272e+02				no	1.086

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Signal/Noise Height Ratio Summary

CLIENT ID.
76554

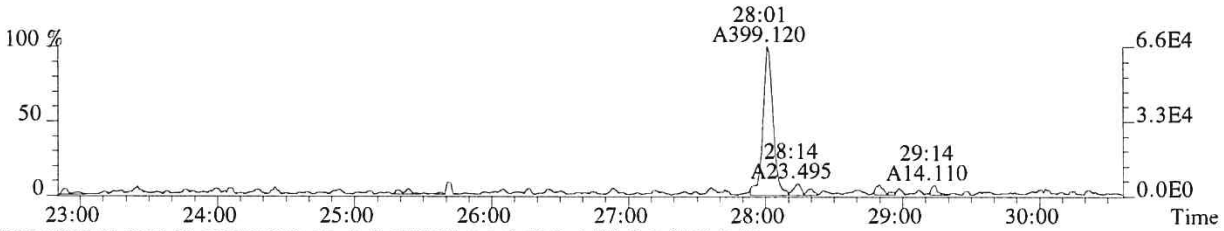
Run #1 Filename P614682 Samp: 1 Inj: 1 Acquired: 25-SEP-18 14:18:27
Processed: 26-SEP-18 07:39:04 LAB. ID: CS0.5

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.55e+04	1.79e+03	3.7e+01	1.00e+05	4.41e+03	2.3e+01
2	1,2,3,7,8-PeCDF	5.99e+05	1.18e+03	5.1e+02	3.57e+05	4.28e+03	8.3e+01
3	2,3,4,7,8-PeCDF	5.69e+05	1.18e+03	4.8e+02	3.70e+05	4.28e+03	8.7e+01
4	1,2,3,4,7,8-HxCDF	6.38e+05	3.25e+03	2.0e+02	4.85e+05	1.42e+03	3.4e+02
5	1,2,3,6,7,8-HxCDF	6.38e+05	3.25e+03	2.0e+02	4.95e+05	1.42e+03	3.5e+02
6	2,3,4,6,7,8-HxCDF	6.03e+05	3.25e+03	1.9e+02	4.83e+05	1.42e+03	3.4e+02
7	1,2,3,7,8,9-HxCDF	4.97e+05	3.25e+03	1.5e+02	4.13e+05	1.42e+03	2.9e+02
8	1,2,3,4,6,7,8-HpCDF	5.62e+05	1.66e+03	3.4e+02	5.47e+05	1.04e+03	5.3e+02
9	1,2,3,4,7,8,9-HpCDF	4.02e+05	1.66e+03	2.4e+02	4.51e+05	1.04e+03	4.3e+02
10	OCDF	5.23e+05	1.34e+03	3.9e+02	5.81e+05	4.02e+03	1.4e+02
11	2,3,7,8-TCDD	6.18e+04	5.07e+03	1.2e+01	6.68e+04	2.40e+03	2.8e+01
12	1,2,3,7,8-PeCDD	3.47e+05	2.36e+03	1.5e+02	2.20e+05	2.64e+02	8.3e+02
13	1,2,3,4,7,8-HxCDD	3.95e+05	1.84e+03	2.1e+02	3.18e+05	1.66e+03	1.9e+02
14	1,2,3,6,7,8-HxCDD	3.64e+05	1.84e+03	2.0e+02	2.60e+05	1.66e+03	1.6e+02
15	1,2,3,7,8,9-HxCDD	4.06e+05	1.84e+03	2.2e+02	3.23e+05	1.66e+03	1.9e+02
16	1,2,3,4,6,7,8-HpCDD	3.19e+05	2.32e+03	1.4e+02	3.31e+05	1.19e+03	2.8e+02
17	OCDD	4.28e+05	8.48e+02	5.0e+02	4.37e+05	1.30e+03	3.4e+02
18	13C-2,3,7,8-TCDF	2.54e+07	1.52e+04	1.7e+03	3.22e+07	1.06e+04	3.1e+03
19	13C-1,2,3,7,8-PeCDF	4.04e+07	2.12e+03	1.9e+04	2.49e+07	3.13e+03	8.0e+03
20	13C-2,3,4,7,8-PeCDF	4.23e+07	2.12e+03	2.0e+04	2.67e+07	3.13e+03	8.5e+03
21	13C-1,2,3,4,7,8-HxCDF	2.18e+07	3.28e+03	6.7e+03	4.05e+07	3.71e+03	1.1e+04
22	13C-1,2,3,6,7,8-HxCDF	2.40e+07	3.28e+03	7.3e+03	4.55e+07	3.71e+03	1.2e+04
23	13C-2,3,4,6,7,8-HxCDF	2.42e+07	3.28e+03	7.4e+03	4.44e+07	3.71e+03	1.2e+04
24	13C-1,2,3,7,8,9-HxCDF	1.91e+07	3.28e+03	5.8e+03	3.68e+07	3.71e+03	9.9e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.81e+07	5.66e+03	3.2e+03	3.90e+07	2.05e+04	1.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.45e+07	5.66e+03	2.6e+03	3.15e+07	2.05e+04	1.5e+03
27	13C-2,3,7,8-TCDD	1.84e+07	1.55e+04	1.2e+03	2.34e+07	5.32e+03	4.4e+03
28	13C-1,2,3,7,8-PeCDD	3.10e+07	3.24e+03	9.6e+03	1.95e+07	2.82e+03	6.9e+03
29	13C-1,2,3,4,7,8-HxCDD	2.85e+07	5.20e+03	5.5e+03	2.24e+07	3.08e+03	7.3e+03
30	13C-1,2,3,6,7,8-HxCDD	2.65e+07	5.20e+03	5.1e+03	2.10e+07	3.08e+03	6.8e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.26e+07	2.60e+03	8.7e+03	2.13e+07	2.03e+03	1.1e+04
32	13C-OCDD	2.73e+07	1.56e+03	1.8e+04	2.99e+07	4.32e+02	6.9e+04
33	13C-1,2,3,4-TCDD	1.96e+07	1.55e+04	1.3e+03	2.41e+07	5.32e+03	4.5e+03
34	13C-1,2,3,7,8,9-HxCDD	3.00e+07	5.20e+03	5.8e+03	2.40e+07	3.08e+03	7.8e+03
35	37Cl-2,3,7,8-TCDD	1.12e+05	4.66e+03	2.4e+01			

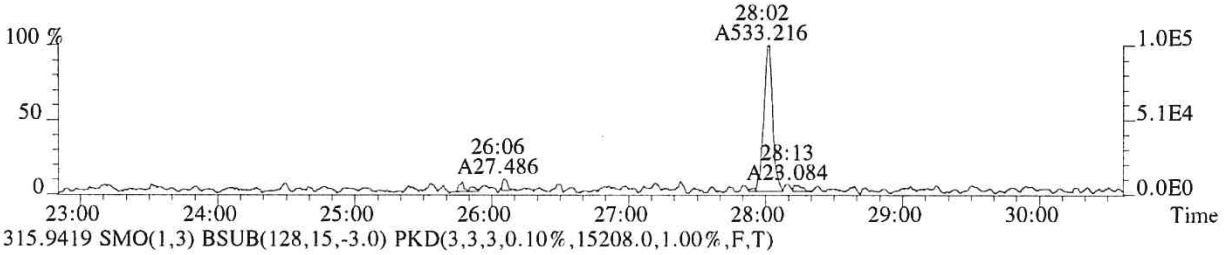
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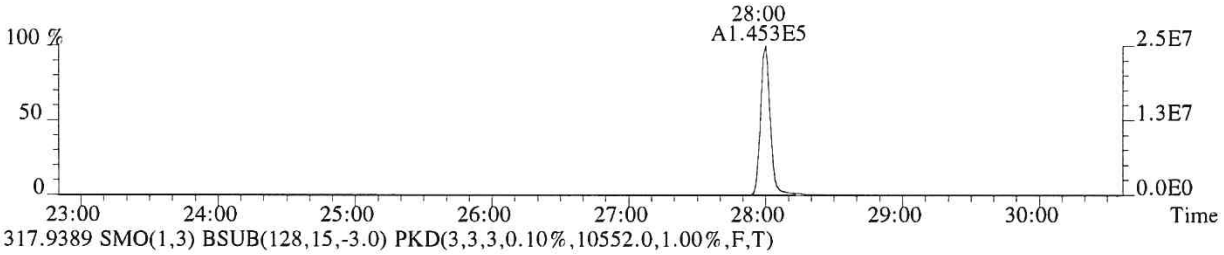
File:P614682 #1-552 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1788.0,1.00%,F,T)



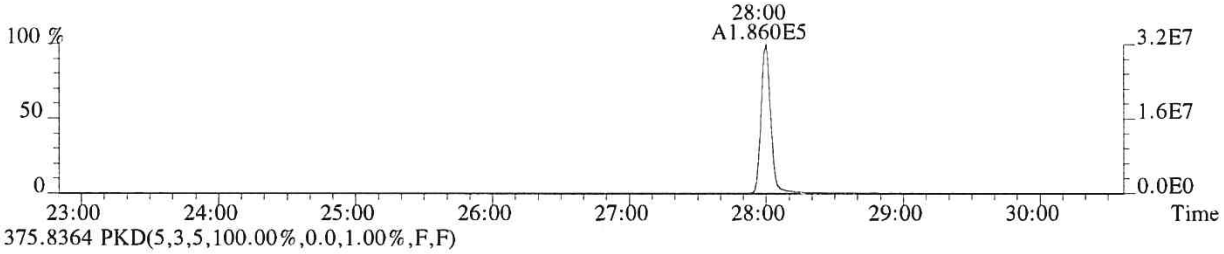
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4408.0,1.00%,F,T)



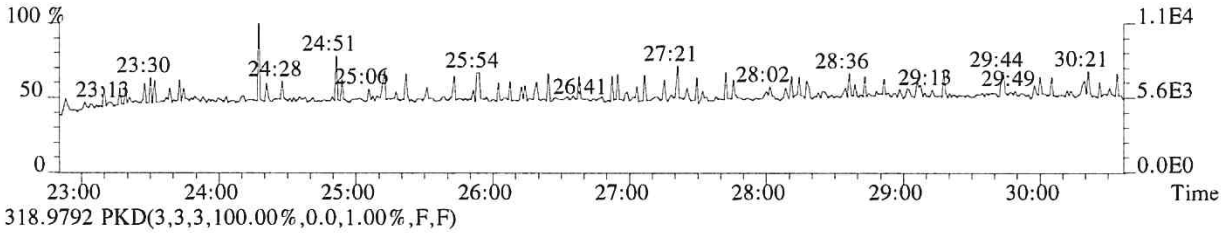
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15208.0,1.00%,F,T)



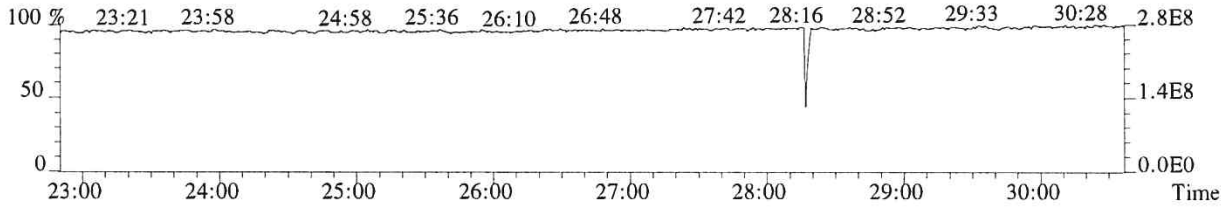
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10552.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

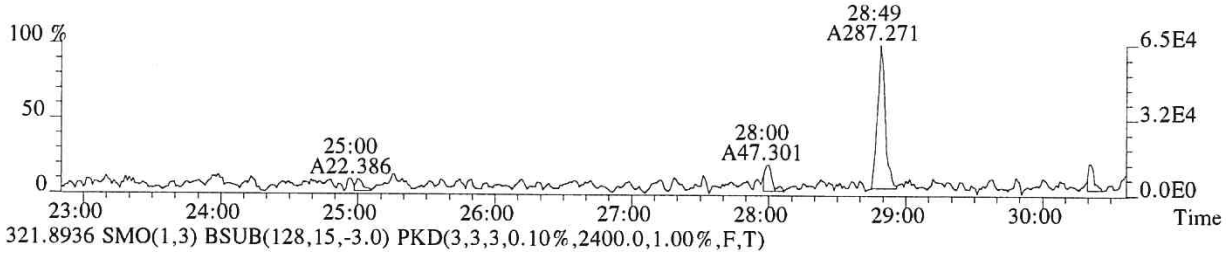


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

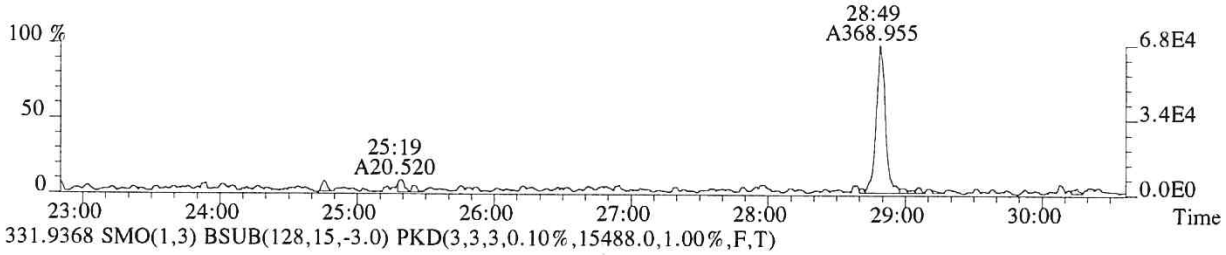


017874

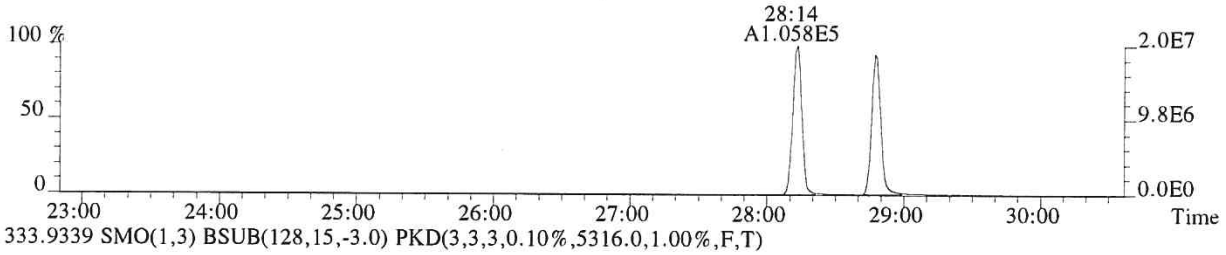
File:P614682 #1-552 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5072.0,1.00%,F,T)



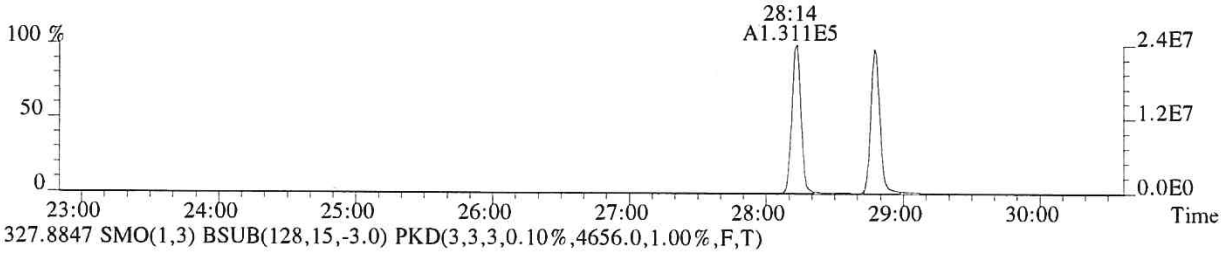
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2400.0,1.00%,F,T)



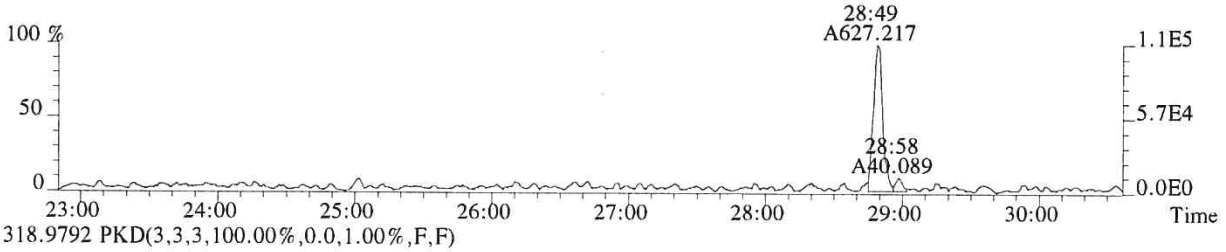
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15488.0,1.00%,F,T)



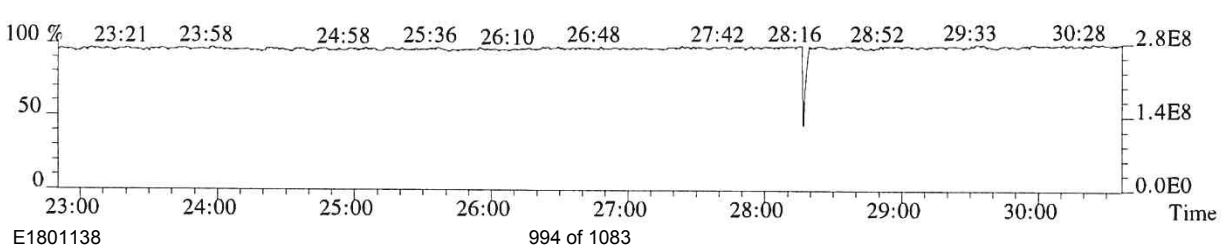
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5316.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4656.0,1.00%,F,T)

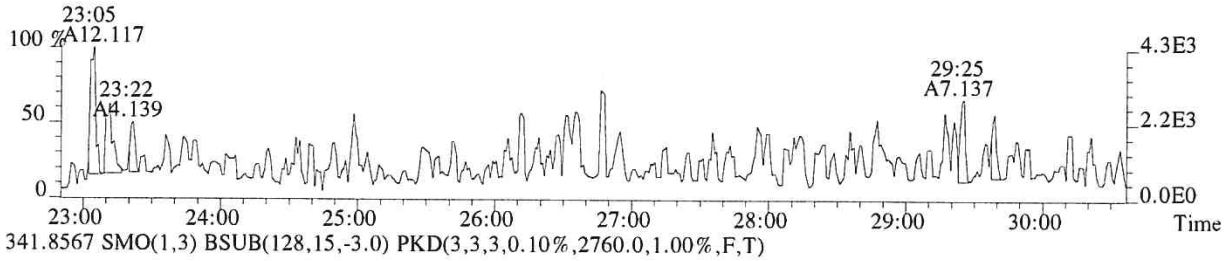


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

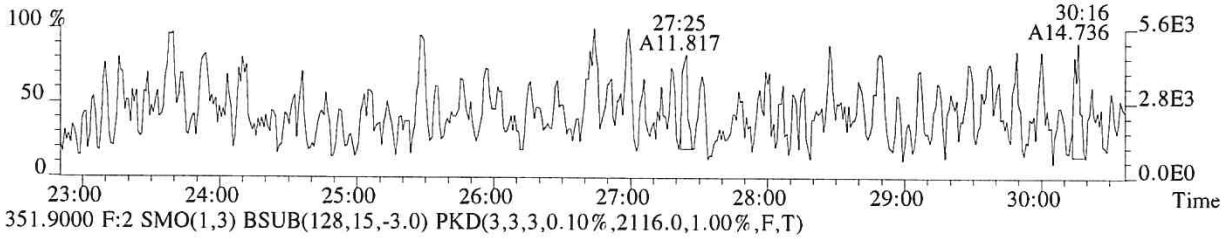


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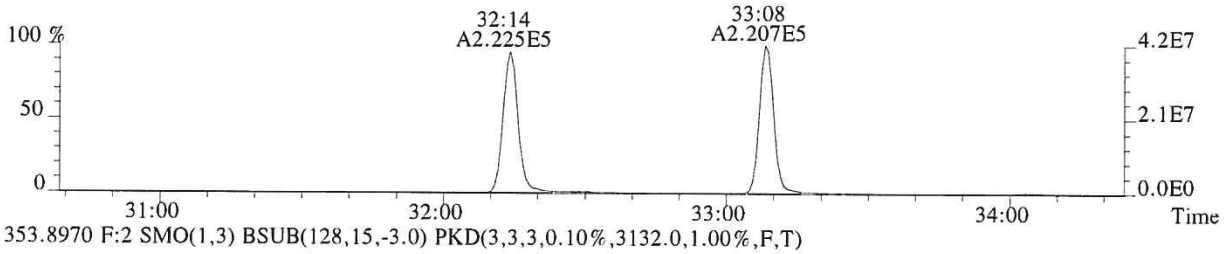
File:P614682 #1-552 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1072.0,1.00%,F,T)



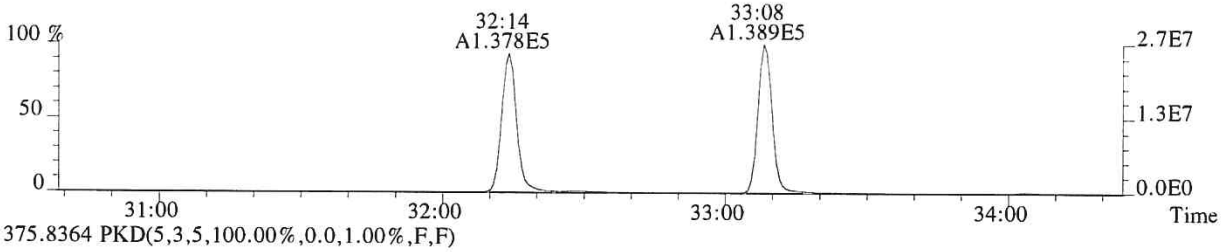
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2760.0,1.00%,F,T)



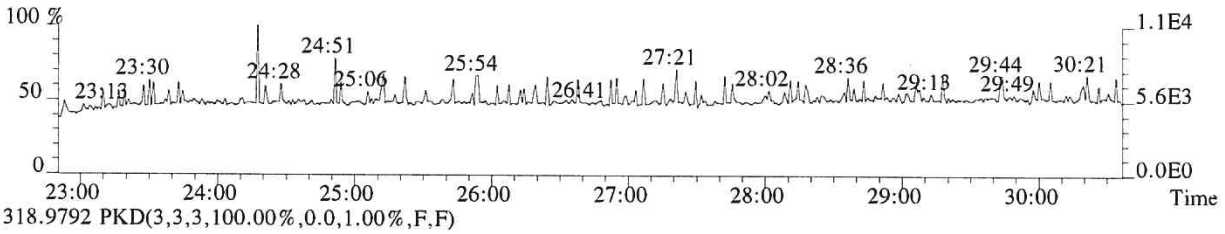
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2116.0,1.00%,F,T)



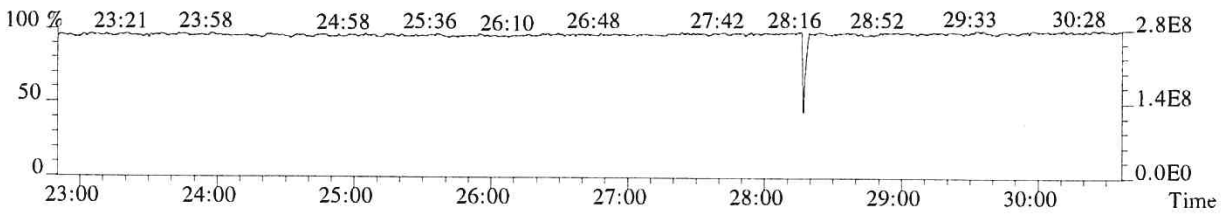
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3132.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

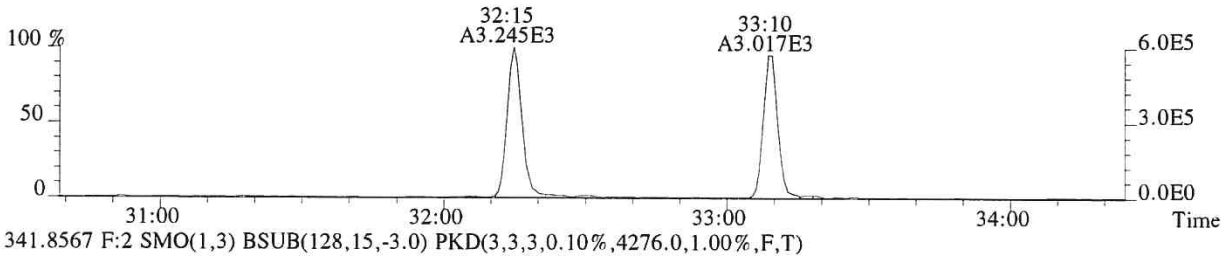


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

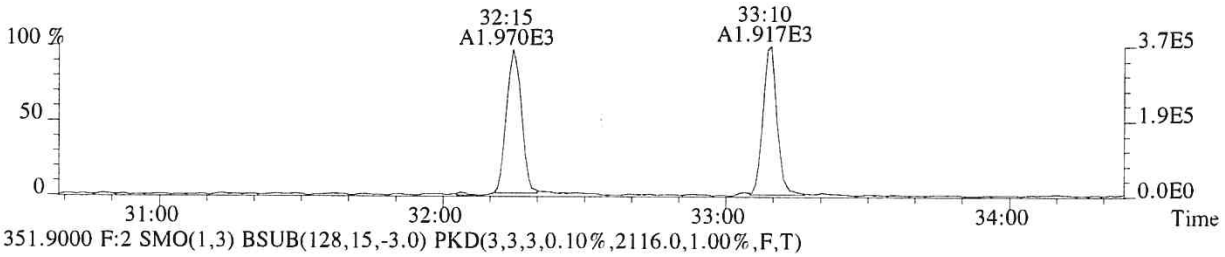


017876

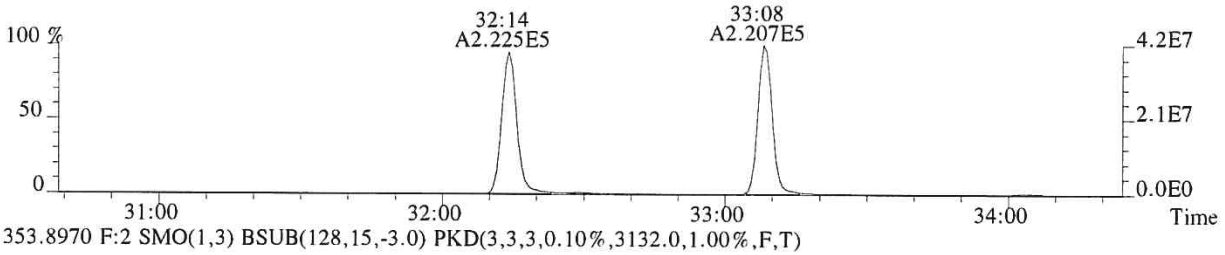
File:P614682 #1-339 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1180.0,1.00%,F,T)



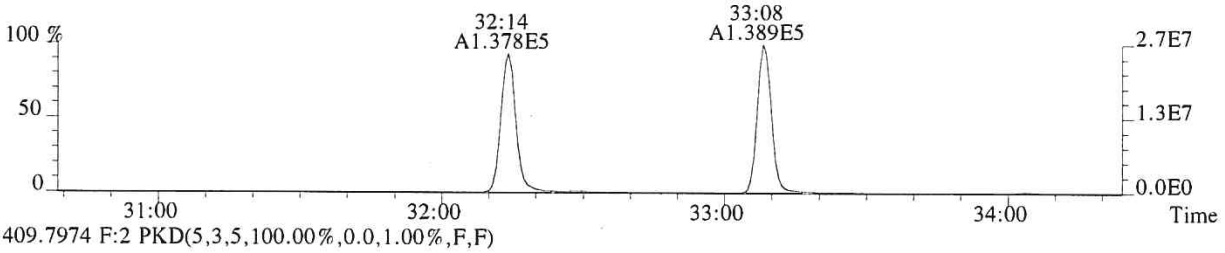
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4276.0,1.00%,F,T)



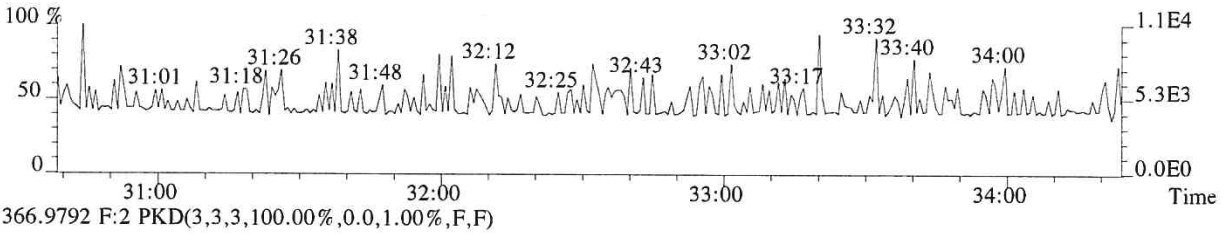
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2116.0,1.00%,F,T)



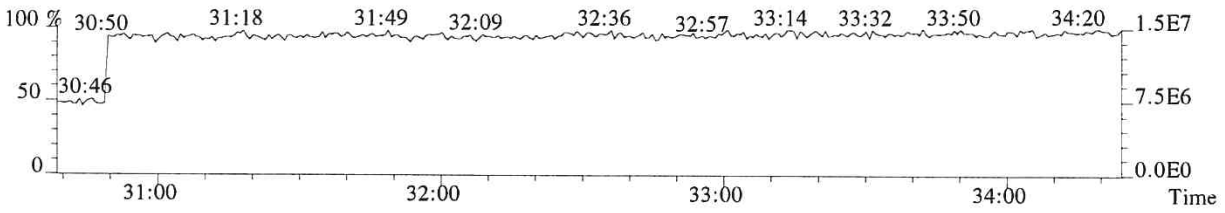
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3132.0,1.00%,F,T)



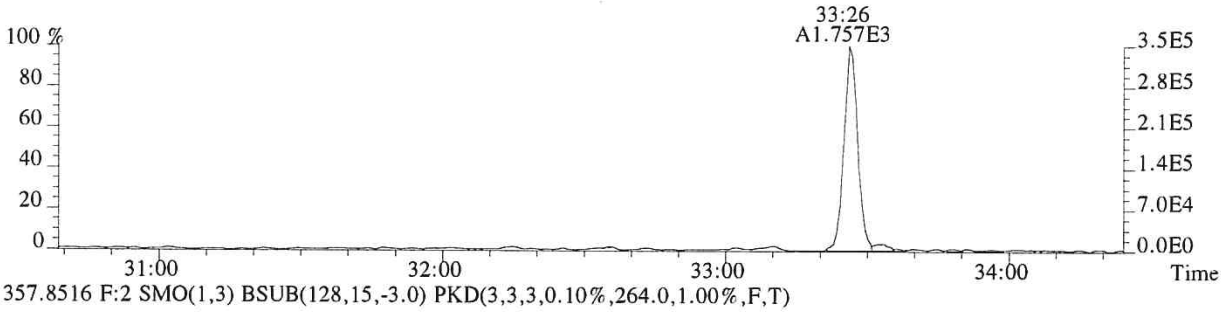
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



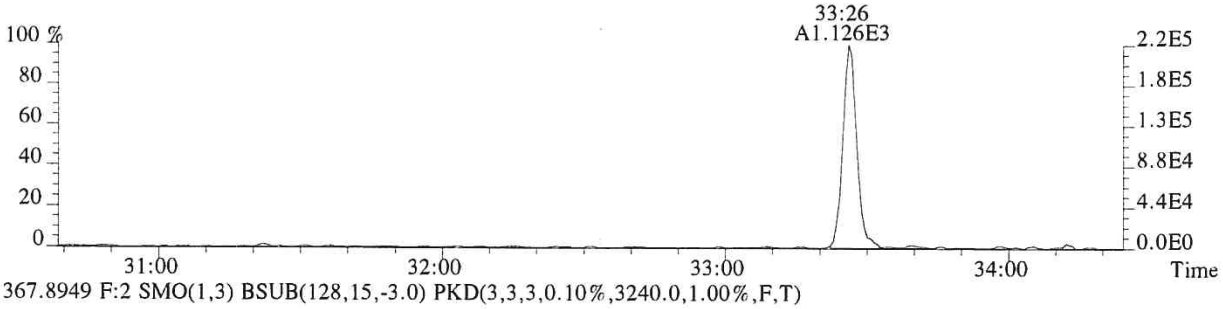
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



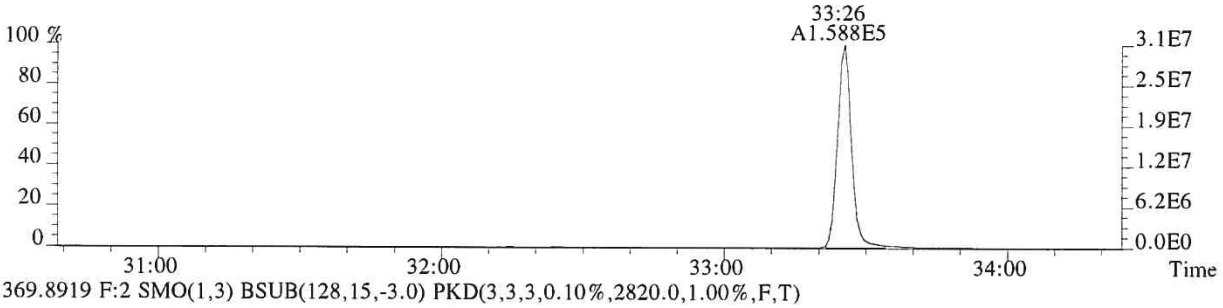
File:P614682 #1-339 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2356.0,1.00%,F,T)



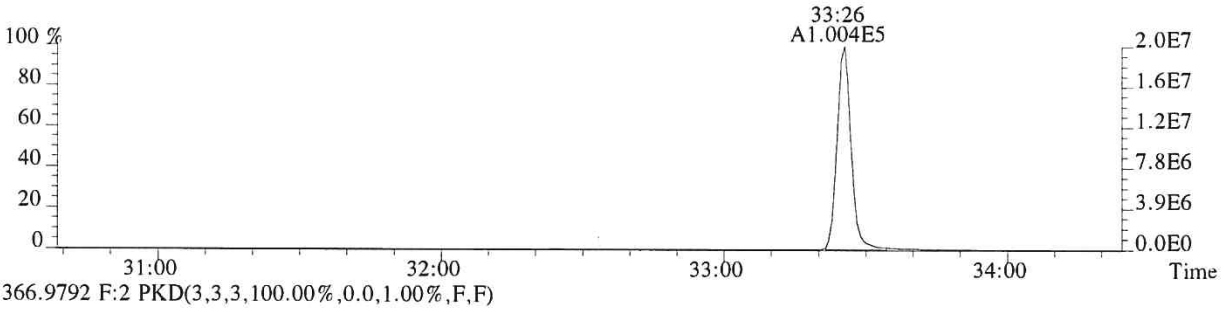
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,264.0,1.00%,F,T)



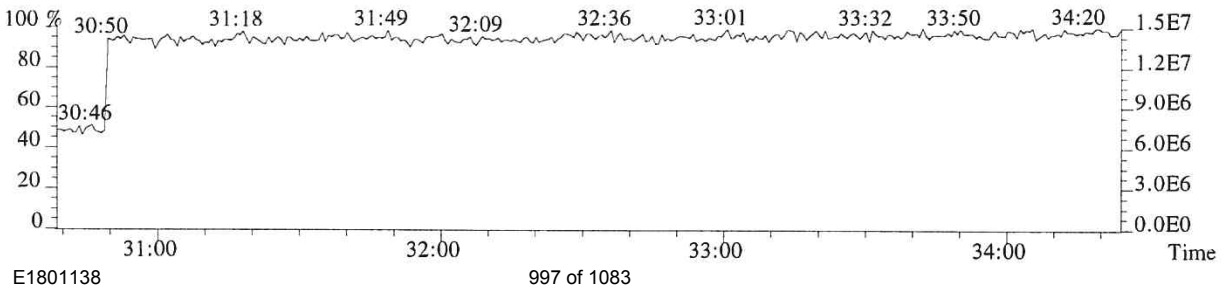
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3240.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2820.0,1.00%,F,T)

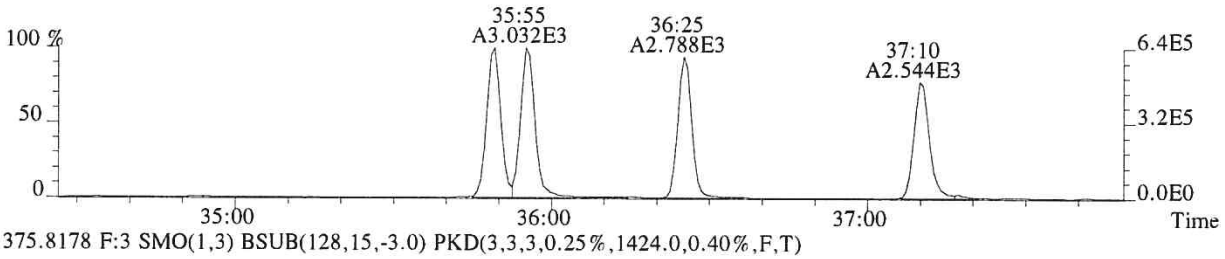


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

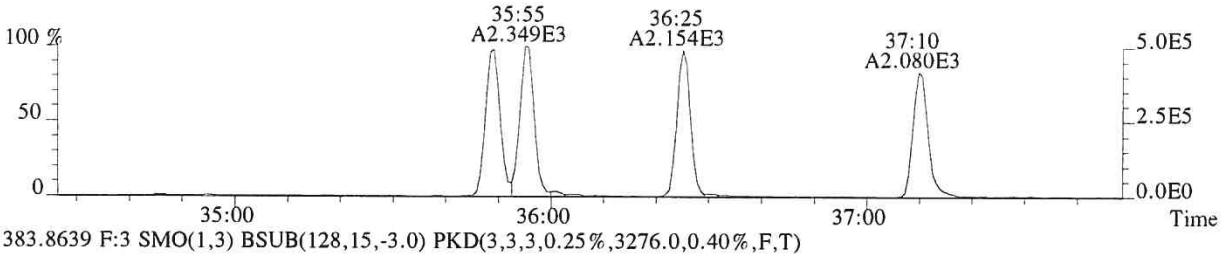


017878

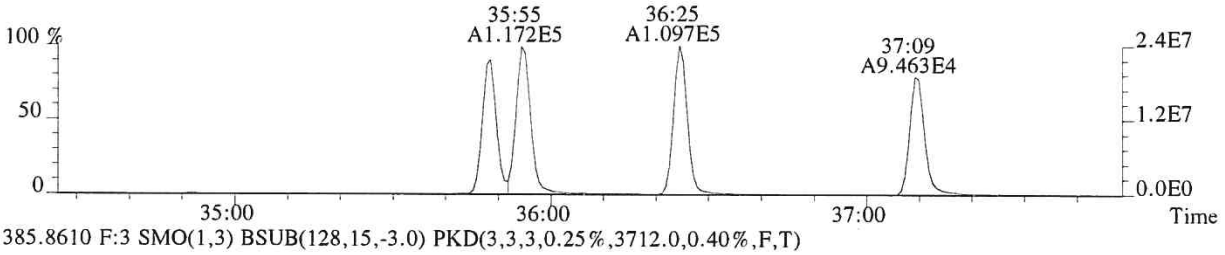
File:P614682 #1-304 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3252.0,0.40%,F,T)



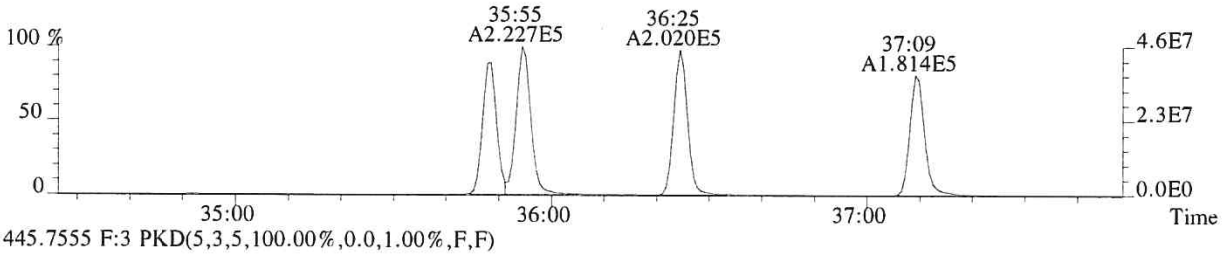
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1424.0,0.40%,F,T)



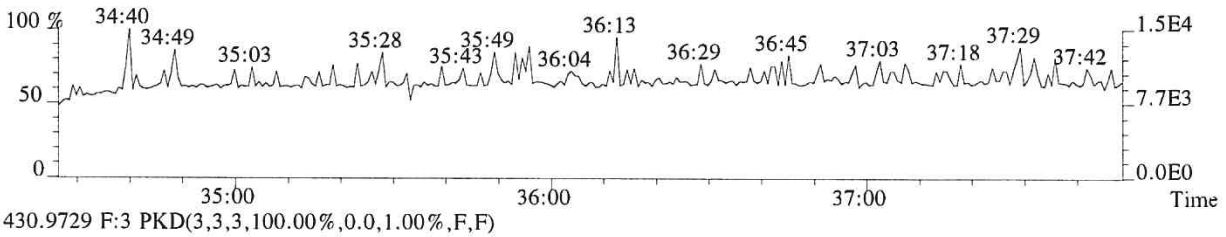
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3276.0,0.40%,F,T)



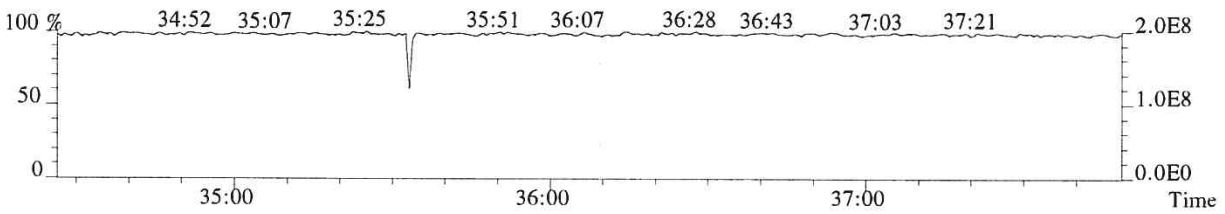
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3712.0,0.40%,F,T)



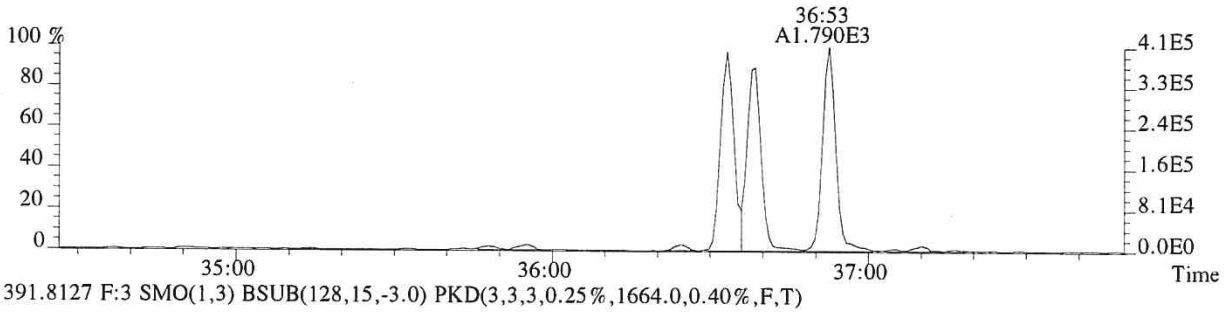
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



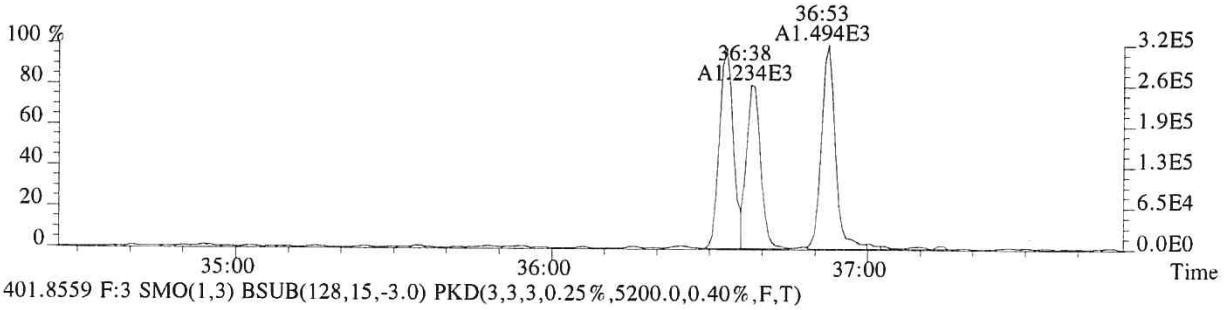
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



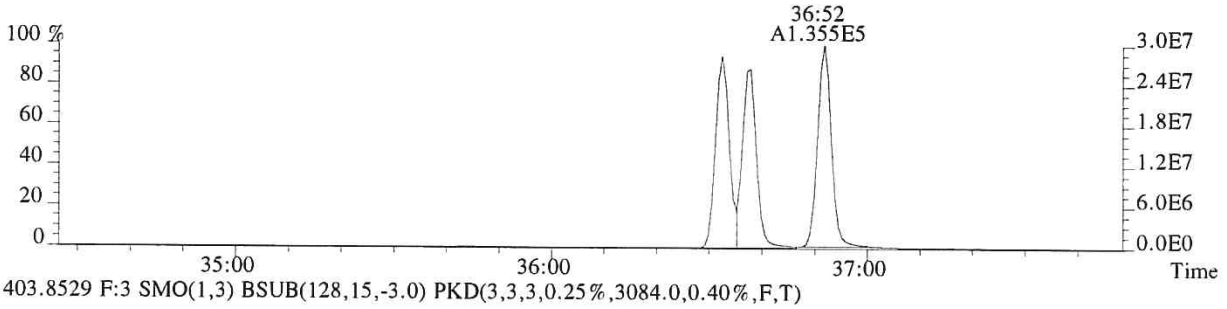
File:P614682 #1-304 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1840.0,0.40%,F,T)



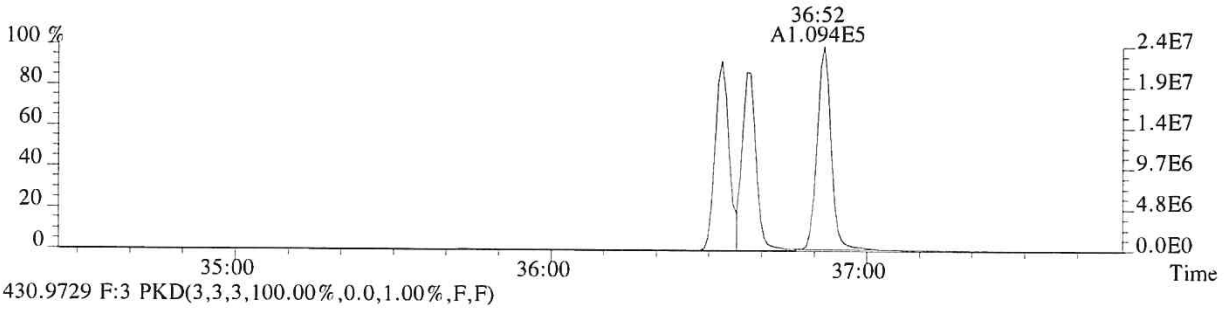
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1664.0,0.40%,F,T)



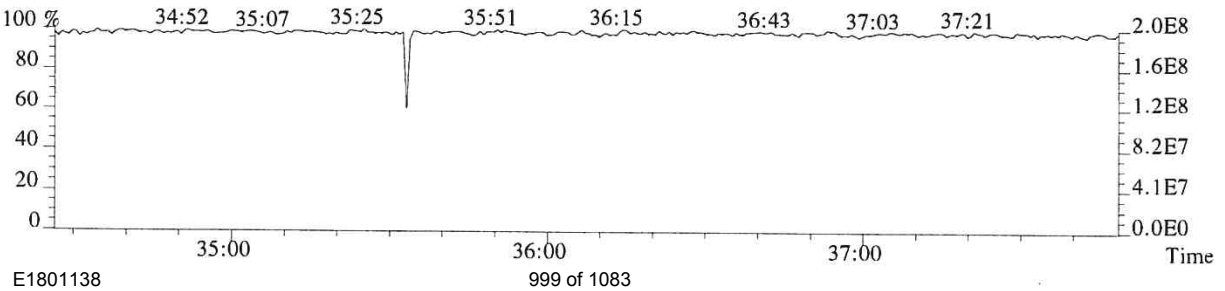
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5200.0,0.40%,F,T)



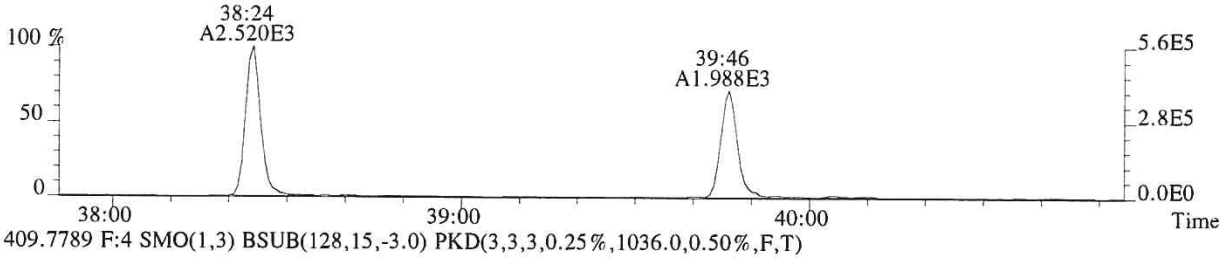
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3084.0,0.40%,F,T)



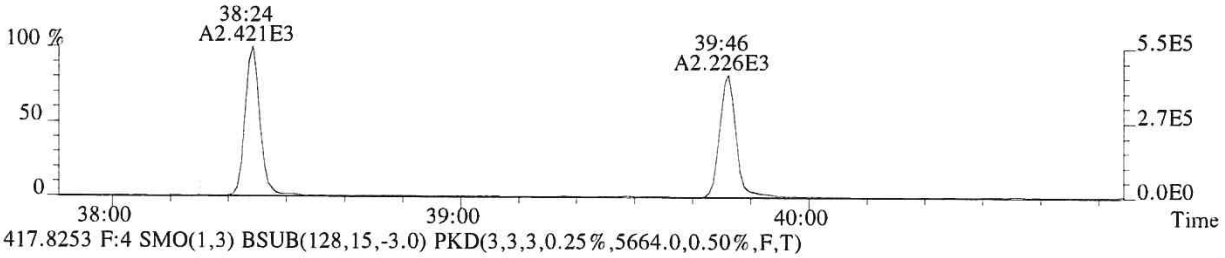
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



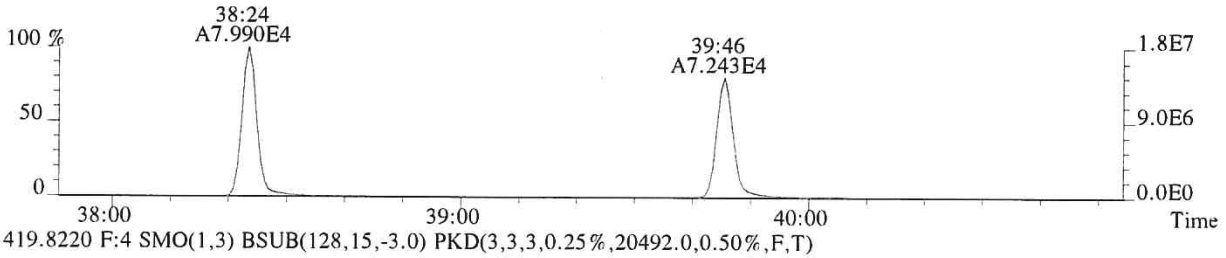
File:P614682 #1-276 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1664.0,0.50%,F,T)



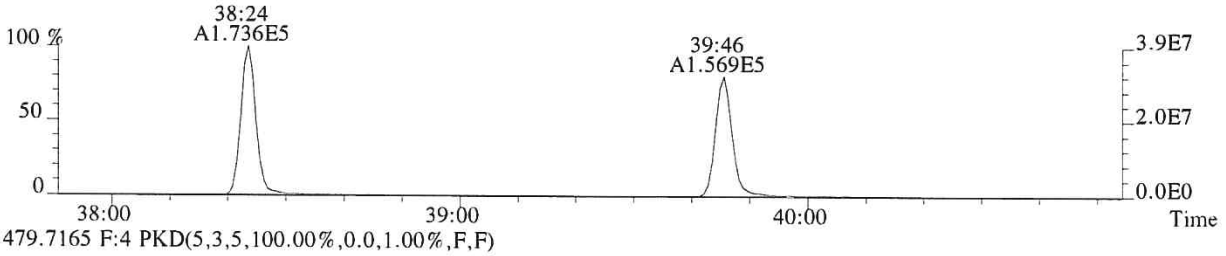
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1036.0,0.50%,F,T)



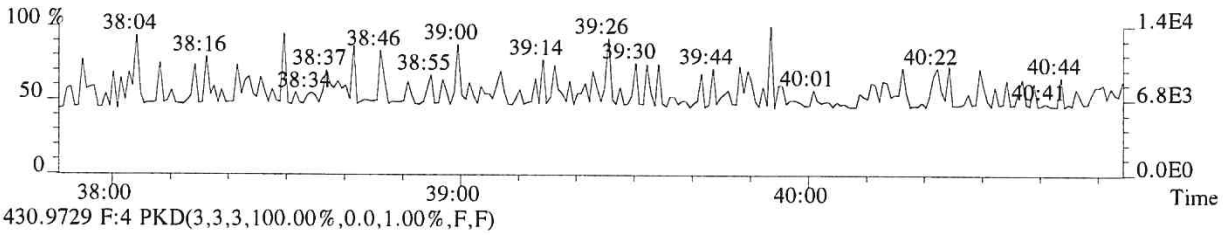
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5664.0,0.50%,F,T)



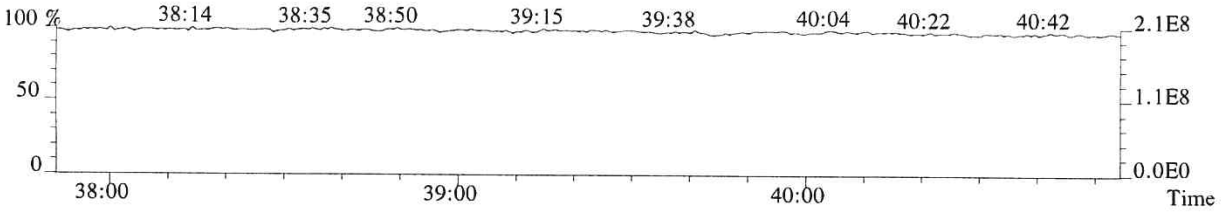
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,20492.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

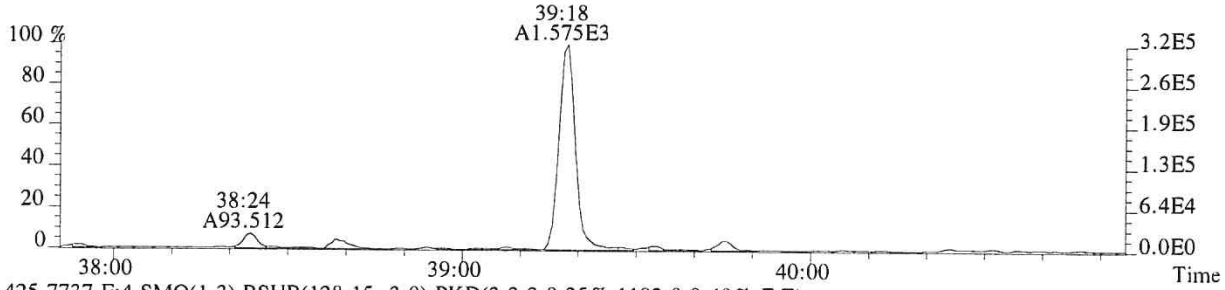


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

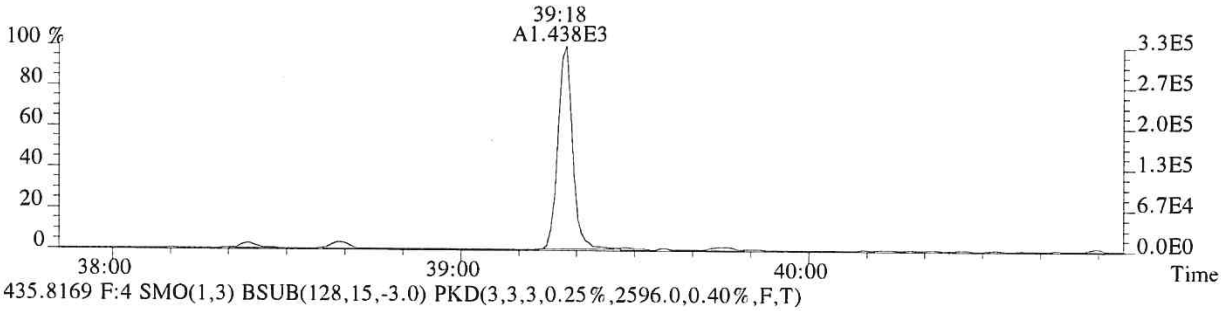


017881

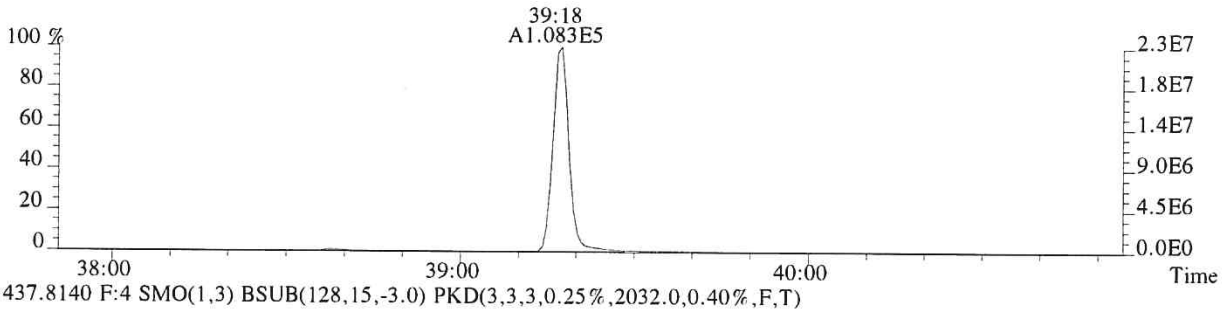
File:P614682 #1-276 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2320.0,0.40%,F,T)



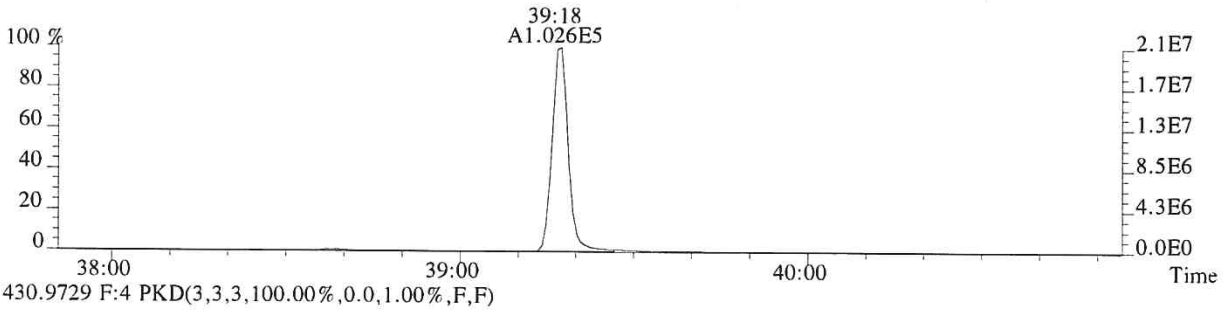
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1192.0,0.40%,F,T)



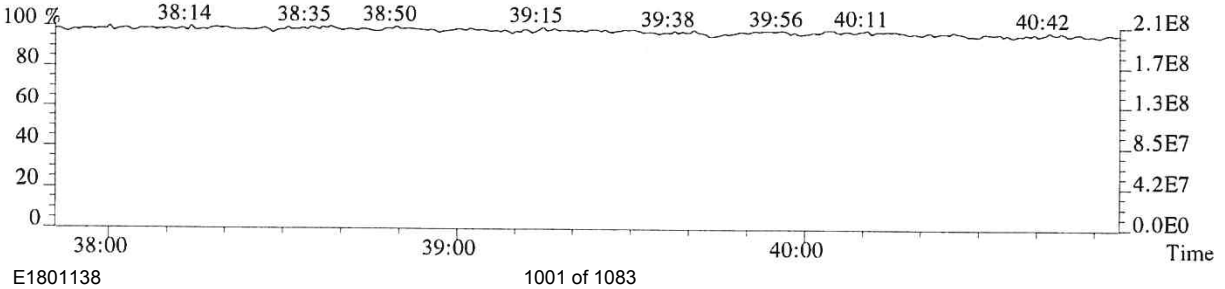
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2596.0,0.40%,F,T)



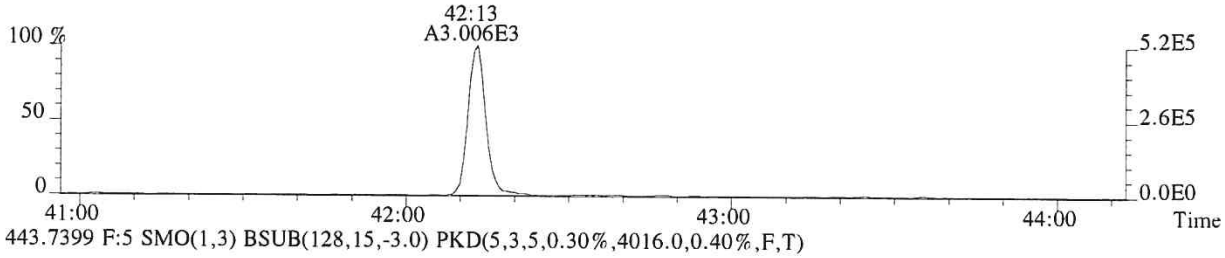
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2032.0,0.40%,F,T)



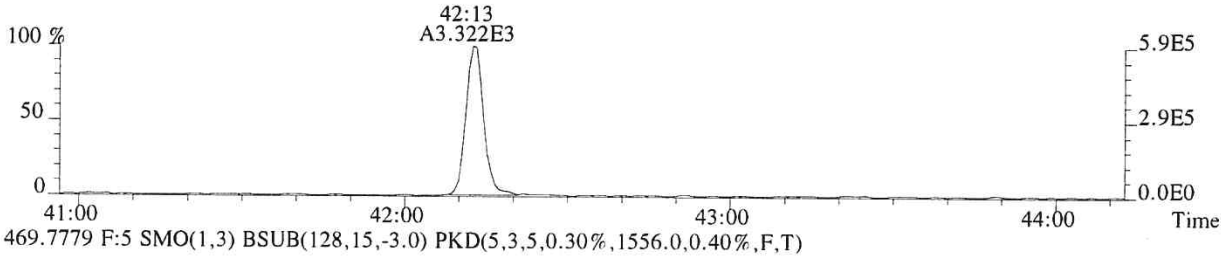
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



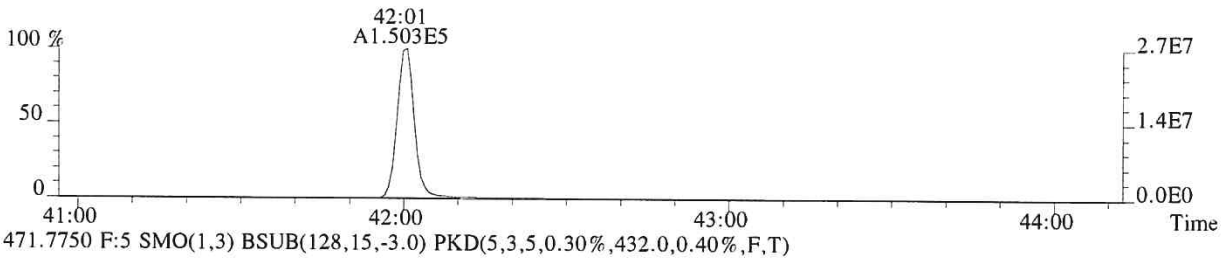
File:P614682 #1-295 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1340.0,0.40%,F,T)



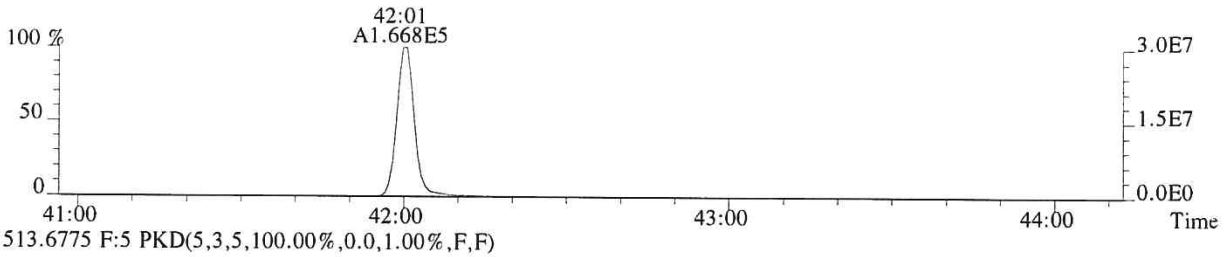
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,4016.0,0.40%,F,T)



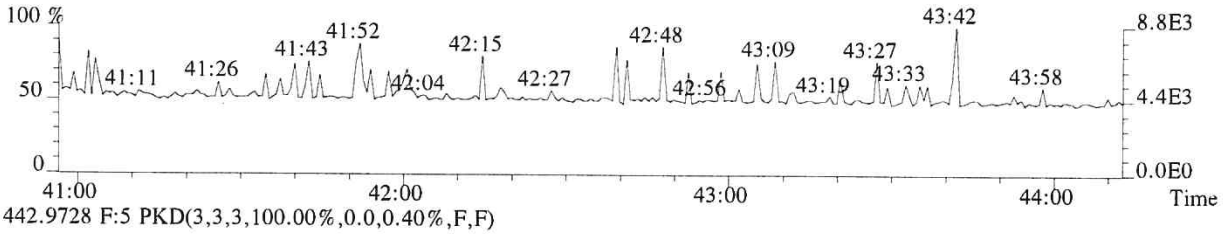
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1556.0,0.40%,F,T)



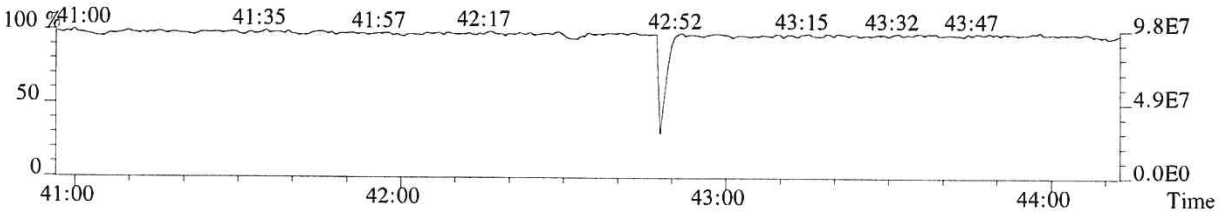
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,432.0,0.40%,F,T)



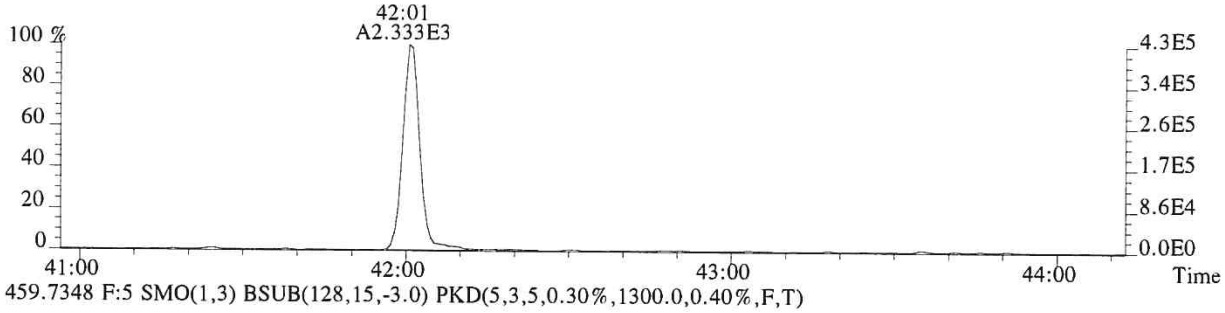
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



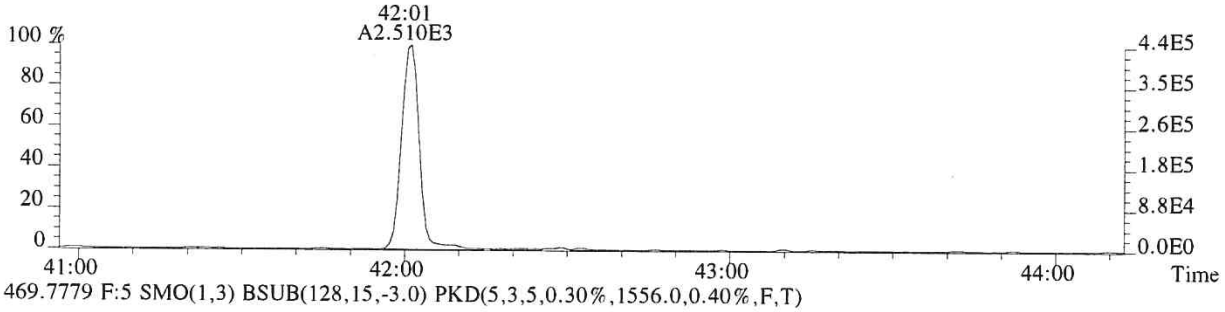
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



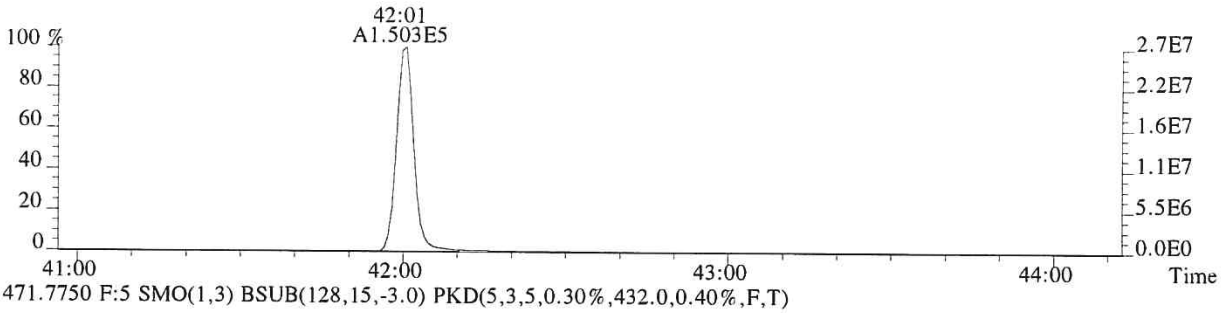
File:P614682 #1-295 Acq:25-SEP-2018 14:18:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS0.5
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,848.0,0.40%,F,T)



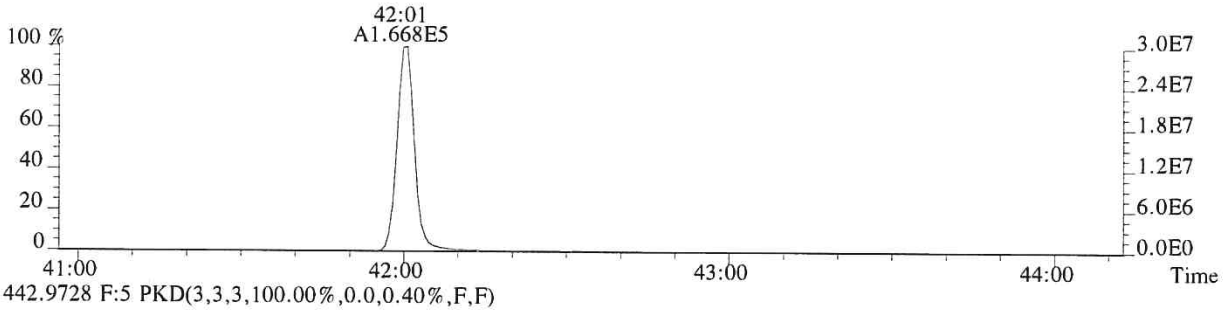
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1300.0,0.40%,F,T)



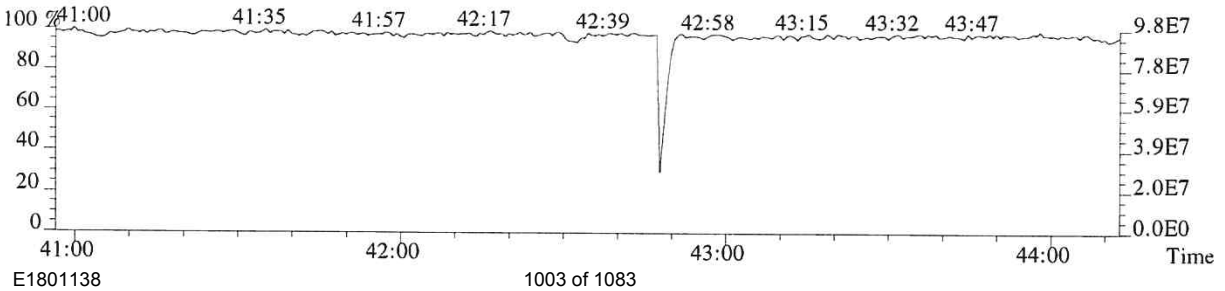
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1556.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,432.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
82614

Run #2 Filename P614683 Samp: 1 Inj: 1 Acquired: 25-SEP-18 15:08:49
Processed: 26-SEP-18 07:39:06 Sample ID: CS1

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:00	9.696e+02	1.301e+03	0.75	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:14	8.209e+03	5.211e+03	1.58	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:09	7.782e+03	4.847e+03	1.61	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	7.580e+03	5.860e+03	1.29	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	7.826e+03	6.295e+03	1.24	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	7.149e+03	5.707e+03	1.25	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:10	6.633e+03	5.137e+03	1.29	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	6.668e+03	6.509e+03	1.02	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	5.874e+03	5.515e+03	1.07	yes	no	1.463
10	Unk	OCDF	42:13	7.957e+03	9.190e+03	0.87	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	6.591e+02	7.969e+02	0.83	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	4.521e+03	2.979e+03	1.52	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	4.250e+03	3.535e+03	1.20	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	4.303e+03	3.394e+03	1.27	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:52	4.586e+03	3.767e+03	1.22	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	4.011e+03	3.764e+03	1.07	yes	no	1.112
17	Unk	OCDD	42:01	6.097e+03	6.815e+03	0.89	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	1.863e+05	2.330e+05	0.80	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	2.845e+05	1.757e+05	1.62	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	2.739e+05	1.718e+05	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:48	1.281e+05	2.407e+05	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:55	1.461e+05	2.703e+05	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:25	1.362e+05	2.538e+05	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	1.215e+05	2.294e+05	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:23	1.041e+05	2.259e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:45	9.345e+04	2.024e+05	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	1.293e+05	1.616e+05	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	1.924e+05	1.218e+05	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:32	1.556e+05	1.239e+05	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	1.601e+05	1.267e+05	1.26	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	1.414e+05	1.336e+05	1.06	yes	no	0.857
32	IS	13C-OCDD	42:00	2.022e+05	2.237e+05	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:13	1.337e+05	1.646e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:51	1.731e+05	1.377e+05	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	1.653e+03				no	1.086

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Signal/Noise Height Ratio Summary

CLIENT ID.
82614

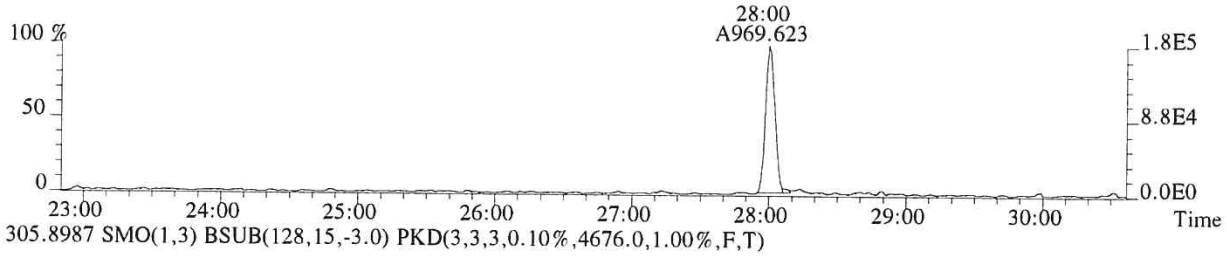
Run #2 Filename P614683 Samp: 1 Inj: 1 Acquired: 25-SEP-18 15:08:49
Processed: 26-SEP-18 07:39:06 LAB. ID: CS1

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.73e+05	2.52e+03	6.9e+01	2.26e+05	4.68e+03	4.8e+01
2	1,2,3,7,8-PeCDF	1.49e+06	1.07e+03	1.4e+03	9.88e+05	5.47e+03	1.8e+02
3	2,3,4,7,8-PeCDF	1.55e+06	1.07e+03	1.5e+03	9.81e+05	5.47e+03	1.8e+02
4	1,2,3,4,7,8-HxCDF	1.64e+06	3.19e+03	5.1e+02	1.29e+06	1.24e+03	1.0e+03
5	1,2,3,6,7,8-HxCDF	1.65e+06	3.19e+03	5.2e+02	1.30e+06	1.24e+03	1.0e+03
6	2,3,4,6,7,8-HxCDF	1.53e+06	3.19e+03	4.8e+02	1.19e+06	1.24e+03	9.6e+02
7	1,2,3,7,8,9-HxCDF	1.37e+06	3.19e+03	4.3e+02	1.06e+06	1.24e+03	8.5e+02
8	1,2,3,4,6,7,8-HpCDF	1.48e+06	1.97e+03	7.5e+02	1.45e+06	1.25e+03	1.2e+03
9	1,2,3,4,7,8,9-HpCDF	1.19e+06	1.97e+03	6.0e+02	1.11e+06	1.25e+03	8.9e+02
10	OCDF	1.45e+06	1.15e+03	1.3e+03	1.64e+06	2.28e+03	7.2e+02
11	2,3,7,8-TCDD	1.20e+05	6.88e+03	1.7e+01	1.48e+05	2.99e+03	5.0e+01
12	1,2,3,7,8-PeCDD	8.64e+05	2.37e+03	3.6e+02	5.83e+05	1.39e+03	4.2e+02
13	1,2,3,4,7,8-HxCDD	9.60e+05	1.02e+03	9.4e+02	8.07e+05	1.68e+03	4.8e+02
14	1,2,3,6,7,8-HxCDD	9.46e+05	1.02e+03	9.3e+02	7.52e+05	1.68e+03	4.5e+02
15	1,2,3,7,8,9-HxCDD	1.01e+06	1.02e+03	9.9e+02	8.34e+05	1.68e+03	5.0e+02
16	1,2,3,4,6,7,8-HpCDD	8.38e+05	1.17e+03	7.2e+02	8.29e+05	4.84e+02	1.7e+03
17	OCDD	1.16e+06	3.14e+03	3.7e+02	1.30e+06	1.96e+03	6.6e+02
18	13C-2,3,7,8-TCDF	3.28e+07	1.64e+04	2.0e+03	4.11e+07	1.27e+04	3.2e+03
19	13C-1,2,3,7,8-PeCDF	5.29e+07	3.44e+03	1.5e+04	3.26e+07	2.57e+03	1.3e+04
20	13C-2,3,4,7,8-PeCDF	5.43e+07	3.44e+03	1.6e+04	3.38e+07	2.57e+03	1.3e+04
21	13C-1,2,3,4,7,8-HxCDF	2.86e+07	3.47e+03	8.3e+03	5.39e+07	4.48e+03	1.2e+04
22	13C-1,2,3,6,7,8-HxCDF	3.07e+07	3.47e+03	8.8e+03	5.68e+07	4.48e+03	1.3e+04
23	13C-2,3,4,6,7,8-HxCDF	2.95e+07	3.47e+03	8.5e+03	5.46e+07	4.48e+03	1.2e+04
24	13C-1,2,3,7,8,9-HxCDF	2.51e+07	3.47e+03	7.2e+03	4.72e+07	4.48e+03	1.1e+04
25	13C-1,2,3,4,6,7,8-HpCDF	2.28e+07	1.29e+04	1.8e+03	4.99e+07	2.56e+04	2.0e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.87e+07	1.29e+04	1.5e+03	4.06e+07	2.56e+04	1.6e+03
27	13C-2,3,7,8-TCDD	2.37e+07	1.79e+04	1.3e+03	2.98e+07	7.48e+03	4.0e+03
28	13C-1,2,3,7,8-PeCDD	3.81e+07	3.05e+03	1.3e+04	2.43e+07	1.79e+03	1.4e+04
29	13C-1,2,3,4,7,8-HxCDD	3.53e+07	4.99e+03	7.1e+03	2.84e+07	2.28e+03	1.2e+04
30	13C-1,2,3,6,7,8-HxCDD	3.46e+07	4.99e+03	6.9e+03	2.73e+07	2.28e+03	1.2e+04
31	13C-1,2,3,4,6,7,8-HpCDD	3.08e+07	3.94e+03	7.8e+03	2.93e+07	1.60e+03	1.8e+04
32	13C-OCDD	3.85e+07	1.12e+03	3.4e+04	4.22e+07	1.86e+03	2.3e+04
33	13C-1,2,3,4-TCDD	2.49e+07	1.79e+04	1.4e+03	3.07e+07	7.48e+03	4.1e+03
34	13C-1,2,3,7,8,9-HxCDD	3.76e+07	4.99e+03	7.5e+03	3.01e+07	2.28e+03	1.3e+04
35	37Cl-2,3,7,8-TCDD	3.03e+05	3.87e+03	7.8e+01			

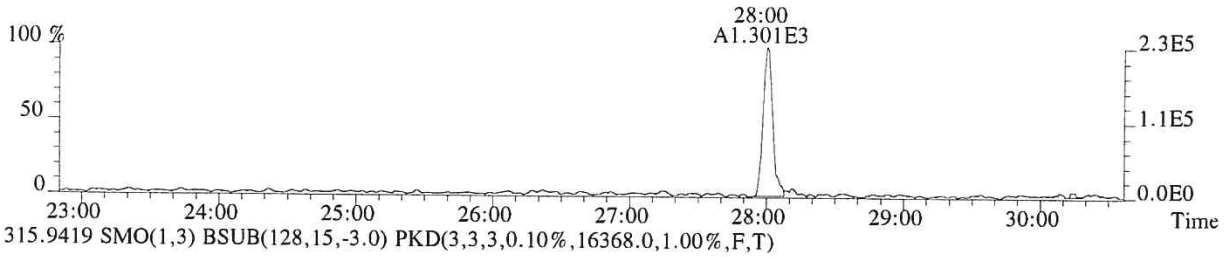
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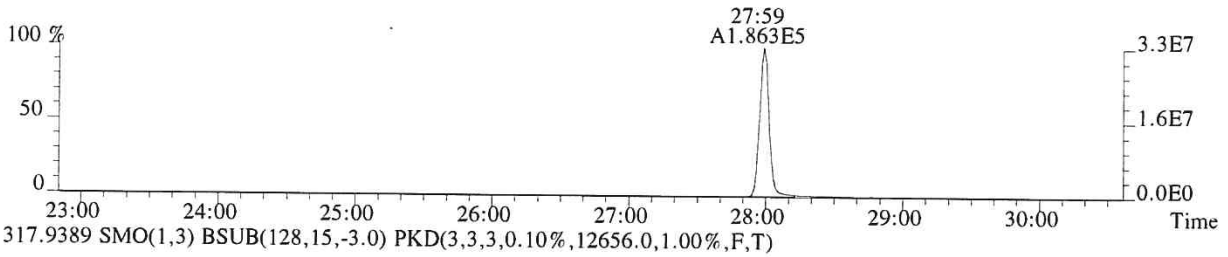
File:P614683 #1-552 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2516.0,1.00%,F,T)



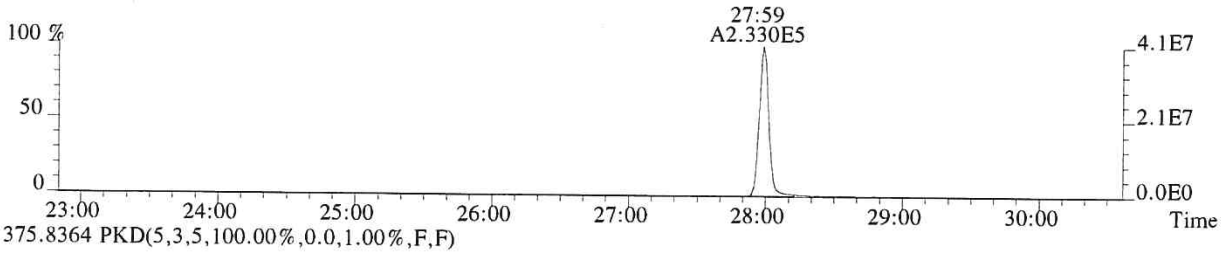
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4676.0,1.00%,F,T)



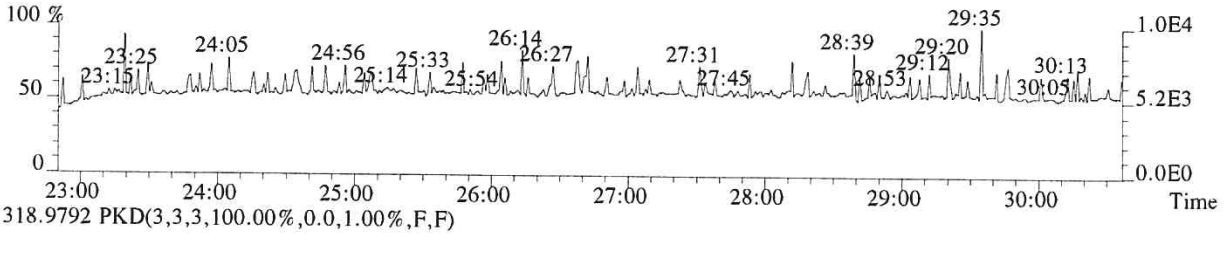
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,16368.0,1.00%,F,T)



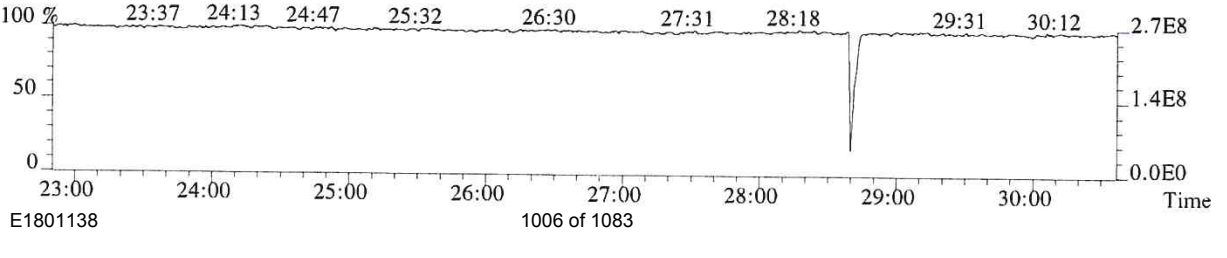
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12656.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

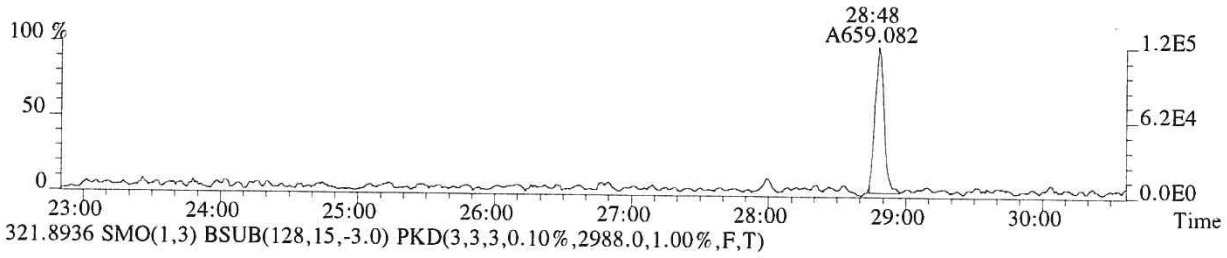


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

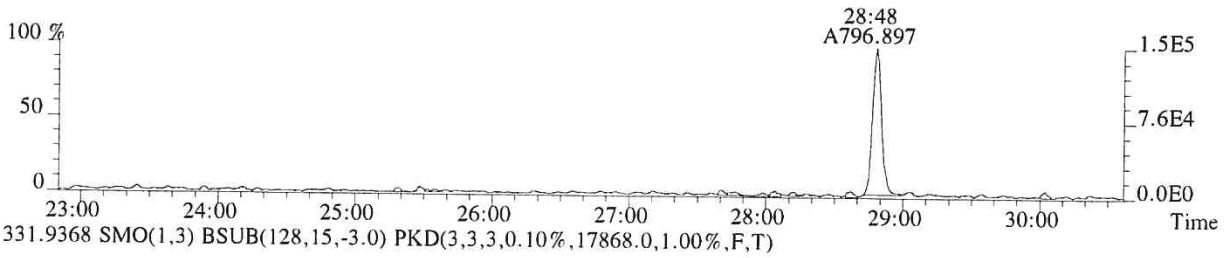


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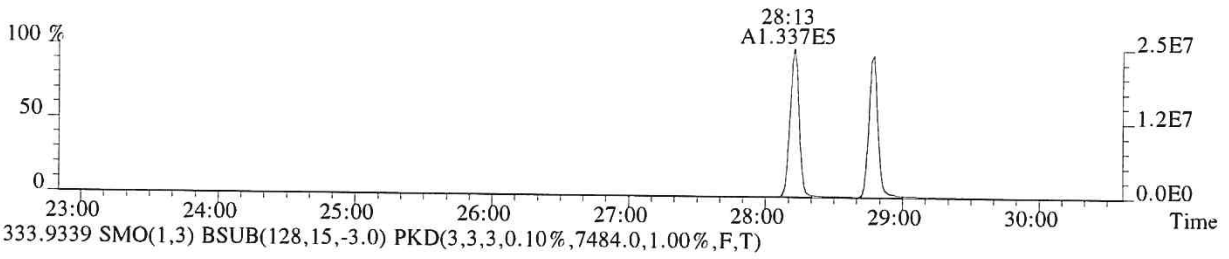
File:P614683 #1-552 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6880.0,1.00%,F,T)



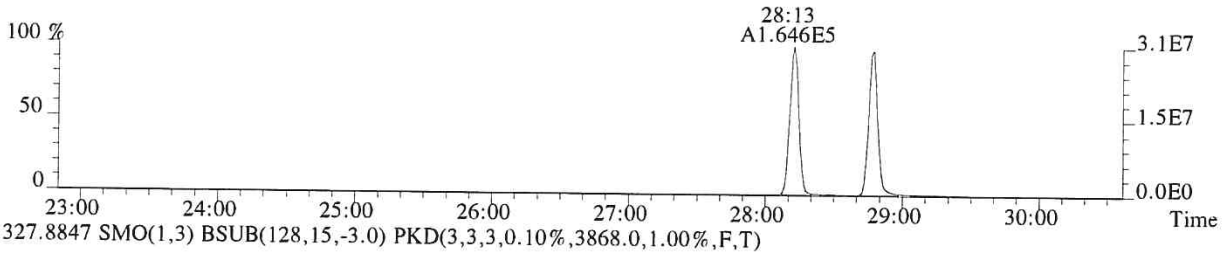
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2988.0,1.00%,F,T)



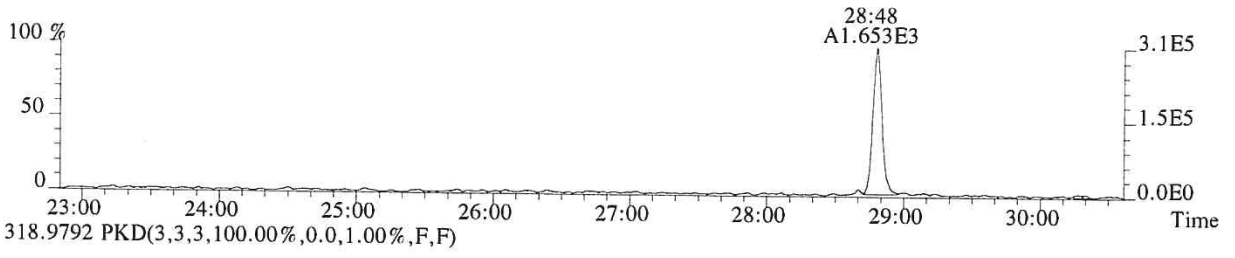
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,17868.0,1.00%,F,T)



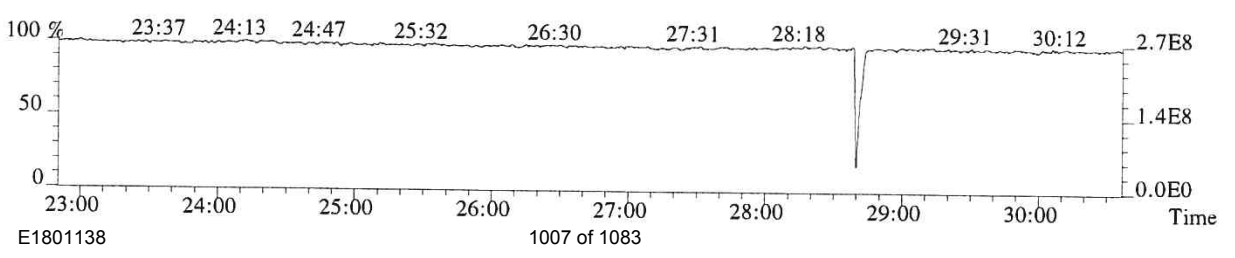
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7484.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3868.0,1.00%,F,T)

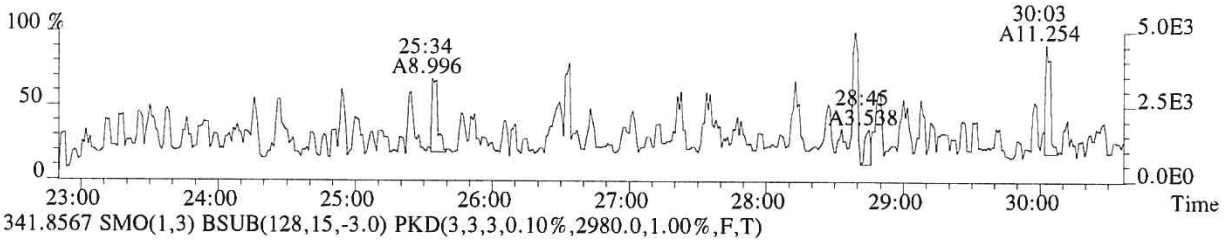


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

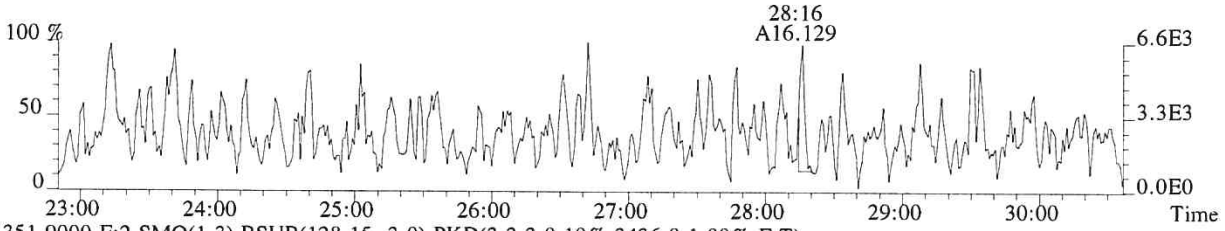


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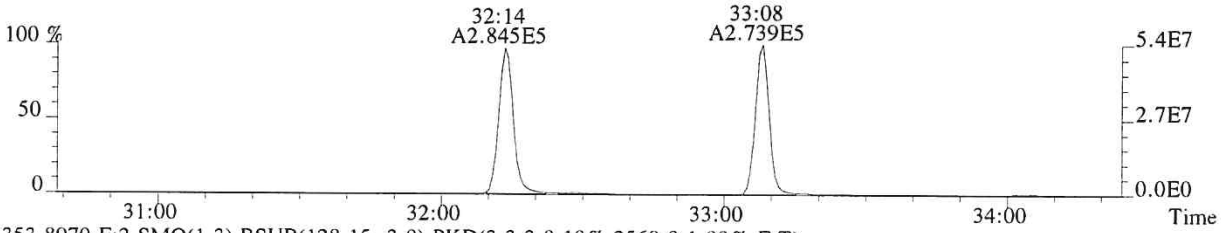
File:P614683 #1-552 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1796.0,1.00%,F,T)



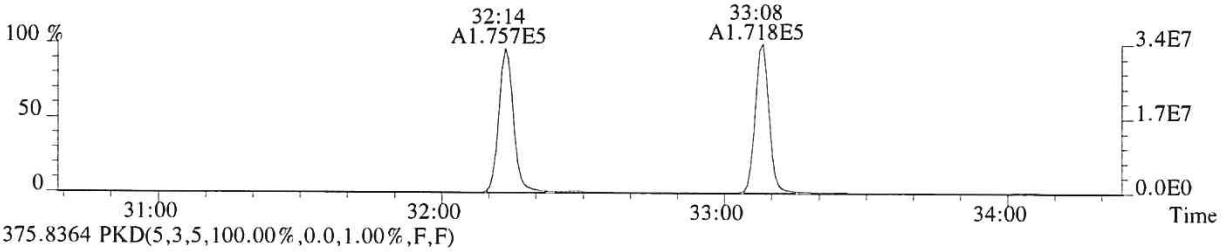
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2980.0,1.00%,F,T)



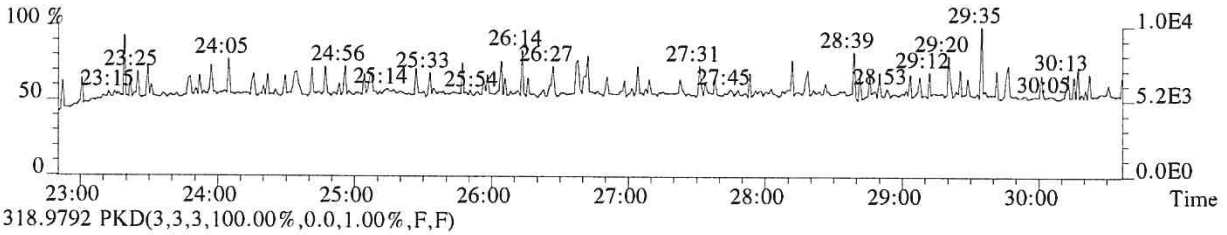
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3436.0,1.00%,F,T)



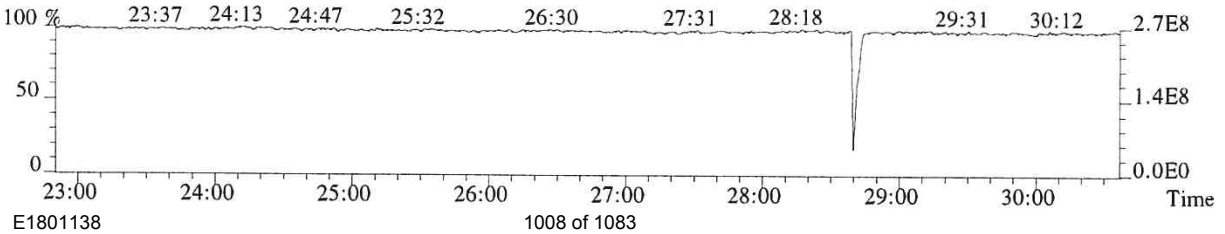
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2568.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



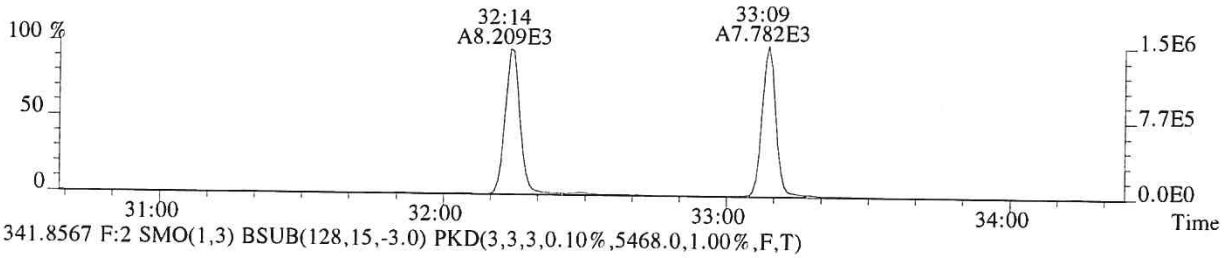
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



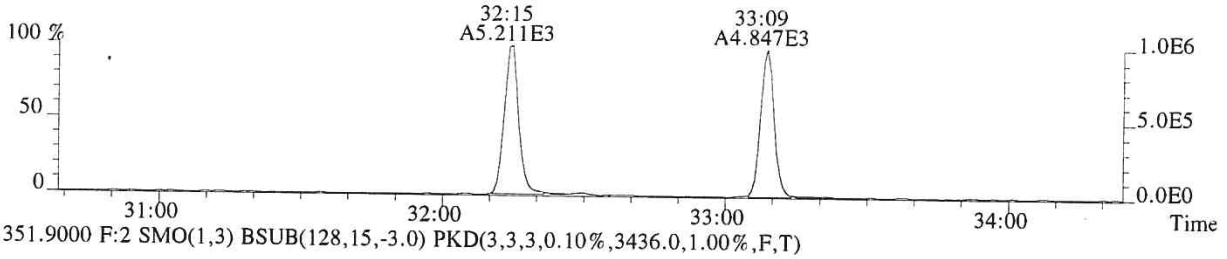
017889

File:P614683 #1-339 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1

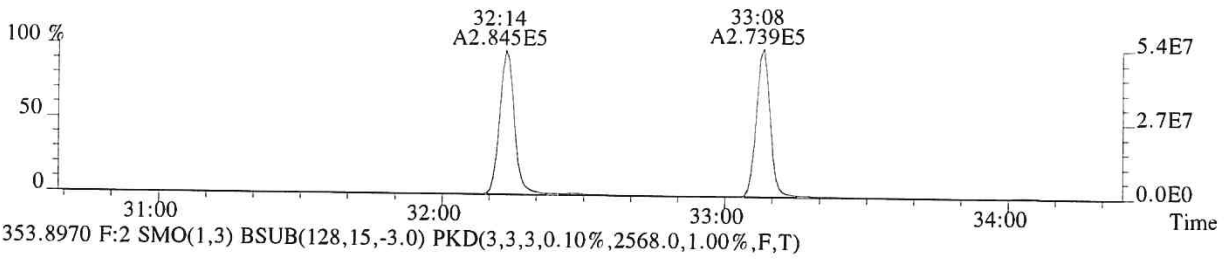
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1068.0,1.00%,F,T)



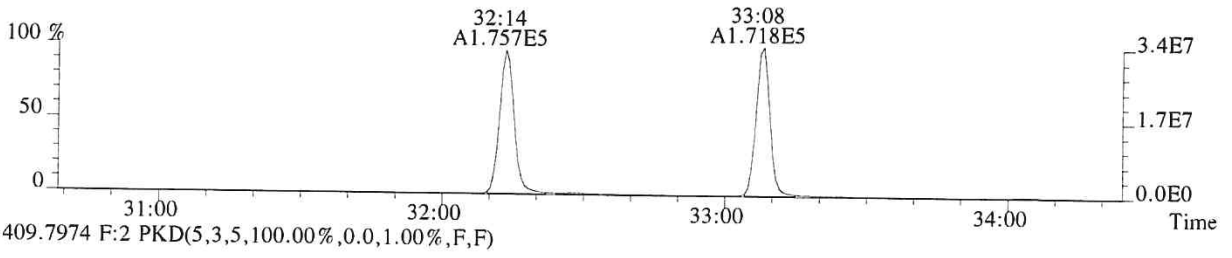
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5468.0,1.00%,F,T)



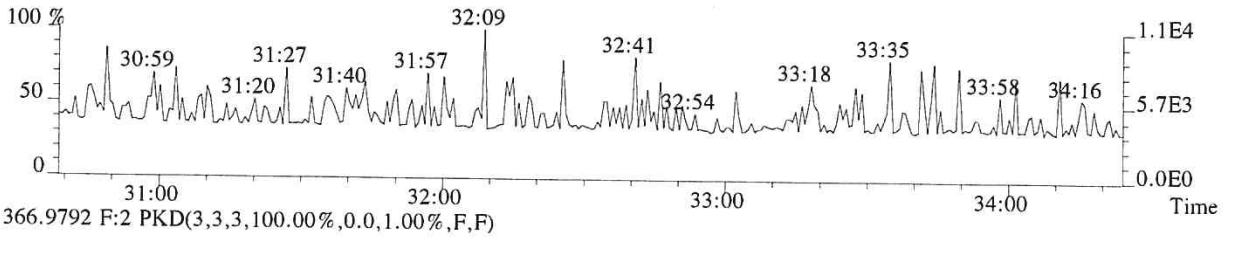
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3436.0,1.00%,F,T)



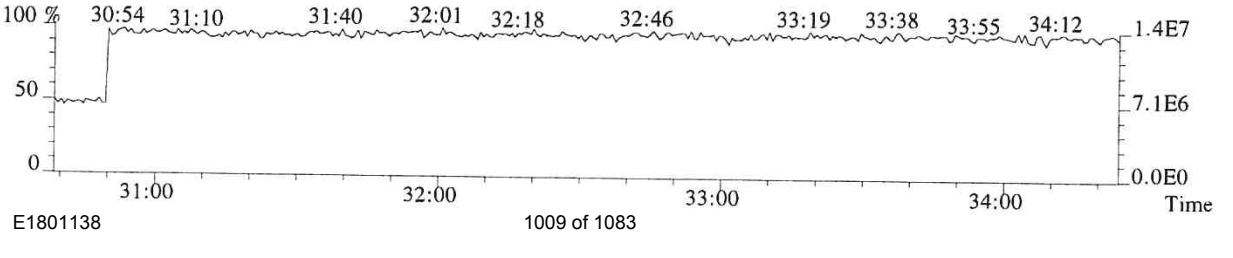
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2568.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

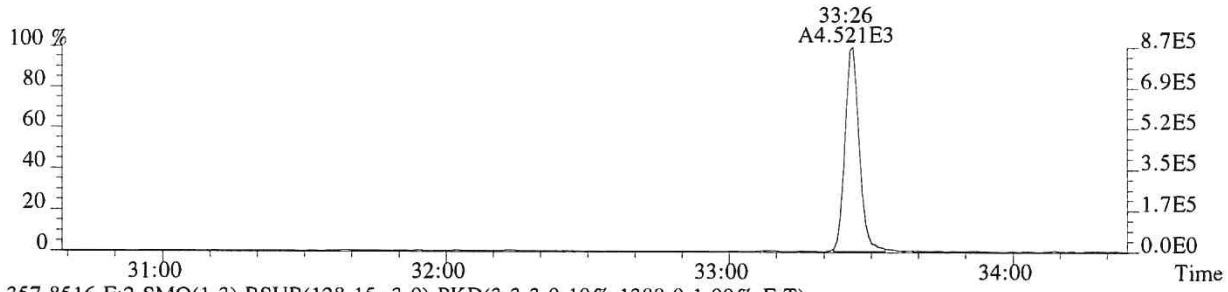


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

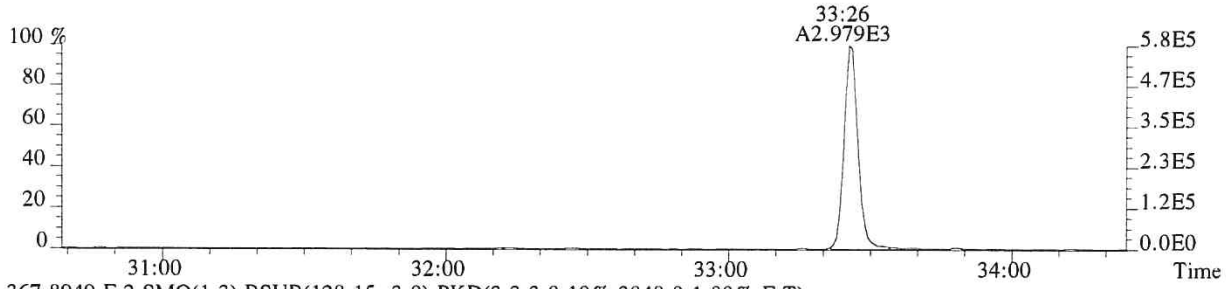


017890

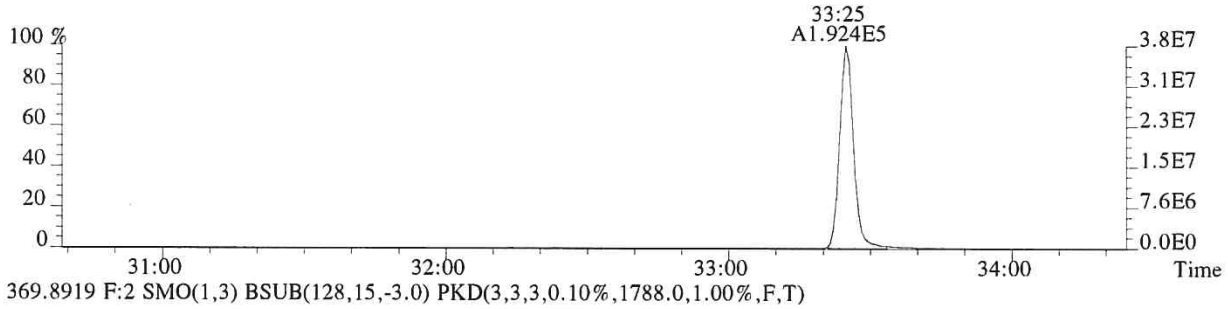
File:P614683 #1-339 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2368.0,1.00%,F,T)



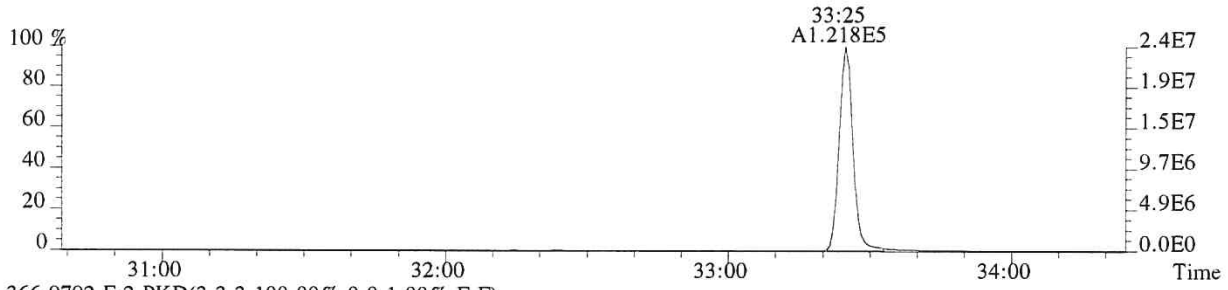
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1388.0,1.00%,F,T)



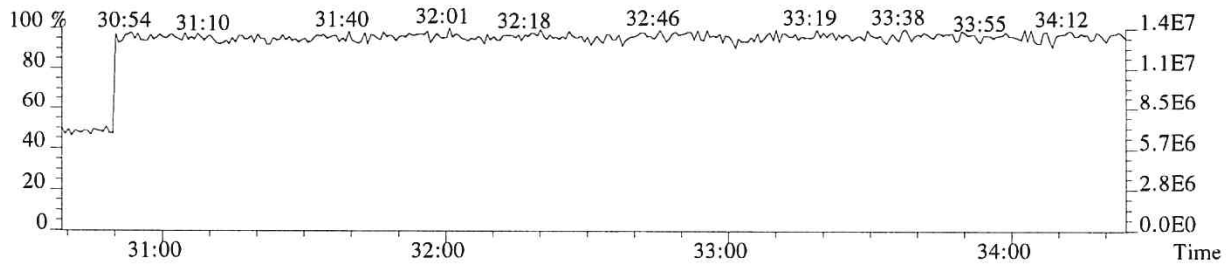
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3048.0,1.00%,F,T)



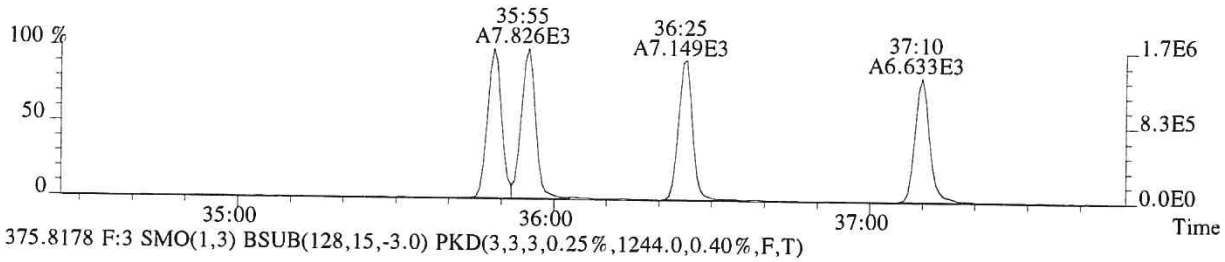
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1788.0,1.00%,F,T)



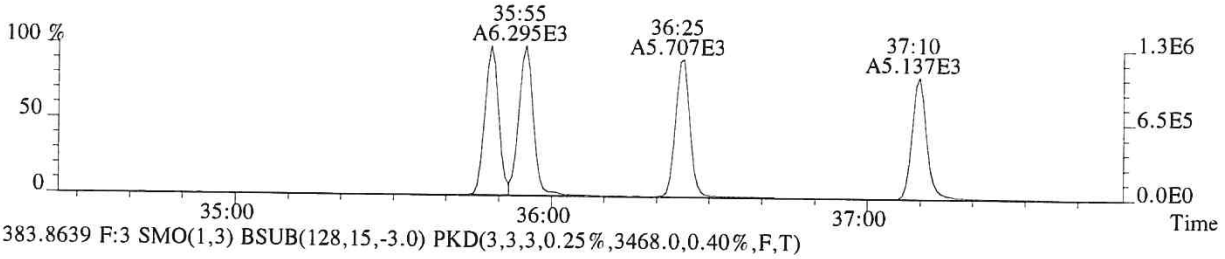
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



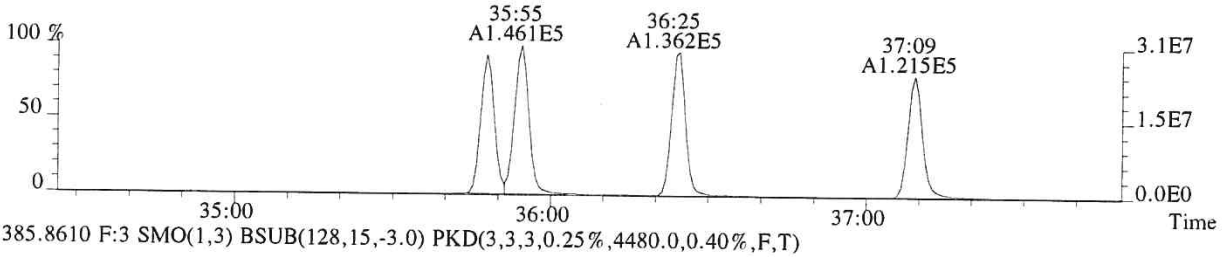
File:P614683 #1-304 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3192.0,0.40%,F,T)



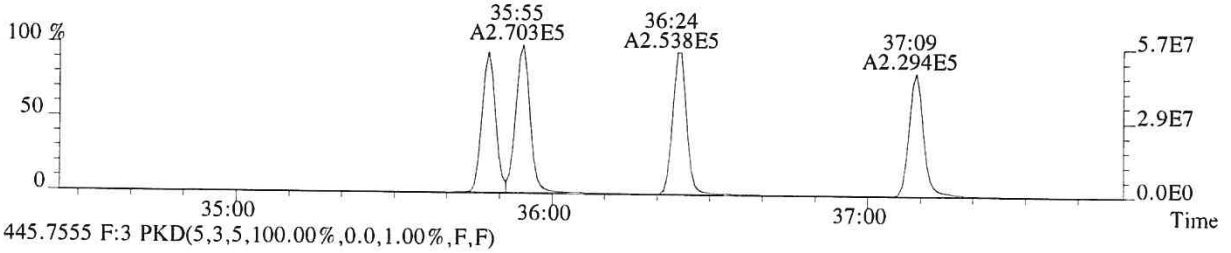
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1244.0,0.40%,F,T)



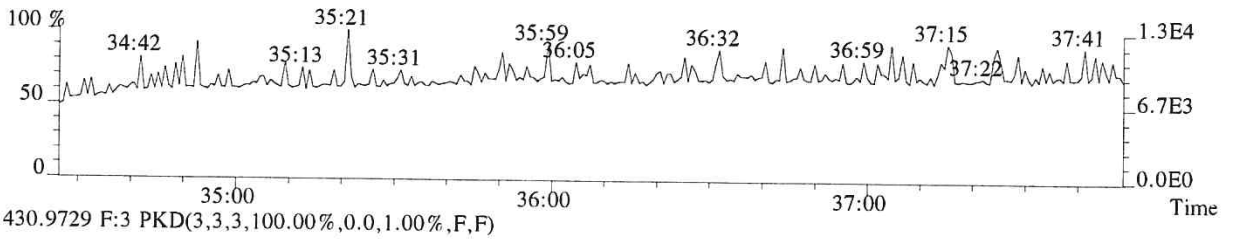
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3468.0,0.40%,F,T)



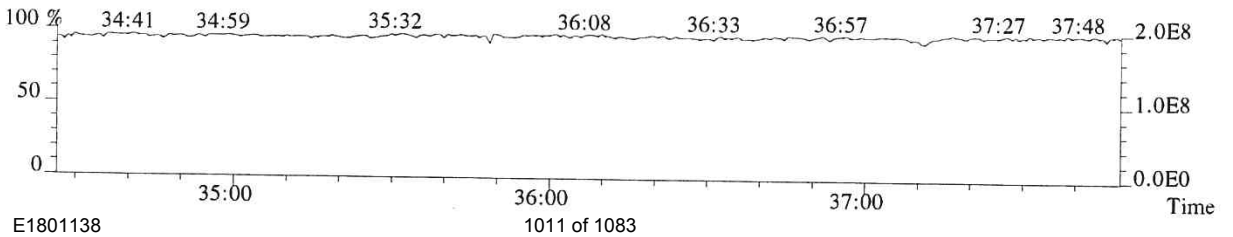
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4480.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

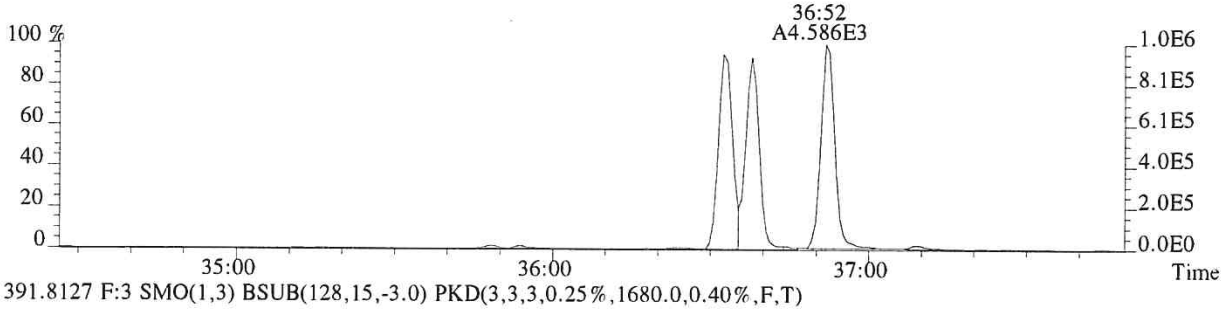


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

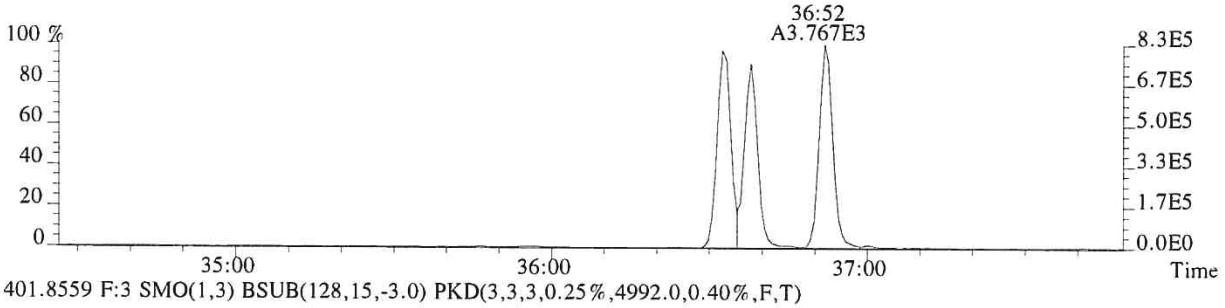


017892

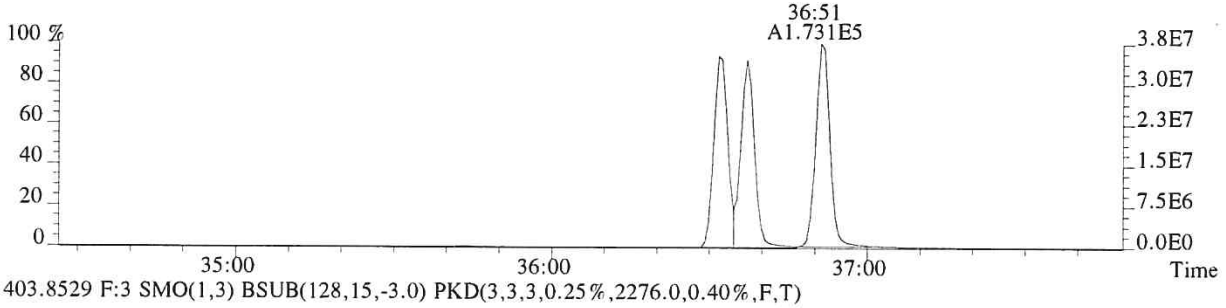
File:P614683 #1-304 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1020.0,0.40%,F,T)



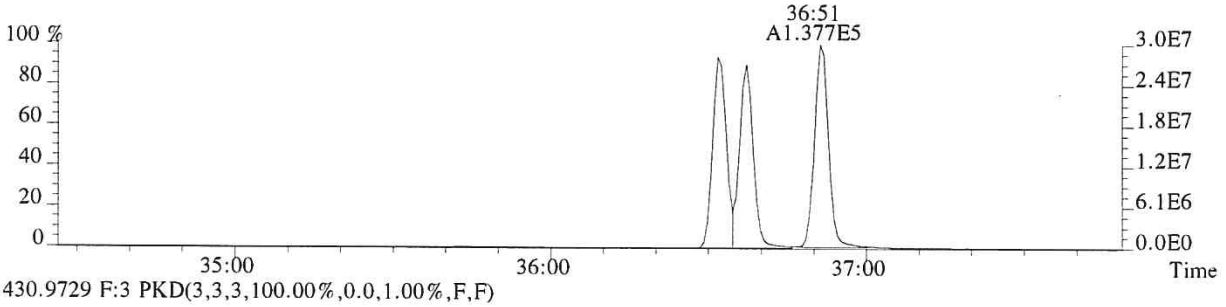
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1680.0,0.40%,F,T)



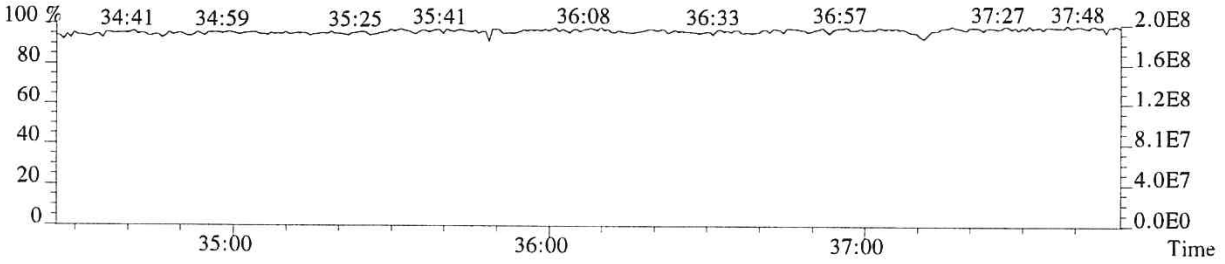
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4992.0,0.40%,F,T)



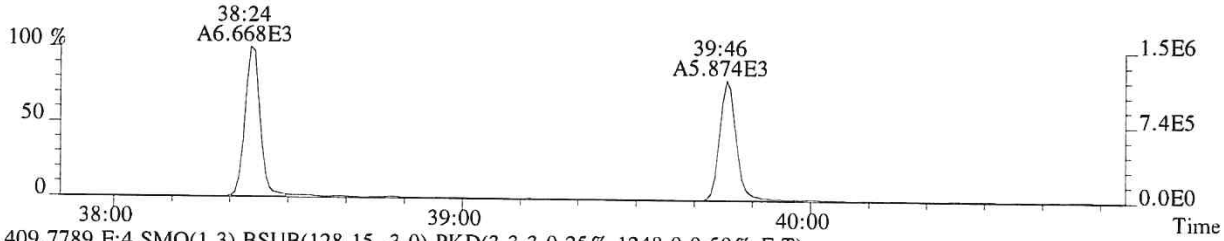
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2276.0,0.40%,F,T)



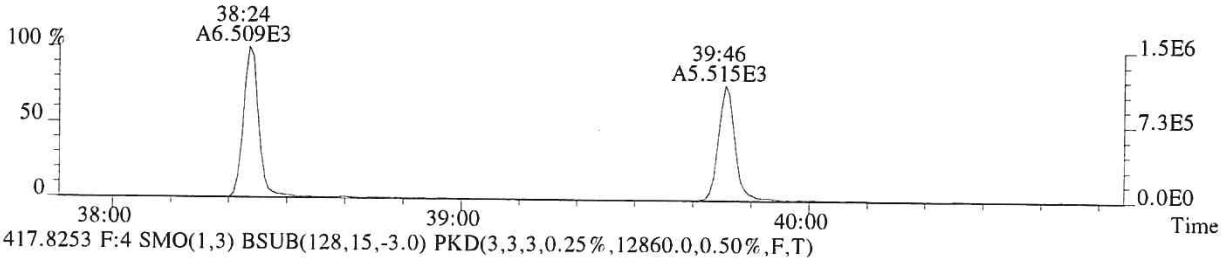
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



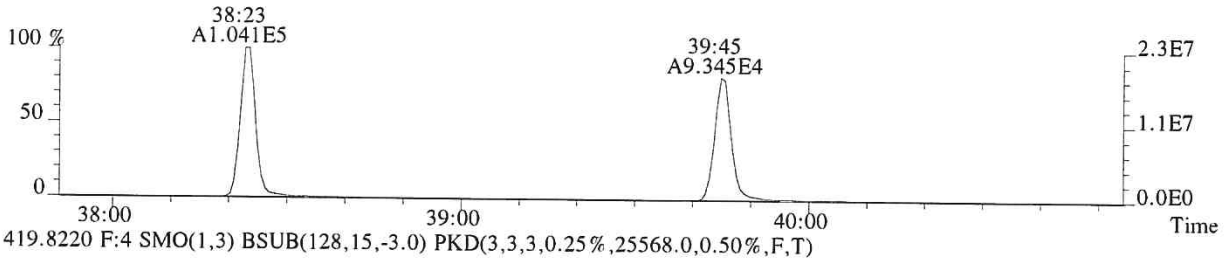
File:P614683 #1-276 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1968.0,0.50%,F,T)



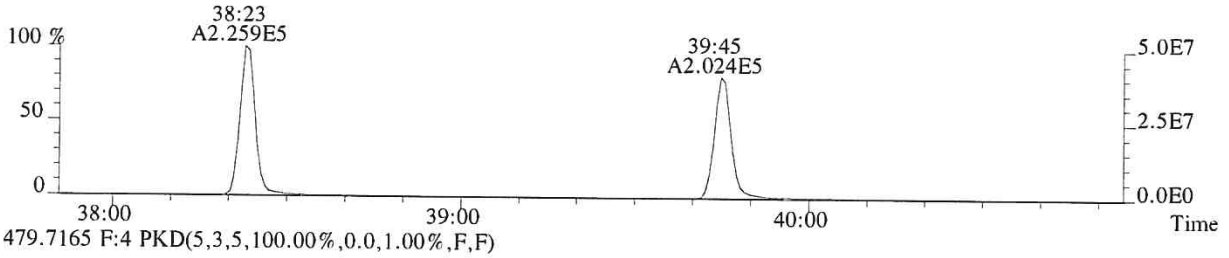
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1248.0,0.50%,F,T)



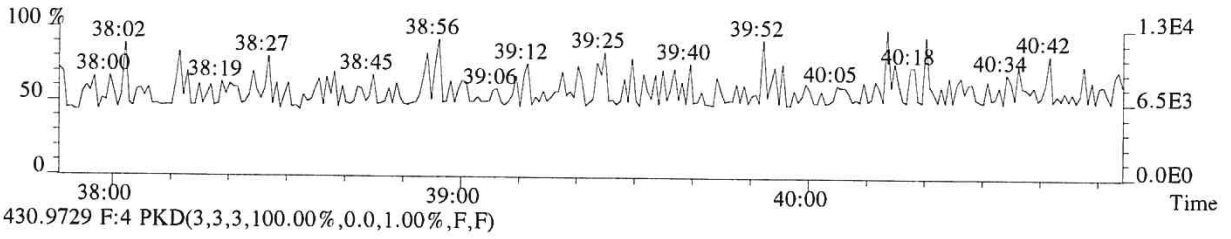
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,12860.0,0.50%,F,T)



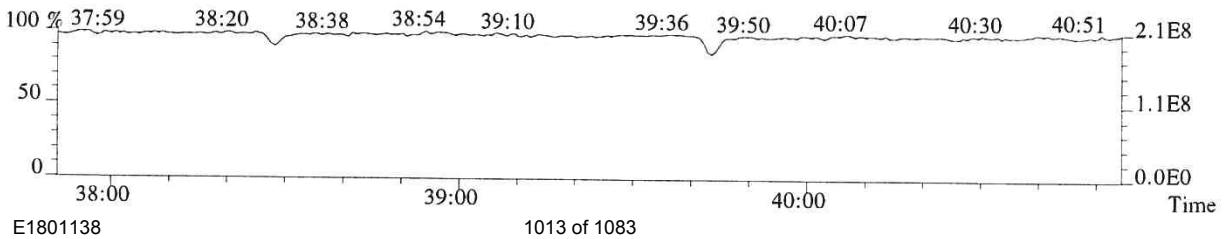
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,25568.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

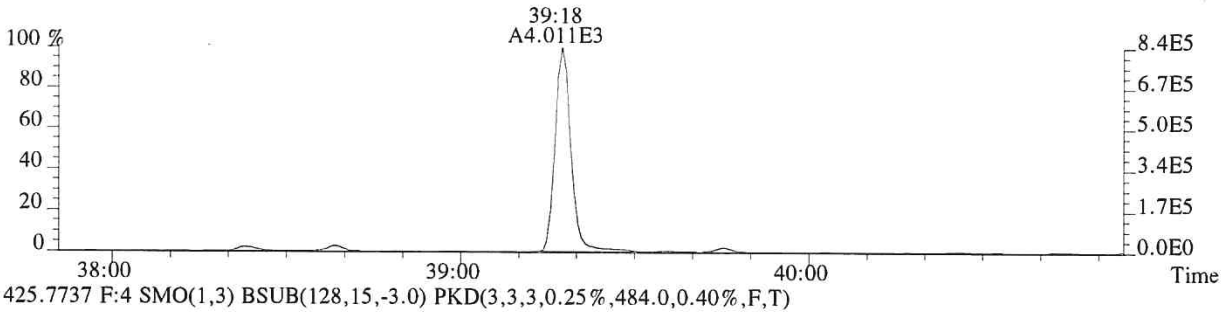


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

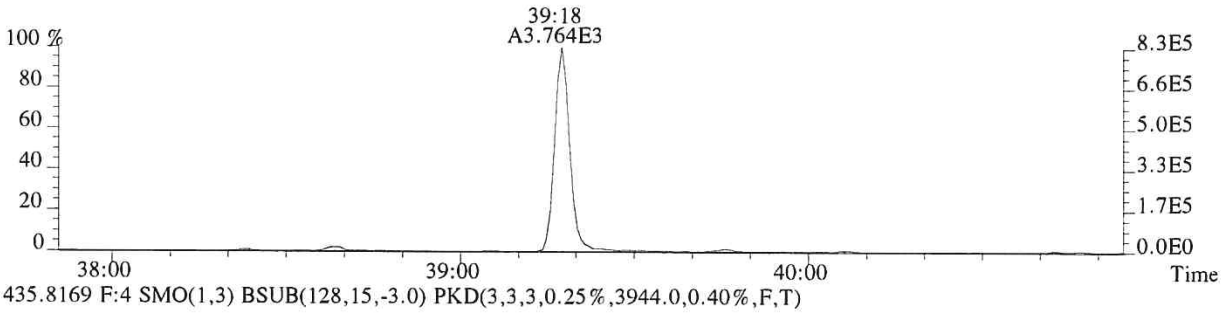


017894

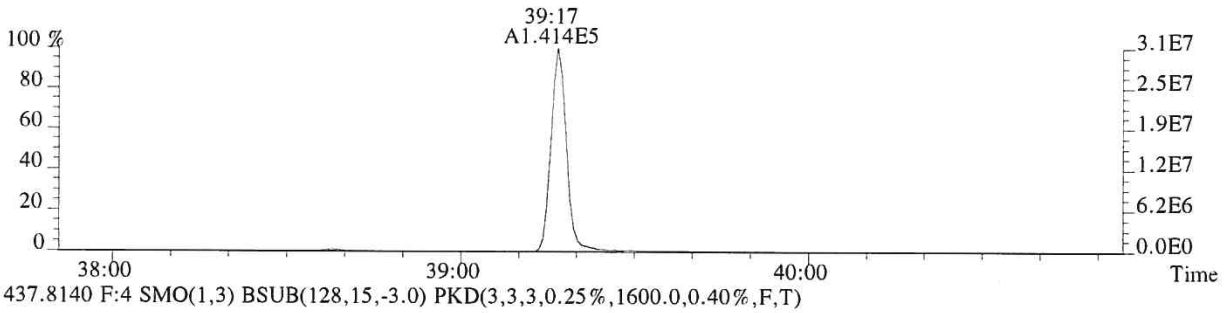
File:P614683 #1-276 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1168.0,0.40%,F,T)



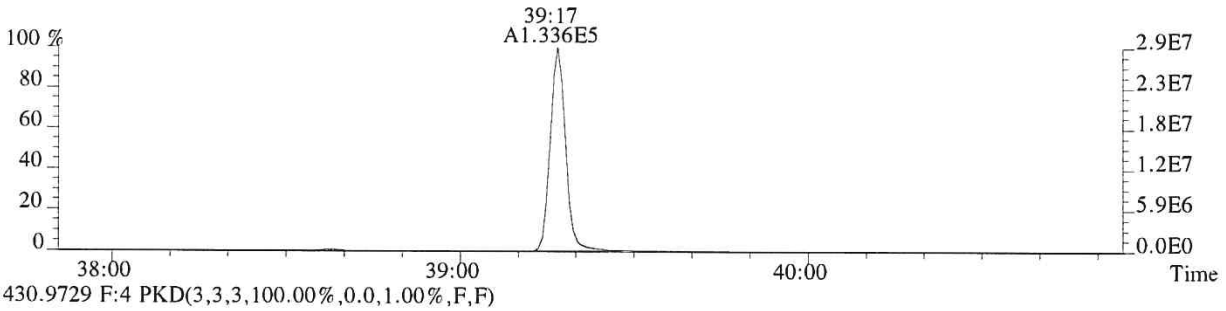
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,484.0,0.40%,F,T)



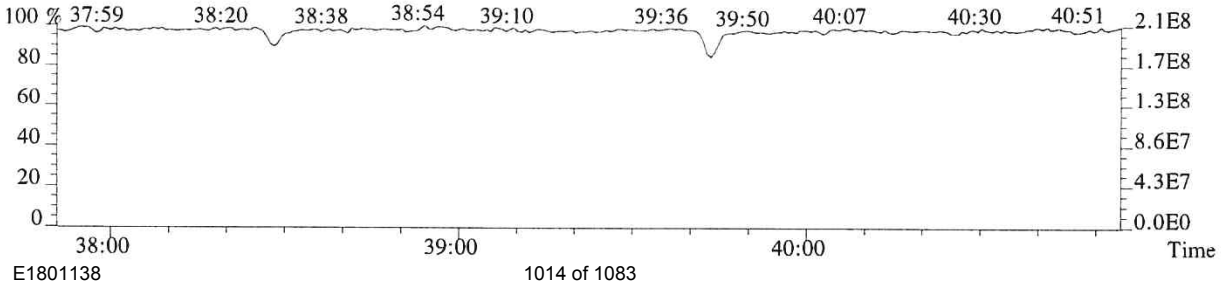
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3944.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1600.0,0.40%,F,T)

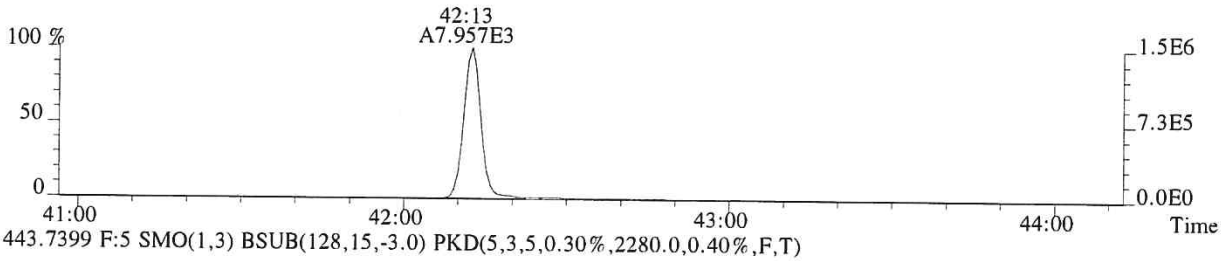


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

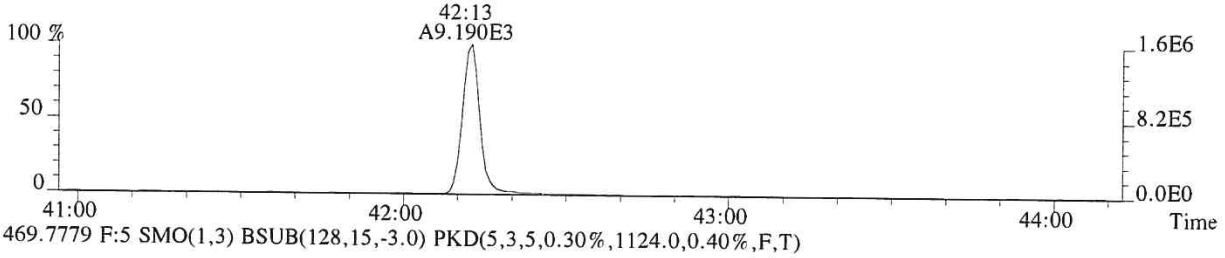


File:P614683 #1-295 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1

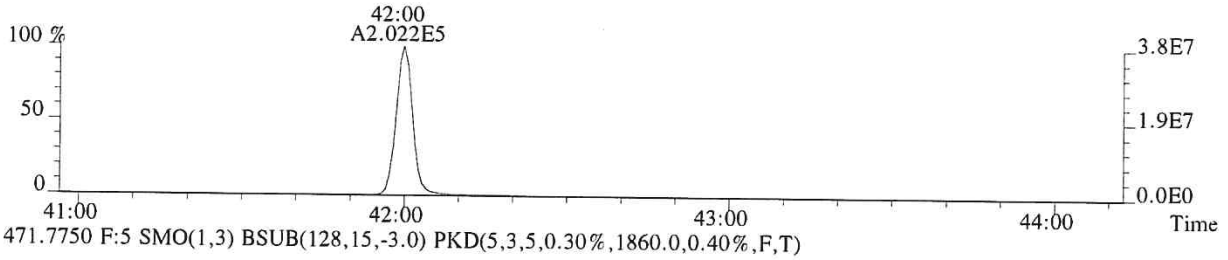
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1152.0,0.40%,F,T)



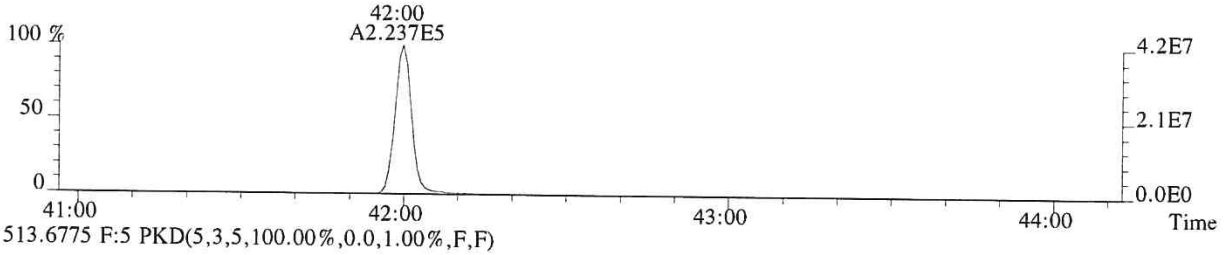
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2280.0,0.40%,F,T)



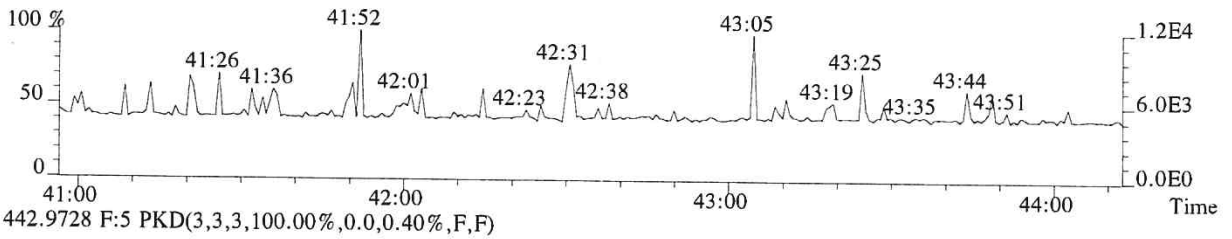
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1124.0,0.40%,F,T)



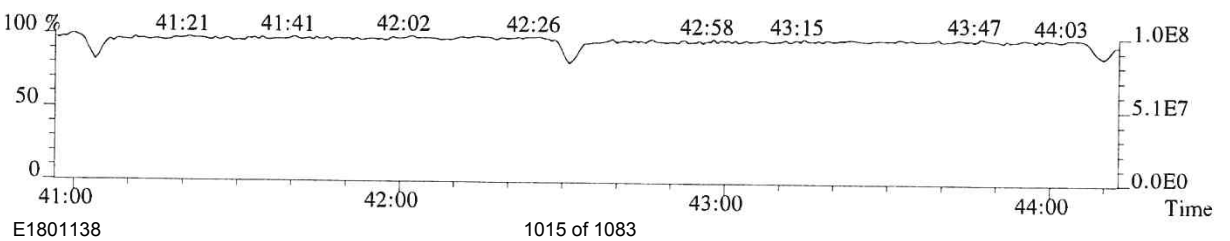
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1860.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

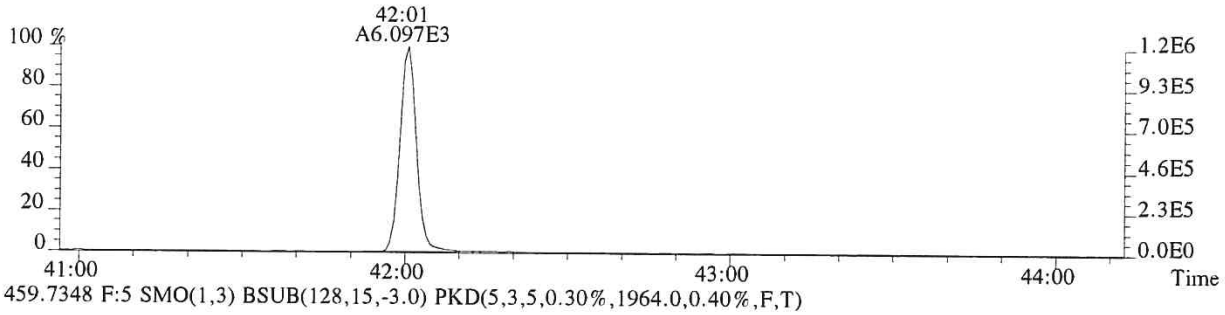


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

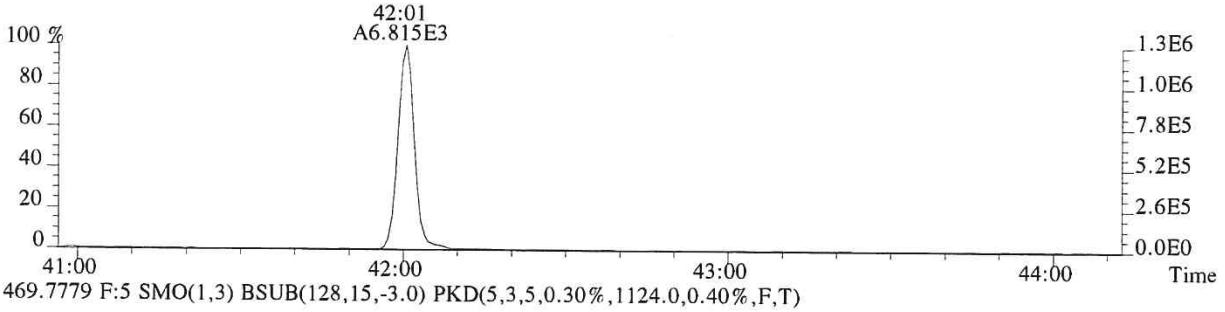


017896

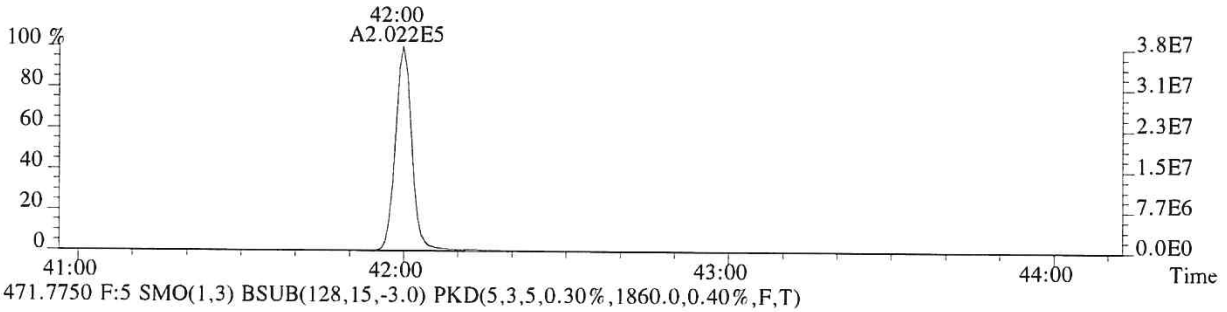
File:P614683 #1-295 Acq:25-SEP-2018 15:08:49 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS1
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3136.0,0.40%,F,T)



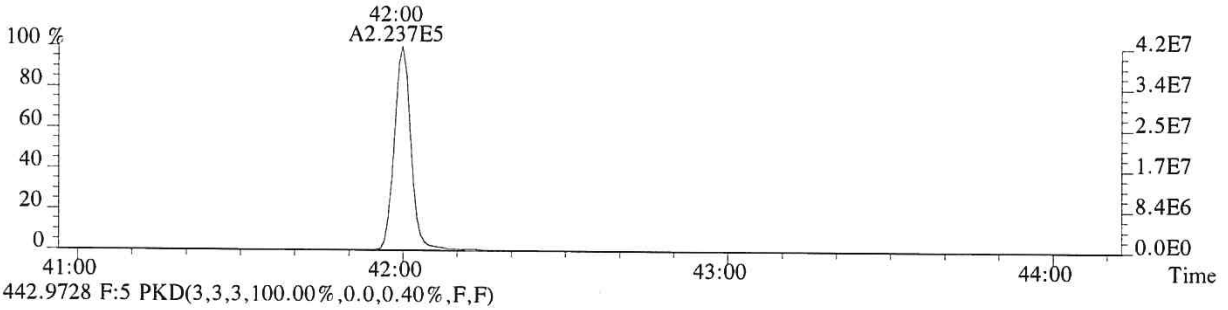
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1964.0,0.40%,F,T)



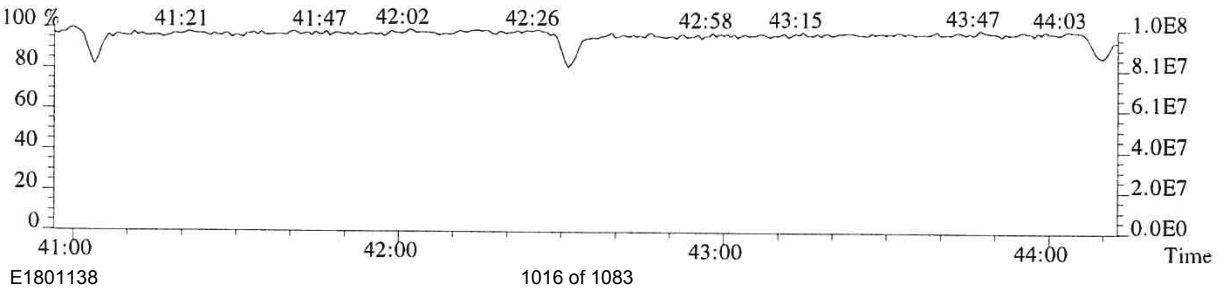
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1124.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1860.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
193434

Run #3 Filename P614684 Samp: 1 Inj: 1 Acquired: 25-SEP-18 15:59:37
Processed: 26-SEP-18 07:39:08 Sample ID: CS2

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:00	3.102e+03	3.732e+03	0.83	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:14	2.387e+04	1.519e+04	1.57	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:08	2.329e+04	1.484e+04	1.57	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	2.143e+04	1.713e+04	1.25	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	2.340e+04	1.874e+04	1.25	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	2.188e+04	1.713e+04	1.28	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:09	1.950e+04	1.588e+04	1.23	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	1.863e+04	1.764e+04	1.06	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	1.650e+04	1.567e+04	1.05	yes	no	1.463
10	Unk	OCDF	42:12	2.250e+04	2.478e+04	0.91	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	1.874e+03	2.328e+03	0.80	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	1.440e+04	9.416e+03	1.53	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	1.279e+04	1.013e+04	1.26	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	1.275e+04	1.020e+04	1.25	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:52	1.359e+04	1.091e+04	1.25	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	1.169e+04	1.088e+04	1.07	yes	no	1.112
17	Unk	OCDD	42:01	1.626e+04	1.848e+04	0.88	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	1.350e+05	1.713e+05	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	2.144e+05	1.340e+05	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	2.142e+05	1.318e+05	1.62	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:47	9.603e+04	1.811e+05	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:54	1.132e+05	2.120e+05	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:24	1.055e+05	1.978e+05	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	9.513e+04	1.787e+05	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:23	7.767e+04	1.706e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:45	6.849e+04	1.521e+05	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	9.327e+04	1.167e+05	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	1.531e+05	9.729e+04	1.57	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:32	1.232e+05	9.748e+04	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	1.208e+05	9.608e+04	1.26	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	1.060e+05	1.018e+05	1.04	yes	no	0.857
32	IS	13C-OCDD	42:00	1.501e+05	1.663e+05	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:12	9.647e+04	1.194e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:51	1.360e+05	1.078e+05	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	4.600e+03				no	1.086

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Signal/Noise Height Ratio Summary

CLIENT ID.
193434

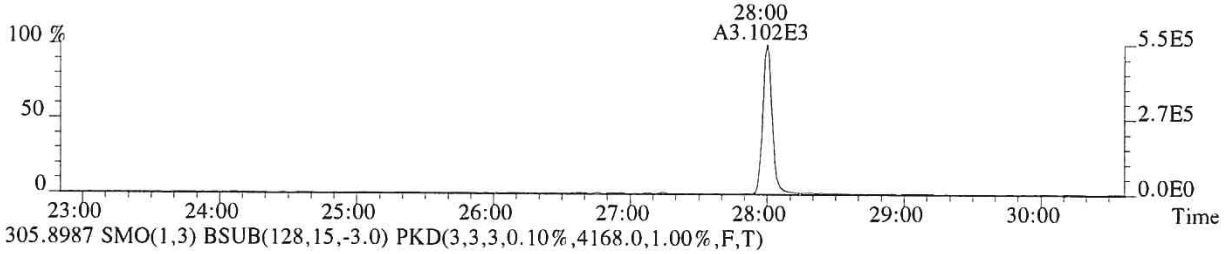
Run #3 Filename P614684 Samp: 1 Inj: 1 Acquired: 25-SEP-18 15:59:37
Processed: 26-SEP-18 07:39:08 LAB. ID: CS2

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.46e+05	1.35e+03	4.0e+02	6.81e+05	4.17e+03	1.6e+02
2	1,2,3,7,8-PeCDF	4.40e+06	1.19e+03	3.7e+03	2.83e+06	5.62e+03	5.0e+02
3	2,3,4,7,8-PeCDF	4.45e+06	1.19e+03	3.7e+03	2.83e+06	5.62e+03	5.0e+02
4	1,2,3,4,7,8-HxCDF	4.64e+06	2.66e+03	1.7e+03	3.65e+06	1.33e+03	2.7e+03
5	1,2,3,6,7,8-HxCDF	4.85e+06	2.66e+03	1.8e+03	3.88e+06	1.33e+03	2.9e+03
6	2,3,4,6,7,8-HxCDF	4.77e+06	2.66e+03	1.8e+03	3.75e+06	1.33e+03	2.8e+03
7	1,2,3,7,8,9-HxCDF	3.92e+06	2.66e+03	1.5e+03	3.16e+06	1.33e+03	2.4e+03
8	1,2,3,4,6,7,8-HpCDF	4.16e+06	4.06e+03	1.0e+03	3.98e+06	5.19e+03	7.7e+02
9	1,2,3,4,7,8,9-HpCDF	3.43e+06	4.06e+03	8.5e+02	3.23e+06	5.19e+03	6.2e+02
10	OCDF	4.02e+06	1.02e+03	3.9e+03	4.45e+06	3.18e+03	1.4e+03
11	2,3,7,8-TCDD	3.59e+05	5.08e+03	7.1e+01	4.49e+05	2.84e+03	1.6e+02
12	1,2,3,7,8-PeCDD	2.79e+06	2.23e+03	1.3e+03	1.83e+06	1.03e+03	1.8e+03
13	1,2,3,4,7,8-HxCDD	2.90e+06	1.16e+03	2.5e+03	2.30e+06	2.22e+03	1.0e+03
14	1,2,3,6,7,8-HxCDD	2.75e+06	1.16e+03	2.4e+03	2.20e+06	2.22e+03	9.9e+02
15	1,2,3,7,8,9-HxCDD	2.97e+06	1.16e+03	2.6e+03	2.38e+06	2.22e+03	1.1e+03
16	1,2,3,4,6,7,8-HpCDD	2.45e+06	1.22e+03	2.0e+03	2.30e+06	1.43e+03	1.6e+03
17	OCDD	3.03e+06	8.24e+02	3.7e+03	3.48e+06	2.34e+03	1.5e+03
18	13C-2,3,7,8-TCDF	2.30e+07	1.44e+04	1.6e+03	2.91e+07	8.40e+03	3.5e+03
19	13C-1,2,3,7,8-PeCDF	3.88e+07	2.39e+03	1.6e+04	2.43e+07	1.71e+03	1.4e+04
20	13C-2,3,4,7,8-PeCDF	4.22e+07	2.39e+03	1.8e+04	2.60e+07	1.71e+03	1.5e+04
21	13C-1,2,3,4,7,8-HxCDF	2.07e+07	2.16e+03	9.6e+03	3.93e+07	5.29e+03	7.4e+03
22	13C-1,2,3,6,7,8-HxCDF	2.36e+07	2.16e+03	1.1e+04	4.45e+07	5.29e+03	8.4e+03
23	13C-2,3,4,6,7,8-HxCDF	2.32e+07	2.16e+03	1.1e+04	4.39e+07	5.29e+03	8.3e+03
24	13C-1,2,3,7,8,9-HxCDF	1.94e+07	2.16e+03	8.9e+03	3.69e+07	5.29e+03	7.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.76e+07	7.69e+03	2.3e+03	3.85e+07	2.07e+04	1.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.41e+07	7.69e+03	1.8e+03	3.12e+07	2.07e+04	1.5e+03
27	13C-2,3,7,8-TCDD	1.74e+07	1.66e+04	1.0e+03	2.17e+07	7.77e+03	2.8e+03
28	13C-1,2,3,7,8-PeCDD	2.92e+07	3.94e+03	7.4e+03	1.87e+07	3.45e+03	5.4e+03
29	13C-1,2,3,4,7,8-HxCDD	2.82e+07	5.37e+03	5.3e+03	2.21e+07	2.98e+03	7.4e+03
30	13C-1,2,3,6,7,8-HxCDD	2.61e+07	5.37e+03	4.9e+03	2.11e+07	2.98e+03	7.1e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.24e+07	3.06e+03	7.3e+03	2.12e+07	2.68e+03	7.9e+03
32	13C-OCDD	2.74e+07	2.09e+03	1.3e+04	3.02e+07	1.61e+03	1.9e+04
33	13C-1,2,3,4-TCDD	1.78e+07	1.66e+04	1.1e+03	2.20e+07	7.77e+03	2.8e+03
34	13C-1,2,3,7,8,9-HxCDD	2.99e+07	5.37e+03	5.6e+03	2.35e+07	2.98e+03	7.9e+03
35	37Cl-2,3,7,8-TCDD	8.73e+05	3.54e+03	2.5e+02			

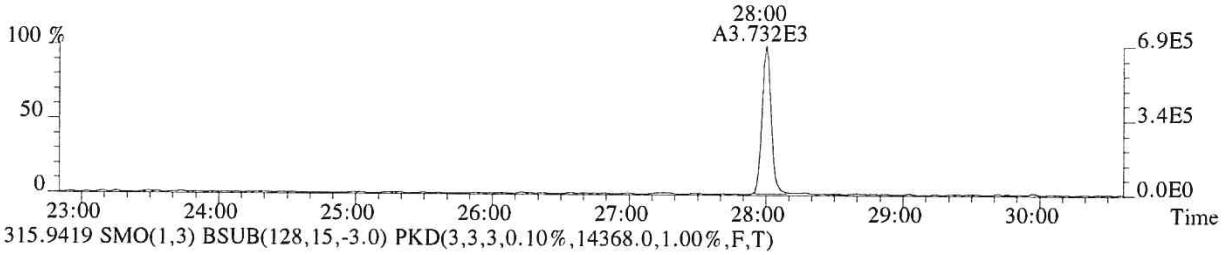
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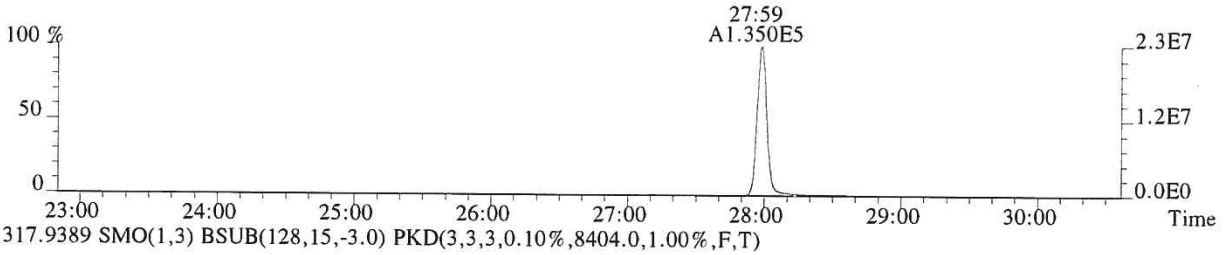
File:P614684 #1-552 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1352.0,1.00%,F,T)



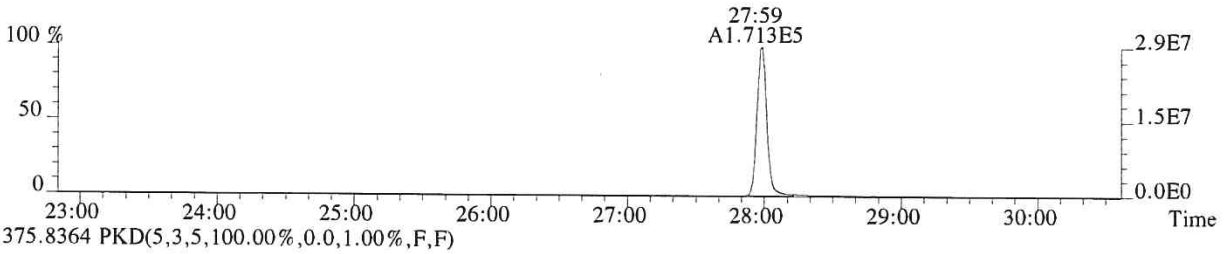
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4168.0,1.00%,F,T)



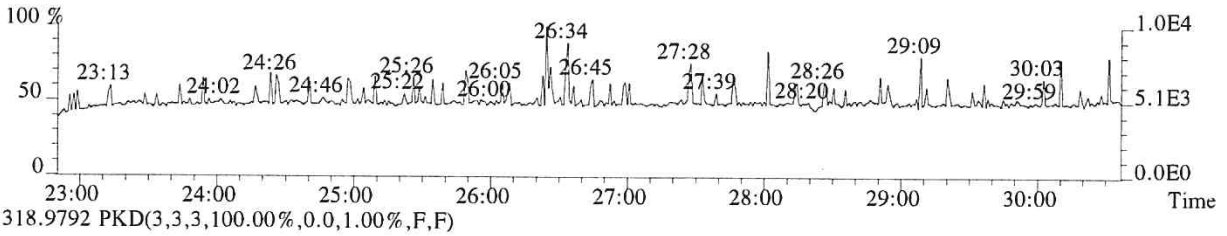
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,14368.0,1.00%,F,T)



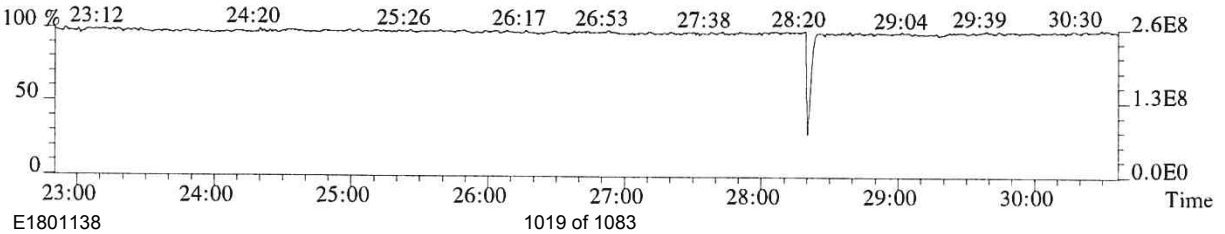
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8404.0,1.00%,F,T)



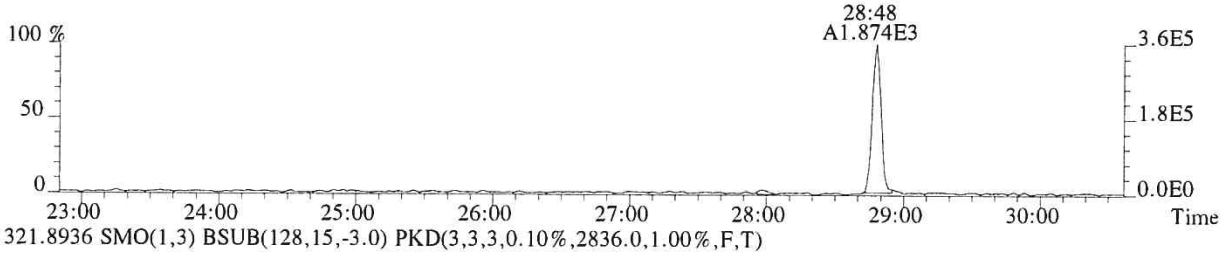
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



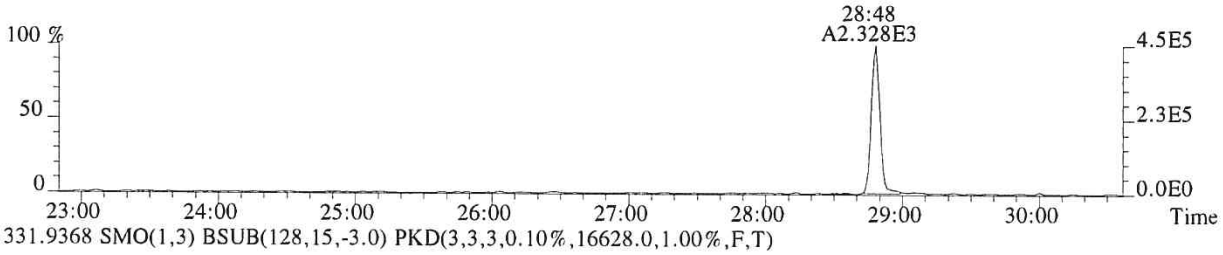
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



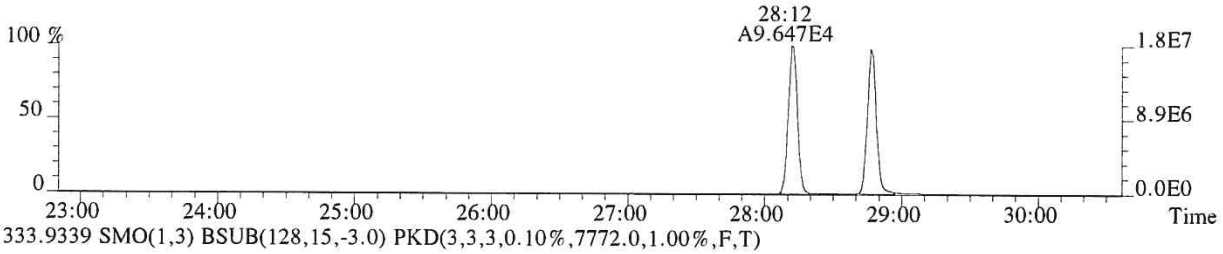
File:P614684 #1-552 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5080.0,1.00%,F,T)



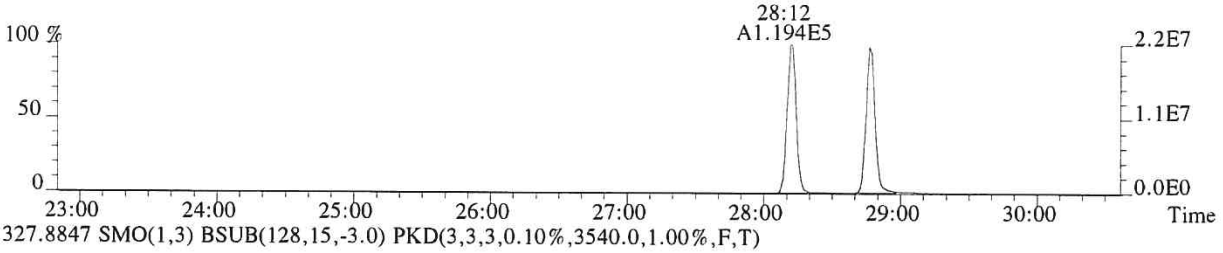
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2836.0,1.00%,F,T)



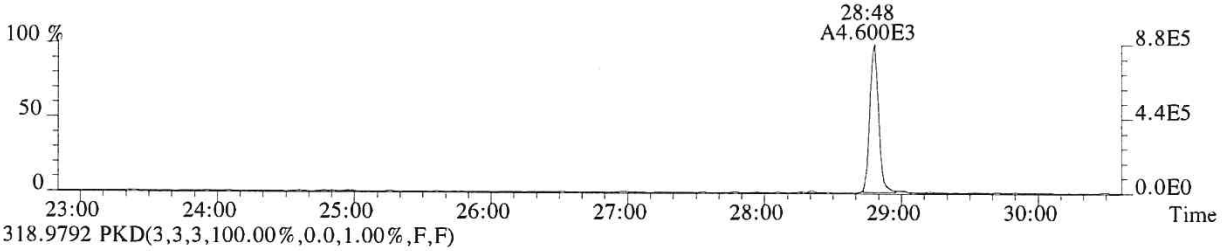
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,16628.0,1.00%,F,T)



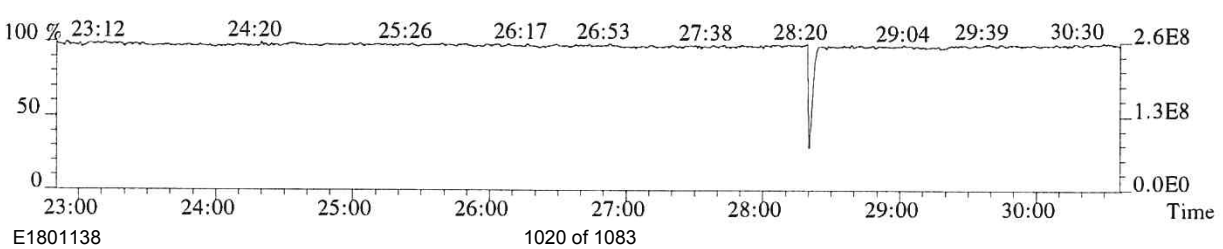
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7772.0,1.00%,F,T)



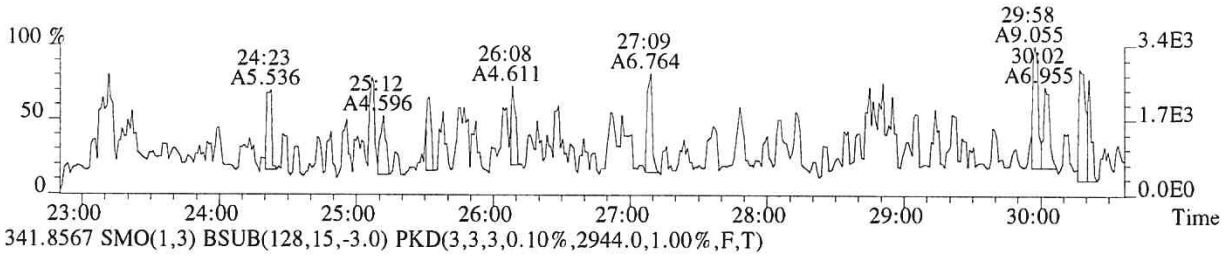
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3540.0,1.00%,F,T)



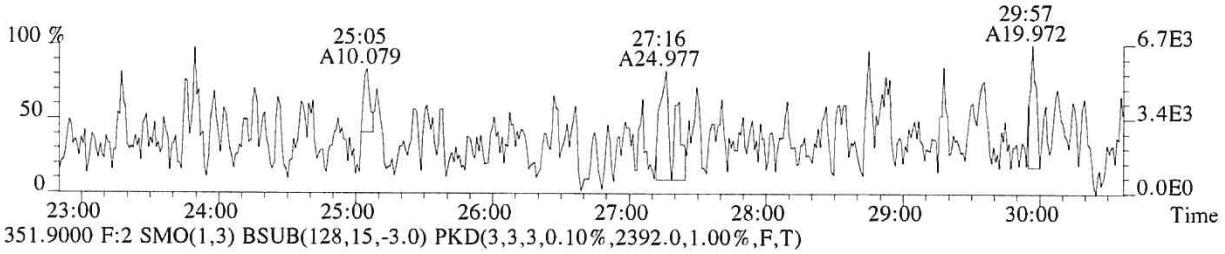
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



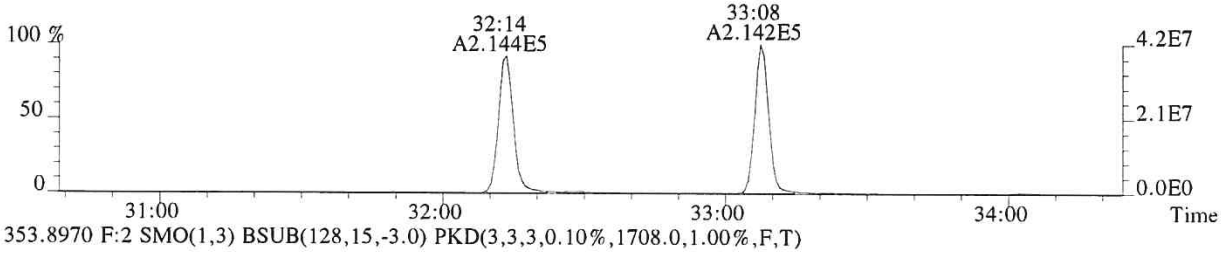
File:P614684 #1-552 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1084.0,1.00%,F,T)



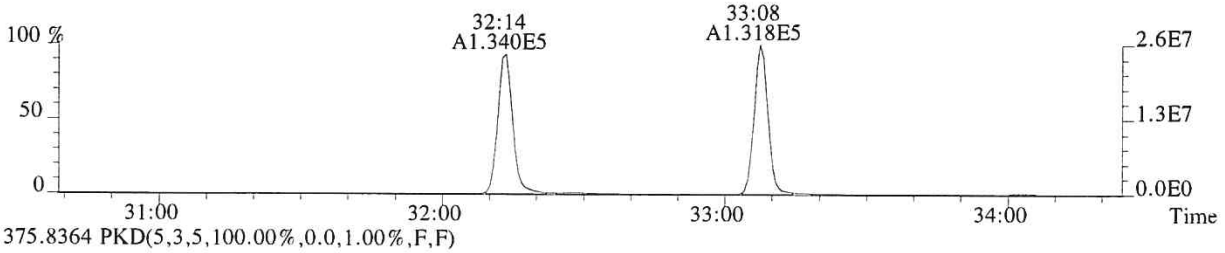
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2944.0,1.00%,F,T)



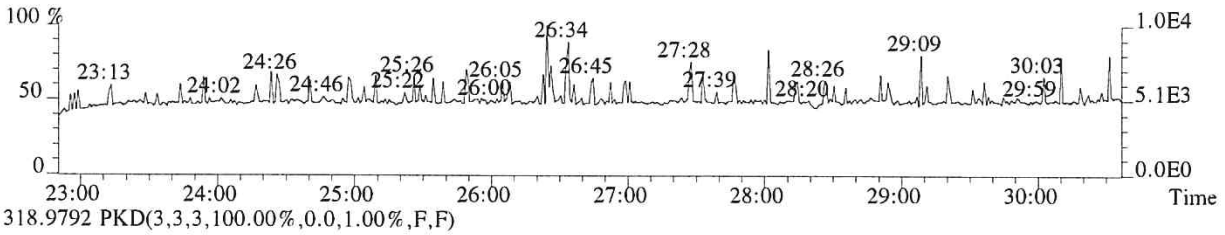
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2392.0,1.00%,F,T)



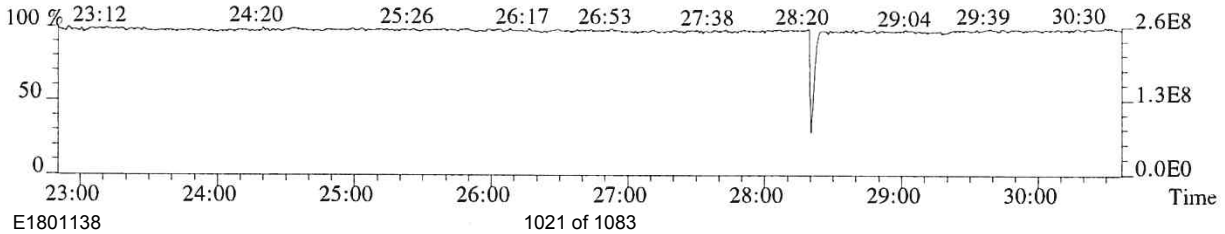
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1708.0,1.00%,F,T)



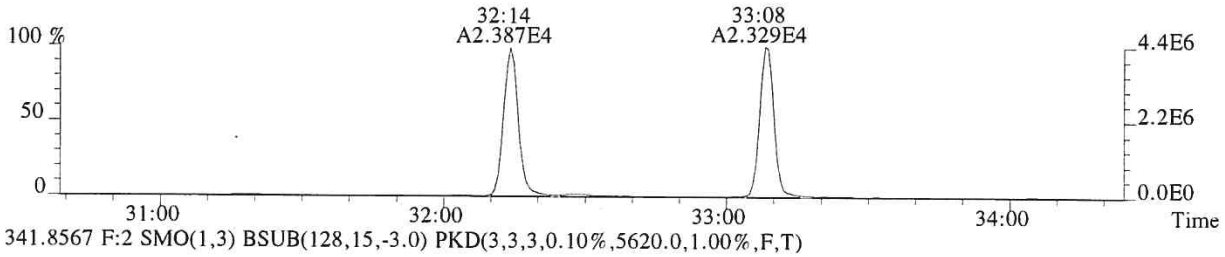
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



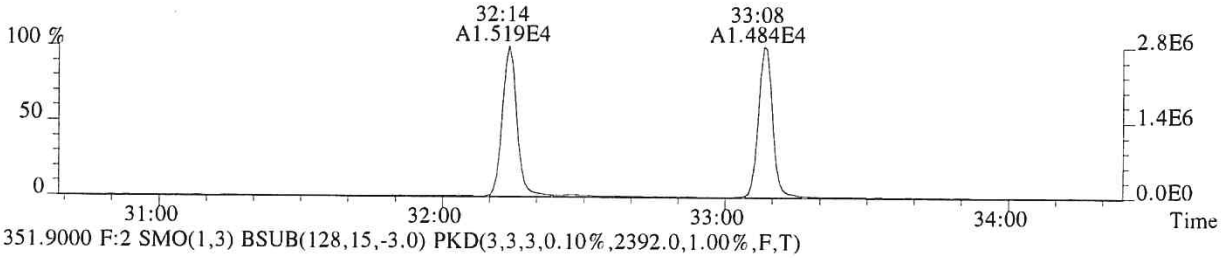
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



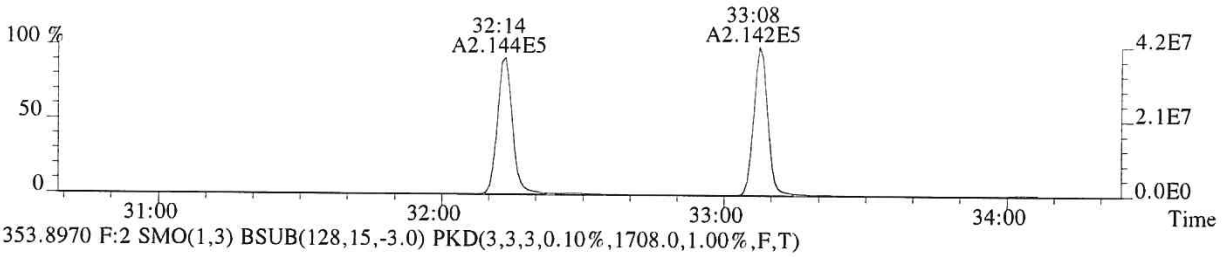
File:P614684 #1-339 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1188.0,1.00%,F,T)



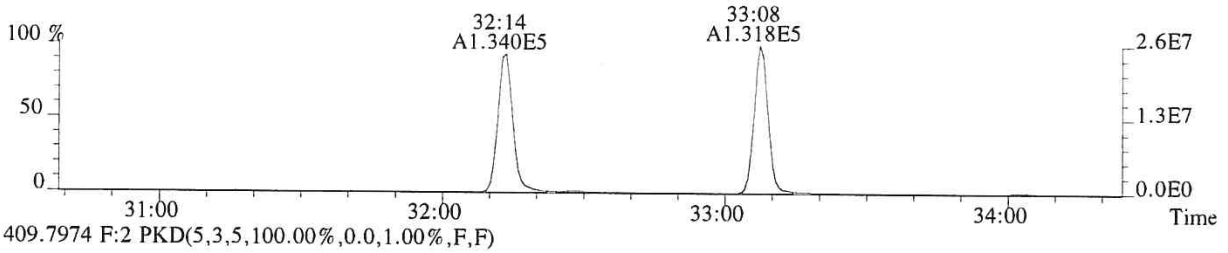
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5620.0,1.00%,F,T)



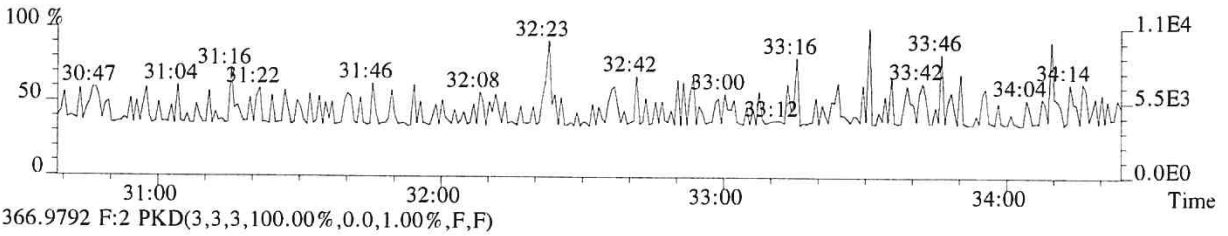
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2392.0,1.00%,F,T)



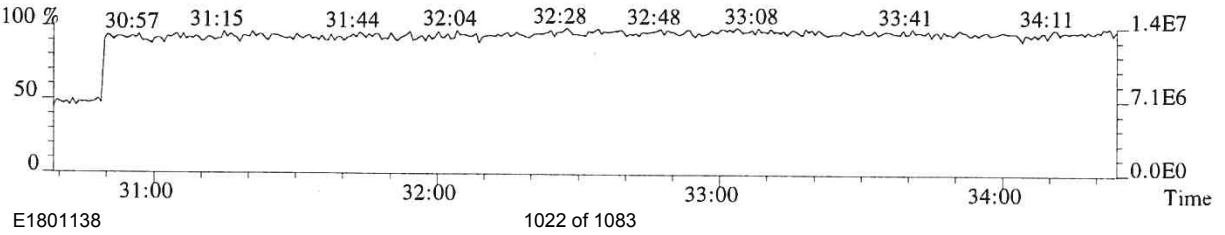
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1708.0,1.00%,F,T)



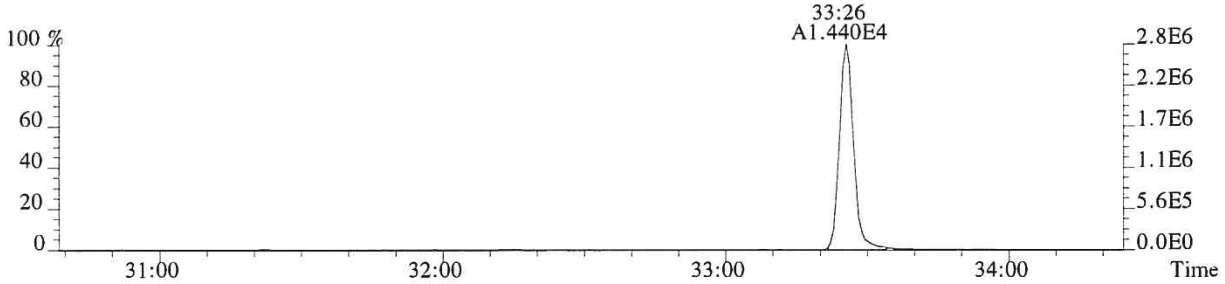
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



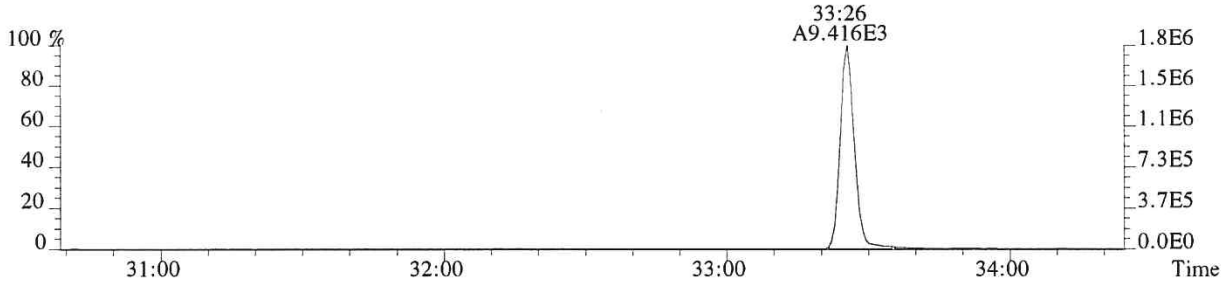
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



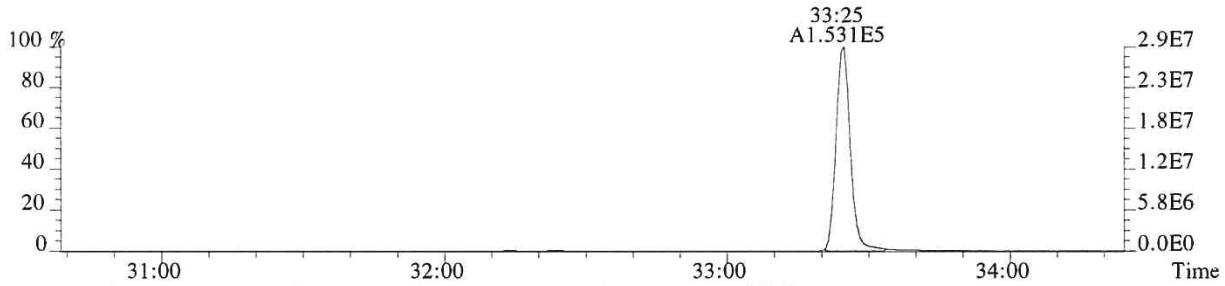
File:P614684 #1-339 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2228.0,1.00%,F,T)



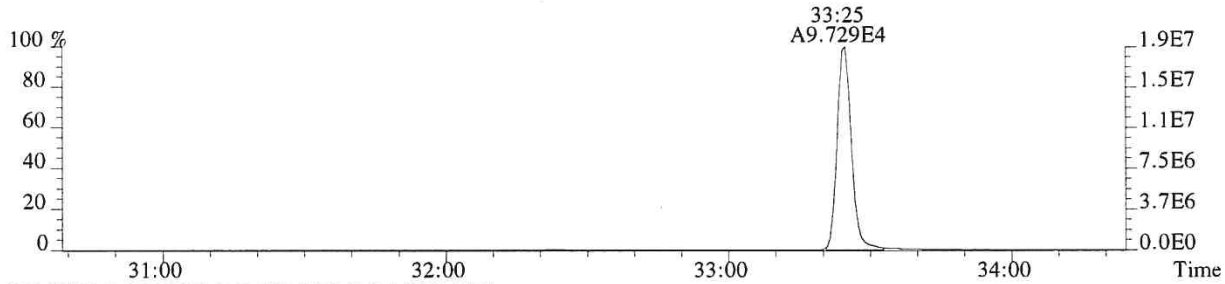
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



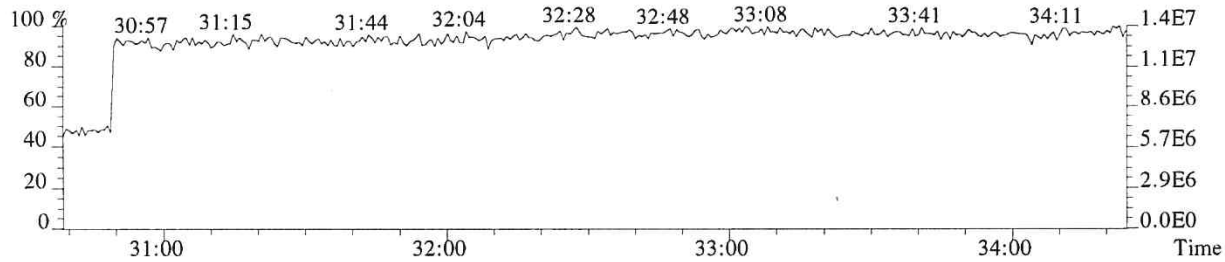
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3936.0,1.00%,F,T)



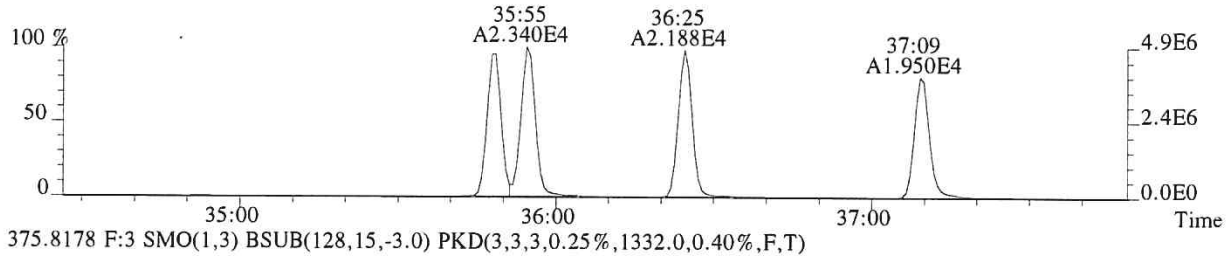
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3448.0,1.00%,F,T)



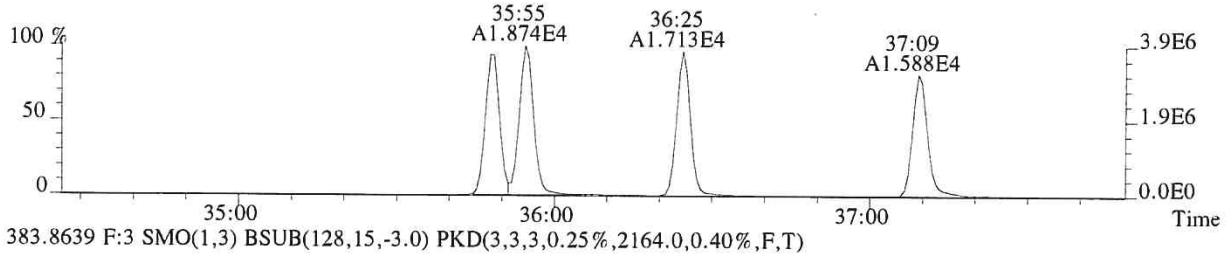
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



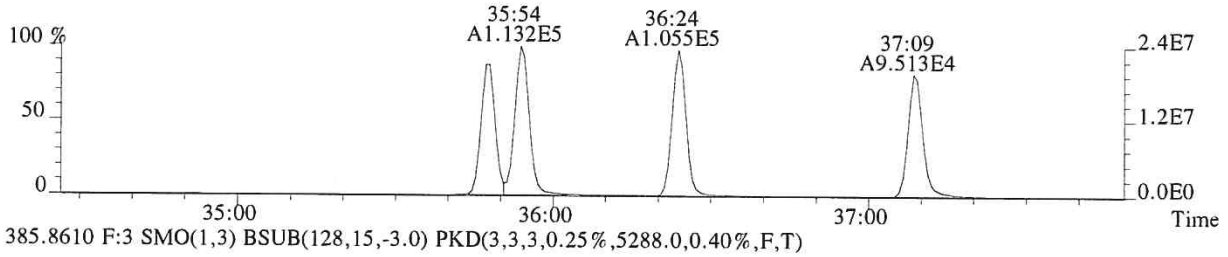
File:P614684 #1-304 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2656.0,0.40%,F,T)



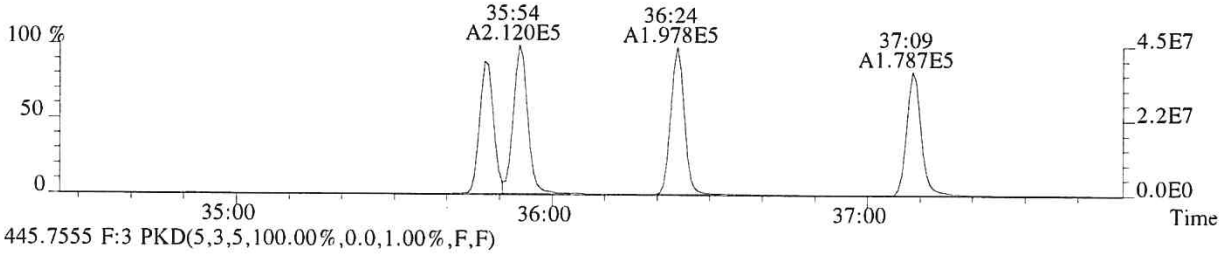
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1332.0,0.40%,F,T)



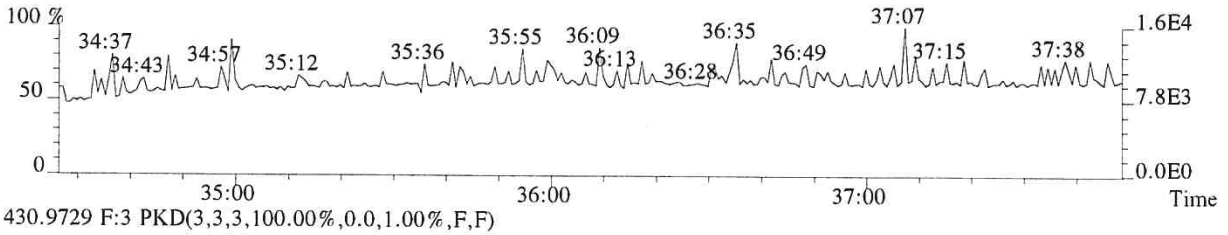
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2164.0,0.40%,F,T)



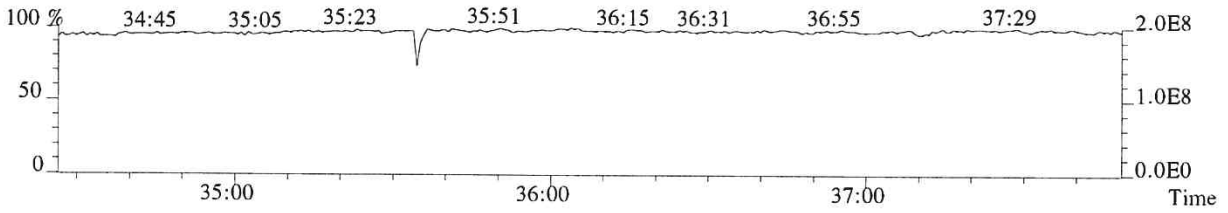
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5288.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

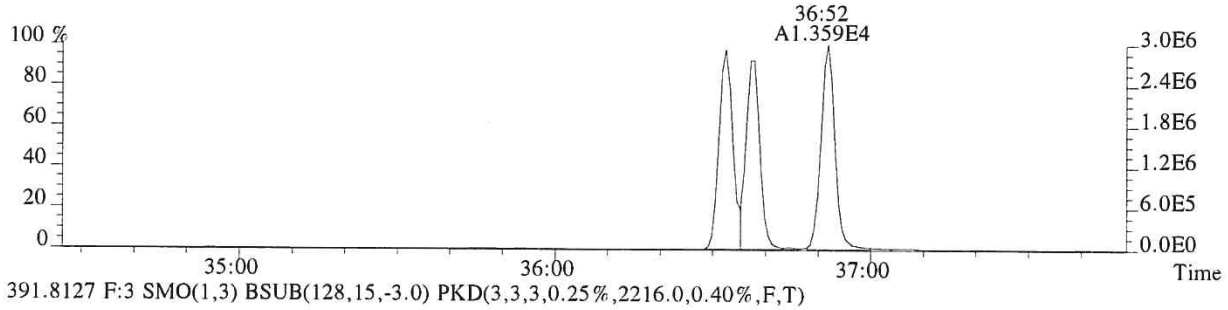


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

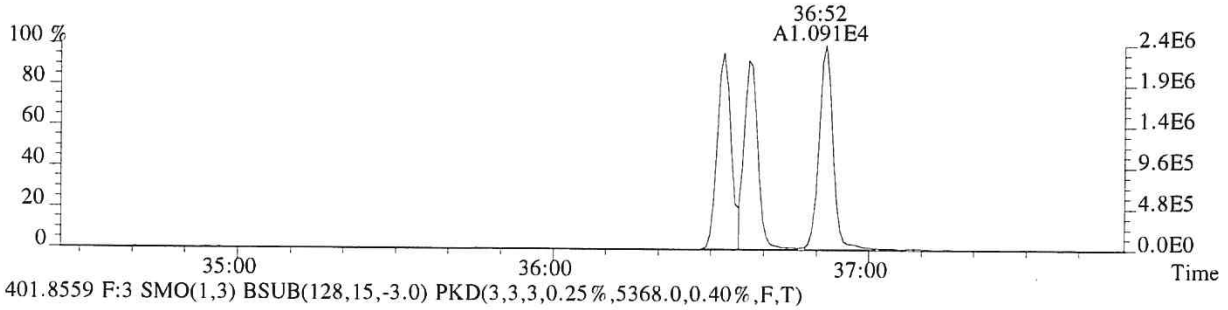


017905

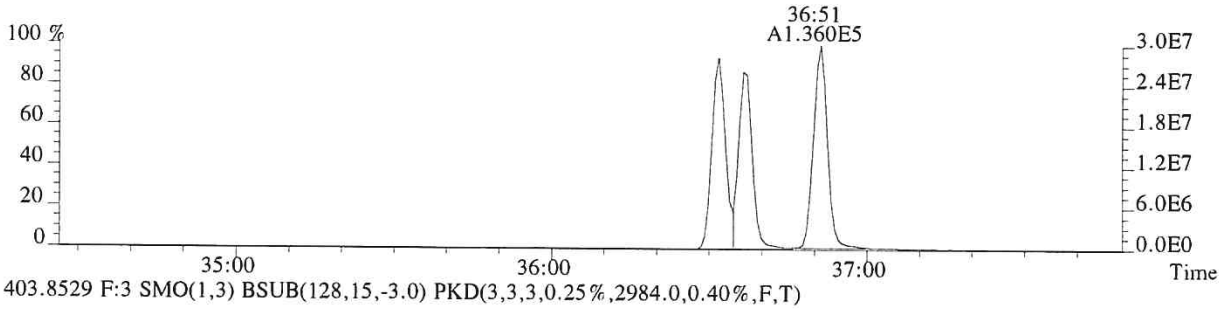
File:P614684 #1-304 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1156.0,0.40%,F,T)



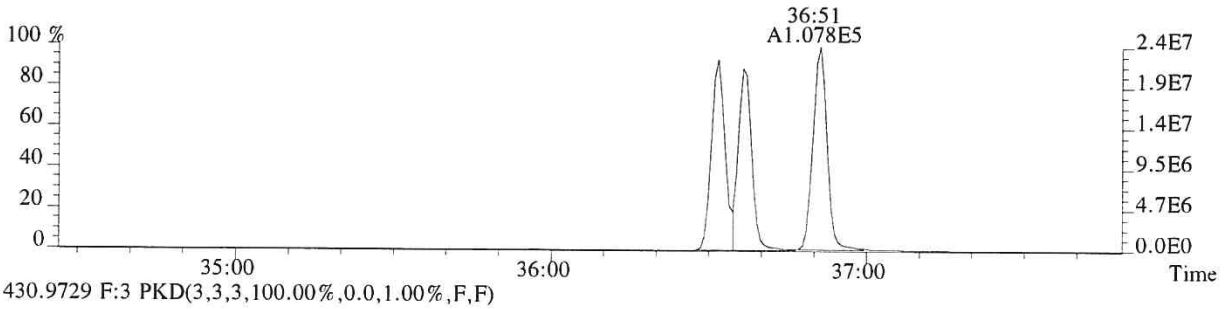
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2216.0,0.40%,F,T)



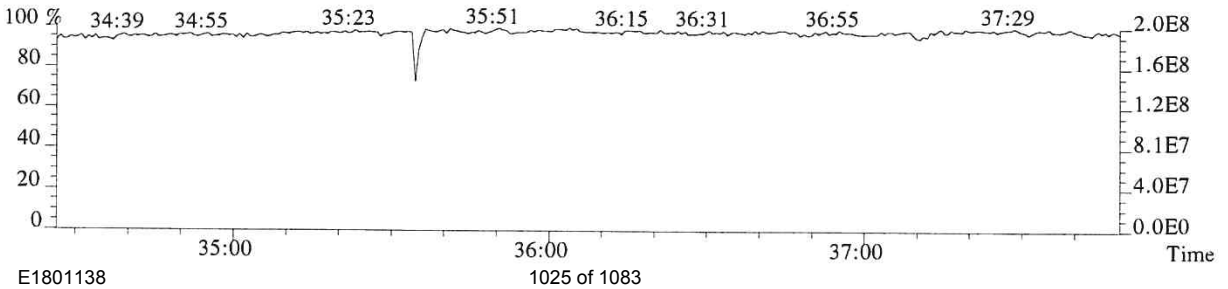
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5368.0,0.40%,F,T)



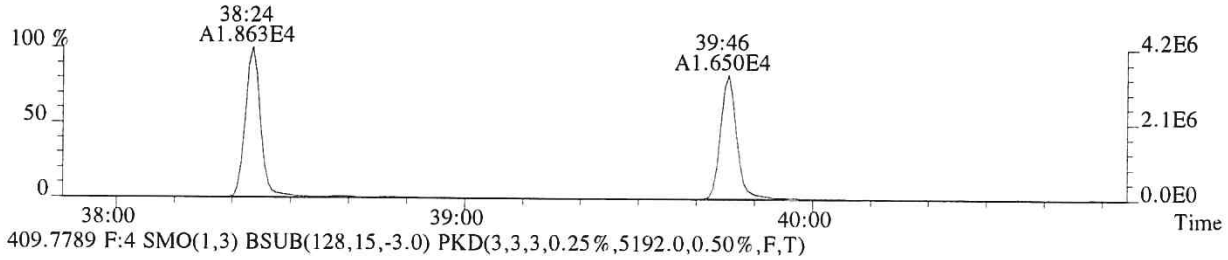
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2984.0,0.40%,F,T)



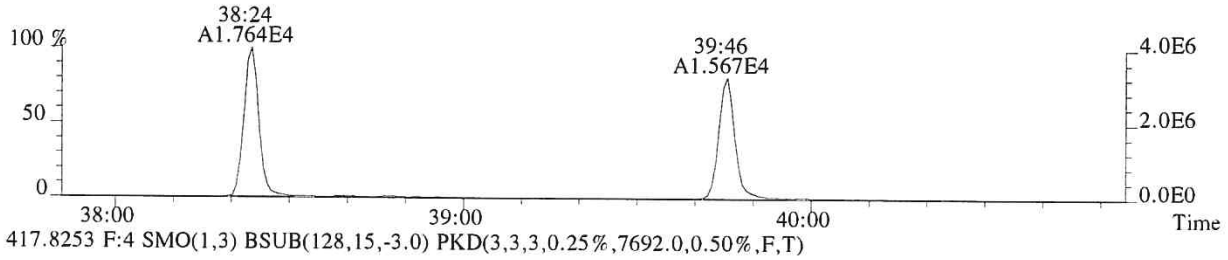
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



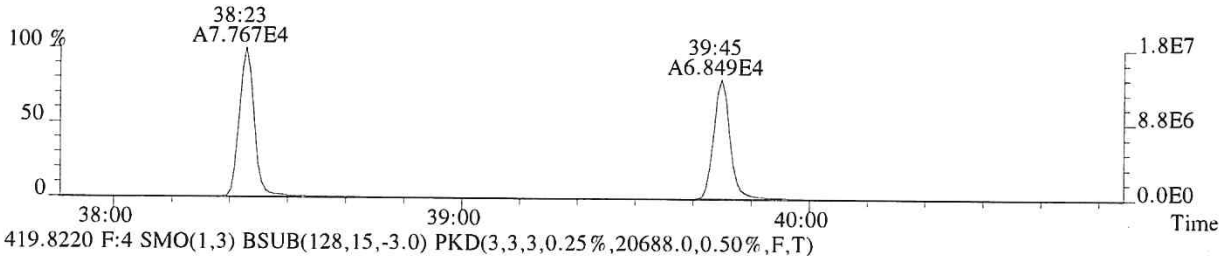
File:P614684 #1-276 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4060.0,0.50%,F,T)



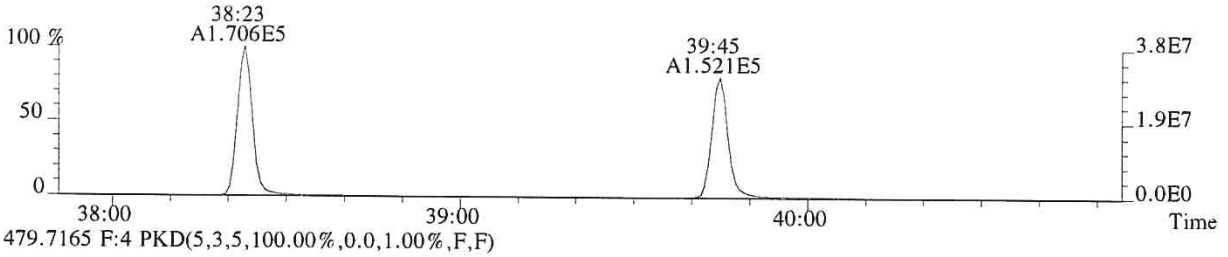
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5192.0,0.50%,F,T)



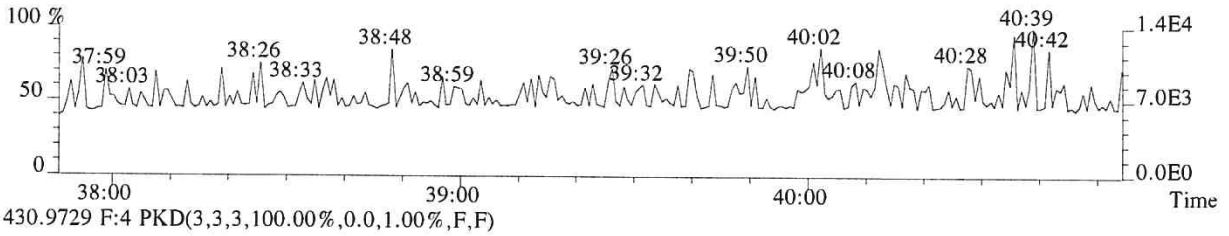
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7692.0,0.50%,F,T)



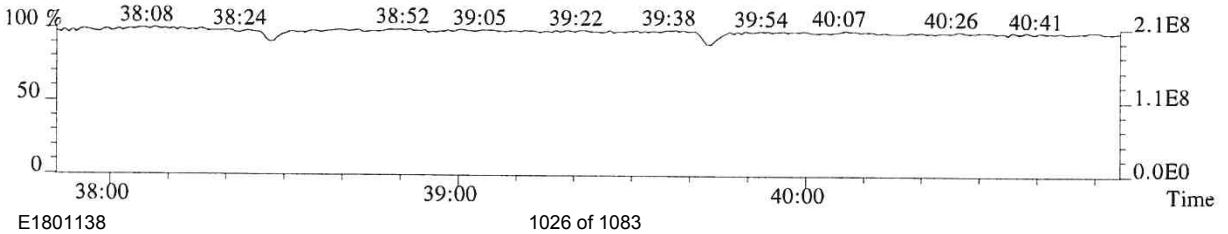
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,20688.0,0.50%,F,T)



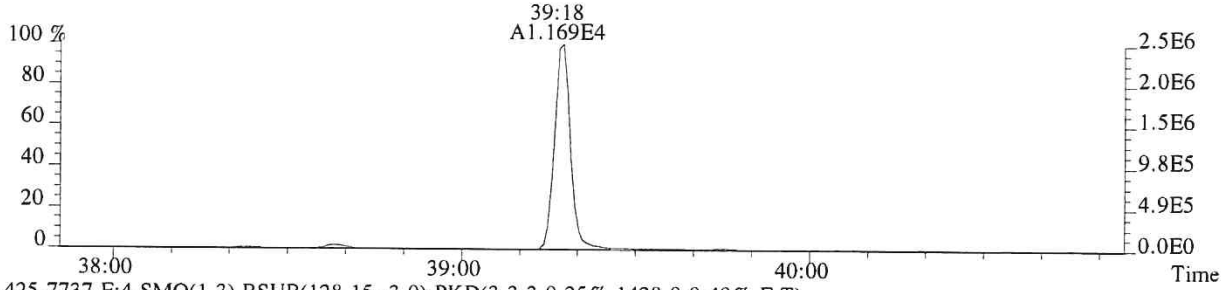
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



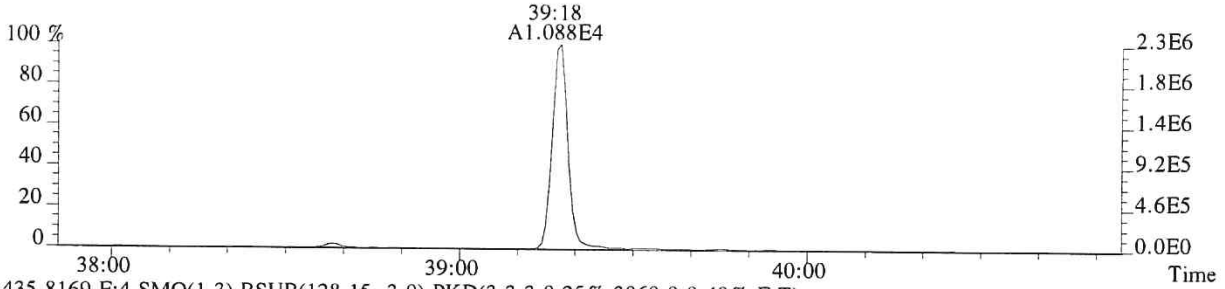
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



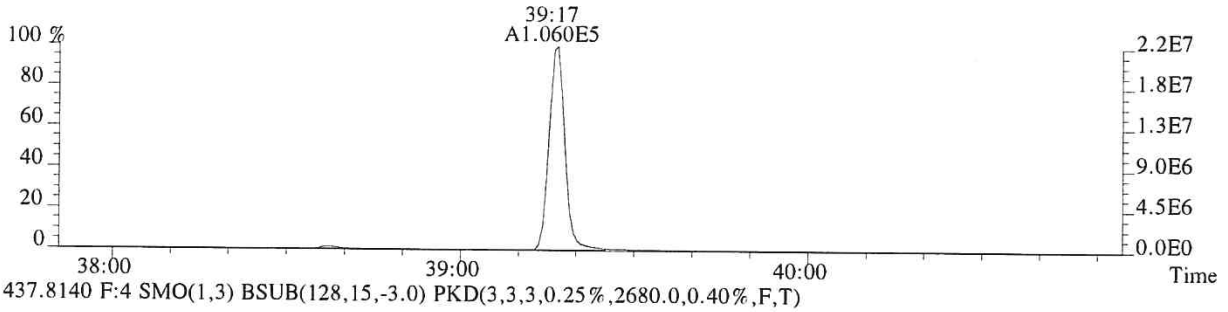
File:P614684 #1-276 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1224.0,0.40%,F,T)



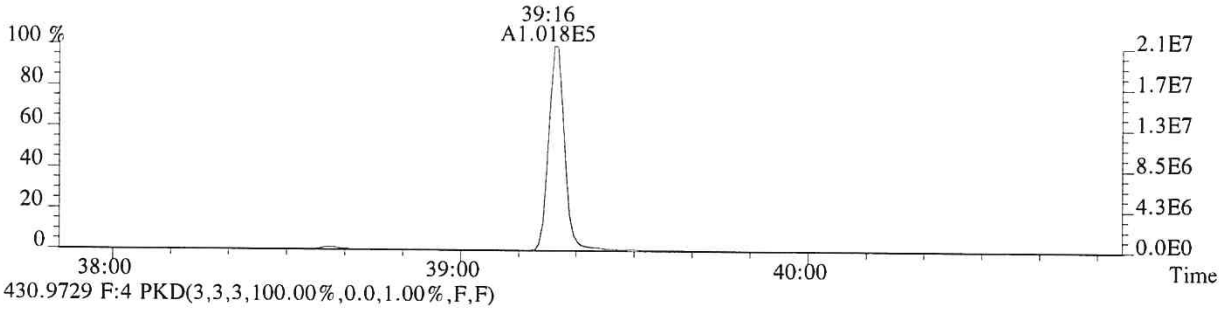
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1428.0,0.40%,F,T)



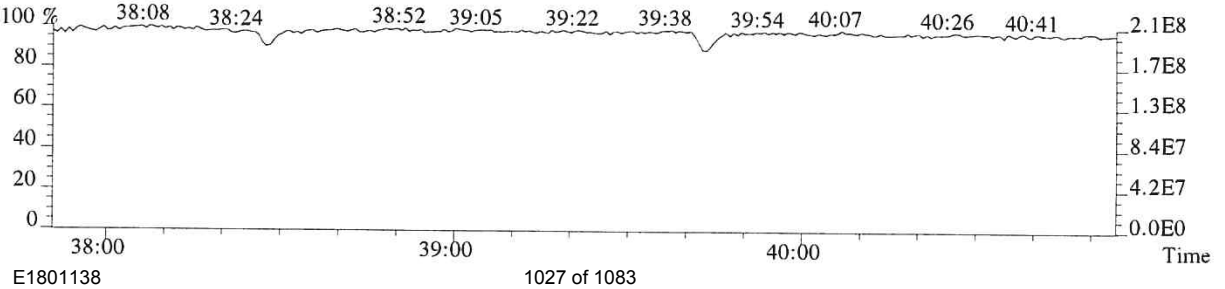
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3060.0,0.40%,F,T)



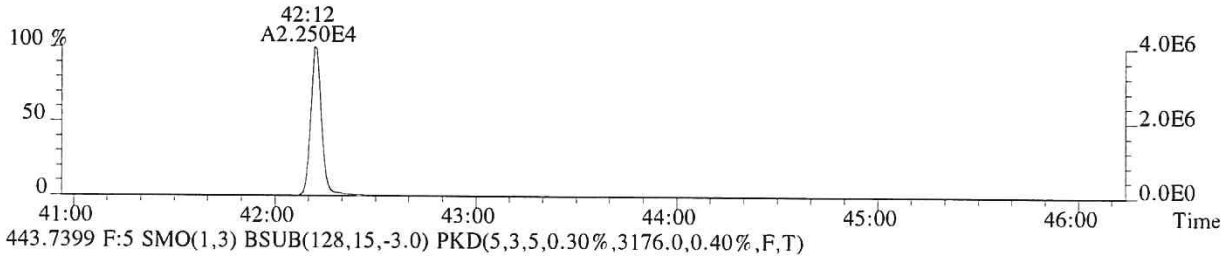
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2680.0,0.40%,F,T)



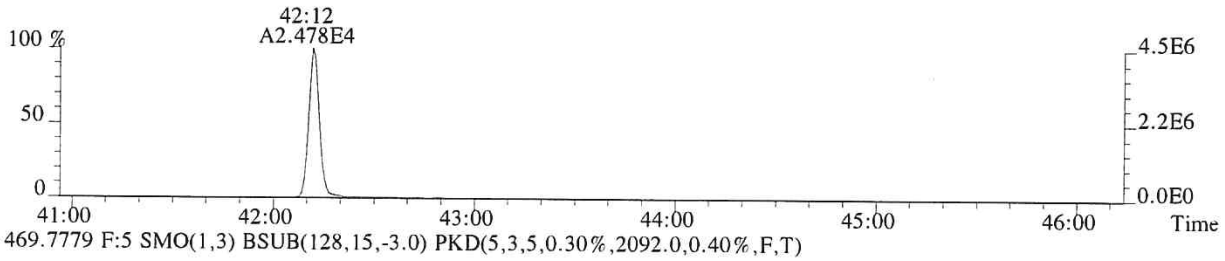
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



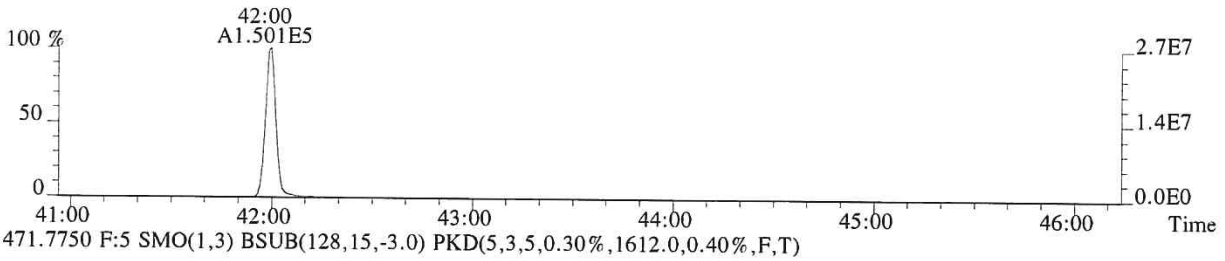
File:P614684 #1-477 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1020.0,0.40%,F,T)



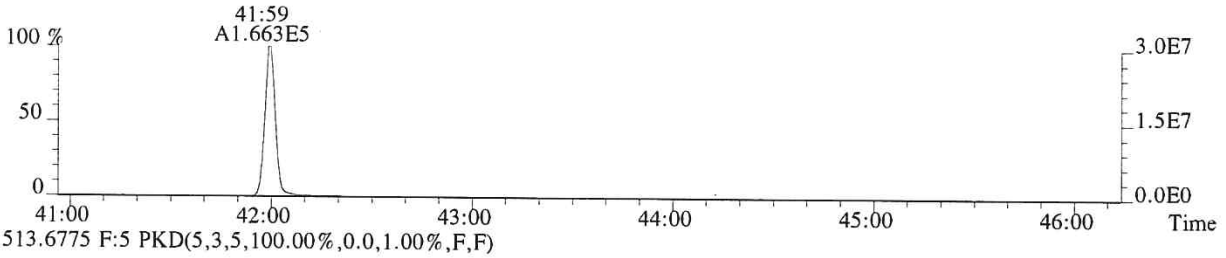
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3176.0,0.40%,F,T)



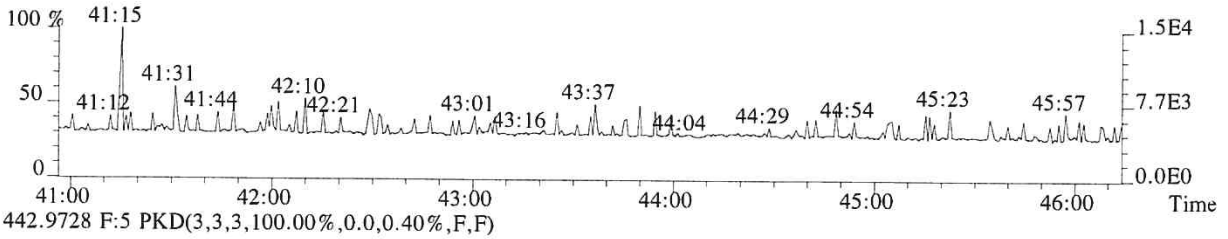
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2092.0,0.40%,F,T)



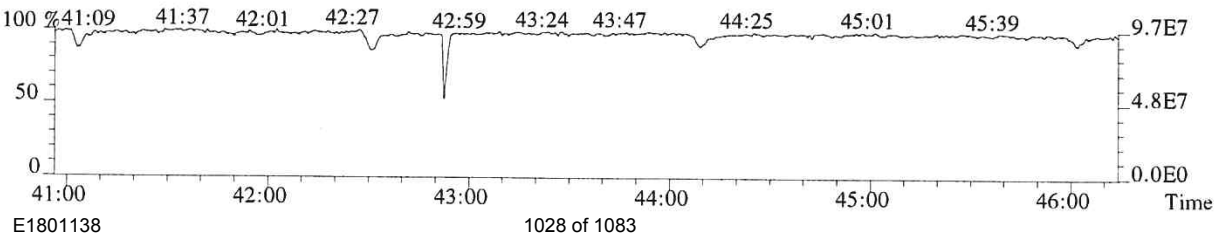
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1612.0,0.40%,F,T)



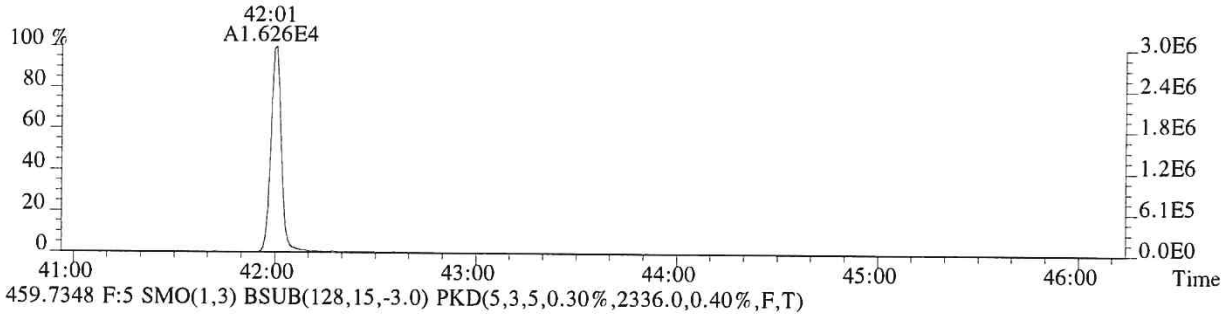
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



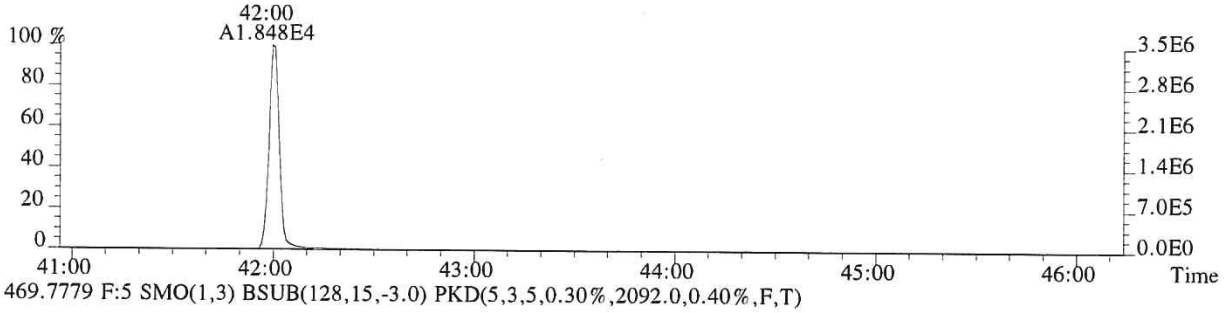
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



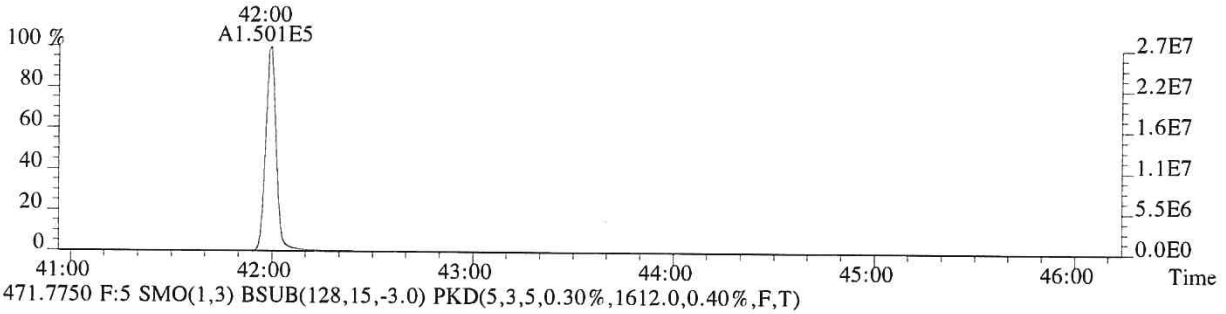
File:P614684 #1-477 Acq:25-SEP-2018 15:59:37 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS2
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,824.0,0.40%,F,T)



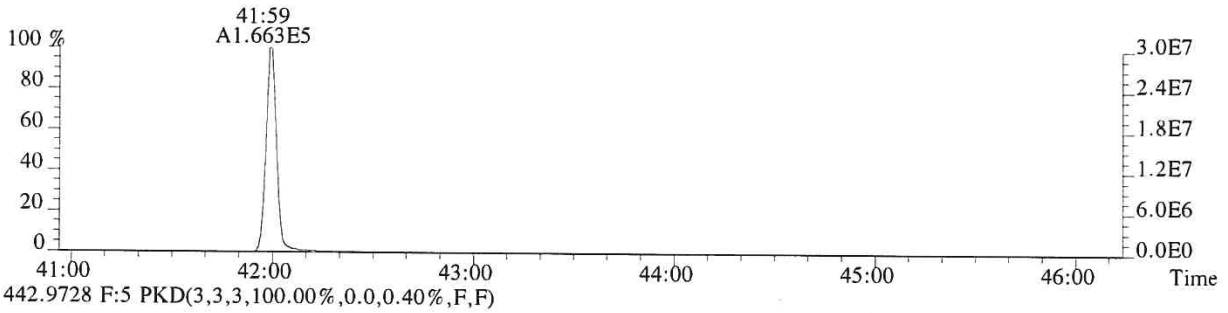
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2336.0,0.40%,F,T)



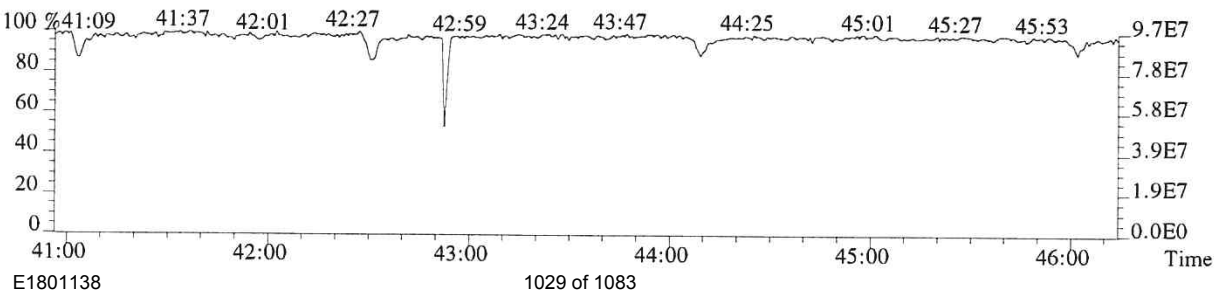
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2092.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1612.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76557

Run #4 Filename P614685 Samp: 1 Inj: 1 Acquired: 25-SEP-18 16:52:47
Processed: 26-SEP-18 07:39:09 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:01	3.637e+04	4.546e+04	0.80	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:15	3.073e+05	1.939e+05	1.58	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:09	2.818e+05	1.782e+05	1.58	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	2.774e+05	2.200e+05	1.26	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	2.905e+05	2.295e+05	1.27	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	2.685e+05	2.105e+05	1.28	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:10	2.537e+05	1.982e+05	1.28	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	2.407e+05	2.292e+05	1.05	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	1.925e+05	1.847e+05	1.04	yes	no	1.463
10	Unk	OCDF	42:13	3.041e+05	3.309e+05	0.92	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	2.365e+04	3.051e+04	0.78	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	1.706e+05	1.098e+05	1.55	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	1.645e+05	1.238e+05	1.33	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	1.567e+05	1.272e+05	1.23	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:53	1.702e+05	1.368e+05	1.24	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	1.477e+05	1.392e+05	1.06	yes	no	1.112
17	Unk	OCDD	42:01	2.180e+05	2.422e+05	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	3.444e+05	4.352e+05	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	5.358e+05	3.352e+05	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	5.234e+05	3.254e+05	1.61	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:48	2.524e+05	4.773e+05	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:55	2.834e+05	5.294e+05	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:25	2.621e+05	4.867e+05	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	2.431e+05	4.520e+05	0.54	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:24	1.967e+05	4.289e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:46	1.638e+05	3.571e+05	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	2.330e+05	2.909e+05	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	3.758e+05	2.372e+05	1.58	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:33	3.106e+05	2.345e+05	1.32	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	2.932e+05	2.439e+05	1.20	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	2.673e+05	2.524e+05	1.06	yes	no	0.857
32	IS	13C-OCDD	42:00	3.863e+05	4.247e+05	0.91	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:13	2.395e+05	3.006e+05	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:52	3.335e+05	2.694e+05	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	5.645e+04				no	1.086

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Signal/Noise Height Ratio Summary

CLIENT ID.
76557

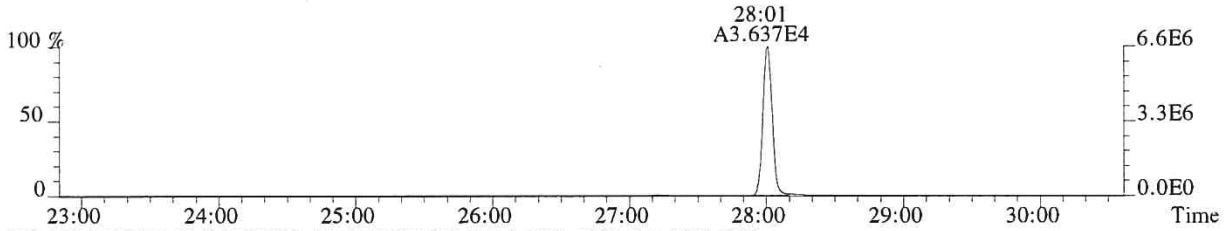
Run #4 Filename P614685 Samp: 1 Inj: 1 Acquired: 25-SEP-18 16:52:47
Processed: 26-SEP-18 07:39:09 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.55e+06	2.18e+03	3.0e+03	8.17e+06	4.39e+03	1.9e+03
2	1,2,3,7,8-PeCDF	5.78e+07	2.87e+03	2.0e+04	3.64e+07	4.35e+03	8.4e+03
3	2,3,4,7,8-PeCDF	5.79e+07	2.87e+03	2.0e+04	3.65e+07	4.35e+03	8.4e+03
4	1,2,3,4,7,8-HxCDF	6.15e+07	2.89e+03	2.1e+04	4.93e+07	2.08e+03	2.4e+04
5	1,2,3,6,7,8-HxCDF	6.26e+07	2.89e+03	2.2e+04	4.97e+07	2.08e+03	2.4e+04
6	2,3,4,6,7,8-HxCDF	6.14e+07	2.89e+03	2.1e+04	4.79e+07	2.08e+03	2.3e+04
7	1,2,3,7,8,9-HxCDF	5.42e+07	2.89e+03	1.9e+04	4.26e+07	2.08e+03	2.0e+04
8	1,2,3,4,6,7,8-HpCDF	5.56e+07	1.47e+04	3.8e+03	5.23e+07	1.66e+04	3.1e+03
9	1,2,3,4,7,8,9-HpCDF	3.99e+07	1.47e+04	2.7e+03	3.80e+07	1.66e+04	2.3e+03
10	OCDF	5.72e+07	1.23e+03	4.7e+04	6.22e+07	3.01e+03	2.1e+04
11	2,3,7,8-TCDD	4.49e+06	5.36e+03	8.4e+02	5.78e+06	2.64e+03	2.2e+03
12	1,2,3,7,8-PeCDD	3.45e+07	2.46e+03	1.4e+04	2.21e+07	1.02e+03	2.2e+04
13	1,2,3,4,7,8-HxCDD	3.72e+07	9.04e+02	4.1e+04	2.90e+07	1.56e+03	1.9e+04
14	1,2,3,6,7,8-HxCDD	3.60e+07	9.04e+02	4.0e+04	2.81e+07	1.56e+03	1.8e+04
15	1,2,3,7,8,9-HxCDD	3.80e+07	9.04e+02	4.2e+04	3.00e+07	1.56e+03	1.9e+04
16	1,2,3,4,6,7,8-HpCDD	3.19e+07	1.58e+03	2.0e+04	3.06e+07	1.63e+03	1.9e+04
17	OCDD	4.21e+07	1.71e+03	2.5e+04	4.66e+07	1.53e+03	3.0e+04
18	13C-2,3,7,8-TCDF	6.23e+07	1.55e+04	4.0e+03	7.90e+07	1.02e+04	7.8e+03
19	13C-1,2,3,7,8-PeCDF	1.00e+08	2.14e+03	4.7e+04	6.28e+07	2.18e+03	2.9e+04
20	13C-2,3,4,7,8-PeCDF	1.07e+08	2.14e+03	5.0e+04	6.66e+07	2.18e+03	3.1e+04
21	13C-1,2,3,4,7,8-HxCDF	5.63e+07	2.92e+03	1.9e+04	1.07e+08	4.60e+03	2.3e+04
22	13C-1,2,3,6,7,8-HxCDF	6.12e+07	2.92e+03	2.1e+04	1.15e+08	4.60e+03	2.5e+04
23	13C-2,3,4,6,7,8-HxCDF	5.95e+07	2.92e+03	2.0e+04	1.10e+08	4.60e+03	2.4e+04
24	13C-1,2,3,7,8,9-HxCDF	5.22e+07	2.92e+03	1.8e+04	9.74e+07	4.60e+03	2.1e+04
25	13C-1,2,3,4,6,7,8-HpCDF	4.59e+07	1.18e+04	3.9e+03	9.95e+07	3.82e+04	2.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	3.37e+07	1.18e+04	2.9e+03	7.29e+07	3.82e+04	1.9e+03
27	13C-2,3,7,8-TCDD	4.45e+07	1.91e+04	2.3e+03	5.53e+07	7.70e+03	7.2e+03
28	13C-1,2,3,7,8-PeCDD	7.50e+07	3.59e+03	2.1e+04	4.74e+07	2.50e+03	1.9e+04
29	13C-1,2,3,4,7,8-HxCDD	6.95e+07	5.55e+03	1.3e+04	5.43e+07	3.18e+03	1.7e+04
30	13C-1,2,3,6,7,8-HxCDD	6.70e+07	5.55e+03	1.2e+04	5.36e+07	3.18e+03	1.7e+04
31	13C-1,2,3,4,6,7,8-HpCDD	5.80e+07	4.72e+03	1.2e+04	5.53e+07	2.63e+03	2.1e+04
32	13C-OCDD	7.33e+07	1.86e+03	4.0e+04	8.10e+07	5.92e+02	1.4e+05
33	13C-1,2,3,4-TCDD	4.48e+07	1.91e+04	2.3e+03	5.67e+07	7.70e+03	7.4e+03
34	13C-1,2,3,7,8,9-HxCDD	7.38e+07	5.55e+03	1.3e+04	5.89e+07	3.18e+03	1.9e+04
35	37Cl-2,3,7,8-TCDD	1.08e+07	3.52e+03	3.1e+03			

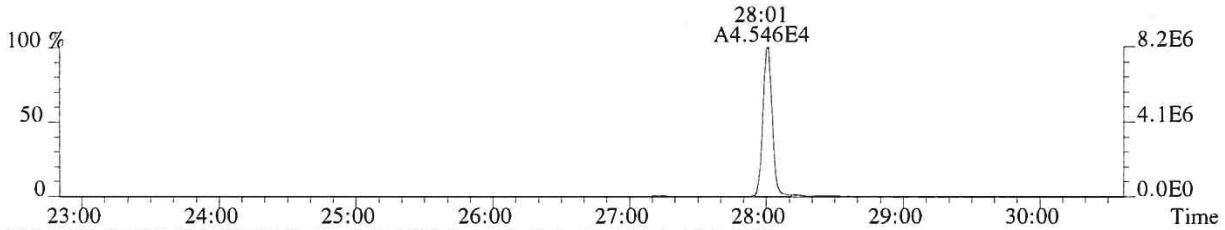
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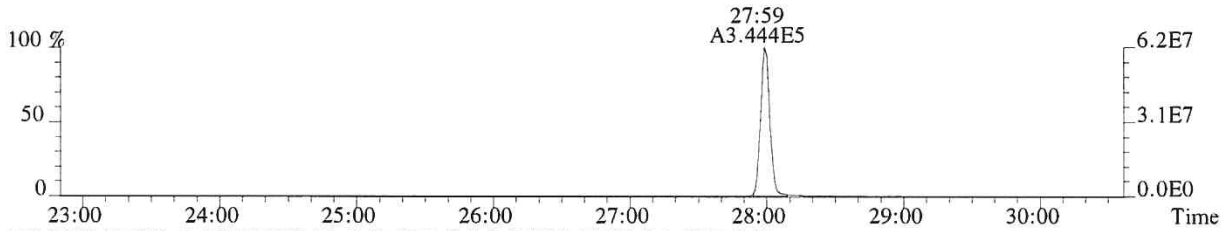
File:P614685 #1-552 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2176.0,1.00%,F,T)



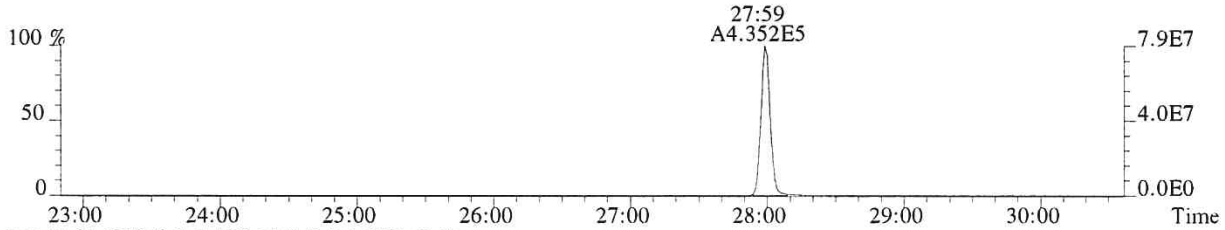
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4392.0,1.00%,F,T)



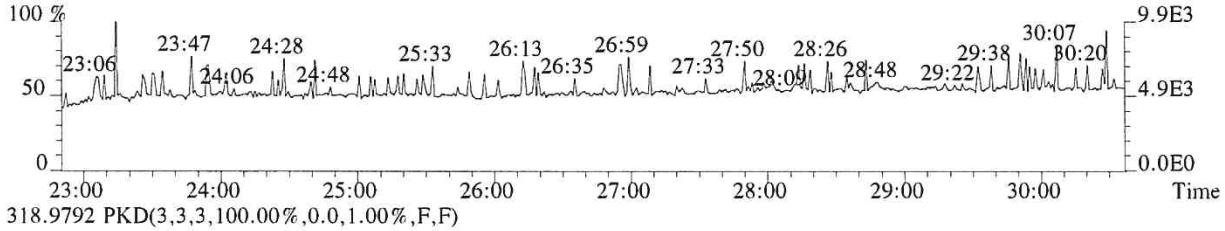
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15516.0,1.00%,F,T)



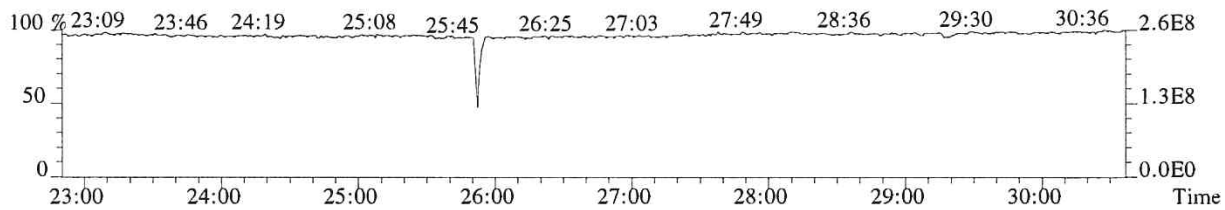
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10180.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

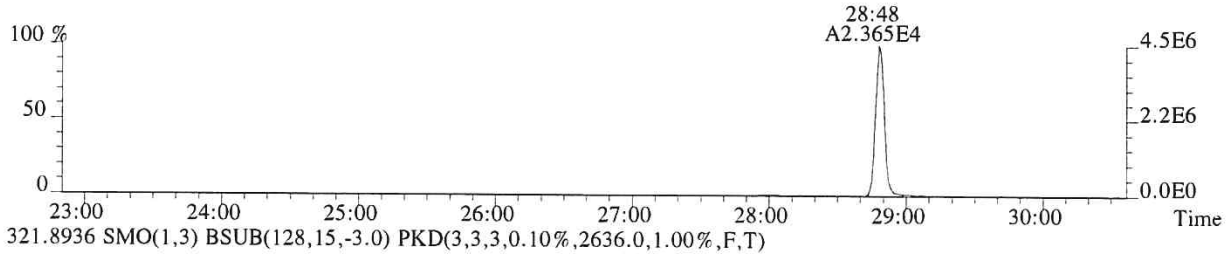


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

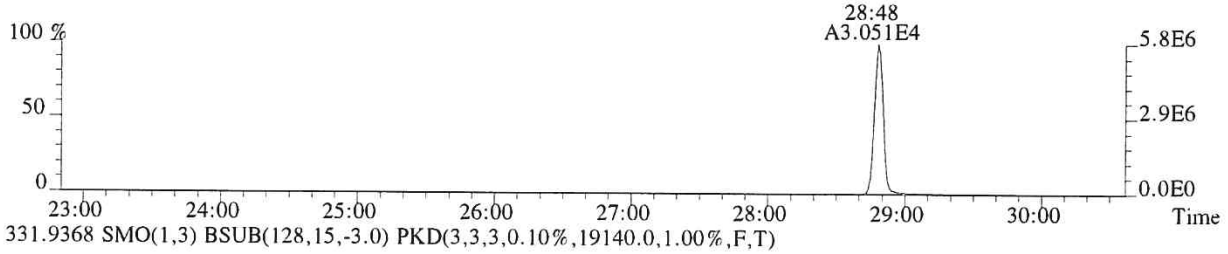


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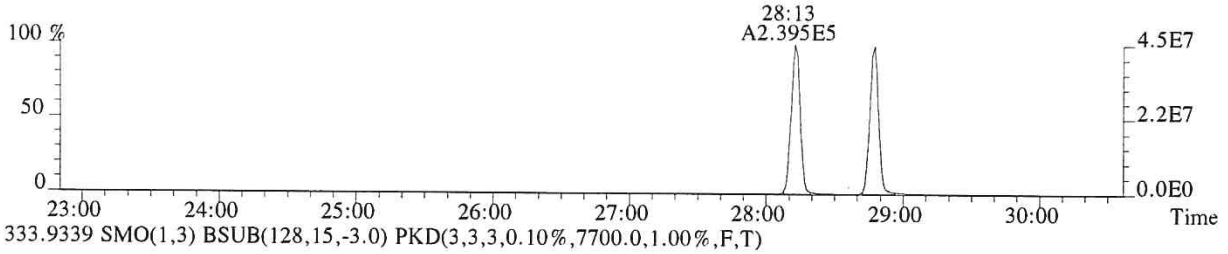
File:P614685 #1-552 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5364.0,1.00%,F,T)



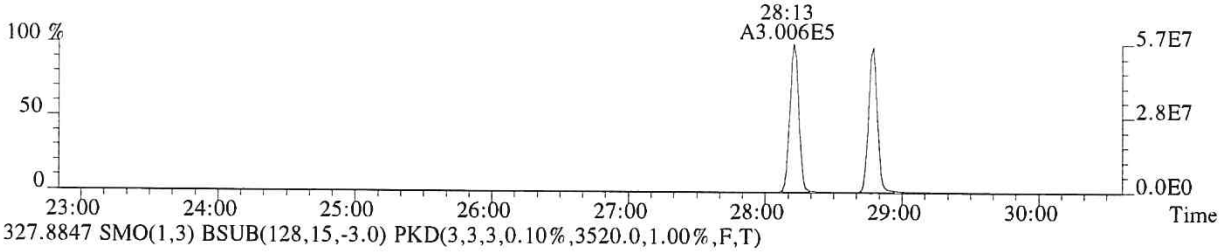
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2636.0,1.00%,F,T)



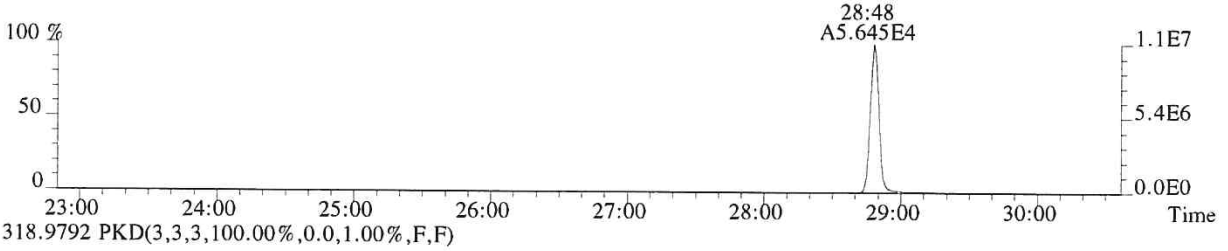
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,19140.0,1.00%,F,T)



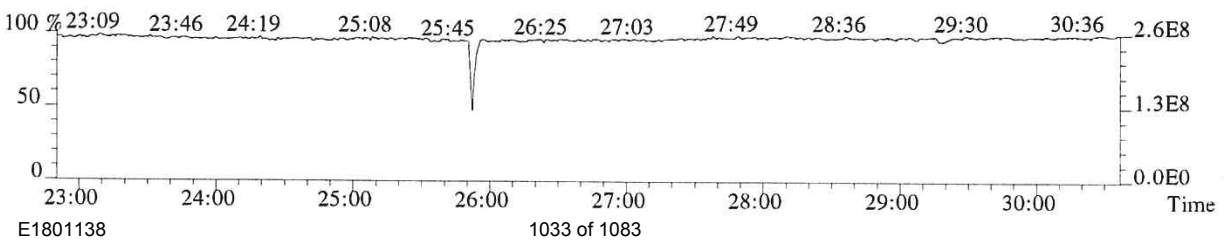
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7700.0,1.00%,F,T)



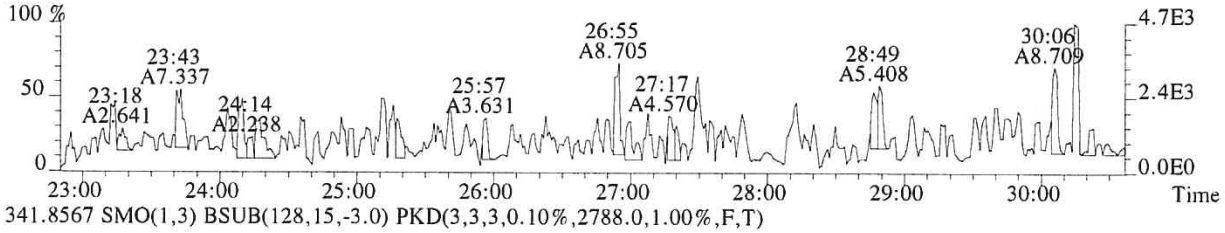
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3520.0,1.00%,F,T)



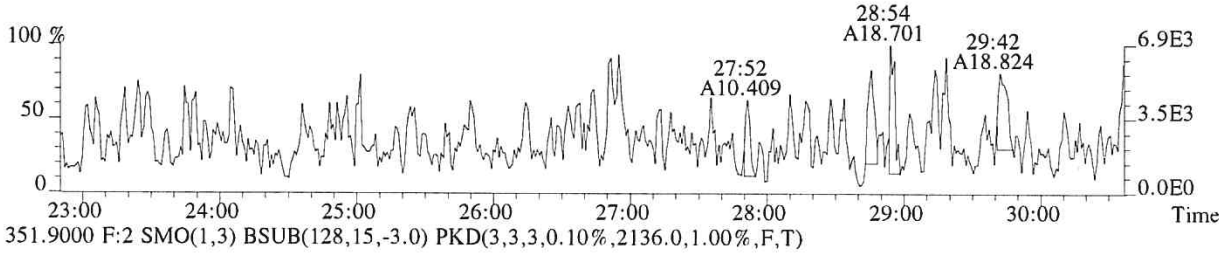
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



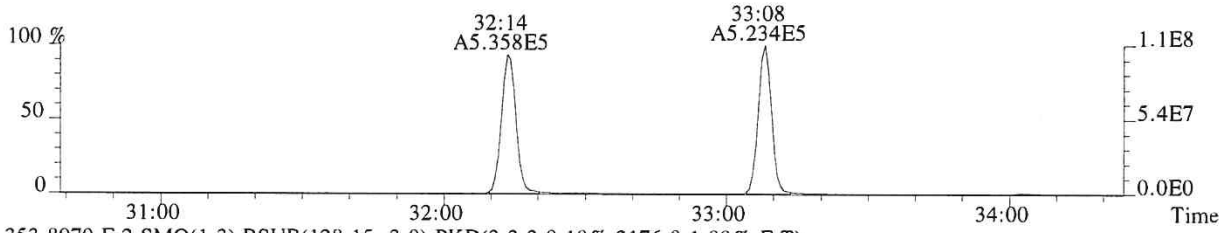
File:P614685 #1-552 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1116.0,1.00%,F,T)



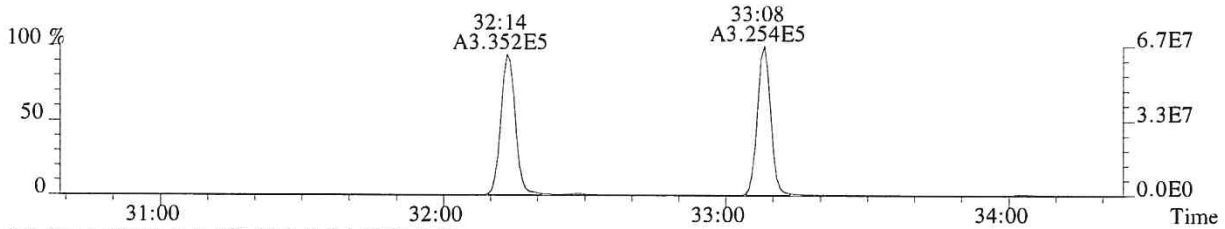
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2788.0,1.00%,F,T)



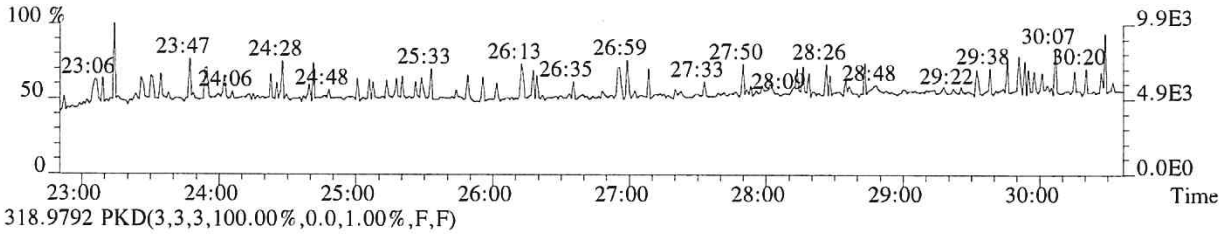
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2136.0,1.00%,F,T)



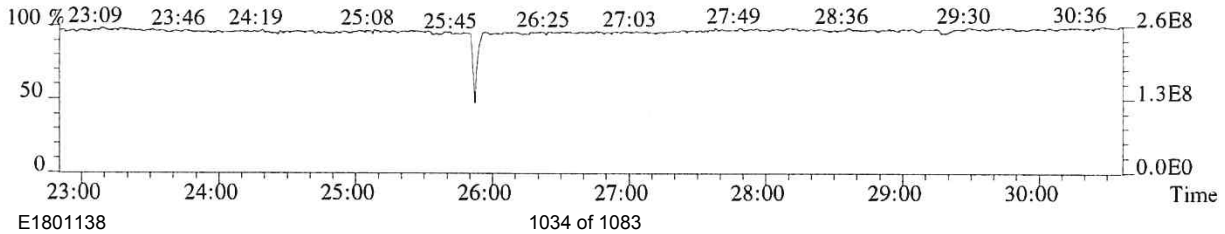
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2176.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

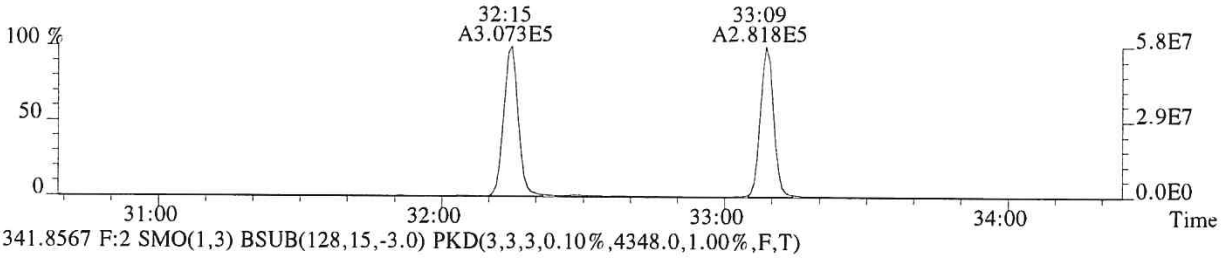


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

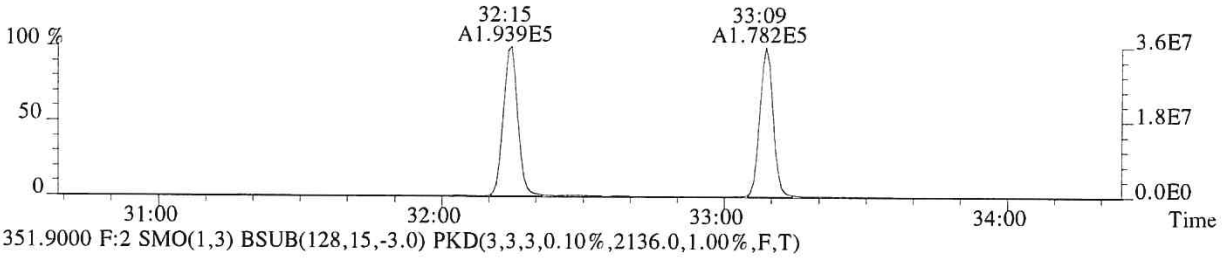


017915

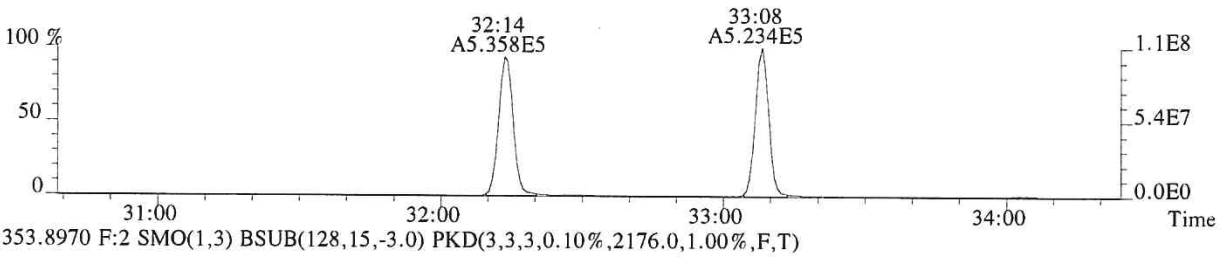
File:P614685 #1-339 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2872.0,1.00%,F,T)



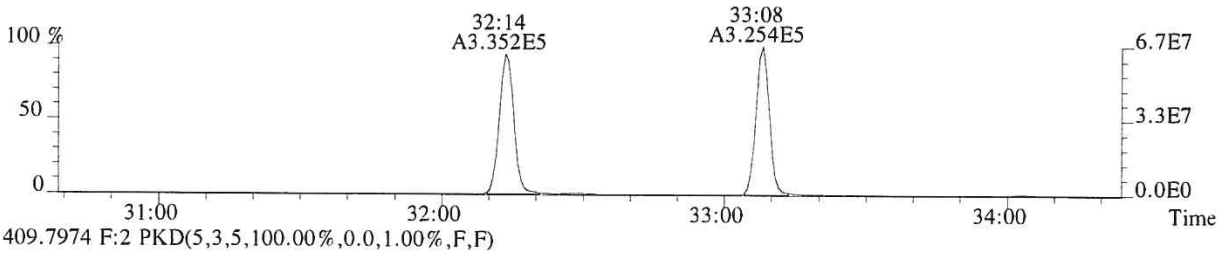
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4348.0,1.00%,F,T)



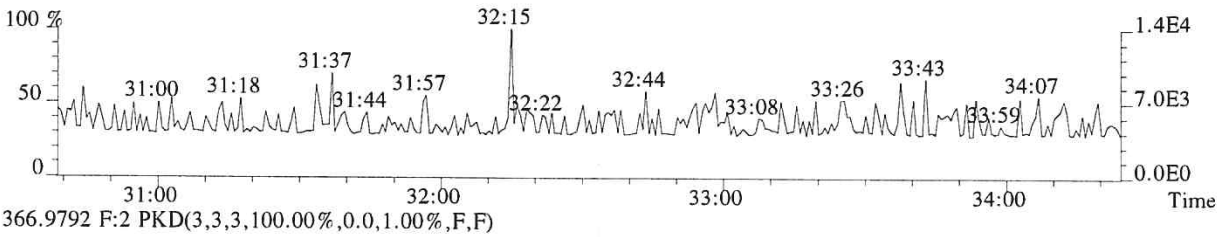
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2136.0,1.00%,F,T)



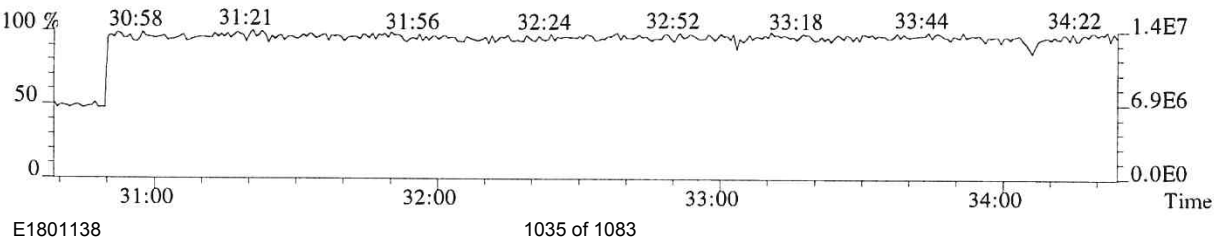
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2176.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

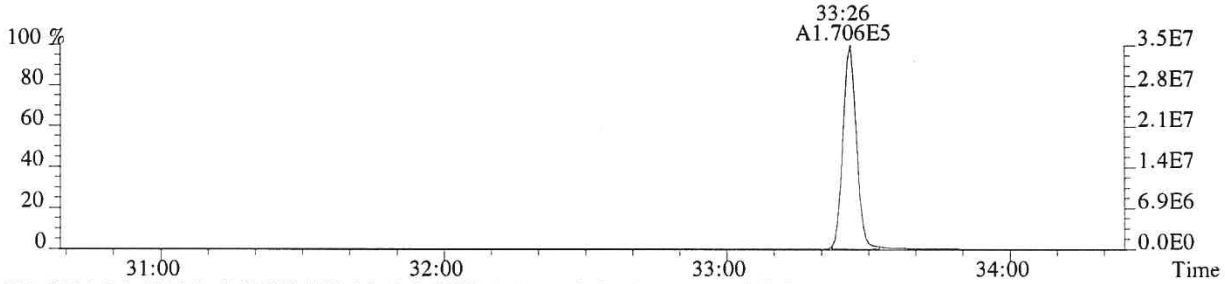


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

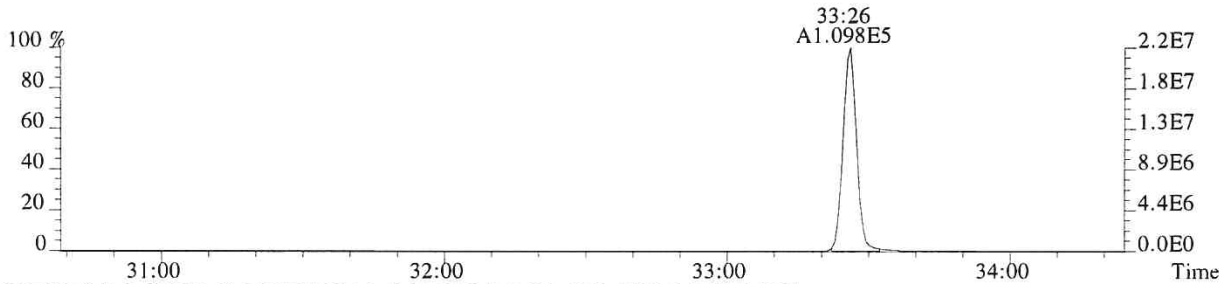


017916

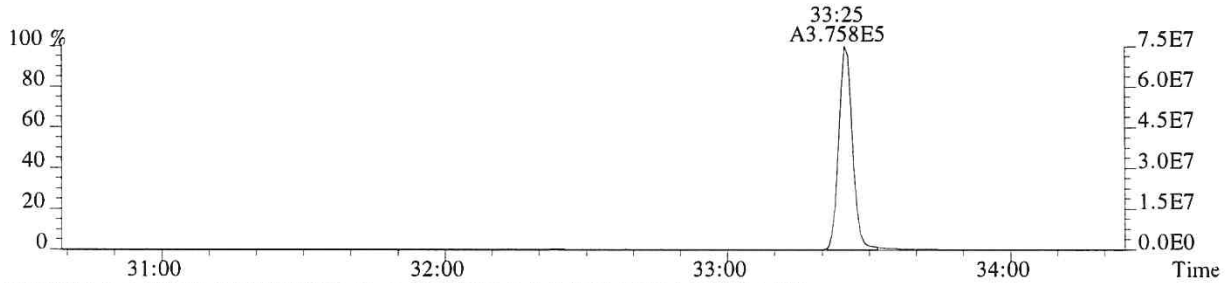
File:P614685 #1-339 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2460.0,1.00%,F,T)



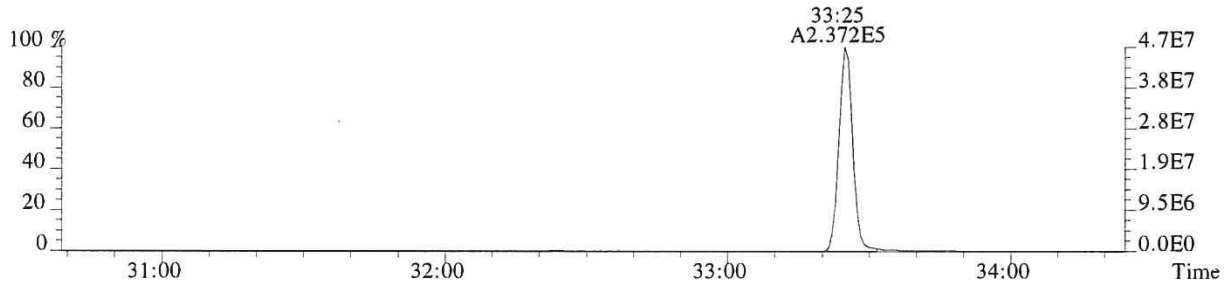
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1020.0,1.00%,F,T)



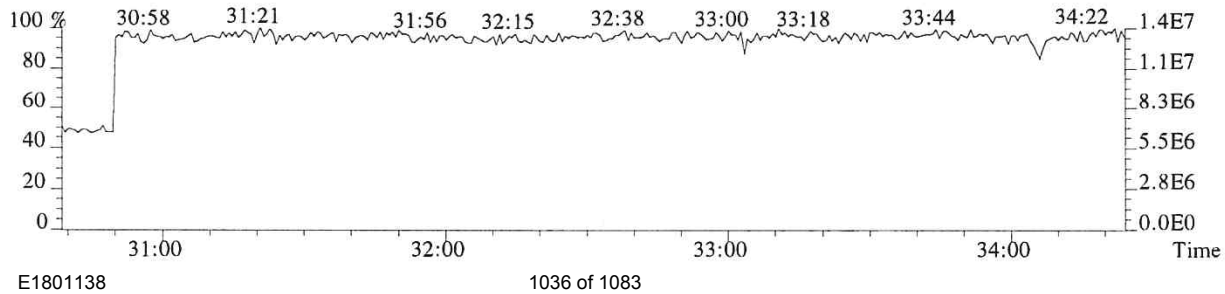
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3592.0,1.00%,F,T)



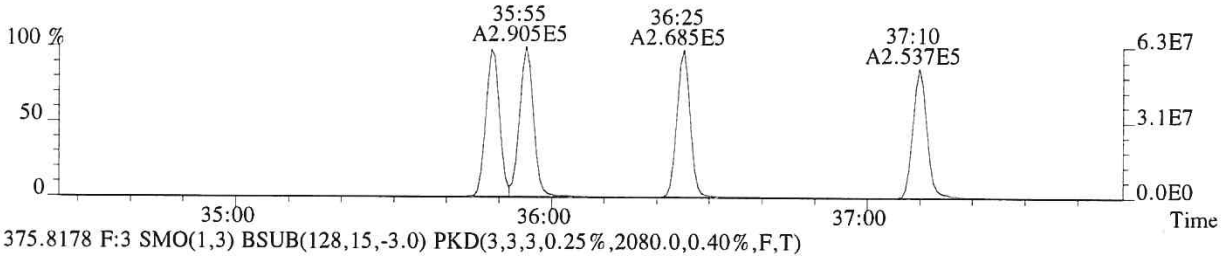
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2496.0,1.00%,F,T)



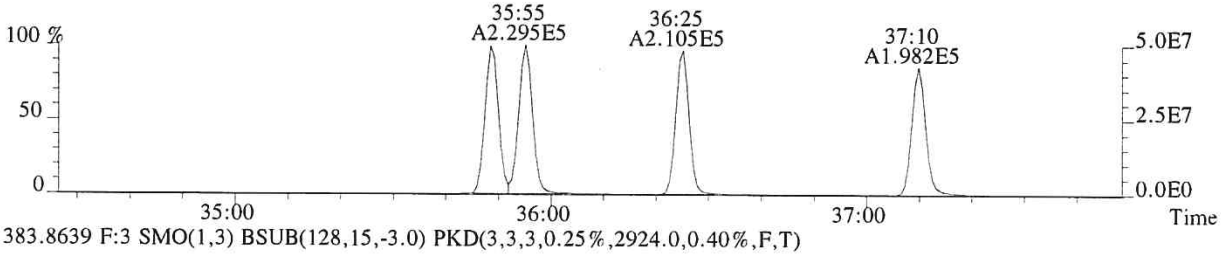
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



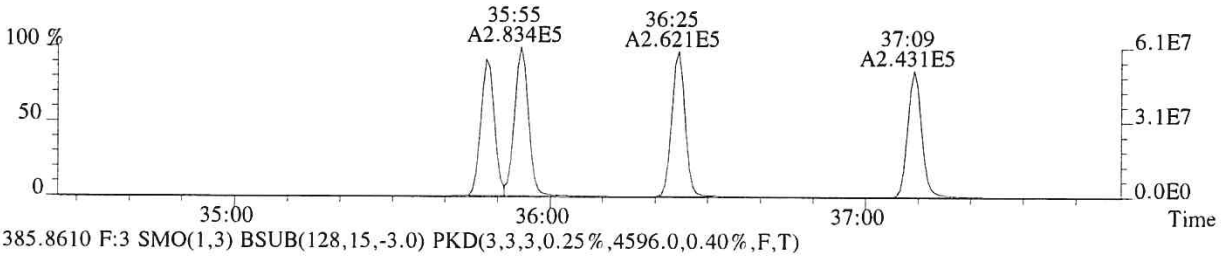
File:P614685 #1-304 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2888.0,0.40%,F,T)



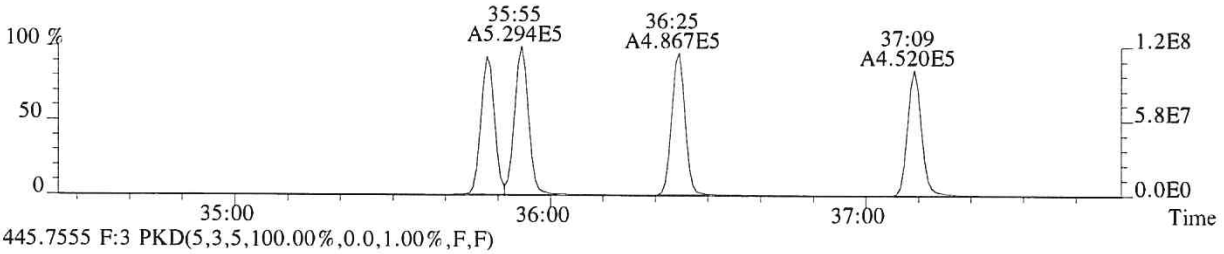
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2080.0,0.40%,F,T)



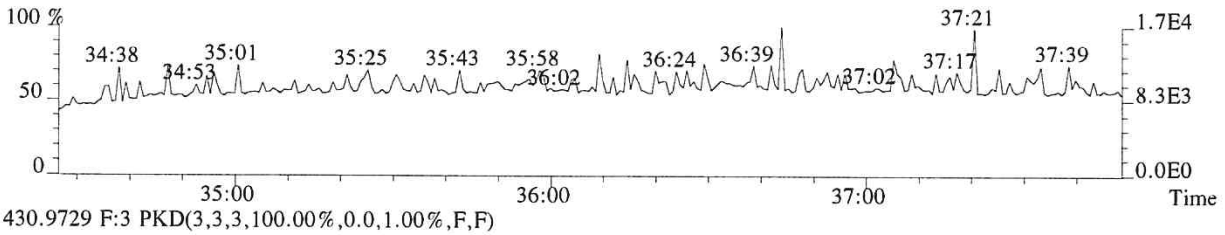
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2924.0,0.40%,F,T)



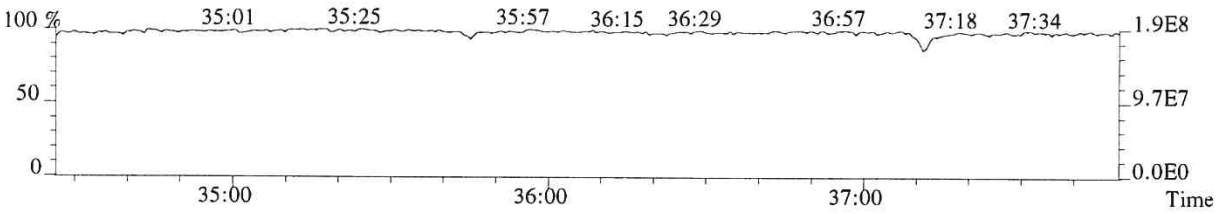
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4596.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

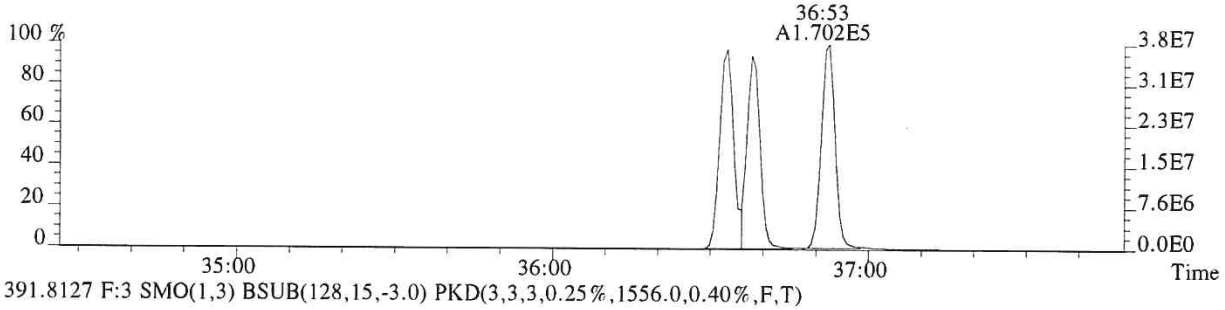


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

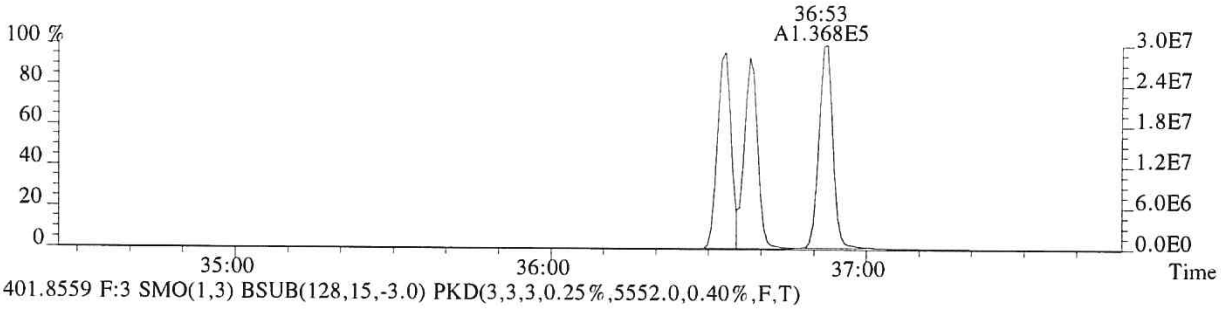


017918

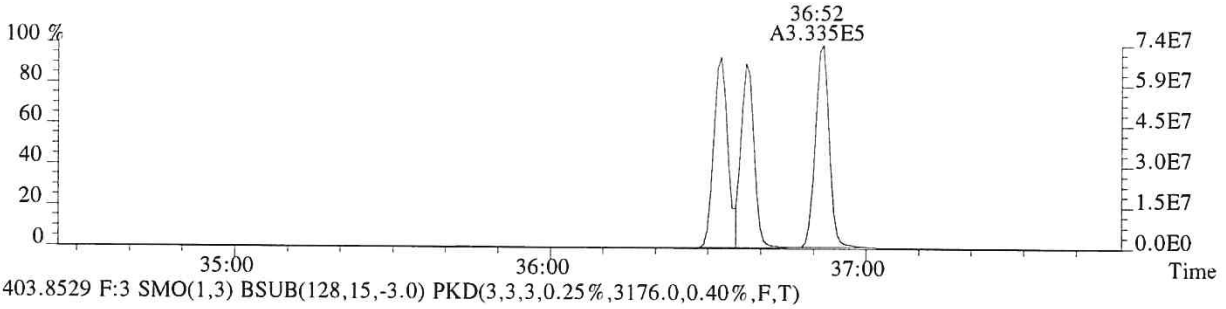
File:P614685 #1-304 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,904.0,0.40%,F,T)



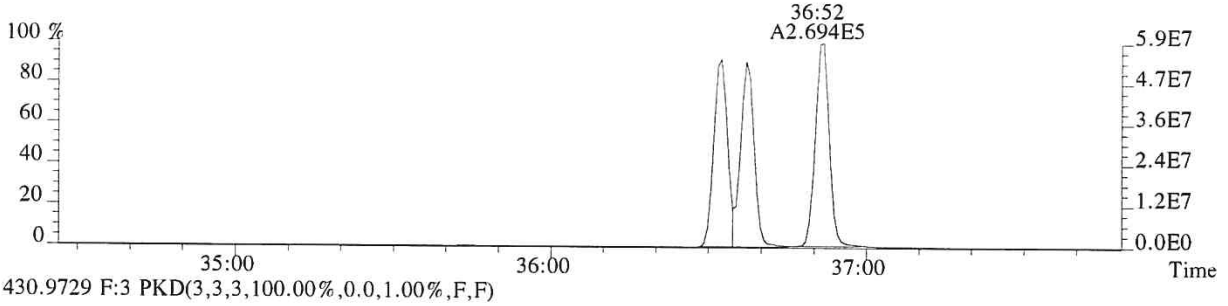
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1556.0,0.40%,F,T)



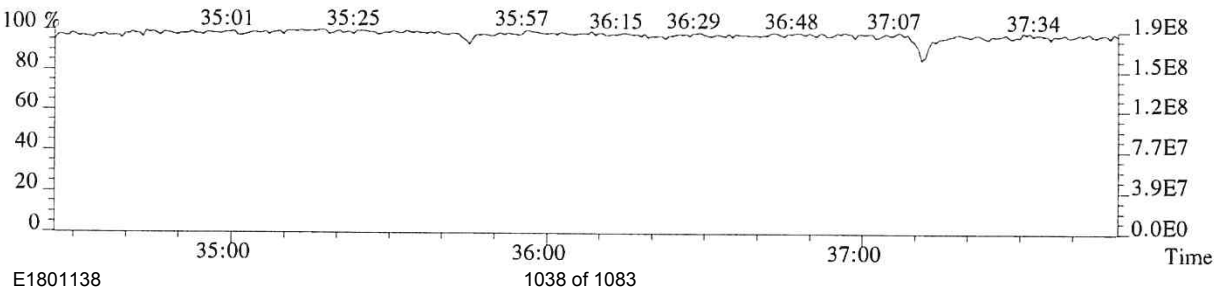
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5552.0,0.40%,F,T)



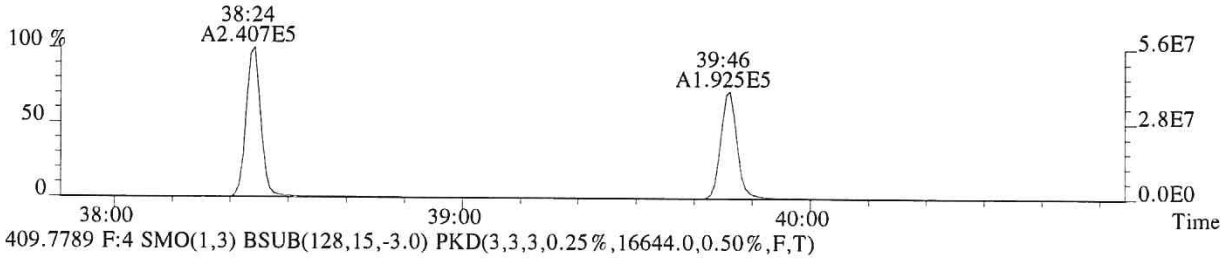
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3176.0,0.40%,F,T)



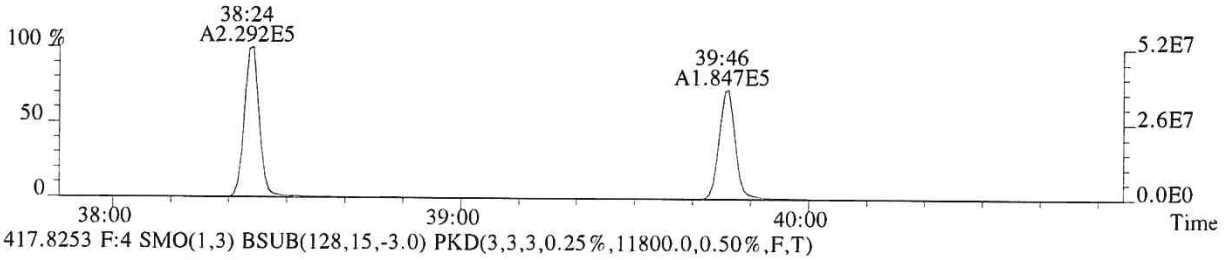
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



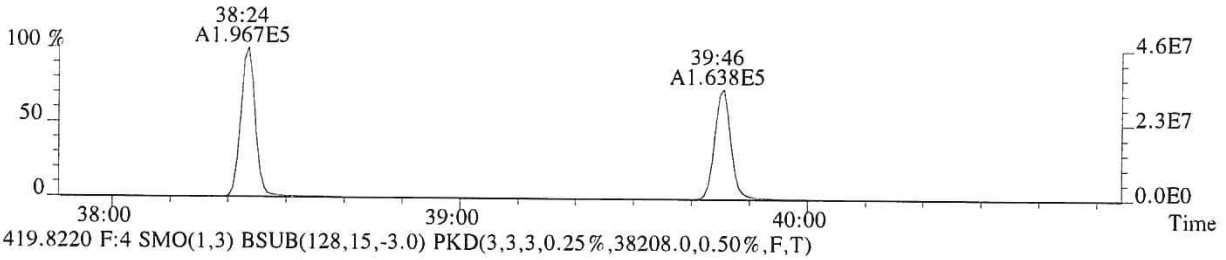
File:P614685 #1-276 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,14728.0,0.50%,F,T)



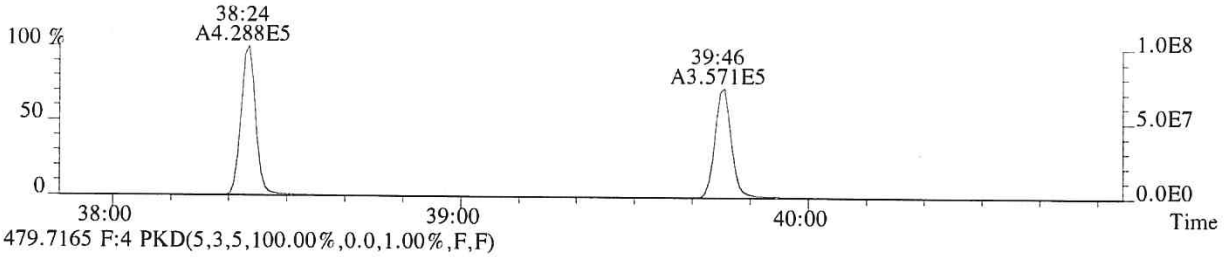
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,16644.0,0.50%,F,T)



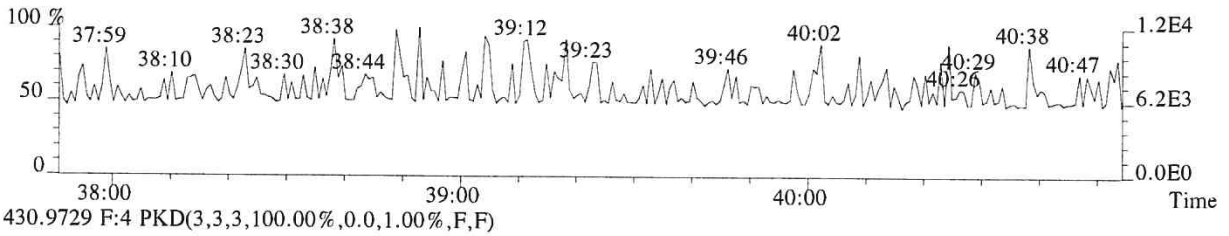
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11800.0,0.50%,F,T)



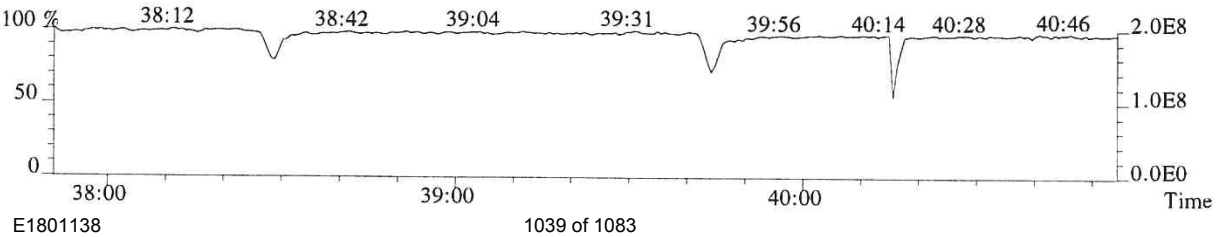
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,38208.0,0.50%,F,T)



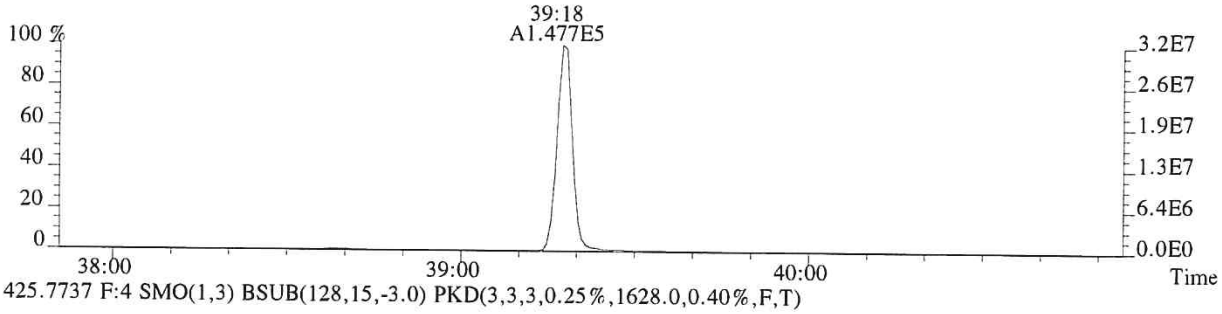
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



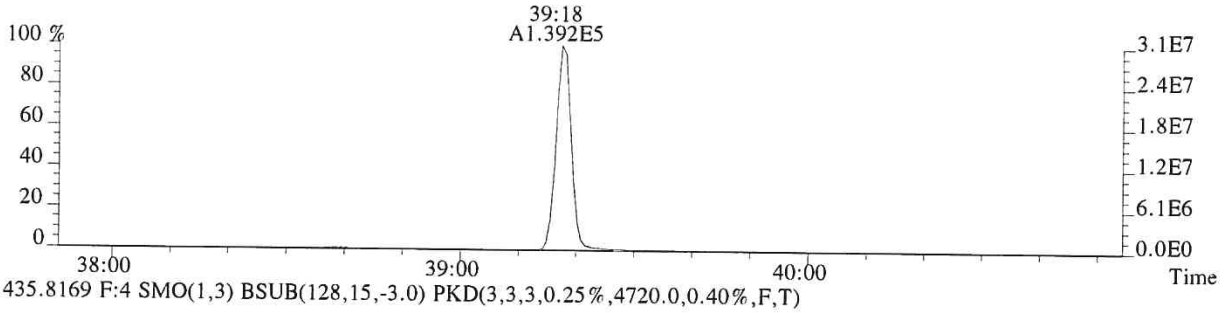
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



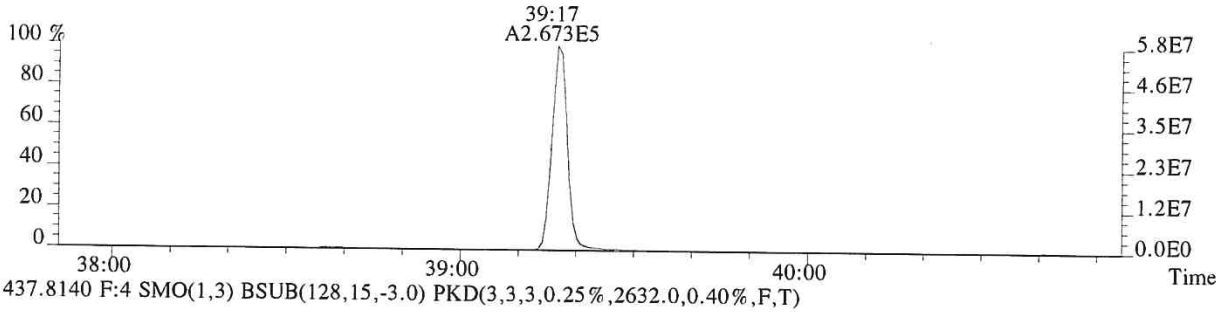
File:P614685 #1-276 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1576.0,0.40%,F,T)



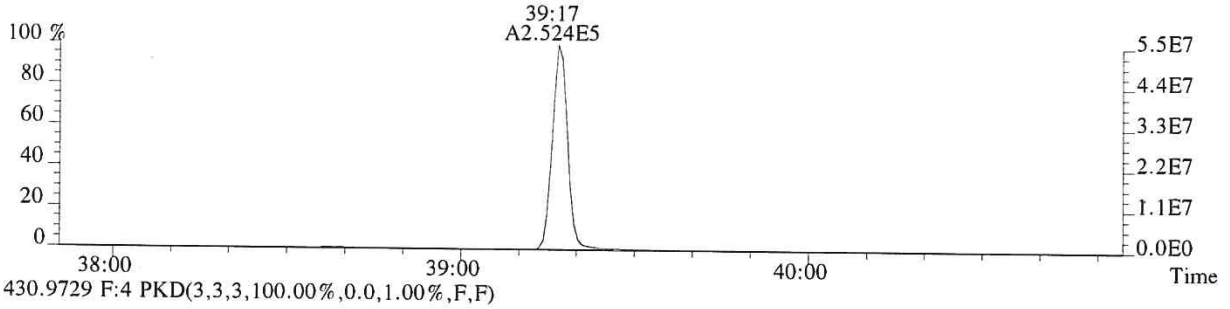
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1628.0,0.40%,F,T)



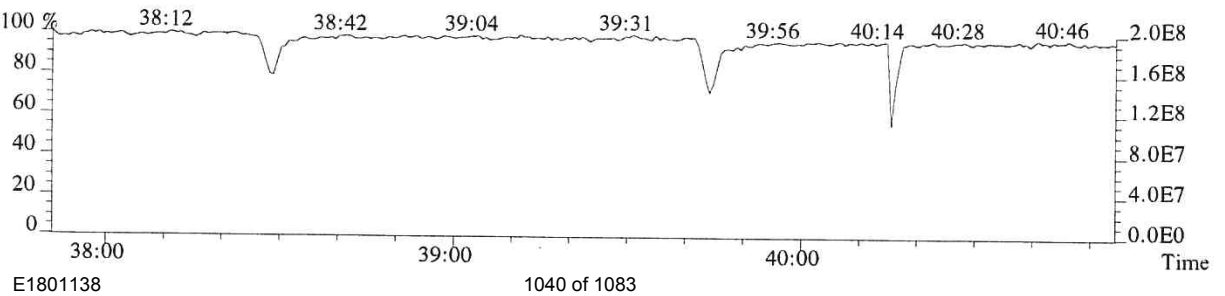
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4720.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2632.0,0.40%,F,T)

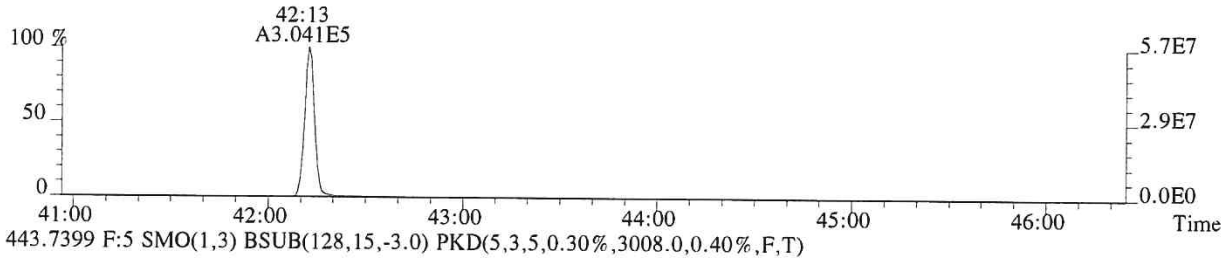


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

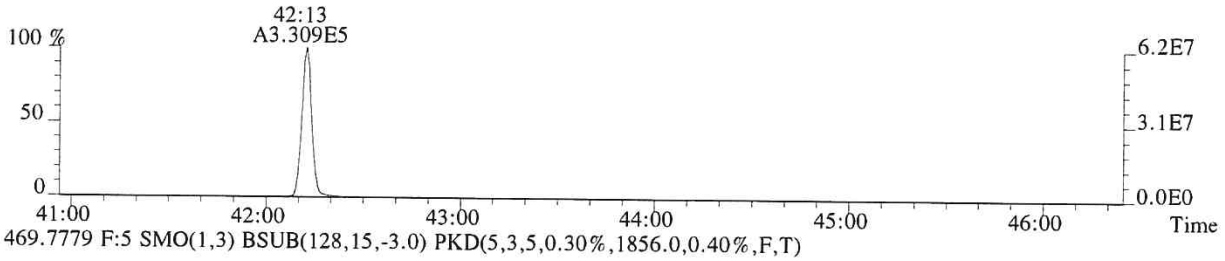


017921

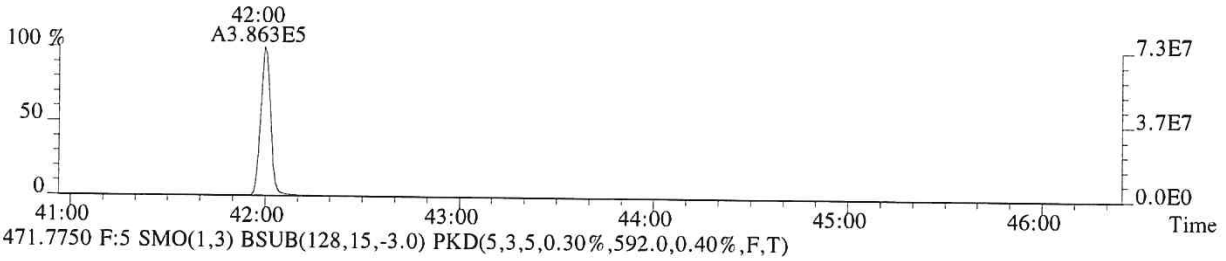
File:P614685 #1-493 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:CS3
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1228.0,0.40%,F,T)



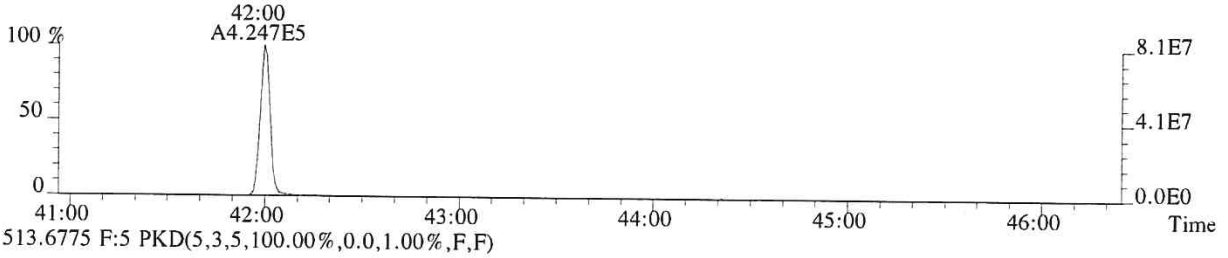
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3008.0,0.40%,F,T)



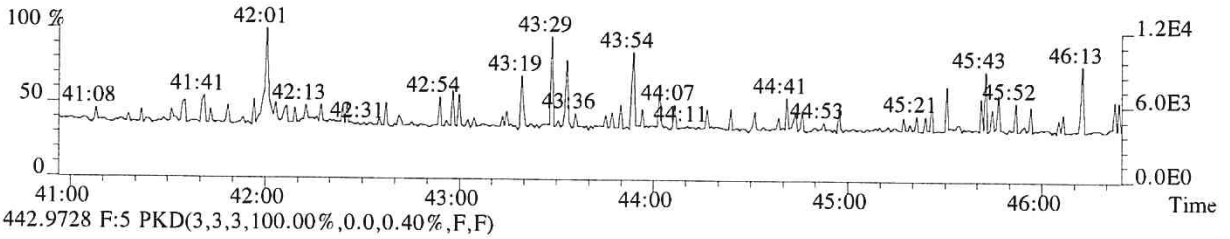
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1856.0,0.40%,F,T)



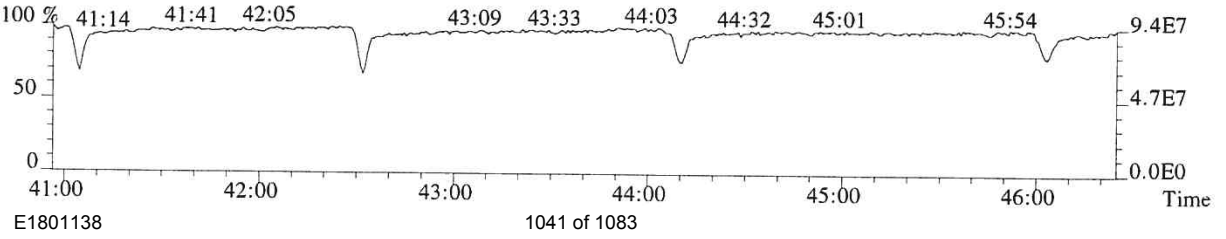
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,592.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

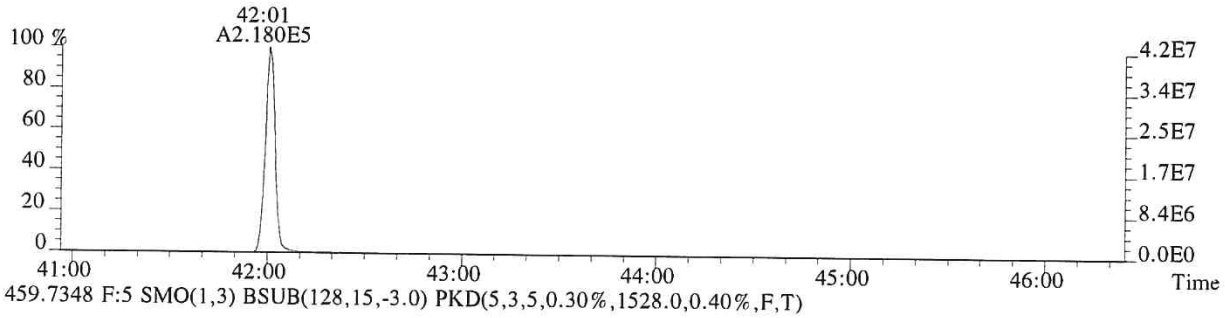


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

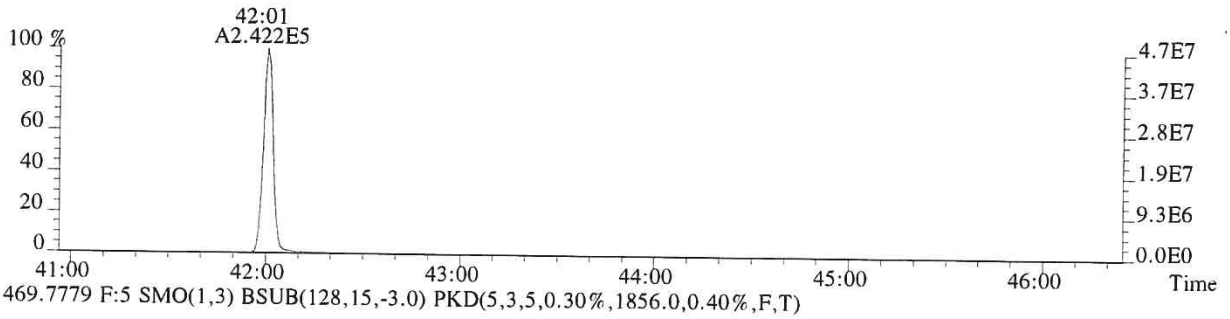


017922

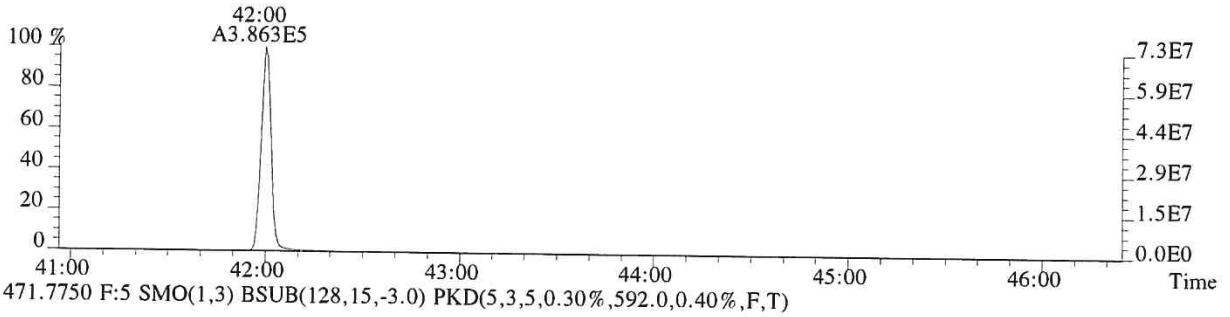
File:P614685 #1-493 Acq:25-SEP-2018 16:52:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS3
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1708.0,0.40%,F,T)



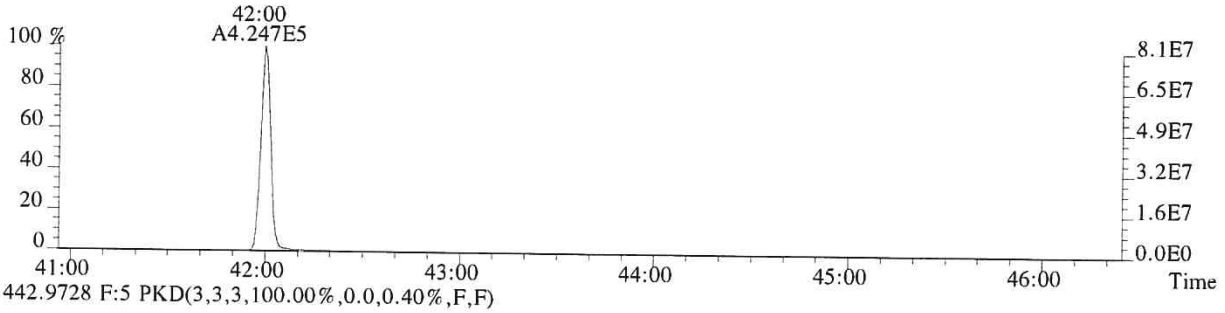
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1528.0,0.40%,F,T)



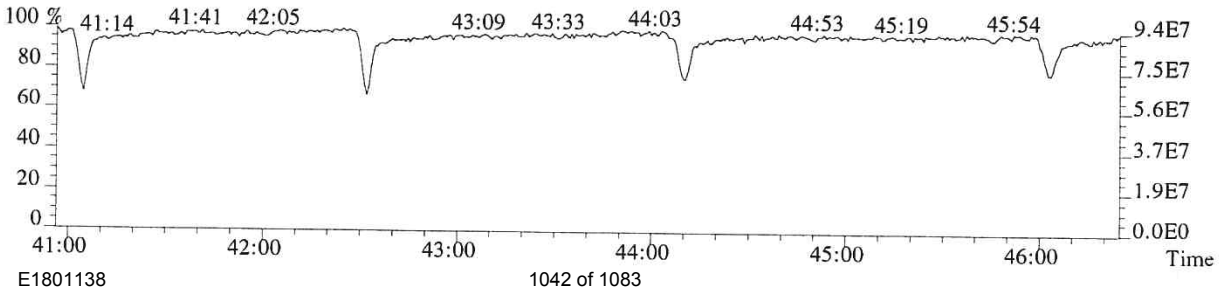
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1856.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,592.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017923

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
82167

Run #5 Filename P614686 Samp: 1 Inj: 1 Acquired: 25-SEP-18 17:41:03
Processed: 26-SEP-18 07:39:11 Sample ID: CS4

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:00	1.186e+05	1.498e+05	0.79	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:14	1.070e+06	6.680e+05	1.60	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:09	9.931e+05	6.255e+05	1.59	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	9.336e+05	7.318e+05	1.28	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	9.546e+05	7.530e+05	1.27	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	9.004e+05	7.134e+05	1.26	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:10	8.574e+05	6.711e+05	1.28	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	7.924e+05	7.640e+05	1.04	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	6.712e+05	6.389e+05	1.05	yes	no	1.463
10	Unk	OCDF	42:13	9.999e+05	1.075e+06	0.93	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	8.371e+04	1.065e+05	0.79	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	5.908e+05	3.807e+05	1.55	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	5.387e+05	4.268e+05	1.26	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	5.444e+05	4.299e+05	1.27	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:52	5.850e+05	4.610e+05	1.27	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	4.859e+05	4.568e+05	1.06	yes	no	1.112
17	Unk	OCDD	42:01	7.127e+05	7.901e+05	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	2.799e+05	3.543e+05	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	4.595e+05	2.875e+05	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	4.523e+05	2.842e+05	1.59	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:48	2.092e+05	3.928e+05	0.53	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:55	2.332e+05	4.327e+05	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:25	2.224e+05	4.139e+05	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	2.041e+05	3.825e+05	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:24	1.626e+05	3.528e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:46	1.431e+05	3.159e+05	0.45	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	2.012e+05	2.528e+05	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	3.193e+05	2.044e+05	1.56	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:33	2.552e+05	2.035e+05	1.25	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	2.565e+05	2.045e+05	1.25	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	2.187e+05	2.081e+05	1.05	yes	no	0.857
32	IS	13C-OCDD	42:00	3.133e+05	3.464e+05	0.90	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:13	2.000e+05	2.518e+05	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:51	2.828e+05	2.264e+05	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	2.003e+05				no	1.086

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Signal/Noise Height Ratio Summary

CLIENT ID.
82167

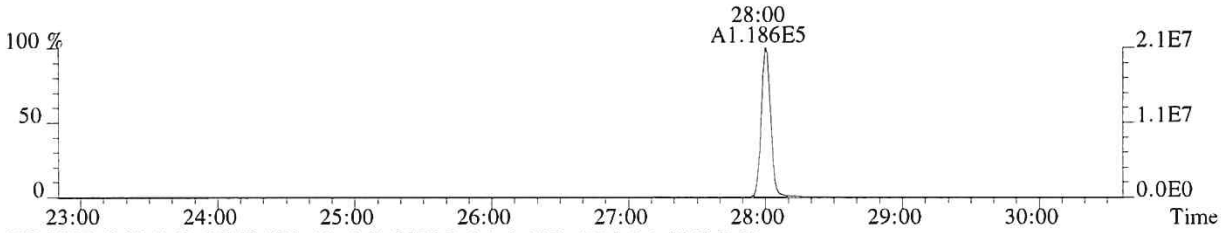
Run #5 Filename P614686 Samp: 1 Inj: 1 Acquired: 25-SEP-18 17:41:03
Processed: 26-SEP-18 07:39:11 LAB. ID: CS4

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.13e+07	2.15e+03	9.9e+03	2.70e+07	4.22e+03	6.4e+03
2	1,2,3,7,8-PeCDF	2.03e+08	3.06e+03	6.6e+04	1.29e+08	4.95e+03	2.6e+04
3	2,3,4,7,8-PeCDF	2.04e+08	3.06e+03	6.7e+04	1.28e+08	4.95e+03	2.6e+04
4	1,2,3,4,7,8-HxCDF	2.14e+08	1.85e+03	1.2e+05	1.68e+08	4.92e+03	3.4e+04
5	1,2,3,6,7,8-HxCDF	2.12e+08	1.85e+03	1.1e+05	1.67e+08	4.92e+03	3.4e+04
6	2,3,4,6,7,8-HxCDF	2.02e+08	1.85e+03	1.1e+05	1.59e+08	4.92e+03	3.2e+04
7	1,2,3,7,8,9-HxCDF	1.88e+08	1.85e+03	1.0e+05	1.47e+08	4.92e+03	3.0e+04
8	1,2,3,4,6,7,8-HpCDF	1.78e+08	2.61e+04	6.8e+03	1.72e+08	1.83e+04	9.4e+03
9	1,2,3,4,7,8,9-HpCDF	1.41e+08	2.61e+04	5.4e+03	1.35e+08	1.83e+04	7.4e+03
10	OCDF	1.94e+08	1.46e+03	1.3e+05	2.08e+08	3.00e+03	6.9e+04
11	2,3,7,8-TCDD	1.62e+07	6.38e+03	2.5e+03	2.06e+07	2.42e+03	8.5e+03
12	1,2,3,7,8-PeCDD	1.19e+08	3.22e+03	3.7e+04	7.64e+07	1.02e+03	7.5e+04
13	1,2,3,4,7,8-HxCDD	1.25e+08	9.48e+02	1.3e+05	9.78e+07	1.64e+03	5.9e+04
14	1,2,3,6,7,8-HxCDD	1.22e+08	9.48e+02	1.3e+05	9.73e+07	1.64e+03	5.9e+04
15	1,2,3,7,8,9-HxCDD	1.31e+08	9.48e+02	1.4e+05	1.04e+08	1.64e+03	6.3e+04
16	1,2,3,4,6,7,8-HpCDD	1.10e+08	2.46e+03	4.5e+04	1.04e+08	2.38e+03	4.4e+04
17	OCDD	1.42e+08	1.24e+03	1.1e+05	1.57e+08	1.46e+03	1.1e+05
18	13C-2,3,7,8-TCDF	5.06e+07	1.14e+04	4.4e+03	6.41e+07	7.28e+03	8.8e+03
19	13C-1,2,3,7,8-PeCDF	8.88e+07	3.08e+03	2.9e+04	5.58e+07	3.54e+03	1.6e+04
20	13C-2,3,4,7,8-PeCDF	9.15e+07	3.08e+03	3.0e+04	5.70e+07	3.54e+03	1.6e+04
21	13C-1,2,3,4,7,8-HxCDF	4.76e+07	3.01e+03	1.6e+04	8.96e+07	4.64e+03	1.9e+04
22	13C-1,2,3,6,7,8-HxCDF	5.17e+07	3.01e+03	1.7e+04	9.54e+07	4.64e+03	2.1e+04
23	13C-2,3,4,6,7,8-HxCDF	4.99e+07	3.01e+03	1.7e+04	9.21e+07	4.64e+03	2.0e+04
24	13C-1,2,3,7,8,9-HxCDF	4.48e+07	3.01e+03	1.5e+04	8.44e+07	4.64e+03	1.8e+04
25	13C-1,2,3,4,6,7,8-HpCDF	3.73e+07	8.80e+03	4.2e+03	8.02e+07	1.92e+04	4.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.97e+07	8.80e+03	3.4e+03	6.54e+07	1.92e+04	3.4e+03
27	13C-2,3,7,8-TCDD	3.77e+07	1.85e+04	2.0e+03	4.78e+07	7.81e+03	6.1e+03
28	13C-1,2,3,7,8-PeCDD	6.47e+07	3.56e+03	1.8e+04	4.18e+07	3.26e+03	1.3e+04
29	13C-1,2,3,4,7,8-HxCDD	5.86e+07	4.66e+03	1.3e+04	4.67e+07	3.04e+03	1.5e+04
30	13C-1,2,3,6,7,8-HxCDD	5.76e+07	4.66e+03	1.2e+04	4.61e+07	3.04e+03	1.5e+04
31	13C-1,2,3,4,6,7,8-HpCDD	4.94e+07	3.14e+03	1.6e+04	4.74e+07	1.71e+03	2.8e+04
32	13C-OCDD	6.18e+07	1.83e+03	3.4e+04	6.87e+07	9.56e+02	7.2e+04
33	13C-1,2,3,4-TCDD	3.76e+07	1.85e+04	2.0e+03	4.73e+07	7.81e+03	6.1e+03
34	13C-1,2,3,7,8,9-HxCDD	6.25e+07	4.66e+03	1.3e+04	5.04e+07	3.04e+03	1.7e+04
35	37Cl-2,3,7,8-TCDD	3.86e+07	4.32e+03	9.0e+03			

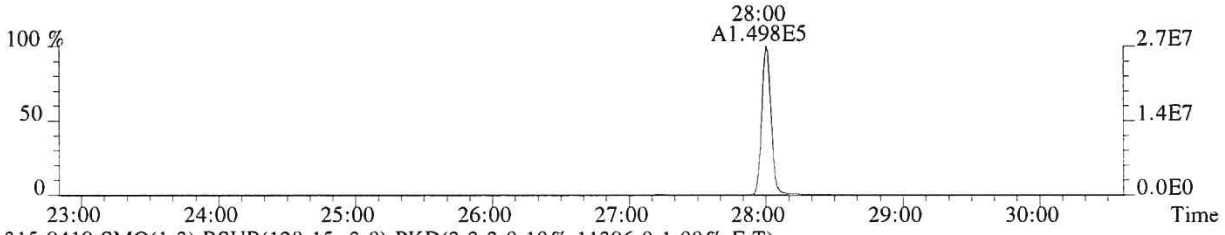
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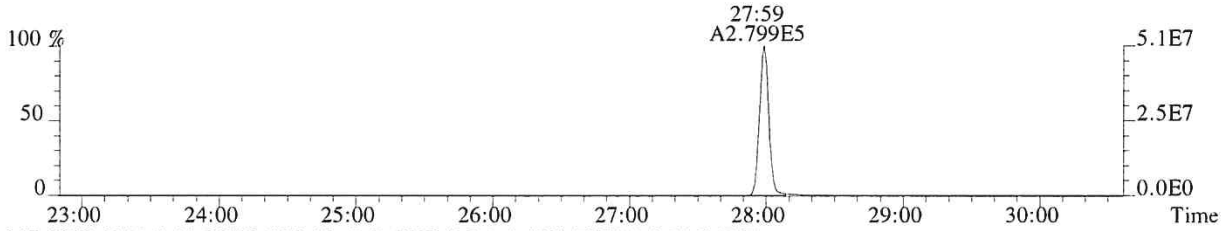
File:P614686 #1-552 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2148.0,1.00%,F,T)



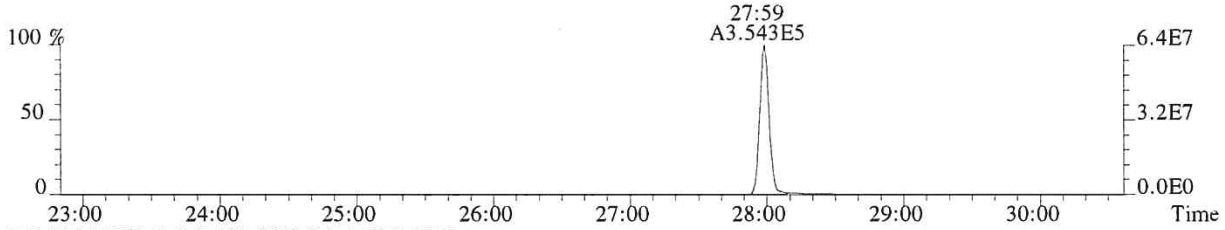
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4220.0,1.00%,F,T)



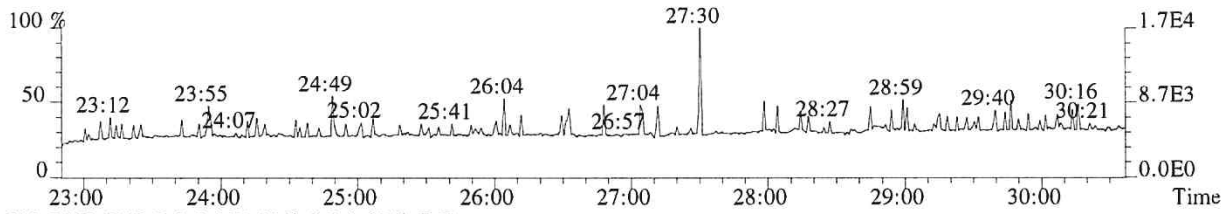
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11396.0,1.00%,F,T)



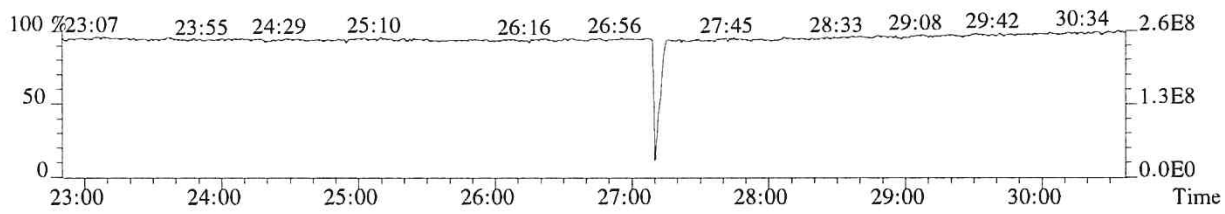
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7276.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

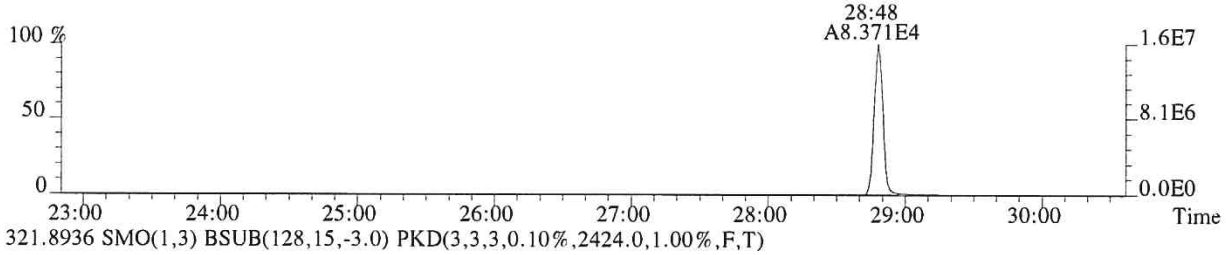


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

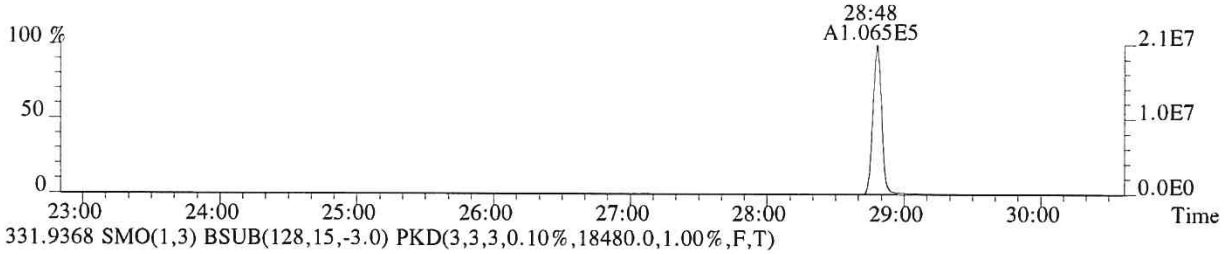


017926

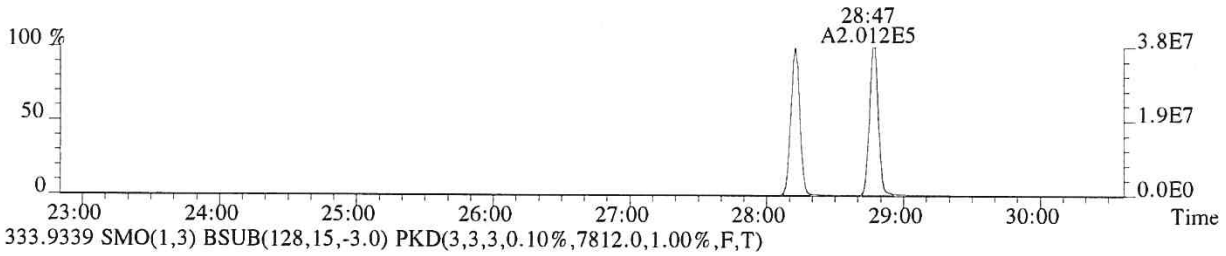
File:P614686 #1-552 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6384.0,1.00%,F,T)



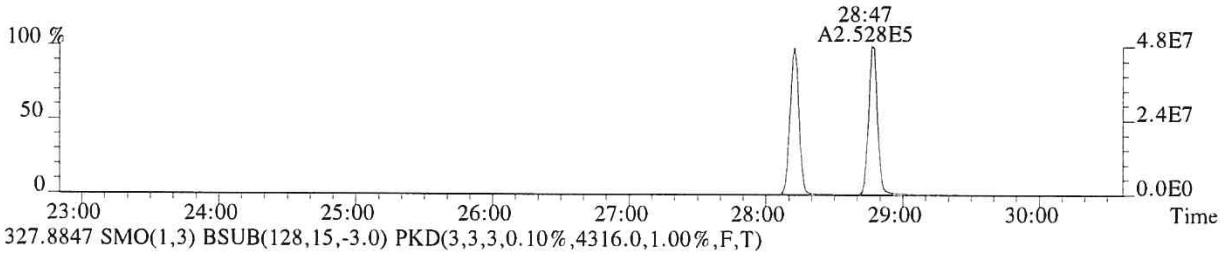
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2424.0,1.00%,F,T)



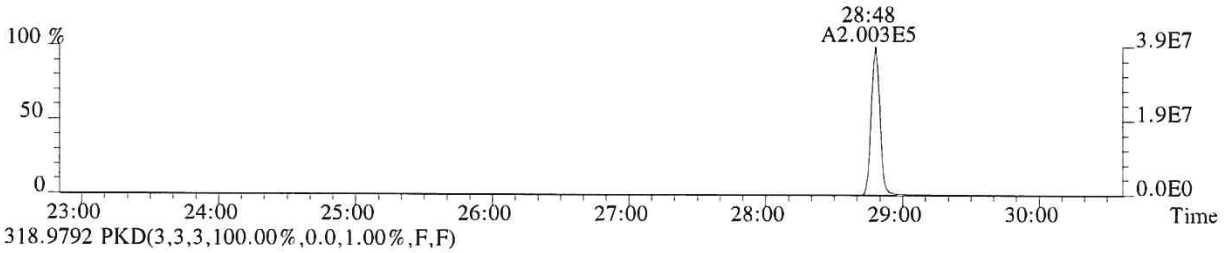
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,18480.0,1.00%,F,T)



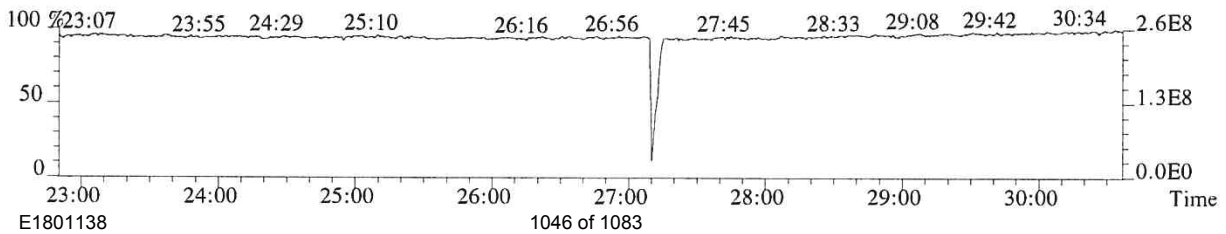
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7812.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4316.0,1.00%,F,T)

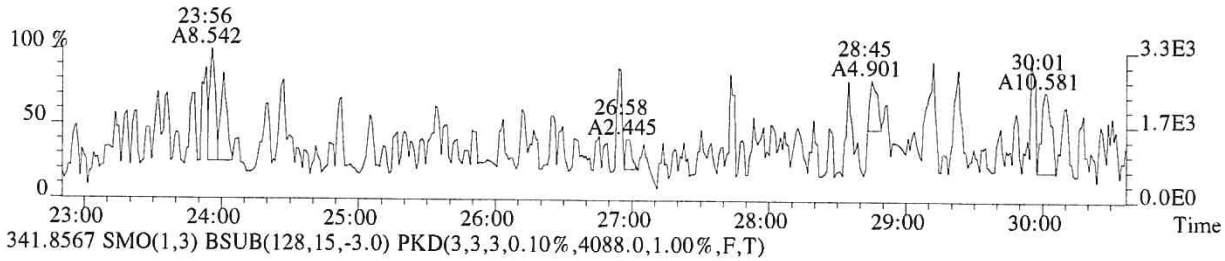


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

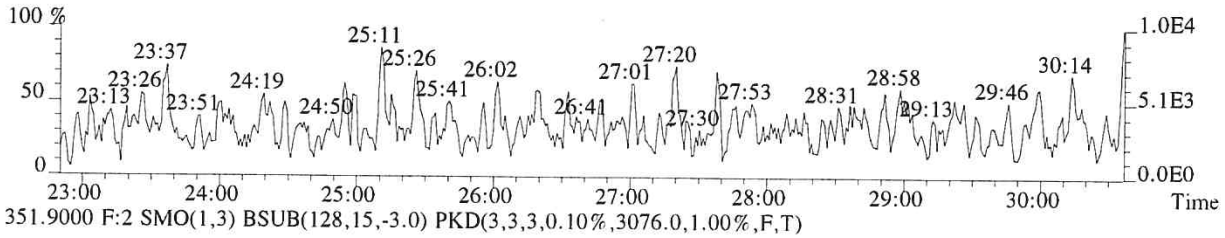


017927

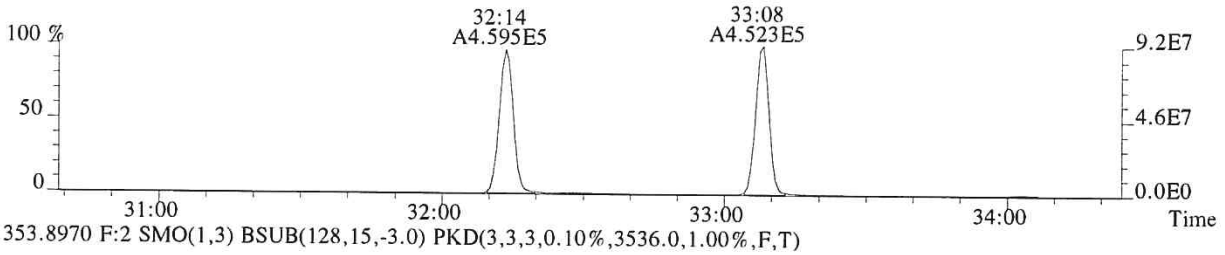
File:P614686 #1-552 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1356.0,1.00%,F,T)



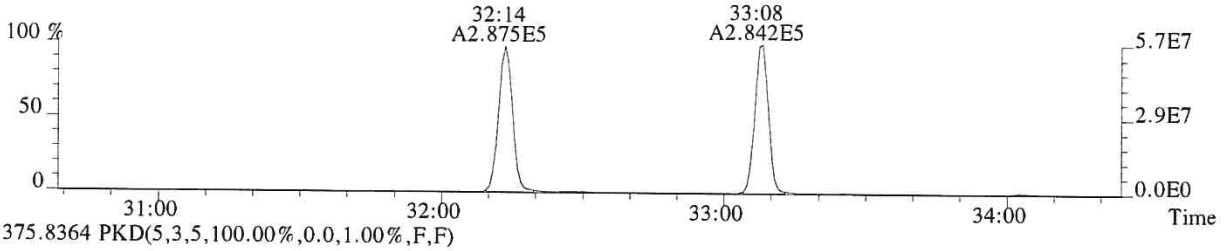
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4088.0,1.00%,F,T)



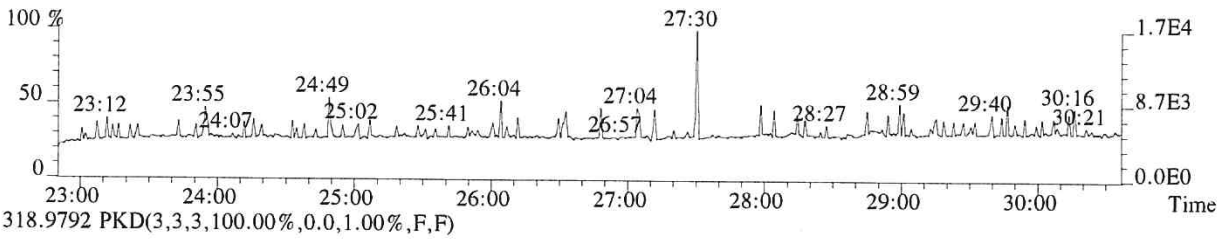
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3076.0,1.00%,F,T)



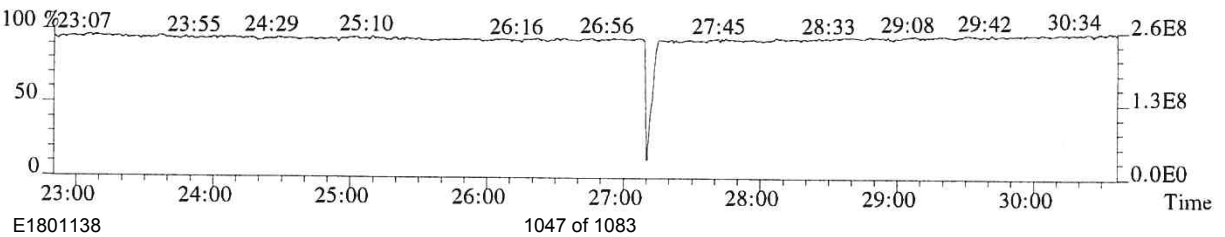
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3536.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

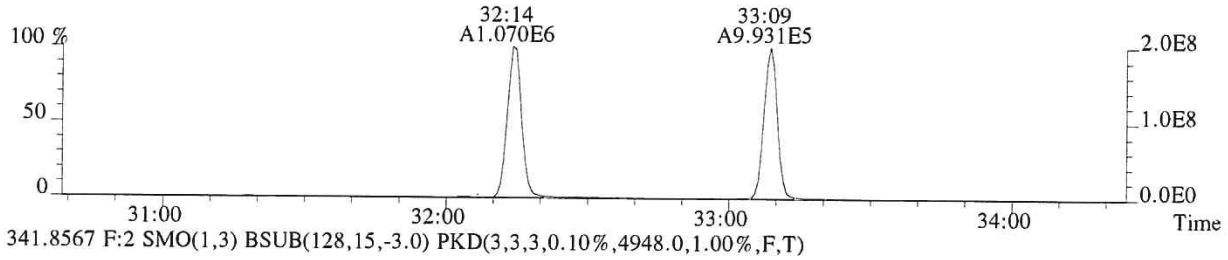


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

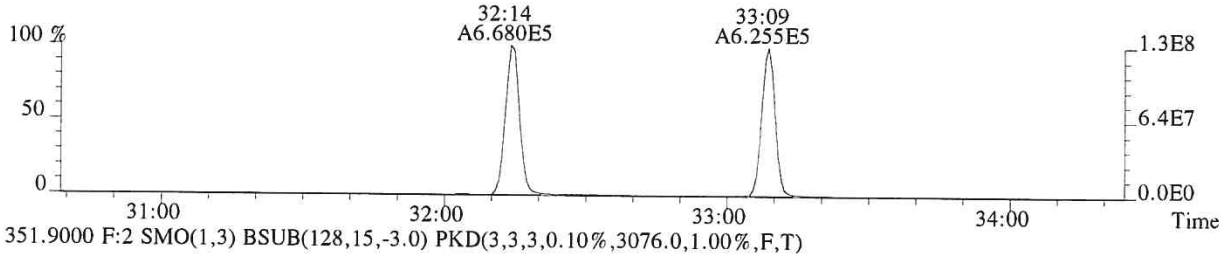


017928

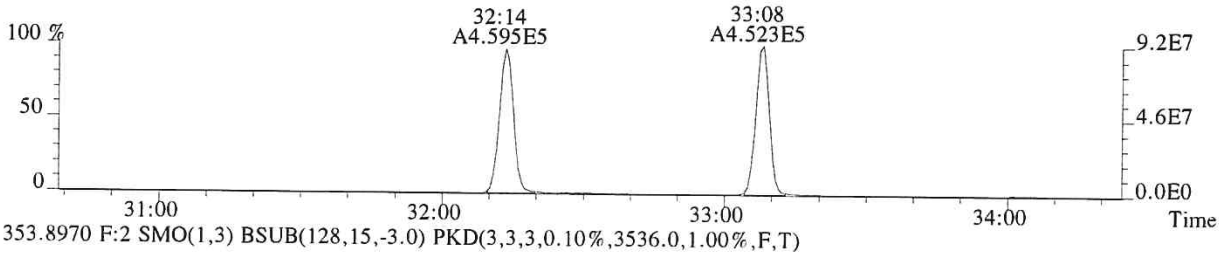
File:P614686 #1-339 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3064.0,1.00%,F,T)



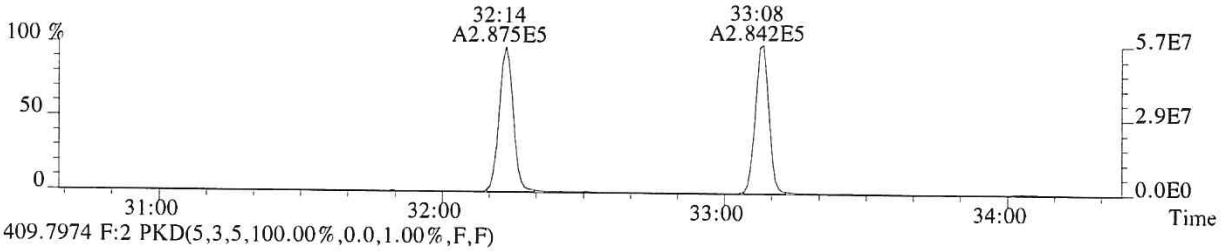
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4948.0,1.00%,F,T)



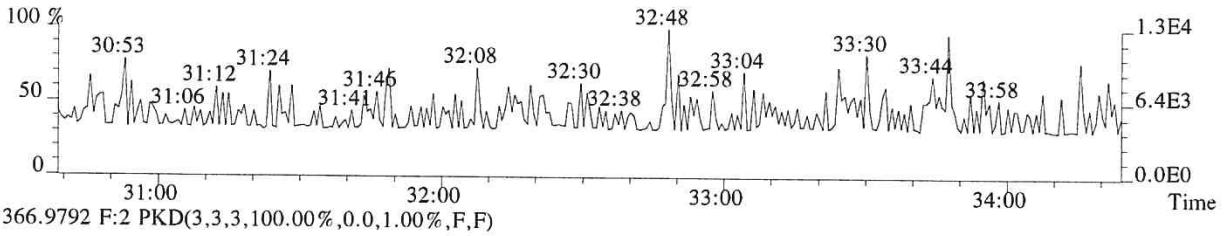
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3076.0,1.00%,F,T)



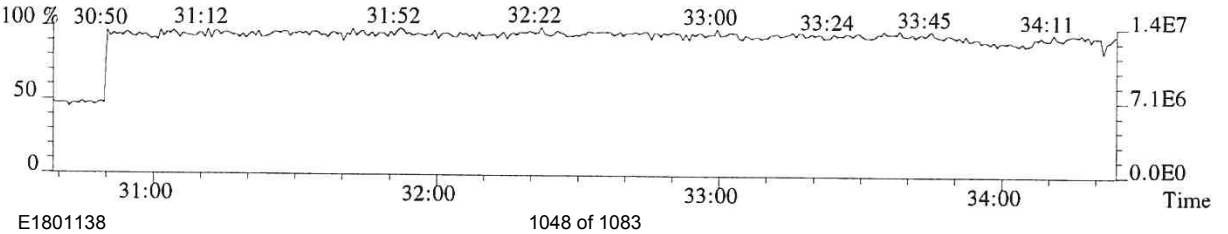
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3536.0,1.00%,F,T)



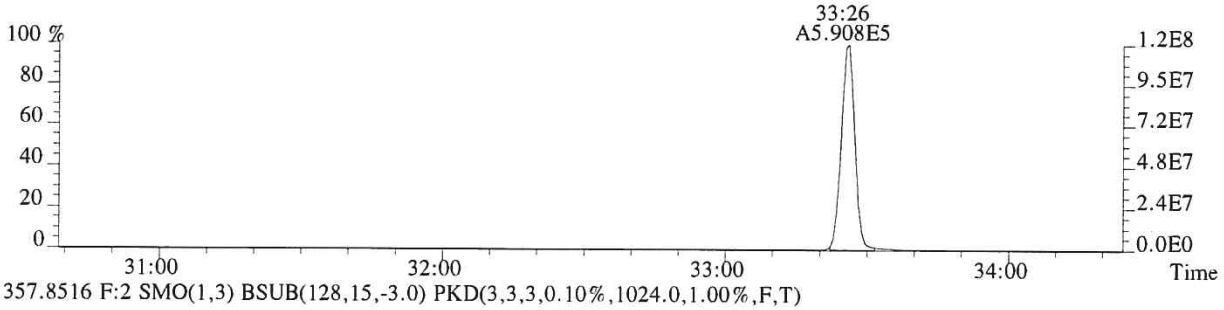
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



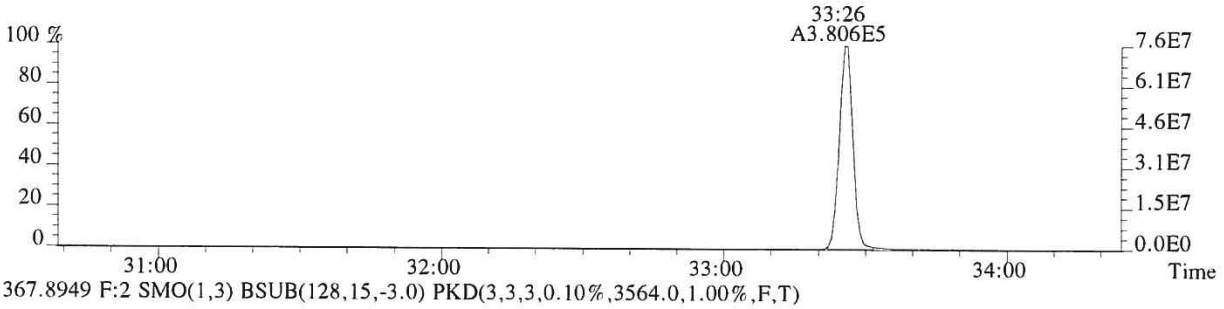
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



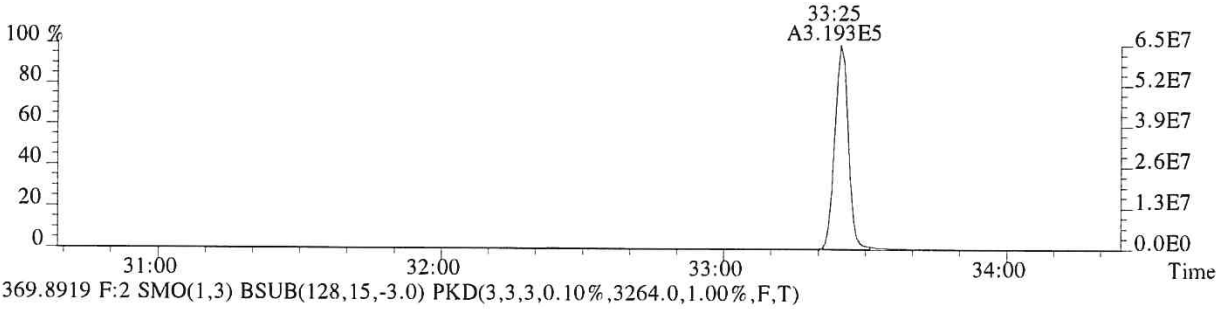
File:P614686 #1-339 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3220.0,1.00%,F,T)



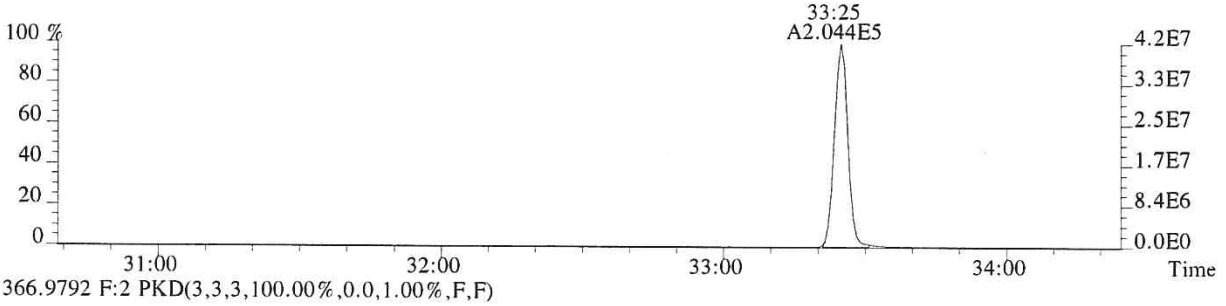
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



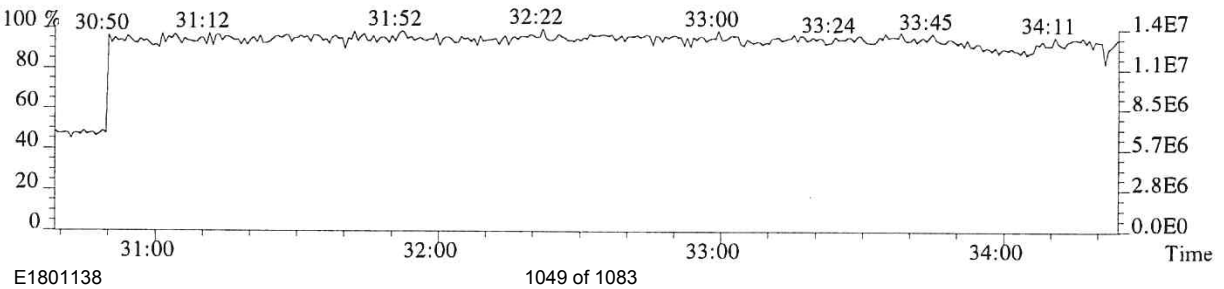
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3564.0,1.00%,F,T)



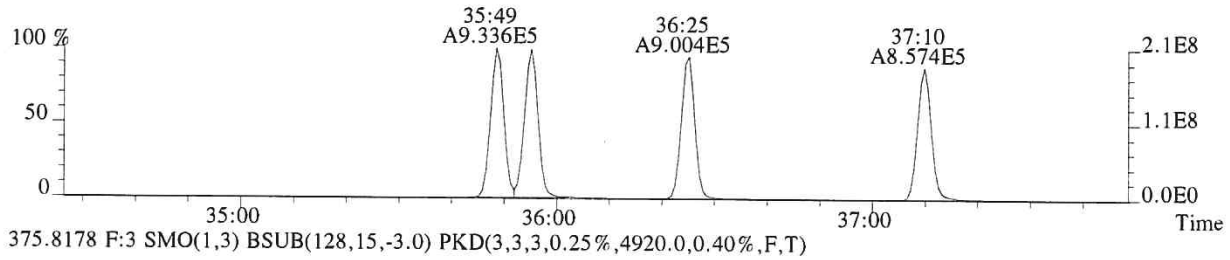
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3264.0,1.00%,F,T)



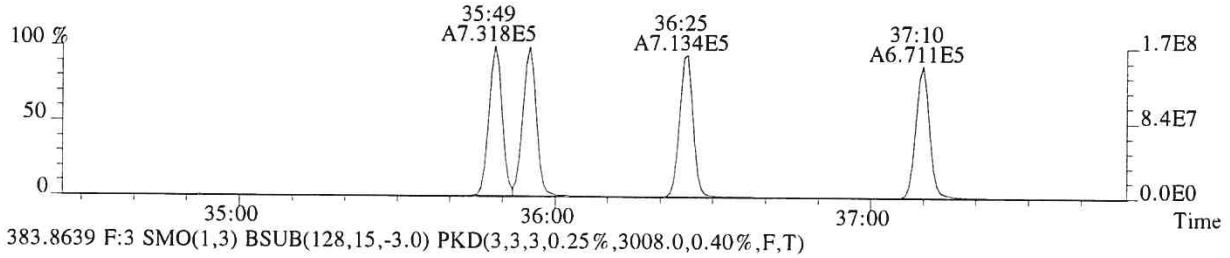
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



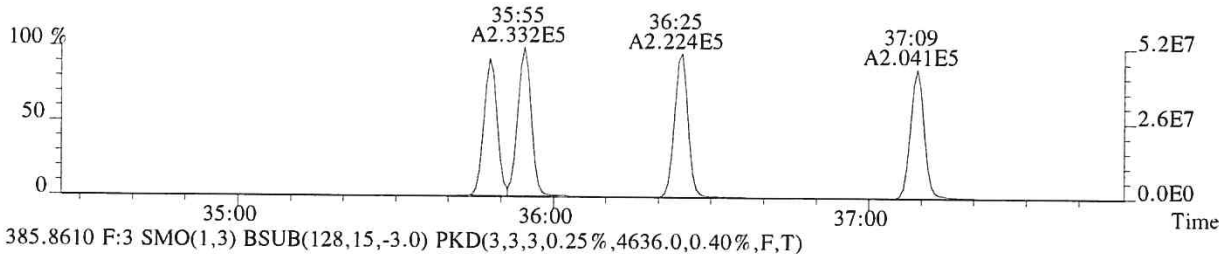
File:P614686 #1-304 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1848.0,0.40%,F,T)



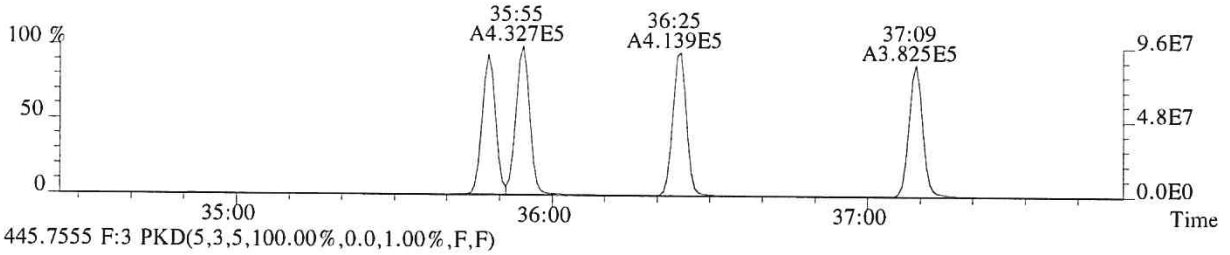
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4920.0,0.40%,F,T)



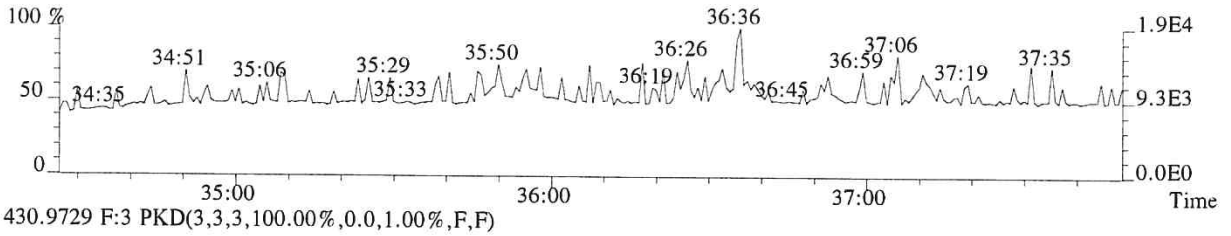
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3008.0,0.40%,F,T)



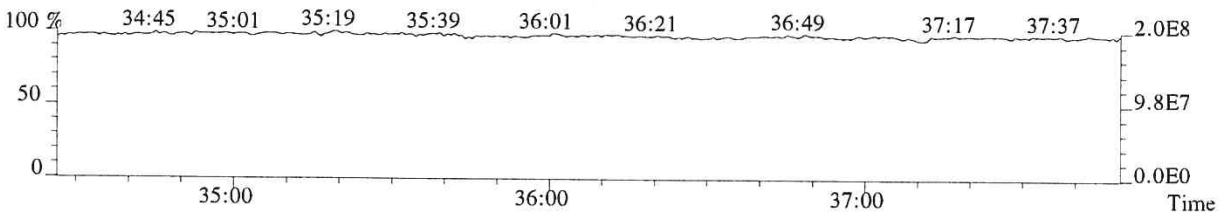
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4636.0,0.40%,F,T)



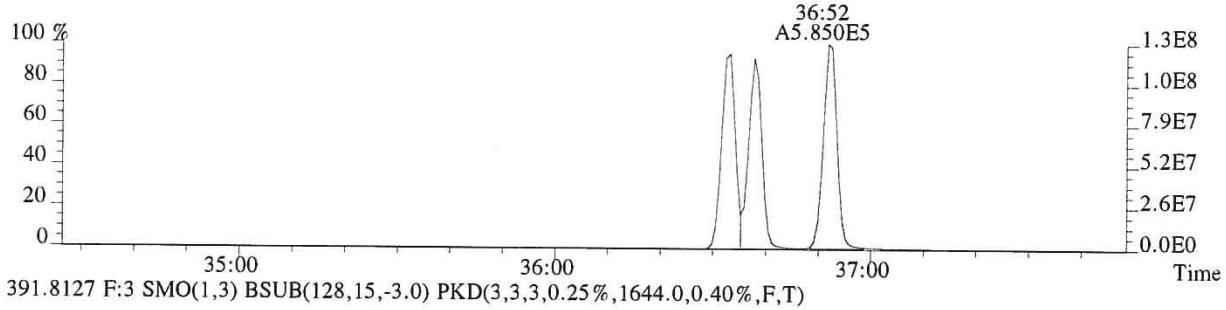
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



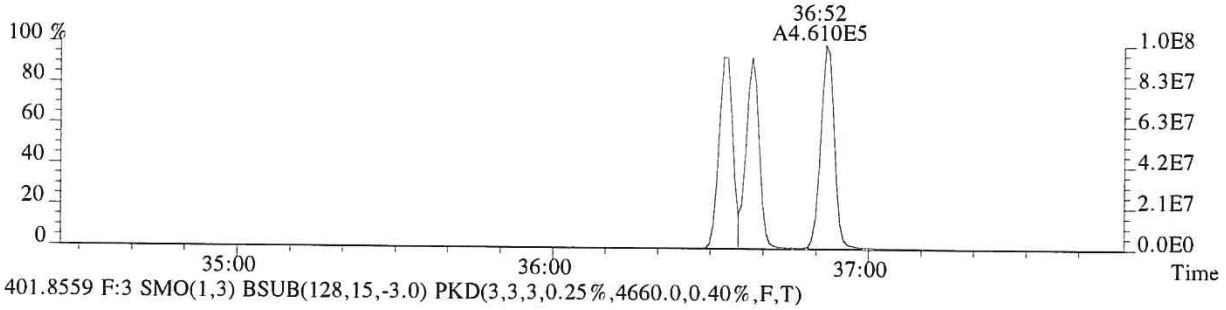
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



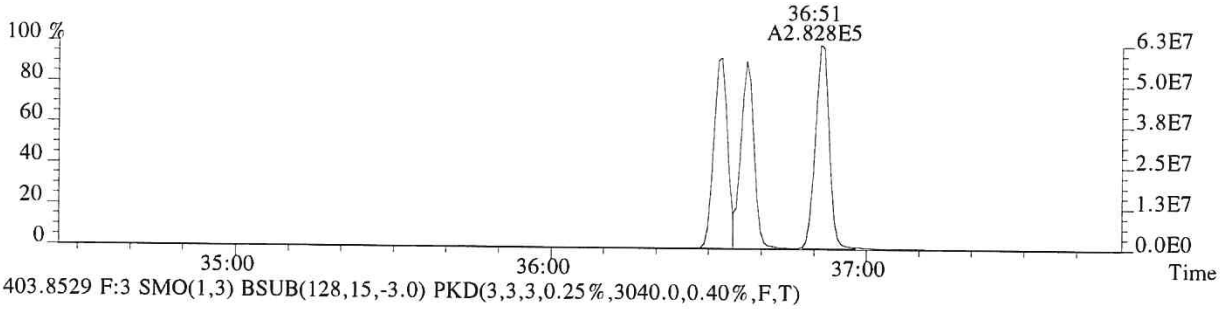
File:P614686 #1-304 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,948.0,0.40%,F,T)



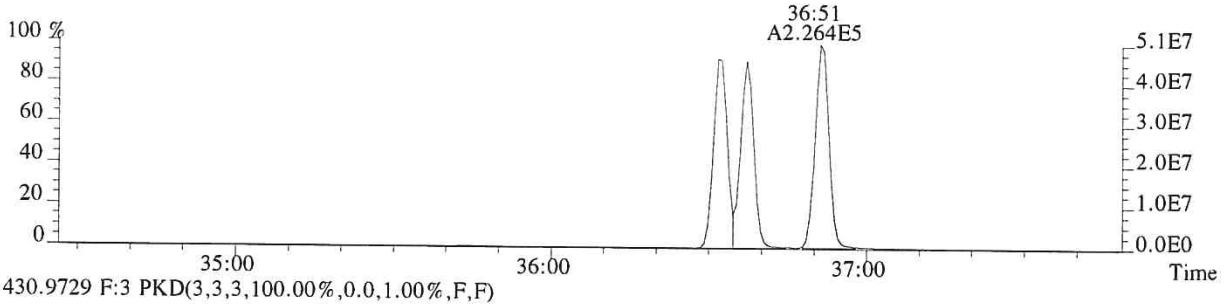
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1644.0,0.40%,F,T)



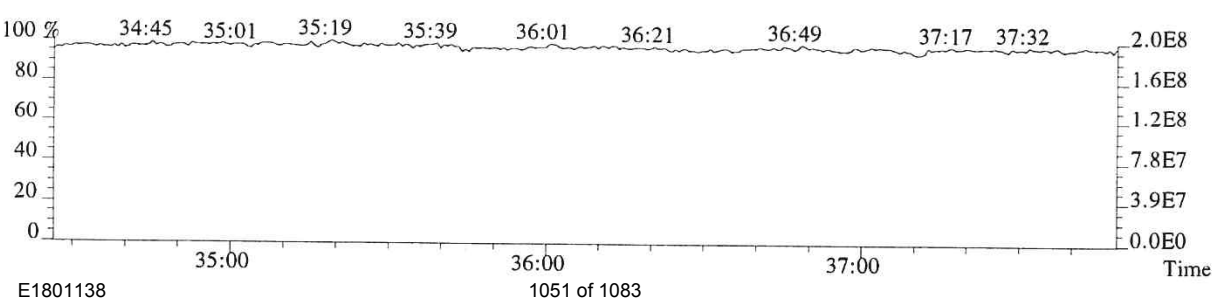
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4660.0,0.40%,F,T)



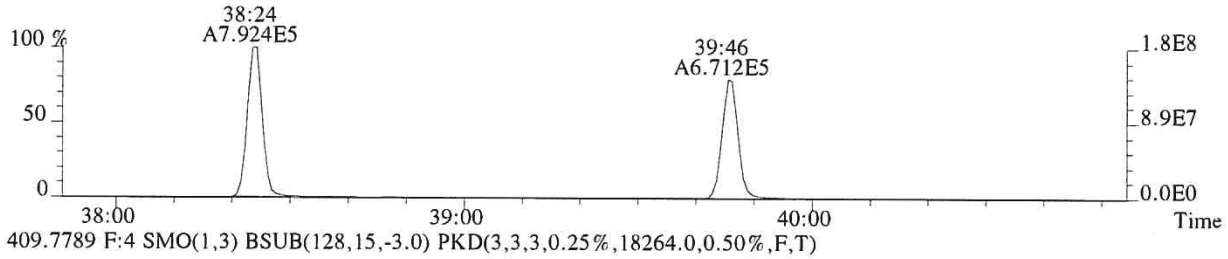
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3040.0,0.40%,F,T)



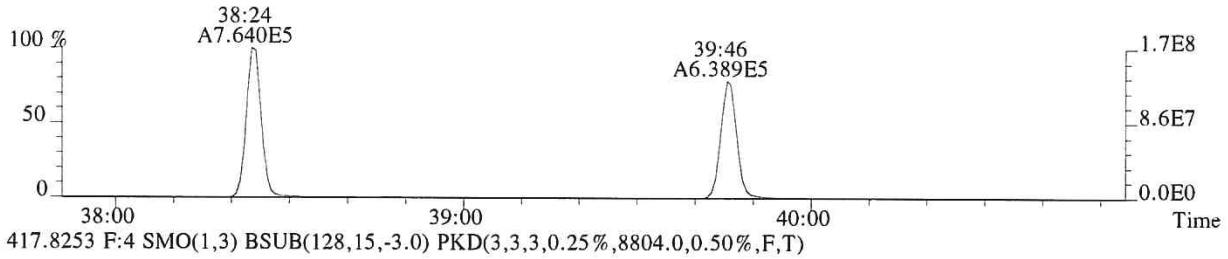
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



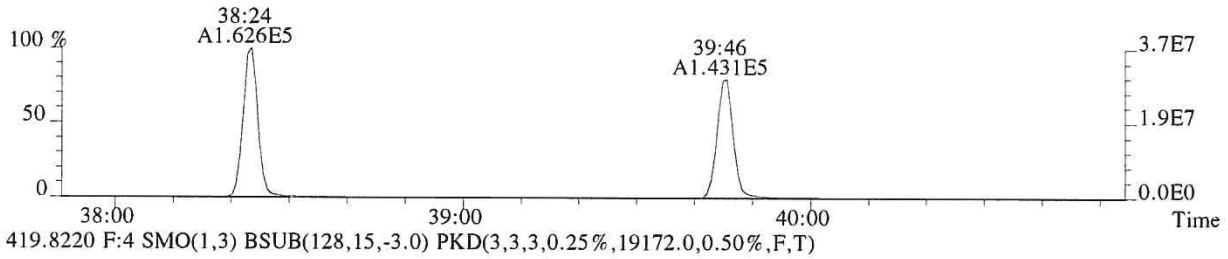
File:P614686 #1-276 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,26056.0,0.50%,F,T)



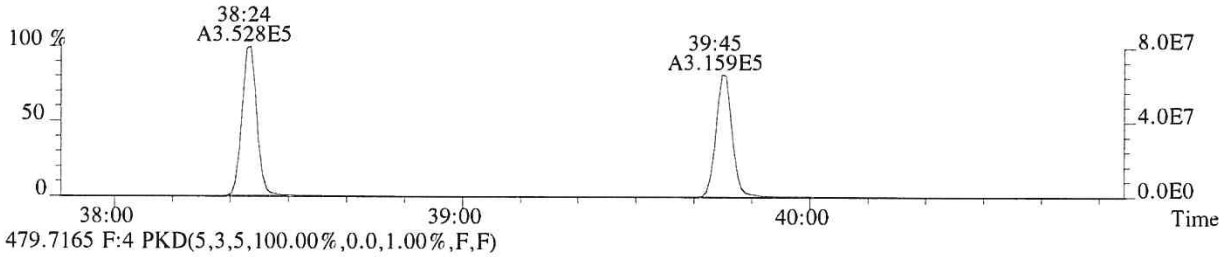
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,18264.0,0.50%,F,T)



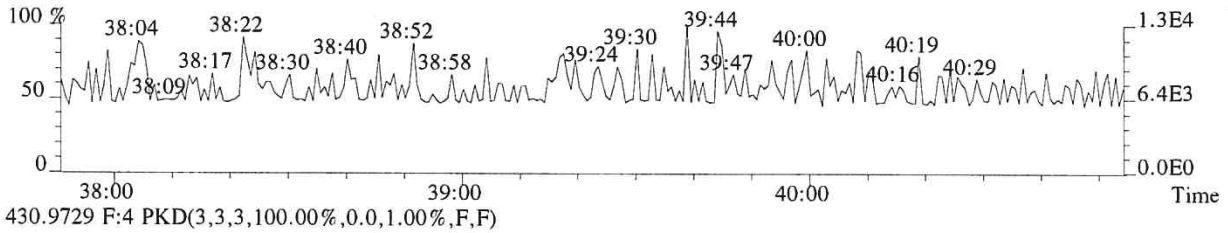
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8804.0,0.50%,F,T)



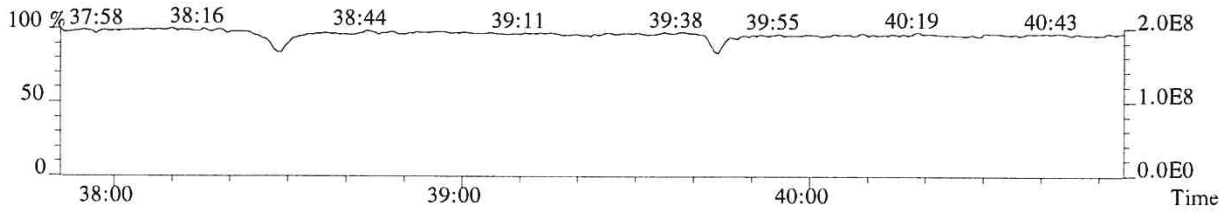
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,19172.0,0.50%,F,T)



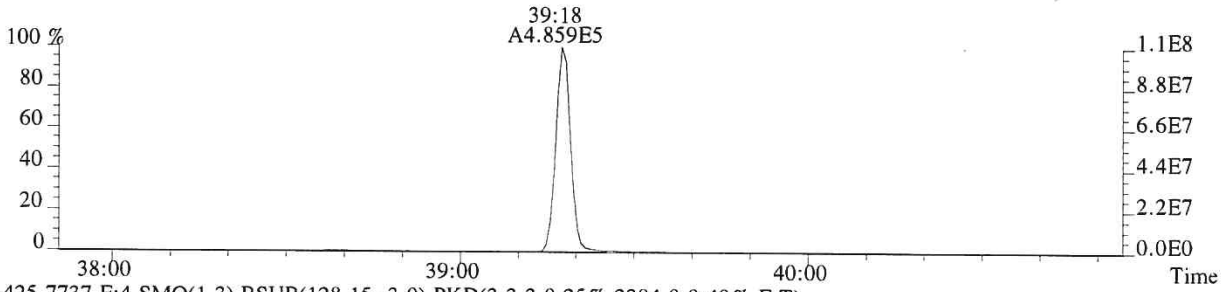
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



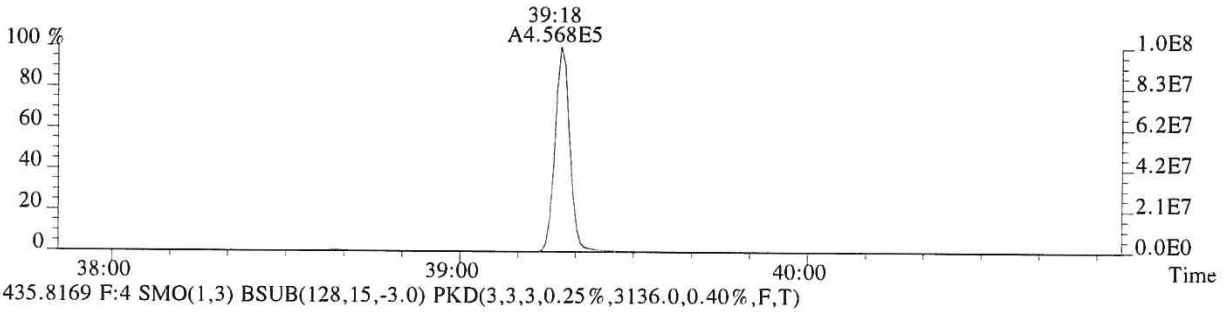
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



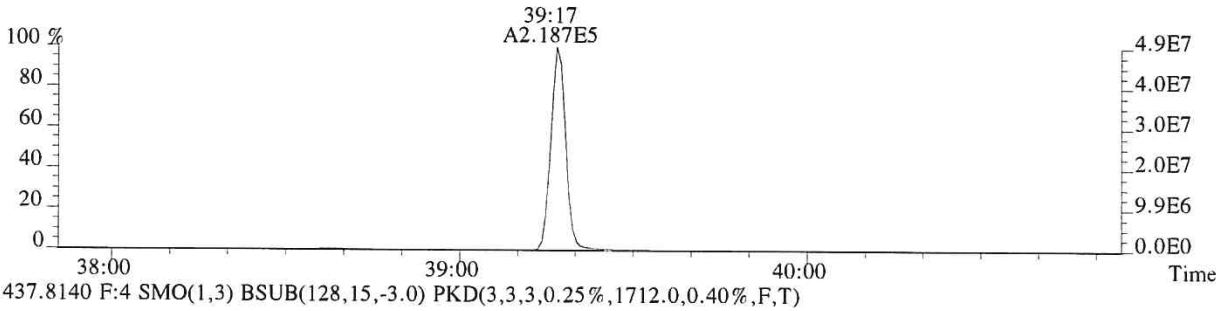
File:P614686 #1-276 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2456.0,0.40%,F,T)



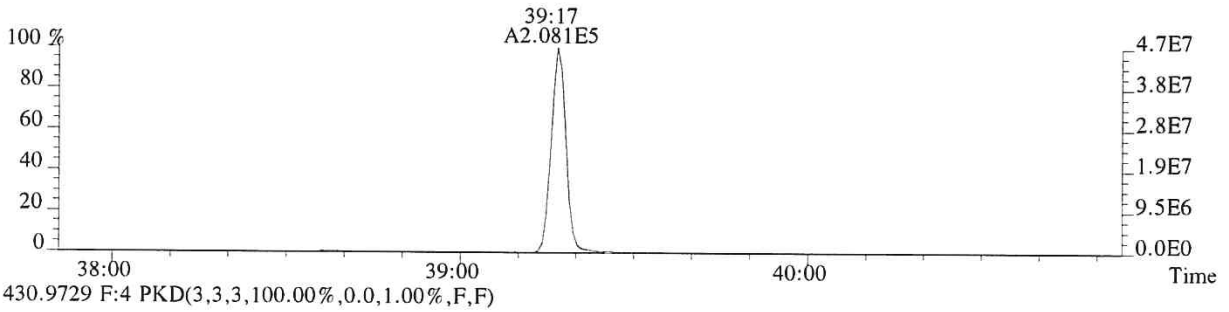
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2384.0,0.40%,F,T)



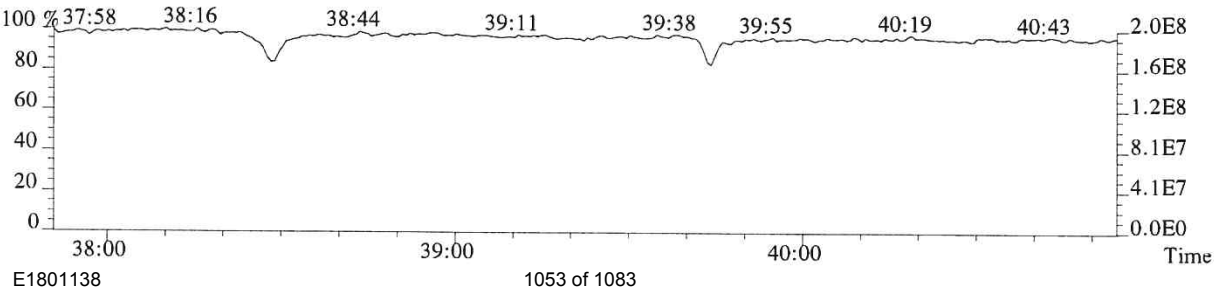
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3136.0,0.40%,F,T)



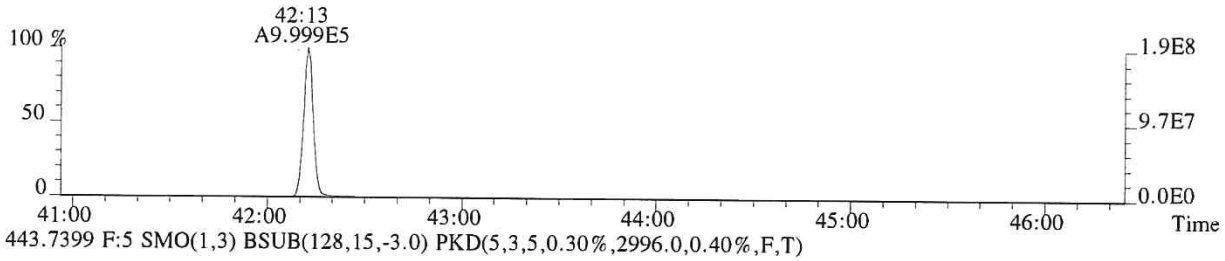
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1712.0,0.40%,F,T)



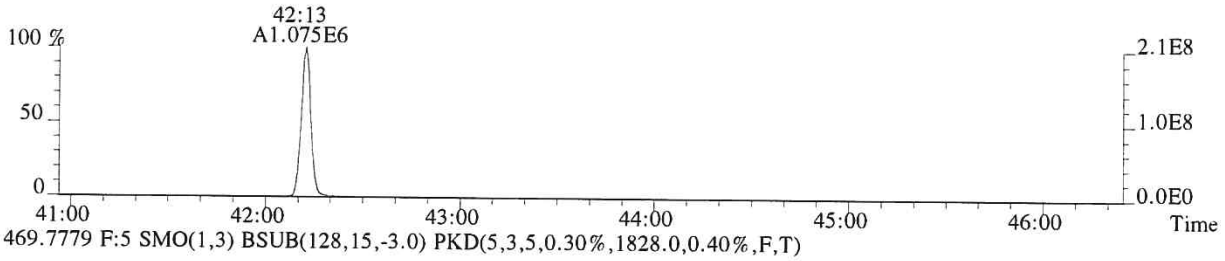
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



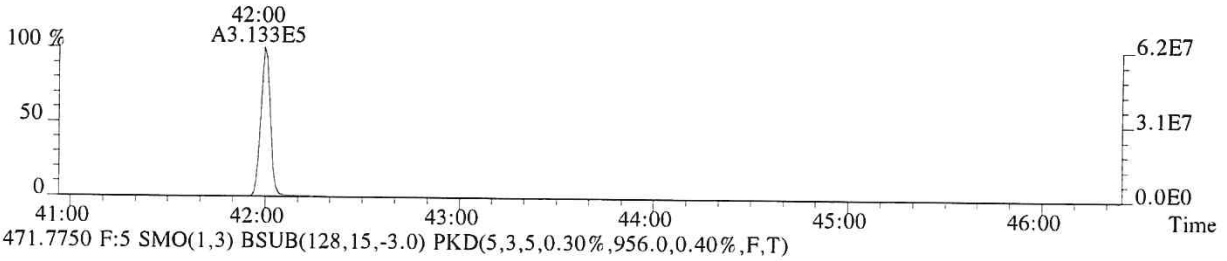
File:P614686 #1-493 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spectℓ
Sample#1 Exp:CS4
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1464.0,0.40%,F,T)



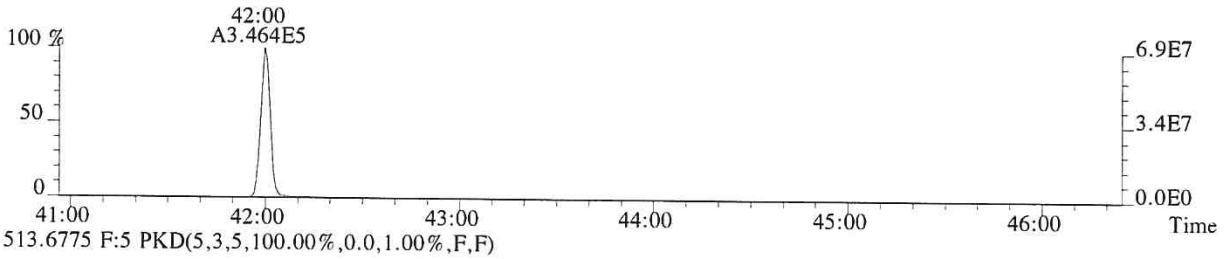
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2996.0,0.40%,F,T)



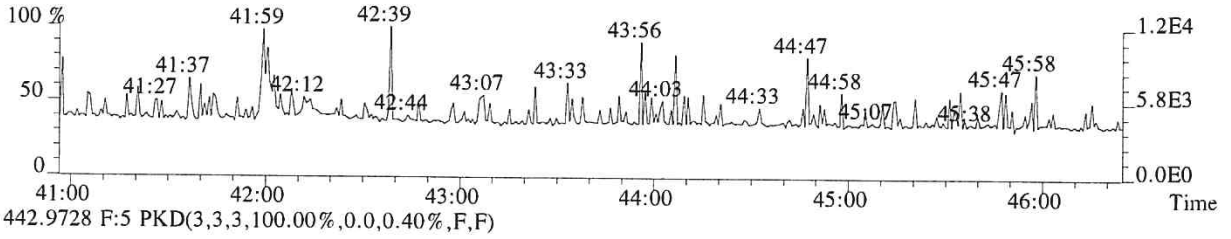
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1828.0,0.40%,F,T)



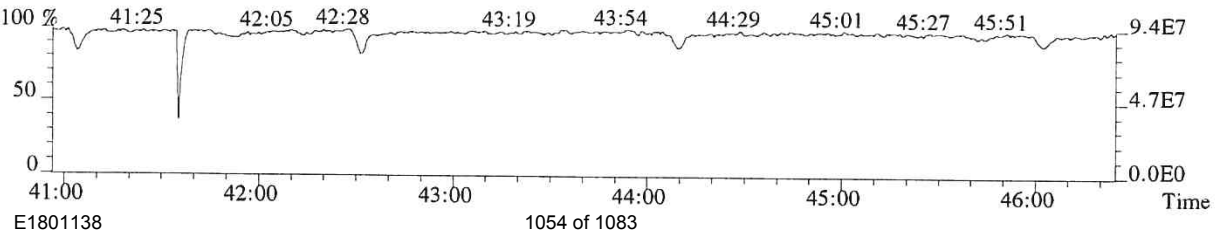
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,956.0,0.40%,F,T)



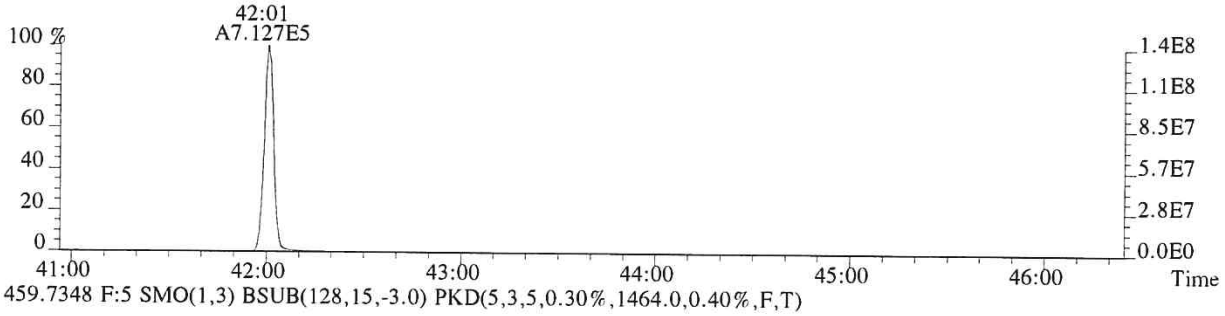
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



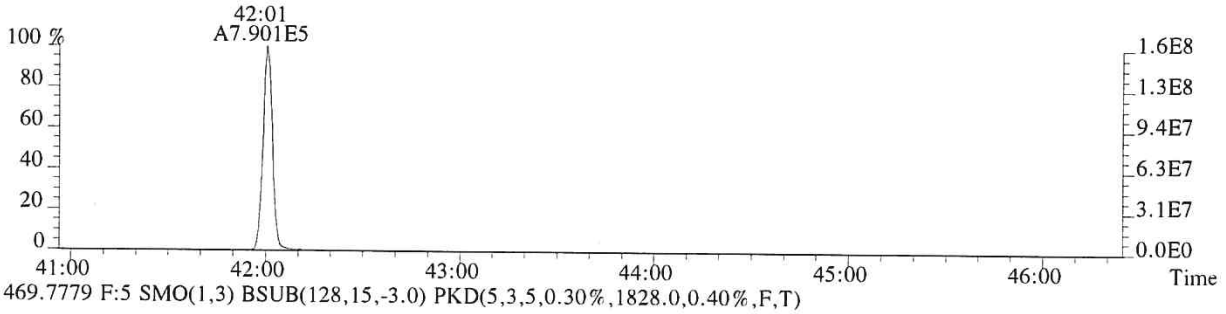
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



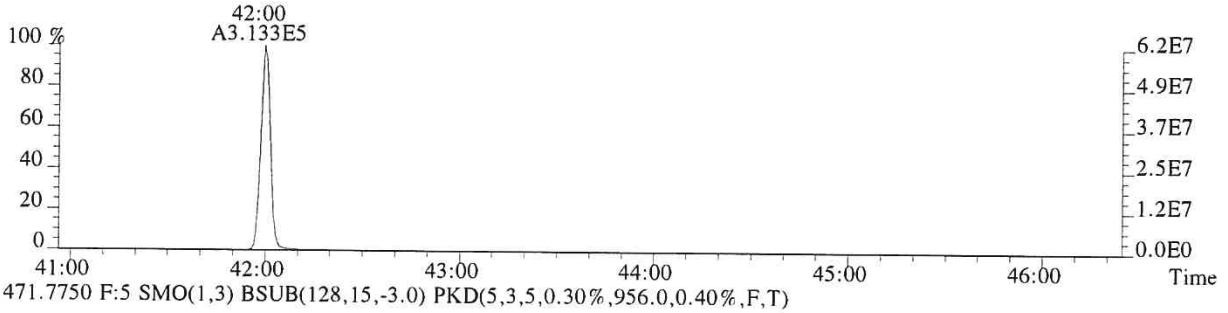
File:P614686 #1-493 Acq:25-SEP-2018 17:41:03 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS4
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1244.0,0.40%,F,T)



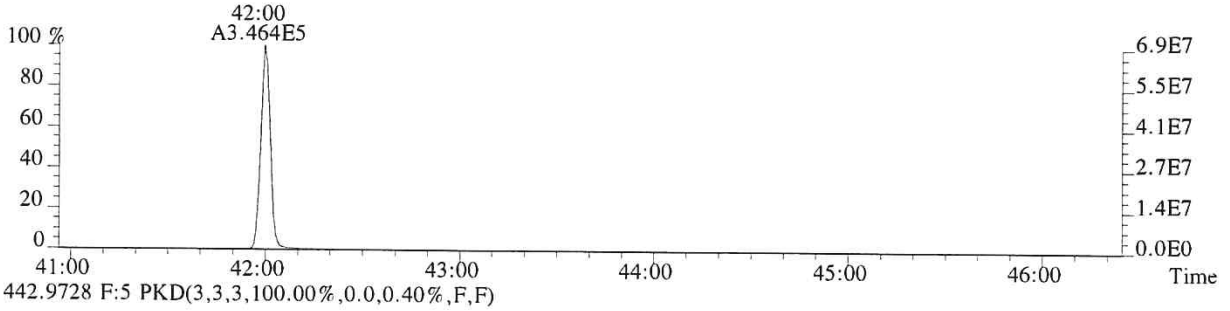
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1464.0,0.40%,F,T)



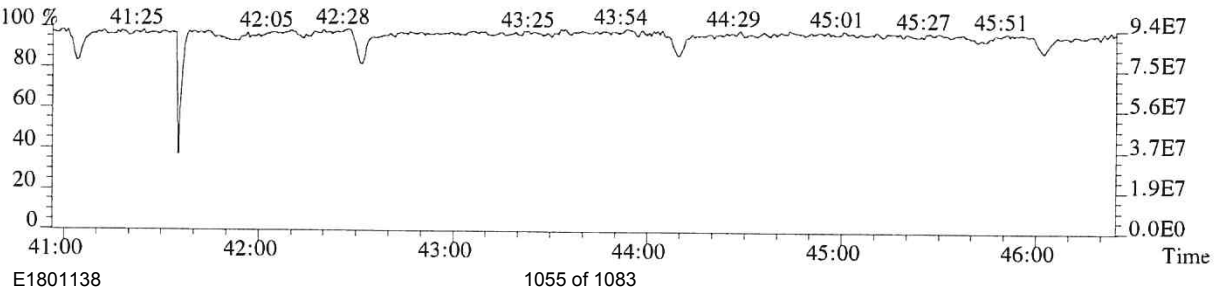
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1828.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,956.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017936

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
185657

Run #6 Filename P614687 Samp: 1 Inj: 1 Acquired: 25-SEP-18 18:30:08
Processed: 26-SEP-18 07:39:13 Sample ID: CS5

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:00	4.651e+05	5.844e+05	0.80	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:14	4.117e+06	2.575e+06	1.60	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:09	3.795e+06	2.391e+06	1.59	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	3.313e+06	2.571e+06	1.29	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	3.588e+06	2.836e+06	1.27	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	3.399e+06	2.690e+06	1.26	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:10	3.119e+06	2.463e+06	1.27	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	3.035e+06	2.883e+06	1.05	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	2.518e+06	2.388e+06	1.05	yes	no	1.463
10	Unk	OCDF	42:13	3.855e+06	4.175e+06	0.92	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	3.257e+05	4.207e+05	0.77	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	2.277e+06	1.455e+06	1.57	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	2.053e+06	1.616e+06	1.27	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	2.042e+06	1.617e+06	1.26	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:52	2.180e+06	1.732e+06	1.26	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	1.868e+06	1.765e+06	1.06	yes	no	1.112
17	Unk	OCDD	42:01	2.725e+06	3.028e+06	0.90	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	2.197e+05	2.785e+05	0.79	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	3.496e+05	2.178e+05	1.60	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	3.453e+05	2.138e+05	1.61	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:48	1.447e+05	2.684e+05	0.54	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:55	1.758e+05	3.274e+05	0.54	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:25	1.668e+05	3.132e+05	0.53	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	1.489e+05	2.799e+05	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:23	1.241e+05	2.682e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:45	1.078e+05	2.346e+05	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	1.558e+05	1.966e+05	0.79	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	2.439e+05	1.553e+05	1.57	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:32	1.940e+05	1.538e+05	1.26	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	1.938e+05	1.542e+05	1.26	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	1.682e+05	1.601e+05	1.05	yes	no	0.857
32	IS	13C-OCDD	42:00	2.375e+05	2.681e+05	0.89	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:13	1.555e+05	1.925e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:51	2.160e+05	1.725e+05	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	7.877e+05				no	1.086

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Signal/Noise Height Ratio Summary

CLIENT ID.
185657

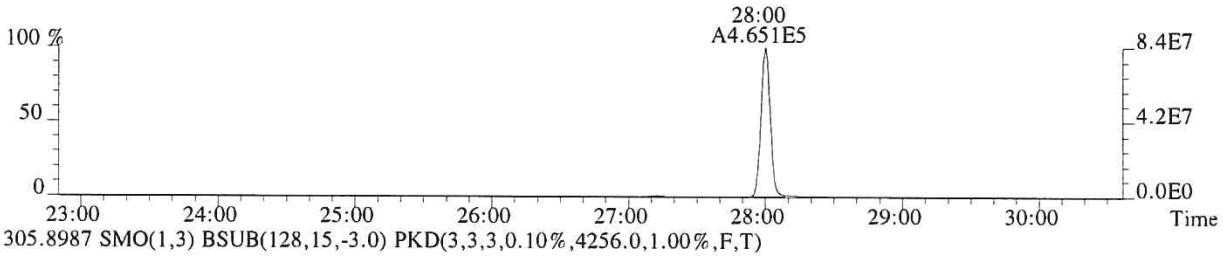
Run #6 Filename P614687 Samp: 1 Inj: 1 Acquired: 25-SEP-18 18:30:08
Processed: 26-SEP-18 07:39:13 LAB. ID: CS5

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.41e+07	1.94e+03	4.3e+04	1.06e+08	4.26e+03	2.5e+04
2	1,2,3,7,8-PeCDF	8.11e+08	8.46e+03	9.6e+04	5.11e+08	9.13e+03	5.6e+04
3	2,3,4,7,8-PeCDF	7.87e+08	8.46e+03	9.3e+04	4.93e+08	9.13e+03	5.4e+04
4	1,2,3,4,7,8-HxCDF	7.76e+08	1.23e+04	6.3e+04	6.07e+08	9.42e+03	6.4e+04
5	1,2,3,6,7,8-HxCDF	8.10e+08	1.23e+04	6.6e+04	6.40e+08	9.42e+03	6.8e+04
6	2,3,4,6,7,8-HxCDF	7.65e+08	1.23e+04	6.2e+04	6.05e+08	9.42e+03	6.4e+04
7	1,2,3,7,8,9-HxCDF	6.96e+08	1.23e+04	5.6e+04	5.46e+08	9.42e+03	5.8e+04
8	1,2,3,4,6,7,8-HpCDF	7.09e+08	9.68e+04	7.3e+03	6.78e+08	6.15e+04	1.1e+04
9	1,2,3,4,7,8,9-HpCDF	5.55e+08	9.68e+04	5.7e+03	5.29e+08	6.15e+04	8.6e+03
10	OCDF	7.55e+08	1.43e+03	5.3e+05	8.22e+08	2.80e+03	2.9e+05
11	2,3,7,8-TCDD	6.32e+07	4.52e+03	1.4e+04	8.21e+07	2.67e+03	3.1e+04
12	1,2,3,7,8-PeCDD	4.67e+08	3.26e+03	1.4e+05	2.98e+08	1.54e+03	1.9e+05
13	1,2,3,4,7,8-HxCDD	4.65e+08	2.34e+03	2.0e+05	3.68e+08	1.99e+03	1.8e+05
14	1,2,3,6,7,8-HxCDD	4.59e+08	2.34e+03	2.0e+05	3.67e+08	1.99e+03	1.8e+05
15	1,2,3,7,8,9-HxCDD	4.96e+08	2.34e+03	2.1e+05	3.98e+08	1.99e+03	2.0e+05
16	1,2,3,4,6,7,8-HpCDD	4.28e+08	1.10e+04	3.9e+04	4.06e+08	8.82e+03	4.6e+04
17	OCDD	5.24e+08	9.60e+02	5.5e+05	5.87e+08	1.87e+03	3.1e+05
18	13C-2,3,7,8-TCDF	3.91e+07	1.53e+04	2.6e+03	4.94e+07	1.22e+04	4.0e+03
19	13C-1,2,3,7,8-PeCDF	6.89e+07	2.06e+03	3.3e+04	4.27e+07	4.55e+03	9.4e+03
20	13C-2,3,4,7,8-PeCDF	6.95e+07	2.06e+03	3.4e+04	4.34e+07	4.55e+03	9.5e+03
21	13C-1,2,3,4,7,8-HxCDF	3.33e+07	2.62e+03	1.3e+04	6.22e+07	4.07e+03	1.5e+04
22	13C-1,2,3,6,7,8-HxCDF	3.91e+07	2.62e+03	1.5e+04	7.31e+07	4.07e+03	1.8e+04
23	13C-2,3,4,6,7,8-HxCDF	3.74e+07	2.62e+03	1.4e+04	6.98e+07	4.07e+03	1.7e+04
24	13C-1,2,3,7,8,9-HxCDF	3.36e+07	2.62e+03	1.3e+04	6.29e+07	4.07e+03	1.5e+04
25	13C-1,2,3,4,6,7,8-HpCDF	2.82e+07	6.76e+03	4.2e+03	6.20e+07	1.14e+04	5.5e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.34e+07	6.76e+03	3.5e+03	5.11e+07	1.14e+04	4.5e+03
27	13C-2,3,7,8-TCDD	3.04e+07	1.91e+04	1.6e+03	3.86e+07	8.85e+03	4.4e+03
28	13C-1,2,3,7,8-PeCDD	5.04e+07	1.98e+03	2.5e+04	3.21e+07	2.85e+03	1.1e+04
29	13C-1,2,3,4,7,8-HxCDD	4.39e+07	4.70e+03	9.3e+03	3.50e+07	2.24e+03	1.6e+04
30	13C-1,2,3,6,7,8-HxCDD	4.37e+07	4.70e+03	9.3e+03	3.49e+07	2.24e+03	1.6e+04
31	13C-1,2,3,4,6,7,8-HpCDD	3.82e+07	2.97e+03	1.3e+04	3.65e+07	2.54e+03	1.4e+04
32	13C-OCDD	4.50e+07	3.46e+03	1.3e+04	5.10e+07	1.82e+03	2.8e+04
33	13C-1,2,3,4-TCDD	2.93e+07	1.91e+04	1.5e+03	3.60e+07	8.85e+03	4.1e+03
34	13C-1,2,3,7,8,9-HxCDD	4.90e+07	4.70e+03	1.0e+04	3.94e+07	2.24e+03	1.8e+04
35	37Cl-2,3,7,8-TCDD	1.54e+08	4.95e+03	3.1e+04			

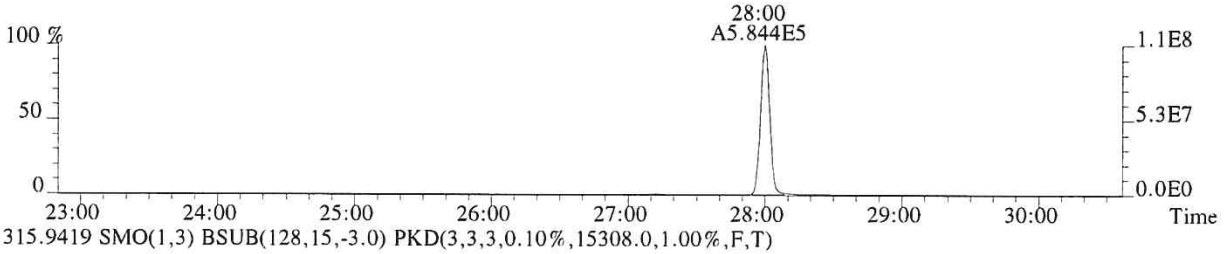
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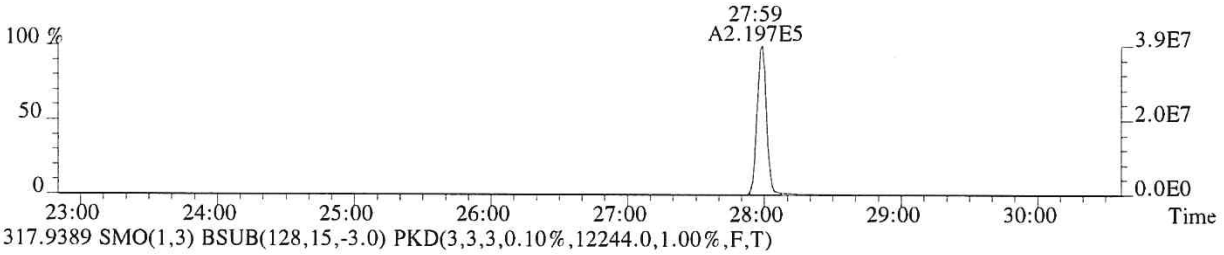
File:P614687 #1-552 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1940.0,1.00%,F,T)



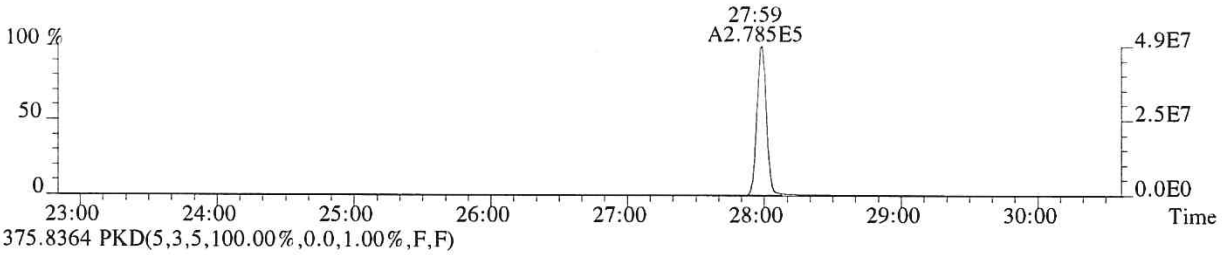
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4256.0,1.00%,F,T)



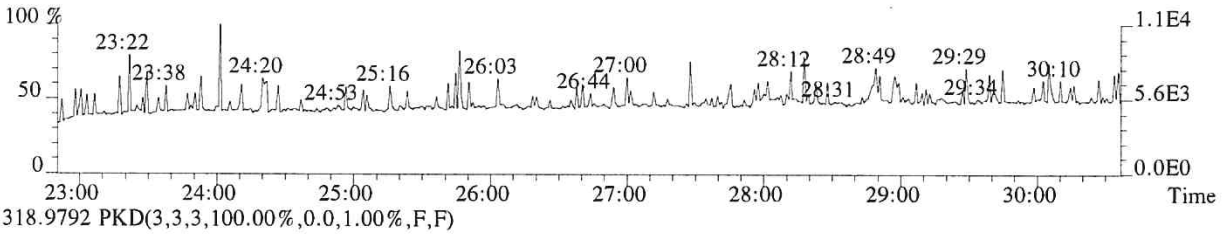
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15308.0,1.00%,F,T)



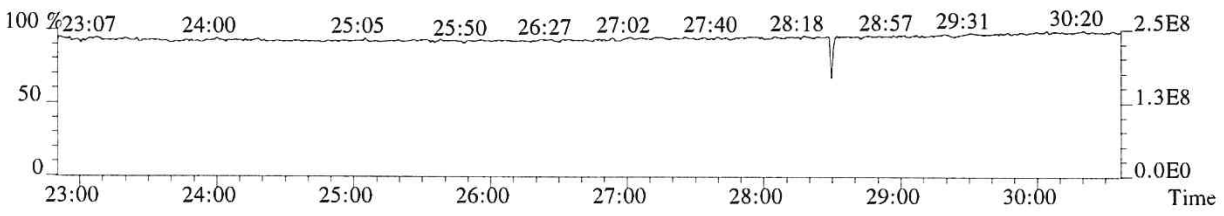
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12244.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

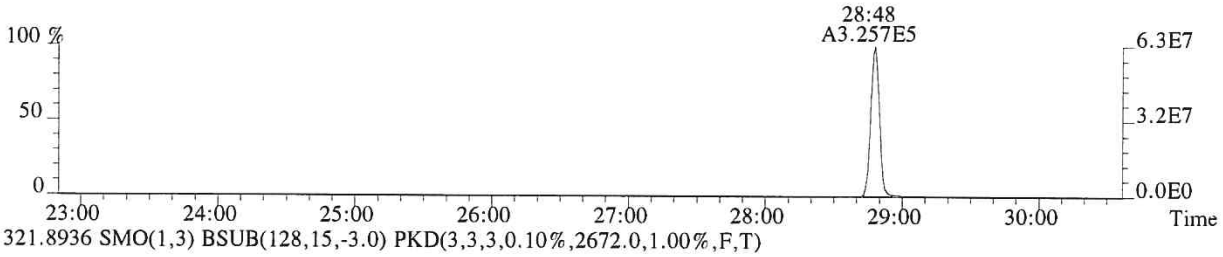


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

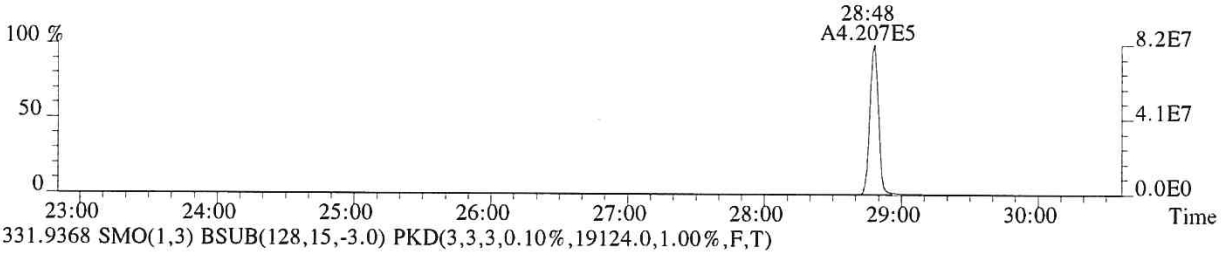


017939

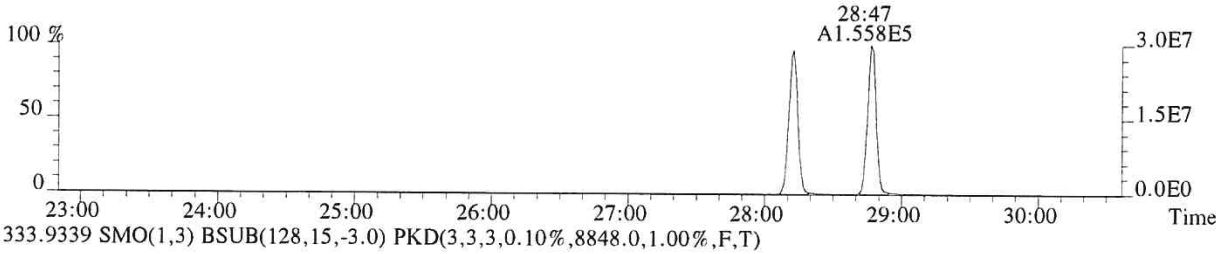
File:P614687 #1-552 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4516.0,1.00%,F,T)



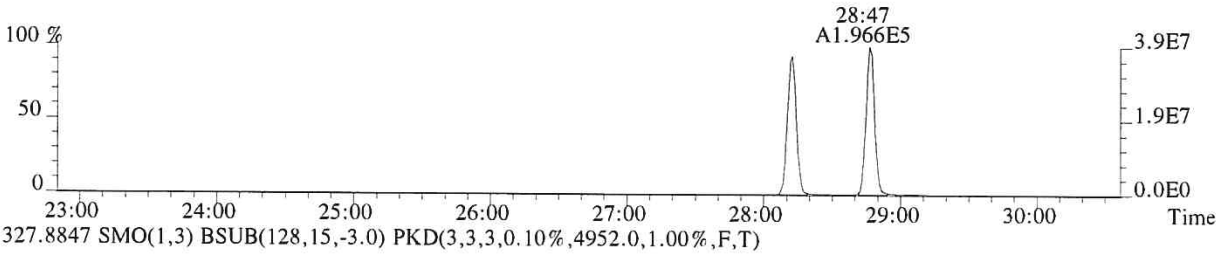
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2672.0,1.00%,F,T)



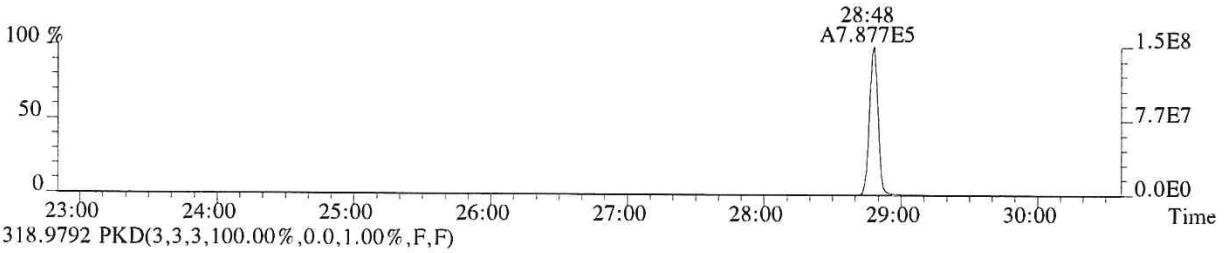
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,19124.0,1.00%,F,T)



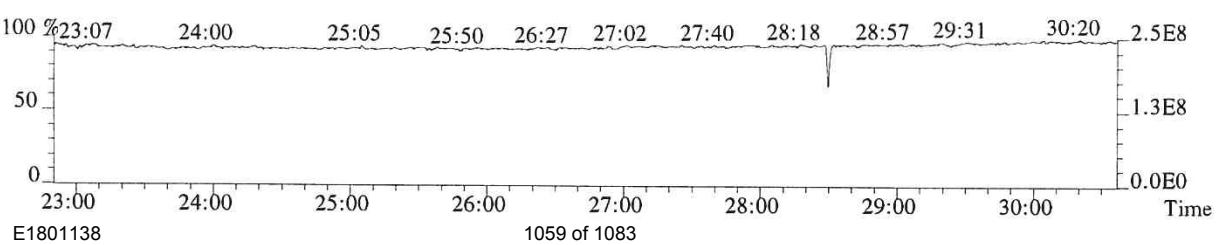
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8848.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4952.0,1.00%,F,T)

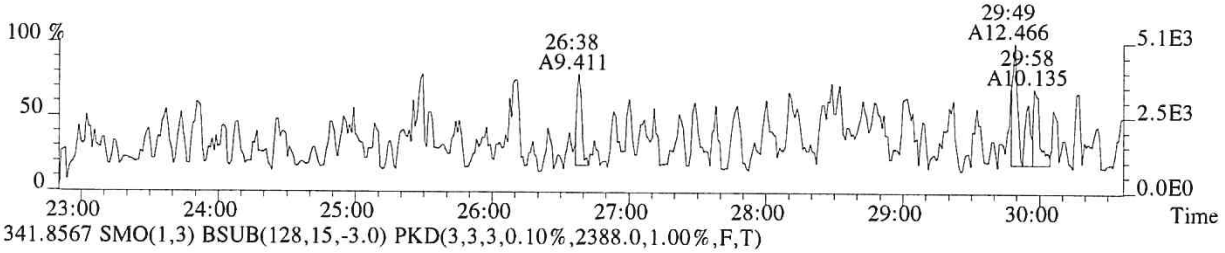


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

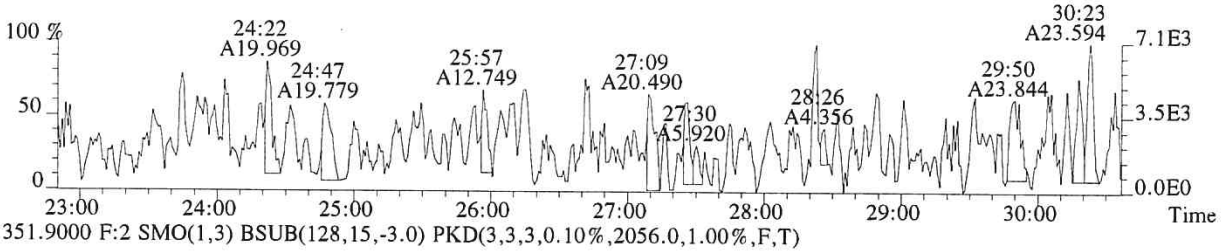


017940

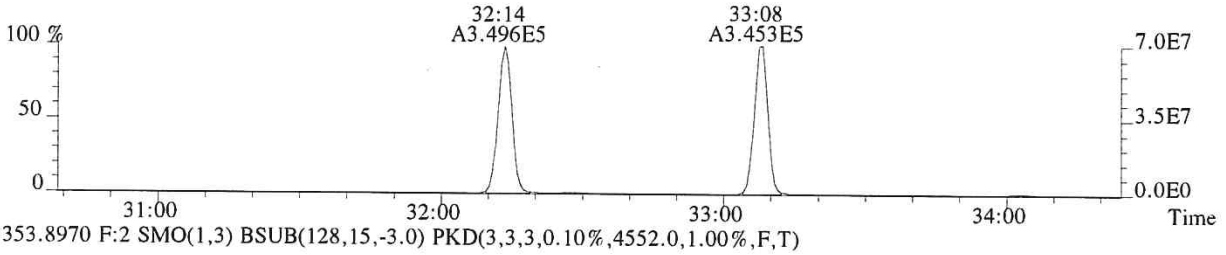
File:P614687 #1-552 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1884.0,1.00%,F,T)



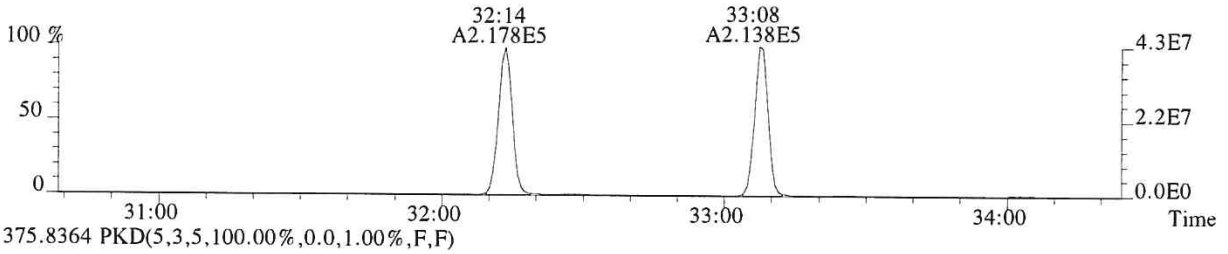
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2388.0,1.00%,F,T)



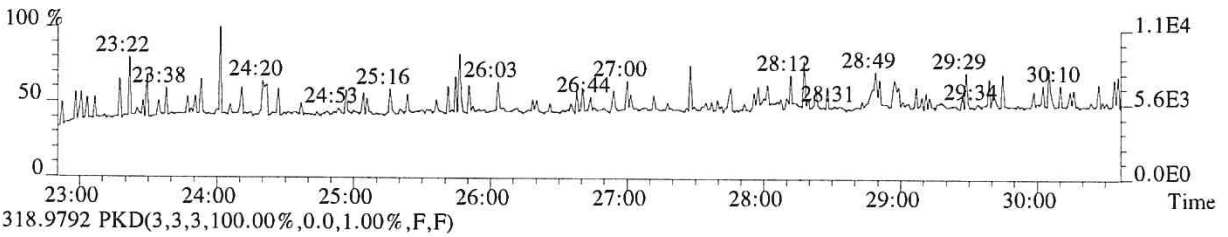
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2056.0,1.00%,F,T)



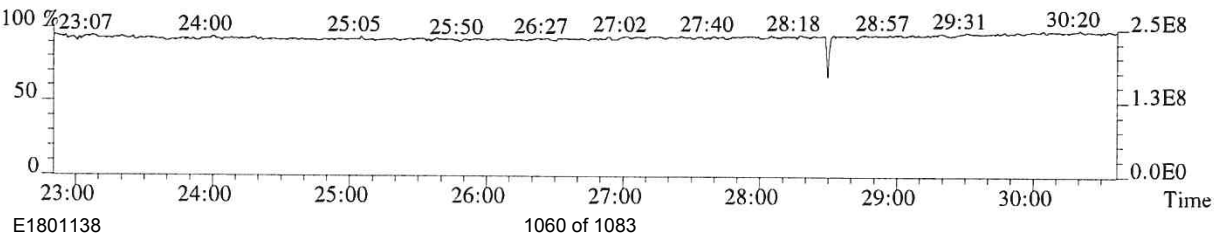
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4552.0,1.00%,F,T)



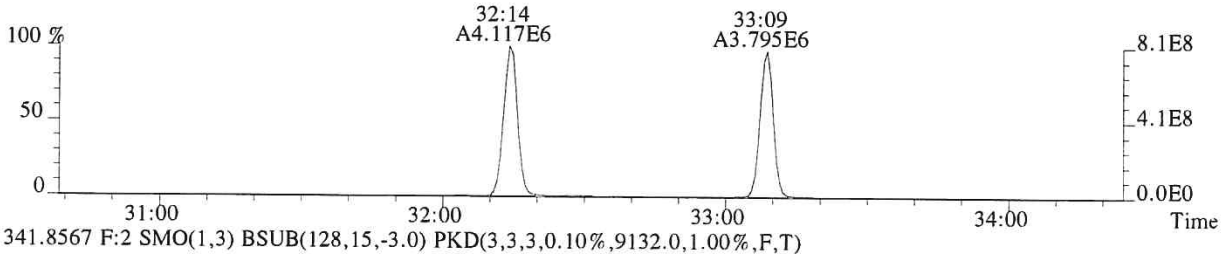
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



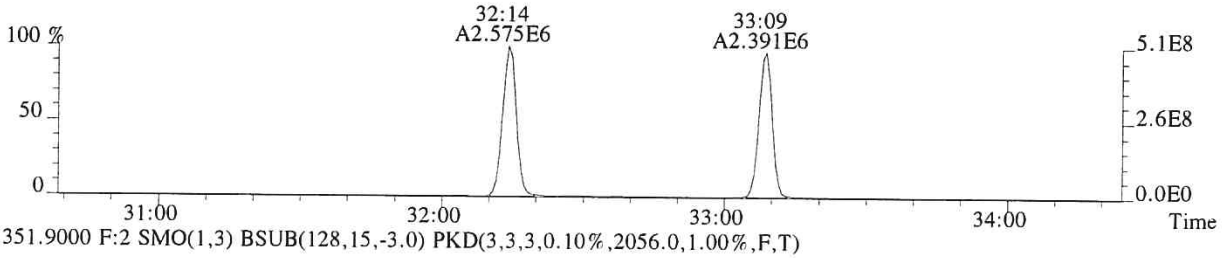
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



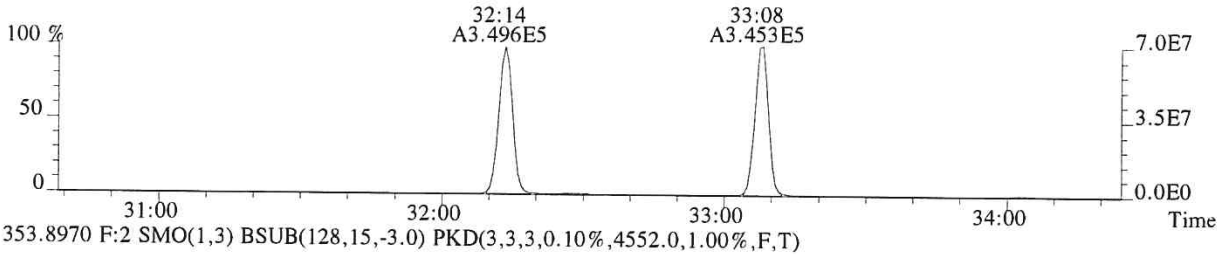
File:P614687 #1-339 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8456.0,1.00%,F,T)



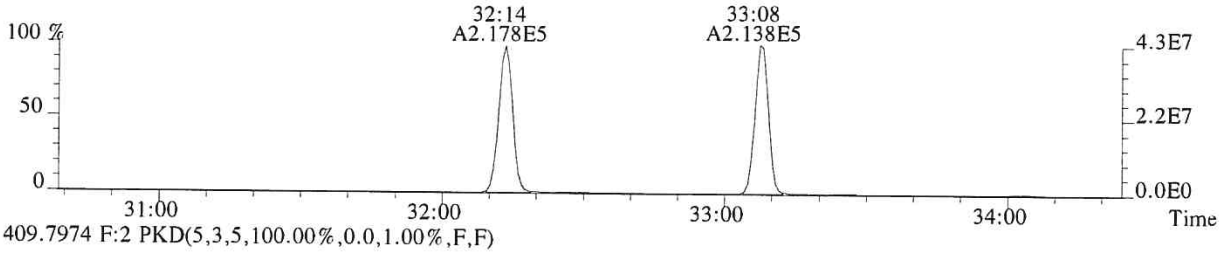
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9132.0,1.00%,F,T)



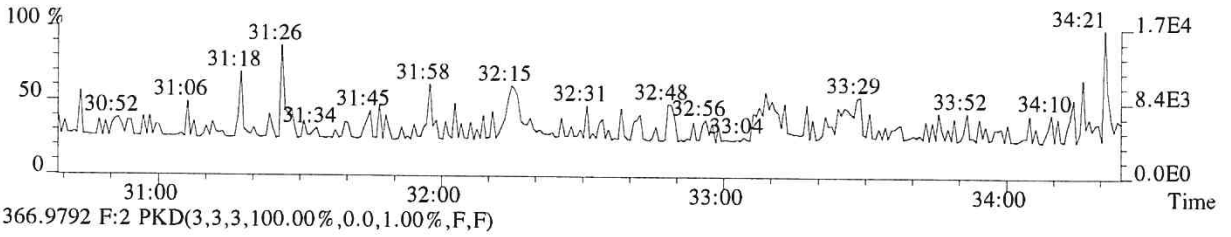
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2056.0,1.00%,F,T)



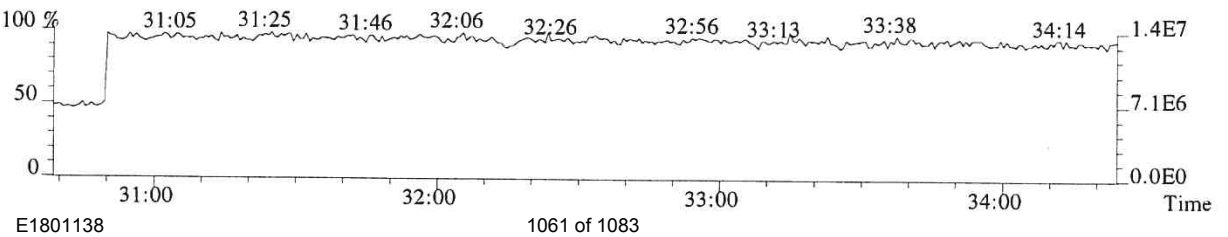
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4552.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

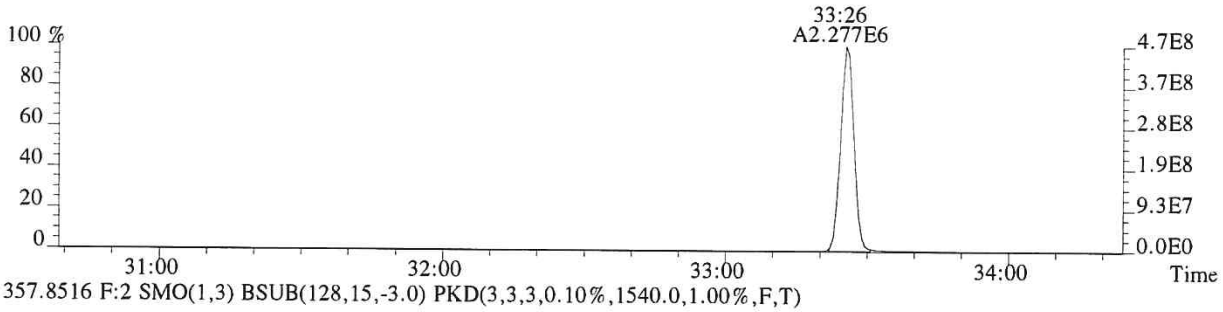


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

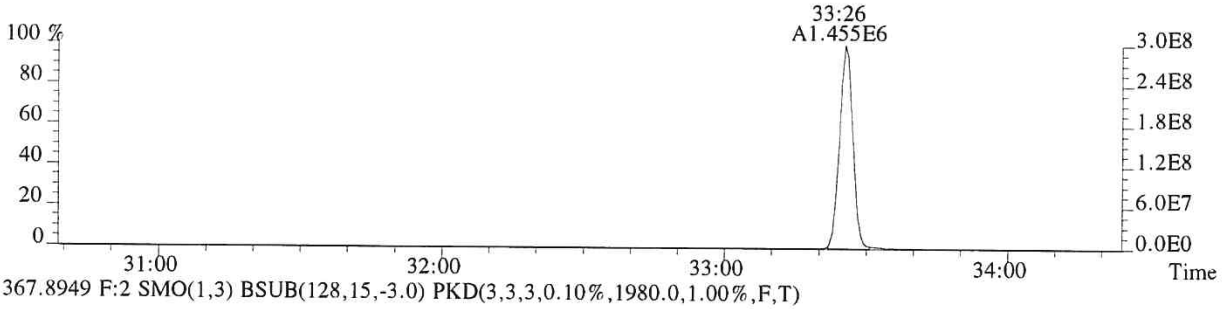


017942

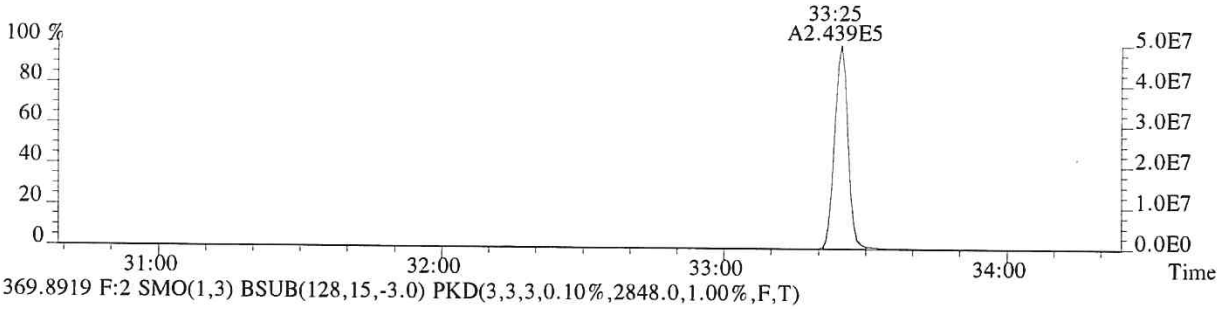
File:P614687 #1-339 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3264.0,1.00%,F,T)



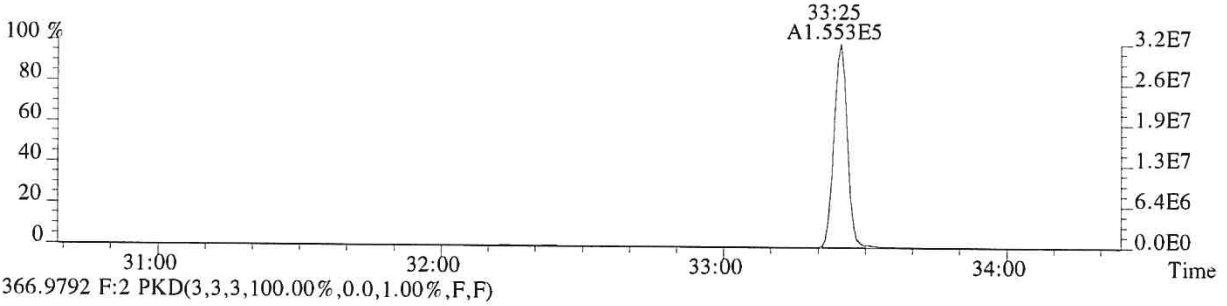
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1540.0,1.00%,F,T)



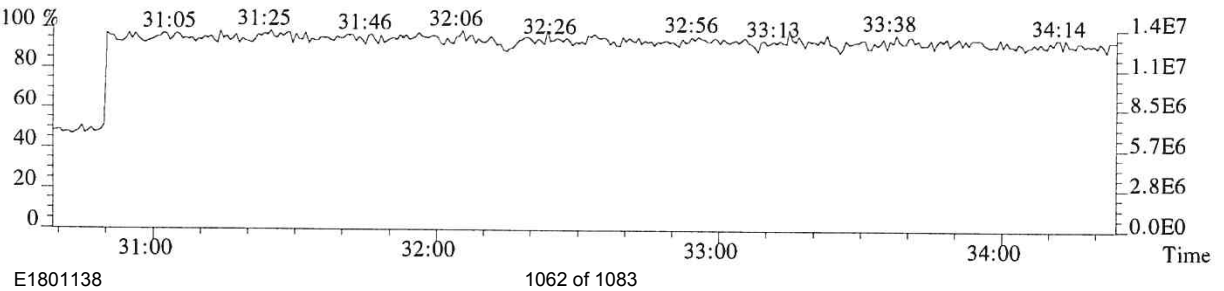
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1980.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2848.0,1.00%,F,T)

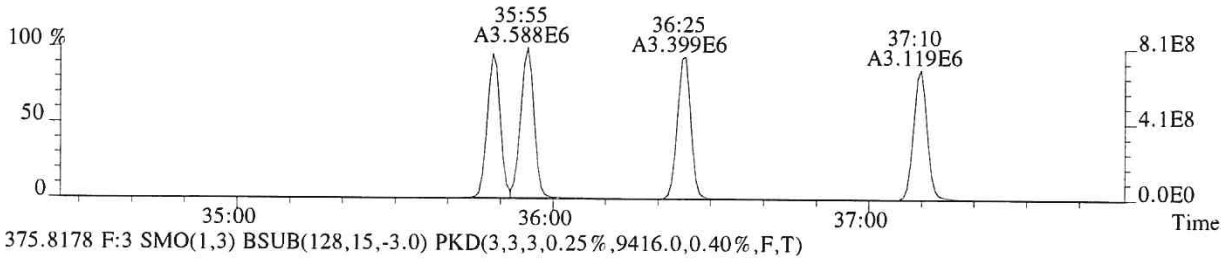


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

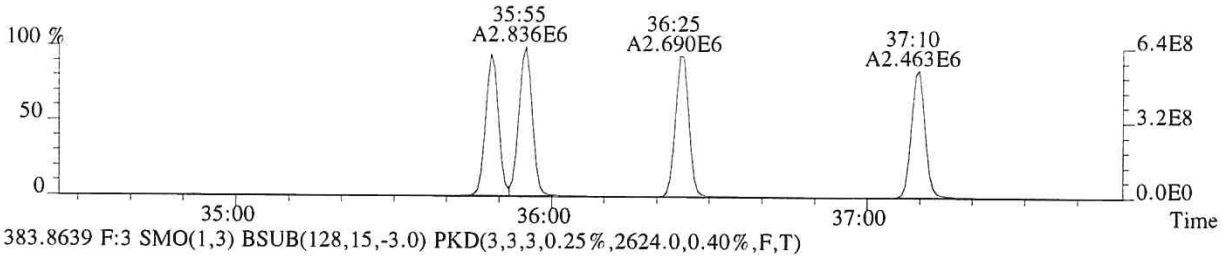


File:P614687 #1-304 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5

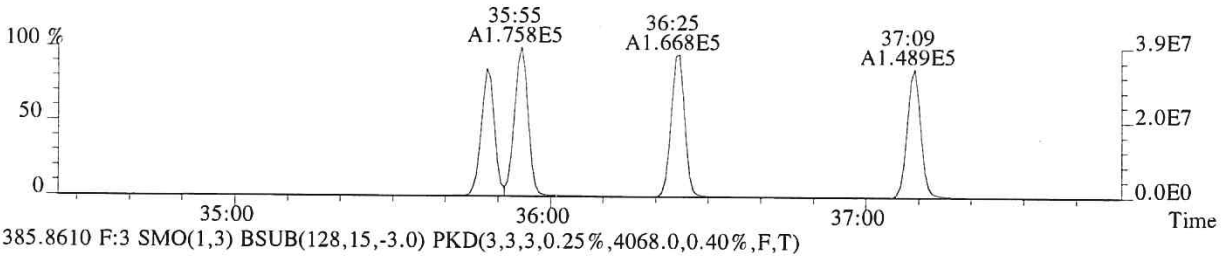
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,12332.0,0.40%,F,T)



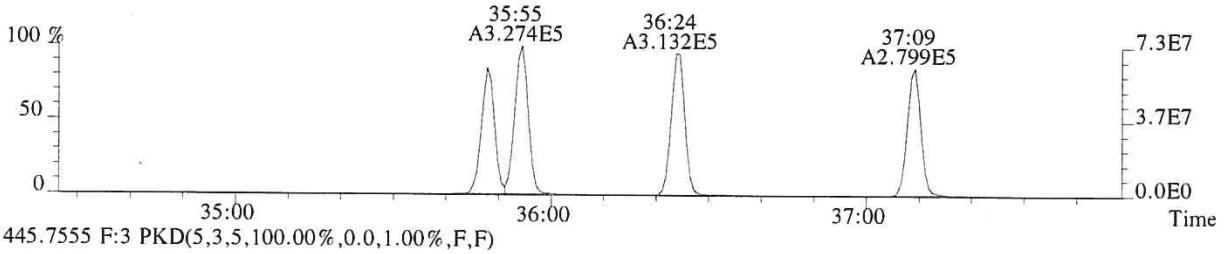
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,9416.0,0.40%,F,T)



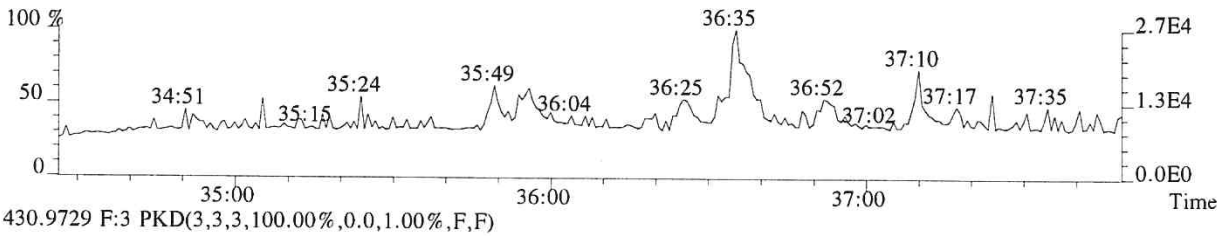
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2624.0,0.40%,F,T)



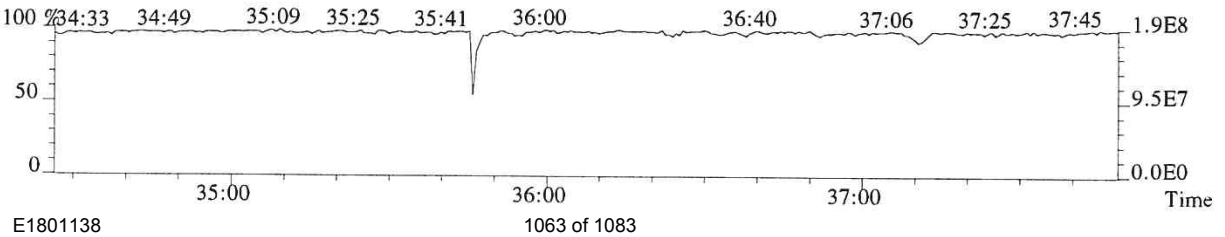
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4068.0,0.40%,F,T)



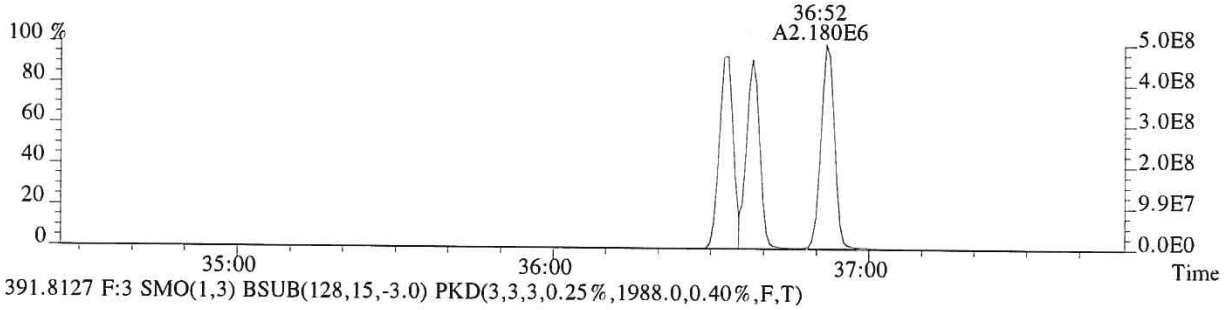
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



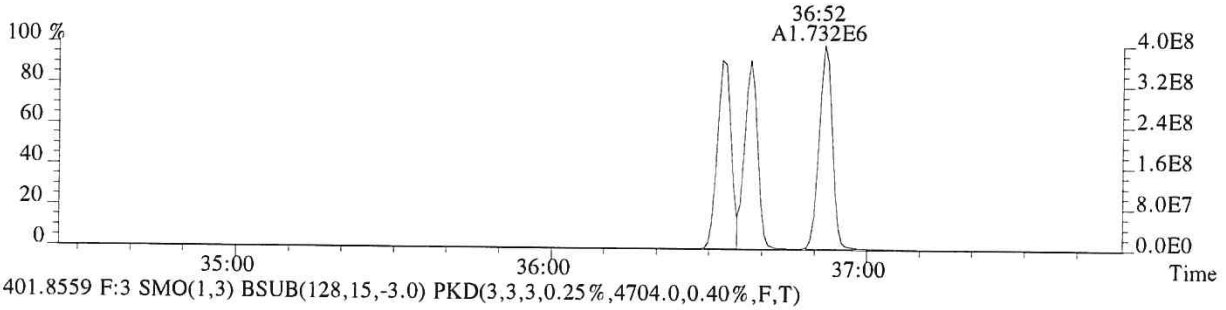
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



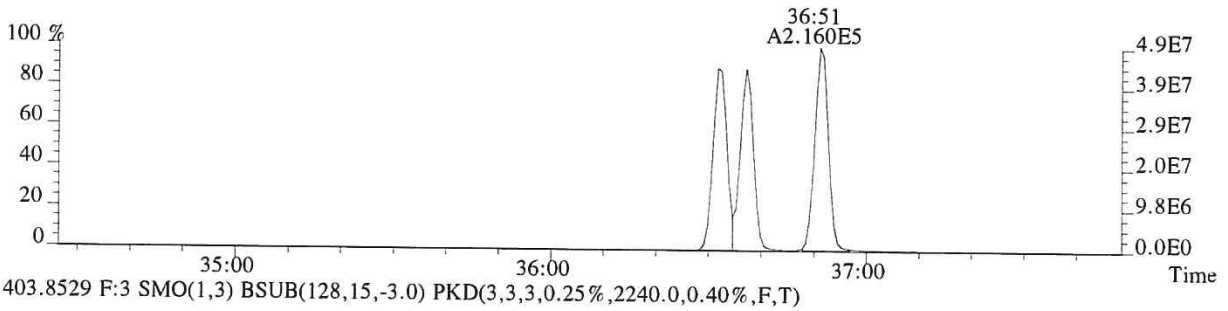
File:P614687 #1-304 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2336.0,0.40%,F,T)



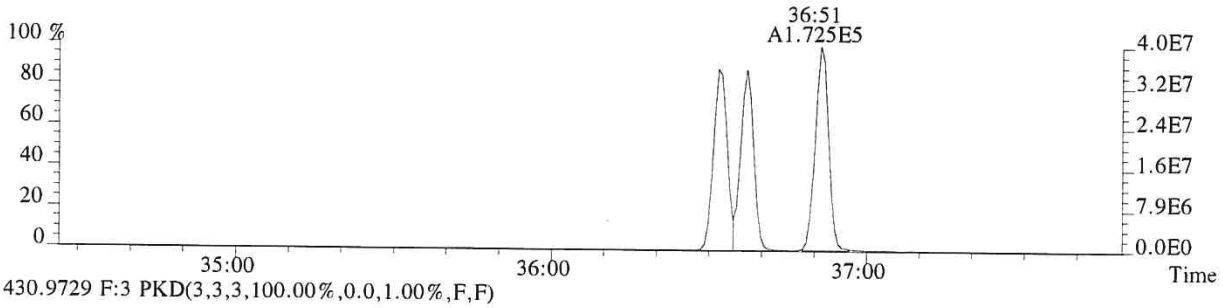
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1988.0,0.40%,F,T)



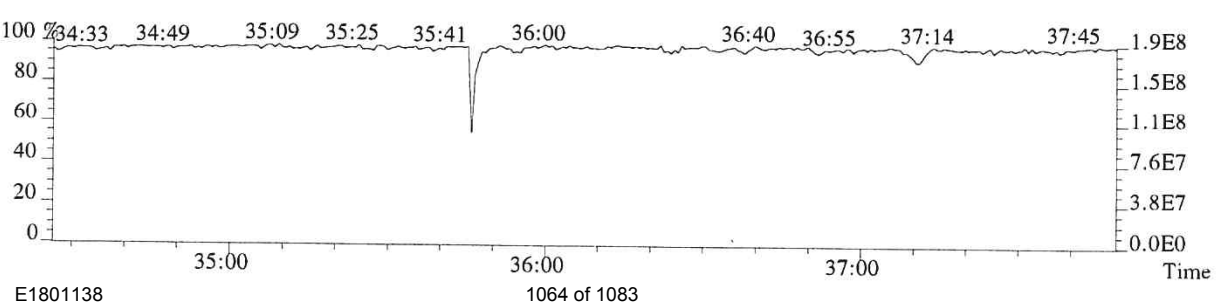
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4704.0,0.40%,F,T)



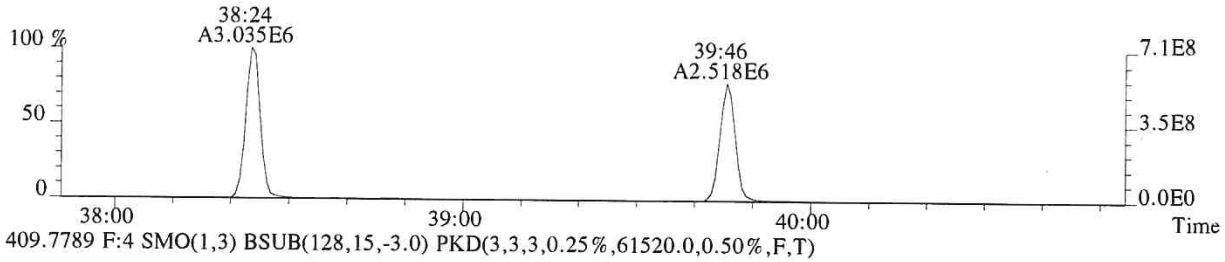
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2240.0,0.40%,F,T)



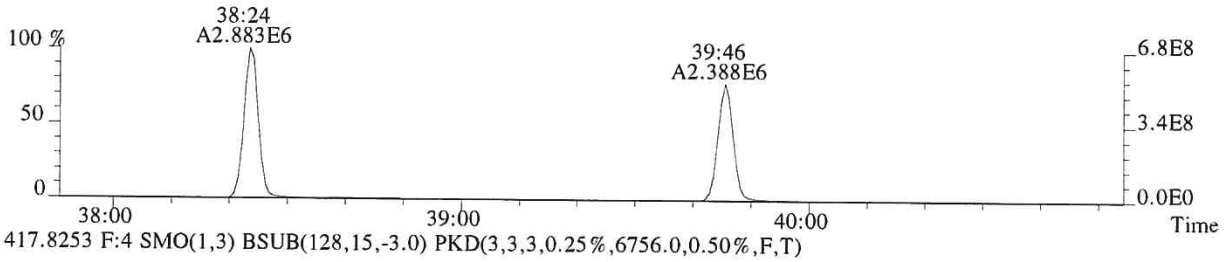
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



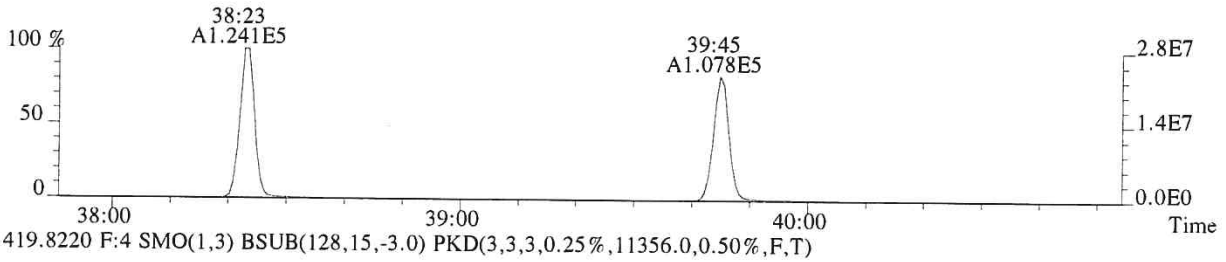
File:P614687 #1-276 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,96804.0,0.50%,F,T)



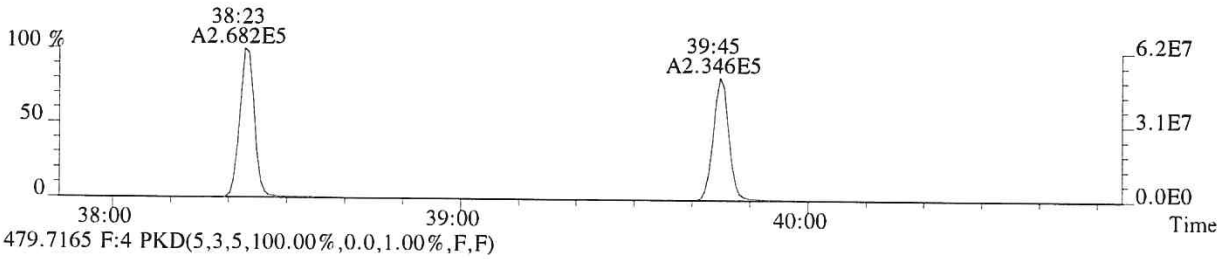
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,61520.0,0.50%,F,T)



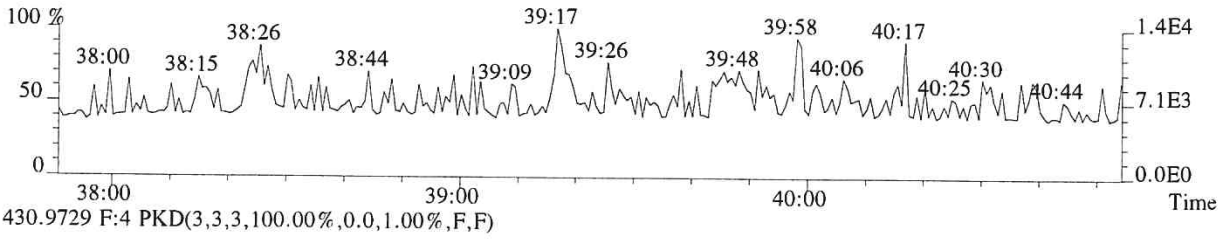
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6756.0,0.50%,F,T)



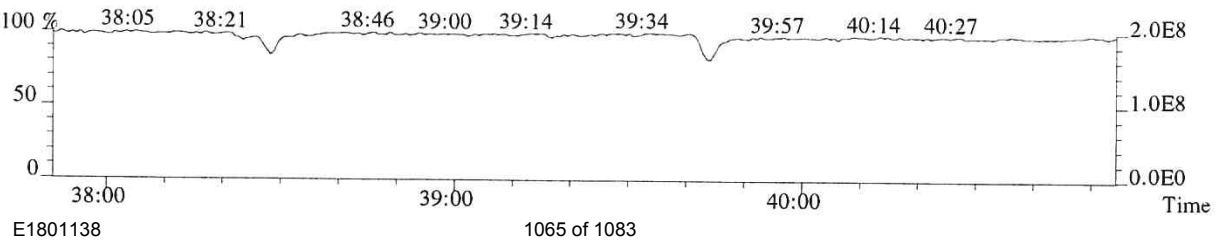
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11356.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

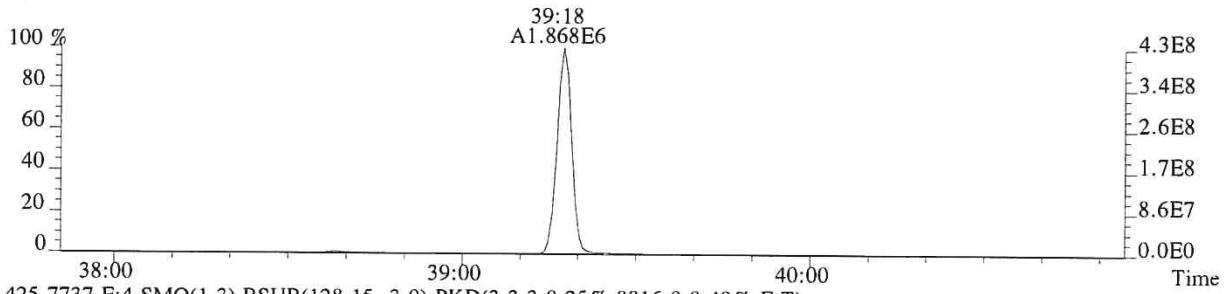


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

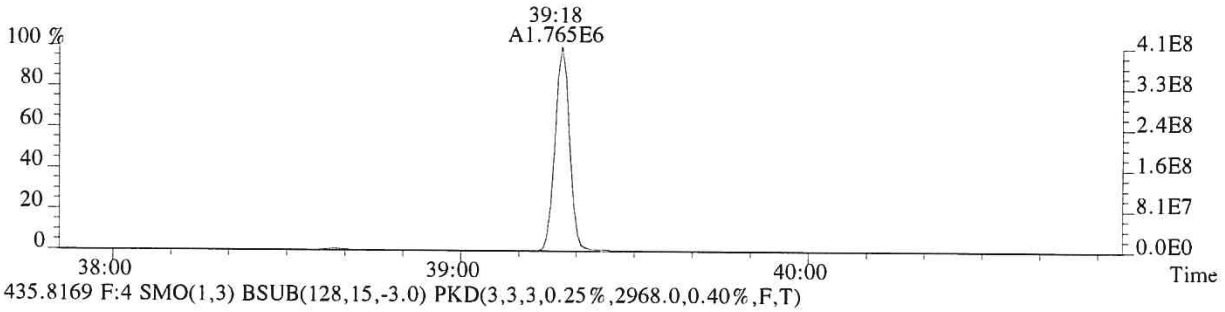


017946

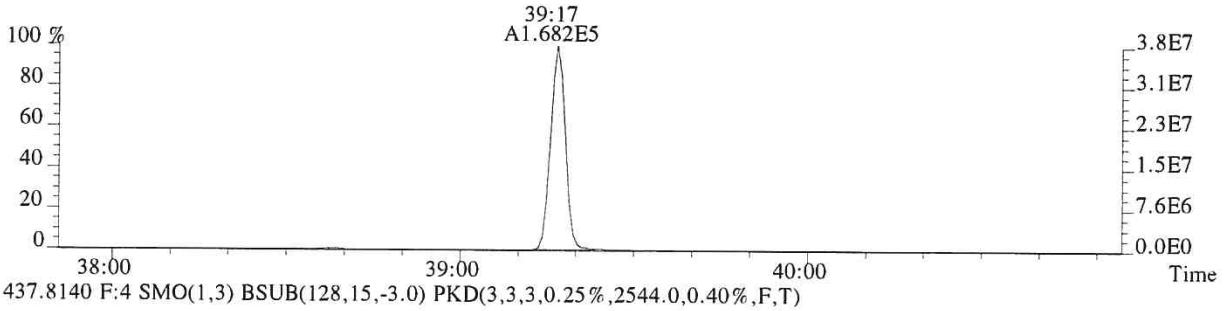
File:P614687 #1-276 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11044.0,0.40%,F,T)



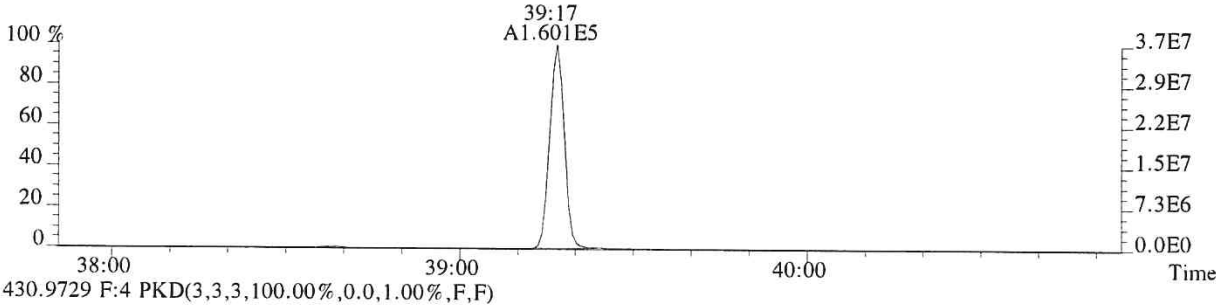
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8816.0,0.40%,F,T)



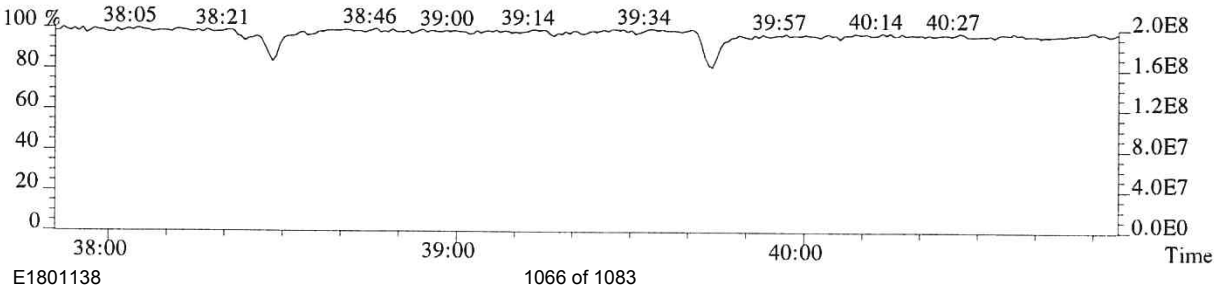
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2968.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2544.0,0.40%,F,T)

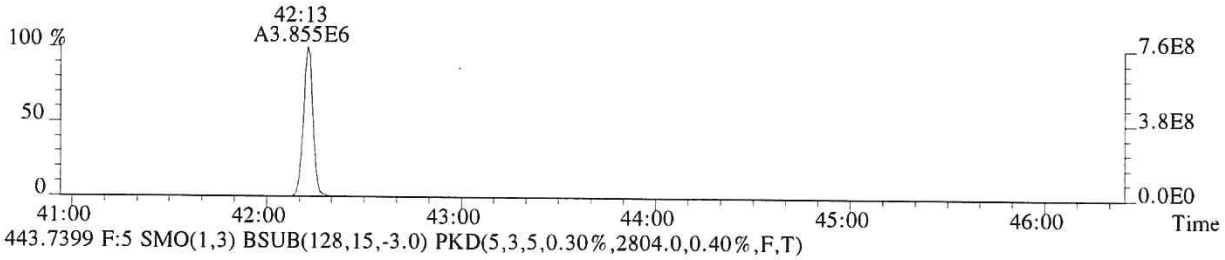


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

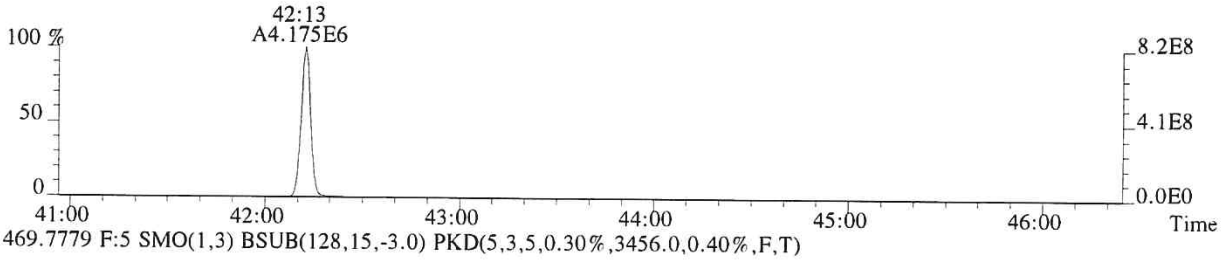


017947

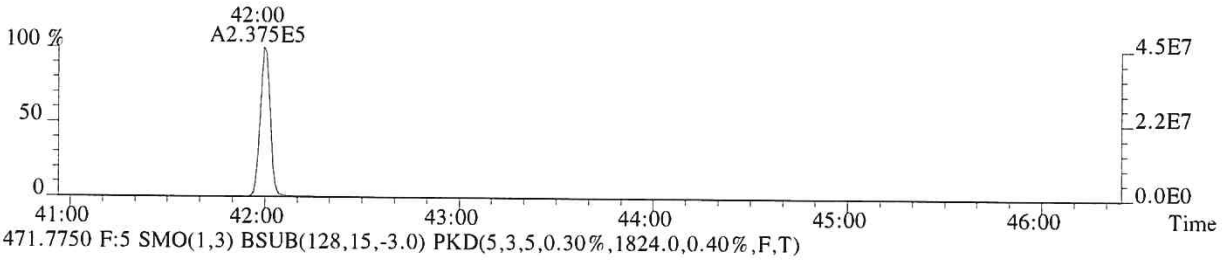
File:P614687 #1-493 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:CS5
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1428.0,0.40%,F,T)



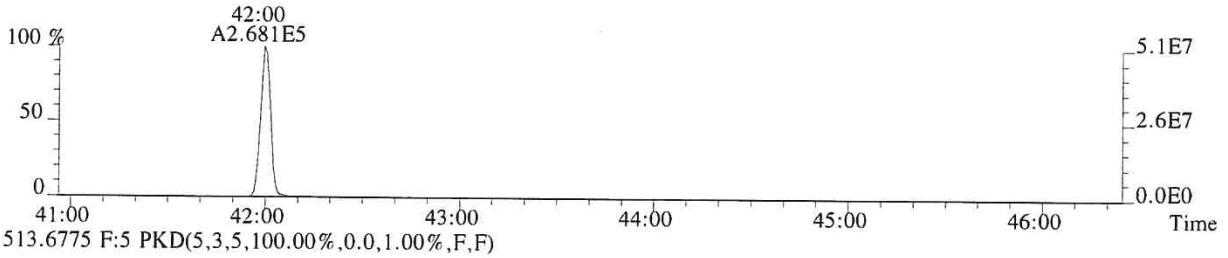
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2804.0,0.40%,F,T)



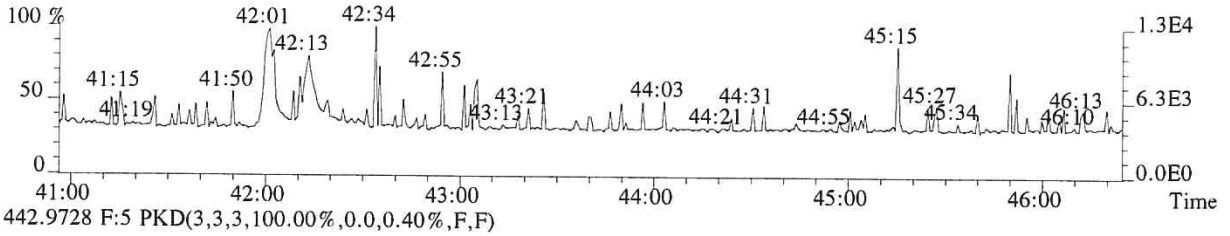
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3456.0,0.40%,F,T)



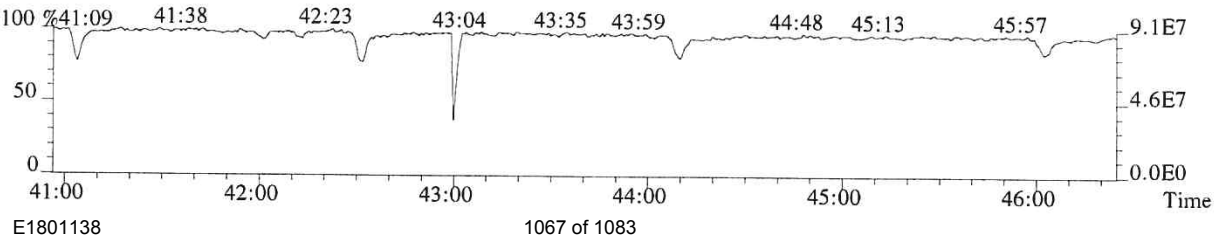
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1824.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

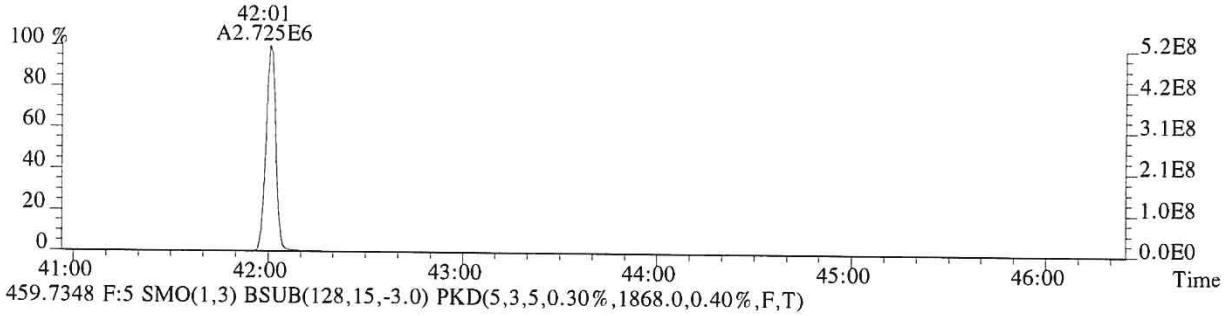


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

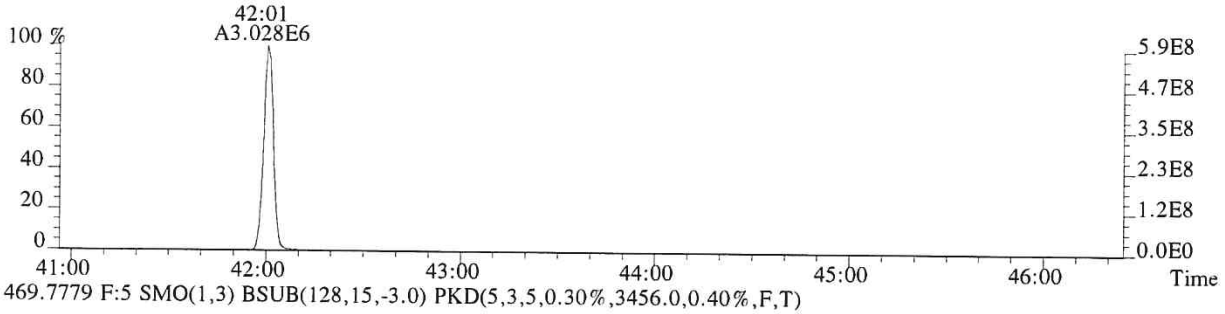


017948

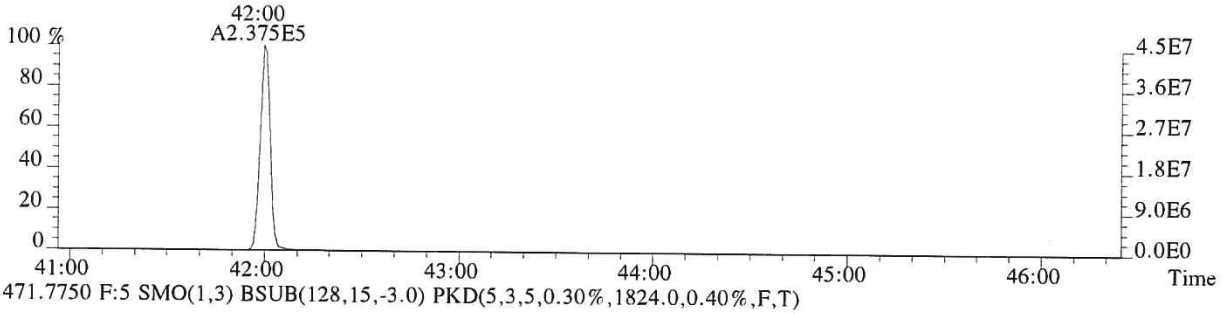
File:P614687 #1-493 Acq:25-SEP-2018 18:30:08 Probe EI+ Magnet SIR VG BioTech Mass spectℓ
Sample#1 Exp:CS5
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,960.0,0.40%,F,T)



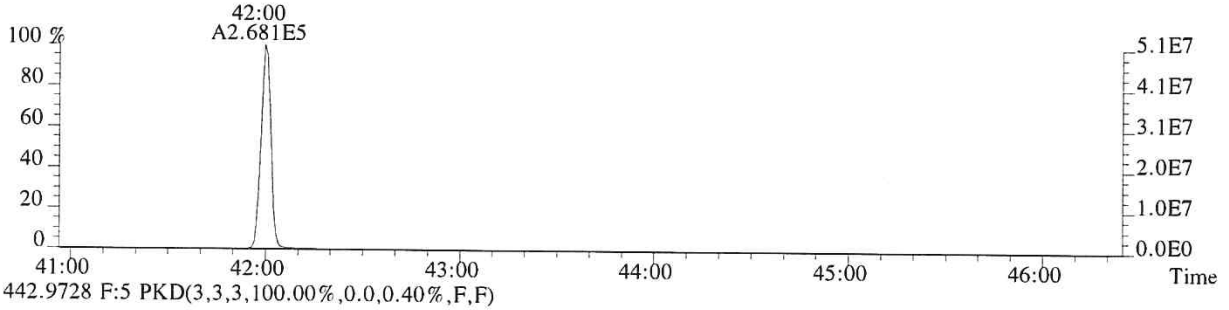
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1868.0,0.40%,F,T)



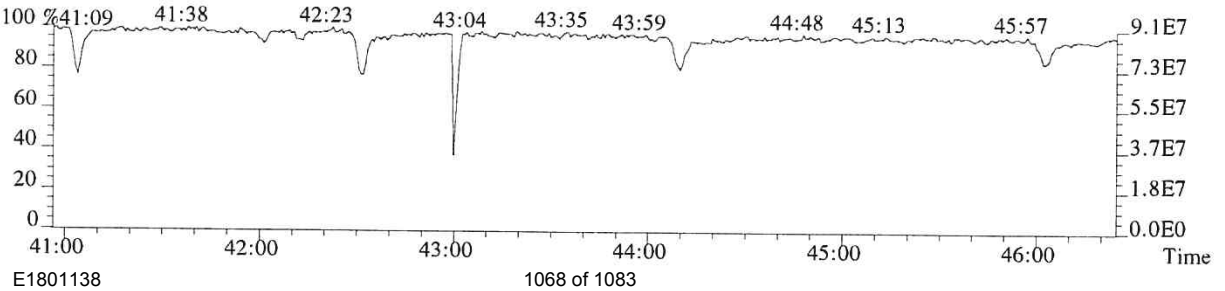
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3456.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1824.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017949

USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P614690 Analysis Date: 25-SEP-18 Time: 20:57:19

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	9.7	7.8 - 12.9	-2.5
1,2,3,7,8-PeCDD	M+2/M+4	1.57	1.32-1.78	49	39 - 65	-2.2
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	49	39 - 64	-2.2
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	50	39 - 64	-0.1
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	49	41 - 61	-1.9
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	50	43 - 58	-0.9
OCDD	M+2/M+4	0.91	0.76-1.02	98	79 - 126	-2.1
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	9.7	8.4 - 12.0	-2.7
1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	49	41 - 60	-1.1
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	49	41 - 61	-1.4
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	49	45 - 56	-2.6
1,2,3,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	49	44 - 57	-2.3
1,2,3,7,8,9-HxCDF	M+2/M+4	1.28	1.05-1.43	50	45 - 56	0.3
2,3,4,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	50	44 - 57	-0.4
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	50	45 - 55	-0.6
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.02	0.88-1.20	48	43 - 58	-3.5
OCDF	M+2/M+4	0.93	0.76-1.02	100	63 - 159	-0.4

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 09/25/18

Instrument ID: E-HRMS-08 GC Column ID: DB-5MSUI

VER Data Filename: P614690 Analysis Date: 25-SEP-18 Time: 20:57:19

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	99	82 - 121	-0.7
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.56	1.32-1.78	97	62 - 160	-2.6
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	102	85 - 117	1.5
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	100	85 - 118	-0.2
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	105	72 - 138	5.2
13C-OCDD	M+2/M+4	0.89	0.76-1.02	224	96 - 415	11.9
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	99	71 - 140	-0.7
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	98	76 - 130	-2.1
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	96	77 - 130	-3.8
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	102	76 - 131	2.1
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	101	70 - 143	0.6
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	100	74 - 135	0.4
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	100	73 - 137	0.2
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	103	78 - 129	2.7
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	109	77 - 129	9.0
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				9.9	7.8 - 12.7	-1.0

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
188969

Run #7 Filename P614690 Samp: 1 Inj: 1 Acquired: 25-SEP-18 20:57:19
Processed: 26-SEP-18 08:08:37 Sample ID: 2ND SOURCE

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:00	1.742e+04	2.239e+04	0.78	yes	no	1.081
2	Unk	1,2,3,7,8-PeCDF	32:14	1.470e+05	9.342e+04	1.57	yes	no	1.156
3	Unk	2,3,4,7,8-PeCDF	33:09	1.362e+05	8.490e+04	1.60	yes	no	1.104
4	Unk	1,2,3,4,7,8-HxCDF	35:49	1.308e+05	1.044e+05	1.25	yes	no	1.416
5	Unk	1,2,3,6,7,8-HxCDF	35:55	1.371e+05	1.074e+05	1.28	yes	no	1.293
6	Unk	2,3,4,6,7,8-HxCDF	36:25	1.285e+05	1.018e+05	1.26	yes	no	1.281
7	Unk	1,2,3,7,8,9-HxCDF	37:09	1.211e+05	9.459e+04	1.28	yes	no	1.313
8	Unk	1,2,3,4,6,7,8-HpCDF	38:24	1.180e+05	1.126e+05	1.05	yes	no	1.523
9	Unk	1,2,3,4,7,8,9-HpCDF	39:46	1.018e+05	9.931e+04	1.02	yes	no	1.463
10	Unk	OCDF	42:12	1.605e+05	1.721e+05	0.93	yes	no	1.571
11	Unk	2,3,7,8-TCDD	28:48	1.193e+04	1.490e+04	0.80	yes	no	1.049
12	Unk	1,2,3,7,8-PeCDD	33:26	8.164e+04	5.215e+04	1.57	yes	no	0.929
13	Unk	1,2,3,4,7,8-HxCDD	36:33	7.752e+04	6.082e+04	1.27	yes	no	1.071
14	Unk	1,2,3,6,7,8-HxCDD	36:38	7.678e+04	6.066e+04	1.27	yes	no	1.060
15	Unk	1,2,3,7,8,9-HxCDD	36:52	8.213e+04	6.494e+04	1.26	yes	no	1.145
16	Unk	1,2,3,4,6,7,8-HpCDD	39:18	7.382e+04	6.944e+04	1.06	yes	no	1.112
17	Unk	OCDD	42:01	1.146e+05	1.261e+05	0.91	yes	no	1.157
18	IS	13C-2,3,7,8-TCDF	27:59	1.682e+05	2.104e+05	0.80	yes	no	1.417
19	IS	13C-1,2,3,7,8-PeCDF	32:14	2.590e+05	1.613e+05	1.61	yes	no	1.596
20	IS	13C-2,3,4,7,8-PeCDF	33:08	2.497e+05	1.565e+05	1.60	yes	no	1.571
21	IS	13C-1,2,3,4,7,8-HxCDF	35:48	1.202e+05	2.212e+05	0.54	yes	no	1.160
22	IS	13C-1,2,3,6,7,8-HxCDF	35:54	1.342e+05	2.529e+05	0.53	yes	no	1.336
23	IS	13C-2,3,4,6,7,8-HxCDF	36:24	1.258e+05	2.350e+05	0.54	yes	no	1.250
24	IS	13C-1,2,3,7,8,9-HxCDF	37:09	1.132e+05	2.142e+05	0.53	yes	no	1.131
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:23	9.579e+04	2.089e+05	0.46	yes	no	1.029
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:45	8.964e+04	1.952e+05	0.46	yes	no	0.907
27	IS	13C-2,3,7,8-TCDD	28:47	1.166e+05	1.457e+05	0.80	yes	no	0.983
28	IS	13C-1,2,3,7,8-PeCDD	33:25	1.797e+05	1.149e+05	1.56	yes	no	1.125
29	IS	13C-1,2,3,4,7,8-HxCDD	36:32	1.476e+05	1.165e+05	1.27	yes	no	0.903
30	IS	13C-1,2,3,6,7,8-HxCDD	36:37	1.453e+05	1.145e+05	1.27	yes	no	0.903
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:17	1.336e+05	1.263e+05	1.06	yes	no	0.857
32	IS	13C-OCDD	42:00	2.007e+05	2.242e+05	0.89	yes	no	0.659
33	RS/RT	13C-1,2,3,4-TCDD	28:13	1.202e+05	1.487e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:51	1.598e+05	1.284e+05	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	28:48	2.893e+04				no	1.086

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
188969

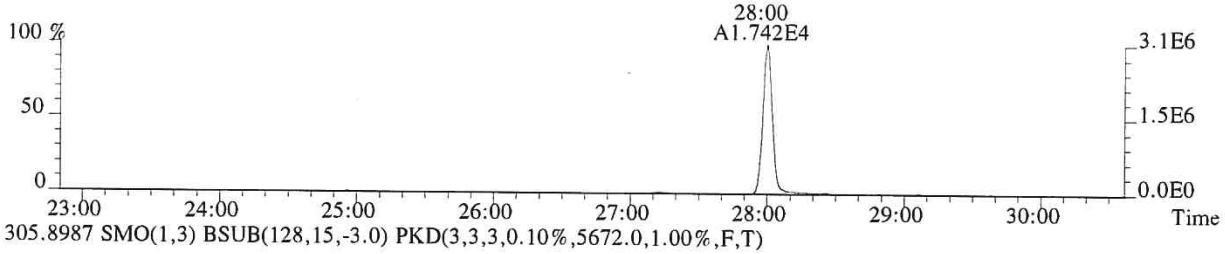
Run #7 Filename P614690 Samp: 1 Inj: 1 Acquired: 25-SEP-18 20:57:19
Processed: 26-SEP-18 08:08:37 LAB. ID: 2ND SOURCE

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	3.08e+06	2.16e+03	1.4e+03	3.95e+06	5.67e+03	7.0e+02
2	1,2,3,7,8-PeCDF	2.75e+07	1.50e+03	1.8e+04	1.74e+07	8.24e+03	2.1e+03
3	2,3,4,7,8-PeCDF	2.67e+07	1.50e+03	1.8e+04	1.67e+07	8.24e+03	2.0e+03
4	1,2,3,4,7,8-HxCDF	2.88e+07	2.35e+03	1.2e+04	2.29e+07	2.48e+03	9.3e+03
5	1,2,3,6,7,8-HxCDF	2.88e+07	2.35e+03	1.2e+04	2.30e+07	2.48e+03	9.3e+03
6	2,3,4,6,7,8-HxCDF	2.86e+07	2.35e+03	1.2e+04	2.28e+07	2.48e+03	9.2e+03
7	1,2,3,7,8,9-HxCDF	2.47e+07	2.35e+03	1.1e+04	1.95e+07	2.48e+03	7.9e+03
8	1,2,3,4,6,7,8-HpCDF	2.70e+07	4.46e+03	6.0e+03	2.58e+07	1.29e+04	2.0e+03
9	1,2,3,4,7,8,9-HpCDF	2.12e+07	4.46e+03	4.8e+03	2.03e+07	1.29e+04	1.6e+03
10	OCDF	3.01e+07	1.50e+03	2.0e+04	3.28e+07	3.09e+03	1.1e+04
11	2,3,7,8-TCDD	2.20e+06	4.04e+03	5.4e+02	2.73e+06	2.27e+03	1.2e+03
12	1,2,3,7,8-PeCDD	1.64e+07	3.14e+03	5.2e+03	1.06e+07	2.92e+02	3.6e+04
13	1,2,3,4,7,8-HxCDD	1.79e+07	1.59e+03	1.1e+04	1.41e+07	2.43e+03	5.8e+03
14	1,2,3,6,7,8-HxCDD	1.70e+07	1.59e+03	1.1e+04	1.34e+07	2.43e+03	5.5e+03
15	1,2,3,7,8,9-HxCDD	1.85e+07	1.59e+03	1.2e+04	1.48e+07	2.43e+03	6.1e+03
16	1,2,3,4,6,7,8-HpCDD	1.59e+07	2.28e+03	7.0e+03	1.49e+07	8.84e+02	1.7e+04
17	OCDD	2.16e+07	1.17e+03	1.8e+04	2.38e+07	1.31e+03	1.8e+04
18	13C-2,3,7,8-TCDF	2.88e+07	1.57e+04	1.8e+03	3.60e+07	9.18e+03	3.9e+03
19	13C-1,2,3,7,8-PeCDF	4.79e+07	4.01e+03	1.2e+04	3.00e+07	3.41e+03	8.8e+03
20	13C-2,3,4,7,8-PeCDF	4.95e+07	4.01e+03	1.2e+04	3.12e+07	3.41e+03	9.1e+03
21	13C-1,2,3,4,7,8-HxCDF	2.65e+07	2.99e+03	8.9e+03	4.93e+07	3.83e+03	1.3e+04
22	13C-1,2,3,6,7,8-HxCDF	2.83e+07	2.99e+03	9.5e+03	5.32e+07	3.83e+03	1.4e+04
23	13C-2,3,4,6,7,8-HxCDF	2.80e+07	2.99e+03	9.4e+03	5.25e+07	3.83e+03	1.4e+04
24	13C-1,2,3,7,8,9-HxCDF	2.35e+07	2.99e+03	7.9e+03	4.43e+07	3.83e+03	1.2e+04
25	13C-1,2,3,4,6,7,8-HpCDF	2.19e+07	7.32e+03	3.0e+03	4.77e+07	1.38e+04	3.5e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.88e+07	7.32e+03	2.6e+03	4.06e+07	1.38e+04	2.9e+03
27	13C-2,3,7,8-TCDD	2.17e+07	2.56e+04	8.4e+02	2.71e+07	6.97e+03	3.9e+03
28	13C-1,2,3,7,8-PeCDD	3.57e+07	3.26e+03	1.1e+04	2.28e+07	2.28e+03	1.0e+04
29	13C-1,2,3,4,7,8-HxCDD	3.37e+07	5.66e+03	6.0e+03	2.64e+07	3.42e+03	7.7e+03
30	13C-1,2,3,6,7,8-HxCDD	3.18e+07	5.66e+03	5.6e+03	2.51e+07	3.42e+03	7.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.85e+07	3.13e+03	9.1e+03	2.68e+07	1.88e+03	1.4e+04
32	13C-OCDD	3.77e+07	2.72e+03	1.4e+04	4.17e+07	9.60e+02	4.3e+04
33	13C-1,2,3,4-TCDD	2.21e+07	2.56e+04	8.6e+02	2.72e+07	6.97e+03	3.9e+03
34	13C-1,2,3,7,8,9-HxCDD	3.62e+07	5.66e+03	6.4e+03	2.92e+07	3.42e+03	8.5e+03
35	37Cl-2,3,7,8-TCDD	5.28e+06	4.24e+03	1.2e+03			

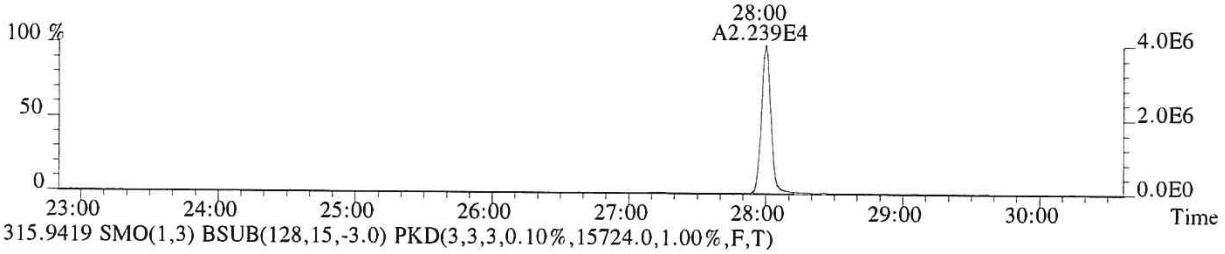
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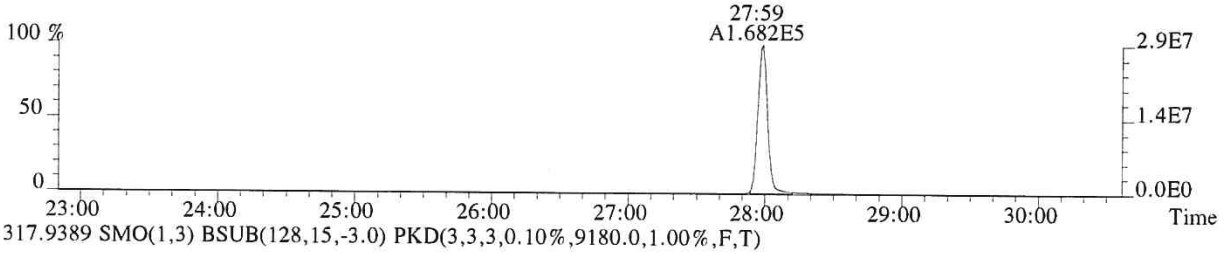
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Sample#1 Exp:2ND SOURCE
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2160.0,1.00%,F,T)



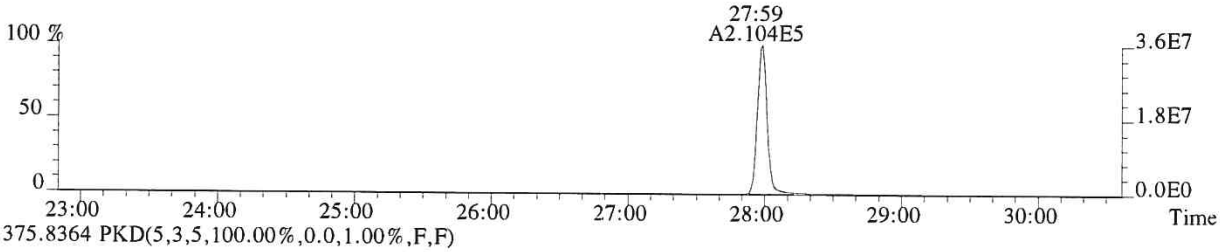
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5672.0,1.00%,F,T)



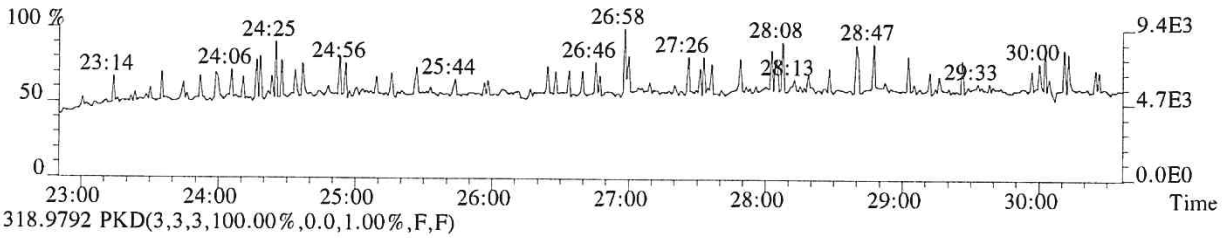
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,15724.0,1.00%,F,T)



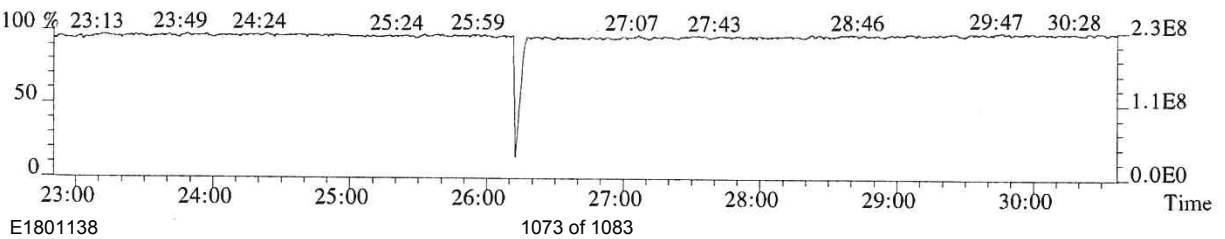
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9180.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

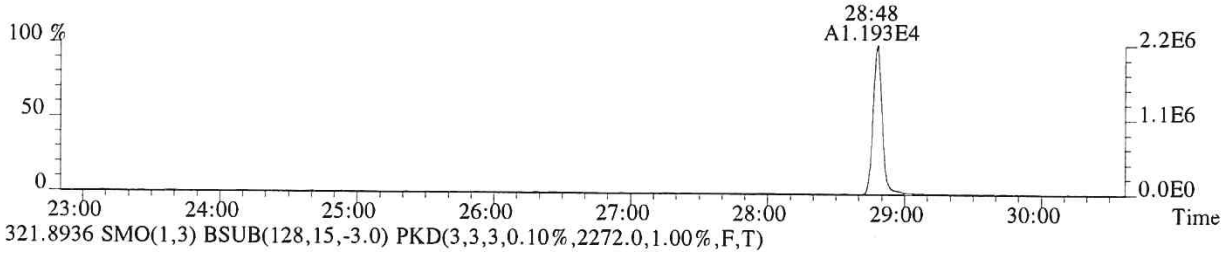


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

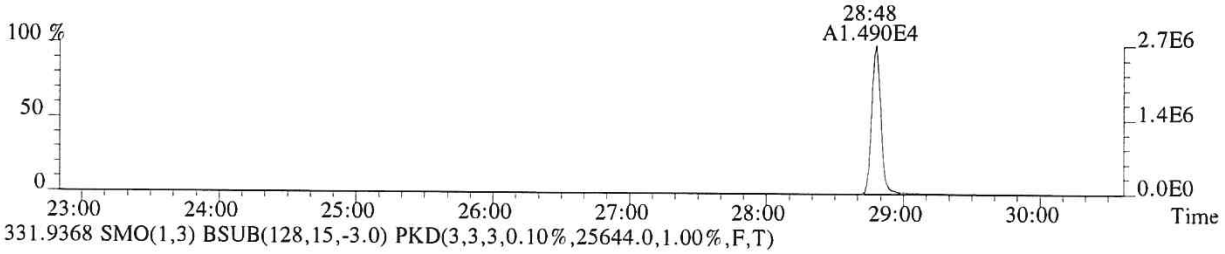


017954

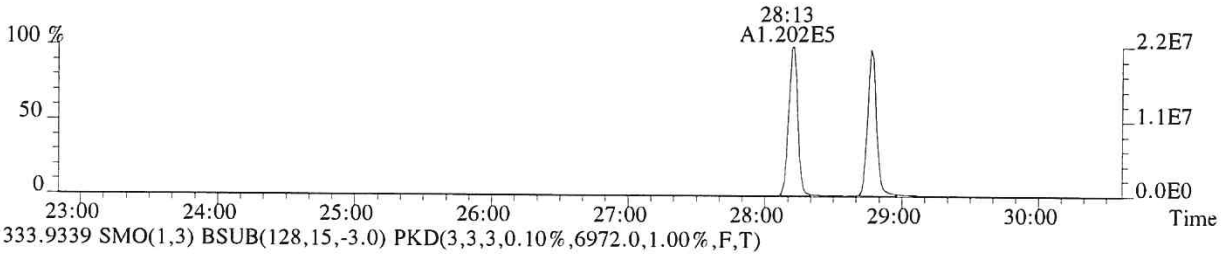
File:P614690 #1-552 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4040.0,1.00%,F,T)



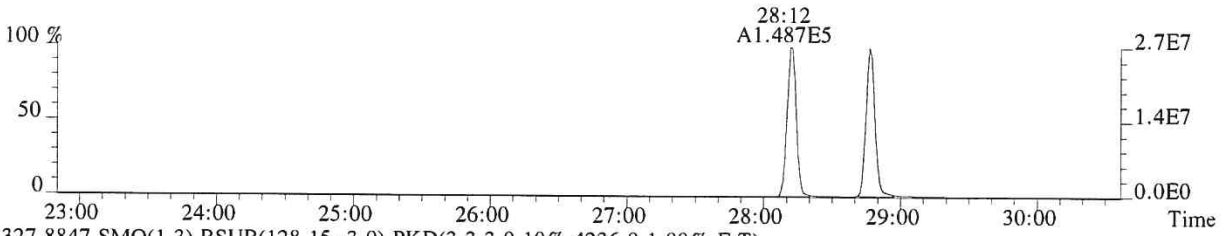
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2272.0,1.00%,F,T)



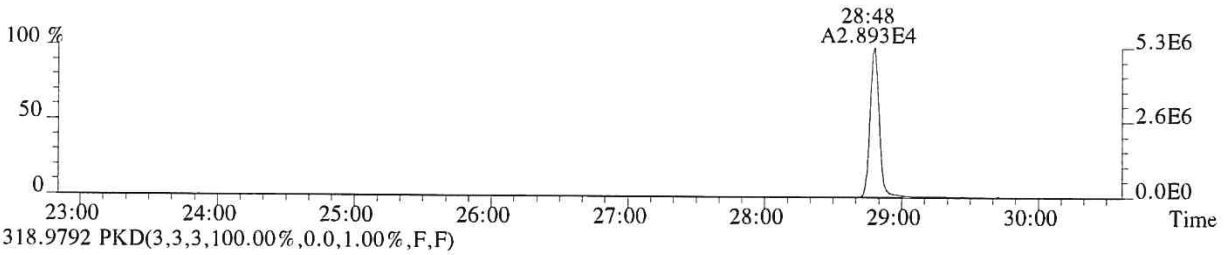
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,25644.0,1.00%,F,T)



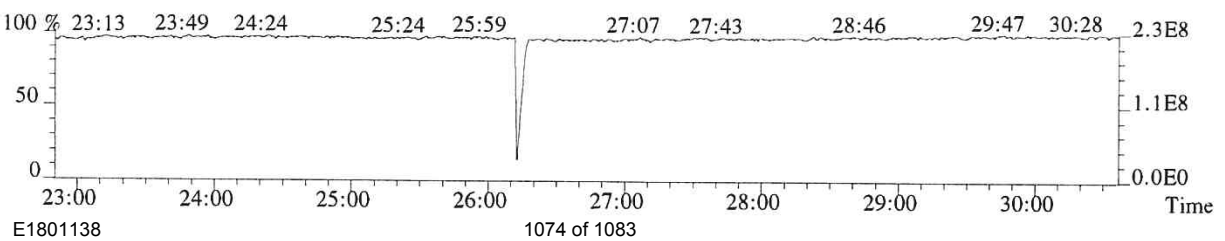
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6972.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4236.0,1.00%,F,T)

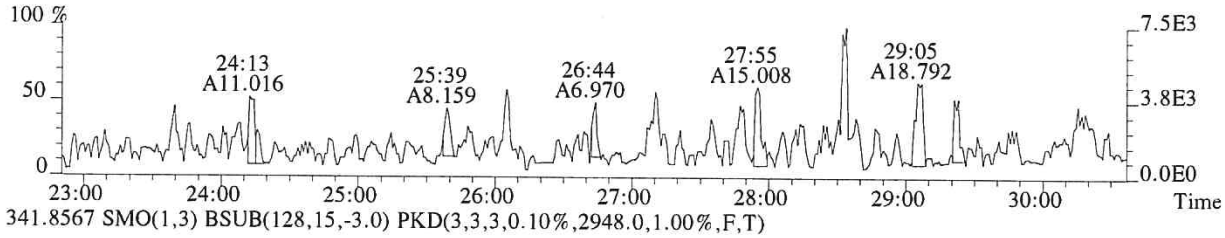


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

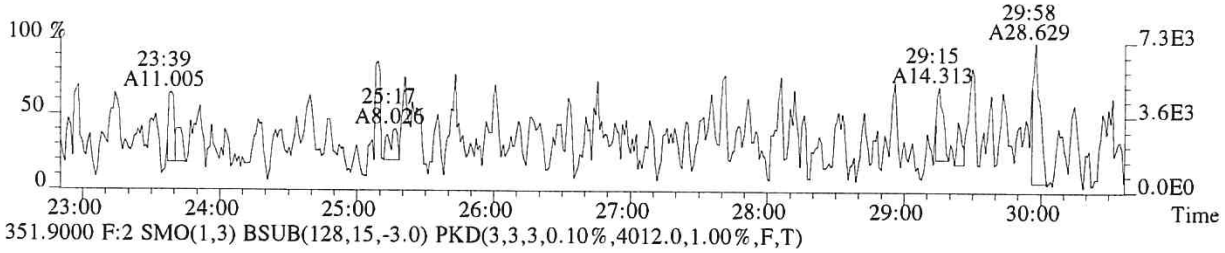


017955

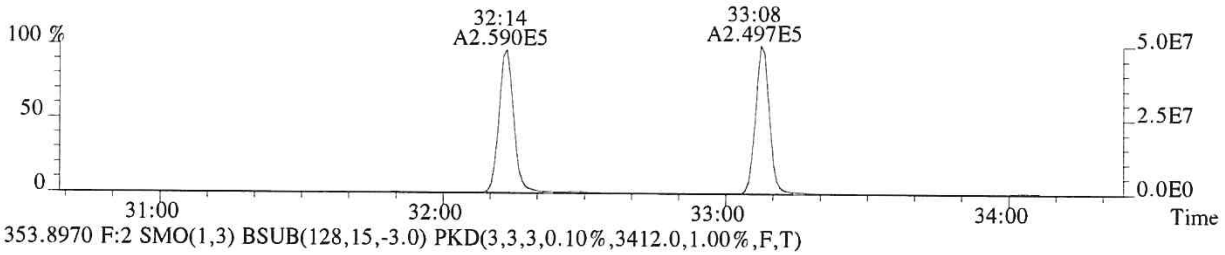
File:P614690 #1-552 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:2ND SOURCE
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1588.0,1.00%,F,T)



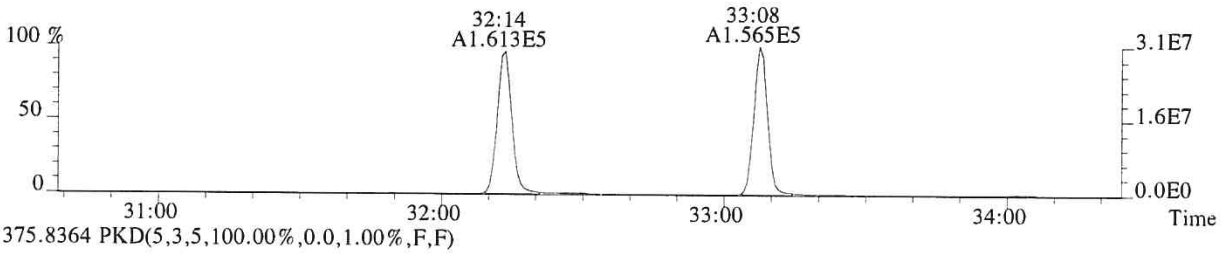
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2948.0,1.00%,F,T)



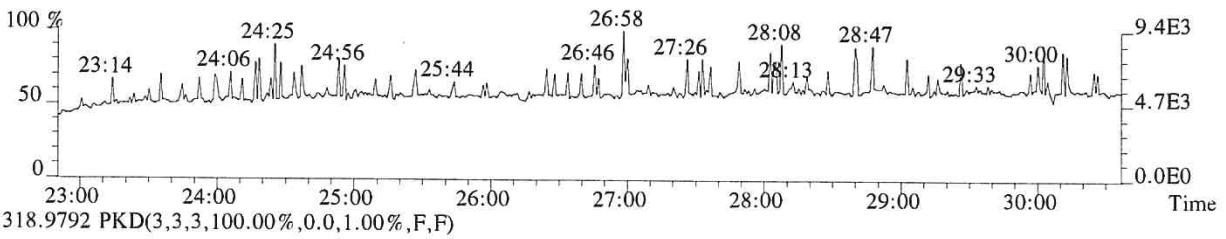
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4012.0,1.00%,F,T)



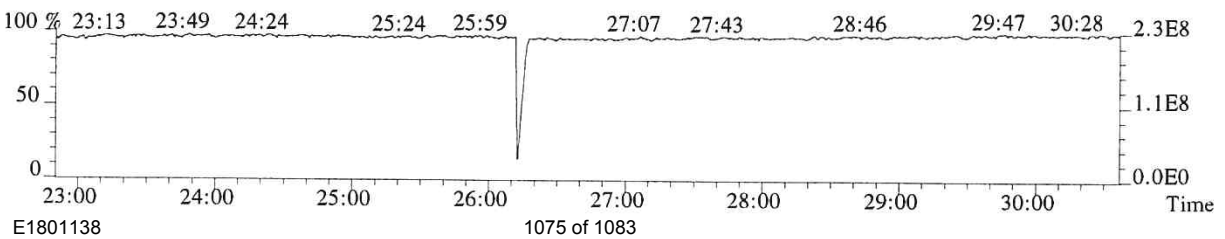
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3412.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

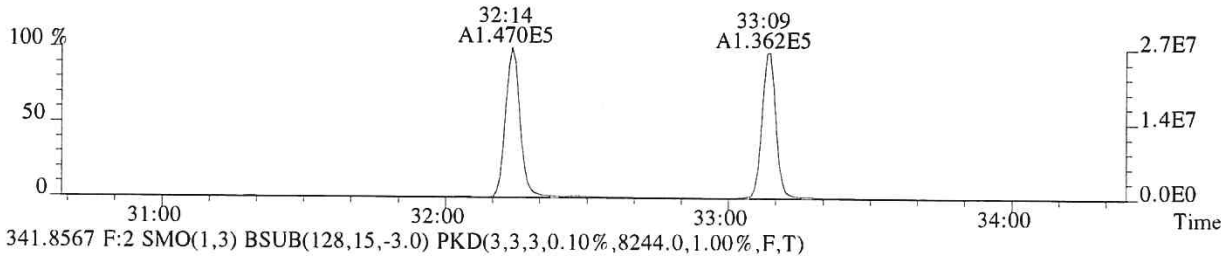


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

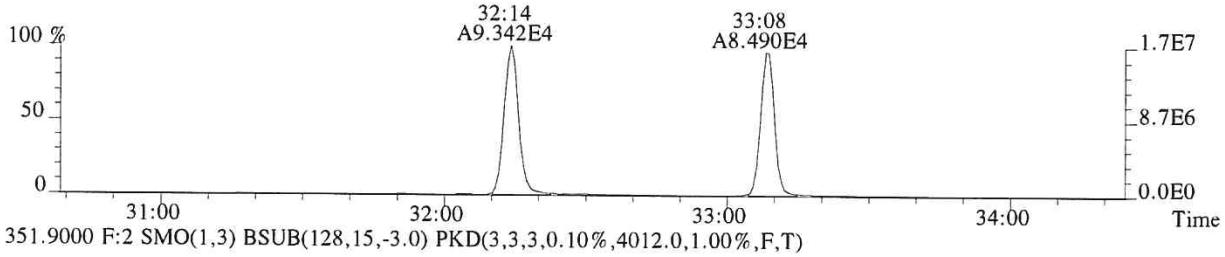


017956

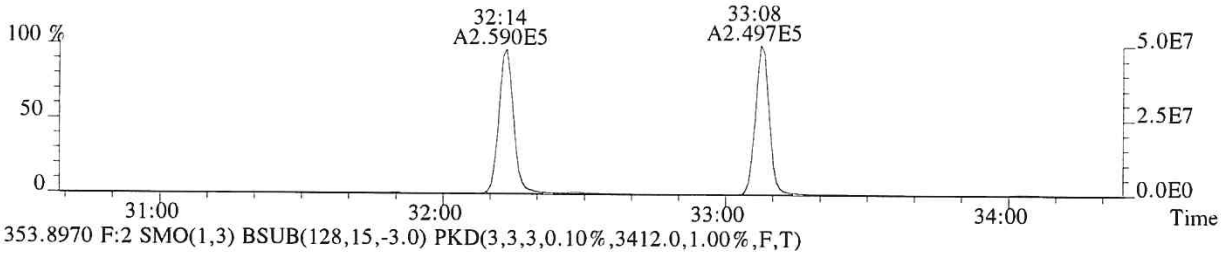
File:P614690 #1-339 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1504.0,1.00%,F,T)



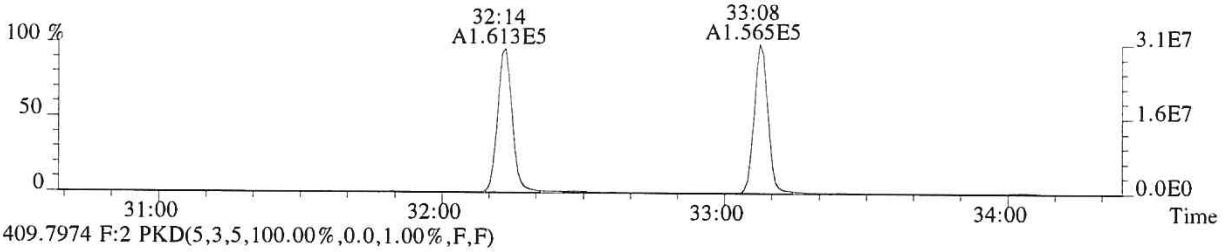
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8244.0,1.00%,F,T)



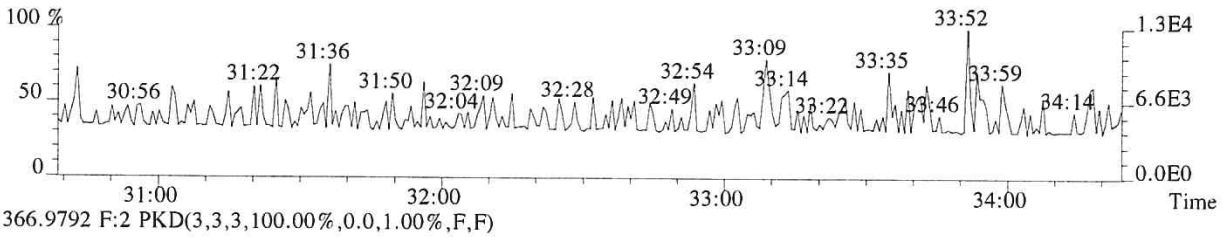
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4012.0,1.00%,F,T)



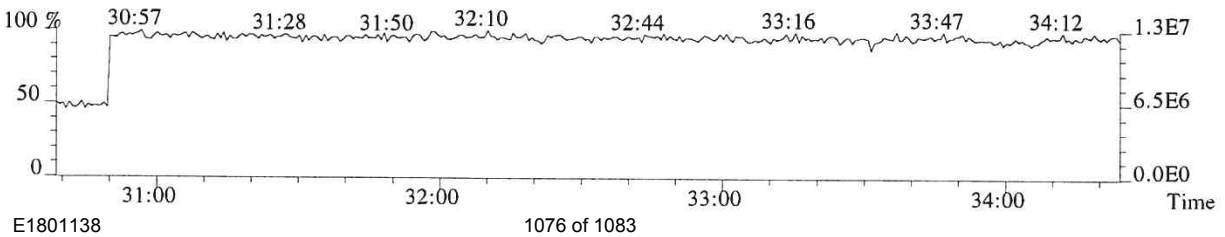
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3412.0,1.00%,F,T)



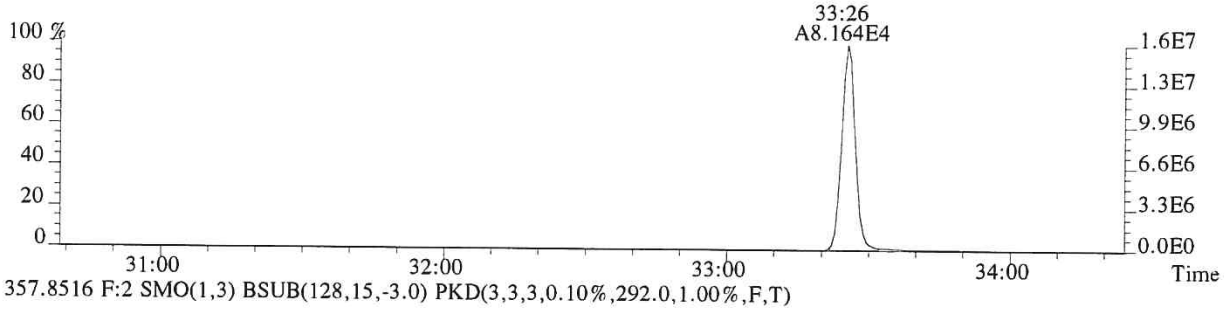
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



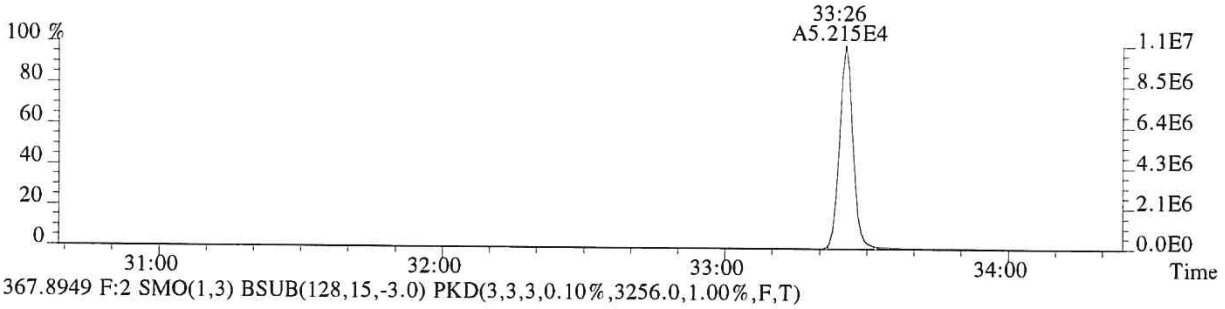
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



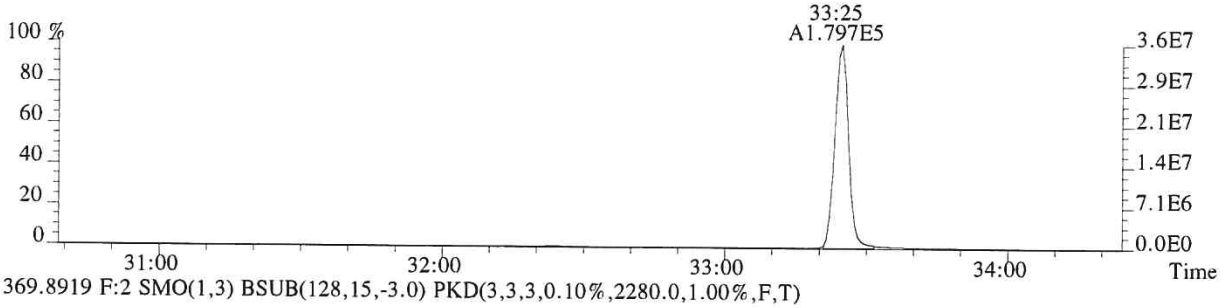
File:P614690 #1-339 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3144.0,1.00%,F,T)



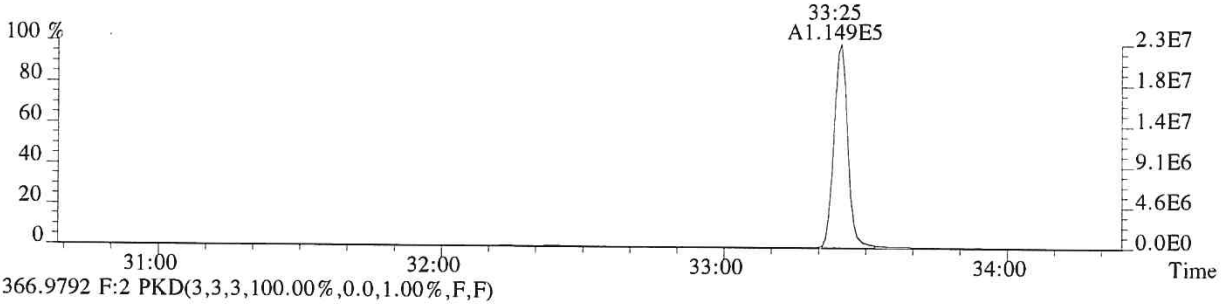
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,292.0,1.00%,F,T)



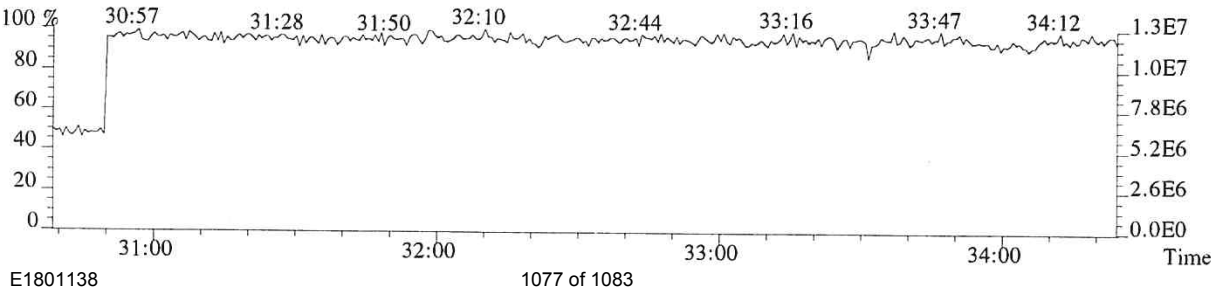
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3256.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2280.0,1.00%,F,T)

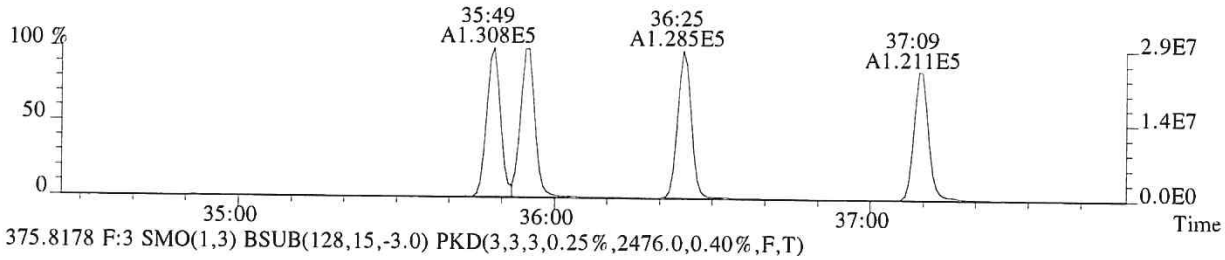


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

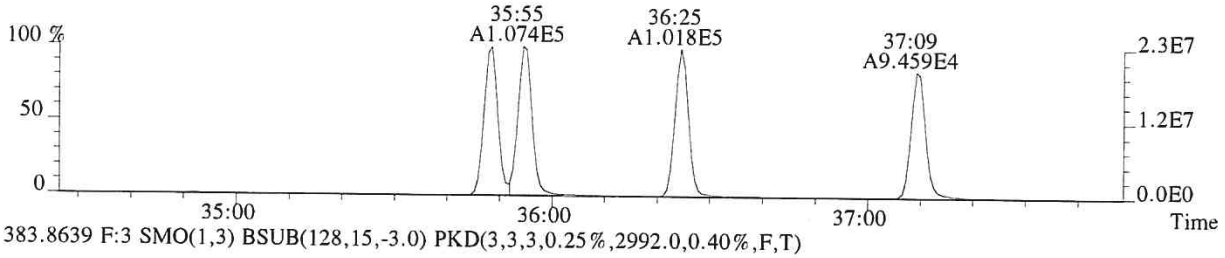


017958

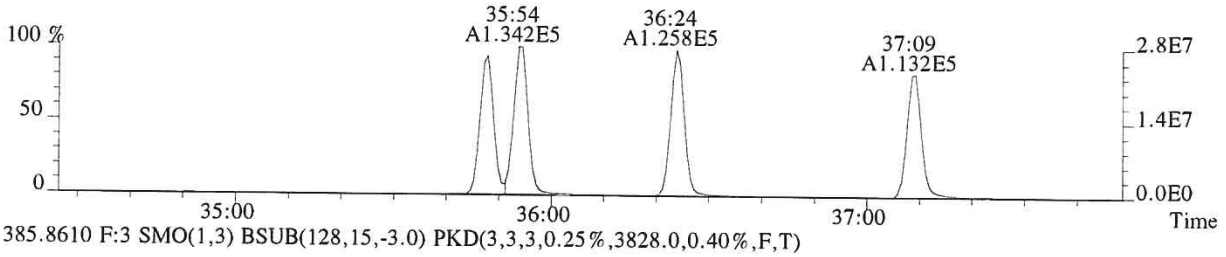
File:P614690 #1-304 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2352.0,0.40%,F,T)



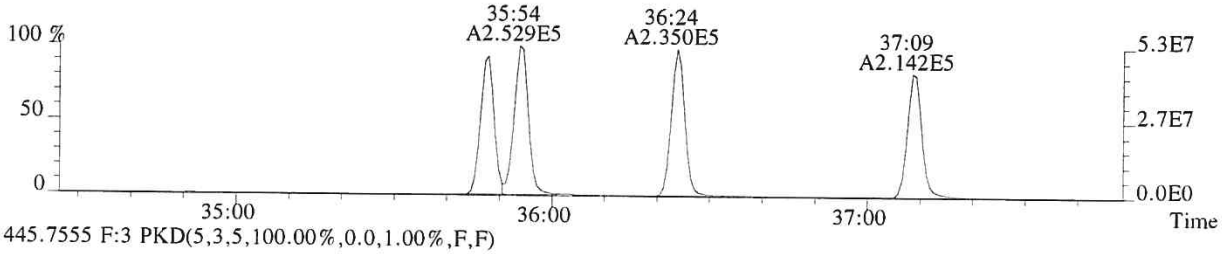
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2476.0,0.40%,F,T)



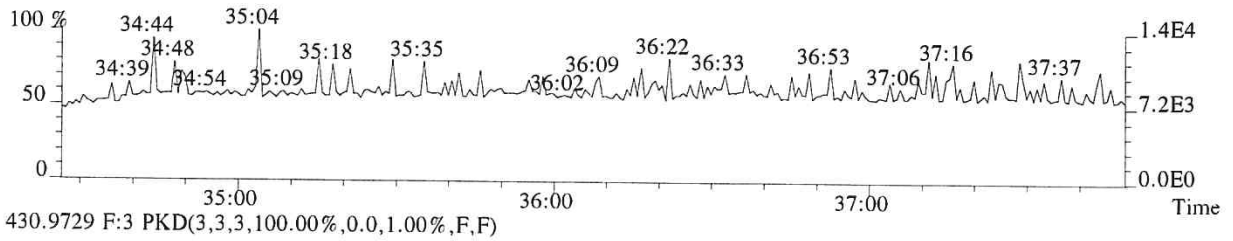
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2992.0,0.40%,F,T)



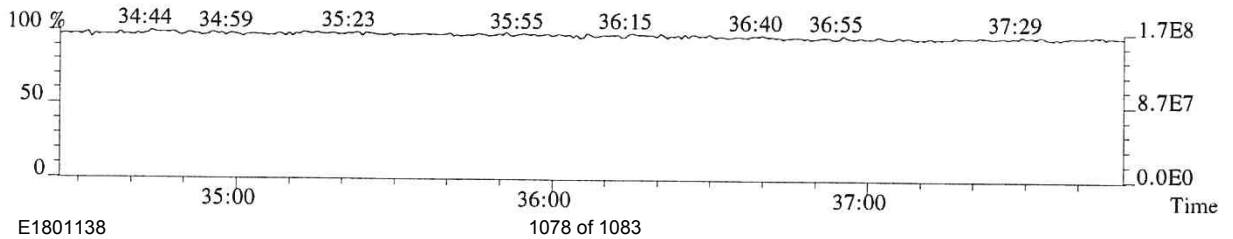
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3828.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

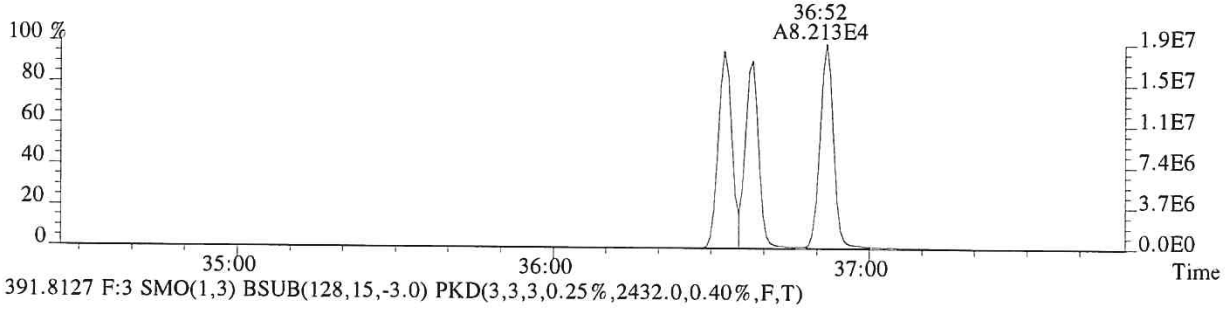


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

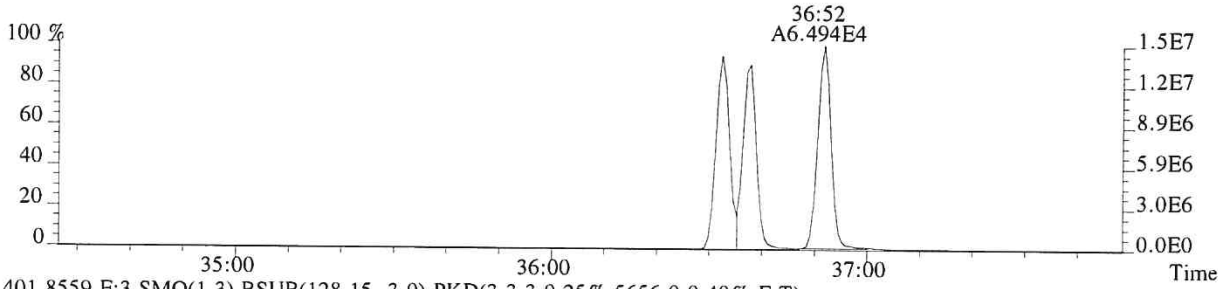


017959

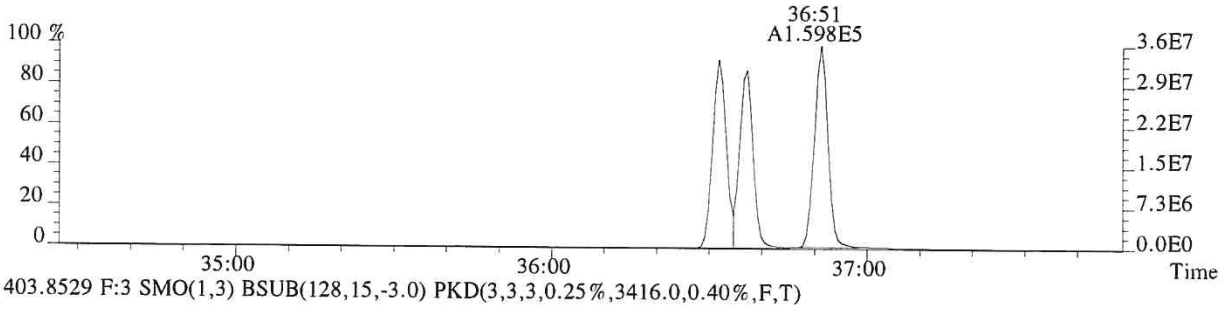
File:P614690 #1-304 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1588.0,0.40%,F,T)



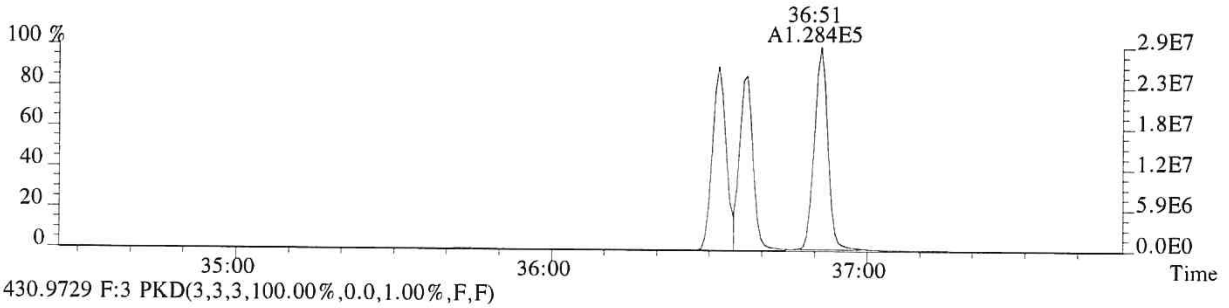
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2432.0,0.40%,F,T)



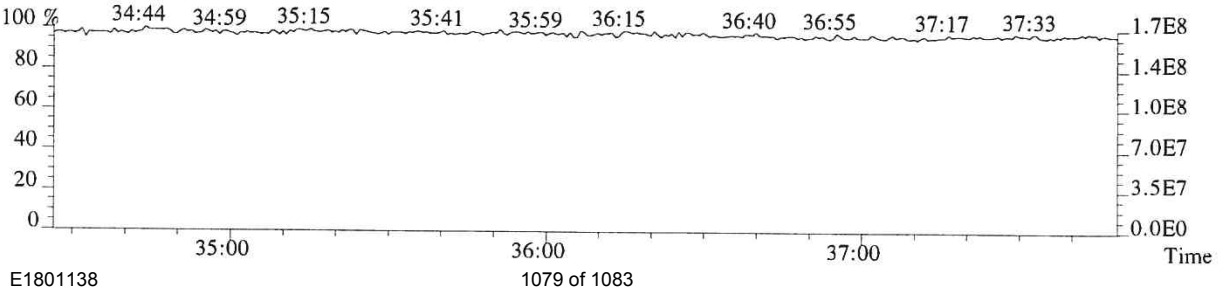
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5656.0,0.40%,F,T)



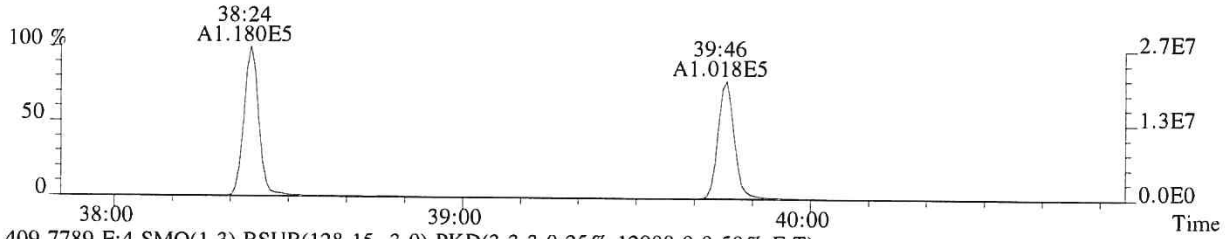
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3416.0,0.40%,F,T)



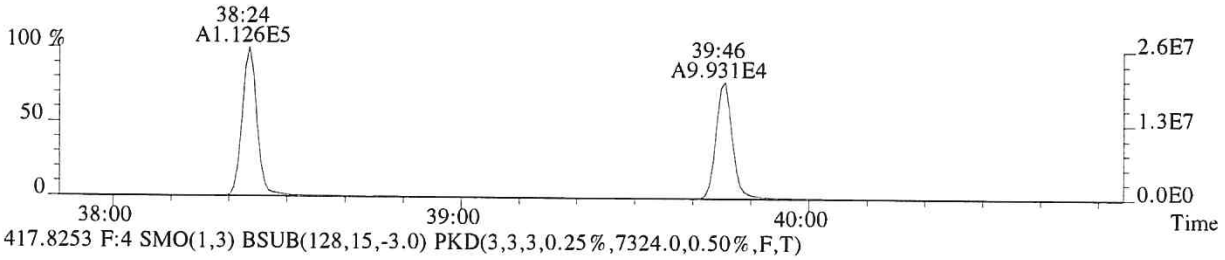
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



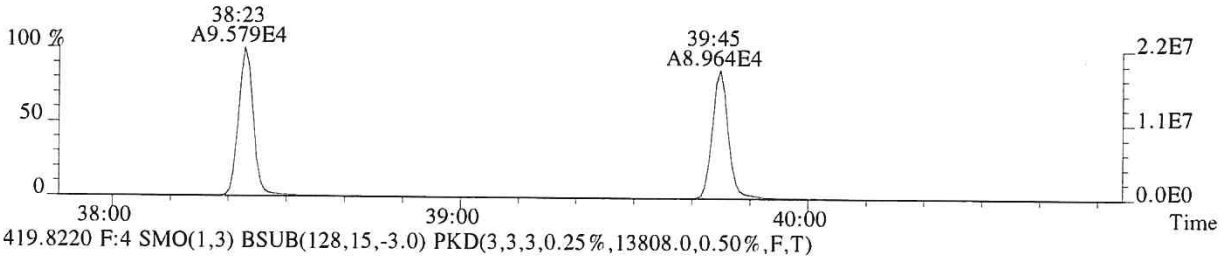
File:P614690 #1-276 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4460.0,0.50%,F,T)



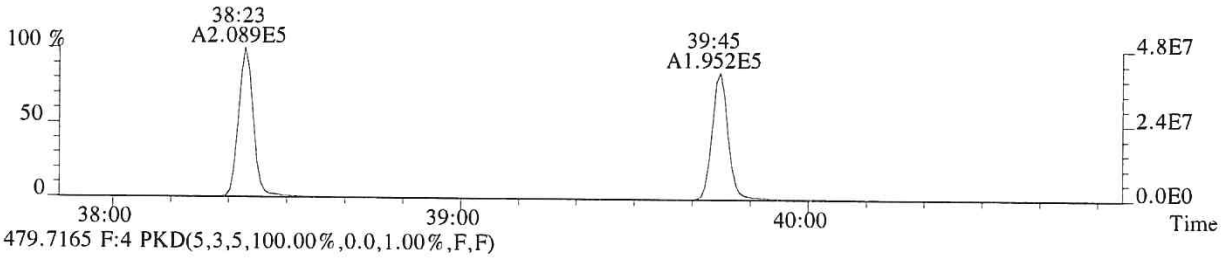
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,12908.0,0.50%,F,T)



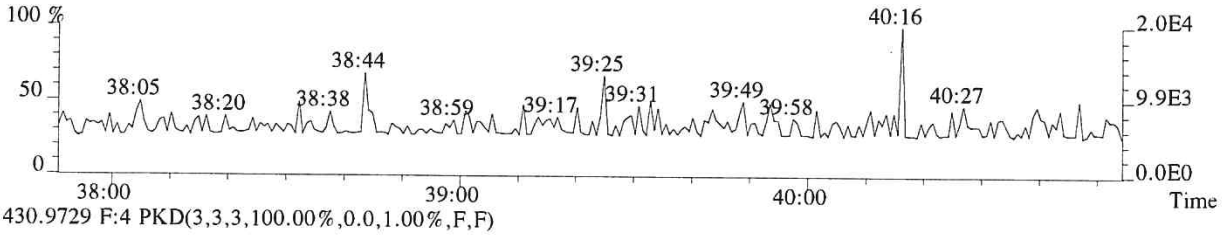
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7324.0,0.50%,F,T)



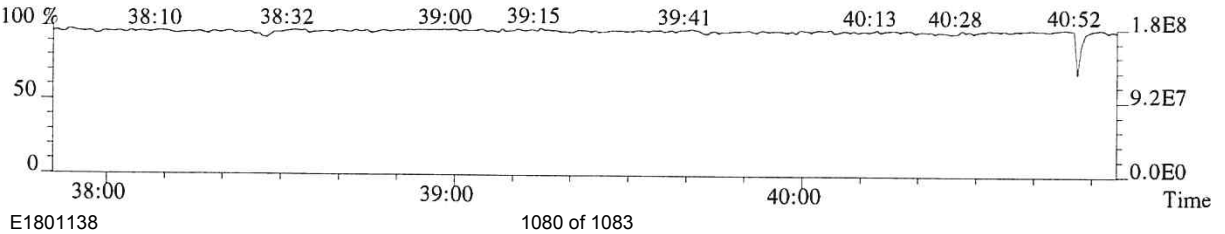
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,13808.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

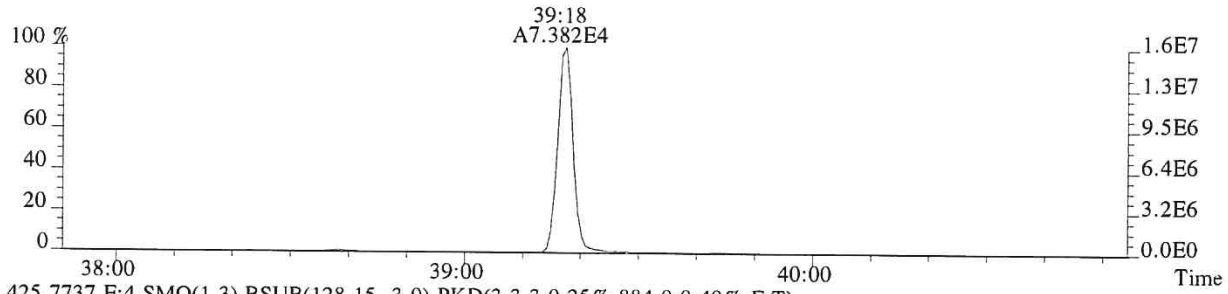


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

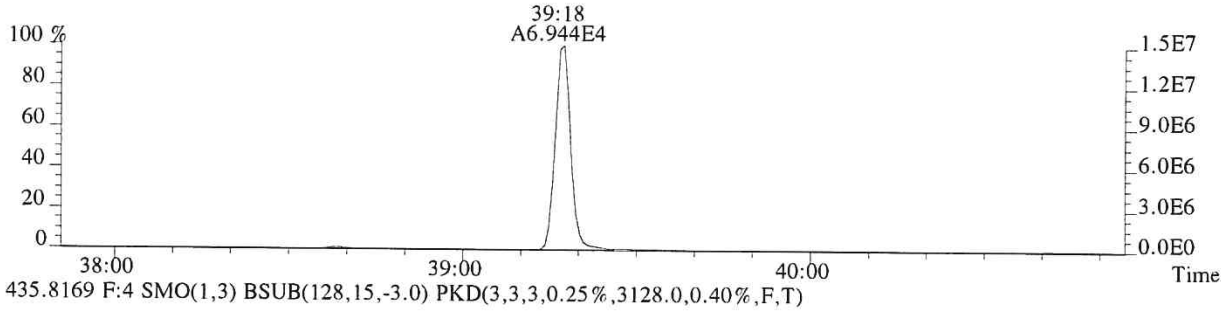


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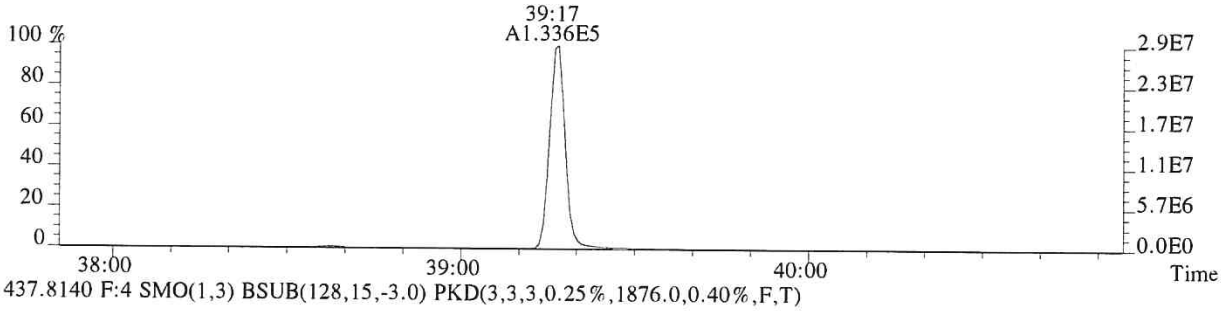
File:P614690 #1-276 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2280.0,0.40%,F,T)



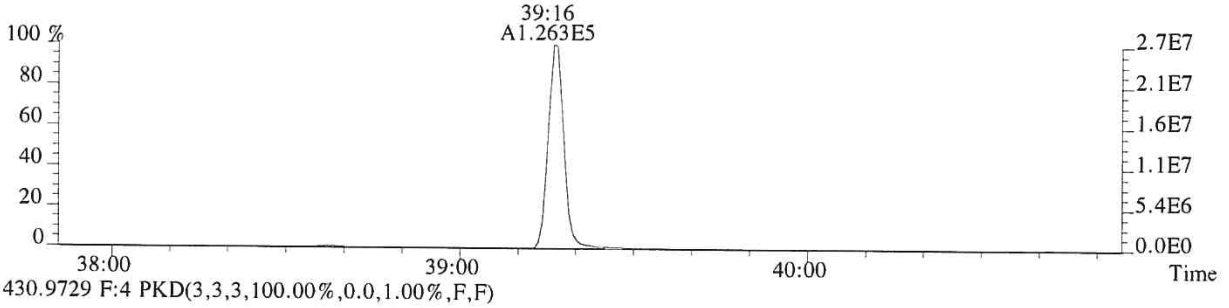
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



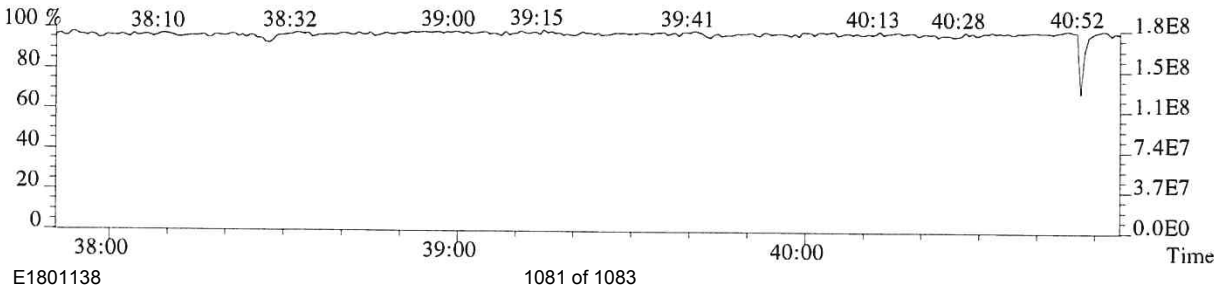
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3128.0,0.40%,F,T)



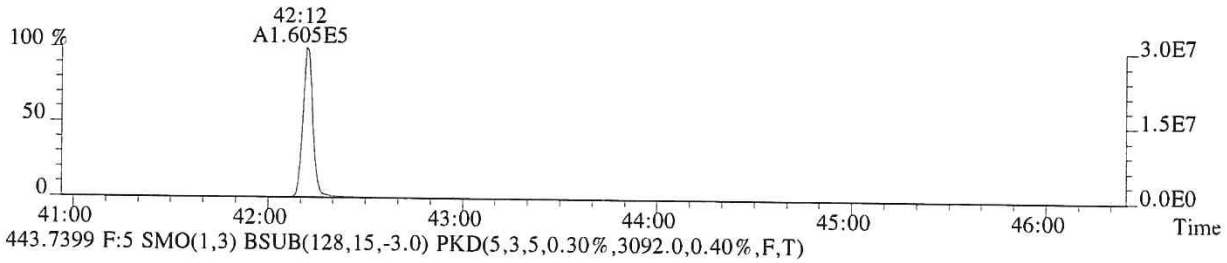
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1876.0,0.40%,F,T)



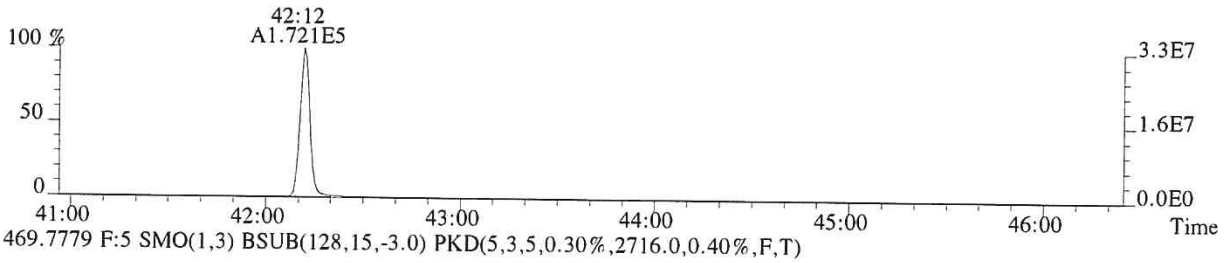
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



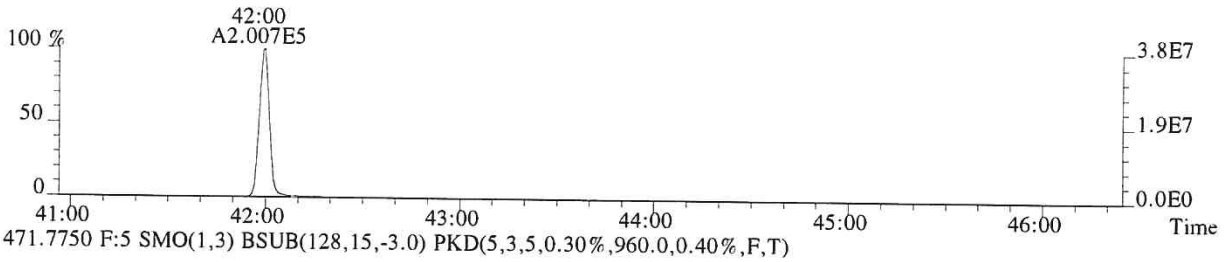
File:P614690 #1-493 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1500.0,0.40%,F,T)



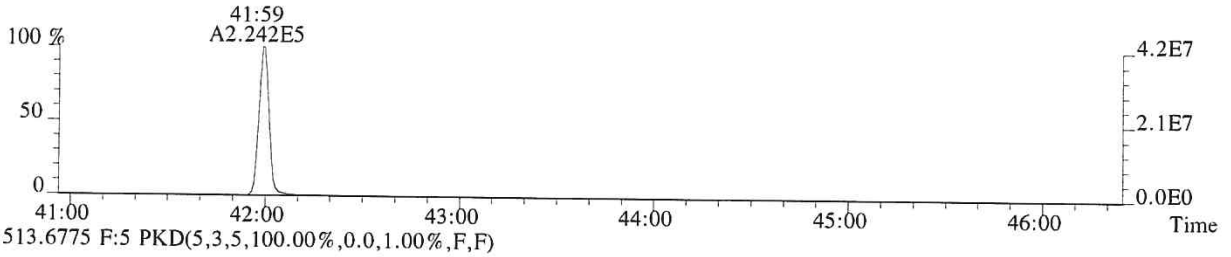
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,3092.0,0.40%,F,T)



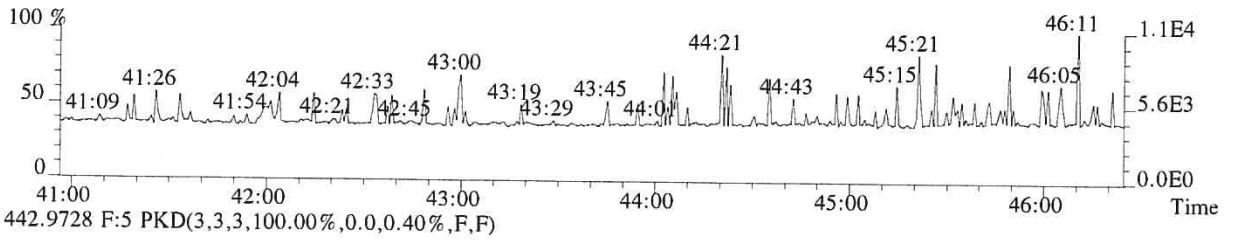
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2716.0,0.40%,F,T)



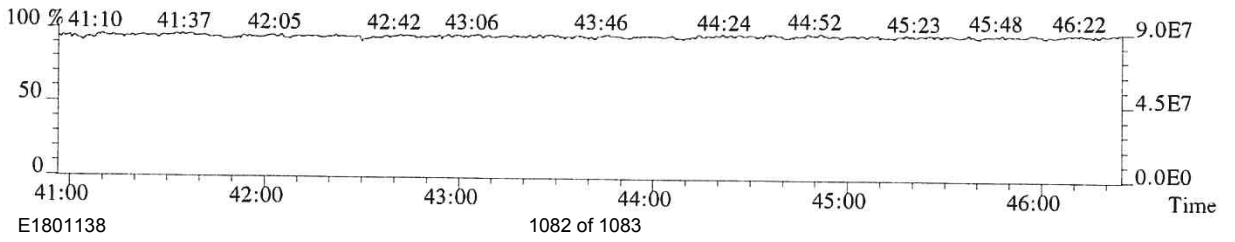
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,960.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

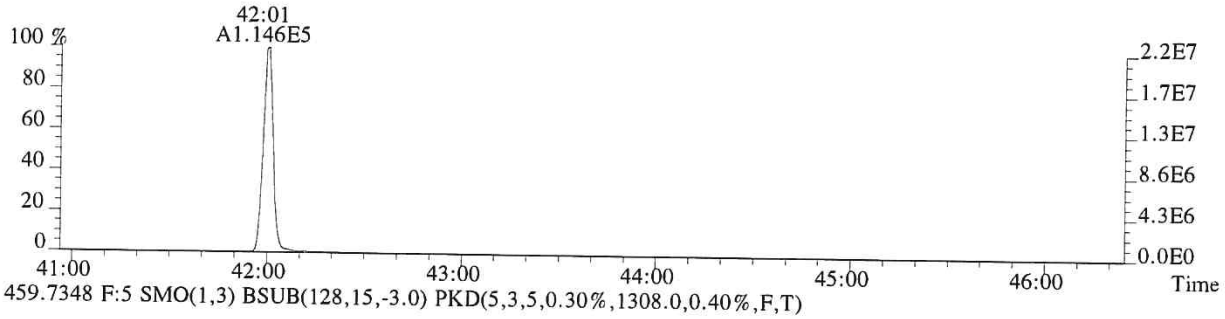


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

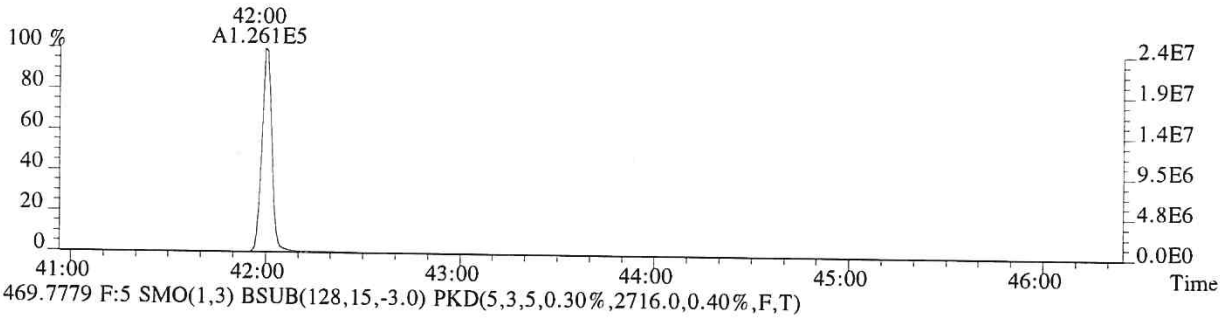


017963

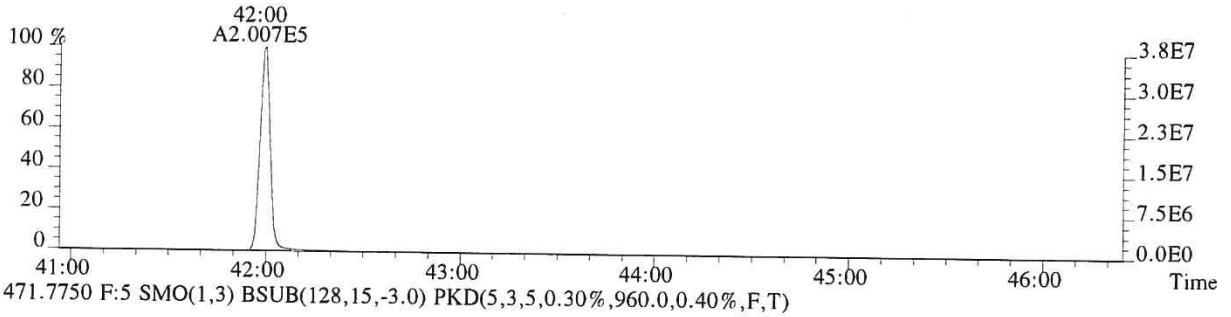
File:P614690 #1-493 Acq:25-SEP-2018 20:57:19 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:2ND SOURCE
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1172.0,0.40%,F,T)



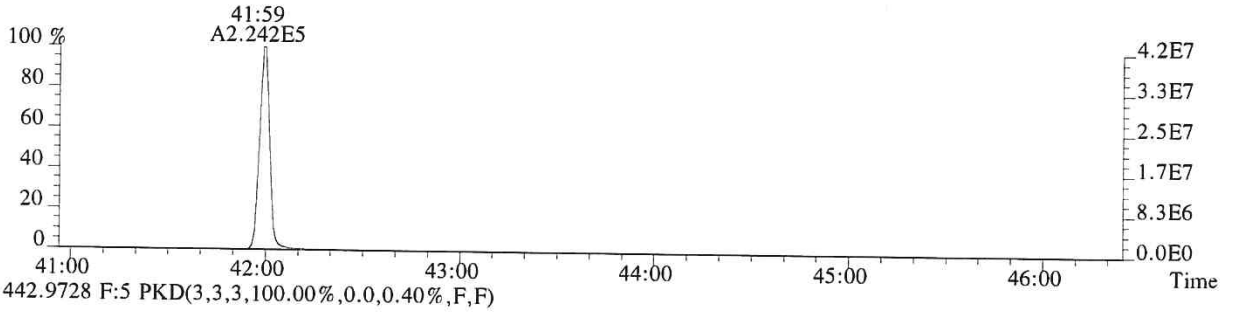
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1308.0,0.40%,F,T)



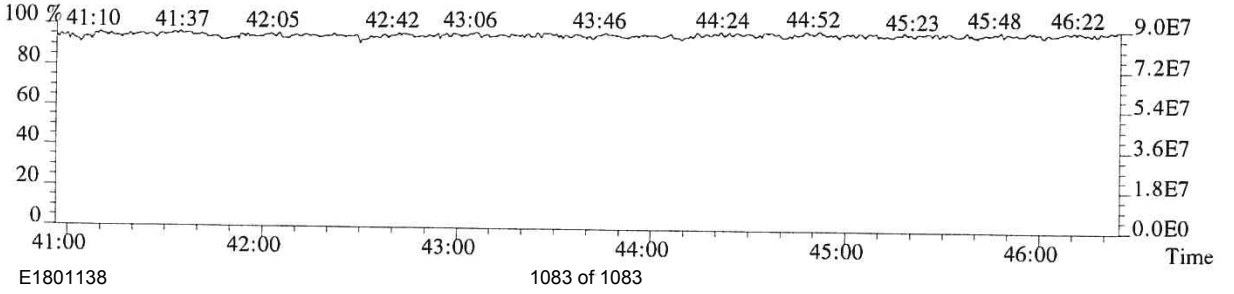
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,2716.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,960.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



017964

January 17, 2019 Service Request No:E1801139

Craig Hutchings
Integral Consulting, Inc.
1205 West Bay Drive NW
Olympia, WA 98502-4670

Laboratory Results for: C1887-0501

Dear Craig,

Enclosed are the results of the sample(s) submitted to our laboratory November 16, 2018
For your reference, these analyses have been assigned our service request number **E1801139.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the final complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the TNI 2009 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kristin Brown

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client: Integral **Service Request No.:** E1801139
Project: C1887-0501
Sample Matrix: Sediment

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Sample on hold originally reported on a separate ALS service request number; samples were activated and reported under E1801139.

Data Validation Notes and Discussion

Re-extraction

Samples 021 and 022, "SL0247" and "SL0248", were re-extracted and re-analyzed due to quality control exceedances in the initial batch. The initial results are not included in this report.

B flags – Method Blanks

The Method Blanks EQ1900003-01 and EQ19000017-01 contained low levels of various dioxins furans compounds below the Method Reporting Limit (MRL). The associated compounds in the samples are flagged with 'B' flags where the sample result is less than ten times the level detected in the method blank.

Precision and Accuracy:

EQ1900003 and EQ1900017: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within control limits.

Y flags – Labeled Standards

Various labeled standards recovered below control limits in sample EQ1900003-02.

Quantification of the native 2,3,7,8-substituted congeners is based on isotopic dilution, which automatically corrects for variation in extraction efficiency and provides accurate values even with poor recovery. Samples that had recoveries of labeled standards outside the acceptance limits are qualified with 'Y' flags on the Labeled Compound summary pages. In all cases, the signal-to-noise ratios are greater than 10:1 and detection limits were below the Method Reporting Limits.

E flags

When OCDD exceed the upper method calibration limit (MCL), we use an 'E' flag on the Sample Analytical Report results page when the detector is not saturated. Sample E1801139-018 is reported with an 'E' flag to denote that they had concentration greater than the highest calibration point. The process of dilution is counter to the isotopic

dilution technique that the laboratory uses to determine recovery and produces variability in the final value. The laboratory only dilutes when detector saturation occurs.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

P flags

Chlorodiphenyl ether interference was present at the retention time of the target analyte 1,2,3,6,7,8-HxCDF in samples E1801139-011, 012, 019. Reported result should be considered an estimate.

2378-TCDF

Samples analyzed on the DB-5MSUI column were analyzed under conditions where sufficient separation between 2,3,7,8-TCDF and its closest eluter was achieved. Confirmation of this result was not required.

Dilutions

Various samples had elevated levels of target analytes and required a dilution. The undiluted and diluted results were combined into one Total TEQ summary report for each sample. This reports a 'Total' result that includes the most appropriate concentration found for the associated target analyte.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

Manual Integrations

For this type of instrumentation and software, manual integration may be required frequently to correct inaccurate integrations performed by the processing software. These manual integrations are indicated in the raw data with a before and after chromatogram and are stamped with the reason for integration.

The TEQ Summary results for each sample have been calculated by ALS/Houston to include:

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- 2378-TCDF from the DB-225 column, when confirmation required
- Non-detected compounds are not included in the 'Total'
- The 1:1 and associated dilution have been combined into one TEQ Summary report

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole

discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E1801139-001	SL0214	11/15/2018	1335
E1801139-002	SL0215	11/15/2018	1340
E1801139-003	SL0216	11/15/2018	1410
E1801139-004	SL0217	11/15/2018	1415
E1801139-005	SL0218	11/15/2018	1420
E1801139-006	SL0219	11/15/2018	1425
E1801139-007	SL0220	11/15/2018	1430
E1801139-008	SL0222	11/15/2018	1550
E1801139-009	SL0223	11/15/2018	1555
E1801139-010	SL0224	11/15/2018	1600
E1801139-011	SL0225	11/15/2018	1605
E1801139-012	SL0226	11/15/2018	1610
E1801139-013	SL0228	11/15/2018	1655
E1801139-014	SL0229	11/15/2018	1700
E1801139-015	SL0230	11/15/2018	1705
E1801139-016	SL0231	11/15/2018	1710
E1801139-017	SL0232	11/15/2018	1715
E1801139-018	SL0244	11/16/2018	1130
E1801139-019	SL0245	11/16/2018	1135
E1801139-020	SL0246	11/16/2018	1140
E1801139-021	SL0247	11/16/2018	1145
E1801139-022	SL0248	11/16/2018	1150

Service Request Summary

Folder #: **E1801139**
Client Name: Integral Consulting, Incorporated
Project Name: C1887-0501
Project Number:

Report To: Craig Hutchings
Integral Consulting, Inc.
1205 West Bay Drive NW
Olympia, WA 98502-4670
USA
Phone Number: 360-705-3534
Cell Number:
Fax Number:
E-mail: chutchings@integral-corp.com

Project Chemist: Kristin Brown
Originating Lab: HOUSTON
Logged By: ALOPEZ
Date Received: 11/16/18 - 11/17/18
Internal Due Date: 1/11/2019
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N, Y
Report to MDL?: N, Y
P.O. Number:
EDD: Integral-UCR

22 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
Location: EHRMS-WIC 2E, EHRMS-WIC 3B, In Lab
Pressure Gas:

				HOUSTON	
				Dioxins Furans/1613B	Total Solids/ALS SOP
Lab Samp No.	**Client Samp No**	**Matrix**	**Collected**		
E1801139-001	SL0214	Sediment	11/15/18 1335	**IV**	**IV**
E1801139-002	SL0215	Sediment	11/15/18 1340	**IV**	**IV**
E1801139-003	SL0216	Sediment	11/15/18 1410	**IV**	**IV**
E1801139-004	SL0217	Sediment	11/15/18 1415	**IV**	**IV**
E1801139-005	SL0218	Sediment	11/15/18 1420	**IV**	**IV**
E1801139-006	SL0219	Sediment	11/15/18 1425	**IV**	**IV**
E1801139-007	SL0220	Sediment	11/15/18 1430	**IV**	**IV**
E1801139-008	SL0222	Sediment	11/15/18 1550	**IV**	**IV**
E1801139-009	SL0223	Sediment	11/15/18 1555	**IV**	**IV**
E1801139-010	SL0224	Sediment	11/15/18 1600	**IV**	**IV**
E1801139-011	SL0225	Sediment	11/15/18 1605	**IV**	**IV**
E1801139-012	SL0226	Sediment	11/15/18 1610	**IV**	**IV**
E1801139-013	SL0228	Sediment	11/15/18 1655	**IV**	**IV**
E1801139-014	SL0229	Sediment	11/15/18 1700	**IV**	**IV**
E1801139-015	SL0230	Sediment	11/15/18 1705	**IV**	**IV**
E1801139-016	SL0231	Sediment	11/15/18 1710	**IV**	**IV**

Service Request Summary

Folder #: **E1801139**
Client Name: Integral Consulting, Incorporated
Project Name: C1887-0501
Project Number:

Report To: Craig Hutchings
Integral Consulting, Inc.
1205 West Bay Drive NW
Olympia, WA 98502-4670
USA
Phone Number: 360-705-3534
Cell Number:
Fax Number:
E-mail: chutchings@integral-corp.com

Project Chemist: Kristin Brown
Originating Lab: HOUSTON
Logged By: ALOPEZ
Date Received: 11/16/18 - 11/17/18
Internal Due Date: 1/11/2019
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N, Y
Report to MDL?: N, Y
P.O. Number:
EDD: Integral-UCR

22 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
Location: EHRMS-WIC 2E, EHRMS-WIC 3B, In Lab
Pressure Gas:

				HOUSTON	
				Dioxins Furans/1613B	Total Solids/ALS SOP
Lab Samp No.	**Client Samp No**	**Matrix**	**Collected**		
E1801139-017	SL0232	Sediment	11/15/18 1715	**IV**	**IV**
E1801139-018	SL0244	Sediment	11/16/18 1130	**IV**	**IV**
E1801139-019	SL0245	Sediment	11/16/18 1135	**IV**	**IV**
E1801139-020	SL0246	Sediment	11/16/18 1140	**IV**	**IV**
E1801139-021	SL0247	Sediment	11/16/18 1145	**IV**	**IV**
E1801139-022	SL0248	Sediment	11/16/18 1150	**IV**	**IV**

Service Request Summary

Folder #:	**E1801139**
Client Name:	Integral Consulting, Incorporated
Project Name:	C1887-0501
Project Number:	

Report To:	Craig Hutchings Integral Consulting, Inc. 1205 West Bay Drive NW Olympia, WA 98502-4670 USA
Phone Number:	360-705-3534
Cell Number:	
Fax Number:	
E-mail:	chutchings@integral-corp.com

Project Chemist:	Kristin Brown
Originating Lab:	HOUSTON
Logged By:	ALOPEZ
Date Received:	11/16/18 - 11/17/18
Internal Due Date:	1/11/2019
QAP:	LAB QAP
Qualifier Set:	HRMS Qualifier Set
Formset:	Lab Standard
Merged?:	N, Y
Report to MDL?:	N, Y
P.O. Number:	
EDD:	Integral-UCR

22 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved

Location: EHRMS-WIC 2E, EHRMS-WIC 3B, In Lab

Pressure Gas:

Superset Summary

Service Request: E1801139 **SuperSet Reference:** 19-0000494365 rev 00

Analytical Method: **1613B**

Calibrations: 01/24/18

Data Files:

Raw Data	Begin CCAL	Method Blank	Lab ID
P519892	P519885	P519887	E1801139-001
P519869	P519865	P519887	E1801139-002
P519907	P519900	P519887	E1801139-003
P519870	P519865	P519887	E1801139-003.R01
P519908	P519900	P519887	E1801139-004
P519871	P519865	P519887	E1801139-004.R01
P519909	P519900	P519887	E1801139-005
P519872	P519865	P519887	E1801139-005.R01
P519873	P519865	P519887	E1801139-006
P519874	P519865	P519887	E1801139-007
P519910	P519900	P519887	E1801139-008
P519875	P519865	P519887	E1801139-008.R01
P519911	P519900	P519887	E1801139-009
P519876	P519865	P519887	E1801139-009.R01
P519912	P519900	P519887	E1801139-010
P519877	P519865	P519887	E1801139-010.R01
P519878	P519865	P519887	E1801139-011
P519879	P519865	P519887	E1801139-012
P519922	P519915	P519887	E1801139-013
P519893	P519885	P519887	E1801139-013.R01
P519923	P519915	P519887	E1801139-014
P519894	P519885	P519887	E1801139-014.R01
P519895	P519885	P519887	E1801139-015
P519896	P519885	P519887	E1801139-016
P519903	P519900	P519887	E1801139-017
P519904	P519900	P519887	E1801139-018
P519924	P519915	P519887	E1801139-019
P519905	P519900	P519887	E1801139-019.R01
P519906	P519900	P519887	E1801139-020
P520001	P519996	P519999	E1801139-021
P520002	P519996	P519999	E1801139-022
P519887	P519885	P519887	EQ1900003-01
P519913	P519900	P519887	EQ1900003-02
P519914	P519900	P519887	EQ1900003-03
P519999	P519996	P519999	EQ1900017-01
P520007	P519996	P519999	EQ1900017-02
P520008	P519996	P519999	EQ1900017-03

Data Qualifiers

HRMS Qualifier Set

B	Indicates the associated analyte was found in the method blank at >1/10th the reported value.
E	Estimated value. The reported concentration is above the calibration range of the instrument.
H	Sample extracted and/or analyzed out of suggested holding time.
J	Estimated value. The reported concentration is below the MRL.
K	The ion abundance ratio between the primary and secondary ions were outside of theoretical acceptance limits.The concentration of this analyte should be considered as an estimate.
P	Chlorodiphenyl ether interference was present at the retention time of the target analyte. Reported result should be considered an estimate.
Q	Monitored lock-mass indicates matrix-interference. Reported result is estimated.
S	Signal saturated detector. Result reported from dilution.
U	Compound was analyzed for, but was not detected (ND).
X	See Case Narrative.
Y	Isotopically Labeled Standard recovery outside of acceptance limits. In all cases, the signal-to-nois ratios are greater than 10:1, making the recoveries acceptable.
i	The MDL/MRL have been elevated due to a matrix interference.

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID: E1801139 | DB-5MSUI | SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
01/10/19	YC	002-012

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
01/11/19	LKL	002 - 012

HS-HRMSREVIEW R1.0

PEER REVIEW PAGE2015

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID: E1801139 | DB-5MSUI | SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
01/11/19	[signature]	021, 022, 001, 013-016

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
01/11/19	LKL	021, 022 001, 013 - 016

HS-HRMSREVIEW R1.0

PEER REVIEW PAGE2015

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID: E 180 1139 | DB-5MSUI | SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
01/11/19	JC	017-020, 003DL-005DL, 008DL-010DL

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
01/14/19	LKL	017-020, 003DL-005DL 008DL-010DL

HS-HRMSREVIEW R1.0

PEER REVIEW PAGE2015

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID: E1801139 | DB-5MSUI (circled) | SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
01/14/19	YC	013DL, 014DL, 019DL

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
01/14/19	LKL	013 DL, 014 DL, 019 DL

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID: E1801139 | DB-5MSUI (circled) | SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
01/17/19	JC	021RE, 022RE

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
01/17/19	LK	021RE, 022RE

HS-HRMSREVIEW R1.0

PEER REVIEW PAGE2015

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 329178 **Prep WorkFlow:** OrgExtS(365) **Status:** Prepped
Team: Semivoa GCMS/TWOODS **Prep Method:** Method Soxhlet **Prep Date/Time:** 1/3/19 11:00 AM

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E1801139-001	SL0214	.01	1613B/Dioxins Furans			Sediment	10.898g	Brown Mud
2	E1801139-002	SL0215	.01	1613B/Dioxins Furans			Sediment	10.918g	Brown Mud
3	E1801139-003	SL0216	.01	1613B/Dioxins Furans			Sediment	10.207g	Brown Mud
4	E1801139-004	SL0217	.01	1613B/Dioxins Furans			Sediment	10.537g	Brown Mud
5	E1801139-005	SL0218	.01	1613B/Dioxins Furans			Sediment	10.921g	Brown Mud
6	E1801139-006	SL0219	.01	1613B/Dioxins Furans			Sediment	10.659g	Brown Mud
7	E1801139-007	SL0220	.01	1613B/Dioxins Furans			Sediment	10.225g	Brown Mud
8	E1801139-008	SL0222	.01	1613B/Dioxins Furans			Sediment	10.668g	Brown Mud
9	E1801139-009	SL0223	.01	1613B/Dioxins Furans			Sediment	10.864g	Brown Mud
10	E1801139-010	SL0224	.01	1613B/Dioxins Furans			Sediment	10.202g	Brown Mud
11	E1801139-011	SL0225	.01	1613B/Dioxins Furans			Sediment	10.093g	Brown Mud
12	E1801139-012	SL0226	.01	1613B/Dioxins Furans			Sediment	10.837g	Brown Mud
13	E1801139-013	SL0228	.01	1613B/Dioxins Furans			Sediment	10.445g	Brown Mud
14	E1801139-014	SL0229	.01	1613B/Dioxins Furans			Sediment	10.688g	Brown Mud
15	E1801139-015	SL0230	.01	1613B/Dioxins Furans			Sediment	10.687g	Brown Mud
16	E1801139-016	SL0231	.01	1613B/Dioxins Furans			Sediment	10.936g	Brown Mud
17	E1801139-017	SL0232	.01	1613B/Dioxins Furans			Sediment	10.528g	Brown Mud
18	E1801139-018	SL0244	.01	1613B/Dioxins Furans			Sediment	10.825g	Brown Mud
19	E1801139-019	SL0245	.01	1613B/Dioxins Furans			Sediment	10.242g	Brown Mud
20	E1801139-020	SL0246	.01	1613B/Dioxins Furans			Sediment	10.760g	Brown Mud
21	EQ1900003-01	MB		1613B/Dioxins Furans			Solid	10.299g	
22	EQ1900003-02	LCS		1613B/Dioxins Furans			Solid	10.063g	
23	EQ1900003-03	DLCS		1613B/Dioxins Furans			Solid	10.075g	

Spiking Solutions

Name: 1613B Matrix Working Standard Inventory ID 195855 Logbook Ref: 195855 AL 12/26/18 2-20 ng/mL Expires On: 06/24/2019

EQ1900003-02 100.00µL EQ1900003-03 100.00µL

Name: 1613B Labeled Working Standard Inventory ID 196006 Logbook Ref: 196006 AL 1/2/18 2-4 ng/mL Expires On: 01/31/2019

E1801139-001	1,000.00µL	E1801139-002	1,000.00µL	E1801139-003	1,000.00µL	E1801139-004	1,000.00µL	E1801139-005	1,000.00µL	E1801139-006	1,000.00µL
E1801139-007	1,000.00µL	E1801139-008	1,000.00µL	E1801139-009	1,000.00µL	E1801139-010	1,000.00µL	E1801139-011	1,000.00µL	E1801139-012	1,000.00µL
E1801139-013	1,000.00µL	E1801139-014	1,000.00µL	E1801139-015	1,000.00µL	E1801139-016	1,000.00µL	E1801139-017	1,000.00µL	E1801139-018	1,000.00µL
E1801139-019	1,000.00µL	E1801139-020	1,000.00µL	EQ1900003-01	1,000.00µL	EQ1900003-02	1,000.00µL	EQ1900003-03	1,000.00µL		

Preparation Information Benchsheet

Prep Run#: 329178 **Prep WorkFlow:** OrgExtS(365) **Status:** Prepped
Team: Semivoa GCMS/TWOODS **Prep Method:** Method Soxhlet **Prep Date/Time:** 1/3/19 11:00 AM

Name:	8290/1613B Cleanup Working Standard	Inventory ID	196034	Logbook Ref:	tw 010319 196034 8ng/ml	Expires On:	04/27/2019

E1801139-001	100.00µL	E1801139-002	100.00µL	E1801139-003	100.00µL	E1801139-004	100.00µL	E1801139-005	100.00µL	E1801139-006	100.00µL
E1801139-007	100.00µL	E1801139-008	100.00µL	E1801139-009	100.00µL	E1801139-010	100.00µL	E1801139-011	100.00µL	E1801139-012	100.00µL
E1801139-013	100.00µL	E1801139-014	100.00µL	E1801139-015	100.00µL	E1801139-016	100.00µL	E1801139-017	100.00µL	E1801139-018	100.00µL
E1801139-019	100.00µL	E1801139-020	100.00µL	EQ1900003-01	100.00µL	EQ1900003-02	100.00µL	EQ1900003-03	100.00µL		

Preparation Materials

Carbon, High Purity	JG 12/17/18 (195653)	Ethyl Acetate 99.9% Minimum EtOAc	AL 12/31/18 (195971)	Glass Wool	112018 tw glasswool (195079)
Hexanes 95%	JG 12/17/18 #2 (195674)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	AL (195005)	Sodium Hydroxide 1N NaOH	TW 6/14/18 (191093)
Sodium Sulfate Anhydrous Reagent Grade Na2SO4	AL 10/12/18 (194060)	Tridecane (n-Tridecane)	AL 12/12/18 (195585)	Silica Gel	tw 12/31/18 (195984)
sulfuric acid	AL 10/11/18 (194007)	Toluene 99.9% Minimum	JG 12/17/18 (195675)		

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	1/3/19 11:00	Started:	1/8/19 08:00	Started:	1/8/19 12:00	Started:	1/9/19 09:00
Finished:	1/4/19 07:30	Finished:	1/8/19 09:00	Finished:	1/8/19 15:00	Finished:	1/9/19 12:00
By:	ALOPEZ	By:	TWOODS	By:	TWOODS	By:	TWOODS
Comments		Comments		Comments		Comments	

Comments: _____

Reviewed By: GC Date: 01/11/2019

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

E1801139 20 of 1143

017984

Preparation Information Benchsheet

Prep Run#: 329747 **Prep WorkFlow:** OrgExtS(365) **Status:** Prepped
Team: Semivoa GCMS/TWOODS **Prep Method:** Method Soxhlet **Prep Date/Time:** 1/14/19 11:02 AM

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E1801137-009RE	SL0132	.01	1613B/Dioxins Furans			Sediment	10.108g	brown mud
2	E1801139-021RE	SL0247	.01	1613B/Dioxins Furans			Sediment	10.248g	Black Mud
3	E1801139-022RE	SL0248	.01	1613B/Dioxins Furans			Sediment	10.247g	Black Mud
4	EQ1900017-01	MB		1613B/Dioxins Furans			Solid	10.410g	
5	EQ1900017-02	LCS		1613B/Dioxins Furans			Solid	10.032g	
6	EQ1900017-03	DLCS		1613B/Dioxins Furans			Solid	10.110g	

Spiking Solutions

Name: 8290/1613B Cleanup Working Standard Inventory ID 196034 Logbook Ref: tw 010319 196034 8ng/ml Expires On: 04/27/2019

E1801137-009 100.00µL E1801139-021 100.00µL E1801139-022 100.00µL EQ1900017-01 100.00µL EQ1900017-02 100.00µL EQ1900017-03 100.00µL

Name: 1613B Labeled Working Standard Inventory ID 196104 Logbook Ref: 196102 JG 1/7/18 2-4ngml Expires On: 01/31/2019

E1801137-009 1,000.00µL E1801139-021 1,000.00µL E1801139-022 1,000.00µL EQ1900017-01 1,000.00µL EQ1900017-02 1,000.00µL EQ1900017-03 1,000.00µL

Name: 1613B Matrix Working Standard Inventory ID 196207 Logbook Ref: 196207 JG 01/11/19 2-20ngml Expires On: 07/10/2019

EQ1900017-02 100.00µL EQ1900017-03 100.00µL

Preparation Materials

Carbon, High Purity	JG 12/17/18 (195653)	Ethyl Acetate 99.9% Minimum EtOAc	AL 12/31/18 (195971)	Glass Wool	AL 8/20/18 (192604)
Hexanes 95%	JG 12/17/18 #2 (195674)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	AL (195005)	Tridecane (n-Tridecane)	AL 12/12/18 (195585)
Silica Gel	tw 12/31/18 (195984)	Toluene 99.9% Minimum	tw 011119 toluene (196224)	sulfuric acid	AL 10/11/18 (194007)
Sodium Sulfate Anhydrous Reagent Grade Na2SO4	AL 10/12/18 (194060)				

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	1/14/19 11:02	Started:	1/15/19 10:00	Started:	1/15/19 12:00	Started:	1/16/19 09:00
Finished:	1/15/19 08:00	Finished:	1/15/19 11:00	Finished:	1/15/19 15:00	Finished:	1/16/19 12:00
By:	JGUIN	By:	JGUIN	By:	JGUIN	By:	JGUIN
Comments		Comments		Comments		Comments	

Comments: _____

Reviewed By: _____ Date: _____

Preparation Information Benchsheet

Prep Run#: 329747 **Prep WorkFlow:** OrgExtS(365) **Status:** Prepped
Team: Semivoa GCMS/TWOODS **Prep Method:** Method Soxhlet **Prep Date/Time:** 1/14/19 11:02 AM

Chain of Custody

Relinquished By:	LKL	Date:	01/17/19	Extracts Examined
Received By:		Date:		Yes No

E1801139 22 of 1143

017986

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 13:35
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0214	**Units:**	ng/Kg
Lab Code:	E1801139-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 18:51
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.898g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519892	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519885

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	14.0		0.376	0.594	0.71	1.001	1
1,2,3,7,8-PeCDD	0.316	**JK**	0.135	2.97	2.12	1.000	1
1,2,3,4,7,8-HxCDD	0.403	**J**	0.108	2.97	1.07	1.000	1
1,2,3,6,7,8-HxCDD	0.713	**J**	0.120	2.97	1.26	1.000	1
1,2,3,7,8,9-HxCDD	1.28	**J**	0.111	2.97	1.18	1.007	1
1,2,3,4,6,7,8-HpCDD	15.0		0.348	2.97	1.03	1.000	1
OCDD	452		0.0817	5.94	0.89	1.000	1
2,3,7,8-TCDF	29.7		0.140	0.594	0.74	1.000	1
1,2,3,7,8-PeCDF	1.26	**J**	0.156	2.97	1.34	1.001	1
2,3,4,7,8-PeCDF	0.974	**J**	0.164	2.97	1.32	1.001	1
1,2,3,4,7,8-HxCDF	1.98	**J**	0.0906	2.97	1.17	1.000	1
1,2,3,6,7,8-HxCDF	0.563	**J**	0.0999	2.97	1.23	1.000	1
1,2,3,7,8,9-HxCDF	0.252	**BJK**	0.108	2.97	0.83	1.001	1
2,3,4,6,7,8-HxCDF	0.104	**JK**	0.0954	2.97	2.34	1.000	1
1,2,3,4,6,7,8-HpCDF	0.942	**J**	0.0506	2.97	0.97	1.000	1
1,2,3,4,7,8,9-HpCDF	0.291	**JK**	0.0586	2.97	1.24	1.000	1
OCDF	2.52	**JK**	0.151	5.94	1.04	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 13:35
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0214	**Units:**	ng/Kg
Lab Code:	E1801139-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 18:51
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.898g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519892	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519885

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	26.6		0.376	0.594	0.76		1
Total Penta-Dioxins	6.50		0.135	2.97	1.63		1
Total Hexa-Dioxins	7.86		0.113	2.97	1.27		1
Total Hepta-Dioxins	15.0		0.348	2.97	1.03		1
Total Tetra-Furans	56.3		0.140	0.594	0.71		1
Total Penta-Furans	1.26	**J**	0.160	2.97	1.34		1
Total Hexa-Furans	2.65	**J**	0.0982	2.97	1.19		1
Total Hepta-Furans	0.942	**J**	0.0543	2.97	0.97		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 13:35
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0214	**Units:**	Percent
Lab Code:	E1801139-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 18:51
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.898g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519892	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519885

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	717.087	36		25-164	0.77	1.028
13C-1,2,3,7,8-PeCDD	2000	1339.979	67		25-181	1.59	1.239
13C-1,2,3,4,7,8-HxCDD	2000	1255.651	63		32-141	1.25	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1144.345	57		28-130	1.23	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1417.425	71		23-140	1.06	1.071
13C-OCDD	4000	2175.283	54		17-157	0.89	1.143
13C-2,3,7,8-TCDF	2000	1060.406	53		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	1223.611	61		24-185	1.58	1.186
13C-2,3,4,7,8-PeCDF	2000	1170.481	59		21-178	1.57	1.226
13C-1,2,3,4,7,8-HxCDF	2000	1035.578	52		26-152	0.51	0.968
13C-1,2,3,6,7,8-HxCDF	2000	952.983	48		26-123	0.52	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1116.281	56		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1051.466	53		28-136	0.52	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	986.691	49		28-143	0.44	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1132.318	57		26-138	0.44	1.084
37Cl-2,3,7,8-TCDD	800	408.740	51		35-197	NA	1.029

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 13:35
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0214	**Units:**	ng/Kg
Lab Code:	E1801139-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**14.0**	0.376	0.594	1	1	14.0
1,2,3,7,8-PeCDD	**0.316**	0.135	2.97	1	1	0.316
1,2,3,4,7,8-HxCDD	**0.403**	0.108	2.97	1	0.1	0.0403
1,2,3,6,7,8-HxCDD	**0.713**	0.120	2.97	1	0.1	0.0713
1,2,3,7,8,9-HxCDD	**1.28**	0.111	2.97	1	0.1	0.128
1,2,3,4,6,7,8-HpCDD	**15.0**	0.348	2.97	1	0.01	0.150
OCDD	**452**	0.0817	5.94	1	0.0003	0.136
2,3,7,8-TCDF	**29.7**	0.140	0.594	1	0.1	2.97
1,2,3,7,8-PeCDF	**1.26**	0.156	2.97	1	0.03	0.0378
2,3,4,7,8-PeCDF	**0.974**	0.164	2.97	1	0.3	0.292
1,2,3,4,7,8-HxCDF	**1.98**	0.0906	2.97	1	0.1	0.198
1,2,3,6,7,8-HxCDF	**0.563**	0.0999	2.97	1	0.1	0.0563
1,2,3,7,8,9-HxCDF	**0.252**	0.108	2.97	1	0.1	0.0252
2,3,4,6,7,8-HxCDF	**0.104**	0.0954	2.97	1	0.1	0.0104
1,2,3,4,6,7,8-HpCDF	**0.942**	0.0506	2.97	1	0.01	0.00942
1,2,3,4,7,8,9-HpCDF	**0.291**	0.0586	2.97	1	0.01	0.00291
OCDF	**2.52**	0.151	5.94	1	0.0003	0.000756
		Total TEQ				18.4

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 13:35
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0214	**Units:**	Percent
Lab Code:	E1801139-001	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	7.878g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	77.2		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 13:40
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0215	**Units:**	ng/Kg
Lab Code:	E1801139-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 19:29
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.918g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519869	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	1.36		0.715	0.715	0.89	1.001	1
1,2,3,7,8-PeCDD	0.564	**JK**	0.165	2.94	1.03	1.001	1
1,2,3,4,7,8-HxCDD	0.342	**JK**	0.257	2.94	2.36	1.001	1
1,2,3,6,7,8-HxCDD	0.921	**J**	0.272	2.94	1.10	1.000	1
1,2,3,7,8,9-HxCDD	1.44	**JK**	0.259	2.94	1.47	1.007	1
1,2,3,4,6,7,8-HpCDD	15.2		0.316	2.94	0.99	1.000	1
OCDD	528		0.442	5.89	0.87	1.000	1
2,3,7,8-TCDF	2.42		0.408	0.589	0.79	1.002	1
1,2,3,7,8-PeCDF	0.350	**JK**	0.207	2.94	1.31	1.001	1
2,3,4,7,8-PeCDF	0.358	**JK**	0.223	2.94	1.20	1.001	1
1,2,3,4,7,8-HxCDF	0.427	**JK**	0.113	2.94	1.87	1.000	1
1,2,3,6,7,8-HxCDF	0.380	**JK**	0.112	2.94	1.04	1.000	1
1,2,3,7,8,9-HxCDF	0.446	**BJK**	0.156	2.94	1.04	1.000	1
2,3,4,6,7,8-HxCDF	0.329	**J**	0.125	2.94	1.25	1.001	1
1,2,3,4,6,7,8-HpCDF	0.363	**BJ**	0.155	2.94	0.88	1.000	1
1,2,3,4,7,8,9-HpCDF	0.453	**J**	0.234	2.94	0.90	1.000	1
OCDF	0.989	**J**	0.543	5.89	0.90	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 13:40
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0215	**Units:**	ng/Kg
Lab Code:	E1801139-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 19:29
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.918g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519869	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	14.0		0.715	0.715	0.77		1
Total Penta-Dioxins	7.24		0.165	2.94	1.58		1
Total Hexa-Dioxins	45.9		0.263	2.94	1.22		1
Total Hepta-Dioxins	91.0		0.316	2.94	1.05		1
Total Tetra-Furans	2.42		0.408	0.589	0.79		1
Total Penta-Furans	ND	U	0.214	2.94			1
Total Hexa-Furans	0.329**J**		0.125	2.94	1.25		1
Total Hepta-Furans	0.453**J**		0.192	2.94	0.90		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 13:40
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0215	**Units:**	Percent
Lab Code:	E1801139-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 19:29
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.918g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519869	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	642.569	32		25-164	0.78	1.027
13C-1,2,3,7,8-PeCDD	2000	1171.228	59		25-181	1.61	1.234
13C-1,2,3,4,7,8-HxCDD	2000	1001.819	50		32-141	1.26	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1226.896	61		28-130	1.27	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1419.139	71		23-140	1.07	1.077
13C-OCDD	4000	1969.060	49		17-157	0.90	1.160
13C-2,3,7,8-TCDF	2000	821.190	41		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	1068.796	53		24-185	1.58	1.181
13C-2,3,4,7,8-PeCDF	2000	1034.316	52		21-178	1.57	1.221
13C-1,2,3,4,7,8-HxCDF	2000	880.989	44		26-152	0.51	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1028.962	51		26-123	0.52	0.970
13C-1,2,3,7,8,9-HxCDF	2000	993.951	50		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	977.569	49		28-136	0.51	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	981.584	49		28-143	0.44	1.048
13C-1,2,3,4,7,8,9-HpCDF	2000	1088.858	54		26-138	0.43	1.090
37Cl-2,3,7,8-TCDD	800	395.136	49		35-197	NA	1.028

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 13:40
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0215	**Units:**	ng/Kg
Lab Code:	E1801139-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**1.36**	0.715	0.715	1	1	1.36
1,2,3,7,8-PeCDD	**0.564**	0.165	2.94	1	1	0.564
1,2,3,4,7,8-HxCDD	**0.342**	0.257	2.94	1	0.1	0.0342
1,2,3,6,7,8-HxCDD	**0.921**	0.272	2.94	1	0.1	0.0921
1,2,3,7,8,9-HxCDD	**1.44**	0.259	2.94	1	0.1	0.144
1,2,3,4,6,7,8-HpCDD	**15.2**	0.316	2.94	1	0.01	0.152
OCDD	**528**	0.442	5.89	1	0.0003	0.158
2,3,7,8-TCDF	**2.42**	0.408	0.589	1	0.1	0.242
1,2,3,7,8-PeCDF	**0.350**	0.207	2.94	1	0.03	0.0105
2,3,4,7,8-PeCDF	**0.358**	0.223	2.94	1	0.3	0.107
1,2,3,4,7,8-HxCDF	**0.427**	0.113	2.94	1	0.1	0.0427
1,2,3,6,7,8-HxCDF	**0.380**	0.112	2.94	1	0.1	0.0380
1,2,3,7,8,9-HxCDF	**0.446**	0.156	2.94	1	0.1	0.0446
2,3,4,6,7,8-HxCDF	**0.329**	0.125	2.94	1	0.1	0.0329
1,2,3,4,6,7,8-HpCDF	**0.363**	0.155	2.94	1	0.01	0.00363
1,2,3,4,7,8,9-HpCDF	**0.453**	0.234	2.94	1	0.01	0.00453
OCDF	**0.989**	0.543	5.89	1	0.0003	0.000297
		Total TEQ				3.03

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 13:40
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0215	**Units:**	Percent
Lab Code:	E1801139-002	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	8.65g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	77.8		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0216	**Units:**	ng/Kg
Lab Code:	E1801139-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 07:15
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.207g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519907	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	6790		55.0	55.0	0.80	1.001	50
1,2,3,7,8-PeCDD	26.0		0.173	2.98	1.60	1.001	1
1,2,3,4,7,8-HxCDD	0.601	**JK**	0.380	2.98	1.45	1.000	1
1,2,3,6,7,8-HxCDD	3.70		0.413	2.98	1.30	1.001	1
1,2,3,7,8,9-HxCDD	2.75	**JK**	0.388	2.98	1.02	1.007	1
1,2,3,4,6,7,8-HpCDD	138		1.45	2.98	1.05	1.000	1
OCDD	3280		0.280	5.96	0.89	1.000	1
2,3,7,8-TCDF	11300		14.6	29.8	0.75	1.001	50
1,2,3,7,8-PeCDF	313		0.452	2.98	1.51	1.000	1
2,3,4,7,8-PeCDF	242		0.499	2.98	1.51	1.001	1
1,2,3,4,7,8-HxCDF	572		0.547	2.98	1.22	1.000	1
1,2,3,6,7,8-HxCDF	138		0.534	2.98	1.24	1.000	1
1,2,3,7,8,9-HxCDF	42.6		0.709	2.98	1.22	1.001	1
2,3,4,6,7,8-HxCDF	26.1		0.611	2.98	1.23	1.000	1
1,2,3,4,6,7,8-HpCDF	146		1.35	2.98	1.01	1.000	1
1,2,3,4,7,8,9-HpCDF	53.6		2.07	2.98	1.02	1.000	1
OCDF	83.0		0.417	5.96	0.90	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0216	**Units:**	ng/Kg
Lab Code:	E1801139-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 07:15
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.207g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519907	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	4030		0.667	0.667	0.70		1
Total Penta-Dioxins	44.1		0.173	2.98	1.55		1
Total Hexa-Dioxins	72.4		0.394	2.98	1.27		1
Total Hepta-Dioxins	294		1.45	2.98	1.04		1
Total Tetra-Furans	13900		0.280	0.596	0.80		1
Total Penta-Furans	844		0.474	2.98	1.50		1
Total Hexa-Furans	843		0.596	2.98	1.28		1
Total Hepta-Furans	257		1.68	2.98	1.01		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0216	**Units:**	Percent
Lab Code:	E1801139-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 20:18
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.207g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519870	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	866.627	43		25-164	0.80	1.027
13C-1,2,3,7,8-PeCDD	2000	1408.809	70		25-181	1.58	1.232
13C-1,2,3,4,7,8-HxCDD	2000	1186.844	59		32-141	1.26	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1363.732	68		28-130	1.29	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1604.142	80		23-140	1.06	1.076
13C-OCDD	4000	2537.948	63		17-157	0.89	1.160
13C-2,3,7,8-TCDF	2000	1098.561	55		24-169	0.78	0.988
13C-1,2,3,7,8-PeCDF	2000	1314.069	66		24-185	1.58	1.181
13C-2,3,4,7,8-PeCDF	2000	1248.880	62		21-178	1.56	1.220
13C-1,2,3,4,7,8-HxCDF	2000	1066.876	53		26-152	0.52	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1179.933	59		26-123	0.53	0.970
13C-1,2,3,7,8,9-HxCDF	2000	1224.531	61		29-147	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1118.400	56		28-136	0.51	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1122.315	56		28-143	0.45	1.048
13C-1,2,3,4,7,8,9-HpCDF	2000	1242.286	62		26-138	0.45	1.089
37Cl-2,3,7,8-TCDD	800	591.855	74		35-197	NA	1.028

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0216	**Units:**	ng/Kg
Lab Code:	E1801139-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**6790**	55.0	55.0	50	1	6790
1,2,3,7,8-PeCDD	**26.0**	0.173	2.98	1	1	26.0
1,2,3,4,7,8-HxCDD	**0.601**	0.380	2.98	1	0.1	0.0601
1,2,3,6,7,8-HxCDD	**3.70**	0.413	2.98	1	0.1	0.370
1,2,3,7,8,9-HxCDD	**2.75**	0.388	2.98	1	0.1	0.275
1,2,3,4,6,7,8-HpCDD	**138**	1.45	2.98	1	0.01	1.38
OCDD	**3280**	0.280	5.96	1	0.0003	0.984
2,3,7,8-TCDF	**11300**	14.6	29.8	50	0.1	1130
1,2,3,7,8-PeCDF	**313**	0.452	2.98	1	0.03	9.39
2,3,4,7,8-PeCDF	**242**	0.499	2.98	1	0.3	72.6
1,2,3,4,7,8-HxCDF	**572**	0.547	2.98	1	0.1	57.2
1,2,3,6,7,8-HxCDF	**138**	0.534	2.98	1	0.1	13.8
1,2,3,7,8,9-HxCDF	**42.6**	0.709	2.98	1	0.1	4.26
2,3,4,6,7,8-HxCDF	**26.1**	0.611	2.98	1	0.1	2.61
1,2,3,4,6,7,8-HpCDF	**146**	1.35	2.98	1	0.01	1.46
1,2,3,4,7,8,9-HpCDF	**53.6**	2.07	2.98	1	0.01	0.536
OCDF	**83.0**	0.417	5.96	1	0.0003	0.0249
		Total TEQ				8110

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0216	**Units:**	Percent
Lab Code:	E1801139-003	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	7.788g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	82.2		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:15
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0217	**Units:**	ng/Kg
Lab Code:	E1801139-004	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 08:04
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.537g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519908	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	59800		541	541	0.77	1.001	400
1,2,3,7,8-PeCDD	199		0.487	3.56	1.62	1.001	1
1,2,3,4,7,8-HxCDD	2.74	**JK**	0.663	3.56	1.01	1.000	1
1,2,3,6,7,8-HxCDD	26.5		0.702	3.56	1.20	1.000	1
1,2,3,7,8,9-HxCDD	8.33		0.667	3.56	1.27	1.007	1
1,2,3,4,6,7,8-HpCDD	909		4.09	4.09	1.03	1.000	1
OCDD	28900		110	2850	0.92	1.000	400
2,3,7,8-TCDF	100000		171	285	0.70	1.001	400
1,2,3,7,8-PeCDF	1890		1.89	3.56	1.53	1.000	1
2,3,4,7,8-PeCDF	1670		1.92	3.56	1.57	1.001	1
1,2,3,4,7,8-HxCDF	6130		90.3	1420	1.24	1.001	400
1,2,3,6,7,8-HxCDF	827		1.16	3.56	1.22	1.000	1
1,2,3,7,8,9-HxCDF	240		1.49	3.56	1.22	1.001	1
2,3,4,6,7,8-HxCDF	143		1.26	3.56	1.23	1.000	1
1,2,3,4,6,7,8-HpCDF	1010		4.89	4.89	1.03	1.000	1
1,2,3,4,7,8,9-HpCDF	365		7.62	7.62	1.03	1.000	1
OCDF	605		0.993	7.12	0.89	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:15
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0217	**Units:**	ng/Kg
Lab Code:	E1801139-004	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 08:04
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.537g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519908	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	32200		0.907	0.907	0.82		1
Total Penta-Dioxins	256		0.487	3.56	1.56		1
Total Hexa-Dioxins	191		0.678	3.56	1.30		1
Total Hepta-Dioxins	1830		4.09	4.09	1.05		1
Total Tetra-Furans	80200		1.33	1.33	0.77		1
Total Penta-Furans	5360		1.91	3.56	1.57		1
Total Hexa-Furans	5240		1.26	3.56	1.17		1
Total Hepta-Furans	1860		6.13	6.13	1.03		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:15
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0217	**Units:**	Percent
Lab Code:	E1801139-004	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 21:06
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.537g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519871	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	852.943	43		25-164	0.79	1.024
13C-1,2,3,7,8-PeCDD	2000	1380.605	69		25-181	1.56	1.224
13C-1,2,3,4,7,8-HxCDD	2000	1091.620	55		32-141	1.25	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1155.402	58		28-130	1.27	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1302.667	65		23-140	1.08	1.076
13C-OCDD	4000	1767.737	44		17-157	0.90	1.160
13C-2,3,7,8-TCDF	2000	1181.551	59		24-169	0.83	0.986
13C-1,2,3,7,8-PeCDF	2000	1286.913	64		24-185	1.61	1.174
13C-2,3,4,7,8-PeCDF	2000	1176.994	59		21-178	1.60	1.212
13C-1,2,3,4,7,8-HxCDF	2000	921.107	46		26-152	0.52	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1024.824	51		26-123	0.53	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1096.067	55		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1009.795	50		28-136	0.53	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	960.916	48		28-143	0.44	1.048
13C-1,2,3,4,7,8,9-HpCDF	2000	1024.914	51		26-138	0.43	1.088
37Cl-2,3,7,8-TCDD	800	943.394	118		35-197	NA	1.024

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:15
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0217	**Units:**	ng/Kg
Lab Code:	E1801139-004	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**59800**	541	541	400	1	59800
1,2,3,7,8-PeCDD	**199**	0.487	3.56	1	1	199
1,2,3,4,7,8-HxCDD	**2.74**	0.663	3.56	1	0.1	0.274
1,2,3,6,7,8-HxCDD	**26.5**	0.702	3.56	1	0.1	2.65
1,2,3,7,8,9-HxCDD	**8.33**	0.667	3.56	1	0.1	0.833
1,2,3,4,6,7,8-HpCDD	**909**	4.09	4.09	1	0.01	9.09
OCDD	**28900**	110	2850	400	0.0003	8.67
2,3,7,8-TCDF	**100000**	171	285	400	0.1	10000
1,2,3,7,8-PeCDF	**1890**	1.89	3.56	1	0.03	56.7
2,3,4,7,8-PeCDF	**1670**	1.92	3.56	1	0.3	501
1,2,3,4,7,8-HxCDF	**6130**	90.3	1420	400	0.1	613
1,2,3,6,7,8-HxCDF	**827**	1.16	3.56	1	0.1	82.7
1,2,3,7,8,9-HxCDF	**240**	1.49	3.56	1	0.1	24.0
2,3,4,6,7,8-HxCDF	**143**	1.26	3.56	1	0.1	14.3
1,2,3,4,6,7,8-HpCDF	**1010**	4.89	4.89	1	0.01	10.1
1,2,3,4,7,8,9-HpCDF	**365**	7.62	7.62	1	0.01	3.65
OCDF	**605**	0.993	7.12	1	0.0003	0.182
		Total TEQ				71300

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:15
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0217	**Units:**	Percent
Lab Code:	E1801139-004	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	6.407g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	66.6		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:20
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0218	**Units:**	ng/Kg
Lab Code:	E1801139-005	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 08:57
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.921g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519909	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	54700		334	334	0.79	1.001	200
1,2,3,7,8-PeCDD	128		0.761	3.93	1.60	1.001	1
1,2,3,4,7,8-HxCDD	5.51		0.659	3.93	1.26	1.000	1
1,2,3,6,7,8-HxCDD	26.0		0.694	3.93	1.16	1.000	1
1,2,3,7,8,9-HxCDD	12.8		0.661	3.93	1.30	1.007	1
1,2,3,4,6,7,8-HpCDD	461		0.813	3.93	1.01	1.000	1
OCDD	24700		50.2	1570	0.86	1.000	200
2,3,7,8-TCDF	79500		112	157	0.75	1.001	200
1,2,3,7,8-PeCDF	1160		4.96	4.96	1.54	1.001	1
2,3,4,7,8-PeCDF	982		5.18	5.18	1.54	1.001	1
1,2,3,4,7,8-HxCDF	2570		3.04	3.93	1.21	1.000	1
1,2,3,6,7,8-HxCDF	568		3.00	3.93	1.17	1.000	1
1,2,3,7,8,9-HxCDF	165		3.88	3.93	1.22	1.001	1
2,3,4,6,7,8-HxCDF	90.3		3.35	3.93	1.18	1.000	1
1,2,3,4,6,7,8-HpCDF	768		4.24	4.24	1.04	1.000	1
1,2,3,4,7,8,9-HpCDF	284		6.78	6.78	1.03	1.000	1
OCDF	22900		99.2	1570	0.86	1.005	200

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:20
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0218	**Units:**	ng/Kg
Lab Code:	E1801139-005	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 08:57
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.921g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519909	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	20300		1.15	1.15	0.79		1
Total Penta-Dioxins	184		0.761	3.93	1.48		1
Total Hexa-Dioxins	234		0.672	3.93	1.24		1
Total Hepta-Dioxins	1110		0.813	3.93	1.03		1
Total Tetra-Furans	70000		1.42	1.42	0.76		1
Total Penta-Furans	3190		5.07	5.07	1.54		1
Total Hexa-Furans	3740		3.30	3.93	1.26		1
Total Hepta-Furans	1520		5.38	5.38	1.04		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:20
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0218	**Units:**	Percent
Lab Code:	E1801139-005	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 21:55
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.921g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519872	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	776.329	39		25-164	0.80	1.028
13C-1,2,3,7,8-PeCDD	2000	1541.758	77		25-181	1.55	1.226
13C-1,2,3,4,7,8-HxCDD	2000	1213.842	61		32-141	1.27	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1274.406	64		28-130	1.28	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1419.319	71		23-140	1.05	1.076
13C-OCDD	4000	1732.545	43		17-157	0.95	1.161
13C-2,3,7,8-TCDF	2000	1314.236	66		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	1391.804	70		24-185	1.60	1.176
13C-2,3,4,7,8-PeCDF	2000	1292.223	65		21-178	1.60	1.214
13C-1,2,3,4,7,8-HxCDF	2000	1072.564	54		26-152	0.54	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1162.571	58		26-123	0.51	0.970
13C-1,2,3,7,8,9-HxCDF	2000	1222.166	61		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1188.483	59		28-136	0.53	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1044.695	52		28-143	0.44	1.048
13C-1,2,3,4,7,8,9-HpCDF	2000	1083.026	54		26-138	0.45	1.089
37Cl-2,3,7,8-TCDD	800	704.384	88		35-197	NA	1.029

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:20
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0218	**Units:**	ng/Kg
Lab Code:	E1801139-005	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**54700**	334	334	200	1	54700
1,2,3,7,8-PeCDD	**128**	0.761	3.93	1	1	128
1,2,3,4,7,8-HxCDD	**5.51**	0.659	3.93	1	0.1	0.551
1,2,3,6,7,8-HxCDD	**26.0**	0.694	3.93	1	0.1	2.60
1,2,3,7,8,9-HxCDD	**12.8**	0.661	3.93	1	0.1	1.28
1,2,3,4,6,7,8-HpCDD	**461**	0.813	3.93	1	0.01	4.61
OCDD	**24700**	50.2	1570	200	0.0003	7.41
2,3,7,8-TCDF	**79500**	112	157	200	0.1	7950
1,2,3,7,8-PeCDF	**1160**	4.96	4.96	1	0.03	34.8
2,3,4,7,8-PeCDF	**982**	5.18	5.18	1	0.3	295
1,2,3,4,7,8-HxCDF	**2570**	3.04	3.93	1	0.1	257
1,2,3,6,7,8-HxCDF	**568**	3.00	3.93	1	0.1	56.8
1,2,3,7,8,9-HxCDF	**165**	3.88	3.93	1	0.1	16.5
2,3,4,6,7,8-HxCDF	**90.3**	3.35	3.93	1	0.1	9.03
1,2,3,4,6,7,8-HpCDF	**768**	4.24	4.24	1	0.01	7.68
1,2,3,4,7,8,9-HpCDF	**284**	6.78	6.78	1	0.01	2.84
OCDF	**22900**	99.2	1570	200	0.0003	6.87
		Total TEQ				63500

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:20
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0218	**Units:**	Percent
Lab Code:	E1801139-005	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	6.618g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	58.3		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:25
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0219	**Units:**	ng/Kg
Lab Code:	E1801139-006	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 22:44
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.659g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519873	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	20.5		0.999	0.999	0.78	1.001	1
1,2,3,7,8-PeCDD	0.451**JK**		0.277	2.95	0.99	1.001	1
1,2,3,4,7,8-HxCDD	ND	U	0.438	2.95			1
1,2,3,6,7,8-HxCDD	0.649**JK**		0.458	2.95	0.85	1.000	1
1,2,3,7,8,9-HxCDD	1.29**JK**		0.439	2.95	1.74	1.007	1
1,2,3,4,6,7,8-HpCDD	16.4		0.441	2.95	1.06	1.000	1
OCDD	519		0.899	5.91	0.89	1.001	1
2,3,7,8-TCDF	43.1		0.874	0.874	0.71	1.001	1
1,2,3,7,8-PeCDF	1.39**J**		0.250	2.95	1.58	1.001	1
2,3,4,7,8-PeCDF	1.26**J**		0.267	2.95	1.38	1.001	1
1,2,3,4,7,8-HxCDF	1.97**J**		0.268	2.95	1.23	1.000	1
1,2,3,6,7,8-HxCDF	0.546**JK**		0.255	2.95	1.68	1.000	1
1,2,3,7,8,9-HxCDF	ND	U	0.358	2.95			1
2,3,4,6,7,8-HxCDF	0.361**JK**		0.298	2.95	0.91	1.000	1
1,2,3,4,6,7,8-HpCDF	1.52**JK**		0.312	2.95	1.30	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.502	2.95			1
OCDF	30.9		0.815	5.91	0.84	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:25
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0219	**Units:**	ng/Kg
Lab Code:	E1801139-006	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 22:44
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.659g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519873	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	39.3		0.999	0.999	0.80		1
Total Penta-Dioxins	6.09		0.277	2.95	1.64		1
Total Hexa-Dioxins	34.6		0.445	2.95	1.24		1
Total Hepta-Dioxins	64.5		0.441	2.95	1.04		1
Total Tetra-Furans	73.8		0.874	0.874	0.68		1
Total Penta-Furans	3.00		0.258	2.95	1.58		1
Total Hexa-Furans	1.97	**J**	0.292	2.95	1.23		1
Total Hepta-Furans	0.691	**J**	0.399	2.95	1.18		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:25
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0219	**Units:**	Percent
Lab Code:	E1801139-006	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 22:44
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.659g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519873	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	579.321	29		25-164	0.80	1.028
13C-1,2,3,7,8-PeCDD	2000	1091.200	55		25-181	1.57	1.234
13C-1,2,3,4,7,8-HxCDD	2000	894.129	45		32-141	1.28	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1072.780	54		28-130	1.26	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1260.601	63		23-140	1.05	1.077
13C-OCDD	4000	1789.587	45		17-157	0.91	1.161
13C-2,3,7,8-TCDF	2000	749.788	37		24-169	0.77	0.988
13C-1,2,3,7,8-PeCDF	2000	990.908	50		24-185	1.56	1.182
13C-2,3,4,7,8-PeCDF	2000	946.238	47		21-178	1.58	1.221
13C-1,2,3,4,7,8-HxCDF	2000	817.719	41		26-152	0.51	0.967
13C-1,2,3,6,7,8-HxCDF	2000	903.522	45		26-123	0.52	0.970
13C-1,2,3,7,8,9-HxCDF	2000	921.025	46		29-147	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	852.556	43		28-136	0.52	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	895.728	45		28-143	0.44	1.049
13C-1,2,3,4,7,8,9-HpCDF	2000	954.148	48		26-138	0.43	1.089
37Cl-2,3,7,8-TCDD	800	352.452	44		35-197	NA	1.029

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:25
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0219	**Units:**	ng/Kg
Lab Code:	E1801139-006	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**20.5**	0.999	0.999	1	1	20.5
1,2,3,7,8-PeCDD	**0.451**	0.277	2.95	1	1	0.451
1,2,3,4,7,8-HxCDD	ND	0.438	2.95	1	0.1	
1,2,3,6,7,8-HxCDD	**0.649**	0.458	2.95	1	0.1	0.0649
1,2,3,7,8,9-HxCDD	**1.29**	0.439	2.95	1	0.1	0.129
1,2,3,4,6,7,8-HpCDD	**16.4**	0.441	2.95	1	0.01	0.164
OCDD	**519**	0.899	5.91	1	0.0003	0.156
2,3,7,8-TCDF	**43.1**	0.874	0.874	1	0.1	4.31
1,2,3,7,8-PeCDF	**1.39**	0.250	2.95	1	0.03	0.0417
2,3,4,7,8-PeCDF	**1.26**	0.267	2.95	1	0.3	0.378
1,2,3,4,7,8-HxCDF	**1.97**	0.268	2.95	1	0.1	0.197
1,2,3,6,7,8-HxCDF	**0.546**	0.255	2.95	1	0.1	0.0546
1,2,3,7,8,9-HxCDF	ND	0.358	2.95	1	0.1	
2,3,4,6,7,8-HxCDF	**0.361**	0.298	2.95	1	0.1	0.0361
1,2,3,4,6,7,8-HpCDF	**1.52**	0.312	2.95	1	0.01	0.0152
1,2,3,4,7,8,9-HpCDF	ND	0.502	2.95	1	0.01	
OCDF	**30.9**	0.815	5.91	1	0.0003	0.00927
		Total TEQ				26.5

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:25
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0219	**Units:**	Percent
Lab Code:	E1801139-006	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	9.436g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	79.4		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:30
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0220	**Units:**	ng/Kg
Lab Code:	E1801139-007	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 23:32
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.225g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519874	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	17.1		0.585	0.633	0.76	1.001	1
1,2,3,7,8-PeCDD	0.606**JK**		0.166	3.17	1.85	1.001	1
1,2,3,4,7,8-HxCDD	0.537**J**		0.291	3.17	1.14	1.000	1
1,2,3,6,7,8-HxCDD	0.855**J**		0.296	3.17	1.12	1.001	1
1,2,3,7,8,9-HxCDD	1.37**J**		0.287	3.17	1.10	1.007	1
1,2,3,4,6,7,8-HpCDD	16.4		0.430	3.17	1.11	1.000	1
OCDD	480		0.566	6.33	0.87	1.000	1
2,3,7,8-TCDF	41.1		0.429	0.633	0.75	1.001	1
1,2,3,7,8-PeCDF	1.25**JK**		0.228	3.17	1.29	1.000	1
2,3,4,7,8-PeCDF	1.23**J**		0.252	3.17	1.51	1.001	1
1,2,3,4,7,8-HxCDF	1.68**J**		0.135	3.17	1.17	1.000	1
1,2,3,6,7,8-HxCDF	0.471**JK**		0.130	3.17	0.86	1.000	1
1,2,3,7,8,9-HxCDF	0.430**BJ**		0.185	3.17	1.29	1.001	1
2,3,4,6,7,8-HxCDF	0.184**JK**		0.149	3.17	1.88	1.000	1
1,2,3,4,6,7,8-HpCDF	1.68**J**		0.203	3.17	0.94	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.319	3.17			1
OCDF	41.2		0.498	6.33	0.90	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:30
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0220	**Units:**	ng/Kg
Lab Code:	E1801139-007	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 23:32
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.225g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519874	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	24.2		0.585	0.633	0.75		1
Total Penta-Dioxins	3.02**J**		0.166	3.17	1.58		1
Total Hexa-Dioxins	28.0		0.291	3.17	1.28		1
Total Hepta-Dioxins	58.9		0.430	3.17	1.04		1
Total Tetra-Furans	75.6		0.429	0.633	0.81		1
Total Penta-Furans	3.56		0.239	3.17	1.51		1
Total Hexa-Furans	2.79**J**		0.148	3.17	1.23		1
Total Hepta-Furans	1.68**J**		0.256	3.17	0.94		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:30
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0220	**Units:**	Percent
Lab Code:	E1801139-007	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/09/19 23:32
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.225g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519874	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	760.265	38		25-164	0.78	1.028
13C-1,2,3,7,8-PeCDD	2000	1359.163	68		25-181	1.59	1.234
13C-1,2,3,4,7,8-HxCDD	2000	1088.186	54		32-141	1.27	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1271.765	64		28-130	1.27	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1455.844	73		23-140	1.06	1.078
13C-OCDD	4000	1943.239	49		17-157	0.89	1.162
13C-2,3,7,8-TCDF	2000	989.944	49		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	1238.609	62		24-185	1.55	1.182
13C-2,3,4,7,8-PeCDF	2000	1196.821	60		21-178	1.56	1.222
13C-1,2,3,4,7,8-HxCDF	2000	983.496	49		26-152	0.51	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1070.761	54		26-123	0.52	0.970
13C-1,2,3,7,8,9-HxCDF	2000	1067.673	53		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1039.809	52		28-136	0.51	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1030.300	52		28-143	0.45	1.049
13C-1,2,3,4,7,8,9-HpCDF	2000	1101.788	55		26-138	0.44	1.090
37Cl-2,3,7,8-TCDD	800	461.363	58		35-197	NA	1.028

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:30
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0220	**Units:**	ng/Kg
Lab Code:	E1801139-007	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**17.1**	0.585	0.633	1	1	17.1
1,2,3,7,8-PeCDD	**0.606**	0.166	3.17	1	1	0.606
1,2,3,4,7,8-HxCDD	**0.537**	0.291	3.17	1	0.1	0.0537
1,2,3,6,7,8-HxCDD	**0.855**	0.296	3.17	1	0.1	0.0855
1,2,3,7,8,9-HxCDD	**1.37**	0.287	3.17	1	0.1	0.137
1,2,3,4,6,7,8-HpCDD	**16.4**	0.430	3.17	1	0.01	0.164
OCDD	**480**	0.566	6.33	1	0.0003	0.144
2,3,7,8-TCDF	**41.1**	0.429	0.633	1	0.1	4.11
1,2,3,7,8-PeCDF	**1.25**	0.228	3.17	1	0.03	0.0375
2,3,4,7,8-PeCDF	**1.23**	0.252	3.17	1	0.3	0.369
1,2,3,4,7,8-HxCDF	**1.68**	0.135	3.17	1	0.1	0.168
1,2,3,6,7,8-HxCDF	**0.471**	0.130	3.17	1	0.1	0.0471
1,2,3,7,8,9-HxCDF	**0.430**	0.185	3.17	1	0.1	0.0430
2,3,4,6,7,8-HxCDF	**0.184**	0.149	3.17	1	0.1	0.0184
1,2,3,4,6,7,8-HpCDF	**1.68**	0.203	3.17	1	0.01	0.0168
1,2,3,4,7,8,9-HpCDF	ND	0.319	3.17	1	0.01	
OCDF	**41.2**	0.498	6.33	1	0.0003	0.0124
		Total TEQ				23.1

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 14:30
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0220	**Units:**	Percent
Lab Code:	E1801139-007	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	7.854g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	77.2		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 15:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0222	**Units:**	ng/Kg
Lab Code:	E1801139-008	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 09:45
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.668g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519910	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	1310		17.8	17.8	0.78	1.001	10
1,2,3,7,8-PeCDD	6.28		0.140	2.72	1.58	1.001	1
1,2,3,4,7,8-HxCDD	1.09	**J**	0.294	2.72	1.36	1.001	1
1,2,3,6,7,8-HxCDD	2.80		0.307	2.72	1.10	1.000	1
1,2,3,7,8,9-HxCDD	3.25		0.294	2.72	1.23	1.008	1
1,2,3,4,6,7,8-HpCDD	84.4		0.564	2.72	1.07	1.000	1
OCDD	1870		0.353	5.44	0.91	1.000	1
2,3,7,8-TCDF	2200		6.28	6.28	0.76	1.001	10
1,2,3,7,8-PeCDF	52.3		0.462	2.72	1.54	1.001	1
2,3,4,7,8-PeCDF	42.9		0.510	2.72	1.48	1.001	1
1,2,3,4,7,8-HxCDF	95.1		0.195	2.72	1.21	1.001	1
1,2,3,6,7,8-HxCDF	25.0		0.185	2.72	1.24	1.000	1
1,2,3,7,8,9-HxCDF	7.39		0.230	2.72	1.30	1.001	1
2,3,4,6,7,8-HxCDF	5.49		0.211	2.72	1.27	1.000	1
1,2,3,4,6,7,8-HpCDF	35.1		0.348	2.72	0.99	1.000	1
1,2,3,4,7,8,9-HpCDF	10.0		0.506	2.72	0.99	1.000	1
OCDF	63.7		0.439	5.44	0.88	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 15:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0222	**Units:**	ng/Kg
Lab Code:	E1801139-008	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 09:45
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.668g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519910	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	857		0.524	0.544	0.77		1
Total Penta-Dioxins	15.9		0.140	2.72	1.47		1
Total Hexa-Dioxins	79.7		0.299	2.72	1.27		1
Total Hepta-Dioxins	212		0.564	2.72	1.03		1
Total Tetra-Furans	3000		0.288	0.544	0.74		1
Total Penta-Furans	149		0.485	2.72	1.42		1
Total Hexa-Furans	155		0.205	2.72	1.11		1
Total Hepta-Furans	73.0		0.421	2.72	0.99		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 15:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0222	**Units:**	Percent
Lab Code:	E1801139-008	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 00:21
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.668g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519875	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	794.635	40		25-164	0.79	1.027
13C-1,2,3,7,8-PeCDD	2000	1236.183	62		25-181	1.58	1.233
13C-1,2,3,4,7,8-HxCDD	2000	1014.503	51		32-141	1.30	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1213.534	61		28-130	1.26	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1397.704	70		23-140	1.09	1.077
13C-OCDD	4000	2171.841	54		17-157	0.91	1.162
13C-2,3,7,8-TCDF	2000	1020.599	51		24-169	0.78	0.988
13C-1,2,3,7,8-PeCDF	2000	1161.113	58		24-185	1.57	1.181
13C-2,3,4,7,8-PeCDF	2000	1109.565	55		21-178	1.58	1.221
13C-1,2,3,4,7,8-HxCDF	2000	937.688	47		26-152	0.51	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1004.652	50		26-123	0.52	0.970
13C-1,2,3,7,8,9-HxCDF	2000	1118.628	56		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	992.222	50		28-136	0.52	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	987.383	49		28-143	0.45	1.049
13C-1,2,3,4,7,8,9-HpCDF	2000	1110.994	56		26-138	0.44	1.090
37Cl-2,3,7,8-TCDD	800	571.101	71		35-197	NA	1.028

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 15:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0222	**Units:**	ng/Kg
Lab Code:	E1801139-008	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**1310**	17.8	17.8	10	1	1310
1,2,3,7,8-PeCDD	**6.28**	0.140	2.72	1	1	6.28
1,2,3,4,7,8-HxCDD	**1.09**	0.294	2.72	1	0.1	0.109
1,2,3,6,7,8-HxCDD	**2.80**	0.307	2.72	1	0.1	0.280
1,2,3,7,8,9-HxCDD	**3.25**	0.294	2.72	1	0.1	0.325
1,2,3,4,6,7,8-HpCDD	**84.4**	0.564	2.72	1	0.01	0.844
OCDD	**1870**	0.353	5.44	1	0.0003	0.561
2,3,7,8-TCDF	**2200**	6.28	6.28	10	0.1	220
1,2,3,7,8-PeCDF	**52.3**	0.462	2.72	1	0.03	1.57
2,3,4,7,8-PeCDF	**42.9**	0.510	2.72	1	0.3	12.9
1,2,3,4,7,8-HxCDF	**95.1**	0.195	2.72	1	0.1	9.51
1,2,3,6,7,8-HxCDF	**25.0**	0.185	2.72	1	0.1	2.50
1,2,3,7,8,9-HxCDF	**7.39**	0.230	2.72	1	0.1	0.739
2,3,4,6,7,8-HxCDF	**5.49**	0.211	2.72	1	0.1	0.549
1,2,3,4,6,7,8-HpCDF	**35.1**	0.348	2.72	1	0.01	0.351
1,2,3,4,7,8,9-HpCDF	**10.0**	0.506	2.72	1	0.01	0.100
OCDF	**63.7**	0.439	5.44	1	0.0003	0.0191
		Total TEQ				1570

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 15:50
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0222	**Units:**	Percent
Lab Code:	E1801139-008	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	9.108g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	86.2		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 15:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0223	**Units:**	ng/Kg
Lab Code:	E1801139-009	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 10:33
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.864g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519911	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	40300		221	221	0.76	1.001	200
1,2,3,7,8-PeCDD	161		0.305	3.30	1.62	1.001	1
1,2,3,4,7,8-HxCDD	1.64	**J**	0.489	3.30	1.39	1.000	1
1,2,3,6,7,8-HxCDD	12.2		0.515	3.30	1.24	1.000	1
1,2,3,7,8,9-HxCDD	4.77		0.491	3.30	1.15	1.008	1
1,2,3,4,6,7,8-HpCDD	379		0.324	3.30	1.02	1.000	1
OCDD	8980		42.1	1320	0.88	1.000	200
2,3,7,8-TCDF	66000		87.3	132	0.76	1.001	200
1,2,3,7,8-PeCDF	1280		2.68	3.30	1.53	1.000	1
2,3,4,7,8-PeCDF	1080		2.92	3.30	1.55	1.001	1
1,2,3,4,7,8-HxCDF	2360		1.39	3.30	1.22	1.000	1
1,2,3,6,7,8-HxCDF	598		1.39	3.30	1.21	1.000	1
1,2,3,7,8,9-HxCDF	172		1.78	3.30	1.19	1.001	1
2,3,4,6,7,8-HxCDF	101		1.55	3.30	1.22	1.000	1
1,2,3,4,6,7,8-HpCDF	641		2.22	3.30	1.01	1.000	1
1,2,3,4,7,8,9-HpCDF	253		3.34	3.34	1.03	1.000	1
OCDF	362		0.724	6.59	0.88	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 15:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0223	**Units:**	ng/Kg
Lab Code:	E1801139-009	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 10:33
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.864g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519911	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	25300		0.654	0.659	0.78		1
Total Penta-Dioxins	195		0.305	3.30	1.57		1
Total Hexa-Dioxins	97.3		0.499	3.30	1.27		1
Total Hepta-Dioxins	740		0.324	3.30	1.03		1
Total Tetra-Furans	85400		0.840	0.840	0.77		1
Total Penta-Furans	3560		2.79	3.30	1.52		1
Total Hexa-Furans	3500		1.52	3.30	1.25		1
Total Hepta-Furans	1130		2.74	3.30	1.01		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 15:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0223	**Units:**	Percent
Lab Code:	E1801139-009	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 01:10
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.864g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519876	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	904.204	45		25-164	0.80	1.024
13C-1,2,3,7,8-PeCDD	2000	1453.436	73		25-181	1.61	1.226
13C-1,2,3,4,7,8-HxCDD	2000	1181.140	59		32-141	1.26	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1266.719	63		28-130	1.29	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1416.491	71		23-140	1.07	1.077
13C-OCDD	4000	1863.555	47		17-157	0.90	1.162
13C-2,3,7,8-TCDF	2000	1157.127	58		24-169	0.81	0.987
13C-1,2,3,7,8-PeCDF	2000	1353.543	68		24-185	1.59	1.177
13C-2,3,4,7,8-PeCDF	2000	1239.432	62		21-178	1.60	1.215
13C-1,2,3,4,7,8-HxCDF	2000	1051.930	53		26-152	0.53	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1086.481	54		26-123	0.54	0.970
13C-1,2,3,7,8,9-HxCDF	2000	1203.909	60		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1077.979	54		28-136	0.53	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1009.898	50		28-143	0.43	1.049
13C-1,2,3,4,7,8,9-HpCDF	2000	1126.442	56		26-138	0.44	1.090
37Cl-2,3,7,8-TCDD	800	921.667	115		35-197	NA	1.025

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 15:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0223	**Units:**	ng/Kg
Lab Code:	E1801139-009	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**40300**	221	221	200	1	40300
1,2,3,7,8-PeCDD	**161**	0.305	3.30	1	1	161
1,2,3,4,7,8-HxCDD	**1.64**	0.489	3.30	1	0.1	0.164
1,2,3,6,7,8-HxCDD	**12.2**	0.515	3.30	1	0.1	1.22
1,2,3,7,8,9-HxCDD	**4.77**	0.491	3.30	1	0.1	0.477
1,2,3,4,6,7,8-HpCDD	**379**	0.324	3.30	1	0.01	3.79
OCDD	**8980**	42.1	1320	200	0.0003	2.69
2,3,7,8-TCDF	**66000**	87.3	132	200	0.1	6600
1,2,3,7,8-PeCDF	**1280**	2.68	3.30	1	0.03	38.4
2,3,4,7,8-PeCDF	**1080**	2.92	3.30	1	0.3	324
1,2,3,4,7,8-HxCDF	**2360**	1.39	3.30	1	0.1	236
1,2,3,6,7,8-HxCDF	**598**	1.39	3.30	1	0.1	59.8
1,2,3,7,8,9-HxCDF	**172**	1.78	3.30	1	0.1	17.2
2,3,4,6,7,8-HxCDF	**101**	1.55	3.30	1	0.1	10.1
1,2,3,4,6,7,8-HpCDF	**641**	2.22	3.30	1	0.01	6.41
1,2,3,4,7,8,9-HpCDF	**253**	3.34	3.34	1	0.01	2.53
OCDF	**362**	0.724	6.59	1	0.0003	0.109
		Total TEQ				47800

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 15:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0223	**Units:**	Percent
Lab Code:	E1801139-009	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	5.935g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	69.8		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0224	**Units:**	ng/Kg
Lab Code:	E1801139-010	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 11:22
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.202g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519912	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	30000		355	355	0.77	1.001	200
1,2,3,7,8-PeCDD	122		0.857	3.83	1.56	1.001	1
1,2,3,4,7,8-HxCDD	4.72		0.613	3.83	1.34	1.000	1
1,2,3,6,7,8-HxCDD	19.8		0.640	3.83	1.30	1.001	1
1,2,3,7,8,9-HxCDD	10.2		0.613	3.83	1.43	1.008	1
1,2,3,4,6,7,8-HpCDD	379		1.31	3.83	1.02	1.000	1
OCDD	13500		88.6	1530	0.86	1.000	200
2,3,7,8-TCDF	46100		119	153	0.77	1.001	200
1,2,3,7,8-PeCDF	1900		4.92	4.92	1.53	1.001	1
2,3,4,7,8-PeCDF	1190		5.54	5.54	1.53	1.001	1
1,2,3,4,7,8-HxCDF	5000		63.1	766	1.14	1.000	200
1,2,3,6,7,8-HxCDF	961		3.38	3.83	1.18	1.000	1
1,2,3,7,8,9-HxCDF	270		4.33	4.33	1.25	1.001	1
2,3,4,6,7,8-HxCDF	164		3.75	3.83	1.18	1.000	1
1,2,3,4,6,7,8-HpCDF	1070		2.81	3.83	1.02	1.000	1
1,2,3,4,7,8,9-HpCDF	400		4.55	4.55	1.03	1.000	1
OCDF	13400		144	1530	0.93	1.004	200

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0224	**Units:**	ng/Kg
Lab Code:	E1801139-010	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 11:22
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.202g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519912	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	19400		1.24	1.24	0.78		1
Total Penta-Dioxins	169		0.857	3.83	1.48		1
Total Hexa-Dioxins	210		0.623	3.83	1.25		1
Total Hepta-Dioxins	944		1.31	3.83	1.04		1
Total Tetra-Furans	64300		1.28	1.28	0.76		1
Total Penta-Furans	4730		5.22	5.22	1.41		1
Total Hexa-Furans	5570		3.69	3.83	1.26		1
Total Hepta-Furans	1910		3.59	3.83	1.02		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0224	**Units:**	Percent
Lab Code:	E1801139-010	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 01:58
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.202g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519877	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	605.420	30		25-164	0.77	1.026
13C-1,2,3,7,8-PeCDD	2000	954.463	48		25-181	1.58	1.229
13C-1,2,3,4,7,8-HxCDD	2000	740.161	37		32-141	1.26	0.990
13C-1,2,3,6,7,8-HxCDD	2000	898.814	45		28-130	1.25	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	871.627	44		23-140	1.07	1.077
13C-OCDD	4000	1004.845	25		17-157	0.93	1.163
13C-2,3,7,8-TCDF	2000	810.709	41		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	870.457	44		24-185	1.60	1.178
13C-2,3,4,7,8-PeCDF	2000	819.429	41		21-178	1.58	1.217
13C-1,2,3,4,7,8-HxCDF	2000	713.461	36		26-152	0.53	0.967
13C-1,2,3,6,7,8-HxCDF	2000	736.827	37		26-123	0.52	0.970
13C-1,2,3,7,8,9-HxCDF	2000	800.794	40		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	739.410	37		28-136	0.51	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	640.838	32		28-143	0.44	1.049
13C-1,2,3,4,7,8,9-HpCDF	2000	673.450	34		26-138	0.44	1.090
37Cl-2,3,7,8-TCDD	800	479.449	60		35-197	NA	1.027

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0224	**Units:**	ng/Kg
Lab Code:	E1801139-010	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**30000**	355	355	200	1	30000
1,2,3,7,8-PeCDD	**122**	0.857	3.83	1	1	122
1,2,3,4,7,8-HxCDD	**4.72**	0.613	3.83	1	0.1	0.472
1,2,3,6,7,8-HxCDD	**19.8**	0.640	3.83	1	0.1	1.98
1,2,3,7,8,9-HxCDD	**10.2**	0.613	3.83	1	0.1	1.02
1,2,3,4,6,7,8-HpCDD	**379**	1.31	3.83	1	0.01	3.79
OCDD	**13500**	88.6	1530	200	0.0003	4.05
2,3,7,8-TCDF	**46100**	119	153	200	0.1	4610
1,2,3,7,8-PeCDF	**1900**	4.92	4.92	1	0.03	57.0
2,3,4,7,8-PeCDF	**1190**	5.54	5.54	1	0.3	357
1,2,3,4,7,8-HxCDF	**5000**	63.1	766	200	0.1	500
1,2,3,6,7,8-HxCDF	**961**	3.38	3.83	1	0.1	96.1
1,2,3,7,8,9-HxCDF	**270**	4.33	4.33	1	0.1	27.0
2,3,4,6,7,8-HxCDF	**164**	3.75	3.83	1	0.1	16.4
1,2,3,4,6,7,8-HpCDF	**1070**	2.81	3.83	1	0.01	10.7
1,2,3,4,7,8,9-HpCDF	**400**	4.55	4.55	1	0.01	4.00
OCDF	**13400**	144	1530	200	0.0003	4.02
		Total TEQ				35800

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0224	**Units:**	Percent
Lab Code:	E1801139-010	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	6.653g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	64.0		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:05
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0225	**Units:**	ng/Kg
Lab Code:	E1801139-011	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 02:47
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.093g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519878	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	106		0.621	0.621	0.77	1.001	1
1,2,3,7,8-PeCDD	1.88	**J**	0.241	3.10	1.47	1.001	1
1,2,3,4,7,8-HxCDD	0.705	**J**	0.449	3.10	1.28	1.000	1
1,2,3,6,7,8-HxCDD	3.75		0.465	3.10	1.23	1.000	1
1,2,3,7,8,9-HxCDD	1.81	**J**	0.447	3.10	1.25	1.007	1
1,2,3,4,6,7,8-HpCDD	68.3		0.849	3.10	1.03	1.000	1
OCDD	1480		0.931	6.21	0.90	1.000	1
2,3,7,8-TCDF	239		0.442	0.621	0.76	1.001	1
1,2,3,7,8-PeCDF	5.16		0.497	3.10	1.52	1.001	1
2,3,4,7,8-PeCDF	7.68		0.528	3.10	1.57	1.001	1
1,2,3,4,7,8-HxCDF	12.8		0.338	3.10	1.15	1.000	1
1,2,3,6,7,8-HxCDF	4.85	**P**	0.338	3.10	1.09	1.000	1
1,2,3,7,8,9-HxCDF	1.43	**JK**	0.435	3.10	0.84	1.001	1
2,3,4,6,7,8-HxCDF	3.01	**J**	0.375	3.10	1.28	1.000	1
1,2,3,4,6,7,8-HpCDF	54.4		0.644	3.10	1.03	1.000	1
1,2,3,4,7,8,9-HpCDF	4.55		0.994	3.10	1.15	1.001	1
OCDF	1290		0.919	6.21	0.88	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:05
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0225	**Units:**	ng/Kg
Lab Code:	E1801139-011	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 02:47
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.093g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519878	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	108		0.621	0.621	0.66		1
Total Penta-Dioxins	7.14		0.241	3.10	1.34		1
Total Hexa-Dioxins	39.2		0.454	3.10	1.26		1
Total Hepta-Dioxins	177		0.849	3.10	1.07		1
Total Tetra-Furans	429		0.442	0.621	0.83		1
Total Penta-Furans	44.8		0.512	3.10	1.42		1
Total Hexa-Furans	52.0		0.370	3.10	1.10		1
Total Hepta-Furans	117		0.804	3.10	1.03		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:05
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0225	**Units:**	Percent
Lab Code:	E1801139-011	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 02:47
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.093g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519878	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	896.278	45		25-164	0.81	1.028
13C-1,2,3,7,8-PeCDD	2000	1392.581	70		25-181	1.58	1.234
13C-1,2,3,4,7,8-HxCDD	2000	1135.547	57		32-141	1.25	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1192.340	60		28-130	1.25	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1233.863	62		23-140	1.07	1.078
13C-OCDD	4000	1535.817	38		17-157	0.91	1.162
13C-2,3,7,8-TCDF	2000	1166.899	58		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	1286.422	64		24-185	1.60	1.181
13C-2,3,4,7,8-PeCDF	2000	1236.376	62		21-178	1.57	1.221
13C-1,2,3,4,7,8-HxCDF	2000	968.640	48		26-152	0.51	0.967
13C-1,2,3,6,7,8-HxCDF	2000	1063.230	53		26-123	0.52	0.970
13C-1,2,3,7,8,9-HxCDF	2000	1131.048	57		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1041.641	52		28-136	0.52	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	908.450	45		28-143	0.44	1.049
13C-1,2,3,4,7,8,9-HpCDF	2000	991.522	50		26-138	0.44	1.090
37Cl-2,3,7,8-TCDD	800	534.859	67		35-197	NA	1.028

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:05
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0225	**Units:**	ng/Kg
Lab Code:	E1801139-011	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**106**	0.621	0.621	1	1	106
1,2,3,7,8-PeCDD	**1.88**	0.241	3.10	1	1	1.88
1,2,3,4,7,8-HxCDD	**0.705**	0.449	3.10	1	0.1	0.0705
1,2,3,6,7,8-HxCDD	**3.75**	0.465	3.10	1	0.1	0.375
1,2,3,7,8,9-HxCDD	**1.81**	0.447	3.10	1	0.1	0.181
1,2,3,4,6,7,8-HpCDD	**68.3**	0.849	3.10	1	0.01	0.683
OCDD	**1480**	0.931	6.21	1	0.0003	0.444
2,3,7,8-TCDF	**239**	0.442	0.621	1	0.1	23.9
1,2,3,7,8-PeCDF	**5.16**	0.497	3.10	1	0.03	0.155
2,3,4,7,8-PeCDF	**7.68**	0.528	3.10	1	0.3	2.30
1,2,3,4,7,8-HxCDF	**12.8**	0.338	3.10	1	0.1	1.28
1,2,3,6,7,8-HxCDF	**4.85**	0.338	3.10	1	0.1	0.485
1,2,3,7,8,9-HxCDF	**1.43**	0.435	3.10	1	0.1	0.143
2,3,4,6,7,8-HxCDF	**3.01**	0.375	3.10	1	0.1	0.301
1,2,3,4,6,7,8-HpCDF	**54.4**	0.644	3.10	1	0.01	0.544
1,2,3,4,7,8,9-HpCDF	**4.55**	0.994	3.10	1	0.01	0.0455
OCDF	**1290**	0.919	6.21	1	0.0003	0.387
		Total TEQ				139

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:05
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0225	**Units:**	Percent
Lab Code:	E1801139-011	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	8.118g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	79.8		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0226	**Units:**	ng/Kg
Lab Code:	E1801139-012	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 03:36
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.837g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519879	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	136		0.572	0.605	0.78	1.001	1
1,2,3,7,8-PeCDD	2.71	**J**	0.245	3.02	1.58	1.001	1
1,2,3,4,7,8-HxCDD	1.12	**JK**	0.327	3.02	1.64	1.000	1
1,2,3,6,7,8-HxCDD	5.75		0.348	3.02	1.27	1.000	1
1,2,3,7,8,9-HxCDD	3.07	**K**	0.330	3.02	1.44	1.007	1
1,2,3,4,6,7,8-HpCDD	125		1.62	3.02	1.05	1.001	1
OCDD	2390		1.37	6.05	0.90	1.000	1
2,3,7,8-TCDF	336		0.327	0.605	0.77	1.001	1
1,2,3,7,8-PeCDF	5.85		0.750	3.02	1.44	1.001	1
2,3,4,7,8-PeCDF	9.04		0.819	3.02	1.42	1.002	1
1,2,3,4,7,8-HxCDF	10.7		0.821	3.02	1.19	1.000	1
1,2,3,6,7,8-HxCDF	4.19	**P**	0.813	3.02	1.08	1.000	1
1,2,3,7,8,9-HxCDF	1.85	**JK**	1.20	3.02	0.88	1.001	1
2,3,4,6,7,8-HxCDF	3.05	**K**	0.921	3.02	0.94	1.000	1
1,2,3,4,6,7,8-HpCDF	73.9		0.788	3.02	0.99	1.000	1
1,2,3,4,7,8,9-HpCDF	6.51		1.31	3.02	0.99	1.000	1
OCDF	2270		1.04	6.05	0.88	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0226	**Units:**	ng/Kg
Lab Code:	E1801139-012	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 03:36
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.837g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519879	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	141		0.572	0.605	0.80		1
Total Penta-Dioxins	11.3		0.245	3.02	1.56		1
Total Hexa-Dioxins	82.9		0.336	3.02	1.33		1
Total Hepta-Dioxins	399		1.62	3.02	1.04		1
Total Tetra-Furans	608		0.327	0.605	0.80		1
Total Penta-Furans	61.7		0.783	3.02	1.44		1
Total Hexa-Furans	63.8		0.925	3.02	1.06		1
Total Hepta-Furans	153		1.02	3.02	0.99		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0226	**Units:**	Percent
Lab Code:	E1801139-012	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 03:36
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.837g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519879	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519865

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	903.051	45		25-164	0.80	1.027
13C-1,2,3,7,8-PeCDD	2000	1391.798	70		25-181	1.57	1.233
13C-1,2,3,4,7,8-HxCDD	2000	1104.635	55		32-141	1.27	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1245.143	62		28-130	1.26	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1260.330	63		23-140	1.08	1.076
13C-OCDD	4000	1464.682	37		17-157	0.90	1.162
13C-2,3,7,8-TCDF	2000	1164.147	58		24-169	0.78	0.988
13C-1,2,3,7,8-PeCDF	2000	1274.825	64		24-185	1.61	1.181
13C-2,3,4,7,8-PeCDF	2000	1224.958	61		21-178	1.57	1.220
13C-1,2,3,4,7,8-HxCDF	2000	1013.422	51		26-152	0.52	0.966
13C-1,2,3,6,7,8-HxCDF	2000	1057.084	53		26-123	0.52	0.969
13C-1,2,3,7,8,9-HxCDF	2000	1019.798	51		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1052.397	53		28-136	0.52	0.985
13C-1,2,3,4,6,7,8-HpCDF	2000	942.794	47		28-143	0.43	1.048
13C-1,2,3,4,7,8,9-HpCDF	2000	968.583	48		26-138	0.45	1.089
37Cl-2,3,7,8-TCDD	800	542.079	68		35-197	NA	1.027

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0226	**Units:**	ng/Kg
Lab Code:	E1801139-012	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**136**	0.572	0.605	1	1	136
1,2,3,7,8-PeCDD	**2.71**	0.245	3.02	1	1	2.71
1,2,3,4,7,8-HxCDD	**1.12**	0.327	3.02	1	0.1	0.112
1,2,3,6,7,8-HxCDD	**5.75**	0.348	3.02	1	0.1	0.575
1,2,3,7,8,9-HxCDD	**3.07**	0.330	3.02	1	0.1	0.307
1,2,3,4,6,7,8-HpCDD	**125**	1.62	3.02	1	0.01	1.25
OCDD	**2390**	1.37	6.05	1	0.0003	0.717
2,3,7,8-TCDF	**336**	0.327	0.605	1	0.1	33.6
1,2,3,7,8-PeCDF	**5.85**	0.750	3.02	1	0.03	0.176
2,3,4,7,8-PeCDF	**9.04**	0.819	3.02	1	0.3	2.71
1,2,3,4,7,8-HxCDF	**10.7**	0.821	3.02	1	0.1	1.07
1,2,3,6,7,8-HxCDF	**4.19**	0.813	3.02	1	0.1	0.419
1,2,3,7,8,9-HxCDF	**1.85**	1.20	3.02	1	0.1	0.185
2,3,4,6,7,8-HxCDF	**3.05**	0.921	3.02	1	0.1	0.305
1,2,3,4,6,7,8-HpCDF	**73.9**	0.788	3.02	1	0.01	0.739
1,2,3,4,7,8,9-HpCDF	**6.51**	1.31	3.02	1	0.01	0.0651
OCDF	**2270**	1.04	6.05	1	0.0003	0.681
		Total TEQ				182

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0226	**Units:**	Percent
Lab Code:	E1801139-012	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	8.759g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	76.3		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0228	**Units:**	ng/Kg
Lab Code:	E1801139-013	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 19:45
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.445g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519922	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519915

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	11300		171	171	0.76	1.001	100
1,2,3,7,8-PeCDD	53.8		0.150	2.99	1.62	1.001	1
1,2,3,4,7,8-HxCDD	1.21	**J**	0.164	2.99	1.12	1.000	1
1,2,3,6,7,8-HxCDD	6.54		0.186	2.99	1.17	1.000	1
1,2,3,7,8,9-HxCDD	3.38		0.170	2.99	1.29	1.008	1
1,2,3,4,6,7,8-HpCDD	221		0.423	2.99	1.06	1.000	1
OCDD	4250		0.105	5.98	0.89	1.000	1
2,3,7,8-TCDF	19600		112	112	0.74	1.001	100
1,2,3,7,8-PeCDF	685		1.77	2.99	1.53	1.001	1
2,3,4,7,8-PeCDF	504		1.89	2.99	1.54	1.001	1
1,2,3,4,7,8-HxCDF	1330		0.459	2.99	1.19	1.000	1
1,2,3,6,7,8-HxCDF	308		0.467	2.99	1.19	1.000	1
1,2,3,7,8,9-HxCDF	92.0		0.511	2.99	1.22	1.001	1
2,3,4,6,7,8-HxCDF	55.6		0.488	2.99	1.20	1.000	1
1,2,3,4,6,7,8-HpCDF	412		0.356	2.99	1.03	1.000	1
1,2,3,4,7,8,9-HpCDF	152		0.417	2.99	1.01	1.000	1
OCDF	257		0.145	5.98	0.87	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0228	**Units:**	ng/Kg
Lab Code:	E1801139-013	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 19:45
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.445g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519922	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519915

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	8570		0.369	0.598	0.80		1
Total Penta-Dioxins	77.0		0.150	2.99	1.51		1
Total Hexa-Dioxins	37.5		0.173	2.99	1.25		1
Total Hepta-Dioxins	221		0.423	2.99	1.06		1
Total Tetra-Furans	30500		0.175	0.598	0.76		1
Total Penta-Furans	1800		1.83	2.99	1.62		1
Total Hexa-Furans	1920		0.481	2.99	1.15		1
Total Hepta-Furans	688		0.384	2.99	1.03		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0228	**Units:**	Percent
Lab Code:	E1801139-013	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 19:40
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.445g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519893	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519885

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1009.831	50		25-164	0.79	1.027
13C-1,2,3,7,8-PeCDD	2000	1581.347	79		25-181	1.58	1.235
13C-1,2,3,4,7,8-HxCDD	2000	1453.509	73		32-141	1.24	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1282.656	64		28-130	1.26	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1784.275	89		23-140	1.05	1.071
13C-OCDD	4000	2723.124	68		17-157	0.90	1.142
13C-2,3,7,8-TCDF	2000	1243.292	62		24-169	0.80	0.987
13C-1,2,3,7,8-PeCDF	2000	1414.884	71		24-185	1.60	1.184
13C-2,3,4,7,8-PeCDF	2000	1333.616	67		21-178	1.57	1.223
13C-1,2,3,4,7,8-HxCDF	2000	1199.270	60		26-152	0.51	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1167.103	58		26-123	0.52	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1331.881	67		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1227.771	61		28-136	0.52	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1251.258	63		28-143	0.44	1.045
13C-1,2,3,4,7,8,9-HpCDF	2000	1402.994	70		26-138	0.45	1.083
37Cl-2,3,7,8-TCDD	800	761.764	95		35-197	NA	1.027

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0228	**Units:**	ng/Kg
Lab Code:	E1801139-013	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**11300**	171	171	100	1	11300
1,2,3,7,8-PeCDD	**53.8**	0.150	2.99	1	1	53.8
1,2,3,4,7,8-HxCDD	**1.21**	0.164	2.99	1	0.1	0.121
1,2,3,6,7,8-HxCDD	**6.54**	0.186	2.99	1	0.1	0.654
1,2,3,7,8,9-HxCDD	**3.38**	0.170	2.99	1	0.1	0.338
1,2,3,4,6,7,8-HpCDD	**221**	0.423	2.99	1	0.01	2.21
OCDD	**4250**	0.105	5.98	1	0.0003	1.28
2,3,7,8-TCDF	**19600**	112	112	100	0.1	1960
1,2,3,7,8-PeCDF	**685**	1.77	2.99	1	0.03	20.6
2,3,4,7,8-PeCDF	**504**	1.89	2.99	1	0.3	151
1,2,3,4,7,8-HxCDF	**1330**	0.459	2.99	1	0.1	133
1,2,3,6,7,8-HxCDF	**308**	0.467	2.99	1	0.1	30.8
1,2,3,7,8,9-HxCDF	**92.0**	0.511	2.99	1	0.1	9.20
2,3,4,6,7,8-HxCDF	**55.6**	0.488	2.99	1	0.1	5.56
1,2,3,4,6,7,8-HpCDF	**412**	0.356	2.99	1	0.01	4.12
1,2,3,4,7,8,9-HpCDF	**152**	0.417	2.99	1	0.01	1.52
OCDF	**257**	0.145	5.98	1	0.0003	0.0771
		Total TEQ				13700

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 16:55
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0228	**Units:**	Percent
Lab Code:	E1801139-013	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	5.464g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	80.1		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0229	**Units:**	ng/Kg
Lab Code:	E1801139-014	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 20:34
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.688g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519923	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519915

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	38900		217	217	0.78	1.001	200
1,2,3,7,8-PeCDD	161		0.218	3.37	1.64	1.001	1
1,2,3,4,7,8-HxCDD	2.00	**J**	0.268	3.37	1.28	1.000	1
1,2,3,6,7,8-HxCDD	8.27		0.313	3.37	1.32	1.001	1
1,2,3,7,8,9-HxCDD	3.24	**J**	0.283	3.37	1.09	1.008	1
1,2,3,4,6,7,8-HpCDD	175		0.396	3.37	1.03	1.000	1
OCDD	3610		0.239	6.74	0.89	1.000	1
2,3,7,8-TCDF	64900		109	135	0.74	1.001	200
1,2,3,7,8-PeCDF	3170		37.8	674	1.57	1.001	200
2,3,4,7,8-PeCDF	1680		5.53	5.53	1.54	1.001	1
1,2,3,4,7,8-HxCDF	12700		31.3	674	1.12	1.000	200
1,2,3,6,7,8-HxCDF	1650		0.778	3.37	1.21	1.000	1
1,2,3,7,8,9-HxCDF	578		0.834	3.37	1.21	1.001	1
2,3,4,6,7,8-HxCDF	279		0.816	3.37	1.22	1.000	1
1,2,3,4,6,7,8-HpCDF	2410		1.36	3.37	1.03	1.000	1
1,2,3,4,7,8,9-HpCDF	1300		1.52	3.37	1.03	1.000	1
OCDF	3780		0.269	6.74	0.88	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0229	**Units:**	ng/Kg
Lab Code:	E1801139-014	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 20:34
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.688g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519923	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519915

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	24200		0.750	0.750	0.82		1
Total Penta-Dioxins	187		0.218	3.37	1.59		1
Total Hexa-Dioxins	40.5		0.288	3.37	1.33		1
Total Hepta-Dioxins	175		0.396	3.37	1.03		1
Total Tetra-Furans	84100		1.02	1.02	0.76		1
Total Penta-Furans	6720		5.32	5.32	1.71		1
Total Hexa-Furans	12200		0.812	3.37	1.21		1
Total Hepta-Furans	4720		1.43	3.37	1.03		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0229	**Units:**	Percent
Lab Code:	E1801139-014	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 20:28
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.688g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519894	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519885

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	962.967	48		25-164	0.79	1.026
13C-1,2,3,7,8-PeCDD	2000	1544.779	77		25-181	1.57	1.232
13C-1,2,3,4,7,8-HxCDD	2000	1339.592	67		32-141	1.34	0.990
13C-1,2,3,6,7,8-HxCDD	2000	1213.062	61		28-130	1.22	0.992
13C-1,2,3,4,6,7,8-HpCDD	2000	1433.302	72		23-140	1.05	1.071
13C-OCDD	4000	1714.849	43		17-157	0.87	1.142
13C-2,3,7,8-TCDF	2000	1184.681	59		24-169	0.82	0.987
13C-1,2,3,7,8-PeCDF	2000	1396.689	70		24-185	1.57	1.182
13C-2,3,4,7,8-PeCDF	2000	1308.145	65		21-178	1.59	1.221
13C-1,2,3,4,7,8-HxCDF	2000	1060.292	53		26-152	0.51	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1049.807	52		26-123	0.53	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1231.540	62		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1071.443	54		28-136	0.53	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1021.178	51		28-143	0.44	1.045
13C-1,2,3,4,7,8,9-HpCDF	2000	1184.231	59		26-138	0.44	1.083
37Cl-2,3,7,8-TCDD	800	969.681	121		35-197	NA	1.027

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0229	**Units:**	ng/Kg
Lab Code:	E1801139-014	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**38900**	217	217	200	1	38900
1,2,3,7,8-PeCDD	**161**	0.218	3.37	1	1	161
1,2,3,4,7,8-HxCDD	**2.00**	0.268	3.37	1	0.1	0.200
1,2,3,6,7,8-HxCDD	**8.27**	0.313	3.37	1	0.1	0.827
1,2,3,7,8,9-HxCDD	**3.24**	0.283	3.37	1	0.1	0.324
1,2,3,4,6,7,8-HpCDD	**175**	0.396	3.37	1	0.01	1.75
OCDD	**3610**	0.239	6.74	1	0.0003	1.08
2,3,7,8-TCDF	**64900**	109	135	200	0.1	6490
1,2,3,7,8-PeCDF	**3170**	37.8	674	200	0.03	95.1
2,3,4,7,8-PeCDF	**1680**	5.53	5.53	1	0.3	504
1,2,3,4,7,8-HxCDF	**12700**	31.3	674	200	0.1	1270
1,2,3,6,7,8-HxCDF	**1650**	0.778	3.37	1	0.1	165
1,2,3,7,8,9-HxCDF	**578**	0.834	3.37	1	0.1	57.8
2,3,4,6,7,8-HxCDF	**279**	0.816	3.37	1	0.1	27.9
1,2,3,4,6,7,8-HpCDF	**2410**	1.36	3.37	1	0.01	24.1
1,2,3,4,7,8,9-HpCDF	**1300**	1.52	3.37	1	0.01	13.0
OCDF	**3780**	0.269	6.74	1	0.0003	1.13
		Total TEQ				47700

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:00
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0229	**Units:**	Percent
Lab Code:	E1801139-014	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	7.022g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	69.4		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:05
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0230	**Units:**	ng/Kg
Lab Code:	E1801139-015	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 21:17
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.687g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519895	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519885

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	167		0.711	0.711	0.77	1.001	1
1,2,3,7,8-PeCDD	1.26	**JK**	0.170	3.18	1.80	1.000	1
1,2,3,4,7,8-HxCDD	0.472	**JK**	0.157	3.18	0.77	1.000	1
1,2,3,6,7,8-HxCDD	0.828	**JK**	0.181	3.18	1.03	1.000	1
1,2,3,7,8,9-HxCDD	1.63	**JK**	0.165	3.18	1.01	1.008	1
1,2,3,4,6,7,8-HpCDD	22.1		0.236	3.18	1.05	1.000	1
OCDD	663		0.144	6.37	0.90	1.000	1
2,3,7,8-TCDF	382		0.599	0.637	0.76	1.001	1
1,2,3,7,8-PeCDF	11.2		0.208	3.18	1.41	1.001	1
2,3,4,7,8-PeCDF	8.46		0.202	3.18	1.43	1.001	1
1,2,3,4,7,8-HxCDF	19.9		0.145	3.18	1.24	1.000	1
1,2,3,6,7,8-HxCDF	4.91		0.146	3.18	1.15	1.000	1
1,2,3,7,8,9-HxCDF	1.64	**J**	0.166	3.18	1.27	1.001	1
2,3,4,6,7,8-HxCDF	0.929	**JK**	0.156	3.18	0.93	1.000	1
1,2,3,4,6,7,8-HpCDF	5.86		0.143	3.18	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	2.61	**J**	0.148	3.18	1.14	1.000	1
OCDF	4.90	**J**	0.187	6.37	0.89	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:05
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0230	**Units:**	ng/Kg
Lab Code:	E1801139-015	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 21:17
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.687g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519895	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519885

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	210		0.711	0.711	0.78		1
Total Penta-Dioxins	8.46		0.170	3.18	1.53		1
Total Hexa-Dioxins	6.07		0.168	3.18	1.27		1
Total Hepta-Dioxins	22.1		0.236	3.18	1.05		1
Total Tetra-Furans	692		0.599	0.637	0.74		1
Total Penta-Furans	28.9		0.205	3.18	1.55		1
Total Hexa-Furans	28.1		0.153	3.18	1.25		1
Total Hepta-Furans	10.9		0.145	3.18	1.05		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:05
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0230	**Units:**	Percent
Lab Code:	E1801139-015	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 21:17
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.687g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519895	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519885

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	695.605	35		25-164	0.77	1.028
13C-1,2,3,7,8-PeCDD	2000	1356.972	68		25-181	1.59	1.239
13C-1,2,3,4,7,8-HxCDD	2000	1294.259	65		32-141	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1237.914	62		28-130	1.28	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1549.099	77		23-140	1.05	1.071
13C-OCDD	4000	2057.375	51		17-157	0.91	1.142
13C-2,3,7,8-TCDF	2000	882.011	44		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	1152.545	58		24-185	1.57	1.186
13C-2,3,4,7,8-PeCDF	2000	1176.815	59		21-178	1.59	1.226
13C-1,2,3,4,7,8-HxCDF	2000	1051.176	53		26-152	0.51	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1022.980	51		26-123	0.51	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1163.115	58		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1051.223	53		28-136	0.53	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1015.043	51		28-143	0.44	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1257.548	63		26-138	0.44	1.084
37Cl-2,3,7,8-TCDD	800	411.411	51		35-197	NA	1.029

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:05
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0230	**Units:**	ng/Kg
Lab Code:	E1801139-015	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**167**	0.711	0.711	1	1	167
1,2,3,7,8-PeCDD	**1.26**	0.170	3.18	1	1	1.26
1,2,3,4,7,8-HxCDD	**0.472**	0.157	3.18	1	0.1	0.0472
1,2,3,6,7,8-HxCDD	**0.828**	0.181	3.18	1	0.1	0.0828
1,2,3,7,8,9-HxCDD	**1.63**	0.165	3.18	1	0.1	0.163
1,2,3,4,6,7,8-HpCDD	**22.1**	0.236	3.18	1	0.01	0.221
OCDD	**663**	0.144	6.37	1	0.0003	0.199
2,3,7,8-TCDF	**382**	0.599	0.637	1	0.1	38.2
1,2,3,7,8-PeCDF	**11.2**	0.208	3.18	1	0.03	0.336
2,3,4,7,8-PeCDF	**8.46**	0.202	3.18	1	0.3	2.54
1,2,3,4,7,8-HxCDF	**19.9**	0.145	3.18	1	0.1	1.99
1,2,3,6,7,8-HxCDF	**4.91**	0.146	3.18	1	0.1	0.491
1,2,3,7,8,9-HxCDF	**1.64**	0.166	3.18	1	0.1	0.164
2,3,4,6,7,8-HxCDF	**0.929**	0.156	3.18	1	0.1	0.0929
1,2,3,4,6,7,8-HpCDF	**5.86**	0.143	3.18	1	0.01	0.0586
1,2,3,4,7,8,9-HpCDF	**2.61**	0.148	3.18	1	0.01	0.0261
OCDF	**4.90**	0.187	6.37	1	0.0003	0.00147
		Total TEQ				213

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:05
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0230	**Units:**	Percent
Lab Code:	E1801139-015	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	6.394g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	73.5		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0231	**Units:**	ng/Kg
Lab Code:	E1801139-016	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 22:06
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.936g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519896	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519885

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	36.4		0.910	0.910	0.77	1.001	1
1,2,3,7,8-PeCDD	0.527	**JK**	0.242	3.11	1.18	1.001	1
1,2,3,4,7,8-HxCDD	0.551	**JK**	0.225	3.11	0.96	1.000	1
1,2,3,6,7,8-HxCDD	0.866	**JK**	0.250	3.11	0.96	1.000	1
1,2,3,7,8,9-HxCDD	1.79	**J**	0.232	3.11	1.29	1.007	1
1,2,3,4,6,7,8-HpCDD	22.9		0.433	3.11	1.04	1.000	1
OCDD	731		0.124	6.21	0.89	1.000	1
2,3,7,8-TCDF	77.8		0.411	0.621	0.74	1.001	1
1,2,3,7,8-PeCDF	3.51		0.161	3.11	1.45	1.001	1
2,3,4,7,8-PeCDF	2.37	**J**	0.158	3.11	1.55	1.001	1
1,2,3,4,7,8-HxCDF	4.80		0.119	3.11	1.08	1.000	1
1,2,3,6,7,8-HxCDF	1.18	**J**	0.116	3.11	1.18	1.000	1
1,2,3,7,8,9-HxCDF	0.573	**BJK**	0.128	3.11	1.75	1.001	1
2,3,4,6,7,8-HxCDF	0.288	**JK**	0.118	3.11	1.00	1.000	1
1,2,3,4,6,7,8-HpCDF	1.45	**J**	0.0853	3.11	0.98	1.000	1
1,2,3,4,7,8,9-HpCDF	0.701	**J**	0.0994	3.11	1.08	1.000	1
OCDF	1.71	**J**	0.167	6.21	0.91	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0231	**Units:**	ng/Kg
Lab Code:	E1801139-016	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 22:06
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.936g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519896	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519885

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	61.4		0.910	0.910	0.81		1
Total Penta-Dioxins	10.1		0.242	3.11	1.42		1
Total Hexa-Dioxins	8.83		0.236	3.11	1.37		1
Total Hepta-Dioxins	22.9		0.433	3.11	1.04		1
Total Tetra-Furans	133		0.411	0.621	0.83		1
Total Penta-Furans	6.23		0.160	3.11	1.49		1
Total Hexa-Furans	6.82		0.120	3.11	1.08		1
Total Hepta-Furans	2.15	**J**	0.0917	3.11	0.98		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0231	**Units:**	Percent
Lab Code:	E1801139-016	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 22:06
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.936g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519896	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519885

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	620.852	31		25-164	0.79	1.029
13C-1,2,3,7,8-PeCDD	2000	1197.143	60		25-181	1.60	1.239
13C-1,2,3,4,7,8-HxCDD	2000	1159.443	58		32-141	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1088.870	54		28-130	1.28	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1572.480	79		23-140	1.08	1.072
13C-OCDD	4000	2496.775	62		17-157	0.92	1.143
13C-2,3,7,8-TCDF	2000	773.637	39		24-169	0.78	0.988
13C-1,2,3,7,8-PeCDF	2000	1034.845	52		24-185	1.59	1.186
13C-2,3,4,7,8-PeCDF	2000	1022.042	51		21-178	1.59	1.226
13C-1,2,3,4,7,8-HxCDF	2000	938.697	47		26-152	0.52	0.968
13C-1,2,3,6,7,8-HxCDF	2000	945.985	47		26-123	0.51	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1039.213	52		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	961.360	48		28-136	0.52	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1042.189	52		28-143	0.45	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1196.154	60		26-138	0.45	1.084
37Cl-2,3,7,8-TCDD	800	374.852	47		35-197	NA	1.029

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0231	**Units:**	ng/Kg
Lab Code:	E1801139-016	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**36.4**	0.910	0.910	1	1	36.4
1,2,3,7,8-PeCDD	**0.527**	0.242	3.11	1	1	0.527
1,2,3,4,7,8-HxCDD	**0.551**	0.225	3.11	1	0.1	0.0551
1,2,3,6,7,8-HxCDD	**0.866**	0.250	3.11	1	0.1	0.0866
1,2,3,7,8,9-HxCDD	**1.79**	0.232	3.11	1	0.1	0.179
1,2,3,4,6,7,8-HpCDD	**22.9**	0.433	3.11	1	0.01	0.229
OCDD	**731**	0.124	6.21	1	0.0003	0.219
2,3,7,8-TCDF	**77.8**	0.411	0.621	1	0.1	7.78
1,2,3,7,8-PeCDF	**3.51**	0.161	3.11	1	0.03	0.105
2,3,4,7,8-PeCDF	**2.37**	0.158	3.11	1	0.3	0.711
1,2,3,4,7,8-HxCDF	**4.80**	0.119	3.11	1	0.1	0.480
1,2,3,6,7,8-HxCDF	**1.18**	0.116	3.11	1	0.1	0.118
1,2,3,7,8,9-HxCDF	**0.573**	0.128	3.11	1	0.1	0.0573
2,3,4,6,7,8-HxCDF	**0.288**	0.118	3.11	1	0.1	0.0288
1,2,3,4,6,7,8-HpCDF	**1.45**	0.0853	3.11	1	0.01	0.0145
1,2,3,4,7,8,9-HpCDF	**0.701**	0.0994	3.11	1	0.01	0.00701
OCDF	**1.71**	0.167	6.21	1	0.0003	0.000513
		Total TEQ				47.0

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:10
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0231	**Units:**	Percent
Lab Code:	E1801139-016	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	9.978g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	73.6		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:15
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0232	**Units:**	ng/Kg
Lab Code:	E1801139-017	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 04:01
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.528g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519903	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	24.8		0.577	0.607	0.80	1.001	1
1,2,3,7,8-PeCDD	0.567**J**		0.146	3.04	1.61	1.000	1
1,2,3,4,7,8-HxCDD	0.522**J**		0.119	3.04	1.22	1.000	1
1,2,3,6,7,8-HxCDD	0.676**J**		0.135	3.04	1.24	1.000	1
1,2,3,7,8,9-HxCDD	1.05**J**		0.124	3.04	1.13	1.007	1
1,2,3,4,6,7,8-HpCDD	14.8		0.173	3.04	1.10	1.000	1
OCDD	464		0.108	6.07	0.89	1.000	1
2,3,7,8-TCDF	60.2		0.205	0.607	0.77	1.001	1
1,2,3,7,8-PeCDF	2.08**J**		0.0995	3.04	1.54	1.001	1
2,3,4,7,8-PeCDF	1.61**JK**		0.101	3.04	1.80	1.001	1
1,2,3,4,7,8-HxCDF	3.31		0.0658	3.04	1.30	1.000	1
1,2,3,6,7,8-HxCDF	0.661**JK**		0.0650	3.04	0.69	1.000	1
1,2,3,7,8,9-HxCDF	0.424**BJ**		0.0749	3.04	1.39	1.001	1
2,3,4,6,7,8-HxCDF	0.223**JK**		0.0692	3.04	1.86	1.000	1
1,2,3,4,6,7,8-HpCDF	1.18**J**		0.0580	3.04	0.98	1.000	1
1,2,3,4,7,8,9-HpCDF	0.282**JK**		0.0644	3.04	0.67	1.000	1
OCDF	9.47		0.229	6.07	0.86	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:15
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0232	**Units:**	ng/Kg
Lab Code:	E1801139-017	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 04:01
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.528g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519903	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	32.7		0.577	0.607	0.80		1
Total Penta-Dioxins	5.62		0.146	3.04	1.50		1
Total Hexa-Dioxins	26.7		0.126	3.04	1.19		1
Total Hepta-Dioxins	54.0		0.173	3.04	1.01		1
Total Tetra-Furans	110		0.205	0.607	0.81		1
Total Penta-Furans	3.86		0.101	3.04	1.51		1
Total Hexa-Furans	3.94		0.0686	3.04	1.39		1
Total Hepta-Furans	1.80	**J**	0.0609	3.04	0.98		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:15
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0232	**Units:**	Percent
Lab Code:	E1801139-017	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 04:01
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.528g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519903	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	663.711	33		25-164	0.81	1.029
13C-1,2,3,7,8-PeCDD	2000	1153.971	58		25-181	1.63	1.240
13C-1,2,3,4,7,8-HxCDD	2000	1042.011	52		32-141	1.27	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1021.657	51		28-130	1.29	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1311.821	66		23-140	1.05	1.071
13C-OCDD	4000	2024.615	51		17-157	0.88	1.142
13C-2,3,7,8-TCDF	2000	833.499	42		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	1039.193	52		24-185	1.58	1.186
13C-2,3,4,7,8-PeCDF	2000	1004.102	50		21-178	1.58	1.227
13C-1,2,3,4,7,8-HxCDF	2000	872.520	44		26-152	0.52	0.968
13C-1,2,3,6,7,8-HxCDF	2000	867.005	43		26-123	0.52	0.971
13C-1,2,3,7,8,9-HxCDF	2000	969.486	48		29-147	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	889.393	44		28-136	0.51	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	881.781	44		28-143	0.45	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1064.371	53		26-138	0.45	1.083
37Cl-2,3,7,8-TCDD	800	394.961	49		35-197	NA	1.030

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:15
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0232	**Units:**	ng/Kg
Lab Code:	E1801139-017	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**24.8**	0.577	0.607	1	1	24.8
1,2,3,7,8-PeCDD	**0.567**	0.146	3.04	1	1	0.567
1,2,3,4,7,8-HxCDD	**0.522**	0.119	3.04	1	0.1	0.0522
1,2,3,6,7,8-HxCDD	**0.676**	0.135	3.04	1	0.1	0.0676
1,2,3,7,8,9-HxCDD	**1.05**	0.124	3.04	1	0.1	0.105
1,2,3,4,6,7,8-HpCDD	**14.8**	0.173	3.04	1	0.01	0.148
OCDD	**464**	0.108	6.07	1	0.0003	0.139
2,3,7,8-TCDF	**60.2**	0.205	0.607	1	0.1	6.02
1,2,3,7,8-PeCDF	**2.08**	0.0995	3.04	1	0.03	0.0624
2,3,4,7,8-PeCDF	**1.61**	0.101	3.04	1	0.3	0.483
1,2,3,4,7,8-HxCDF	**3.31**	0.0658	3.04	1	0.1	0.331
1,2,3,6,7,8-HxCDF	**0.661**	0.0650	3.04	1	0.1	0.0661
1,2,3,7,8,9-HxCDF	**0.424**	0.0749	3.04	1	0.1	0.0424
2,3,4,6,7,8-HxCDF	**0.223**	0.0692	3.04	1	0.1	0.0223
1,2,3,4,6,7,8-HpCDF	**1.18**	0.0580	3.04	1	0.01	0.0118
1,2,3,4,7,8,9-HpCDF	**0.282**	0.0644	3.04	1	0.01	0.00282
OCDF	**9.47**	0.229	6.07	1	0.0003	0.00284
		Total TEQ				32.9

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/15/18 17:15
Sample Matrix:	Sediment	**Date Received:**	11/16/18 14:00
Sample Name:	SL0232	**Units:**	Percent
Lab Code:	E1801139-017	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	8.555g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	78.2		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:30
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0244	**Units:**	ng/Kg
Lab Code:	E1801139-018	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 04:49
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.825g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519904	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	108		0.532	0.550	0.77	1.001	1
1,2,3,7,8-PeCDD	1.02	**J**	0.114	2.75	1.60	1.000	1
1,2,3,4,7,8-HxCDD	0.627	**J**	0.108	2.75	1.39	1.000	1
1,2,3,6,7,8-HxCDD	1.30	**JK**	0.119	2.75	1.00	1.000	1
1,2,3,7,8,9-HxCDD	1.10	**JK**	0.110	2.75	1.47	1.007	1
1,2,3,4,6,7,8-HpCDD	77.7		1.41	2.75	1.03	1.000	1
OCDD	26100	**E**	0.0842	5.50	0.90	1.000	1
2,3,7,8-TCDF	229		0.165	0.550	0.75	1.001	1
1,2,3,7,8-PeCDF	7.33		0.159	2.75	1.41	1.001	1
2,3,4,7,8-PeCDF	6.89		0.164	2.75	1.39	1.001	1
1,2,3,4,7,8-HxCDF	12.9		0.211	2.75	1.19	1.000	1
1,2,3,6,7,8-HxCDF	3.62		0.214	2.75	1.27	1.000	1
1,2,3,7,8,9-HxCDF	1.03	**BJ**	0.235	2.75	1.14	1.000	1
2,3,4,6,7,8-HxCDF	1.06	**J**	0.219	2.75	1.34	1.000	1
1,2,3,4,6,7,8-HpCDF	9.20		0.109	2.75	1.03	1.000	1
1,2,3,4,7,8,9-HpCDF	1.82	**J**	0.116	2.75	1.13	1.000	1
OCDF	23.8		0.163	5.50	0.85	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:30
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0244	**Units:**	ng/Kg
Lab Code:	E1801139-018	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 04:49
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.825g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519904	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	120		0.532	0.550	0.86		1
Total Penta-Dioxins	1.36	**J**	0.114	2.75	1.43		1
Total Hexa-Dioxins	12.2		0.112	2.75	1.18		1
Total Hepta-Dioxins	195		1.41	2.75	1.06		1
Total Tetra-Furans	405		0.165	0.550	0.77		1
Total Penta-Furans	25.9		0.162	2.75	1.67		1
Total Hexa-Furans	24.9		0.219	2.75	1.20		1
Total Hepta-Furans	21.1		0.112	2.75	1.03		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:30
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0244	**Units:**	Percent
Lab Code:	E1801139-018	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 04:49
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.825g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519904	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	735.716	37		25-164	0.80	1.029
13C-1,2,3,7,8-PeCDD	2000	1243.818	62		25-181	1.60	1.240
13C-1,2,3,4,7,8-HxCDD	2000	1082.780	54		32-141	1.30	0.991
13C-1,2,3,6,7,8-HxCDD	2000	993.885	50		28-130	1.30	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1259.190	63		23-140	1.07	1.071
13C-OCDD	4000	1811.017	45		17-157	0.90	1.143
13C-2,3,7,8-TCDF	2000	940.112	47		24-169	0.78	0.988
13C-1,2,3,7,8-PeCDF	2000	1115.464	56		24-185	1.57	1.187
13C-2,3,4,7,8-PeCDF	2000	1084.996	54		21-178	1.61	1.227
13C-1,2,3,4,7,8-HxCDF	2000	882.444	44		26-152	0.52	0.968
13C-1,2,3,6,7,8-HxCDF	2000	875.893	44		26-123	0.53	0.971
13C-1,2,3,7,8,9-HxCDF	2000	996.948	50		29-147	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	905.178	45		28-136	0.51	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	831.019	42		28-143	0.45	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1047.915	52		26-138	0.43	1.084
37Cl-2,3,7,8-TCDD	800	443.368	55		35-197	NA	1.030

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:30
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0244	**Units:**	ng/Kg
Lab Code:	E1801139-018	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**108**	0.532	0.550	1	1	108
1,2,3,7,8-PeCDD	**1.02**	0.114	2.75	1	1	1.02
1,2,3,4,7,8-HxCDD	**0.627**	0.108	2.75	1	0.1	0.0627
1,2,3,6,7,8-HxCDD	**1.30**	0.119	2.75	1	0.1	0.130
1,2,3,7,8,9-HxCDD	**1.10**	0.110	2.75	1	0.1	0.110
1,2,3,4,6,7,8-HpCDD	**77.7**	1.41	2.75	1	0.01	0.777
OCDD	**26100**	0.0842	5.50	1	0.0003	7.83
2,3,7,8-TCDF	**229**	0.165	0.550	1	0.1	22.9
1,2,3,7,8-PeCDF	**7.33**	0.159	2.75	1	0.03	0.220
2,3,4,7,8-PeCDF	**6.89**	0.164	2.75	1	0.3	2.07
1,2,3,4,7,8-HxCDF	**12.9**	0.211	2.75	1	0.1	1.29
1,2,3,6,7,8-HxCDF	**3.62**	0.214	2.75	1	0.1	0.362
1,2,3,7,8,9-HxCDF	**1.03**	0.235	2.75	1	0.1	0.103
2,3,4,6,7,8-HxCDF	**1.06**	0.219	2.75	1	0.1	0.106
1,2,3,4,6,7,8-HpCDF	**9.20**	0.109	2.75	1	0.01	0.0920
1,2,3,4,7,8,9-HpCDF	**1.82**	0.116	2.75	1	0.01	0.0182
OCDF	**23.8**	0.163	5.50	1	0.0003	0.00714
		Total TEQ				145

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:30
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0244	**Units:**	Percent
Lab Code:	E1801139-018	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	7.965g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	84.0		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:35
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0245	**Units:**	ng/Kg
Lab Code:	E1801139-019	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 21:22
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.242g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519924	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519915

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	11400		152	152	0.82	1.001	100
1,2,3,7,8-PeCDD	45.7		0.117	3.04	1.60	1.001	1
1,2,3,4,7,8-HxCDD	1.15	**J**	0.312	3.04	1.27	1.000	1
1,2,3,6,7,8-HxCDD	8.03		0.355	3.04	1.22	1.000	1
1,2,3,7,8,9-HxCDD	3.49		0.325	3.04	1.26	1.007	1
1,2,3,4,6,7,8-HpCDD	258		0.636	3.04	1.07	1.000	1
OCDD	4590		0.359	6.07	0.89	1.000	1
2,3,7,8-TCDF	18000		59.5	60.7	0.76	1.001	100
1,2,3,7,8-PeCDF	509		1.61	3.04	1.52	1.000	1
2,3,4,7,8-PeCDF	390		1.68	3.04	1.53	1.001	1
1,2,3,4,7,8-HxCDF	1070		0.464	3.04	1.20	1.000	1
1,2,3,6,7,8-HxCDF	251	**P**	0.460	3.04	1.23	1.000	1
1,2,3,7,8,9-HxCDF	78.7		0.533	3.04	1.15	1.001	1
2,3,4,6,7,8-HxCDF	49.1		0.497	3.04	1.17	1.000	1
1,2,3,4,6,7,8-HpCDF	279		0.588	3.04	1.02	1.000	1
1,2,3,4,7,8,9-HpCDF	108		0.694	3.04	1.00	1.000	1
OCDF	236		0.190	6.07	0.91	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:35
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0245	**Units:**	ng/Kg
Lab Code:	E1801139-019	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 21:22
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.242g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519924	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519915

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	7290		0.605	0.607	0.82		1
Total Penta-Dioxins	63.9		0.117	3.04	1.48		1
Total Hexa-Dioxins	87.0		0.330	3.04	1.24		1
Total Hepta-Dioxins	485		0.636	3.04	1.08		1
Total Tetra-Furans	24200		0.350	0.607	0.75		1
Total Penta-Furans	1370		1.65	3.04	1.50		1
Total Hexa-Furans	1570		0.487	3.04	1.17		1
Total Hepta-Furans	506		0.636	3.04	1.02		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:35
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0245	**Units:**	Percent
Lab Code:	E1801139-019	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 05:38
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.242g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519905	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	568.535	28		25-164	0.80	1.028
13C-1,2,3,7,8-PeCDD	2000	937.365	47		25-181	1.61	1.238
13C-1,2,3,4,7,8-HxCDD	2000	871.598	44		32-141	1.30	0.991
13C-1,2,3,6,7,8-HxCDD	2000	776.936	39		28-130	1.26	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1078.629	54		23-140	1.07	1.071
13C-OCDD	4000	1734.260	43		17-157	0.88	1.142
13C-2,3,7,8-TCDF	2000	709.130	35		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	881.877	44		24-185	1.61	1.186
13C-2,3,4,7,8-PeCDF	2000	822.073	41		21-178	1.60	1.225
13C-1,2,3,4,7,8-HxCDF	2000	698.363	35		26-152	0.51	0.968
13C-1,2,3,6,7,8-HxCDF	2000	699.322	35		26-123	0.51	0.971
13C-1,2,3,7,8,9-HxCDF	2000	774.496	39		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	682.326	34		28-136	0.50	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	761.906	38		28-143	0.45	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	863.409	43		26-138	0.44	1.084
37Cl-2,3,7,8-TCDD	800	409.154	51		35-197	NA	1.029

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:35
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0245	**Units:**	ng/Kg
Lab Code:	E1801139-019	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**11400**	152	152	100	1	11400
1,2,3,7,8-PeCDD	**45.7**	0.117	3.04	1	1	45.7
1,2,3,4,7,8-HxCDD	**1.15**	0.312	3.04	1	0.1	0.115
1,2,3,6,7,8-HxCDD	**8.03**	0.355	3.04	1	0.1	0.803
1,2,3,7,8,9-HxCDD	**3.49**	0.325	3.04	1	0.1	0.349
1,2,3,4,6,7,8-HpCDD	**258**	0.636	3.04	1	0.01	2.58
OCDD	**4590**	0.359	6.07	1	0.0003	1.38
2,3,7,8-TCDF	**18000**	59.5	60.7	100	0.1	1800
1,2,3,7,8-PeCDF	**509**	1.61	3.04	1	0.03	15.3
2,3,4,7,8-PeCDF	**390**	1.68	3.04	1	0.3	117
1,2,3,4,7,8-HxCDF	**1070**	0.464	3.04	1	0.1	107
1,2,3,6,7,8-HxCDF	**251**	0.460	3.04	1	0.1	25.1
1,2,3,7,8,9-HxCDF	**78.7**	0.533	3.04	1	0.1	7.87
2,3,4,6,7,8-HxCDF	**49.1**	0.497	3.04	1	0.1	4.91
1,2,3,4,6,7,8-HpCDF	**279**	0.588	3.04	1	0.01	2.79
1,2,3,4,7,8,9-HpCDF	**108**	0.694	3.04	1	0.01	1.08
OCDF	**236**	0.190	6.07	1	0.0003	0.0708
		Total TEQ				13500

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:35
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0245	**Units:**	Percent
Lab Code:	E1801139-019	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	6.742g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	80.4		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:40
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0246	**Units:**	ng/Kg
Lab Code:	E1801139-020	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 06:27
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.760g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519906	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	66.3		0.503	0.611	0.76	1.001	1
1,2,3,7,8-PeCDD	0.926	**JK**	0.158	3.06	1.08	1.000	1
1,2,3,4,7,8-HxCDD	0.725	**J**	0.178	3.06	1.33	1.000	1
1,2,3,6,7,8-HxCDD	1.28	**J**	0.203	3.06	1.05	1.000	1
1,2,3,7,8,9-HxCDD	2.23	**J**	0.186	3.06	1.14	1.007	1
1,2,3,4,6,7,8-HpCDD	29.6		0.449	3.06	1.06	1.000	1
OCDD	849		0.220	6.11	0.89	1.000	1
2,3,7,8-TCDF	142		0.312	0.611	0.77	1.001	1
1,2,3,7,8-PeCDF	4.33		0.288	3.06	1.67	1.001	1
2,3,4,7,8-PeCDF	3.95		0.297	3.06	1.74	1.001	1
1,2,3,4,7,8-HxCDF	6.74		0.126	3.06	1.23	1.000	1
1,2,3,6,7,8-HxCDF	2.01	**J**	0.125	3.06	1.31	1.001	1
1,2,3,7,8,9-HxCDF	0.937	**BJ**	0.144	3.06	1.22	1.001	1
2,3,4,6,7,8-HxCDF	0.647	**J**	0.130	3.06	1.17	1.000	1
1,2,3,4,6,7,8-HpCDF	2.82	**J**	0.0753	3.06	1.00	1.000	1
1,2,3,4,7,8,9-HpCDF	0.534	**JK**	0.0864	3.06	1.57	1.000	1
OCDF	2.15	**J**	0.189	6.11	0.86	1.004	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:40
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0246	**Units:**	ng/Kg
Lab Code:	E1801139-020	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 06:27
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.760g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519906	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	78.2		0.503	0.611	0.76		1
Total Penta-Dioxins	1.70	**J**	0.158	3.06	1.68		1
Total Hexa-Dioxins	28.8		0.189	3.06	1.26		1
Total Hepta-Dioxins	87.5		0.449	3.06	1.04		1
Total Tetra-Furans	250		0.312	0.611	0.83		1
Total Penta-Furans	13.8		0.293	3.06	1.68		1
Total Hexa-Furans	11.9		0.131	3.06	1.23		1
Total Hepta-Furans	3.99		0.0803	3.06	1.00		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:40
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0246	**Units:**	Percent
Lab Code:	E1801139-020	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 06:27
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.760g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519906	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	634.962	32		25-164	0.80	1.029
13C-1,2,3,7,8-PeCDD	2000	1132.438	57		25-181	1.62	1.240
13C-1,2,3,4,7,8-HxCDD	2000	1028.190	51		32-141	1.33	0.991
13C-1,2,3,6,7,8-HxCDD	2000	971.644	49		28-130	1.22	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1349.347	67		23-140	1.04	1.071
13C-OCDD	4000	2036.879	51		17-157	0.87	1.142
13C-2,3,7,8-TCDF	2000	817.050	41		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	1007.199	50		24-185	1.57	1.187
13C-2,3,4,7,8-PeCDF	2000	980.091	49		21-178	1.58	1.227
13C-1,2,3,4,7,8-HxCDF	2000	833.532	42		26-152	0.51	0.968
13C-1,2,3,6,7,8-HxCDF	2000	838.028	42		26-123	0.52	0.971
13C-1,2,3,7,8,9-HxCDF	2000	949.283	47		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	872.140	44		28-136	0.52	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	900.664	45		28-143	0.46	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1020.400	51		26-138	0.46	1.084
37Cl-2,3,7,8-TCDD	800	394.908	49		35-197	NA	1.030

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:40
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0246	**Units:**	ng/Kg
Lab Code:	E1801139-020	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**66.3**	0.503	0.611	1	1	66.3
1,2,3,7,8-PeCDD	**0.926**	0.158	3.06	1	1	0.926
1,2,3,4,7,8-HxCDD	**0.725**	0.178	3.06	1	0.1	0.0725
1,2,3,6,7,8-HxCDD	**1.28**	0.203	3.06	1	0.1	0.128
1,2,3,7,8,9-HxCDD	**2.23**	0.186	3.06	1	0.1	0.223
1,2,3,4,6,7,8-HpCDD	**29.6**	0.449	3.06	1	0.01	0.296
OCDD	**849**	0.220	6.11	1	0.0003	0.255
2,3,7,8-TCDF	**142**	0.312	0.611	1	0.1	14.2
1,2,3,7,8-PeCDF	**4.33**	0.288	3.06	1	0.03	0.130
2,3,4,7,8-PeCDF	**3.95**	0.297	3.06	1	0.3	1.19
1,2,3,4,7,8-HxCDF	**6.74**	0.126	3.06	1	0.1	0.674
1,2,3,6,7,8-HxCDF	**2.01**	0.125	3.06	1	0.1	0.201
1,2,3,7,8,9-HxCDF	**0.937**	0.144	3.06	1	0.1	0.0937
2,3,4,6,7,8-HxCDF	**0.647**	0.130	3.06	1	0.1	0.0647
1,2,3,4,6,7,8-HpCDF	**2.82**	0.0753	3.06	1	0.01	0.0282
1,2,3,4,7,8,9-HpCDF	**0.534**	0.0864	3.06	1	0.01	0.00534
OCDF	**2.15**	0.189	6.11	1	0.0003	0.000645
		Total TEQ				84.8

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:40
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0246	**Units:**	Percent
Lab Code:	E1801139-020	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/04/19 13:28
	6.734g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	76.0		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:45
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0247	**Units:**	ng/Kg
Lab Code:	E1801139-021	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/16/19 16:10
Prep Method:	Method Soxhlet	**Date Extracted:**	1/14/19
Sample Amount:	10.248g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520001	**Blank File Name:**	P519999
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519996

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	253		1.31	3.81	0.76	1.001	1
1,2,3,7,8-PeCDD	3.14	**JK**	0.269	19.1	1.79	1.000	1
1,2,3,4,7,8-HxCDD	1.93	**JK**	0.504	19.1	0.98	1.000	1
1,2,3,6,7,8-HxCDD	3.06	**J**	0.565	19.1	1.18	1.000	1
1,2,3,7,8,9-HxCDD	5.46	**J**	0.521	19.1	1.19	1.007	1
1,2,3,4,6,7,8-HpCDD	77.0		0.650	19.1	1.06	1.000	1
OCDD	2270		0.615	38.1	0.90	1.000	1
2,3,7,8-TCDF	513		0.482	3.81	0.76	1.001	1
1,2,3,7,8-PeCDF	14.7	**J**	0.507	19.1	1.46	1.000	1
2,3,4,7,8-PeCDF	13.6	**J**	0.530	19.1	1.36	1.000	1
1,2,3,4,7,8-HxCDF	22.5		0.321	19.1	1.21	1.000	1
1,2,3,6,7,8-HxCDF	6.38	**J**	0.306	19.1	1.26	1.000	1
1,2,3,7,8,9-HxCDF	2.36	**J**	0.358	19.1	1.23	1.001	1
2,3,4,6,7,8-HxCDF	1.66	**J**	0.309	19.1	1.32	1.000	1
1,2,3,4,6,7,8-HpCDF	8.18	**J**	0.251	19.1	0.98	1.000	1
1,2,3,4,7,8,9-HpCDF	2.33	**JK**	0.332	19.1	1.34	1.000	1
OCDF	5.12	**J**	0.581	38.1	0.92	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:45
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0247	**Units:**	ng/Kg
Lab Code:	E1801139-021	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/16/19 16:10
Prep Method:	Method Soxhlet	**Date Extracted:**	1/14/19
Sample Amount:	10.248g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520001	**Blank File Name:**	P519999
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519996

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	373		1.31	3.81	0.83		1
Total Penta-Dioxins	34.2		0.269	19.1	1.41		1
Total Hexa-Dioxins	188		0.530	19.1	1.22		1
Total Hepta-Dioxins	312		0.650	19.1	1.05		1
Total Tetra-Furans	904		0.482	3.81	0.74		1
Total Penta-Furans	36.2		0.518	19.1	1.64		1
Total Hexa-Furans	36.9		0.322	19.1	1.18		1
Total Hepta-Furans	8.18	**J**	0.287	19.1	0.98		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:45
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0247	**Units:**	Percent
Lab Code:	E1801139-021	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/16/19 16:10
Prep Method:	Method Soxhlet	**Date Extracted:**	1/14/19
Sample Amount:	10.248g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520001	**Blank File Name:**	P519999
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519996

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1317.709	66		25-164	0.79	1.019
13C-1,2,3,7,8-PeCDD	2000	2146.677	107		25-181	1.57	1.180
13C-1,2,3,4,7,8-HxCDD	2000	1995.661	100		32-141	1.27	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1870.414	94		28-130	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	2291.008	115		23-140	1.05	1.067
13C-OCDD	4000	3199.367	80		17-157	0.89	1.142
13C-2,3,7,8-TCDF	2000	1636.696	82		24-169	0.79	0.992
13C-1,2,3,7,8-PeCDF	2000	1908.503	95		24-185	1.57	1.139
13C-2,3,4,7,8-PeCDF	2000	1854.026	93		21-178	1.58	1.170
13C-1,2,3,4,7,8-HxCDF	2000	1522.038	76		26-152	0.52	0.971
13C-1,2,3,6,7,8-HxCDF	2000	1554.577	78		26-123	0.52	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1681.529	84		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1661.010	83		28-136	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1584.903	79		28-143	0.44	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1632.303	82		26-138	0.44	1.080
37Cl-2,3,7,8-TCDD	800	787.718	98		35-197	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:45
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0247	**Units:**	ng/Kg
Lab Code:	E1801139-021	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**253**	1.31	3.81	1	1	253
1,2,3,7,8-PeCDD	**3.14**	0.269	19.1	1	1	3.14
1,2,3,4,7,8-HxCDD	**1.93**	0.504	19.1	1	0.1	0.193
1,2,3,6,7,8-HxCDD	**3.06**	0.565	19.1	1	0.1	0.306
1,2,3,7,8,9-HxCDD	**5.46**	0.521	19.1	1	0.1	0.546
1,2,3,4,6,7,8-HpCDD	**77.0**	0.650	19.1	1	0.01	0.770
OCDD	**2270**	0.615	38.1	1	0.0003	0.681
2,3,7,8-TCDF	**513**	0.482	3.81	1	0.1	51.3
1,2,3,7,8-PeCDF	**14.7**	0.507	19.1	1	0.03	0.441
2,3,4,7,8-PeCDF	**13.6**	0.530	19.1	1	0.3	4.08
1,2,3,4,7,8-HxCDF	**22.5**	0.321	19.1	1	0.1	2.25
1,2,3,6,7,8-HxCDF	**6.38**	0.306	19.1	1	0.1	0.638
1,2,3,7,8,9-HxCDF	**2.36**	0.358	19.1	1	0.1	0.236
2,3,4,6,7,8-HxCDF	**1.66**	0.309	19.1	1	0.1	0.166
1,2,3,4,6,7,8-HpCDF	**8.18**	0.251	19.1	1	0.01	0.0818
1,2,3,4,7,8,9-HpCDF	**2.33**	0.332	19.1	1	0.01	0.0233
OCDF	**5.12**	0.581	38.1	1	0.0003	0.00154
		Total TEQ				318

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:45
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0247	**Units:**	Percent
Lab Code:	E1801139-021	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/10/19 15:31
	7.961g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	12.8		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:50
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0248	**Units:**	ng/Kg
Lab Code:	E1801139-022	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/16/19 16:59
Prep Method:	Method Soxhlet	**Date Extracted:**	1/14/19
Sample Amount:	10.247g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520002	**Blank File Name:**	P519999
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519996

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	0.896	**K**	0.203	0.638	0.61	1.001	1
1,2,3,7,8-PeCDD	0.319	**JK**	0.0405	3.19	1.19	1.000	1
1,2,3,4,7,8-HxCDD	0.342	**JK**	0.0555	3.19	0.89	1.000	1
1,2,3,6,7,8-HxCDD	0.604	**JK**	0.0617	3.19	1.48	1.000	1
1,2,3,7,8,9-HxCDD	0.940	**J**	0.0572	3.19	1.36	1.007	1
1,2,3,4,6,7,8-HpCDD	13.6		0.0720	3.19	1.03	1.000	1
OCDD	385		0.0710	6.38	0.89	1.000	1
2,3,7,8-TCDF	2.24		0.0939	0.638	0.77	1.000	1
1,2,3,7,8-PeCDF	0.149	**JK**	0.0562	3.19	2.27	1.001	1
2,3,4,7,8-PeCDF	0.246	**JK**	0.0580	3.19	1.27	1.001	1
1,2,3,4,7,8-HxCDF	0.194	**JK**	0.0478	3.19	0.96	1.000	1
1,2,3,6,7,8-HxCDF	0.162	**JK**	0.0453	3.19	1.55	1.000	1
1,2,3,7,8,9-HxCDF	0.0893	**BJK**	0.0552	3.19	1.62	1.000	1
2,3,4,6,7,8-HxCDF	0.134	**JK**	0.0479	3.19	0.99	1.000	1
1,2,3,4,6,7,8-HpCDF	0.360	**BJ**	0.0312	3.19	0.99	1.000	1
1,2,3,4,7,8,9-HpCDF	0.0462	**JK**	0.0421	3.19	0.44	1.000	1
OCDF	0.202	**JK**	0.0983	6.38	1.05	1.006	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:50
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0248	**Units:**	ng/Kg
Lab Code:	E1801139-022	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/16/19 16:59
Prep Method:	Method Soxhlet	**Date Extracted:**	1/14/19
Sample Amount:	10.247g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520002	**Blank File Name:**	P519999
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519996

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	5.82		0.203	0.638	0.72		1
Total Penta-Dioxins	2.42**J**		0.0405	3.19	1.56		1
Total Hexa-Dioxins	16.9		0.0582	3.19	1.30		1
Total Hepta-Dioxins	44.2		0.0720	3.19	1.00		1
Total Tetra-Furans	5.59		0.0939	0.638	0.73		1
Total Penta-Furans	1.17**J**		0.0571	3.19	1.62		1
Total Hexa-Furans	0.128**J**		0.0488	3.19	1.16		1
Total Hepta-Furans	0.488**J**		0.0362	3.19	0.99		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:50
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0248	**Units:**	Percent
Lab Code:	E1801139-022	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/16/19 16:59
Prep Method:	Method Soxhlet	**Date Extracted:**	1/14/19
Sample Amount:	10.247g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520002	**Blank File Name:**	P519999
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519996

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1198.770	60		25-164	0.78	1.019
13C-1,2,3,7,8-PeCDD	2000	2074.065	104		25-181	1.57	1.181
13C-1,2,3,4,7,8-HxCDD	2000	1977.873	99		32-141	1.27	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1937.521	97		28-130	1.27	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	2277.161	114		23-140	1.06	1.067
13C-OCDD	4000	3072.555	77		17-157	0.90	1.142
13C-2,3,7,8-TCDF	2000	1467.501	73		24-169	0.80	0.992
13C-1,2,3,7,8-PeCDF	2000	1806.066	90		24-185	1.58	1.139
13C-2,3,4,7,8-PeCDF	2000	1768.426	88		21-178	1.57	1.170
13C-1,2,3,4,7,8-HxCDF	2000	1601.497	80		26-152	0.52	0.971
13C-1,2,3,6,7,8-HxCDF	2000	1575.237	79		26-123	0.53	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1692.073	85		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1680.295	84		28-136	0.52	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	1576.987	79		28-143	0.45	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1704.640	85		26-138	0.45	1.079
37Cl-2,3,7,8-TCDD	800	729.288	91		35-197	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:50
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0248	**Units:**	ng/Kg
Lab Code:	E1801139-022	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**0.896**	0.203	0.638	1	1	0.896
1,2,3,7,8-PeCDD	**0.319**	0.0405	3.19	1	1	0.319
1,2,3,4,7,8-HxCDD	**0.342**	0.0555	3.19	1	0.1	0.0342
1,2,3,6,7,8-HxCDD	**0.604**	0.0617	3.19	1	0.1	0.0604
1,2,3,7,8,9-HxCDD	**0.940**	0.0572	3.19	1	0.1	0.0940
1,2,3,4,6,7,8-HpCDD	**13.6**	0.0720	3.19	1	0.01	0.136
OCDD	**385**	0.0710	6.38	1	0.0003	0.116
2,3,7,8-TCDF	**2.24**	0.0939	0.638	1	0.1	0.224
1,2,3,7,8-PeCDF	**0.149**	0.0562	3.19	1	0.03	0.00447
2,3,4,7,8-PeCDF	**0.246**	0.0580	3.19	1	0.3	0.0738
1,2,3,4,7,8-HxCDF	**0.194**	0.0478	3.19	1	0.1	0.0194
1,2,3,6,7,8-HxCDF	**0.162**	0.0453	3.19	1	0.1	0.0162
1,2,3,7,8,9-HxCDF	**0.0893**	0.0552	3.19	1	0.1	0.00893
2,3,4,6,7,8-HxCDF	**0.134**	0.0479	3.19	1	0.1	0.0134
1,2,3,4,6,7,8-HpCDF	**0.360**	0.0312	3.19	1	0.01	0.00360
1,2,3,4,7,8,9-HpCDF	**0.0462**	0.0421	3.19	1	0.01	0.000462
OCDF	**0.202**	0.0983	6.38	1	0.0003	0.0000606
		Total TEQ				2.02

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	11/16/18 11:50
Sample Matrix:	Sediment	**Date Received:**	11/17/18 09:52
Sample Name:	SL0248	**Units:**	Percent
Lab Code:	E1801139-022	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	01/10/19 15:31
	6.625g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	76.5		-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1900003-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 14:48
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.299g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519887	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519885

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.382	0.485			1
1,2,3,7,8-PeCDD	ND	U	0.0602	2.43			1
1,2,3,4,7,8-HxCDD	ND	U	0.0483	2.43			1
1,2,3,6,7,8-HxCDD	ND	U	0.0520	2.43			1
1,2,3,7,8,9-HxCDD	ND	U	0.0490	2.43			1
1,2,3,4,6,7,8-HpCDD	0.0598**JK**		0.0368	2.43	1.25	1.001	1
OCDD	0.355**J**		0.0729	4.85	0.97	1.000	1
2,3,7,8-TCDF	ND	U	0.0942	0.485			1
1,2,3,7,8-PeCDF	ND	U	0.0616	2.43			1
2,3,4,7,8-PeCDF	ND	U	0.0631	2.43			1
1,2,3,4,7,8-HxCDF	ND	U	0.0580	2.43			1
1,2,3,6,7,8-HxCDF	ND	U	0.0584	2.43			1
1,2,3,7,8,9-HxCDF	0.104**J**		0.0650	2.43	1.23	1.000	1
2,3,4,6,7,8-HxCDF	ND	U	0.0578	2.43			1
1,2,3,4,6,7,8-HpCDF	0.0526**JK**		0.0394	2.43	1.37	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0491	2.43			1
OCDF	ND	U	0.114	4.85			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1900003-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 14:48
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.299g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519887	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519885

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.382	0.485			1
Total Penta-Dioxins	ND	U	0.0602	2.43			1
Total Hexa-Dioxins	ND	U	0.0498	2.43			1
Total Hepta-Dioxins	ND	U	0.0368	2.43			1
Total Tetra-Furans	ND	U	0.0942	0.485			1
Total Penta-Furans	ND	U	0.0624	2.43			1
Total Hexa-Furans	0.104**J**		0.0596	2.43	1.23		1
Total Hepta-Furans	ND	U	0.0437	2.43			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	Percent
Lab Code:	EQ1900003-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/10/19 14:48
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.299g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519887	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519885

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	876.684	44		25-164	0.80	1.029
13C-1,2,3,7,8-PeCDD	2000	1538.885	77		25-181	1.59	1.239
13C-1,2,3,4,7,8-HxCDD	2000	1557.967	78		32-141	1.25	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1488.865	74		28-130	1.26	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1944.147	97		23-140	1.04	1.071
13C-OCDD	4000	2963.196	74		17-157	0.90	1.143
13C-2,3,7,8-TCDF	2000	1075.935	54		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	1350.506	68		24-185	1.59	1.186
13C-2,3,4,7,8-PeCDF	2000	1329.742	66		21-178	1.59	1.226
13C-1,2,3,4,7,8-HxCDF	2000	1246.945	62		26-152	0.51	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1261.368	63		26-123	0.52	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1331.223	67		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1323.666	66		28-136	0.52	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1334.881	67		28-143	0.44	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1416.791	71		26-138	0.45	1.084
37Cl-2,3,7,8-TCDD	800	493.074	62		35-197	NA	1.030

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1900017-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/16/19 14:33
Prep Method:	Method Soxhlet	**Date Extracted:**	1/14/19
Sample Amount:	10.410g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519999	**Blank File Name:**	P519999
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519996

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.151	0.480			1
1,2,3,7,8-PeCDD	ND	U	0.0250	2.40			1
1,2,3,4,7,8-HxCDD	ND	U	0.0228	2.40			1
1,2,3,6,7,8-HxCDD	0.0275**JK**		0.0251	2.40	1.48	1.000	1
1,2,3,7,8,9-HxCDD	ND	U	0.0234	2.40			1
1,2,3,4,6,7,8-HpCDD	0.0422**JK**		0.0303	2.40	1.78	1.000	1
OCDD	0.309**J**		0.0499	4.80	0.87	1.000	1
2,3,7,8-TCDF	ND	U	0.0512	0.480			1
1,2,3,7,8-PeCDF	ND	U	0.0322	2.40			1
2,3,4,7,8-PeCDF	ND	U	0.0346	2.40			1
1,2,3,4,7,8-HxCDF	ND	U	0.0328	2.40			1
1,2,3,6,7,8-HxCDF	ND	U	0.0314	2.40			1
1,2,3,7,8,9-HxCDF	0.0565**JK**		0.0384	2.40	0.91	1.000	1
2,3,4,6,7,8-HxCDF	ND	U	0.0336	2.40			1
1,2,3,4,6,7,8-HpCDF	0.0397**JK**		0.0260	2.40	1.21	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0343	2.40			1
OCDF	ND	U	0.0594	4.80			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1900017-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/16/19 14:33
Prep Method:	Method Soxhlet	**Date Extracted:**	1/14/19
Sample Amount:	10.410g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519999	**Blank File Name:**	P519999
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519996

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.151	0.480			1
Total Penta-Dioxins	ND	U	0.0250	2.40			1
Total Hexa-Dioxins	ND	U	0.0238	2.40			1
Total Hepta-Dioxins	ND	U	0.0303	2.40			1
Total Tetra-Furans	ND	U	0.0512	0.480			1
Total Penta-Furans	ND	U	0.0334	2.40			1
Total Hexa-Furans	ND	U	0.0339	2.40			1
Total Hepta-Furans	ND	U	0.0297	2.40			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	Percent
Lab Code:	EQ1900017-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/16/19 14:33
Prep Method:	Method Soxhlet	**Date Extracted:**	1/14/19
Sample Amount:	10.410g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519999	**Blank File Name:**	P519999
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519996

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1299.702	65		25-164	0.78	1.019
13C-1,2,3,7,8-PeCDD	2000	2102.193	105		25-181	1.59	1.180
13C-1,2,3,4,7,8-HxCDD	2000	1995.051	100		32-141	1.27	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1914.846	96		28-130	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	2372.519	119		23-140	1.06	1.067
13C-OCDD	4000	3452.845	86		17-157	0.89	1.143
13C-2,3,7,8-TCDF	2000	1587.349	79		24-169	0.79	0.992
13C-1,2,3,7,8-PeCDF	2000	1919.249	96		24-185	1.57	1.139
13C-2,3,4,7,8-PeCDF	2000	1815.984	91		21-178	1.59	1.170
13C-1,2,3,4,7,8-HxCDF	2000	1635.230	82		26-152	0.52	0.971
13C-1,2,3,6,7,8-HxCDF	2000	1649.840	82		26-123	0.52	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1731.636	87		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1688.116	84		28-136	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1679.119	84		28-143	0.46	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1766.537	88		26-138	0.45	1.080
37Cl-2,3,7,8-TCDD	800	706.124	88		35-197	NA	1.020

Accuracy & Precision

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Analyzed:**	01/11/19
Sample Matrix:	Sediment	**Date Extracted:**	01/03/19

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Units:**	ng/Kg
Prep Method:	Method Soxhlet	**Basis:**	Dry
		Analysis Lot:	621859

	Lab Control Sample EQ1900003-02			Duplicate Lab Control Sample EQ1900003-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,2,3,4,6,7,8-HpCDD	70.3	99.4	71	70.7	99.3	71	70-140	<1	50
1,2,3,4,7,8-HxCDD	84.1	99.4	85	86.8	99.3	87	70-164	3	50
1,2,3,6,7,8-HxCDD	93.0	99.4	94	94.9	99.3	96	76-134	2	50
1,2,3,7,8,9-HxCDD	89.9	99.4	90	91.6	99.3	92	64-162	2	50
1,2,3,7,8-PeCDD	92.7	99.4	93	95.1	99.3	96	70-142	3	50
2,3,7,8-TCDD	30.0	19.9	151	27.2	19.9	137	67-158	10	50
OCDD	191	199	96	191	199	96	78-144	<1	50
1,2,3,4,6,7,8-HpCDF	89.6	99.4	90	90.0	99.3	91	82-122	<1	50
1,2,3,4,7,8,9-HpCDF	96.9	99.4	97	95.2	99.3	96	78-138	2	50
1,2,3,4,7,8-HxCDF	89.9	99.4	90	93.6	99.3	94	72-134	4	50
1,2,3,6,7,8-HxCDF	91.1	99.4	92	92.1	99.3	93	84-130	1	50
1,2,3,7,8,9-HxCDF	87.9	99.4	89	86.7	99.3	87	78-130	1	50
1,2,3,7,8-PeCDF	84.9	99.4	85	86.5	99.3	87	80-134	2	50
2,3,4,6,7,8-HxCDF	93.9	99.4	95	96.7	99.3	97	70-156	3	50
2,3,4,7,8-PeCDF	94.7	99.4	95	96.8	99.3	98	68-160	2	50
2,3,7,8-TCDF	24.0	19.9	121	19.5	19.9	98	75-158	21	50
OCDF	200	199	101	196	199	99	63-170	2	50

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900003-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 12:11
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.063g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519913	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	30.0		0.988	0.988	0.79	1.001	1
1,2,3,7,8-PeCDD	92.7		0.108	2.48	1.59	1.001	1
1,2,3,4,7,8-HxCDD	84.1		0.0608	2.48	1.29	1.000	1
1,2,3,6,7,8-HxCDD	93.0		0.0675	2.48	1.25	1.000	1
1,2,3,7,8,9-HxCDD	89.9		0.0627	2.48	1.26	1.007	1
1,2,3,4,6,7,8-HpCDD	70.3		0.0544	2.48	1.05	1.000	1
OCDD	191		0.103	4.97	0.88	1.000	1
2,3,7,8-TCDF	24.0		0.396	0.497	0.76	1.001	1
1,2,3,7,8-PeCDF	84.9		0.146	2.48	1.49	1.001	1
2,3,4,7,8-PeCDF	94.7		0.130	2.48	1.55	1.001	1
1,2,3,4,7,8-HxCDF	89.9		0.0734	2.48	1.17	1.000	1
1,2,3,6,7,8-HxCDF	91.1		0.0694	2.48	1.20	1.000	1
1,2,3,7,8,9-HxCDF	87.9		0.0790	2.48	1.22	1.000	1
2,3,4,6,7,8-HxCDF	93.9		0.0722	2.48	1.19	1.000	1
1,2,3,4,6,7,8-HpCDF	89.6		0.131	2.48	1.01	1.000	1
1,2,3,4,7,8,9-HpCDF	96.9		0.150	2.48	1.02	1.000	1
OCDF	200		0.134	4.97	0.87	1.005	1

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900003-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 12:11
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.063g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519913	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	30.0		0.988	0.988	0.79		1
Total Penta-Dioxins	92.7		0.108	2.48	1.59		1
Total Hexa-Dioxins	267		0.0636	2.48	1.29		1
Total Hepta-Dioxins	70.3		0.0544	2.48	1.05		1
Total Tetra-Furans	26.7		0.396	0.497	0.70		1
Total Penta-Furans	180		0.138	2.48	1.49		1
Total Hexa-Furans	363		0.0733	2.48	1.17		1
Total Hepta-Furans	186		0.140	2.48	1.01		1

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1900003-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 12:11
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.063g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519913	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	341.532	17	**Y**	25-164	0.77	1.028
13C-1,2,3,7,8-PeCDD	2000	1056.510	53		25-181	1.60	1.239
13C-1,2,3,4,7,8-HxCDD	2000	1115.926	56		32-141	1.26	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1097.320	55		28-130	1.26	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1602.744	80		23-140	1.06	1.072
13C-OCDD	4000	2661.290	67		17-157	0.88	1.142
13C-2,3,7,8-TCDF	2000	390.868	20	**Y**	24-169	0.80	0.988
13C-1,2,3,7,8-PeCDF	2000	817.923	41		24-185	1.58	1.186
13C-2,3,4,7,8-PeCDF	2000	884.927	44		21-178	1.60	1.226
13C-1,2,3,4,7,8-HxCDF	2000	859.519	43		26-152	0.53	0.968
13C-1,2,3,6,7,8-HxCDF	2000	885.487	44		26-123	0.52	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1008.493	50		29-147	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	928.232	46		28-136	0.52	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1084.701	54		28-143	0.45	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1199.307	60		26-138	0.44	1.084
37Cl-2,3,7,8-TCDD	800	197.582	25	**Y**	35-197	NA	1.029

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900003-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 12:59
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.075g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519914	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	27.2		0.509	0.509	0.82	1.001	1
1,2,3,7,8-PeCDD	95.1		0.0733	2.48	1.52	1.000	1
1,2,3,4,7,8-HxCDD	86.8		0.0732	2.48	1.25	1.000	1
1,2,3,6,7,8-HxCDD	94.9		0.0797	2.48	1.29	1.000	1
1,2,3,7,8,9-HxCDD	91.6		0.0746	2.48	1.31	1.007	1
1,2,3,4,6,7,8-HpCDD	70.7		0.0417	2.48	1.05	1.000	1
OCDD	191		0.0843	4.96	0.87	1.000	1
2,3,7,8-TCDF	19.5		0.232	0.496	0.78	1.001	1
1,2,3,7,8-PeCDF	86.5		0.0785	2.48	1.50	1.001	1
2,3,4,7,8-PeCDF	96.8		0.0807	2.48	1.55	1.001	1
1,2,3,4,7,8-HxCDF	93.6		0.0437	2.48	1.25	1.000	1
1,2,3,6,7,8-HxCDF	92.1		0.0435	2.48	1.11	1.000	1
1,2,3,7,8,9-HxCDF	86.7		0.0498	2.48	1.19	1.000	1
2,3,4,6,7,8-HxCDF	96.7		0.0441	2.48	1.24	1.000	1
1,2,3,4,6,7,8-HpCDF	90.0		0.0612	2.48	1.00	1.000	1
1,2,3,4,7,8,9-HpCDF	95.2		0.0762	2.48	1.01	1.000	1
OCDF	196		0.101	4.96	0.88	1.005	1

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900003-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 12:59
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.075g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519914	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	27.2		0.509	0.509	0.82		1
Total Penta-Dioxins	95.5		0.0733	2.48	1.52		1
Total Hexa-Dioxins	273		0.0758	2.48	1.25		1
Total Hepta-Dioxins	70.7		0.0417	2.48	1.05		1
Total Tetra-Furans	19.5		0.232	0.496	0.78		1
Total Penta-Furans	184		0.0796	2.48	1.74		1
Total Hexa-Furans	369		0.0452	2.48	1.25		1
Total Hepta-Furans	185		0.0680	2.48	1.00		1

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1900003-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/11/19 12:59
Prep Method:	Method Soxhlet	**Date Extracted:**	1/3/19
Sample Amount:	10.075g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P519914	**Blank File Name:**	P519887
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519900

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	699.544	35		25-164	0.80	1.028
13C-1,2,3,7,8-PeCDD	2000	1342.211	67		25-181	1.62	1.239
13C-1,2,3,4,7,8-HxCDD	2000	1302.484	65		32-141	1.26	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1246.388	62		28-130	1.27	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1833.997	92		23-140	1.04	1.071
13C-OCDD	4000	3182.850	80		17-157	0.89	1.142
13C-2,3,7,8-TCDF	2000	879.141	44		24-169	0.78	0.988
13C-1,2,3,7,8-PeCDF	2000	1194.012	60		24-185	1.55	1.186
13C-2,3,4,7,8-PeCDF	2000	1147.925	57		21-178	1.59	1.226
13C-1,2,3,4,7,8-HxCDF	2000	1018.441	51		26-152	0.51	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1080.298	54		26-123	0.51	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1156.124	58		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1080.469	54		28-136	0.53	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1287.402	64		28-143	0.44	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1382.935	69		26-138	0.44	1.083
37Cl-2,3,7,8-TCDD	800	422.576	53		35-197	NA	1.029

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Analyzed:**	01/16/19
Sample Matrix:	Sediment	**Date Extracted:**	01/14/19

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Units:**	ng/Kg
Prep Method:	Method Soxhlet	**Basis:**	Dry
		Analysis Lot:	622327

	Lab Control Sample EQ1900017-02			Duplicate Lab Control Sample EQ1900017-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,2,3,4,6,7,8-HpCDD	77.7	99.7	78	78.0	98.9	79	70-140	<1	50
1,2,3,4,7,8-HxCDD	92.6	99.7	93	92.1	98.9	93	70-164	<1	50
1,2,3,6,7,8-HxCDD	102	99.7	103	101	98.9	102	76-134	2	50
1,2,3,7,8,9-HxCDD	98.1	99.7	98	99.1	98.9	100	64-162	1	50
1,2,3,7,8-PeCDD	100	99.7	101	99.9	98.9	101	70-142	<1	50
2,3,7,8-TCDD	27.3	19.9	137	29.4	19.8	148	67-158	7	50
OCDD	207	199	104	232	198	118	78-144	12	50
1,2,3,4,6,7,8-HpCDF	98.9	99.7	99	99.3	98.9	100	82-122	<1	50
1,2,3,4,7,8,9-HpCDF	103	99.7	103	102	98.9	103	78-138	<1	50
1,2,3,4,7,8-HxCDF	102	99.7	102	100	98.9	101	72-134	1	50
1,2,3,6,7,8-HxCDF	100	99.7	100	101	98.9	102	84-130	<1	50
1,2,3,7,8,9-HxCDF	98.6	99.7	99	96.4	98.9	97	78-130	2	50
1,2,3,7,8-PeCDF	94.7	99.7	95	91.9	98.9	93	80-134	3	50
2,3,4,6,7,8-HxCDF	105	99.7	106	101	98.9	102	70-156	4	50
2,3,4,7,8-PeCDF	104	99.7	104	102	98.9	103	68-160	1	50
2,3,7,8-TCDF	20.0	19.9	101	23.8	19.8	120	75-158	17	50
OCDF	216	199	108	213	198	107	63-170	2	50

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900017-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/16/19 21:02
Prep Method:	Method Soxhlet	**Date Extracted:**	1/14/19
Sample Amount:	10.032g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520007	**Blank File Name:**	P519999
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519996

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	27.3		0.186	0.498	0.77	1.001	1
1,2,3,7,8-PeCDD	100		0.0478	2.49	1.58	1.000	1
1,2,3,4,7,8-HxCDD	92.6		0.0306	2.49	1.24	1.000	1
1,2,3,6,7,8-HxCDD	102		0.0345	2.49	1.27	1.000	1
1,2,3,7,8,9-HxCDD	98.1		0.0317	2.49	1.30	1.006	1
1,2,3,4,6,7,8-HpCDD	77.7		0.0314	2.49	1.08	1.000	1
OCDD	207		0.0646	4.98	0.89	1.000	1
2,3,7,8-TCDF	20.0		0.0479	0.498	0.72	1.000	1
1,2,3,7,8-PeCDF	94.7		0.0510	2.49	1.51	1.001	1
2,3,4,7,8-PeCDF	104		0.0547	2.49	1.49	1.000	1
1,2,3,4,7,8-HxCDF	102		0.0342	2.49	1.23	1.000	1
1,2,3,6,7,8-HxCDF	100		0.0338	2.49	1.20	1.000	1
1,2,3,7,8,9-HxCDF	98.6		0.0416	2.49	1.21	1.000	1
2,3,4,6,7,8-HxCDF	105		0.0382	2.49	1.18	1.000	1
1,2,3,4,6,7,8-HpCDF	98.9		0.0463	2.49	1.01	1.000	1
1,2,3,4,7,8,9-HpCDF	103		0.0619	2.49	1.03	1.000	1
OCDF	216		0.0894	4.98	0.88	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900017-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/16/19 21:02
Prep Method:	Method Soxhlet	**Date Extracted:**	1/14/19
Sample Amount:	10.032g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520007	**Blank File Name:**	P519999
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519996

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	27.3		0.186	0.498	0.77		1
Total Penta-Dioxins	100		0.0478	2.49	1.58		1
Total Hexa-Dioxins	293		0.0322	2.49	1.24		1
Total Hepta-Dioxins	77.7		0.0314	2.49	1.08		1
Total Tetra-Furans	20.6		0.0479	0.498	0.86		1
Total Penta-Furans	201		0.0528	2.49	1.46		1
Total Hexa-Furans	406		0.0368	2.49	1.23		1
Total Hepta-Furans	202		0.0534	2.49	1.01		1

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1900017-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/16/19 21:02
Prep Method:	Method Soxhlet	**Date Extracted:**	1/14/19
Sample Amount:	10.032g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520007	**Blank File Name:**	P519999
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519996

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1129.372	56		25-164	0.79	1.019
13C-1,2,3,7,8-PeCDD	2000	1947.941	97		25-181	1.57	1.181
13C-1,2,3,4,7,8-HxCDD	2000	1731.739	87		32-141	1.26	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1588.820	79		28-130	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	2038.238	102		23-140	1.06	1.067
13C-OCDD	4000	2797.415	70		17-157	0.90	1.142
13C-2,3,7,8-TCDF	2000	1361.199	68		24-169	0.79	0.992
13C-1,2,3,7,8-PeCDF	2000	1785.973	89		24-185	1.57	1.139
13C-2,3,4,7,8-PeCDF	2000	1676.579	84		21-178	1.57	1.170
13C-1,2,3,4,7,8-HxCDF	2000	1441.676	72		26-152	0.51	0.971
13C-1,2,3,6,7,8-HxCDF	2000	1420.618	71		26-123	0.52	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1521.195	76		29-147	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1410.166	71		28-136	0.52	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	1452.498	73		28-143	0.45	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1555.326	78		26-138	0.45	1.080
37Cl-2,3,7,8-TCDD	800	653.729	82		35-197	NA	1.020

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900017-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/16/19 21:59
Prep Method:	Method Soxhlet	**Date Extracted:**	1/14/19
Sample Amount:	10.110g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520008	**Blank File Name:**	P519999
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519996

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	29.4		0.124	0.495	0.77	1.001	1
1,2,3,7,8-PeCDD	99.9		0.0318	2.47	1.58	1.000	1
1,2,3,4,7,8-HxCDD	92.1		0.0198	2.47	1.28	1.000	1
1,2,3,6,7,8-HxCDD	101		0.0229	2.47	1.28	1.000	1
1,2,3,7,8,9-HxCDD	99.1		0.0208	2.47	1.24	1.007	1
1,2,3,4,6,7,8-HpCDD	78.0		0.0253	2.47	1.04	1.000	1
OCDD	232		0.0592	4.95	0.88	1.000	1
2,3,7,8-TCDF	23.8		0.0429	0.495	0.73	1.001	1
1,2,3,7,8-PeCDF	91.9		0.0440	2.47	1.51	1.001	1
2,3,4,7,8-PeCDF	102		0.0460	2.47	1.50	1.000	1
1,2,3,4,7,8-HxCDF	100		0.0334	2.47	1.19	1.000	1
1,2,3,6,7,8-HxCDF	101		0.0336	2.47	1.21	1.000	1
1,2,3,7,8,9-HxCDF	96.4		0.0385	2.47	1.21	1.000	1
2,3,4,6,7,8-HxCDF	101		0.0356	2.47	1.22	1.000	1
1,2,3,4,6,7,8-HpCDF	99.3		0.0919	2.47	1.02	1.000	1
1,2,3,4,7,8,9-HpCDF	102		0.113	2.47	1.00	1.000	1
OCDF	213		0.0754	4.95	0.90	1.005	1

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1900017-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/16/19 21:59
Prep Method:	Method Soxhlet	**Date Extracted:**	1/14/19
Sample Amount:	10.110g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520008	**Blank File Name:**	P519999
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519996

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	29.4		0.124	0.495	0.77		1
Total Penta-Dioxins	99.9		0.0318	2.47	1.58		1
Total Hexa-Dioxins	292		0.0211	2.47	1.28		1
Total Hepta-Dioxins	83.1		0.0253	2.47	1.05		1
Total Tetra-Furans	27.9		0.0429	0.495	0.70		1
Total Penta-Furans	195		0.0450	2.47	1.72		1
Total Hexa-Furans	399		0.0352	2.47	1.30		1
Total Hepta-Furans	203		0.102	2.47	1.02		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	E1801139
Project:	C1887-0501	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1900017-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	01/16/19 21:59
Prep Method:	Method Soxhlet	**Date Extracted:**	1/14/19
Sample Amount:	10.110g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P520008	**Blank File Name:**	P519999
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P519996

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1210.602	61		25-164	0.79	1.019
13C-1,2,3,7,8-PeCDD	2000	2091.933	105		25-181	1.59	1.180
13C-1,2,3,4,7,8-HxCDD	2000	1940.082	97		32-141	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1772.686	89		28-130	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	2144.037	107		23-140	1.06	1.067
13C-OCDD	4000	2973.979	74		17-157	0.89	1.143
13C-2,3,7,8-TCDF	2000	1512.707	76		24-169	0.79	0.992
13C-1,2,3,7,8-PeCDF	2000	1919.196	96		24-185	1.57	1.139
13C-2,3,4,7,8-PeCDF	2000	1834.395	92		21-178	1.57	1.170
13C-1,2,3,4,7,8-HxCDF	2000	1597.881	80		26-152	0.52	0.971
13C-1,2,3,6,7,8-HxCDF	2000	1557.862	78		26-123	0.52	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1750.061	88		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1648.008	82		28-136	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1477.802	74		28-143	0.45	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1687.100	84		26-138	0.45	1.080
37Cl-2,3,7,8-TCDD	800	695.386	87		35-197	NA	1.020

Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0214

Run #15 Filename P519892 Samp: 1 Inj: 1 Acquired: 10-JAN-19 18:51:24
Processed: 11-JAN-19 09:26:58 Sample ID: E1801139-001

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	3.615e+03	4.906e+03	0.74	yes	yes	0.942
2	Unk	1,2,3,7,8-PeCDF	30:28	2.488e+02	1.861e+02	1.34	yes	yes	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	1.835e+02	1.394e+02	1.32	no	yes	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	3.209e+02	2.733e+02	1.17	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	9.202e+01	7.456e+01	1.23	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:03	3.164e+01	1.351e+01	2.34	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:50	3.822e+01	4.603e+01	0.83	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:10	1.179e+02	1.218e+02	0.97	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	4.092e+01	3.290e+01	1.24	no	no	1.258
10	Unk	OCDF	40:45	2.348e+02	2.265e+02	1.04	no	no	1.359
11	Unk	2,3,7,8-TCDD	26:25	7.905e+02	1.112e+03	0.71	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:48	6.240e+01	2.937e+01	2.12	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:12	4.974e+01	4.631e+01	1.07	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:17	8.843e+01	7.027e+01	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:32	1.631e+02	1.379e+02	1.18	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	1.877e+03	1.824e+03	1.03	yes	no	1.025
17	Unk	OCDD	40:35	2.975e+04	3.349e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:22	3.195e+04	4.038e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:27	4.970e+04	3.145e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:28	4.693e+04	2.992e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:23	2.038e+04	3.964e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	2.153e+04	4.106e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:02	2.122e+04	4.083e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	1.942e+04	3.750e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:09	1.373e+04	3.104e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	1.343e+04	3.018e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:23	1.300e+04	1.686e+04	0.77	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:48	3.611e+04	2.278e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:11	3.027e+04	2.425e+04	1.25	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:17	2.818e+04	2.282e+04	1.23	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	2.932e+04	2.776e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	40:35	2.810e+04	3.140e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:40	3.996e+04	5.020e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:31	5.180e+04	4.212e+04	1.23	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:25	1.868e+04				no	1.014

$$\text{OCDD} = \frac{(2.975e+04 + 3.349e+04) \times 4000\ \text{pg} \times 1}{(2.810e+04 + 3.140e+04) \times 10.898\ \text{g} \times 77.2 / 100 \times 1.118} = 452\ \text{ng/kg}$$

LW 01/11/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0214

Run #15 Filename P519892 Samp: 1 Inj: 1 Acquired: 10-JAN-19 18:51:24
Processed: 11-JAN-19 09:26:58 LAB. ID: E1801139-001

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.22e+05	8.68e+02	6.0e+02	6.72e+05	1.48e+03	4.6e+02
2	1,2,3,7,8-PeCDF	4.23e+04	8.04e+02	5.3e+01	3.11e+04	2.95e+03	1.1e+01
3	2,3,4,7,8-PeCDF	2.70e+04	8.04e+02	3.4e+01	2.56e+04	2.95e+03	8.7e+00
4	1,2,3,4,7,8-HxCDF	6.73e+04	1.32e+03	5.1e+01	5.78e+04	1.05e+03	5.5e+01
5	1,2,3,6,7,8-HxCDF	1.64e+04	1.32e+03	1.2e+01	1.59e+04	1.05e+03	1.5e+01
6	2,3,4,6,7,8-HxCDF	8.51e+03	1.32e+03	6.4e+00	2.80e+03	1.05e+03	2.7e+00
7	1,2,3,7,8,9-HxCDF	6.54e+03	1.32e+03	4.9e+00	9.12e+03	1.05e+03	8.7e+00
8	1,2,3,4,6,7,8-HpCDF	2.61e+04	7.04e+02	3.7e+01	2.48e+04	4.08e+02	6.1e+01
9	1,2,3,4,7,8,9-HpCDF	8.03e+03	7.04e+02	1.1e+01	6.41e+03	4.08e+02	1.6e+01
10	OCDF	4.51e+04	4.72e+02	9.6e+01	4.22e+04	1.38e+03	3.0e+01
11	2,3,7,8-TCDD	1.58e+05	2.12e+03	7.5e+01	2.13e+05	1.66e+03	1.3e+02
12	1,2,3,7,8-PeCDD	1.24e+04	1.26e+03	9.9e+00	6.63e+03	1.18e+03	5.6e+00
13	1,2,3,4,7,8-HxCDD	1.15e+04	9.52e+02	1.2e+01	1.18e+04	1.30e+03	9.1e+00
14	1,2,3,6,7,8-HxCDD	1.96e+04	9.52e+02	2.1e+01	1.63e+04	1.30e+03	1.3e+01
15	1,2,3,7,8,9-HxCDD	3.37e+04	9.52e+02	3.5e+01	2.98e+04	1.30e+03	2.3e+01
16	1,2,3,4,6,7,8-HpCDD	4.00e+05	3.77e+03	1.1e+02	3.93e+05	3.48e+03	1.1e+02
17	OCDD	5.28e+06	4.08e+02	1.3e+04	5.98e+06	4.20e+02	1.4e+04
18	13C-2,3,7,8-TCDF	4.67e+06	6.01e+03	7.8e+02	5.85e+06	3.83e+03	1.5e+03
19	13C-1,2,3,7,8-PeCDF	8.67e+06	8.64e+02	1.0e+04	5.48e+06	1.18e+03	4.6e+03
20	13C-2,3,4,7,8-PeCDF	8.69e+06	8.64e+02	1.0e+04	5.52e+06	1.18e+03	4.7e+03
21	13C-1,2,3,4,7,8-HxCDF	4.42e+06	8.72e+02	5.1e+03	8.64e+06	1.06e+03	8.2e+03
22	13C-1,2,3,6,7,8-HxCDF	4.31e+06	8.72e+02	4.9e+03	8.24e+06	1.06e+03	7.8e+03
23	13C-2,3,4,6,7,8-HxCDF	4.53e+06	8.72e+02	5.2e+03	8.79e+06	1.06e+03	8.3e+03
24	13C-1,2,3,7,8,9-HxCDF	3.87e+06	8.72e+02	4.4e+03	7.61e+06	1.06e+03	7.2e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.96e+06	3.40e+03	8.7e+02	6.70e+06	3.52e+03	1.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.73e+06	3.40e+03	8.0e+02	6.23e+06	3.52e+03	1.8e+03
27	13C-2,3,7,8-TCDD	2.41e+06	9.11e+03	2.6e+02	3.09e+06	3.23e+03	9.6e+02
28	13C-1,2,3,7,8-PeCDD	6.89e+06	8.04e+02	8.6e+03	4.35e+06	1.38e+03	3.2e+03
29	13C-1,2,3,4,7,8-HxCDD	6.70e+06	1.55e+03	4.3e+03	5.23e+06	9.64e+02	5.4e+03
30	13C-1,2,3,6,7,8-HxCDD	5.94e+06	1.55e+03	3.8e+03	4.76e+06	9.64e+02	4.9e+03
31	13C-1,2,3,4,6,7,8-HpCDD	6.20e+06	7.64e+02	8.1e+03	5.87e+06	3.92e+02	1.5e+04
32	13C-OCDD	5.07e+06	5.28e+02	9.6e+03	5.66e+06	2.80e+02	2.0e+04
33	13C-1,2,3,4-TCDD	6.02e+06	9.11e+03	6.6e+02	7.57e+06	3.23e+03	2.3e+03
34	13C-1,2,3,7,8,9-HxCDD	1.09e+07	1.55e+03	7.0e+03	8.57e+06	9.64e+02	8.9e+03
35	37Cl-2,3,7,8-TCDD	3.63e+06	1.42e+03	2.6e+03			

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Peak List Summary

CLIENT ID.
SL0214

Entry: 36 Totals Name: Total Tetra-Furans

Run: 15 File: P519892 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 18:51:24 Processed: 11-JAN-19 09:26:58

Mass: 303.9020 305.8990 Tot Response: 1.61e+04 RRF: 0.9417

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	20:59	3.70e+01	0.71	yes	8.94e+01		n	n
2	21:51	7.60e+01	0.77	yes	1.75e+02		n	n
3	22:33	2.88e+02	0.87	yes	6.19e+02		n	n
4	22:55	9.19e+01	0.86	yes	1.99e+02		n	n
5	23:11	1.80e+02	0.73	yes	4.25e+02		n	n
6	23:33	6.14e+01	0.75	yes	1.43e+02		n	n
7	24:23	1.91e+03	0.80	yes	4.31e+03		n	n
8	24:41	1.04e+02	0.80	yes	2.34e+02		n	n
9	25:22	3.62e+03	0.74	yes	8.52e+03	2,3,7,8-TCDF	n	y
10	25:50	2.77e+02	0.72	yes	6.61e+02		n	n
11	27:40	3.23e+02	0.75	yes	7.53e+02		n	n

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Peak List Summary

CLIENT ID.
SL0214

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 15 File: P519892 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 18:51:24 Processed: 11-JAN-19 09:26:58

Mass: 319.8970 321.8940 Tot Response: 3.62e+03 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:04	6.50e+02	8.52e+02	0.76	yes	1.50e+03		n	n
2	26:25	7.90e+02	1.11e+03	0.71	yes	1.90e+03	2,3,7,8-TCDD	n	n
3	26:48	1.00e+02	1.18e+02	0.85	yes	2.18e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0214

Entry: 39 Totals Name: Total Penta-Furans2

Run: 15 File: P519892 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 18:51:24 Processed: 11-JAN-19 09:26:58

Mass: 339.8600 341.8570 Tot Response: 4.35e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:28	2.49e+02	1.86e+02 1.34	yes	4.35e+02	1,2,3,7,8-PeCDF	n	y

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Peak List Summary

CLIENT ID.
SL0214

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 15 File: P519892 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 18:51:24 Processed: 11-JAN-19 09:26:58

Mass: 355.8550 357.8520 Tot Response: 1.54e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:00	7.33e+02	4.51e+02	1.63	yes	1.18e+03		n	n
2	31:01	2.13e+02	1.44e+02	1.48	yes	3.58e+02		n	n

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Peak List Summary

CLIENT ID.
SL0214

Entry: 41 Totals Name: Total Hexa-Furans

Run: 15 File: P519892 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 18:51:24 Processed: 11-JAN-19 09:26:58

Mass: 373.8210 375.8180 Tot Response: 7.91e+02 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:56	1.64e+01	1.38e+01	1.19	yes	3.02e+01		n	n
2	34:23	3.21e+02	2.73e+02	1.17	yes	5.94e+02	1,2,3,4,7,8-HxCDF	n	n
3	34:30	9.20e+01	7.46e+01	1.23	yes	1.67e+02	1,2,3,6,7,8-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0214

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 15 File: P519892 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 18:51:24 Processed: 11-JAN-19 09:26:58

Mass: 389.8160 391.8130 Tot Response: 1.83e+03 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:35	6.49e+02	5.12e+02	1.27	yes	1.16e+03		n	n
2	35:12	4.97e+01	4.63e+01	1.07	yes	9.61e+01	1,2,3,4,7,8-HxCDD	n	n
3	35:17	8.84e+01	7.03e+01	1.26	yes	1.59e+02	1,2,3,6,7,8-HxCDD	n	n
4	35:27	5.86e+01	5.04e+01	1.16	yes	1.09e+02		n	n
5	35:32	1.63e+02	1.38e+02	1.18	yes	3.01e+02	1,2,3,7,8,9-HxCDD	n	n

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Peak List Summary

CLIENT ID.
SL0214

Entry: 43 Totals Name: Total Hepta-Furans

Run: 15 File: P519892 Sample:1 Injection:1 Function:4

Acquired: 10-JAN-19 18:51:24 Processed: 11-JAN-19 09:26:58

Mass: 407.7820 409.7790 Tot Response: 2.40e+02 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:10	1.18e+02	1.22e+02 0.97	yes	2.40e+02	1,2,3,4,6,7,8-HpCDF	n	n

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Peak List Summary

CLIENT ID.
SL0214

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 15 File: P519892 Sample:1 Injection:1 Function:4

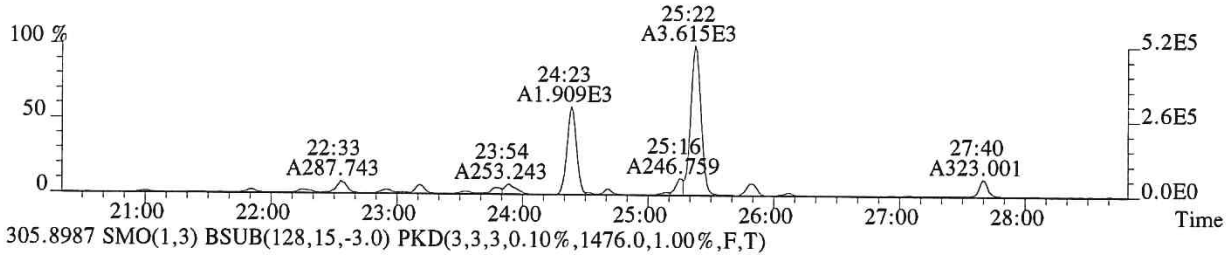
Acquired: 10-JAN-19 18:51:24 Processed: 11-JAN-19 09:26:58

Mass: 423.7770 425.7740 Tot Response: 3.70e+03 RRF: 1.025

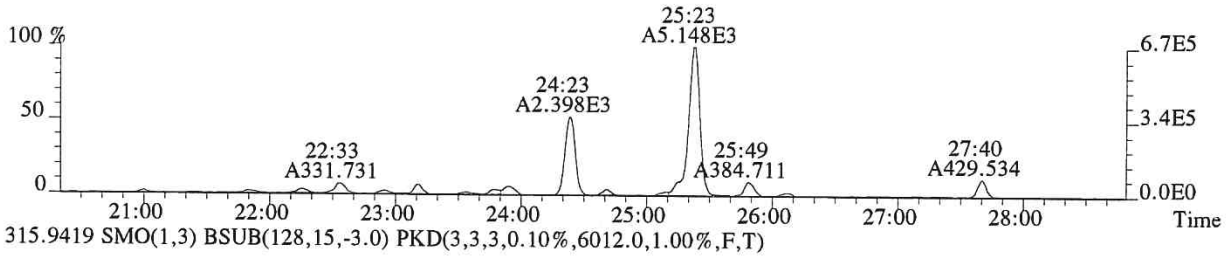
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:04	1.88e+03	1.82e+03 1.03	yes	3.70e+03	1,2,3,4,6,7,8-HpCDD	n	n

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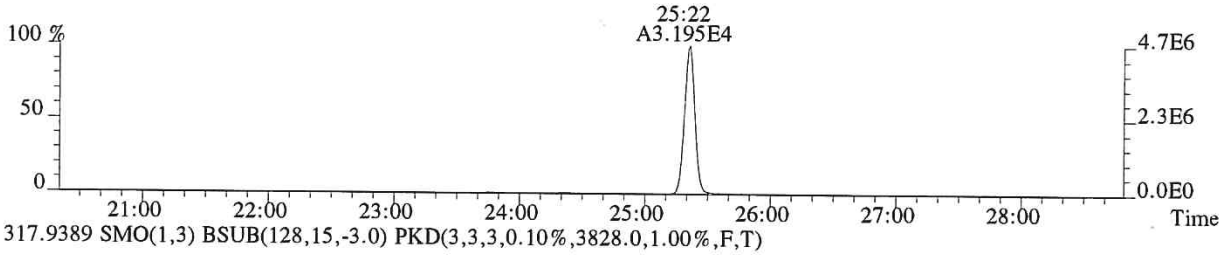
File:P519892 #1-602 Acq:10-JAN-2019 18:51:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-001
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,868.0,1.00%,F,T)



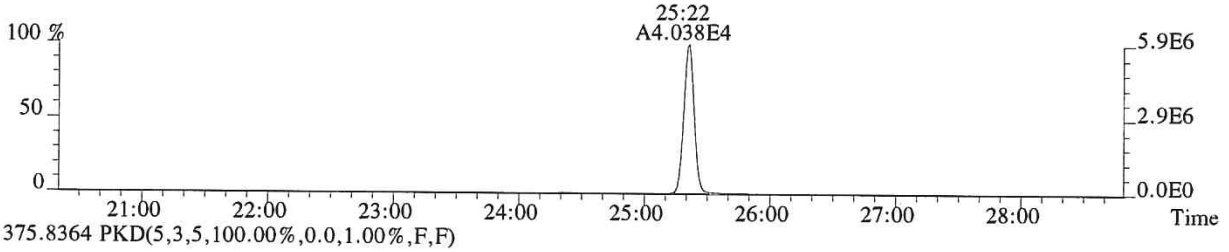
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1476.0,1.00%,F,T)



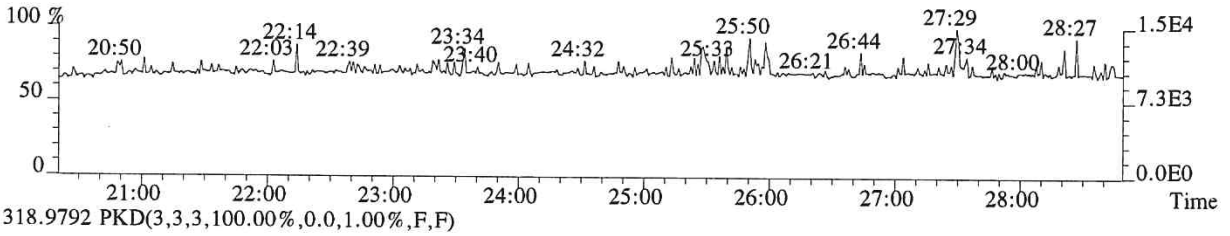
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6012.0,1.00%,F,T)



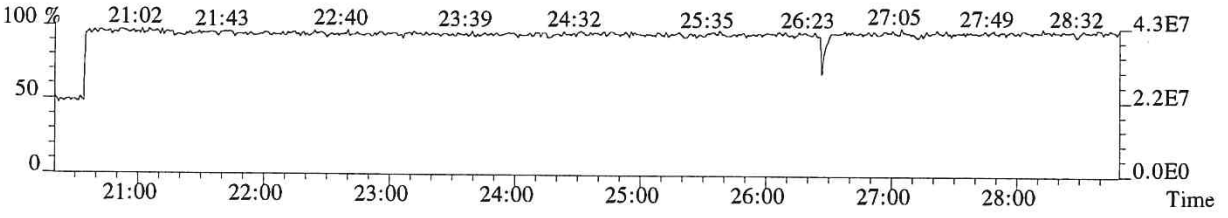
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3828.0,1.00%,F,T)



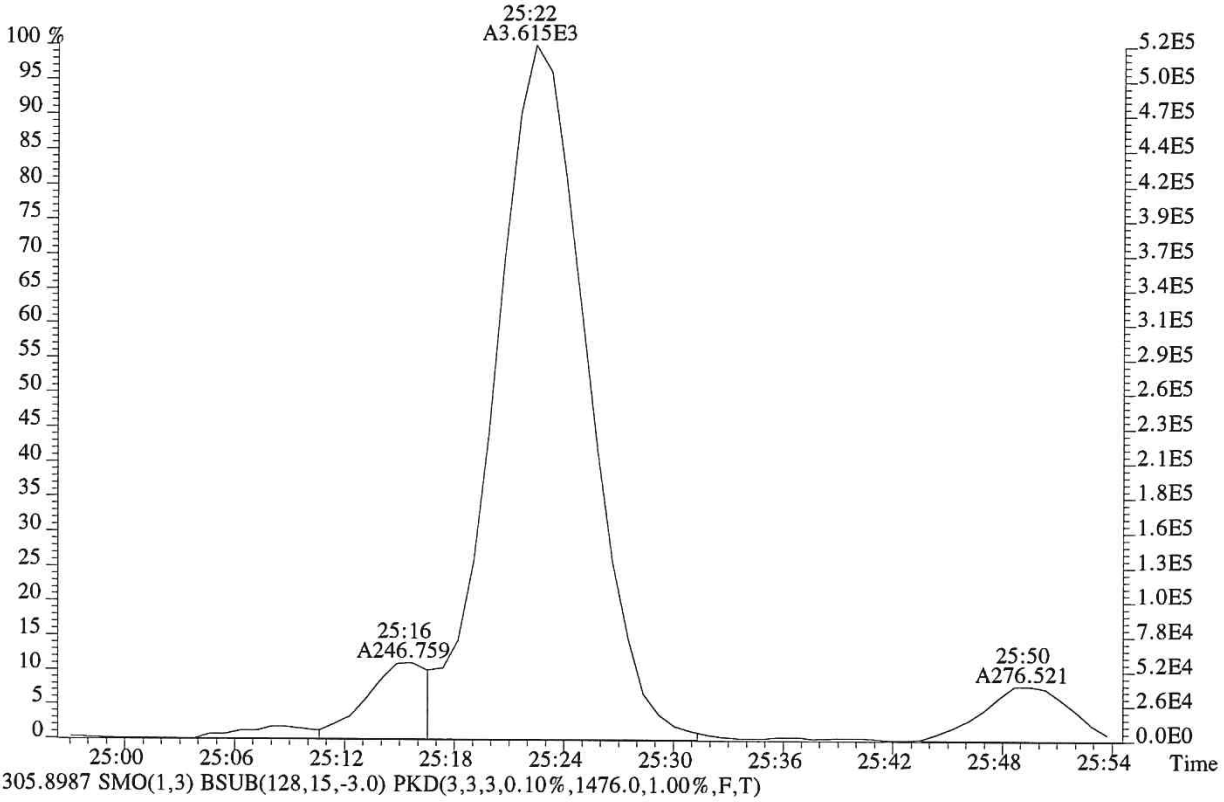
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



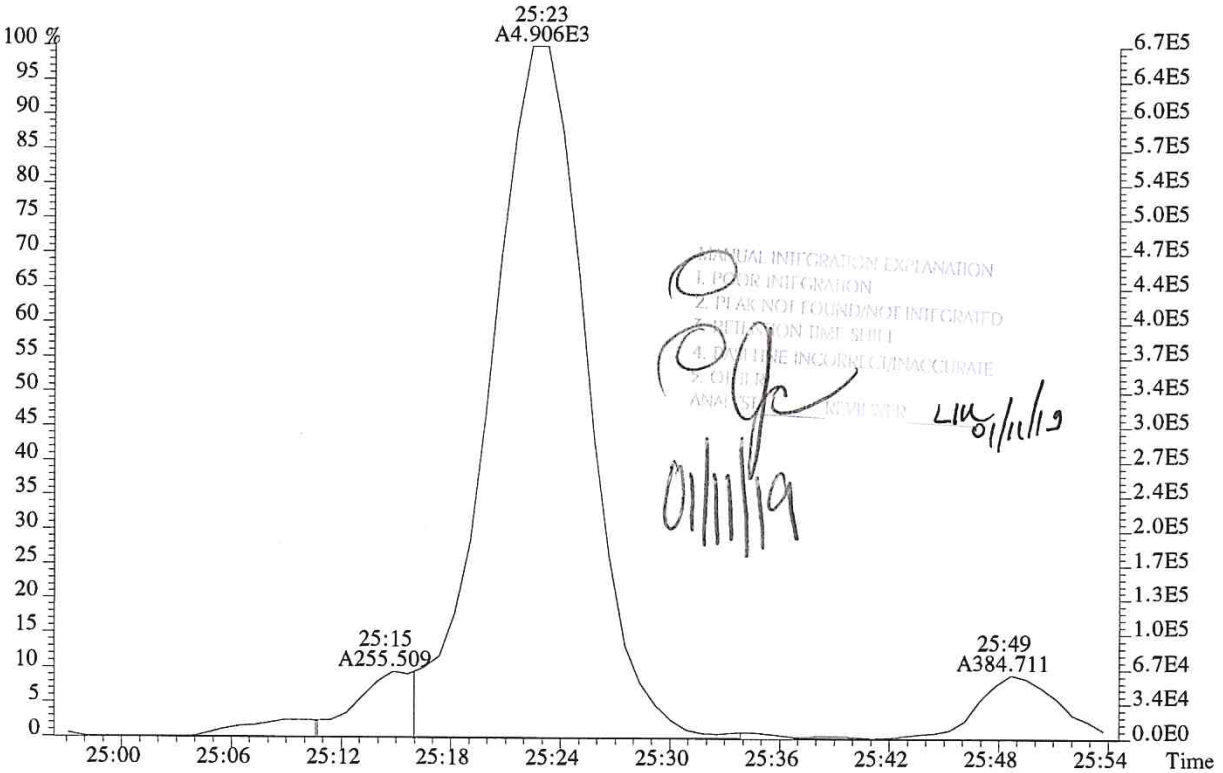
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



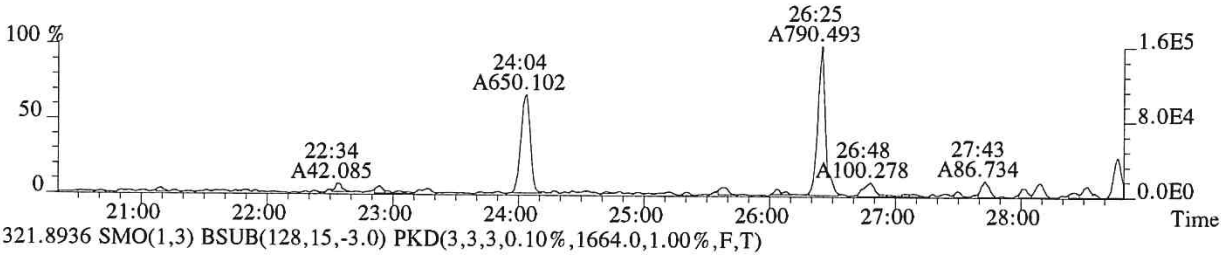
File:P519892 #1-602 Acq:10-JAN-2019 18:51:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-001
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,868.0,1.00%,F,T)



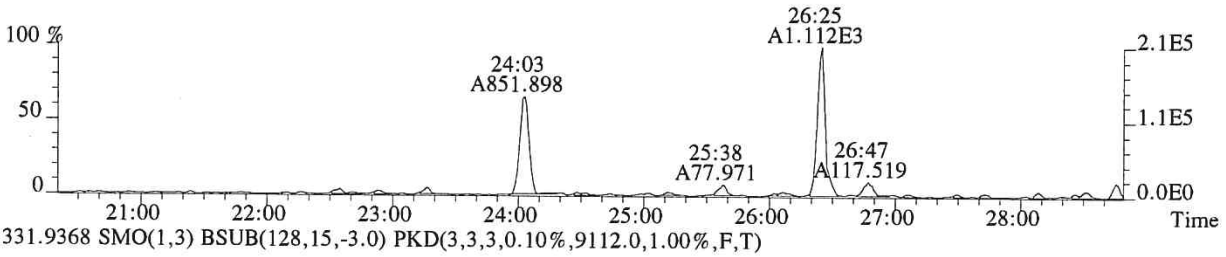
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1476.0,1.00%,F,T)



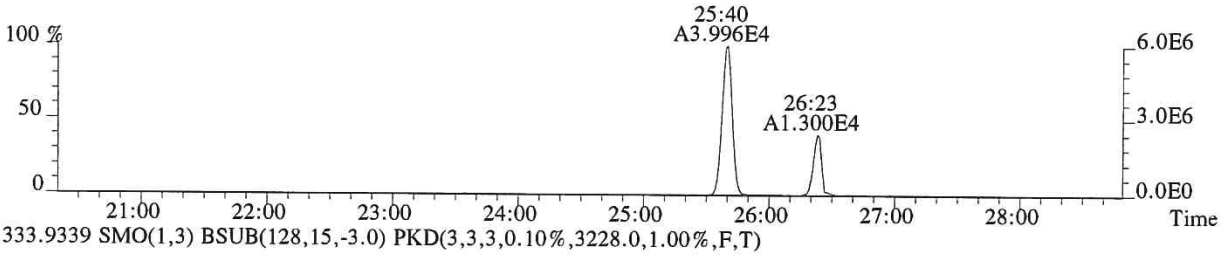
File:P519892 #1-602 Acq:10-JAN-2019 18:51:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-001
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2124.0,1.00%,F,T)



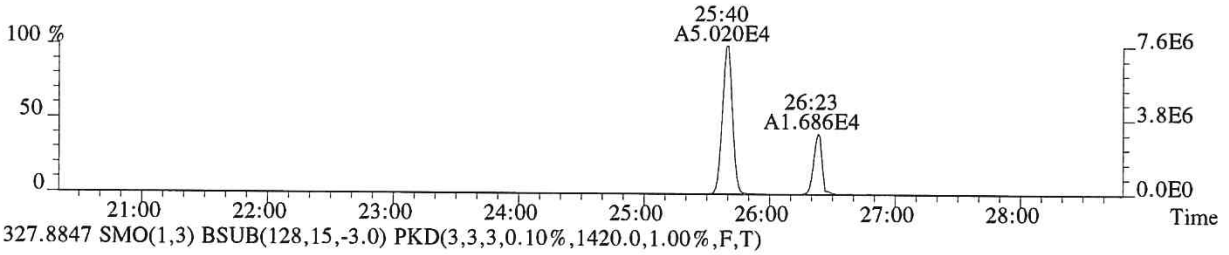
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1664.0,1.00%,F,T)



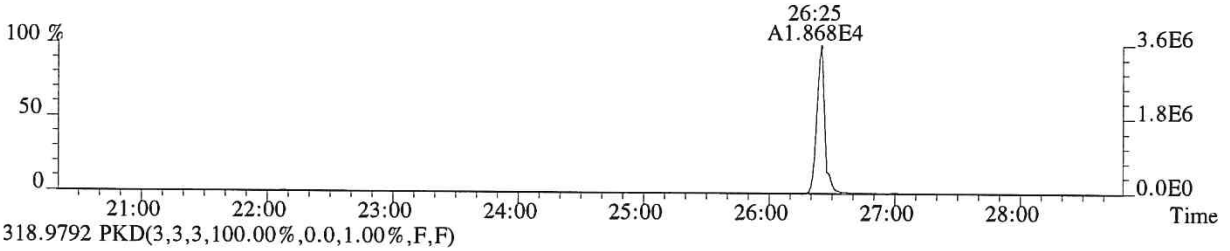
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9112.0,1.00%,F,T)



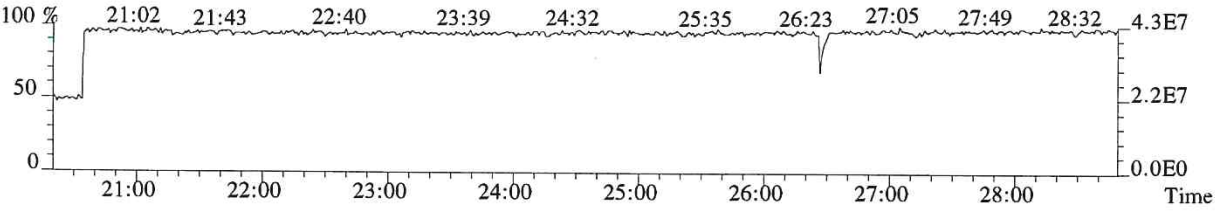
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3228.0,1.00%,F,T)



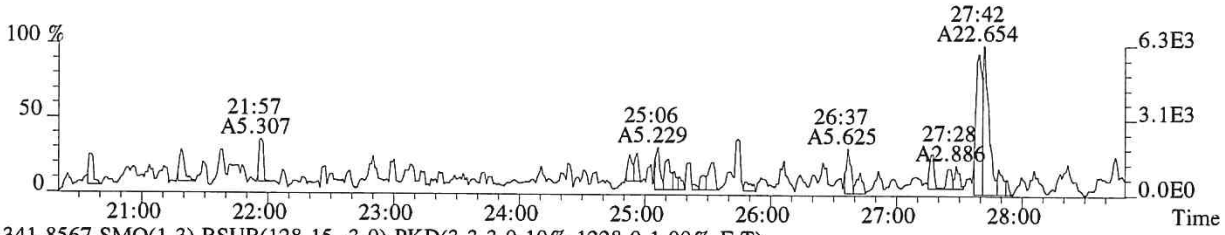
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1420.0,1.00%,F,T)



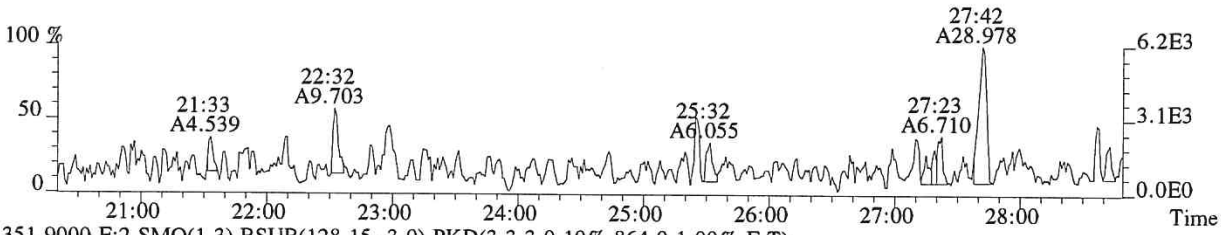
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



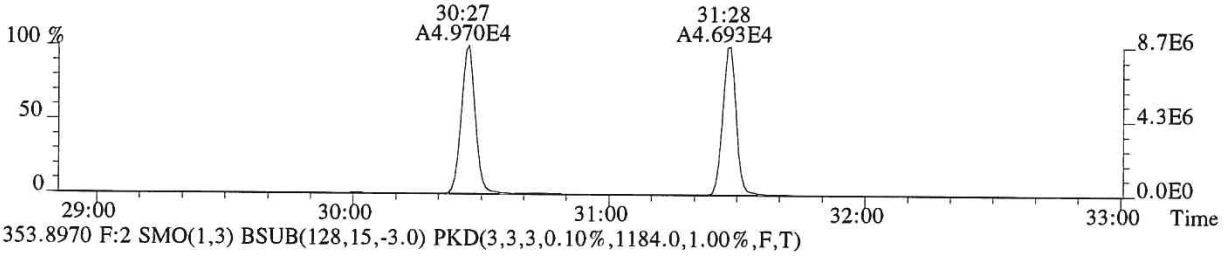
File:P519892 #1-602 Acq:10-JAN-2019 18:51:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-001
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,680.0,1.00%,F,T)



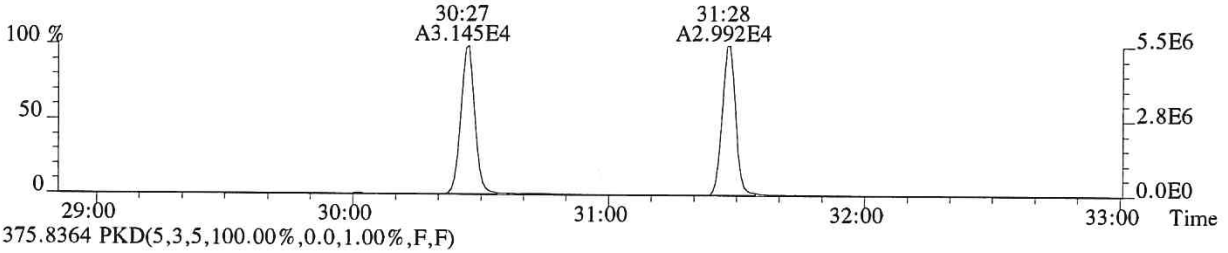
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1228.0,1.00%,F,T)



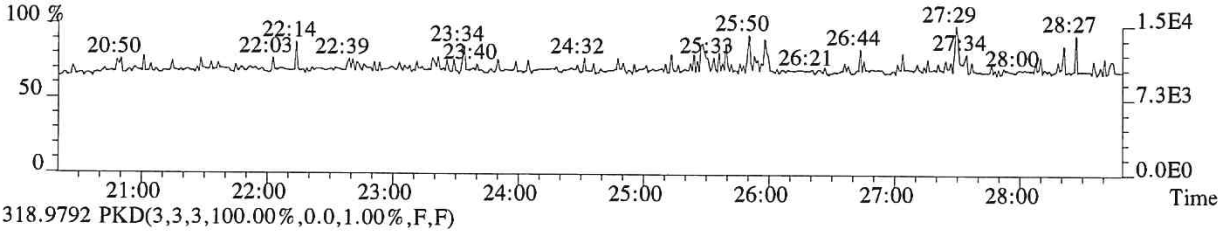
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,864.0,1.00%,F,T)



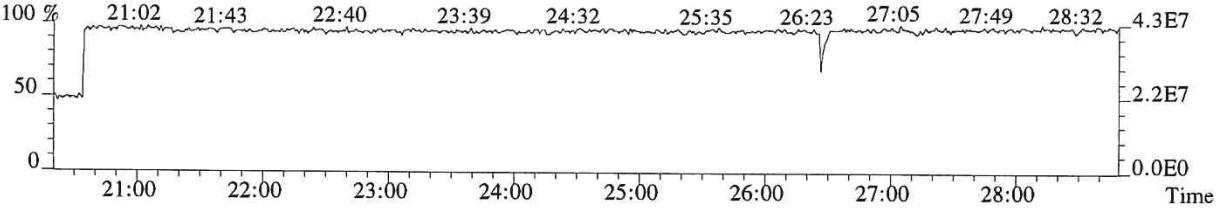
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1184.0,1.00%,F,T)



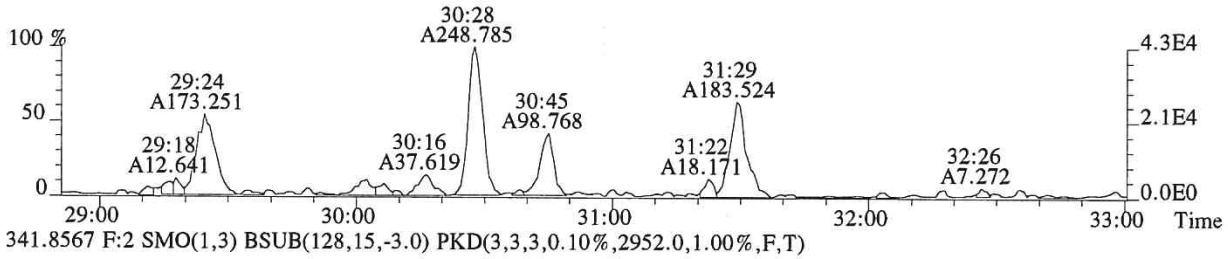
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



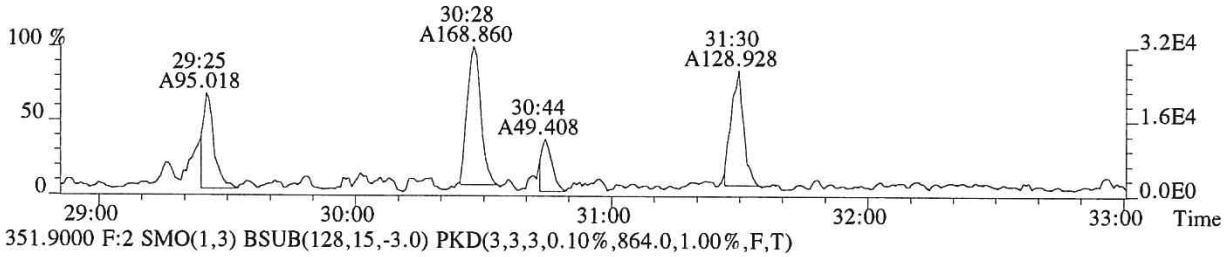
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



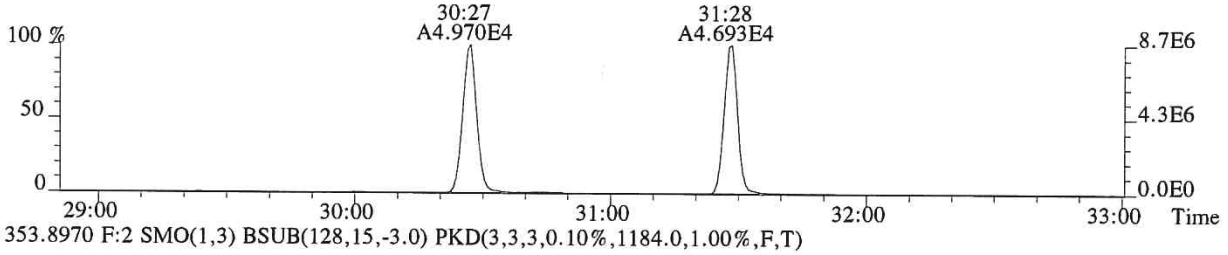
File:P519892 #1-375 Acq:10-JAN-2019 18:51:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-001
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,804.0,1.00%,F,T)



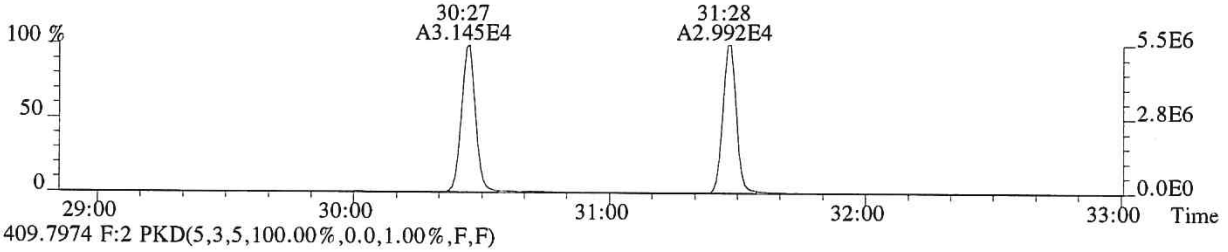
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2952.0,1.00%,F,T)



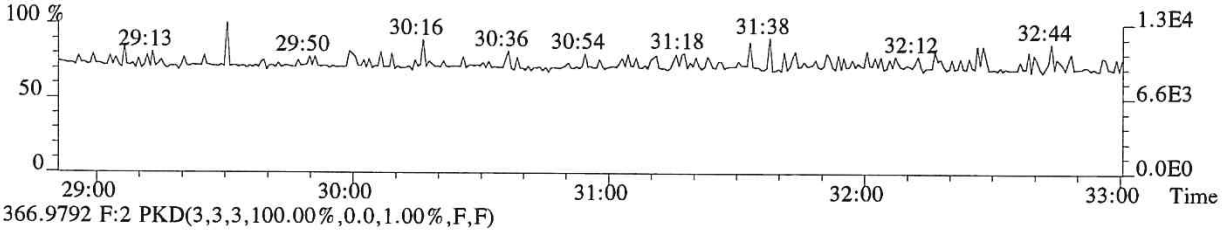
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,864.0,1.00%,F,T)



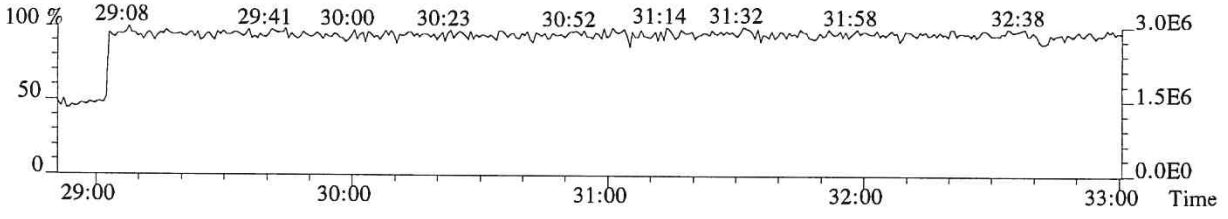
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1184.0,1.00%,F,T)



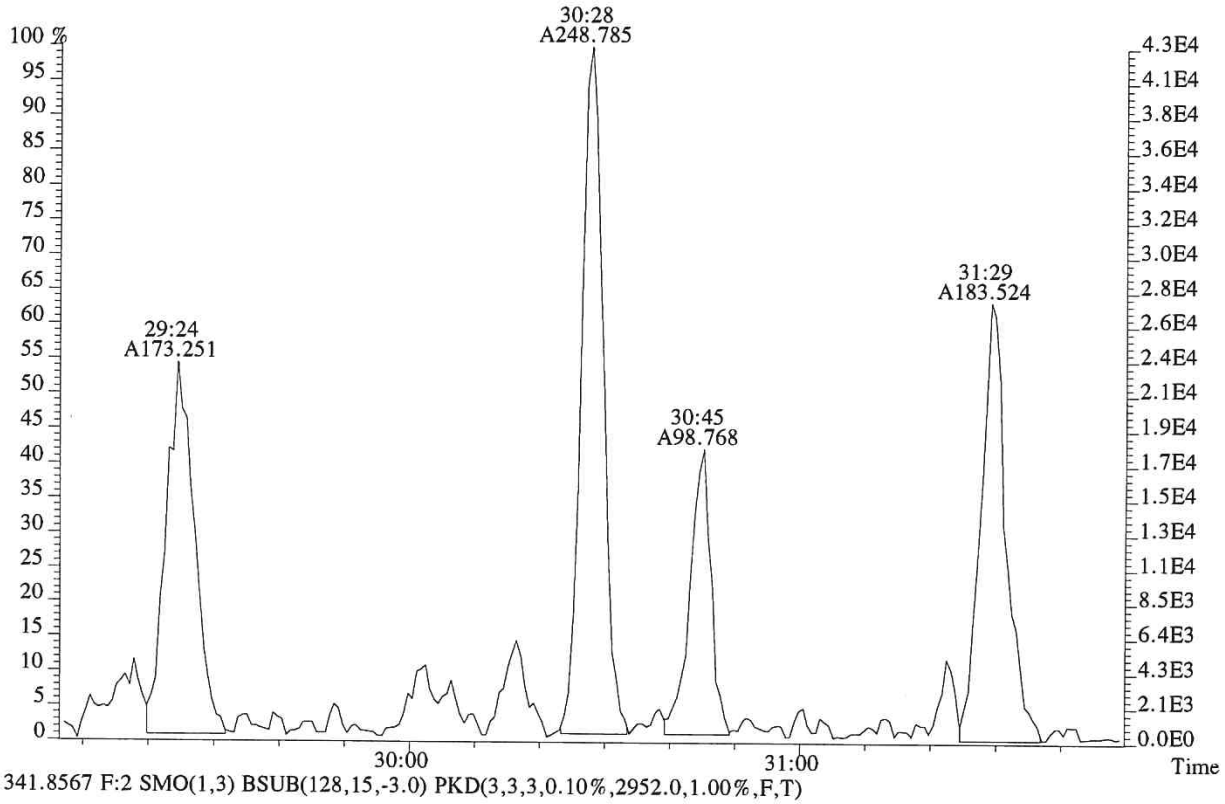
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



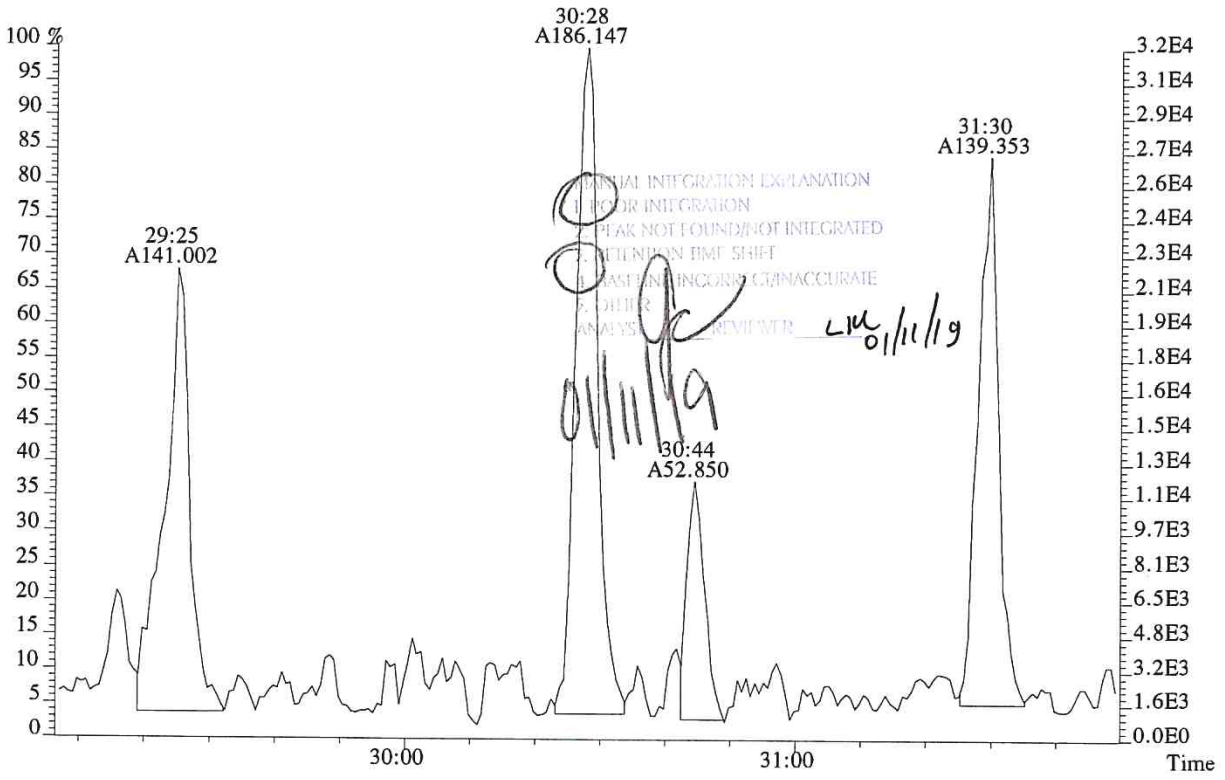
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



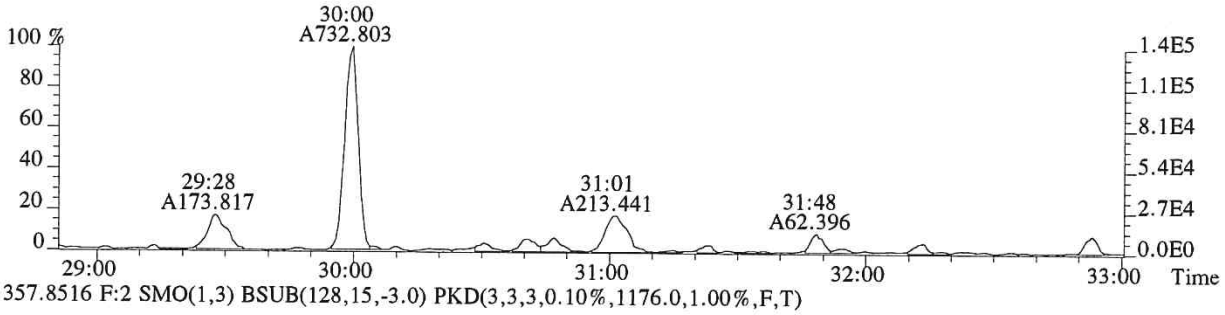
File:P519892 #1-375 Acq:10-JAN-2019 18:51:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-001
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,804.0,1.00%,F,T)



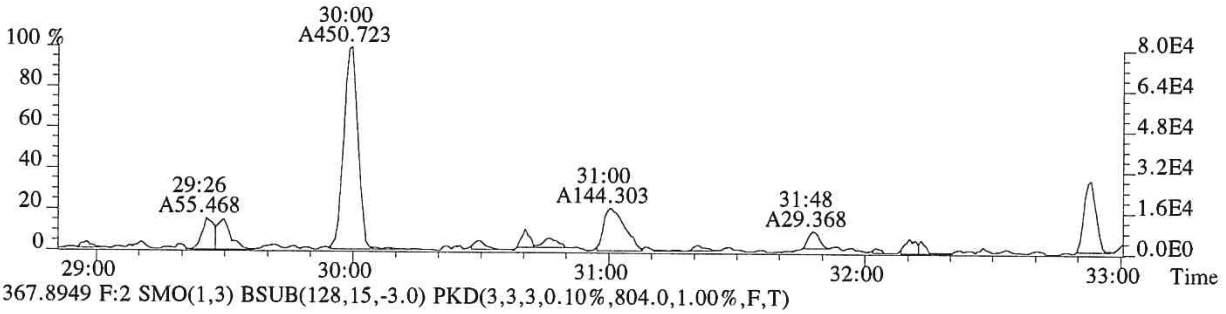
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2952.0,1.00%,F,T)



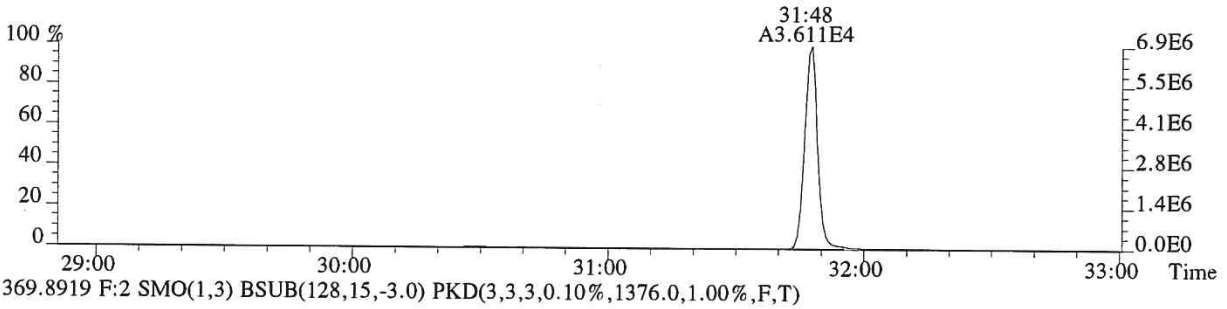
File:P519892 #1-375 Acq:10-JAN-2019 18:51:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-001
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1260.0,1.00%,F,T)



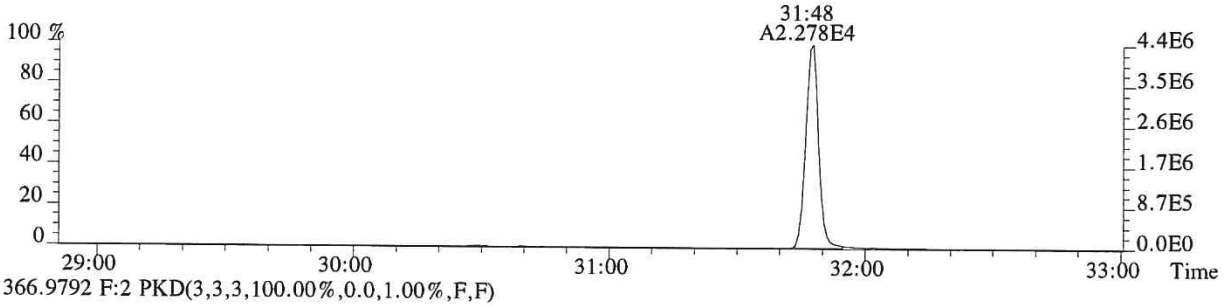
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1176.0,1.00%,F,T)



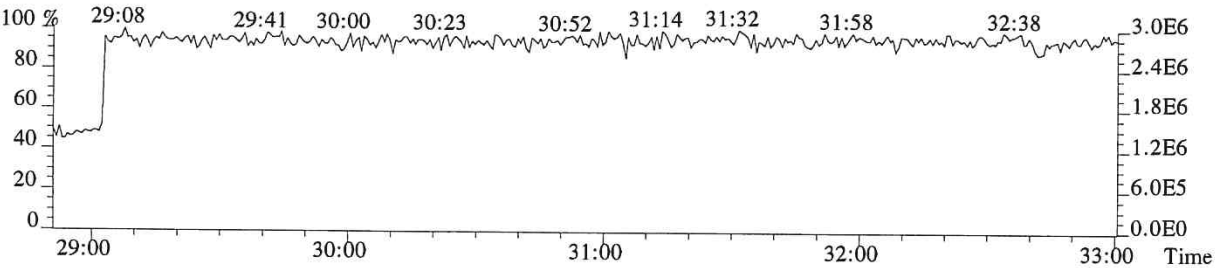
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,804.0,1.00%,F,T)



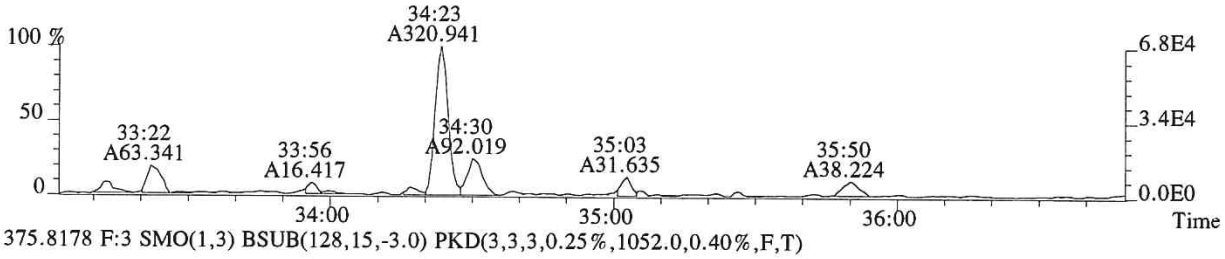
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1376.0,1.00%,F,T)



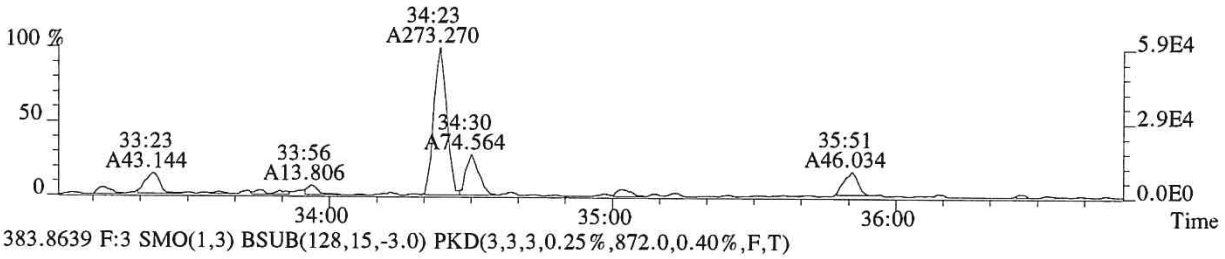
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



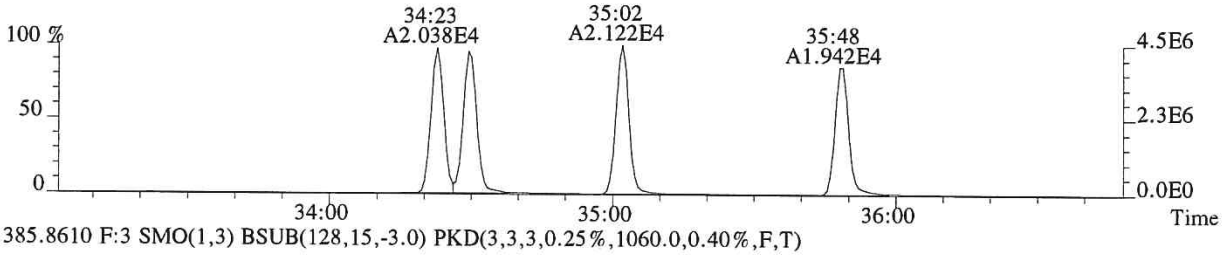
File:P519892 #1-339 Acq:10-JAN-2019 18:51:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-001
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1324.0,0.40%,F,T)



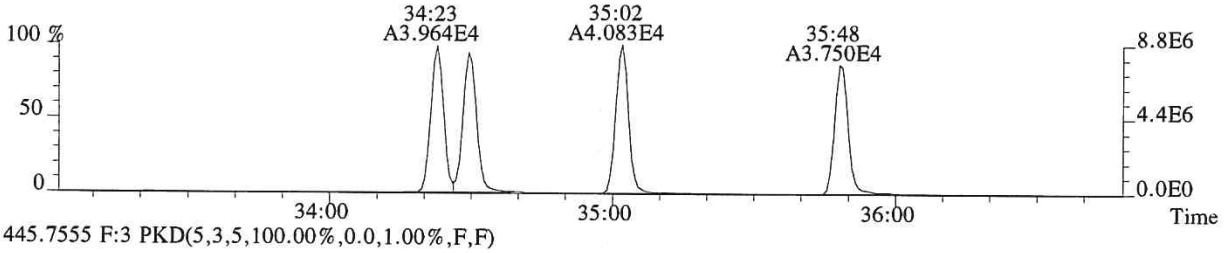
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1052.0,0.40%,F,T)



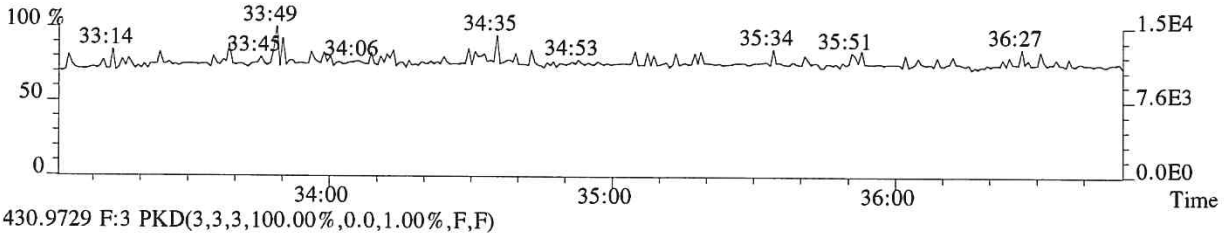
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,872.0,0.40%,F,T)



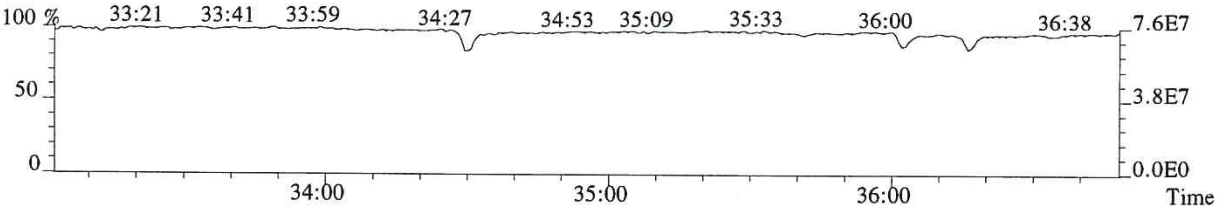
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1060.0,0.40%,F,T)



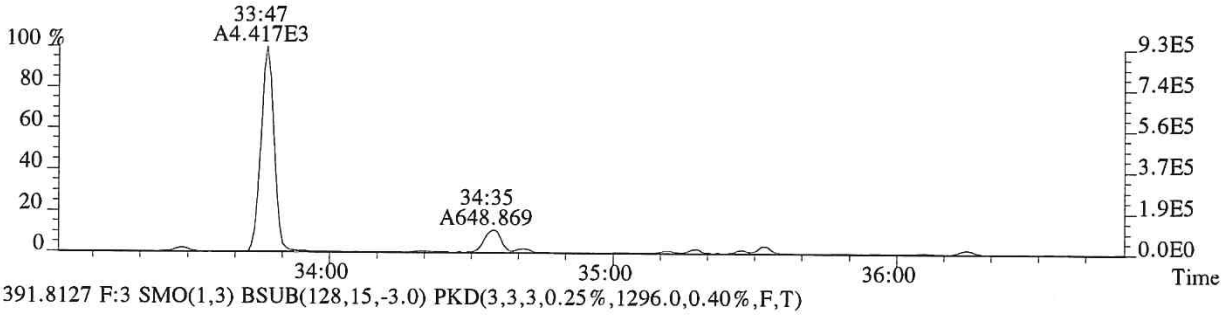
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



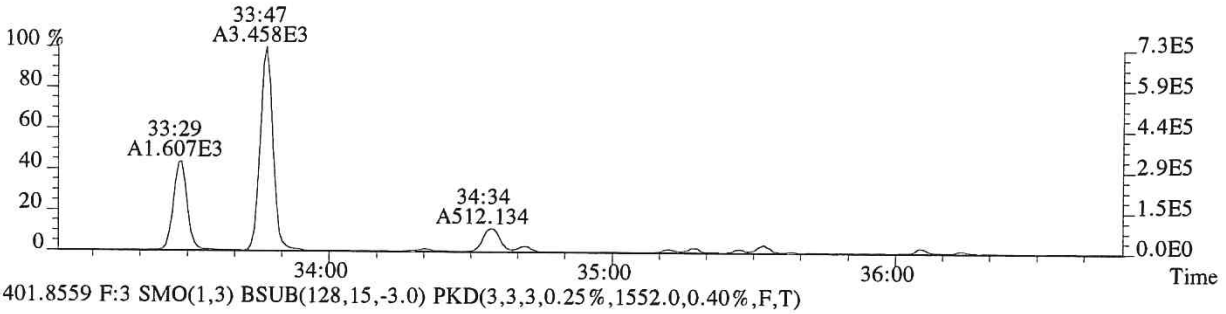
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



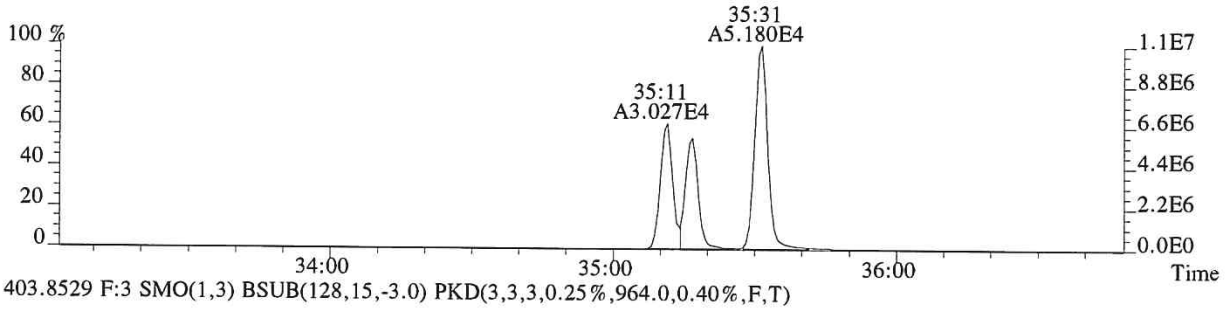
File:P519892 #1-339 Acq:10-JAN-2019 18:51:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-001
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,952.0,0.40%,F,T)



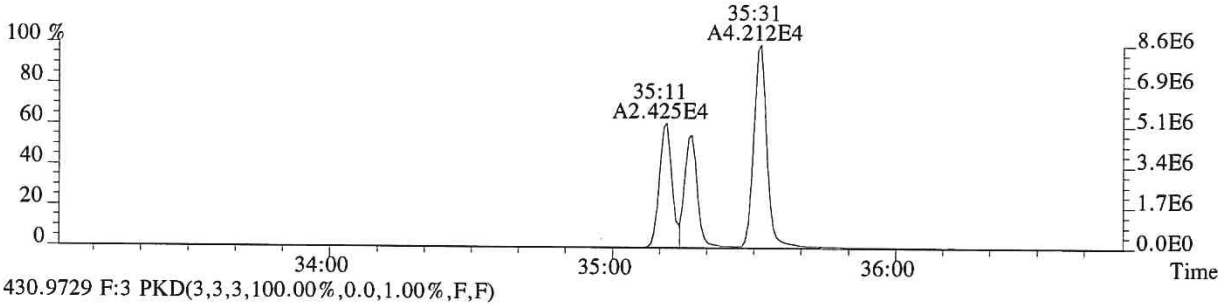
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1296.0,0.40%,F,T)



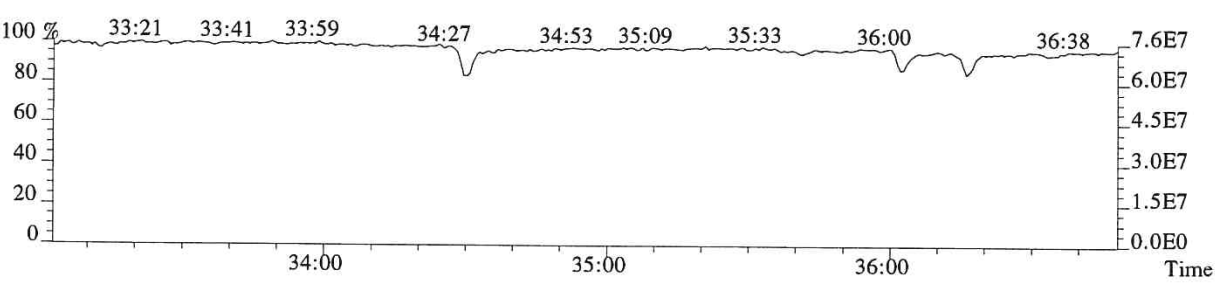
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1552.0,0.40%,F,T)



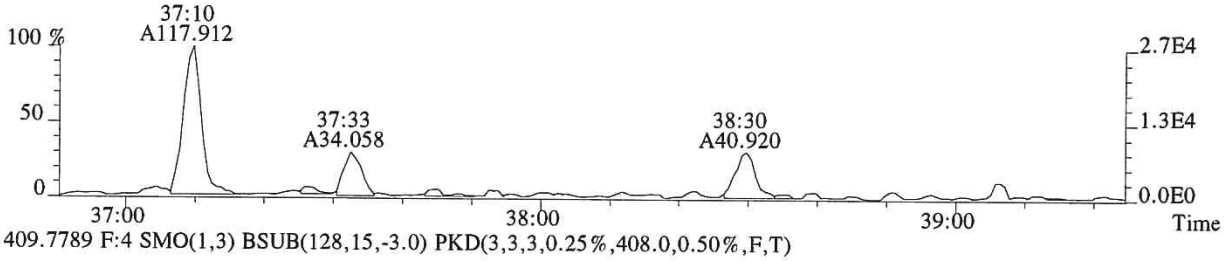
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,964.0,0.40%,F,T)



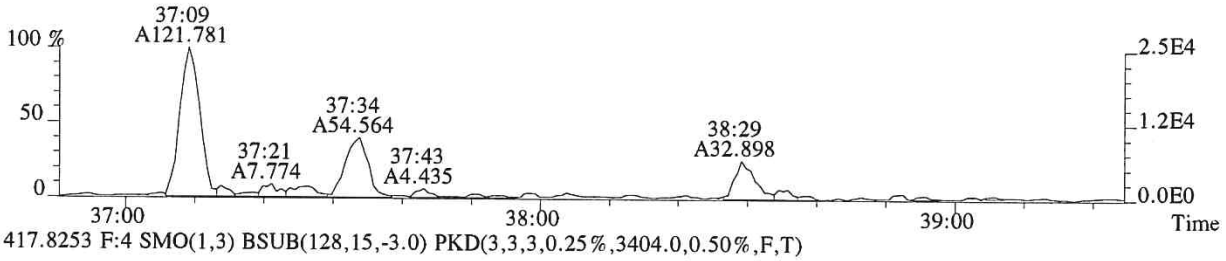
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



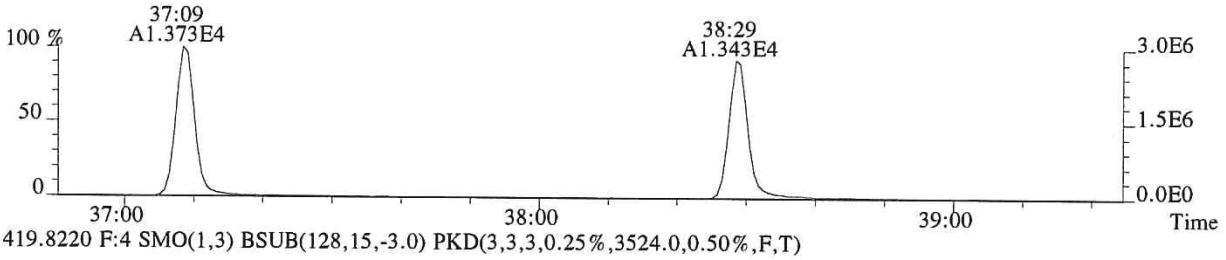
File:P519892 #1-232 Acq:10-JAN-2019 18:51:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-001
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,704.0,0.50%,F,T)



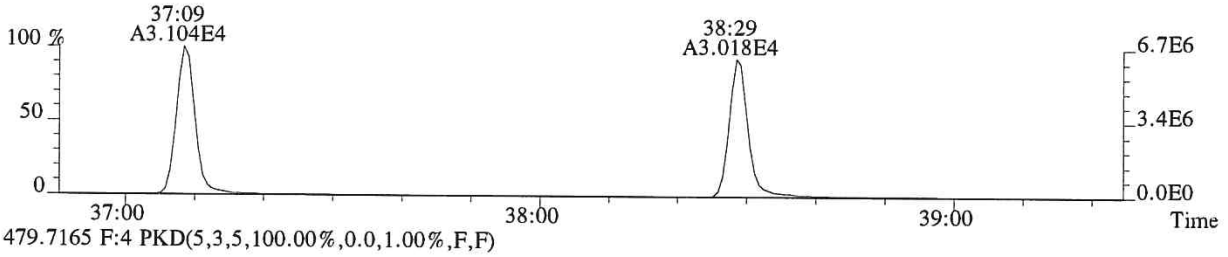
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,408.0,0.50%,F,T)



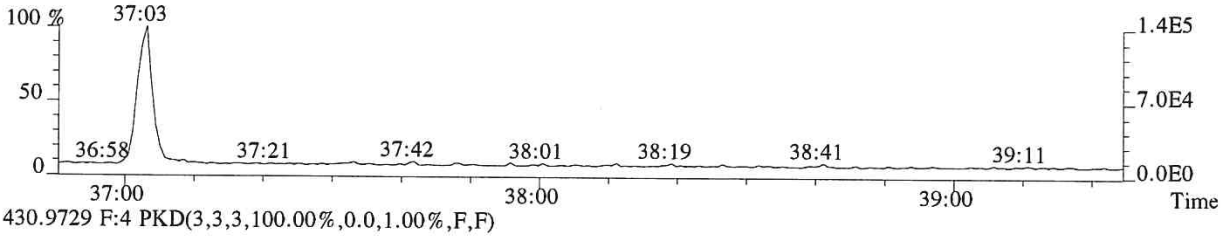
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3404.0,0.50%,F,T)



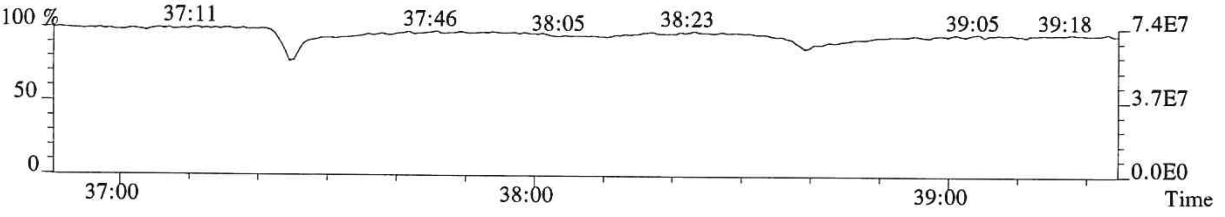
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3524.0,0.50%,F,T)



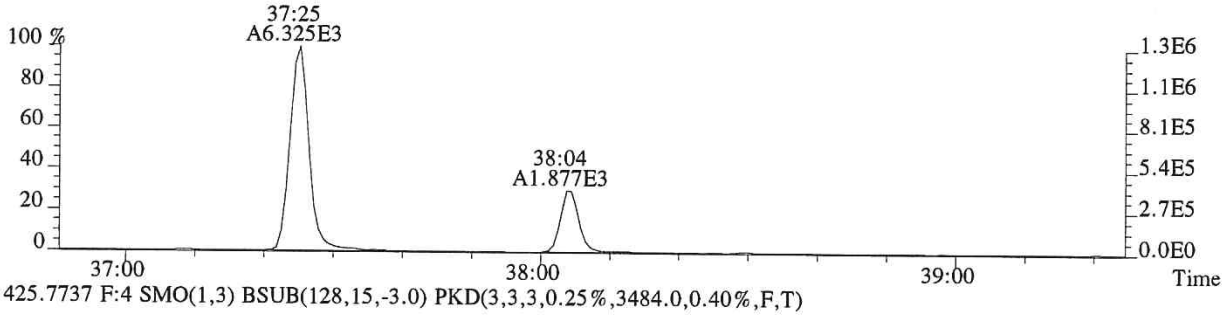
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



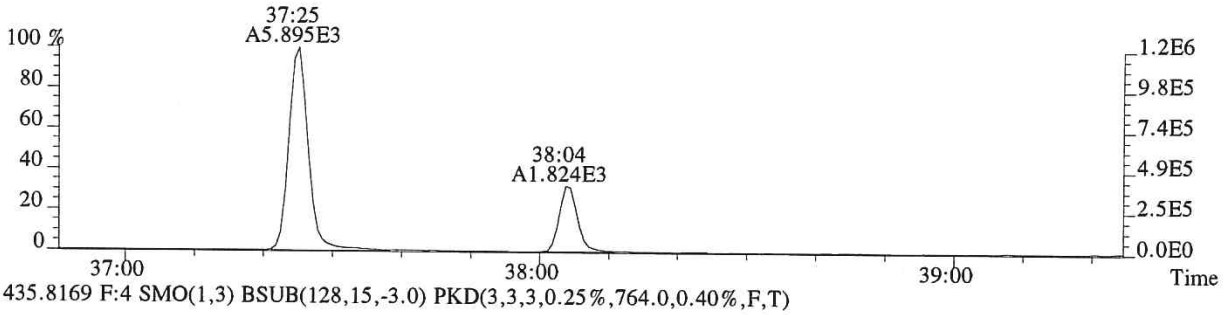
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



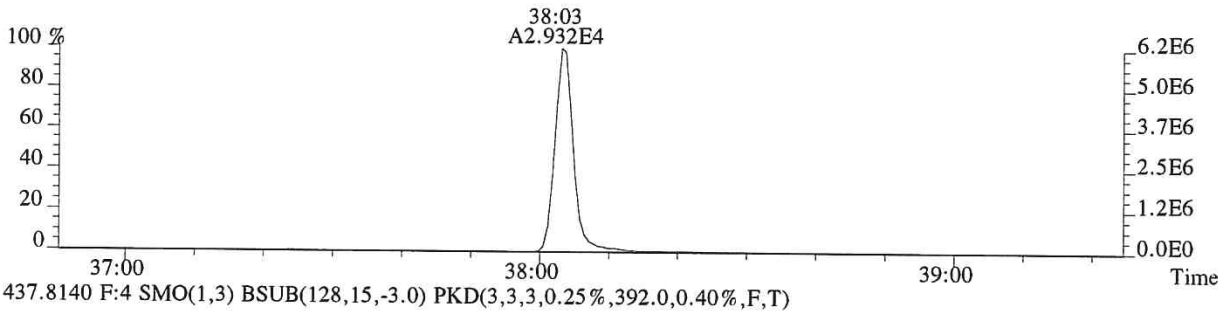
File:P519892 #1-232 Acq:10-JAN-2019 18:51:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-001
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3772.0,0.40%,F,T)



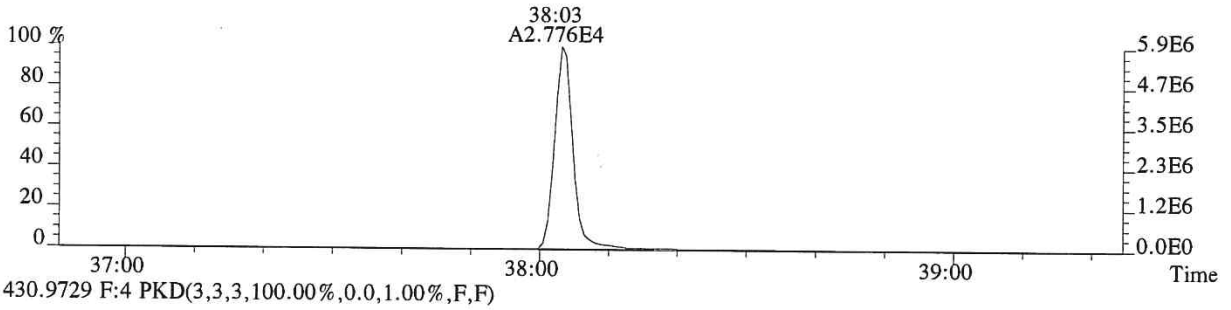
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3484.0,0.40%,F,T)



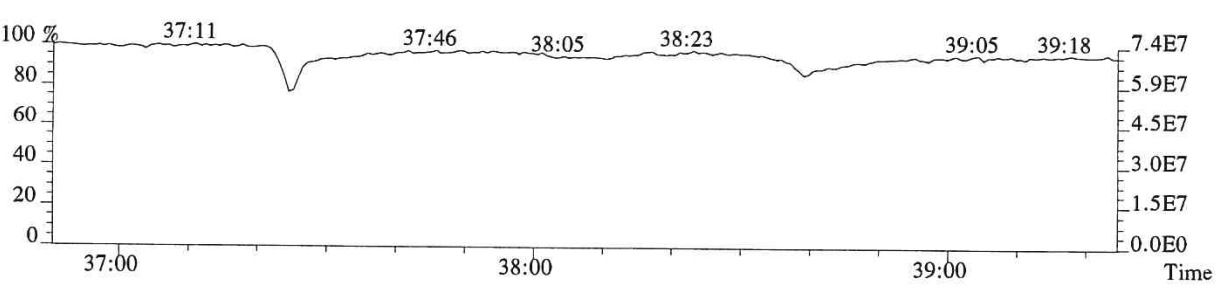
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,764.0,0.40%,F,T)



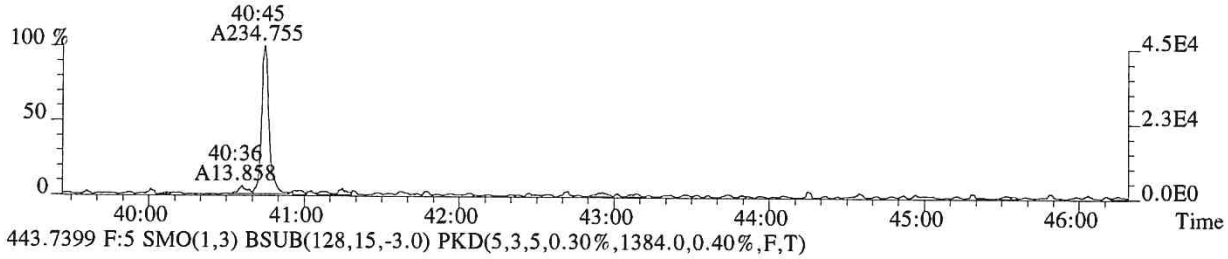
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,392.0,0.40%,F,T)



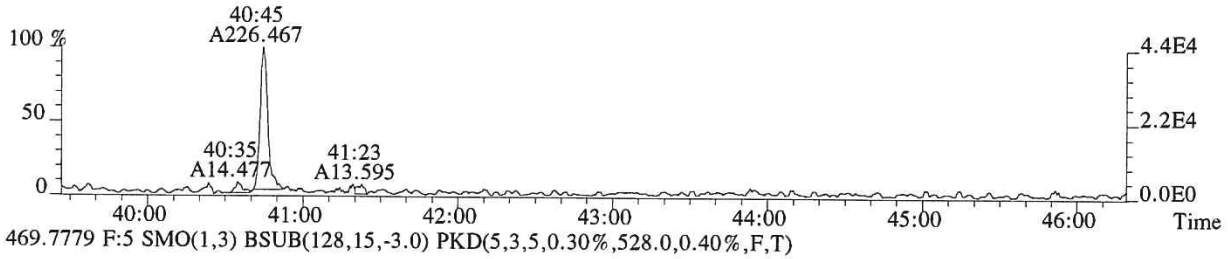
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



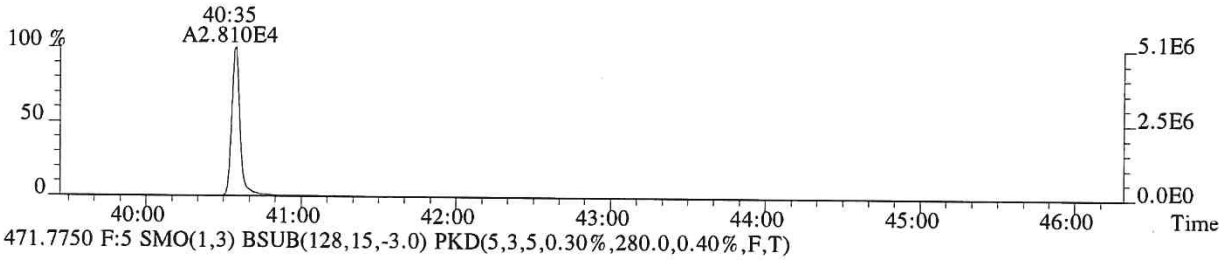
File:P519892 #1-619 Acq:10-JAN-2019 18:51:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-001
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,472.0,0.40%,F,T)



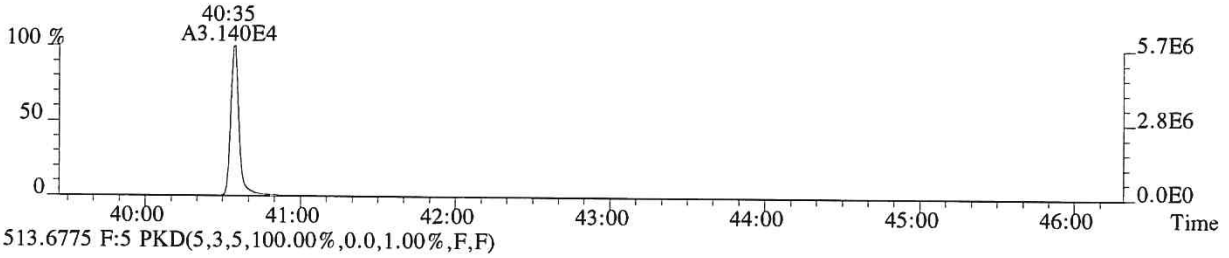
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1384.0,0.40%,F,T)



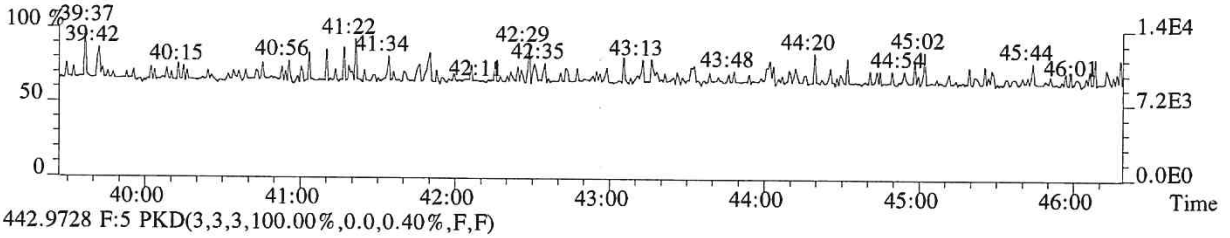
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,528.0,0.40%,F,T)



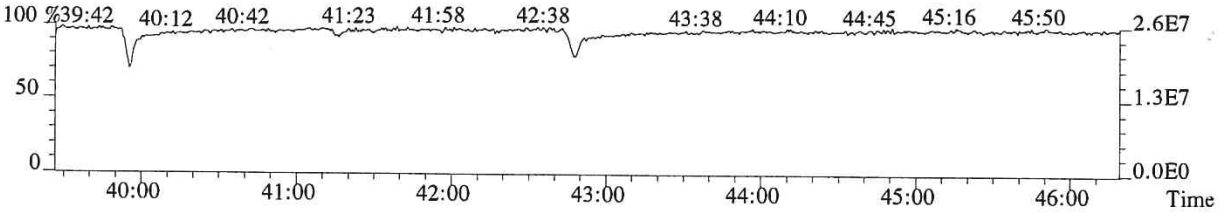
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,280.0,0.40%,F,T)



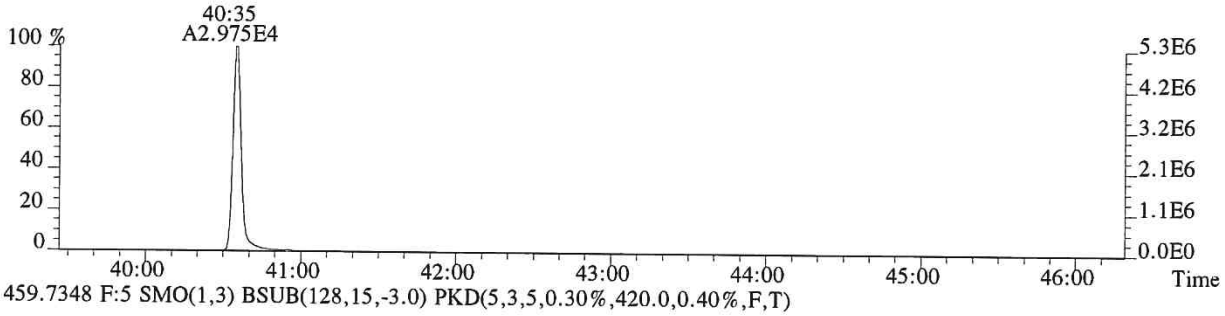
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



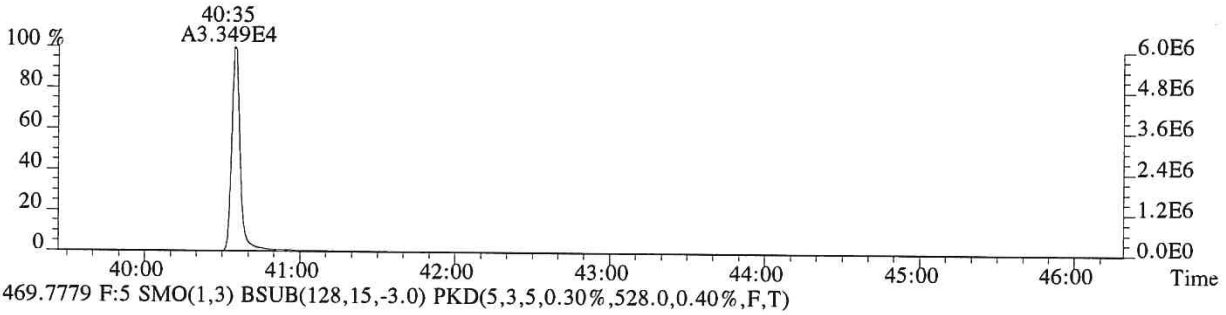
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



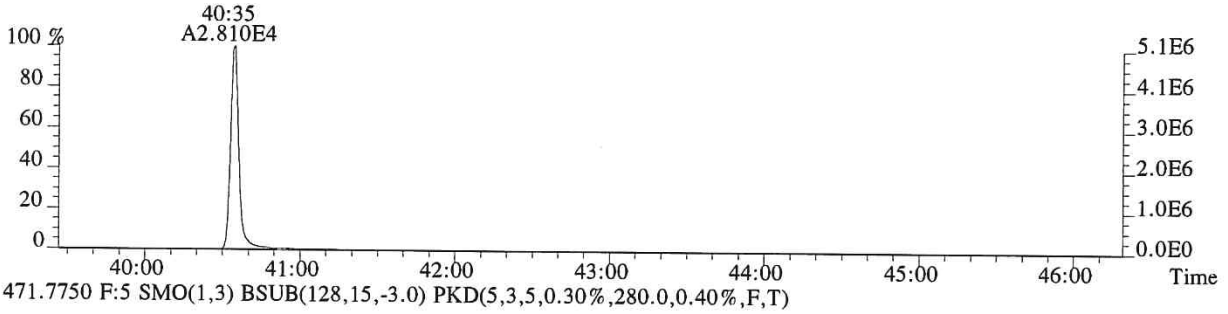
File:P519892 #1-619 Acq:10-JAN-2019 18:51:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-001
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,408.0,0.40%,F,T)



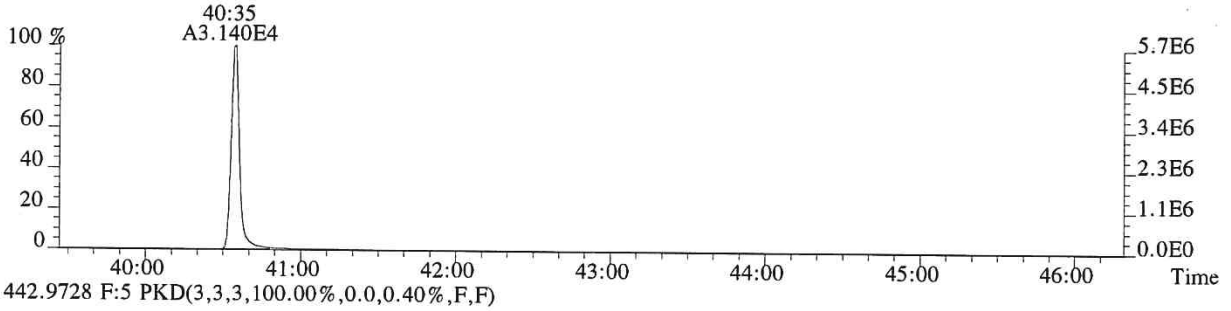
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,420.0,0.40%,F,T)



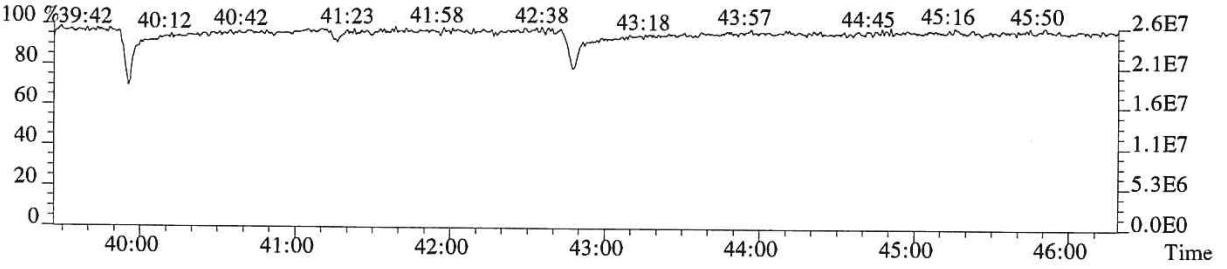
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,528.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,280.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0215

Run #11 Filename P519869 Samp: 1 Inj: 1 Acquired: 9-JAN-19 19:29:44
Processed: 10-JAN-19 08:15:29 Sample ID: E1801139-002

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:45	2.162e+02	2.752e+02	0.79	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:46	5.895e+01	4.489e+01	1.31	no	yes	1.012
3	Unk	2,3,4,7,8-PeCDF	31:48	5.461e+01	4.538e+01	1.20	no	yes	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:46	8.350e+01	4.467e+01	1.87	no	yes	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:53	6.157e+01	5.916e+01	1.04	no	yes	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:27	4.516e+01	3.614e+01	1.25	yes	yes	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:14	5.525e+01	5.296e+01	1.04	no	yes	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:40	4.293e+01	4.898e+01	0.88	no	yes	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:09	4.357e+01	4.849e+01	0.90	yes	yes	1.258
10	Unk	OCDF	41:53	6.613e+01	7.344e+01	0.90	yes	yes	1.359
11	Unk	2,3,7,8-TCDD	26:45	7.696e+01	8.625e+01	0.89	no	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:07	6.508e+01	6.316e+01	1.03	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:37	6.259e+01	2.657e+01	2.36	no	yes	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:42	1.057e+02	9.591e+01	1.10	yes	yes	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:57	1.900e+02	1.294e+02	1.47	no	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:42	1.712e+03	1.723e+03	0.99	yes	no	1.025
17	Unk	OCDD	41:43	2.847e+04	3.279e+04	0.87	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:42	2.246e+04	2.839e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:44	3.942e+04	2.492e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:46	3.770e+04	2.395e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:45	1.565e+04	3.072e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:52	2.102e+04	4.036e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:25	1.769e+04	3.469e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:14	1.572e+04	3.030e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:40	1.239e+04	2.806e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:09	1.151e+04	2.657e+04	0.43	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:43	1.064e+04	1.365e+04	0.78	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:06	2.886e+04	1.787e+04	1.61	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:35	2.205e+04	1.745e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:41	2.775e+04	2.190e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:42	2.681e+04	2.509e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	41:42	2.315e+04	2.576e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:01	3.617e+04	4.567e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:56	4.779e+04	3.750e+04	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:45	1.639e+04				no	1.014

$$\text{OCDD} = \frac{(2.847e+04 + 3.279e+04) \times 4000\ \text{pg} \times 1}{(2.315e+04 + 2.576e+04) \times 10.918\ \text{g} \times 77.8 / 100 \times 1.118} = 527.5\ \text{ng/kg}$$

LW 01/11/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0215

Run #11 Filename P519869 Samp: 1 Inj: 1 Acquired: 9-JAN-19 19:29:44
Processed: 10-JAN-19 08:15:29 LAB. ID: E1801139-002

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.93e+04	1.59e+03	1.8e+01	3.52e+04	2.76e+03	1.3e+01
2	1,2,3,7,8-PeCDF	1.09e+04	1.04e+03	1.0e+01	8.42e+03	2.36e+03	3.6e+00
3	2,3,4,7,8-PeCDF	9.20e+03	1.04e+03	8.8e+00	8.10e+03	2.36e+03	3.4e+00
4	1,2,3,4,7,8-HxCDF	1.52e+04	9.00e+02	1.7e+01	7.31e+03	8.72e+02	8.4e+00
5	1,2,3,6,7,8-HxCDF	9.11e+03	9.00e+02	1.0e+01	7.90e+03	8.72e+02	9.1e+00
6	2,3,4,6,7,8-HxCDF	5.76e+03	9.00e+02	6.4e+00	5.40e+03	8.72e+02	6.2e+00
7	1,2,3,7,8,9-HxCDF	9.95e+03	9.00e+02	1.1e+01	7.82e+03	8.72e+02	9.0e+00
8	1,2,3,4,6,7,8-HpCDF	6.37e+03	1.01e+03	6.3e+00	7.70e+03	6.04e+02	1.3e+01
9	1,2,3,4,7,8,9-HpCDF	5.64e+03	1.01e+03	5.6e+00	5.10e+03	6.04e+02	8.4e+00
10	OCDF	4.89e+03	6.40e+02	7.6e+00	5.77e+03	8.72e+02	6.6e+00
11	2,3,7,8-TCDD	1.28e+04	3.02e+03	4.2e+00	1.19e+04	1.72e+03	6.9e+00
12	1,2,3,7,8-PeCDD	1.16e+04	1.28e+03	9.1e+00	9.34e+03	6.24e+02	1.5e+01
13	1,2,3,4,7,8-HxCDD	1.09e+04	9.84e+02	1.1e+01	6.55e+03	2.02e+03	3.2e+00
14	1,2,3,6,7,8-HxCDD	1.37e+04	9.84e+02	1.4e+01	1.21e+04	2.02e+03	6.0e+00
15	1,2,3,7,8,9-HxCDD	2.28e+04	9.84e+02	2.3e+01	2.20e+04	2.02e+03	1.1e+01
16	1,2,3,4,6,7,8-HpCDD	1.63e+05	2.11e+03	7.8e+01	1.54e+05	4.16e+02	3.7e+02
17	OCDD	1.39e+06	3.80e+02	3.6e+03	1.59e+06	6.32e+02	2.5e+03
18	13C-2,3,7,8-TCDF	2.94e+06	8.65e+03	3.4e+02	3.71e+06	7.26e+03	5.1e+02
19	13C-1,2,3,7,8-PeCDF	5.82e+06	1.17e+03	5.0e+03	3.72e+06	9.92e+02	3.8e+03
20	13C-2,3,4,7,8-PeCDF	5.70e+06	1.17e+03	4.9e+03	3.67e+06	9.92e+02	3.7e+03
21	13C-1,2,3,4,7,8-HxCDF	2.64e+06	1.78e+03	1.5e+03	5.12e+06	1.05e+03	4.9e+03
22	13C-1,2,3,6,7,8-HxCDF	2.82e+06	1.78e+03	1.6e+03	5.50e+06	1.05e+03	5.2e+03
23	13C-2,3,4,6,7,8-HxCDF	2.53e+06	1.78e+03	1.4e+03	4.97e+06	1.05e+03	4.7e+03
24	13C-1,2,3,7,8,9-HxCDF	1.96e+06	1.78e+03	1.1e+03	3.89e+06	1.05e+03	3.7e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.40e+06	1.14e+03	1.2e+03	3.12e+06	2.58e+03	1.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	9.93e+05	1.14e+03	8.7e+02	2.21e+06	2.58e+03	8.6e+02
27	13C-2,3,7,8-TCDD	1.56e+06	6.84e+03	2.3e+02	2.02e+06	3.07e+03	6.6e+02
28	13C-1,2,3,7,8-PeCDD	4.37e+06	1.21e+03	3.6e+03	2.70e+06	1.40e+03	1.9e+03
29	13C-1,2,3,4,7,8-HxCDD	3.70e+06	1.47e+03	2.5e+03	2.93e+06	9.92e+02	3.0e+03
30	13C-1,2,3,6,7,8-HxCDD	3.50e+06	1.47e+03	2.4e+03	2.74e+06	9.92e+02	2.8e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.36e+06	7.80e+02	3.0e+03	2.22e+06	6.88e+02	3.2e+03
32	13C-OCDD	1.17e+06	1.06e+03	1.1e+03	1.23e+06	4.44e+02	2.8e+03
33	13C-1,2,3,4-TCDD	5.18e+06	6.84e+03	7.6e+02	6.56e+06	3.07e+03	2.1e+03
34	13C-1,2,3,7,8,9-HxCDD	5.96e+06	1.47e+03	4.0e+03	4.75e+06	9.92e+02	4.8e+03
35	37Cl-2,3,7,8-TCDD	2.41e+06	1.60e+03	1.5e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0215

Entry: 36 Totals Name: Total Tetra-Furans

Run: 11 File: P519869 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 19:29:44 Processed: 10-JAN-19 08:15:29

Mass: 303.9020 305.8990 Tot Response: 4.91e+02 RRF: 0.9417

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	25:45	2.16e+02	2.75e+02 0.79	yes	4.91e+02	2,3,7,8-TCDF	n	n

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Peak List Summary

CLIENT ID.
SL0215

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 11 File: P519869 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 19:29:44 Processed: 10-JAN-19 08:15:29

Mass: 319.8970 321.8940 Tot Response: 1.57e+03 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:23	6.82e+02	8.85e+02 0.77	yes	1.57e+03		n	n

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Peak List Summary

CLIENT ID.
SL0215

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 11 File: P519869 Sample:1 Injection:1 Function:2

Acquired: 9-JAN-19 19:29:44 Processed: 10-JAN-19 08:15:29

Mass: 355.8550 357.8520 Tot Response: 1.37e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:17	8.41e+02	5.33e+02	1.58	yes	1.37e+03		n	n

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Peak List Summary

CLIENT ID.
SL0215

Entry: 41 Totals Name: Total Hexa-Furans

Run: 11 File: P519869 Sample:1 Injection:1 Function:3

Acquired: 9-JAN-19 19:29:44 Processed: 10-JAN-19 08:15:29

Mass: 373.8210 375.8180 Tot Response: 8.13e+01 RRF: 1.141

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	35:27	4.52e+01	3.61e+01 1.25	yes	8.13e+01	2,3,4,6,7,8-HxCDF	y	n

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Peak List Summary

CLIENT ID.
SL0215

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 11 File: P519869 Sample:1 Injection:1 Function:3

Acquired: 9-JAN-19 19:29:44 Processed: 10-JAN-19 08:15:29

Mass: 389.8160 391.8130 Tot Response: 9.11e+03 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:08	4.34e+03	3.54e+03 1.22	yes	7.88e+03		n	n
2	34:57	5.98e+02	4.32e+02 1.39	yes	1.03e+03		n	n
3	35:42	1.06e+02	9.59e+01 1.10	yes	2.02e+02	1,2,3,6,7,8-HxCDD	n	y

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Peak List Summary

CLIENT ID.
SL0215

Entry: 43 Totals Name: Total Hepta-Furans

Run: 11 File: P519869 Sample:1 Injection:1 Function:4

Acquired: 9-JAN-19 19:29:44 Processed: 10-JAN-19 08:15:29

Mass: 407.7820 409.7790 Tot Response: 9.21e+01 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	39:09	4.36e+01	4.85e+01 0.90	yes	9.21e+01	1,2,3,4,7,8,9-HpCDF	y	n

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Peak List Summary

CLIENT ID.
SL0215

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 11 File: P519869 Sample:1 Injection:1 Function:4

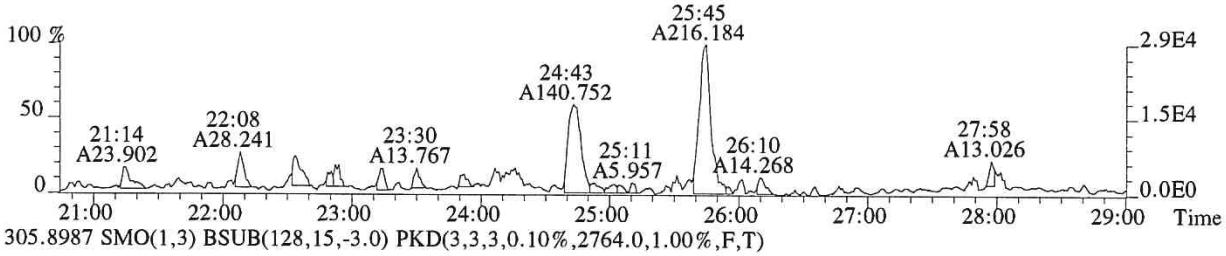
Acquired: 9-JAN-19 19:29:44 Processed: 10-JAN-19 08:15:29

Mass: 423.7770 425.7740 Tot Response: 2.06e+04 RRF: 1.025

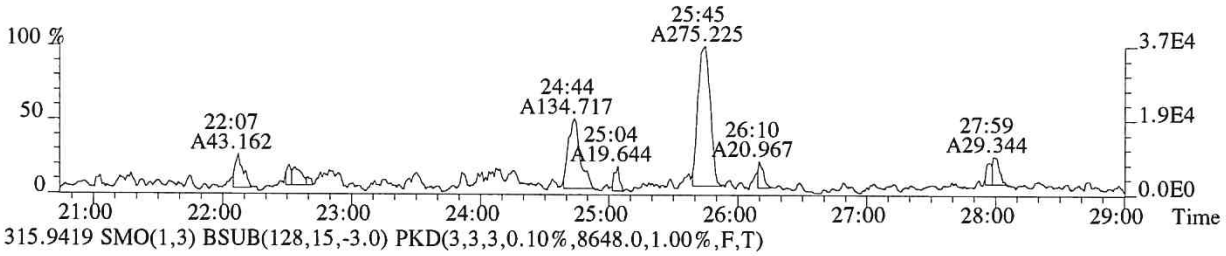
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:59	8.76e+03	8.36e+03	1.05	yes	1.71e+04		n	n
2	38:42	1.71e+03	1.72e+03	0.99	yes	3.43e+03	1,2,3,4,6,7,8-HpCDD	n	n

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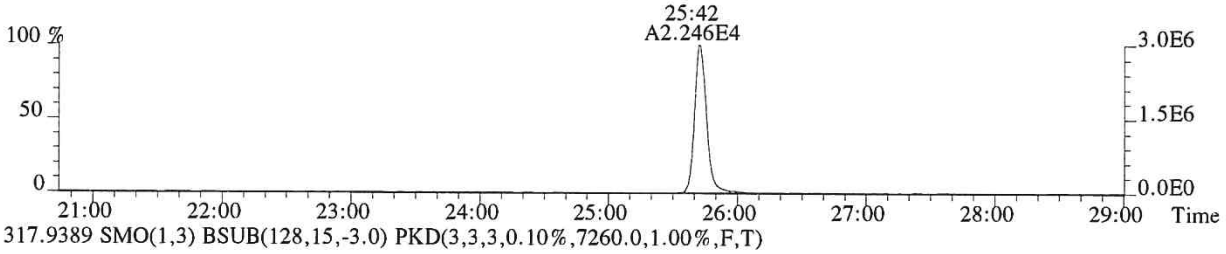
File:P519869 #1-587 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1588.0,1.00%,F,T)



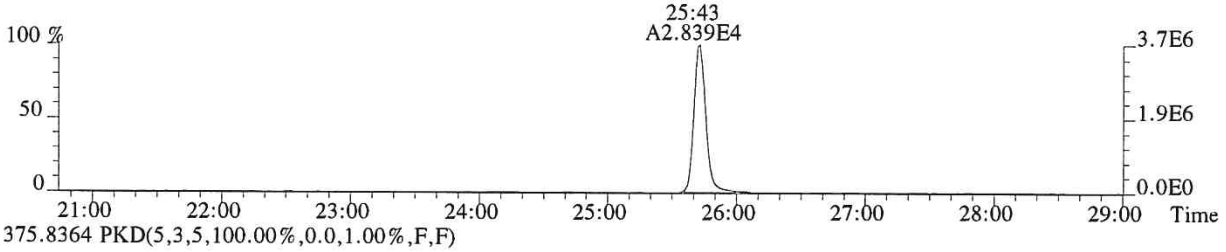
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2764.0,1.00%,F,T)



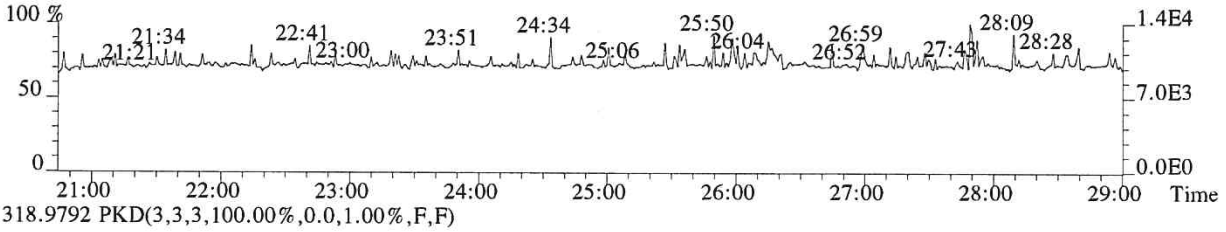
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8648.0,1.00%,F,T)



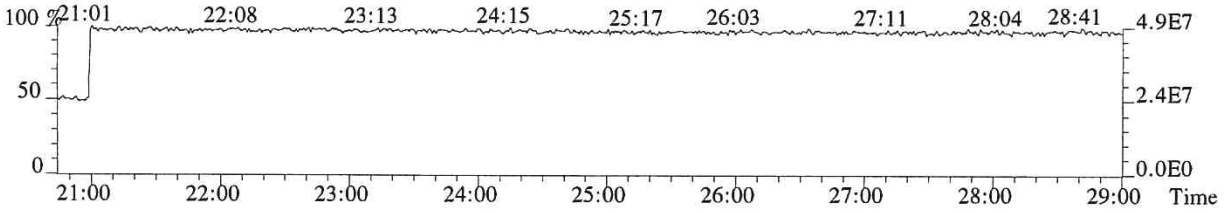
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7260.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

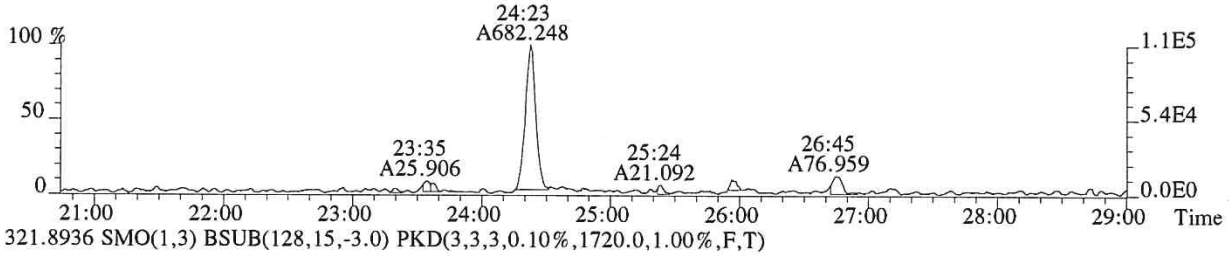


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

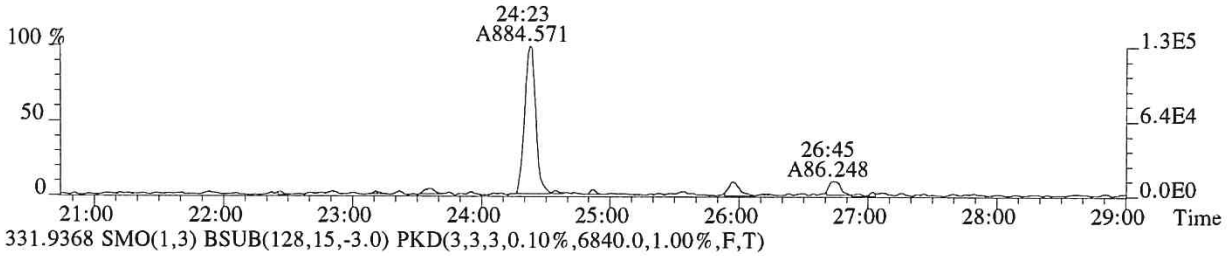


018152

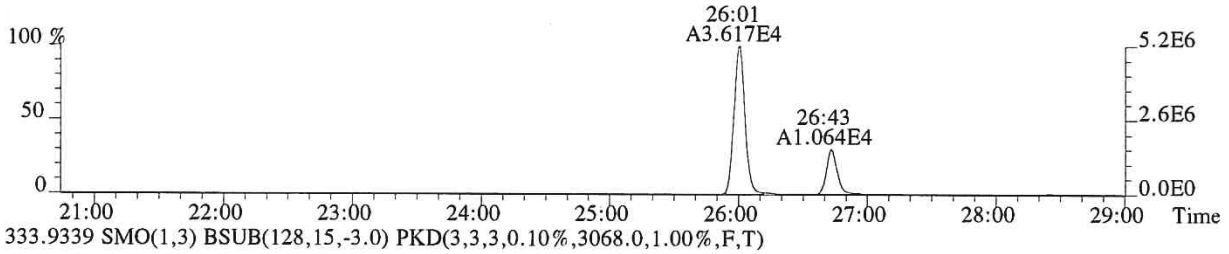
File:P519869 #1-587 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3020.0,1.00%,F,T)



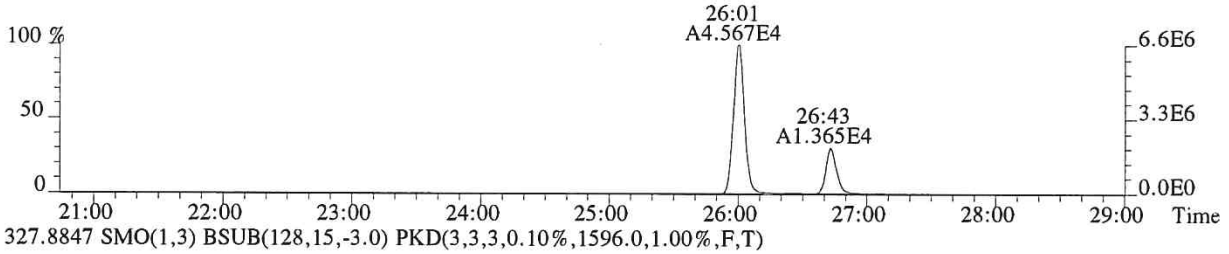
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1720.0,1.00%,F,T)



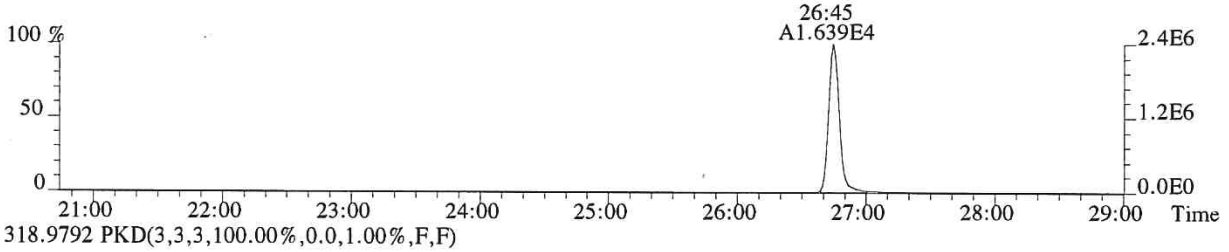
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6840.0,1.00%,F,T)



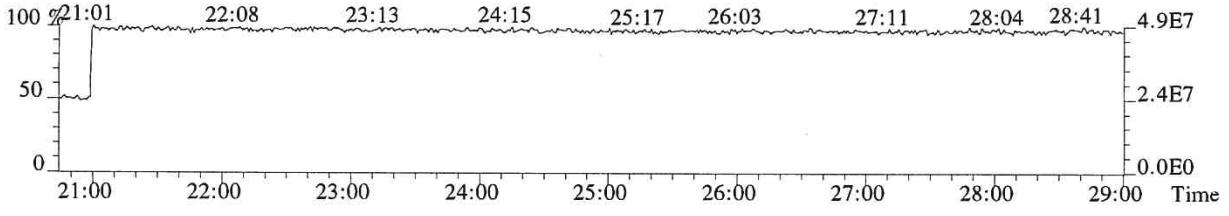
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3068.0,1.00%,F,T)



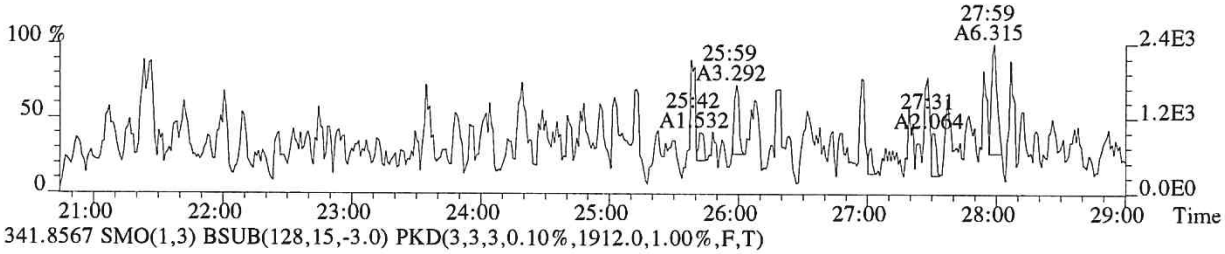
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1596.0,1.00%,F,T)



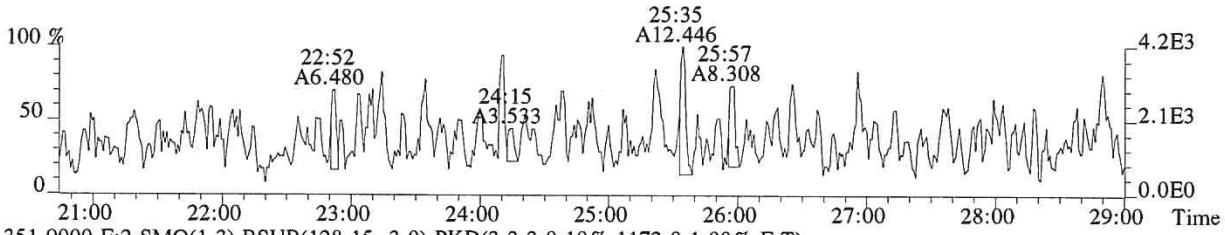
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



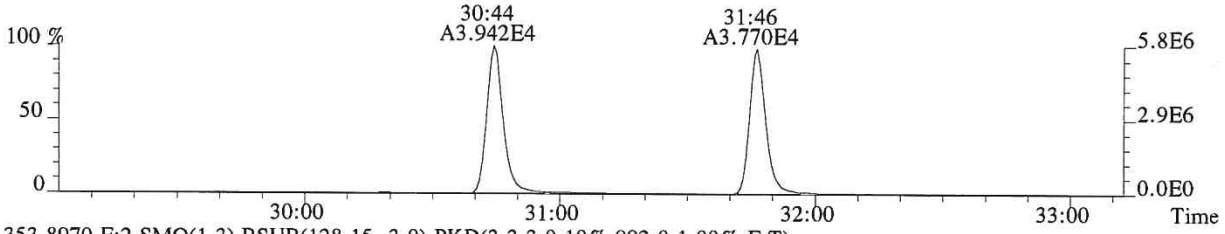
File:P519869 #1-587 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,908.0,1.00%,F,T)



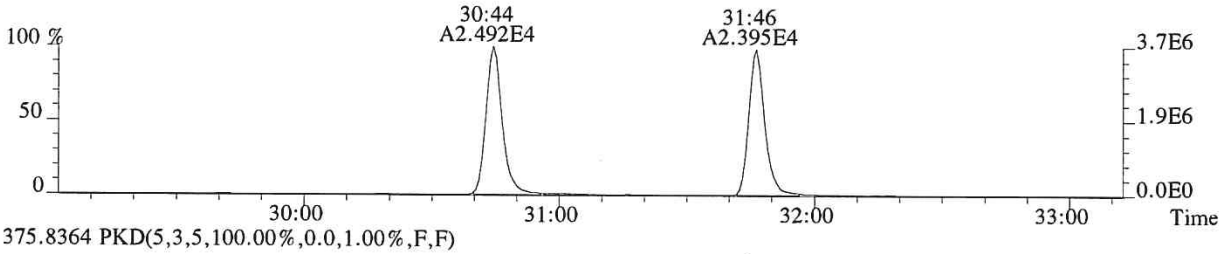
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1912.0,1.00%,F,T)



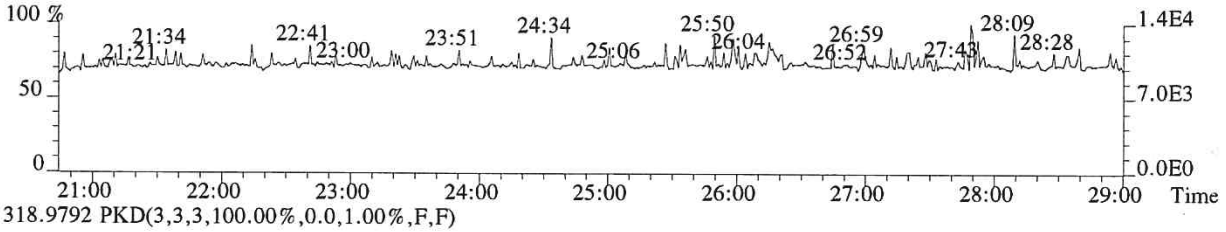
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1172.0,1.00%,F,T)



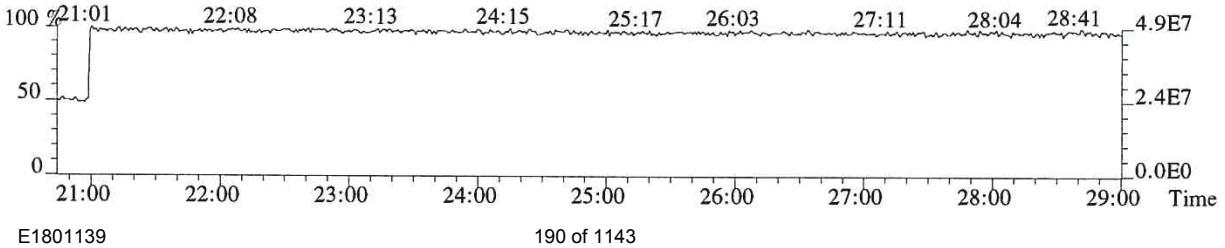
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,992.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

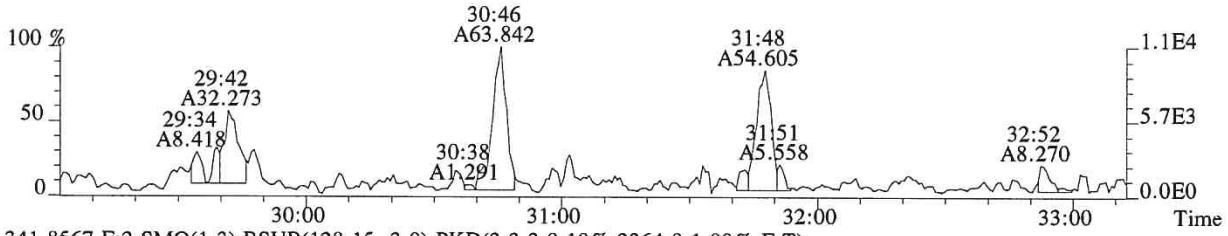


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

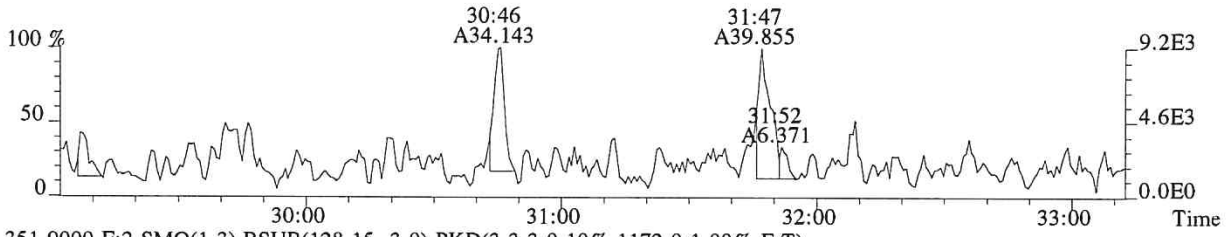


018154

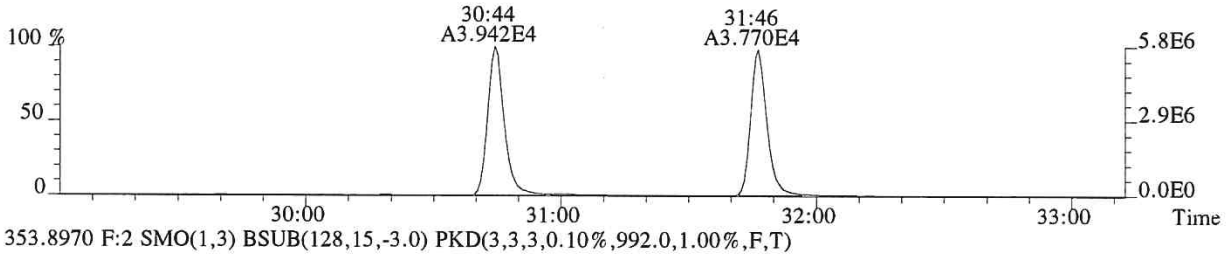
File:P519869 #1-376 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1044.0,1.00%,F,T)



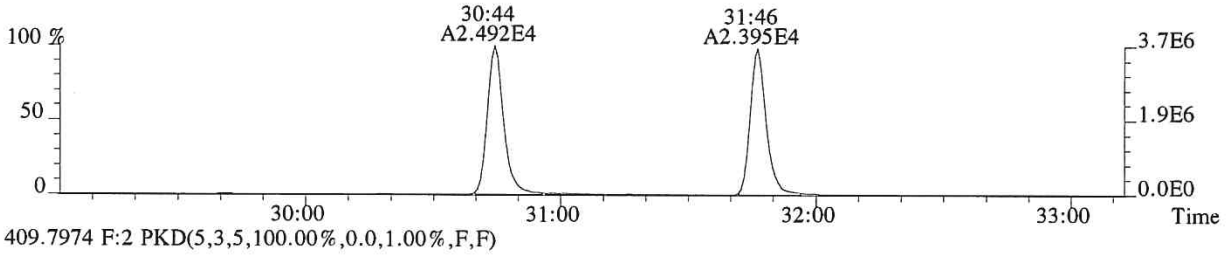
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2364.0,1.00%,F,T)



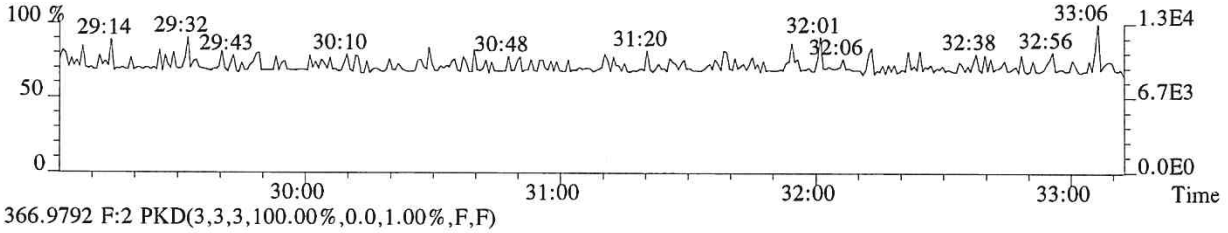
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1172.0,1.00%,F,T)



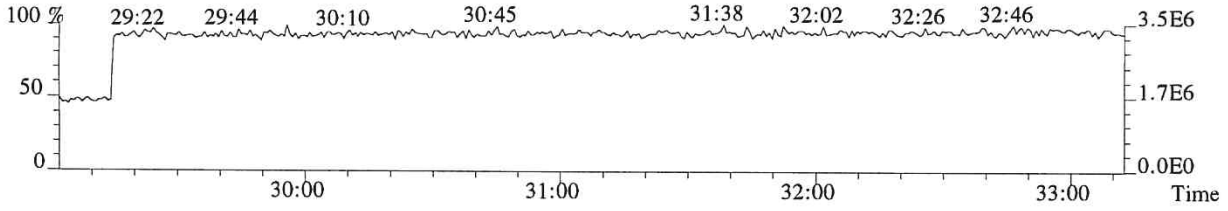
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,992.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

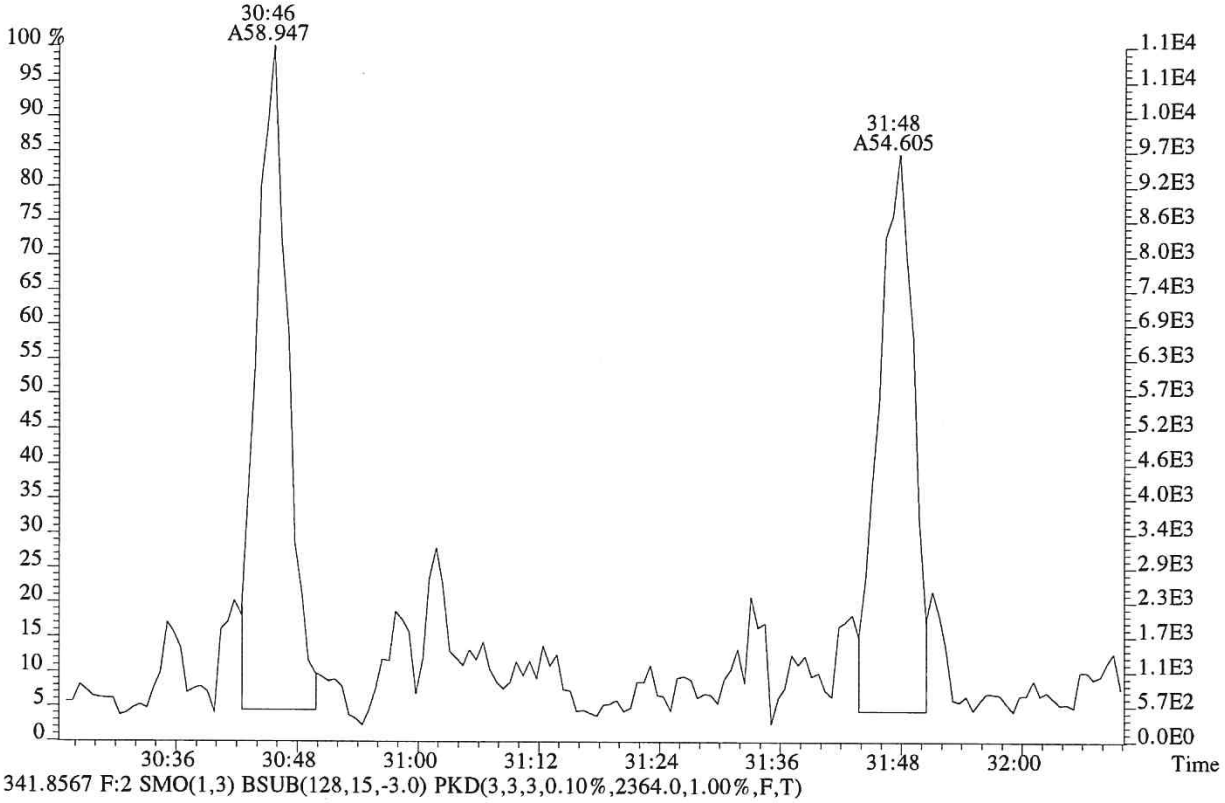


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

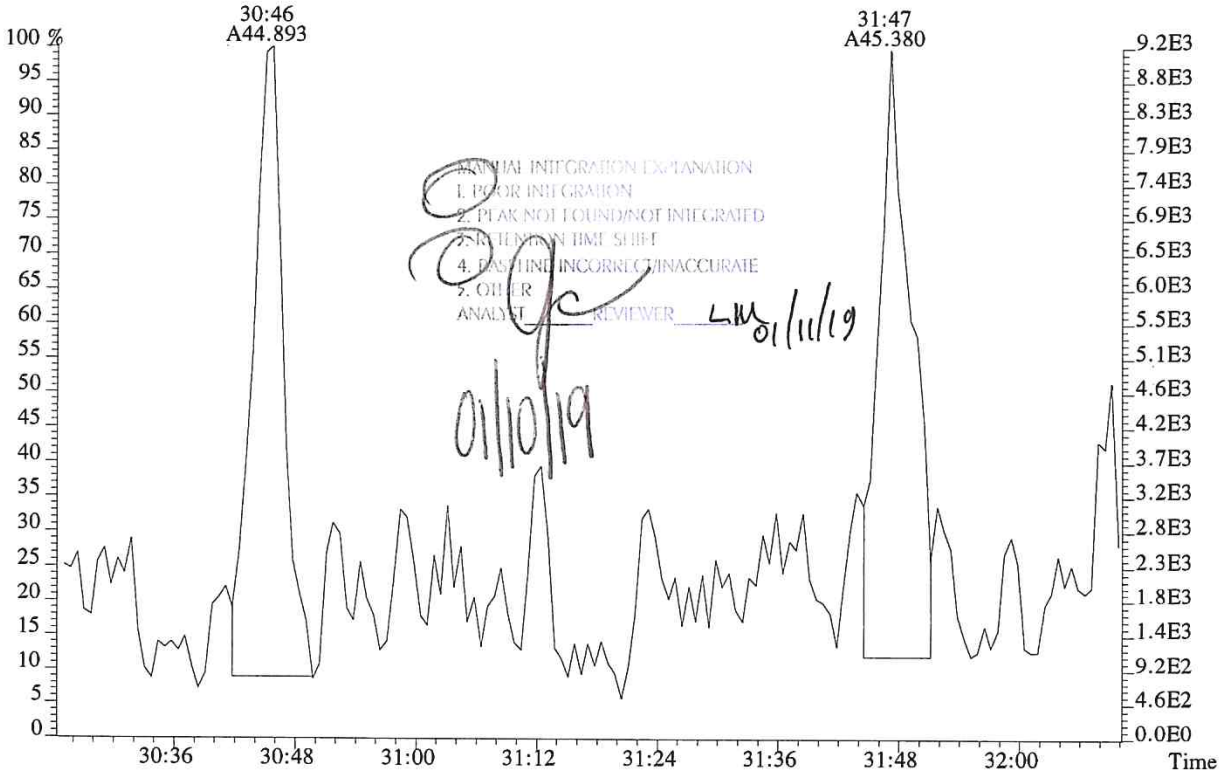


018155

File:P519869 #1-376 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1044.0,1.00%,F,T)



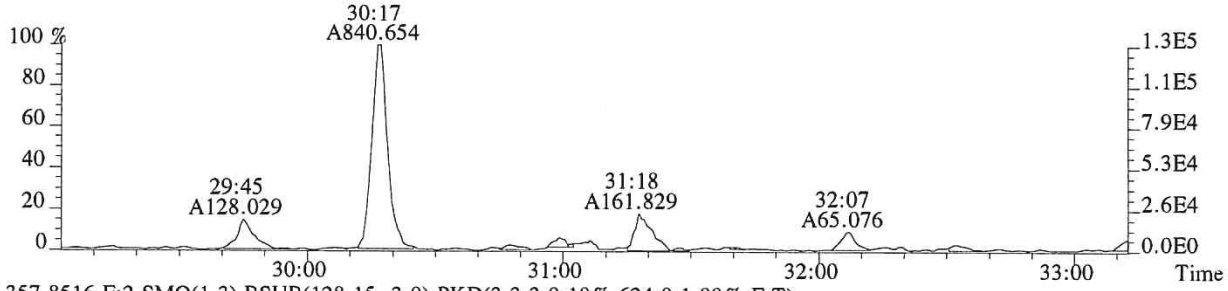
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2364.0,1.00%,F,T)



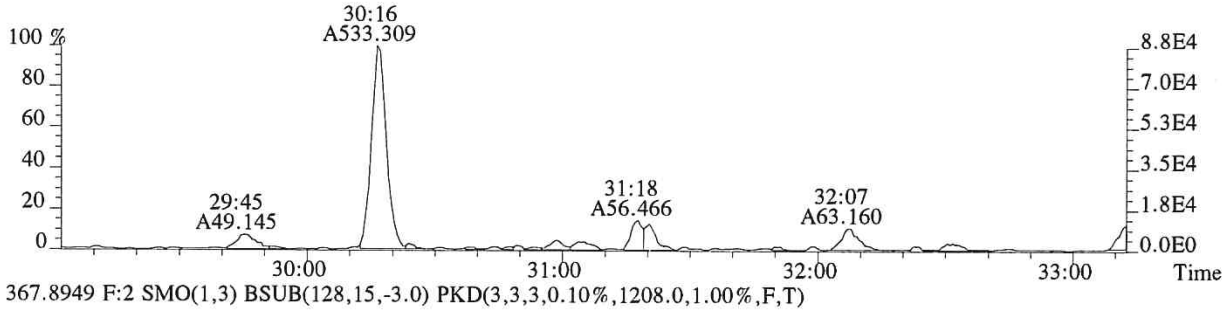
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST [illegible] REVIEWER LMS 01/11/19

01/10/19

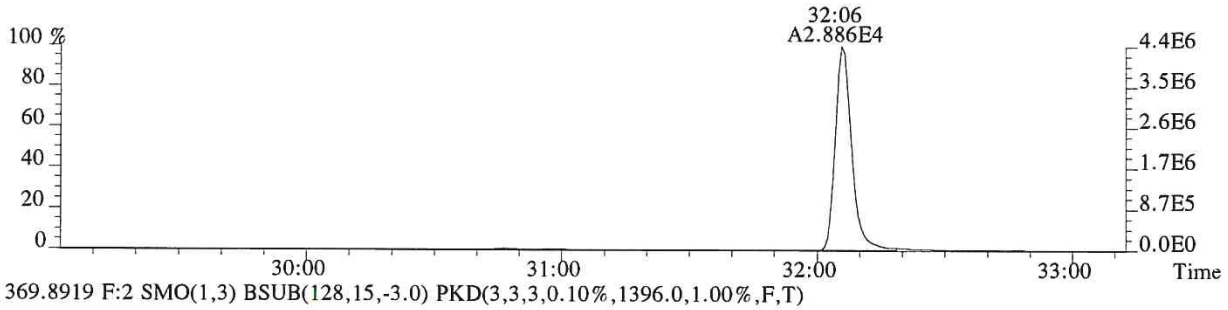
File:P519869 #1-376 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1276.0,1.00%,F,T)



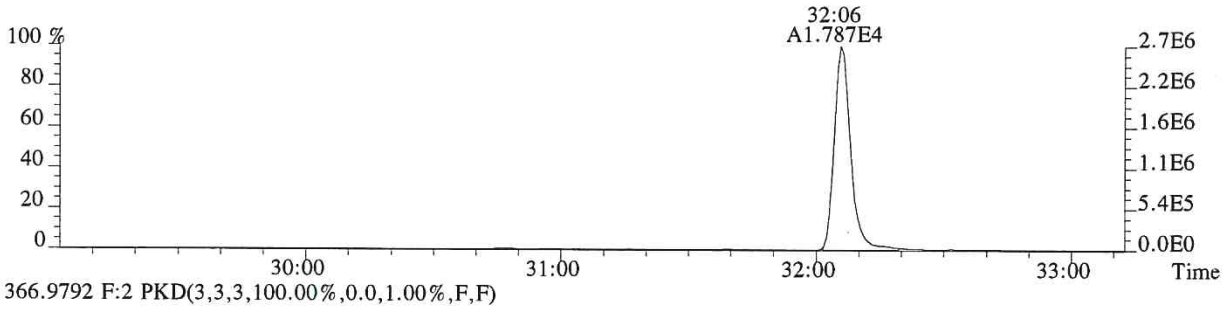
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,624.0,1.00%,F,T)



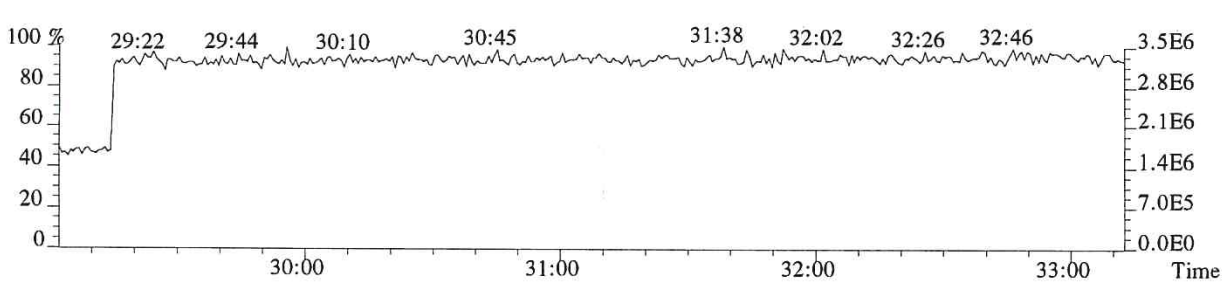
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1208.0,1.00%,F,T)



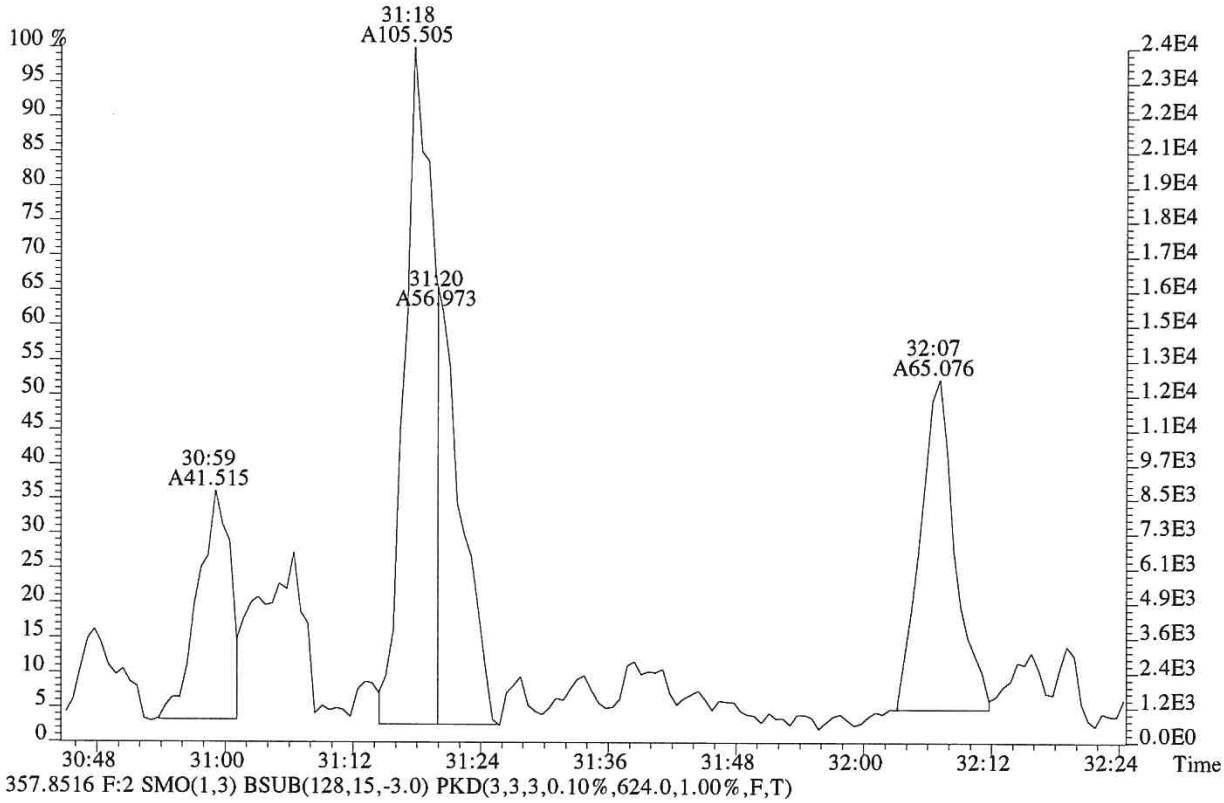
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1396.0,1.00%,F,T)



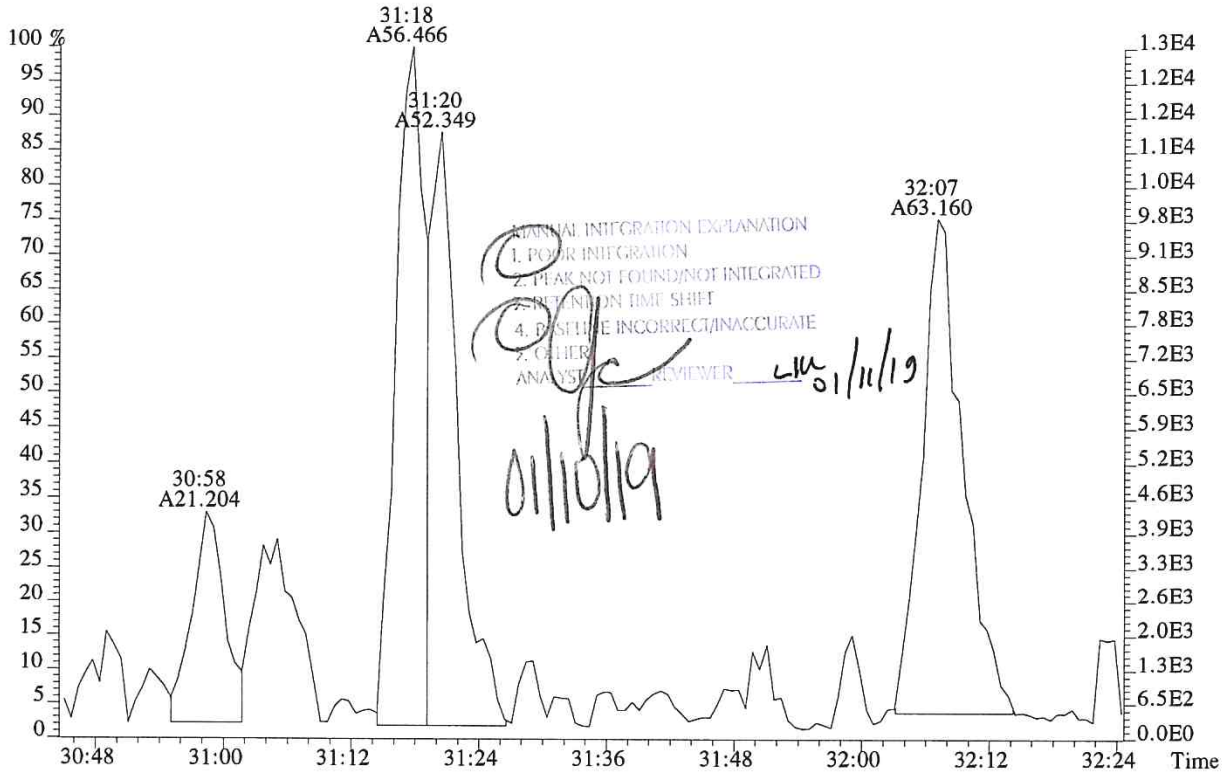
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519869 #1-376 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1276.0,1.00%,F,T)

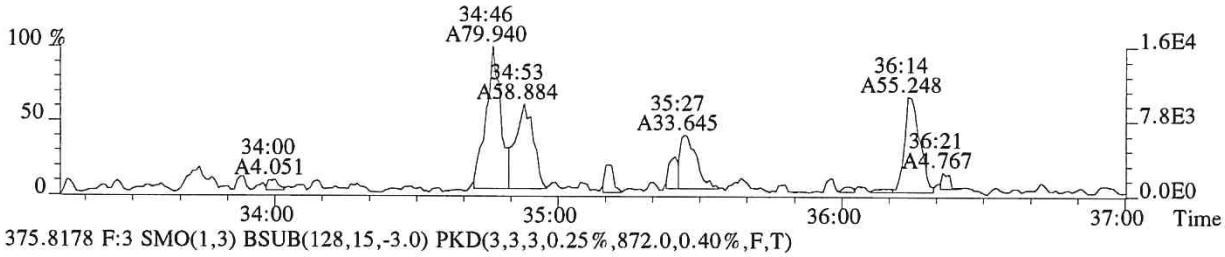


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,624.0,1.00%,F,T)

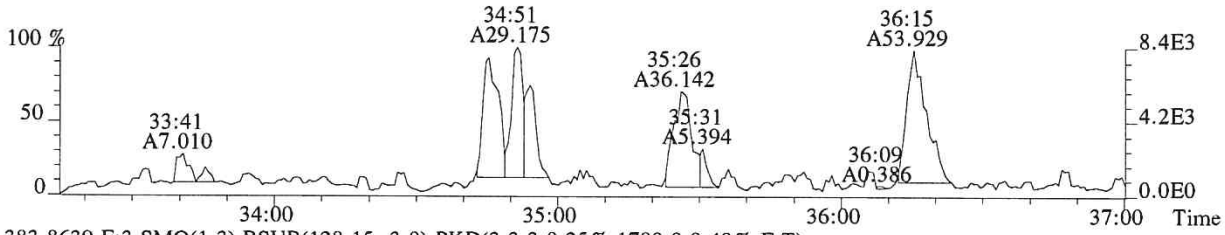


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST 01/10/19 REVIEWER 01/11/19

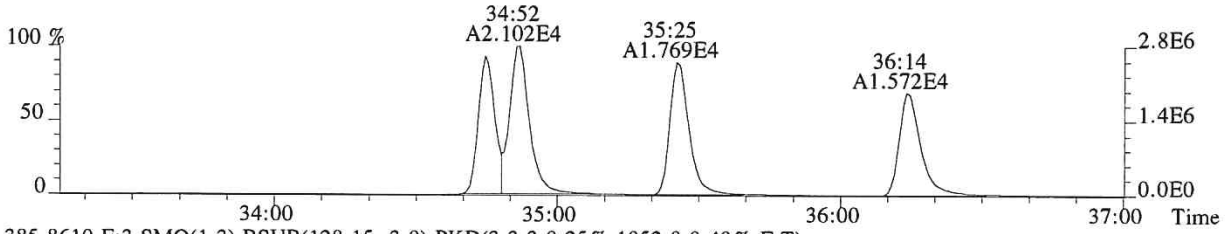
File:P519869 #1-339 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,900.0,0.40%,F,T)



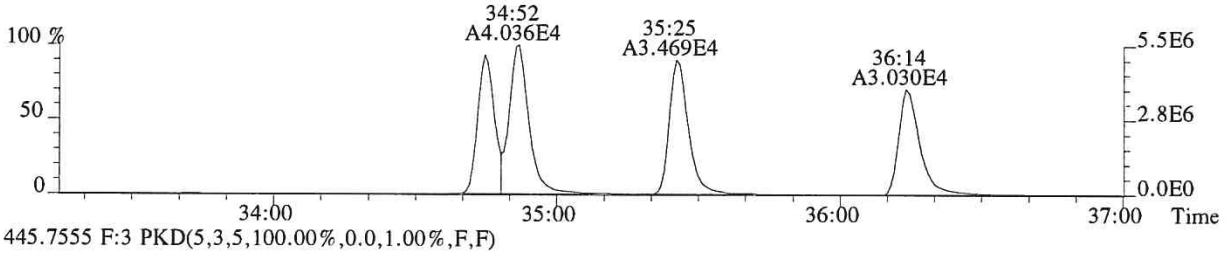
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,872.0,0.40%,F,T)



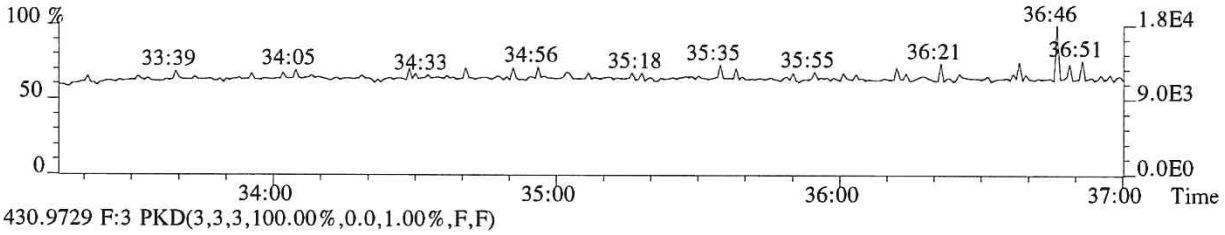
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1780.0,0.40%,F,T)



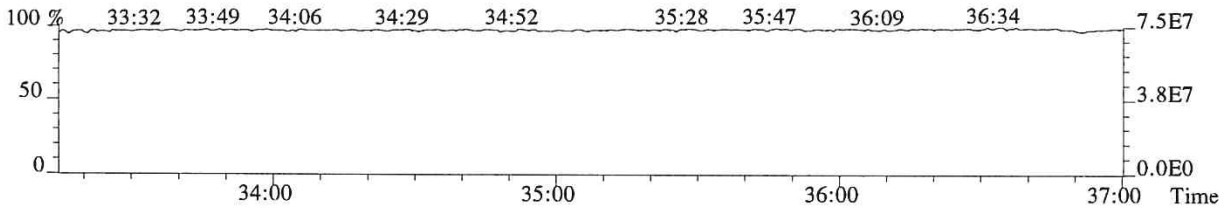
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1052.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

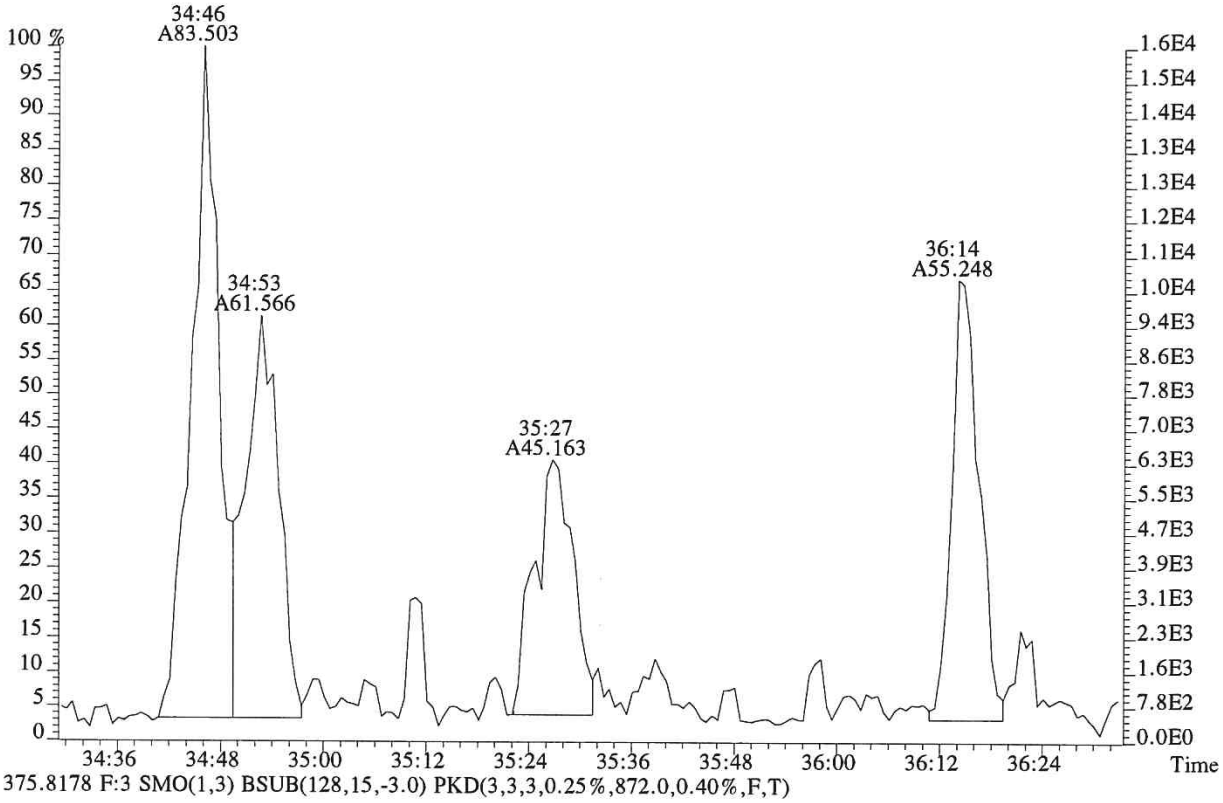


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

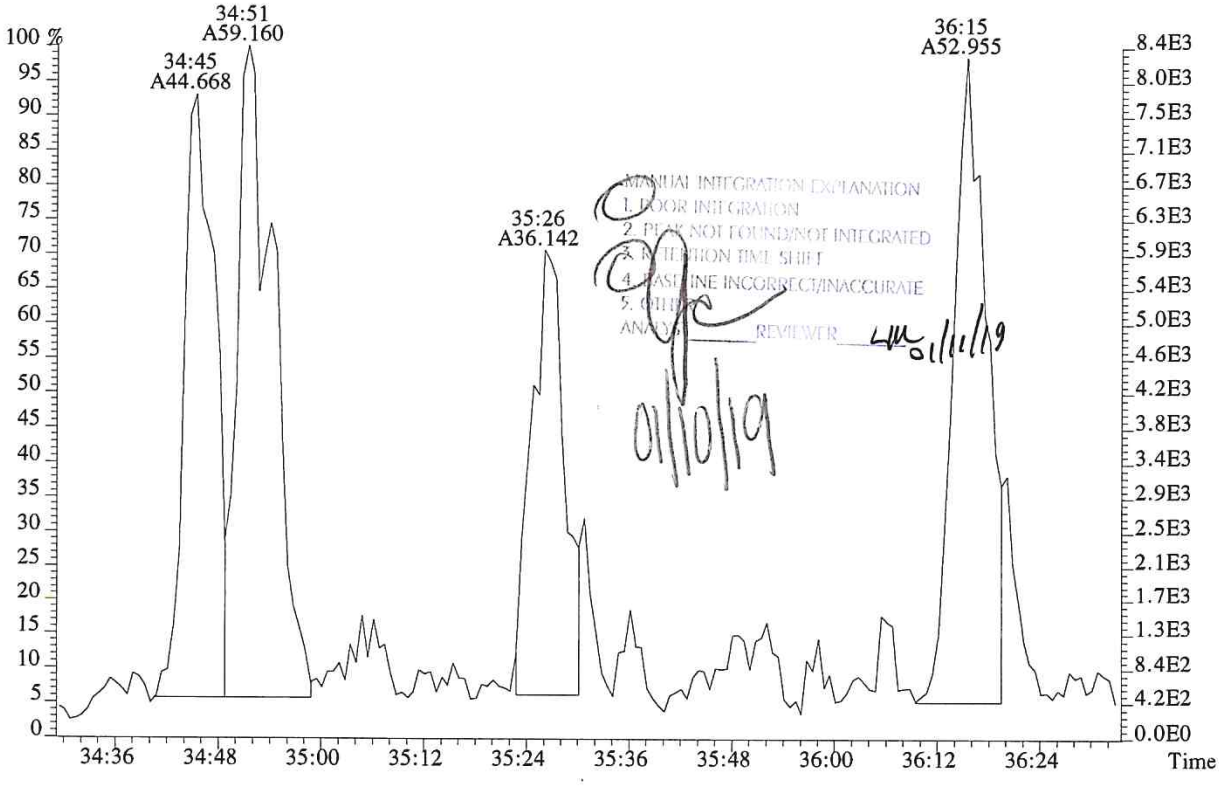


018159

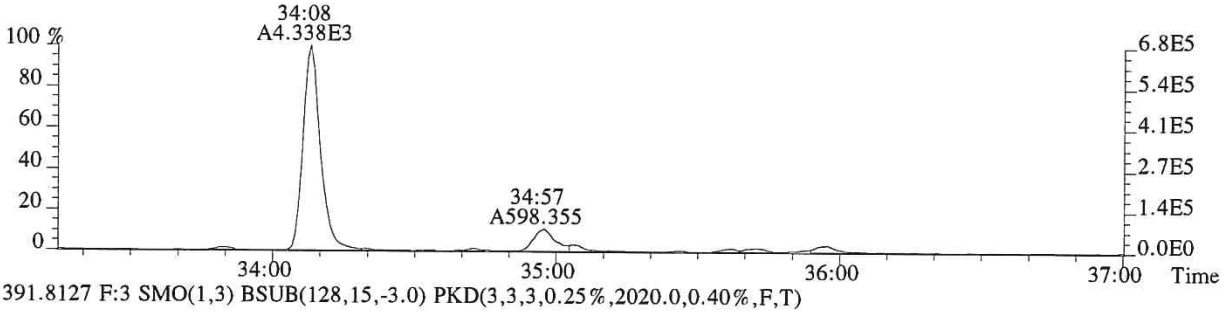
File:P519869 #1-339 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,900.0,0.40%,F,T)



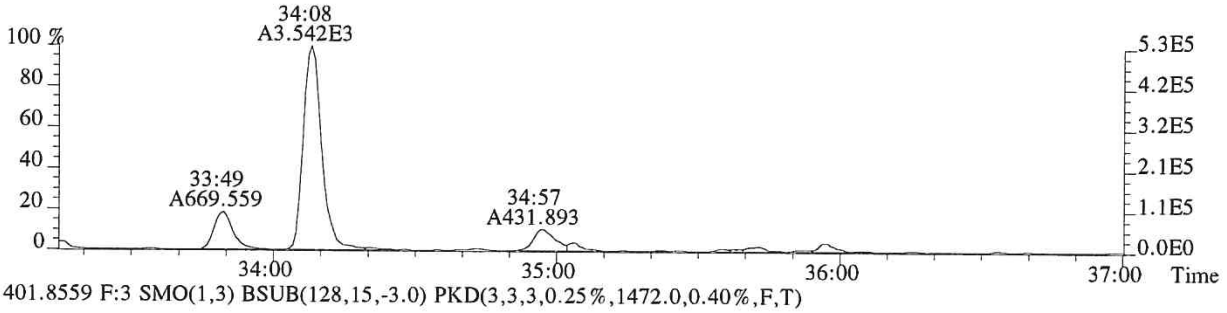
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,872.0,0.40%,F,T)



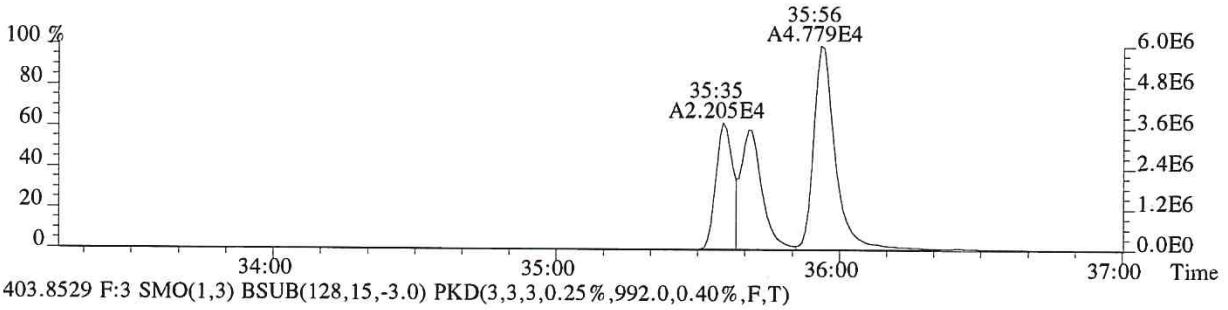
File:P519869 #1-339 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,984.0,0.40%,F,T)



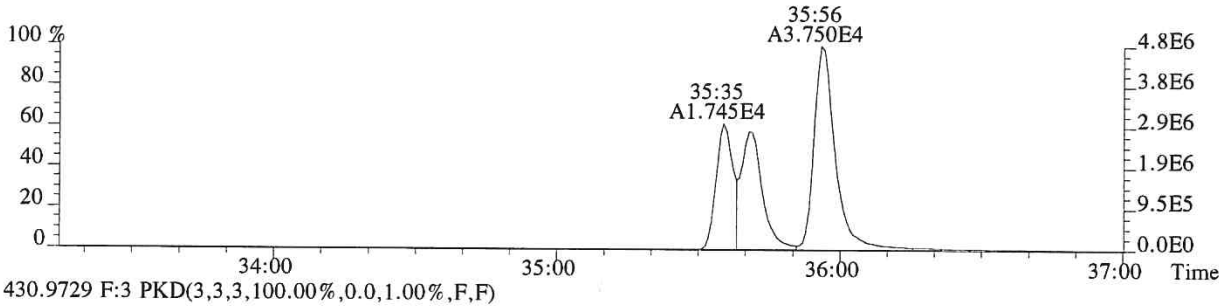
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2020.0,0.40%,F,T)



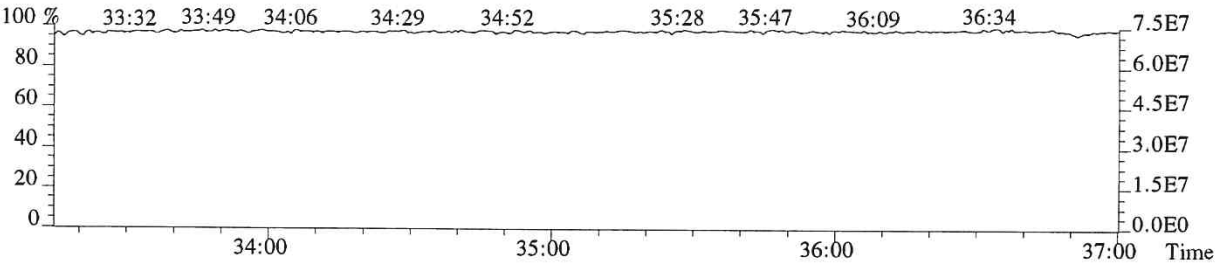
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1472.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,992.0,0.40%,F,T)

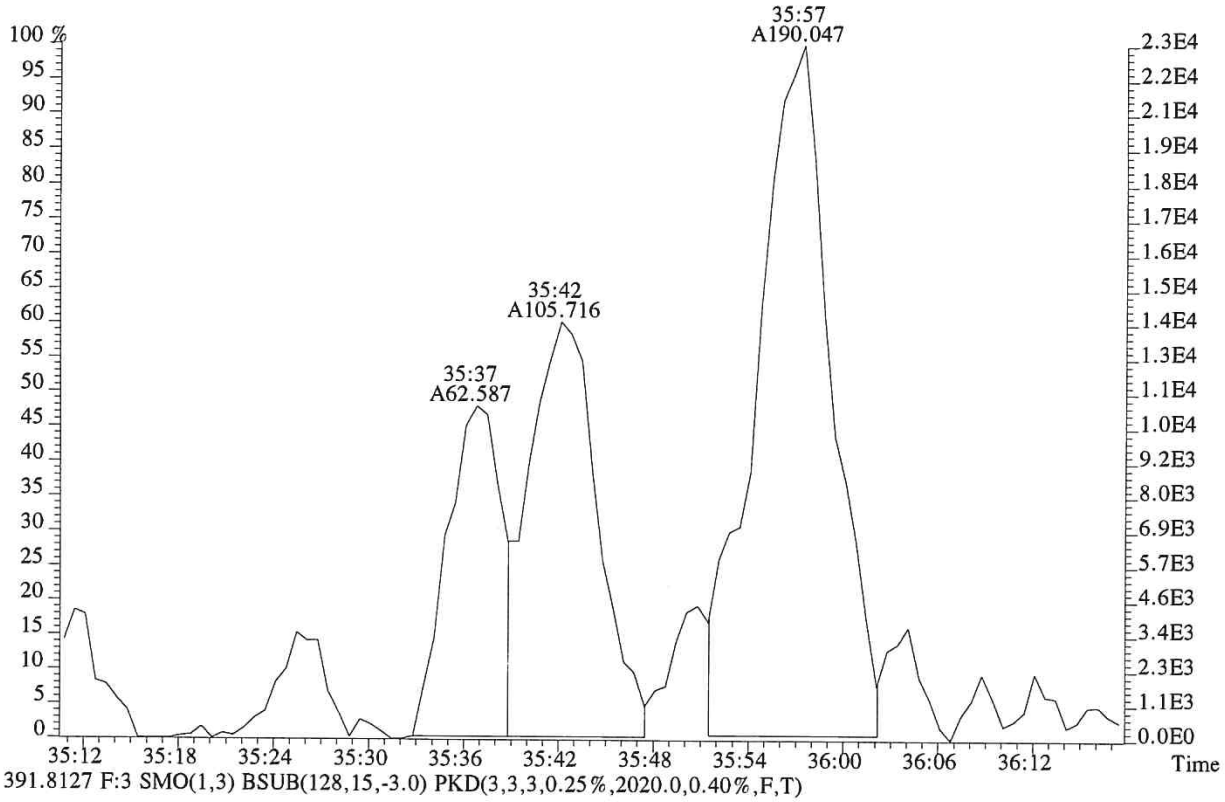


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

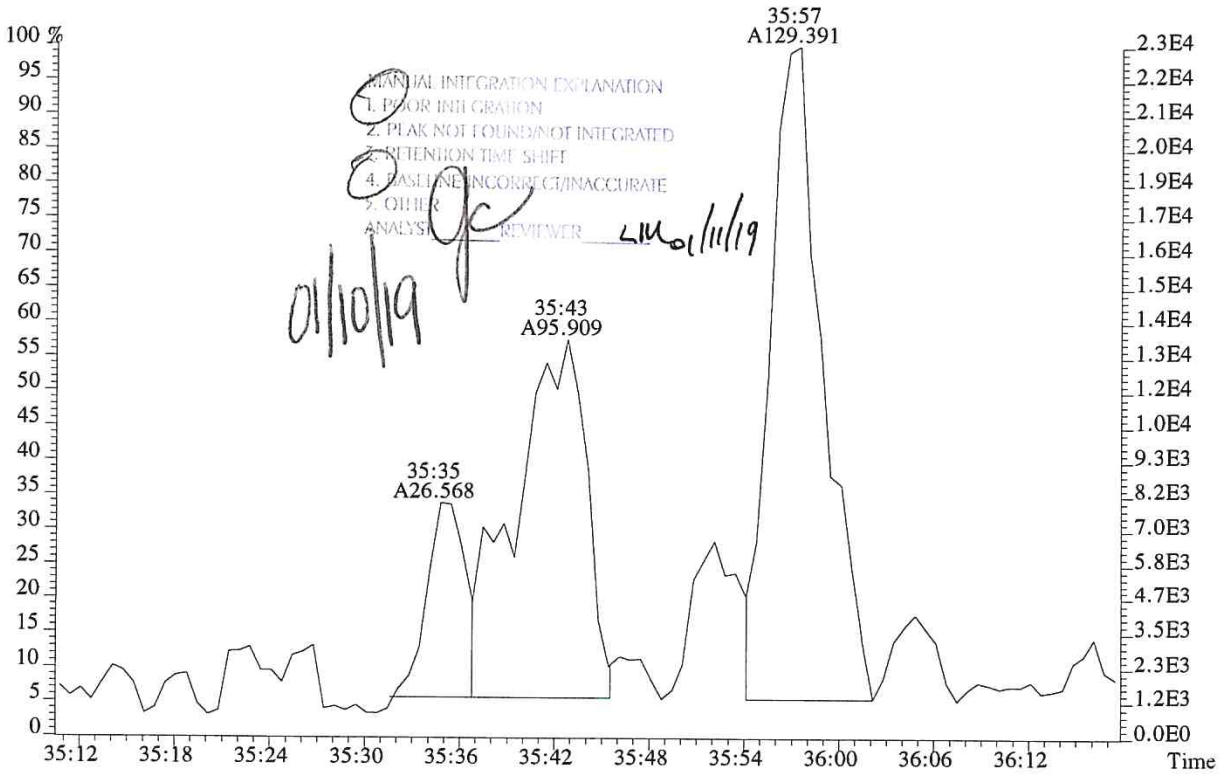


018161

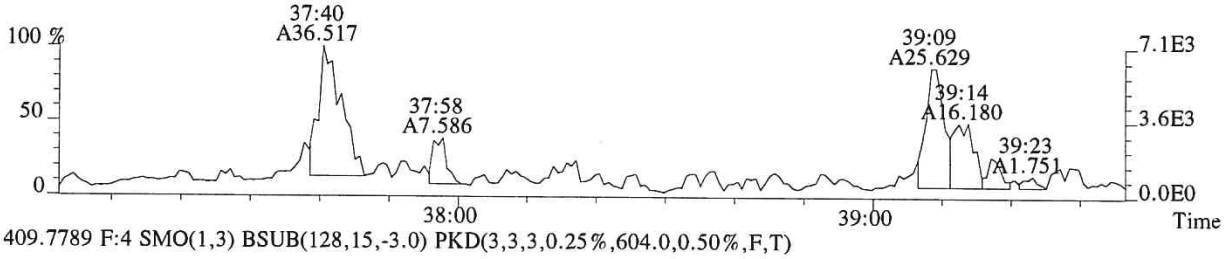
File:P519869 #1-339 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,984.0,0.40%,F,T)



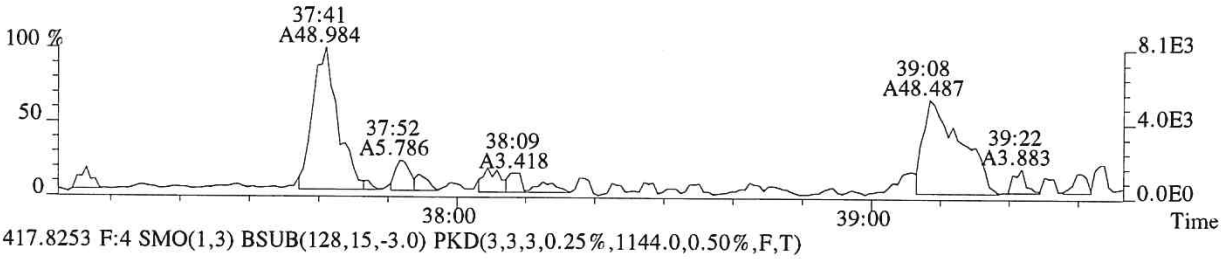
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2020.0,0.40%,F,T)



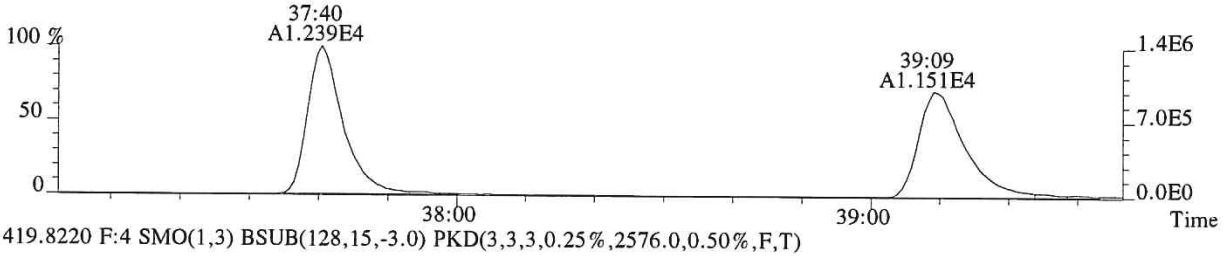
File:P519869 #1-232 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1012.0,0.50%,F,T)



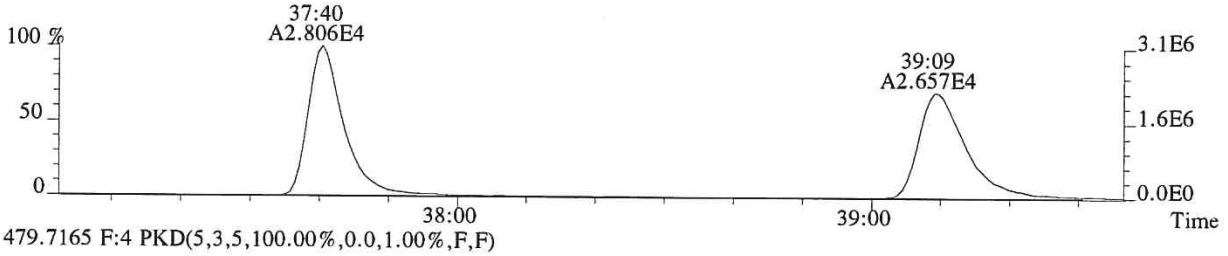
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,604.0,0.50%,F,T)



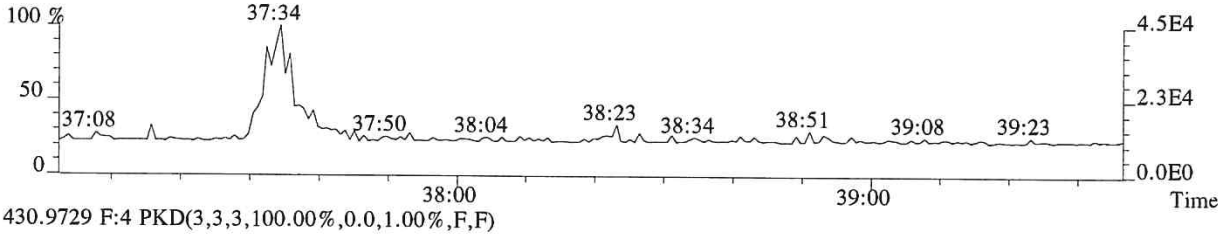
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1144.0,0.50%,F,T)



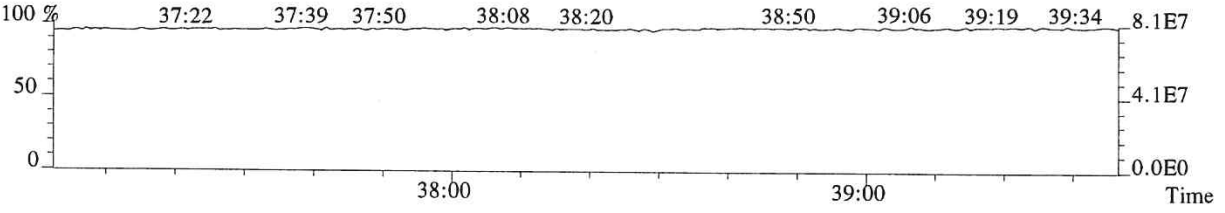
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2576.0,0.50%,F,T)



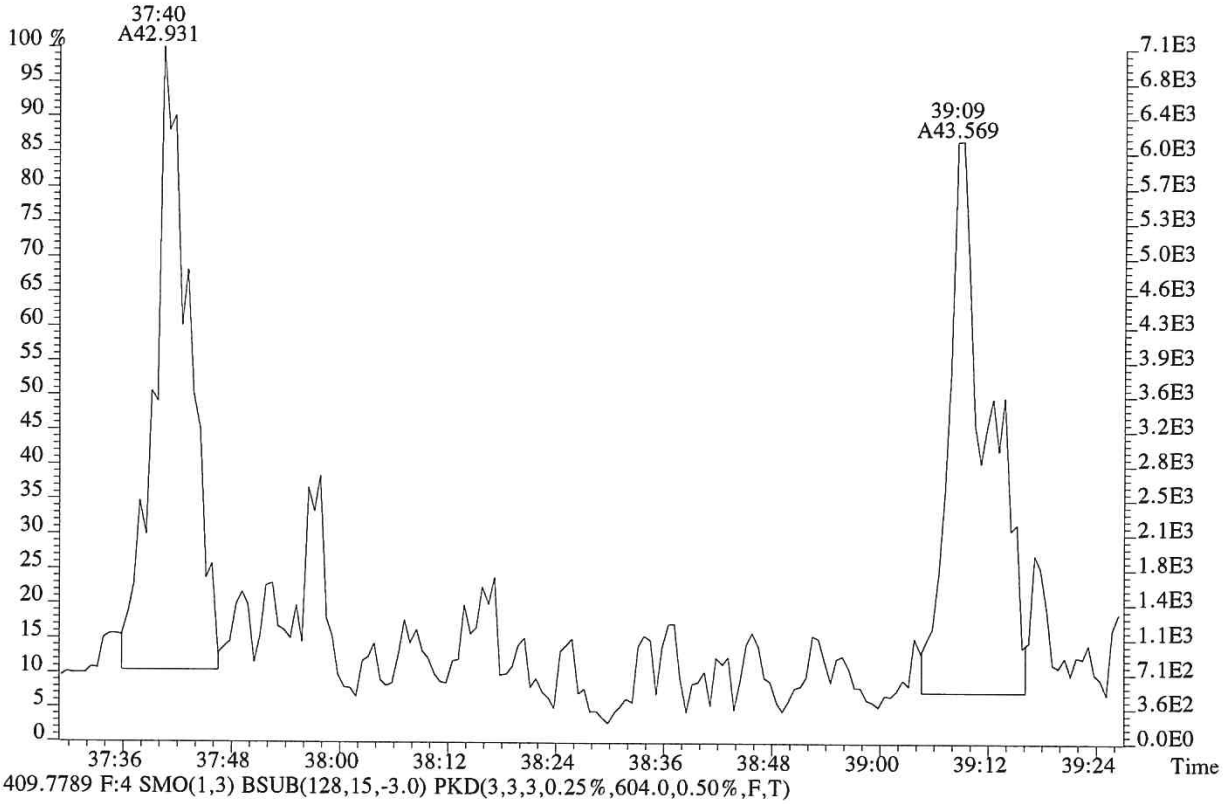
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



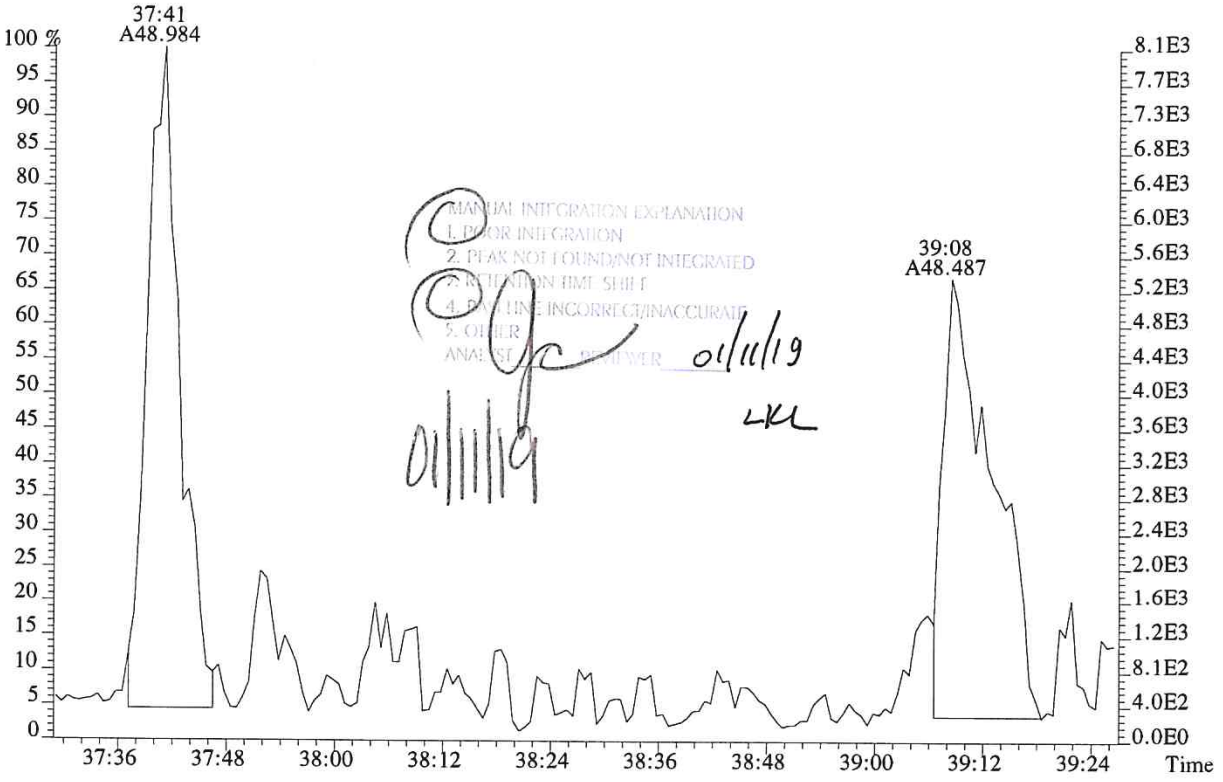
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519869 #1-232 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1012.0,0.50%,F,T)

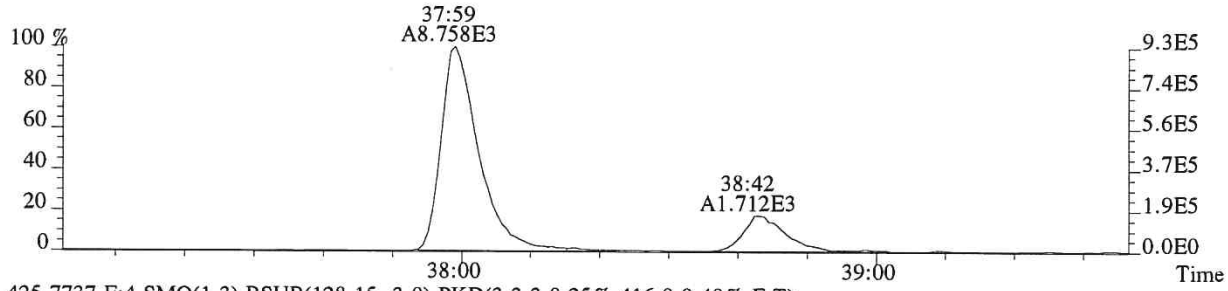


409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,604.0,0.50%,F,T)

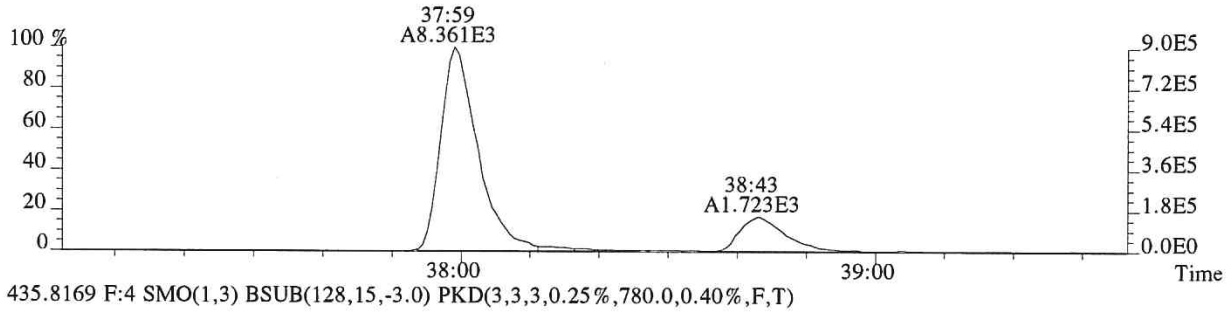


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER 01/11/19
LKL
01/11/19

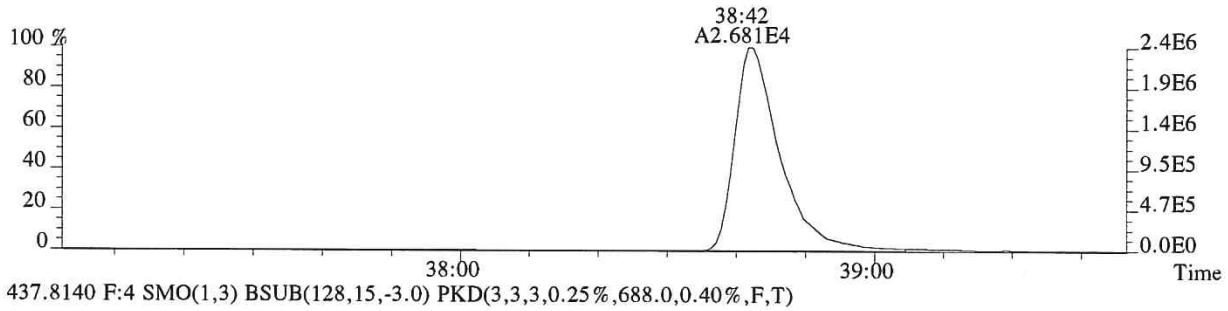
File:P519869 #1-232 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2108.0,0.40%,F,T)



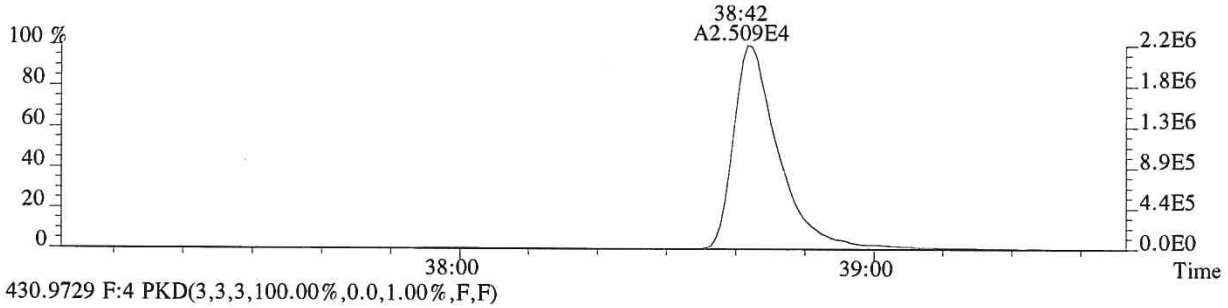
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,416.0,0.40%,F,T)



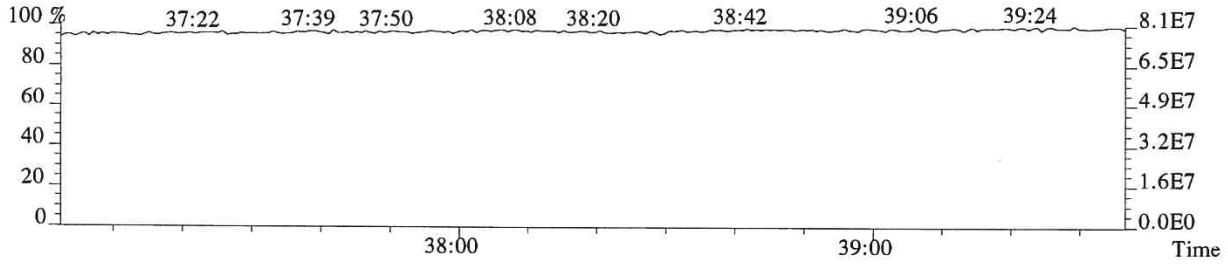
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,780.0,0.40%,F,T)



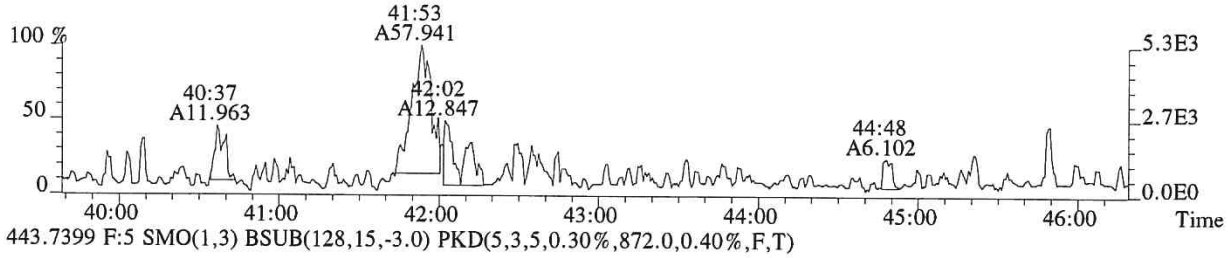
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,688.0,0.40%,F,T)



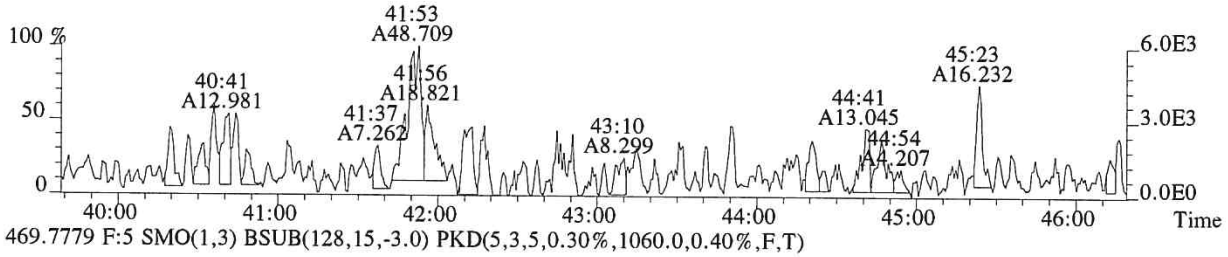
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



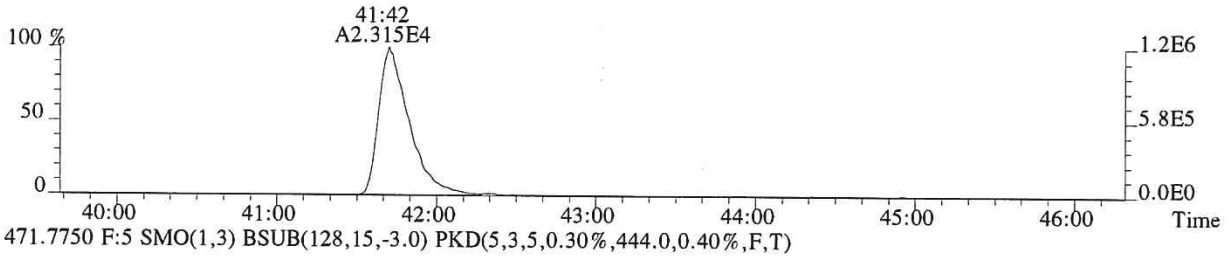
File:P519869 #1-601 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,640.0,0.40%,F,T)



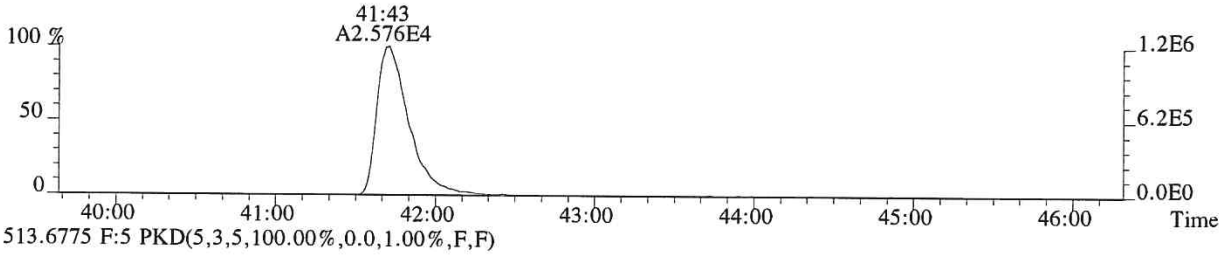
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,872.0,0.40%,F,T)



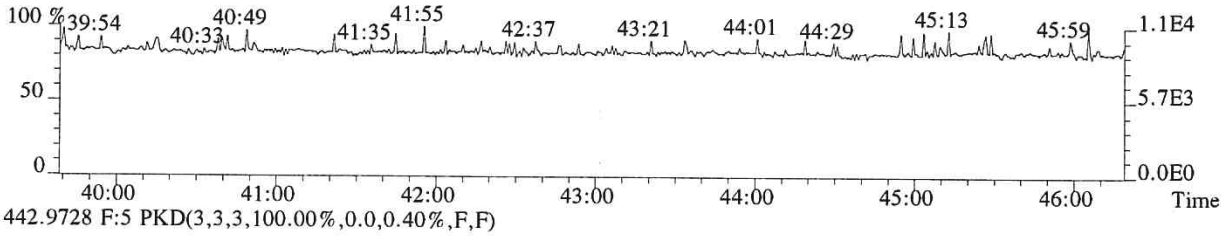
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1060.0,0.40%,F,T)



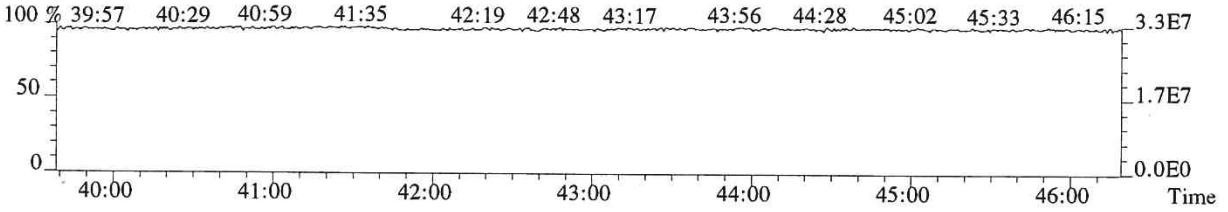
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,444.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

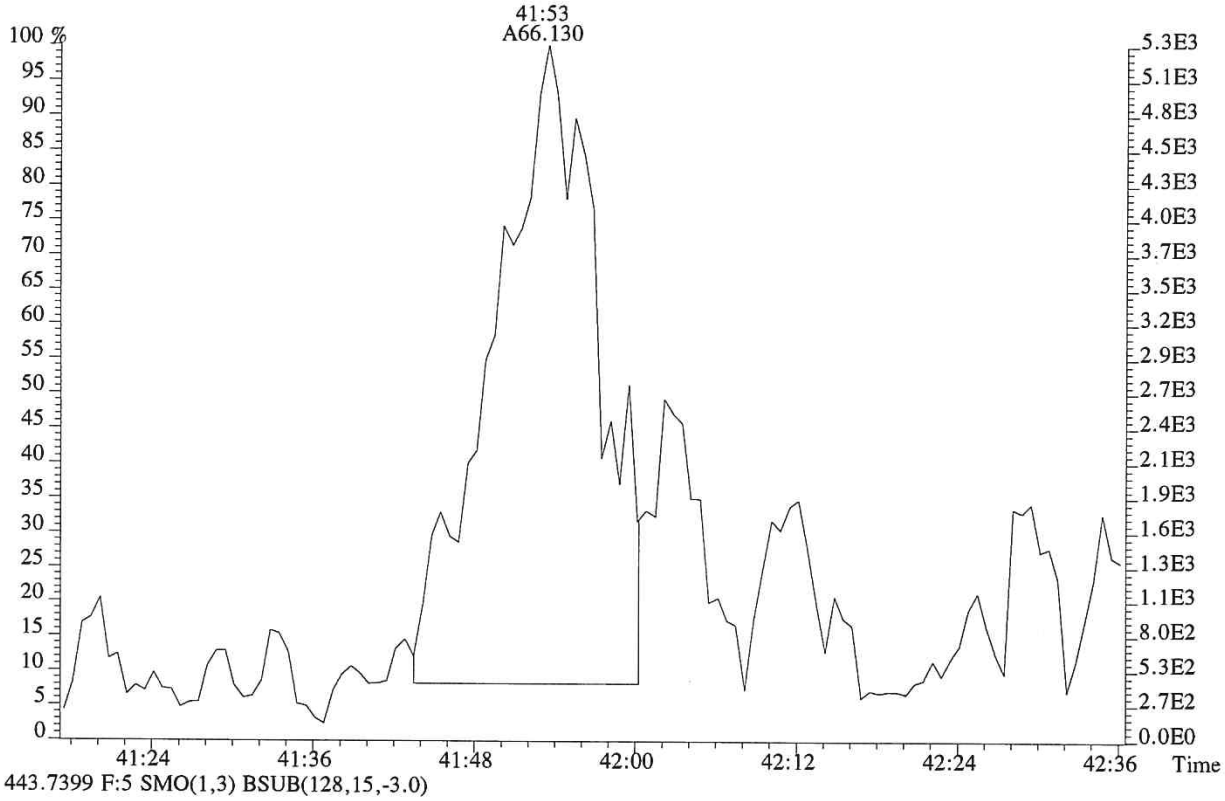


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

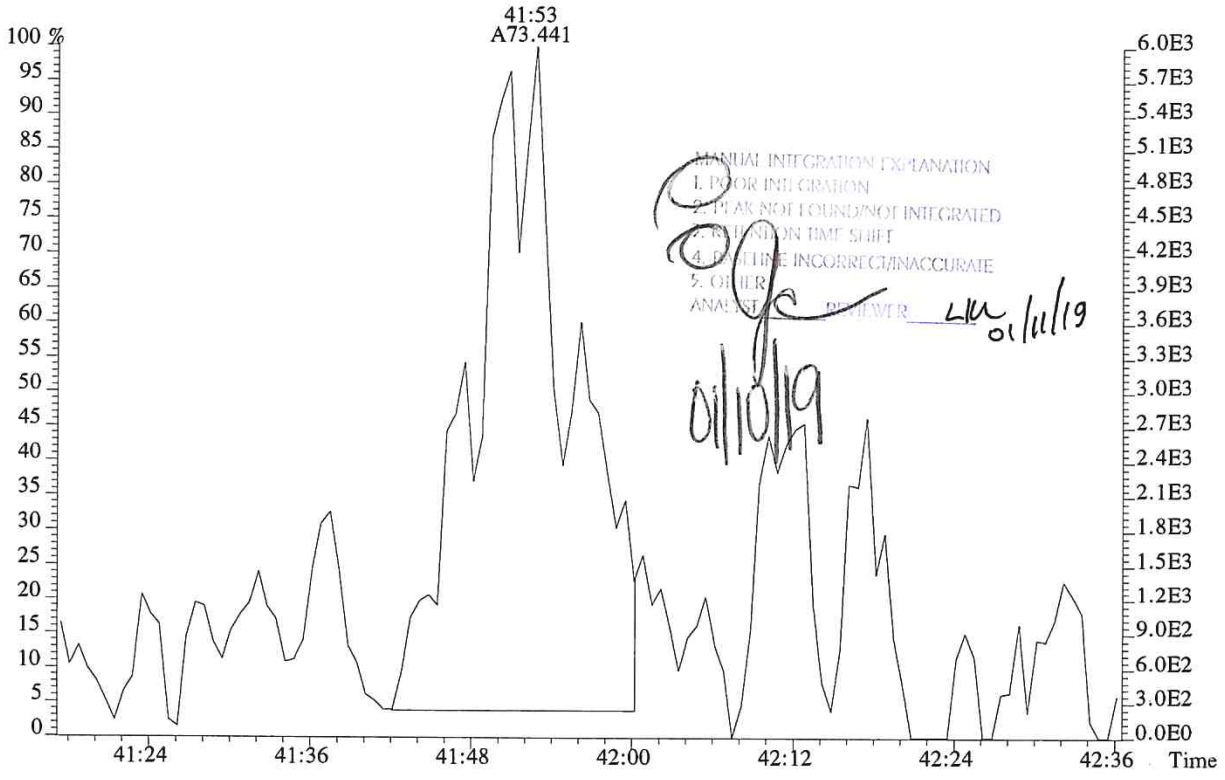


018166

File:P519869 #1-601 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0)

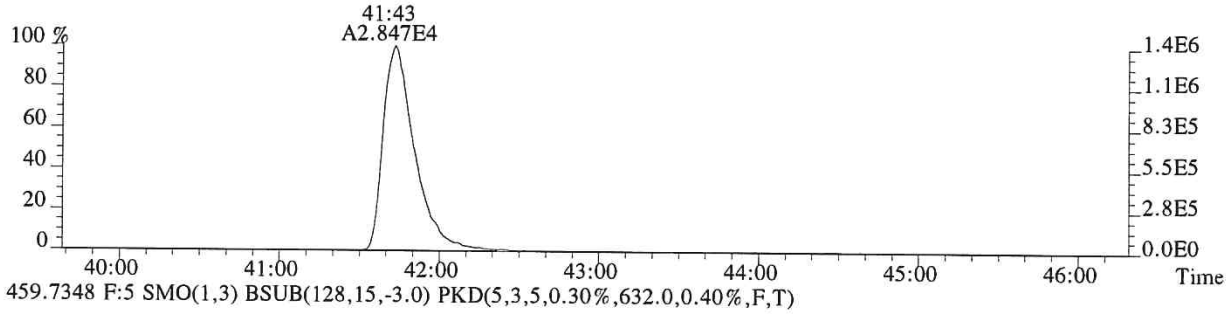


443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0)

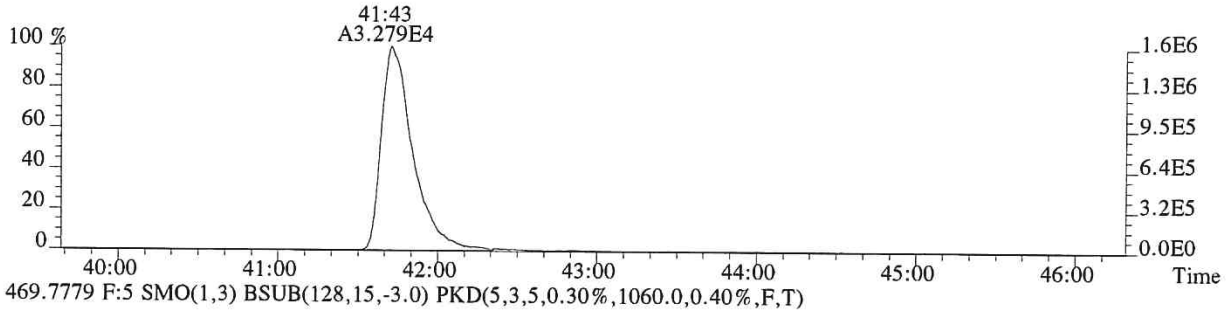


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. PEAK TIME INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LHL 01/11/19
01/10/19

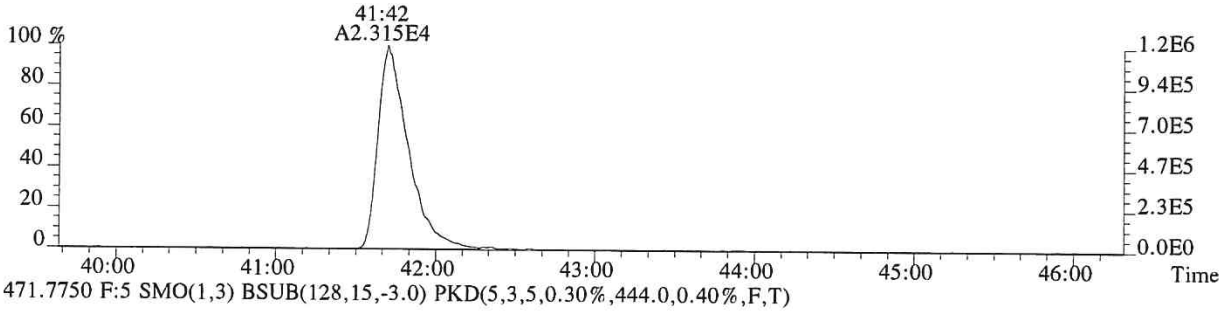
File:P519869 #1-601 Acq: 9-JAN-2019 19:29:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-002
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,380.0,0.40%,F,T)



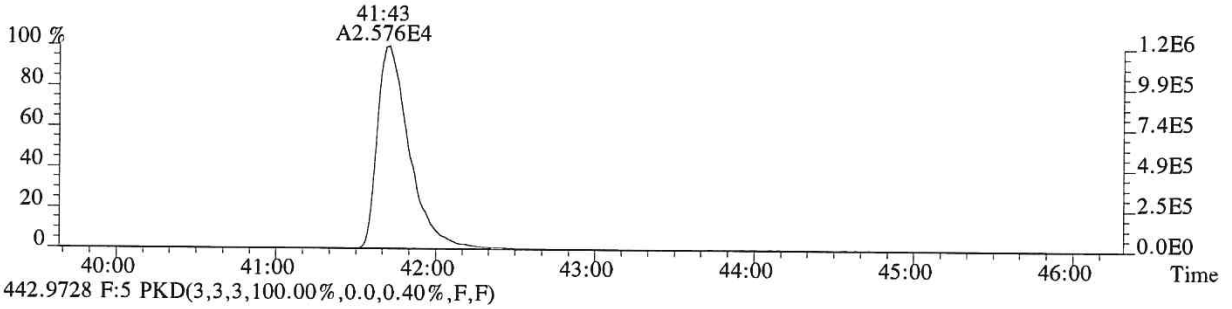
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,632.0,0.40%,F,T)



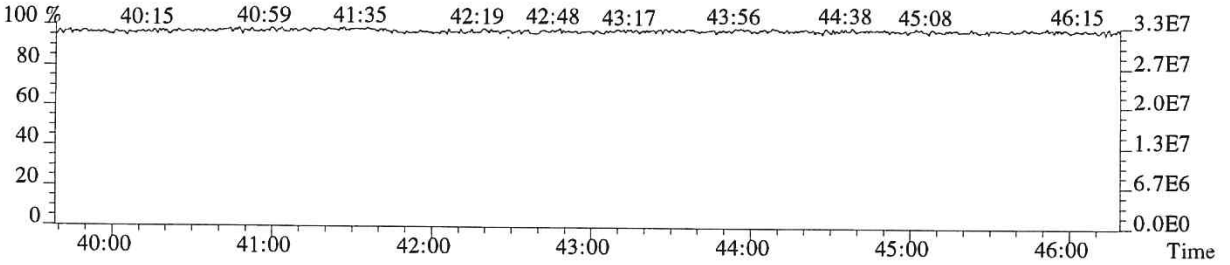
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1060.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,444.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0216

Run #12 Filename P519870 Samp: 1 Inj: 1 Acquired: 9-JAN-19 20:18:21
Processed: 10-JAN-19 08:15:30 Sample ID: E1801139-003

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:46	1.033e+06	1.325e+06	0.78	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:46	7.267e+04	4.824e+04	1.51	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:48	5.003e+04	3.307e+04	1.51	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:46	1.013e+05	8.300e+04	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:53	2.919e+04	2.349e+04	1.24	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:27	4.608e+03	3.759e+03	1.23	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:17	7.337e+03	5.991e+03	1.22	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:42	2.218e+04	2.190e+04	1.01	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:10	7.130e+03	6.987e+03	1.02	yes	no	1.258
10	Unk	OCDF	41:52	8.098e+03	9.026e+03	0.90	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:46	2.726e+05	3.467e+05	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:08	4.141e+03	2.585e+03	1.60	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:36	9.126e+01	6.287e+01	1.45	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:43	5.775e+02	4.432e+02	1.30	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:57	3.976e+02	3.895e+02	1.02	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:43	2.041e+04	1.946e+04	1.05	yes	no	1.025
17	Unk	OCDD	41:43	2.619e+05	2.948e+05	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:45	3.424e+04	4.386e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:46	5.557e+04	3.526e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:47	5.205e+04	3.342e+04	1.56	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:45	2.196e+04	4.254e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:53	2.792e+04	5.292e+04	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:26	2.330e+04	4.554e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:15	2.176e+04	4.337e+04	0.50	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:41	1.640e+04	3.672e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:10	1.551e+04	3.440e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:45	1.672e+04	2.089e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:06	3.957e+04	2.497e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:36	3.001e+04	2.374e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:41	3.572e+04	2.767e+04	1.29	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:42	3.465e+04	3.274e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	41:42	3.411e+04	3.830e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:03	4.168e+04	5.229e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:57	5.509e+04	4.288e+04	1.28	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:46	2.819e+04				no	1.014

$$\text{OCDD} = \frac{(2.619e+05 + 2.948e+05) \times 4000\ \text{pg} \times 1}{(3.411e+04 + 3.830e+04) \times 10.207\ \text{g} \times 82.2/100 \times 1.118} = 3278\ \text{ng/kg}$$

LW 01/11/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0216

Run #12 Filename P519870 Samp: 1 Inj: 1 Acquired: 9-JAN-19 20:18:21
Processed: 10-JAN-19 08:15:30 LAB. ID: E1801139-003

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.36e+08	1.98e+03	6.8e+04	1.72e+08	2.98e+03	5.8e+04
2	1,2,3,7,8-PeCDF	1.16e+07	3.79e+03	3.1e+03	7.57e+06	7.53e+03	1.0e+03
3	2,3,4,7,8-PeCDF	6.98e+06	3.79e+03	1.8e+03	4.59e+06	7.53e+03	6.1e+02
4	1,2,3,4,7,8-HxCDF	1.62e+07	4.28e+03	3.8e+03	1.33e+07	7.54e+03	1.8e+03
5	1,2,3,6,7,8-HxCDF	4.18e+06	4.28e+03	9.8e+02	3.40e+06	7.54e+03	4.5e+02
6	2,3,4,6,7,8-HxCDF	7.21e+05	4.28e+03	1.7e+02	5.77e+05	7.54e+03	7.7e+01
7	1,2,3,7,8,9-HxCDF	1.03e+06	4.28e+03	2.4e+02	8.40e+05	7.54e+03	1.1e+02
8	1,2,3,4,6,7,8-HpCDF	2.50e+06	4.29e+03	5.8e+02	2.45e+06	1.40e+04	1.8e+02
9	1,2,3,4,7,8,9-HpCDF	6.48e+05	4.29e+03	1.5e+02	6.23e+05	1.40e+04	4.4e+01
10	OCDF	4.11e+05	6.20e+02	6.6e+02	4.33e+05	1.04e+03	4.2e+02
11	2,3,7,8-TCDD	4.25e+07	4.21e+03	1.0e+04	5.41e+07	3.22e+03	1.7e+04
12	1,2,3,7,8-PeCDD	5.90e+05	1.44e+03	4.1e+02	3.83e+05	1.44e+03	2.7e+02
13	1,2,3,4,7,8-HxCDD	1.71e+04	2.57e+03	6.7e+00	1.43e+04	3.48e+03	4.1e+00
14	1,2,3,6,7,8-HxCDD	8.53e+04	2.57e+03	3.3e+01	6.62e+04	3.48e+03	1.9e+01
15	1,2,3,7,8,9-HxCDD	5.59e+04	2.57e+03	2.2e+01	5.79e+04	3.48e+03	1.7e+01
16	1,2,3,4,6,7,8-HpCDD	1.84e+06	7.98e+03	2.3e+02	1.77e+06	7.12e+03	2.5e+02
17	OCDD	1.29e+07	3.72e+02	3.5e+04	1.43e+07	5.44e+02	2.6e+04
18	13C-2,3,7,8-TCDF	4.92e+06	1.44e+04	3.4e+02	6.25e+06	9.50e+03	6.6e+02
19	13C-1,2,3,7,8-PeCDF	9.01e+06	3.42e+03	2.6e+03	5.70e+06	3.24e+03	1.8e+03
20	13C-2,3,4,7,8-PeCDF	8.58e+06	3.42e+03	2.5e+03	5.49e+06	3.24e+03	1.7e+03
21	13C-1,2,3,4,7,8-HxCDF	3.66e+06	4.45e+03	8.2e+02	7.12e+06	2.26e+03	3.2e+03
22	13C-1,2,3,6,7,8-HxCDF	4.03e+06	4.45e+03	9.1e+02	7.70e+06	2.26e+03	3.4e+03
23	13C-2,3,4,6,7,8-HxCDF	3.52e+06	4.45e+03	7.9e+02	6.81e+06	2.26e+03	3.0e+03
24	13C-1,2,3,7,8,9-HxCDF	2.91e+06	4.45e+03	6.5e+02	5.73e+06	2.26e+03	2.5e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.87e+06	6.27e+03	3.0e+02	4.08e+06	1.00e+04	4.1e+02
26	13C-1,2,3,4,7,8,9-HpCDF	1.28e+06	6.27e+03	2.0e+02	2.93e+06	1.00e+04	2.9e+02
27	13C-2,3,7,8-TCDD	2.72e+06	7.34e+03	3.7e+02	3.36e+06	2.84e+03	1.2e+03
28	13C-1,2,3,7,8-PeCDD	6.27e+06	1.20e+03	5.2e+03	4.05e+06	1.73e+03	2.3e+03
29	13C-1,2,3,4,7,8-HxCDD	5.14e+06	1.86e+03	2.8e+03	3.99e+06	6.12e+02	6.5e+03
30	13C-1,2,3,6,7,8-HxCDD	4.70e+06	1.86e+03	2.5e+03	3.68e+06	6.12e+02	6.0e+03
31	13C-1,2,3,4,6,7,8-HpCDD	3.09e+06	8.36e+02	3.7e+03	2.98e+06	1.07e+03	2.8e+03
32	13C-OCDD	1.65e+06	9.28e+02	1.8e+03	1.83e+06	5.56e+02	3.3e+03
33	13C-1,2,3,4-TCDD	6.27e+06	7.34e+03	8.5e+02	7.91e+06	2.84e+03	2.8e+03
34	13C-1,2,3,7,8,9-HxCDD	7.15e+06	1.86e+03	3.8e+03	5.64e+06	6.12e+02	9.2e+03
35	37Cl-2,3,7,8-TCDD	4.37e+06	2.12e+03	2.1e+03			

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Peak List Summary

CLIENT ID.
SL0216

Entry: 36 Totals Name: Total Tetra-Furans

Run: 12 File: P519870 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 20:18:21 Processed: 10-JAN-19 08:15:30

Mass: 303.9020 305.8990 Tot Response: 4.30e+06 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:37	8.82e+03	1.11e+04	0.80	yes	1.99e+04		n	n
2	22:53	4.82e+04	6.30e+04	0.76	yes	1.11e+05		n	n
3	23:15	1.46e+04	1.99e+04	0.73	yes	3.45e+04		n	n
4	23:32	4.00e+04	5.27e+04	0.76	yes	9.27e+04		n	n
5	23:54	7.91e+03	1.18e+04	0.67	yes	1.97e+04		n	n
6	24:09	2.74e+04	3.62e+04	0.76	yes	6.36e+04		n	n
7	24:16	4.97e+04	6.49e+04	0.77	yes	1.15e+05		n	n
8	24:46	4.58e+05	5.92e+05	0.77	yes	1.05e+06		n	n
9	25:03	2.26e+04	2.97e+04	0.76	yes	5.23e+04		n	n
10	25:46	1.03e+06	1.32e+06	0.78	yes	2.36e+06	2,3,7,8-TCDF	n	n
11	26:12	7.24e+04	9.55e+04	0.76	yes	1.68e+05		n	n
12	26:29	1.23e+04	1.62e+04	0.76	yes	2.84e+04		n	n
13	28:01	8.00e+04	1.04e+05	0.77	yes	1.84e+05		n	n

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Peak List Summary

CLIENT ID.
SL0216

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 12 File: P519870 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 20:18:21 Processed: 10-JAN-19 08:15:30

Mass: 319.8970 321.8940 Tot Response: 6.90e+05 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:24	6.58e+02	9.37e+02	0.70	yes	1.60e+03	n	n
2	26:27	3.88e+03	4.89e+03	0.79	yes	8.78e+03	n	n
3	26:46	2.73e+05	3.47e+05	0.79	yes	6.19e+05 2,3,7,8-TCDD	n	n
4	27:08	2.61e+04	3.43e+04	0.76	yes	6.04e+04	n	n

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CLIENT ID.
SL0216

Entry: 38 Totals Name: Total Penta-Furans1

Run: 12 File: P519870 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 20:18:21 Processed: 10-JAN-19 08:15:30

Mass: 339.8600 341.8570 Tot Response: 2.12e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:02	1.33e+03	7.93e+02	1.68	yes	2.12e+03	n	n

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Entry: 39 Totals Name: Total Penta-Furans2

Run: 12 File: P519870 Sample:1 Injection:1 Function:2

Acquired: 9-JAN-19 20:18:21 Processed: 10-JAN-19 08:15:30

Mass: 339.8600 341.8570 Tot Response: 3.07e+05 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:44	3.13e+04	2.08e+04	1.50	yes	5.21e+04		n	n
2	30:35	6.03e+03	4.10e+03	1.47	yes	1.01e+04		n	n
3	30:46	7.27e+04	4.82e+04	1.51	yes	1.21e+05	1,2,3,7,8-PeCDF	n	n
4	31:03	2.16e+04	1.45e+04	1.49	yes	3.61e+04		n	n
5	31:42	4.48e+02	2.68e+02	1.67	yes	7.16e+02		n	n
6	31:48	5.00e+04	3.31e+04	1.51	yes	8.31e+04	2,3,4,7,8-PeCDF	n	n
7	32:47	2.42e+03	1.71e+03	1.41	yes	4.13e+03		n	n

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SL0216

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 12 File: P519870 Sample:1 Injection:1 Function:2

Acquired: 9-JAN-19 20:18:21 Processed: 10-JAN-19 08:15:30

Mass: 355.8550 357.8520 Tot Response: 1.14e+04 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:47	4.32e+02	2.78e+02	1.55	yes	7.10e+02		n	n
2	30:18	9.35e+02	6.10e+02	1.53	yes	1.54e+03		n	n
3	30:49	5.01e+02	3.04e+02	1.65	yes	8.06e+02		n	n
4	31:00	2.59e+02	1.56e+02	1.65	yes	4.15e+02		n	n
5	31:06	1.91e+02	1.44e+02	1.32	yes	3.35e+02		n	n
6	31:20	3.76e+02	2.54e+02	1.48	yes	6.30e+02		n	n
7	31:41	1.59e+02	1.06e+02	1.49	yes	2.66e+02		n	n
8	32:08	4.14e+03	2.58e+03	1.60	yes	6.73e+03	1,2,3,7,8-PeCDD	n	n

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Entry: 41 Totals Name: Total Hexa-Furans

Run: 12 File: P519870 Sample:1 Injection:1 Function:3

Acquired: 9-JAN-19 20:18:21 Processed: 10-JAN-19 08:15:30

Mass: 373.8210 375.8180 Tot Response: 2.80e+05 RRF: 1.141

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
.	33:33	6.69e+02	5.21e+02 1.28	yes	1.19e+03		n	n
:	33:44	7.34e+03	5.82e+03 1.26	yes	1.32e+04		n	n
;	34:18	3.78e+03	3.15e+03 1.20	yes	6.93e+03		n	n
<	34:46	1.01e+05	8.30e+04 1.22	yes	1.84e+05	1,2,3,4,7,8-HxCDF	n	n
=	34:53	2.92e+04	2.35e+04 1.24	yes	5.27e+04	1,2,3,6,7,8-HxCDF	n	n
>	35:27	4.61e+03	3.76e+03 1.23	yes	8.37e+03	2,3,4,6,7,8-HxCDF	n	n
?	36:17	7.34e+03	5.99e+03 1.22	yes	1.33e+04	1,2,3,7,8,9-HxCDF	n	n

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Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 12 File: P519870 Sample:1 Injection:1 Function:3

Acquired: 9-JAN-19 20:18:21 Processed: 10-JAN-19 08:15:30

Mass: 389.8160 391.8130 Tot Response: 1.87e+04 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:09	7.31e+03	5.74e+03	1.27	yes	1.31e+04		n	n
2	34:43	2.36e+02	1.96e+02	1.20	yes	4.32e+02		n	n
3	34:58	2.15e+03	1.73e+03	1.24	yes	3.88e+03		n	y
4	35:05	1.73e+02	1.25e+02	1.38	yes	2.98e+02		n	y
5	35:43	5.78e+02	4.43e+02	1.30	yes	1.02e+03	1,2,3,6,7,8-HxCDD	n	n

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Entry: 43 Totals Name: Total Hepta-Furans

Run: 12 File: P519870 Sample:1 Injection:1 Function:4

Acquired: 9-JAN-19 20:18:21 Processed: 10-JAN-19 08:15:30

Mass: 407.7820 409.7790 Tot Response: 7.44e+04 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
.	37:42	2.22e+04	2.19e+04 1.01	yes	4.41e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	38:08	8.36e+03	7.81e+03 1.07	yes	1.62e+04		n	n
3	39:10	7.13e+03	6.99e+03 1.02	yes	1.41e+04	1,2,3,4,7,8,9-HpCDF	n	n

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Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 12 File: P519870 Sample:1 Injection:1 Function:4

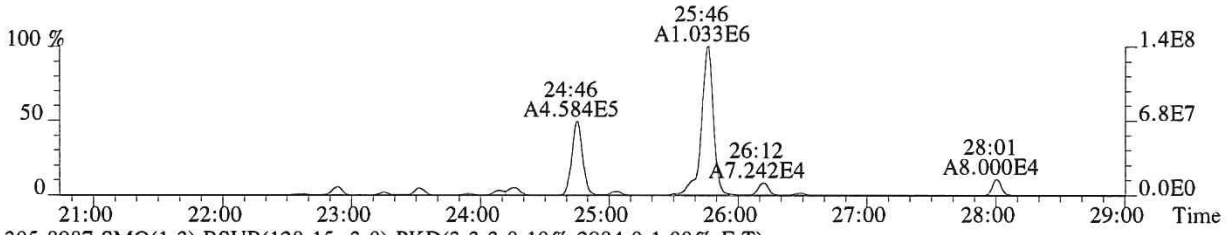
Acquired: 9-JAN-19 20:18:21 Processed: 10-JAN-19 08:15:30

Mass: 423.7770 425.7740 Tot Response: 8.52e+04 RRF: 1.025

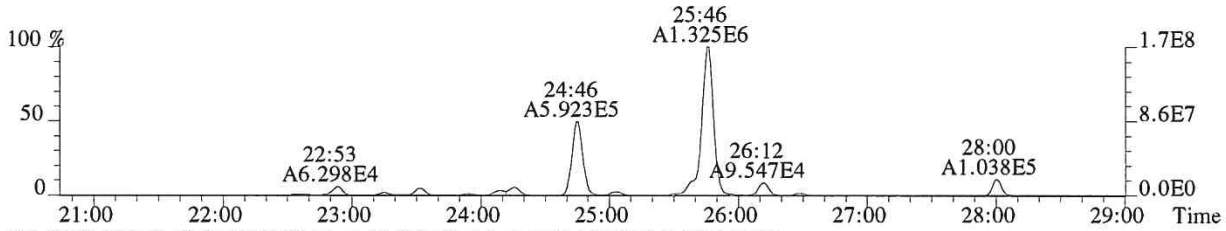
	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
	38:00	2.31e+04	1.04	yes	4.53e+04		n	n
	38:43	2.04e+04	1.05	yes	3.99e+04	1,2,3,4,6,7,8-HpCDD	n	n

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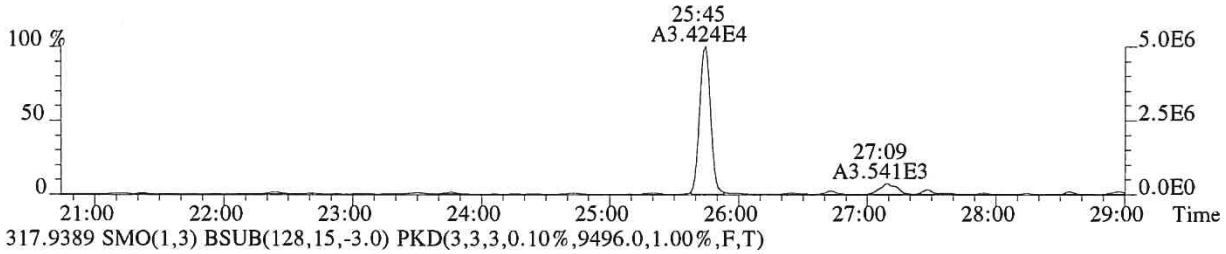
File:P519870 #1-587 Acq: 9-JAN-2019 20:18:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1984.0,1.00%,F,T)



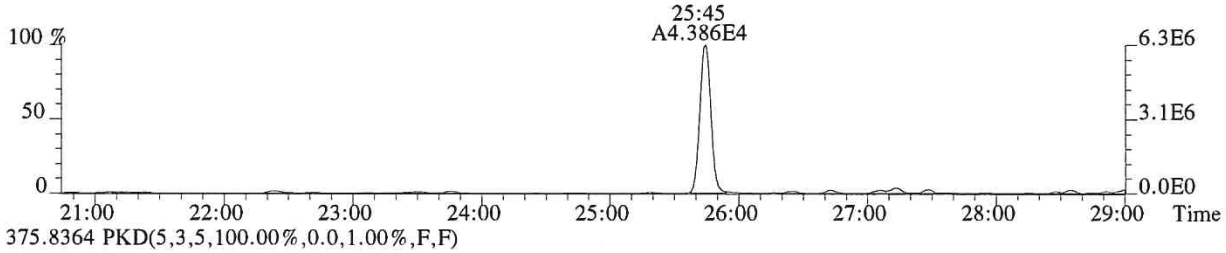
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2984.0,1.00%,F,T)



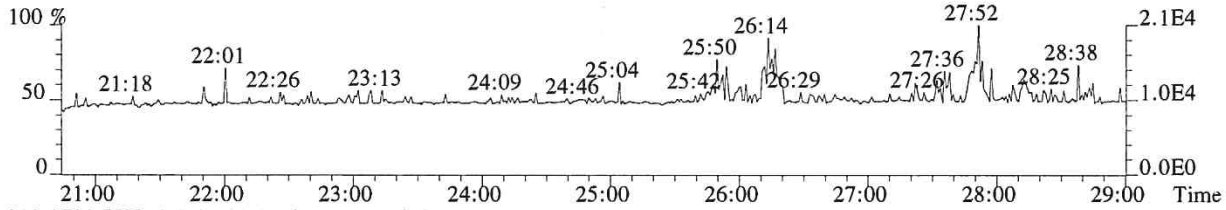
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,14376.0,1.00%,F,T)



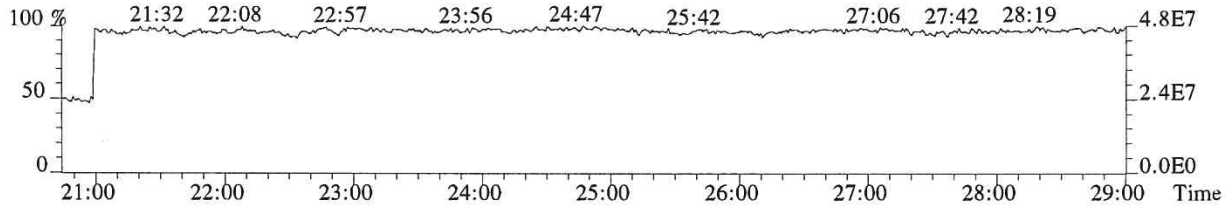
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9496.0,1.00%,F,T)



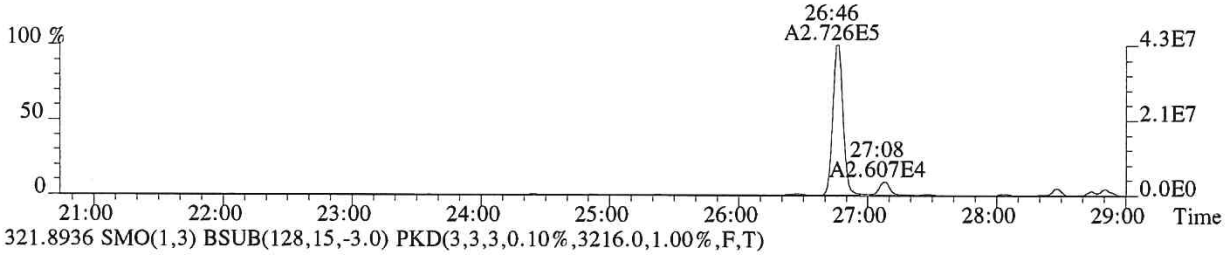
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



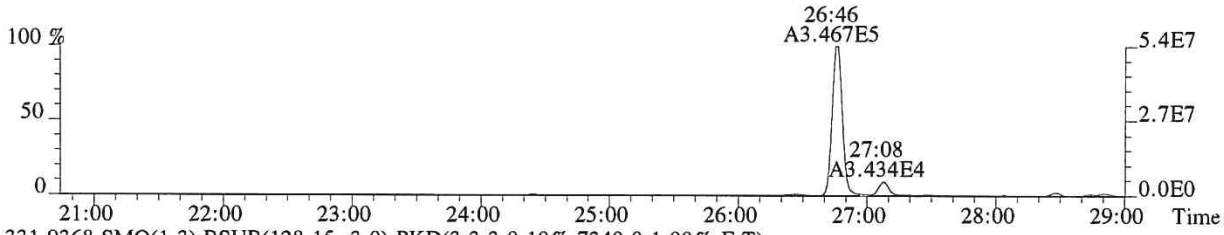
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



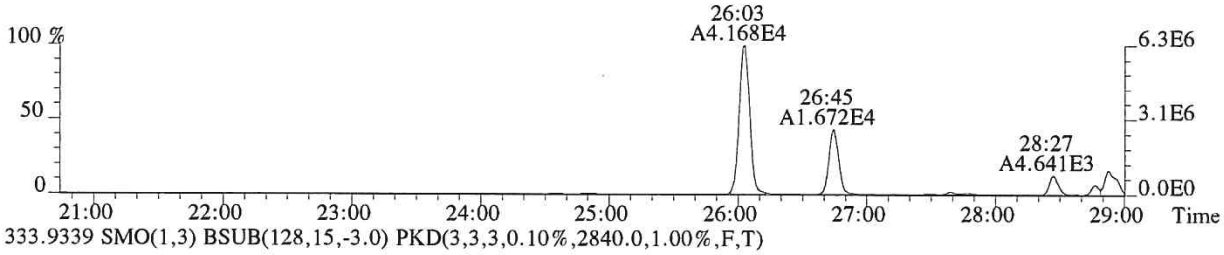
File:P519870 #1-587 Acq: 9-JAN-2019 20:18:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4208.0,1.00%,F,T)



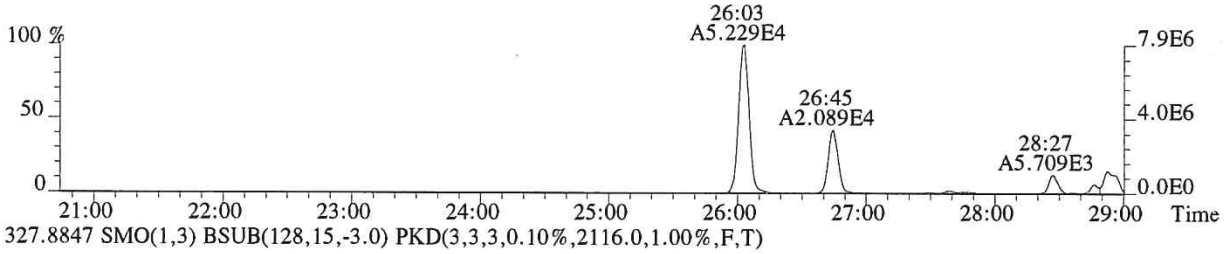
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3216.0,1.00%,F,T)



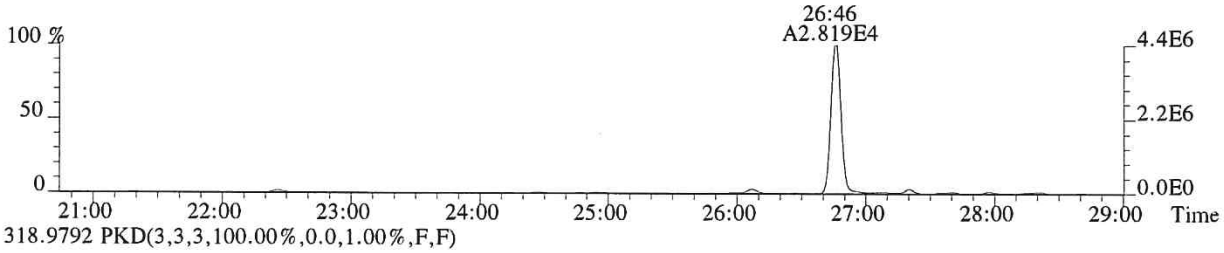
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7340.0,1.00%,F,T)



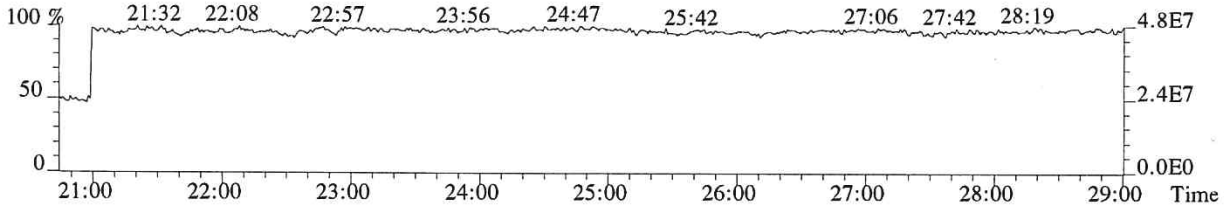
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2840.0,1.00%,F,T)



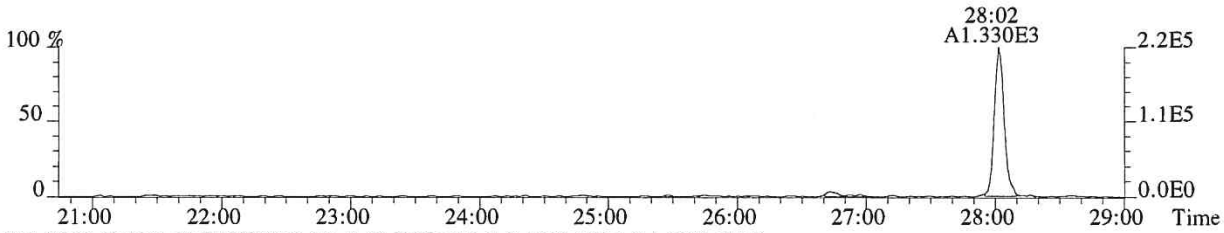
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2116.0,1.00%,F,T)



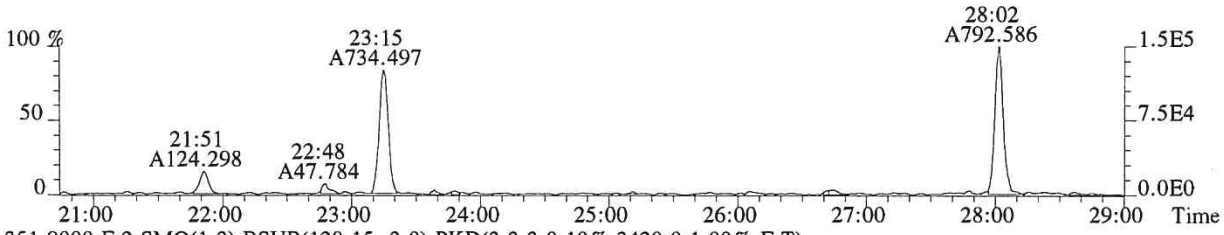
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



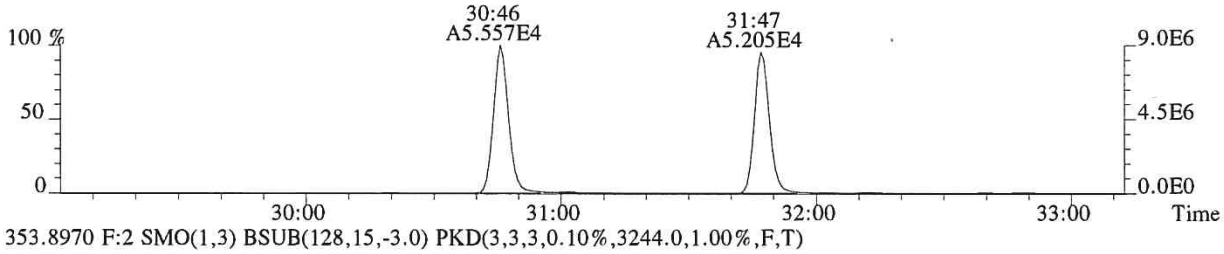
File:P519870 #1-587 Acq: 9-JAN-2019 20:18:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1416.0,1.00%,F,T)



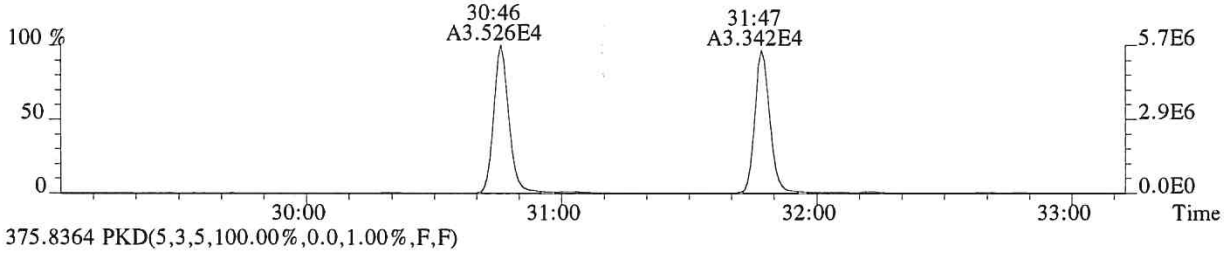
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1804.0,1.00%,F,T)



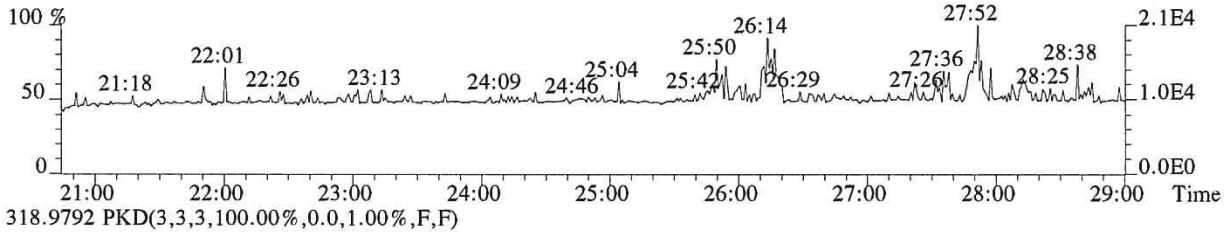
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3420.0,1.00%,F,T)



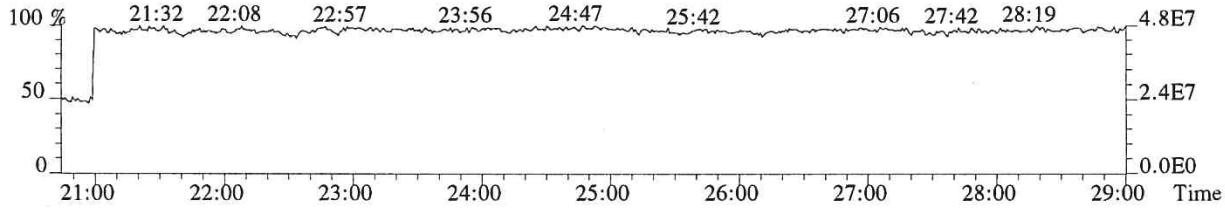
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3244.0,1.00%,F,T)



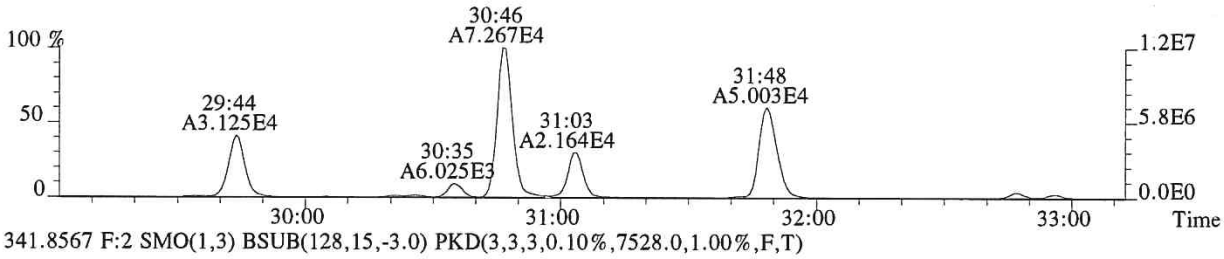
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



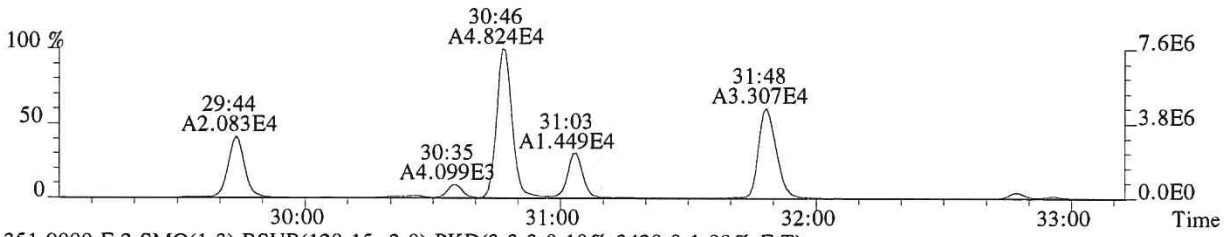
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



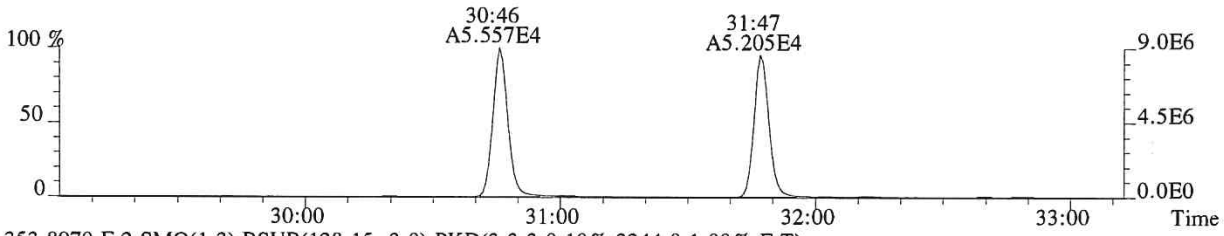
File:P519870 #1-376 Acq: 9-JAN-2019 20:18:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3788.0,1.00%,F,T)



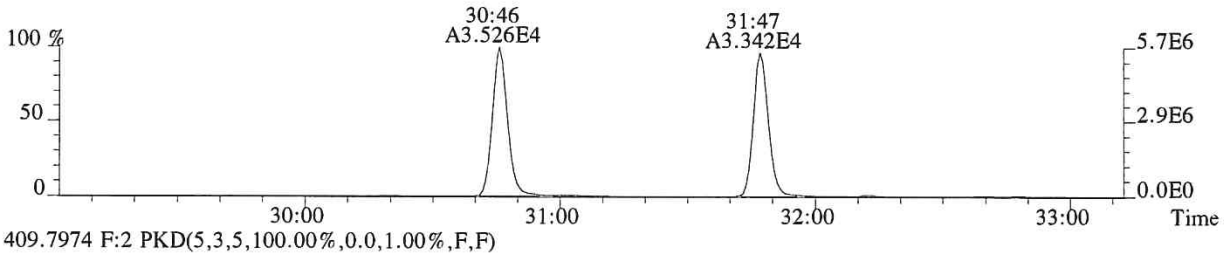
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7528.0,1.00%,F,T)



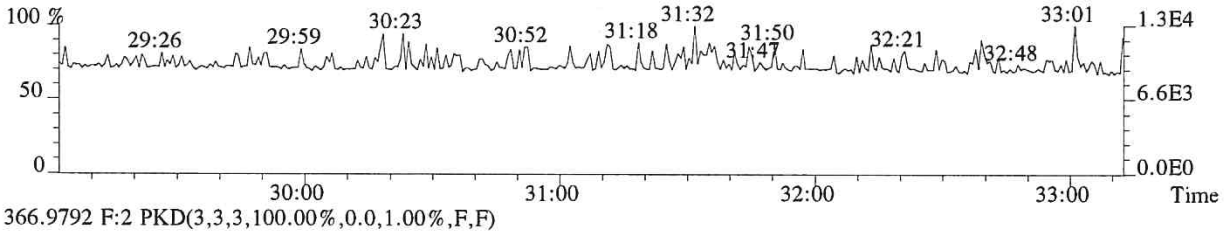
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3420.0,1.00%,F,T)



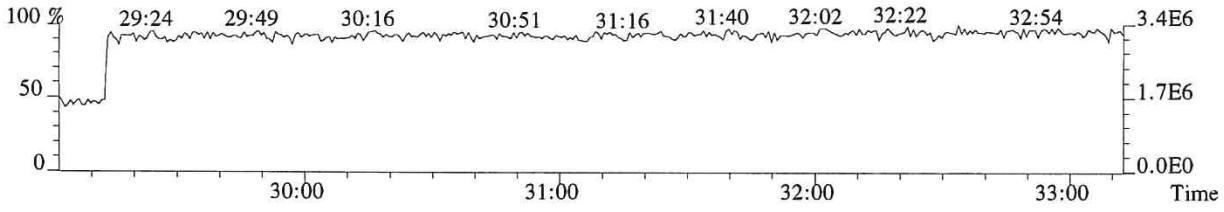
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3244.0,1.00%,F,T)



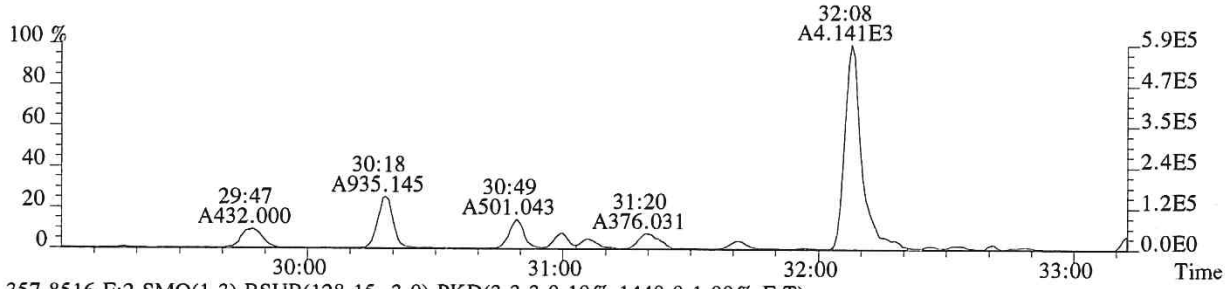
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



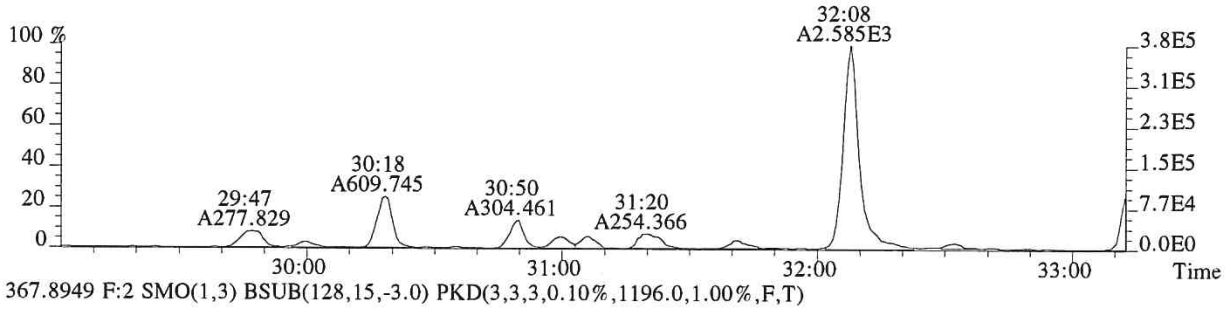
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



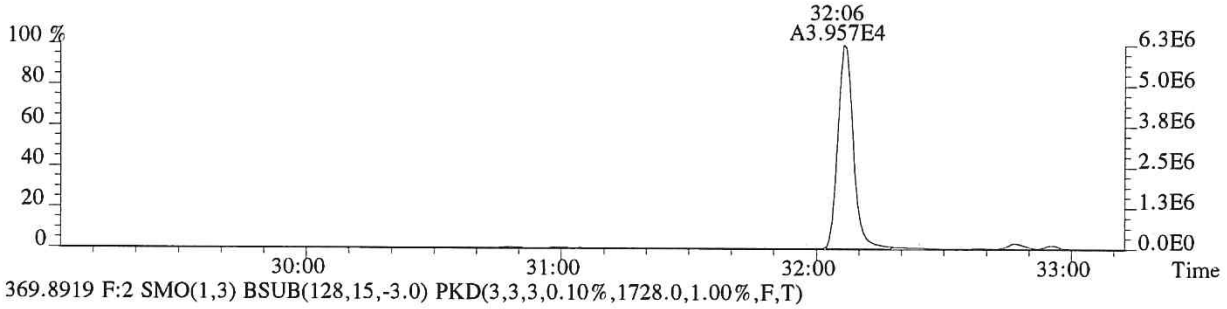
File:P519870 #1-376 Acq: 9-JAN-2019 20:18:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1436.0,1.00%,F,T)



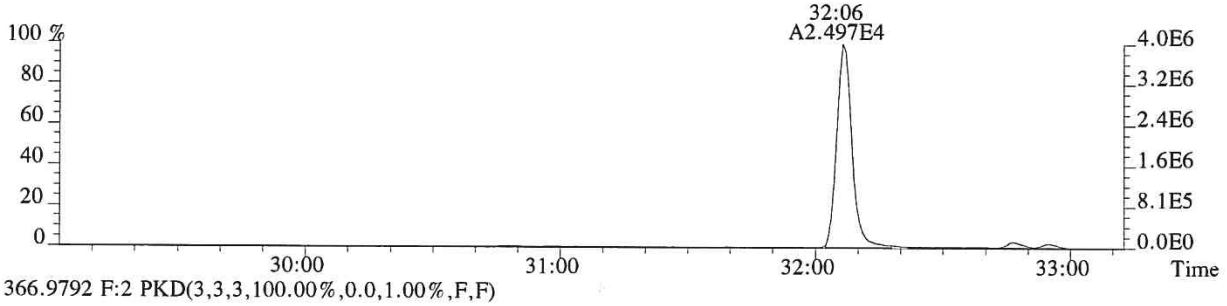
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1440.0,1.00%,F,T)



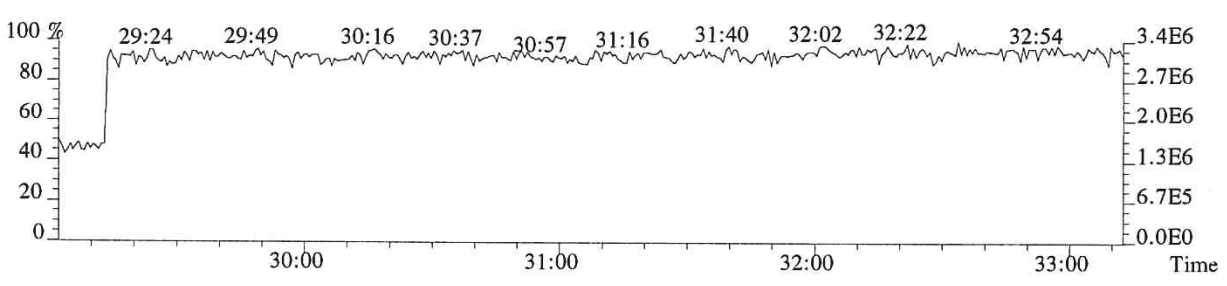
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1196.0,1.00%,F,T)



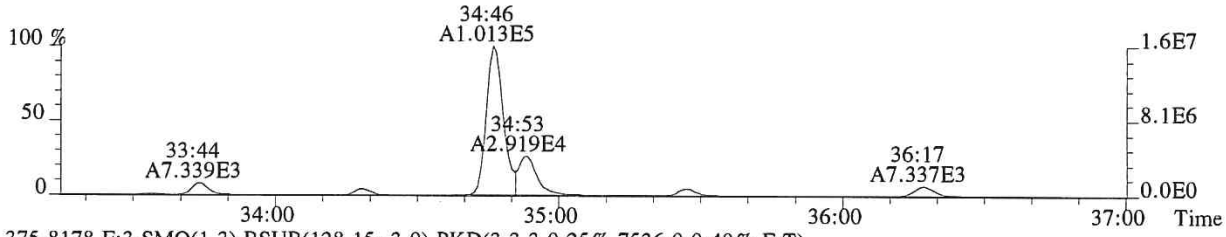
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1728.0,1.00%,F,T)



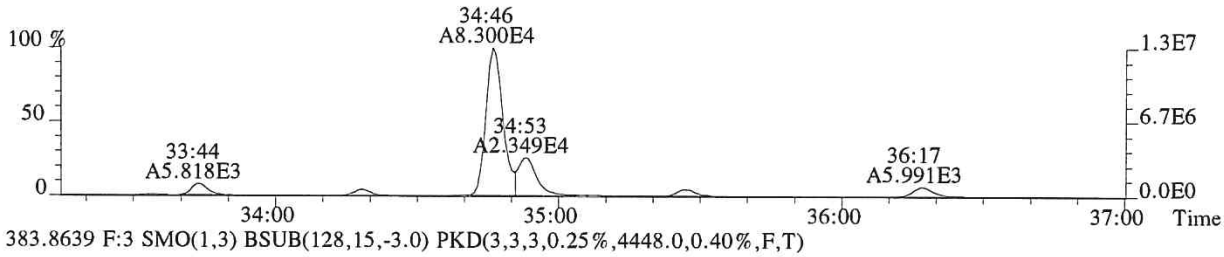
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



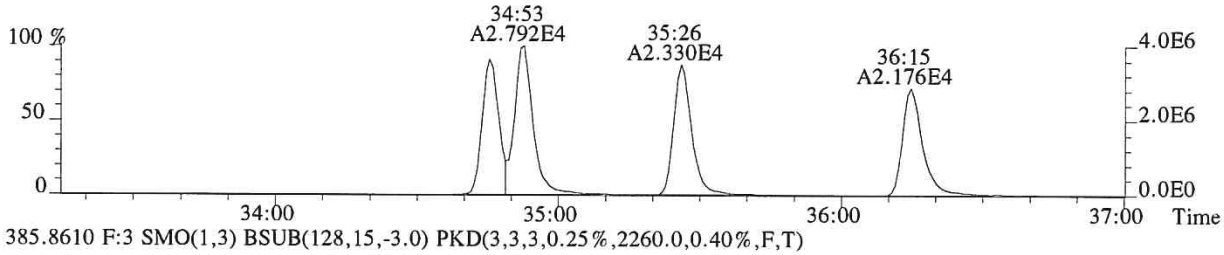
File:P519870 #1-339 Acq: 9-JAN-2019 20:18:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4280.0,0.40%,F,T)



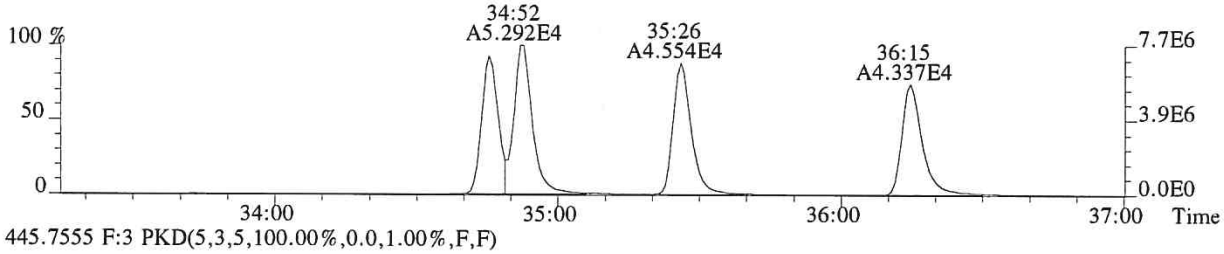
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7536.0,0.40%,F,T)



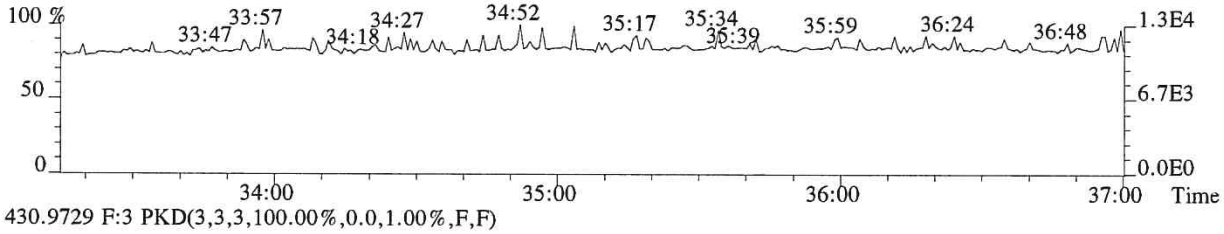
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4448.0,0.40%,F,T)



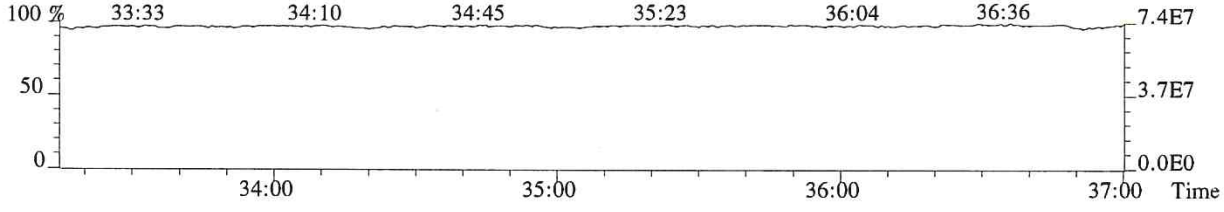
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2260.0,0.40%,F,T)



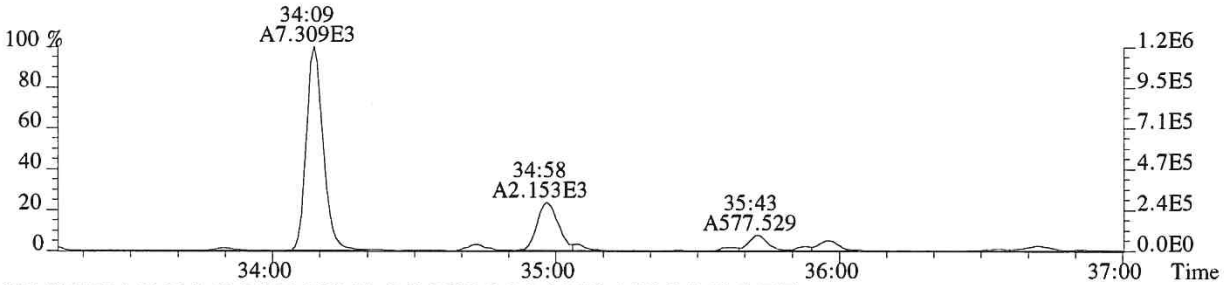
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



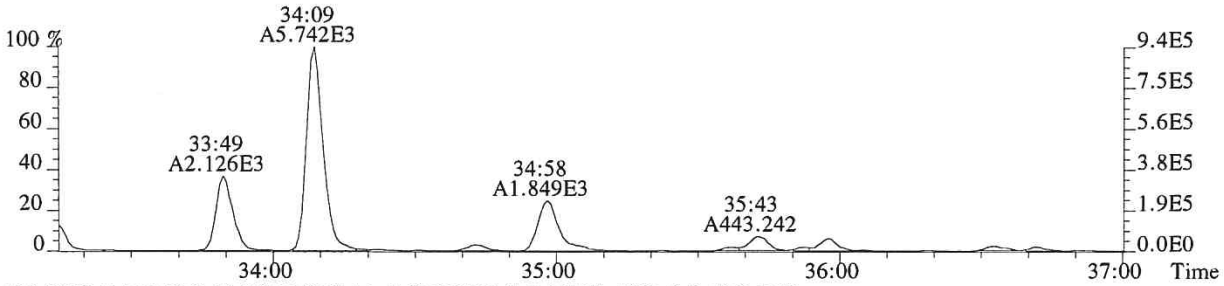
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



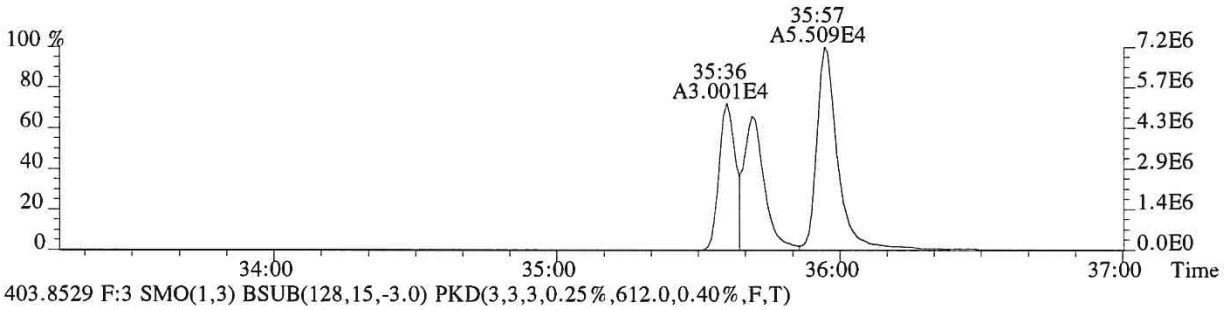
File:P519870 #1-339 Acq: 9-JAN-2019 20:18:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2568.0,0.40%,F,T)



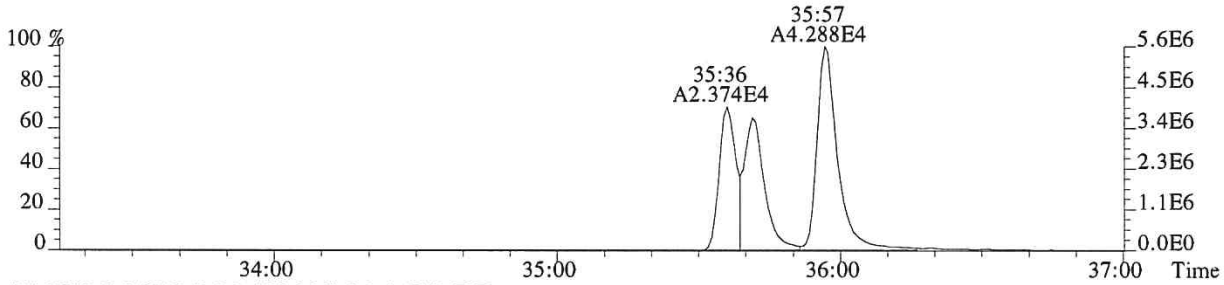
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3480.0,0.40%,F,T)



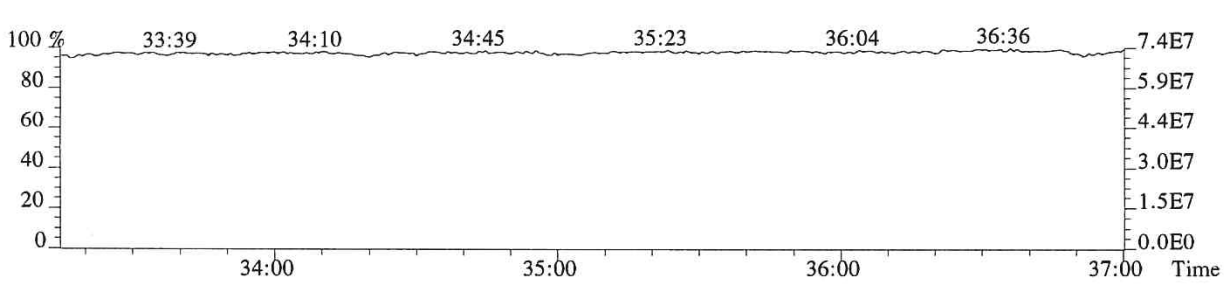
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1864.0,0.40%,F,T)



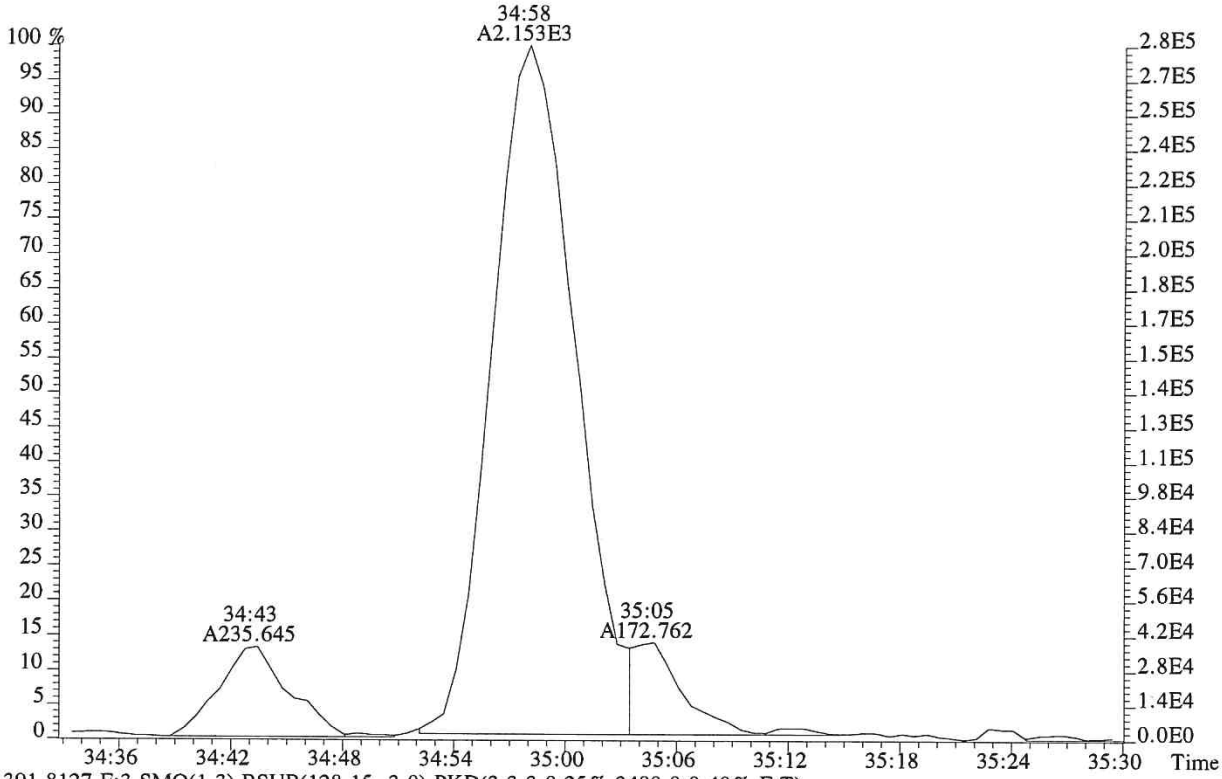
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,612.0,0.40%,F,T)



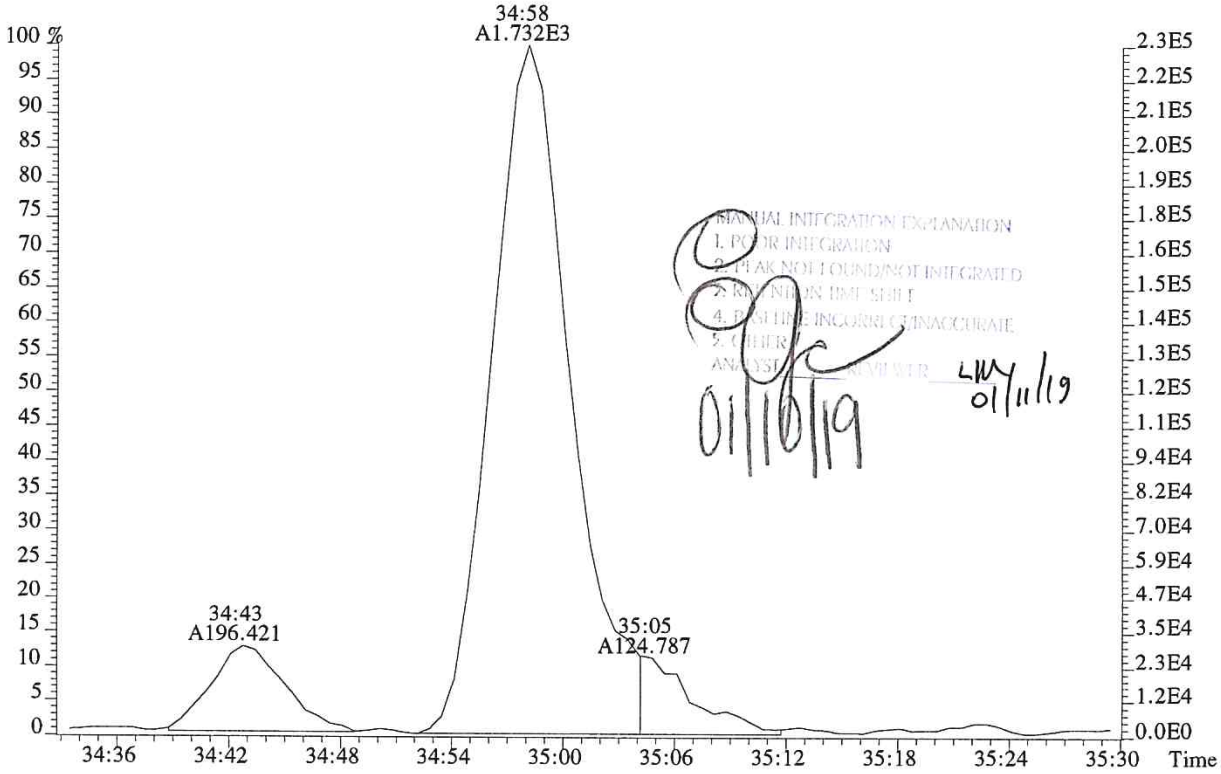
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519870 #1-339 Acq: 9-JAN-2019 20:18:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2568.0,0.40%,F,T)

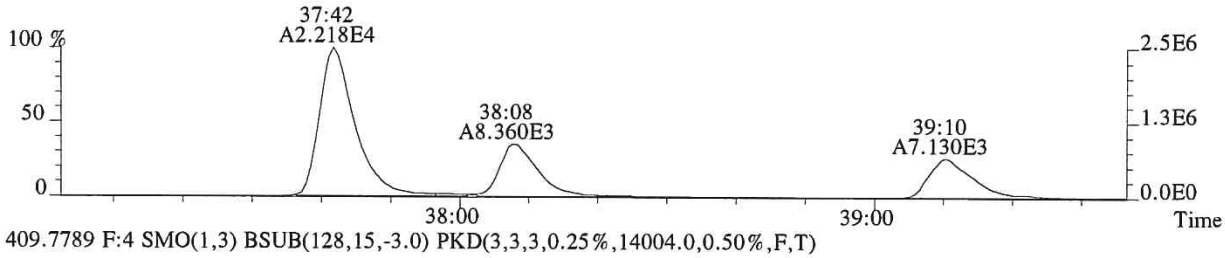


391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3480.0,0.40%,F,T)

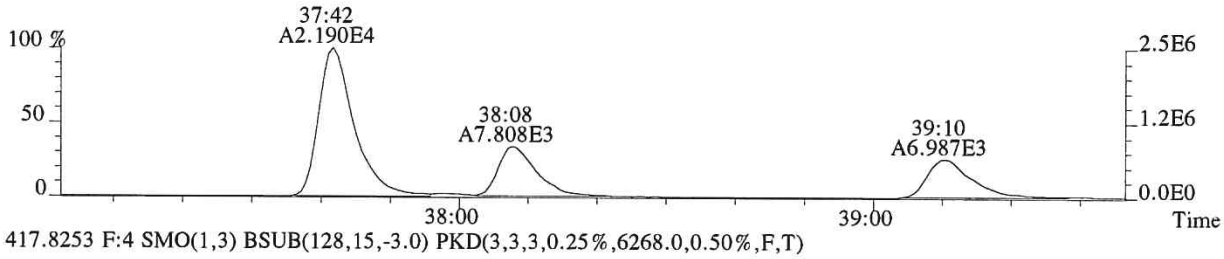


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER
01/10/19
LMV 01/11/19

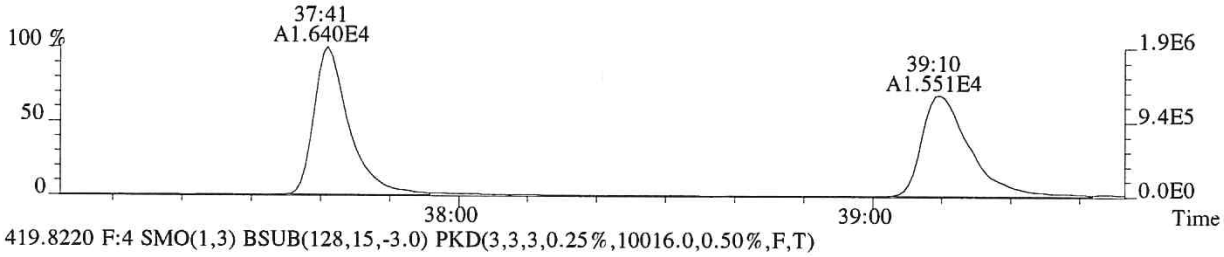
File:P519870 #1-232 Acq: 9-JAN-2019 20:18:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4288.0,0.50%,F,T)



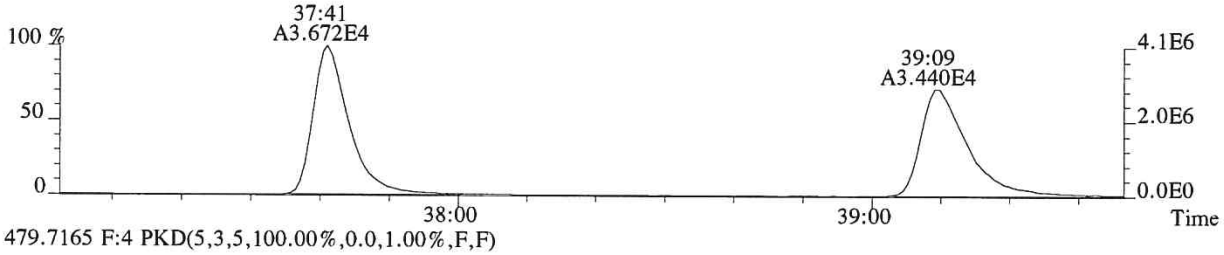
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,14004.0,0.50%,F,T)



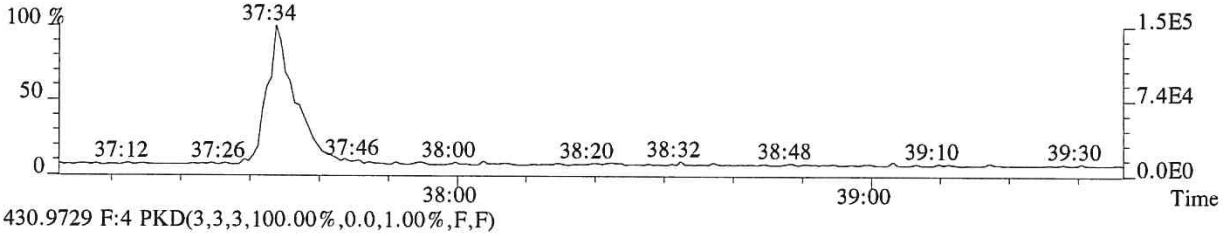
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6268.0,0.50%,F,T)



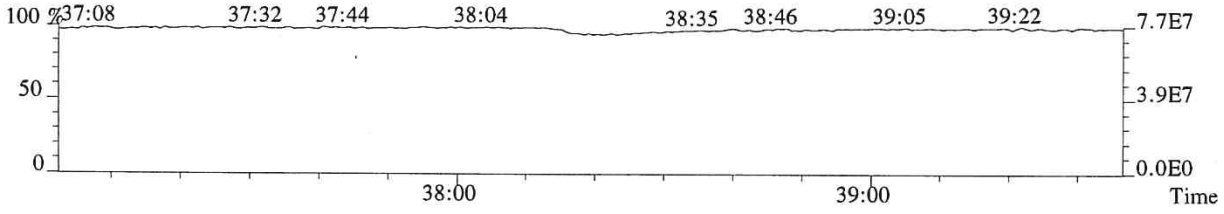
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10016.0,0.50%,F,T)



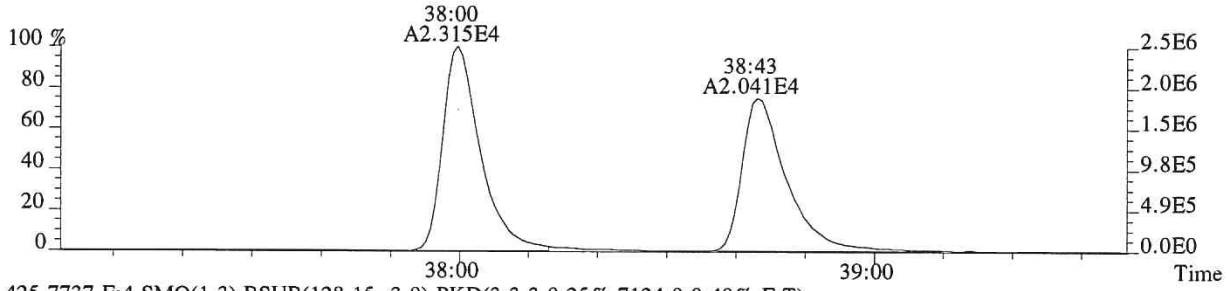
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



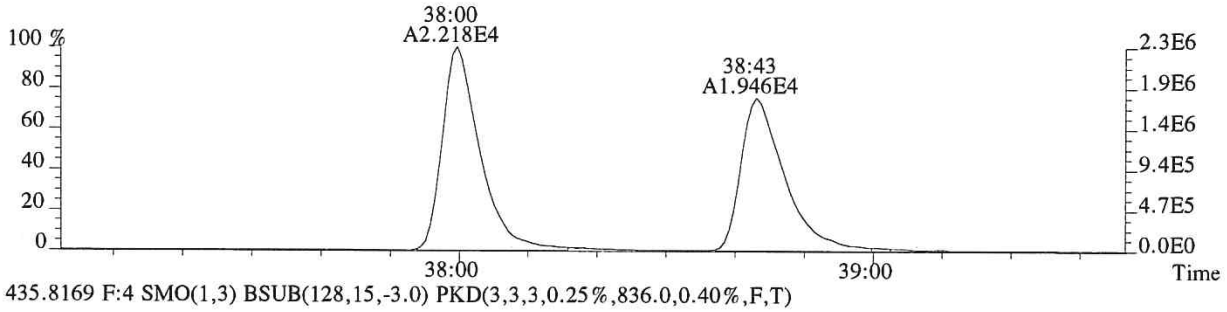
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



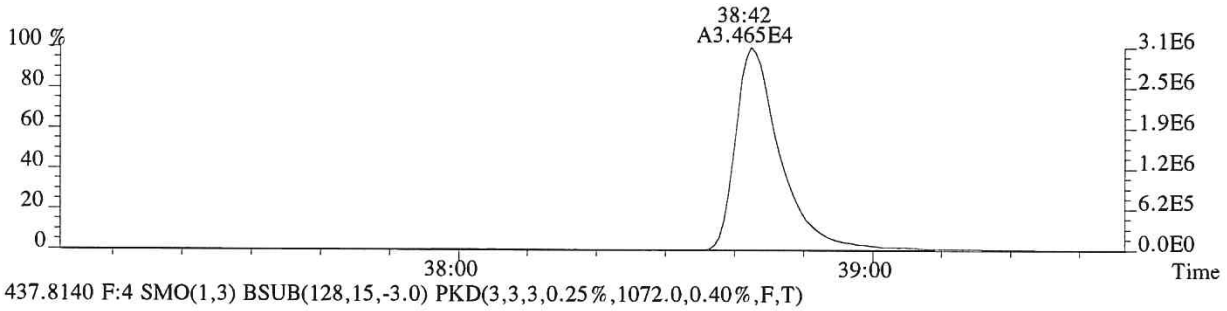
File:P519870 #1-232 Acq: 9-JAN-2019 20:18:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7980.0,0.40%,F,T)



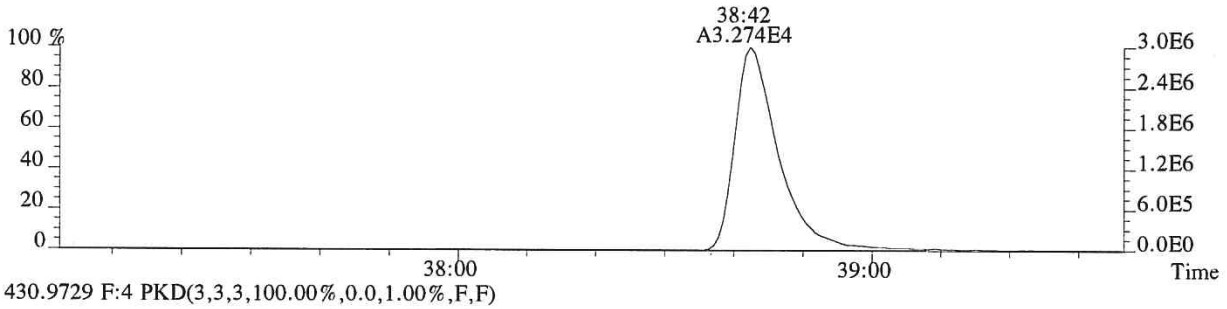
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7124.0,0.40%,F,T)



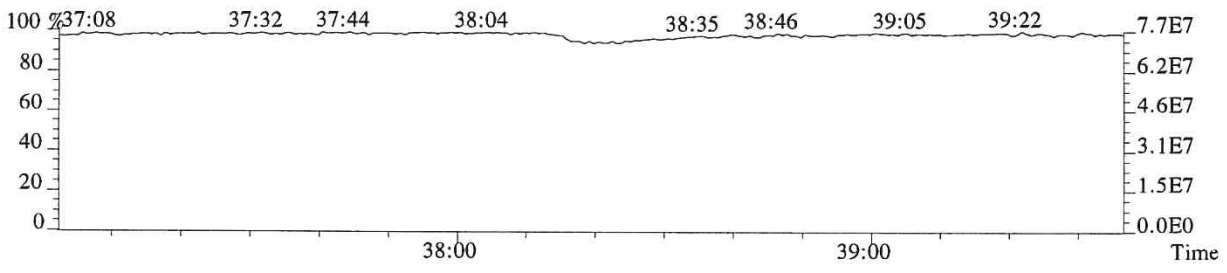
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,836.0,0.40%,F,T)



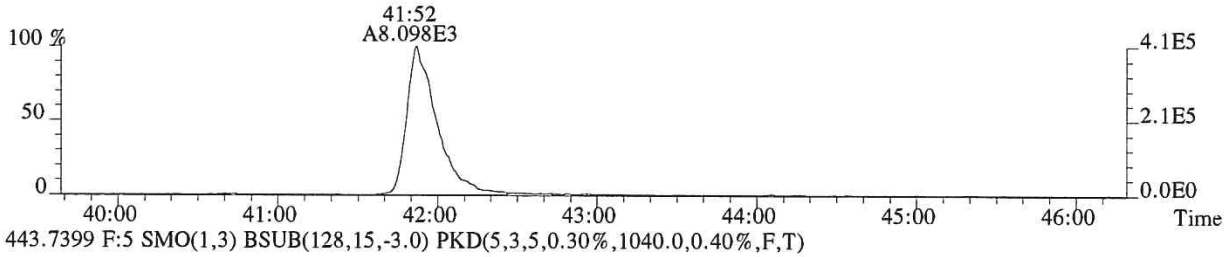
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1072.0,0.40%,F,T)



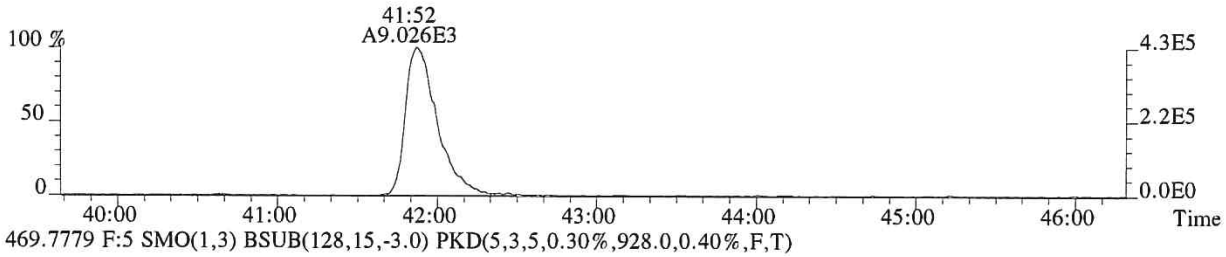
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



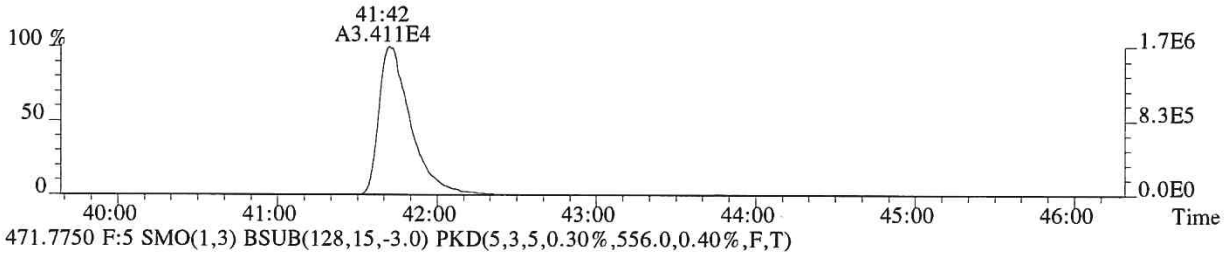
File:P519870 #1-601 Acq: 9-JAN-2019 20:18:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,620.0,0.40%,F,T)



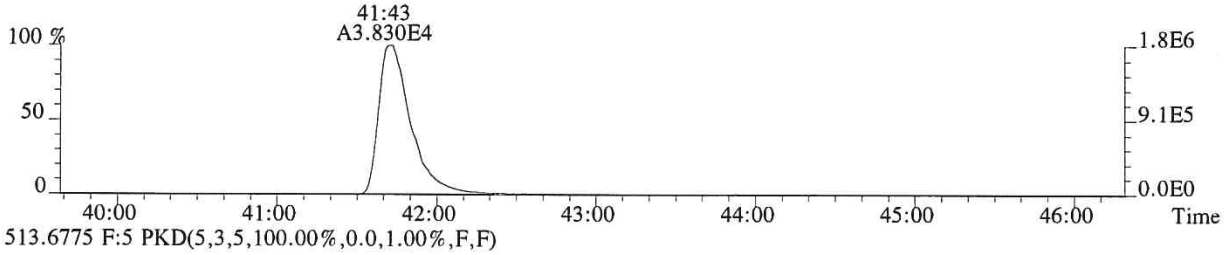
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1040.0,0.40%,F,T)



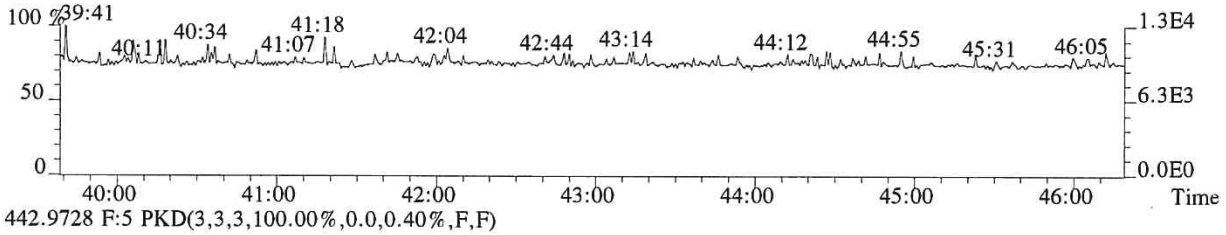
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,928.0,0.40%,F,T)



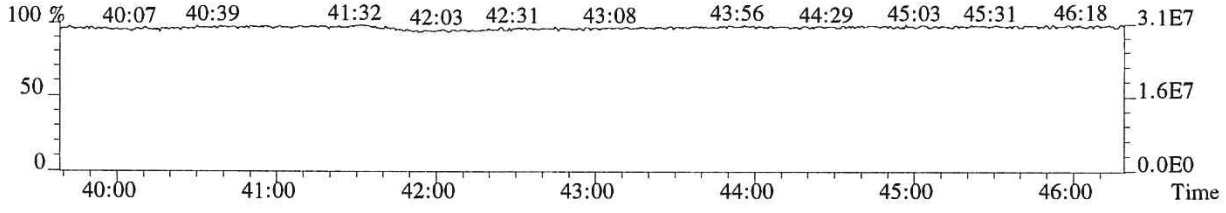
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,556.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

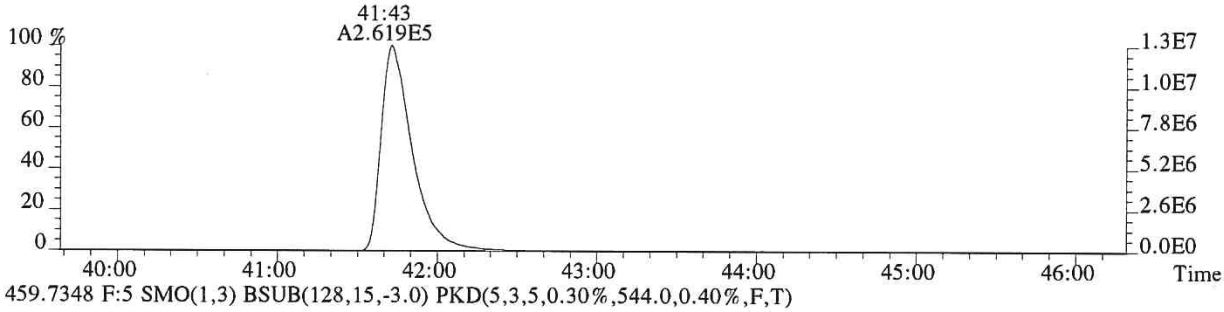


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

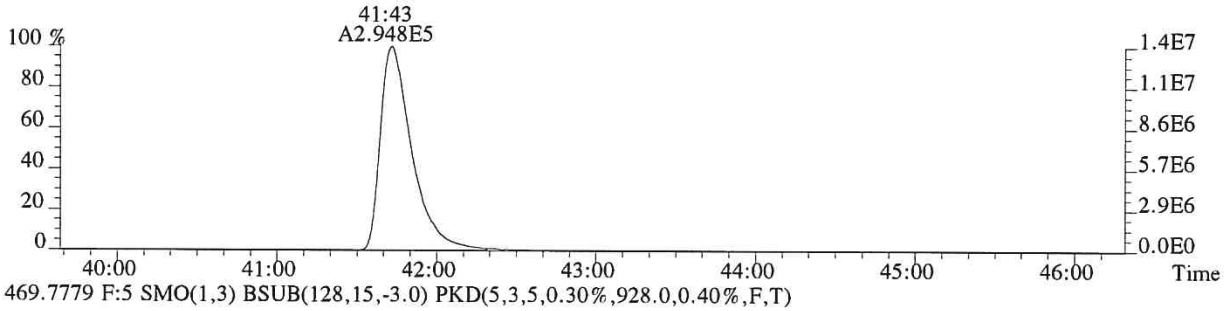


018190

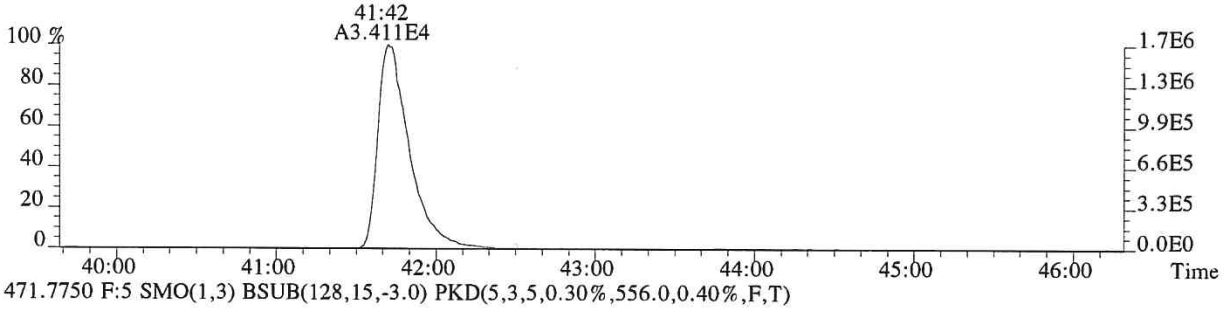
File:P519870 #1-601 Acq: 9-JAN-2019 20:18:21 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,372.0,0.40%,F,T)



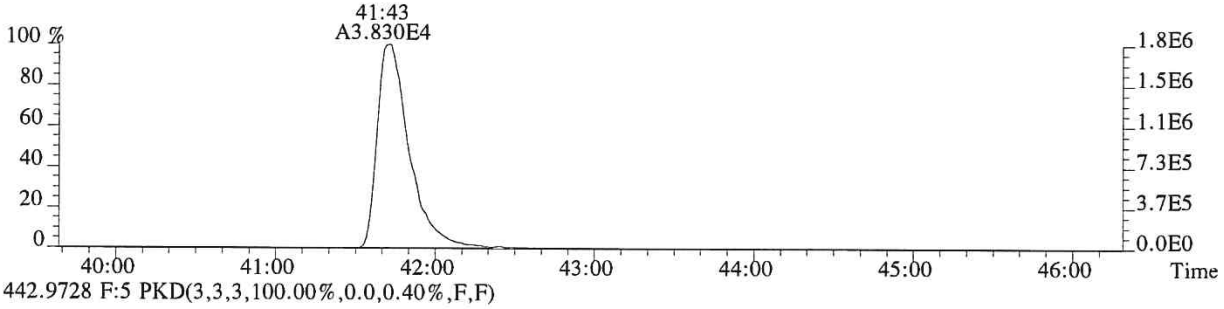
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,544.0,0.40%,F,T)



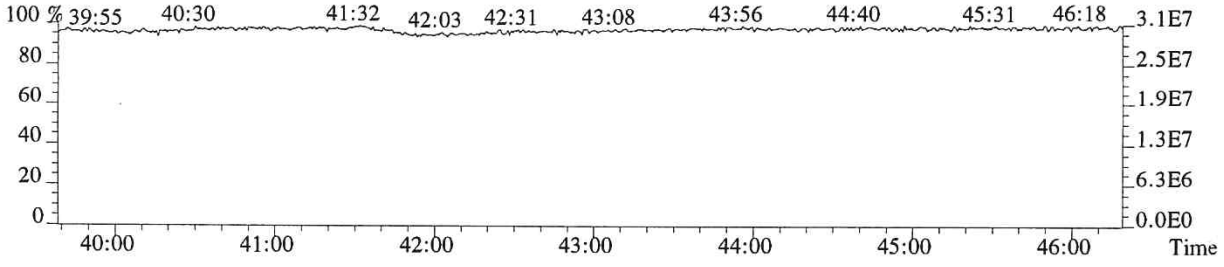
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,928.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,556.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0216

Run #14 Filename P519907 Samp: 1 Inj: 1 Acquired: 11-JAN-19 07:15:39
Processed: 11-JAN-19 14:53:37 Sample ID: E1801139-003DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	1.090e+04	1.444e+04	0.75	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:27	7.982e+02	5.167e+02	1.54	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	5.833e+02	3.370e+02	1.73	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	1.047e+03	9.482e+02	1.10	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	2.518e+02	2.735e+02	0.92	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:01	5.419e+01	4.447e+01	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:49	1.182e+02	8.291e+01	1.43	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:09	2.991e+02	2.603e+02	1.15	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:29	8.870e+01	7.612e+01	1.17	yes	no	1.258
10	Unk	OCDF	40:44	1.080e+02	1.201e+02	0.90	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:24	2.907e+03	3.654e+03	0.80	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:48	5.053e+01	3.387e+01	1.49	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:17	1.280e+01	1.127e+01	1.14	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:31	1.536e+01	7.125e+00	2.16	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	2.777e+02	2.417e+02	1.15	yes	no	1.025
17	Unk	OCDD	40:34	3.373e+03	3.863e+03	0.87	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:21	2.234e+04	2.926e+04	0.76	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:26	3.372e+04	2.121e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:28	3.232e+04	2.050e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:22	1.385e+04	2.683e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.616e+04	3.107e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	1.498e+04	2.902e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	1.364e+04	2.732e+04	0.50	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:08	1.183e+04	2.706e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:28	1.096e+04	2.437e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:22	1.085e+04	1.383e+04	0.78	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:47	2.481e+04	1.543e+04	1.61	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:11	2.084e+04	1.639e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:16	2.027e+04	1.625e+04	1.25	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	2.520e+04	2.367e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	40:34	2.852e+04	3.195e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:39	1.685e+04	2.154e+04	0.78	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:31	2.376e+04	1.876e+04	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:24	3.240e+02				no	1.014

$$\text{OCDD} = \frac{(3.373e+03 + 3.863e+03) \times 4000\ \text{pg} \times 50}{(2.852e+04 + 3.195e+04) \times 10.207\ \text{g} \times 82.2 / 100 \times 1.118 \times 0.63} = 4049\ \text{ng/Kg}$$

LM 01/14/19

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Houston, TX 77099
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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0216

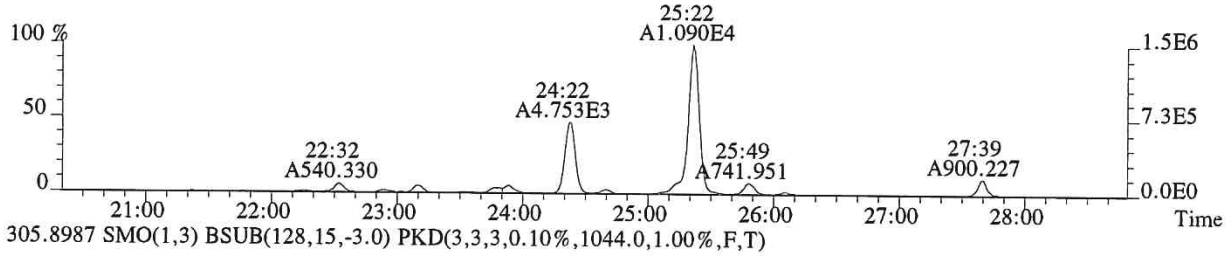
Run #14 Filename P519907 Samp: 1 Inj: 1 Acquired: 11-JAN-19 07:15:39
Processed: 11-JAN-19 14:53:37 LAB. ID: E1801139-003DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.45e+06	7.80e+02	1.9e+03	1.84e+06	1.04e+03	1.8e+03
2	1,2,3,7,8-PeCDF	1.46e+05	9.72e+02	1.5e+02	8.59e+04	1.13e+03	7.6e+01
3	2,3,4,7,8-PeCDF	8.66e+04	9.72e+02	8.9e+01	5.00e+04	1.13e+03	4.4e+01
4	1,2,3,4,7,8-HxCDF	2.12e+05	9.44e+02	2.2e+02	2.07e+05	7.24e+02	2.9e+02
5	1,2,3,6,7,8-HxCDF	5.22e+04	9.44e+02	5.5e+01	5.51e+04	7.24e+02	7.6e+01
6	2,3,4,6,7,8-HxCDF	1.03e+04	9.44e+02	1.1e+01	7.68e+03	7.24e+02	1.1e+01
7	1,2,3,7,8,9-HxCDF	1.70e+04	9.44e+02	1.8e+01	1.46e+04	7.24e+02	2.0e+01
8	1,2,3,4,6,7,8-HpCDF	6.33e+04	6.56e+02	9.6e+01	6.08e+04	4.12e+02	1.5e+02
9	1,2,3,4,7,8,9-HpCDF	1.56e+04	6.56e+02	2.4e+01	1.59e+04	4.12e+02	3.8e+01
10	OCDF	2.11e+04	4.44e+02	4.8e+01	2.05e+04	1.18e+03	1.7e+01
11	2,3,7,8-TCDD	4.40e+05	2.01e+03	2.2e+02	5.72e+05	1.28e+03	4.5e+02
12	1,2,3,7,8-PeCDD	9.00e+03	5.84e+02	1.5e+01	5.70e+03	3.64e+02	1.6e+01
13	1,2,3,4,7,8-HxCDD	*	6.44e+02	*	*	5.52e+02	*
14	1,2,3,6,7,8-HxCDD	2.60e+03	6.44e+02	4.0e+00	2.53e+03	5.52e+02	4.6e+00
15	1,2,3,7,8,9-HxCDD	3.86e+03	6.44e+02	6.0e+00	2.39e+03	5.52e+02	4.3e+00
16	1,2,3,4,6,7,8-HpCDD	5.14e+04	7.76e+02	6.6e+01	5.15e+04	1.28e+03	4.0e+01
17	OCDD	6.04e+05	3.32e+02	1.8e+03	6.70e+05	5.88e+02	1.1e+03
18	13C-2,3,7,8-TCDF	3.13e+06	3.69e+03	8.5e+02	4.05e+06	3.08e+03	1.3e+03
19	13C-1,2,3,7,8-PeCDF	5.72e+06	7.20e+02	7.9e+03	3.63e+06	5.88e+02	6.2e+03
20	13C-2,3,4,7,8-PeCDF	5.84e+06	7.20e+02	8.1e+03	3.67e+06	5.88e+02	6.2e+03
21	13C-1,2,3,4,7,8-HxCDF	2.89e+06	5.88e+02	4.9e+03	5.57e+06	1.31e+03	4.2e+03
22	13C-1,2,3,6,7,8-HxCDF	3.07e+06	5.88e+02	5.2e+03	5.97e+06	1.31e+03	4.6e+03
23	13C-2,3,4,6,7,8-HxCDF	3.11e+06	5.88e+02	5.3e+03	6.00e+06	1.31e+03	4.6e+03
24	13C-1,2,3,7,8,9-HxCDF	2.67e+06	5.88e+02	4.5e+03	5.28e+06	1.31e+03	4.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.50e+06	2.49e+03	1.0e+03	5.66e+06	4.01e+03	1.4e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.16e+06	2.49e+03	8.7e+02	4.79e+06	4.01e+03	1.2e+03
27	13C-2,3,7,8-TCDD	1.67e+06	6.06e+03	2.8e+02	2.13e+06	2.52e+03	8.5e+02
28	13C-1,2,3,7,8-PeCDD	4.55e+06	6.48e+02	7.0e+03	2.82e+06	9.44e+02	3.0e+03
29	13C-1,2,3,4,7,8-HxCDD	4.49e+06	1.06e+03	4.3e+03	3.51e+06	4.56e+02	7.7e+03
30	13C-1,2,3,6,7,8-HxCDD	4.08e+06	1.06e+03	3.9e+03	3.23e+06	4.56e+02	7.1e+03
31	13C-1,2,3,4,6,7,8-HpCDD	5.04e+06	9.12e+02	5.5e+03	4.75e+06	6.48e+02	7.3e+03
32	13C-OCDD	5.01e+06	7.36e+02	6.8e+03	5.59e+06	4.72e+02	1.2e+04
33	13C-1,2,3,4-TCDD	2.48e+06	6.06e+03	4.1e+02	3.20e+06	2.52e+03	1.3e+03
34	13C-1,2,3,7,8,9-HxCDD	4.65e+06	1.06e+03	4.4e+03	3.61e+06	4.56e+02	7.9e+03
35	37Cl-2,3,7,8-TCDD	5.03e+04	1.73e+03	2.9e+01			

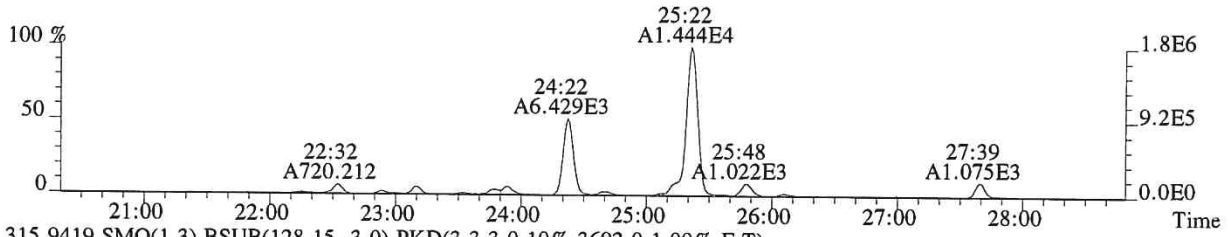
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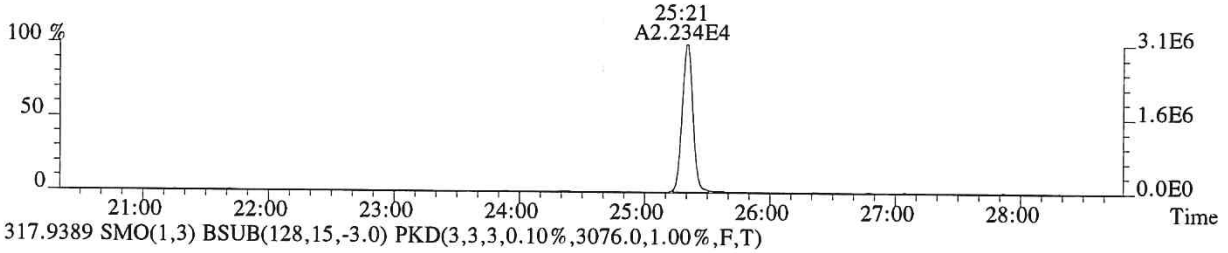
File:P519907 #1-602 Acq:11-JAN-2019 07:15:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,780.0,1.00%,F,T)



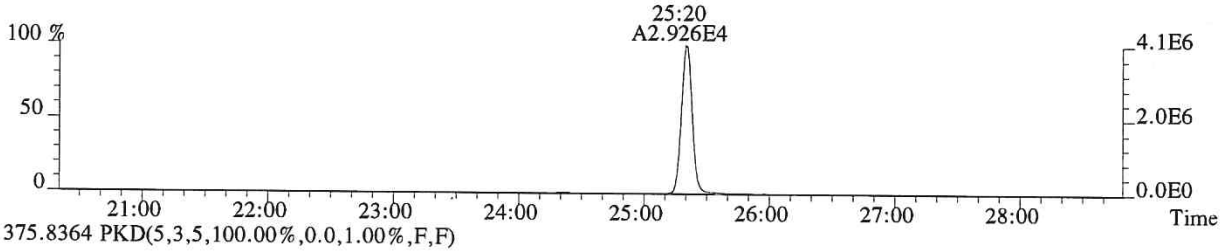
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1044.0,1.00%,F,T)



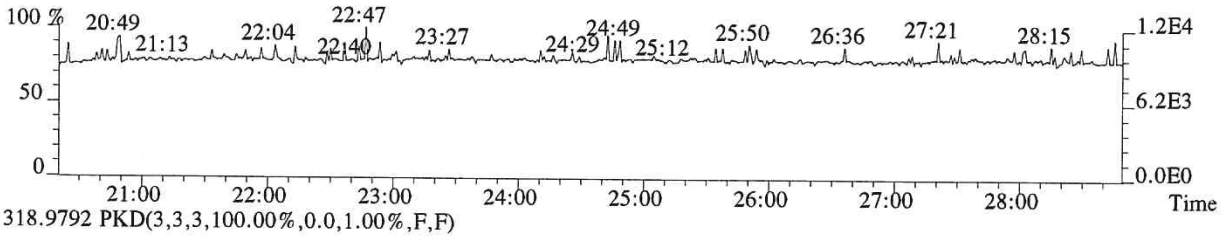
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3692.0,1.00%,F,T)



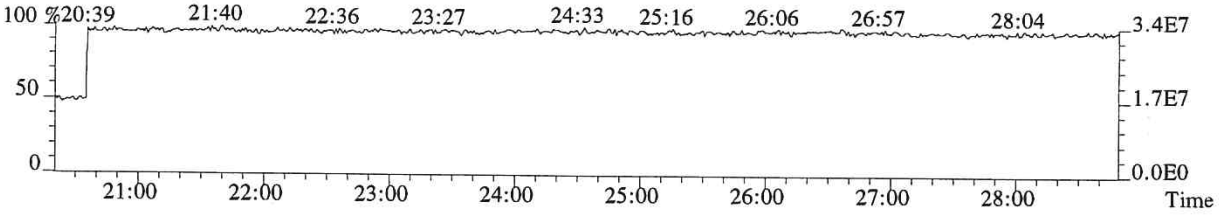
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3076.0,1.00%,F,T)



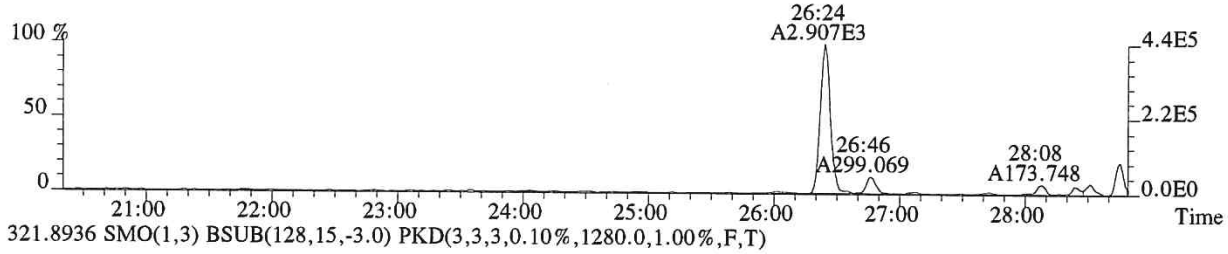
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



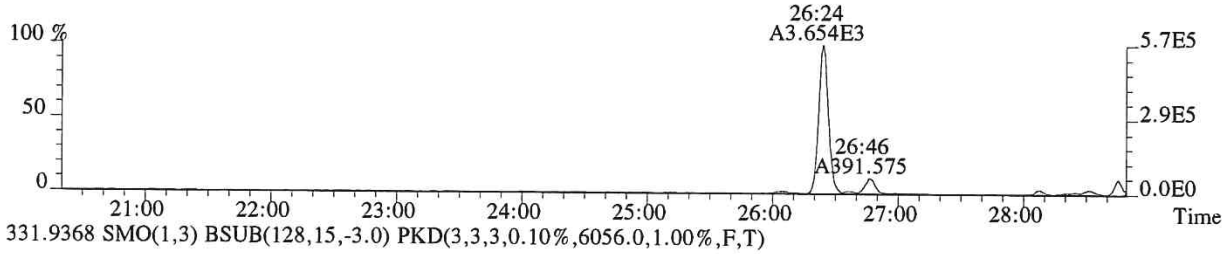
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



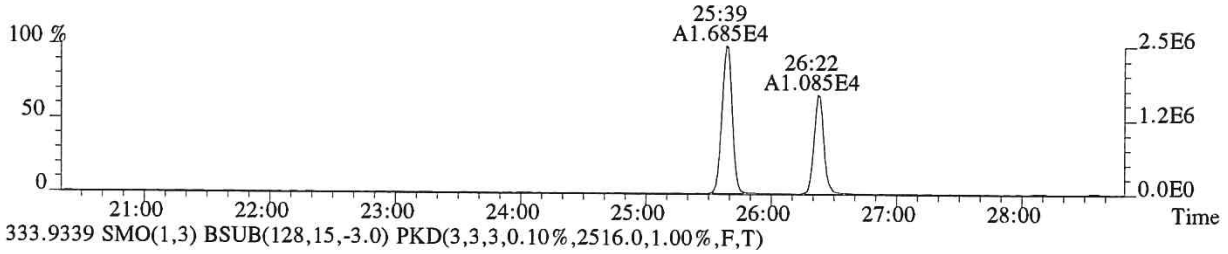
File:P519907 #1-602 Acq:11-JAN-2019 07:15:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2008.0,1.00%,F,T)



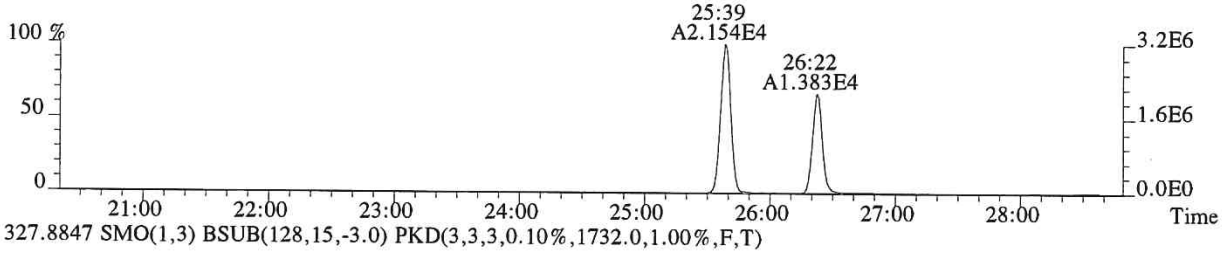
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1280.0,1.00%,F,T)



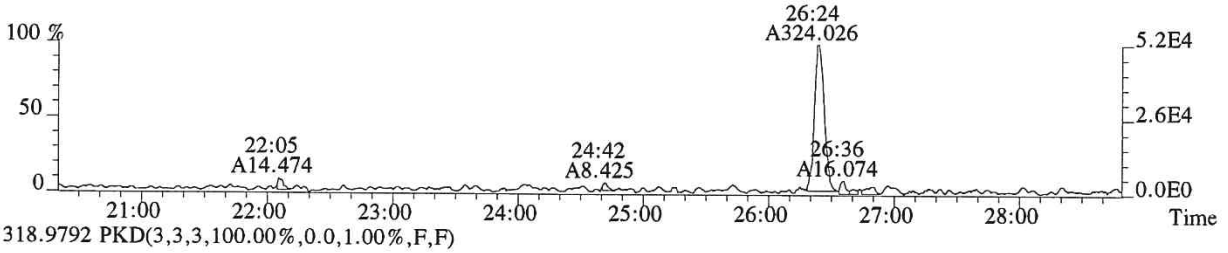
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6056.0,1.00%,F,T)



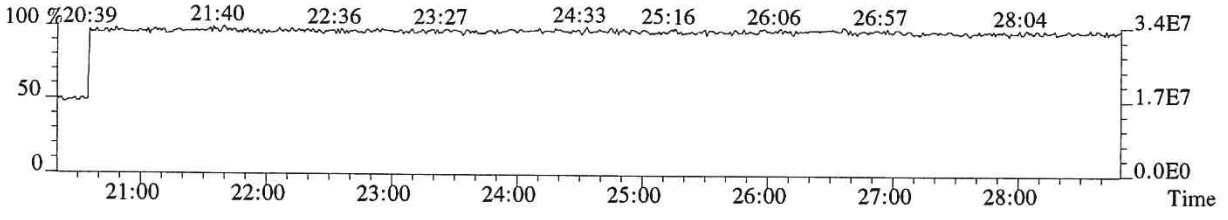
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2516.0,1.00%,F,T)



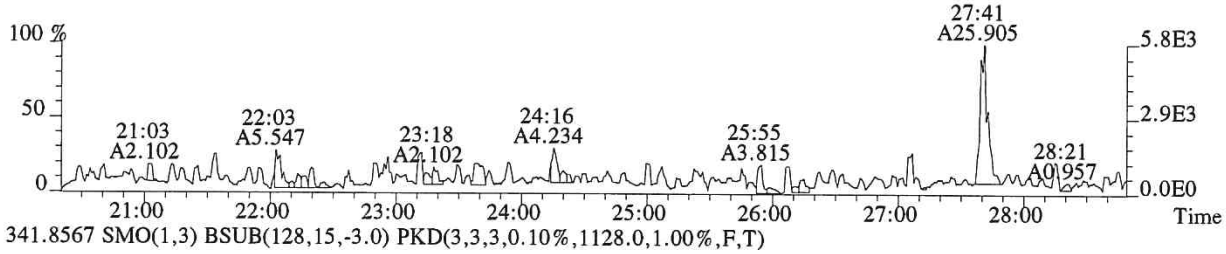
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1732.0,1.00%,F,T)



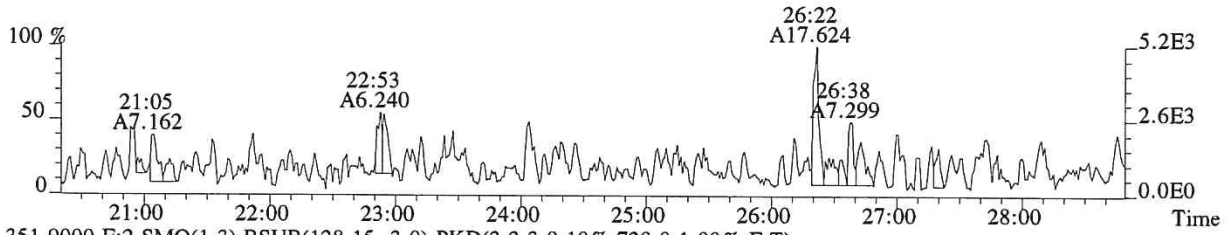
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



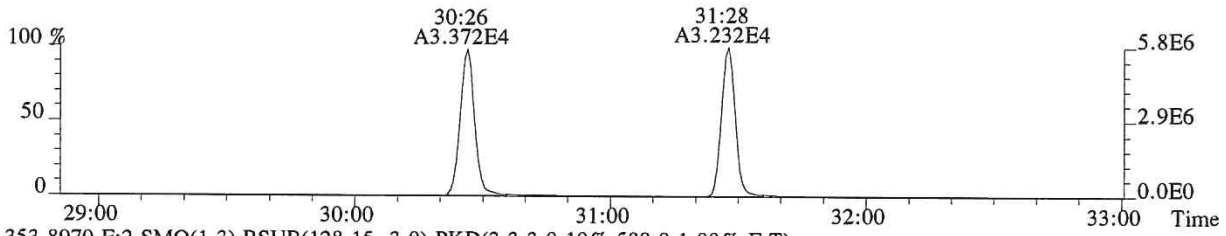
File:P519907 #1-602 Acq:11-JAN-2019 07:15:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,608.0,1.00%,F,T)



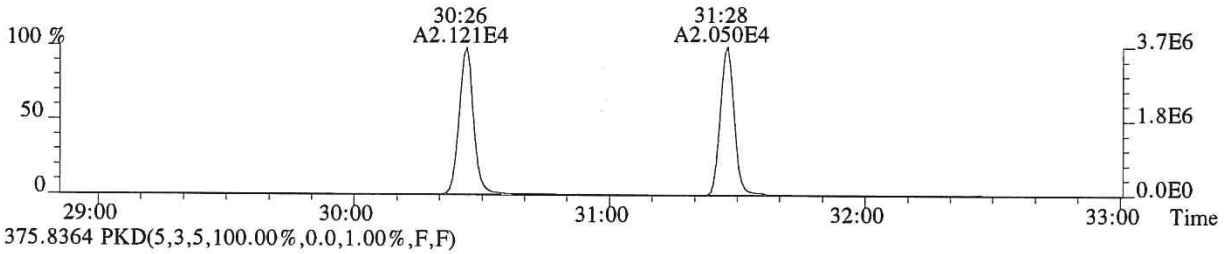
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1128.0,1.00%,F,T)



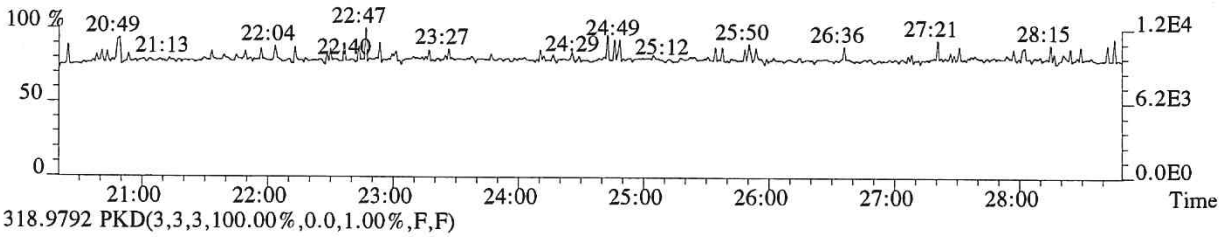
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,720.0,1.00%,F,T)



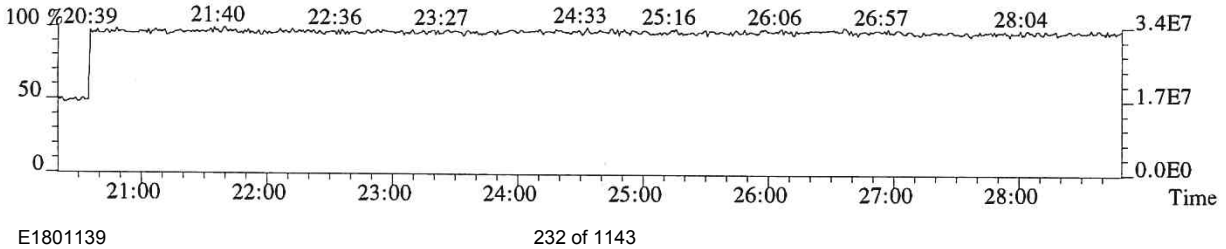
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,588.0,1.00%,F,T)



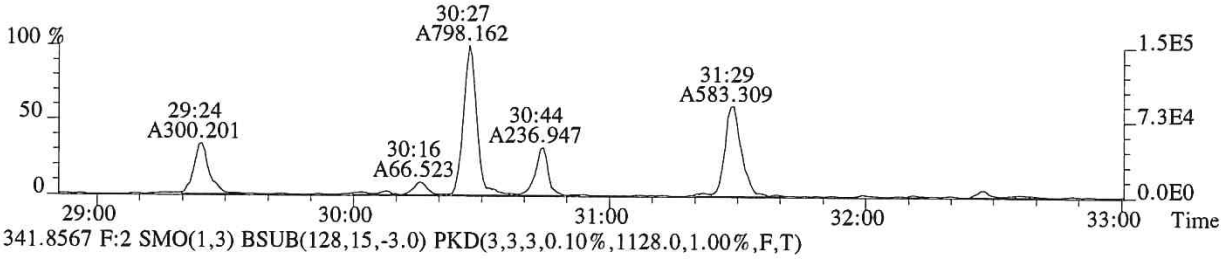
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



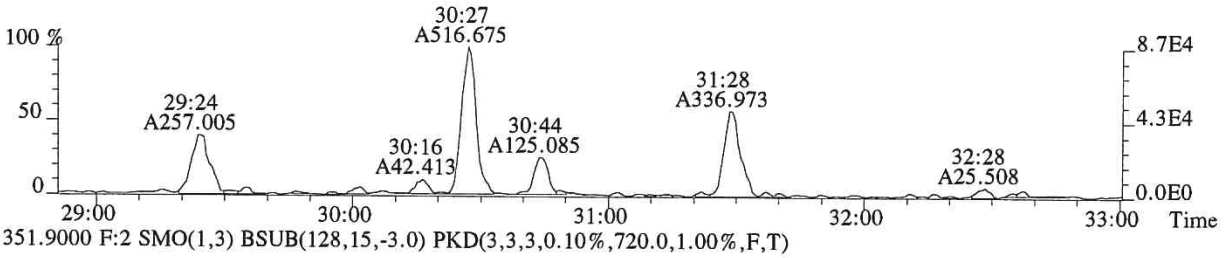
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



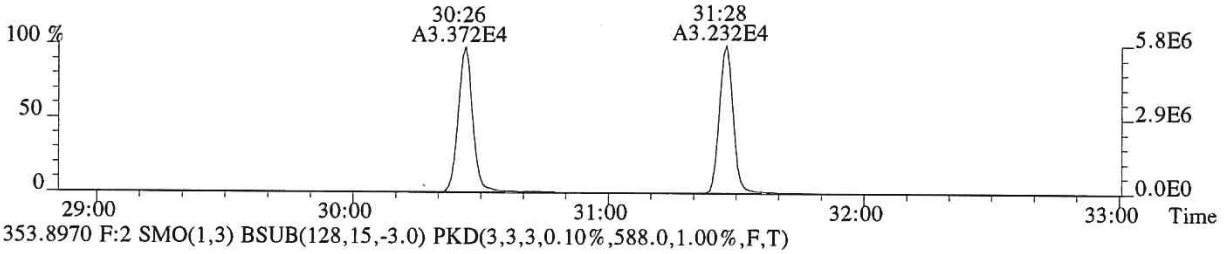
File:P519907 #1-375 Acq:11-JAN-2019 07:15:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,972.0,1.00%,F,T)



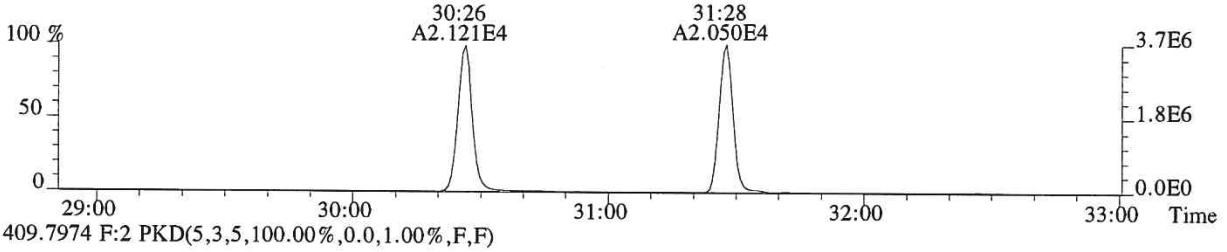
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1128.0,1.00%,F,T)



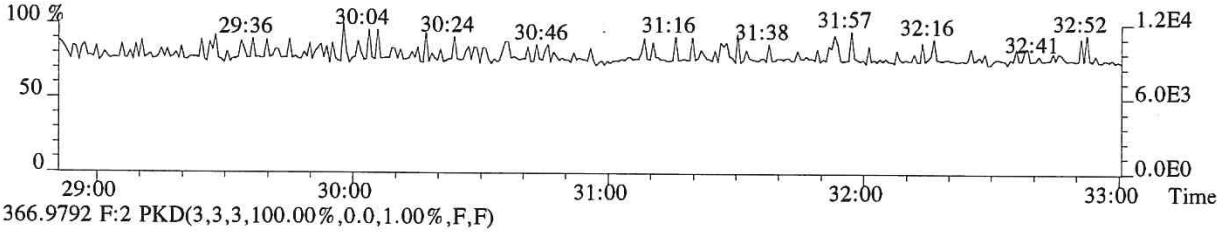
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,720.0,1.00%,F,T)



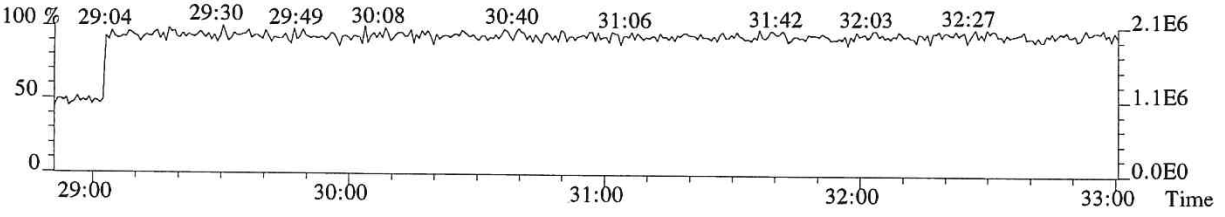
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,588.0,1.00%,F,T)



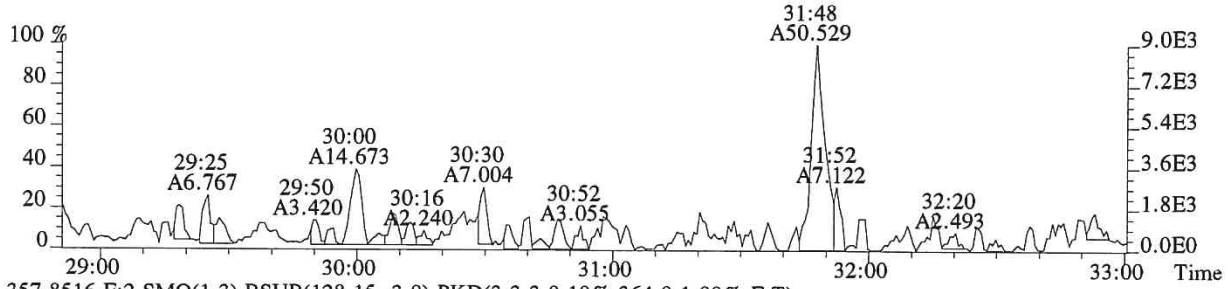
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



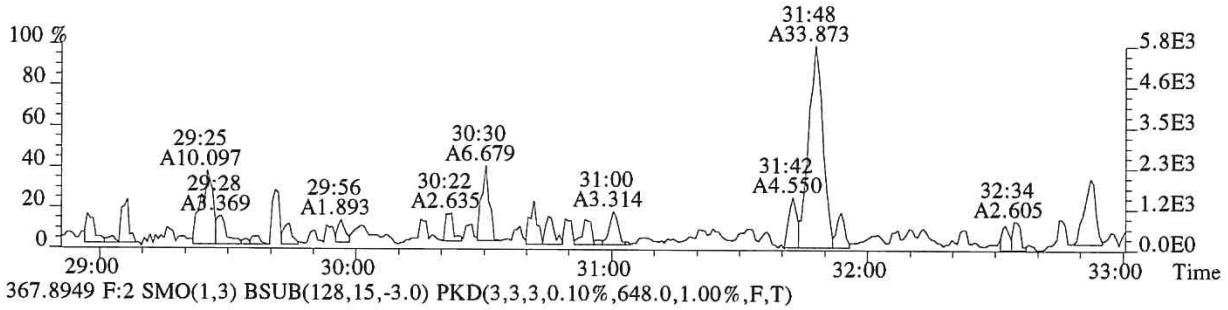
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



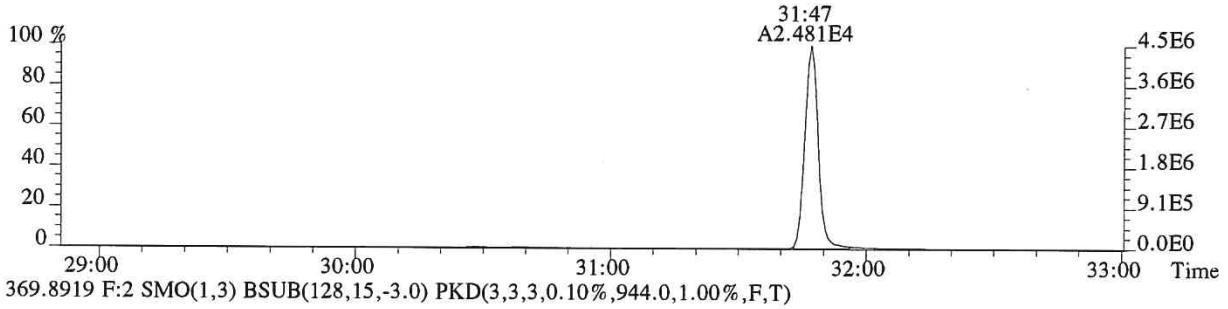
File:P519907 #1-375 Acq:11-JAN-2019 07:15:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,584.0,1.00%,F,T)



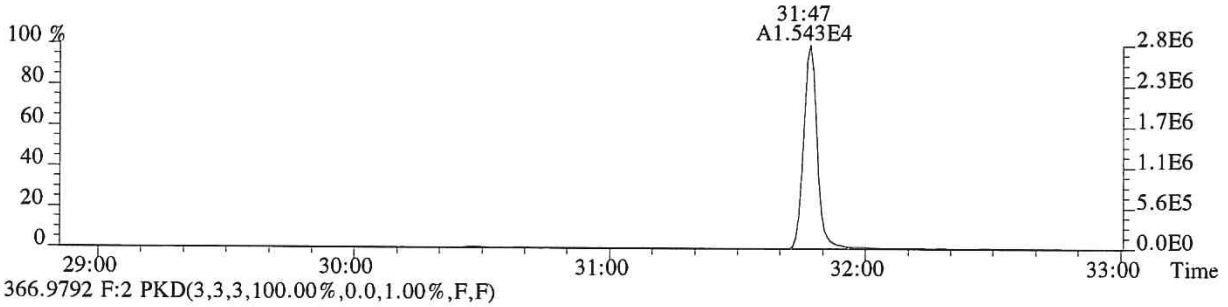
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,364.0,1.00%,F,T)



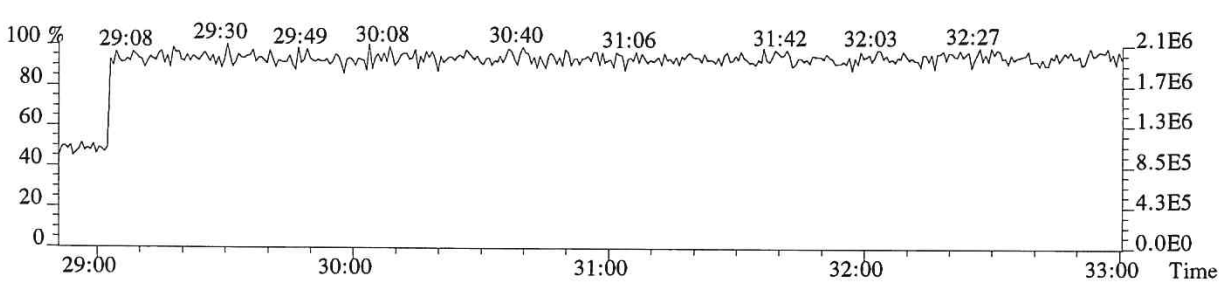
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,648.0,1.00%,F,T)



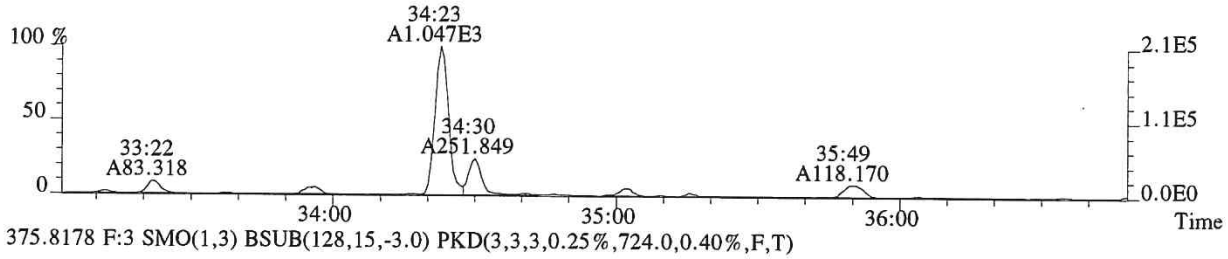
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



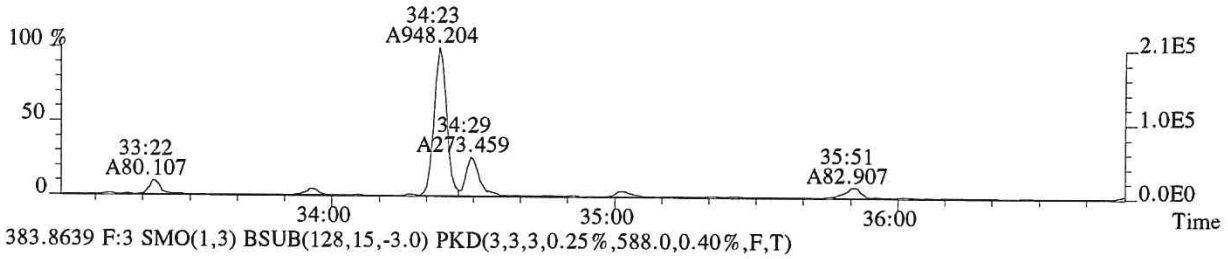
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



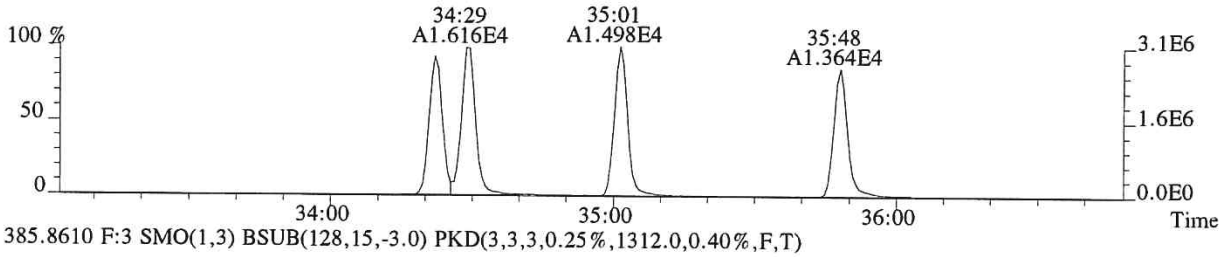
File:P519907 #1-339 Acq:11-JAN-2019 07:15:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,944.0,0.40%,F,T)



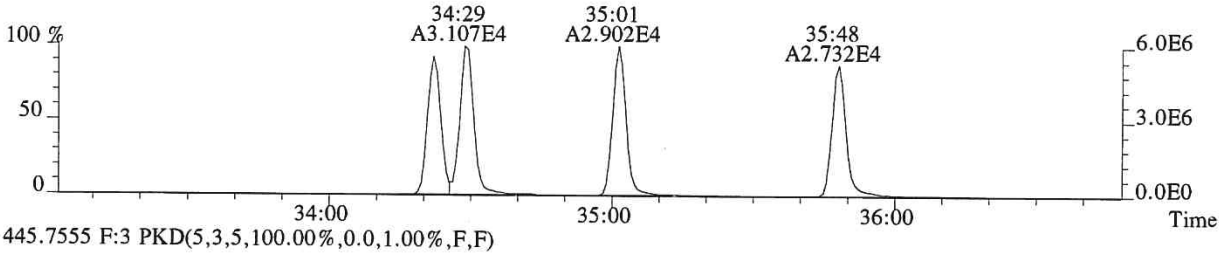
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,724.0,0.40%,F,T)



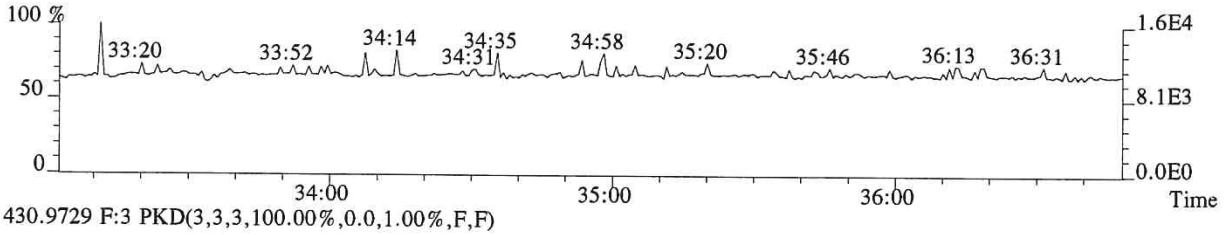
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,588.0,0.40%,F,T)



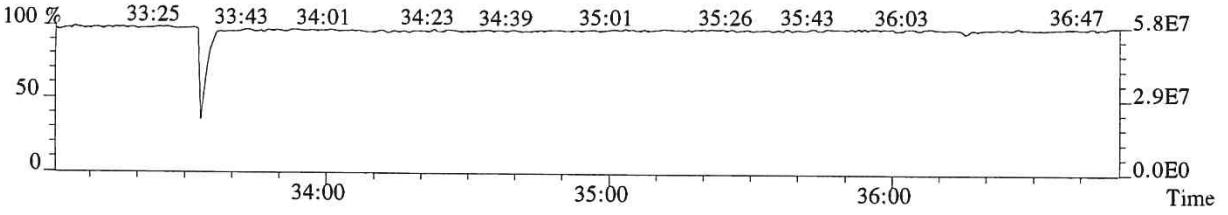
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1312.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

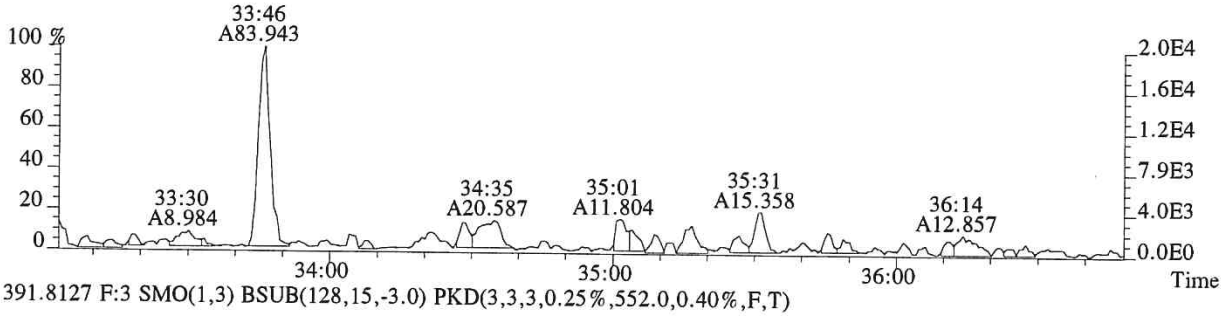


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

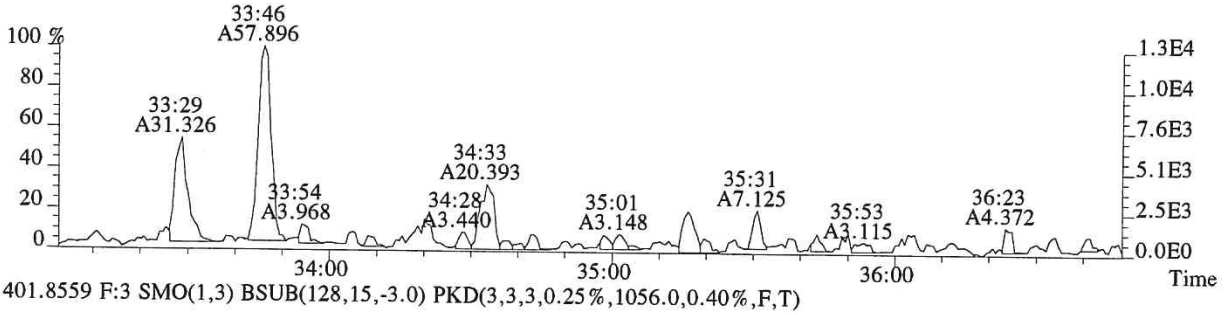


018199

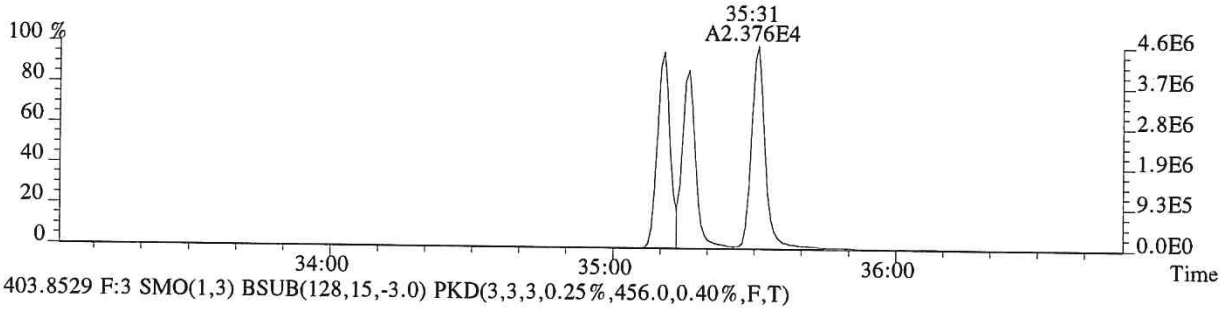
File:P519907 #1-339 Acq:11-JAN-2019 07:15:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,644.0,0.40%,F,T)



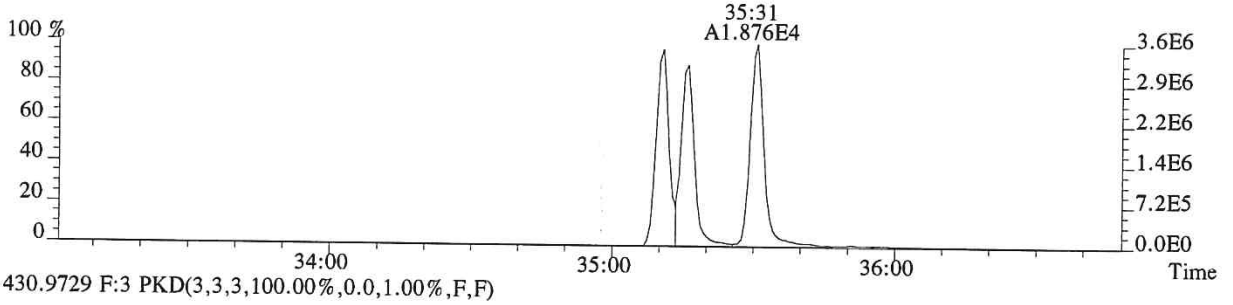
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,552.0,0.40%,F,T)



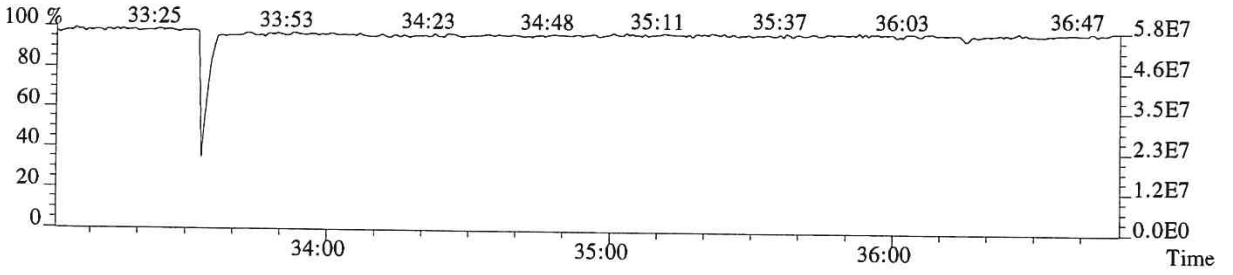
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1056.0,0.40%,F,T)



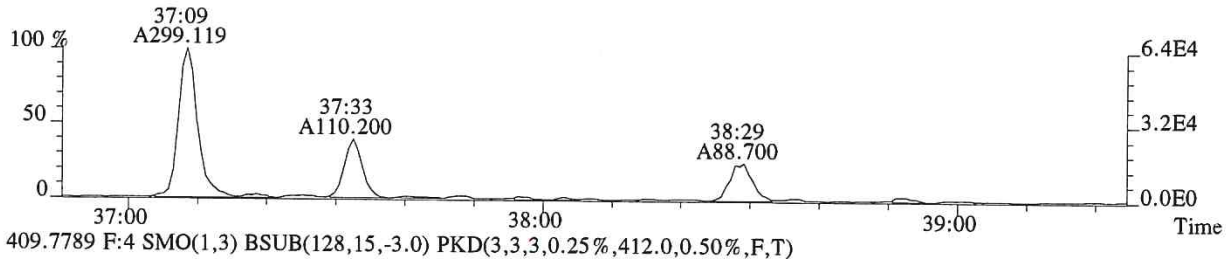
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,456.0,0.40%,F,T)



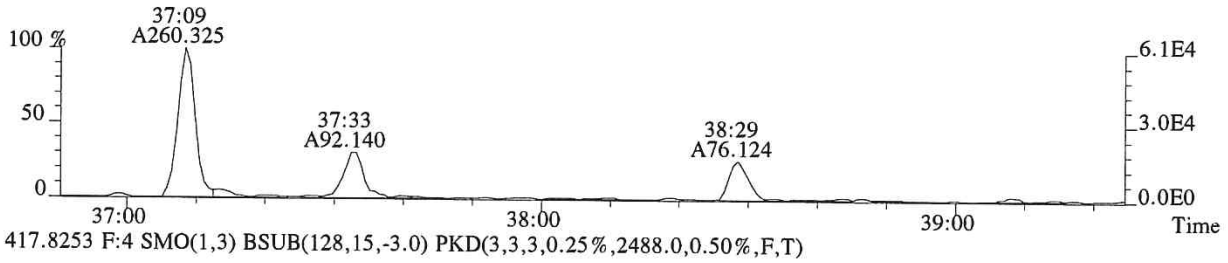
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



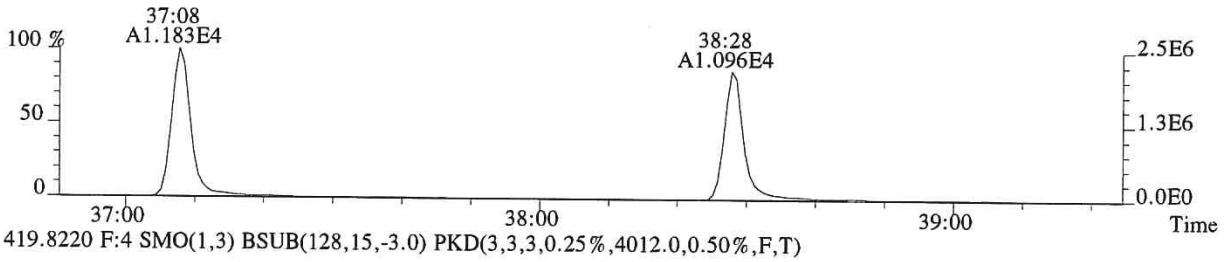
File:P519907 #1-232 Acq:11-JAN-2019 07:15:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,656.0,0.50%,F,T)



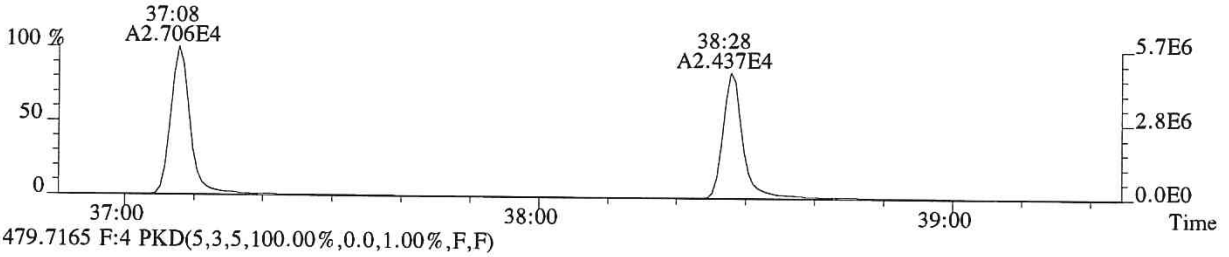
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,412.0,0.50%,F,T)



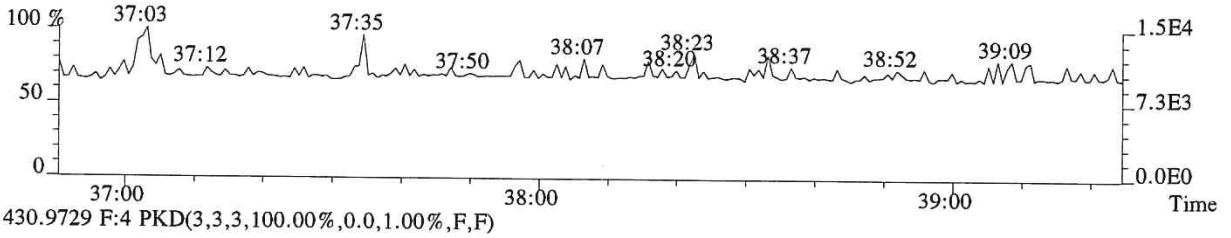
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2488.0,0.50%,F,T)



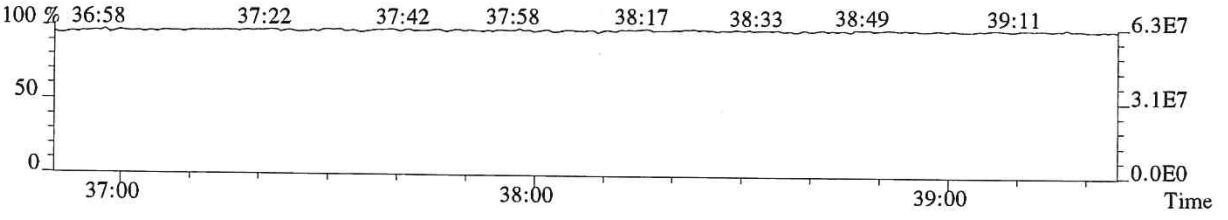
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4012.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

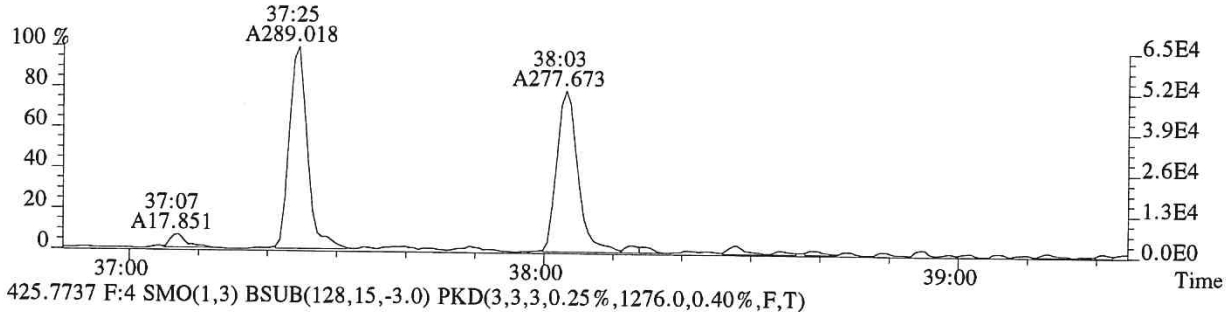


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

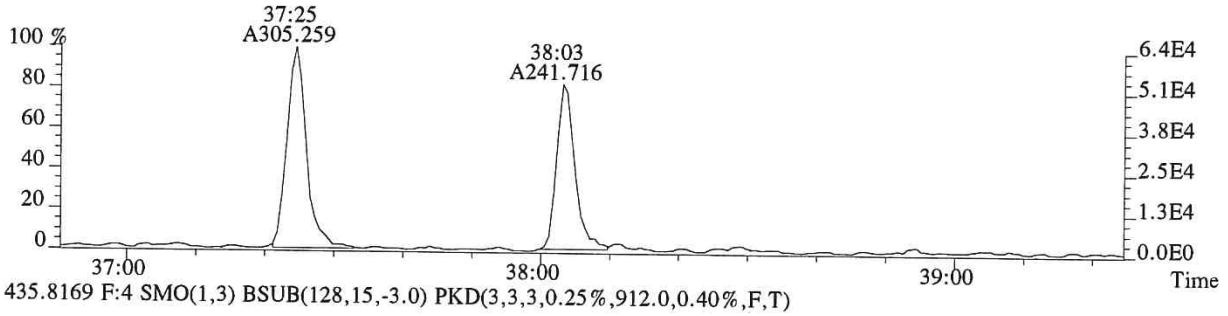


018201

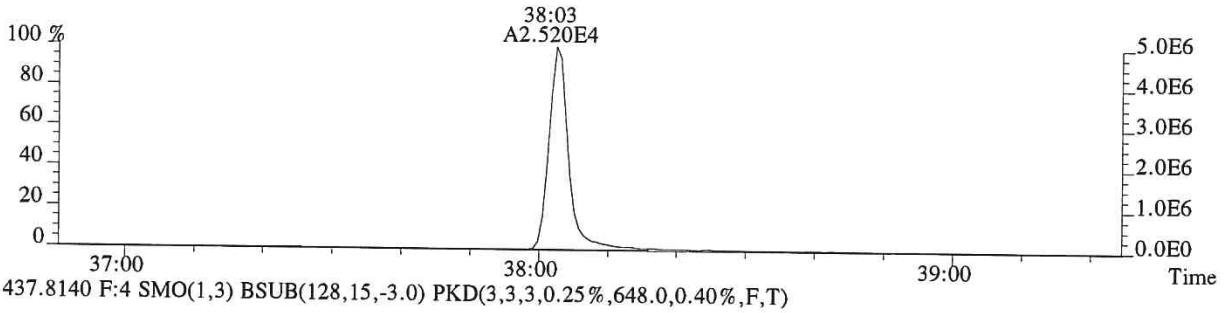
File:P519907 #1-232 Acq:11-JAN-2019 07:15:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,776.0,0.40%,F,T)



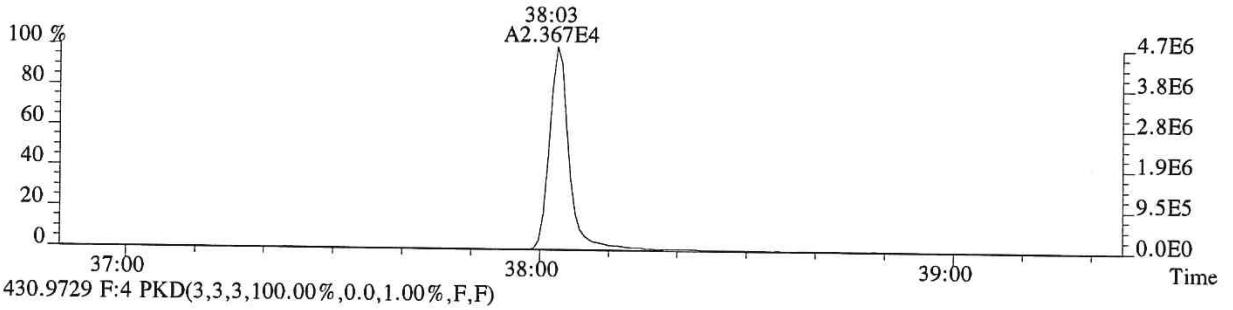
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1276.0,0.40%,F,T)



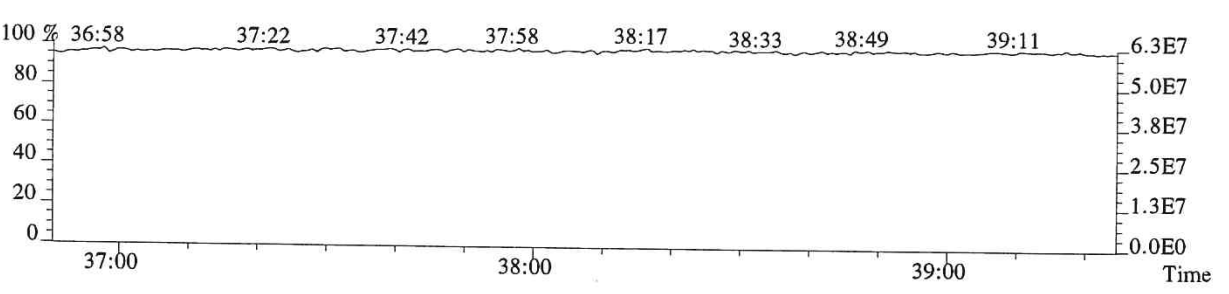
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,912.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,648.0,0.40%,F,T)

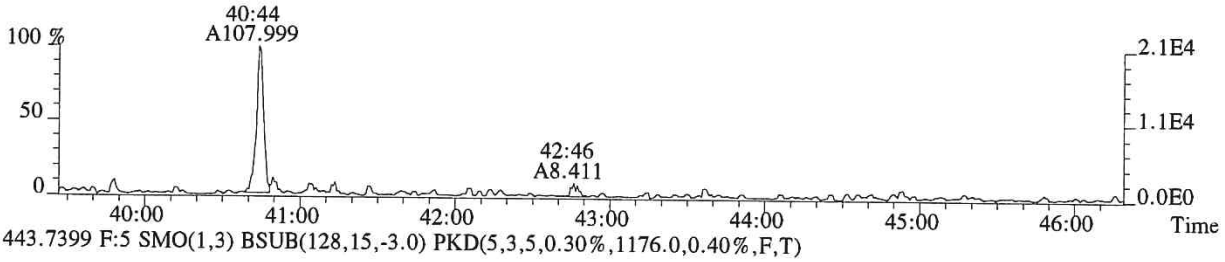


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

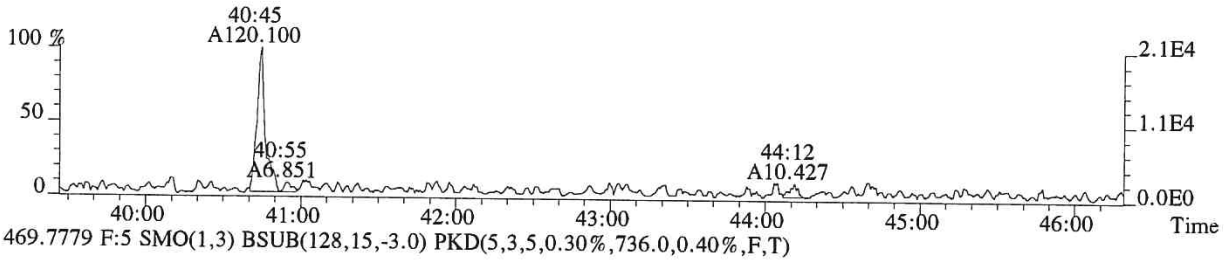


018202

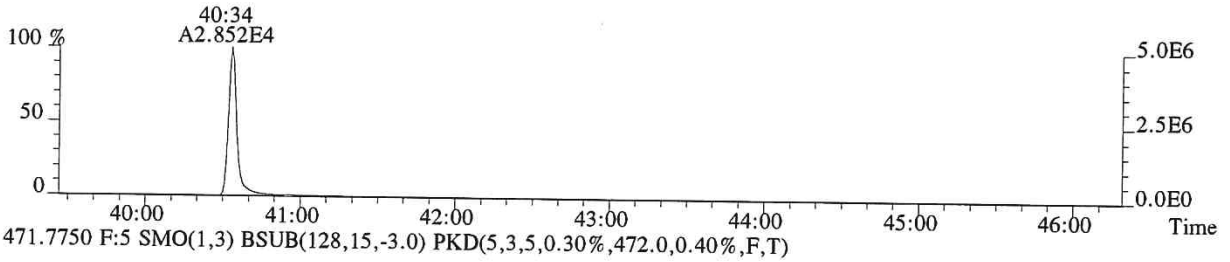
File:P519907 #1-619 Acq:11-JAN-2019 07:15:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,444.0,0.40%,F,T)



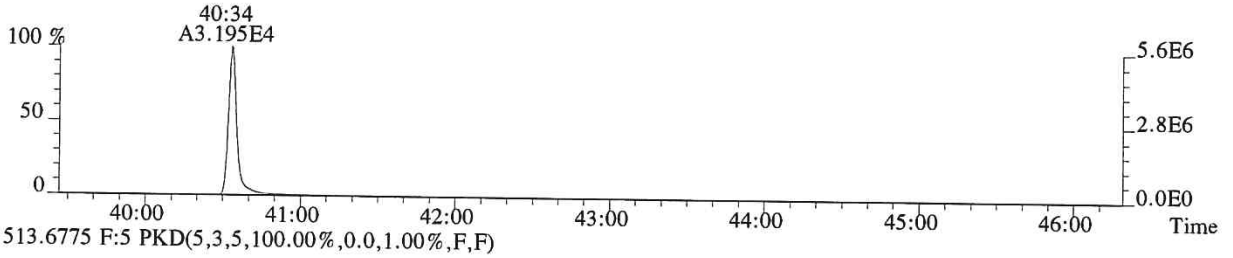
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1176.0,0.40%,F,T)



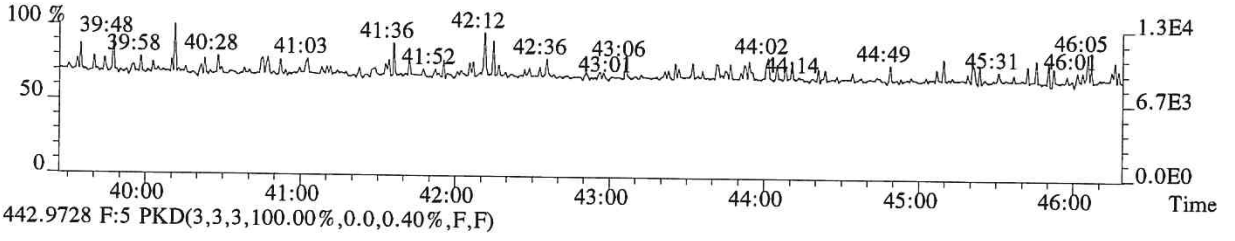
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,736.0,0.40%,F,T)



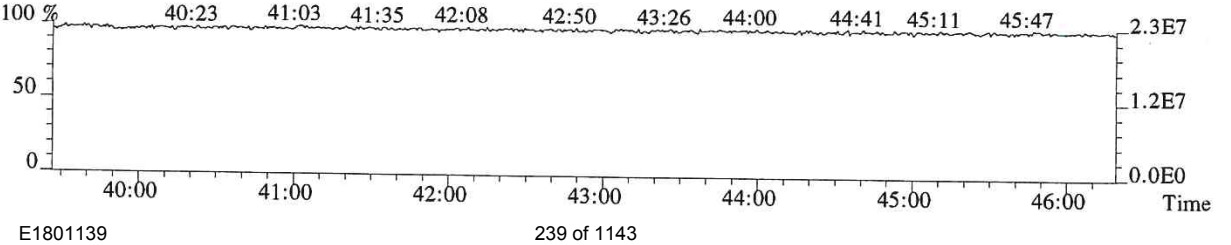
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,472.0,0.40%,F,T)



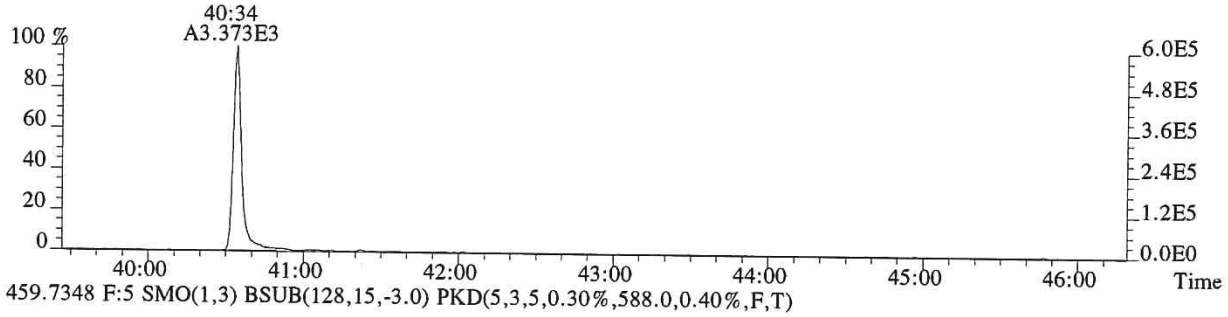
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



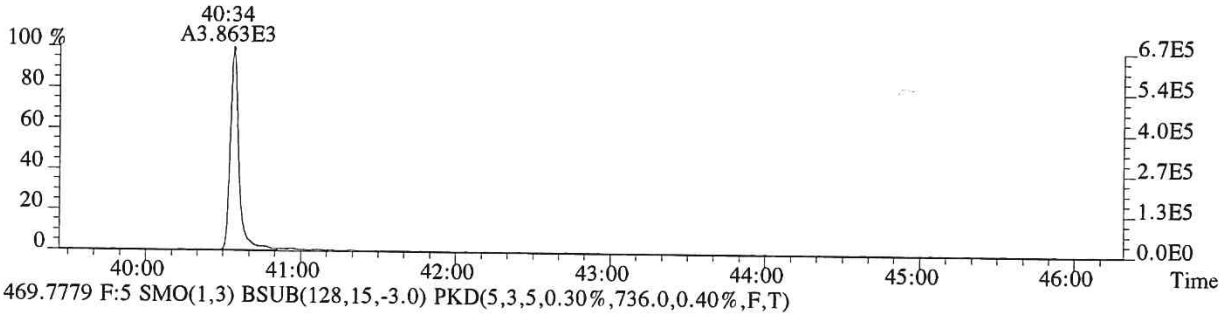
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



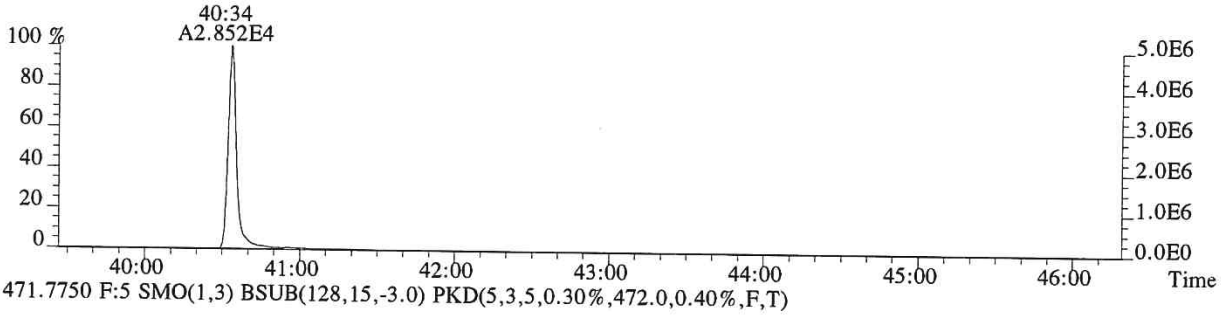
File:P519907 #1-619 Acq:11-JAN-2019 07:15:39 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-003DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,332.0,0.40%,F,T)



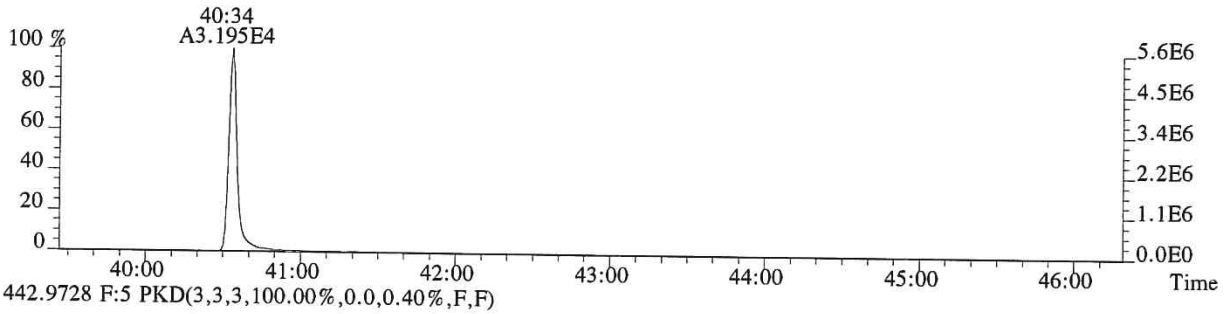
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,588.0,0.40%,F,T)



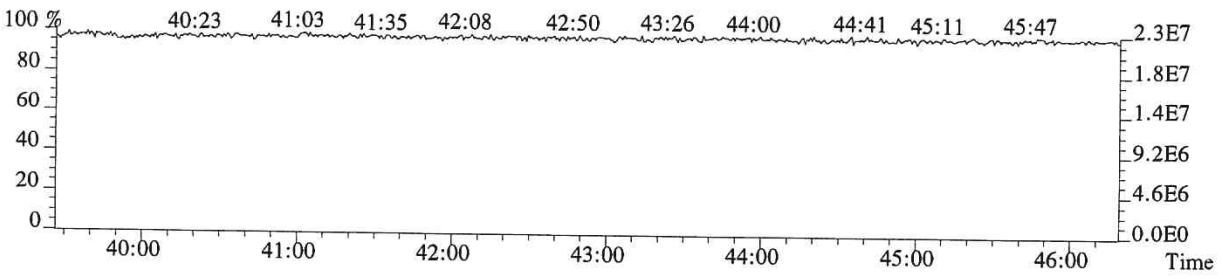
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,736.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,472.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0217

Run #13 Filename P519871 Samp: 1 Inj: 1 Acquired: 9-JAN-19 21:06:58
Processed: 10-JAN-19 08:15:31 Sample ID: E1801139-004

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:59	7.376e+06	9.055e+06	0.81	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:54	3.451e+05	2.256e+05	1.53	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:54	2.643e+05	1.687e+05	1.57	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:49	4.952e+05	4.068e+05	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:57	1.337e+05	1.100e+05	1.22	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:29	2.026e+04	1.651e+04	1.23	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:19	3.284e+04	2.685e+04	1.22	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:43	1.171e+05	1.138e+05	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:11	3.590e+04	3.477e+04	1.03	yes	no	1.258
10	Unk	OCDF	41:55	3.649e+04	4.093e+04	0.89	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:57	1.710e+06	2.165e+06	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:13	2.497e+04	1.540e+04	1.62	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:39	2.908e+02	2.888e+02	1.01	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:45	3.015e+03	2.507e+03	1.20	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:00	9.557e+02	7.515e+02	1.27	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:44	9.660e+04	9.396e+04	1.03	yes	no	1.025
17	Unk	OCDD	41:45	9.070e+05	1.018e+06	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:57	3.625e+04	4.392e+04	0.83	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:54	5.232e+04	3.257e+04	1.61	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:53	4.726e+04	2.960e+04	1.60	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:49	2.016e+04	3.914e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:56	2.587e+04	4.891e+04	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:29	2.287e+04	4.332e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:17	2.129e+04	4.080e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:42	1.481e+04	3.363e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:10	1.319e+04	3.066e+04	0.43	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:57	1.563e+04	1.969e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:12	3.679e+04	2.357e+04	1.56	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:39	2.928e+04	2.338e+04	1.25	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:44	3.204e+04	2.516e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:44	3.021e+04	2.807e+04	1.08	yes	no	0.858
32	IS	13C-OCDD	41:45	2.551e+04	2.820e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:19	3.970e+04	4.997e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:59	5.785e+04	4.649e+04	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:57	4.288e+04				no	1.014

$$\text{OCDD} = \frac{(9.070e{+}05 + 1.018e{+}06) \times 4000\ \text{pg} \times 1}{(2.551e{+}04 + 2.820e{+}04) \times 10.537\ \text{g} \times 66.6 / 100 \times 1.118} = 18272\ \text{ng/kg}$$

LMO 1/11/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0217

Run #13 Filename P519871 Samp: 1 Inj: 1 Acquired: 9-JAN-19 21:06:58
Processed: 10-JAN-19 08:15:31 LAB. ID: E1801139-004

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.86e+08	9.36e+03	9.5e+04	1.04e+09	8.73e+03	1.2e+05
2	1,2,3,7,8-PeCDF	4.92e+07	2.13e+04	2.3e+03	3.22e+07	1.23e+04	2.6e+03
3	2,3,4,7,8-PeCDF	3.54e+07	2.13e+04	1.7e+03	2.26e+07	1.23e+04	1.8e+03
4	1,2,3,4,7,8-HxCDF	8.04e+07	1.43e+04	5.6e+03	6.59e+07	5.08e+03	1.3e+04
5	1,2,3,6,7,8-HxCDF	1.94e+07	1.43e+04	1.4e+03	1.60e+07	5.08e+03	3.1e+03
6	2,3,4,6,7,8-HxCDF	3.25e+06	1.43e+04	2.3e+02	2.68e+06	5.08e+03	5.3e+02
7	1,2,3,7,8,9-HxCDF	4.53e+06	1.43e+04	3.2e+02	3.68e+06	5.08e+03	7.2e+02
8	1,2,3,4,6,7,8-HpCDF	1.29e+07	2.63e+04	4.9e+02	1.27e+07	2.38e+04	5.3e+02
9	1,2,3,4,7,8,9-HpCDF	3.06e+06	2.63e+04	1.2e+02	3.01e+06	2.38e+04	1.3e+02
10	OCDF	1.75e+06	7.48e+02	2.3e+03	2.01e+06	1.74e+03	1.2e+03
11	2,3,7,8-TCDD	3.07e+08	4.61e+03	6.7e+04	3.88e+08	3.68e+03	1.1e+05
12	1,2,3,7,8-PeCDD	3.60e+06	3.56e+03	1.0e+03	2.28e+06	2.87e+03	8.0e+02
13	1,2,3,4,7,8-HxCDD	5.77e+04	2.30e+03	2.5e+01	5.48e+04	5.82e+03	9.4e+00
14	1,2,3,6,7,8-HxCDD	4.31e+05	2.30e+03	1.9e+02	3.66e+05	5.82e+03	6.3e+01
15	1,2,3,7,8,9-HxCDD	1.37e+05	2.30e+03	6.0e+01	9.65e+04	5.82e+03	1.7e+01
16	1,2,3,4,6,7,8-HpCDD	8.74e+06	1.36e+03	6.4e+03	8.33e+06	2.89e+04	2.9e+02
17	OCDD	4.37e+07	9.36e+02	4.7e+04	4.88e+07	1.28e+03	3.8e+04
18	13C-2,3,7,8-TCDF	4.63e+06	2.91e+04	1.6e+02	5.63e+06	4.24e+04	1.3e+02
19	13C-1,2,3,7,8-PeCDF	7.65e+06	5.96e+03	1.3e+03	4.80e+06	1.09e+04	4.4e+02
20	13C-2,3,4,7,8-PeCDF	7.98e+06	5.96e+03	1.3e+03	4.98e+06	1.09e+04	4.6e+02
21	13C-1,2,3,4,7,8-HxCDF	3.35e+06	7.97e+03	4.2e+02	6.62e+06	6.74e+03	9.8e+02
22	13C-1,2,3,6,7,8-HxCDF	3.64e+06	7.97e+03	4.6e+02	7.02e+06	6.74e+03	1.0e+03
23	13C-2,3,4,6,7,8-HxCDF	3.38e+06	7.97e+03	4.2e+02	6.53e+06	6.74e+03	9.7e+02
24	13C-1,2,3,7,8,9-HxCDF	2.77e+06	7.97e+03	3.5e+02	5.31e+06	6.74e+03	7.9e+02
25	13C-1,2,3,4,6,7,8-HpCDF	1.65e+06	6.83e+03	2.4e+02	3.72e+06	1.03e+04	3.6e+02
26	13C-1,2,3,4,7,8,9-HpCDF	1.13e+06	6.83e+03	1.7e+02	2.57e+06	1.03e+04	2.5e+02
27	13C-2,3,7,8-TCDD	2.66e+06	1.00e+04	2.7e+02	3.31e+06	3.51e+03	9.4e+02
28	13C-1,2,3,7,8-PeCDD	5.98e+06	1.95e+03	3.1e+03	3.82e+06	2.08e+03	1.8e+03
29	13C-1,2,3,4,7,8-HxCDD	4.70e+06	1.40e+03	3.4e+03	3.68e+06	1.40e+03	2.6e+03
30	13C-1,2,3,6,7,8-HxCDD	4.45e+06	1.40e+03	3.2e+03	3.47e+06	1.40e+03	2.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.66e+06	1.08e+03	2.5e+03	2.46e+06	1.20e+03	2.1e+03
32	13C-OCDD	1.23e+06	1.05e+03	1.2e+03	1.38e+06	1.14e+03	1.2e+03
33	13C-1,2,3,4-TCDD	5.16e+06	1.00e+04	5.2e+02	6.47e+06	3.51e+03	1.8e+03
34	13C-1,2,3,7,8,9-HxCDD	7.64e+06	1.40e+03	5.5e+03	6.09e+06	1.40e+03	4.3e+03
35	37Cl-2,3,7,8-TCDD	7.58e+06	1.35e+04	5.6e+02			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0217

Entry: 36 Totals Name: Total Tetra-Furans

Run: 13 File: P519871 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 21:06:58 Processed: 10-JAN-19 08:15:31

Mass: 303.9020 305.8990 Tot Response: 2.12e+07 RRF: 0.9417

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:51	5.57e+04	7.22e+04	0.77	yes	1.28e+05		n	n
2	23:07	3.10e+05	4.02e+05	0.77	yes	7.13e+05		n	n
3	23:28	1.04e+05	1.35e+05	0.77	yes	2.39e+05		n	n
4	23:46	2.81e+05	3.63e+05	0.77	yes	6.44e+05		n	n
5	24:08	6.92e+04	8.89e+04	0.78	yes	1.58e+05		n	n
6	24:22	2.04e+05	2.66e+05	0.77	yes	4.69e+05		n	n
7	24:29	3.46e+05	4.44e+05	0.78	yes	7.90e+05		n	n
8	25:15	1.83e+05	2.36e+05	0.77	yes	4.19e+05		n	n
9	25:59	7.38e+06	9.06e+06	0.81	yes	1.64e+07	2,3,7,8-TCDF	n	n
10	26:27	4.48e+05	5.77e+05	0.78	yes	1.02e+06		n	n
11	26:41	9.47e+04	1.22e+05	0.77	yes	2.17e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0217

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 13 File: P519871 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 21:06:58 Processed: 10-JAN-19 08:15:31

Mass: 319.8970 321.8940 Tot Response: 4.33e+06 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:38	2.45e+04	3.00e+04 0.82	yes	5.45e+04		n	n
2	26:57	1.71e+06	2.17e+06 0.79	yes	3.87e+06	2,3,7,8-TCDD	n	n
3	27:18	1.79e+05	2.26e+05 0.80	yes	4.05e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0217

Entry: 39 Totals Name: Total Penta-Furans2

Run: 13 File: P519871 Sample:1 Injection:1 Function:2

Acquired: 9-JAN-19 21:06:58 Processed: 10-JAN-19 08:15:31

Mass: 339.8600 341.8570 Tot Response: 1.50e+06 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:44	2.77e+03	1.77e+03	1.57	yes	4.53e+03		n	n
2	29:53	1.48e+05	9.51e+04	1.56	yes	2.43e+05		n	n
3	30:13	1.33e+03	8.19e+02	1.63	yes	2.15e+03		n	n
4	30:29	5.74e+03	3.85e+03	1.49	yes	9.59e+03		n	n
5	30:34	6.04e+03	4.09e+03	1.48	yes	1.01e+04		n	n
6	30:43	3.31e+04	2.17e+04	1.53	yes	5.48e+04		n	n
7	30:54	3.45e+05	2.26e+05	1.53	yes	5.71e+05	1,2,3,7,8-PeCDF	n	n
8	31:11	9.21e+04	6.07e+04	1.52	yes	1.53e+05		n	n
9	31:54	2.64e+05	1.69e+05	1.57	yes	4.33e+05	2,3,4,7,8-PeCDF	n	n
10	32:52	1.41e+04	9.27e+03	1.52	yes	2.34e+04		n	n

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Peak List Summary

CLIENT ID.
SL0217

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 13 File: P519871 Sample:1 Injection:1 Function:2

Acquired: 9-JAN-19 21:06:58 Processed: 10-JAN-19 08:15:31

Mass: 355.8550 357.8520 Tot Response: 5.19e+04 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:56	1.43e+03	9.16e+02	1.56	yes	2.34e+03		n	n
2	30:27	4.31e+02	2.81e+02	1.53	yes	7.12e+02		n	n
3	30:57	2.93e+03	1.88e+03	1.55	yes	4.81e+03		n	n
4	31:07	1.14e+03	6.81e+02	1.67	yes	1.82e+03		n	n
5	31:26	3.69e+02	2.24e+02	1.65	yes	5.94e+02		n	n
6	31:48	7.43e+02	4.96e+02	1.50	yes	1.24e+03		n	n
7	32:13	2.50e+04	1.54e+04	1.62	yes	4.04e+04	1,2,3,7,8-PeCDD	n	n

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CLIENT ID.
SL0217

Entry: 41 Totals Name: Total Hexa-Furans

Run: 13 File: P519871 Sample:1 Injection:1 Function:3

Acquired: 9-JAN-19 21:06:58 Processed: 10-JAN-19 08:15:31

Mass: 373.8210 375.8180 Tot Response: 1.35e+06 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:39	2.99e+03	2.57e+03	1.17	yes	5.56e+03		n	n
2	33:49	3.38e+04	2.78e+04	1.22	yes	6.15e+04		n	n
3	34:23	1.99e+04	1.60e+04	1.24	yes	3.59e+04		n	n
4	34:49	4.95e+05	4.07e+05	1.22	yes	9.02e+05	1,2,3,4,7,8-HxCDF	n	n
5	34:57	1.34e+05	1.10e+05	1.22	yes	2.44e+05	1,2,3,6,7,8-HxCDF	n	n
6	35:29	2.03e+04	1.65e+04	1.23	yes	3.68e+04	2,3,4,6,7,8-HxCDF	n	n
7	36:19	3.28e+04	2.69e+04	1.22	yes	5.97e+04	1,2,3,7,8,9-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0217

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 13 File: P519871 Sample:1 Injection:1 Function:3

Acquired: 9-JAN-19 21:06:58 Processed: 10-JAN-19 08:15:31

Mass: 389.8160 391.8130 Tot Response: 3.87e+04 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:13	7.94e+03	6.11e+03	1.30	yes	1.40e+04		n	n
2	34:46	1.06e+03	7.92e+02	1.34	yes	1.85e+03		n	n
3	35:01	8.18e+03	6.70e+03	1.22	yes	1.49e+04		n	n
4	35:45	3.02e+03	2.51e+03	1.20	yes	5.52e+03	1,2,3,6,7,8-HxCDD	n	n
5	35:55	3.74e+02	3.50e+02	1.07	yes	7.24e+02		n	n
6	36:00	9.56e+02	7.51e+02	1.27	yes	1.71e+03	1,2,3,7,8,9-HxCDD	n	n

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Peak List Summary

CLIENT ID.
SL0217

Entry: 43 Totals Name: Total Hepta-Furans

Run: 13 File: P519871 Sample:1 Injection:1 Function:4

Acquired: 9-JAN-19 21:06:58 Processed: 10-JAN-19 08:15:31

Mass: 407.7820 409.7790 Tot Response: 4.05e+05 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:43	1.17e+05	1.14e+05	1.03	yes	2.31e+05	1,2,3,4,6,7,8-HpCDF	n	n
2	38:00	1.33e+03	1.41e+03	0.95	yes	2.74e+03		n	n
3	38:10	4.96e+04	5.08e+04	0.97	yes	1.00e+05		n	n
4	39:11	3.59e+04	3.48e+04	1.03	yes	7.07e+04	1,2,3,4,7,8,9-HpCDF	n	n

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Peak List Summary

CLIENT ID.
SL0217

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 13 File: P519871 Sample:1 Injection:1 Function:4

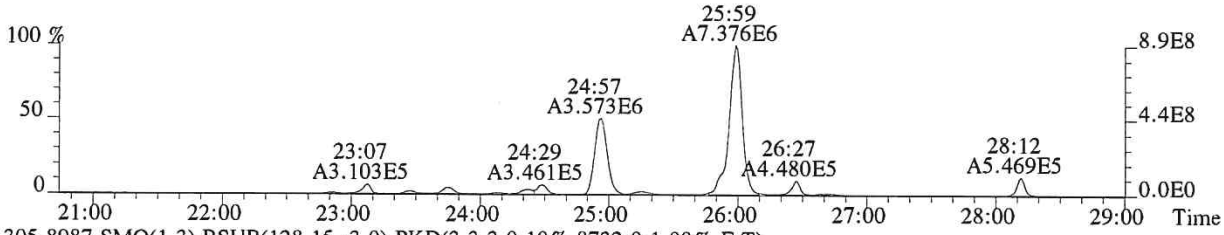
Acquired: 9-JAN-19 21:06:58 Processed: 10-JAN-19 08:15:31

Mass: 423.7770 425.7740 Tot Response: 3.84e+05 RRF: 1.025

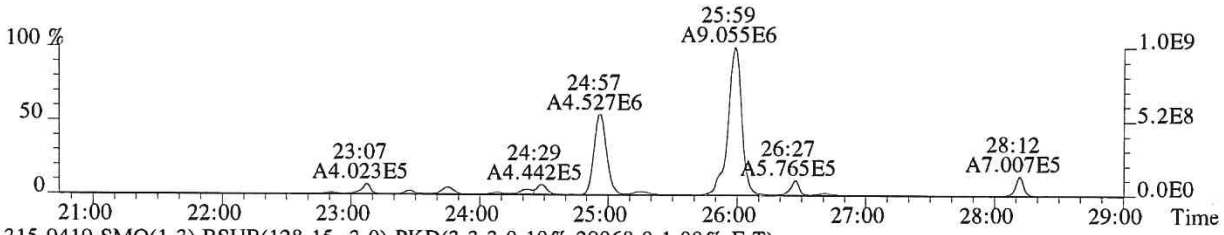
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:01	9.91e+04	9.40e+04	1.05	yes	1.93e+05		n	n
2	38:44	9.66e+04	9.40e+04	1.03	yes	1.91e+05	1,2,3,4,6,7,8-HpCDD	n	n

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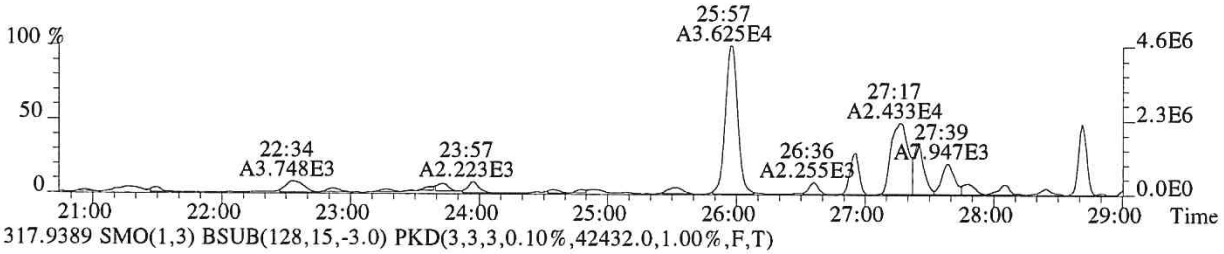
File:P519871 #1-587 Acq: 9-JAN-2019 21:06:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9356.0,1.00%,F,T)



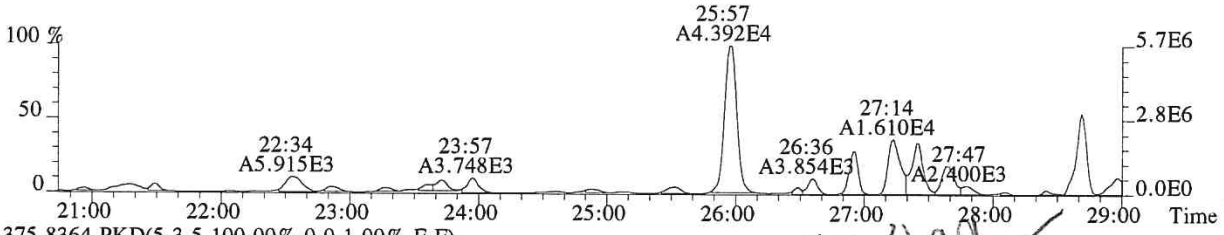
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8732.0,1.00%,F,T)



315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,29068.0,1.00%,F,T)

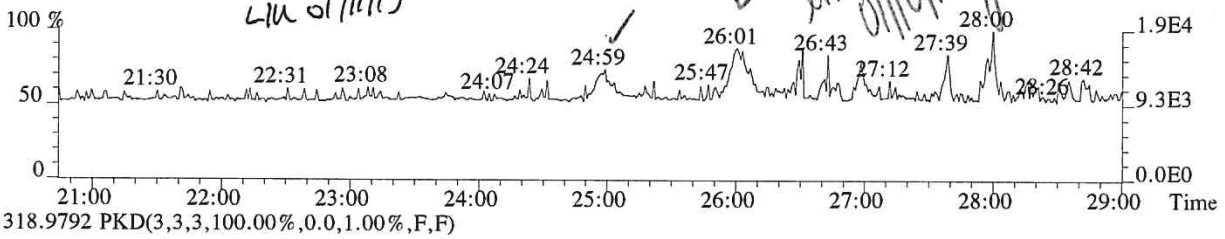


317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,42432.0,1.00%,F,T)

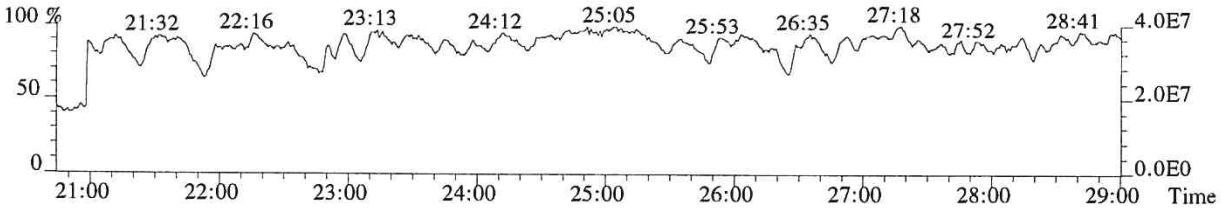


375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

LW 01/11/19 ✓ thw 01/10/19 ✓

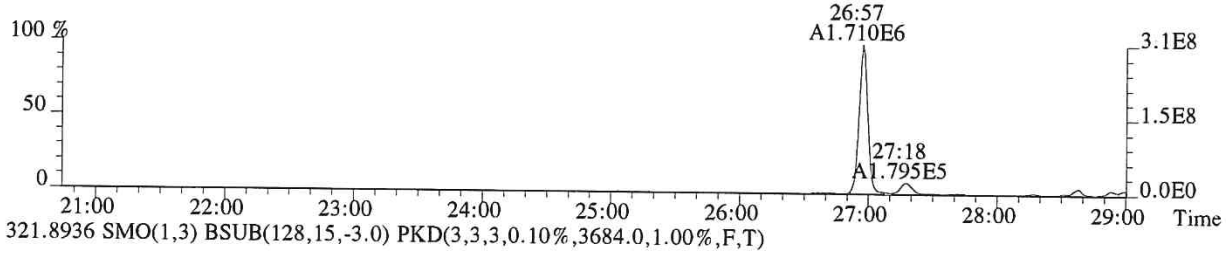


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

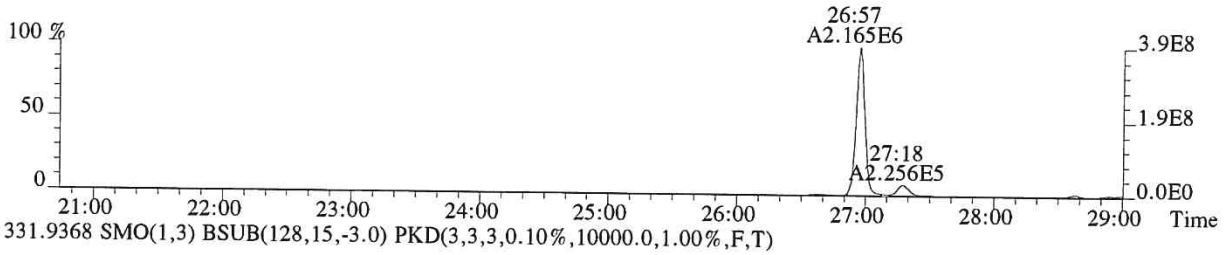


018215

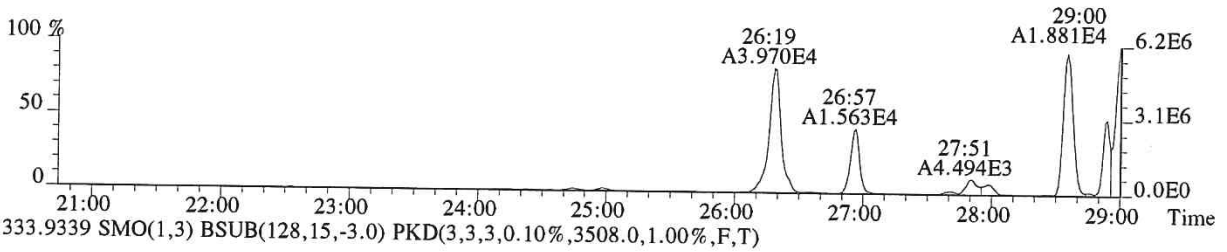
File:P519871 #1-587 Acq: 9-JAN-2019 21:06:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4608.0,1.00%,F,T)



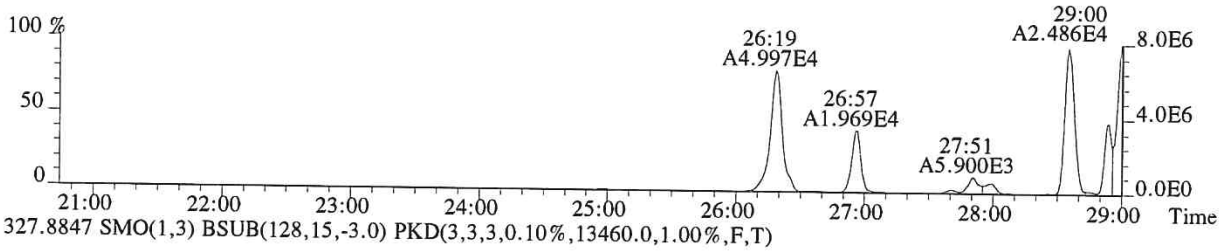
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3684.0,1.00%,F,T)



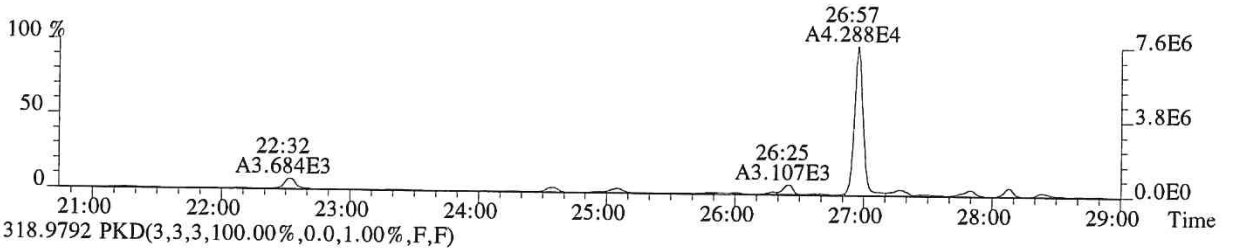
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10000.0,1.00%,F,T)



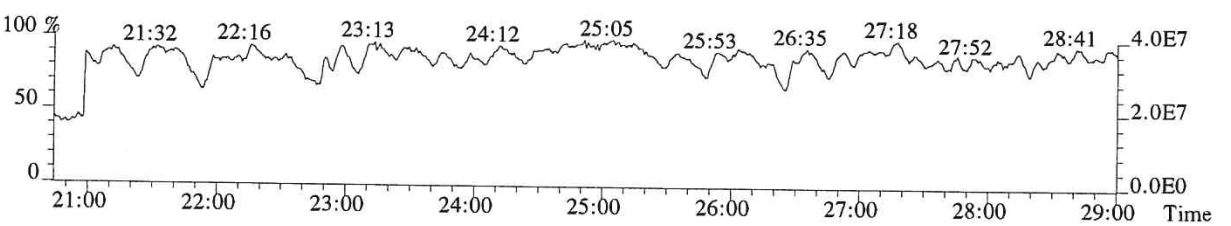
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3508.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,13460.0,1.00%,F,T)

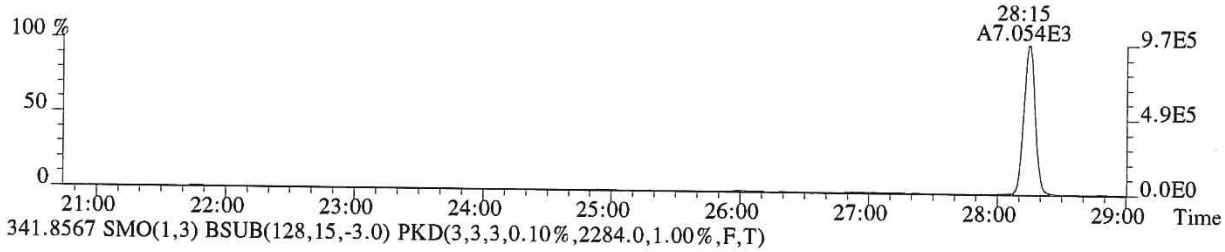


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

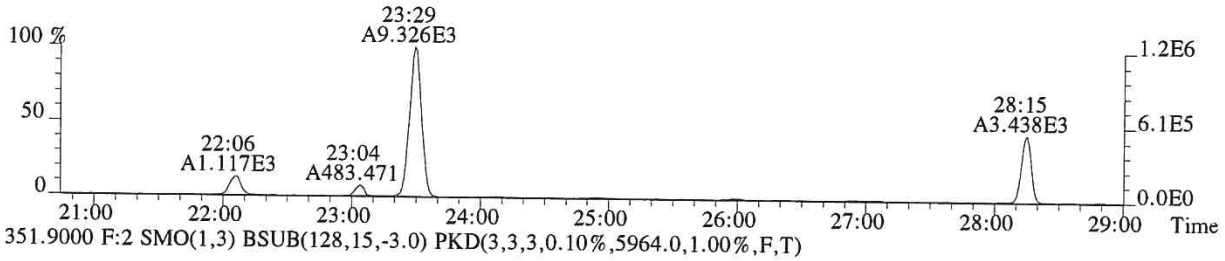


018216

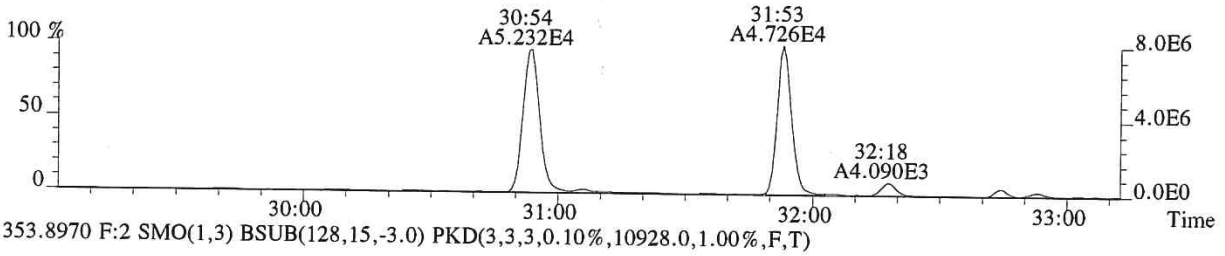
File:P519871 #1-587 Acq: 9-JAN-2019 21:06:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1168.0,1.00%,F,T)



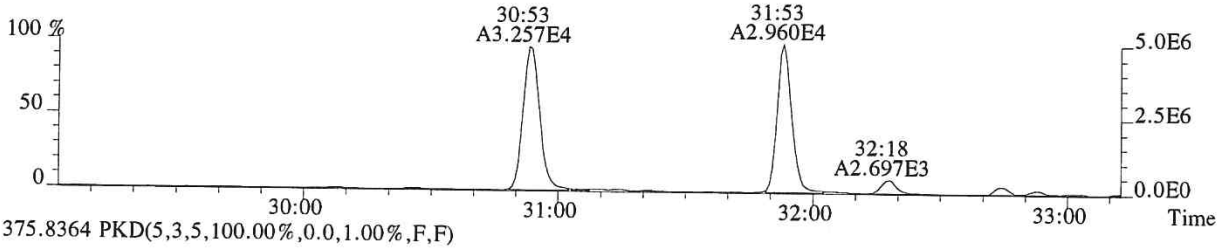
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2284.0,1.00%,F,T)



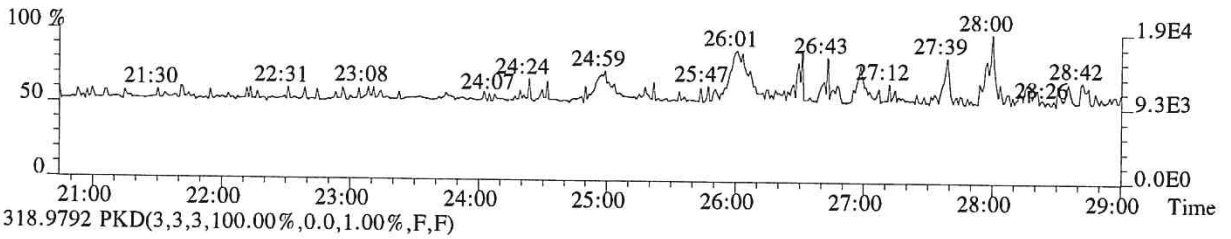
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5964.0,1.00%,F,T)



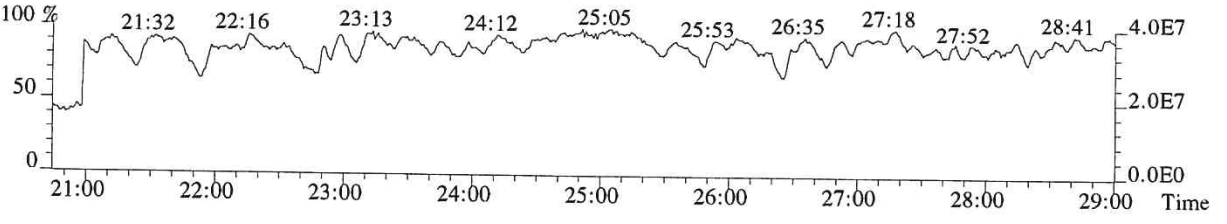
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10928.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

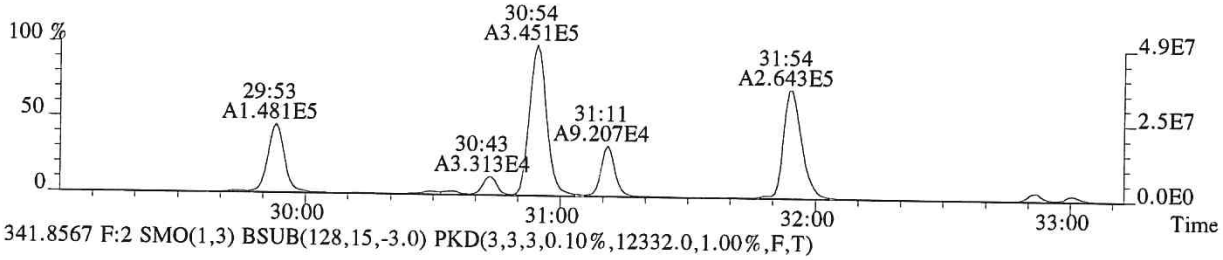


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

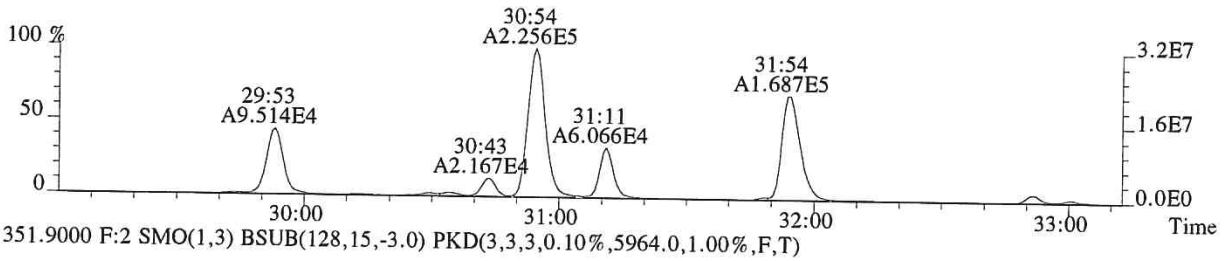


018217

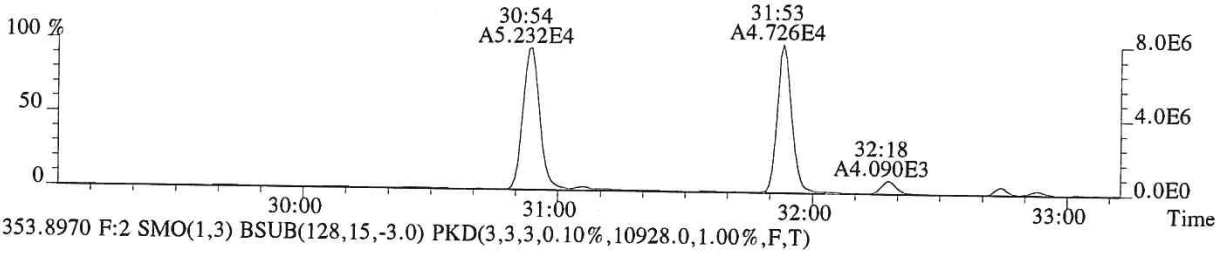
File:P519871 #1-376 Acq: 9-JAN-2019 21:06:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,21260.0,1.00%,F,T)



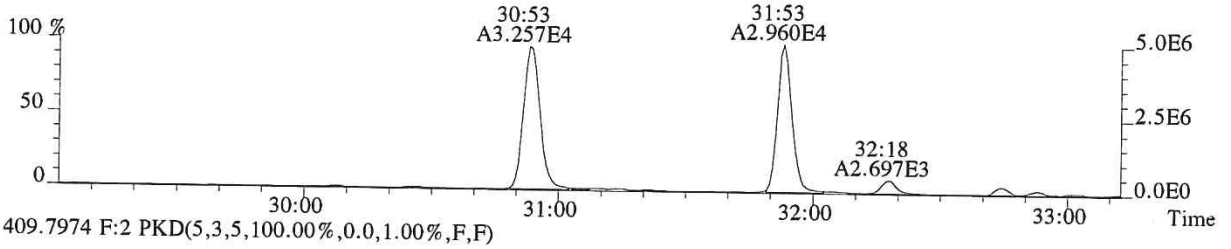
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12332.0,1.00%,F,T)



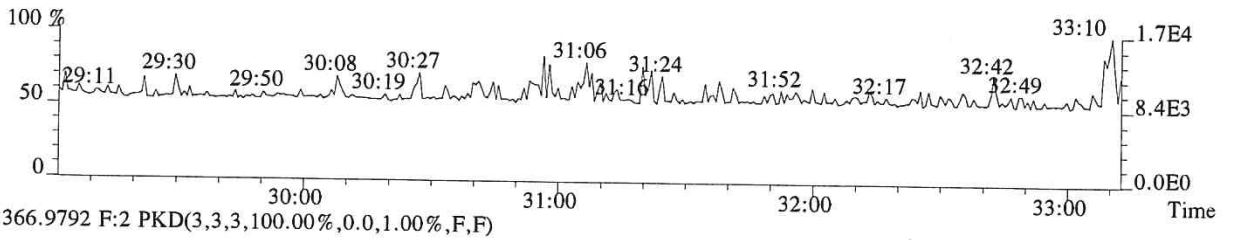
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5964.0,1.00%,F,T)



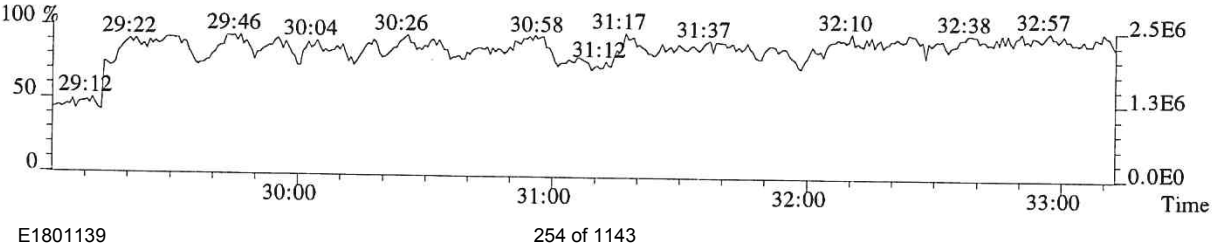
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10928.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

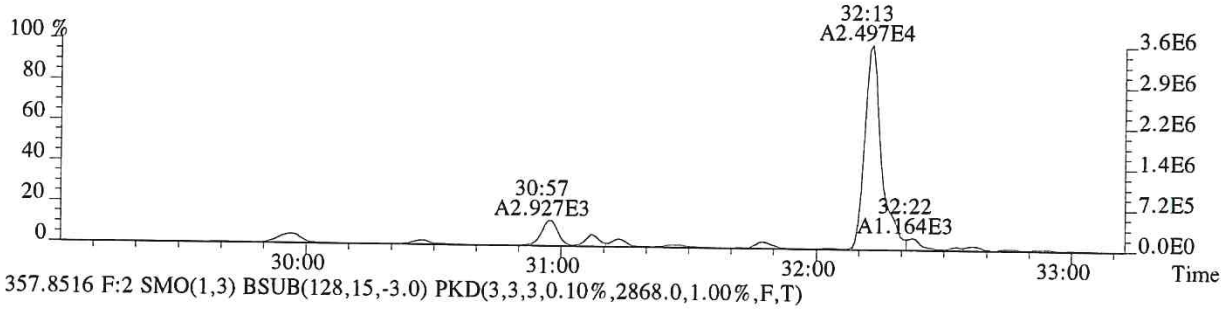


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

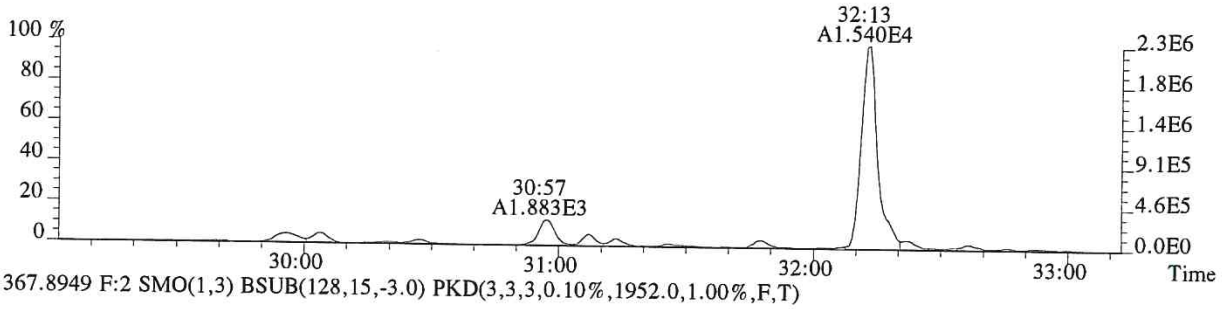


018218

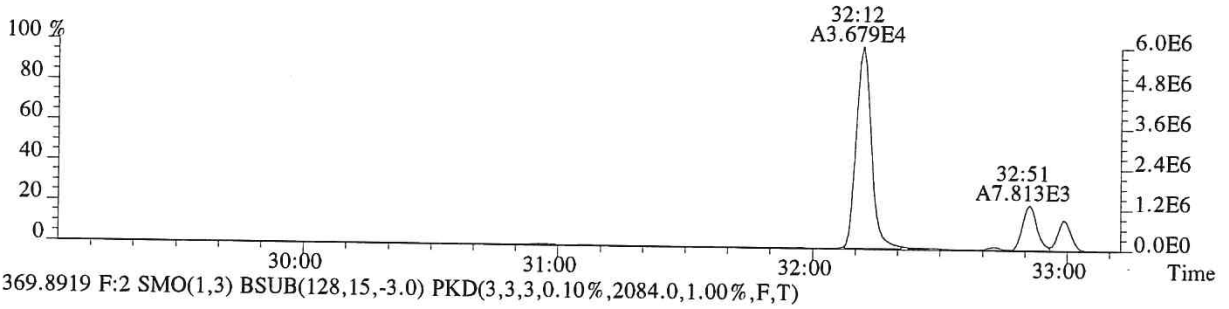
File:P519871 #1-376 Acq: 9-JAN-2019 21:06:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3556.0,1.00%,F,T)



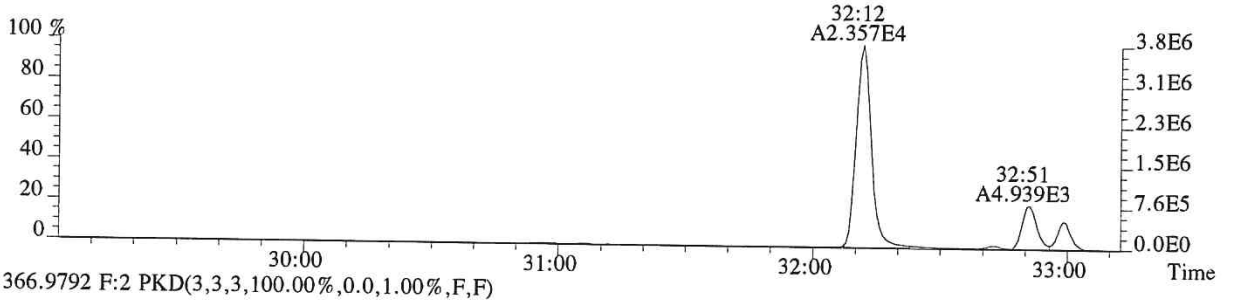
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2868.0,1.00%,F,T)



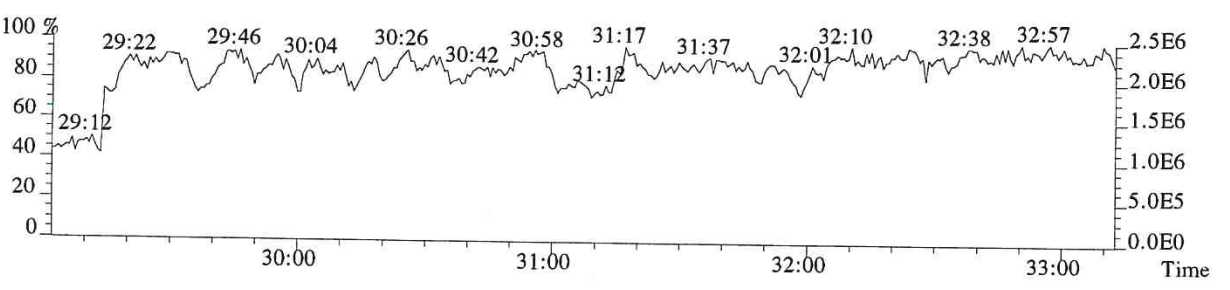
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1952.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2084.0,1.00%,F,T)

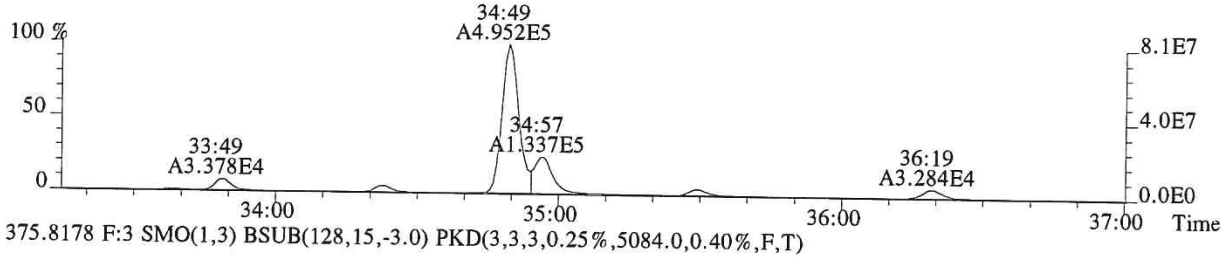


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

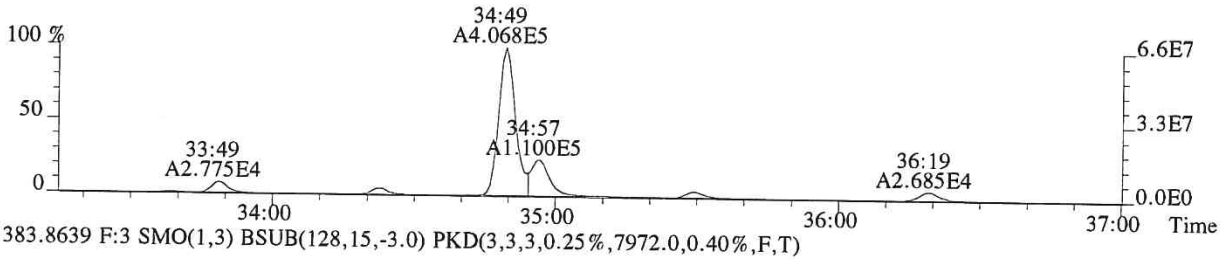


018219

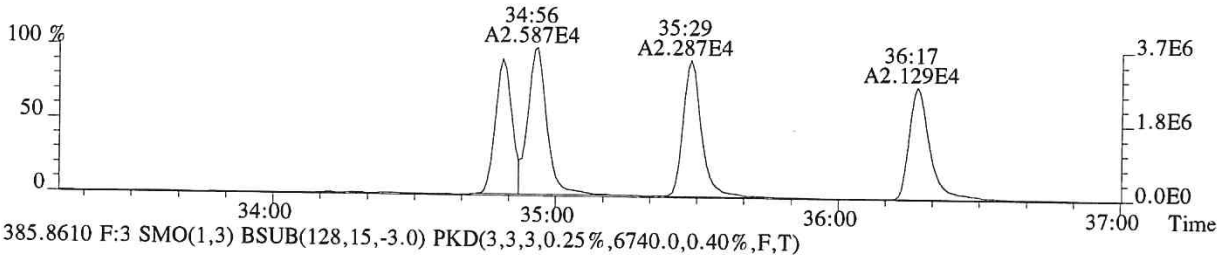
File:P519871 #1-339 Acq: 9-JAN-2019 21:06:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,14272.0,0.40%,F,T)



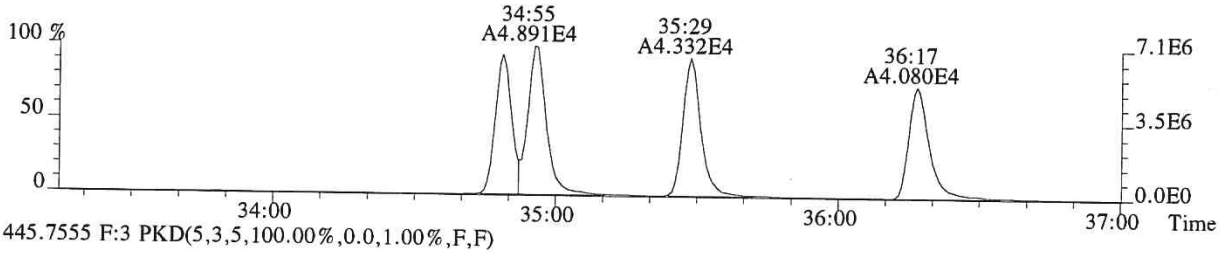
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5084.0,0.40%,F,T)



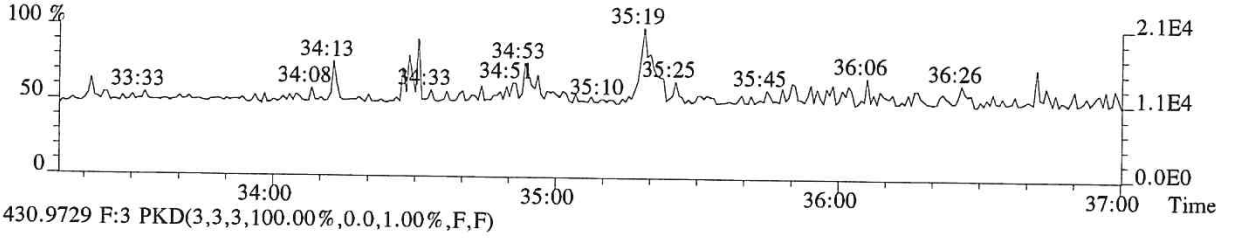
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7972.0,0.40%,F,T)



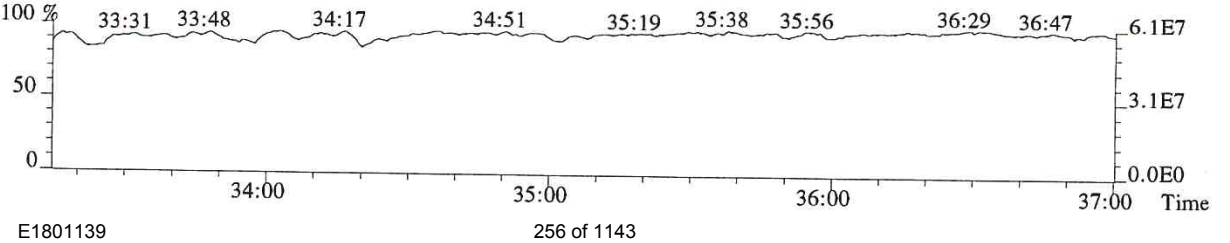
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6740.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

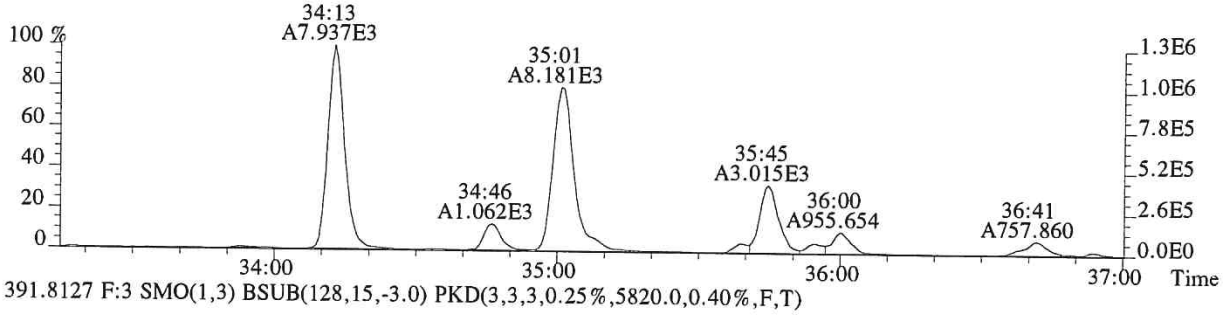


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

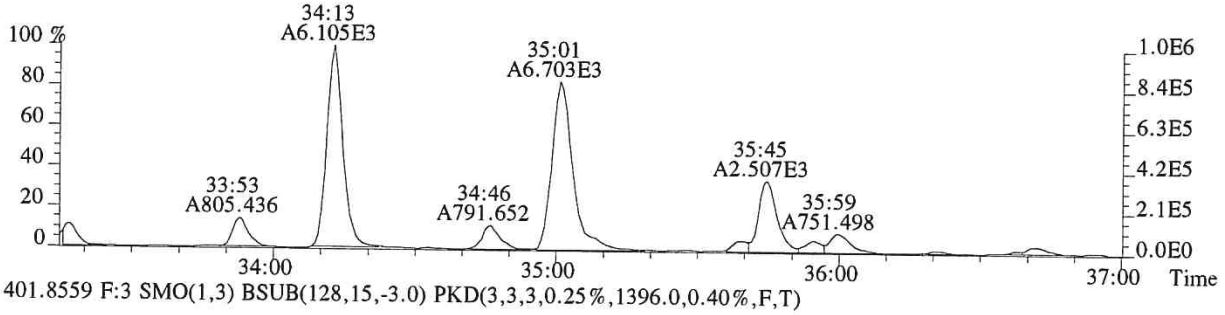


018220

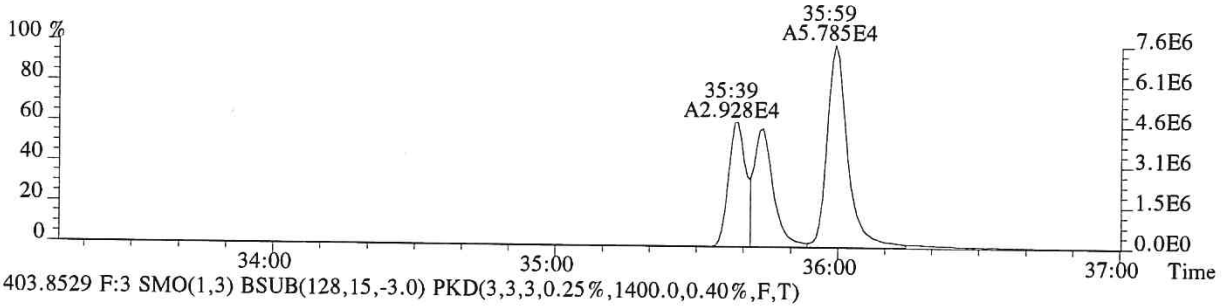
File:P519871 #1-339 Acq: 9-JAN-2019 21:06:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2296.0,0.40%,F,T)



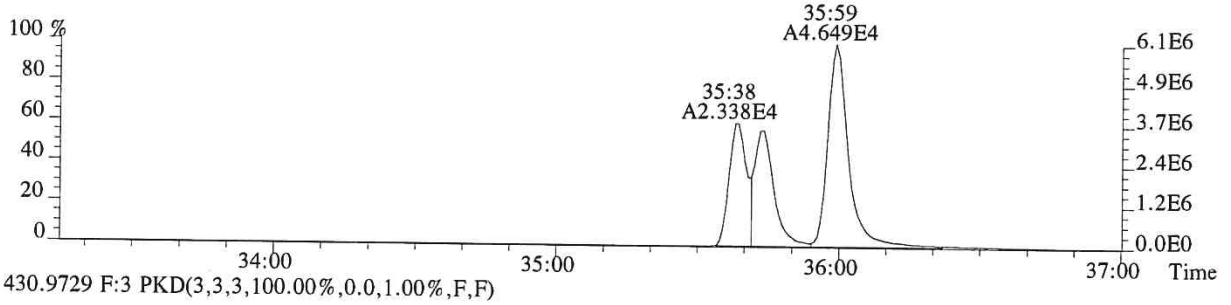
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5820.0,0.40%,F,T)



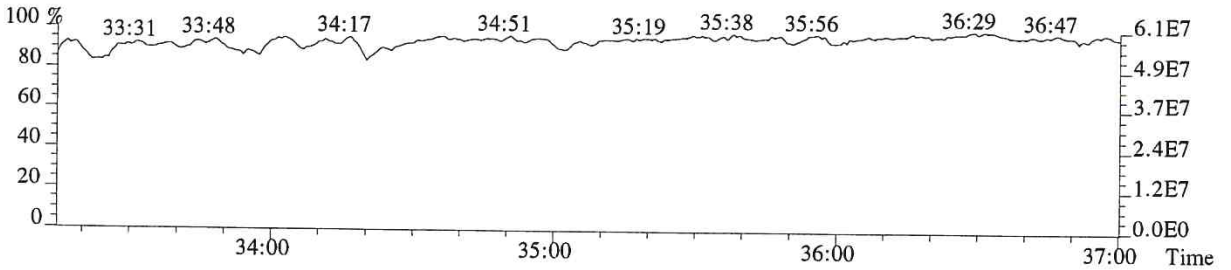
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1396.0,0.40%,F,T)



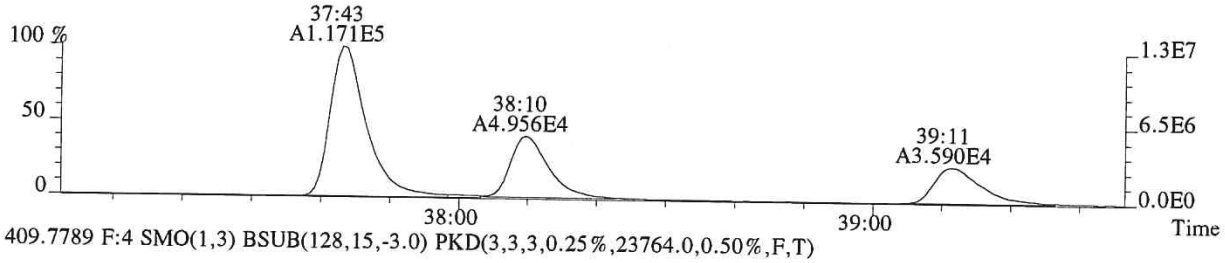
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1400.0,0.40%,F,T)



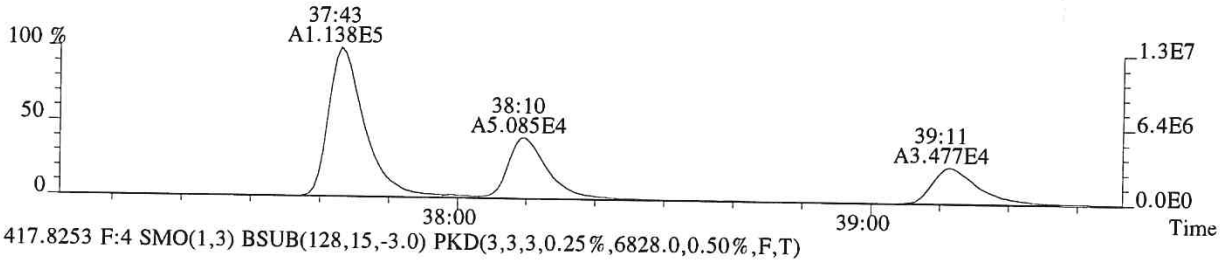
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



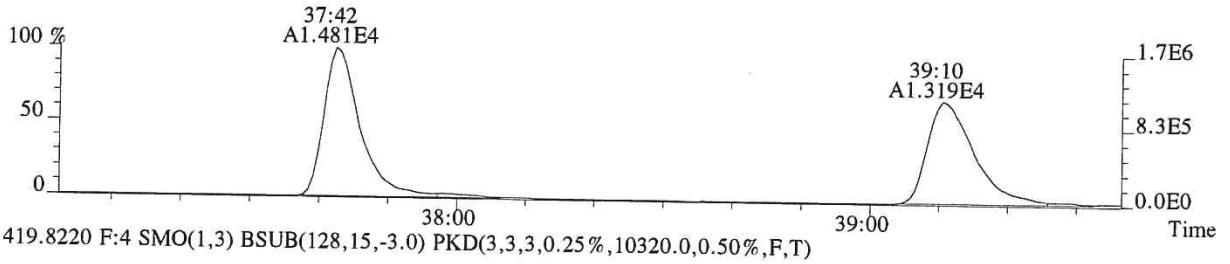
File:P519871 #1-232 Acq: 9-JAN-2019 21:06:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,26312.0,0.50%,F,T)



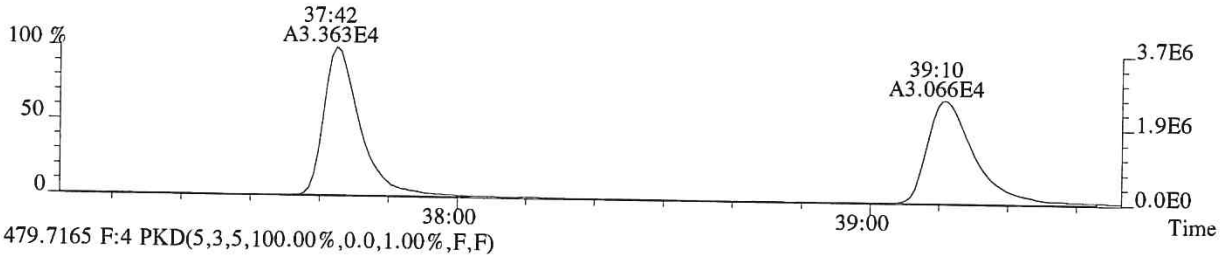
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,23764.0,0.50%,F,T)



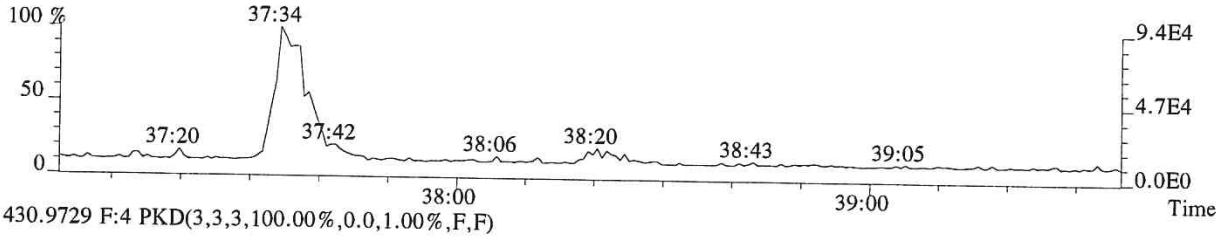
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6828.0,0.50%,F,T)



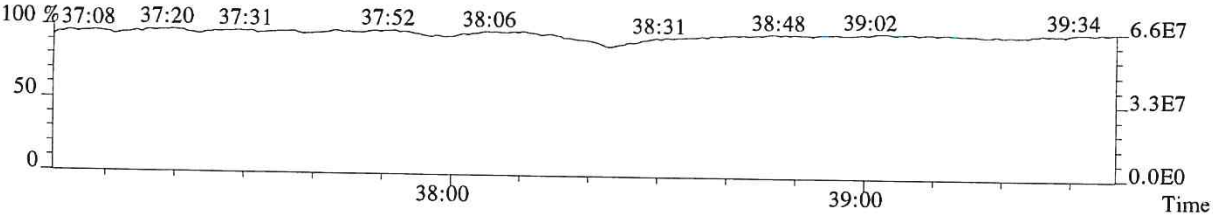
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10320.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

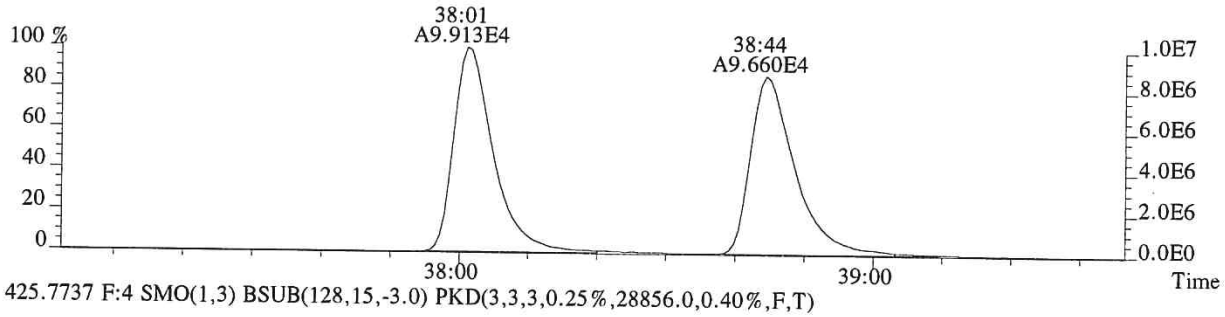


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

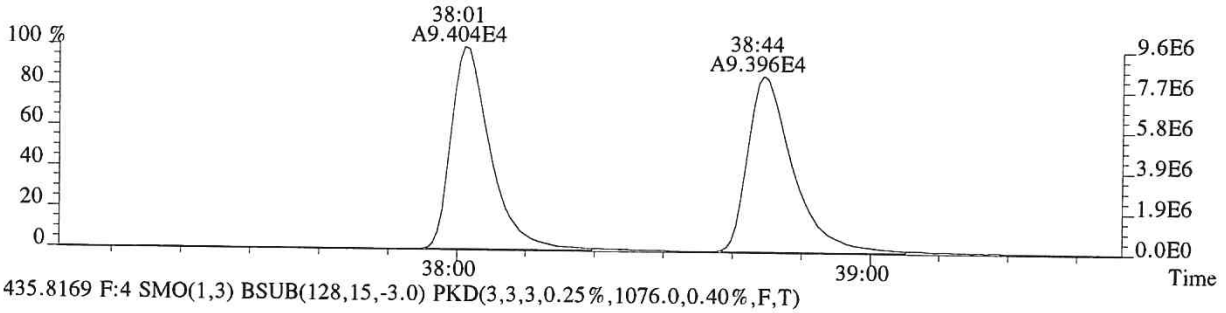


018222

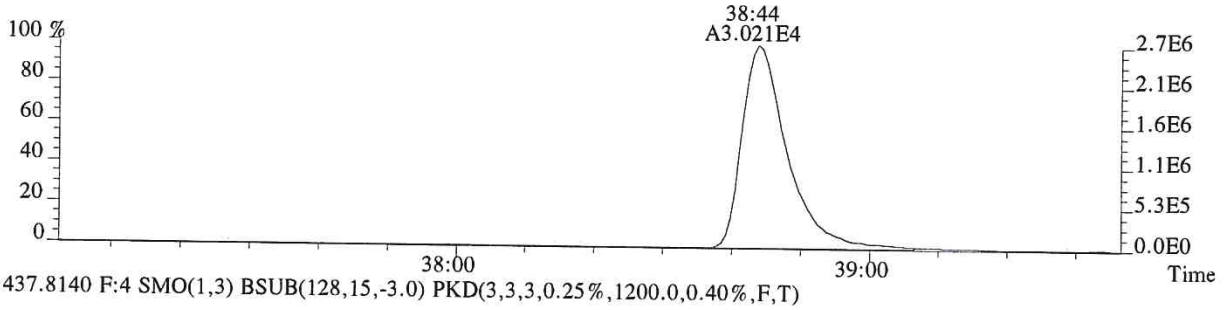
File:P519871 #1-232 Acq: 9-JAN-2019 21:06:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1360.0,0.40%,F,T)



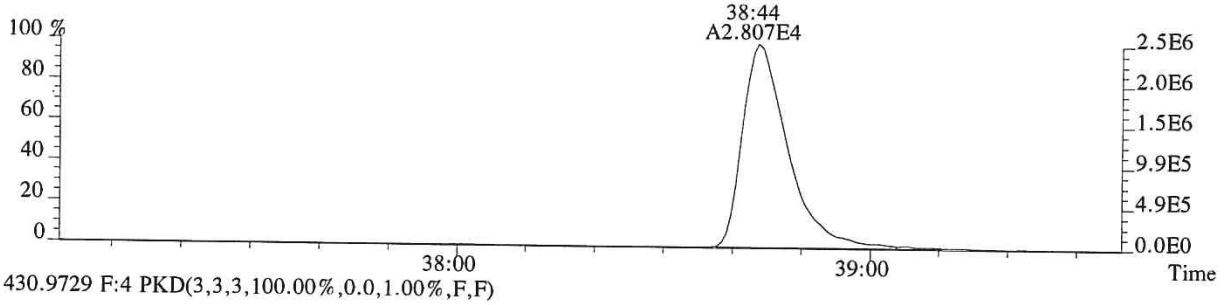
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,28856.0,0.40%,F,T)



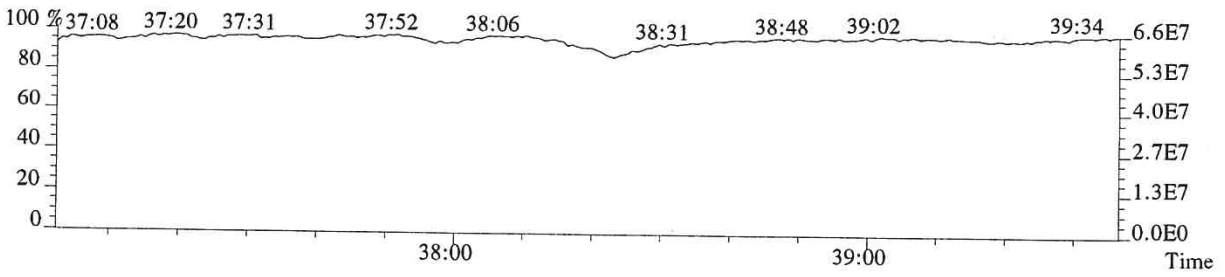
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1076.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1200.0,0.40%,F,T)

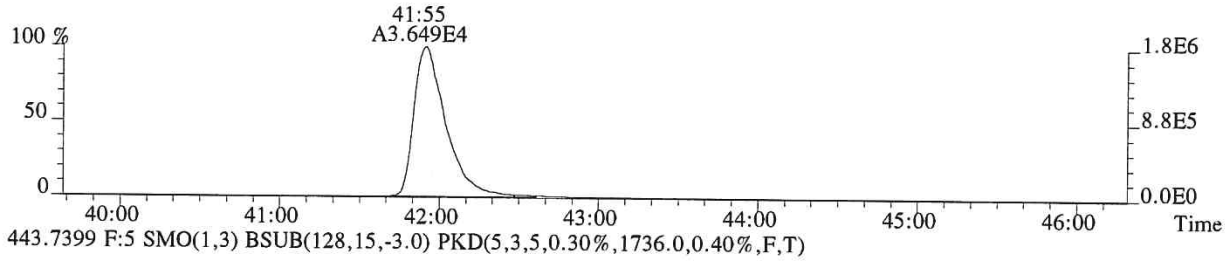


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

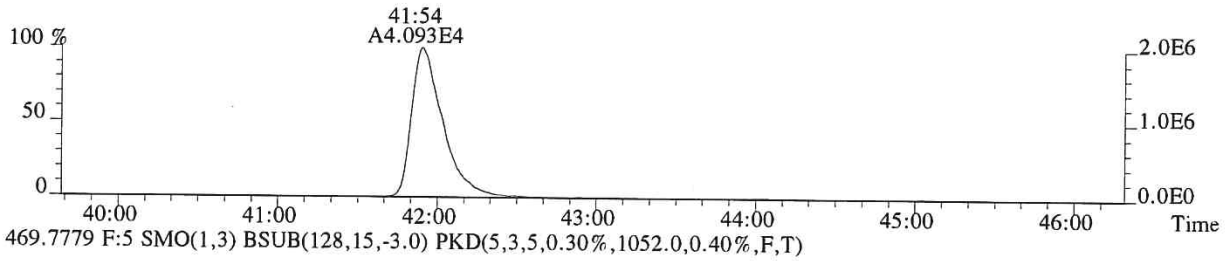


018223

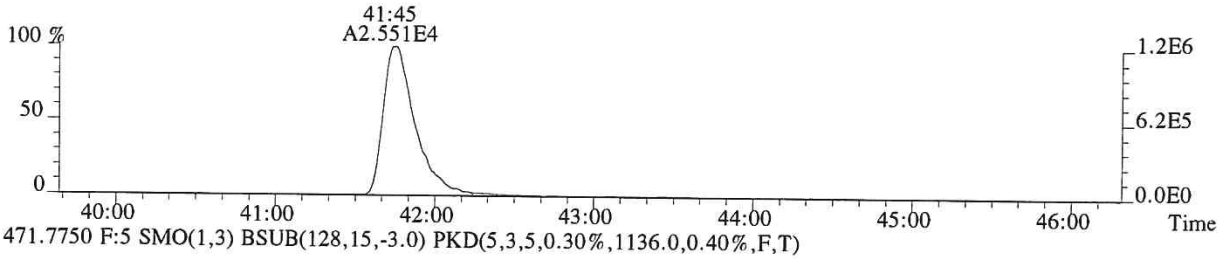
File:P519871 #1-601 Acq: 9-JAN-2019 21:06:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,748.0,0.40%,F,T)



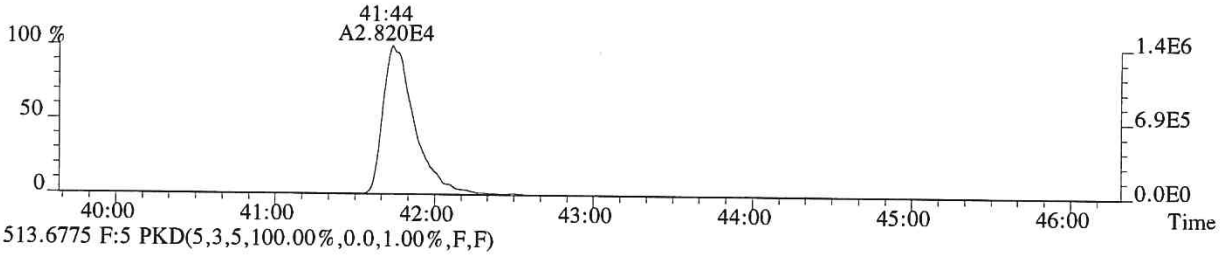
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1736.0,0.40%,F,T)



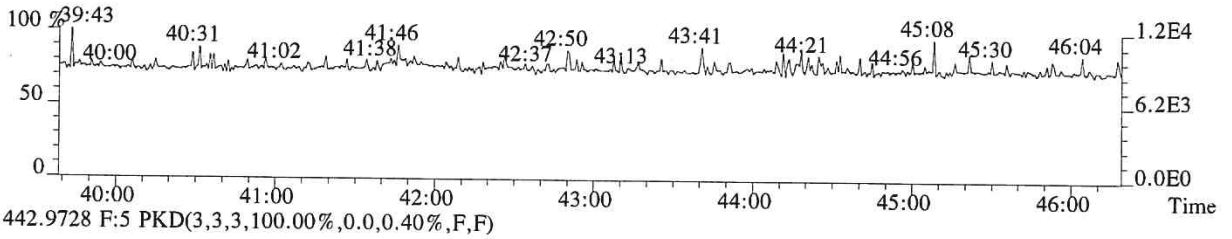
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1052.0,0.40%,F,T)



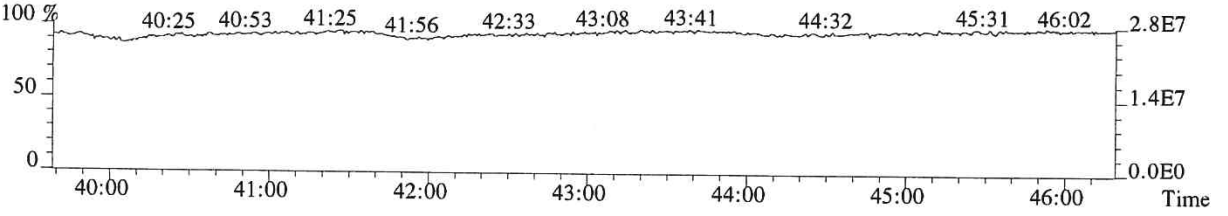
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1136.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

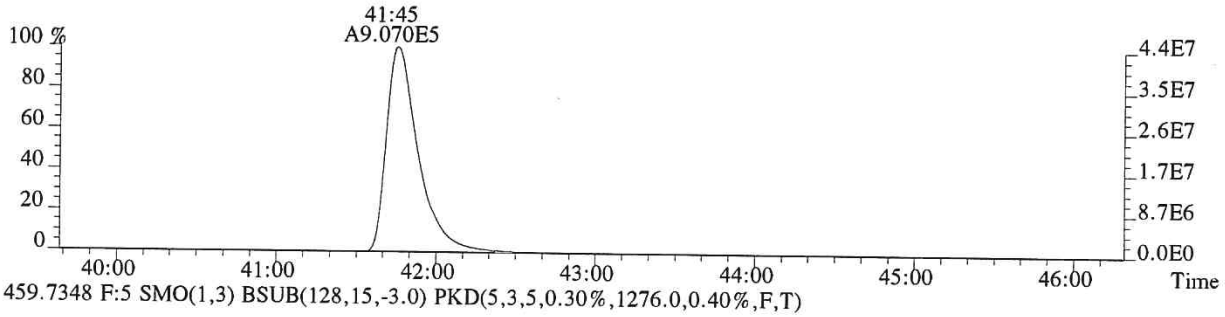


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

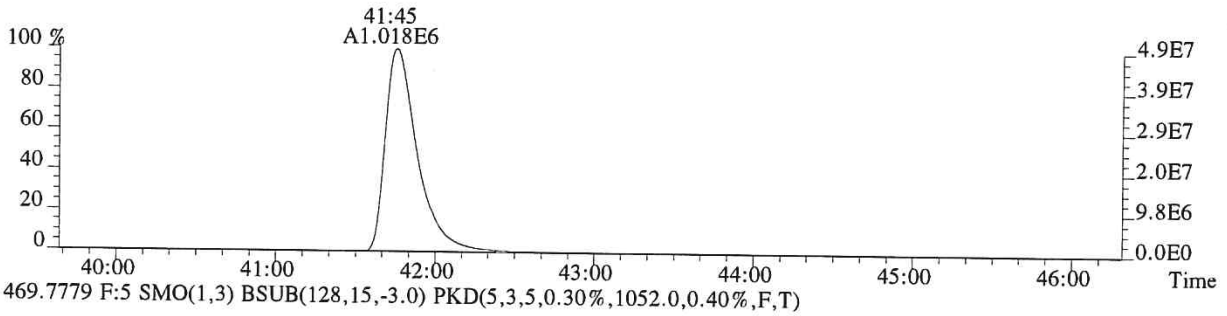


018224

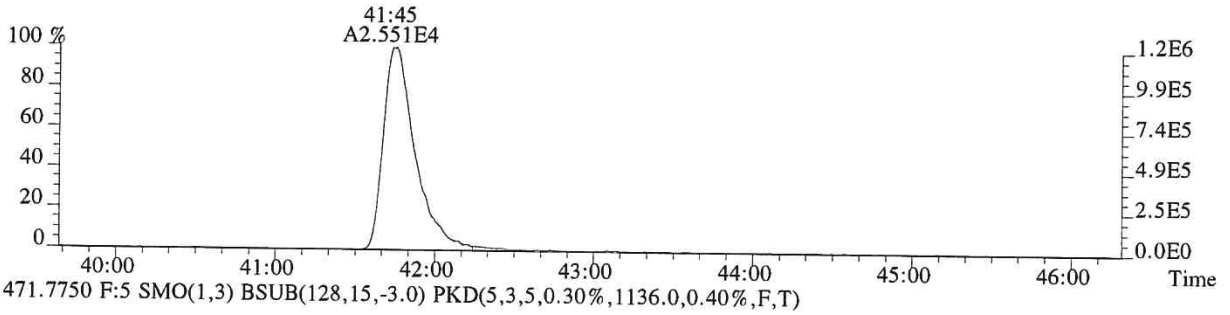
File:P519871 #1-601 Acq: 9-JAN-2019 21:06:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,936.0,0.40%,F,T)



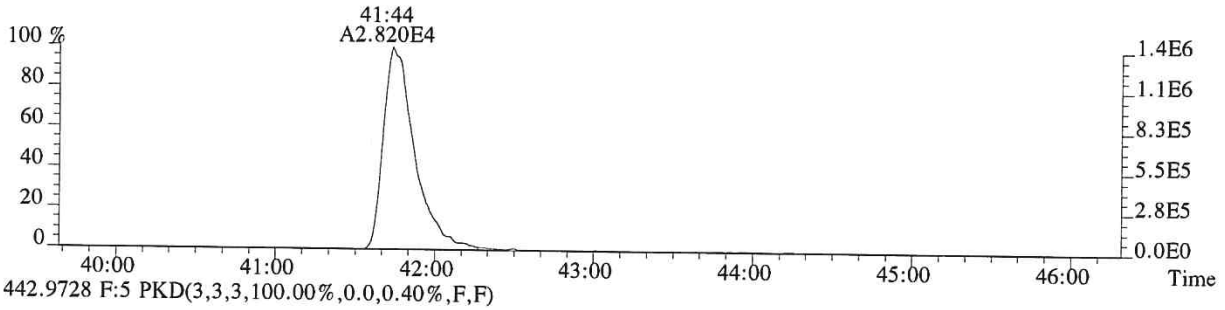
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1276.0,0.40%,F,T)



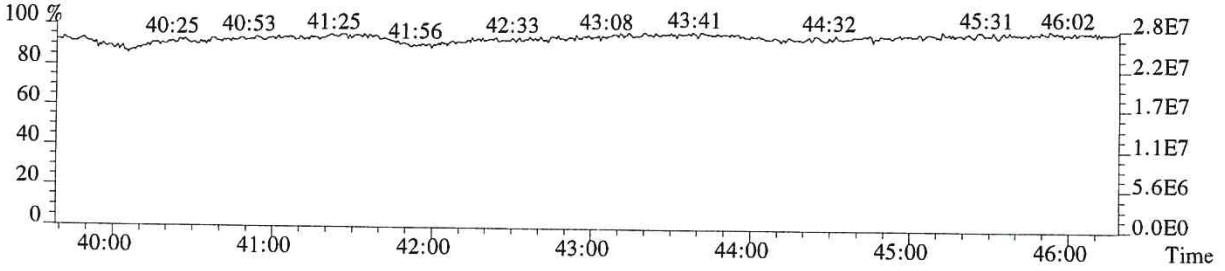
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1052.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1136.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018225

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0217

Run #15 Filename P519908 Samp: 1 Inj: 1 Acquired: 11-JAN-19 08:04:17
Processed: 11-JAN-19 14:53:38 Sample ID: E1801139-004DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	1.034e+04	1.485e+04	0.70	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:27	5.123e+02	3.350e+02	1.53	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:28	3.961e+02	2.640e+02	1.50	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	6.954e+02	5.593e+02	1.24	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:29	2.002e+02	1.455e+02	1.38	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:01	3.339e+01	2.745e+01	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:49	6.461e+01	4.890e+01	1.32	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	1.541e+02	1.552e+02	0.99	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:29	4.476e+01	6.216e+01	0.72	no	no	1.258
10	Unk	OCDF	40:44	7.808e+01	8.810e+01	0.89	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:23	2.621e+03	3.391e+03	0.77	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:48	4.648e+01	1.325e+01	3.51	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:16	1.240e+01	5.466e+00	2.27	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:31	1.153e+01	5.730e+00	2.01	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	1.585e+02	1.515e+02	1.05	yes	no	1.025
17	Unk	OCDD	40:34	1.816e+03	1.973e+03	0.92	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:20	2.285e+04	2.883e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:26	3.380e+04	2.122e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:27	3.209e+04	2.032e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:21	1.456e+04	2.808e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.652e+04	3.215e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	1.587e+04	2.948e+04	0.54	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:47	1.415e+04	2.702e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:08	1.213e+04	2.715e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:28	1.072e+04	2.403e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:22	1.097e+04	1.359e+04	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:46	2.463e+04	1.548e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:10	2.104e+04	1.673e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:15	2.131e+04	1.657e+04	1.29	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	2.508e+04	2.383e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	40:33	2.870e+04	3.203e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:39	1.698e+04	2.143e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:30	2.464e+04	1.873e+04	1.32	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:24	7.227e+01				no	1.014

$$\text{OCDD} = \frac{(1.816e{+}03 + 1.973e{+}03) \times 4000 \text{ pg} \times 400}{(2.870e{+}04 + 3.203e{+}04) \times 10.537 \text{ g} \times 66.6/100 \times 1.118} \times 0.44 = 28917 \text{ ng/kg}$$

4m 1/14/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0217

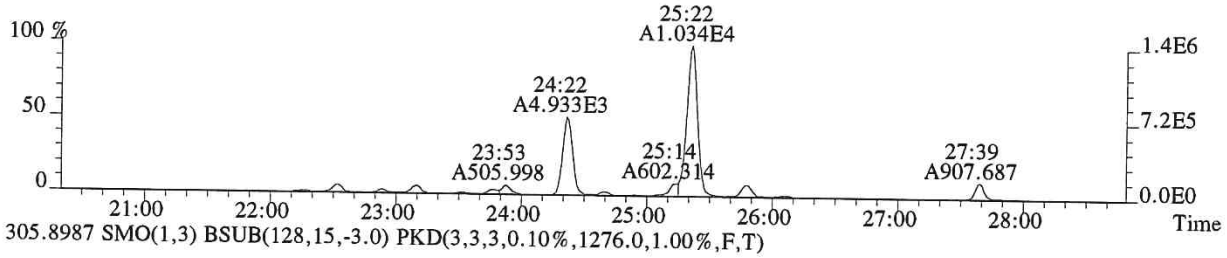
Run #15 Filename P519908 Samp: 1 Inj: 1 Acquired: 11-JAN-19 08:04:17
Processed: 11-JAN-19 14:53:38 LAB. ID: E1801139-004DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.44e+06	1.21e+03	1.2e+03	1.92e+06	1.28e+03	1.5e+03
2	1,2,3,7,8-PeCDF	8.51e+04	8.56e+02	9.9e+01	5.73e+04	1.83e+03	3.1e+01
3	2,3,4,7,8-PeCDF	6.14e+04	8.56e+02	7.2e+01	4.11e+04	1.83e+03	2.2e+01
4	1,2,3,4,7,8-HxCDF	1.45e+05	6.68e+02	2.2e+02	1.12e+05	8.32e+02	1.3e+02
5	1,2,3,6,7,8-HxCDF	3.56e+04	6.68e+02	5.3e+01	2.95e+04	8.32e+02	3.5e+01
6	2,3,4,6,7,8-HxCDF	7.15e+03	6.68e+02	1.1e+01	4.63e+03	8.32e+02	5.6e+00
7	1,2,3,7,8,9-HxCDF	8.93e+03	6.68e+02	1.3e+01	8.75e+03	8.32e+02	1.1e+01
8	1,2,3,4,6,7,8-HpCDF	3.38e+04	5.44e+02	6.2e+01	3.59e+04	6.08e+02	5.9e+01
9	1,2,3,4,7,8,9-HpCDF	8.80e+03	5.44e+02	1.6e+01	1.34e+04	6.08e+02	2.2e+01
10	OCDF	1.26e+04	5.96e+02	2.1e+01	1.47e+04	1.16e+03	1.3e+01
11	2,3,7,8-TCDD	4.06e+05	2.36e+03	1.7e+02	5.24e+05	9.88e+02	5.3e+02
12	1,2,3,7,8-PeCDD	7.59e+03	1.15e+03	6.6e+00	3.61e+03	8.80e+02	4.1e+00
13	1,2,3,4,7,8-HxCDD	*	5.88e+02	*	*	6.32e+02	*
14	1,2,3,6,7,8-HxCDD	2.62e+03	5.88e+02	4.5e+00	1.66e+03	6.32e+02	2.6e+00
15	1,2,3,7,8,9-HxCDD	3.40e+03	5.88e+02	5.8e+00	1.81e+03	6.32e+02	2.9e+00
16	1,2,3,4,6,7,8-HpCDD	3.30e+04	8.52e+02	3.9e+01	3.48e+04	1.18e+03	2.9e+01
17	OCDD	3.13e+05	6.52e+02	4.8e+02	3.48e+05	3.64e+02	9.6e+02
18	13C-2,3,7,8-TCDF	3.29e+06	3.53e+03	9.3e+02	4.18e+06	2.58e+03	1.6e+03
19	13C-1,2,3,7,8-PeCDF	5.80e+06	4.88e+02	1.2e+04	3.65e+06	3.60e+02	1.0e+04
20	13C-2,3,4,7,8-PeCDF	5.98e+06	4.88e+02	1.2e+04	3.74e+06	3.60e+02	1.0e+04
21	13C-1,2,3,4,7,8-HxCDF	2.93e+06	1.22e+03	2.4e+03	5.70e+06	1.23e+03	4.6e+03
22	13C-1,2,3,6,7,8-HxCDF	3.23e+06	1.22e+03	2.7e+03	6.26e+06	1.23e+03	5.1e+03
23	13C-2,3,4,6,7,8-HxCDF	3.21e+06	1.22e+03	2.6e+03	6.04e+06	1.23e+03	4.9e+03
24	13C-1,2,3,7,8,9-HxCDF	2.76e+06	1.22e+03	2.3e+03	5.32e+06	1.23e+03	4.3e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.47e+06	2.52e+03	9.8e+02	5.54e+06	5.35e+03	1.0e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.15e+06	2.52e+03	8.5e+02	4.73e+06	5.35e+03	8.8e+02
27	13C-2,3,7,8-TCDD	1.70e+06	5.69e+03	3.0e+02	2.07e+06	2.01e+03	1.0e+03
28	13C-1,2,3,7,8-PeCDD	4.50e+06	1.26e+03	3.6e+03	2.85e+06	1.62e+03	1.8e+03
29	13C-1,2,3,4,7,8-HxCDD	4.62e+06	7.20e+02	6.4e+03	3.73e+06	6.68e+02	5.6e+03
30	13C-1,2,3,6,7,8-HxCDD	4.25e+06	7.20e+02	5.9e+03	3.34e+06	6.68e+02	5.0e+03
31	13C-1,2,3,4,6,7,8-HpCDD	5.19e+06	6.76e+02	7.7e+03	4.77e+06	3.64e+02	1.3e+04
32	13C-OCDD	5.07e+06	5.00e+02	1.0e+04	5.60e+06	4.08e+02	1.4e+04
33	13C-1,2,3,4-TCDD	2.51e+06	5.69e+03	4.4e+02	3.16e+06	2.01e+03	1.6e+03
34	13C-1,2,3,7,8,9-HxCDD	4.81e+06	7.20e+02	6.7e+03	3.74e+06	6.68e+02	5.6e+03
35	37Cl-2,3,7,8-TCDD	1.43e+04	1.64e+03	8.7e+00			

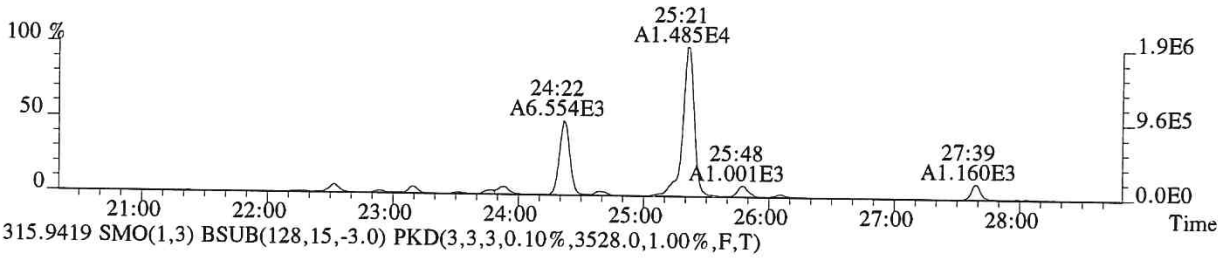
ALS ENVIRONMENTAL
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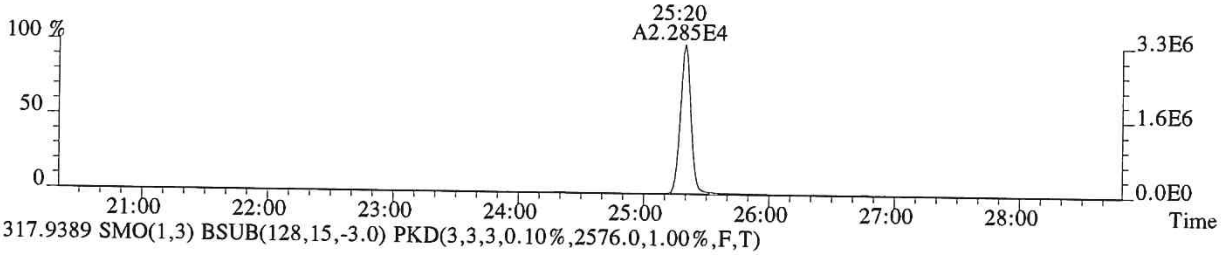
File:P519908 #1-602 Acq:11-JAN-2019 08:04:17 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1208.0,1.00%,F,T)



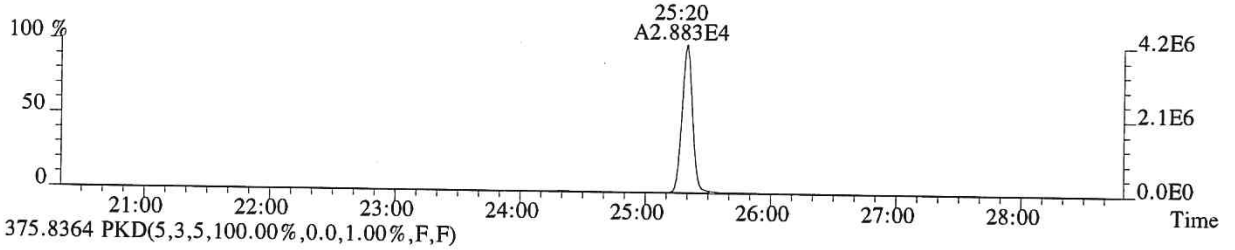
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1276.0,1.00%,F,T)



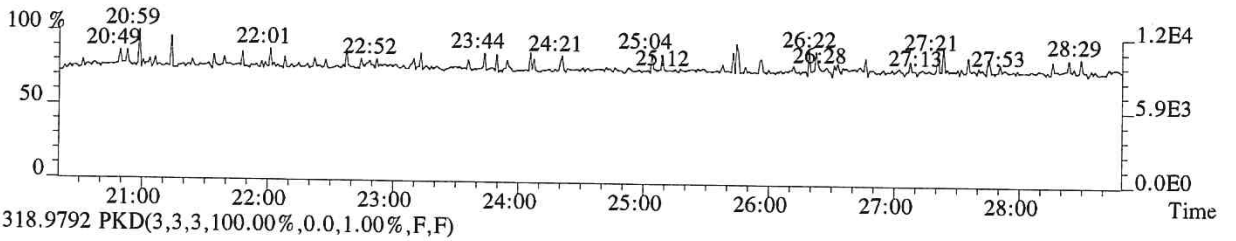
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3528.0,1.00%,F,T)



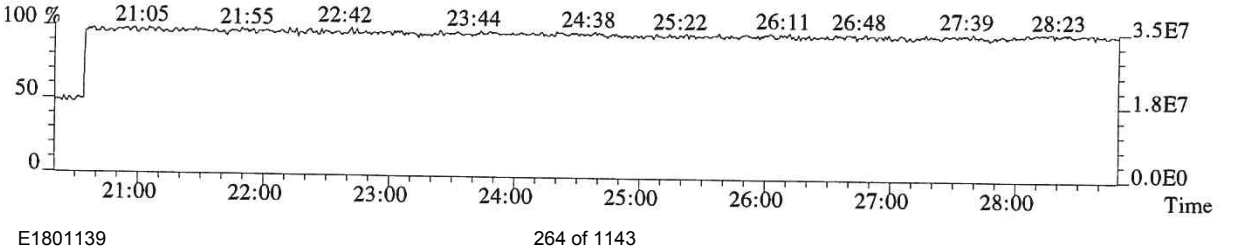
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2576.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

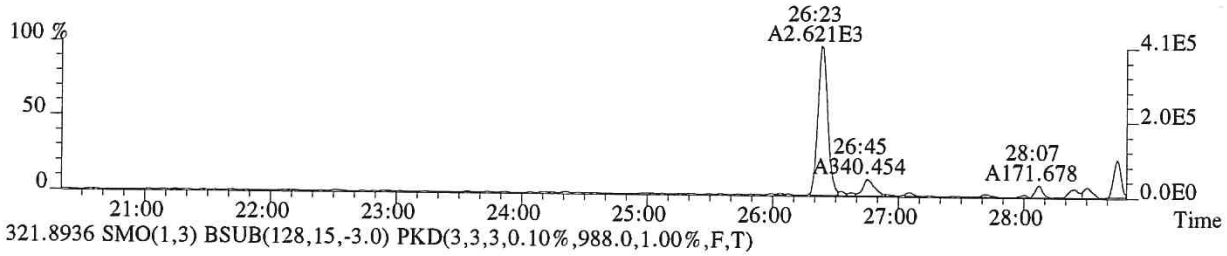


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

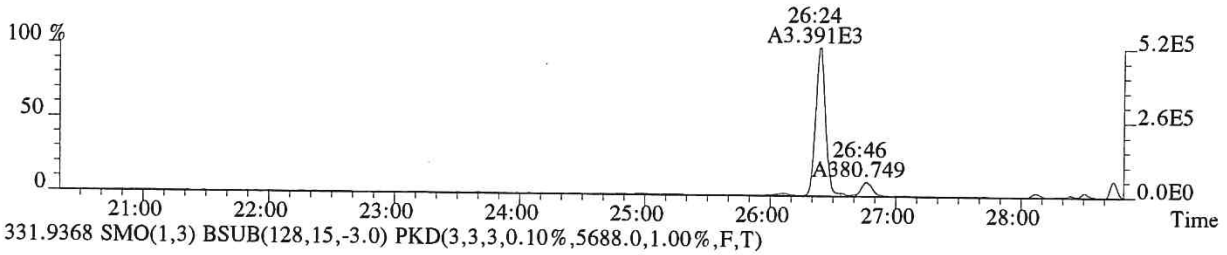


018228

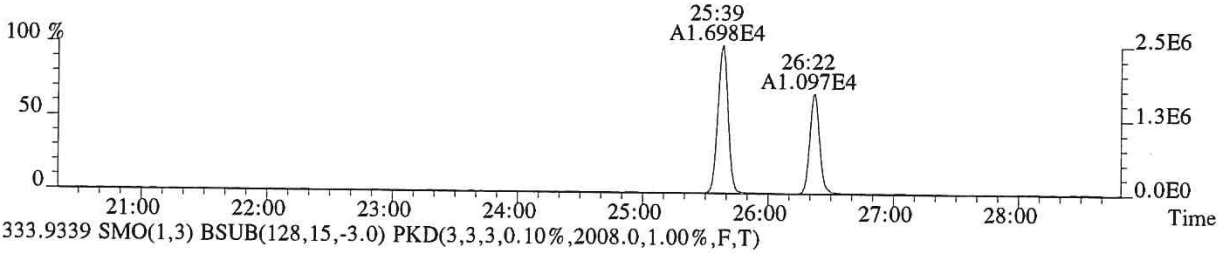
File:P519908 #1-602 Acq:11-JAN-2019 08:04:17 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2364.0,1.00%,F,T)



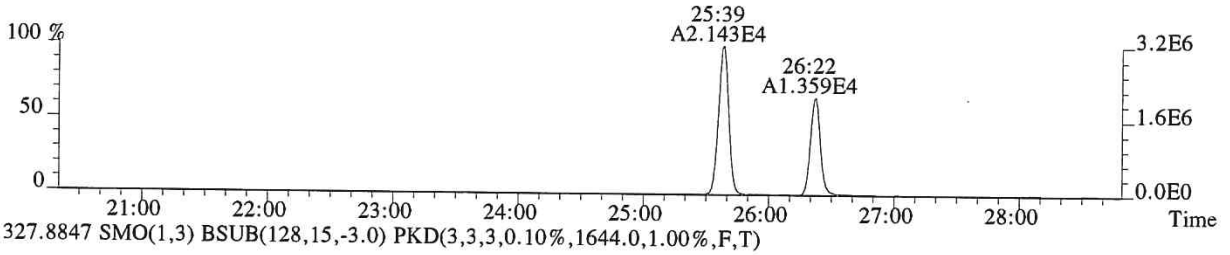
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,988.0,1.00%,F,T)



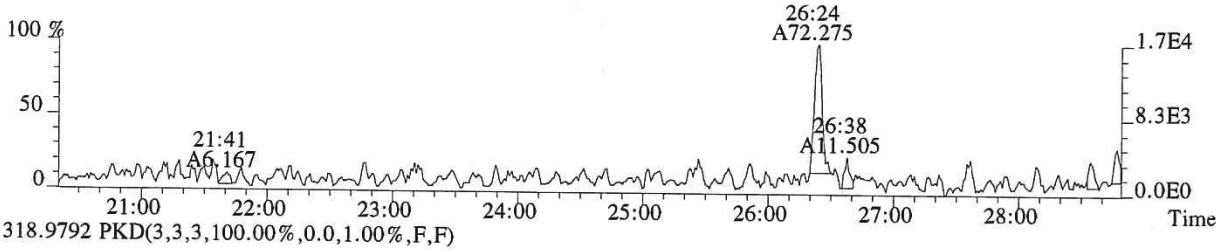
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5688.0,1.00%,F,T)



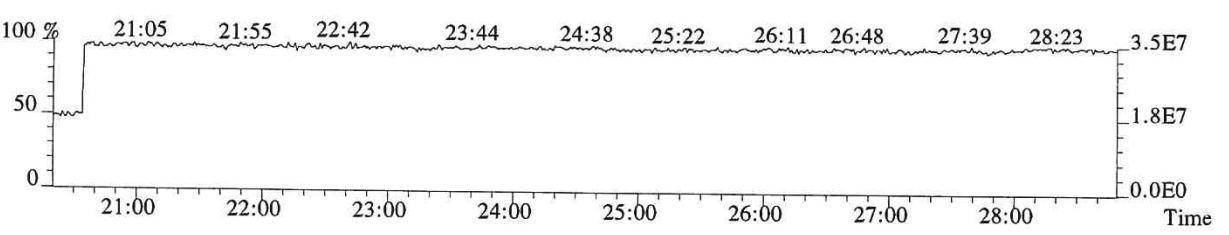
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2008.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1644.0,1.00%,F,T)

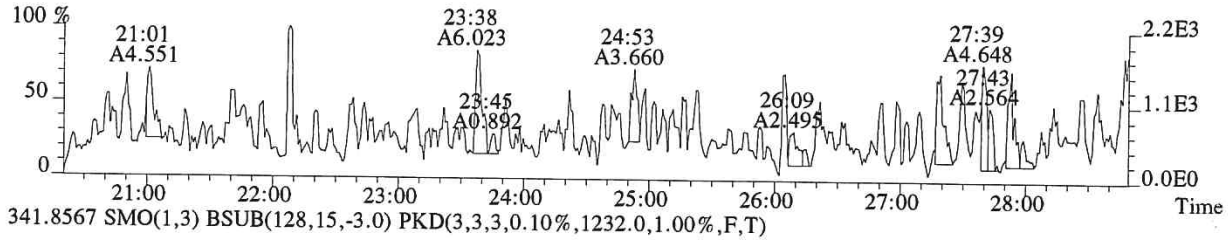


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

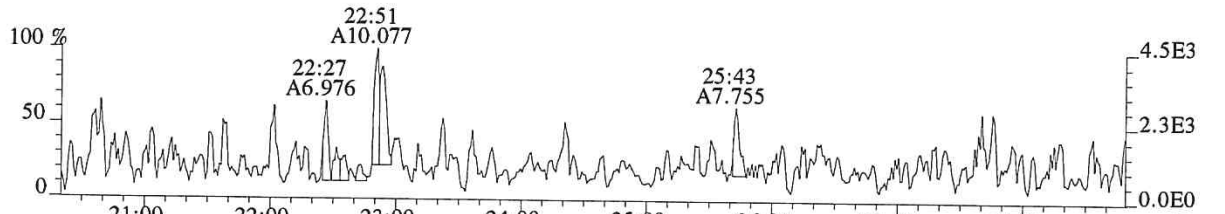


018229

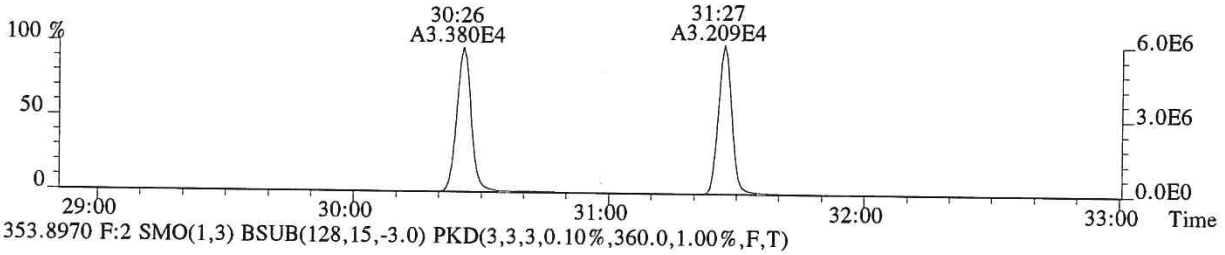
File:P519908 #1-602 Acq:11-JAN-2019 08:04:17 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,740.0,1.00%,F,T)



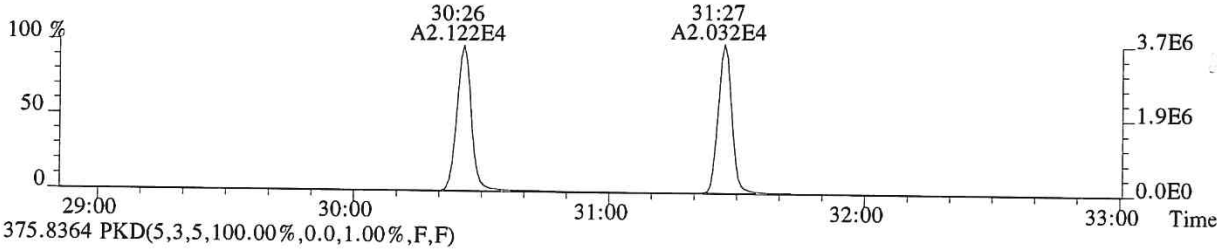
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1232.0,1.00%,F,T)



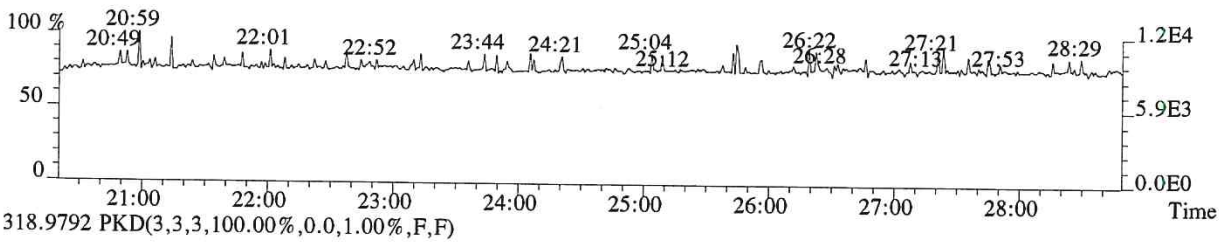
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,488.0,1.00%,F,T)



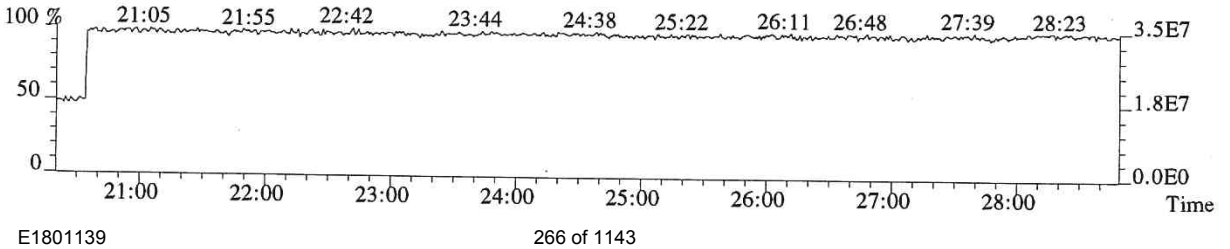
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,360.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

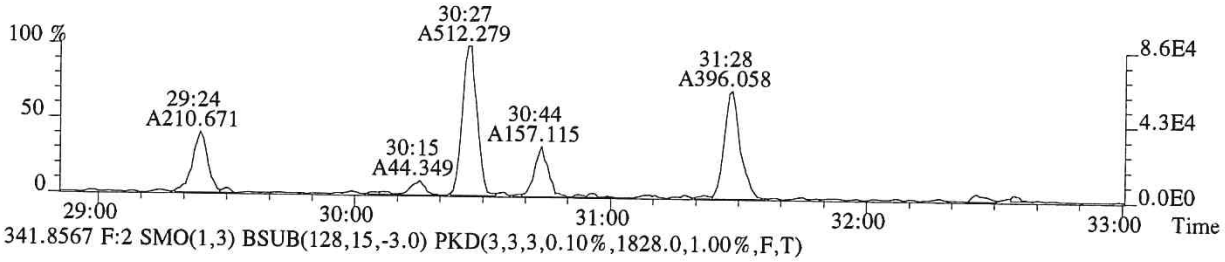


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

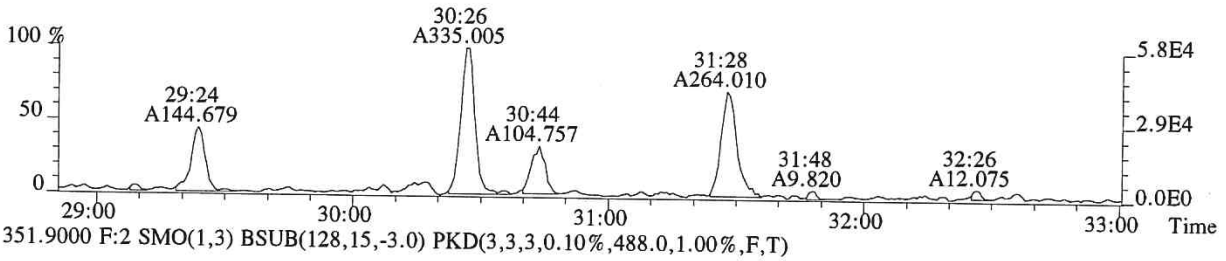


018230

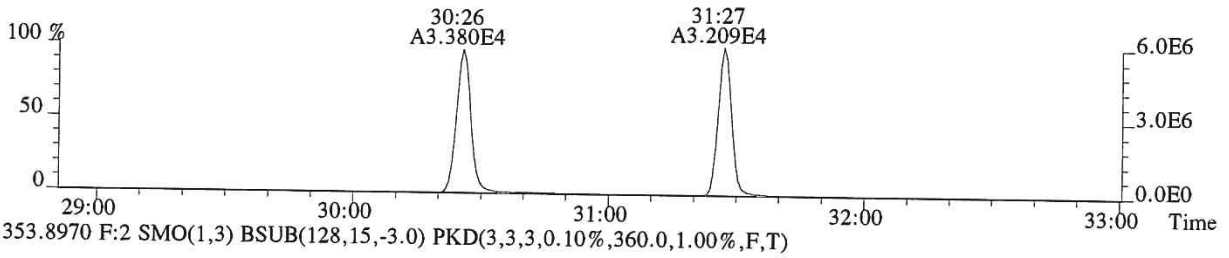
File:P519908 #1-375 Acq:11-JAN-2019 08:04:17 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,856.0,1.00%,F,T)



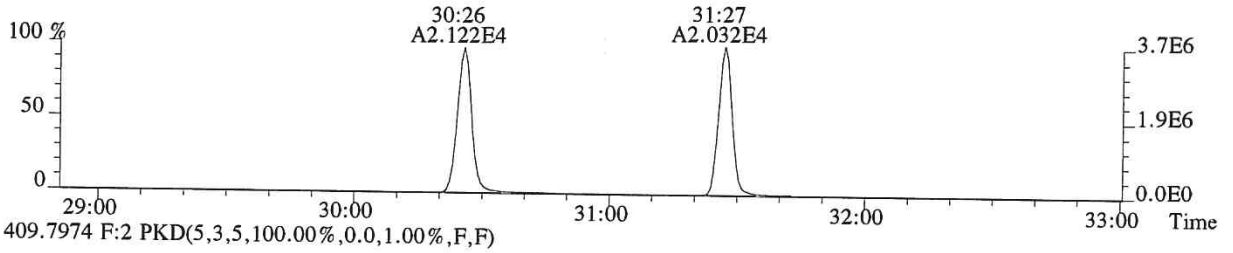
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1828.0,1.00%,F,T)



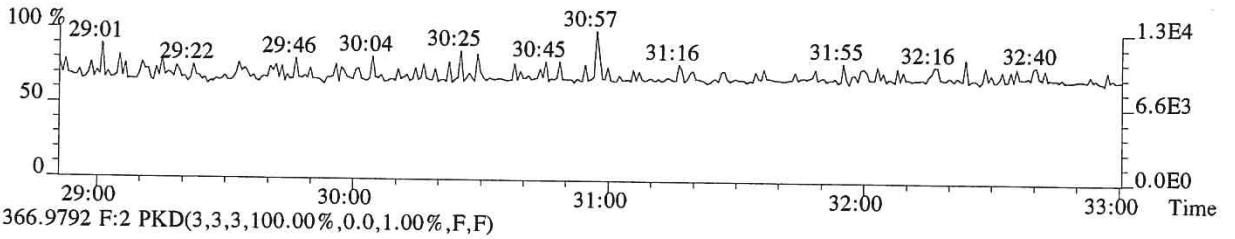
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,488.0,1.00%,F,T)



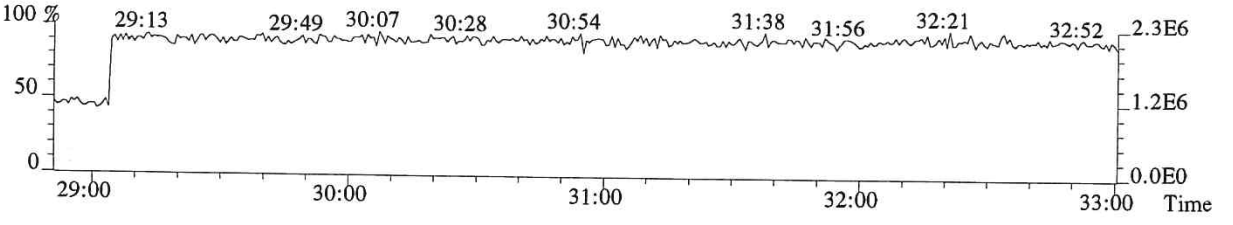
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,360.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

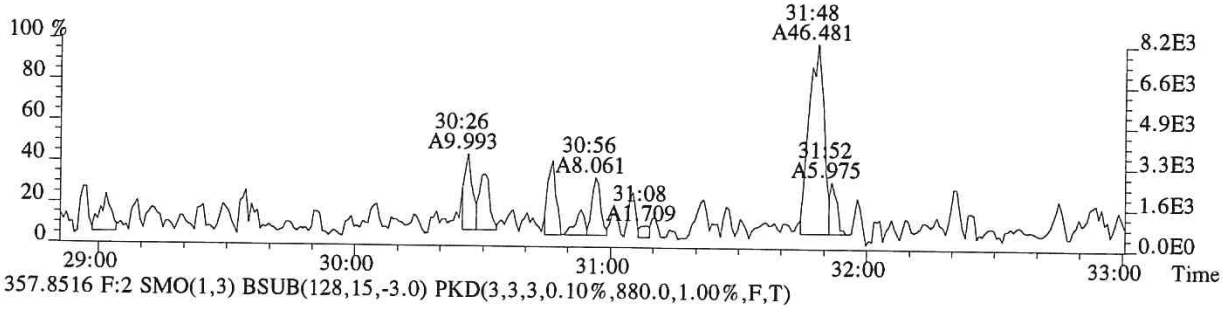


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

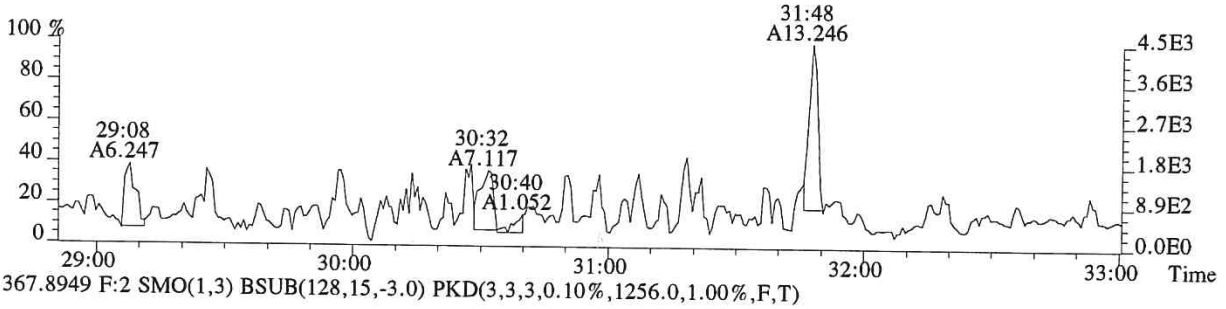


018231

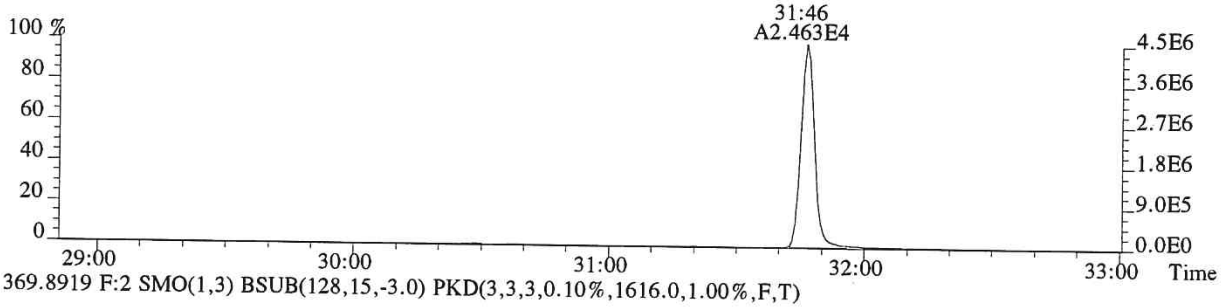
File:P519908 #1-375 Acq:11-JAN-2019 08:04:17 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1148.0,1.00%,F,T)



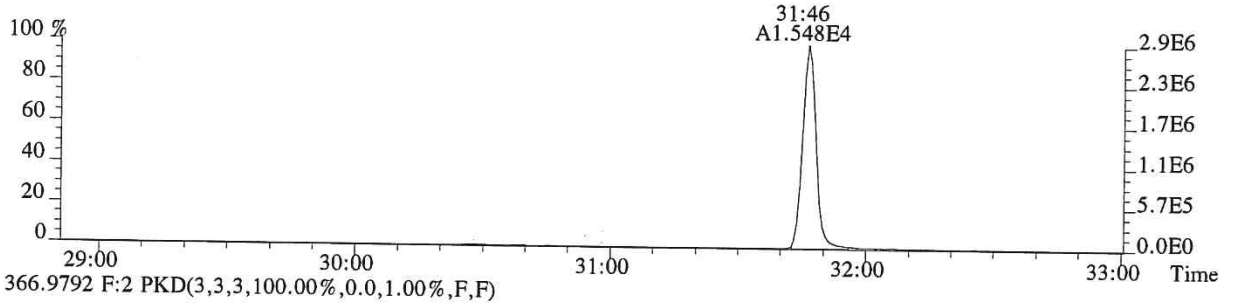
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,880.0,1.00%,F,T)



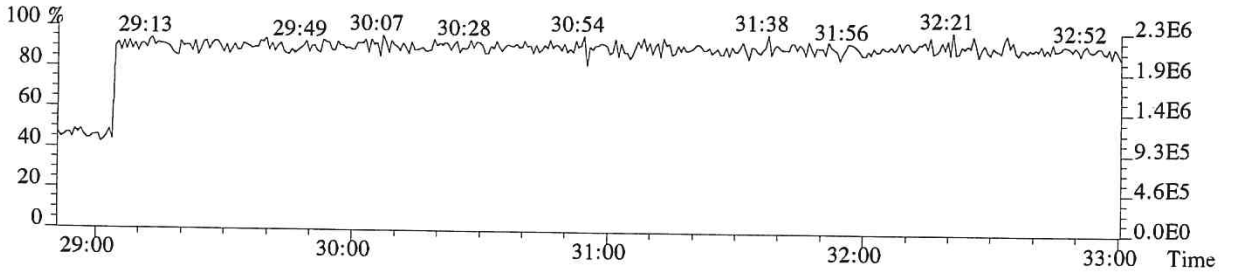
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1256.0,1.00%,F,T)



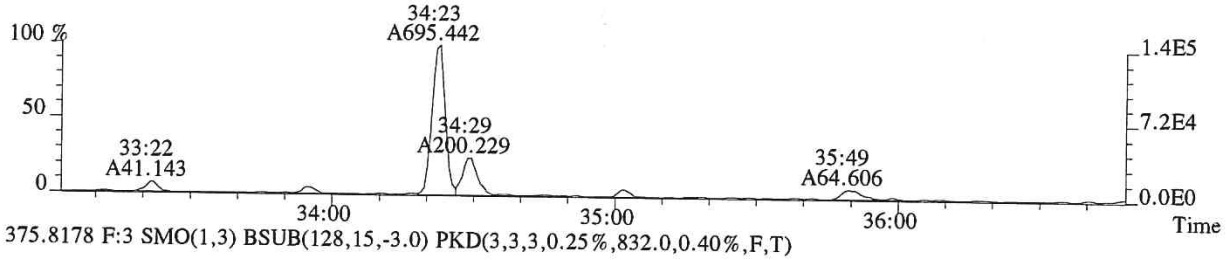
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1616.0,1.00%,F,T)



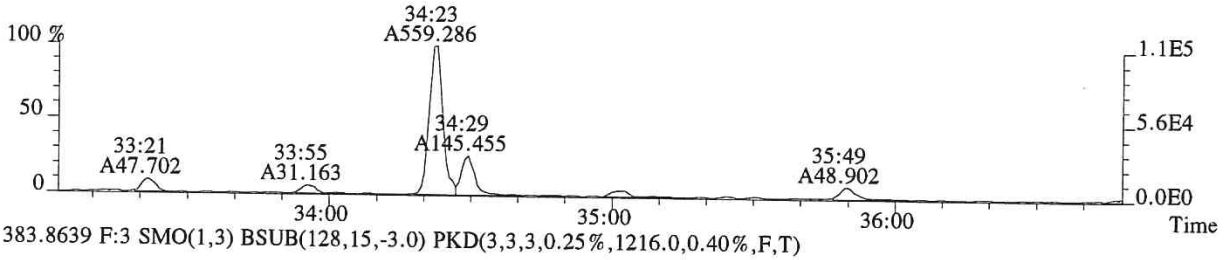
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



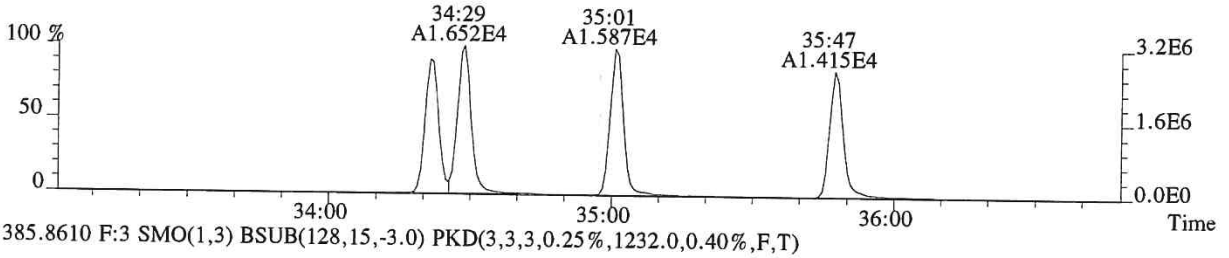
File:P519908 #1-339 Acq:11-JAN-2019 08:04:17 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,668.0,0.40%,F,T)



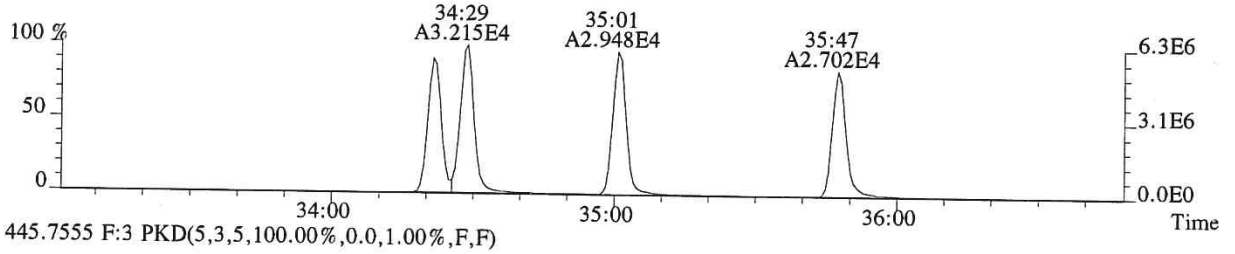
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,832.0,0.40%,F,T)



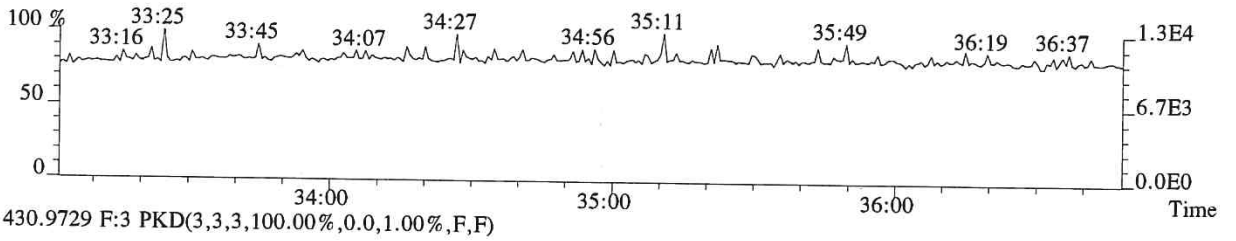
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1216.0,0.40%,F,T)



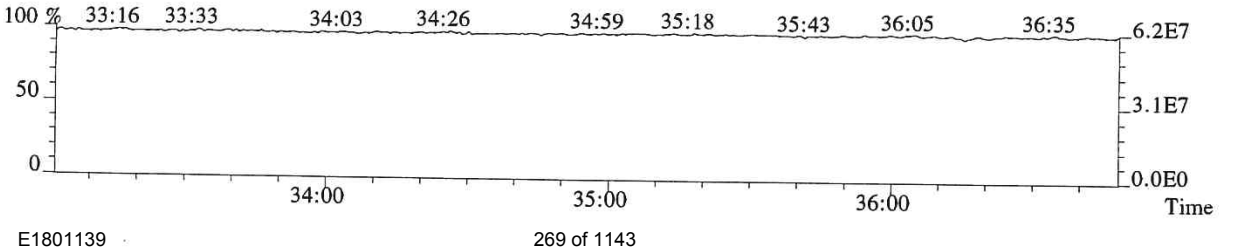
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1232.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

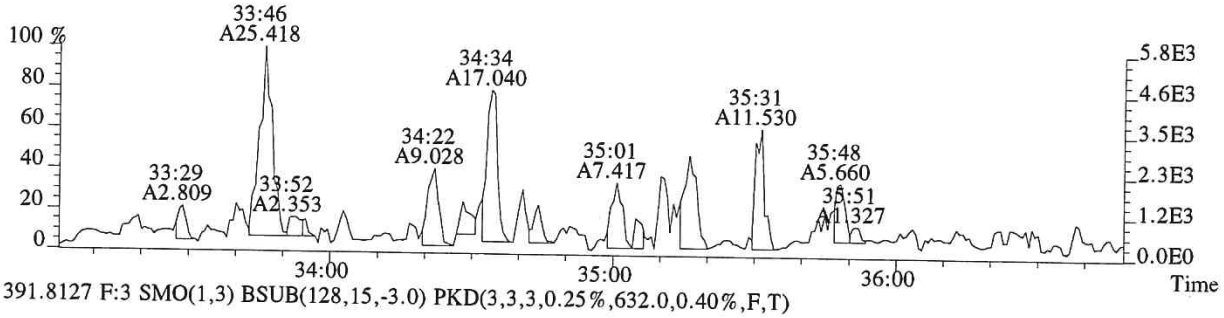


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

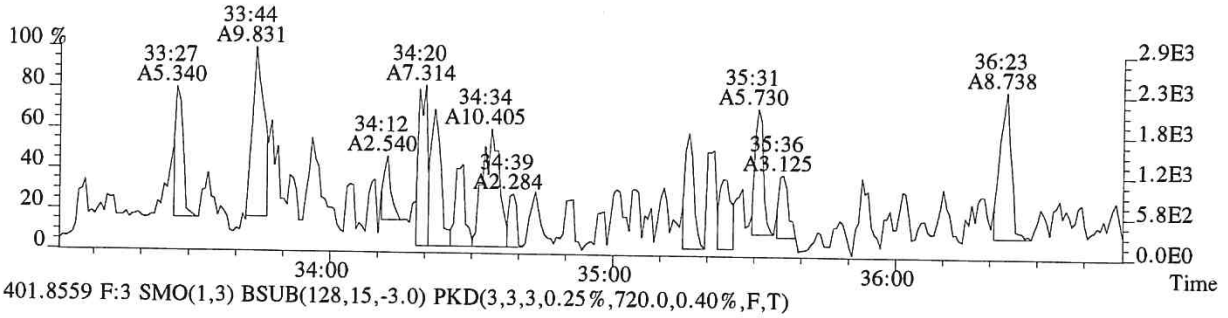


018233

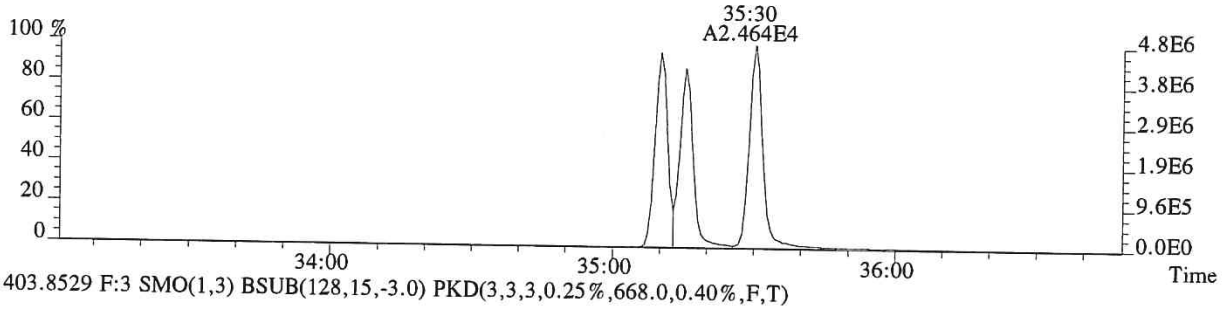
File:P519908 #1-339 Acq:11-JAN-2019 08:04:17 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,588.0,0.40%,F,T)



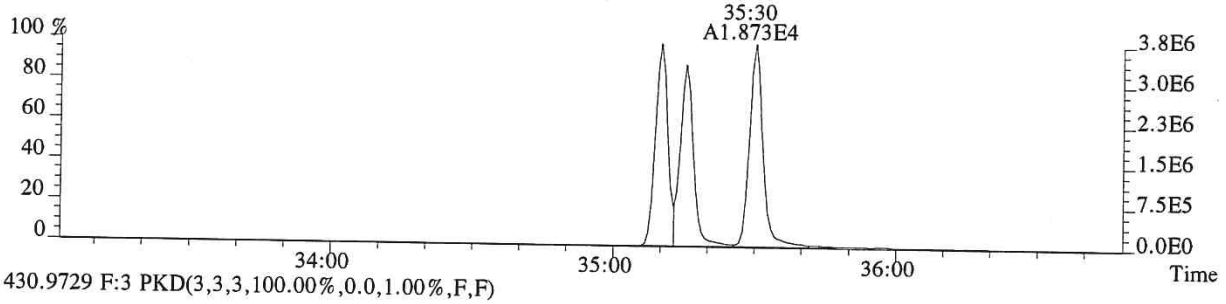
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,632.0,0.40%,F,T)



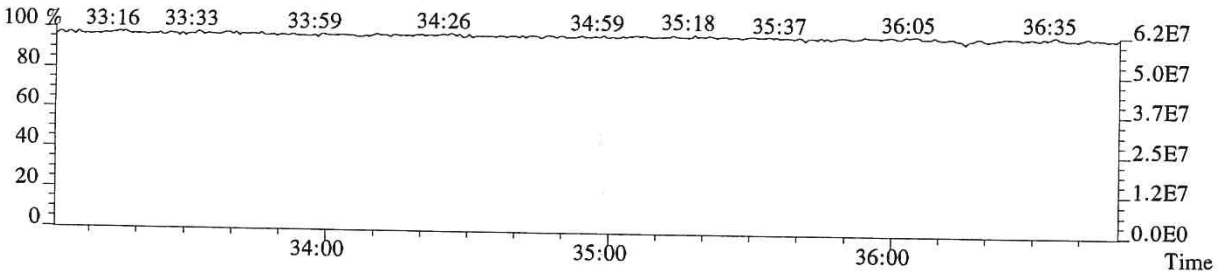
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,720.0,0.40%,F,T)



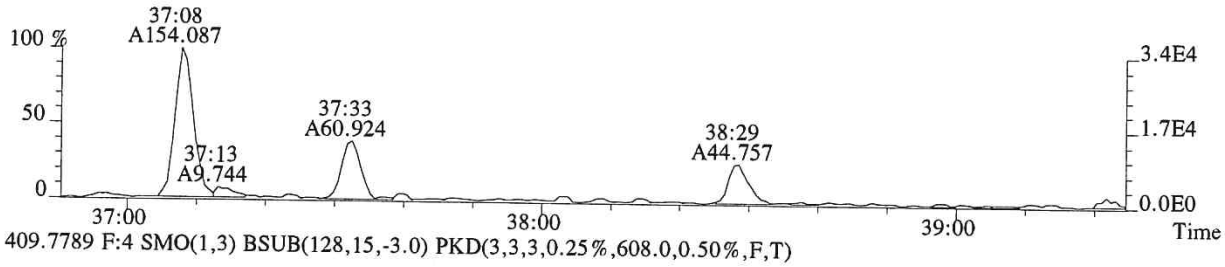
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,668.0,0.40%,F,T)



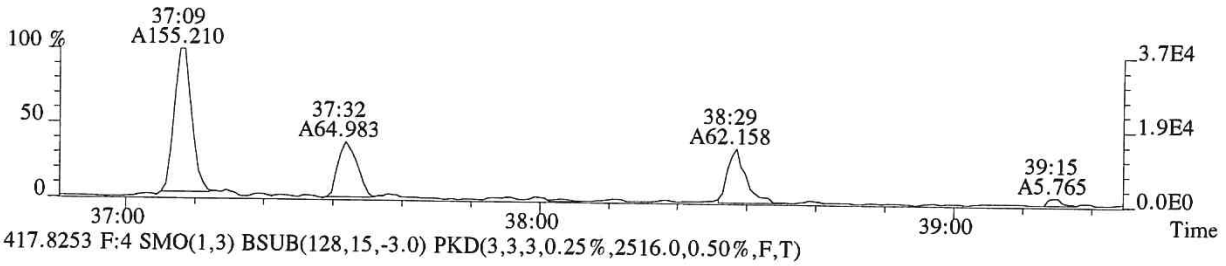
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



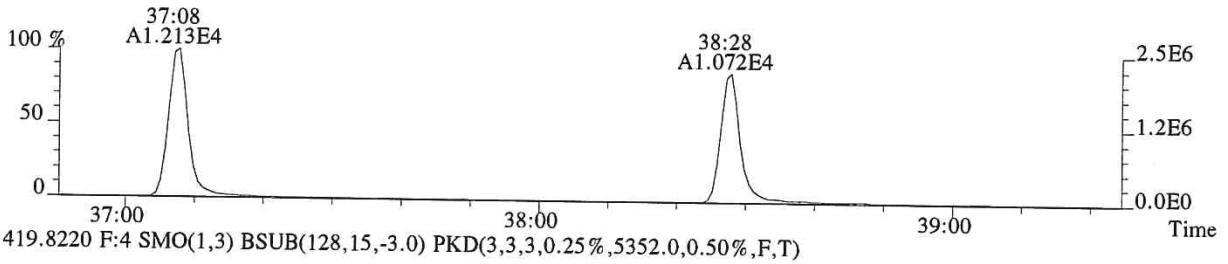
File:P519908 #1-232 Acq:11-JAN-2019 08:04:17 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,544.0,0.50%,F,T)



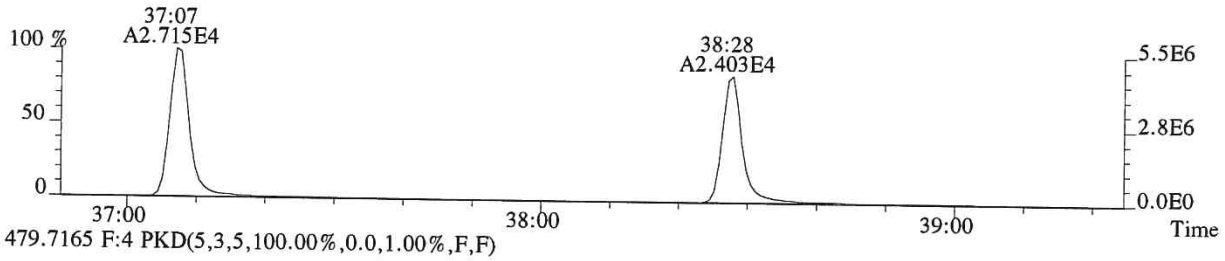
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,608.0,0.50%,F,T)



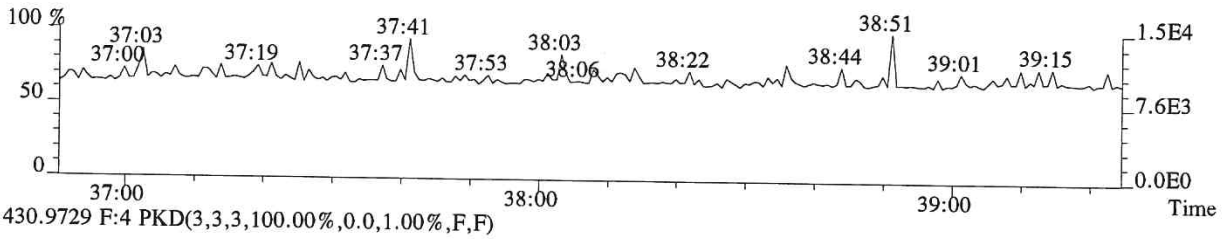
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2516.0,0.50%,F,T)



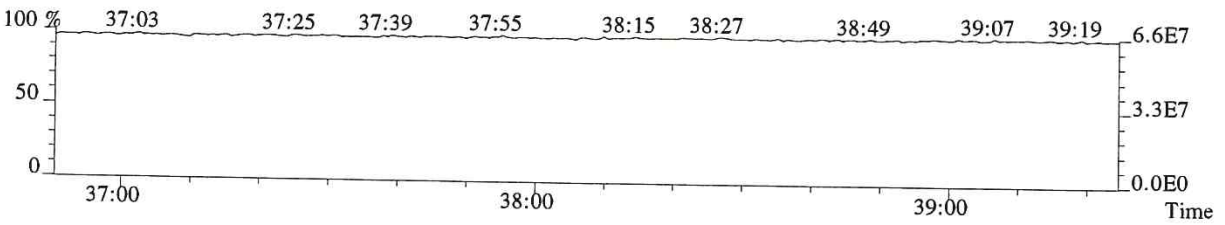
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5352.0,0.50%,F,T)



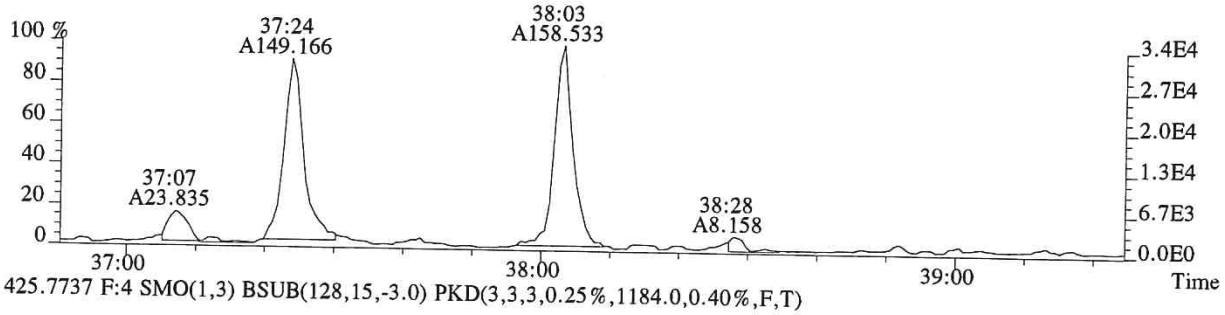
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



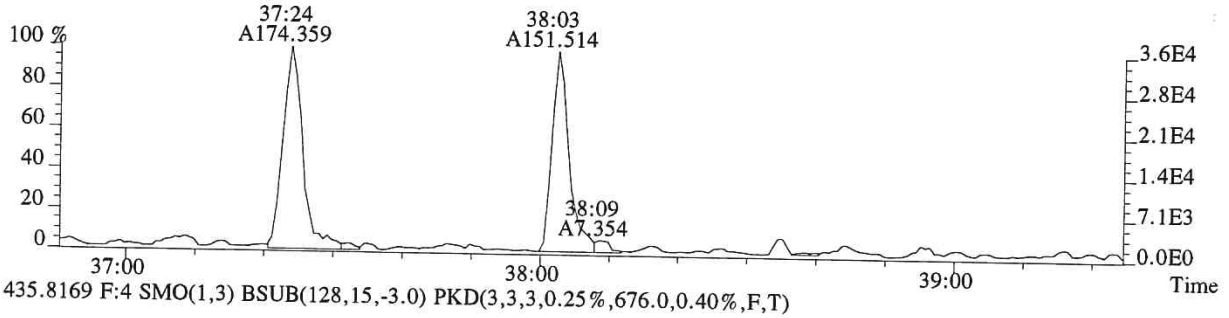
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



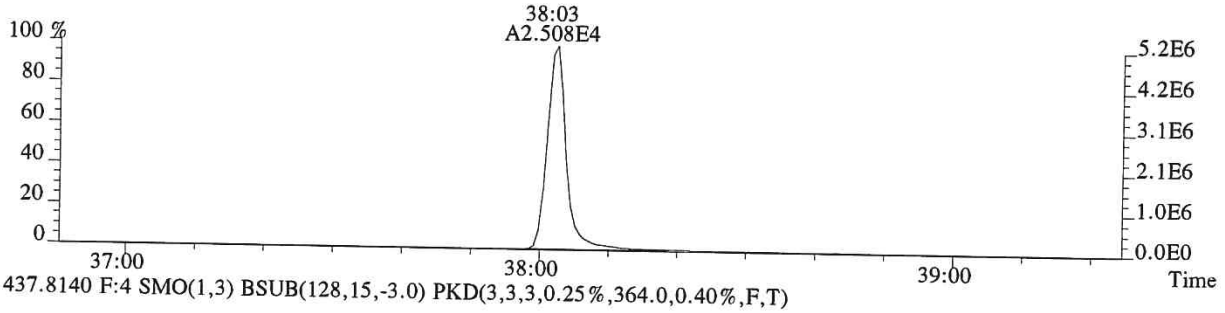
File:P519908 #1-232 Acq:11-JAN-2019 08:04:17 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,852.0,0.40%,F,T)



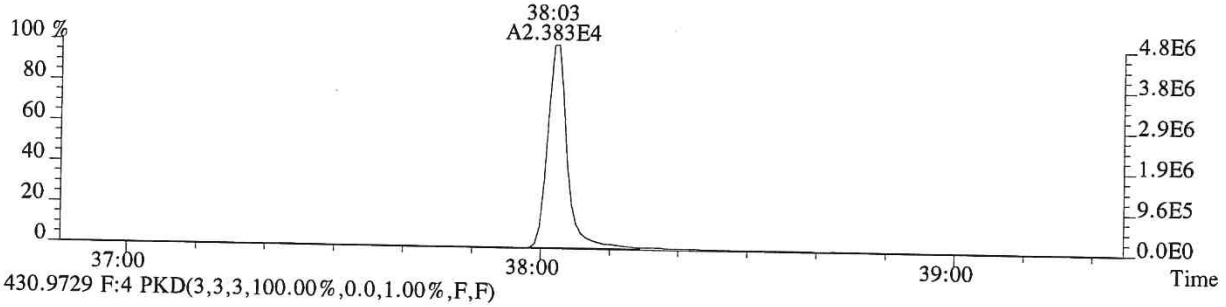
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1184.0,0.40%,F,T)



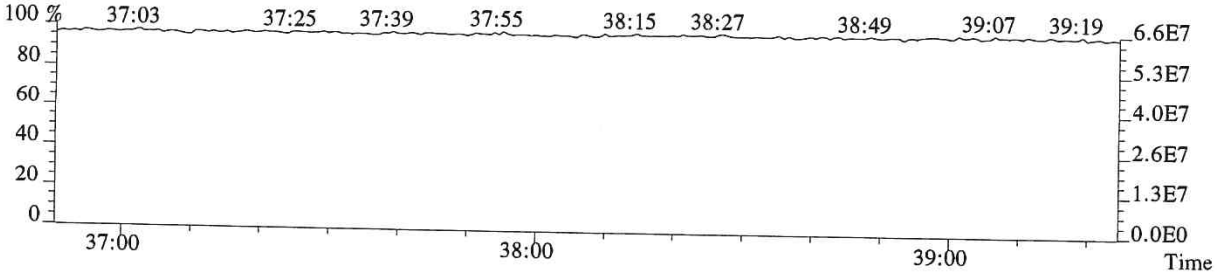
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,676.0,0.40%,F,T)



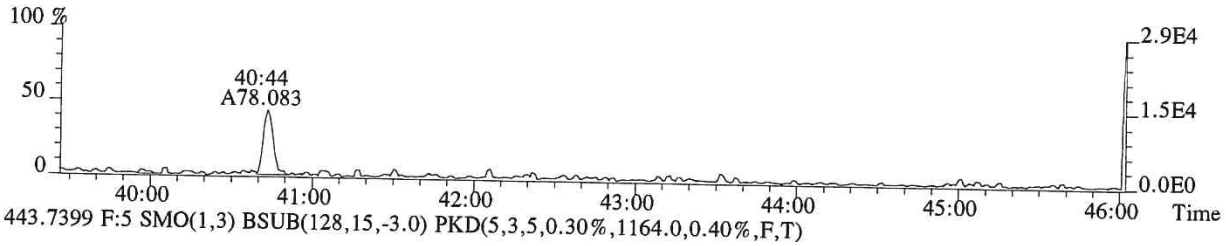
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,364.0,0.40%,F,T)



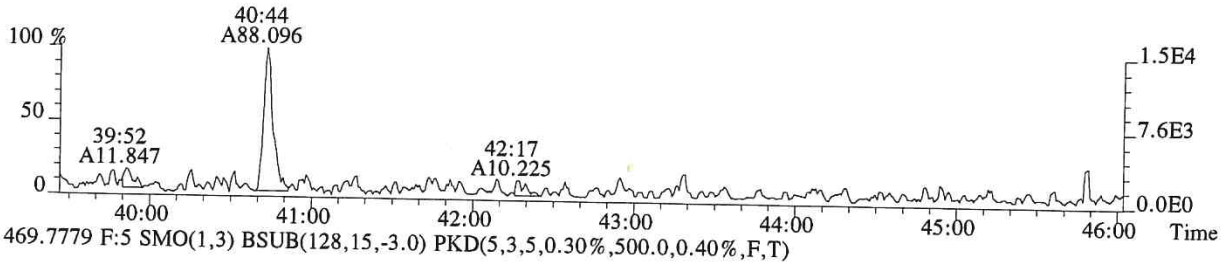
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



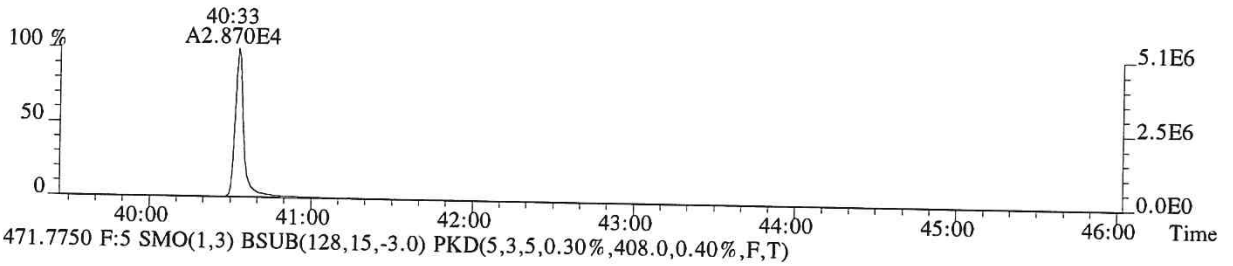
File:P519908 #1-593 Acq:11-JAN-2019 08:04:17 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,596.0,0.40%,F,T)



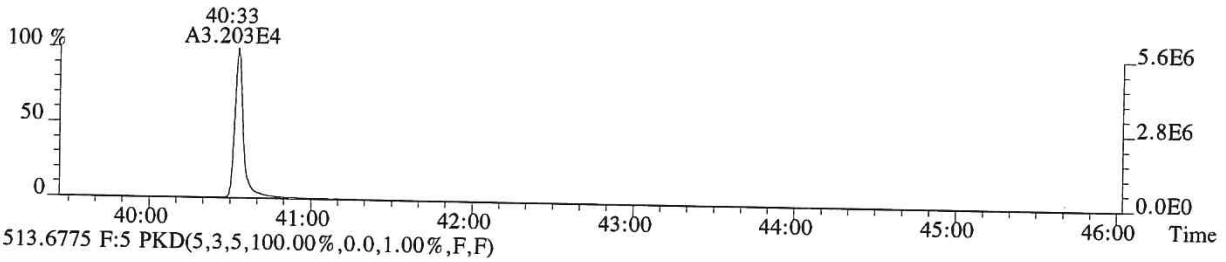
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1164.0,0.40%,F,T)



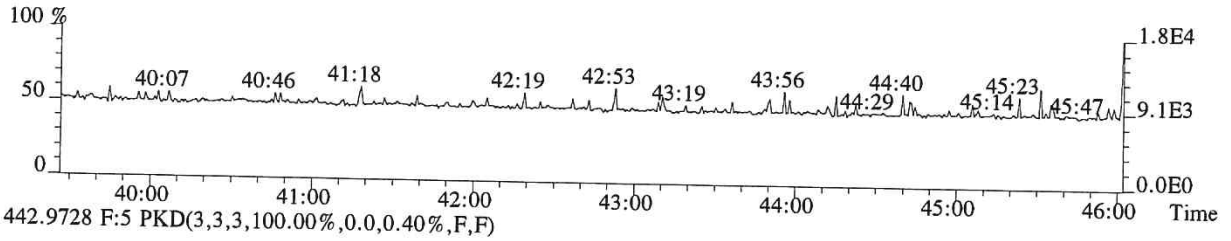
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,500.0,0.40%,F,T)



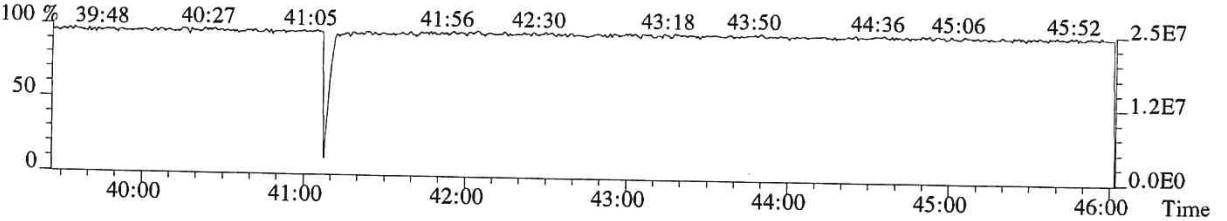
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,408.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

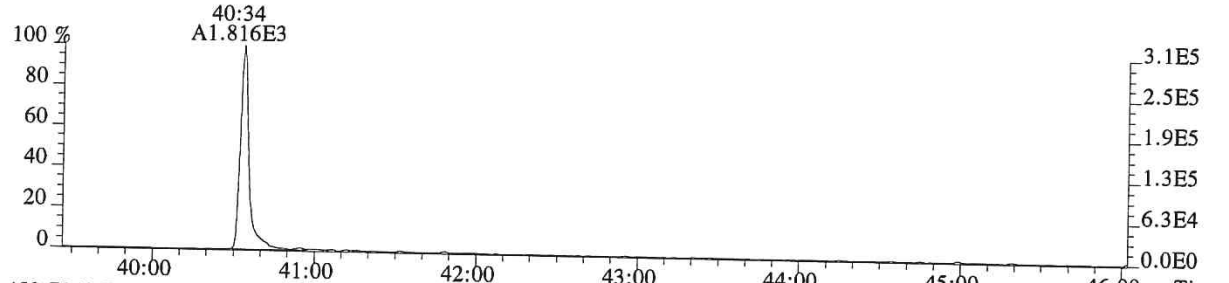


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

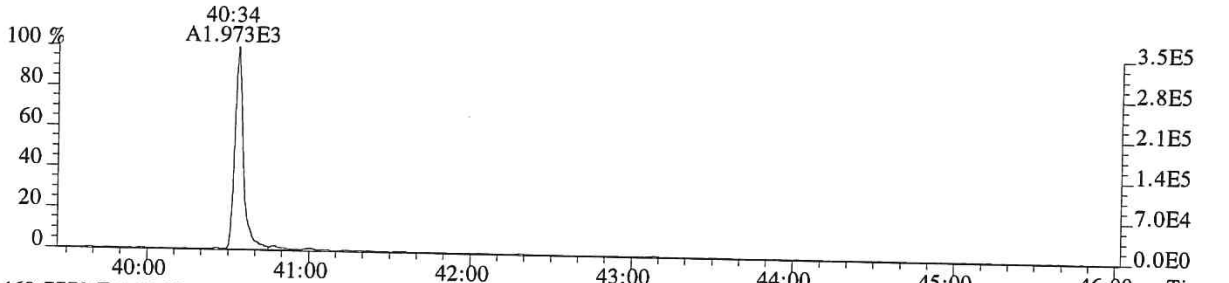


018237

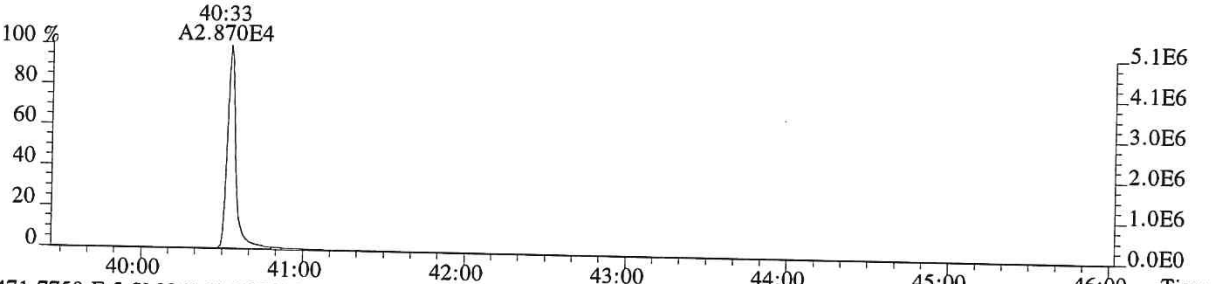
File:P519908 #1-593 Acq:11-JAN-2019 08:04:17 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-004DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,652.0,0.40%,F,T)



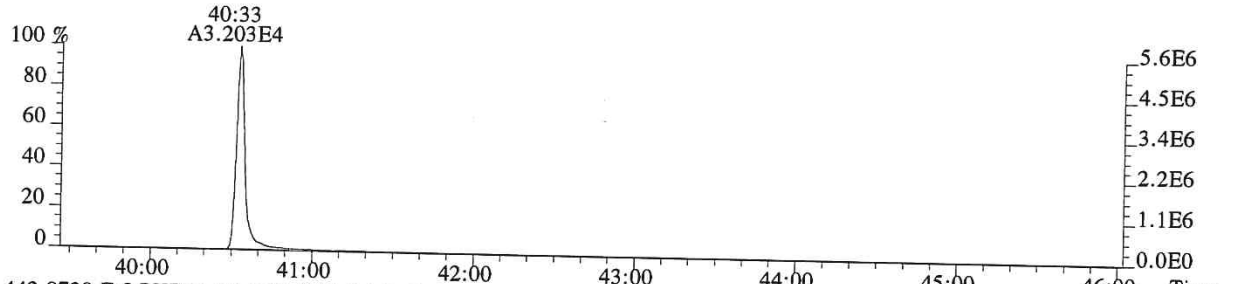
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,364.0,0.40%,F,T)



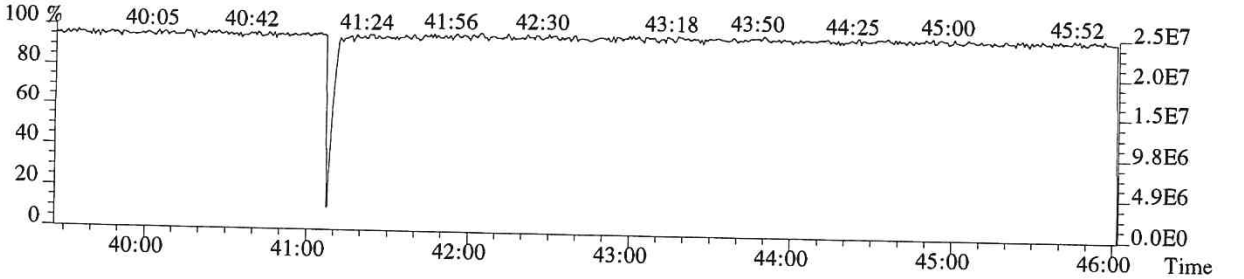
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,500.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,408.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0218

Run #14 Filename P519872 Samp: 1 Inj: 1 Acquired: 9-JAN-19 21:55:36
Processed: 10-JAN-19 08:15:32 Sample ID: E1801139-005

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:58	4.686e+06	5.948e+06	0.79	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:55	2.013e+05	1.304e+05	1.54	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:55	1.479e+05	9.615e+04	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:51	3.353e+05	2.782e+05	1.21	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:58	8.484e+04	7.239e+04	1.17	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:31	1.227e+04	1.043e+04	1.18	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:21	2.092e+04	1.714e+04	1.22	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:46	8.090e+04	7.805e+04	1.04	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:14	2.442e+04	2.377e+04	1.03	yes	no	1.258
10	Unk	OCDF	41:59	4.965e+05	5.649e+05	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	27:01	8.496e+05	1.079e+06	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:14	1.567e+04	9.760e+03	1.60	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:41	5.422e+02	4.315e+02	1.26	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:47	2.659e+03	2.300e+03	1.16	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:01	1.362e+03	1.045e+03	1.30	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:47	4.388e+04	4.328e+04	1.01	yes	no	1.025
17	Unk	OCDD	41:50	4.443e+05	4.898e+05	0.91	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:57	3.790e+04	4.812e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:54	5.452e+04	3.405e+04	1.60	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:54	5.012e+04	3.129e+04	1.60	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:50	2.213e+04	4.095e+04	0.54	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:57	2.618e+04	5.131e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:30	2.451e+04	4.666e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:19	2.139e+04	4.185e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:45	1.473e+04	3.338e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:14	1.321e+04	2.912e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	27:00	1.375e+04	1.727e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:12	3.955e+04	2.548e+04	1.55	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:41	2.987e+04	2.361e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:46	3.233e+04	2.531e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:46	2.967e+04	2.834e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	41:49	2.339e+04	2.470e+04	0.95	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:16	3.819e+04	4.833e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:01	5.370e+04	4.161e+04	1.29	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	27:01	3.089e+04				no	1.014

$$\text{OCDD} = \frac{(4.443e{+}05 + 4.898e{+}05) \times 4000 \text{ pg} \times 1}{(2.339e{+}04 + 2.470e{+}04) \times 10.92 \text{ g} \times 58.3/100 \times 1.118} = 10915 \text{ ng/kg}$$

LM 01/11/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0218

Run #14 Filename P519872 Samp: 1 Inj: 1 Acquired: 9-JAN-19 21:55:36
Processed: 10-JAN-19 08:15:32 LAB. ID: E1801139-005

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.14e+08	8.39e+03	6.1e+04	6.56e+08	9.21e+03	7.1e+04
2	1,2,3,7,8-PeCDF	2.94e+07	5.29e+04	5.6e+02	1.91e+07	3.22e+04	5.9e+02
3	2,3,4,7,8-PeCDF	2.06e+07	5.29e+04	3.9e+02	1.34e+07	3.22e+04	4.2e+02
4	1,2,3,4,7,8-HxCDF	5.52e+07	2.84e+04	1.9e+03	4.54e+07	2.02e+04	2.2e+03
5	1,2,3,6,7,8-HxCDF	1.27e+07	2.84e+04	4.5e+02	1.05e+07	2.02e+04	5.2e+02
6	2,3,4,6,7,8-HxCDF	1.92e+06	2.84e+04	6.8e+01	1.68e+06	2.02e+04	8.3e+01
7	1,2,3,7,8,9-HxCDF	3.03e+06	2.84e+04	1.1e+02	2.47e+06	2.02e+04	1.2e+02
8	1,2,3,4,6,7,8-HpCDF	8.89e+06	2.30e+04	3.9e+02	8.67e+06	1.55e+04	5.6e+02
9	1,2,3,4,7,8,9-HpCDF	2.06e+06	2.30e+04	9.0e+01	2.03e+06	1.55e+04	1.3e+02
10	OCDF	2.34e+07	1.34e+03	1.7e+04	2.68e+07	1.28e+03	2.1e+04
11	2,3,7,8-TCDD	1.73e+08	2.84e+03	6.1e+04	2.20e+08	6.10e+03	3.6e+04
12	1,2,3,7,8-PeCDD	2.25e+06	4.23e+03	5.3e+02	1.44e+06	5.12e+03	2.8e+02
13	1,2,3,4,7,8-HxCDD	1.01e+05	4.56e+03	2.2e+01	8.07e+04	2.88e+03	2.8e+01
14	1,2,3,6,7,8-HxCDD	3.90e+05	4.56e+03	8.5e+01	3.34e+05	2.88e+03	1.2e+02
15	1,2,3,7,8,9-HxCDD	1.81e+05	4.56e+03	4.0e+01	1.41e+05	2.88e+03	4.9e+01
16	1,2,3,4,6,7,8-HpCDD	3.92e+06	1.24e+03	3.2e+03	3.81e+06	4.13e+03	9.2e+02
17	OCDD	2.10e+07	1.17e+03	1.8e+04	2.35e+07	1.75e+03	1.3e+04
18	13C-2,3,7,8-TCDF	4.56e+06	1.08e+04	4.2e+02	5.77e+06	1.50e+04	3.9e+02
19	13C-1,2,3,7,8-PeCDF	8.14e+06	4.12e+04	2.0e+02	5.12e+06	4.41e+04	1.2e+02
20	13C-2,3,4,7,8-PeCDF	8.28e+06	4.12e+04	2.0e+02	5.14e+06	4.41e+04	1.2e+02
21	13C-1,2,3,4,7,8-HxCDF	3.61e+06	4.82e+03	7.5e+02	6.99e+06	1.19e+04	5.9e+02
22	13C-1,2,3,6,7,8-HxCDF	3.89e+06	4.82e+03	8.1e+02	7.38e+06	1.19e+04	6.2e+02
23	13C-2,3,4,6,7,8-HxCDF	3.49e+06	4.82e+03	7.2e+02	6.79e+06	1.19e+04	5.7e+02
24	13C-1,2,3,7,8,9-HxCDF	2.95e+06	4.82e+03	6.1e+02	5.59e+06	1.19e+04	4.7e+02
25	13C-1,2,3,4,6,7,8-HpCDF	1.63e+06	7.83e+03	2.1e+02	3.63e+06	4.89e+03	7.4e+02
26	13C-1,2,3,4,7,8,9-HpCDF	1.12e+06	7.83e+03	1.4e+02	2.41e+06	4.89e+03	4.9e+02
27	13C-2,3,7,8-TCDD	2.51e+06	1.22e+04	2.1e+02	3.11e+06	8.98e+03	3.5e+02
28	13C-1,2,3,7,8-PeCDD	6.16e+06	5.67e+03	1.1e+03	3.91e+06	3.74e+03	1.0e+03
29	13C-1,2,3,4,7,8-HxCDD	4.80e+06	2.41e+03	2.0e+03	3.72e+06	2.37e+03	1.6e+03
30	13C-1,2,3,6,7,8-HxCDD	4.53e+06	2.41e+03	1.9e+03	3.55e+06	2.37e+03	1.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.61e+06	2.56e+03	1.0e+03	2.44e+06	1.18e+03	2.1e+03
32	13C-OCDD	1.12e+06	1.90e+03	5.9e+02	1.18e+06	1.63e+03	7.3e+02
33	13C-1,2,3,4-TCDD	4.88e+06	1.22e+04	4.0e+02	6.12e+06	8.98e+03	6.8e+02
34	13C-1,2,3,7,8,9-HxCDD	6.99e+06	2.41e+03	2.9e+03	5.46e+06	2.37e+03	2.3e+03
35	37Cl-2,3,7,8-TCDD	6.33e+06	5.79e+03	1.1e+03			

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Peak List Summary

CLIENT ID.
SL0218

ntry: 36 Totals Name: Total Tetra-Furans

un: 14 File: P519872 Sample:1 Injection:1 Function:1

cquired: 9-JAN-19 21:55:36 Processed: 10-JAN-19 08:15:32

lass: 303.9020 305.8990 Tot Response: 1.80e+07 RRF: 0.9417

	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
	22:48	3.64e+04	4.78e+04	0.76	yes	8.42e+04		n	n
	23:06	1.95e+05	2.53e+05	0.77	yes	4.47e+05		n	n
	23:26	6.02e+04	7.89e+04	0.76	yes	1.39e+05		n	n
	23:44	1.75e+05	2.26e+05	0.77	yes	4.00e+05		n	n
	24:07	4.21e+04	5.55e+04	0.76	yes	9.77e+04		n	n
	24:21	1.22e+05	1.59e+05	0.77	yes	2.82e+05		n	n
	24:28	2.23e+05	2.84e+05	0.78	yes	5.07e+05		n	n
	24:56	2.23e+06	2.85e+06	0.78	yes	5.08e+06		n	n
	25:14	1.12e+05	1.45e+05	0.77	yes	2.57e+05		n	n
0	25:58	4.69e+06	5.95e+06	0.79	yes	1.06e+07	2,3,7,8-TCDF	n	n
1	26:41	5.27e+04	6.76e+04	0.78	yes	1.20e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0218

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 14 File: P519872 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 21:55:36 Processed: 10-JAN-19 08:15:32

Mass: 319.8970 321.8940 Tot Response: 2.17e+06 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:01	8.50e+05	1.08e+06 0.79	yes	1.93e+06	2,3,7,8-TCDD	n	n
2	27:18	1.08e+05	1.36e+05 0.79	yes	2.44e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0218

ntry: 38 Totals Name: Total Penta-Furans1

un: 14 File: P519872 Sample:1 Injection:1 Function:1

cquired: 9-JAN-19 21:55:36 Processed: 10-JAN-19 08:15:32

lass: 339.8600 341.8570 Tot Response: 8.58e+01 RRF: 0.9857

	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
.	28:49	5.09e+01	3.48e+01 1.46	yes	8.58e+01		n	n

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Peak List Summary

CLIENT ID.
SL0218

Entry: 39 Totals Name: Total Penta-Furans2

Run: 14 File: P519872 Sample:1 Injection:1 Function:2

Acquired: 9-JAN-19 21:55:36 Processed: 10-JAN-19 08:15:32

Mass: 339.8600 341.8570 Tot Response: 8.55e+05 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:44	2.04e+03	1.32e+03	1.54	yes	3.37e+03		n	n
2	29:54	8.41e+04	5.44e+04	1.54	yes	1.39e+05		n	n
3	30:30	4.24e+03	2.80e+03	1.51	yes	7.04e+03		n	n
4	30:35	3.41e+03	2.12e+03	1.61	yes	5.52e+03		n	n
5	30:44	1.79e+04	1.19e+04	1.51	yes	2.99e+04		n	n
6	30:55	2.01e+05	1.30e+05	1.54	yes	3.32e+05	1,2,3,7,8-PeCDF	n	n
7	31:12	5.04e+04	3.23e+04	1.56	yes	8.27e+04		n	n
8	31:55	1.48e+05	9.62e+04	1.54	yes	2.44e+05	2,3,4,7,8-PeCDF	n	n
9	32:54	7.49e+03	5.04e+03	1.49	yes	1.25e+04		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0218

ntry: 40 Totals Name: Total Penta-Dioxins

un: 14 File: P519872 Sample:1 Injection:1 Function:2

cquired: 9-JAN-19 21:55:36 Processed: 10-JAN-19 08:15:32

lass: 355.8550 357.8520 Tot Response: 3.65e+04 RRF: 0.9565

	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
	29:57	1.65e+03	1.12e+03 1.48	yes	2.77e+03		n	n
	30:28	7.55e+02	5.31e+02 1.42	yes	1.29e+03		n	n
	30:58	1.04e+03	6.90e+02 1.51	yes	1.73e+03		n	n
	31:08	9.35e+02	5.71e+02 1.64	yes	1.51e+03		n	n
	31:14	4.16e+02	2.69e+02 1.55	yes	6.85e+02		n	n
	31:27	7.79e+02	4.64e+02 1.68	yes	1.24e+03		n	n
	31:48	5.12e+02	3.43e+02 1.49	yes	8.55e+02		n	n
	32:14	1.57e+04	9.76e+03 1.60	yes	2.54e+04	1,2,3,7,8-PeCDD	n	n
	32:38	5.91e+02	4.05e+02 1.46	yes	9.97e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0218

Entry: 41 Totals Name: Total Hexa-Furans

Run: 14 File: P519872 Sample:1 Injection:1 Function:3

Acquired: 9-JAN-19 21:55:36 Processed: 10-JAN-19 08:15:32

Mass: 373.8210 375.8180 Tot Response: 9.19e+05 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:40	3.35e+03	2.66e+03	1.26	yes	6.02e+03		n	n
2	33:50	2.60e+04	2.13e+04	1.22	yes	4.73e+04		n	n
3	34:23	1.90e+04	1.52e+04	1.25	yes	3.42e+04		n	n
4	34:51	3.35e+05	2.78e+05	1.21	yes	6.13e+05	1,2,3,4,7,8-HxCDF	n	n
5	34:58	8.48e+04	7.24e+04	1.17	yes	1.57e+05	1,2,3,6,7,8-HxCDF	n	n
6	35:31	1.23e+04	1.04e+04	1.18	yes	2.27e+04	2,3,4,6,7,8-HxCDF	n	n
7	36:21	2.09e+04	1.71e+04	1.22	yes	3.81e+04	1,2,3,7,8,9-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0218

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 14 File: P519872 Sample:1 Injection:1 Function:3

Acquired: 9-JAN-19 21:55:36 Processed: 10-JAN-19 08:15:32

Mass: 389.8160 391.8130 Tot Response: 4.34e+04 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:14	9.32e+03	7.50e+03	1.24	yes	1.68e+04		n	n
2	34:47	1.44e+03	1.06e+03	1.36	yes	2.50e+03		n	n
3	35:02	8.71e+03	7.00e+03	1.24	yes	1.57e+04		n	n
4	35:41	5.42e+02	4.31e+02	1.26	yes	9.74e+02	1,2,3,4,7,8-HxCDD	n	n
5	35:47	2.66e+03	2.30e+03	1.16	yes	4.96e+03	1,2,3,6,7,8-HxCDD	n	n
6	36:01	1.36e+03	1.05e+03	1.30	yes	2.41e+03	1,2,3,7,8,9-HxCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0218

ntry: 43 Totals Name: Total Hepta-Furans

un: 14 File: P519872 Sample:1 Injection:1 Function:4

cquired: 9-JAN-19 21:55:36 Processed: 10-JAN-19 08:15:32

lass: 407.7820 409.7790 Tot Response: 2.95e+05 RRF: 1.308

	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
	37:46	8.09e+04	7.81e+04	1.04	yes	1.59e+05	1,2,3,4,6,7,8-HpCDF	n	n
	38:12	4.40e+04	4.37e+04	1.01	yes	8.77e+04		n	n
	39:14	2.44e+04	2.38e+04	1.03	yes	4.82e+04	1,2,3,4,7,8,9-HpCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0218

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 14 File: P519872 Sample:1 Injection:1 Function:4

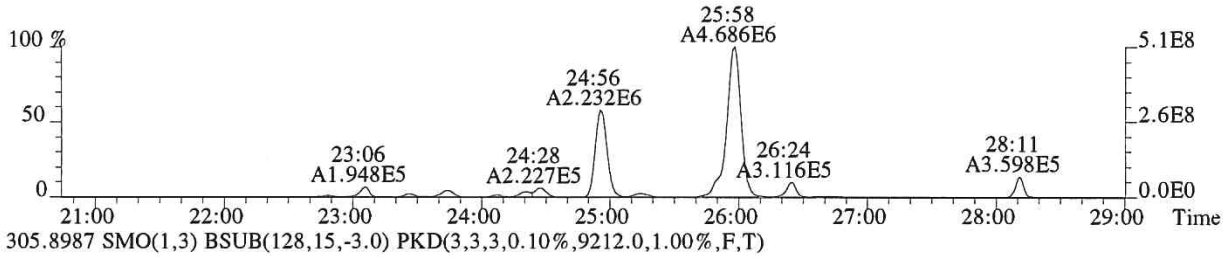
Acquired: 9-JAN-19 21:55:36 Processed: 10-JAN-19 08:15:32

Mass: 423.7770 425.7740 Tot Response: 2.11e+05 RRF: 1.025

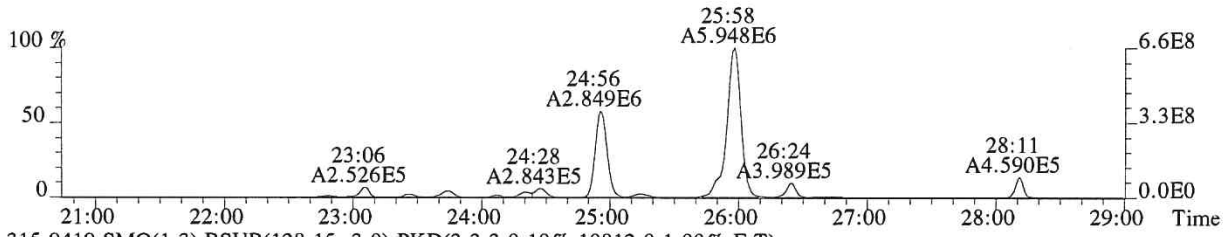
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:04	6.26e+04	6.09e+04 1.03	yes	1.23e+05		n	n
2	38:47	4.39e+04	4.33e+04 1.01	yes	8.72e+04	1,2,3,4,6,7,8-HpCDD	n	n

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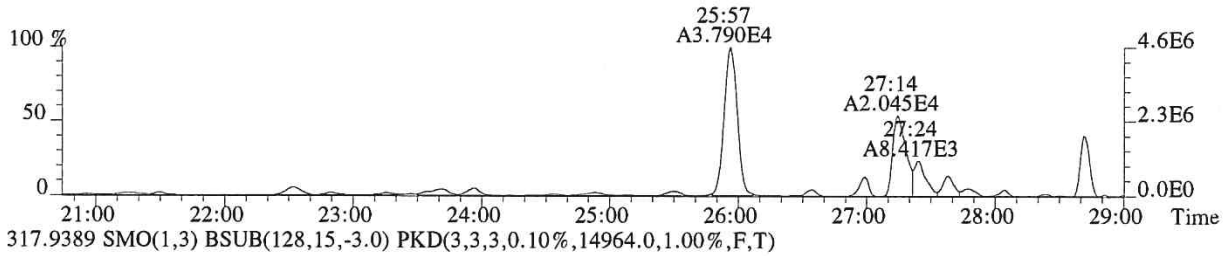
File:P519872 #1-587 Acq: 9-JAN-2019 21:55:36 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8388.0,1.00%,F,T)



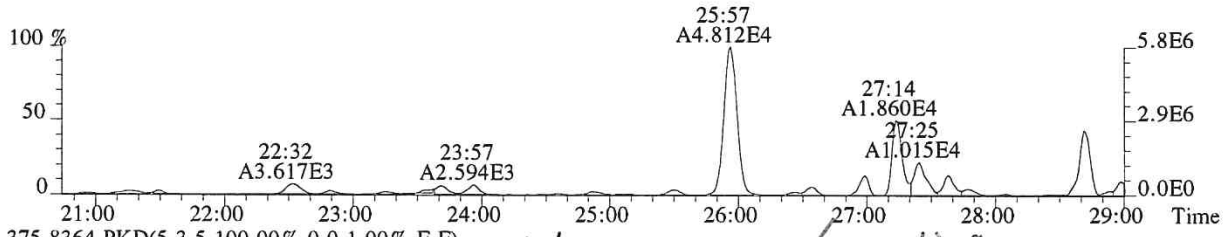
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9212.0,1.00%,F,T)



315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10812.0,1.00%,F,T)

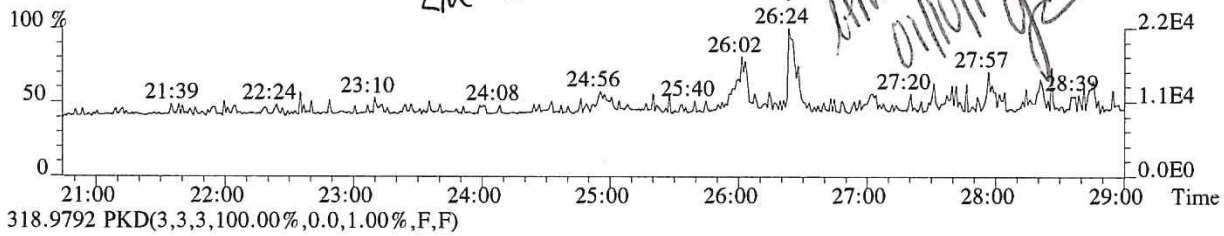


317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,14964.0,1.00%,F,T)

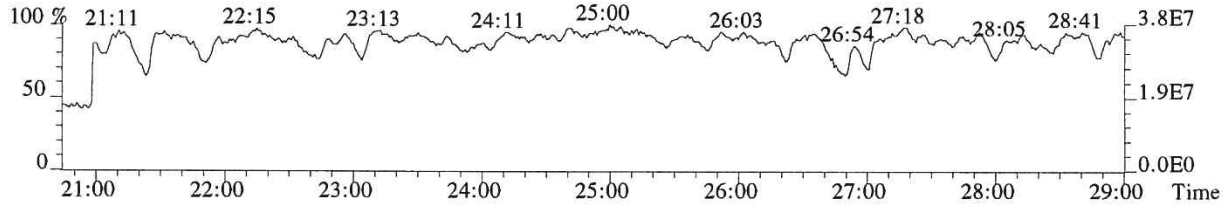


375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

LM 01/11/19

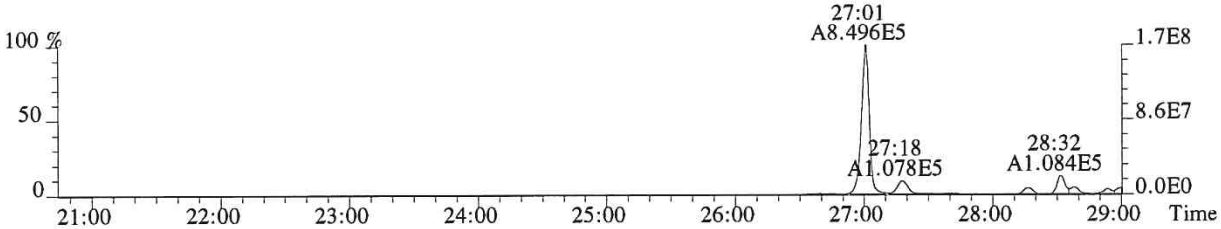


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

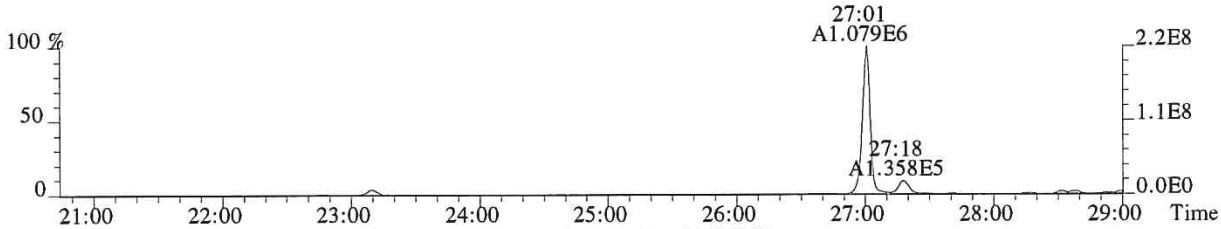


018250

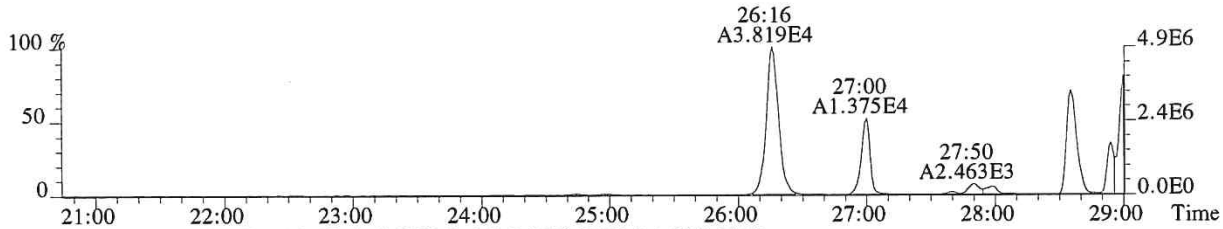
File:P519872 #1-587 Acq: 9-JAN-2019 21:55:36 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2836.0,1.00%,F,T)



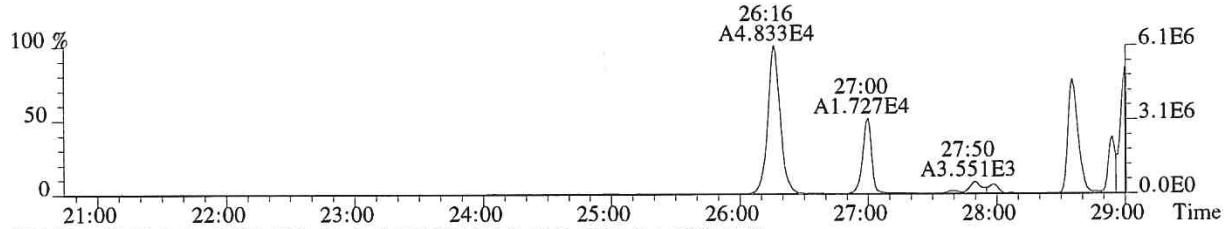
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6096.0,1.00%,F,T)



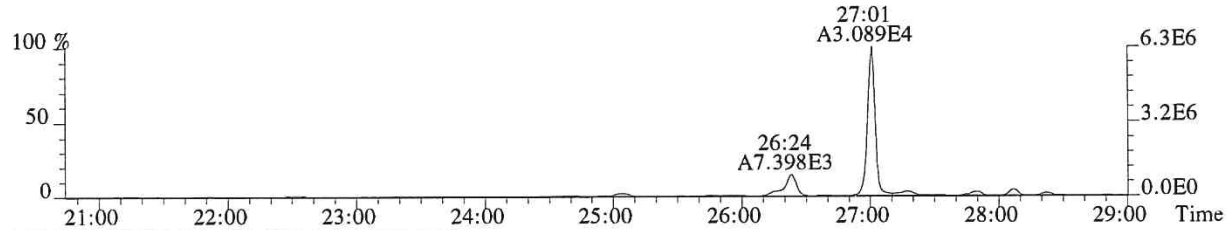
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12220.0,1.00%,F,T)



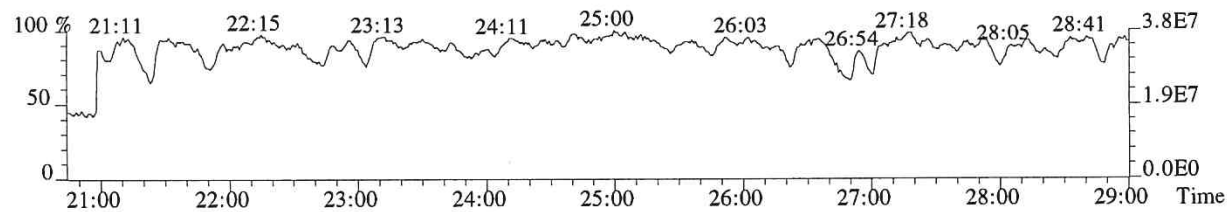
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8976.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5792.0,1.00%,F,T)

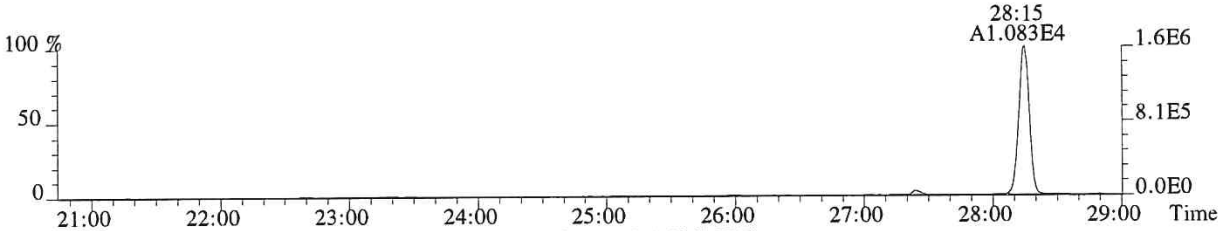


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

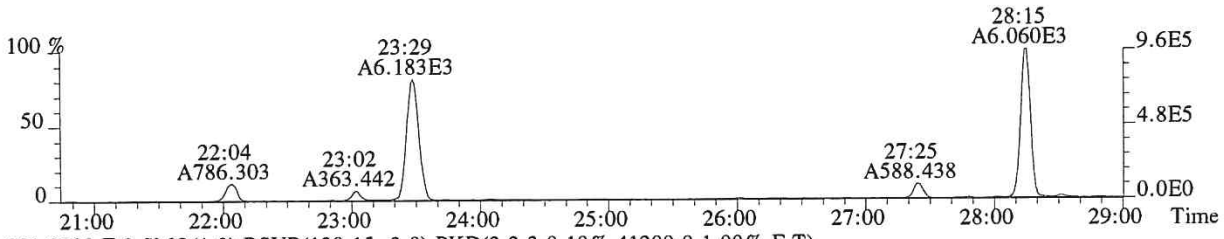


018251

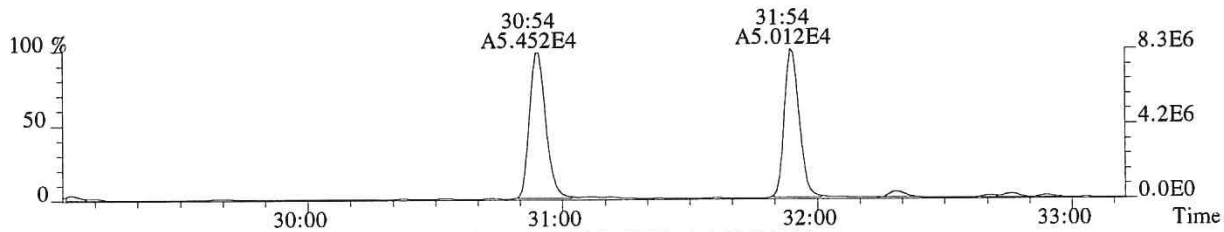
File:P519872 #1-587 Acq: 9-JAN-2019 21:55:36 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1948.0,1.00%,F,T)



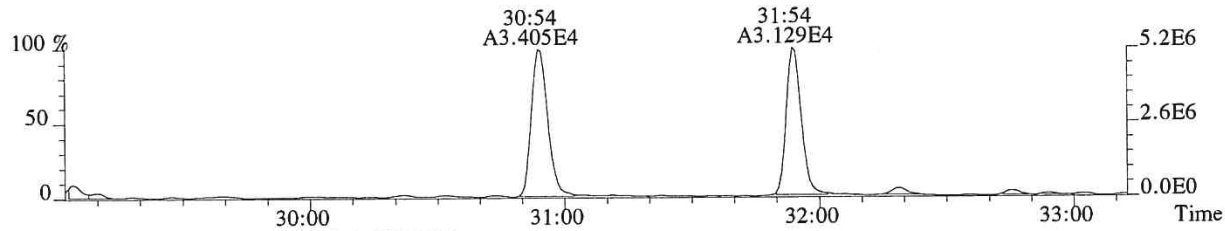
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1888.0,1.00%,F,T)



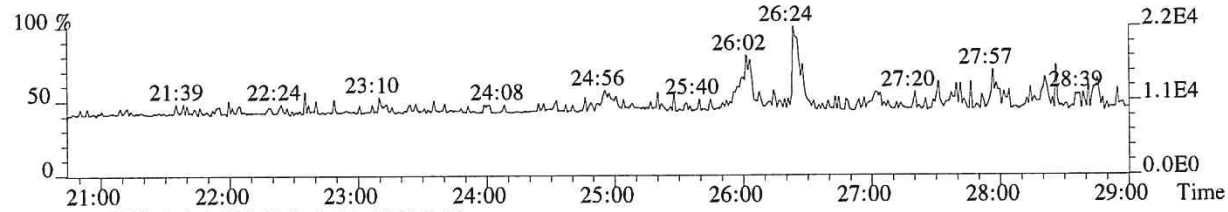
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,41200.0,1.00%,F,T)



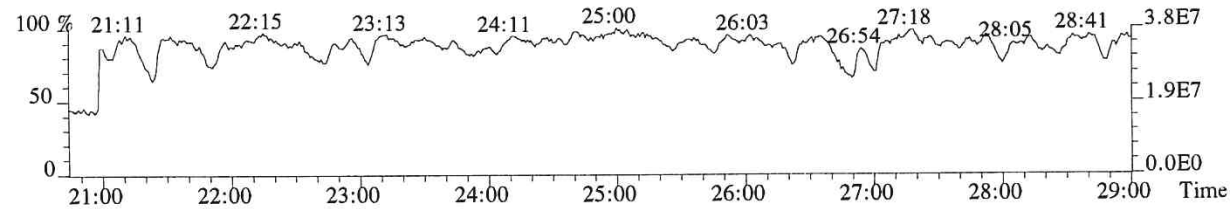
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,44072.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

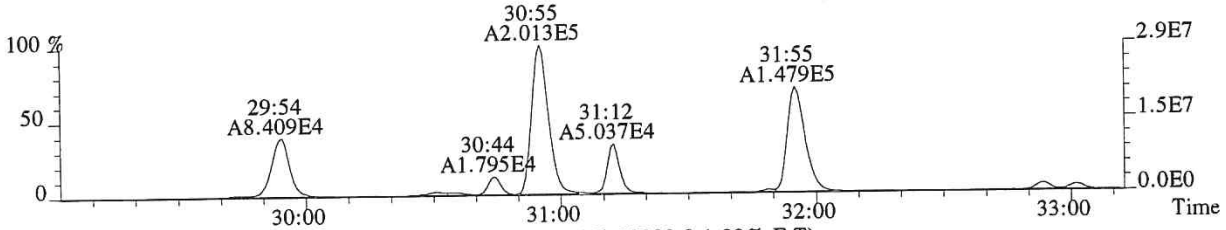


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

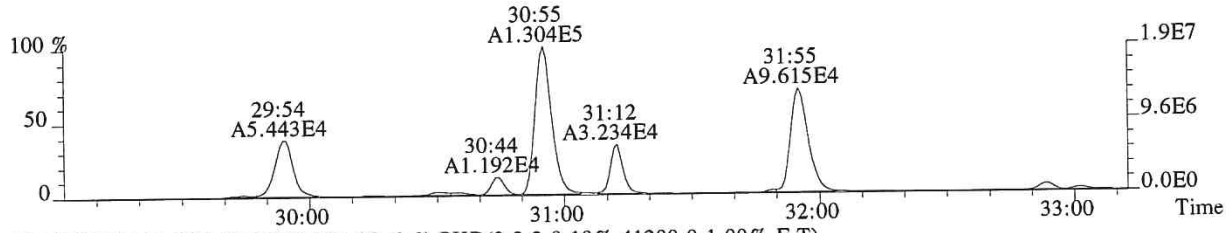


018252

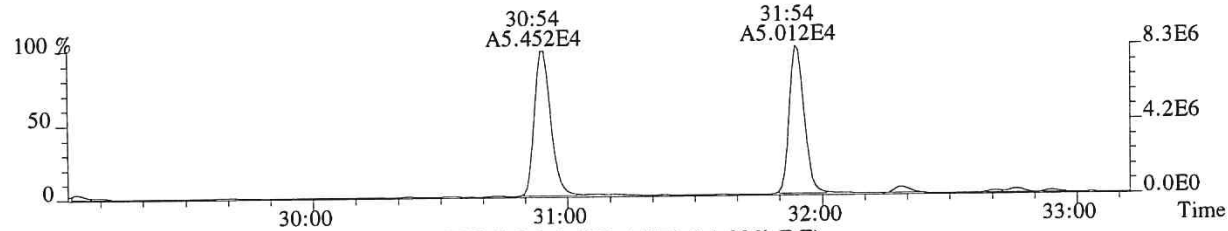
File:P519872 #1-376 Acq: 9-JAN-2019 21:55:36 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,52896.0,1.00%,F,T)



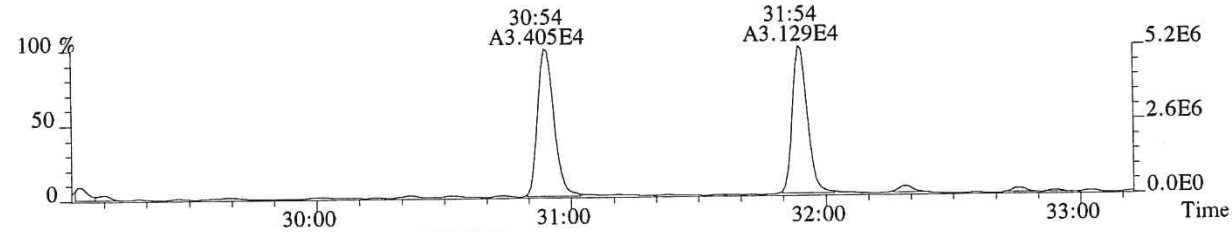
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,32200.0,1.00%,F,T)



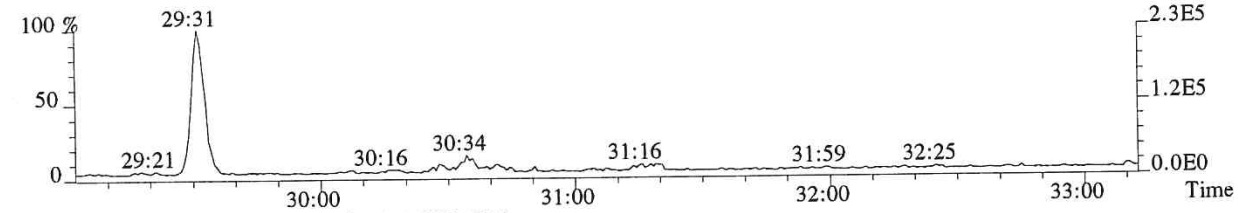
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,41200.0,1.00%,F,T)



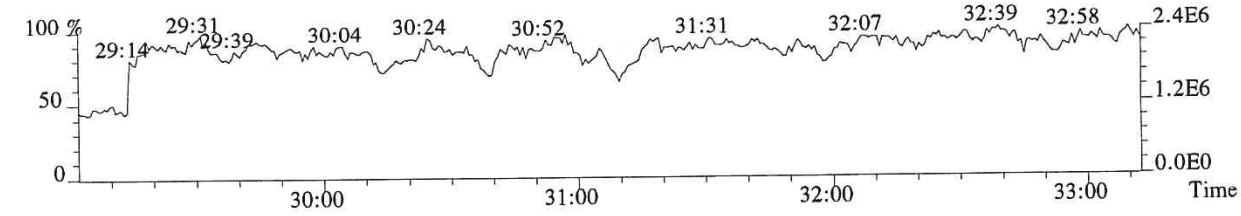
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,44072.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

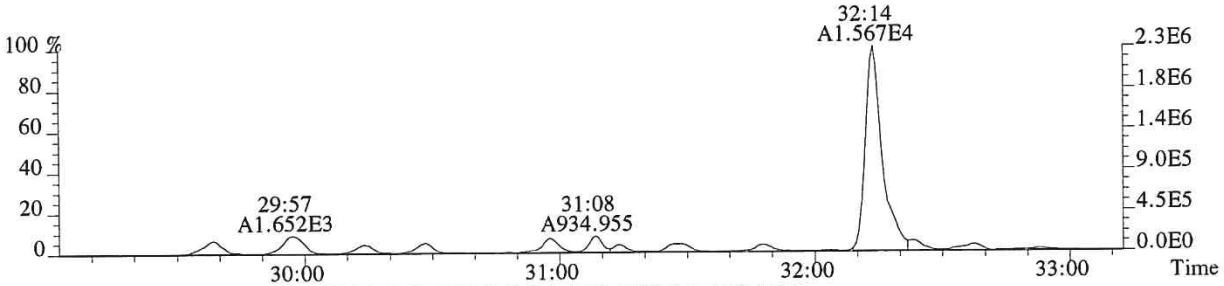


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

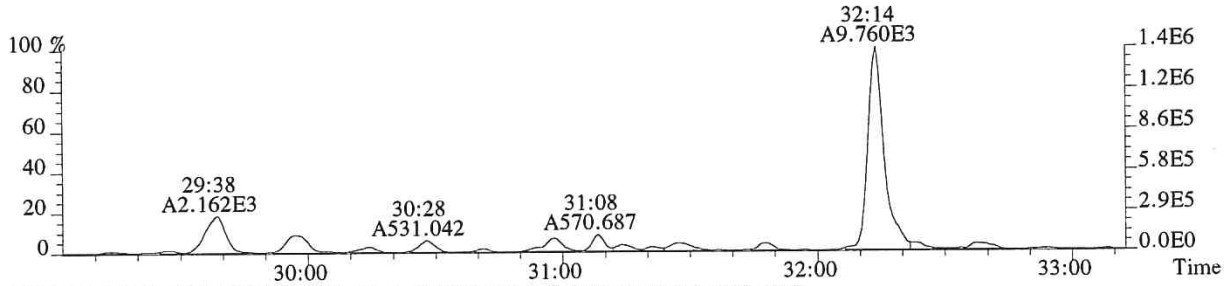


018253

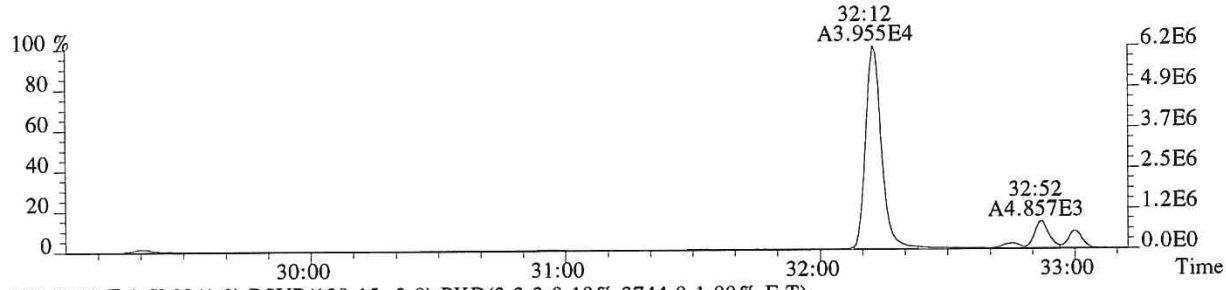
File:P519872 #1-376 Acq: 9-JAN-2019 21:55:36 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4228.0,1.00%,F,T)



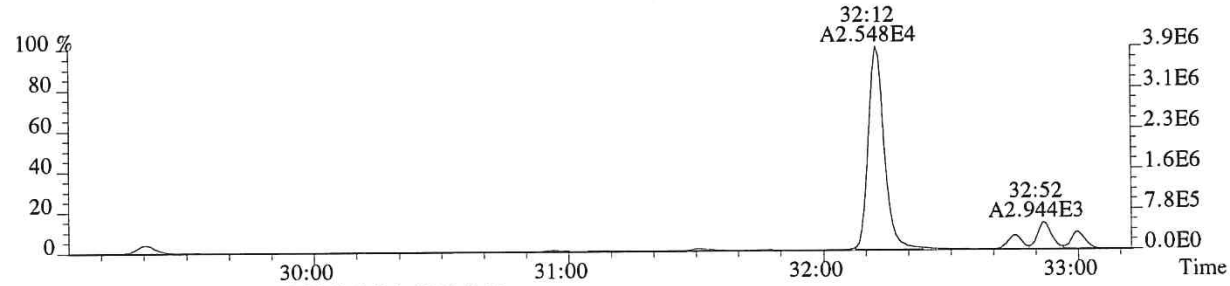
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5116.0,1.00%,F,T)



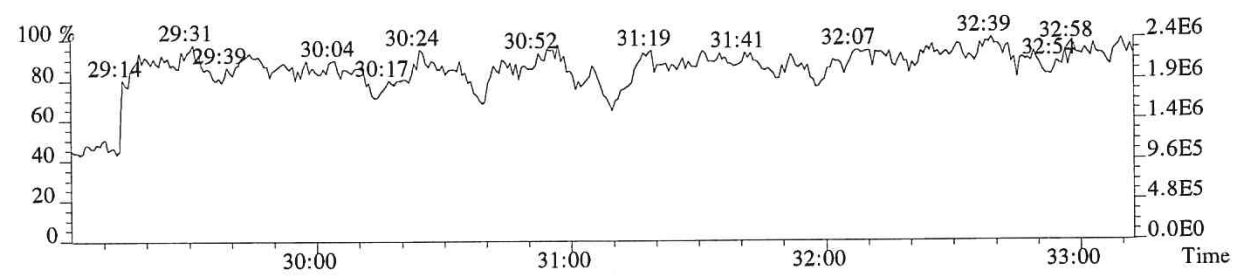
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5668.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3744.0,1.00%,F,T)

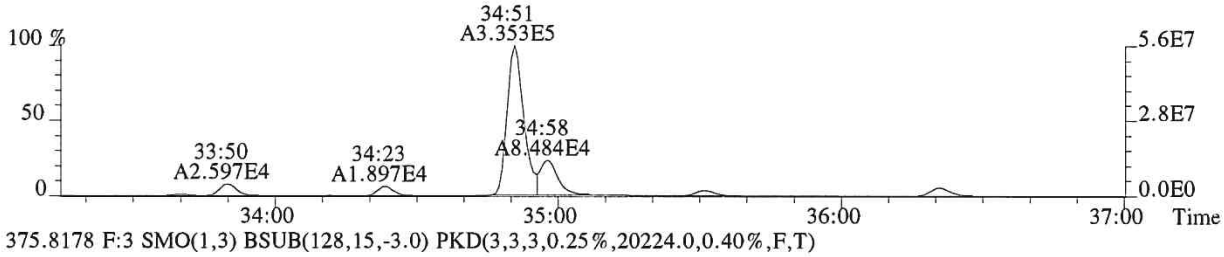


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

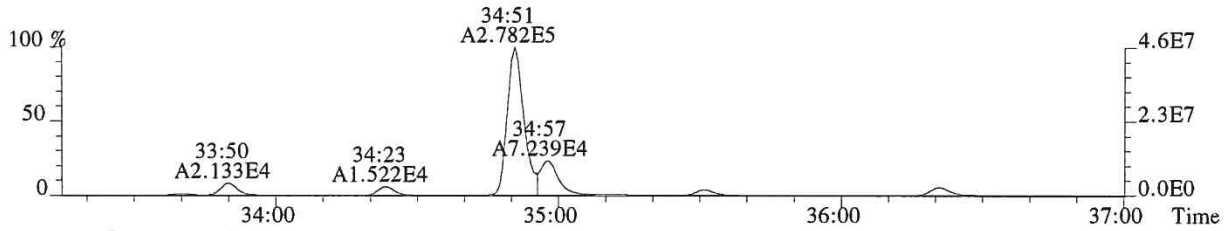


018254

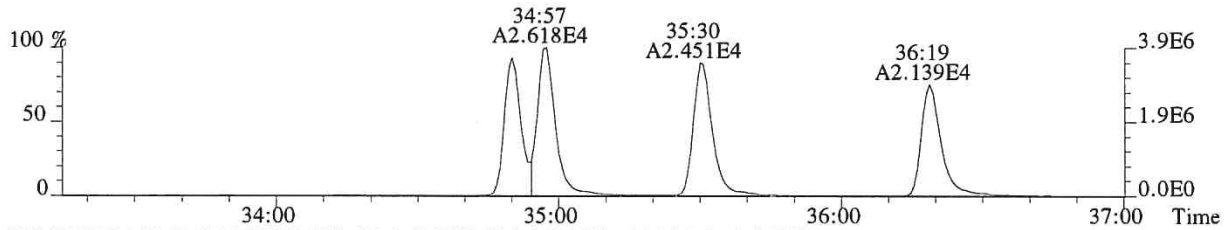
File:P519872 #1-339 Acq: 9-JAN-2019 21:55:36 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,28420.0,0.40%,F,T)



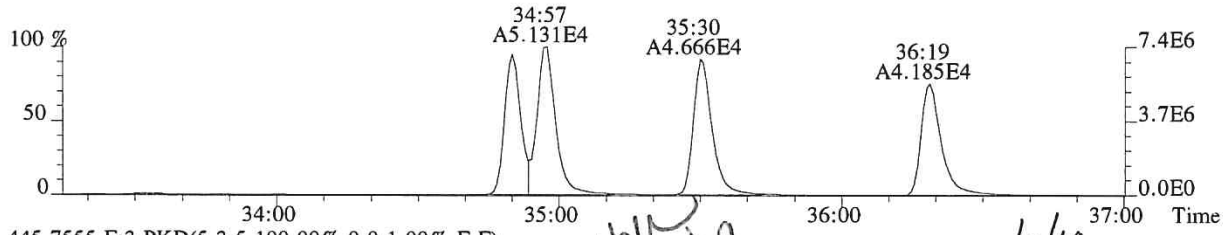
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,20224.0,0.40%,F,T)



383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4824.0,0.40%,F,T)

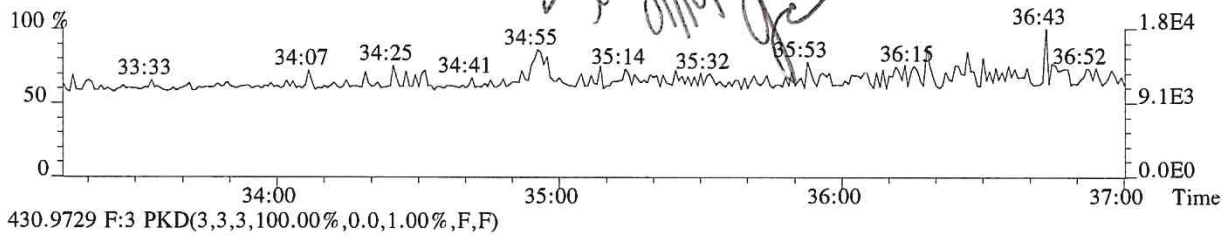


385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11936.0,0.40%,F,T)

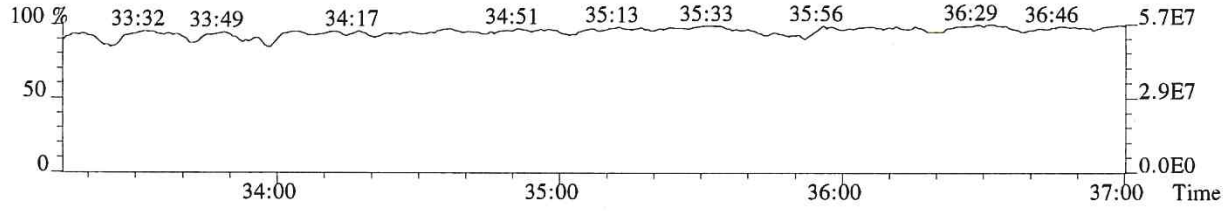


445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

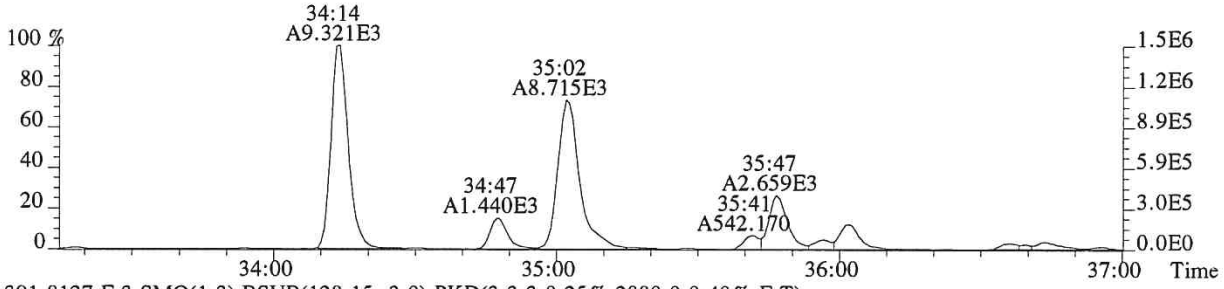
arthur 01/10/19 LM 01/11/19



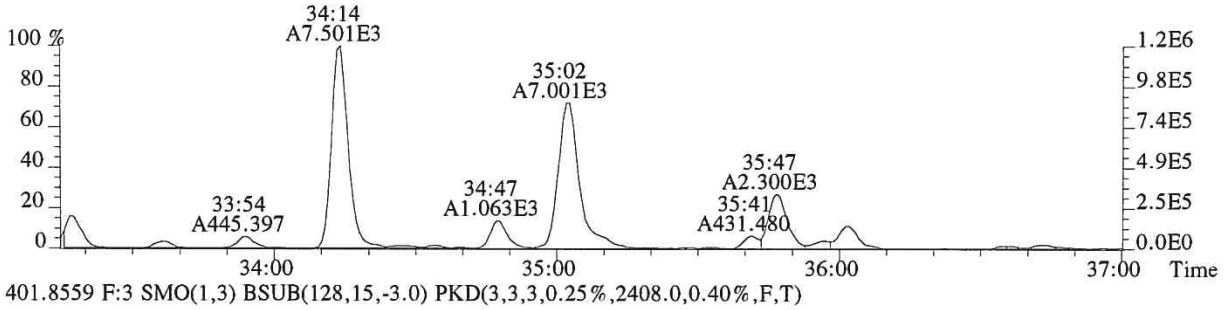
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



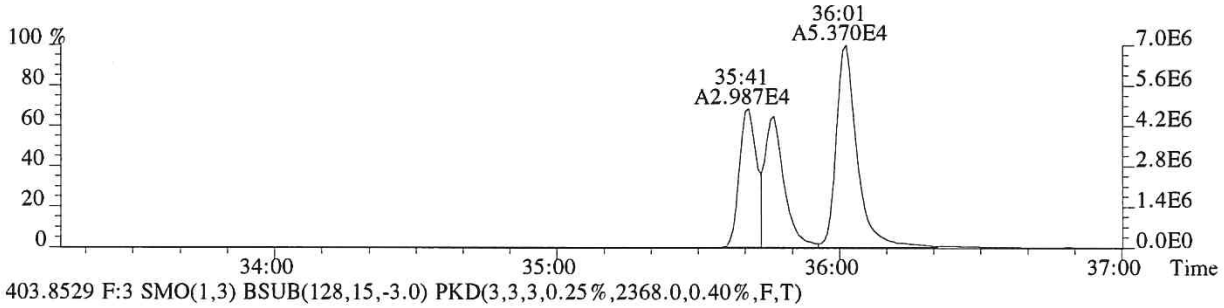
File:P519872 #1-339 Acq: 9-JAN-2019 21:55:36 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4564.0,0.40%,F,T)



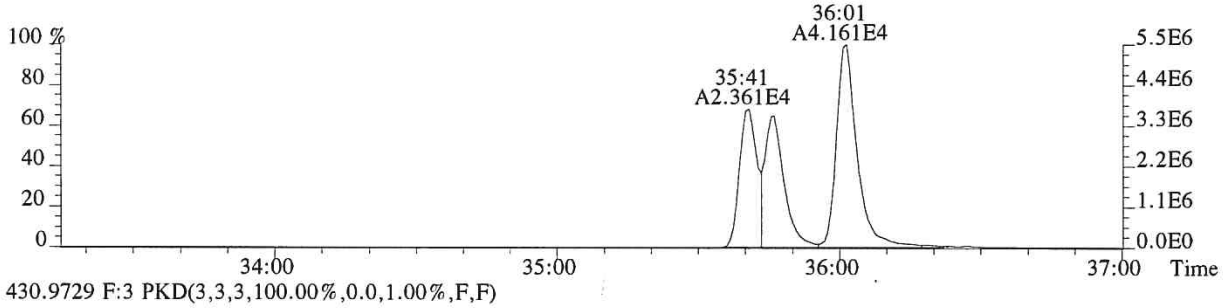
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2880.0,0.40%,F,T)



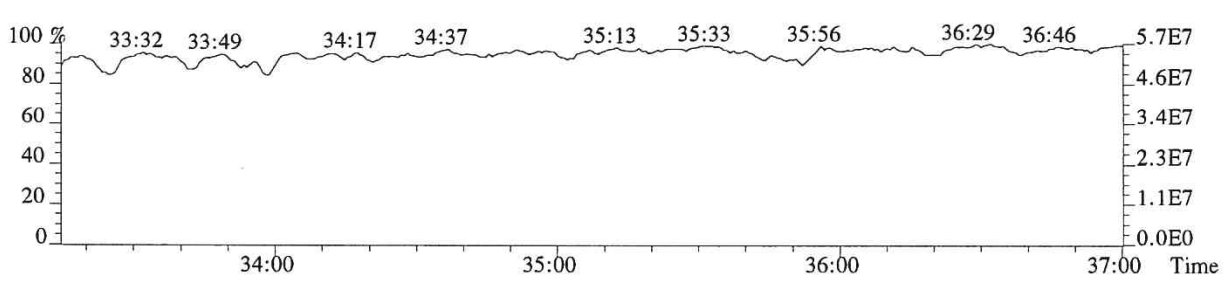
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2408.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2368.0,0.40%,F,T)

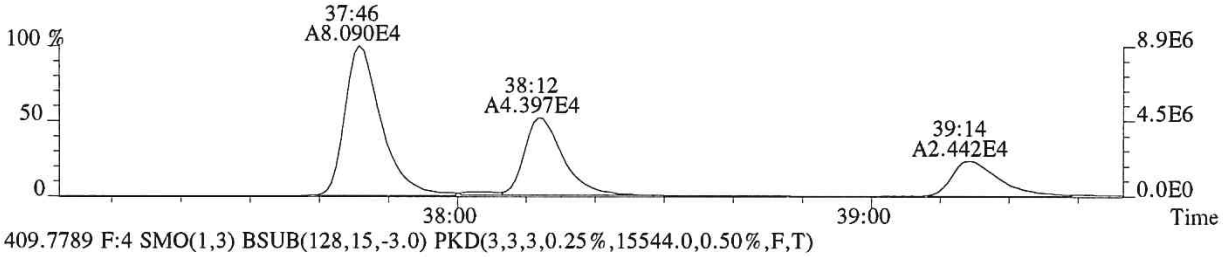


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

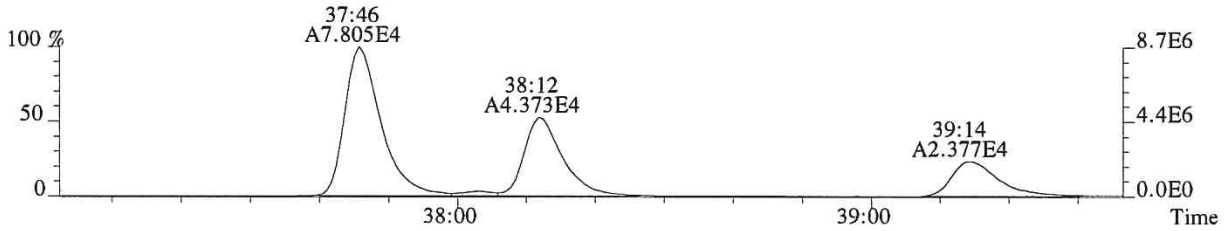


018256

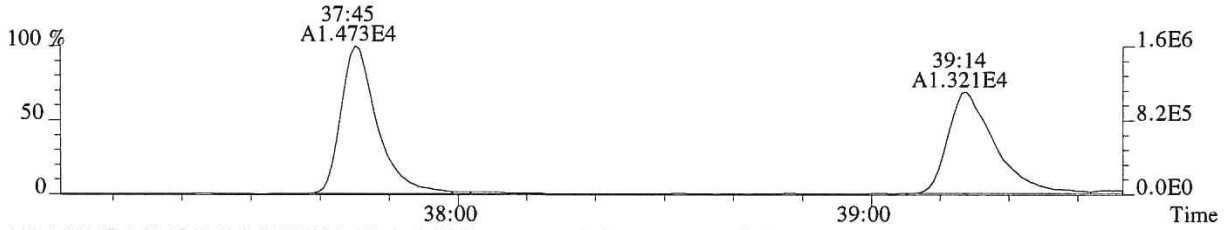
File:P519872 #1-232 Acq: 9-JAN-2019 21:55:36 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,23032.0,0.50%,F,T)



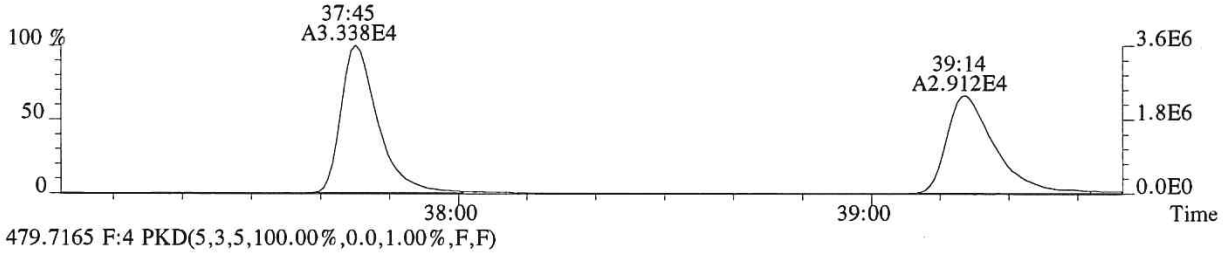
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,15544.0,0.50%,F,T)



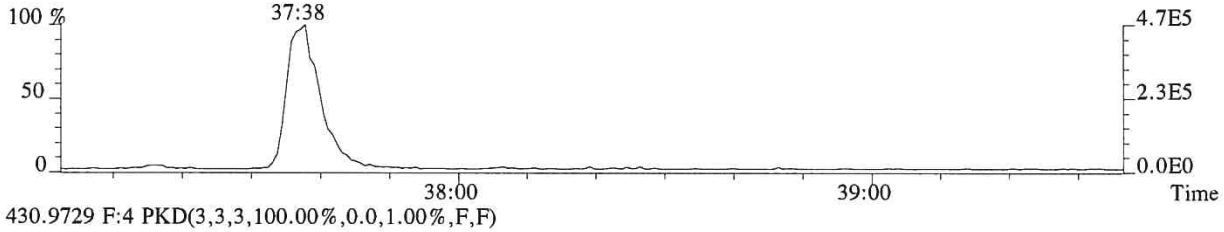
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7828.0,0.50%,F,T)



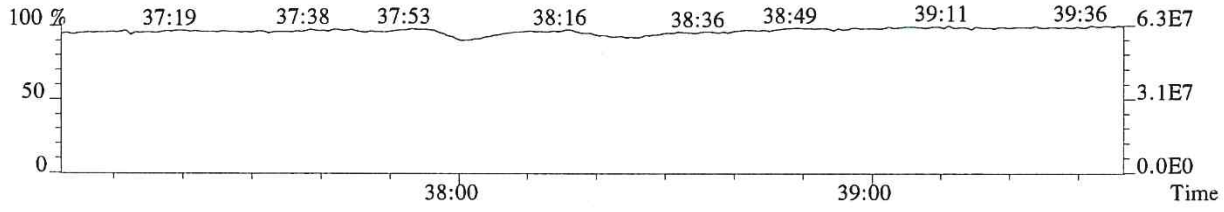
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4888.0,0.50%,F,T)



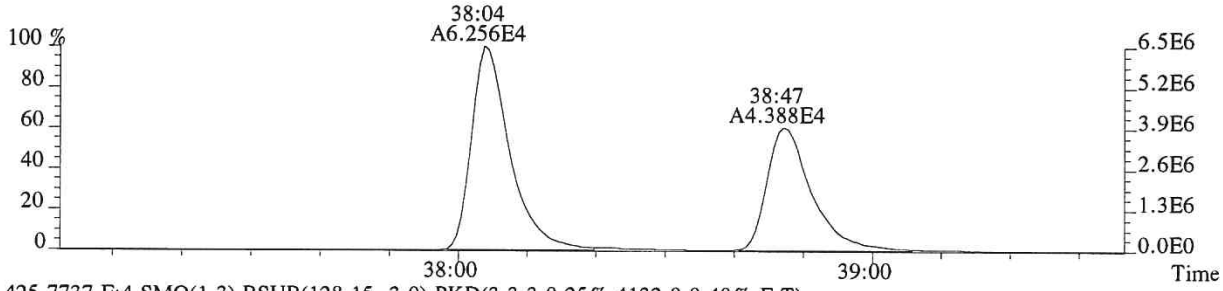
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



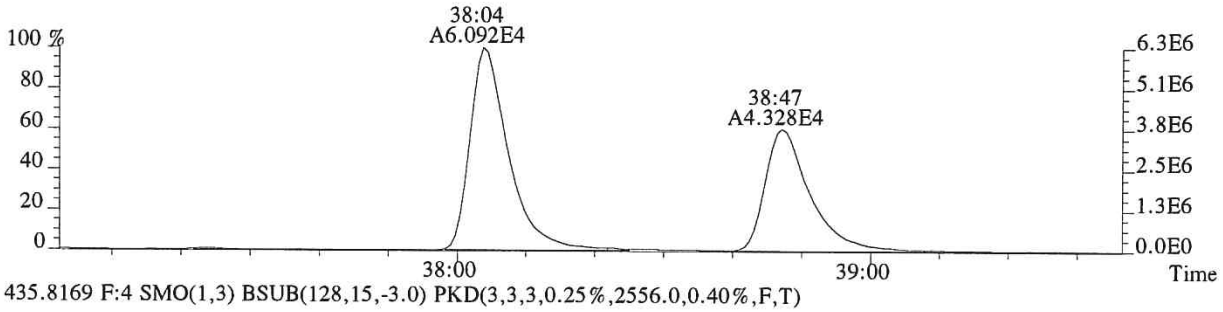
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



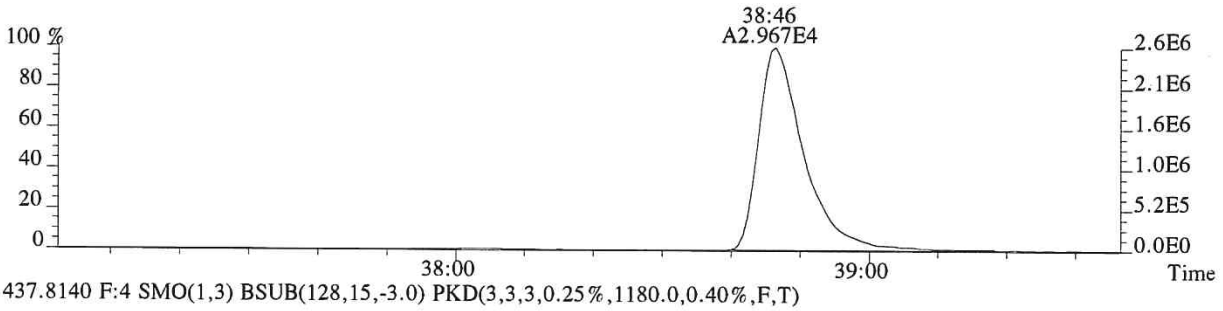
File:P519872 #1-232 Acq: 9-JAN-2019 21:55:36 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1236.0,0.40%,F,T)



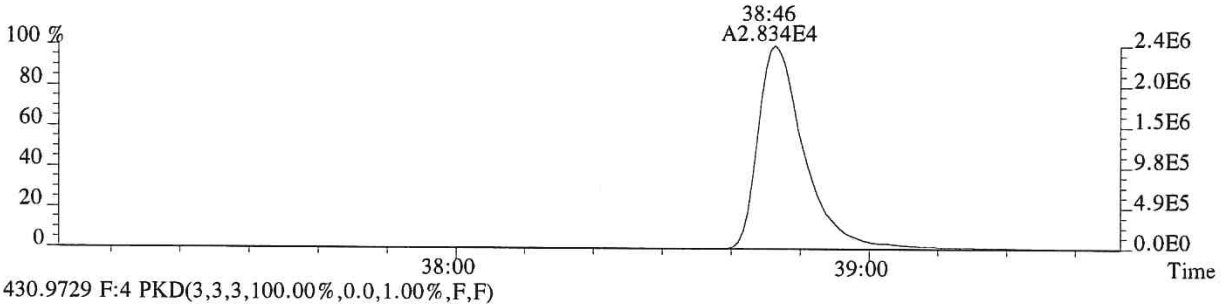
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4132.0,0.40%,F,T)



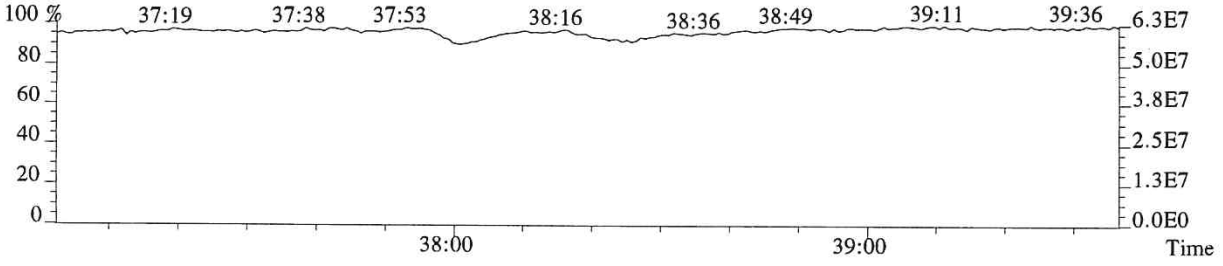
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2556.0,0.40%,F,T)



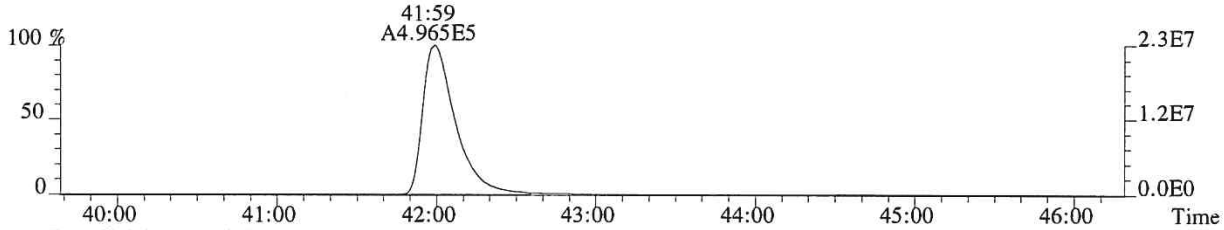
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1180.0,0.40%,F,T)



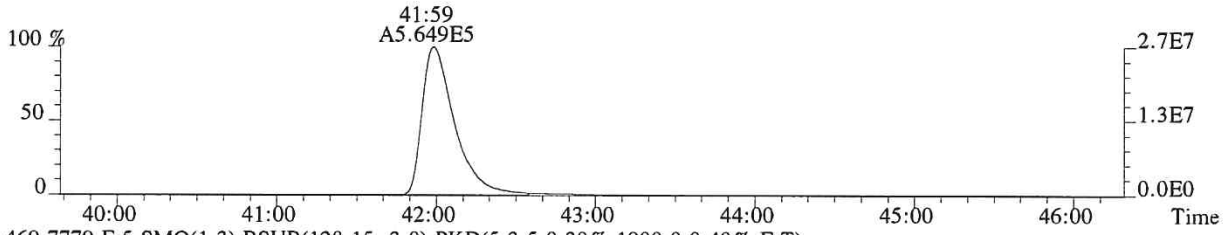
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



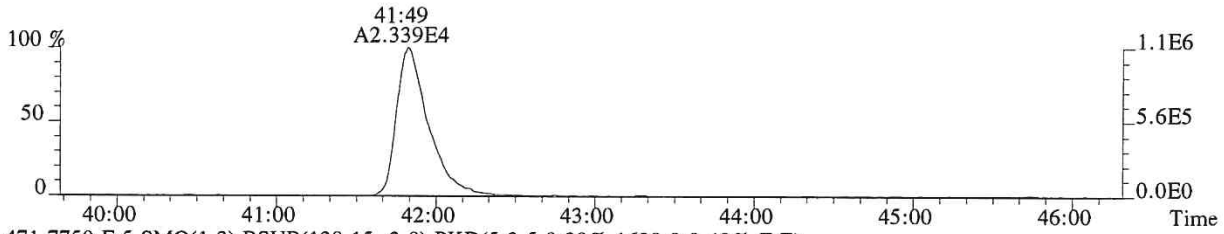
File:P519872 #1-601 Acq: 9-JAN-2019 21:55:36 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1344.0,0.40%,F,T)



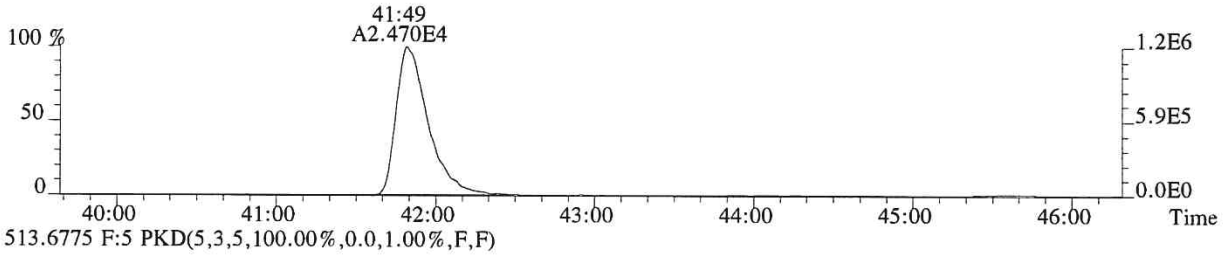
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1276.0,0.40%,F,T)



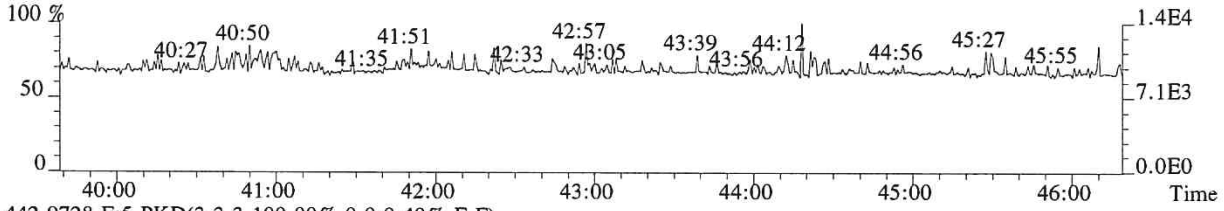
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1900.0,0.40%,F,T)



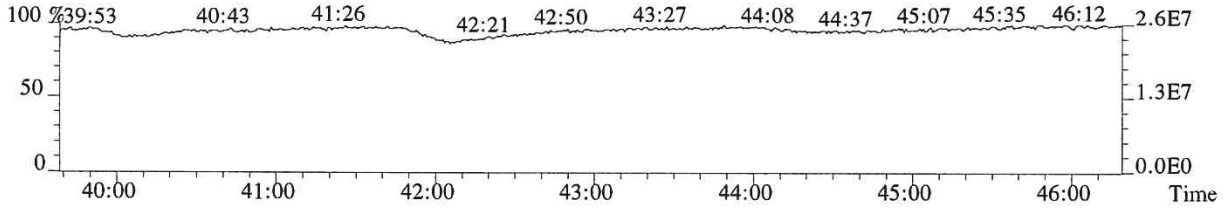
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1628.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

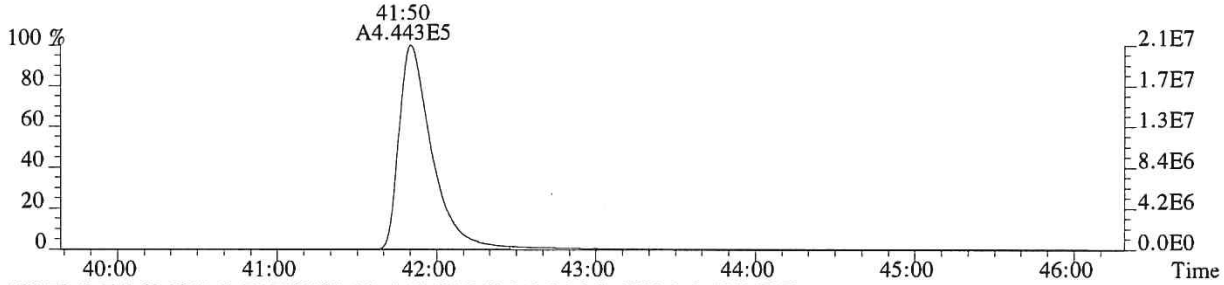


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

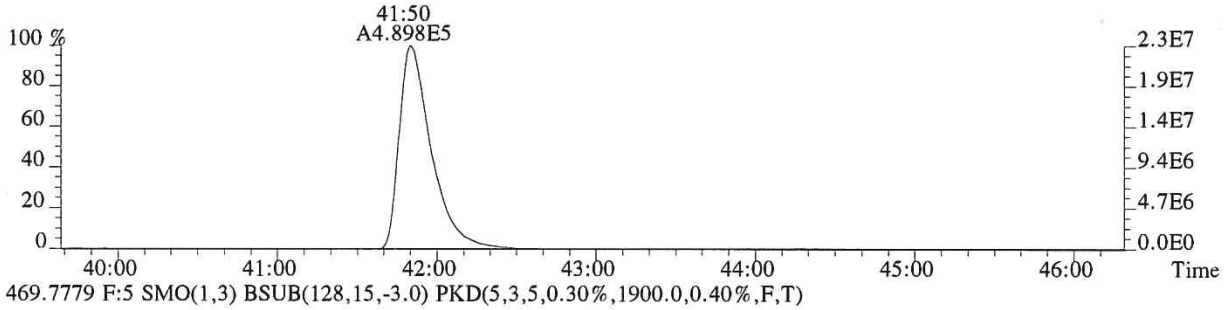


018259

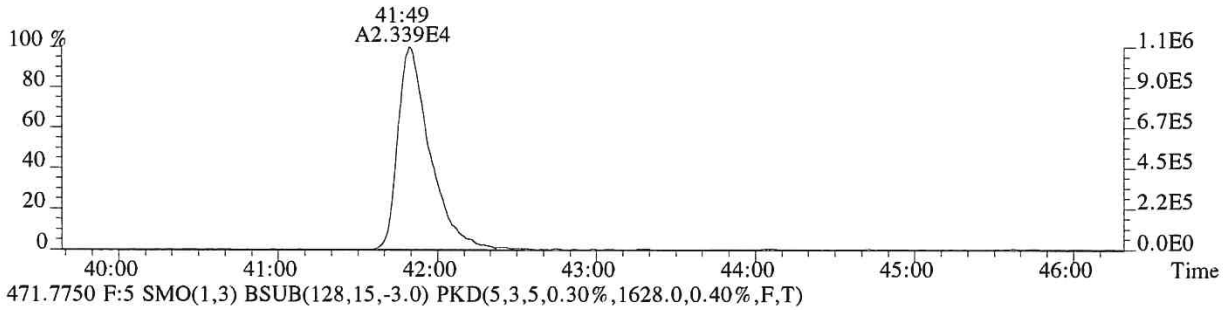
File:P519872 #1-601 Acq: 9-JAN-2019 21:55:36 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1172.0,0.40%,F,T)



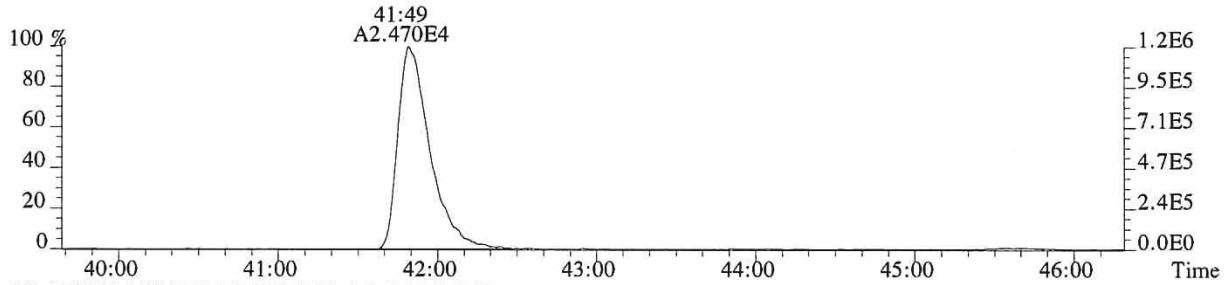
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1752.0,0.40%,F,T)



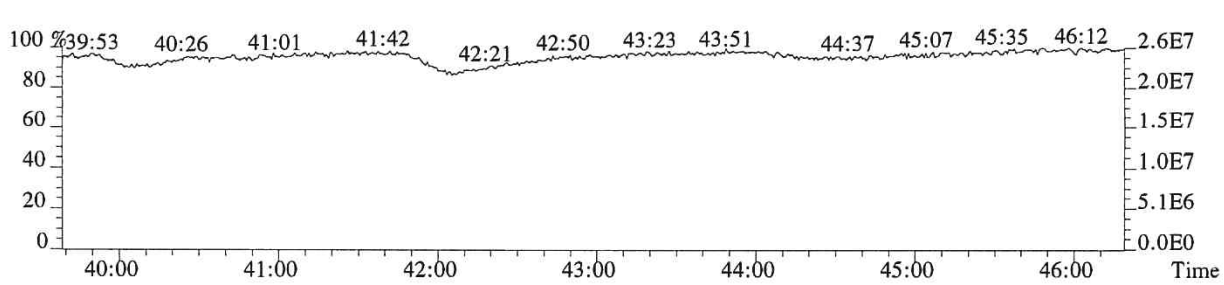
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1900.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1628.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0218

Run #16 Filename P519909 Samp: 1 Inj: 1 Acquired: 11-JAN-19 08:57:31
Processed: 11-JAN-19 14:53:39 Sample ID: E1801139-005DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	1.713e+04	2.275e+04	0.75	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:27	6.902e+02	5.431e+02	1.27	no	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	5.387e+02	3.878e+02	1.39	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	1.143e+03	9.151e+02	1.25	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	3.480e+02	2.471e+02	1.41	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:02	4.382e+01	4.413e+01	0.99	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:50	7.734e+01	6.545e+01	1.18	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:09	3.536e+02	3.659e+02	0.97	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:28	1.195e+02	1.039e+02	1.15	yes	no	1.258
10	Unk	OCDF	40:44	2.899e+03	3.368e+03	0.86	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:24	3.903e+03	4.961e+03	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:47	6.681e+01	3.826e+01	1.75	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:16	1.809e+01	6.647e+00	2.72	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:30	4.453e+00	7.107e+00	0.63	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	1.964e+02	1.896e+02	1.04	yes	no	1.025
17	Unk	OCDD	40:34	2.568e+03	2.986e+03	0.86	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:20	2.233e+04	2.836e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:26	3.319e+04	2.097e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:27	3.087e+04	1.948e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:22	1.358e+04	2.584e+04	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.548e+04	2.960e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	1.447e+04	2.793e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	1.300e+04	2.554e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	1.131e+04	2.578e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:28	1.010e+04	2.286e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:22	1.063e+04	1.345e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:47	2.378e+04	1.498e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:10	1.983e+04	1.535e+04	1.29	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:16	1.958e+04	1.531e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	2.403e+04	2.315e+04	1.04	yes	no	0.858
32	IS	13C-OCDD	40:33	2.776e+04	3.105e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:39	1.785e+04	2.221e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:30	2.351e+04	1.869e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:23	1.625e+02				no	1.014

$$\text{OCDD} = \frac{(2.568e+03 + 2.986e+03) \times 4000\ \text{pg} \times 200}{(2.776e+04 + 3.105e+04) \times 10.921\ \text{g} \times 58.3 / 100 \times 1.118 \times 0.143} = 24683\ \text{ng/kg}$$

LM 01/14/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0218

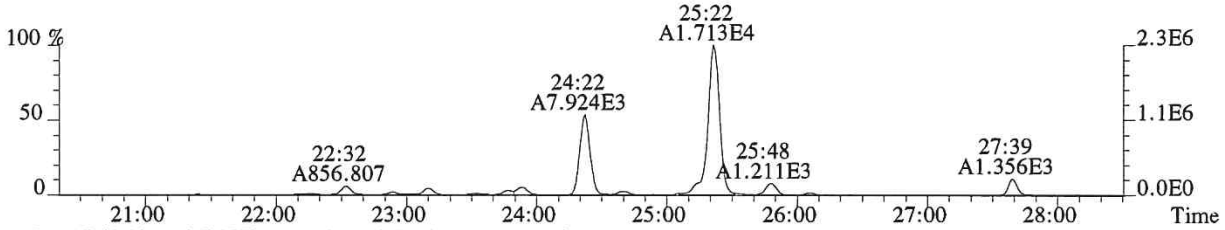
Run #16 Filename P519909 Samp: 1 Inj: 1 Acquired: 11-JAN-19 08:57:31
Processed: 11-JAN-19 14:53:39 LAB. ID: E1801139-005DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
-	2,3,7,8-TCDF	2.28e+06	1.20e+03	1.9e+03	3.00e+06	2.04e+03	1.5e+03
2	1,2,3,7,8-PeCDF	1.23e+05	7.48e+02	1.6e+02	9.13e+04	8.96e+02	1.0e+02
3	2,3,4,7,8-PeCDF	8.51e+04	7.48e+02	1.1e+02	5.70e+04	8.96e+02	6.4e+01
4	1,2,3,4,7,8-HxCDF	2.43e+05	9.36e+02	2.6e+02	1.77e+05	8.20e+02	2.2e+02
5	1,2,3,6,7,8-HxCDF	6.20e+04	9.36e+02	6.6e+01	4.65e+04	8.20e+02	5.7e+01
6	2,3,4,6,7,8-HxCDF	1.09e+04	9.36e+02	1.2e+01	7.61e+03	8.20e+02	9.3e+00
7	1,2,3,7,8,9-HxCDF	1.44e+04	9.36e+02	1.5e+01	9.74e+03	8.20e+02	1.2e+01
8	1,2,3,4,6,7,8-HpCDF	6.85e+04	4.52e+02	1.5e+02	6.71e+04	4.28e+02	1.6e+02
9	1,2,3,4,7,8,9-HpCDF	2.36e+04	4.52e+02	5.2e+01	2.04e+04	4.28e+02	4.8e+01
10	OCDF	4.92e+05	5.44e+02	9.0e+02	5.63e+05	1.30e+03	4.3e+02
11	2,3,7,8-TCDD	6.23e+05	2.42e+03	2.6e+02	7.68e+05	1.10e+03	7.0e+02
12	1,2,3,7,8-PeCDD	9.68e+03	7.92e+02	1.2e+01	6.09e+03	5.16e+02	1.2e+01
13	1,2,3,4,7,8-HxCDD	*	1.14e+03	*	*	7.28e+02	*
14	1,2,3,6,7,8-HxCDD	4.77e+03	1.14e+03	4.2e+00	1.84e+03	7.28e+02	2.5e+00
15	1,2,3,7,8,9-HxCDD	1.31e+03	1.14e+03	1.2e+00	1.77e+03	7.28e+02	2.4e+00
16	1,2,3,4,6,7,8-HpCDD	4.36e+04	5.76e+02	7.6e+01	3.73e+04	8.44e+02	4.4e+01
17	OCDD	4.62e+05	3.40e+02	1.4e+03	5.11e+05	4.28e+02	1.2e+03
18	13C-2,3,7,8-TCDF	3.23e+06	4.08e+03	7.9e+02	4.07e+06	2.81e+03	1.4e+03
19	13C-1,2,3,7,8-PeCDF	5.61e+06	4.92e+02	1.1e+04	3.52e+06	5.60e+02	6.3e+03
20	13C-2,3,4,7,8-PeCDF	5.62e+06	4.92e+02	1.1e+04	3.64e+06	5.60e+02	6.5e+03
21	13C-1,2,3,4,7,8-HxCDF	2.82e+06	9.00e+02	3.1e+03	5.36e+06	3.76e+02	1.4e+04
22	13C-1,2,3,6,7,8-HxCDF	3.06e+06	9.00e+02	3.4e+03	5.81e+06	3.76e+02	1.5e+04
23	13C-2,3,4,6,7,8-HxCDF	2.97e+06	9.00e+02	3.3e+03	5.73e+06	3.76e+02	1.5e+04
24	13C-1,2,3,7,8,9-HxCDF	2.54e+06	9.00e+02	2.8e+03	5.01e+06	3.76e+02	1.3e+04
25	13C-1,2,3,4,6,7,8-HpCDF	2.32e+06	1.74e+03	1.3e+03	5.28e+06	2.02e+03	2.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.98e+06	1.74e+03	1.1e+03	4.46e+06	2.02e+03	2.2e+03
27	13C-2,3,7,8-TCDD	1.73e+06	4.87e+03	3.6e+02	2.17e+06	2.26e+03	9.6e+02
28	13C-1,2,3,7,8-PeCDD	4.31e+06	8.00e+02	5.4e+03	2.73e+06	8.96e+02	3.0e+03
29	13C-1,2,3,4,7,8-HxCDD	4.35e+06	1.07e+03	4.1e+03	3.32e+06	6.84e+02	4.9e+03
30	13C-1,2,3,6,7,8-HxCDD	3.89e+06	1.07e+03	3.6e+03	3.07e+06	6.84e+02	4.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	4.88e+06	1.00e+03	4.9e+03	4.54e+06	4.32e+02	1.1e+04
32	13C-OCDD	4.65e+06	7.92e+02	5.9e+03	5.32e+06	2.28e+02	2.3e+04
33	13C-1,2,3,4-TCDD	2.68e+06	4.87e+03	5.5e+02	3.33e+06	2.26e+03	1.5e+03
34	13C-1,2,3,7,8,9-HxCDD	4.72e+06	1.07e+03	4.4e+03	3.76e+06	6.84e+02	5.5e+03
35	37Cl-2,3,7,8-TCDD	2.87e+04	1.78e+03	1.6e+01			

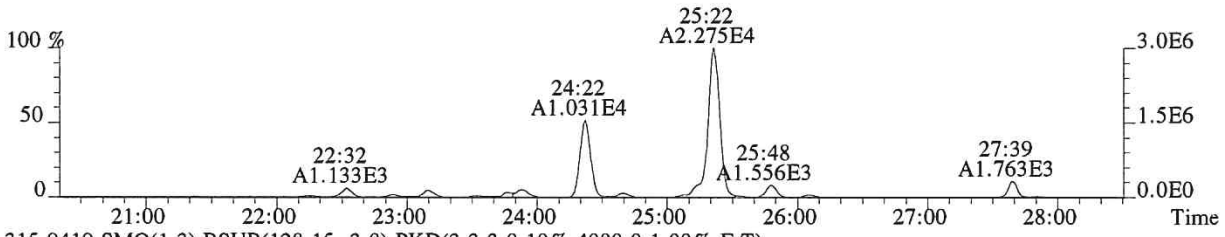
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www.alsglobal.com

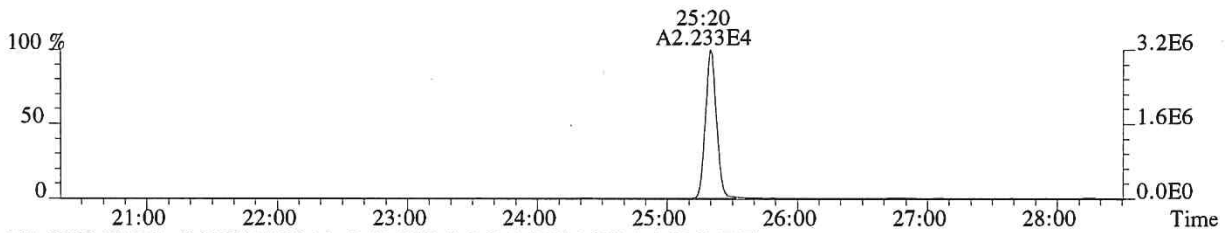
File:P519909 #1-580 Acq:11-JAN-2019 08:57:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1196.0,1.00%,F,T)



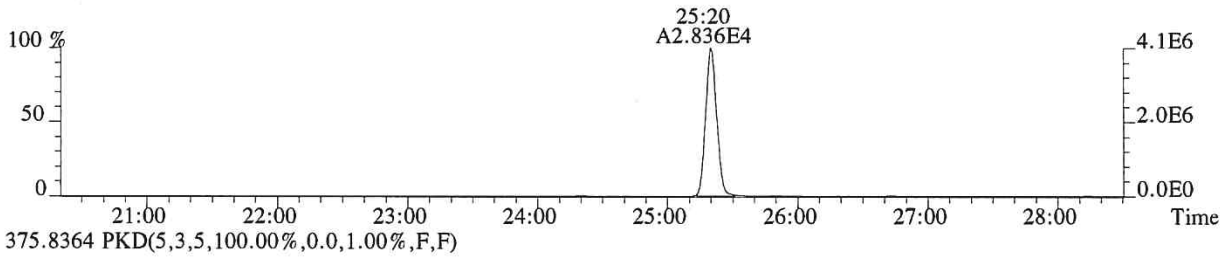
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2044.0,1.00%,F,T)



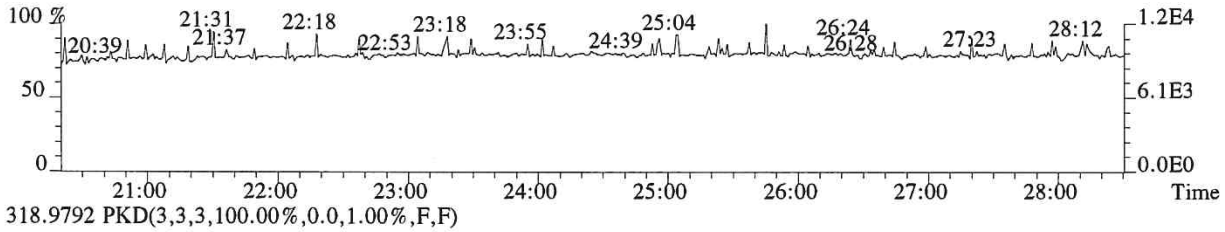
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4080.0,1.00%,F,T)



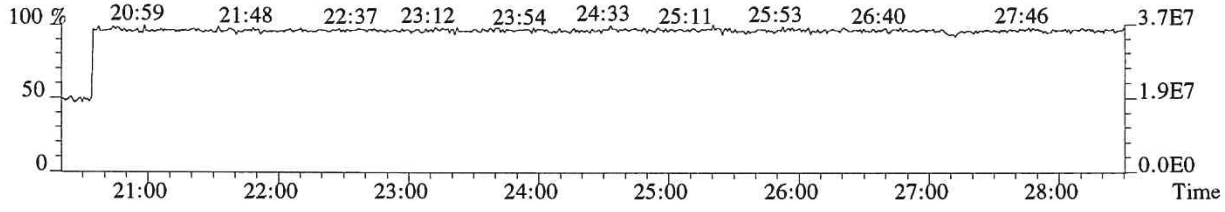
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2808.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

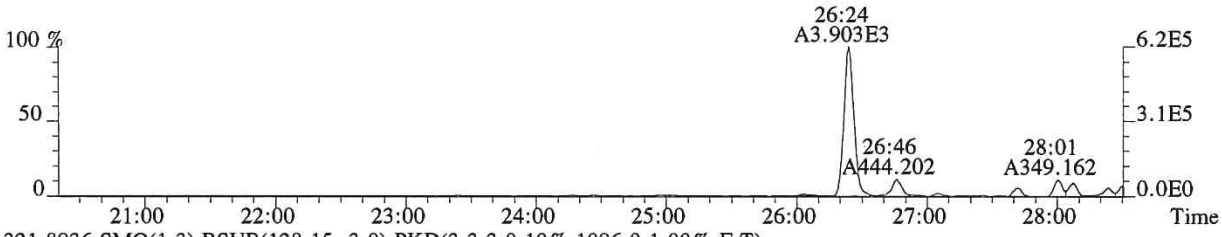


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

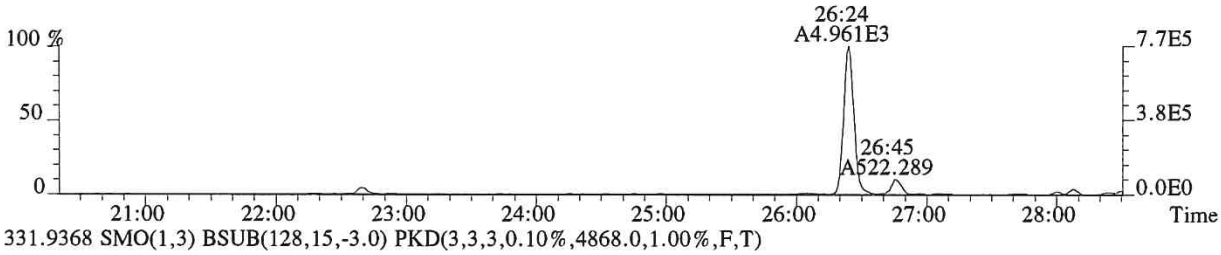


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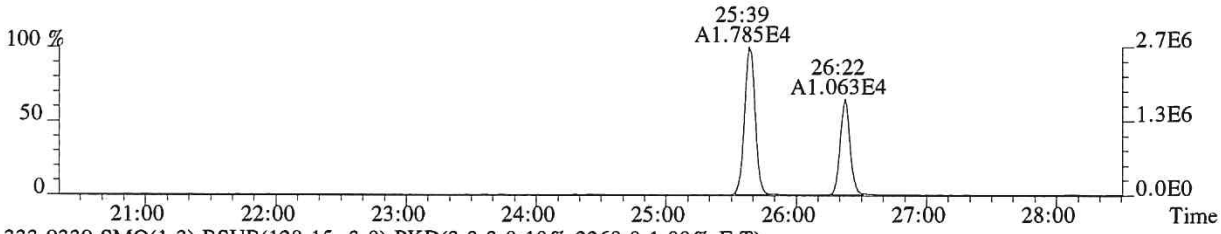
File:P519909 #1-580 Acq:11-JAN-2019 08:57:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2424.0,1.00%,F,T)



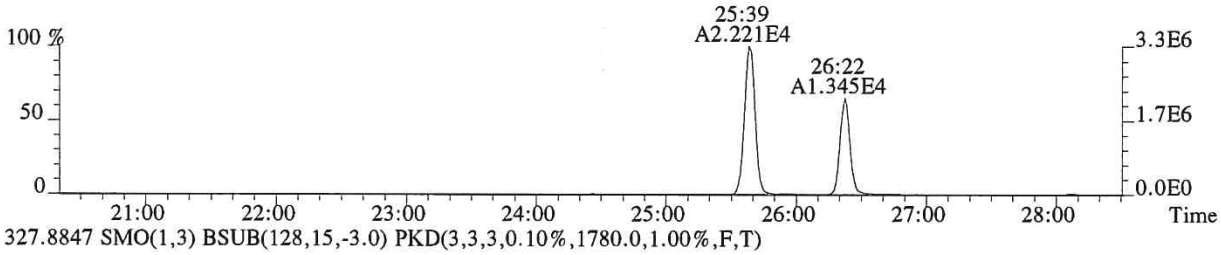
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1096.0,1.00%,F,T)



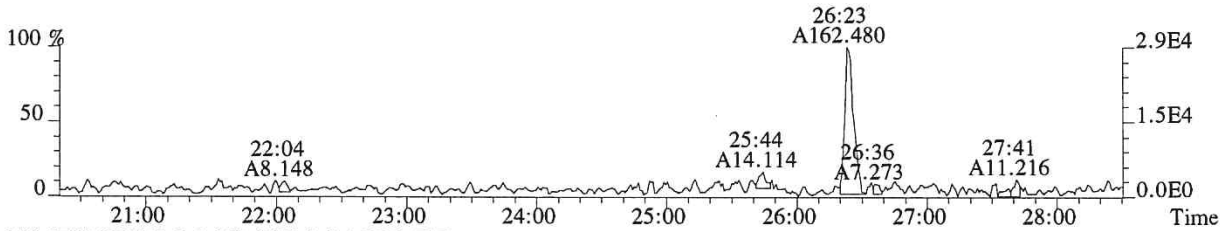
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4868.0,1.00%,F,T)



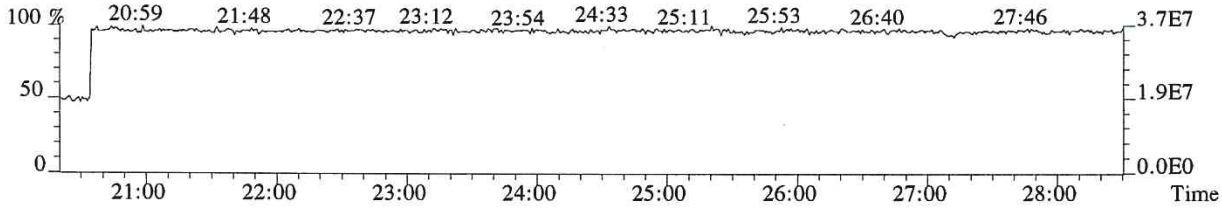
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2260.0,1.00%,F,T)



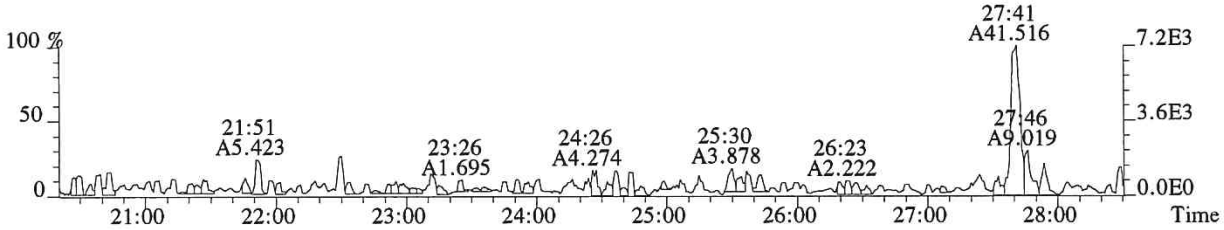
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1780.0,1.00%,F,T)



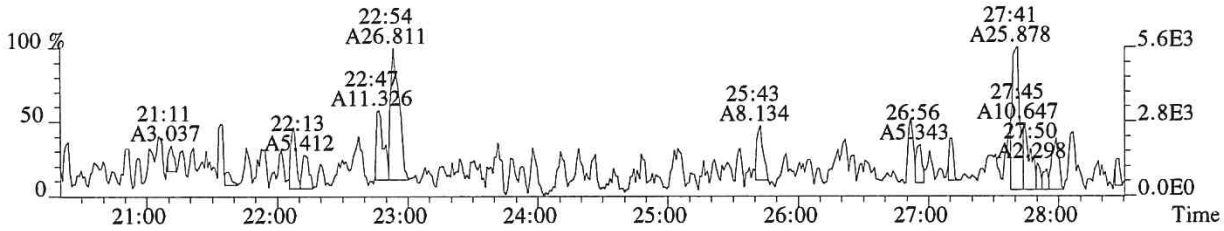
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



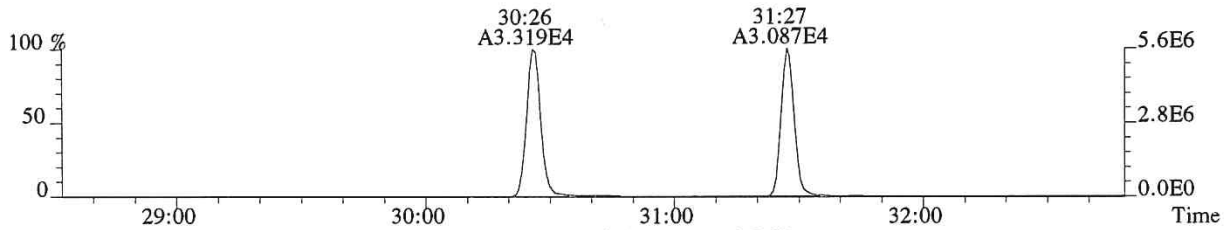
File:P519909 #1-580 Acq:11-JAN-2019 08:57:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,368.0,1.00%,F,T)



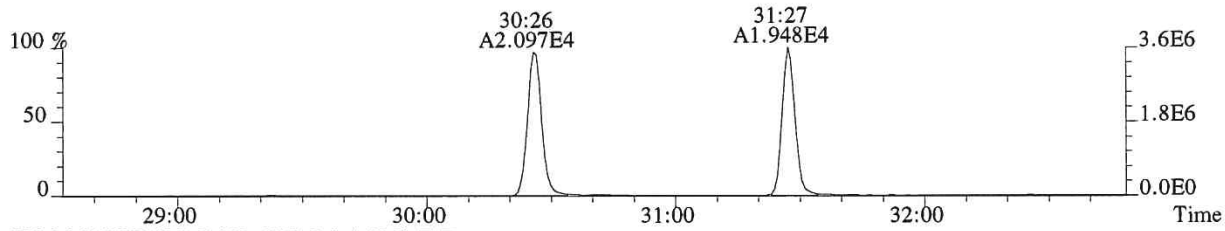
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1020.0,1.00%,F,T)



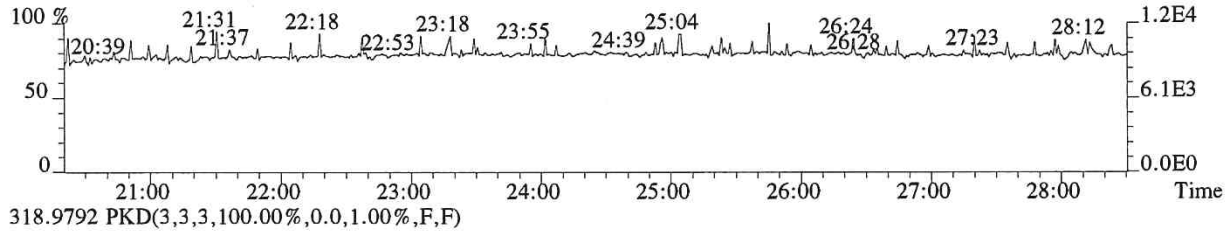
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,492.0,1.00%,F,T)



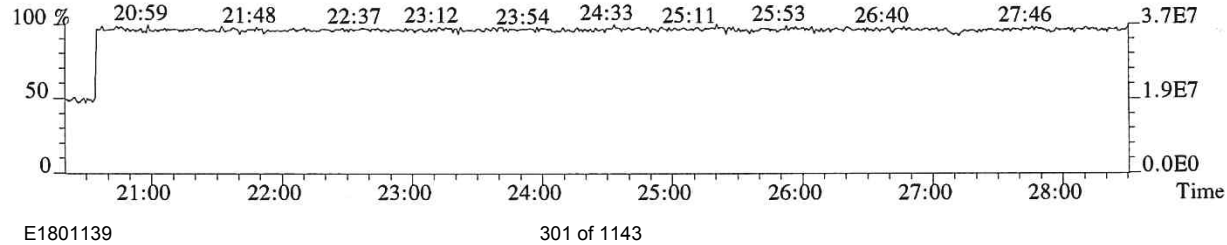
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,560.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

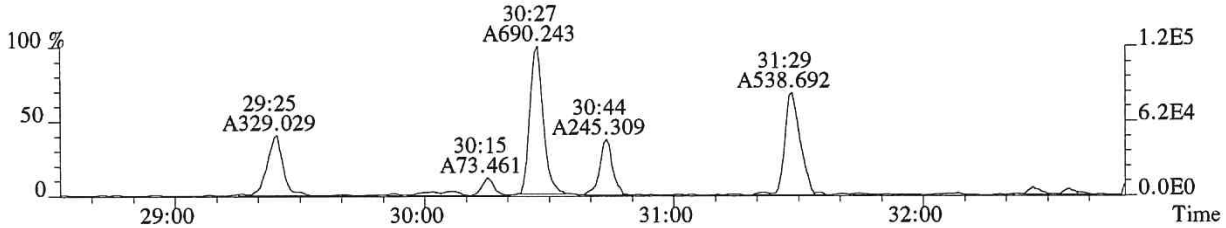


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

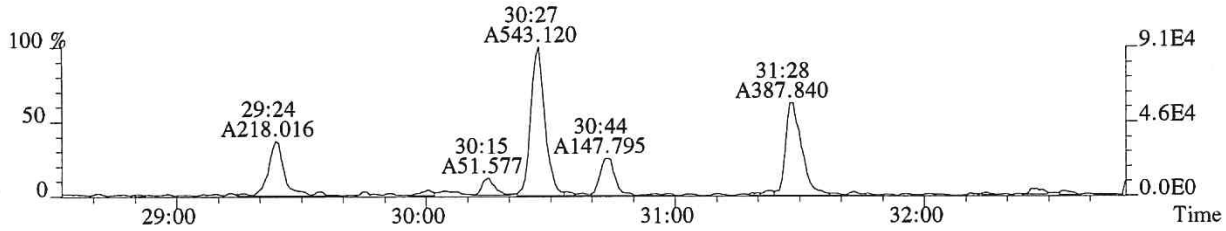


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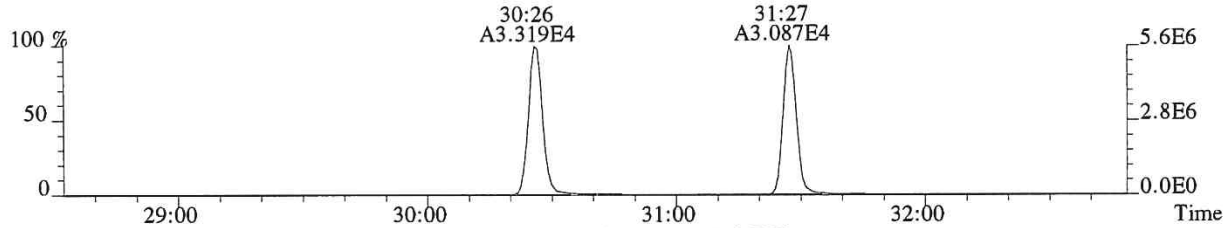
File:P519909 #1-385 Acq:11-JAN-2019 08:57:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,748.0,1.00%,F,T)



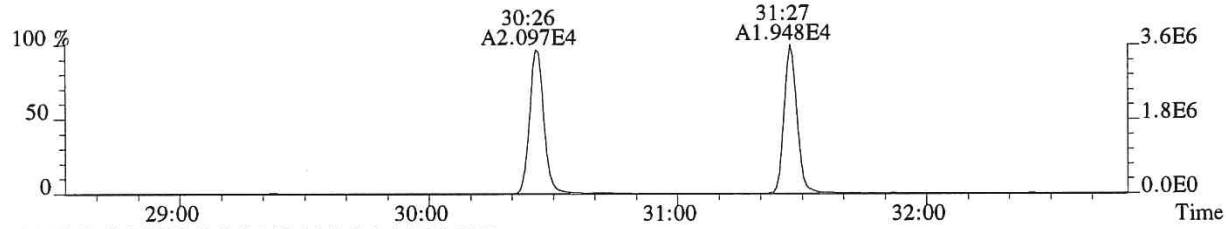
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,896.0,1.00%,F,T)



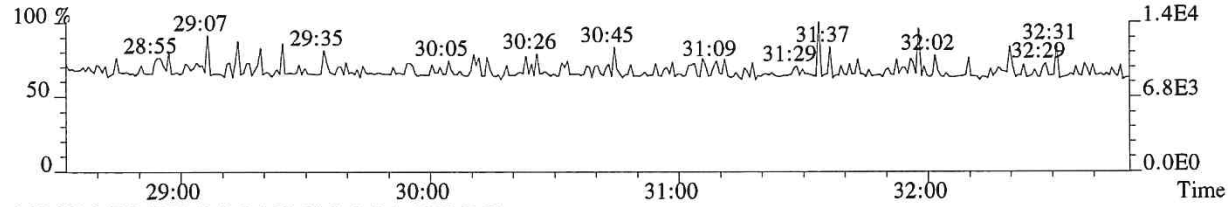
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,492.0,1.00%,F,T)



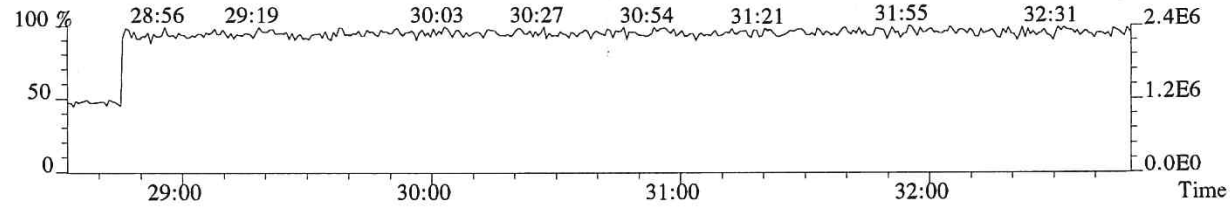
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,560.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

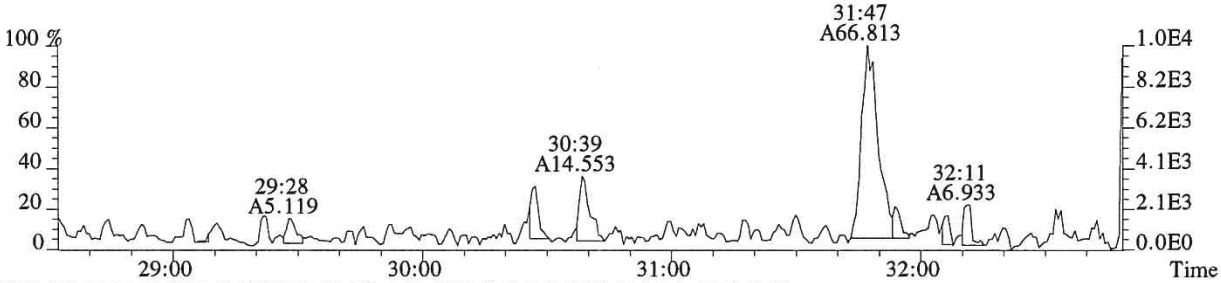


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

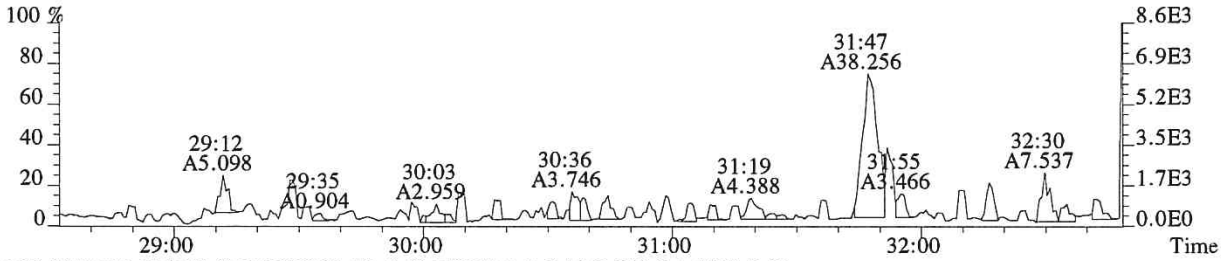


018266

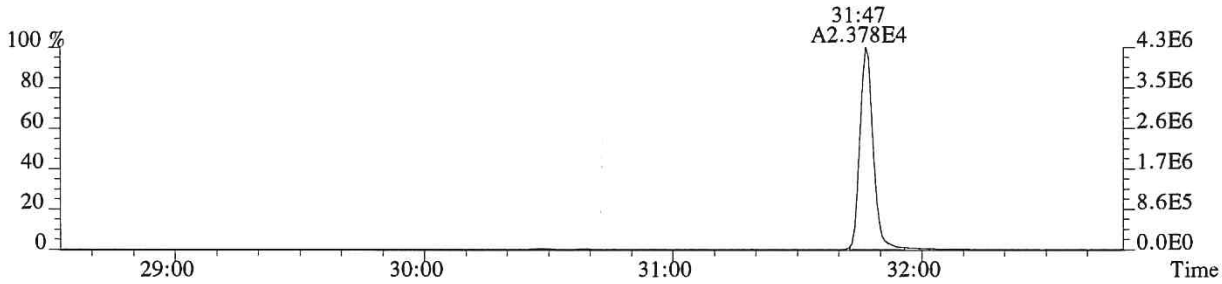
File:P519909 #1-385 Acq:11-JAN-2019 08:57:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,792.0,1.00%,F,T)



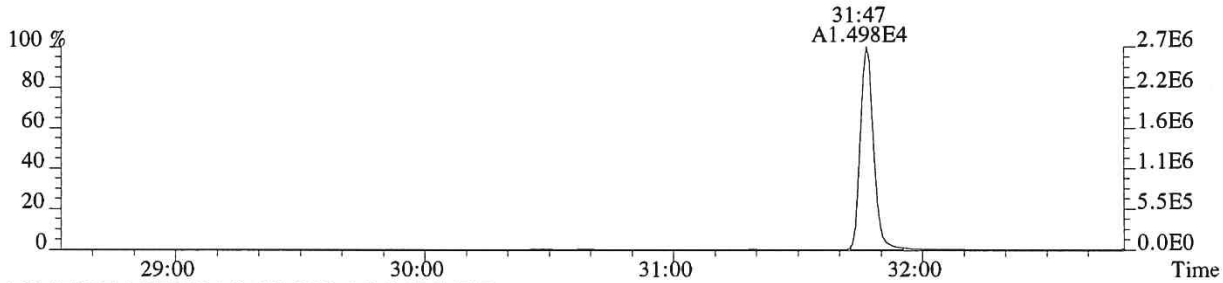
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,516.0,1.00%,F,T)



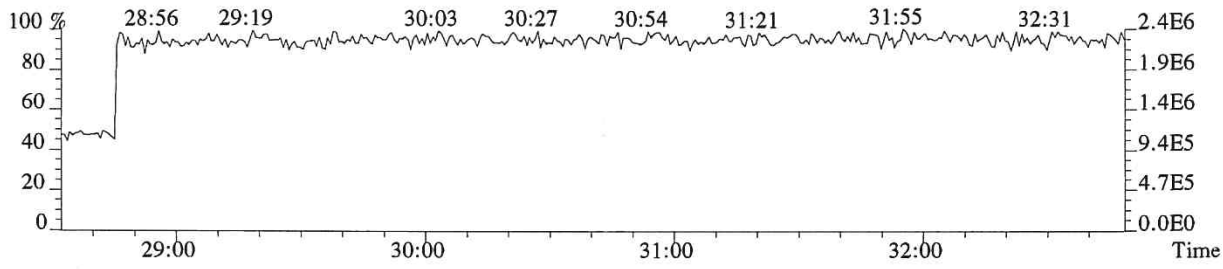
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,800.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,896.0,1.00%,F,T)

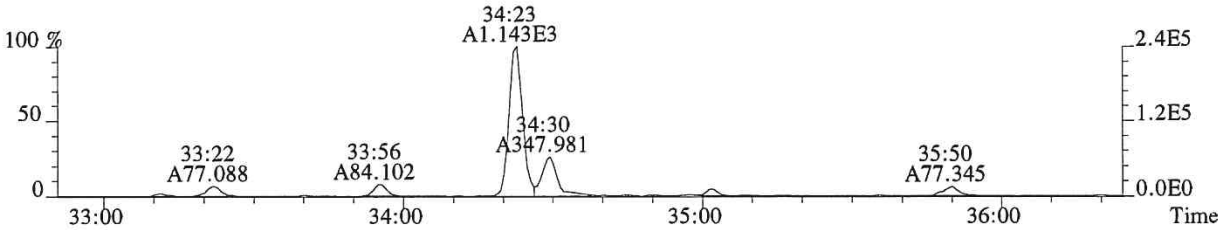


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

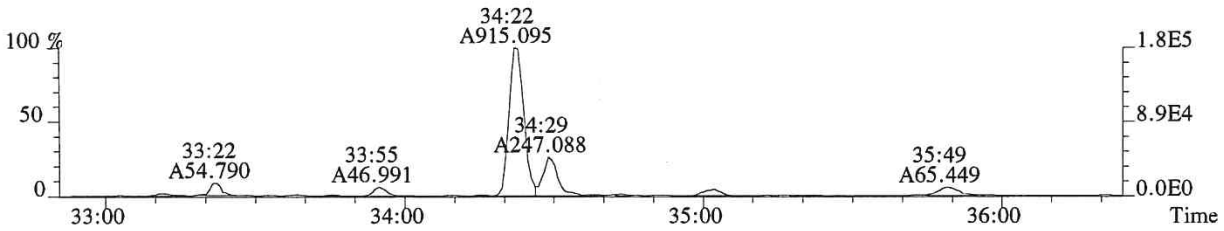


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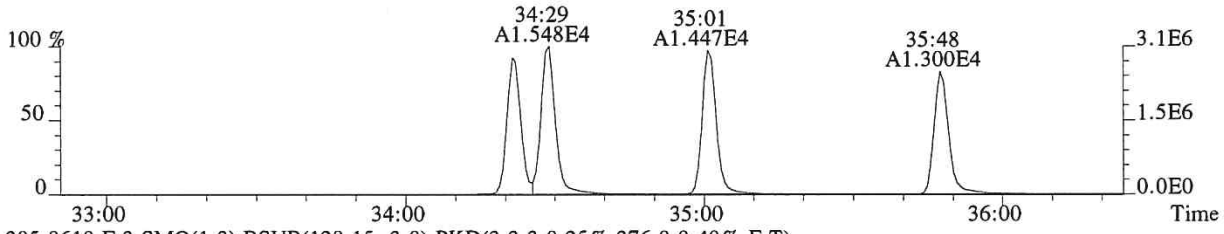
File:P519909 #1-321 Acq:11-JAN-2019 08:57:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,936.0,0.40%,F,T)



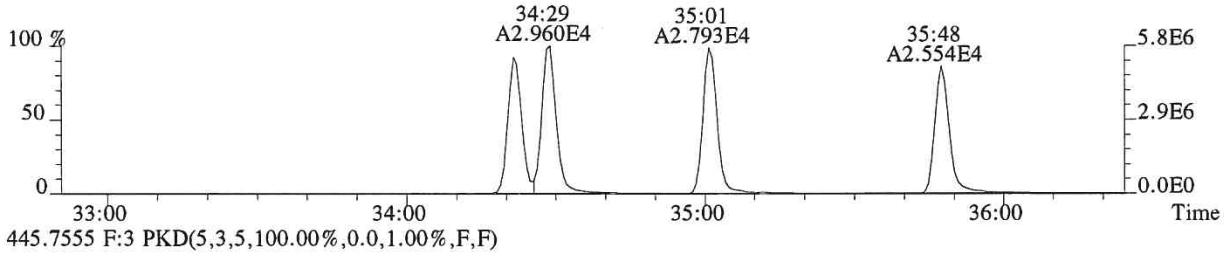
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,820.0,0.40%,F,T)



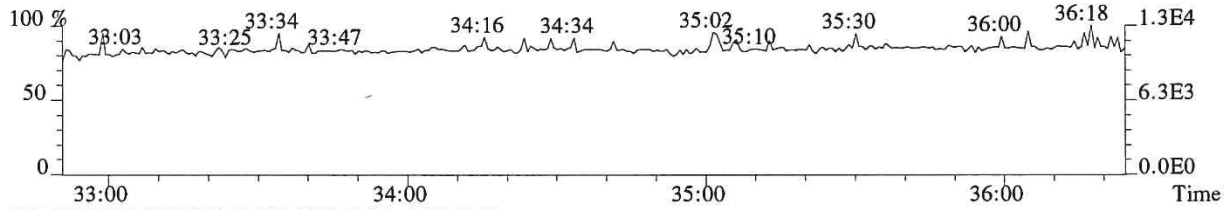
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,900.0,0.40%,F,T)



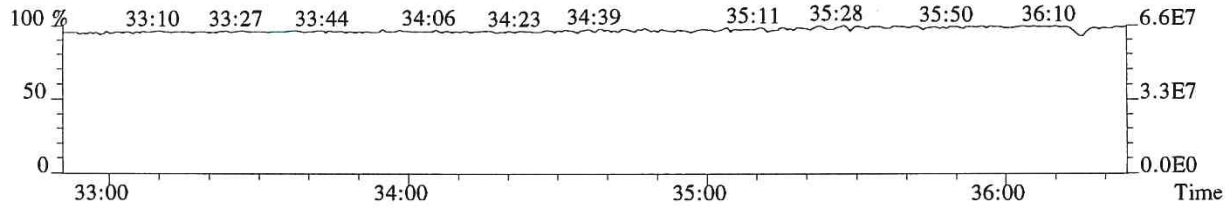
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,376.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

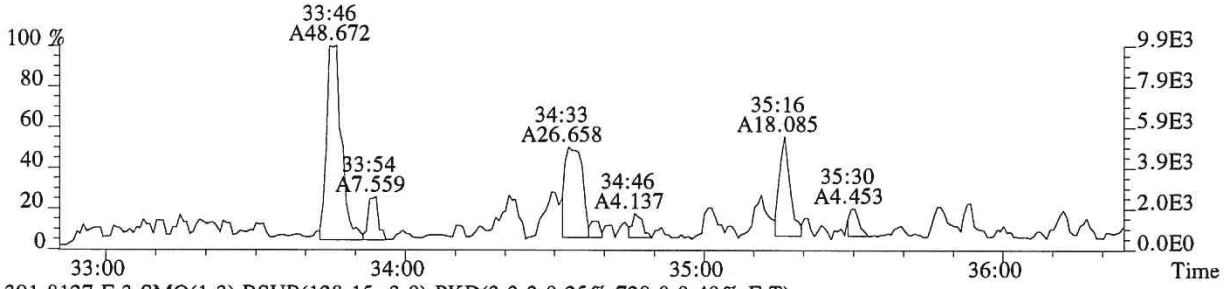


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

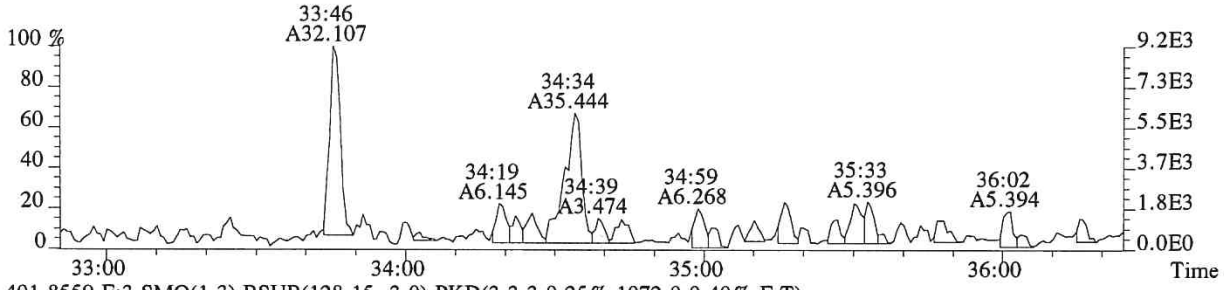


018268

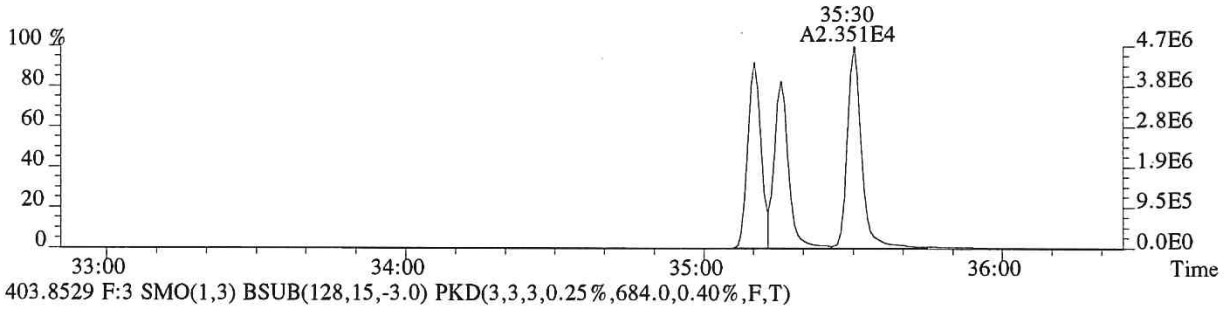
File:P519909 #1-321 Acq:11-JAN-2019 08:57:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1136.0,0.40%,F,T)



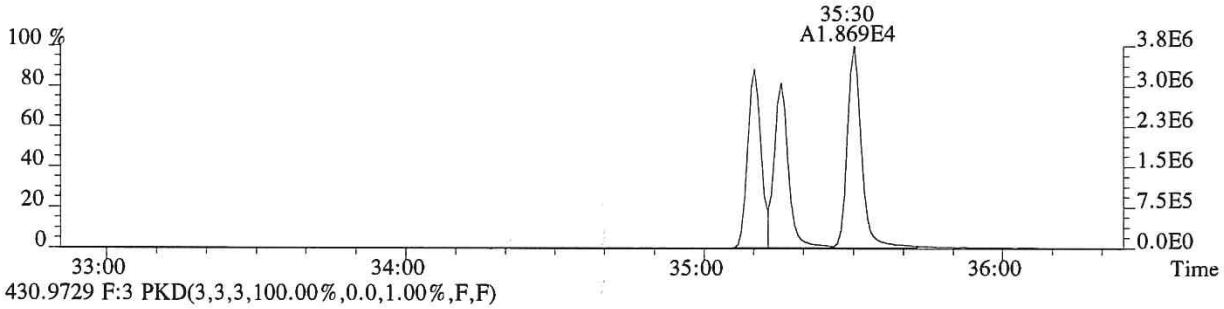
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,728.0,0.40%,F,T)



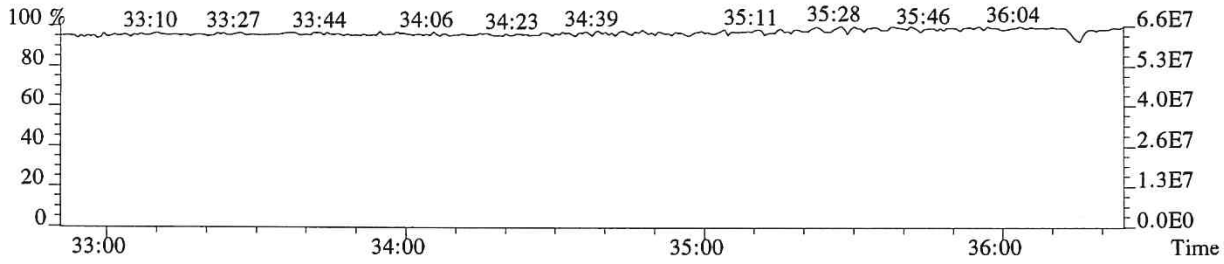
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1072.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,684.0,0.40%,F,T)

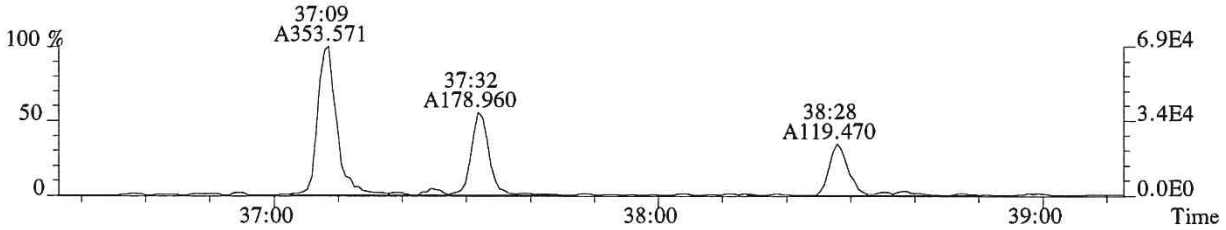


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

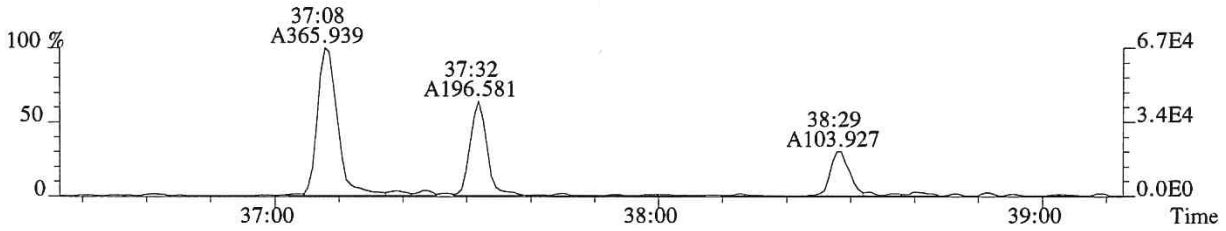


018269

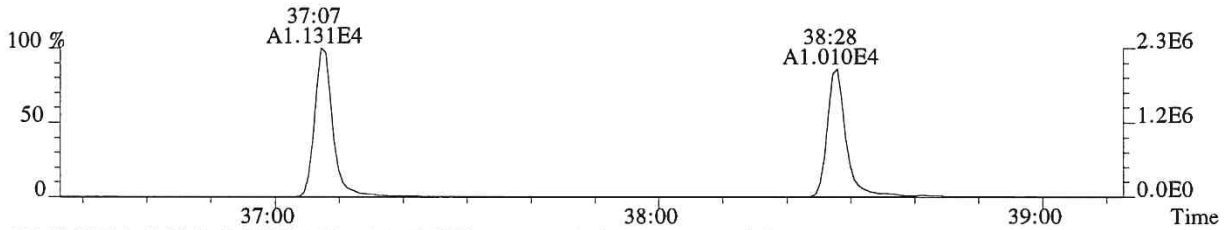
File:P519909 #1-250 Acq:11-JAN-2019 08:57:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,452.0,0.50%,F,T)



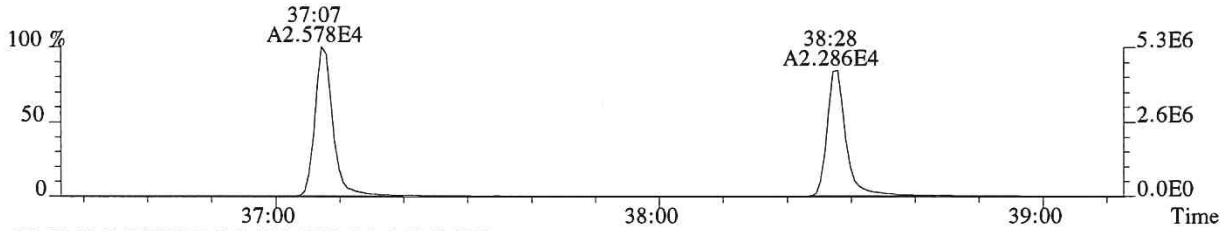
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,428.0,0.50%,F,T)



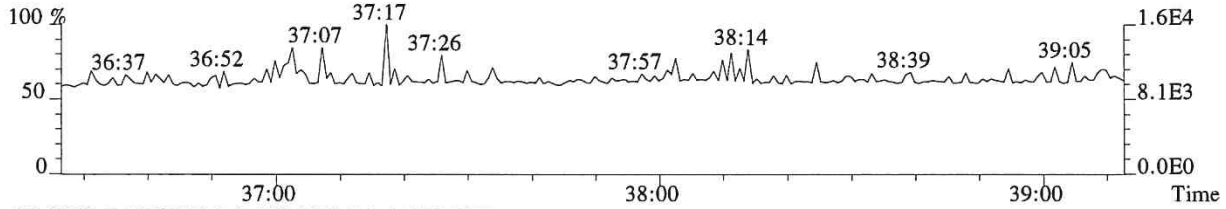
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1740.0,0.50%,F,T)



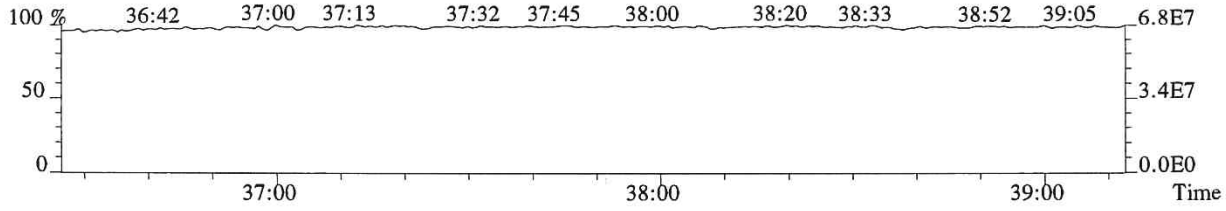
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2020.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

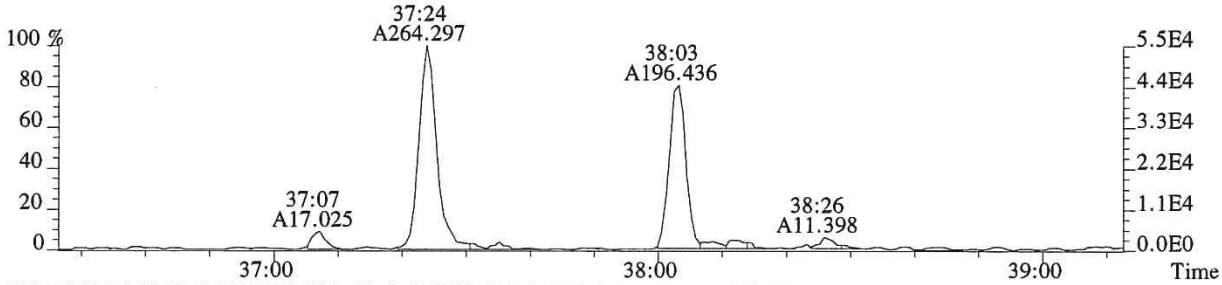


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

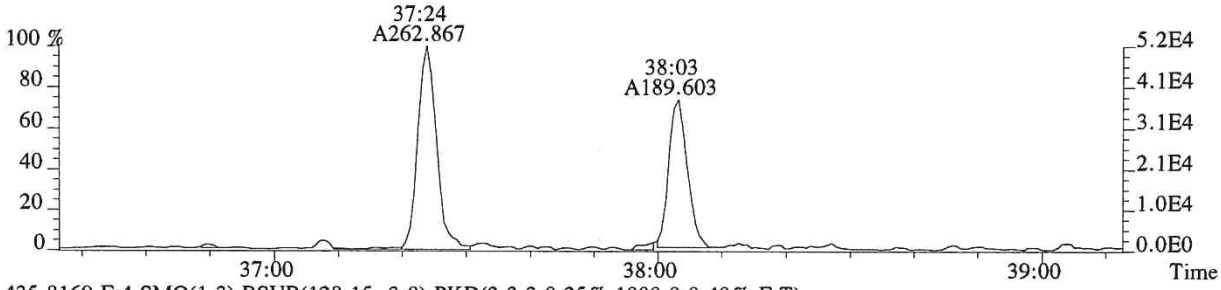


018270

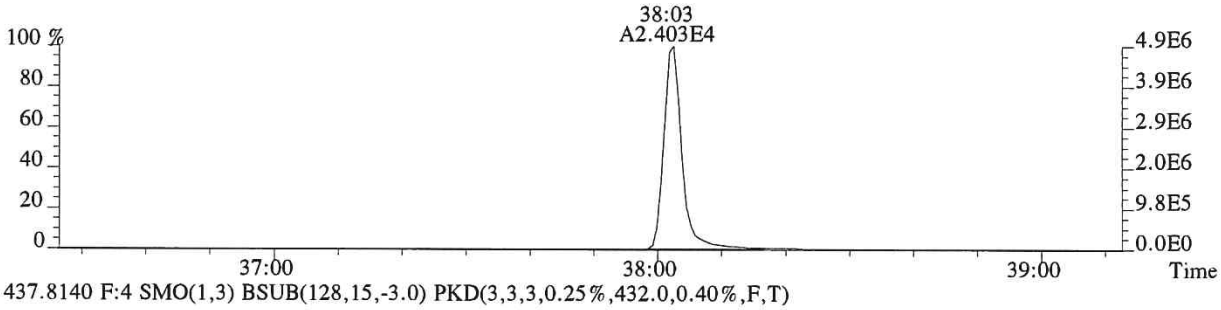
File:P519909 #1-250 Acq:11-JAN-2019 08:57:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,576.0,0.40%,F,T)



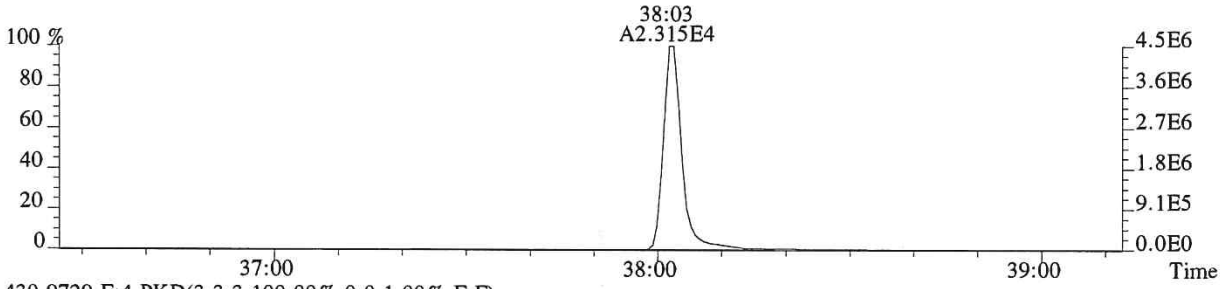
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,844.0,0.40%,F,T)



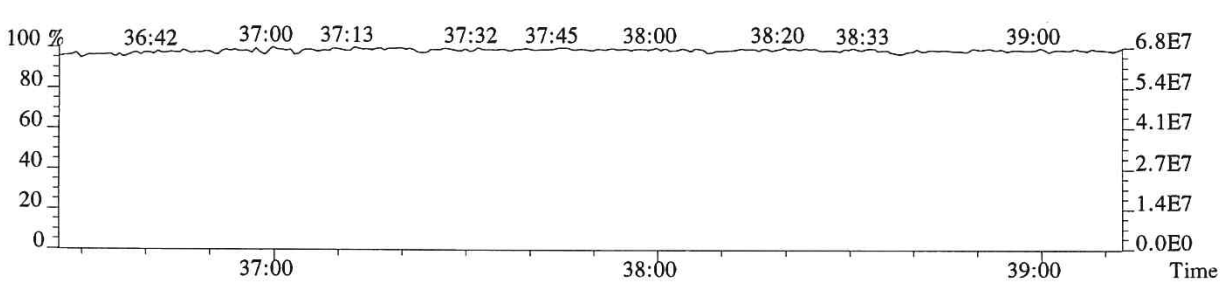
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1000.0,0.40%,F,T)



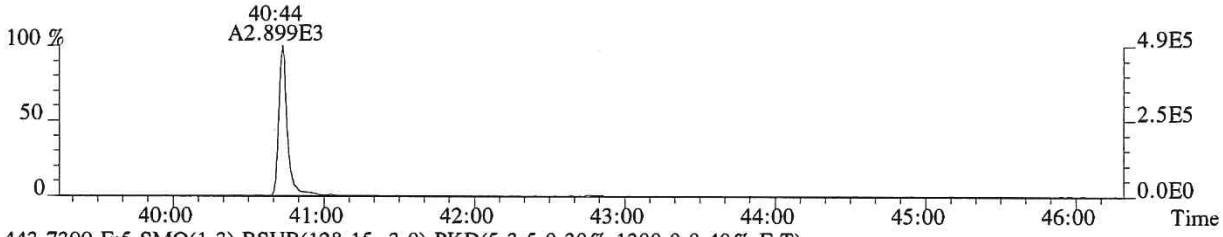
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,432.0,0.40%,F,T)



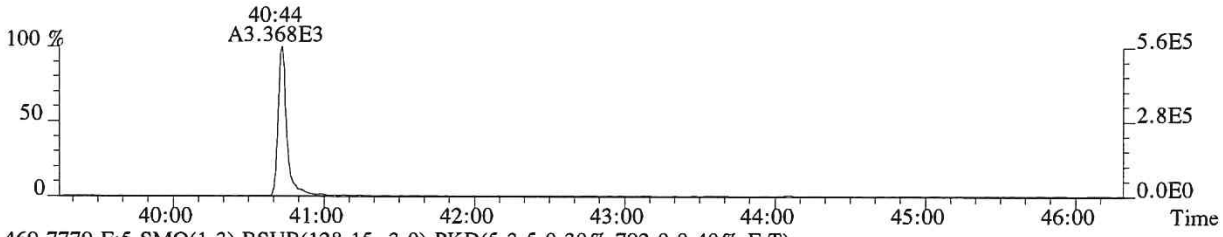
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



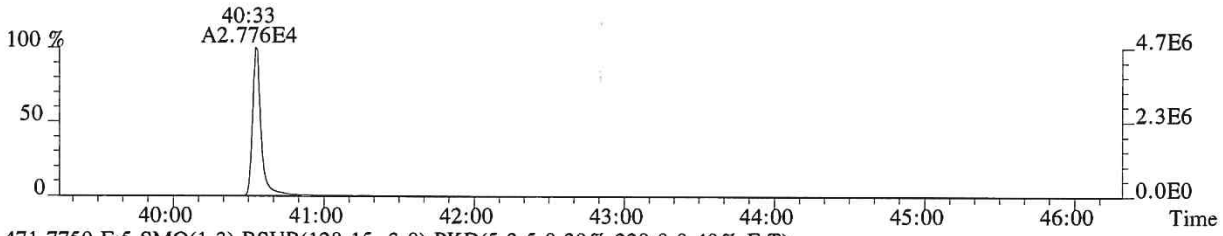
File:P519909 #1-637 Acq:11-JAN-2019 08:57:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,544.0,0.40%,F,T)



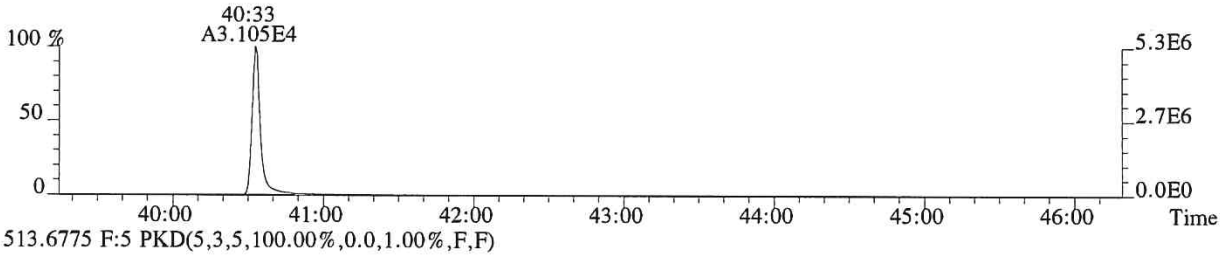
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1300.0,0.40%,F,T)



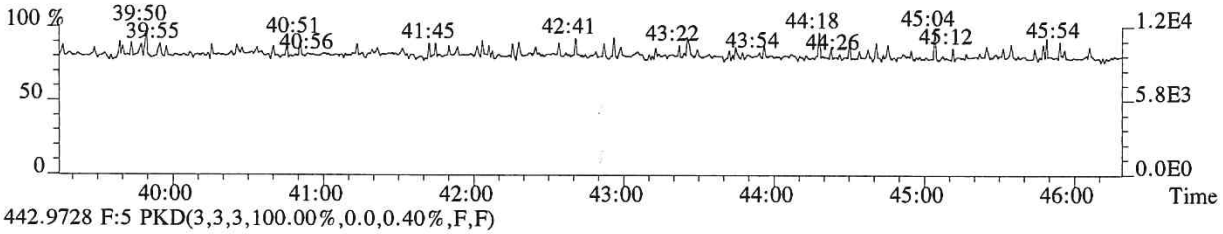
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,792.0,0.40%,F,T)



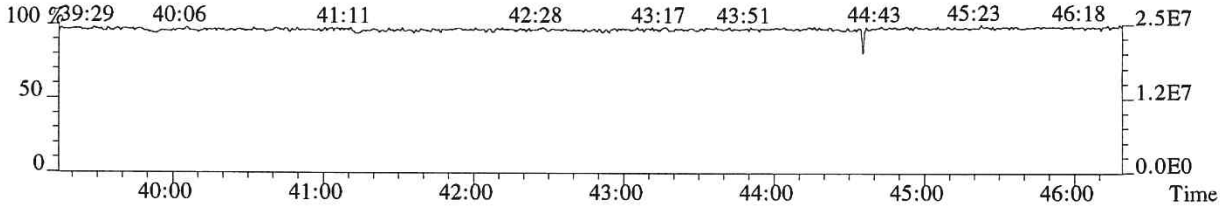
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,228.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

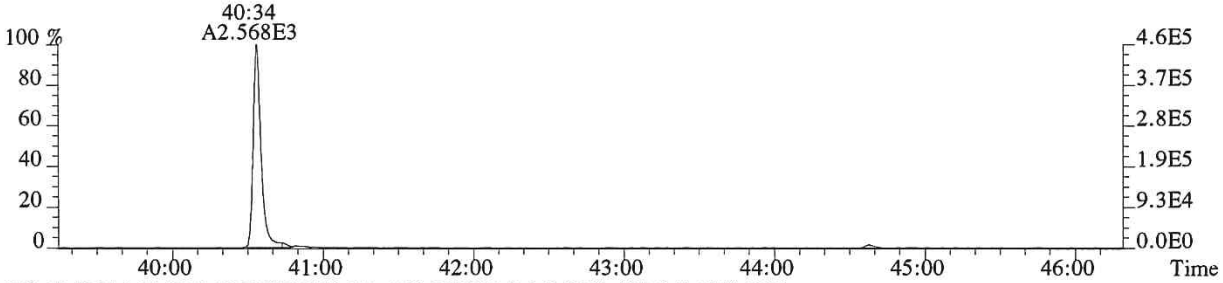


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

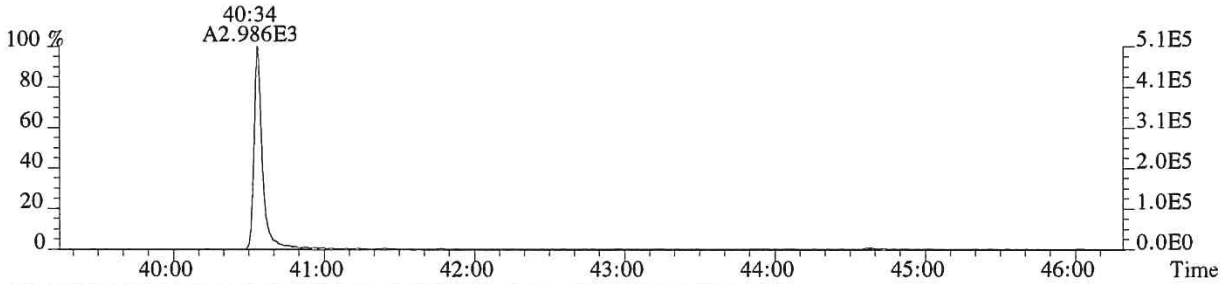


018272

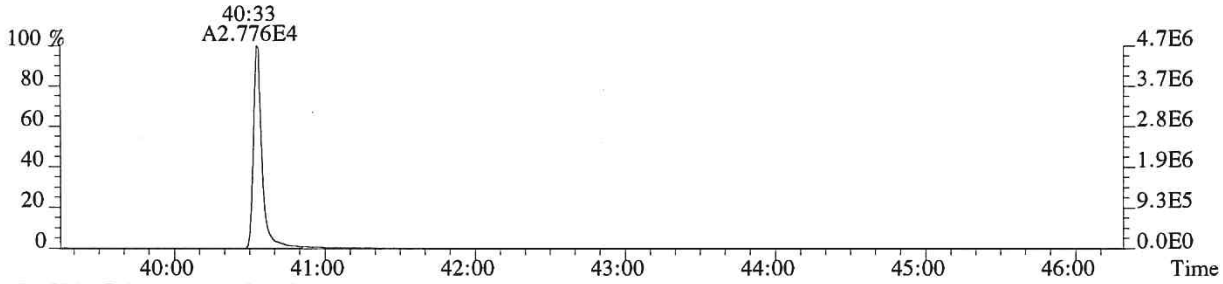
File:P519909 #1-637 Acq:11-JAN-2019 08:57:31 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-005DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,340.0,0.40%,F,T)



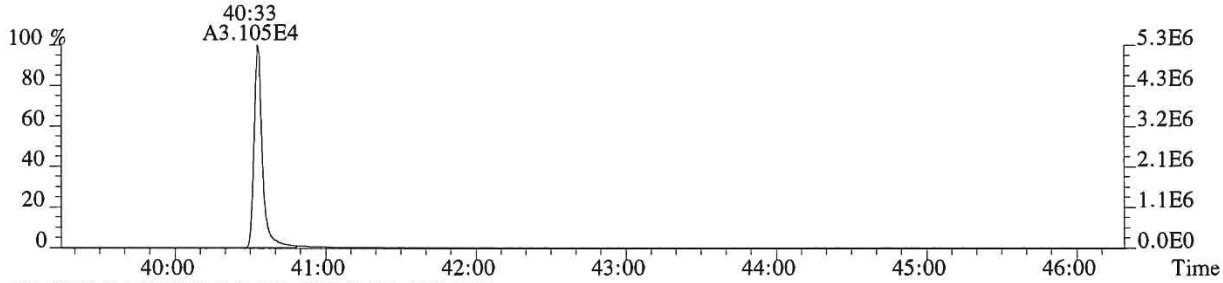
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,428.0,0.40%,F,T)



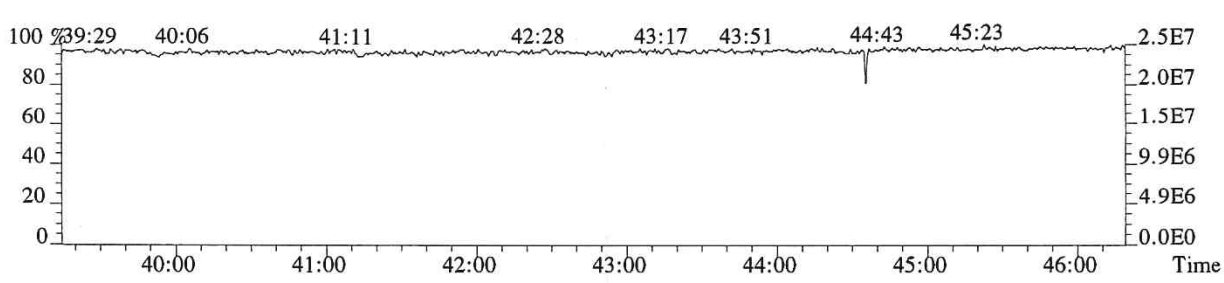
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,792.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,228.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018273

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0219

Run #15 Filename P519873 Samp: 1 Inj: 1 Acquired: 9-JAN-19 22:44:14
Processed: 10-JAN-19 08:15:33 Sample ID: E1801139-006

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:45	3.618e+03	5.073e+03	0.71	yes	yes	0.942
2	Unk	1,2,3,7,8-PeCDF	30:46	2.369e+02	1.499e+02	1.58	yes	yes	1.012
3	Unk	2,3,4,7,8-PeCDF	31:47	1.821e+02	1.321e+02	1.38	yes	yes	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:45	2.689e+02	2.189e+02	1.23	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:53	1.196e+02	7.115e+01	1.68	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:26	4.894e+01	5.362e+01	0.91	no	yes	1.110
7	Unk	1,2,3,7,8,9-HxCDF	NotFnd	*	*	*	no	yes	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:42	2.338e+02	1.793e+02	1.30	no	yes	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	yes	1.258
10	Unk	OCDF	41:57	2.048e+03	2.448e+03	0.84	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:46	9.840e+02	1.266e+03	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:08	5.273e+01	5.300e+01	0.99	no	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	yes	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:41	7.808e+01	9.145e+01	0.85	no	yes	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:57	2.027e+02	1.164e+02	1.74	no	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:44	1.920e+03	1.816e+03	1.06	yes	no	1.025
17	Unk	OCDD	41:47	2.920e+04	3.299e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:43	2.208e+04	2.855e+04	0.77	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:45	3.967e+04	2.538e+04	1.56	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:46	3.771e+04	2.379e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:45	1.667e+04	3.240e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:52	2.102e+04	4.043e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:26	1.783e+04	3.427e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:15	1.615e+04	3.248e+04	0.50	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:42	1.281e+04	2.928e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:10	1.152e+04	2.653e+04	0.43	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:44	1.059e+04	1.329e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:06	2.902e+04	1.846e+04	1.57	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:36	2.254e+04	1.766e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:41	2.764e+04	2.187e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:44	2.695e+04	2.563e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	41:45	2.411e+04	2.657e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:01	3.966e+04	4.959e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:57	5.487e+04	4.238e+04	1.29	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:46	1.595e+04				no	1.014

$$\text{OCDD} = \frac{(2.920e+04 + 3.299e+04) \times 4000\ \text{pg} \times 1}{(2.411e+04 + 2.657e+04) \times 10.659\ \text{g} \times 79.4 / 100 \times 1.118} = 518.7\ \text{ng/kg}$$

LW 01/11/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0219

Run #15 Filename P519873 Samp: 1 Inj: 1 Acquired: 9-JAN-19 22:44:14
Processed: 10-JAN-19 08:15:33 LAB. ID: E1801139-006

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	4.74e+05	4.00e+03	1.2e+02	6.61e+05	5.26e+03	1.3e+02
2	1,2,3,7,8-PeCDF	3.65e+04	2.18e+03	1.7e+01	2.06e+04	1.87e+03	1.1e+01
3	2,3,4,7,8-PeCDF	2.43e+04	2.18e+03	1.1e+01	1.63e+04	1.87e+03	8.7e+00
4	1,2,3,4,7,8-HxCDF	3.75e+04	2.24e+03	1.7e+01	2.86e+04	1.96e+03	1.5e+01
5	1,2,3,6,7,8-HxCDF	1.75e+04	2.24e+03	7.8e+00	1.14e+04	1.96e+03	5.8e+00
6	2,3,4,6,7,8-HxCDF	9.54e+03	2.24e+03	4.3e+00	7.23e+03	1.96e+03	3.7e+00
7	1,2,3,7,8,9-HxCDF	*	2.24e+03	*	*	1.96e+03	*
8	1,2,3,4,6,7,8-HpCDF	2.95e+04	2.17e+03	1.4e+01	2.10e+04	1.12e+03	1.9e+01
9	1,2,3,4,7,8,9-HpCDF	*	2.17e+03	*	*	1.12e+03	*
10	OCDF	1.01e+05	7.52e+02	1.3e+02	1.14e+05	1.48e+03	7.7e+01
11	2,3,7,8-TCDD	1.38e+05	4.13e+03	3.3e+01	1.78e+05	2.33e+03	7.6e+01
12	1,2,3,7,8-PeCDD	9.37e+03	2.06e+03	4.5e+00	7.51e+03	1.10e+03	6.9e+00
13	1,2,3,4,7,8-HxCDD	*	1.12e+03	*	*	3.99e+03	*
14	1,2,3,6,7,8-HxCDD	1.13e+04	1.12e+03	1.0e+01	1.26e+04	3.99e+03	3.2e+00
15	1,2,3,7,8,9-HxCDD	2.55e+04	1.12e+03	2.3e+01	1.64e+04	3.99e+03	4.1e+00
16	1,2,3,4,6,7,8-HpCDD	1.67e+05	1.76e+03	9.5e+01	1.63e+05	1.71e+03	9.5e+01
17	OCDD	1.37e+06	1.06e+03	1.3e+03	1.53e+06	9.68e+02	1.6e+03
18	13C-2,3,7,8-TCDF	2.84e+06	8.32e+03	3.4e+02	3.80e+06	5.81e+03	6.5e+02
19	13C-1,2,3,7,8-PeCDF	5.75e+06	2.14e+03	2.7e+03	3.71e+06	1.44e+03	2.6e+03
20	13C-2,3,4,7,8-PeCDF	5.76e+06	2.14e+03	2.7e+03	3.58e+06	1.44e+03	2.5e+03
21	13C-1,2,3,4,7,8-HxCDF	2.64e+06	1.22e+03	2.2e+03	5.11e+06	2.14e+03	2.4e+03
22	13C-1,2,3,6,7,8-HxCDF	2.95e+06	1.22e+03	2.4e+03	5.71e+06	2.14e+03	2.7e+03
23	13C-2,3,4,6,7,8-HxCDF	2.54e+06	1.22e+03	2.1e+03	4.93e+06	2.14e+03	2.3e+03
24	13C-1,2,3,7,8,9-HxCDF	2.04e+06	1.22e+03	1.7e+03	3.97e+06	2.14e+03	1.9e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.41e+06	4.82e+03	2.9e+02	3.19e+06	6.32e+03	5.0e+02
26	13C-1,2,3,4,7,8,9-HpCDF	9.24e+05	4.82e+03	1.9e+02	2.15e+06	6.32e+03	3.4e+02
27	13C-2,3,7,8-TCDD	1.55e+06	1.22e+04	1.3e+02	1.96e+06	1.13e+04	1.7e+02
28	13C-1,2,3,7,8-PeCDD	4.30e+06	3.02e+03	1.4e+03	2.72e+06	2.01e+03	1.4e+03
29	13C-1,2,3,4,7,8-HxCDD	3.73e+06	1.66e+03	2.3e+03	2.90e+06	1.54e+03	1.9e+03
30	13C-1,2,3,6,7,8-HxCDD	3.53e+06	1.66e+03	2.1e+03	2.80e+06	1.54e+03	1.8e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.32e+06	1.02e+03	2.3e+03	2.19e+06	9.24e+02	2.4e+03
32	13C-OCDD	1.12e+06	6.64e+02	1.7e+03	1.26e+06	8.36e+02	1.5e+03
33	13C-1,2,3,4-TCDD	5.81e+06	1.22e+04	4.8e+02	7.29e+06	1.13e+04	6.5e+02
34	13C-1,2,3,7,8,9-HxCDD	6.80e+06	1.66e+03	4.1e+03	5.33e+06	1.54e+03	3.5e+03
35	37Cl-2,3,7,8-TCDD	2.27e+06	1.48e+03	1.5e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0219

Entry: 36 Totals Name: Total Tetra-Furans

Run: 15 File: P519873 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 22:44:14 Processed: 10-JAN-19 08:15:33

Mass: 303.9020 305.8990 Tot Response: 1.49e+04 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	23:30	1.17e+02	1.73e+02	0.68	yes	2.90e+02		y	y
2	24:08	5.77e+01	6.80e+01	0.85	yes	1.26e+02		y	y
3	24:16	1.55e+02	1.89e+02	0.82	yes	3.44e+02		y	y
4	24:45	1.65e+03	2.11e+03	0.78	yes	3.76e+03		n	n
5	25:38	1.66e+02	2.23e+02	0.74	yes	3.89e+02		y	y
6	25:45	3.62e+03	5.07e+03	0.71	yes	8.69e+03	2,3,7,8-TCDF	y	y
7	26:11	2.50e+02	3.48e+02	0.72	yes	5.99e+02		y	y
8	27:58	2.77e+02	4.06e+02	0.68	yes	6.83e+02		n	y

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Peak List Summary

CLIENT ID.
SL0219

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 15 File: P519873 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 22:44:14 Processed: 10-JAN-19 08:15:33

Mass: 319.8970 321.8940 Tot Response: 4.31e+03 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:24	8.46e+02	1.05e+03	0.80	yes	1.90e+03		n	n
2	26:46	9.84e+02	1.27e+03	0.78	yes	2.25e+03	2,3,7,8-TCDD	n	n
3	27:06	7.44e+01	8.75e+01	0.85	yes	1.62e+02		n	n

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Peak List Summary

CLIENT ID.
SL0219

Entry: 39 Totals Name: Total Penta-Furans2

Run: 15 File: P519873 Sample:1 Injection:1 Function:2

Acquired: 9-JAN-19 22:44:14 Processed: 10-JAN-19 08:15:33

Mass: 339.8600 341.8570 Tot Response: 7.94e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:46	2.37e+02	1.50e+02	1.58	yes	3.87e+02	1,2,3,7,8-PeCDF	y	n
2	31:03	5.94e+01	3.34e+01	1.78	yes	9.29e+01		n	y
3	31:47	1.82e+02	1.32e+02	1.38	yes	3.14e+02	2,3,4,7,8-PeCDF	y	y

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Peak List Summary

CLIENT ID.
SL0219

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 15 File: P519873 Sample:1 Injection:1 Function:2

Acquired: 9-JAN-19 22:44:14 Processed: 10-JAN-19 08:15:33

Mass: 355.8550 357.8520 Tot Response: 1.17e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:17	6.07e+02	3.70e+02	1.64	yes	9.77e+02		n	n
2	30:58	3.64e+01	2.51e+01	1.45	yes	6.15e+01		n	y
3	31:19	8.38e+01	4.77e+01	1.76	yes	1.31e+02		n	n

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Peak List Summary

CLIENT ID.
SL0219

Entry: 41 Totals Name: Total Hexa-Furans

Run: 15 File: P519873 Sample:1 Injection:1 Function:3

Acquired: 9-JAN-19 22:44:14 Processed: 10-JAN-19 08:15:33

Mass: 373.8210 375.8180 Tot Response: 4.88e+02 RRF: 1.141

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:45	2.69e+02	2.19e+02 1.23	yes	4.88e+02	1,2,3,4,7,8-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0219

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 15 File: P519873 Sample:1 Injection:1 Function:3

Acquired: 9-JAN-19 22:44:14 Processed: 10-JAN-19 08:15:33

Mass: 389.8160 391.8130 Tot Response: 6.88e+03 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:08	3.34e+03	2.69e+03 1.24	yes	6.02e+03		n	n
2	34:58	4.90e+02	3.65e+02 1.34	yes	8.54e+02		n	n

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Peak List Summary

CLIENT ID.
SL0219

Entry: 43 Totals Name: Total Hepta-Furans

Run: 15 File: P519873 Sample:1 Injection:1 Function:4

Acquired: 9-JAN-19 22:44:14 Processed: 10-JAN-19 08:15:33

Mass: 407.7820 409.7790 Tot Response: 1.53e+02 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:09	8.29e+01	7.04e+01 1.18	yes	1.53e+02		y	n

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Peak List Summary

CLIENT ID.
SL0219

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 15 File: P519873 Sample:1 Injection:1 Function:4

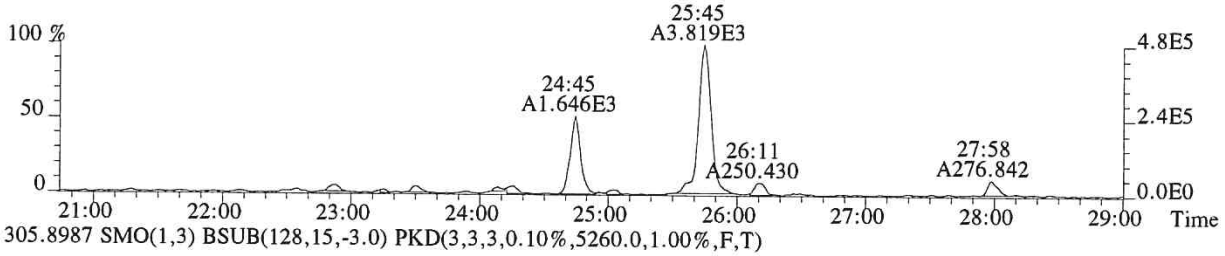
Acquired: 9-JAN-19 22:44:14 Processed: 10-JAN-19 08:15:33

Mass: 423.7770 425.7740 Tot Response: 1.47e+04 RRF: 1.025

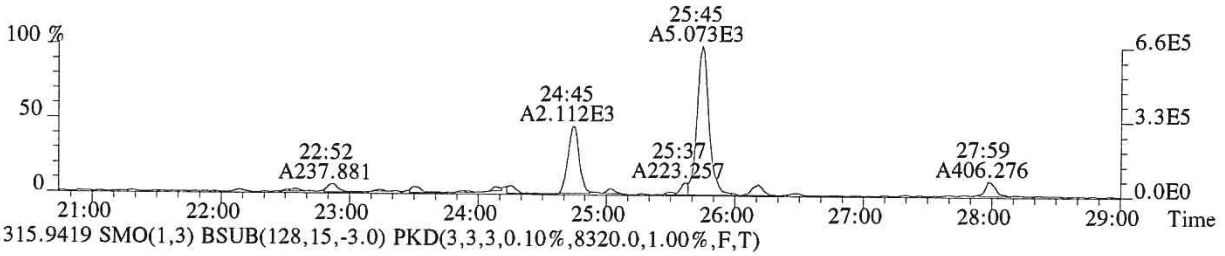
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:01	5.60e+03	5.37e+03	1.04	yes	1.10e+04		n	n
2	38:44	1.92e+03	1.82e+03	1.06	yes	3.74e+03	1,2,3,4,6,7,8-HpCDD	n	n

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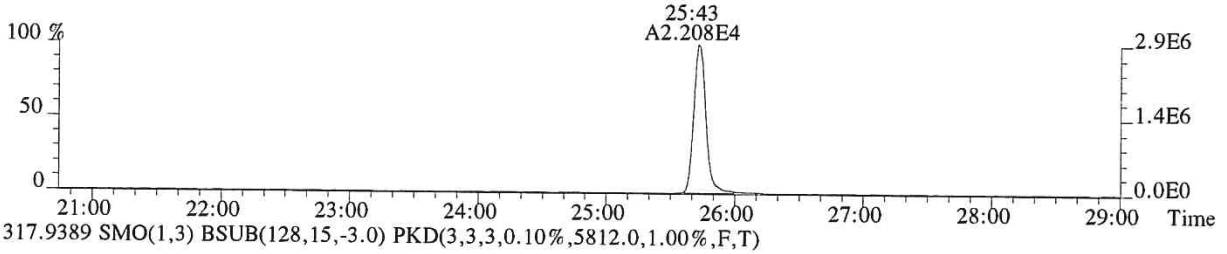
File:P519873 #1-587 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4004.0,1.00%,F,T)



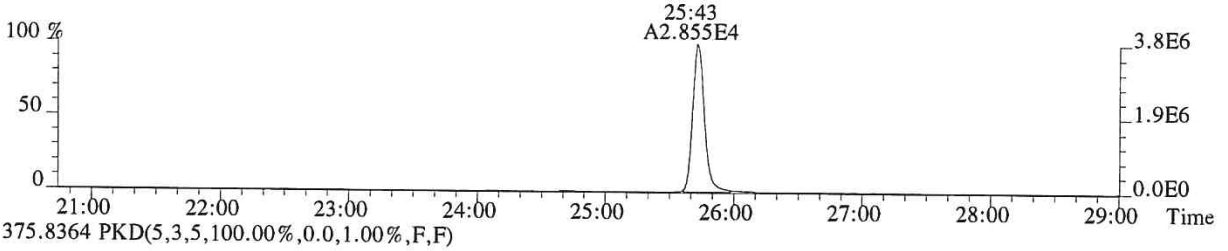
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5260.0,1.00%,F,T)



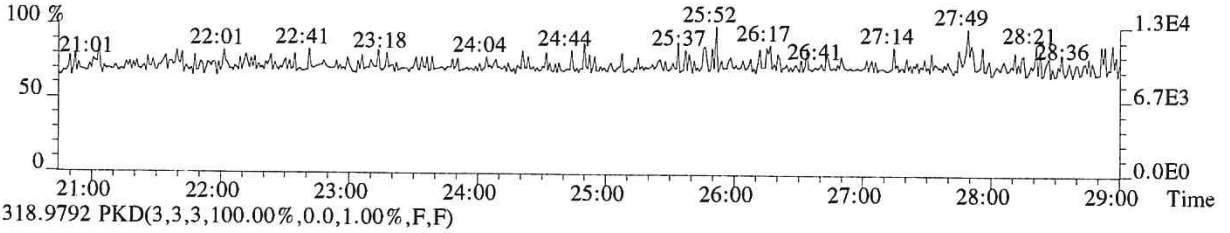
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8320.0,1.00%,F,T)



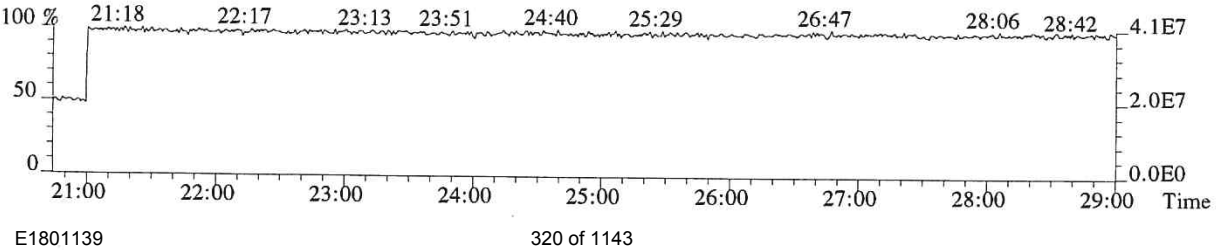
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5812.0,1.00%,F,T)



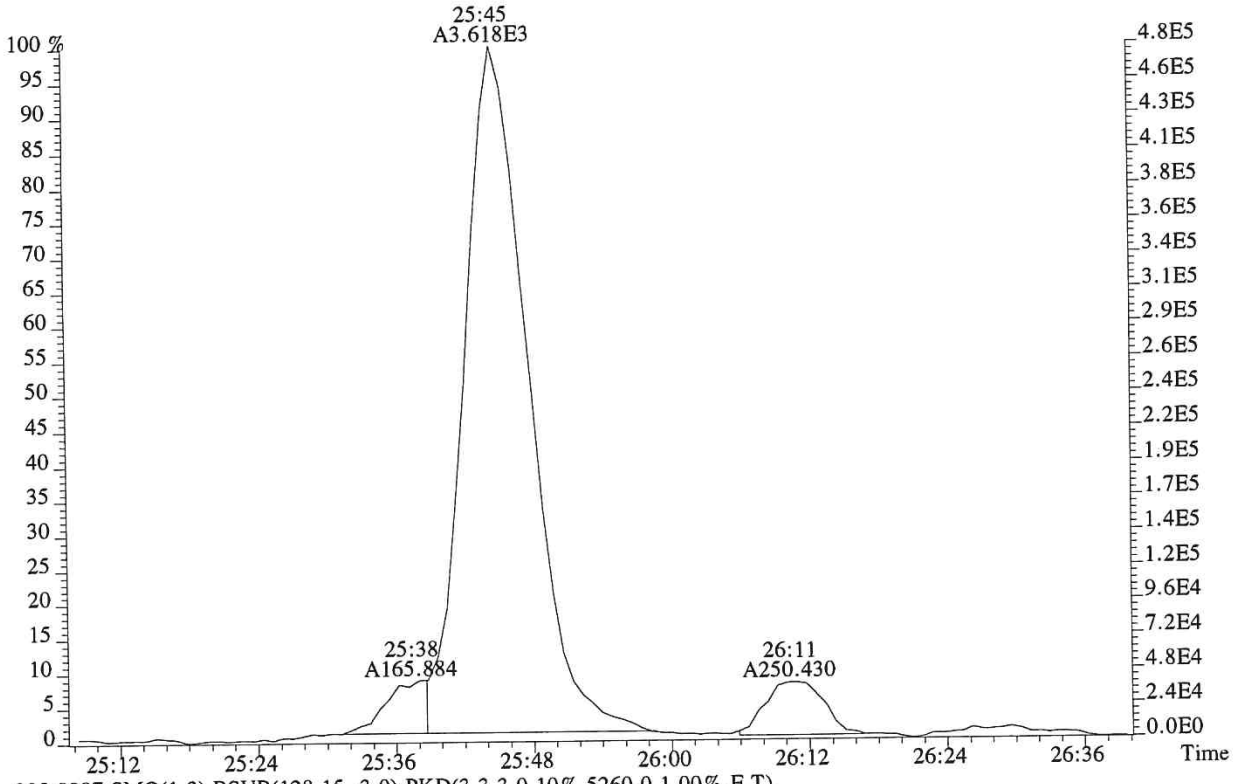
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



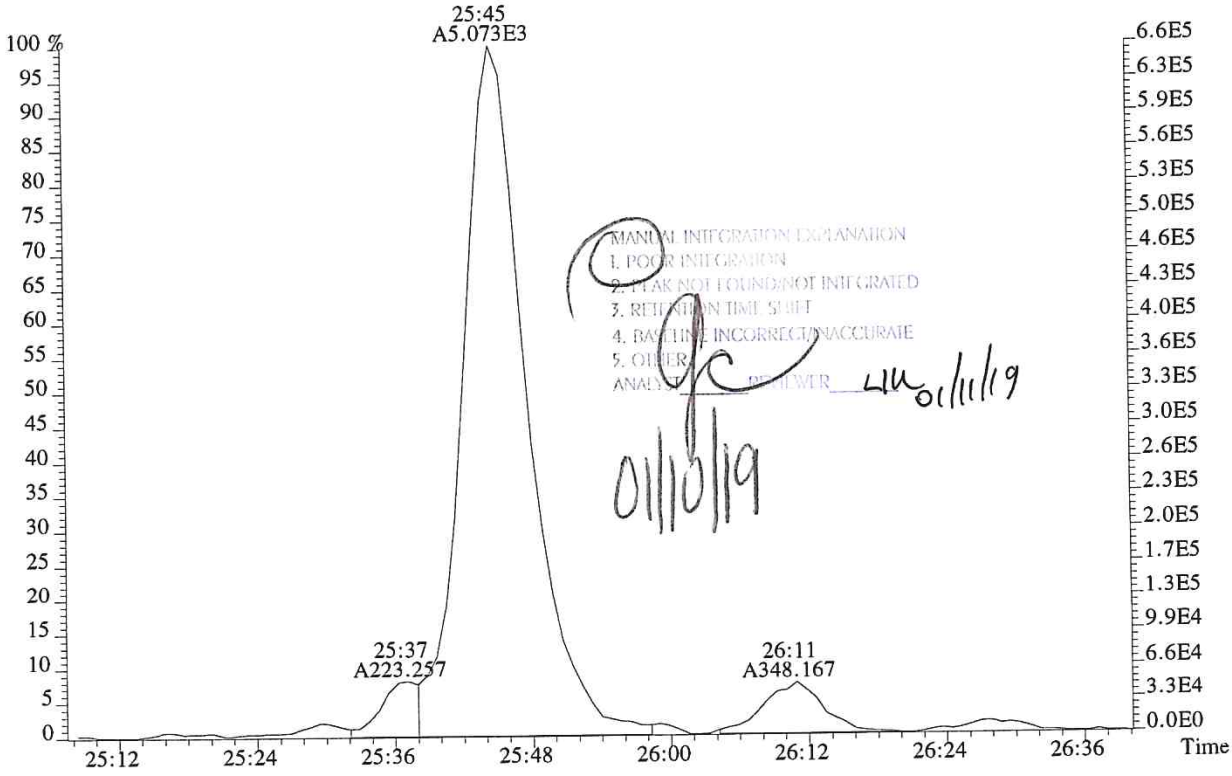
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519873 #1-587 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4004.0,1.00%,F,T)



305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5260.0,1.00%,F,T)



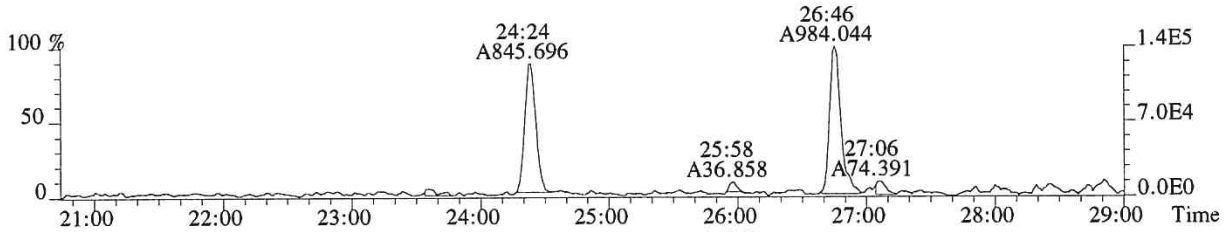
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER

01/10/19

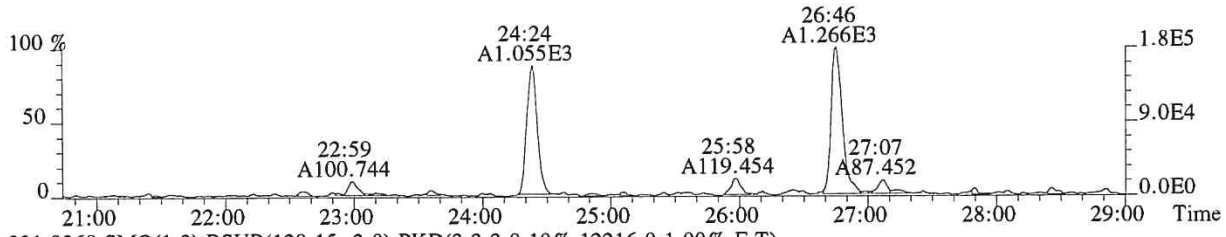
01/11/19

018285

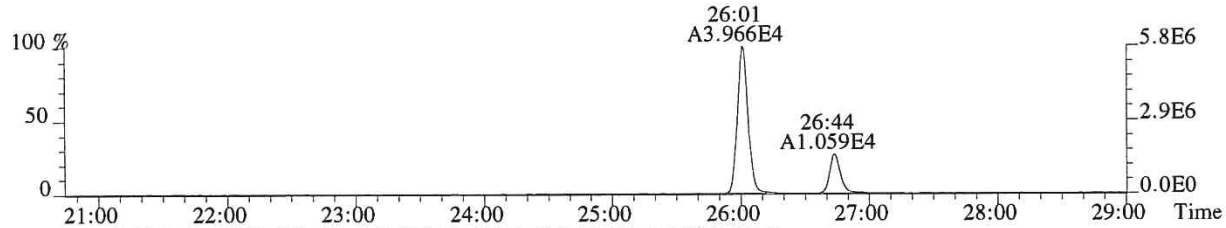
File:P519873 #1-587 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4128.0,1.00%,F,T)



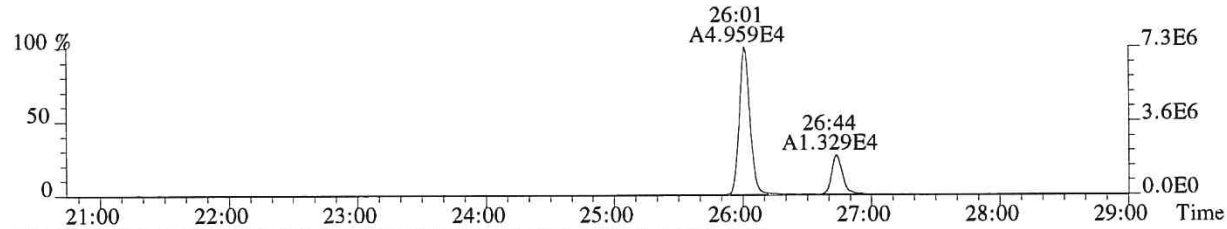
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2332.0,1.00%,F,T)



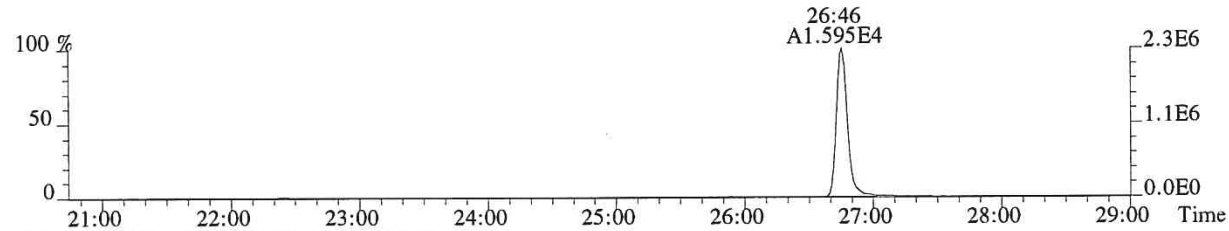
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12216.0,1.00%,F,T)



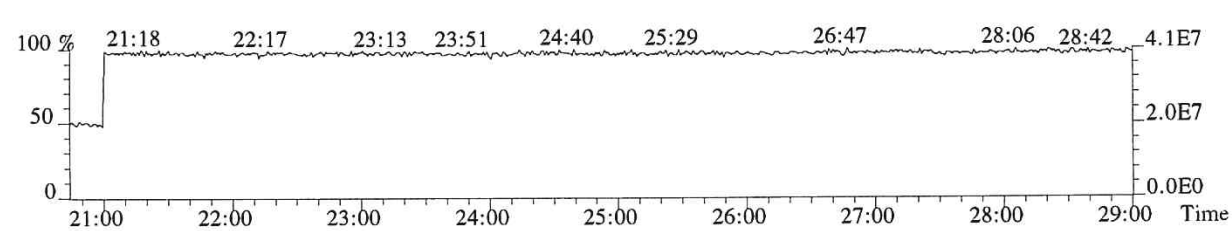
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11260.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1484.0,1.00%,F,T)

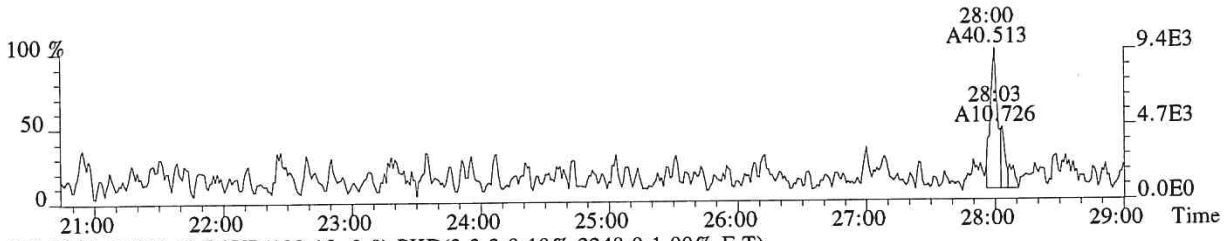


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

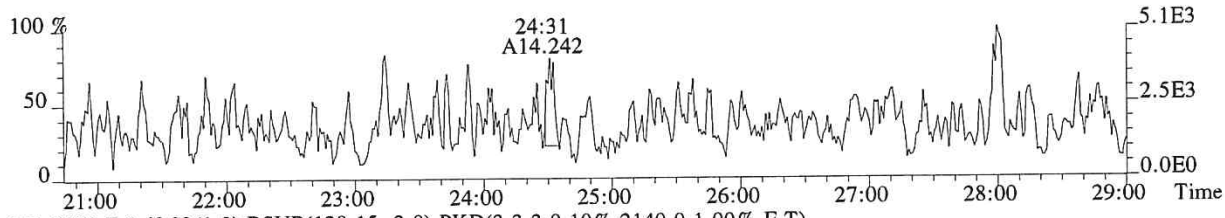


018286

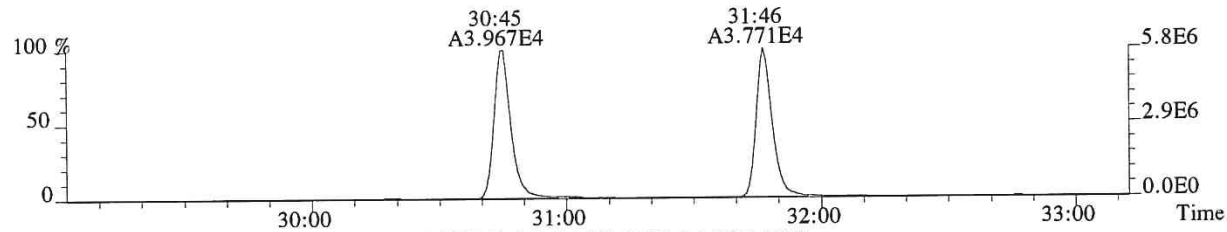
File:P519873 #1-587 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1808.0,1.00%,F,T)



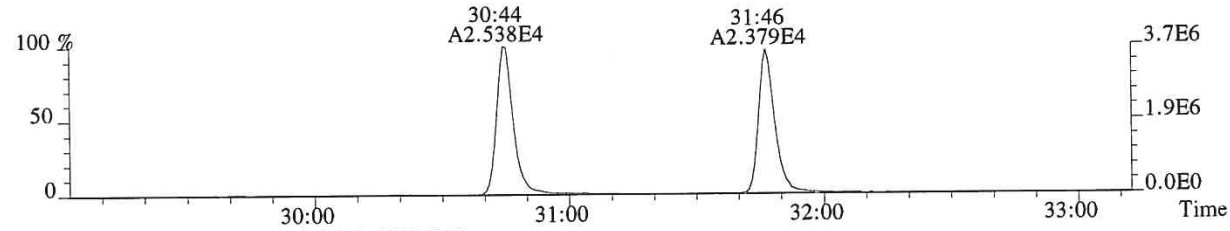
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2248.0,1.00%,F,T)



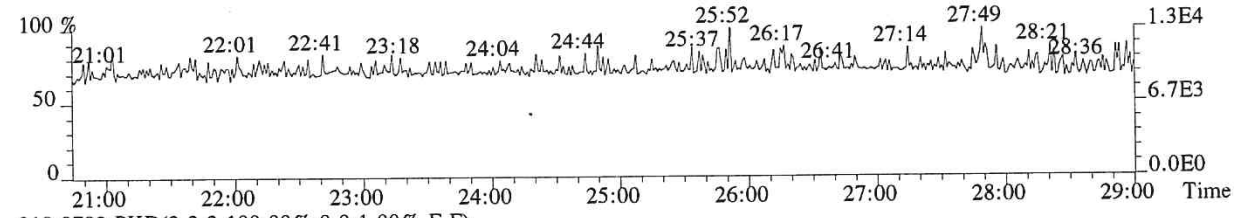
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2140.0,1.00%,F,T)



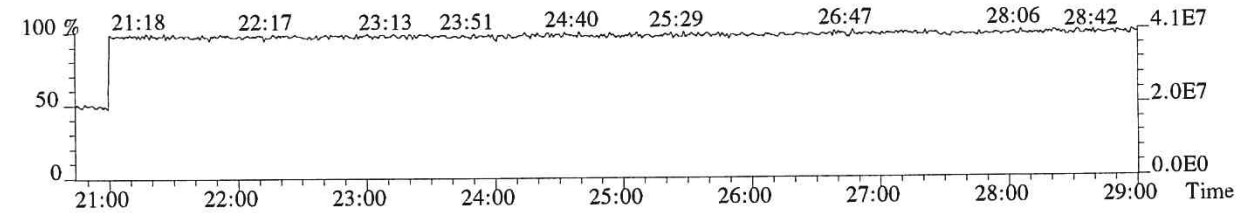
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1440.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

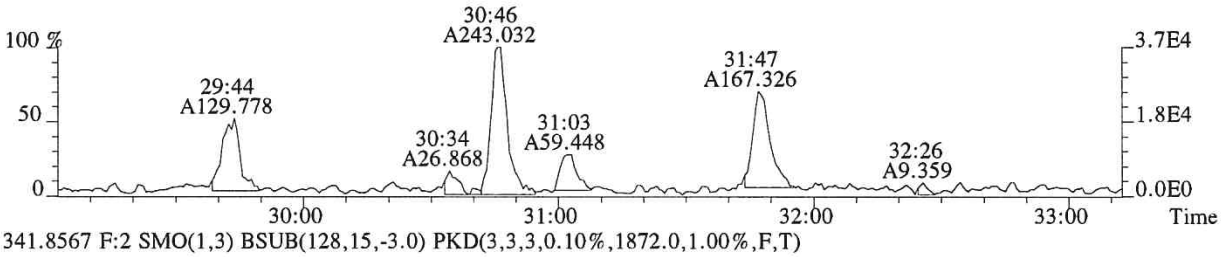


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

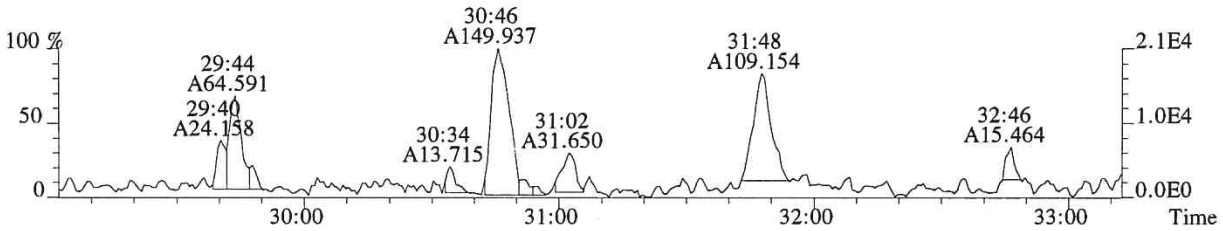


018287

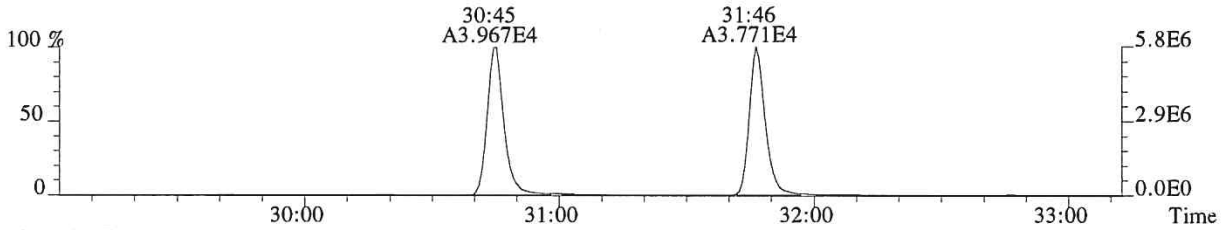
File:P519873 #1-376 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2184.0,1.00%,F,T)



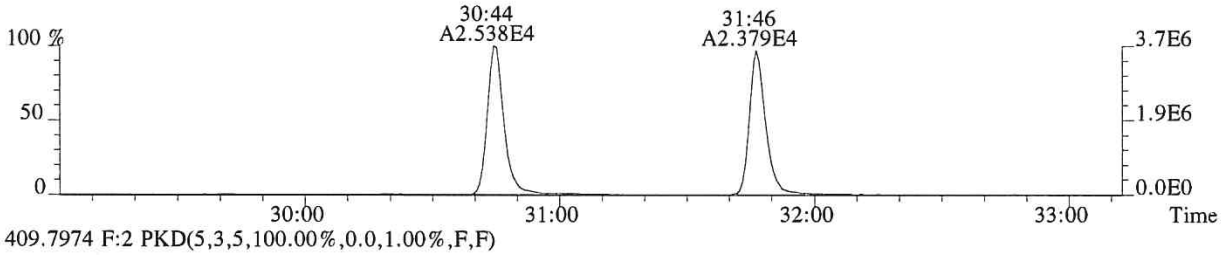
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1872.0,1.00%,F,T)



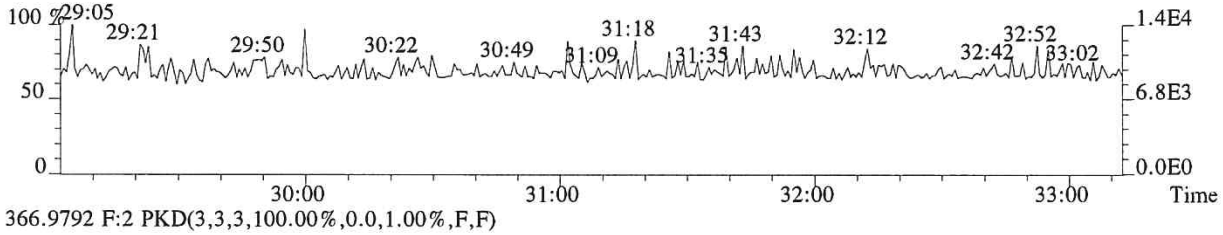
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2140.0,1.00%,F,T)



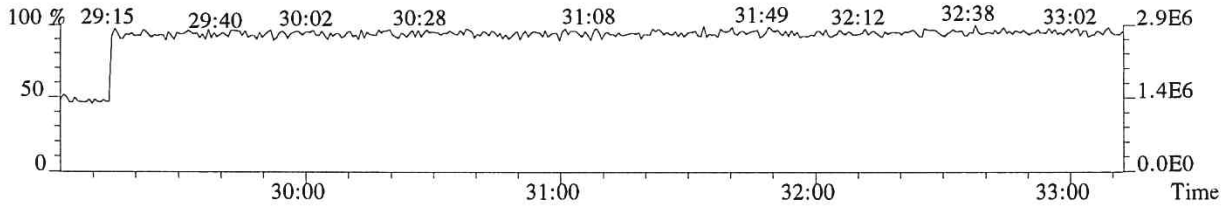
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1440.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

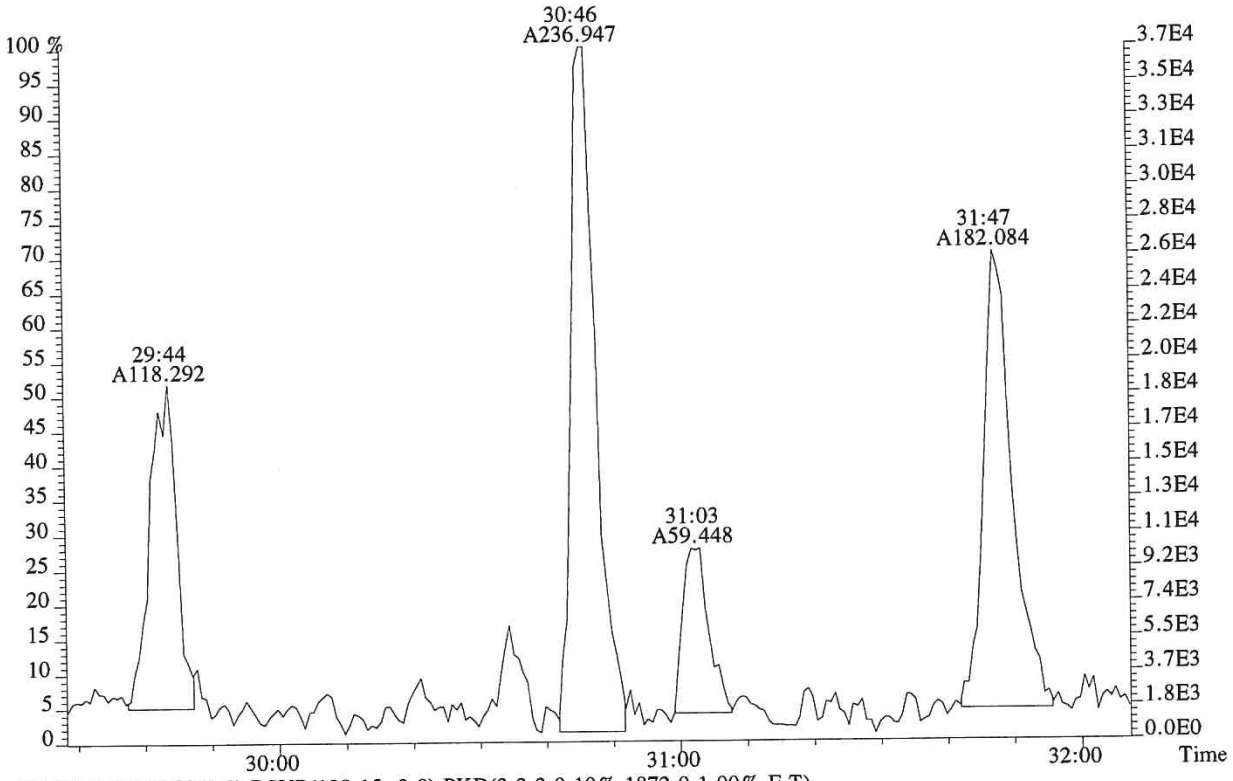


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

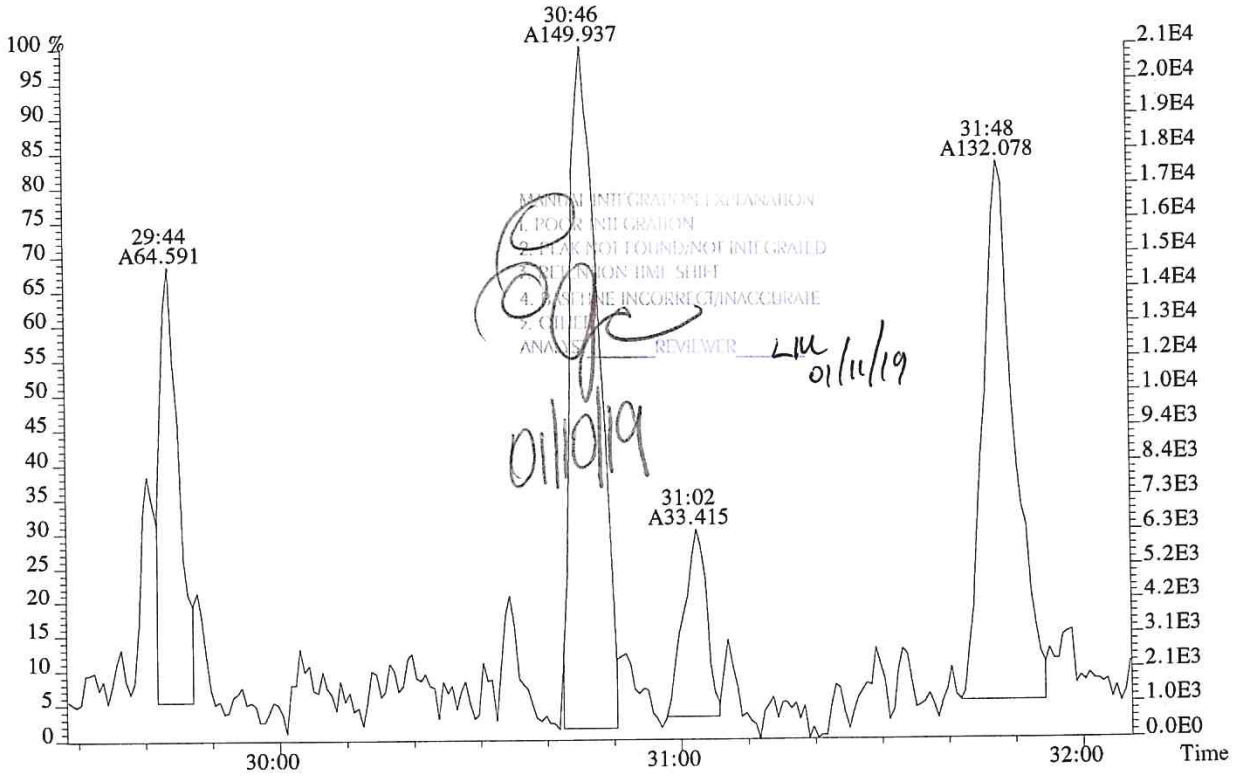


018288

File:P519873 #1-376 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2184.0,1.00%,F,T)



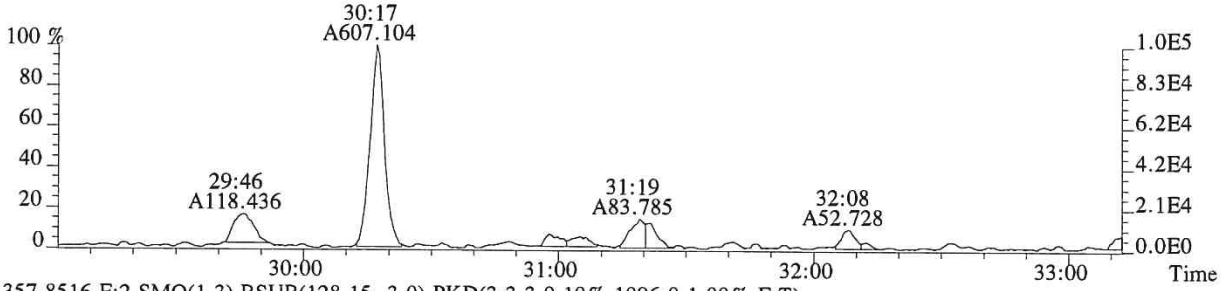
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1872.0,1.00%,F,T)



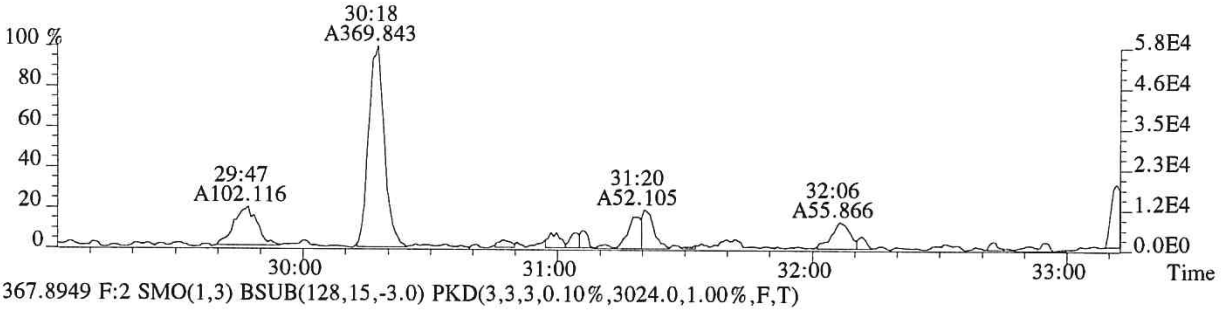
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LM 01/11/19
01/10/19

018289

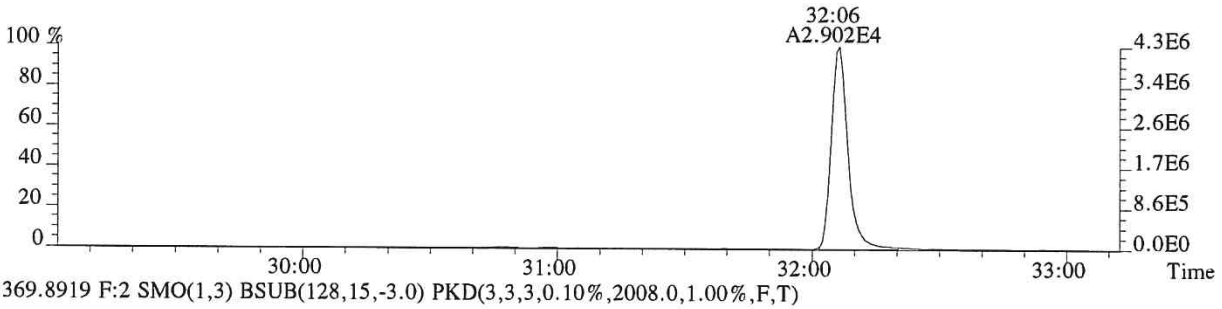
File:P519873 #1-376 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2064.0,1.00%,F,T)



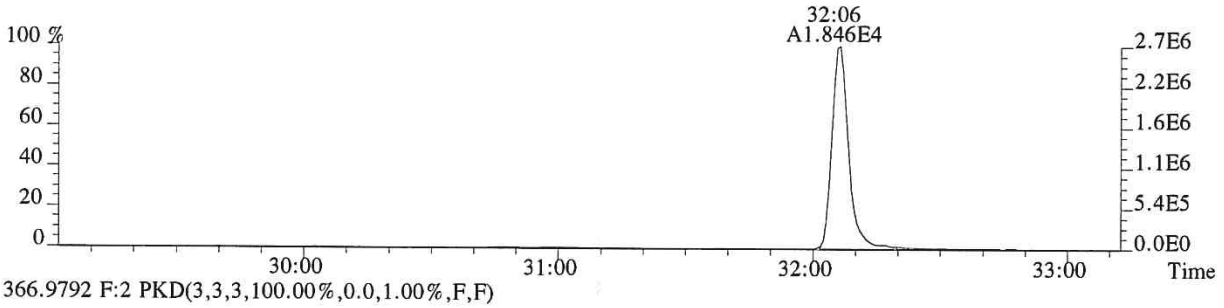
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1096.0,1.00%,F,T)



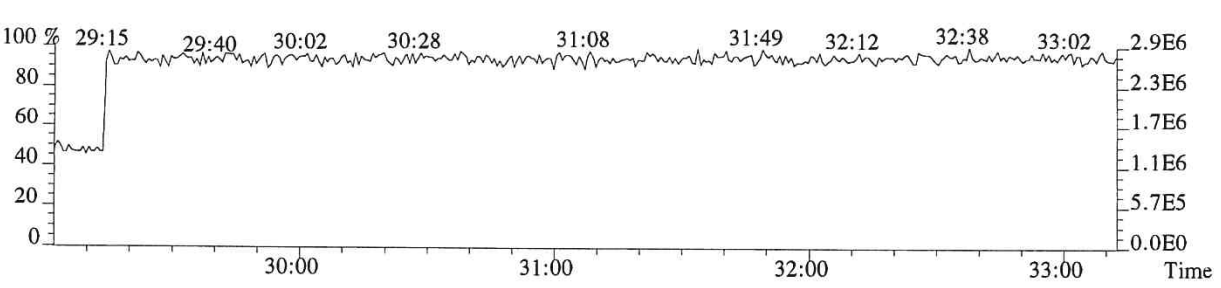
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3024.0,1.00%,F,T)



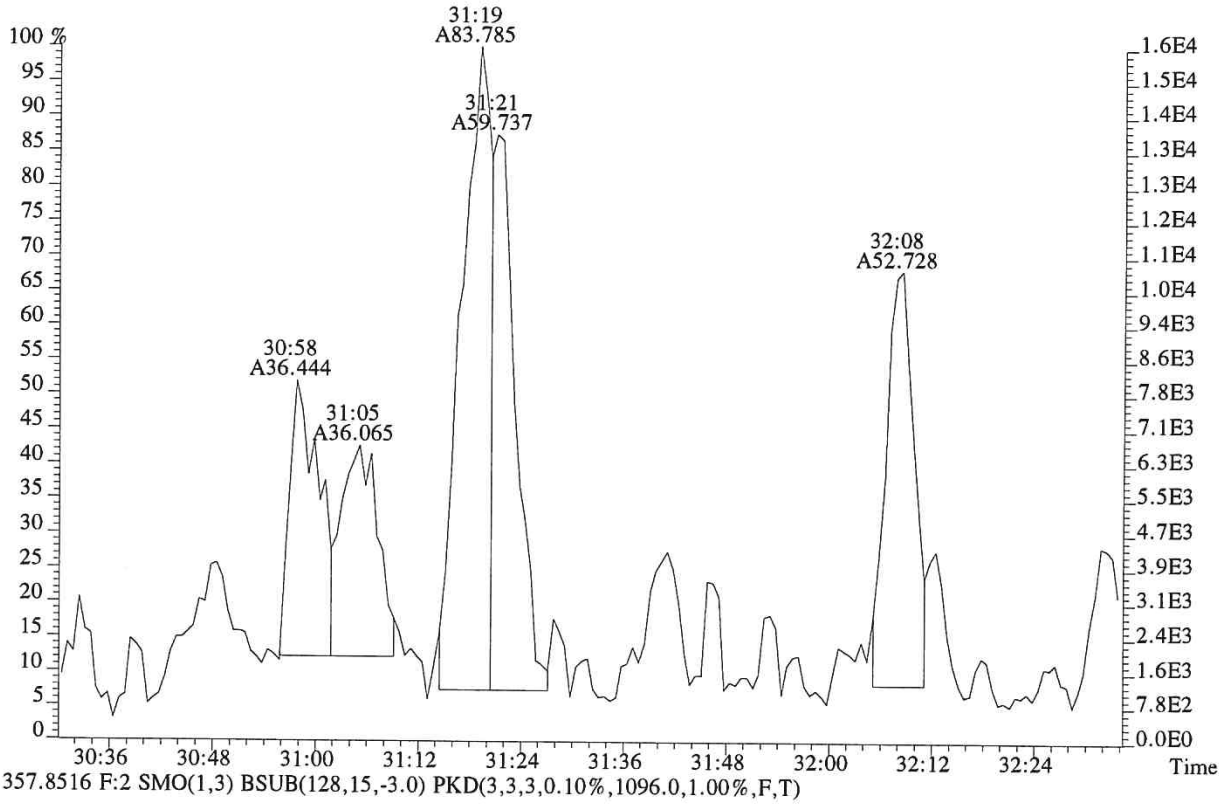
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2008.0,1.00%,F,T)



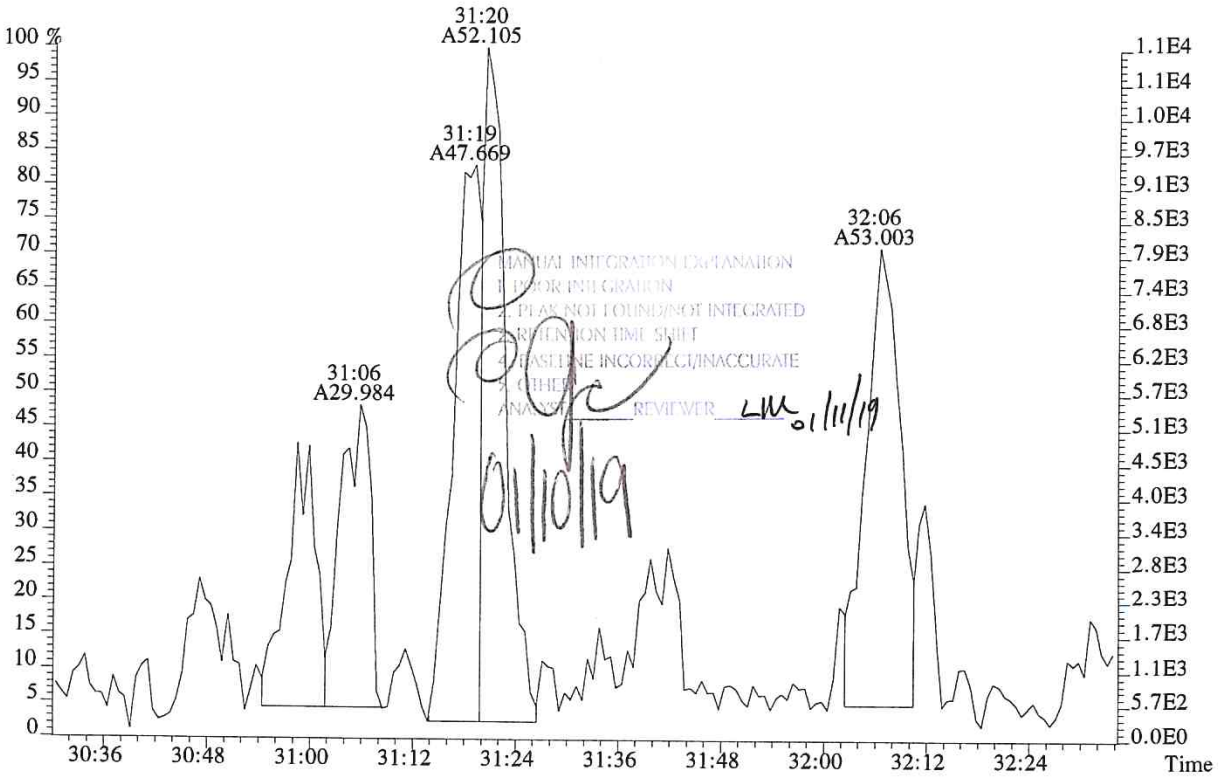
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



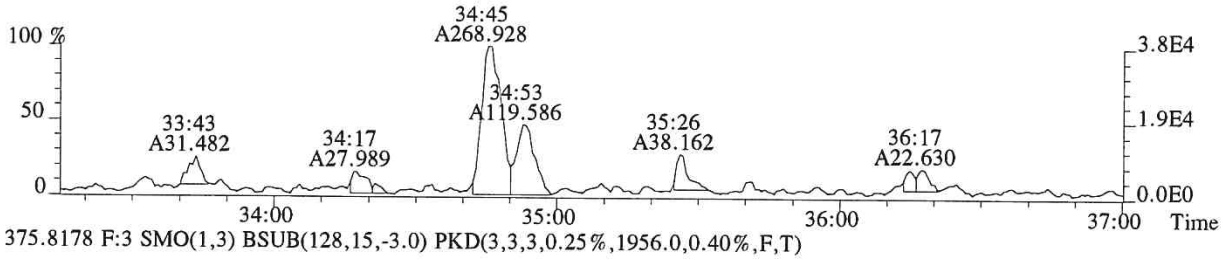
File:P519873 #1-376 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2064.0,1.00%,F,T)



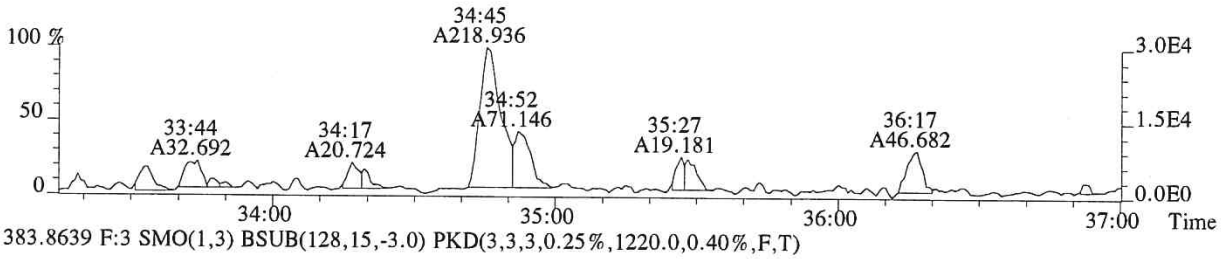
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1096.0,1.00%,F,T)



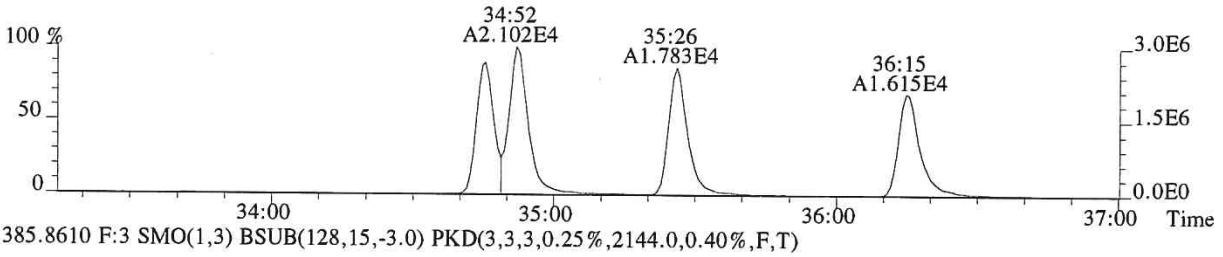
File:P519873 #1-339 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2240.0,0.40%,F,T)



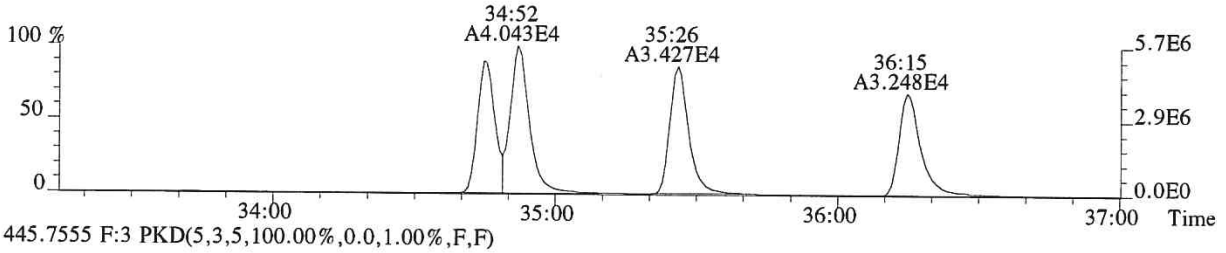
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1956.0,0.40%,F,T)



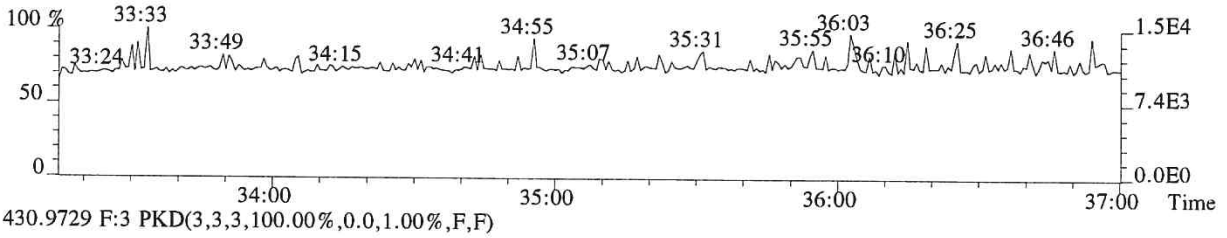
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1220.0,0.40%,F,T)



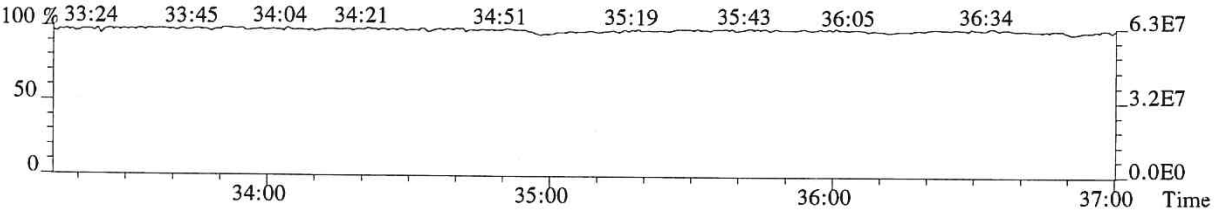
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2144.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

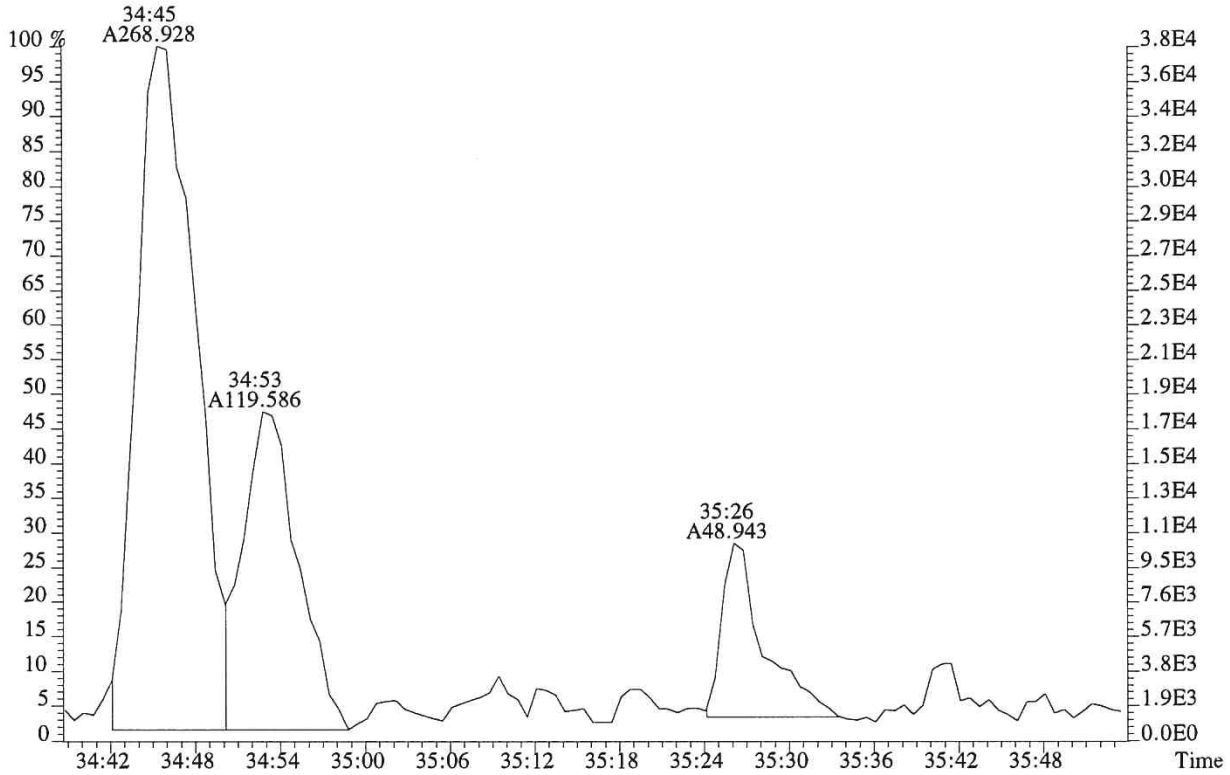


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

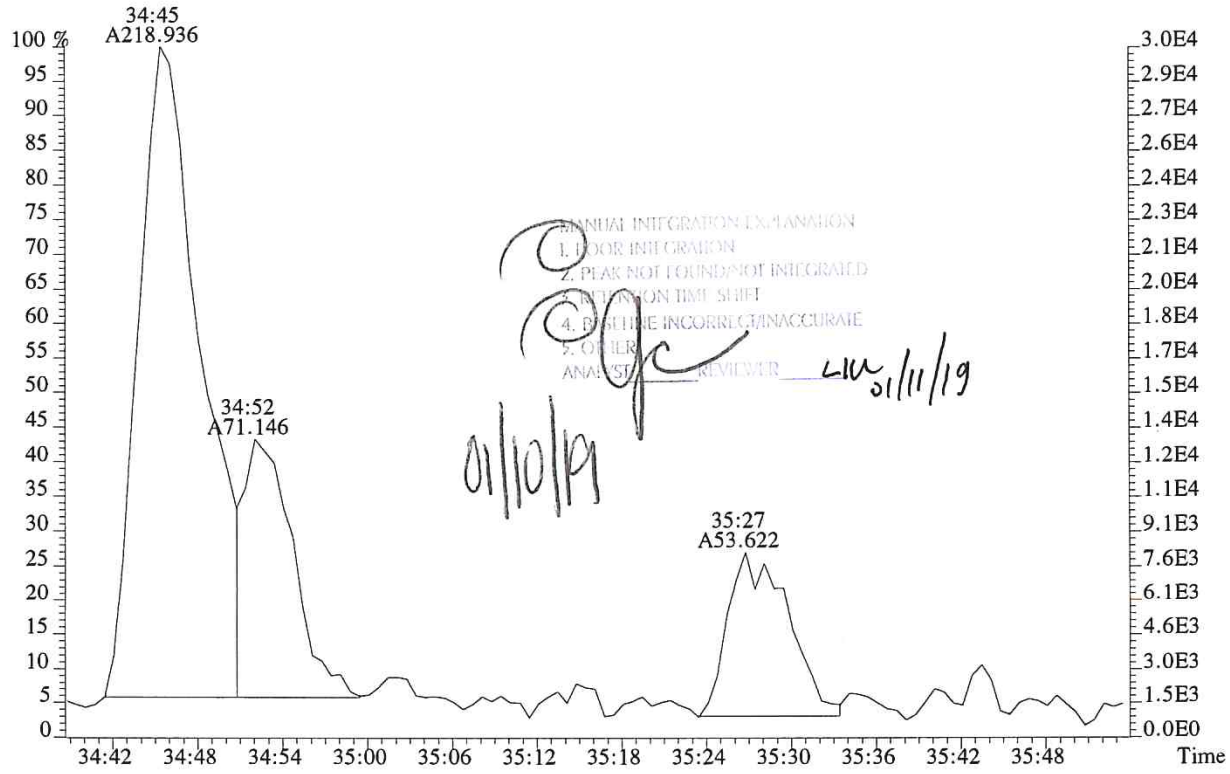


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File:P519873 #1-339 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2240.0,0.40%,F,T)

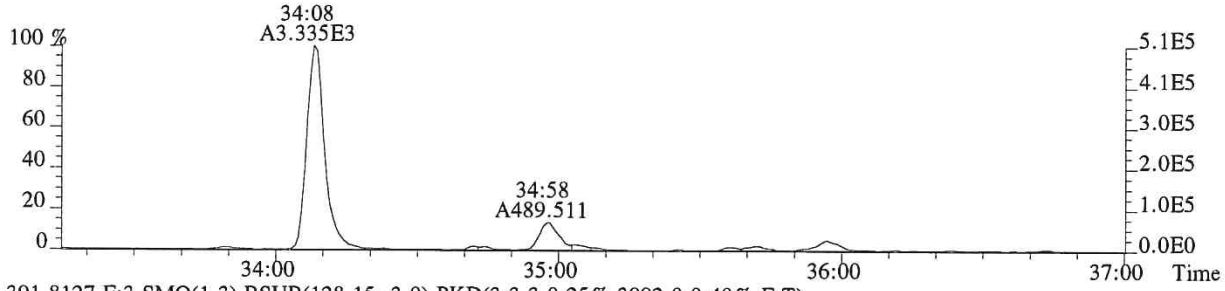


375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1956.0,0.40%,F,T)

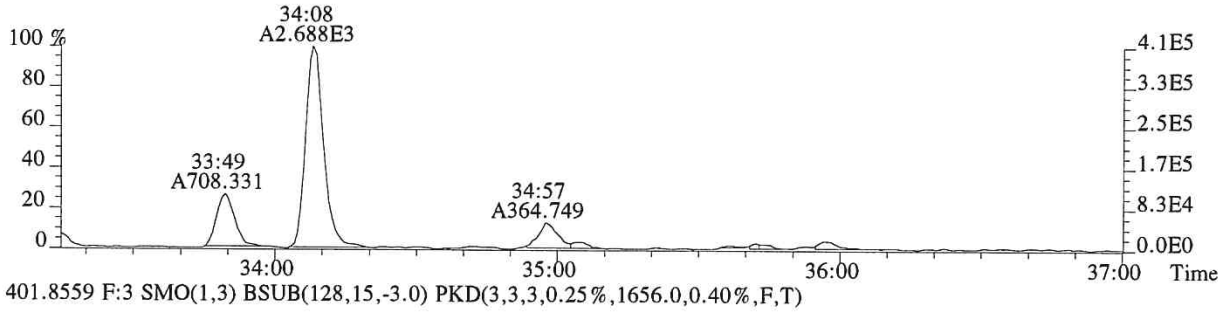


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LW 01/11/19
01/10/19

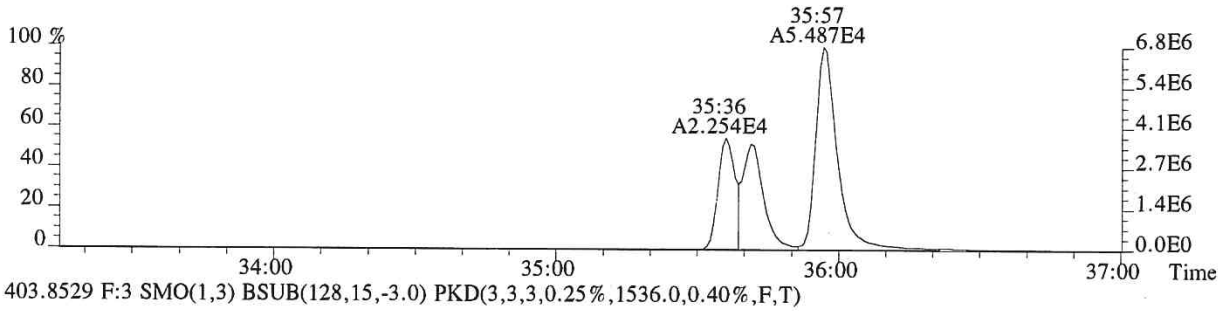
File:P519873 #1-339 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1120.0,0.40%,F,T)



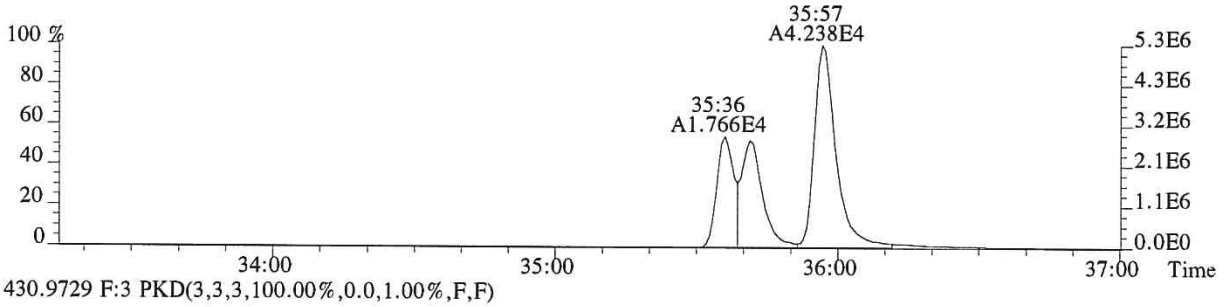
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3992.0,0.40%,F,T)



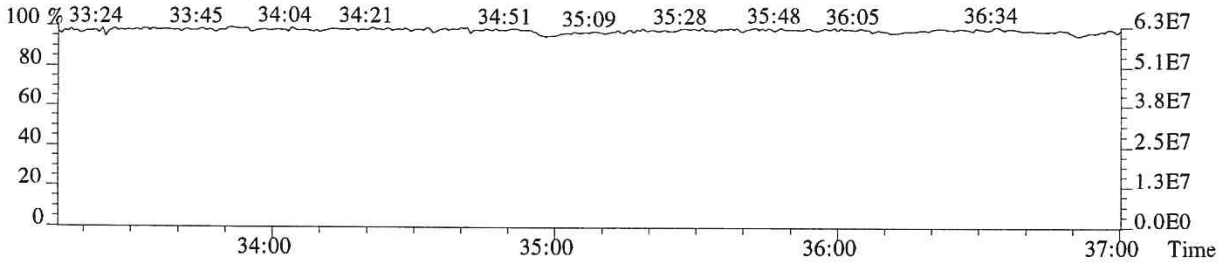
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1656.0,0.40%,F,T)



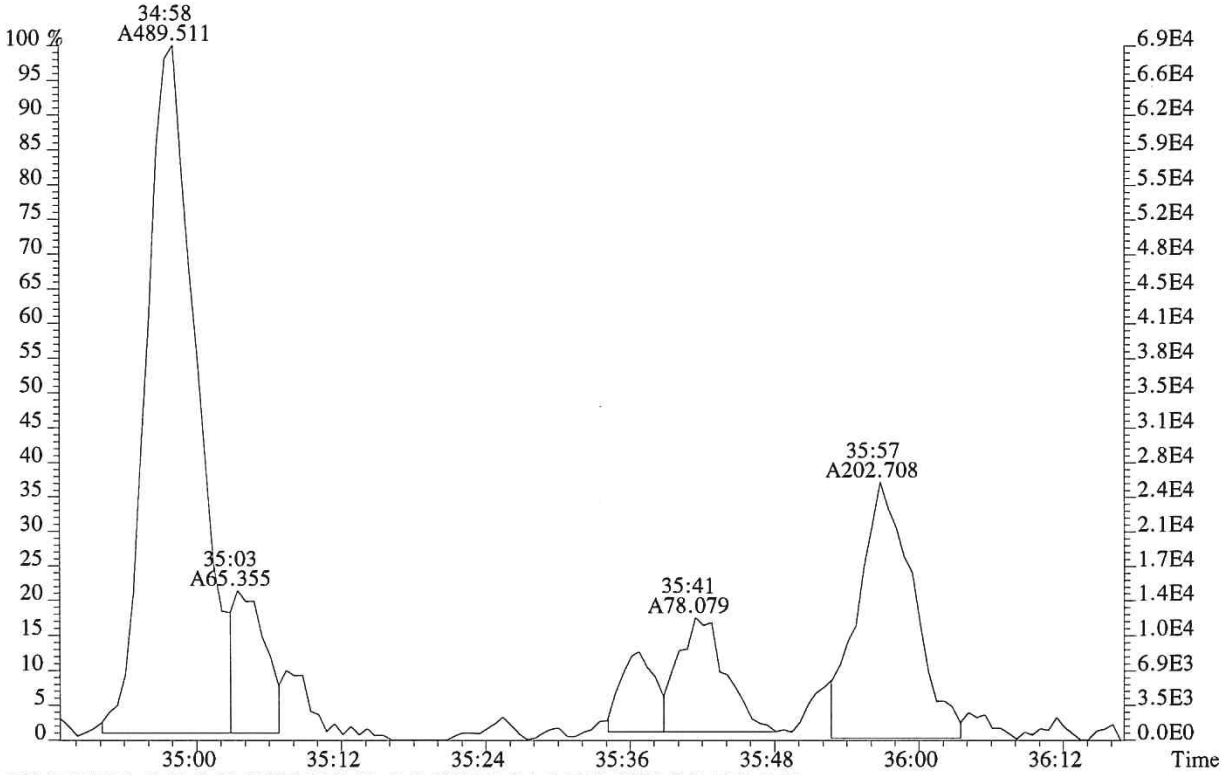
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1536.0,0.40%,F,T)



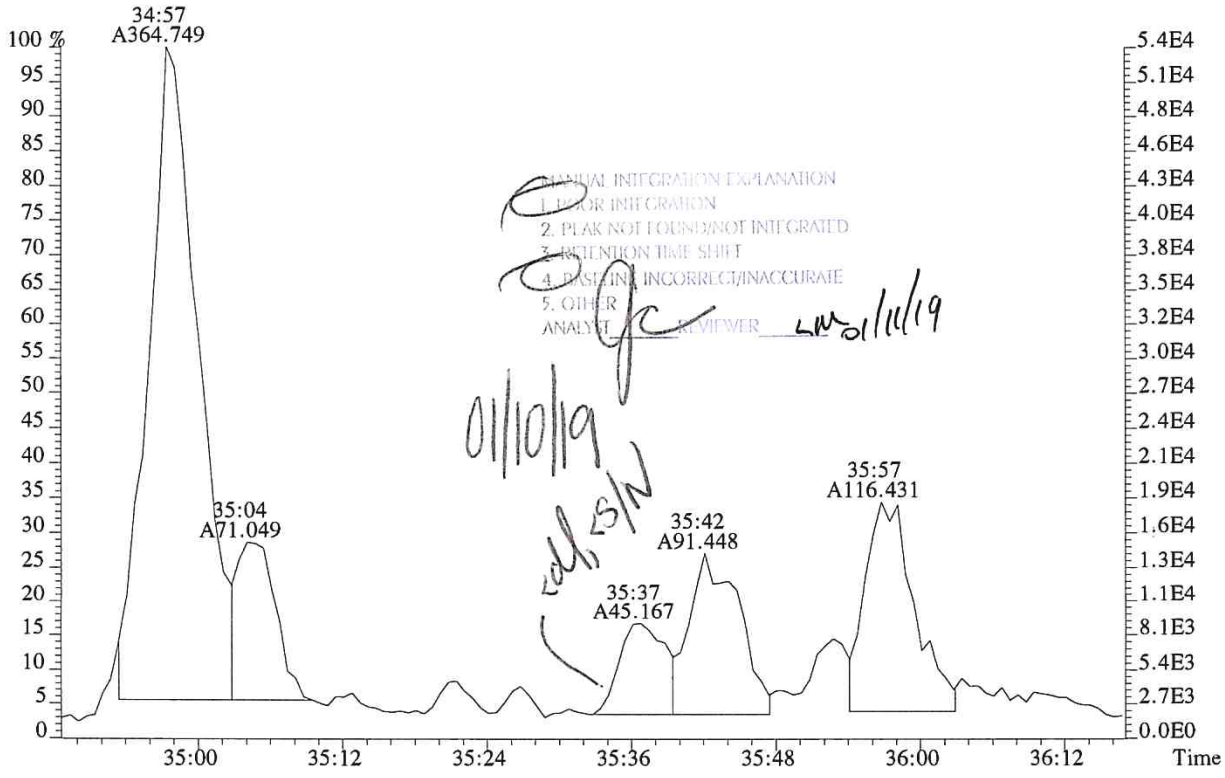
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519873 #1-339 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1120.0,0.40%,F,T)



391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3992.0,0.40%,F,T)

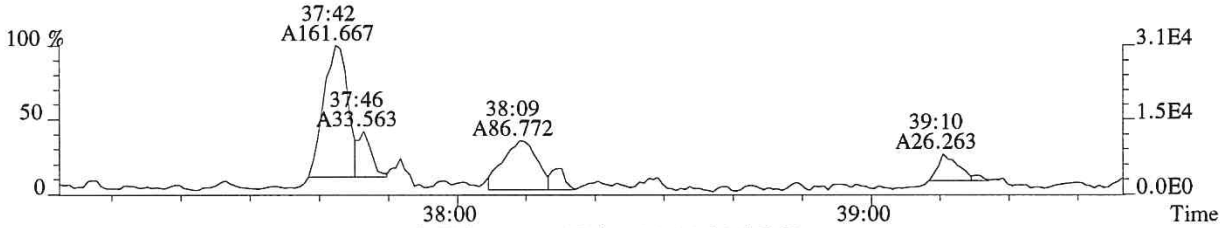


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST _____ REVIEWER _____ 01/10/19

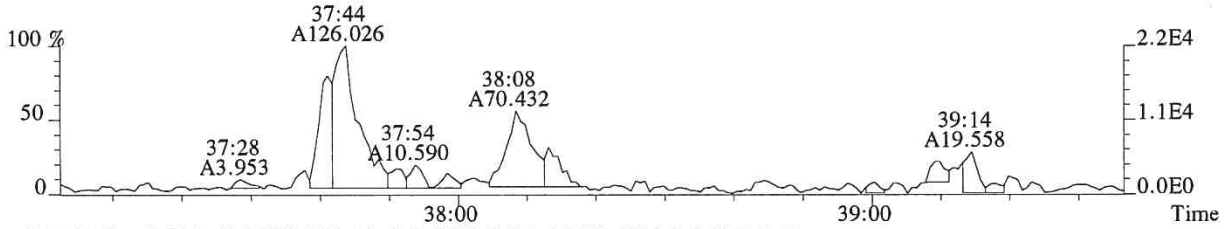
01/10/19

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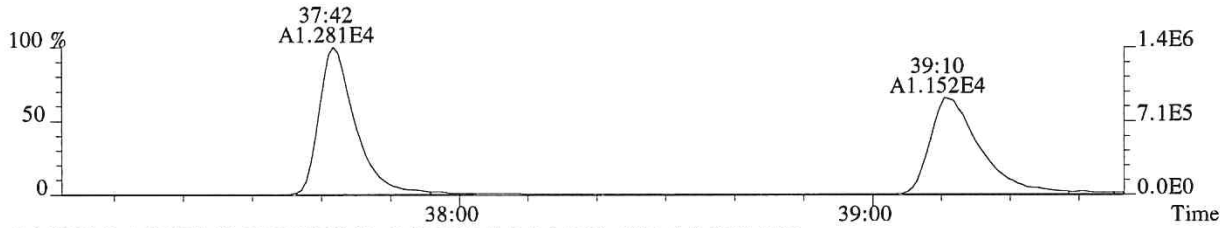
File:P519873 #1-232 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2172.0,0.50%,F,T)



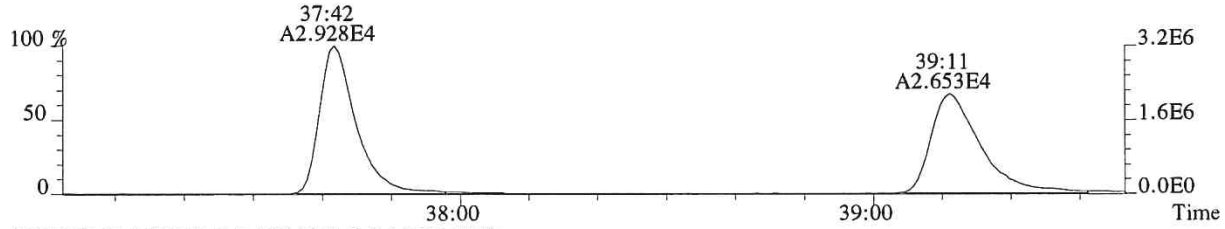
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1120.0,0.50%,F,T)



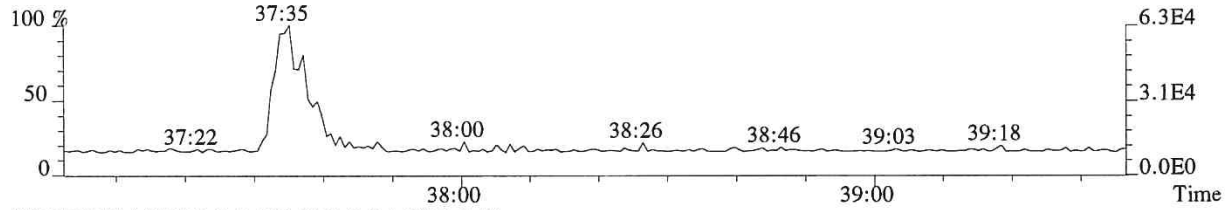
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4820.0,0.50%,F,T)



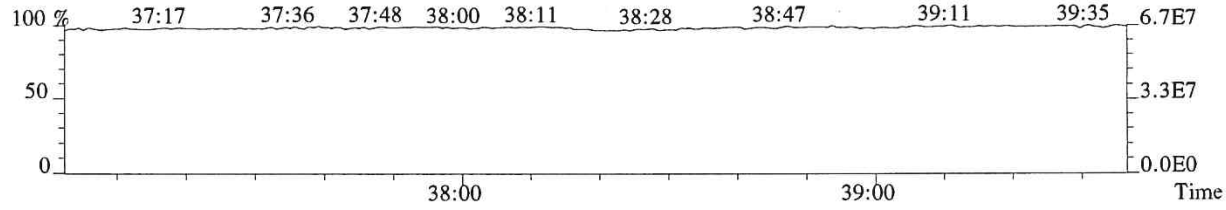
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6324.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

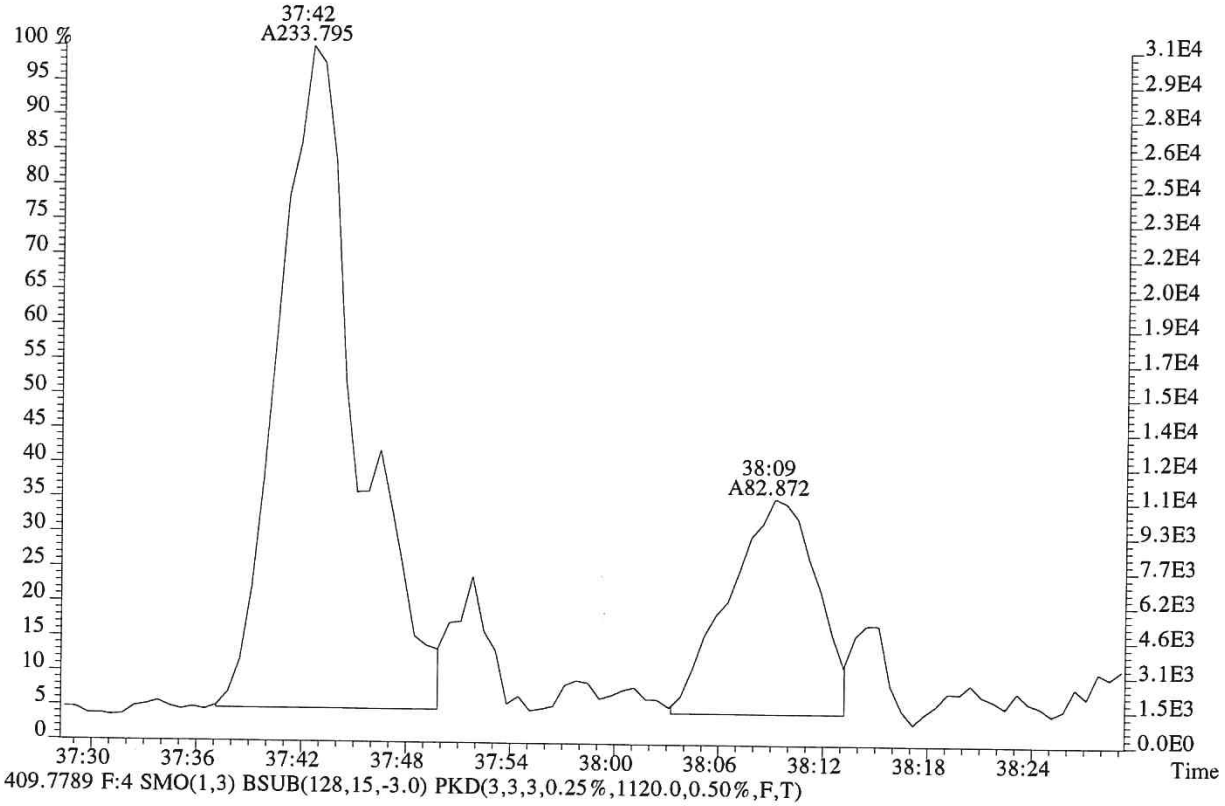


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

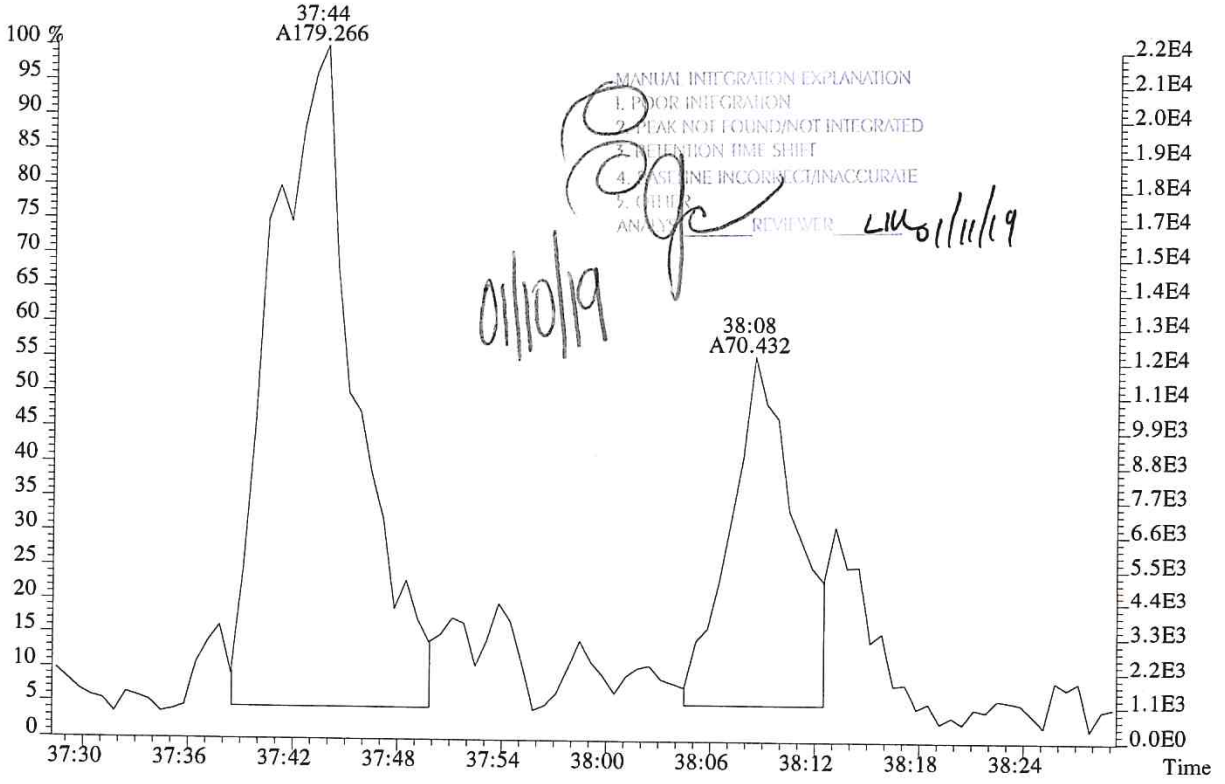


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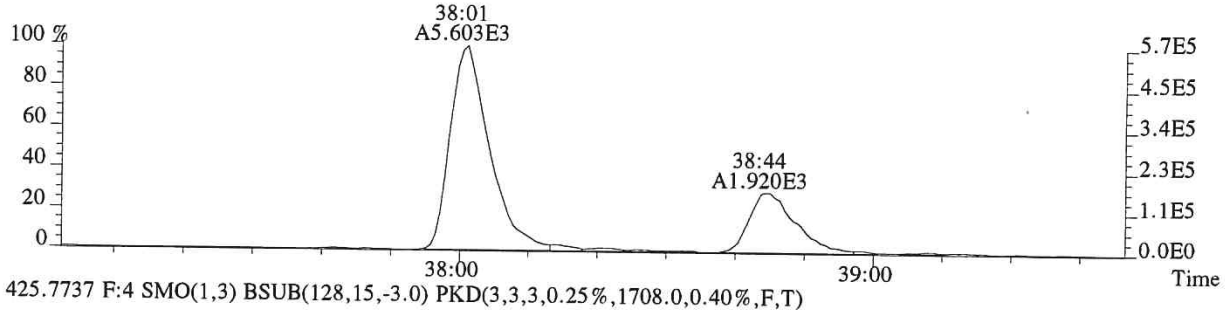
File:P519873 #1-232 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2172.0,0.50%,F,T)



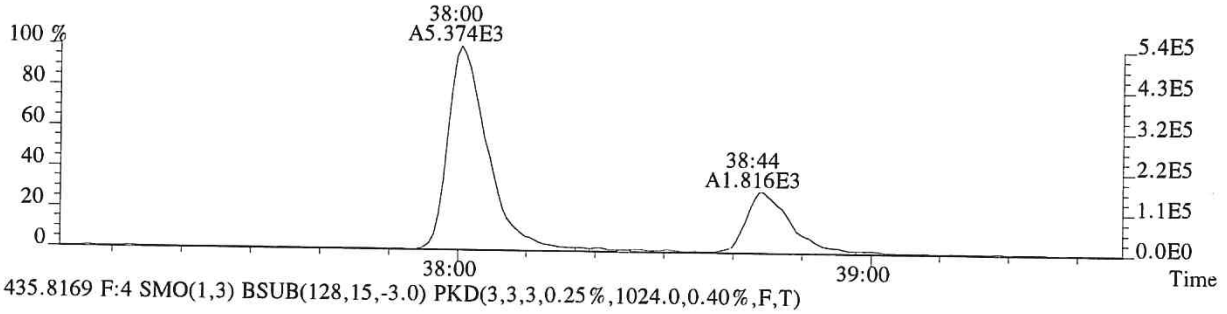
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1120.0,0.50%,F,T)



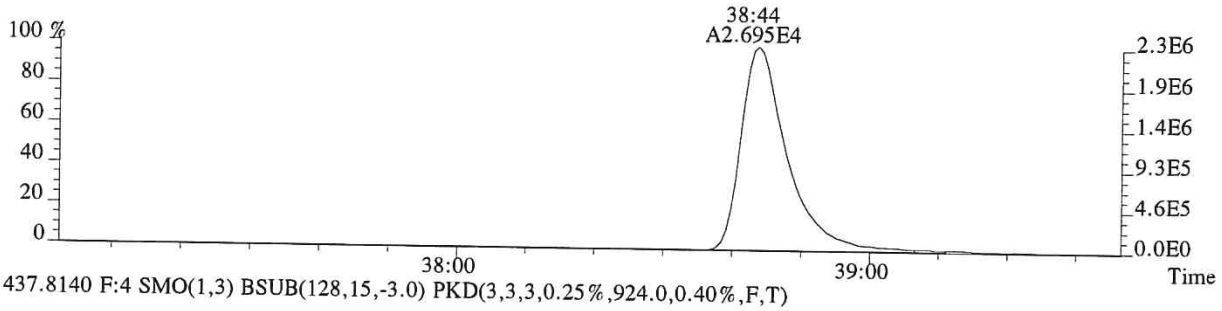
File:P519873 #1-232 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1756.0,0.40%,F,T)



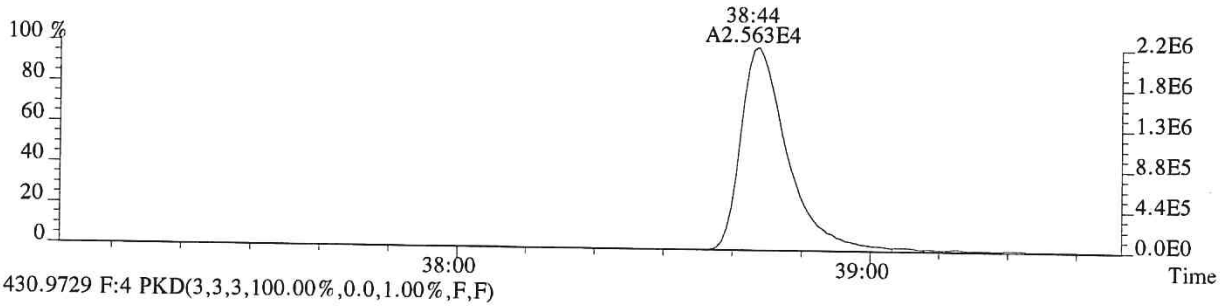
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1708.0,0.40%,F,T)



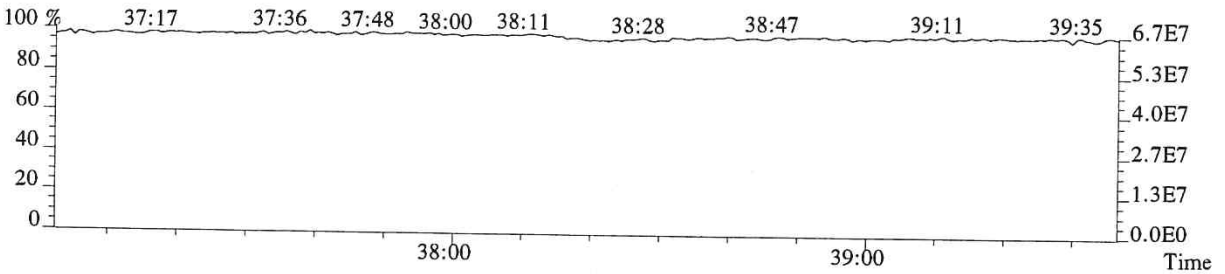
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1024.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,924.0,0.40%,F,T)

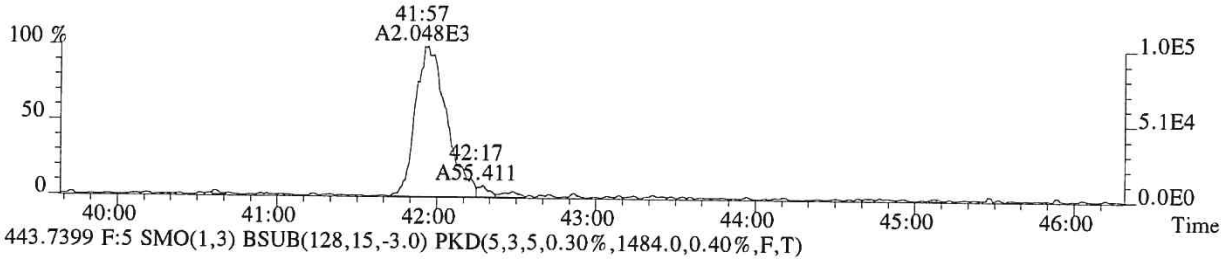


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

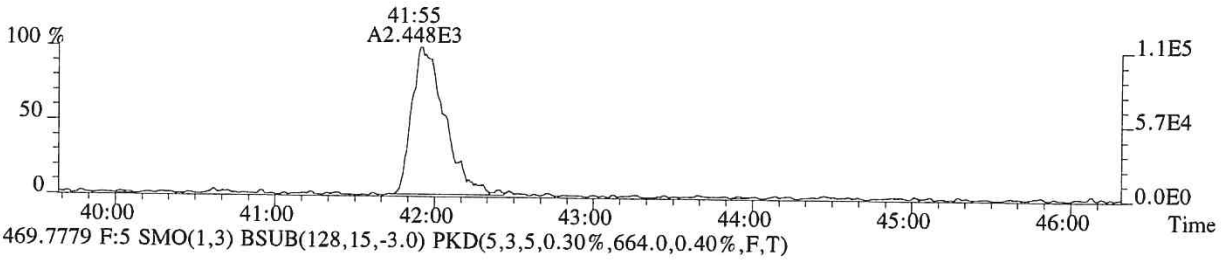


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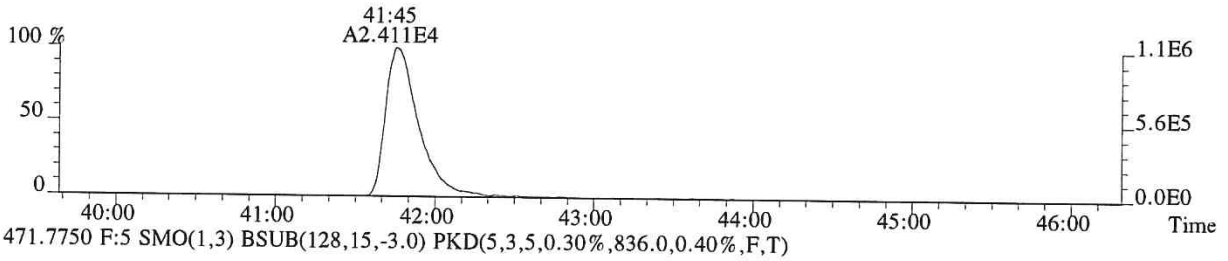
File:P519873 #1-601 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,752.0,0.40%,F,T)



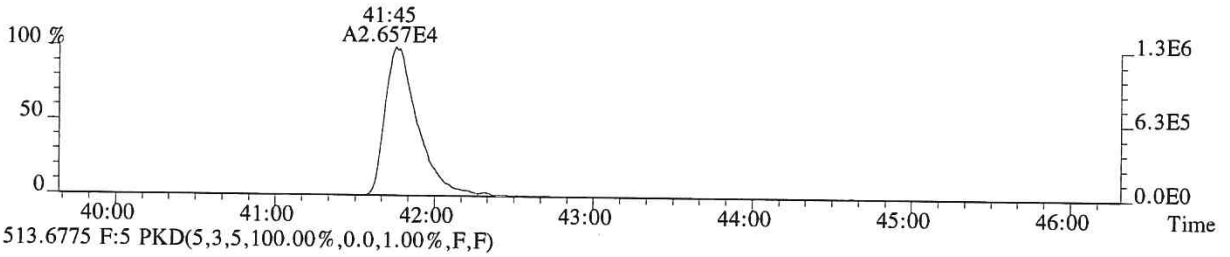
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1484.0,0.40%,F,T)



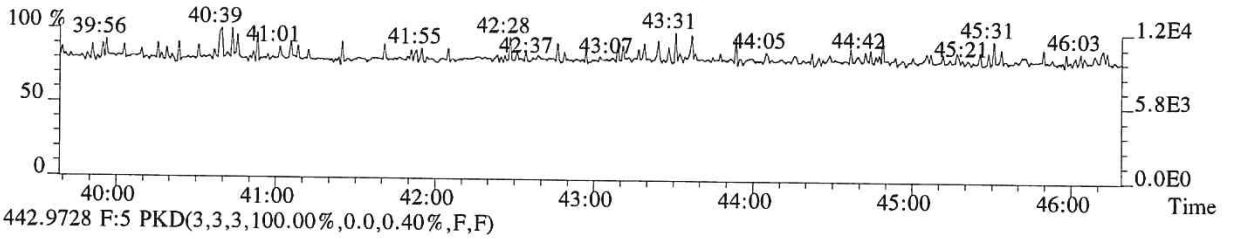
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,664.0,0.40%,F,T)



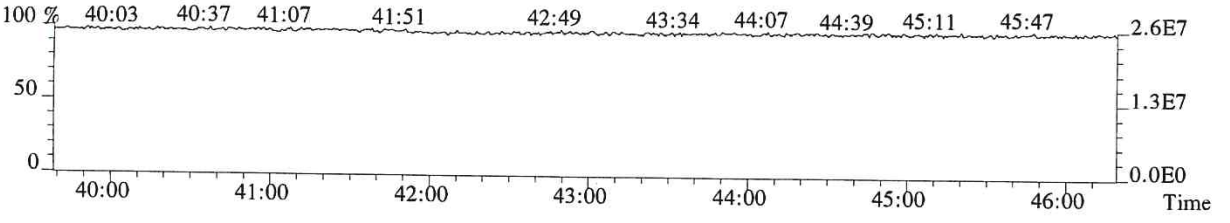
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,836.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

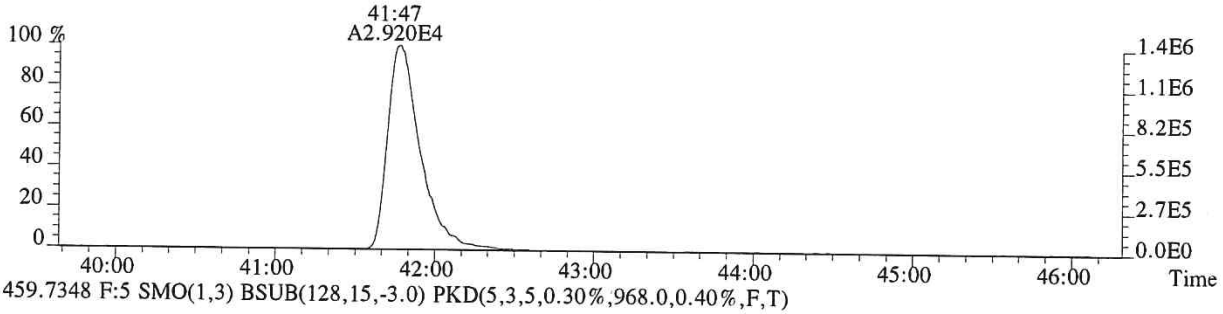


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

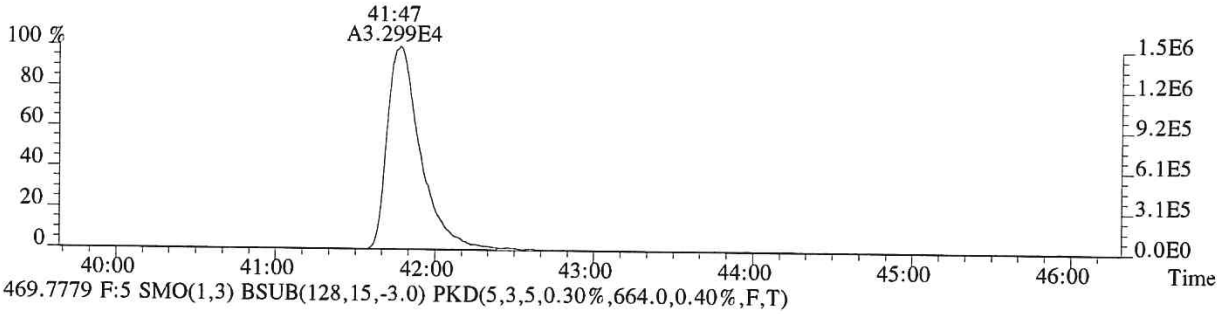


018299

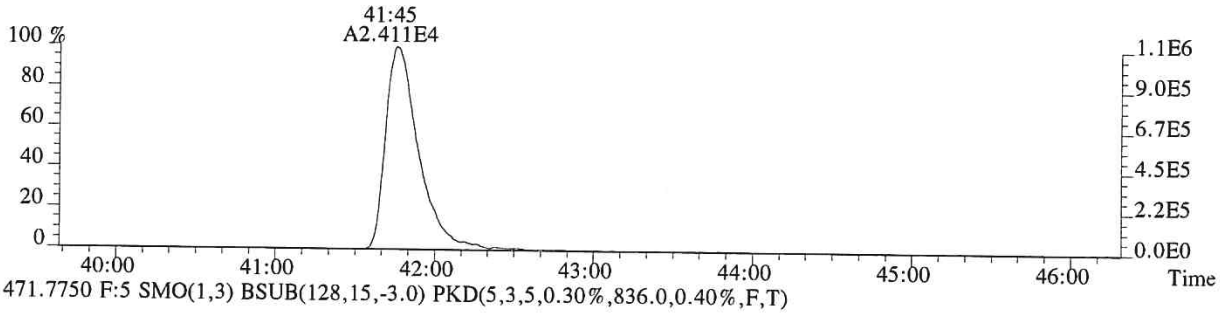
File:P519873 #1-601 Acq: 9-JAN-2019 22:44:14 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-006
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1064.0,0.40%,F,T)



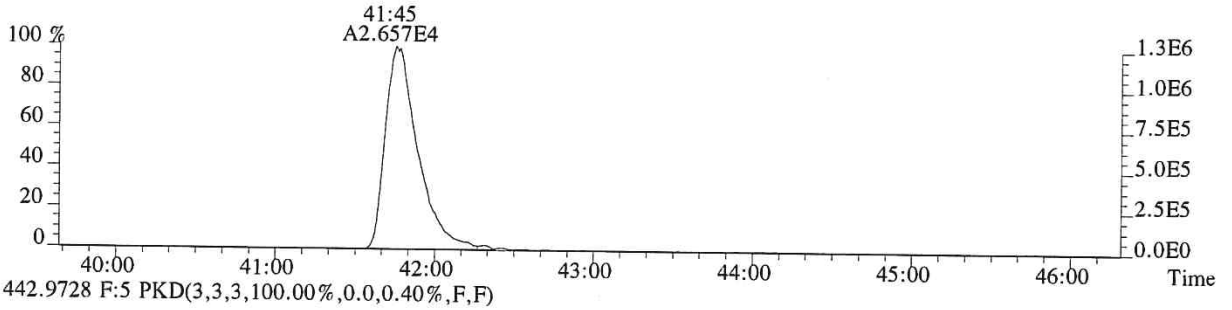
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,968.0,0.40%,F,T)



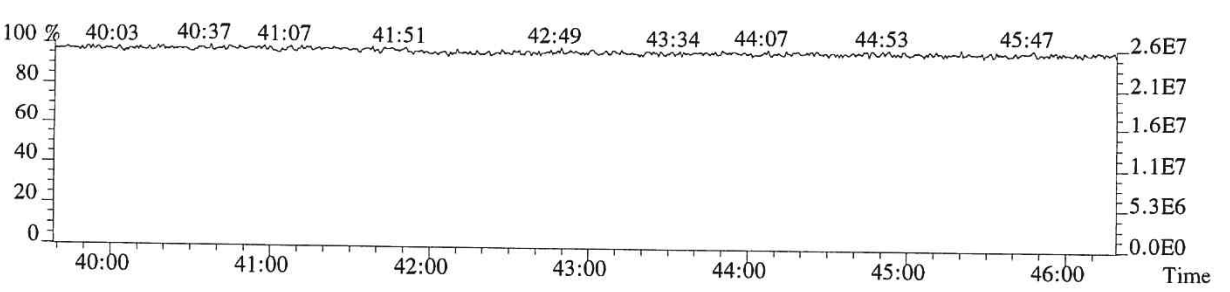
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,664.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,836.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018300

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0220

Run #16 Filename P519874 Samp: 1 Inj: 1 Acquired: 9-JAN-19 23:32:51
Processed: 10-JAN-19 08:15:34 Sample ID: E1801139-007

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:46	4.626e+03	6.196e+03	0.75	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:46	2.605e+02	2.024e+02	1.29	no	yes	1.012
3	Unk	2,3,4,7,8-PeCDF	31:49	2.303e+02	1.527e+02	1.51	yes	yes	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:47	2.681e+02	2.294e+02	1.17	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:54	8.984e+01	1.047e+02	0.86	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:28	4.583e+01	2.438e+01	1.88	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:19	6.579e+01	5.103e+01	1.29	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:43	2.234e+02	2.388e+02	0.94	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	yes	1.258
10	Unk	OCDF	41:57	3.073e+03	3.428e+03	0.90	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:46	1.051e+03	1.379e+03	0.76	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:08	1.038e+02	5.619e+01	1.85	no	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:38	6.118e+01	5.386e+01	1.14	yes	yes	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:45	1.163e+02	1.034e+02	1.12	yes	yes	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:59	1.724e+02	1.569e+02	1.10	yes	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:46	2.263e+03	2.036e+03	1.11	yes	no	1.025
17	Unk	OCDD	41:48	2.896e+04	3.327e+04	0.87	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:44	3.113e+04	3.965e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:46	5.237e+04	3.373e+04	1.55	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:48	5.021e+04	3.216e+04	1.56	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:46	2.123e+04	4.181e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:53	2.647e+04	5.132e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:27	2.300e+04	4.487e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:16	2.045e+04	3.976e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:43	1.602e+04	3.569e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:12	1.435e+04	3.259e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:45	1.459e+04	1.860e+04	0.78	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:07	3.841e+04	2.420e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:37	2.923e+04	2.303e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:43	3.510e+04	2.758e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:46	3.330e+04	3.155e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	41:47	2.773e+04	3.106e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:02	4.203e+04	5.246e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:58	5.782e+04	4.605e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:46	2.210e+04				no	1.014

$$\text{OCDD} = \frac{(2.896e+04 + 3.327e+04) \times 4000\ \text{pg} \times 1}{(2.773e+04 + 3.106e+04) \times 10.225\ \text{g} \times 77.2/100 \times 1.118} = 479.7\ \text{ng/kg}$$

LMcC 11/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0220

Run #16 Filename P519874 Samp: 1 Inj: 1 Acquired: 9-JAN-19 23:32:51
Processed: 10-JAN-19 08:15:34 LAB. ID: E1801139-007

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.44e+05	2.64e+03	2.1e+02	7.42e+05	3.20e+03	2.3e+02
2	1,2,3,7,8-PeCDF	3.61e+04	1.28e+03	2.8e+01	2.67e+04	3.28e+03	8.1e+00
3	2,3,4,7,8-PeCDF	2.84e+04	1.28e+03	2.2e+01	1.80e+04	3.28e+03	5.5e+00
4	1,2,3,4,7,8-HxCDF	3.64e+04	1.29e+03	2.8e+01	3.38e+04	1.21e+03	2.8e+01
5	1,2,3,6,7,8-HxCDF	1.34e+04	1.29e+03	1.0e+01	1.40e+04	1.21e+03	1.2e+01
6	2,3,4,6,7,8-HxCDF	1.01e+04	1.29e+03	7.9e+00	6.48e+03	1.21e+03	5.3e+00
7	1,2,3,7,8,9-HxCDF	8.63e+03	1.29e+03	6.7e+00	6.44e+03	1.21e+03	5.3e+00
8	1,2,3,4,6,7,8-HpCDF	2.35e+04	1.17e+03	2.0e+01	3.06e+04	1.24e+03	2.5e+01
9	1,2,3,4,7,8,9-HpCDF	*	1.17e+03	*	*	1.24e+03	*
10	OCDF	1.40e+05	4.84e+02	2.9e+02	1.66e+05	9.92e+02	1.7e+02
11	2,3,7,8-TCDD	1.53e+05	3.08e+03	5.0e+01	1.93e+05	1.75e+03	1.1e+02
12	1,2,3,7,8-PeCDD	1.45e+04	1.59e+03	9.1e+00	7.98e+03	6.92e+02	1.2e+01
13	1,2,3,4,7,8-HxCDD	1.29e+04	9.28e+02	1.4e+01	9.11e+03	3.06e+03	3.0e+00
14	1,2,3,6,7,8-HxCDD	1.26e+04	9.28e+02	1.4e+01	1.67e+04	3.06e+03	5.5e+00
15	1,2,3,7,8,9-HxCDD	2.12e+04	9.28e+02	2.3e+01	2.02e+04	3.06e+03	6.6e+00
16	1,2,3,4,6,7,8-HpCDD	2.01e+05	2.85e+03	7.0e+01	1.79e+05	1.03e+03	1.7e+02
17	OCDD	1.38e+06	6.00e+02	2.3e+03	1.51e+06	7.80e+02	1.9e+03
18	13C-2,3,7,8-TCDF	4.03e+06	7.78e+03	5.2e+02	5.10e+06	5.02e+03	1.0e+03
19	13C-1,2,3,7,8-PeCDF	7.65e+06	1.39e+03	5.5e+03	4.86e+06	2.40e+03	2.0e+03
20	13C-2,3,4,7,8-PeCDF	7.37e+06	1.39e+03	5.3e+03	4.63e+06	2.40e+03	1.9e+03
21	13C-1,2,3,4,7,8-HxCDF	3.32e+06	1.23e+03	2.7e+03	6.54e+06	1.13e+03	5.8e+03
22	13C-1,2,3,6,7,8-HxCDF	3.69e+06	1.23e+03	3.0e+03	7.15e+06	1.13e+03	6.3e+03
23	13C-2,3,4,6,7,8-HxCDF	3.20e+06	1.23e+03	2.6e+03	6.41e+06	1.13e+03	5.7e+03
24	13C-1,2,3,7,8,9-HxCDF	2.56e+06	1.23e+03	2.1e+03	4.88e+06	1.13e+03	4.3e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.73e+06	1.70e+03	1.0e+03	3.82e+06	5.18e+03	7.4e+02
26	13C-1,2,3,4,7,8,9-HpCDF	1.16e+06	1.70e+03	6.8e+02	2.63e+06	5.18e+03	5.1e+02
27	13C-2,3,7,8-TCDD	2.10e+06	9.38e+03	2.2e+02	2.70e+06	6.84e+03	3.9e+02
28	13C-1,2,3,7,8-PeCDD	5.59e+06	1.94e+03	2.9e+03	3.53e+06	1.73e+03	2.0e+03
29	13C-1,2,3,4,7,8-HxCDD	4.69e+06	1.80e+03	2.6e+03	3.67e+06	1.25e+03	2.9e+03
30	13C-1,2,3,6,7,8-HxCDD	4.55e+06	1.80e+03	2.5e+03	3.65e+06	1.25e+03	2.9e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.84e+06	7.68e+02	3.7e+03	2.72e+06	5.16e+02	5.3e+03
32	13C-OCDD	1.30e+06	7.68e+02	1.7e+03	1.46e+06	5.20e+02	2.8e+03
33	13C-1,2,3,4-TCDD	6.03e+06	9.38e+03	6.4e+02	7.62e+06	6.84e+03	1.1e+03
34	13C-1,2,3,7,8,9-HxCDD	7.11e+06	1.80e+03	3.9e+03	5.72e+06	1.25e+03	4.6e+03
35	37Cl-2,3,7,8-TCDD	3.13e+06	1.18e+03	2.7e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0220

Entry: 36 Totals Name: Total Tetra-Furans

Run: 16 File: P519874 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 23:32:51 Processed: 10-JAN-19 08:15:34

Mass: 303.9020 305.8990 Tot Response: 1.99e+04 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:17	7.79e+01	9.56e+01	0.81	yes	1.74e+02		n	n
2	22:07	1.57e+02	2.02e+02	0.77	yes	3.59e+02		n	n
3	23:16	9.22e+01	1.14e+02	0.81	yes	2.06e+02		n	n
4	23:52	5.61e+01	7.08e+01	0.79	yes	1.27e+02		n	n
5	24:08	2.06e+02	3.00e+02	0.69	yes	5.06e+02		n	n
6	24:15	2.90e+02	3.96e+02	0.73	yes	6.85e+02		n	n
7	24:45	2.18e+03	2.78e+03	0.78	yes	4.97e+03		n	n
8	25:03	1.43e+02	1.92e+02	0.74	yes	3.35e+02		n	n
9	25:46	4.63e+03	6.20e+03	0.75	yes	1.08e+04	2,3,7,8-TCDF	n	n
10	26:10	3.29e+02	4.18e+02	0.79	yes	7.47e+02		n	n
11	27:59	4.12e+02	5.55e+02	0.74	yes	9.66e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0220

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 16 File: P519874 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 23:32:51 Processed: 10-JAN-19 08:15:34

Mass: 319.8970 321.8940 Tot Response: 3.44e+03 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:24	4.33e+02	5.74e+02	0.75	yes	1.01e+03		n	n
2	26:46	1.05e+03	1.38e+03	0.76	yes	2.43e+03	2,3,7,8-TCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0220

Entry: 38 Totals Name: Total Penta-Furans1

Run: 16 File: P519874 Sample:1 Injection:1 Function:1

Acquired: 9-JAN-19 23:32:51 Processed: 10-JAN-19 08:15:34

Mass: 339.8600 341.8570 Tot Response: 1.28e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:00	7.41e+01	5.38e+01 1.38	yes	1.28e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0220

Entry: 39 Totals Name: Total Penta-Furans2

Run: 16 File: P519874 Sample:1 Injection:1 Function:2

Acquired: 9-JAN-19 23:32:51 Processed: 10-JAN-19 08:15:34

Mass: 339.8600 341.8570 Tot Response: 1.02e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:44	2.72e+02	1.80e+02 1.51	yes	4.52e+02		n	y
2	31:03	1.08e+02	7.68e+01 1.41	yes	1.85e+02		n	y
3	31:49	2.30e+02	1.53e+02 1.51	yes	3.83e+02	2,3,4,7,8-PeCDF	n	y

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0220

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 16 File: P519874 Sample:1 Injection:1 Function:2

Acquired: 9-JAN-19 23:32:51 Processed: 10-JAN-19 08:15:34

Mass: 355.8550 357.8520 Tot Response: 7.14e+02 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:18	3.68e+02	2.34e+02	1.58	yes	6.02e+02		n	n
2	30:49	2.58e+01	1.69e+01	1.53	yes	4.27e+01		n	n
3	31:00	4.48e+01	2.54e+01	1.77	yes	7.02e+01		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0220

Entry: 41 Totals Name: Total Hexa-Furans

Run: 16 File: P519874 Sample:1 Injection:1 Function:3

Acquired: 9-JAN-19 23:32:51 Processed: 10-JAN-19 08:15:34

Mass: 373.8210 375.8180 Tot Response: 8.21e+02 RRF: 1.141

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:45	7.27e+01	5.90e+01 1.23	yes	1.32e+02		n	n
2	34:19	4.03e+01	3.43e+01 1.17	yes	7.46e+01		n	n
3	34:47	2.68e+02	2.29e+02 1.17	yes	4.98e+02	1,2,3,4,7,8-HxCDF	n	n
4	36:19	6.58e+01	5.10e+01 1.29	yes	1.17e+02	1,2,3,7,8,9-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0220

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 16 File: P519874 Sample:1 Injection:1 Function:3

Acquired: 9-JAN-19 23:32:51 Processed: 10-JAN-19 08:15:34

Mass: 389.8160 391.8130 Tot Response: 6.66e+03 RRF: 1.047

	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
	34:09	2.60e+03	2.03e+03	1.28	yes	4.63e+03		n	n
	34:44	7.22e+01	5.50e+01	1.31	yes	1.27e+02		n	y
	34:59	7.03e+02	5.42e+02	1.30	yes	1.25e+03		n	y
	35:38	6.12e+01	5.39e+01	1.14	yes	1.15e+02	1,2,3,4,7,8-HxCDD	n	y
	35:45	1.16e+02	1.03e+02	1.12	yes	2.20e+02	1,2,3,6,7,8-HxCDD	n	y
	35:59	1.72e+02	1.57e+02	1.10	yes	3.29e+02	1,2,3,7,8,9-HxCDD	n	y

ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0220

Entry: 43 Totals Name: Total Hepta-Furans

Run: 16 File: P519874 Sample:1 Injection:1 Function:4

Acquired: 9-JAN-19 23:32:51 Processed: 10-JAN-19 08:15:34

Mass: 407.7820 409.7790 Tot Response: 4.62e+02 RRF: 1.308

	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
	37:43	2.23e+02	2.39e+02 0.94	yes	4.62e+02	1,2,3,4,6,7,8-HpCDF	n	n

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Peak List Summary

CLIENT ID.
SL0220

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 16 File: P519874 Sample:1 Injection:1 Function:4

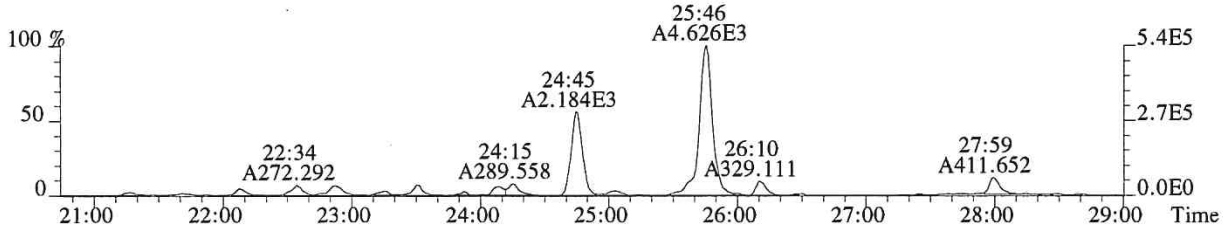
Acquired: 9-JAN-19 23:32:51 Processed: 10-JAN-19 08:15:34

Mass: 423.7770 425.7740 Tot Response: 1.54e+04 RRF: 1.025

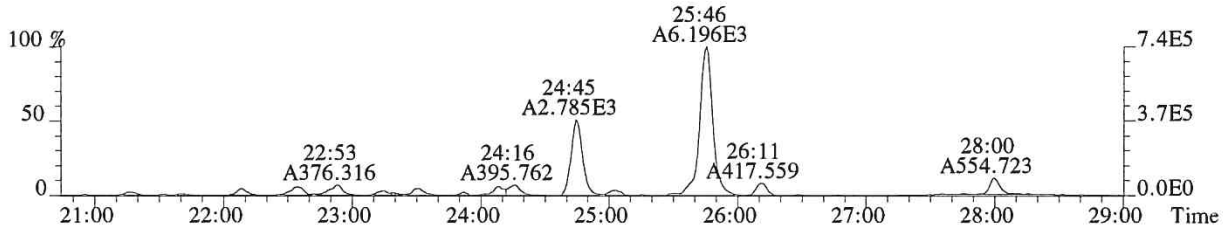
	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
	38:02	5.68e+03	5.47e+03 1.04	yes	1.11e+04		n	n
	38:46	2.26e+03	2.04e+03 1.11	yes	4.30e+03	1,2,3,4,6,7,8-HpCDD	n	n

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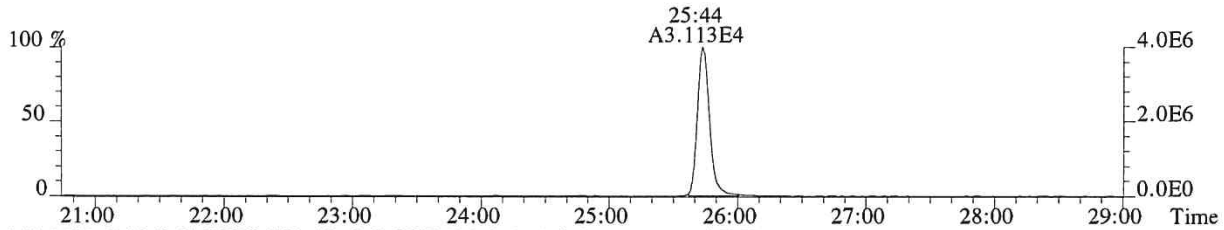
File:P519874 #1-587 Acq: 9-JAN-2019 23:32:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-007
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2640.0,1.00%,F,T)



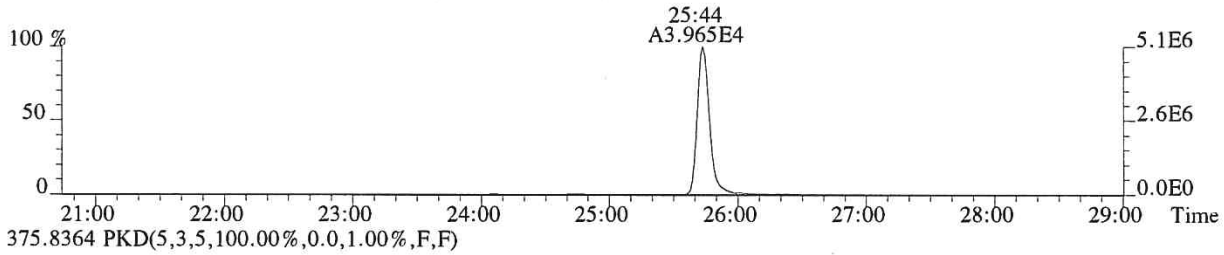
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3200.0,1.00%,F,T)



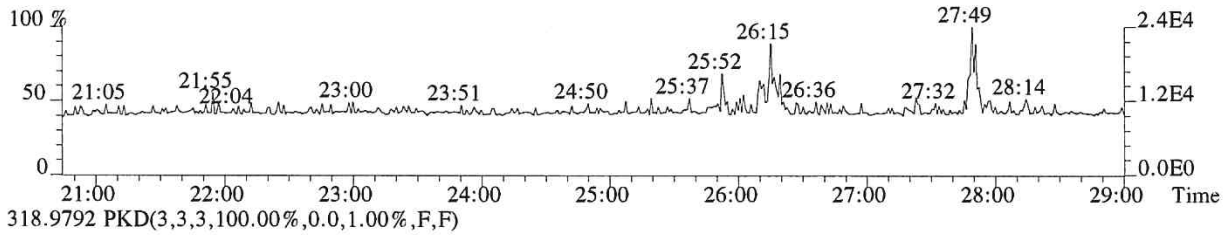
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7780.0,1.00%,F,T)



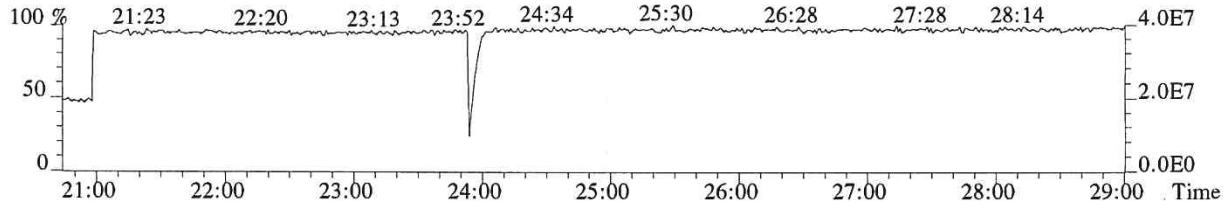
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5024.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

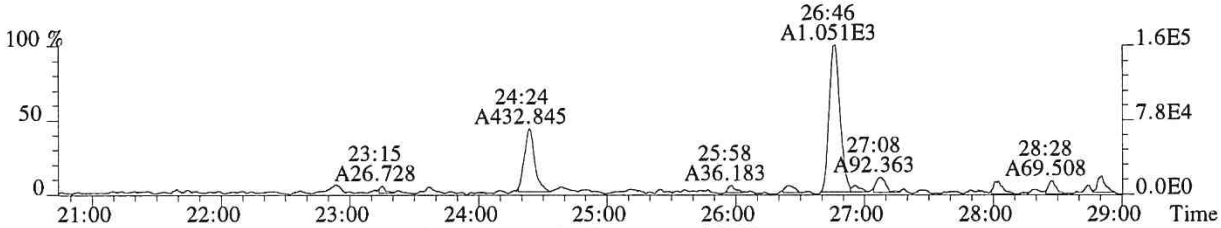


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

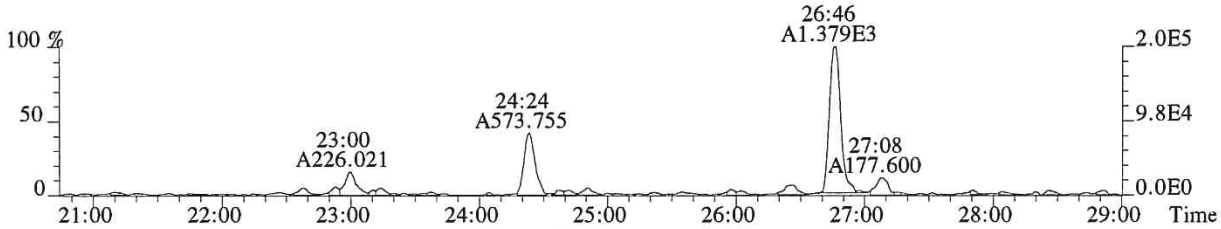


018312

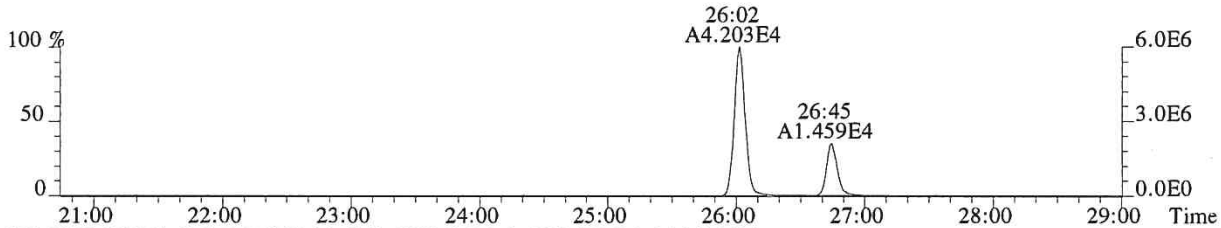
File:P519874 #1-587 Acq: 9-JAN-2019 23:32:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-007
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3076.0,1.00%,F,T)



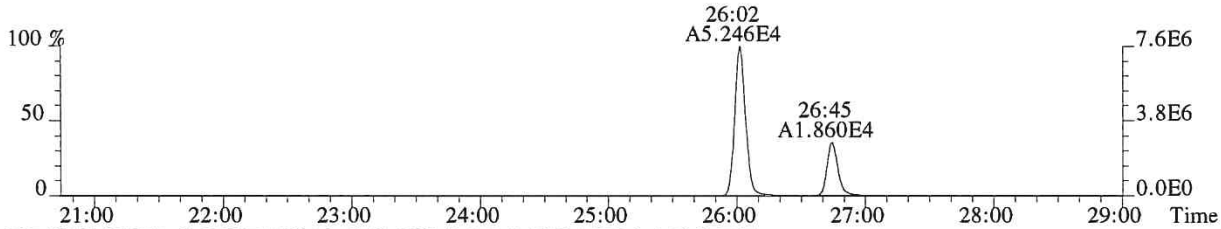
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1748.0,1.00%,F,T)



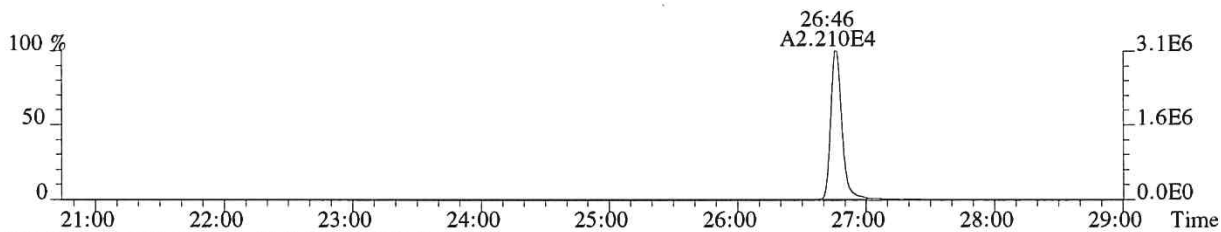
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9376.0,1.00%,F,T)



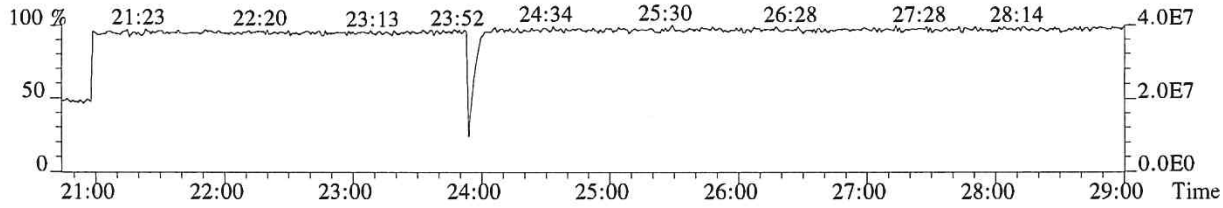
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6836.0,1.00%,F,T)



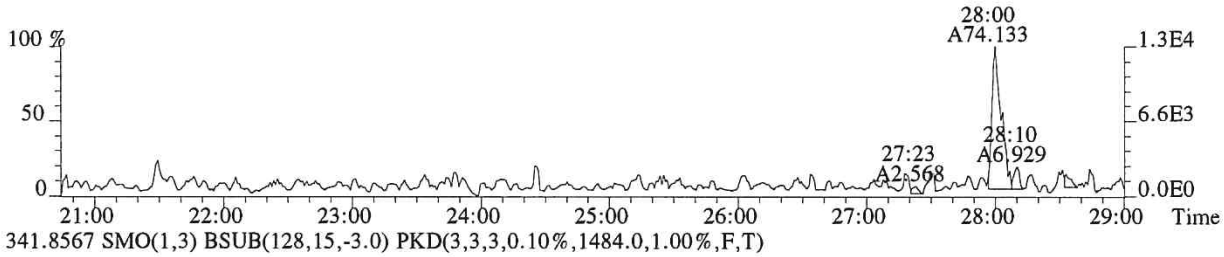
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1176.0,1.00%,F,T)



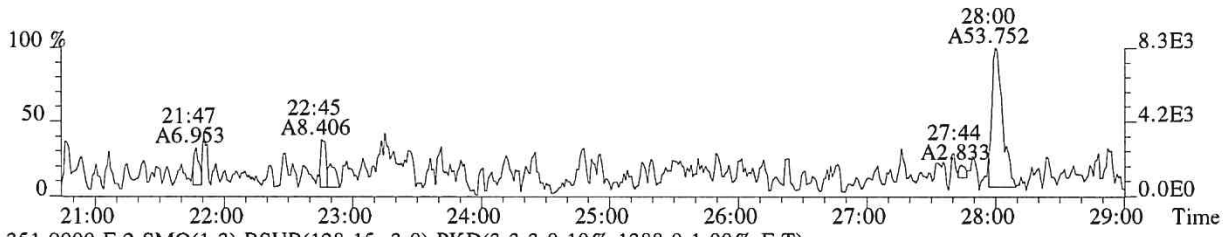
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



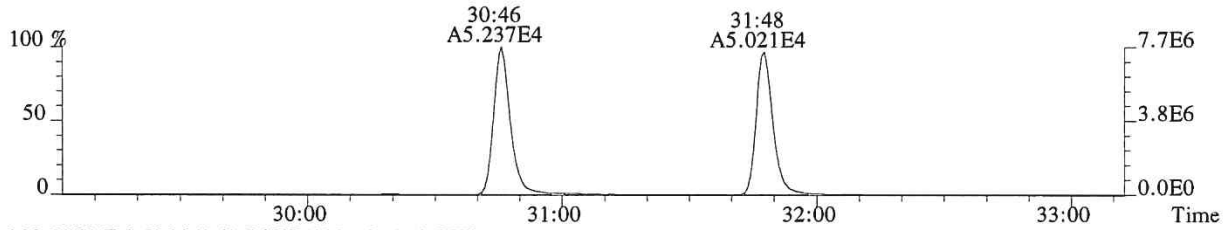
File:P519874 #1-587 Acq: 9-JAN-2019 23:32:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-007
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1140.0,1.00%,F,T)



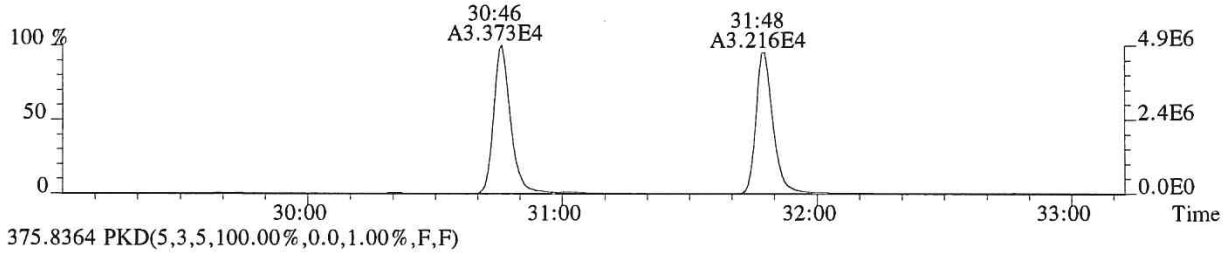
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1484.0,1.00%,F,T)



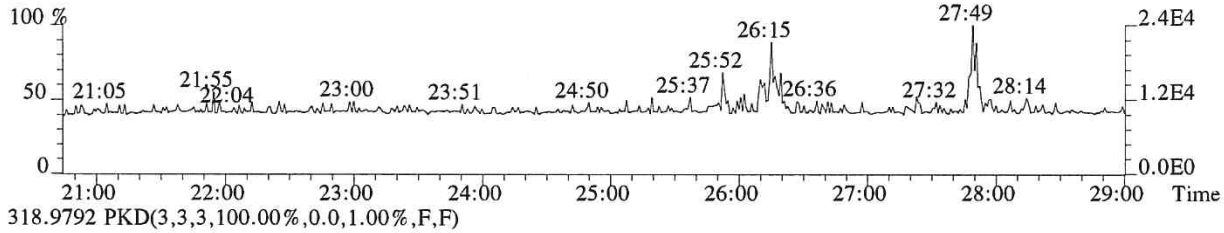
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1388.0,1.00%,F,T)



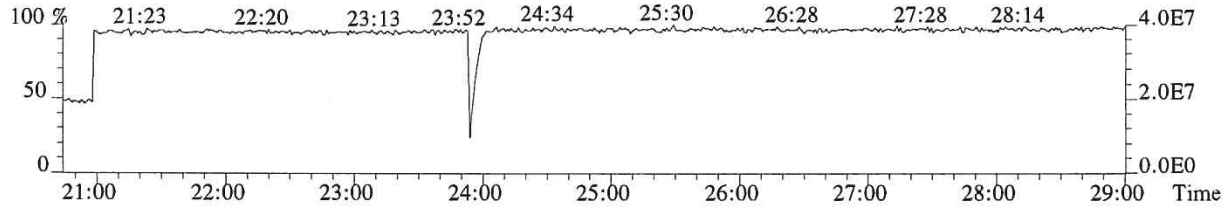
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2404.0,1.00%,F,T)



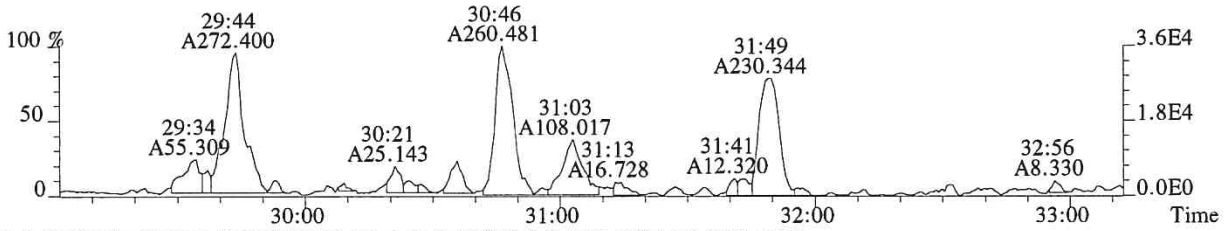
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



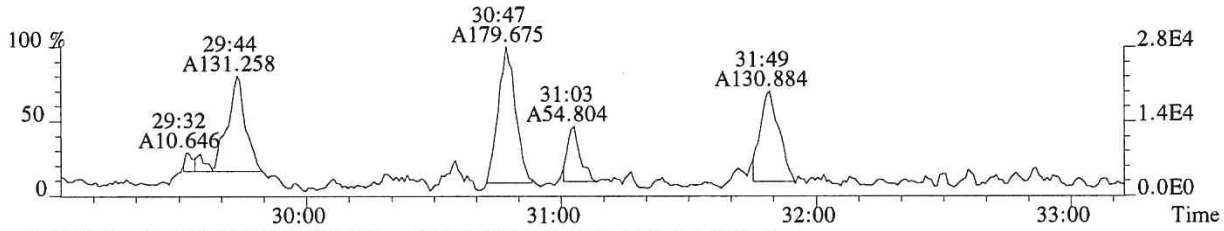
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



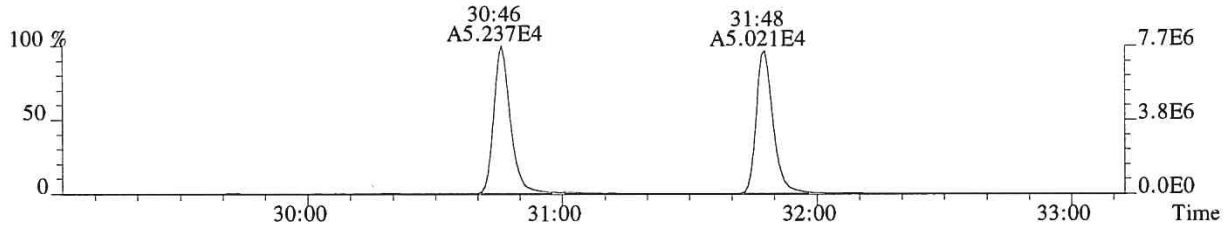
File:P519874 #1-376 Acq: 9-JAN-2019 23:32:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-007
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1284.0,1.00%,F,T)



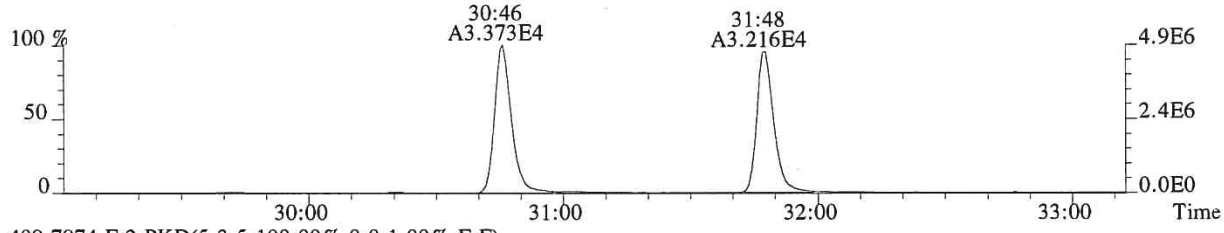
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3284.0,1.00%,F,T)



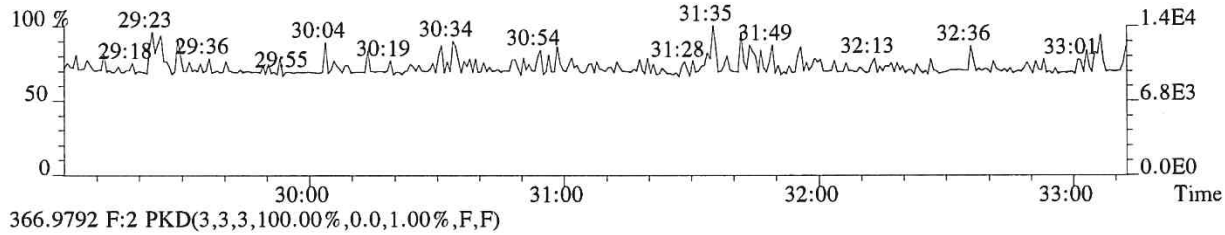
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1388.0,1.00%,F,T)



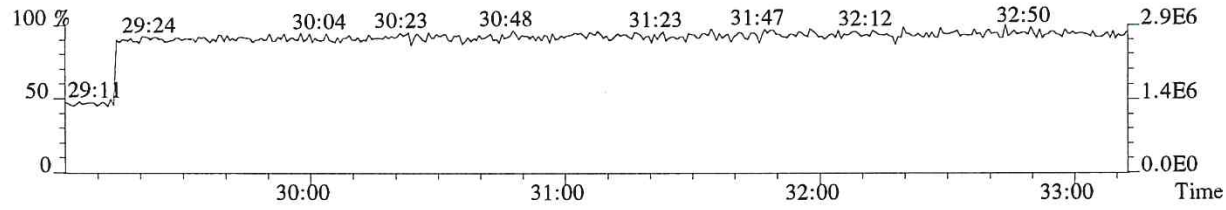
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2404.0,1.00%,F,T)



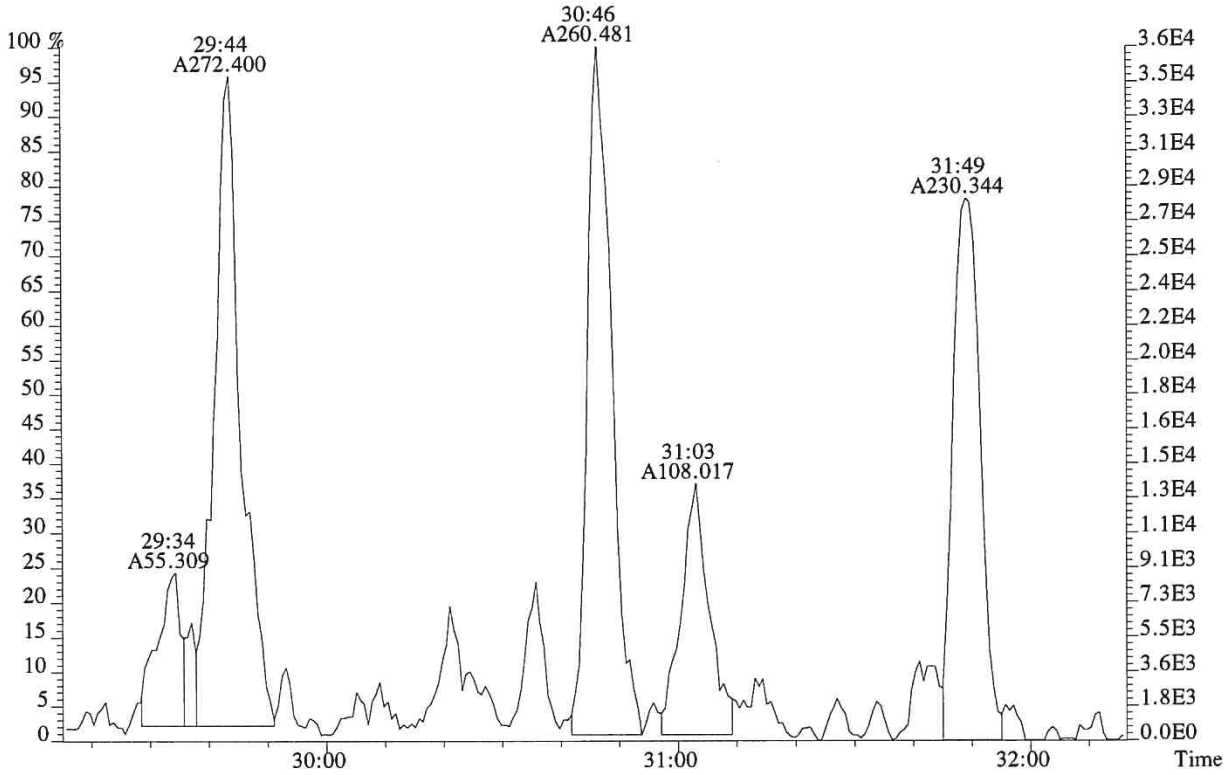
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



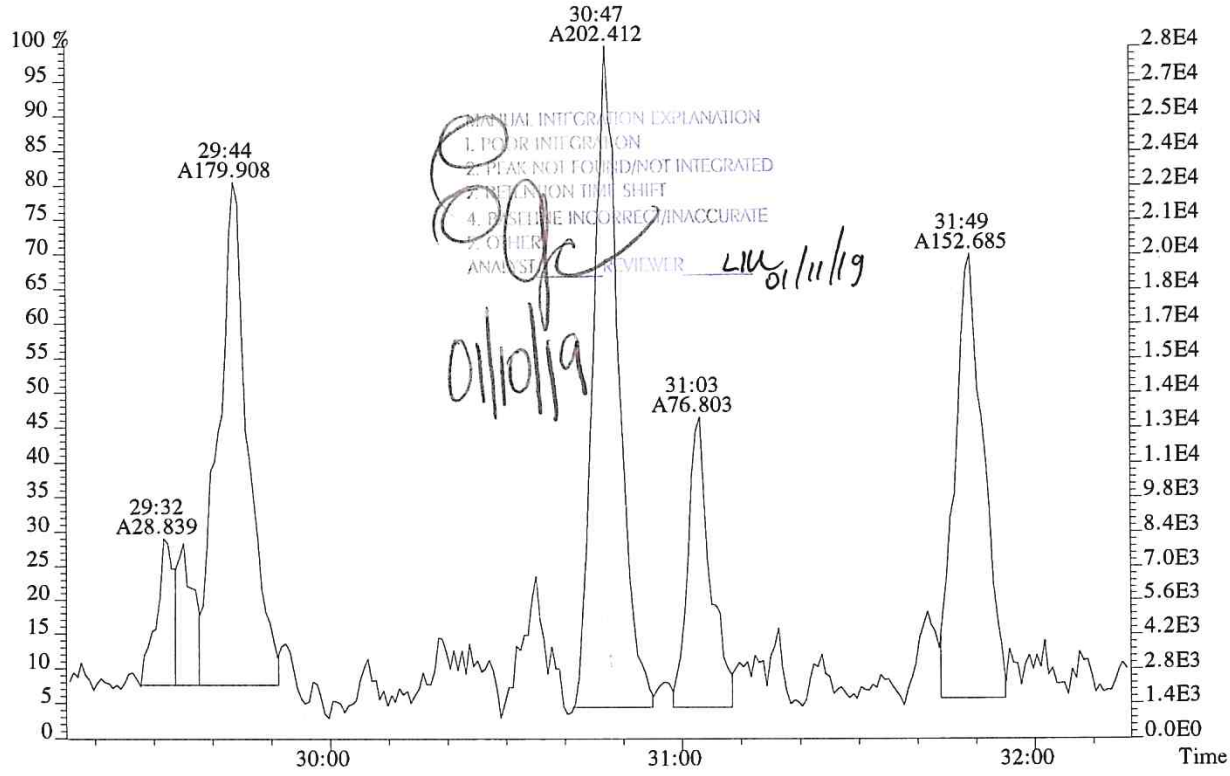
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519874 #1-376 Acq: 9-JAN-2019 23:32:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-007
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1284.0,1.00%,F,T)

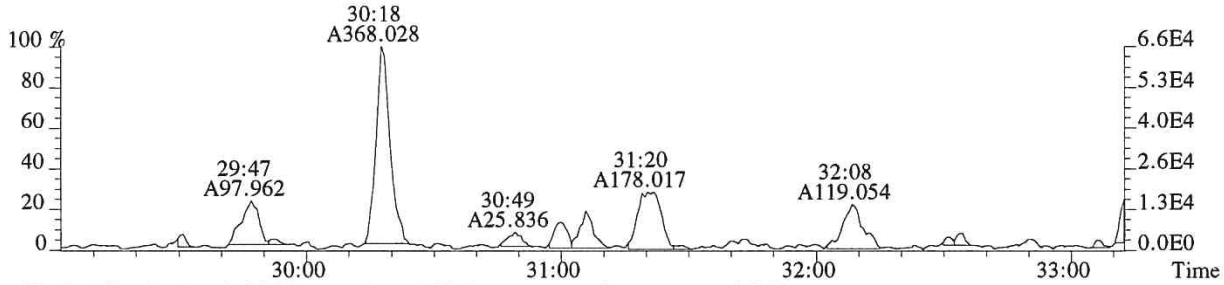


341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3284.0,1.00%,F,T)

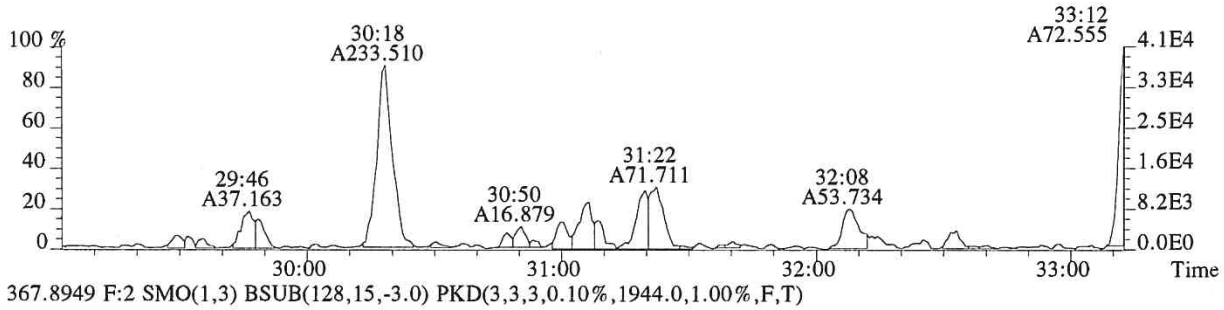


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LW 01/11/19
01/10/19

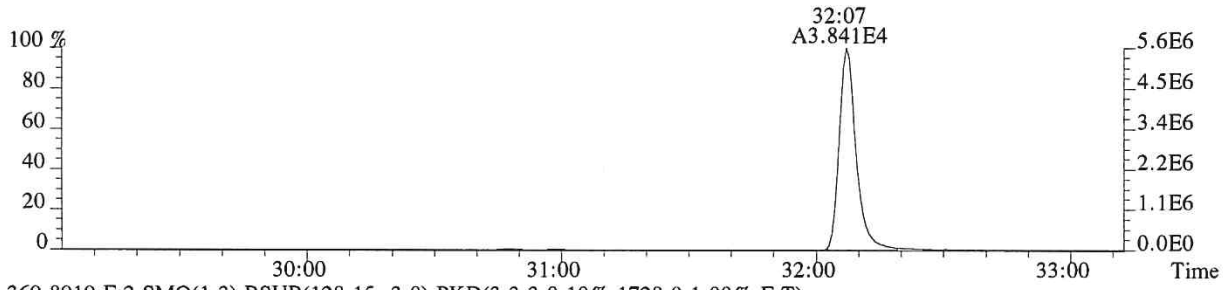
File:P519874 #1-376 Acq: 9-JAN-2019 23:32:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-007
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1592.0,1.00%,F,T)



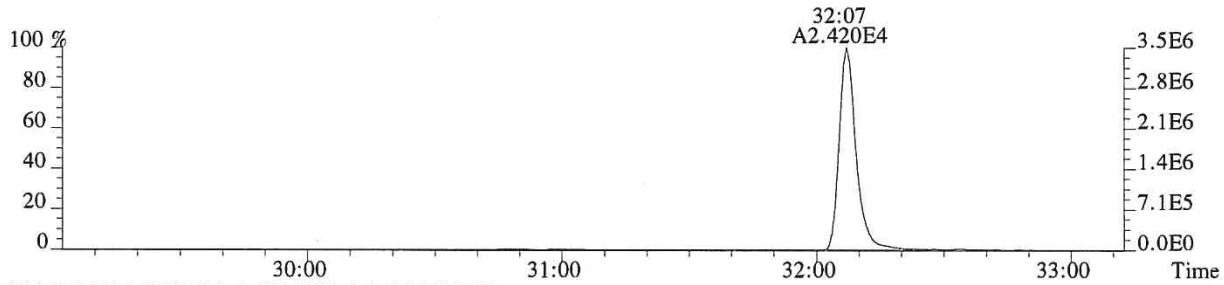
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,692.0,1.00%,F,T)



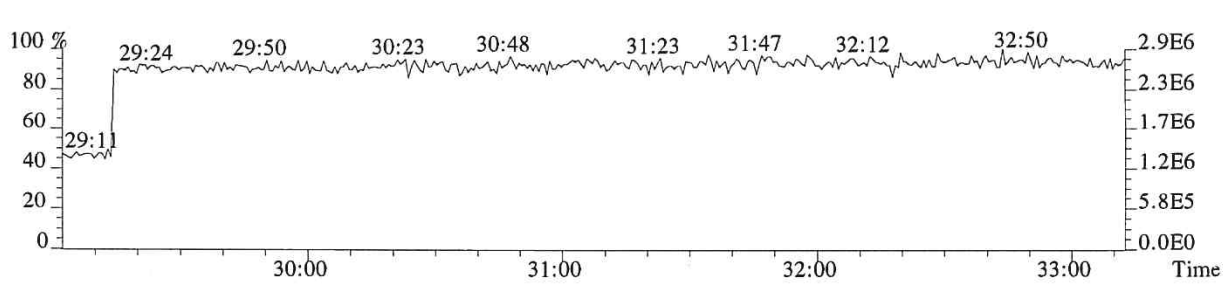
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1944.0,1.00%,F,T)



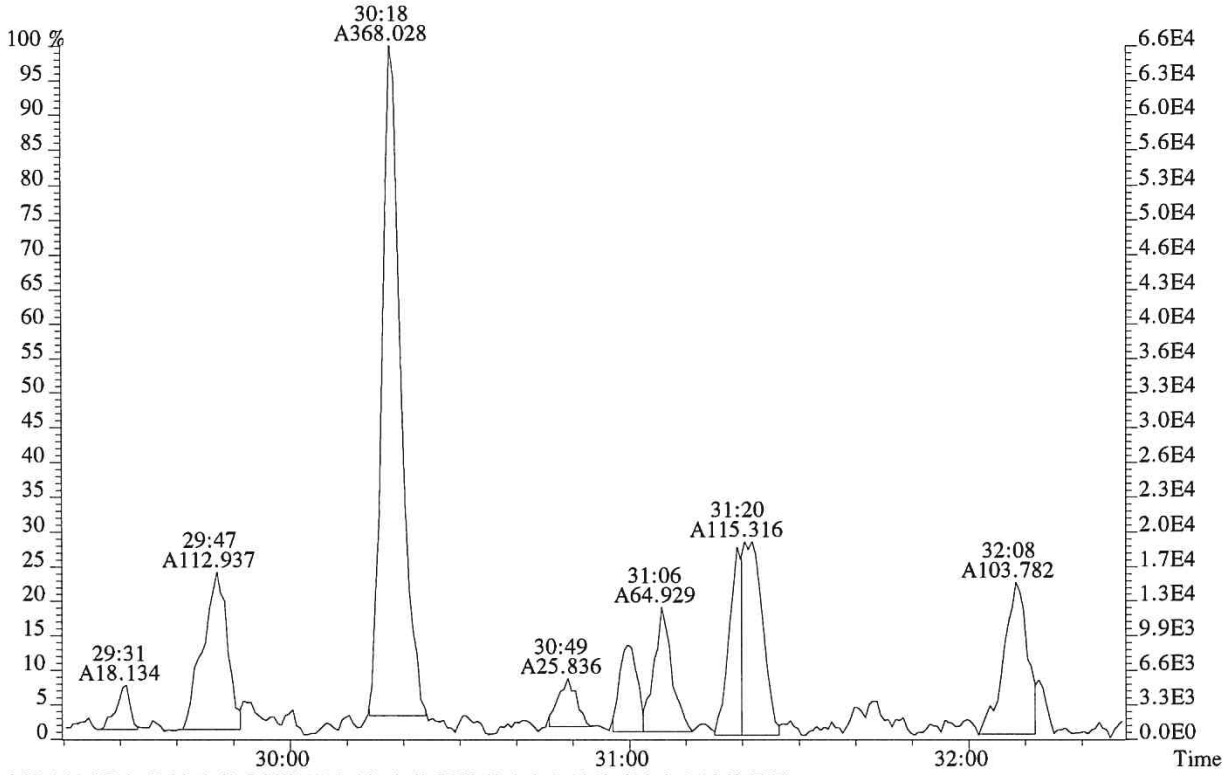
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1728.0,1.00%,F,T)



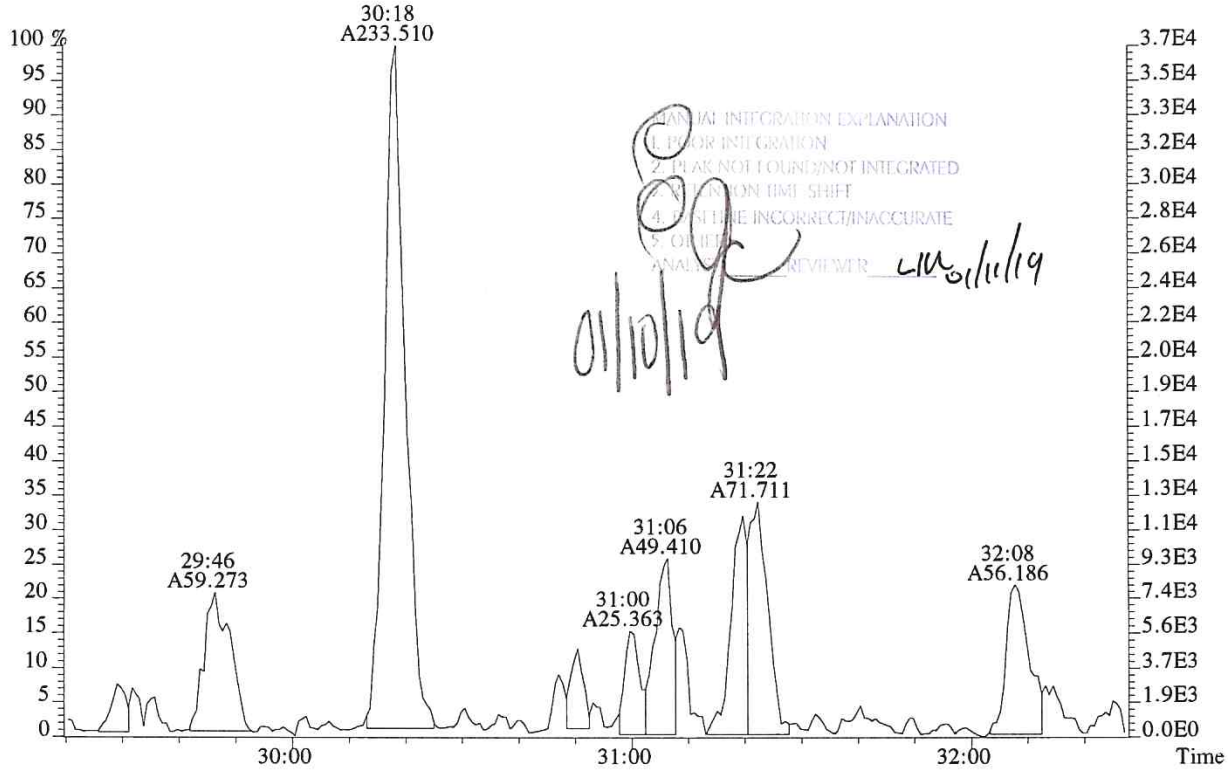
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519874 #1-376 Acq: 9-JAN-2019 23:32:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-007
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1592.0,1.00%,F,T)

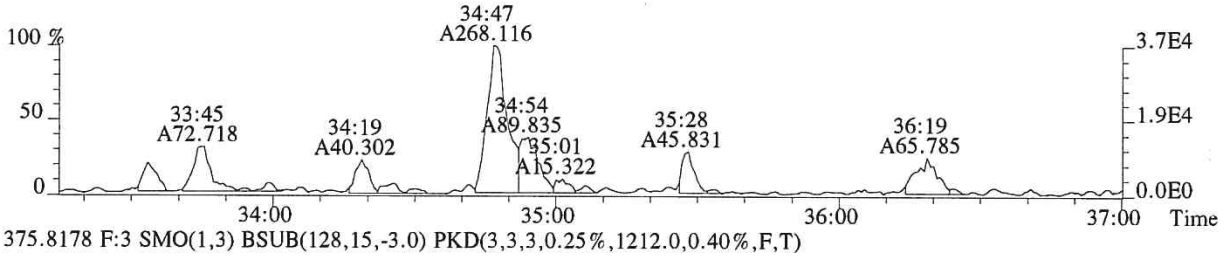


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,692.0,1.00%,F,T)

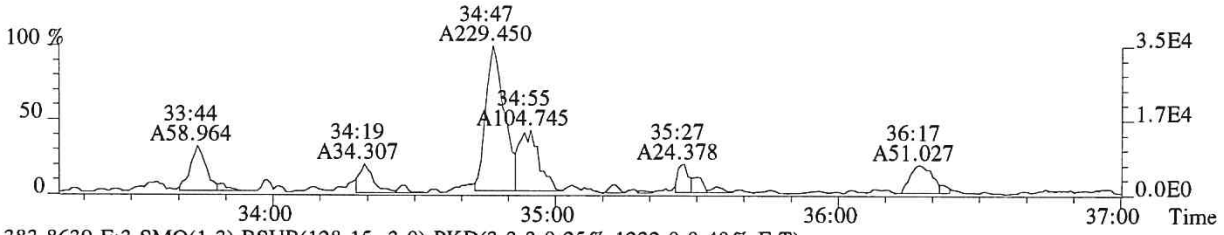


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. PEAK TIME INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER
01/10/19
01/10/19

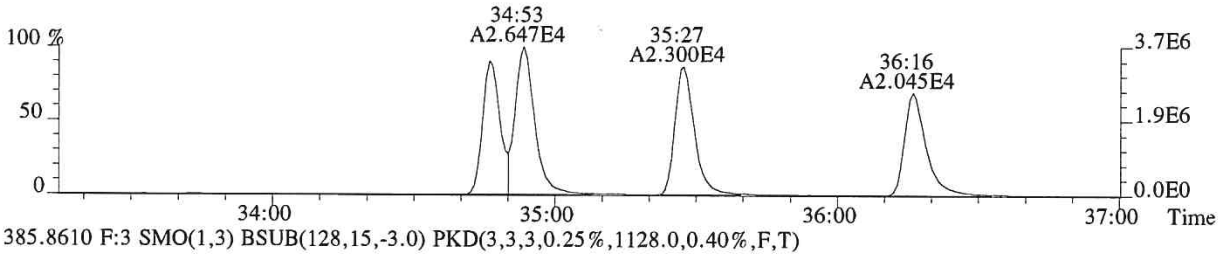
File:P519874 #1-339 Acq: 9-JAN-2019 23:32:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-007
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1288.0,0.40%,F,T)



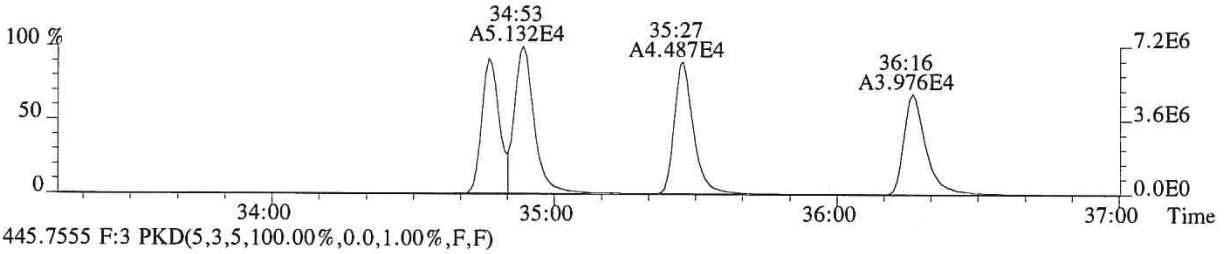
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1212.0,0.40%,F,T)



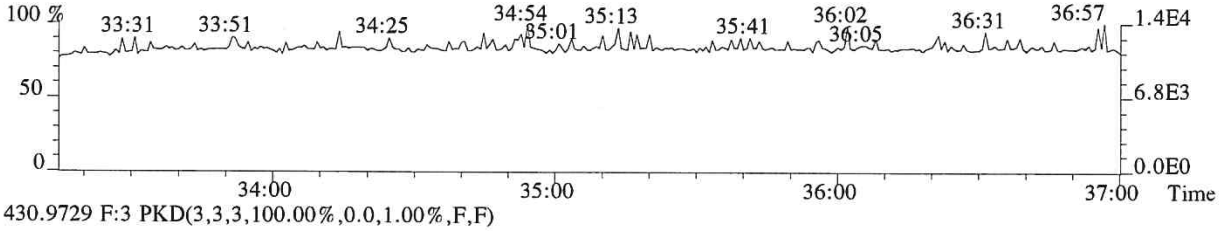
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1232.0,0.40%,F,T)



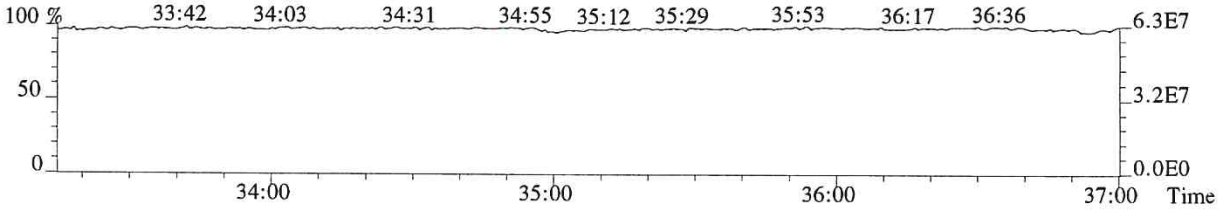
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1128.0,0.40%,F,T)



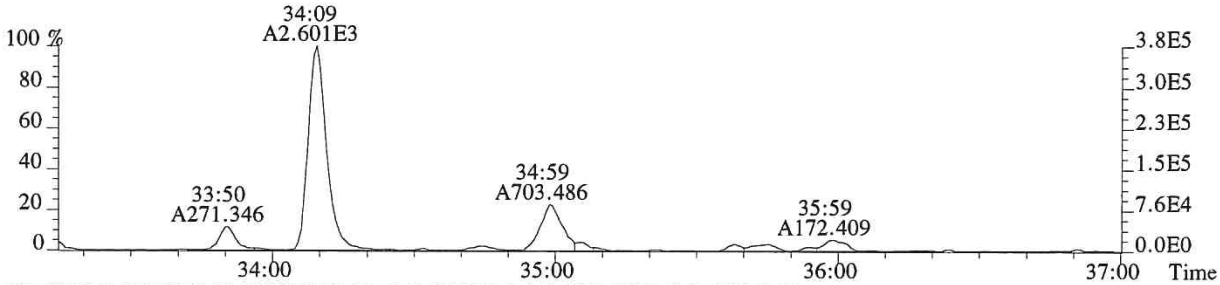
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



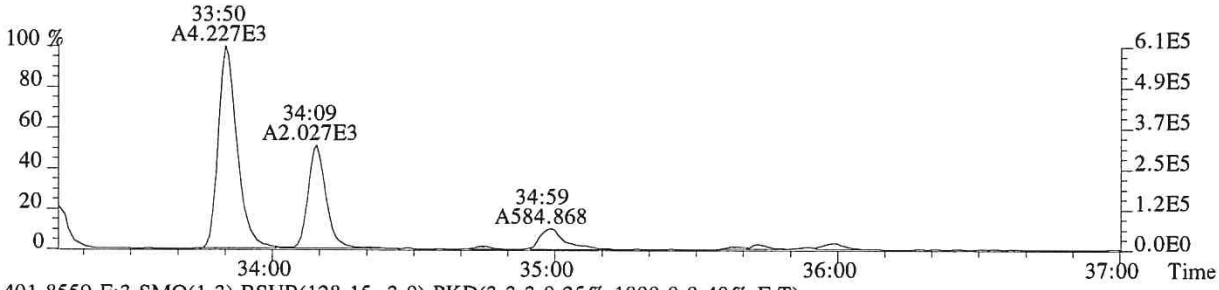
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



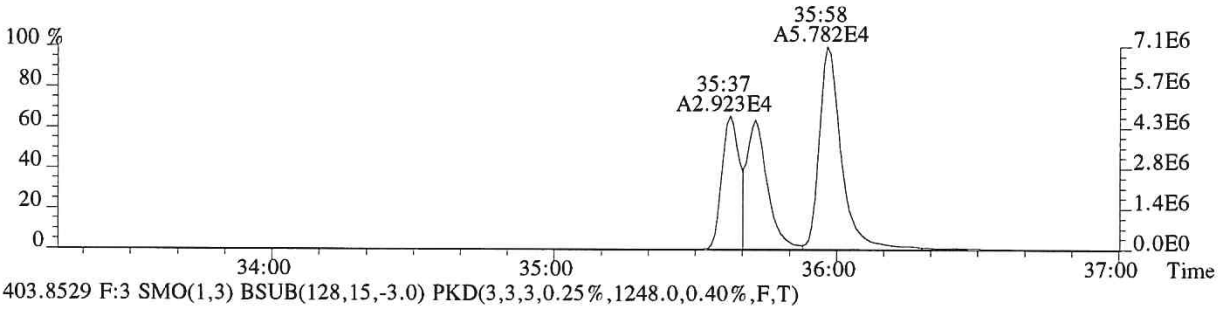
File:P519874 #1-339 Acq: 9-JAN-2019 23:32:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-007
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,928.0,0.40%,F,T)



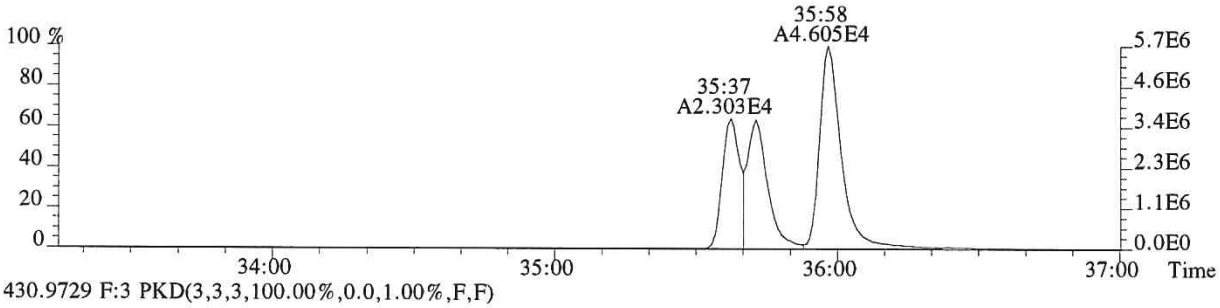
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3064.0,0.40%,F,T)



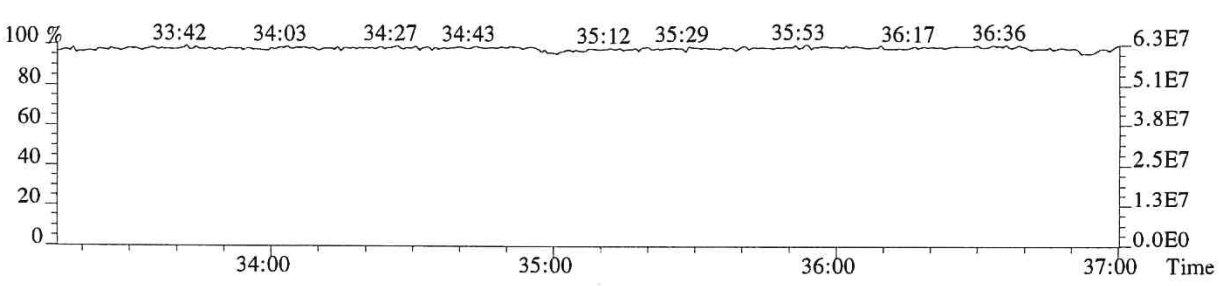
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1800.0,0.40%,F,T)



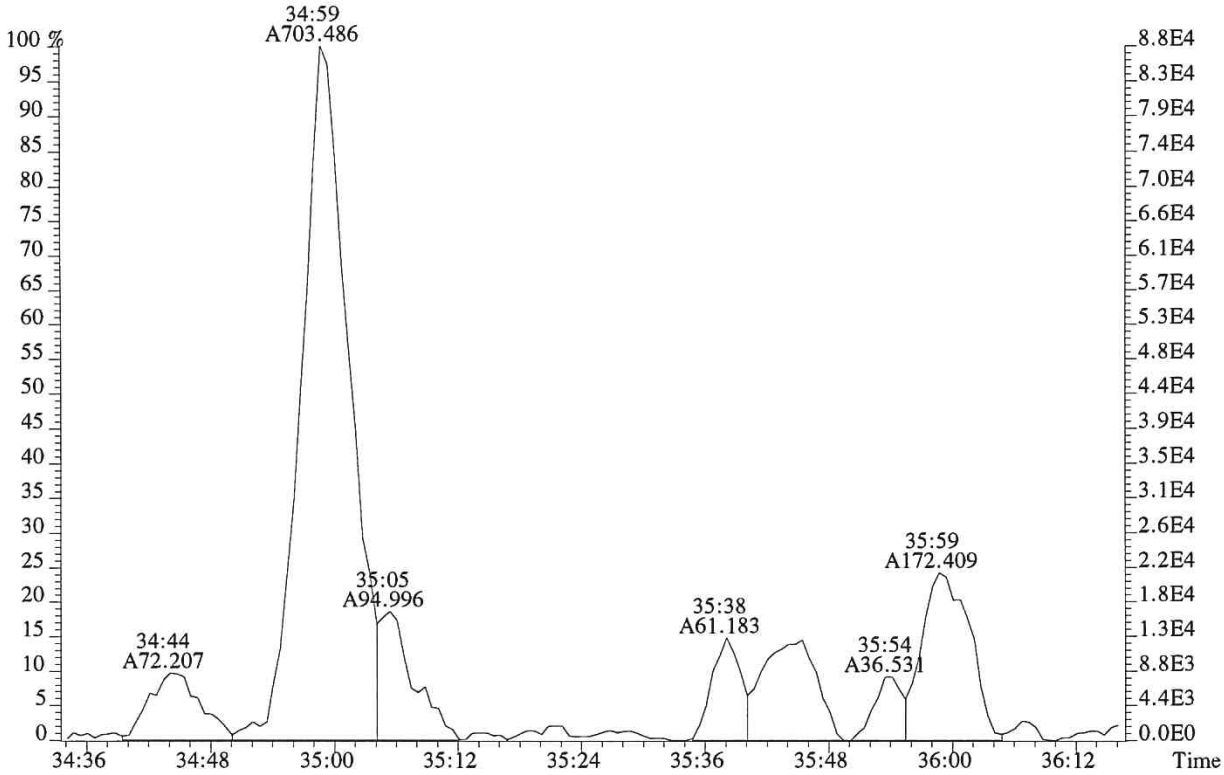
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1248.0,0.40%,F,T)



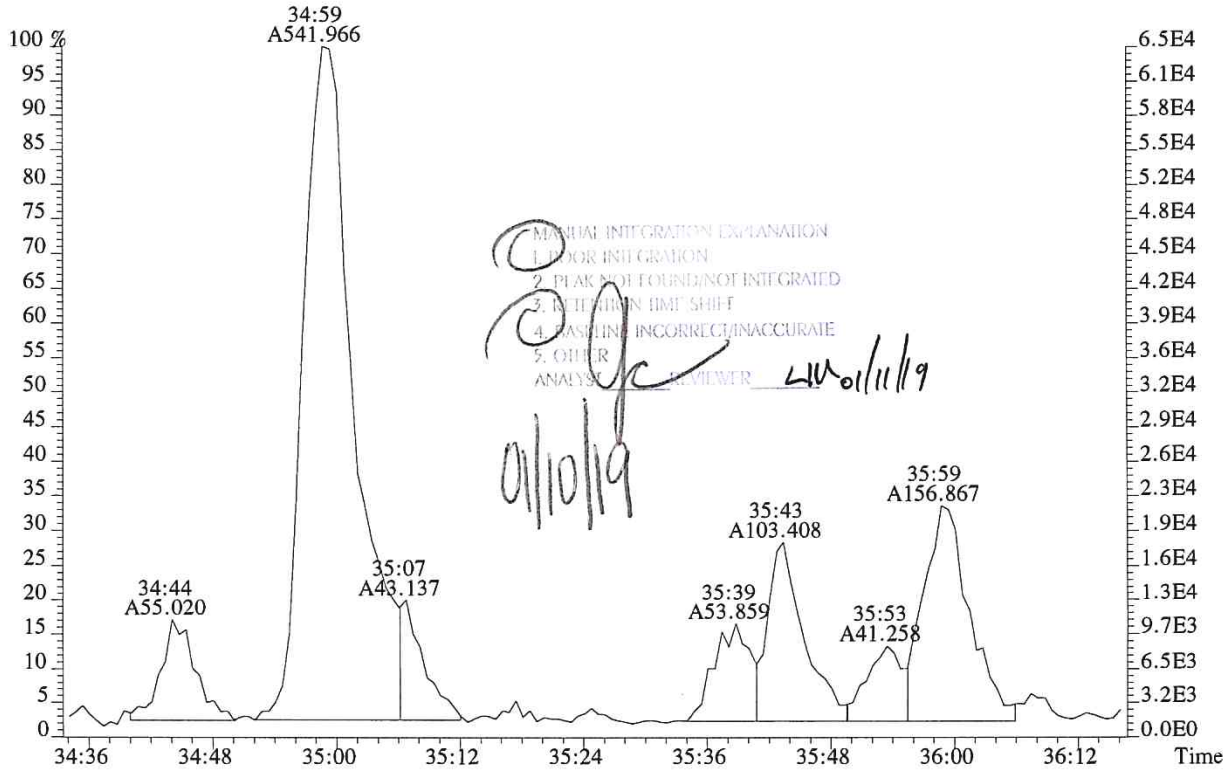
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519874 #1-339 Acq: 9-JAN-2019 23:32:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-007
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,928.0,0.40%,F,T)



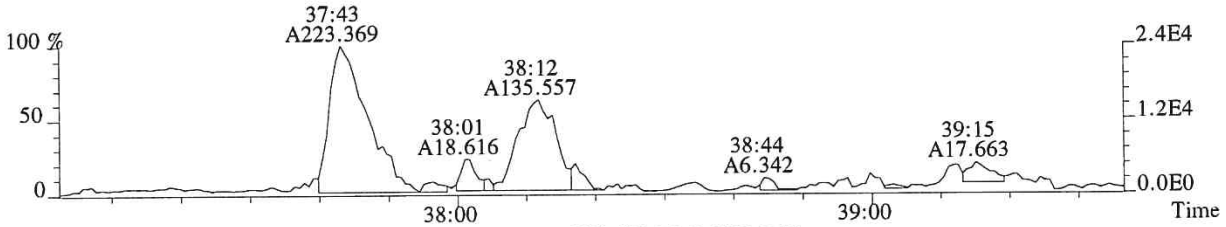
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3064.0,0.40%,F,T)



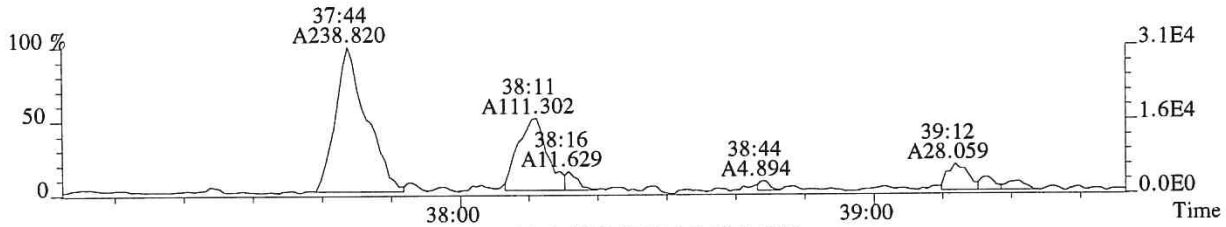
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER 01/11/19
01/10/19

018321

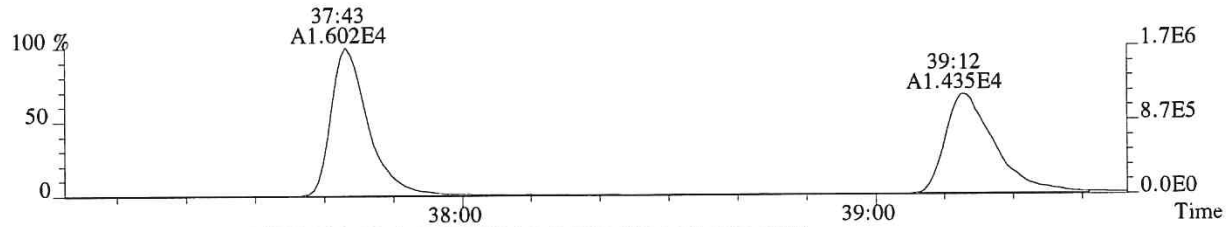
File:P519874 #1-232 Acq: 9-JAN-2019 23:32:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-007
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1172.0,0.50%,F,T)



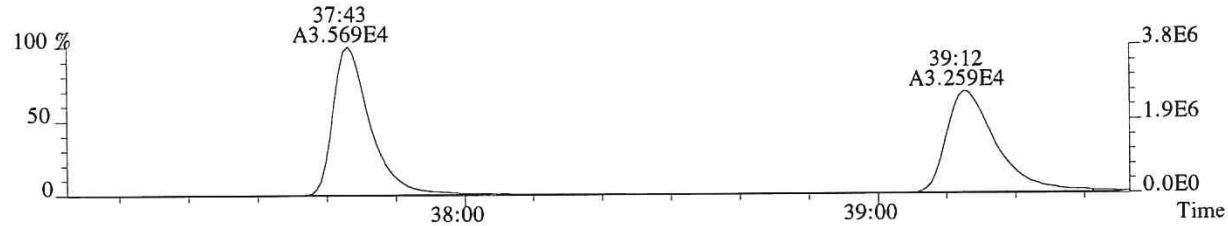
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1236.0,0.50%,F,T)



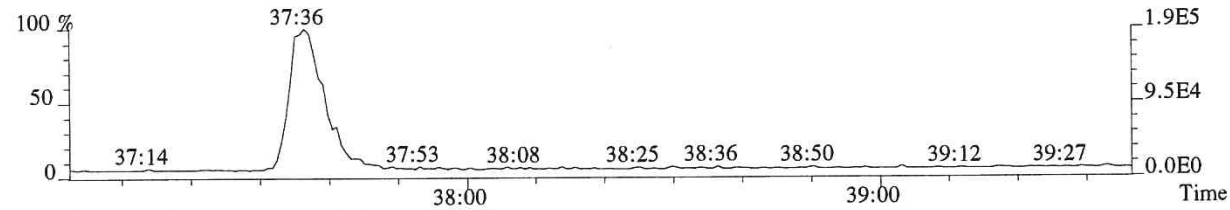
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1704.0,0.50%,F,T)



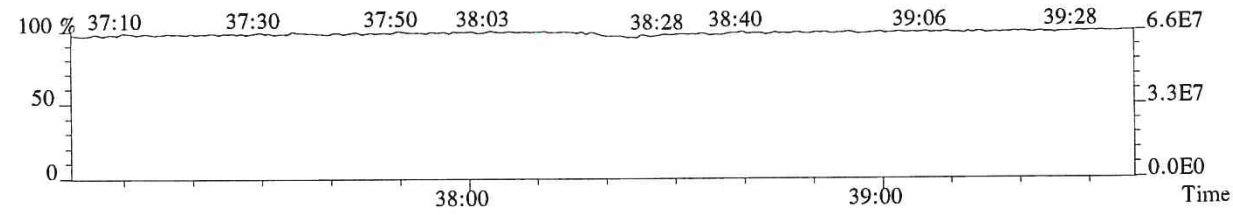
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5184.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

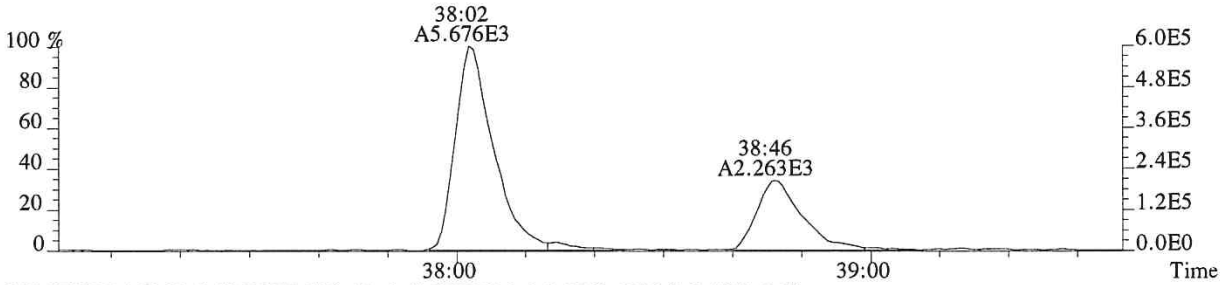


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

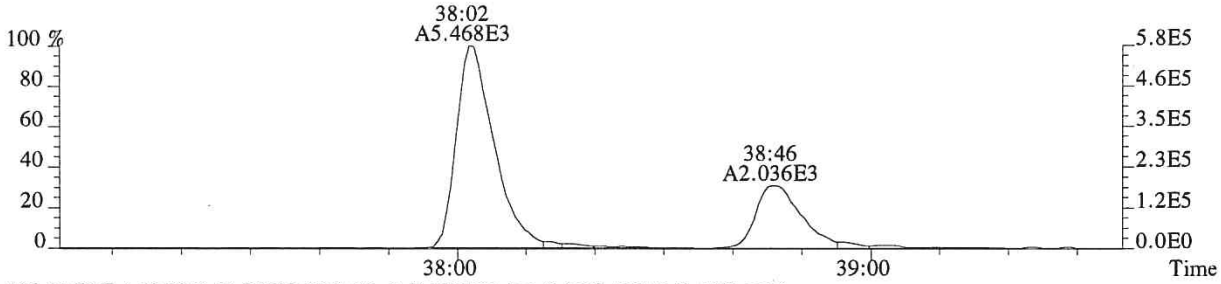


018322

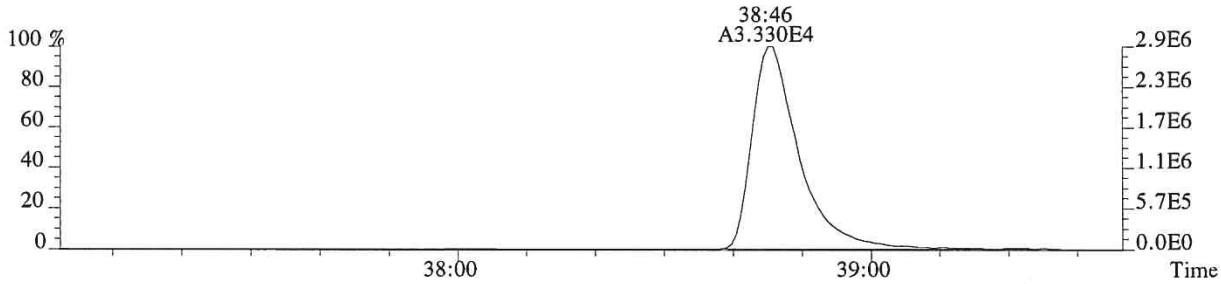
File:P519874 #1-232 Acq: 9-JAN-2019 23:32:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-007
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2848.0,0.40%,F,T)



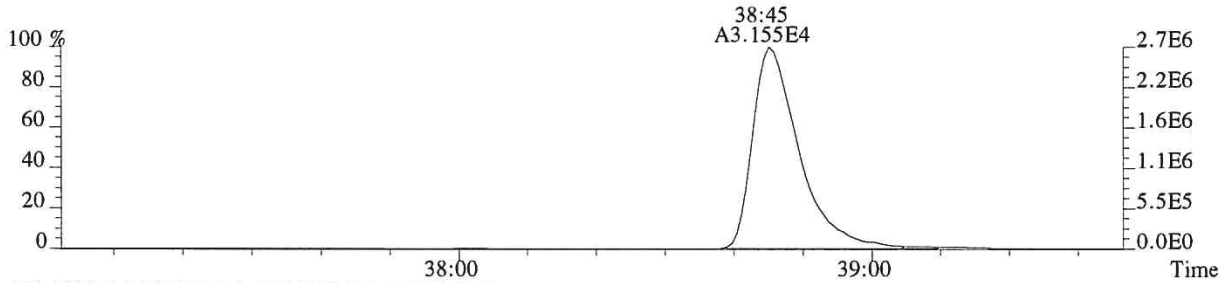
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1032.0,0.40%,F,T)



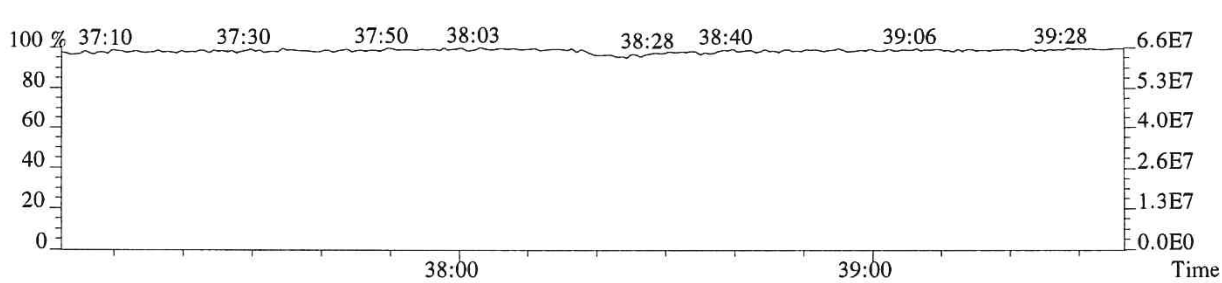
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,768.0,0.40%,F,T)



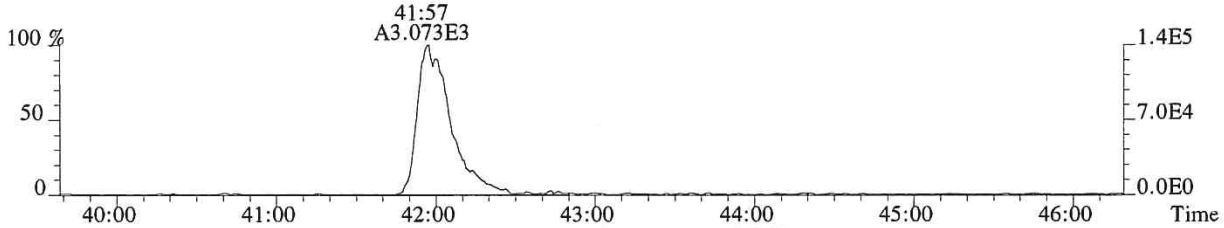
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,516.0,0.40%,F,T)



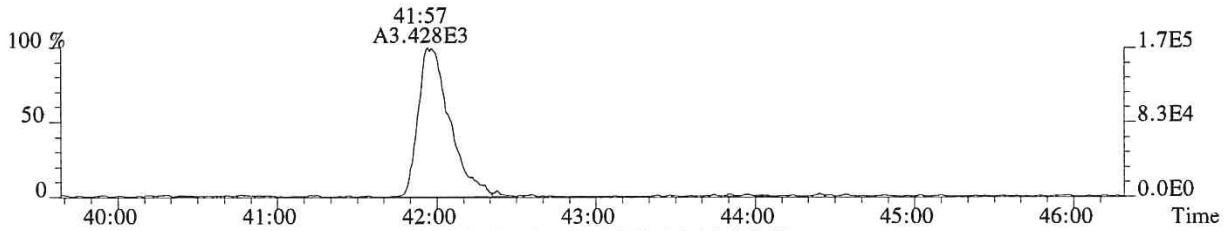
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



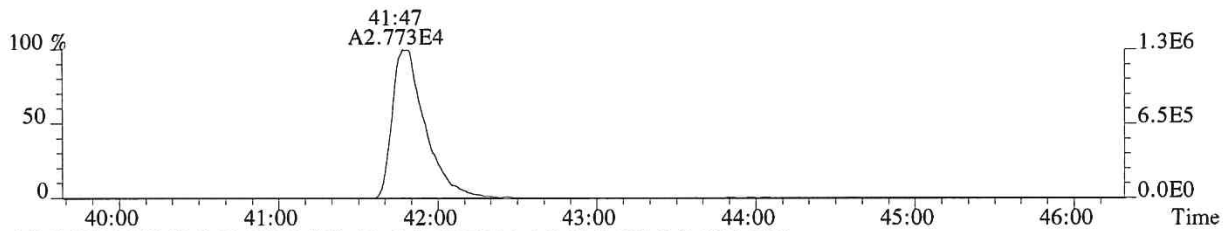
File:P519874 #1-601 Acq: 9-JAN-2019 23:32:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-007
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,484.0,0.40%,F,T)



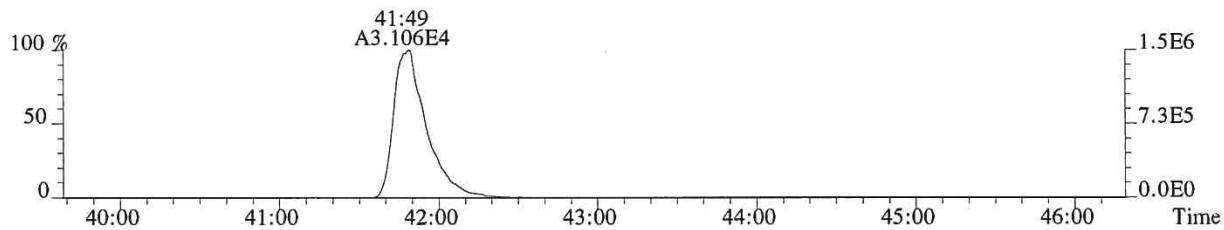
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,992.0,0.40%,F,T)



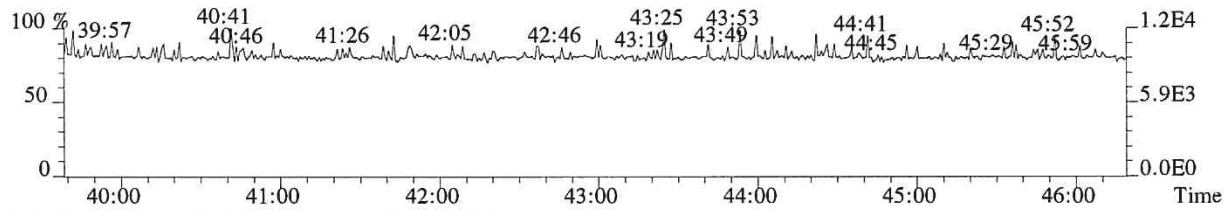
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,768.0,0.40%,F,T)



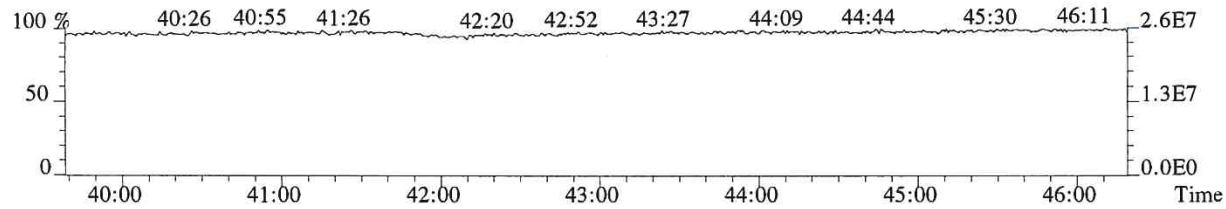
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,520.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

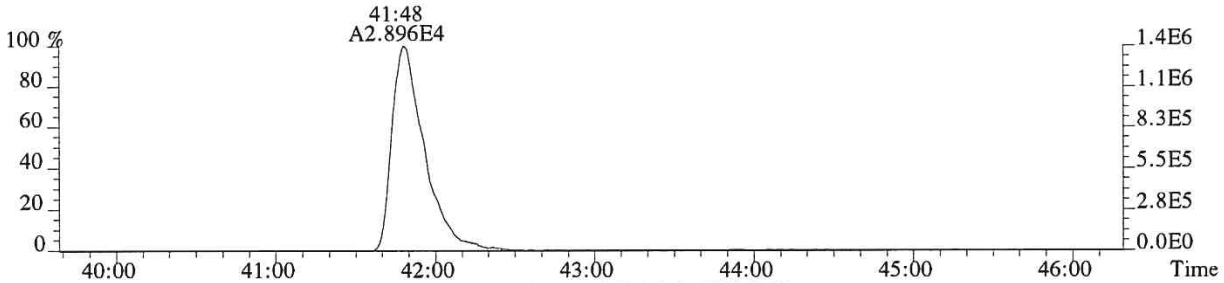


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

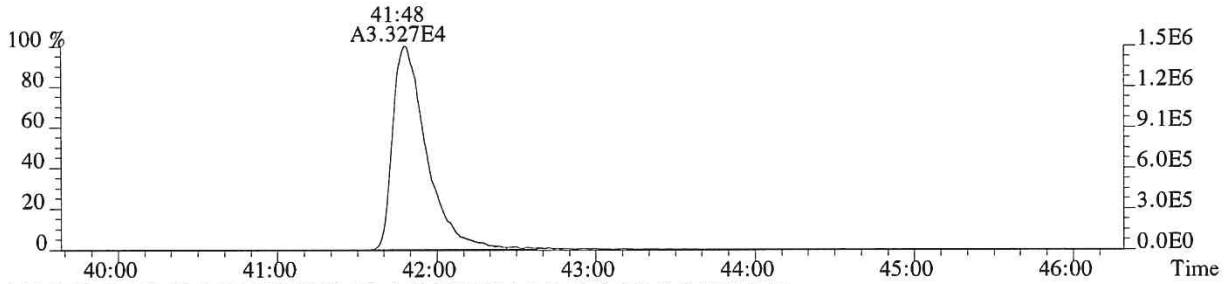


018324

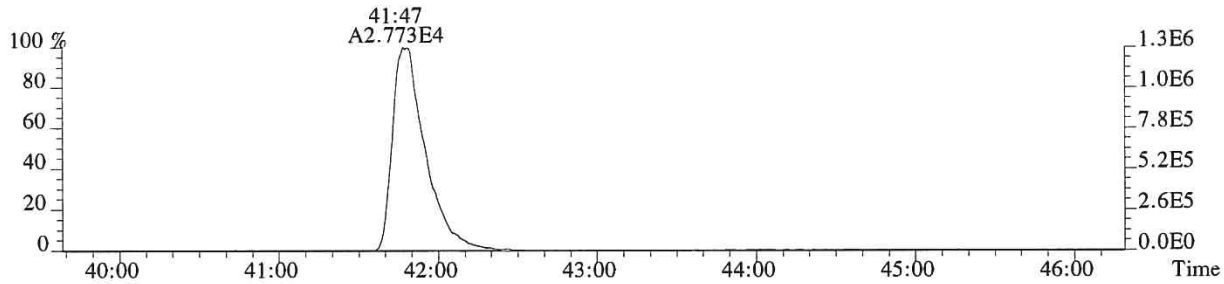
File:P519874 #1-601 Acq: 9-JAN-2019 23:32:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-007
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,600.0,0.40%,F,T)



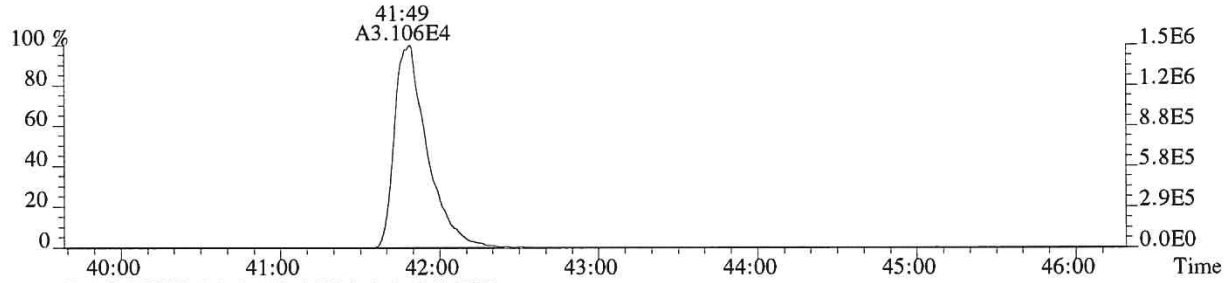
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,780.0,0.40%,F,T)



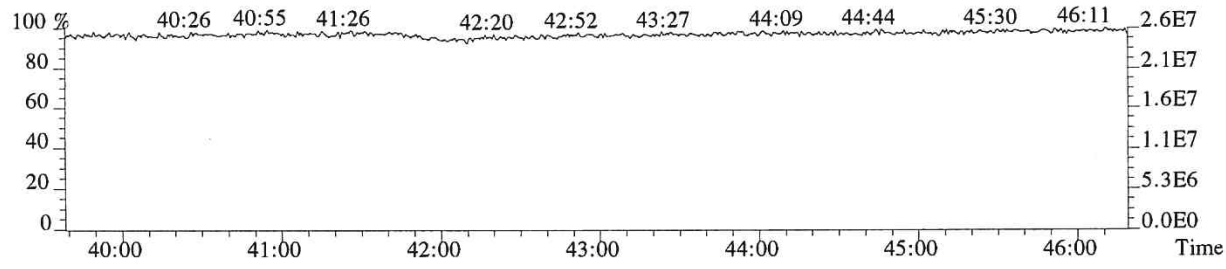
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,768.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,520.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018325

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0222

Run #17 Filename P519875 Samp: 1 Inj: 1 Acquired: 10-JAN-19 00:21:27
Processed: 10-JAN-19 08:15:34 LAB. ID: E1801139-008

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	3.02e+07	2.47e+03	1.2e+04	3.90e+07	2.80e+03	1.4e+04
2	1,2,3,7,8-PeCDF	1.90e+06	6.48e+03	2.9e+02	1.27e+06	4.71e+03	2.7e+02
3	2,3,4,7,8-PeCDF	1.25e+06	6.48e+03	1.9e+02	8.13e+05	4.71e+03	1.7e+02
4	1,2,3,4,7,8-HxCDF	2.69e+06	1.58e+03	1.7e+03	2.16e+06	2.45e+03	8.8e+02
5	1,2,3,6,7,8-HxCDF	6.92e+05	1.58e+03	4.4e+02	5.67e+05	2.45e+03	2.3e+02
6	2,3,4,6,7,8-HxCDF	1.49e+05	1.58e+03	9.4e+01	1.16e+05	2.45e+03	4.7e+01
7	1,2,3,7,8,9-HxCDF	1.82e+05	1.58e+03	1.2e+02	1.39e+05	2.45e+03	5.6e+01
8	1,2,3,4,6,7,8-HpCDF	5.78e+05	2.46e+03	2.3e+02	6.10e+05	2.12e+03	2.9e+02
9	1,2,3,4,7,8,9-HpCDF	1.08e+05	2.46e+03	4.4e+01	1.12e+05	2.12e+03	5.3e+01
10	OCDF	2.95e+05	6.44e+02	4.6e+02	3.42e+05	1.04e+03	3.3e+02
11	2,3,7,8-TCDD	9.27e+06	3.93e+03	2.4e+03	1.18e+07	1.84e+03	6.4e+03
12	1,2,3,7,8-PeCDD	1.33e+05	1.29e+03	1.0e+02	8.60e+04	1.01e+03	8.5e+01
13	1,2,3,4,7,8-HxCDD	2.47e+04	1.79e+03	1.4e+01	2.10e+04	2.71e+03	7.7e+00
14	1,2,3,6,7,8-HxCDD	6.13e+04	1.79e+03	3.4e+01	5.19e+04	2.71e+03	1.9e+01
15	1,2,3,7,8,9-HxCDD	6.31e+04	1.79e+03	3.5e+01	4.75e+04	2.71e+03	1.8e+01
16	1,2,3,4,6,7,8-HpCDD	1.10e+06	1.20e+03	9.2e+02	1.05e+06	4.48e+03	2.3e+02
17	OCDD	6.86e+06	6.16e+02	1.1e+04	7.70e+06	4.96e+02	1.6e+04
18	13C-2,3,7,8-TCDF	4.61e+06	8.81e+03	5.2e+02	5.93e+06	8.47e+03	7.0e+02
19	13C-1,2,3,7,8-PeCDF	7.96e+06	2.10e+03	3.8e+03	5.02e+06	1.74e+03	2.9e+03
20	13C-2,3,4,7,8-PeCDF	7.58e+06	2.10e+03	3.6e+03	4.82e+06	1.74e+03	2.8e+03
21	13C-1,2,3,4,7,8-HxCDF	3.17e+06	9.72e+02	3.3e+03	6.25e+06	1.71e+03	3.7e+03
22	13C-1,2,3,6,7,8-HxCDF	3.59e+06	9.72e+02	3.7e+03	6.94e+06	1.71e+03	4.1e+03
23	13C-2,3,4,6,7,8-HxCDF	3.24e+06	9.72e+02	3.3e+03	6.07e+06	1.71e+03	3.5e+03
24	13C-1,2,3,7,8,9-HxCDF	2.86e+06	9.72e+02	2.9e+03	5.44e+06	1.71e+03	3.2e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.65e+06	2.04e+03	8.1e+02	3.65e+06	4.96e+03	7.4e+02
26	13C-1,2,3,4,7,8,9-HpCDF	1.19e+06	2.04e+03	5.8e+02	2.71e+06	4.96e+03	5.5e+02
27	13C-2,3,7,8-TCDD	2.44e+06	8.22e+03	3.0e+02	3.05e+06	5.46e+03	5.6e+02
28	13C-1,2,3,7,8-PeCDD	5.73e+06	1.42e+03	4.0e+03	3.60e+06	1.89e+03	1.9e+03
29	13C-1,2,3,4,7,8-HxCDD	4.46e+06	1.46e+03	3.1e+03	3.52e+06	7.92e+02	4.4e+03
30	13C-1,2,3,6,7,8-HxCDD	4.21e+06	1.46e+03	2.9e+03	3.44e+06	7.92e+02	4.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.72e+06	5.72e+02	4.8e+03	2.61e+06	5.36e+02	4.9e+03
32	13C-OCDD	1.43e+06	5.08e+02	2.8e+03	1.63e+06	4.24e+02	3.8e+03
33	13C-1,2,3,4-TCDD	6.30e+06	8.22e+03	7.7e+02	7.99e+06	5.46e+03	1.5e+03
34	13C-1,2,3,7,8,9-HxCDD	7.41e+06	1.46e+03	5.1e+03	5.90e+06	7.92e+02	7.4e+03
35	37Cl-2,3,7,8-TCDD	4.28e+06	1.66e+03	2.6e+03			

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Peak List Summary

CLIENT ID.
SL0222

Entry: 36 Totals Name: Total Tetra-Furans

Run: 17 File: P519875 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 00:21:27 Processed: 10-JAN-19 08:15:34

Mass: 303.9020 305.8990 Tot Response: 9.54e+05 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:35	1.96e+03	2.65e+03	0.74	yes	4.60e+03		n	n
2	22:52	9.87e+03	1.36e+04	0.73	yes	2.35e+04		n	n
3	23:14	3.26e+03	4.31e+03	0.76	yes	7.57e+03		n	n
4	23:21	3.59e+02	4.54e+02	0.79	yes	8.12e+02		n	n
5	23:30	8.69e+03	1.13e+04	0.77	yes	2.00e+04		n	n
6	23:53	1.99e+03	2.56e+03	0.78	yes	4.55e+03		n	n
7	24:07	6.06e+03	6.89e+03	0.88	yes	1.29e+04		n	n
8	24:14	1.02e+04	1.47e+04	0.69	yes	2.49e+04		n	n
9	24:44	1.00e+05	1.31e+05	0.77	yes	2.31e+05		n	n
10	25:02	4.83e+03	6.02e+03	0.80	yes	1.09e+04		n	n
11	25:45	2.28e+05	2.96e+05	0.77	yes	5.24e+05	2,3,7,8-TCDF	n	n
12	26:10	1.60e+04	2.13e+04	0.75	yes	3.73e+04		n	n
13	26:28	2.76e+03	3.30e+03	0.84	yes	6.05e+03		n	n
14	27:59	2.14e+04	2.48e+04	0.86	yes	4.62e+04		n	n

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Peak List Summary

CLIENT ID.
SL0222

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 17 File: P519875 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 00:21:27 Processed: 10-JAN-19 08:15:34

Mass: 319.8970 321.8940 Tot Response: 1.49e+05 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:24	4.56e+02	5.94e+02	0.77	yes	1.05e+03		n	n
2	26:46	5.94e+04	7.61e+04	0.78	yes	1.36e+05	2,3,7,8-TCDD	n	n
3	27:07	5.37e+03	7.29e+03	0.74	yes	1.27e+04		n	n

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CLIENT ID.
SL0222

Entry: 38 Totals Name: Total Penta-Furans1

Run: 17 File: P519875 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 00:21:27 Processed: 10-JAN-19 08:15:34

Mass: 339.8600 341.8570 Tot Response: 1.47e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:01	8.91e+02	5.82e+02 1.53	yes	1.47e+03		n	n

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CLIENT ID.
SL0222

Entry: 39 Totals Name: Total Penta-Furans2

Run: 17 File: P519875 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 00:21:27 Processed: 10-JAN-19 08:15:34

Mass: 339.8600 341.8570 Tot Response: 5.21e+04 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:43	5.38e+03	3.78e+03	1.42	yes	9.16e+03		n	n
2	30:34	1.08e+03	6.71e+02	1.61	yes	1.75e+03		n	n
3	30:46	1.20e+04	7.78e+03	1.54	yes	1.98e+04	1,2,3,7,8-PeCDF	n	n
4	31:03	3.52e+03	2.35e+03	1.50	yes	5.87e+03		n	n
5	31:42	1.58e+02	9.71e+01	1.63	yes	2.55e+02		n	n
6	31:48	8.68e+03	5.86e+03	1.48	yes	1.45e+04	2,3,4,7,8-PeCDF	n	n
7	32:47	4.77e+02	2.87e+02	1.66	yes	7.64e+02		n	n

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Peak List Summary

CLIENT ID.
SL0222

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 17 File: P519875 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 00:21:27 Processed: 10-JAN-19 08:15:34

Mass: 355.8550 357.8520 Tot Response: 4.00e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:48	2.69e+02	1.84e+02	1.47	yes	4.53e+02		n	n
2	30:18	7.89e+02	4.64e+02	1.70	yes	1.25e+03		n	n
3	30:59	1.29e+02	8.87e+01	1.45	yes	2.18e+02		n	n
4	31:18	3.04e+02	1.88e+02	1.61	yes	4.92e+02		n	y
5	32:08	9.68e+02	6.13e+02	1.58	yes	1.58e+03	1,2,3,7,8-PeCDD	n	n

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Peak List Summary

CLIENT ID.
SL0222

Entry: 41 Totals Name: Total Hexa-Furans

Run: 17 File: P519875 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 00:21:27 Processed: 10-JAN-19 08:15:34

Mass: 373.8210 375.8180 Tot Response: 5.10e+04 RRF: 1.141

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:33	3.16e+02	2.84e+02 1.11	yes	6.00e+02		n	n
2	33:44	2.11e+03	1.83e+03 1.15	yes	3.94e+03		n	n
3	34:18	1.52e+03	1.26e+03 1.21	yes	2.78e+03		n	n
4	34:47	1.66e+04	1.38e+04 1.21	yes	3.04e+04	1,2,3,4,7,8-HxCDF	n	n
5	34:53	5.06e+03	4.09e+03 1.24	yes	9.15e+03	1,2,3,6,7,8-HxCDF	n	n
6	35:27	9.84e+02	7.76e+02 1.27	yes	1.76e+03	2,3,4,6,7,8-HxCDF	n	n
7	36:18	1.34e+03	1.04e+03 1.30	yes	2.38e+03	1,2,3,7,8,9-HxCDF	n	n

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SL0222

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 17 File: P519875 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 00:21:27 Processed: 10-JAN-19 08:15:34

Mass: 389.8160 391.8130 Tot Response: 2.02e+04 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:09	8.14e+03	6.40e+03	1.27	yes	1.45e+04		n	n
2	34:44	2.14e+02	1.77e+02	1.21	yes	3.91e+02		n	n
3	34:58	1.67e+03	1.38e+03	1.21	yes	3.05e+03		y	n
4	35:03	2.05e+02	1.78e+02	1.15	yes	3.83e+02		y	n
5	35:39	1.41e+02	1.04e+02	1.36	yes	2.45e+02	1,2,3,4,7,8-HxCDD	y	y
6	35:43	4.06e+02	3.68e+02	1.10	yes	7.74e+02	1,2,3,6,7,8-HxCDD	y	y
7	35:59	4.62e+02	3.76e+02	1.23	yes	8.38e+02	1,2,3,7,8,9-HxCDD	y	n

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SL0222

Entry: 43 Totals Name: Total Hepta-Furans

Run: 17 File: P519875 Sample:1 Injection:1 Function:4

Acquired: 10-JAN-19 00:21:27 Processed: 10-JAN-19 08:15:34

Mass: 407.7820 409.7790 Tot Response: 2.10e+04 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:43	5.21e+03	5.27e+03	0.99	yes	1.05e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	38:09	3.98e+03	3.89e+03	1.02	yes	7.87e+03		n	n
3	39:13	1.33e+03	1.34e+03	0.99	yes	2.66e+03	1,2,3,4,7,8,9-HpCDF	n	n

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SL0222

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 17 File: P519875 Sample:1 Injection:1 Function:4

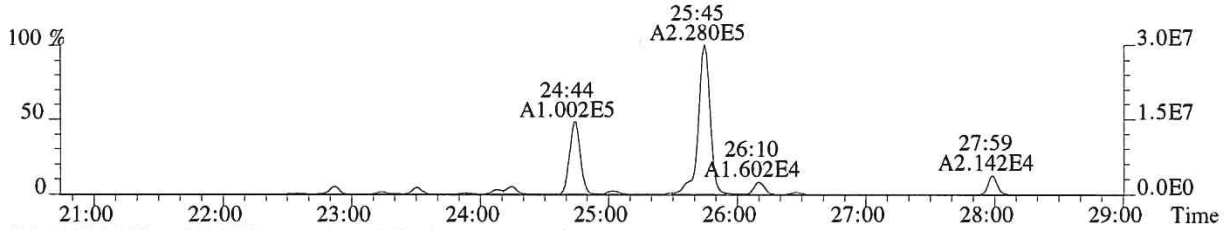
Acquired: 10-JAN-19 00:21:27 Processed: 10-JAN-19 08:15:34

Mass: 423.7770 425.7740 Tot Response: 6.03e+04 RRF: 1.025

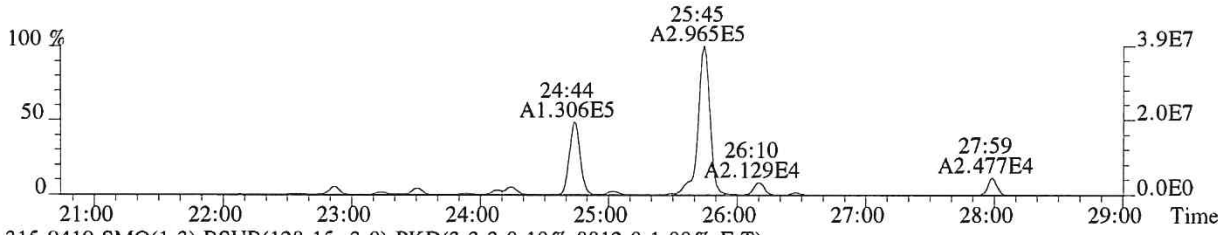
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:02	1.84e+04	1.03	yes	3.62e+04		n	n
2	38:45	1.24e+04	1.07	yes	2.40e+04	1,2,3,4,6,7,8-HpCDD	n	n

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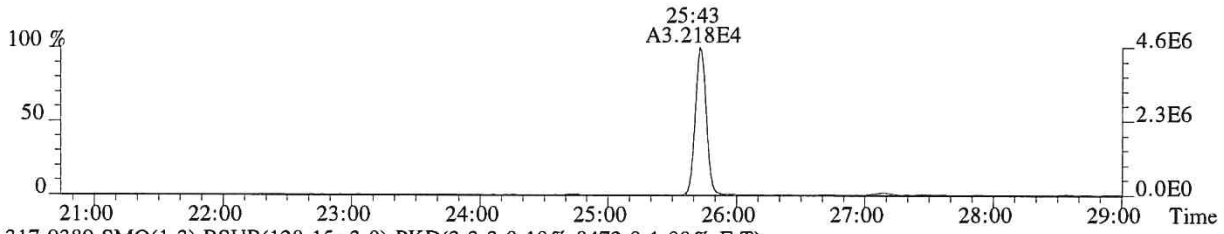
File:P519875 #1-587 Acq:10-JAN-2019 00:21:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2468.0,1.00%,F,T)



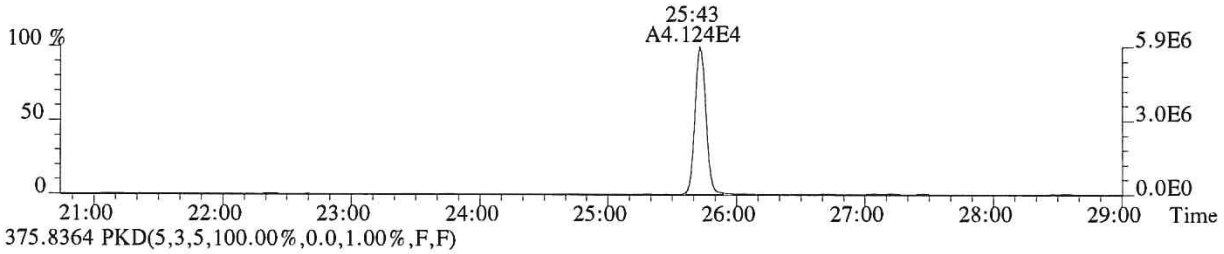
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2796.0,1.00%,F,T)



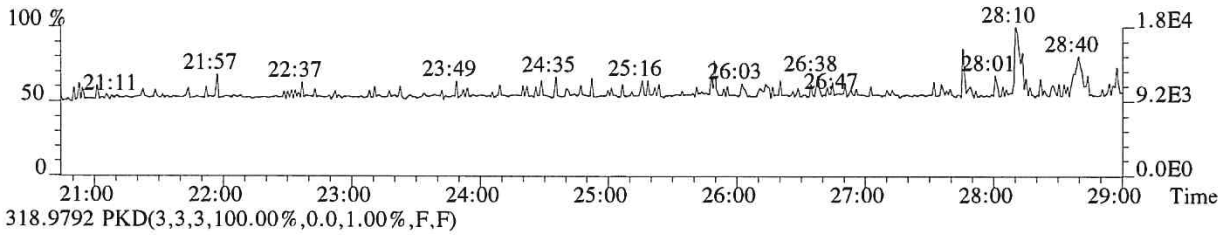
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8812.0,1.00%,F,T)



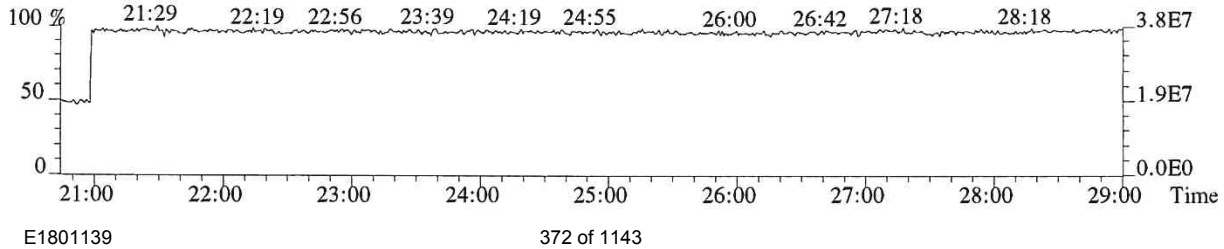
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8472.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

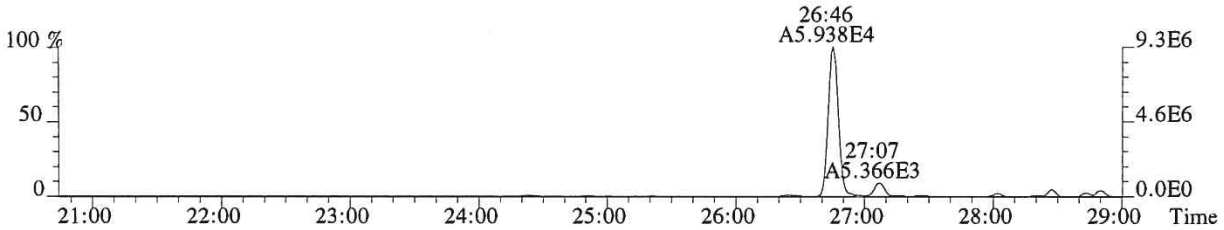


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

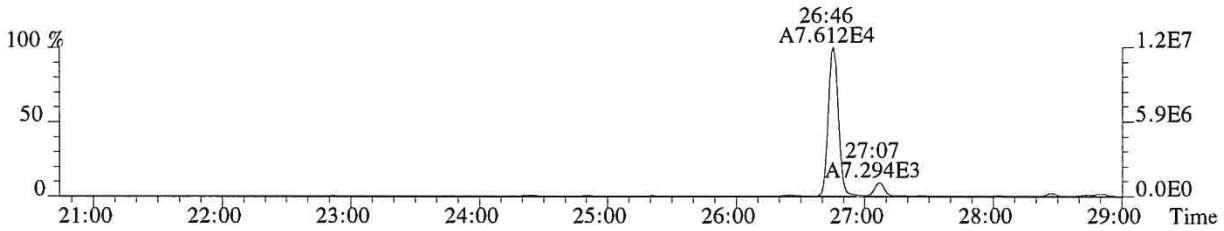


018336

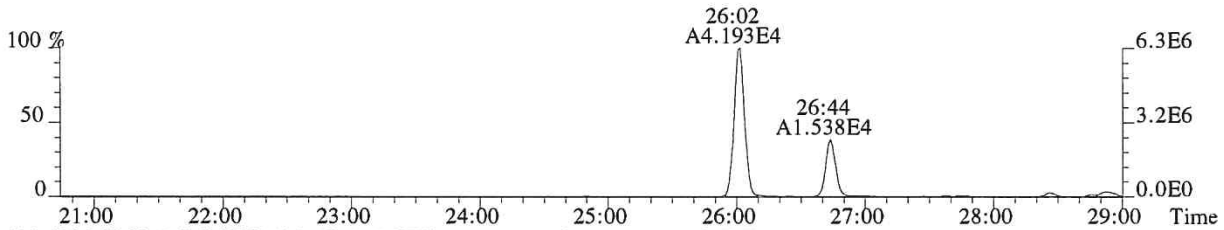
File:P519875 #1-587 Acq:10-JAN-2019 00:21:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3932.0,1.00%,F,T)



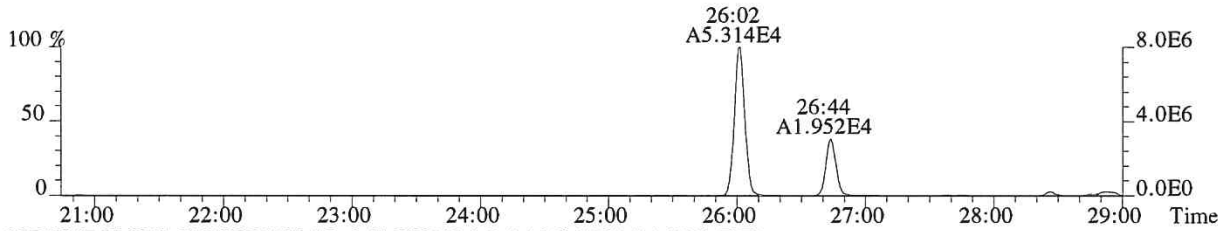
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1840.0,1.00%,F,T)



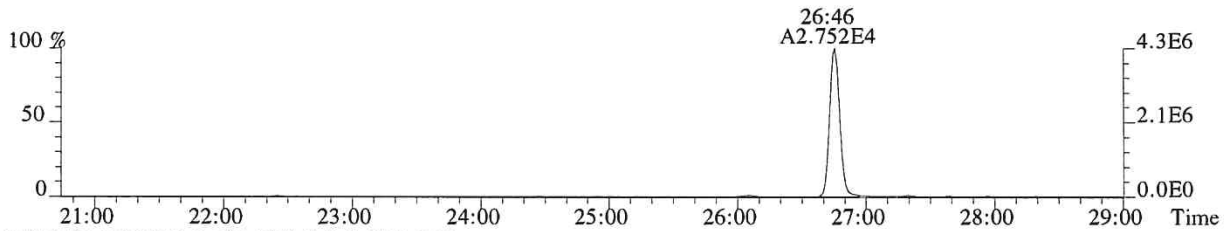
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8220.0,1.00%,F,T)



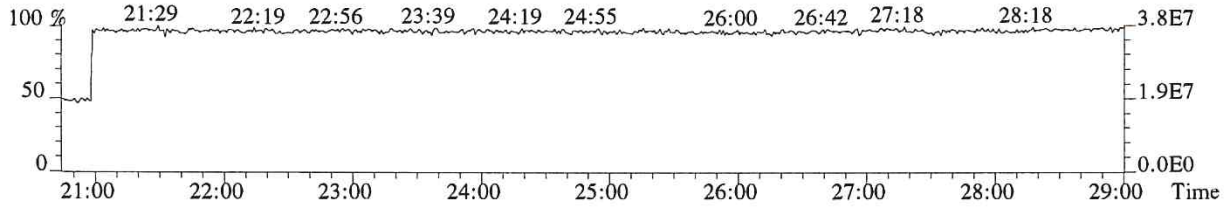
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5464.0,1.00%,F,T)



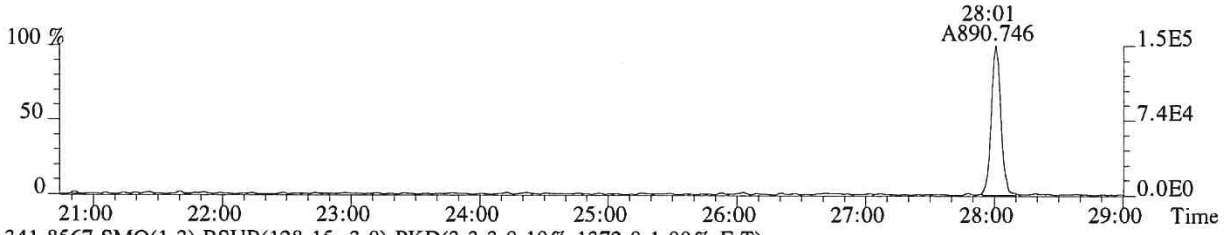
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1660.0,1.00%,F,T)



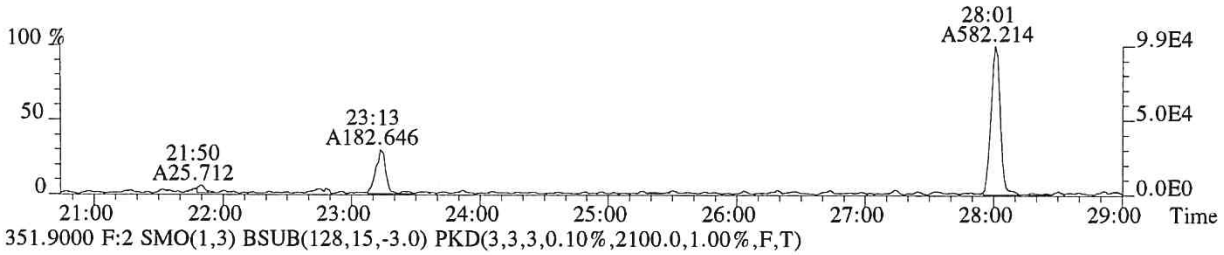
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



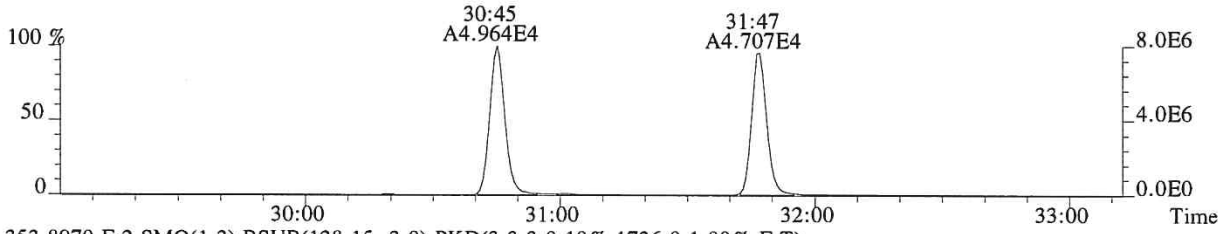
File:P519875 #1-587 Acq:10-JAN-2019 00:21:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1248.0,1.00%,F,T)



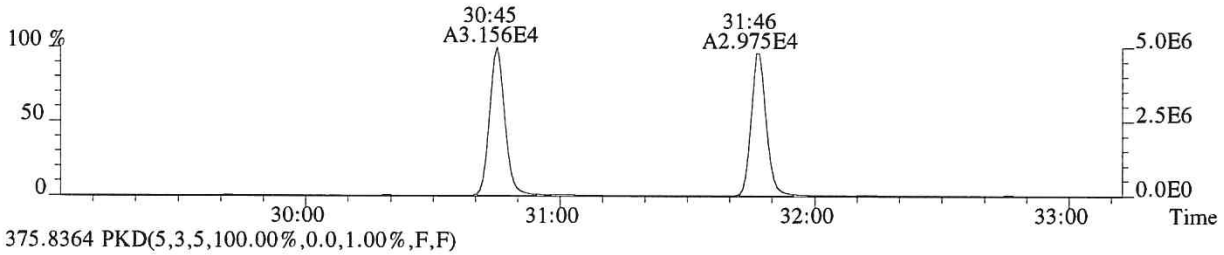
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1372.0,1.00%,F,T)



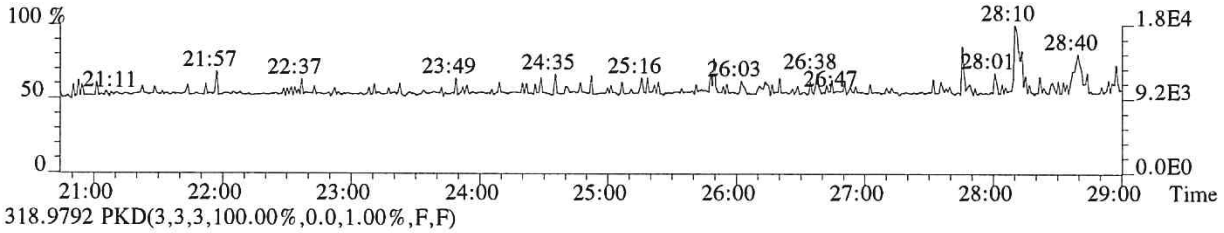
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2100.0,1.00%,F,T)



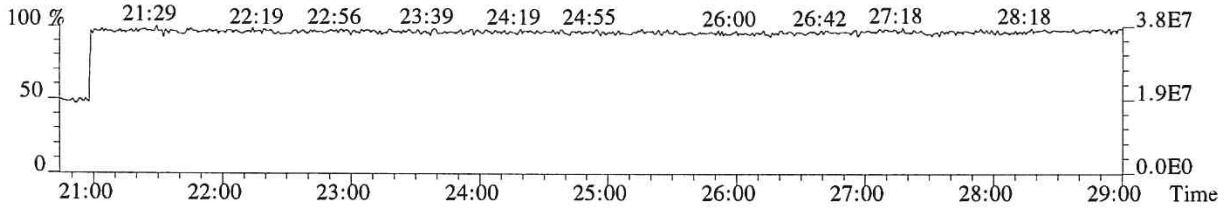
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1736.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

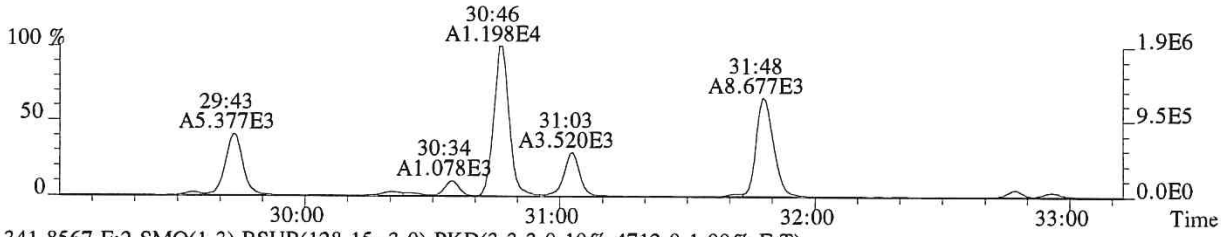


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

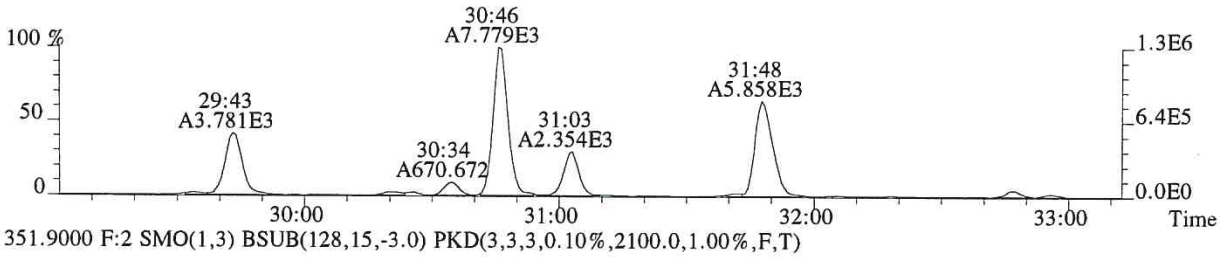


018338

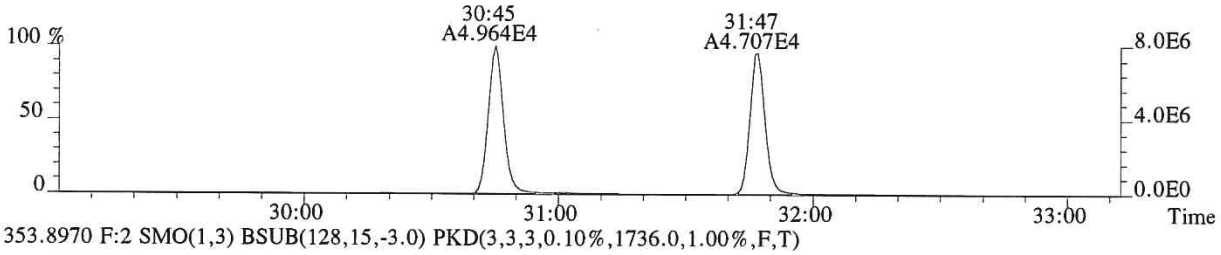
File:P519875 #1-376 Acq:10-JAN-2019 00:21:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6476.0,1.00%,F,T)



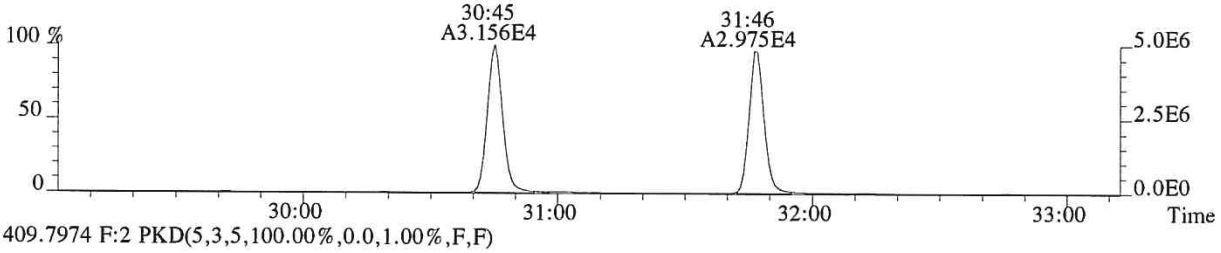
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4712.0,1.00%,F,T)



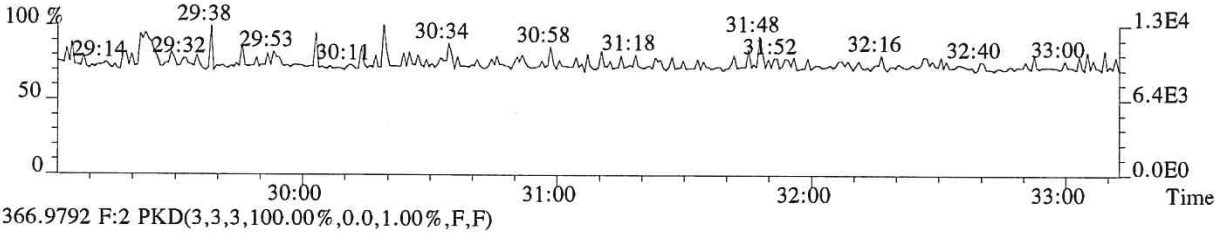
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2100.0,1.00%,F,T)



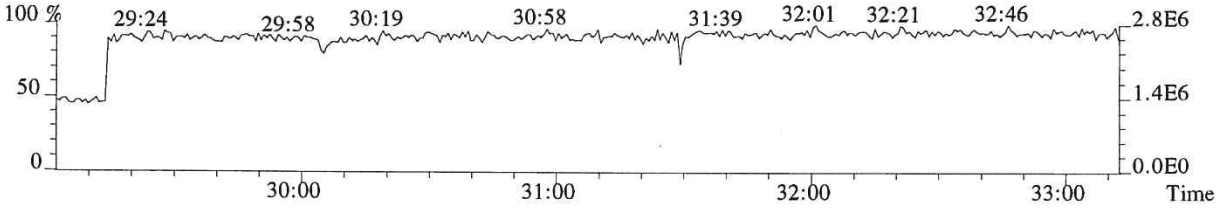
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1736.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

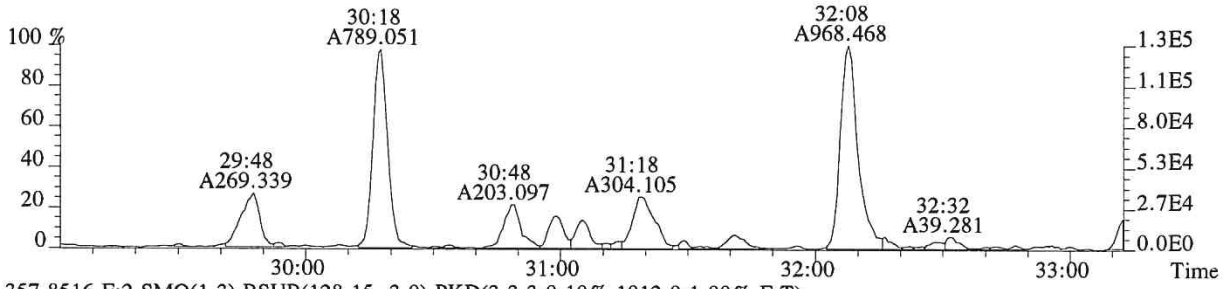


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

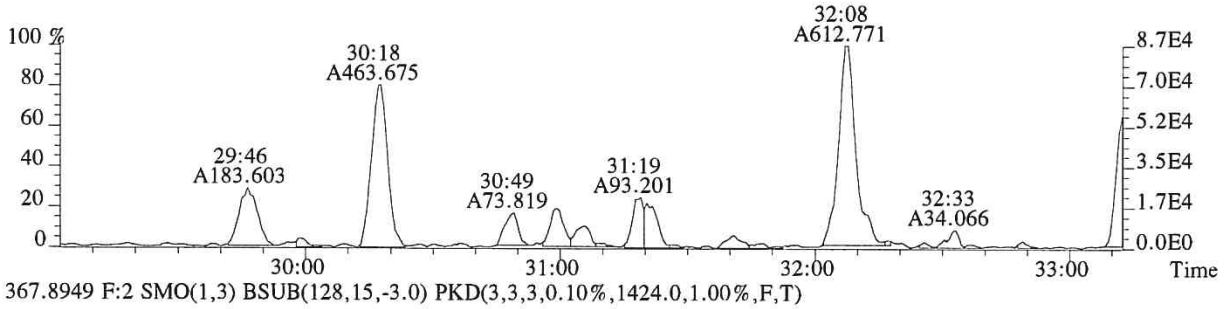


018339

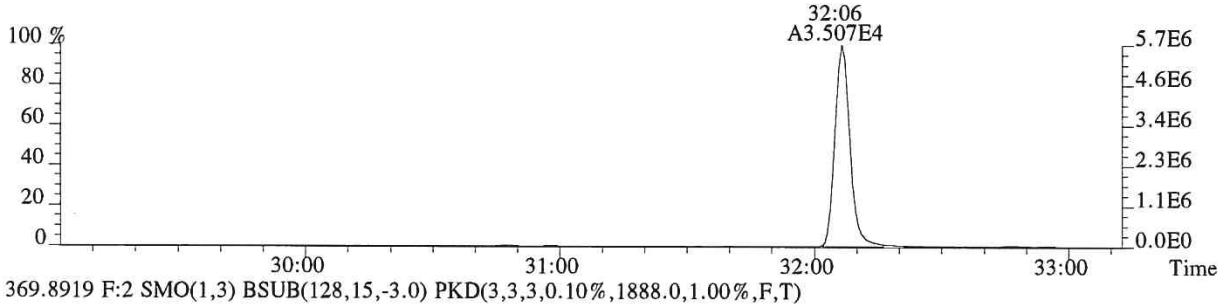
File:P519875 #1-376 Acq:10-JAN-2019 00:21:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1288.0,1.00%,F,T)



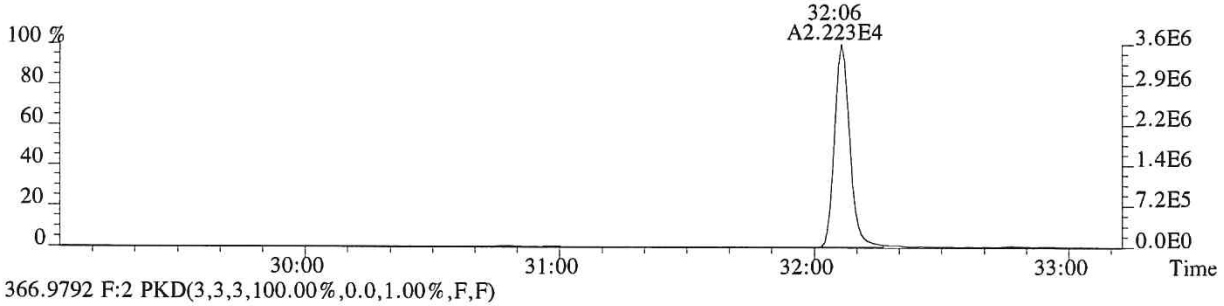
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1012.0,1.00%,F,T)



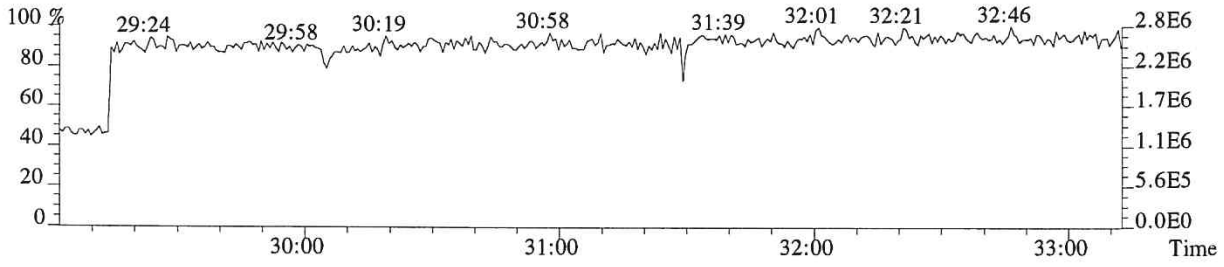
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1424.0,1.00%,F,T)



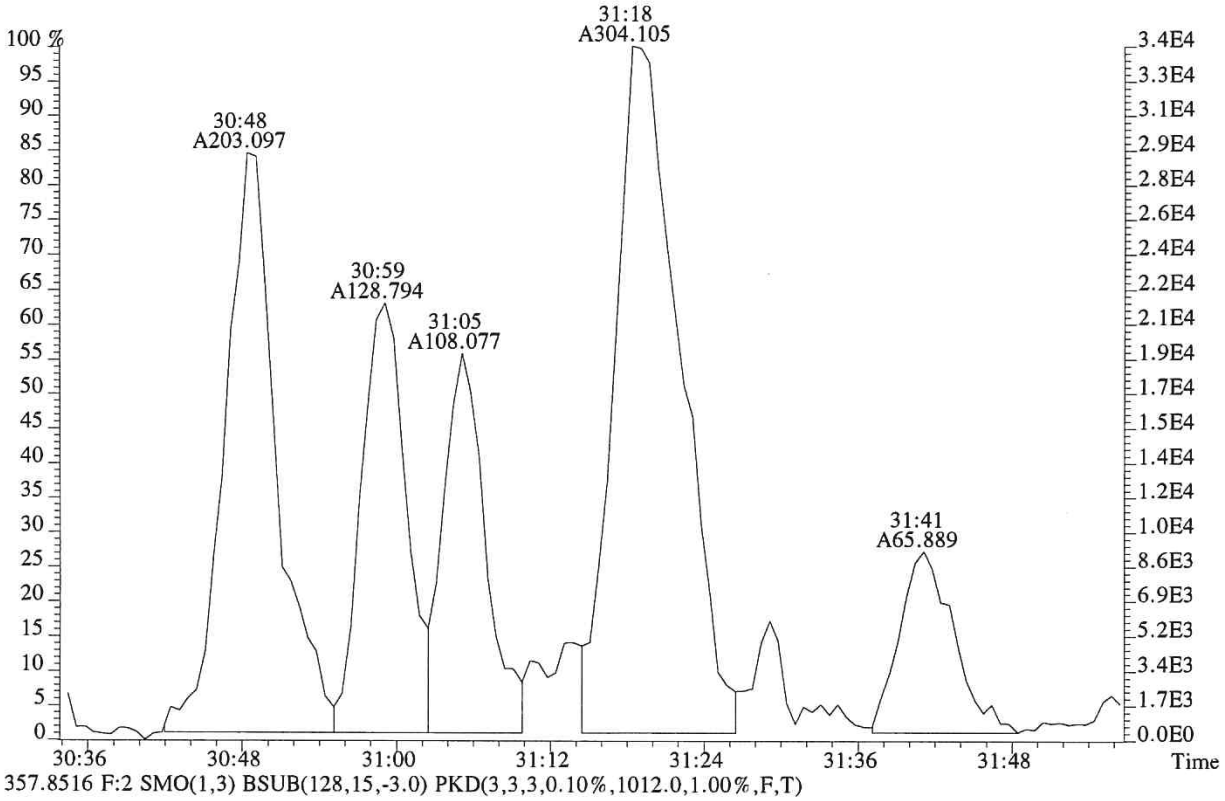
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1888.0,1.00%,F,T)



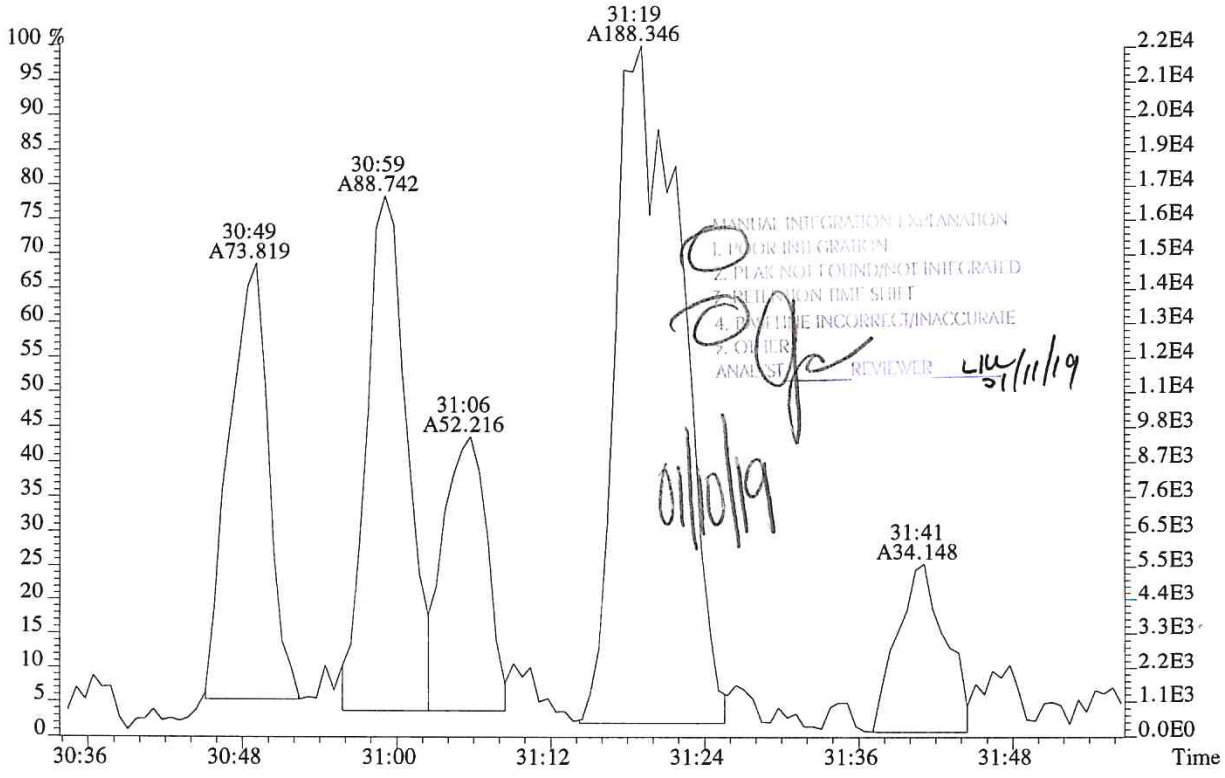
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519875 #1-376 Acq:10-JAN-2019 00:21:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1288.0,1.00%,F,T)

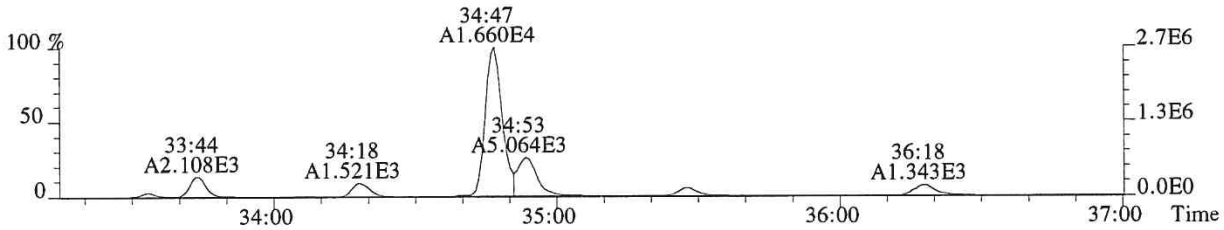


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1012.0,1.00%,F,T)

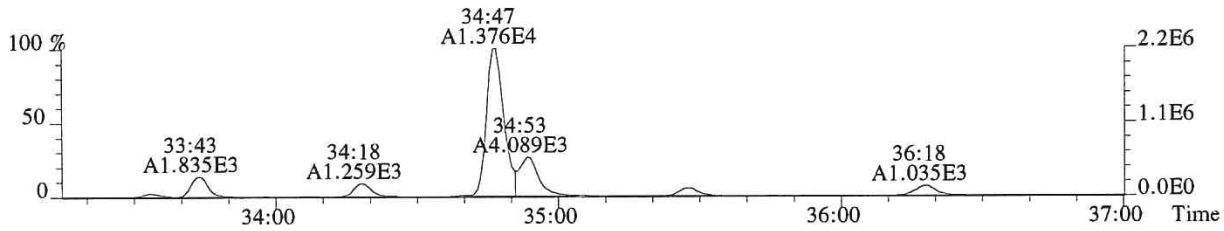


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER 11/11/19
01/10/19

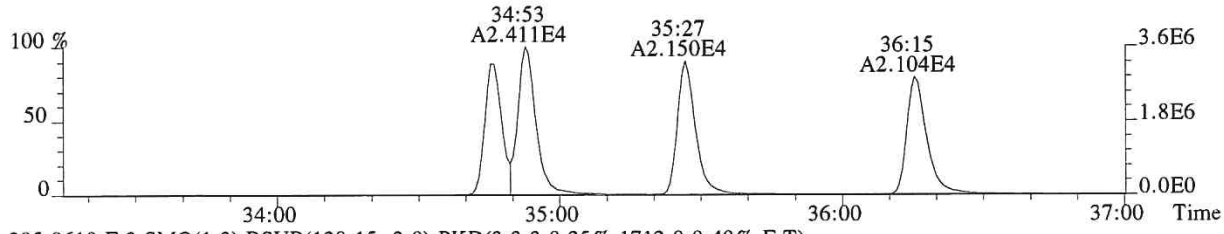
File:P519875 #1-339 Acq:10-JAN-2019 00:21:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1576.0,0.40%,F,T)



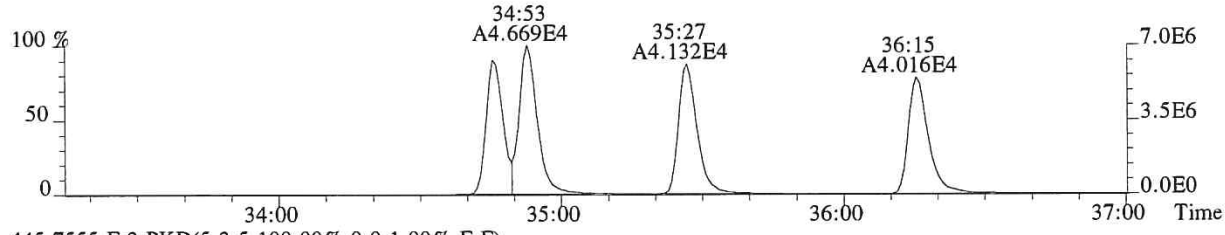
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2452.0,0.40%,F,T)



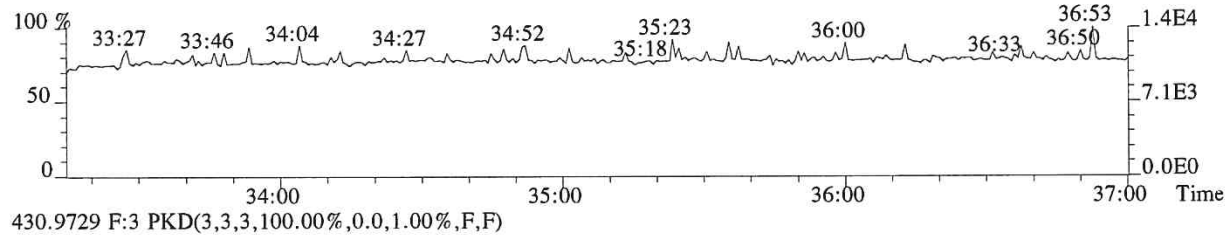
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,972.0,0.40%,F,T)



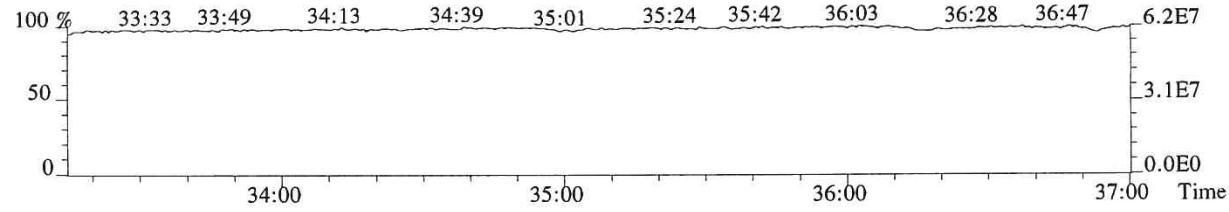
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1712.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

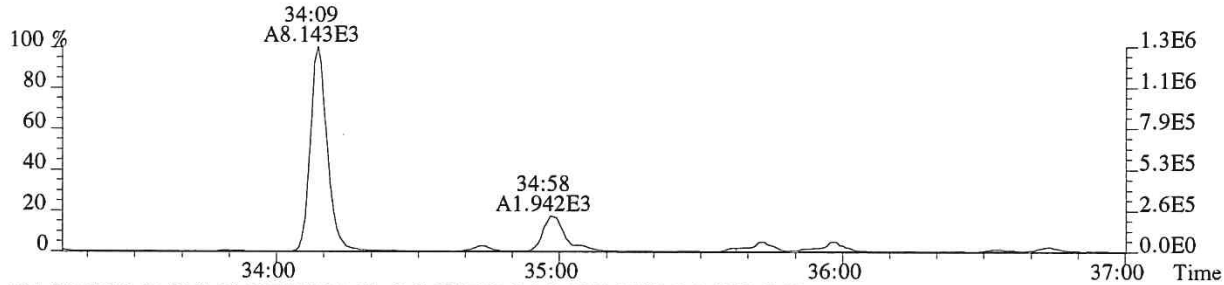


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

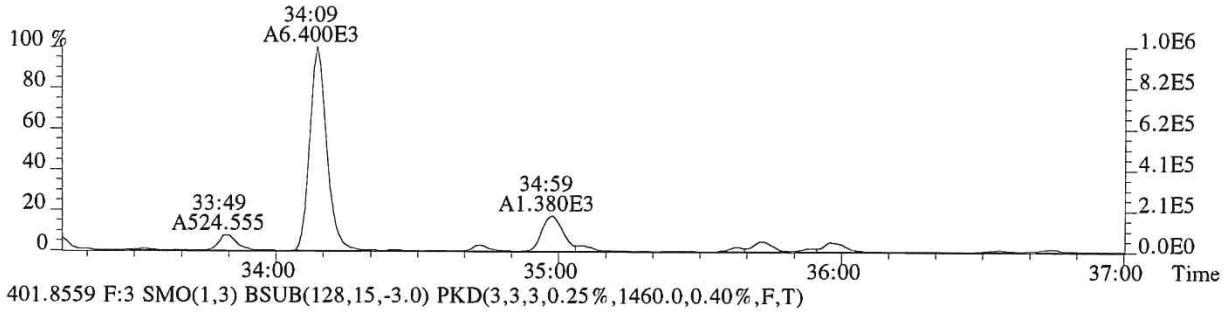


018342

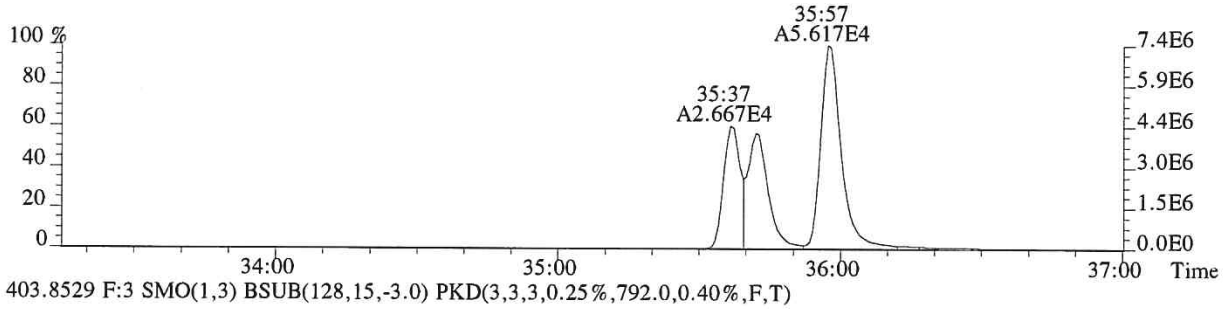
File:P519875 #1-339 Acq:10-JAN-2019 00:21:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1792.0,0.40%,F,T)



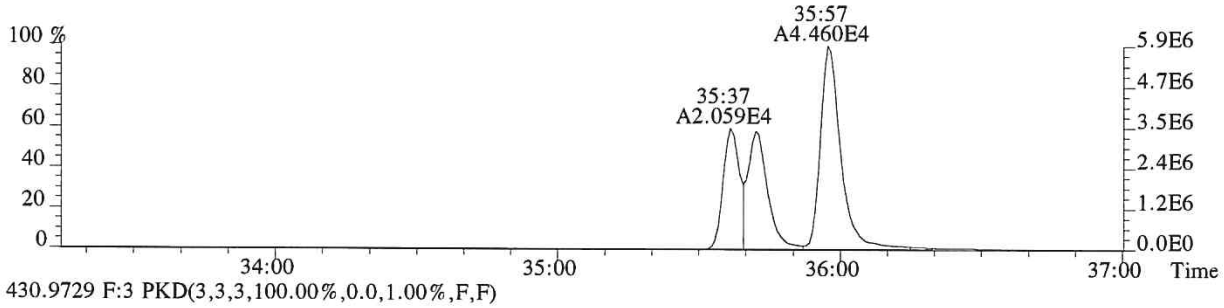
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2712.0,0.40%,F,T)



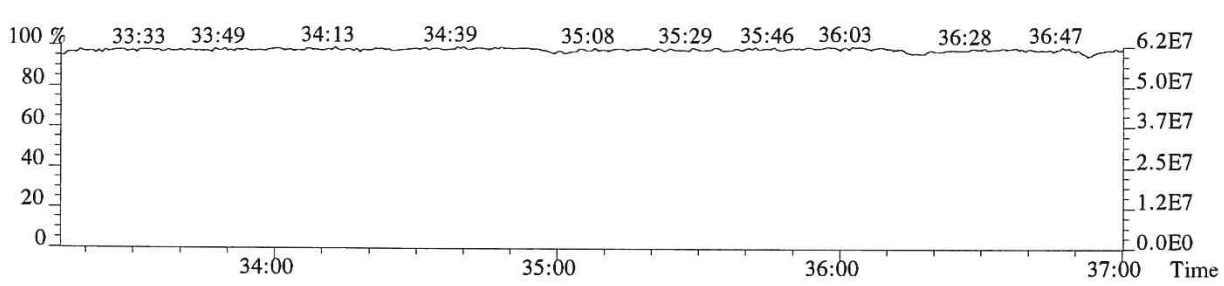
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1460.0,0.40%,F,T)



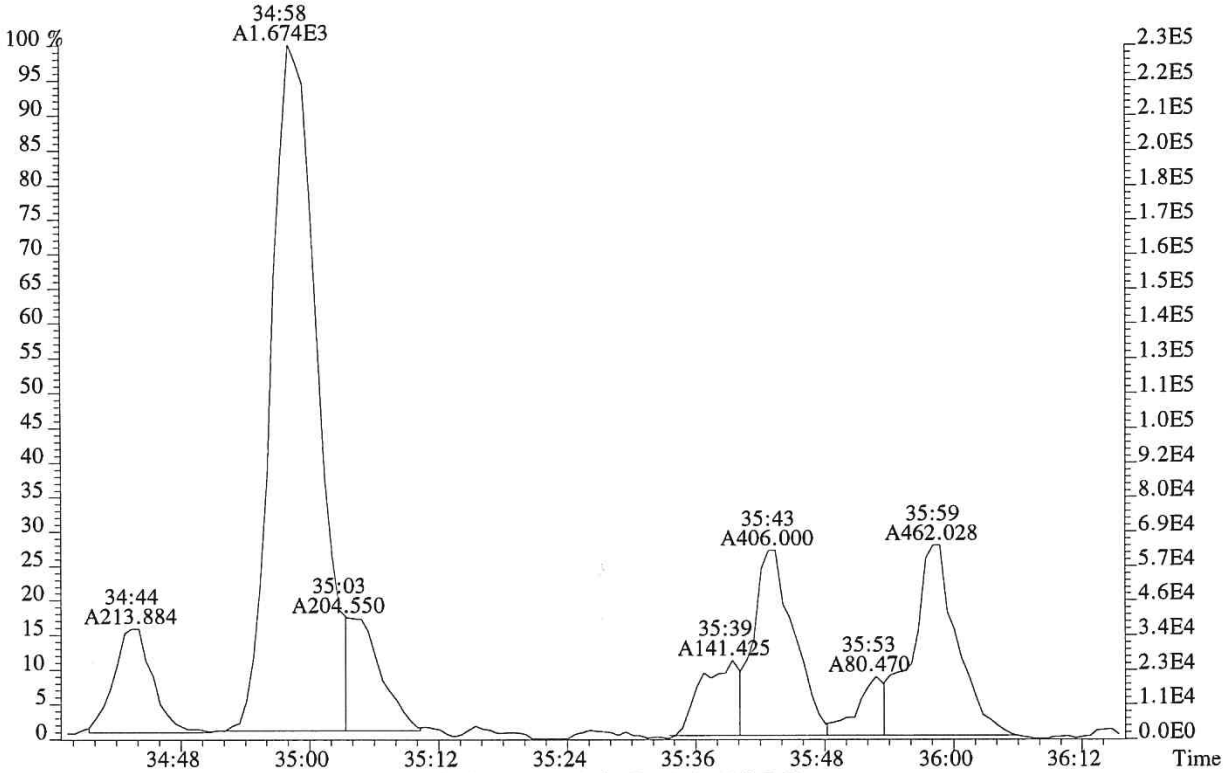
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,792.0,0.40%,F,T)



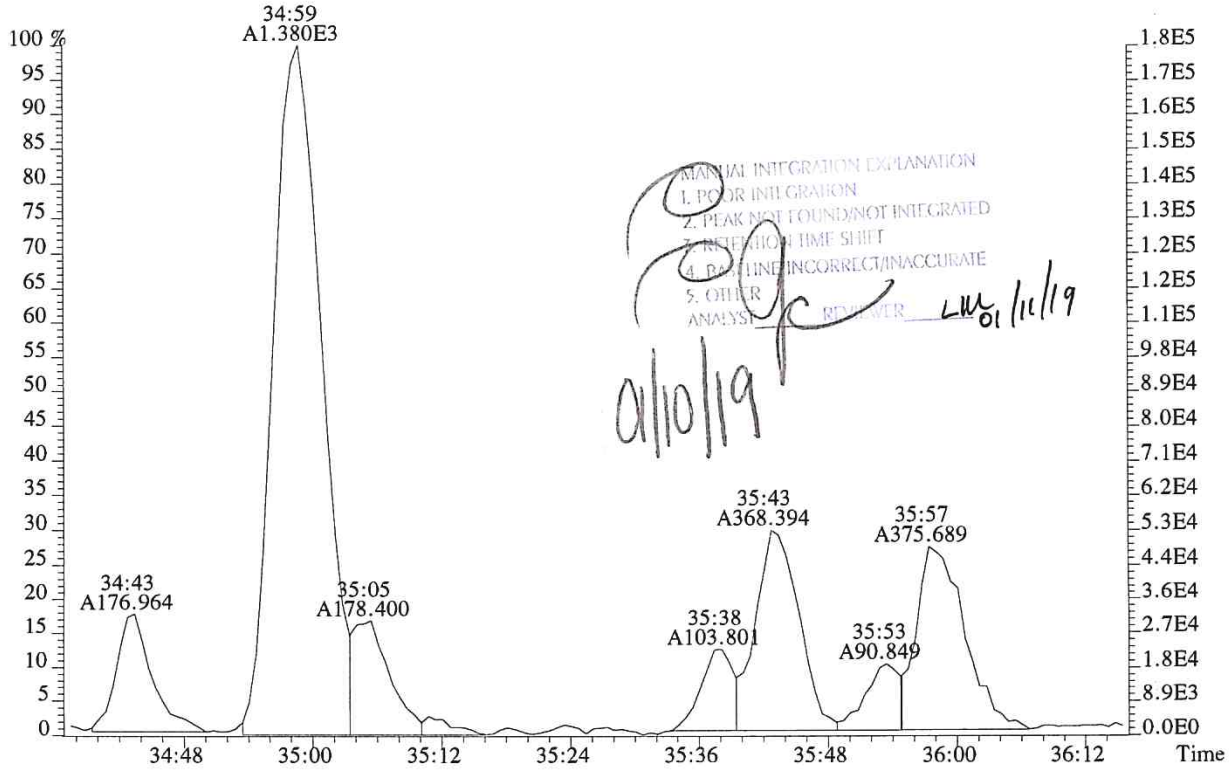
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519875 #1-339 Acq:10-JAN-2019 00:21:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1792.0,0.40%,F,T)

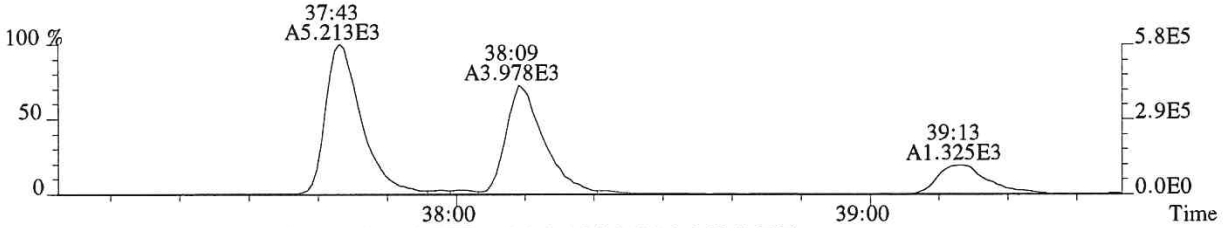


391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2712.0,0.40%,F,T)

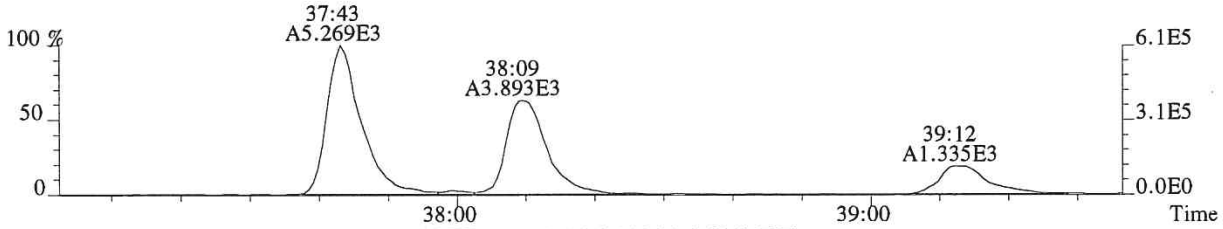


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST LW 01/11/19 REVIEWER
01/10/19

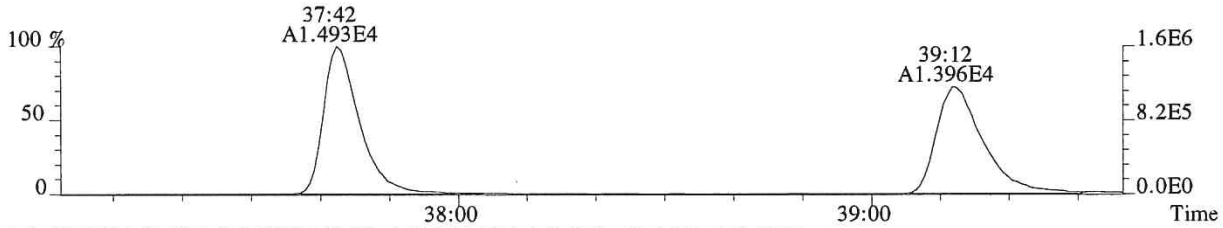
File:P519875 #1-232 Acq:10-JAN-2019 00:21:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2460.0,0.50%,F,T)



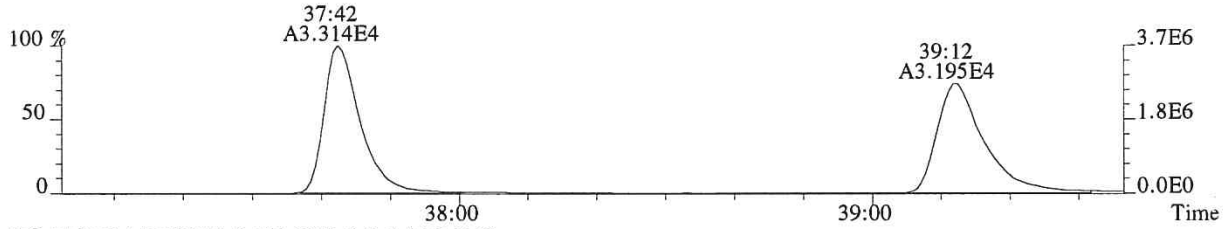
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2124.0,0.50%,F,T)



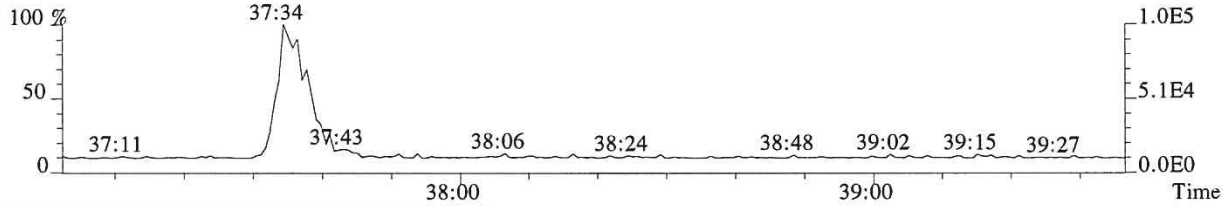
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2036.0,0.50%,F,T)



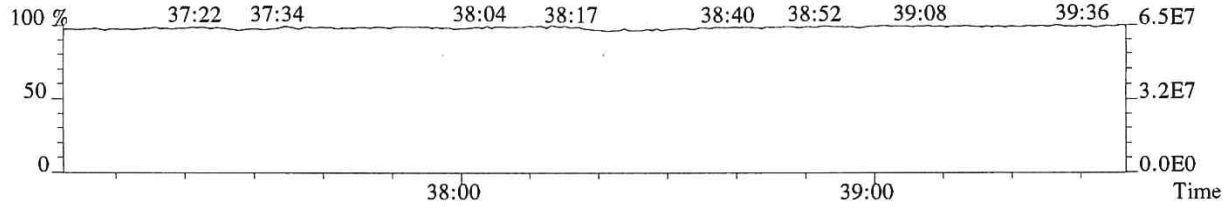
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4956.0,0.50%,F,T)



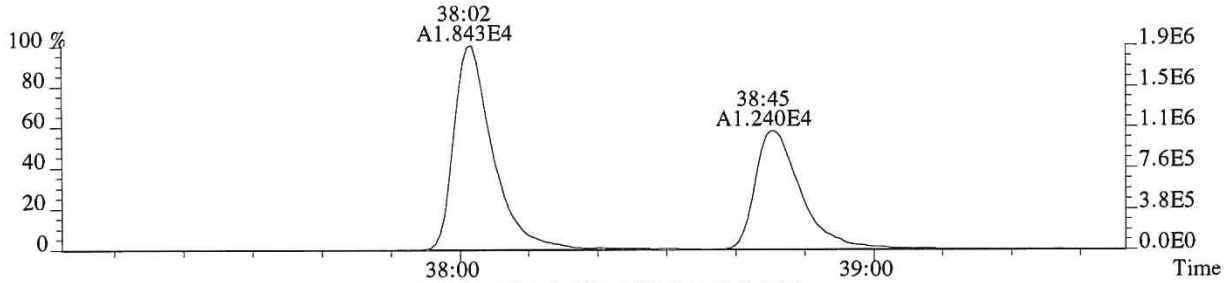
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



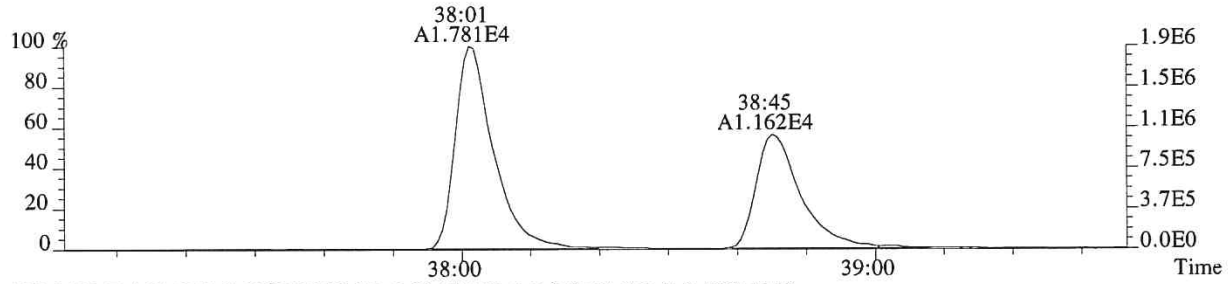
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



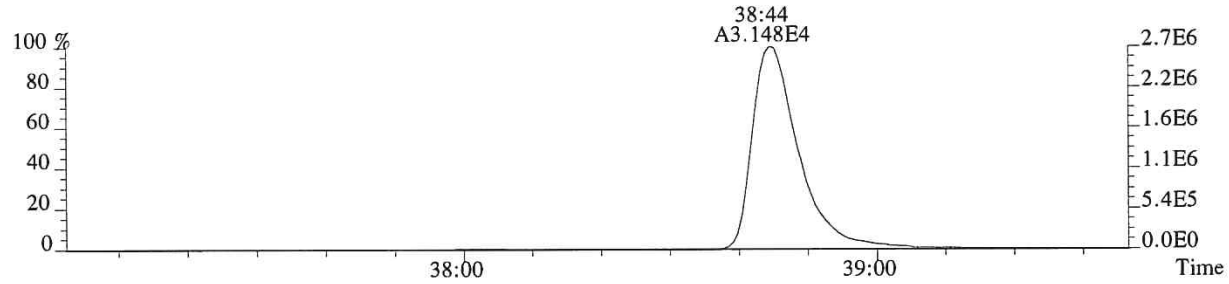
File:P519875 #1-232 Acq:10-JAN-2019 00:21:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1200.0,0.40%,F,T)



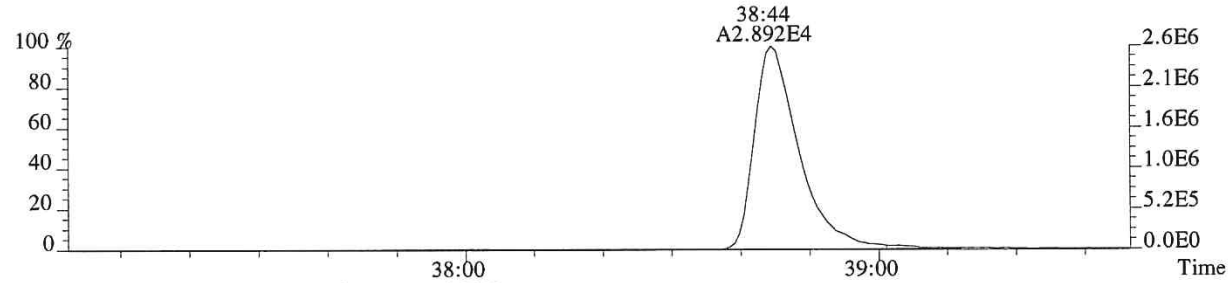
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4484.0,0.40%,F,T)



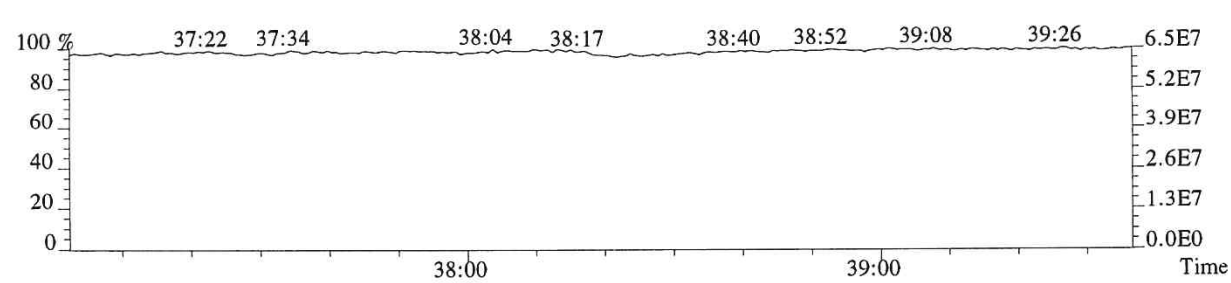
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,572.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,536.0,0.40%,F,T)

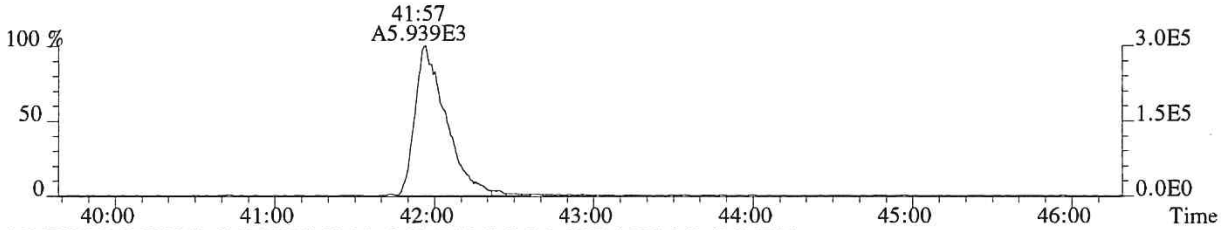


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

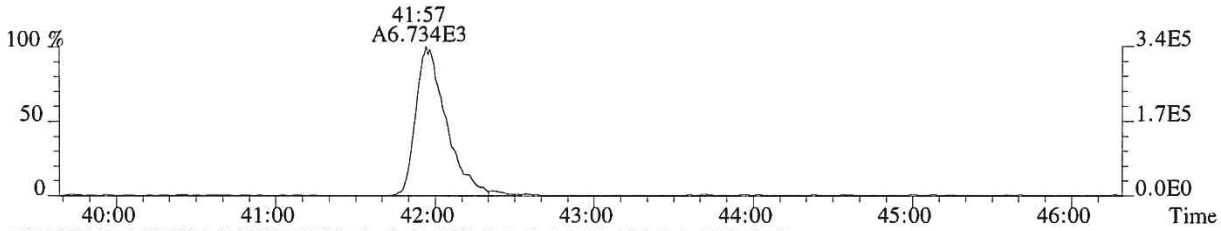


018346

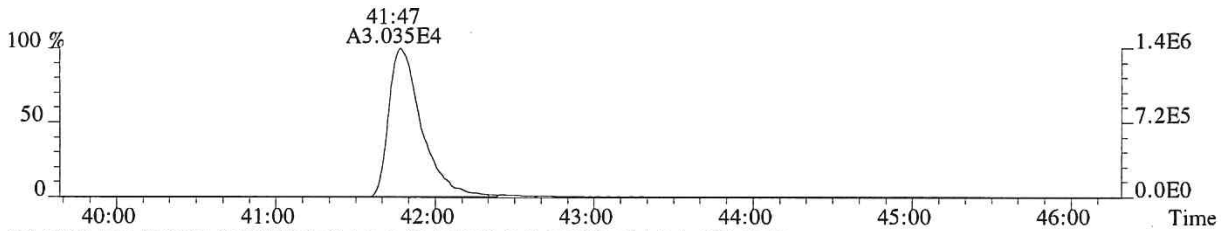
File:P519875 #1-601 Acq:10-JAN-2019 00:21:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,644.0,0.40%,F,T)



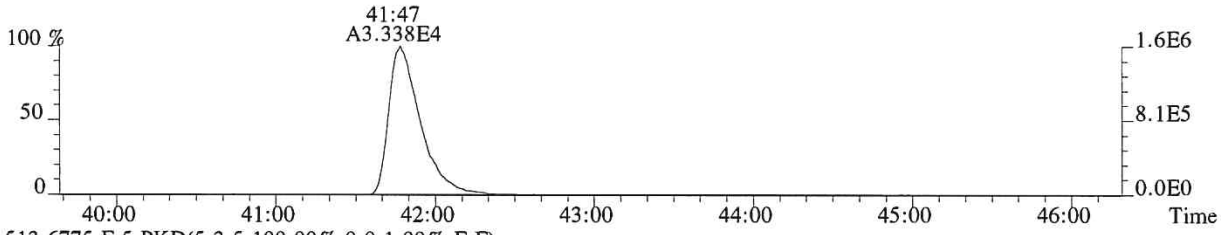
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1036.0,0.40%,F,T)



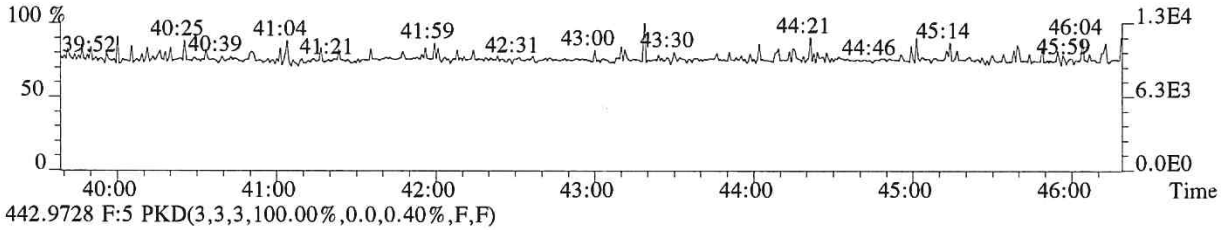
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,508.0,0.40%,F,T)



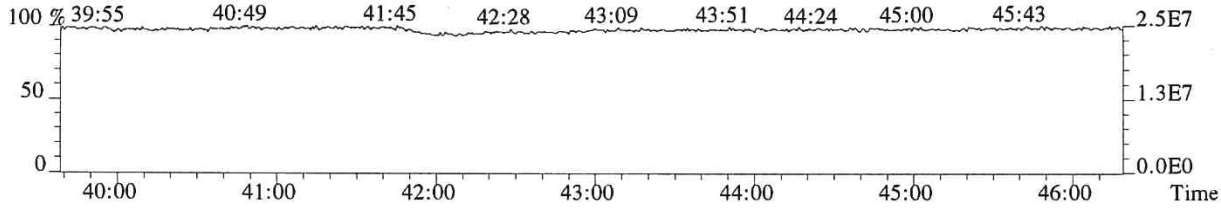
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,424.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

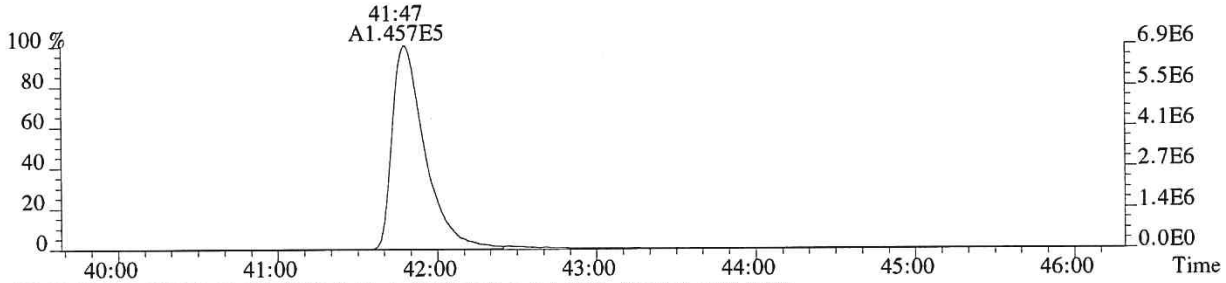


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

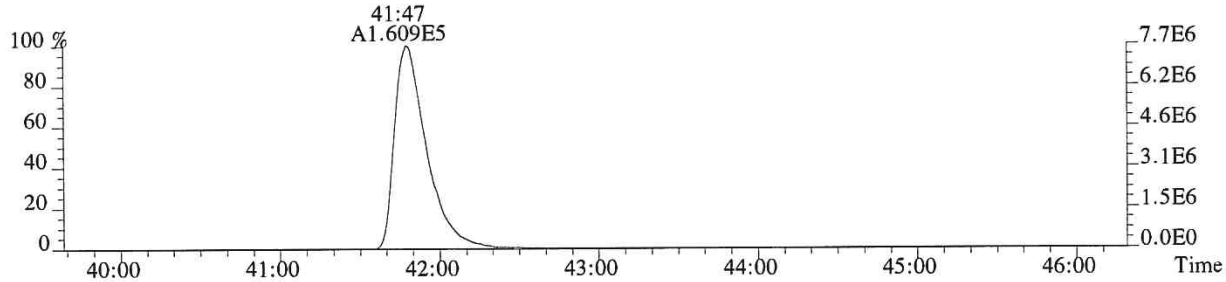


018347

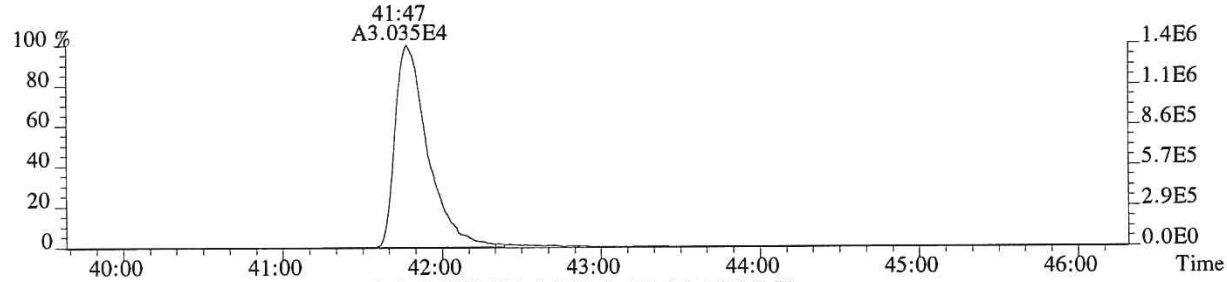
File:P519875 #1-601 Acq:10-JAN-2019 00:21:27 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,616.0,0.40%,F,T)



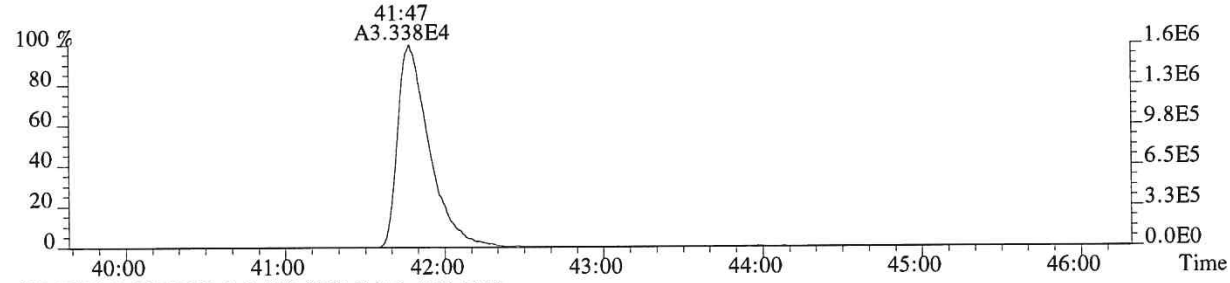
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,496.0,0.40%,F,T)



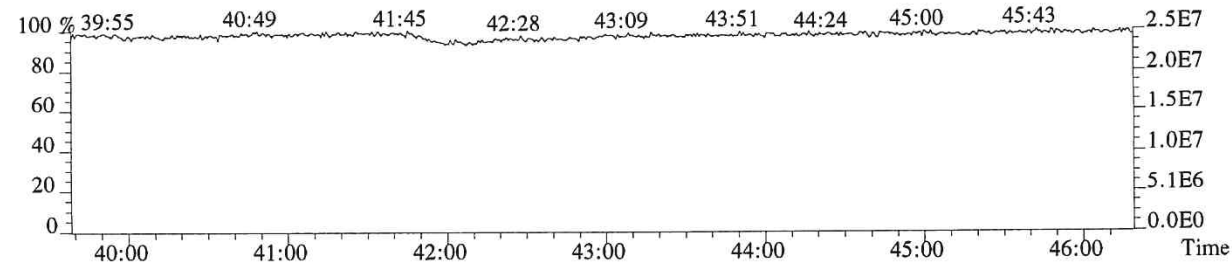
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,508.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,424.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018348

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0222

Run #17 Filename P519910 Samp: 1 Inj: 1 Acquired: 11-JAN-19 09:45:20
Processed: 11-JAN-19 14:53:40 Sample ID: E1801139-008DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	6.220e+03	8.208e+03	0.76	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:27	3.603e+02	2.491e+02	1.45	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	2.873e+02	1.980e+02	1.45	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	5.059e+02	4.703e+02	1.08	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	1.369e+02	1.253e+02	1.09	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:02	2.864e+01	1.938e+01	1.48	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:50	3.542e+01	3.593e+01	0.99	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:09	2.034e+02	1.793e+02	1.13	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:29	3.805e+01	3.710e+01	1.03	yes	no	1.258
10	Unk	OCDF	40:44	2.389e+02	3.000e+02	0.80	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:24	1.675e+03	2.141e+03	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:48	3.929e+01	1.562e+01	2.52	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:16	1.541e+01	1.870e+01	0.82	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	4.798e+02	4.415e+02	1.09	yes	no	1.025
17	Unk	OCDD	40:34	6.041e+03	6.554e+03	0.92	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:20	1.318e+04	1.657e+04	0.80	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:26	2.123e+04	1.324e+04	1.60	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:27	2.041e+04	1.282e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:22	9.361e+03	1.787e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.075e+04	2.078e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	1.018e+04	1.942e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	9.371e+03	1.798e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	8.189e+03	1.904e+04	0.43	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:27	7.787e+03	1.762e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:22	6.466e+03	8.084e+03	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:47	1.607e+04	1.002e+04	1.60	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:10	1.429e+04	1.113e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:16	1.423e+04	1.144e+04	1.24	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:02	1.809e+04	1.693e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	40:33	2.188e+04	2.373e+04	0.92	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:39	1.175e+04	1.488e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:30	1.860e+04	1.456e+04	1.28	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:24	8.237e+02				no	1.014

$$\text{OCDD} = \frac{(6.041e+03 + 6.554e+03) \times 4000\ \text{pg} \times 10}{(2.188e+04 + 2.373e+04) \times 10.668\ \text{g} \times 86.2/100 \times 1.118 \times 0.54} = 1990\ \text{ng/kg}$$

LW 01/14/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0222

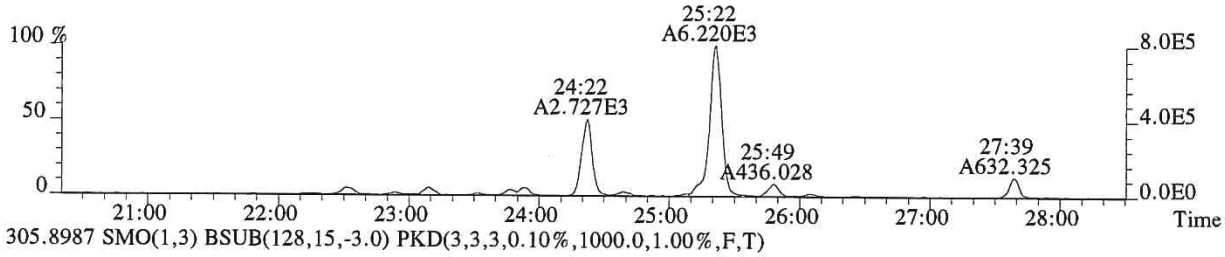
Run #17 Filename P519910 Samp: 1 Inj: 1 Acquired: 11-JAN-19 09:45:20
Processed: 11-JAN-19 14:53:40 LAB. ID: E1801139-008DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.00e+05	1.33e+03	6.0e+02	1.04e+06	1.00e+03	1.0e+03
2	1,2,3,7,8-PeCDF	6.05e+04	5.88e+02	1.0e+02	4.59e+04	1.63e+03	2.8e+01
3	2,3,4,7,8-PeCDF	3.93e+04	5.88e+02	6.7e+01	2.93e+04	1.63e+03	1.8e+01
4	1,2,3,4,7,8-HxCDF	1.05e+05	1.00e+03	1.1e+02	9.50e+04	5.48e+02	1.7e+02
5	1,2,3,6,7,8-HxCDF	2.38e+04	1.00e+03	2.4e+01	2.26e+04	5.48e+02	4.1e+01
6	2,3,4,6,7,8-HxCDF	5.94e+03	1.00e+03	5.9e+00	4.75e+03	5.48e+02	8.7e+00
7	1,2,3,7,8,9-HxCDF	6.91e+03	1.00e+03	6.9e+00	6.07e+03	5.48e+02	1.1e+01
8	1,2,3,4,6,7,8-HpCDF	4.43e+04	5.68e+02	7.8e+01	3.77e+04	1.05e+03	3.6e+01
9	1,2,3,4,7,8,9-HpCDF	6.93e+03	5.68e+02	1.2e+01	9.05e+03	1.05e+03	8.6e+00
10	OCDF	4.61e+04	4.36e+02	1.1e+02	5.08e+04	1.36e+03	3.7e+01
11	2,3,7,8-TCDD	2.55e+05	2.23e+03	1.1e+02	3.28e+05	9.08e+02	3.6e+02
12	1,2,3,7,8-PeCDD	7.86e+03	1.06e+03	7.4e+00	4.17e+03	4.76e+02	8.8e+00
13	1,2,3,4,7,8-HxCDD	*	7.68e+02	*	*	8.52e+02	*
14	1,2,3,6,7,8-HxCDD	4.19e+03	7.68e+02	5.5e+00	3.65e+03	8.52e+02	4.3e+00
15	1,2,3,7,8,9-HxCDD	*	7.68e+02	*	*	8.52e+02	*
16	1,2,3,4,6,7,8-HpCDD	9.65e+04	8.12e+02	1.2e+02	9.24e+04	4.24e+02	2.2e+02
17	OCDD	1.04e+06	4.84e+02	2.2e+03	1.16e+06	5.64e+02	2.1e+03
18	13C-2,3,7,8-TCDF	1.84e+06	4.14e+03	4.4e+02	2.34e+06	2.10e+03	1.1e+03
19	13C-1,2,3,7,8-PeCDF	3.63e+06	5.12e+02	7.1e+03	2.21e+06	5.48e+02	4.0e+03
20	13C-2,3,4,7,8-PeCDF	3.72e+06	5.12e+02	7.3e+03	2.34e+06	5.48e+02	4.3e+03
21	13C-1,2,3,4,7,8-HxCDF	1.91e+06	7.12e+02	2.7e+03	3.65e+06	1.06e+03	3.4e+03
22	13C-1,2,3,6,7,8-HxCDF	2.09e+06	7.12e+02	2.9e+03	4.09e+06	1.06e+03	3.8e+03
23	13C-2,3,4,6,7,8-HxCDF	2.08e+06	7.12e+02	2.9e+03	3.98e+06	1.06e+03	3.7e+03
24	13C-1,2,3,7,8,9-HxCDF	1.87e+06	7.12e+02	2.6e+03	3.55e+06	1.06e+03	3.3e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.67e+06	1.45e+03	1.2e+03	3.91e+06	2.69e+03	1.5e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.50e+06	1.45e+03	1.0e+03	3.38e+06	2.69e+03	1.3e+03
27	13C-2,3,7,8-TCDD	9.67e+05	7.28e+03	1.3e+02	1.25e+06	2.56e+03	4.9e+02
28	13C-1,2,3,7,8-PeCDD	2.90e+06	5.84e+02	5.0e+03	1.83e+06	1.02e+03	1.8e+03
29	13C-1,2,3,4,7,8-HxCDD	3.17e+06	7.48e+02	4.2e+03	2.41e+06	6.16e+02	3.9e+03
30	13C-1,2,3,6,7,8-HxCDD	2.88e+06	7.48e+02	3.8e+03	2.31e+06	6.16e+02	3.7e+03
31	13C-1,2,3,4,6,7,8-HpCDD	3.58e+06	4.76e+02	7.5e+03	3.39e+06	5.68e+02	6.0e+03
32	13C-OCDD	3.79e+06	3.36e+02	1.1e+04	4.17e+06	5.72e+02	7.3e+03
33	13C-1,2,3,4-TCDD	1.71e+06	7.28e+03	2.4e+02	2.16e+06	2.56e+03	8.4e+02
34	13C-1,2,3,7,8,9-HxCDD	3.76e+06	7.48e+02	5.0e+03	2.87e+06	6.16e+02	4.7e+03
35	37Cl-2,3,7,8-TCDD	1.33e+05	1.81e+03	7.3e+01			

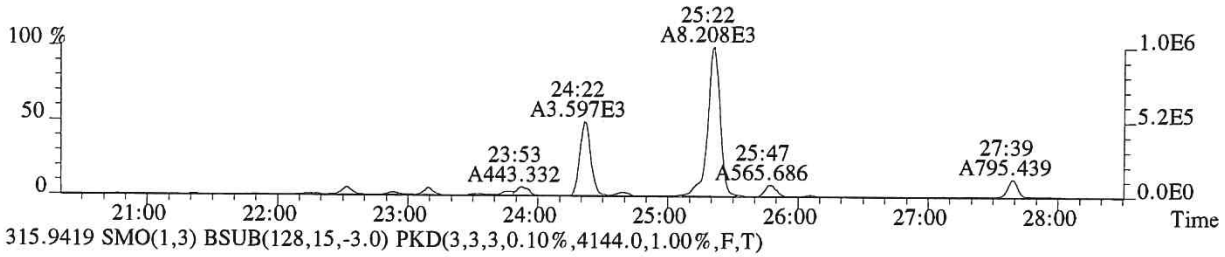
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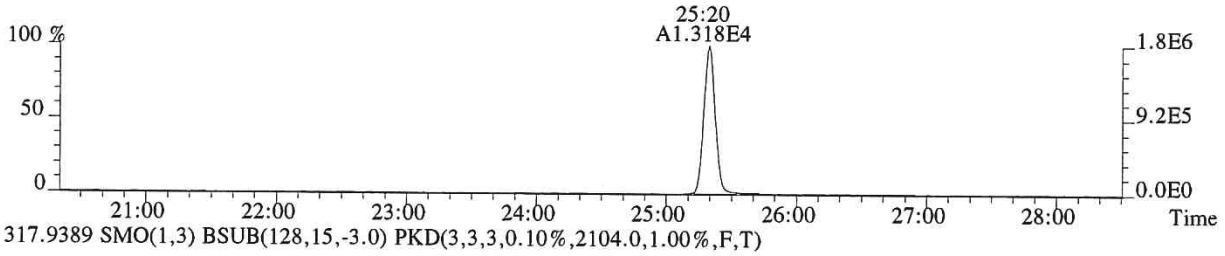
File:P519910 #1-580 Acq:11-JAN-2019 09:45:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1328.0,1.00%,F,T)



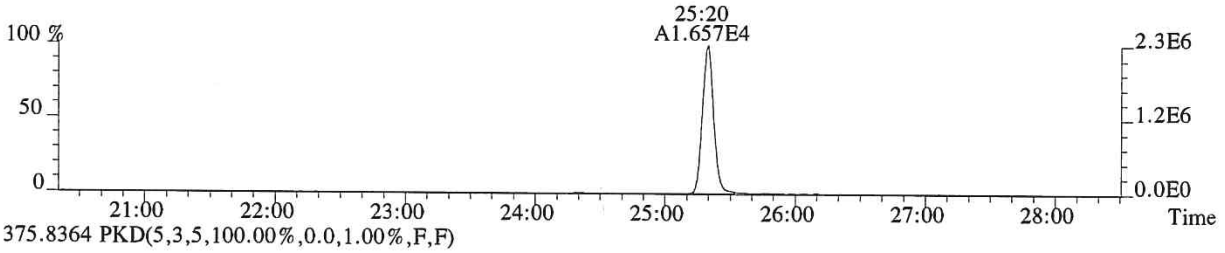
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1000.0,1.00%,F,T)



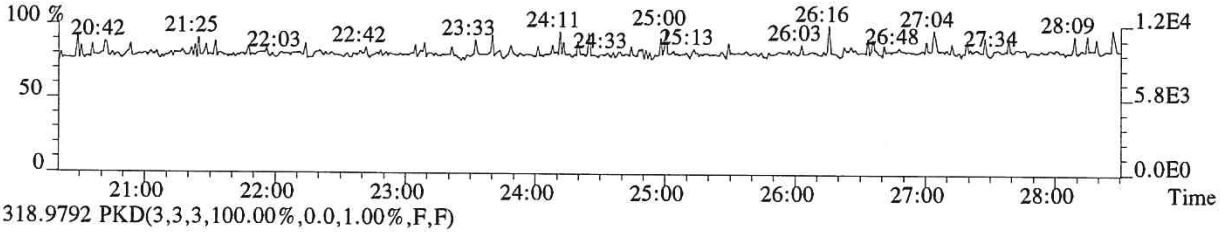
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4144.0,1.00%,F,T)



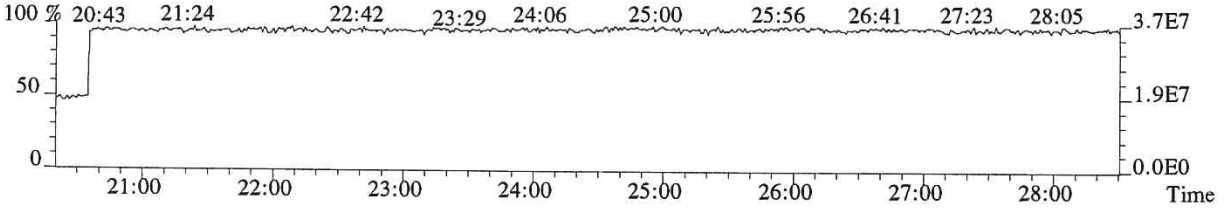
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2104.0,1.00%,F,T)



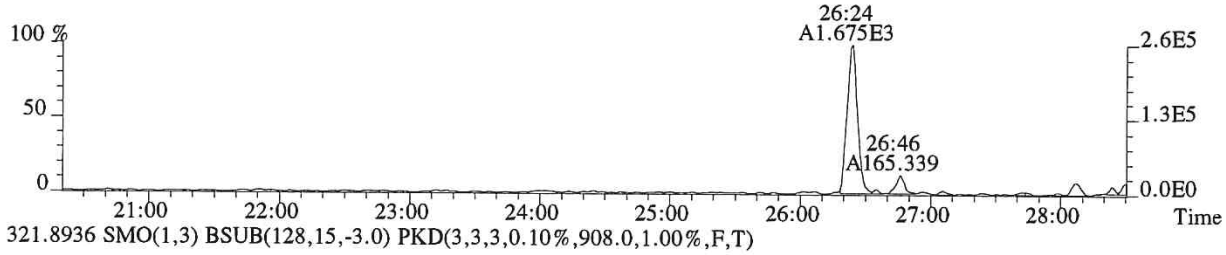
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



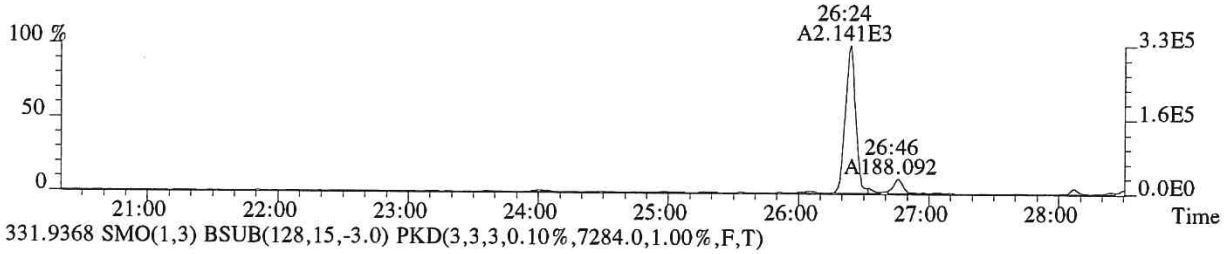
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



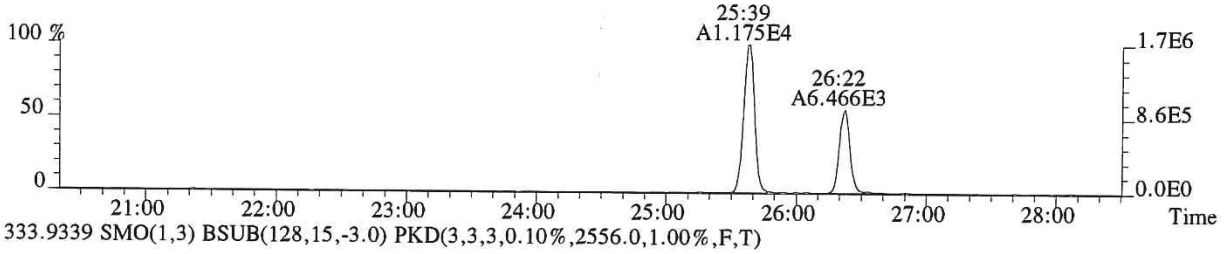
File:P519910 #1-580 Acq:11-JAN-2019 09:45:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2232.0,1.00%,F,T)



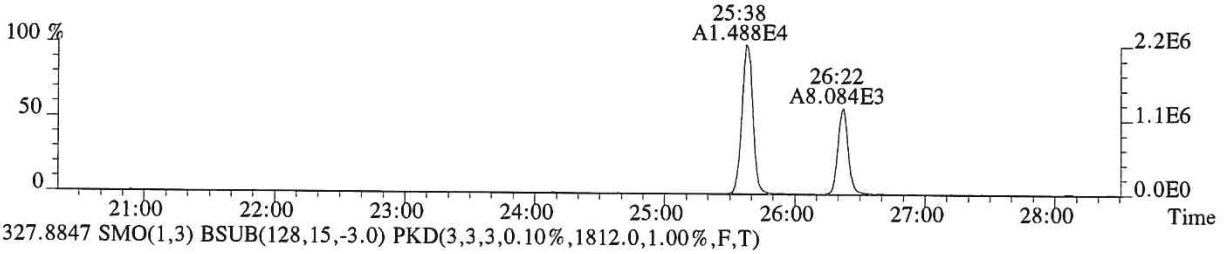
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,908.0,1.00%,F,T)



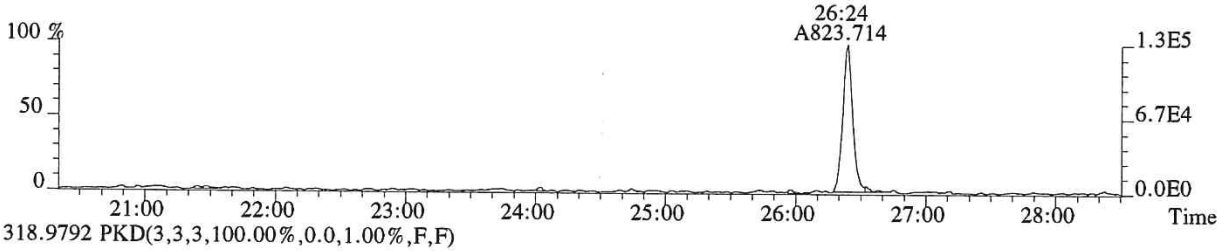
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7284.0,1.00%,F,T)



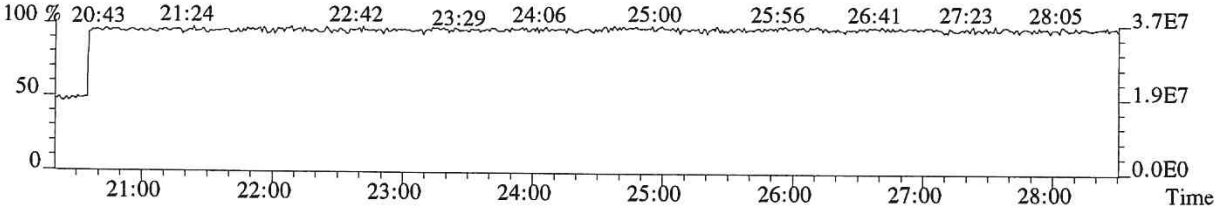
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2556.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1812.0,1.00%,F,T)

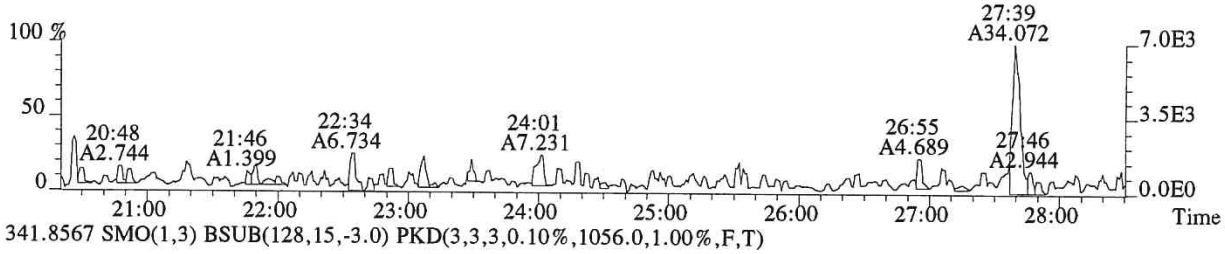


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

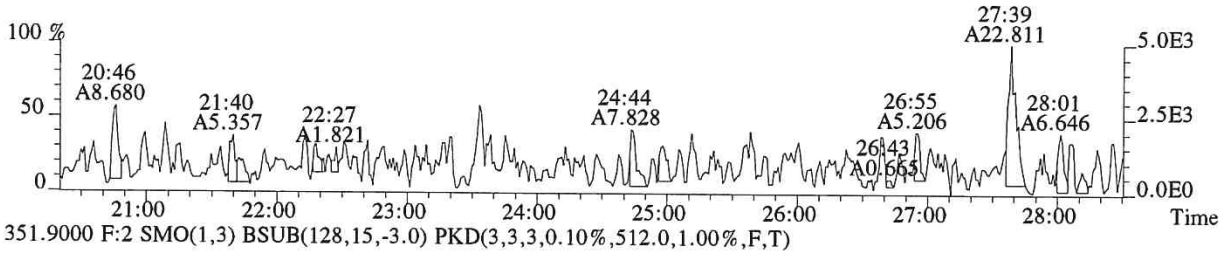


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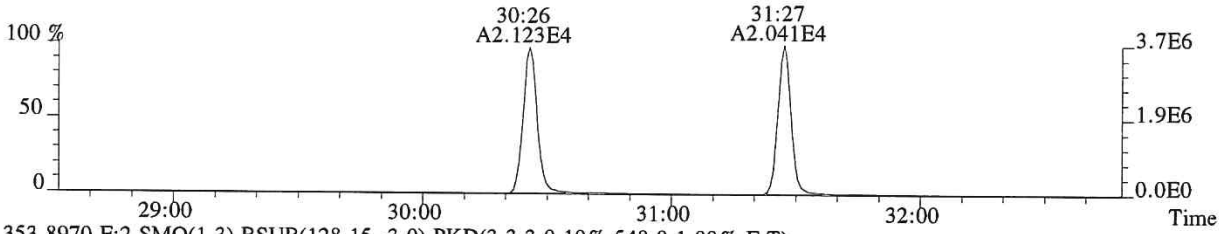
File:P519910 #1-580 Acq:11-JAN-2019 09:45:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,536.0,1.00%,F,T)



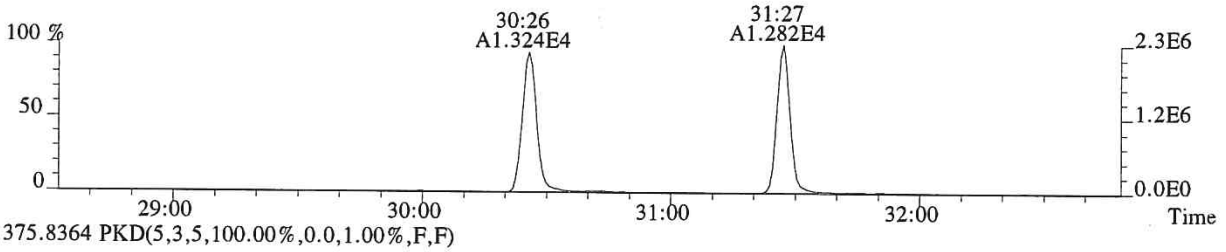
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1056.0,1.00%,F,T)



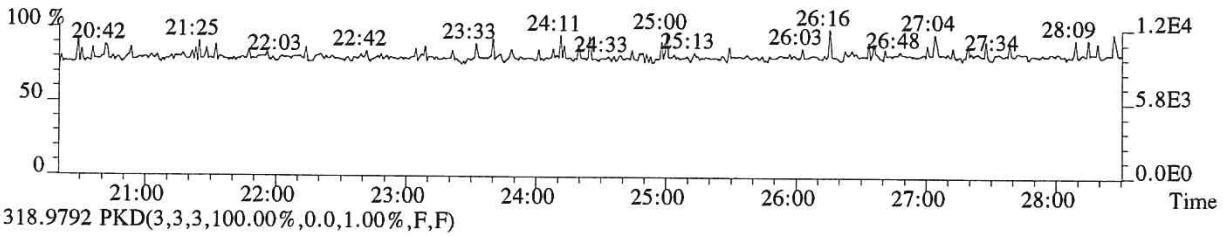
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,512.0,1.00%,F,T)



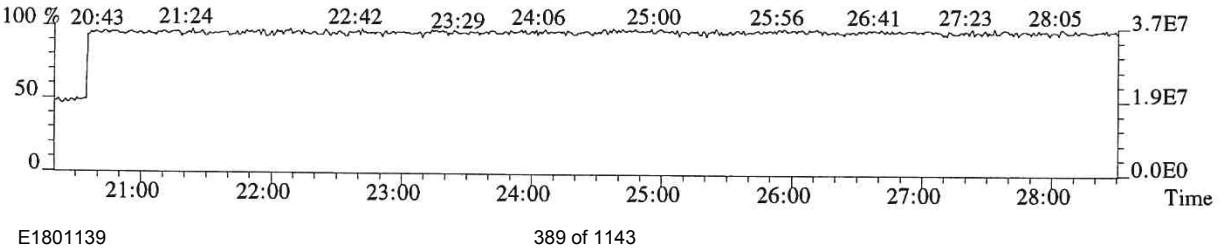
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,548.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

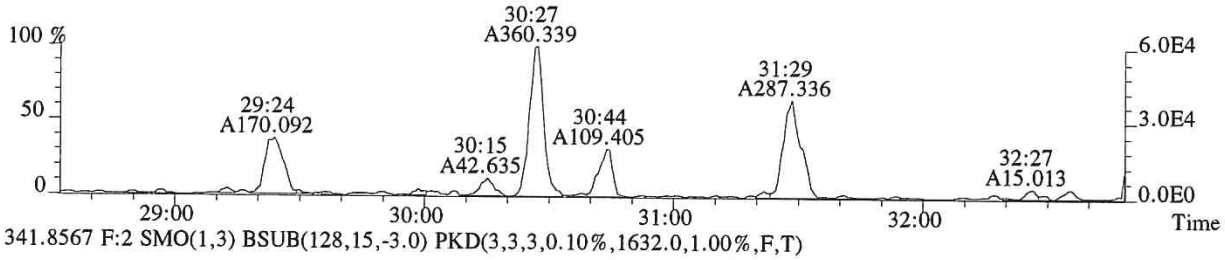


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

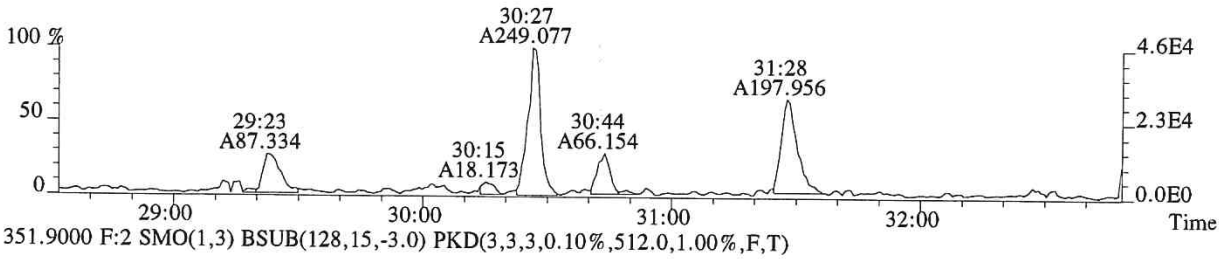


018353

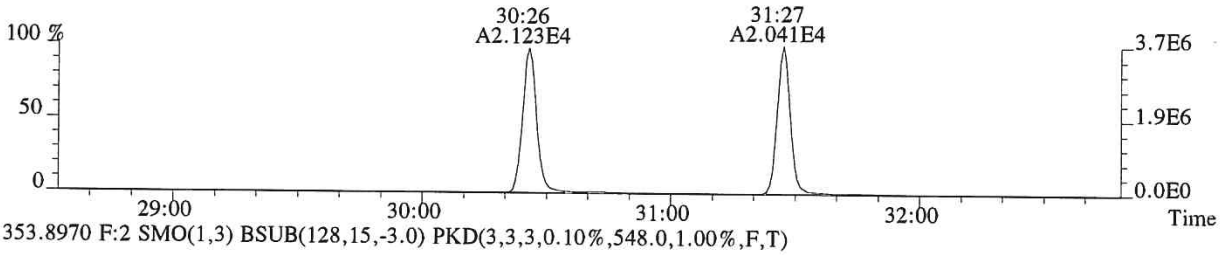
File:P519910 #1-385 Acq:11-JAN-2019 09:45:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,588.0,1.00%,F,T)



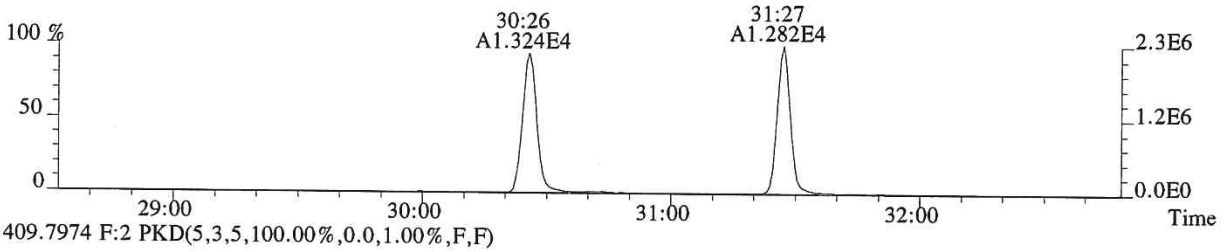
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1632.0,1.00%,F,T)



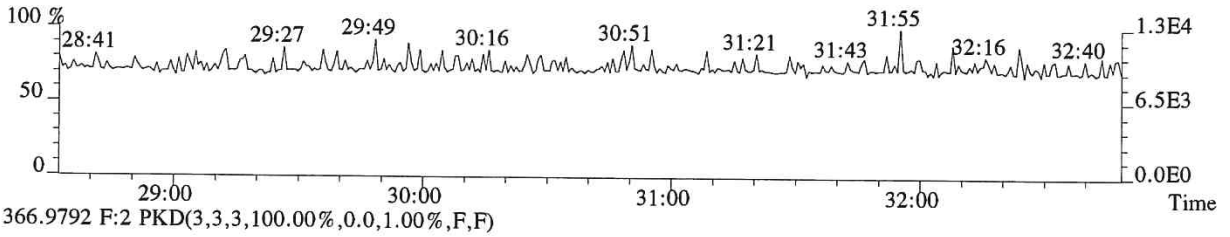
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,512.0,1.00%,F,T)



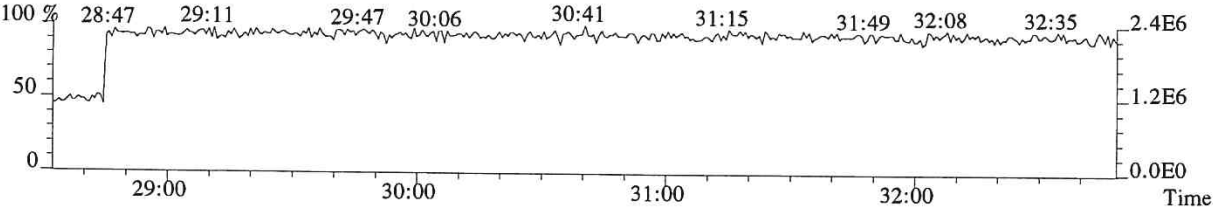
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,548.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

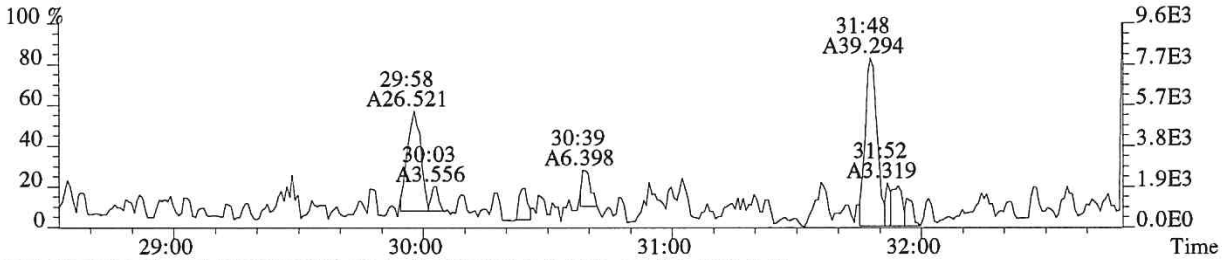


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

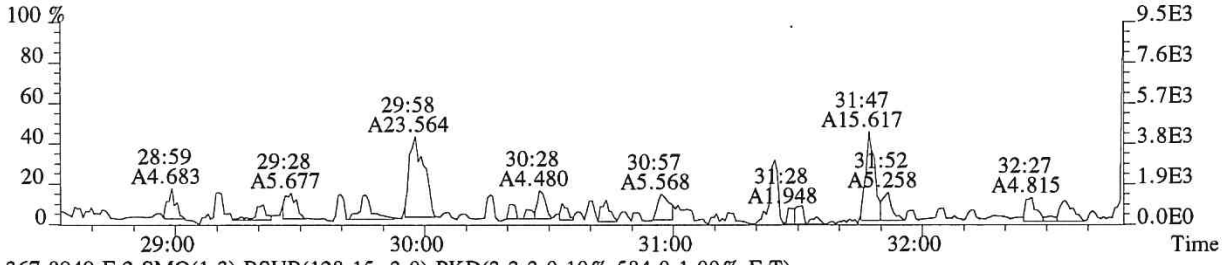


018354

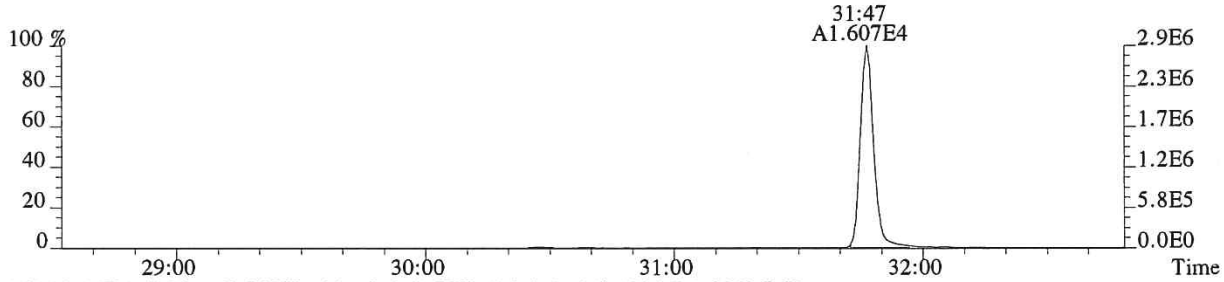
File:P519910 #1-385 Acq:11-JAN-2019 09:45:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1060.0,1.00%,F,T)



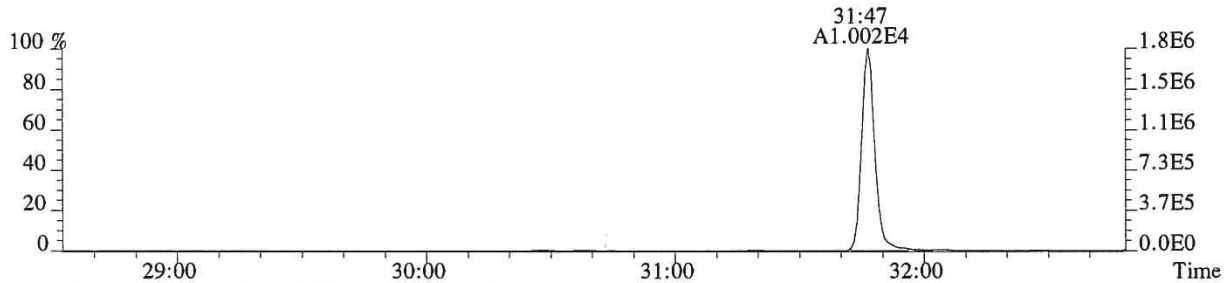
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,476.0,1.00%,F,T)



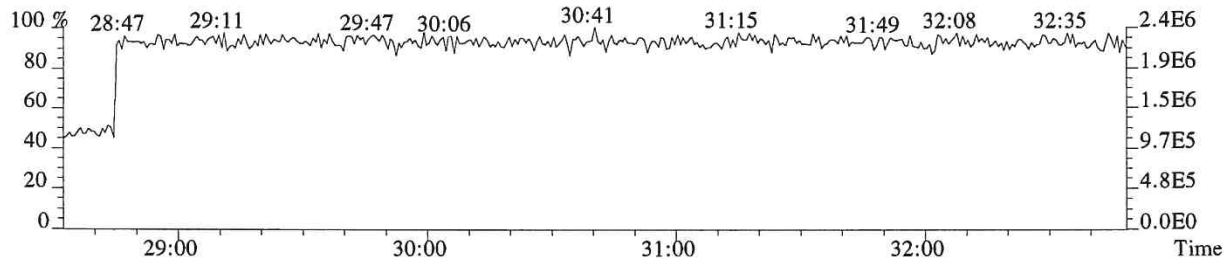
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,584.0,1.00%,F,T)



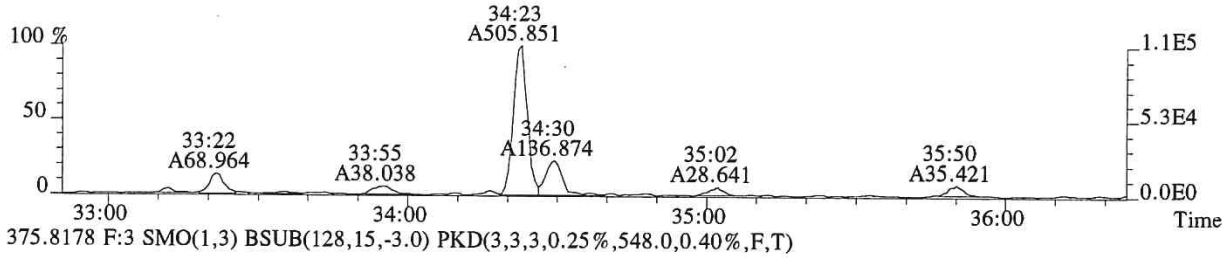
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



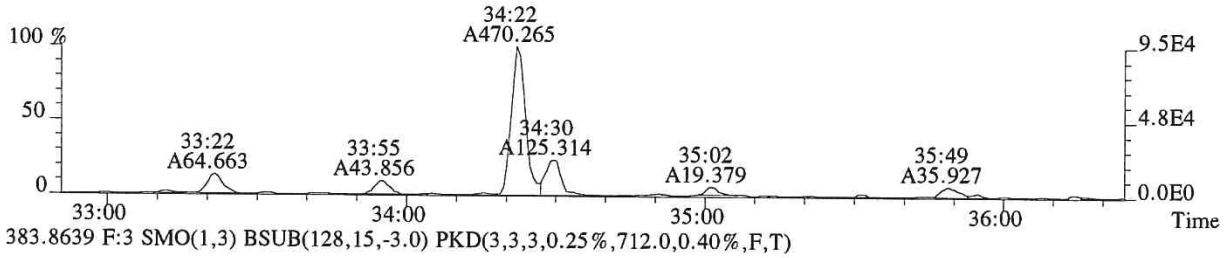
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



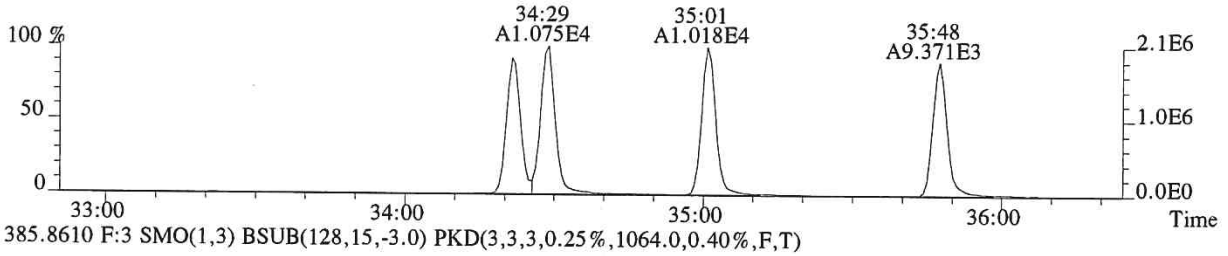
File:P519910 #1-321 Acq:11-JAN-2019 09:45:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1000.0,0.40%,F,T)



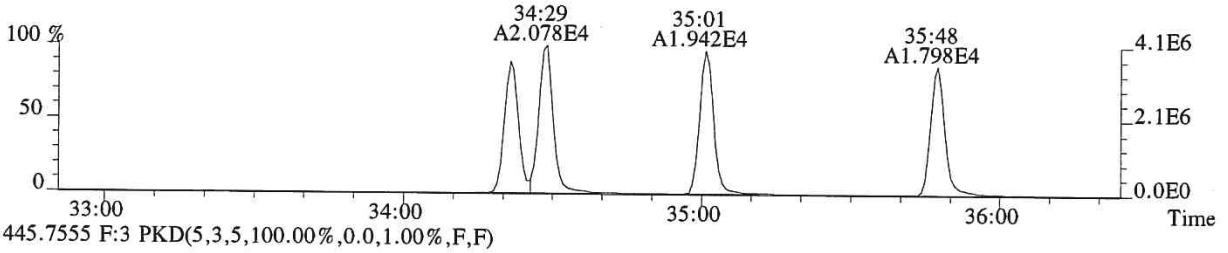
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,548.0,0.40%,F,T)



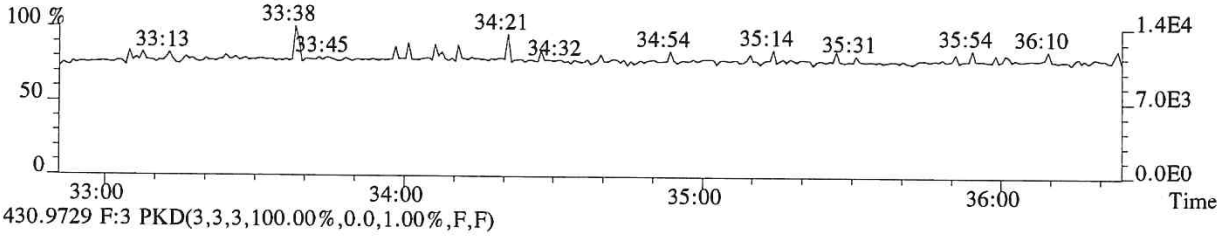
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,712.0,0.40%,F,T)



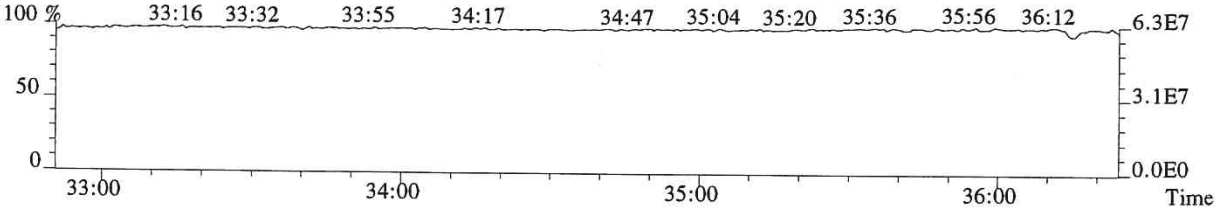
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1064.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

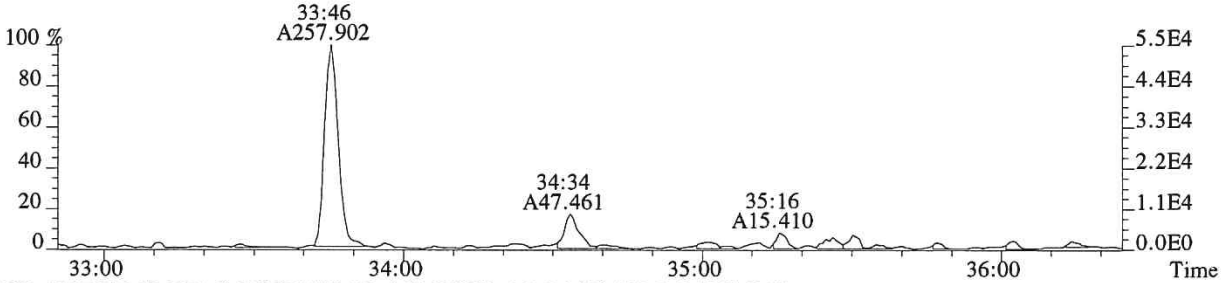


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

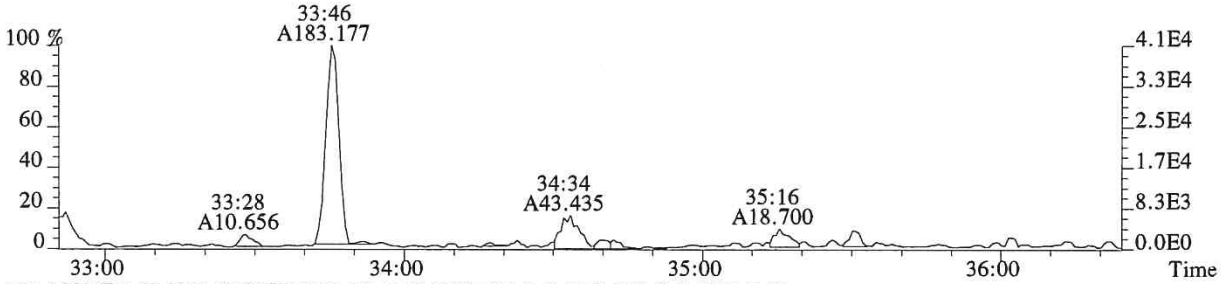


018356

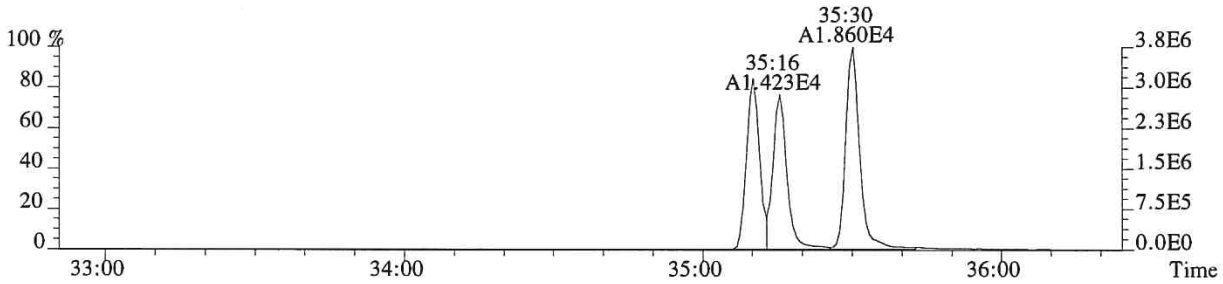
File:P519910 #1-321 Acq:11-JAN-2019 09:45:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,768.0,0.40%,F,T)



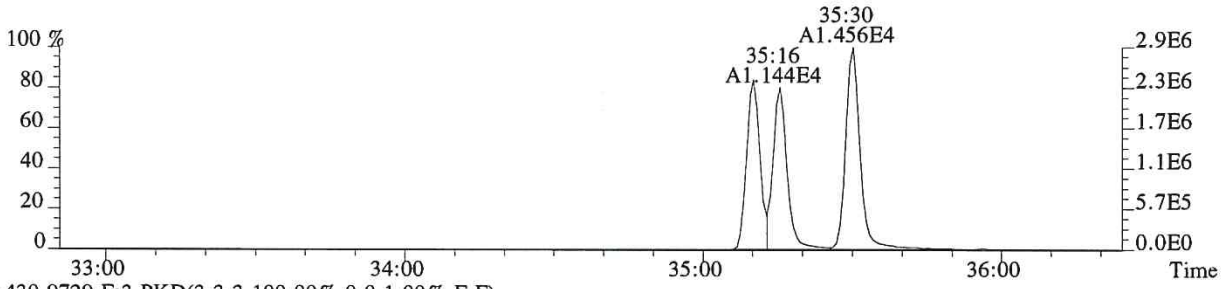
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,852.0,0.40%,F,T)



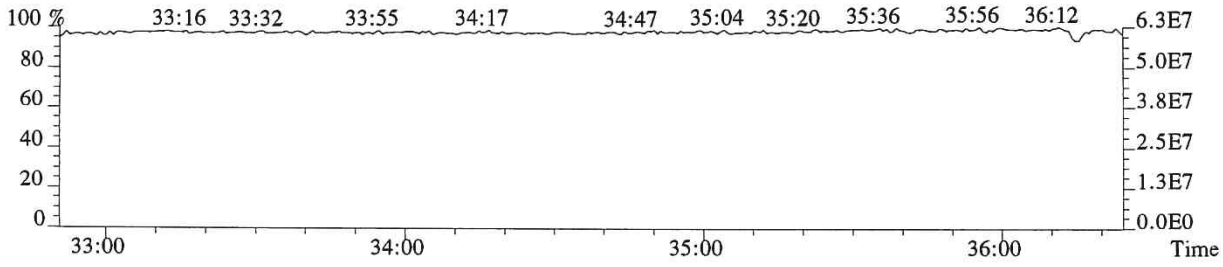
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,748.0,0.40%,F,T)



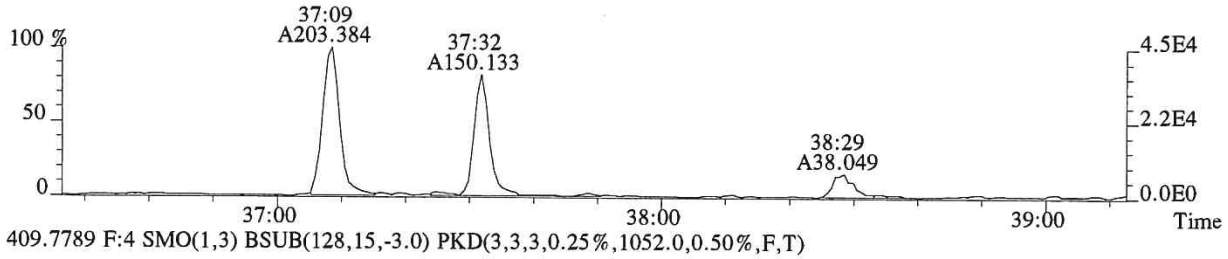
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,616.0,0.40%,F,T)



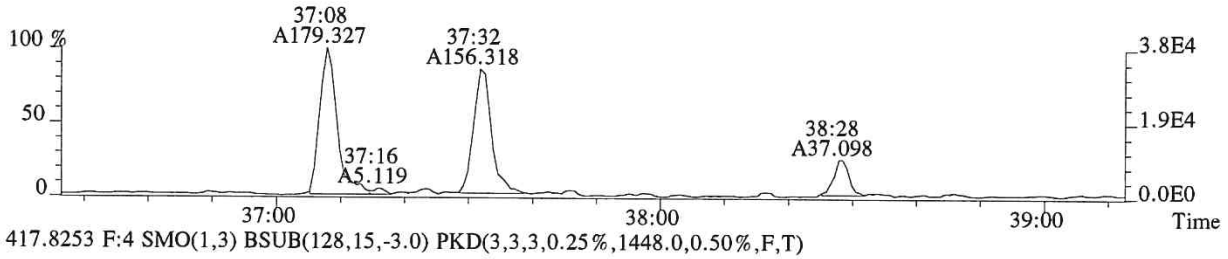
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



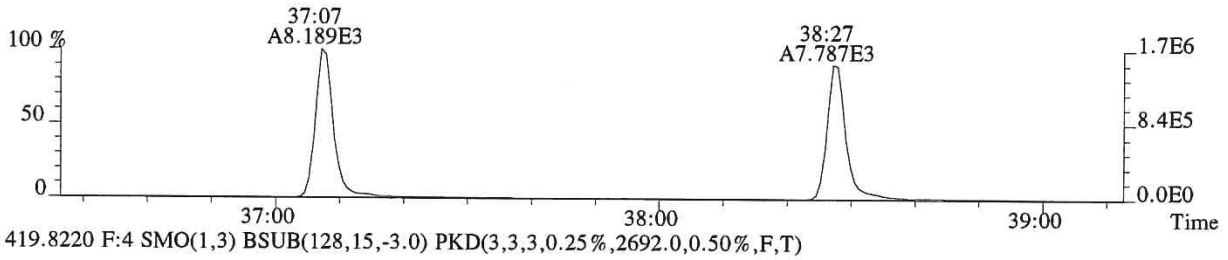
File:P519910 #1-250 Acq:11-JAN-2019 09:45:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,568.0,0.50%,F,T)



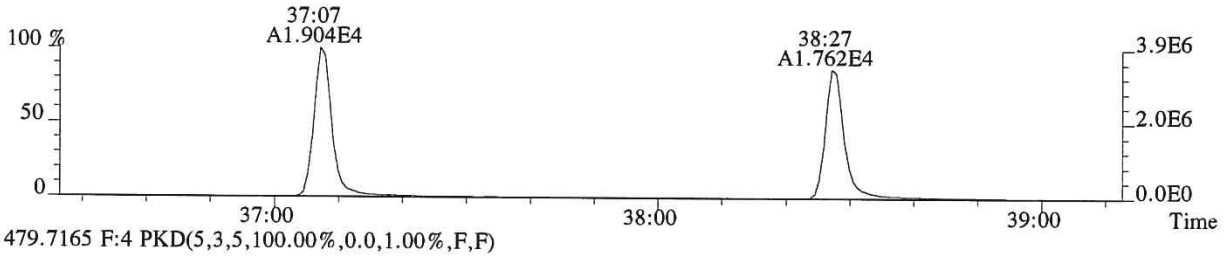
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1052.0,0.50%,F,T)



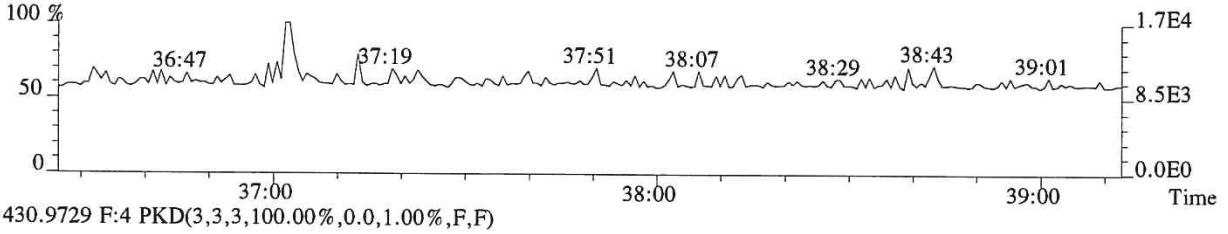
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1448.0,0.50%,F,T)



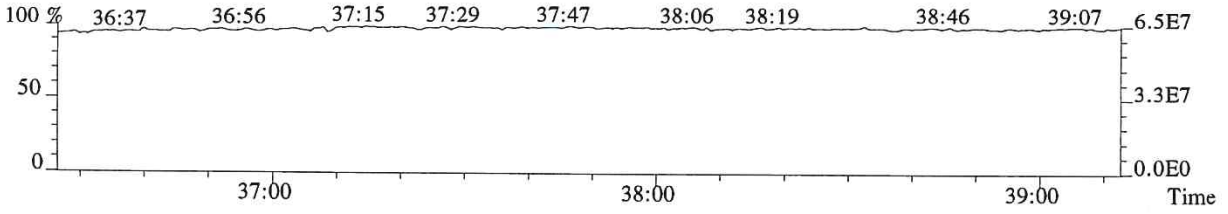
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2692.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

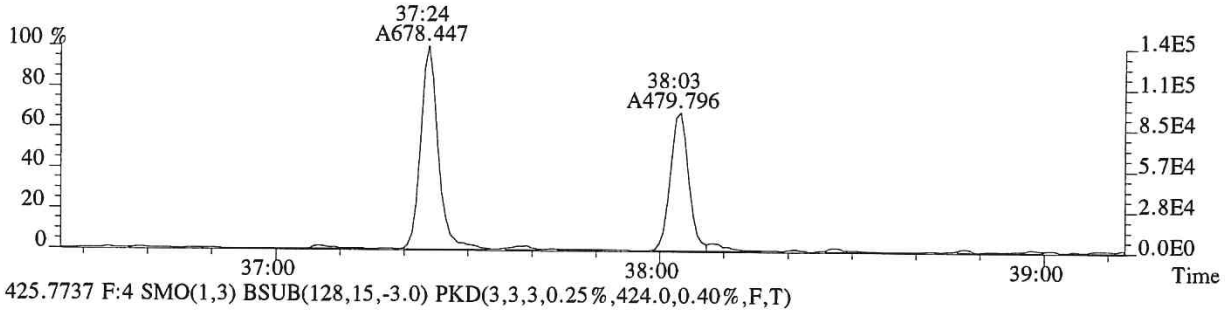


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

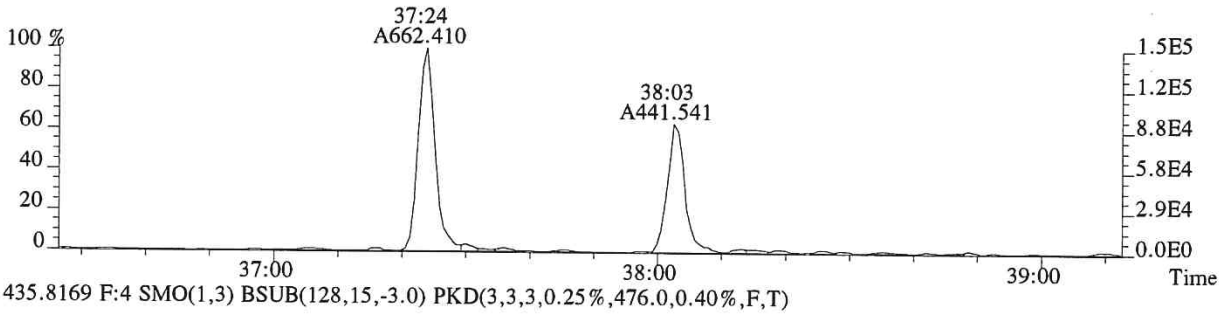


018358

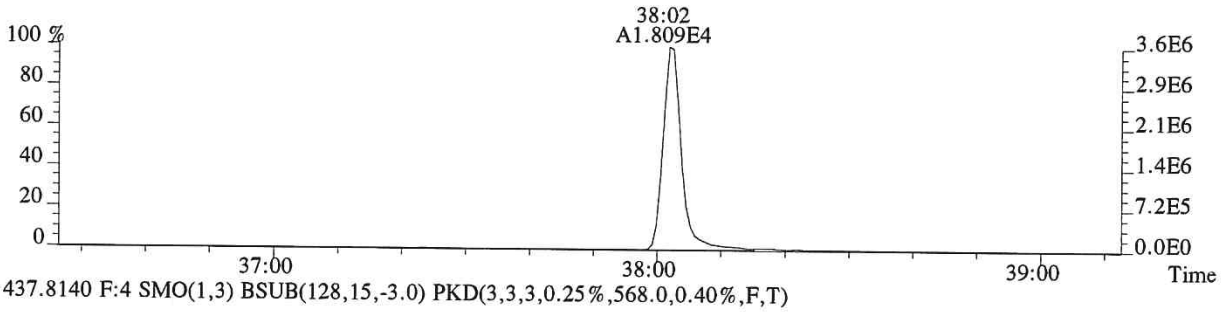
File:P519910 #1-250 Acq:11-JAN-2019 09:45:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,812.0,0.40%,F,T)



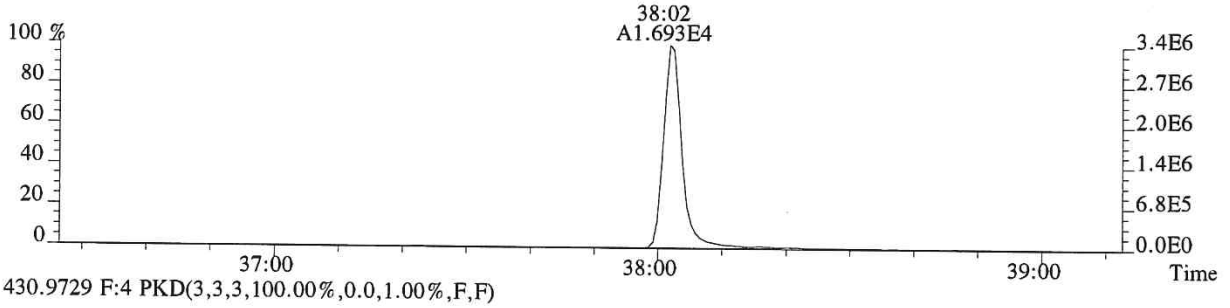
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,424.0,0.40%,F,T)



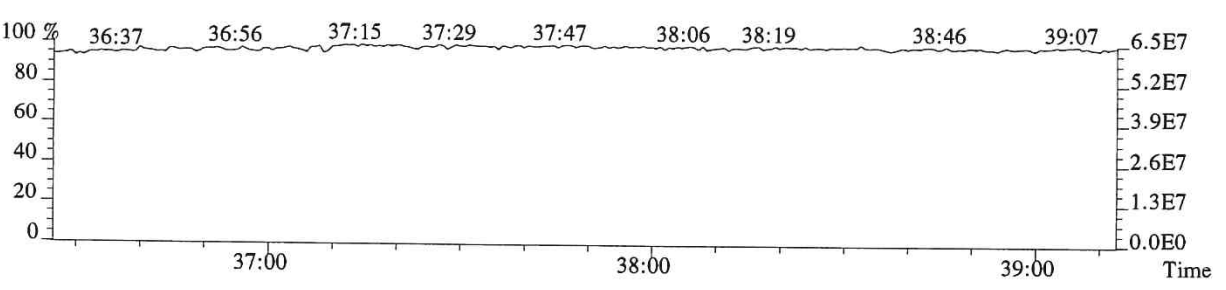
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,476.0,0.40%,F,T)



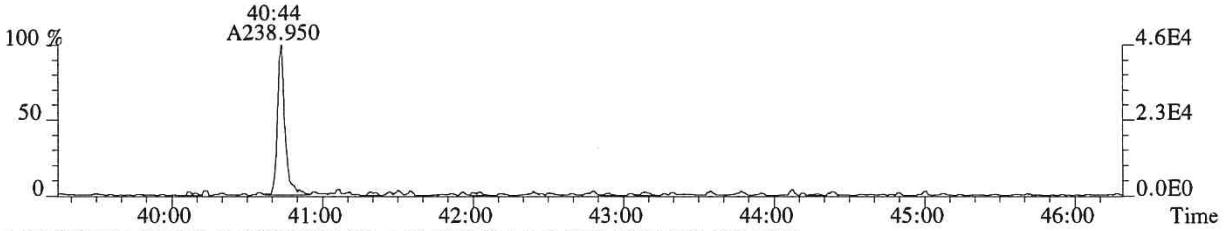
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,568.0,0.40%,F,T)



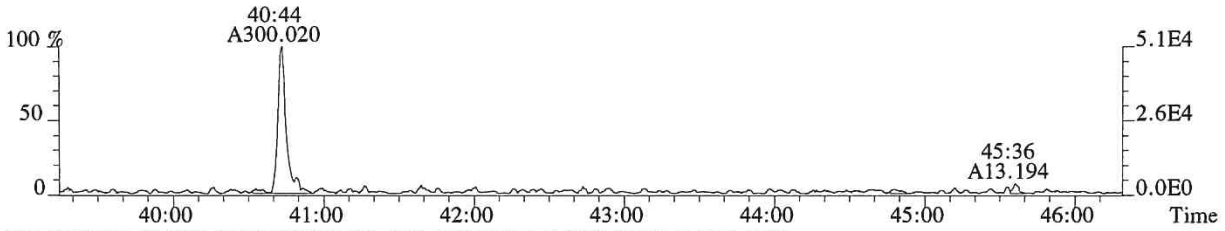
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



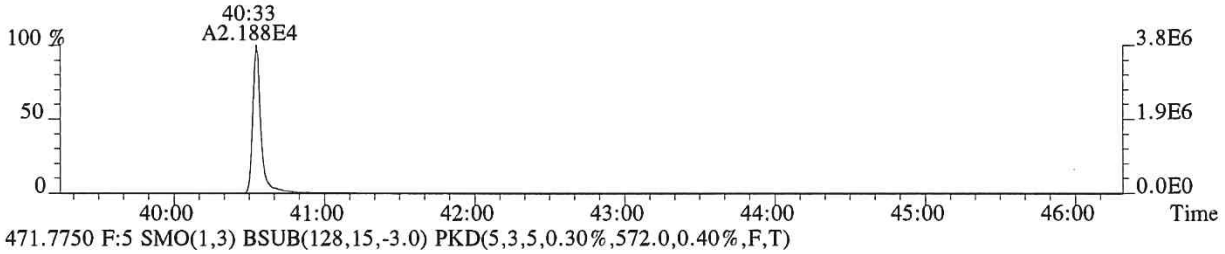
File:P519910 #1-637 Acq:11-JAN-2019 09:45:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,436.0,0.40%,F,T)



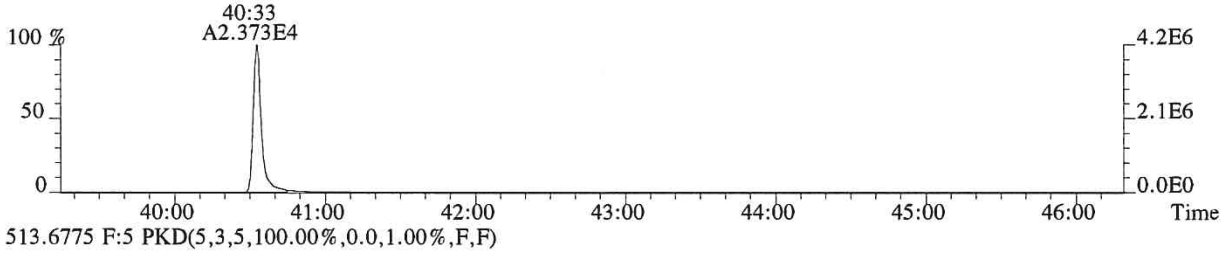
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1364.0,0.40%,F,T)



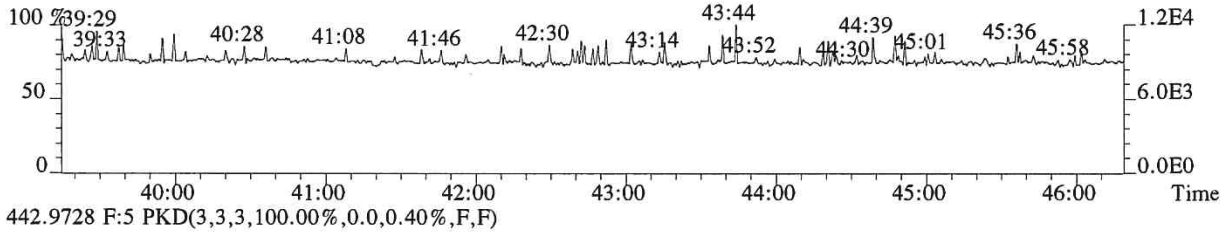
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,336.0,0.40%,F,T)



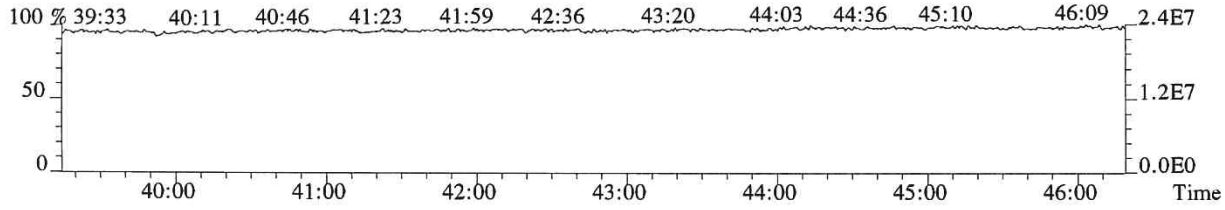
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,572.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

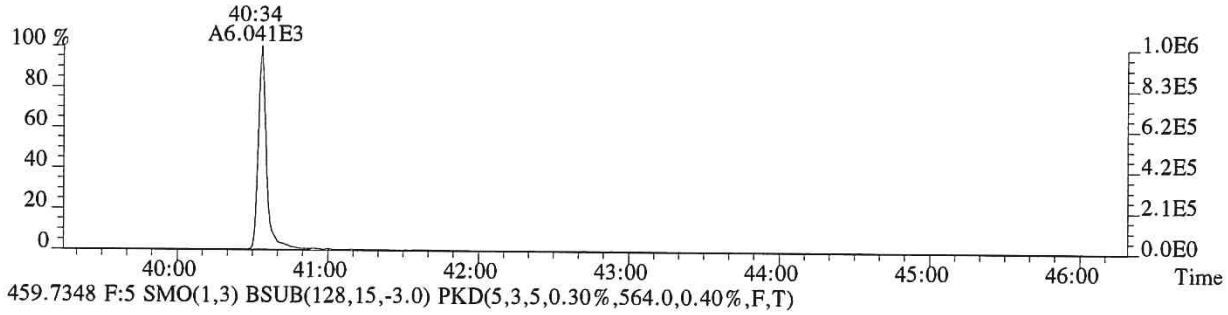


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

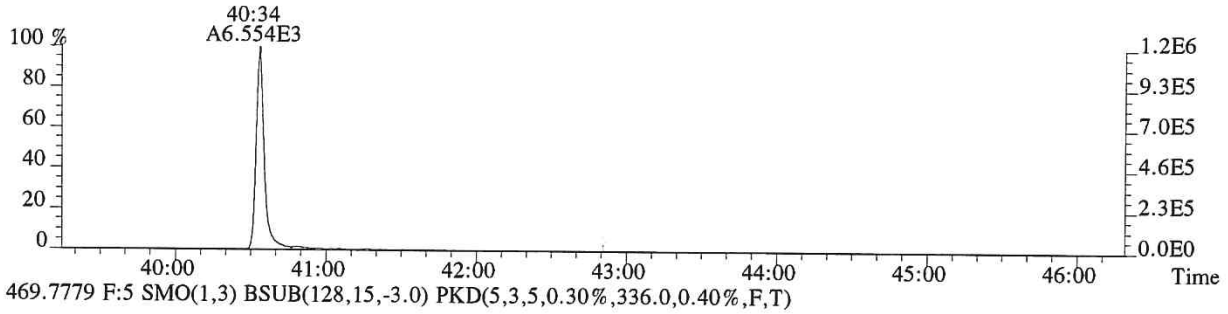


018360

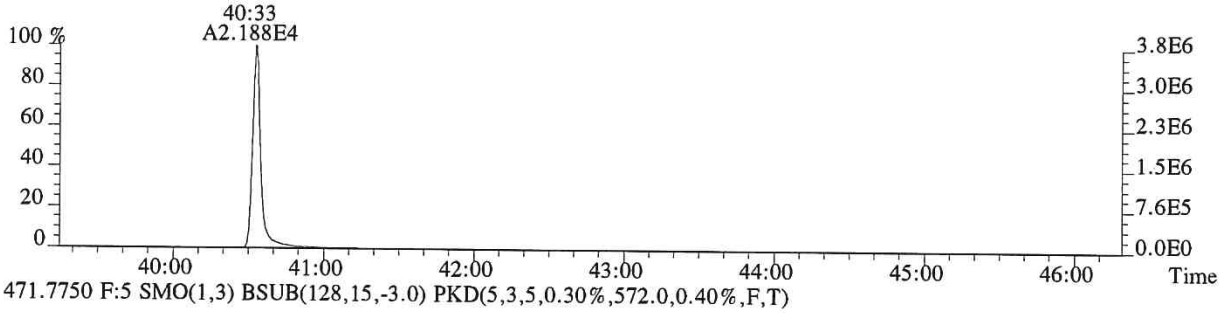
File:P519910 #1-637 Acq:11-JAN-2019 09:45:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-008DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,484.0,0.40%,F,T)



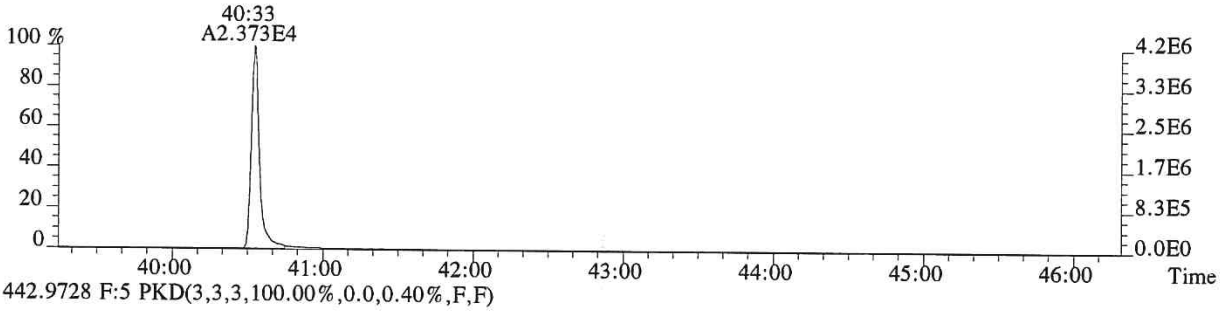
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,564.0,0.40%,F,T)



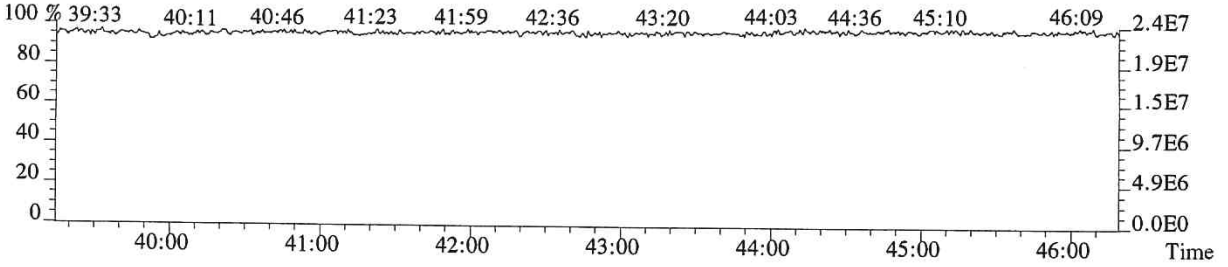
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,336.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,572.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018361

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0223

Run #18 Filename P519876 Samp: 1 Inj: 1 Acquired: 10-JAN-19 01:10:06
Processed: 10-JAN-19 08:15:35 Sample ID: E1801139-009

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:55	6.147e+06	7.736e+06	0.79	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:52	2.790e+05	1.824e+05	1.53	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:53	2.030e+05	1.310e+05	1.55	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:49	4.056e+05	3.333e+05	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:56	1.130e+05	9.337e+04	1.21	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:29	1.700e+04	1.388e+04	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:19	2.824e+04	2.379e+04	1.19	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:44	8.605e+04	8.495e+04	1.01	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:14	3.015e+04	2.929e+04	1.03	yes	no	1.258
10	Unk	OCDF	42:00	2.529e+04	2.877e+04	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:54	1.626e+06	2.070e+06	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:12	2.418e+04	1.488e+04	1.62	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:39	2.192e+02	1.578e+02	1.39	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:45	1.709e+03	1.374e+03	1.24	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:01	6.298e+02	5.477e+02	1.15	yes	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:46	4.819e+04	4.727e+04	1.02	yes	no	1.025
17	Unk	OCDD	41:50	4.219e+05	4.682e+05	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:53	3.685e+04	4.570e+04	0.81	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:52	5.765e+04	3.622e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:52	5.232e+04	3.279e+04	1.60	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:48	2.387e+04	4.544e+04	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:55	2.841e+04	5.272e+04	0.54	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:29	2.501e+04	4.731e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:17	2.395e+04	4.584e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:44	1.578e+04	3.632e+04	0.43	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:14	1.513e+04	3.419e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:52	1.746e+04	2.192e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:10	4.122e+04	2.559e+04	1.61	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:39	3.255e+04	2.575e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:44	3.610e+04	2.808e+04	1.29	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:46	3.355e+04	3.131e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	41:49	2.750e+04	3.045e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:14	4.165e+04	5.264e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:59	5.972e+04	4.705e+04	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:54	4.405e+04				no	1.014

$$\text{OCDD} = \frac{(4.219e+05 + 4.682e+05) \times 4000 \text{ pg} \times 1}{(2.750e+04 + 3.045e+04) \times 10.864 \text{ g} \times 69.8 / 100 \times 1.118} = 7247 \text{ ng/kg}$$

LMA 01/11/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0223

Run #18 Filename P519876 Samp: 1 Inj: 1 Acquired: 10-JAN-19 01:10:06
Processed: 10-JAN-19 08:15:35 LAB. ID: E1801139-009

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	7.64e+08	6.17e+03	1.2e+05	9.51e+08	6.88e+03	1.4e+05
2	1,2,3,7,8-PeCDF	4.34e+07	5.20e+04	8.3e+02	2.83e+07	8.37e+03	3.4e+03
3	2,3,4,7,8-PeCDF	2.72e+07	5.20e+04	5.2e+02	1.75e+07	8.37e+03	2.1e+03
4	1,2,3,4,7,8-HxCDF	6.46e+07	1.30e+04	5.0e+03	5.35e+07	1.53e+04	3.5e+03
5	1,2,3,6,7,8-HxCDF	1.62e+07	1.30e+04	1.2e+03	1.36e+07	1.53e+04	8.9e+02
6	2,3,4,6,7,8-HxCDF	2.70e+06	1.30e+04	2.1e+02	2.26e+06	1.53e+04	1.5e+02
7	1,2,3,7,8,9-HxCDF	3.85e+06	1.30e+04	3.0e+02	3.24e+06	1.53e+04	2.1e+02
8	1,2,3,4,6,7,8-HpCDF	9.40e+06	1.82e+04	5.2e+02	9.38e+06	7.75e+03	1.2e+03
9	1,2,3,4,7,8,9-HpCDF	2.48e+06	1.82e+04	1.4e+02	2.42e+06	7.75e+03	3.1e+02
10	OCDF	1.21e+06	7.92e+02	1.5e+03	1.35e+06	1.24e+03	1.1e+03
11	2,3,7,8-TCDD	2.73e+08	4.59e+03	5.9e+04	3.49e+08	2.68e+03	1.3e+05
12	1,2,3,7,8-PeCDD	3.64e+06	2.84e+03	1.3e+03	2.26e+06	1.92e+03	1.2e+03
13	1,2,3,4,7,8-HxCDD	4.56e+04	2.87e+03	1.6e+01	3.20e+04	4.36e+03	7.3e+00
14	1,2,3,6,7,8-HxCDD	2.37e+05	2.87e+03	8.3e+01	2.01e+05	4.36e+03	4.6e+01
15	1,2,3,7,8,9-HxCDD	8.17e+04	2.87e+03	2.8e+01	7.40e+04	4.36e+03	1.7e+01
16	1,2,3,4,6,7,8-HpCDD	4.09e+06	1.16e+03	3.5e+03	4.03e+06	1.68e+03	2.4e+03
17	OCDD	1.96e+07	5.84e+02	3.4e+04	2.18e+07	1.39e+03	1.6e+04
18	13C-2,3,7,8-TCDF	4.84e+06	2.00e+04	2.4e+02	6.01e+06	2.86e+04	2.1e+02
19	13C-1,2,3,7,8-PeCDF	8.97e+06	1.13e+04	7.9e+02	5.67e+06	4.92e+03	1.2e+03
20	13C-2,3,4,7,8-PeCDF	8.72e+06	1.13e+04	7.7e+02	5.48e+06	4.92e+03	1.1e+03
21	13C-1,2,3,4,7,8-HxCDF	3.88e+06	6.50e+03	6.0e+02	7.35e+06	4.53e+03	1.6e+03
22	13C-1,2,3,6,7,8-HxCDF	4.19e+06	6.50e+03	6.5e+02	7.78e+06	4.53e+03	1.7e+03
23	13C-2,3,4,6,7,8-HxCDF	3.73e+06	6.50e+03	5.7e+02	7.13e+06	4.53e+03	1.6e+03
24	13C-1,2,3,7,8,9-HxCDF	3.09e+06	6.50e+03	4.8e+02	6.09e+06	4.53e+03	1.3e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.73e+06	3.83e+03	4.5e+02	3.95e+06	9.23e+03	4.3e+02
26	13C-1,2,3,4,7,8,9-HpCDF	1.26e+06	3.83e+03	3.3e+02	2.79e+06	9.23e+03	3.0e+02
27	13C-2,3,7,8-TCDD	2.97e+06	7.77e+03	3.8e+02	3.76e+06	4.38e+03	8.6e+02
28	13C-1,2,3,7,8-PeCDD	6.59e+06	1.96e+03	3.4e+03	4.14e+06	1.87e+03	2.2e+03
29	13C-1,2,3,4,7,8-HxCDD	5.27e+06	1.53e+03	3.5e+03	4.09e+06	1.30e+03	3.1e+03
30	13C-1,2,3,6,7,8-HxCDD	4.97e+06	1.53e+03	3.3e+03	3.90e+06	1.30e+03	3.0e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.89e+06	1.18e+03	2.5e+03	2.74e+06	1.21e+03	2.3e+03
32	13C-OCDD	1.30e+06	8.76e+02	1.5e+03	1.42e+06	1.01e+03	1.4e+03
33	13C-1,2,3,4-TCDD	5.65e+06	7.77e+03	7.3e+02	7.27e+06	4.38e+03	1.7e+03
34	13C-1,2,3,7,8,9-HxCDD	7.91e+06	1.53e+03	5.2e+03	6.18e+06	1.30e+03	4.8e+03
35	37Cl-2,3,7,8-TCDD	7.31e+06	5.07e+03	1.4e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0223

Entry: 36 Totals Name: Total Tetra-Furans

Run: 18 File: P519876 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 01:10:06 Processed: 10-JAN-19 08:15:35

Mass: 303.9020 305.8990 Tot Response: 2.52e+07 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:45	4.40e+04	5.75e+04	0.77	yes	1.01e+05		n	n
2	23:02	2.32e+05	3.01e+05	0.77	yes	5.33e+05		n	n
3	23:23	7.90e+04	1.02e+05	0.77	yes	1.81e+05		n	n
4	23:40	2.09e+05	2.73e+05	0.77	yes	4.82e+05		n	n
5	24:03	5.70e+04	7.46e+04	0.76	yes	1.32e+05		n	n
6	24:17	1.34e+05	1.75e+05	0.77	yes	3.08e+05		n	n
7	24:24	2.84e+05	3.66e+05	0.77	yes	6.50e+05		n	n
8	24:52	2.85e+06	3.61e+06	0.79	yes	6.47e+06		n	n
9	25:11	1.43e+05	1.85e+05	0.77	yes	3.27e+05		n	n
10	25:55	6.15e+06	7.74e+06	0.79	yes	1.39e+07	2,3,7,8-TCDF	n	n
11	26:22	3.75e+05	4.82e+05	0.78	yes	8.56e+05		n	n
12	26:37	7.16e+04	9.46e+04	0.76	yes	1.66e+05		n	n
13	28:09	4.72e+05	6.04e+05	0.78	yes	1.08e+06		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0223

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 18 File: P519876 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 01:10:06 Processed: 10-JAN-19 08:15:35

Mass: 319.8970 321.8940 Tot Response: 4.10e+06 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:35	2.10e+04	2.68e+04	0.78	yes	4.78e+04		n	n
2	26:54	1.63e+06	2.07e+06	0.79	yes	3.70e+06	2,3,7,8-TCDD	n	n
3	27:14	1.58e+05	2.00e+05	0.79	yes	3.58e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0223

Entry: 38 Totals Name: Total Penta-Furans1

Run: 18 File: P519876 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 01:10:06 Processed: 10-JAN-19 08:15:35

Mass: 339.8600 341.8570 Tot Response: 6.73e+01 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:45	3.89e+01	2.85e+01	1.37	yes	6.73e+01	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0223

Entry: 39 Totals Name: Total Penta-Furans2

Run: 18 File: P519876 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 01:10:06 Processed: 10-JAN-19 08:15:35

Mass: 339.8600 341.8570 Tot Response: 1.20e+06 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:50	1.18e+05	7.73e+04	1.52	yes	1.95e+05		n	n
2	30:27	4.07e+03	2.57e+03	1.59	yes	6.64e+03		n	n
3	30:32	5.37e+03	3.53e+03	1.52	yes	8.90e+03		n	n
4	30:41	2.50e+04	1.62e+04	1.54	yes	4.13e+04		n	n
5	30:52	2.79e+05	1.82e+05	1.53	yes	4.61e+05	1,2,3,7,8-PeCDF	n	n
6	31:09	7.67e+04	4.91e+04	1.56	yes	1.26e+05		n	n
7	31:47	2.16e+03	1.29e+03	1.67	yes	3.45e+03		n	n
8	31:53	2.03e+05	1.31e+05	1.55	yes	3.34e+05	2,3,4,7,8-PeCDF	n	n
9	32:50	1.18e+04	7.54e+03	1.57	yes	1.94e+04		n	n

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Peak List Summary

CLIENT ID.
SL0223

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 18 File: P519876 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 01:10:06 Processed: 10-JAN-19 08:15:35

Mass: 355.8550 357.8520 Tot Response: 4.74e+04 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:54	8.43e+02	5.38e+02	1.57	yes	1.38e+03		n	n
2	30:24	4.50e+02	2.99e+02	1.51	yes	7.48e+02		n	n
3	30:55	1.47e+03	9.63e+02	1.53	yes	2.43e+03		n	n
4	31:05	1.06e+03	7.03e+02	1.51	yes	1.76e+03		n	n
5	31:12	5.19e+02	3.06e+02	1.70	yes	8.26e+02		n	n
6	31:24	3.07e+02	1.97e+02	1.56	yes	5.03e+02		n	n
7	32:12	2.42e+04	1.49e+04	1.62	yes	3.91e+04	1,2,3,7,8-PeCDD	n	n
8	32:36	4.11e+02	2.36e+02	1.74	yes	6.47e+02		n	n

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Peak List Summary

CLIENT ID.
SL0223

Entry: 41 Totals Name: Total Hexa-Furans

Run: 18 File: P519876 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 01:10:06 Processed: 10-JAN-19 08:15:35

Mass: 373.8210 375.8180 Tot Response: 1.11e+06 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:37	2.58e+03	2.06e+03	1.25	yes	4.64e+03		n	n
2	33:47	2.79e+04	2.35e+04	1.19	yes	5.14e+04		n	n
3	34:22	1.51e+04	1.27e+04	1.20	yes	2.78e+04		n	n
4	34:49	4.06e+05	3.33e+05	1.22	yes	7.39e+05	1,2,3,4,7,8-HxCDF	n	n
5	34:56	1.13e+05	9.34e+04	1.21	yes	2.06e+05	1,2,3,6,7,8-HxCDF	n	n
6	35:29	1.70e+04	1.39e+04	1.22	yes	3.09e+04	2,3,4,6,7,8-HxCDF	n	n
7	36:19	2.82e+04	2.38e+04	1.19	yes	5.20e+04	1,2,3,7,8,9-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0223

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 18 File: P519876 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 01:10:06 Processed: 10-JAN-19 08:15:35

Mass: 389.8160 391.8130 Tot Response: 2.37e+04 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:12	5.28e+03	4.17e+03	1.27	yes	9.45e+03		n	n
2	34:46	5.36e+02	4.51e+02	1.19	yes	9.87e+02		n	n
3	35:01	4.75e+03	3.70e+03	1.28	yes	8.44e+03		n	n
4	35:39	2.19e+02	1.58e+02	1.39	yes	3.77e+02	1,2,3,4,7,8-HxCDD	n	n
5	35:45	1.71e+03	1.37e+03	1.24	yes	3.08e+03	1,2,3,6,7,8-HxCDD	n	n
6	35:54	1.25e+02	1.13e+02	1.11	yes	2.38e+02		y	n
7	36:01	6.30e+02	5.48e+02	1.15	yes	1.18e+03	1,2,3,7,8,9-HxCDD	y	n

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Peak List Summary

CLIENT ID.
SL0223

Entry: 43 Totals Name: Total Hepta-Furans

Run: 18 File: P519876 Sample:1 Injection:1 Function:4

Acquired: 10-JAN-19 01:10:06 Processed: 10-JAN-19 08:15:35

Mass: 407.7820 409.7790 Tot Response: 2.91e+05 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:44	8.60e+04	8.49e+04	1.01	yes	1.71e+05	1,2,3,4,6,7,8-HpCDF	n	n
2	38:12	3.12e+04	2.93e+04	1.06	yes	6.05e+04		n	n
3	39:14	3.01e+04	2.93e+04	1.03	yes	5.94e+04	1,2,3,4,7,8,9-HpCDF	n	n

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Peak List Summary

CLIENT ID.
SL0223

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 18 File: P519876 Sample:1 Injection:1 Function:4

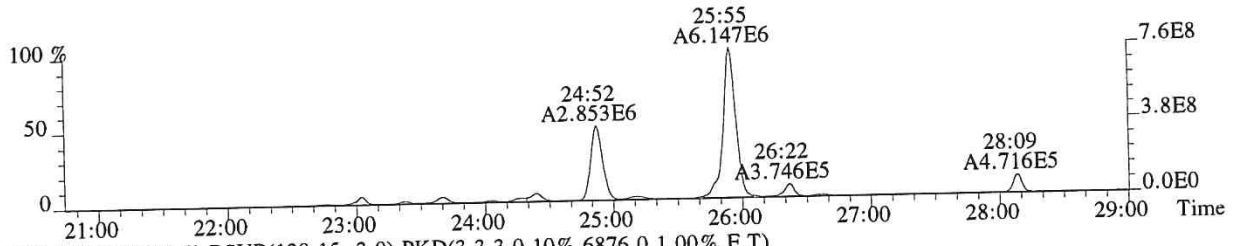
Acquired: 10-JAN-19 01:10:06 Processed: 10-JAN-19 08:15:35

Mass: 423.7770 425.7740 Tot Response: 1.86e+05 RRF: 1.025

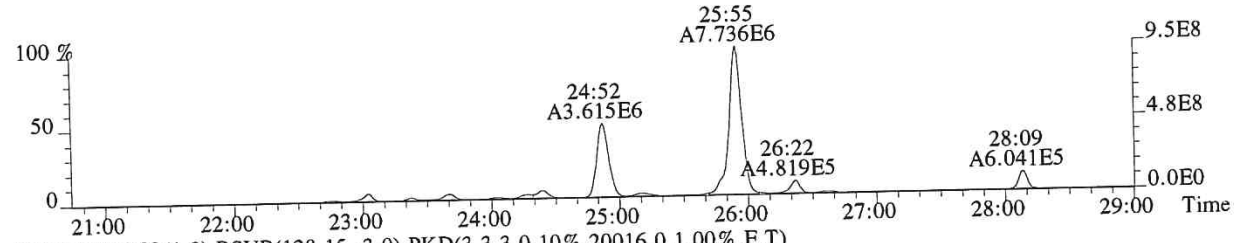
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:02	4.60e+04	4.49e+04	1.03	yes	9.09e+04		n	n
2	38:46	4.82e+04	4.73e+04	1.02	yes	9.55e+04	1,2,3,4,6,7,8-HpCDD	n	n

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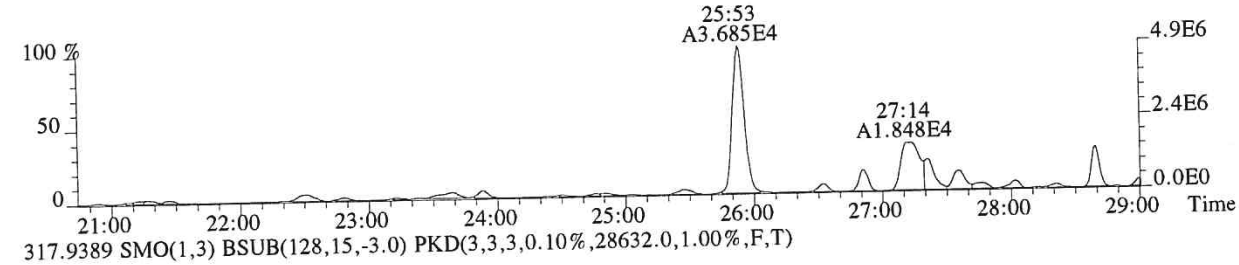
File:P519876 #1-587 Acq:10-JAN-2019 01:10:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6172.0,1.00%,F,T)



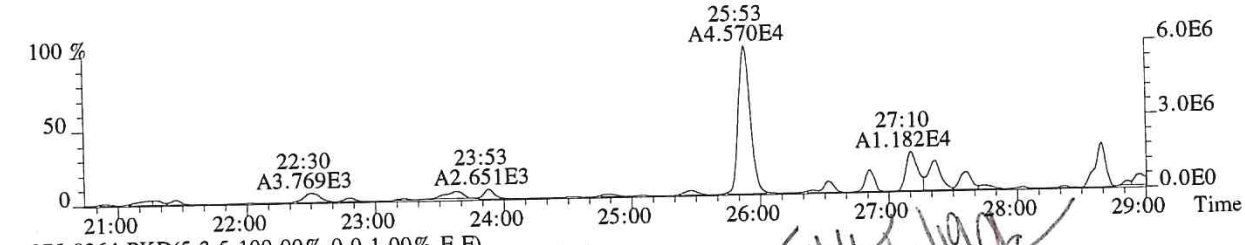
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6876.0,1.00%,F,T)



315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,20016.0,1.00%,F,T)

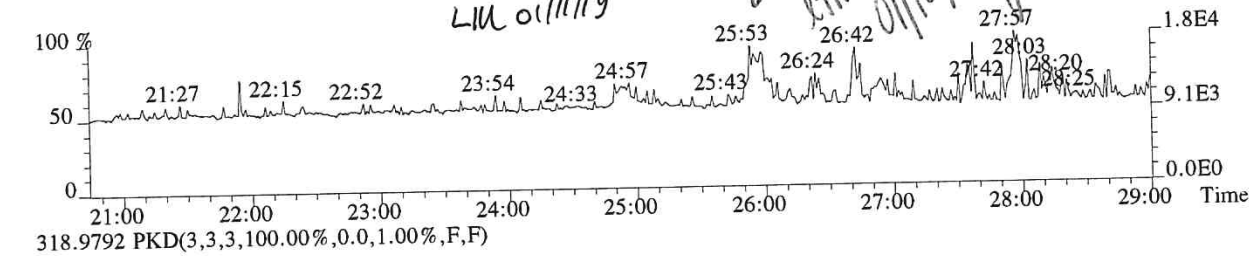


317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,28632.0,1.00%,F,T)

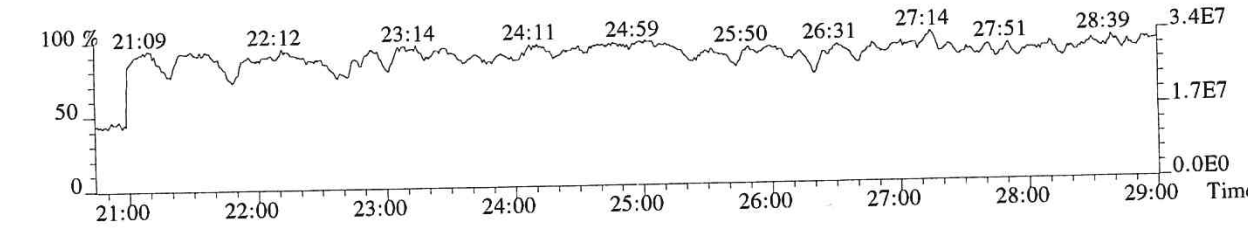


375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

LM 01/11/19



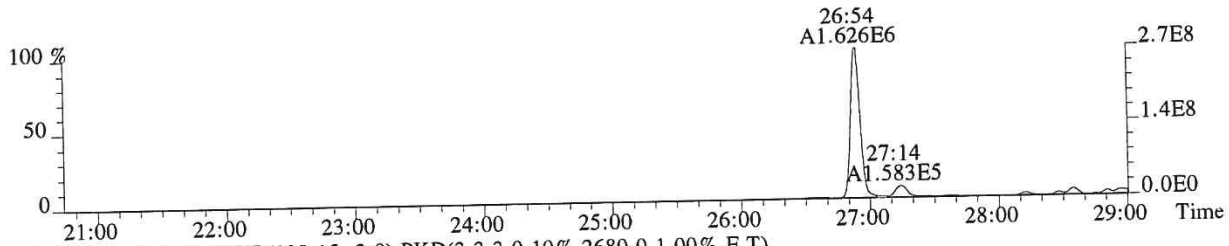
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



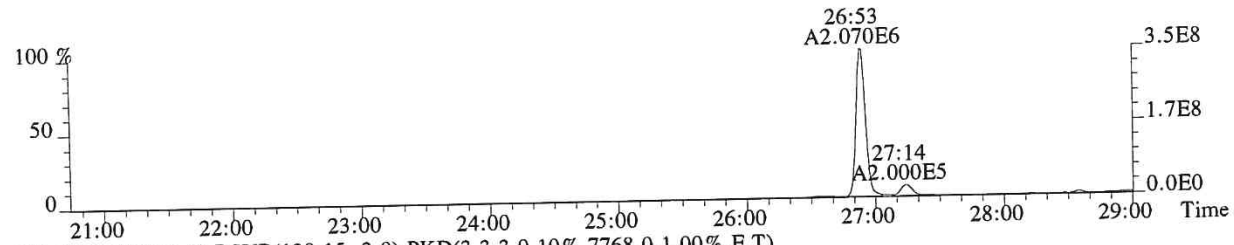
018373

File:P519876 #1-587 Acq:10-JAN-2019 01:10:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009

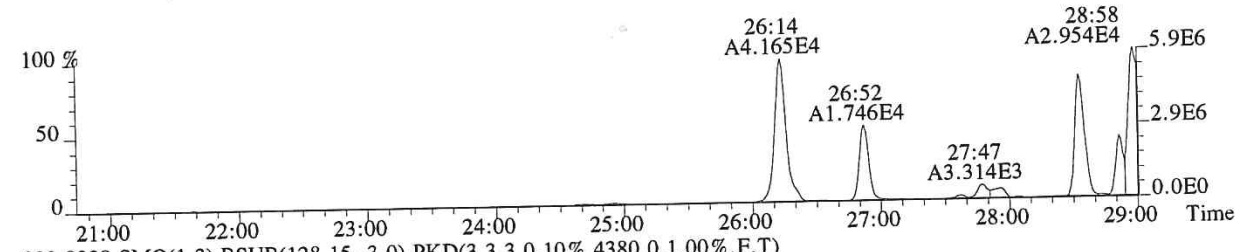
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4592.0,1.00%,F,T)



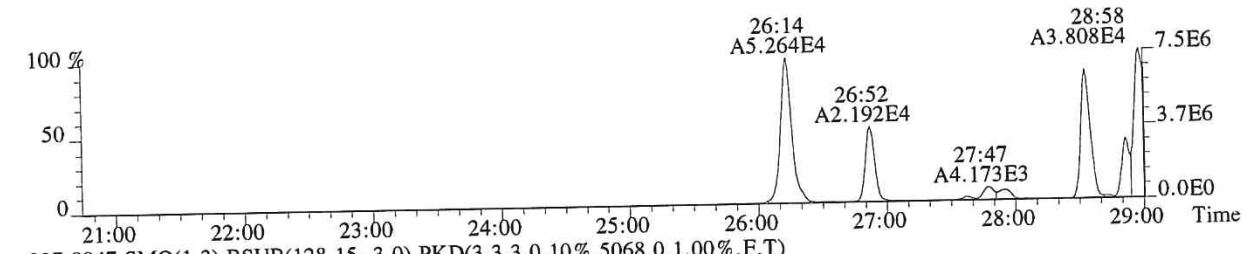
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2680.0,1.00%,F,T)



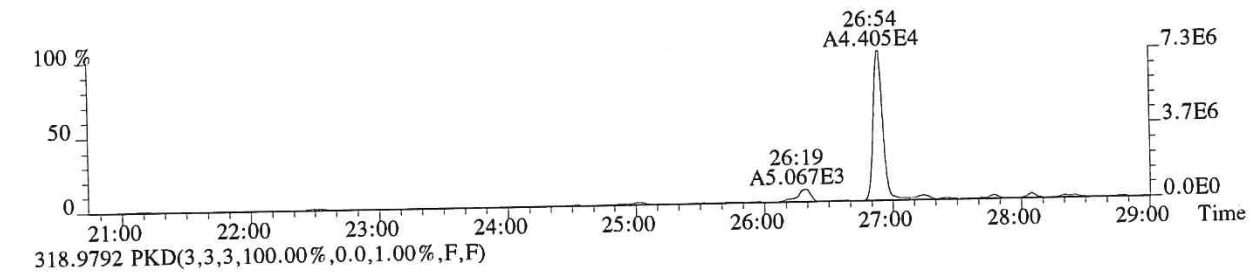
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7768.0,1.00%,F,T)



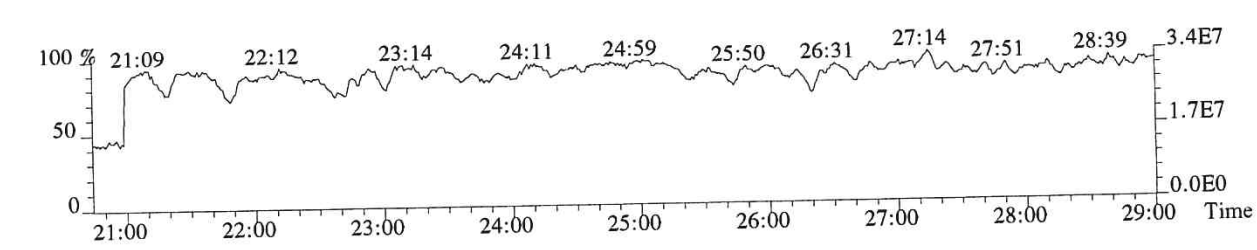
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4380.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5068.0,1.00%,F,T)

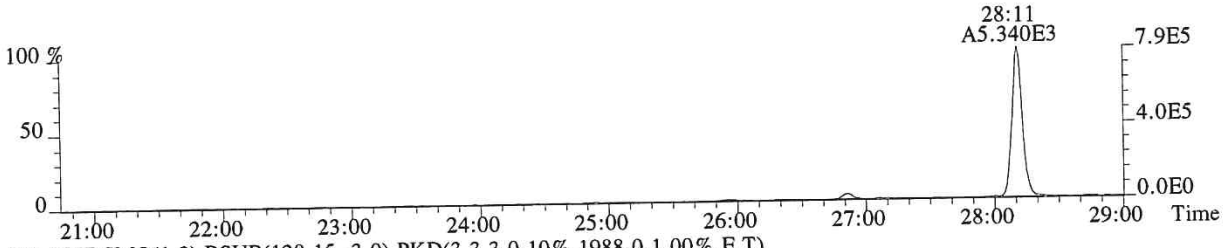


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

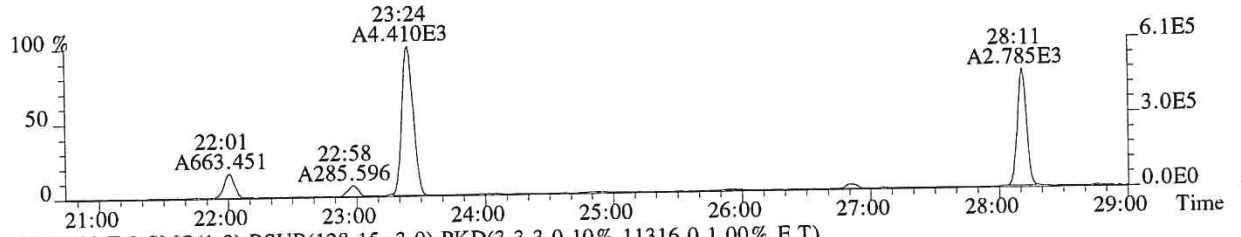


018374

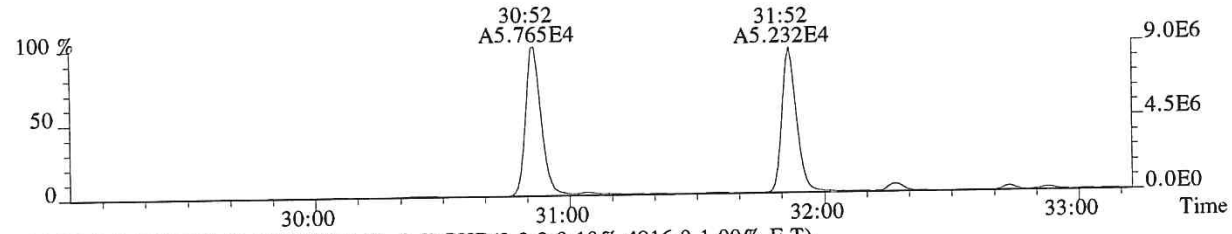
File:P519876 #1-587 Acq:10-JAN-2019 01:10:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1812.0,1.00%,F,T)



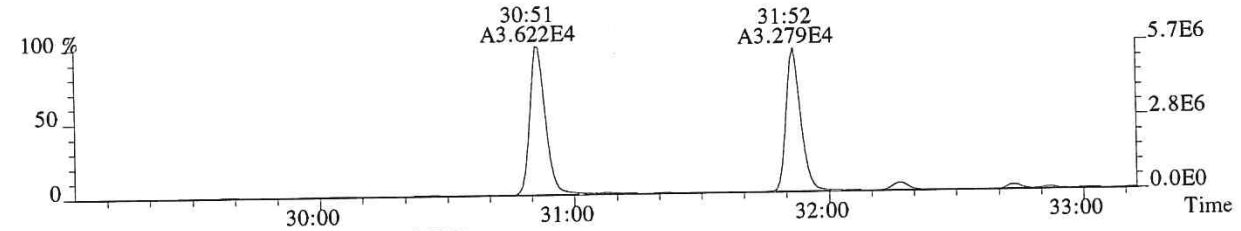
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1988.0,1.00%,F,T)



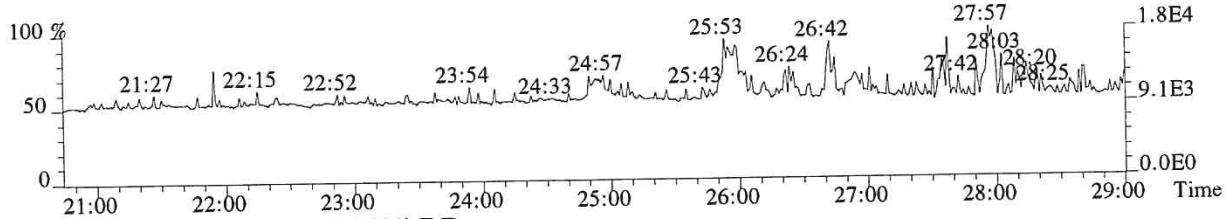
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11316.0,1.00%,F,T)



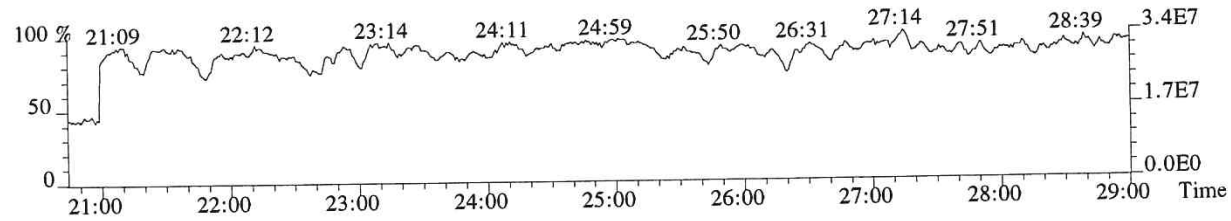
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4916.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

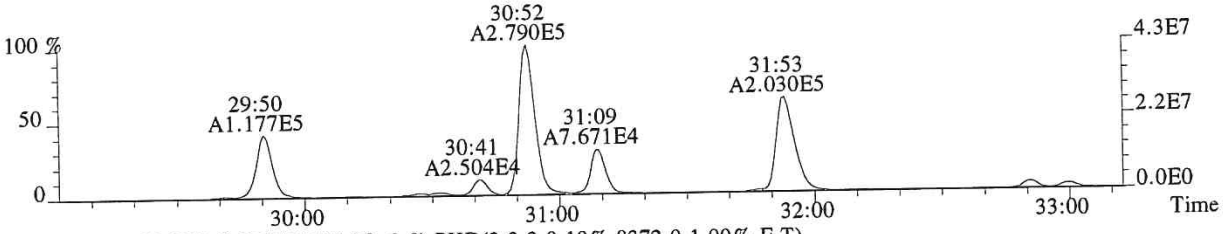


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

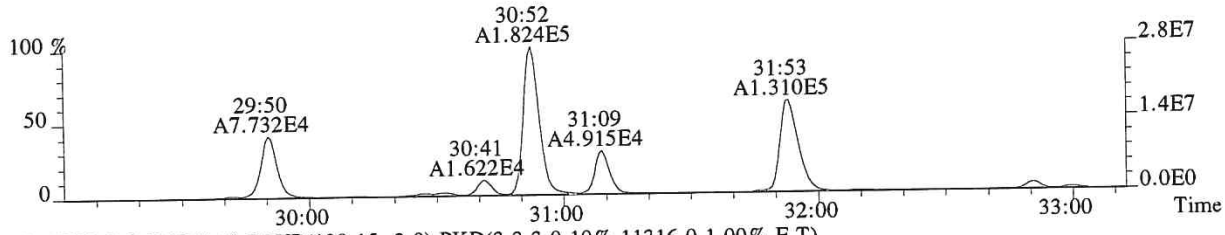


018375

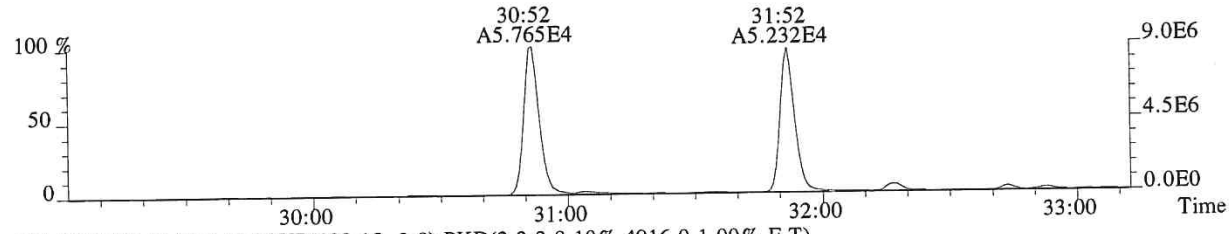
File:P519876 #1-376 Acq:10-JAN-2019 01:10:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,52048.0,1.00%,F,T)



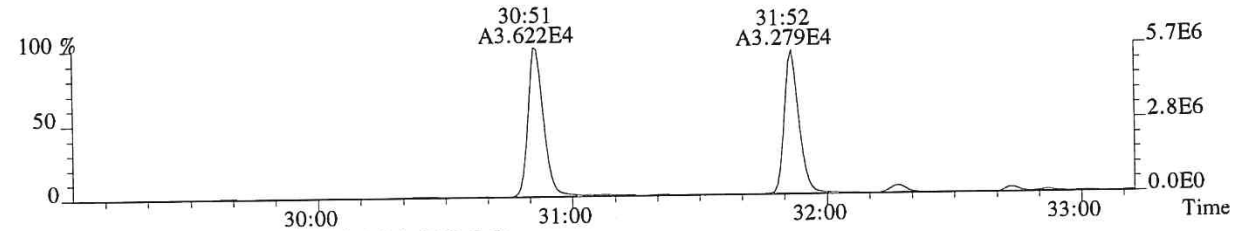
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8372.0,1.00%,F,T)



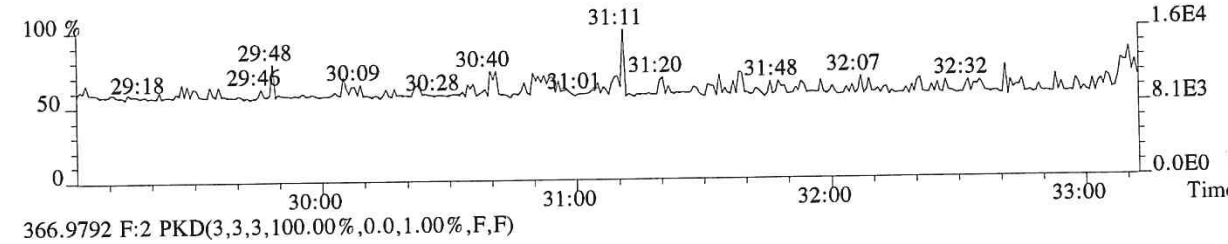
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11316.0,1.00%,F,T)



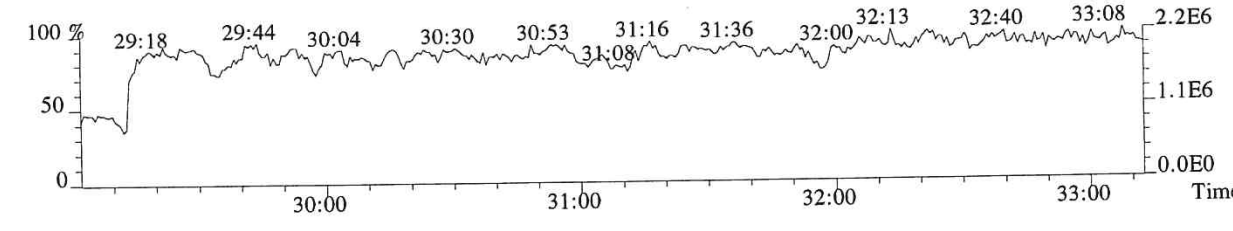
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4916.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

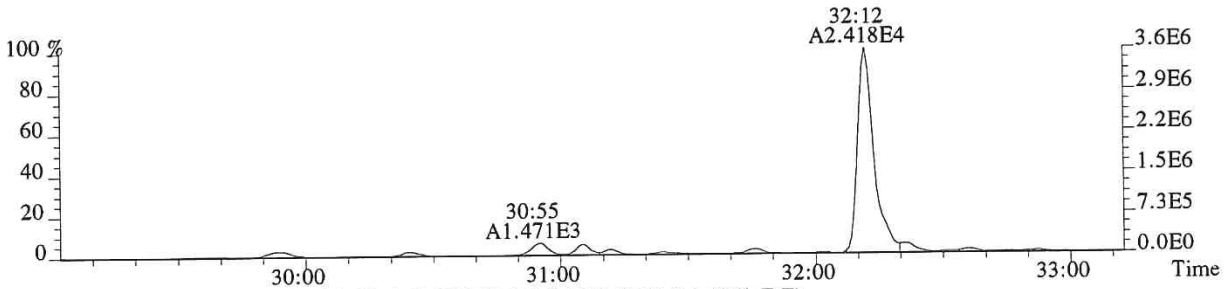


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

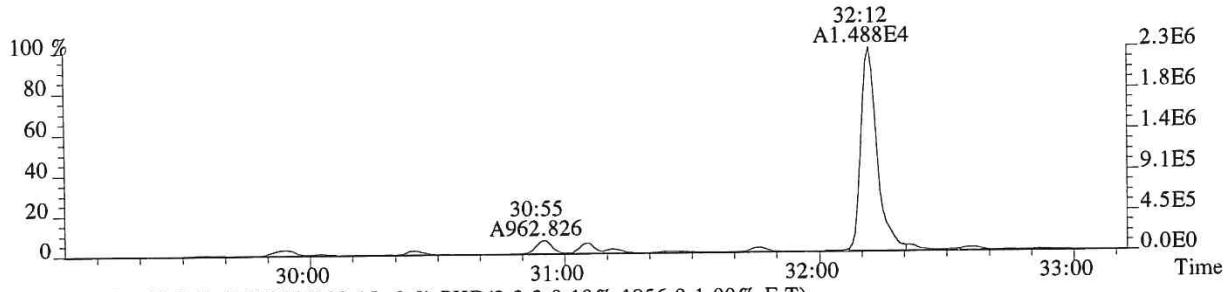


018376

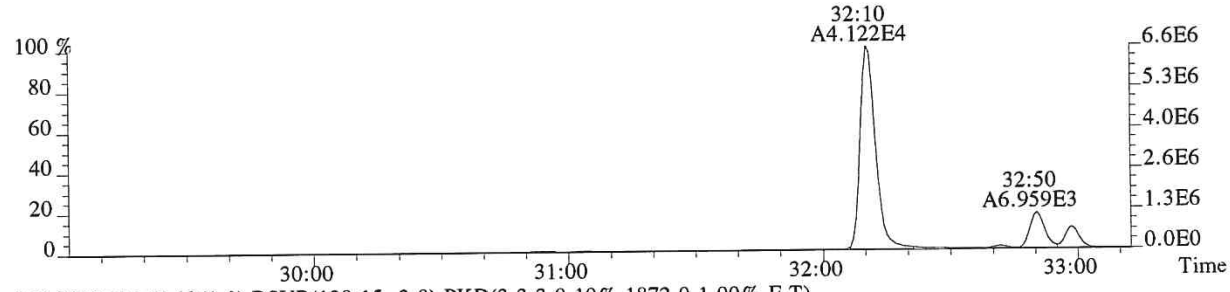
File:P519876 #1-376 Acq:10-JAN-2019 01:10:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2844.0,1.00%,F,T)



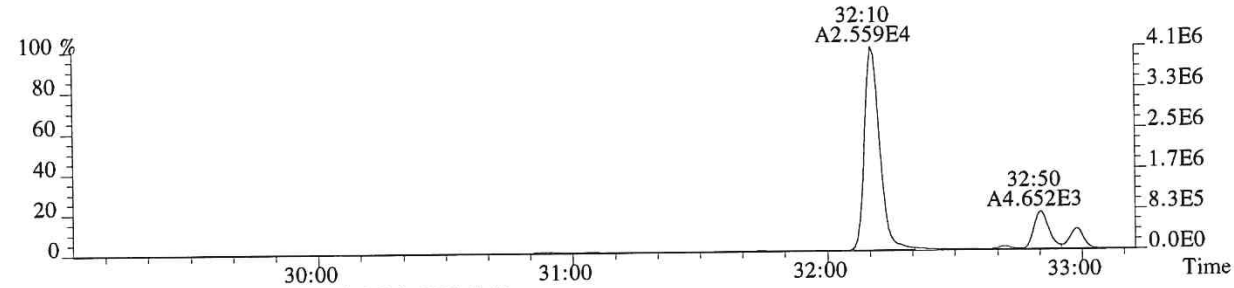
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1920.0,1.00%,F,T)



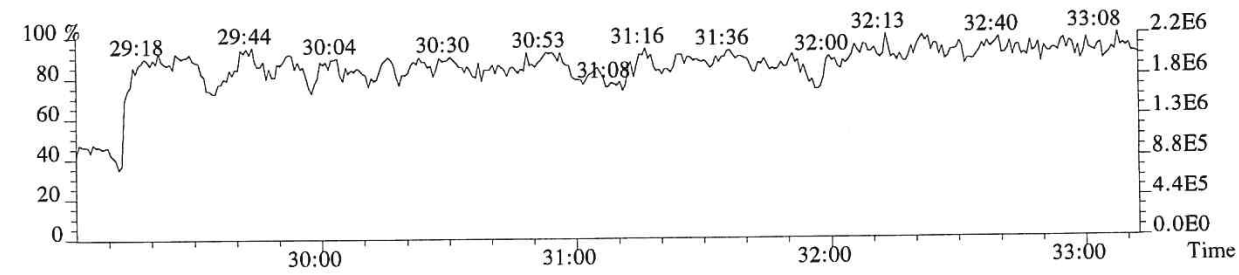
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1956.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1872.0,1.00%,F,T)

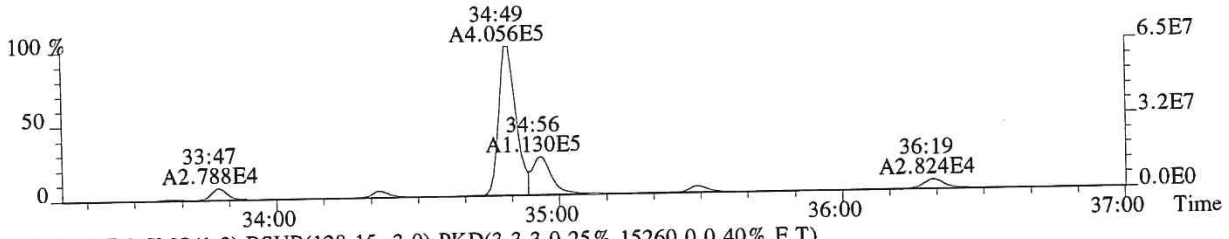


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

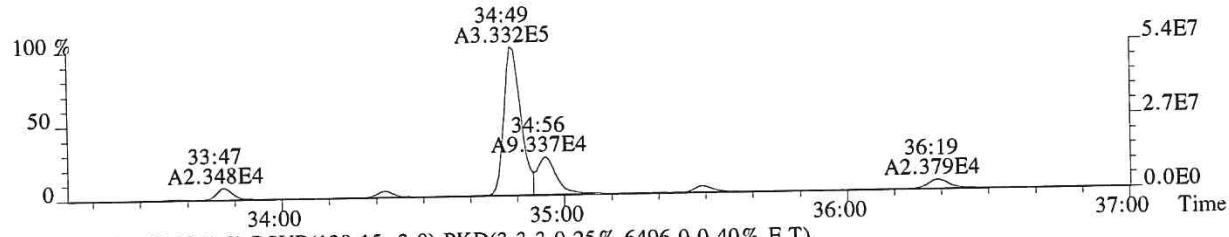


018377

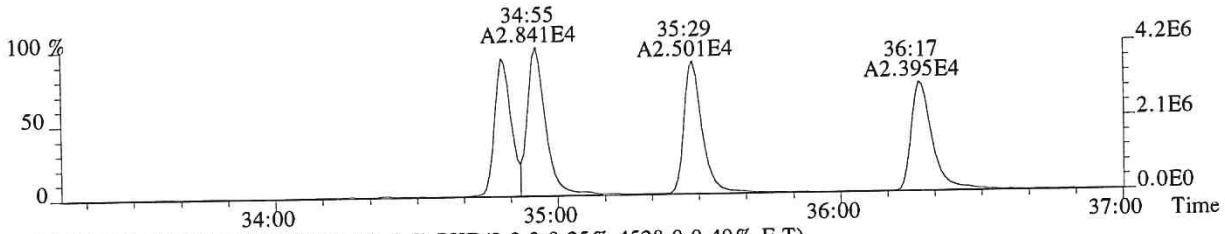
File:P519876 #1-339 Acq:10-JAN-2019 01:10:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,13016.0,0.40%,F,T)



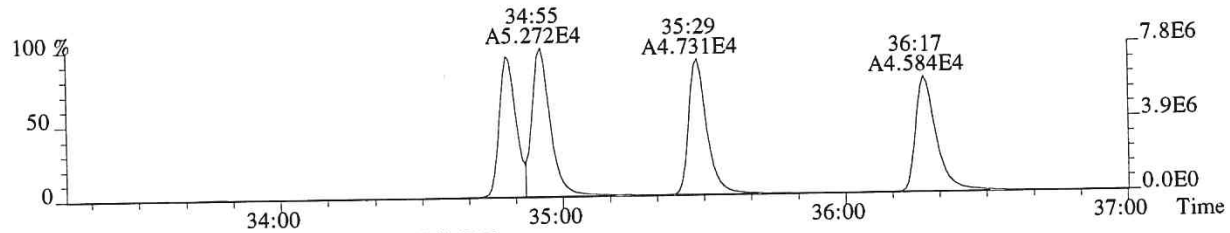
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,15260.0,0.40%,F,T)



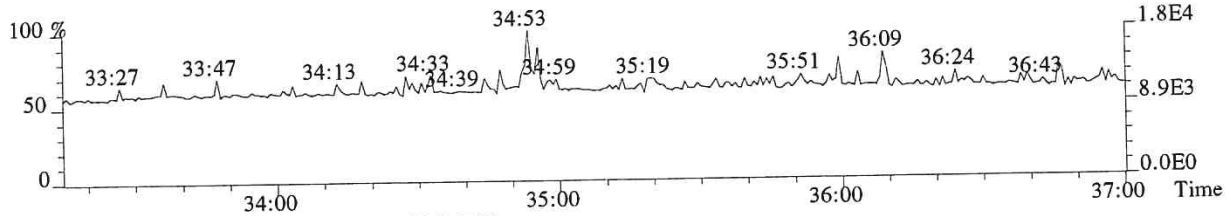
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6496.0,0.40%,F,T)



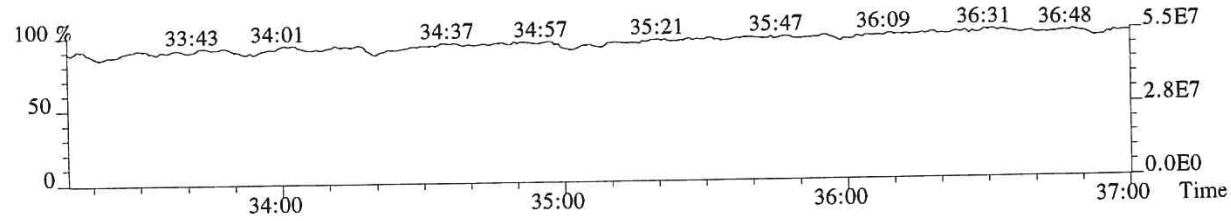
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4528.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

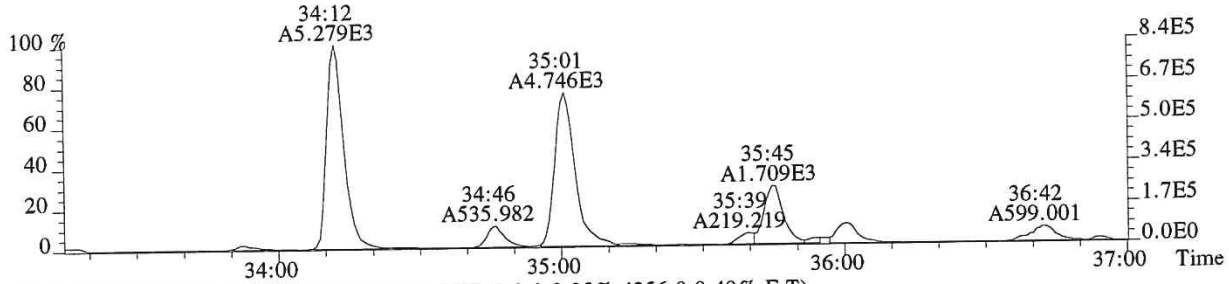


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

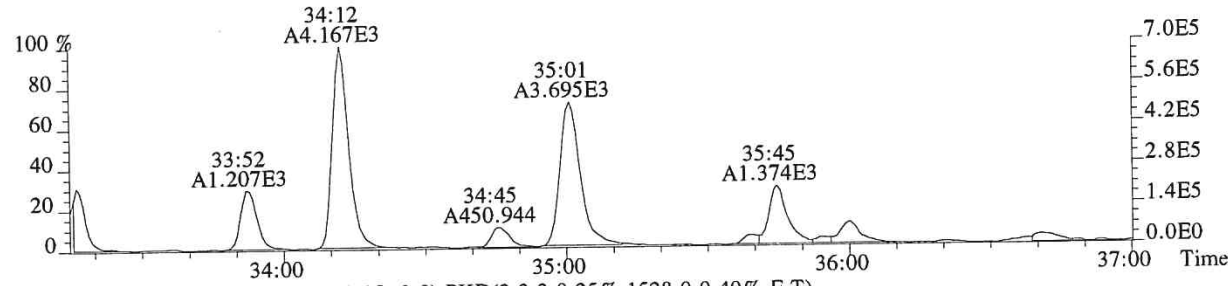


018378

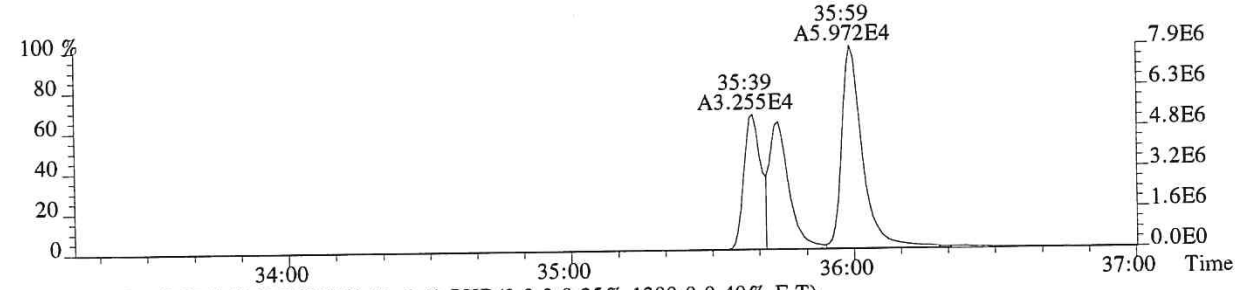
File:P519876 #1-339 Acq:10-JAN-2019 01:10:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2868.0,0.40%,F,T)



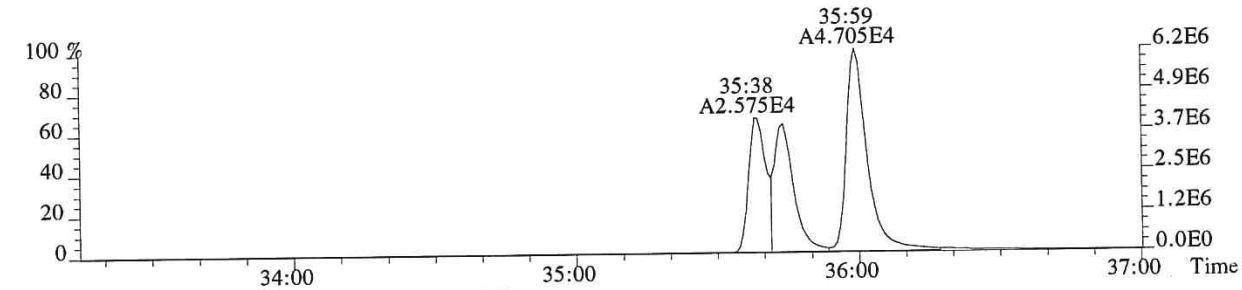
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4356.0,0.40%,F,T)



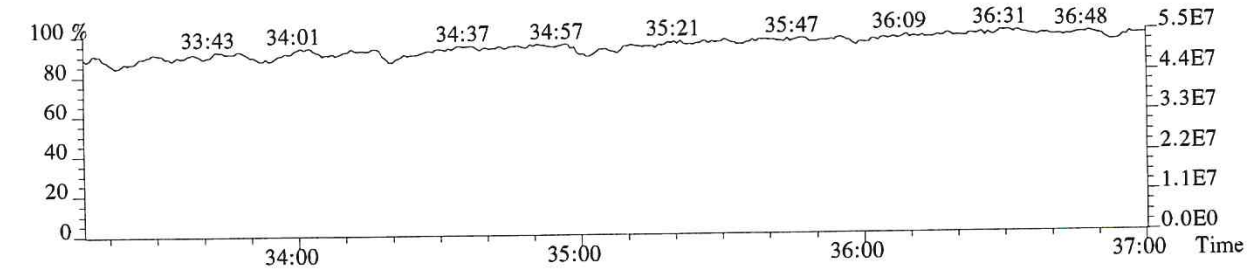
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1528.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1300.0,0.40%,F,T)

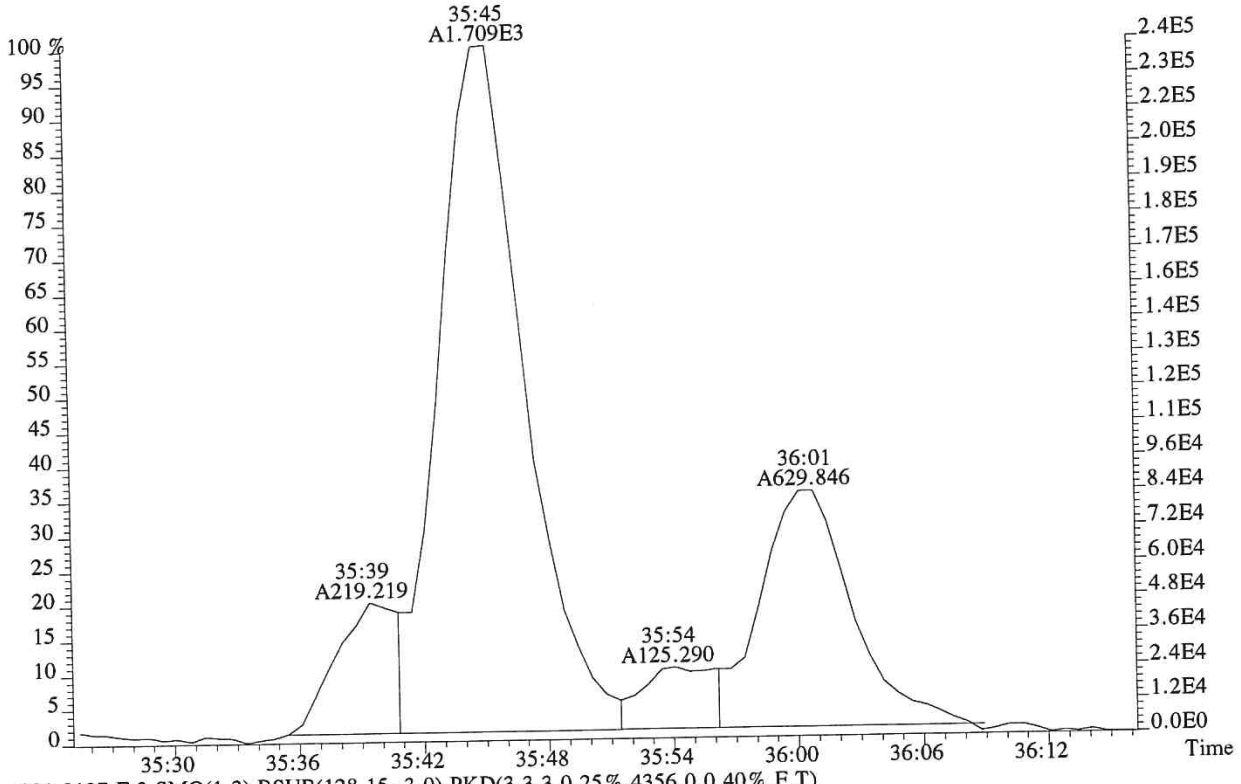


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

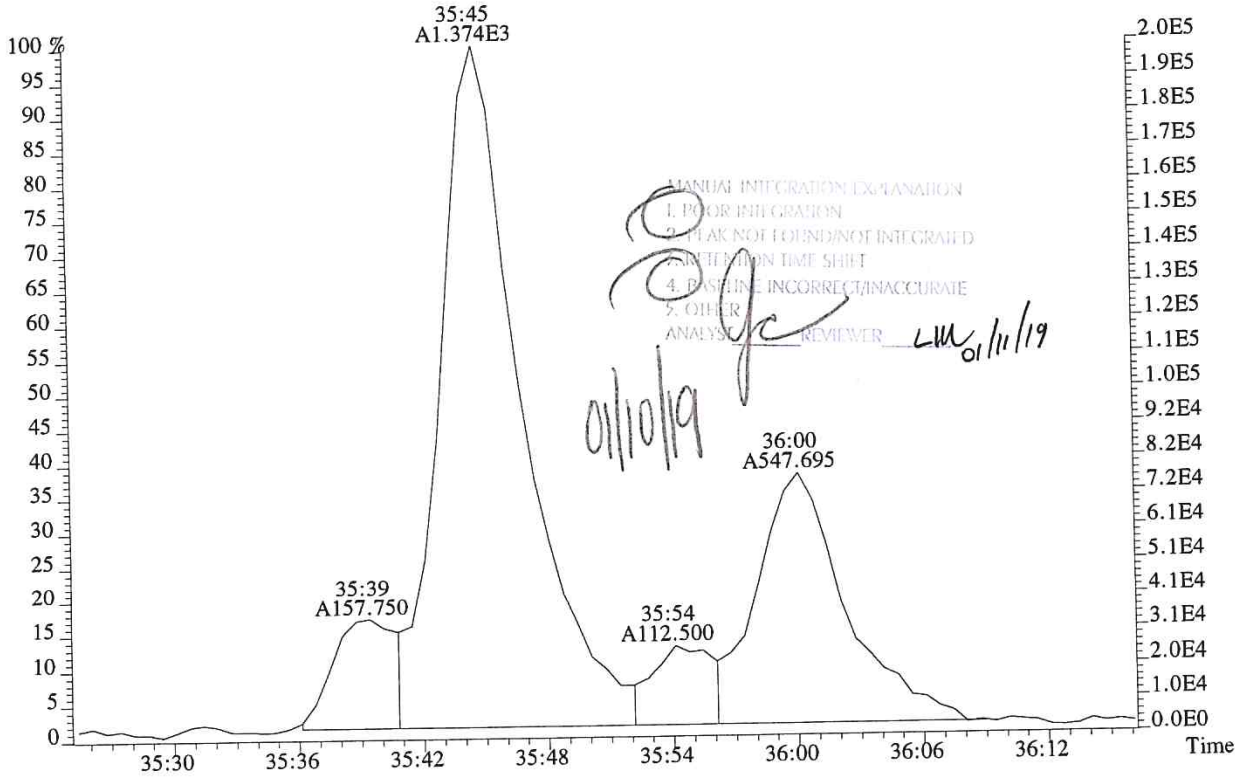


018379

File:P519876 #1-339 Acq:10-JAN-2019 01:10:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2868.0,0.40%,F,T)

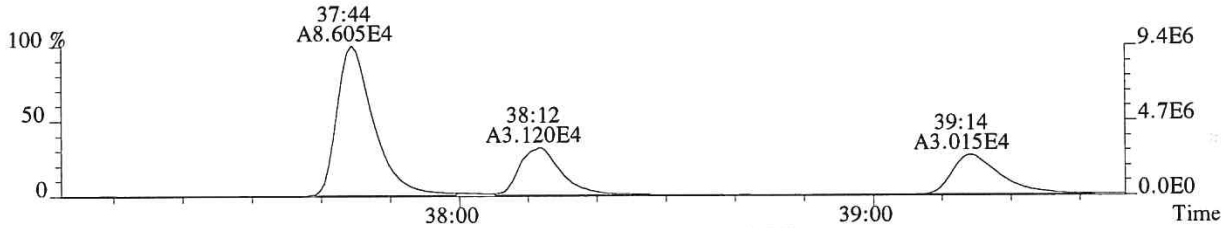


391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4356.0,0.40%,F,T)

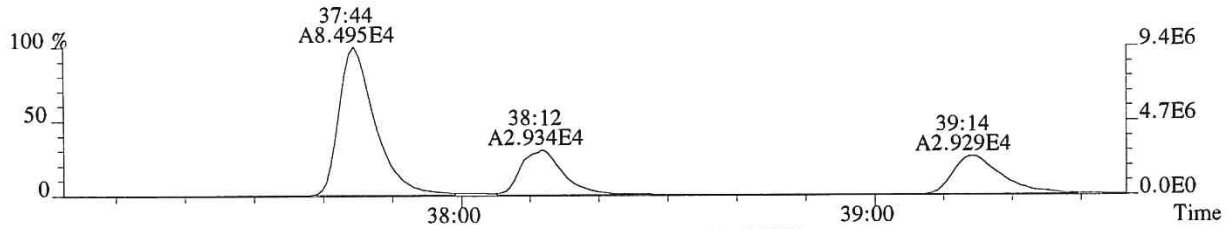


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST/REVIEWER LM 01/11/19
01/10/19

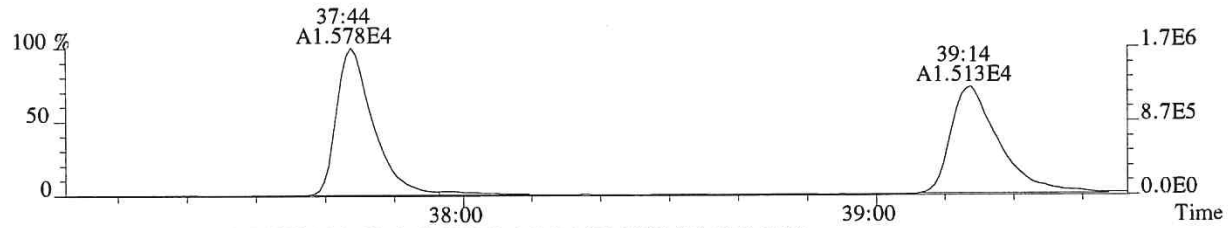
File:P519876 #1-232 Acq:10-JAN-2019 01:10:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,18160.0,0.50%,F,T)



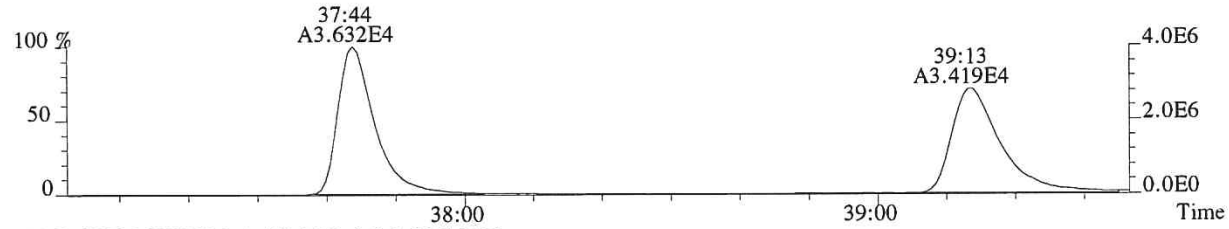
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7748.0,0.50%,F,T)



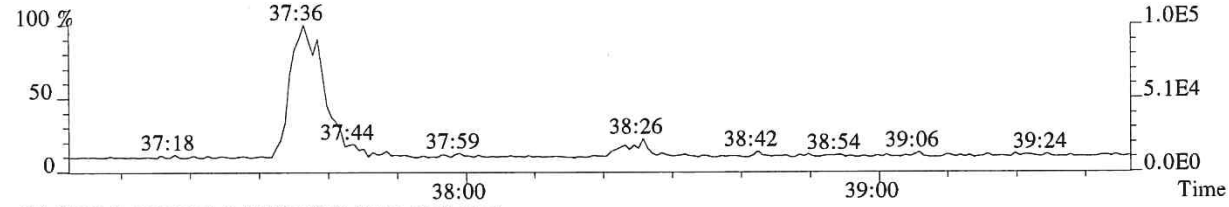
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3832.0,0.50%,F,T)



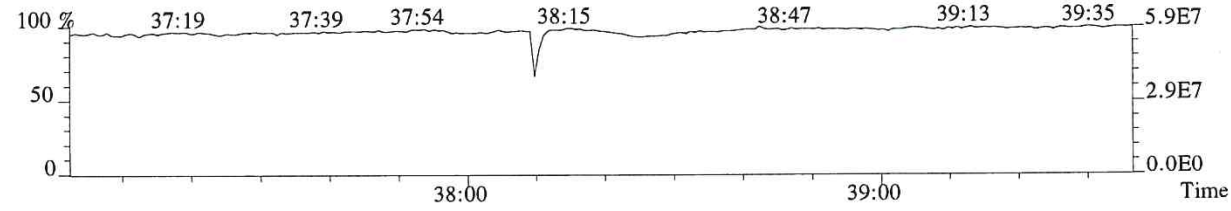
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,9228.0,0.50%,F,T)



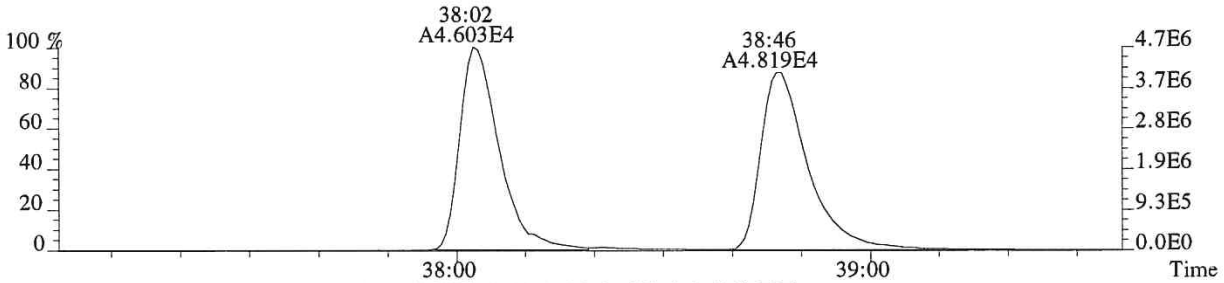
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



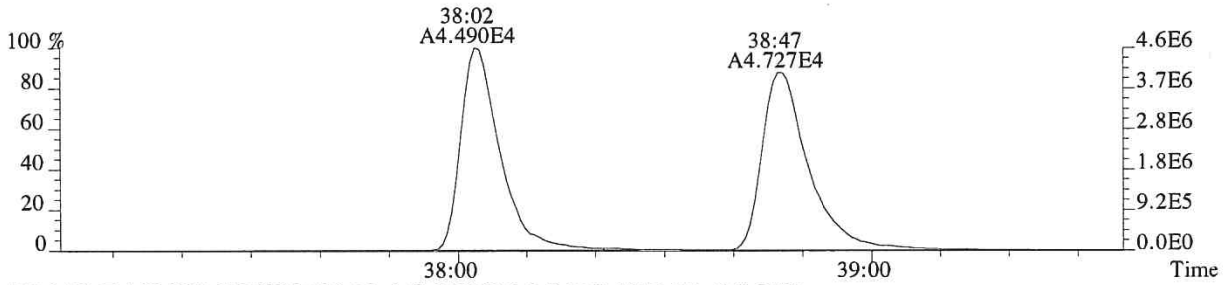
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



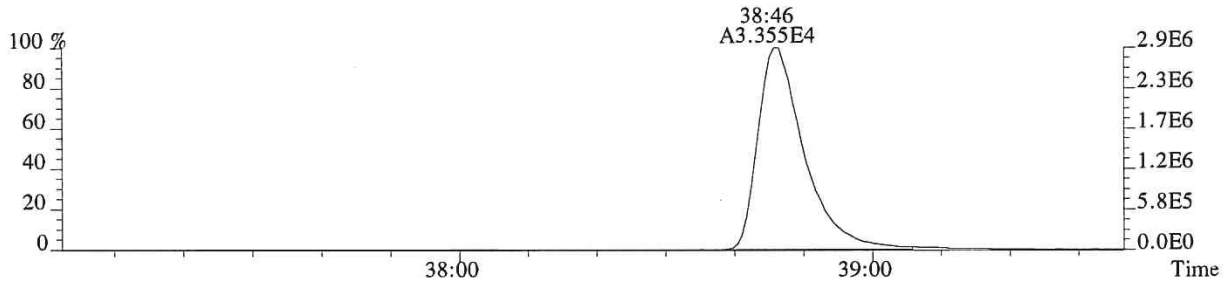
File:P519876 #1-232 Acq:10-JAN-2019 01:10:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1156.0,0.40%,F,T)



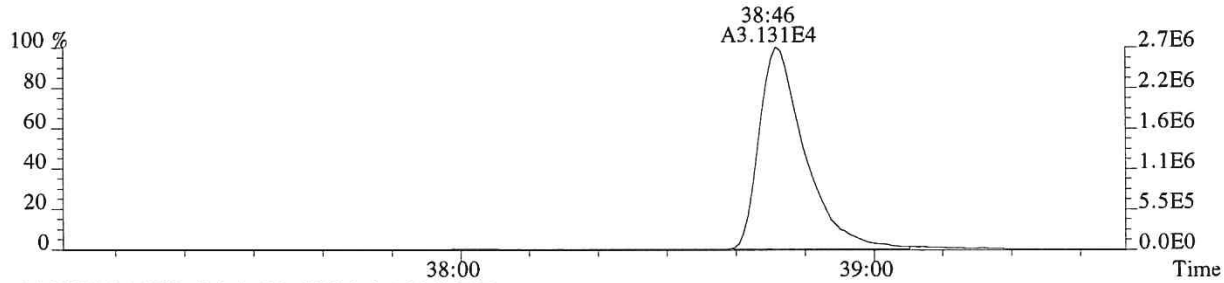
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1680.0,0.40%,F,T)



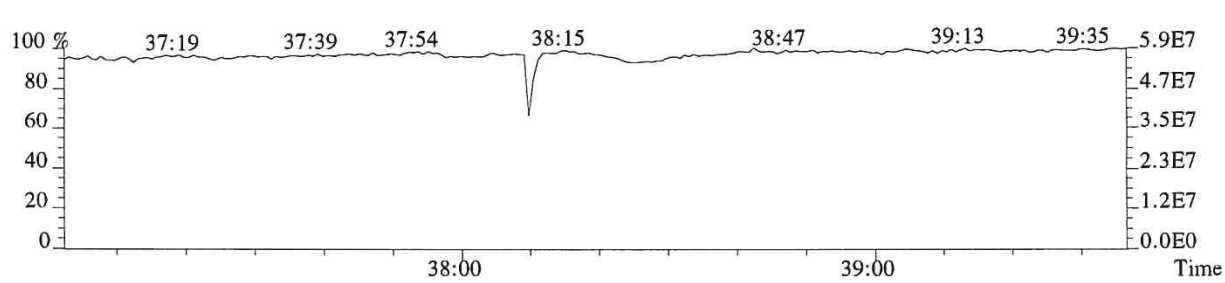
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1176.0,0.40%,F,T)



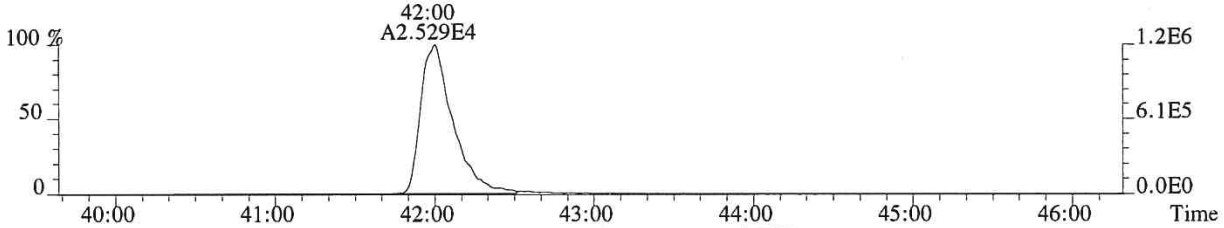
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1208.0,0.40%,F,T)



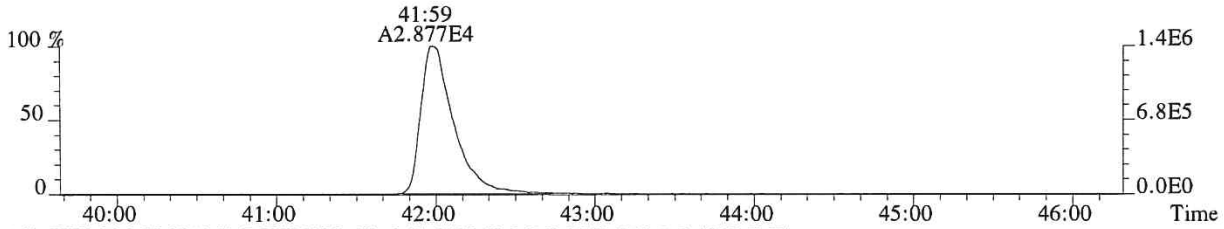
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



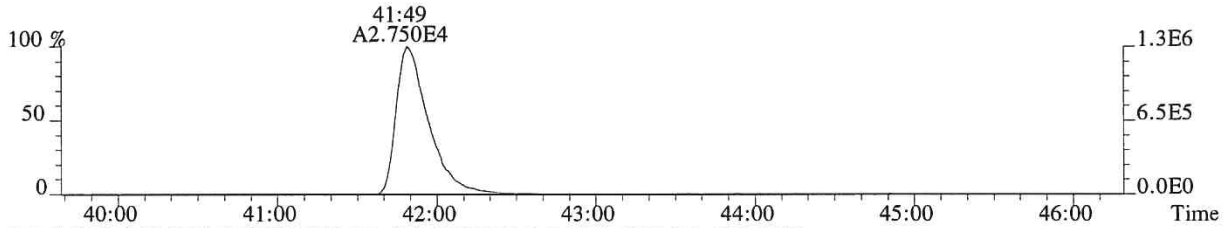
File:P519876 #1-601 Acq:10-JAN-2019 01:10:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,792.0,0.40%,F,T)



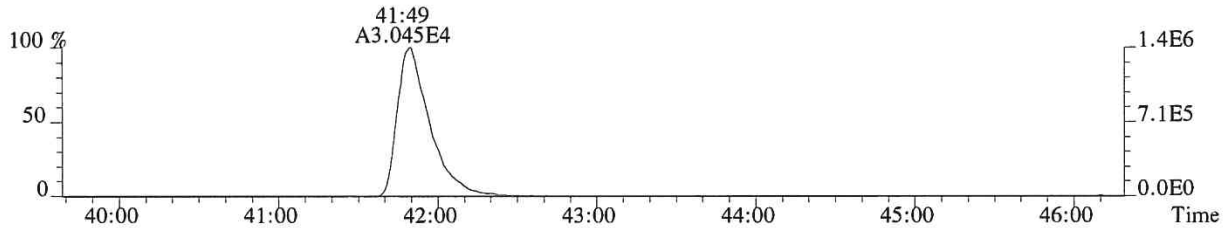
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1244.0,0.40%,F,T)



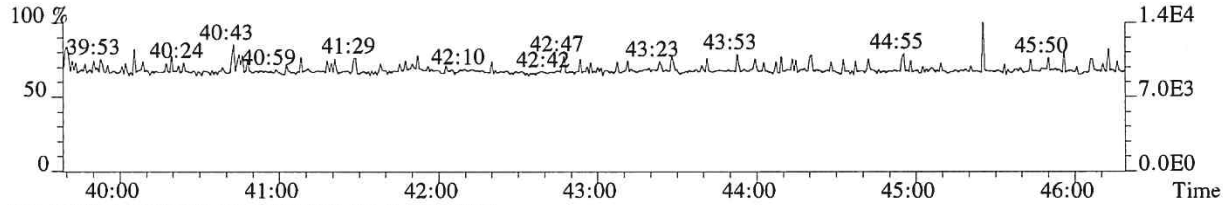
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,876.0,0.40%,F,T)



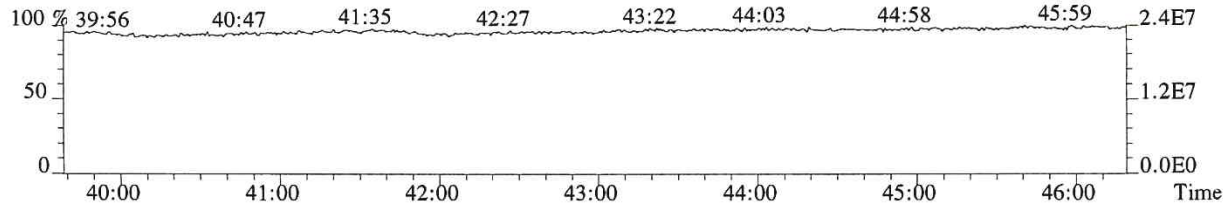
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1012.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

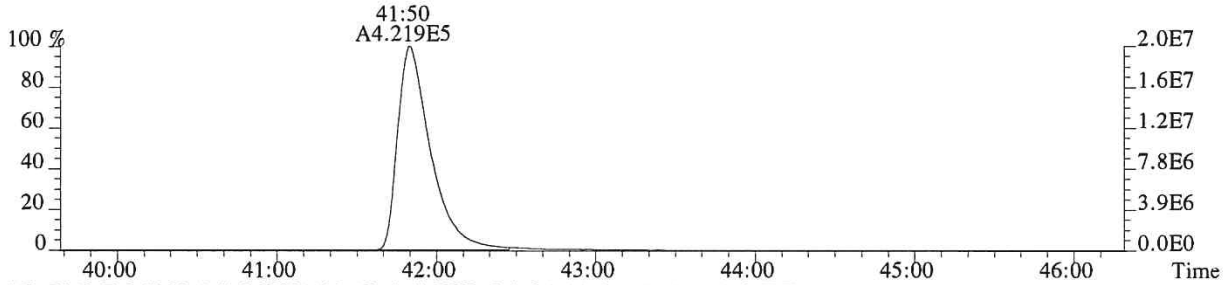


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

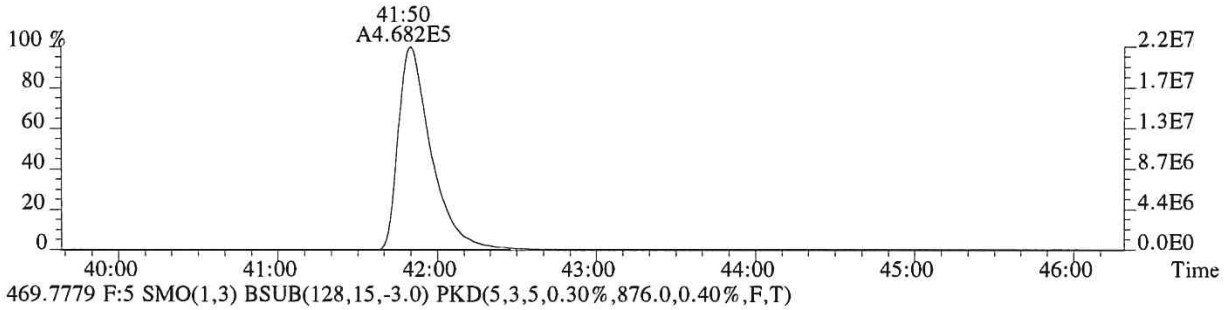


018383

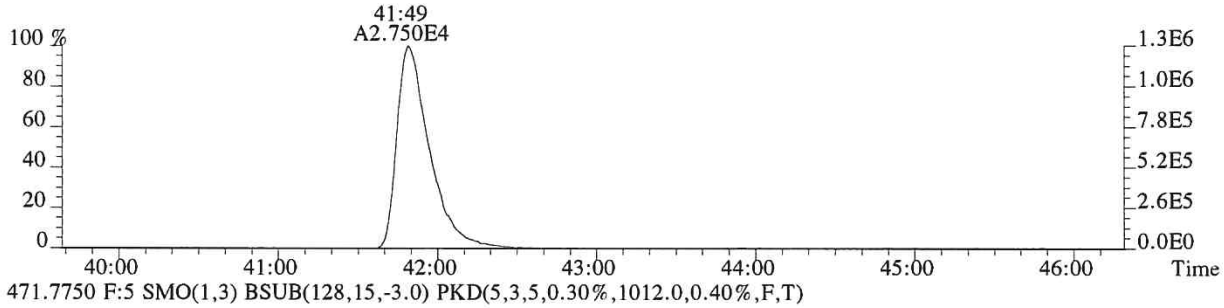
File:P519876 #1-601 Acq:10-JAN-2019 01:10:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,584.0,0.40%,F,T)



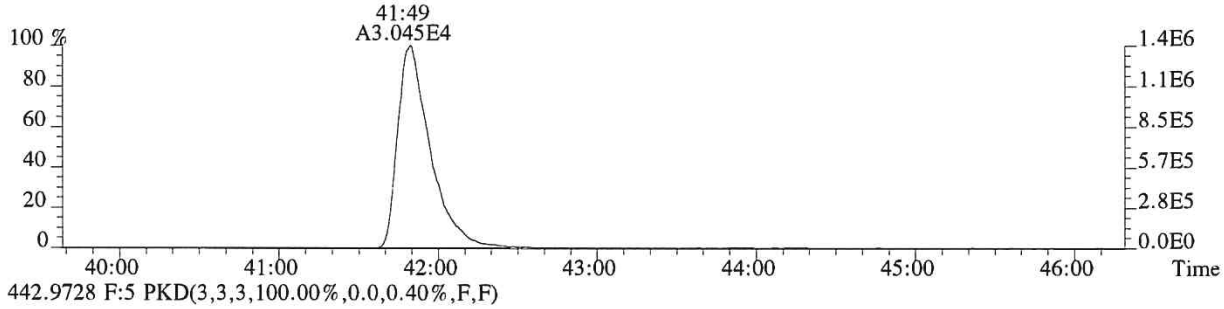
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1388.0,0.40%,F,T)



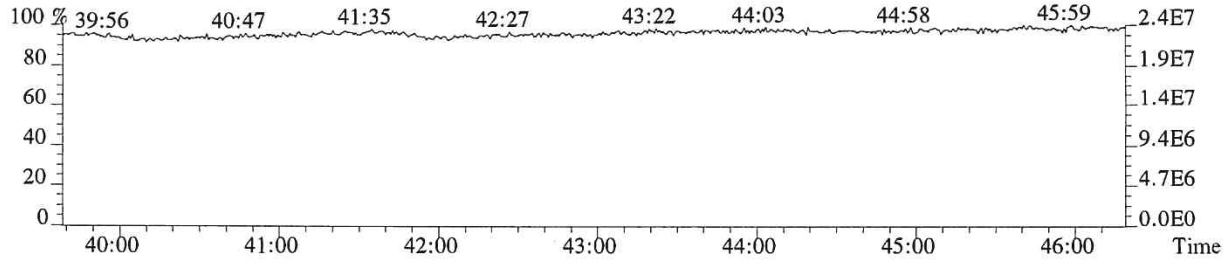
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,876.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1012.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0223

ın #18 Filename P519911 Samp: 1 Inj: 1 Acquired: 11-JAN-19 10:33:57
rocessed: 11-JAN-19 14:53:41 Sample ID: E1801139-009DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	1.650e+04	2.172e+04	0.76	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:27	6.812e+02	4.730e+02	1.44	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	5.424e+02	3.401e+02	1.59	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	9.260e+02	8.016e+02	1.16	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	2.458e+02	2.225e+02	1.10	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:02	5.688e+01	4.364e+01	1.30	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:50	7.776e+01	5.979e+01	1.30	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:09	2.410e+02	2.387e+02	1.01	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:29	7.482e+01	8.674e+01	0.86	no	no	1.258
0	Unk	OCDF	40:44	9.081e+01	1.191e+02	0.76	yes	no	1.359
1	Unk	2,3,7,8-TCDD	26:24	4.258e+03	5.575e+03	0.76	yes	no	1.085
2	Unk	1,2,3,7,8-PeCDD	31:49	8.288e+01	3.551e+01	2.33	no	no	0.956
3	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
4	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
5	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.063
6	Unk	1,2,3,4,6,7,8-HpCDD	38:03	1.372e+02	1.416e+02	0.97	yes	no	1.025
7	Unk	OCDD	40:34	1.340e+03	1.526e+03	0.88	yes	no	1.118
8	IS	13C-2,3,7,8-TCDF	25:20	2.463e+04	3.128e+04	0.79	yes	no	1.513
9	IS	13C-1,2,3,7,8-PeCDF	30:26	3.653e+04	2.301e+04	1.59	yes	no	1.471
0	IS	13C-2,3,4,7,8-PeCDF	31:27	3.477e+04	2.191e+04	1.59	yes	no	1.457
1	IS	13C-1,2,3,4,7,8-HxCDF	34:22	1.510e+04	2.888e+04	0.52	yes	no	1.234
2	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.707e+04	3.306e+04	0.52	yes	no	1.399
3	IS	13C-2,3,4,6,7,8-HxCDF	35:02	1.622e+04	3.135e+04	0.52	yes	no	1.257
4	IS	13C-1,2,3,7,8,9-HxCDF	35:48	1.472e+04	2.843e+04	0.52	yes	no	1.086
5	IS	13C-1,2,3,4,6,7,8-HpCDF	37:08	1.239e+04	2.806e+04	0.44	yes	no	0.966
6	IS	13C-1,2,3,4,7,8,9-HpCDF	38:28	1.117e+04	2.487e+04	0.45	yes	no	0.820
7	IS	13C-2,3,7,8-TCDD	26:22	1.147e+04	1.489e+04	0.77	yes	no	0.924
8	IS	13C-1,2,3,7,8-PeCDD	31:47	2.649e+04	1.668e+04	1.59	yes	no	0.975
9	IS	13C-1,2,3,4,7,8-HxCDD	35:10	2.179e+04	1.721e+04	1.27	yes	no	0.925
0	IS	13C-1,2,3,6,7,8-HxCDD	35:16	2.257e+04	1.791e+04	1.26	yes	no	0.949
1	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	2.599e+04	2.435e+04	1.07	yes	no	0.858
2	IS	13C-OCDD	40:34	3.027e+04	3.380e+04	0.90	yes	no	0.582
3	RS/RT	13C-1,2,3,4-TCDD	25:39	1.787e+04	2.240e+04	0.80	yes	no	-
4	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:30	2.404e+04	1.952e+04	1.23	yes	no	-
5	C/Up	37Cl-2,3,7,8-TCDD	26:23	1.144e+02				no	1.014

$$OCDD = \frac{(1.340e+03 + 1.526e+03) \times 4000\ pg \times 200}{(3.027e+04 + 3.380e+04) \times 10.864\ g \times 69.8 / 100 \times 1.118 \times 0.47} = 3981\ ng/kg$$

LM 01/14/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0223

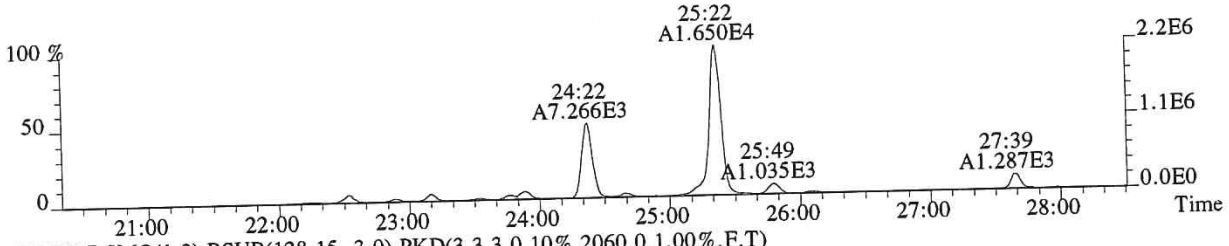
un #18 Filename P519911 Samp: 1 Inj: 1 Acquired: 11-JAN-19 10:33:57
rocessed: 11-JAN-19 14:53:41 LAB. ID: E1801139-009DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
	2,3,7,8-TCDF	2.18e+06	8.24e+02	2.6e+03	2.88e+06	2.06e+03	1.4e+03
	1,2,3,7,8-PeCDF	1.12e+05	5.52e+02	2.0e+02	7.71e+04	1.74e+03	4.4e+01
	2,3,4,7,8-PeCDF	8.57e+04	5.52e+02	1.6e+02	5.22e+04	1.74e+03	3.0e+01
	1,2,3,4,7,8-HxCDF	1.94e+05	8.96e+02	2.2e+02	1.59e+05	6.04e+02	2.6e+02
	1,2,3,6,7,8-HxCDF	4.68e+04	8.96e+02	5.2e+01	4.65e+04	6.04e+02	7.7e+01
	2,3,4,6,7,8-HxCDF	1.17e+04	8.96e+02	1.3e+01	7.50e+03	6.04e+02	1.2e+01
	1,2,3,7,8,9-HxCDF	1.20e+04	8.96e+02	1.3e+01	8.57e+03	6.04e+02	1.4e+01
	1,2,3,4,6,7,8-HpCDF	5.20e+04	3.84e+02	1.4e+02	4.33e+04	2.32e+02	1.9e+02
	1,2,3,4,7,8,9-HpCDF	1.82e+04	3.84e+02	4.7e+01	1.76e+04	2.32e+02	7.6e+01
.0	OCDF	1.75e+04	5.36e+02	3.3e+01	2.19e+04	1.01e+03	2.2e+01
11	2,3,7,8-TCDD	6.74e+05	2.24e+03	3.0e+02	8.46e+05	1.14e+03	7.4e+02
12	1,2,3,7,8-PeCDD	1.27e+04	1.13e+03	1.1e+01	7.38e+03	5.00e+02	1.5e+01
13	1,2,3,4,7,8-HxCDD	*	7.84e+02	*	*	7.08e+02	*
14	1,2,3,6,7,8-HxCDD	*	7.84e+02	*	*	7.08e+02	*
15	1,2,3,7,8,9-HxCDD	*	7.84e+02	*	*	7.08e+02	*
16	1,2,3,4,6,7,8-HpCDD	3.03e+04	5.16e+02	5.9e+01	3.07e+04	4.88e+02	6.3e+01
17	OCDD	2.30e+05	4.44e+02	5.2e+02	2.61e+05	4.68e+02	5.6e+02
18	13C-2,3,7,8-TCDF	3.50e+06	3.88e+03	9.0e+02	4.45e+06	3.22e+03	1.4e+03
19	13C-1,2,3,7,8-PeCDF	6.21e+06	5.96e+02	1.0e+04	4.00e+06	3.16e+02	1.3e+04
20	13C-2,3,4,7,8-PeCDF	6.31e+06	5.96e+02	1.1e+04	3.99e+06	3.16e+02	1.3e+04
21	13C-1,2,3,4,7,8-HxCDF	3.18e+06	9.12e+02	3.5e+03	5.97e+06	7.44e+02	8.0e+03
22	13C-1,2,3,6,7,8-HxCDF	3.34e+06	9.12e+02	3.7e+03	6.46e+06	7.44e+02	8.7e+03
23	13C-2,3,4,6,7,8-HxCDF	3.31e+06	9.12e+02	3.6e+03	6.36e+06	7.44e+02	8.5e+03
24	13C-1,2,3,7,8,9-HxCDF	2.77e+06	9.12e+02	3.0e+03	5.34e+06	7.44e+02	7.2e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.56e+06	2.16e+03	1.2e+03	5.76e+06	2.48e+03	2.3e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.24e+06	2.16e+03	1.0e+03	4.96e+06	2.48e+03	2.0e+03
27	13C-2,3,7,8-TCDD	1.83e+06	6.87e+03	2.7e+02	2.28e+06	2.65e+03	8.6e+02
28	13C-1,2,3,7,8-PeCDD	4.72e+06	6.84e+02	6.9e+03	2.98e+06	1.28e+03	2.3e+03
29	13C-1,2,3,4,7,8-HxCDD	4.87e+06	1.21e+03	4.0e+03	3.81e+06	8.60e+02	4.4e+03
30	13C-1,2,3,6,7,8-HxCDD	4.30e+06	1.21e+03	3.6e+03	3.46e+06	8.60e+02	4.0e+03
31	13C-1,2,3,4,6,7,8-HpCDD	5.25e+06	6.40e+02	8.2e+03	4.95e+06	6.24e+02	7.9e+03
32	13C-OCDD	5.10e+06	5.40e+02	9.4e+03	5.75e+06	3.32e+02	1.7e+04
33	13C-1,2,3,4-TCDD	2.62e+06	6.87e+03	3.8e+02	3.29e+06	2.65e+03	1.2e+03
34	13C-1,2,3,7,8,9-HxCDD	4.71e+06	1.21e+03	3.9e+03	3.75e+06	8.60e+02	4.4e+03
35	37Cl-2,3,7,8-TCDD	1.85e+04	1.56e+03	1.2e+01			

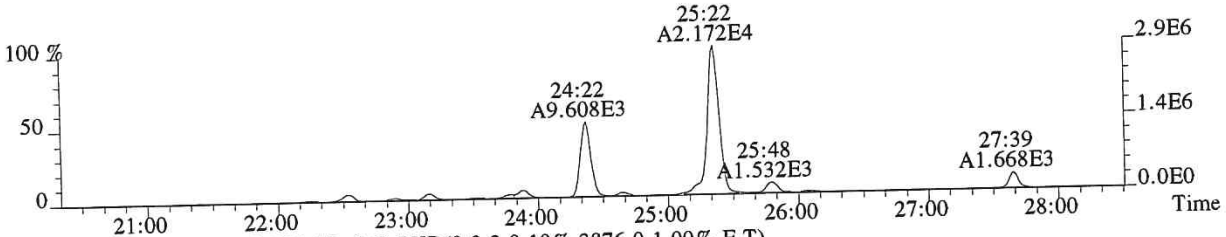
ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
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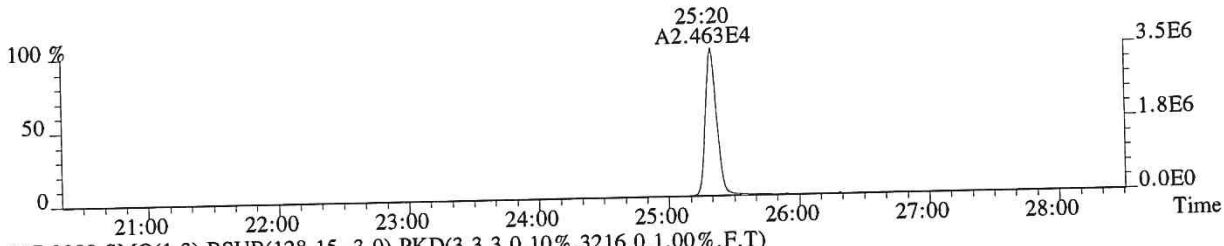
File:P519911 #1-580 Acq:11-JAN-2019 10:33:57 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:E1801139-009DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,824.0,1.00%,F,T)



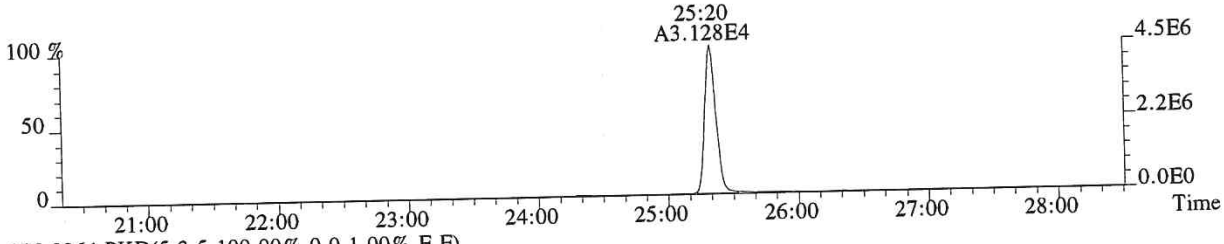
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2060.0,1.00%,F,T)



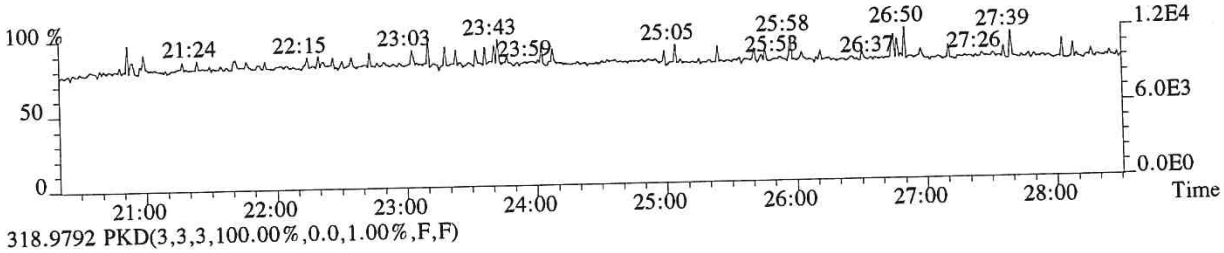
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3876.0,1.00%,F,T)



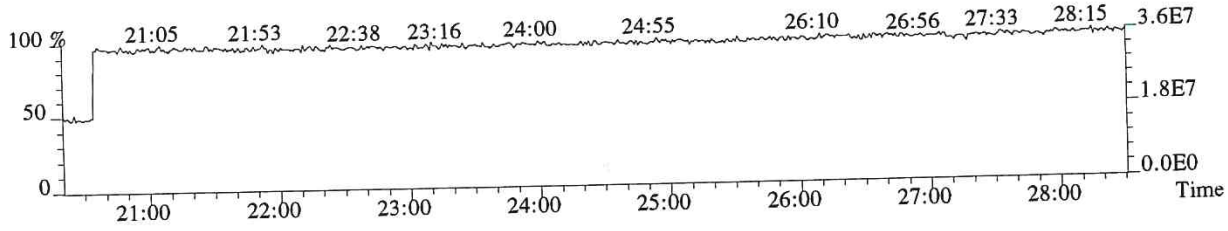
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3216.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

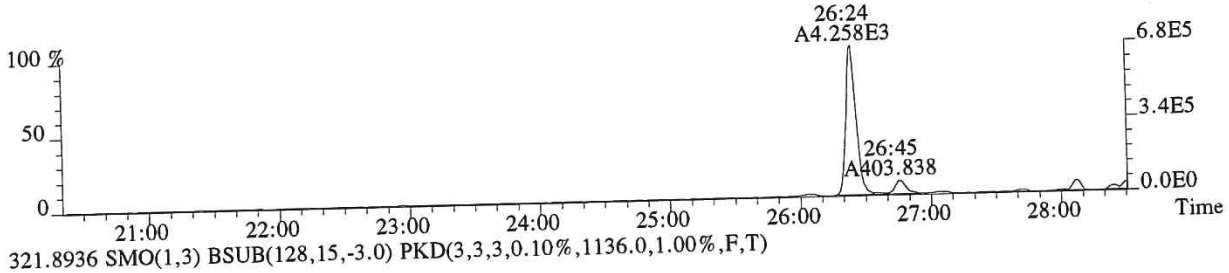


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

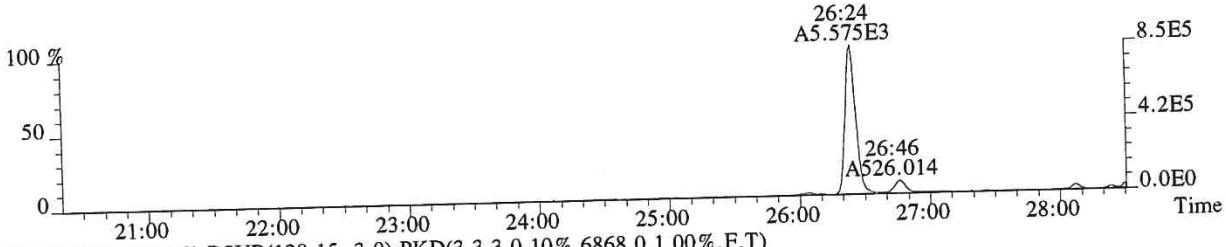


018387

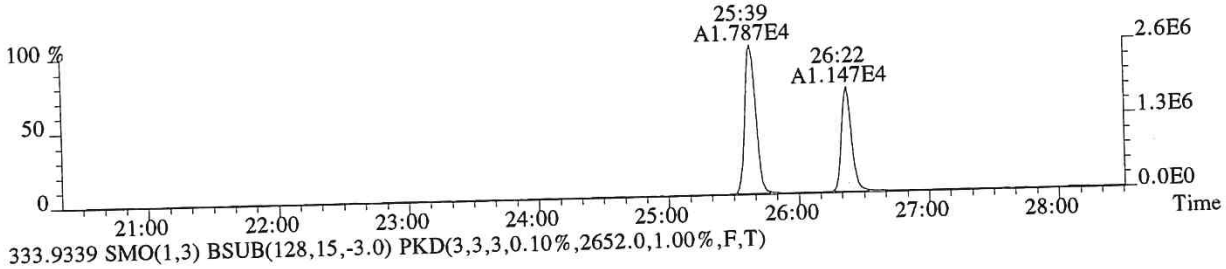
File:P519911 #1-580 Acq:11-JAN-2019 10:33:57 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:E1801139-009DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2236.0,1.00%,F,T)



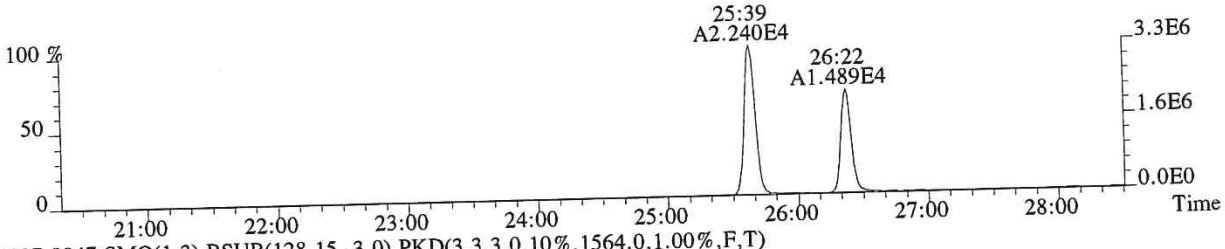
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1136.0,1.00%,F,T)



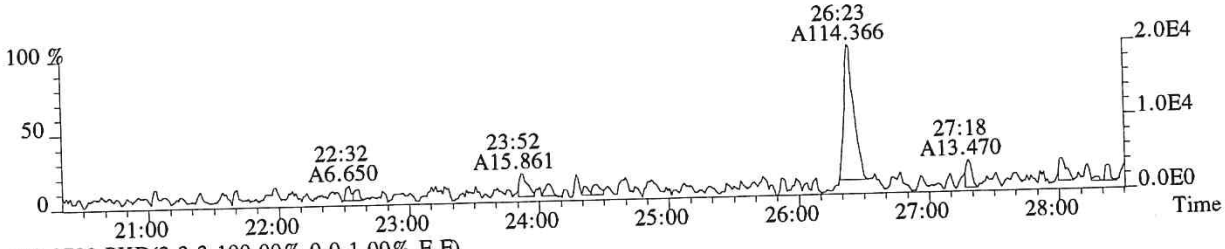
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6868.0,1.00%,F,T)



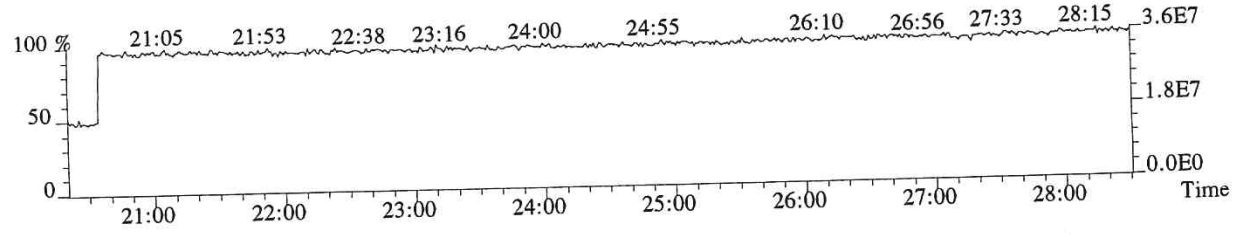
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2652.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1564.0,1.00%,F,T)

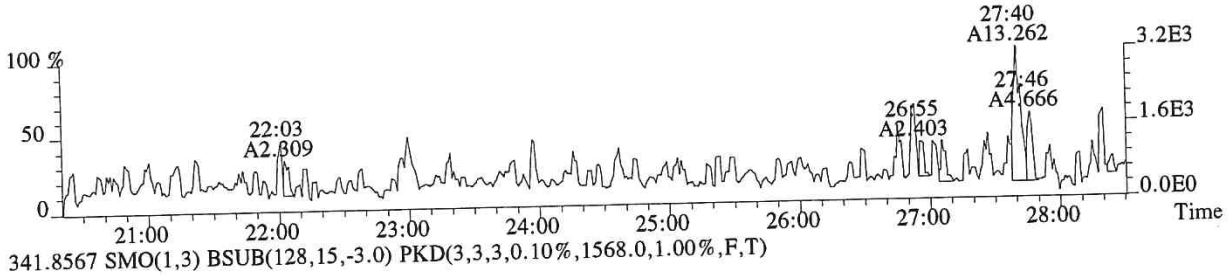


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

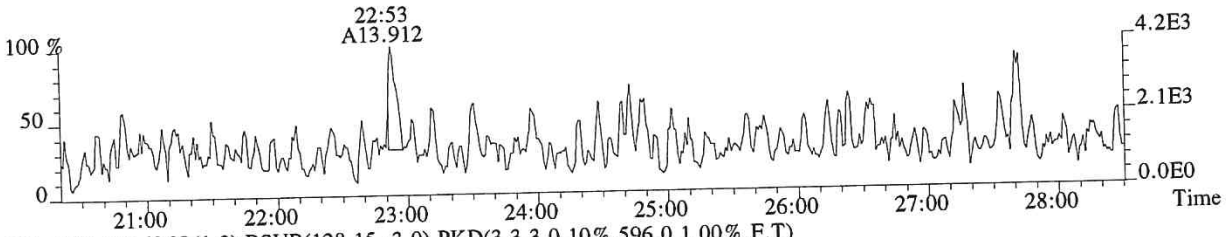


018388

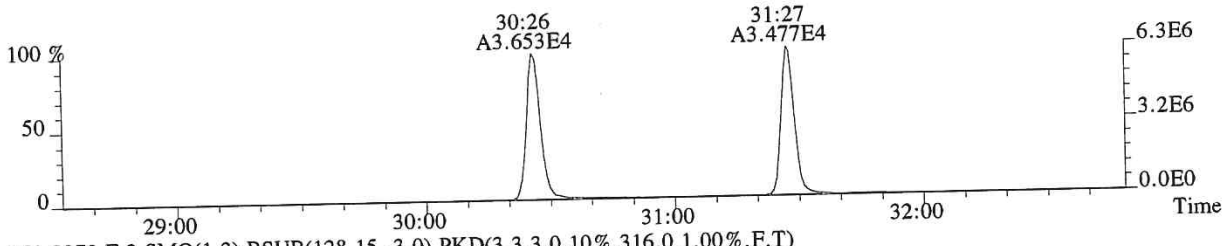
File:P519911 #1-580 Acq:11-JAN-2019 10:33:57 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:E1801139-009DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,712.0,1.00%,F,T)



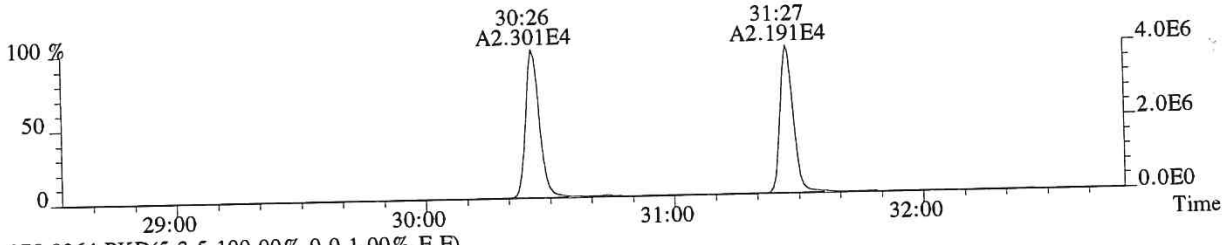
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1568.0,1.00%,F,T)



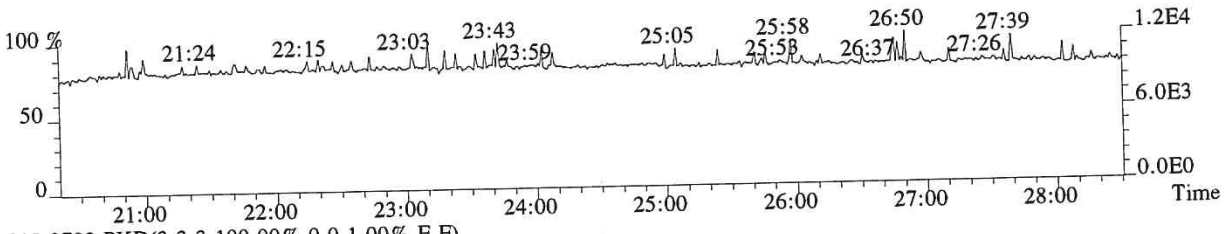
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,596.0,1.00%,F,T)



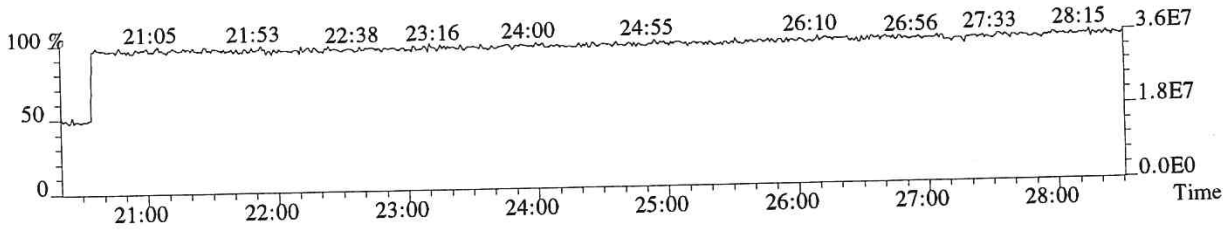
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,316.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

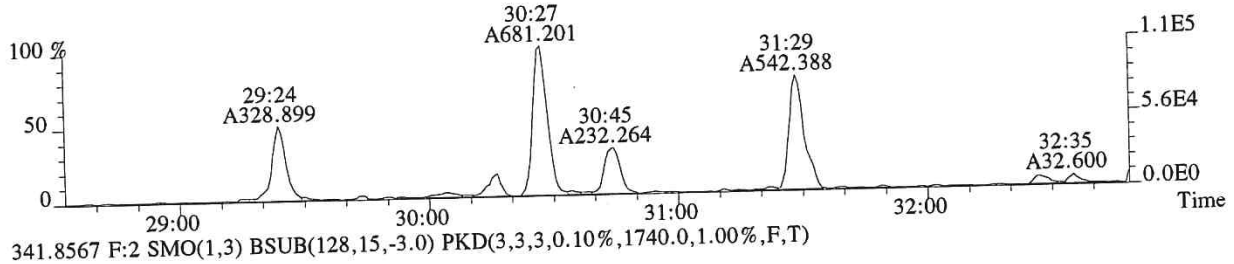


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

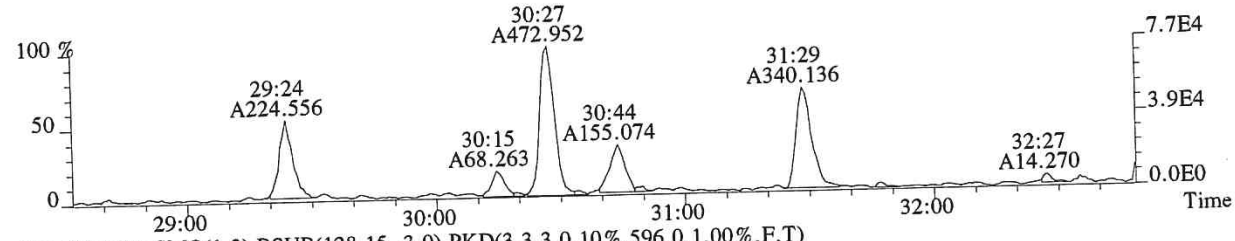


018389

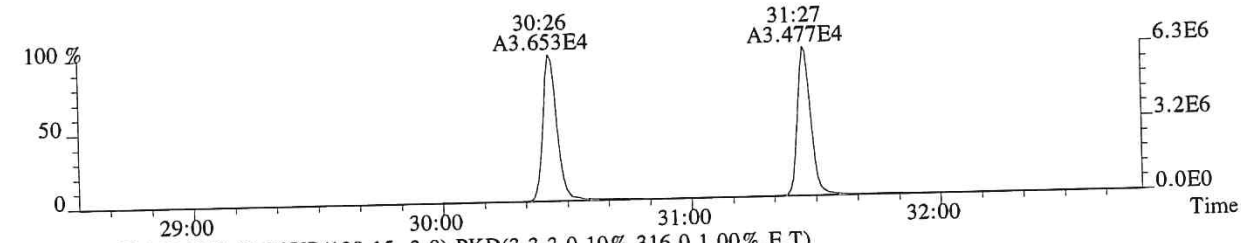
File:P519911 #1-385 Acq:11-JAN-2019 10:33:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,552.0,1.00%,F,T)



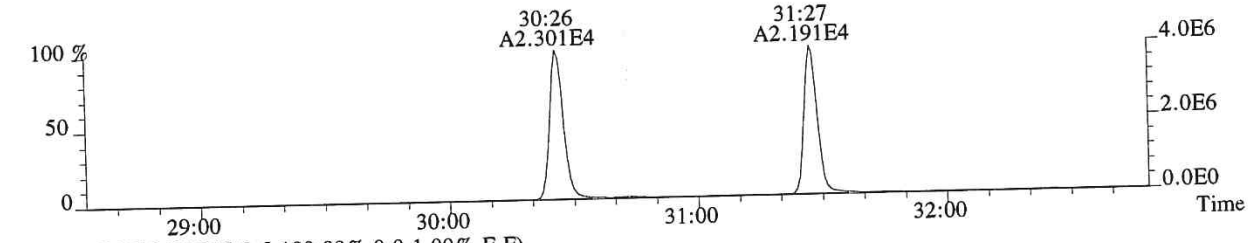
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1740.0,1.00%,F,T)



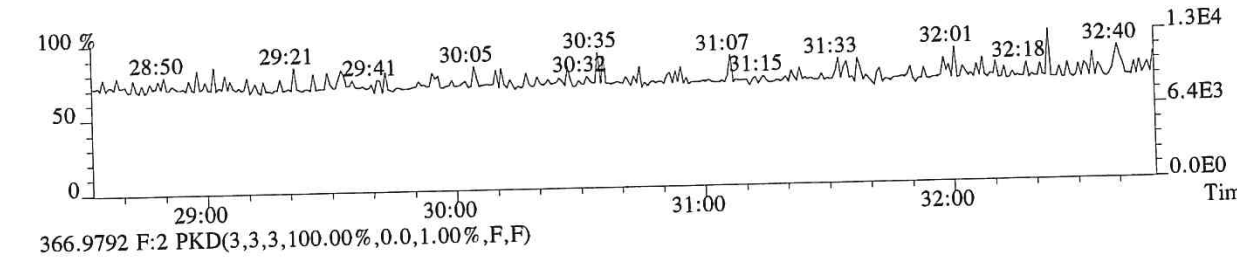
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,596.0,1.00%,F,T)



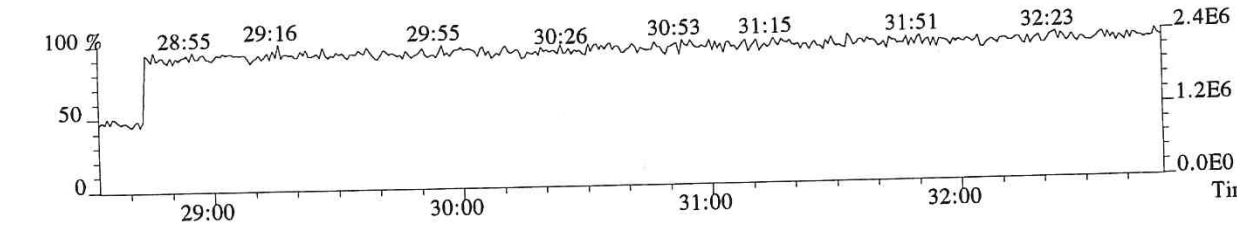
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,316.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

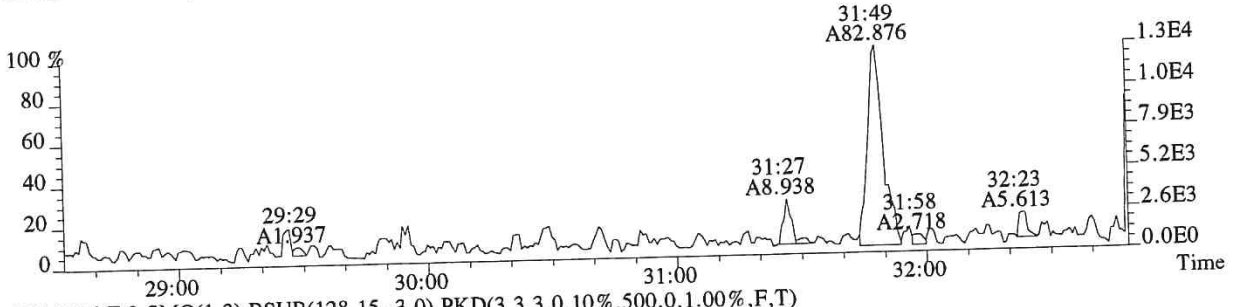


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

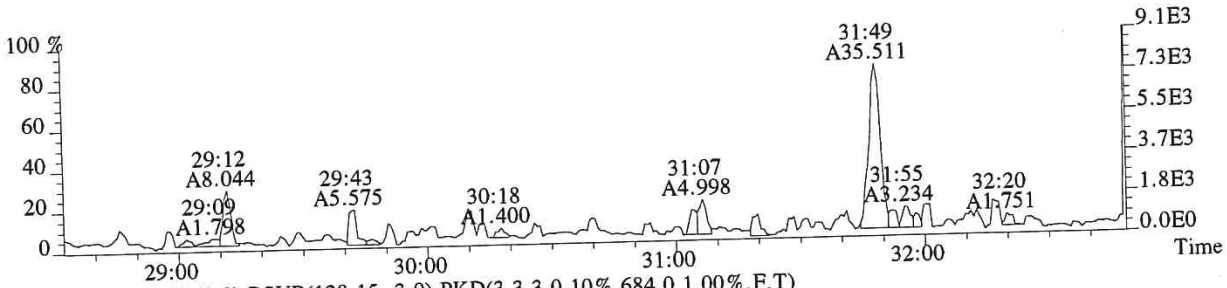


018390

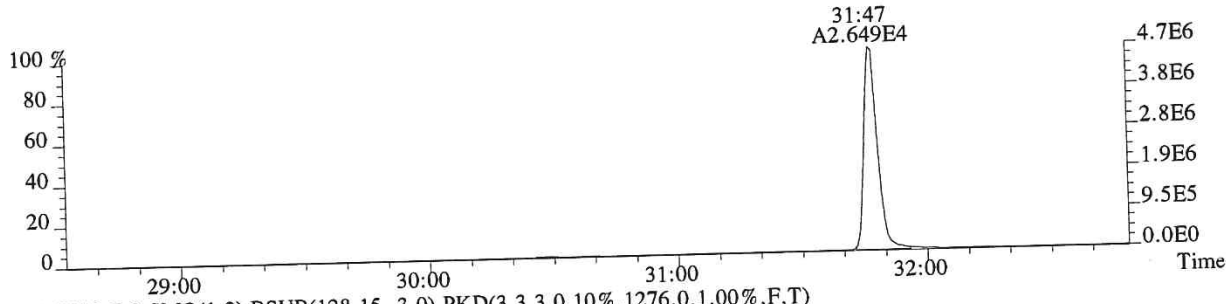
File:P519911 #1-385 Acq:11-JAN-2019 10:33:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1132.0,1.00%,F,T)



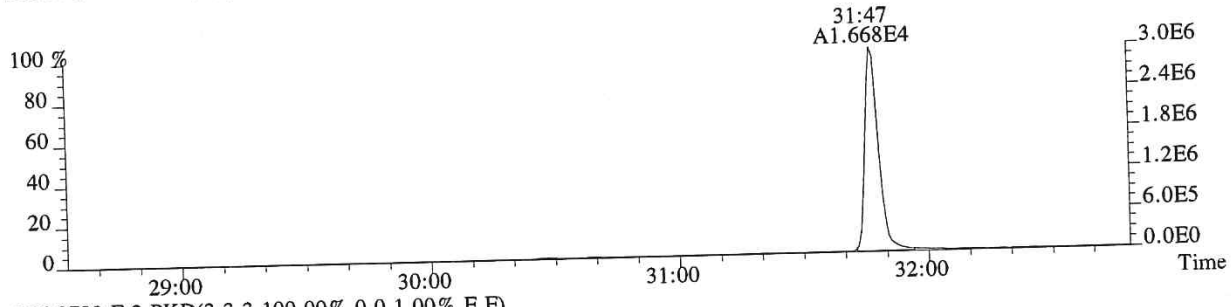
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,500.0,1.00%,F,T)



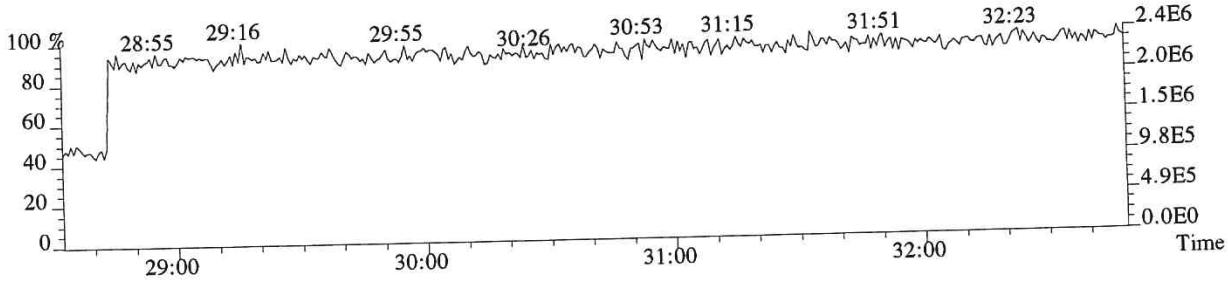
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,684.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1276.0,1.00%,F,T)

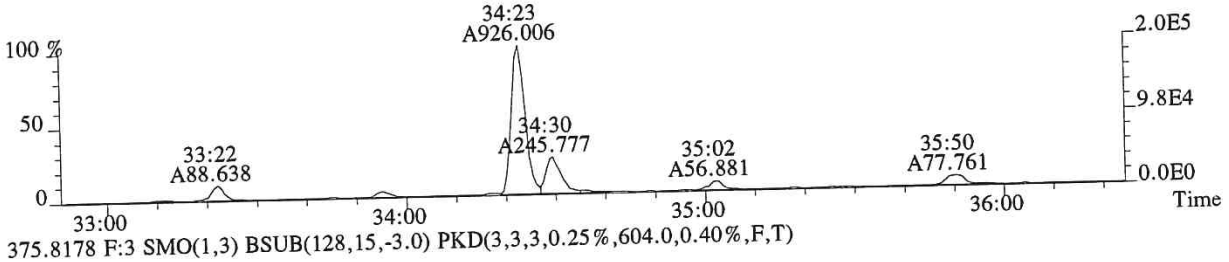


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

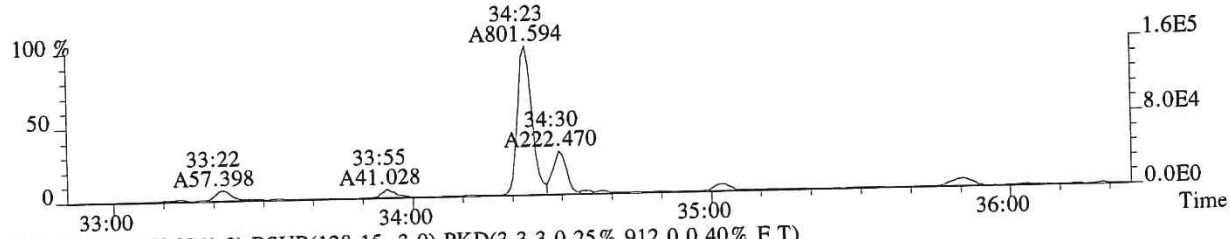


018391

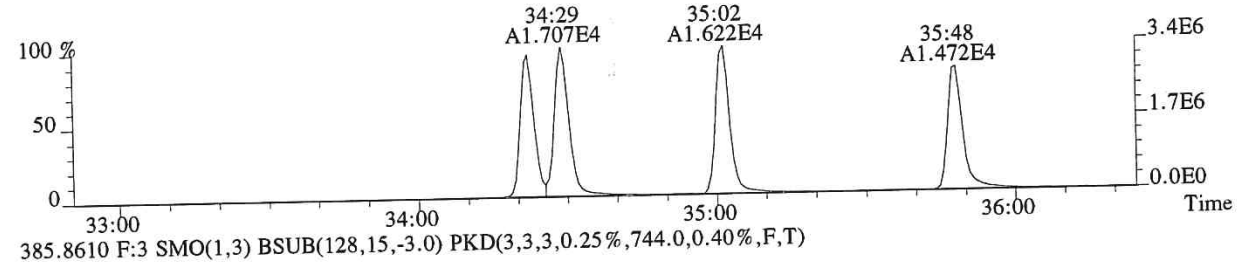
File:P519911 #1-321 Acq:11-JAN-2019 10:33:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,896.0,0.40%,F,T)



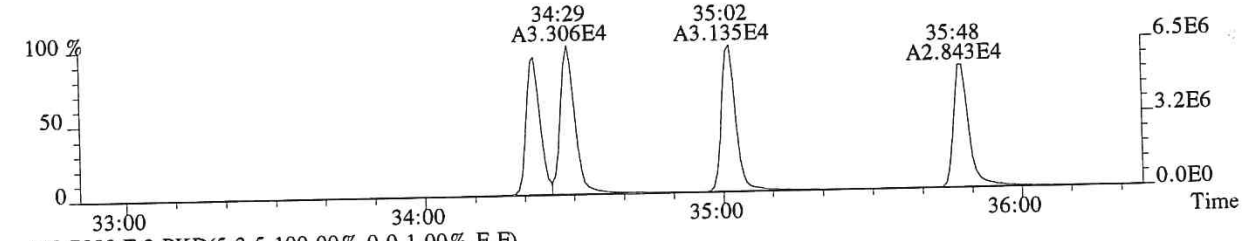
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,604.0,0.40%,F,T)



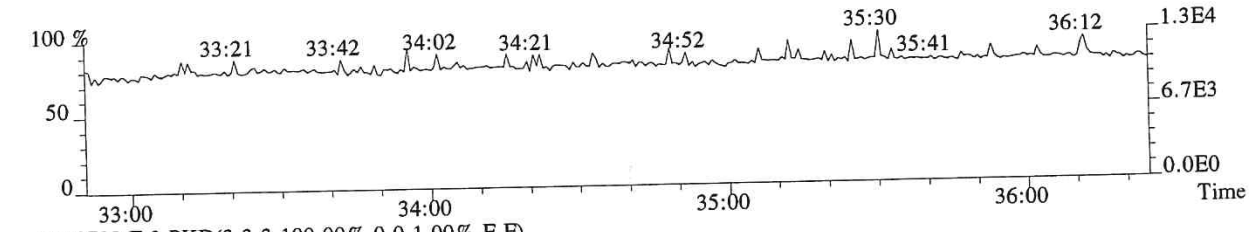
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,912.0,0.40%,F,T)



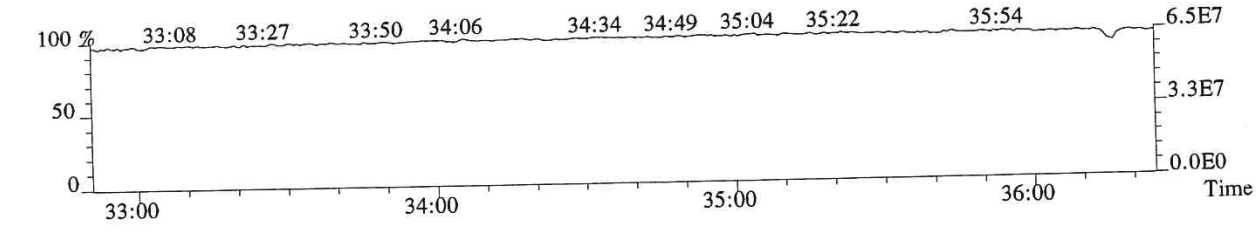
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,744.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

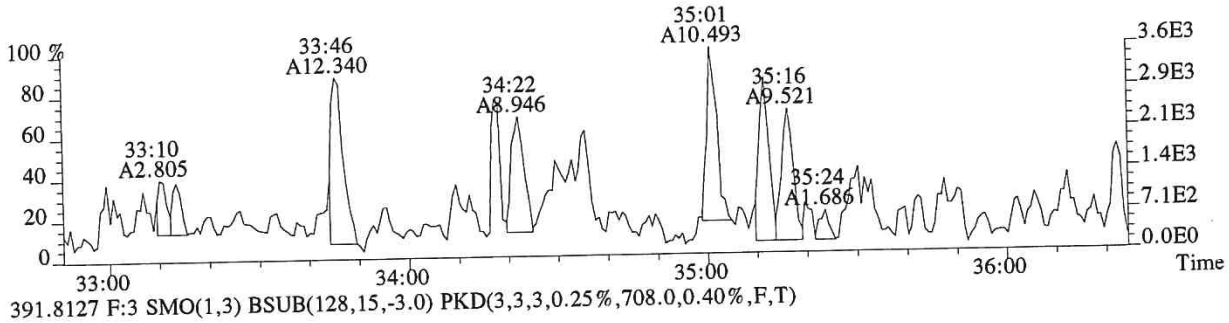


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

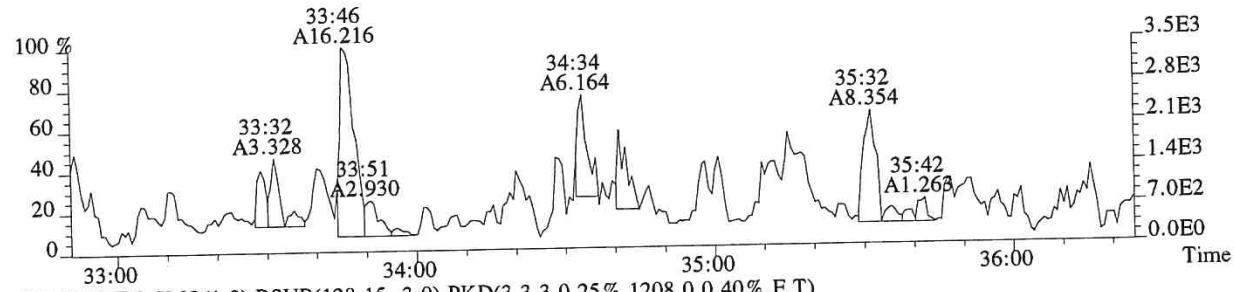


018392

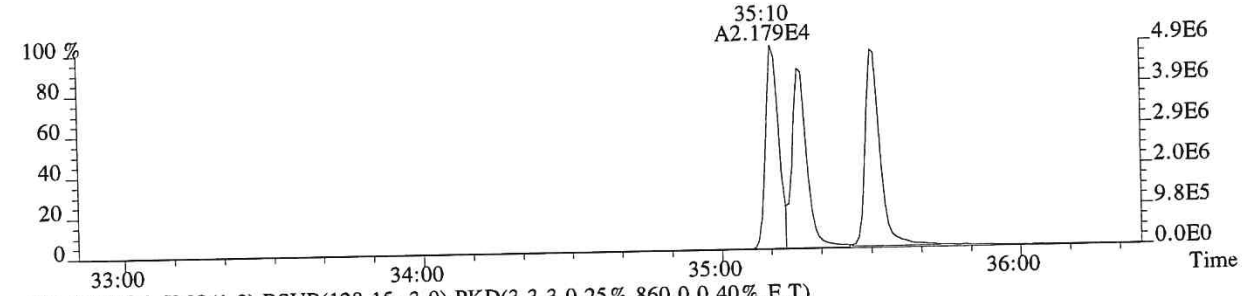
File:P519911 #1-321 Acq:11-JAN-2019 10:33:57 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:E1801139-009DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,784.0,0.40%,F,T)



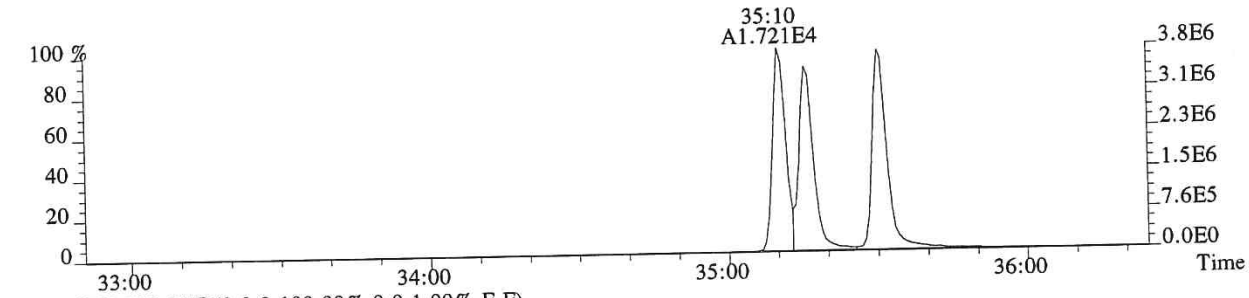
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,708.0,0.40%,F,T)



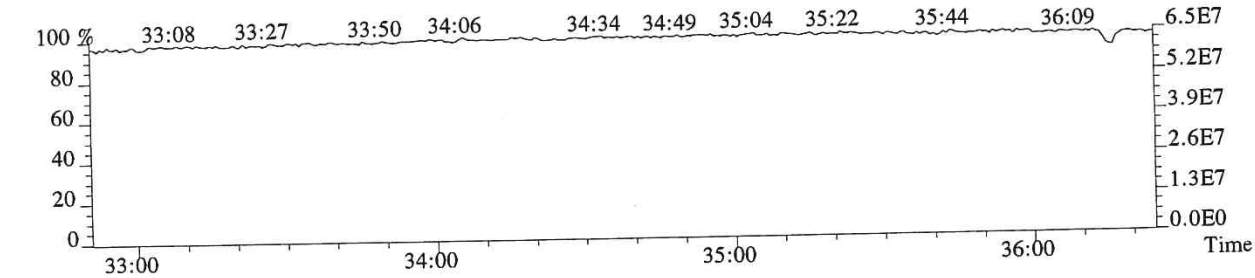
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1208.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,860.0,0.40%,F,T)

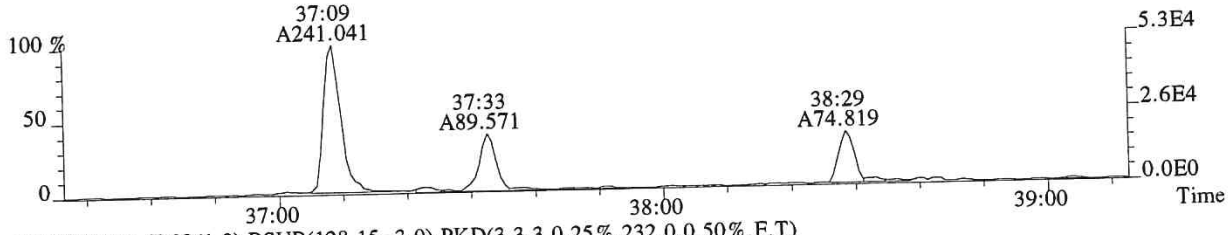


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

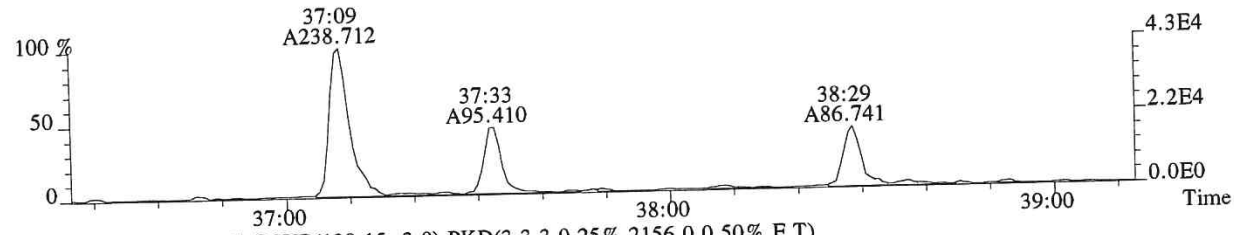


018393

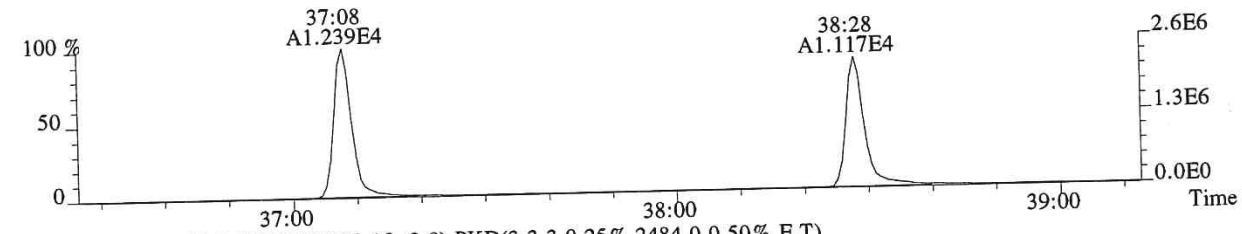
File:P519911 #1-250 Acq:11-JAN-2019 10:33:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,384.0,0.50%,F,T)



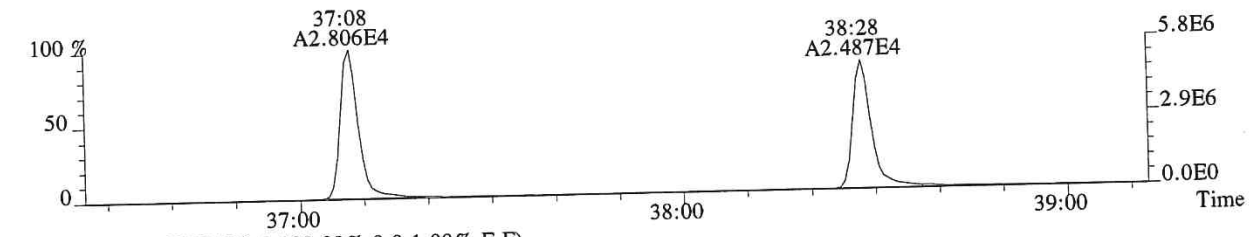
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,232.0,0.50%,F,T)



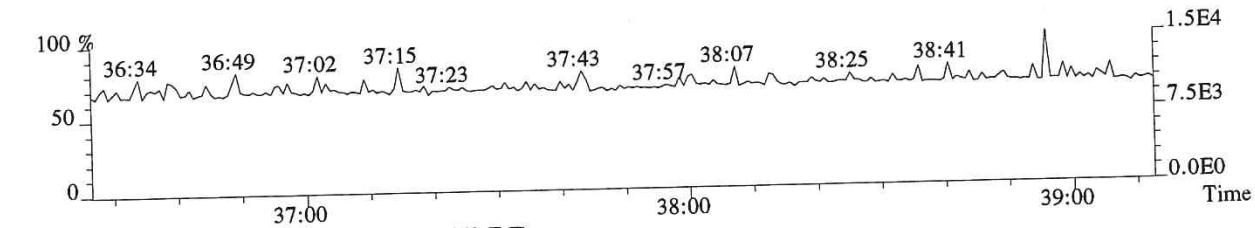
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2156.0,0.50%,F,T)



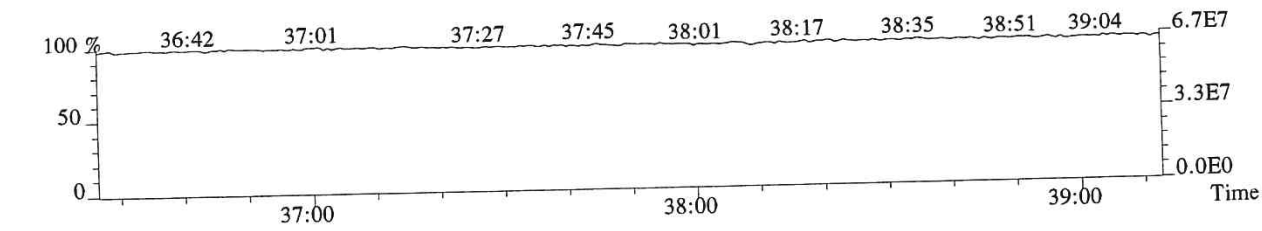
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2484.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

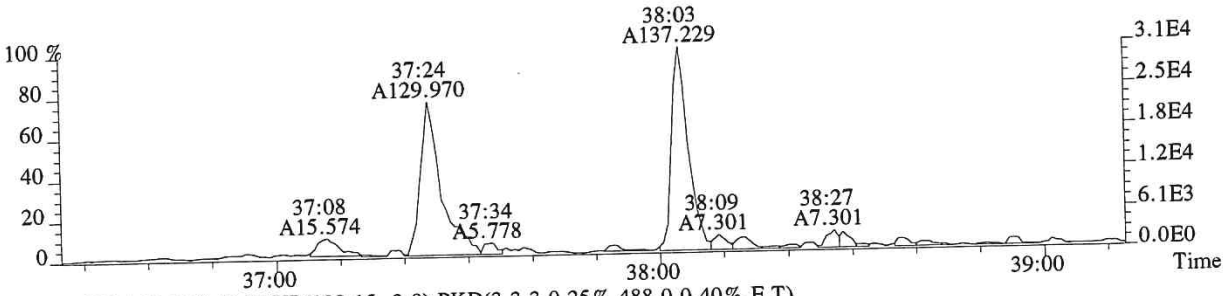


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

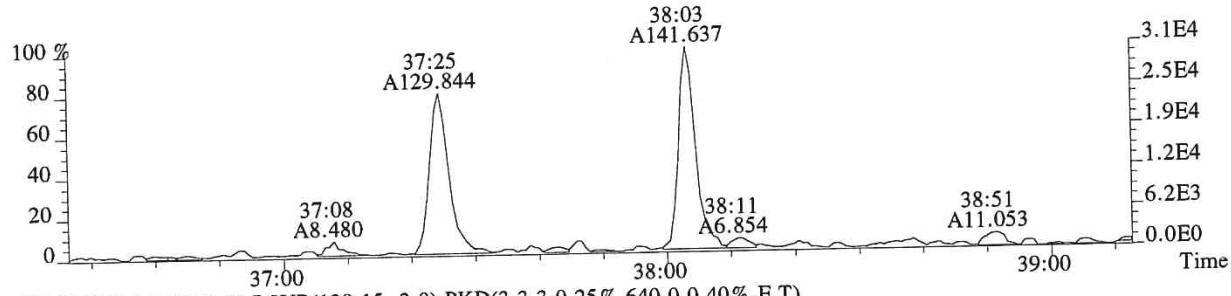


018394

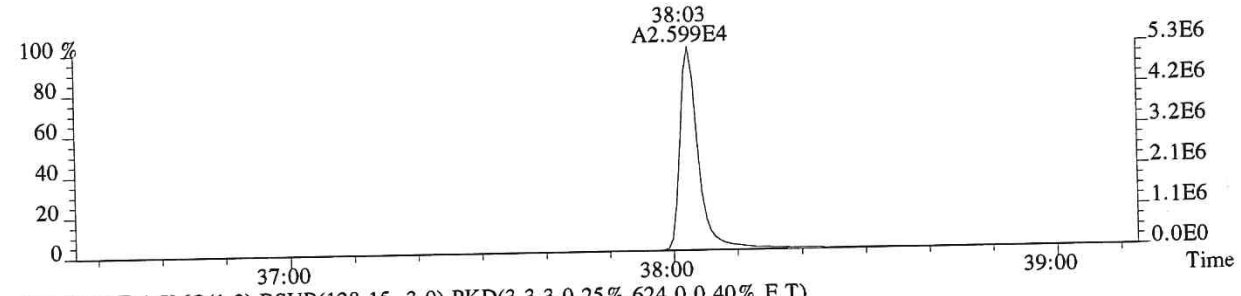
File:P519911 #1-250 Acq:11-JAN-2019 10:33:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,516.0,0.40%,F,T)



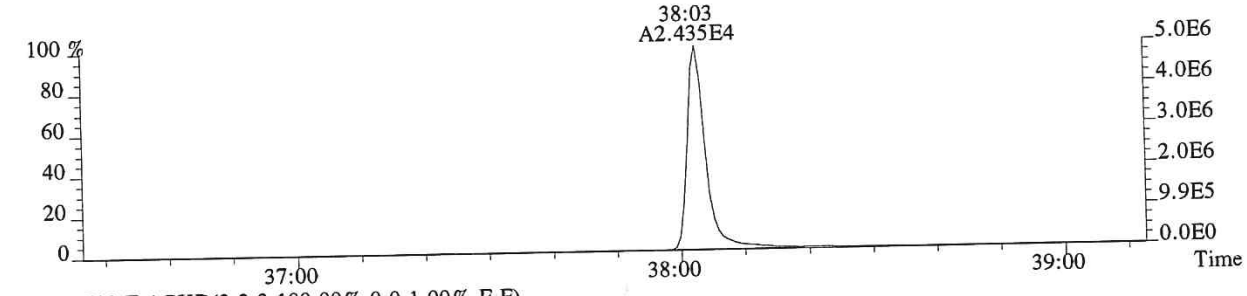
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,488.0,0.40%,F,T)



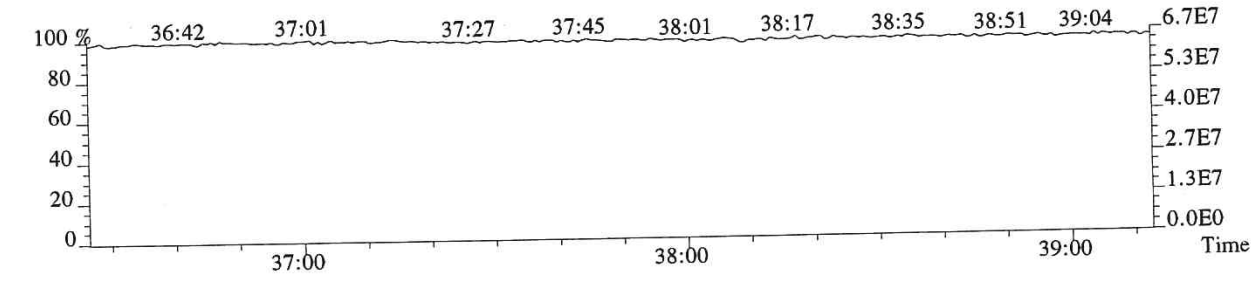
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,640.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,624.0,0.40%,F,T)

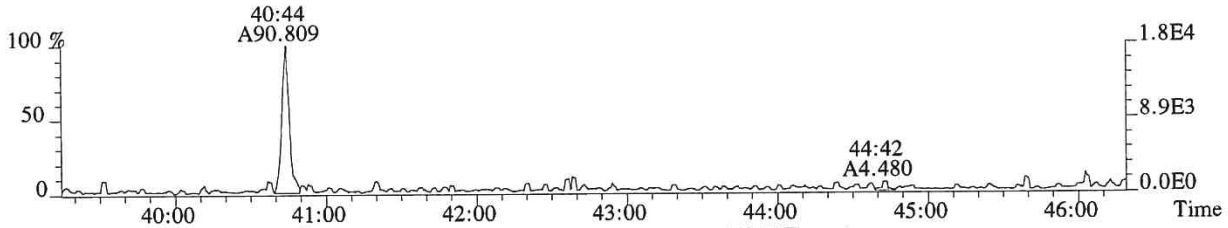


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

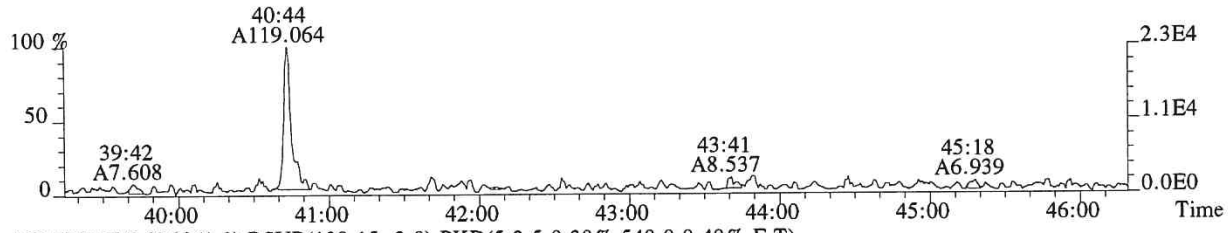


018395

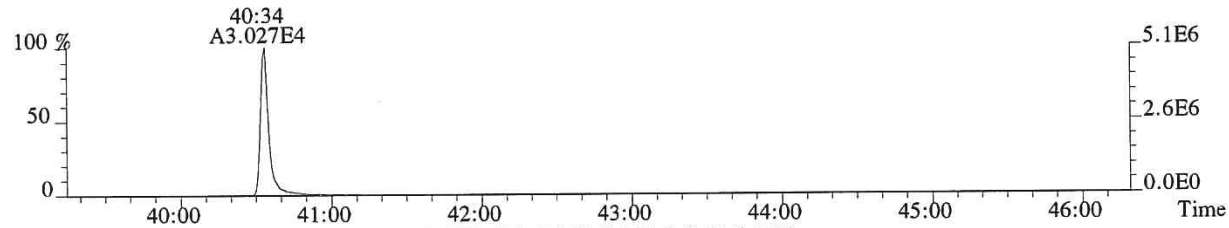
File:P519911 #1-637 Acq:11-JAN-2019 10:33:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,536.0,0.40%,F,T)



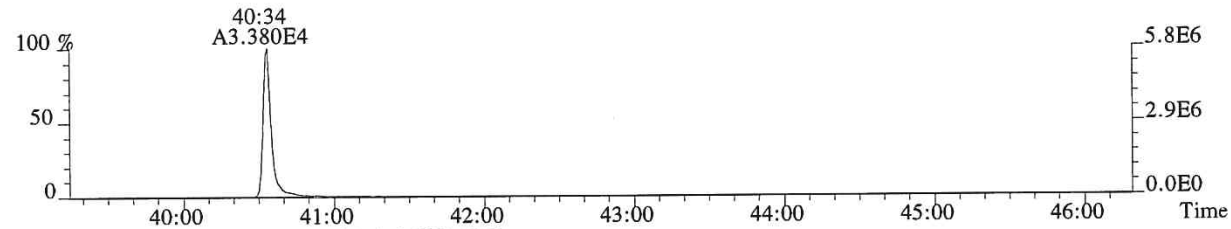
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1008.0,0.40%,F,T)



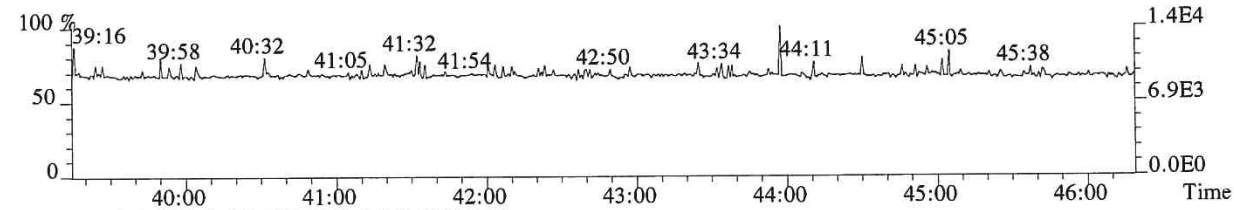
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,540.0,0.40%,F,T)



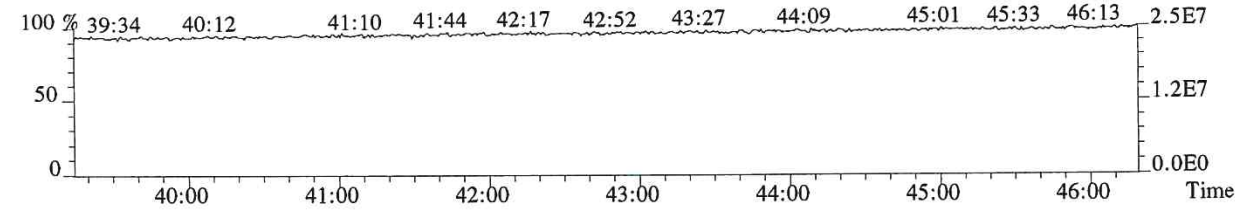
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,332.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

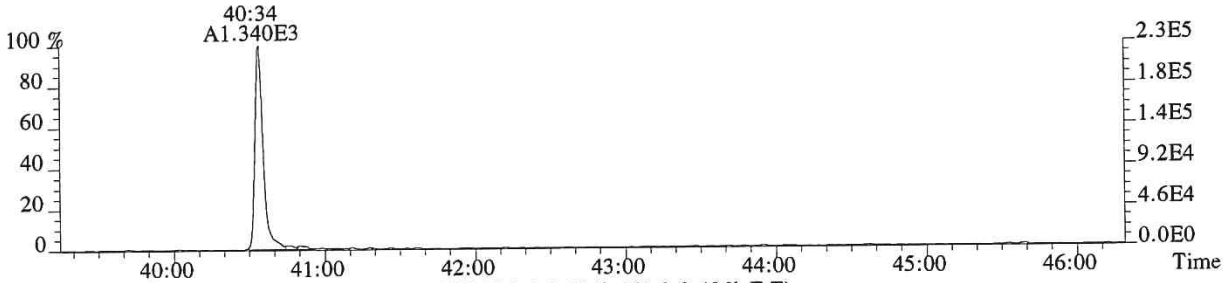


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

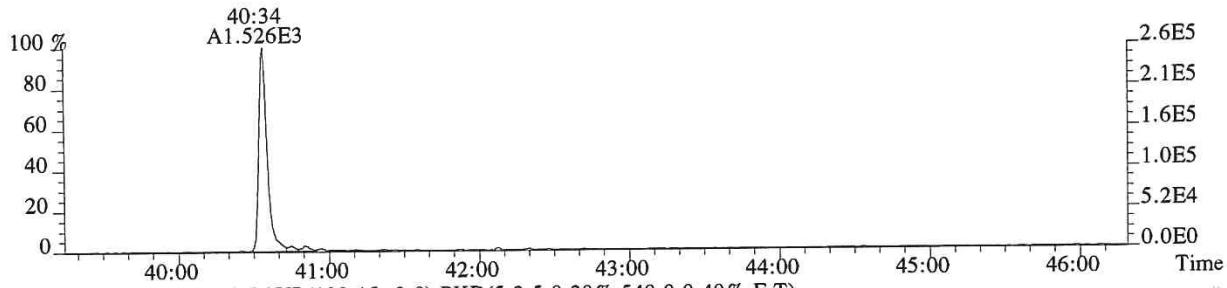


018396

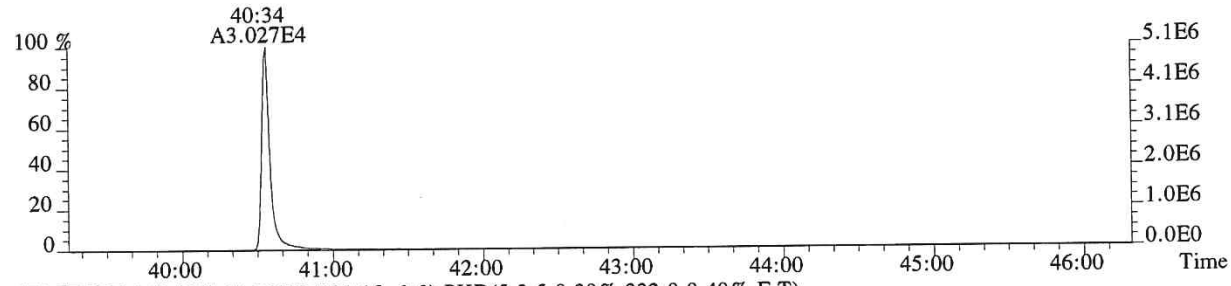
File:P519911 #1-637 Acq:11-JAN-2019 10:33:57 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-009DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,444.0,0.40%,F,T)



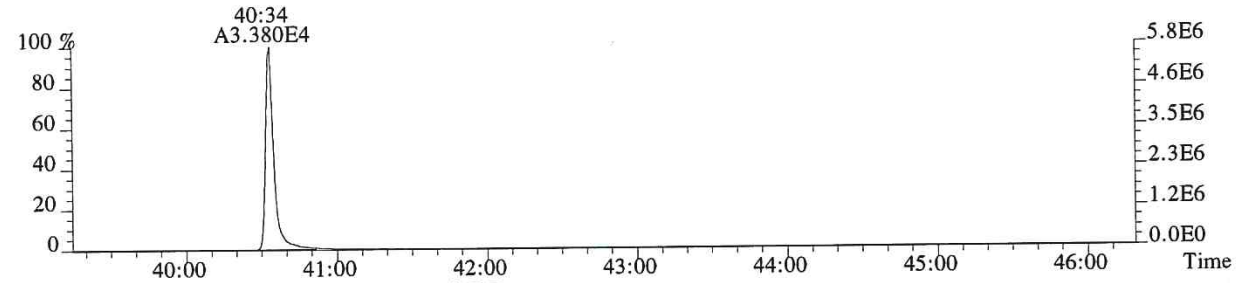
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,468.0,0.40%,F,T)



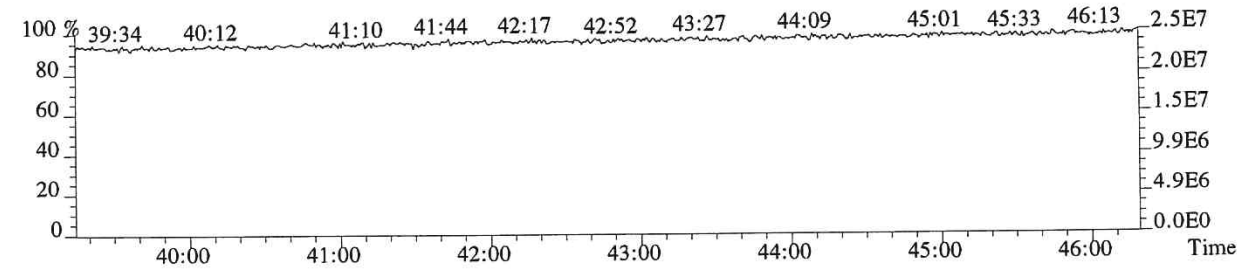
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,540.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,332.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0224

Run #19 Filename P519877 Samp: 1 Inj: 1 Acquired: 10-JAN-19 01:58:43
Processed: 10-JAN-19 08:15:36 Sample ID: E1801139-010

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:52	3.056e+06	3.908e+06	0.78	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:50	2.566e+05	1.674e+05	1.53	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:51	1.418e+05	9.253e+04	1.53	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:48	3.688e+05	3.036e+05	1.21	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:55	1.054e+05	8.916e+04	1.18	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:29	1.609e+04	1.359e+04	1.18	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:19	2.610e+04	2.093e+04	1.25	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:44	7.896e+04	7.778e+04	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:14	2.471e+04	2.394e+04	1.03	yes	no	1.258
10	Unk	OCDF	42:00	2.781e+05	3.169e+05	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:52	7.972e+05	1.016e+06	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:10	1.141e+04	7.307e+03	1.56	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:39	3.362e+02	2.512e+02	1.34	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:45	1.741e+03	1.335e+03	1.30	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:00	9.339e+02	6.517e+02	1.43	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:46	2.568e+04	2.510e+04	1.02	yes	no	1.025
17	Unk	OCDD	41:51	2.302e+05	2.635e+05	0.87	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:50	2.860e+04	3.603e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:49	4.157e+04	2.591e+04	1.60	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:50	3.848e+04	2.440e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:47	1.631e+04	3.088e+04	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:55	1.895e+04	3.629e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:28	1.690e+04	3.290e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:17	1.565e+04	3.096e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:44	1.013e+04	2.305e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:14	9.083e+03	2.052e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:50	1.282e+04	1.665e+04	0.77	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:09	3.005e+04	1.899e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:38	2.048e+04	1.620e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:43	2.536e+04	2.035e+04	1.25	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:46	2.072e+04	1.934e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	41:50	1.510e+04	1.627e+04	0.93	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:09	4.661e+04	5.877e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:59	5.965e+04	4.754e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:52	2.561e+04				no	1.014

$$OCDD = \frac{(2.302e+05 + 2.635e+05) \times 4000\ pg \times 1}{(1.510e+04 + 1.627e+04) \times 10,202\ g \times 64.0 / 100 \times 1.118} = 8623\ ng/kg$$

CM 01/11/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0224

Run #19 Filename P519877 Samp: 1 Inj: 1 Acquired: 10-JAN-19 01:58:43
Processed: 10-JAN-19 08:15:36 LAB. ID: E1801139-010

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	3.93e+08	5.84e+03	6.7e+04	4.99e+08	7.92e+03	6.3e+04
2	1,2,3,7,8-PeCDF	4.09e+07	4.06e+04	1.0e+03	2.66e+07	3.10e+04	8.6e+02
3	2,3,4,7,8-PeCDF	1.92e+07	4.06e+04	4.7e+02	1.23e+07	3.10e+04	4.0e+02
4	1,2,3,4,7,8-HxCDF	5.88e+07	2.63e+04	2.2e+03	4.85e+07	1.42e+04	3.4e+03
5	1,2,3,6,7,8-HxCDF	1.53e+07	2.63e+04	5.8e+02	1.26e+07	1.42e+04	8.9e+02
6	2,3,4,6,7,8-HxCDF	2.58e+06	2.63e+04	9.8e+01	2.16e+06	1.42e+04	1.5e+02
7	1,2,3,7,8,9-HxCDF	3.55e+06	2.63e+04	1.4e+02	2.89e+06	1.42e+04	2.0e+02
8	1,2,3,4,6,7,8-HpCDF	8.57e+06	7.79e+03	1.1e+03	8.44e+06	1.03e+04	8.2e+02
9	1,2,3,4,7,8,9-HpCDF	2.08e+06	7.79e+03	2.7e+02	1.95e+06	1.03e+04	1.9e+02
10	OCDF	1.30e+07	8.00e+02	1.6e+04	1.47e+07	9.76e+02	1.5e+04
11	2,3,7,8-TCDD	1.43e+08	4.55e+03	3.1e+04	1.83e+08	4.45e+03	4.1e+04
12	1,2,3,7,8-PeCDD	1.67e+06	5.92e+03	2.8e+02	1.07e+06	2.46e+03	4.4e+02
13	1,2,3,4,7,8-HxCDD	6.30e+04	2.30e+03	2.7e+01	4.93e+04	2.92e+03	1.7e+01
14	1,2,3,6,7,8-HxCDD	2.40e+05	2.30e+03	1.0e+02	1.97e+05	2.92e+03	6.7e+01
15	1,2,3,7,8,9-HxCDD	1.21e+05	2.30e+03	5.3e+01	8.94e+04	2.92e+03	3.1e+01
16	1,2,3,4,6,7,8-HpCDD	2.25e+06	1.31e+03	1.7e+03	2.21e+06	4.78e+03	4.6e+02
17	OCDD	1.08e+07	1.05e+03	1.0e+04	1.22e+07	1.11e+03	1.1e+04
18	13C-2,3,7,8-TCDF	3.85e+06	1.16e+04	3.3e+02	4.86e+06	1.24e+04	3.9e+02
19	13C-1,2,3,7,8-PeCDF	6.64e+06	1.73e+04	3.8e+02	4.30e+06	2.55e+04	1.7e+02
20	13C-2,3,4,7,8-PeCDF	6.25e+06	1.73e+04	3.6e+02	4.02e+06	2.55e+04	1.6e+02
21	13C-1,2,3,4,7,8-HxCDF	2.68e+06	2.67e+03	1.0e+03	5.08e+06	2.21e+04	2.3e+02
22	13C-1,2,3,6,7,8-HxCDF	2.78e+06	2.67e+03	1.0e+03	5.36e+06	2.21e+04	2.4e+02
23	13C-2,3,4,6,7,8-HxCDF	2.52e+06	2.67e+03	9.5e+02	4.91e+06	2.21e+04	2.2e+02
24	13C-1,2,3,7,8,9-HxCDF	2.10e+06	2.67e+03	7.9e+02	4.13e+06	2.21e+04	1.9e+02
25	13C-1,2,3,4,6,7,8-HpCDF	1.13e+06	4.35e+03	2.6e+02	2.50e+06	3.55e+03	7.0e+02
26	13C-1,2,3,4,7,8,9-HpCDF	7.53e+05	4.35e+03	1.7e+02	1.65e+06	3.55e+03	4.7e+02
27	13C-2,3,7,8-TCDD	2.25e+06	1.17e+04	1.9e+02	2.87e+06	8.32e+03	3.5e+02
28	13C-1,2,3,7,8-PeCDD	4.82e+06	3.12e+03	1.5e+03	3.00e+06	3.10e+03	9.7e+02
29	13C-1,2,3,4,7,8-HxCDD	3.54e+06	1.96e+03	1.8e+03	2.74e+06	1.86e+03	1.5e+03
30	13C-1,2,3,6,7,8-HxCDD	3.30e+06	1.96e+03	1.7e+03	2.70e+06	1.86e+03	1.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.80e+06	1.63e+03	1.1e+03	1.67e+06	7.88e+02	2.1e+03
32	13C-OCDD	7.19e+05	1.55e+03	4.6e+02	7.65e+05	8.00e+02	9.6e+02
33	13C-1,2,3,4-TCDD	6.92e+06	1.17e+04	5.9e+02	8.76e+06	8.32e+03	1.1e+03
34	13C-1,2,3,7,8,9-HxCDD	7.78e+06	1.96e+03	4.0e+03	6.17e+06	1.86e+03	3.3e+03
35	37Cl-2,3,7,8-TCDD	4.62e+06	4.39e+03	1.1e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0224

Entry: 36 Totals Name: Total Tetra-Furans

Run: 19 File: P519877 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 01:58:43 Processed: 10-JAN-19 08:15:36

Mass: 303.9020 305.8990 Tot Response: 1.28e+07 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:42	2.41e+04	3.16e+04	0.76	yes	5.57e+04		n	n
2	22:59	1.30e+05	1.67e+05	0.78	yes	2.97e+05		n	n
3	23:20	4.06e+04	5.52e+04	0.74	yes	9.58e+04		n	n
4	23:28	4.97e+03	5.86e+03	0.85	yes	1.08e+04		n	n
5	23:38	1.10e+05	1.43e+05	0.77	yes	2.54e+05		n	n
6	24:01	2.38e+04	3.51e+04	0.68	yes	5.89e+04		n	n
7	24:15	7.42e+04	8.58e+04	0.87	yes	1.60e+05		n	n
8	24:21	1.37e+05	1.90e+05	0.72	yes	3.27e+05		n	n
9	24:50	1.45e+06	1.84e+06	0.78	yes	3.29e+06		n	n
10	25:08	7.09e+04	9.35e+04	0.76	yes	1.64e+05		n	n
11	25:52	3.06e+06	3.91e+06	0.78	yes	6.96e+06	2,3,7,8-TCDF	n	n
12	26:18	2.06e+05	2.63e+05	0.78	yes	4.68e+05		n	n
13	26:35	3.64e+04	4.85e+04	0.75	yes	8.49e+04		n	n
14	28:05	2.44e+05	3.12e+05	0.78	yes	5.56e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0224

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 19 File: P519877 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 01:58:43 Processed: 10-JAN-19 08:15:36

Mass: 319.8970 321.8940 Tot Response: 2.03e+06 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:33	1.02e+04	1.31e+04	0.78	yes	2.34e+04		n	n
2	26:52	7.97e+05	1.02e+06	0.78	yes	1.81e+06	2,3,7,8-TCDD	n	n
3	27:12	8.31e+04	1.06e+05	0.79	yes	1.89e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0224

Entry: 38 Totals Name: Total Penta-Furans1

Run: 19 File: P519877 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 01:58:43 Processed: 10-JAN-19 08:15:36

Mass: 339.8600 341.8570 Tot Response: 1.66e+04 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:08	1.04e+04	6.26e+03	1.66	yes	1.66e+04	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0224

Entry: 39 Totals Name: Total Penta-Furans2

Run: 19 File: P519877 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 01:58:43 Processed: 10-JAN-19 08:15:36

Mass: 339.8600 341.8570 Tot Response: 9.86e+05 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:39	1.98e+03	1.41e+03	1.41	yes	3.39e+03		n	n
2	29:48	1.06e+05	6.92e+04	1.53	yes	1.75e+05		n	n
3	30:25	3.19e+03	1.87e+03	1.70	yes	5.06e+03		n	n
4	30:39	1.59e+04	1.03e+04	1.54	yes	2.62e+04		n	n
5	30:50	2.57e+05	1.67e+05	1.53	yes	4.24e+05	1,2,3,7,8-PeCDF	n	n
6	31:07	6.30e+04	4.17e+04	1.51	yes	1.05e+05		n	n
7	31:45	1.08e+03	7.45e+02	1.45	yes	1.83e+03		n	n
8	31:51	1.42e+05	9.25e+04	1.53	yes	2.34e+05	2,3,4,7,8-PeCDF	n	n
9	32:50	7.21e+03	4.78e+03	1.51	yes	1.20e+04		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0224

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 19 File: P519877 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 01:58:43 Processed: 10-JAN-19 08:15:36

Mass: 355.8550 357.8520 Tot Response: 2.59e+04 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:52	1.22e+03	8.28e+02	1.48	yes	2.05e+03		n	n
2	30:22	5.63e+02	4.14e+02	1.36	yes	9.77e+02		n	n
3	30:52	6.96e+02	4.69e+02	1.48	yes	1.17e+03		n	n
4	31:03	7.79e+02	5.76e+02	1.35	yes	1.36e+03		n	n
5	31:09	2.90e+02	1.96e+02	1.48	yes	4.86e+02		n	n
6	31:23	6.82e+02	4.81e+02	1.42	yes	1.16e+03		n	n
7	32:10	1.14e+04	7.31e+03	1.56	yes	1.87e+04	1,2,3,7,8-PeCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0224

Entry: 41 Totals Name: Total Hexa-Furans

Run: 19 File: P519877 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 01:58:43 Processed: 10-JAN-19 08:15:36

Mass: 373.8210 375.8180 Tot Response: 1.04e+06 RRF: 1.141

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:36	3.31e+03	2.63e+03 1.26	yes	5.94e+03		n	n
2	33:47	3.09e+04	2.50e+04 1.23	yes	5.59e+04		n	n
3	34:21	1.77e+04	1.48e+04 1.20	yes	3.25e+04		n	n
4	34:48	3.69e+05	3.04e+05 1.21	yes	6.72e+05	1,2,3,4,7,8-HxCDF	n	n
5	34:55	1.05e+05	8.92e+04 1.18	yes	1.95e+05	1,2,3,6,7,8-HxCDF	n	n
6	35:29	1.61e+04	1.36e+04 1.18	yes	2.97e+04	2,3,4,6,7,8-HxCDF	n	n
7	36:19	2.61e+04	2.09e+04 1.25	yes	4.70e+04	1,2,3,7,8,9-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0224

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 19 File: P519877 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 01:58:43 Processed: 10-JAN-19 08:15:36

Mass: 389.8160 391.8130 Tot Response: 2.98e+04 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:11	7.44e+03	1.25	yes	1.34e+04		n	n
2	34:45	9.71e+02	1.24	yes	1.76e+03		n	n
3	35:00	5.98e+03	1.19	yes	1.10e+04		n	n
4	35:39	3.36e+02	1.34	yes	5.87e+02	1,2,3,4,7,8-HxCDD	n	n
5	35:45	1.74e+03	1.30	yes	3.08e+03	1,2,3,6,7,8-HxCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0224

Entry: 43 Totals Name: Total Hepta-Furans

Run: 19 File: P519877 Sample:1 Injection:1 Function:4

Acquired: 10-JAN-19 01:58:43 Processed: 10-JAN-19 08:15:36

Mass: 407.7820 409.7790 Tot Response: 2.64e+05 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:44	7.90e+04	7.78e+04 1.02	yes	1.57e+05	1,2,3,4,6,7,8-HpCDF	n	n
2	38:12	2.91e+04	2.92e+04 1.00	yes	5.83e+04		n	n
3	39:14	2.47e+04	2.39e+04 1.03	yes	4.87e+04	1,2,3,4,7,8,9-HpCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0224

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 19 File: P519877 Sample:1 Injection:1 Function:4

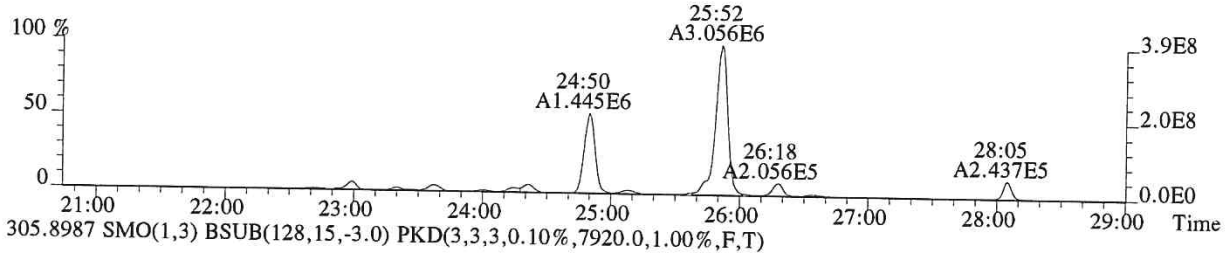
Acquired: 10-JAN-19 01:58:43 Processed: 10-JAN-19 08:15:36

Mass: 423.7770 425.7740 Tot Response: 1.26e+05 RRF: 1.025

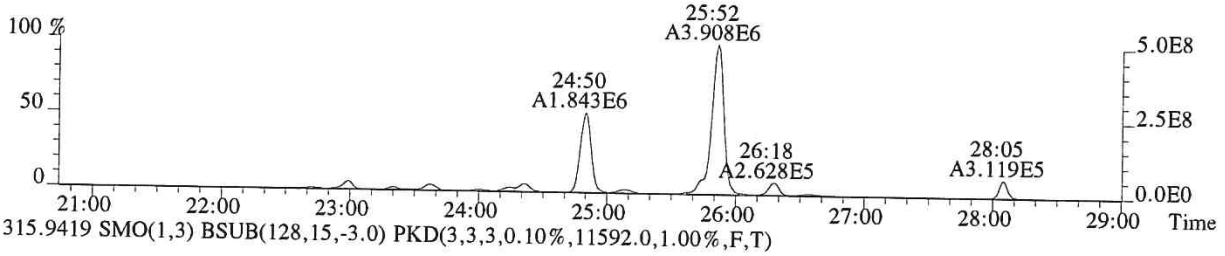
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:03	3.87e+04	3.70e+04 1.04	yes	7.57e+04		n	n
2	38:46	2.57e+04	2.51e+04 1.02	yes	5.08e+04	1,2,3,4,6,7,8-HpCDD	n	n

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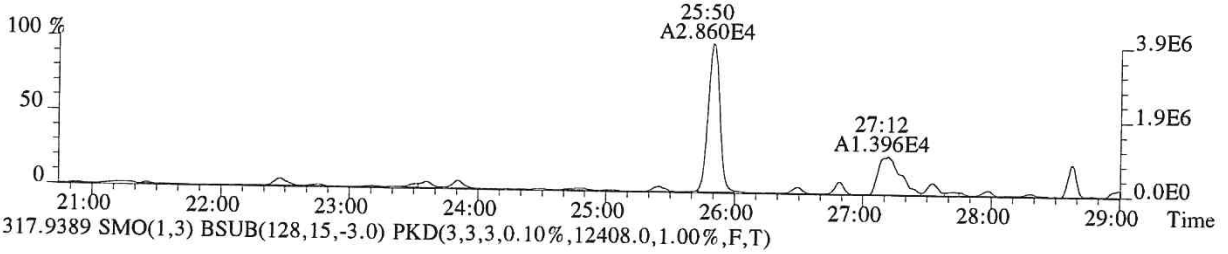
File:P519877 #1-587 Acq:10-JAN-2019 01:58:43 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5844.0,1.00%,F,T)



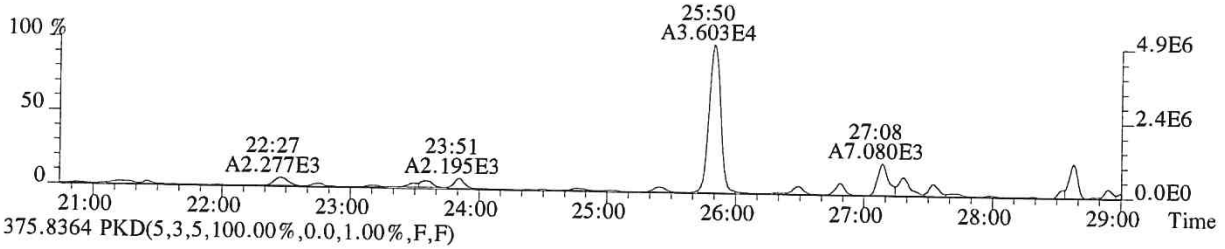
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7920.0,1.00%,F,T)



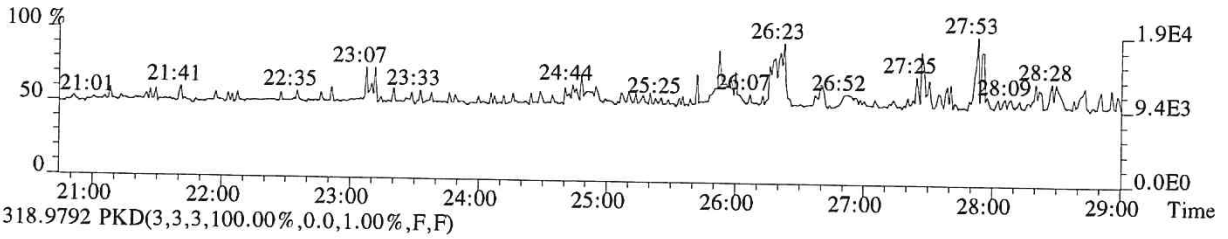
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11592.0,1.00%,F,T)



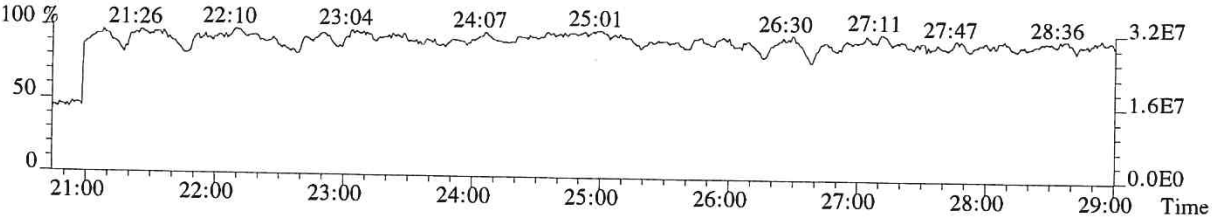
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12408.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

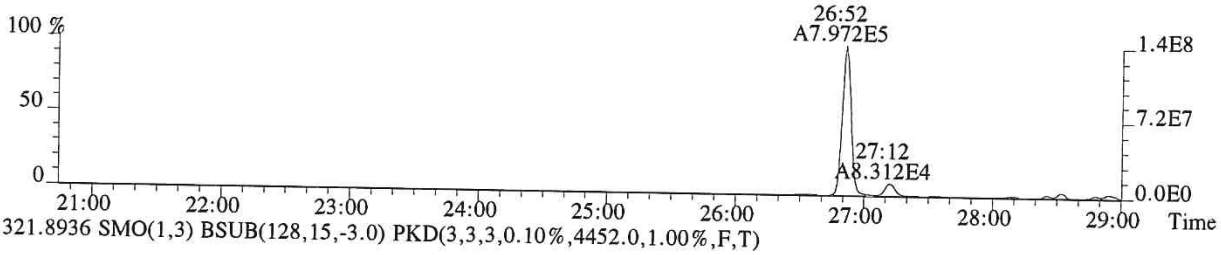


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

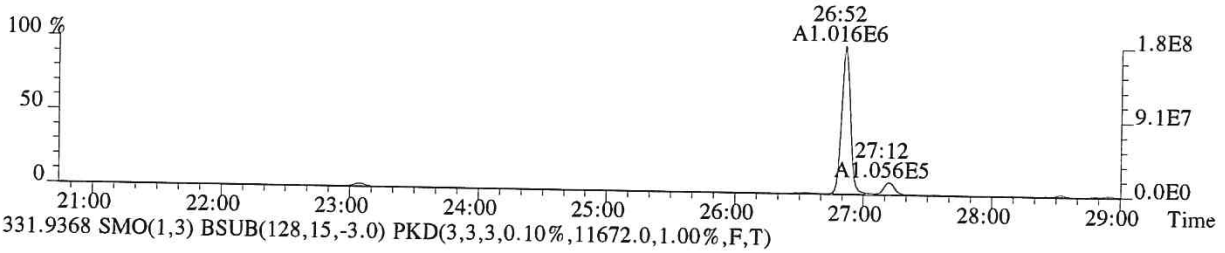


018409

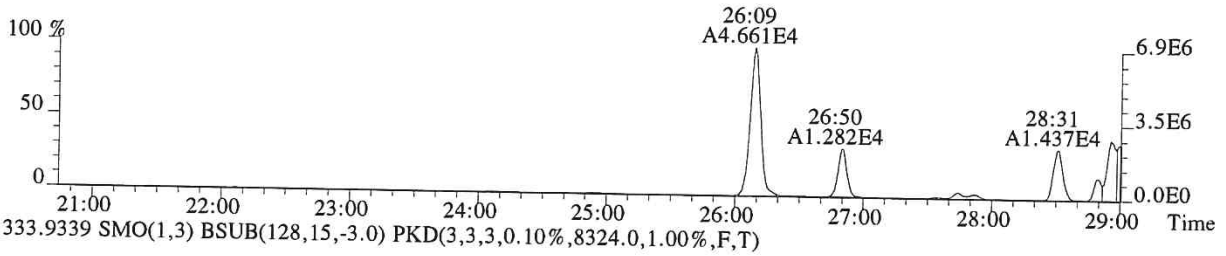
File:P519877 #1-587 Acq:10-JAN-2019 01:58:43 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4548.0,1.00%,F,T)



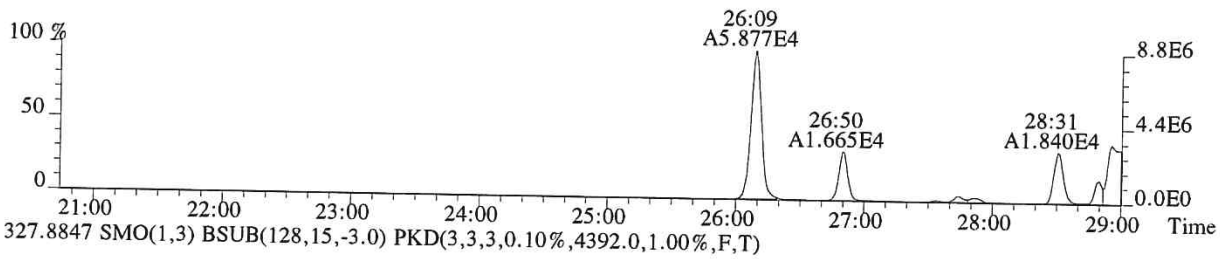
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4452.0,1.00%,F,T)



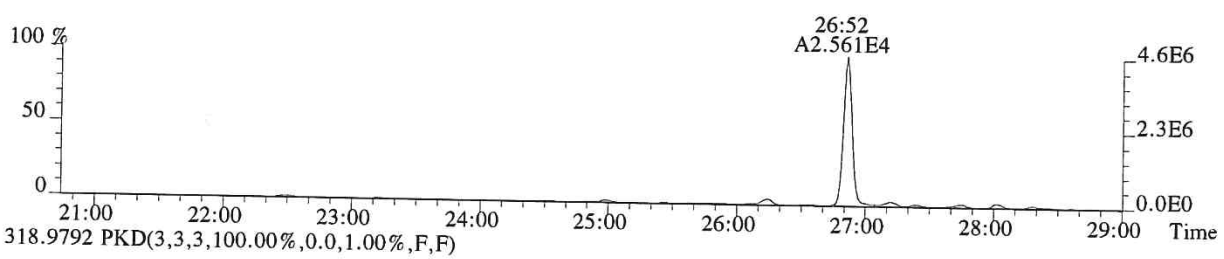
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11672.0,1.00%,F,T)



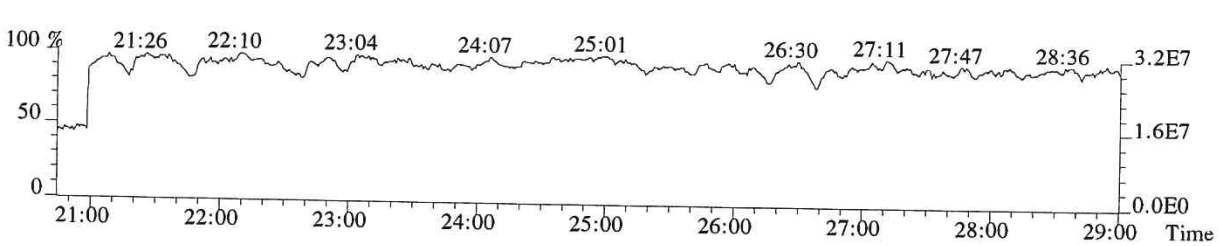
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8324.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4392.0,1.00%,F,T)

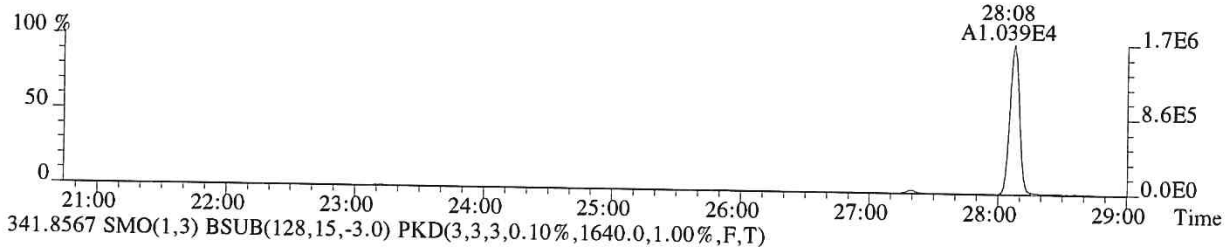


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

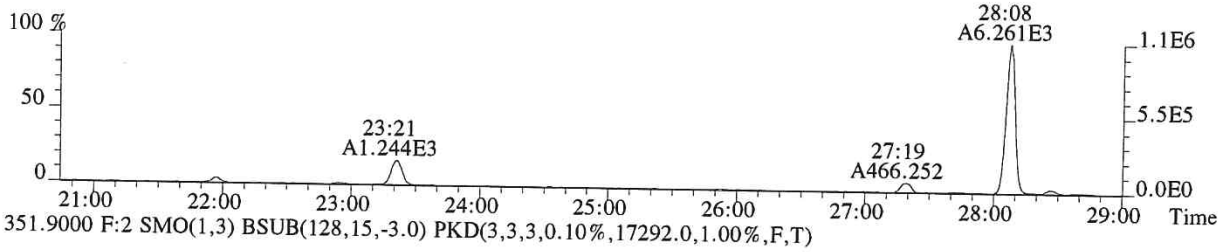


018410

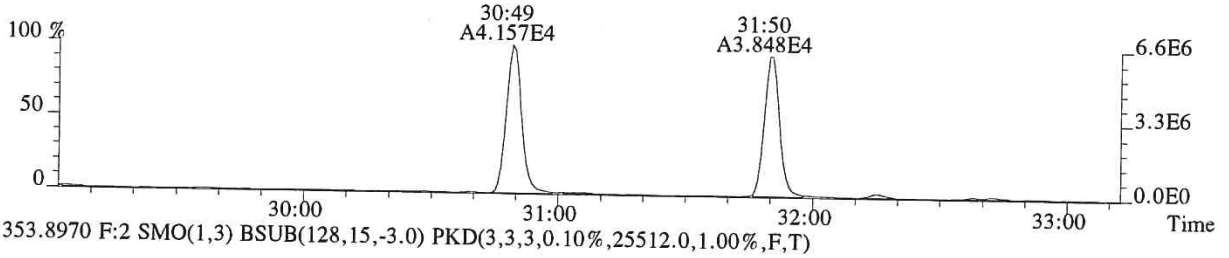
File:P519877 #1-587 Acq:10-JAN-2019 01:58:43 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1708.0,1.00%,F,T)



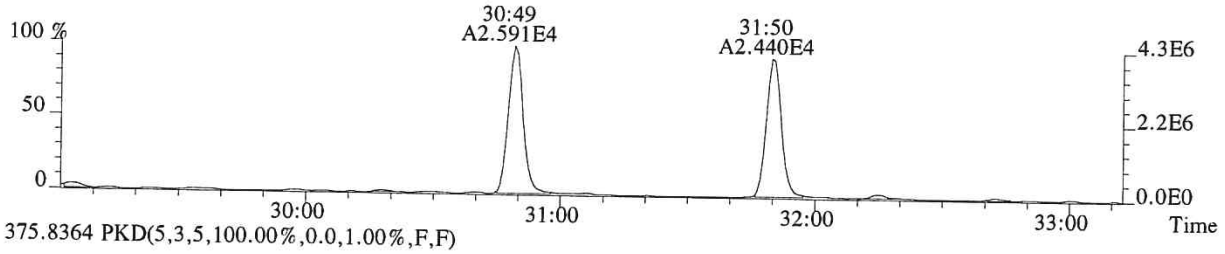
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1640.0,1.00%,F,T)



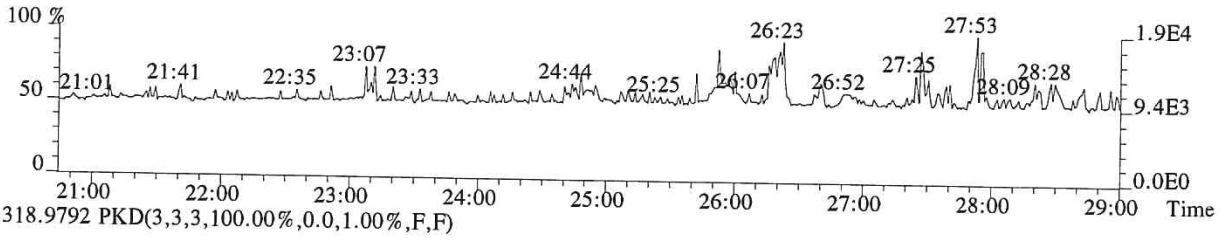
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,17292.0,1.00%,F,T)



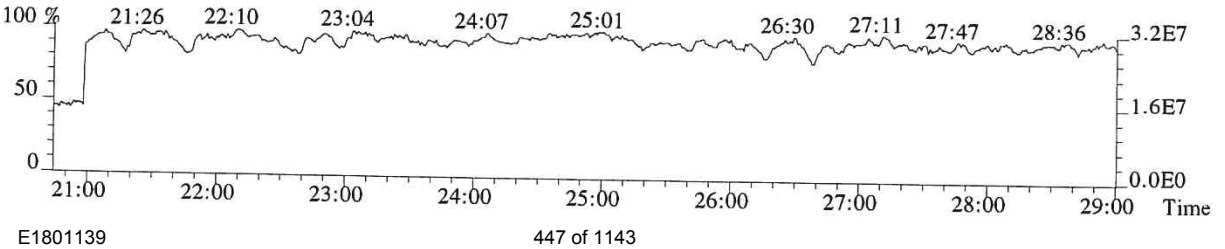
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,25512.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

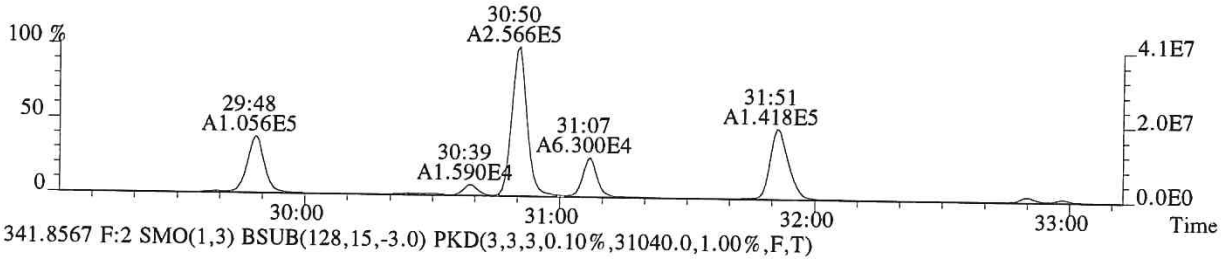


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

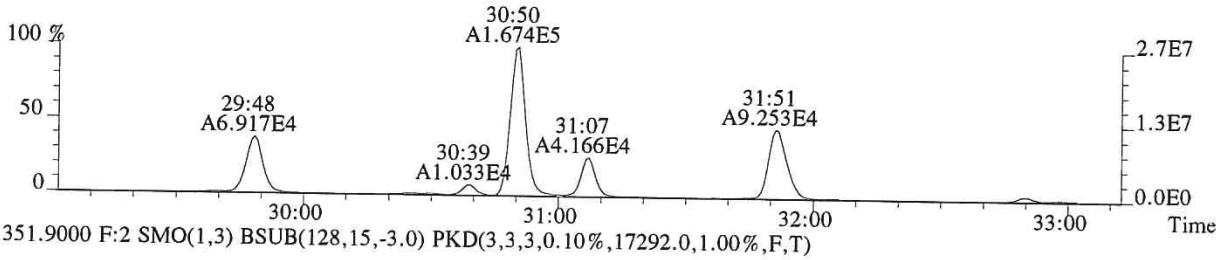


018411

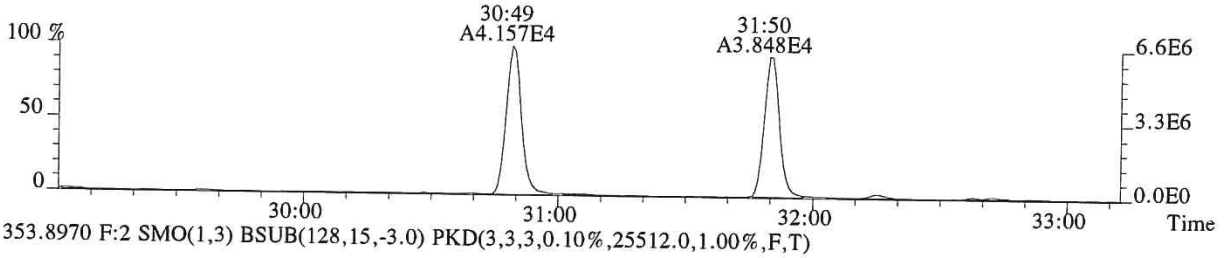
File:P519877 #1-376 Acq:10-JAN-2019 01:58:43 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,40572.0,1.00%,F,T)



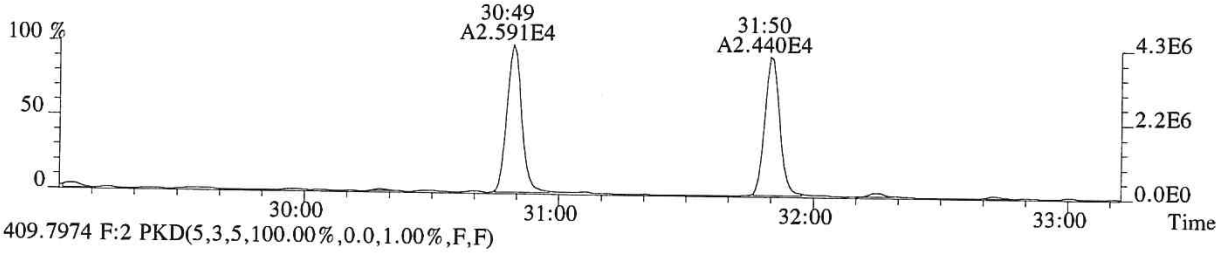
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,31040.0,1.00%,F,T)



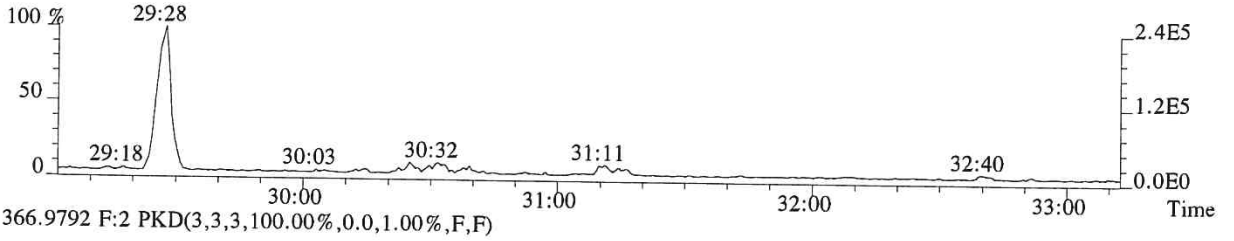
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,17292.0,1.00%,F,T)



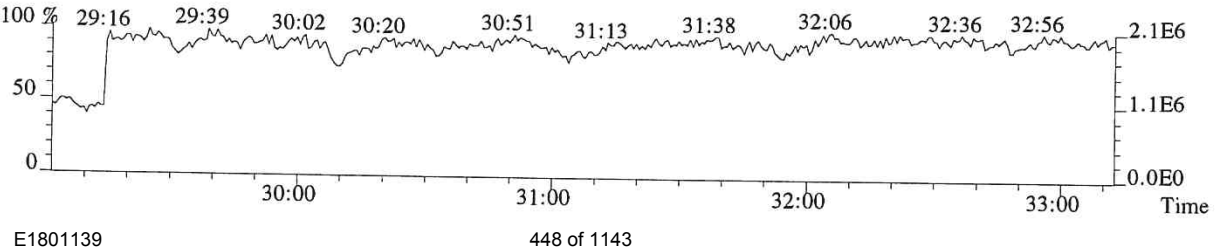
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,25512.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

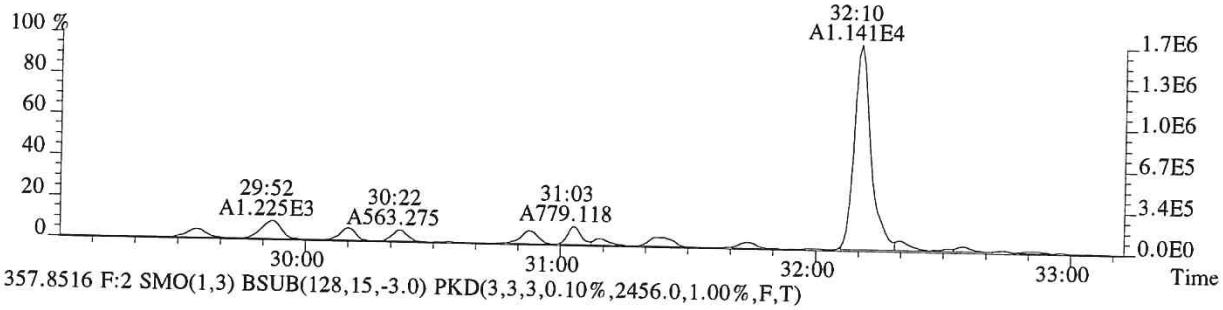


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

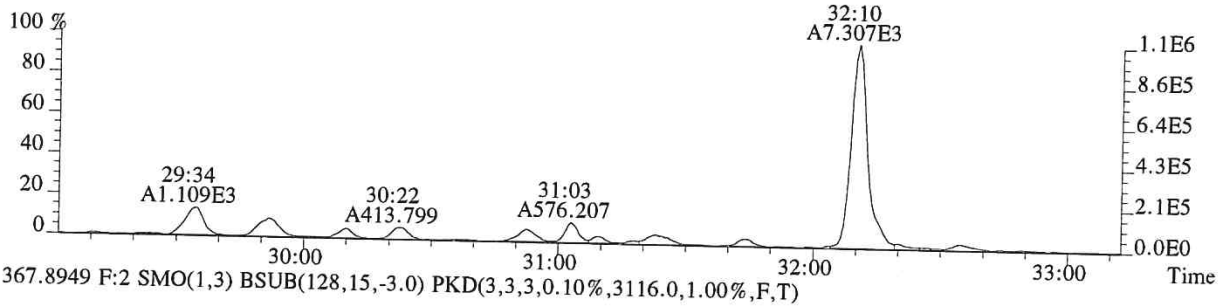


018412

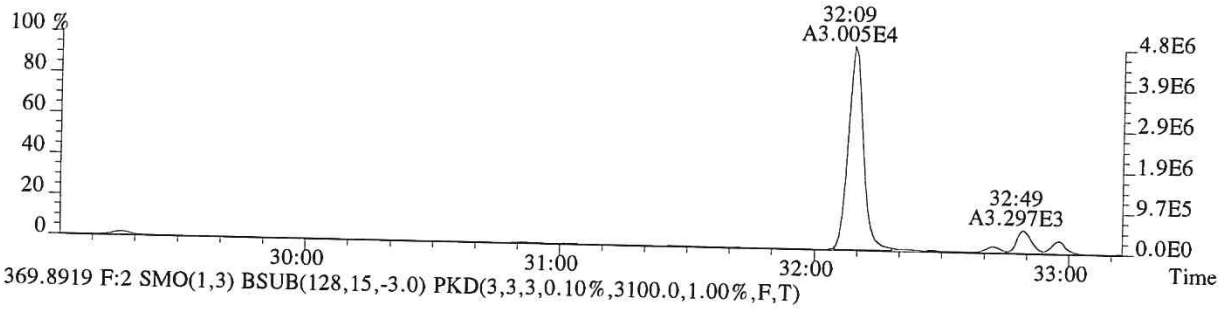
File:P519877 #1-376 Acq:10-JAN-2019 01:58:43 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5924.0,1.00%,F,T)



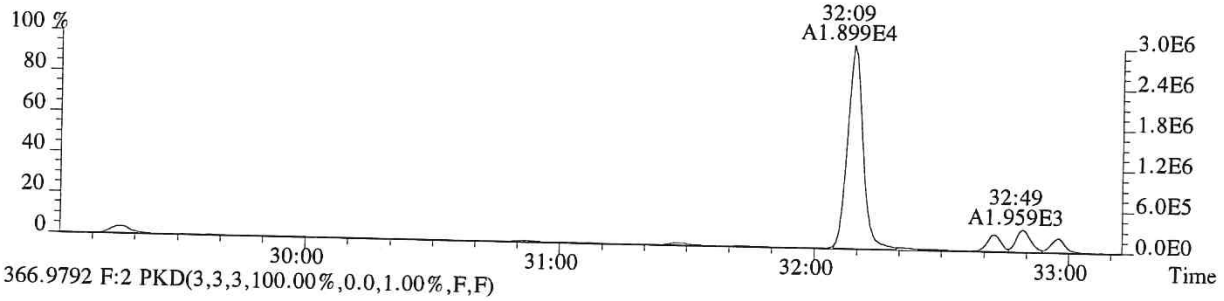
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2456.0,1.00%,F,T)



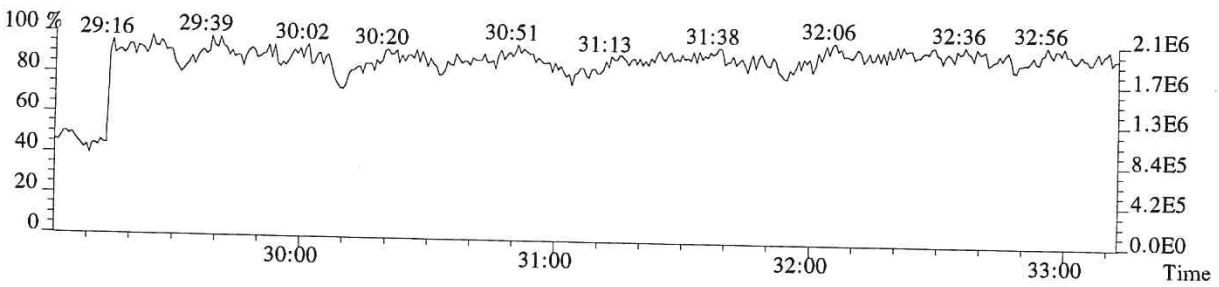
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3116.0,1.00%,F,T)



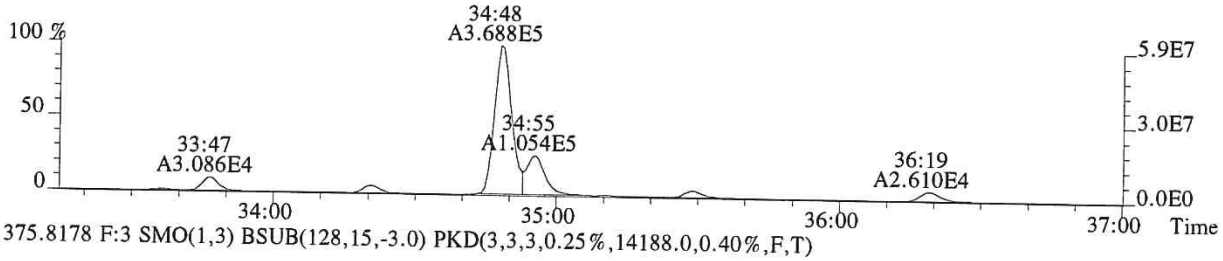
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3100.0,1.00%,F,T)



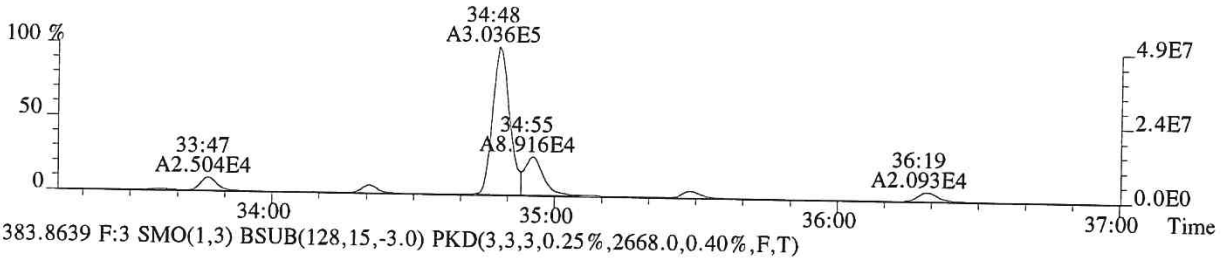
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



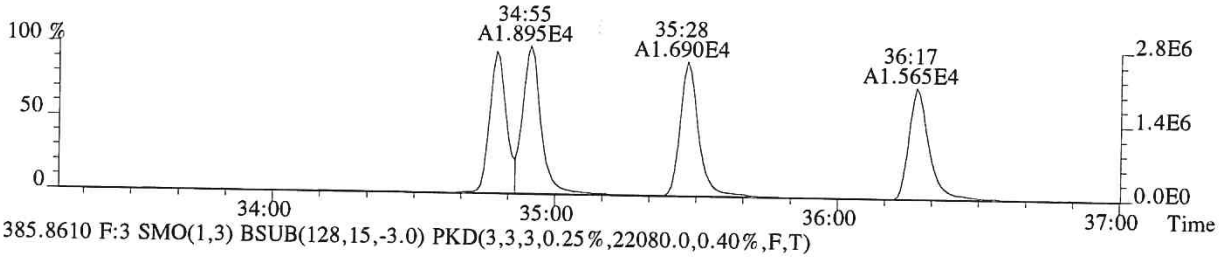
File:P519877 #1-339 Acq:10-JAN-2019 01:58:43 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,26300.0,0.40%,F,T)



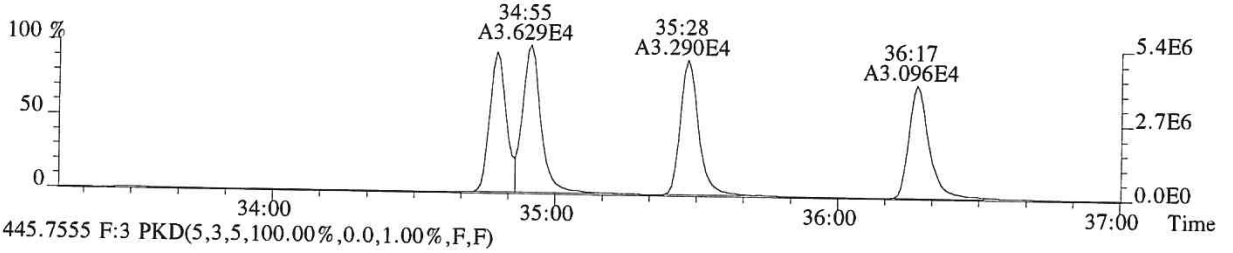
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,14188.0,0.40%,F,T)



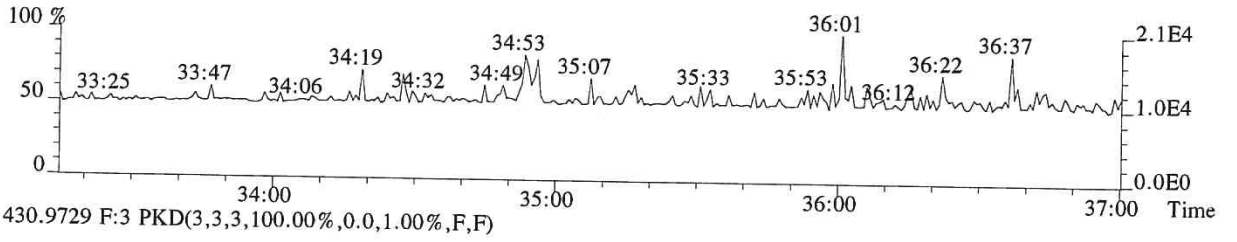
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2668.0,0.40%,F,T)



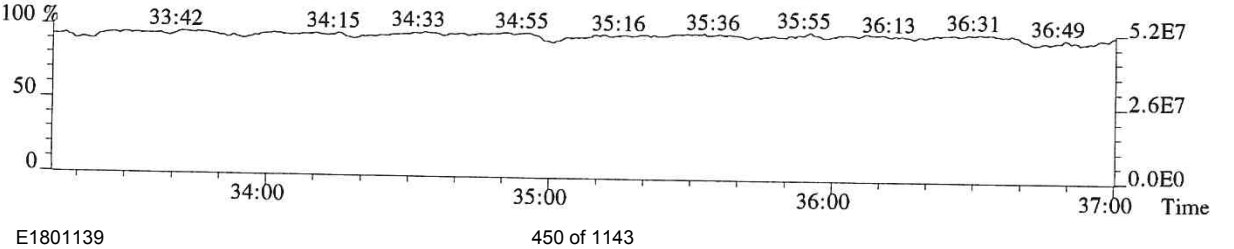
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,22080.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

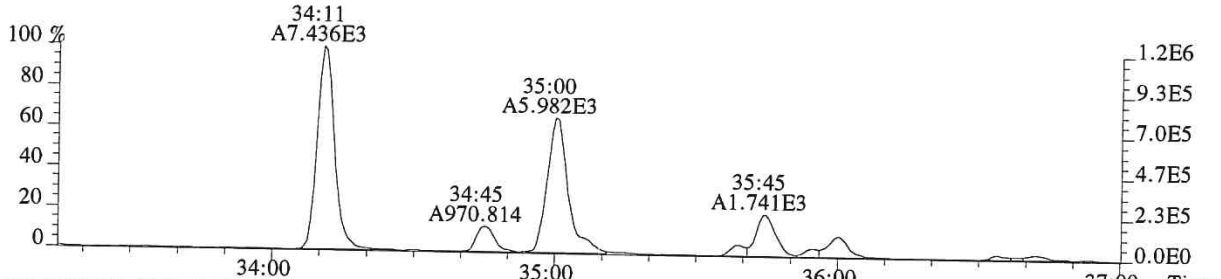


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

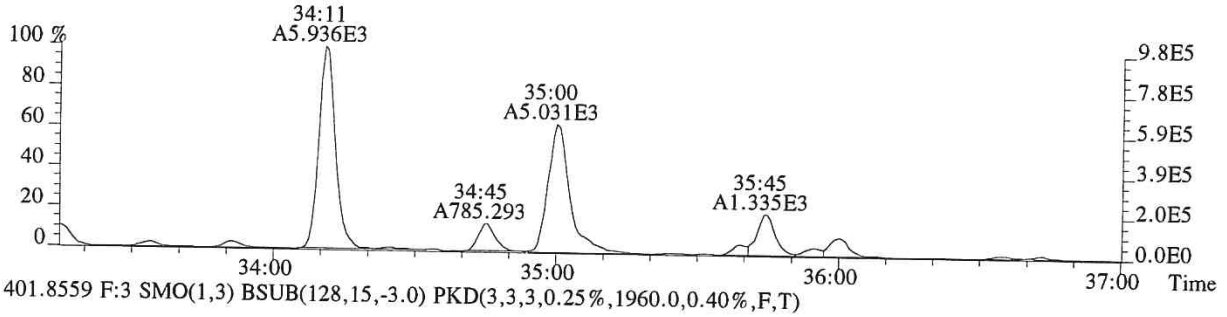


018414

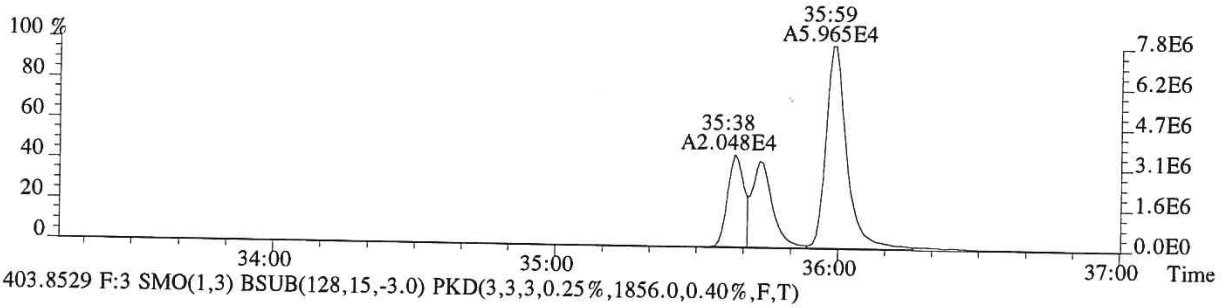
File:P519877 #1-339 Acq:10-JAN-2019 01:58:43 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2304.0,0.40%,F,T)



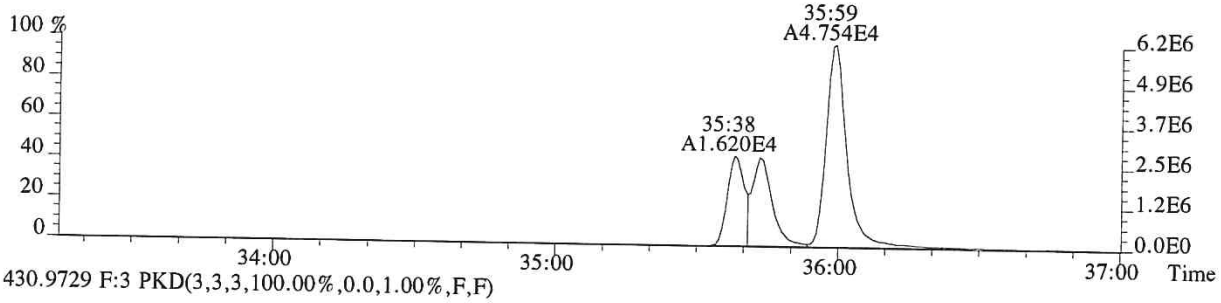
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2924.0,0.40%,F,T)



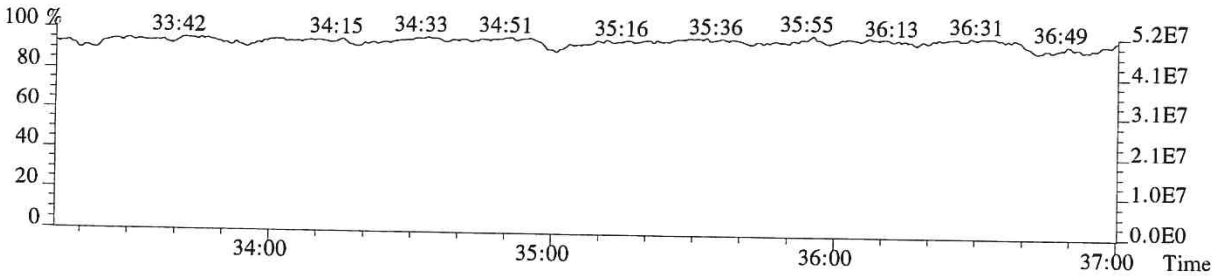
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1960.0,0.40%,F,T)



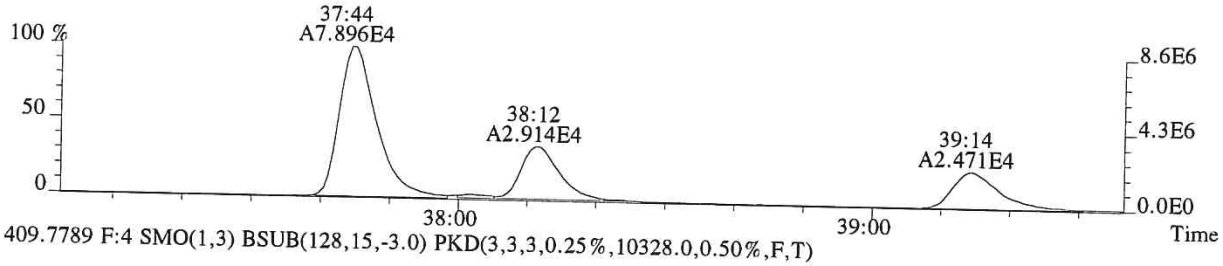
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1856.0,0.40%,F,T)



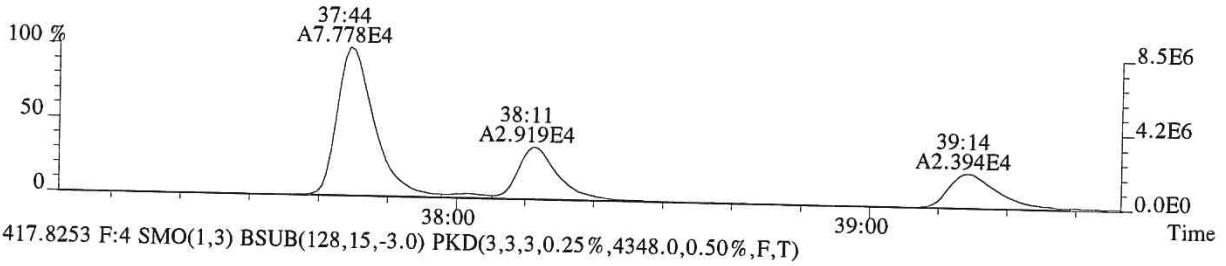
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



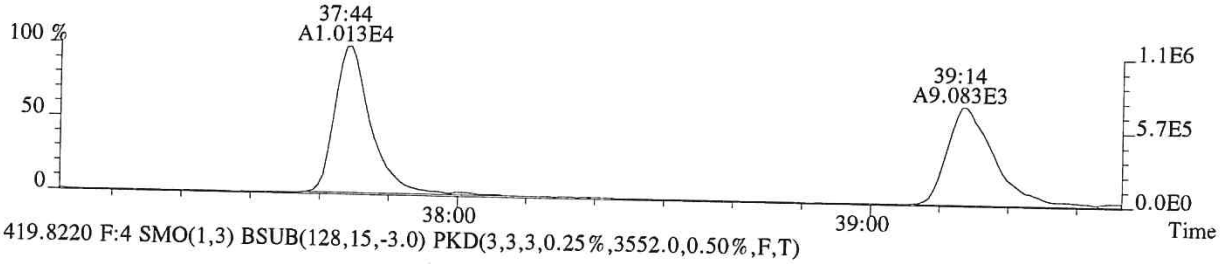
File:P519877 #1-232 Acq:10-JAN-2019 01:58:43 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7792.0,0.50%,F,T)



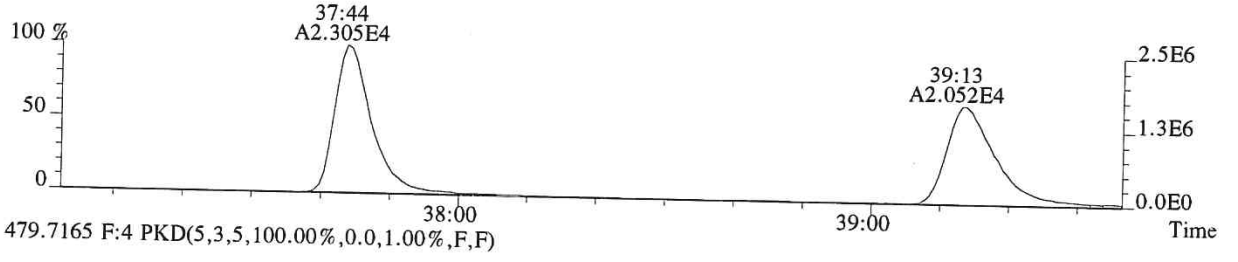
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10328.0,0.50%,F,T)



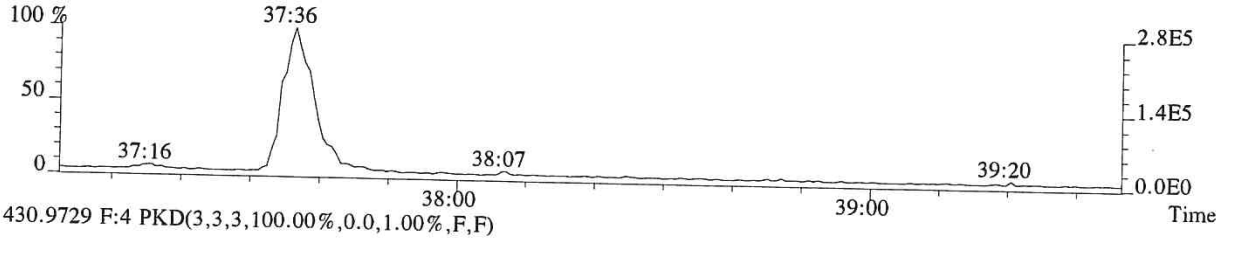
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4348.0,0.50%,F,T)



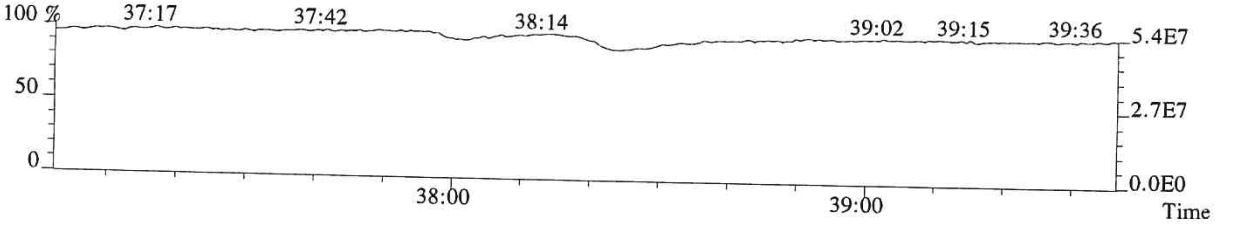
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3552.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

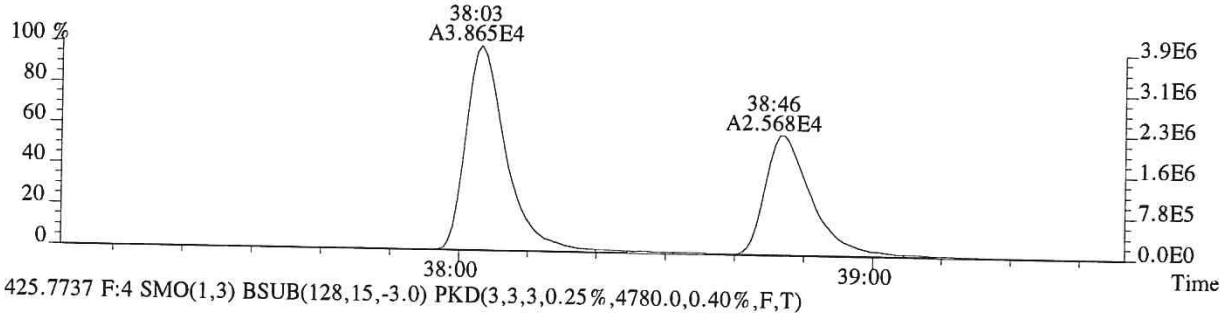


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

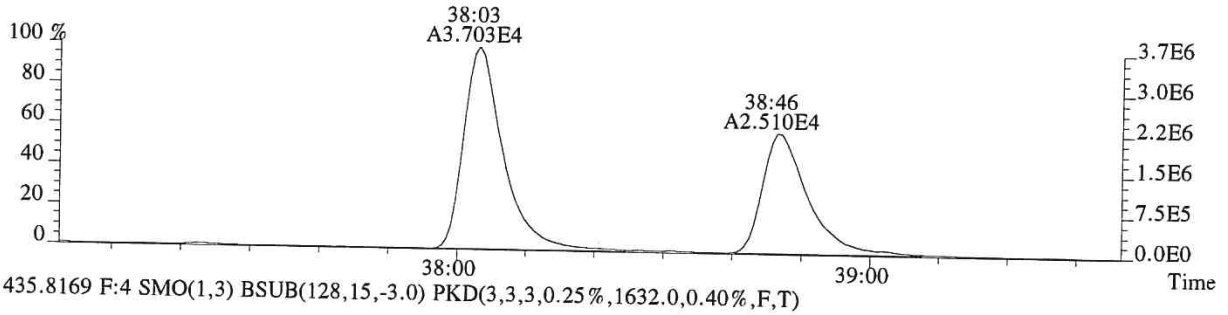


018416

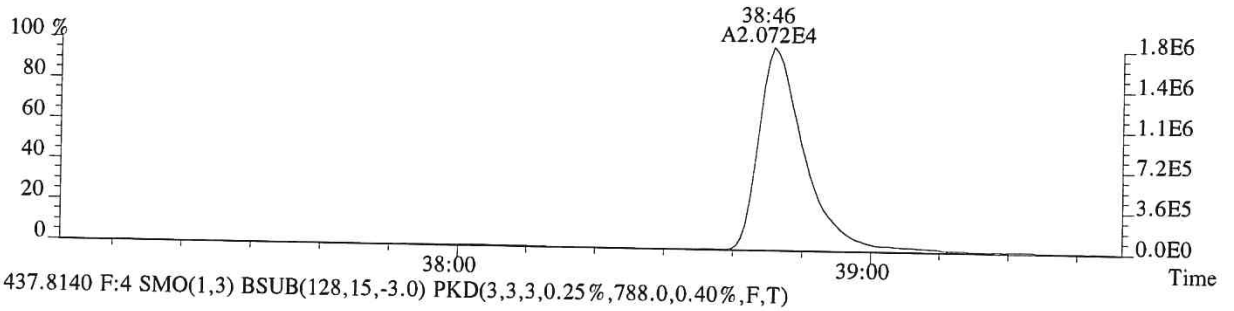
File:P519877 #1-232 Acq:10-JAN-2019 01:58:43 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1308.0,0.40%,F,T)



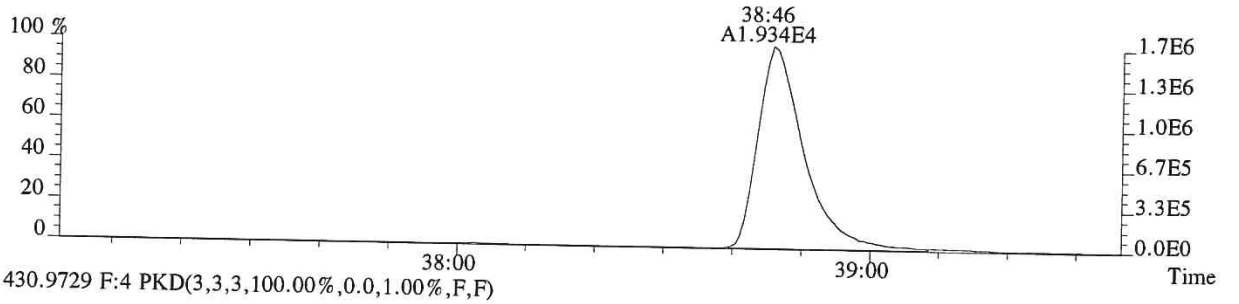
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4780.0,0.40%,F,T)



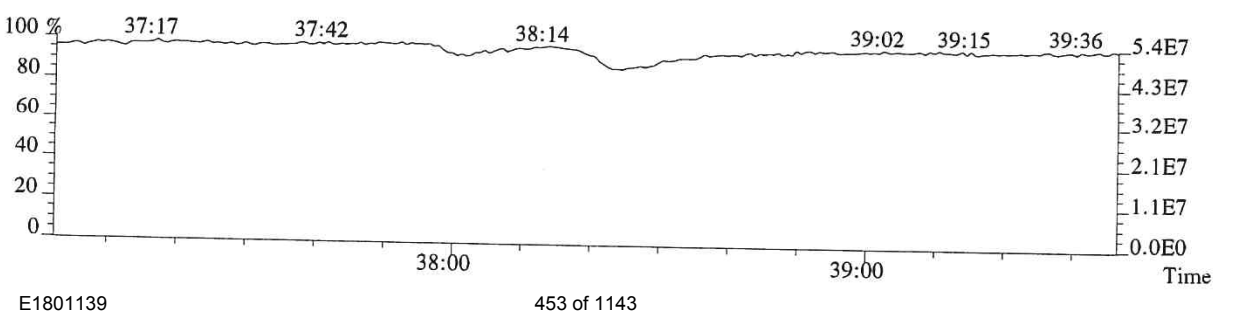
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1632.0,0.40%,F,T)



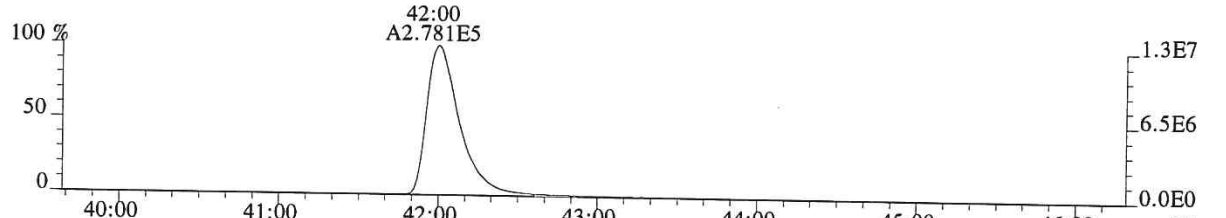
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,788.0,0.40%,F,T)



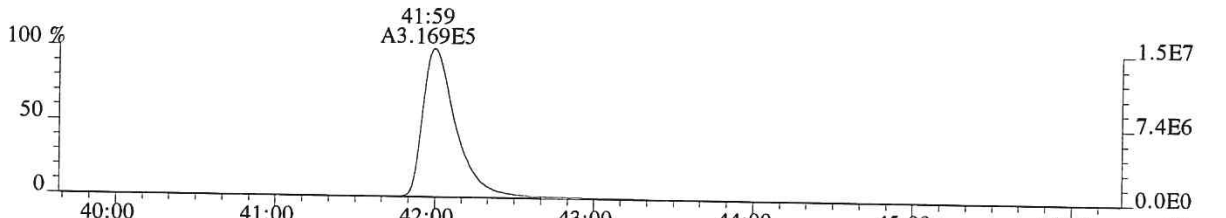
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



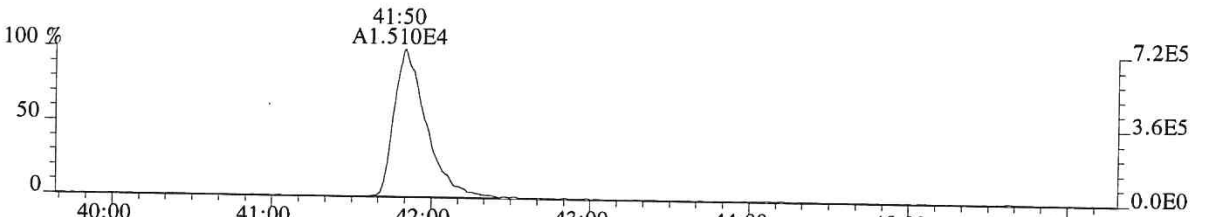
File:P519877 #1-601 Acq:10-JAN-2019 01:58:43 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,800.0,0.40%,F,T)



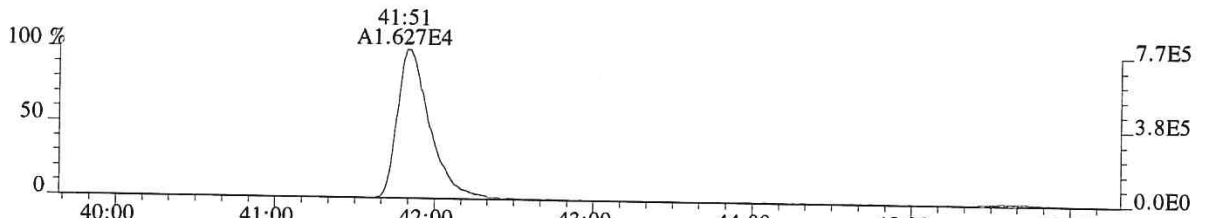
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,976.0,0.40%,F,T)



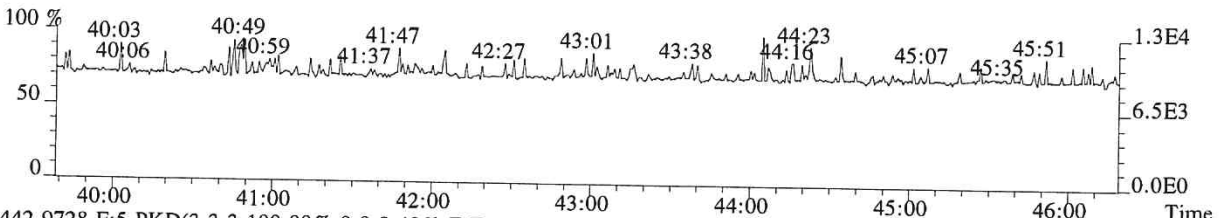
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1552.0,0.40%,F,T)



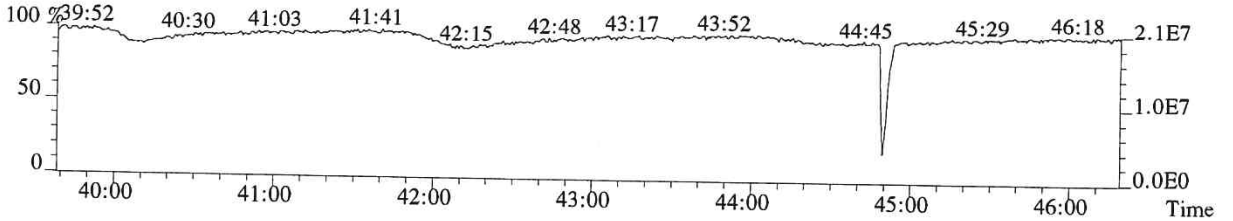
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,800.0,0.40%,F,T)



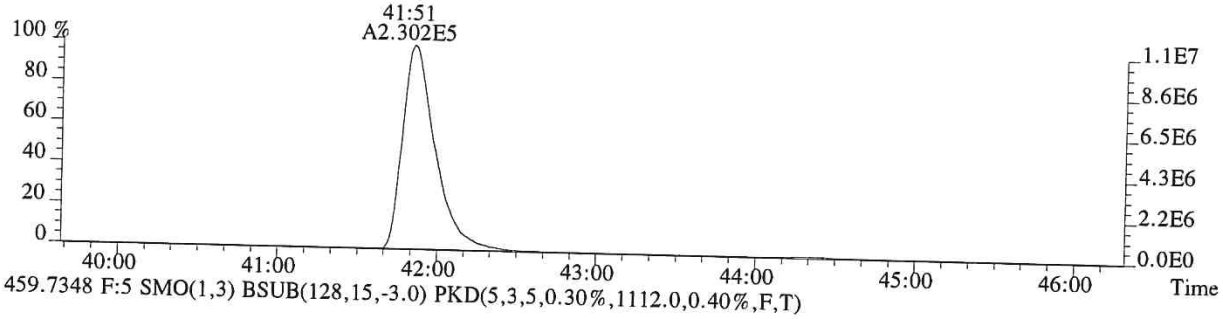
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



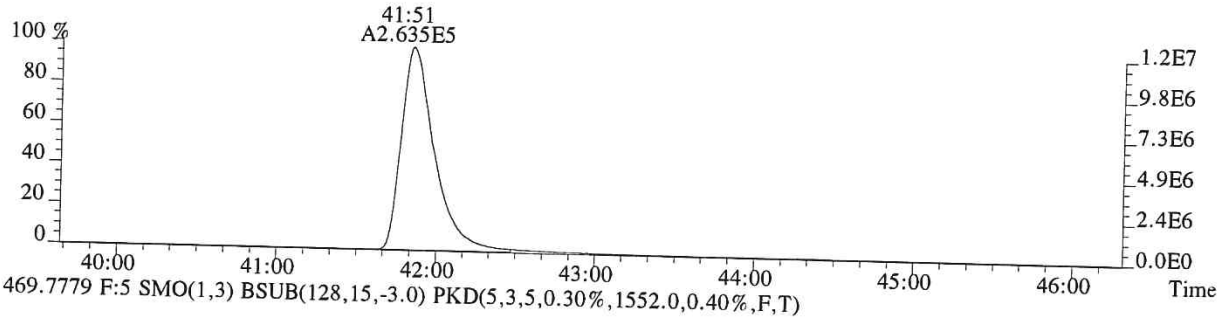
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



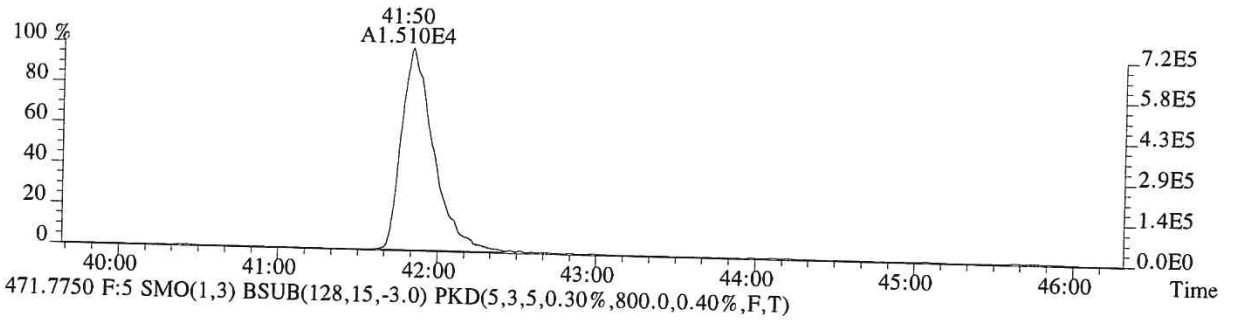
File:P519877 #1-601 Acq:10-JAN-2019 01:58:43 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1052.0,0.40%,F,T)



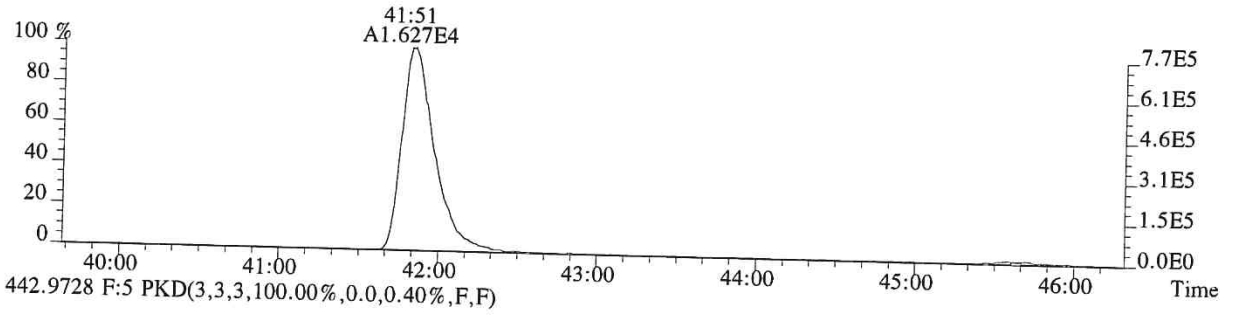
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1112.0,0.40%,F,T)



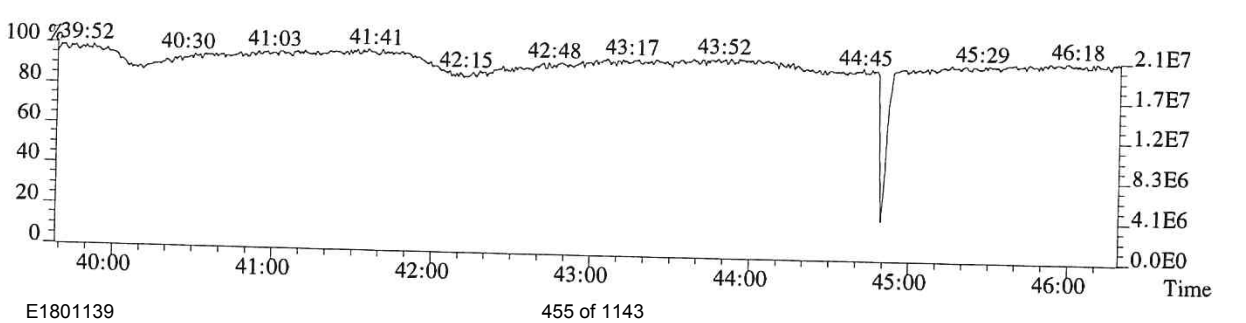
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1552.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,800.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0224

Run #19 Filename P519912 Samp: 1 Inj: 1 Acquired: 11-JAN-19 11:22:34
Processed: 11-JAN-19 14:53:42 Sample ID: E1801139-010DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	6.893e+03	8.964e+03	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:27	4.977e+02	3.529e+02	1.41	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	3.339e+02	2.494e+02	1.34	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	7.807e+02	6.868e+02	1.14	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	1.911e+02	2.042e+02	0.94	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:02	2.859e+01	2.503e+01	1.14	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:50	5.983e+01	7.487e+01	0.80	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:09	2.399e+02	2.541e+02	0.94	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:29	8.035e+01	5.765e+01	1.39	no	no	1.258
10	Unk	OCDF	40:44	1.124e+03	1.205e+03	0.93	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:24	1.814e+03	2.355e+03	0.77	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:49	3.290e+01	2.866e+01	1.15	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	7.643e+01	7.676e+01	1.00	yes	no	1.025
17	Unk	OCDD	40:34	8.966e+02	1.040e+03	0.86	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:20	2.409e+04	3.050e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:26	3.574e+04	2.246e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:28	3.408e+04	2.139e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:22	1.426e+04	2.775e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.711e+04	3.329e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:02	1.594e+04	3.106e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	1.461e+04	2.800e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:08	1.214e+04	2.771e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:28	1.095e+04	2.458e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:22	1.162e+04	1.451e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:47	2.579e+04	1.629e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:10	2.281e+04	1.663e+04	1.37	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:16	2.182e+04	1.785e+04	1.22	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	2.563e+04	2.414e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	40:34	2.937e+04	3.349e+04	0.88	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:39	1.774e+04	2.247e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:31	2.460e+04	1.944e+04	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:24	6.246e+01				no	1.014

$$OCDD = \frac{(8.966e+02 + 1.040e+03) \times 4000\ pg \times 200}{(2.937e+04 + 3.349e+04) \times 10.052\ g \times 64.0/100 \times 1.118 \times 0.25} = 13505\ ng/Kg$$

LM 01/14/19

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10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0224

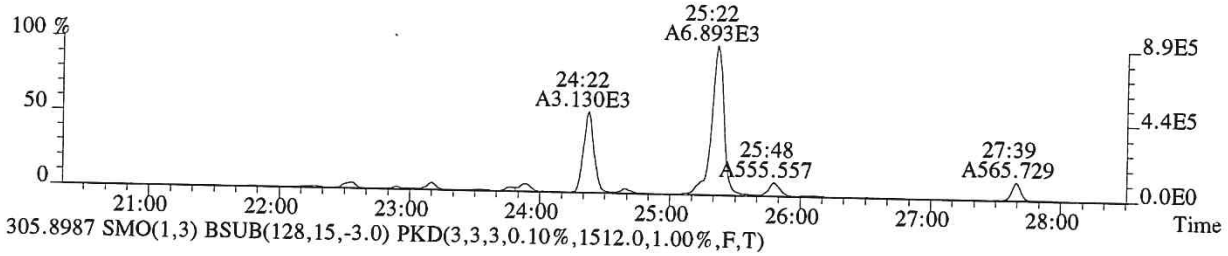
Run #19 Filename P519912 Samp: 1 Inj: 1 Acquired: 11-JAN-19 11:22:34
Processed: 11-JAN-19 14:53:42 LAB. ID: E1801139-010DL

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.89e+05	7.92e+02	1.1e+03	1.17e+06	1.51e+03	7.7e+02
2	1,2,3,7,8-PeCDF	8.34e+04	3.00e+02	2.8e+02	5.99e+04	1.66e+03	3.6e+01
3	2,3,4,7,8-PeCDF	5.00e+04	3.00e+02	1.7e+02	3.91e+04	1.66e+03	2.4e+01
4	1,2,3,4,7,8-HxCDF	1.65e+05	8.44e+02	2.0e+02	1.37e+05	7.20e+02	1.9e+02
5	1,2,3,6,7,8-HxCDF	3.71e+04	8.44e+02	4.4e+01	3.64e+04	7.20e+02	5.1e+01
6	2,3,4,6,7,8-HxCDF	6.89e+03	8.44e+02	8.2e+00	4.10e+03	7.20e+02	5.7e+00
7	1,2,3,7,8,9-HxCDF	1.05e+04	8.44e+02	1.2e+01	1.33e+04	7.20e+02	1.8e+01
8	1,2,3,4,6,7,8-HpCDF	4.98e+04	4.64e+02	1.1e+02	5.40e+04	5.44e+02	9.9e+01
9	1,2,3,4,7,8,9-HpCDF	1.40e+04	4.64e+02	3.0e+01	1.09e+04	5.44e+02	2.0e+01
10	OCDF	1.92e+05	6.20e+02	3.1e+02	1.90e+05	1.08e+03	1.8e+02
11	2,3,7,8-TCDD	2.93e+05	2.02e+03	1.4e+02	3.66e+05	9.40e+02	3.9e+02
12	1,2,3,7,8-PeCDD	4.36e+03	3.64e+02	1.2e+01	5.53e+03	4.76e+02	1.2e+01
13	1,2,3,4,7,8-HxCDD	*	7.56e+02	*	*	5.44e+02	*
14	1,2,3,6,7,8-HxCDD	*	7.56e+02	*	*	5.44e+02	*
15	1,2,3,7,8,9-HxCDD	*	7.56e+02	*	*	5.44e+02	*
16	1,2,3,4,6,7,8-HpCDD	1.97e+04	4.00e+02	4.9e+01	1.57e+04	4.56e+02	3.4e+01
17	OCDD	1.55e+05	4.24e+02	3.6e+02	1.82e+05	4.44e+02	4.1e+02
18	13C-2,3,7,8-TCDF	3.36e+06	3.46e+03	9.7e+02	4.32e+06	2.37e+03	1.8e+03
19	13C-1,2,3,7,8-PeCDF	5.83e+06	9.48e+02	6.2e+03	3.69e+06	8.76e+02	4.2e+03
20	13C-2,3,4,7,8-PeCDF	6.00e+06	9.48e+02	6.3e+03	3.78e+06	8.76e+02	4.3e+03
21	13C-1,2,3,4,7,8-HxCDF	2.99e+06	6.12e+02	4.9e+03	5.84e+06	1.51e+03	3.9e+03
22	13C-1,2,3,6,7,8-HxCDF	3.32e+06	6.12e+02	5.4e+03	6.43e+06	1.51e+03	4.3e+03
23	13C-2,3,4,6,7,8-HxCDF	3.27e+06	6.12e+02	5.3e+03	6.25e+06	1.51e+03	4.1e+03
24	13C-1,2,3,7,8,9-HxCDF	2.72e+06	6.12e+02	4.4e+03	5.19e+06	1.51e+03	3.4e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.55e+06	3.11e+03	8.2e+02	5.73e+06	3.89e+03	1.5e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.14e+06	3.11e+03	6.9e+02	4.82e+06	3.89e+03	1.2e+03
27	13C-2,3,7,8-TCDD	1.72e+06	6.30e+03	2.7e+02	2.20e+06	2.86e+03	7.7e+02
28	13C-1,2,3,7,8-PeCDD	4.62e+06	5.56e+02	8.3e+03	2.93e+06	9.56e+02	3.1e+03
29	13C-1,2,3,4,7,8-HxCDD	4.82e+06	1.35e+03	3.6e+03	3.69e+06	5.56e+02	6.6e+03
30	13C-1,2,3,6,7,8-HxCDD	4.27e+06	1.35e+03	3.2e+03	3.37e+06	5.56e+02	6.1e+03
31	13C-1,2,3,4,6,7,8-HpCDD	5.08e+06	3.48e+02	1.5e+04	4.78e+06	3.84e+02	1.2e+04
32	13C-OCDD	5.06e+06	3.44e+02	1.5e+04	5.64e+06	4.72e+02	1.2e+04
33	13C-1,2,3,4-TCDD	2.65e+06	6.30e+03	4.2e+02	3.30e+06	2.86e+03	1.2e+03
34	13C-1,2,3,7,8,9-HxCDD	4.60e+06	1.35e+03	3.4e+03	3.64e+06	5.56e+02	6.5e+03
35	37Cl-2,3,7,8-TCDD	1.27e+04	2.26e+03	5.6e+00			

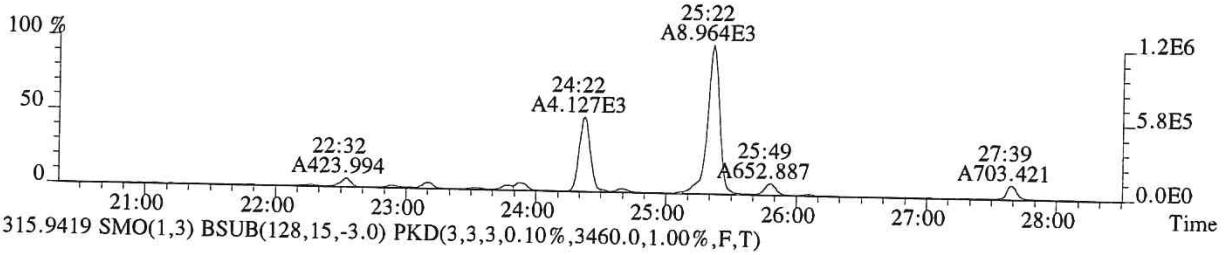
ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office:(713)266-1599. Fax:(713)266-0130

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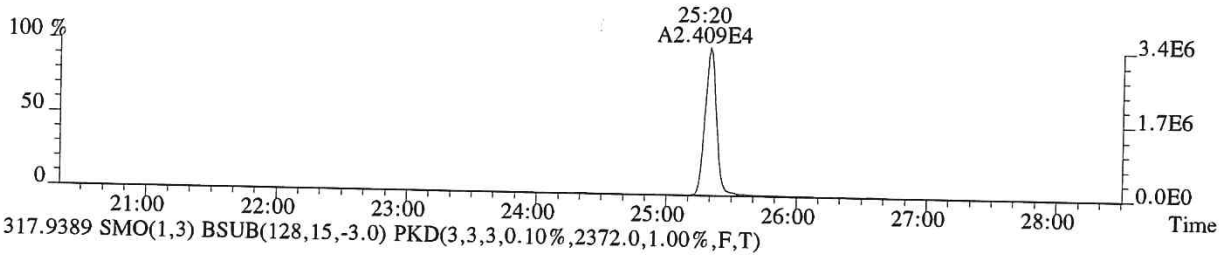
File:P519912 #1-580 Acq:11-JAN-2019 11:22:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,792.0,1.00%,F,T)



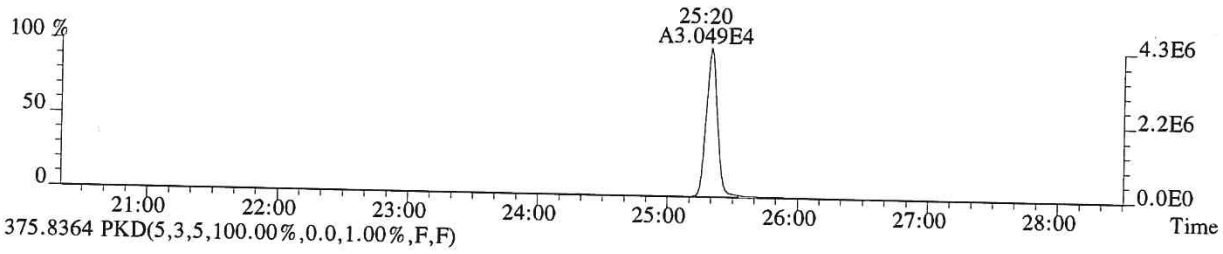
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1512.0,1.00%,F,T)



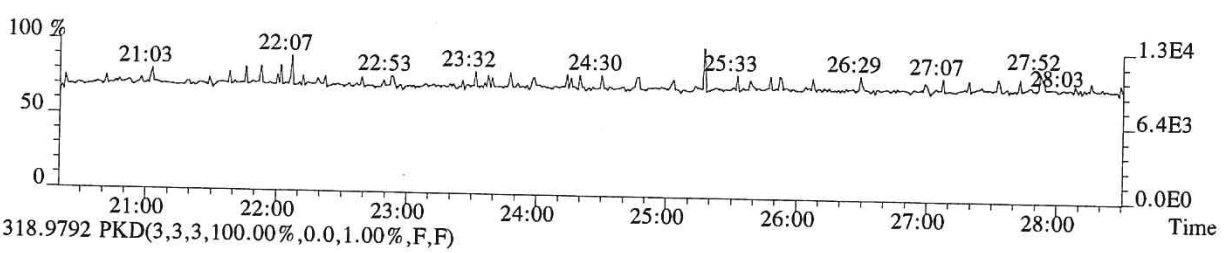
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3460.0,1.00%,F,T)



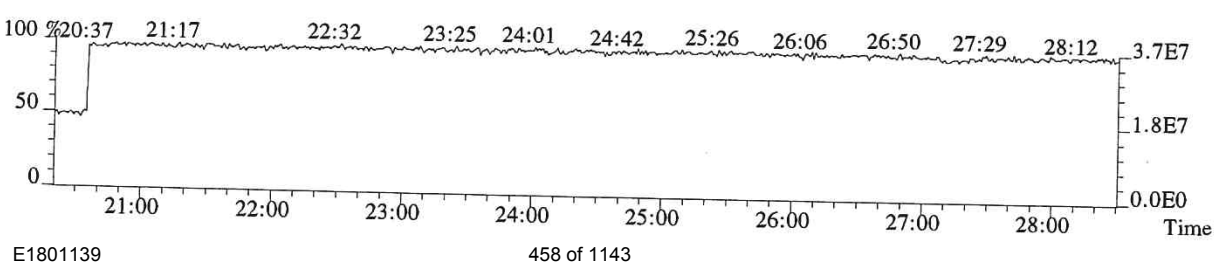
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2372.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

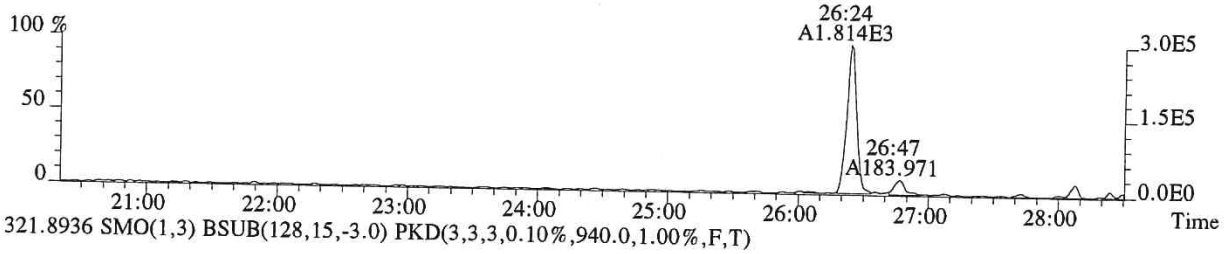


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

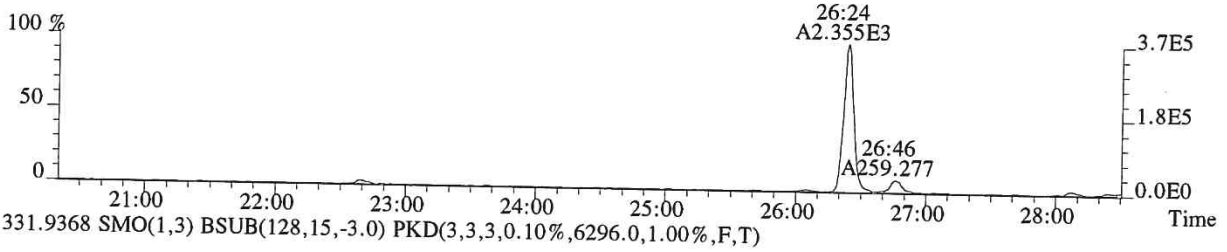


018422

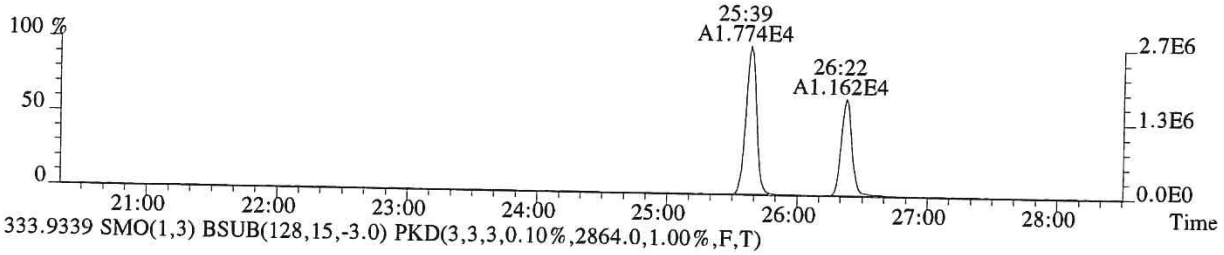
File:P519912 #1-580 Acq:11-JAN-2019 11:22:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2024.0,1.00%,F,T)



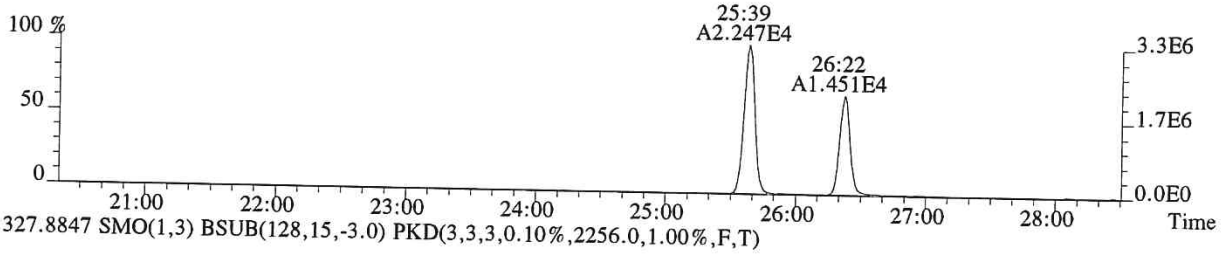
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,940.0,1.00%,F,T)



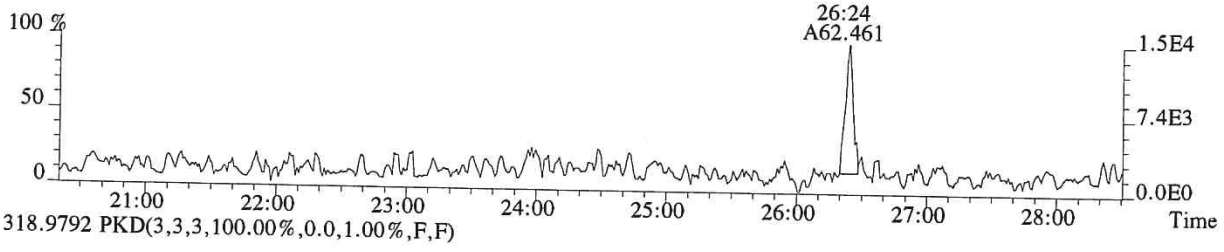
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6296.0,1.00%,F,T)



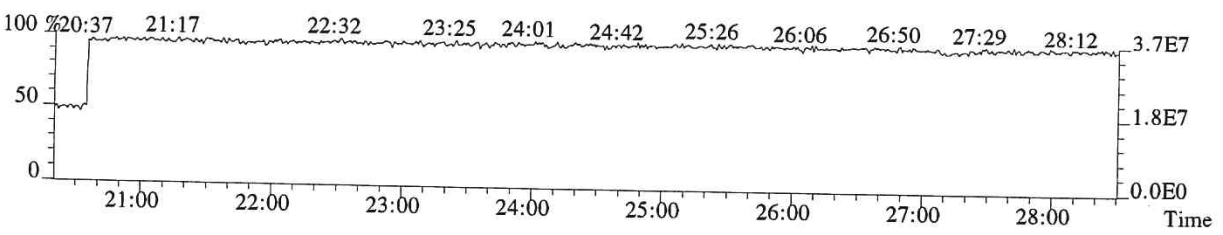
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2864.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2256.0,1.00%,F,T)

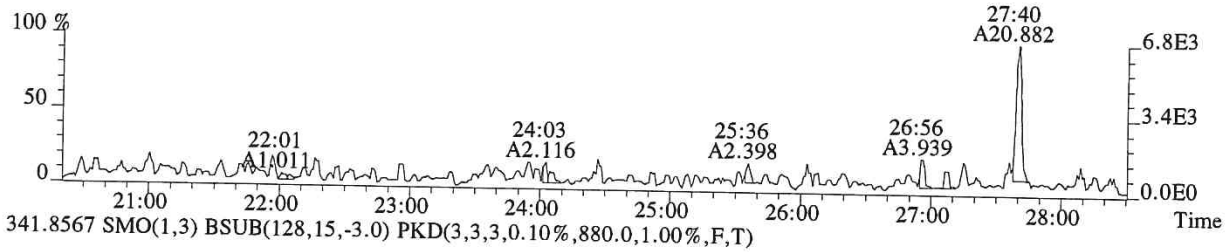


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

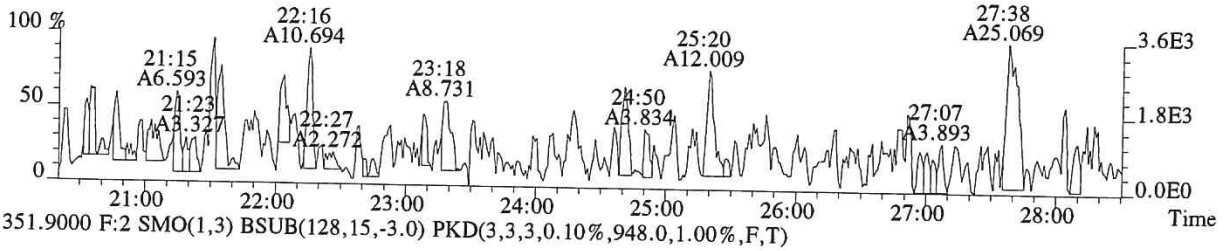


018423

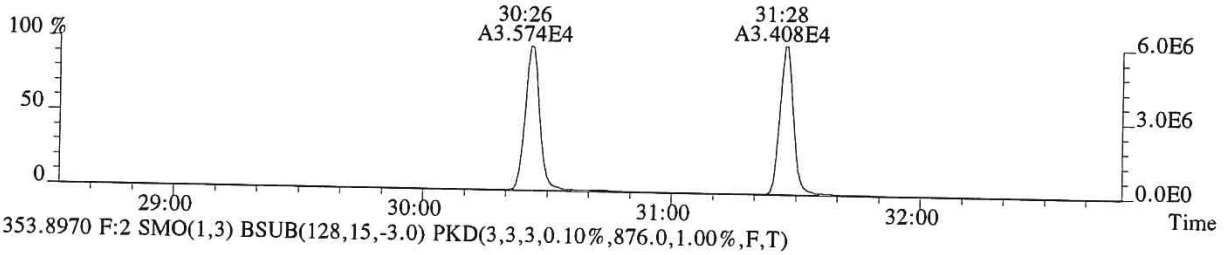
File:P519912 #1-580 Acq:11-JAN-2019 11:22:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,624.0,1.00%,F,T)



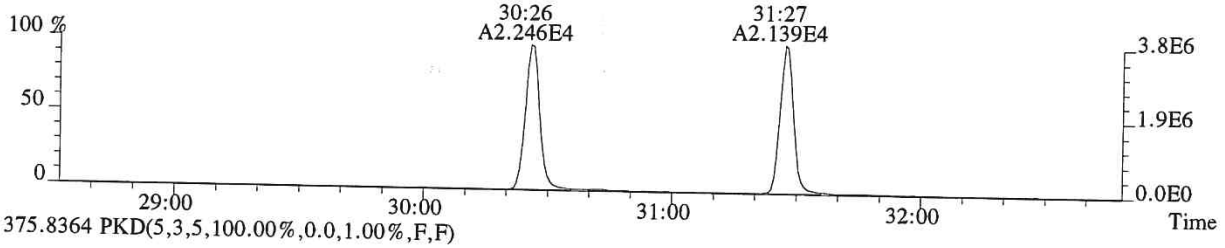
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,880.0,1.00%,F,T)



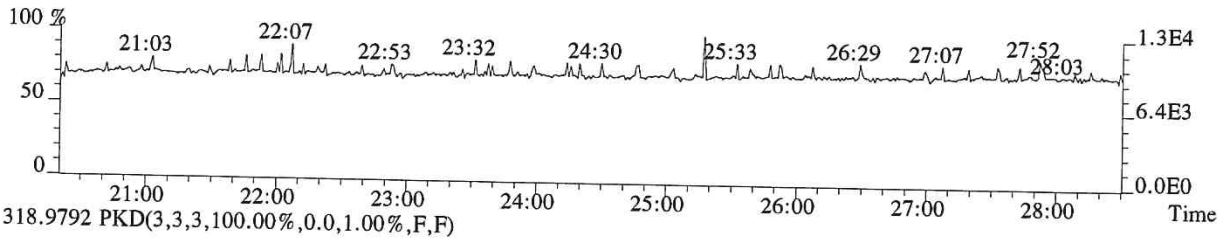
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,948.0,1.00%,F,T)



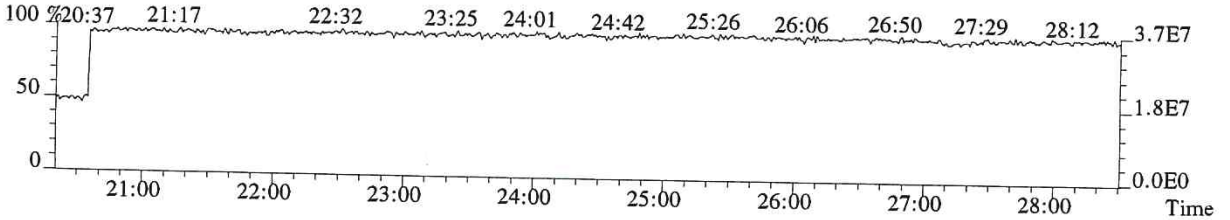
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,876.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

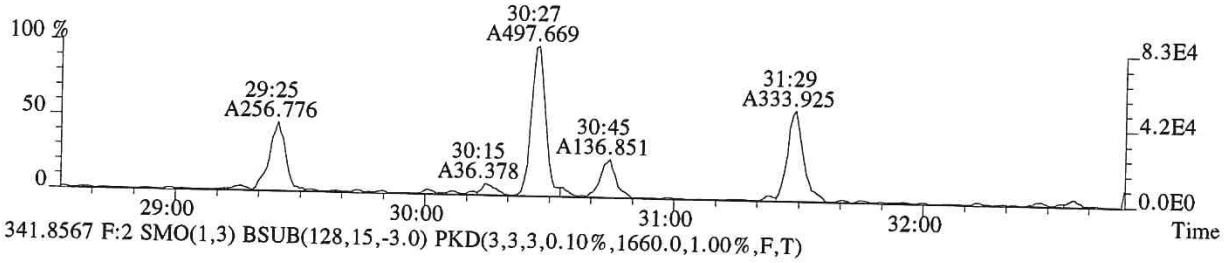


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

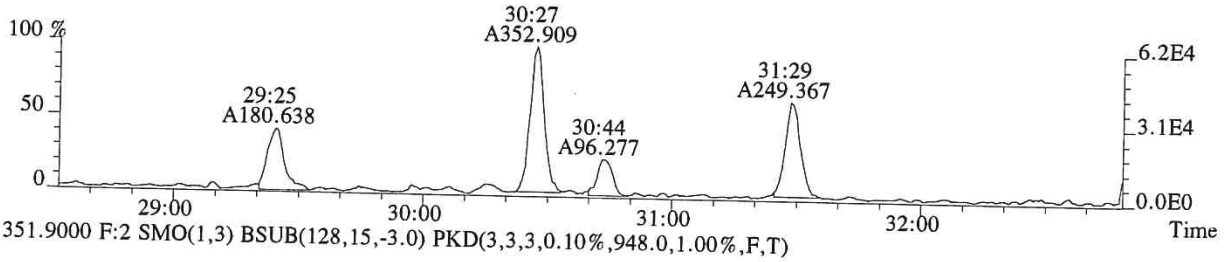


018424

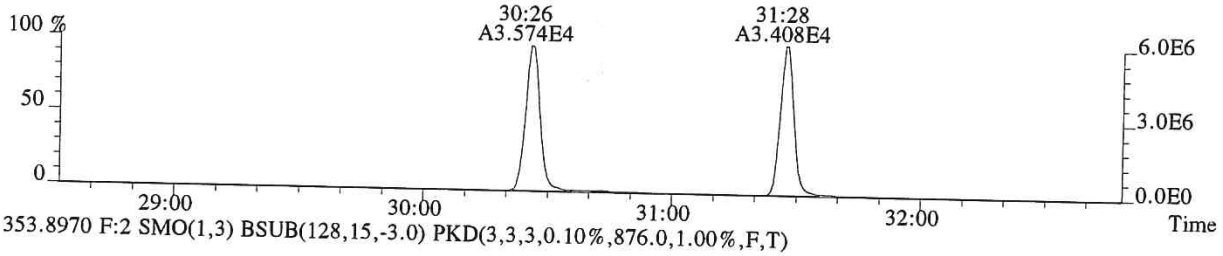
File:P519912 #1-385 Acq:11-JAN-2019 11:22:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,300.0,1.00%,F,T)



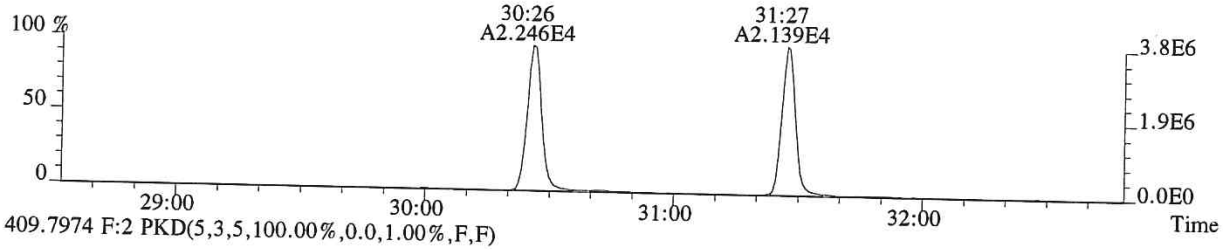
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1660.0,1.00%,F,T)



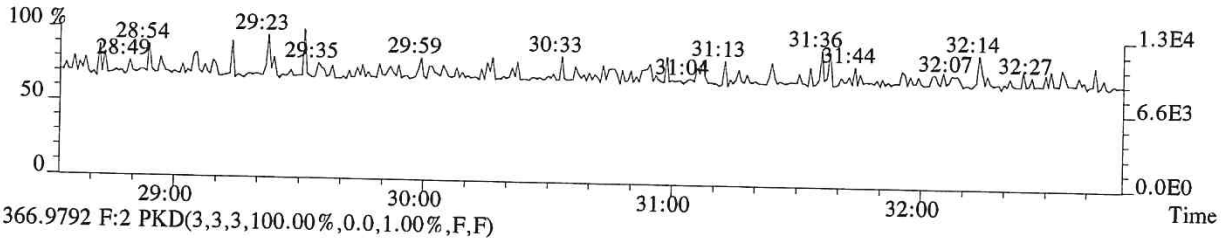
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,948.0,1.00%,F,T)



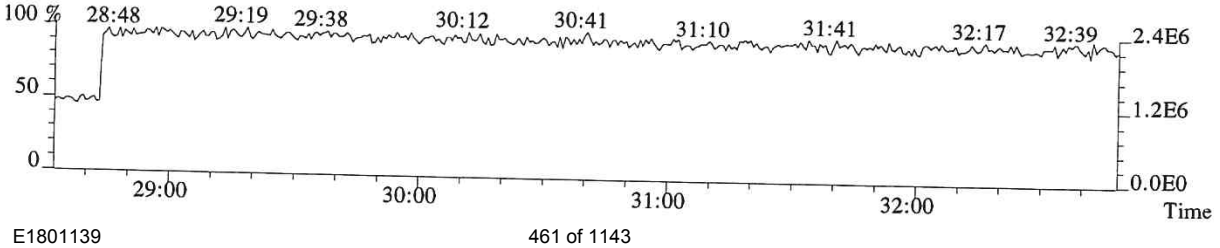
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,876.0,1.00%,F,T)



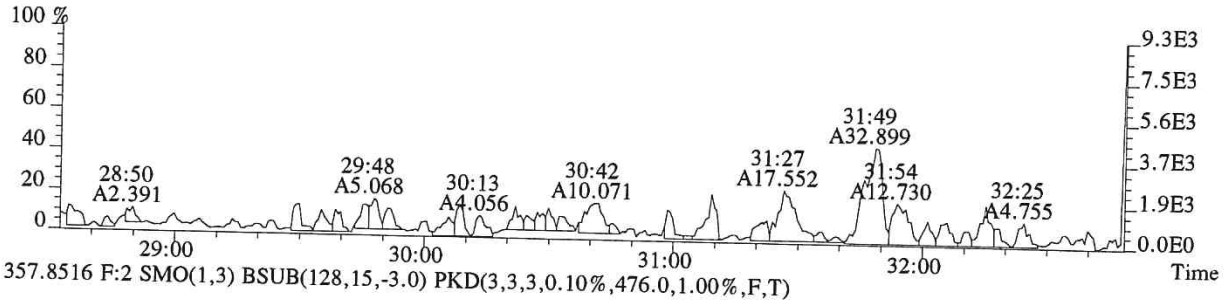
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



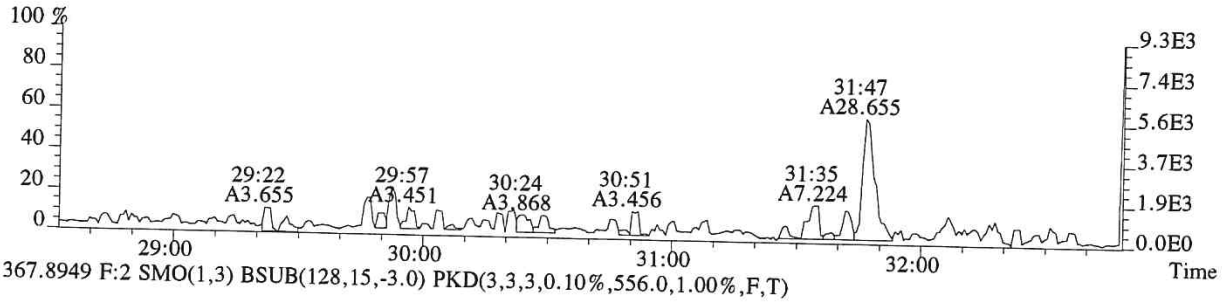
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



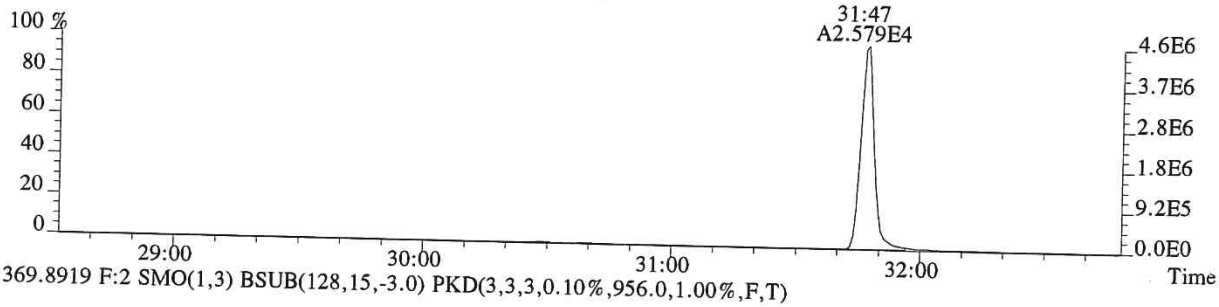
File:P519912 #1-385 Acq:11-JAN-2019 11:22:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,364.0,1.00%,F,T)



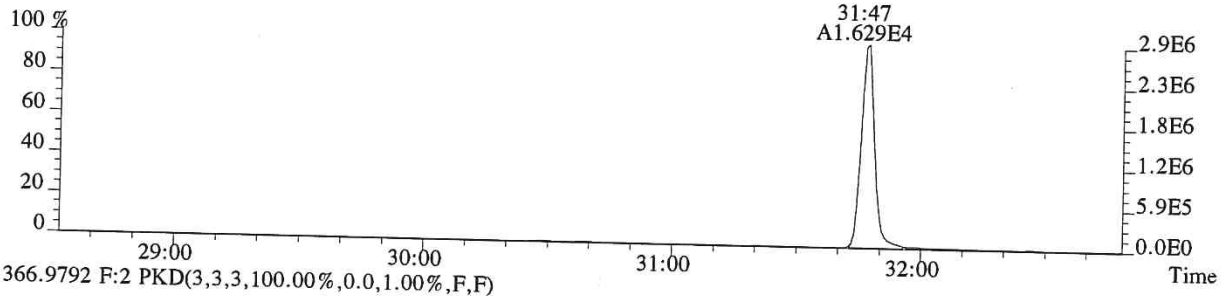
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,476.0,1.00%,F,T)



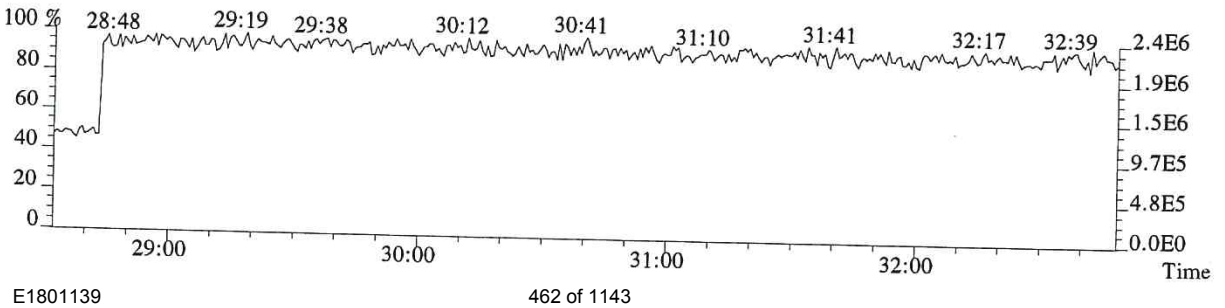
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,556.0,1.00%,F,T)



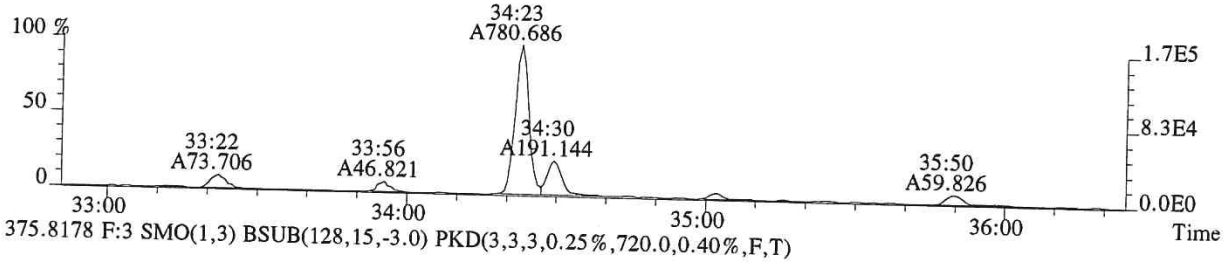
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,956.0,1.00%,F,T)



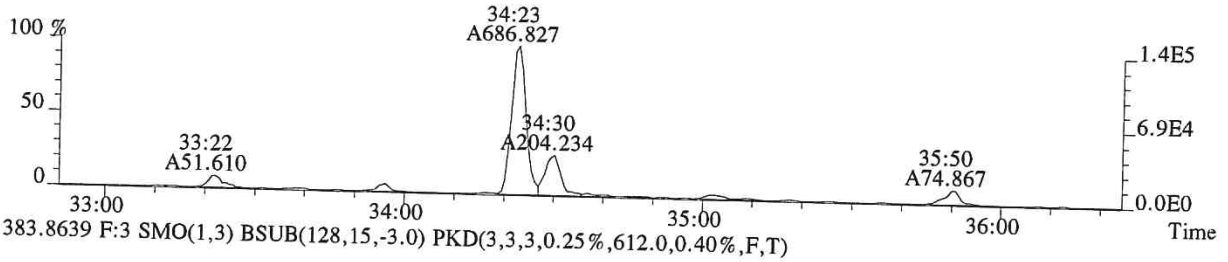
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



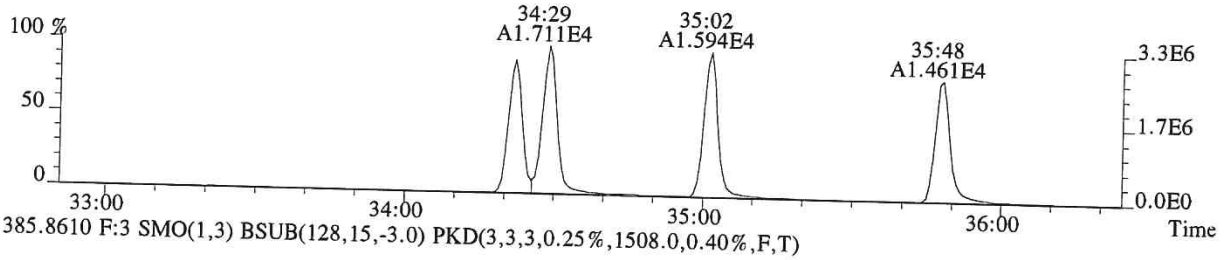
File:P519912 #1-321 Acq:11-JAN-2019 11:22:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,844.0,0.40%,F,T)



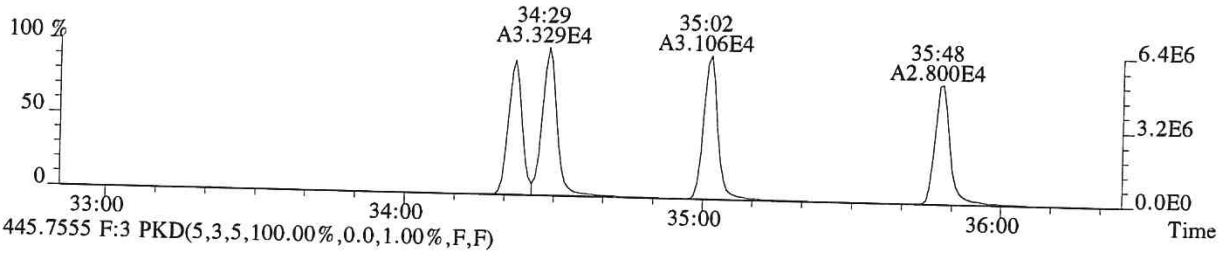
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,720.0,0.40%,F,T)



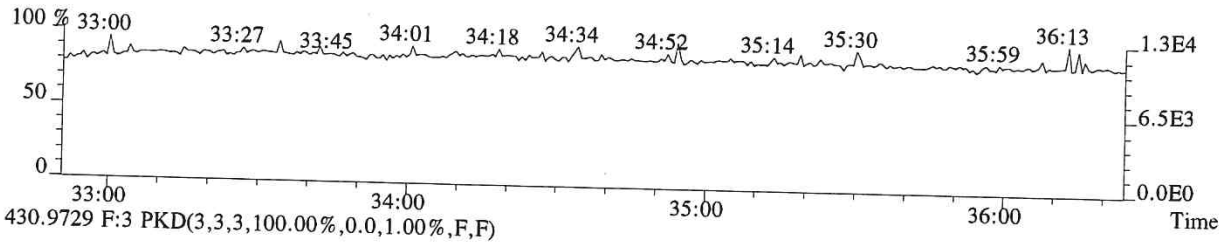
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,612.0,0.40%,F,T)



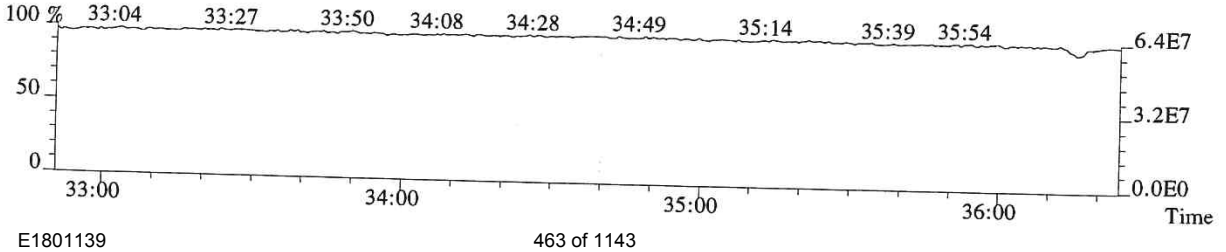
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1508.0,0.40%,F,T)



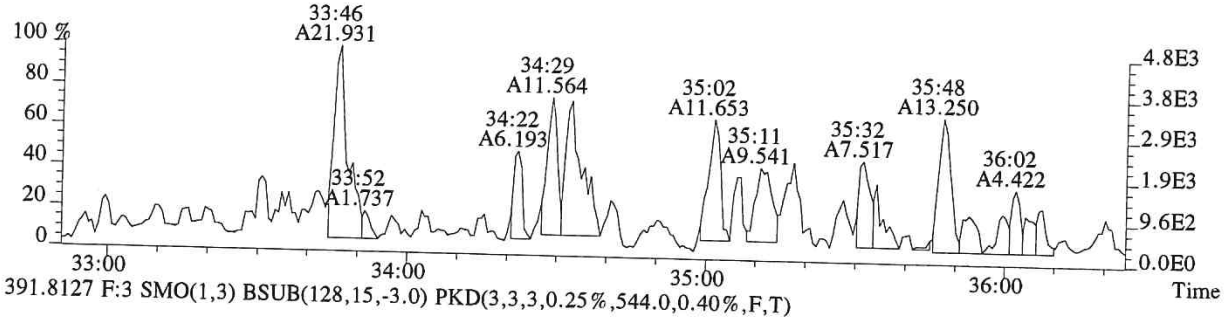
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



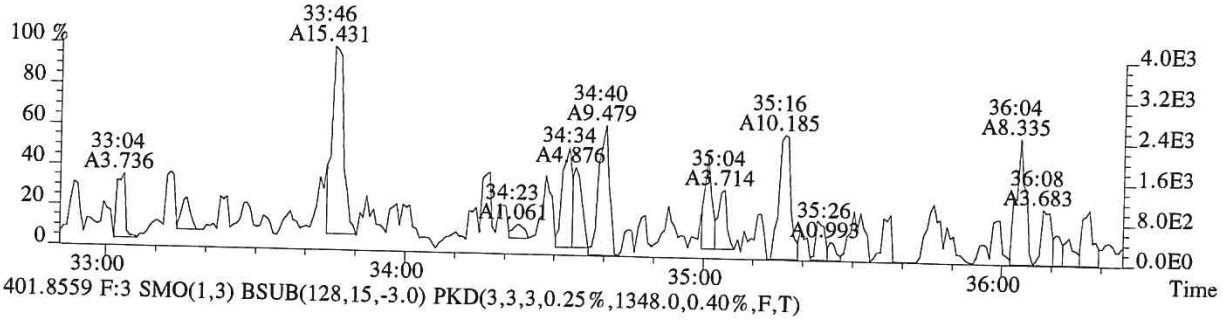
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



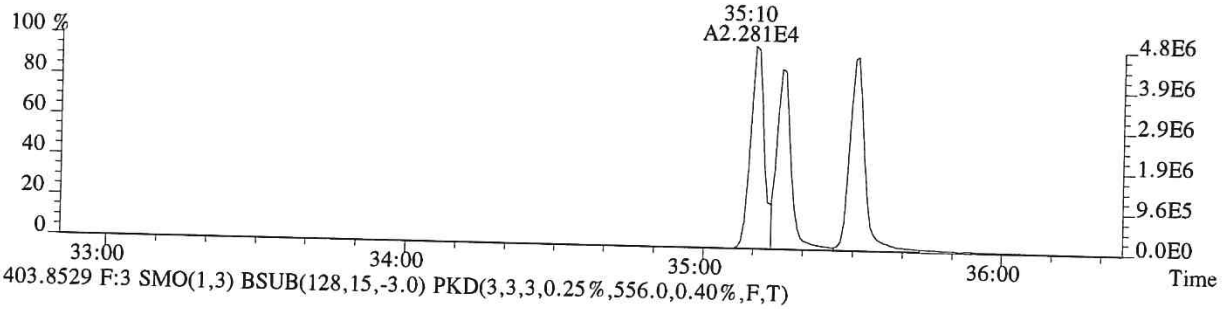
File:P519912 #1-321 Acq:11-JAN-2019 11:22:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,756.0,0.40%,F,T)



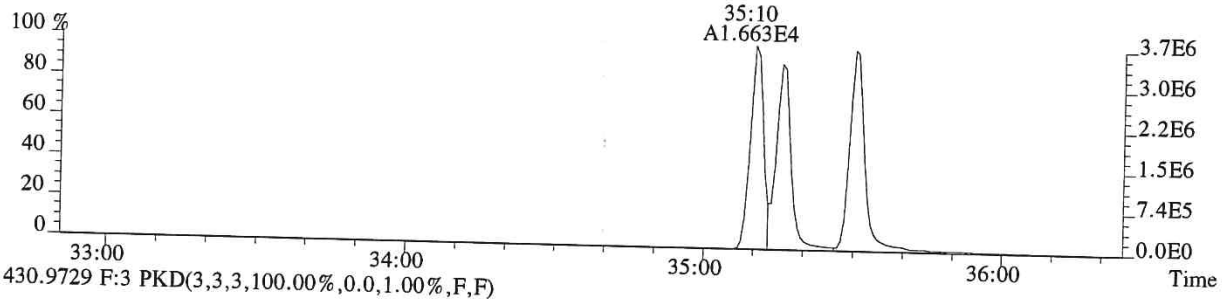
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,544.0,0.40%,F,T)



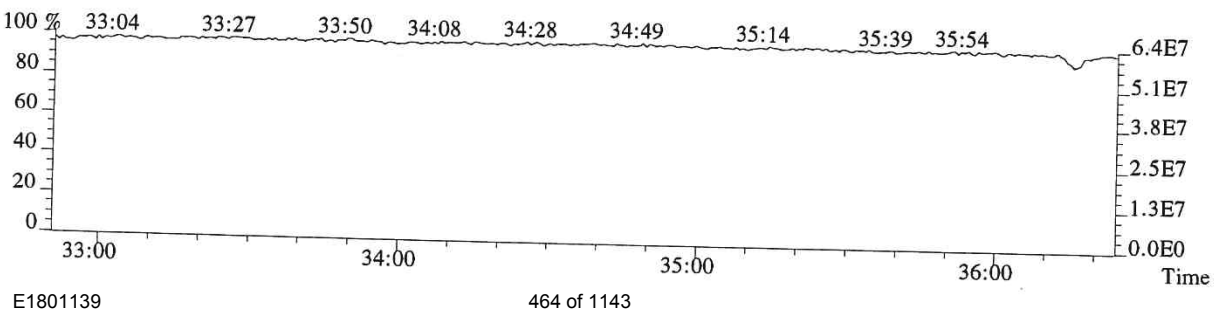
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1348.0,0.40%,F,T)



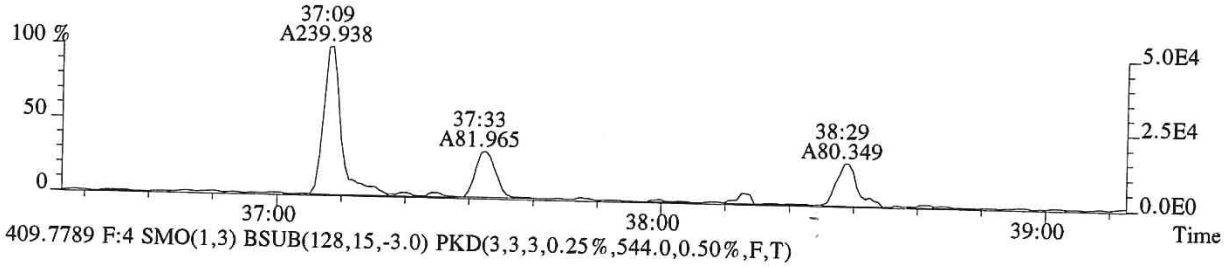
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,556.0,0.40%,F,T)



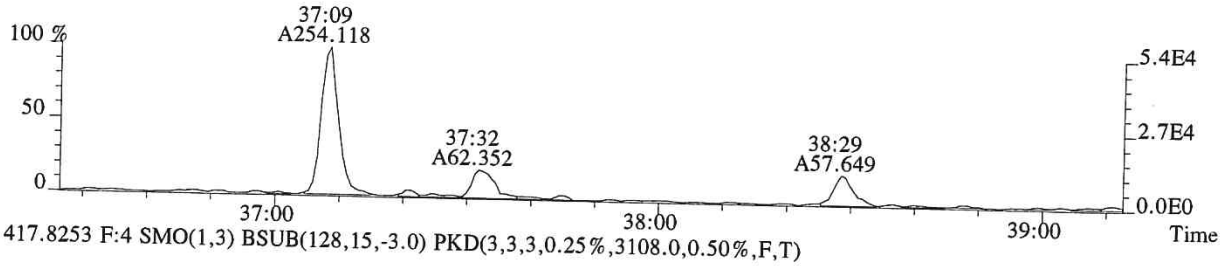
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



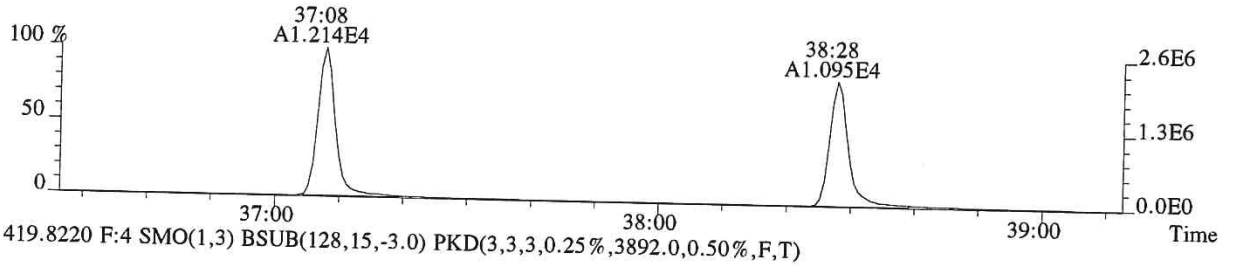
File:P519912 #1-250 Acq:11-JAN-2019 11:22:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,464.0,0.50%,F,T)



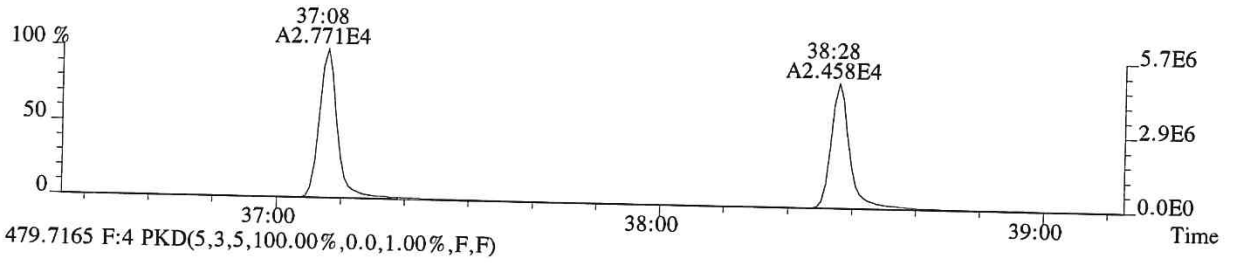
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,544.0,0.50%,F,T)



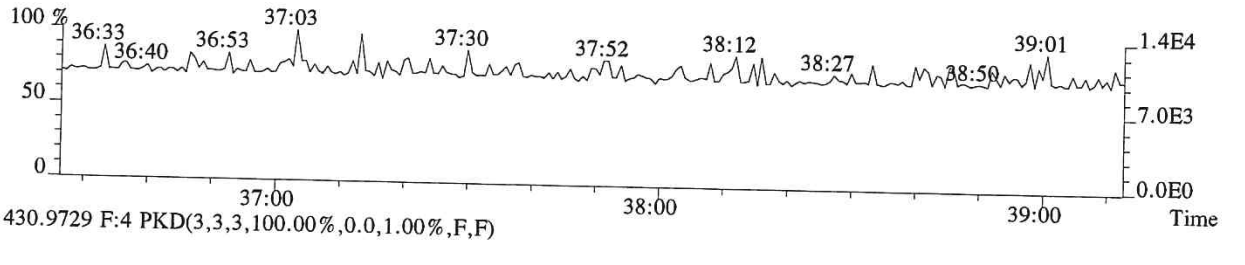
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3108.0,0.50%,F,T)



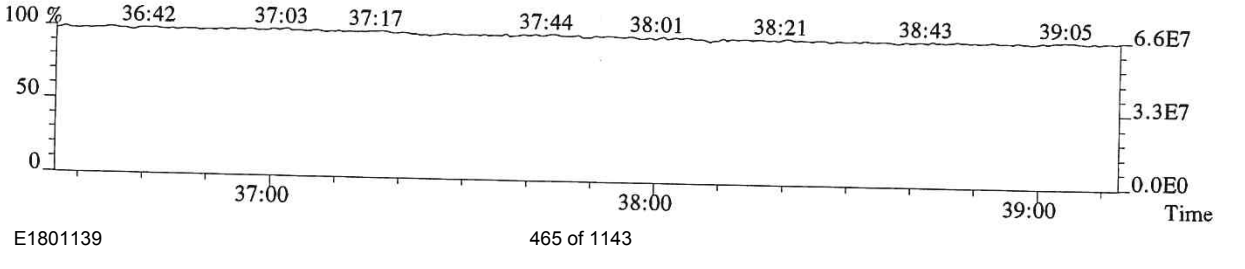
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3892.0,0.50%,F,T)



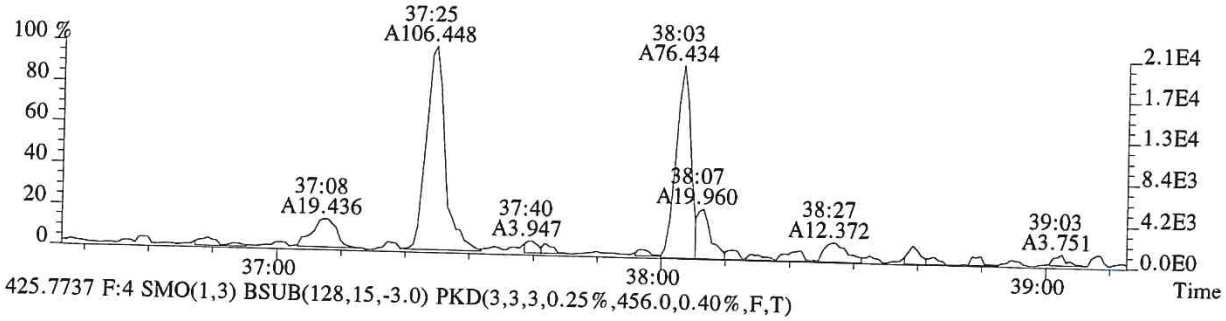
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



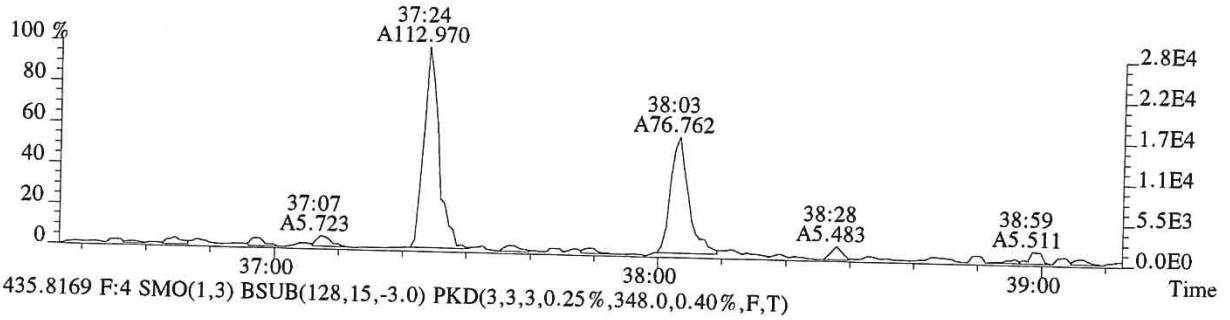
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



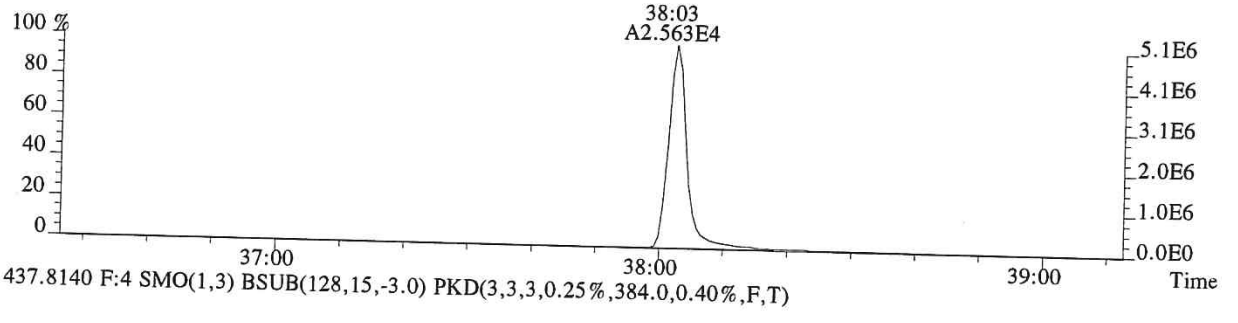
File:P519912 #1-250 Acq:11-JAN-2019 11:22:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,400.0,0.40%,F,T)



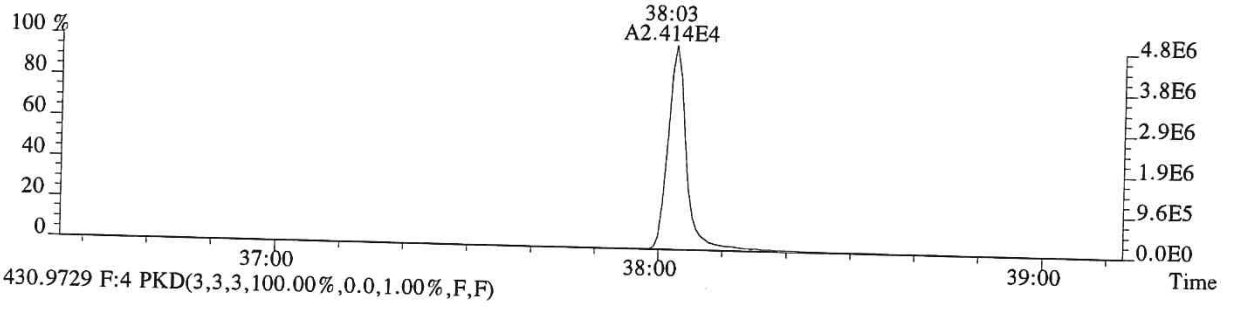
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,456.0,0.40%,F,T)



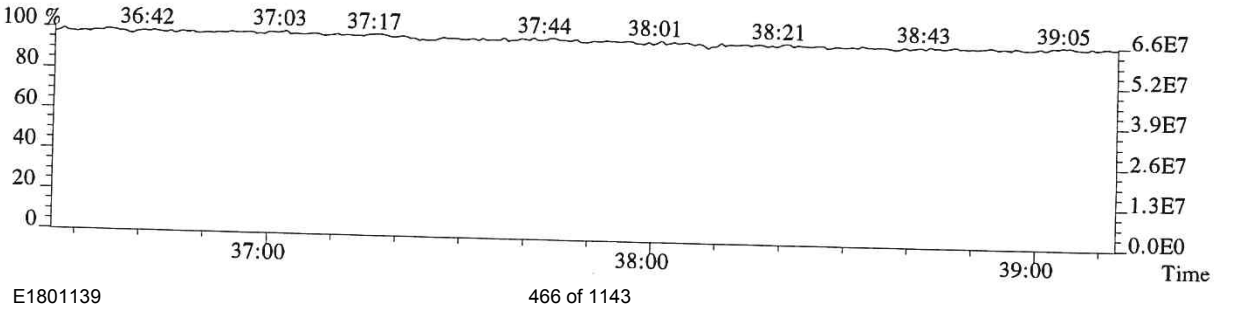
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,348.0,0.40%,F,T)



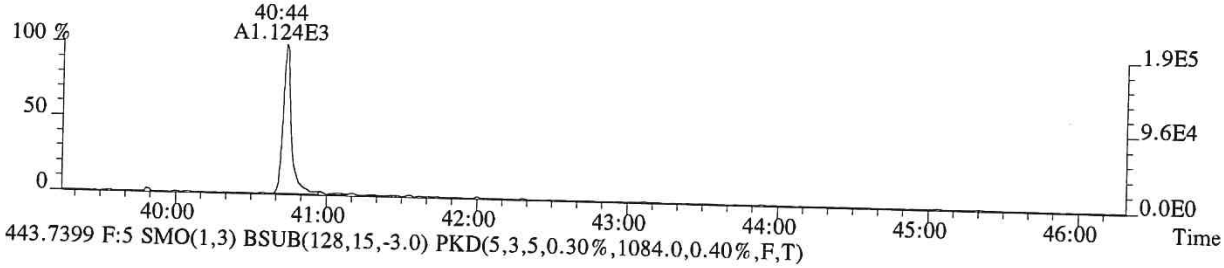
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,384.0,0.40%,F,T)



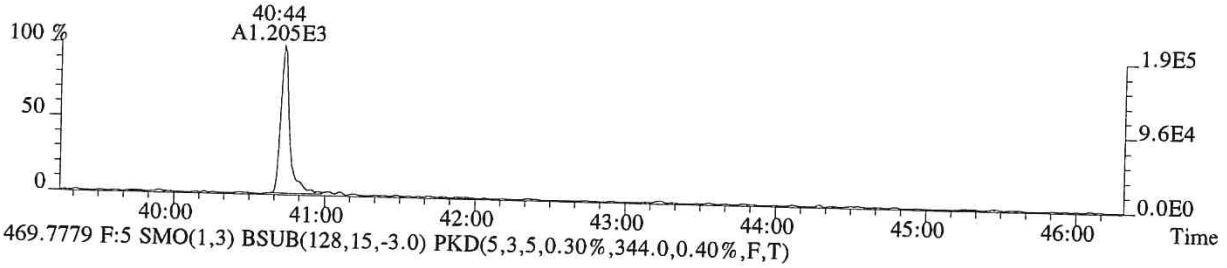
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



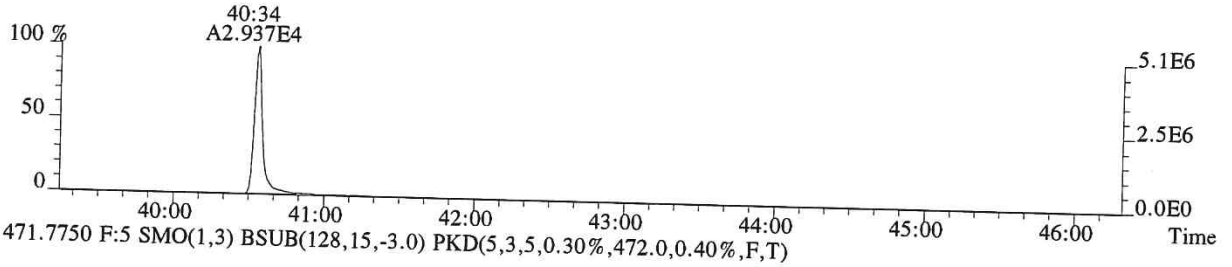
File:P519912 #1-637 Acq:11-JAN-2019 11:22:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,620.0,0.40%,F,T)



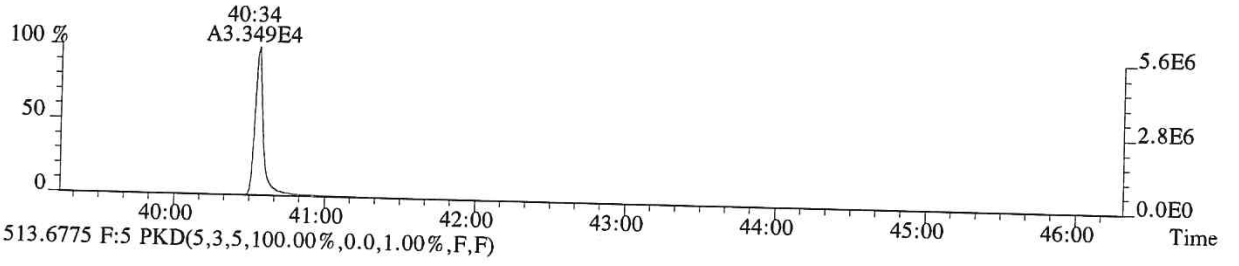
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1084.0,0.40%,F,T)



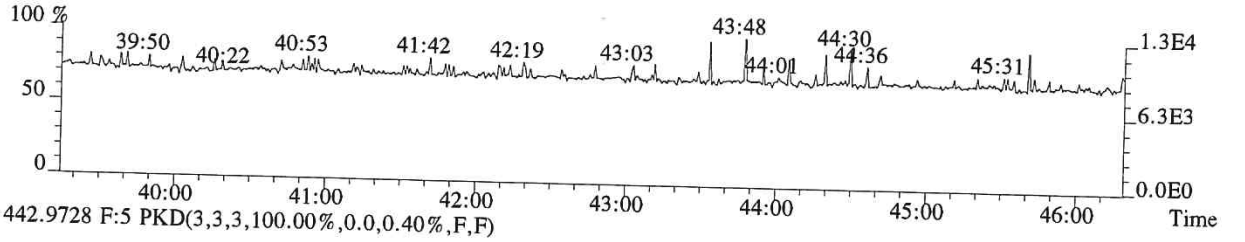
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,344.0,0.40%,F,T)



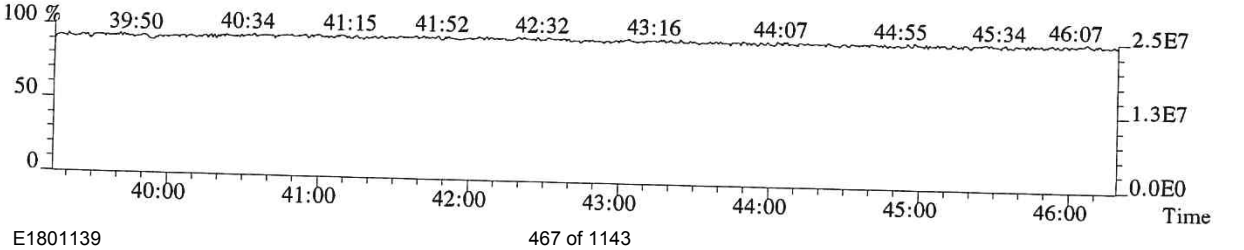
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,472.0,0.40%,F,T)



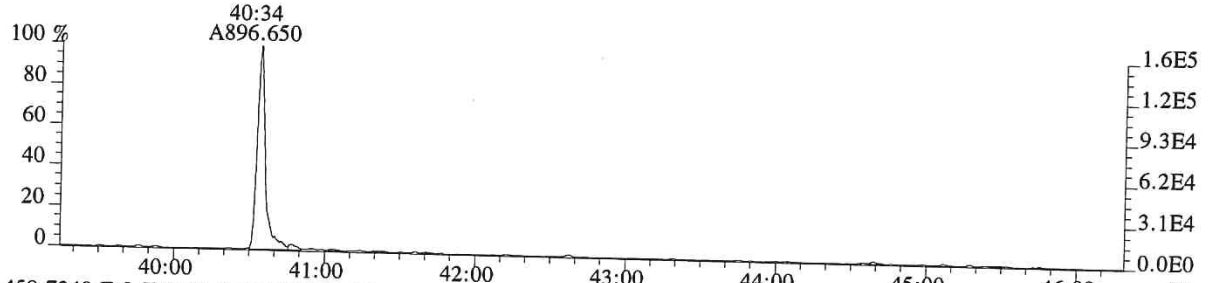
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



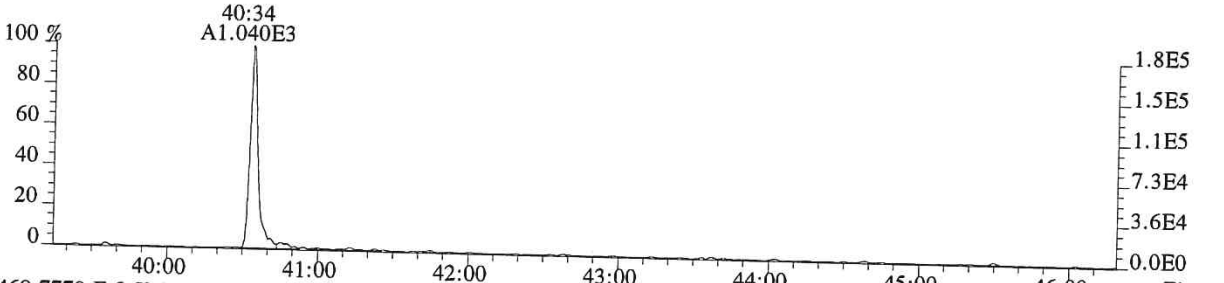
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



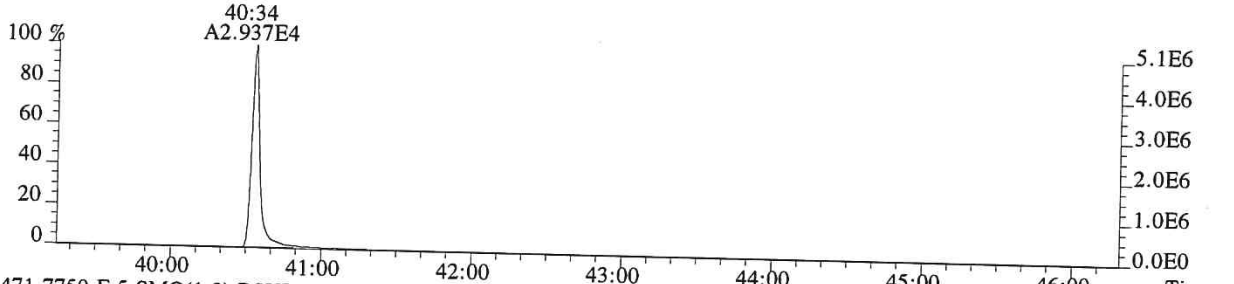
File:P519912 #1-637 Acq:11-JAN-2019 11:22:34 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-010DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,424.0,0.40%,F,T)



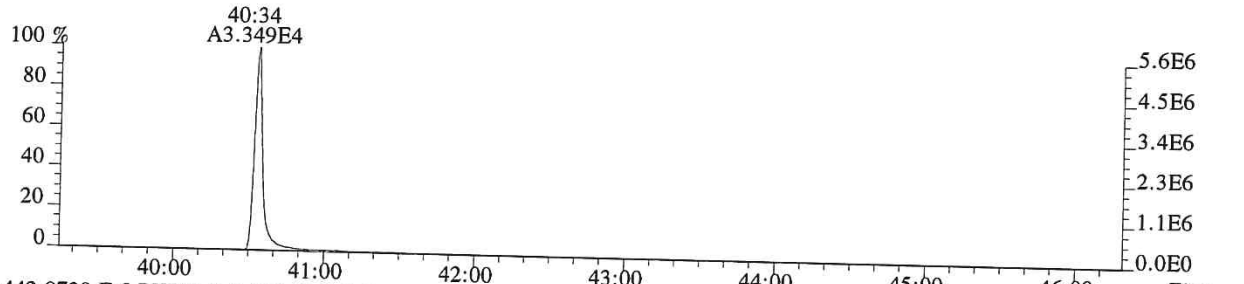
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,444.0,0.40%,F,T)



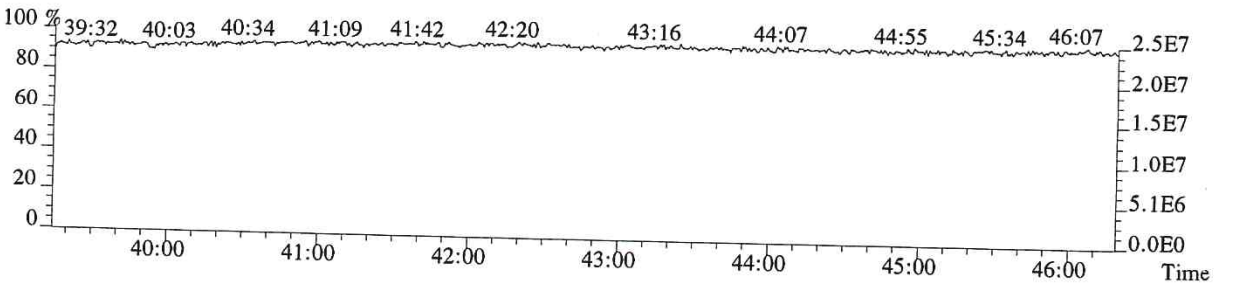
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,344.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,472.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0225

Run #20 Filename P519878 Samp: 1 Inj: 1 Acquired: 10-JAN-19 02:47:20
Processed: 10-JAN-19 08:15:37 Sample ID: E1801139-011

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:46	3.287e+04	4.348e+04	0.76	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:46	1.148e+03	7.544e+02	1.52	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:49	1.558e+03	9.918e+02	1.57	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:47	1.978e+03	1.721e+03	1.15	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:54	8.555e+02	7.831e+02	1.09	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:27	4.965e+02	3.873e+02	1.28	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:18	2.256e+02	2.698e+02	0.84	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:44	6.631e+03	6.420e+03	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:14	5.045e+02	4.378e+02	1.15	yes	no	1.258
10	Unk	OCDF	41:58	7.411e+04	8.466e+04	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:46	7.978e+03	1.031e+04	0.77	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:08	2.790e+02	1.902e+02	1.47	yes	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:37	8.723e+01	6.840e+01	1.28	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:44	4.919e+02	4.001e+02	1.23	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:57	2.358e+02	1.884e+02	1.25	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:46	7.609e+03	7.385e+03	1.03	yes	no	1.025
17	Unk	OCDD	41:49	7.120e+04	7.890e+04	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:44	3.727e+04	4.709e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:45	5.568e+04	3.474e+04	1.60	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:47	5.253e+04	3.350e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:46	2.034e+04	3.973e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:53	2.550e+04	4.922e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:27	2.246e+04	4.331e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:15	2.103e+04	4.068e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:43	1.345e+04	3.065e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:12	1.255e+04	2.831e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:45	1.768e+04	2.187e+04	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:07	3.969e+04	2.518e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:37	2.935e+04	2.340e+04	1.25	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:43	3.162e+04	2.523e+04	1.25	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:46	2.746e+04	2.571e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	41:48	2.140e+04	2.355e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:02	4.215e+04	5.340e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:58	5.577e+04	4.472e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:46	2.591e+04				no	1.014

$$\text{OCDD} = \frac{(7.120e+04 + 7.890e+04) \times 4000 \text{ pg} \times 1}{(2.140e+04 + 2.355e+04) \times 10.093 \text{ g} \times 79.8 / 100 \times 1.118} = 1483 \text{ ng/kg}$$

LM 01/11/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0225

Run #20 Filename P519878 Samp: 1 Inj: 1 Acquired: 10-JAN-19 02:47:20
Processed: 10-JAN-19 08:15:37 LAB. ID: E1801139-011

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	4.37e+06	3.98e+03	1.1e+03	5.72e+06	4.02e+03	1.4e+03
2	1,2,3,7,8-PeCDF	1.89e+05	5.71e+03	3.3e+01	1.23e+05	5.78e+03	2.1e+01
3	2,3,4,7,8-PeCDF	1.78e+05	5.71e+03	3.1e+01	1.19e+05	5.78e+03	2.1e+01
4	1,2,3,4,7,8-HxCDF	3.11e+05	5.08e+03	6.1e+01	2.85e+05	1.40e+03	2.0e+02
5	1,2,3,6,7,8-HxCDF	1.18e+05	5.08e+03	2.3e+01	1.06e+05	1.40e+03	7.5e+01
6	2,3,4,6,7,8-HxCDF	7.23e+04	5.08e+03	1.4e+01	4.92e+04	1.40e+03	3.5e+01
7	1,2,3,7,8,9-HxCDF	3.36e+04	5.08e+03	6.6e+00	3.40e+04	1.40e+03	2.4e+01
8	1,2,3,4,6,7,8-HpCDF	7.18e+05	7.96e+02	9.0e+02	6.86e+05	5.92e+03	1.2e+02
9	1,2,3,4,7,8,9-HpCDF	4.60e+04	7.96e+02	5.8e+01	3.82e+04	5.92e+03	6.5e+00
10	OCDF	3.48e+06	8.12e+02	4.3e+03	3.95e+06	1.31e+03	3.0e+03
11	2,3,7,8-TCDD	1.25e+06	3.29e+03	3.8e+02	1.59e+06	3.34e+03	4.7e+02
12	1,2,3,7,8-PeCDD	3.73e+04	1.95e+03	1.9e+01	2.27e+04	1.89e+03	1.2e+01
13	1,2,3,4,7,8-HxCDD	1.60e+04	1.44e+03	1.1e+01	1.48e+04	4.63e+03	3.2e+00
14	1,2,3,6,7,8-HxCDD	6.34e+04	1.44e+03	4.4e+01	5.16e+04	4.63e+03	1.1e+01
15	1,2,3,7,8,9-HxCDD	3.07e+04	1.44e+03	2.1e+01	2.84e+04	4.63e+03	6.1e+00
16	1,2,3,4,6,7,8-HpCDD	6.67e+05	1.11e+03	6.0e+02	6.13e+05	5.29e+03	1.2e+02
17	OCDD	3.30e+06	8.40e+02	3.9e+03	3.66e+06	9.32e+02	3.9e+03
18	13C-2,3,7,8-TCDF	5.26e+06	8.24e+03	6.4e+02	6.62e+06	5.85e+03	1.1e+03
19	13C-1,2,3,7,8-PeCDF	8.68e+06	7.46e+03	1.2e+03	5.45e+06	1.13e+04	4.8e+02
20	13C-2,3,4,7,8-PeCDF	8.56e+06	7.46e+03	1.1e+03	5.49e+06	1.13e+04	4.8e+02
21	13C-1,2,3,4,7,8-HxCDF	3.39e+06	1.32e+03	2.6e+03	6.56e+06	1.91e+03	3.4e+03
22	13C-1,2,3,6,7,8-HxCDF	3.59e+06	1.32e+03	2.7e+03	7.00e+06	1.91e+03	3.7e+03
23	13C-2,3,4,6,7,8-HxCDF	3.29e+06	1.32e+03	2.5e+03	6.37e+06	1.91e+03	3.3e+03
24	13C-1,2,3,7,8,9-HxCDF	2.78e+06	1.32e+03	2.1e+03	5.24e+06	1.91e+03	2.7e+03
25	13C-1,2,3,4,6,7,8-HpCDF	1.47e+06	2.90e+03	5.1e+02	3.29e+06	2.84e+03	1.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.01e+06	2.90e+03	3.5e+02	2.33e+06	2.84e+03	8.2e+02
27	13C-2,3,7,8-TCDD	2.71e+06	8.81e+03	3.1e+02	3.39e+06	8.70e+03	3.9e+02
28	13C-1,2,3,7,8-PeCDD	6.31e+06	2.44e+03	2.6e+03	3.99e+06	2.22e+03	1.8e+03
29	13C-1,2,3,4,7,8-HxCDD	4.50e+06	8.68e+02	5.2e+03	3.57e+06	9.64e+02	3.7e+03
30	13C-1,2,3,6,7,8-HxCDD	4.33e+06	8.68e+02	5.0e+03	3.45e+06	9.64e+02	3.6e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.38e+06	1.35e+03	1.8e+03	2.18e+06	7.24e+02	3.0e+03
32	13C-OCDD	1.00e+06	1.13e+03	8.9e+02	1.10e+06	6.60e+02	1.7e+03
33	13C-1,2,3,4-TCDD	6.39e+06	8.81e+03	7.3e+02	8.06e+06	8.70e+03	9.3e+02
34	13C-1,2,3,7,8,9-HxCDD	7.18e+06	8.68e+02	8.3e+03	5.75e+06	9.64e+02	6.0e+03
35	37Cl-2,3,7,8-TCDD	3.99e+06	1.67e+03	2.4e+03			

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Peak List Summary

CLIENT ID.
SL0225

Entry: 36 Totals Name: Total Tetra-Furans

Run: 20 File: P519878 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 02:47:20 Processed: 10-JAN-19 08:15:37

Mass: 303.9020 305.8990 Tot Response: 1.37e+05 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:41	2.17e+02	2.60e+02	0.83	yes	4.78e+02		n	n
2	22:08	4.97e+02	7.08e+02	0.70	yes	1.21e+03		n	n
3	22:35	5.63e+02	7.69e+02	0.73	yes	1.33e+03		n	n
4	22:53	1.65e+03	2.21e+03	0.74	yes	3.86e+03		n	n
5	23:14	6.31e+02	9.26e+02	0.68	yes	1.56e+03		n	n
6	23:22	1.38e+02	2.03e+02	0.68	yes	3.41e+02		n	n
7	23:31	1.35e+03	1.79e+03	0.75	yes	3.14e+03		n	n
8	24:08	1.19e+03	1.60e+03	0.74	yes	2.80e+03		n	n
9	24:15	1.17e+03	1.56e+03	0.75	yes	2.73e+03		n	n
10	24:45	1.29e+04	1.71e+04	0.76	yes	3.00e+04		n	n
11	25:02	6.77e+02	9.28e+02	0.73	yes	1.60e+03		n	n
12	25:46	3.29e+04	4.35e+04	0.76	yes	7.64e+04	2,3,7,8-TCDF	n	n
13	26:11	2.40e+03	3.40e+03	0.71	yes	5.80e+03		n	n
14	26:28	4.06e+02	4.98e+02	0.82	yes	9.04e+02		n	n
15	28:00	2.22e+03	2.88e+03	0.77	yes	5.10e+03		n	n

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Peak List Summary

CLIENT ID.
SL0225

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 20 File: P519878 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 02:47:20 Processed: 10-JAN-19 08:15:37

Mass: 319.8970 321.8940 Tot Response: 1.87e+04 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	23:13	5.00e+01	7.59e+01	0.66	yes	1.26e+02		n	n
2	24:23	1.03e+02	1.33e+02	0.77	yes	2.36e+02		n	n
3	26:00	1.89e+01	2.75e+01	0.69	yes	4.64e+01		n	n
4	26:46	7.98e+03	1.03e+04	0.77	yes	1.83e+04	2,3,7,8-TCDD	n	n

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SL0225

Entry: 38 Totals Name: Total Penta-Furans1

Run: 20 File: P519878 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 02:47:20 Processed: 10-JAN-19 08:15:37

Mass: 339.8600 341.8570 Tot Response: 5.67e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:01	3.44e+03	2.17e+03 1.59	yes	5.60e+03		n	n
2	28:22	3.83e+01	2.84e+01 1.35	yes	6.67e+01		n	n

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SL0225

Entry: 39 Totals Name: Total Penta-Furans2

Run: 20 File: P519878 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 02:47:20 Processed: 10-JAN-19 08:15:37

Mass: 339.8600 341.8570 Tot Response: 9.96e+03 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:44	2.28e+03	1.60e+03	1.42	yes	3.89e+03		n	n
2	30:20	6.50e+02	4.25e+02	1.53	yes	1.08e+03		n	n
3	30:34	2.08e+02	1.17e+02	1.78	yes	3.26e+02		n	n
4	30:46	1.15e+03	7.54e+02	1.52	yes	1.90e+03	1,2,3,7,8-PeCDF	n	n
5	31:49	1.56e+03	9.92e+02	1.57	yes	2.55e+03	2,3,4,7,8-PeCDF	n	n
6	32:48	1.34e+02	8.89e+01	1.51	yes	2.23e+02		n	n

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SL0225

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 20 File: P519878 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 02:47:20 Processed: 10-JAN-19 08:15:37

Mass: 355.8550 357.8520 Tot Response: 1.78e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:47	4.27e+02	3.19e+02	1.34	yes	7.46e+02		n	n
2	30:49	2.02e+02	1.18e+02	1.72	yes	3.20e+02		y	n
3	31:00	1.53e+02	9.42e+01	1.63	yes	2.48e+02		y	n
4	32:08	2.79e+02	1.90e+02	1.47	yes	4.69e+02	1,2,3,7,8-PeCDD	y	n

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Peak List Summary

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SL0225

Entry: 41 Totals Name: Total Hexa-Furans

Run: 20 File: P519878 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 02:47:20 Processed: 10-JAN-19 08:15:37

Mass: 373.8210 375.8180 Tot Response: 1.56e+04 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:44	2.37e+03	2.16e+03	1.10	yes	4.53e+03		n	n
2	34:07	7.34e+01	6.41e+01	1.15	yes	1.38e+02		n	n
3	34:19	2.44e+03	2.06e+03	1.18	yes	4.49e+03		n	n
4	34:47	1.98e+03	1.72e+03	1.15	yes	3.70e+03	1,2,3,4,7,8-HxCDF	n	n
5	34:54	8.55e+02	7.83e+02	1.09	yes	1.64e+03	1,2,3,6,7,8-HxCDF	n	n
6	35:11	1.33e+02	1.24e+02	1.07	yes	2.57e+02		n	n
7	35:27	4.96e+02	3.87e+02	1.28	yes	8.84e+02	2,3,4,6,7,8-HxCDF	n	n

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Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 20 File: P519878 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 02:47:20 Processed: 10-JAN-19 08:15:37

Mass: 389.8160 391.8130 Tot Response: 9.09e+03 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:09	2.13e+03	1.70e+03	1.26	yes	3.83e+03		n	n
2	34:44	3.39e+02	2.61e+02	1.30	yes	5.99e+02		n	n
3	34:59	1.79e+03	1.40e+03	1.28	yes	3.19e+03		n	n
4	35:37	8.72e+01	6.84e+01	1.28	yes	1.56e+02	1,2,3,4,7,8-HxCDD	n	n
5	35:44	4.92e+02	4.00e+02	1.23	yes	8.92e+02	1,2,3,6,7,8-HxCDD	n	n
6	35:57	2.36e+02	1.88e+02	1.25	yes	4.24e+02	1,2,3,7,8,9-HxCDD	n	n

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Entry: 43 Totals Name: Total Hepta-Furans

Run: 20 File: P519878 Sample:1 Injection:1 Function:4

Acquired: 10-JAN-19 02:47:20 Processed: 10-JAN-19 08:15:37

Mass: 407.7820 409.7790 Tot Response: 2.69e+04 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:44	6.63e+03	6.42e+03	1.03	yes	1.31e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	38:10	6.58e+03	6.36e+03	1.03	yes	1.29e+04		n	n
3	39:14	5.04e+02	4.38e+02	1.15	yes	9.42e+02	1,2,3,4,7,8,9-HpCDF	n	n

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Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 20 File: P519878 Sample:1 Injection:1 Function:4

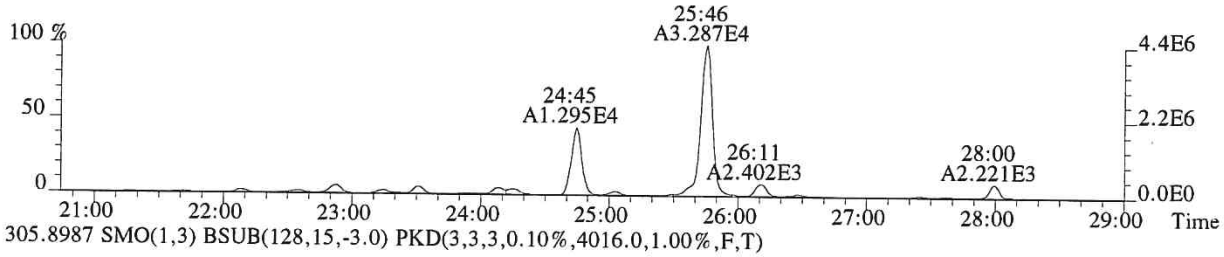
Acquired: 10-JAN-19 02:47:20 Processed: 10-JAN-19 08:15:37

Mass: 423.7770 425.7740 Tot Response: 3.88e+04 RRF: 1.025

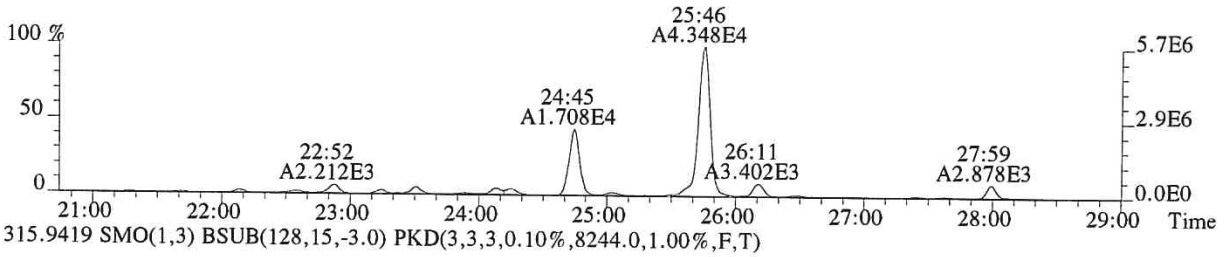
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:02	1.23e+04	1.15e+04 1.07	yes	2.38e+04		n	n
2	38:46	7.61e+03	7.39e+03 1.03	yes	1.50e+04	1,2,3,4,6,7,8-HpCDD	n	n

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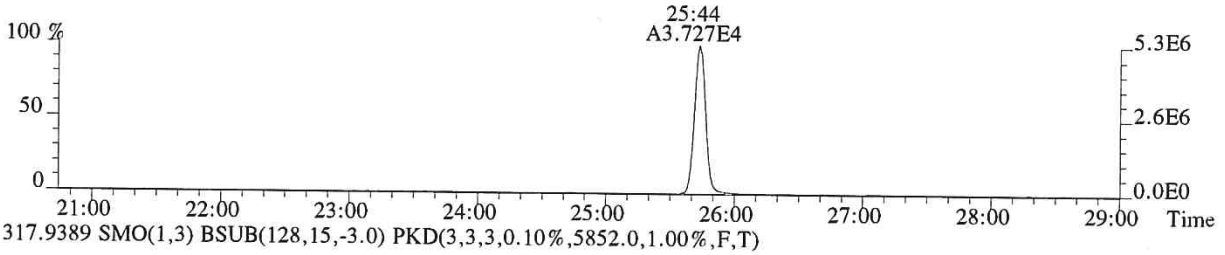
File:P519878 #1-587 Acq:10-JAN-2019 02:47:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-011
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3976.0,1.00%,F,T)



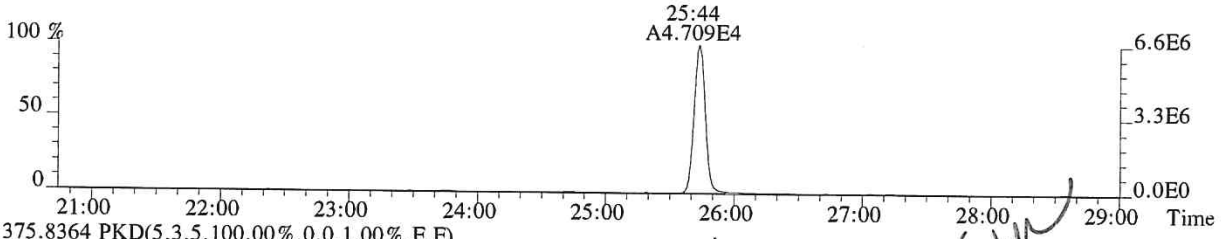
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4016.0,1.00%,F,T)



315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8244.0,1.00%,F,T)

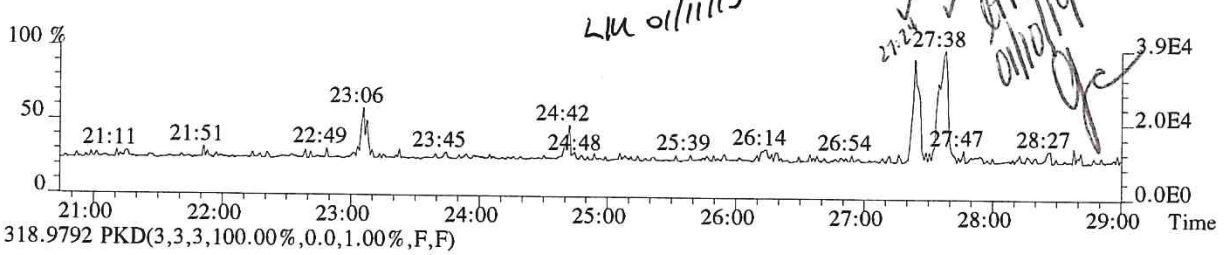


317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5852.0,1.00%,F,T)

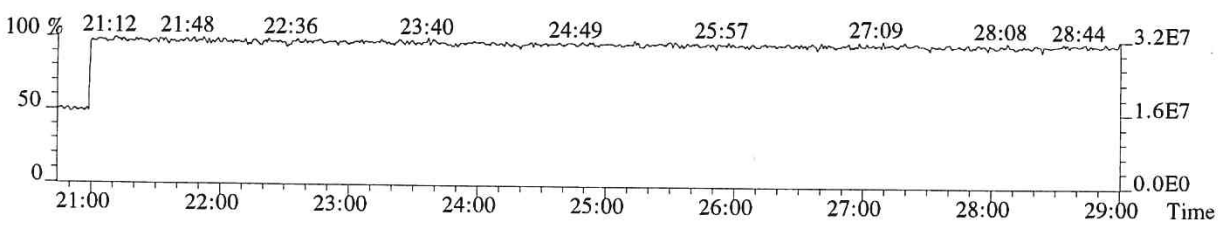


375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

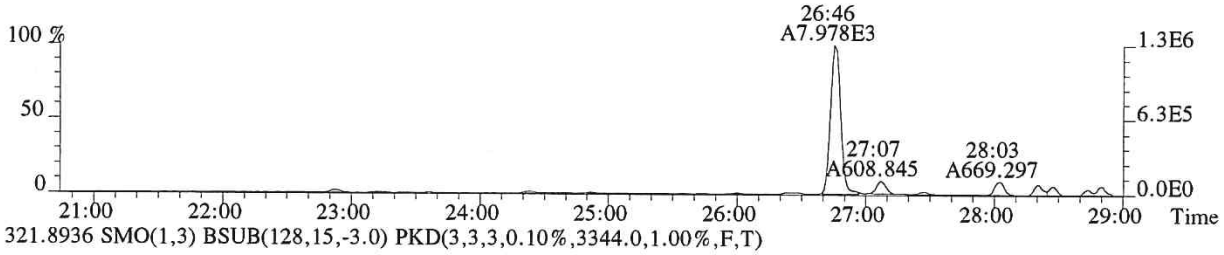
LM 01/11/19



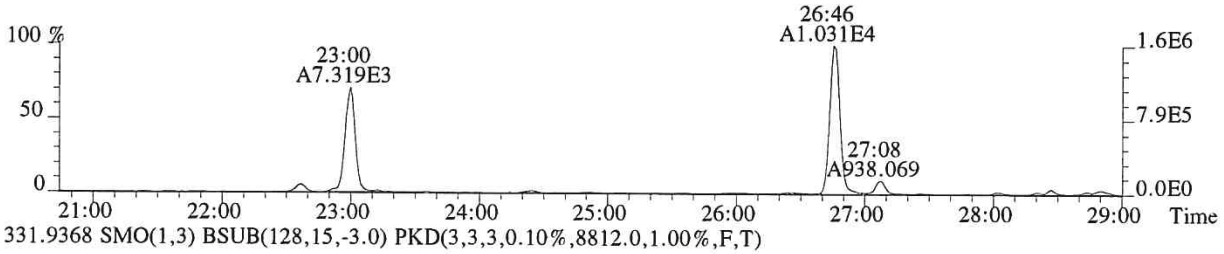
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



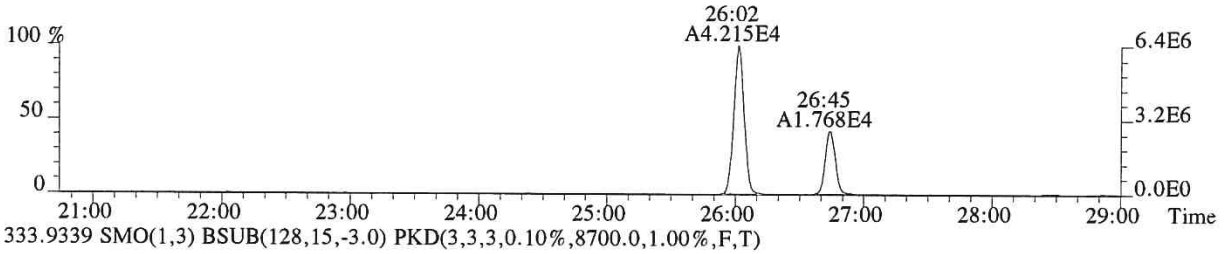
File:P519878 #1-587 Acq:10-JAN-2019 02:47:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-011
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3292.0,1.00%,F,T)



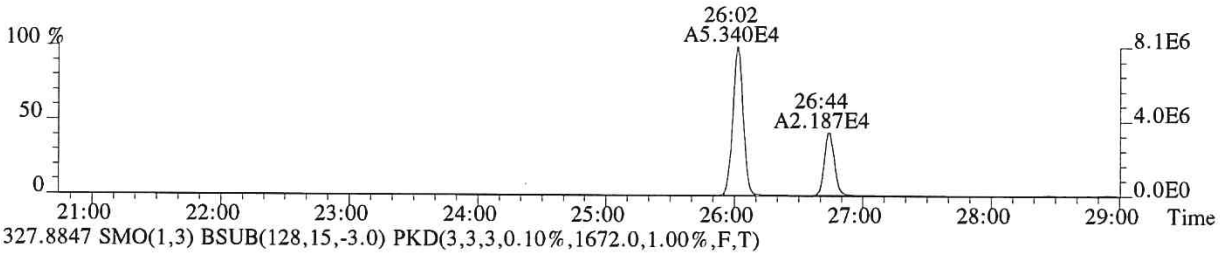
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3344.0,1.00%,F,T)



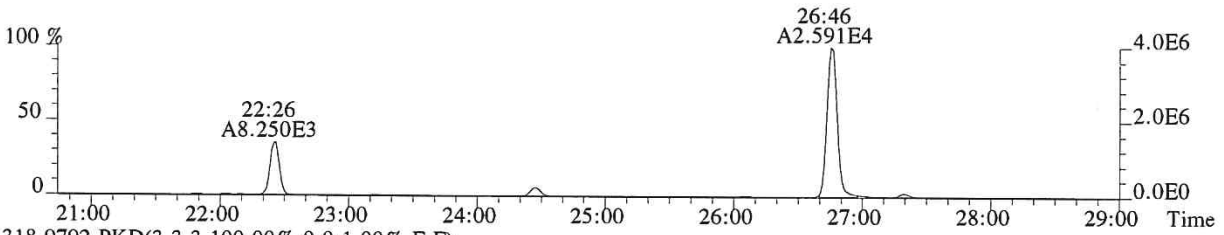
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8812.0,1.00%,F,T)



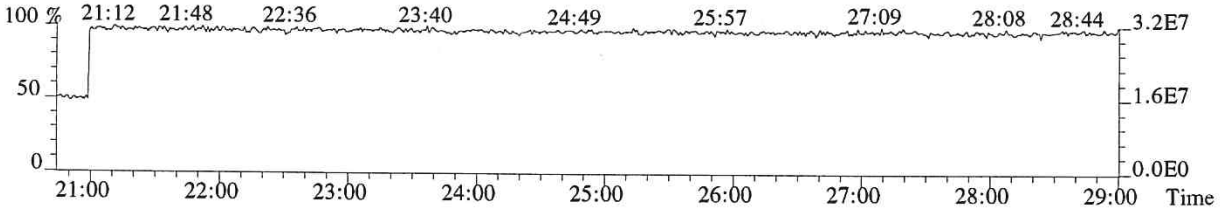
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8700.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1672.0,1.00%,F,T)

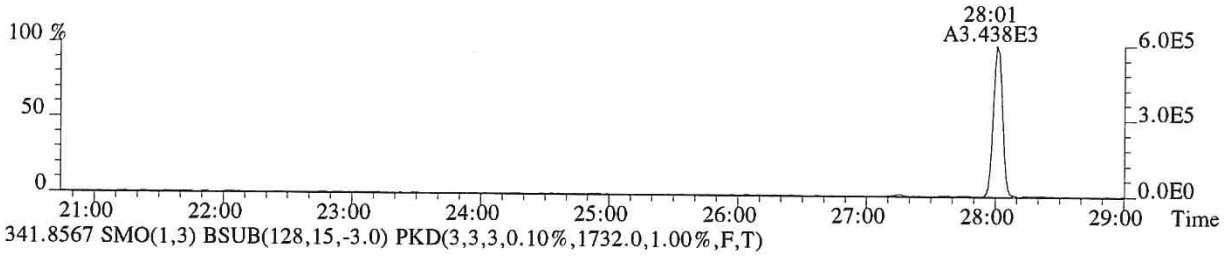


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

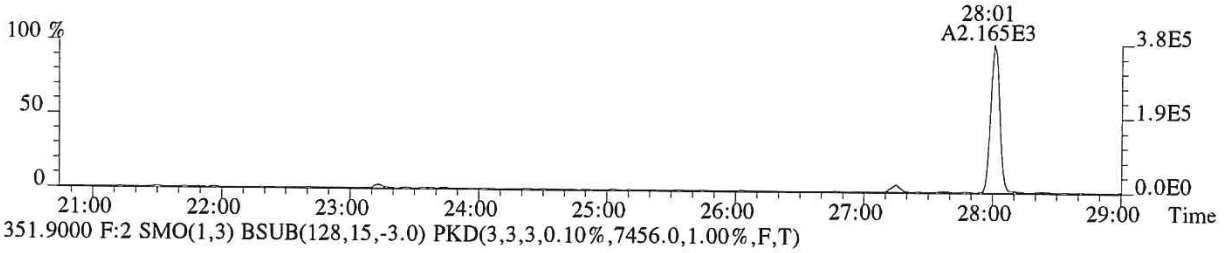


018445

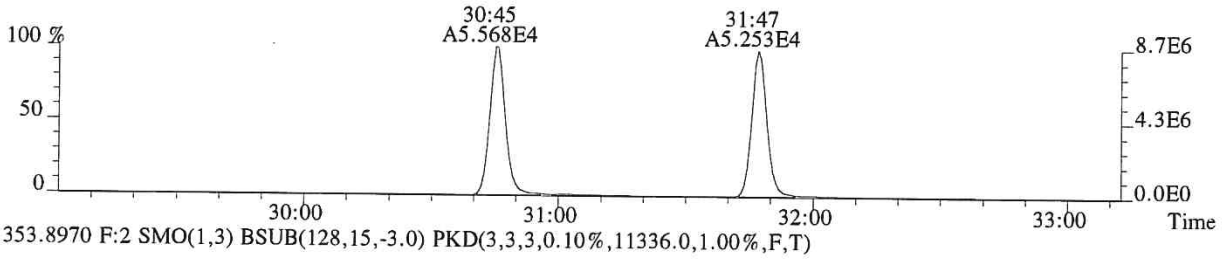
File:P519878 #1-587 Acq:10-JAN-2019 02:47:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-011
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1036.0,1.00%,F,T)



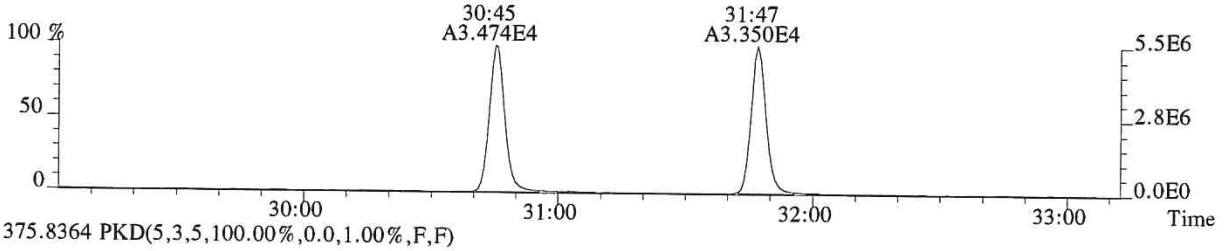
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1732.0,1.00%,F,T)



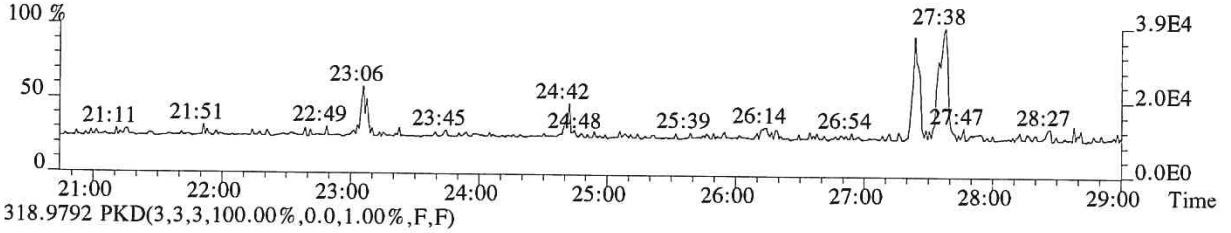
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7456.0,1.00%,F,T)



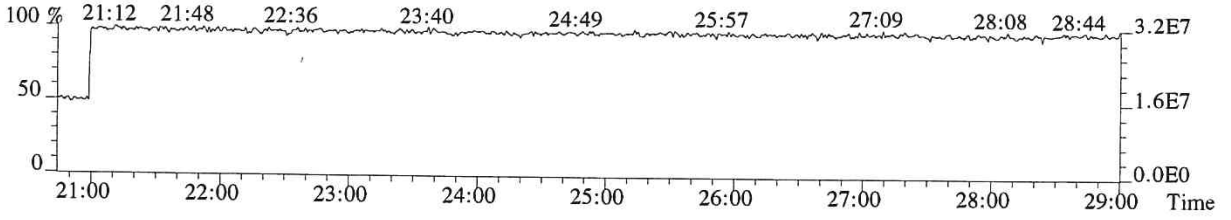
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11336.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

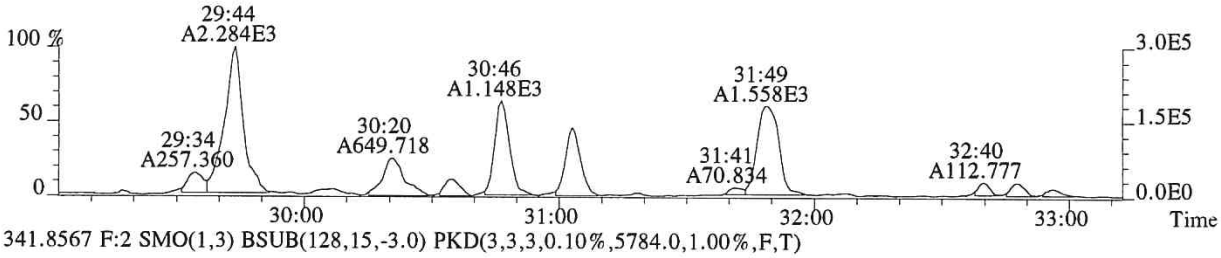


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

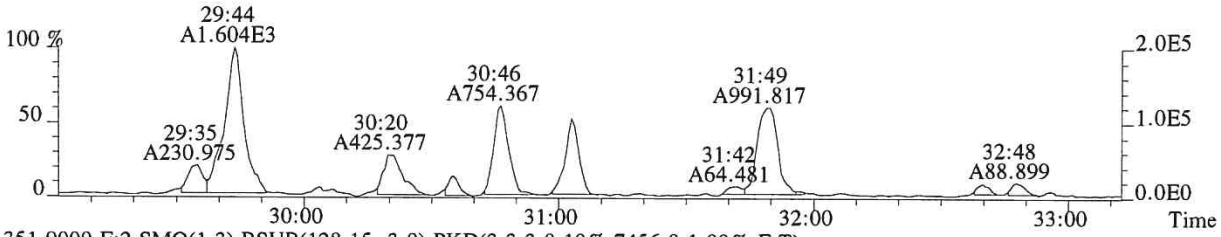


018446

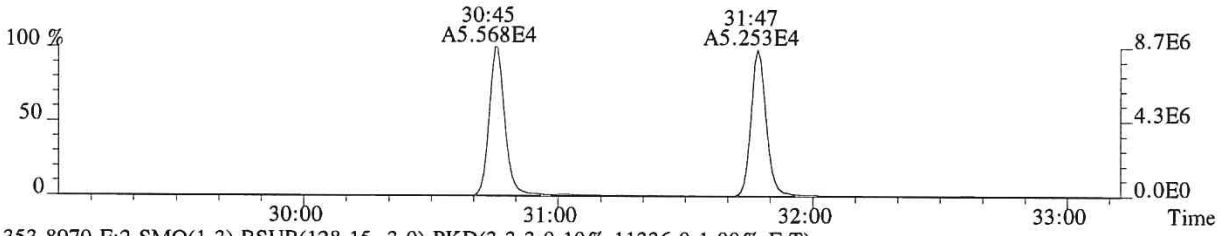
File:P519878 #1-376 Acq:10-JAN-2019 02:47:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-011
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5712.0,1.00%,F,T)



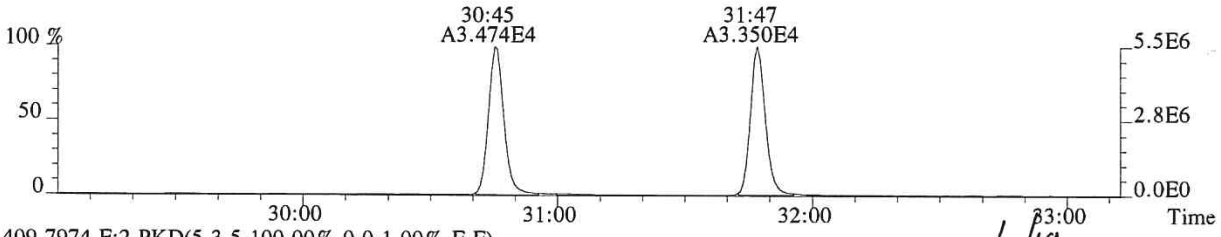
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5784.0,1.00%,F,T)



351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7456.0,1.00%,F,T)

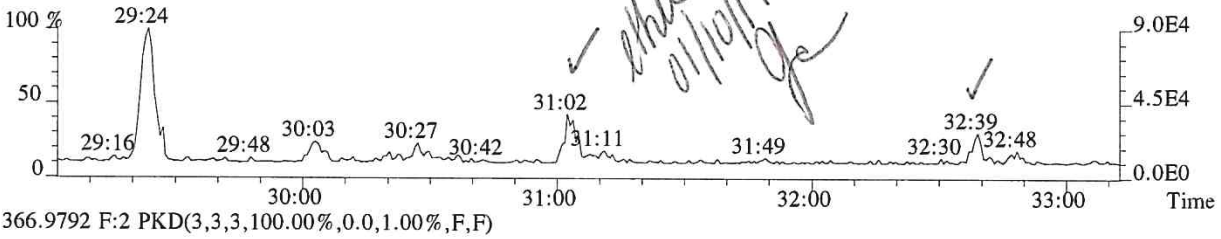


353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,11336.0,1.00%,F,T)

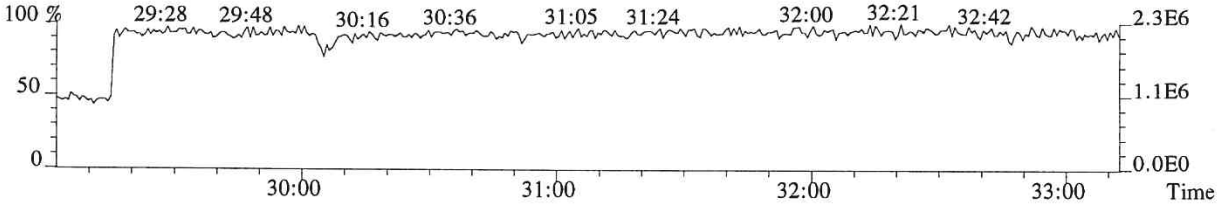


409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

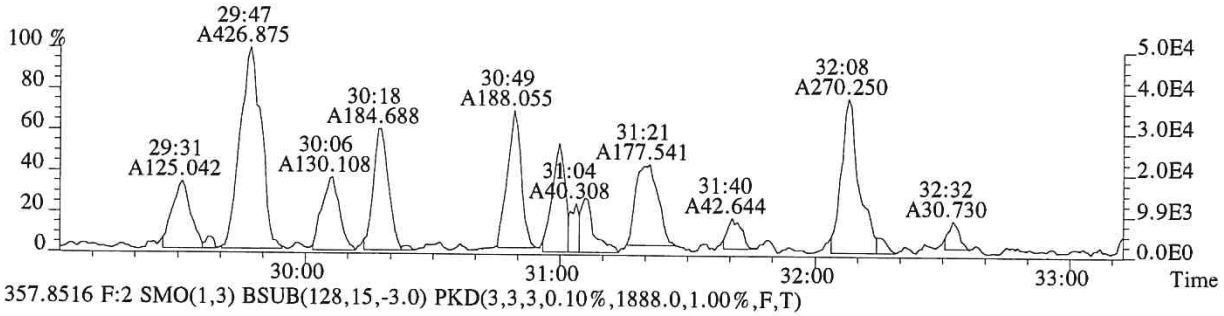
LM 01/11/19



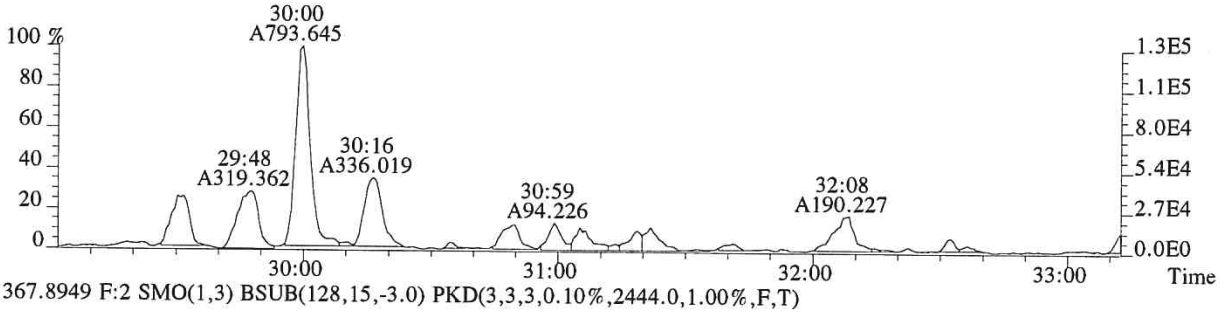
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



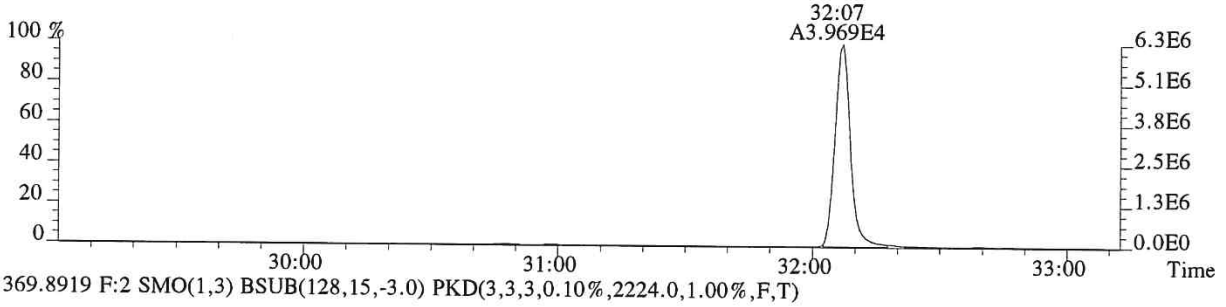
File:P519878 #1-376 Acq:10-JAN-2019 02:47:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-011
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1948.0,1.00%,F,T)



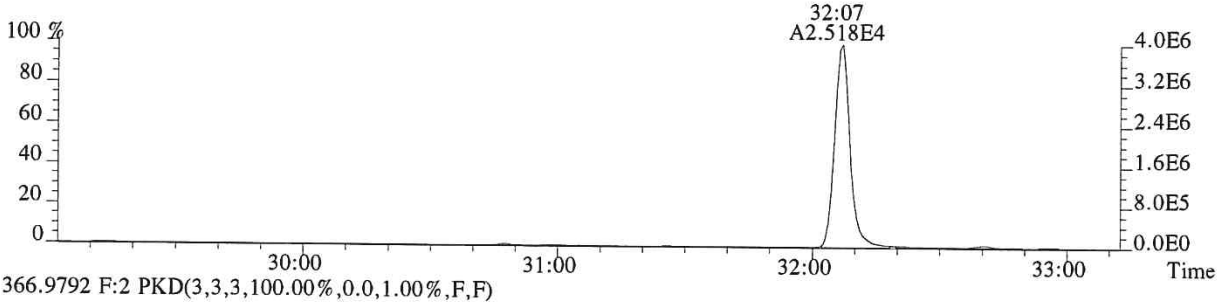
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1888.0,1.00%,F,T)



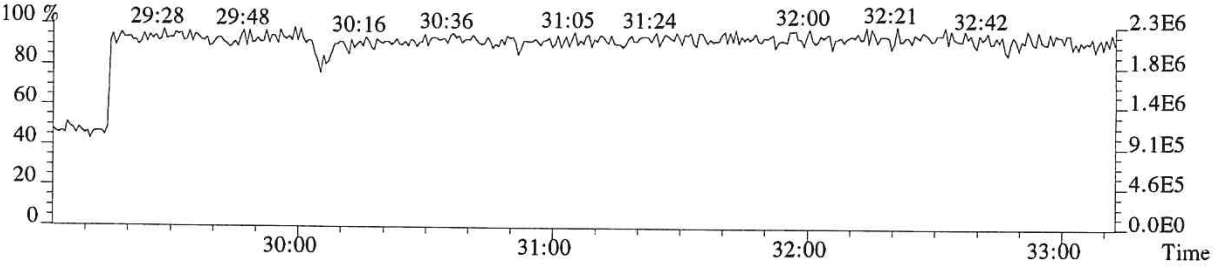
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2444.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2224.0,1.00%,F,T)

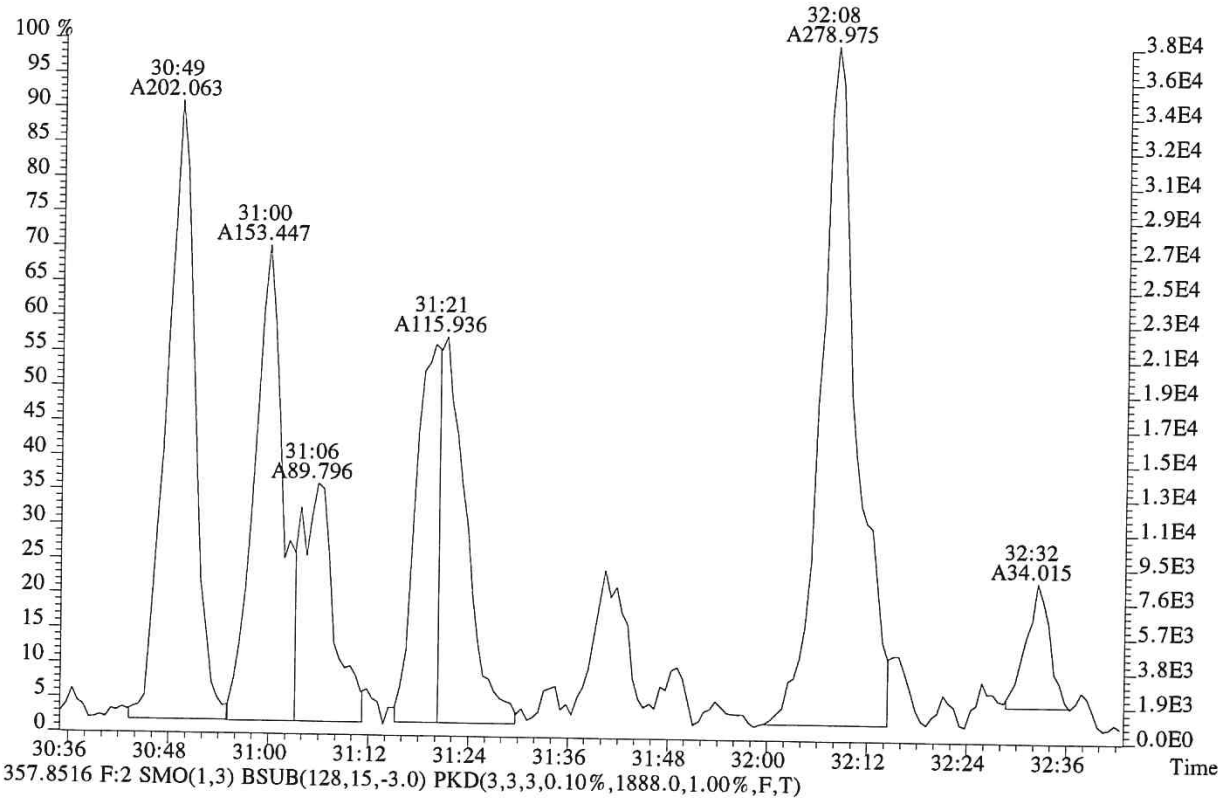


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

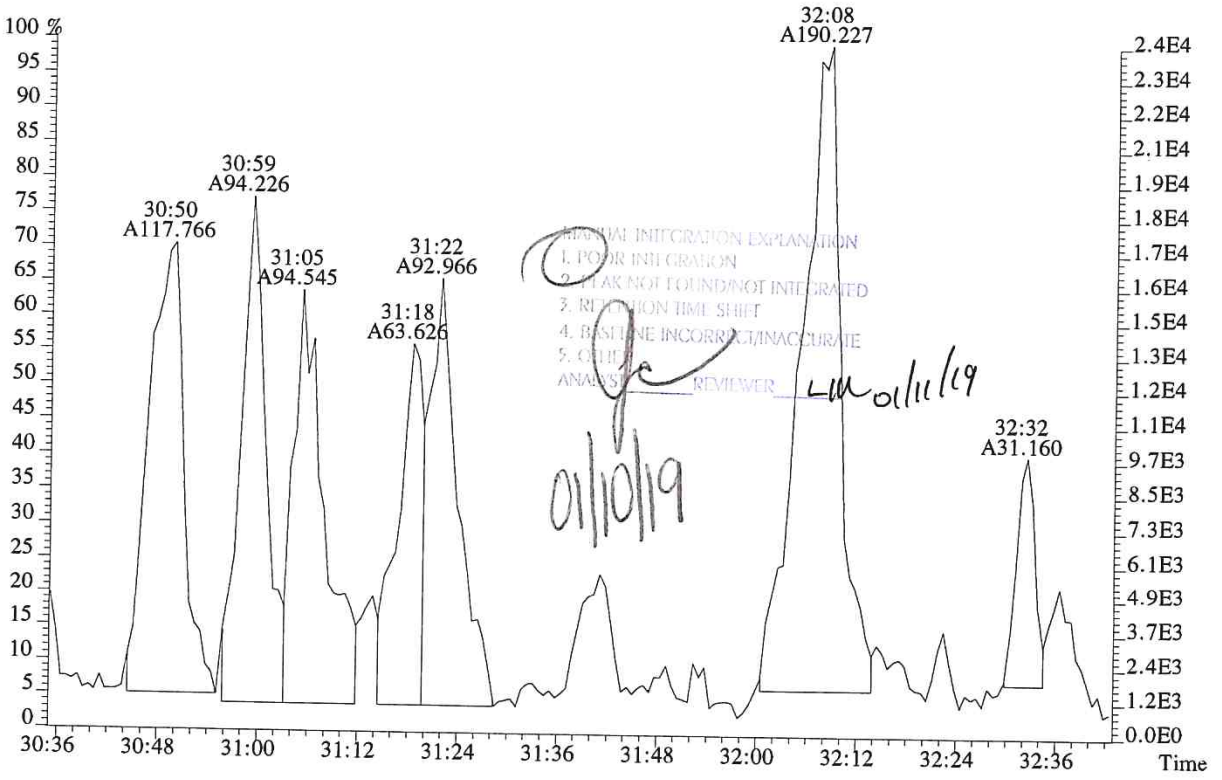


018448

File:P519878 #1-376 Acq:10-JAN-2019 02:47:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-011
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1948.0,1.00%,F,T)

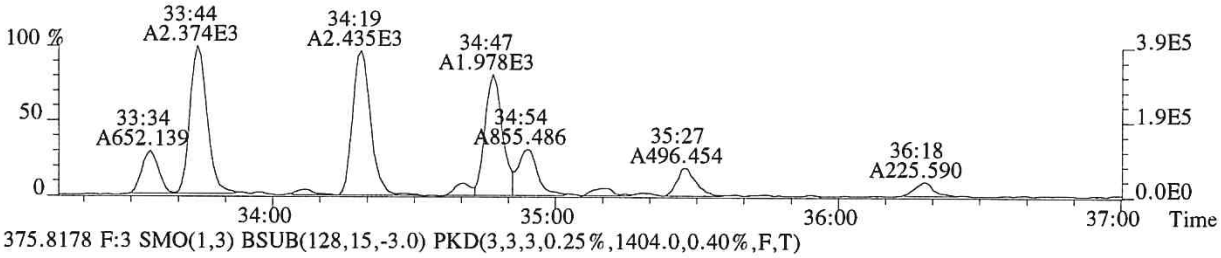


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1888.0,1.00%,F,T)

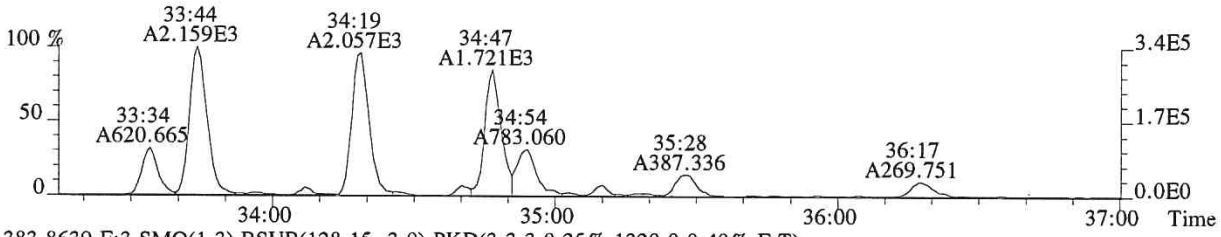


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST _____ REVIEWER LM 01/11/19
01/10/19

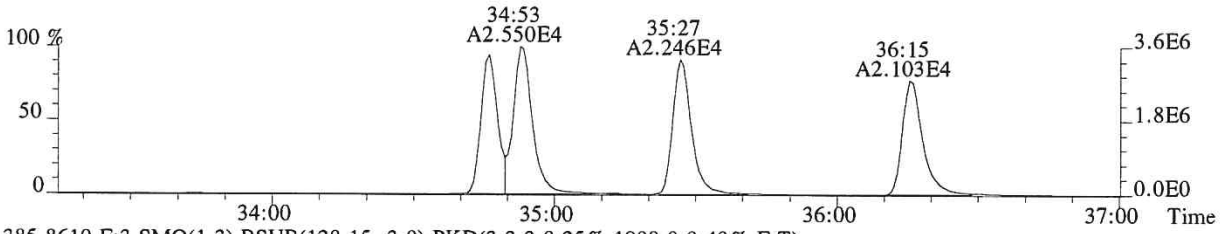
File:P519878 #1-339 Acq:10-JAN-2019 02:47:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-011
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5076.0,0.40%,F,T)



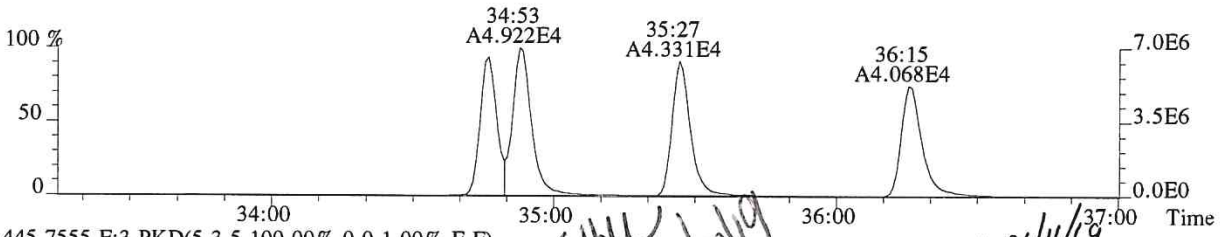
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1404.0,0.40%,F,T)



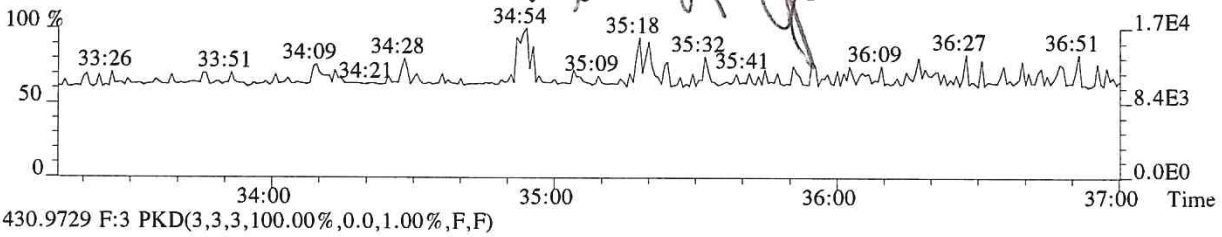
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1320.0,0.40%,F,T)



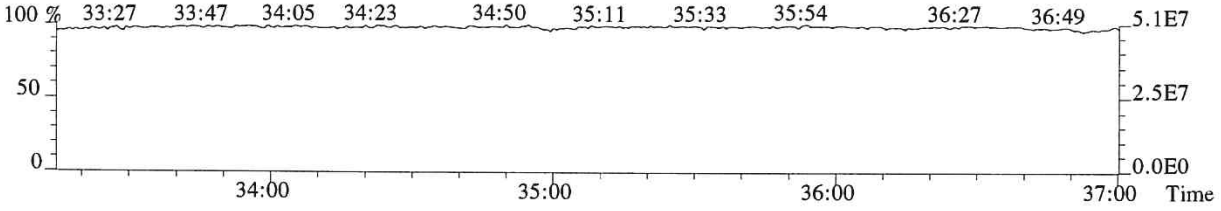
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1908.0,0.40%,F,T)



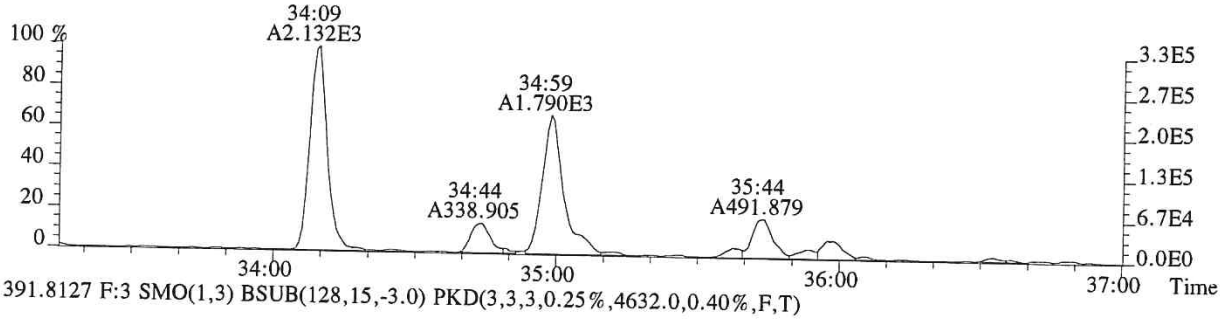
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



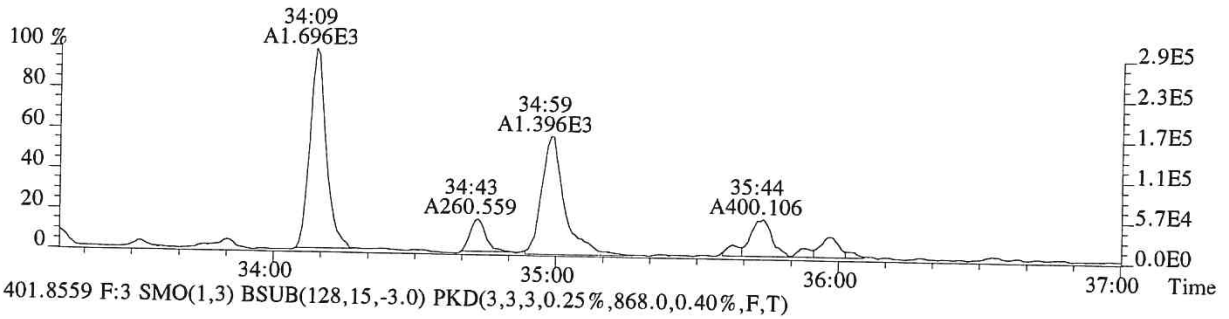
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



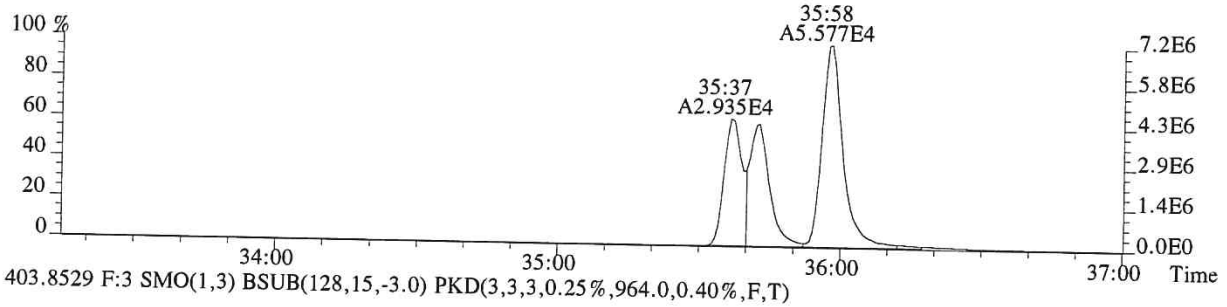
File:P519878 #1-339 Acq:10-JAN-2019 02:47:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-011
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1444.0,0.40%,F,T)



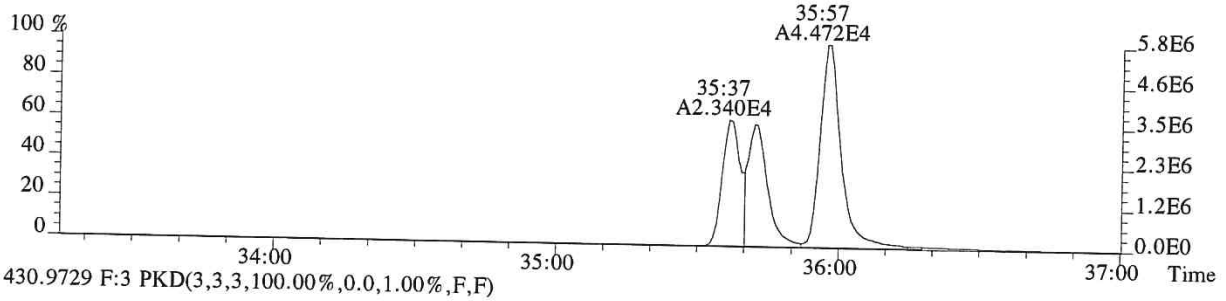
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4632.0,0.40%,F,T)



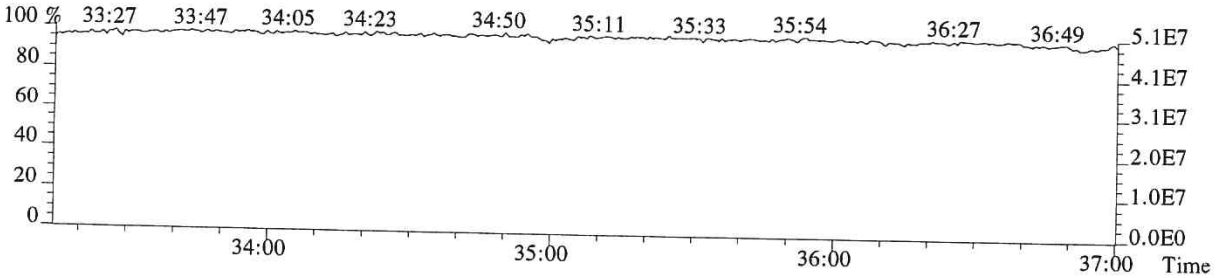
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,868.0,0.40%,F,T)



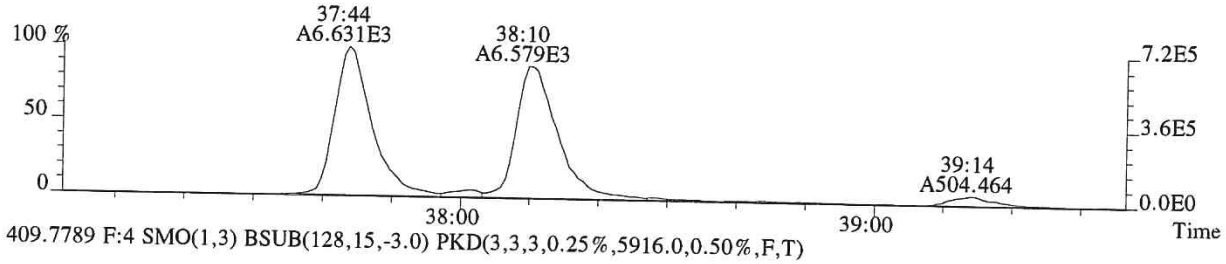
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,964.0,0.40%,F,T)



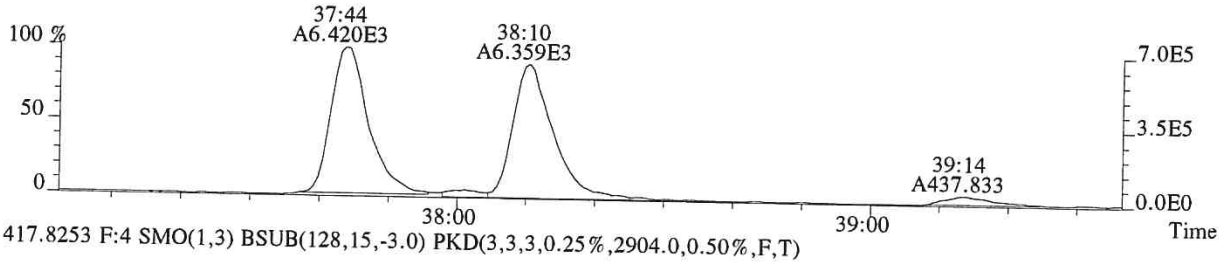
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



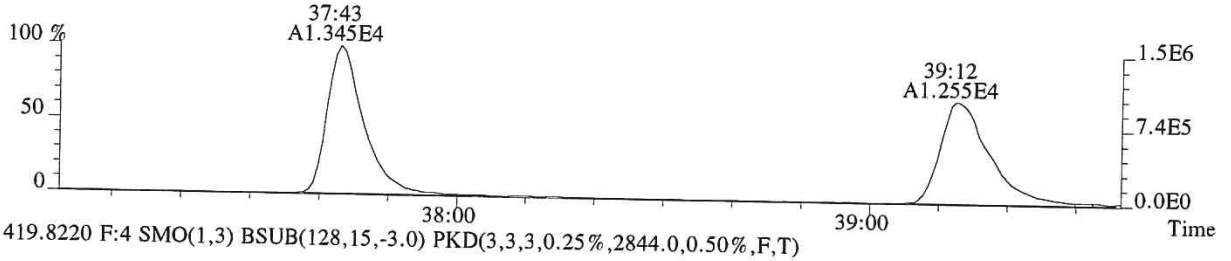
File:P519878 #1-232 Acq:10-JAN-2019 02:47:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-011
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,796.0,0.50%,F,T)



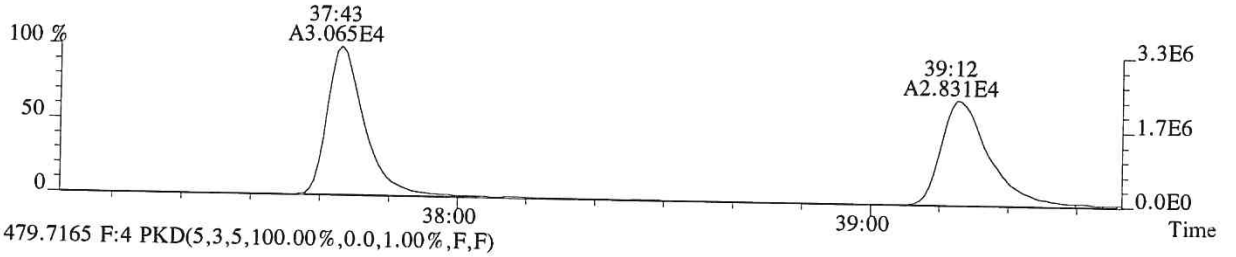
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5916.0,0.50%,F,T)



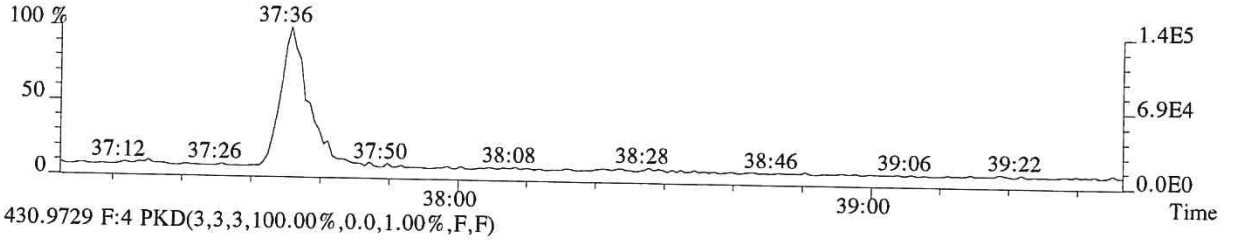
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2904.0,0.50%,F,T)



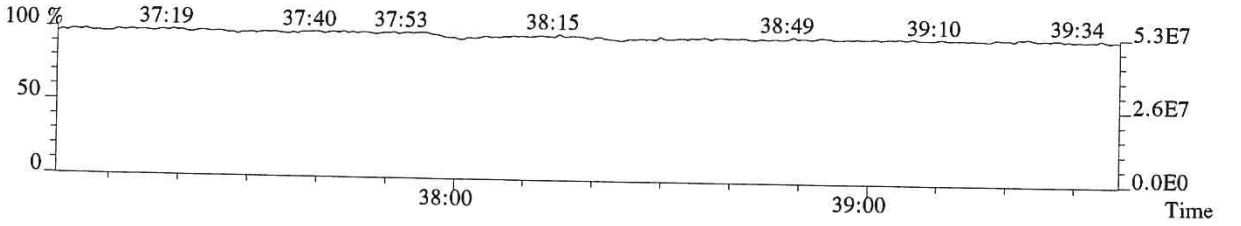
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2844.0,0.50%,F,T)



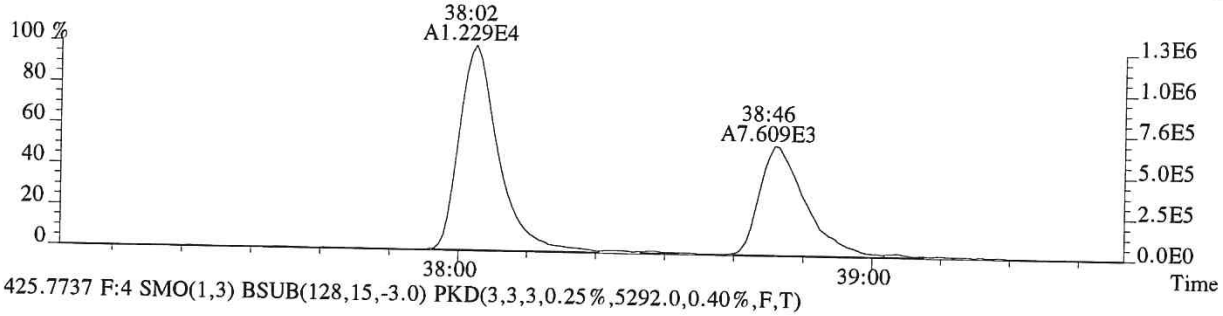
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



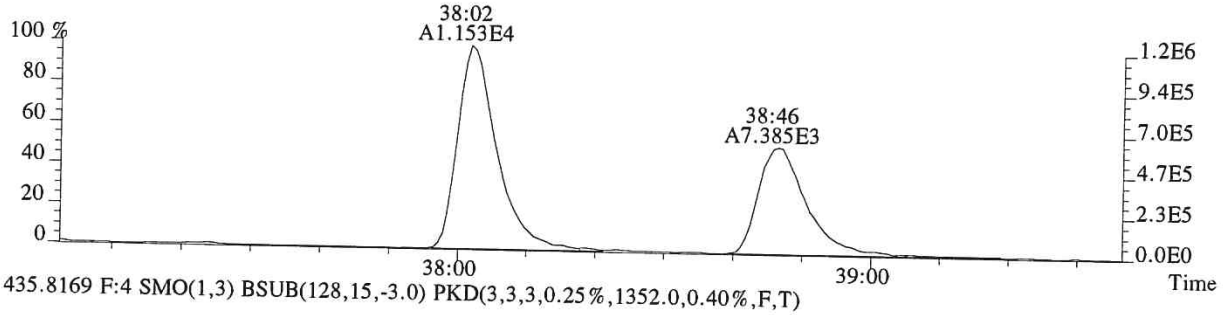
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



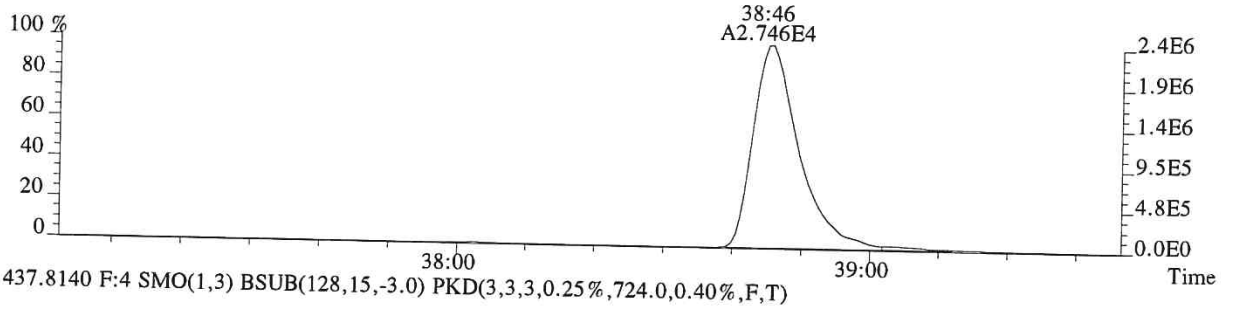
File:P519878 #1-232 Acq:10-JAN-2019 02:47:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-011
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1108.0,0.40%,F,T)



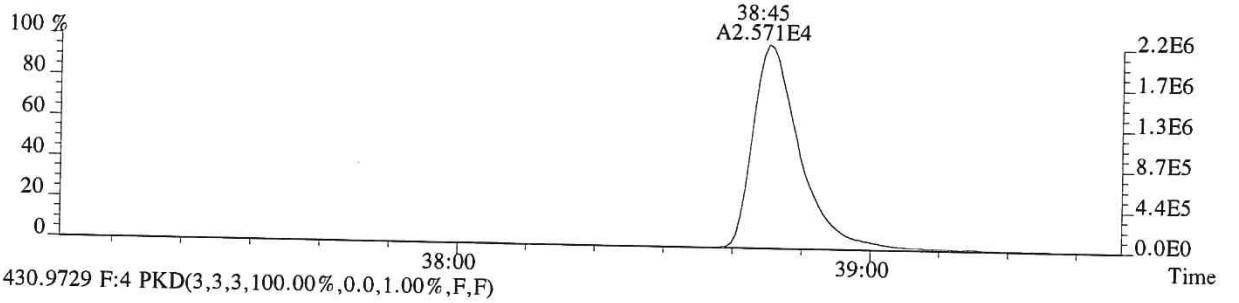
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5292.0,0.40%,F,T)



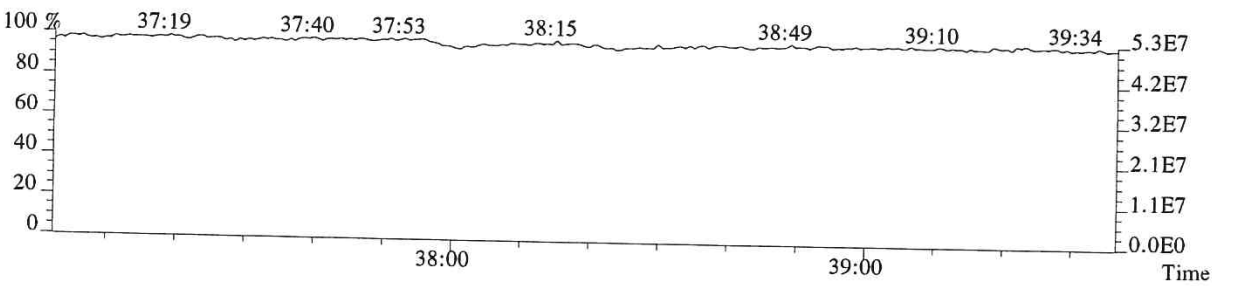
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1352.0,0.40%,F,T)



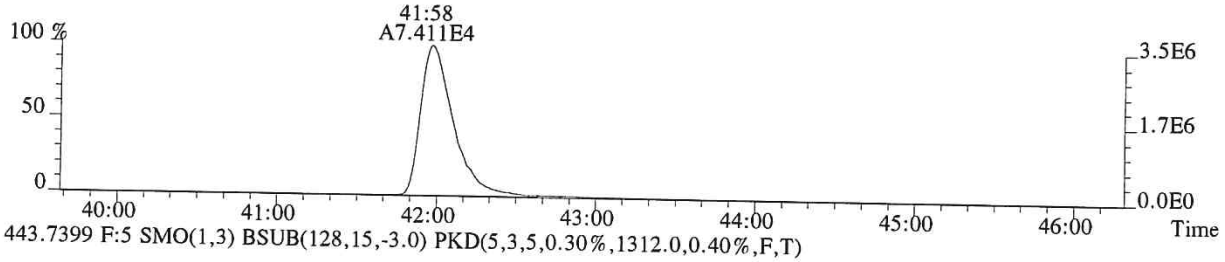
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,724.0,0.40%,F,T)



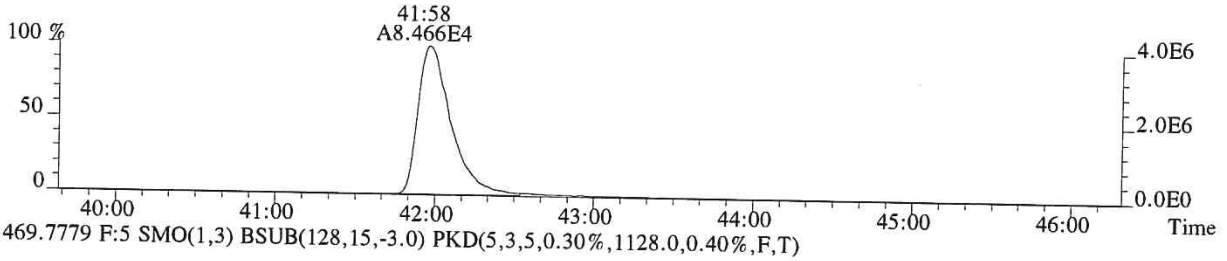
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



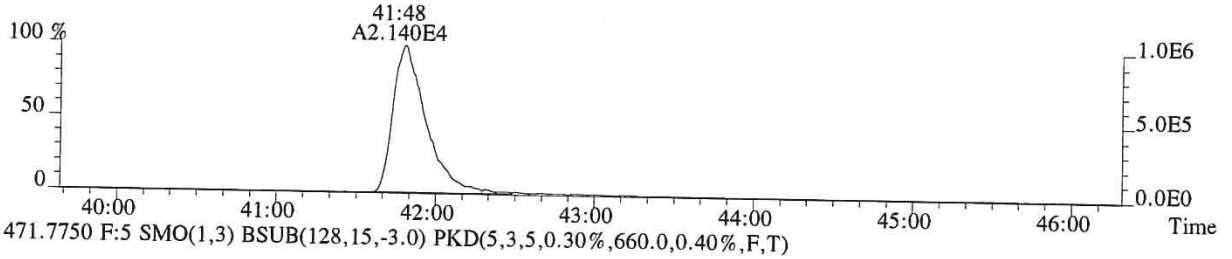
File:P519878 #1-601 Acq:10-JAN-2019 02:47:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-011
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,812.0,0.40%,F,T)



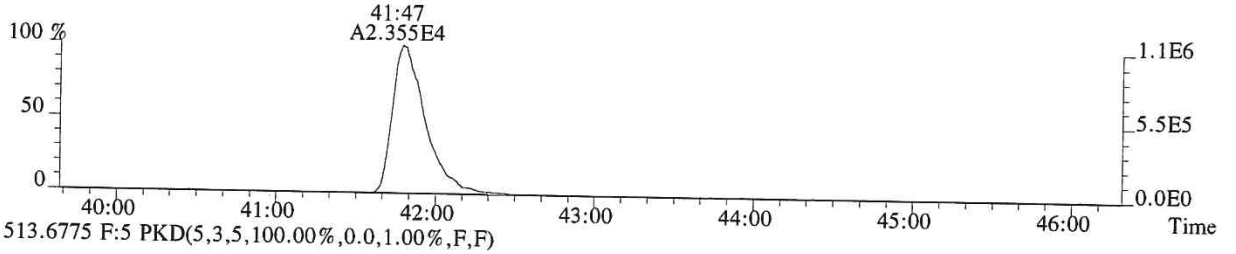
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1312.0,0.40%,F,T)



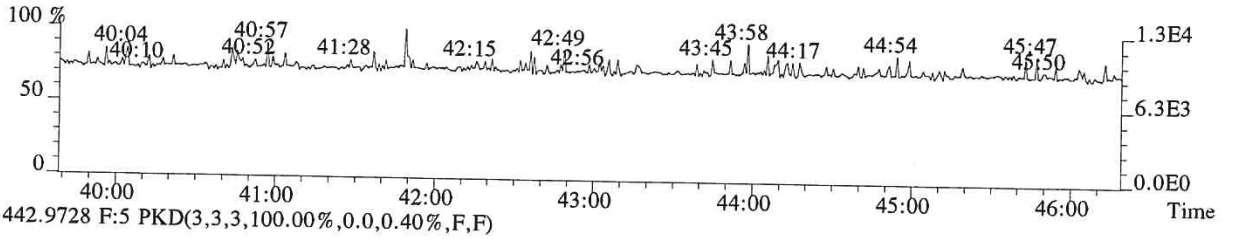
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1128.0,0.40%,F,T)



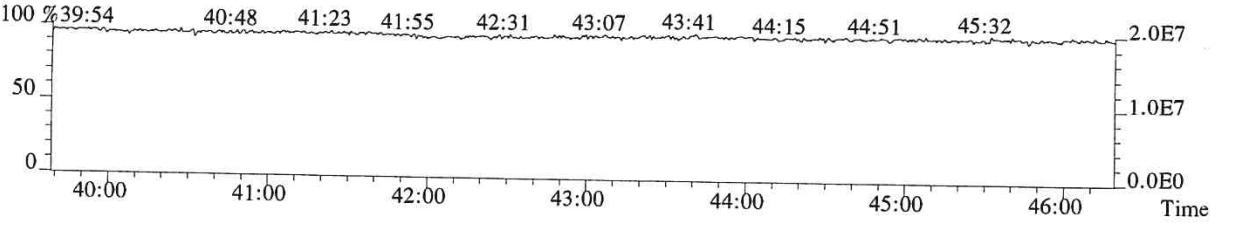
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,660.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

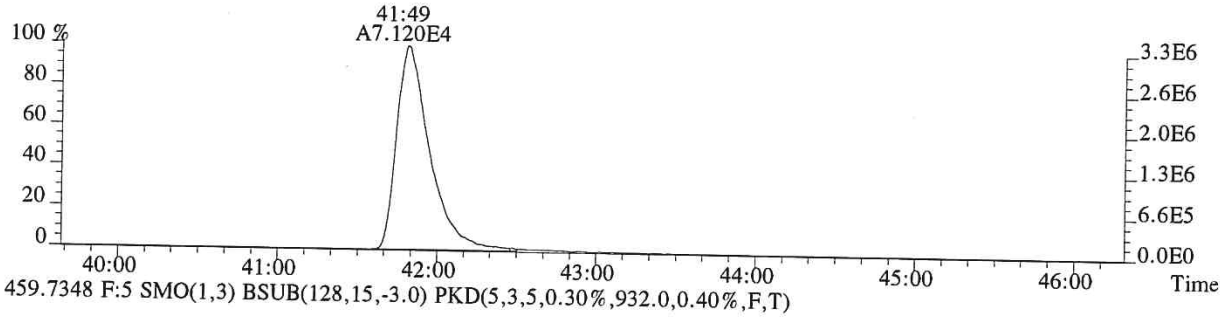


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

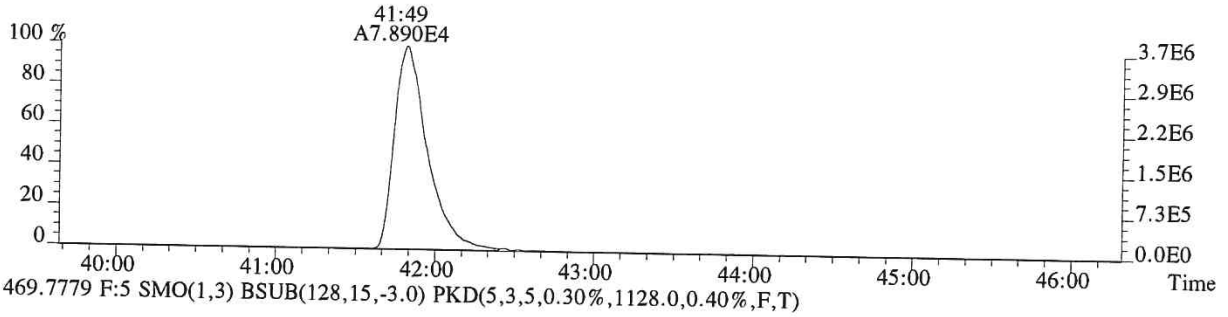


018454

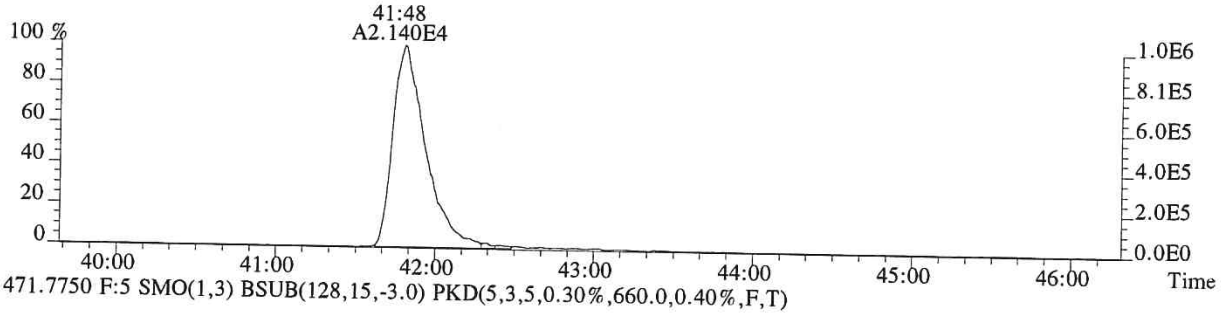
File:P519878 #1-601 Acq:10-JAN-2019 02:47:20 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-011
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,840.0,0.40%,F,T)



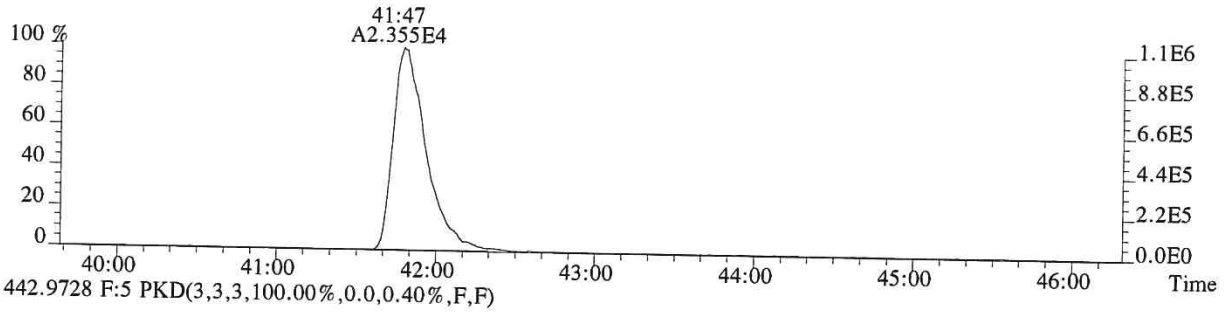
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,932.0,0.40%,F,T)



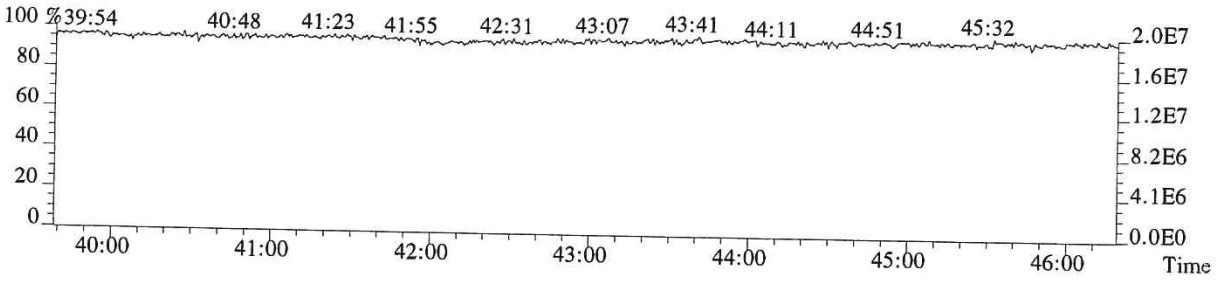
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1128.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,660.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0226

Run #21 Filename P519879 Samp: 1 Inj: 1 Acquired: 10-JAN-19 03:36:06
Processed: 10-JAN-19 08:15:38 Sample ID: E1801139-012

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:47	4.848e+04	6.300e+04	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:48	1.314e+03	9.120e+02	1.44	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:51	1.814e+03	1.282e+03	1.42	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:48	1.804e+03	1.510e+03	1.19	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:55	7.554e+02	6.966e+02	1.08	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:29	5.173e+02	5.508e+02	0.94	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:21	2.714e+02	3.080e+02	0.88	no	yes	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:45	9.441e+03	9.536e+03	0.99	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:15	6.750e+02	6.814e+02	0.99	yes	no	1.258
10	Unk	OCDF	42:00	1.286e+05	1.461e+05	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:48	1.083e+04	1.386e+04	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:09	4.311e+02	2.729e+02	1.58	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:40	1.816e+02	1.105e+02	1.64	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:46	8.251e+02	6.479e+02	1.27	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	36:01	4.814e+02	3.345e+02	1.44	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:48	1.476e+04	1.404e+04	1.05	yes	no	1.025
17	Unk	OCDD	41:51	1.125e+05	1.257e+05	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:46	3.744e+04	4.790e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:47	5.604e+04	3.482e+04	1.61	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:48	5.283e+04	3.361e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:47	2.147e+04	4.166e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:55	2.538e+04	4.925e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:29	2.291e+04	4.384e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:19	1.887e+04	3.702e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:44	1.394e+04	3.205e+04	0.43	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:14	1.246e+04	2.764e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:46	1.793e+04	2.249e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:08	4.019e+04	2.555e+04	1.57	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:39	2.887e+04	2.269e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:45	3.326e+04	2.638e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:46	2.830e+04	2.626e+04	1.08	yes	no	0.858
32	IS	13C-OCDD	41:51	2.039e+04	2.267e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:04	4.283e+04	5.407e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	36:01	5.638e+04	4.457e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:47	2.662e+04				no	1.014

$$\text{OCDD} = \frac{(1.125e+05 + 1.257e+05) \times 4000\ \text{pg} \times 1}{(2.039e+04 + 2.267e+04) \times 10.837\ \text{g} \times 76.3 / 100 \times 1.118} = 2393\ \text{ng/kg}$$

LWO 1/11/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0226

Run #21 Filename P519879 Samp: 1 Inj: 1 Acquired: 10-JAN-19 03:36:06
Processed: 10-JAN-19 08:15:38 LAB. ID: E1801139-012

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.47e+06	2.98e+03	2.2e+03	8.39e+06	3.20e+03	2.6e+03
2	1,2,3,7,8-PeCDF	2.06e+05	1.26e+04	1.6e+01	1.46e+05	5.82e+03	2.5e+01
3	2,3,4,7,8-PeCDF	2.43e+05	1.26e+04	1.9e+01	1.70e+05	5.82e+03	2.9e+01
4	1,2,3,4,7,8-HxCDF	2.90e+05	1.55e+04	1.9e+01	2.41e+05	1.04e+03	2.3e+02
5	1,2,3,6,7,8-HxCDF	1.13e+05	1.55e+04	7.3e+00	9.90e+04	1.04e+03	9.6e+01
6	2,3,4,6,7,8-HxCDF	9.18e+04	1.55e+04	5.9e+00	8.46e+04	1.04e+03	8.2e+01
7	1,2,3,7,8,9-HxCDF	4.22e+04	1.55e+04	2.7e+00	4.26e+04	1.04e+03	4.1e+01
8	1,2,3,4,6,7,8-HpCDF	1.04e+06	5.85e+03	1.8e+02	1.03e+06	2.90e+03	3.6e+02
9	1,2,3,4,7,8,9-HpCDF	6.06e+04	5.85e+03	1.0e+01	5.45e+04	2.90e+03	1.9e+01
10	OCDF	5.95e+06	9.20e+02	6.5e+03	6.80e+06	1.42e+03	4.8e+03
11	2,3,7,8-TCDD	1.64e+06	3.75e+03	4.4e+02	2.16e+06	2.80e+03	7.7e+02
12	1,2,3,7,8-PeCDD	5.27e+04	1.65e+03	3.2e+01	3.38e+04	2.39e+03	1.4e+01
13	1,2,3,4,7,8-HxCDD	3.67e+04	1.75e+03	2.1e+01	2.17e+04	2.76e+03	7.9e+00
14	1,2,3,6,7,8-HxCDD	1.04e+05	1.75e+03	6.0e+01	8.68e+04	2.76e+03	3.1e+01
15	1,2,3,7,8,9-HxCDD	5.93e+04	1.75e+03	3.4e+01	5.05e+04	2.76e+03	1.8e+01
16	1,2,3,4,6,7,8-HpCDD	1.29e+06	1.91e+03	6.8e+02	1.22e+06	1.08e+04	1.1e+02
17	OCDD	5.13e+06	1.11e+03	4.6e+03	5.78e+06	1.43e+03	4.0e+03
18	13C-2,3,7,8-TCDF	5.32e+06	7.41e+03	7.2e+02	6.77e+06	6.46e+03	1.0e+03
19	13C-1,2,3,7,8-PeCDF	9.07e+06	1.00e+04	9.1e+02	5.58e+06	1.07e+04	5.2e+02
20	13C-2,3,4,7,8-PeCDF	8.67e+06	1.00e+04	8.7e+02	5.49e+06	1.07e+04	5.1e+02
21	13C-1,2,3,4,7,8-HxCDF	3.49e+06	1.48e+03	2.4e+03	6.71e+06	8.01e+03	8.4e+02
22	13C-1,2,3,6,7,8-HxCDF	3.72e+06	1.48e+03	2.5e+03	7.20e+06	8.01e+03	9.0e+02
23	13C-2,3,4,6,7,8-HxCDF	3.35e+06	1.48e+03	2.3e+03	6.43e+06	8.01e+03	8.0e+02
24	13C-1,2,3,7,8,9-HxCDF	2.44e+06	1.48e+03	1.6e+03	4.86e+06	8.01e+03	6.1e+02
25	13C-1,2,3,4,6,7,8-HpCDF	1.51e+06	6.66e+03	2.3e+02	3.43e+06	3.65e+03	9.4e+02
26	13C-1,2,3,4,7,8,9-HpCDF	9.98e+05	6.66e+03	1.5e+02	2.21e+06	3.65e+03	6.1e+02
27	13C-2,3,7,8-TCDD	2.84e+06	8.02e+03	3.5e+02	3.52e+06	6.44e+03	5.5e+02
28	13C-1,2,3,7,8-PeCDD	6.39e+06	2.10e+03	3.0e+03	4.02e+06	2.01e+03	2.0e+03
29	13C-1,2,3,4,7,8-HxCDD	4.54e+06	1.95e+03	2.3e+03	3.49e+06	8.60e+02	4.1e+03
30	13C-1,2,3,6,7,8-HxCDD	4.21e+06	1.95e+03	2.2e+03	3.32e+06	8.60e+02	3.9e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.42e+06	1.74e+03	1.4e+03	2.21e+06	1.19e+03	1.9e+03
32	13C-OCDD	9.33e+05	1.30e+03	7.2e+02	1.07e+06	9.48e+02	1.1e+03
33	13C-1,2,3,4-TCDD	6.37e+06	8.02e+03	7.9e+02	8.10e+06	6.44e+03	1.3e+03
34	13C-1,2,3,7,8,9-HxCDD	6.99e+06	1.95e+03	3.6e+03	5.50e+06	8.60e+02	6.4e+03
35	37Cl-2,3,7,8-TCDD	4.07e+06	1.82e+03	2.2e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0226

Entry: 36 Totals Name: Total Tetra-Furans

Run: 21 File: P519879 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 03:36:06 Processed: 10-JAN-19 08:15:38

Mass: 303.9020 305.8990 Tot Response: 2.02e+05 RRF: 0.9417

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:18	1.28e+02	0.80	yes	2.88e+02		n	n
2	22:10	1.03e+03	0.85	yes	2.23e+03		n	n
3	22:36	7.65e+02	0.66	yes	1.92e+03		n	n
4	22:54	2.54e+03	0.73	yes	6.01e+03		n	n
5	23:16	1.18e+03	0.78	yes	2.70e+03		n	n
6	23:33	1.95e+03	0.73	yes	4.63e+03		n	n
7	23:55	3.41e+02	0.76	yes	7.91e+02		n	n
8	24:10	1.92e+03	0.74	yes	4.49e+03		n	n
9	24:17	1.74e+03	0.76	yes	4.04e+03		n	n
10	24:46	1.97e+04	0.75	yes	4.58e+04		n	n
11	25:04	9.71e+02	0.68	yes	2.40e+03		n	n
12	25:47	4.85e+04	0.77	yes	1.11e+05	2,3,7,8-TCDF	n	n
13	26:13	3.58e+03	0.79	yes	8.11e+03		n	n
14	28:01	3.12e+03	0.77	yes	7.18e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0226

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 21 File: P519879 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 03:36:06 Processed: 10-JAN-19 08:15:38

Mass: 319.8970 321.8940 Tot Response: 2.55e+04 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:26	2.84e+02	3.54e+02	0.80	yes	6.39e+02		n	n
2	24:52	8.70e+01	1.12e+02	0.78	yes	1.99e+02		n	n
3	26:48	1.08e+04	1.39e+04	0.78	yes	2.47e+04	2,3,7,8-TCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0226

Entry: 38 Totals Name: Total Penta-Furans1

Run: 21 File: P519879 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 03:36:06 Processed: 10-JAN-19 08:15:38

Mass: 339.8600 341.8570 Tot Response: 8.66e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	28:03	5.31e+03	3.35e+03 1.59	yes	8.66e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0226

Entry: 39 Totals Name: Total Penta-Furans2

Run: 21 File: P519879 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 03:36:06 Processed: 10-JAN-19 08:15:38

Mass: 339.8600 341.8570 Tot Response: 1.36e+04 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:50	3.27e+03	2.26e+03	1.44	yes	5.53e+03		n	n
2	30:22	1.08e+03	7.83e+02	1.38	yes	1.86e+03		n	n
3	30:36	3.96e+02	2.37e+02	1.67	yes	6.33e+02		n	n
4	30:48	1.31e+03	9.12e+02	1.44	yes	2.23e+03	1,2,3,7,8-PeCDF	n	n
5	31:51	1.81e+03	1.28e+03	1.42	yes	3.10e+03	2,3,4,7,8-PeCDF	n	n
6	32:49	1.23e+02	8.36e+01	1.47	yes	2.07e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0226

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 21 File: P519879 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 03:36:06 Processed: 10-JAN-19 08:15:38

Mass: 355.8550 357.8520 Tot Response: 2.95e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:56	7.33e+02	4.70e+02	1.56	yes	1.20e+03		n	n
2	30:50	2.91e+02	1.85e+02	1.57	yes	4.76e+02		n	n
3	31:01	2.00e+02	1.49e+02	1.34	yes	3.49e+02		n	n
4	31:07	1.36e+02	8.29e+01	1.64	yes	2.19e+02		n	n
5	32:09	4.31e+02	2.73e+02	1.58	yes	7.04e+02	1,2,3,7,8-PeCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0226

Entry: 41 Totals Name: Total Hexa-Furans

Run: 21 File: P519879 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 03:36:06 Processed: 10-JAN-19 08:15:38

Mass: 373.8210 375.8180 Tot Response: 1.98e+04 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:35	9.69e+02	9.14e+02	1.06	yes	1.88e+03		n	n
2	33:45	3.46e+03	3.06e+03	1.13	yes	6.53e+03		n	n
3	34:20	3.53e+03	3.07e+03	1.15	yes	6.60e+03		n	n
4	34:48	1.80e+03	1.51e+03	1.19	yes	3.31e+03	1,2,3,4,7,8-HxCDF	n	n
5	34:55	7.55e+02	6.97e+02	1.08	yes	1.45e+03	1,2,3,6,7,8-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0226

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 21 File: P519879 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 03:36:06 Processed: 10-JAN-19 08:15:38

Mass: 389.8160 391.8130 Tot Response: 2.00e+04 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:11	5.21e+03	3.91e+03 1.33	yes	9.12e+03		n	n
2	34:45	9.02e+02	7.24e+02 1.25	yes	1.63e+03		n	n
3	35:01	3.14e+03	2.66e+03 1.18	yes	5.80e+03		n	n
4	35:07	7.79e+02	6.30e+02 1.24	yes	1.41e+03		n	n
5	35:46	8.25e+02	6.48e+02 1.27	yes	1.47e+03	1,2,3,6,7,8-HxCDD	n	n
6	35:56	3.44e+02	2.55e+02 1.35	yes	5.99e+02		n	n

ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0226

Entry: 43 Totals Name: Total Hepta-Furans

Run: 21 File: P519879 Sample:1 Injection:1 Function:4

Acquired: 10-JAN-19 03:36:06 Processed: 10-JAN-19 08:15:38

Mass: 407.7820 409.7790 Tot Response: 3.73e+04 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:45	9.44e+03	9.54e+03	0.99	yes	1.90e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	38:03	4.18e+02	4.46e+02	0.94	yes	8.64e+02		n	n
3	38:12	8.05e+03	8.06e+03	1.00	yes	1.61e+04		n	n
4	39:15	6.75e+02	6.81e+02	0.99	yes	1.36e+03	1,2,3,4,7,8,9-HpCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0226

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 21 File: P519879 Sample:1 Injection:1 Function:4

Acquired: 10-JAN-19 03:36:06 Processed: 10-JAN-19 08:15:38

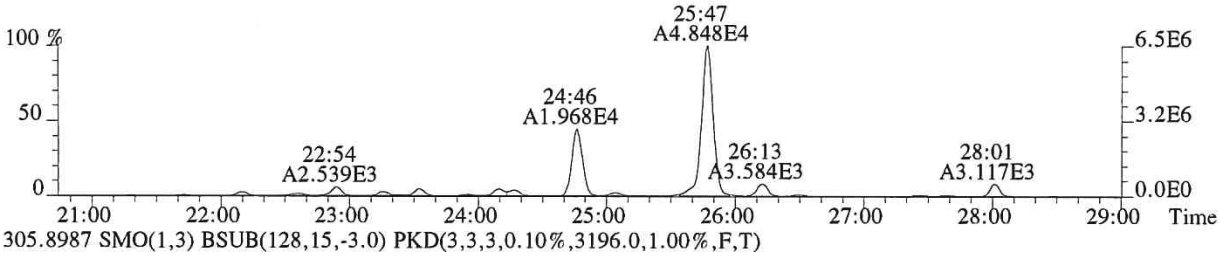
Mass: 423.7770 425.7740 Tot Response: 9.23e+04 RRF: 1.025

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:04	3.23e+04	1.04	yes	6.35e+04		n	n
2	38:48	1.48e+04	1.05	yes	2.88e+04	1,2,3,4,6,7,8-HpCDD	n	n

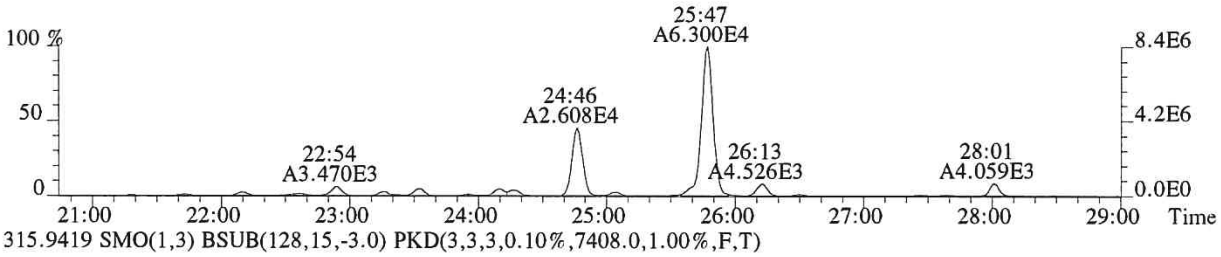
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File:P519879 #1-587 Acq:10-JAN-2019 03:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-012

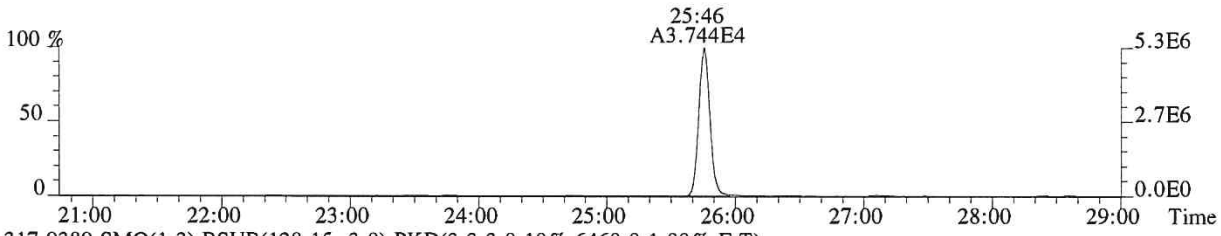
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2980.0,1.00%,F,T)



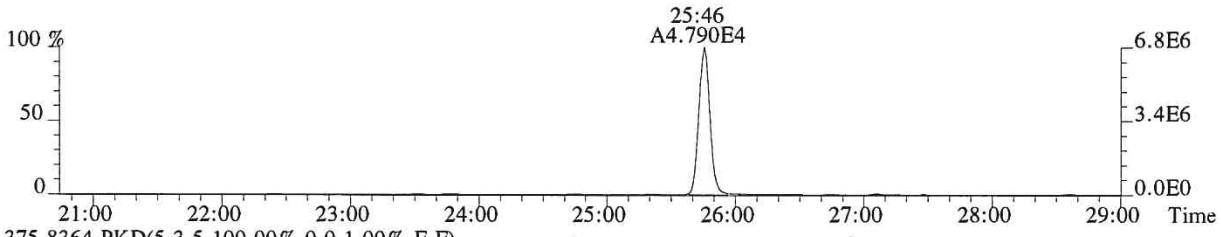
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3196.0,1.00%,F,T)



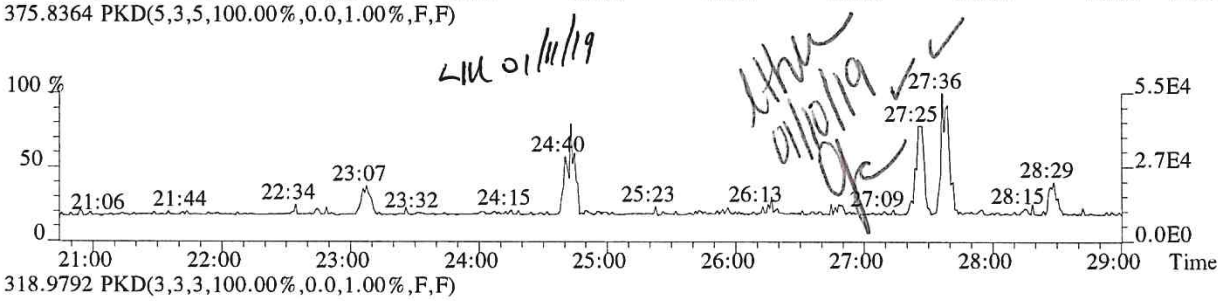
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7408.0,1.00%,F,T)



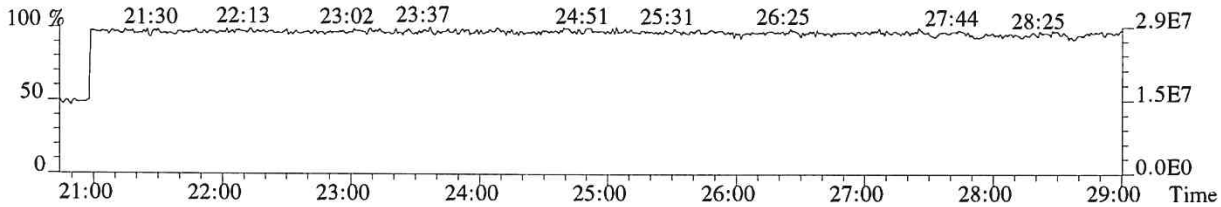
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6460.0,1.00%,F,T)



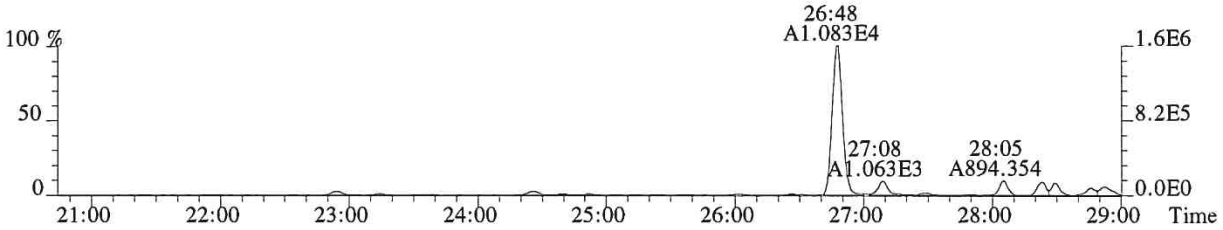
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



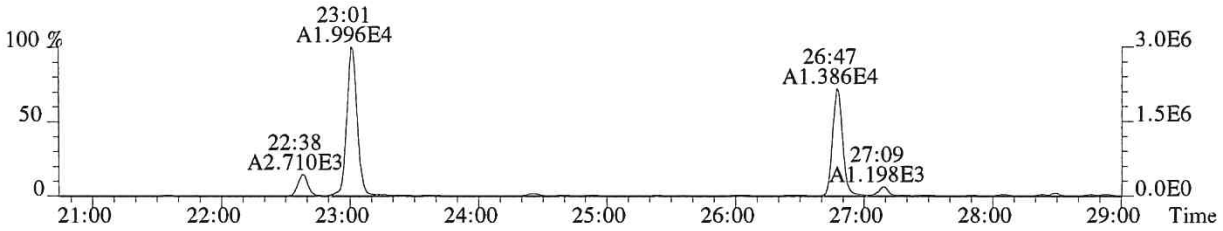
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



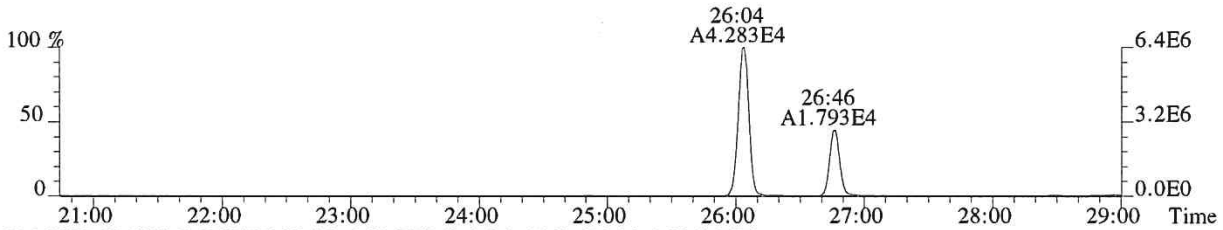
File:P519879 #1-587 Acq:10-JAN-2019 03:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-012
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3752.0,1.00%,F,T)



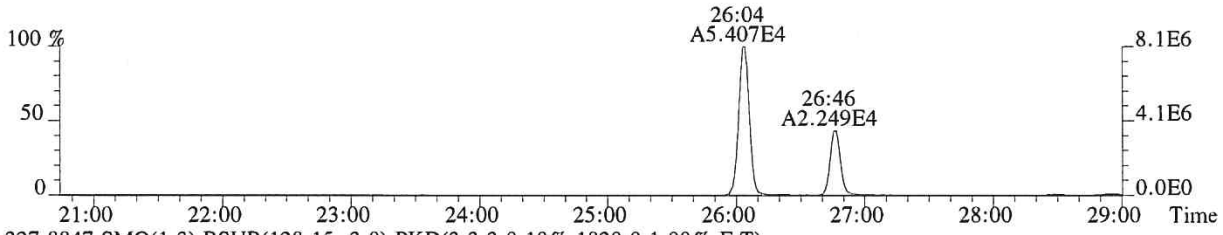
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2800.0,1.00%,F,T)



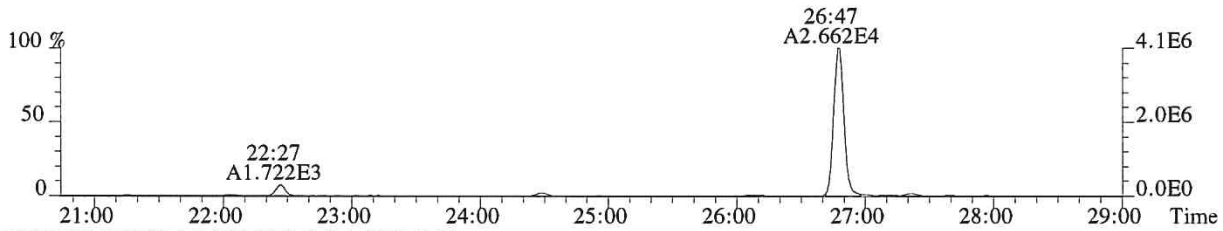
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8016.0,1.00%,F,T)



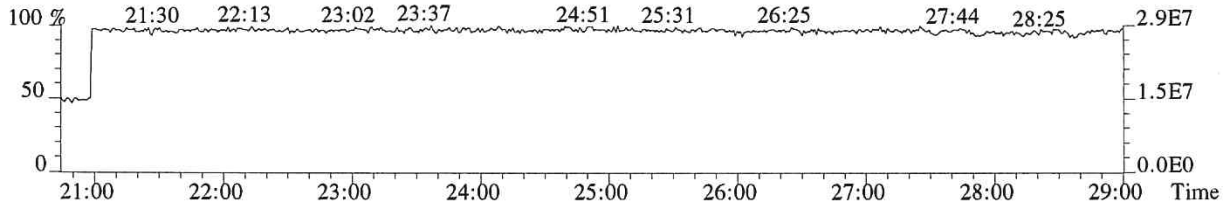
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6436.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1820.0,1.00%,F,T)

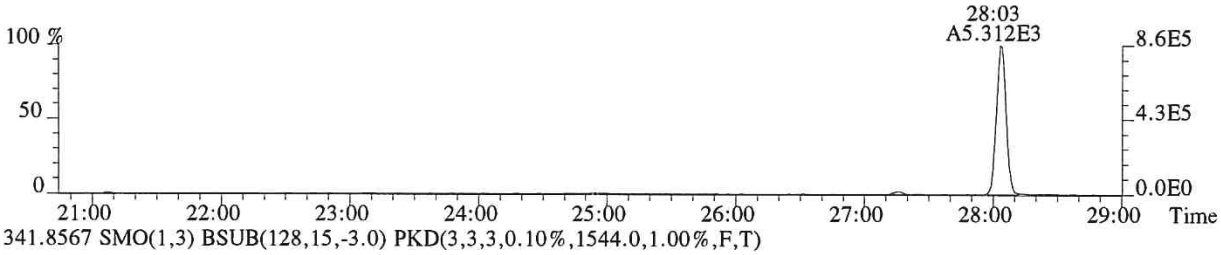


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

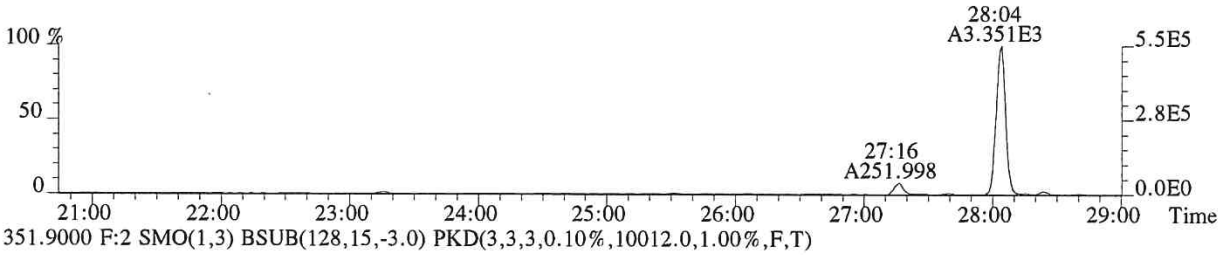


018468

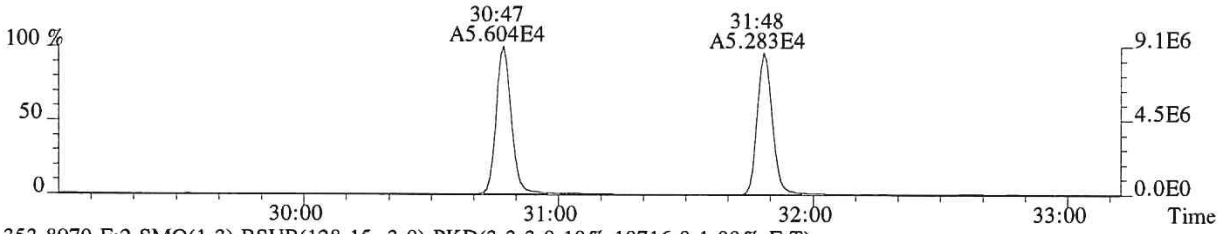
File:P519879 #1-587 Acq:10-JAN-2019 03:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-012
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1476.0,1.00%,F,T)



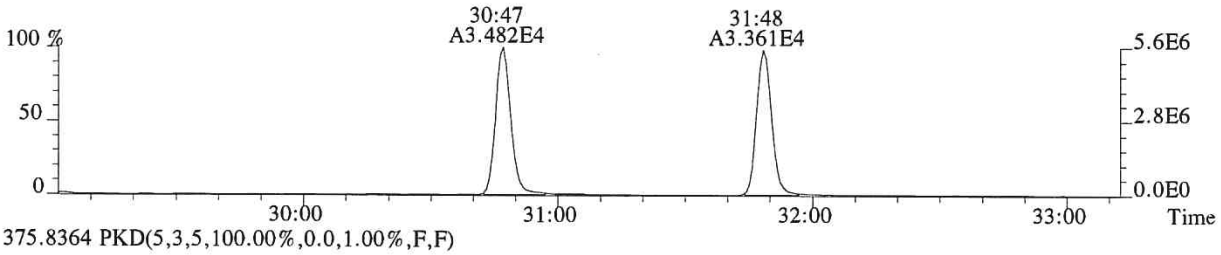
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1544.0,1.00%,F,T)



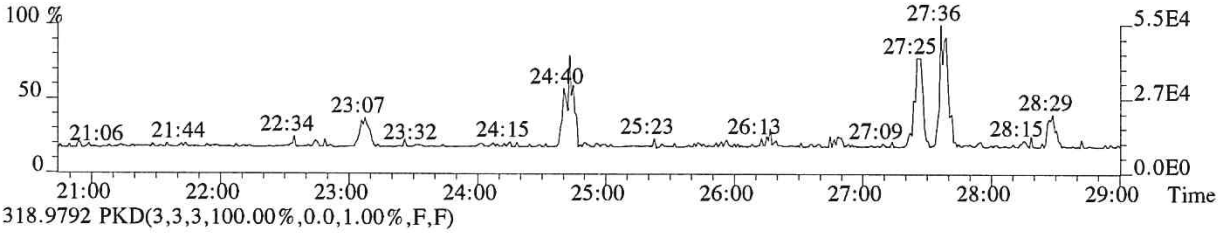
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10012.0,1.00%,F,T)



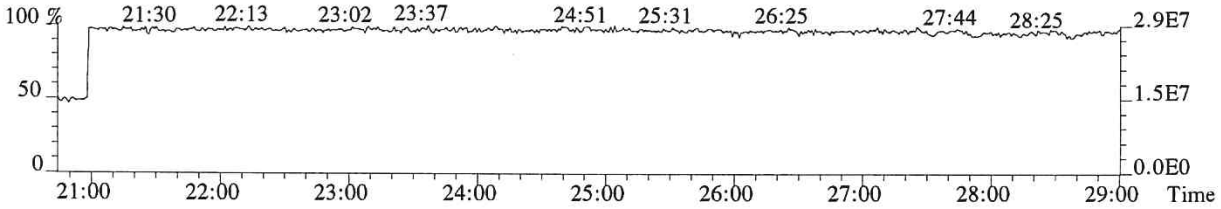
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10716.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

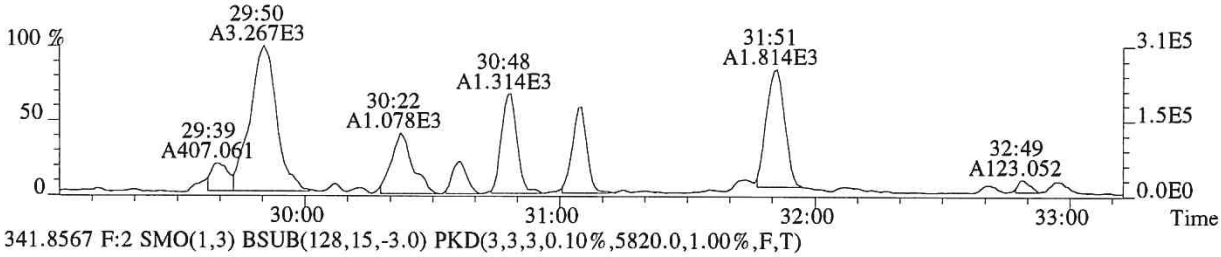


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

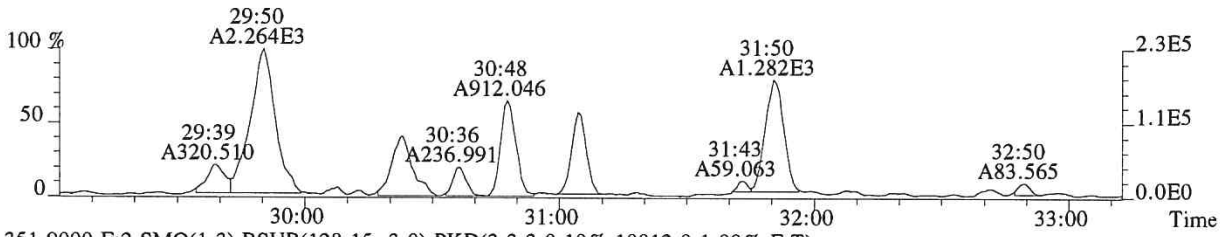


018469

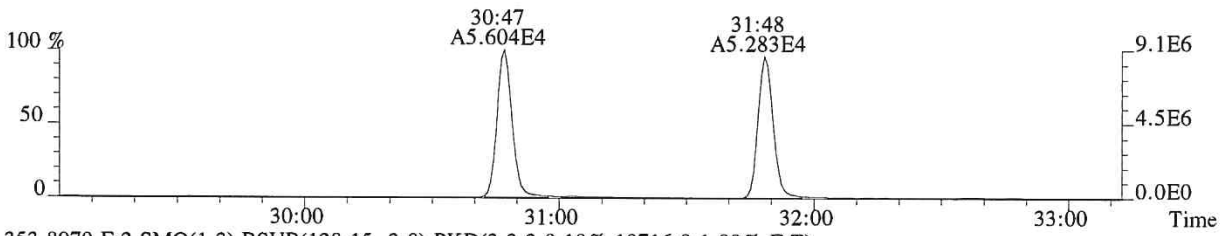
File:P519879 #1-376 Acq:10-JAN-2019 03:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-012
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,12608.0,1.00%,F,T)



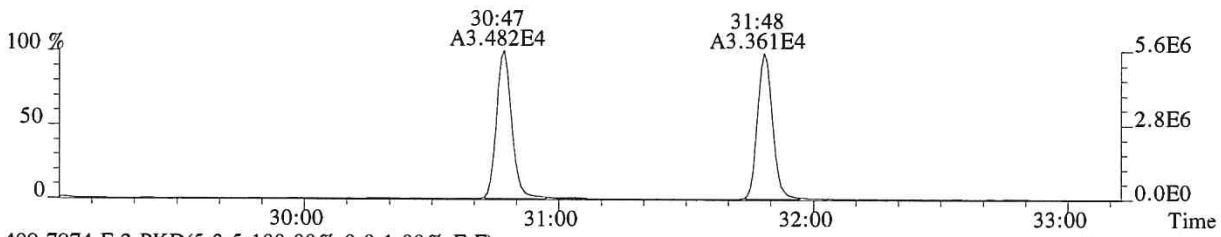
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5820.0,1.00%,F,T)



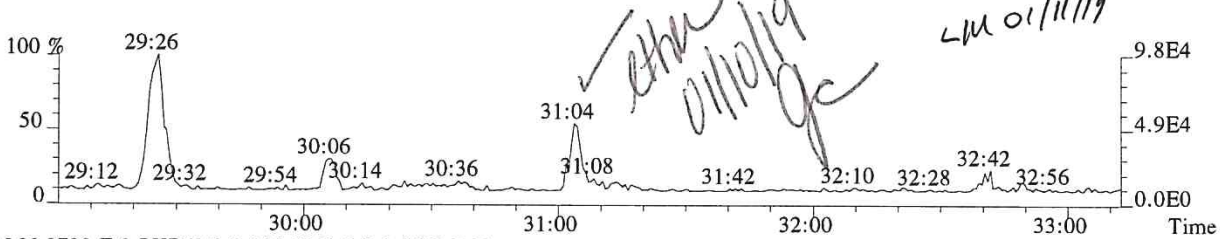
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10012.0,1.00%,F,T)



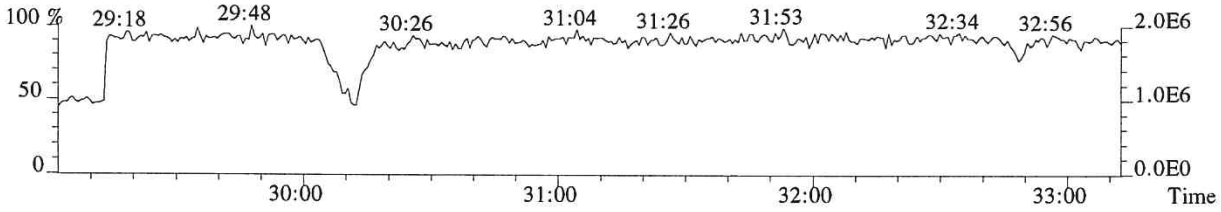
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,10716.0,1.00%,F,T)



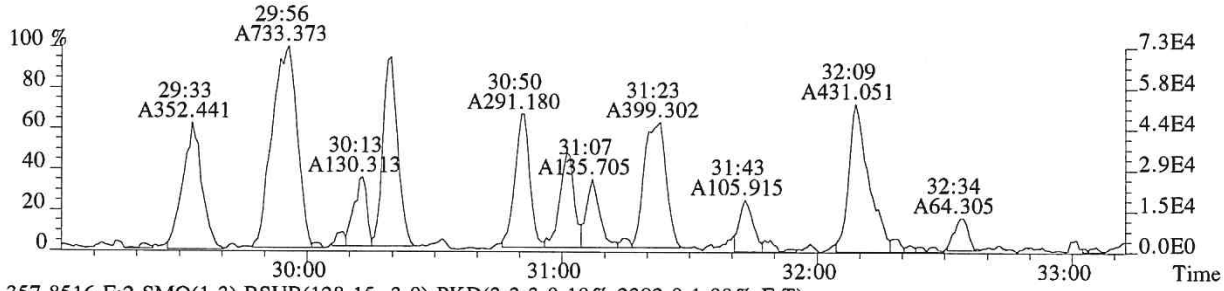
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



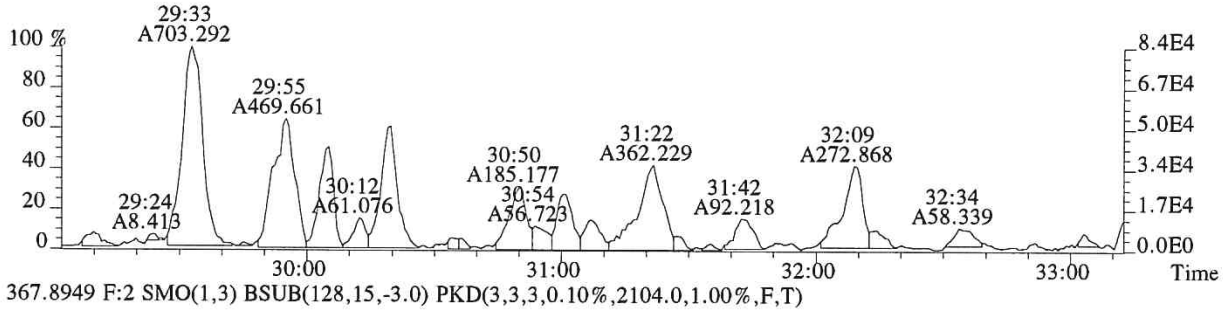
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



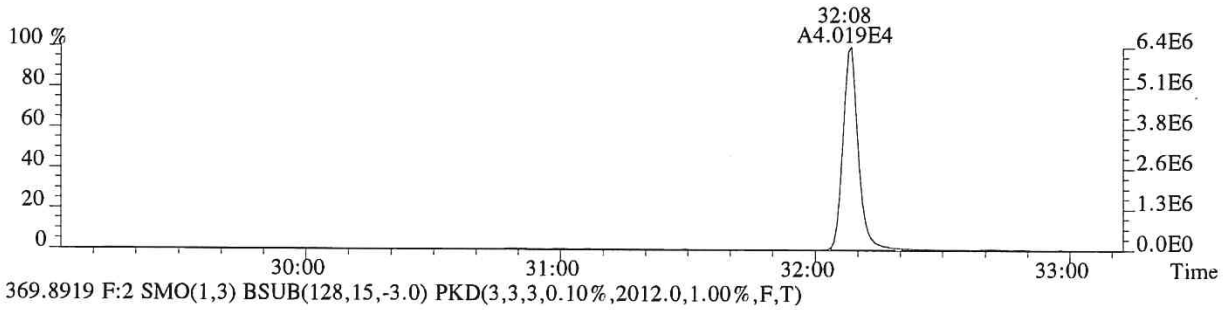
File:P519879 #1-376 Acq:10-JAN-2019 03:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-012
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1648.0,1.00%,F,T)



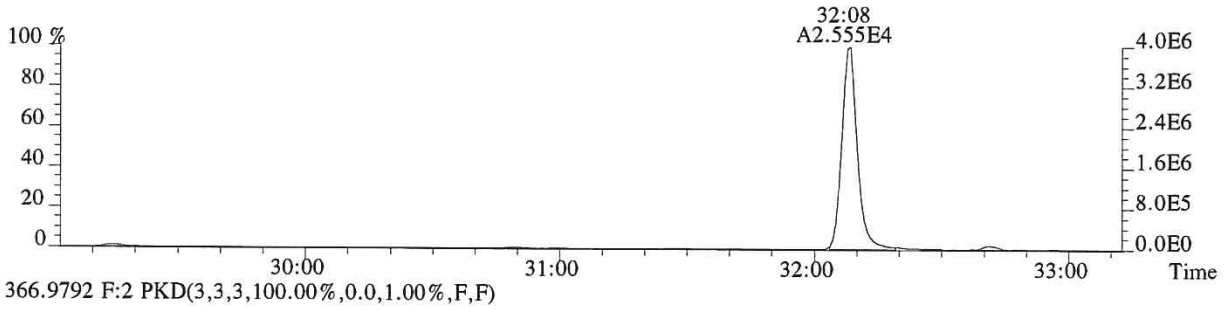
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2392.0,1.00%,F,T)



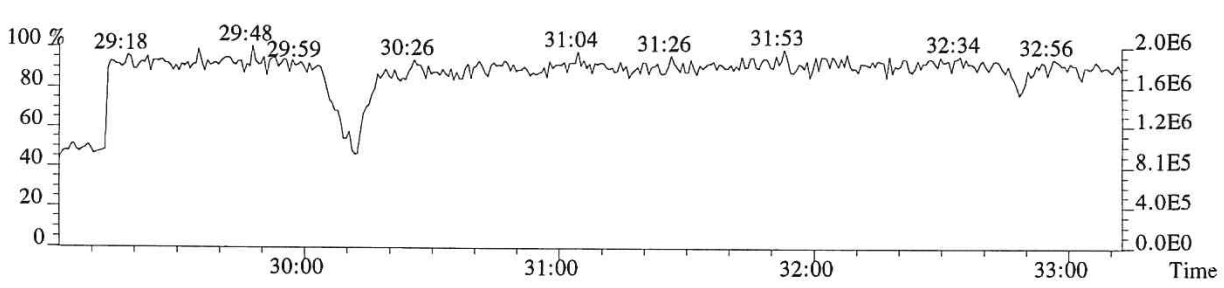
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2104.0,1.00%,F,T)



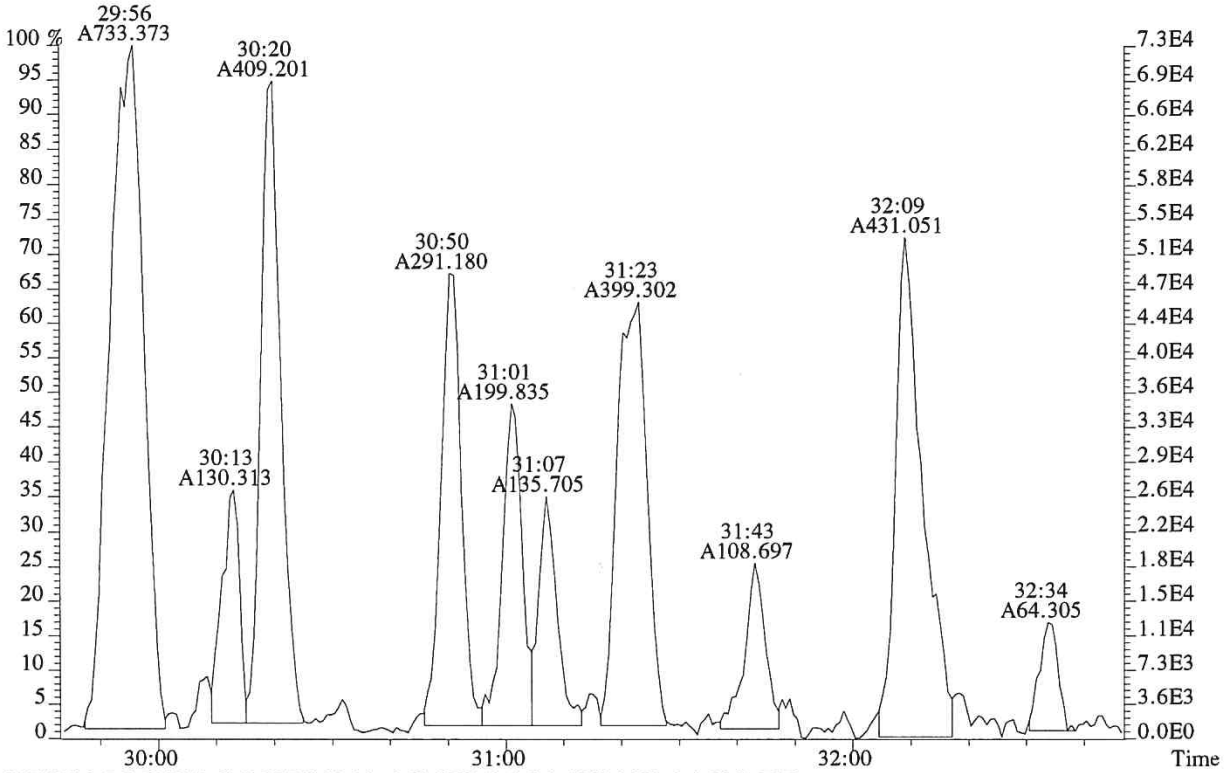
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2012.0,1.00%,F,T)



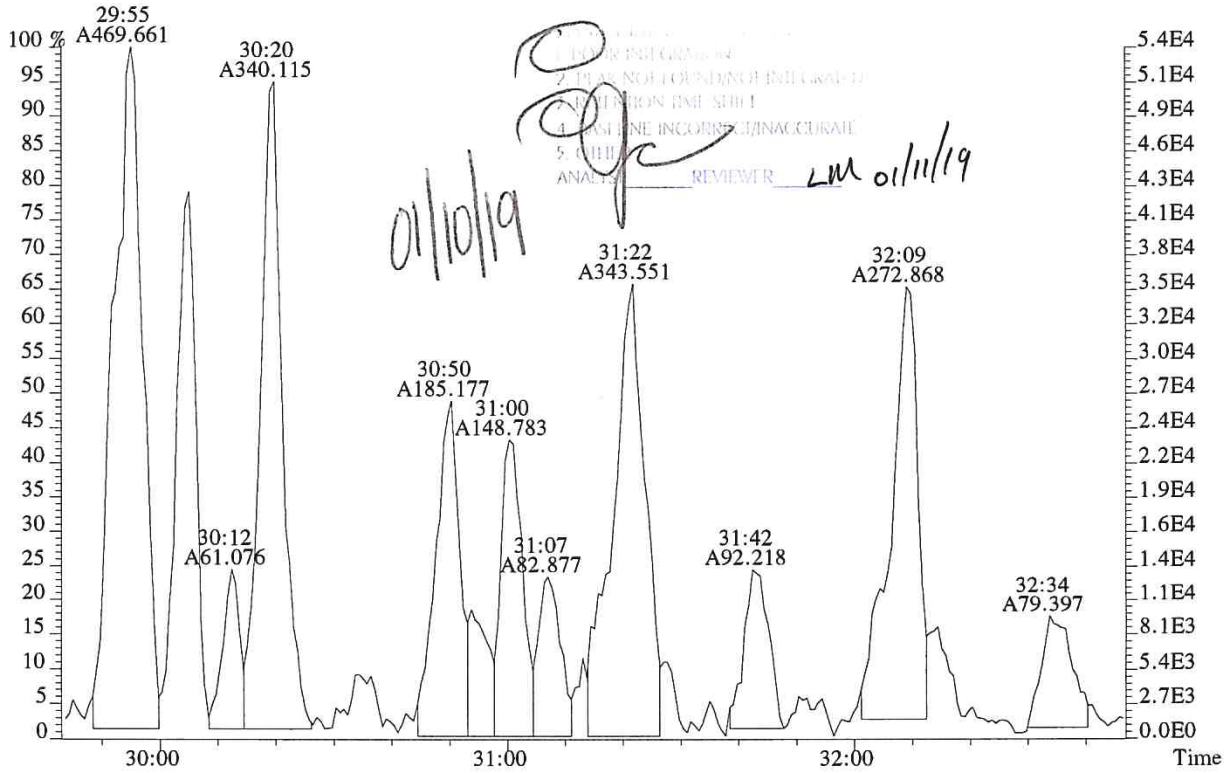
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519879 #1-376 Acq:10-JAN-2019 03:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-012
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1648.0,1.00%,F,T)



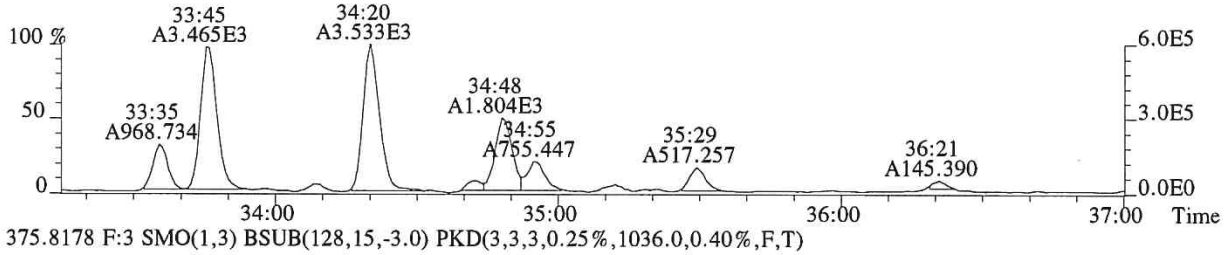
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2392.0,1.00%,F,T)



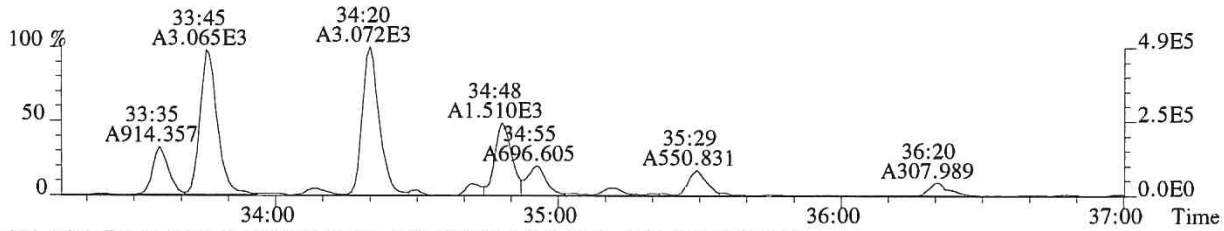
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01/11/19

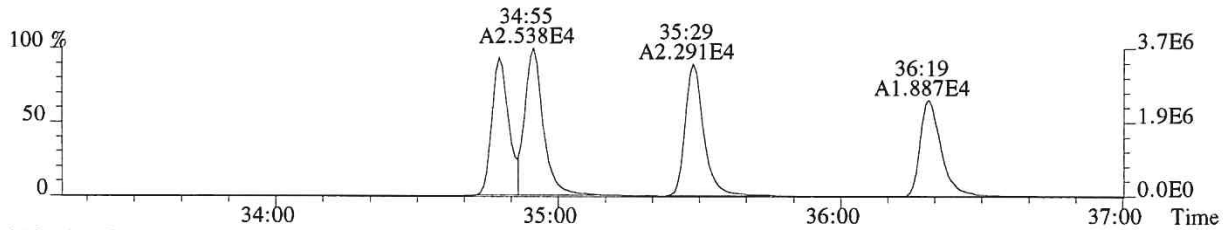
File:P519879 #1-339 Acq:10-JAN-2019 03:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-012
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,15532.0,0.40%,F,T)



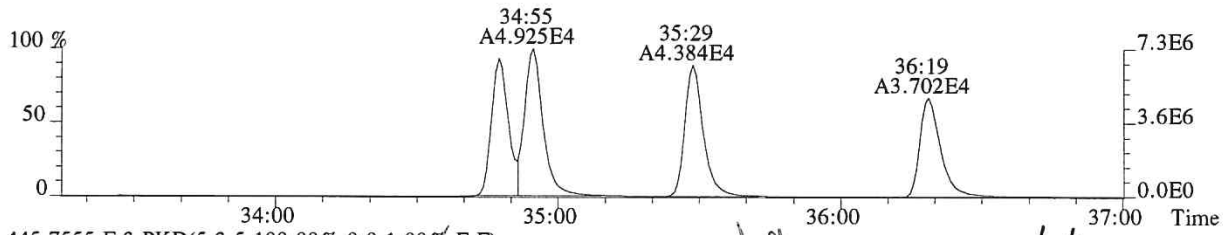
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1036.0,0.40%,F,T)



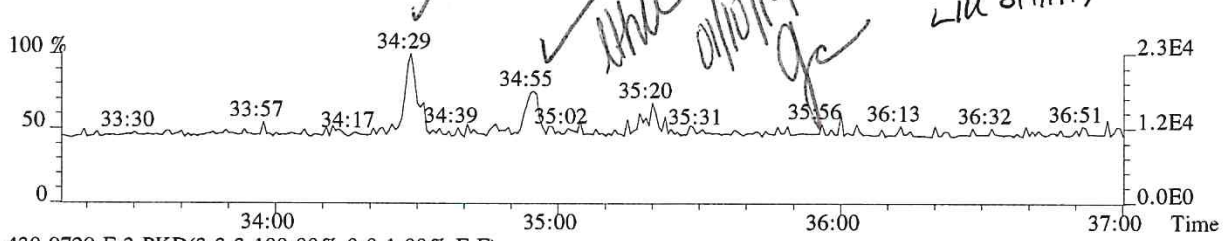
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1480.0,0.40%,F,T)



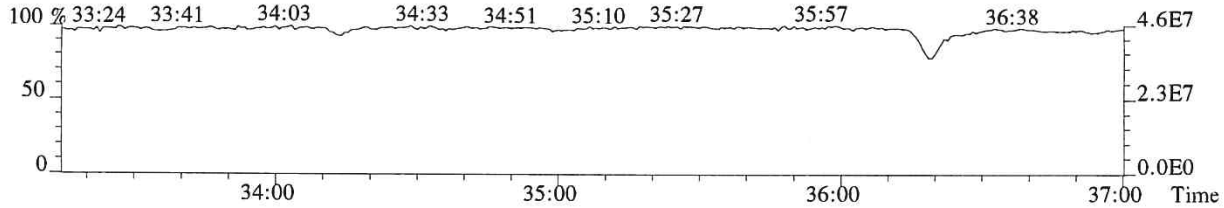
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8012.0,0.40%,F,T)



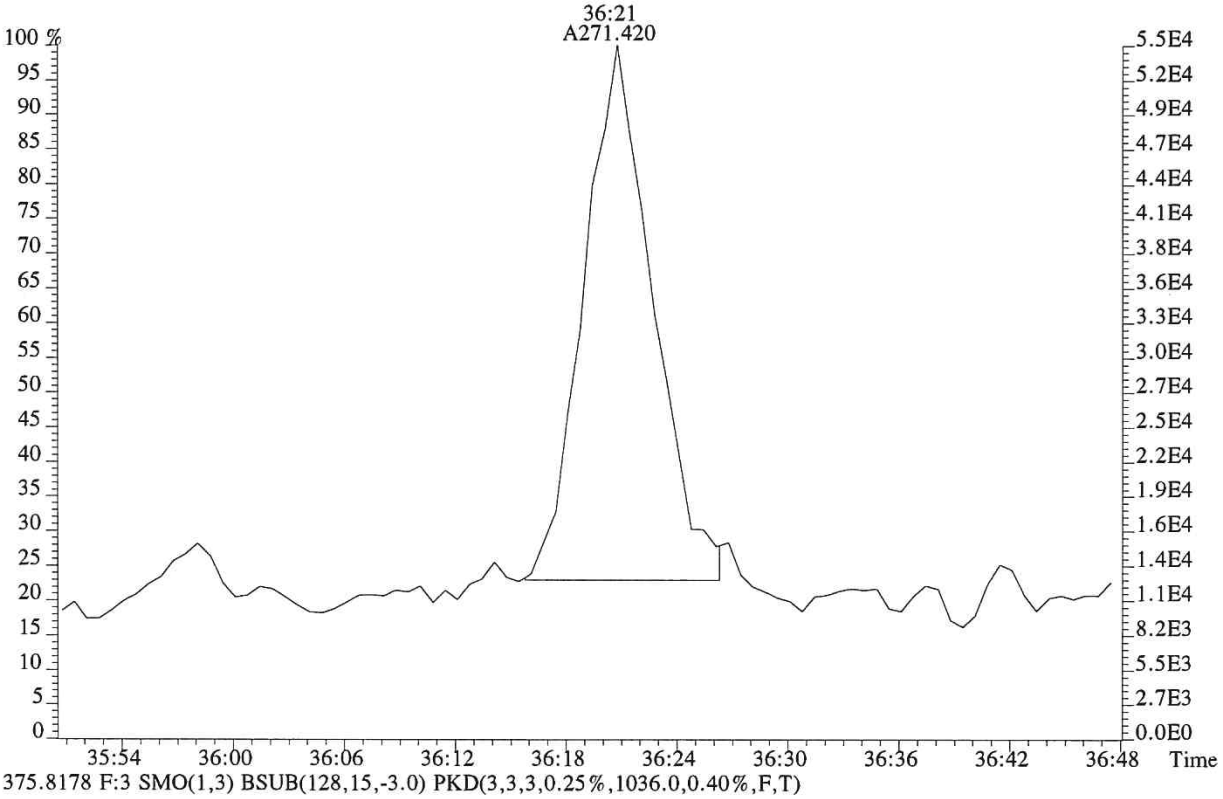
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



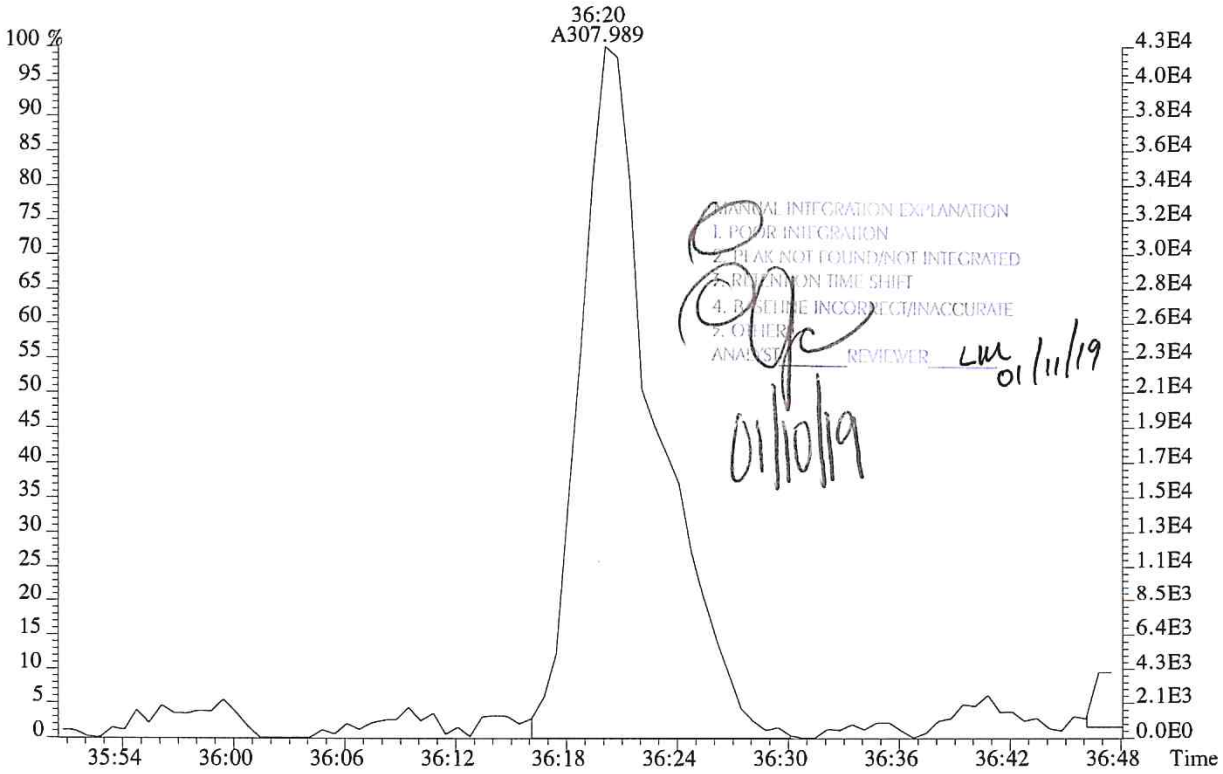
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519879 #1-339 Acq:10-JAN-2019 03:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-012
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,15532.0,0.40%,F,T)

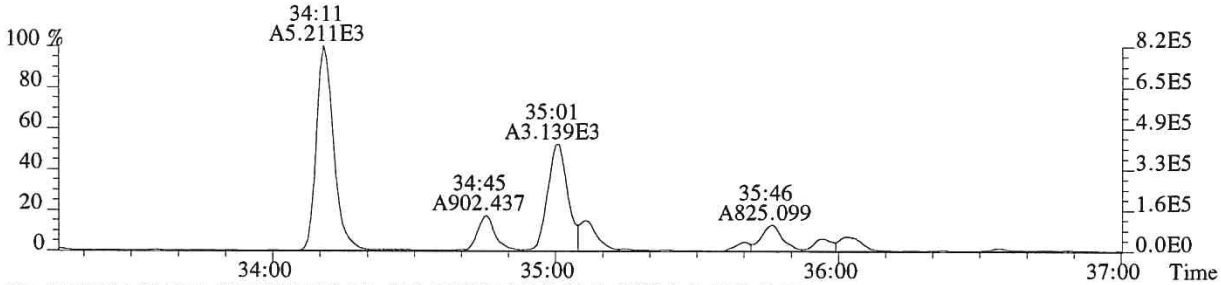


375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1036.0,0.40%,F,T)

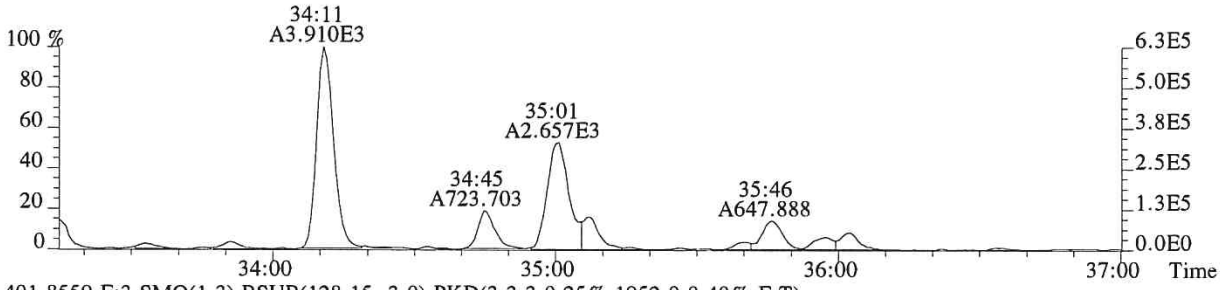


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LM 01/11/19
01/10/19

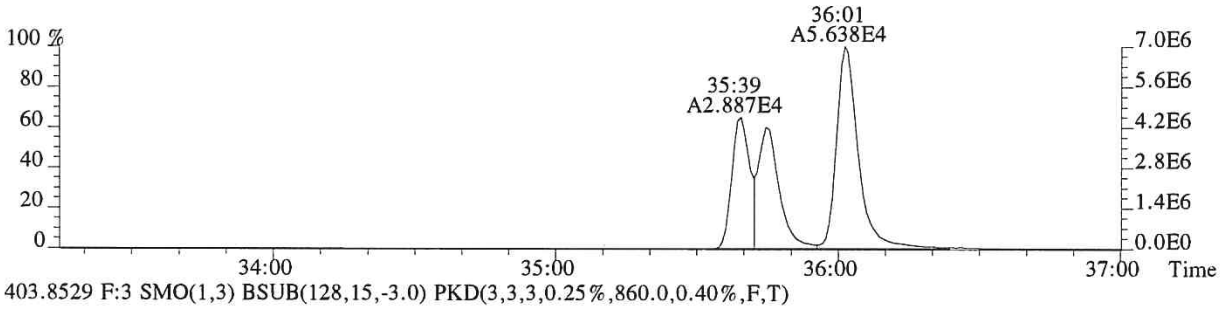
File:P519879 #1-339 Acq:10-JAN-2019 03:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-012
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1752.0,0.40%,F,T)



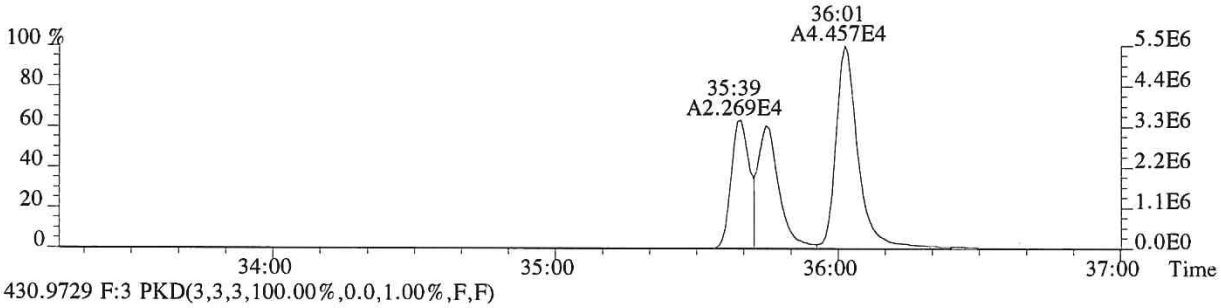
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2760.0,0.40%,F,T)



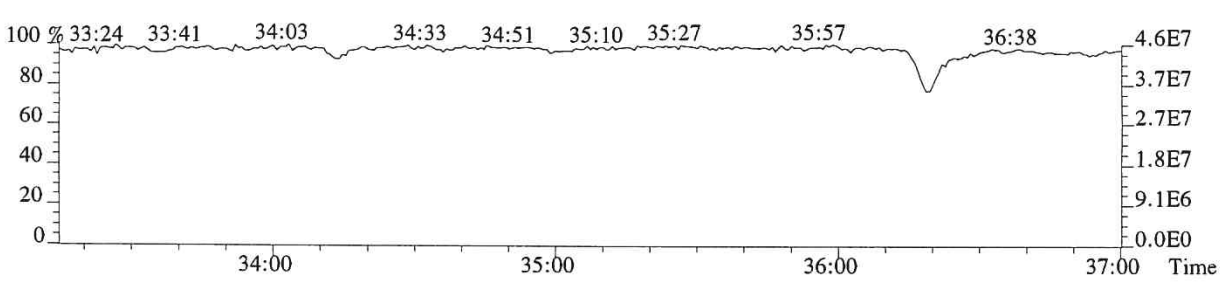
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1952.0,0.40%,F,T)



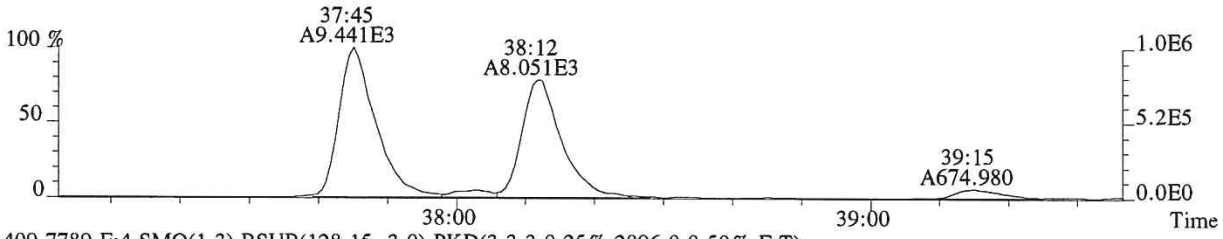
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,860.0,0.40%,F,T)



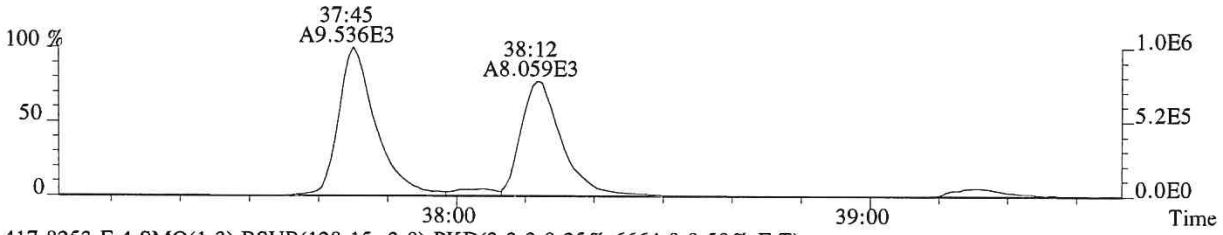
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



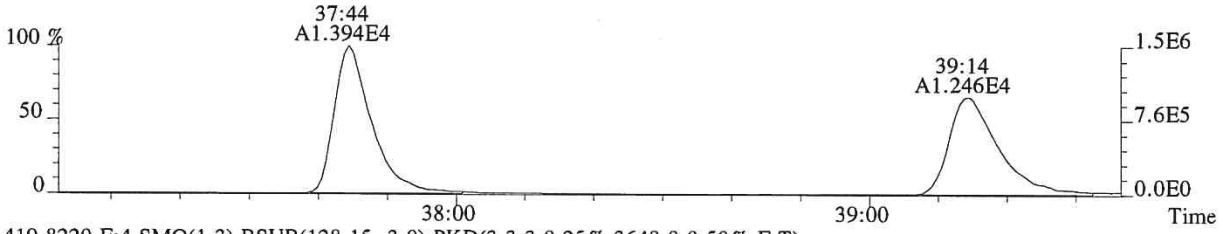
File:P519879 #1-232 Acq:10-JAN-2019 03:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-012
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5852.0,0.50%,F,T)



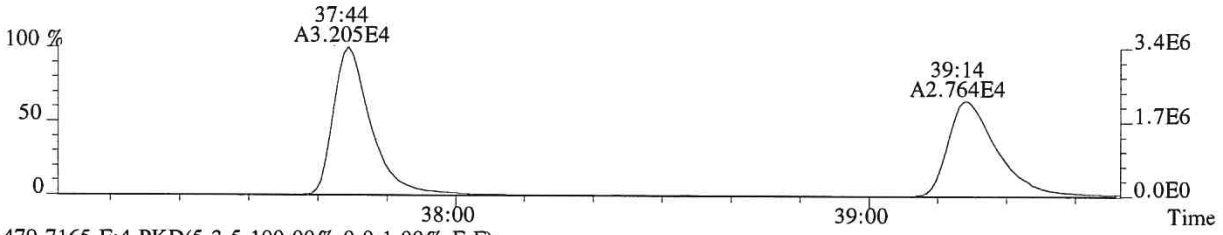
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2896.0,0.50%,F,T)



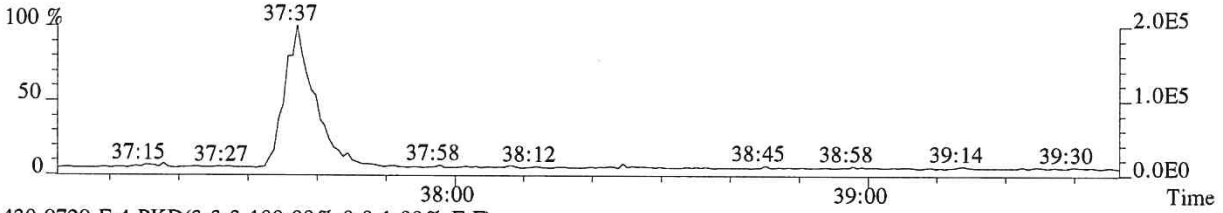
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6664.0,0.50%,F,T)



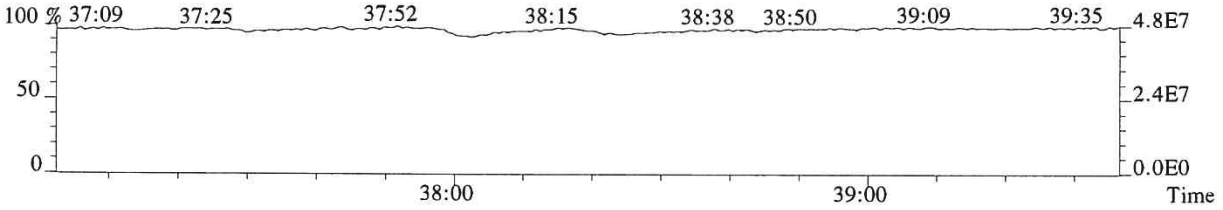
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3648.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

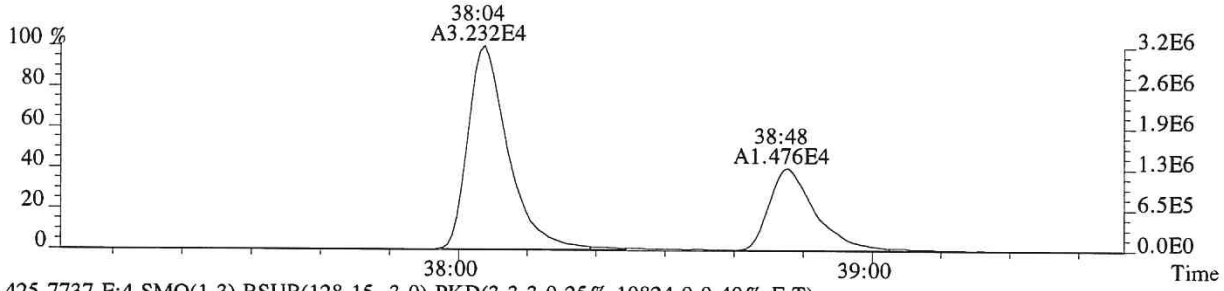


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

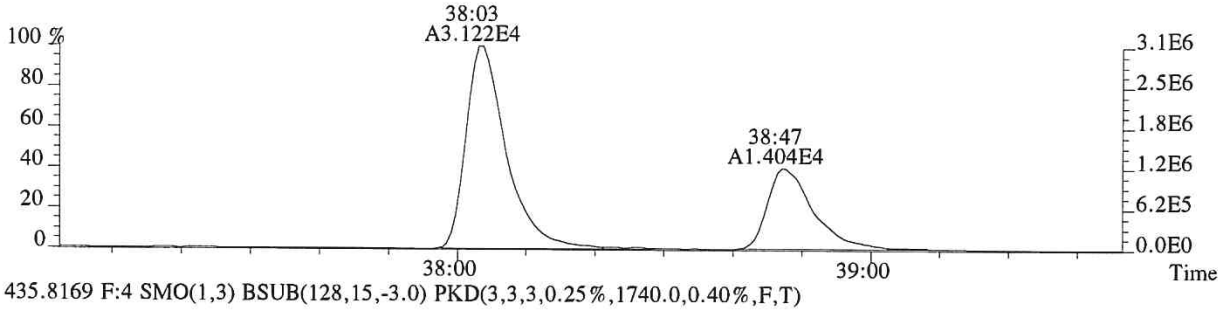


018476

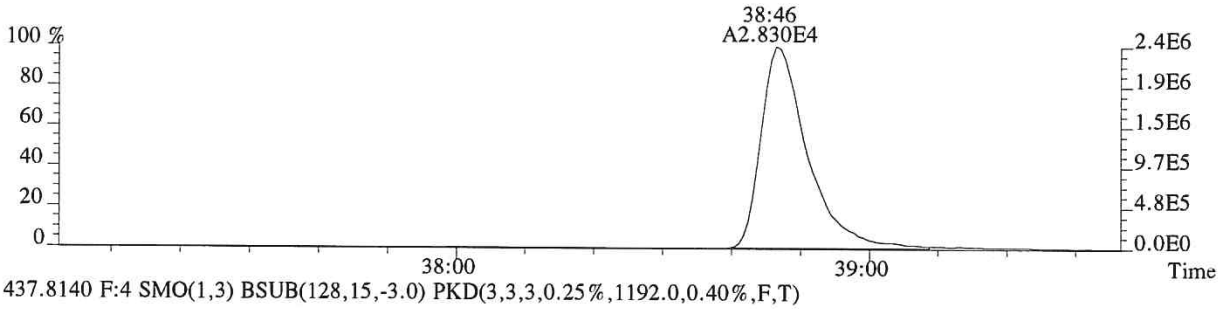
File:P519879 #1-232 Acq:10-JAN-2019 03:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-012
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1908.0,0.40%,F,T)



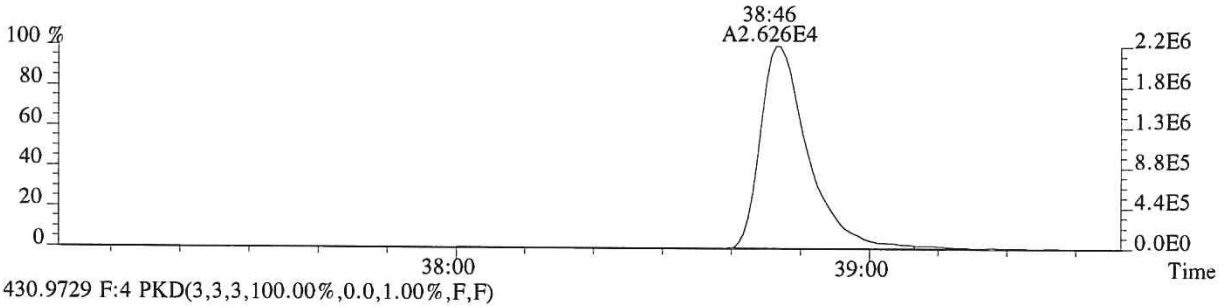
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10824.0,0.40%,F,T)



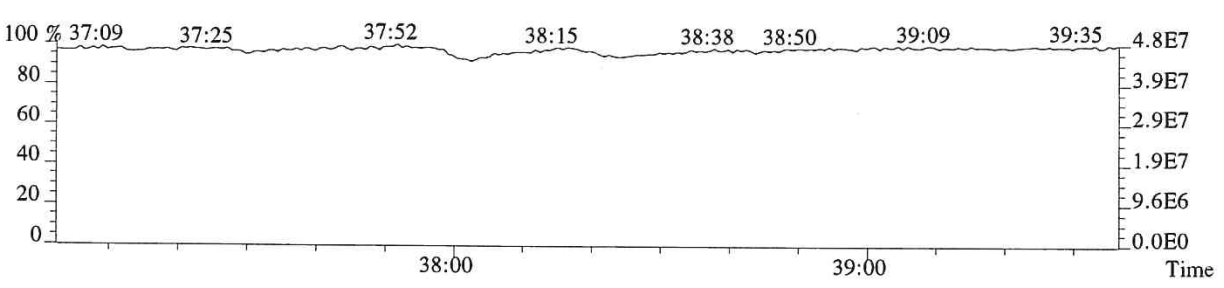
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1740.0,0.40%,F,T)



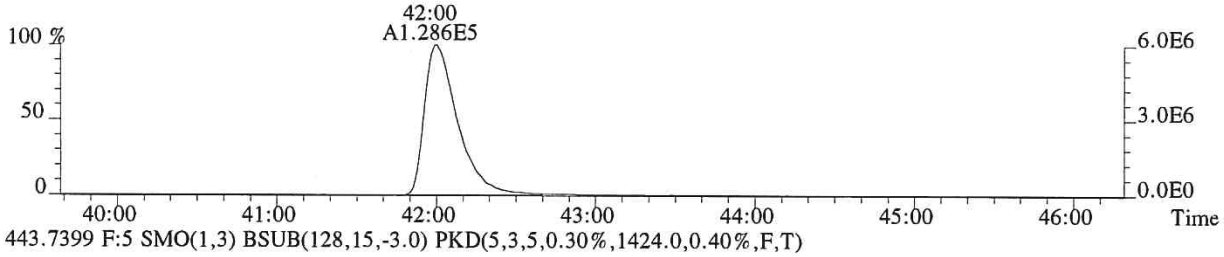
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1192.0,0.40%,F,T)



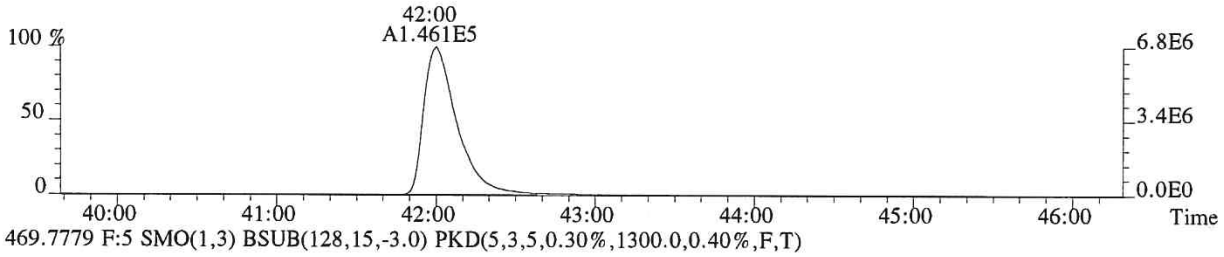
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



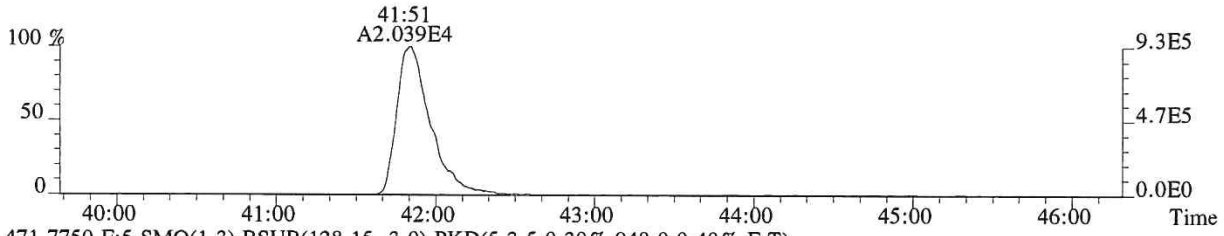
File:P519879 #1-601 Acq:10-JAN-2019 03:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-012
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,920.0,0.40%,F,T)



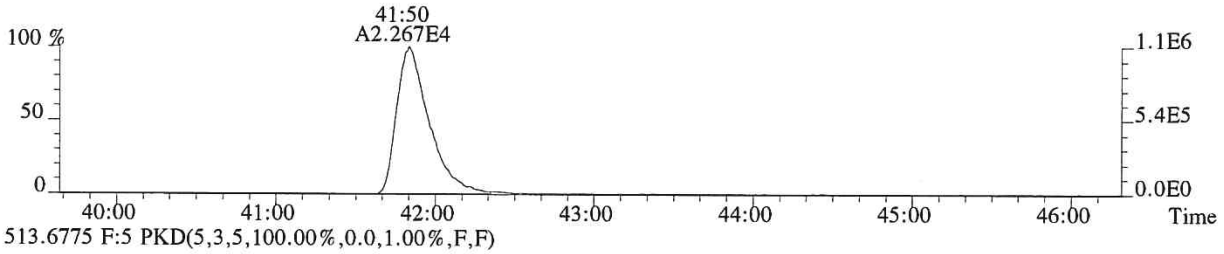
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1424.0,0.40%,F,T)



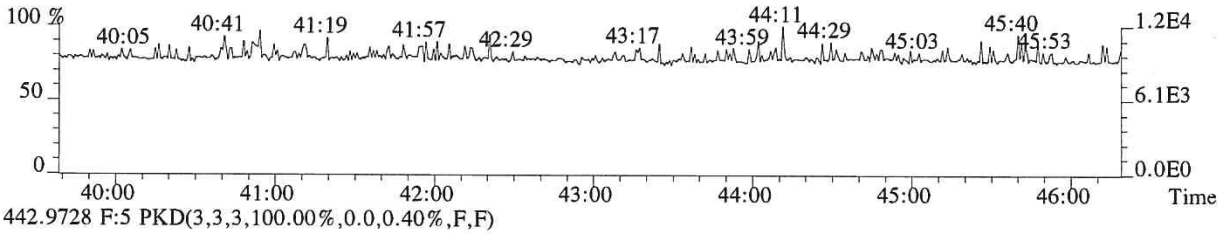
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1300.0,0.40%,F,T)



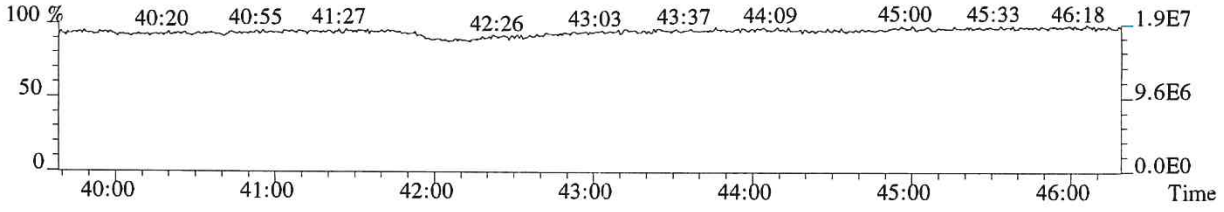
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,948.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

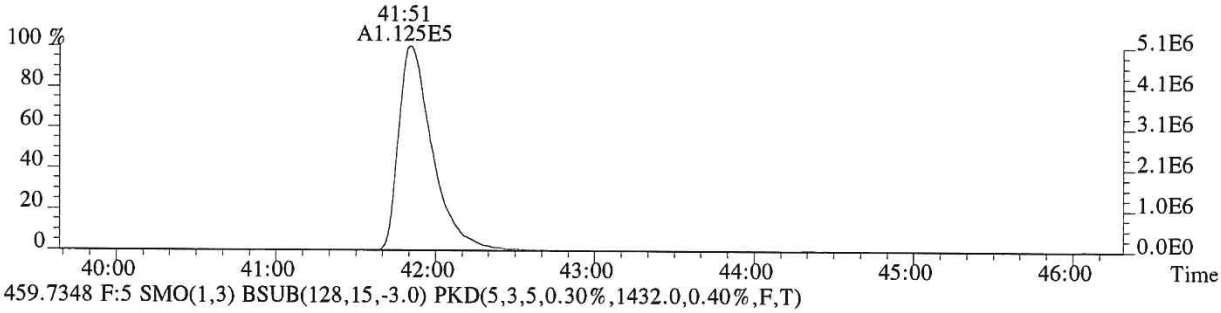


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

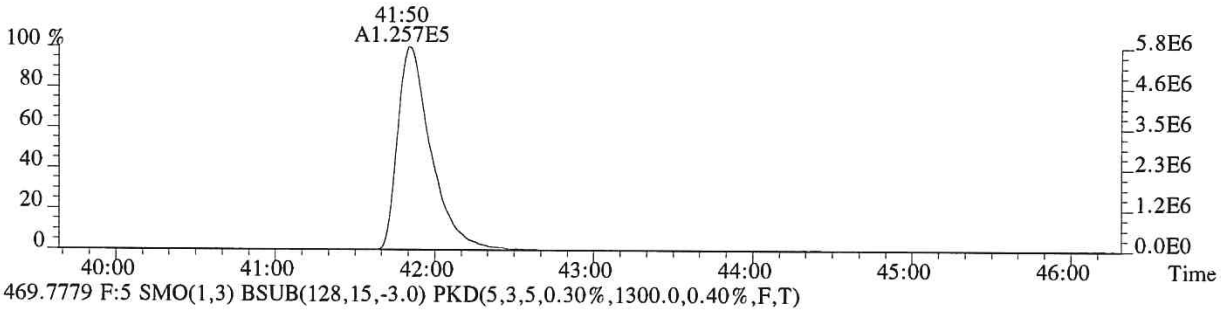


018478

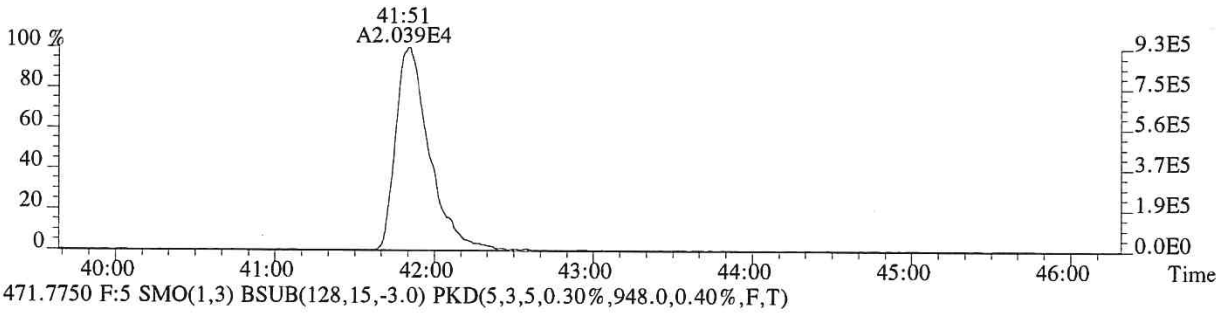
File:P519879 #1-601 Acq:10-JAN-2019 03:36:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-012
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1108.0,0.40%,F,T)



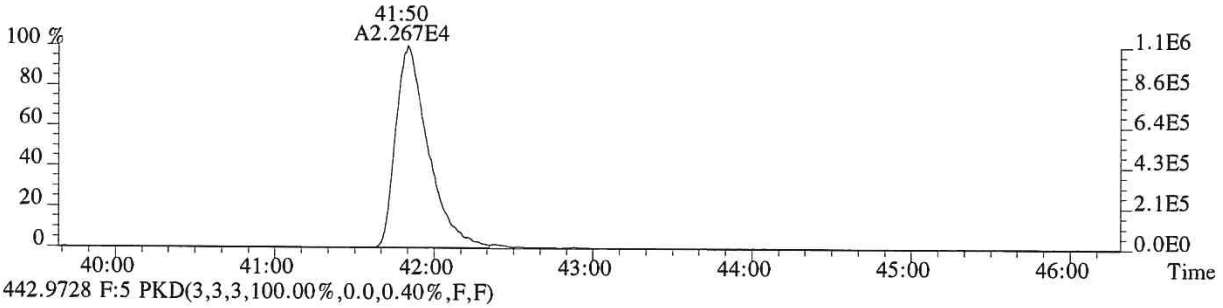
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1432.0,0.40%,F,T)



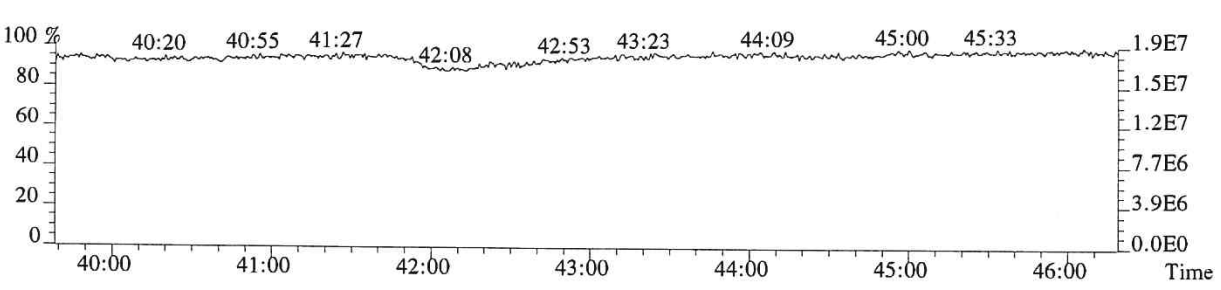
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1300.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,948.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018479

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0228

Run #16 Filename P519893 Samp: 1 Inj: 1 Acquired: 10-JAN-19 19:40:00
Processed: 11-JAN-19 09:26:59 Sample ID: E1801139-013

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:28	2.328e+06	2.946e+06	0.79	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:31	1.580e+05	1.034e+05	1.53	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:32	1.028e+05	6.698e+04	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:25	2.531e+05	2.130e+05	1.19	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:31	6.115e+04	5.135e+04	1.19	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:04	1.035e+04	8.624e+03	1.20	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:52	1.669e+04	1.365e+04	1.22	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:10	6.795e+04	6.618e+04	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	2.204e+04	2.184e+04	1.01	yes	no	1.258
10	Unk	OCDF	40:46	2.557e+04	2.955e+04	0.87	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:28	6.258e+05	7.979e+05	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:50	8.890e+03	5.487e+03	1.62	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:13	1.766e+02	1.584e+02	1.12	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:18	8.888e+02	7.576e+02	1.17	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:33	5.167e+02	3.993e+02	1.29	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:05	3.546e+04	3.358e+04	1.06	yes	no	1.025
17	Unk	OCDD	40:36	3.529e+05	3.970e+05	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:26	3.612e+04	4.533e+04	0.80	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:30	5.540e+04	3.472e+04	1.60	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:30	5.138e+04	3.271e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:24	2.369e+04	4.680e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:31	2.666e+04	5.107e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:03	2.516e+04	4.831e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:49	2.361e+04	4.526e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:09	1.763e+04	3.994e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	1.702e+04	3.778e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:27	1.779e+04	2.260e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:49	4.093e+04	2.583e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:12	3.545e+04	2.855e+04	1.24	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:17	3.232e+04	2.564e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:04	3.734e+04	3.553e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	40:35	3.574e+04	3.979e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:46	3.853e+04	4.806e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:32	5.347e+04	4.177e+04	1.28	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:28	3.343e+04				no	1.014

$$\text{OCDD} = \frac{(3.529e{+}05 + 3.970e{+}05) \times 4000\ \text{pg} \times 1}{(3.574e{+}04 + 3.979e{+}04) \times 10.445\ \text{g} \times 80.1 / 100 \times 1.118} = 4245.8\ \text{ng/Kg}$$

LW 01/11/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0228

Run #16 Filename P519893 Samp: 1 Inj: 1 Acquired: 10-JAN-19 19:40:00
Processed: 11-JAN-19 09:26:59 LAB. ID: E1801139-013

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	3.13e+08	1.96e+03	1.6e+05	3.95e+08	1.28e+03	3.1e+05
2	1,2,3,7,8-PeCDF	2.73e+07	2.70e+04	1.0e+03	1.79e+07	2.08e+04	8.6e+02
3	2,3,4,7,8-PeCDF	1.54e+07	2.70e+04	5.7e+02	1.00e+07	2.08e+04	4.8e+02
4	1,2,3,4,7,8-HxCDF	5.40e+07	7.49e+03	7.2e+03	4.56e+07	6.44e+03	7.1e+03
5	1,2,3,6,7,8-HxCDF	1.23e+07	7.49e+03	1.6e+03	1.05e+07	6.44e+03	1.6e+03
6	2,3,4,6,7,8-HxCDF	2.26e+06	7.49e+03	3.0e+02	1.86e+06	6.44e+03	2.9e+02
7	1,2,3,7,8,9-HxCDF	3.16e+06	7.49e+03	4.2e+02	2.60e+06	6.44e+03	4.0e+02
8	1,2,3,4,6,7,8-HpCDF	1.50e+07	6.56e+03	2.3e+03	1.45e+07	3.69e+03	3.9e+03
9	1,2,3,4,7,8,9-HpCDF	4.64e+06	6.56e+03	7.1e+02	4.63e+06	3.69e+03	1.3e+03
10	OCDF	4.77e+06	7.32e+02	6.5e+03	5.39e+06	1.56e+03	3.5e+03
11	2,3,7,8-TCDD	1.01e+08	2.80e+03	3.6e+04	1.29e+08	1.61e+03	8.0e+04
12	1,2,3,7,8-PeCDD	1.54e+06	1.38e+03	1.1e+03	9.62e+05	1.69e+03	5.7e+02
13	1,2,3,4,7,8-HxCDD	4.72e+04	1.35e+03	3.5e+01	3.62e+04	2.76e+03	1.3e+01
14	1,2,3,6,7,8-HxCDD	2.19e+05	1.35e+03	1.6e+02	1.81e+05	2.76e+03	6.5e+01
15	1,2,3,7,8,9-HxCDD	1.11e+05	1.35e+03	8.2e+01	8.36e+04	2.76e+03	3.0e+01
16	1,2,3,4,6,7,8-HpCDD	7.62e+06	5.57e+03	1.4e+03	7.25e+06	5.84e+03	1.2e+03
17	OCDD	6.52e+07	6.12e+02	1.1e+05	7.32e+07	7.56e+02	9.7e+04
18	13C-2,3,7,8-TCDF	5.17e+06	7.34e+03	7.0e+02	6.53e+06	7.25e+03	9.0e+02
19	13C-1,2,3,7,8-PeCDF	9.73e+06	3.42e+03	2.8e+03	6.15e+06	4.28e+03	1.4e+03
20	13C-2,3,4,7,8-PeCDF	9.62e+06	3.42e+03	2.8e+03	6.14e+06	4.28e+03	1.4e+03
21	13C-1,2,3,4,7,8-HxCDF	5.09e+06	5.72e+03	8.9e+02	1.01e+07	1.94e+03	5.2e+03
22	13C-1,2,3,6,7,8-HxCDF	5.42e+06	5.72e+03	9.5e+02	1.04e+07	1.94e+03	5.4e+03
23	13C-2,3,4,6,7,8-HxCDF	5.23e+06	5.72e+03	9.1e+02	1.01e+07	1.94e+03	5.2e+03
24	13C-1,2,3,7,8,9-HxCDF	4.89e+06	5.72e+03	8.5e+02	9.29e+06	1.94e+03	4.8e+03
25	13C-1,2,3,4,6,7,8-HpCDF	3.91e+06	4.15e+03	9.4e+02	8.77e+06	6.23e+03	1.4e+03
26	13C-1,2,3,4,7,8,9-HpCDF	3.62e+06	4.15e+03	8.7e+02	8.01e+06	6.23e+03	1.3e+03
27	13C-2,3,7,8-TCDD	2.90e+06	7.20e+03	4.0e+02	3.66e+06	2.69e+03	1.4e+03
28	13C-1,2,3,7,8-PeCDD	7.78e+06	1.18e+03	6.6e+03	4.98e+06	1.62e+03	3.1e+03
29	13C-1,2,3,4,7,8-HxCDD	8.02e+06	1.19e+03	6.7e+03	6.44e+06	5.36e+02	1.2e+04
30	13C-1,2,3,6,7,8-HxCDD	7.10e+06	1.19e+03	6.0e+03	5.63e+06	5.36e+02	1.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	8.03e+06	1.58e+03	5.1e+03	7.66e+06	8.36e+02	9.2e+03
32	13C-OCDD	6.54e+06	5.48e+02	1.2e+04	7.37e+06	8.40e+02	8.8e+03
33	13C-1,2,3,4-TCDD	5.78e+06	7.20e+03	8.0e+02	7.24e+06	2.69e+03	2.7e+03
34	13C-1,2,3,7,8,9-HxCDD	1.14e+07	1.19e+03	9.6e+03	8.93e+06	5.36e+02	1.7e+04
35	37Cl-2,3,7,8-TCDD	5.41e+06	1.45e+03	3.7e+03			

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Peak List Summary

CLIENT ID.
SL0228

Entry: 36 Totals Name: Total Tetra-Furans

Run: 16 File: P519893 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 19:40:00 Processed: 11-JAN-19 09:26:59

Mass: 303.9020 305.8990 Tot Response: 9.80e+06 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:22	1.99e+04	2.62e+04	0.76	yes	4.60e+04		n	n
2	22:38	1.07e+05	1.38e+05	0.78	yes	2.45e+05		n	n
3	23:00	3.41e+04	4.46e+04	0.76	yes	7.87e+04		n	n
4	23:06	3.31e+03	4.60e+03	0.72	yes	7.90e+03		n	n
5	23:16	9.02e+04	1.17e+05	0.77	yes	2.07e+05		n	n
6	23:38	2.07e+04	2.71e+04	0.76	yes	4.78e+04		n	n
7	23:52	6.09e+04	7.92e+04	0.77	yes	1.40e+05		n	n
8	23:59	1.14e+05	1.45e+05	0.78	yes	2.59e+05		n	n
9	24:27	1.12e+06	1.42e+06	0.79	yes	2.54e+06		n	n
10	24:45	5.51e+04	6.94e+04	0.79	yes	1.24e+05		n	n
11	25:28	2.33e+06	2.95e+06	0.79	yes	5.27e+06	2,3,7,8-TCDF	n	n
12	25:55	1.59e+05	2.02e+05	0.78	yes	3.61e+05		n	n
13	26:11	2.78e+04	3.57e+04	0.78	yes	6.36e+04		n	n
14	27:45	1.79e+05	2.31e+05	0.78	yes	4.11e+05		n	n

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Peak List Summary

CLIENT ID.
SL0228

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 16 File: P519893 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 19:40:00 Processed: 11-JAN-19 09:26:59

Mass: 319.8970 321.8940 Tot Response: 1.57e+06 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:08	8.85e+03	1.11e+04	0.80	yes	2.00e+04		n	n
2	26:28	6.26e+05	7.98e+05	0.78	yes	1.42e+06	2,3,7,8-TCDD	n	n
3	26:50	5.63e+04	7.09e+04	0.79	yes	1.27e+05		n	n

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SL0228

Entry: 38 Totals Name: Total Penta-Furans1

Run: 16 File: P519893 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 19:40:00 Processed: 11-JAN-19 09:26:59

Mass: 339.8600 341.8570 Tot Response: 4.02e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:46	2.53e+03	1.48e+03 1.71	yes	4.02e+03		n	n

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Entry: 39 Totals Name: Total Penta-Furans2

Run: 16 File: P519893 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 19:40:00 Processed: 11-JAN-19 09:26:59

Mass: 339.8600 341.8570 Tot Response: 6.47e+05 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:19	1.15e+03	7.08e+02	1.62	yes	1.86e+03		n	n
2	29:28	6.44e+04	4.19e+04	1.54	yes	1.06e+05		n	n
3	30:05	1.94e+03	1.16e+03	1.67	yes	3.10e+03		n	n
4	30:10	2.03e+03	1.44e+03	1.41	yes	3.47e+03		n	n
5	30:20	1.24e+04	8.07e+03	1.53	yes	2.04e+04		n	n
6	30:31	1.58e+05	1.03e+05	1.53	yes	2.61e+05	1,2,3,7,8-PeCDF	n	n
7	30:47	4.29e+04	2.84e+04	1.51	yes	7.13e+04		n	n
8	31:32	1.03e+05	6.70e+04	1.54	yes	1.70e+05	2,3,4,7,8-PeCDF	n	n
9	32:29	5.26e+03	3.54e+03	1.48	yes	8.80e+03		n	n

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Entry: 40 Totals Name: Total Penta-Dioxins

Run: 16 File: P519893 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 19:40:00 Processed: 11-JAN-19 09:26:59

Mass: 355.8550 357.8520 Tot Response: 2.06e+04 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:32	5.86e+02	3.88e+02	1.51	yes	9.74e+02		n	n
2	30:02	9.22e+02	5.40e+02	1.71	yes	1.46e+03		n	n
3	30:33	9.39e+02	5.45e+02	1.72	yes	1.48e+03		n	n
4	30:44	4.54e+02	2.83e+02	1.60	yes	7.37e+02		n	n
5	30:50	3.38e+02	2.38e+02	1.42	yes	5.76e+02		n	n
6	31:04	3.61e+02	2.22e+02	1.63	yes	5.83e+02		n	n
7	31:24	2.28e+02	1.50e+02	1.52	yes	3.77e+02		n	n
8	31:50	8.89e+03	5.49e+03	1.62	yes	1.44e+04	1,2,3,7,8-PeCDD	n	n

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SL0228

Entry: 41 Totals Name: Total Hexa-Furans

Run: 16 File: P519893 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 19:40:00 Processed: 11-JAN-19 09:26:59

Mass: 373.8210 375.8180 Tot Response: 6.76e+05 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:15	1.33e+03	1.16e+03	1.15	yes	2.49e+03		n	n
2	33:25	1.64e+04	1.36e+04	1.21	yes	3.00e+04		n	n
3	33:58	8.25e+03	7.17e+03	1.15	yes	1.54e+04		n	n
4	34:25	2.53e+05	2.13e+05	1.19	yes	4.66e+05	1,2,3,4,7,8-HxCDF	n	n
5	34:31	6.11e+04	5.14e+04	1.19	yes	1.13e+05	1,2,3,6,7,8-HxCDF	n	n
6	35:04	1.04e+04	8.62e+03	1.20	yes	1.90e+04	2,3,4,6,7,8-HxCDF	n	n
7	35:52	1.67e+04	1.36e+04	1.22	yes	3.03e+04	1,2,3,7,8,9-HxCDF	n	n

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Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 16 File: P519893 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 19:40:00 Processed: 11-JAN-19 09:26:59

Mass: 389.8160 391.8130 Tot Response: 9.94e+03 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:21	3.77e+02	3.01e+02	1.25	yes	6.78e+02		n	n
2	34:36	3.17e+03	2.55e+03	1.24	yes	5.72e+03		n	n
3	34:42	1.98e+02	1.84e+02	1.08	yes	3.82e+02		n	n
4	35:13	1.77e+02	1.58e+02	1.12	yes	3.35e+02	1,2,3,4,7,8-HxCDD	n	n
5	35:18	8.89e+02	7.58e+02	1.17	yes	1.65e+03	1,2,3,6,7,8-HxCDD	n	n
6	35:28	1.39e+02	1.27e+02	1.10	yes	2.66e+02		n	n
7	35:33	5.17e+02	3.99e+02	1.29	yes	9.16e+02	1,2,3,7,8,9-HxCDD	n	n

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Entry: 43 Totals Name: Total Hepta-Furans

Run: 16 File: P519893 Sample:1 Injection:1 Function:4

Acquired: 10-JAN-19 19:40:00 Processed: 11-JAN-19 09:26:59

Mass: 407.7820 409.7790 Tot Response: 2.16e+05 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:10	6.79e+04	6.62e+04	1.03	yes	1.34e+05	1,2,3,4,6,7,8-HpCDF	n	n
2	37:34	1.94e+04	1.87e+04	1.04	yes	3.81e+04		n	n
3	38:30	2.20e+04	2.18e+04	1.01	yes	4.39e+04	1,2,3,4,7,8,9-HpCDF	n	n

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Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 16 File: P519893 Sample:1 Injection:1 Function:4

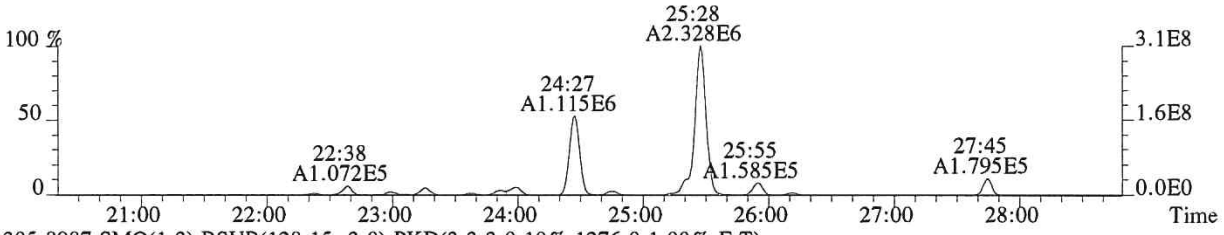
Acquired: 10-JAN-19 19:40:00 Processed: 11-JAN-19 09:26:59

Mass: 423.7770 425.7740 Tot Response: 6.90e+04 RRF: 1.025

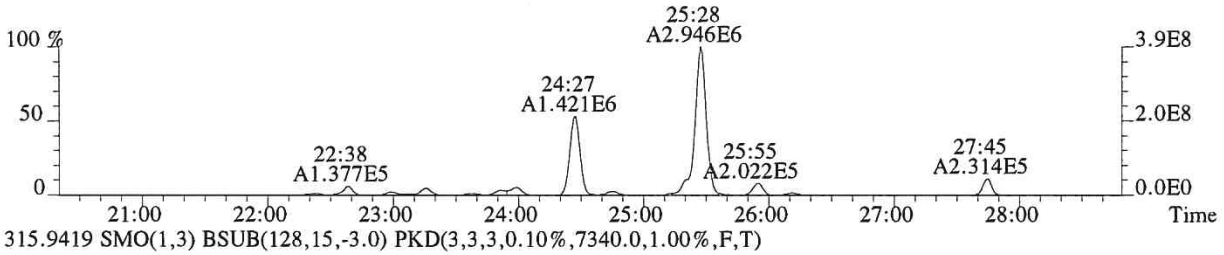
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:05	3.55e+04	3.36e+04 1.06	yes	6.90e+04	1,2,3,4,6,7,8-HpCDD	n	n

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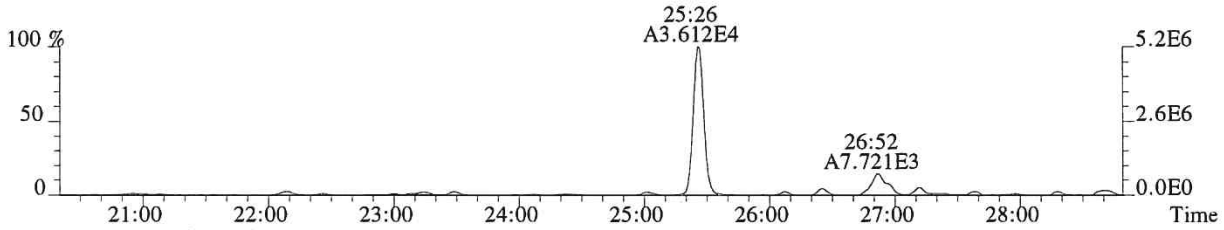
File:P519893 #1-602 Acq:10-JAN-2019 19:40:00 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-013
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1956.0,1.00%,F,T)



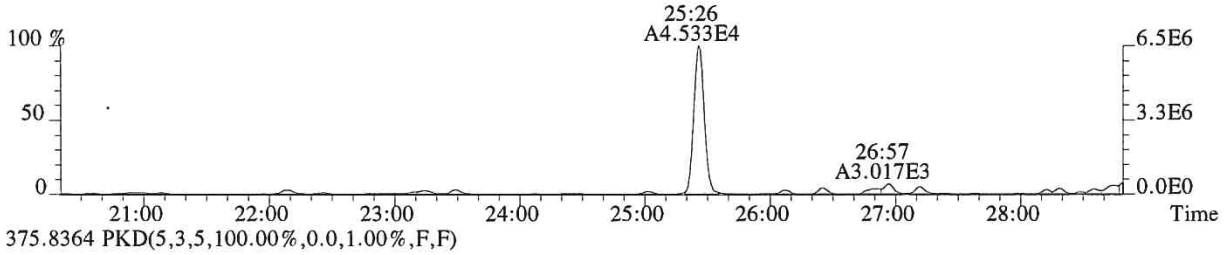
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1276.0,1.00%,F,T)



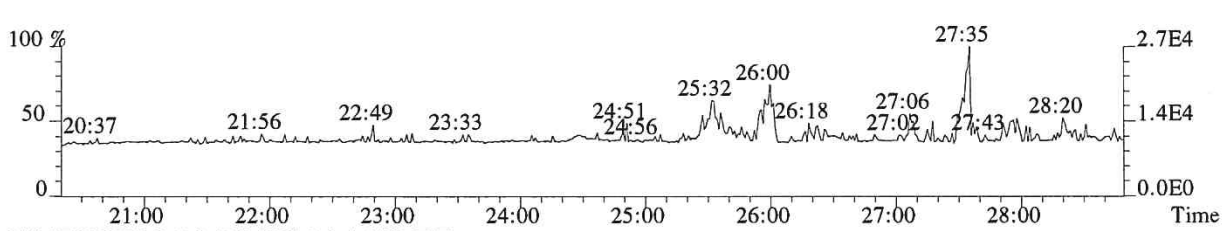
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7340.0,1.00%,F,T)



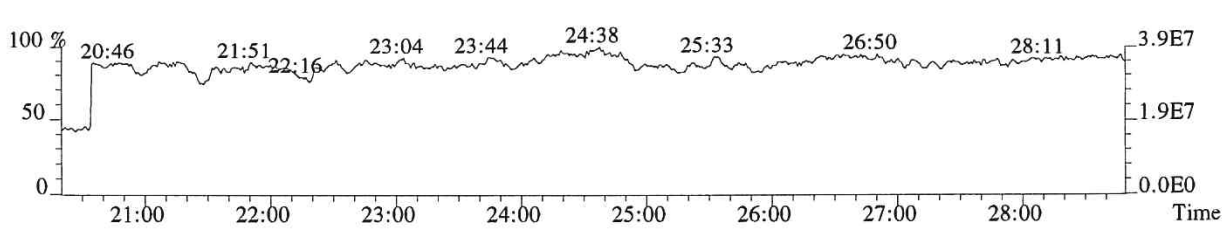
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7252.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

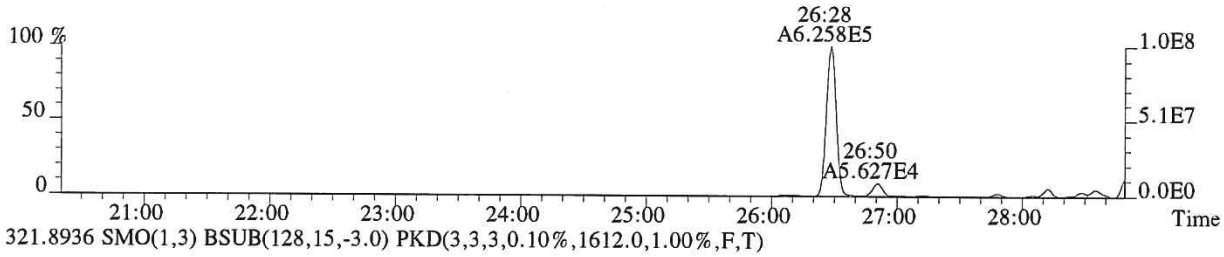


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

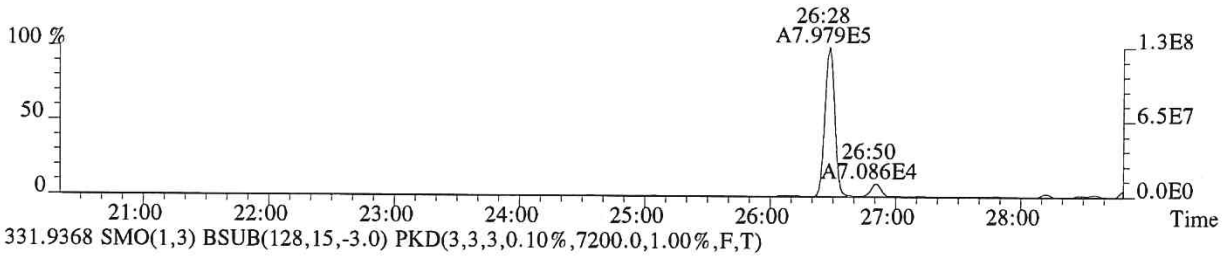


018491

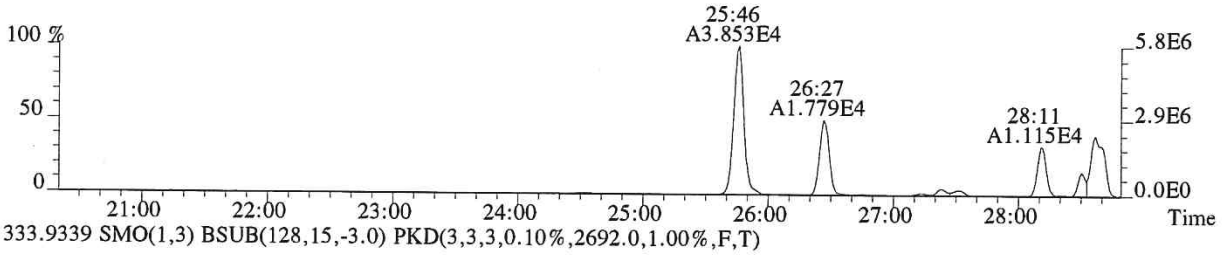
File:P519893 #1-602 Acq:10-JAN-2019 19:40:00 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-013
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2804.0,1.00%,F,T)



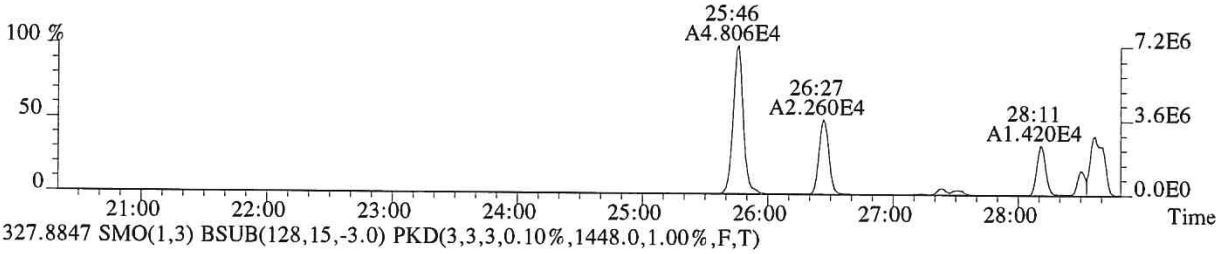
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1612.0,1.00%,F,T)



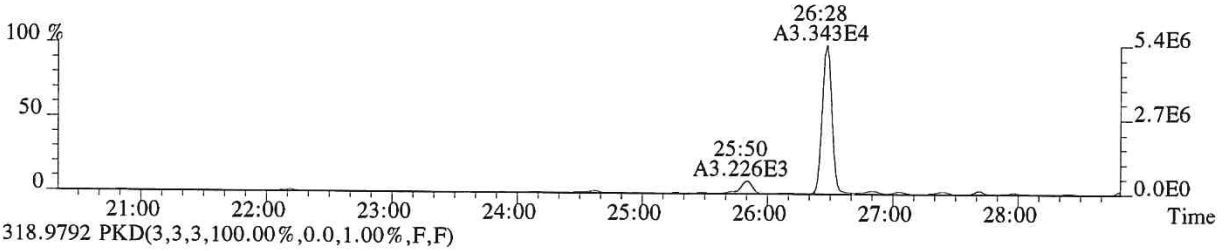
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7200.0,1.00%,F,T)



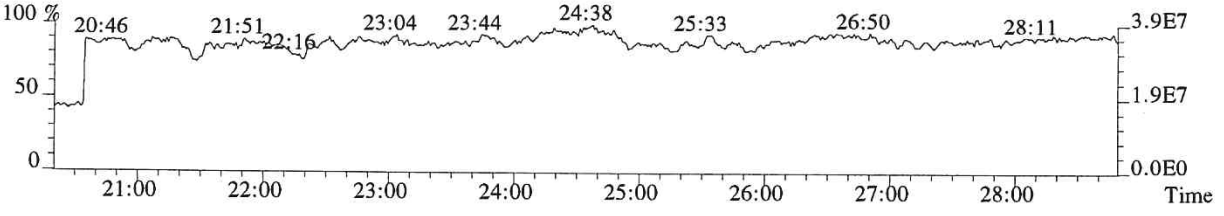
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2692.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1448.0,1.00%,F,T)

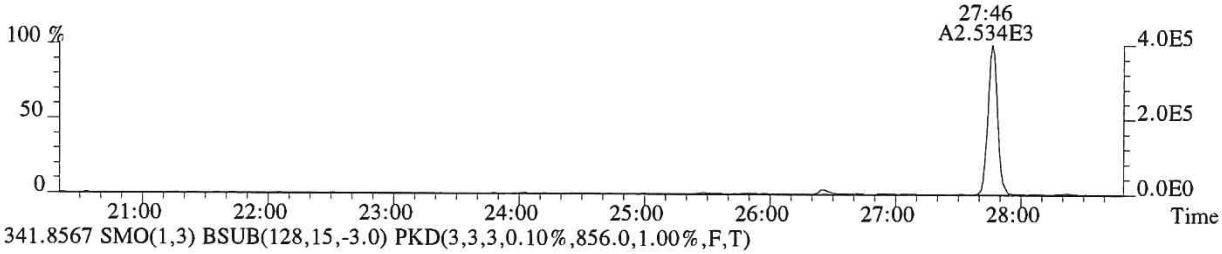


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

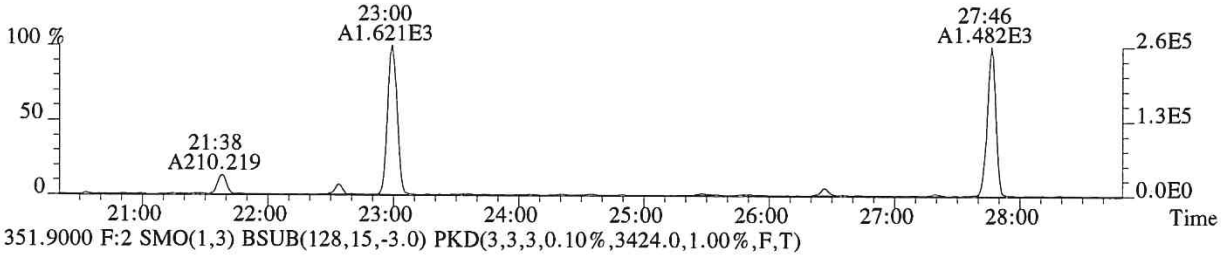


018492

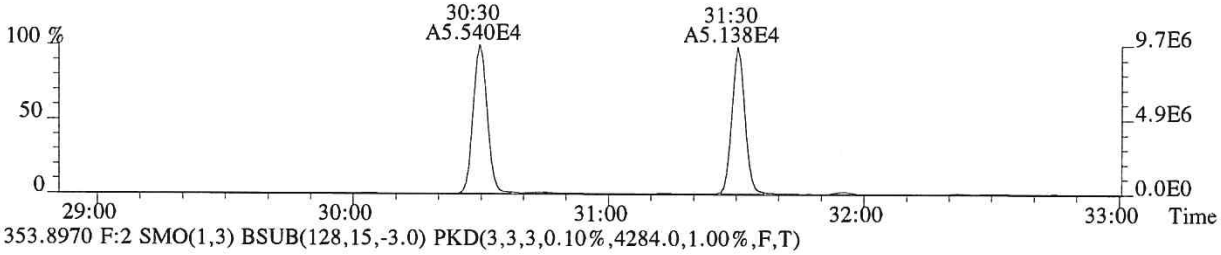
File:P519893 #1-602 Acq:10-JAN-2019 19:40:00 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-013
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,572.0,1.00%,F,T)



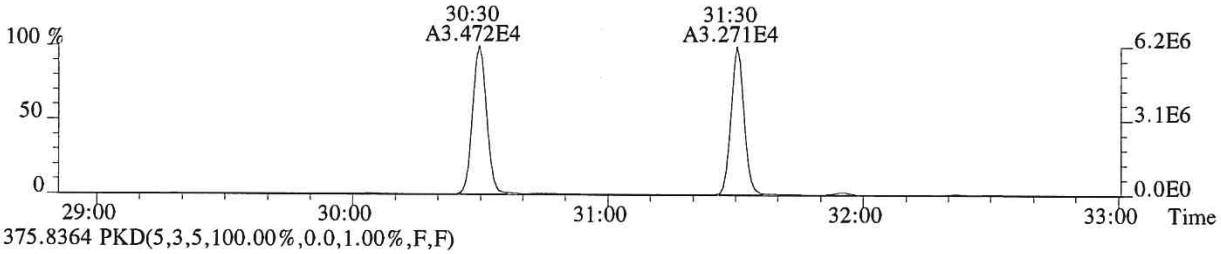
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,856.0,1.00%,F,T)



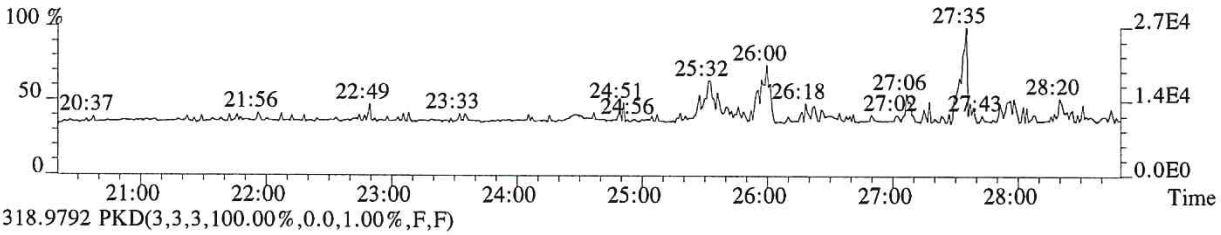
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3424.0,1.00%,F,T)



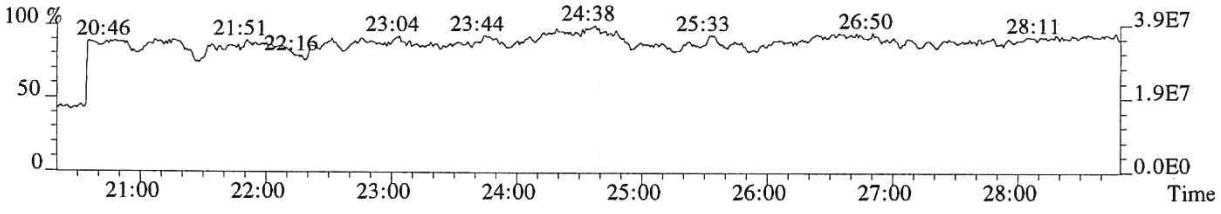
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4284.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

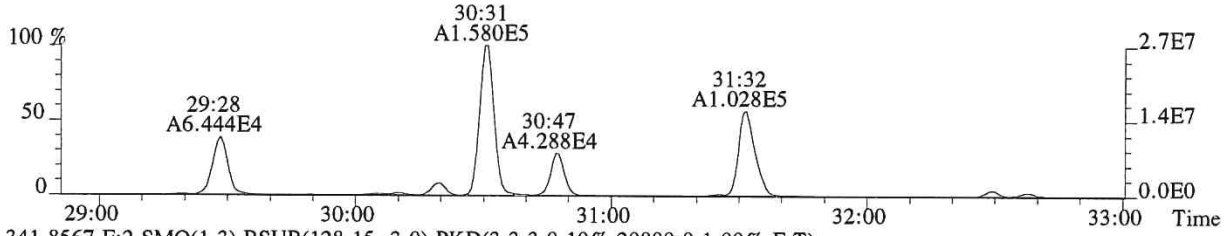


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

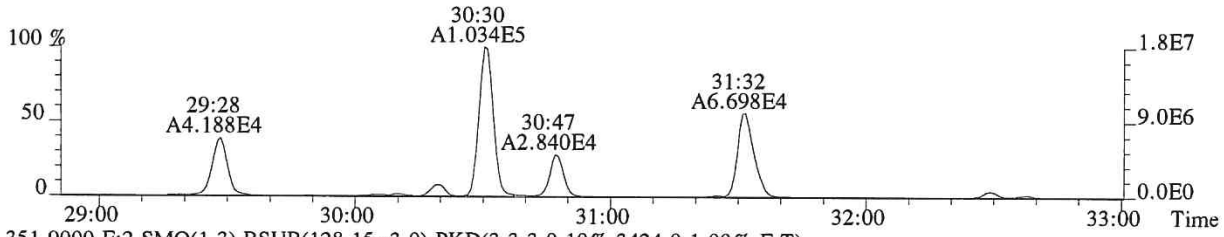


018493

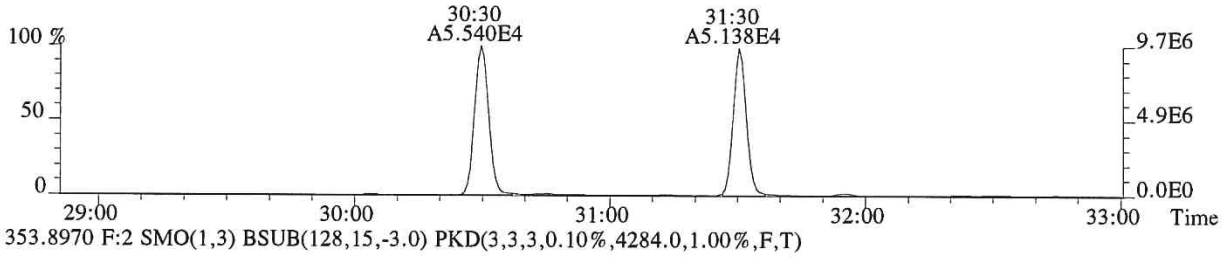
File:P519893 #1-375 Acq:10-JAN-2019 19:40:00 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-013
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,27008.0,1.00%,F,T)



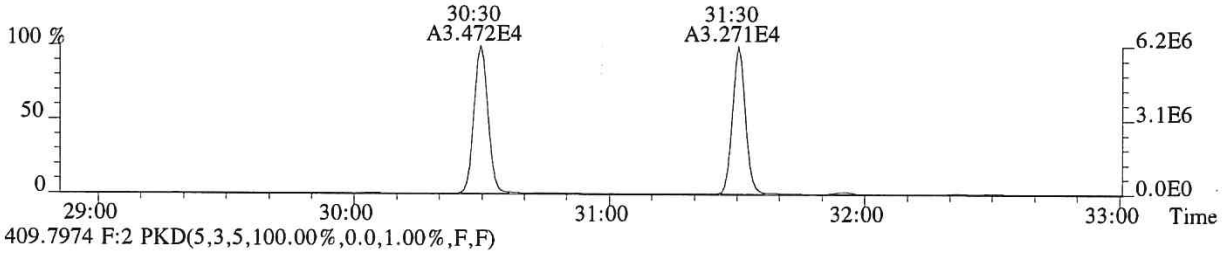
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,20800.0,1.00%,F,T)



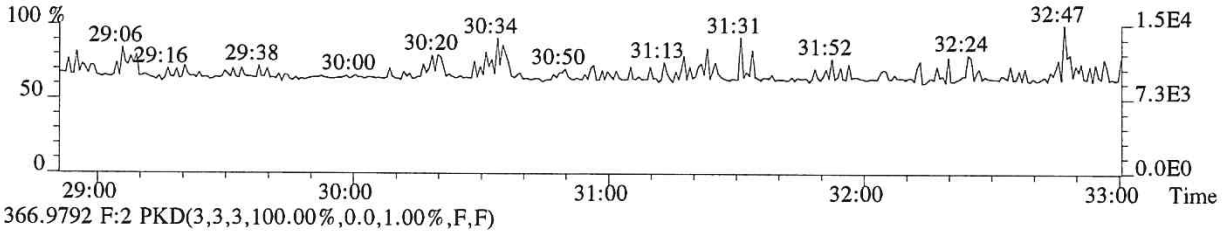
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3424.0,1.00%,F,T)



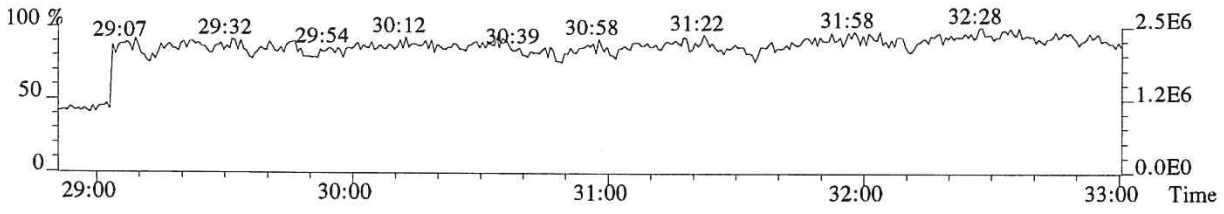
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4284.0,1.00%,F,T)



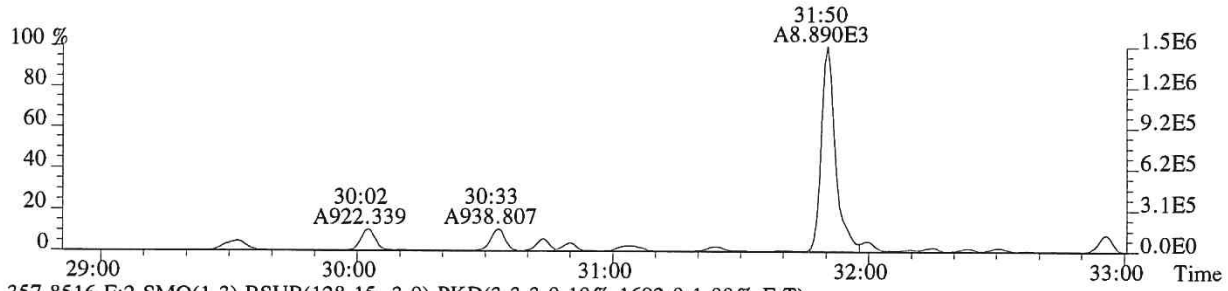
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



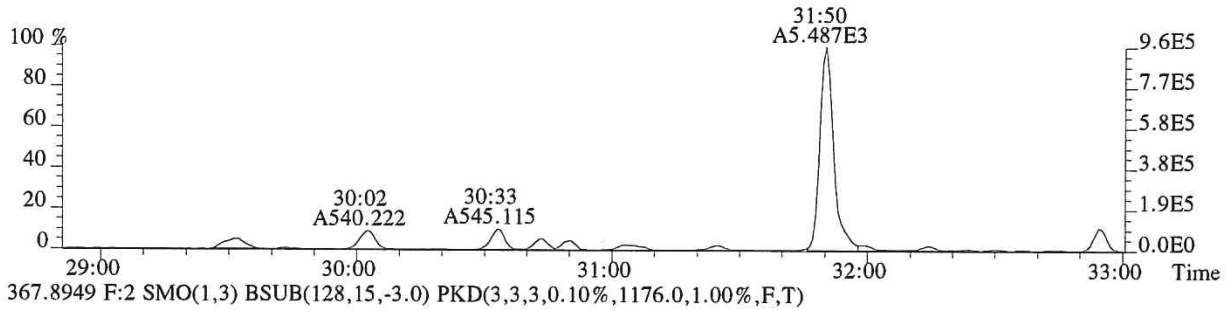
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



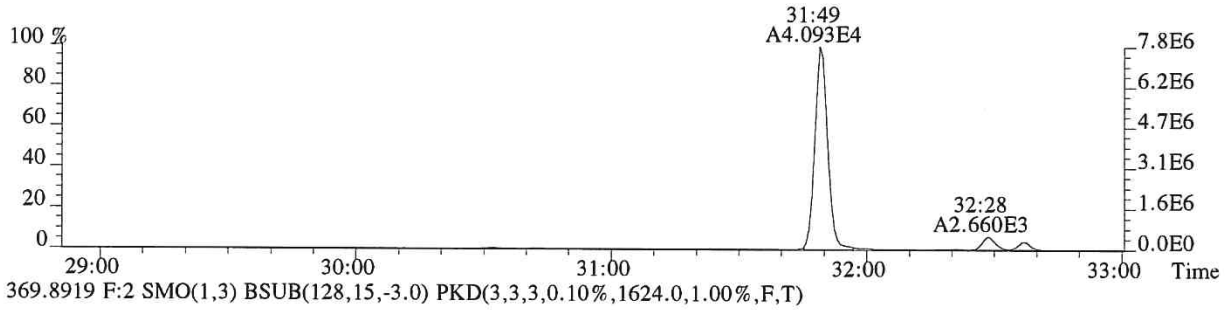
File:P519893 #1-375 Acq:10-JAN-2019 19:40:00 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-013
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1380.0,1.00%,F,T)



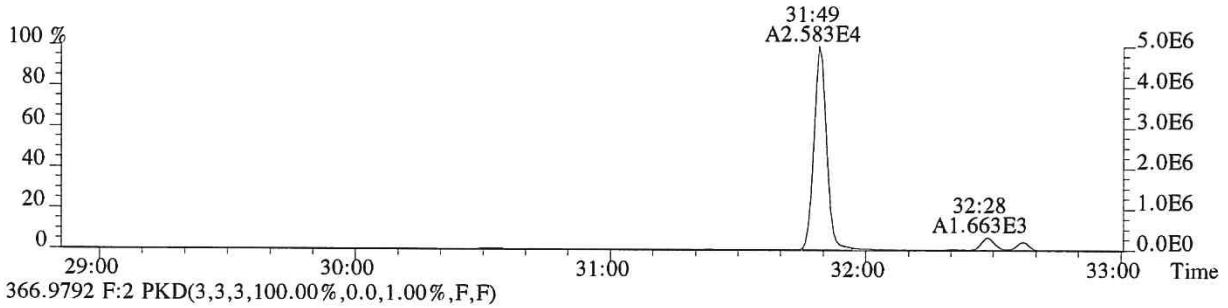
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1692.0,1.00%,F,T)



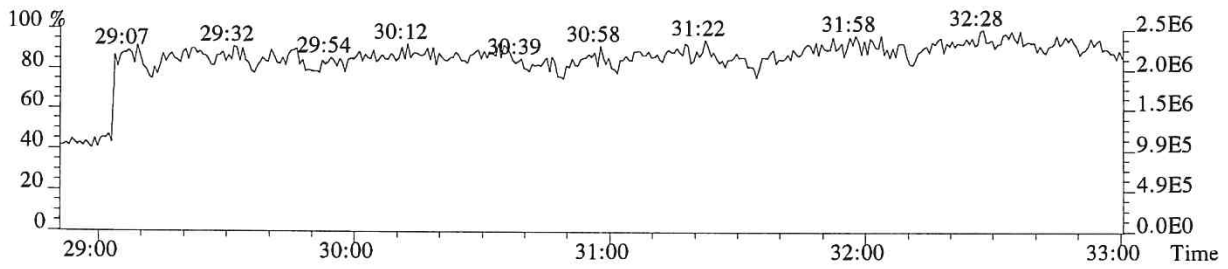
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1176.0,1.00%,F,T)



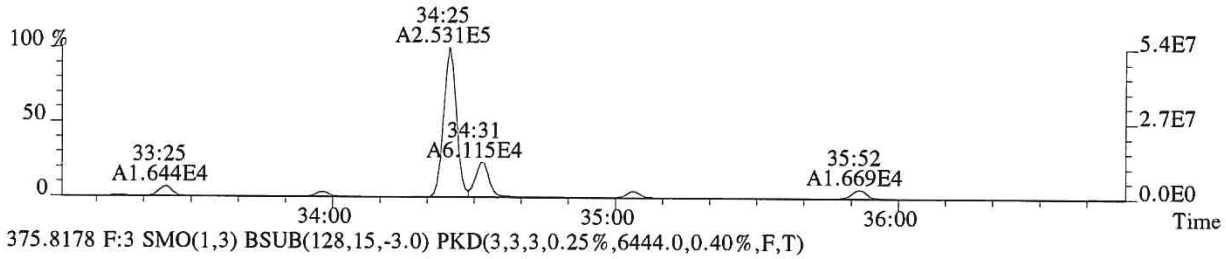
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1624.0,1.00%,F,T)



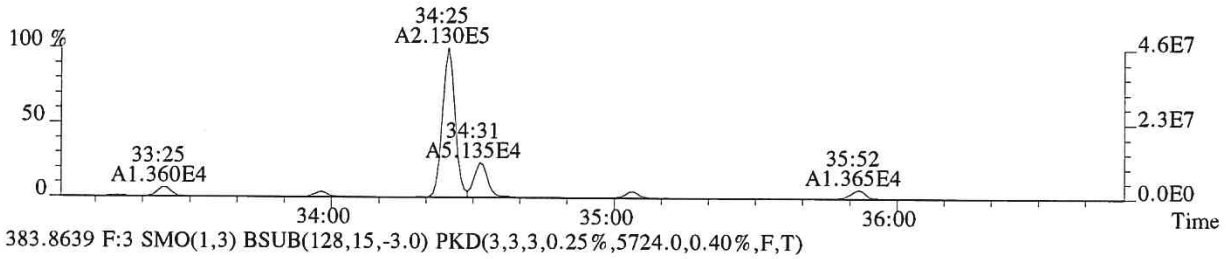
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



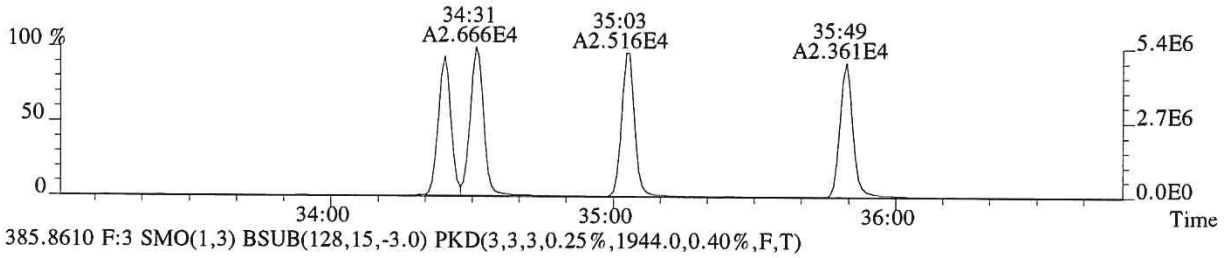
File:P519893 #1-339 Acq:10-JAN-2019 19:40:00 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-013
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7492.0,0.40%,F,T)



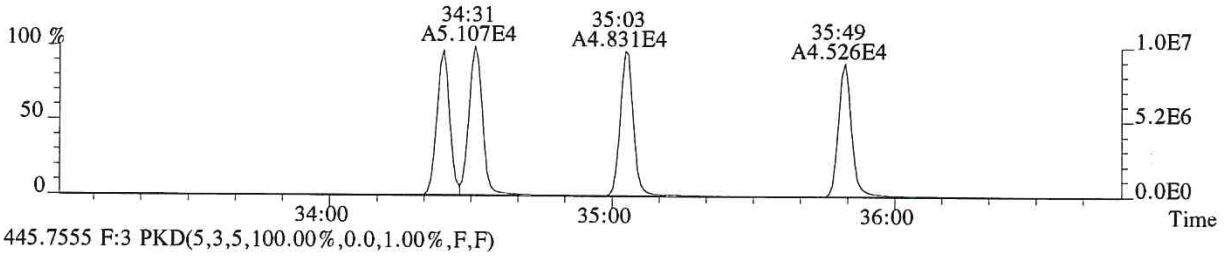
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6444.0,0.40%,F,T)



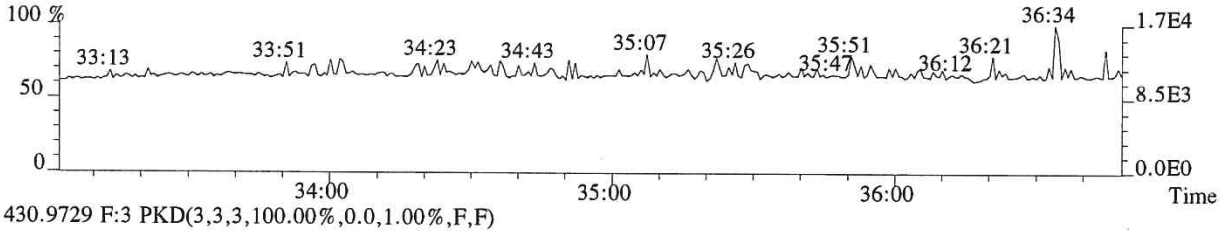
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5724.0,0.40%,F,T)



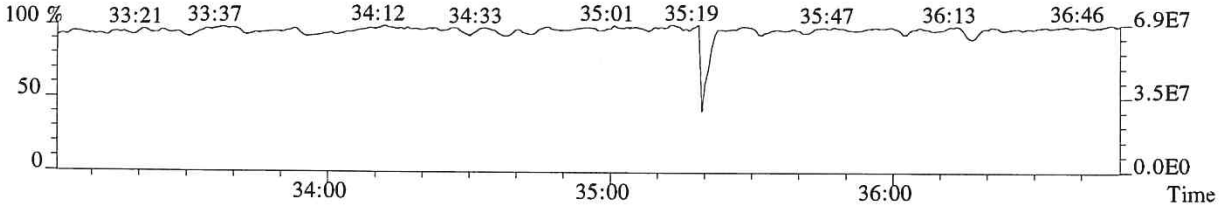
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1944.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

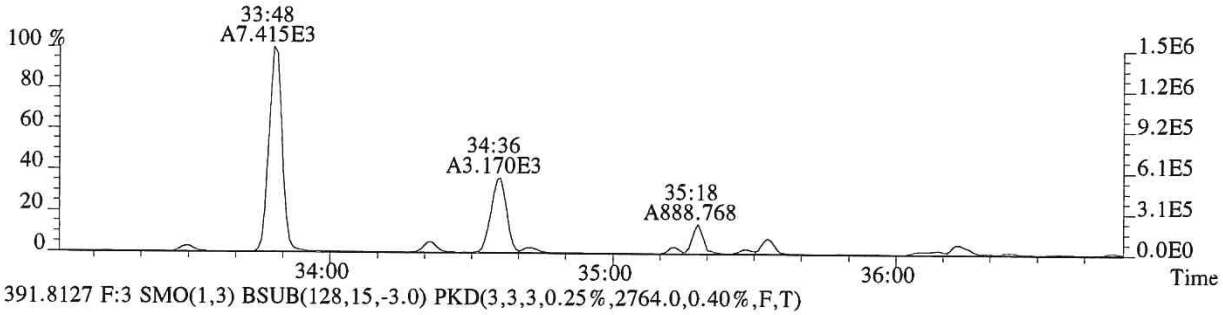


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

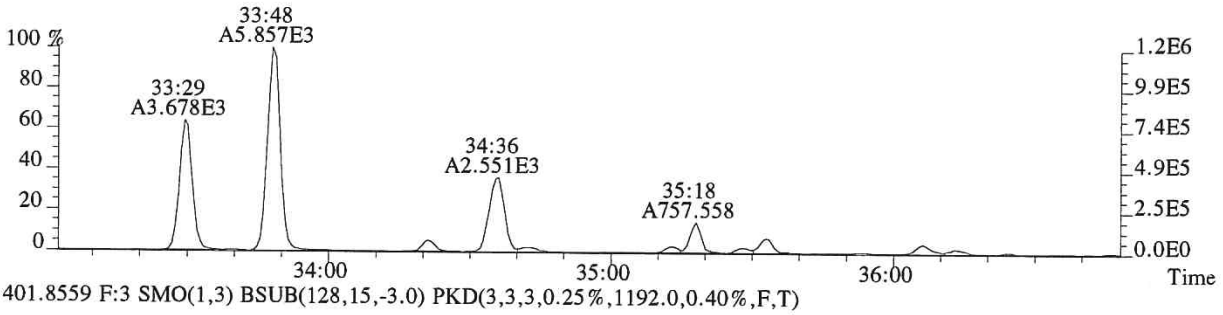


018496

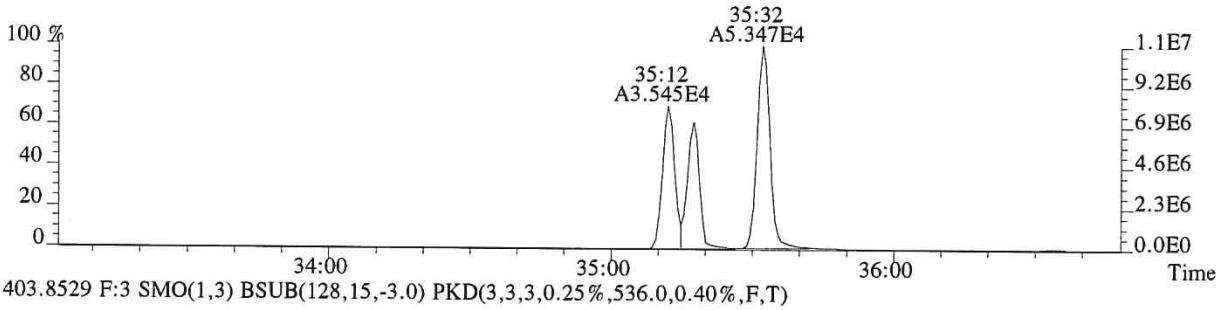
File:P519893 #1-339 Acq:10-JAN-2019 19:40:00 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-013
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1348.0,0.40%,F,T)



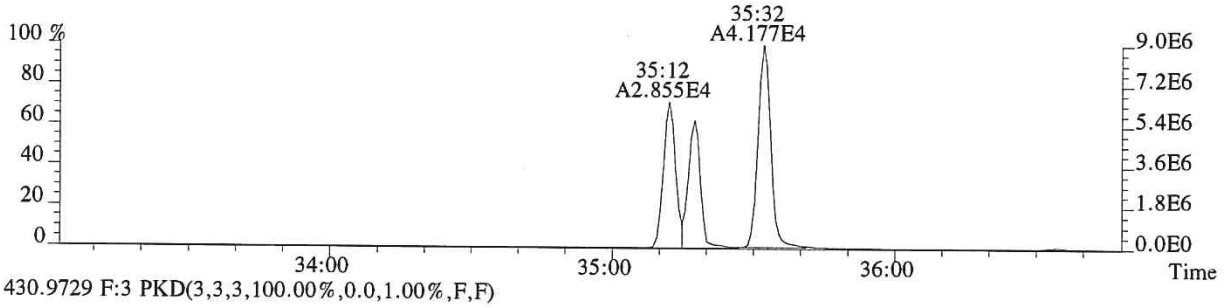
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2764.0,0.40%,F,T)



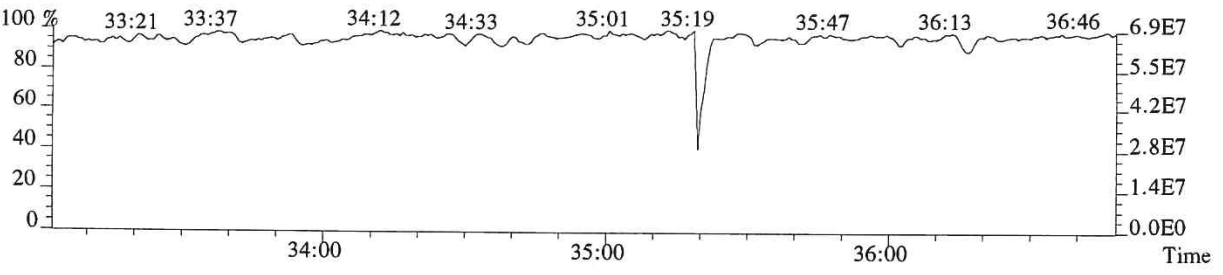
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1192.0,0.40%,F,T)



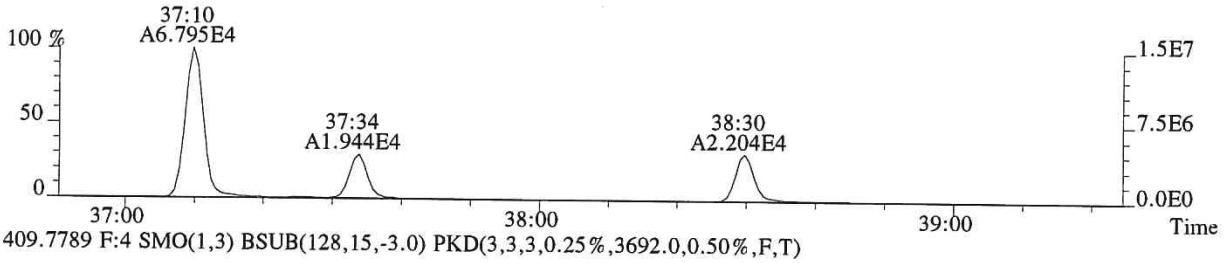
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,536.0,0.40%,F,T)



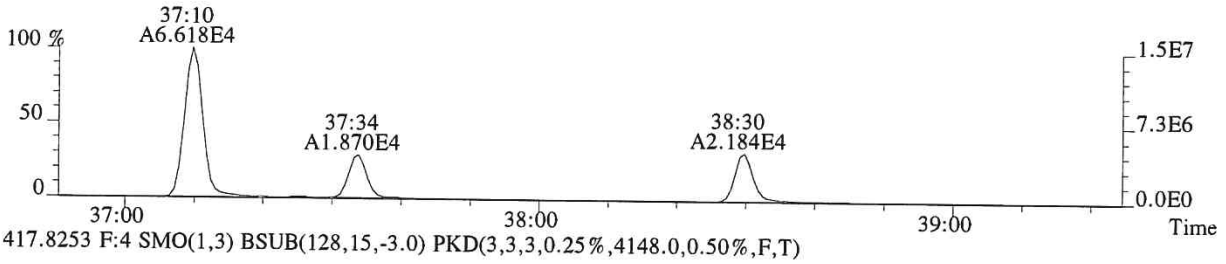
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



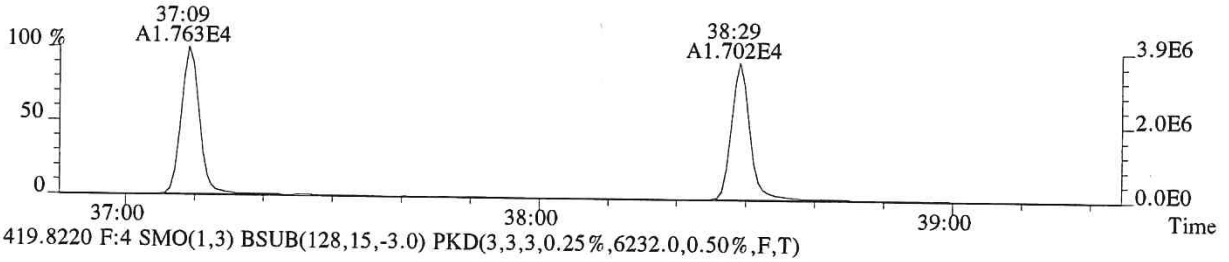
File:P519893 #1-232 Acq:10-JAN-2019 19:40:00 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-013
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6556.0,0.50%,F,T)



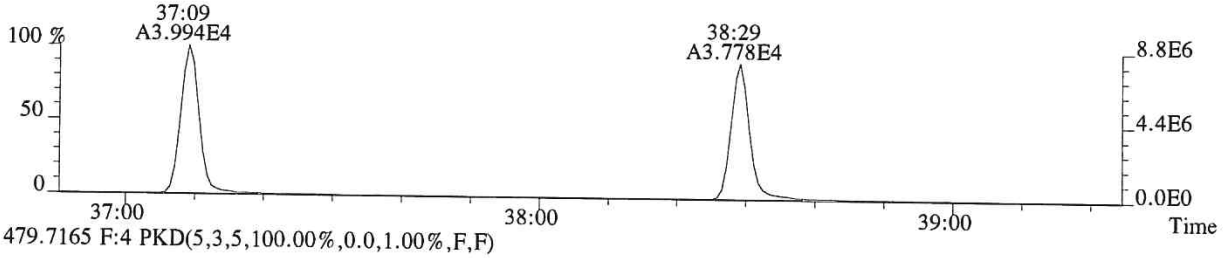
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3692.0,0.50%,F,T)



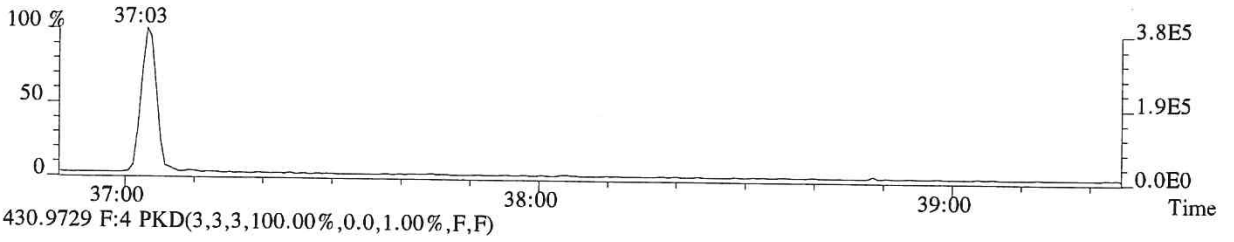
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4148.0,0.50%,F,T)



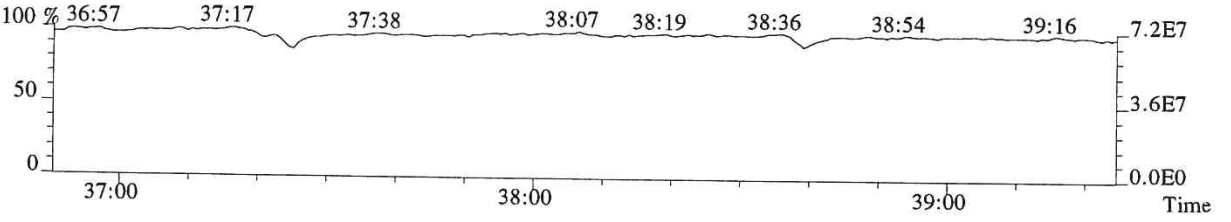
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6232.0,0.50%,F,T)



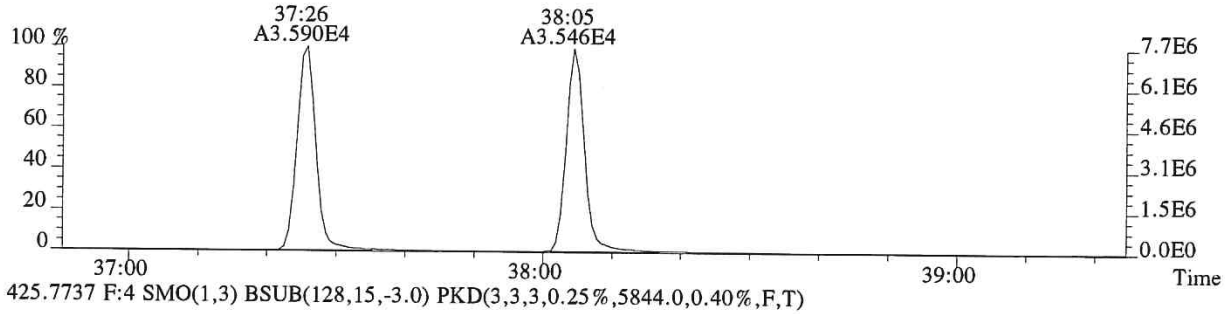
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



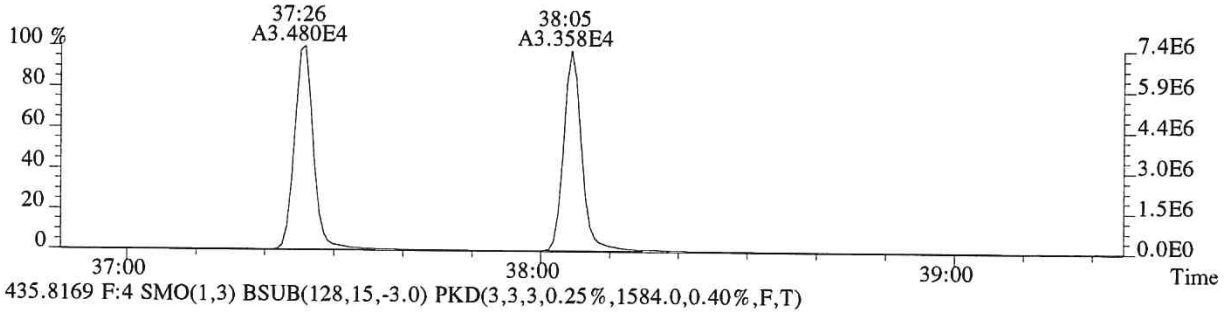
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



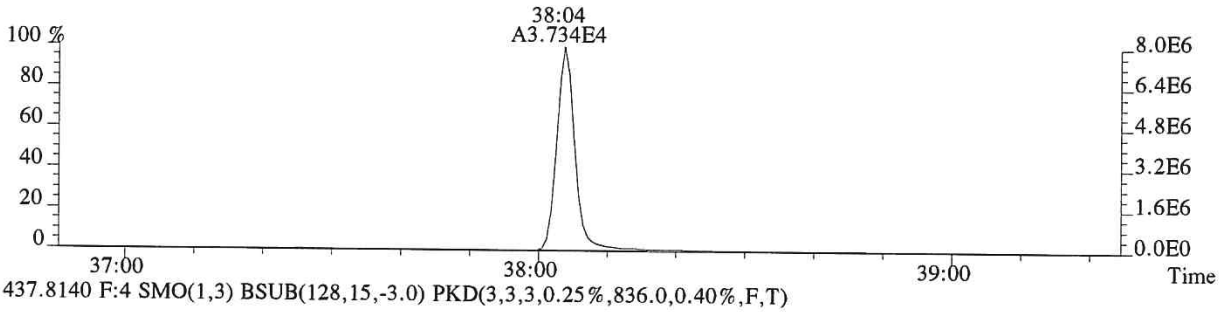
File:P519893 #1-232 Acq:10-JAN-2019 19:40:00 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-013
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5568.0,0.40%,F,T)



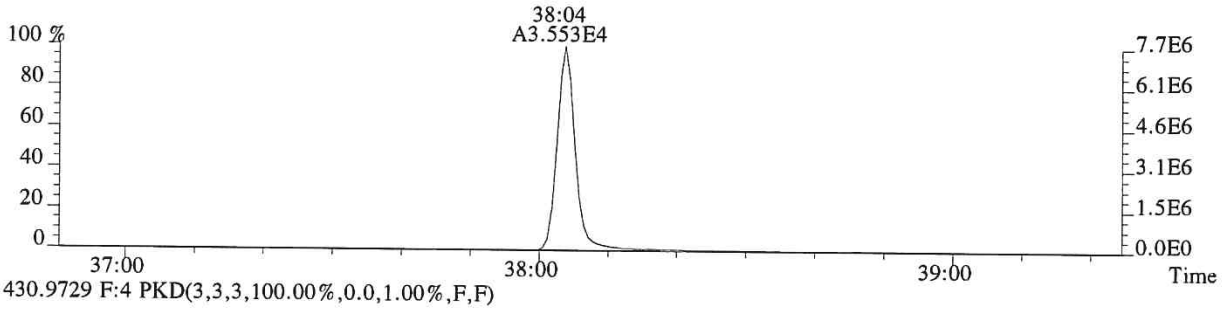
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5844.0,0.40%,F,T)



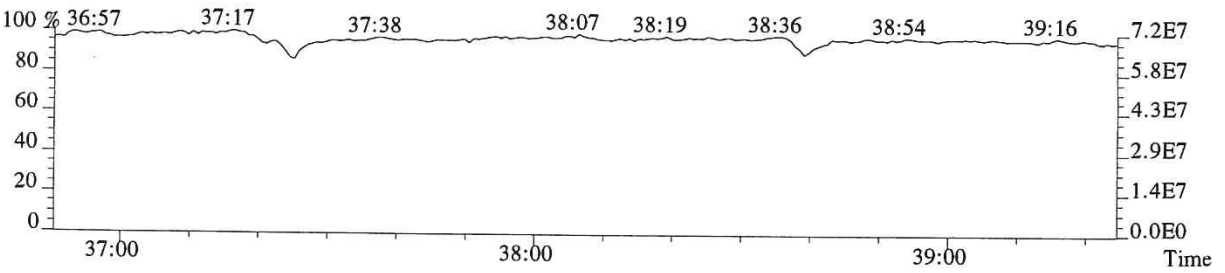
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1584.0,0.40%,F,T)



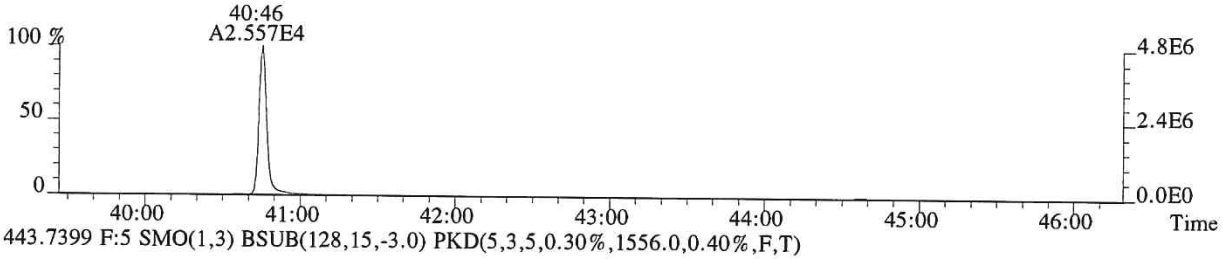
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,836.0,0.40%,F,T)



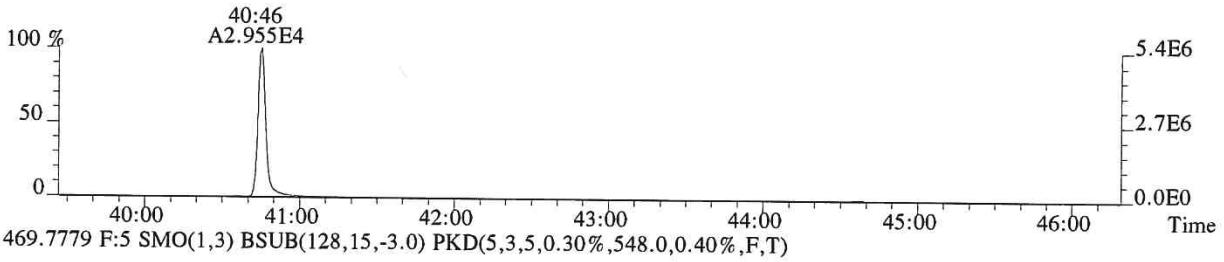
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



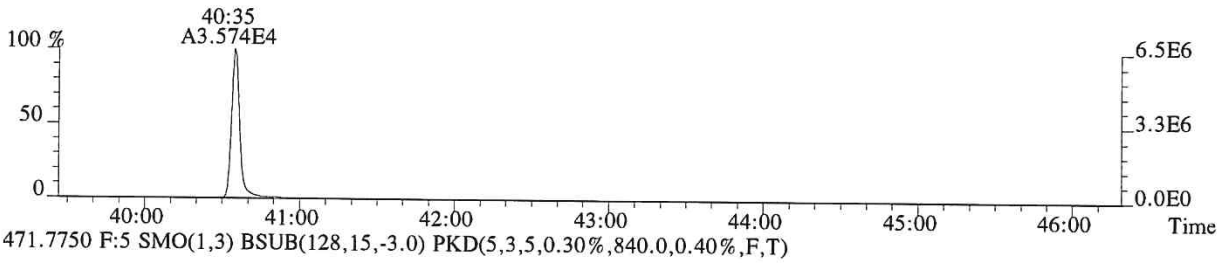
File:P519893 #1-619 Acq:10-JAN-2019 19:40:00 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-013
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,732.0,0.40%,F,T)



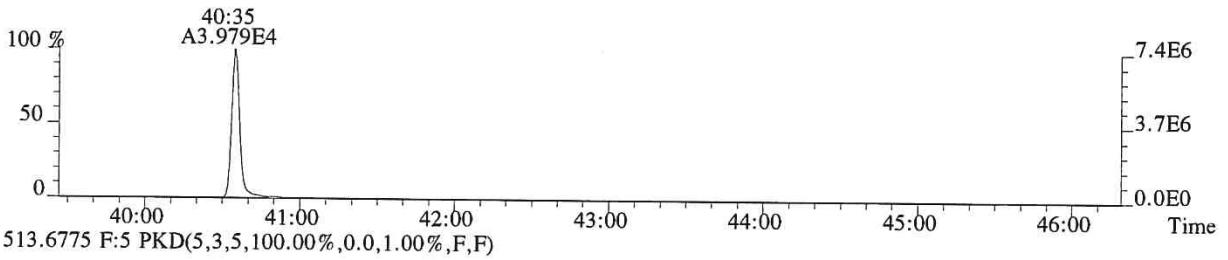
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1556.0,0.40%,F,T)



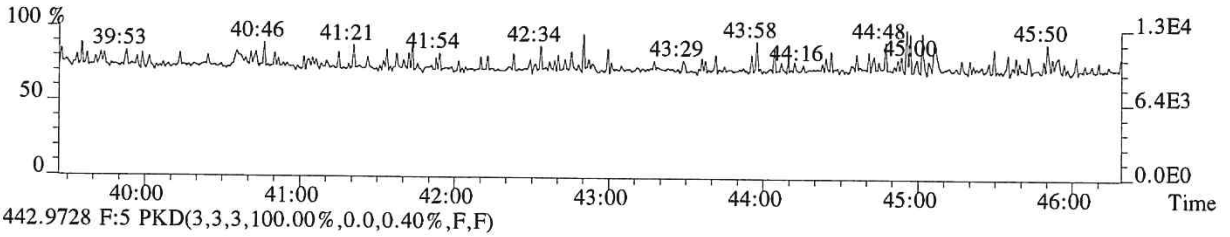
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,548.0,0.40%,F,T)



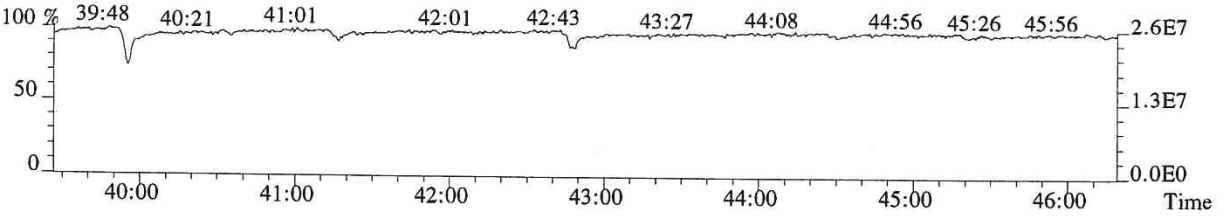
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,840.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

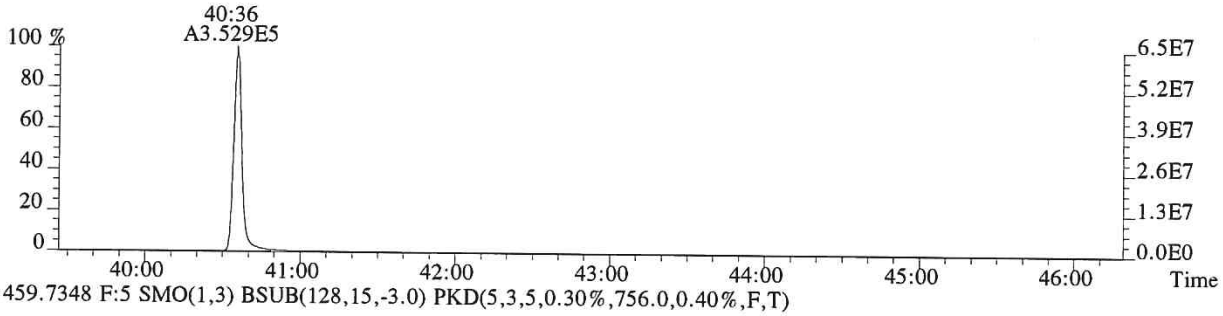


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

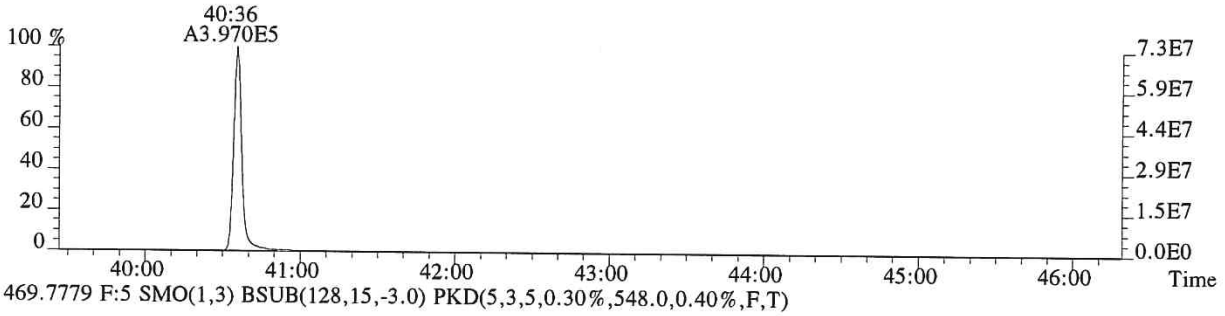


018500

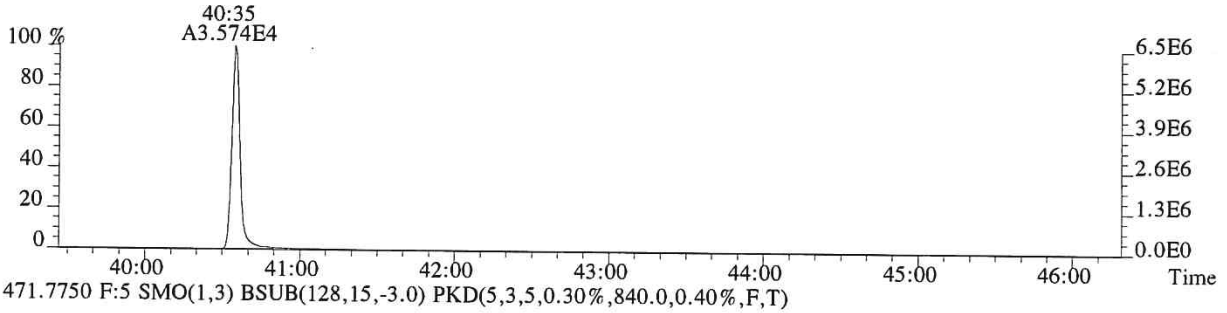
File:P519893 #1-619 Acq:10-JAN-2019 19:40:00 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-013
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,612.0,0.40%,F,T)



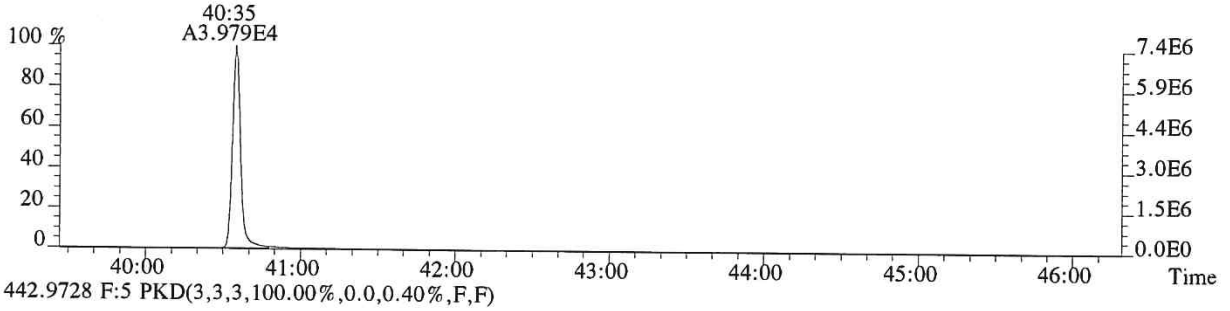
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,756.0,0.40%,F,T)



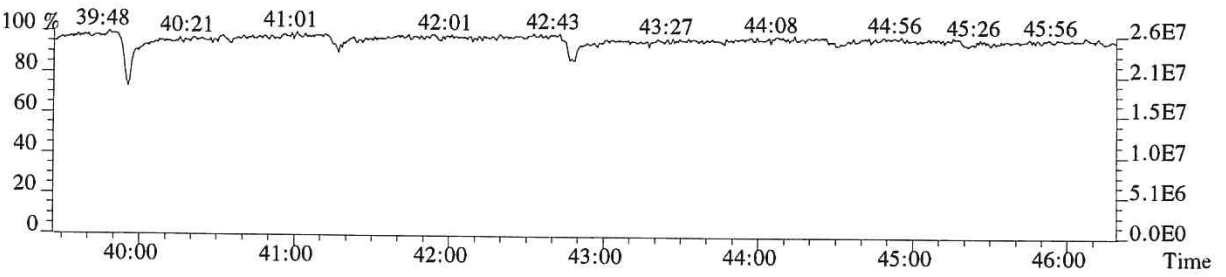
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,548.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,840.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0228

Run #14 Filename P519922 Samp: 1 Inj: 1 Acquired: 11-JAN-19 19:45:29
Processed: 14-JAN-19 08:19:05 Sample ID: E1801139-013DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	9.154e+03	1.229e+04	0.74	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:27	5.615e+02	3.777e+02	1.49	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	3.785e+02	2.495e+02	1.52	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	8.627e+02	7.626e+02	1.13	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	3.075e+02	1.997e+02	1.54	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:02	5.973e+01	3.785e+01	1.58	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:50	7.230e+01	6.643e+01	1.09	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:09	2.813e+02	2.863e+02	0.98	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:28	8.874e+01	7.965e+01	1.11	yes	no	1.258
10	Unk	OCDF	40:44	1.095e+02	1.062e+02	1.03	no	no	1.359
11	Unk	2,3,7,8-TCDD	26:24	2.362e+03	3.125e+03	0.76	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:48	3.531e+01	2.720e+01	1.30	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	1.458e+02	1.367e+02	1.07	yes	no	1.025
17	Unk	OCDD	40:34	1.478e+03	1.573e+03	0.94	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:20	1.965e+04	2.517e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:26	3.154e+04	1.984e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:27	3.010e+04	1.850e+04	1.63	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:22	1.355e+04	2.709e+04	0.50	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.589e+04	3.110e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:02	1.504e+04	2.902e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	1.367e+04	2.700e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:08	1.204e+04	2.724e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:28	1.093e+04	2.434e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:22	9.291e+03	1.205e+04	0.77	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:47	2.368e+04	1.488e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:10	2.065e+04	1.605e+04	1.29	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:16	2.171e+04	1.692e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	2.548e+04	2.385e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	40:34	2.858e+04	3.134e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:39	1.365e+04	1.749e+04	0.78	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:30	2.130e+04	1.743e+04	1.22	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:23	1.247e+02				no	1.014

$$OCDD = \frac{(1.478e+03 + 1.573e+03) \times 4000\ pg \times 100}{(2.858e+04 + 3.134e+04) \times 10.445\ g \times 80.1 / 100 \times 1.118 \times 0.68} = 3202\ ng/kg$$

LW 01/14/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0228

Run #14 Filename P519922 Samp: 1 Inj: 1 Acquired: 11-JAN-19 19:45:29
Processed: 14-JAN-19 08:19:05 LAB. ID: E1801139-013DL

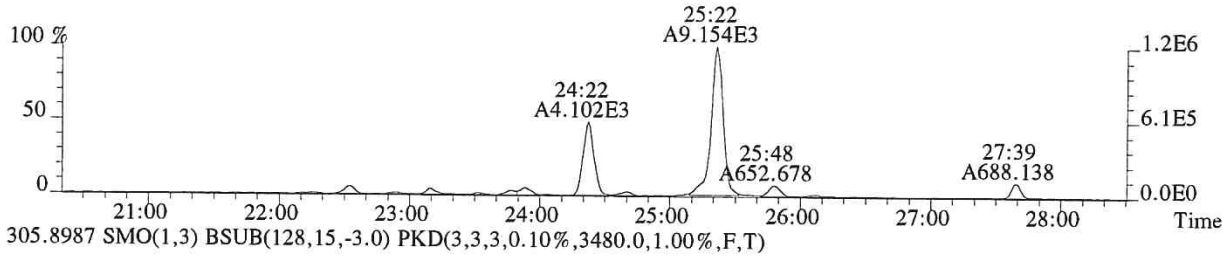
	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.21e+06	3.46e+03	3.5e+02	1.55e+06	3.48e+03	4.5e+02
2	1,2,3,7,8-PeCDF	9.12e+04	9.00e+02	1.0e+02	5.95e+04	1.96e+03	3.0e+01
3	2,3,4,7,8-PeCDF	5.56e+04	9.00e+02	6.2e+01	3.60e+04	1.96e+03	1.8e+01
4	1,2,3,4,7,8-HxCDF	1.85e+05	6.20e+02	3.0e+02	1.62e+05	9.40e+02	1.7e+02
5	1,2,3,6,7,8-HxCDF	5.32e+04	6.20e+02	8.6e+01	3.38e+04	9.40e+02	3.6e+01
6	2,3,4,6,7,8-HxCDF	1.14e+04	6.20e+02	1.8e+01	8.52e+03	9.40e+02	9.1e+00
7	1,2,3,7,8,9-HxCDF	1.07e+04	6.20e+02	1.7e+01	1.23e+04	9.40e+02	1.3e+01
8	1,2,3,4,6,7,8-HpCDF	5.58e+04	1.04e+03	5.4e+01	5.71e+04	9.24e+02	6.2e+01
9	1,2,3,4,7,8,9-HpCDF	1.97e+04	1.04e+03	1.9e+01	1.75e+04	9.24e+02	1.9e+01
10	OCDF	1.88e+04	3.76e+02	5.0e+01	2.04e+04	1.33e+03	1.5e+01
11	2,3,7,8-TCDD	3.59e+05	2.70e+03	1.3e+02	4.69e+05	2.36e+03	2.0e+02
12	1,2,3,7,8-PeCDD	7.13e+03	9.64e+02	7.4e+00	4.19e+03	5.28e+02	7.9e+00
13	1,2,3,4,7,8-HxCDD	*	6.56e+02	*	*	9.84e+02	*
14	1,2,3,6,7,8-HxCDD	*	6.56e+02	*	*	9.84e+02	*
15	1,2,3,7,8,9-HxCDD	*	6.56e+02	*	*	9.84e+02	*
16	1,2,3,4,6,7,8-HpCDD	2.93e+04	5.64e+02	5.2e+01	2.89e+04	6.00e+02	4.8e+01
17	OCDD	2.22e+05	4.32e+02	5.1e+02	2.46e+05	1.08e+03	2.3e+02
18	13C-2,3,7,8-TCDF	2.80e+06	4.22e+03	6.7e+02	3.55e+06	2.58e+03	1.4e+03
19	13C-1,2,3,7,8-PeCDF	5.15e+06	8.04e+02	6.4e+03	3.31e+06	5.24e+02	6.3e+03
20	13C-2,3,4,7,8-PeCDF	5.41e+06	8.04e+02	6.7e+03	3.35e+06	5.24e+02	6.4e+03
21	13C-1,2,3,4,7,8-HxCDF	2.83e+06	6.48e+02	4.4e+03	5.51e+06	1.24e+03	4.5e+03
22	13C-1,2,3,6,7,8-HxCDF	3.09e+06	6.48e+02	4.8e+03	5.93e+06	1.24e+03	4.8e+03
23	13C-2,3,4,6,7,8-HxCDF	3.02e+06	6.48e+02	4.7e+03	5.66e+06	1.24e+03	4.6e+03
24	13C-1,2,3,7,8,9-HxCDF	2.49e+06	6.48e+02	3.8e+03	4.94e+06	1.24e+03	4.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.39e+06	2.12e+03	1.1e+03	5.42e+06	4.53e+03	1.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.09e+06	2.12e+03	9.9e+02	4.61e+06	4.53e+03	1.0e+03
27	13C-2,3,7,8-TCDD	1.39e+06	6.90e+03	2.0e+02	1.87e+06	6.78e+03	2.8e+02
28	13C-1,2,3,7,8-PeCDD	4.22e+06	1.64e+03	2.6e+03	2.66e+06	1.27e+03	2.1e+03
29	13C-1,2,3,4,7,8-HxCDD	4.55e+06	1.59e+03	2.9e+03	3.48e+06	1.17e+03	3.0e+03
30	13C-1,2,3,6,7,8-HxCDD	4.15e+06	1.59e+03	2.6e+03	3.22e+06	1.17e+03	2.8e+03
31	13C-1,2,3,4,6,7,8-HpCDD	5.03e+06	1.02e+03	4.9e+03	4.70e+06	9.80e+02	4.8e+03
32	13C-OCDD	4.27e+06	1.02e+03	4.2e+03	4.72e+06	6.20e+02	7.6e+03
33	13C-1,2,3,4-TCDD	2.04e+06	6.90e+03	3.0e+02	2.58e+06	6.78e+03	3.8e+02
34	13C-1,2,3,7,8,9-HxCDD	4.13e+06	1.59e+03	2.6e+03	3.33e+06	1.17e+03	2.8e+03
35	37Cl-2,3,7,8-TCDD	2.16e+04	2.18e+03	9.9e+00			

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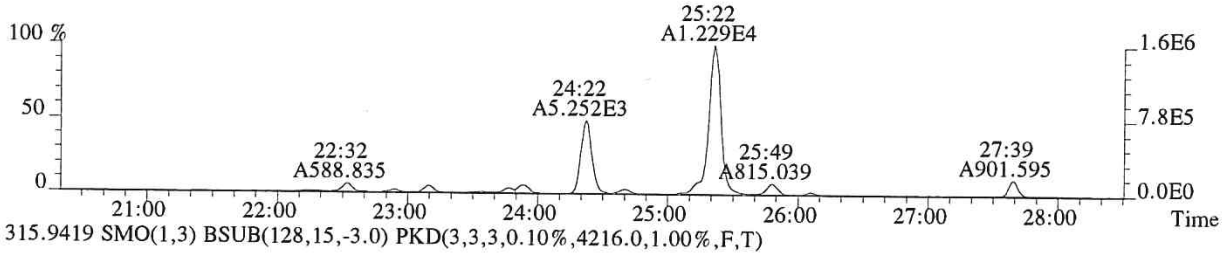
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01/14/19 LMW 01/14/19

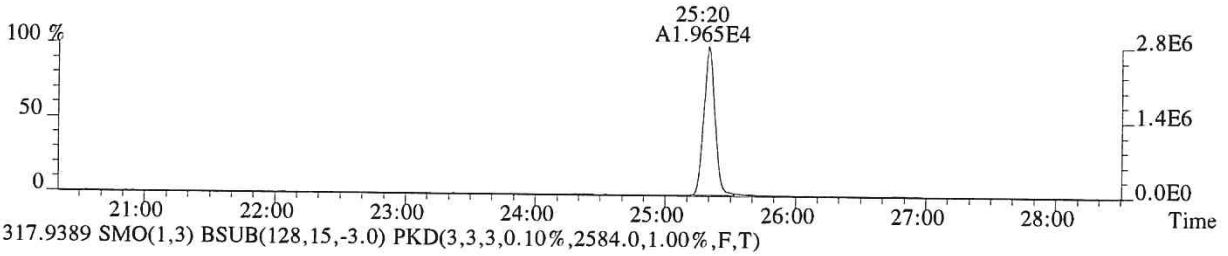
File:P519922 #1-580 Acq:11-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1800~~1139~~-013DL E1801139-013DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3464.0,1.00%,F,T)



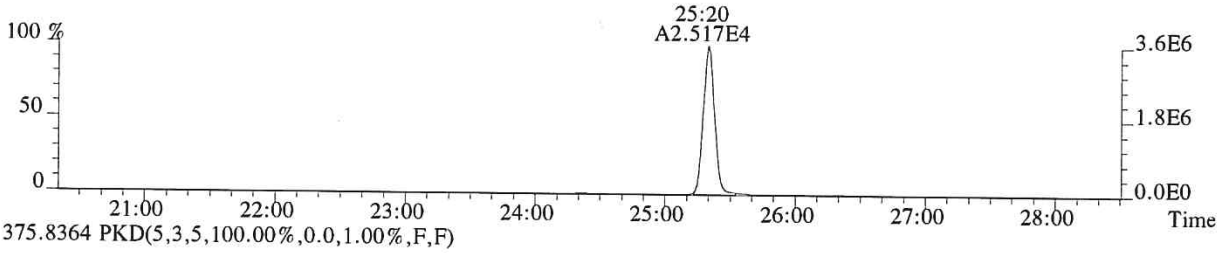
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3480.0,1.00%,F,T)



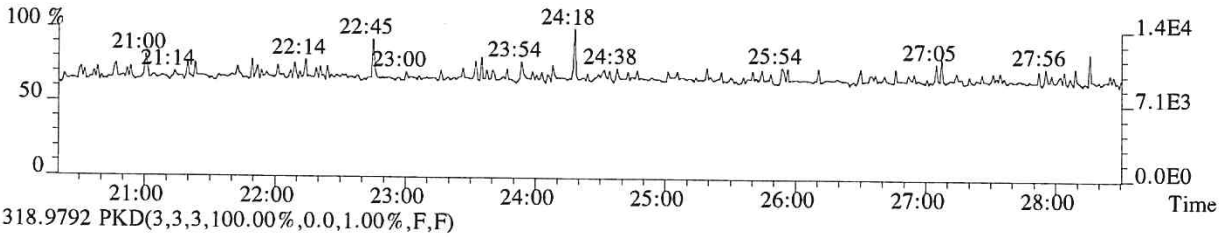
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4216.0,1.00%,F,T)



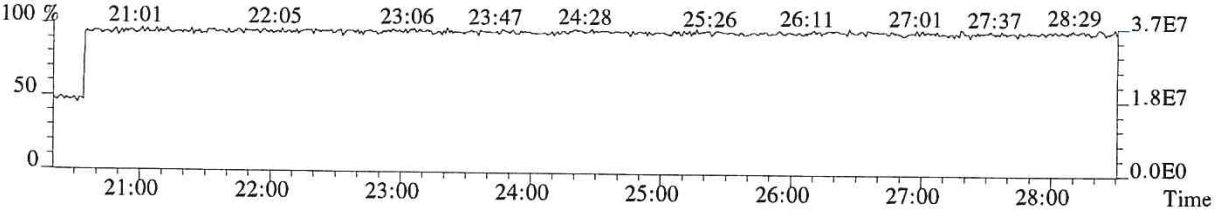
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2584.0,1.00%,F,T)



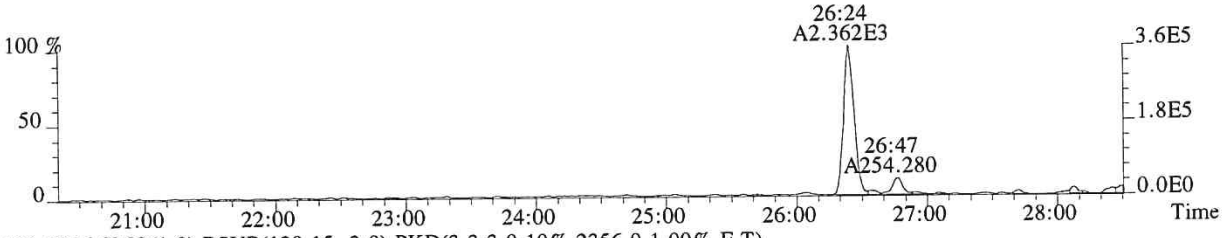
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



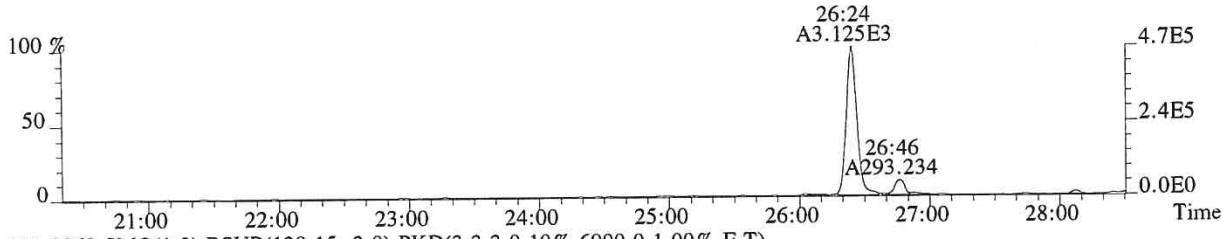
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



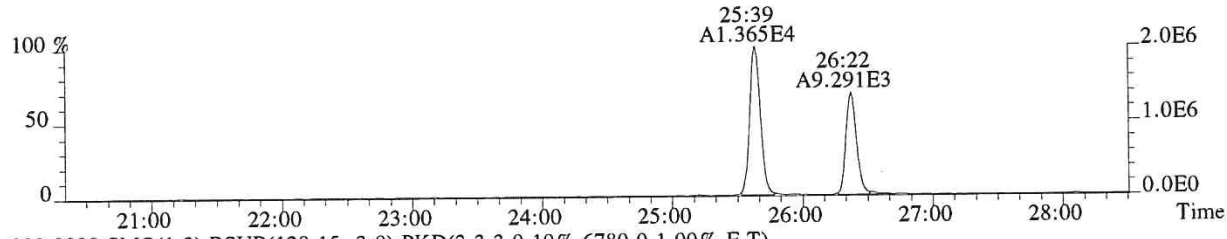
File:P519922 #1-580 Acq:11-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-013DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2704.0,1.00%,F,T)



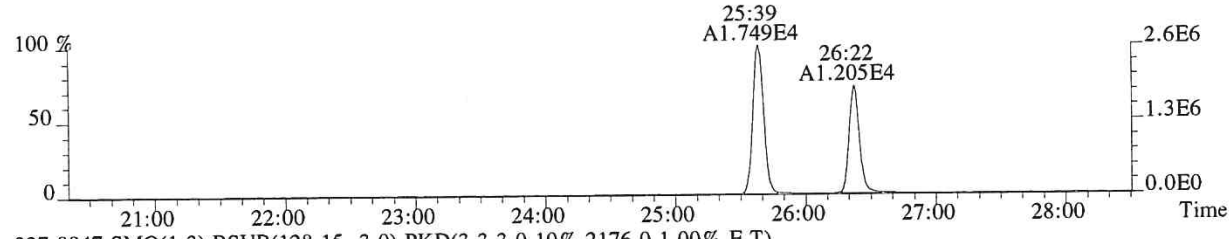
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2356.0,1.00%,F,T)



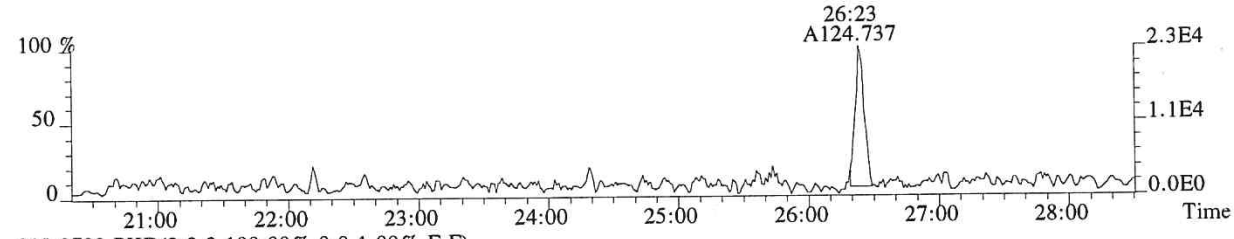
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6900.0,1.00%,F,T)



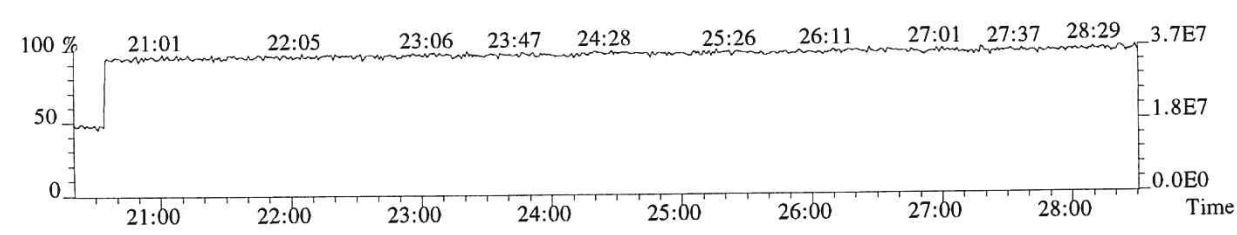
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6780.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2176.0,1.00%,F,T)

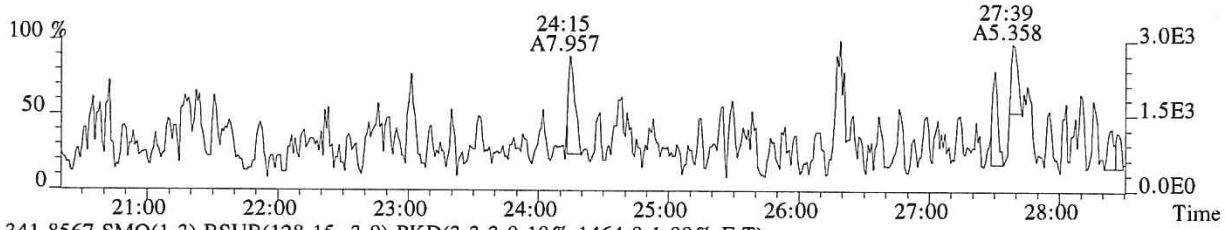


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

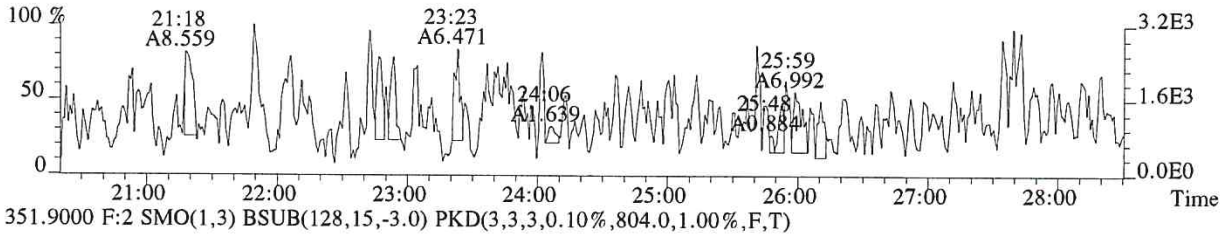


018505

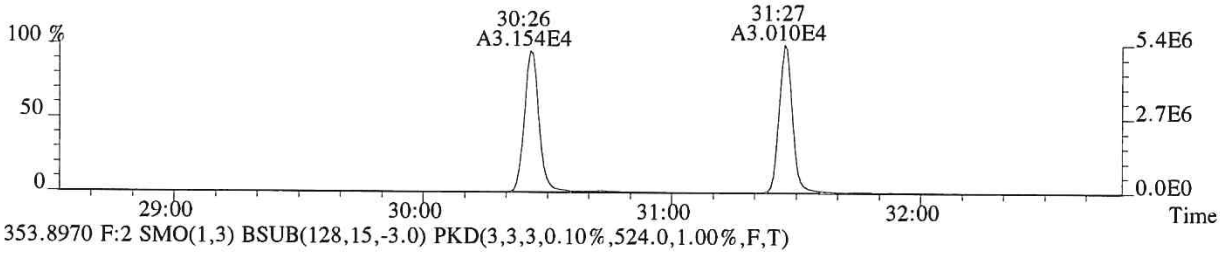
File:P519922 #1-580 Acq:11-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-013DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1036.0,1.00%,F,T)



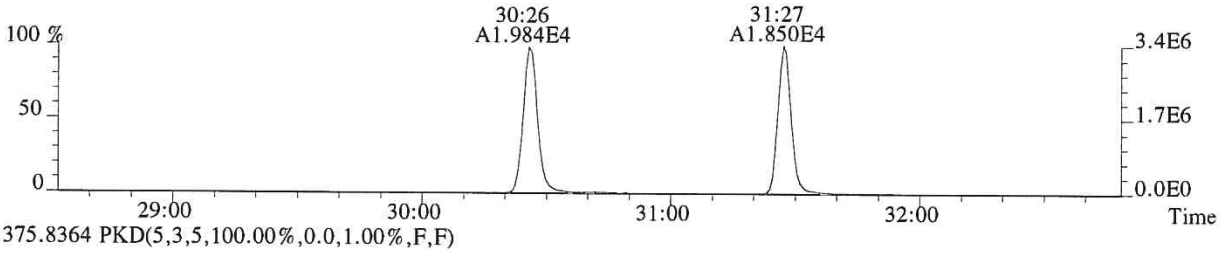
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1464.0,1.00%,F,T)



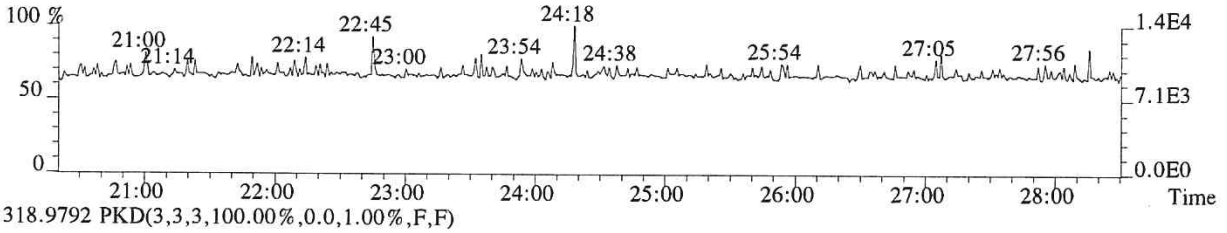
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,804.0,1.00%,F,T)



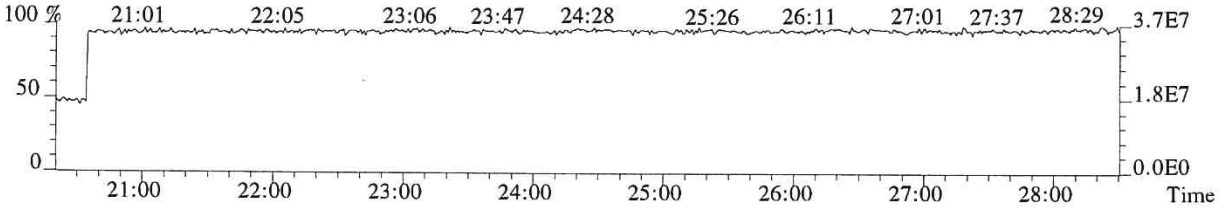
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,524.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

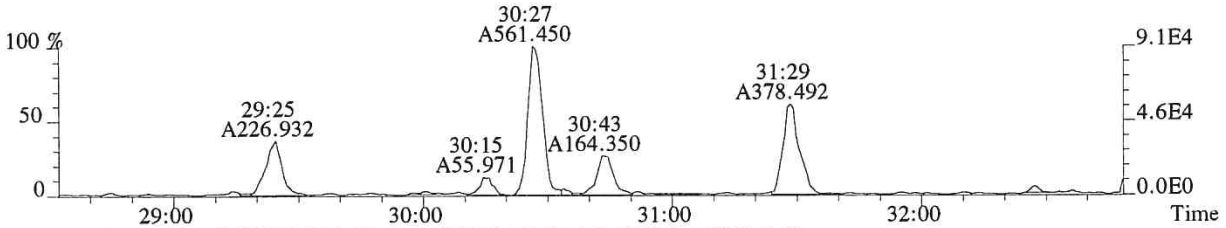


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

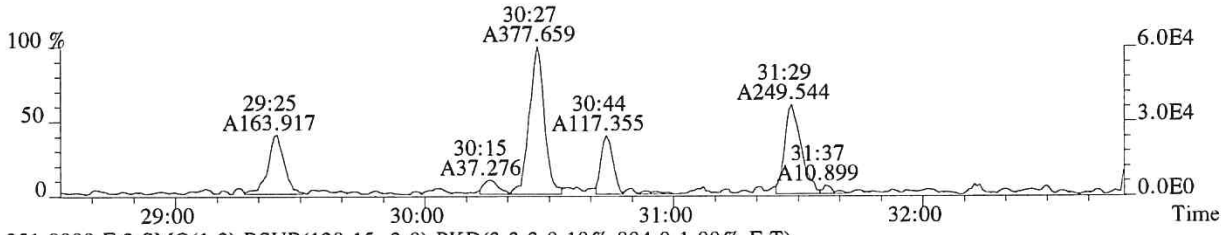


018506

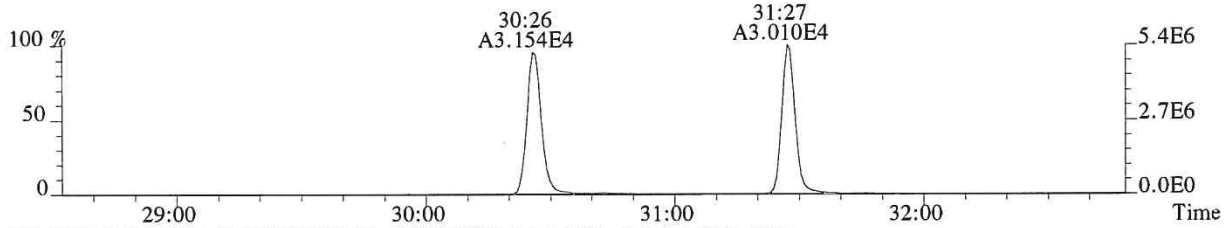
File:P519922 #1-385 Acq:11-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-013DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,900.0,1.00%,F,T)



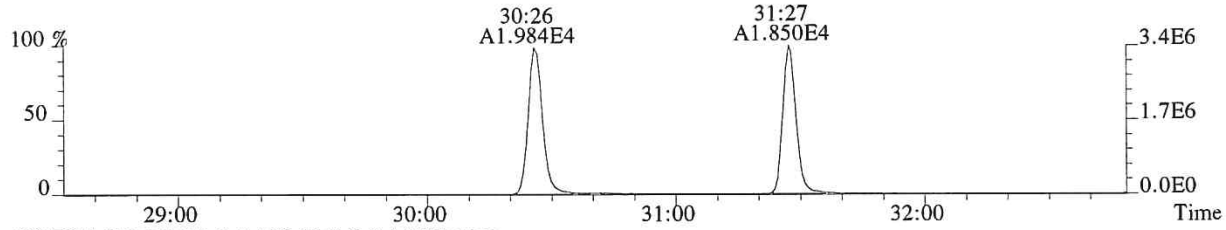
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1960.0,1.00%,F,T)



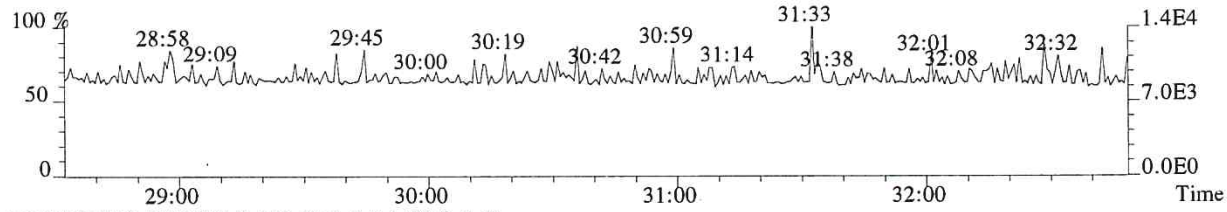
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,804.0,1.00%,F,T)



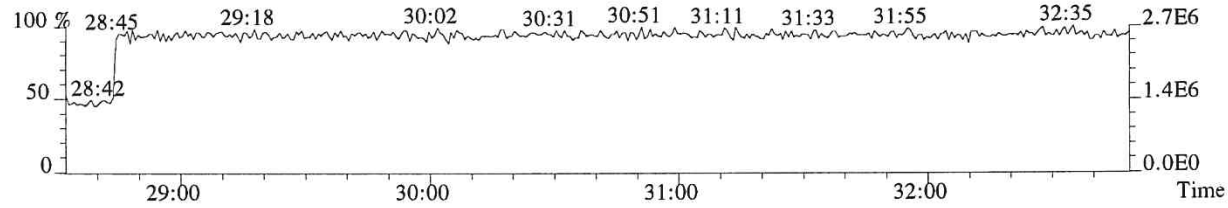
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,524.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

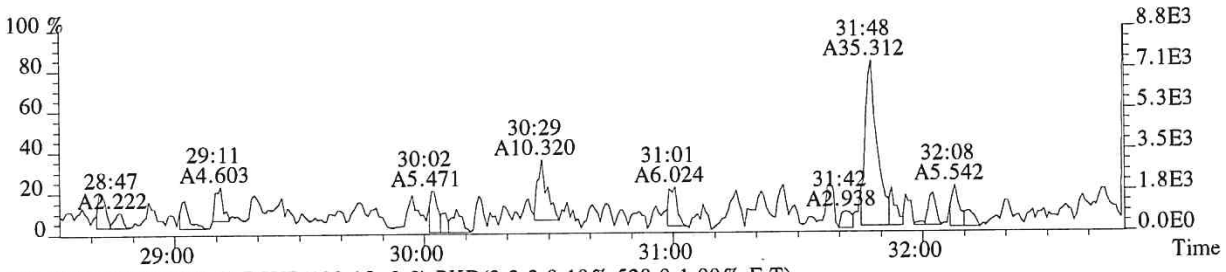


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

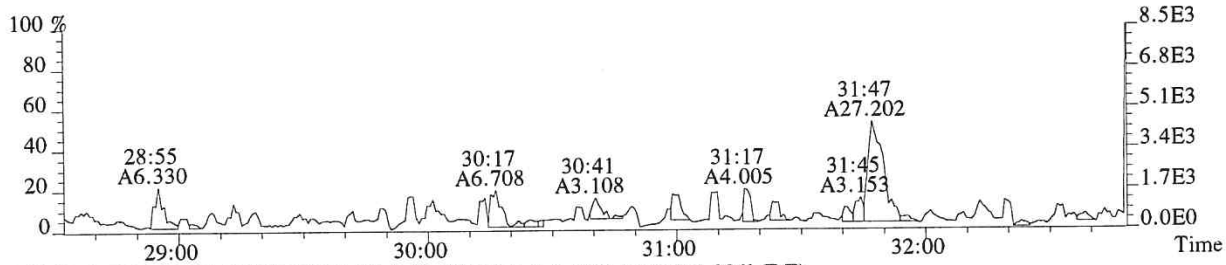


018507

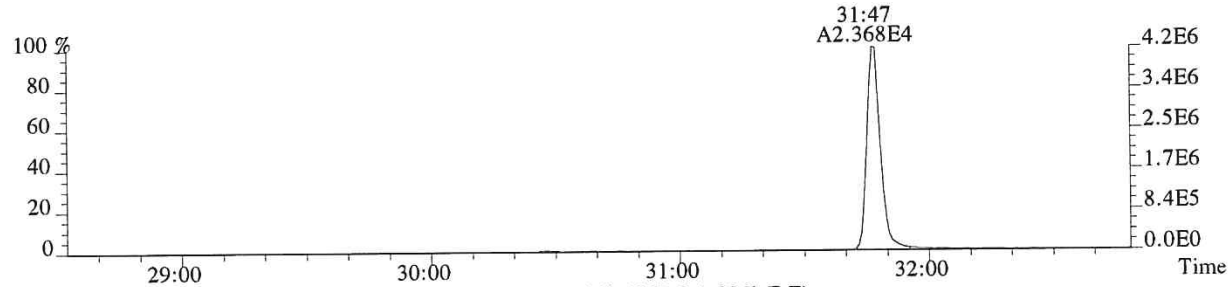
File:P519922 #1-385 Acq:11-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-013DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,964.0,1.00%,F,T)



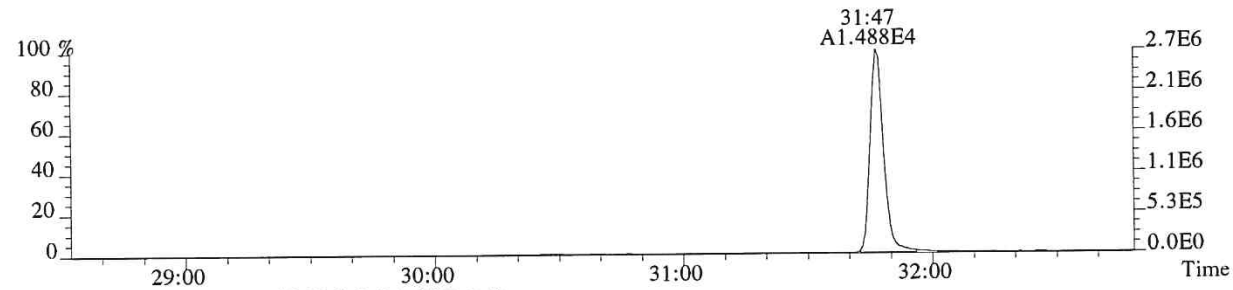
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,528.0,1.00%,F,T)



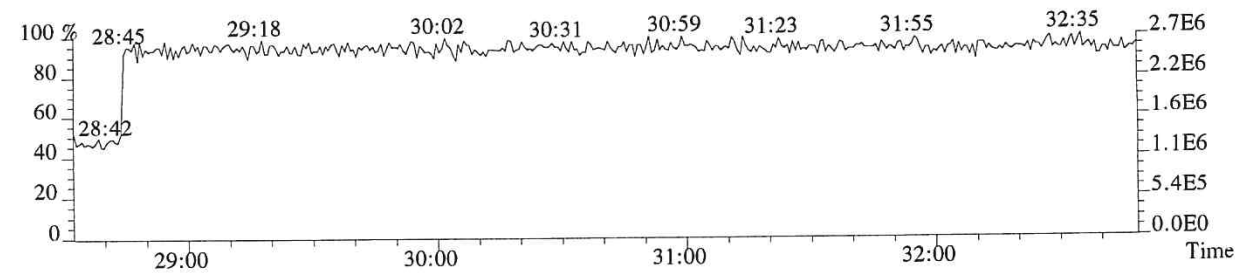
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1640.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1268.0,1.00%,F,T)

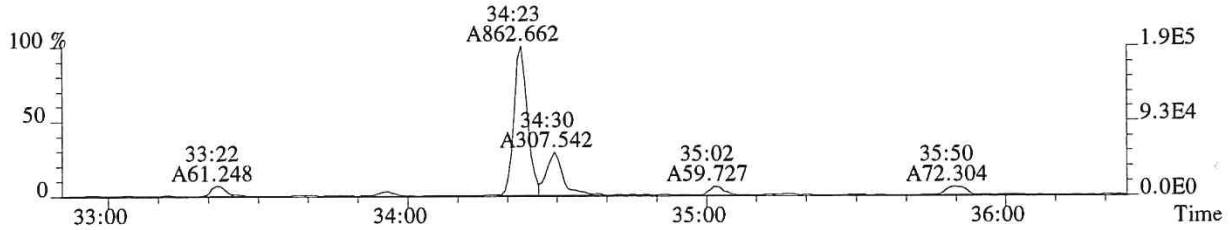


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

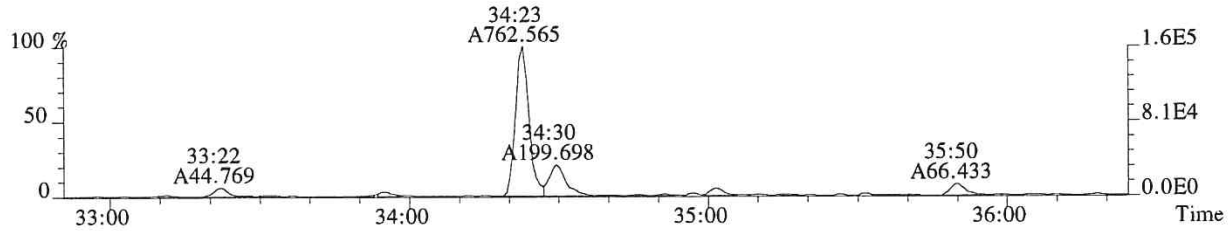


018508

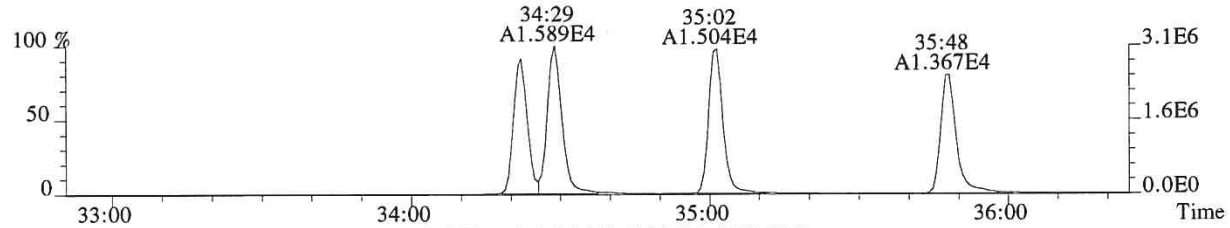
File:P519922 #1-321 Acq:11-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-013DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,620.0,0.40%,F,T)



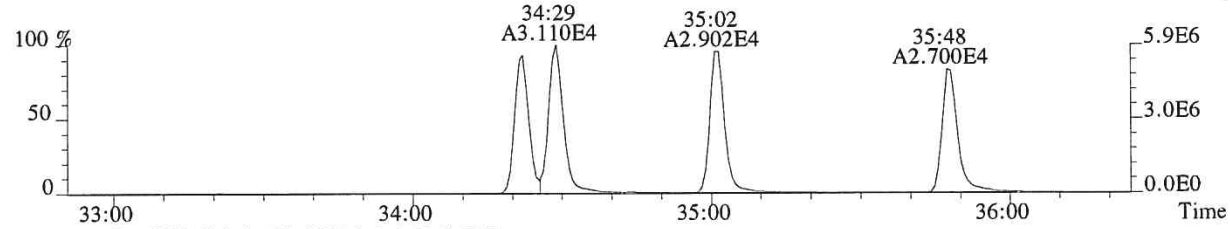
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,940.0,0.40%,F,T)



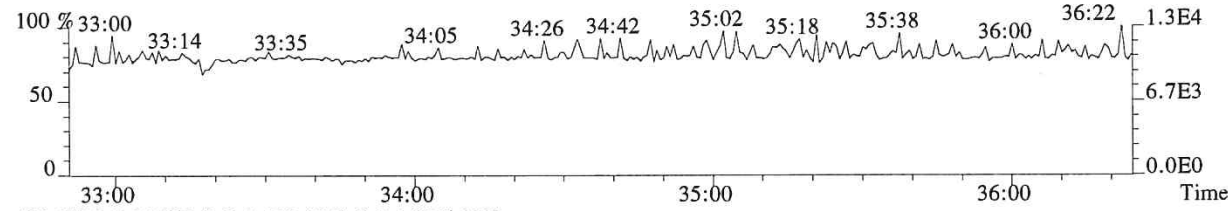
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,648.0,0.40%,F,T)



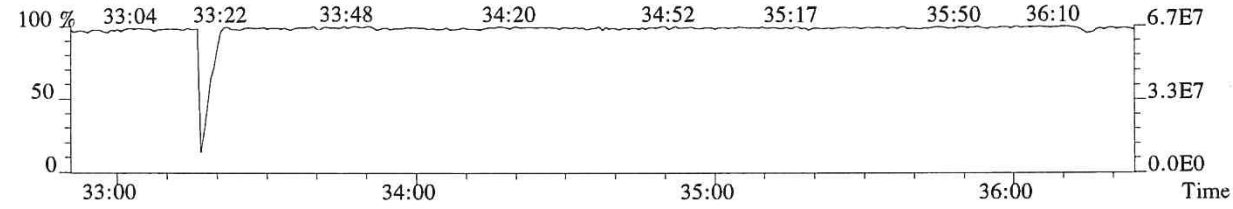
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1236.0,0.40%,F,T)



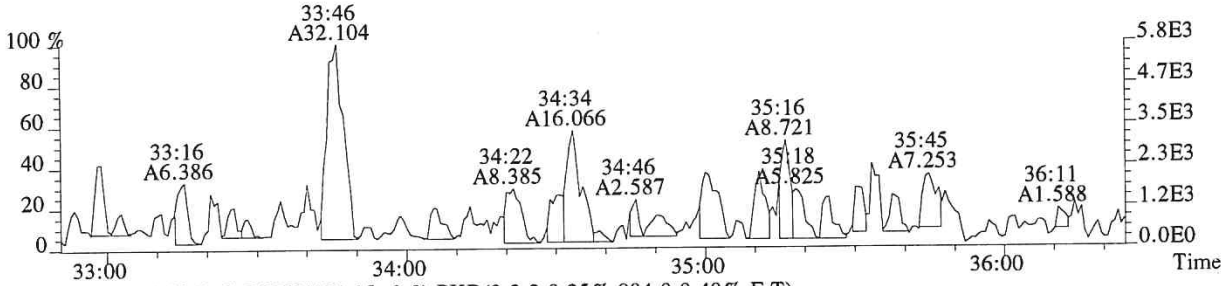
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



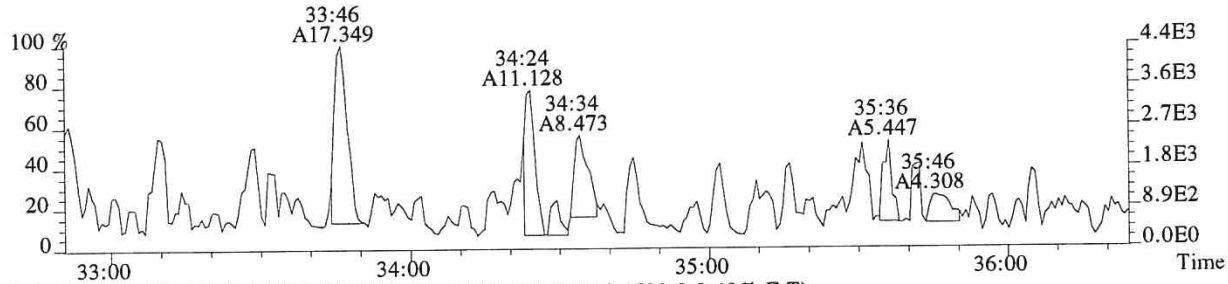
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



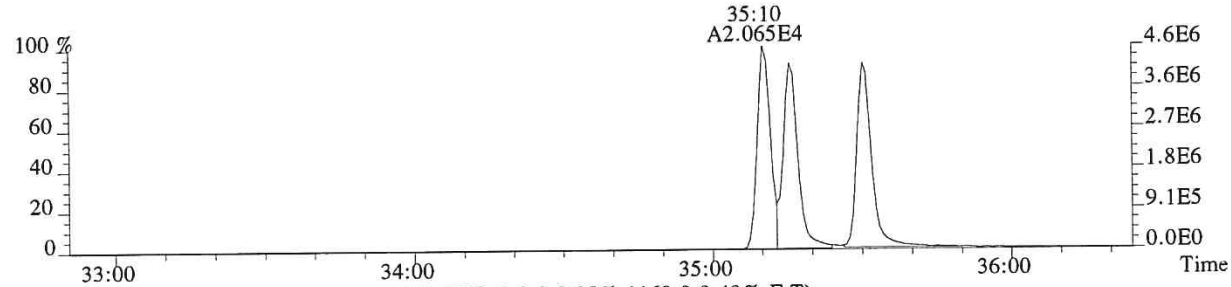
File:P519922 #1-321 Acq:11-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-013DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,656.0,0.40%,F,T)



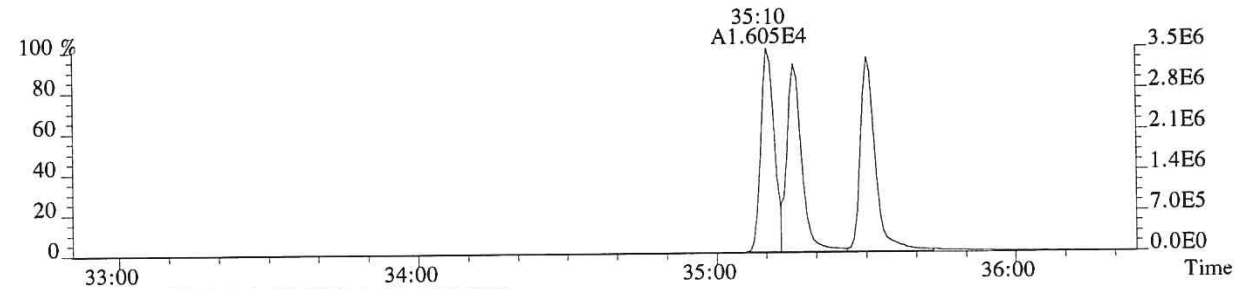
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,984.0,0.40%,F,T)



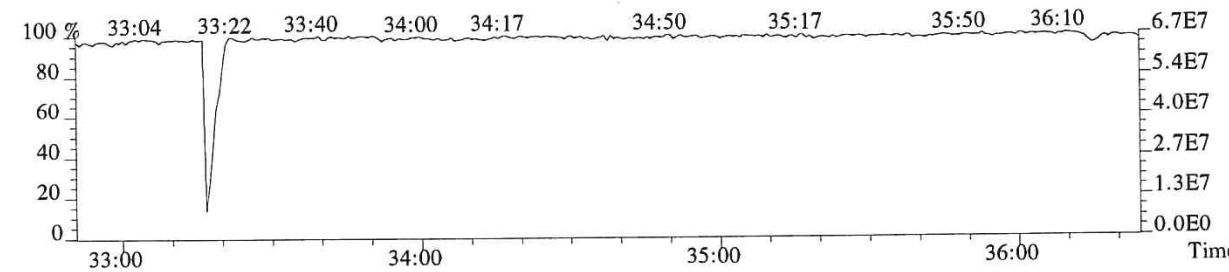
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1592.0,0.40%,F,T)



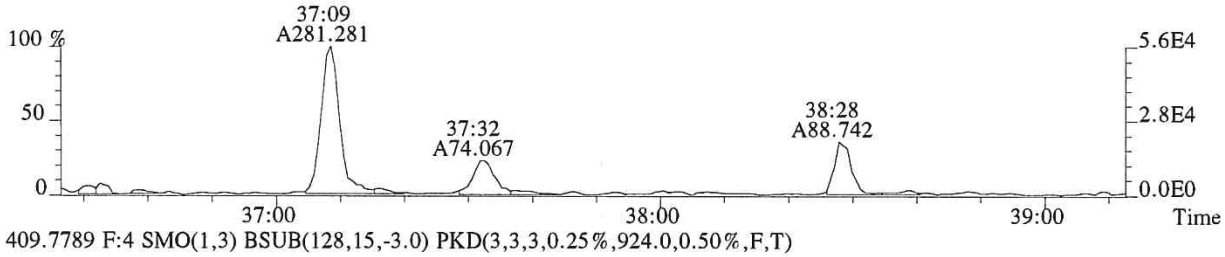
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1168.0,0.40%,F,T)



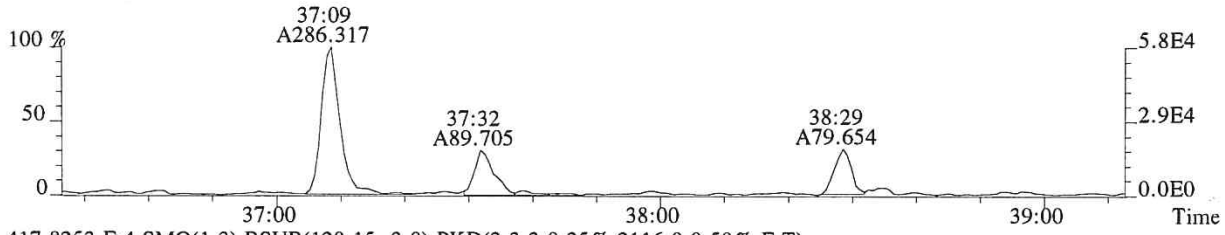
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



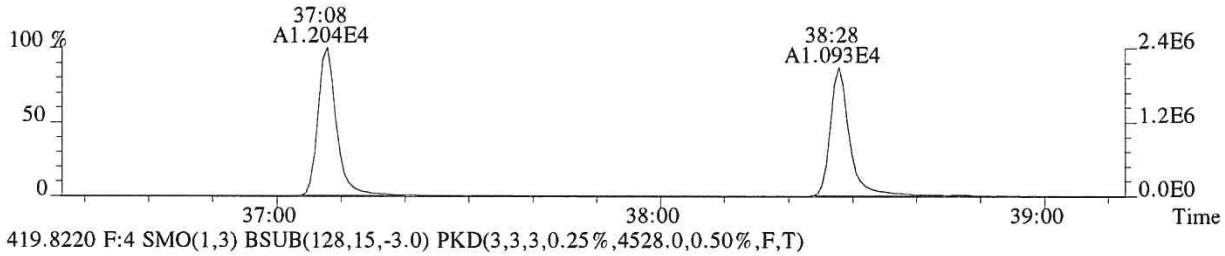
File:P519922 #1-250 Acq:11-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-013DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1036.0,0.50%,F,T)



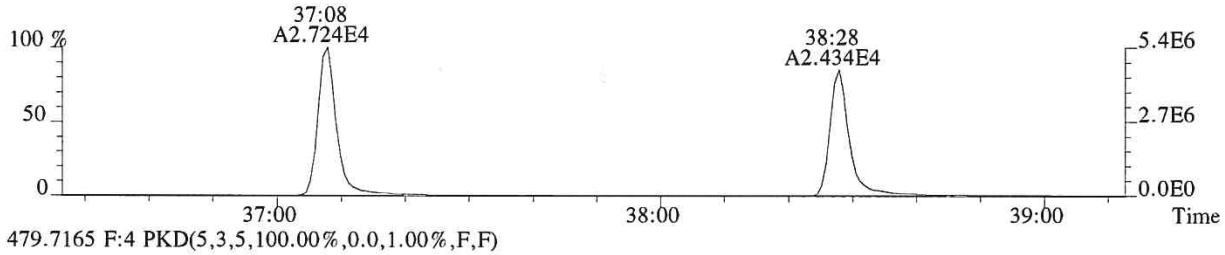
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,924.0,0.50%,F,T)



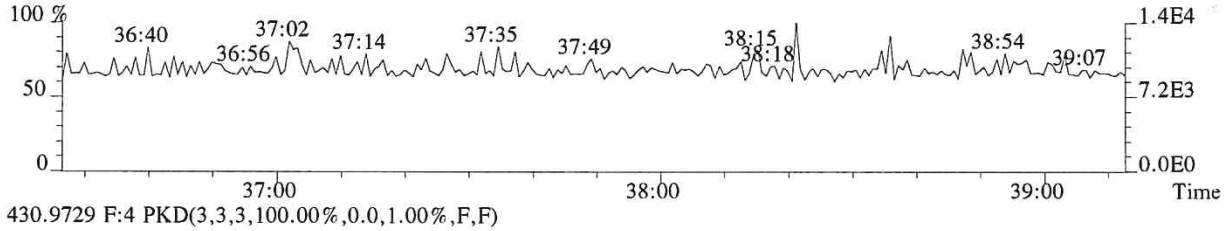
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2116.0,0.50%,F,T)



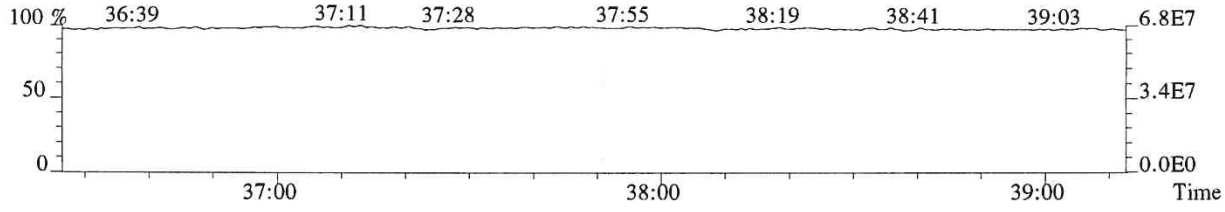
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4528.0,0.50%,F,T)



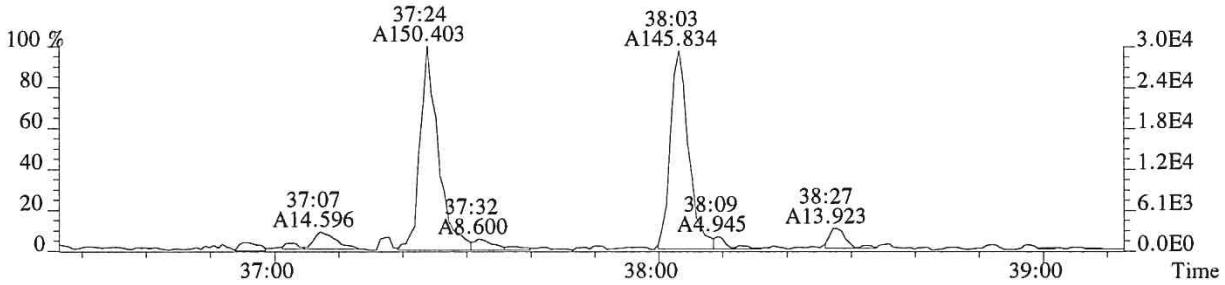
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



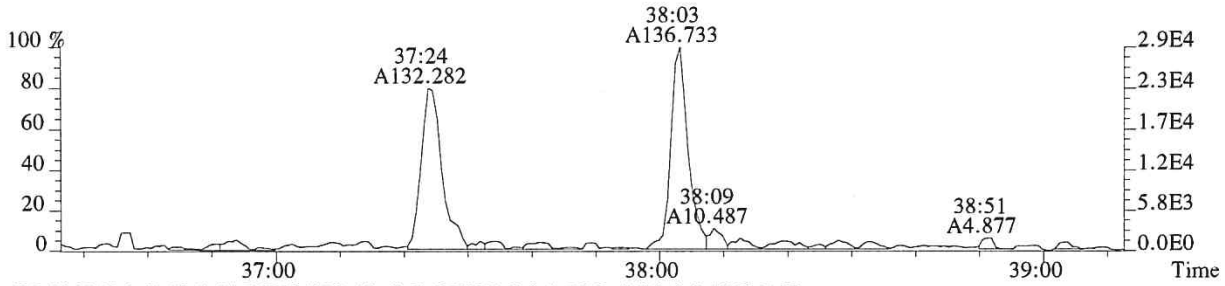
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



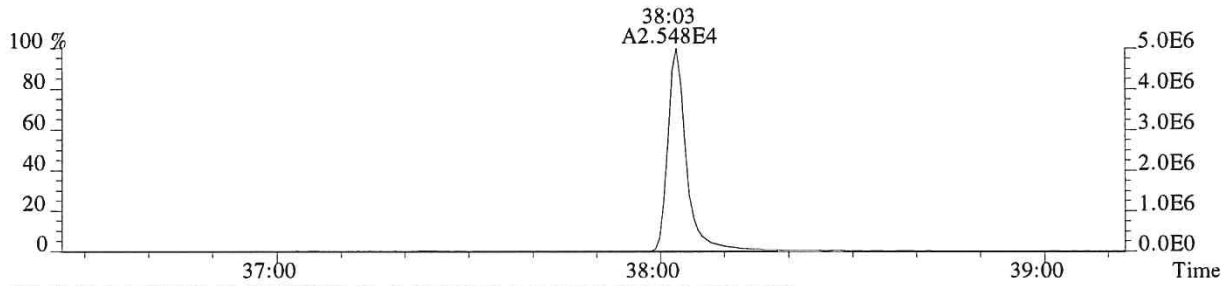
File:P519922 #1-250 Acq:11-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-013DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,564.0,0.40%,F,T)



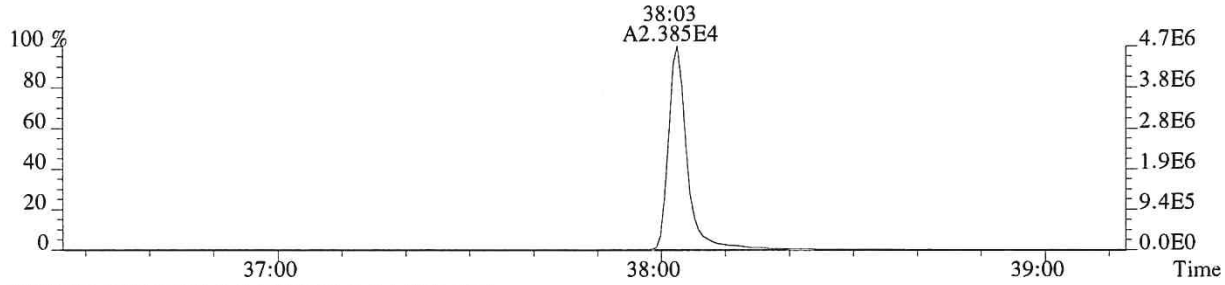
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,600.0,0.40%,F,T)



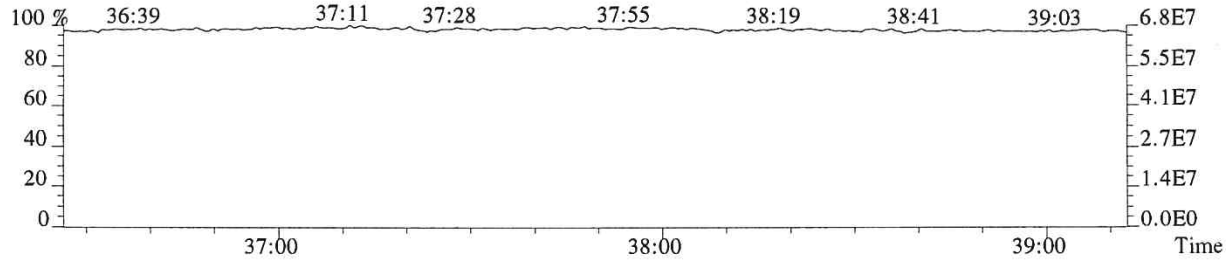
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1020.0,0.40%,F,T)



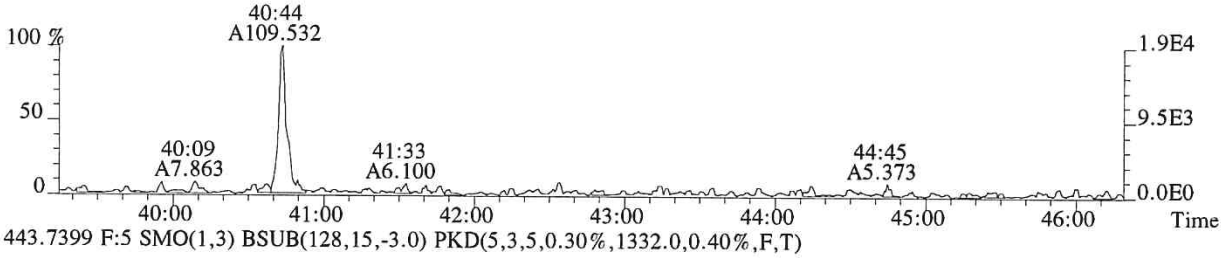
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,980.0,0.40%,F,T)



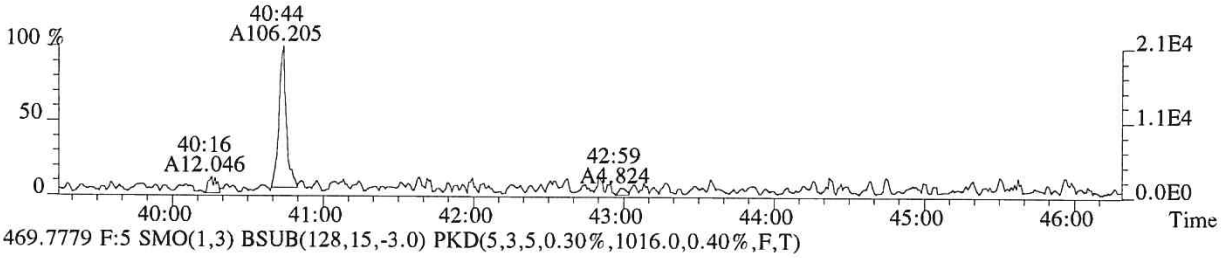
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



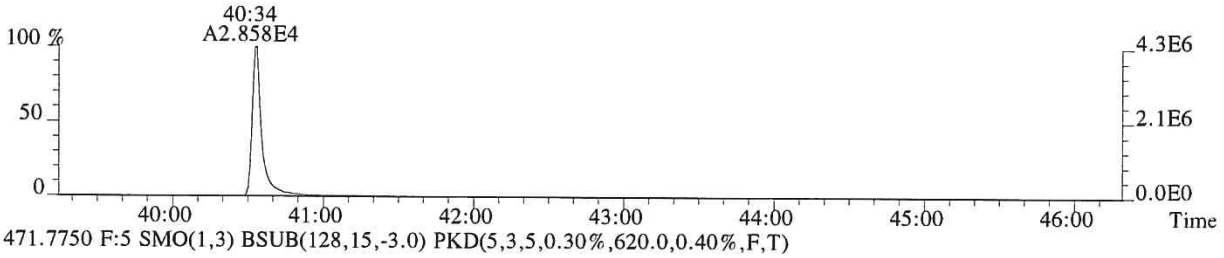
File:P519922 #1-637 Acq:11-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-013DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,376.0,0.40%,F,T)



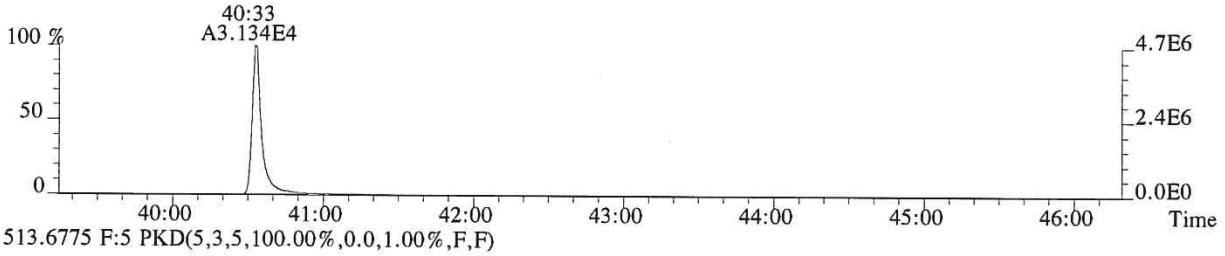
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1332.0,0.40%,F,T)



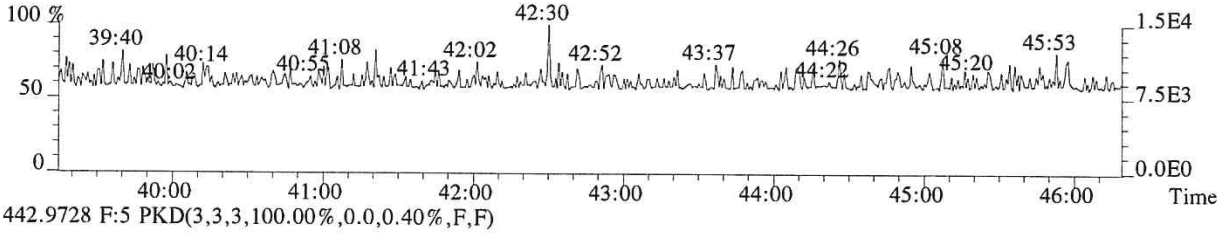
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1016.0,0.40%,F,T)



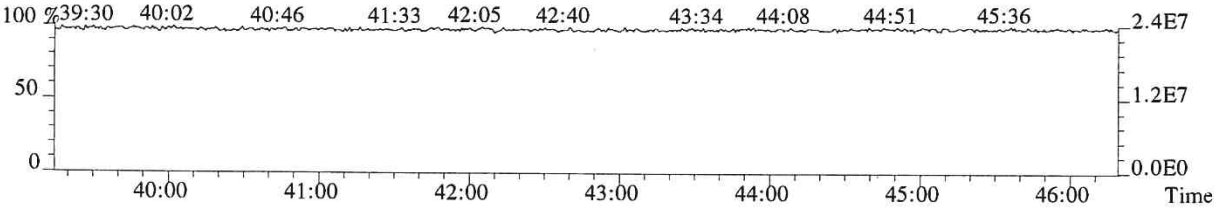
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,620.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



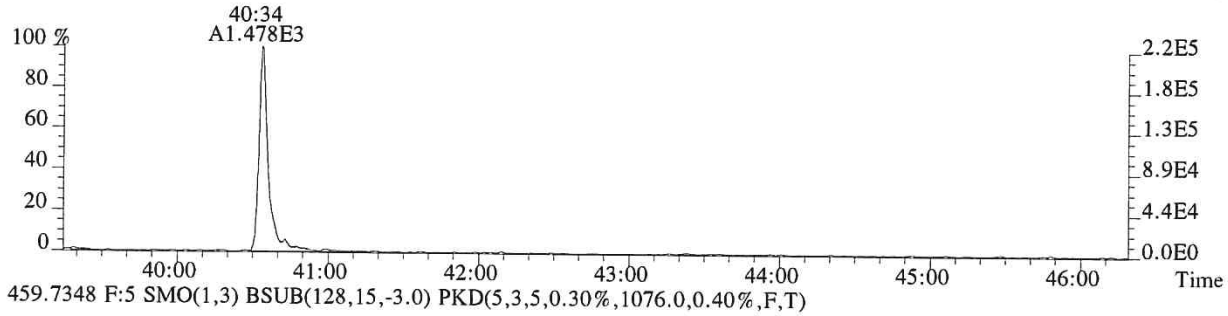
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



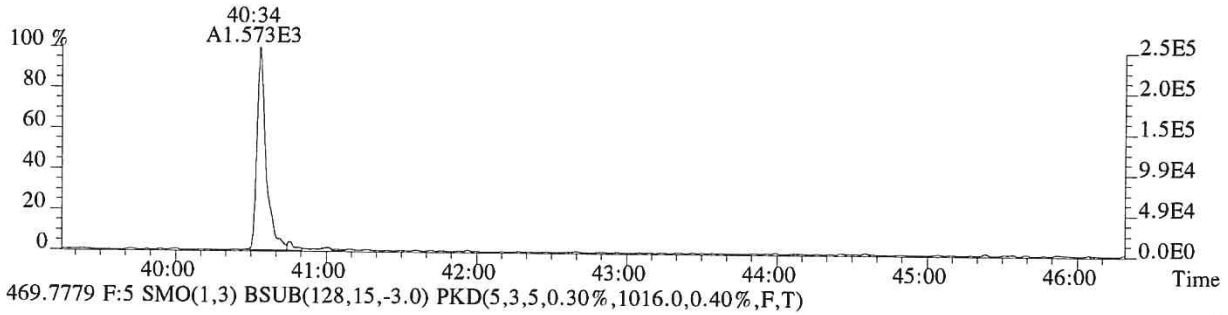
018513

01/14/19 gc LKA 01/14/19

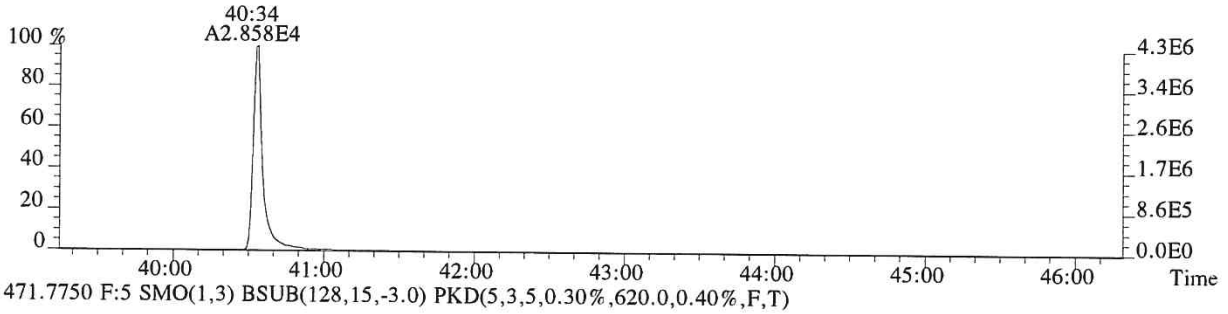
File:P519922 #1-637 Acq:11-JAN-2019 19:45:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1800139-013DL E1801139-013DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,432.0,0.40%,F,T)



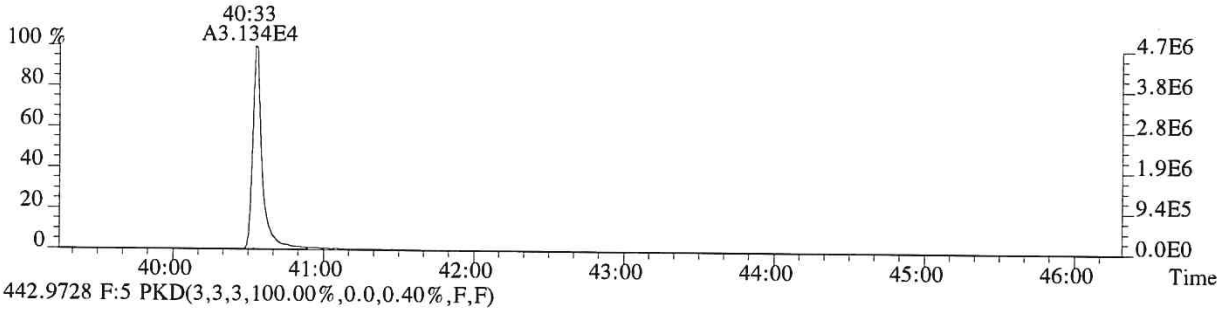
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1076.0,0.40%,F,T)



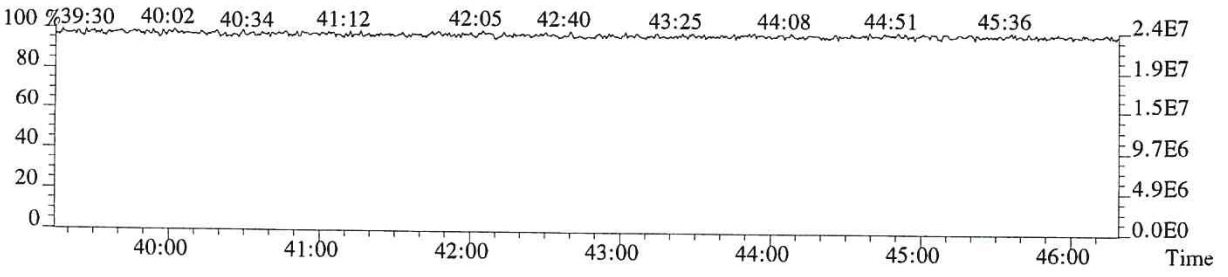
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1016.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,620.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0229

Run #17 Filename P519894 Samp: 1 Inj: 1 Acquired: 10-JAN-19 20:28:38
Processed: 11-JAN-19 09:27:00 Sample ID: E1801139-014

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:32	4.682e+06	5.924e+06	0.79	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:33	4.819e+05	3.140e+05	1.53	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:33	2.527e+05	1.640e+05	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:25	1.229e+06	1.011e+06	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:33	2.383e+05	1.973e+05	1.21	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:04	3.671e+04	3.005e+04	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:52	7.758e+04	6.396e+04	1.21	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:10	2.610e+05	2.531e+05	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:30	1.289e+05	1.250e+05	1.03	yes	no	1.258
10	Unk	OCDF	40:46	1.923e+05	2.183e+05	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:32	1.265e+06	1.600e+06	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:52	1.952e+04	1.188e+04	1.64	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:13	2.307e+02	1.802e+02	1.28	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:19	9.005e+02	6.822e+02	1.32	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:33	3.440e+02	3.151e+02	1.09	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:05	1.796e+04	1.743e+04	1.03	yes	no	1.025
17	Unk	OCDD	40:35	1.526e+05	1.706e+05	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:30	2.944e+04	3.608e+04	0.82	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:32	4.589e+04	2.922e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:32	4.273e+04	2.692e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:25	1.909e+04	3.742e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:32	2.186e+04	4.155e+04	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:03	2.002e+04	3.813e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:49	1.961e+04	3.813e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:09	1.308e+04	2.953e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	1.289e+04	2.905e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:30	1.437e+04	1.814e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:50	3.359e+04	2.146e+04	1.57	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:12	3.065e+04	2.284e+04	1.34	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:17	2.734e+04	2.237e+04	1.22	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:04	2.718e+04	2.590e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	40:35	2.003e+04	2.310e+04	0.87	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:50	3.250e+04	4.060e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:33	4.790e+04	3.847e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:32	3.593e+04				no	1.014

$$\text{OCDD} = \frac{(1.526e+05 + 1.706e+05) \times 4000\ \text{pg} \times 1}{(2.003e+04 + 2.310e+04) \times 10.688\ \text{g} \times 69.4 / 100 \times 1.118} = 3614\ \text{ng/kg}$$

LM 01/11/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0229

Run #17 Filename P519894 Samp: 1 Inj: 1 Acquired: 10-JAN-19 20:28:38
Processed: 11-JAN-19 09:27:00 LAB. ID: E1801139-014

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.92e+08	7.14e+03	8.3e+04	7.46e+08	5.25e+03	1.4e+05
2	1,2,3,7,8-PeCDF	8.44e+07	6.37e+04	1.3e+03	5.51e+07	3.86e+04	1.4e+03
3	2,3,4,7,8-PeCDF	3.67e+07	6.37e+04	5.8e+02	2.39e+07	3.86e+04	6.2e+02
4	1,2,3,4,7,8-HxCDF	2.52e+08	7.67e+03	3.3e+04	2.09e+08	9.34e+03	2.2e+04
5	1,2,3,6,7,8-HxCDF	4.70e+07	7.67e+03	6.1e+03	3.88e+07	9.34e+03	4.2e+03
6	2,3,4,6,7,8-HxCDF	8.20e+06	7.67e+03	1.1e+03	6.81e+06	9.34e+03	7.3e+02
7	1,2,3,7,8,9-HxCDF	1.59e+07	7.67e+03	2.1e+03	1.31e+07	9.34e+03	1.4e+03
8	1,2,3,4,6,7,8-HpCDF	5.79e+07	1.52e+04	3.8e+03	5.61e+07	1.04e+04	5.4e+03
9	1,2,3,4,7,8,9-HpCDF	2.72e+07	1.52e+04	1.8e+03	2.67e+07	1.04e+04	2.6e+03
10	OCDF	3.49e+07	9.08e+02	3.8e+04	3.98e+07	1.24e+03	3.2e+04
11	2,3,7,8-TCDD	2.07e+08	4.32e+03	4.8e+04	2.59e+08	2.12e+03	1.2e+05
12	1,2,3,7,8-PeCDD	3.29e+06	1.30e+03	2.5e+03	2.08e+06	1.84e+03	1.1e+03
13	1,2,3,4,7,8-HxCDD	5.56e+04	2.32e+03	2.4e+01	4.02e+04	2.51e+03	1.6e+01
14	1,2,3,6,7,8-HxCDD	1.86e+05	2.32e+03	8.0e+01	1.47e+05	2.51e+03	5.8e+01
15	1,2,3,7,8,9-HxCDD	6.95e+04	2.32e+03	3.0e+01	6.65e+04	2.51e+03	2.6e+01
16	1,2,3,4,6,7,8-HpCDD	3.87e+06	3.52e+03	1.1e+03	3.78e+06	3.38e+03	1.1e+03
17	OCDD	2.77e+07	8.92e+02	3.1e+04	3.13e+07	6.80e+02	4.6e+04
18	13C-2,3,7,8-TCDF	3.93e+06	8.53e+03	4.6e+02	4.81e+06	2.57e+04	1.9e+02
19	13C-1,2,3,7,8-PeCDF	8.10e+06	7.88e+03	1.0e+03	5.15e+06	4.75e+03	1.1e+03
20	13C-2,3,4,7,8-PeCDF	7.99e+06	7.88e+03	1.0e+03	4.98e+06	4.75e+03	1.0e+03
21	13C-1,2,3,4,7,8-HxCDF	3.92e+06	8.01e+03	4.9e+02	7.79e+06	3.42e+03	2.3e+03
22	13C-1,2,3,6,7,8-HxCDF	4.53e+06	8.01e+03	5.7e+02	8.54e+06	3.42e+03	2.5e+03
23	13C-2,3,4,6,7,8-HxCDF	4.33e+06	8.01e+03	5.4e+02	8.30e+06	3.42e+03	2.4e+03
24	13C-1,2,3,7,8,9-HxCDF	4.05e+06	8.01e+03	5.1e+02	7.95e+06	3.42e+03	2.3e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.90e+06	5.04e+03	5.8e+02	6.51e+06	3.07e+03	2.1e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.81e+06	5.04e+03	5.6e+02	6.19e+06	3.07e+03	2.0e+03
27	13C-2,3,7,8-TCDD	2.35e+06	7.43e+03	3.2e+02	2.97e+06	3.33e+03	8.9e+02
28	13C-1,2,3,7,8-PeCDD	6.20e+06	1.83e+03	3.4e+03	3.96e+06	1.86e+03	2.1e+03
29	13C-1,2,3,4,7,8-HxCDD	6.56e+06	1.42e+03	4.6e+03	5.08e+06	1.77e+03	2.9e+03
30	13C-1,2,3,6,7,8-HxCDD	5.60e+06	1.42e+03	3.9e+03	4.41e+06	1.77e+03	2.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	5.86e+06	1.78e+03	3.3e+03	5.57e+06	1.80e+03	3.1e+03
32	13C-OCDD	3.71e+06	1.74e+03	2.1e+03	4.22e+06	1.39e+03	3.0e+03
33	13C-1,2,3,4-TCDD	4.62e+06	7.43e+03	6.2e+02	5.67e+06	3.33e+03	1.7e+03
34	13C-1,2,3,7,8,9-HxCDD	1.03e+07	1.42e+03	7.2e+03	8.14e+06	1.77e+03	4.6e+03
35	37Cl-2,3,7,8-TCDD	5.77e+06	5.14e+03	1.1e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0229

Entry: 36 Totals Name: Total Tetra-Furans

Run: 17 File: P519894 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 20:28:38 Processed: 11-JAN-19 09:27:00

Mass: 303.9020 305.8990 Tot Response: 1.93e+07 RRF: 0.9417

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:26	3.39e+04	0.76	yes	7.83e+04		n	n
2	22:43	1.77e+05	0.78	yes	4.05e+05		n	n
3	23:02	5.76e+04	0.77	yes	1.32e+05		n	n
4	23:10	5.83e+03	0.74	yes	1.37e+04		n	n
5	23:20	1.55e+05	0.77	yes	3.57e+05		n	n
6	23:42	3.82e+04	0.66	yes	9.60e+04		n	n
7	23:55	9.96e+04	0.75	yes	2.32e+05		n	n
8	24:02	2.15e+05	0.78	yes	4.92e+05		n	n
9	24:30	2.18e+06	0.79	yes	4.96e+06		n	n
10	24:48	1.02e+05	0.76	yes	2.35e+05		n	n
11	25:32	4.68e+06	0.79	yes	1.06e+07	2,3,7,8-TCDF	n	n
12	26:00	3.01e+05	0.78	yes	6.89e+05		n	n
13	26:15	5.13e+04	0.76	yes	1.19e+05		n	n
14	27:48	3.70e+05	0.79	yes	8.40e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0229

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 17 File: P519894 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 20:28:38 Processed: 11-JAN-19 09:27:00

Mass: 319.8970 321.8940 Tot Response: 3.17e+06 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:12	1.81e+04	2.22e+04	0.82	yes	4.04e+04		n	n
2	26:32	1.27e+06	1.60e+06	0.79	yes	2.87e+06	2,3,7,8-TCDD	n	n
3	26:54	1.16e+05	1.47e+05	0.79	yes	2.63e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0229

Entry: 38 Totals Name: Total Penta-Furans1

Run: 17 File: P519894 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 20:28:38 Processed: 11-JAN-19 09:27:00

Mass: 339.8600 341.8570 Tot Response: 8.88e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:50	5.60e+03	3.20e+03 1.75	yes	8.80e+03		n	n
2	28:22	2.07e+01	1.26e+01 1.63	yes	3.33e+01		n	n
3	28:27	2.94e+01	1.79e+01 1.64	yes	4.73e+01		n	n

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CLIENT ID.
SL0229

Entry: 39 Totals Name: Total Penta-Furans2

Run: 17 File: P519894 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 20:28:38 Processed: 11-JAN-19 09:27:00

Mass: 339.8600 341.8570 Tot Response: 1.79e+06 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:22	2.30e+03	1.34e+03	1.71	yes	3.64e+03		n	n
2	29:31	1.85e+05	1.20e+05	1.54	yes	3.05e+05		n	n
3	30:08	3.67e+03	2.29e+03	1.60	yes	5.96e+03		n	n
4	30:13	4.15e+03	2.73e+03	1.52	yes	6.88e+03		n	n
5	30:22	2.78e+04	1.79e+04	1.55	yes	4.57e+04		n	n
6	30:33	4.82e+05	3.14e+05	1.53	yes	7.96e+05	1,2,3,7,8-PeCDF	n	n
7	30:50	1.10e+05	7.42e+04	1.48	yes	1.84e+05		n	n
8	31:27	2.00e+03	1.36e+03	1.48	yes	3.36e+03		n	n
9	31:33	2.53e+05	1.64e+05	1.54	yes	4.17e+05	2,3,4,7,8-PeCDF	n	n
10	32:30	1.28e+04	8.61e+03	1.49	yes	2.14e+04		n	n

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Peak List Summary

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SL0229

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 17 File: P519894 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 20:28:38 Processed: 11-JAN-19 09:27:00

Mass: 355.8550 357.8520 Tot Response: 3.66e+04 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:35	4.88e+02	3.08e+02	1.59	yes	7.96e+02		n	n
2	30:06	4.17e+02	2.56e+02	1.63	yes	6.73e+02		n	n
3	30:36	6.81e+02	4.03e+02	1.69	yes	1.08e+03		n	n
4	30:46	9.02e+02	5.73e+02	1.57	yes	1.47e+03		n	n
5	31:26	3.92e+02	2.95e+02	1.33	yes	6.88e+02		n	n
6	31:52	1.95e+04	1.19e+04	1.64	yes	3.14e+04	1,2,3,7,8-PeCDD	n	n
7	32:16	2.86e+02	1.89e+02	1.51	yes	4.76e+02		n	n

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Entry: 41 Totals Name: Total Hexa-Furans

Run: 17 File: P519894 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 20:28:38 Processed: 11-JAN-19 09:27:00

Mass: 373.8210 375.8180 Tot Response: 3.07e+06 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:26	6.44e+04	5.30e+04	1.21	yes	1.17e+05		n	n
2	33:59	3.81e+04	3.08e+04	1.24	yes	6.89e+04		n	n
3	34:25	1.23e+06	1.01e+06	1.22	yes	2.24e+06	1,2,3,4,7,8-HxCDF	n	n
4	34:33	2.38e+05	1.97e+05	1.21	yes	4.36e+05	1,2,3,6,7,8-HxCDF	n	n
5	35:04	3.67e+04	3.01e+04	1.22	yes	6.68e+04	2,3,4,6,7,8-HxCDF	n	n
6	35:52	7.76e+04	6.40e+04	1.21	yes	1.42e+05	1,2,3,7,8,9-HxCDF	n	n

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Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 17 File: P519894 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 20:28:38 Processed: 11-JAN-19 09:27:00

Mass: 389.8160 391.8130 Tot Response: 8.07e+03 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:22	3.33e+02	1.33	yes	5.83e+02		n	n
2	34:36	2.56e+03	1.23	yes	4.64e+03		n	n
3	35:13	2.31e+02	1.28	yes	4.11e+02	1,2,3,4,7,8-HxCDD	n	n
4	35:19	9.00e+02	1.32	yes	1.58e+03	1,2,3,6,7,8-HxCDD	n	n
5	35:28	1.00e+02	1.08	yes	1.93e+02		n	n
6	35:33	3.44e+02	1.09	yes	6.59e+02	1,2,3,7,8,9-HxCDD	n	n

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Entry: 43 Totals Name: Total Hepta-Furans

Run: 17 File: P519894 Sample:1 Injection:1 Function:4

Acquired: 10-JAN-19 20:28:38 Processed: 11-JAN-19 09:27:00

Mass: 407.7820 409.7790 Tot Response: 9.77e+05 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:10	2.61e+05	2.53e+05 1.03	yes	5.14e+05	1,2,3,4,6,7,8-HpCDF	n	n
2	37:34	1.06e+05	1.03e+05 1.04	yes	2.09e+05		n	n
3	38:30	1.29e+05	1.25e+05 1.03	yes	2.54e+05	1,2,3,4,7,8,9-HpCDF	n	n

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Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 17 File: P519894 Sample:1 Injection:1 Function:4

Acquired: 10-JAN-19 20:28:38 Processed: 11-JAN-19 09:27:00

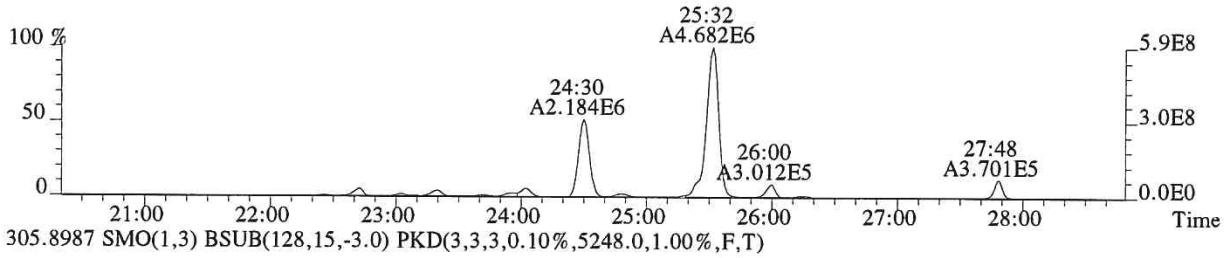
Mass: 423.7770 425.7740 Tot Response: 3.54e+04 RRF: 1.025

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:05	1.80e+04	1.74e+04	1.03	yes	3.54e+04	1,2,3,4,6,7,8-HpCDD	n	n

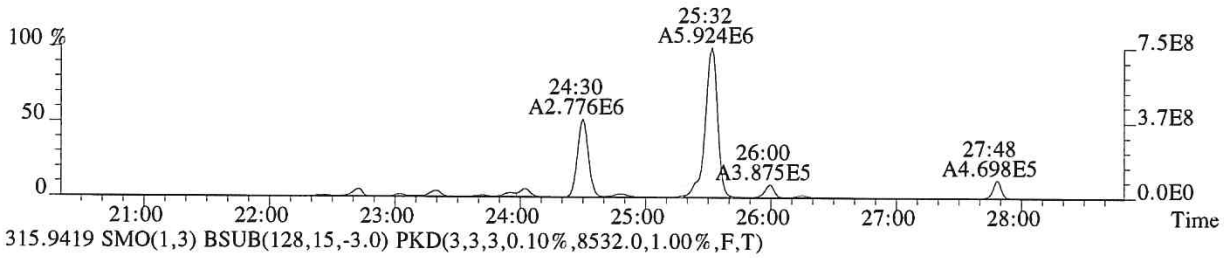
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File:P519894 #1-602 Acq:10-JAN-2019 20:28:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-014

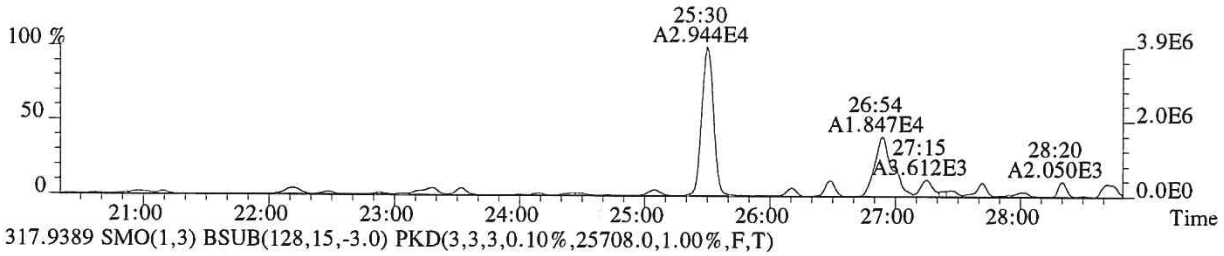
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7144.0,1.00%,F,T)



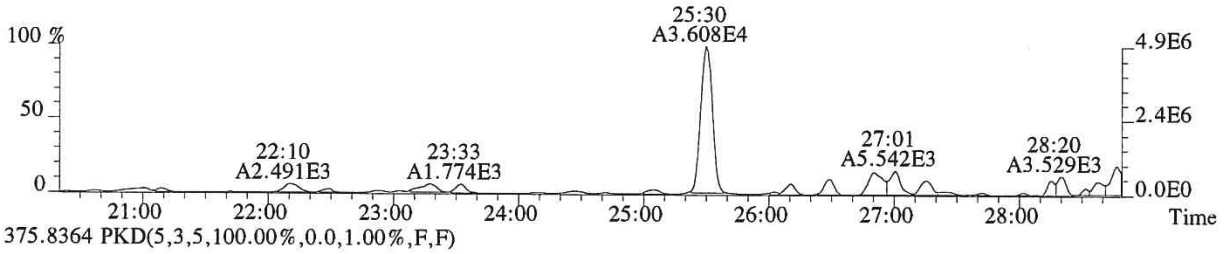
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5248.0,1.00%,F,T)



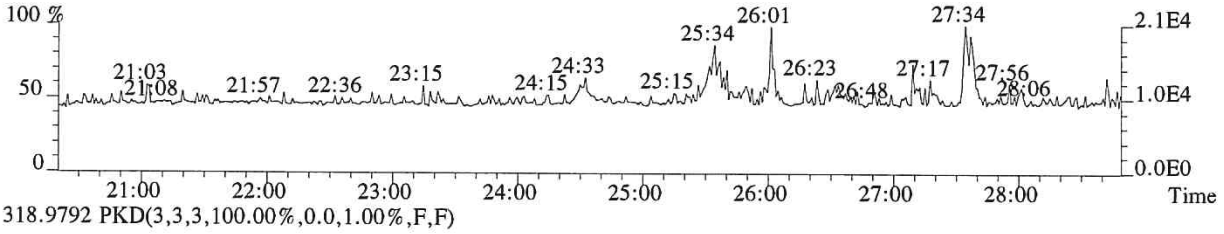
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8532.0,1.00%,F,T)



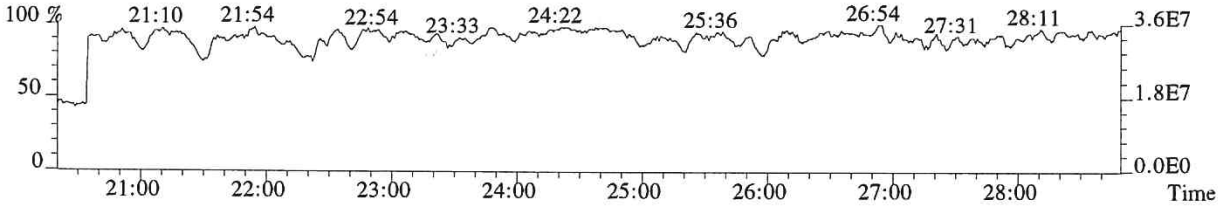
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,25708.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

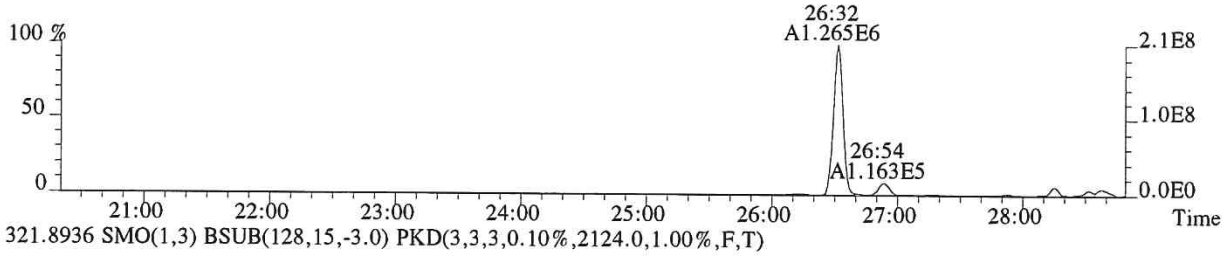


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

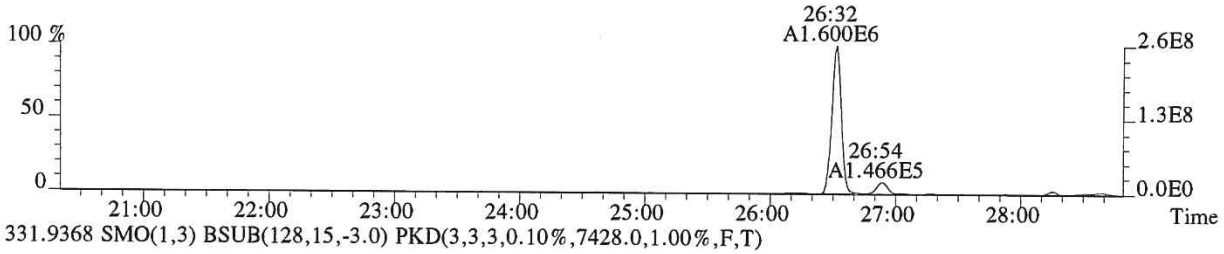


018526

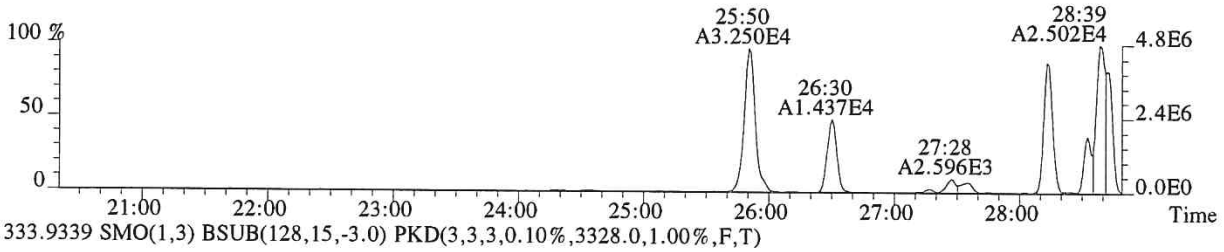
File:P519894 #1-602 Acq:10-JAN-2019 20:28:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-014
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4320.0,1.00%,F,T)



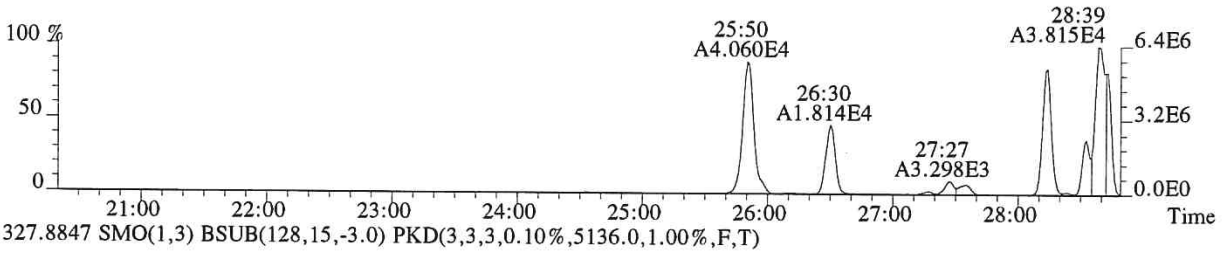
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2124.0,1.00%,F,T)



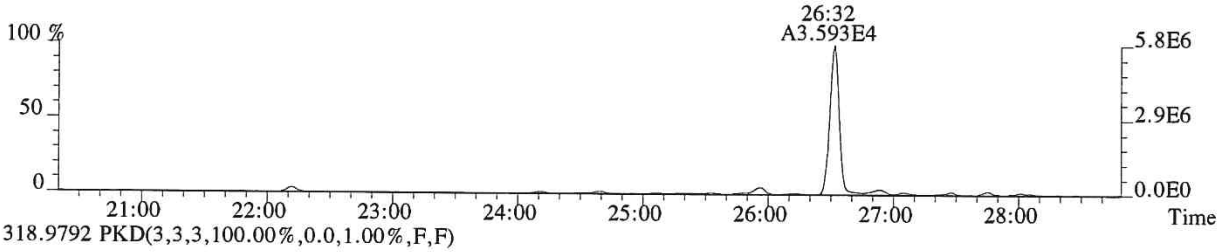
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7428.0,1.00%,F,T)



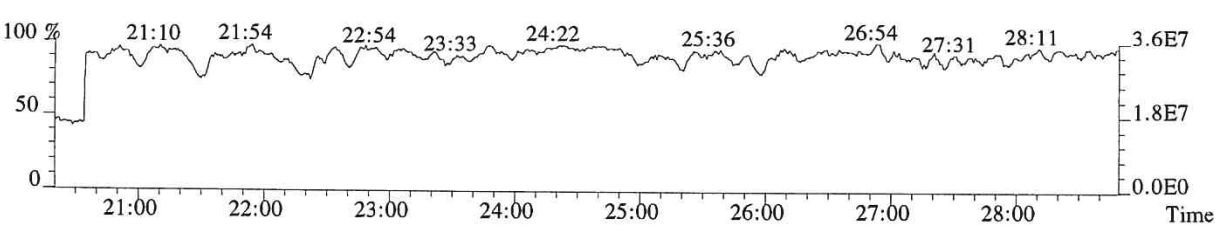
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3328.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5136.0,1.00%,F,T)

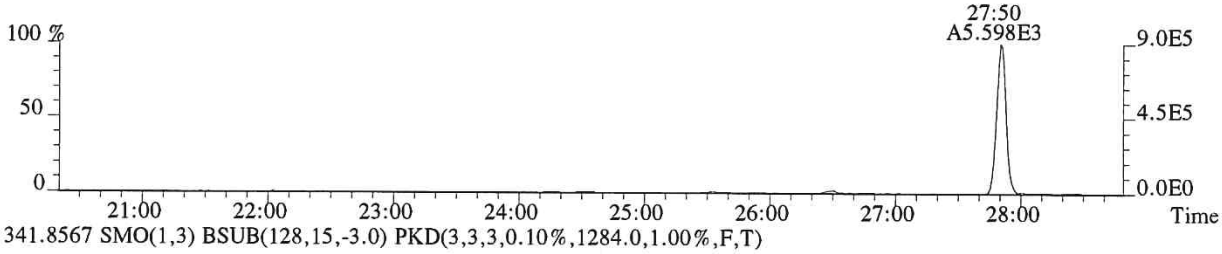


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

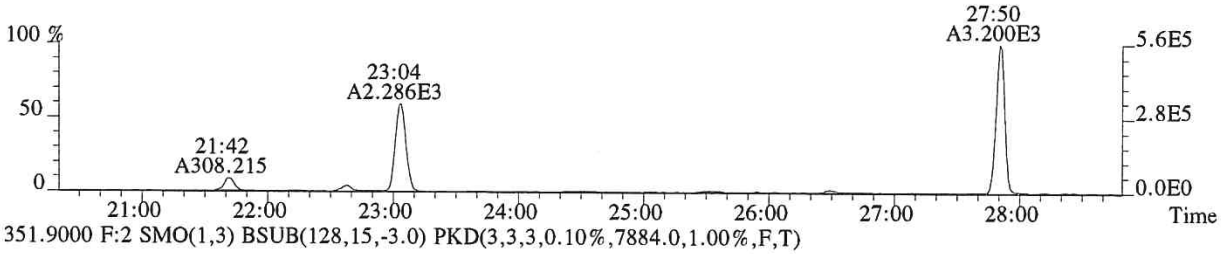


018527

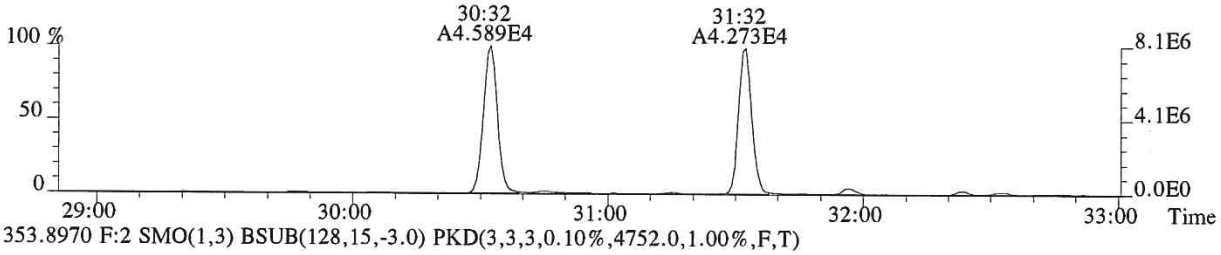
File:P519894 #1-602 Acq:10-JAN-2019 20:28:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-014
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1200.0,1.00%,F,T)



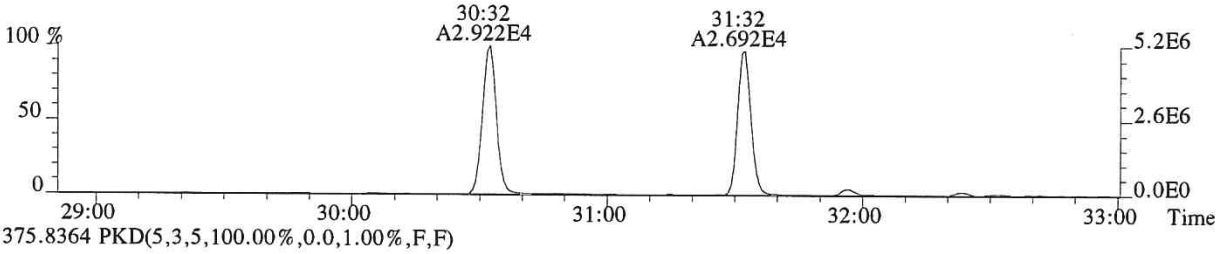
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1284.0,1.00%,F,T)



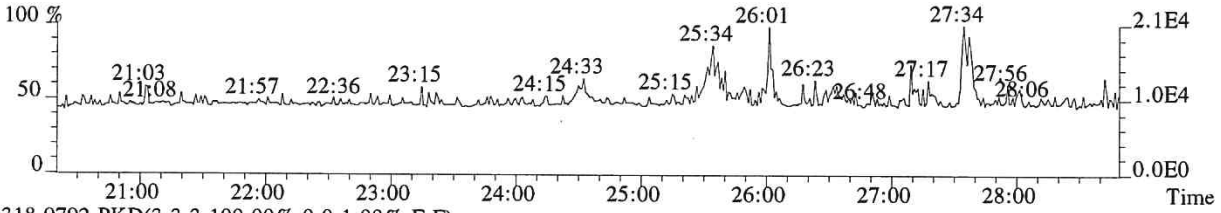
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7884.0,1.00%,F,T)



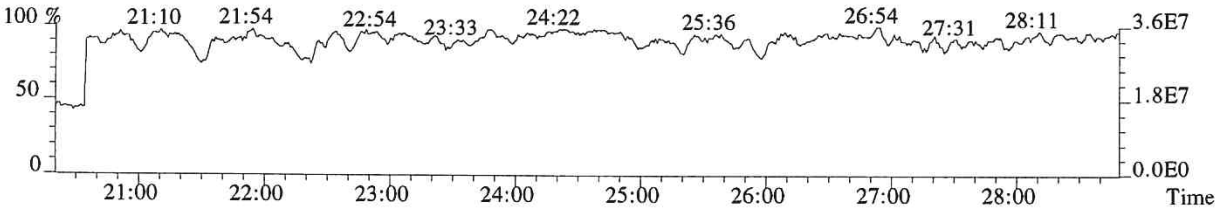
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4752.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

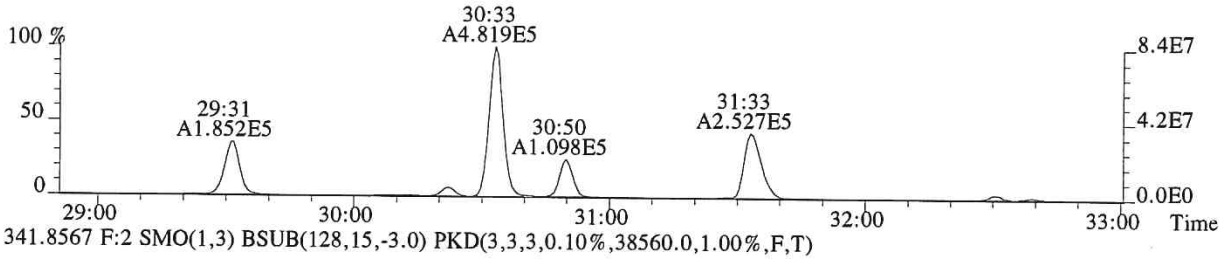


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

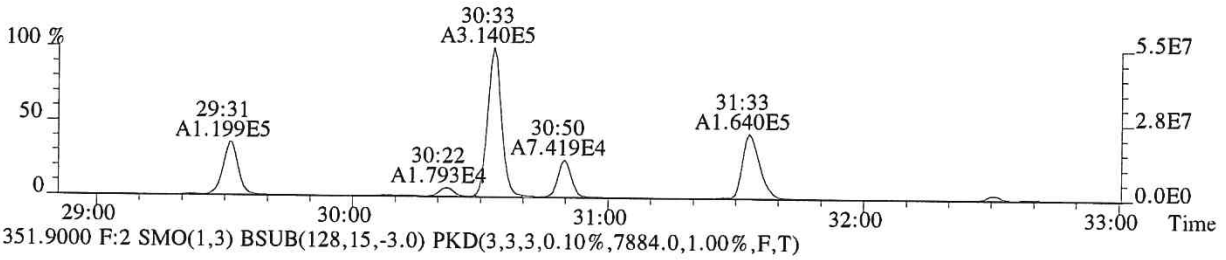


018528

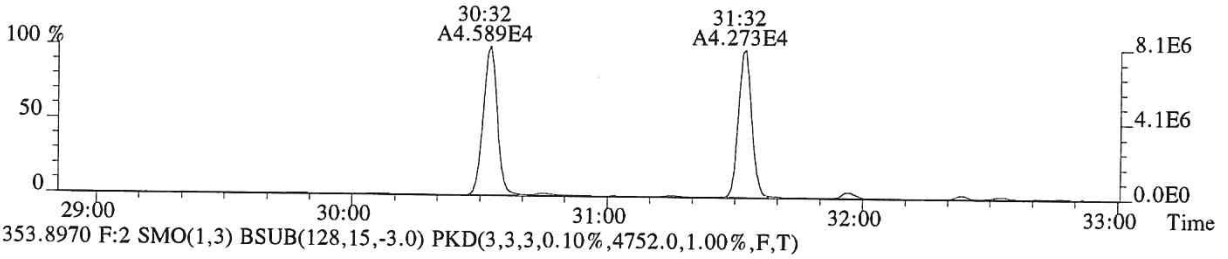
File:P519894 #1-375 Acq:10-JAN-2019 20:28:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-014
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,63672.0,1.00%,F,T)



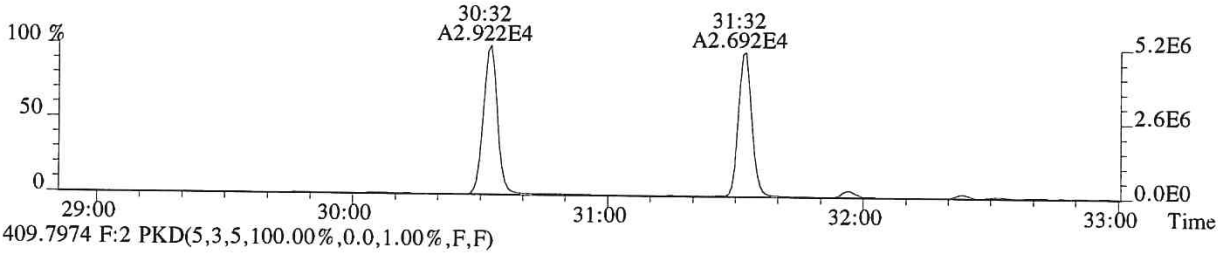
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,38560.0,1.00%,F,T)



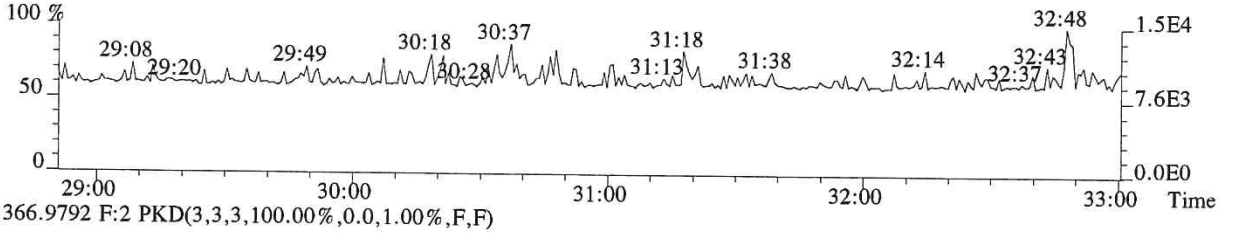
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7884.0,1.00%,F,T)



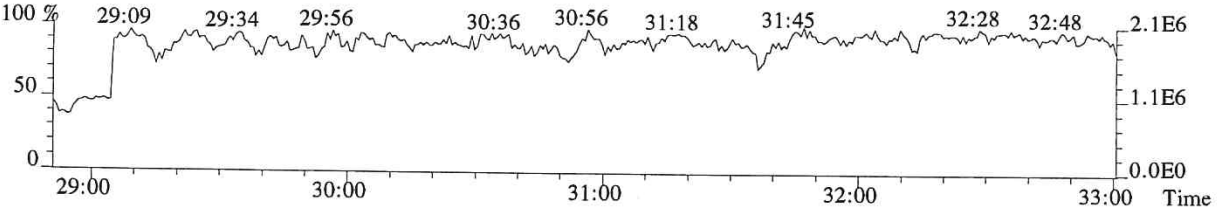
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4752.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

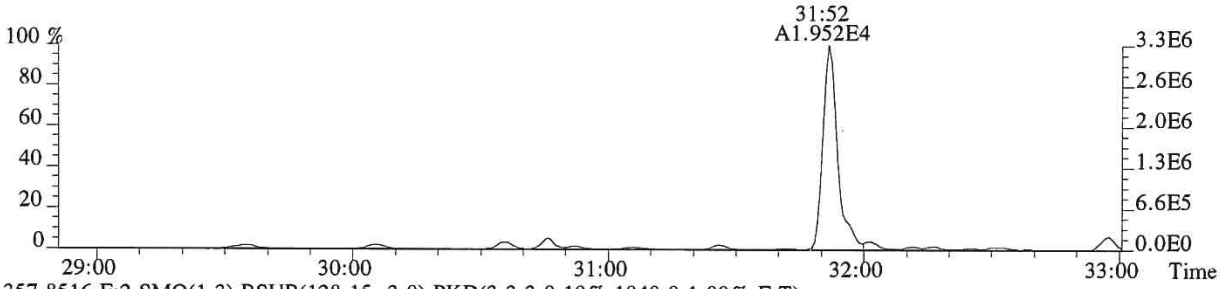


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

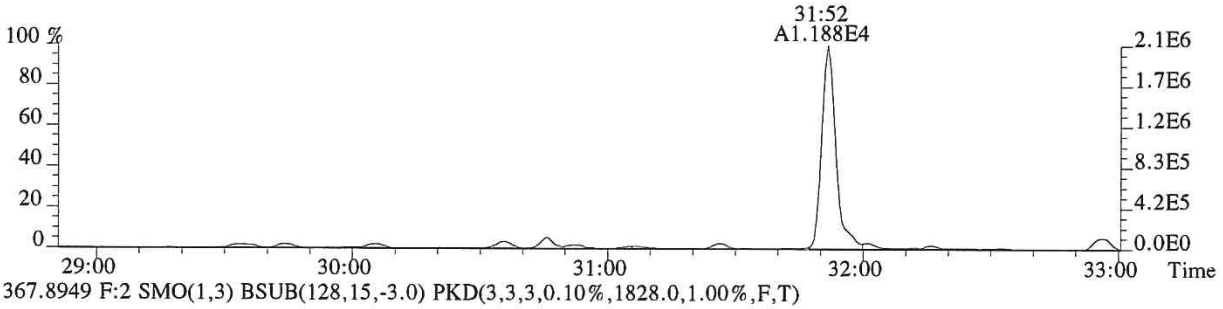


018529

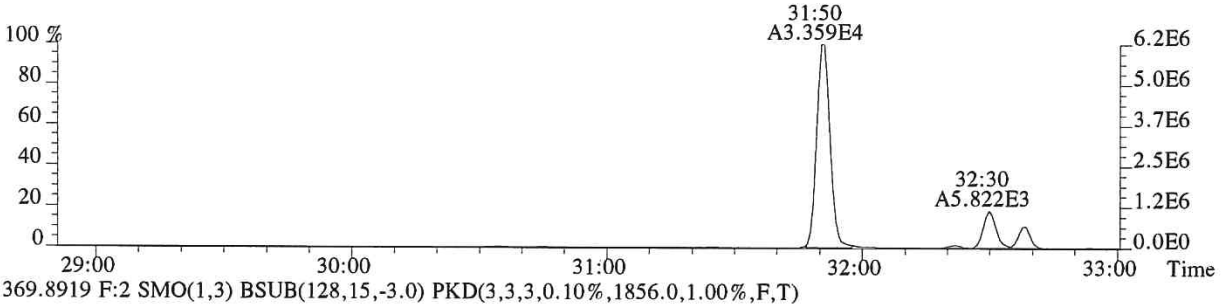
File:P519894 #1-375 Acq:10-JAN-2019 20:28:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-014
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1300.0,1.00%,F,T)



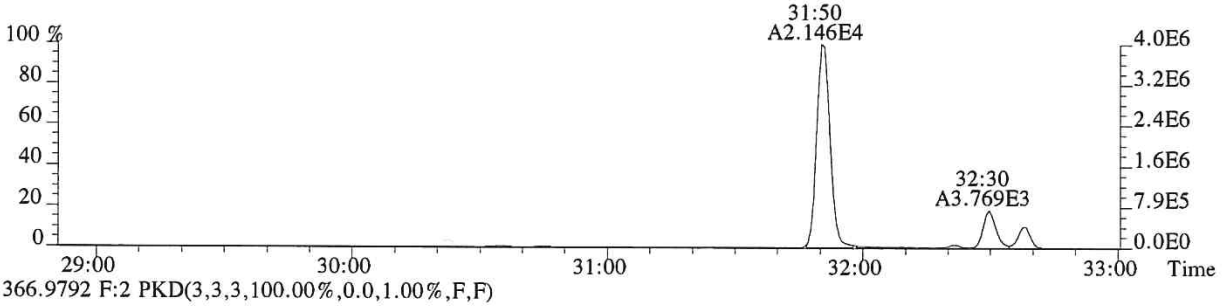
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1840.0,1.00%,F,T)



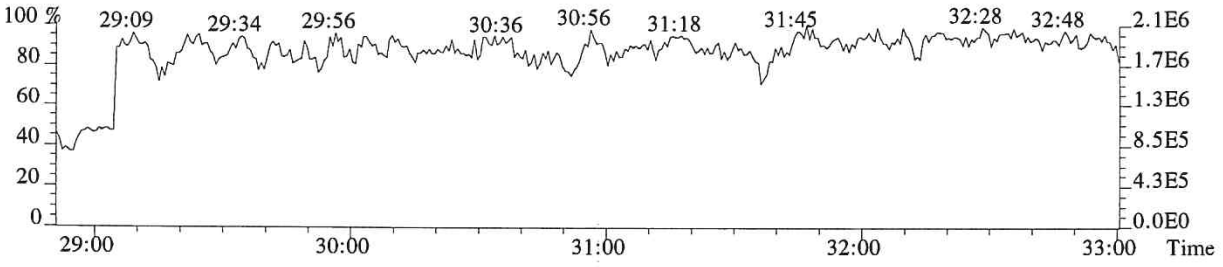
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1828.0,1.00%,F,T)



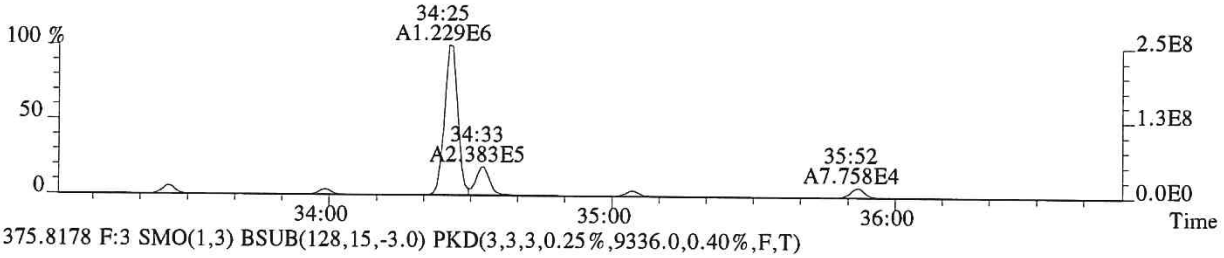
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1856.0,1.00%,F,T)



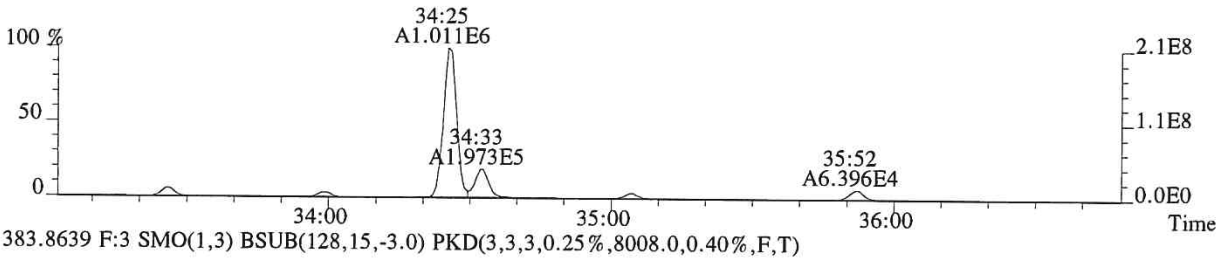
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



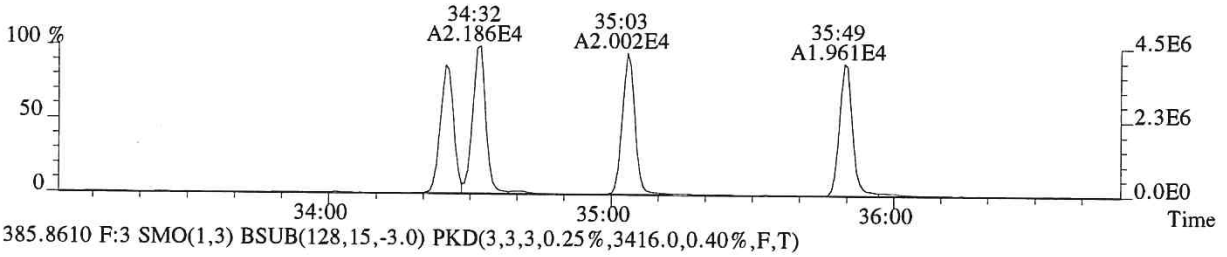
File:P519894 #1-339 Acq:10-JAN-2019 20:28:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-014
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7672.0,0.40%,F,T)



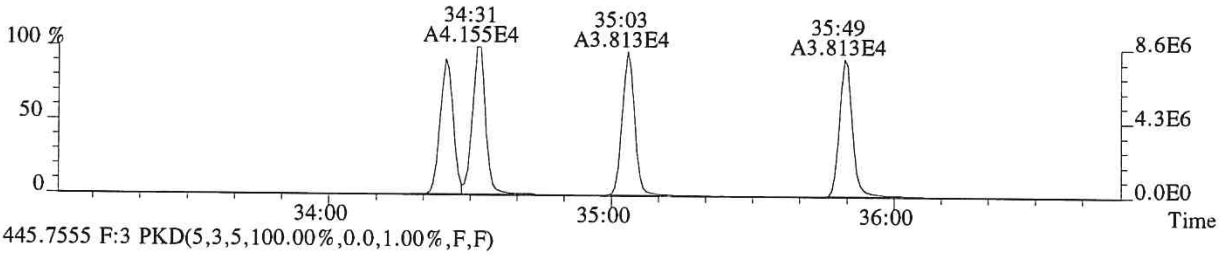
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,9336.0,0.40%,F,T)



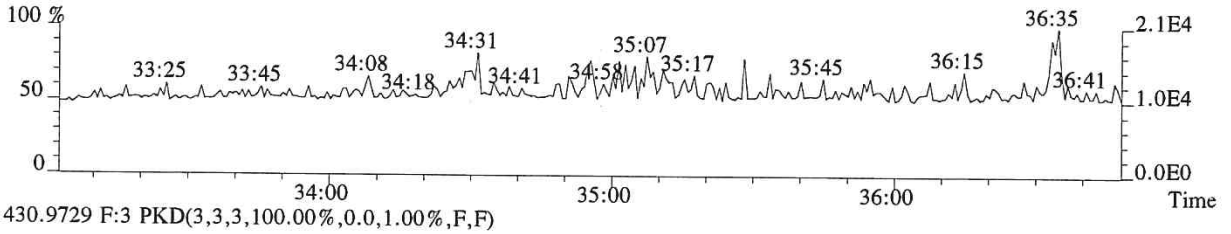
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8008.0,0.40%,F,T)



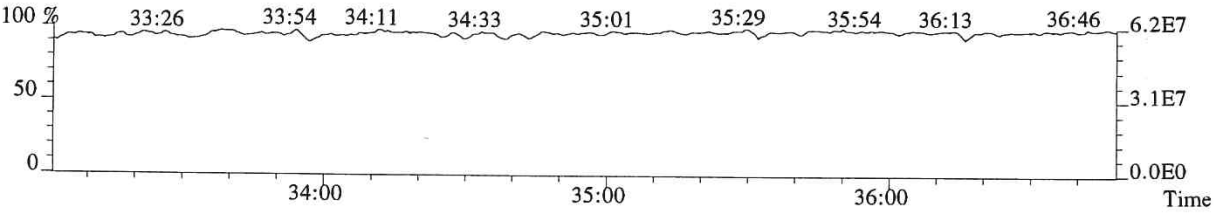
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3416.0,0.40%,F,T)



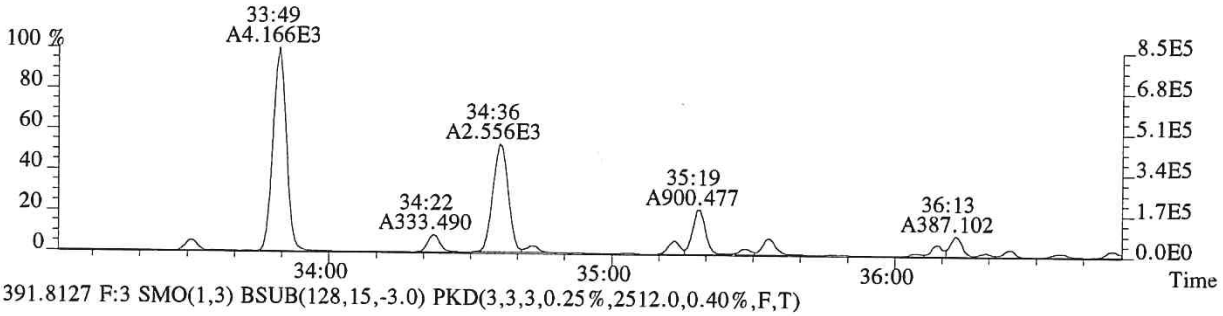
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



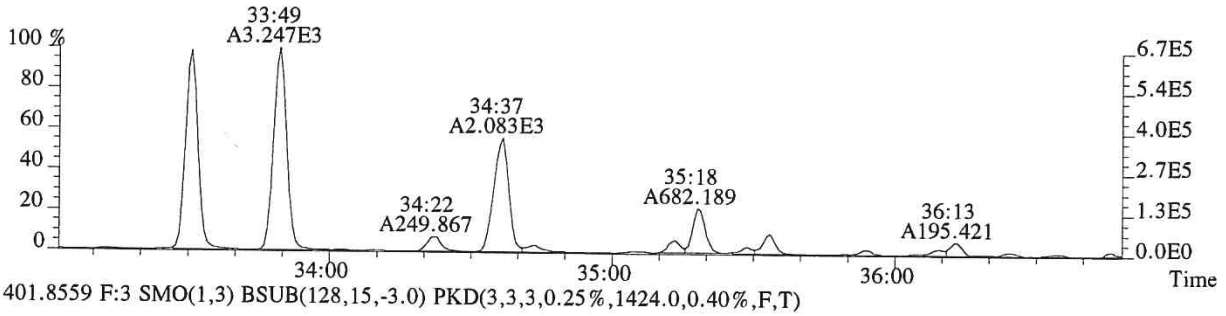
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



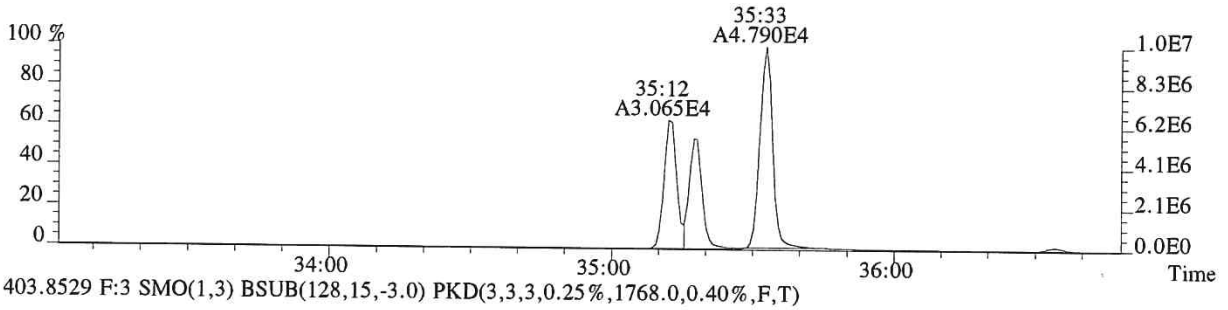
File:P519894 #1-339 Acq:10-JAN-2019 20:28:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-014
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2320.0,0.40%,F,T)



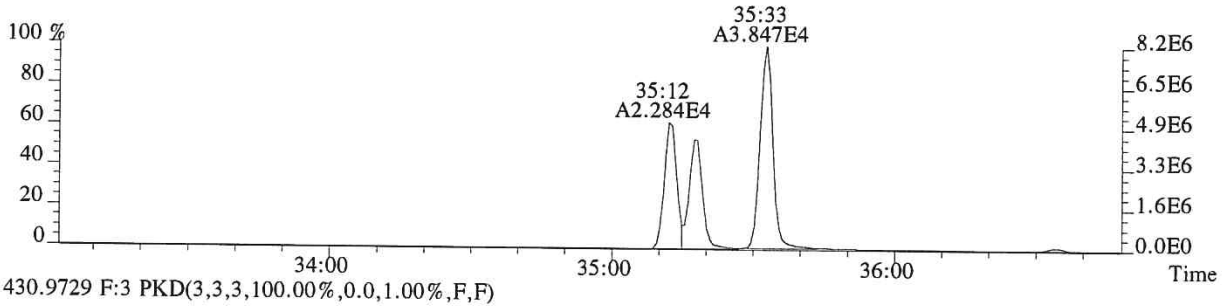
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2512.0,0.40%,F,T)



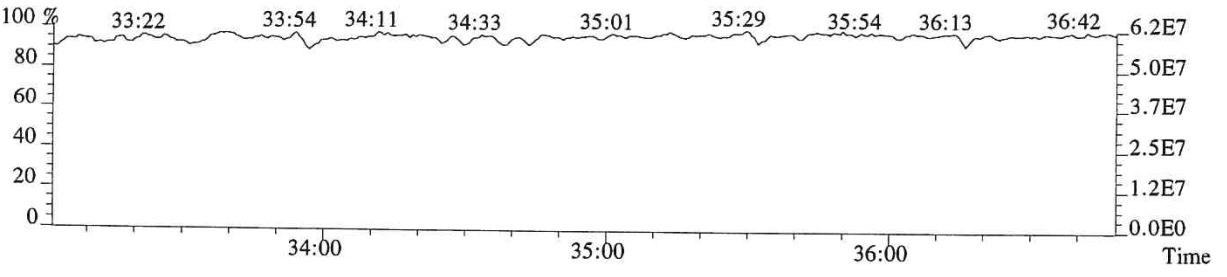
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1424.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1768.0,0.40%,F,T)

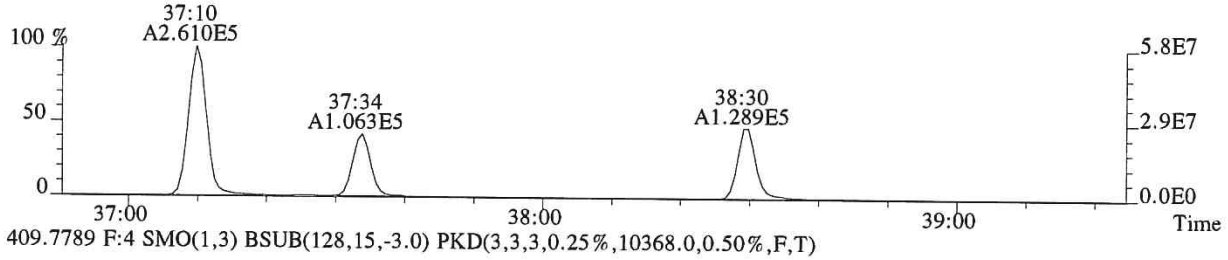


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

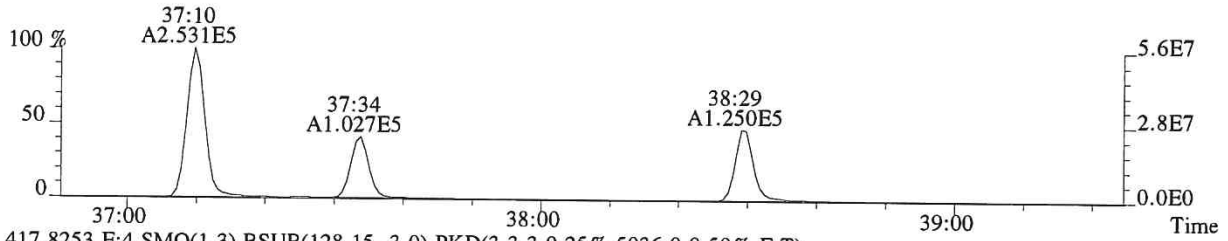


018532

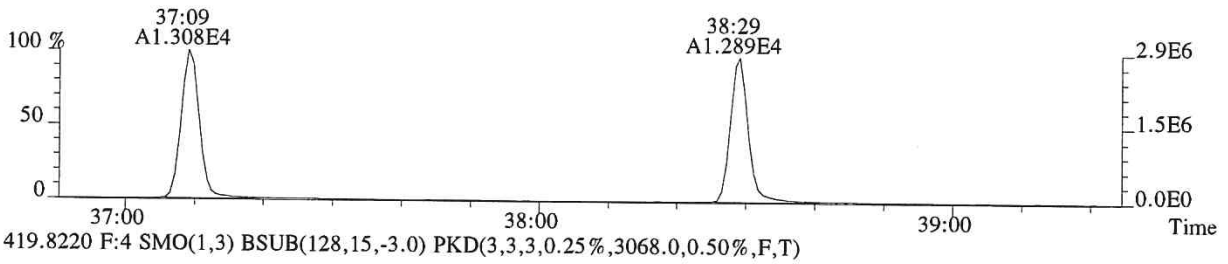
File:P519894 #1-232 Acq:10-JAN-2019 20:28:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-014
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,15248.0,0.50%,F,T)



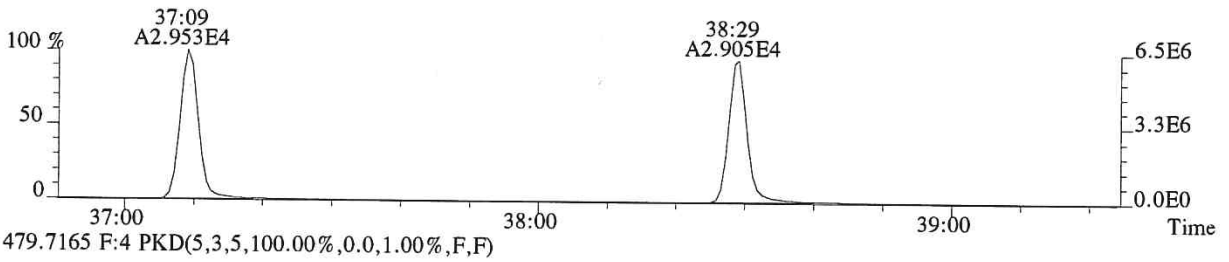
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10368.0,0.50%,F,T)



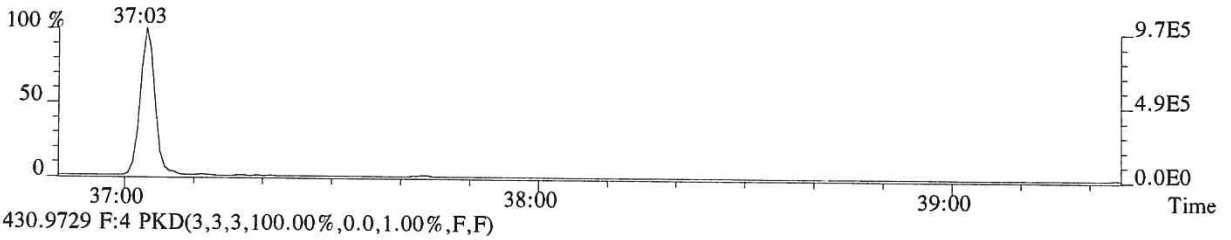
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5036.0,0.50%,F,T)



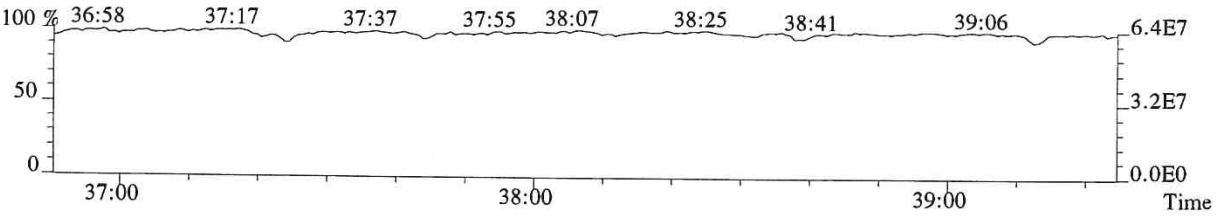
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3068.0,0.50%,F,T)



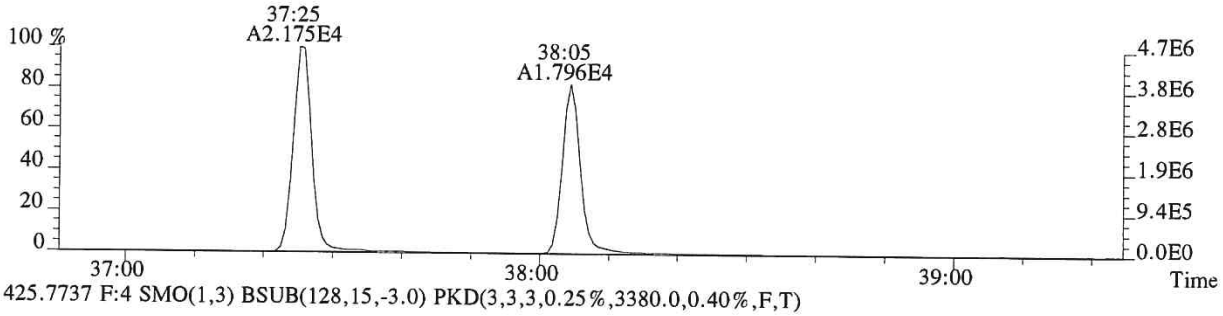
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



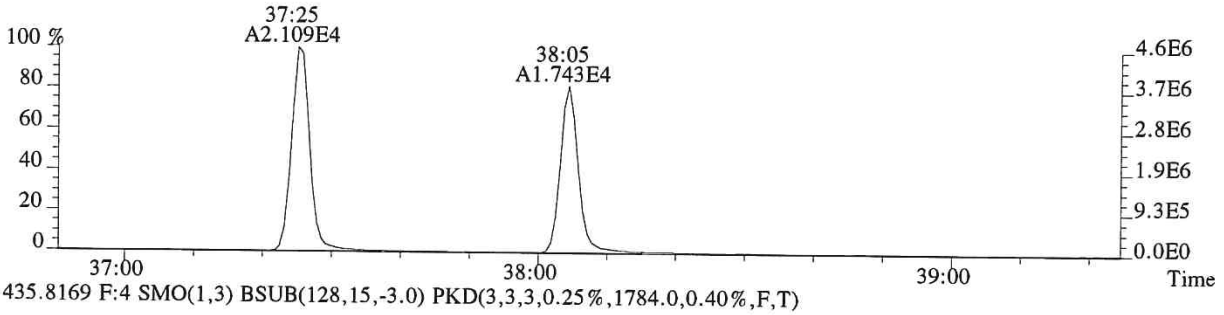
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



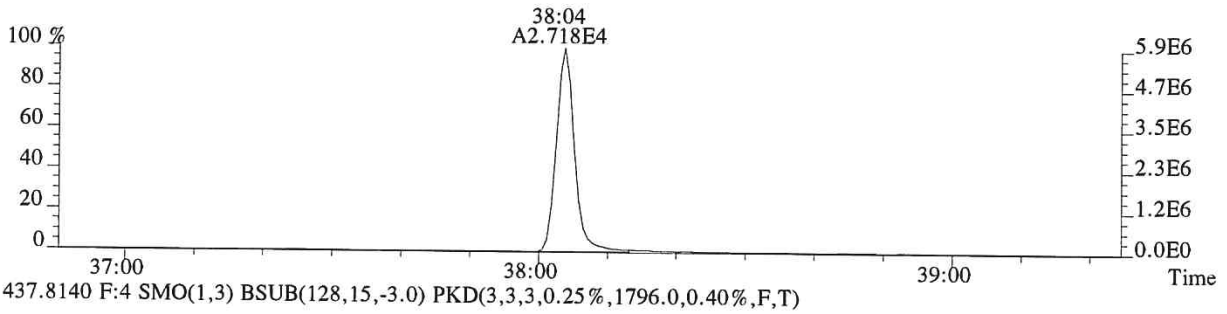
File:P519894 #1-232 Acq:10-JAN-2019 20:28:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-014
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3520.0,0.40%,F,T)



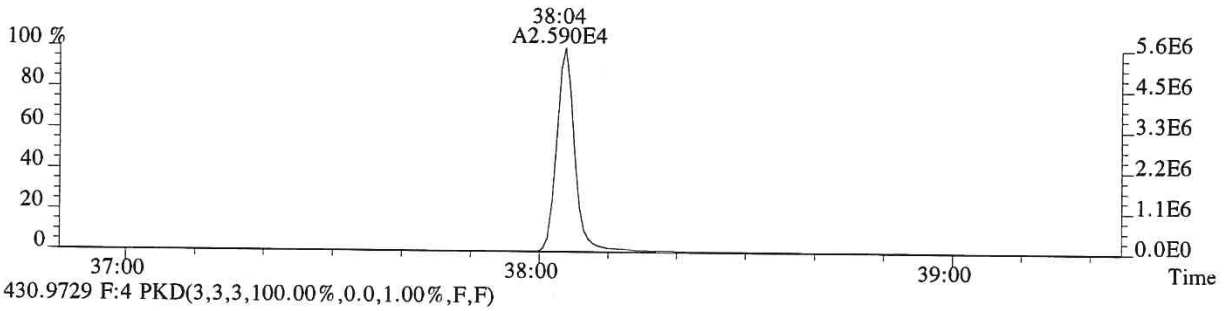
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3380.0,0.40%,F,T)



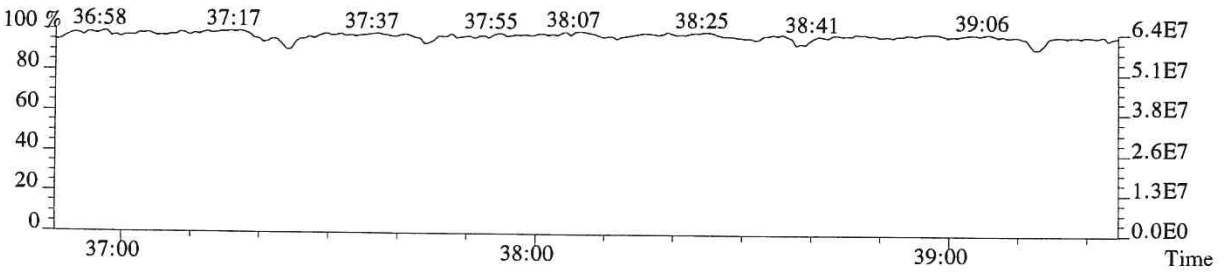
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1784.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1796.0,0.40%,F,T)

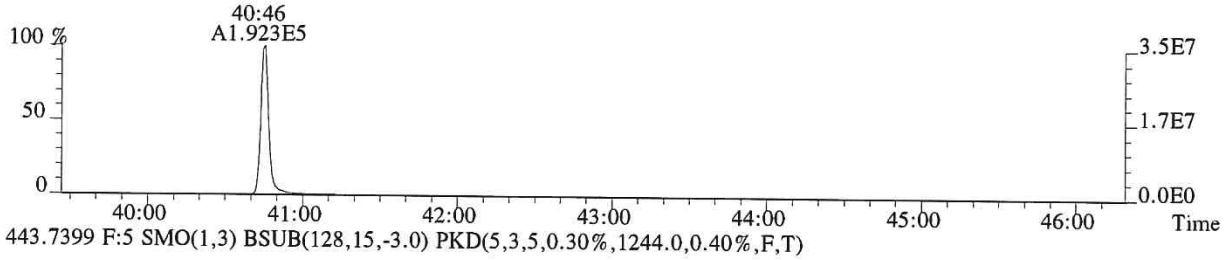


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

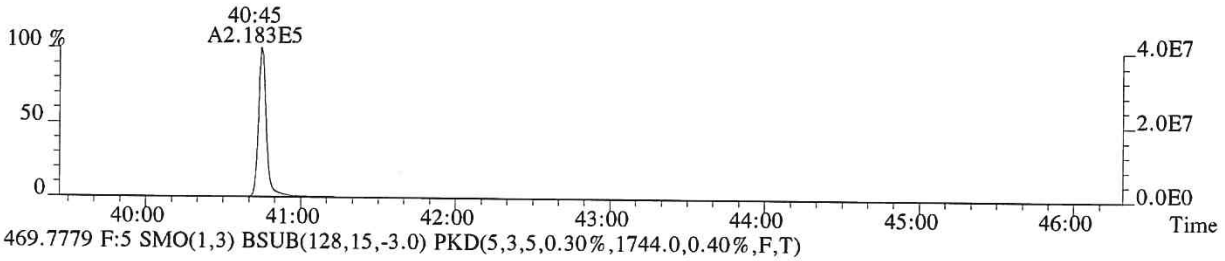


018534

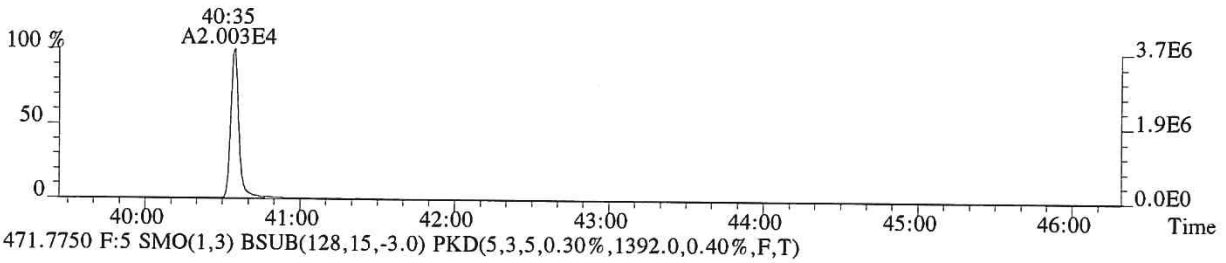
File:P519894 #1-619 Acq:10-JAN-2019 20:28:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-014
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,908.0,0.40%,F,T)



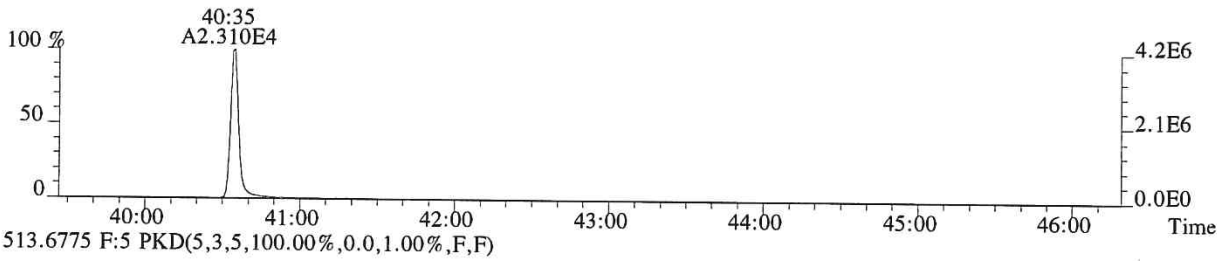
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1244.0,0.40%,F,T)



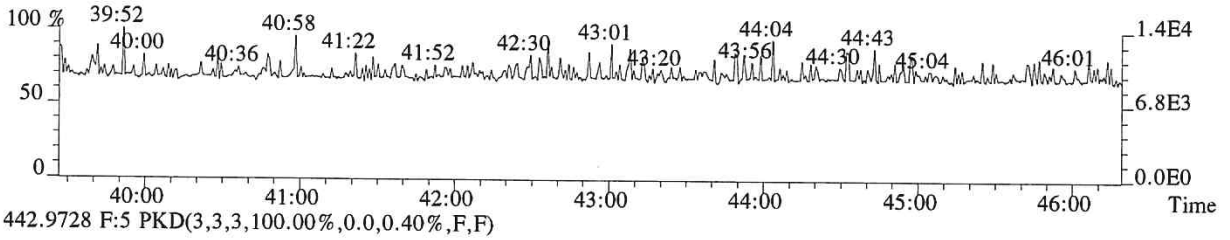
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1744.0,0.40%,F,T)



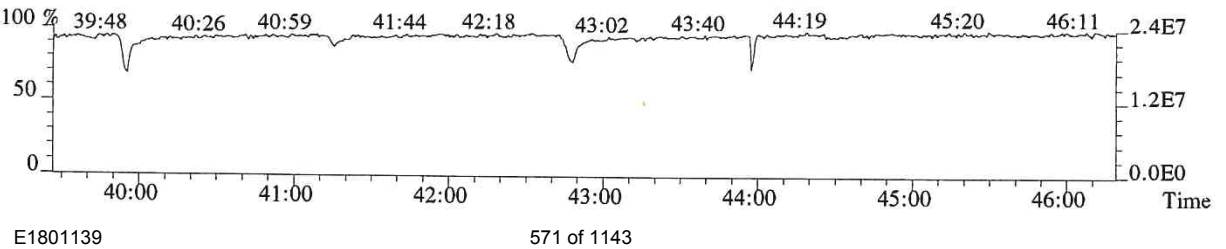
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1392.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

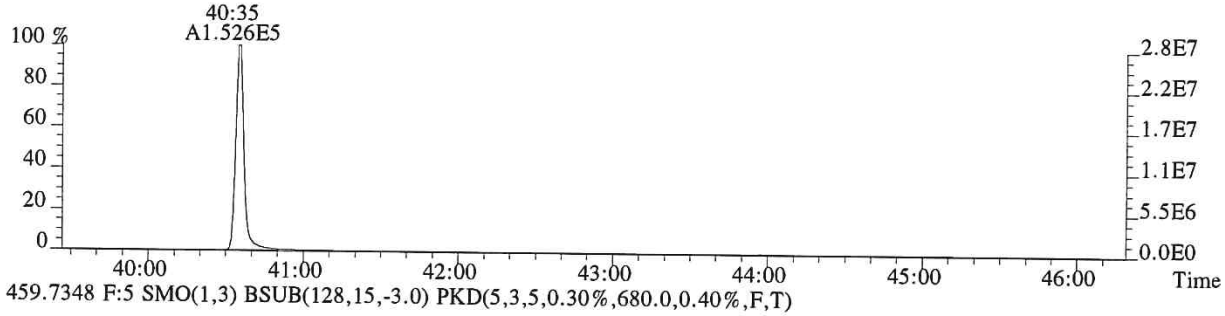


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

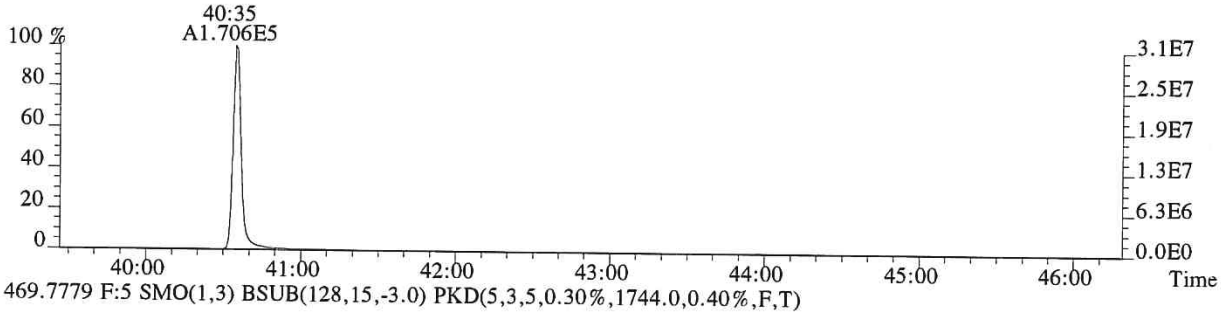


018535

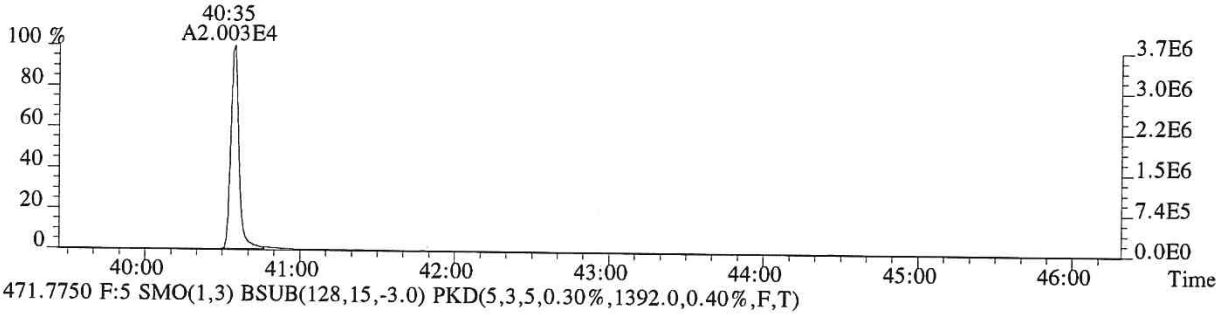
File:P519894 #1-619 Acq:10-JAN-2019 20:28:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-014
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,892.0,0.40%,F,T)



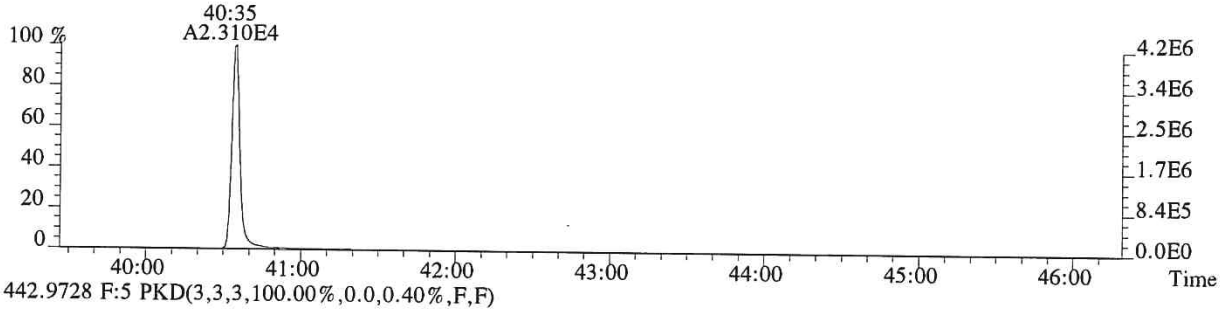
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,680.0,0.40%,F,T)



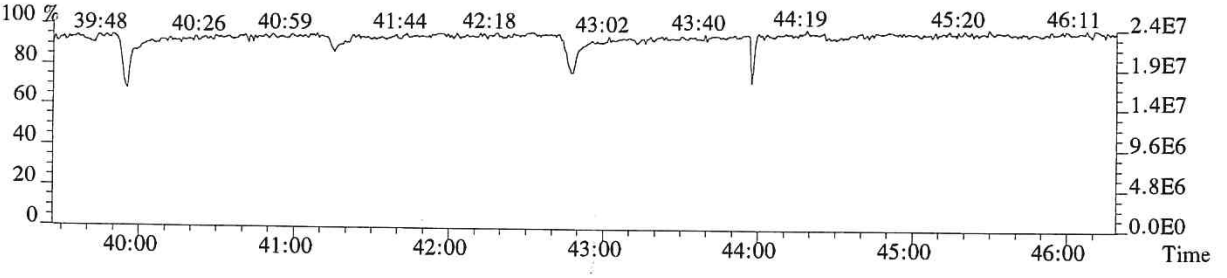
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1744.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1392.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018536

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0229

Run #15 Filename P519923 Samp: 1 Inj: 1 Acquired: 11-JAN-19 20:34:15
Processed: 14-JAN-19 08:19:06 Sample ID: E1801139-014DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	1.854e+04	2.494e+04	0.74	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:28	1.793e+03	1.142e+03	1.57	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	9.856e+02	6.085e+02	1.62	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:24	3.995e+03	3.552e+03	1.12	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	8.455e+02	7.002e+02	1.21	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:03	1.015e+02	1.144e+02	0.89	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:51	2.525e+02	2.110e+02	1.20	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:09	8.049e+02	8.803e+02	0.91	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:29	3.766e+02	4.074e+02	0.92	yes	no	1.258
10	Unk	OCDF	40:45	6.294e+02	7.183e+02	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:24	5.001e+03	6.442e+03	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:48	8.295e+01	5.045e+01	1.64	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:17	6.373e+00	4.071e+00	1.57	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:30	1.564e+01	6.341e+00	2.47	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	6.818e+01	6.989e+01	0.98	yes	no	1.025
17	Unk	OCDD	40:35	5.361e+02	6.291e+02	0.85	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:21	2.884e+04	3.616e+04	0.80	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:27	4.328e+04	2.708e+04	1.60	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:28	4.109e+04	2.585e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:23	1.740e+04	3.347e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:30	2.060e+04	3.954e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:02	1.917e+04	3.679e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	1.722e+04	3.351e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:09	1.448e+04	3.290e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	1.307e+04	2.938e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:22	1.340e+04	1.702e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:47	3.130e+04	1.976e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:11	2.558e+04	2.037e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:16	2.684e+04	2.094e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	3.005e+04	2.852e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	40:34	3.361e+04	3.712e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:39	1.853e+04	2.301e+04	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:31	2.577e+04	2.065e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:24	1.373e+02				no	1.014

$$OCDD = \frac{(5.361e+02 + 6.291e+02) \times 4000\ pg \times 200}{(3.361e+04 + 3.712e+04) \times 10.688\ g \times 69.4 / 100 \times 1.118 \times 0.43} = 3695.5\ ng/kg$$

cmol 1/14/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0229

Run #15 Filename P519923 Samp: 1 Inj: 1 Acquired: 11-JAN-19 20:34:15
Processed: 14-JAN-19 08:19:06 LAB. ID: E1801139-014DL

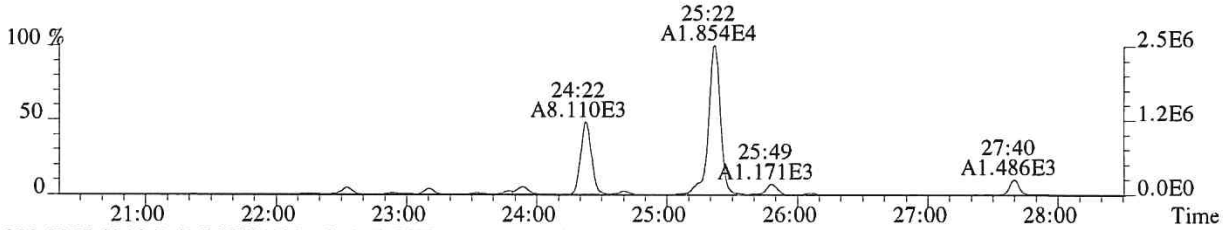
	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.47e+06	1.32e+03	1.9e+03	3.27e+06	2.78e+03	1.2e+03
2	1,2,3,7,8-PeCDF	3.02e+05	8.96e+02	3.4e+02	2.02e+05	1.46e+03	1.4e+02
3	2,3,4,7,8-PeCDF	1.42e+05	8.96e+02	1.6e+02	8.76e+04	1.46e+03	6.0e+01
4	1,2,3,4,7,8-HxCDF	8.09e+05	1.01e+03	8.0e+02	7.08e+05	5.08e+02	1.4e+03
5	1,2,3,6,7,8-HxCDF	1.50e+05	1.01e+03	1.5e+02	1.27e+05	5.08e+02	2.5e+02
6	2,3,4,6,7,8-HxCDF	2.33e+04	1.01e+03	2.3e+01	2.23e+04	5.08e+02	4.4e+01
7	1,2,3,7,8,9-HxCDF	4.16e+04	1.01e+03	4.1e+01	3.59e+04	5.08e+02	7.1e+01
8	1,2,3,4,6,7,8-HpCDF	1.57e+05	1.48e+03	1.1e+02	1.78e+05	1.06e+03	1.7e+02
9	1,2,3,4,7,8,9-HpCDF	7.49e+04	1.48e+03	5.1e+01	7.78e+04	1.06e+03	7.3e+01
10	OCDF	9.82e+04	1.18e+03	8.3e+01	1.25e+05	1.39e+03	9.0e+01
11	2,3,7,8-TCDD	7.50e+05	2.53e+03	3.0e+02	9.61e+05	1.43e+03	6.7e+02
12	1,2,3,7,8-PeCDD	1.46e+04	8.68e+02	1.7e+01	7.54e+03	4.64e+02	1.6e+01
13	1,2,3,4,7,8-HxCDD	*	4.20e+02	*	*	5.20e+02	*
14	1,2,3,6,7,8-HxCDD	1.45e+03	4.20e+02	3.5e+00	1.28e+03	5.20e+02	2.5e+00
15	1,2,3,7,8,9-HxCDD	2.55e+03	4.20e+02	6.1e+00	1.95e+03	5.20e+02	3.7e+00
16	1,2,3,4,6,7,8-HpCDD	1.74e+04	5.84e+02	3.0e+01	1.27e+04	4.12e+02	3.1e+01
17	OCDD	8.91e+04	4.36e+02	2.0e+02	9.57e+04	1.20e+03	8.0e+01
18	13C-2,3,7,8-TCDF	4.07e+06	3.96e+03	1.0e+03	5.05e+06	2.97e+03	1.7e+03
19	13C-1,2,3,7,8-PeCDF	7.31e+06	8.60e+02	8.5e+03	4.55e+06	9.12e+02	5.0e+03
20	13C-2,3,4,7,8-PeCDF	7.60e+06	8.60e+02	8.8e+03	4.76e+06	9.12e+02	5.2e+03
21	13C-1,2,3,4,7,8-HxCDF	3.58e+06	1.00e+03	3.6e+03	6.72e+06	1.01e+03	6.7e+03
22	13C-1,2,3,6,7,8-HxCDF	4.02e+06	1.00e+03	4.0e+03	7.70e+06	1.01e+03	7.6e+03
23	13C-2,3,4,6,7,8-HxCDF	3.78e+06	1.00e+03	3.8e+03	7.34e+06	1.01e+03	7.3e+03
24	13C-1,2,3,7,8,9-HxCDF	3.20e+06	1.00e+03	3.2e+03	6.35e+06	1.01e+03	6.3e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.98e+06	1.22e+03	2.4e+03	6.52e+06	2.25e+03	2.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.51e+06	1.22e+03	2.1e+03	5.58e+06	2.25e+03	2.5e+03
27	13C-2,3,7,8-TCDD	2.07e+06	6.84e+03	3.0e+02	2.64e+06	4.70e+03	5.6e+02
28	13C-1,2,3,7,8-PeCDD	5.57e+06	1.26e+03	4.4e+03	3.56e+06	1.46e+03	2.4e+03
29	13C-1,2,3,4,7,8-HxCDD	5.55e+06	1.37e+03	4.0e+03	4.41e+06	7.80e+02	5.7e+03
30	13C-1,2,3,6,7,8-HxCDD	5.17e+06	1.37e+03	3.8e+03	4.04e+06	7.80e+02	5.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	5.99e+06	4.72e+02	1.3e+04	5.67e+06	3.72e+02	1.5e+04
32	13C-OCDD	5.35e+06	5.76e+02	9.3e+03	5.91e+06	6.64e+02	8.9e+03
33	13C-1,2,3,4-TCDD	2.72e+06	6.84e+03	4.0e+02	3.40e+06	4.70e+03	7.2e+02
34	13C-1,2,3,7,8,9-HxCDD	4.87e+06	1.37e+03	3.5e+03	3.91e+06	7.80e+02	5.0e+03
35	37Cl-2,3,7,8-TCDD	2.09e+04	1.68e+03	1.2e+01			

ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
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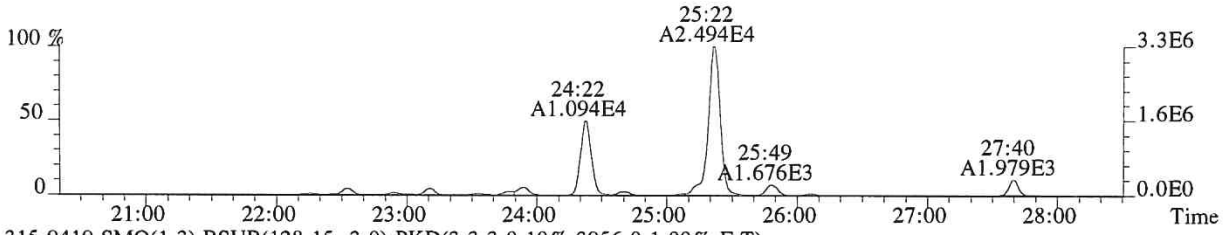
www.alsglobal.com

01/14/19 LKL 01/14/19

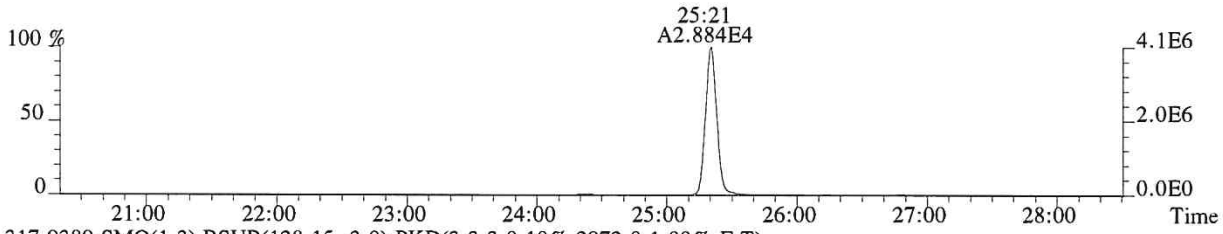
File:P519923 #1-580 Acq:11-JAN-2019 20:34:15 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-014DL E1801139-014DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1324.0,1.00%,F,T)



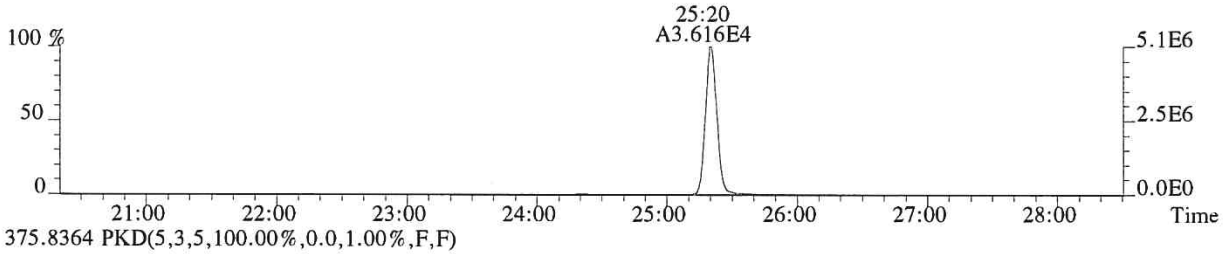
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2776.0,1.00%,F,T)



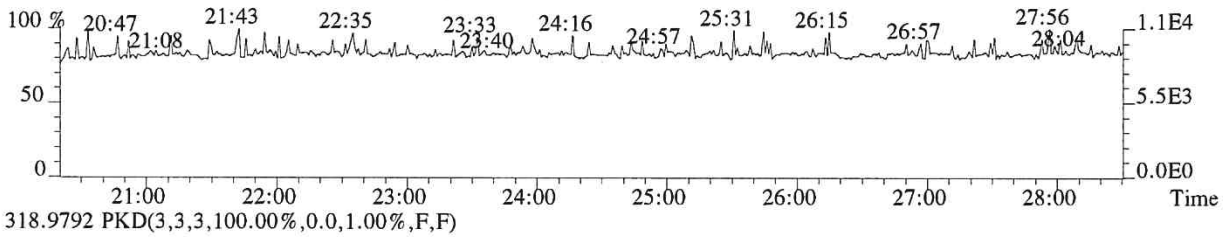
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3956.0,1.00%,F,T)



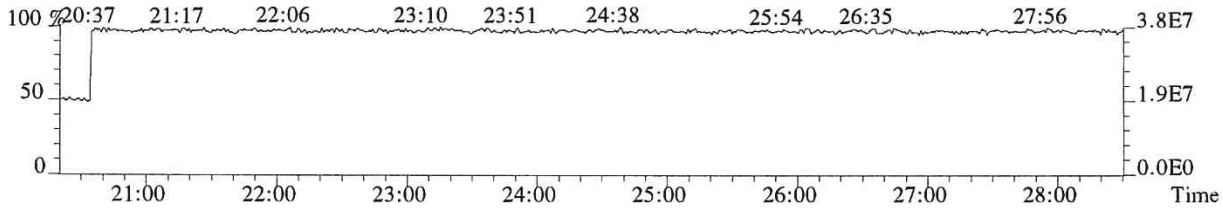
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2972.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

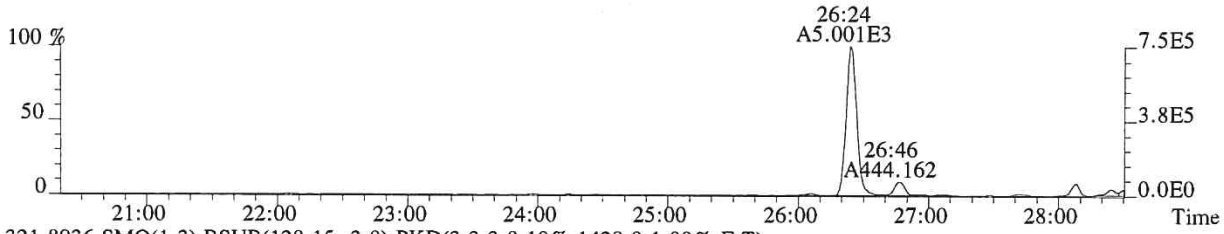


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

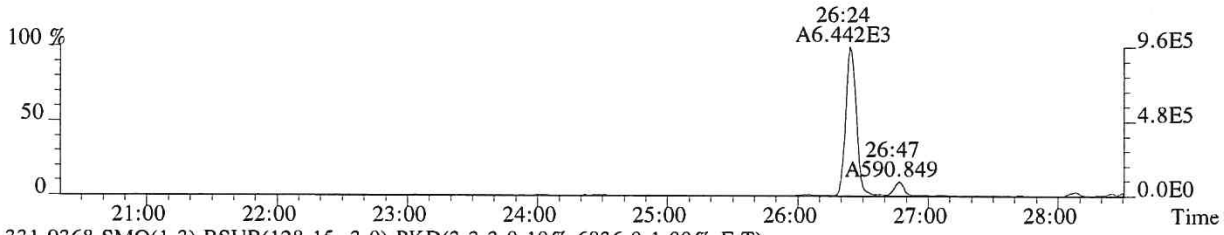


018539

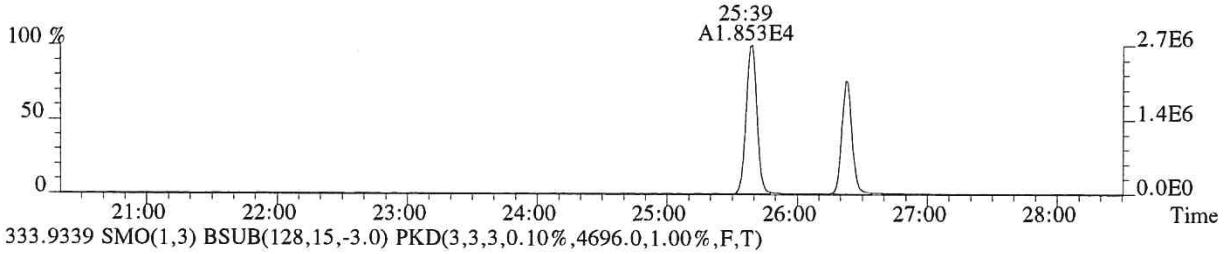
File:P519923 #1-580 Acq:11-JAN-2019 20:34:15 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-014DL
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2528.0,1.00%,F,T)



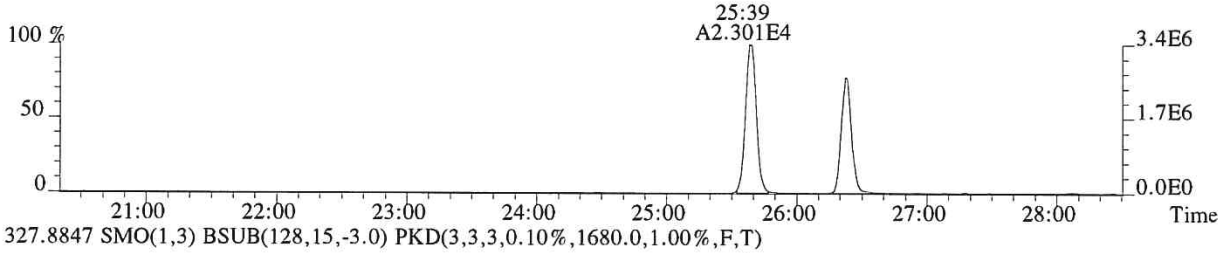
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1428.0,1.00%,F,T)



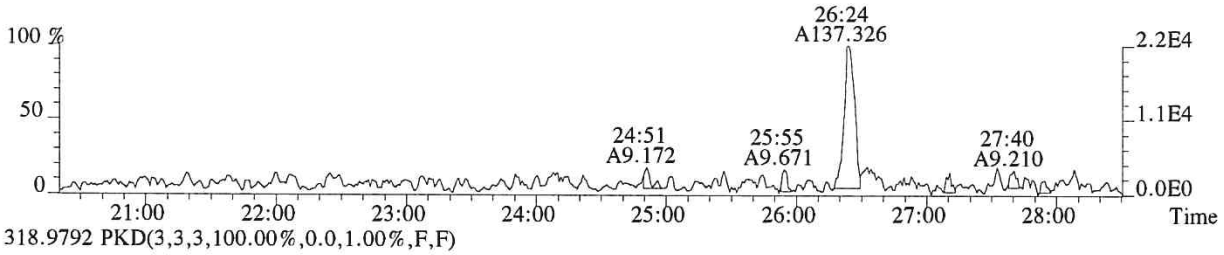
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6836.0,1.00%,F,T)



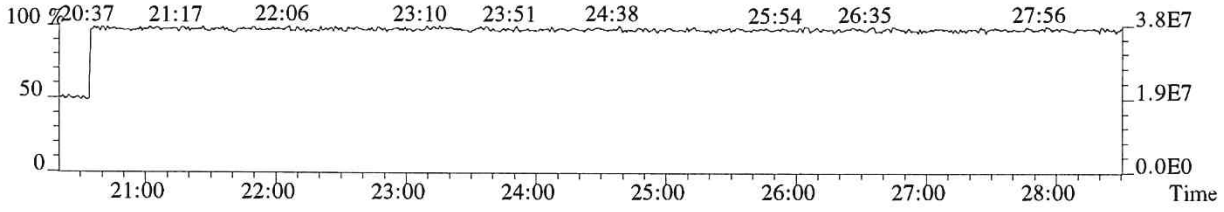
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4696.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1680.0,1.00%,F,T)

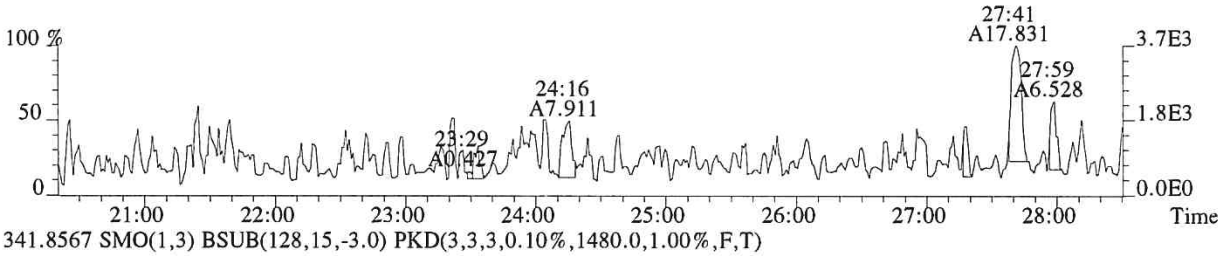


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

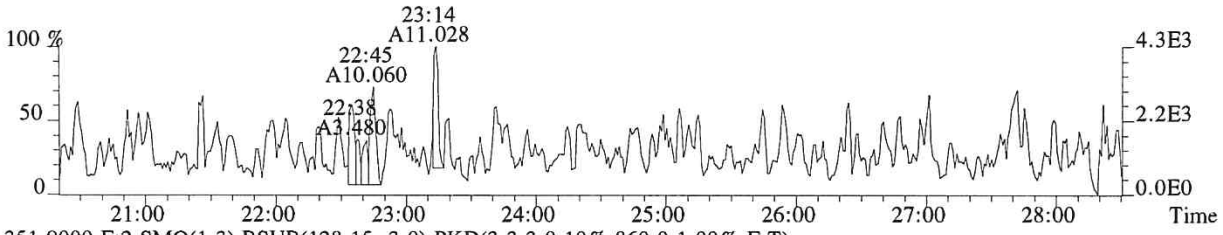


018540

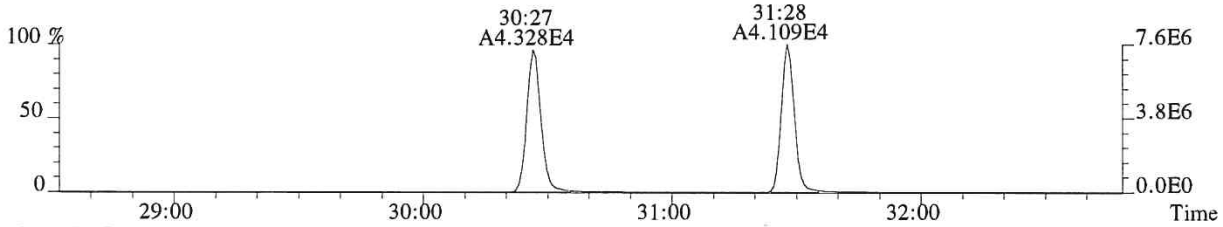
File:P519923 #1-580 Acq:11-JAN-2019 20:34:15 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-014DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,992.0,1.00%,F,T)



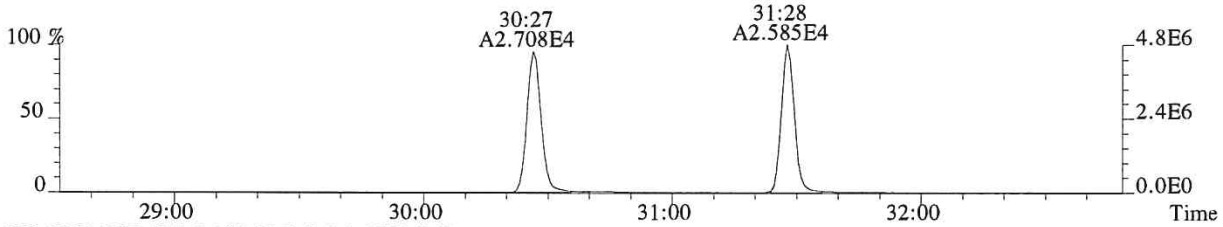
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1480.0,1.00%,F,T)



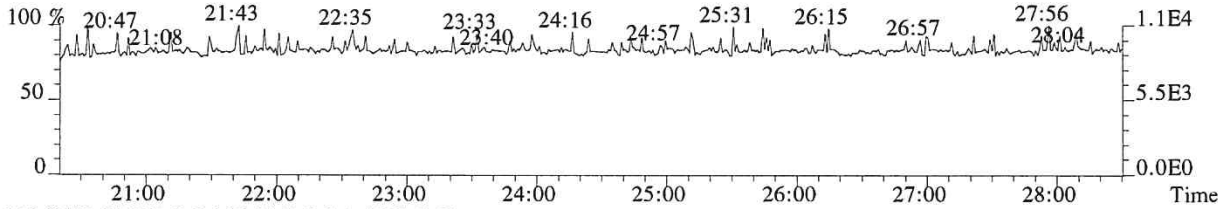
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,860.0,1.00%,F,T)



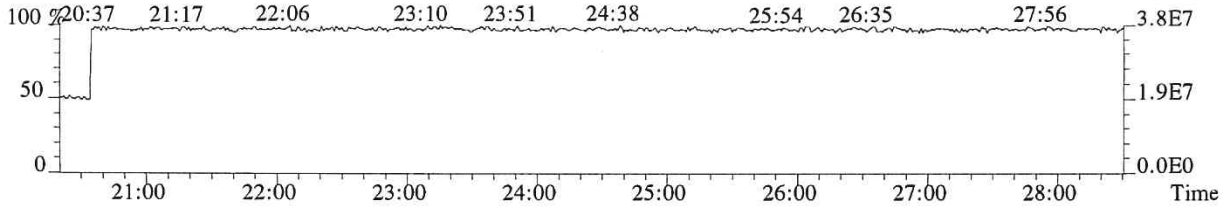
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,912.0,1.00%,F,T)



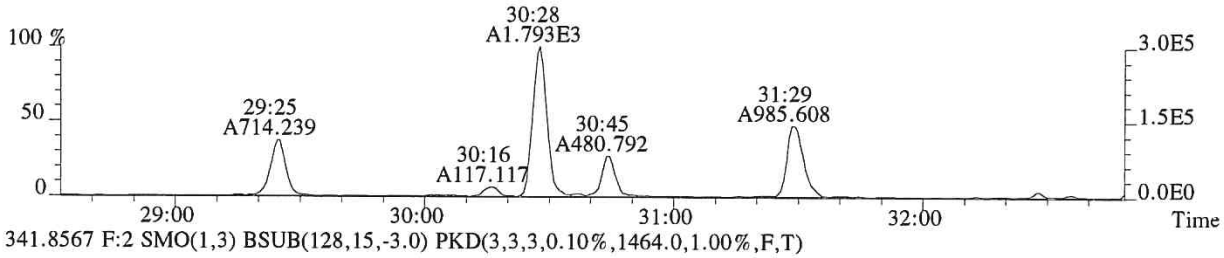
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



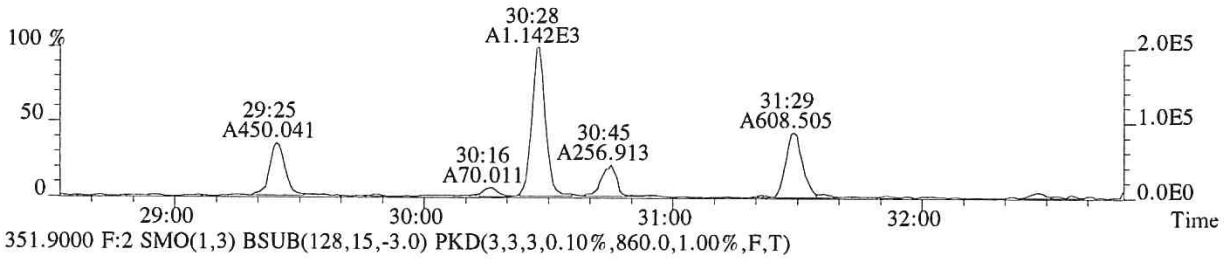
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



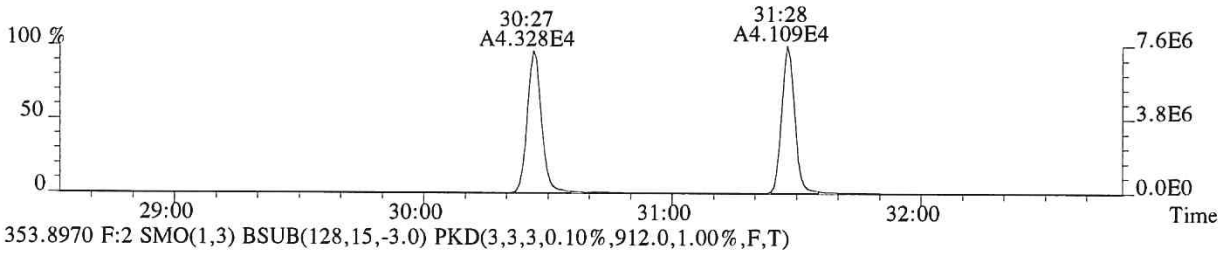
File:P519923 #1-385 Acq:11-JAN-2019 20:34:15 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-014DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,896.0,1.00%,F,T)



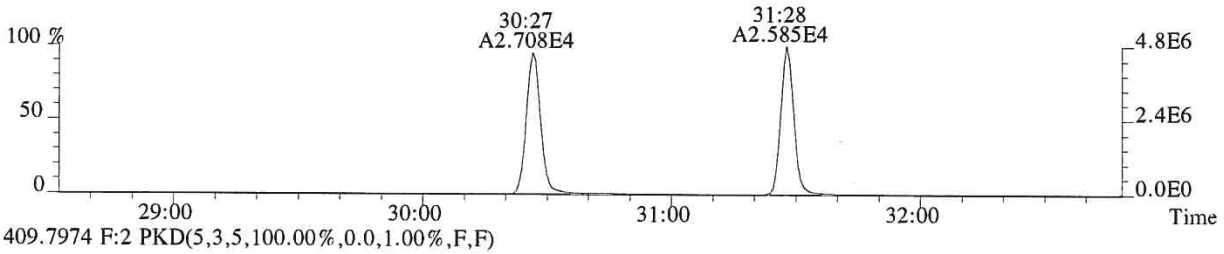
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1464.0,1.00%,F,T)



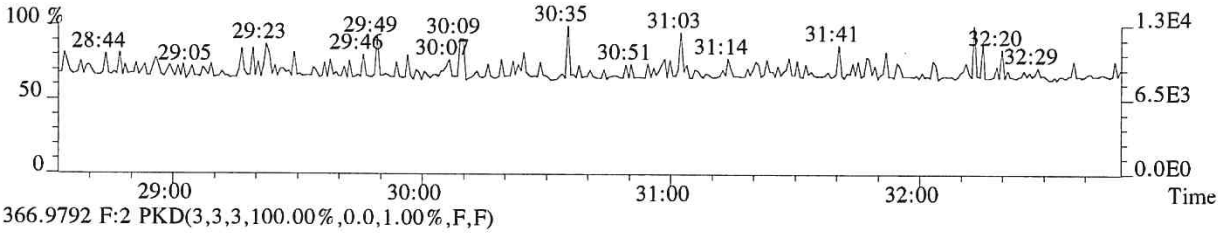
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,860.0,1.00%,F,T)



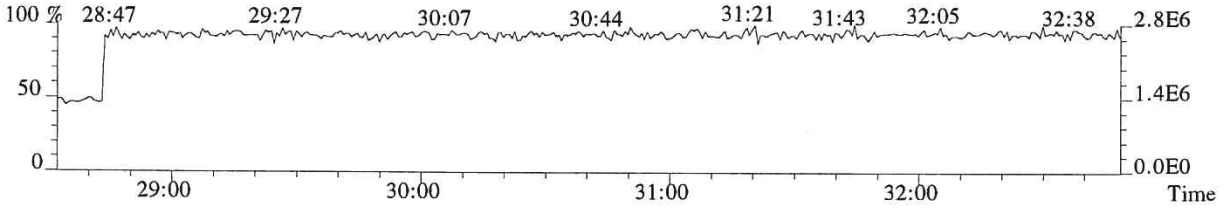
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,912.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

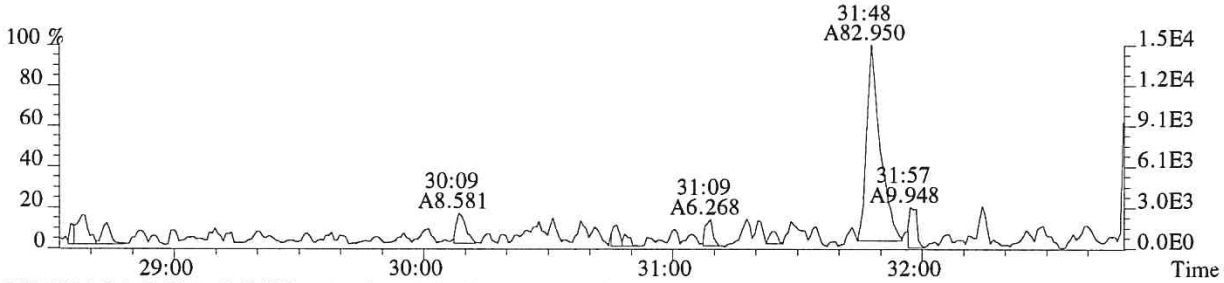


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

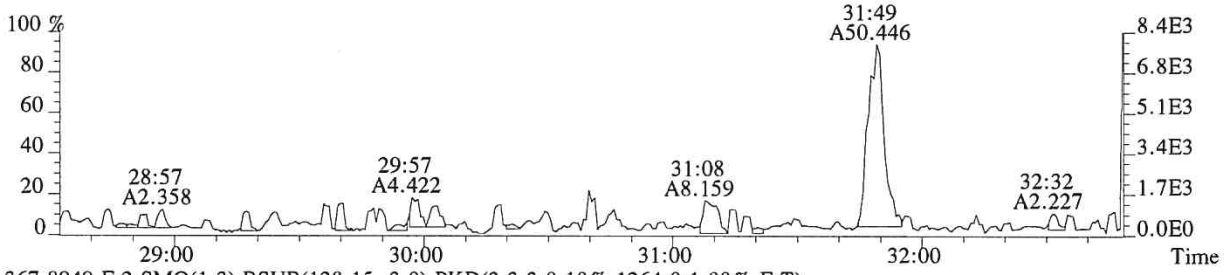


018542

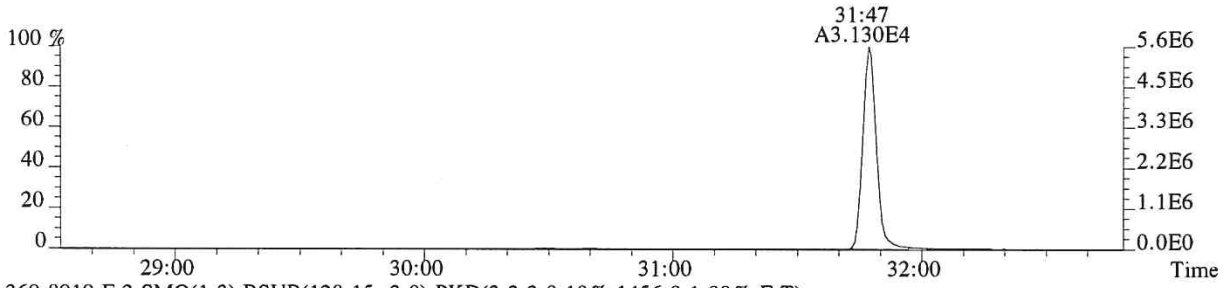
File:P519923 #1-385 Acq:11-JAN-2019 20:34:15 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-014DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,868.0,1.00%,F,T)



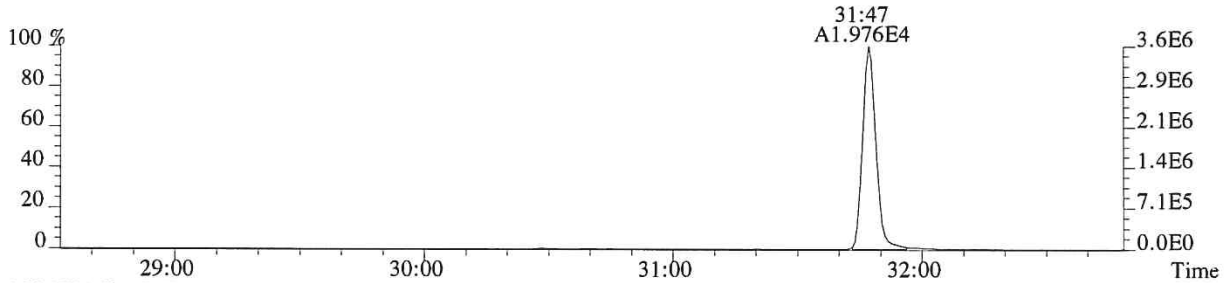
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,464.0,1.00%,F,T)



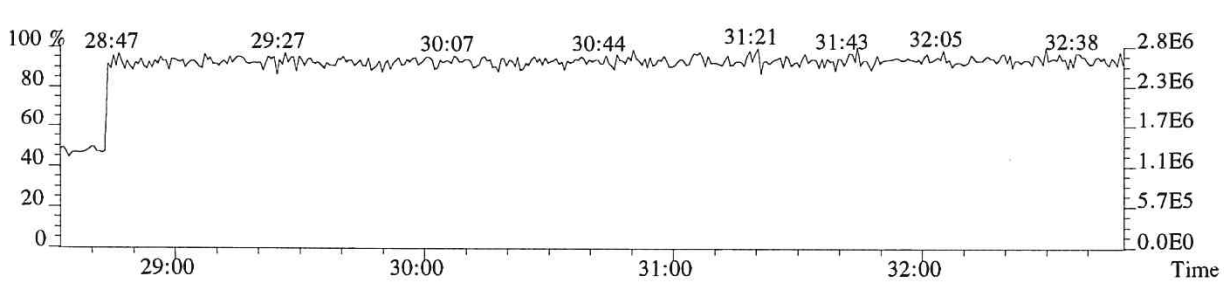
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1264.0,1.00%,F,T)



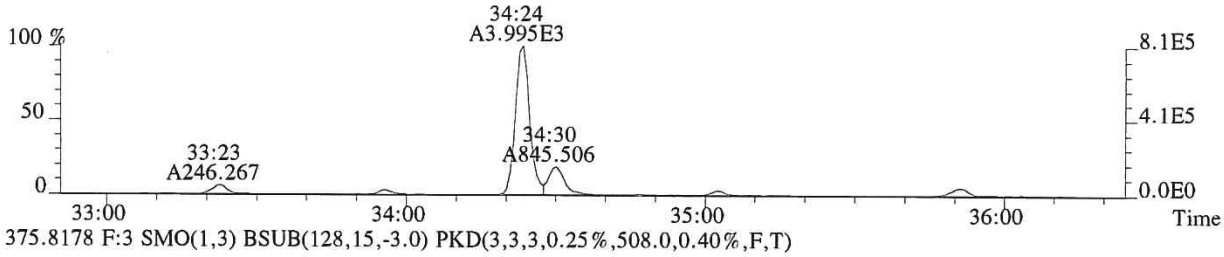
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1456.0,1.00%,F,T)



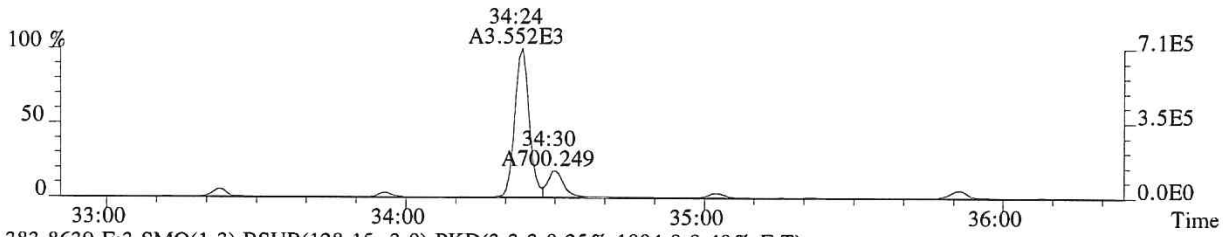
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



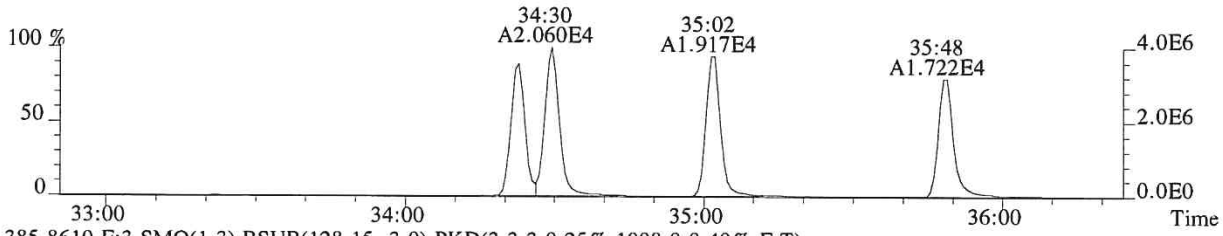
File:P519923 #1-321 Acq:11-JAN-2019 20:34:15 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-014DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1012.0,0.40%,F,T)



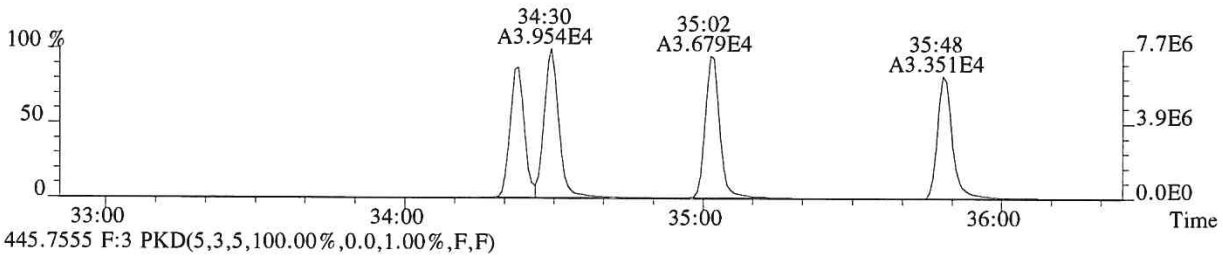
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,508.0,0.40%,F,T)



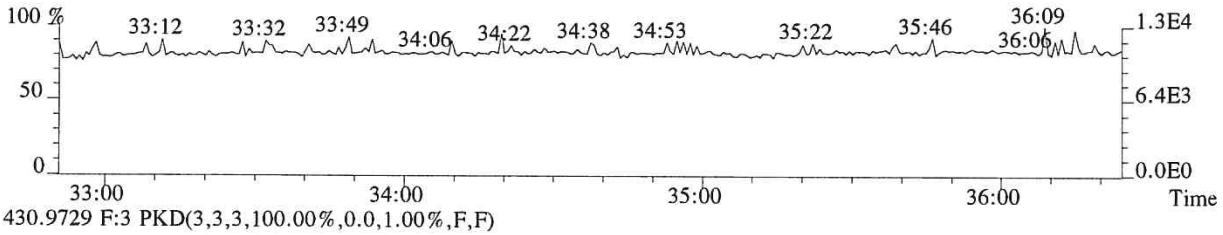
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1004.0,0.40%,F,T)



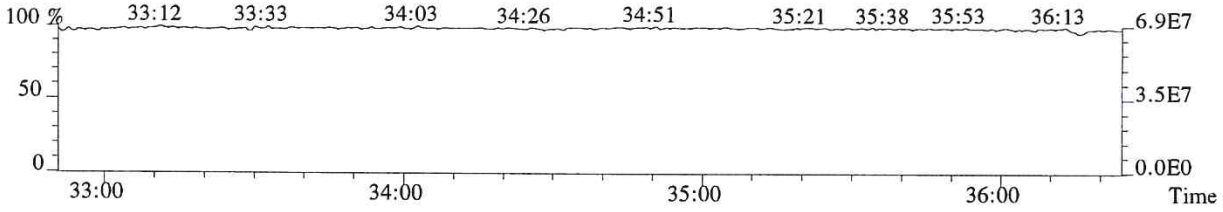
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1008.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

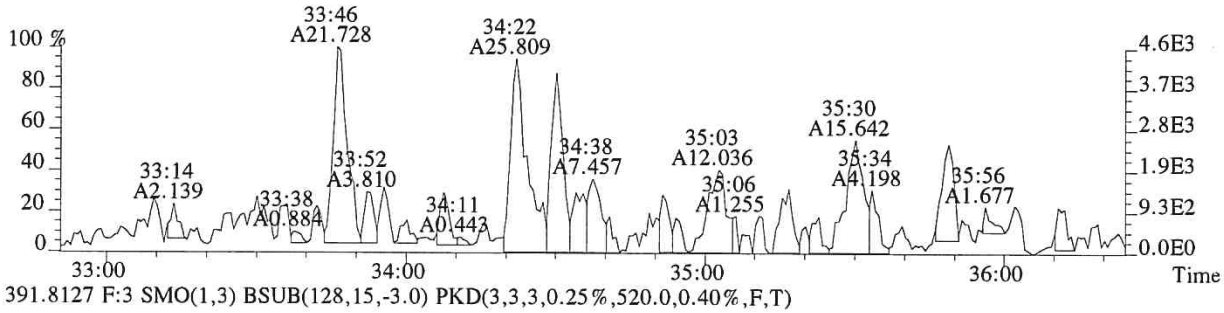


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

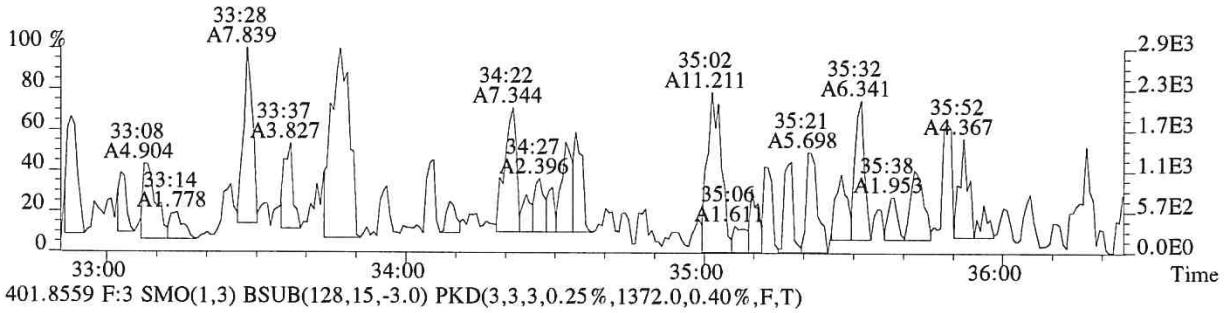


018544

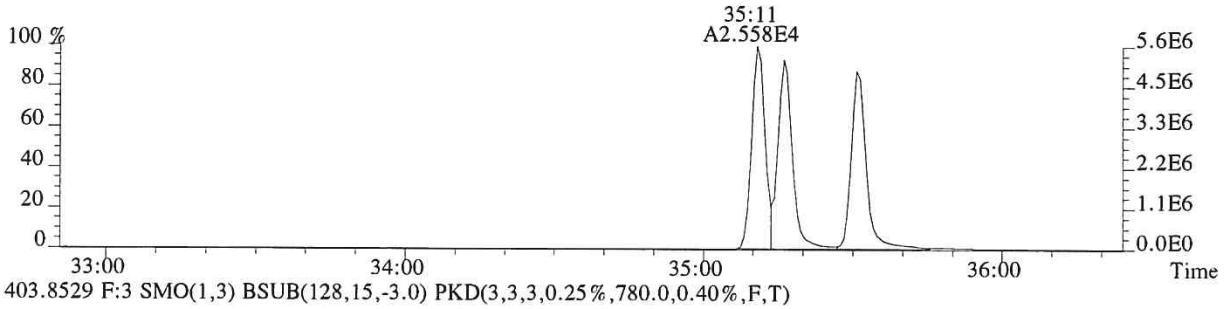
File:P519923 #1-321 Acq:11-JAN-2019 20:34:15 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-014DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,420.0,0.40%,F,T)



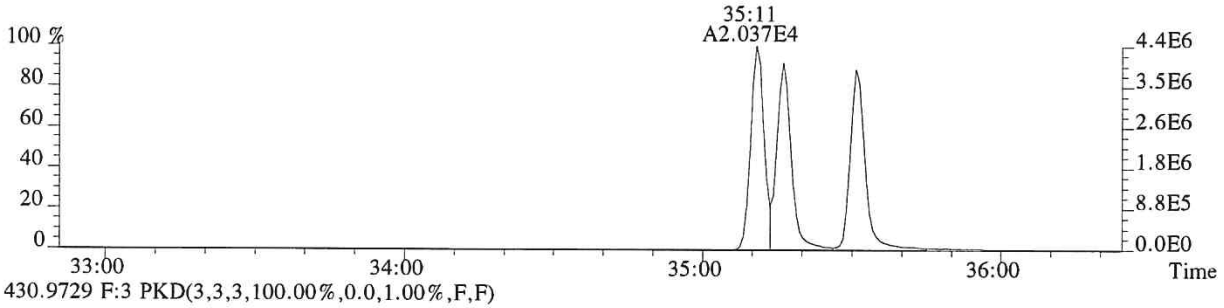
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,520.0,0.40%,F,T)



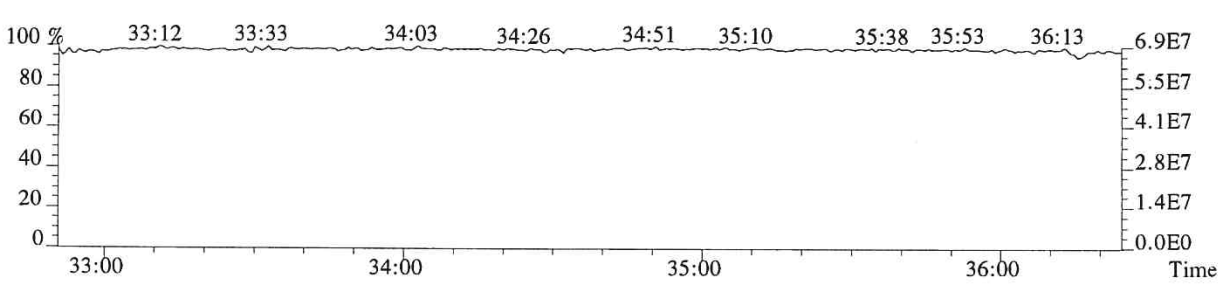
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1372.0,0.40%,F,T)



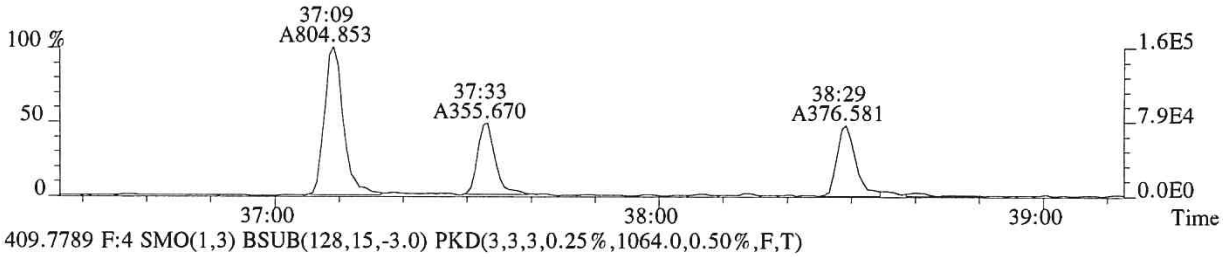
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,780.0,0.40%,F,T)



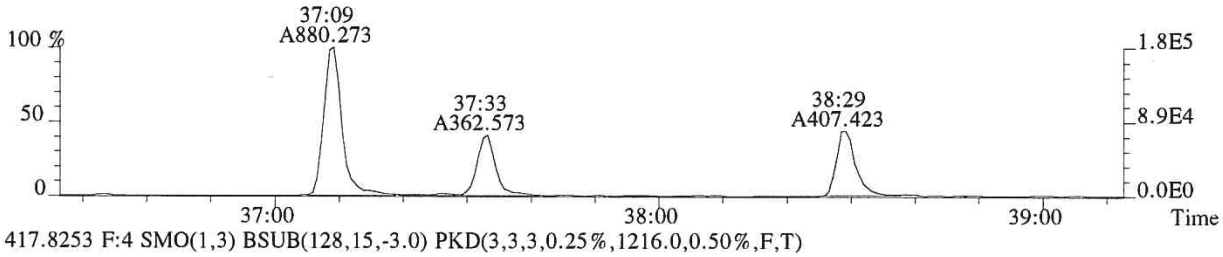
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



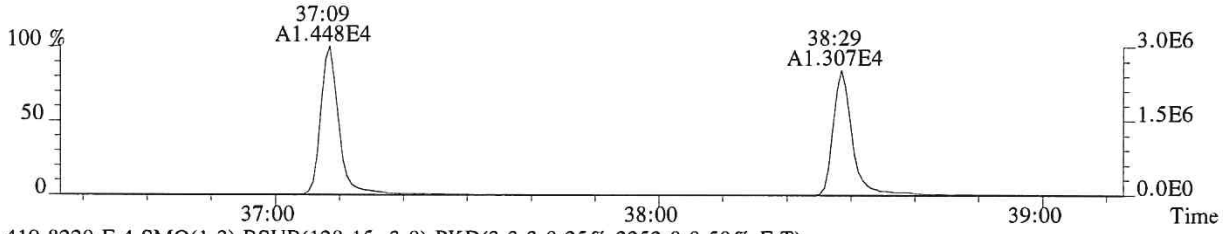
File:P519923 #1-250 Acq:11-JAN-2019 20:34:15 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-014DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1480.0,0.50%,F,T)



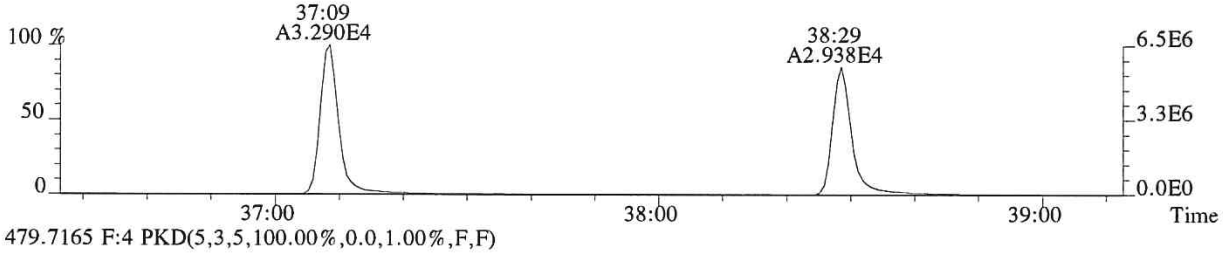
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1064.0,0.50%,F,T)



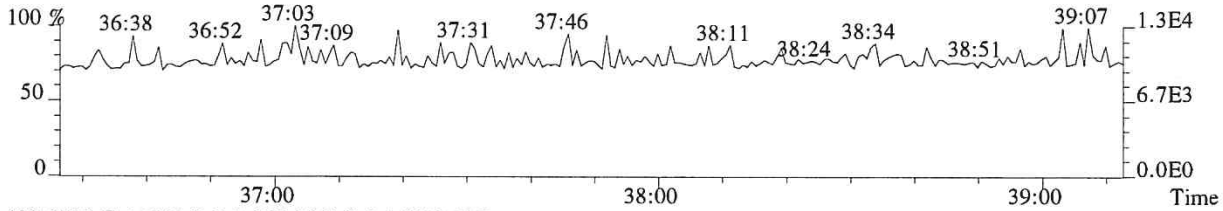
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1216.0,0.50%,F,T)



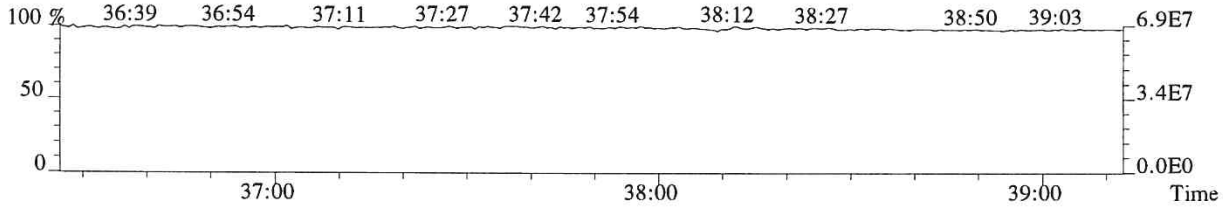
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2252.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

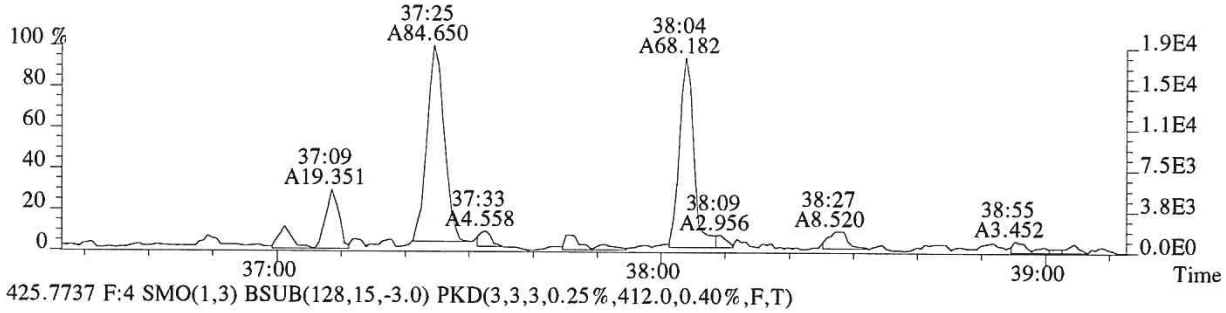


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

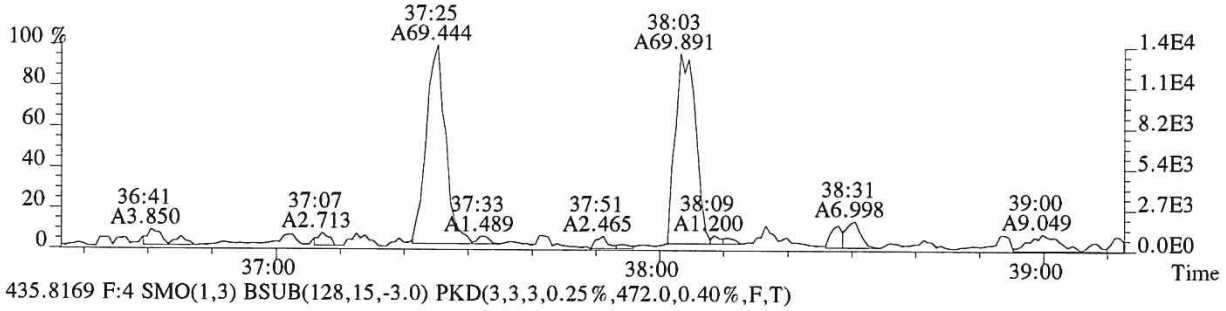


018546

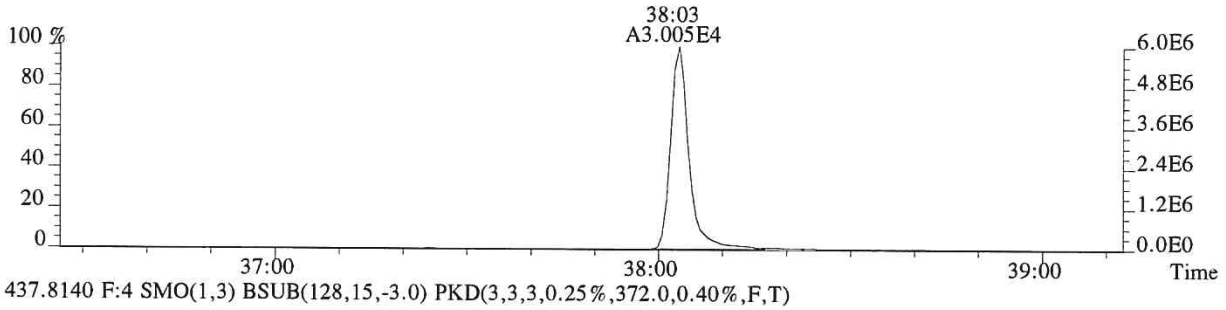
File:P519923 #1-250 Acq:11-JAN-2019 20:34:15 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-014DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,584.0,0.40%,F,T)



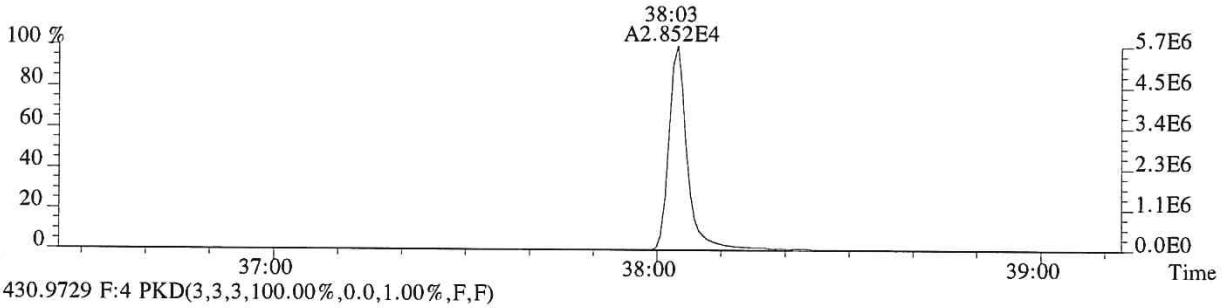
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,412.0,0.40%,F,T)



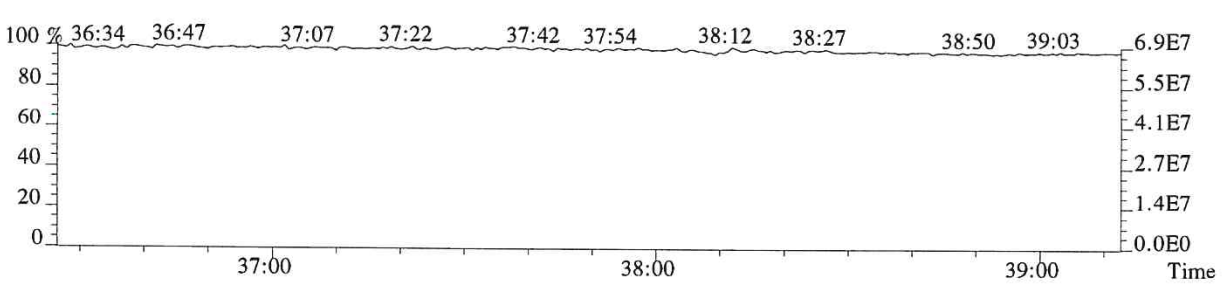
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,472.0,0.40%,F,T)



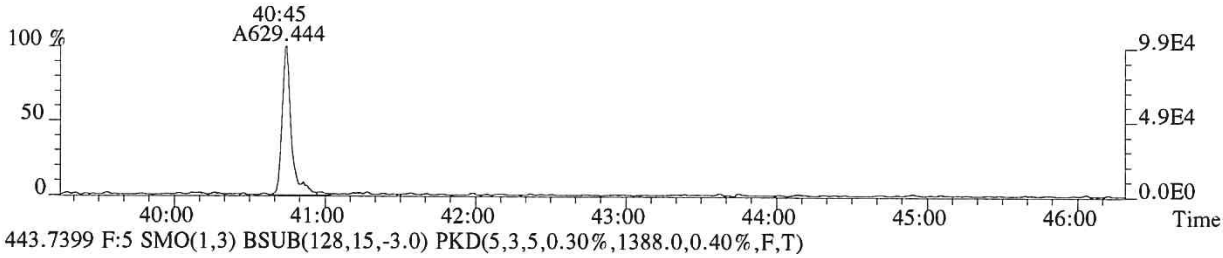
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,372.0,0.40%,F,T)



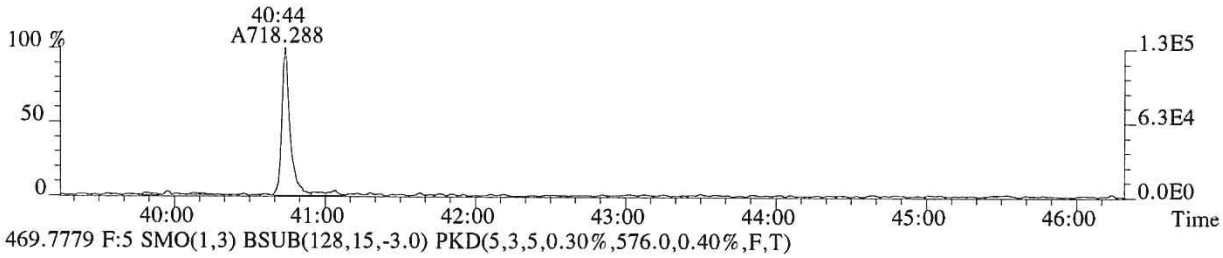
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



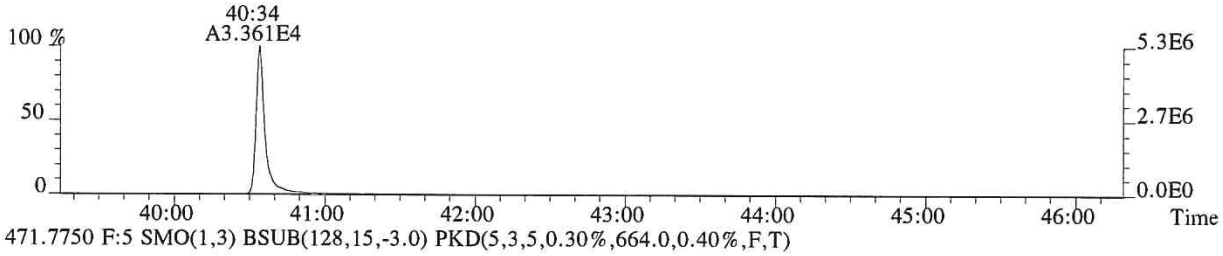
File:P519923 #1-637 Acq:11-JAN-2019 20:34:15 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-014DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1184.0,0.40%,F,T)



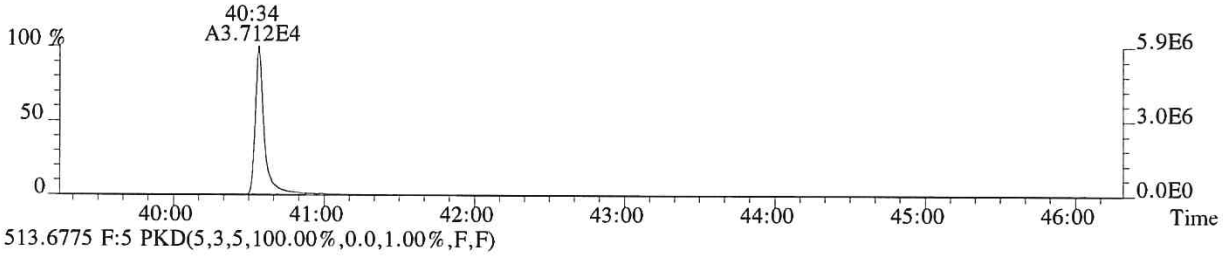
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1388.0,0.40%,F,T)



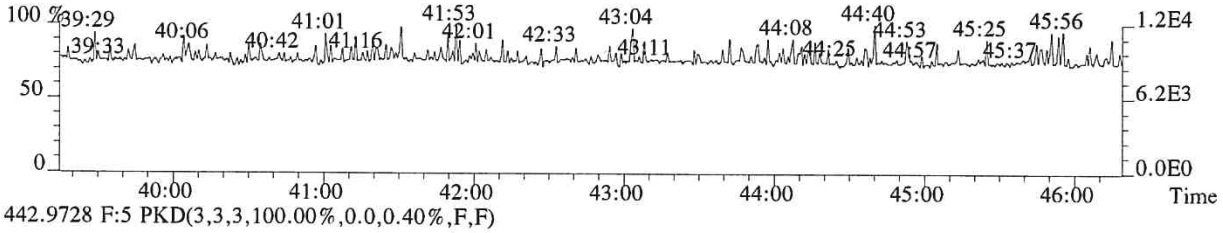
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,576.0,0.40%,F,T)



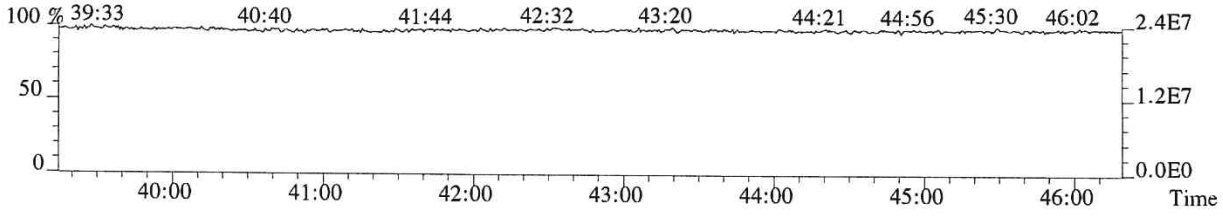
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,664.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



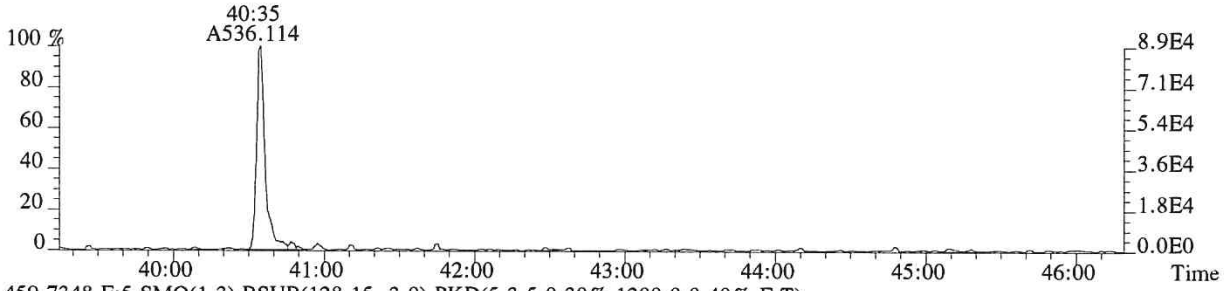
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



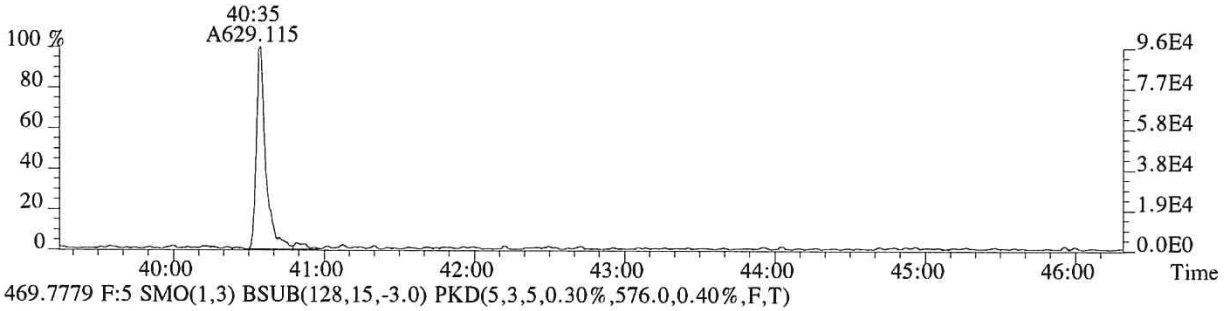
018548

01/14/19 gc LKL 01/14/19

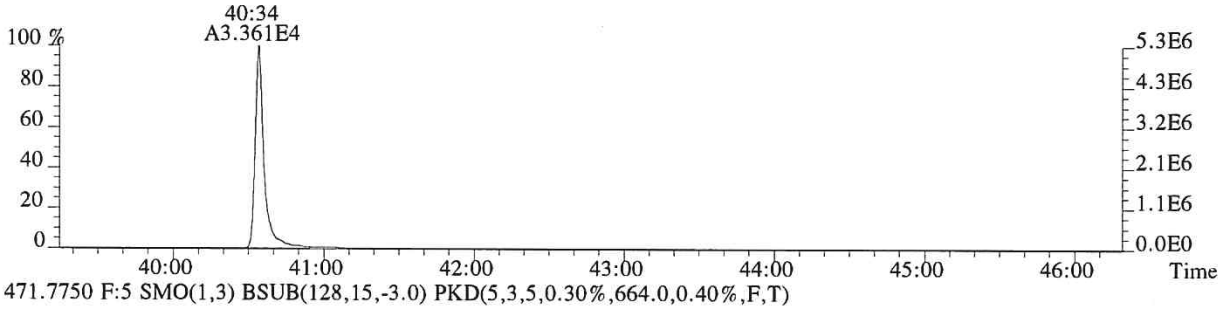
File:P519923 #1-637 Acq:11-JAN-2019 20:34:15 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-014DL E1801139-014DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,436.0,0.40%,F,T)



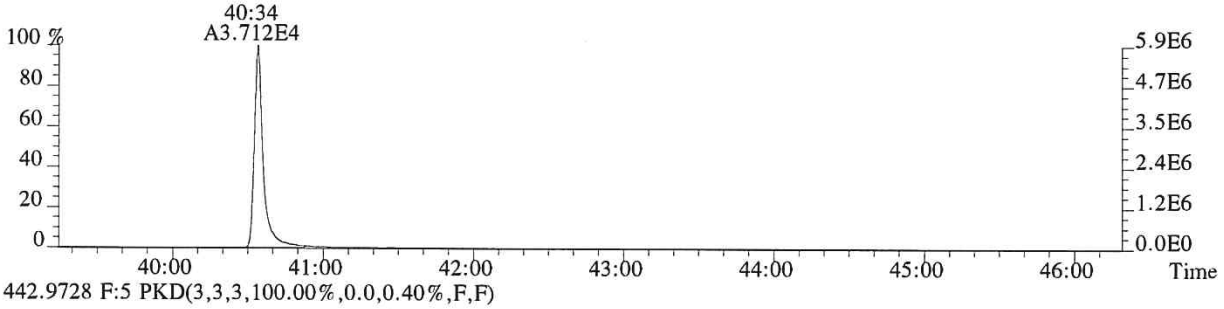
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1200.0,0.40%,F,T)



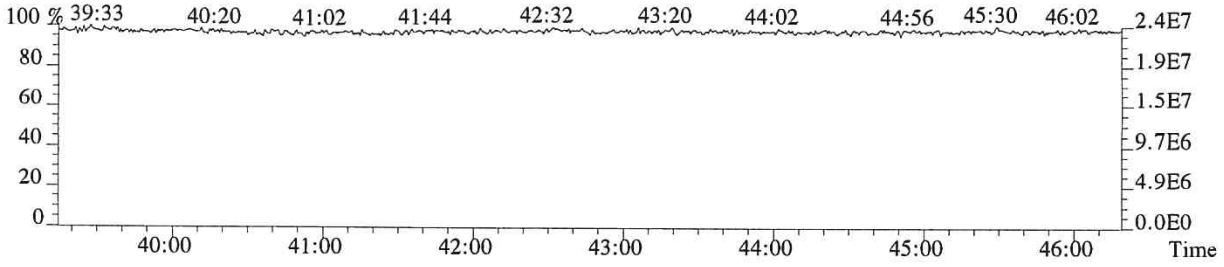
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,576.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,664.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0230

Run #18 Filename P519895 Samp: 1 Inj: 1 Acquired: 10-JAN-19 21:17:25
Processed: 11-JAN-19 09:27:00 Sample ID: E1801139-015

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:23	3.150e+04	4.143e+04	0.76	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:28	1.714e+03	1.212e+03	1.41	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	1.240e+03	8.704e+02	1.43	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	2.862e+03	2.308e+03	1.24	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	7.099e+02	6.157e+02	1.15	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:03	1.269e+02	1.363e+02	0.93	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:51	2.237e+02	1.760e+02	1.27	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:09	6.688e+02	6.381e+02	1.05	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:29	3.028e+02	2.664e+02	1.14	yes	no	1.258
10	Unk	OCDF	40:44	3.152e+02	3.551e+02	0.89	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:25	7.664e+03	9.987e+03	0.77	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:48	1.703e+02	9.469e+01	1.80	no	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:11	5.457e+01	7.088e+01	0.77	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:17	9.401e+01	9.138e+01	1.03	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:32	1.915e+02	1.892e+02	1.01	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	2.594e+03	2.472e+03	1.05	yes	no	1.025
17	Unk	OCDD	40:35	3.539e+04	3.937e+04	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:22	2.280e+04	2.877e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:27	4.003e+04	2.549e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:28	4.070e+04	2.553e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:23	1.884e+04	3.671e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	2.066e+04	4.062e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:02	1.958e+04	3.700e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	1.845e+04	3.563e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:09	1.283e+04	2.917e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	1.355e+04	3.062e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:23	1.080e+04	1.402e+04	0.77	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:48	3.139e+04	1.974e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:11	2.881e+04	2.244e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:16	2.828e+04	2.203e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	2.911e+04	2.778e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	40:34	2.438e+04	2.694e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:40	3.437e+04	4.290e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:31	4.766e+04	3.799e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:25	1.612e+04				no	1.014

$$\text{OCDD} = \frac{(3.539e+04 + 3.937e+04) \times 4000 \text{ pg} \times 1}{(2.438e+04 + 2.694e+04) \times 10.687 \text{ g} \times 73.5 / 100 \times 1.118} = 663.5 \text{ ng/kg}$$

LW 01/11/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0230

Run #18 Filename P519895 Samp: 1 Inj: 1 Acquired: 10-JAN-19 21:17:25
Processed: 11-JAN-19 09:27:00 LAB. ID: E1801139-015

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	4.21e+06	3.40e+03	1.2e+03	5.42e+06	3.20e+03	1.7e+03
2	1,2,3,7,8-PeCDF	3.17e+05	1.54e+03	2.0e+02	2.06e+05	2.23e+03	9.3e+01
3	2,3,4,7,8-PeCDF	1.99e+05	1.54e+03	1.3e+02	1.43e+05	2.23e+03	6.4e+01
4	1,2,3,4,7,8-HxCDF	5.99e+05	1.19e+03	5.0e+02	4.81e+05	2.04e+03	2.4e+02
5	1,2,3,6,7,8-HxCDF	1.36e+05	1.19e+03	1.1e+02	1.23e+05	2.04e+03	6.0e+01
6	2,3,4,6,7,8-HxCDF	2.73e+04	1.19e+03	2.3e+01	2.39e+04	2.04e+03	1.2e+01
7	1,2,3,7,8,9-HxCDF	3.51e+04	1.19e+03	2.9e+01	3.02e+04	2.04e+03	1.5e+01
8	1,2,3,4,6,7,8-HpCDF	1.42e+05	1.51e+03	9.4e+01	1.41e+05	1.27e+03	1.1e+02
9	1,2,3,4,7,8,9-HpCDF	6.41e+04	1.51e+03	4.2e+01	5.58e+04	1.27e+03	4.4e+01
10	OCDF	5.67e+04	9.36e+02	6.1e+01	6.34e+04	1.00e+03	6.3e+01
11	2,3,7,8-TCDD	1.26e+06	2.44e+03	5.1e+02	1.57e+06	2.36e+03	6.7e+02
12	1,2,3,7,8-PeCDD	3.69e+04	1.55e+03	2.4e+01	1.77e+04	8.92e+02	2.0e+01
13	1,2,3,4,7,8-HxCDD	1.38e+04	1.33e+03	1.0e+01	1.83e+04	1.65e+03	1.1e+01
14	1,2,3,6,7,8-HxCDD	2.10e+04	1.33e+03	1.6e+01	1.98e+04	1.65e+03	1.2e+01
15	1,2,3,7,8,9-HxCDD	3.53e+04	1.33e+03	2.7e+01	3.99e+04	1.65e+03	2.4e+01
16	1,2,3,4,6,7,8-HpCDD	5.66e+05	3.12e+03	1.8e+02	5.18e+05	1.49e+03	3.5e+02
17	OCDD	6.66e+06	6.12e+02	1.1e+04	7.53e+06	6.20e+02	1.2e+04
18	13C-2,3,7,8-TCDF	3.25e+06	4.86e+03	6.7e+02	4.18e+06	3.14e+03	1.3e+03
19	13C-1,2,3,7,8-PeCDF	7.00e+06	1.51e+03	4.6e+03	4.40e+06	8.04e+02	5.5e+03
20	13C-2,3,4,7,8-PeCDF	7.61e+06	1.51e+03	5.0e+03	4.77e+06	8.04e+02	5.9e+03
21	13C-1,2,3,4,7,8-HxCDF	4.04e+06	1.18e+03	3.4e+03	7.82e+06	2.66e+03	2.9e+03
22	13C-1,2,3,6,7,8-HxCDF	4.25e+06	1.18e+03	3.6e+03	8.25e+06	2.66e+03	3.1e+03
23	13C-2,3,4,6,7,8-HxCDF	4.11e+06	1.18e+03	3.5e+03	7.71e+06	2.66e+03	2.9e+03
24	13C-1,2,3,7,8,9-HxCDF	3.69e+06	1.18e+03	3.1e+03	7.12e+06	2.66e+03	2.7e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.81e+06	3.01e+03	9.3e+02	6.30e+06	4.02e+03	1.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.94e+06	3.01e+03	9.8e+02	6.51e+06	4.02e+03	1.6e+03
27	13C-2,3,7,8-TCDD	1.71e+06	8.51e+03	2.0e+02	2.25e+06	7.42e+03	3.0e+02
28	13C-1,2,3,7,8-PeCDD	5.86e+06	1.90e+03	3.1e+03	3.70e+06	1.66e+03	2.2e+03
29	13C-1,2,3,4,7,8-HxCDD	6.52e+06	1.70e+03	3.8e+03	5.07e+06	1.28e+03	4.0e+03
30	13C-1,2,3,6,7,8-HxCDD	5.58e+06	1.70e+03	3.3e+03	4.48e+06	1.28e+03	3.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	6.24e+06	1.11e+03	5.6e+03	5.89e+06	1.54e+03	3.8e+03
32	13C-OCDD	4.59e+06	1.27e+03	3.6e+03	5.13e+06	8.00e+02	6.4e+03
33	13C-1,2,3,4-TCDD	5.23e+06	8.51e+03	6.2e+02	6.57e+06	7.42e+03	8.9e+02
34	13C-1,2,3,7,8,9-HxCDD	9.98e+06	1.70e+03	5.9e+03	7.99e+06	1.28e+03	6.3e+03
35	37Cl-2,3,7,8-TCDD	2.61e+06	1.25e+03	2.1e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0230

Entry: 36 Totals Name: Total Tetra-Furans

Run: 18 File: P519895 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 21:17:25 Processed: 11-JAN-19 09:27:00

Mass: 303.9020 305.8990 Tot Response: 1.32e+05 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:23	4.17e+01	5.61e+01	0.74	yes	9.78e+01		n	n
2	21:50	1.45e+02	2.02e+02	0.72	yes	3.47e+02		n	n
3	22:17	4.51e+02	5.75e+02	0.78	yes	1.03e+03		n	n
4	22:33	1.45e+03	1.77e+03	0.82	yes	3.23e+03		n	n
5	22:55	4.57e+02	6.03e+02	0.76	yes	1.06e+03		n	n
6	23:11	1.14e+03	1.45e+03	0.79	yes	2.59e+03		n	n
7	23:34	3.95e+02	4.99e+02	0.79	yes	8.93e+02		n	n
8	23:48	8.88e+02	1.15e+03	0.78	yes	2.03e+03		n	n
9	23:54	1.43e+03	2.00e+03	0.71	yes	3.43e+03		n	n
10	24:23	1.38e+04	1.77e+04	0.78	yes	3.15e+04		n	n
11	24:41	7.33e+02	9.07e+02	0.81	yes	1.64e+03		n	n
12	25:23	3.15e+04	4.14e+04	0.76	yes	7.29e+04	2,3,7,8-TCDF	n	n
13	25:50	2.13e+03	2.75e+03	0.78	yes	4.87e+03		n	n
14	26:07	3.12e+02	4.63e+02	0.67	yes	7.75e+02		n	n
15	27:40	2.44e+03	3.12e+03	0.78	yes	5.56e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0230

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 18 File: P519895 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 21:17:25 Processed: 11-JAN-19 09:27:00

Mass: 319.8970 321.8940 Tot Response: 2.23e+04 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:03	1.07e+03	0.78	yes	2.44e+03		n	n
2	26:05	1.51e+02	0.68	yes	3.74e+02		n	n
3	26:25	7.66e+03	0.77	yes	1.77e+04	2,3,7,8-TCDD	n	n
4	26:39	4.17e+01	0.82	yes	9.27e+01		n	n
5	26:47	7.50e+02	0.78	yes	1.71e+03		n	n

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Peak List Summary

CLIENT ID.
SL0230

Entry: 39 Totals Name: Total Penta-Furans2

Run: 18 File: P519895 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 21:17:25 Processed: 11-JAN-19 09:27:00

Mass: 339.8600 341.8570 Tot Response: 7.37e+03 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:25	8.92e+02	5.75e+02	1.55	yes	1.47e+03		n	n
2	30:28	1.71e+03	1.21e+03	1.41	yes	2.93e+03	1,2,3,7,8-PeCDF	n	n
3	30:44	5.08e+02	3.61e+02	1.40	yes	8.69e+02		n	n
4	31:29	1.24e+03	8.70e+02	1.43	yes	2.11e+03	2,3,4,7,8-PeCDF	n	n

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Peak List Summary

CLIENT ID.
SL0230

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 18 File: P519895 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 21:17:25 Processed: 11-JAN-19 09:27:00

Mass: 355.8550 357.8520 Tot Response: 1.63e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:00	7.63e+02	4.99e+02	1.53	yes	1.26e+03		n	n
2	30:42	4.02e+01	2.91e+01	1.38	yes	6.92e+01		n	n
3	30:47	1.82e+02	1.12e+02	1.62	yes	2.94e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0230

Entry: 41 Totals Name: Total Hexa-Furans

Run: 18 File: P519895 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 21:17:25 Processed: 11-JAN-19 09:27:00

Mass: 373.8210 375.8180 Tot Response: 7.32e+03 RRF: 1.141

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:23	2.34e+02	1.88e+02 1.25	yes	4.22e+02		n	n
2	34:23	2.86e+03	2.31e+03 1.24	yes	5.17e+03	1,2,3,4,7,8-HxCDF	n	n
3	34:30	7.10e+02	6.16e+02 1.15	yes	1.33e+03	1,2,3,6,7,8-HxCDF	n	n
4	35:51	2.24e+02	1.76e+02 1.27	yes	4.00e+02	1,2,3,7,8,9-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0230

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 18 File: P519895 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 21:17:25 Processed: 11-JAN-19 09:27:00

Mass: 389.8160 391.8130 Tot Response: 1.27e+03 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:34	6.56e+02	5.16e+02 1.27	yes	1.17e+03		n	n
2	35:27	5.25e+01	4.34e+01 1.21	yes	9.59e+01		n	n

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Peak List Summary

CLIENT ID.
SL0230

Entry: 43 Totals Name: Total Hepta-Furans

Run: 18 File: P519895 Sample:1 Injection:1 Function:4

Acquired: 10-JAN-19 21:17:25 Processed: 11-JAN-19 09:27:00

Mass: 407.7820 409.7790 Tot Response: 2.40e+03 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:09	6.69e+02	6.38e+02	1.05	yes	1.31e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	37:33	2.69e+02	2.59e+02	1.04	yes	5.28e+02		n	n
3	38:29	3.03e+02	2.66e+02	1.14	yes	5.69e+02	1,2,3,4,7,8,9-HpCDF	n	n

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Peak List Summary

CLIENT ID.
SL0230

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 18 File: P519895 Sample:1 Injection:1 Function:4

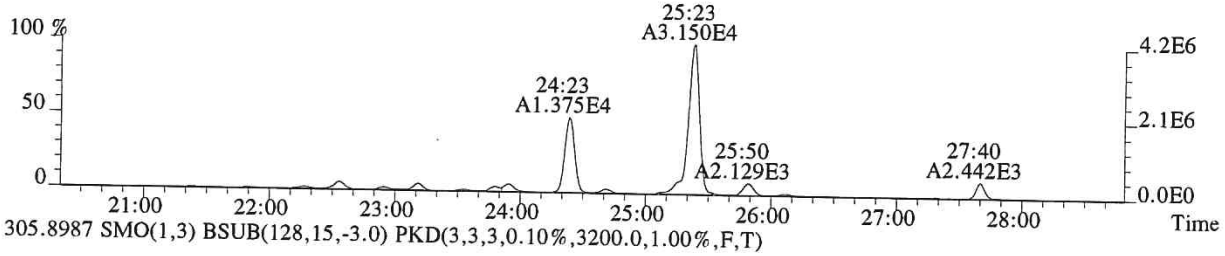
Acquired: 10-JAN-19 21:17:25 Processed: 11-JAN-19 09:27:00

Mass: 423.7770 425.7740 Tot Response: 5.07e+03 RRF: 1.025

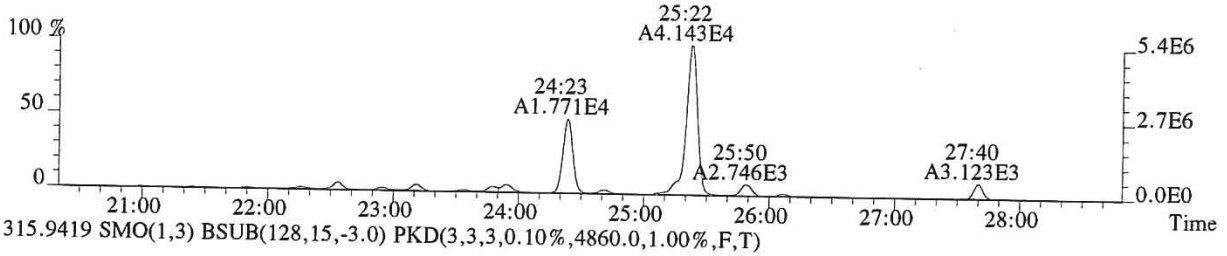
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:04	2.59e+03	2.47e+03 1.05	yes	5.07e+03	1,2,3,4,6,7,8-HpCDD	n	n

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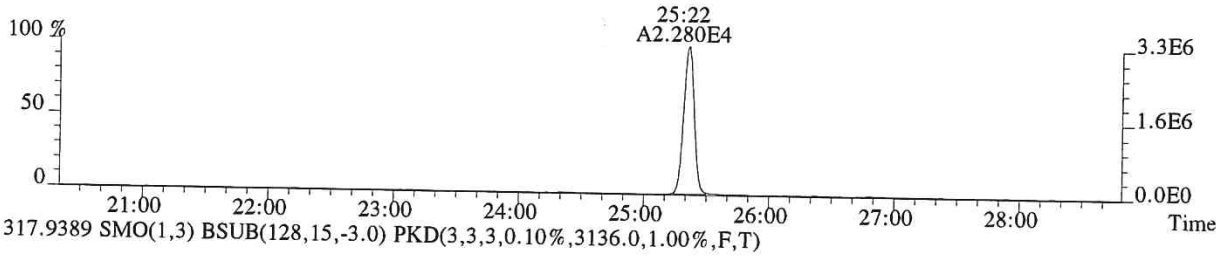
File:P519895 #1-602 Acq:10-JAN-2019 21:17:25 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-015
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3396.0,1.00%,F,T)



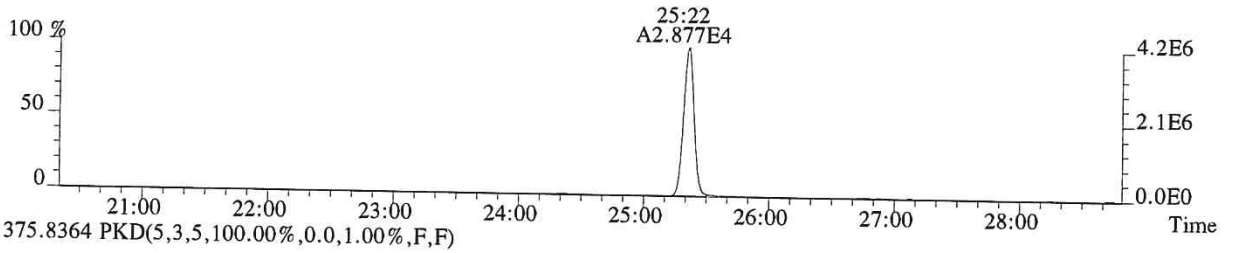
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3200.0,1.00%,F,T)



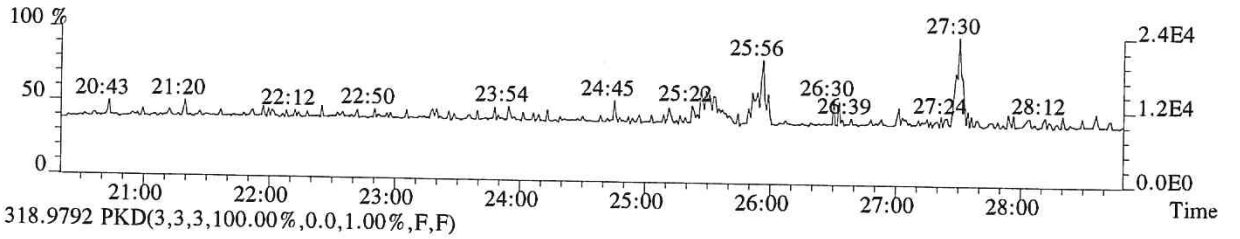
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4860.0,1.00%,F,T)



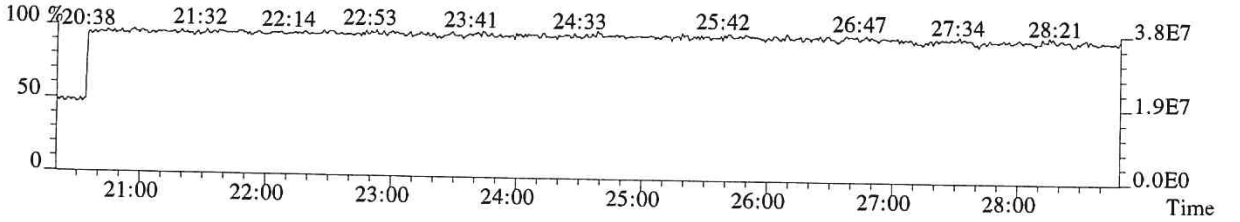
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3136.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

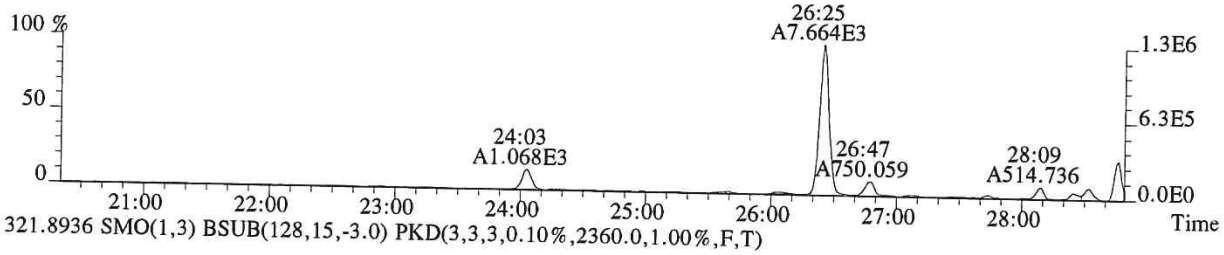


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

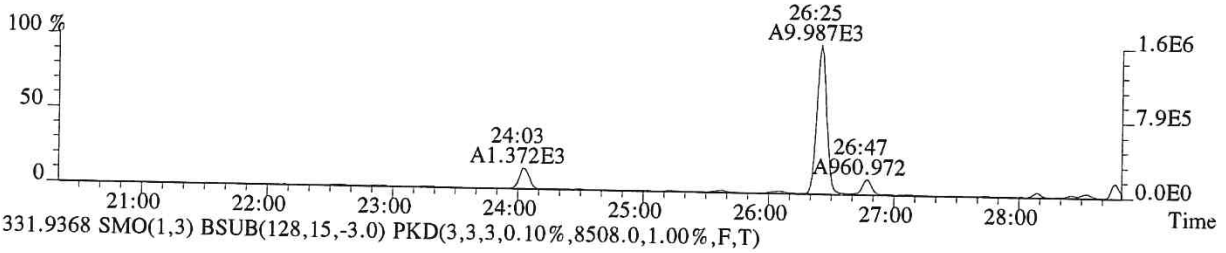


018560

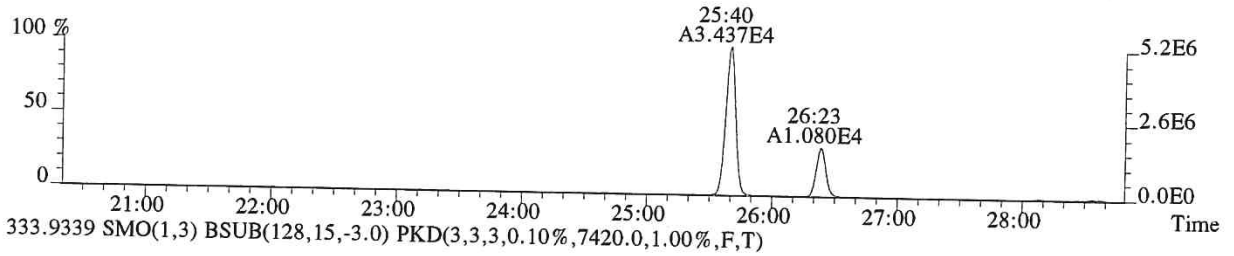
File:P519895 #1-602 Acq:10-JAN-2019 21:17:25 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-015
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2440.0,1.00%,F,T)



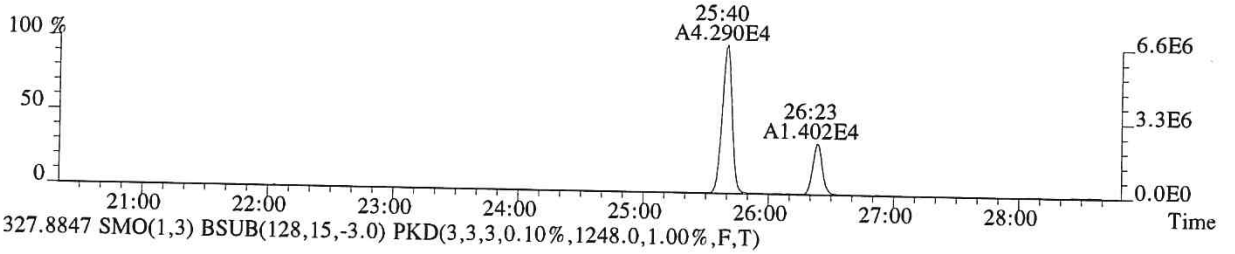
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2360.0,1.00%,F,T)



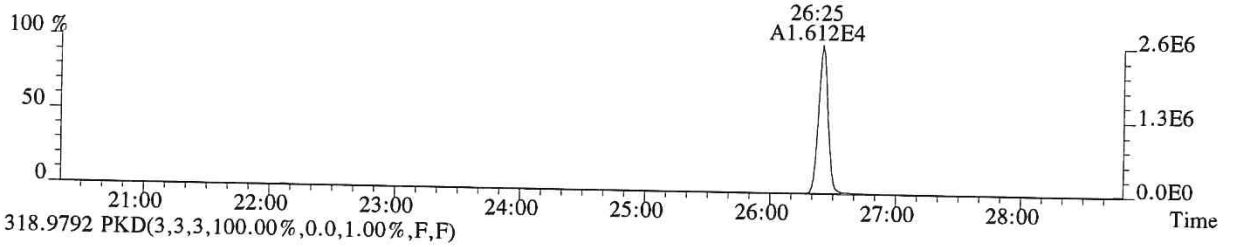
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8508.0,1.00%,F,T)



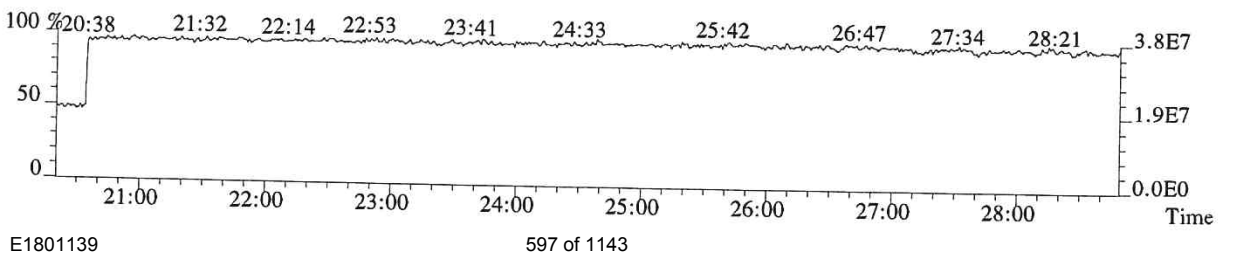
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7420.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1248.0,1.00%,F,T)

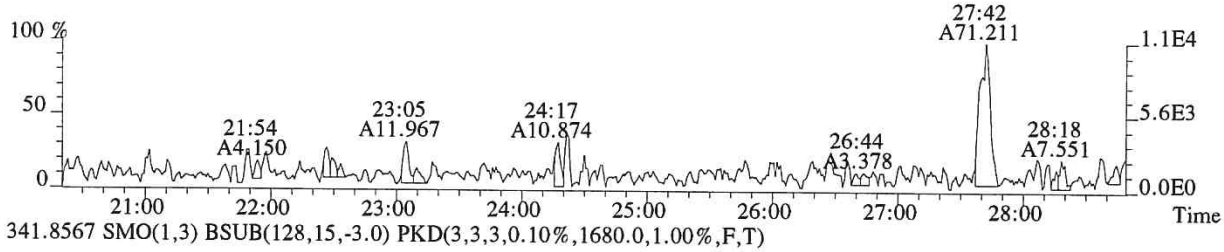


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

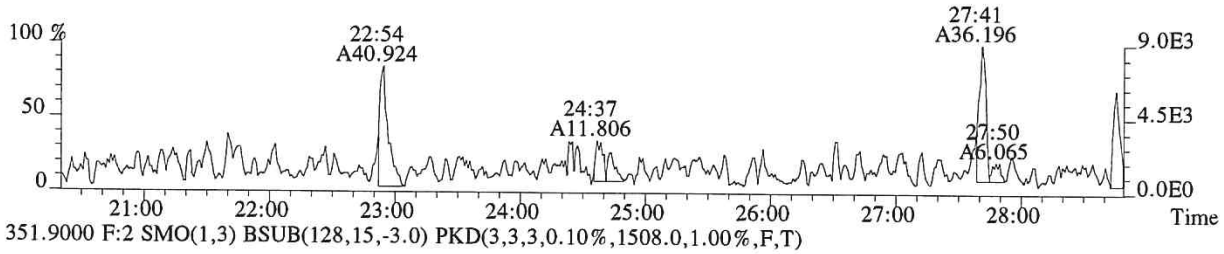


018561

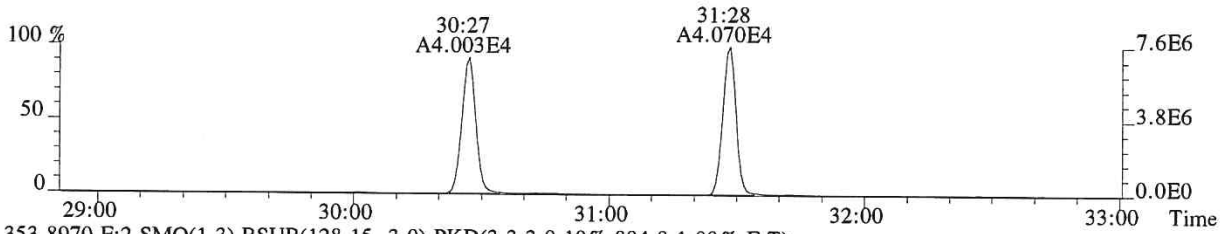
File:P519895 #1-602 Acq:10-JAN-2019 21:17:25 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-015
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1424.0,1.00%,F,T)



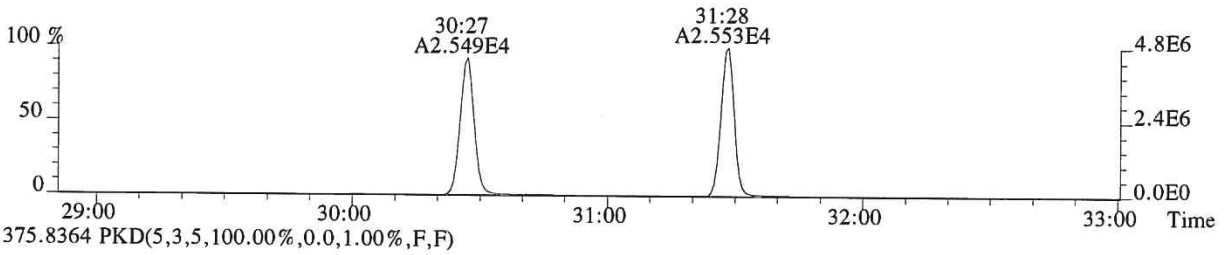
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1680.0,1.00%,F,T)



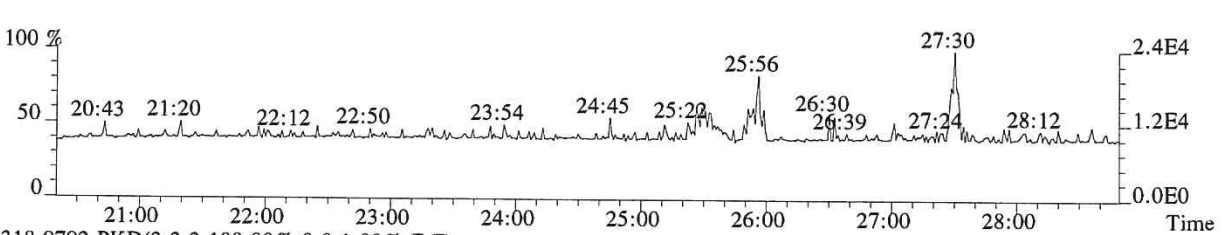
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1508.0,1.00%,F,T)



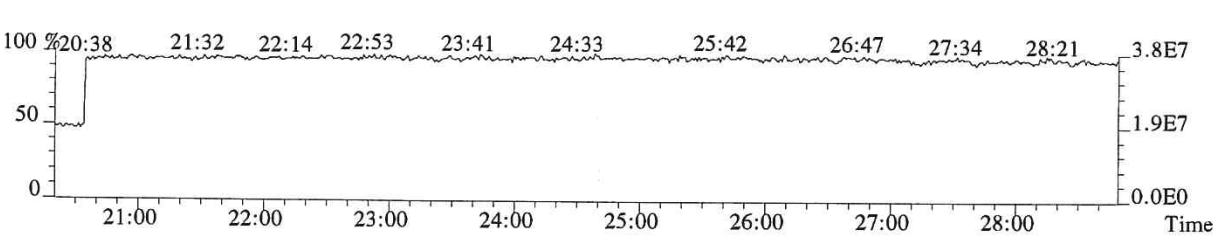
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,804.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

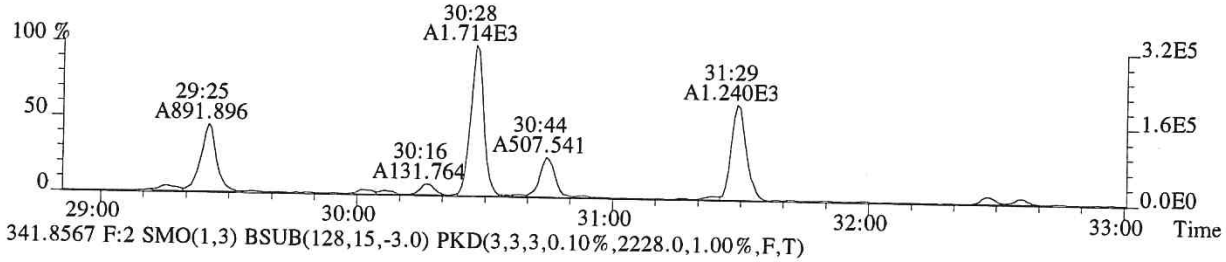


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

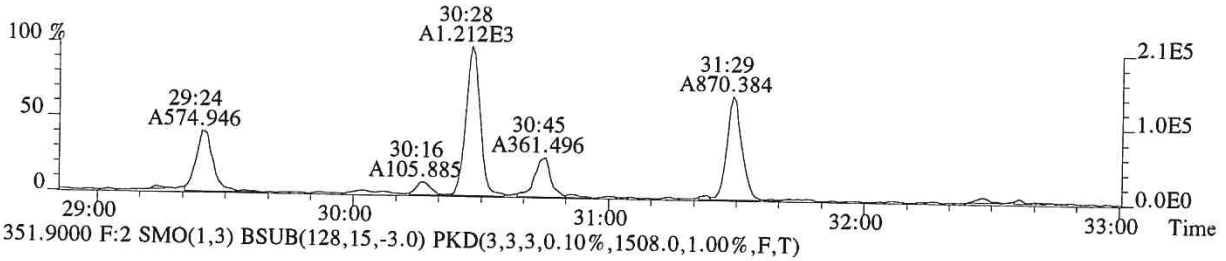


018562

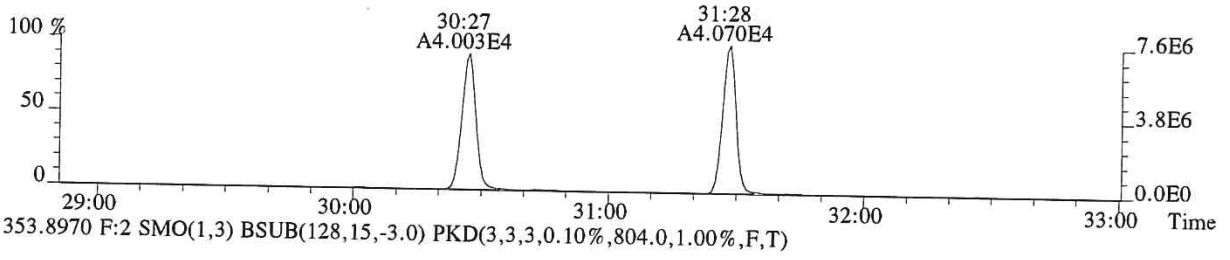
File:P519895 #1-375 Acq:10-JAN-2019 21:17:25 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-015
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1544.0,1.00%,F,T)



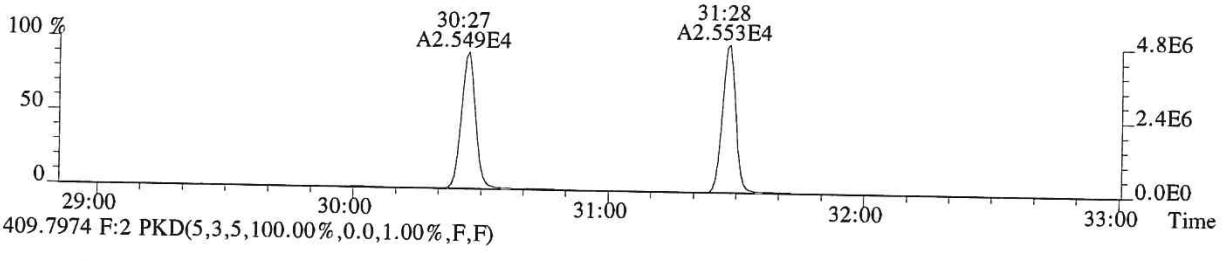
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2228.0,1.00%,F,T)



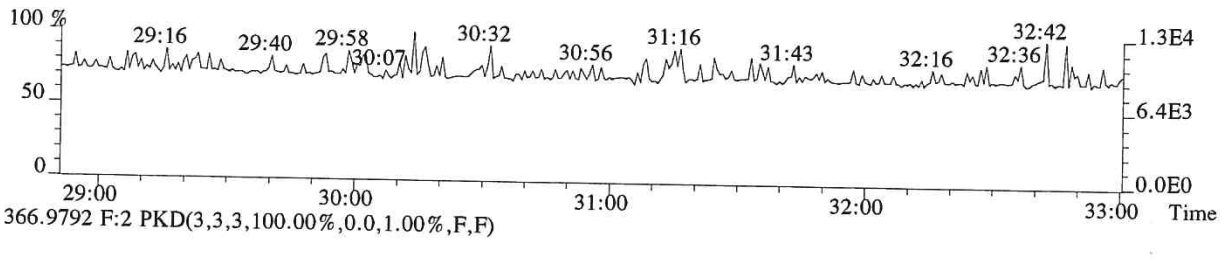
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1508.0,1.00%,F,T)



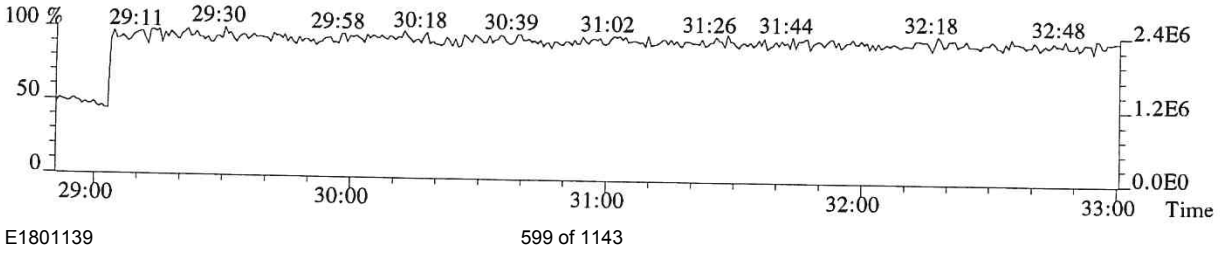
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,804.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

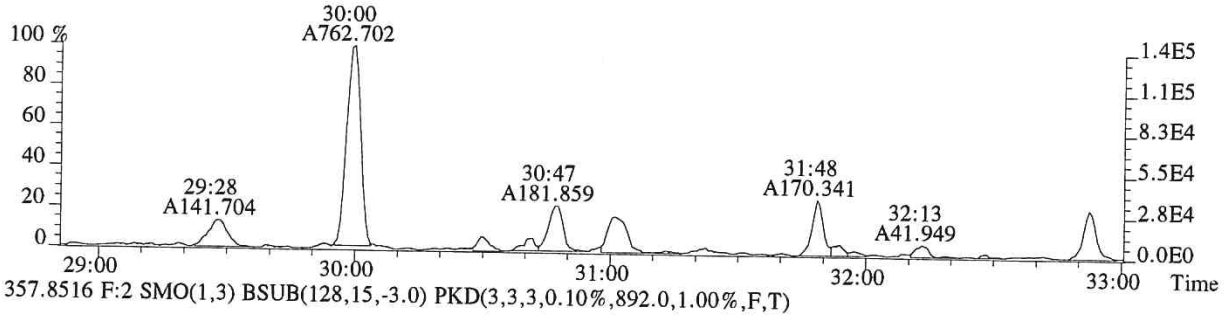


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

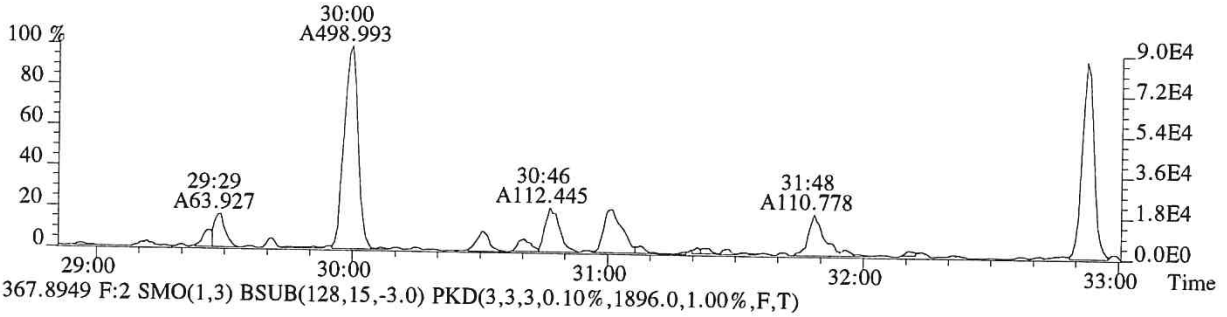


018563

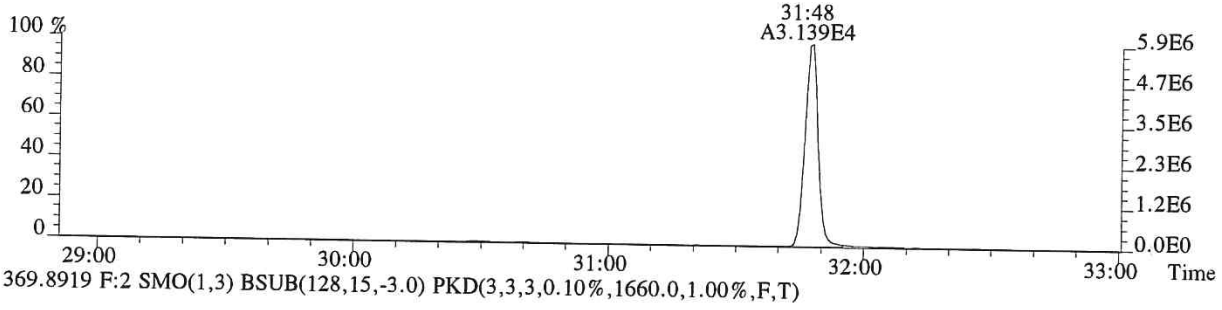
File:P519895 #1-375 Acq:10-JAN-2019 21:17:25 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-015
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1552.0,1.00%,F,T)



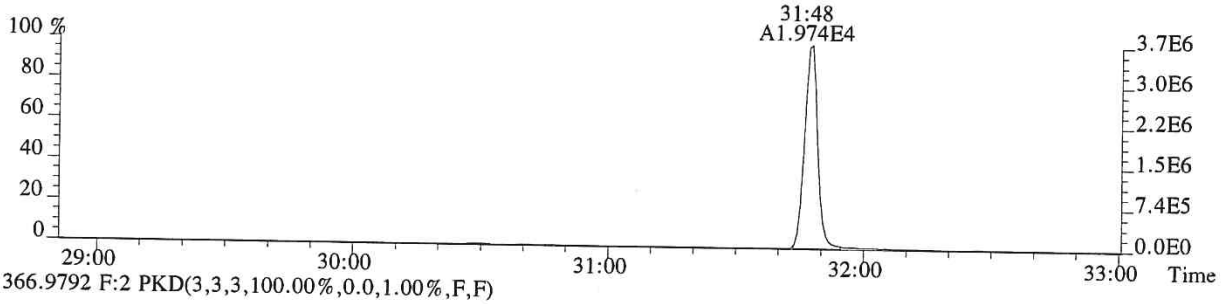
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,892.0,1.00%,F,T)



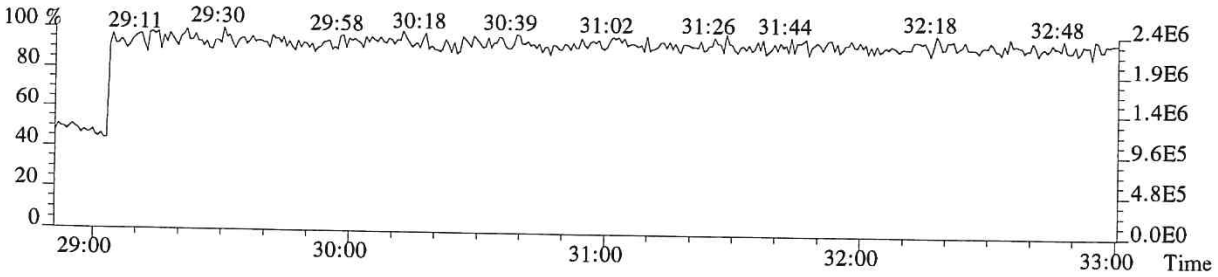
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1896.0,1.00%,F,T)



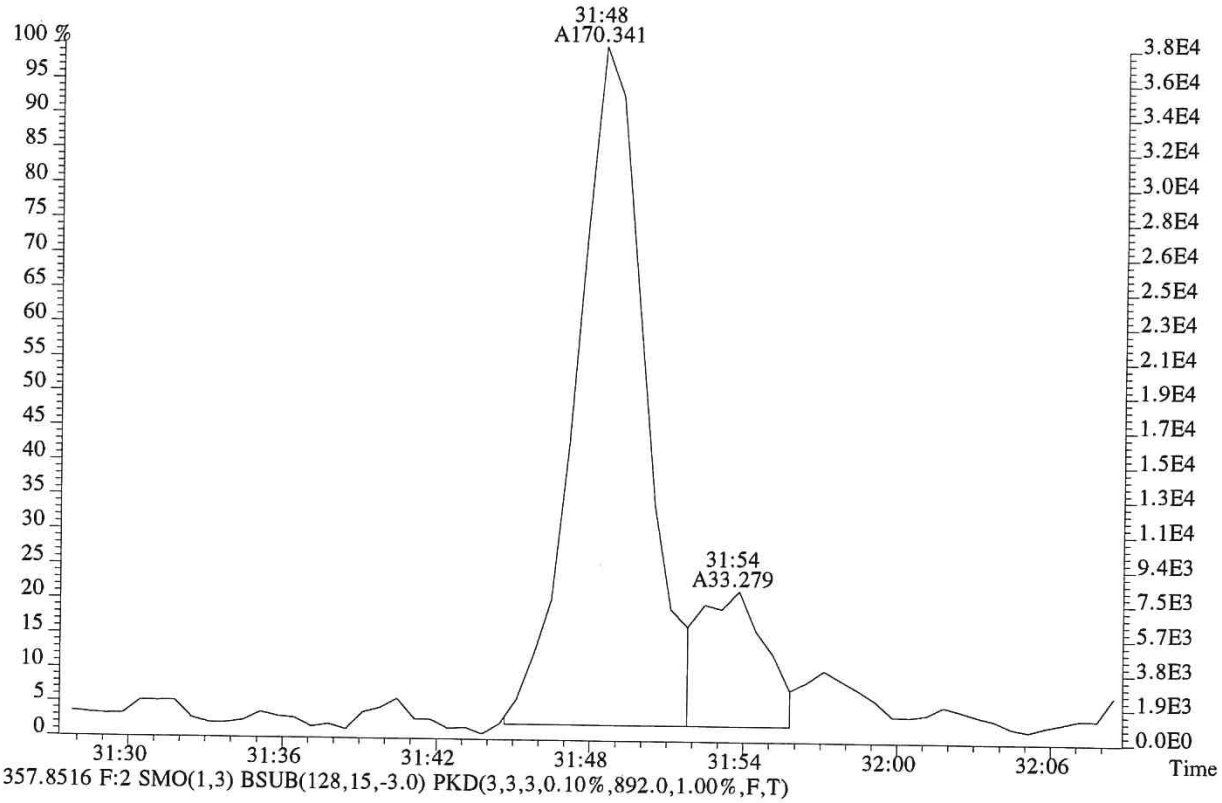
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1660.0,1.00%,F,T)



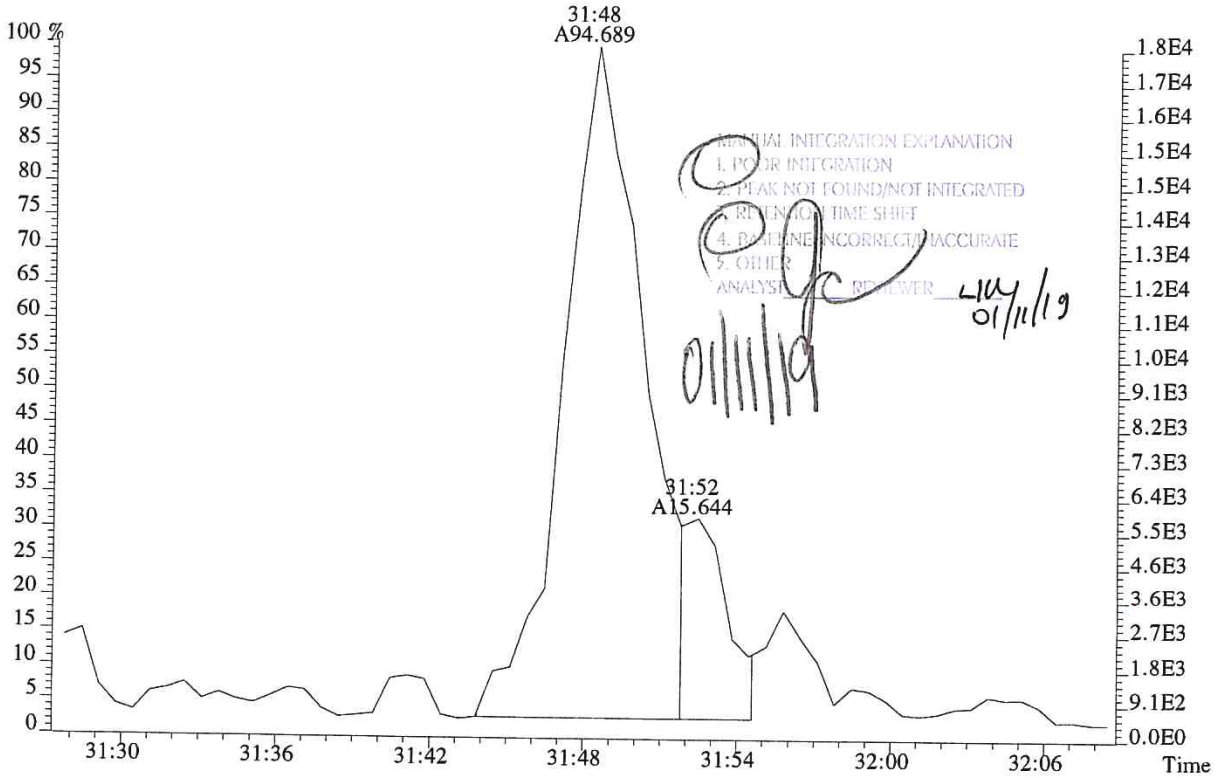
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519895 #1-375 Acq:10-JAN-2019 21:17:25 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-015
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1552.0,1.00%,F,T)

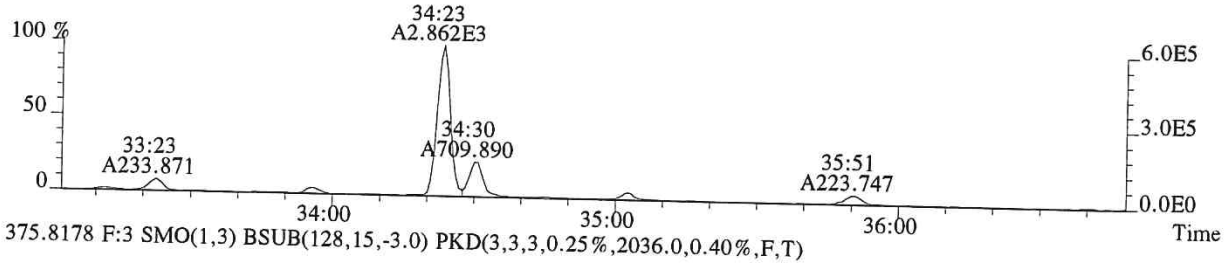


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,892.0,1.00%,F,T)

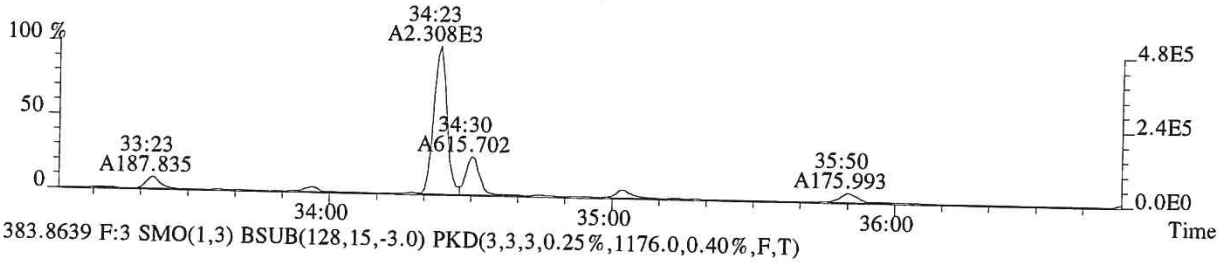


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER
01/11/19
01/11/19

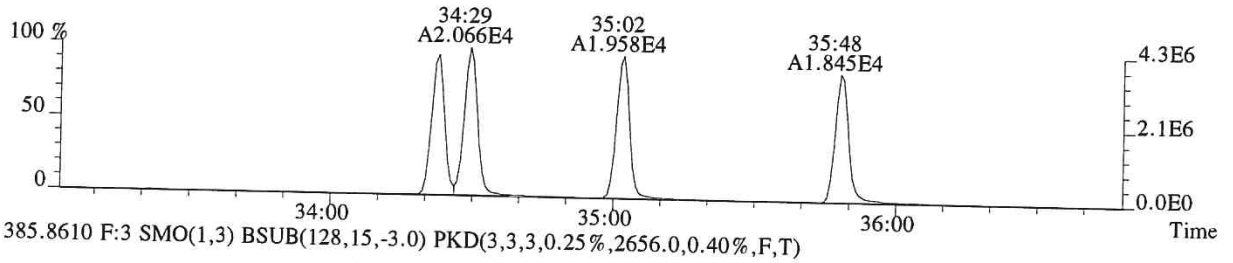
File:P519895 #1-339 Acq:10-JAN-2019 21:17:25 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-015
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1192.0,0.40%,F,T)



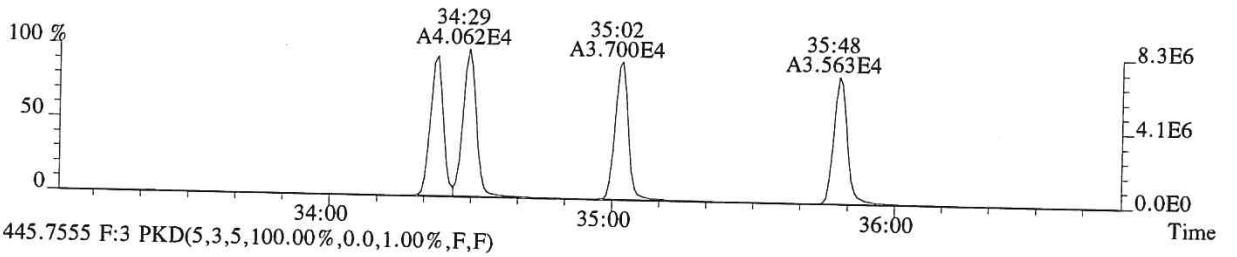
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2036.0,0.40%,F,T)



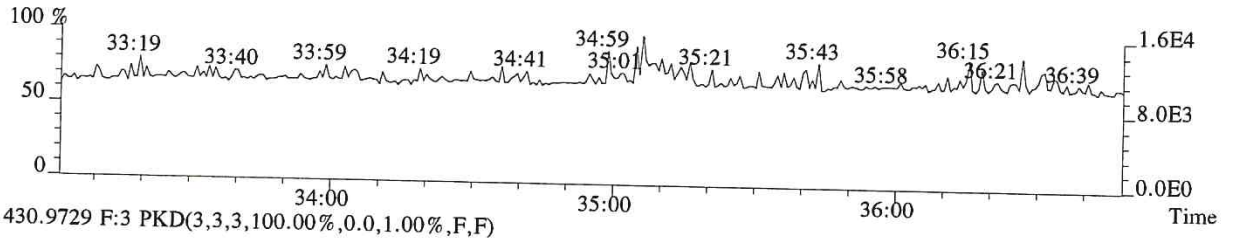
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1176.0,0.40%,F,T)



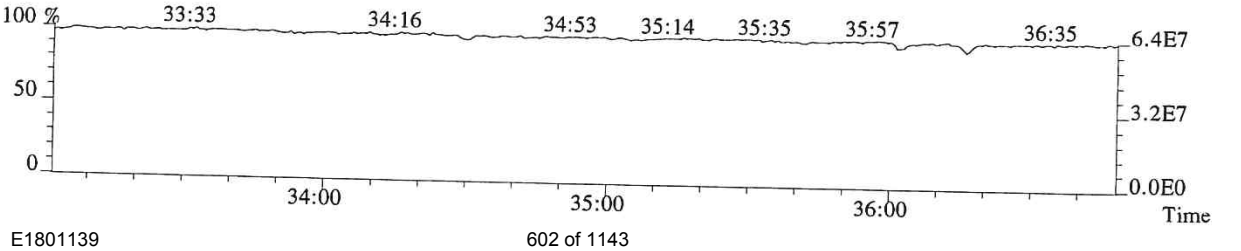
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2656.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

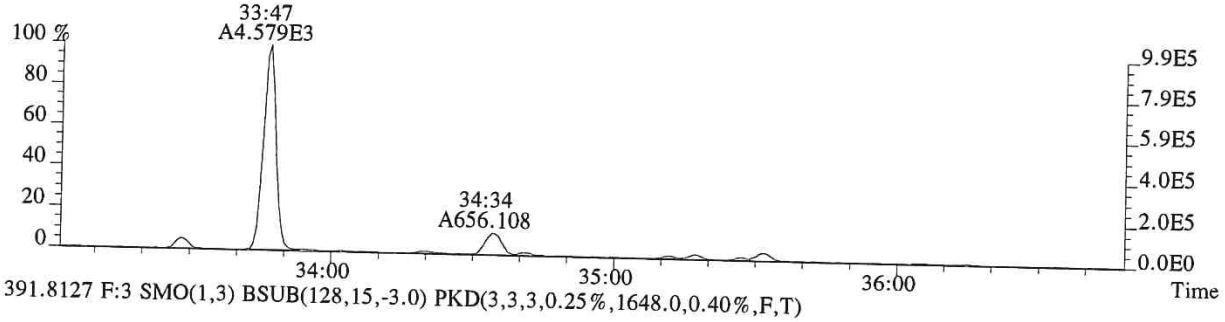


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

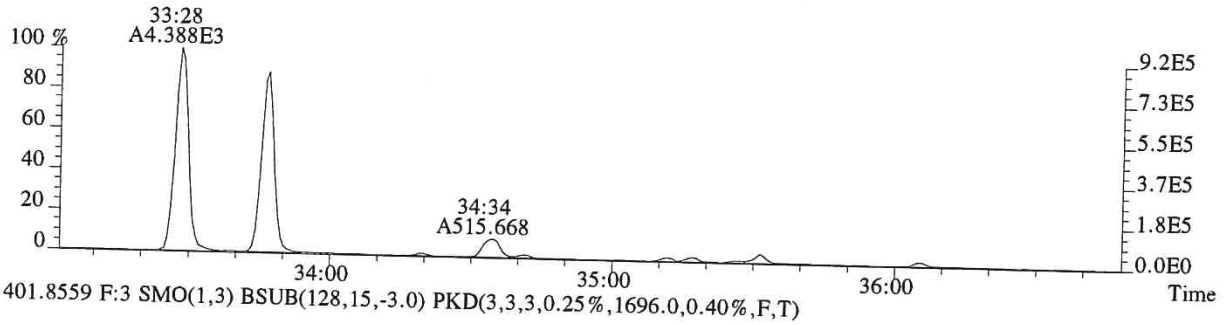


018566

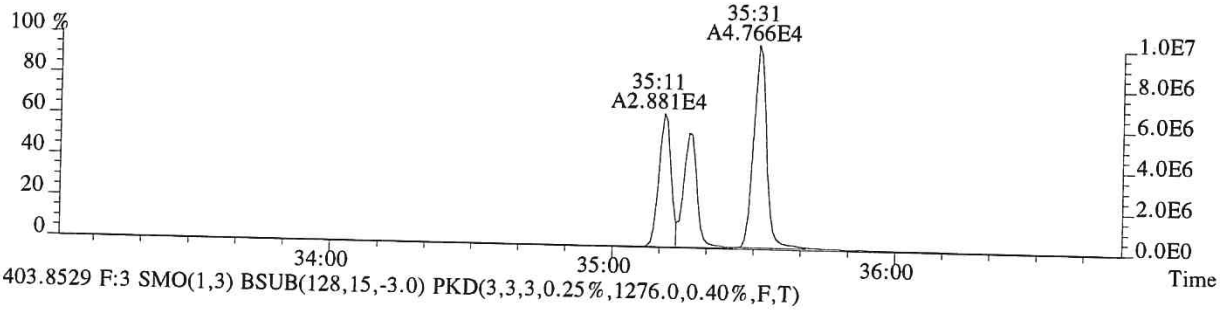
File:P519895 #1-339 Acq:10-JAN-2019 21:17:25 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-015
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1328.0,0.40%,F,T)



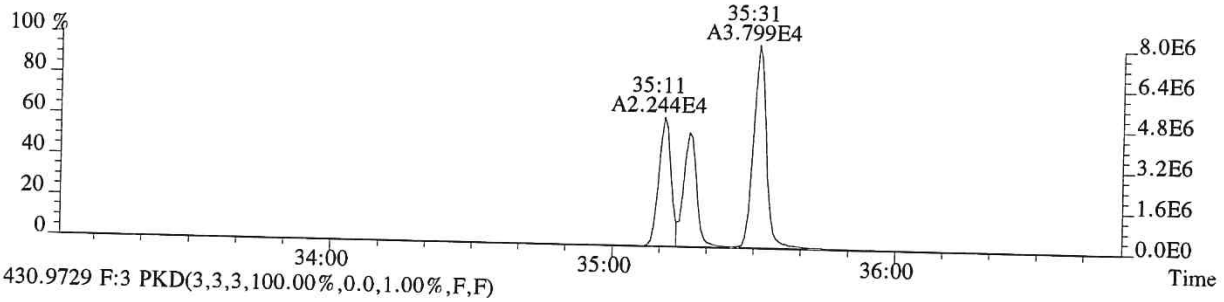
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1648.0,0.40%,F,T)



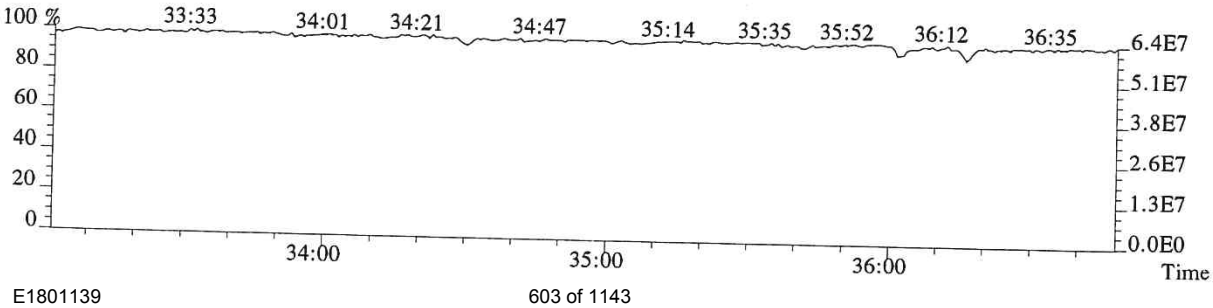
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1696.0,0.40%,F,T)



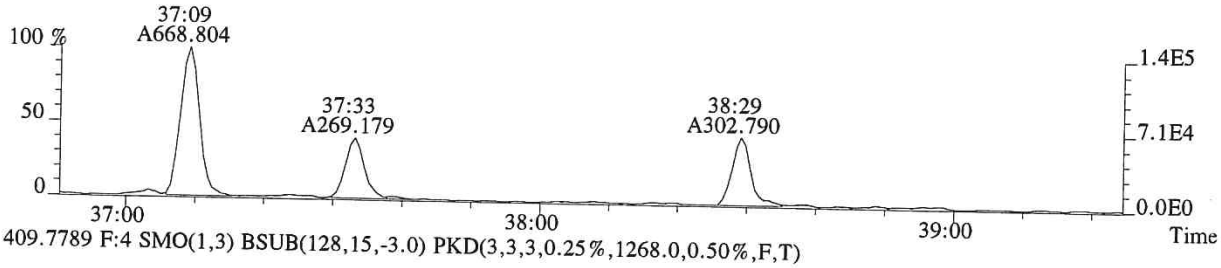
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1276.0,0.40%,F,T)



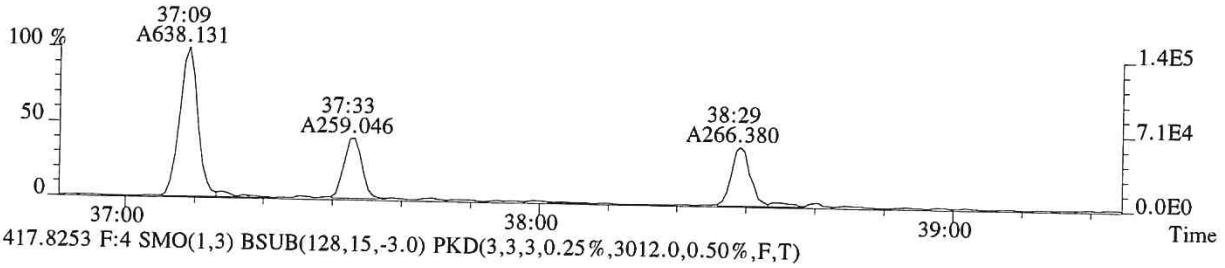
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



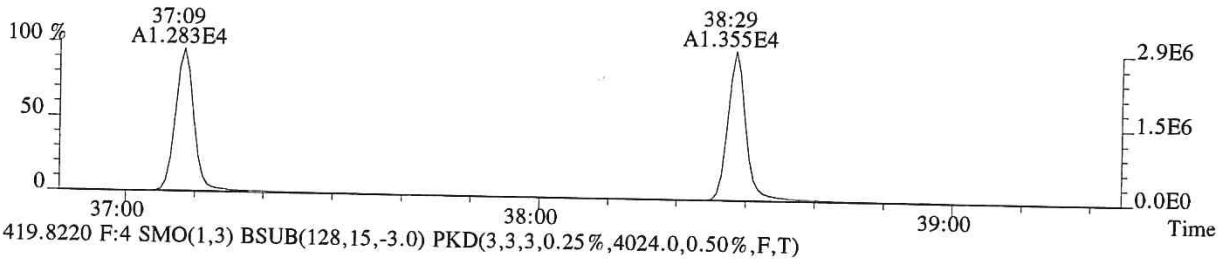
File:P519895 #1-232 Acq:10-JAN-2019 21:17:25 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-015
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1512.0,0.50%,F,T)



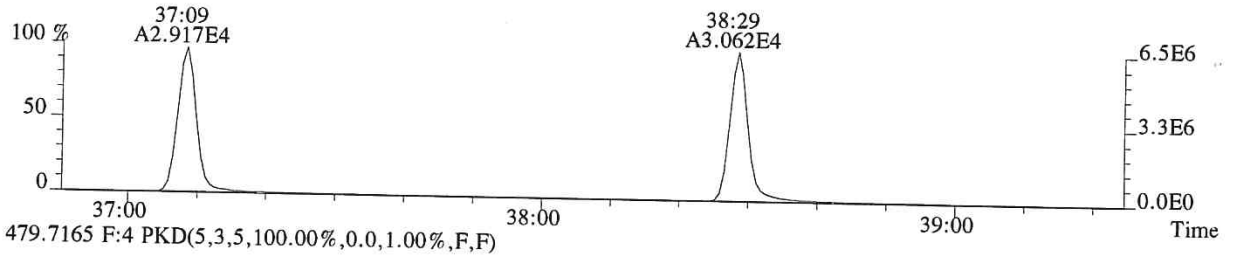
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1268.0,0.50%,F,T)



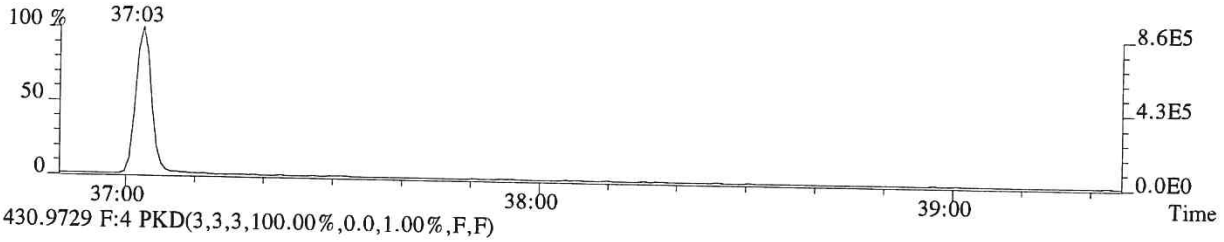
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3012.0,0.50%,F,T)



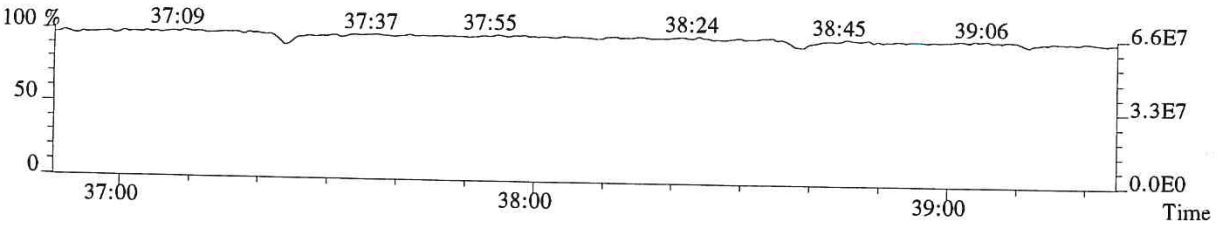
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4024.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

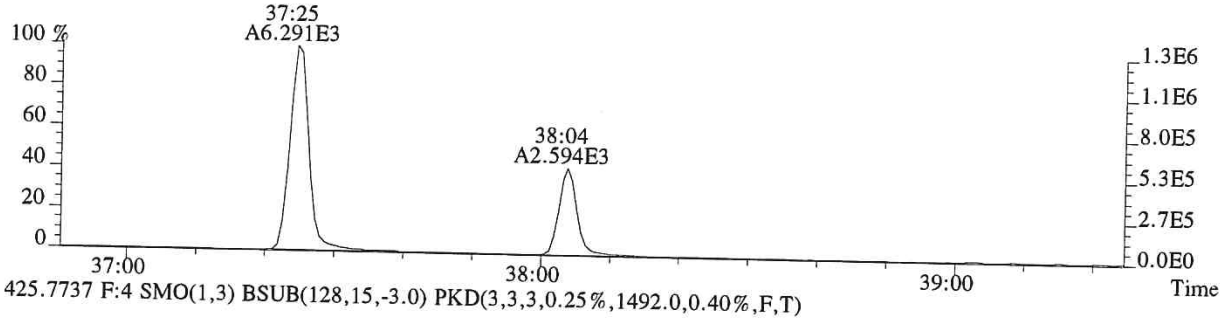


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

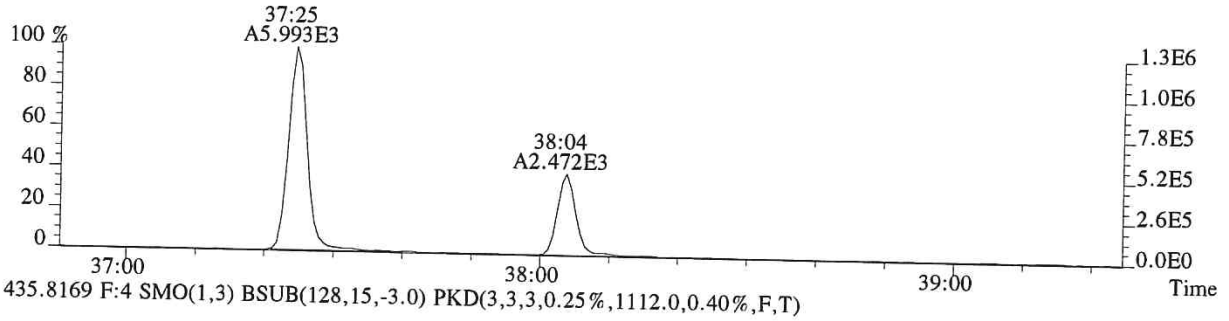


018568

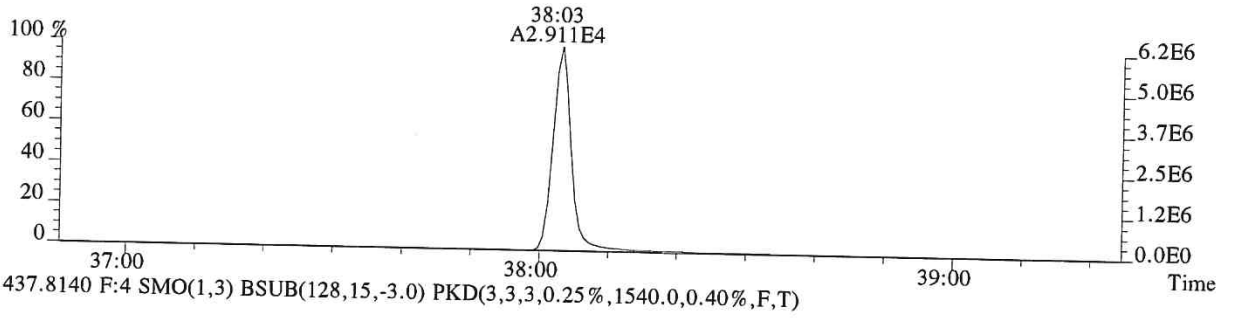
File:P519895 #1-232 Acq:10-JAN-2019 21:17:25 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-015
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3120.0,0.40%,F,T)



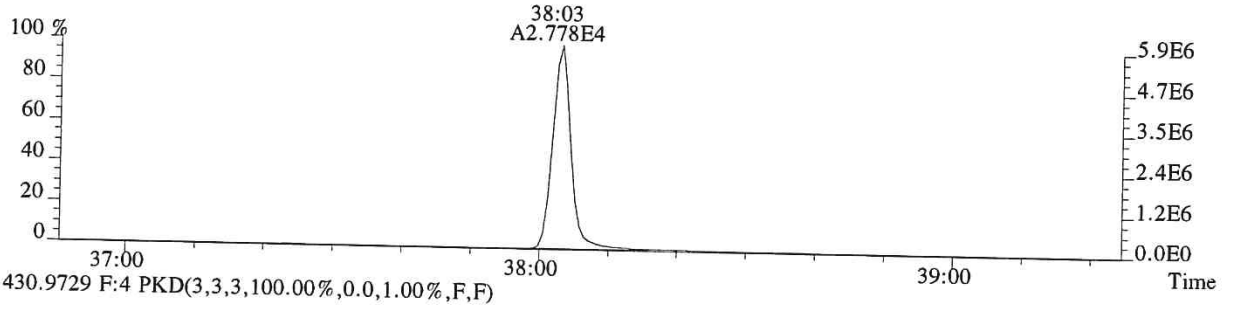
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1492.0,0.40%,F,T)



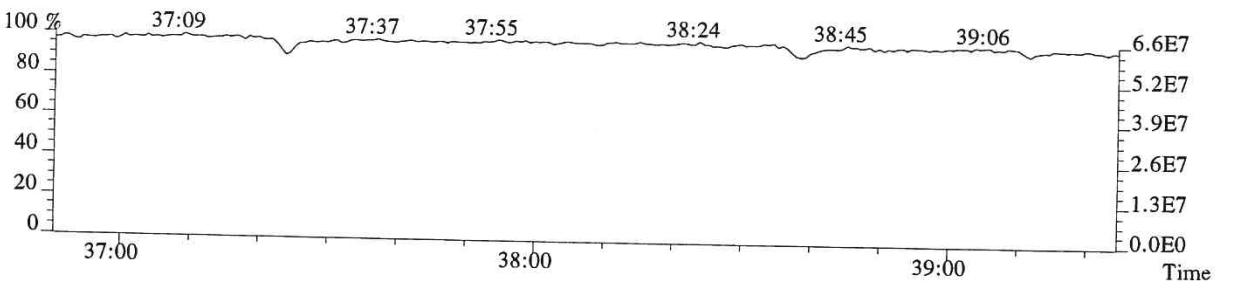
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1112.0,0.40%,F,T)



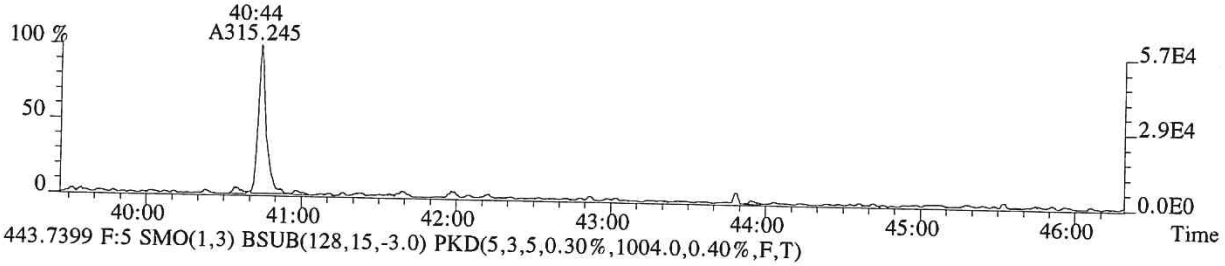
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1540.0,0.40%,F,T)



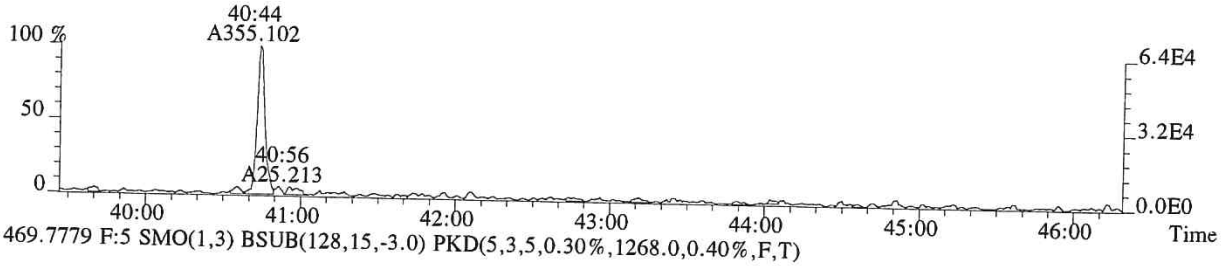
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



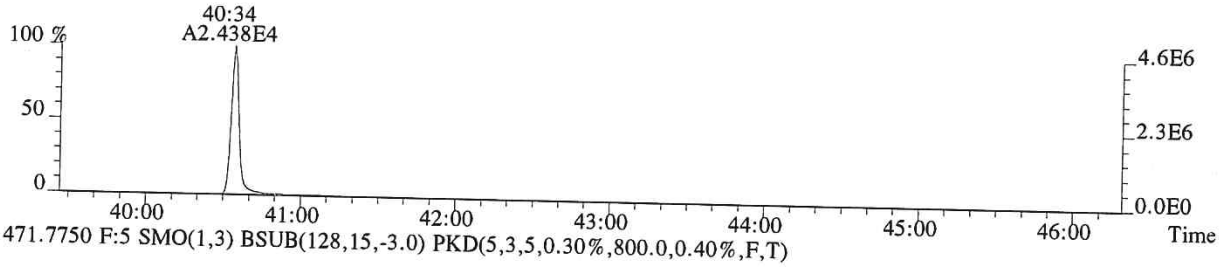
File:P519895 #1-619 Acq:10-JAN-2019 21:17:25 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-015
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,936.0,0.40%,F,T)



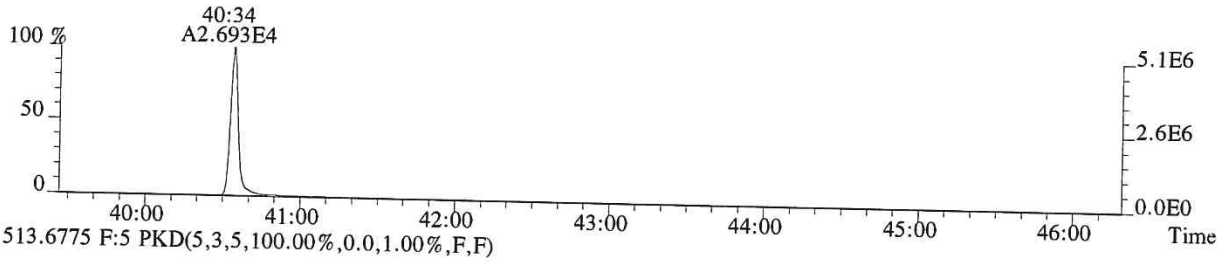
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1004.0,0.40%,F,T)



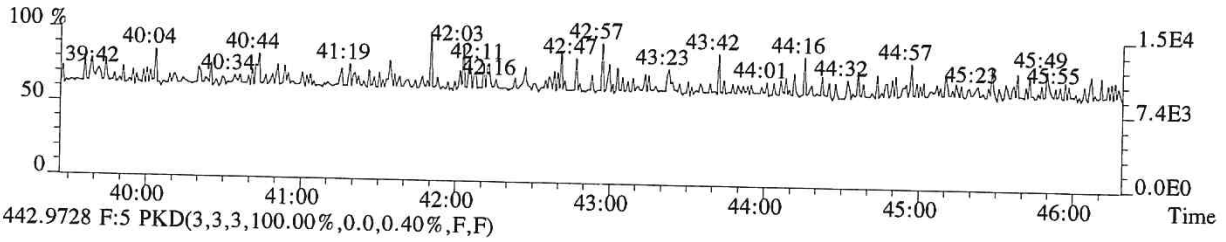
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1268.0,0.40%,F,T)



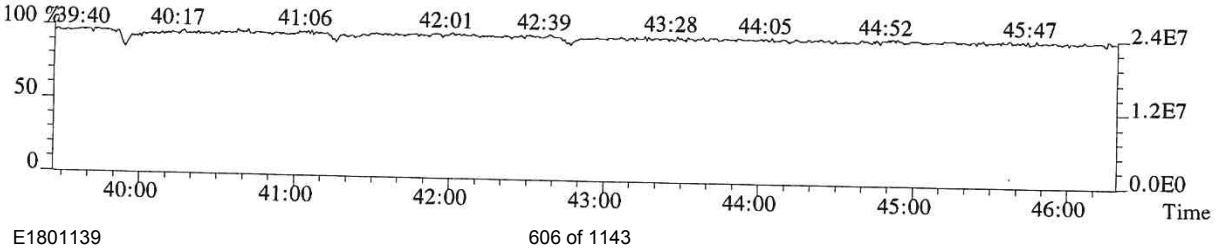
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,800.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

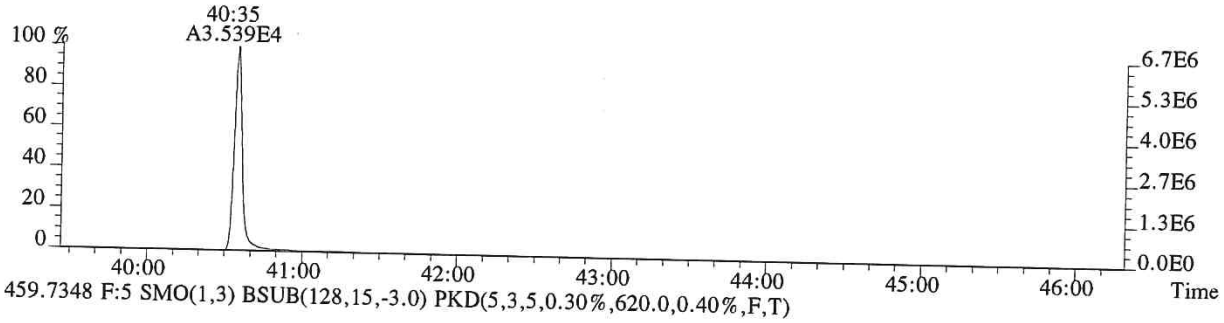


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

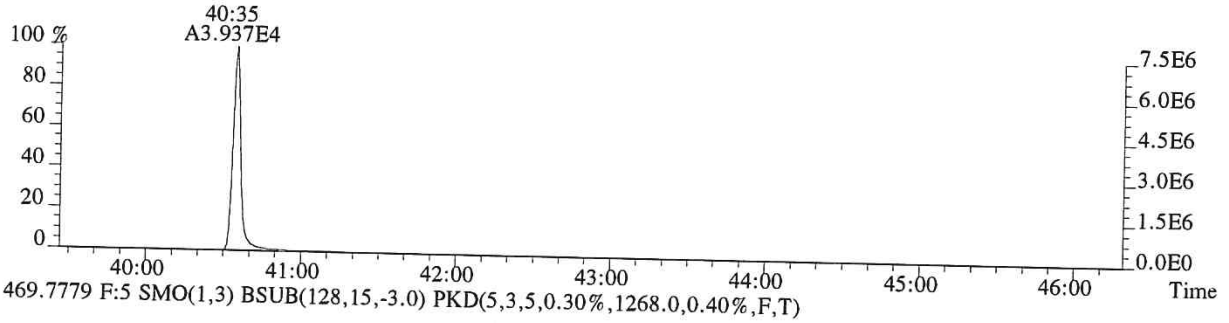


018570

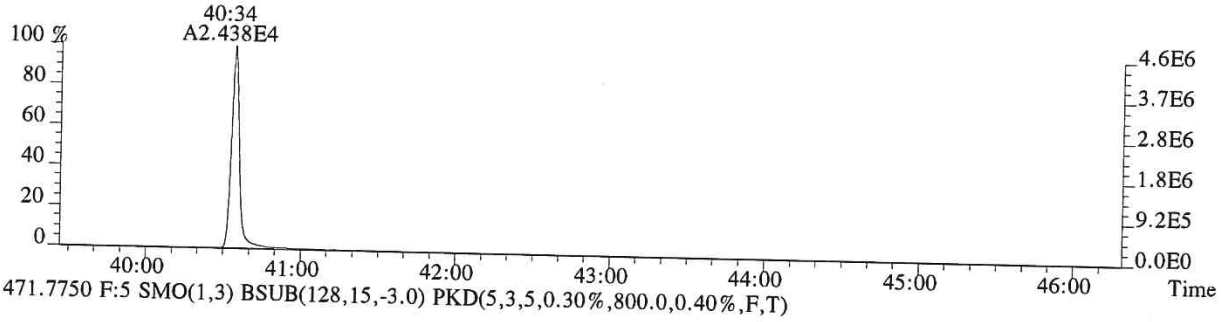
File:P519895 #1-619 Acq:10-JAN-2019 21:17:25 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-015
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,612.0,0.40%,F,T)



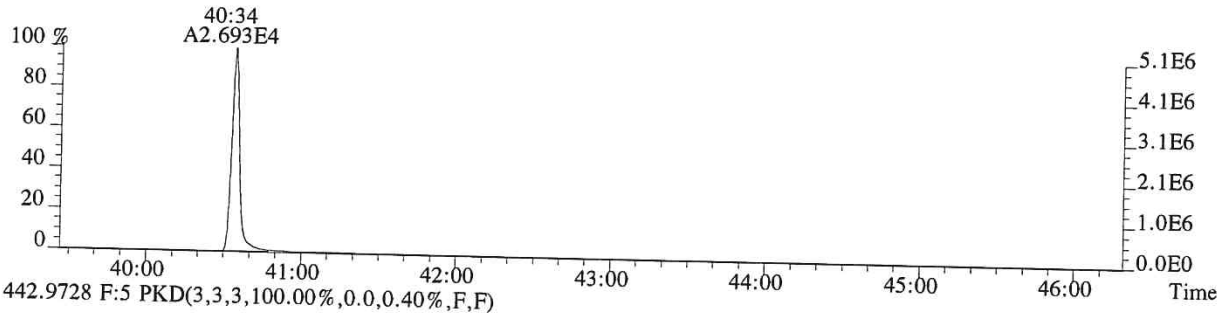
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,620.0,0.40%,F,T)



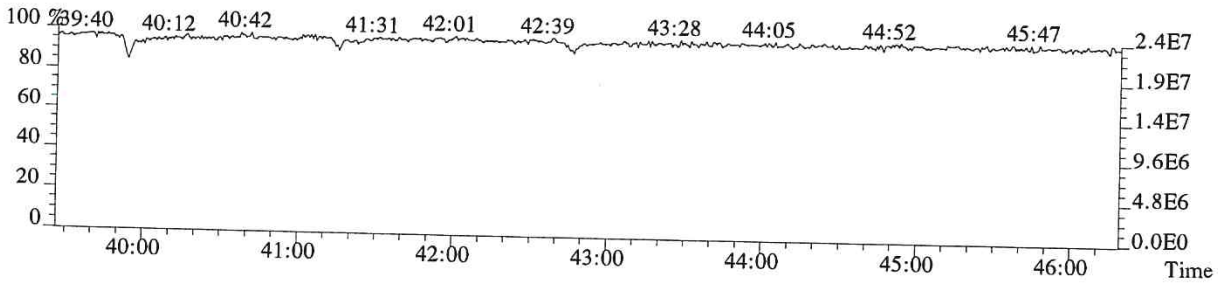
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1268.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,800.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0231

Run #19 Filename P519896 Samp: 1 Inj: 1 Acquired: 10-JAN-19 22:06:01
Processed: 11-JAN-19 09:27:01 Sample ID: E1801139-016

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:23	4.961e+03	6.681e+03	0.74	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:28	4.344e+02	2.994e+02	1.45	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	2.787e+02	1.800e+02	1.55	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	5.212e+02	4.830e+02	1.08	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	1.436e+02	1.220e+02	1.18	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:03	3.241e+01	3.252e+01	1.00	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:51	8.742e+01	5.006e+01	1.75	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:10	1.476e+02	1.512e+02	0.98	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:29	6.821e+01	6.290e+01	1.08	yes	no	1.258
10	Unk	OCDF	40:45	1.219e+02	1.339e+02	0.91	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:26	1.340e+03	1.733e+03	0.77	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:49	4.853e+01	4.116e+01	1.18	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:12	5.145e+01	5.385e+01	0.96	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:17	7.798e+01	8.120e+01	0.96	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:32	1.709e+02	1.321e+02	1.29	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:05	2.442e+03	2.351e+03	1.04	yes	no	1.025
17	Unk	OCDD	40:35	4.233e+04	4.781e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:22	1.727e+04	2.222e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:27	3.154e+04	1.982e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:28	3.084e+04	1.938e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:23	1.491e+04	2.875e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:30	1.690e+04	3.296e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:02	1.563e+04	2.989e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:49	1.456e+04	2.796e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:09	1.174e+04	2.620e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	1.142e+04	2.555e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:24	8.528e+03	1.082e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:48	2.424e+04	1.513e+04	1.60	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:11	2.267e+04	1.772e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:17	2.185e+04	1.708e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:04	2.638e+04	2.444e+04	1.08	yes	no	0.858
32	IS	13C-OCDD	40:35	2.619e+04	2.861e+04	0.92	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:40	2.973e+04	3.774e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:31	4.282e+04	3.254e+04	1.32	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:25	1.282e+04				no	1.014

$$\text{OCDD} = \frac{(4.233e+04 + 4.781e+04) \times 4000 \text{ pg} \times 1}{(2.619e+04 + 2.861e+04) \times 10.936 \text{ g} \times 73.6 / 100 \times 1.118} = 731 \text{ ng/kg}$$

LM 01/11/19

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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0231

Run #19 Filename P519896 Samp: 1 Inj: 1 Acquired: 10-JAN-19 22:06:01
Processed: 11-JAN-19 09:27:01 LAB. ID: E1801139-016

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.61e+05	1.53e+03	4.3e+02	9.06e+05	2.01e+03	4.5e+02
2	1,2,3,7,8-PeCDF	7.41e+04	9.64e+02	7.7e+01	4.79e+04	1.36e+03	3.5e+01
3	2,3,4,7,8-PeCDF	4.12e+04	9.64e+02	4.3e+01	2.91e+04	1.36e+03	2.1e+01
4	1,2,3,4,7,8-HxCDF	1.08e+05	1.38e+03	7.8e+01	9.75e+04	6.68e+02	1.5e+02
5	1,2,3,6,7,8-HxCDF	2.64e+04	1.38e+03	1.9e+01	2.18e+04	6.68e+02	3.3e+01
6	2,3,4,6,7,8-HxCDF	6.02e+03	1.38e+03	4.4e+00	7.53e+03	6.68e+02	1.1e+01
7	1,2,3,7,8,9-HxCDF	1.51e+04	1.38e+03	1.1e+01	8.49e+03	6.68e+02	1.3e+01
8	1,2,3,4,6,7,8-HpCDF	3.14e+04	8.08e+02	3.9e+01	2.95e+04	7.08e+02	4.2e+01
9	1,2,3,4,7,8,9-HpCDF	1.51e+04	8.08e+02	1.9e+01	1.32e+04	7.08e+02	1.9e+01
10	OCDF	2.53e+04	3.80e+02	6.7e+01	2.91e+04	1.40e+03	2.1e+01
11	2,3,7,8-TCDD	2.17e+05	3.13e+03	6.9e+01	2.68e+05	1.68e+03	1.6e+02
12	1,2,3,7,8-PeCDD	1.11e+04	1.64e+03	6.8e+00	7.96e+03	1.10e+03	7.2e+00
13	1,2,3,4,7,8-HxCDD	1.01e+04	1.66e+03	6.1e+00	1.26e+04	1.76e+03	7.2e+00
14	1,2,3,6,7,8-HxCDD	1.86e+04	1.66e+03	1.1e+01	2.07e+04	1.76e+03	1.2e+01
15	1,2,3,7,8,9-HxCDD	3.67e+04	1.66e+03	2.2e+01	2.47e+04	1.76e+03	1.4e+01
16	1,2,3,4,6,7,8-HpCDD	5.10e+05	4.57e+03	1.1e+02	5.09e+05	3.00e+03	1.7e+02
17	OCDD	7.58e+06	2.40e+02	3.2e+04	8.51e+06	8.48e+02	1.0e+04
18	13C-2,3,7,8-TCDF	2.47e+06	6.04e+03	4.1e+02	3.20e+06	2.65e+03	1.2e+03
19	13C-1,2,3,7,8-PeCDF	5.43e+06	9.44e+02	5.8e+03	3.40e+06	1.01e+03	3.4e+03
20	13C-2,3,4,7,8-PeCDF	5.85e+06	9.44e+02	6.2e+03	3.67e+06	1.01e+03	3.6e+03
21	13C-1,2,3,4,7,8-HxCDF	3.08e+06	8.68e+02	3.5e+03	5.92e+06	1.43e+03	4.1e+03
22	13C-1,2,3,6,7,8-HxCDF	3.31e+06	8.68e+02	3.8e+03	6.46e+06	1.43e+03	4.5e+03
23	13C-2,3,4,6,7,8-HxCDF	3.32e+06	8.68e+02	3.8e+03	6.40e+06	1.43e+03	4.5e+03
24	13C-1,2,3,7,8,9-HxCDF	2.96e+06	8.68e+02	3.4e+03	5.73e+06	1.43e+03	4.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.51e+06	3.04e+03	8.3e+02	5.65e+06	3.28e+03	1.7e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.31e+06	3.04e+03	7.6e+02	5.19e+06	3.28e+03	1.6e+03
27	13C-2,3,7,8-TCDD	1.32e+06	6.94e+03	1.9e+02	1.70e+06	4.58e+03	3.7e+02
28	13C-1,2,3,7,8-PeCDD	4.50e+06	1.28e+03	3.5e+03	2.84e+06	1.28e+03	2.2e+03
29	13C-1,2,3,4,7,8-HxCDD	5.11e+06	1.18e+03	4.3e+03	3.97e+06	1.24e+03	3.2e+03
30	13C-1,2,3,6,7,8-HxCDD	4.60e+06	1.18e+03	3.9e+03	3.57e+06	1.24e+03	2.9e+03
31	13C-1,2,3,4,6,7,8-HpCDD	5.51e+06	4.92e+02	1.1e+04	5.05e+06	5.88e+02	8.6e+03
32	13C-OCDD	4.61e+06	7.40e+02	6.2e+03	5.11e+06	3.92e+02	1.3e+04
33	13C-1,2,3,4-TCDD	4.43e+06	6.94e+03	6.4e+02	5.61e+06	4.58e+03	1.2e+03
34	13C-1,2,3,7,8,9-HxCDD	8.86e+06	1.18e+03	7.5e+03	6.93e+06	1.24e+03	5.6e+03
35	37Cl-2,3,7,8-TCDD	1.98e+06	1.36e+03	1.5e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0231

Entry: 36 Totals Name: Total Tetra-Furans

Run: 19 File: P519896 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 22:06:01 Processed: 11-JAN-19 09:27:01

Mass: 303.9020 305.8990 Tot Response: 2.00e+04 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:01	5.60e+01	6.73e+01	0.83	yes	1.23e+02		n	n
2	21:50	1.18e+02	1.44e+02	0.82	yes	2.61e+02		n	n
3	22:16	1.89e+02	2.74e+02	0.69	yes	4.64e+02		n	n
4	22:35	2.73e+02	3.63e+02	0.75	yes	6.35e+02		n	n
5	22:57	9.86e+01	1.35e+02	0.73	yes	2.33e+02		n	n
6	23:11	2.22e+02	2.60e+02	0.85	yes	4.82e+02		n	n
7	24:24	2.25e+03	2.91e+03	0.77	yes	5.16e+03		n	n
8	25:23	4.96e+03	6.68e+03	0.74	yes	1.16e+04	2,3,7,8-TCDF	n	n
9	25:50	4.17e+02	5.52e+02	0.76	yes	9.69e+02		n	n

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Peak List Summary

CLIENT ID.
SL0231

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 19 File: P519896 Sample:1 Injection:1 Function:1

Acquired: 10-JAN-19 22:06:01 Processed: 11-JAN-19 09:27:01

Mass: 319.8970 321.8940 Tot Response: 5.19e+03 RRF: 1.085

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:03	9.48e+02	1.17e+03	0.81	yes	2.11e+03		n	n
2	26:26	1.34e+03	1.73e+03	0.77	yes	3.07e+03	2,3,7,8-TCDD	n	n

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Peak List Summary

CLIENT ID.
SL0231

Entry: 39 Totals Name: Total Penta-Furans2

Run: 19 File: P519896 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 22:06:01 Processed: 11-JAN-19 09:27:01

Mass: 339.8600 341.8570 Tot Response: 1.26e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:16	4.27e+01	2.87e+01	1.49	yes	7.14e+01		n	n
2	30:28	4.34e+02	2.99e+02	1.45	yes	7.34e+02	1,2,3,7,8-PeCDF	n	n
3	31:29	2.79e+02	1.80e+02	1.55	yes	4.59e+02	2,3,4,7,8-PeCDF	n	n

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Peak List Summary

CLIENT ID.
SL0231

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 19 File: P519896 Sample:1 Injection:1 Function:2

Acquired: 10-JAN-19 22:06:01 Processed: 11-JAN-19 09:27:01

Mass: 355.8550 357.8520 Tot Response: 1.53e+03 RRF: 0.9565

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:00	6.19e+02	4.35e+02 1.42	yes	1.05e+03		n	n
2	30:41	3.91e+01	2.38e+01 1.64	yes	6.28e+01		n	n
3	30:46	1.39e+02	1.06e+02 1.32	yes	2.45e+02		n	n
4	31:01	1.04e+02	6.63e+01 1.58	yes	1.71e+02		n	n

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Peak List Summary

CLIENT ID.
SL0231

Entry: 41 Totals Name: Total Hexa-Furans

Run: 19 File: P519896 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 22:06:01 Processed: 11-JAN-19 09:27:01

Mass: 373.8210 375.8180 Tot Response: 1.44e+03 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:23	5.49e+01	5.06e+01	1.08	yes	1.06e+02		n	n
2	33:57	2.94e+01	2.55e+01	1.15	yes	5.49e+01		n	n
3	34:01	1.99e+00	1.83e+00	1.09	yes	3.81e+00		n	n
4	34:23	5.21e+02	4.83e+02	1.08	yes	1.00e+03	1,2,3,4,7,8-HxCDF	n	n
5	34:30	1.44e+02	1.22e+02	1.18	yes	2.66e+02	1,2,3,6,7,8-HxCDF	n	n
6	35:57	5.71e+00	4.29e+00	1.33	yes	1.00e+01		n	n

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Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 19 File: P519896 Sample:1 Injection:1 Function:3

Acquired: 10-JAN-19 22:06:01 Processed: 11-JAN-19 09:27:01

Mass: 389.8160 391.8130 Tot Response: 1.48e+03 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:35	6.09e+02	4.45e+02 1.37	yes	1.05e+03		n	n
2	34:41	6.71e+01	5.66e+01 1.18	yes	1.24e+02		n	n
3	35:32	1.71e+02	1.32e+02 1.29	yes	3.03e+02	1,2,3,7,8,9-HxCDD	n	n

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Peak List Summary

CLIENT ID.
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Entry: 43 Totals Name: Total Hepta-Furans

Run: 19 File: P519896 Sample:1 Injection:1 Function:4

Acquired: 10-JAN-19 22:06:01 Processed: 11-JAN-19 09:27:01

Mass: 407.7820 409.7790 Tot Response: 4.30e+02 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:10	1.48e+02	1.51e+02 0.98	yes	2.99e+02	1,2,3,4,6,7,8-HpCDF	n	n
2	38:29	6.82e+01	6.29e+01 1.08	yes	1.31e+02	1,2,3,4,7,8,9-HpCDF	n	n

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SL0231

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 19 File: P519896 Sample:1 Injection:1 Function:4

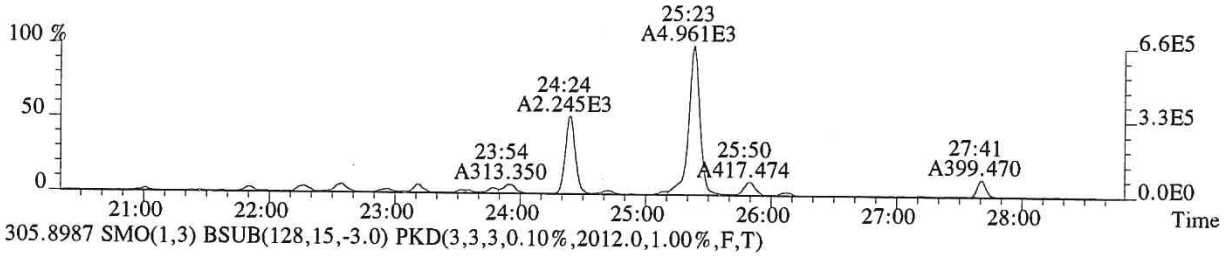
Acquired: 10-JAN-19 22:06:01 Processed: 11-JAN-19 09:27:01

Mass: 423.7770 425.7740 Tot Response: 4.79e+03 RRF: 1.025

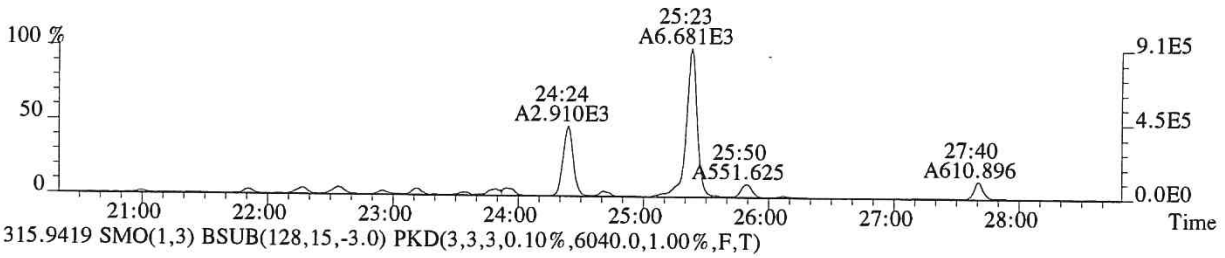
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:05	2.44e+03	2.35e+03 1.04	yes	4.79e+03	1,2,3,4,6,7,8-HpCDD	n	n

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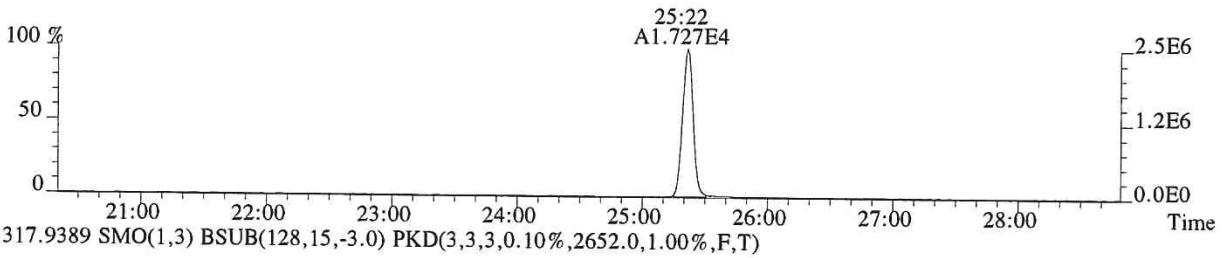
File:P519896 #1-602 Acq:10-JAN-2019 22:06:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-016
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1528.0,1.00%,F,T)



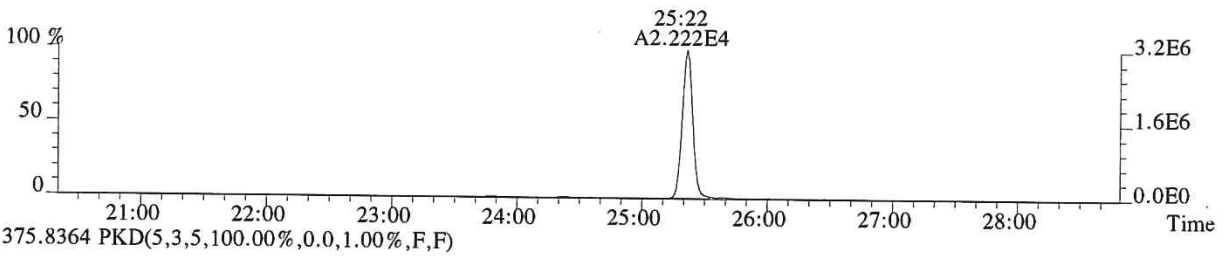
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2012.0,1.00%,F,T)



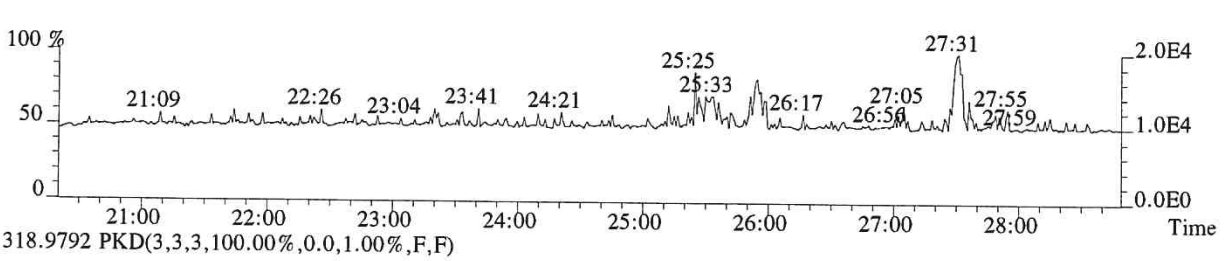
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6040.0,1.00%,F,T)



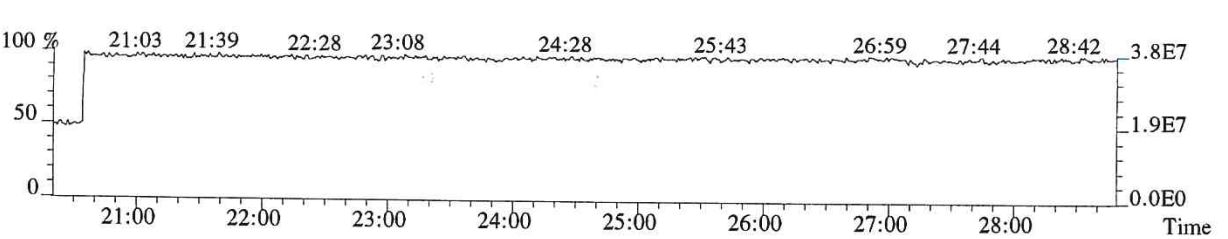
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2652.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

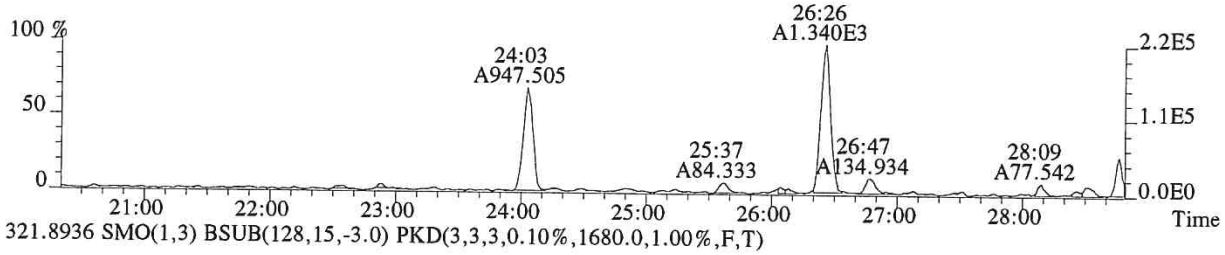


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

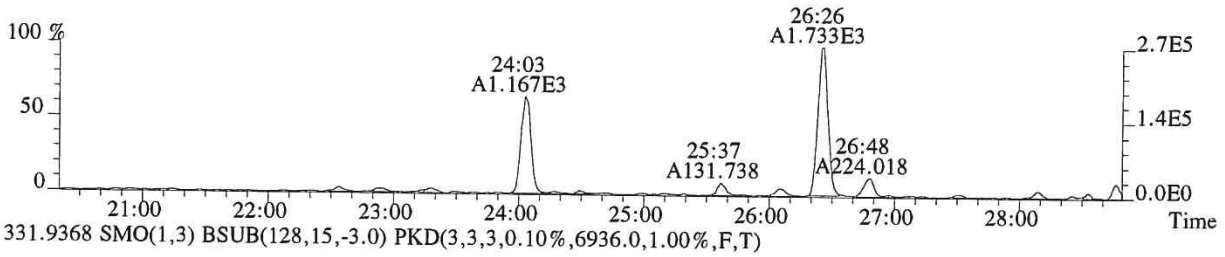


018582

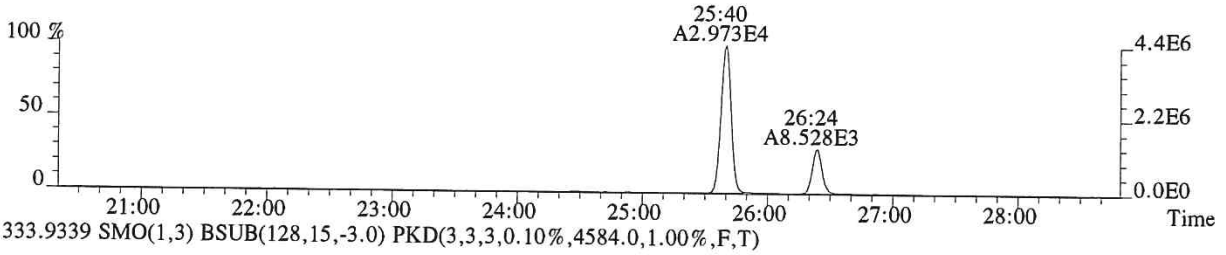
File:P519896 #1-602 Acq:10-JAN-2019 22:06:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-016
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3128.0,1.00%,F,T)



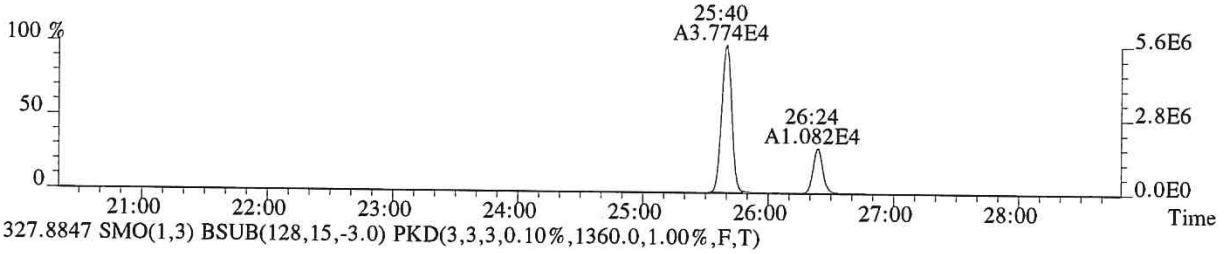
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1680.0,1.00%,F,T)



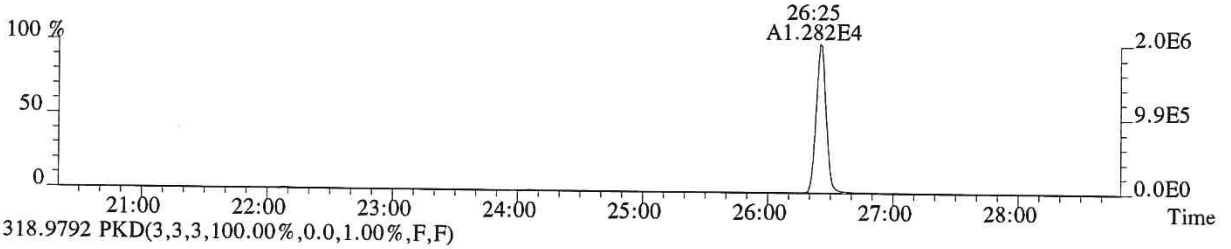
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6936.0,1.00%,F,T)



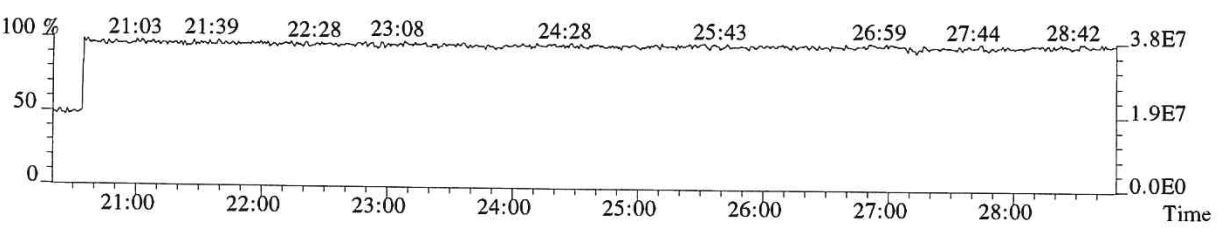
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4584.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1360.0,1.00%,F,T)

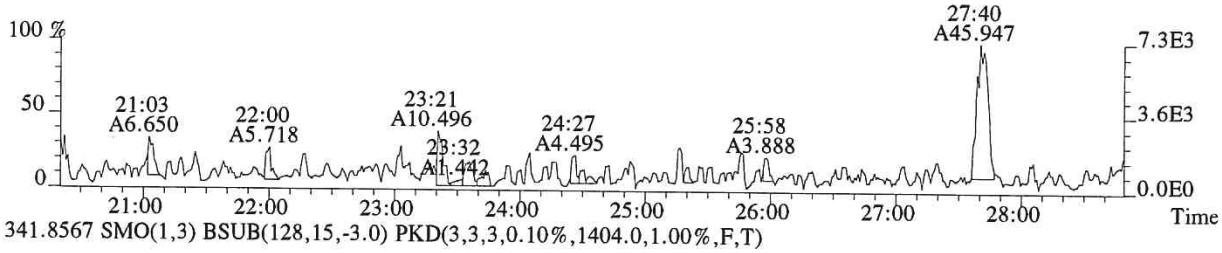


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

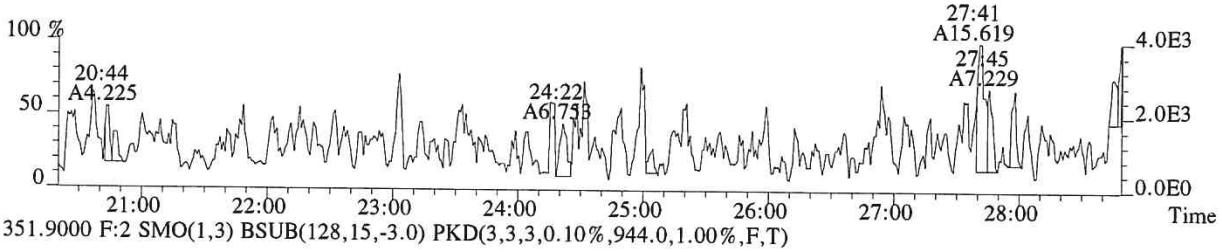


018583

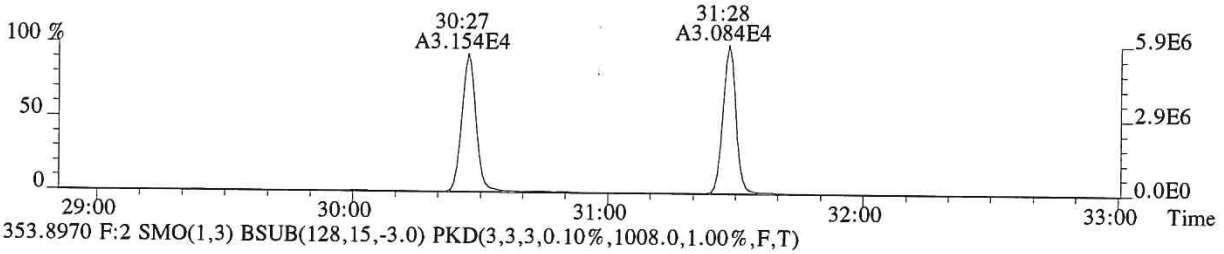
File:P519896 #1-602 Acq:10-JAN-2019 22:06:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-016
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,908.0,1.00%,F,T)



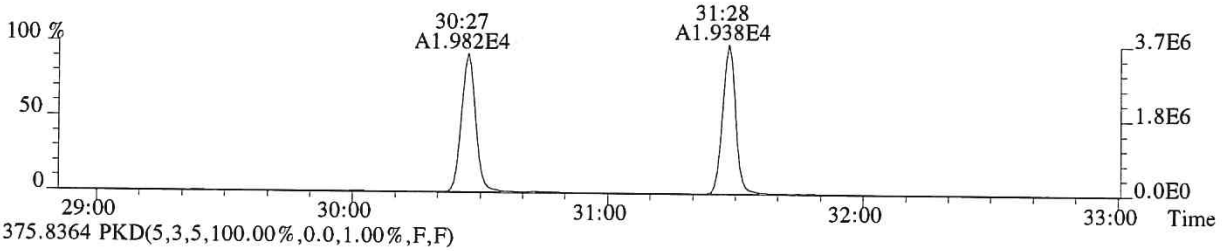
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1404.0,1.00%,F,T)



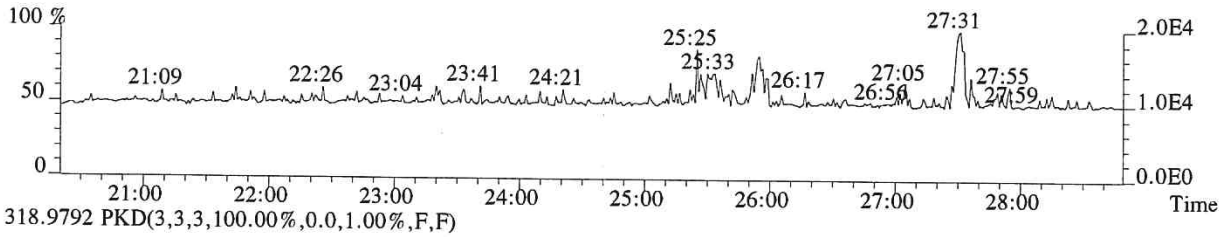
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



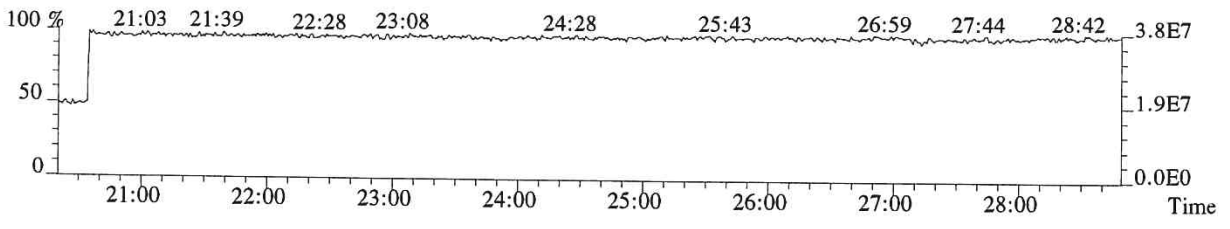
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1008.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

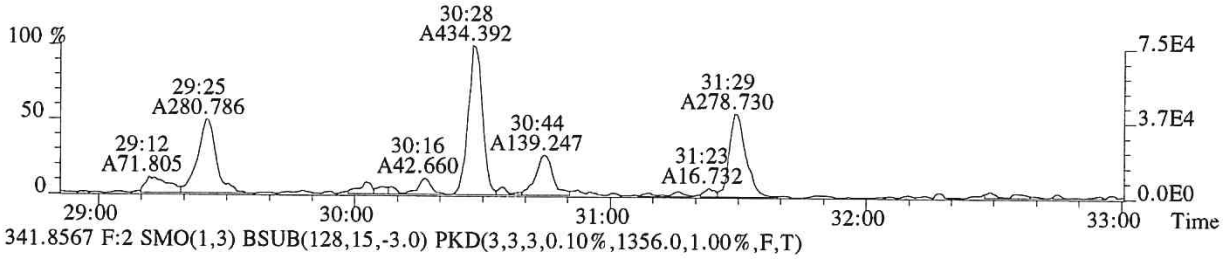


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

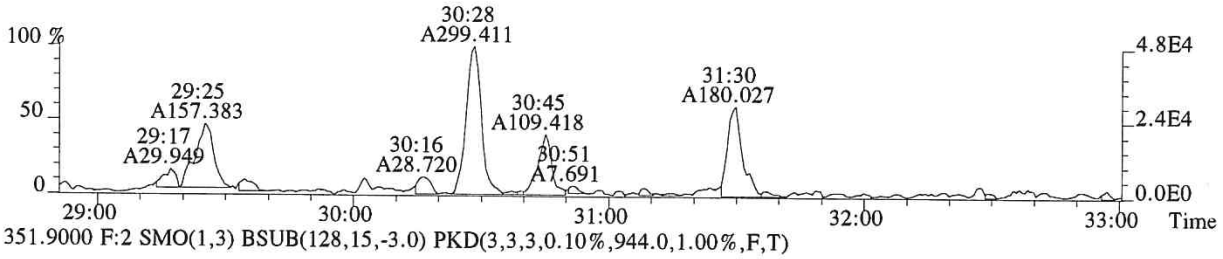


018584

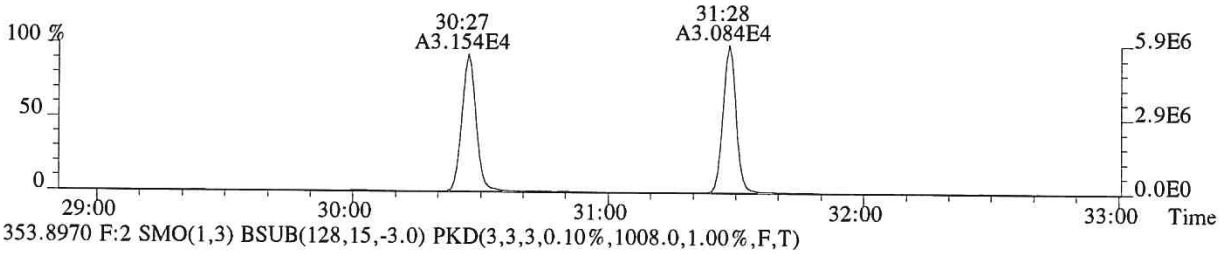
File:P519896 #1-375 Acq:10-JAN-2019 22:06:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-016
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,964.0,1.00%,F,T)



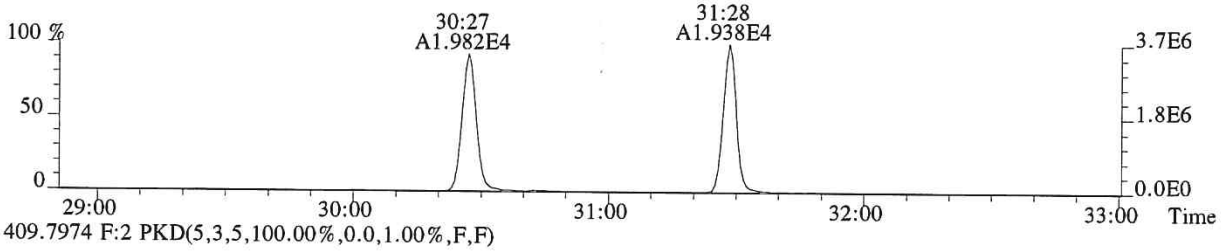
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1356.0,1.00%,F,T)



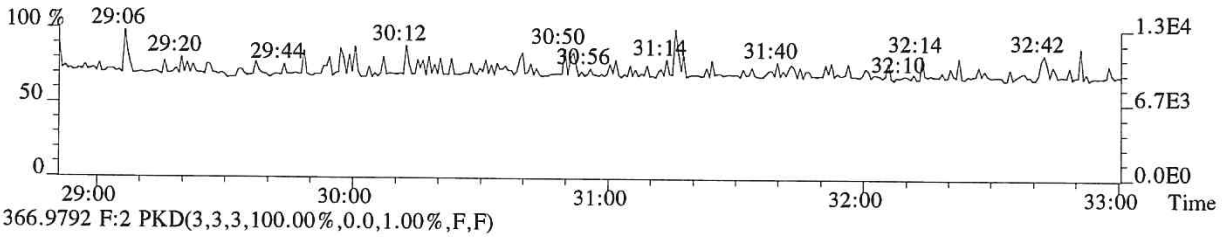
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



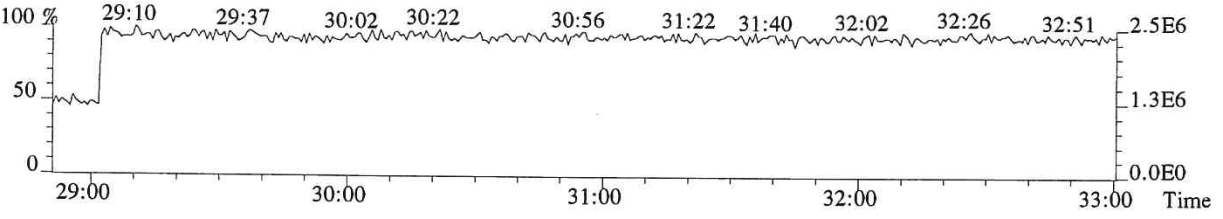
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1008.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

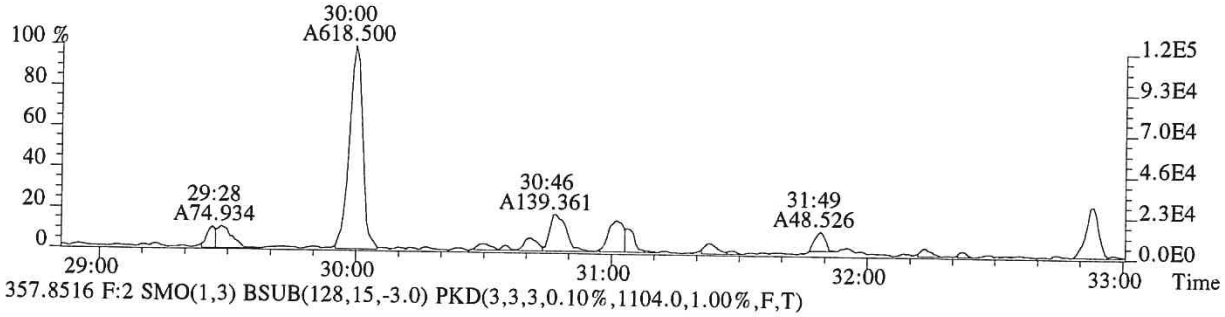


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

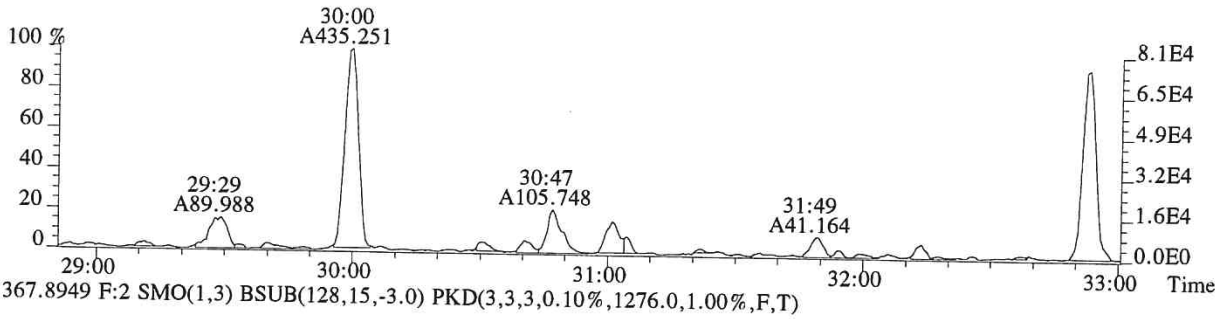


018585

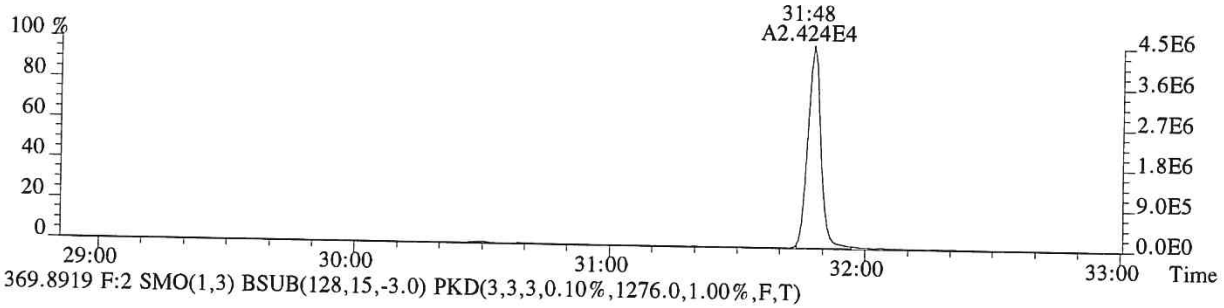
File:P519896 #1-375 Acq:10-JAN-2019 22:06:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-016
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1644.0,1.00%,F,T)



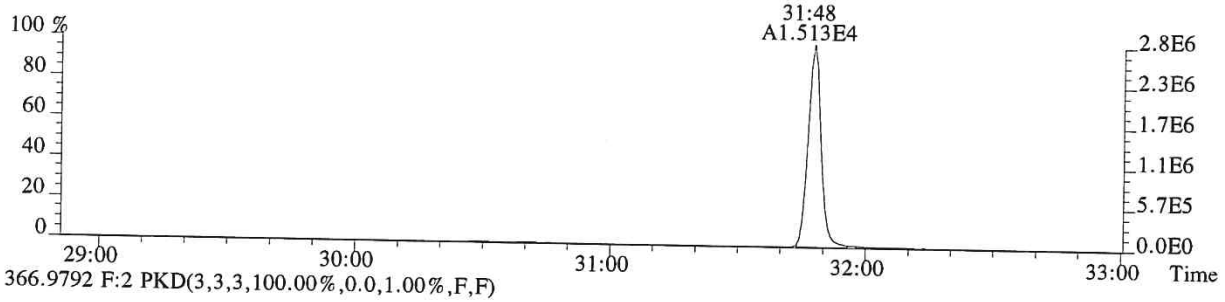
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1104.0,1.00%,F,T)



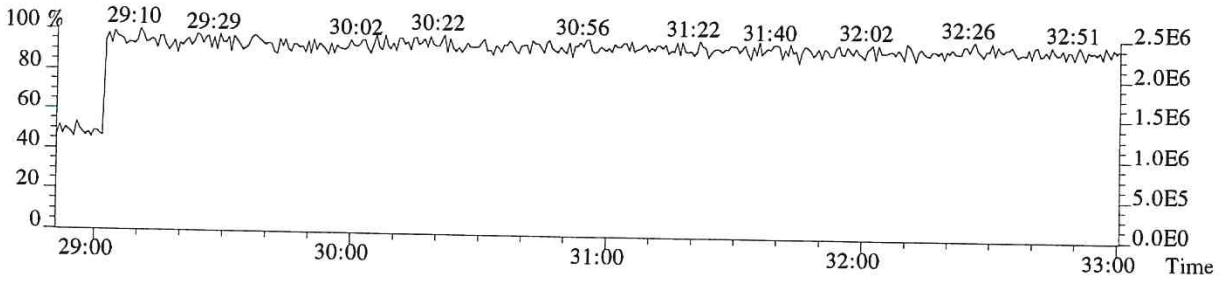
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1276.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1276.0,1.00%,F,T)

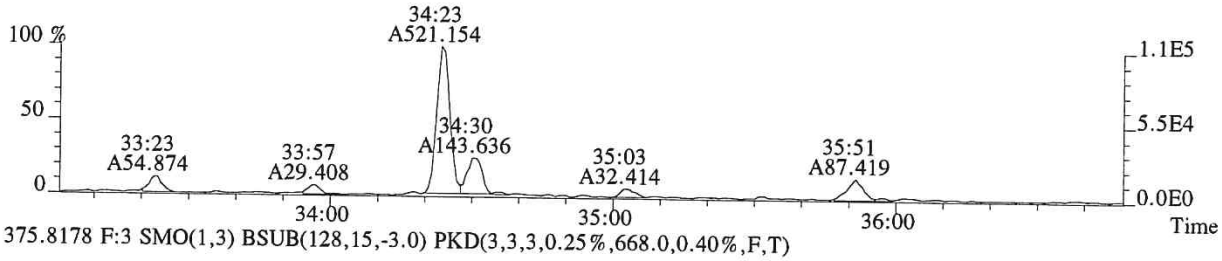


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

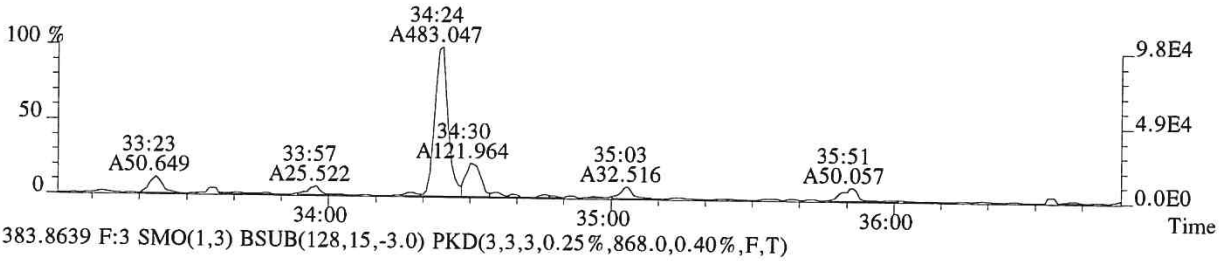


018586

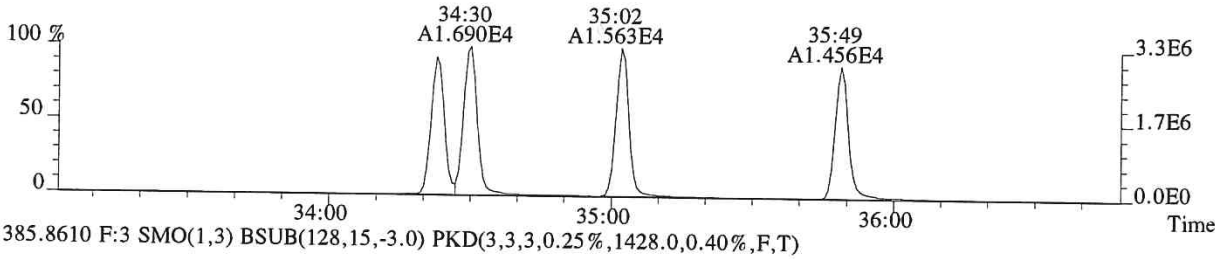
File:P519896 #1-339 Acq:10-JAN-2019 22:06:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-016
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1376.0,0.40%,F,T)



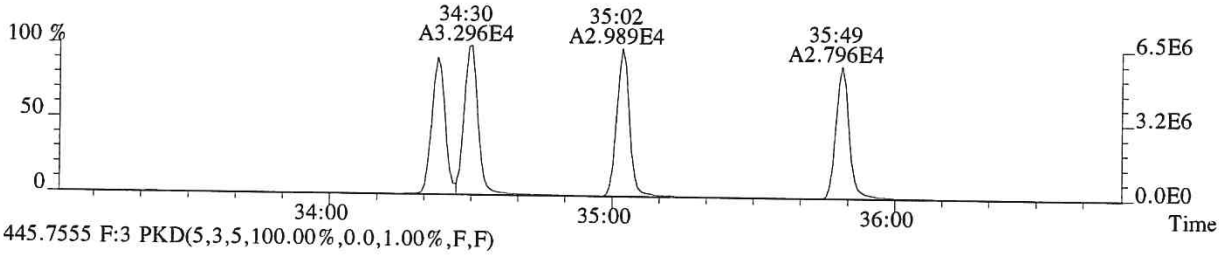
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,668.0,0.40%,F,T)



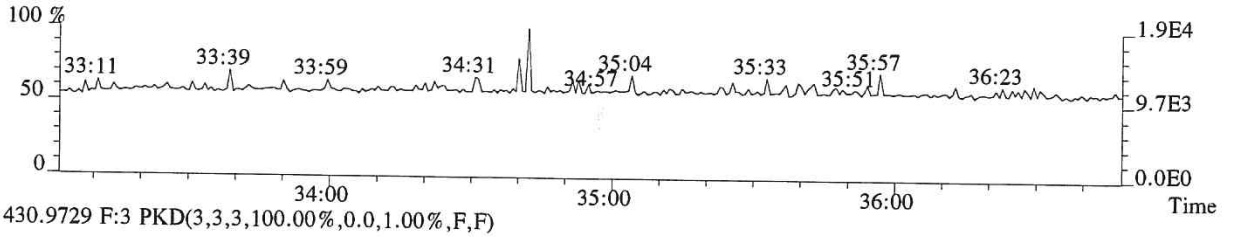
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,868.0,0.40%,F,T)



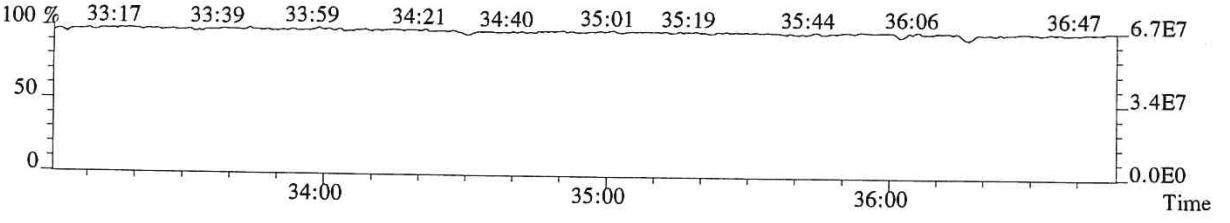
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1428.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

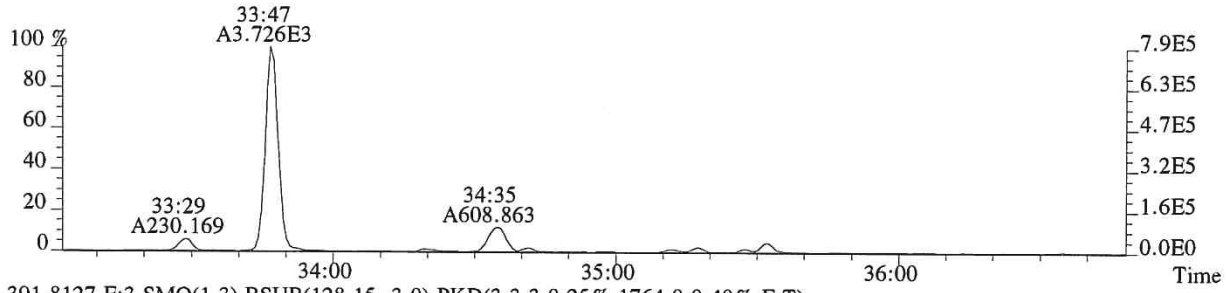


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

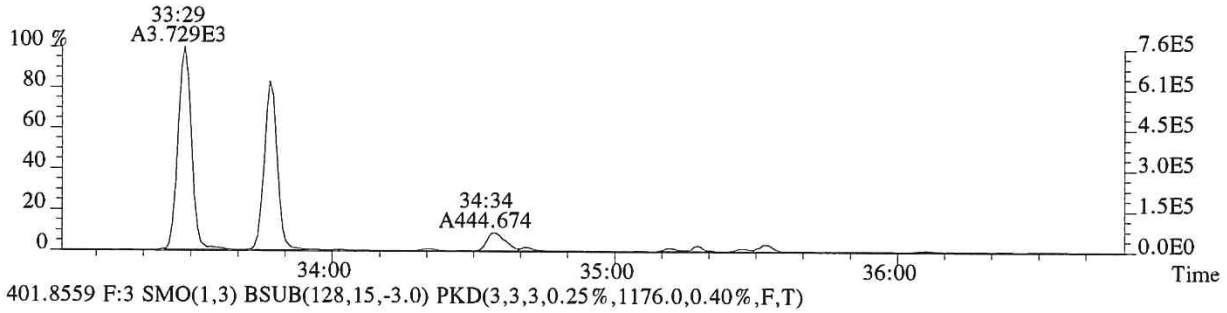


018587

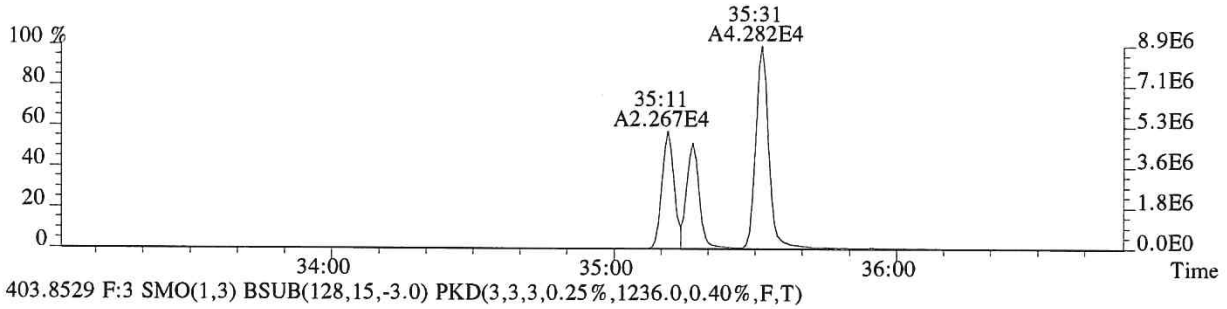
File:P519896 #1-339 Acq:10-JAN-2019 22:06:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-016
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1656.0,0.40%,F,T)



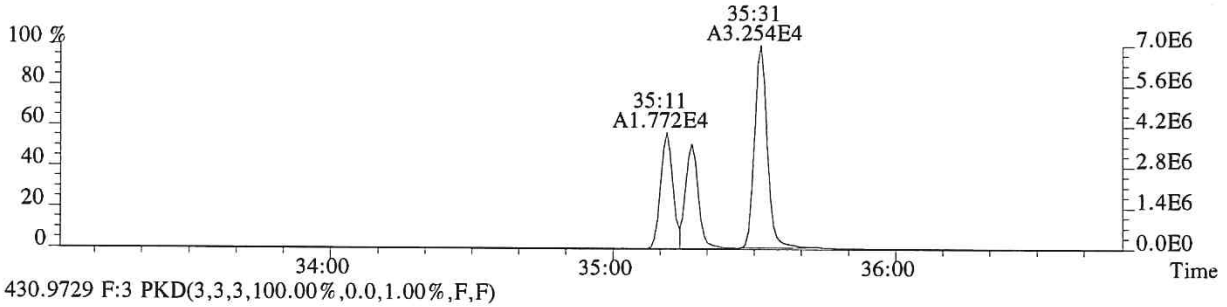
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1764.0,0.40%,F,T)



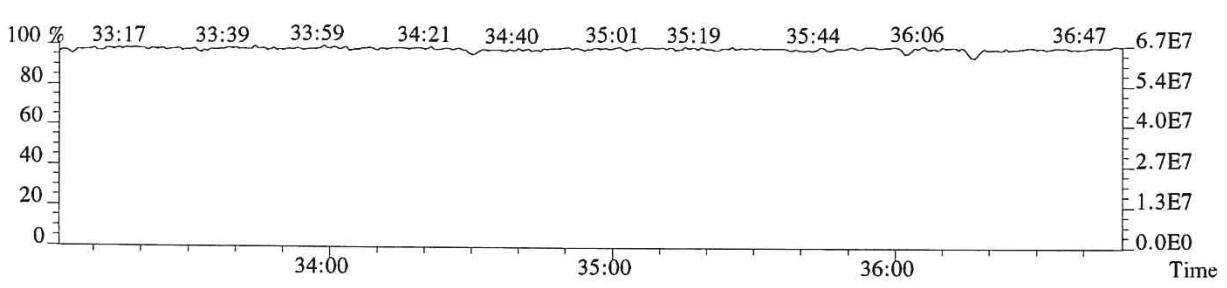
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1176.0,0.40%,F,T)



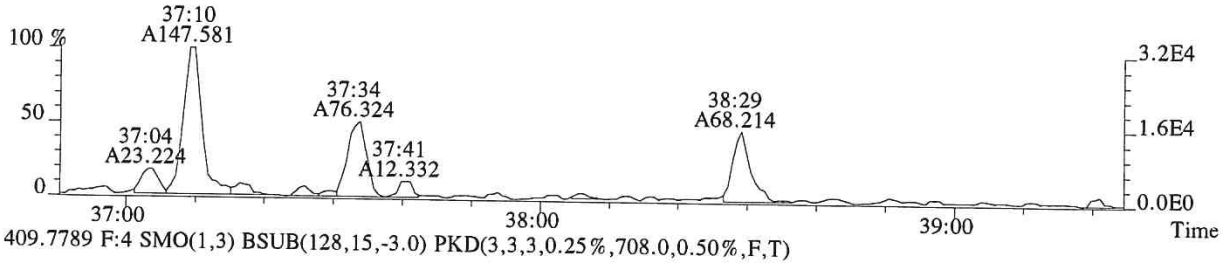
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1236.0,0.40%,F,T)



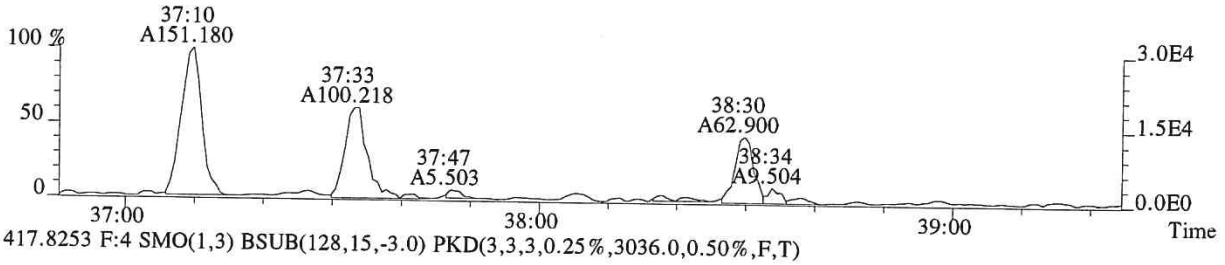
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



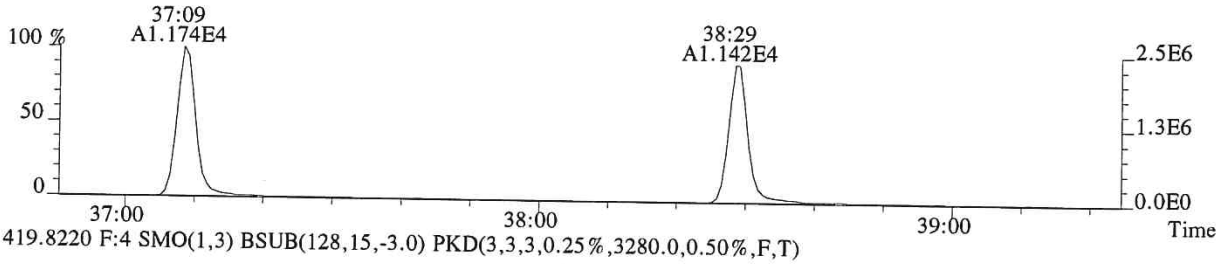
File:P519896 #1-232 Acq:10-JAN-2019 22:06:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-016
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,808.0,0.50%,F,T)



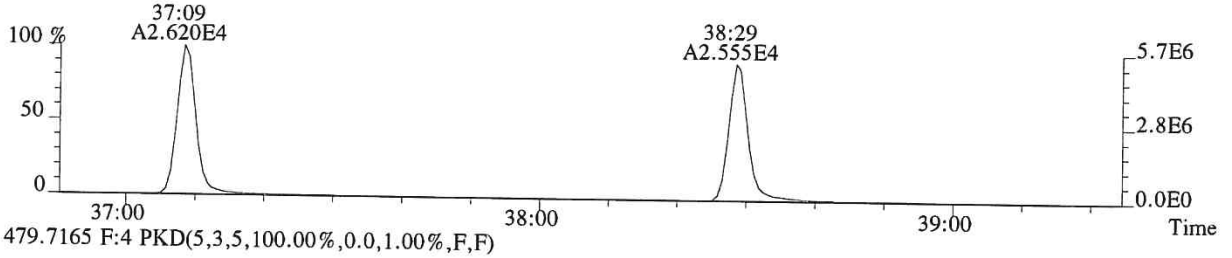
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,708.0,0.50%,F,T)



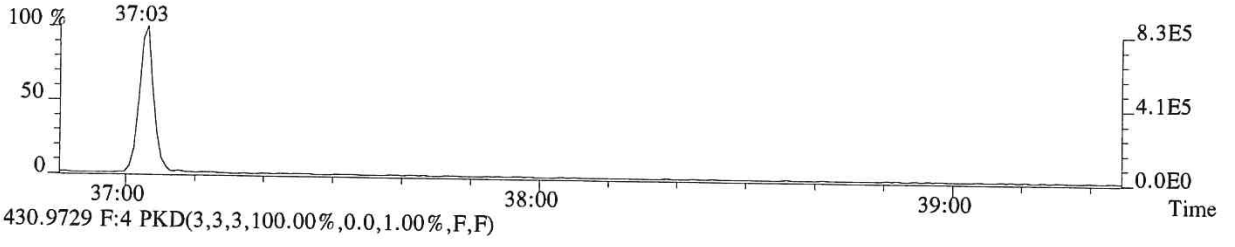
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3036.0,0.50%,F,T)



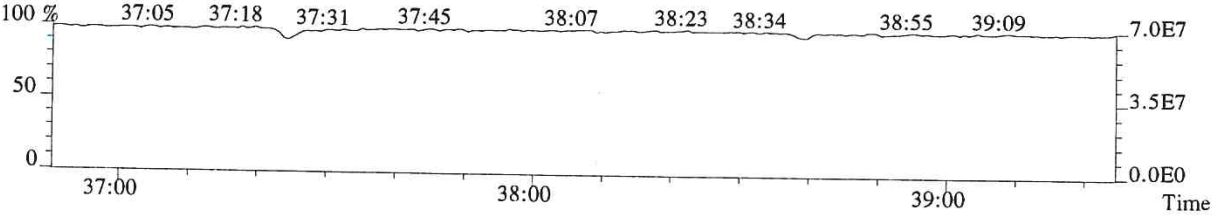
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3280.0,0.50%,F,T)



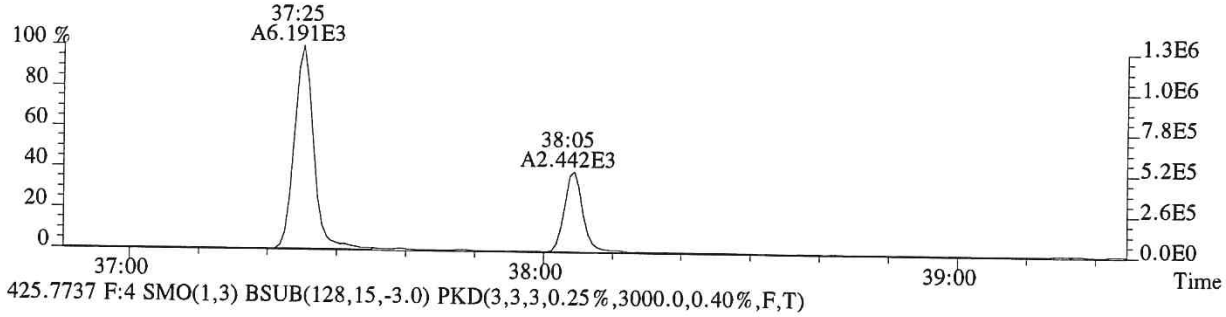
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



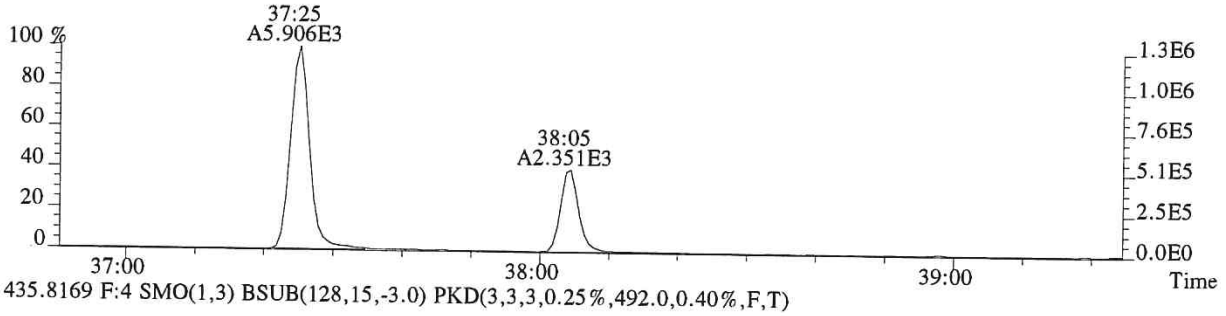
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



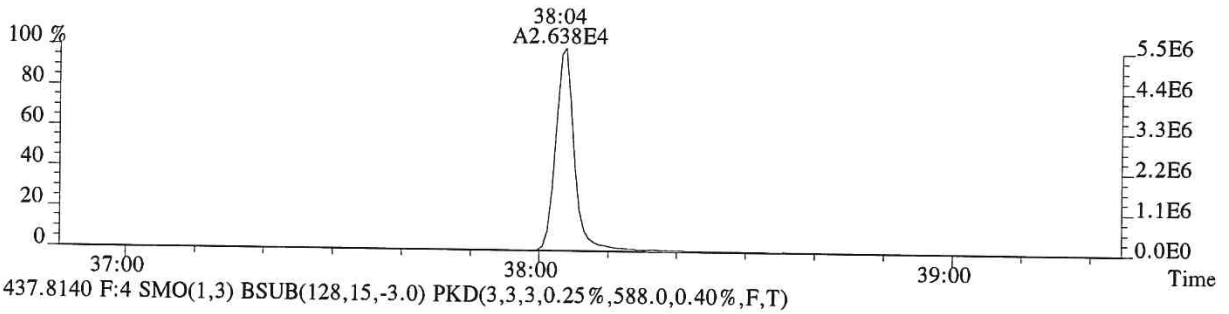
File:P519896 #1-232 Acq:10-JAN-2019 22:06:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-016
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4572.0,0.40%,F,T)



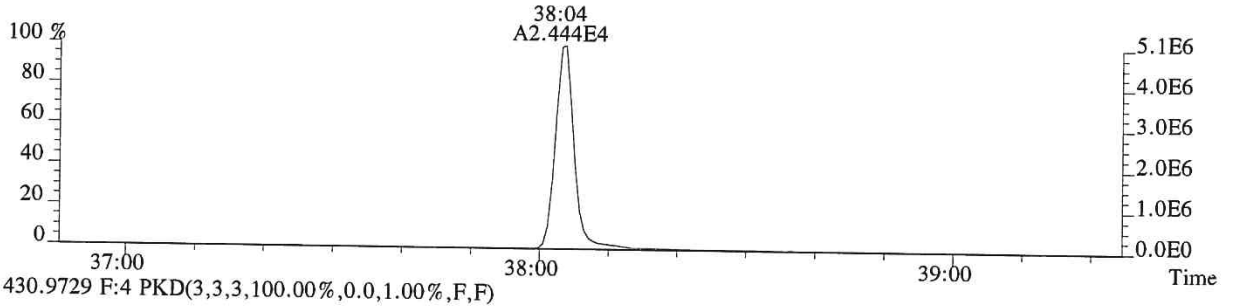
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3000.0,0.40%,F,T)



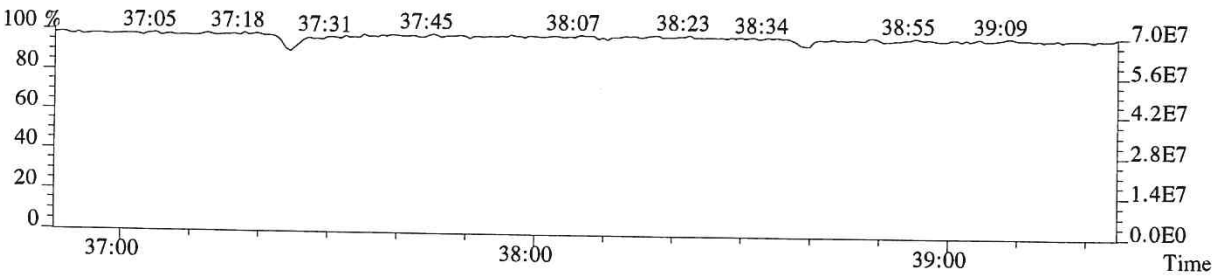
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,492.0,0.40%,F,T)



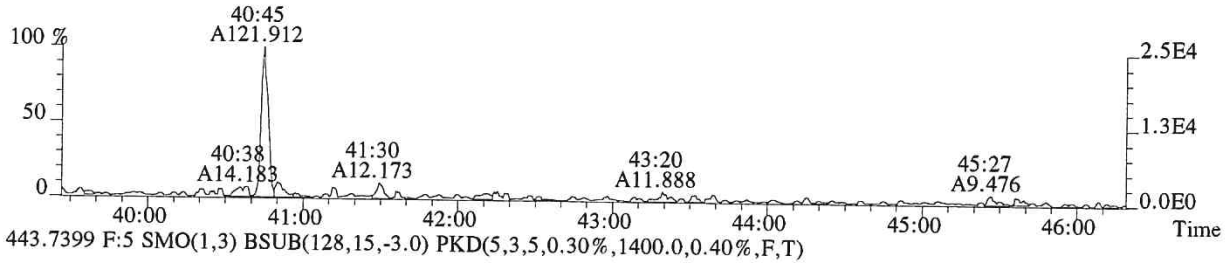
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,588.0,0.40%,F,T)



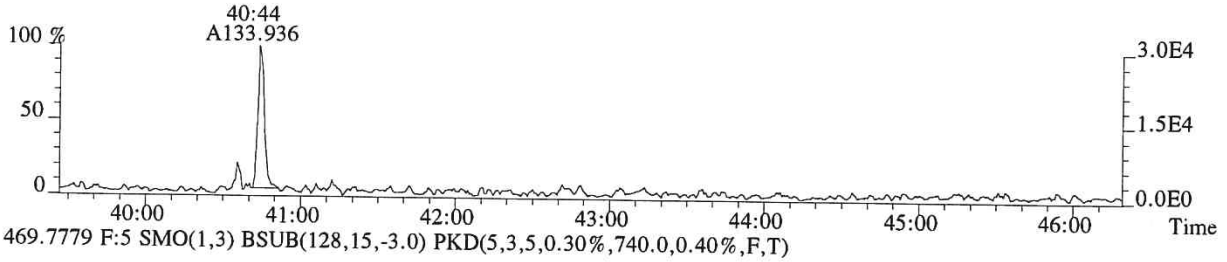
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



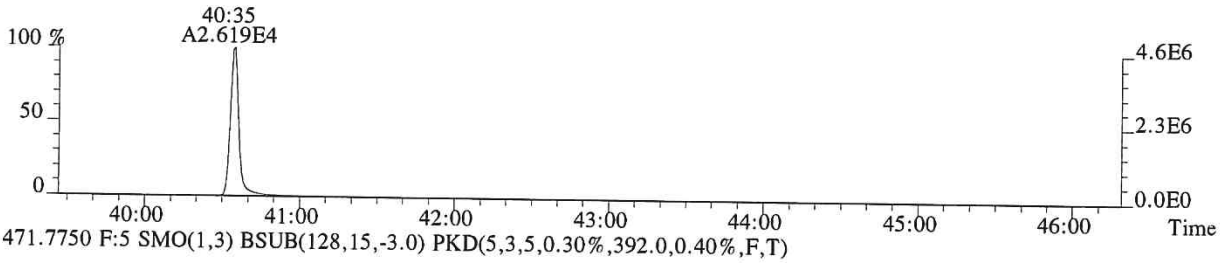
File:P519896 #1-619 Acq:10-JAN-2019 22:06:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-016
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,380.0,0.40%,F,T)



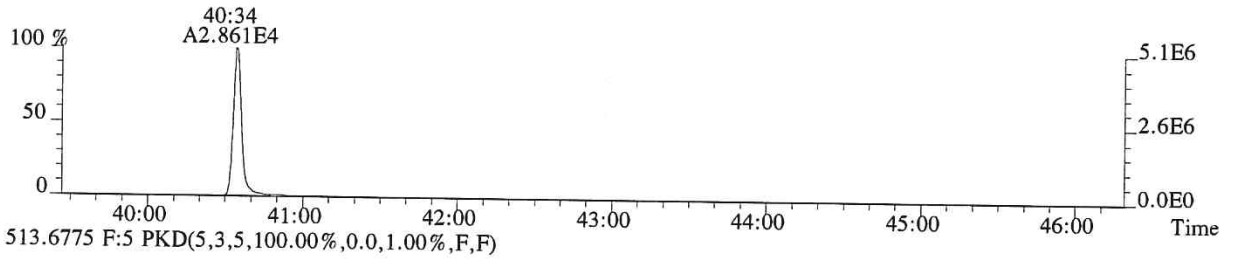
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1400.0,0.40%,F,T)



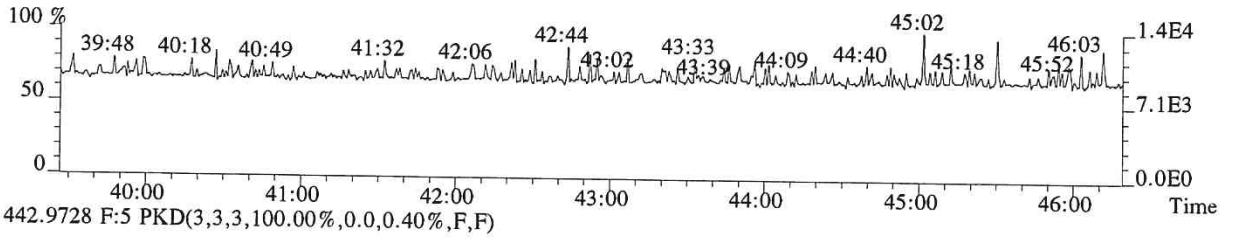
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,740.0,0.40%,F,T)



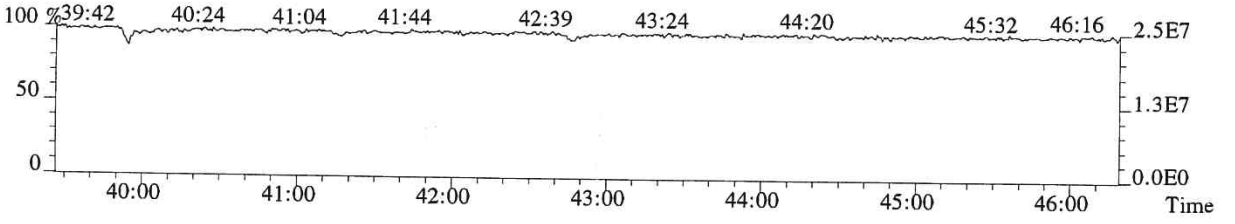
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,392.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

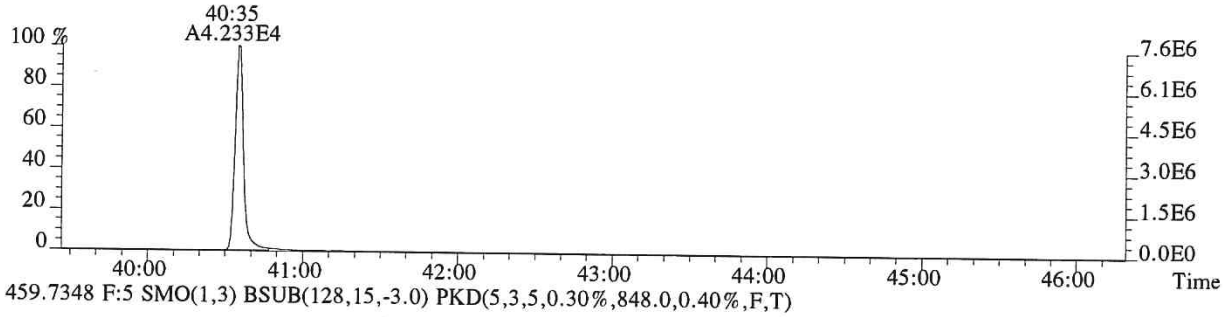


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

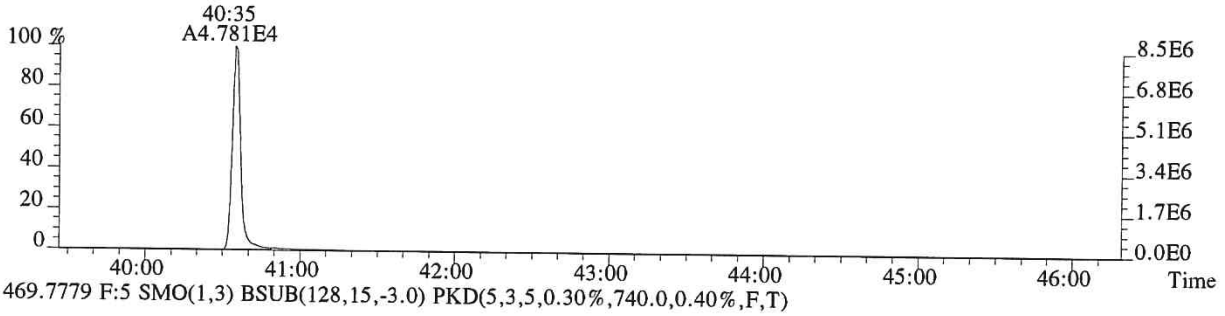


018591

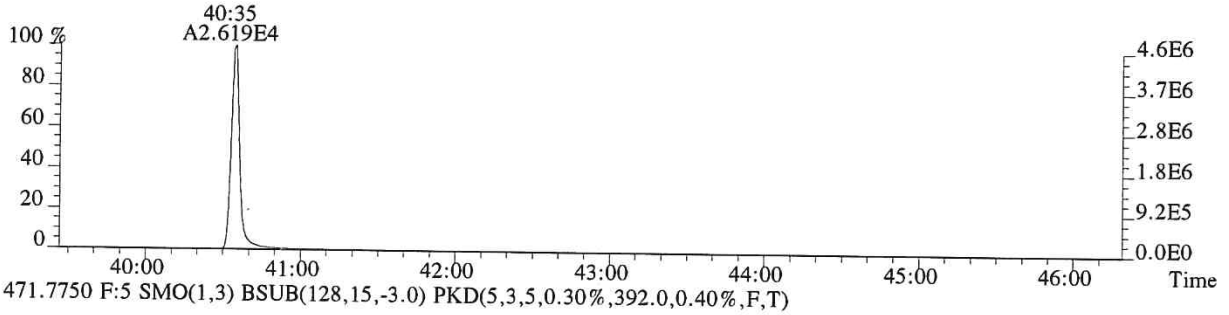
File:P519896 #1-619 Acq:10-JAN-2019 22:06:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-016
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,240.0,0.40%,F,T)



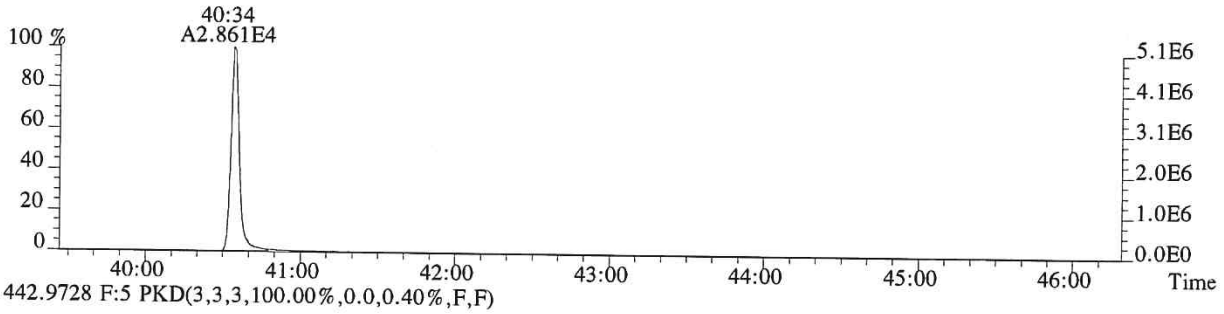
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,848.0,0.40%,F,T)



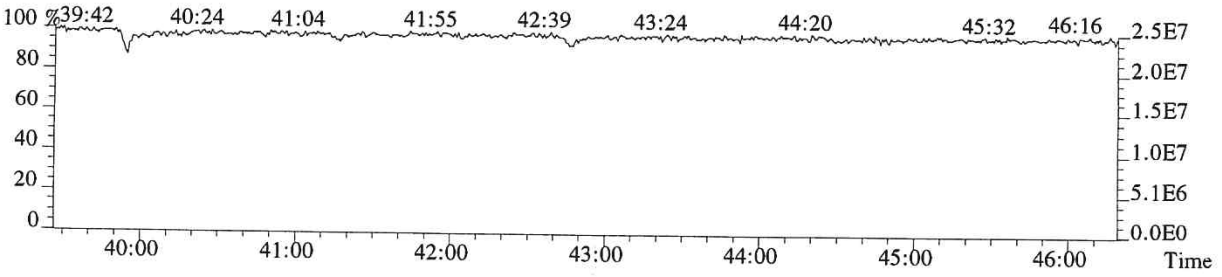
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,740.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,392.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0232

Run #10 Filename P519903 Samp: 1 Inj: 1 Acquired: 11-JAN-19 04:01:05
Processed: 11-JAN-19 14:53:34 Sample ID: E1801139-017

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	5.263e+03	6.861e+03	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:28	3.307e+02	2.148e+02	1.54	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	2.692e+02	1.498e+02	1.80	no	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	4.523e+02	3.491e+02	1.30	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	9.412e+01	1.357e+02	0.69	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:03	4.344e+01	2.337e+01	1.86	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:51	5.616e+01	4.037e+01	1.39	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:09	1.271e+02	1.297e+02	0.98	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:28	2.978e+01	4.437e+01	0.67	no	no	1.258
10	Unk	OCDF	40:44	6.646e+02	7.685e+02	0.86	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:25	1.241e+03	1.557e+03	0.80	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:48	6.384e+01	3.969e+01	1.61	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:12	5.420e+01	4.458e+01	1.22	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:17	7.107e+01	5.747e+01	1.24	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:31	1.079e+02	9.552e+01	1.13	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	1.692e+03	1.536e+03	1.10	yes	no	1.025
17	Unk	OCDD	40:35	2.724e+04	3.062e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:21	2.296e+04	2.898e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:26	3.859e+04	2.437e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:28	3.686e+04	2.337e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:23	1.700e+04	3.244e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.909e+04	3.659e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:02	1.742e+04	3.389e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	1.664e+04	3.169e+04	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:08	1.209e+04	2.703e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:28	1.250e+04	2.758e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:23	1.127e+04	1.398e+04	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:48	2.872e+04	1.762e+04	1.63	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:11	2.478e+04	1.946e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:16	2.508e+04	1.943e+04	1.29	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	2.644e+04	2.522e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	40:34	2.534e+04	2.880e+04	0.88	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:39	3.640e+04	4.597e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:31	5.076e+04	4.107e+04	1.24	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:25	1.649e+04				no	1.014

$$OCDD = \frac{(2.724e+04 + 3.062e+04) \times 4000\ pg \times 1}{(2.534e+04 + 2.880e+04) \times 10.528\ g \times 78.2 / 100 \times 1.118} = 464.4\ ng/kg$$

LMM 01/14/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0232

Run #10 Filename P519903 Samp: 1 Inj: 1 Acquired: 11-JAN-19 04:01:05
Processed: 11-JAN-19 14:53:34 LAB. ID: E1801139-017

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.97e+05	9.44e+02	7.4e+02	8.90e+05	1.43e+03	6.2e+02
2	1,2,3,7,8-PeCDF	6.06e+04	3.04e+02	2.0e+02	3.77e+04	1.48e+03	2.5e+01
3	2,3,4,7,8-PeCDF	3.98e+04	3.04e+02	1.3e+02	2.27e+04	1.48e+03	1.5e+01
4	1,2,3,4,7,8-HxCDF	8.73e+04	6.68e+02	1.3e+02	7.06e+04	6.60e+02	1.1e+02
5	1,2,3,6,7,8-HxCDF	2.05e+04	6.68e+02	3.1e+01	3.11e+04	6.60e+02	4.7e+01
6	2,3,4,6,7,8-HxCDF	9.95e+03	6.68e+02	1.5e+01	5.70e+03	6.60e+02	8.6e+00
7	1,2,3,7,8,9-HxCDF	7.23e+03	6.68e+02	1.1e+01	9.76e+03	6.60e+02	1.5e+01
8	1,2,3,4,6,7,8-HpCDF	2.54e+04	8.60e+02	3.0e+01	2.79e+04	2.24e+02	1.2e+02
9	1,2,3,4,7,8,9-HpCDF	6.62e+03	8.60e+02	7.7e+00	9.77e+03	2.24e+02	4.4e+01
10	OCDF	1.13e+05	5.16e+02	2.2e+02	1.34e+05	1.94e+03	6.9e+01
11	2,3,7,8-TCDD	1.83e+05	2.65e+03	6.9e+01	2.46e+05	1.50e+03	1.6e+02
12	1,2,3,7,8-PeCDD	1.10e+04	1.16e+03	9.5e+00	8.29e+03	7.52e+02	1.1e+01
13	1,2,3,4,7,8-HxCDD	1.34e+04	1.20e+03	1.1e+01	1.05e+04	8.04e+02	1.3e+01
14	1,2,3,6,7,8-HxCDD	1.33e+04	1.20e+03	1.1e+01	1.31e+04	8.04e+02	1.6e+01
15	1,2,3,7,8,9-HxCDD	2.43e+04	1.20e+03	2.0e+01	1.92e+04	8.04e+02	2.4e+01
16	1,2,3,4,6,7,8-HpCDD	3.55e+05	1.59e+03	2.2e+02	3.31e+05	1.59e+03	2.1e+02
17	OCDD	4.84e+06	3.92e+02	1.2e+04	5.47e+06	5.64e+02	9.7e+03
18	13C-2,3,7,8-TCDF	3.31e+06	2.90e+03	1.1e+03	4.14e+06	2.38e+03	1.7e+03
19	13C-1,2,3,7,8-PeCDF	6.55e+06	4.92e+02	1.3e+04	4.15e+06	5.92e+02	7.0e+03
20	13C-2,3,4,7,8-PeCDF	6.74e+06	4.92e+02	1.4e+04	4.38e+06	5.92e+02	7.4e+03
21	13C-1,2,3,4,7,8-HxCDF	3.54e+06	1.20e+03	3.0e+03	6.72e+06	8.00e+02	8.4e+03
22	13C-1,2,3,6,7,8-HxCDF	3.78e+06	1.20e+03	3.1e+03	7.24e+06	8.00e+02	9.0e+03
23	13C-2,3,4,6,7,8-HxCDF	3.58e+06	1.20e+03	3.0e+03	6.85e+06	8.00e+02	8.6e+03
24	13C-1,2,3,7,8,9-HxCDF	3.20e+06	1.20e+03	2.7e+03	6.21e+06	8.00e+02	7.8e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.59e+06	2.57e+03	1.0e+03	5.78e+06	3.25e+03	1.8e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.54e+06	2.57e+03	9.9e+02	5.54e+06	3.25e+03	1.7e+03
27	13C-2,3,7,8-TCDD	1.78e+06	5.86e+03	3.0e+02	2.24e+06	2.95e+03	7.6e+02
28	13C-1,2,3,7,8-PeCDD	5.16e+06	1.14e+03	4.5e+03	3.15e+06	1.37e+03	2.3e+03
29	13C-1,2,3,4,7,8-HxCDD	5.52e+06	9.48e+02	5.8e+03	4.37e+06	6.08e+02	7.2e+03
30	13C-1,2,3,6,7,8-HxCDD	4.87e+06	9.48e+02	5.1e+03	3.84e+06	6.08e+02	6.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	5.57e+06	6.68e+02	8.3e+03	5.28e+06	6.92e+02	7.6e+03
32	13C-OCDD	4.51e+06	6.44e+02	7.0e+03	5.06e+06	3.56e+02	1.4e+04
33	13C-1,2,3,4-TCDD	5.53e+06	5.86e+03	9.4e+02	6.96e+06	2.95e+03	2.4e+03
34	13C-1,2,3,7,8,9-HxCDD	1.02e+07	9.48e+02	1.1e+04	8.21e+06	6.08e+02	1.4e+04
35	37Cl-2,3,7,8-TCDD	2.51e+06	1.92e+03	1.3e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0232

Entry: 36 Totals Name: Total Tetra-Furans

Run: 10 File: P519903 Sample:1 Injection:1 Function:1

Acquired: 11-JAN-19 04:01:05 Processed: 11-JAN-19 14:53:34

Mass: 303.9020 305.8990 Tot Response: 2.21e+04 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:23	2.48e+01	3.07e+01	0.81	yes	5.55e+01		n	n
2	21:50	1.01e+02	1.23e+02	0.82	yes	2.24e+02		n	n
3	22:16	2.38e+02	3.32e+02	0.72	yes	5.71e+02		n	n
4	22:33	3.40e+02	4.33e+02	0.78	yes	7.72e+02		n	n
5	23:11	2.30e+02	2.87e+02	0.80	yes	5.17e+02		n	n
6	23:48	1.96e+02	2.51e+02	0.78	yes	4.47e+02		n	n
7	24:23	2.49e+03	3.21e+03	0.78	yes	5.70e+03		n	n
8	24:41	1.62e+02	2.05e+02	0.79	yes	3.67e+02		n	n
9	25:09	8.02e+01	1.21e+02	0.66	yes	2.01e+02		n	n
10	25:22	5.26e+03	6.86e+03	0.77	yes	1.21e+04	2,3,7,8-TCDF	n	n
11	25:49	4.34e+02	5.71e+02	0.76	yes	1.01e+03		n	n
12	26:07	5.53e+01	6.39e+01	0.87	yes	1.19e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0232

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 10 File: P519903 Sample:1 Injection:1 Function:1

Acquired: 11-JAN-19 04:01:05 Processed: 11-JAN-19 14:53:34

Mass: 319.8970 321.8940 Tot Response: 3.68e+03 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:02	3.31e+02	4.16e+02	0.80	yes	7.47e+02		n	n
2	26:04	5.77e+01	8.20e+01	0.70	yes	1.40e+02		n	n
3	26:25	1.24e+03	1.56e+03	0.80	yes	2.80e+03	2,3,7,8-TCDD	n	n

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Peak List Summary

CLIENT ID.
SL0232

Entry: 39 Totals Name: Total Penta-Furans2

Run: 10 File: P519903 Sample:1 Injection:1 Function:2

Acquired: 11-JAN-19 04:01:05 Processed: 11-JAN-19 14:53:34

Mass: 339.8600 341.8570 Tot Response: 9.92e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:25	2.69e+02	1.78e+02	1.51	yes	4.46e+02		n	n
2	30:28	3.31e+02	2.15e+02	1.54	yes	5.45e+02	1,2,3,7,8-PeCDF	n	n

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Peak List Summary

CLIENT ID.
SL0232

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 10 File: P519903 Sample:1 Injection:1 Function:2

Acquired: 11-JAN-19 04:01:05 Processed: 11-JAN-19 14:53:34

Mass: 355.8550 357.8520 Tot Response: 1.03e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:59	3.15e+02	2.10e+02	1.50	yes	5.25e+02		n	n
2	30:40	4.28e+01	2.42e+01	1.77	yes	6.69e+01		n	n
3	30:46	7.31e+01	4.66e+01	1.57	yes	1.20e+02		n	n
4	31:01	1.28e+02	8.18e+01	1.57	yes	2.10e+02		n	n
5	31:48	6.38e+01	3.97e+01	1.61	yes	1.04e+02	1,2,3,7,8-PeCDD	n	n

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Peak List Summary

CLIENT ID.
SL0232

Entry: 41 Totals Name: Total Hexa-Furans

Run: 10 File: P519903 Sample:1 Injection:1 Function:3

Acquired: 11-JAN-19 04:01:05 Processed: 11-JAN-19 14:53:34

Mass: 373.8210 375.8180 Tot Response: 9.47e+02 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:56	2.85e+01	2.05e+01	1.39	yes	4.90e+01		n	n
2	34:23	4.52e+02	3.49e+02	1.30	yes	8.01e+02	1,2,3,4,7,8-HxCDF	n	n
3	35:51	5.62e+01	4.04e+01	1.39	yes	9.65e+01	1,2,3,7,8,9-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0232

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 10 File: P519903 Sample:1 Injection:1 Function:3

Acquired: 11-JAN-19 04:01:05 Processed: 11-JAN-19 14:53:34

Mass: 389.8160 391.8130 Tot Response: 5.11e+03 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:47	2.02e+03	1.70e+03	1.19	yes	3.72e+03		n	n
2	34:34	4.61e+02	3.83e+02	1.20	yes	8.44e+02		n	n
3	34:41	5.91e+01	5.30e+01	1.12	yes	1.12e+02		n	n
4	35:12	5.42e+01	4.46e+01	1.22	yes	9.88e+01	1,2,3,4,7,8-HxCDD	n	n
5	35:17	7.11e+01	5.75e+01	1.24	yes	1.29e+02	1,2,3,6,7,8-HxCDD	n	n
6	35:31	1.08e+02	9.55e+01	1.13	yes	2.03e+02	1,2,3,7,8,9-HxCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0232

Entry: 43 Totals Name: Total Hepta-Furans

Run: 10 File: P519903 Sample:1 Injection:1 Function:4

Acquired: 11-JAN-19 04:01:05 Processed: 11-JAN-19 14:53:34

Mass: 407.7820 409.7790 Tot Response: 3.88e+02 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:09	1.27e+02	1.30e+02	0.98	yes	2.57e+02	1,2,3,4,6,7,8-HpCDF	n	n
2	37:33	6.63e+01	6.50e+01	1.02	yes	1.31e+02		n	n

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Peak List Summary

CLIENT ID.
SL0232

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 10 File: P519903 Sample:1 Injection:1 Function:4

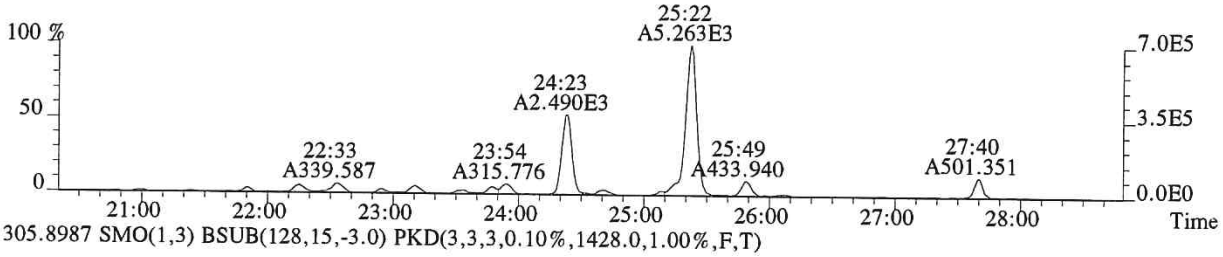
Acquired: 11-JAN-19 04:01:05 Processed: 11-JAN-19 14:53:34

Mass: 423.7770 425.7740 Tot Response: 1.18e+04 RRF: 1.025

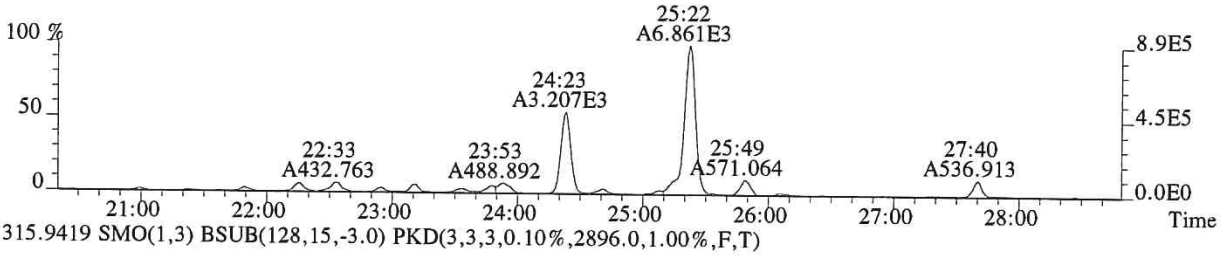
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:24	4.28e+03	4.26e+03	1.01	yes	8.54e+03		n	n
2	38:04	1.69e+03	1.54e+03	1.10	yes	3.23e+03	1,2,3,4,6,7,8-HpCDD	n	n

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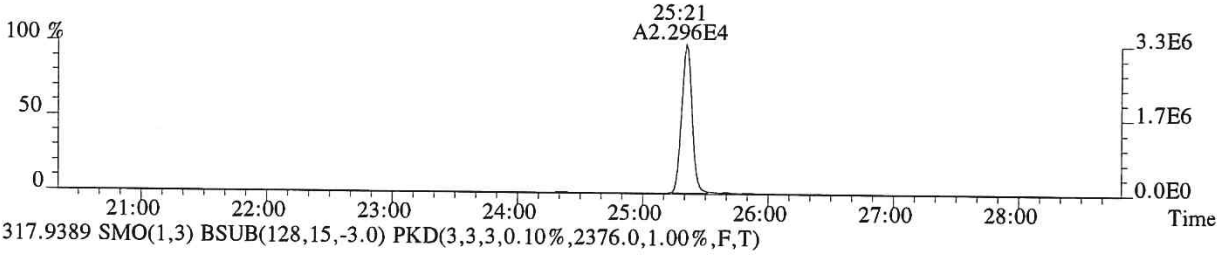
File:P519903 #1-602 Acq:11-JAN-2019 04:01:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-017
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



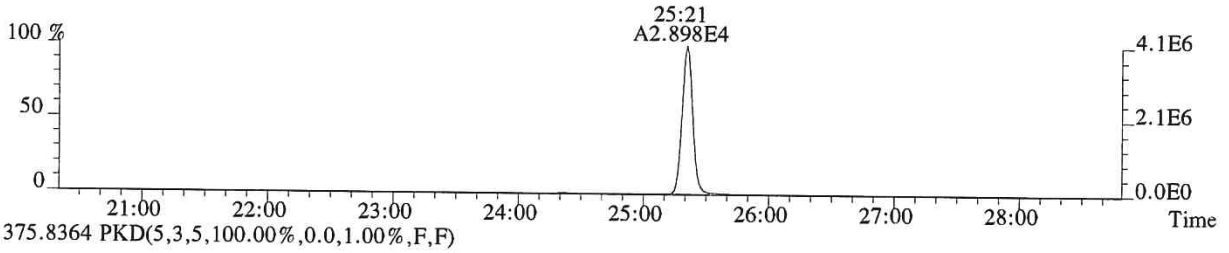
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1428.0,1.00%,F,T)



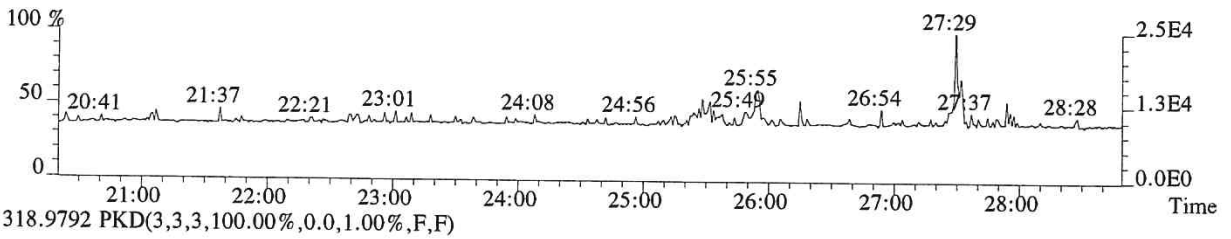
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2896.0,1.00%,F,T)



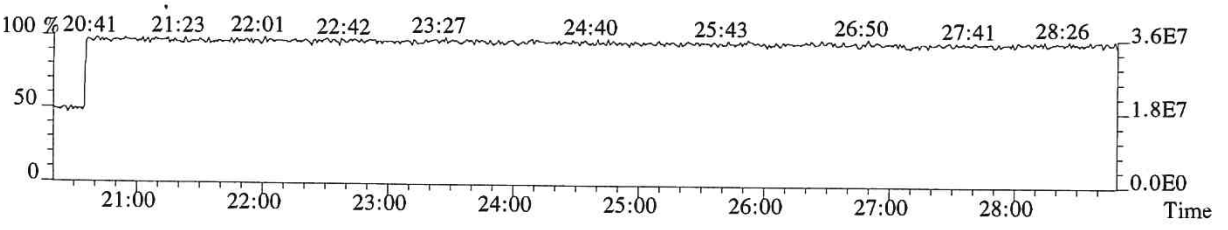
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2376.0,1.00%,F,T)



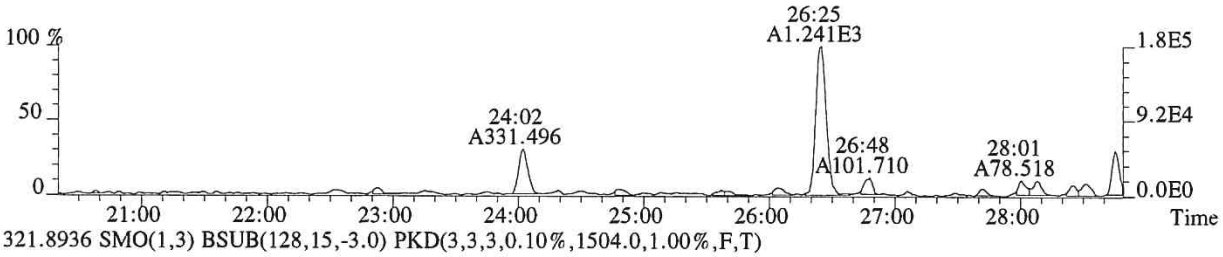
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



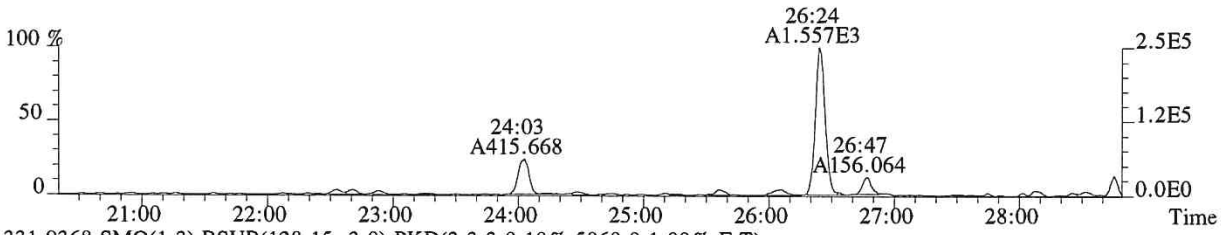
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



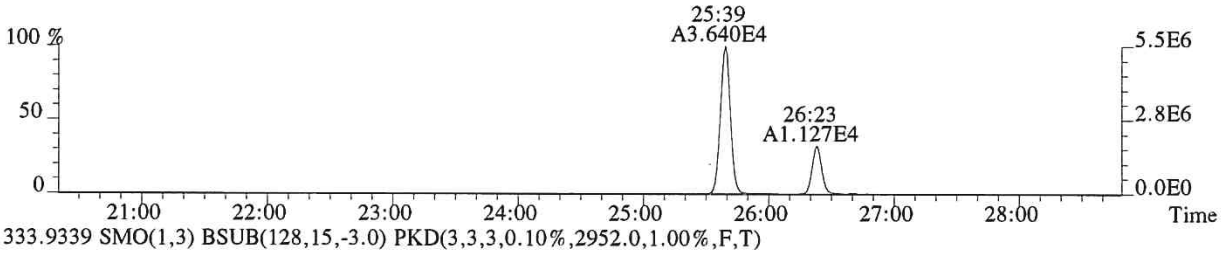
File:P519903 #1-602 Acq:11-JAN-2019 04:01:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-017
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2652.0,1.00%,F,T)



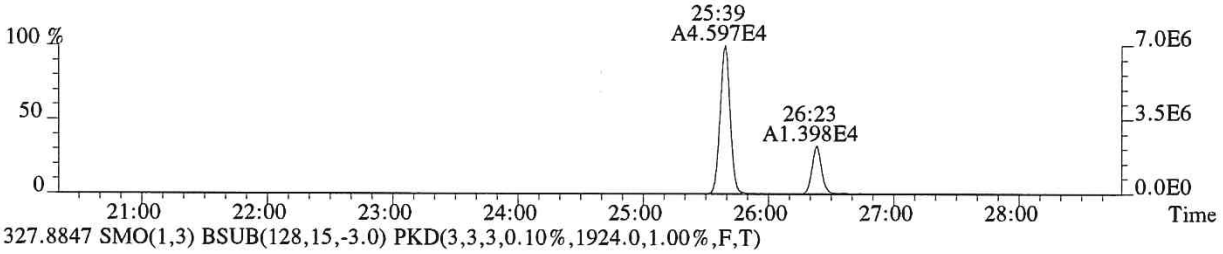
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1504.0,1.00%,F,T)



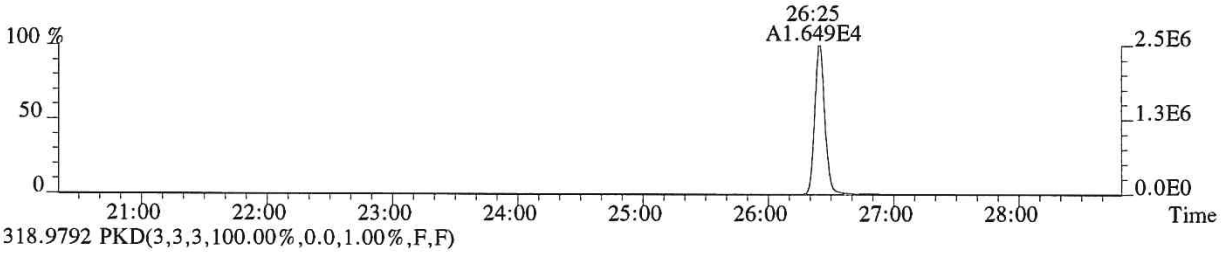
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5860.0,1.00%,F,T)



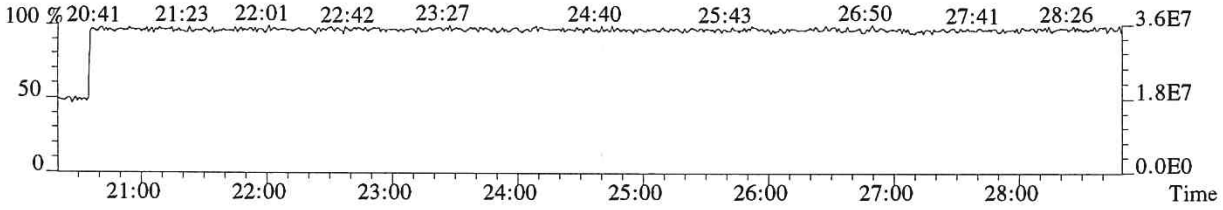
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2952.0,1.00%,F,T)



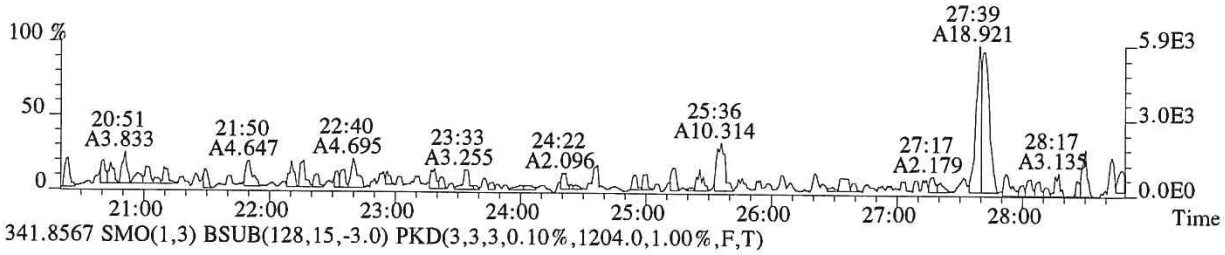
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1924.0,1.00%,F,T)



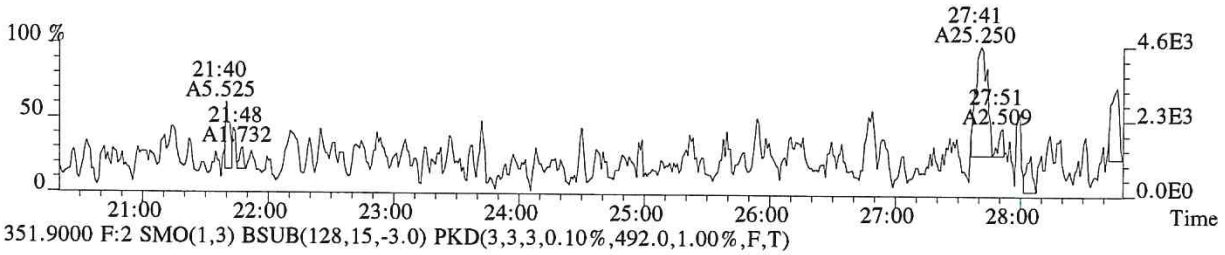
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



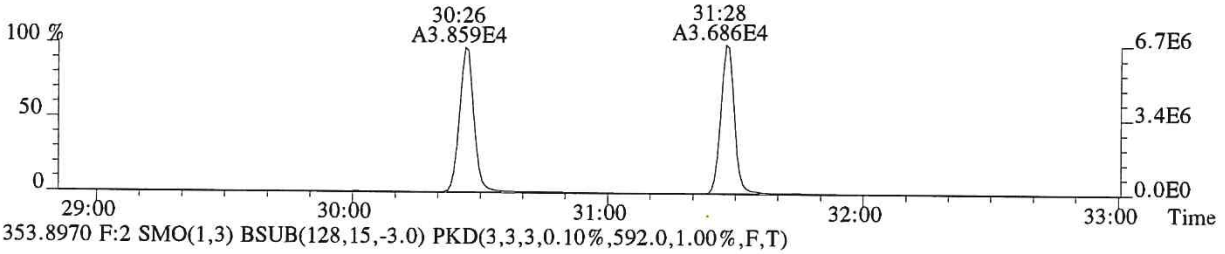
File:P519903 #1-602 Acq:11-JAN-2019 04:01:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-017
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,320.0,1.00%,F,T)



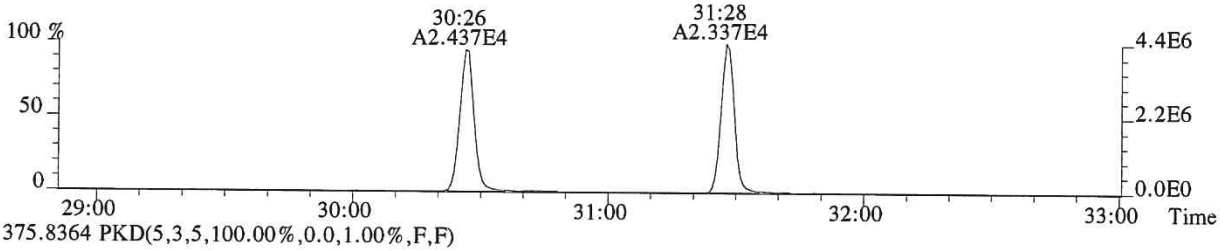
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1204.0,1.00%,F,T)



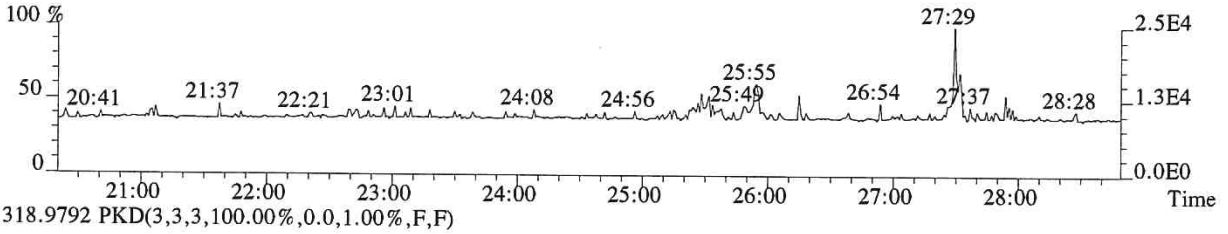
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,492.0,1.00%,F,T)



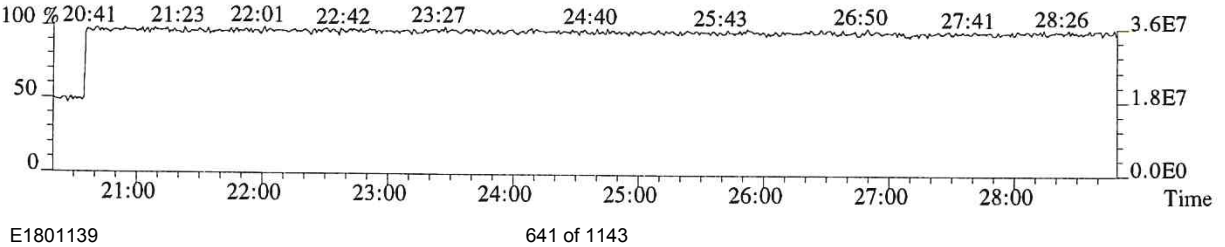
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,592.0,1.00%,F,T)



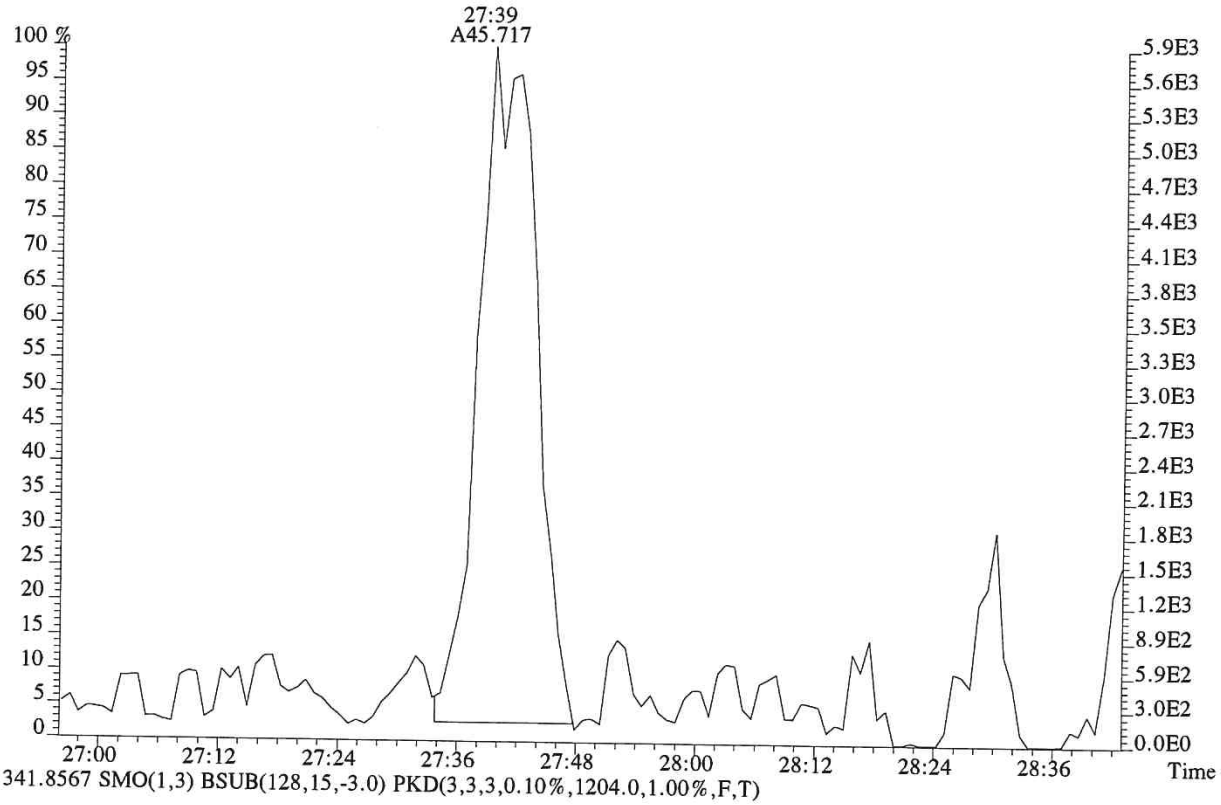
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



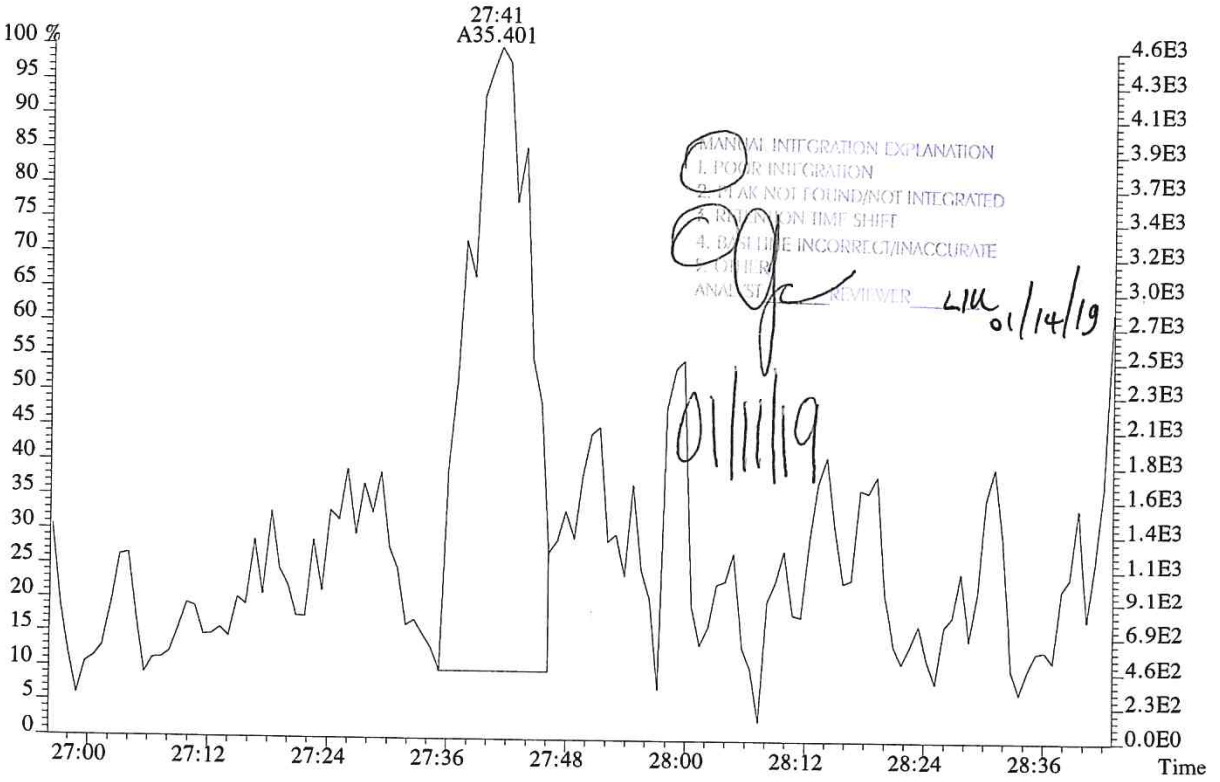
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519903 #1-602 Acq:11-JAN-2019 04:01:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-017
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,320.0,1.00%,F,T)

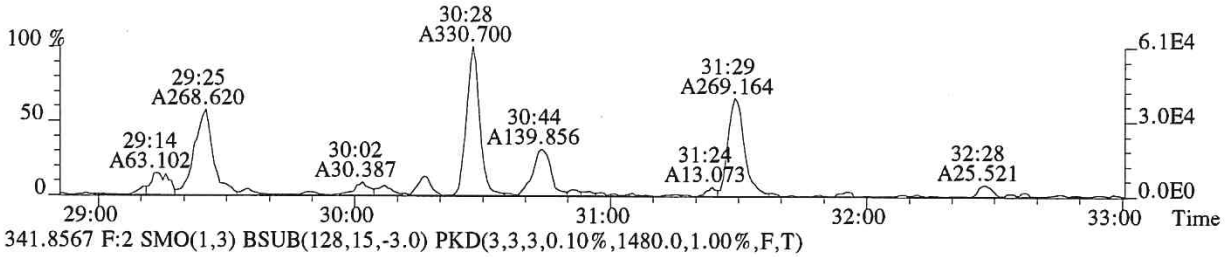


341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1204.0,1.00%,F,T)

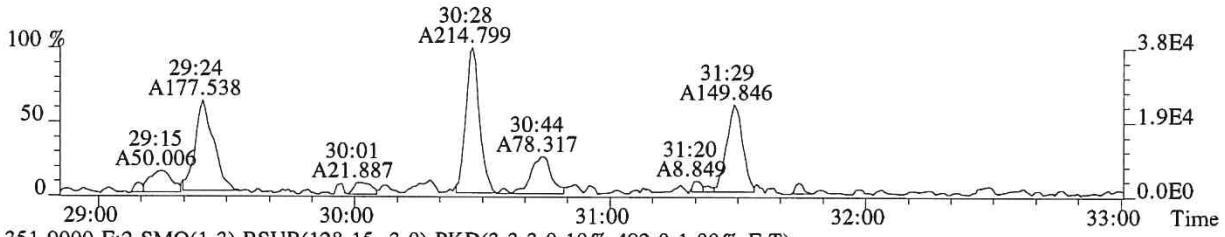


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LLW 01/14/19
01/11/19

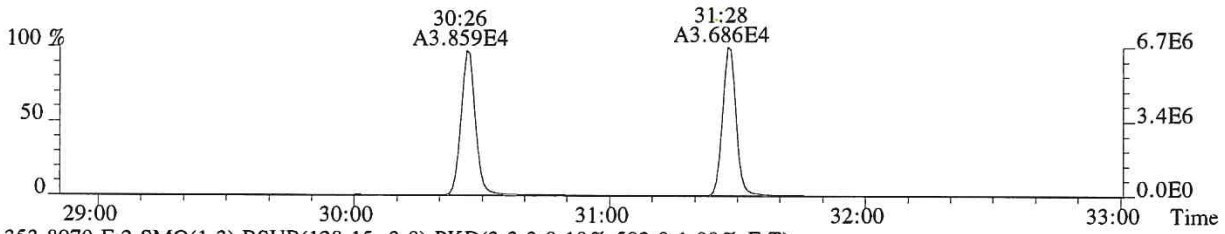
File:P519903 #1-375 Acq:11-JAN-2019 04:01:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-017
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,304.0,1.00%,F,T)



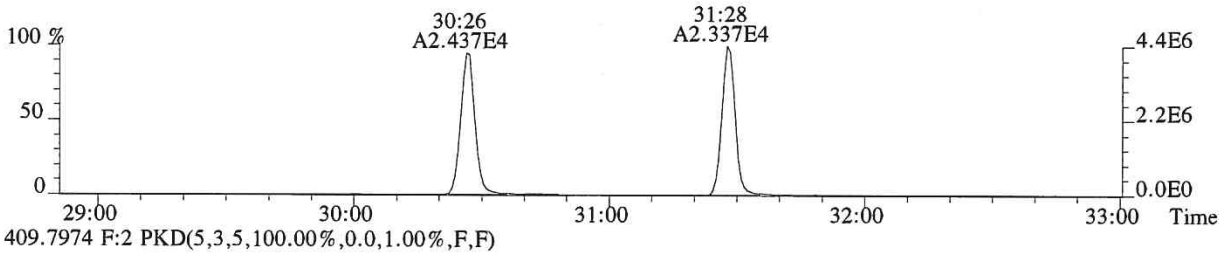
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1480.0,1.00%,F,T)



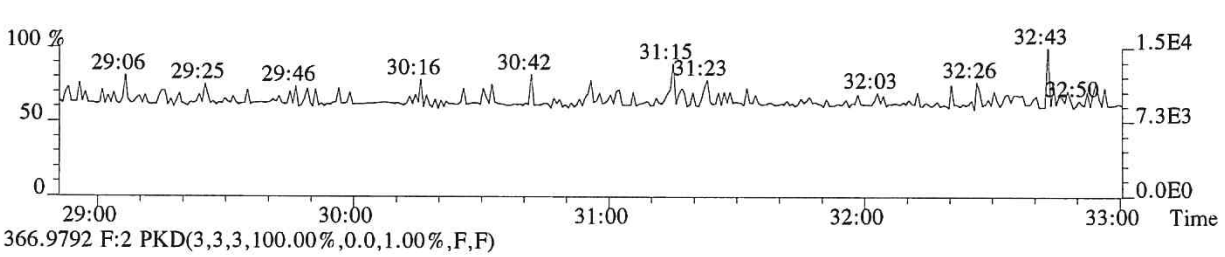
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,492.0,1.00%,F,T)



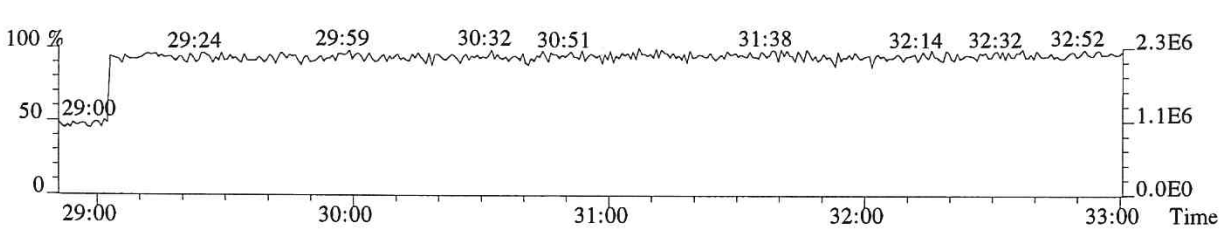
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,592.0,1.00%,F,T)



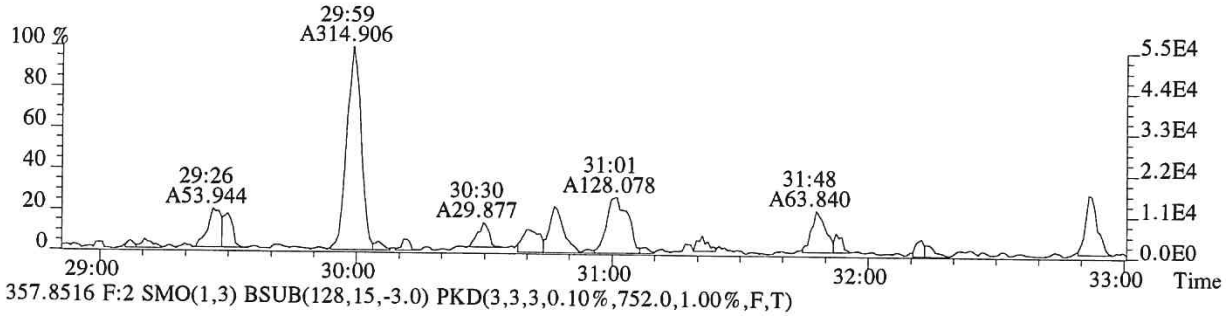
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



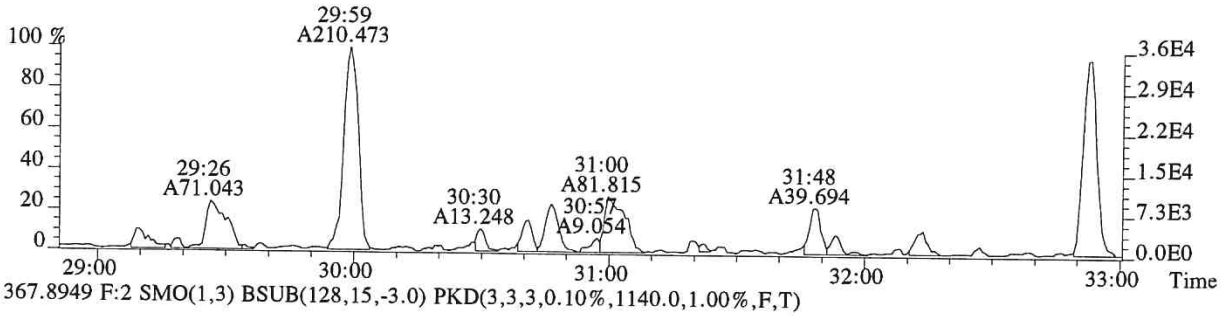
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



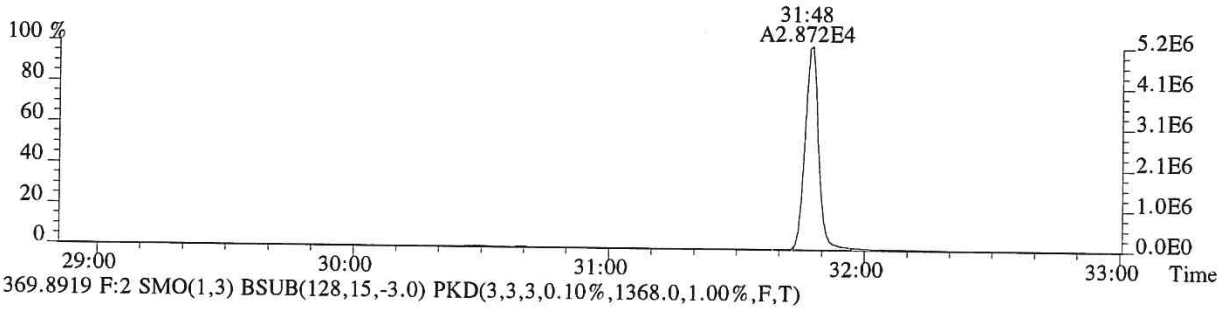
File:P519903 #1-375 Acq:11-JAN-2019 04:01:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-017
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1164.0,1.00%,F,T)



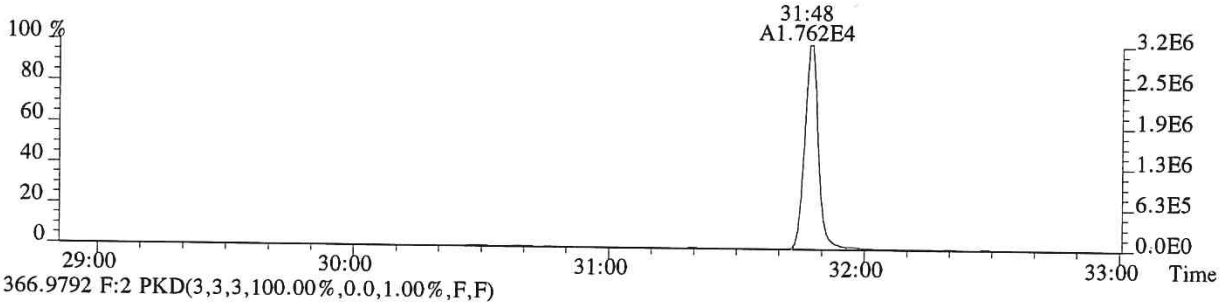
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,752.0,1.00%,F,T)



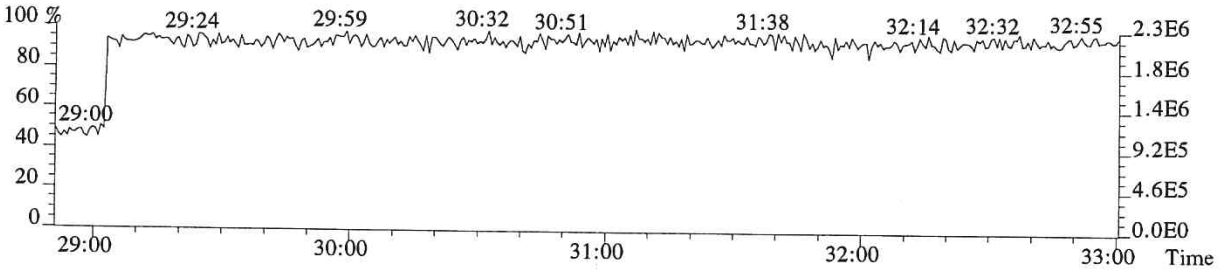
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1140.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1368.0,1.00%,F,T)

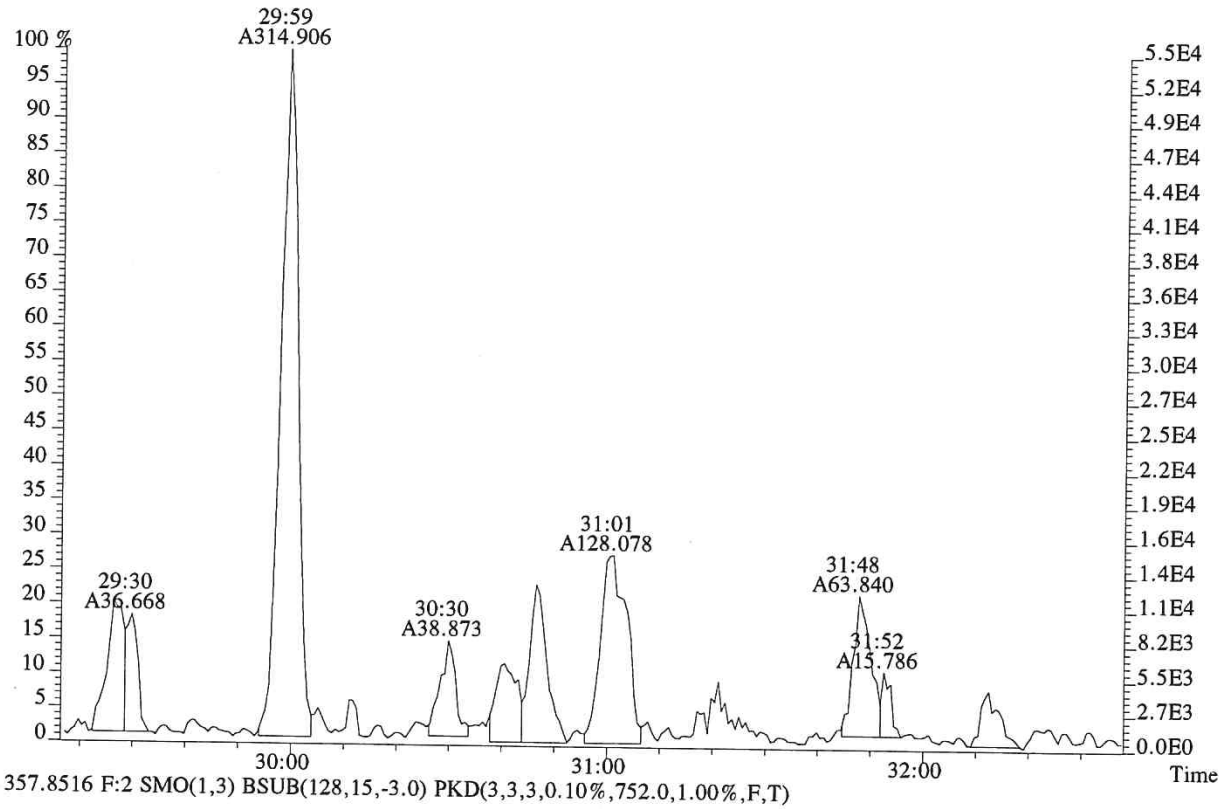


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

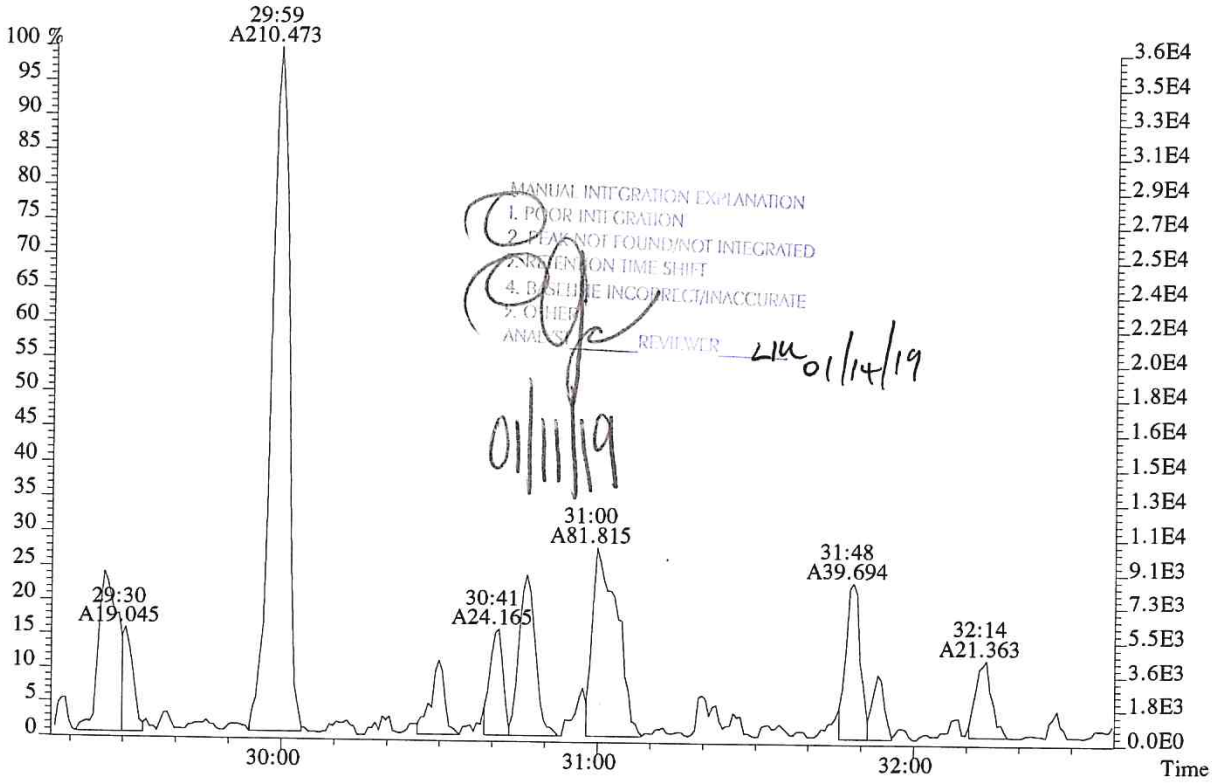


018608

File:P519903 #1-375 Acq:11-JAN-2019 04:01:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-017
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1164.0,1.00%,F,T)

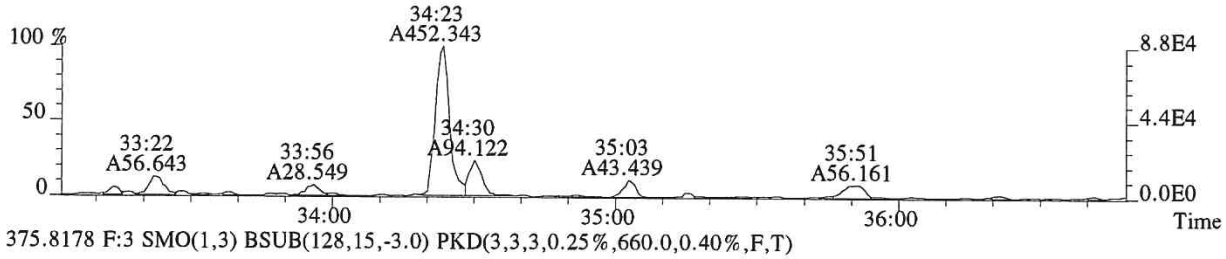


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,752.0,1.00%,F,T)

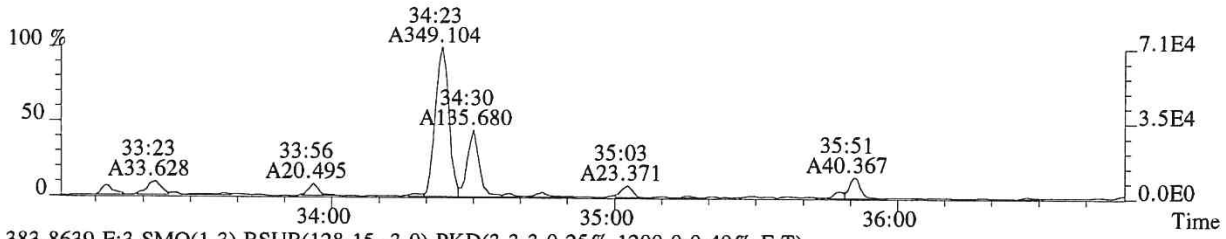


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
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3. RETENTION TIME SHIFT
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5. OTHER
ANALYST
REVIEWER ZM 01/14/19
01/11/19

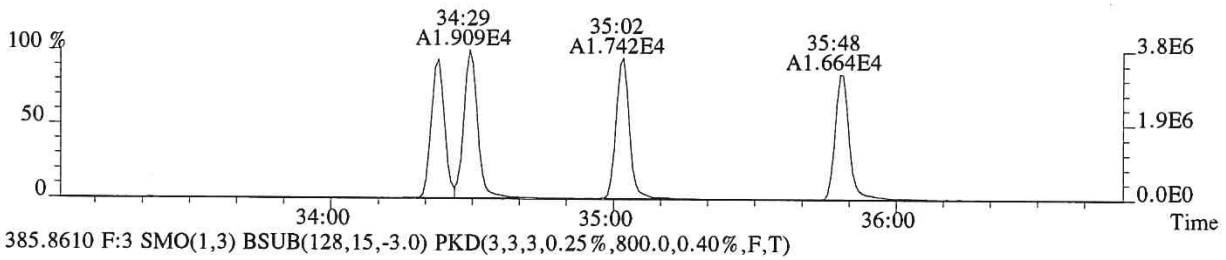
File:P519903 #1-339 Acq:11-JAN-2019 04:01:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-017
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,668.0,0.40%,F,T)



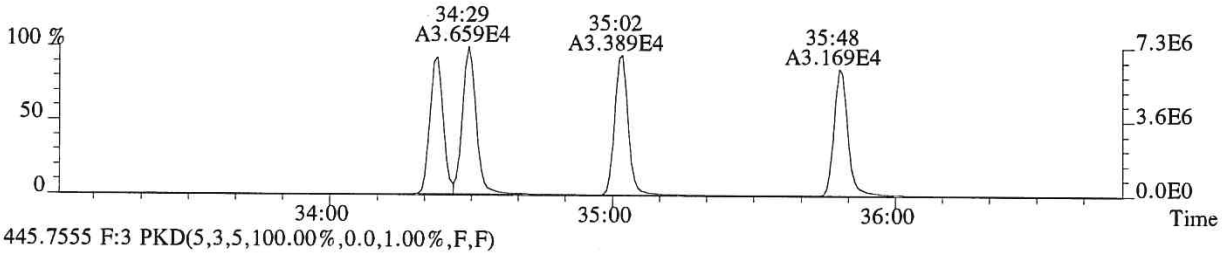
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,660.0,0.40%,F,T)



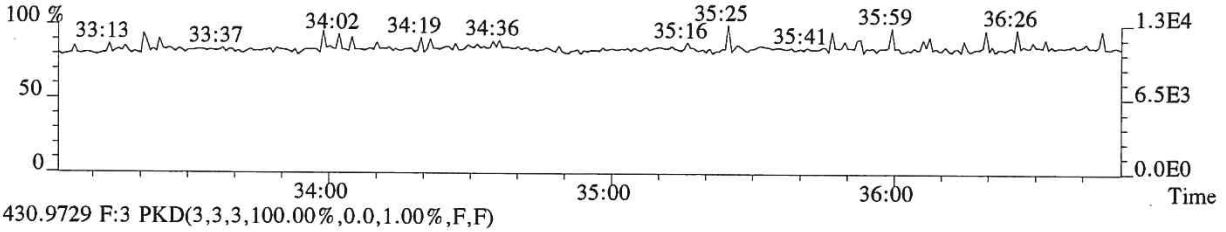
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1200.0,0.40%,F,T)



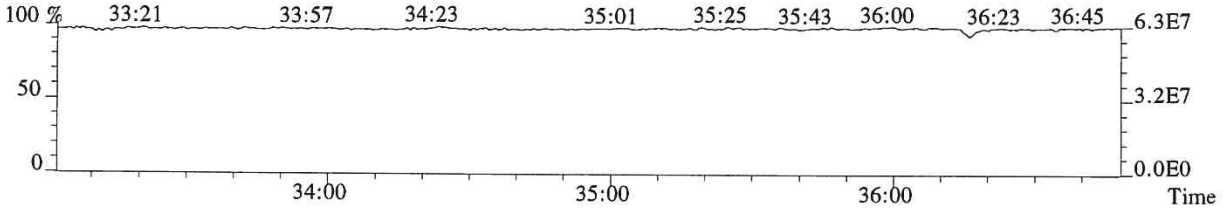
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,800.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

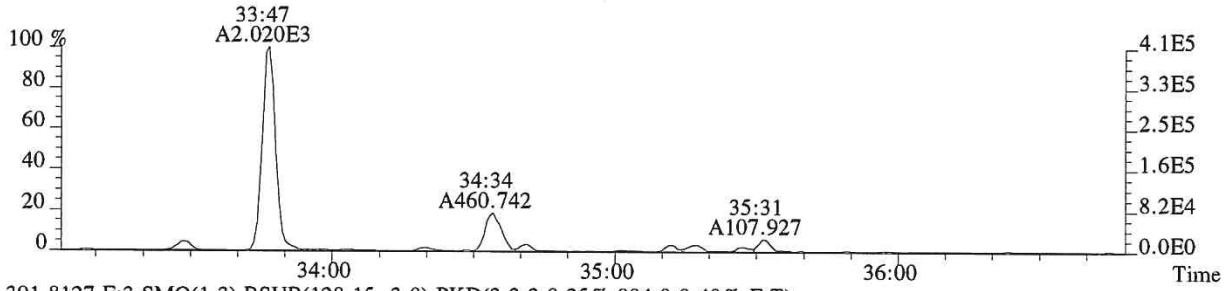


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

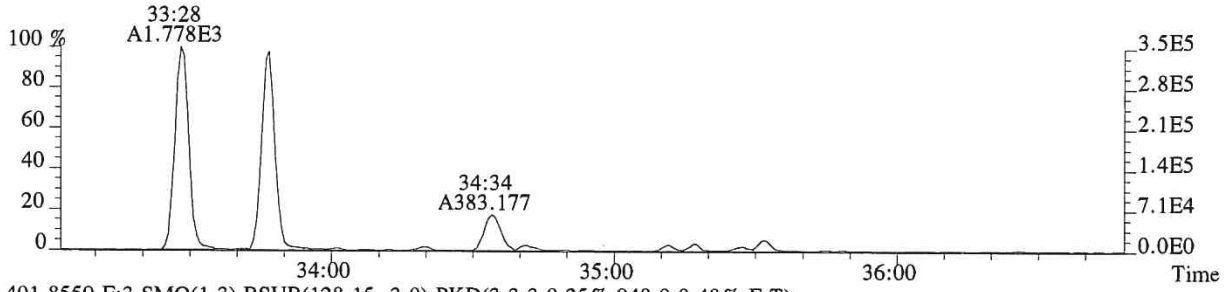


018610

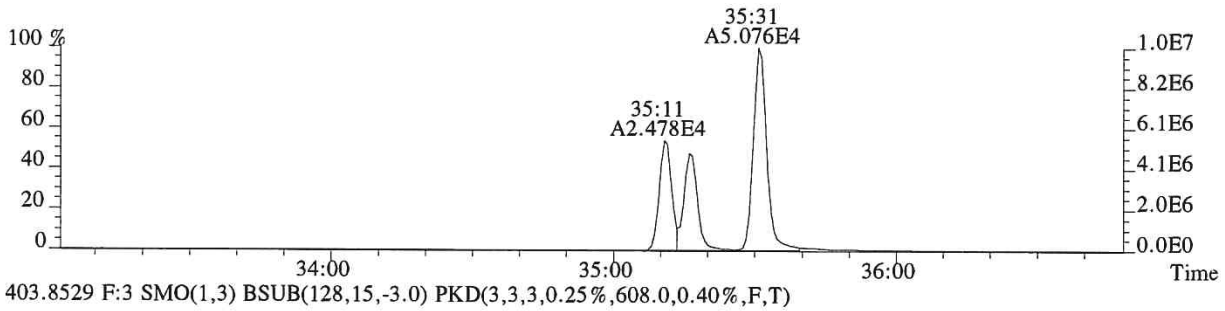
File:P519903 #1-339 Acq:11-JAN-2019 04:01:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-017
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1204.0,0.40%,F,T)



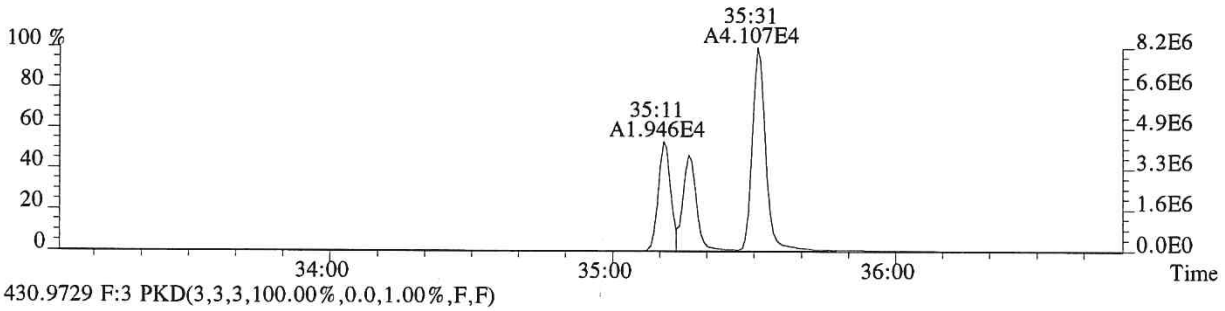
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,804.0,0.40%,F,T)



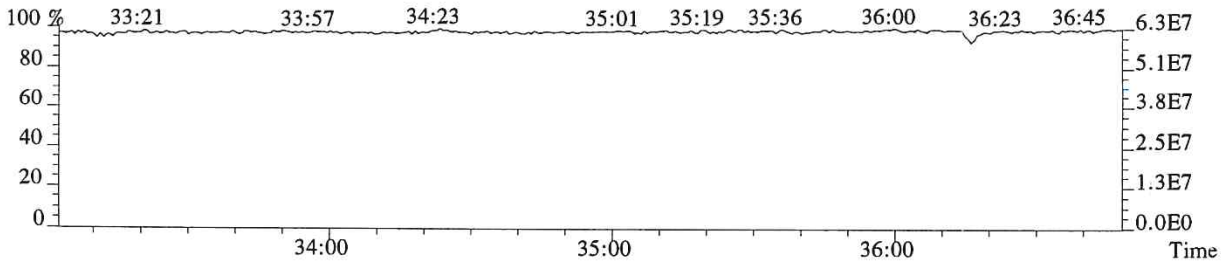
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,948.0,0.40%,F,T)



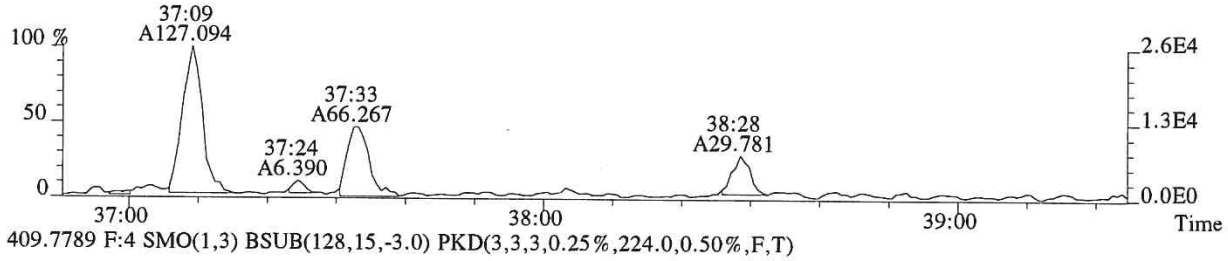
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,608.0,0.40%,F,T)



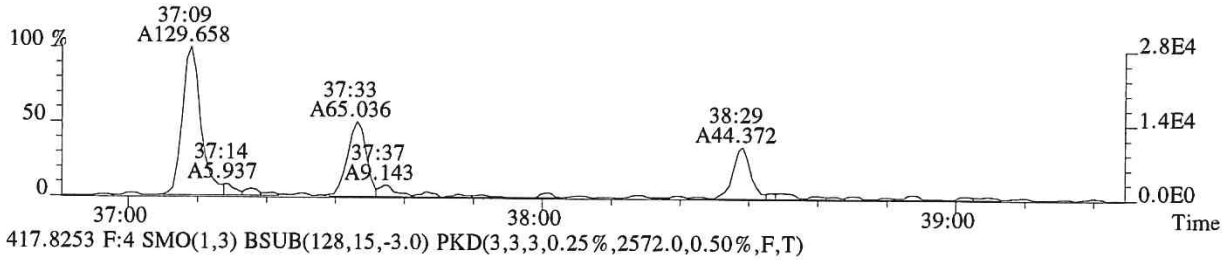
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



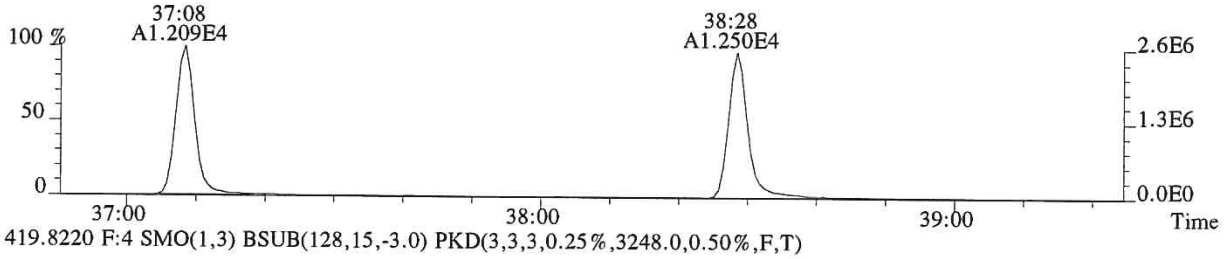
File:P519903 #1-232 Acq:11-JAN-2019 04:01:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-017
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,860.0,0.50%,F,T)



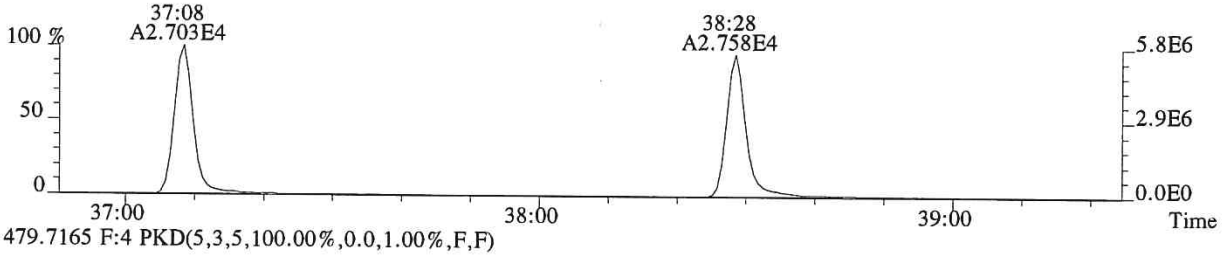
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,224.0,0.50%,F,T)



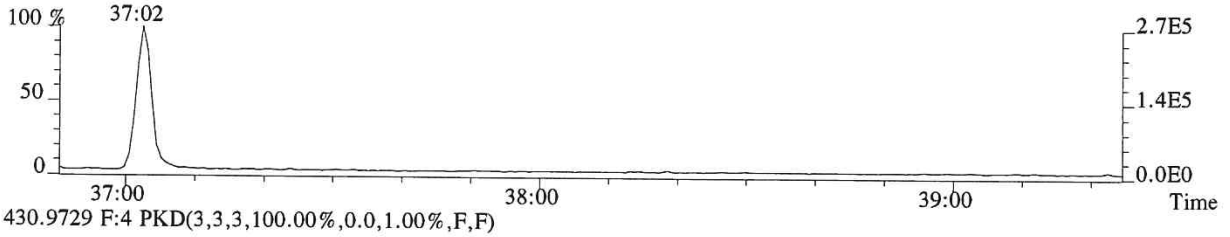
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2572.0,0.50%,F,T)



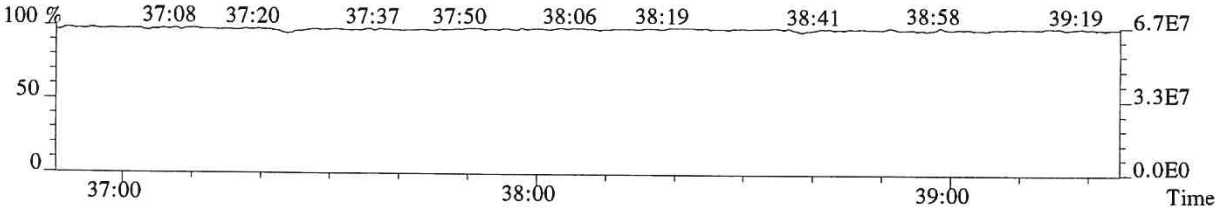
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3248.0,0.50%,F,T)



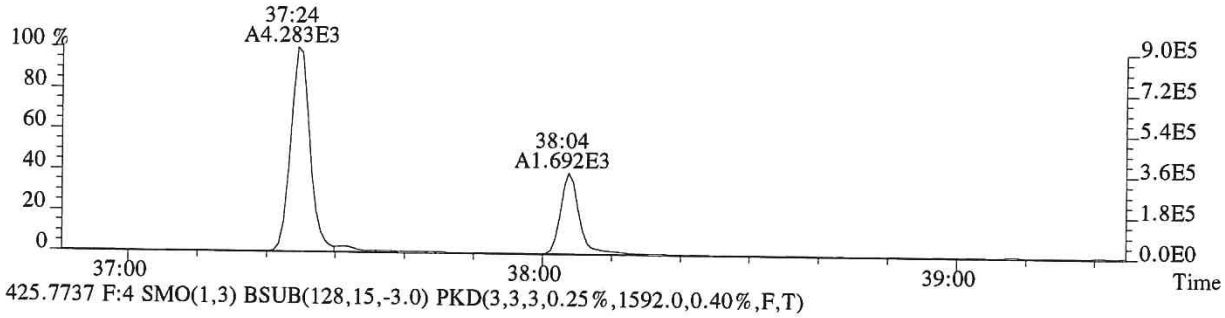
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



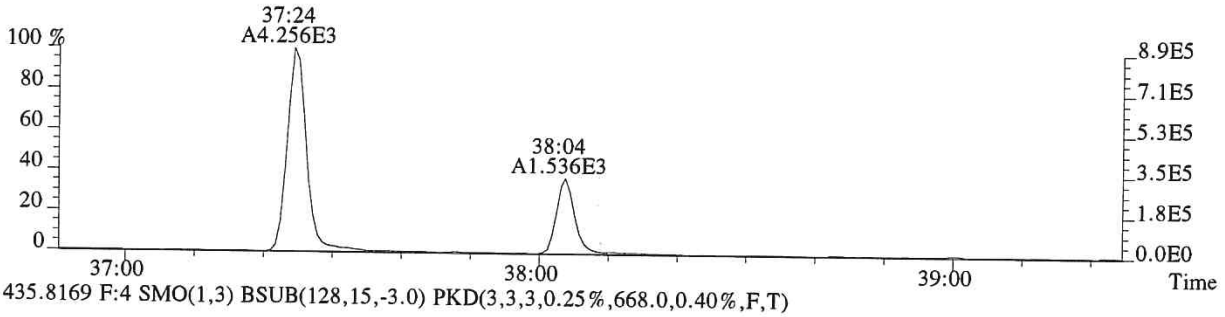
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



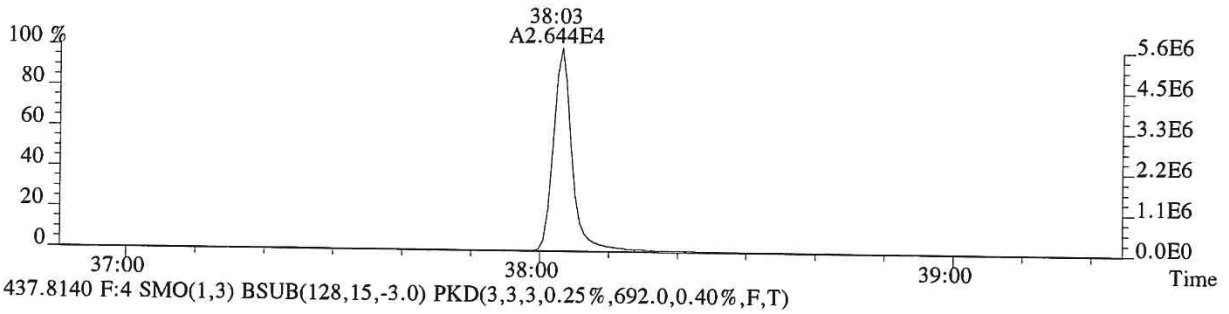
File:P519903 #1-232 Acq:11-JAN-2019 04:01:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-017
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1588.0,0.40%,F,T)



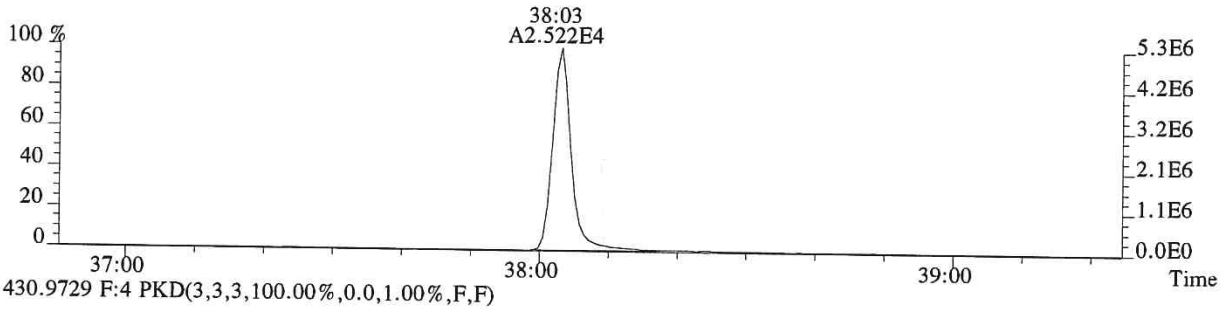
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1592.0,0.40%,F,T)



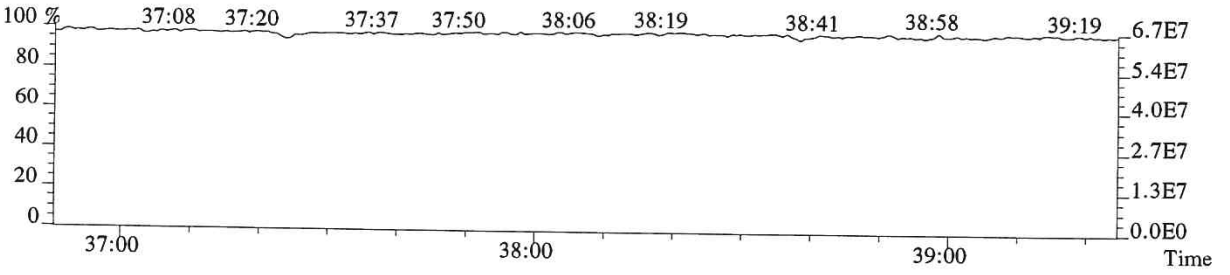
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,668.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,692.0,0.40%,F,T)

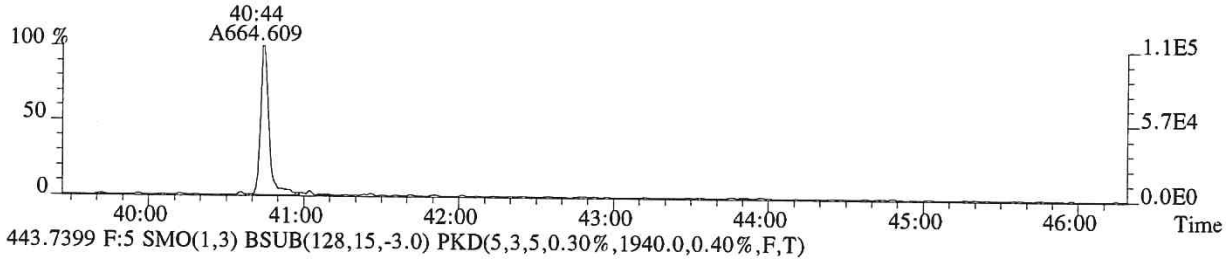


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

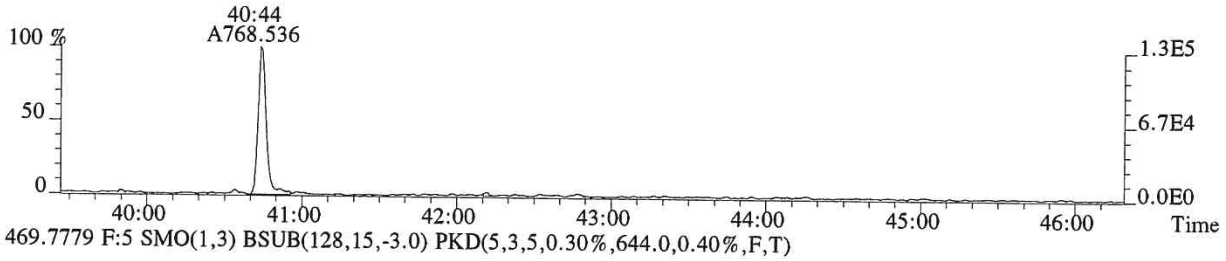


018613

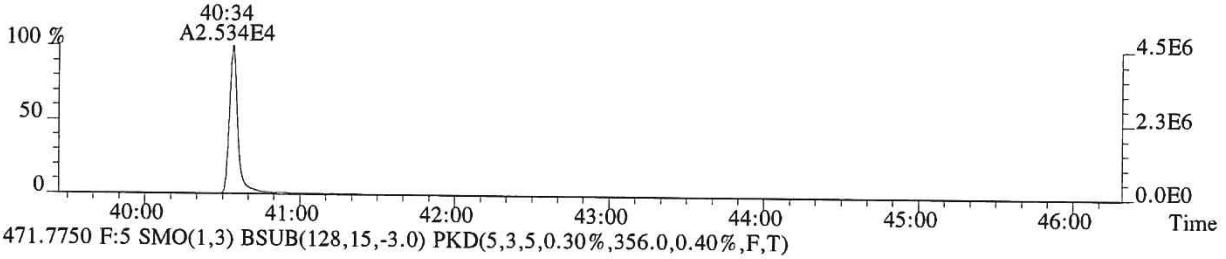
File:P519903 #1-619 Acq:11-JAN-2019 04:01:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-017
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,516.0,0.40%,F,T)



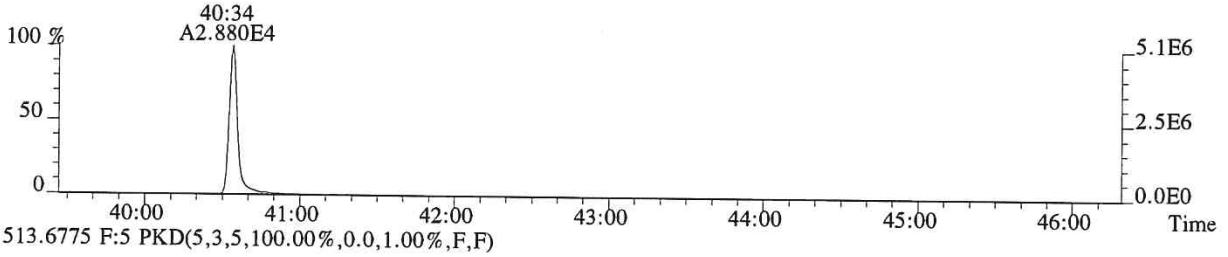
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1940.0,0.40%,F,T)



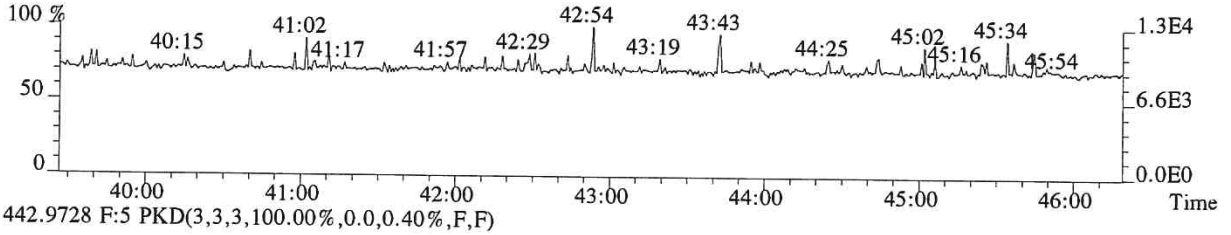
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,644.0,0.40%,F,T)



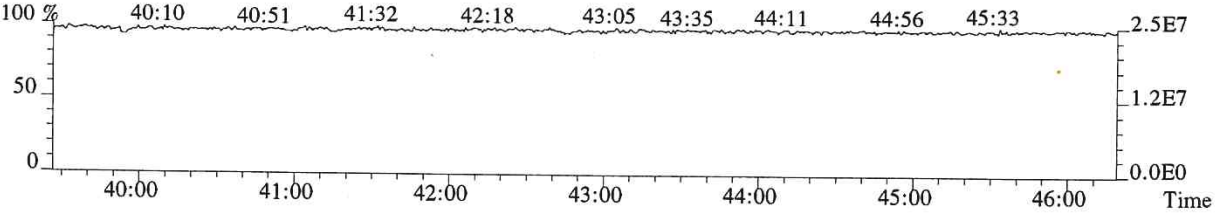
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,356.0,0.40%,F,T)



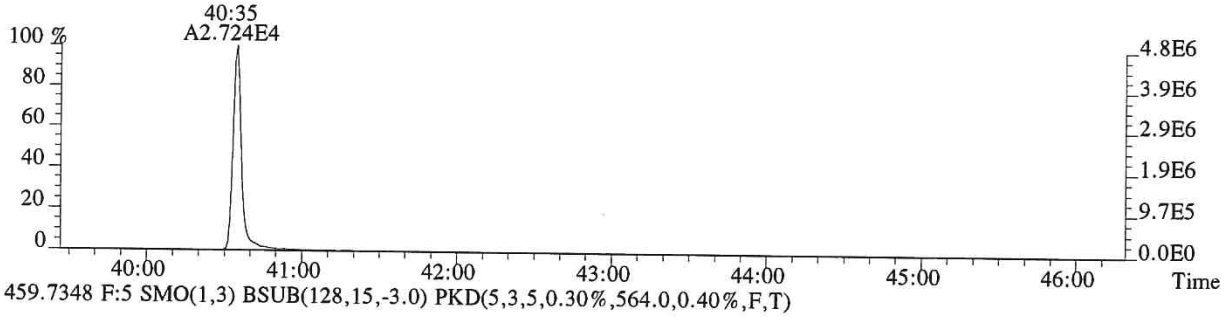
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



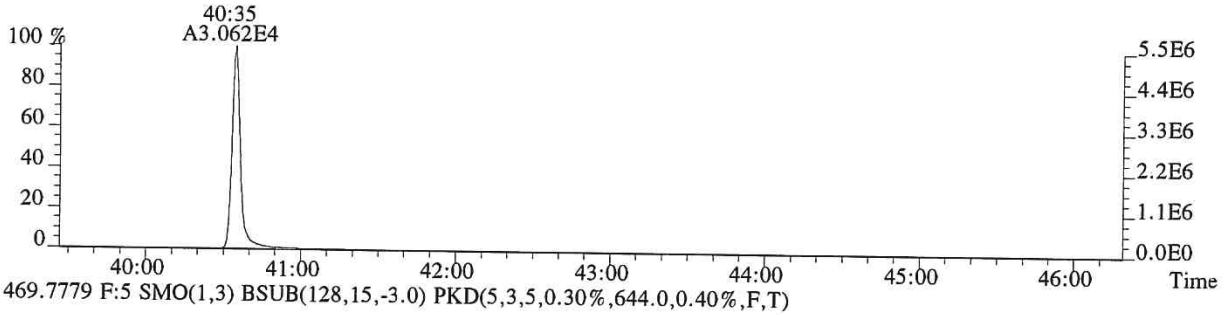
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



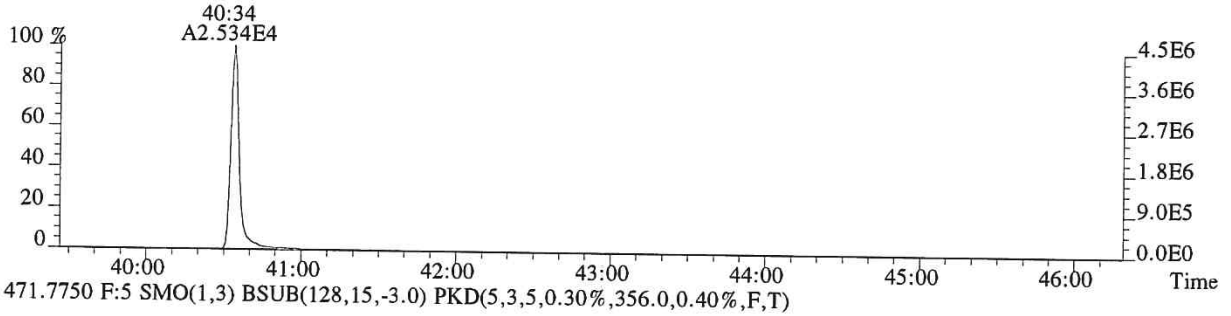
File:P519903 #1-619 Acq:11-JAN-2019 04:01:05 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-017
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,392.0,0.40%,F,T)



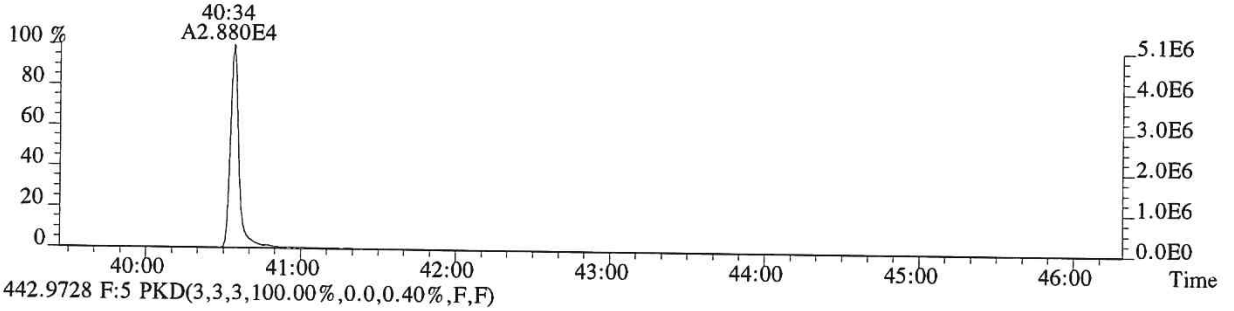
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,564.0,0.40%,F,T)



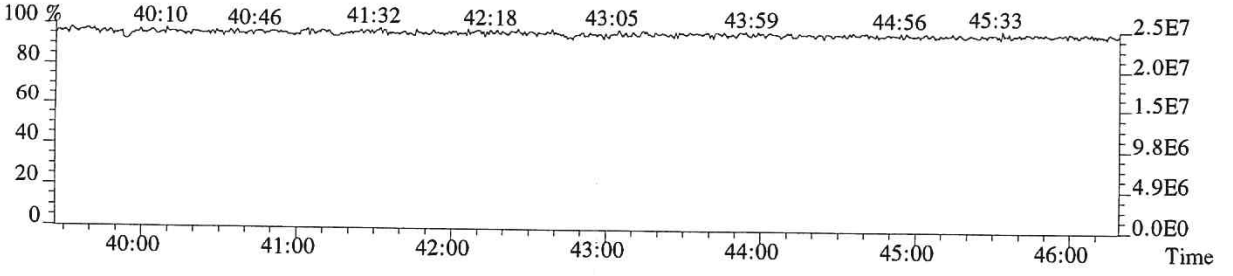
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,644.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,356.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0244

Run #11 Filename P519904 Samp: 1 Inj: 1 Acquired: 11-JAN-19 04:49:47
Processed: 11-JAN-19 14:53:35 Sample ID: E1801139-018

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	2.384e+04	3.179e+04	0.75	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:28	1.294e+03	9.171e+02	1.41	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	1.104e+03	7.920e+02	1.39	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	1.885e+03	1.583e+03	1.19	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	5.799e+02	4.565e+02	1.27	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:02	1.596e+02	1.188e+02	1.34	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:50	1.419e+02	1.241e+02	1.14	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:09	1.055e+03	1.020e+03	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:29	2.167e+02	1.924e+02	1.13	yes	no	1.258
10	Unk	OCDF	40:45	1.625e+03	1.917e+03	0.85	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:25	6.322e+03	8.170e+03	0.77	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:48	1.324e+02	8.287e+01	1.60	yes	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:11	7.882e+01	5.674e+01	1.39	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:17	1.470e+02	1.473e+02	1.00	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:32	1.561e+02	1.060e+02	1.47	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	9.054e+03	8.821e+03	1.03	yes	no	1.025
17	Unk	OCDD	40:35	1.512e+06	1.687e+06	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:21	2.493e+04	3.186e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:27	4.006e+04	2.545e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:28	3.888e+04	2.421e+04	1.61	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:23	1.696e+04	3.285e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.930e+04	3.673e+04	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:02	1.768e+04	3.435e+04	0.51	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:49	1.706e+04	3.244e+04	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:09	1.137e+04	2.535e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	1.191e+04	2.740e+04	0.43	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:23	1.207e+04	1.506e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:48	2.979e+04	1.862e+04	1.60	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:11	2.586e+04	1.993e+04	1.30	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:17	2.441e+04	1.872e+04	1.30	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	2.549e+04	2.390e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	40:35	2.285e+04	2.539e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:39	3.557e+04	4.427e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:31	5.121e+04	4.026e+04	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:25	1.794e+04				no	1.014

$$\text{OCDD} = \frac{(1.512e{+}06 + 1.687e{+}06) \times 4000\ \text{pg} \times 1}{(2.285e{+}04 + 2.539e{+}04) \times 10.825\ \text{g} \times 84.0/100 \times 1.118} = 26092\ \text{ng/kg}$$

LMW 01/14/19

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Houston, TX 77099
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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0244

Run #11 Filename P519904 Samp: 1 Inj: 1 Acquired: 11-JAN-19 04:49:47
Processed: 11-JAN-19 14:53:35 LAB. ID: E1801139-018

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	3.19e+06	7.32e+02	4.4e+03	4.24e+06	1.58e+03	2.7e+03
2	1,2,3,7,8-PeCDF	2.19e+05	1.84e+03	1.2e+02	1.64e+05	1.42e+03	1.2e+02
3	2,3,4,7,8-PeCDF	1.74e+05	1.84e+03	9.5e+01	1.18e+05	1.42e+03	8.3e+01
4	1,2,3,4,7,8-HxCDF	3.87e+05	3.02e+03	1.3e+02	3.34e+05	1.74e+03	1.9e+02
5	1,2,3,6,7,8-HxCDF	1.07e+05	3.02e+03	3.5e+01	8.34e+04	1.74e+03	4.8e+01
6	2,3,4,6,7,8-HxCDF	3.17e+04	3.02e+03	1.0e+01	2.33e+04	1.74e+03	1.3e+01
7	1,2,3,7,8,9-HxCDF	2.47e+04	3.02e+03	8.2e+00	1.73e+04	1.74e+03	1.0e+01
8	1,2,3,4,6,7,8-HpCDF	2.16e+05	1.10e+03	2.0e+02	2.06e+05	9.76e+02	2.1e+02
9	1,2,3,4,7,8,9-HpCDF	4.88e+04	1.10e+03	4.4e+01	4.11e+04	9.76e+02	4.2e+01
10	OCDF	2.74e+05	9.60e+02	2.9e+02	3.13e+05	7.68e+02	4.1e+02
11	2,3,7,8-TCDD	1.03e+06	3.35e+03	3.1e+02	1.30e+06	1.25e+03	1.0e+03
12	1,2,3,7,8-PeCDD	1.99e+04	1.56e+03	1.3e+01	1.38e+04	1.84e+02	7.5e+01
13	1,2,3,4,7,8-HxCDD	1.67e+04	9.56e+02	1.7e+01	1.17e+04	9.92e+02	1.2e+01
14	1,2,3,6,7,8-HxCDD	2.97e+04	9.56e+02	3.1e+01	3.08e+04	9.92e+02	3.1e+01
15	1,2,3,7,8,9-HxCDD	3.51e+04	9.56e+02	3.7e+01	2.12e+04	9.92e+02	2.1e+01
16	1,2,3,4,6,7,8-HpCDD	1.93e+06	2.04e+04	9.5e+01	1.83e+06	6.41e+03	2.9e+02
17	OCDD	2.70e+08	3.88e+02	7.0e+05	3.03e+08	3.48e+02	8.7e+05
18	13C-2,3,7,8-TCDF	3.59e+06	4.06e+03	8.8e+02	4.55e+06	3.30e+03	1.4e+03
19	13C-1,2,3,7,8-PeCDF	6.86e+06	4.04e+02	1.7e+04	4.29e+06	9.96e+02	4.3e+03
20	13C-2,3,4,7,8-PeCDF	7.02e+06	4.04e+02	1.7e+04	4.35e+06	9.96e+02	4.4e+03
21	13C-1,2,3,4,7,8-HxCDF	3.55e+06	1.12e+03	3.2e+03	6.88e+06	9.28e+02	7.4e+03
22	13C-1,2,3,6,7,8-HxCDF	3.70e+06	1.12e+03	3.3e+03	7.22e+06	9.28e+02	7.8e+03
23	13C-2,3,4,6,7,8-HxCDF	3.66e+06	1.12e+03	3.3e+03	7.08e+06	9.28e+02	7.6e+03
24	13C-1,2,3,7,8,9-HxCDF	3.35e+06	1.12e+03	3.0e+03	6.37e+06	9.28e+02	6.9e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.37e+06	2.64e+03	9.0e+02	5.40e+06	2.04e+03	2.7e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.40e+06	2.64e+03	9.1e+02	5.38e+06	2.04e+03	2.6e+03
27	13C-2,3,7,8-TCDD	1.96e+06	6.12e+03	3.2e+02	2.40e+06	2.39e+03	1.0e+03
28	13C-1,2,3,7,8-PeCDD	5.36e+06	4.92e+02	1.1e+04	3.37e+06	1.32e+03	2.6e+03
29	13C-1,2,3,4,7,8-HxCDD	5.36e+06	1.39e+03	3.9e+03	4.21e+06	7.44e+02	5.7e+03
30	13C-1,2,3,6,7,8-HxCDD	4.87e+06	1.39e+03	3.5e+03	3.81e+06	7.44e+02	5.1e+03
31	13C-1,2,3,4,6,7,8-HpCDD	5.23e+06	3.00e+02	1.7e+04	4.97e+06	8.72e+02	5.7e+03
32	13C-OCDD	4.07e+06	9.48e+02	4.3e+03	4.49e+06	4.88e+02	9.2e+03
33	13C-1,2,3,4-TCDD	5.35e+06	6.12e+03	8.7e+02	6.67e+06	2.39e+03	2.8e+03
34	13C-1,2,3,7,8,9-HxCDD	1.03e+07	1.39e+03	7.4e+03	8.06e+06	7.44e+02	1.1e+04
35	37Cl-2,3,7,8-TCDD	2.80e+06	2.00e+03	1.4e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0244

Entry: 36 Totals Name: Total Tetra-Furans

Run: 11 File: P519904 Sample:1 Injection:1 Function:1

Acquired: 11-JAN-19 04:49:47 Processed: 11-JAN-19 14:53:35

Mass: 303.9020 305.8990 Tot Response: 9.85e+04 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	21:25	5.25e+01	6.78e+01	0.77	yes	1.20e+02		n	n
2	21:50	2.00e+02	2.79e+02	0.72	yes	4.79e+02		n	n
3	22:16	2.57e+02	3.63e+02	0.71	yes	6.20e+02		n	n
4	22:33	1.08e+03	1.41e+03	0.76	yes	2.49e+03		n	n
5	22:54	3.70e+02	5.11e+02	0.72	yes	8.81e+02		n	n
6	23:11	8.41e+02	1.24e+03	0.68	yes	2.08e+03		n	n
7	23:48	6.75e+02	9.28e+02	0.73	yes	1.60e+03		n	n
8	23:54	1.11e+03	1.50e+03	0.74	yes	2.61e+03		n	n
9	24:23	1.05e+04	1.37e+04	0.77	yes	2.41e+04		n	n
10	25:22	2.38e+04	3.18e+04	0.75	yes	5.56e+04	2,3,7,8-TCDF	n	n
11	25:37	3.76e+01	4.97e+01	0.76	yes	8.73e+01		n	n
12	25:49	1.62e+03	2.14e+03	0.76	yes	3.76e+03		n	n
13	27:40	1.69e+03	2.29e+03	0.74	yes	3.98e+03		n	n

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Peak List Summary

CLIENT ID.
SL0244

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 11 File: P519904 Sample:1 Injection:1 Function:1

Acquired: 11-JAN-19 04:49:47 Processed: 11-JAN-19 14:53:35

Mass: 319.8970 321.8940 Tot Response: 1.60e+04 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:33	3.97e+01	4.60e+01	0.86	yes	8.56e+01		n	n
2	26:07	5.34e+01	7.42e+01	0.72	yes	1.28e+02		n	n
3	26:25	6.32e+03	8.17e+03	0.77	yes	1.45e+04	2,3,7,8-TCDD	n	n
4	26:47	5.67e+02	7.43e+02	0.76	yes	1.31e+03		n	n

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CLIENT ID.
SL0244

Entry: 38 Totals Name: Total Penta-Furans1

Run: 11 File: P519904 Sample:1 Injection:1 Function:1

Acquired: 11-JAN-19 04:49:47 Processed: 11-JAN-19 14:53:35

Mass: 339.8600 341.8570 Tot Response: 7.19e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:41	4.51e+02	2.67e+02 1.69	yes	7.19e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0244

Entry: 39 Totals Name: Total Penta-Furans2

Run: 11 File: P519904 Sample:1 Injection:1 Function:2

Acquired: 11-JAN-19 04:49:47 Processed: 11-JAN-19 14:53:35

Mass: 339.8600 341.8570 Tot Response: 6.75e+03 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:15	1.08e+02	6.51e+01	1.67	yes	1.74e+02		n	n
2	29:25	8.99e+02	5.88e+02	1.53	yes	1.49e+03		n	n
3	30:28	1.29e+03	9.17e+02	1.41	yes	2.21e+03	1,2,3,7,8-PeCDF	n	n
4	30:44	4.62e+02	3.30e+02	1.40	yes	7.92e+02		n	n
5	31:23	5.19e+01	3.70e+01	1.40	yes	8.89e+01		n	n
6	31:29	1.10e+03	7.92e+02	1.39	yes	1.90e+03	2,3,4,7,8-PeCDF	n	n
7	32:28	6.67e+01	3.94e+01	1.70	yes	1.06e+02		n	n

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Peak List Summary

CLIENT ID.
SL0244

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 11 File: P519904 Sample:1 Injection:1 Function:2

Acquired: 11-JAN-19 04:49:47 Processed: 11-JAN-19 14:53:35

Mass: 355.8550 357.8520 Tot Response: 2.85e+02 RRF: 0.9565

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:40	4.13e+01	2.89e+01 1.43	yes	7.01e+01		y	y
2	31:48	1.32e+02	8.29e+01 1.60	yes	2.15e+02	1,2,3,7,8-PeCDD	y	y

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Peak List Summary

CLIENT ID.
SL0244

Entry: 41 Totals Name: Total Hexa-Furans

Run: 11 File: P519904 Sample:1 Injection:1 Function:3

Acquired: 11-JAN-19 04:49:47 Processed: 11-JAN-19 14:53:35

Mass: 373.8210 375.8180 Tot Response: 6.76e+03 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:23	5.19e+02	4.32e+02	1.20	yes	9.51e+02		n	n
2	33:56	3.90e+02	3.18e+02	1.22	yes	7.08e+02		n	n
3	34:17	2.92e+01	2.24e+01	1.31	yes	5.16e+01		n	n
4	34:23	1.88e+03	1.58e+03	1.19	yes	3.47e+03	1,2,3,4,7,8-HxCDF	n	n
5	34:30	5.80e+02	4.57e+02	1.27	yes	1.04e+03	1,2,3,6,7,8-HxCDF	n	n
6	35:02	1.60e+02	1.19e+02	1.34	yes	2.78e+02	2,3,4,6,7,8-HxCDF	n	n
7	35:50	1.42e+02	1.24e+02	1.14	yes	2.66e+02	1,2,3,7,8,9-HxCDF	n	n

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Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 11 File: P519904 Sample:1 Injection:1 Function:3

Acquired: 11-JAN-19 04:49:47 Processed: 11-JAN-19 14:53:35

Mass: 389.8160 391.8130 Tot Response: 2.57e+03 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:47	6.63e+02	5.60e+02	1.18	yes	1.22e+03		n	n
2	34:19	1.32e+02	1.02e+02	1.29	yes	2.35e+02		n	n
3	34:35	5.36e+02	4.45e+02	1.20	yes	9.80e+02		n	n
4	35:11	7.88e+01	5.67e+01	1.39	yes	1.36e+02	1,2,3,4,7,8-HxCDD	n	n

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SL0244

Entry: 43 Totals Name: Total Hepta-Furans

Run: 11 File: P519904 Sample:1 Injection:1 Function:4

Acquired: 11-JAN-19 04:49:47 Processed: 11-JAN-19 14:53:35

Mass: 407.7820 409.7790 Tot Response: 4.77e+03 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:09	1.06e+03	1.02e+03	1.03	yes	2.08e+03	1,2,3,4,6,7,8-HpCDF	n	n
2	37:33	1.12e+03	1.16e+03	0.96	yes	2.29e+03		n	n
3	38:29	2.17e+02	1.92e+02	1.13	yes	4.09e+02	1,2,3,4,7,8,9-HpCDF	n	n

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CLIENT ID.
SL0244

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 11 File: P519904 Sample:1 Injection:1 Function:4

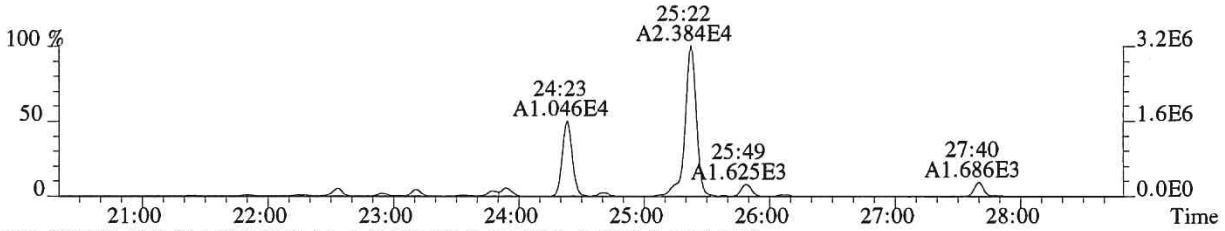
Acquired: 11-JAN-19 04:49:47 Processed: 11-JAN-19 14:53:35

Mass: 423.7770 425.7740 Tot Response: 4.48e+04 RRF: 1.025

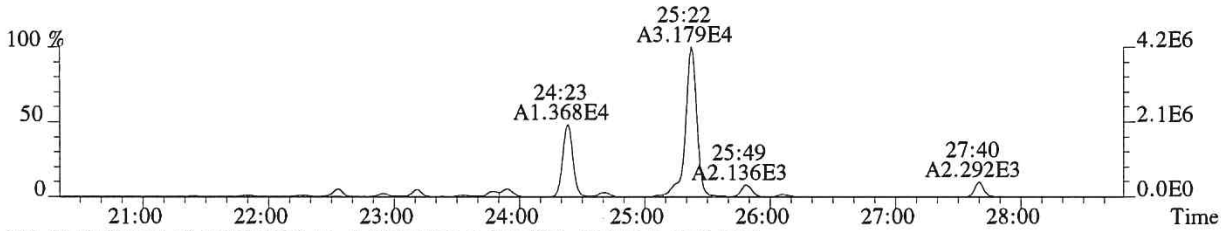
#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:25	1.39e+04	1.31e+04	1.06	yes	2.70e+04		n	n
2	38:04	9.05e+03	8.82e+03	1.03	yes	1.79e+04	1,2,3,4,6,7,8-HpCDD	n	n

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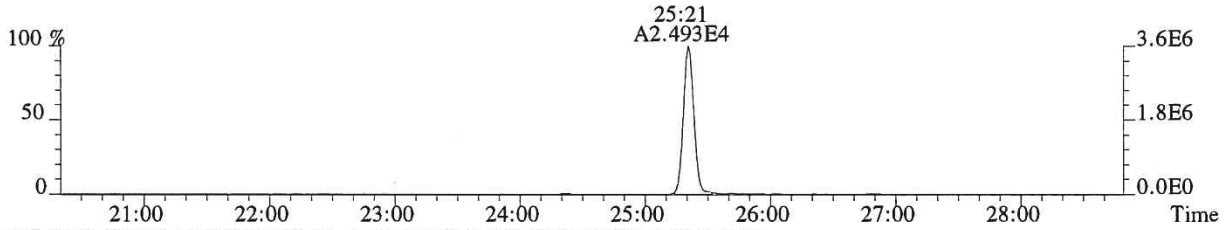
File:P519904 #1-602 Acq:11-JAN-2019 04:49:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-018
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,732.0,1.00%,F,T)



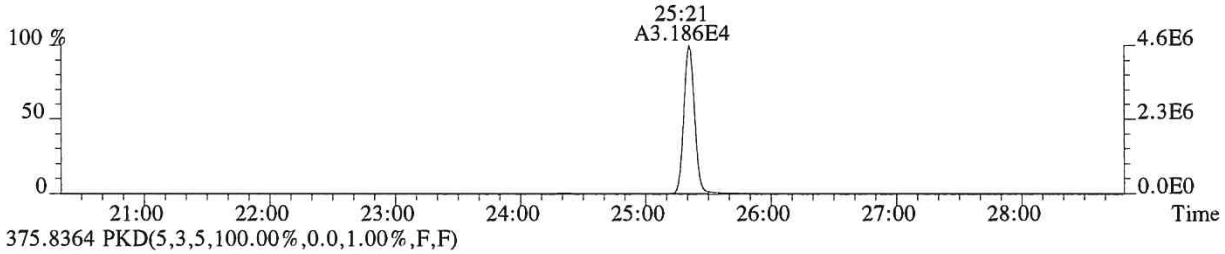
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1576.0,1.00%,F,T)



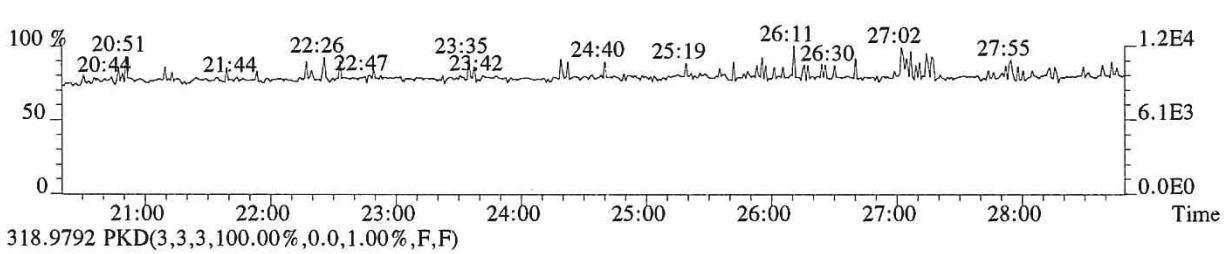
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4060.0,1.00%,F,T)



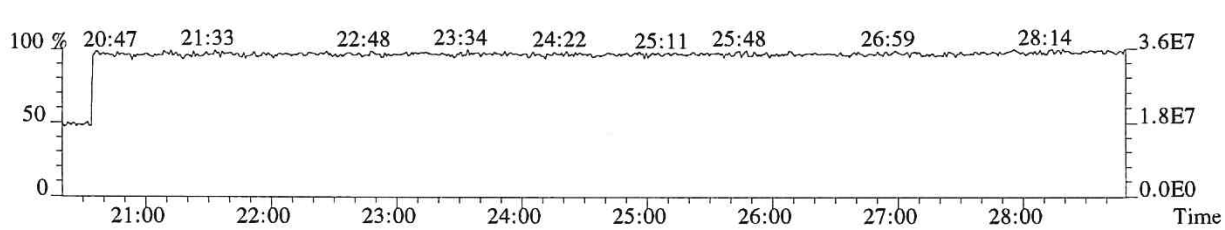
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3300.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

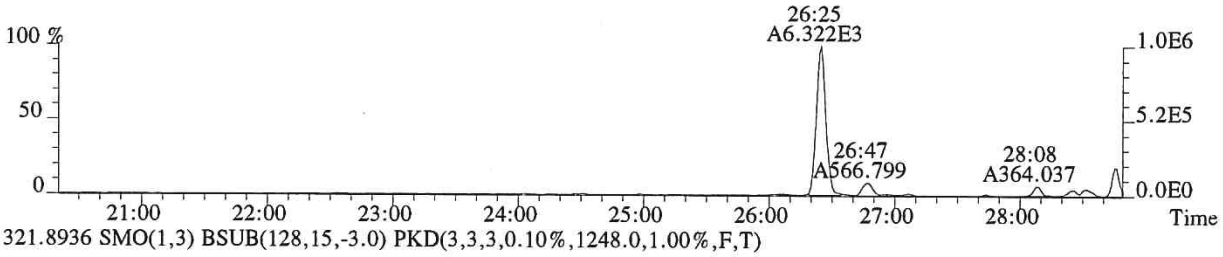


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

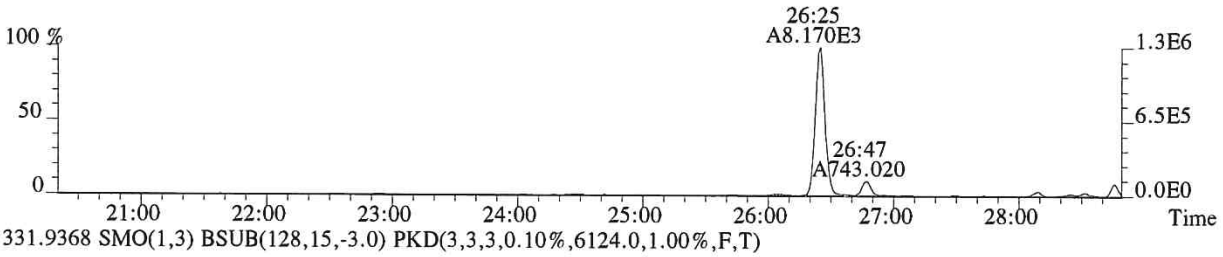


018627

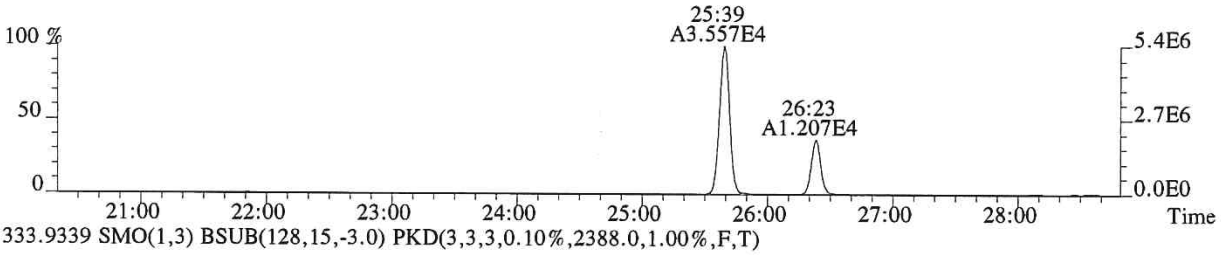
File:P519904 #1-602 Acq:11-JAN-2019 04:49:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-018
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3352.0,1.00%,F,T)



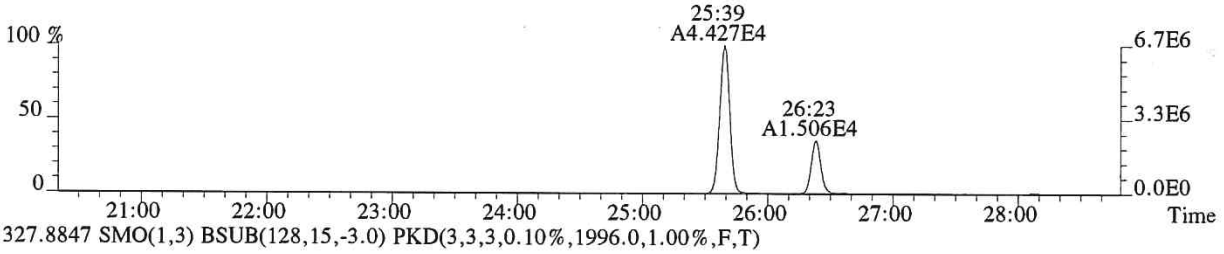
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1248.0,1.00%,F,T)



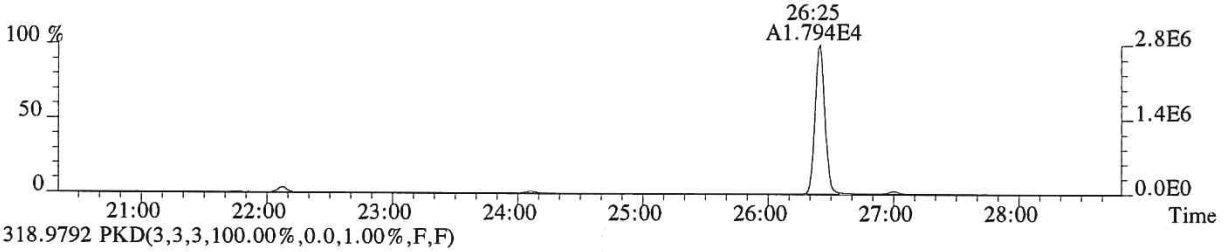
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6124.0,1.00%,F,T)



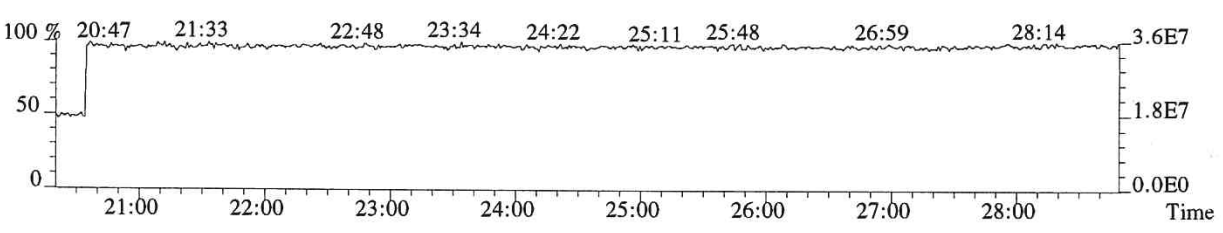
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2388.0,1.00%,F,T)



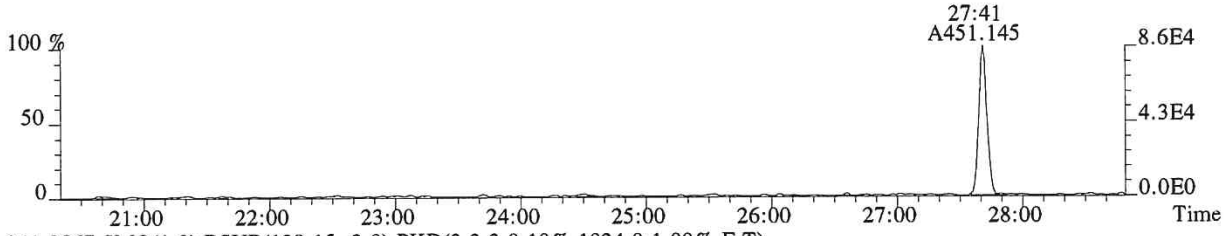
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1996.0,1.00%,F,T)



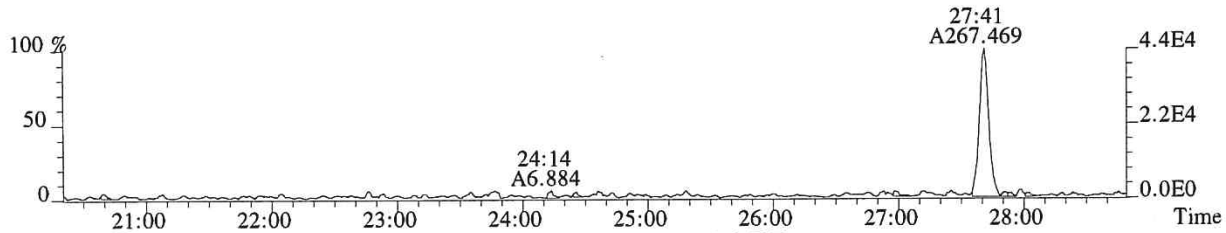
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



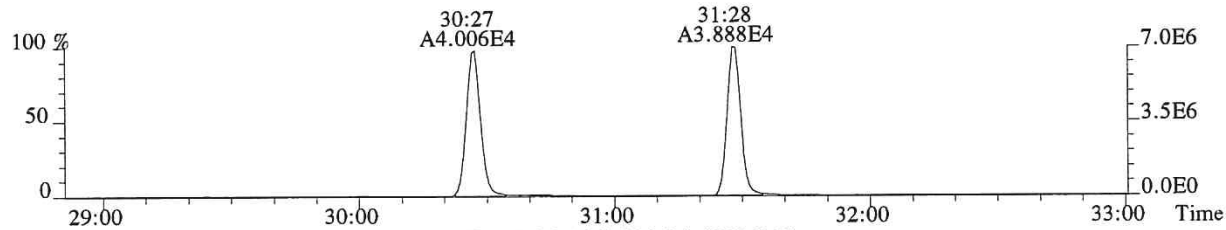
File:P519904 #1-602 Acq:11-JAN-2019 04:49:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-018
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,532.0,1.00%,F,T)



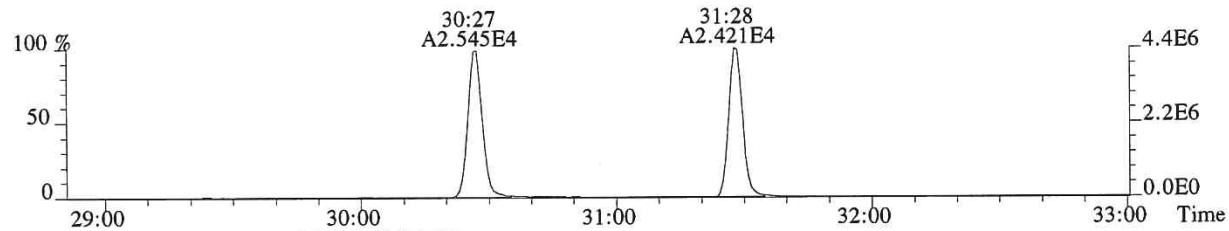
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



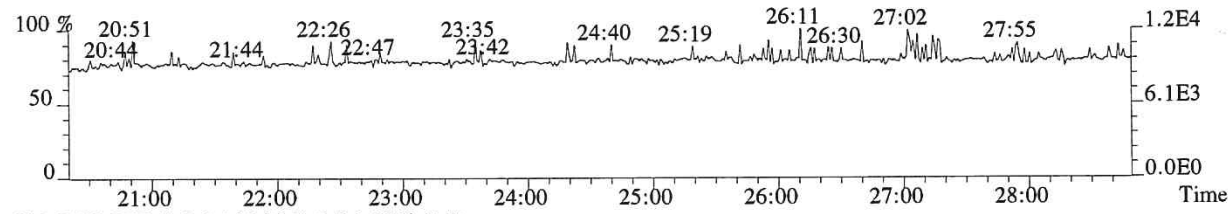
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,404.0,1.00%,F,T)



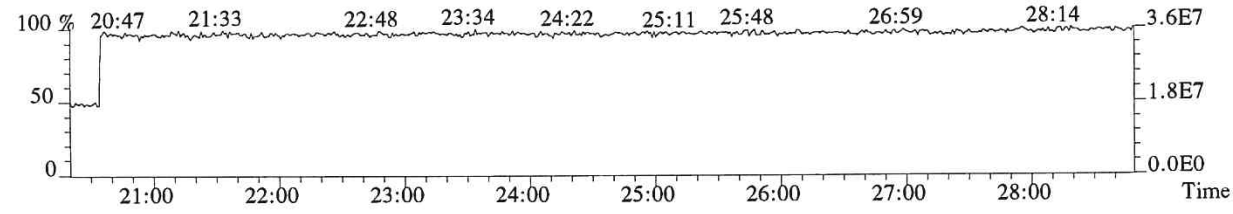
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,996.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

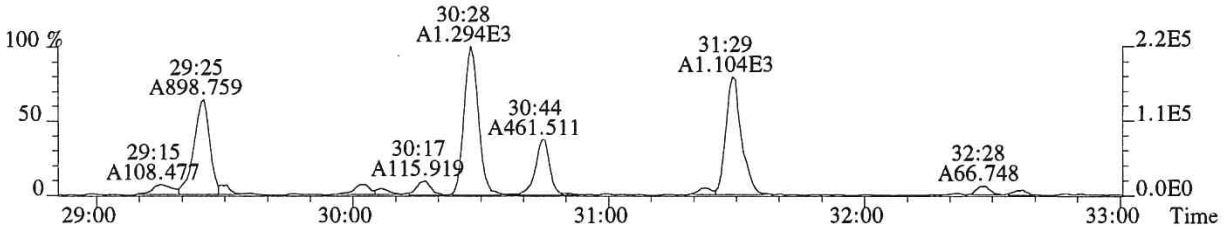


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

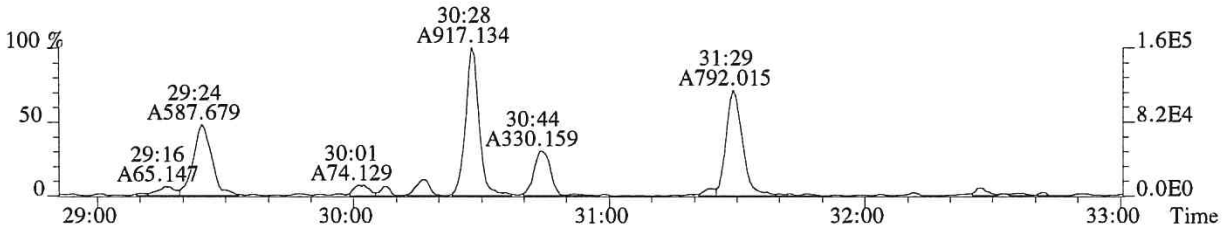


018629

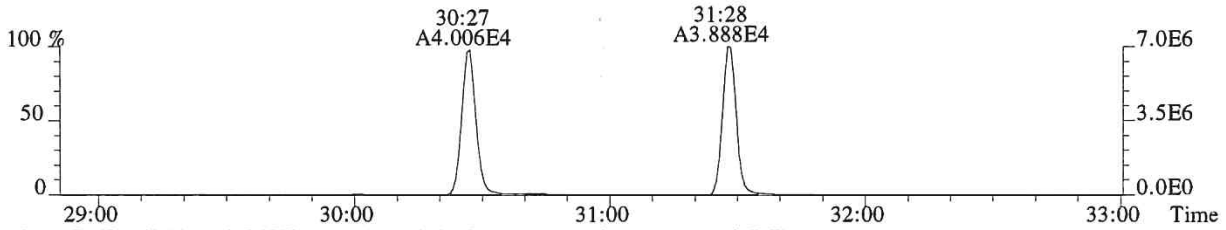
File:P519904 #1-375 Acq:11-JAN-2019 04:49:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-018
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1840.0,1.00%,F,T)



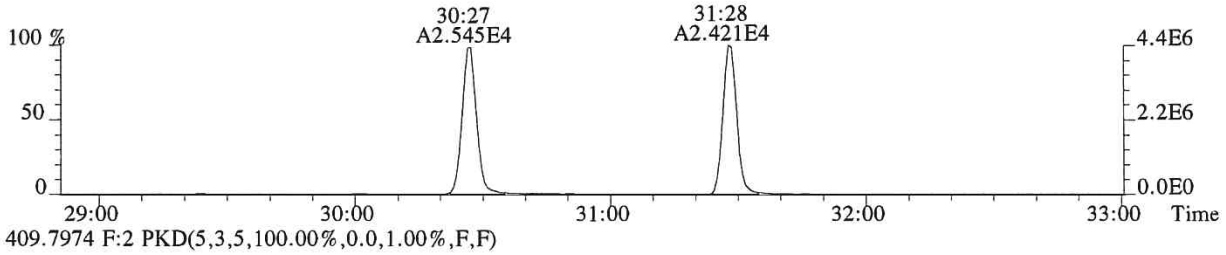
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1420.0,1.00%,F,T)



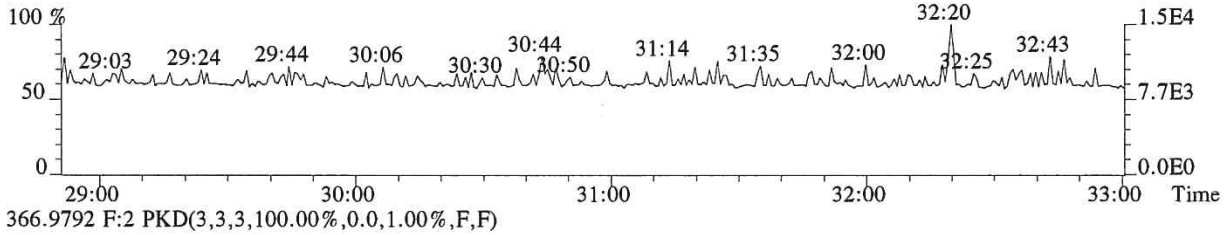
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,404.0,1.00%,F,T)



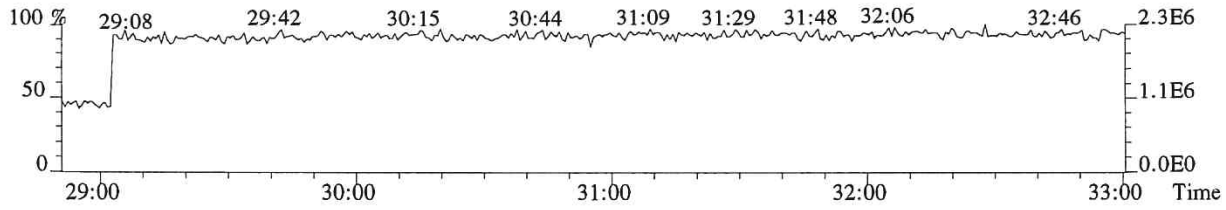
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,996.0,1.00%,F,T)



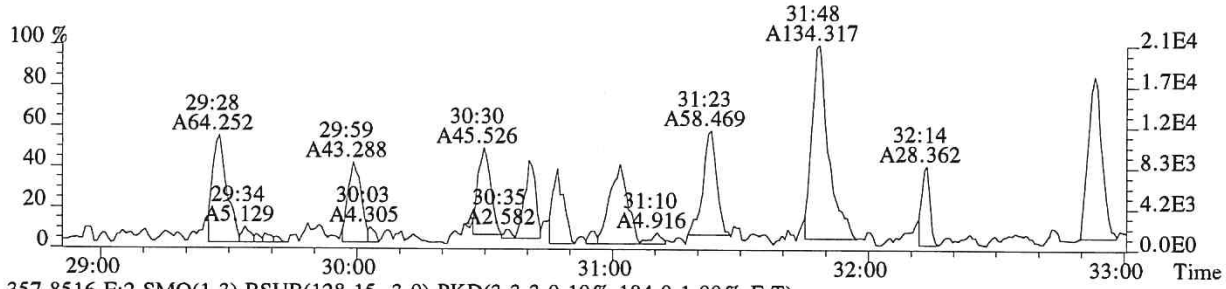
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



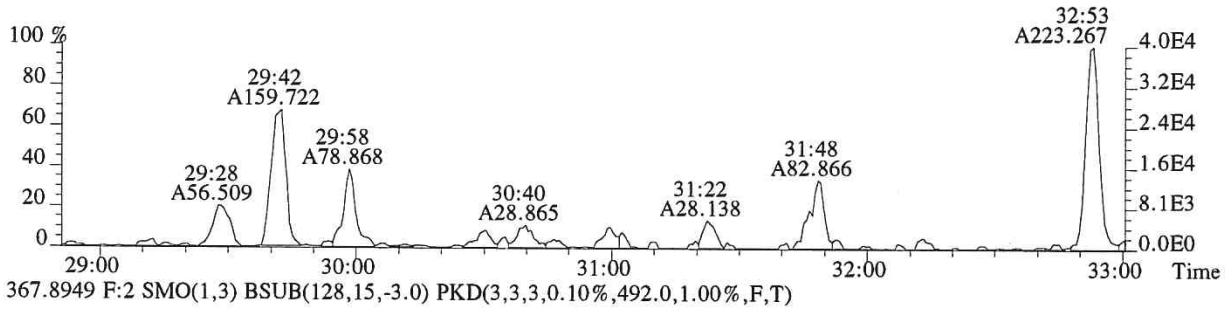
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



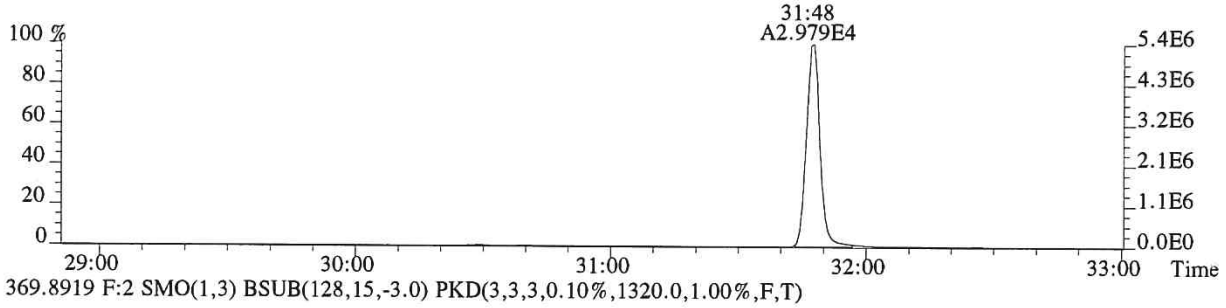
File:P519904 #1-375 Acq:11-JAN-2019 04:49:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-018
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1556.0,1.00%,F,T)



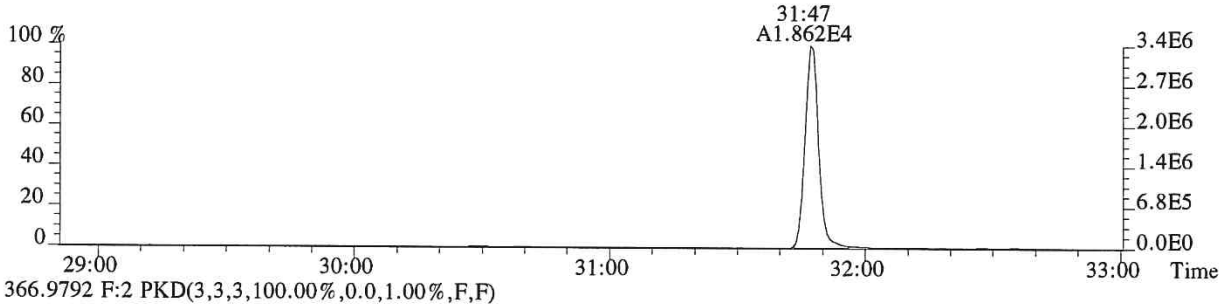
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,184.0,1.00%,F,T)



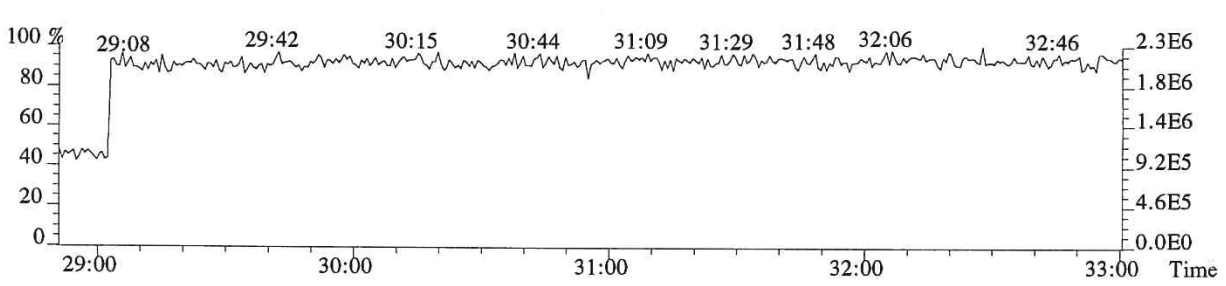
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,492.0,1.00%,F,T)



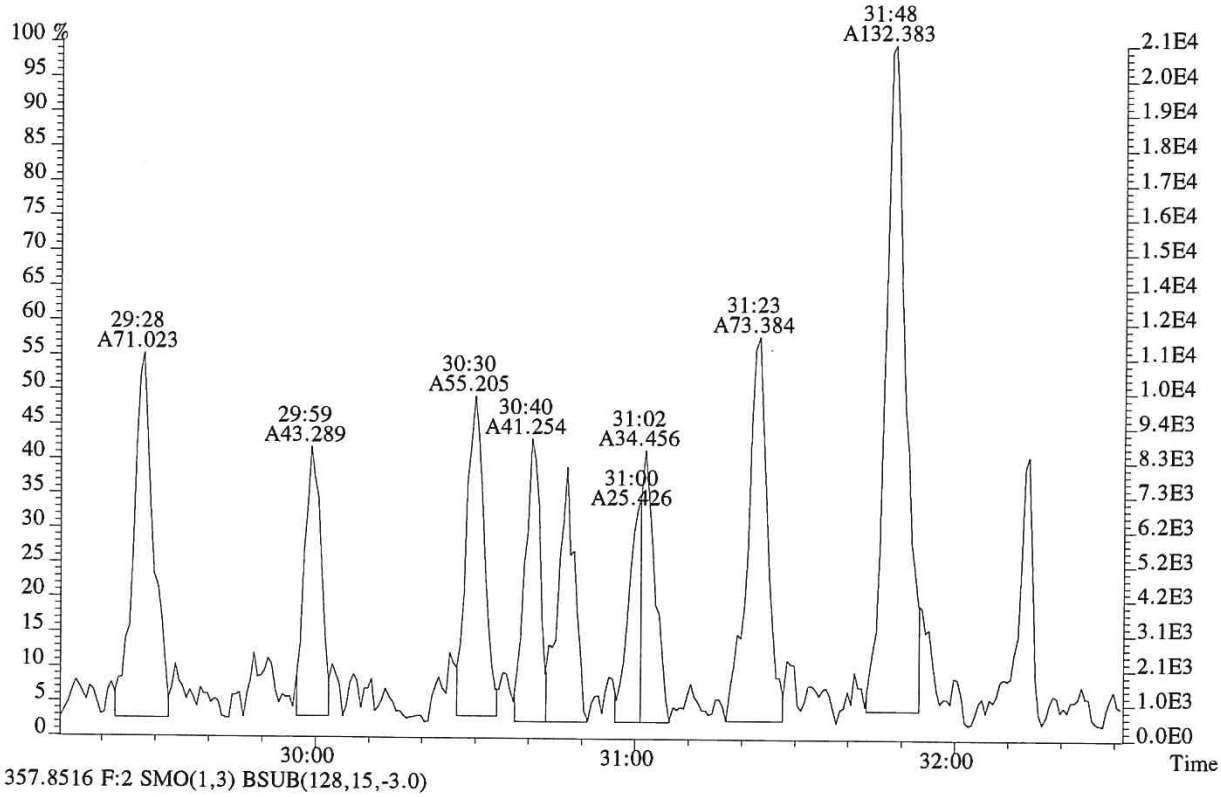
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1320.0,1.00%,F,T)



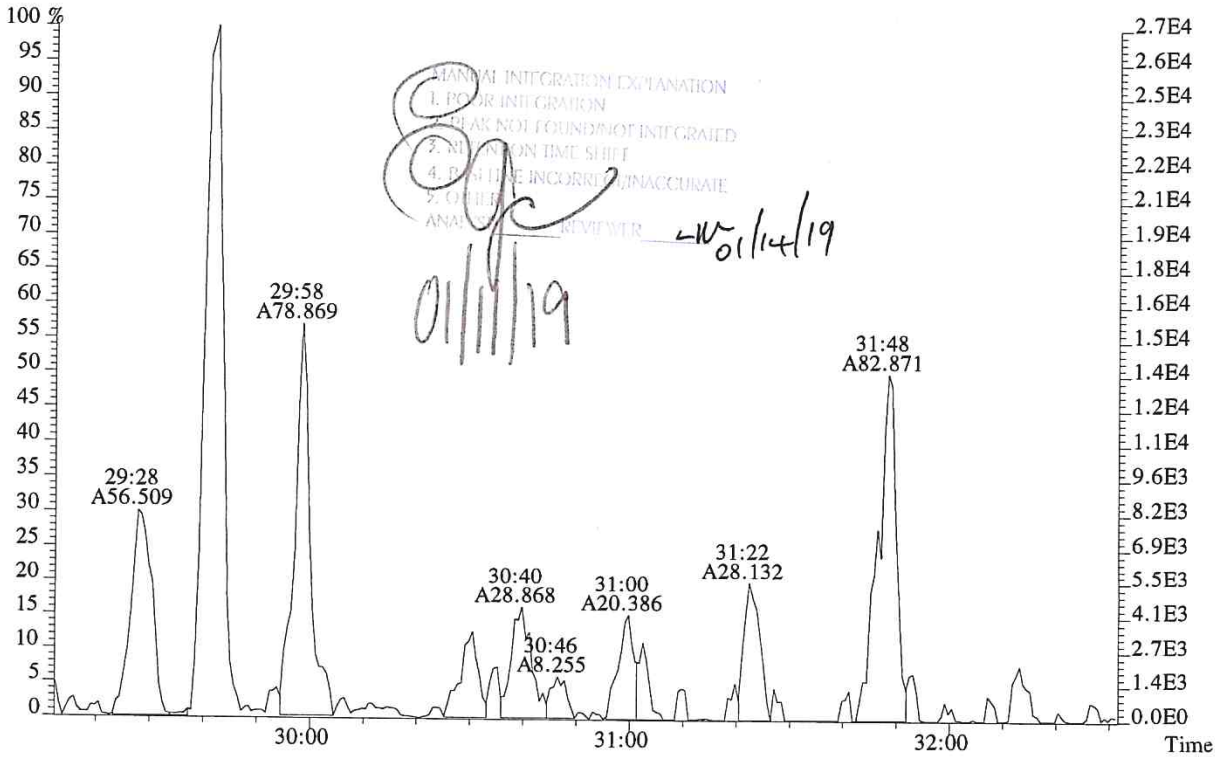
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P519904 #1-375 Acq:11-JAN-2019 04:49:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-018
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0)

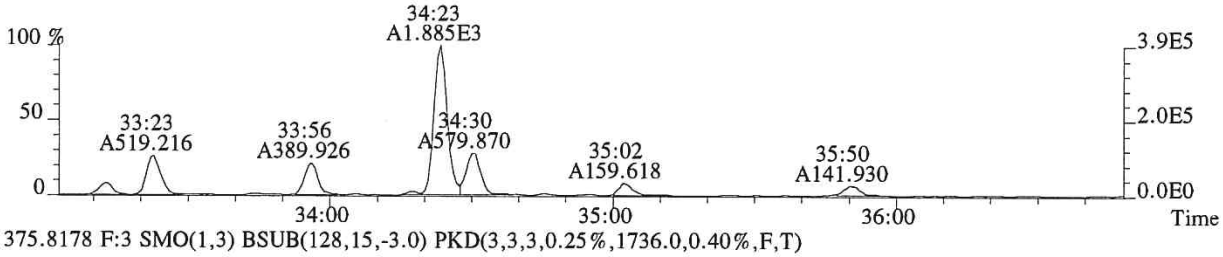


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0)

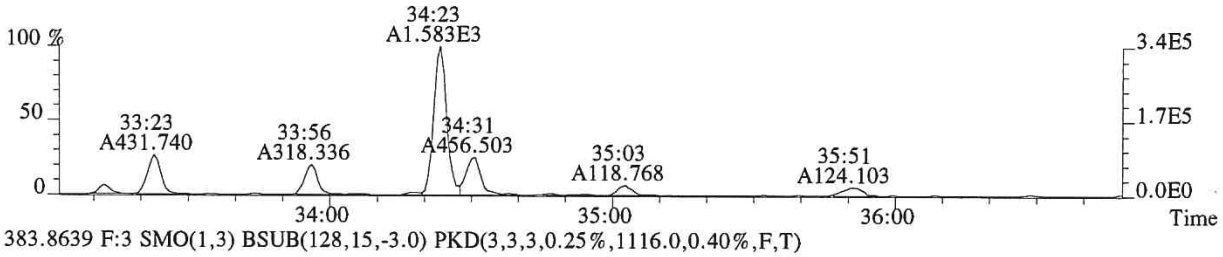


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. PEAK TIME INCORRECT/INACCURATE
5. OTHER
ANALYST
REVIEWER
01/14/19
01/11/19

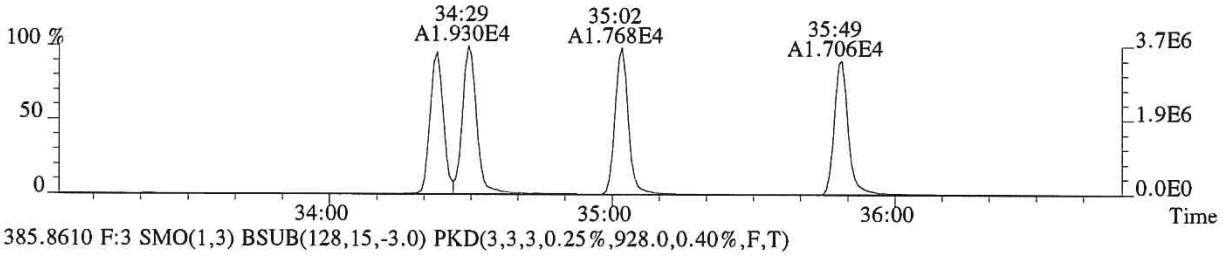
File:P519904 #1-339 Acq:11-JAN-2019 04:49:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-018
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3024.0,0.40%,F,T)



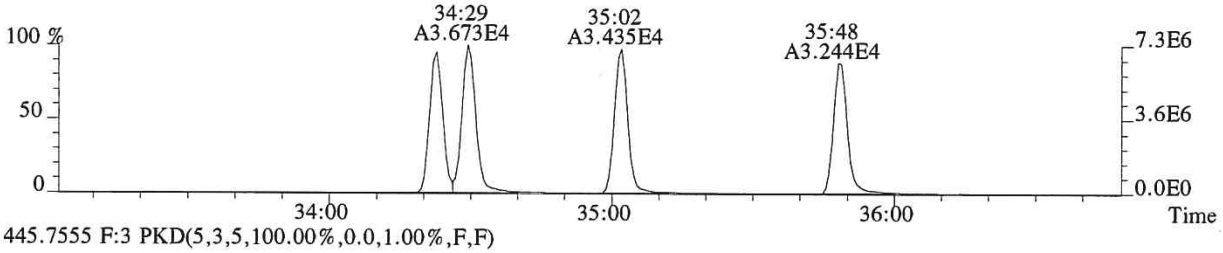
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1736.0,0.40%,F,T)



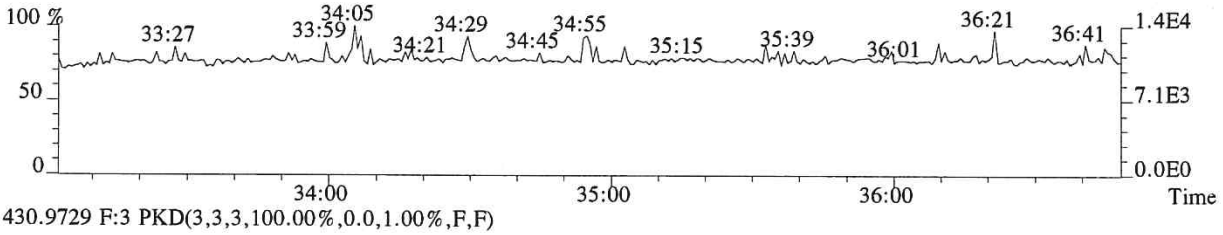
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1116.0,0.40%,F,T)



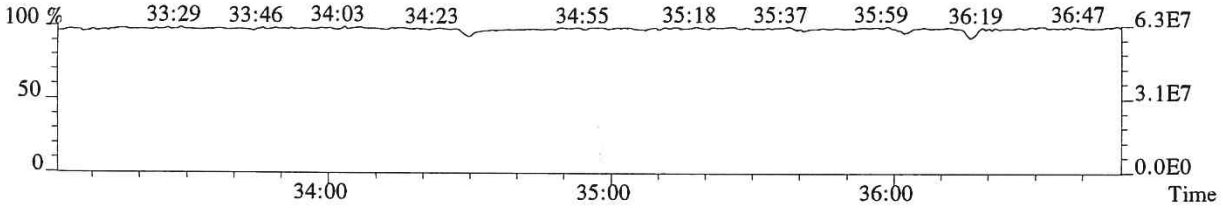
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,928.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

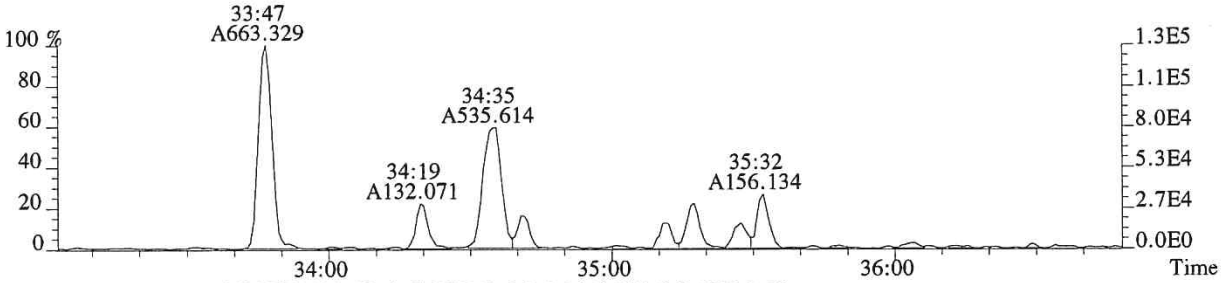


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

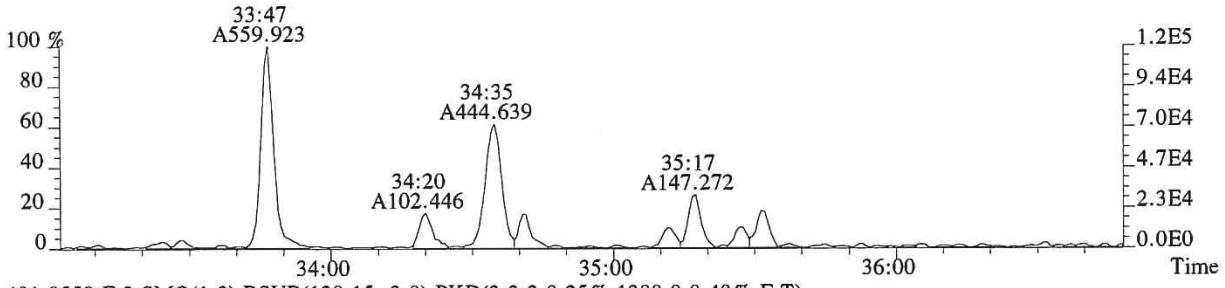


018633

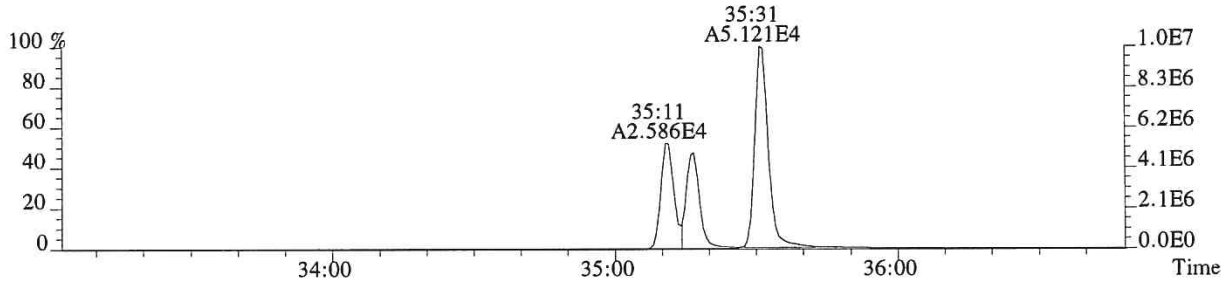
File:P519904 #1-339 Acq:11-JAN-2019 04:49:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-018
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,956.0,0.40%,F,T)



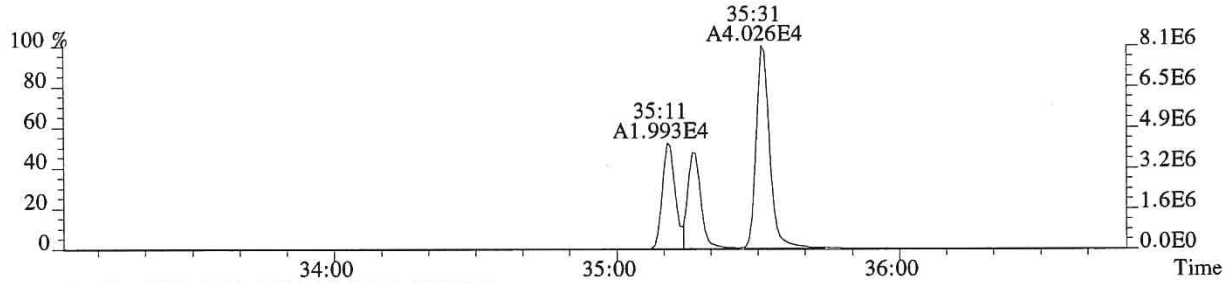
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,992.0,0.40%,F,T)



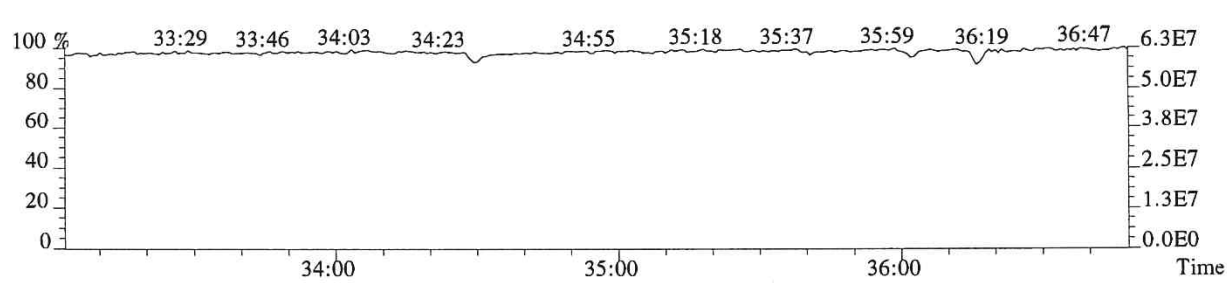
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1388.0,0.40%,F,T)



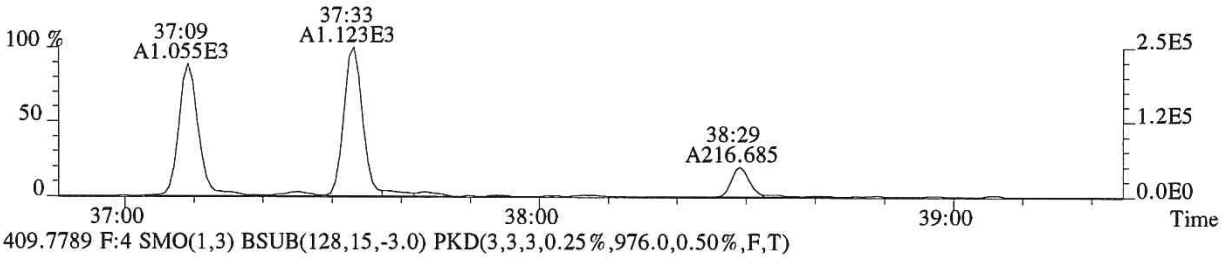
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,744.0,0.40%,F,T)



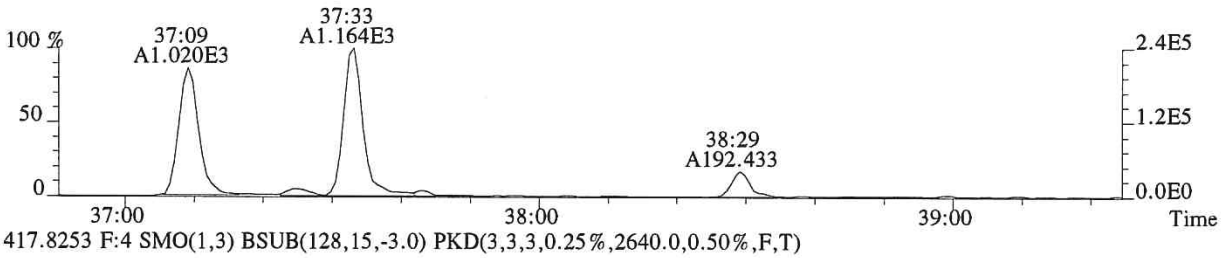
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



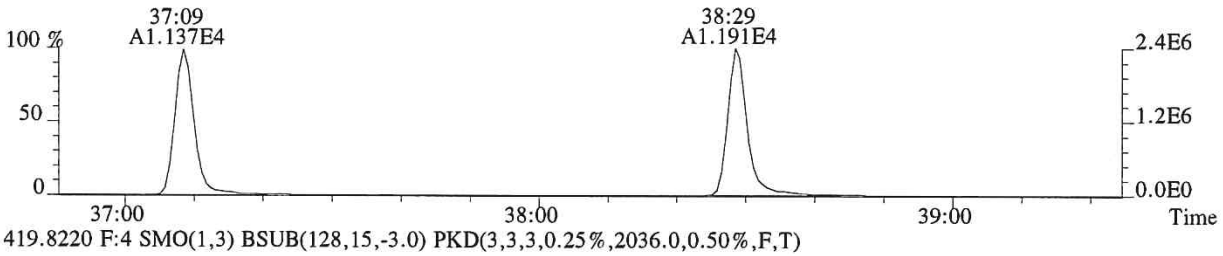
File:P519904 #1-232 Acq:11-JAN-2019 04:49:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-018
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1096.0,0.50%,F,T)



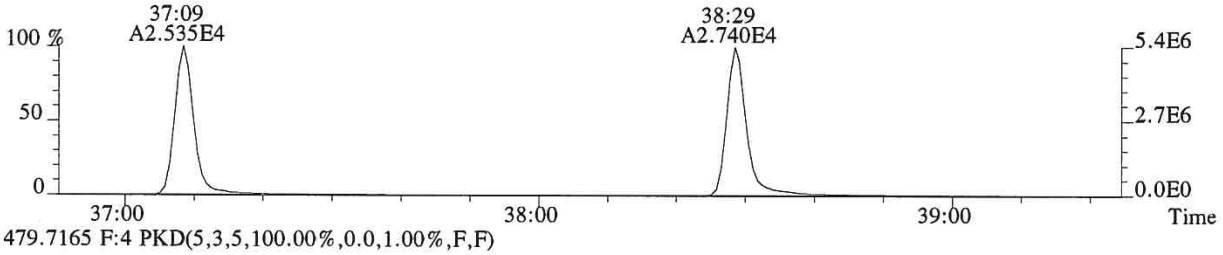
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,976.0,0.50%,F,T)



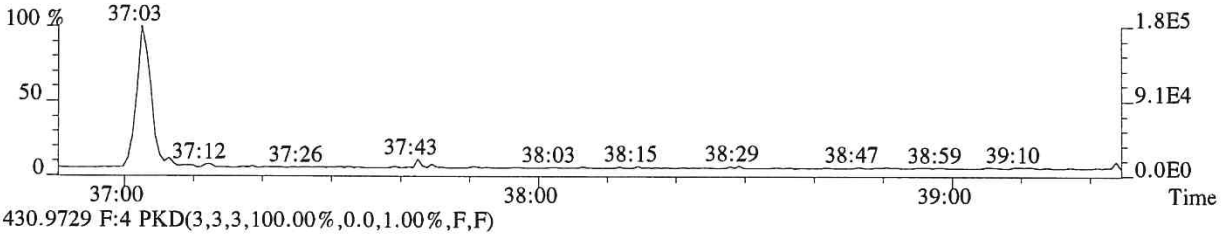
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2640.0,0.50%,F,T)



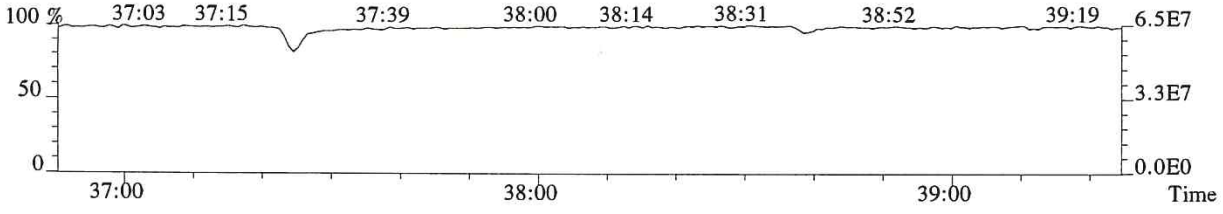
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2036.0,0.50%,F,T)



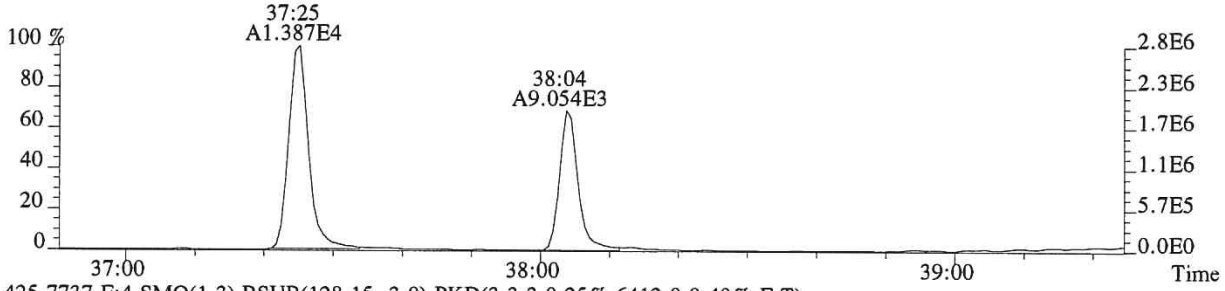
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



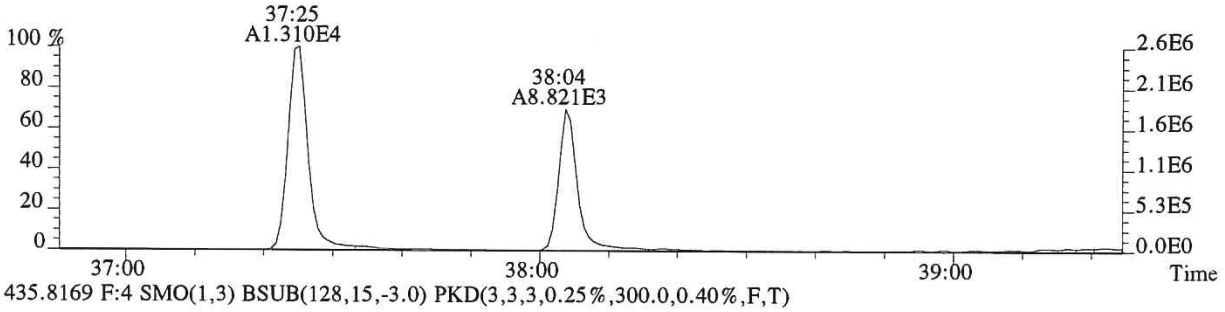
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



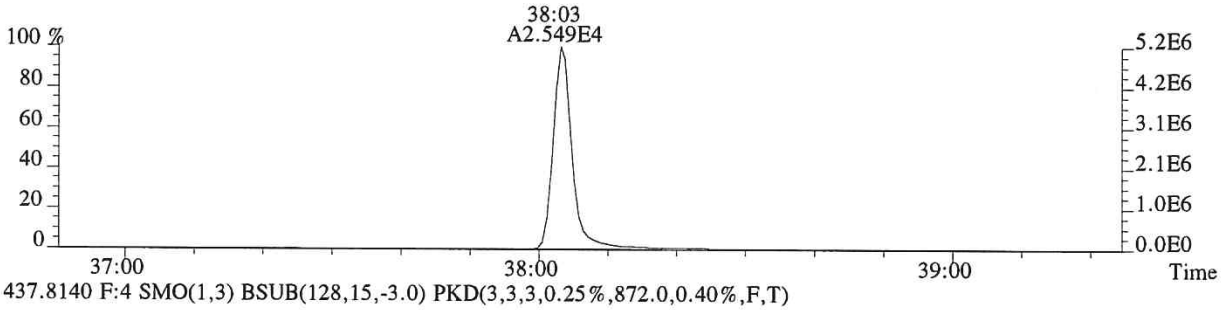
File:P519904 #1-232 Acq:11-JAN-2019 04:49:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-018
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,20408.0,0.40%,F,T)



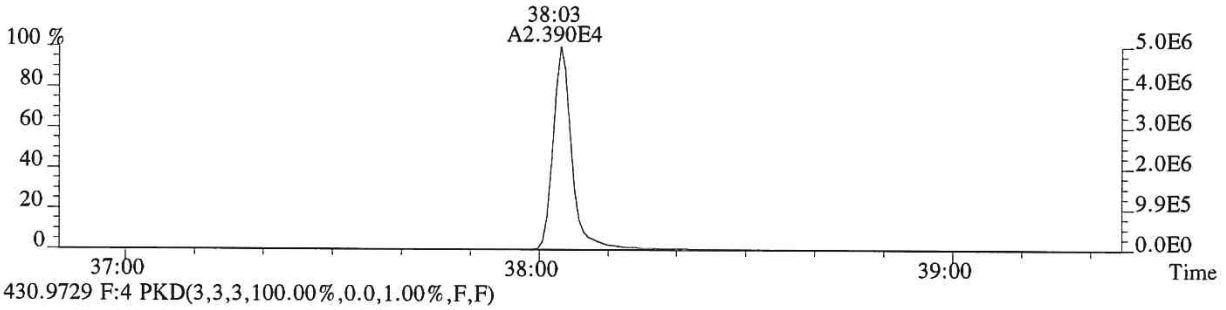
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6412.0,0.40%,F,T)



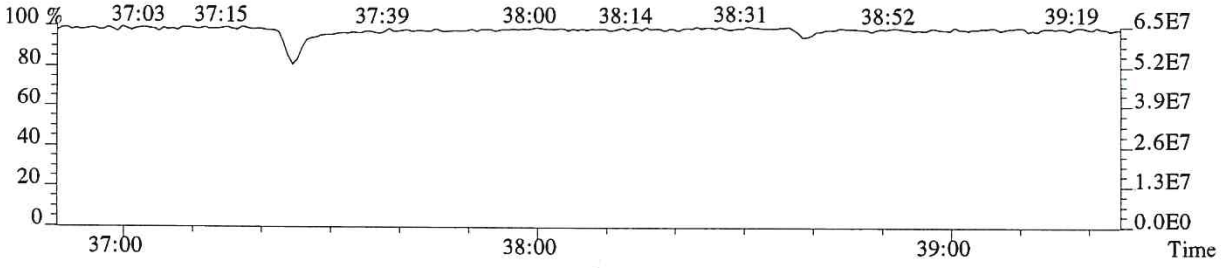
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,300.0,0.40%,F,T)



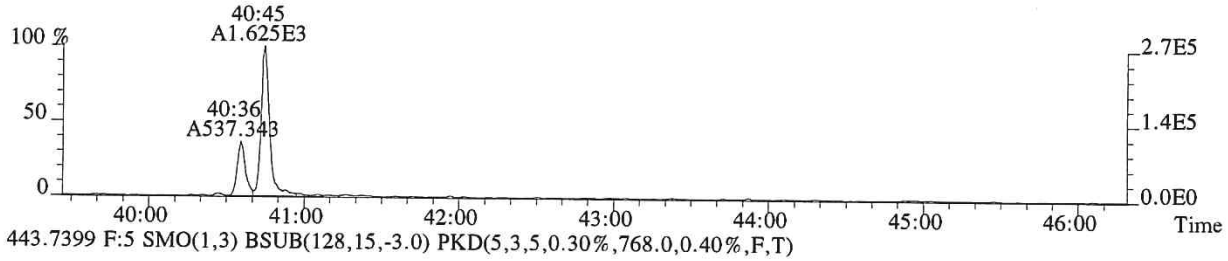
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,872.0,0.40%,F,T)



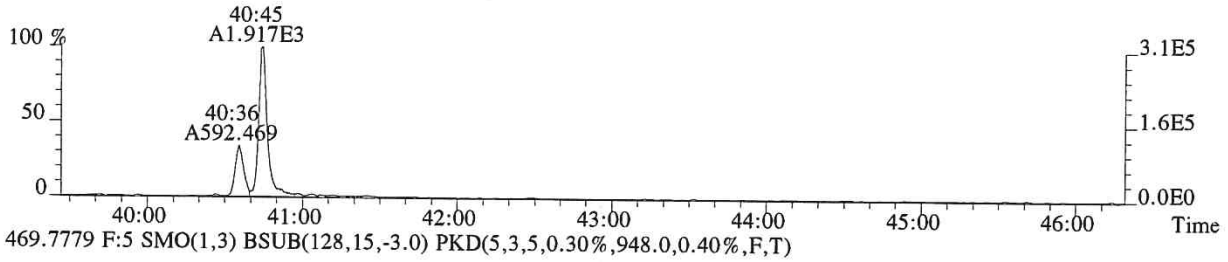
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



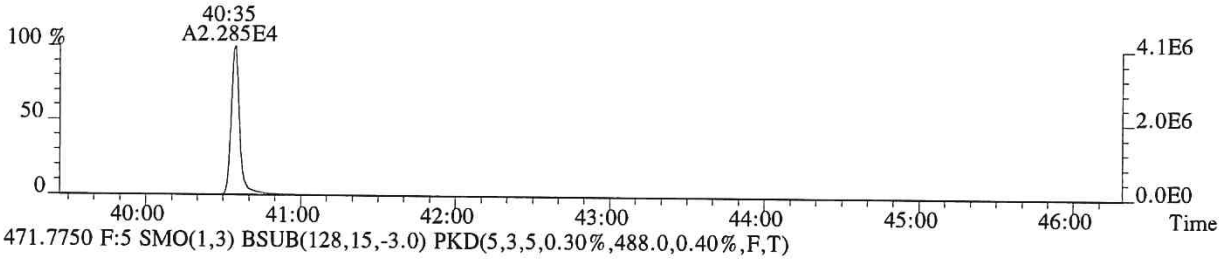
File:P519904 #1-619 Acq:11-JAN-2019 04:49:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-018
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,960.0,0.40%,F,T)



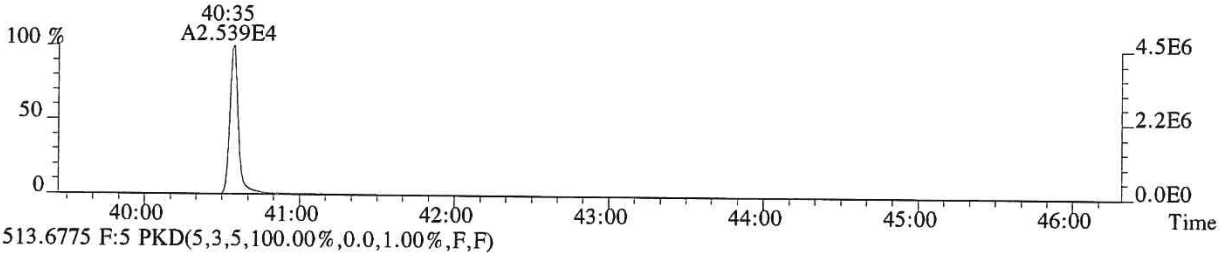
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,768.0,0.40%,F,T)



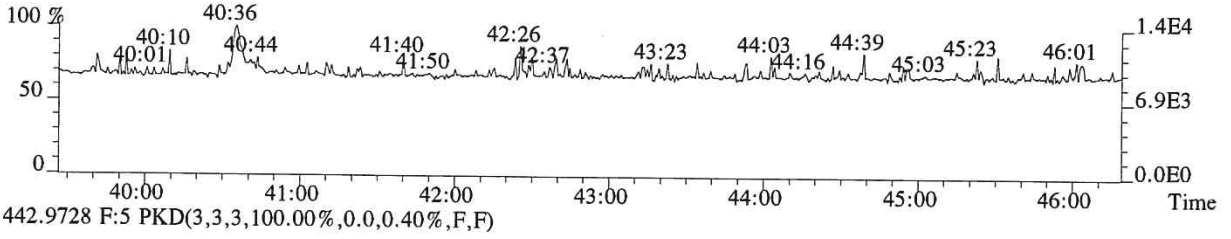
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,948.0,0.40%,F,T)



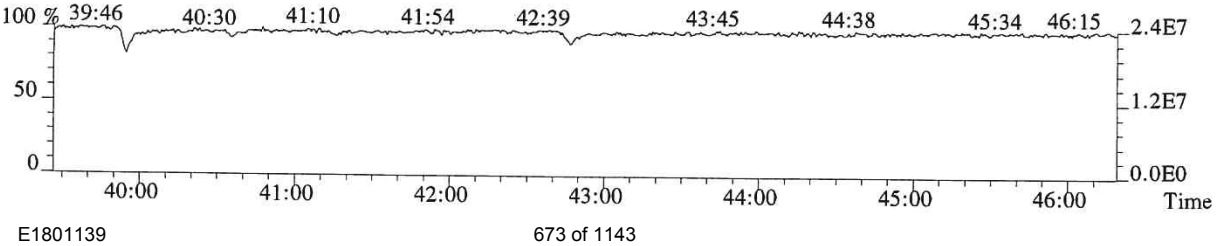
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,488.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

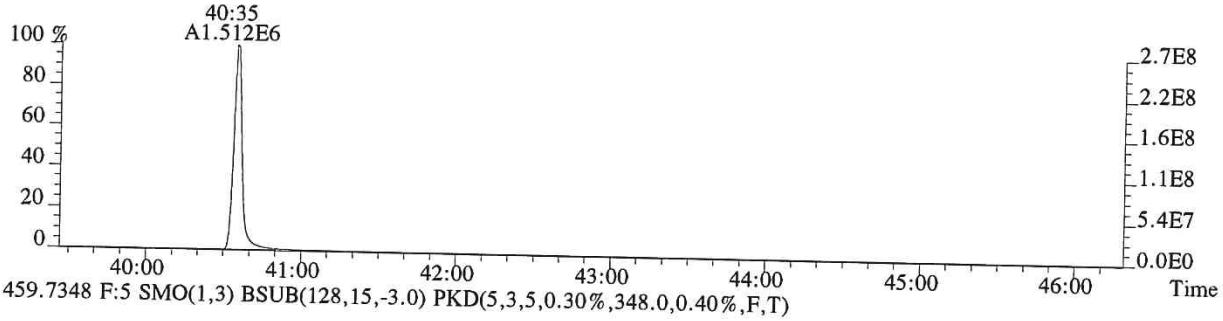


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

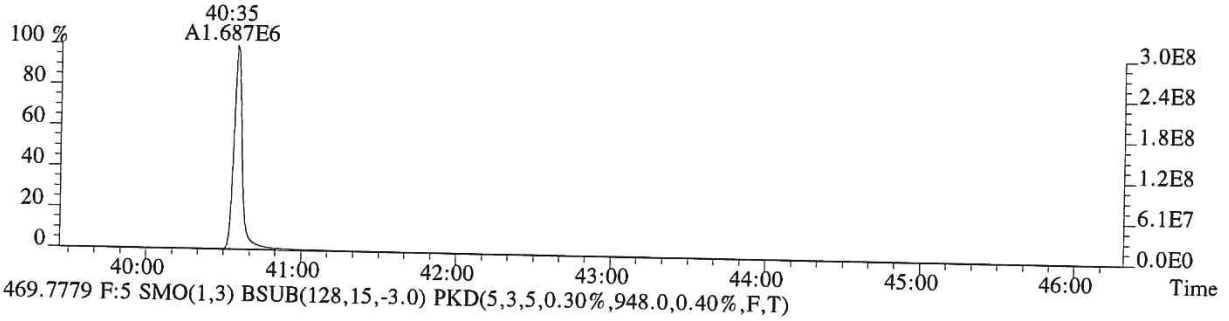


018637

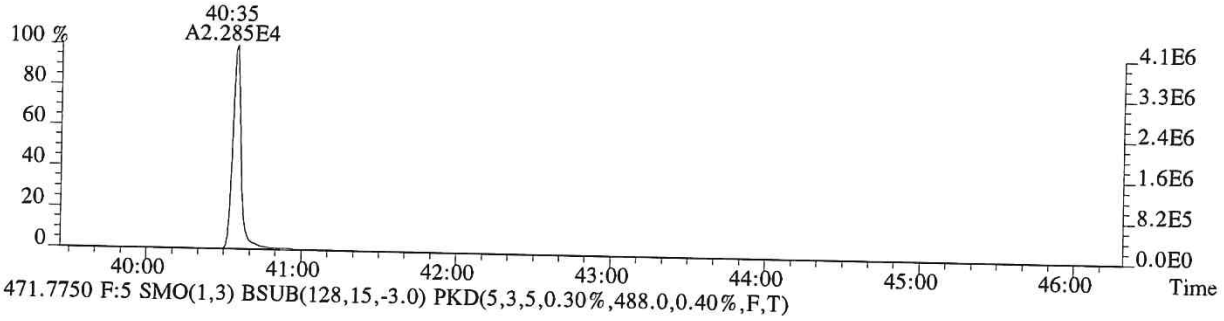
File:P519904 #1-619 Acq:11-JAN-2019 04:49:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-018
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,388.0,0.40%,F,T)



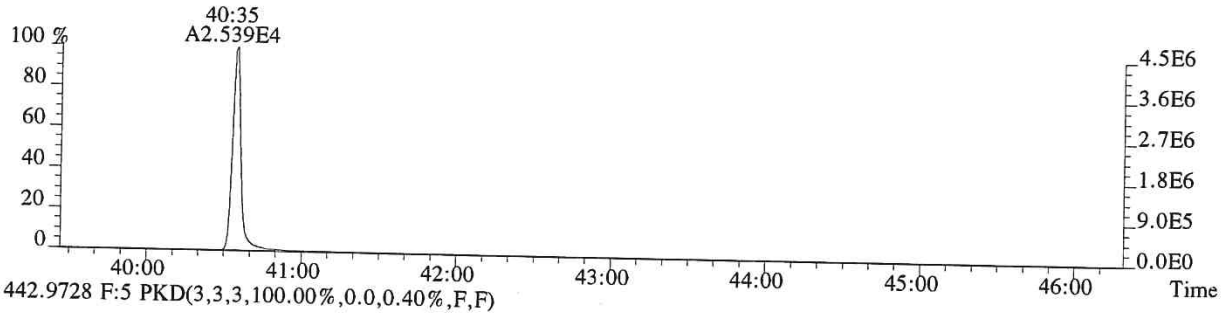
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,348.0,0.40%,F,T)



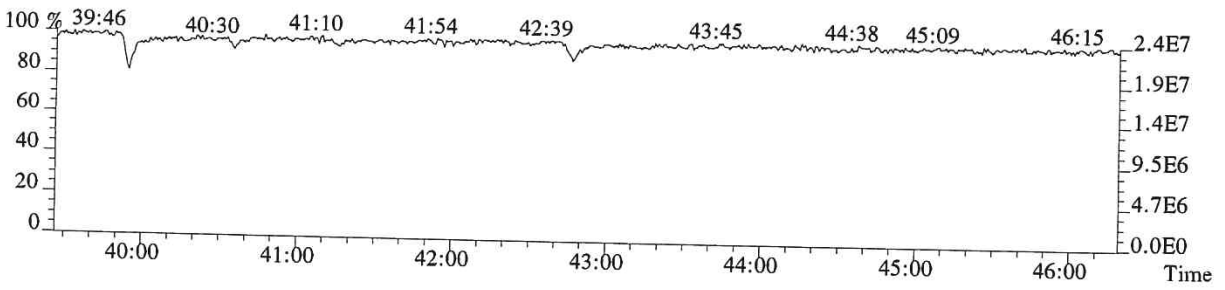
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,948.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,488.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0245

Run #12 Filename P519905 Samp: 1 Inj: 1 Acquired: 11-JAN-19 05:38:24
Processed: 11-JAN-19 14:53:36 Sample ID: E1801139-019

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:24	1.096e+06	1.394e+06	0.79	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:28	7.417e+04	4.879e+04	1.52	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:30	4.975e+04	3.258e+04	1.53	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	1.263e+05	1.049e+05	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	3.201e+04	2.604e+04	1.23	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:03	5.323e+03	4.539e+03	1.17	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:51	8.528e+03	7.437e+03	1.15	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:09	2.955e+04	2.900e+04	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:29	1.017e+04	1.015e+04	1.00	yes	no	1.258
10	Unk	OCDF	40:44	1.629e+04	1.787e+04	0.91	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:26	3.047e+05	3.903e+05	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:49	4.527e+03	2.825e+03	1.60	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:12	1.136e+02	8.951e+01	1.27	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:17	7.134e+02	5.833e+02	1.22	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:32	3.377e+02	2.670e+02	1.26	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	2.672e+04	2.492e+04	1.07	yes	no	1.025
17	Unk	OCDD	40:35	2.566e+05	2.896e+05	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:22	2.114e+04	2.677e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:28	3.574e+04	2.219e+04	1.61	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:28	3.288e+04	2.058e+04	1.60	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:23	1.482e+04	2.933e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.689e+04	3.322e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:02	1.470e+04	2.922e+04	0.50	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:49	1.465e+04	2.843e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:09	1.176e+04	2.596e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	1.101e+04	2.526e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:24	1.041e+04	1.304e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:48	2.516e+04	1.565e+04	1.61	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:11	2.332e+04	1.796e+04	1.30	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:17	2.106e+04	1.671e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	2.448e+04	2.291e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	40:34	2.422e+04	2.752e+04	0.88	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:41	3.966e+04	4.964e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:31	5.626e+04	4.619e+04	1.22	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:26	1.852e+04				no	1.014

$$\text{OCDD} = \frac{(2.566e{+}05 + 2.896e{+}05) \times 4000\ \text{pg} \times 1}{(2.422e{+}04 + 2.752e{+}04) \times 10.242\ \text{g} \times 80.4/100 \times 1.118} = 4586\ \text{ng/kg}$$

LM 01/14/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0245

Run #12 Filename P519905 Samp: 1 Inj: 1 Acquired: 11-JAN-19 05:38:24
Processed: 11-JAN-19 14:53:36 LAB. ID: E1801139-019

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.47e+08	1.41e+03	1.0e+05	1.86e+08	2.39e+03	7.8e+04
2	1,2,3,7,8-PeCDF	1.30e+07	2.08e+04	6.3e+02	8.57e+06	5.96e+03	1.4e+03
3	2,3,4,7,8-PeCDF	7.90e+06	2.08e+04	3.8e+02	5.12e+06	5.96e+03	8.6e+02
4	1,2,3,4,7,8-HxCDF	2.66e+07	4.68e+03	5.7e+03	2.23e+07	3.89e+03	5.7e+03
5	1,2,3,6,7,8-HxCDF	6.12e+06	4.68e+03	1.3e+03	4.99e+06	3.89e+03	1.3e+03
6	2,3,4,6,7,8-HxCDF	1.16e+06	4.68e+03	2.5e+02	9.78e+05	3.89e+03	2.5e+02
7	1,2,3,7,8,9-HxCDF	1.61e+06	4.68e+03	3.4e+02	1.43e+06	3.89e+03	3.7e+02
8	1,2,3,4,6,7,8-HpCDF	6.42e+06	3.57e+03	1.8e+03	6.15e+06	7.09e+03	8.7e+02
9	1,2,3,4,7,8,9-HpCDF	2.11e+06	3.57e+03	5.9e+02	2.13e+06	7.09e+03	3.0e+02
10	OCDF	2.81e+06	7.60e+02	3.7e+03	3.15e+06	1.22e+03	2.6e+03
11	2,3,7,8-TCDD	4.90e+07	2.84e+03	1.7e+04	6.28e+07	1.22e+03	5.1e+04
12	1,2,3,7,8-PeCDD	7.80e+05	1.18e+03	6.6e+02	4.92e+05	2.56e+02	1.9e+03
13	1,2,3,4,7,8-HxCDD	2.34e+04	1.37e+03	1.7e+01	2.39e+04	3.31e+03	7.2e+00
14	1,2,3,6,7,8-HxCDD	1.45e+05	1.37e+03	1.1e+02	1.21e+05	3.31e+03	3.7e+01
15	1,2,3,7,8,9-HxCDD	6.84e+04	1.37e+03	5.0e+01	5.87e+04	3.31e+03	1.8e+01
16	1,2,3,4,6,7,8-HpCDD	5.62e+06	3.88e+03	1.4e+03	5.24e+06	6.86e+03	7.6e+02
17	OCDD	4.56e+07	1.56e+03	2.9e+04	5.11e+07	1.52e+03	3.4e+04
18	13C-2,3,7,8-TCDF	3.08e+06	6.71e+03	4.6e+02	3.90e+06	5.47e+03	7.1e+02
19	13C-1,2,3,7,8-PeCDF	6.17e+06	2.39e+03	2.6e+03	3.79e+06	1.72e+03	2.2e+03
20	13C-2,3,4,7,8-PeCDF	6.16e+06	2.39e+03	2.6e+03	3.88e+06	1.72e+03	2.3e+03
21	13C-1,2,3,4,7,8-HxCDF	3.18e+06	2.54e+03	1.3e+03	6.20e+06	1.72e+03	3.6e+03
22	13C-1,2,3,6,7,8-HxCDF	3.37e+06	2.54e+03	1.3e+03	6.70e+06	1.72e+03	3.9e+03
23	13C-2,3,4,6,7,8-HxCDF	3.18e+06	2.54e+03	1.2e+03	6.19e+06	1.72e+03	3.6e+03
24	13C-1,2,3,7,8,9-HxCDF	2.90e+06	2.54e+03	1.1e+03	5.61e+06	1.72e+03	3.3e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.54e+06	4.68e+03	5.4e+02	5.59e+06	4.52e+03	1.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.23e+06	4.68e+03	4.8e+02	5.18e+06	4.52e+03	1.1e+03
27	13C-2,3,7,8-TCDD	1.66e+06	5.81e+03	2.9e+02	2.09e+06	3.41e+03	6.1e+02
28	13C-1,2,3,7,8-PeCDD	4.80e+06	7.80e+02	6.2e+03	2.96e+06	1.28e+03	2.3e+03
29	13C-1,2,3,4,7,8-HxCDD	4.96e+06	1.19e+03	4.2e+03	3.79e+06	1.06e+03	3.6e+03
30	13C-1,2,3,6,7,8-HxCDD	4.29e+06	1.19e+03	3.6e+03	3.40e+06	1.06e+03	3.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	5.20e+06	1.02e+03	5.1e+03	4.77e+06	1.15e+03	4.1e+03
32	13C-OCDD	4.35e+06	9.28e+02	4.7e+03	4.93e+06	5.00e+02	9.9e+03
33	13C-1,2,3,4-TCDD	5.91e+06	5.81e+03	1.0e+03	7.42e+06	3.41e+03	2.2e+03
34	13C-1,2,3,7,8,9-HxCDD	1.14e+07	1.19e+03	9.6e+03	9.11e+06	1.06e+03	8.6e+03
35	37Cl-2,3,7,8-TCDD	2.99e+06	1.17e+03	2.6e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0245

Entry: 36 Totals Name: Total Tetra-Furans

Run: 12 File: P519905 Sample:1 Injection:1 Function:1

Acquired: 11-JAN-19 05:38:24 Processed: 11-JAN-19 14:53:36

Mass: 303.9020 305.8990 Tot Response: 4.50e+06 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:19	9.50e+03	1.26e+04	0.75	yes	2.21e+04		n	n
2	22:35	4.93e+04	6.43e+04	0.77	yes	1.14e+05		n	n
3	22:56	1.57e+04	2.07e+04	0.76	yes	3.64e+04		n	n
4	23:03	1.78e+03	2.46e+03	0.72	yes	4.24e+03		n	n
5	23:12	4.22e+04	5.46e+04	0.77	yes	9.67e+04		n	n
6	23:34	9.47e+03	1.27e+04	0.75	yes	2.21e+04		n	n
7	23:49	2.89e+04	3.76e+04	0.77	yes	6.65e+04		n	n
8	23:55	5.41e+04	7.04e+04	0.77	yes	1.24e+05		n	n
9	24:24	4.84e+05	6.19e+05	0.78	yes	1.10e+06		n	n
10	24:42	2.21e+04	2.92e+04	0.76	yes	5.14e+04		n	n
11	25:24	1.10e+06	1.39e+06	0.79	yes	2.49e+06	2,3,7,8-TCDF	n	n
12	25:50	7.32e+04	9.37e+04	0.78	yes	1.67e+05		n	n
13	26:08	1.14e+04	1.50e+04	0.76	yes	2.64e+04		n	n
14	27:41	7.86e+04	1.01e+05	0.78	yes	1.80e+05		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0245

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 12 File: P519905 Sample:1 Injection:1 Function:1

Acquired: 11-JAN-19 05:38:24 Processed: 11-JAN-19 14:53:36

Mass: 319.8970 321.8940 Tot Response: 7.64e+05 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	26:06	4.25e+03	5.19e+03	0.82	yes	9.44e+03		n	n
2	26:26	3.05e+05	3.90e+05	0.78	yes	6.95e+05	2,3,7,8-TCDD	n	n
3	26:48	2.58e+04	3.40e+04	0.76	yes	5.98e+04		n	n

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Peak List Summary

CLIENT ID.
SL0245

Entry: 38 Totals Name: Total Penta-Furans1

Run: 12 File: P519905 Sample:1 Injection:1 Function:1

Acquired: 11-JAN-19 05:38:24 Processed: 11-JAN-19 14:53:36

Mass: 339.8600 341.8570 Tot Response: 1.83e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:43	1.13e+03	7.01e+02 1.61	yes	1.83e+03		n	n

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Peak List Summary

CLIENT ID.
SL0245

Entry: 39 Totals Name: Total Penta-Furans2

Run: 12 File: P519905 Sample:1 Injection:1 Function:2

Acquired: 11-JAN-19 05:38:24 Processed: 11-JAN-19 14:53:36

Mass: 339.8600 341.8570 Tot Response: 3.09e+05 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:26	3.06e+04	2.04e+04	1.50	yes	5.10e+04		n	n
2	30:02	9.66e+02	6.75e+02	1.43	yes	1.64e+03		n	n
3	30:08	1.19e+03	7.65e+02	1.55	yes	1.95e+03		n	n
4	30:17	6.27e+03	4.23e+03	1.48	yes	1.05e+04		n	n
5	30:28	7.42e+04	4.88e+04	1.52	yes	1.23e+05	1,2,3,7,8-PeCDF	n	n
6	30:45	2.03e+04	1.34e+04	1.51	yes	3.37e+04		n	n
7	31:23	5.91e+02	3.33e+02	1.78	yes	9.23e+02		n	n
8	31:30	4.97e+04	3.26e+04	1.53	yes	8.23e+04	2,3,4,7,8-PeCDF	n	n
9	32:28	2.36e+03	1.59e+03	1.49	yes	3.94e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0245

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 12 File: P519905 Sample:1 Injection:1 Function:2

Acquired: 11-JAN-19 05:38:24 Processed: 11-JAN-19 14:53:36

Mass: 355.8550 357.8520 Tot Response: 1.03e+04 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:28	3.60e+02	2.43e+02	1.48	yes	6.04e+02		n	n
2	30:30	7.02e+02	4.24e+02	1.65	yes	1.13e+03		n	n
3	30:41	2.70e+02	1.64e+02	1.65	yes	4.34e+02		n	n
4	30:47	2.44e+02	1.47e+02	1.66	yes	3.90e+02		n	n
5	31:22	1.35e+02	7.98e+01	1.69	yes	2.14e+02		n	n
6	31:49	4.53e+03	2.82e+03	1.60	yes	7.35e+03	1,2,3,7,8-PeCDD	n	n
7	32:13	9.31e+01	5.25e+01	1.77	yes	1.46e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0245

Entry: 41 Totals Name: Total Hexa-Furans

Run: 12 File: P519905 Sample:1 Injection:1 Function:3

Acquired: 11-JAN-19 05:38:24 Processed: 11-JAN-19 14:53:36

Mass: 373.8210 375.8180 Tot Response: 3.41e+05 RRF: 1.141

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:13	7.11e+02	6.08e+02 1.17	yes	1.32e+03		n	n
2	33:23	8.50e+03	6.84e+03 1.24	yes	1.53e+04		n	n
3	33:56	4.80e+03	4.00e+03 1.20	yes	8.80e+03		n	n
4	34:23	1.26e+05	1.05e+05 1.20	yes	2.31e+05	1,2,3,4,7,8-HxCDF	n	n
5	34:30	3.20e+04	2.60e+04 1.23	yes	5.80e+04	1,2,3,6,7,8-HxCDF	n	n
6	35:03	5.32e+03	4.54e+03 1.17	yes	9.86e+03	2,3,4,6,7,8-HxCDF	n	n
7	35:51	8.53e+03	7.44e+03 1.15	yes	1.60e+04	1,2,3,7,8,9-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0245

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 12 File: P519905 Sample:1 Injection:1 Function:3

Acquired: 11-JAN-19 05:38:24 Processed: 11-JAN-19 14:53:36

Mass: 389.8160 391.8130 Tot Response: 1.48e+04 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:47	4.89e+03	3.95e+03 1.24	yes	8.84e+03		n	n
2	34:20	2.50e+02	1.86e+02 1.34	yes	4.36e+02		n	n
3	34:35	1.80e+03	1.45e+03 1.25	yes	3.25e+03		n	n
4	35:12	1.14e+02	8.95e+01 1.27	yes	2.03e+02	1,2,3,4,7,8-HxCDD	n	n
5	35:17	7.13e+02	5.83e+02 1.22	yes	1.30e+03	1,2,3,6,7,8-HxCDD	n	n
6	35:27	6.58e+01	5.74e+01 1.15	yes	1.23e+02		n	n
7	35:32	3.38e+02	2.67e+02 1.26	yes	6.05e+02	1,2,3,7,8,9-HxCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0245

Entry: 43 Totals Name: Total Hepta-Furans

Run: 12 File: P519905 Sample:1 Injection:1 Function:4

Acquired: 11-JAN-19 05:38:24 Processed: 11-JAN-19 14:53:36

Mass: 407.7820 409.7790 Tot Response: 1.03e+05 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:09	2.96e+04	2.90e+04	1.02	yes	5.86e+04	1,2,3,4,6,7,8-HpCDF	n	n
2	37:33	1.21e+04	1.16e+04	1.04	yes	2.37e+04		n	n
3	38:29	1.02e+04	1.02e+04	1.00	yes	2.03e+04	1,2,3,4,7,8,9-HpCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0245

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 12 File: P519905 Sample:1 Injection:1 Function:4

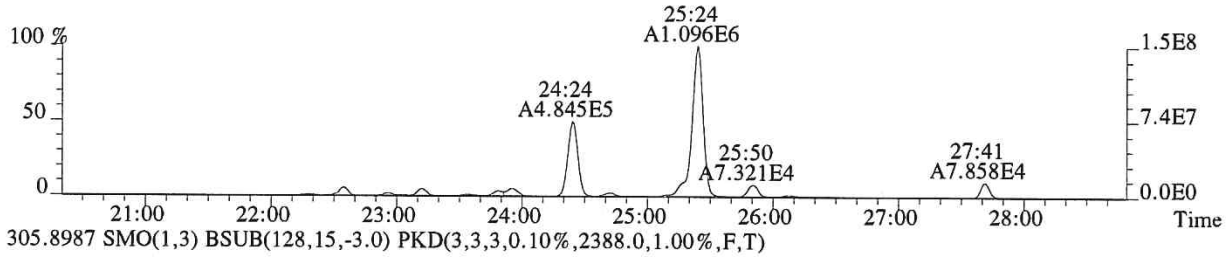
Acquired: 11-JAN-19 05:38:24 Processed: 11-JAN-19 14:53:36

Mass: 423.7770 425.7740 Tot Response: 9.70e+04 RRF: 1.025

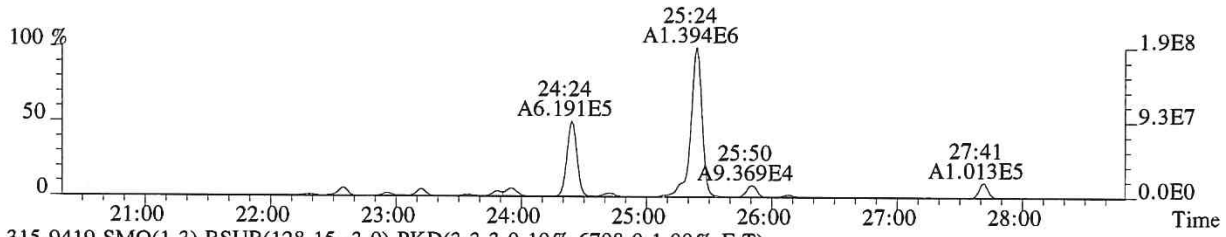
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:25	2.35e+04	2.18e+04 1.08	yes	4.54e+04		n	n
2	38:04	2.67e+04	2.49e+04 1.07	yes	5.16e+04	1,2,3,4,6,7,8-HpCDD	n	n

ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

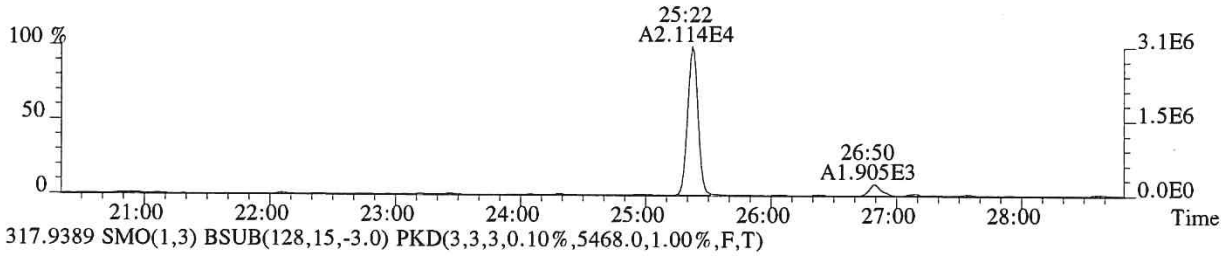
File:P519905 #1-602 Acq:11-JAN-2019 05:38:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-019
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1412.0,1.00%,F,T)



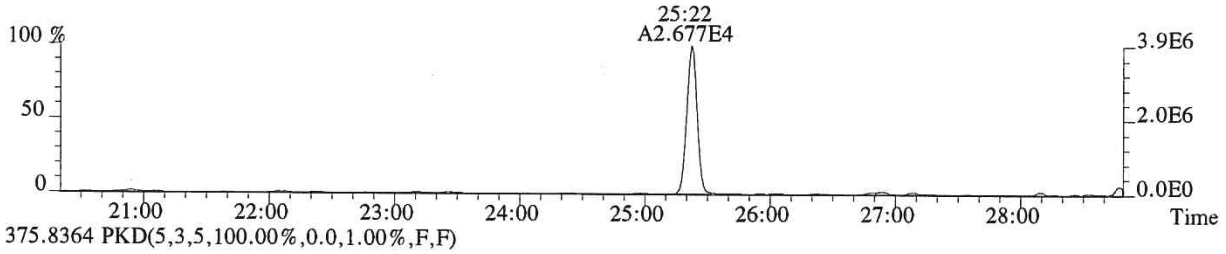
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2388.0,1.00%,F,T)



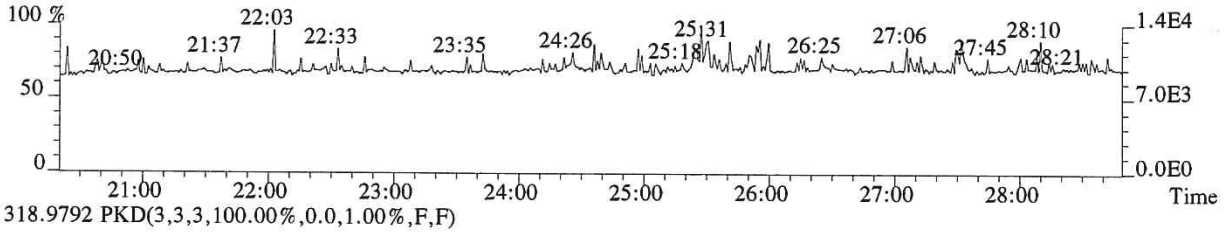
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6708.0,1.00%,F,T)



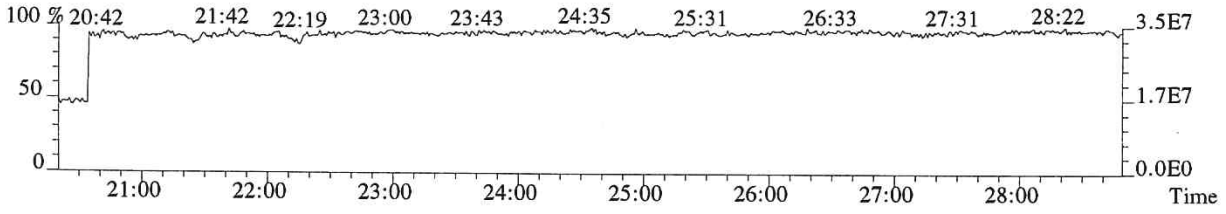
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5468.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

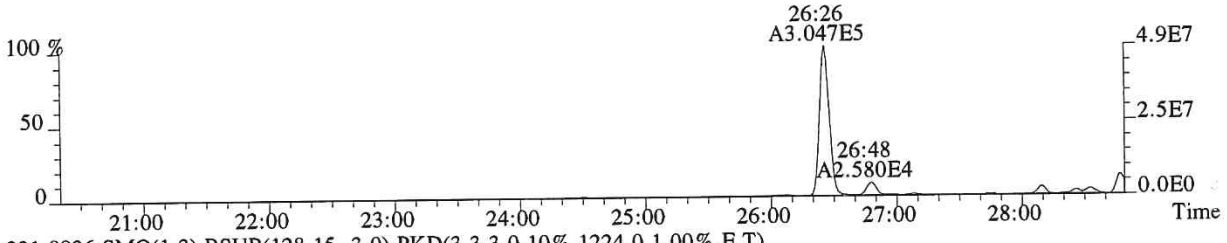


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

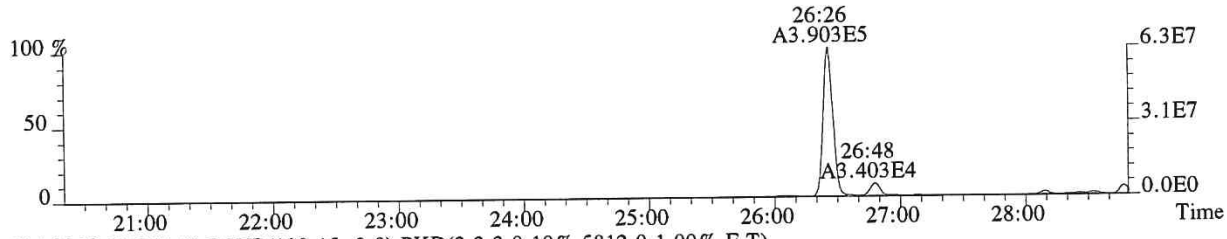


018650

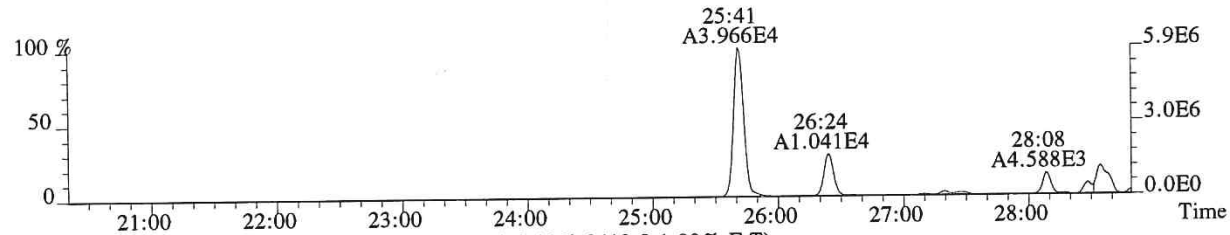
File:P519905 #1-602 Acq:11-JAN-2019 05:38:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-019
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2844.0,1.00%,F,T)



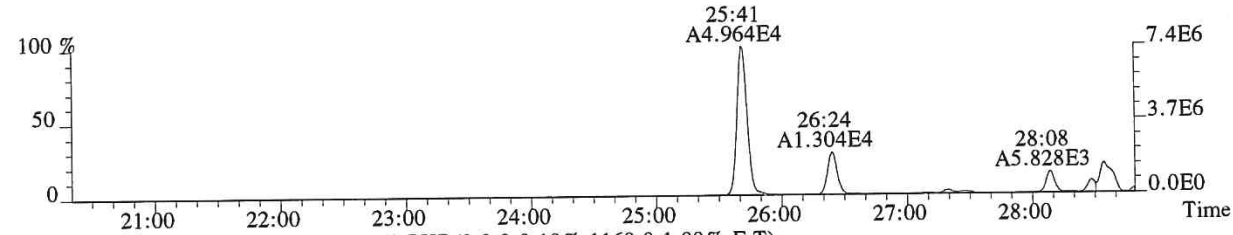
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1224.0,1.00%,F,T)



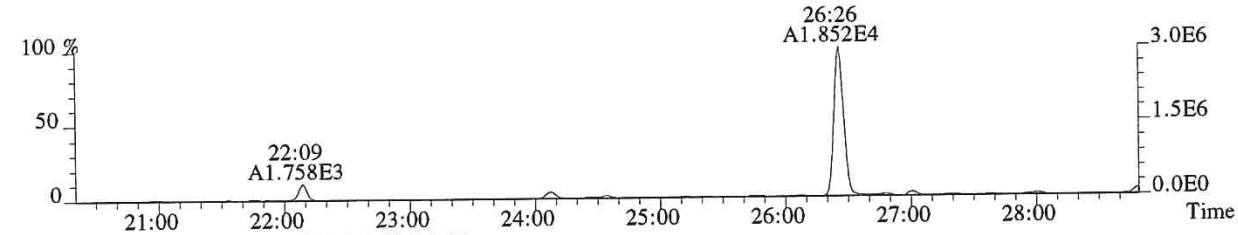
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5812.0,1.00%,F,T)



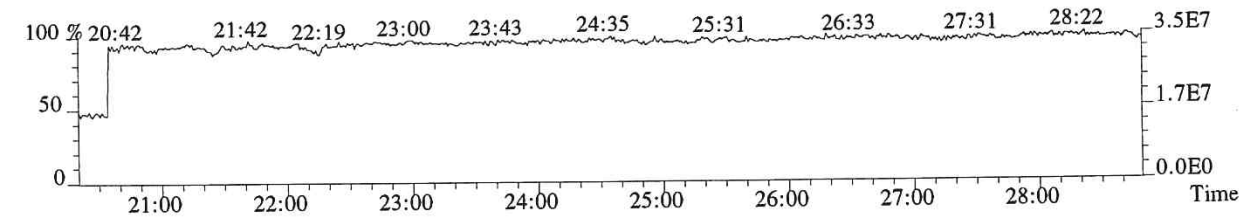
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3412.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1168.0,1.00%,F,T)

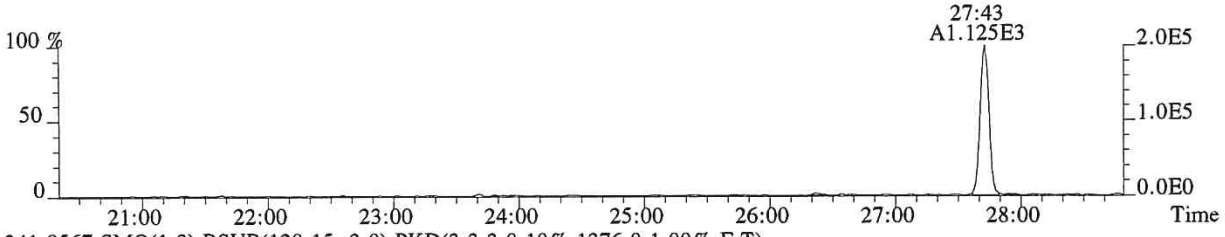


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

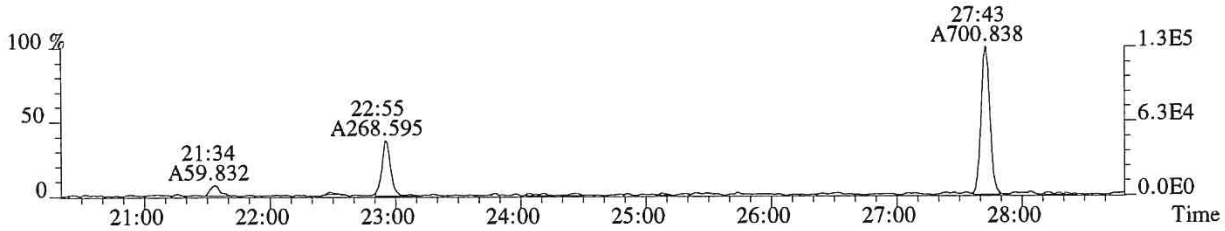


018651

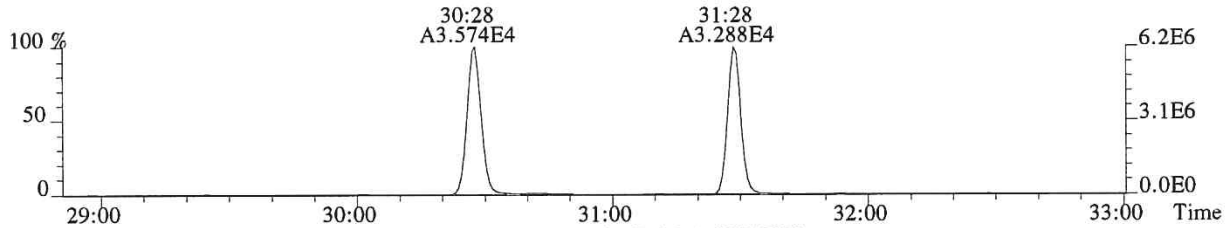
File:P519905 #1-602 Acq:11-JAN-2019 05:38:24 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:E1801139-019
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,976.0,1.00%,F,T)



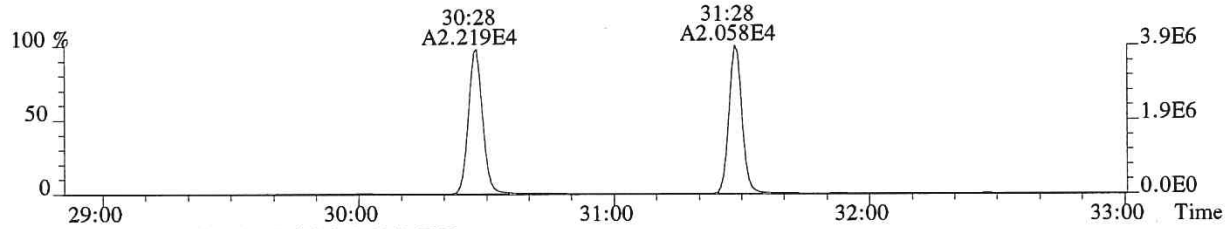
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1376.0,1.00%,F,T)



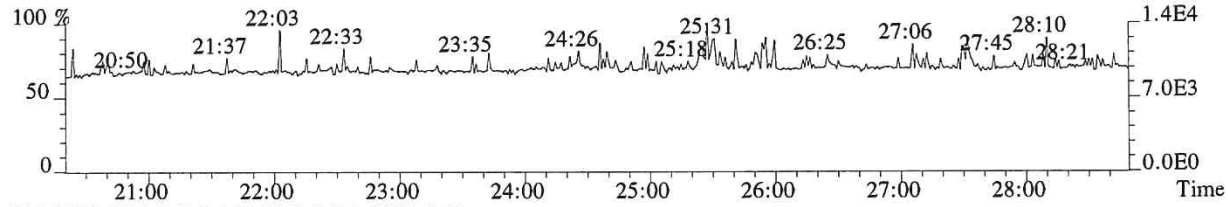
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2392.0,1.00%,F,T)



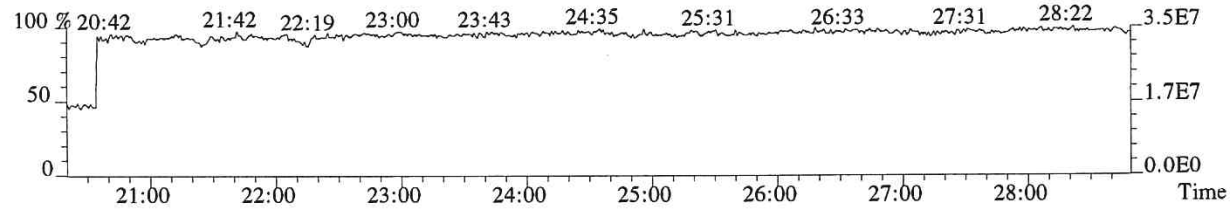
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1716.0,1.00%,F,T)



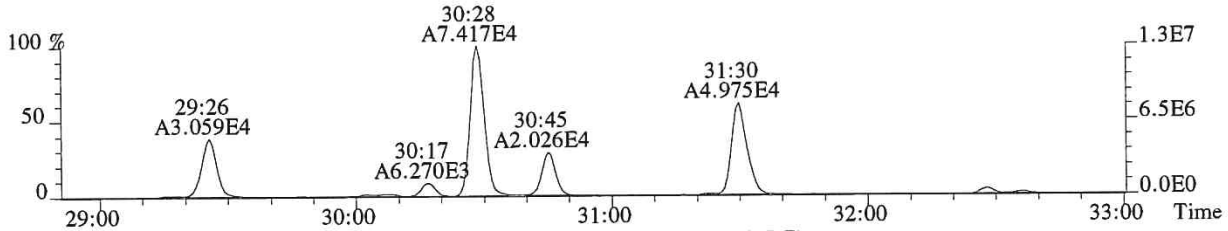
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



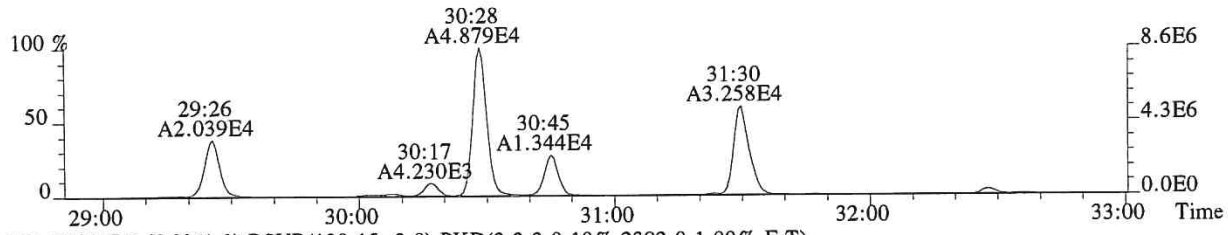
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



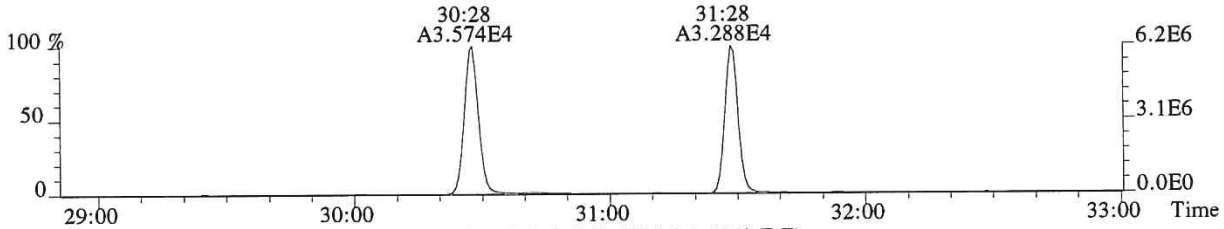
File:P519905 #1-375 Acq:11-JAN-2019 05:38:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-019
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,20760.0,1.00%,F,T)



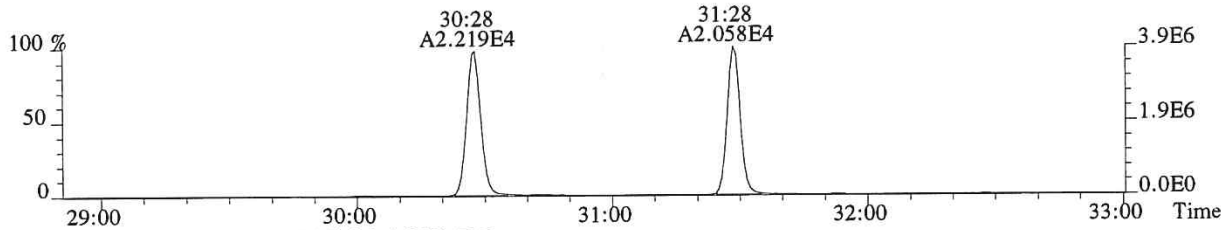
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5956.0,1.00%,F,T)



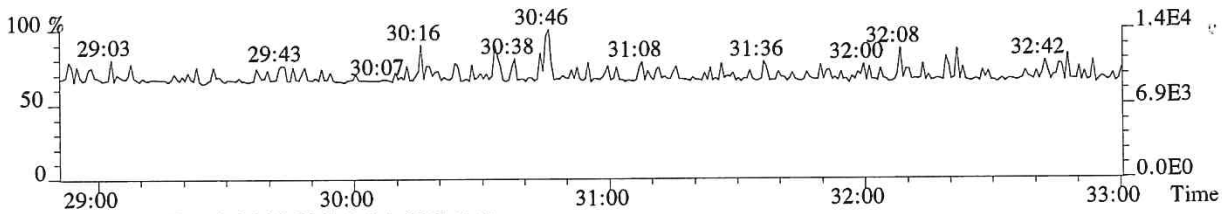
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2392.0,1.00%,F,T)



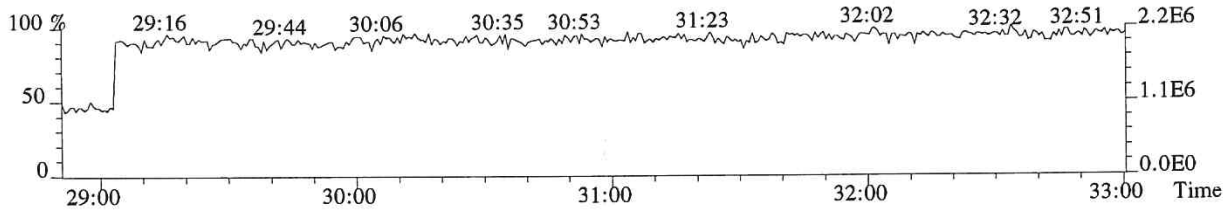
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1716.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

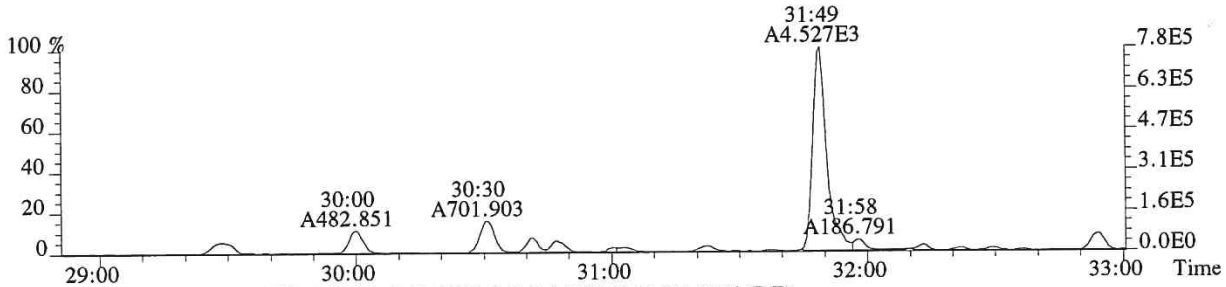


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

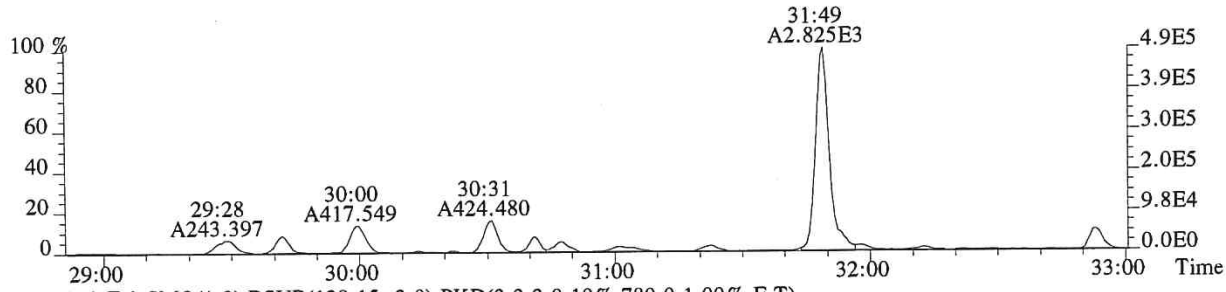


018653

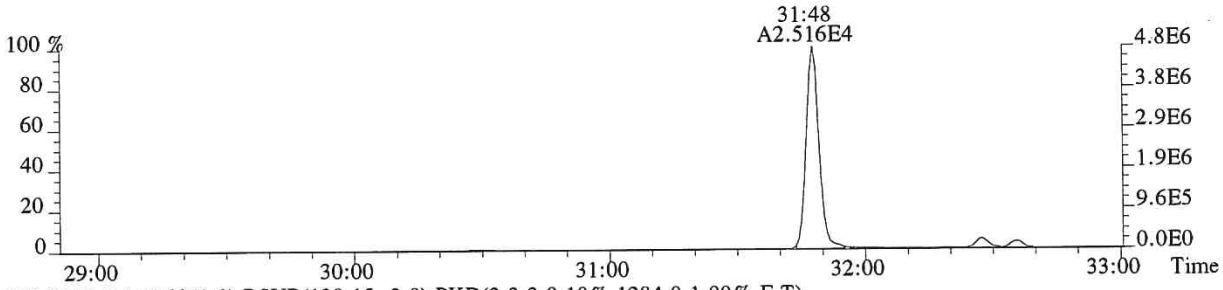
File:P519905 #1-375 Acq:11-JAN-2019 05:38:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-019
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1176.0,1.00%,F,T)



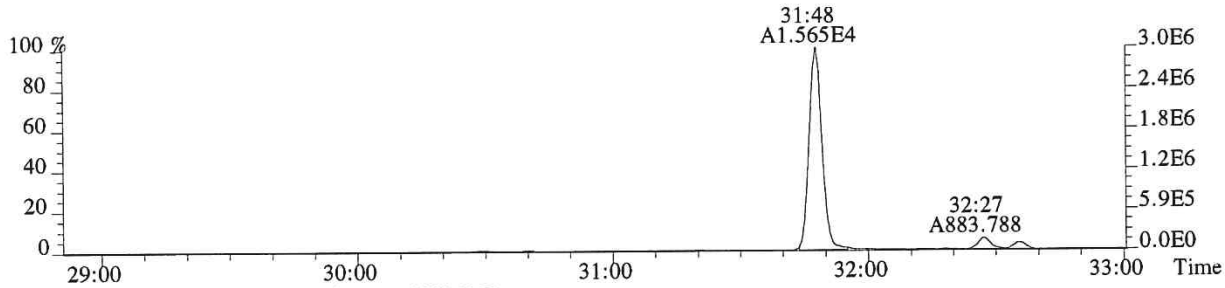
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,256.0,1.00%,F,T)



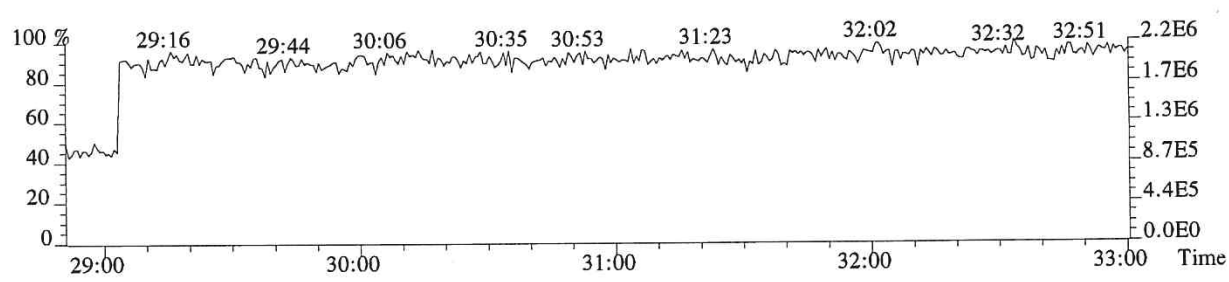
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,780.0,1.00%,F,T)



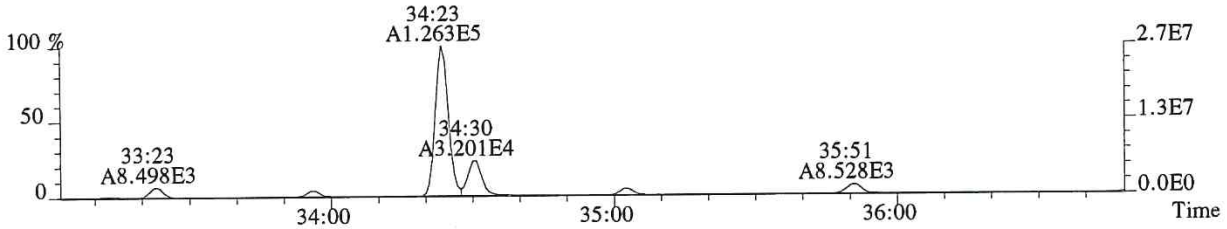
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1284.0,1.00%,F,T)



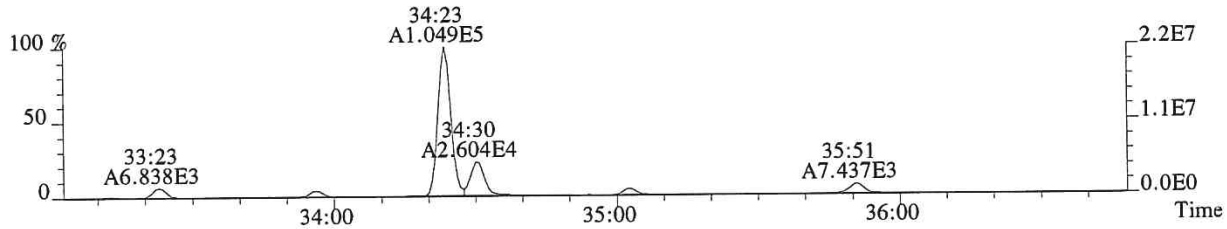
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



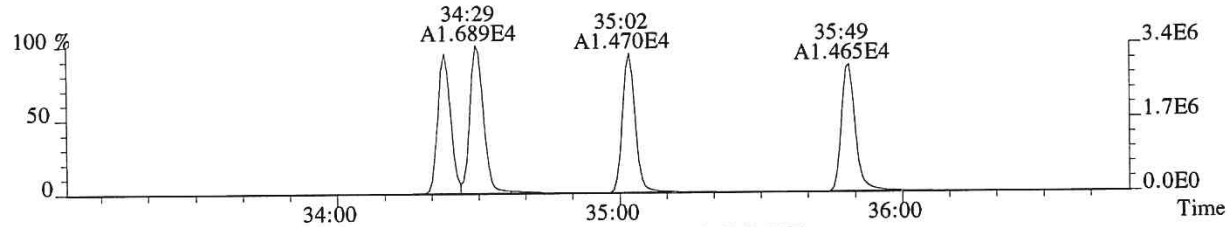
File:P519905 #1-339 Acq:11-JAN-2019 05:38:24 Probe EI+ Magnet SIR VG BioTech Mass spectf
Sample#1 Exp:E1801139-019
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4684.0,0.40%,F,T)



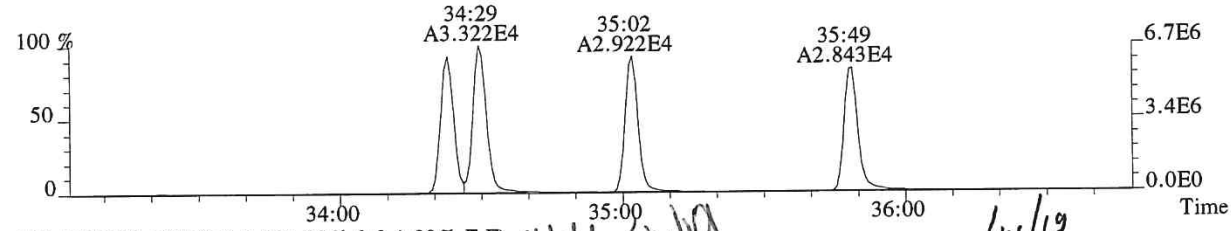
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3888.0,0.40%,F,T)



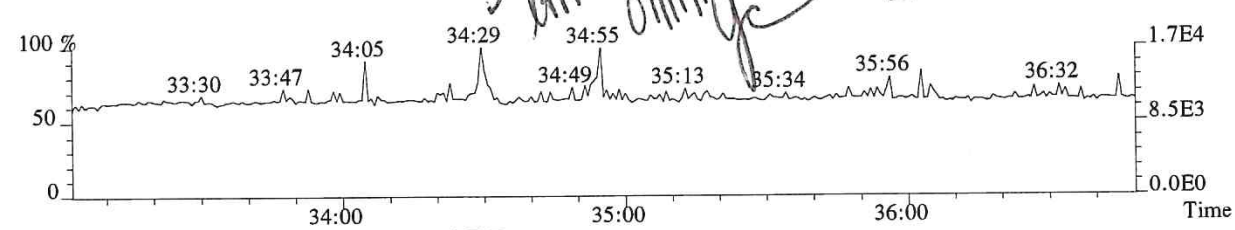
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2544.0,0.40%,F,T)



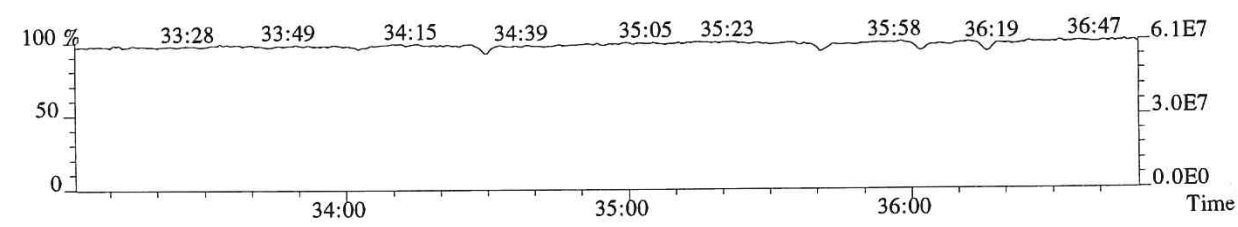
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1720.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

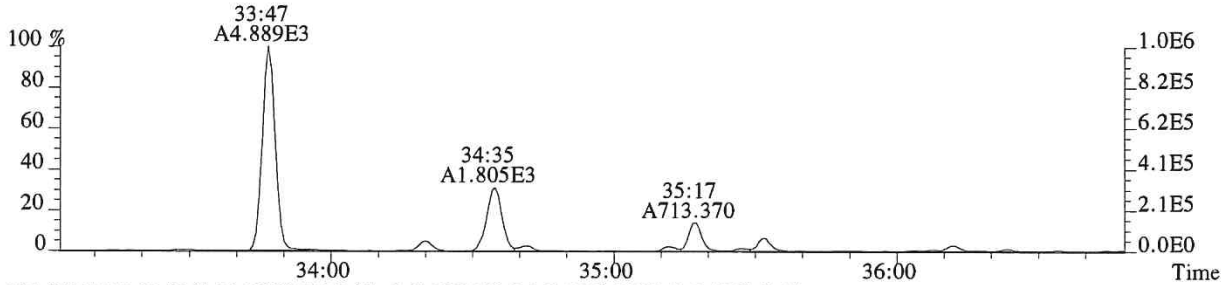


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

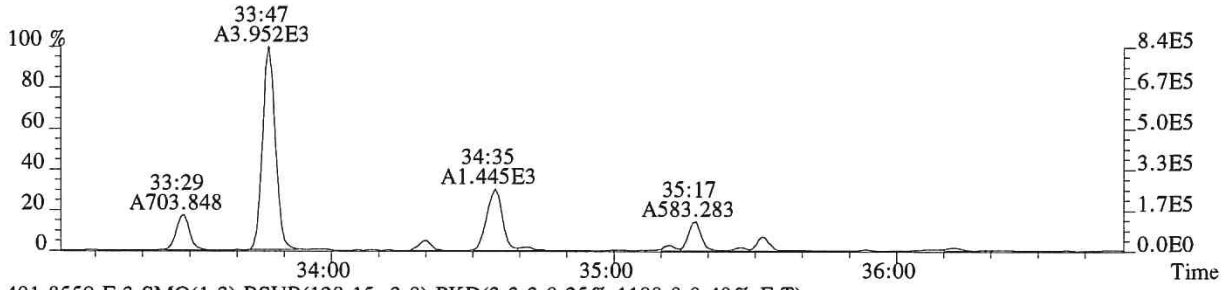


018655

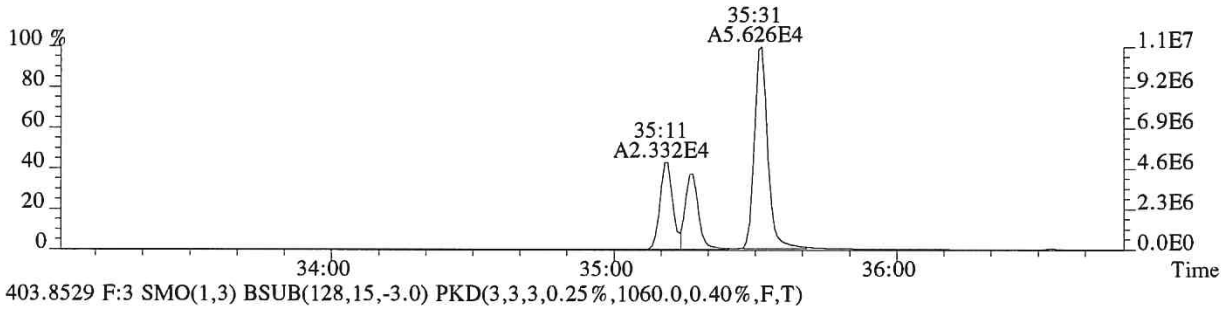
File:P519905 #1-339 Acq:11-JAN-2019 05:38:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-019
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1372.0,0.40%,F,T)



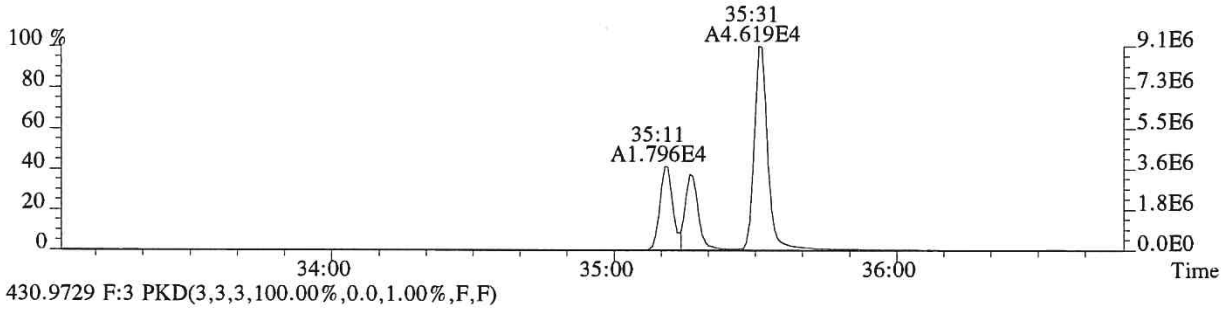
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3308.0,0.40%,F,T)



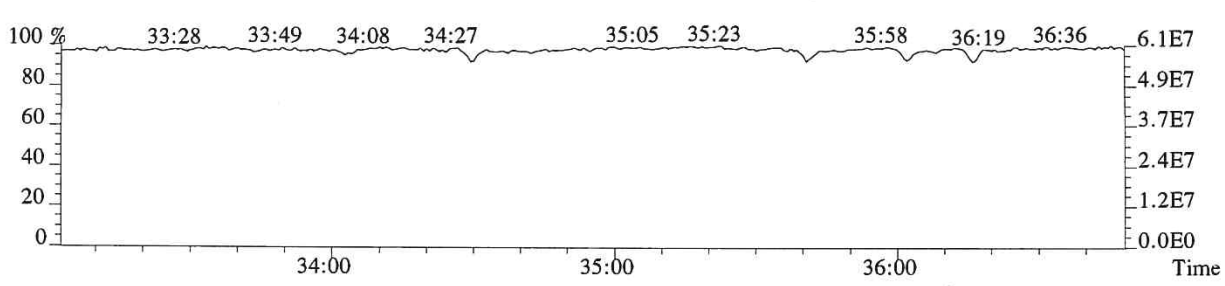
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1188.0,0.40%,F,T)



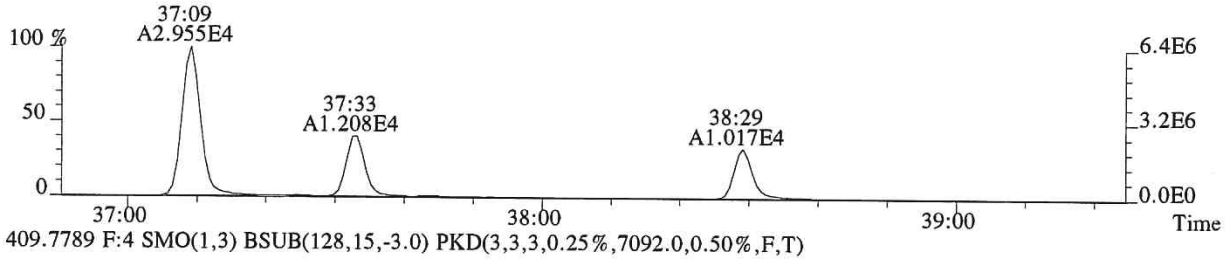
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1060.0,0.40%,F,T)



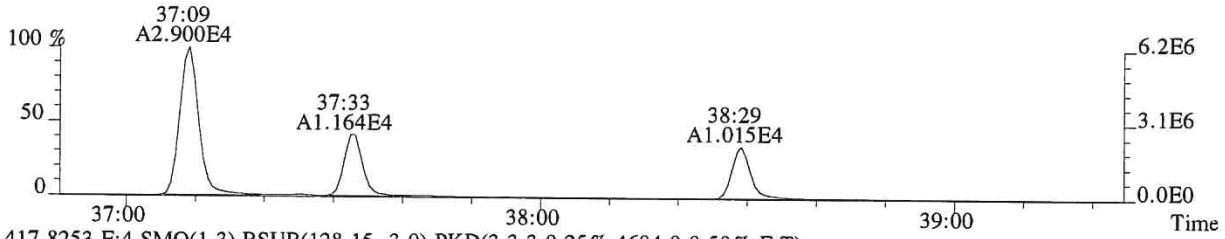
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



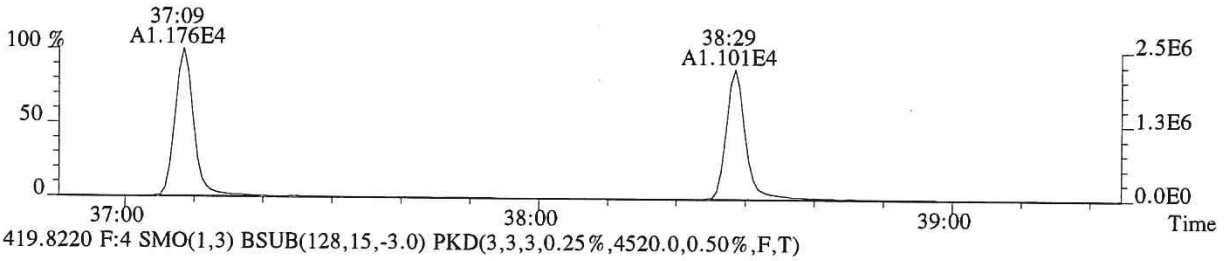
File:P519905 #1-232 Acq:11-JAN-2019 05:38:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-019
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3572.0,0.50%,F,T)



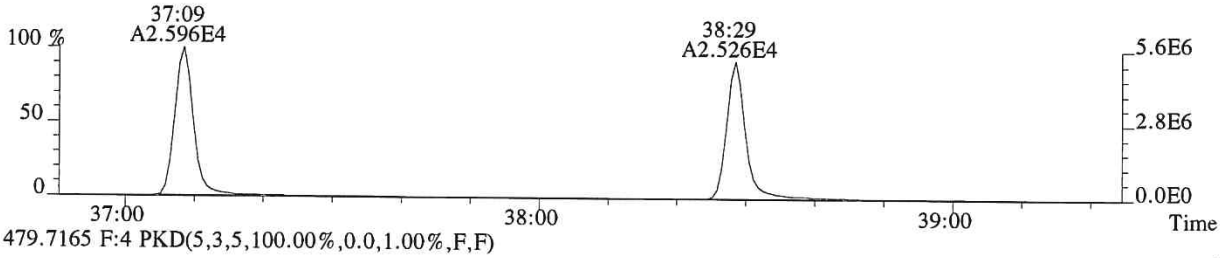
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7092.0,0.50%,F,T)



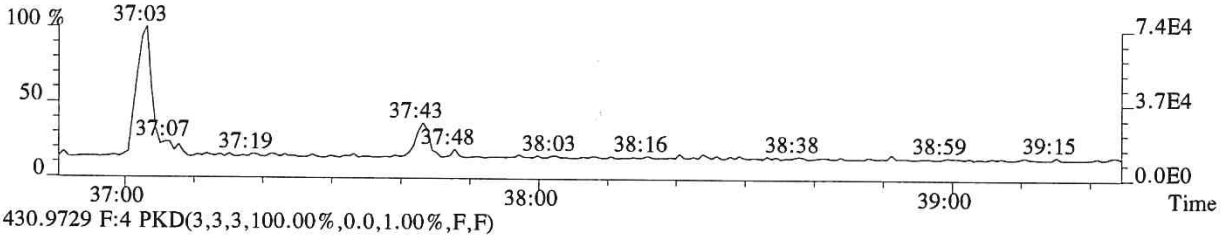
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4684.0,0.50%,F,T)



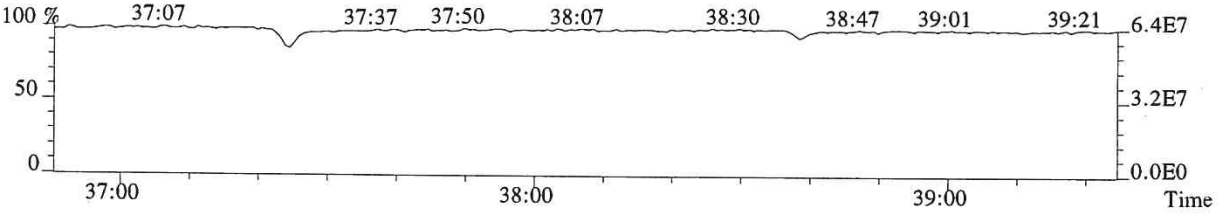
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4520.0,0.50%,F,T)



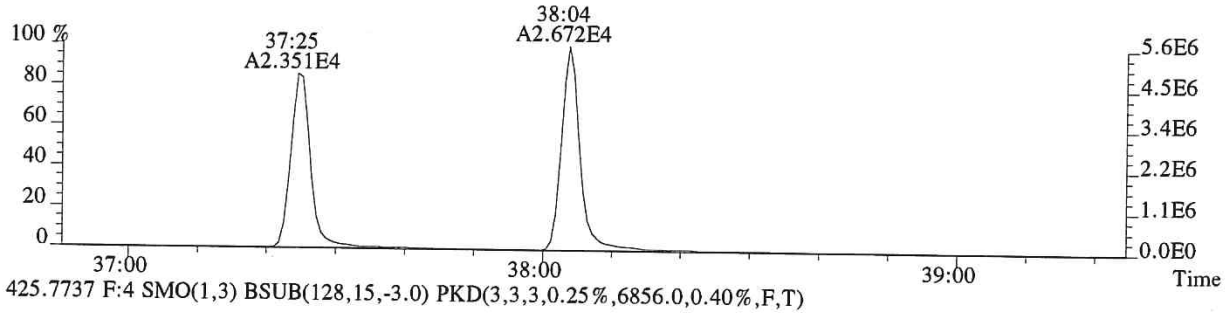
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



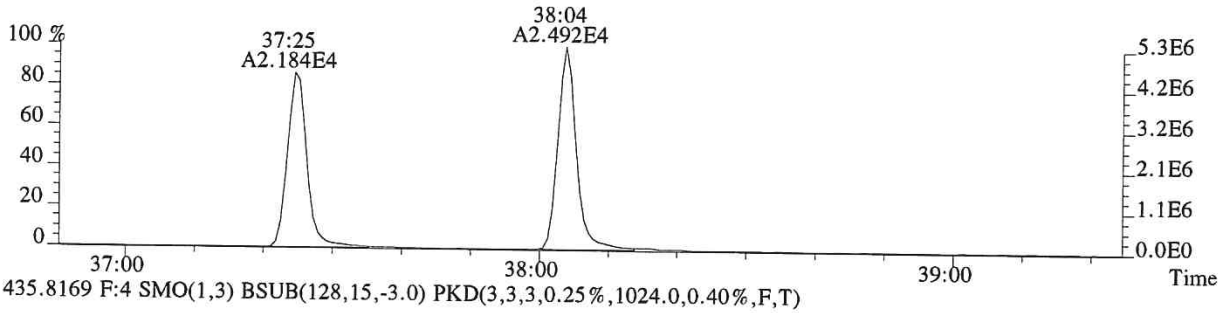
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



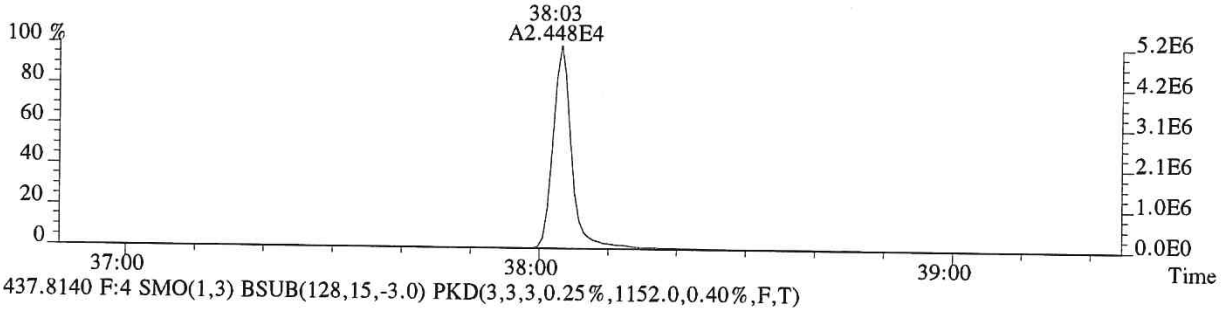
File:P519905 #1-232 Acq:11-JAN-2019 05:38:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-019
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3876.0,0.40%,F,T)



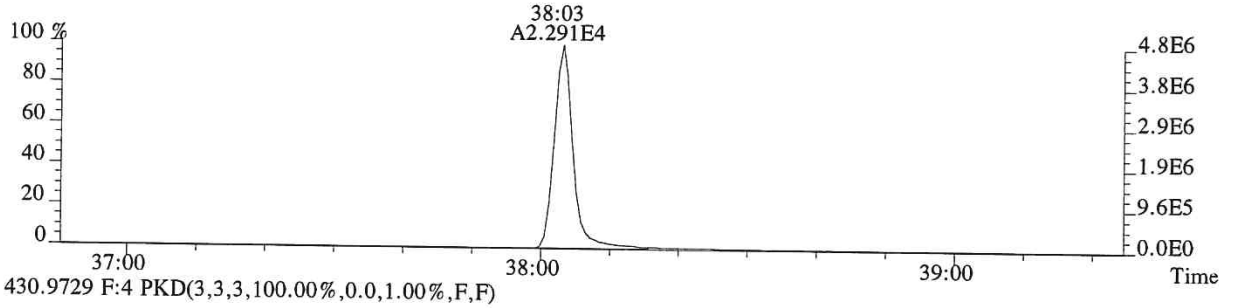
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6856.0,0.40%,F,T)



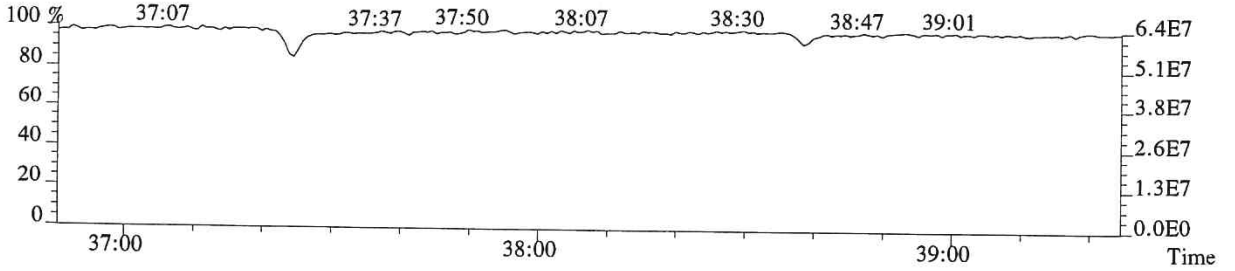
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1024.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1152.0,0.40%,F,T)

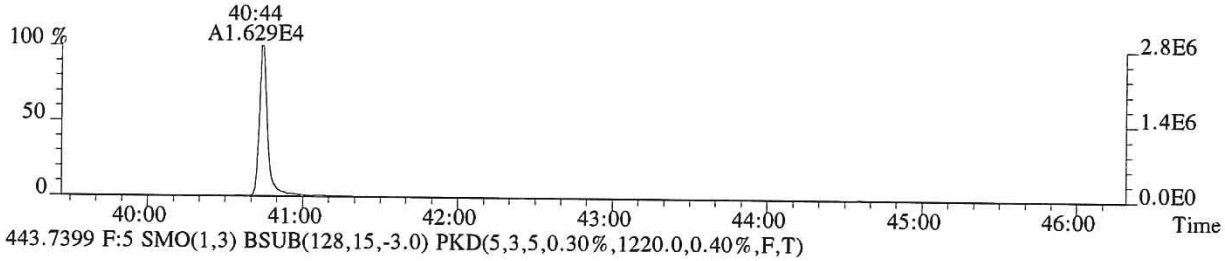


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

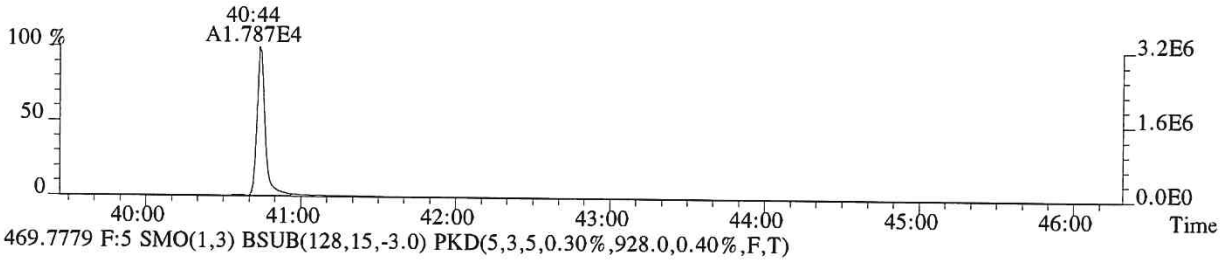


018658

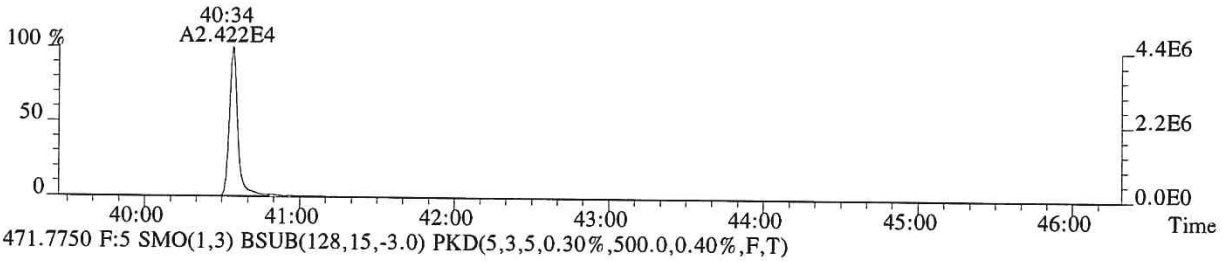
File:P519905 #1-619 Acq:11-JAN-2019 05:38:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-019
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,760.0,0.40%,F,T)



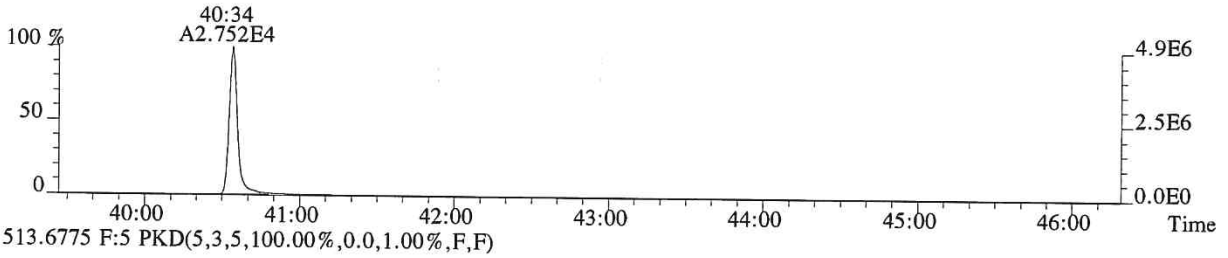
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1220.0,0.40%,F,T)



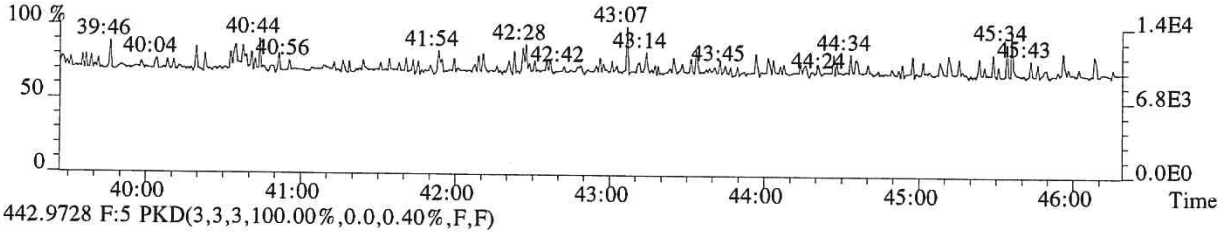
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,928.0,0.40%,F,T)



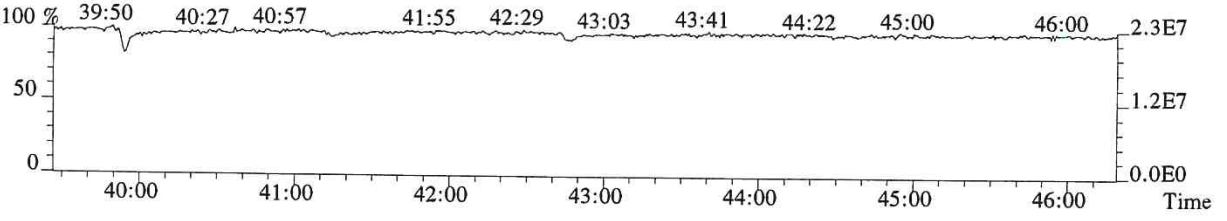
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,500.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

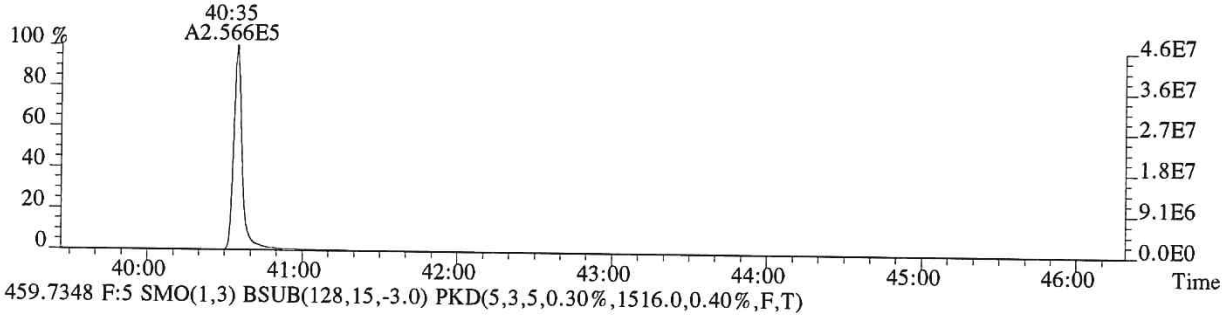


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

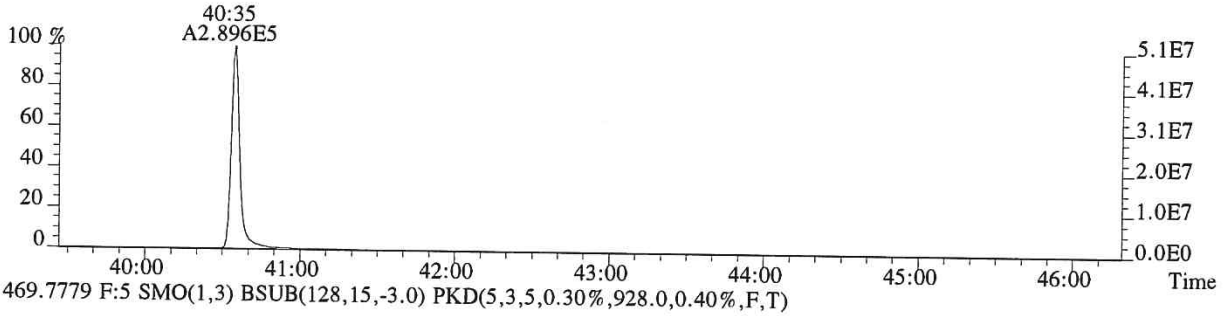


018659

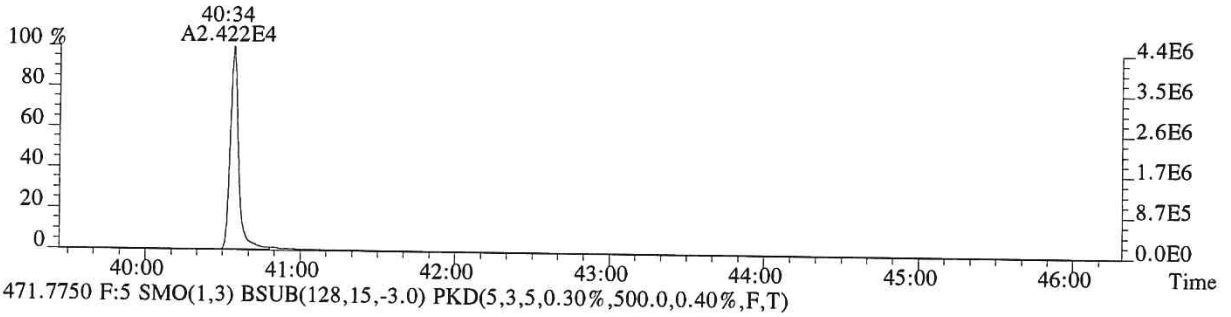
File:P519905 #1-619 Acq:11-JAN-2019 05:38:24 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-019
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1564.0,0.40%,F,T)



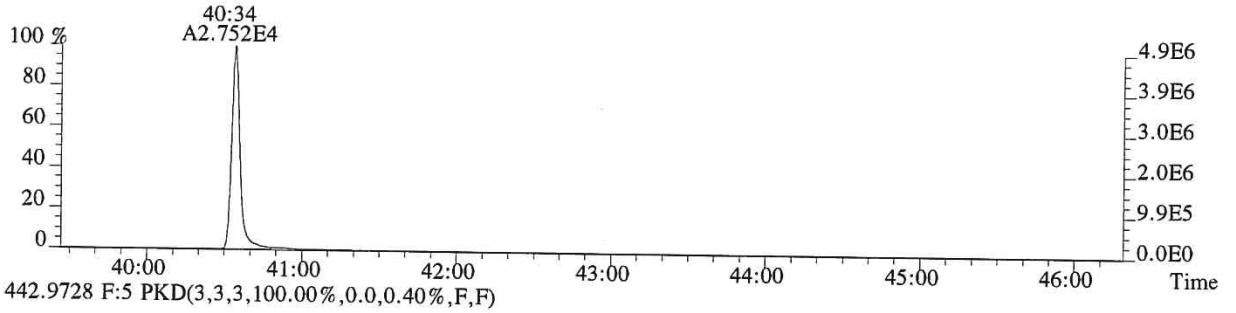
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1516.0,0.40%,F,T)



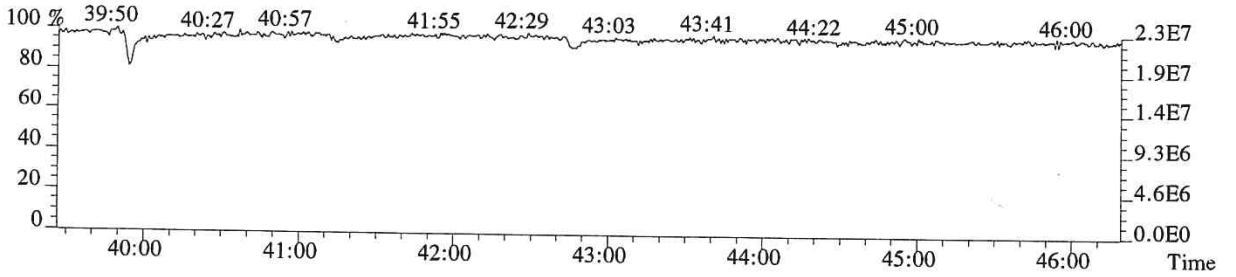
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,928.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,500.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018660

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
SL0230

Run #16 Filename P519924 Samp: 1 Inj: 1 Acquired: 11-JAN-19 21:22:51
Processed: 14-JAN-19 08:19:07 Sample ID: E1801139-019DL

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	6.182e+03	8.146e+03	0.76	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:27	3.749e+02	2.755e+02	1.36	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	2.631e+02	1.908e+02	1.38	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:22	6.279e+02	5.718e+02	1.10	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	1.811e+02	1.485e+02	1.22	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:02	4.311e+01	1.217e+01	3.54	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:51	4.061e+01	3.829e+01	1.06	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	1.403e+02	1.681e+02	0.83	no	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:28	6.220e+01	6.081e+01	1.02	yes	no	1.258
10	Unk	OCDF	40:44	8.061e+01	1.045e+02	0.77	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:23	1.759e+03	2.151e+03	0.82	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:47	1.738e+01	2.812e+01	0.62	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:16	9.638e+00	6.273e+00	1.54	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:31	7.534e+00	1.801e+00	4.18	no	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	1.559e+02	1.407e+02	1.11	yes	no	1.025
17	Unk	OCDD	40:34	1.327e+03	1.467e+03	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:20	2.604e+04	3.277e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:26	3.875e+04	2.413e+04	1.61	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:27	3.697e+04	2.331e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:22	1.581e+04	3.081e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.829e+04	3.519e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	1.710e+04	3.319e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	1.544e+04	2.960e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	1.314e+04	2.964e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:28	1.122e+04	2.635e+04	0.43	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:22	1.218e+04	1.535e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:47	2.811e+04	1.759e+04	1.60	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:10	2.300e+04	1.842e+04	1.25	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:16	2.373e+04	1.842e+04	1.29	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:02	2.725e+04	2.568e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	40:33	3.062e+04	3.440e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:39	1.844e+04	2.353e+04	0.78	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:30	2.615e+04	2.076e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:23	1.244e+02				no	1.014

$$\text{OCDD} = \frac{(1.327e+03 + 1.467e+03) \times 4000\ \text{pg} \times 100}{(3.062e+04 + 3.440e+04) \times 10.242\ \text{g} \times 80.4 / 100 \times 1.118 \times 0.43} = 4341\ \text{ng/kg}$$

LM 01/14/19

ALS ENVIRONMENTAL -- HOUSTON HRMS
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0230

Run #16 Filename P519924 Samp: 1 Inj: 1 Acquired: 11-JAN-19 21:22:51
Processed: 14-JAN-19 08:19:07 LAB. ID: E1801139-019DL

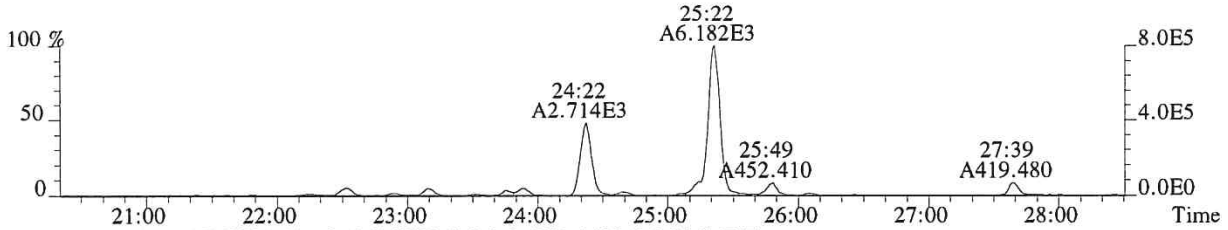
	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.01e+05	1.19e+03	6.7e+02	1.03e+06	1.43e+03	7.2e+02
2	1,2,3,7,8-PeCDF	6.22e+04	5.08e+02	1.2e+02	4.60e+04	1.64e+03	2.8e+01
3	2,3,4,7,8-PeCDF	3.89e+04	5.08e+02	7.7e+01	2.56e+04	1.64e+03	1.6e+01
4	1,2,3,4,7,8-HxCDF	1.29e+05	8.00e+02	1.6e+02	1.08e+05	7.04e+02	1.5e+02
5	1,2,3,6,7,8-HxCDF	3.43e+04	8.00e+02	4.3e+01	3.03e+04	7.04e+02	4.3e+01
6	2,3,4,6,7,8-HxCDF	8.49e+03	8.00e+02	1.1e+01	2.85e+03	7.04e+02	4.0e+00
7	1,2,3,7,8,9-HxCDF	6.99e+03	8.00e+02	8.7e+00	6.75e+03	7.04e+02	9.6e+00
8	1,2,3,4,6,7,8-HpCDF	2.71e+04	3.08e+02	8.8e+01	3.10e+04	3.64e+02	8.5e+01
9	1,2,3,4,7,8,9-HpCDF	1.28e+04	3.08e+02	4.1e+01	1.34e+04	3.64e+02	3.7e+01
10	OCDF	1.27e+04	8.00e+02	1.6e+01	1.87e+04	1.39e+03	1.3e+01
11	2,3,7,8-TCDD	2.55e+05	1.98e+03	1.3e+02	3.24e+05	1.21e+03	2.7e+02
12	1,2,3,7,8-PeCDD	4.04e+03	1.07e+03	3.8e+00	5.07e+03	4.36e+02	1.2e+01
13	1,2,3,4,7,8-HxCDD	*	7.24e+02	*	*	6.72e+02	*
14	1,2,3,6,7,8-HxCDD	3.05e+03	7.24e+02	4.2e+00	1.76e+03	6.72e+02	2.6e+00
15	1,2,3,7,8,9-HxCDD	1.78e+03	7.24e+02	2.5e+00	6.52e+02	6.72e+02	9.7e-01
16	1,2,3,4,6,7,8-HpCDD	3.01e+04	3.44e+02	8.7e+01	2.67e+04	6.84e+02	3.9e+01
17	OCDD	2.11e+05	3.44e+02	6.1e+02	2.58e+05	4.20e+02	6.1e+02
18	13C-2,3,7,8-TCDF	3.59e+06	4.20e+03	8.5e+02	4.49e+06	3.37e+03	1.3e+03
19	13C-1,2,3,7,8-PeCDF	6.41e+06	7.88e+02	8.1e+03	4.04e+06	8.52e+02	4.7e+03
20	13C-2,3,4,7,8-PeCDF	6.60e+06	7.88e+02	8.4e+03	4.13e+06	8.52e+02	4.8e+03
21	13C-1,2,3,4,7,8-HxCDF	3.21e+06	9.08e+02	3.5e+03	6.30e+06	9.36e+02	6.7e+03
22	13C-1,2,3,6,7,8-HxCDF	3.44e+06	9.08e+02	3.8e+03	6.62e+06	9.36e+02	7.1e+03
23	13C-2,3,4,6,7,8-HxCDF	3.41e+06	9.08e+02	3.8e+03	6.65e+06	9.36e+02	7.1e+03
24	13C-1,2,3,7,8,9-HxCDF	2.86e+06	9.08e+02	3.2e+03	5.58e+06	9.36e+02	6.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.56e+06	1.40e+03	1.8e+03	5.81e+06	3.84e+03	1.5e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.15e+06	1.40e+03	1.5e+03	4.87e+06	3.84e+03	1.3e+03
27	13C-2,3,7,8-TCDD	1.89e+06	7.01e+03	2.7e+02	2.29e+06	3.31e+03	6.9e+02
28	13C-1,2,3,7,8-PeCDD	4.96e+06	1.23e+03	4.0e+03	3.12e+06	1.50e+03	2.1e+03
29	13C-1,2,3,4,7,8-HxCDD	4.95e+06	9.80e+02	5.1e+03	3.89e+06	8.56e+02	4.5e+03
30	13C-1,2,3,6,7,8-HxCDD	4.58e+06	9.80e+02	4.7e+03	3.57e+06	8.56e+02	4.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	5.20e+06	5.84e+02	8.9e+03	4.95e+06	4.96e+02	1.0e+04
32	13C-OCDD	4.85e+06	4.96e+02	9.8e+03	5.50e+06	5.12e+02	1.1e+04
33	13C-1,2,3,4-TCDD	2.73e+06	7.01e+03	3.9e+02	3.38e+06	3.31e+03	1.0e+03
34	13C-1,2,3,7,8,9-HxCDD	5.04e+06	9.80e+02	5.1e+03	3.99e+06	8.56e+02	4.7e+03
35	37Cl-2,3,7,8-TCDD	1.92e+04	2.09e+03	9.2e+00			

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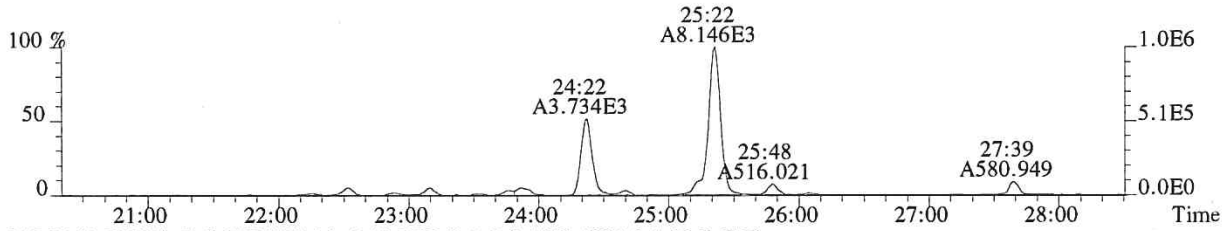
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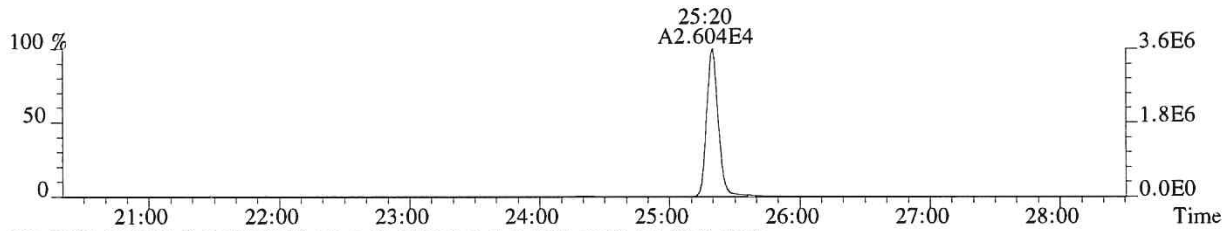
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Sample#1 Exp:E18001139-019DL E1801139-019DL
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1188.0,1.00%,F,T)



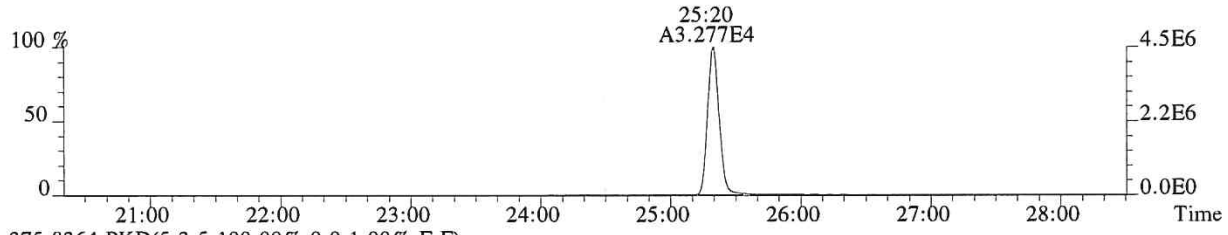
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1428.0,1.00%,F,T)



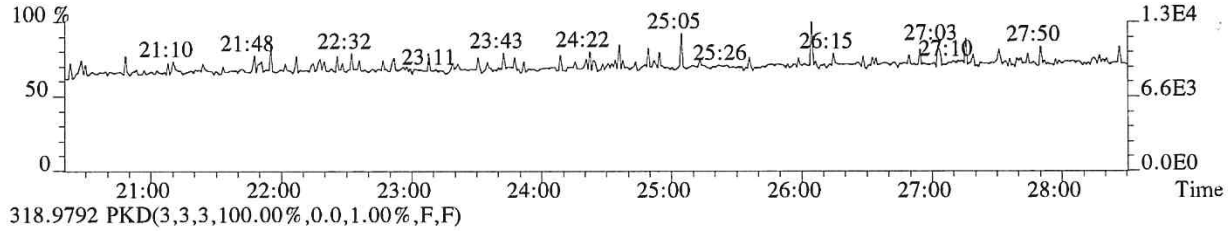
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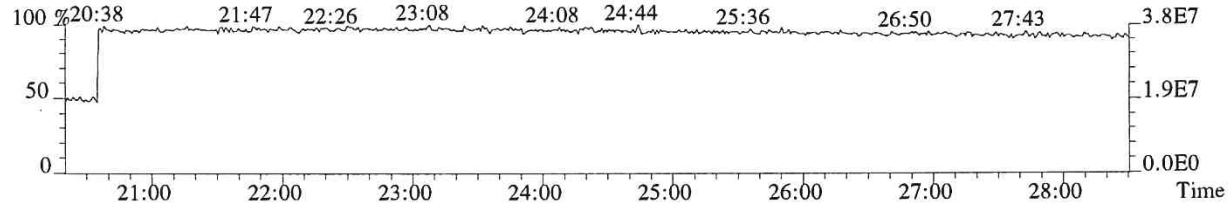
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3368.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

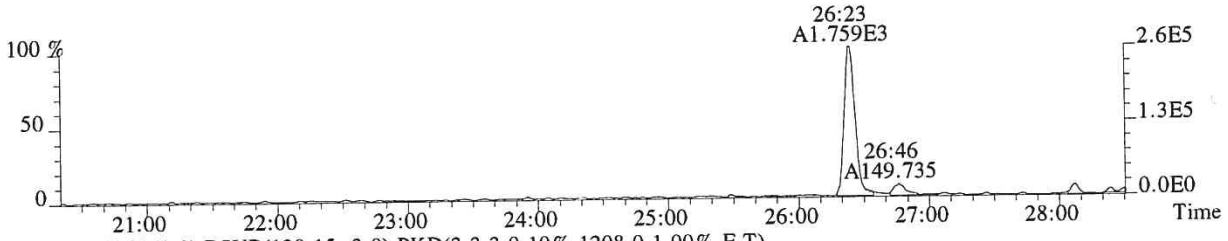


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

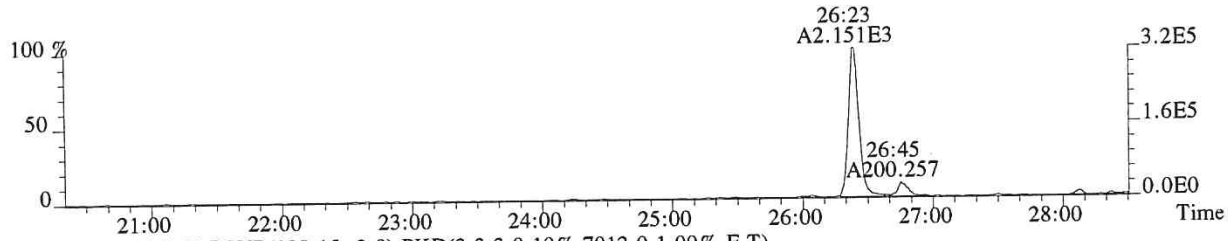


018663

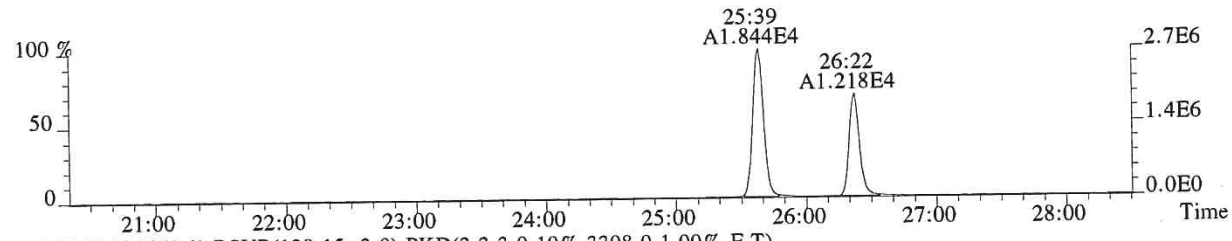
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319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1980.0,1.00%,F,T)



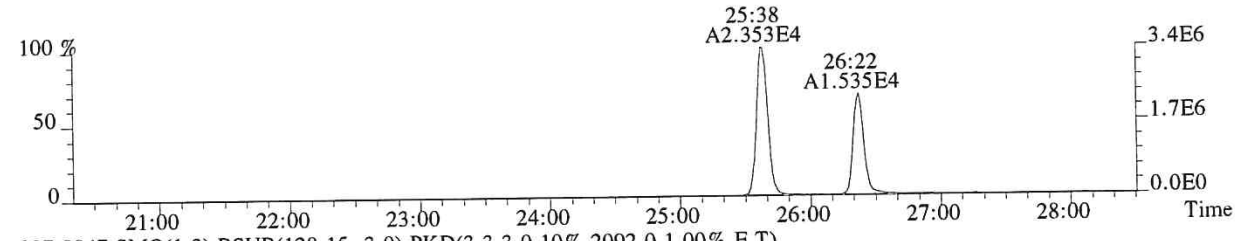
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1208.0,1.00%,F,T)



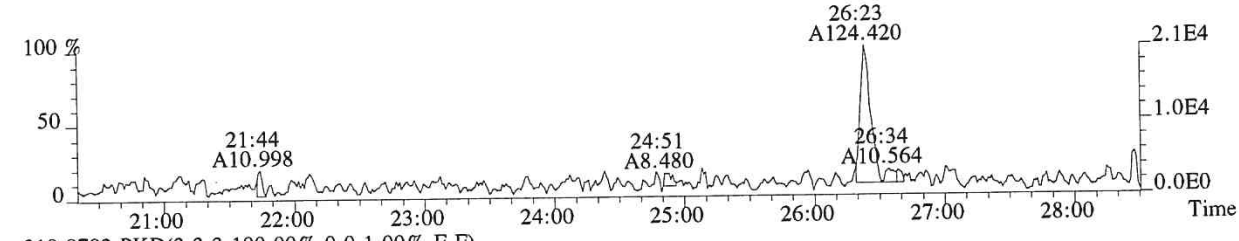
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7012.0,1.00%,F,T)



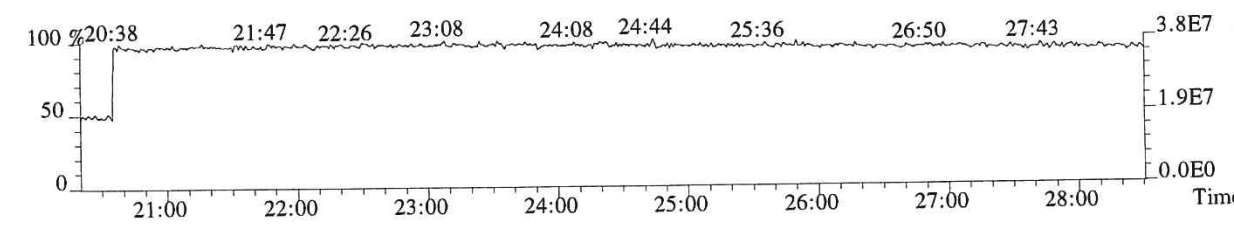
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3308.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2092.0,1.00%,F,T)

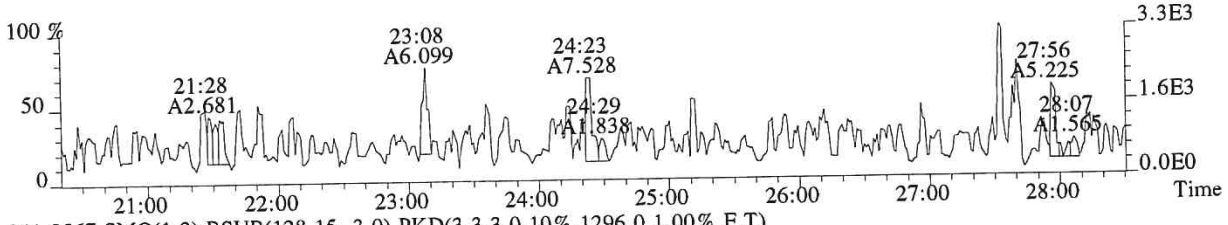


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

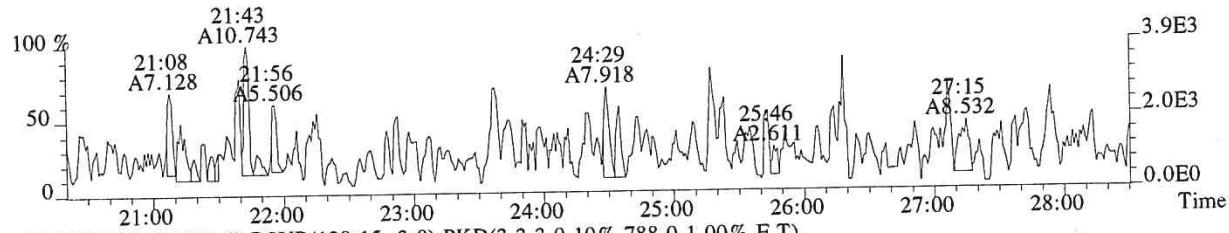


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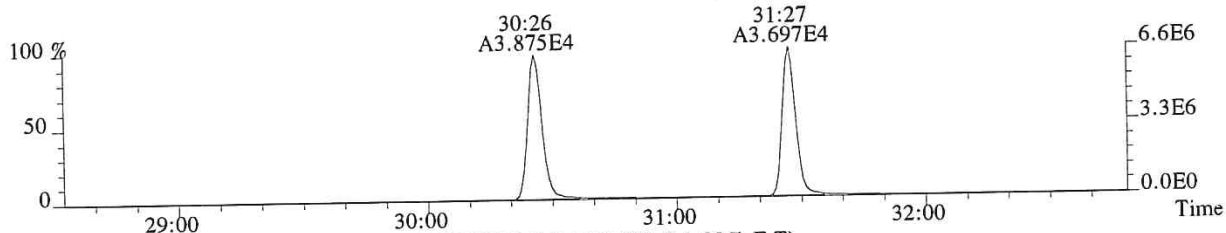
File:P519924 #1-580 Acq:11-JAN-2019 21:22:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-019DL
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,972.0,1.00%,F,T)



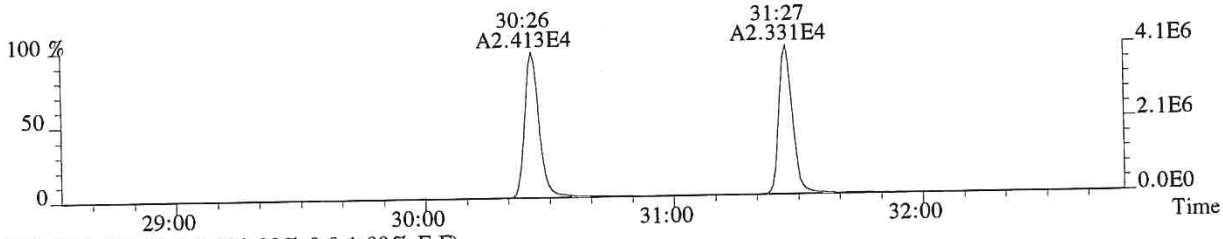
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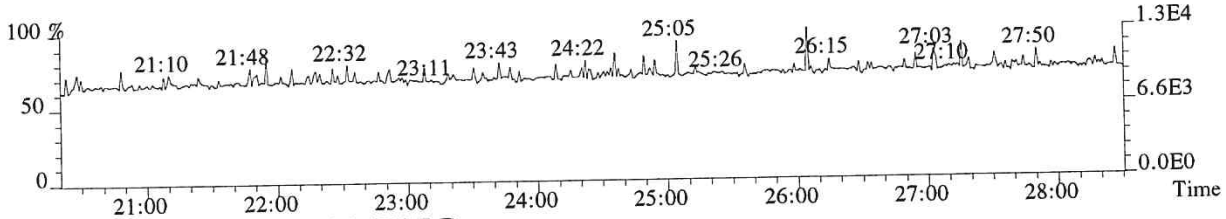
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,788.0,1.00%,F,T)



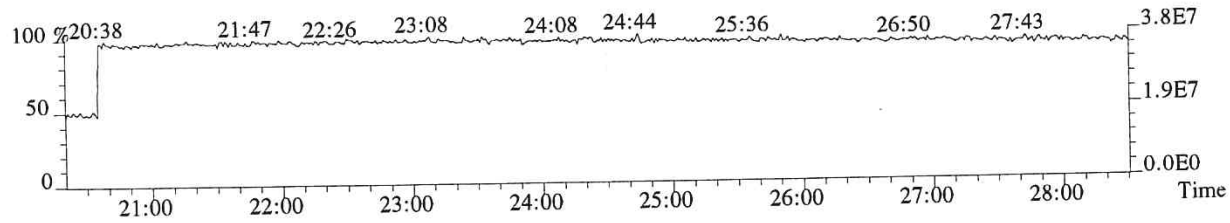
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,852.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

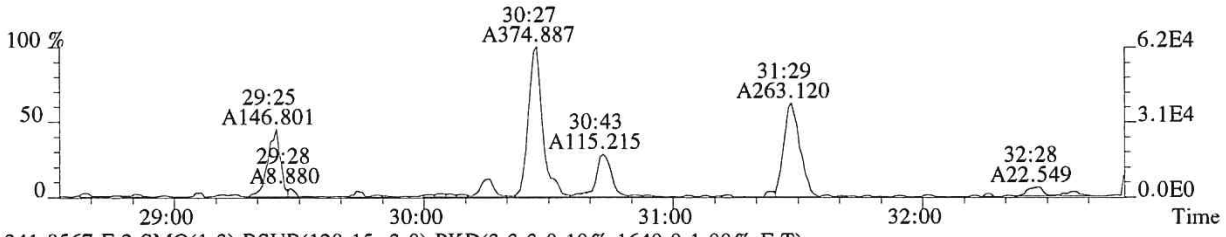


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

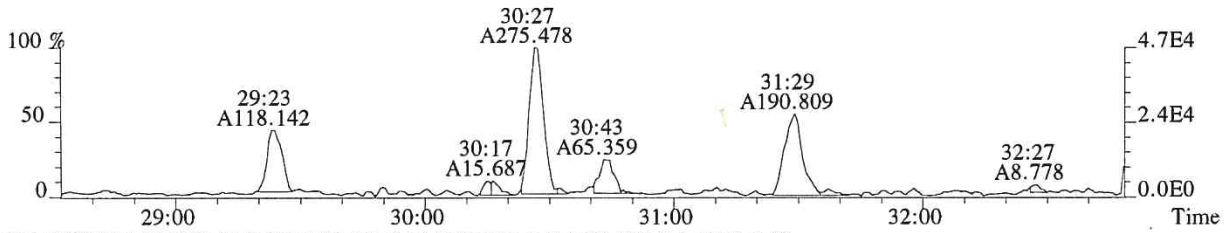


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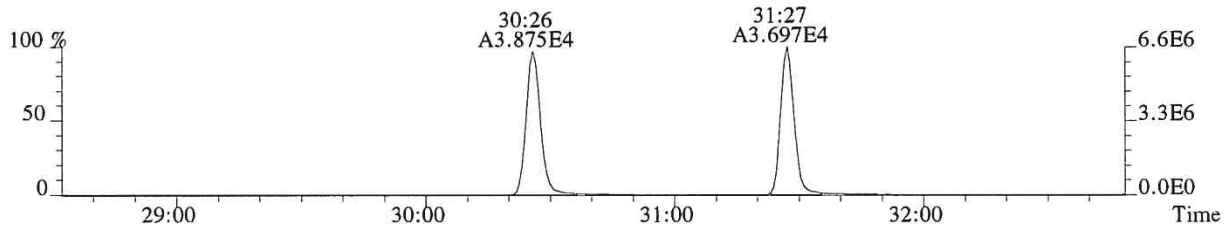
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Sample#1 Exp:E18001139-019DL
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,508.0,1.00%,F,T)



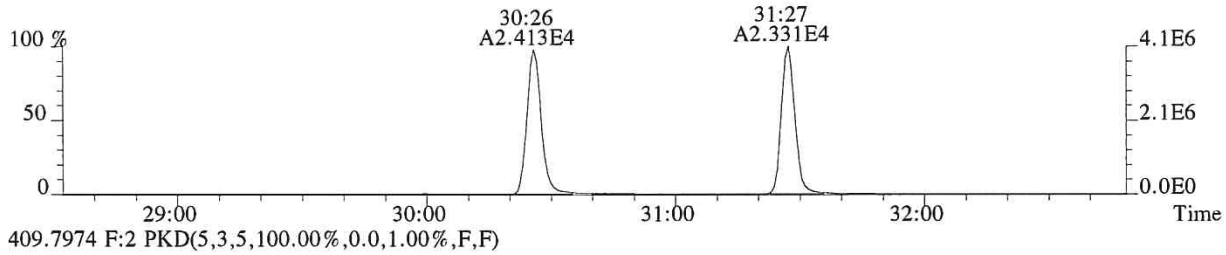
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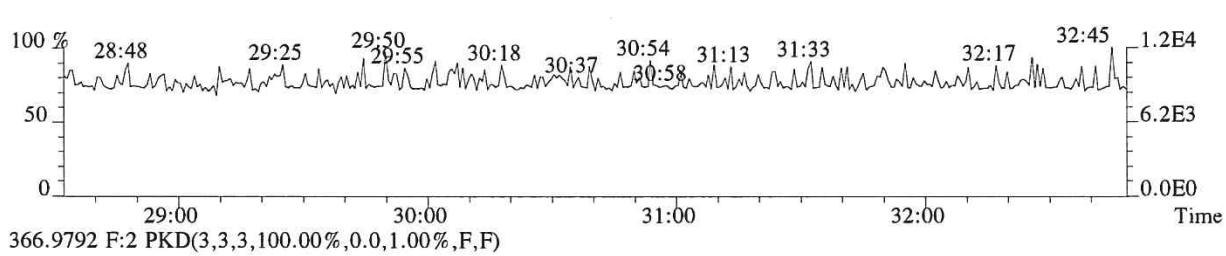
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,788.0,1.00%,F,T)



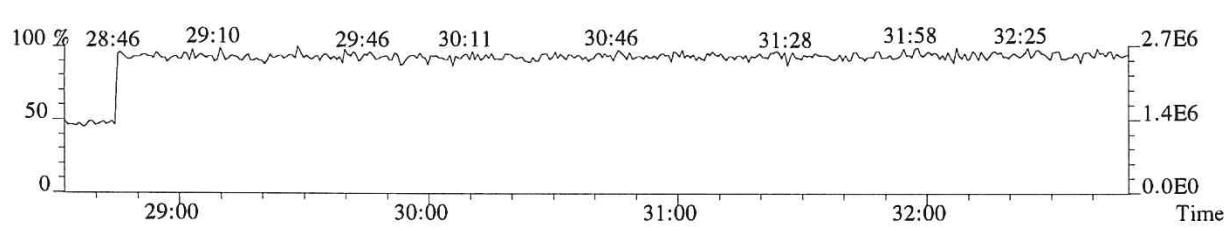
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,852.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

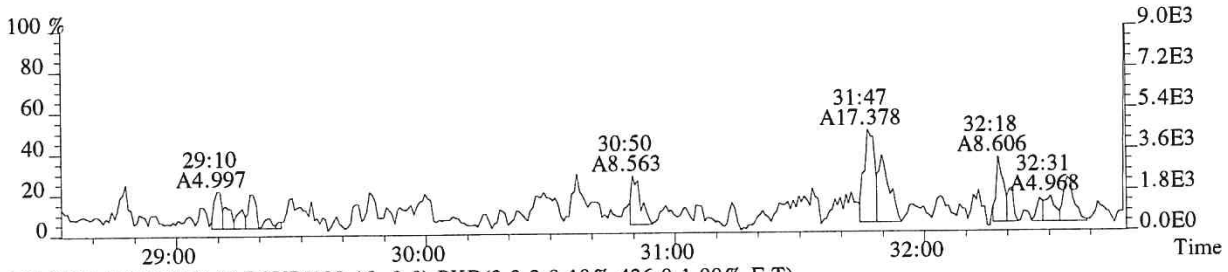


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

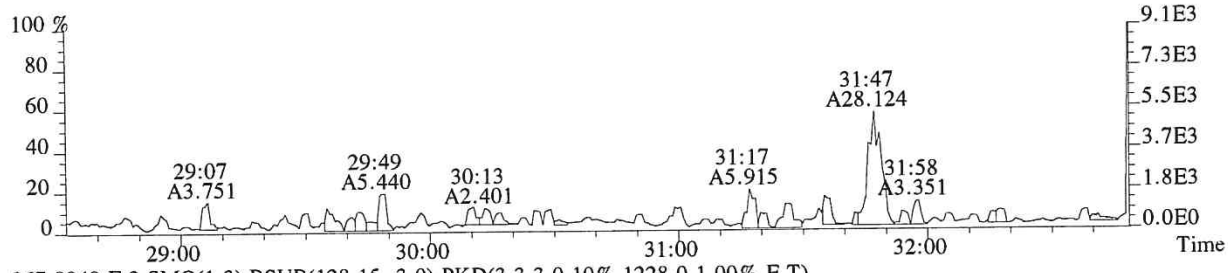


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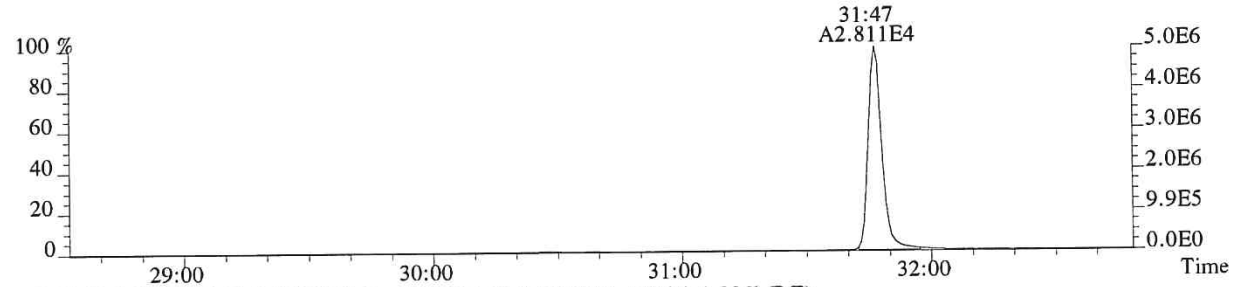
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Sample#1 Exp:E18001139-019DL
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1068.0,1.00%,F,T)



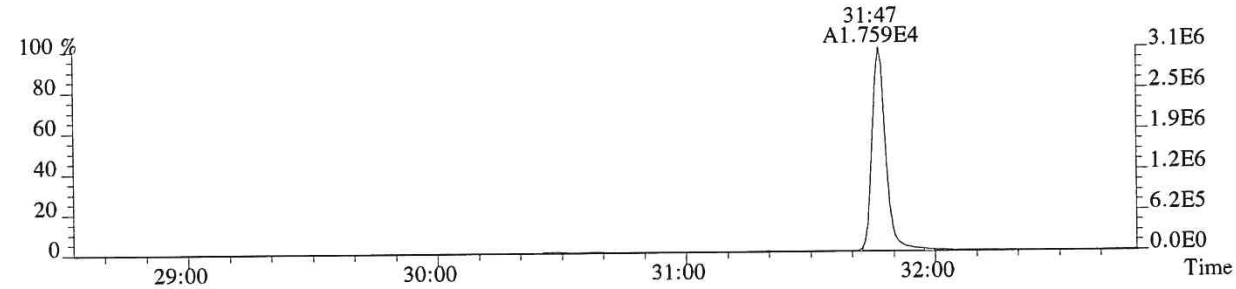
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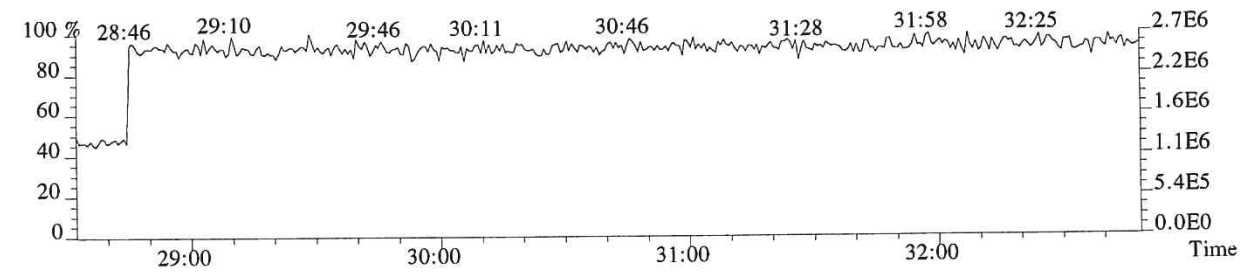
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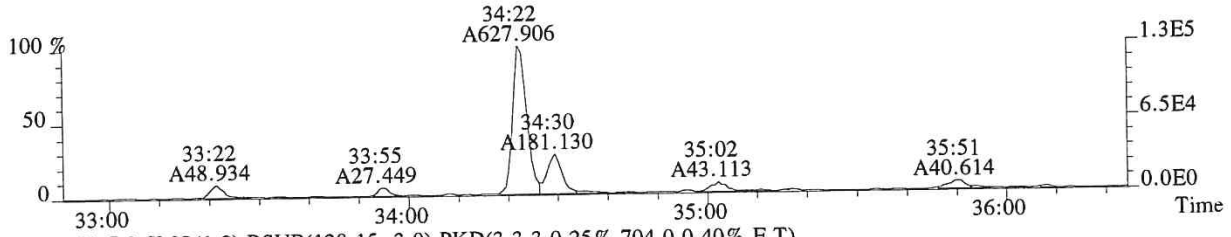
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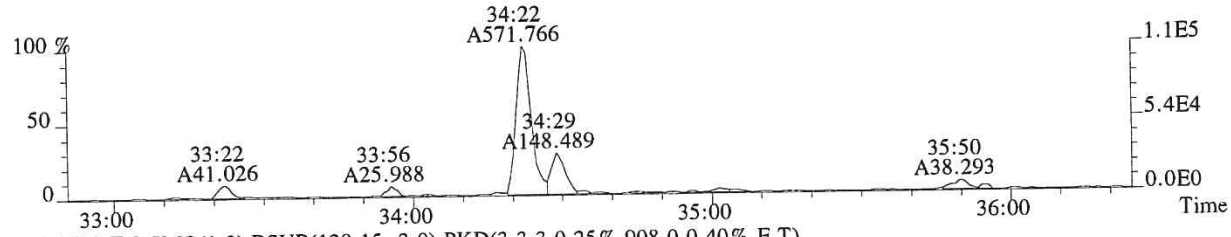
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



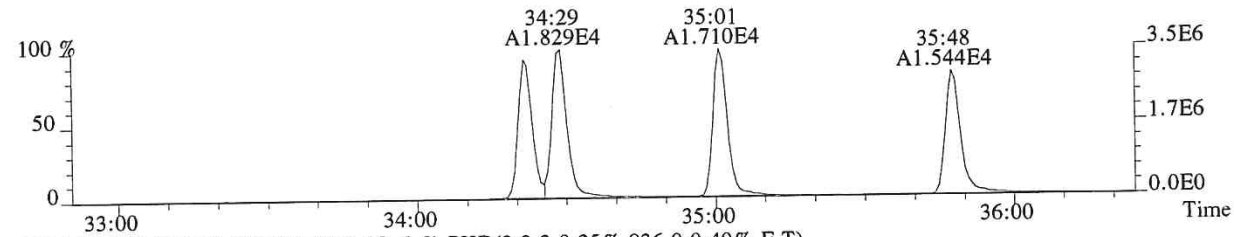
File:P519924 #1-321 Acq:11-JAN-2019 21:22:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-019DL
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,800.0,0.40%,F,T)



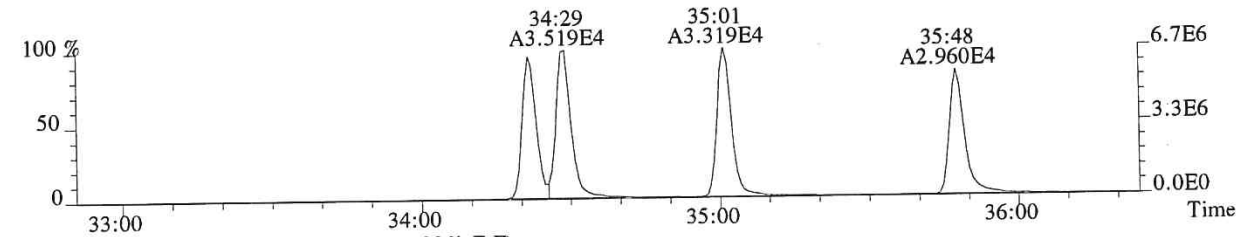
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,704.0,0.40%,F,T)



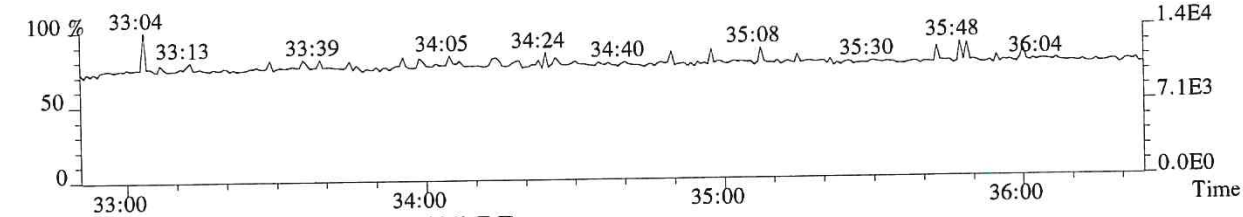
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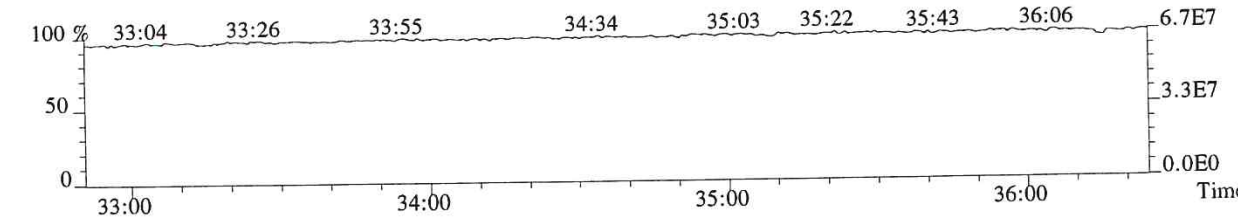
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,936.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

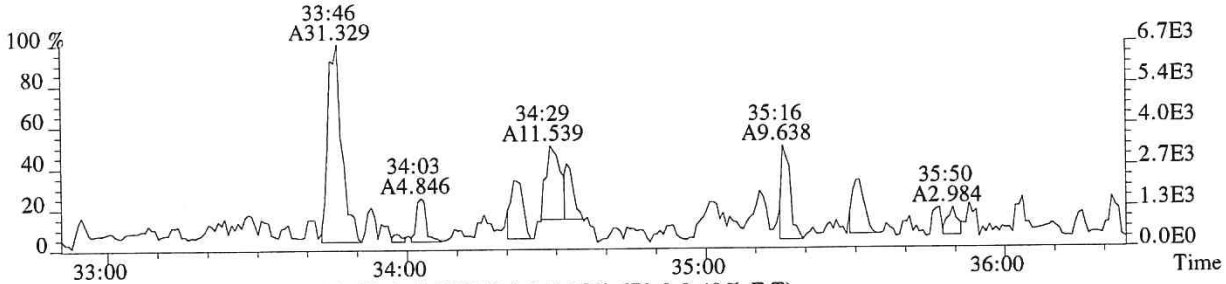


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

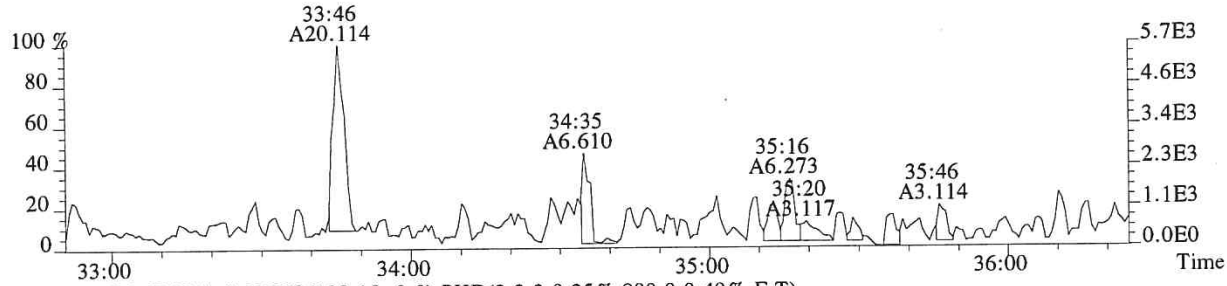


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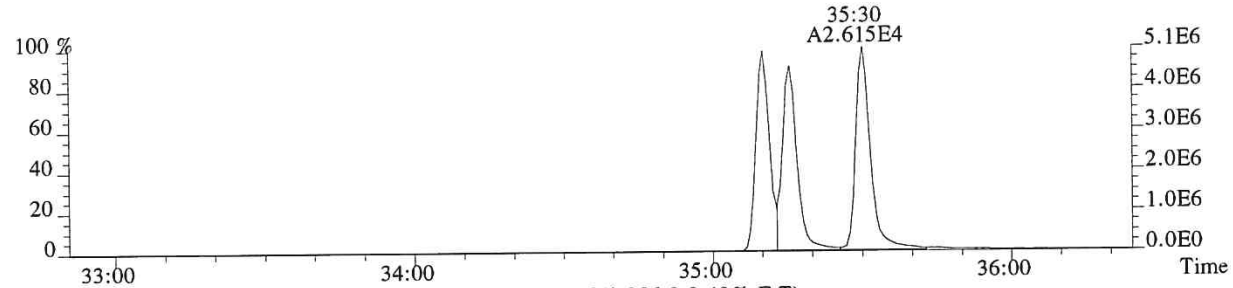
File:P519924 #1-321 Acq:11-JAN-2019 21:22:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-019DL
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,724.0,0.40%,F,T)



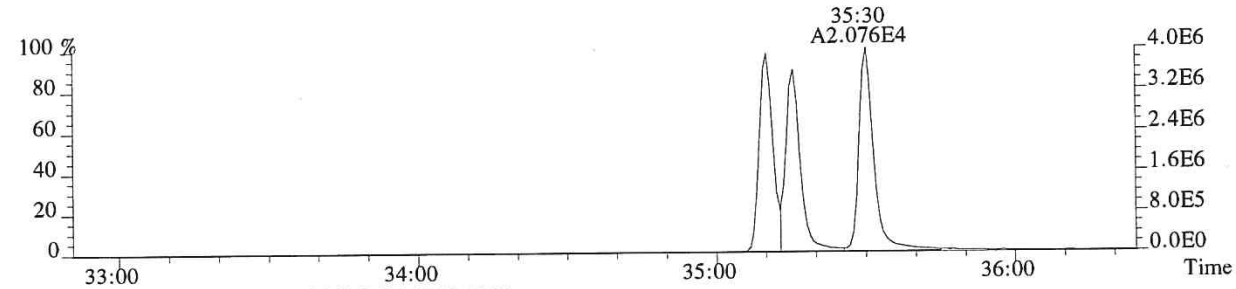
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,672.0,0.40%,F,T)



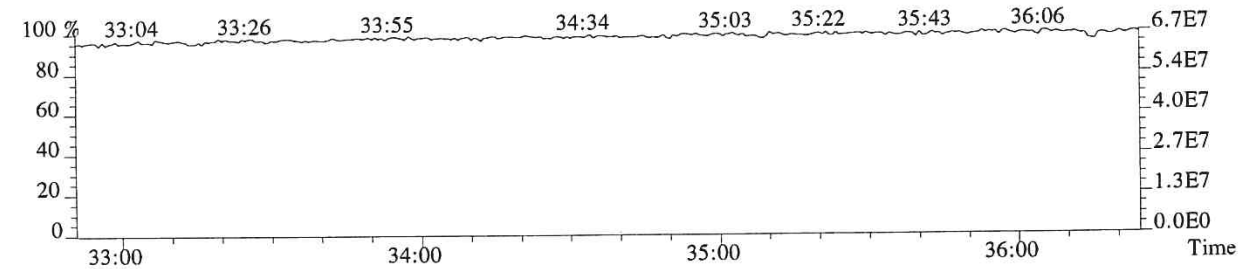
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,980.0,0.40%,F,T)



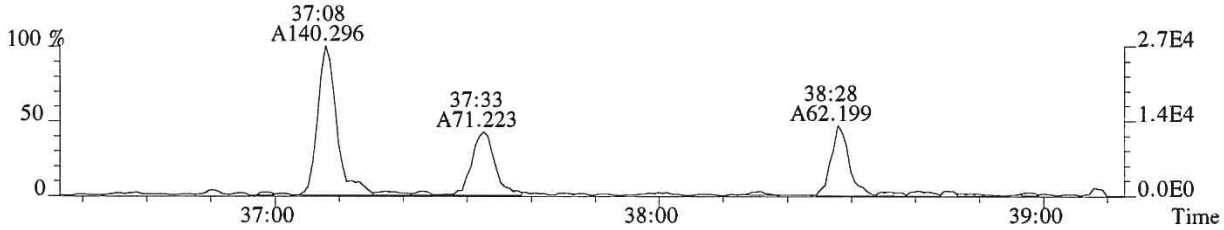
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,856.0,0.40%,F,T)



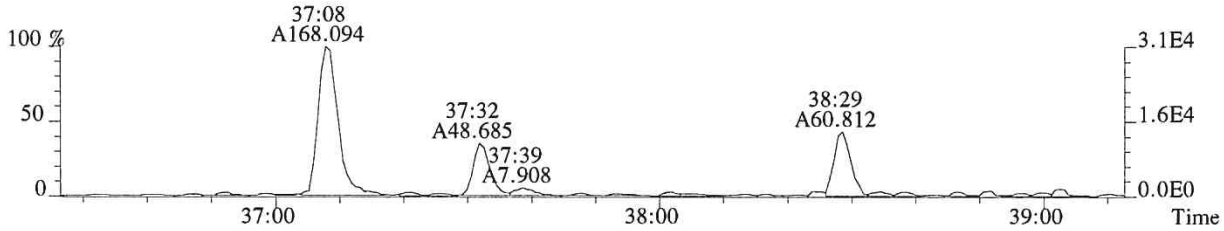
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



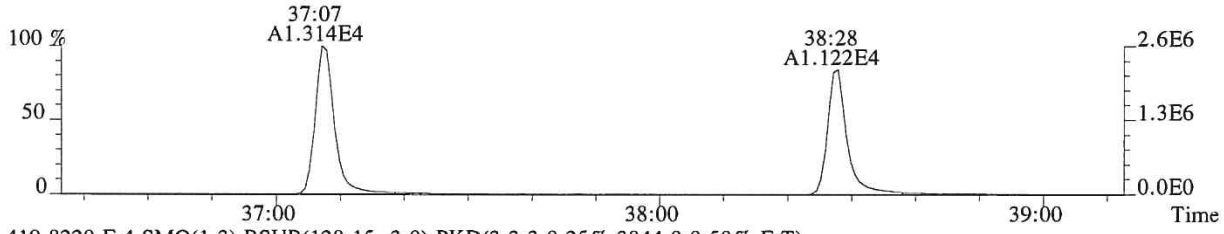
File:P519924 #1-250 Acq:11-JAN-2019 21:22:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-019DL
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,308.0,0.50%,F,T)



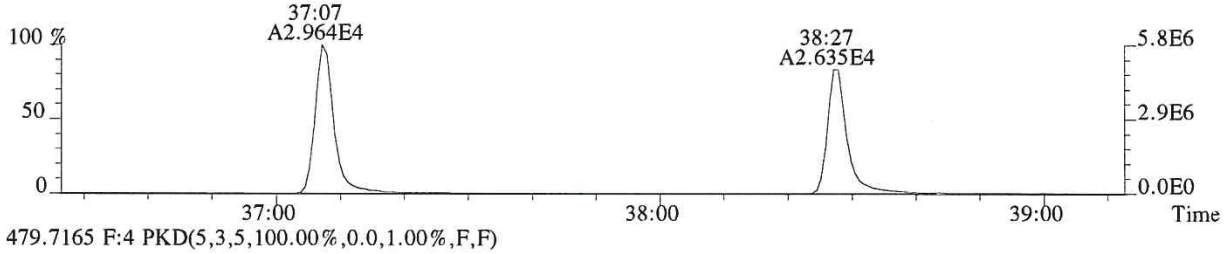
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,364.0,0.50%,F,T)



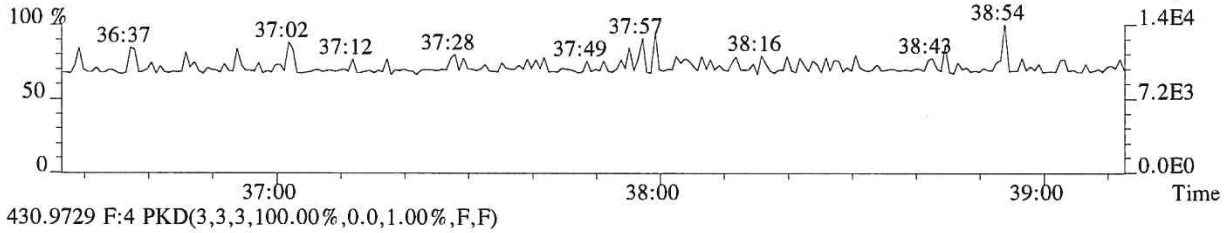
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1404.0,0.50%,F,T)



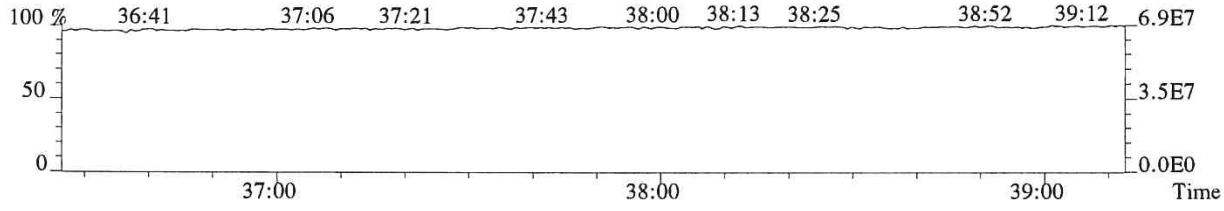
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3844.0,0.50%,F,T)



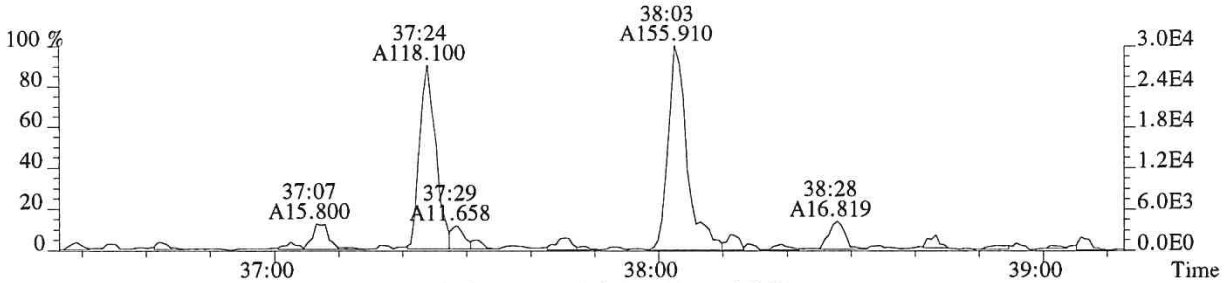
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



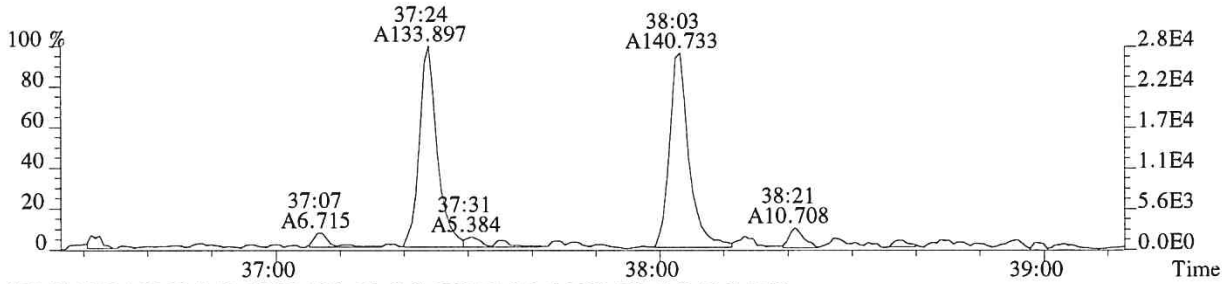
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



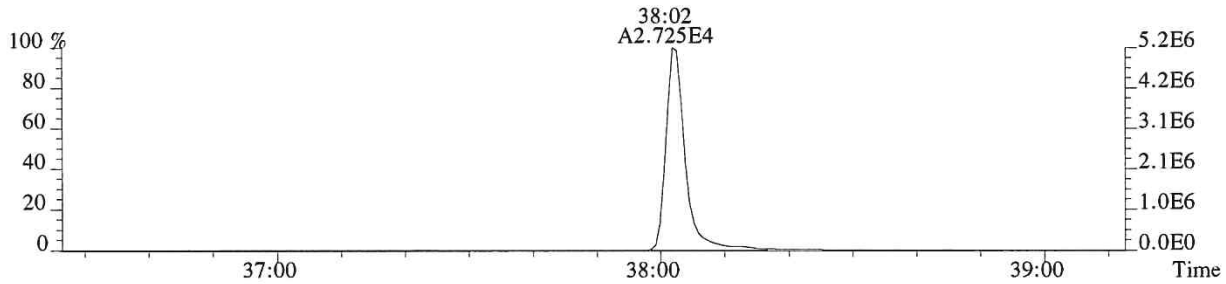
File:P519924 #1-250 Acq:11-JAN-2019 21:22:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-019DL
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,344.0,0.40%,F,T)



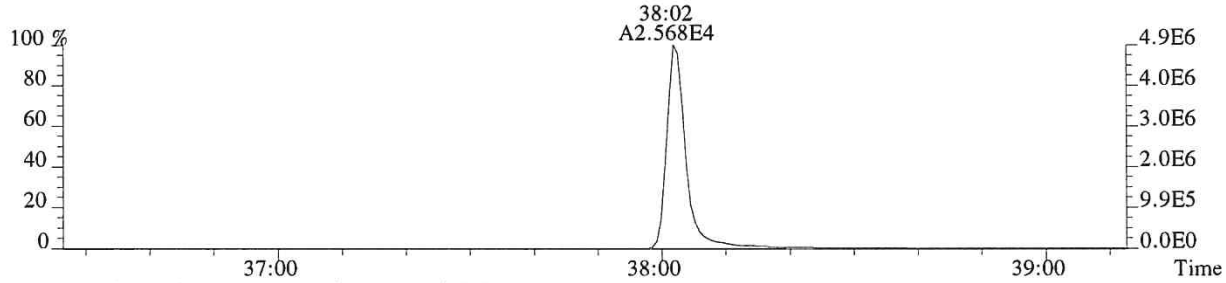
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,684.0,0.40%,F,T)



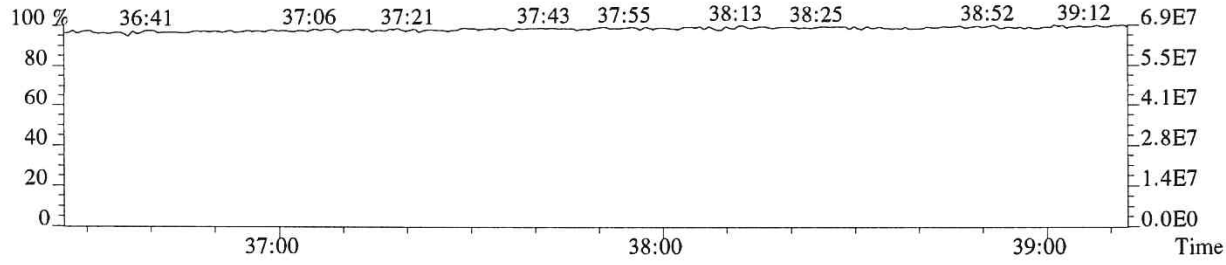
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,584.0,0.40%,F,T)



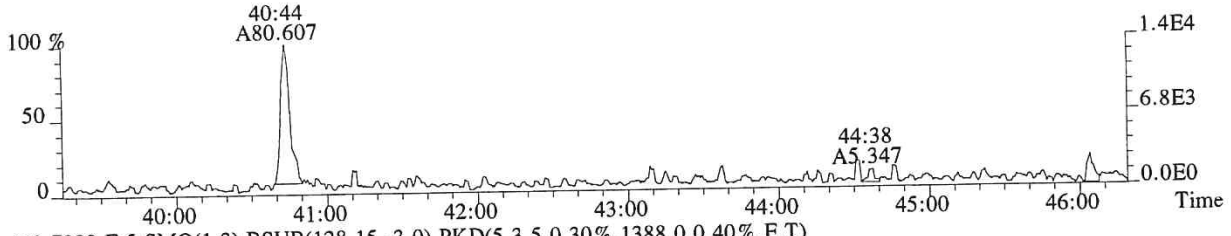
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,496.0,0.40%,F,T)



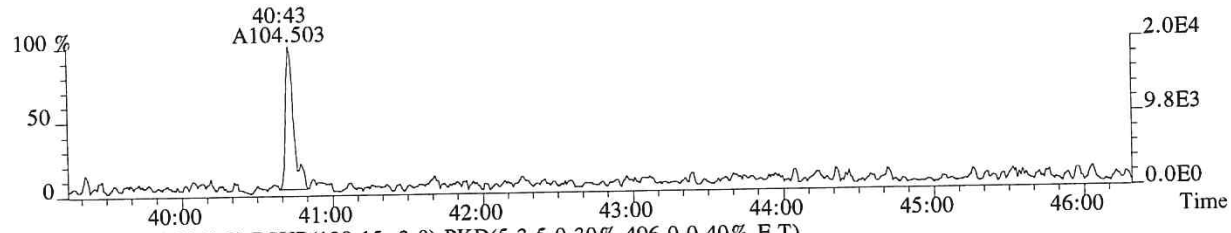
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



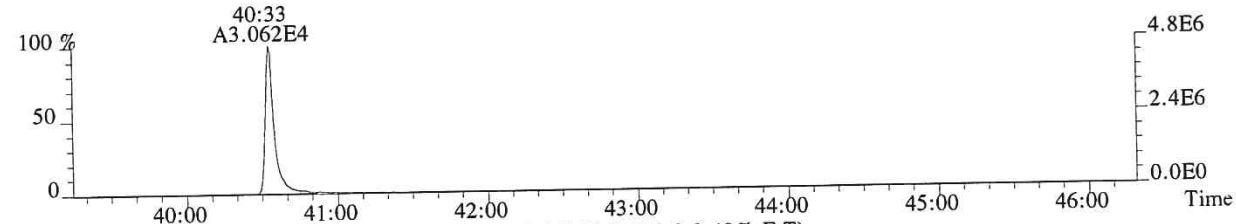
File:P519924 #1-637 Acq:11-JAN-2019 21:22:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-019DL
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,800.0,0.40%,F,T)



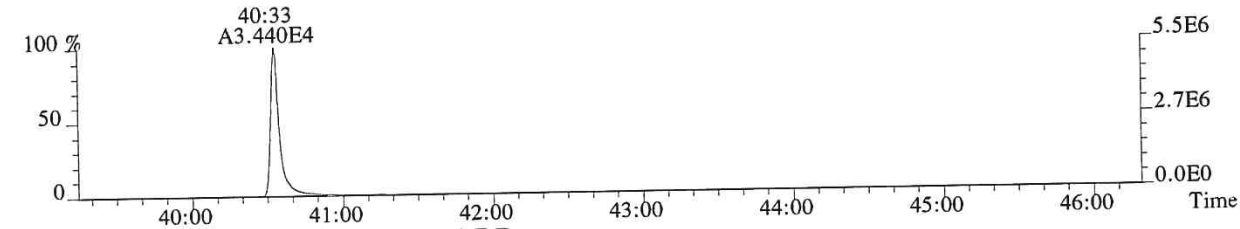
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1388.0,0.40%,F,T)



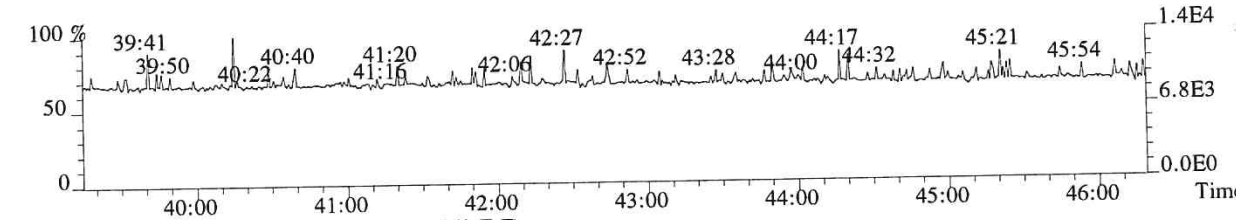
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,496.0,0.40%,F,T)



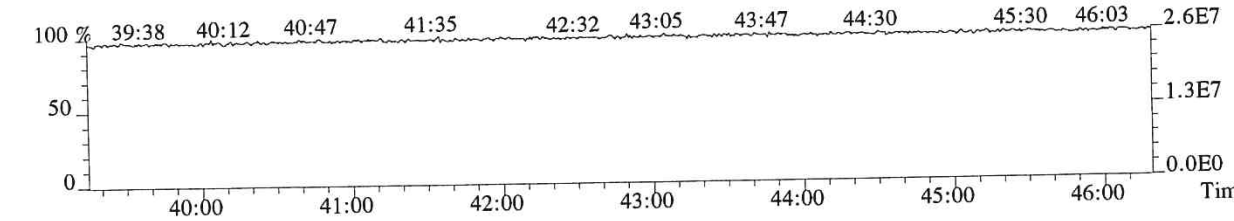
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,512.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



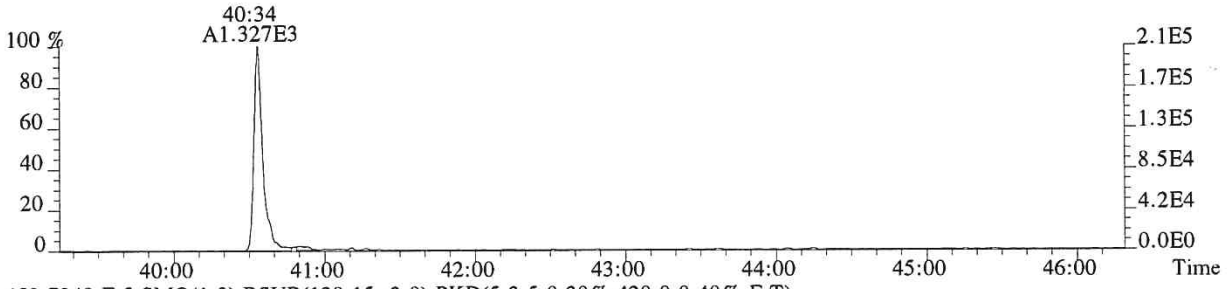
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



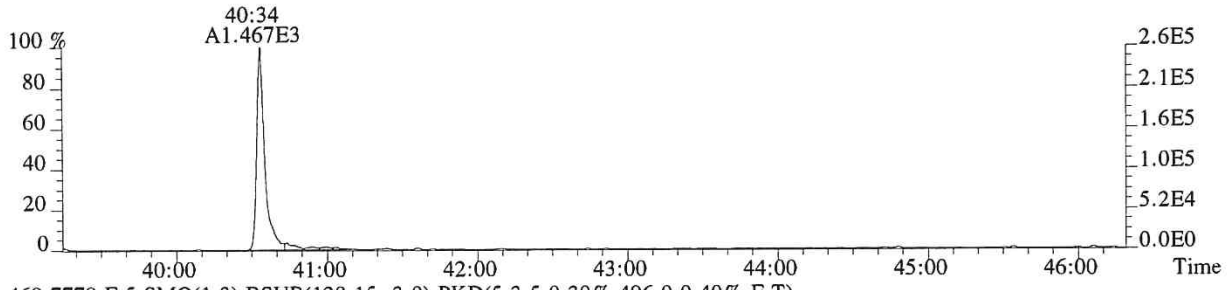
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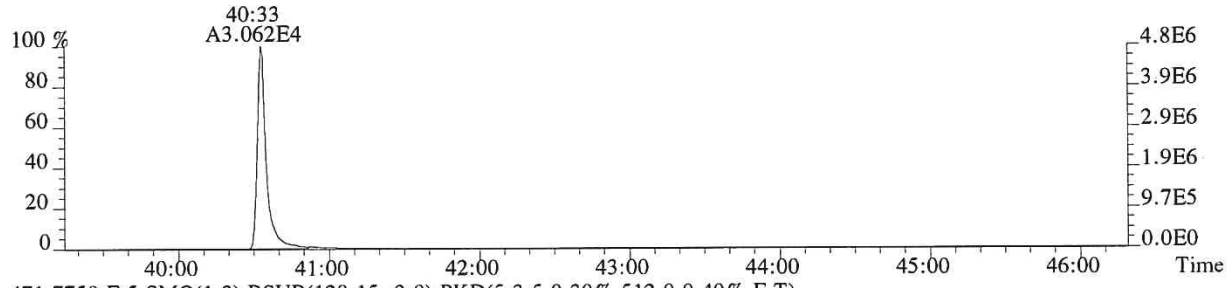
File:P519924 #1-637 Acq:11-JAN-2019 21:22:51 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E18001139-019DL E1801139-019DL
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,344.0,0.40%,F,T)



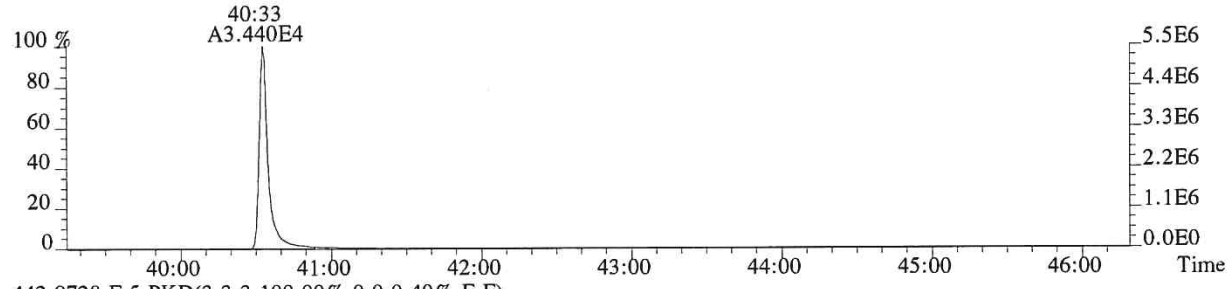
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,420.0,0.40%,F,T)



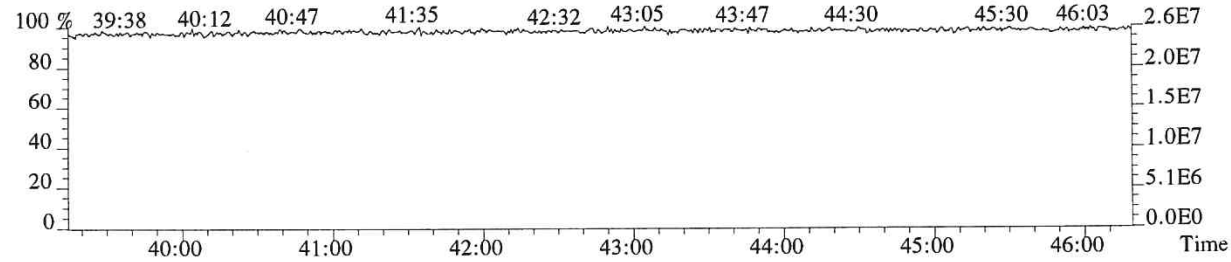
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,496.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,512.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018673

ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0246

Run #13 Filename P519906 Samp: 1 Inj: 1 Acquired: 11-JAN-19 06:27:02
Processed: 11-JAN-19 14:53:37 Sample ID: E1801139-020

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	1.241e+04	1.602e+04	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:28	7.000e+02	4.196e+02	1.67	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	5.919e+02	3.405e+02	1.74	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	9.014e+02	7.323e+02	1.23	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:31	2.975e+02	2.263e+02	1.31	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:03	8.387e+01	7.183e+01	1.17	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:50	1.202e+02	9.846e+01	1.22	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:09	3.284e+02	3.274e+02	1.00	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:29	8.558e+01	5.447e+01	1.57	no	no	1.258
10	Unk	OCDF	40:44	1.590e+02	1.844e+02	0.86	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:25	3.134e+03	4.137e+03	0.76	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:48	1.025e+02	9.515e+01	1.08	no	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:11	8.096e+01	6.072e+01	1.33	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:17	1.343e+02	1.278e+02	1.05	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:31	2.343e+02	2.059e+02	1.14	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:04	3.585e+03	3.372e+03	1.06	yes	no	1.025
17	Unk	OCDD	40:35	5.251e+04	5.896e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:21	2.306e+04	2.904e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:27	3.818e+04	2.426e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:28	3.688e+04	2.328e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:23	1.685e+04	3.294e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.929e+04	3.744e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:02	1.818e+04	3.486e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	1.706e+04	3.283e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:09	1.321e+04	2.892e+04	0.46	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	1.269e+04	2.782e+04	0.46	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:23	1.101e+04	1.371e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:48	2.876e+04	1.776e+04	1.62	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:11	2.630e+04	1.971e+04	1.33	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:16	2.451e+04	2.012e+04	1.22	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	2.857e+04	2.744e+04	1.04	yes	no	0.858
32	IS	13C-OCDD	40:34	2.672e+04	3.070e+04	0.87	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:39	3.710e+04	4.717e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:31	5.379e+04	4.301e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:25	1.687e+04				no	1.014

$$\text{OCDD} = \frac{(5.251e+04 + 5.896e+04) \times 4000\ \text{pg} \times 1}{(2.672e+04 + 3.070e+04) \times 10.760\ \text{g} \times 76.0 / 100 \times 1.118} = 849\ \text{ng/kg}$$

LW 01/14/19

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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0246

Run #13 Filename P519906 Samp: 1 Inj: 1 Acquired: 11-JAN-19 06:27:02
Processed: 11-JAN-19 14:53:37 LAB. ID: E1801139-020

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.66e+06	1.74e+03	9.6e+02	2.14e+06	1.89e+03	1.1e+03
2	1,2,3,7,8-PeCDF	1.18e+05	1.38e+03	8.5e+01	7.71e+04	3.72e+03	2.1e+01
3	2,3,4,7,8-PeCDF	9.70e+04	1.38e+03	7.0e+01	5.45e+04	3.72e+03	1.5e+01
4	1,2,3,4,7,8-HxCDF	1.93e+05	1.70e+03	1.1e+02	1.55e+05	8.52e+02	1.8e+02
5	1,2,3,6,7,8-HxCDF	4.89e+04	1.70e+03	2.9e+01	4.16e+04	8.52e+02	4.9e+01
6	2,3,4,6,7,8-HxCDF	1.40e+04	1.70e+03	8.2e+00	1.31e+04	8.52e+02	1.5e+01
7	1,2,3,7,8,9-HxCDF	1.76e+04	1.70e+03	1.0e+01	2.12e+04	8.52e+02	2.5e+01
8	1,2,3,4,6,7,8-HpCDF	6.38e+04	8.72e+02	7.3e+01	7.30e+04	6.08e+02	1.2e+02
9	1,2,3,4,7,8,9-HpCDF	1.87e+04	8.72e+02	2.1e+01	1.30e+04	6.08e+02	2.1e+01
10	OCDF	2.70e+04	7.16e+02	3.8e+01	3.23e+04	1.39e+03	2.3e+01
11	2,3,7,8-TCDD	5.19e+05	2.27e+03	2.3e+02	6.43e+05	1.23e+03	5.2e+02
12	1,2,3,7,8-PeCDD	1.93e+04	1.59e+03	1.2e+01	1.49e+04	4.88e+02	3.0e+01
13	1,2,3,4,7,8-HxCDD	1.67e+04	1.65e+03	1.0e+01	1.49e+04	1.35e+03	1.1e+01
14	1,2,3,6,7,8-HxCDD	3.33e+04	1.65e+03	2.0e+01	2.81e+04	1.35e+03	2.1e+01
15	1,2,3,7,8,9-HxCDD	4.81e+04	1.65e+03	2.9e+01	4.27e+04	1.35e+03	3.2e+01
16	1,2,3,4,6,7,8-HpCDD	7.31e+05	2.74e+03	2.7e+02	7.09e+05	5.89e+03	1.2e+02
17	OCDD	9.13e+06	1.15e+03	8.0e+03	1.01e+07	8.68e+02	1.2e+04
18	13C-2,3,7,8-TCDF	3.32e+06	5.19e+03	6.4e+02	4.20e+06	3.14e+03	1.3e+03
19	13C-1,2,3,7,8-PeCDF	6.53e+06	7.56e+02	8.6e+03	4.13e+06	9.52e+02	4.3e+03
20	13C-2,3,4,7,8-PeCDF	6.64e+06	7.56e+02	8.8e+03	4.27e+06	9.52e+02	4.5e+03
21	13C-1,2,3,4,7,8-HxCDF	3.57e+06	1.09e+03	3.3e+03	6.84e+06	1.03e+03	6.7e+03
22	13C-1,2,3,6,7,8-HxCDF	3.75e+06	1.09e+03	3.4e+03	7.38e+06	1.03e+03	7.2e+03
23	13C-2,3,4,6,7,8-HxCDF	3.70e+06	1.09e+03	3.4e+03	7.12e+06	1.03e+03	6.9e+03
24	13C-1,2,3,7,8,9-HxCDF	3.25e+06	1.09e+03	3.0e+03	6.26e+06	1.03e+03	6.1e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.79e+06	2.20e+03	1.3e+03	6.07e+06	3.76e+03	1.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.59e+06	2.20e+03	1.2e+03	5.73e+06	3.76e+03	1.5e+03
27	13C-2,3,7,8-TCDD	1.75e+06	5.85e+03	3.0e+02	2.17e+06	3.33e+03	6.5e+02
28	13C-1,2,3,7,8-PeCDD	5.19e+06	7.60e+02	6.8e+03	3.21e+06	1.26e+03	2.6e+03
29	13C-1,2,3,4,7,8-HxCDD	5.54e+06	1.12e+03	4.9e+03	4.36e+06	1.03e+03	4.2e+03
30	13C-1,2,3,6,7,8-HxCDD	4.86e+06	1.12e+03	4.3e+03	3.84e+06	1.03e+03	3.7e+03
31	13C-1,2,3,4,6,7,8-HpCDD	5.82e+06	8.60e+02	6.8e+03	5.61e+06	8.20e+02	6.8e+03
32	13C-OCDD	4.67e+06	8.32e+02	5.6e+03	5.32e+06	5.16e+02	1.0e+04
33	13C-1,2,3,4-TCDD	5.54e+06	5.85e+03	9.5e+02	6.99e+06	3.33e+03	2.1e+03
34	13C-1,2,3,7,8,9-HxCDD	1.09e+07	1.12e+03	9.7e+03	8.73e+06	1.03e+03	8.5e+03
35	37Cl-2,3,7,8-TCDD	2.65e+06	1.78e+03	1.5e+03			

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Peak List Summary

CLIENT ID.
SL0246

Entry: 36 Totals Name: Total Tetra-Furans

Run: 13 File: P519906 Sample:1 Injection:1 Function:1

Acquired: 11-JAN-19 06:27:02 Processed: 11-JAN-19 14:53:37

Mass: 303.9020 305.8990 Tot Response: 5.02e+04 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	20:59	5.23e+01	6.28e+01	0.83	yes	1.15e+02		n	n
2	21:49	1.70e+02	2.37e+02	0.72	yes	4.07e+02		n	n
3	22:16	2.50e+02	3.08e+02	0.81	yes	5.58e+02		n	n
4	22:33	6.20e+02	8.13e+02	0.76	yes	1.43e+03		n	n
5	22:54	2.39e+02	2.76e+02	0.86	yes	5.15e+02		n	n
6	23:11	5.01e+02	6.20e+02	0.81	yes	1.12e+03		n	n
7	23:33	1.40e+02	2.13e+02	0.66	yes	3.53e+02		n	n
8	23:48	3.55e+02	4.79e+02	0.74	yes	8.34e+02		n	n
9	23:54	6.06e+02	8.42e+02	0.72	yes	1.45e+03		n	n
10	24:23	5.21e+03	6.94e+03	0.75	yes	1.22e+04		n	n
11	24:41	2.90e+02	3.84e+02	0.75	yes	6.74e+02		n	n
12	25:22	1.24e+04	1.60e+04	0.77	yes	2.84e+04	2,3,7,8-TCDF	n	n
13	27:39	9.51e+02	1.25e+03	0.76	yes	2.20e+03		n	n

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Peak List Summary

CLIENT ID.
SL0246

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 13 File: P519906 Sample:1 Injection:1 Function:1

Acquired: 11-JAN-19 06:27:02 Processed: 11-JAN-19 14:53:37

Mass: 319.8970 321.8940 Tot Response: 8.57e+03 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	22:33	5.87e+01	7.74e+01	0.76	yes	1.36e+02		n	n
2	24:03	1.84e+02	2.43e+02	0.76	yes	4.27e+02		n	n
3	26:25	3.13e+03	4.14e+03	0.76	yes	7.27e+03	2,3,7,8-TCDD	n	n
4	26:48	3.23e+02	4.17e+02	0.78	yes	7.41e+02		n	n

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CLIENT ID.
SL0246

Entry: 38 Totals Name: Total Penta-Furans1

Run: 13 File: P519906 Sample:1 Injection:1 Function:1

Acquired: 11-JAN-19 06:27:02 Processed: 11-JAN-19 14:53:37

Mass: 339.8600 341.8570 Tot Response: 1.09e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:41	6.72e+01	4.18e+01 1.61	yes	1.09e+02		n	n

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Peak List Summary

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SL0246

Entry: 39 Totals Name: Total Penta-Furans2

Run: 13 File: P519906 Sample:1 Injection:1 Function:2

Acquired: 11-JAN-19 06:27:02 Processed: 11-JAN-19 14:53:37

Mass: 339.8600 341.8570 Tot Response: 3.30e+03 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:24	5.16e+02	3.07e+02	1.68	yes	8.24e+02		n	n
2	30:28	7.00e+02	4.20e+02	1.67	yes	1.12e+03	1,2,3,7,8-PeCDF	n	n
3	30:44	2.60e+02	1.61e+02	1.62	yes	4.21e+02		n	n
4	31:29	5.92e+02	3.41e+02	1.74	yes	9.32e+02	2,3,4,7,8-PeCDF	n	n

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Peak List Summary

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Entry: 40 Totals Name: Total Penta-Dioxins

Run: 13 File: P519906 Sample:1 Injection:1 Function:2

Acquired: 11-JAN-19 06:27:02 Processed: 11-JAN-19 14:53:37

Mass: 355.8550 357.8520 Tot Response: 3.09e+02 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	29:29	1.49e+02	8.88e+01	1.68	yes	2.38e+02		n	n
2	30:47	4.19e+01	2.98e+01	1.40	yes	7.17e+01		n	n

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Peak List Summary

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SL0246

Entry: 41 Totals Name: Total Hexa-Furans

Run: 13 File: P519906 Sample:1 Injection:1 Function:3

Acquired: 11-JAN-19 06:27:02 Processed: 11-JAN-19 14:53:37

Mass: 373.8210 375.8180 Tot Response: 2.91e+03 RRF: 1.141

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:23	1.27e+02	1.03e+02	1.23	yes	2.29e+02		n	n
2	33:56	4.10e+01	3.88e+01	1.06	yes	7.98e+01		n	n
3	34:17	3.63e+01	2.92e+01	1.24	yes	6.54e+01		n	n
4	34:23	9.01e+02	7.32e+02	1.23	yes	1.63e+03	1,2,3,4,7,8-HxCDF	n	n
5	34:31	2.97e+02	2.26e+02	1.31	yes	5.24e+02	1,2,3,6,7,8-HxCDF	n	n
6	35:03	8.39e+01	7.18e+01	1.17	yes	1.56e+02	2,3,4,6,7,8-HxCDF	n	n
7	35:50	1.20e+02	9.85e+01	1.22	yes	2.19e+02	1,2,3,7,8,9-HxCDF	n	n

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Peak List Summary

CLIENT ID.
SL0246

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 13 File: P519906 Sample:1 Injection:1 Function:3

Acquired: 11-JAN-19 06:27:02 Processed: 11-JAN-19 14:53:37

Mass: 389.8160 391.8130 Tot Response: 5.59e+03 RRF: 1.047

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	33:47	1.83e+03	1.46e+03	1.26	yes	3.29e+03		n	n
2	34:35	8.13e+02	6.34e+02	1.28	yes	1.45e+03		n	n
3	34:41	8.58e+01	7.71e+01	1.11	yes	1.63e+02		n	n
4	35:11	8.10e+01	6.07e+01	1.33	yes	1.42e+02	1,2,3,4,7,8-HxCDD	n	n
5	35:26	6.35e+01	4.59e+01	1.38	yes	1.09e+02		n	n
6	35:31	2.34e+02	2.06e+02	1.14	yes	4.40e+02	1,2,3,7,8,9-HxCDD	n	n

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Entry: 43 Totals Name: Total Hepta-Furans

Run: 13 File: P519906 Sample:1 Injection:1 Function:4

Acquired: 11-JAN-19 06:27:02 Processed: 11-JAN-19 14:53:37

Mass: 407.7820 409.7790 Tot Response: 9.15e+02 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:09	3.28e+02	3.27e+02	1.00	yes	6.56e+02	1,2,3,4,6,7,8-HpCDF	n	n
2	37:33	1.37e+02	1.23e+02	1.11	yes	2.60e+02		n	n

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Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 13 File: P519906 Sample:1 Injection:1 Function:4

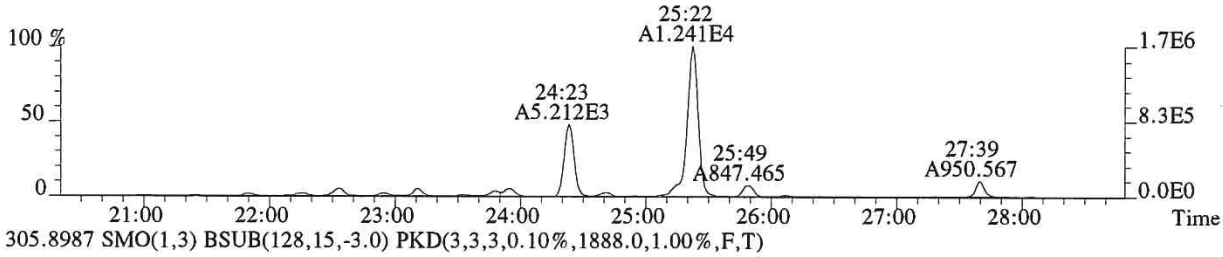
Acquired: 11-JAN-19 06:27:02 Processed: 11-JAN-19 14:53:37

Mass: 423.7770 425.7740 Tot Response: 2.05e+04 RRF: 1.025

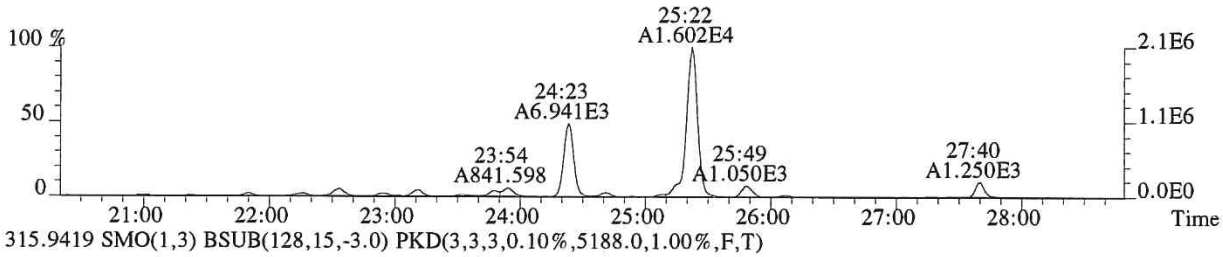
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	37:25	6.92e+03	1.04	yes	1.36e+04		n	n
2	38:04	3.59e+03	1.06	yes	6.96e+03	1,2,3,4,6,7,8-HpCDD	n	n

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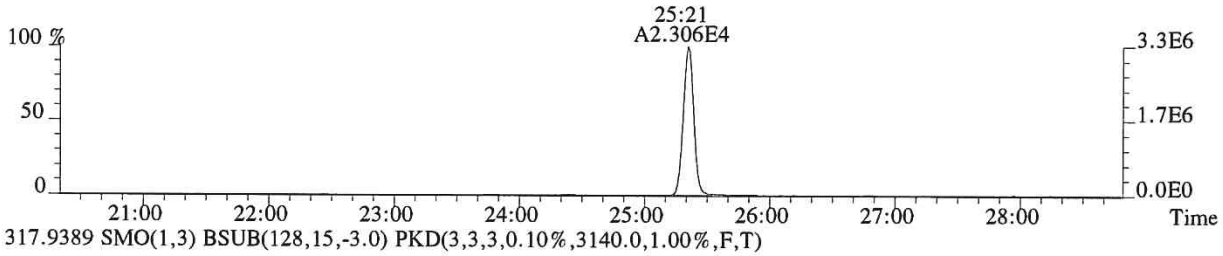
File:P519906 #1-602 Acq:11-JAN-2019 06:27:02 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-020
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1736.0,1.00%,F,T)



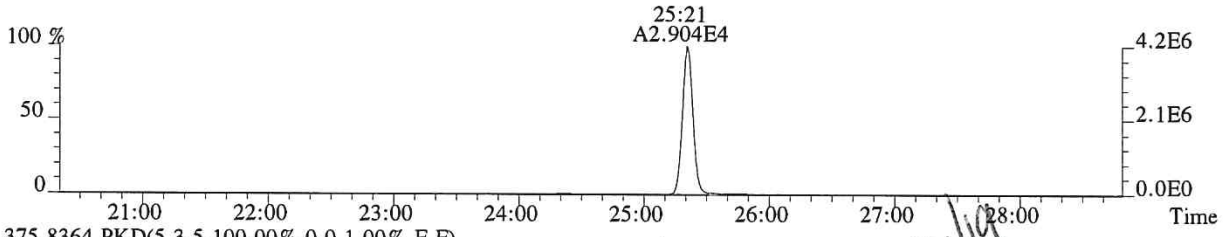
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1888.0,1.00%,F,T)



315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5188.0,1.00%,F,T)

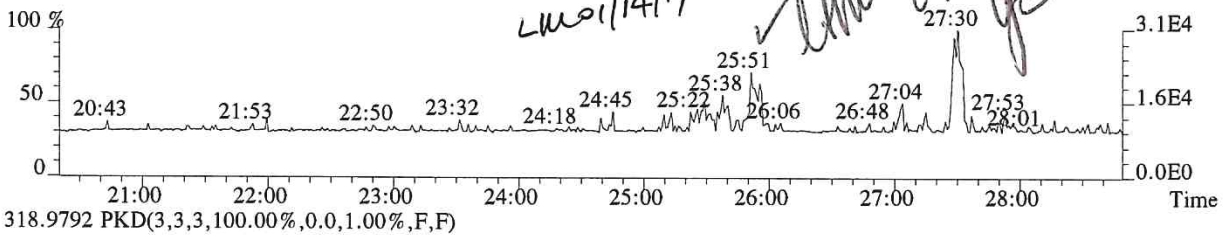


317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3140.0,1.00%,F,T)

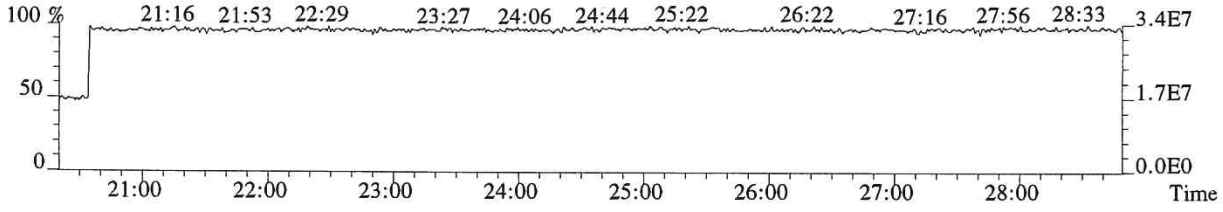


375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

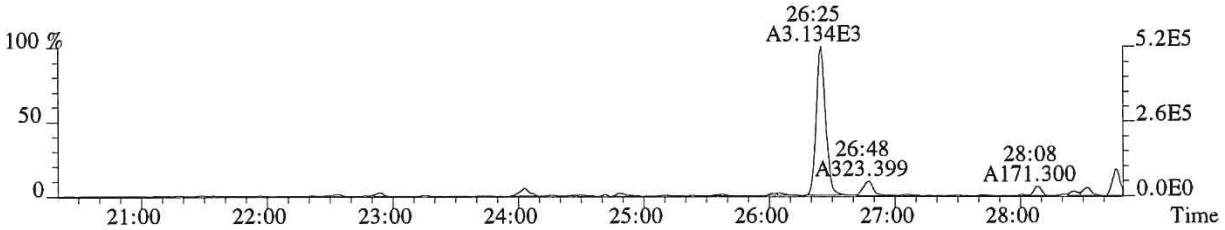
LMO 1/14/19



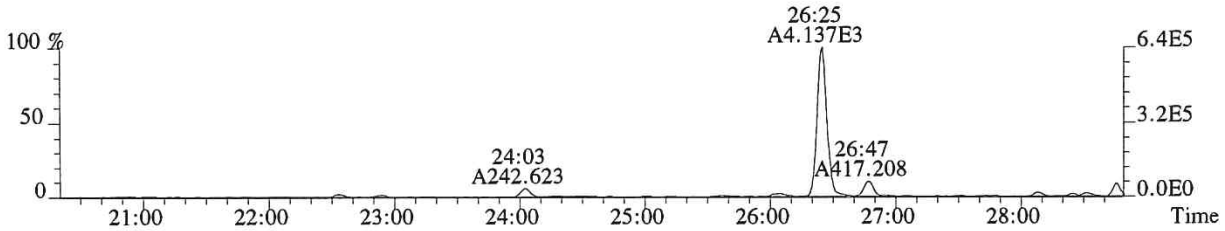
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



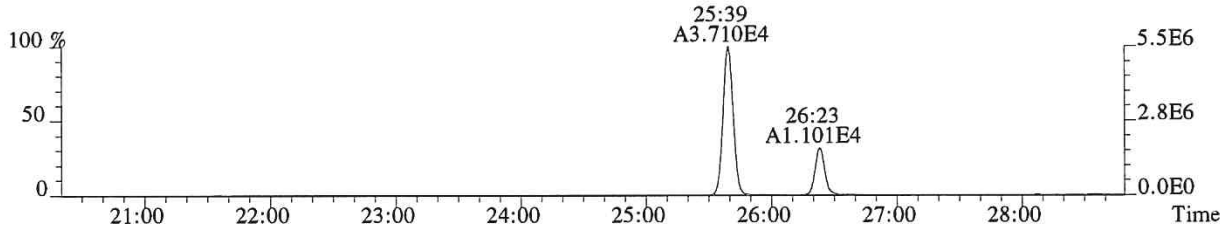
File:P519906 #1-602 Acq:11-JAN-2019 06:27:02 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-020
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2272.0,1.00%,F,T)



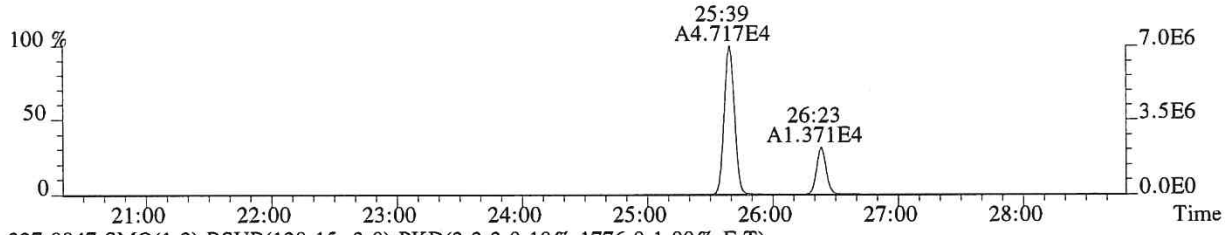
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1232.0,1.00%,F,T)



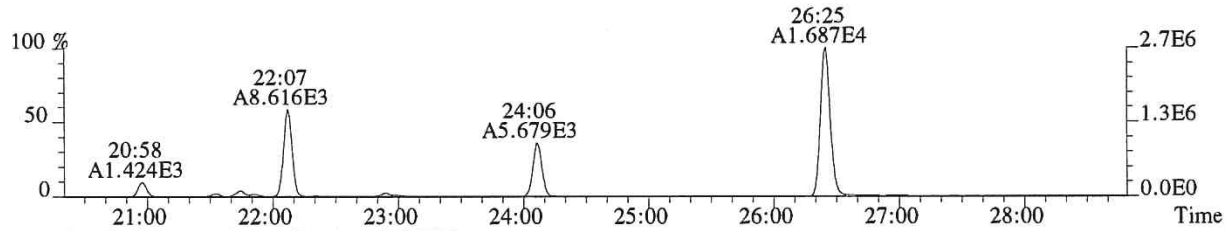
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5848.0,1.00%,F,T)



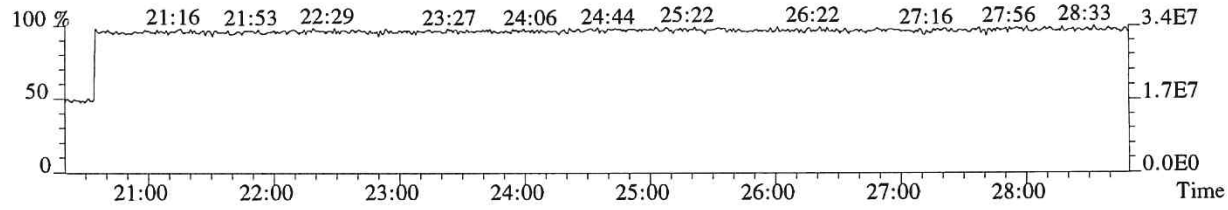
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3332.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1776.0,1.00%,F,T)

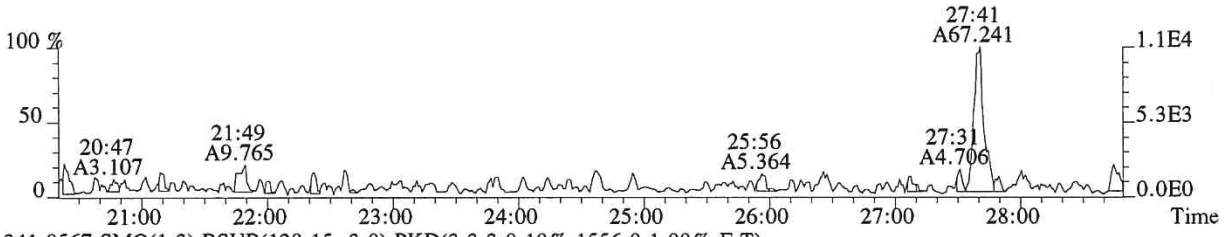


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

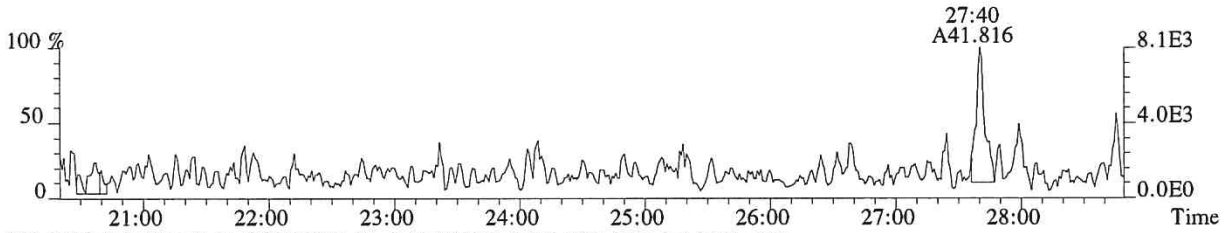


018686

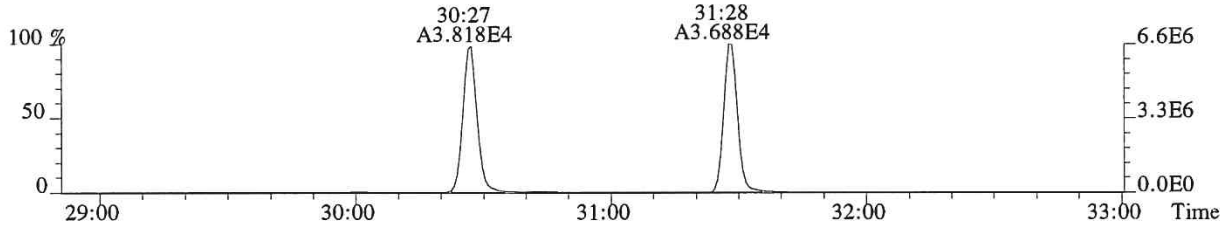
File:P519906 #1-602 Acq:11-JAN-2019 06:27:02 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-020
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,732.0,1.00%,F,T)



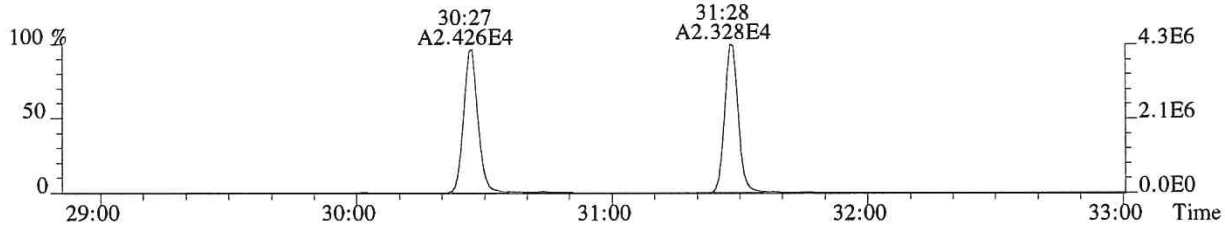
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1556.0,1.00%,F,T)



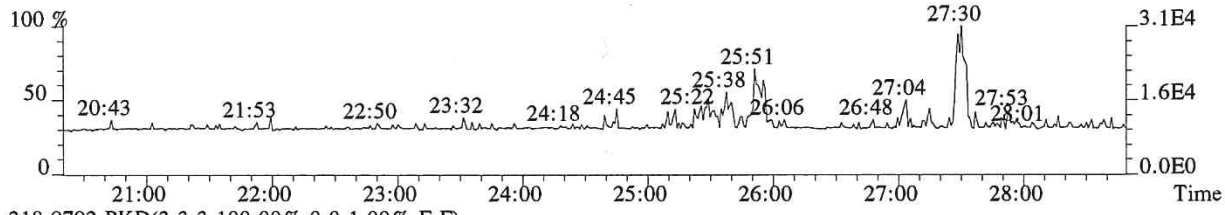
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,756.0,1.00%,F,T)



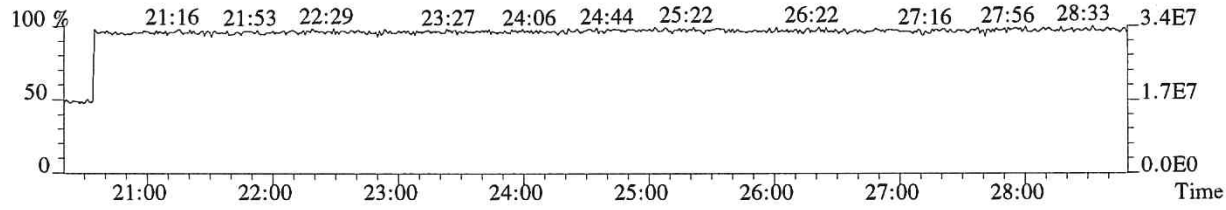
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,952.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

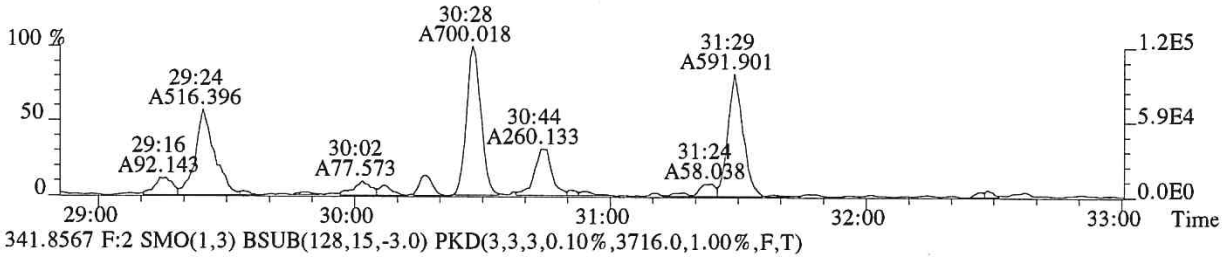


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

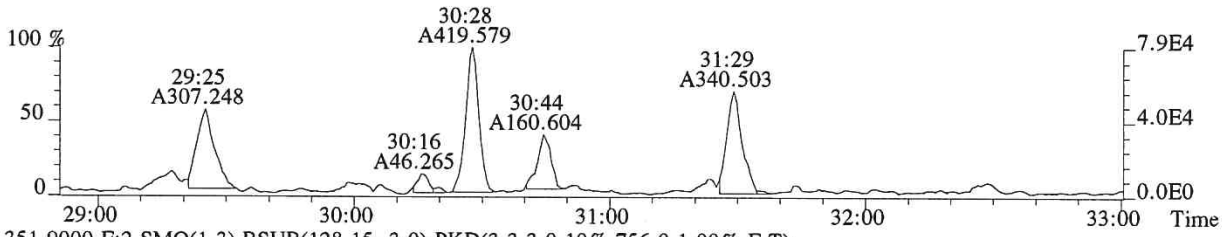


018687

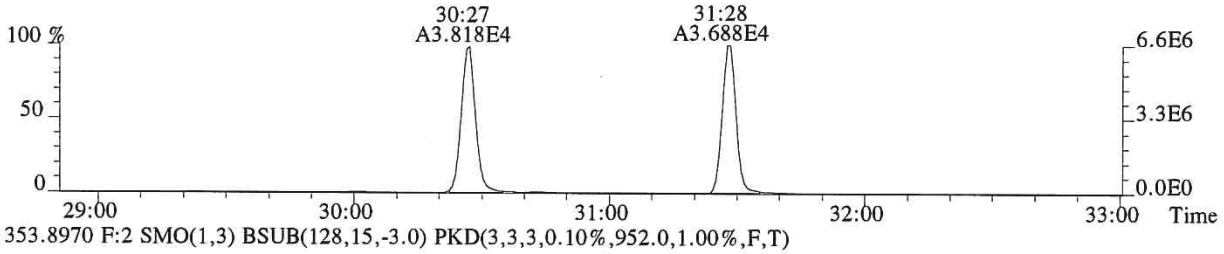
File:P519906 #1-375 Acq:11-JAN-2019 06:27:02 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-020
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1384.0,1.00%,F,T)



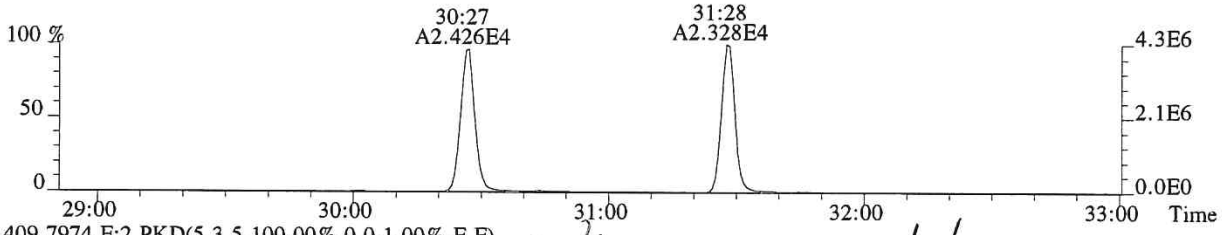
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3716.0,1.00%,F,T)



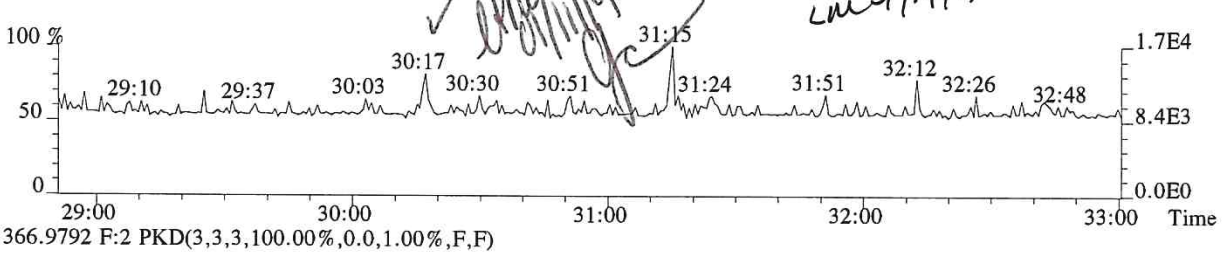
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,756.0,1.00%,F,T)



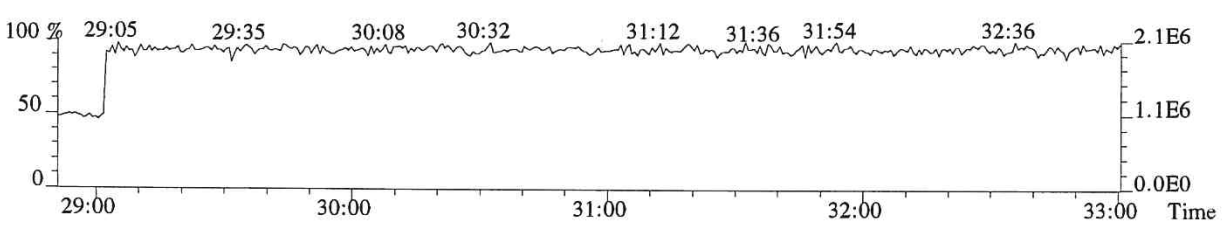
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,952.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

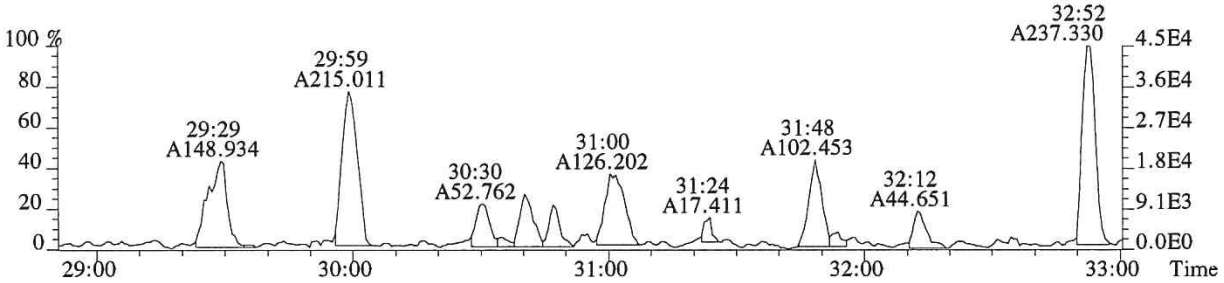


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

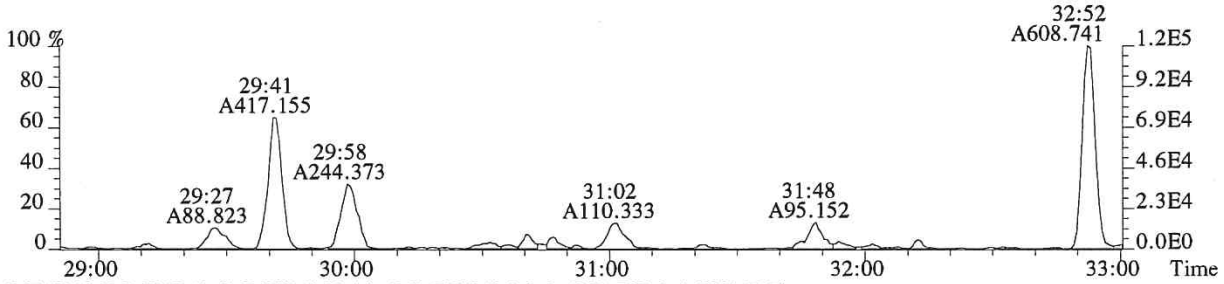


018688

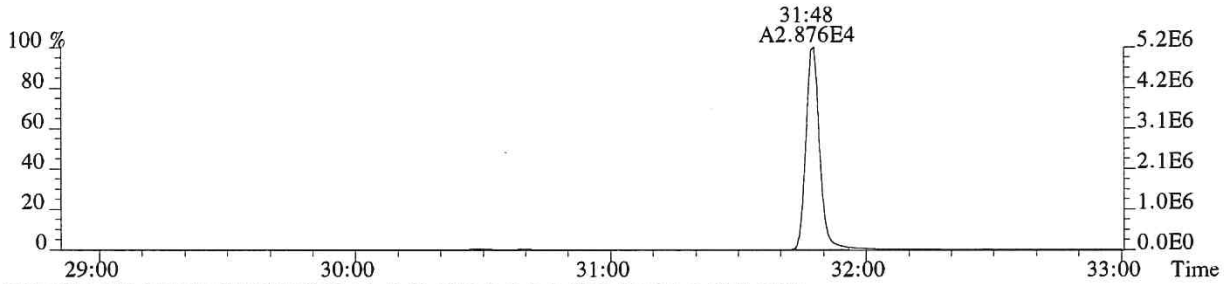
File:P519906 #1-375 Acq:11-JAN-2019 06:27:02 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-020
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1588.0,1.00%,F,T)



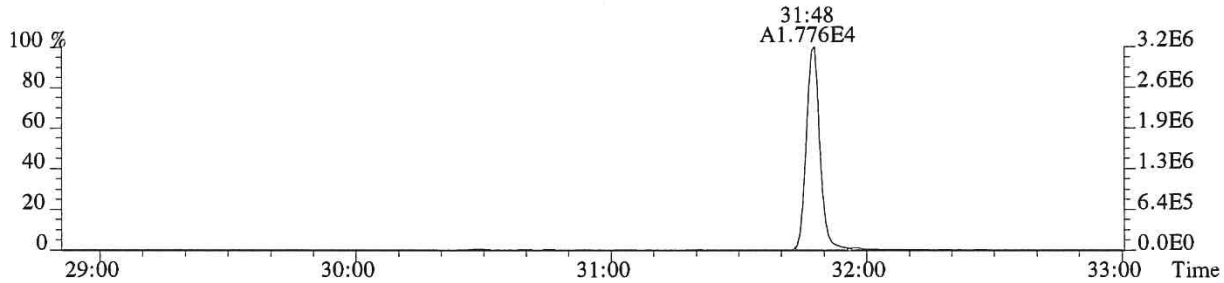
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,488.0,1.00%,F,T)



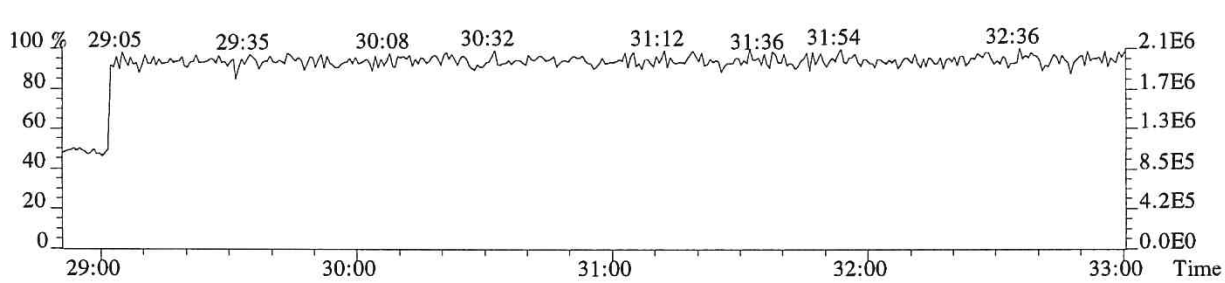
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,760.0,1.00%,F,T)



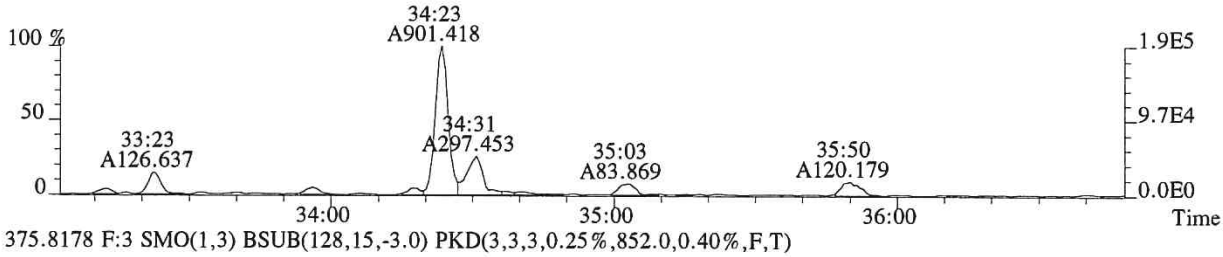
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1256.0,1.00%,F,T)



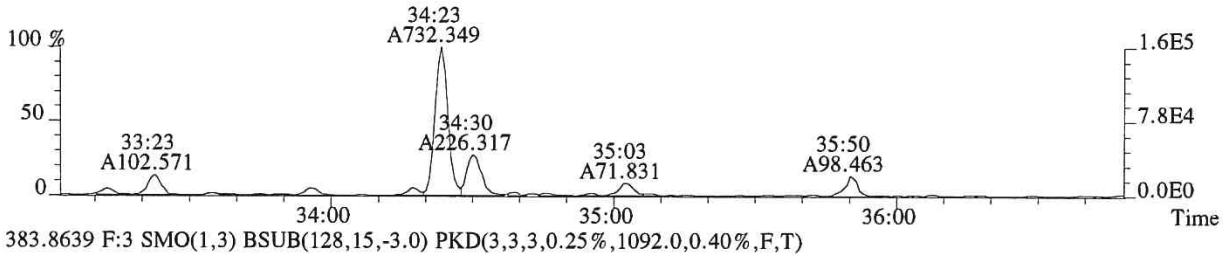
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



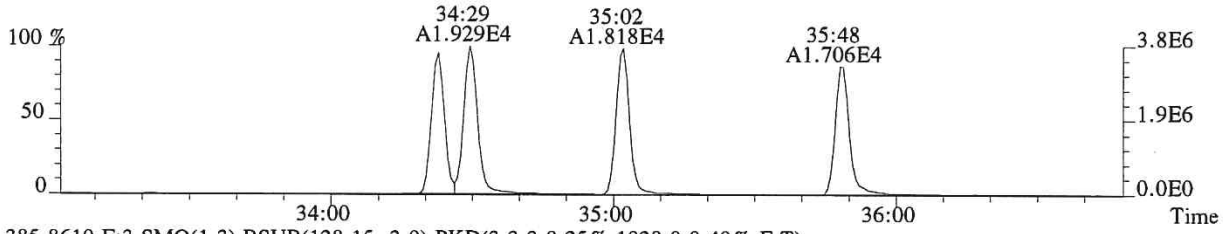
File:P519906 #1-339 Acq:11-JAN-2019 06:27:02 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-020
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1704.0,0.40%,F,T)



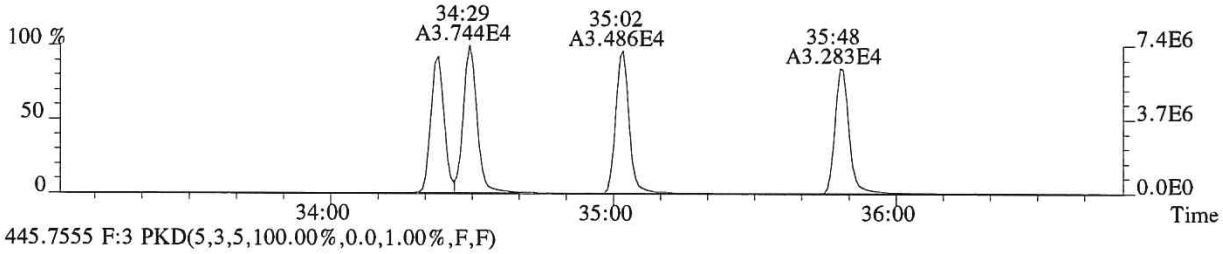
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,852.0,0.40%,F,T)



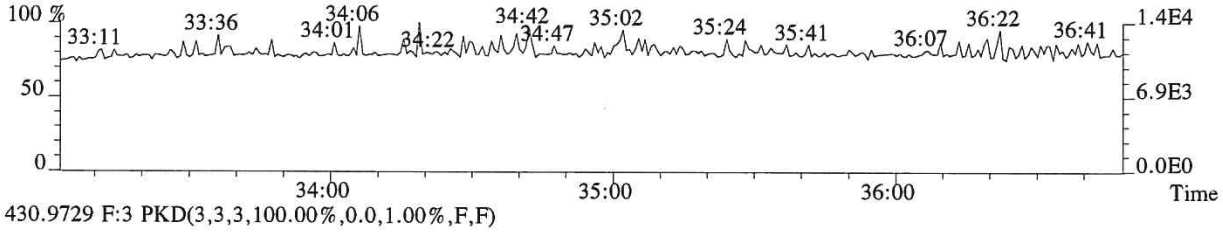
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1092.0,0.40%,F,T)



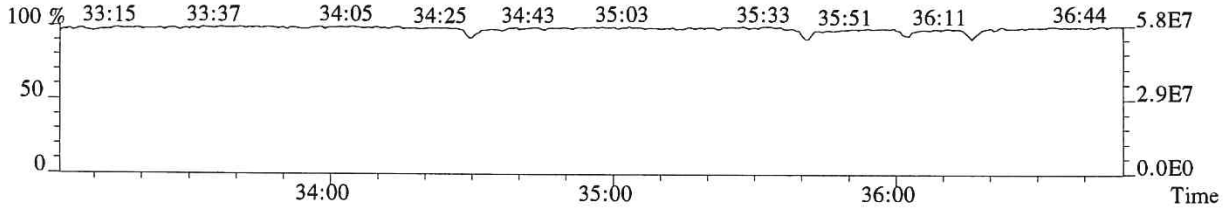
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1028.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

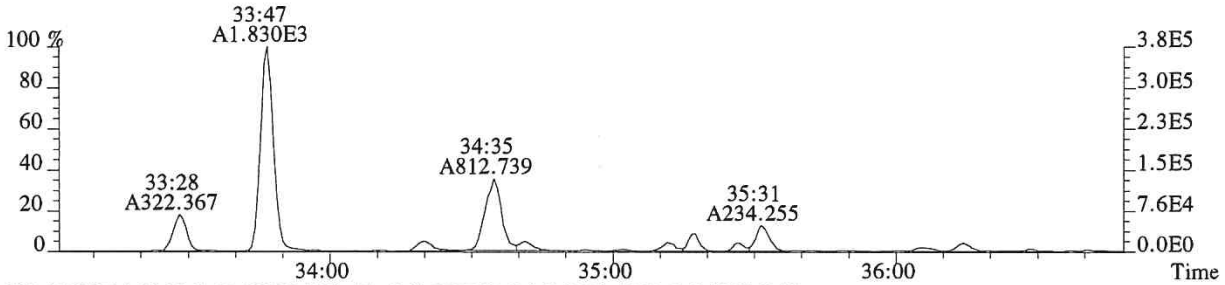


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

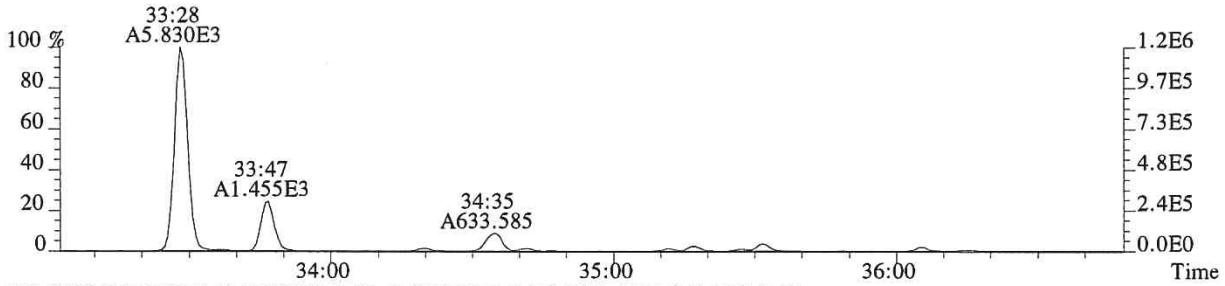


018690

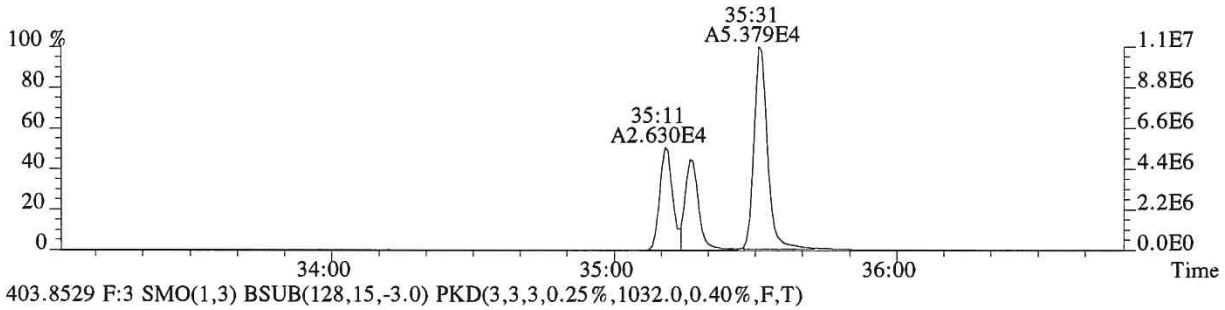
File:P519906 #1-339 Acq:11-JAN-2019 06:27:02 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-020
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1652.0,0.40%,F,T)



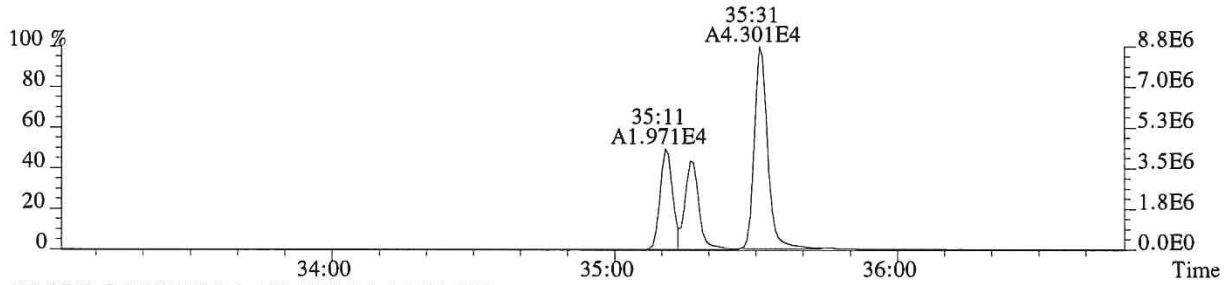
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1352.0,0.40%,F,T)



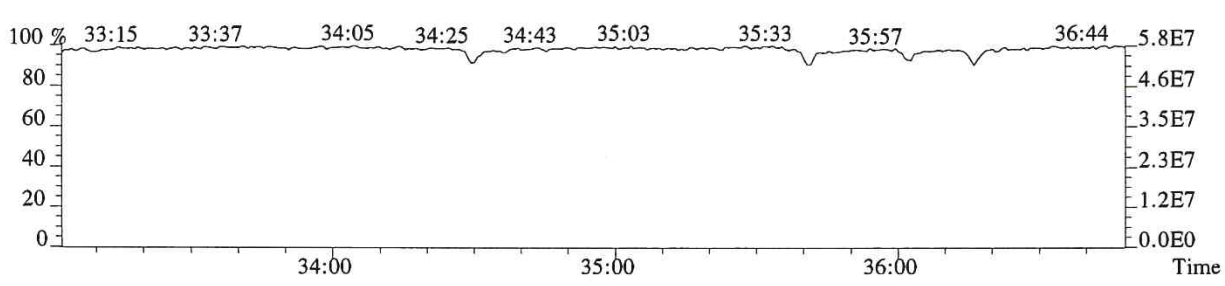
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1124.0,0.40%,F,T)



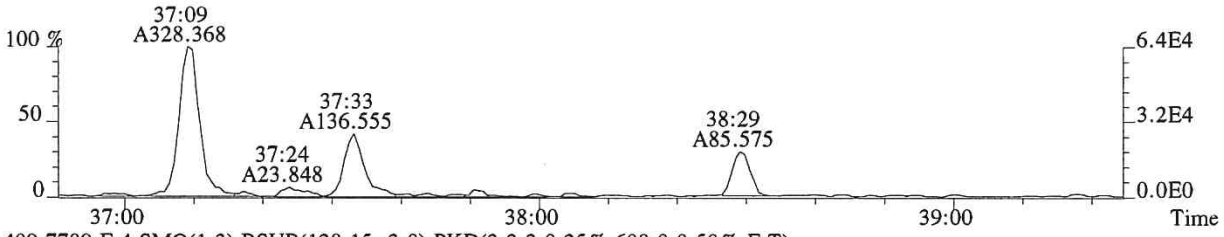
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1032.0,0.40%,F,T)



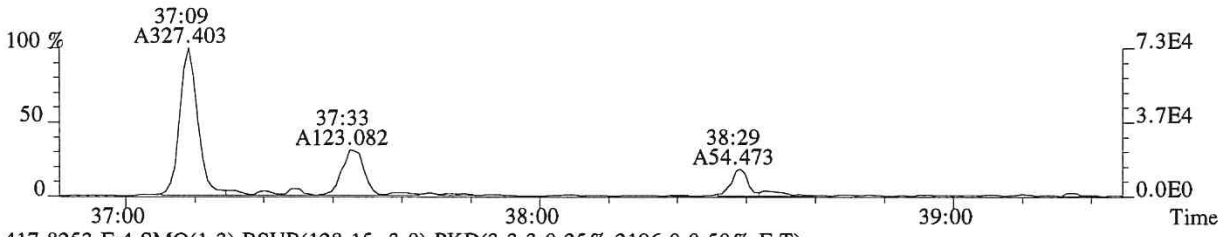
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



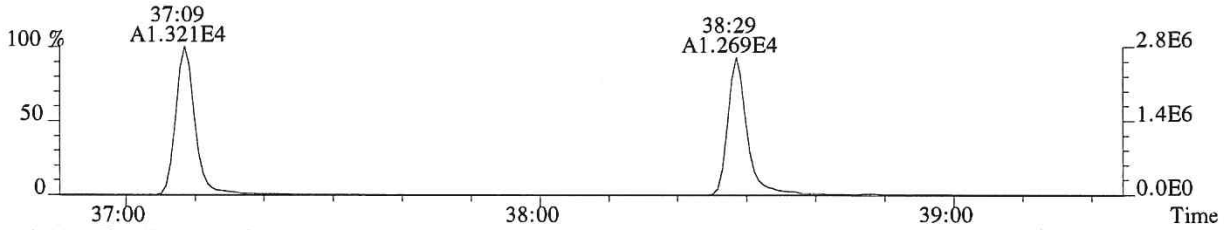
File:P519906 #1-232 Acq:11-JAN-2019 06:27:02 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-020
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,872.0,0.50%,F,T)



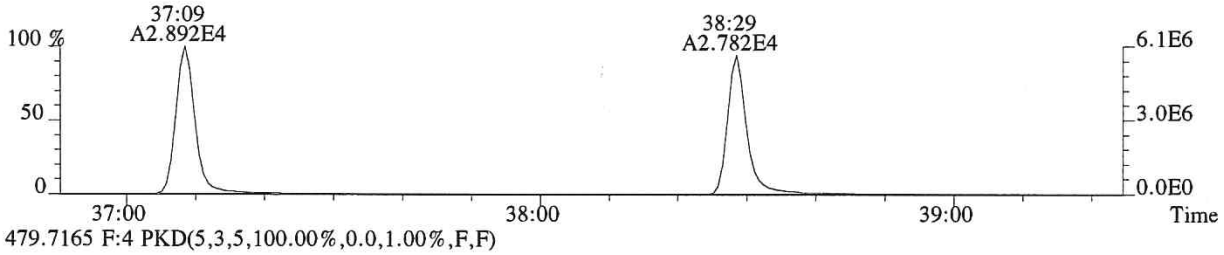
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,608.0,0.50%,F,T)



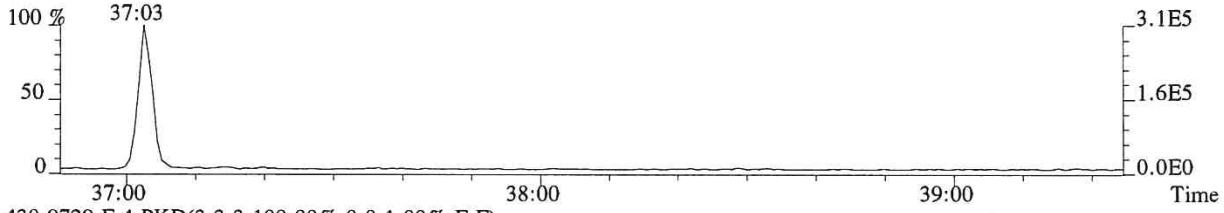
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2196.0,0.50%,F,T)



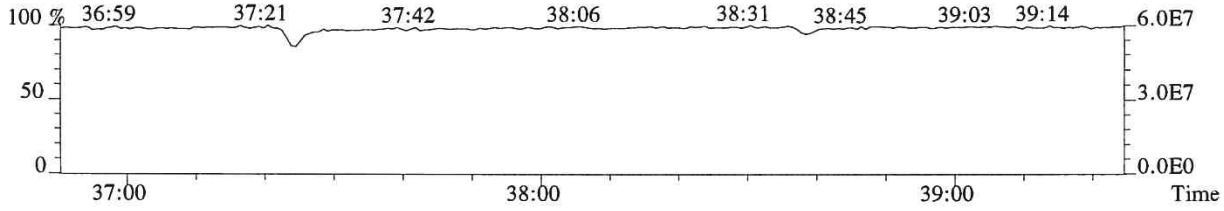
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3756.0,0.50%,F,T)



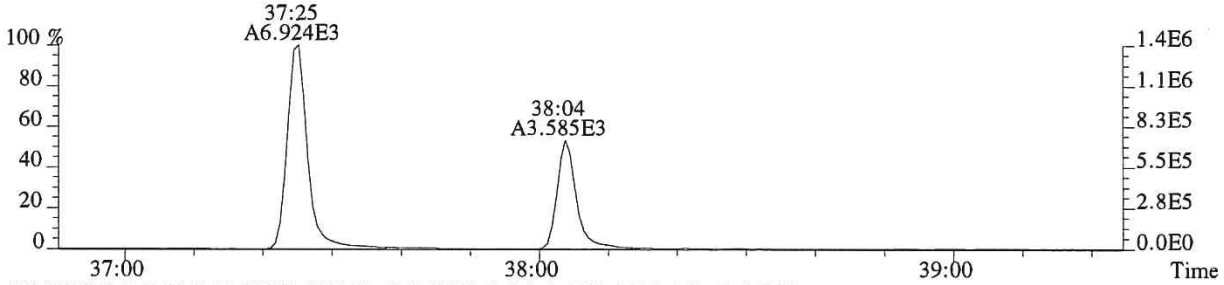
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



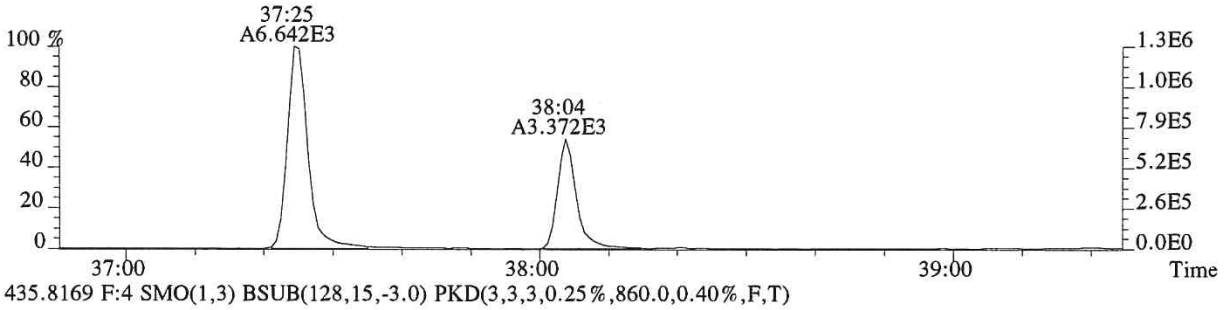
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



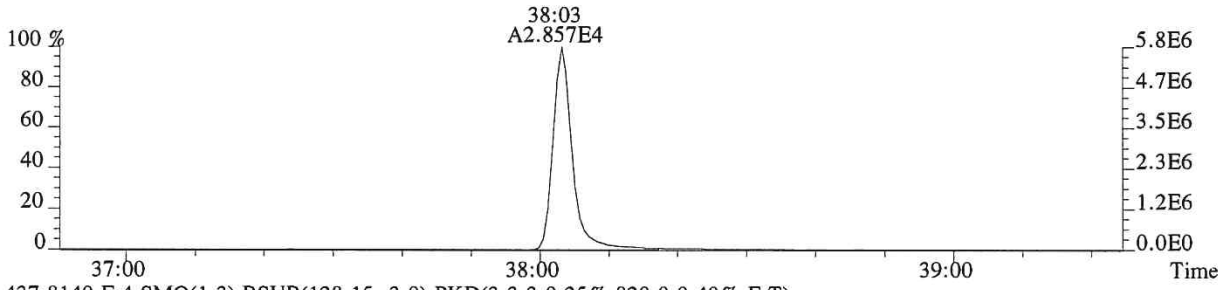
File:P519906 #1-232 Acq:11-JAN-2019 06:27:02 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-020
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2740.0,0.40%,F,T)



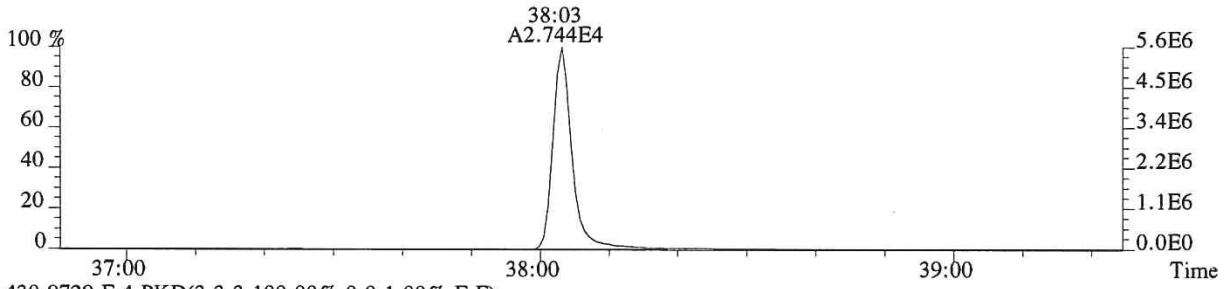
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5888.0,0.40%,F,T)



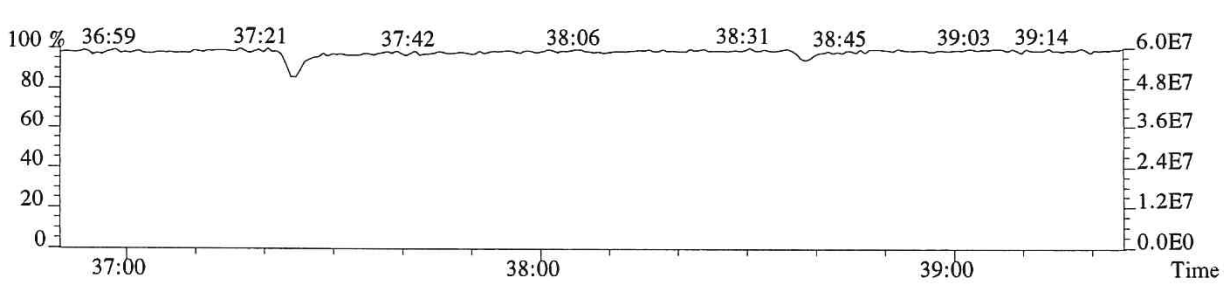
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,860.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,820.0,0.40%,F,T)

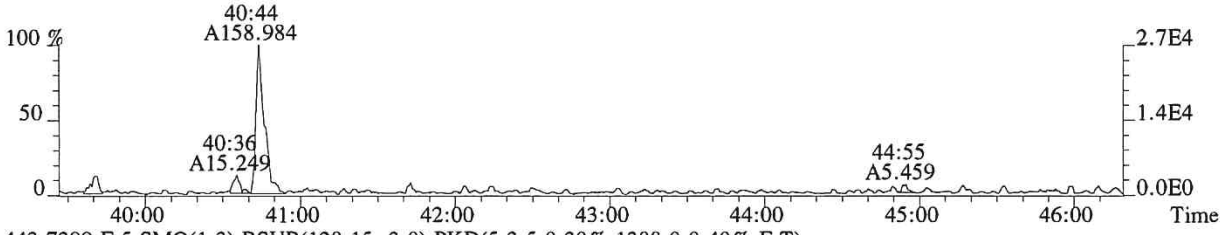


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

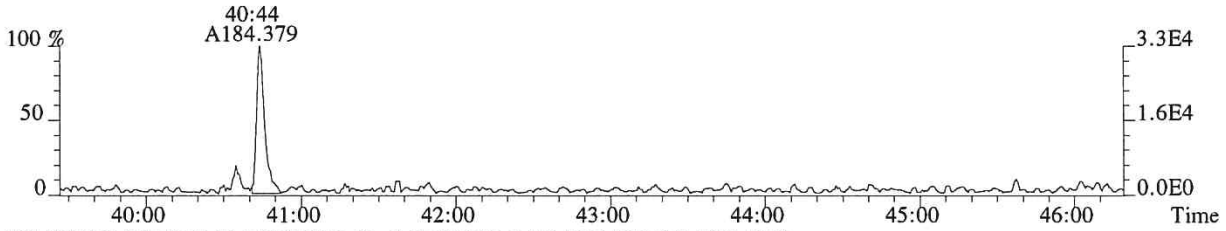


018693

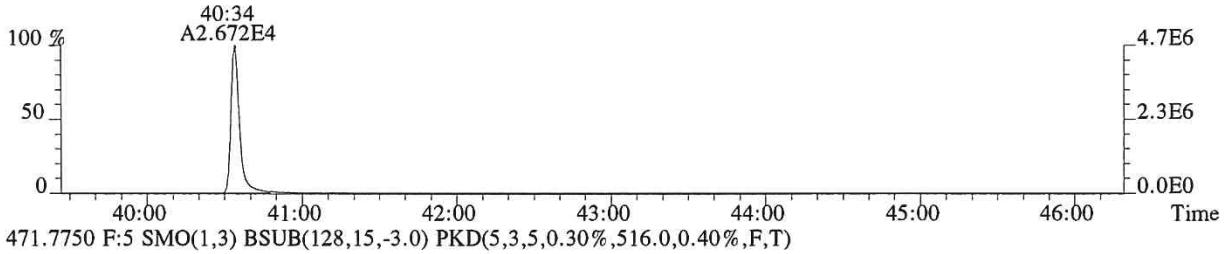
File:P519906 #1-619 Acq:11-JAN-2019 06:27:02 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-020
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,716.0,0.40%,F,T)



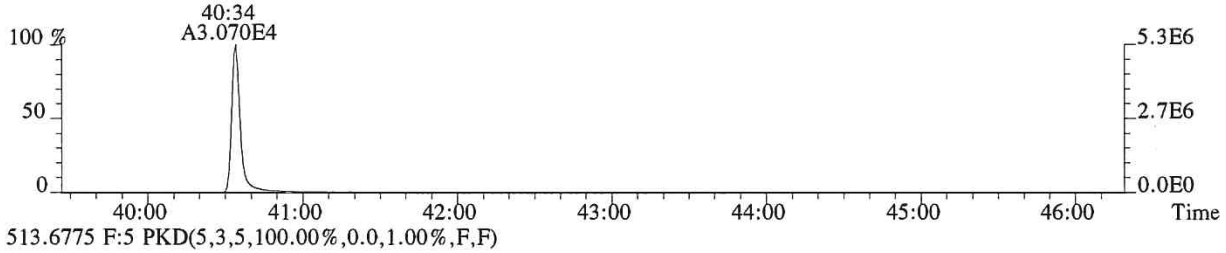
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1388.0,0.40%,F,T)



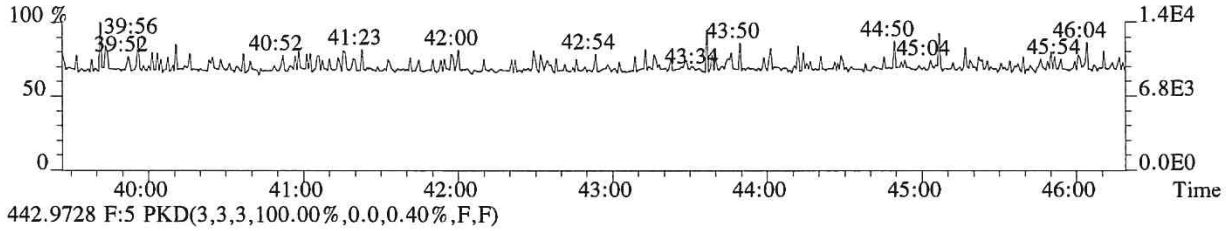
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,832.0,0.40%,F,T)



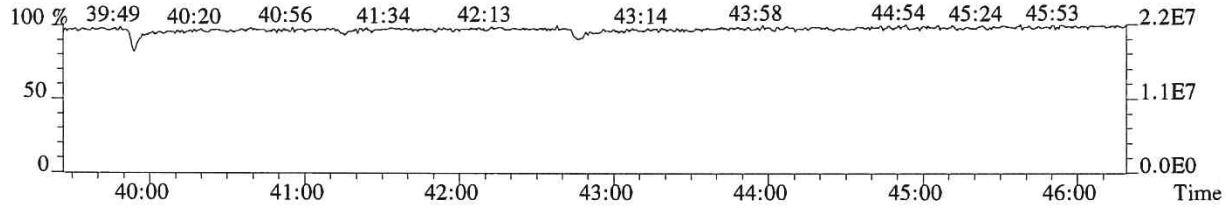
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,516.0,0.40%,F,T)



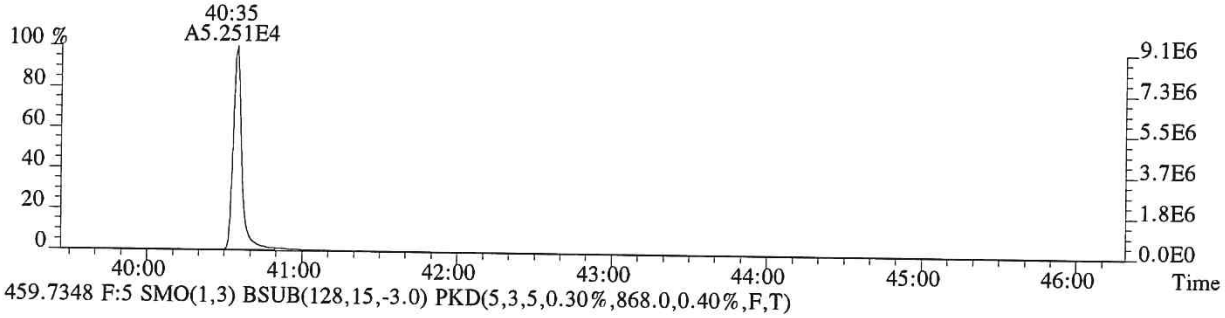
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



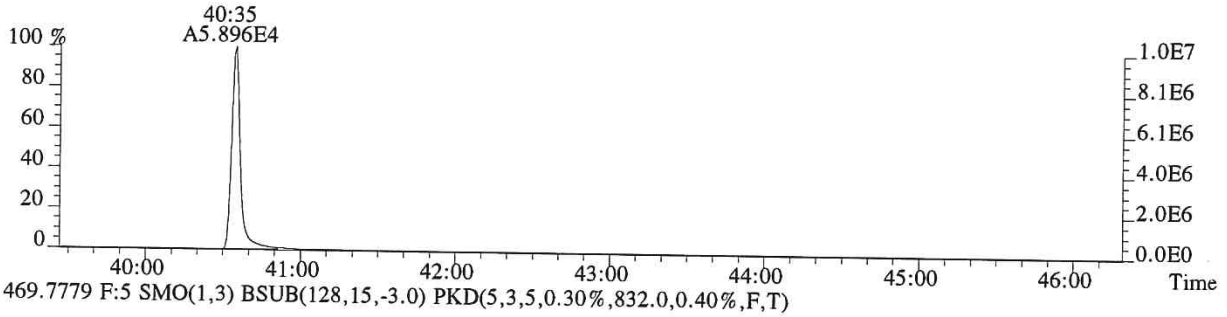
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



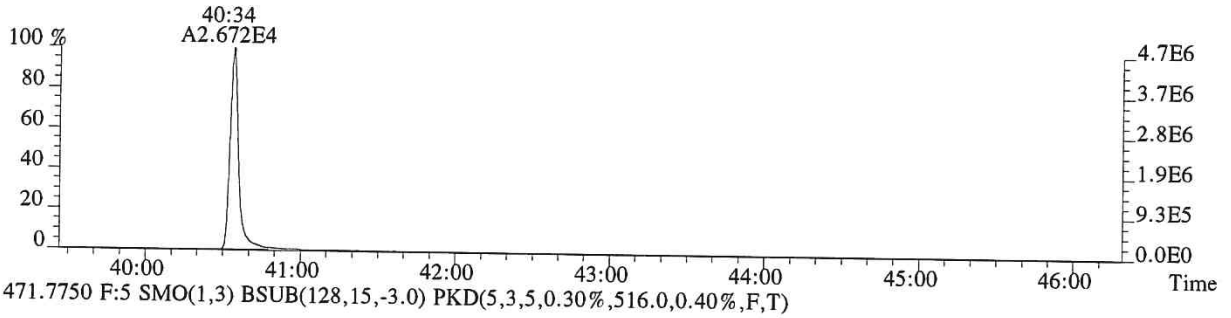
File:P519906 #1-619 Acq:11-JAN-2019 06:27:02 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-020
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1148.0,0.40%,F,T)



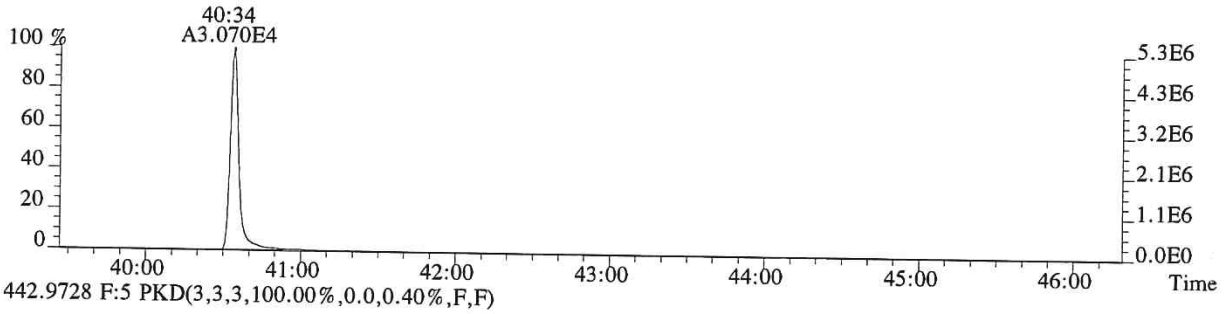
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,868.0,0.40%,F,T)



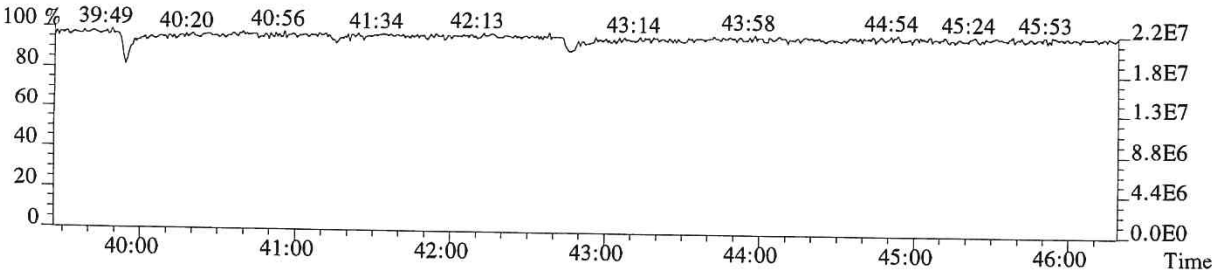
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,832.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,516.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0247

Run #12 Filename P520001 Samp: 1 Inj: 1 Acquired: 16-JAN-19 16:10:30
Processed: 17-JAN-19 11:28:00 Sample ID: E1801139-021RE

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:17	2.185e+04	2.862e+04	0.76	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:28	1.047e+03	7.159e+02	1.46	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:22	8.580e+02	6.311e+02	1.36	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:02	1.230e+03	1.016e+03	1.21	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:09	3.875e+02	3.076e+02	1.26	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:39	9.762e+01	7.414e+01	1.32	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:25	1.211e+02	9.845e+01	1.23	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:39	3.727e+02	3.819e+02	0.98	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:03	1.146e+02	8.575e+01	1.34	no	no	1.258
10	Unk	OCDF	42:35	1.387e+02	1.506e+02	0.92	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:05	6.083e+03	7.976e+03	0.76	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:39	1.857e+02	1.038e+02	1.79	no	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:47	9.152e+01	9.335e+01	0.98	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:52	1.360e+02	1.150e+02	1.18	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:06	2.549e+02	2.141e+02	1.19	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:34	3.557e+03	3.360e+03	1.06	yes	no	1.025
17	Unk	OCDD	42:23	4.977e+04	5.555e+04	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:16	7.015e+04	8.899e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:28	1.101e+05	7.030e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:21	1.062e+05	6.729e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	4.370e+04	8.402e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:08	5.058e+04	9.727e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:38	4.839e+04	9.354e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:23	4.203e+04	8.212e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	3.185e+04	7.228e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:02	2.803e+04	6.300e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:03	3.448e+04	4.374e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:38	8.225e+04	5.225e+04	1.57	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:46	7.014e+04	5.533e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:51	6.726e+04	5.343e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:34	6.857e+04	6.503e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	42:22	5.976e+04	6.695e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:30	5.716e+04	7.135e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	7.574e+04	6.025e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:05	5.132e+04				no	1.014

$$\text{OCDD} = \frac{(4.977e+04 + 5.555e+04) \times 4000 \text{ pg} \times 1}{(5.976e+04 + 6.695e+04) \times 10.248 \text{ g} \times 12.8 / 100 \times 1.118} = 2267 \text{ ng/kg}$$

LM 01/17/19

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0247

Run #12 Filename P520001 Samp: 1 Inj: 1 Acquired: 16-JAN-19 16:10:30
Processed: 17-JAN-19 11:28:00 LAB. ID: E1801139-021RE

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	3.92e+06	1.72e+03	2.3e+03	5.07e+06	1.94e+03	2.6e+03
2	1,2,3,7,8-PeCDF	1.92e+05	2.29e+03	8.4e+01	1.37e+05	2.41e+03	5.7e+01
3	2,3,4,7,8-PeCDF	1.47e+05	2.29e+03	6.4e+01	1.01e+05	2.41e+03	4.2e+01
4	1,2,3,4,7,8-HxCDF	2.63e+05	1.18e+03	2.2e+02	2.18e+05	1.65e+03	1.3e+02
5	1,2,3,6,7,8-HxCDF	8.31e+04	1.18e+03	7.0e+01	6.14e+04	1.65e+03	3.7e+01
6	2,3,4,6,7,8-HxCDF	1.94e+04	1.18e+03	1.6e+01	1.54e+04	1.65e+03	9.4e+00
7	1,2,3,7,8,9-HxCDF	2.43e+04	1.18e+03	2.1e+01	1.91e+04	1.65e+03	1.2e+01
8	1,2,3,4,6,7,8-HpCDF	8.18e+04	1.11e+03	7.4e+01	8.57e+04	9.20e+02	9.3e+01
9	1,2,3,4,7,8,9-HpCDF	1.92e+04	1.11e+03	1.7e+01	1.90e+04	9.20e+02	2.1e+01
10	OCDF	2.16e+04	4.08e+02	5.3e+01	2.67e+04	1.68e+03	1.6e+01
11	2,3,7,8-TCDD	1.23e+06	3.51e+03	3.5e+02	1.59e+06	2.39e+03	6.6e+02
12	1,2,3,7,8-PeCDD	3.60e+04	1.12e+03	3.2e+01	2.15e+04	7.56e+02	2.8e+01
13	1,2,3,4,7,8-HxCDD	2.01e+04	1.10e+03	1.8e+01	2.05e+04	2.80e+03	7.3e+00
14	1,2,3,6,7,8-HxCDD	3.26e+04	1.10e+03	3.0e+01	2.31e+04	2.80e+03	8.3e+00
15	1,2,3,7,8,9-HxCDD	5.32e+04	1.10e+03	4.8e+01	4.58e+04	2.80e+03	1.6e+01
16	1,2,3,4,6,7,8-HpCDD	7.50e+05	2.87e+03	2.6e+02	7.16e+05	2.00e+03	3.6e+02
17	OCDD	7.89e+06	8.08e+02	9.8e+03	8.74e+06	1.01e+03	8.6e+03
18	13C-2,3,7,8-TCDF	1.35e+07	9.24e+03	1.5e+03	1.70e+07	4.93e+03	3.4e+03
19	13C-1,2,3,7,8-PeCDF	2.13e+07	1.72e+02	1.2e+05	1.35e+07	9.96e+02	1.4e+04
20	13C-2,3,4,7,8-PeCDF	2.15e+07	1.72e+02	1.2e+05	1.37e+07	9.96e+02	1.4e+04
21	13C-1,2,3,4,7,8-HxCDF	9.64e+06	1.04e+03	9.3e+03	1.85e+07	1.80e+03	1.0e+04
22	13C-1,2,3,6,7,8-HxCDF	1.08e+07	1.04e+03	1.0e+04	2.06e+07	1.80e+03	1.1e+04
23	13C-2,3,4,6,7,8-HxCDF	1.07e+07	1.04e+03	1.0e+04	2.07e+07	1.80e+03	1.1e+04
24	13C-1,2,3,7,8,9-HxCDF	8.92e+06	1.04e+03	8.6e+03	1.73e+07	1.80e+03	9.7e+03
25	13C-1,2,3,4,6,7,8-HpCDF	7.01e+06	3.93e+03	1.8e+03	1.58e+07	2.96e+03	5.3e+03
26	13C-1,2,3,4,7,8,9-HpCDF	5.67e+06	3.93e+03	1.4e+03	1.29e+07	2.96e+03	4.3e+03
27	13C-2,3,7,8-TCDD	6.98e+06	9.33e+03	7.5e+02	8.90e+06	3.80e+03	2.3e+03
28	13C-1,2,3,7,8-PeCDD	1.69e+07	9.88e+02	1.7e+04	1.08e+07	1.63e+03	6.6e+03
29	13C-1,2,3,4,7,8-HxCDD	1.59e+07	1.40e+03	1.1e+04	1.25e+07	1.27e+03	9.8e+03
30	13C-1,2,3,6,7,8-HxCDD	1.40e+07	1.40e+03	1.0e+04	1.12e+07	1.27e+03	8.8e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.42e+07	1.41e+03	1.0e+04	1.36e+07	9.08e+02	1.5e+04
32	13C-OCDD	9.47e+06	9.24e+02	1.0e+04	1.06e+07	7.96e+02	1.3e+04
33	13C-1,2,3,4-TCDD	1.13e+07	9.33e+03	1.2e+03	1.41e+07	3.80e+03	3.7e+03
34	13C-1,2,3,7,8,9-HxCDD	1.59e+07	1.40e+03	1.1e+04	1.25e+07	1.27e+03	9.9e+03
35	37Cl-2,3,7,8-TCDD	1.03e+07	2.39e+03	4.3e+03			

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0247

Entry: 36 Totals Name: Total Tetra-Furans

Run: 12 File: P520001 Sample:1 Injection:1 Function:1

Acquired: 16-JAN-19 16:10:30 Processed: 17-JAN-19 11:28:00

Mass: 303.9020 305.8990 Tot Response: 8.89e+04 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
.	25:21	4.04e+02	5.46e+02	0.74	yes	9.50e+02		n	n
2	25:41	1.04e+03	1.35e+03	0.77	yes	2.38e+03		n	n
3	26:05	2.84e+02	4.01e+02	0.71	yes	6.85e+02		n	n
4	26:22	8.18e+02	1.05e+03	0.78	yes	1.87e+03		n	n
5	27:05	1.07e+03	1.28e+03	0.83	yes	2.35e+03		n	n
6	27:30	9.33e+03	1.23e+04	0.76	yes	2.16e+04		n	n
7	27:45	5.00e+02	5.94e+02	0.84	yes	1.09e+03		n	n
8	28:17	2.18e+04	2.86e+04	0.76	yes	5.05e+04	2,3,7,8-TCDF	n	n
9	28:37	1.50e+03	2.10e+03	0.72	yes	3.60e+03		n	n
10	30:06	1.67e+03	2.19e+03	0.76	yes	3.86e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0247

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 12 File: P520001 Sample:1 Injection:1 Function:1

Acquired: 16-JAN-19 16:10:30 Processed: 17-JAN-19 11:28:00

Mass: 319.8970 321.8940 Tot Response: 2.08e+04 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	25:41	7.03e+01	8.43e+01	0.83	yes	1.55e+02		n	n
2	27:11	2.34e+03	2.95e+03	0.80	yes	5.29e+03		n	n
3	28:08	3.25e+01	3.80e+01	0.85	yes	7.05e+01		n	n
4	29:05	6.08e+03	7.98e+03	0.76	yes	1.41e+04	2,3,7,8-TCDD	n	n
5	29:22	5.40e+02	6.81e+02	0.79	yes	1.22e+03		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0247

Entry: 39 Totals Name: Total Penta-Furans2

Run: 12 File: P520001 Sample:1 Injection:1 Function:2

Acquired: 16-JAN-19 16:10:30 Processed: 17-JAN-19 11:28:00

Mass: 339.8600 341.8570 Tot Response: 4.15e+03 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
.	31:25	1.26e+02	7.68e+01	1.64	yes	2.03e+02		n	y
2	32:28	1.05e+03	7.16e+02	1.46	yes	1.76e+03	1,2,3,7,8-PeCDF	n	n
3	32:43	3.53e+02	2.26e+02	1.56	yes	5.79e+02		n	n
4	33:16	7.01e+01	4.14e+01	1.69	yes	1.12e+02		n	n
5	33:22	8.58e+02	6.31e+02	1.36	yes	1.49e+03	2,3,4,7,8-PeCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0247

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 12 File: P520001 Sample:1 Injection:1 Function:2

Acquired: 16-JAN-19 16:10:30 Processed: 17-JAN-19 11:28:00

Mass: 355.8550 357.8520 Tot Response: 2.89e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	31:34	2.55e+02	1.81e+02	1.41	yes	4.37e+02		n	n
2	32:02	1.34e+03	8.33e+02	1.61	yes	2.17e+03		n	n
3	32:38	9.74e+01	6.31e+01	1.54	yes	1.61e+02		n	n
4	32:44	7.42e+01	4.17e+01	1.78	yes	1.16e+02		n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0247

Entry: 41 Totals Name: Total Hexa-Furans

Run: 12 File: P520001 Sample:1 Injection:1 Function:3

Acquired: 16-JAN-19 16:10:30 Processed: 17-JAN-19 11:28:00

Mass: 373.8210 375.8180 Tot Response: 3.74e+03 RRF: 1.141

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
.	35:05	1.58e+02	1.34e+02	1.18	yes	2.92e+02		n	n
2	35:36	6.45e+01	5.06e+01	1.27	yes	1.15e+02		n	n
3	36:02	1.23e+03	1.02e+03	1.21	yes	2.25e+03	1,2,3,4,7,8-HxCDF	n	n
4	36:09	3.87e+02	3.08e+02	1.26	yes	6.95e+02	1,2,3,6,7,8-HxCDF	n	n
5	36:39	9.76e+01	7.41e+01	1.32	yes	1.72e+02	2,3,4,6,7,8-HxCDF	n	n
5	37:25	1.21e+02	9.85e+01	1.23	yes	2.20e+02	1,2,3,7,8,9-HxCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0247

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 12 File: P520001 Sample:1 Injection:1 Function:3

Acquired: 16-JAN-19 16:10:30 Processed: 17-JAN-19 11:28:00

Mass: 389.8160 391.8130 Tot Response: 1.59e+04 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	35:27	7.13e+03	5.84e+03 1.22	yes	1.30e+04		n	n
2	35:35	3.36e+01	2.73e+01 1.23	yes	6.09e+01		n	n
3	36:11	1.09e+03	8.37e+02 1.30	yes	1.92e+03		n	n
4	36:52	1.36e+02	1.15e+02 1.18	yes	2.51e+02	1,2,3,6,7,8-HxCDD	n	n
5	37:01	1.01e+02	8.91e+01 1.13	yes	1.90e+02		n	n
6	37:06	2.55e+02	2.14e+02 1.19	yes	4.69e+02	1,2,3,7,8,9-HxCDD	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0247

Entry: 43 Totals Name: Total Hepta-Furans

Run: 12 File: P520001 Sample:1 Injection:1 Function:4

Acquired: 16-JAN-19 16:10:30 Processed: 17-JAN-19 11:28:00

Mass: 407.7820 409.7790 Tot Response: 7.55e+02 RRF: 1.308

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:39	3.73e+02	3.82e+02 0.98	yes	7.55e+02	1,2,3,4,6,7,8-HpCDF	n	n

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ALS ENVIRONMENTAL
Peak List Summary

CLIENT ID.
SL0247

Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 12 File: P520001 Sample:1 Injection:1 Function:4

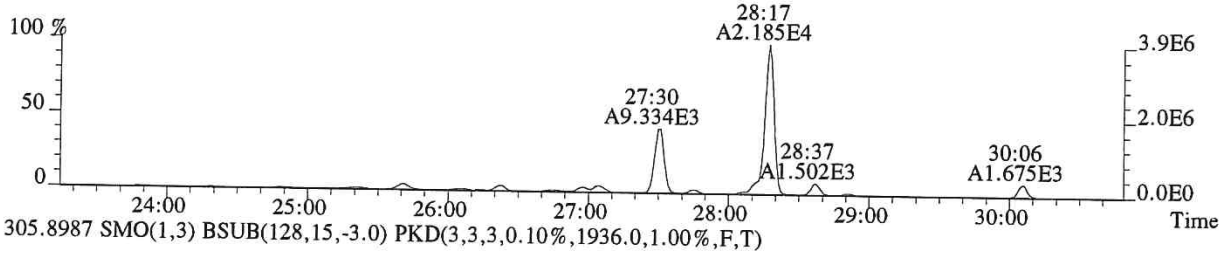
Acquired: 16-JAN-19 16:10:30 Processed: 17-JAN-19 11:28:00

Mass: 423.7770 425.7740 Tot Response: 2.81e+04 RRF: 1.025

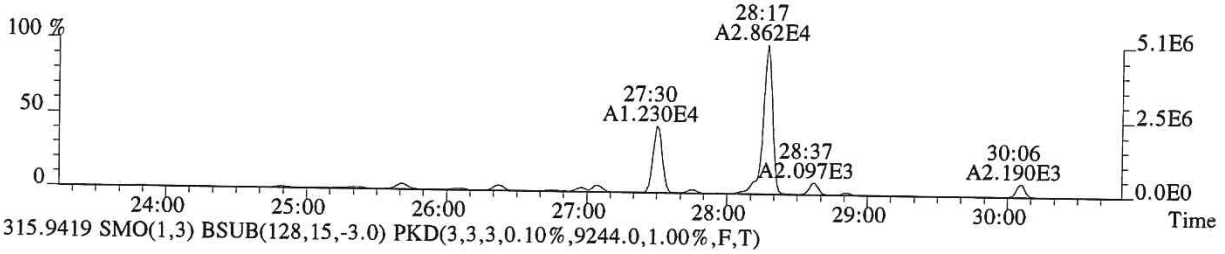
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:54	1.08e+04	1.03e+04 1.05	yes	2.11e+04		n	n
2	39:34	3.56e+03	3.36e+03 1.06	yes	6.92e+03	1,2,3,4,6,7,8-HpCDD	n	n

ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

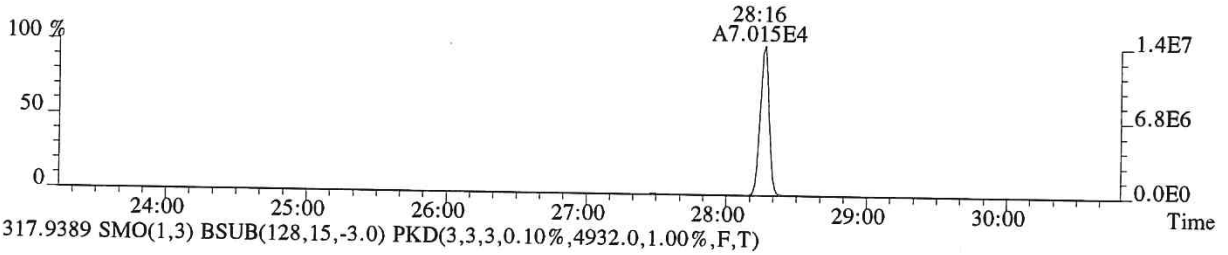
File:P520001 #1-538 Acq:16-JAN-2019 16:10:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-021RE
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1716.0,1.00%,F,T)



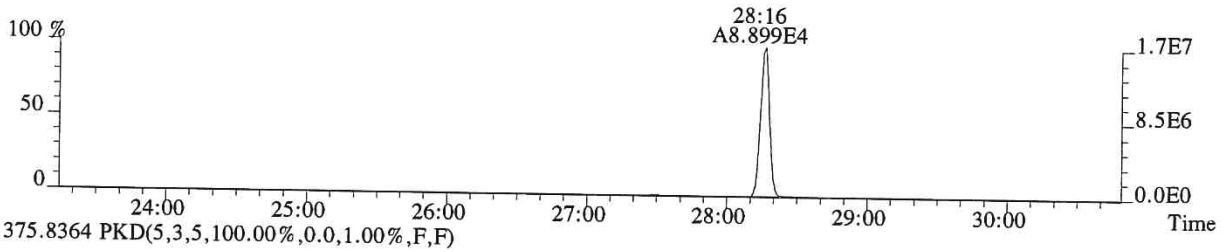
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1936.0,1.00%,F,T)



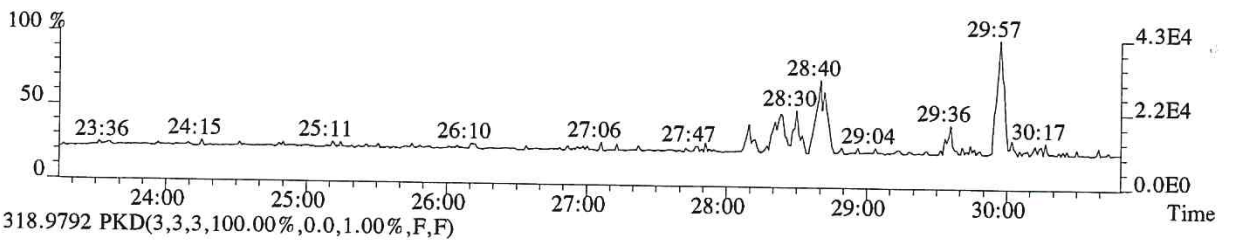
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9244.0,1.00%,F,T)



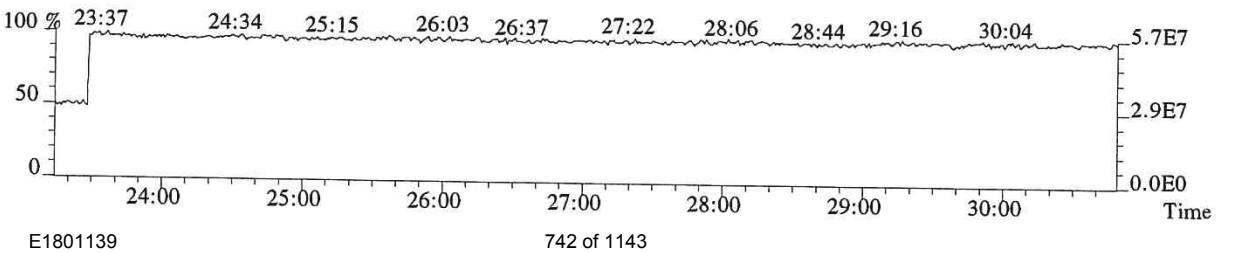
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4932.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

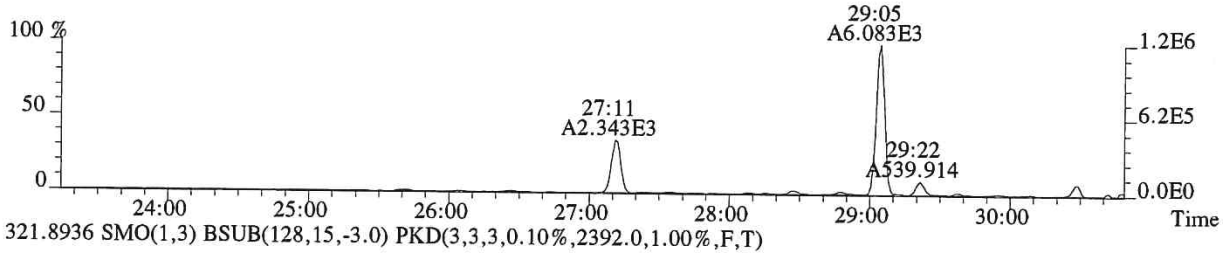


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

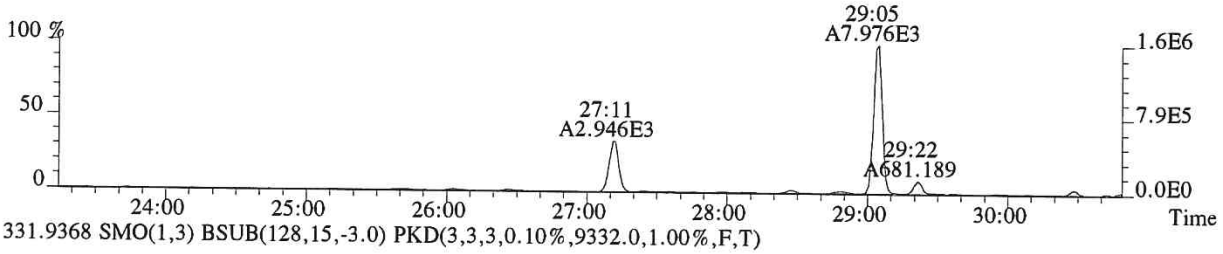


018706

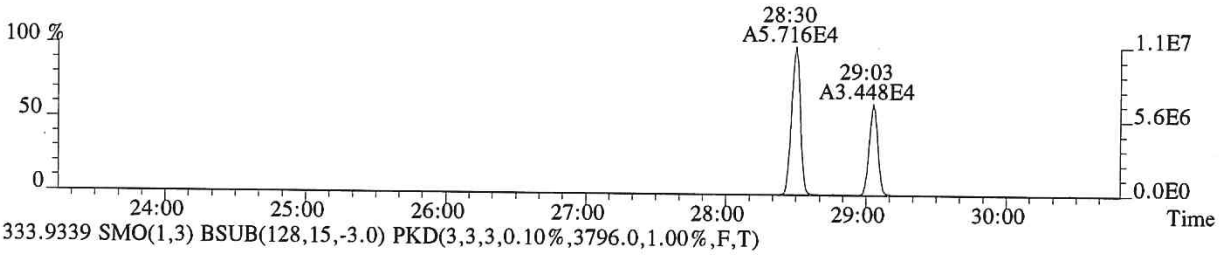
File:P520001 #1-538 Acq:16-JAN-2019 16:10:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-021RE
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3512.0,1.00%,F,T)



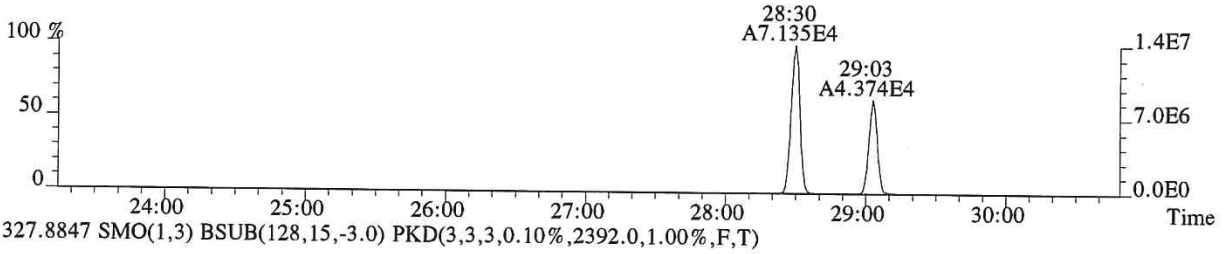
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2392.0,1.00%,F,T)



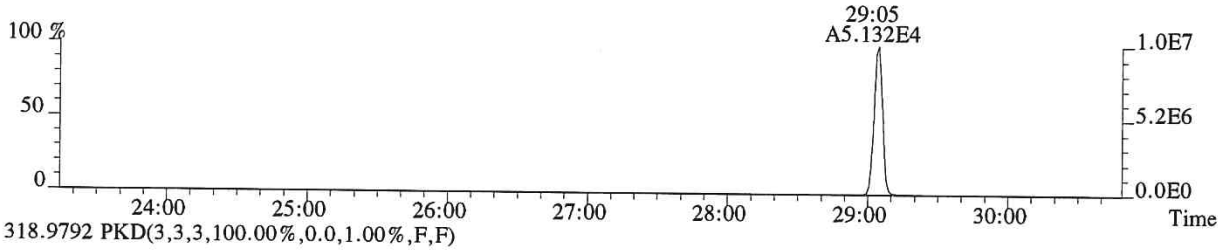
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9332.0,1.00%,F,T)



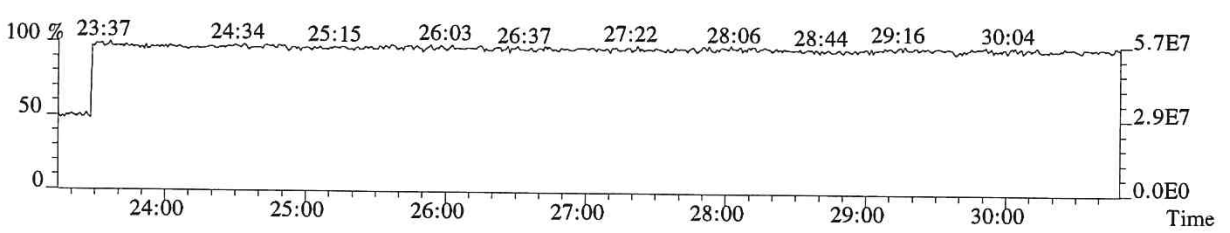
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3796.0,1.00%,F,T)



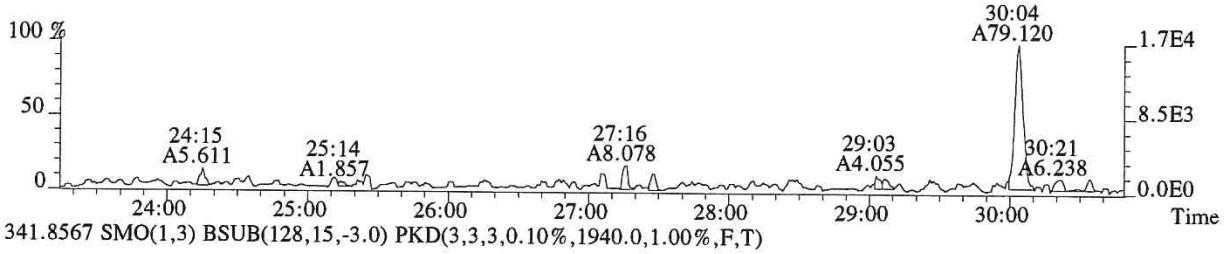
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2392.0,1.00%,F,T)



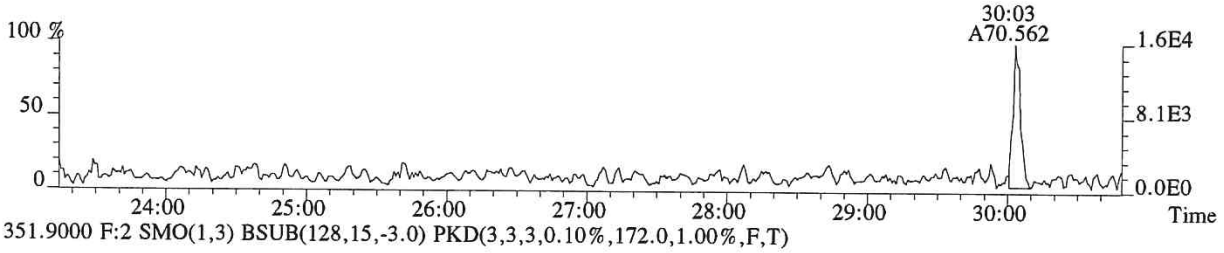
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



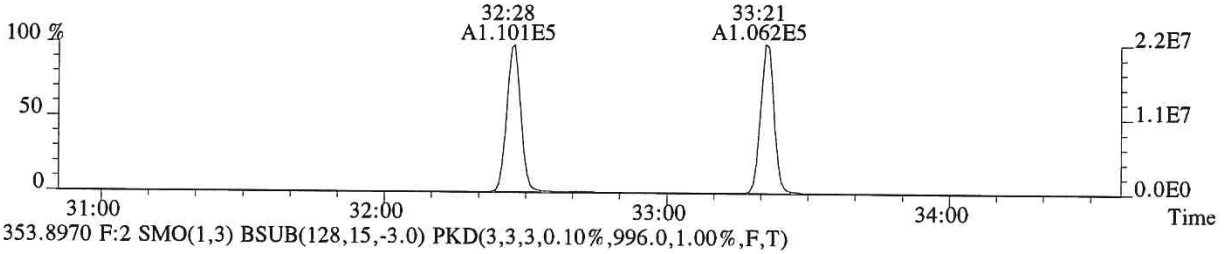
File:P520001 #1-538 Acq:16-JAN-2019 16:10:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-021RE
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,824.0,1.00%,F,T)



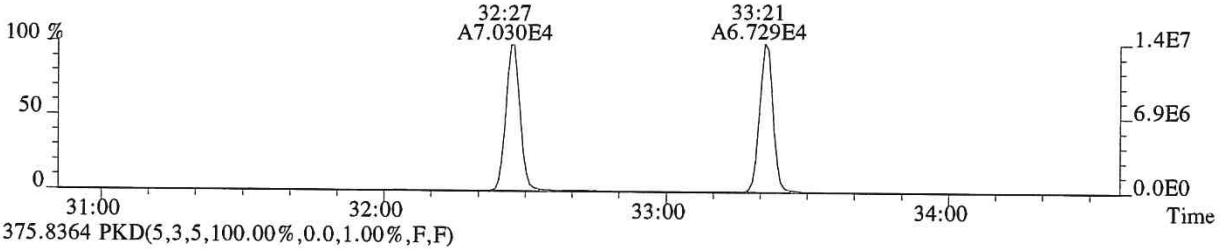
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1940.0,1.00%,F,T)



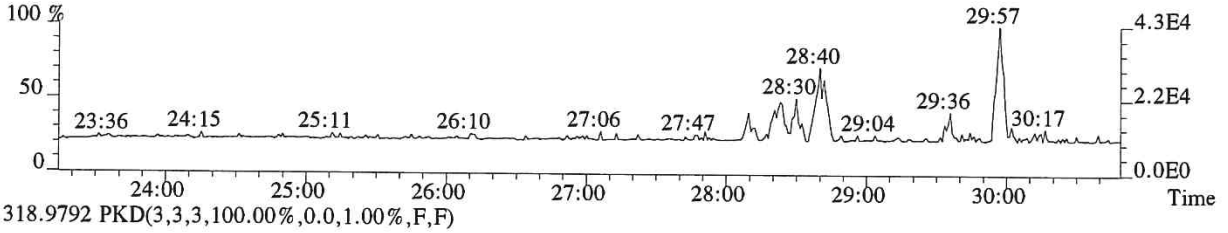
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,172.0,1.00%,F,T)



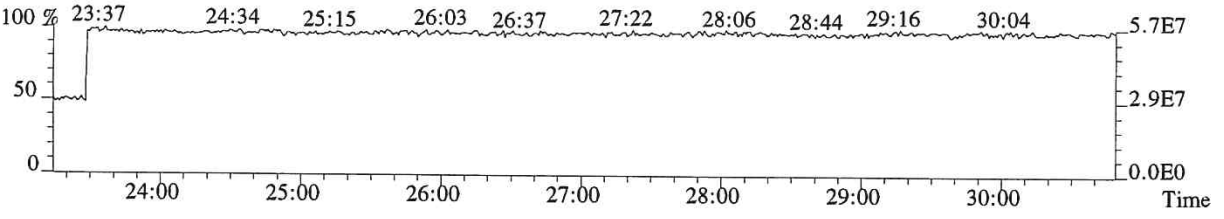
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,996.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

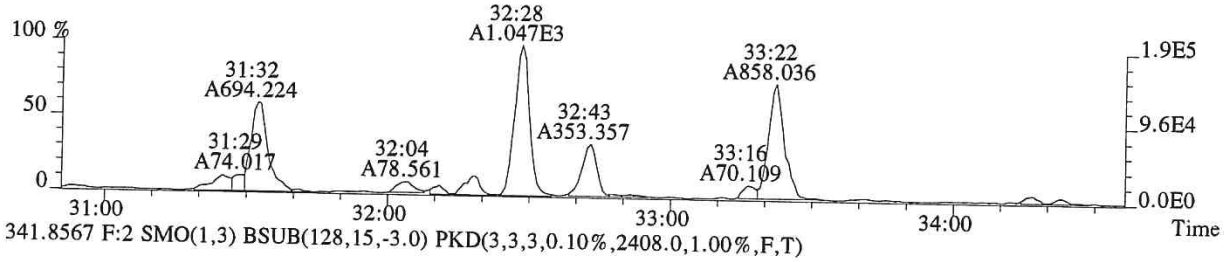


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

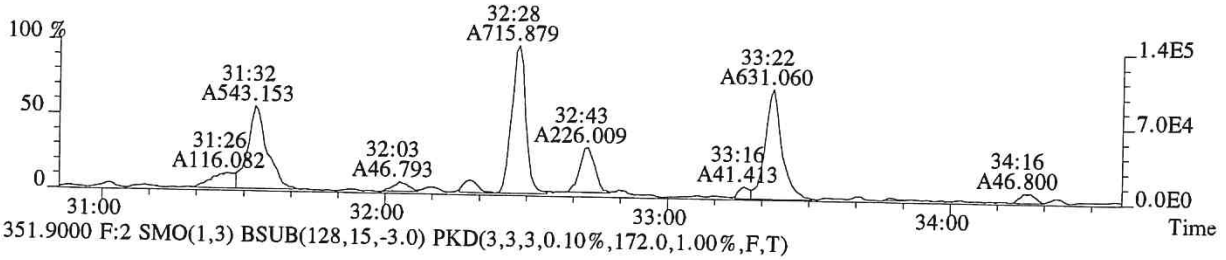


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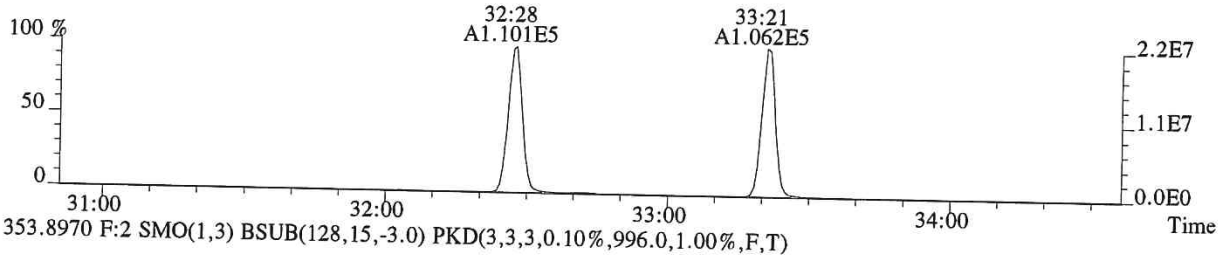
File:P520001 #1-339 Acq:16-JAN-2019 16:10:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-021RE
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2292.0,1.00%,F,T)



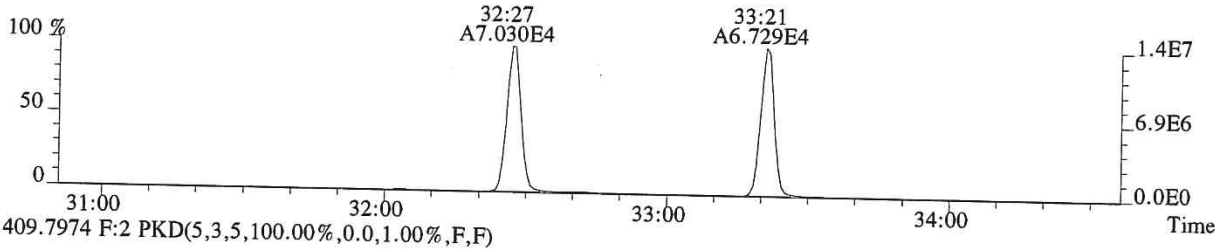
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2408.0,1.00%,F,T)



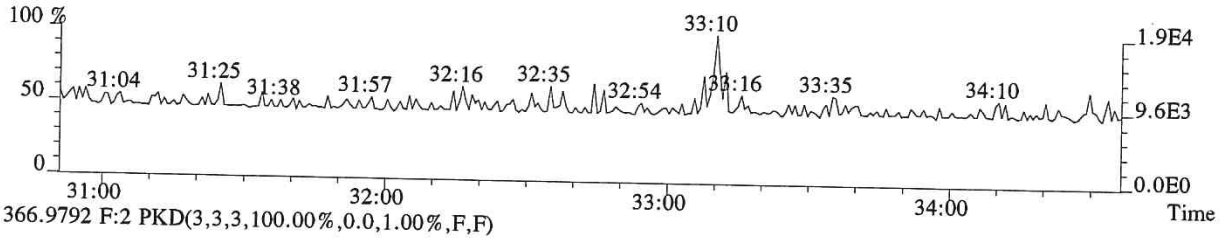
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,172.0,1.00%,F,T)



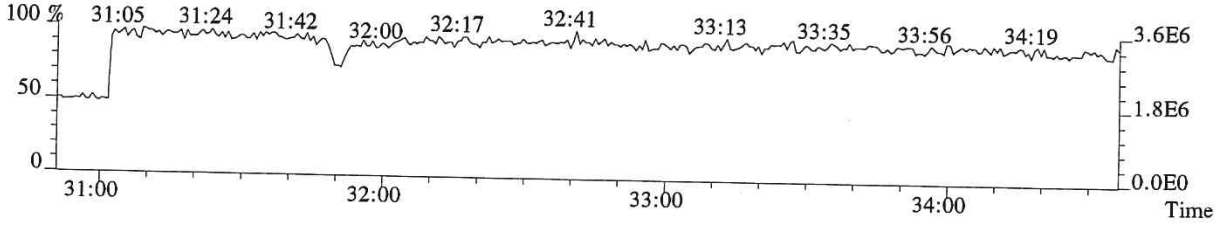
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,996.0,1.00%,F,T)



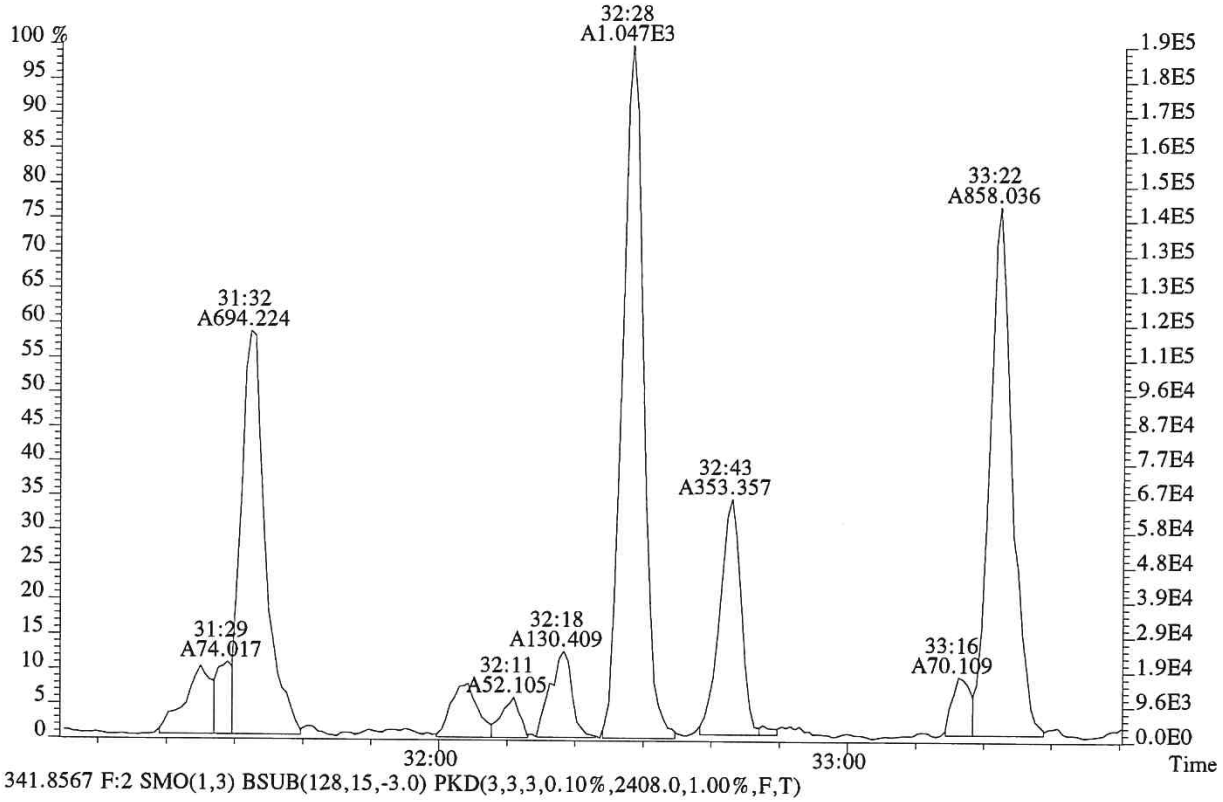
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



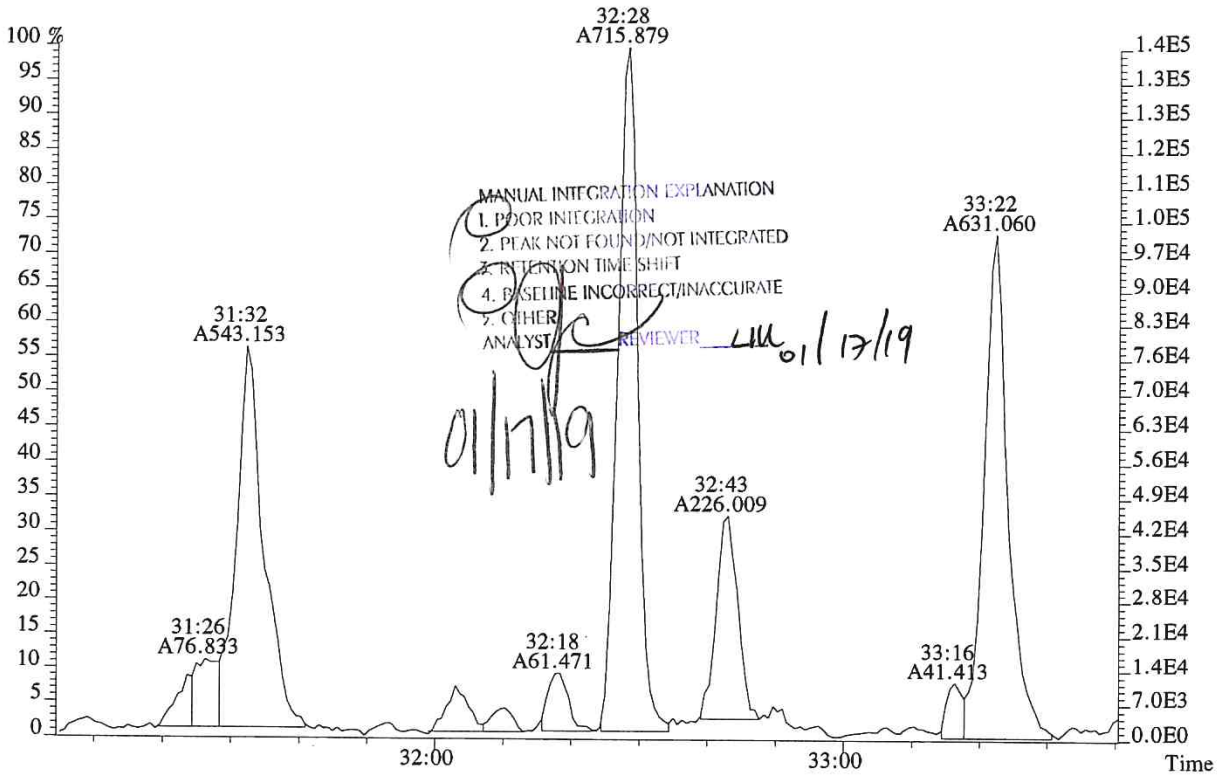
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P520001 #1-339 Acq:16-JAN-2019 16:10:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-021RE
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2292.0,1.00%,F,T)

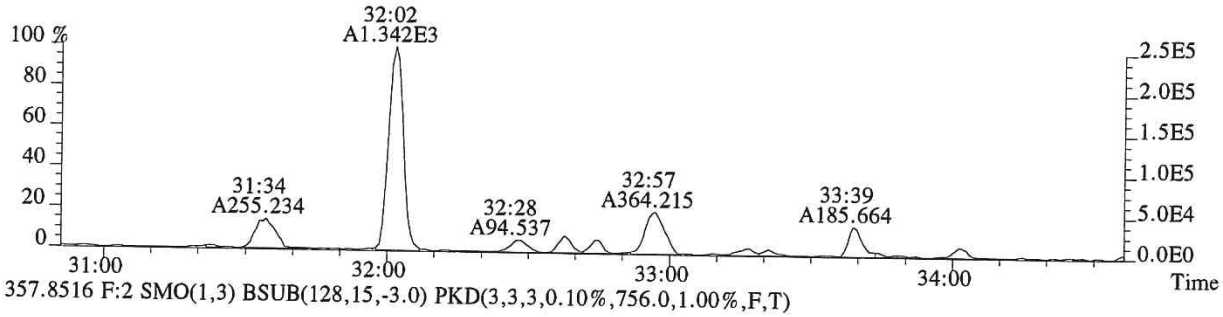


341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2408.0,1.00%,F,T)

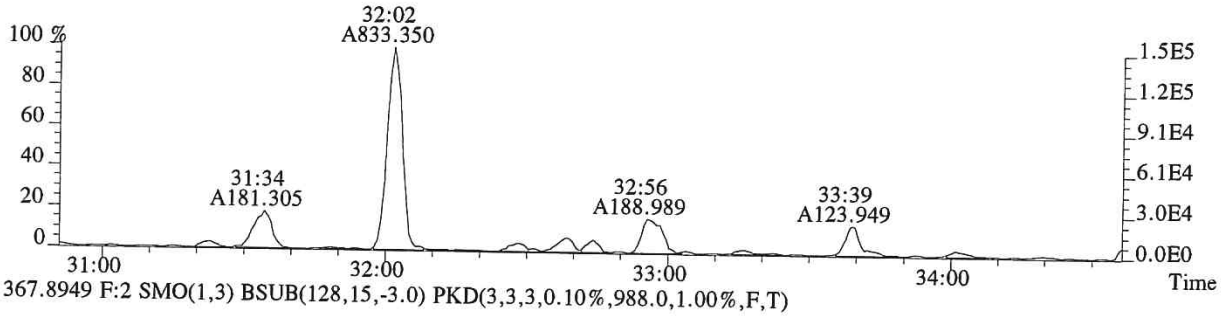


018710

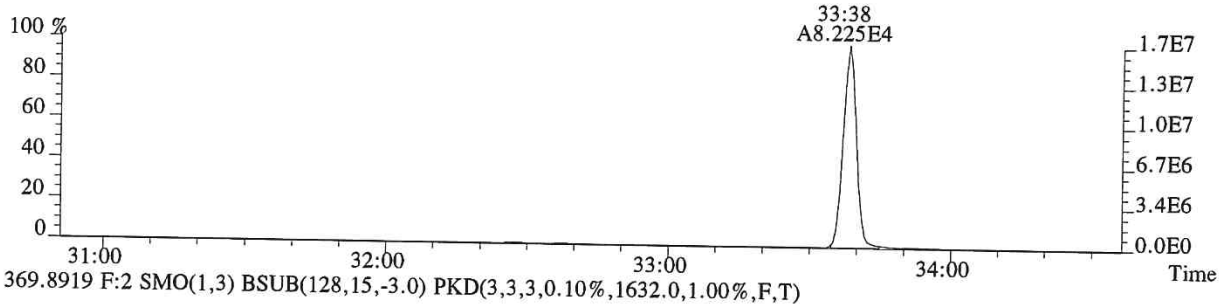
File:P520001 #1-339 Acq:16-JAN-2019 16:10:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-021RE
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1116.0,1.00%,F,T)



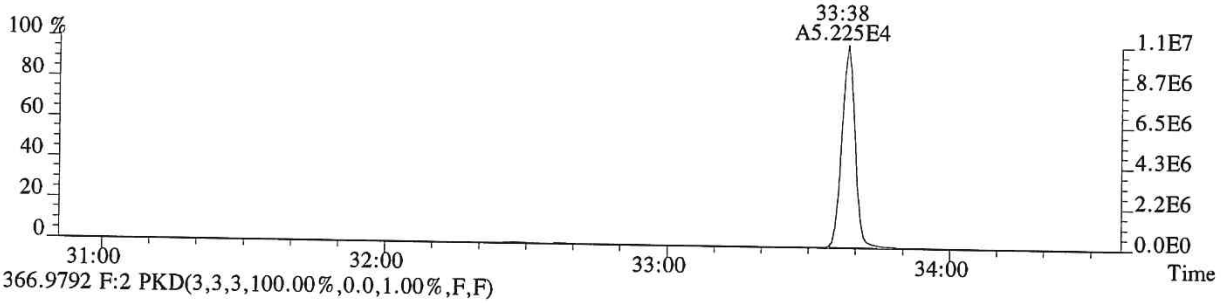
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,756.0,1.00%,F,T)



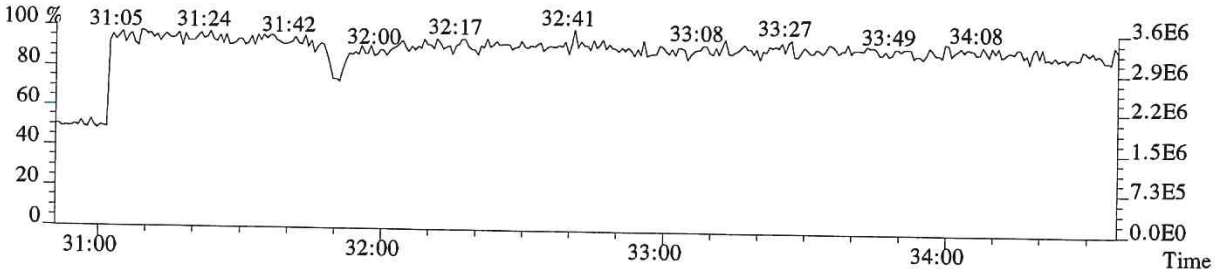
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,988.0,1.00%,F,T)



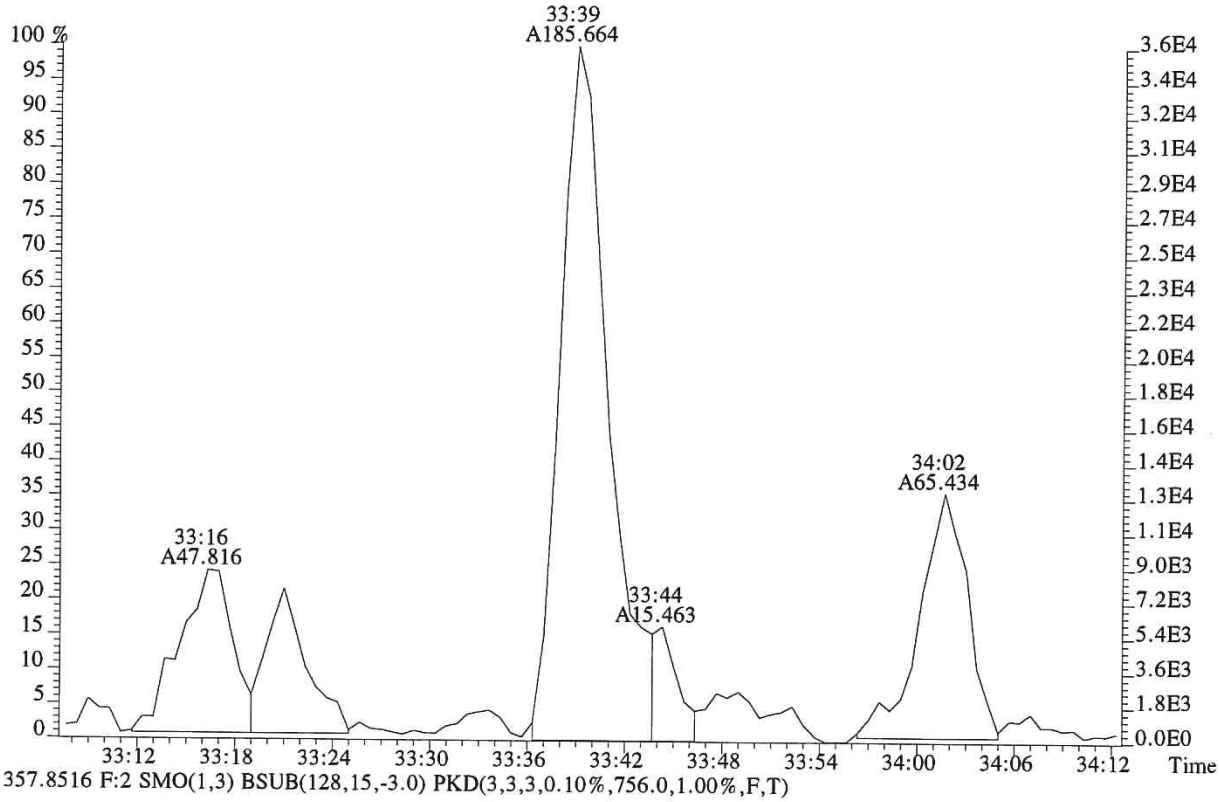
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1632.0,1.00%,F,T)



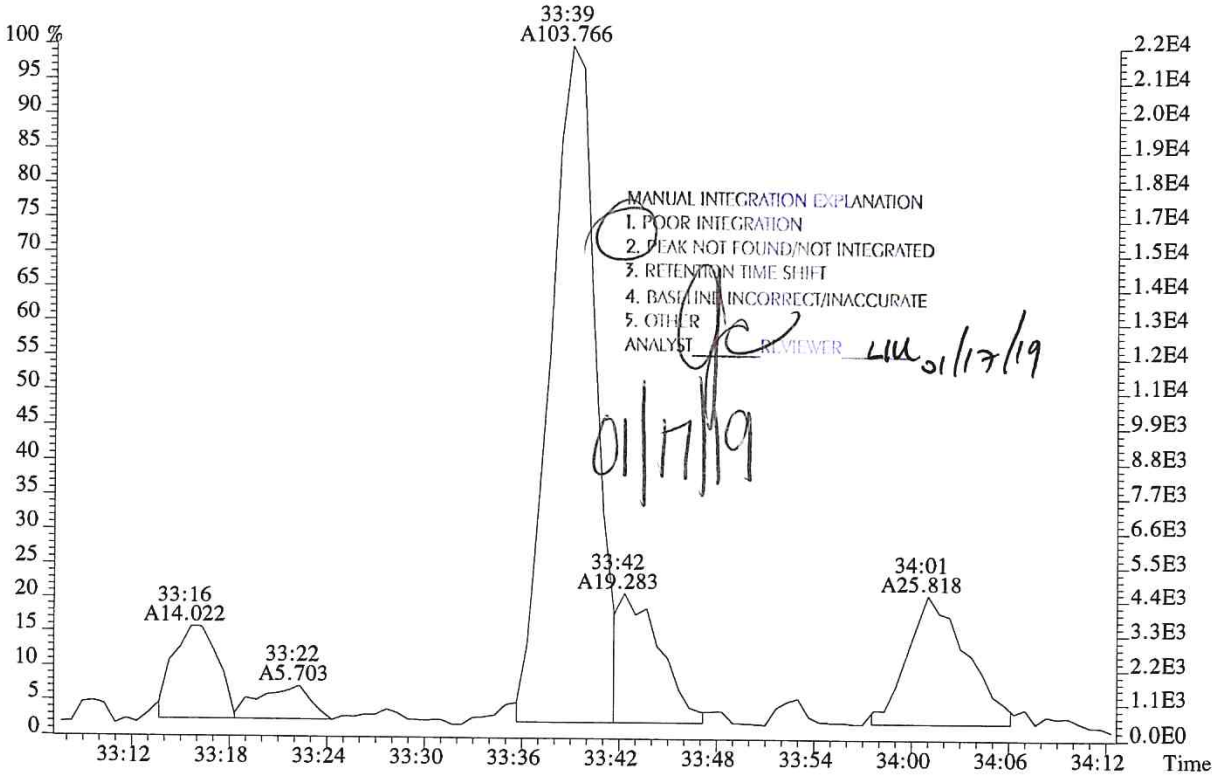
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P520001 #1-339 Acq:16-JAN-2019 16:10:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-021RE
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1116.0,1.00%,F,T)

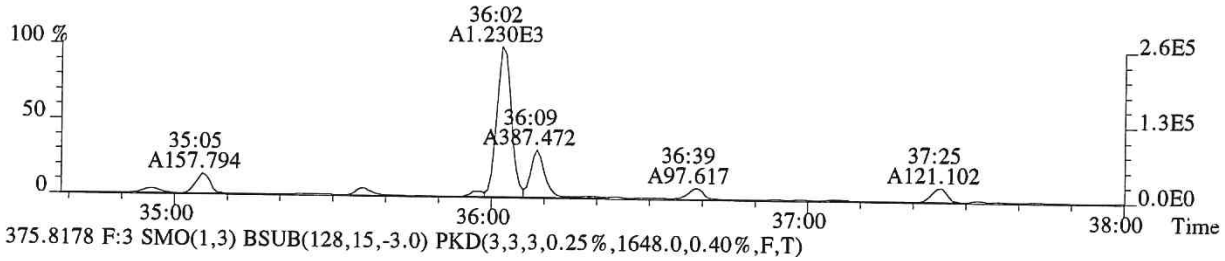


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,756.0,1.00%,F,T)

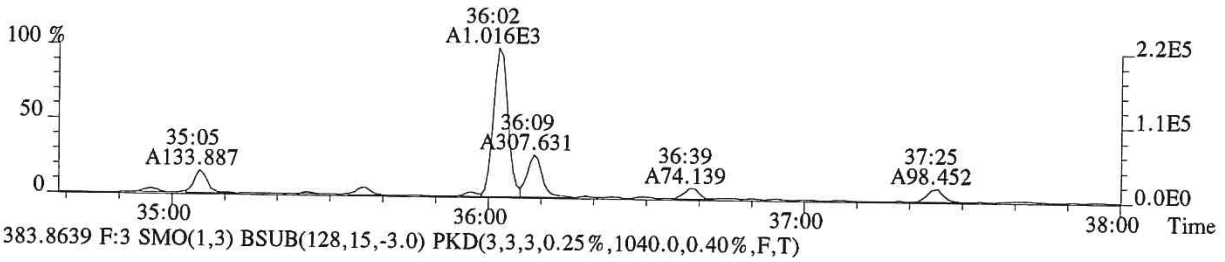


018712

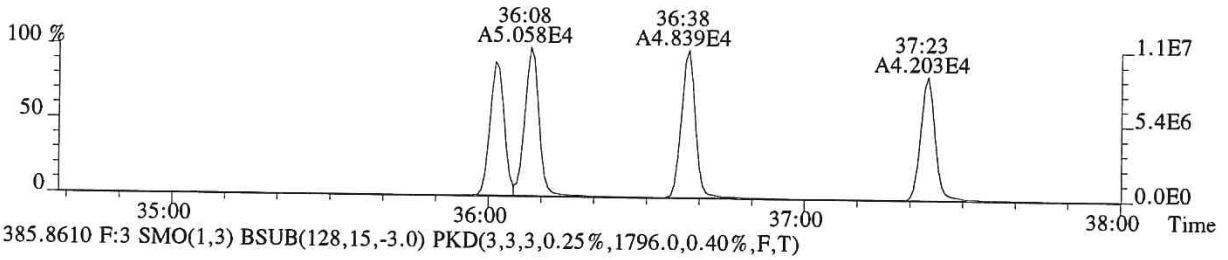
File:P520001 #1-303 Acq:16-JAN-2019 16:10:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-021RE
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1184.0,0.40%,F,T)



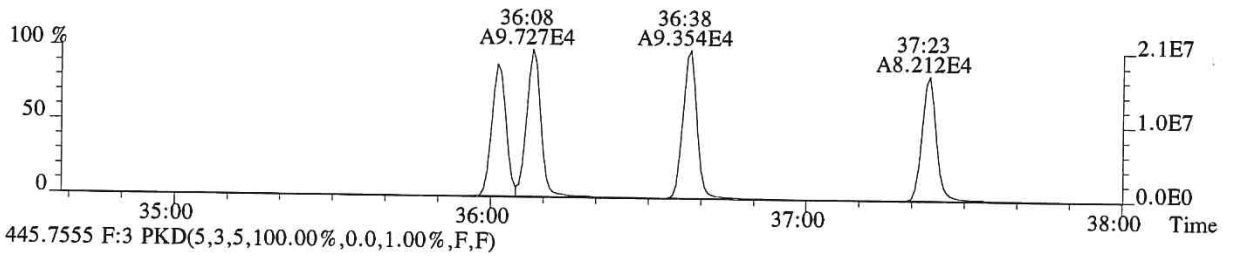
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1648.0,0.40%,F,T)



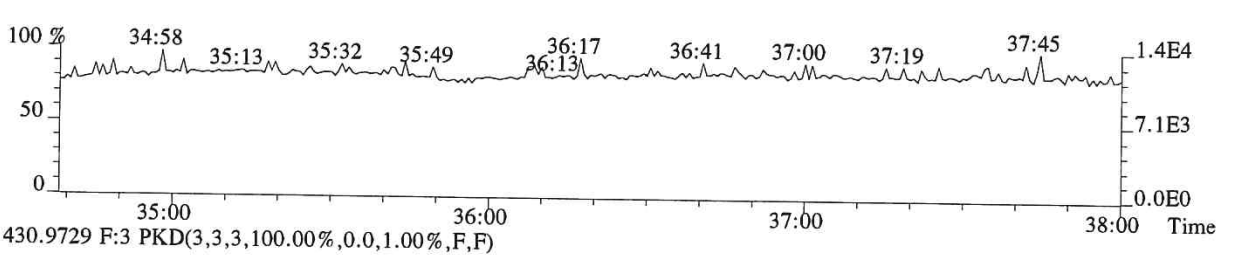
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1040.0,0.40%,F,T)



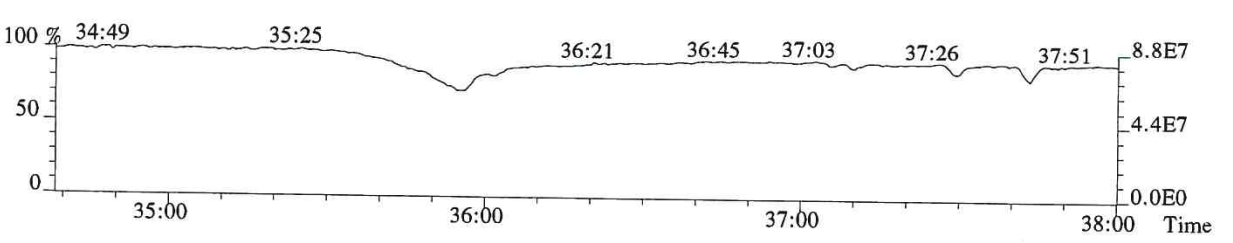
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1796.0,0.40%,F,T)



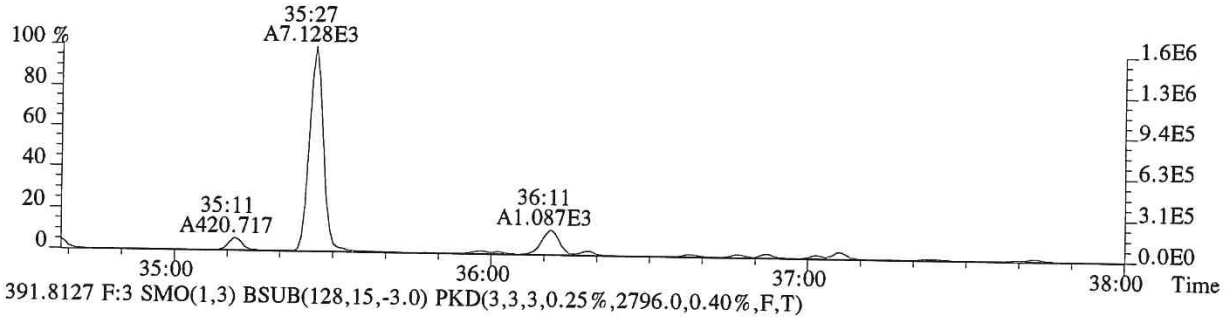
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



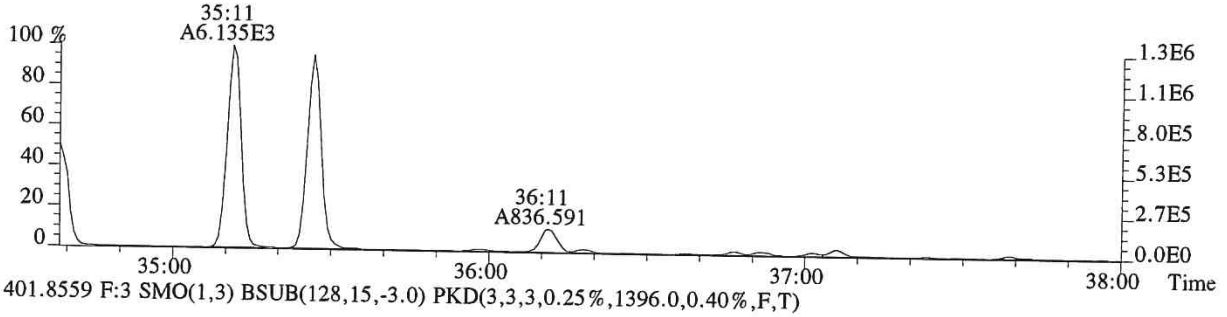
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



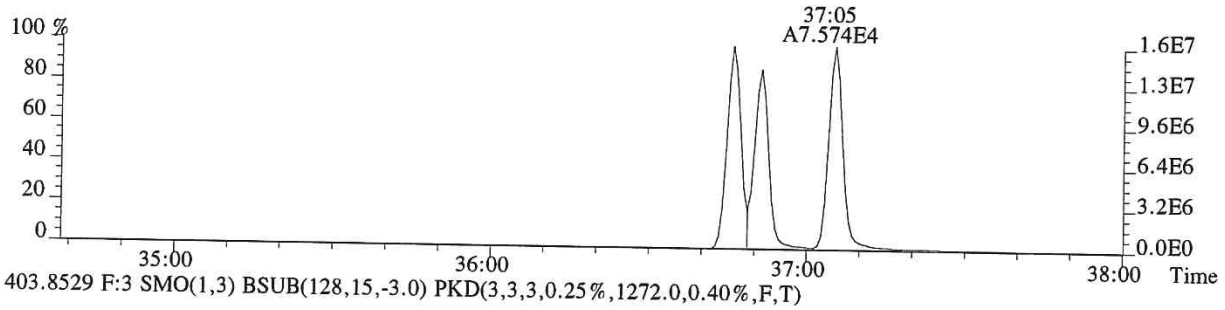
File:P520001 #1-303 Acq:16-JAN-2019 16:10:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-021RE
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1104.0,0.40%,F,T)



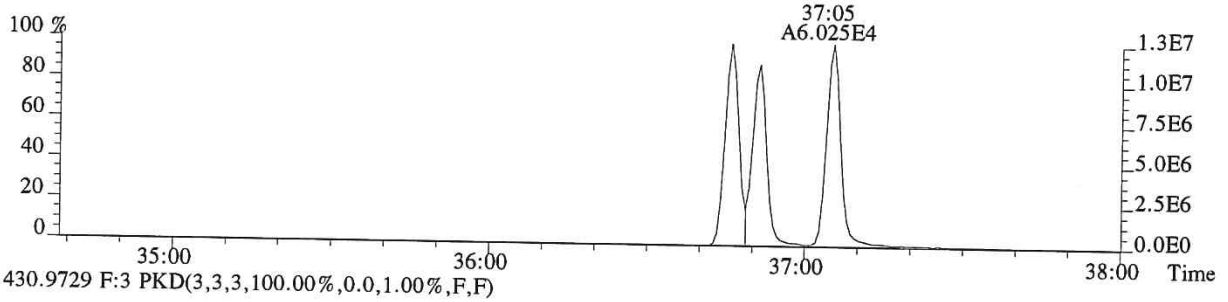
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2796.0,0.40%,F,T)



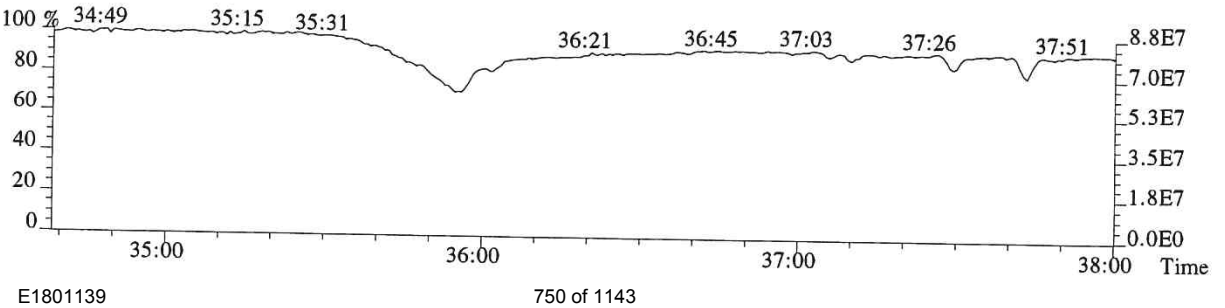
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1396.0,0.40%,F,T)



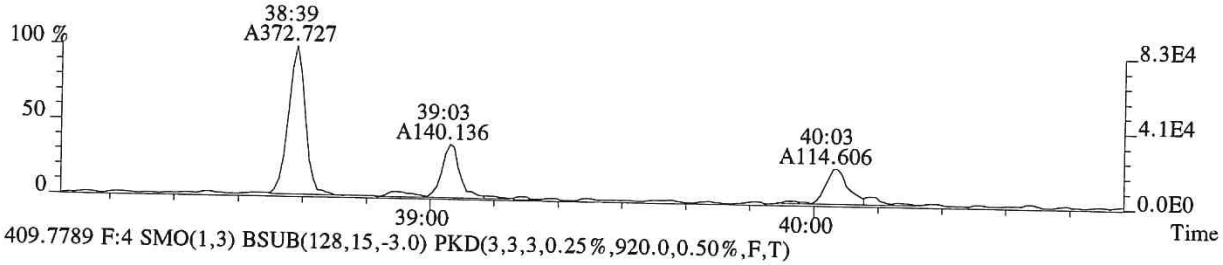
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1272.0,0.40%,F,T)



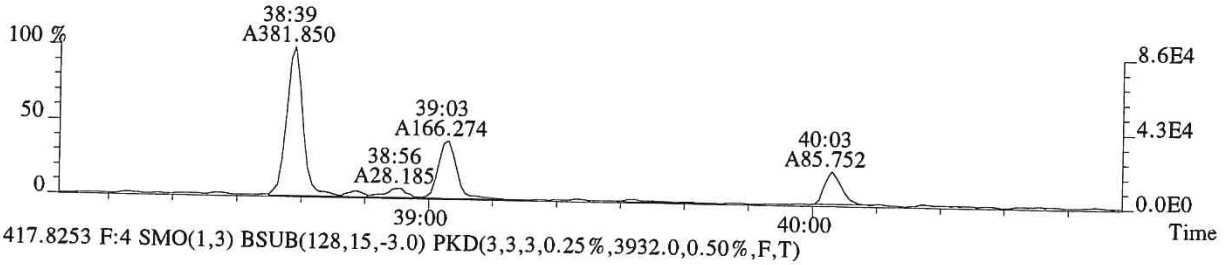
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



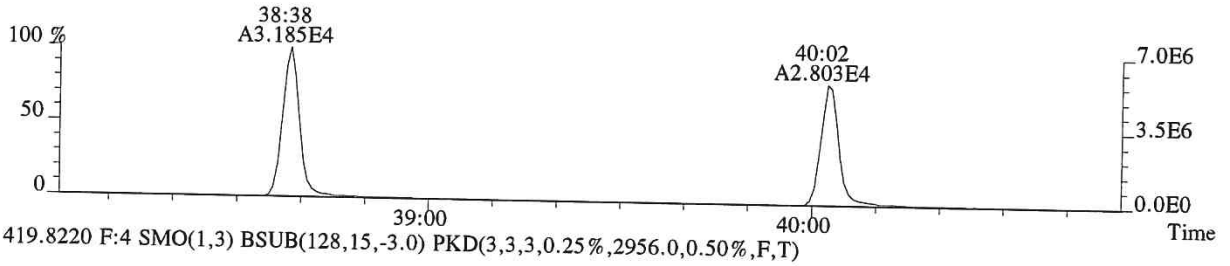
File:P520001 #1-250 Acq:16-JAN-2019 16:10:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-021RE
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1112.0,0.50%,F,T)



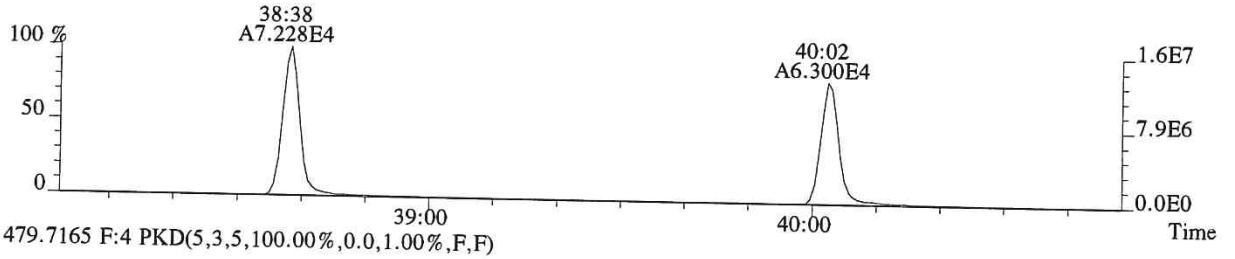
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,920.0,0.50%,F,T)



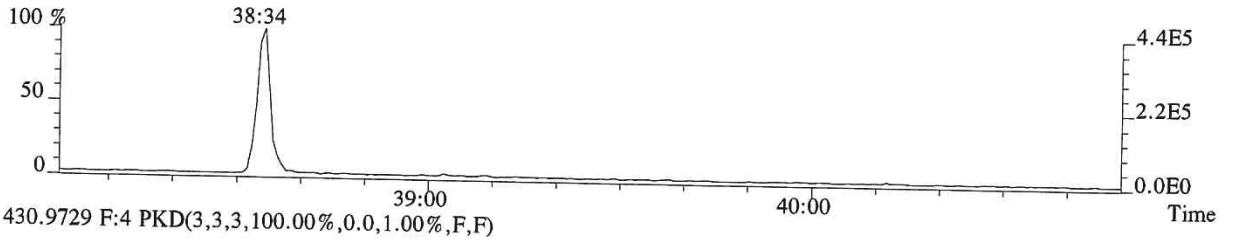
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3932.0,0.50%,F,T)



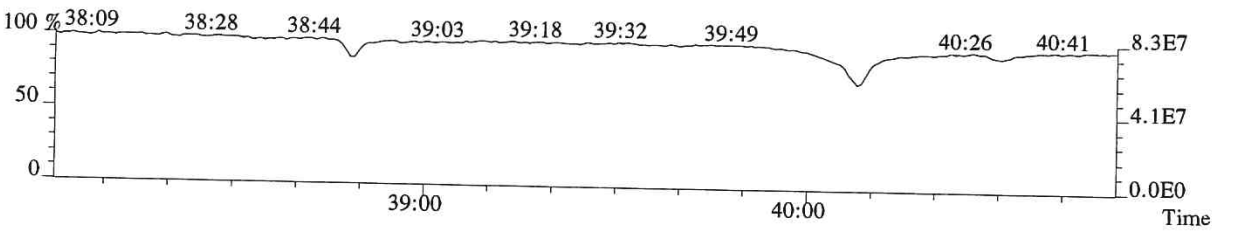
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2956.0,0.50%,F,T)



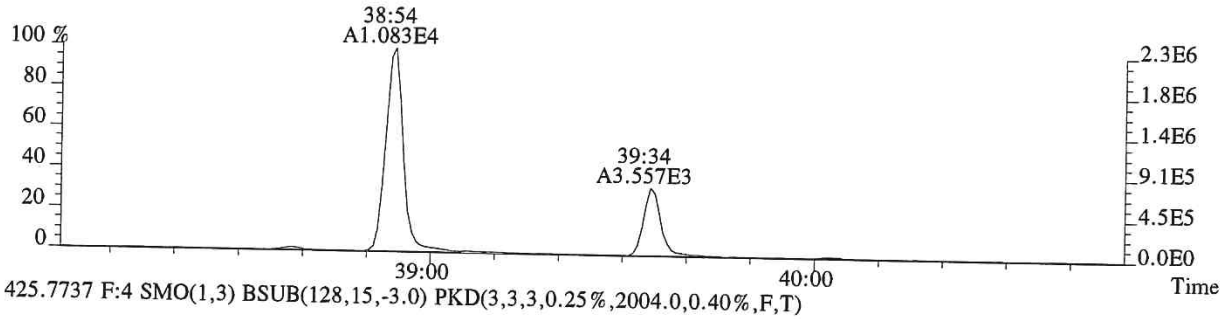
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



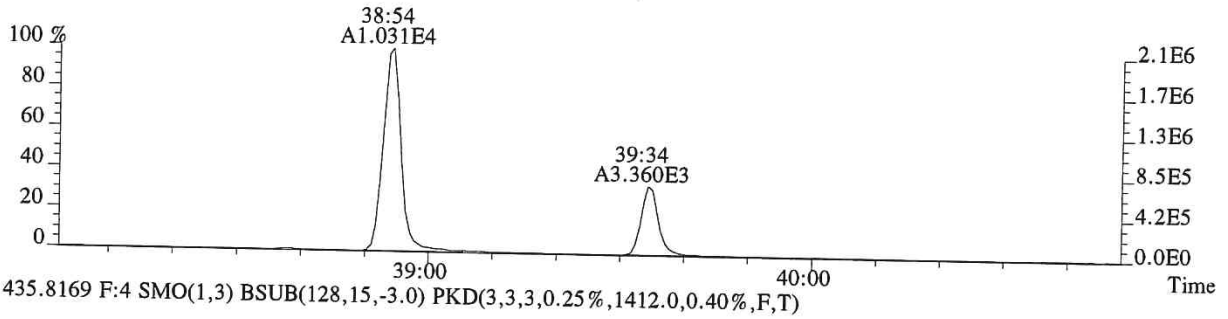
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



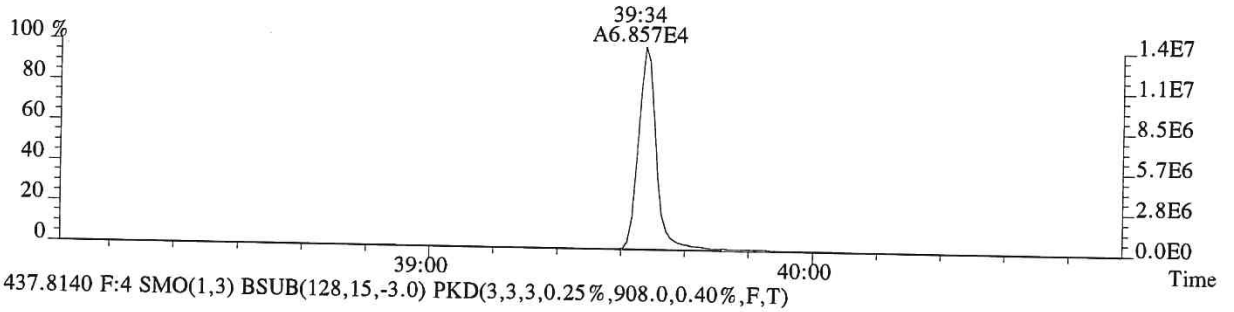
File:P520001 #1-250 Acq:16-JAN-2019 16:10:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-021RE
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2872.0,0.40%,F,T)



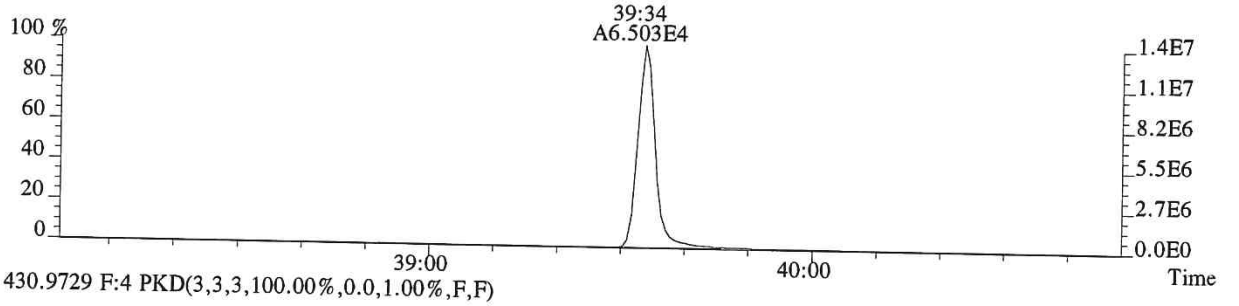
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2004.0,0.40%,F,T)



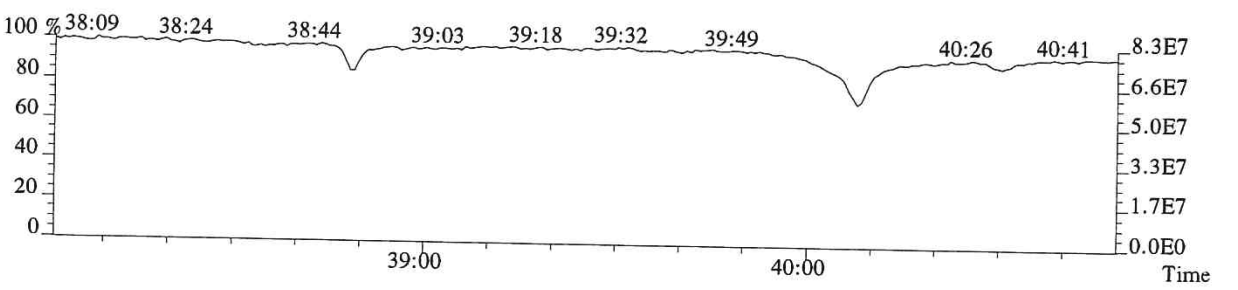
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1412.0,0.40%,F,T)



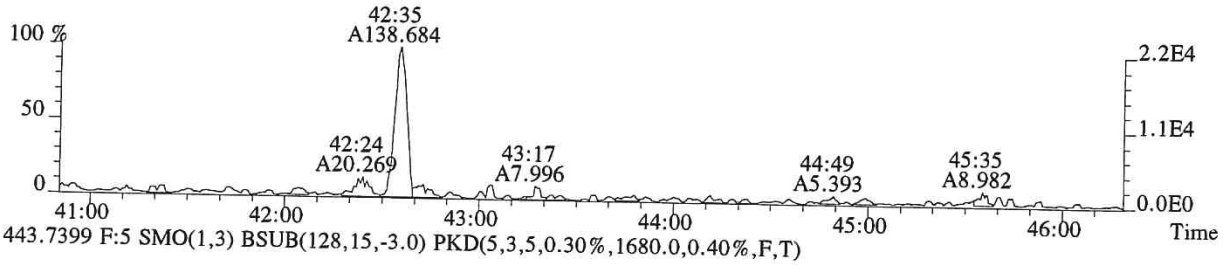
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,908.0,0.40%,F,T)



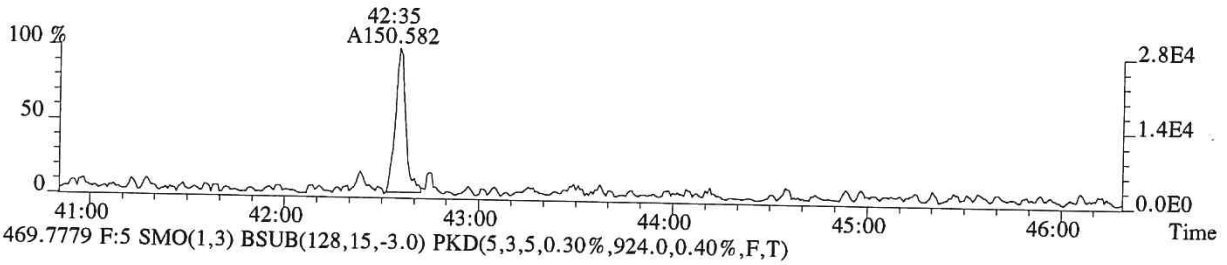
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



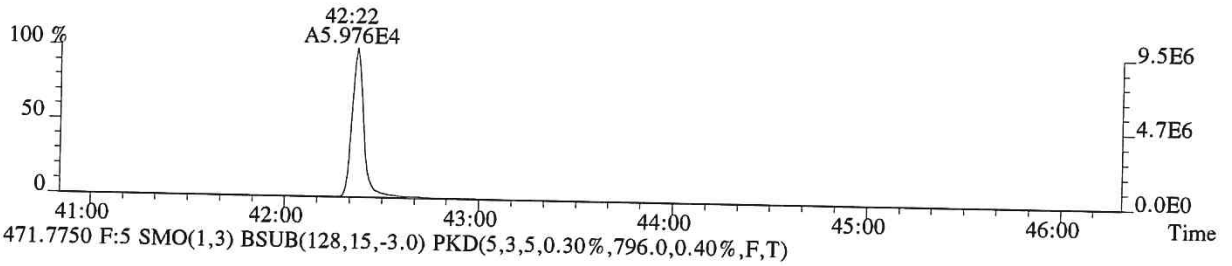
File:P520001 #1-493 Acq:16-JAN-2019 16:10:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-021RE
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,408.0,0.40%,F,T)



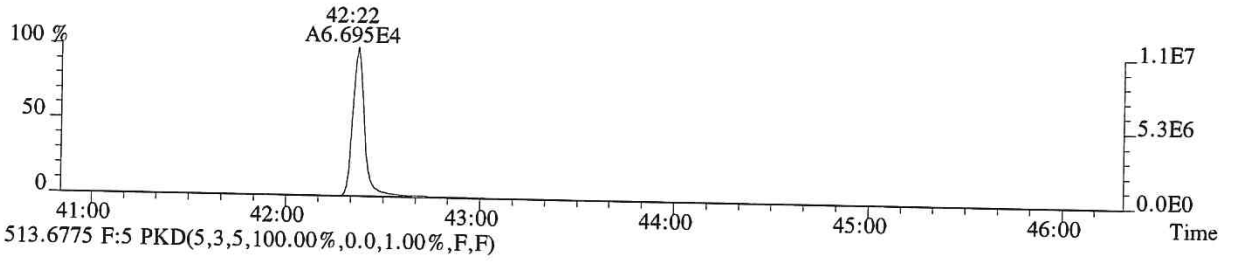
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1680.0,0.40%,F,T)



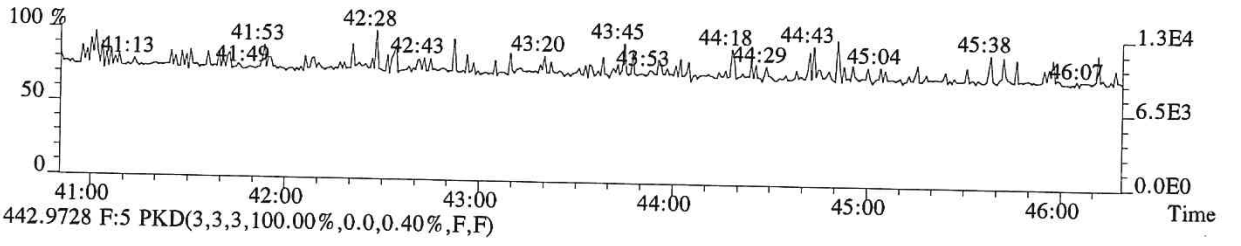
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,924.0,0.40%,F,T)



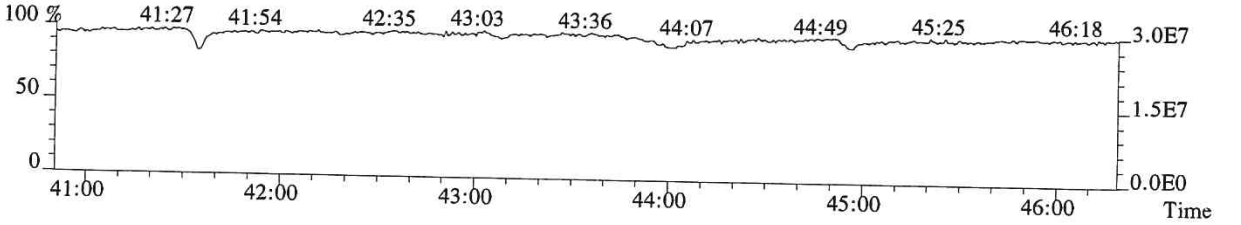
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,796.0,0.40%,F,T)



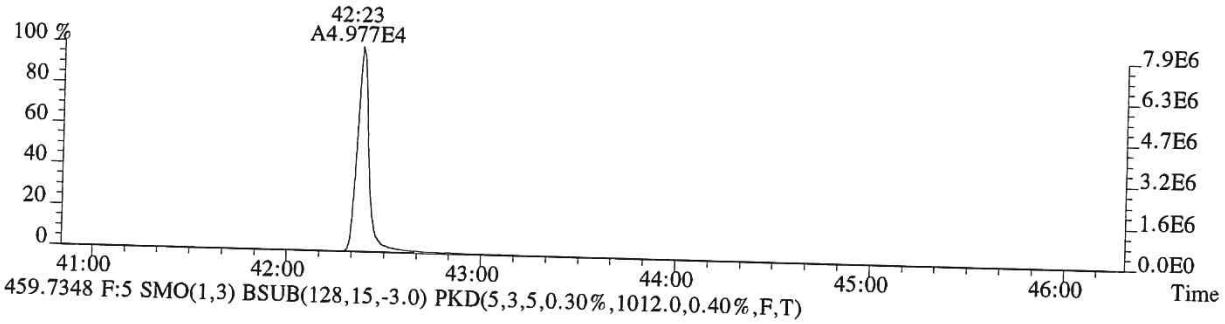
513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



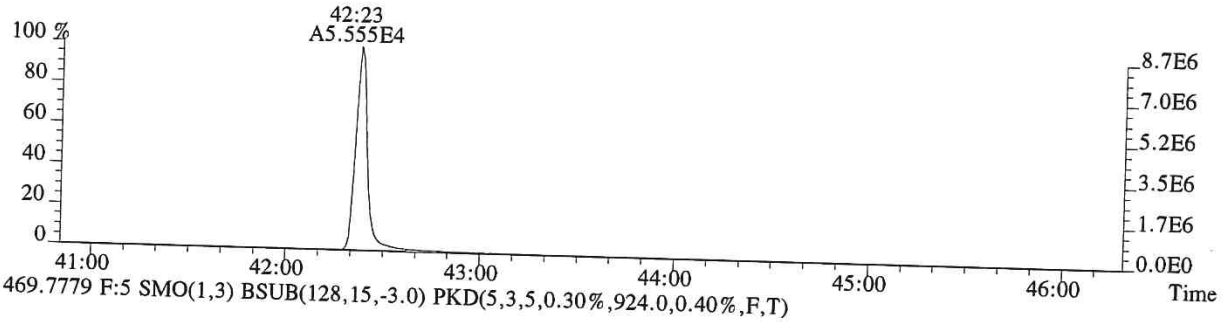
442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



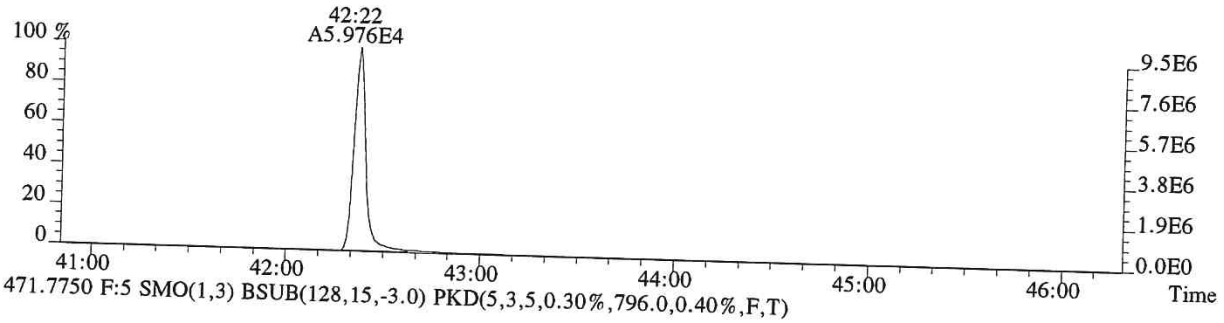
File:P520001 #1-493 Acq:16-JAN-2019 16:10:30 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-021RE
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,808.0,0.40%,F,T)



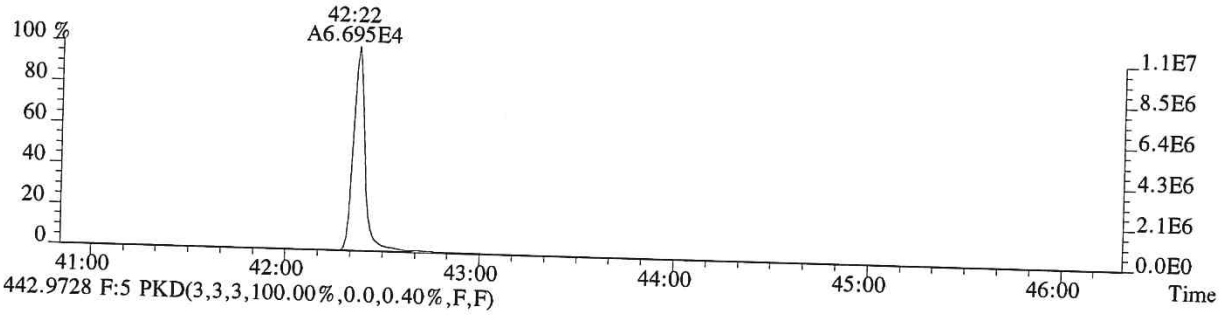
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1012.0,0.40%,F,T)



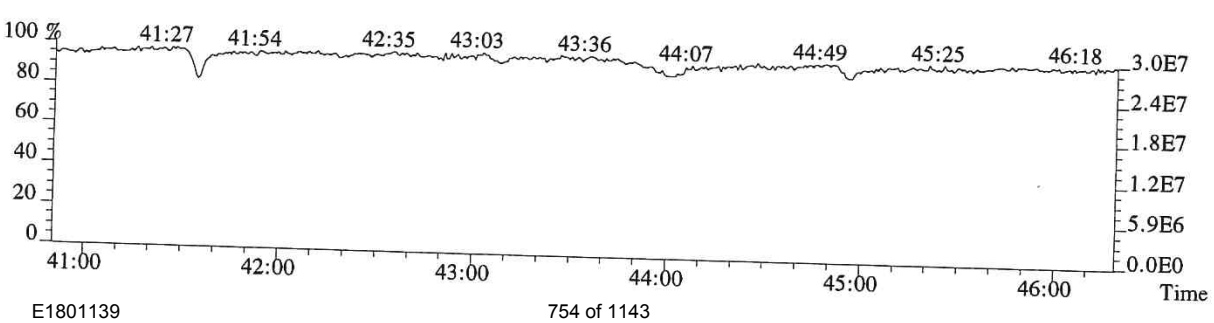
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,924.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,796.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
SL0248

Run #13 Filename P520002 Samp: 1 Inj: 1 Acquired: 16-JAN-19 16:59:48
Processed: 17-JAN-19 11:28:00 Sample ID: E1801139-022RE

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:16	5.148e+02	6.669e+02	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:27	9.007e+01	3.975e+01	2.27	no	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:22	9.335e+01	7.362e+01	1.27	no	yes	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:01	6.533e+01	6.786e+01	0.96	no	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:08	7.163e+01	4.615e+01	1.55	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:37	4.484e+01	4.539e+01	0.99	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:23	3.513e+01	2.166e+01	1.62	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:38	9.549e+01	9.619e+01	0.99	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:02	1.069e+01	2.407e+01	0.44	no	no	1.258
10	Unk	OCDF	42:35	3.538e+01	3.357e+01	1.05	no	no	1.359
11	Unk	2,3,7,8-TCDD	29:04	1.184e+02	1.944e+02	0.61	no	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:38	9.490e+01	7.942e+01	1.19	no	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:45	9.290e+01	1.041e+02	0.89	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:51	1.961e+02	1.329e+02	1.48	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:05	2.729e+02	2.008e+02	1.36	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:34	3.568e+03	3.468e+03	1.03	yes	no	1.025
17	Unk	OCDD	42:22	4.700e+04	5.264e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:16	6.350e+04	7.971e+04	0.80	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:26	1.050e+05	6.636e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:20	1.016e+05	6.455e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	4.473e+04	8.556e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:07	5.033e+04	9.490e+04	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:37	4.769e+04	9.150e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:22	4.148e+04	7.963e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	3.119e+04	6.926e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:01	2.873e+04	6.343e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:02	3.137e+04	4.004e+04	0.78	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:38	7.974e+04	5.068e+04	1.57	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:45	6.734e+04	5.321e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:50	6.785e+04	5.335e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:33	6.620e+04	6.253e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:21	5.579e+04	6.217e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:29	5.704e+04	7.194e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	7.232e+04	5.951e+04	1.22	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:04	4.768e+04				no	1.014

$$\text{OCDD} = \frac{(4.700e{+}04 + 5.264e{+}04) \times 4000 \text{ pg} \times 1}{(5.579e{+}04 + 6.217e{+}04) \times 10.247 \text{ g} \times 76.5 / 100 \times 1.118} = 385.5 \text{ ng/kg}$$

4MO 1/17/19

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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
SL0248

Run #13 Filename P520002 Samp: 1 Inj: 1 Acquired: 16-JAN-19 16:59:48
Processed: 17-JAN-19 11:28:00 LAB. ID: E1801139-022RE

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.04e+04	1.68e+03	4.8e+01	1.18e+05	2.09e+03	5.7e+01
2	1,2,3,7,8-PeCDF	1.45e+04	7.92e+02	1.8e+01	1.04e+04	2.19e+03	4.7e+00
3	2,3,4,7,8-PeCDF	1.64e+04	7.92e+02	2.1e+01	1.42e+04	2.19e+03	6.5e+00
4	1,2,3,4,7,8-HxCDF	1.48e+04	1.28e+03	1.2e+01	1.37e+04	1.23e+03	1.1e+01
5	1,2,3,6,7,8-HxCDF	1.53e+04	1.28e+03	1.2e+01	8.39e+03	1.23e+03	6.8e+00
6	2,3,4,6,7,8-HxCDF	8.60e+03	1.28e+03	6.7e+00	1.01e+04	1.23e+03	8.2e+00
7	1,2,3,7,8,9-HxCDF	8.48e+03	1.28e+03	6.6e+00	5.24e+03	1.23e+03	4.3e+00
8	1,2,3,4,6,7,8-HpCDF	2.11e+04	8.28e+02	2.5e+01	2.04e+04	6.36e+02	3.2e+01
9	1,2,3,4,7,8,9-HpCDF	3.06e+03	8.28e+02	3.7e+00	6.06e+03	6.36e+02	9.5e+00
10	OCDF	6.05e+03	6.64e+02	9.1e+00	5.40e+03	1.30e+03	4.2e+00
11	2,3,7,8-TCDD	2.52e+04	3.54e+03	7.1e+00	4.16e+04	1.47e+03	2.8e+01
12	1,2,3,7,8-PeCDD	1.83e+04	1.22e+03	1.5e+01	1.40e+04	3.72e+02	3.8e+01
13	1,2,3,4,7,8-HxCDD	2.01e+04	5.68e+02	3.5e+01	2.24e+04	1.91e+03	1.2e+01
14	1,2,3,6,7,8-HxCDD	4.18e+04	5.68e+02	7.4e+01	2.95e+04	1.91e+03	1.5e+01
15	1,2,3,7,8,9-HxCDD	5.79e+04	5.68e+02	1.0e+02	4.48e+04	1.91e+03	2.3e+01
16	1,2,3,4,6,7,8-HpCDD	6.99e+05	1.20e+03	5.8e+02	6.67e+05	1.67e+03	4.0e+02
17	OCDD	7.52e+06	3.84e+02	2.0e+04	8.37e+06	7.80e+02	1.1e+04
18	13C-2,3,7,8-TCDF	1.21e+07	5.46e+03	2.2e+03	1.50e+07	4.10e+03	3.7e+03
19	13C-1,2,3,7,8-PeCDF	2.04e+07	9.68e+02	2.1e+04	1.29e+07	1.17e+03	1.1e+04
20	13C-2,3,4,7,8-PeCDF	2.09e+07	9.68e+02	2.2e+04	1.32e+07	1.17e+03	1.1e+04
21	13C-1,2,3,4,7,8-HxCDF	9.68e+06	1.32e+03	7.4e+03	1.84e+07	1.86e+03	9.9e+03
22	13C-1,2,3,6,7,8-HxCDF	1.09e+07	1.32e+03	8.2e+03	2.05e+07	1.86e+03	1.1e+04
23	13C-2,3,4,6,7,8-HxCDF	1.03e+07	1.32e+03	7.9e+03	1.97e+07	1.86e+03	1.1e+04
24	13C-1,2,3,7,8,9-HxCDF	8.65e+06	1.32e+03	6.6e+03	1.67e+07	1.86e+03	9.0e+03
25	13C-1,2,3,4,6,7,8-HpCDF	6.88e+06	5.82e+03	1.2e+03	1.52e+07	8.18e+03	1.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	5.45e+06	5.82e+03	9.4e+02	1.21e+07	8.18e+03	1.5e+03
27	13C-2,3,7,8-TCDD	6.33e+06	8.03e+03	7.9e+02	8.17e+06	3.38e+03	2.4e+03
28	13C-1,2,3,7,8-PeCDD	1.61e+07	8.20e+02	2.0e+04	1.02e+07	1.74e+03	5.8e+03
29	13C-1,2,3,4,7,8-HxCDD	1.53e+07	1.78e+03	8.6e+03	1.20e+07	1.15e+03	1.0e+04
30	13C-1,2,3,6,7,8-HxCDD	1.37e+07	1.78e+03	7.7e+03	1.09e+07	1.15e+03	9.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.28e+07	9.32e+02	1.4e+04	1.19e+07	6.48e+02	1.8e+04
32	13C-OCDD	8.79e+06	8.12e+02	1.1e+04	9.87e+06	7.76e+02	1.3e+04
33	13C-1,2,3,4-TCDD	1.12e+07	8.03e+03	1.4e+03	1.40e+07	3.38e+03	4.1e+03
34	13C-1,2,3,7,8,9-HxCDD	1.57e+07	1.78e+03	8.8e+03	1.27e+07	1.15e+03	1.1e+04
35	37Cl-2,3,7,8-TCDD	9.37e+06	1.98e+03	4.7e+03			

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Peak List Summary

CLIENT ID.
SL0248

Entry: 36 Totals Name: Total Tetra-Furans

Run: 13 File: P520002 Sample:1 Injection:1 Function:1

Acquired: 16-JAN-19 16:59:48 Processed: 17-JAN-19 11:28:00

Mass: 303.9020 305.8990 Tot Response: 2.95e+03 RRF: 0.9417

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	24:48	1.40e+02	1.93e+02	0.73	yes	3.33e+02		n	n
2	27:04	1.32e+02	1.72e+02	0.77	yes	3.04e+02		n	y
3	27:29	2.75e+02	3.18e+02	0.86	yes	5.92e+02		y	n
4	27:54	3.99e+01	5.14e+01	0.78	yes	9.13e+01		n	n
5	28:16	5.15e+02	6.67e+02	0.77	yes	1.18e+03	2,3,7,8-TCDF	n	n
6	28:37	1.19e+02	1.68e+02	0.71	yes	2.86e+02		n	n
7	30:03	7.67e+01	8.75e+01	0.88	yes	1.64e+02		n	n

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Peak List Summary

CLIENT ID.
SL0248

Entry: 37 Totals Name: Total Tetra-Dioxins

Run: 13 File: P520002 Sample:1 Injection:1 Function:1

Acquired: 16-JAN-19 16:59:48 Processed: 17-JAN-19 11:28:00

Mass: 319.8970 321.8940 Tot Response: 1.77e+03 RRF: 1.085

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	27:10	6.25e+02	8.69e+02	0.72	yes	1.49e+03		n	n
2	28:27	5.99e+01	8.82e+01	0.68	yes	1.48e+02		n	n
3	28:49	5.04e+01	7.69e+01	0.66	yes	1.27e+02		n	n

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Peak List Summary

CLIENT ID.
SL0248

Entry: 38 Totals Name: Total Penta-Furans1

Run: 13 File: P520002 Sample:1 Injection:1 Function:1

Acquired: 16-JAN-19 16:59:48 Processed: 17-JAN-19 11:28:00

Mass: 339.8600 341.8570 Tot Response: 1.30e+02 RRF: 0.9857

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	30:02	8.03e+01	4.93e+01 1.63	yes	1.30e+02		y	y

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Peak List Summary

CLIENT ID.
SL0248

Entry: 39 Totals Name: Total Penta-Furans2

Run: 13 File: P520002 Sample:1 Injection:1 Function:2

Acquired: 16-JAN-19 16:59:48 Processed: 17-JAN-19 11:28:00

Mass: 339.8600 341.8570 Tot Response: 6.35e+02 RRF: 0.9857

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	31:24	1.55e+02	9.57e+01	1.62	yes	2.51e+02		n	n
2	31:31	1.48e+02	9.78e+01	1.52	yes	2.46e+02		n	n
3	31:36	4.77e+01	2.98e+01	1.60	yes	7.75e+01		n	n
4	32:09	3.79e+01	2.23e+01	1.69	yes	6.02e+01		n	y

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Peak List Summary

CLIENT ID.
SL0248

Entry: 40 Totals Name: Total Penta-Dioxins

Run: 13 File: P520002 Sample:1 Injection:1 Function:2

Acquired: 16-JAN-19 16:59:48 Processed: 17-JAN-19 11:28:00

Mass: 355.8550 357.8520 Tot Response: 1.18e+03 RRF: 0.9565

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	32:01	4.68e+02	3.00e+02	1.56	yes	7.67e+02		n	n
2	32:54	1.71e+02	9.83e+01	1.74	yes	2.69e+02		n	y
3	32:58	9.21e+01	5.35e+01	1.72	yes	1.46e+02		n	y

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CLIENT ID.
SL0248

Entry: 41 Totals Name: Total Hexa-Furans

Run: 13 File: P520002 Sample:1 Injection:1 Function:3

Acquired: 16-JAN-19 16:59:48 Processed: 17-JAN-19 11:28:00

Mass: 373.8210 375.8180 Tot Response: 7.68e+01 RRF: 1.141

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	34:54	4.13e+01	3.55e+01 1.16	yes	7.68e+01		n	n

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Peak List Summary

CLIENT ID.
SL0248

Entry: 42 Totals Name: Total Hexa-Dioxins

Run: 13 File: P520002 Sample:1 Injection:1 Function:3

Acquired: 16-JAN-19 16:59:48 Processed: 17-JAN-19 11:28:00

Mass: 389.8160 391.8130 Tot Response: 8.40e+03 RRF: 1.047

#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	35:25	3.17e+03	2.44e+03 1.30	yes	5.61e+03		n	n
2	35:57	9.95e+01	9.22e+01 1.08	yes	1.92e+02		n	n
3	36:11	1.13e+03	8.26e+02 1.37	yes	1.96e+03		n	n
4	36:17	9.63e+01	6.79e+01 1.42	yes	1.64e+02		n	n
5	37:05	2.73e+02	2.01e+02 1.36	yes	4.74e+02	1,2,3,7,8,9-HxCDD	n	n

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Peak List Summary

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SL0248

Entry: 43 Totals Name: Total Hepta-Furans

Run: 13 File: P520002 Sample:1 Injection:1 Function:4

Acquired: 16-JAN-19 16:59:48 Processed: 17-JAN-19 11:28:00

Mass: 407.7820 409.7790 Tot Response: 2.55e+02 RRF: 1.308

#	RT	Resp	Resp	Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:38	9.55e+01	9.62e+01	0.99	yes	1.92e+02	1,2,3,4,6,7,8-HpCDF	n	n
2	38:53	1.76e+01	1.49e+01	1.18	yes	3.25e+01		n	n
3	39:02	1.48e+01	1.56e+01	0.95	yes	3.04e+01		n	n

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Entry: 44 Totals Name: Total Hepta-Dioxins

Run: 13 File: P520002 Sample:1 Injection:1 Function:4

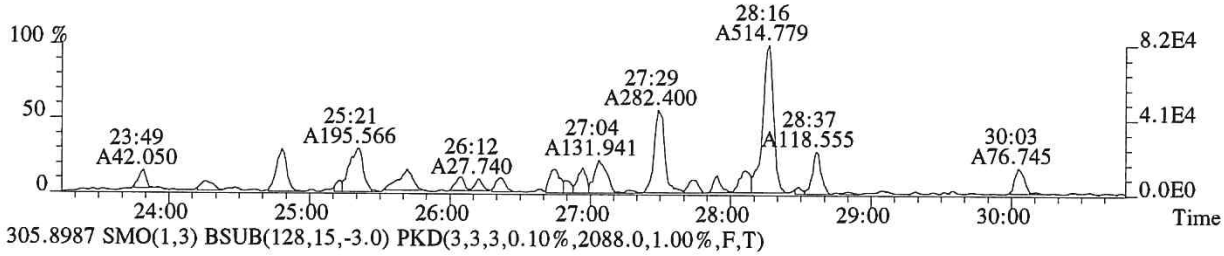
Acquired: 16-JAN-19 16:59:48 Processed: 17-JAN-19 11:28:00

Mass: 423.7770 425.7740 Tot Response: 2.29e+04 RRF: 1.025

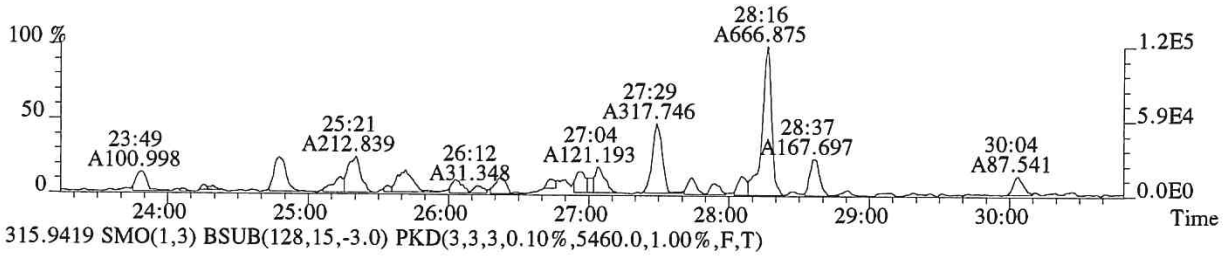
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	38:52	7.92e+03	1.00	yes	1.58e+04		n	n
2	39:34	3.57e+03	1.03	yes	7.04e+03	1,2,3,4,6,7,8-HpCDD	n	n

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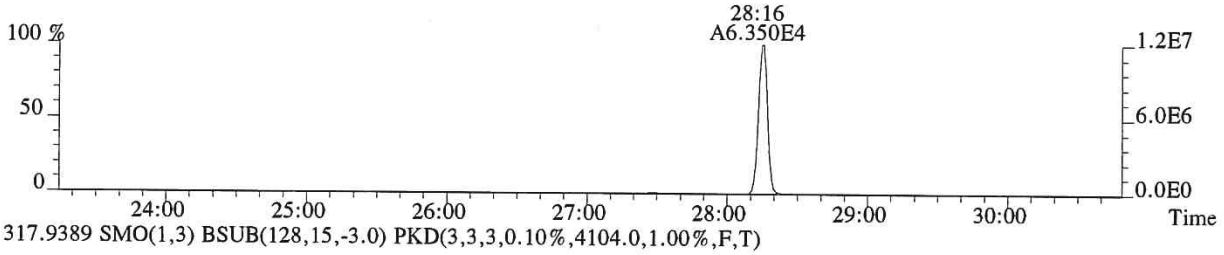
File:P520002 #1-538 Acq:16-JAN-2019 16:59:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-022RE
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1684.0,1.00%,F,T)



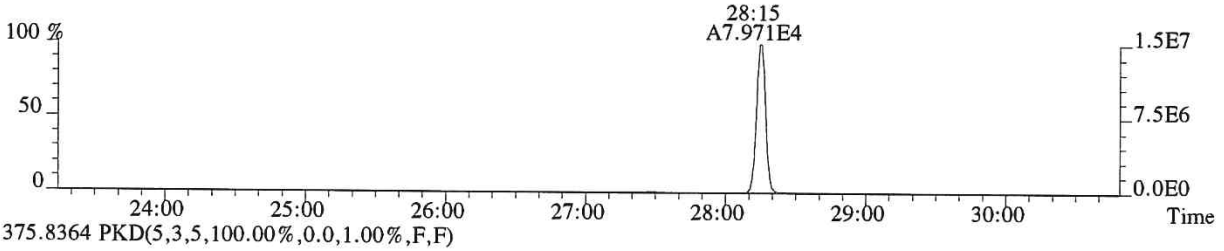
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2088.0,1.00%,F,T)



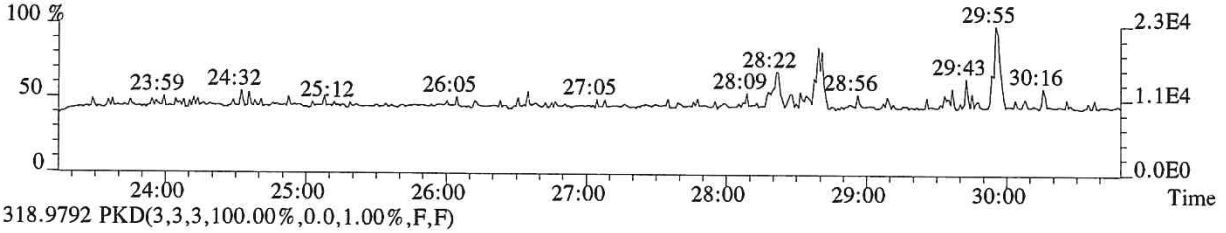
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5460.0,1.00%,F,T)



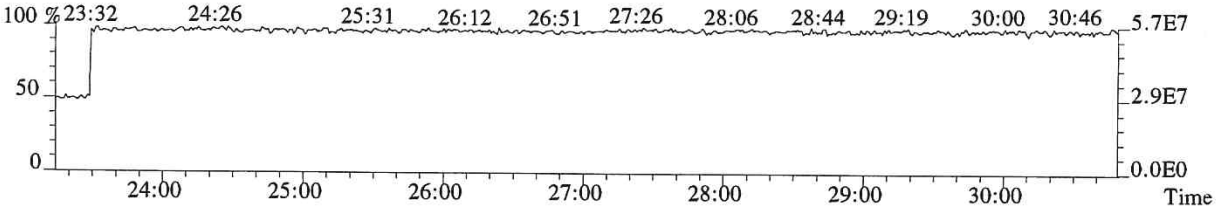
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4104.0,1.00%,F,T)



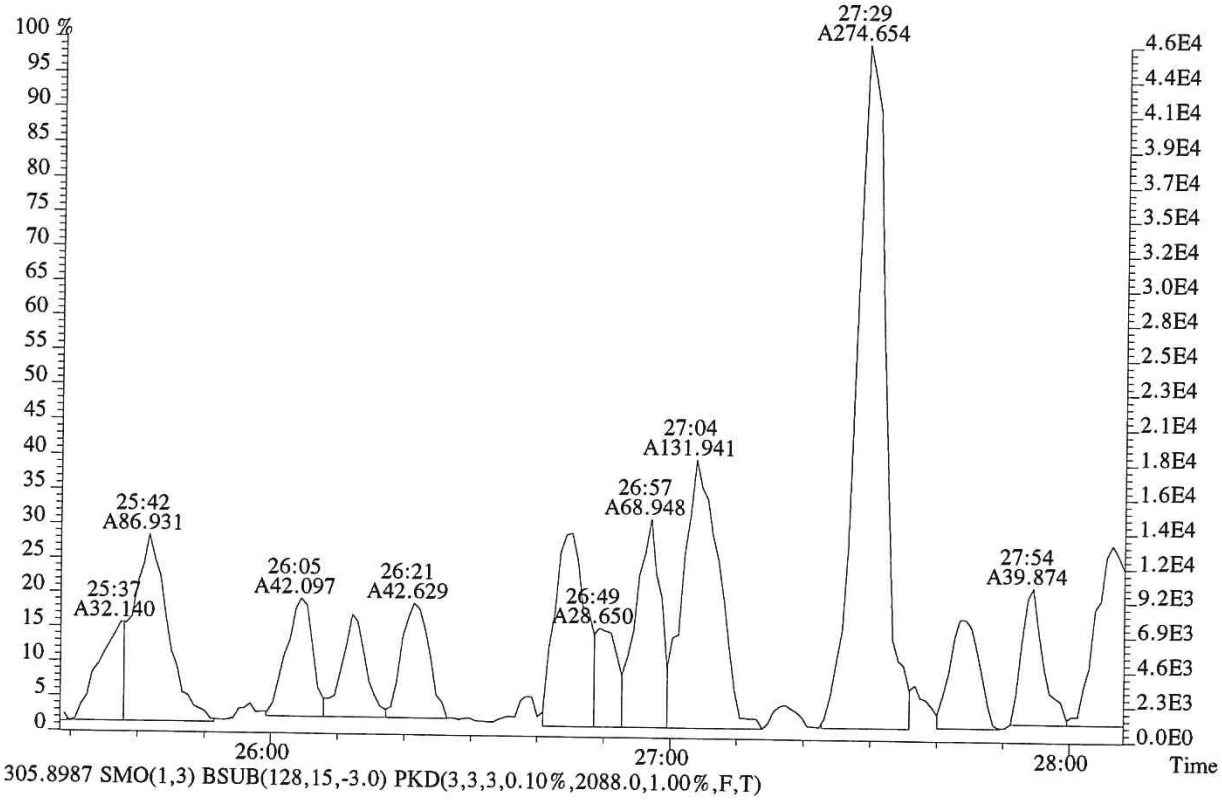
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



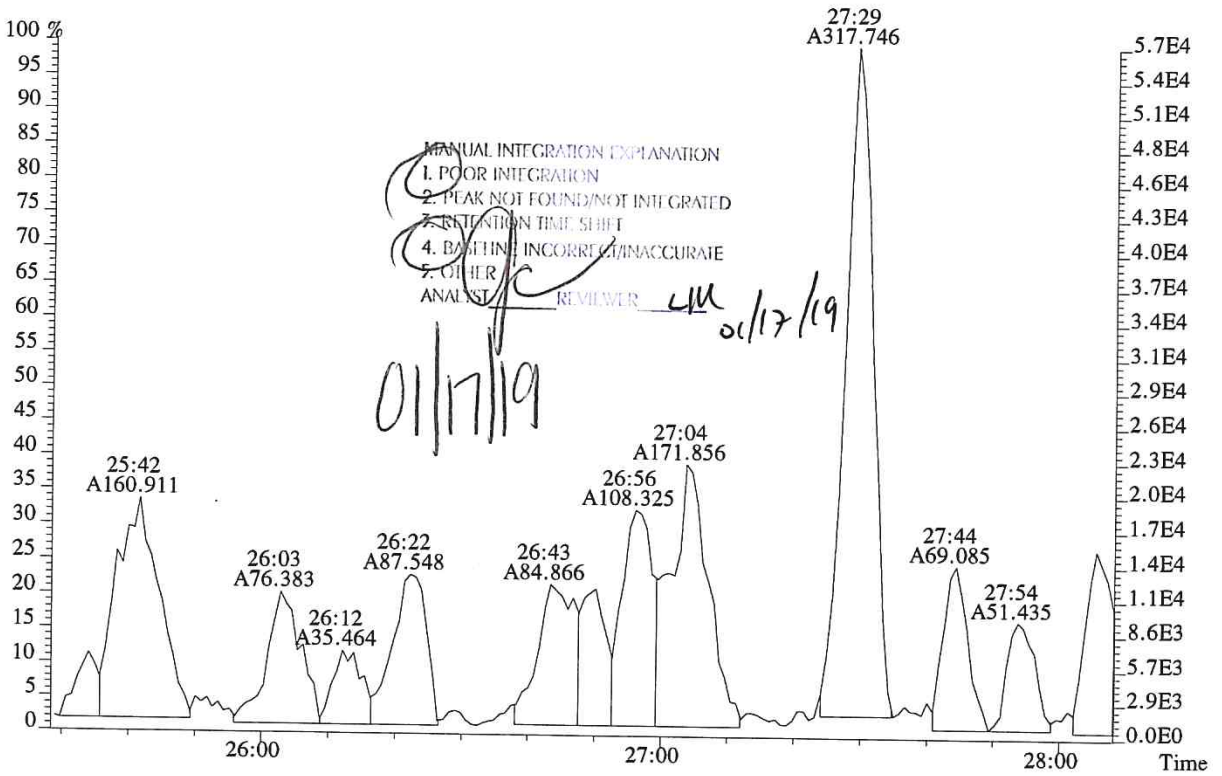
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



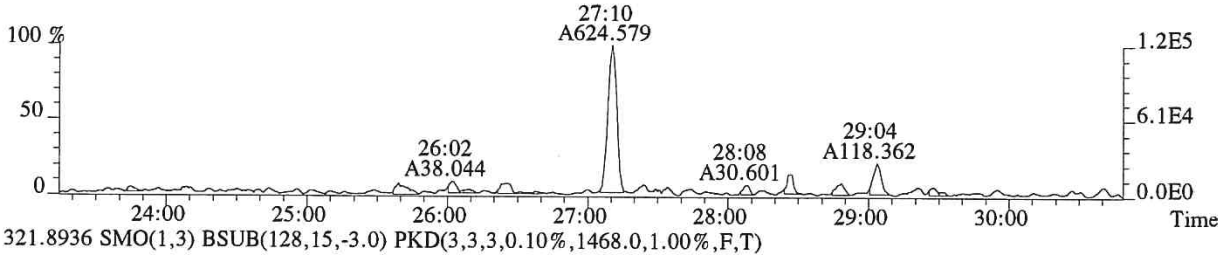
File:P520002 #1-538 Acq:16-JAN-2019 16:59:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-022RE
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1684.0,1.00%,F,T)



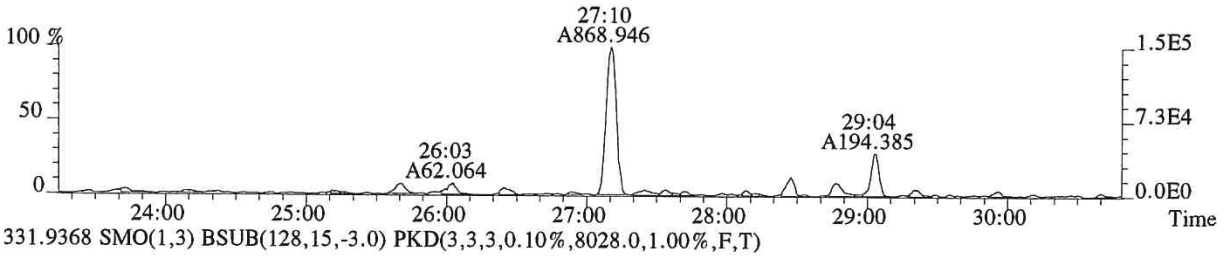
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2088.0,1.00%,F,T)



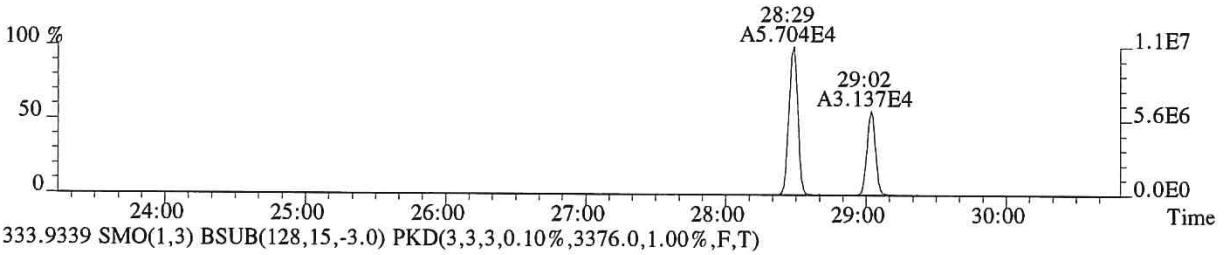
File:P520002 #1-538 Acq:16-JAN-2019 16:59:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-022RE
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3536.0,1.00%,F,T)



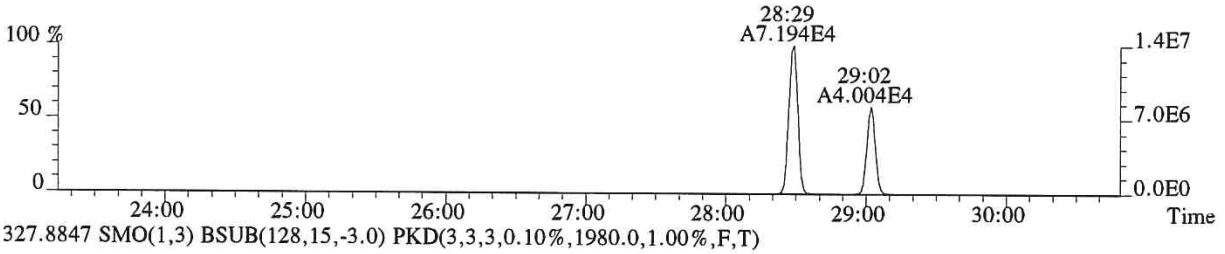
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1468.0,1.00%,F,T)



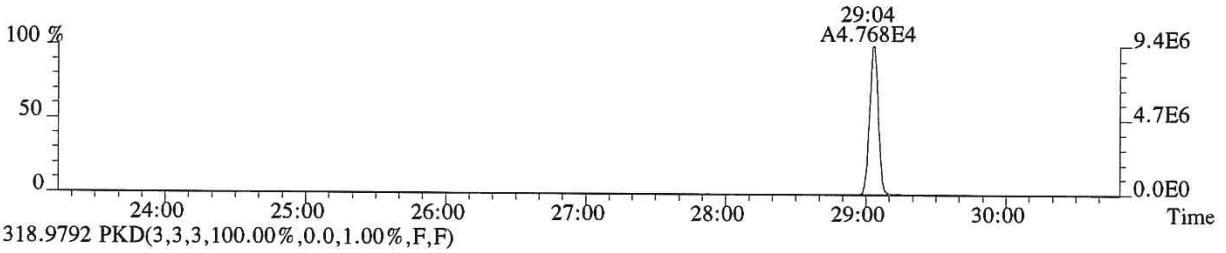
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8028.0,1.00%,F,T)



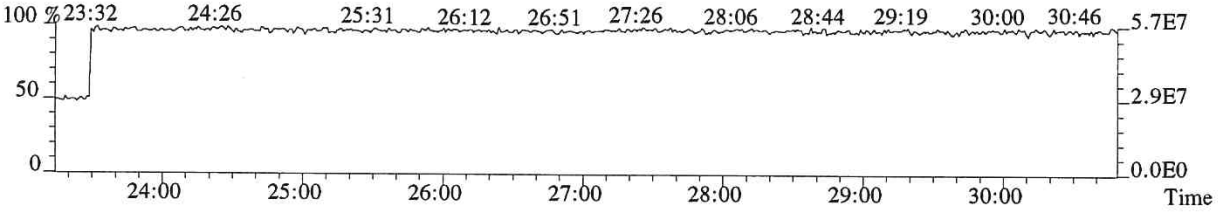
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3376.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1980.0,1.00%,F,T)

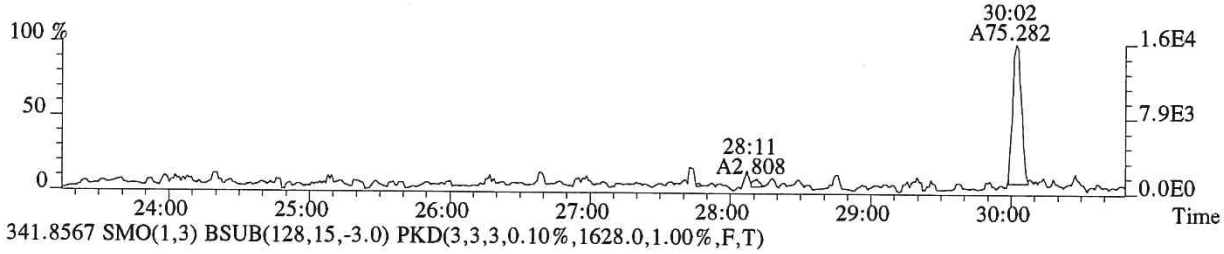


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

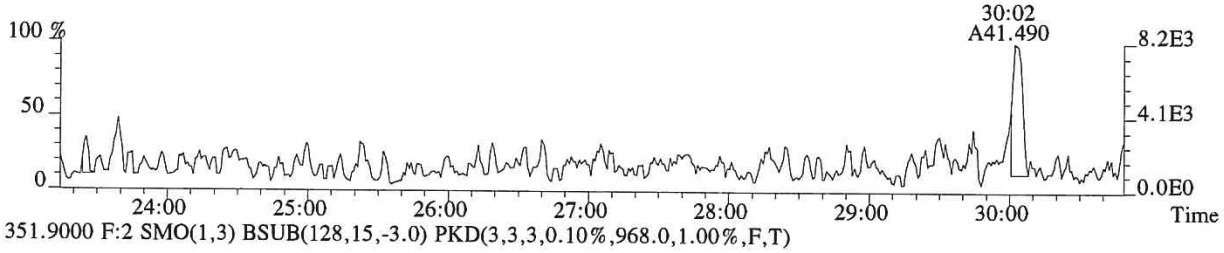


018732

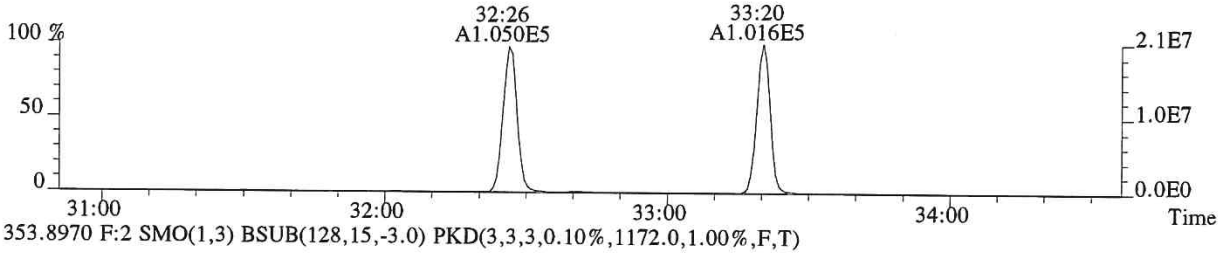
File:P520002 #1-538 Acq:16-JAN-2019 16:59:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-022RE
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



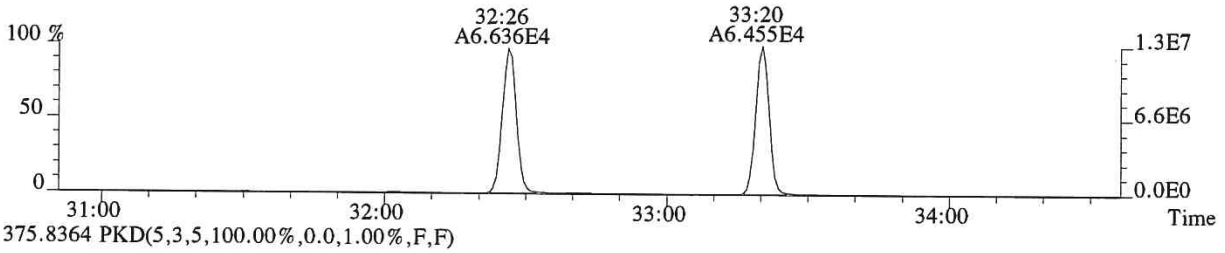
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1628.0,1.00%,F,T)



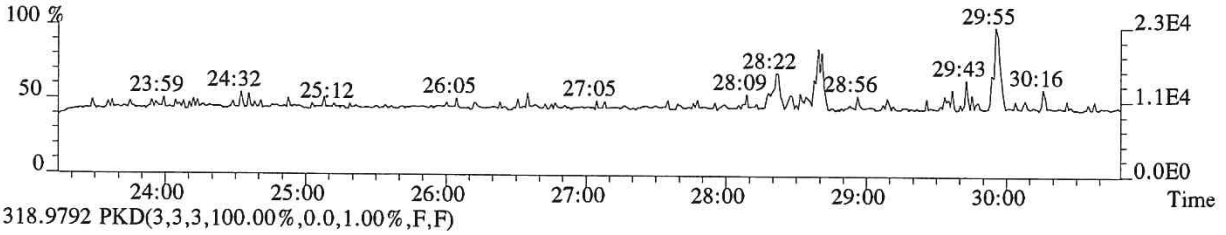
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,968.0,1.00%,F,T)



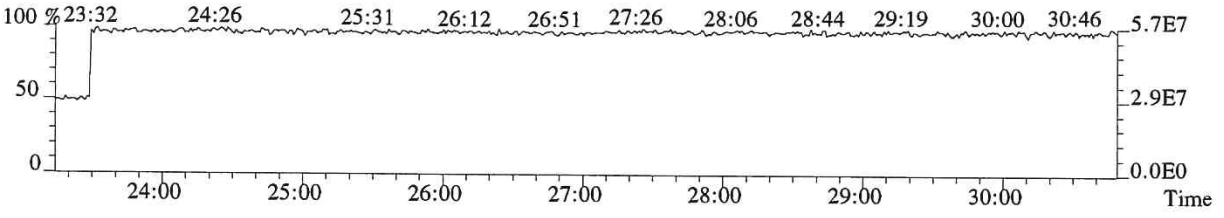
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1172.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

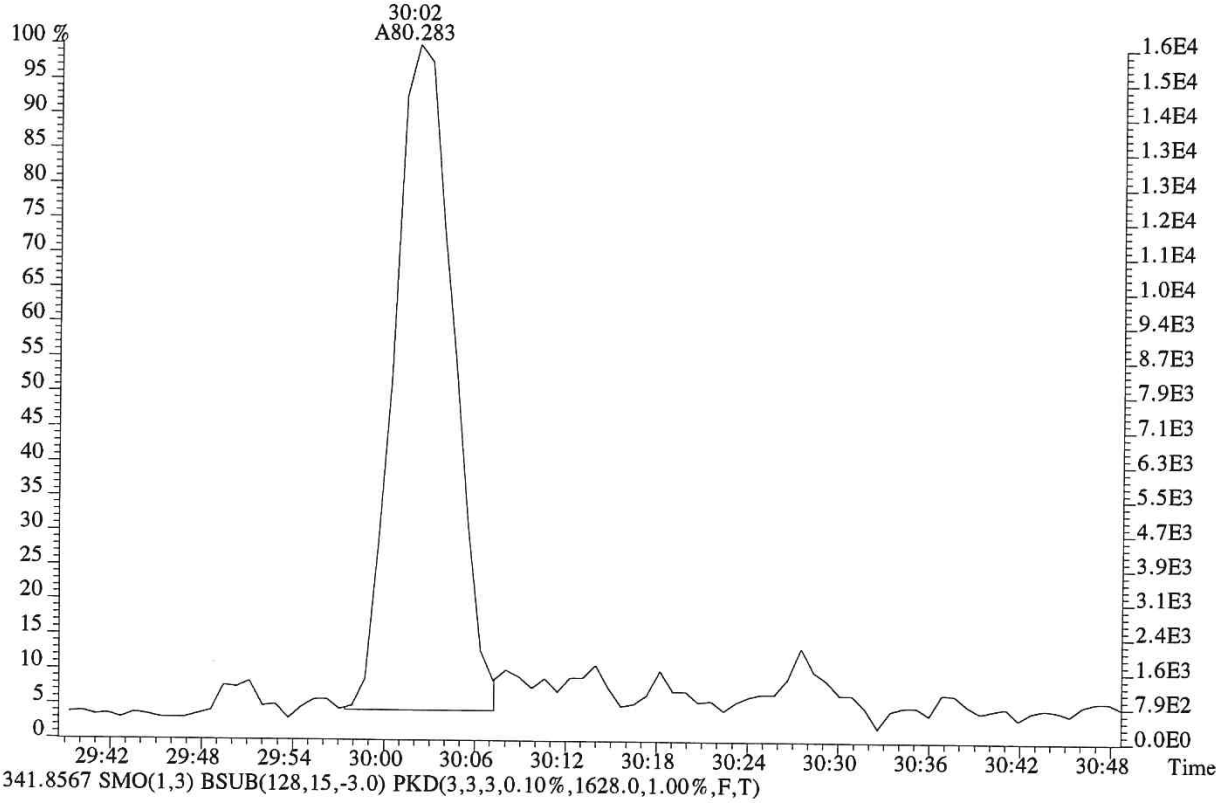


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

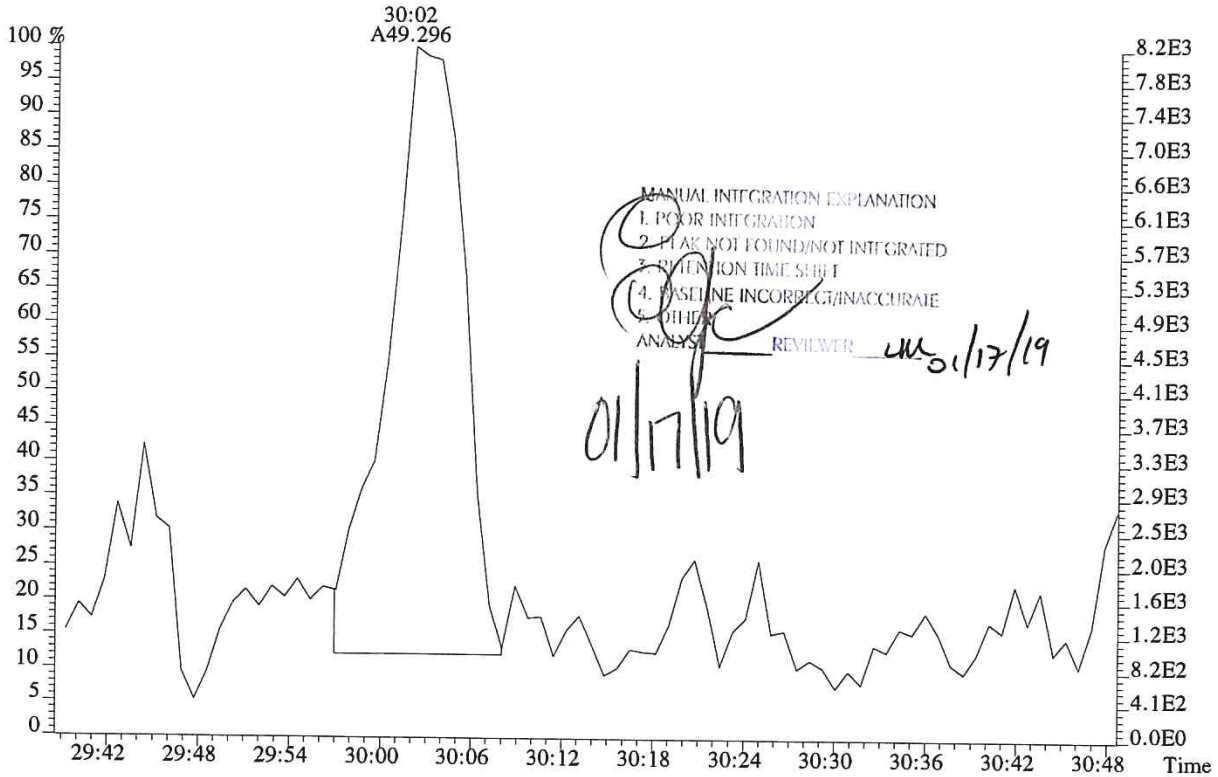


018733

File:P520002 #1-538 Acq:16-JAN-2019 16:59:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-022RE
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)

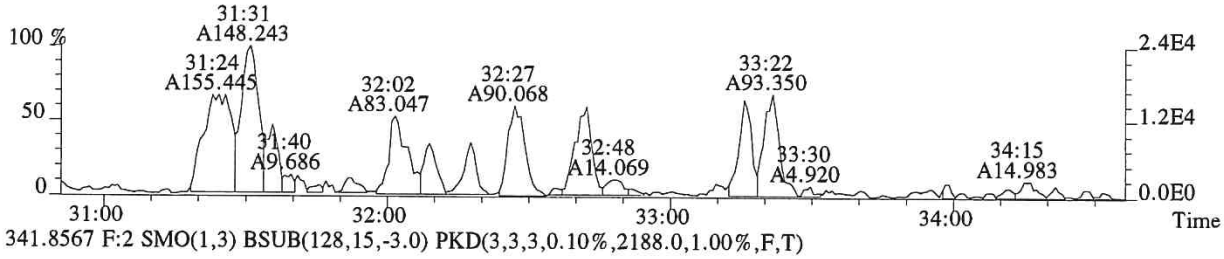


341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1628.0,1.00%,F,T)

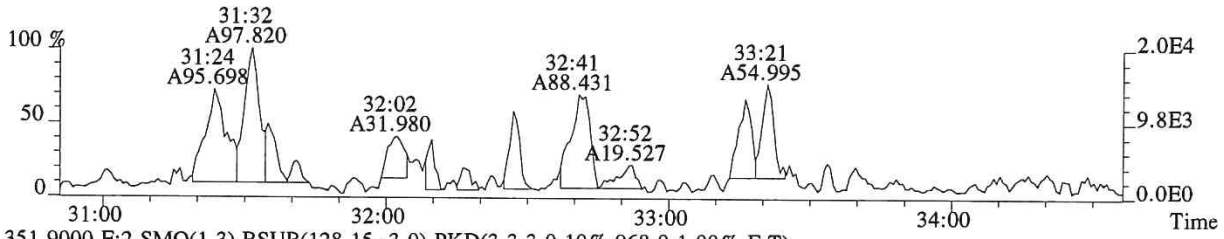


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST 01/17/19 REVIEWER 01/17/19

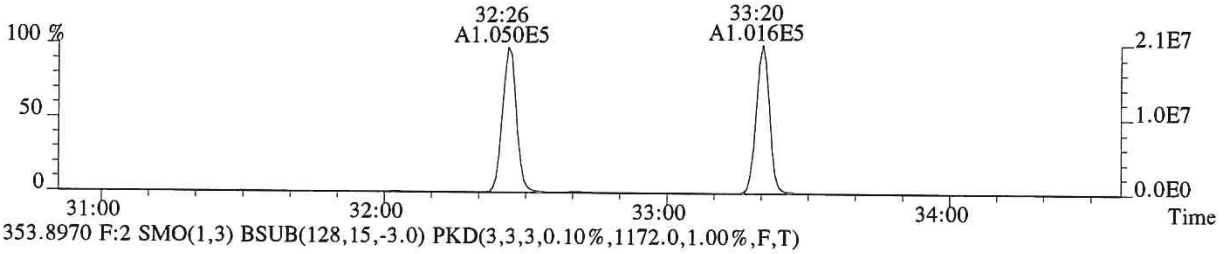
File:P520002 #1-339 Acq:16-JAN-2019 16:59:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-022RE
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,792.0,1.00%,F,T)



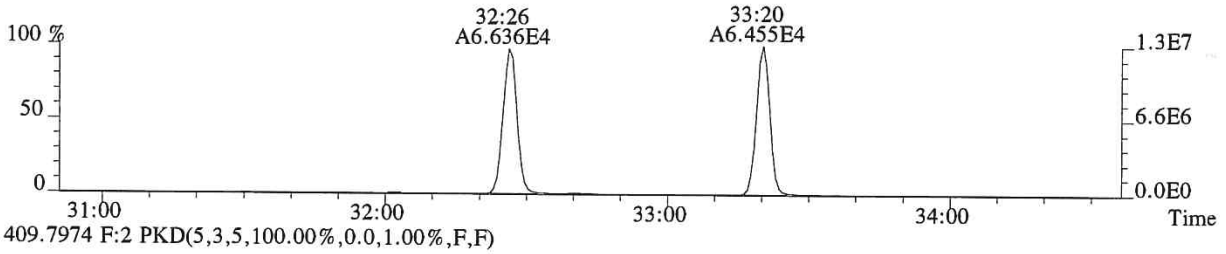
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2188.0,1.00%,F,T)



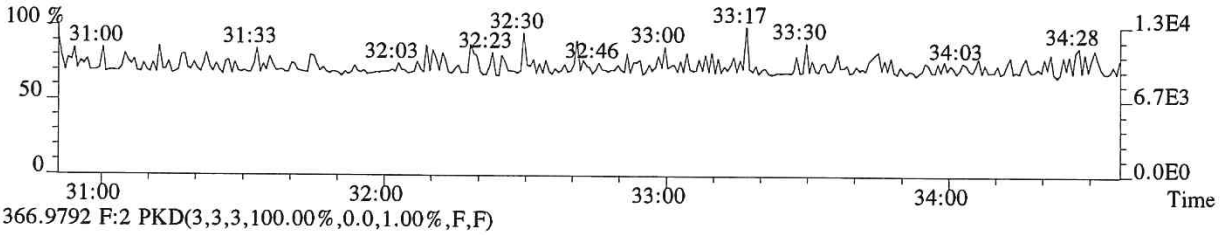
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,968.0,1.00%,F,T)



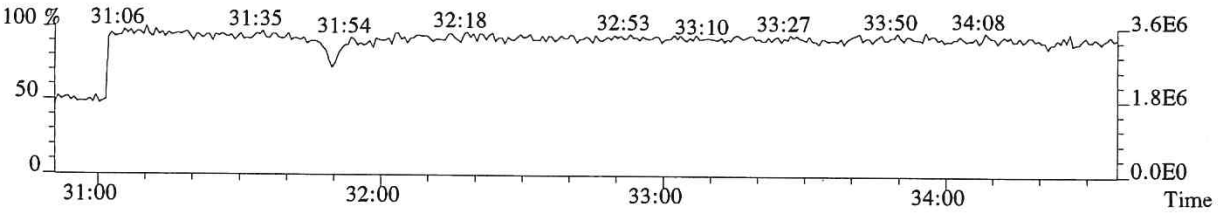
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1172.0,1.00%,F,T)



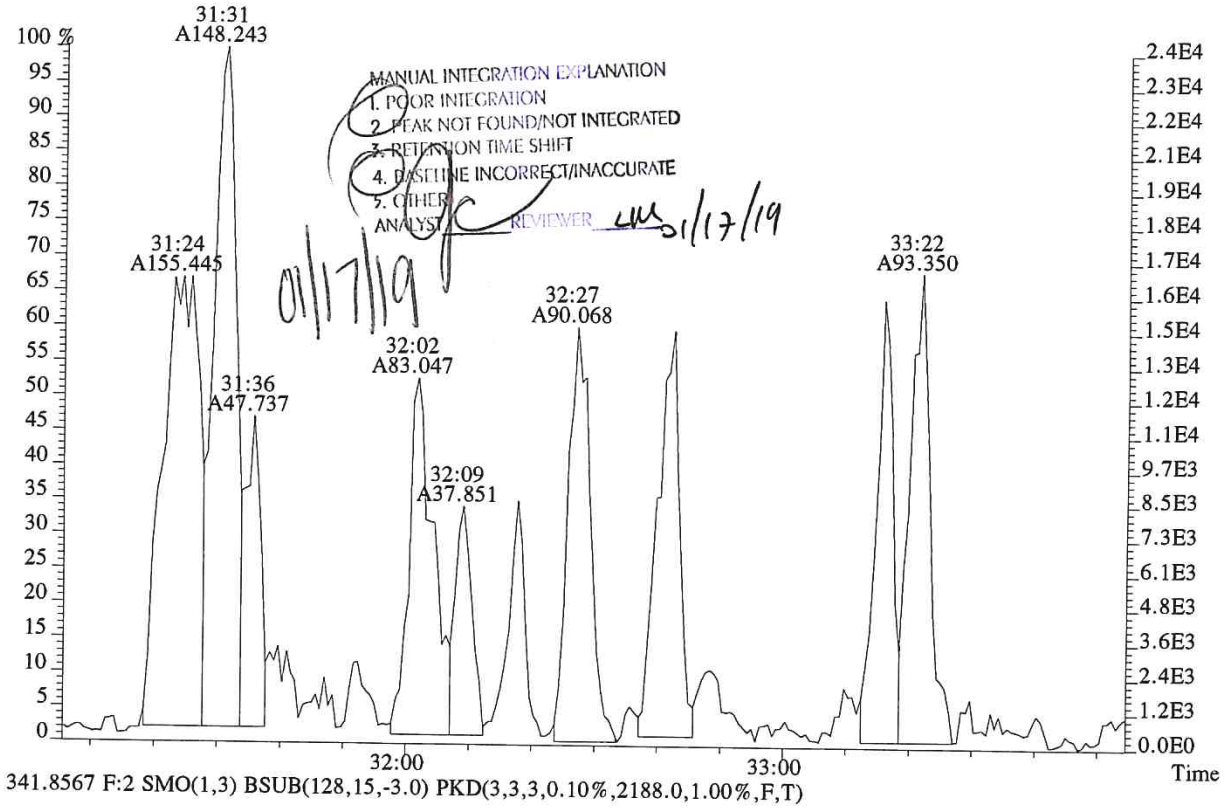
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



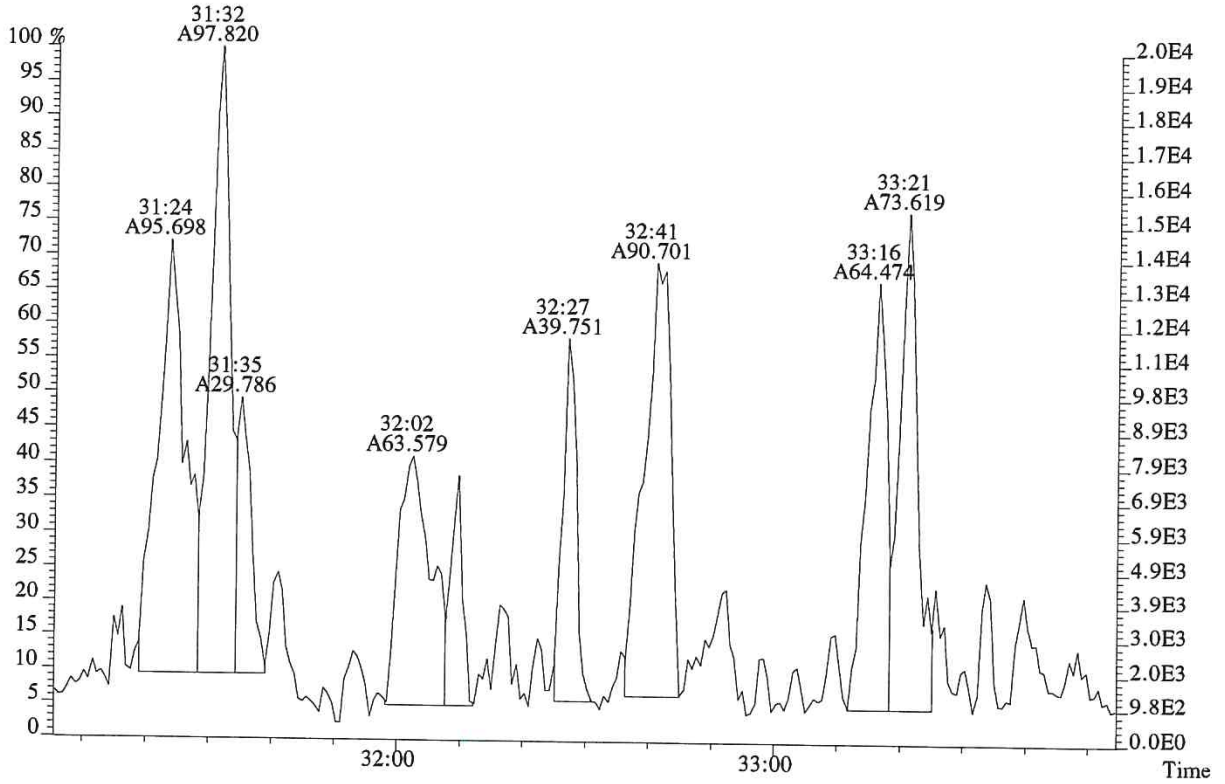
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



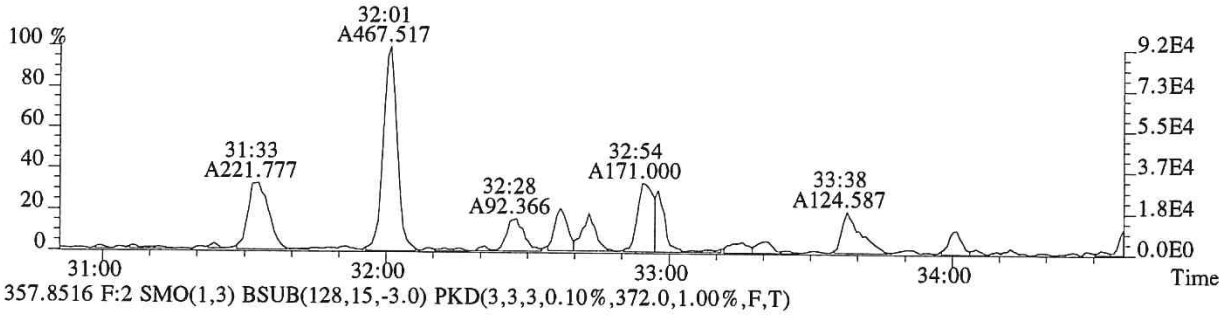
File:P520002 #1-339 Acq:16-JAN-2019 16:59:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-022RE
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,792.0,1.00%,F,T)



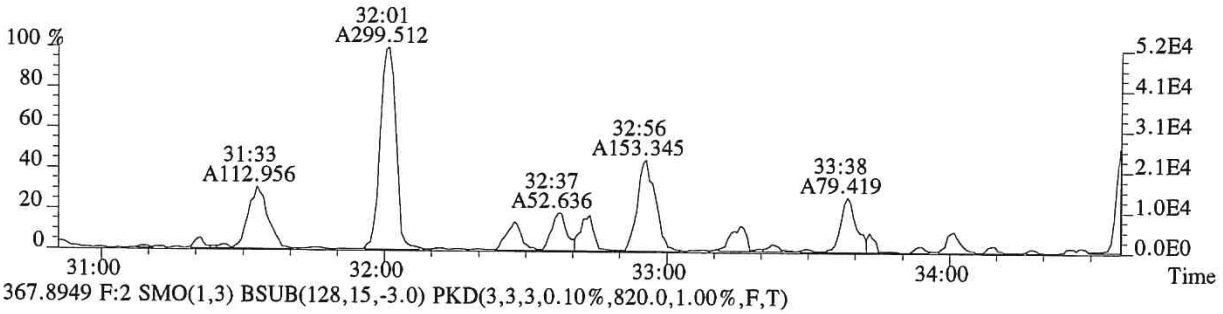
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2188.0,1.00%,F,T)



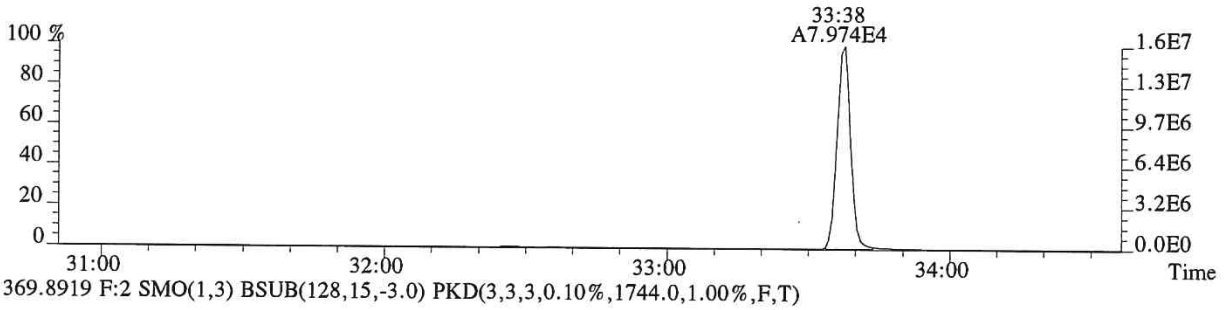
File:P520002 #1-339 Acq:16-JAN-2019 16:59:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-022RE
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1224.0,1.00%,F,T)



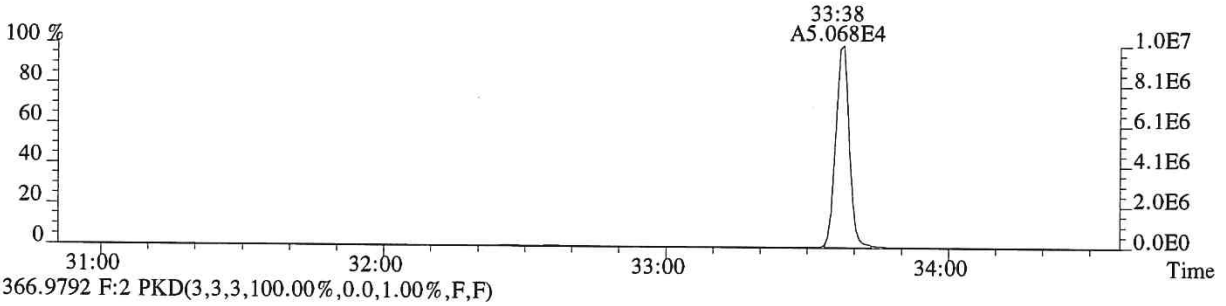
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,372.0,1.00%,F,T)



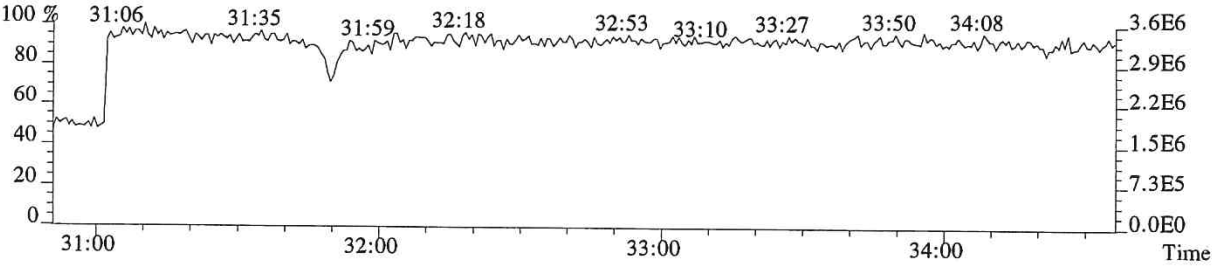
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,820.0,1.00%,F,T)



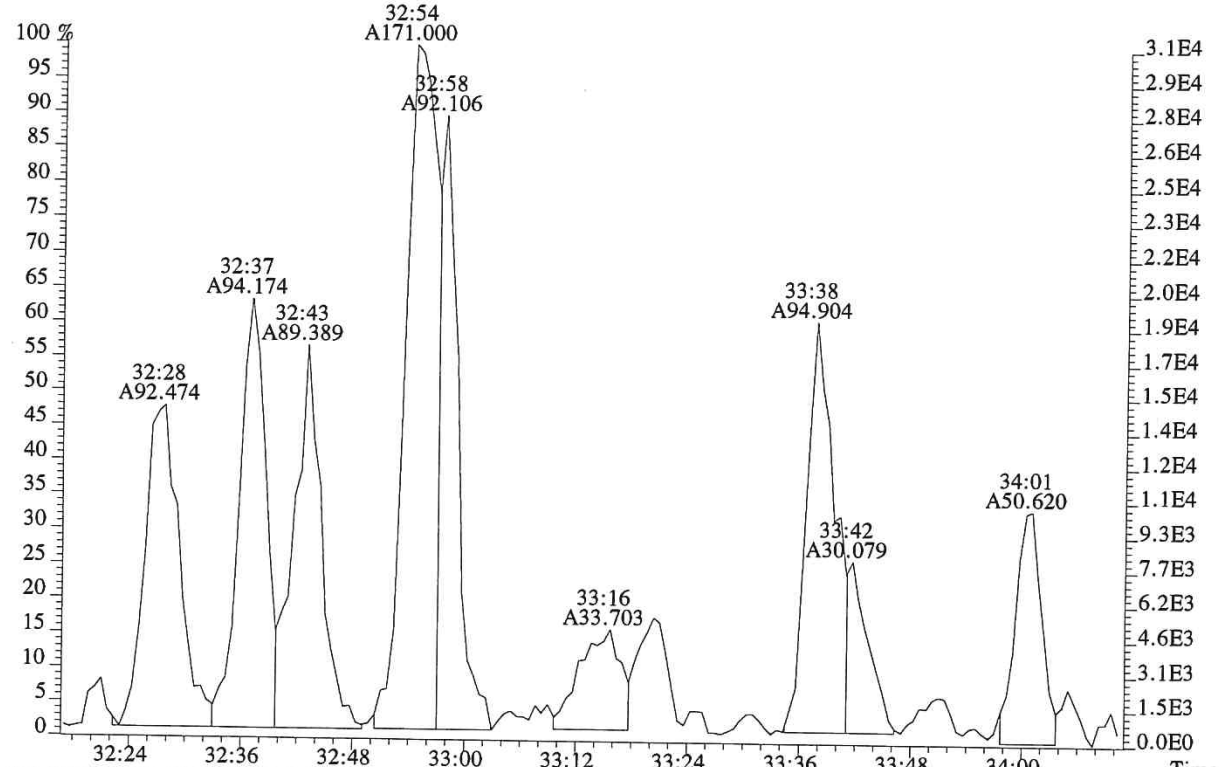
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1744.0,1.00%,F,T)



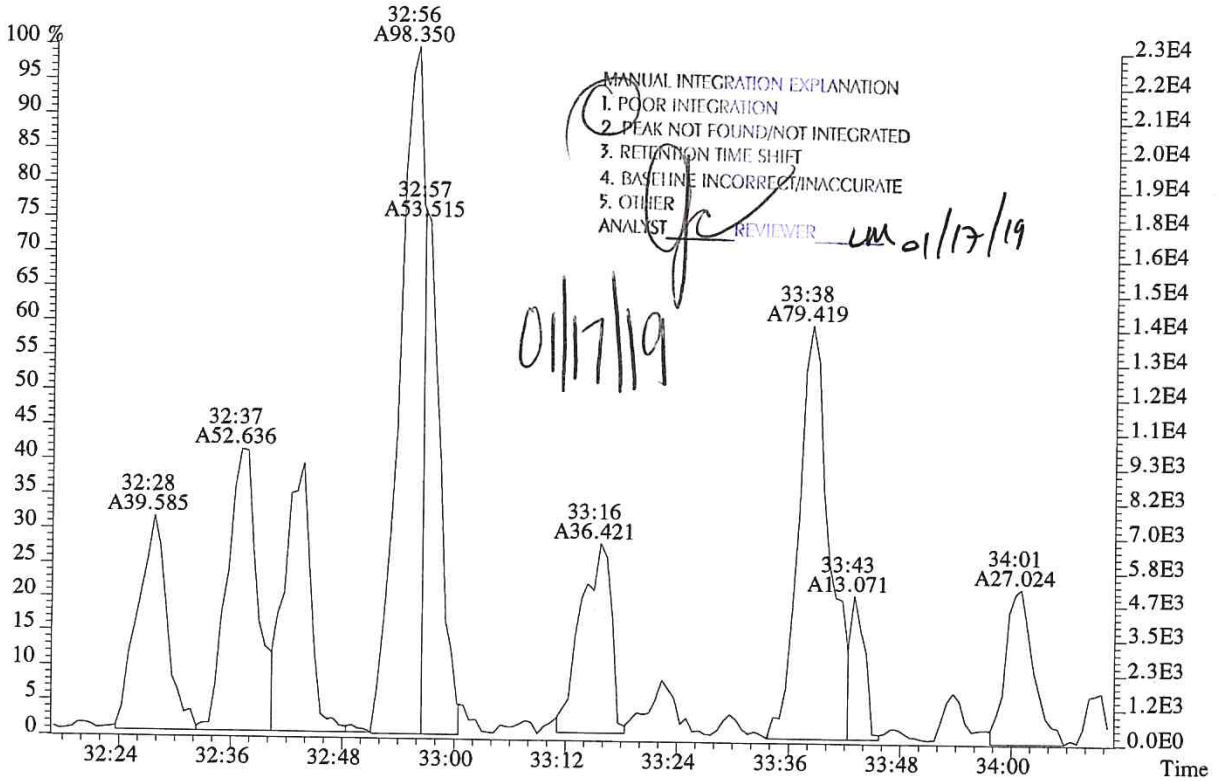
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



File:P520002 #1-339 Acq:16-JAN-2019 16:59:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-022RE
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1224.0,1.00%,F,T)

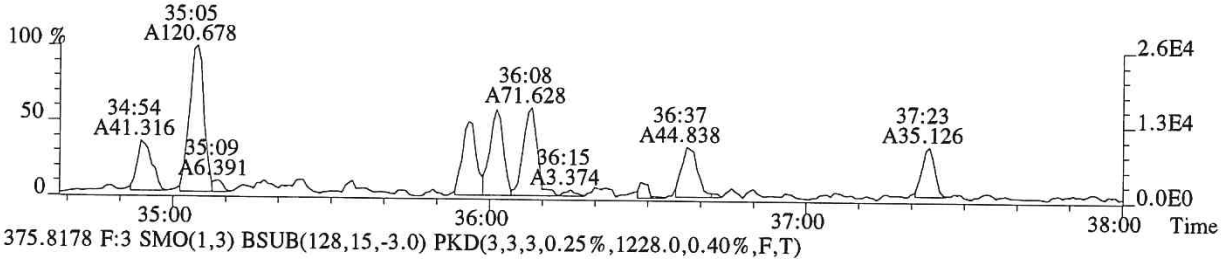


357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,372.0,1.00%,F,T)

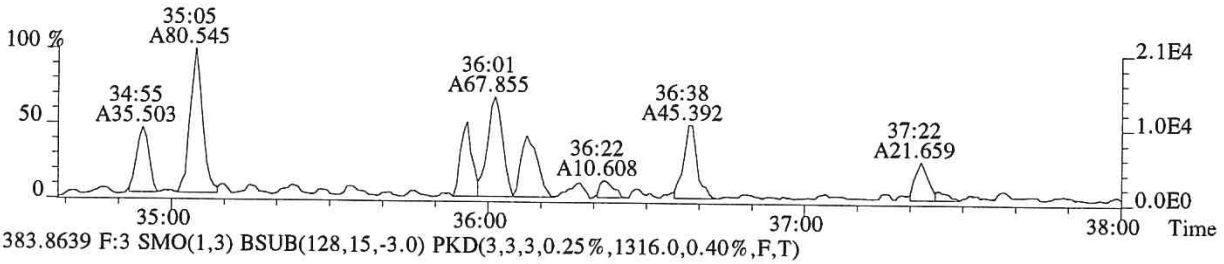


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST JC REVIEWER UM 01/17/19
01/17/19

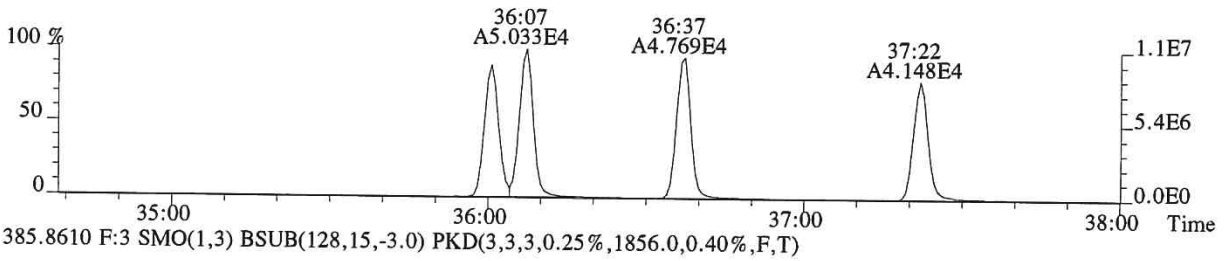
File:P520002 #1-303 Acq:16-JAN-2019 16:59:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-022RE
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1284.0,0.40%,F,T)



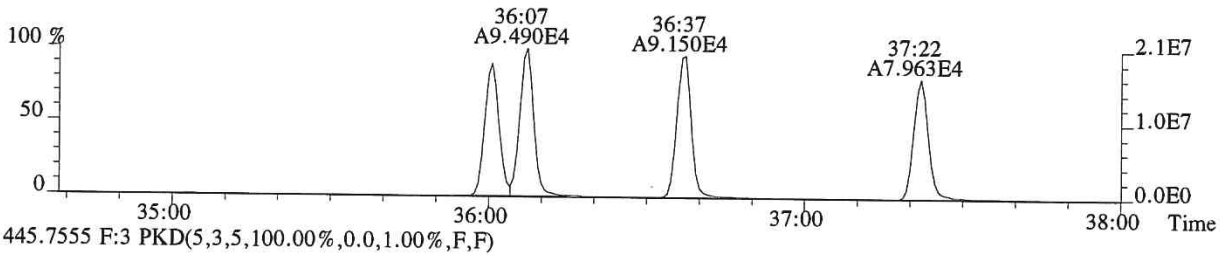
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1228.0,0.40%,F,T)



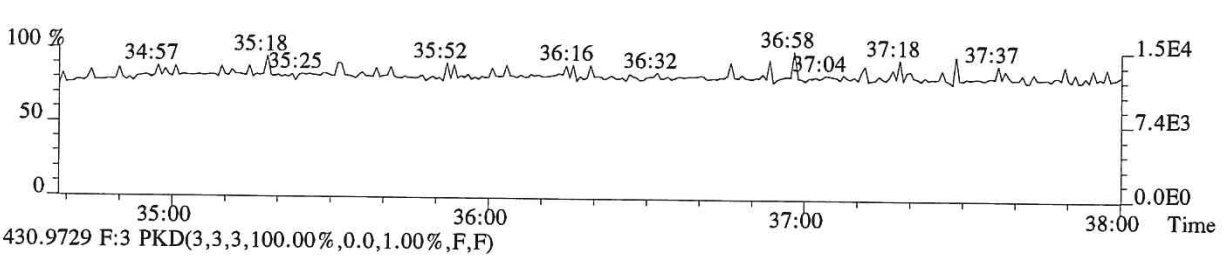
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1316.0,0.40%,F,T)



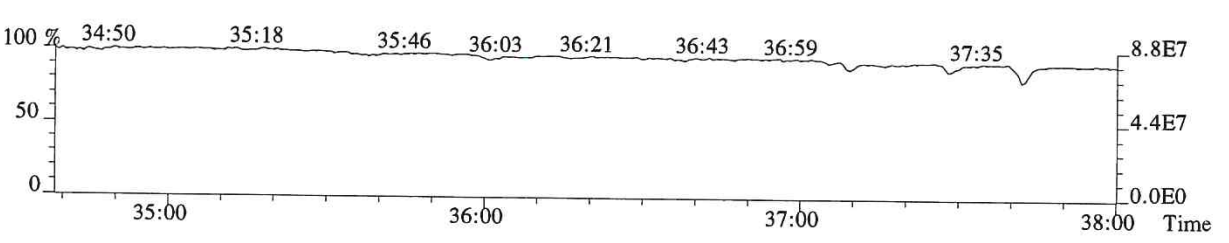
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1856.0,0.40%,F,T)



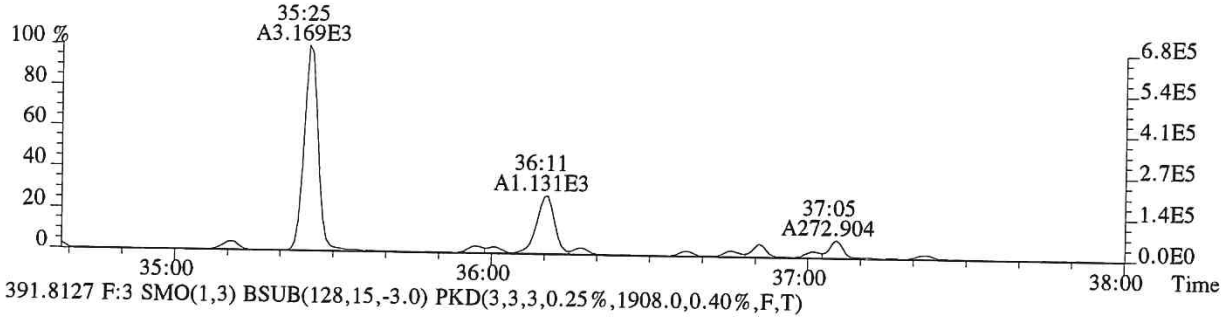
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



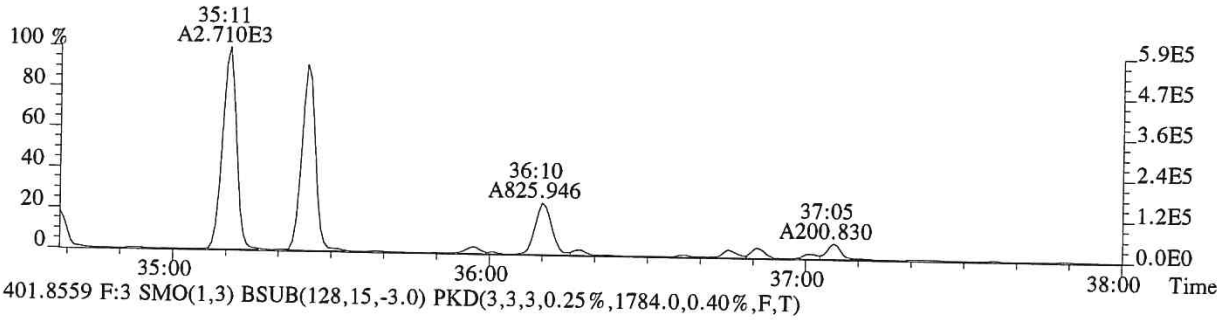
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



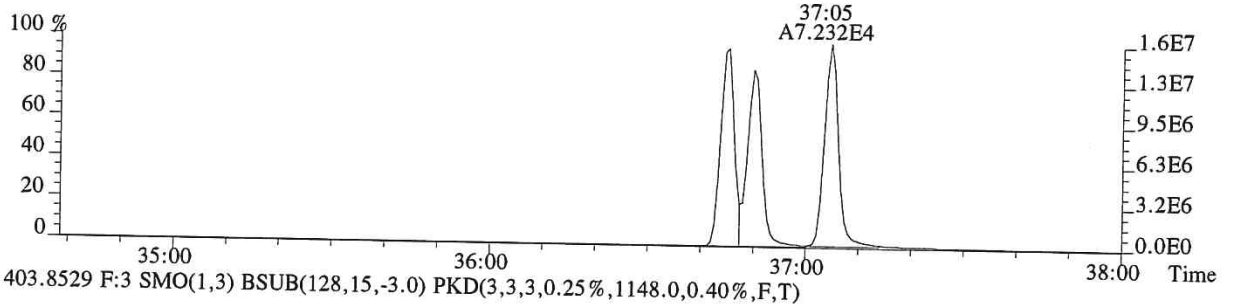
File:P520002 #1-303 Acq:16-JAN-2019 16:59:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-022RE
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,568.0,0.40%,F,T)



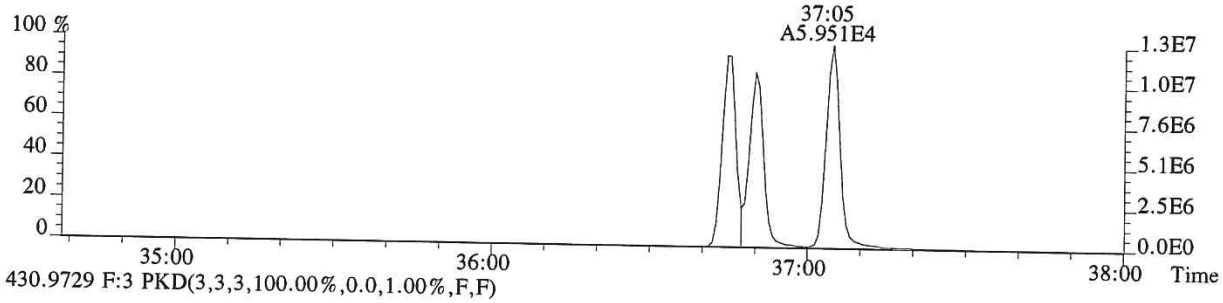
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1908.0,0.40%,F,T)



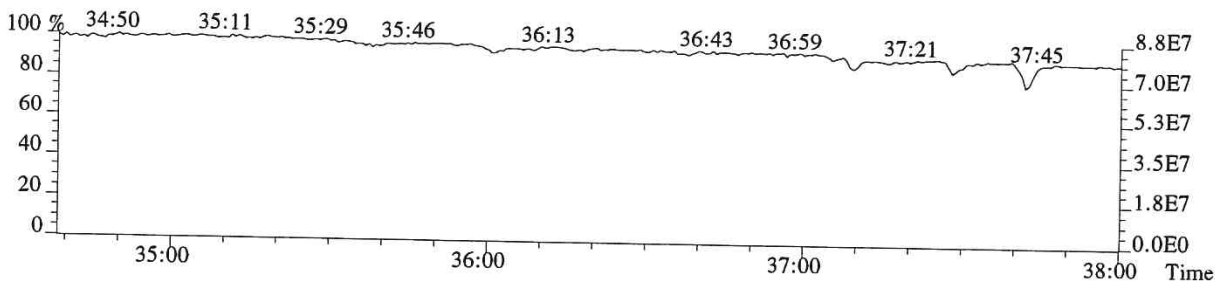
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1784.0,0.40%,F,T)



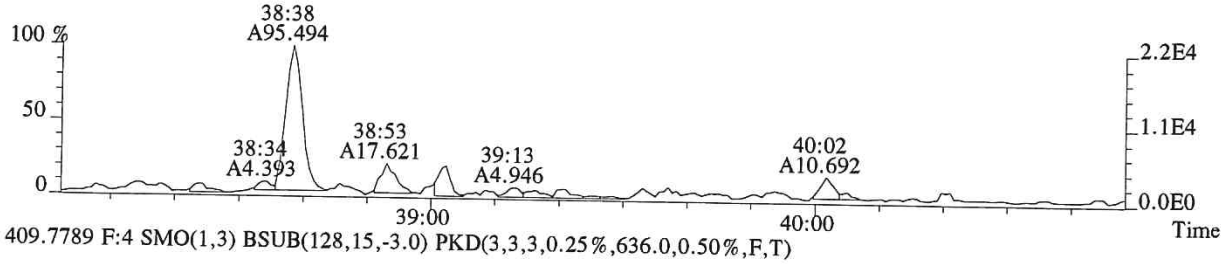
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1148.0,0.40%,F,T)



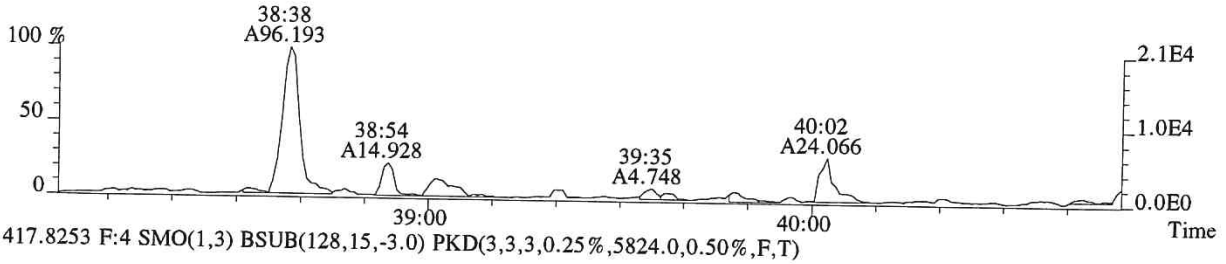
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



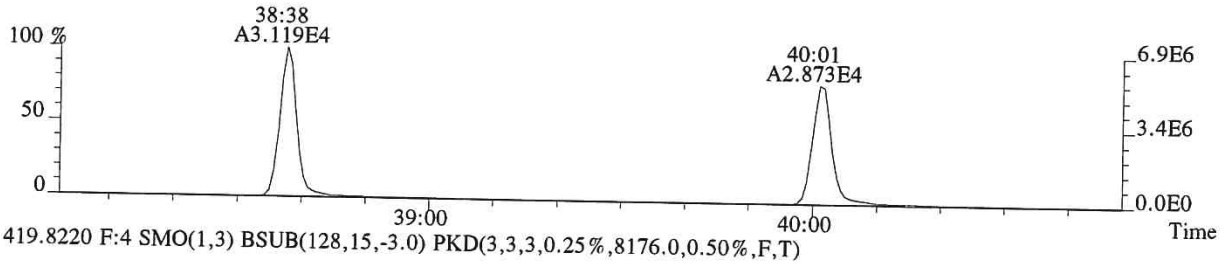
File:P520002 #1-250 Acq:16-JAN-2019 16:59:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-022RE
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,828.0,0.50%,F,T)



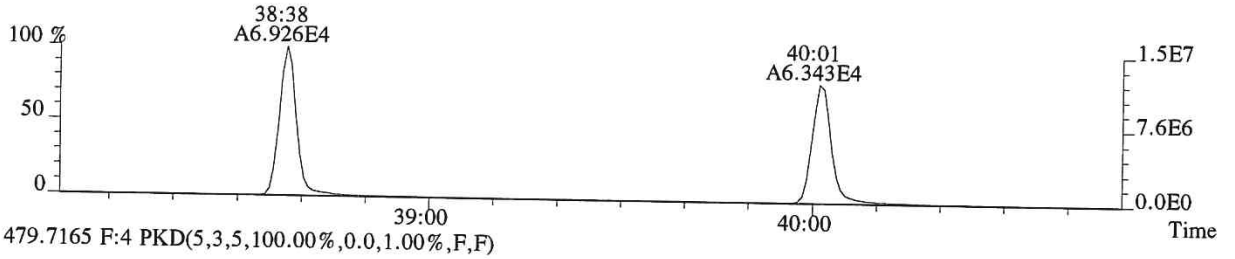
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,636.0,0.50%,F,T)



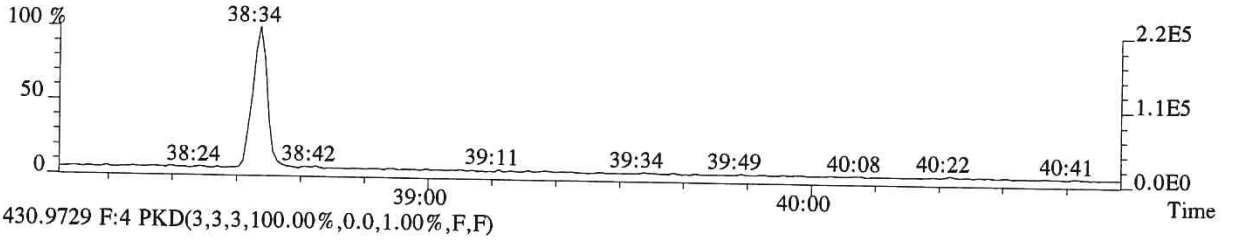
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5824.0,0.50%,F,T)



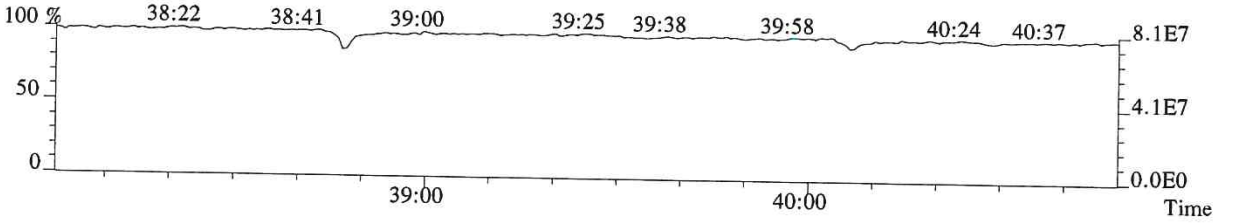
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8176.0,0.50%,F,T)



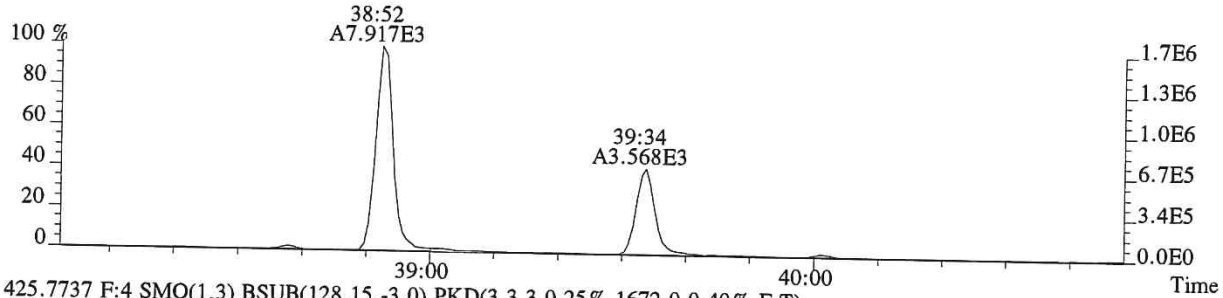
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



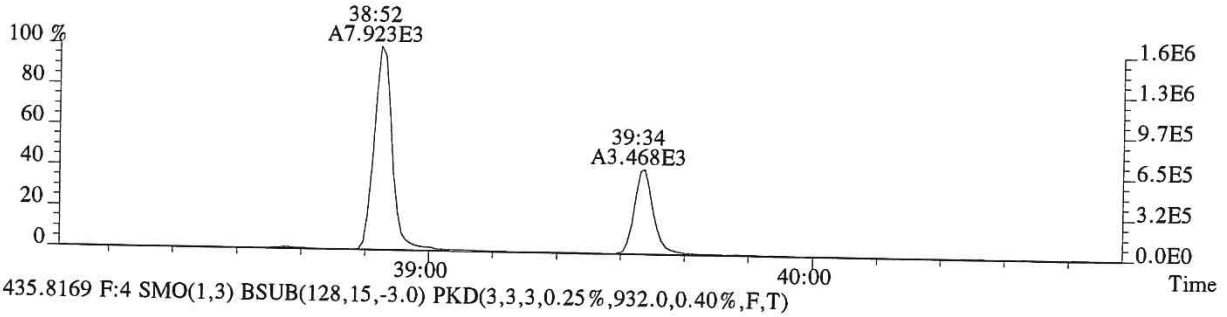
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



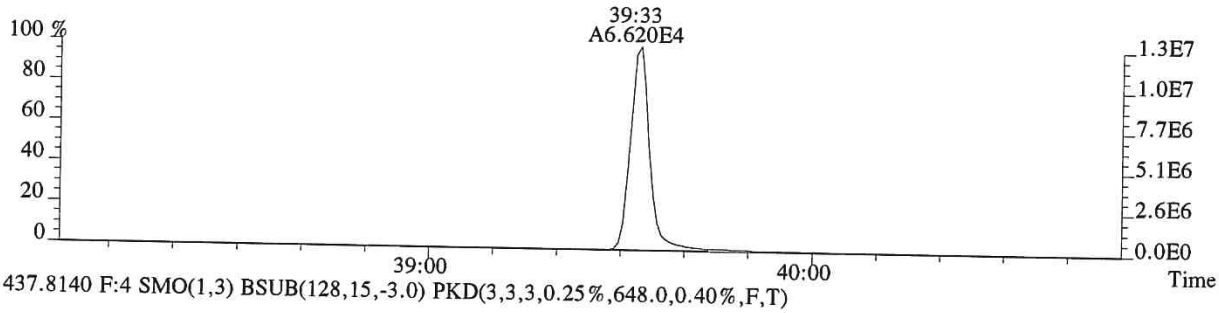
File:P520002 #1-250 Acq:16-JAN-2019 16:59:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-022RE
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1200.0,0.40%,F,T)



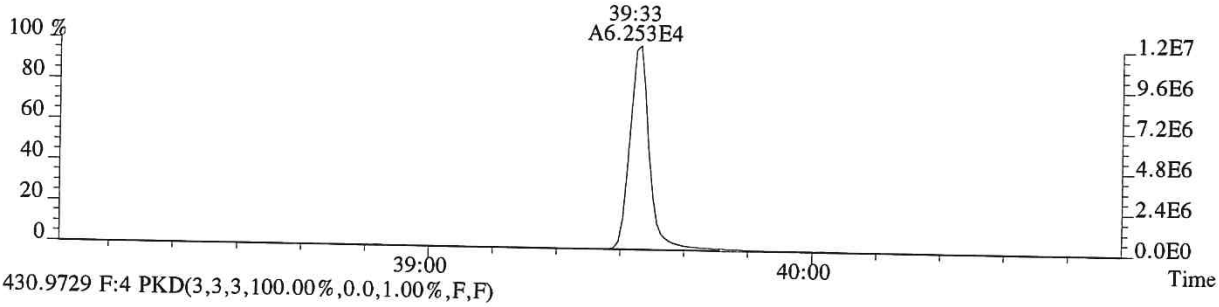
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1672.0,0.40%,F,T)



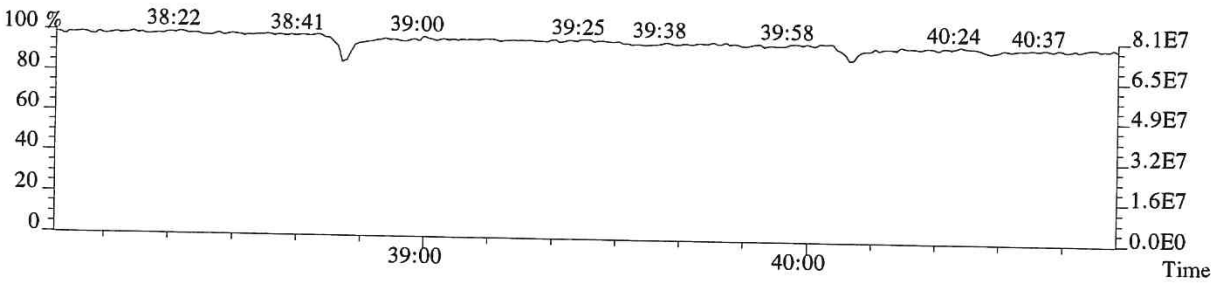
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,932.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,648.0,0.40%,F,T)

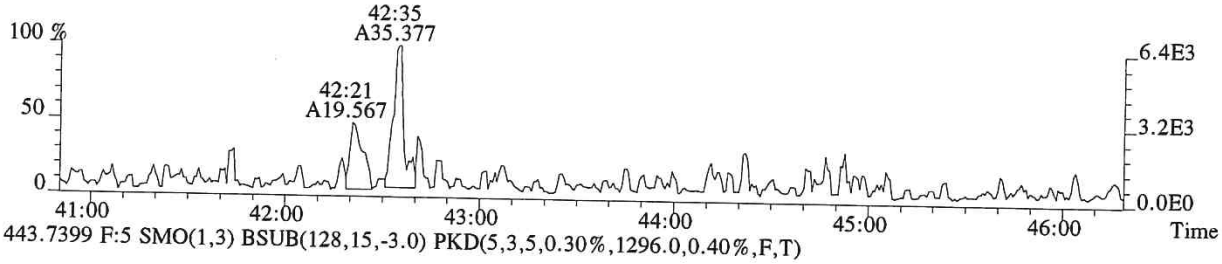


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

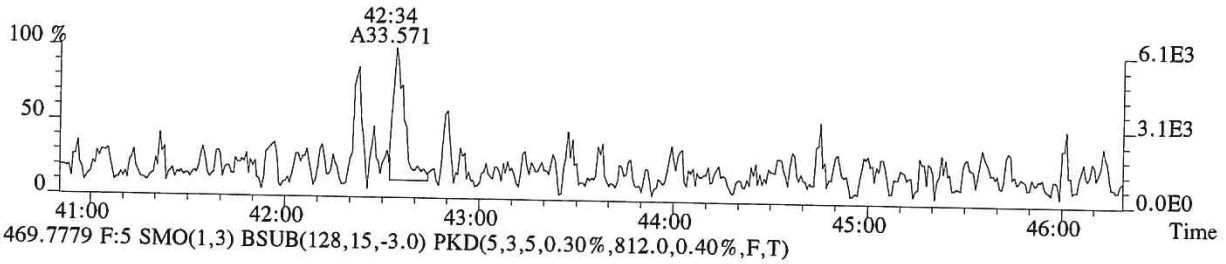


018742

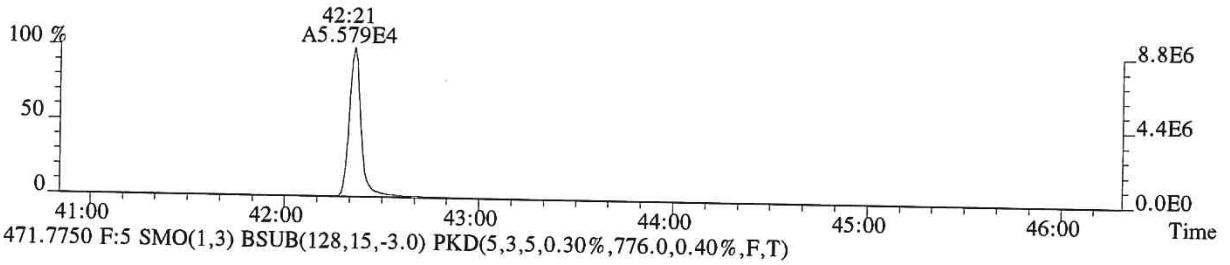
File:P520002 #1-493 Acq:16-JAN-2019 16:59:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-022RE
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,664.0,0.40%,F,T)



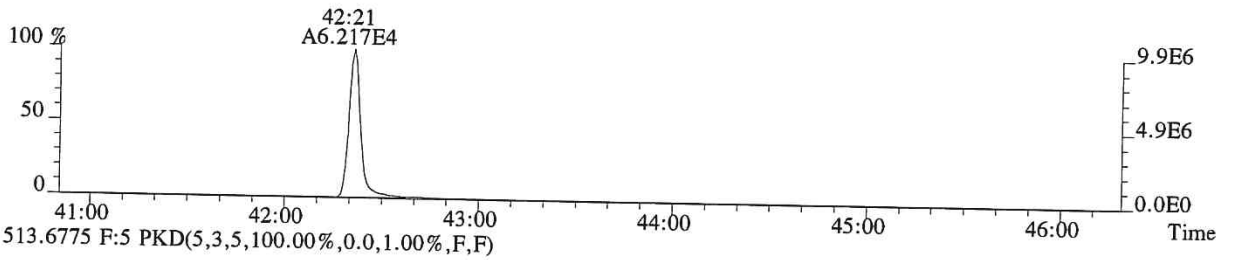
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1296.0,0.40%,F,T)



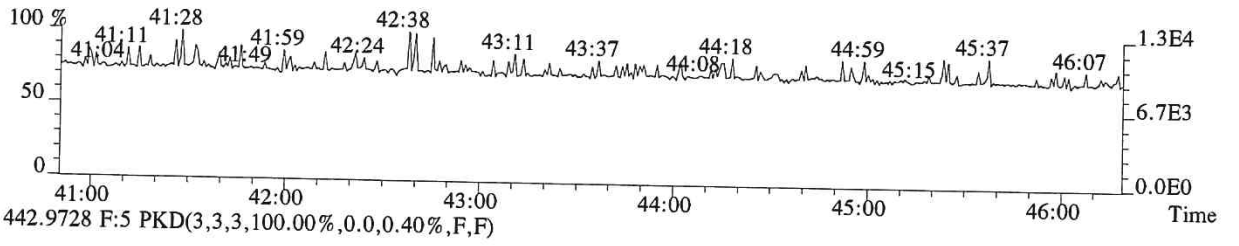
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,812.0,0.40%,F,T)



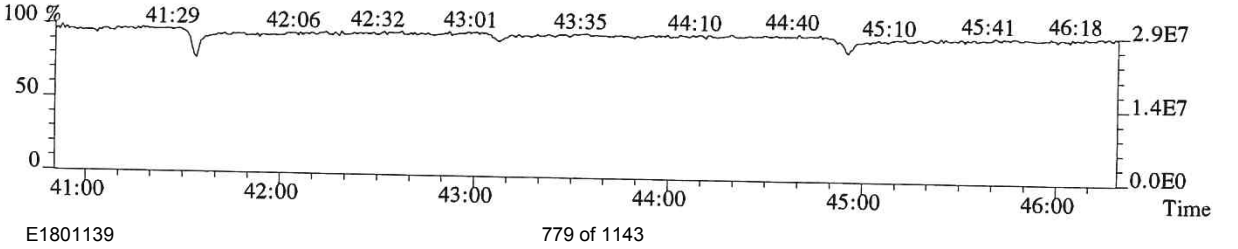
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,776.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

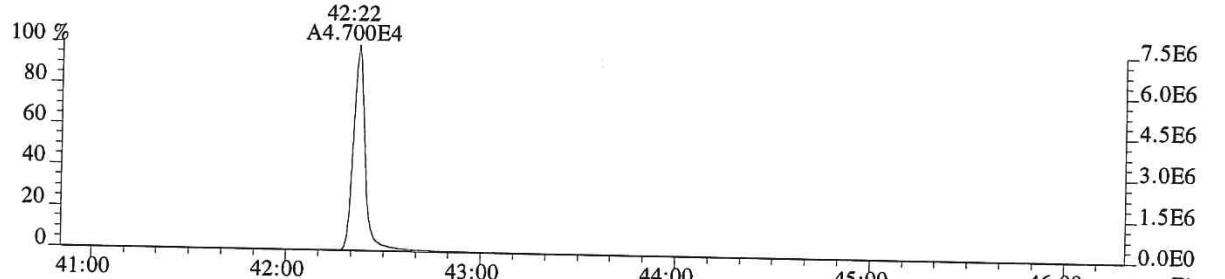


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

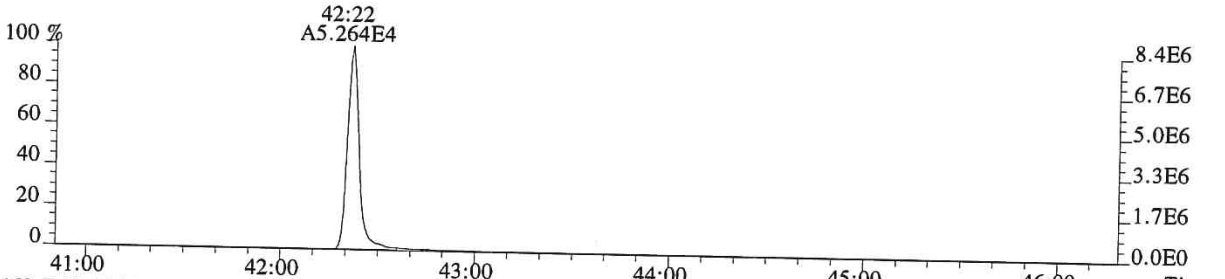


018743

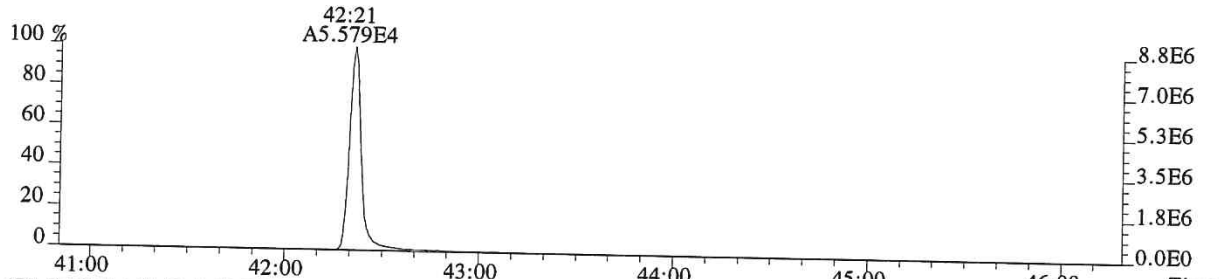
File:P520002 #1-493 Acq:16-JAN-2019 16:59:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:E1801139-022RE
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,384.0,0.40%,F,T)



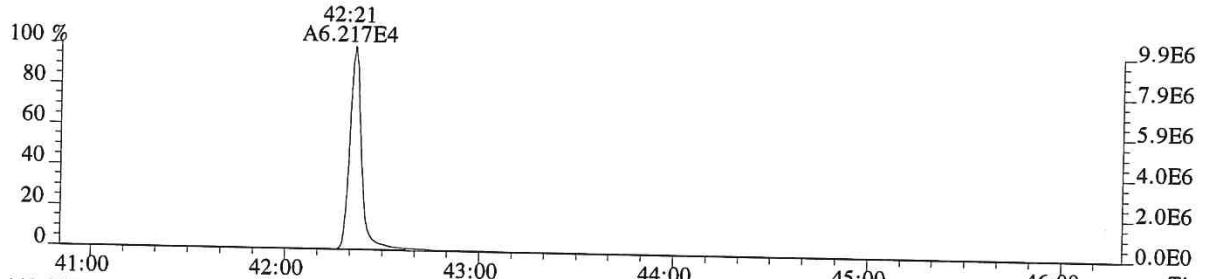
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,780.0,0.40%,F,T)



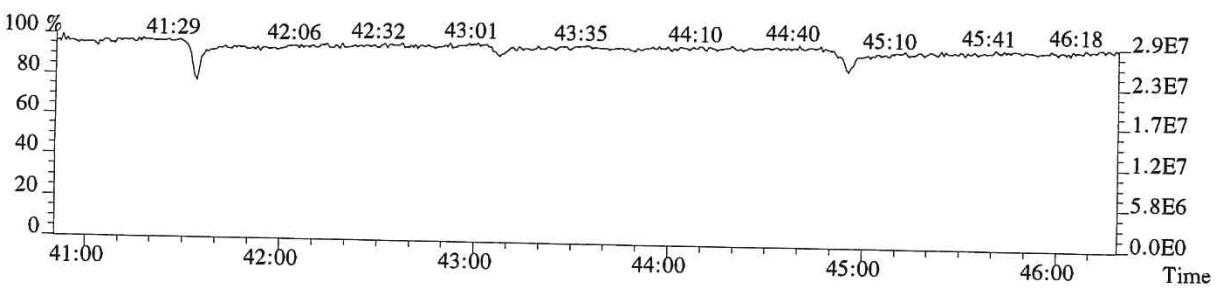
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,812.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,776.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL

Sample Response Summary

CLIENT ID.
METHOD BLANK

Run #10 Filename P519887 Samp: 1 Inj: 1 Acquired: 10-JAN-19 14:48:58
Processed: 11-JAN-19 09:26:54 Sample ID: EQ1900003-01

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	NotFnd	*	*	*	no	yes	0.942
2	Unk	1,2,3,7,8-PeCDF	NotFnd	*	*	*	no	no	1.012
3	Unk	2,3,4,7,8-PeCDF	NotFnd	*	*	*	no	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	NotFnd	*	*	*	no	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	NotFnd	*	*	*	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	NotFnd	*	*	*	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:49	2.303e+01	1.876e+01	1.23	yes	yes	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:10	1.503e+01	1.094e+01	1.37	no	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	yes	1.258
10	Unk	OCDF	NotFnd	*	*	*	no	no	1.359
11	Unk	2,3,7,8-TCDD	NotFnd	*	*	*	no	no	1.085
12	Unk	1,2,3,7,8-PeCDD	NotFnd	*	*	*	no	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	NotFnd	*	*	*	no	yes	1.038
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:05	1.528e+01	1.220e+01	1.25	no	yes	1.025
17	Unk	OCDD	40:36	4.109e+01	4.234e+01	0.97	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:22	3.409e+04	4.306e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:27	5.781e+04	3.635e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:28	5.636e+04	3.542e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:23	2.466e+04	4.808e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:30	2.850e+04	5.489e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:02	2.692e+04	5.170e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:49	2.299e+04	4.533e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:09	1.851e+04	4.246e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:29	1.703e+04	3.789e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:24	1.701e+04	2.136e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:48	4.368e+04	2.743e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:11	3.786e+04	3.023e+04	1.25	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:17	3.727e+04	2.951e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	4.011e+04	3.869e+04	1.04	yes	no	0.858
32	IS	13C-OCDD	40:35	3.874e+04	4.283e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:40	4.211e+04	5.267e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:31	5.265e+04	4.188e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:26	2.369e+04				no	1.014

$$\text{OCDD} = \frac{(4.109e{+}01 + 4.234e{+}01) \times 4000\ \text{pg} \times 1}{(3.874e{+}04 + 4.283e{+}04) \times \quad \text{g} \times \quad / 100 \times 1.118} =$$

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Signal/Noise Height Ratio Summary

CLIENT ID.
METHOD BLANK

Run #10 Filename P519887 Samp: 1 Inj: 1 Acquired: 10-JAN-19 14:48:58
Processed: 11-JAN-19 09:26:54 LAB. ID: EQ1900003-01

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	*	1.04e+03	*	*	9.68e+02	*
2	1,2,3,7,8-PeCDF	*	7.76e+02	*	*	1.36e+03	*
3	2,3,4,7,8-PeCDF	*	7.76e+02	*	*	1.36e+03	*
4	1,2,3,4,7,8-HxCDF	*	1.26e+03	*	*	9.56e+02	*
5	1,2,3,6,7,8-HxCDF	*	1.26e+03	*	*	9.56e+02	*
6	2,3,4,6,7,8-HxCDF	*	1.26e+03	*	*	9.56e+02	*
7	1,2,3,7,8,9-HxCDF	3.91e+03	1.26e+03	3.1e+00	3.54e+03	9.56e+02	3.7e+00
8	1,2,3,4,6,7,8-HpCDF	4.39e+03	8.40e+02	5.2e+00	2.69e+03	6.32e+02	4.3e+00
9	1,2,3,4,7,8,9-HpCDF	*	8.40e+02	*	*	6.32e+02	*
10	OCDF	*	8.84e+02	*	*	1.46e+03	*
11	2,3,7,8-TCDD	*	3.78e+03	*	*	1.42e+03	*
12	1,2,3,7,8-PeCDD	*	6.64e+02	*	*	9.52e+02	*
13	1,2,3,4,7,8-HxCDD	*	7.12e+02	*	*	8.64e+02	*
14	1,2,3,6,7,8-HxCDD	*	7.12e+02	*	*	8.64e+02	*
15	1,2,3,7,8,9-HxCDD	*	7.12e+02	*	*	8.64e+02	*
16	1,2,3,4,6,7,8-HpCDD	3.21e+03	5.88e+02	5.5e+00	2.29e+03	7.28e+02	3.1e+00
17	OCDD	7.89e+03	6.08e+02	1.3e+01	9.79e+03	6.28e+02	1.6e+01
18	13C-2,3,7,8-TCDF	4.84e+06	6.25e+03	7.8e+02	6.08e+06	3.56e+03	1.7e+03
19	13C-1,2,3,7,8-PeCDF	1.01e+07	6.44e+02	1.6e+04	6.38e+06	1.38e+03	4.6e+03
20	13C-2,3,4,7,8-PeCDF	1.05e+07	6.44e+02	1.6e+04	6.58e+06	1.38e+03	4.8e+03
21	13C-1,2,3,4,7,8-HxCDF	5.27e+06	1.44e+03	3.6e+03	1.03e+07	1.93e+03	5.3e+03
22	13C-1,2,3,6,7,8-HxCDF	5.61e+06	1.44e+03	3.9e+03	1.07e+07	1.93e+03	5.6e+03
23	13C-2,3,4,6,7,8-HxCDF	5.70e+06	1.44e+03	3.9e+03	1.10e+07	1.93e+03	5.7e+03
24	13C-1,2,3,7,8,9-HxCDF	4.88e+06	1.44e+03	3.4e+03	9.52e+06	1.93e+03	4.9e+03
25	13C-1,2,3,4,6,7,8-HpCDF	4.08e+06	1.80e+03	2.3e+03	9.29e+06	1.07e+04	8.7e+02
26	13C-1,2,3,4,7,8,9-HpCDF	3.55e+06	1.80e+03	2.0e+03	8.04e+06	1.07e+04	7.5e+02
27	13C-2,3,7,8-TCDD	2.69e+06	7.02e+03	3.8e+02	3.39e+06	3.37e+03	1.0e+03
28	13C-1,2,3,7,8-PeCDD	8.31e+06	9.40e+02	8.8e+03	5.27e+06	1.58e+03	3.3e+03
29	13C-1,2,3,4,7,8-HxCDD	8.43e+06	1.64e+03	5.1e+03	6.76e+06	9.60e+02	7.0e+03
30	13C-1,2,3,6,7,8-HxCDD	7.86e+06	1.64e+03	4.8e+03	6.27e+06	9.60e+02	6.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	8.60e+06	1.04e+03	8.3e+03	8.26e+06	7.88e+02	1.0e+04
32	13C-OCDD	6.95e+06	5.48e+02	1.3e+04	7.73e+06	6.44e+02	1.2e+04
33	13C-1,2,3,4-TCDD	6.19e+06	7.02e+03	8.8e+02	7.70e+06	3.37e+03	2.3e+03
34	13C-1,2,3,7,8,9-HxCDD	1.12e+07	1.64e+03	6.8e+03	8.78e+06	9.60e+02	9.1e+03
35	37Cl-2,3,7,8-TCDD	3.83e+06	1.49e+03	2.6e+03			

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Peak List Summary

CLIENT ID.
METHOD BLANK

Entry: 41 Totals Name: Total Hexa-Furans

Run: 10 File: P519887 Sample:1 Injection:1 Function:3

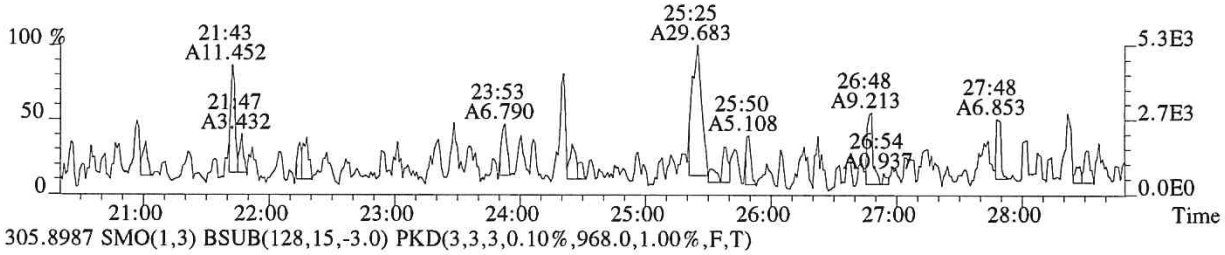
Acquired: 10-JAN-19 14:48:58 Processed: 11-JAN-19 09:26:54

Mass: 373.8210 375.8180 Tot Response: 4.18e+01 RRF: 1.141

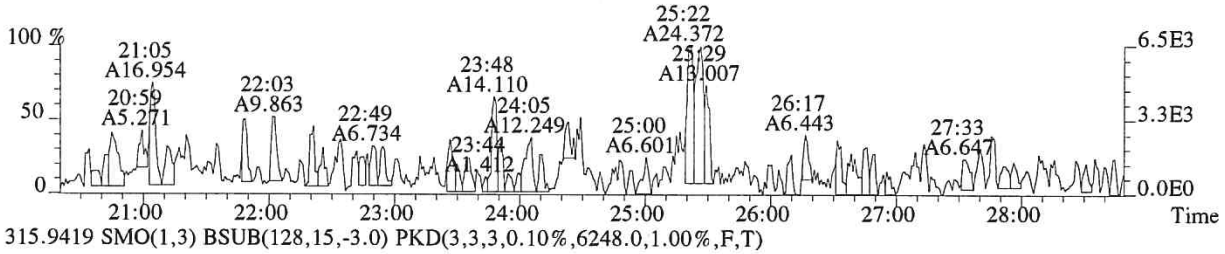
#	RT	Resp	Resp Ratio	Meet	Tot Resp	Name	Mod1?	Mod2
1	35:49	2.30e+01	1.88e+01 1.23	yes	4.18e+01	1,2,3,7,8,9-HxCDF	y	y

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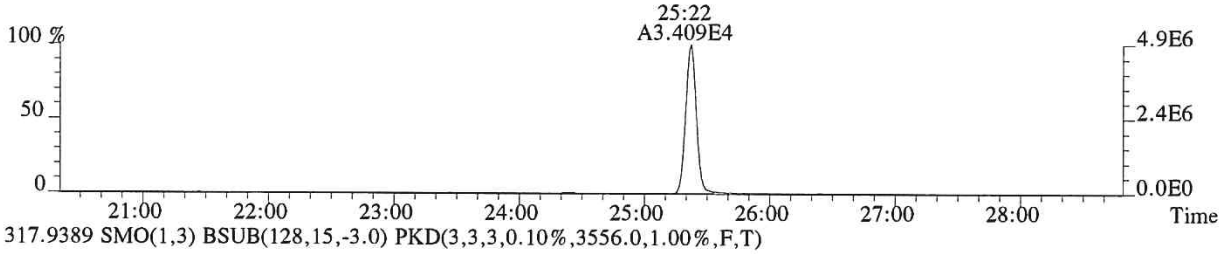
File:P519887 #1-602 Acq:10-JAN-2019 14:48:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-01
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1036.0,1.00%,F,T)



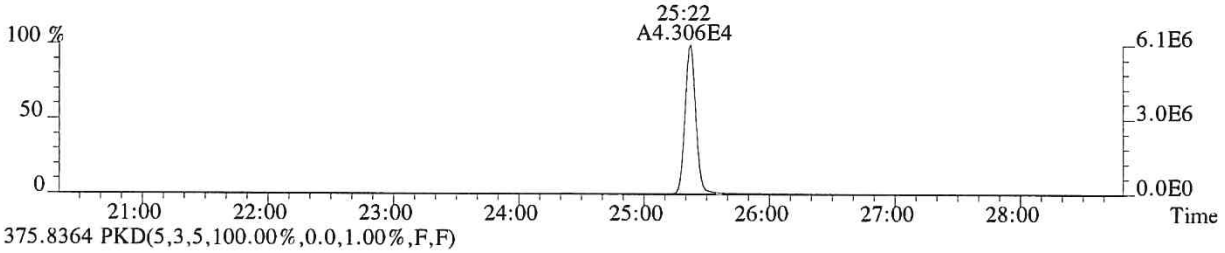
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,968.0,1.00%,F,T)



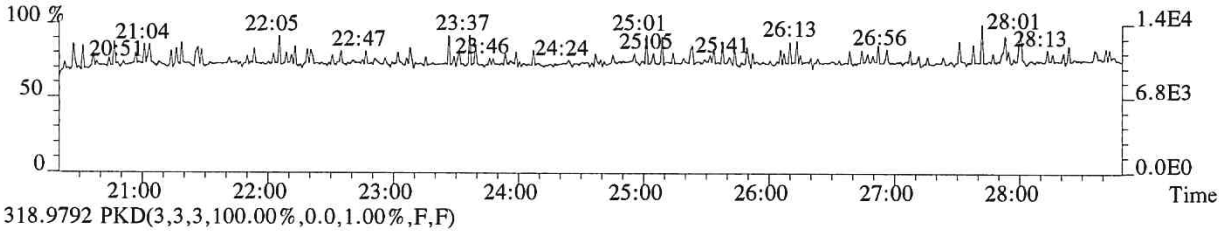
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6248.0,1.00%,F,T)



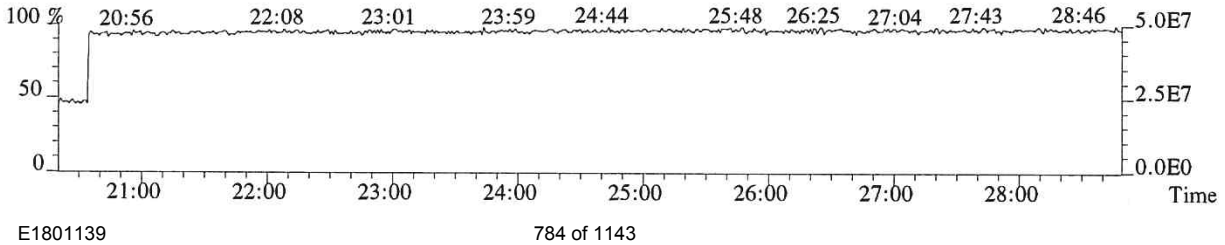
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3556.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

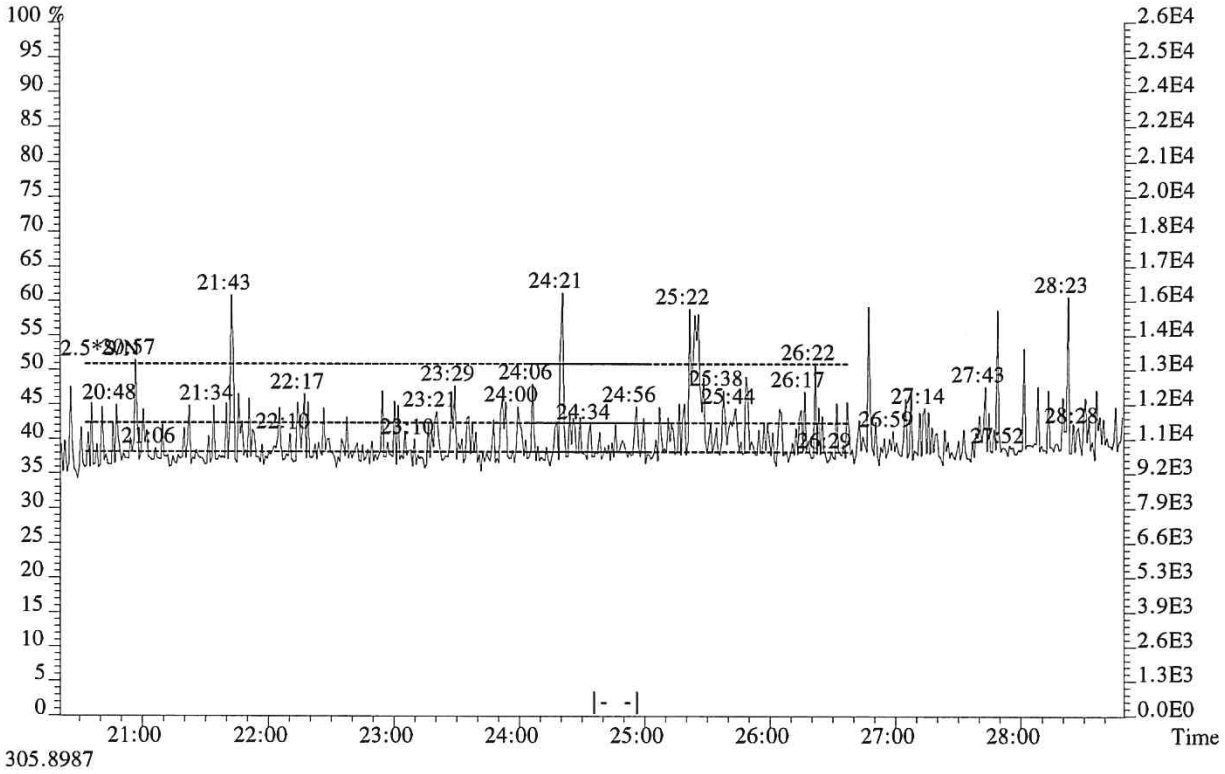


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

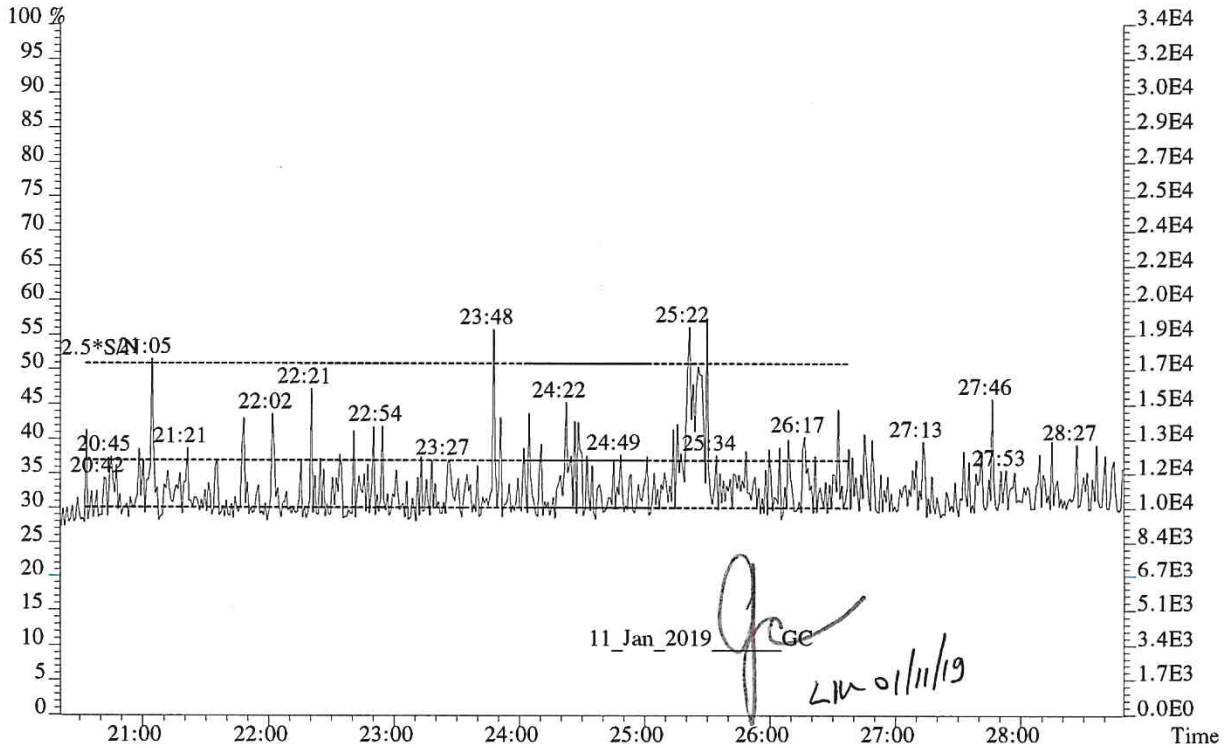


018748

File:P519887 #1-602 Acq:10-JAN-2019 14:48:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-01
303.9016

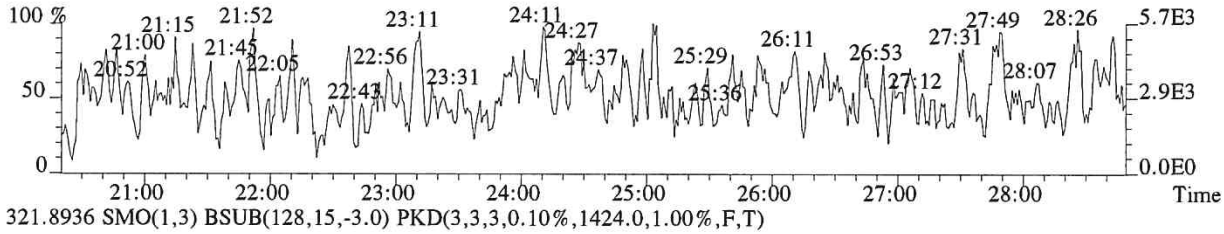


305.8987

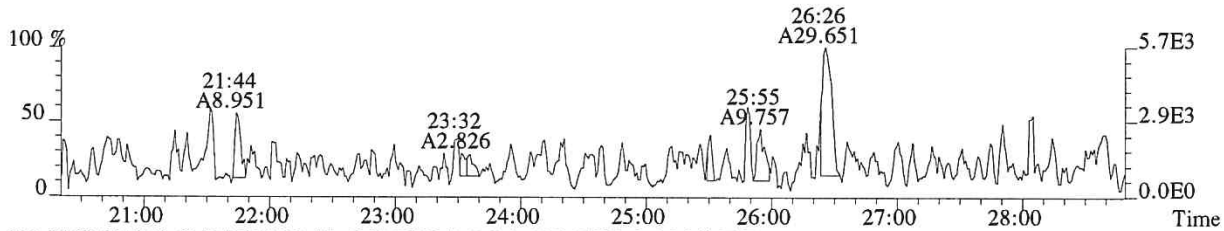


018749

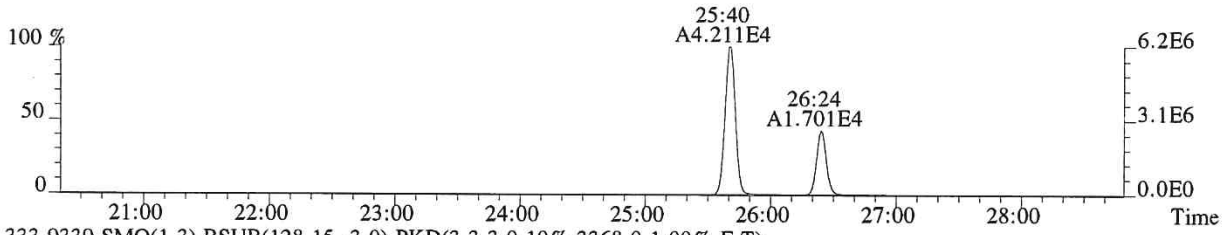
File:P519887 #1-602 Acq:10-JAN-2019 14:48:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-01
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3776.0,1.00%,F,T)



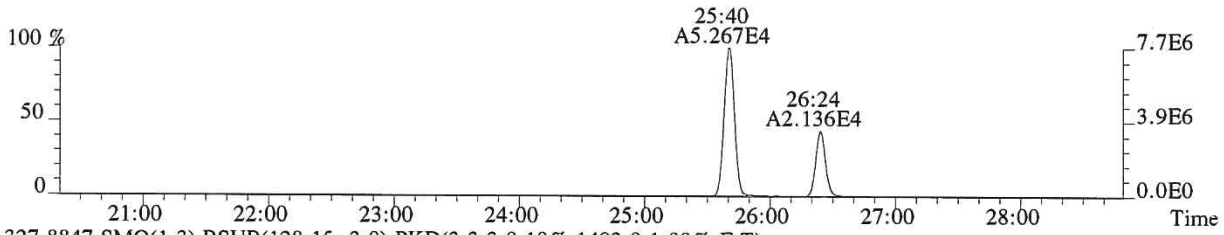
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1424.0,1.00%,F,T)



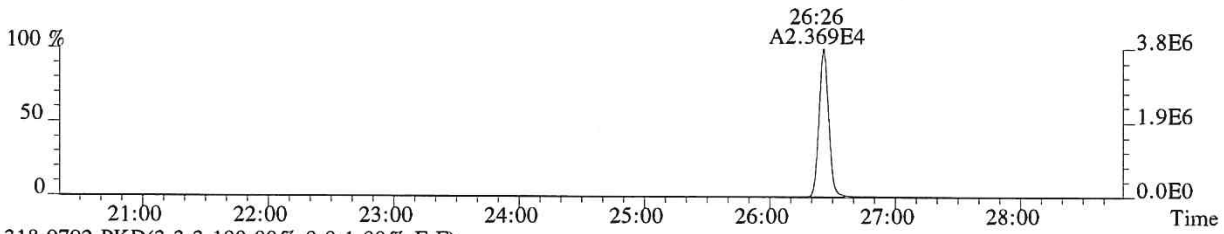
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7020.0,1.00%,F,T)



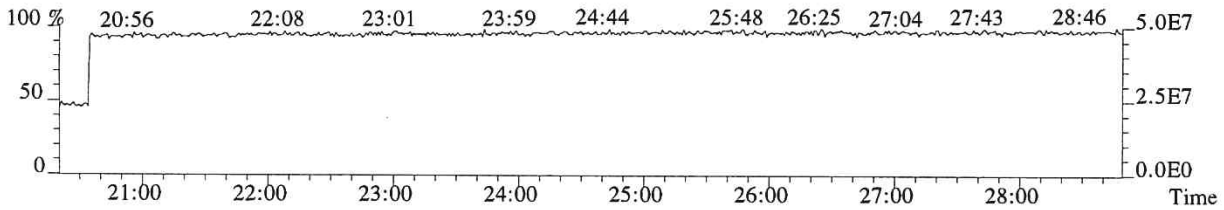
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3368.0,1.00%,F,T)



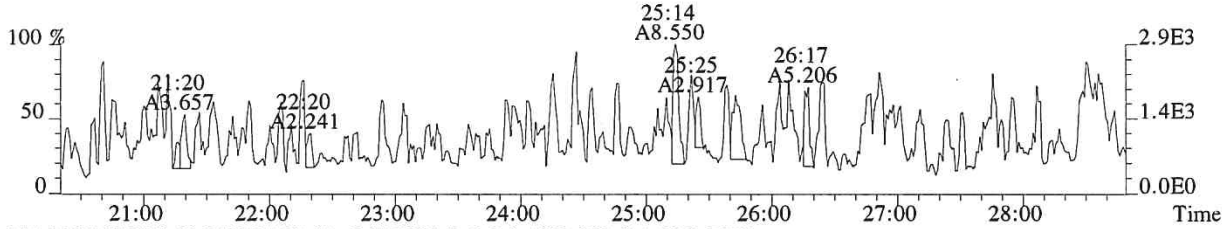
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1492.0,1.00%,F,T)



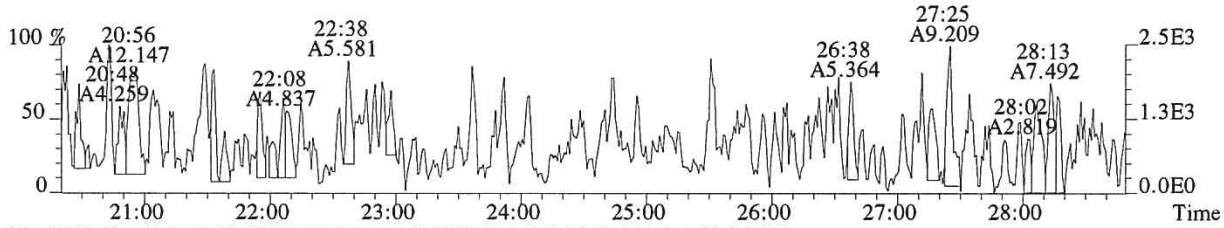
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



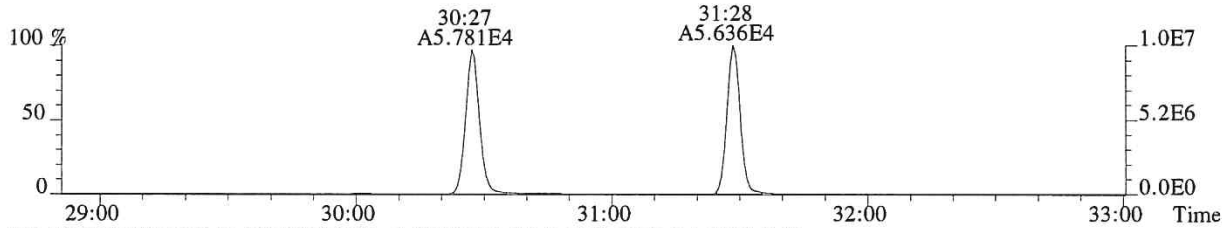
File:P519887 #1-602 Acq:10-JAN-2019 14:48:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-01
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1192.0,1.00%,F,T)



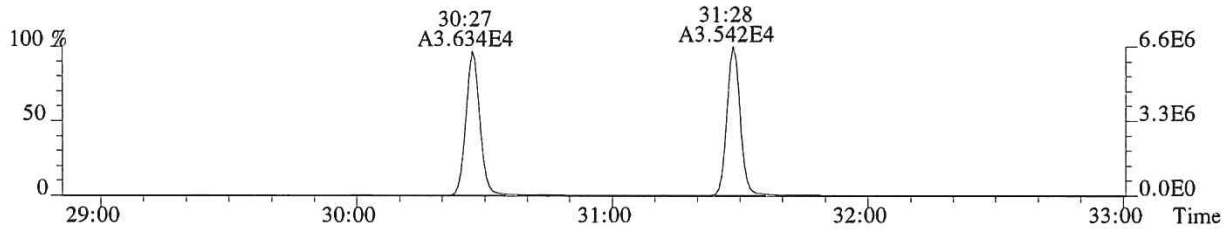
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,892.0,1.00%,F,T)



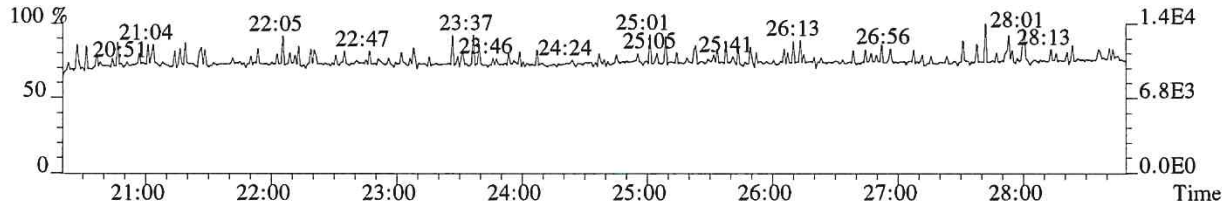
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,644.0,1.00%,F,T)



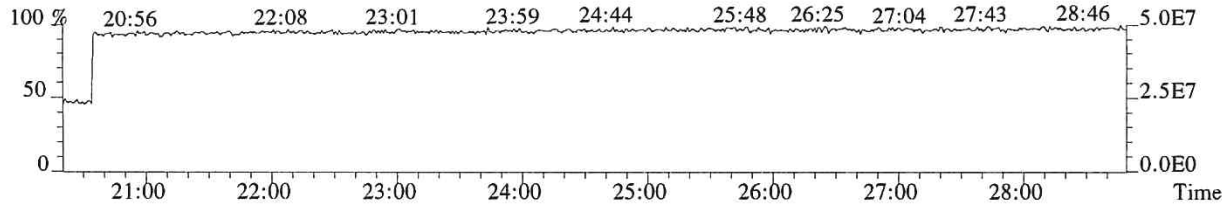
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1376.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

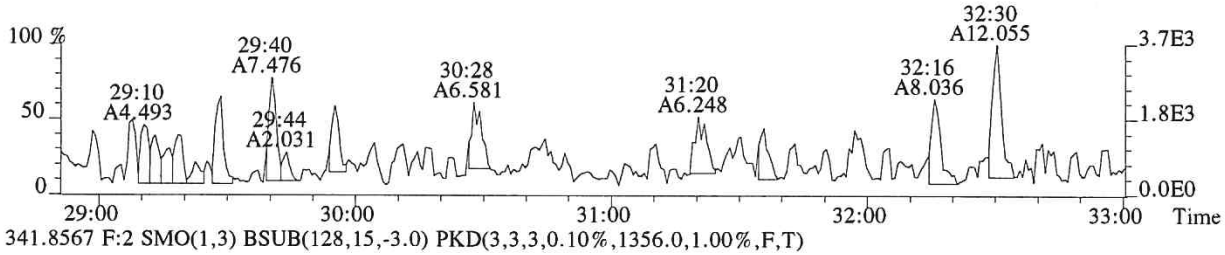


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

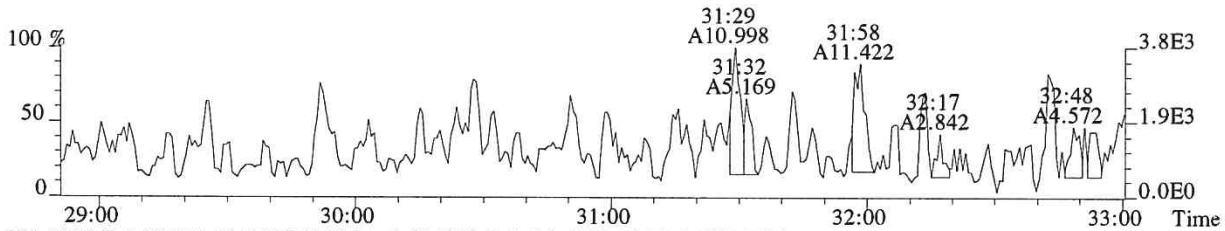


018751

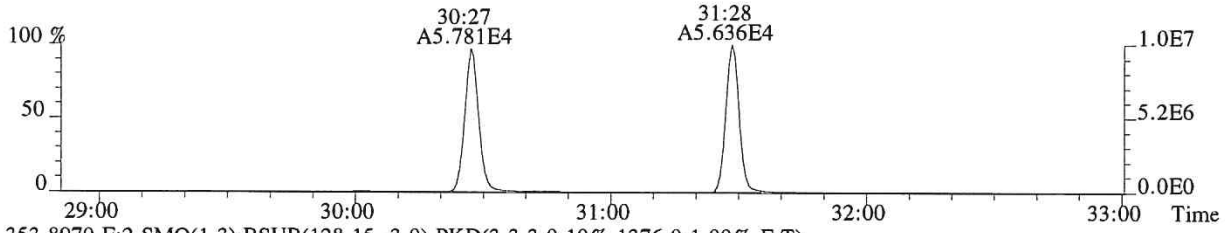
File:P519887 #1-375 Acq:10-JAN-2019 14:48:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-01
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,776.0,1.00%,F,T)



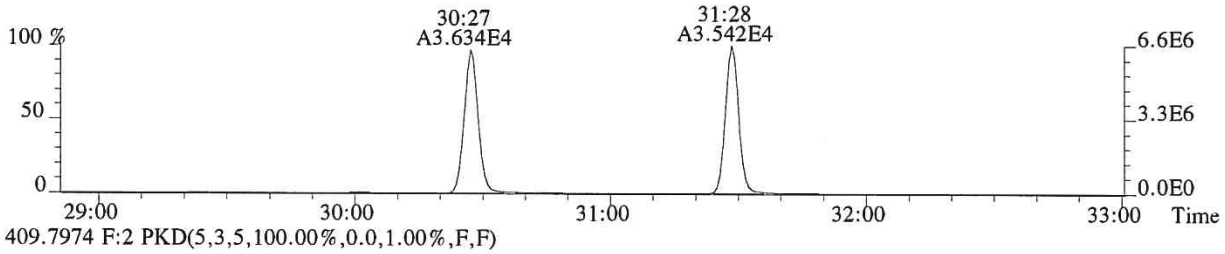
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1356.0,1.00%,F,T)



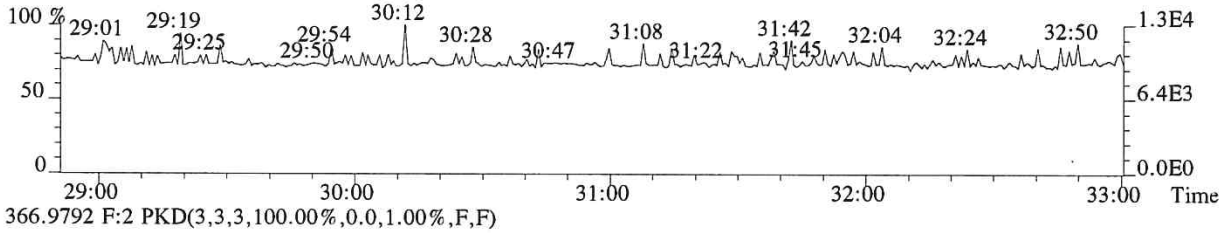
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,644.0,1.00%,F,T)



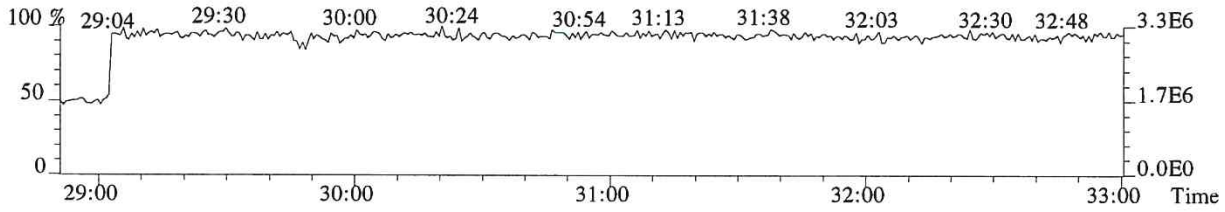
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1376.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

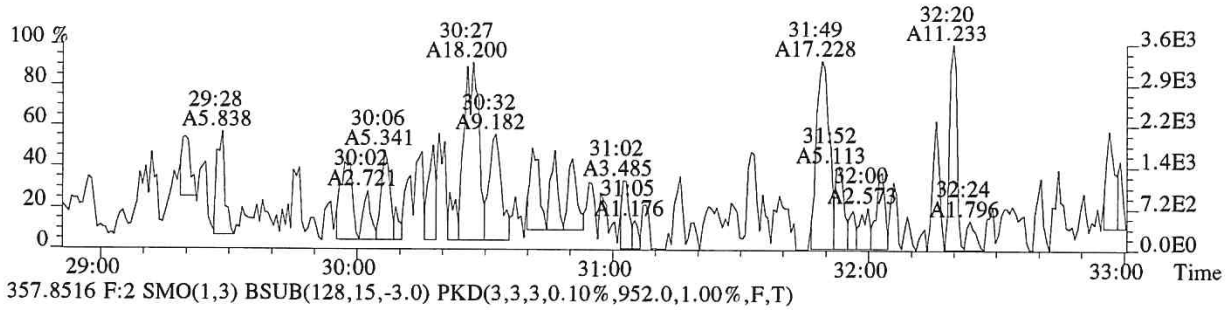


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

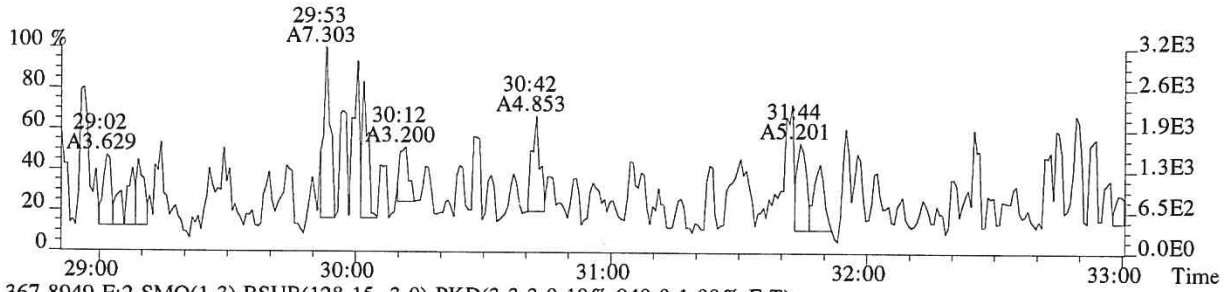


018752

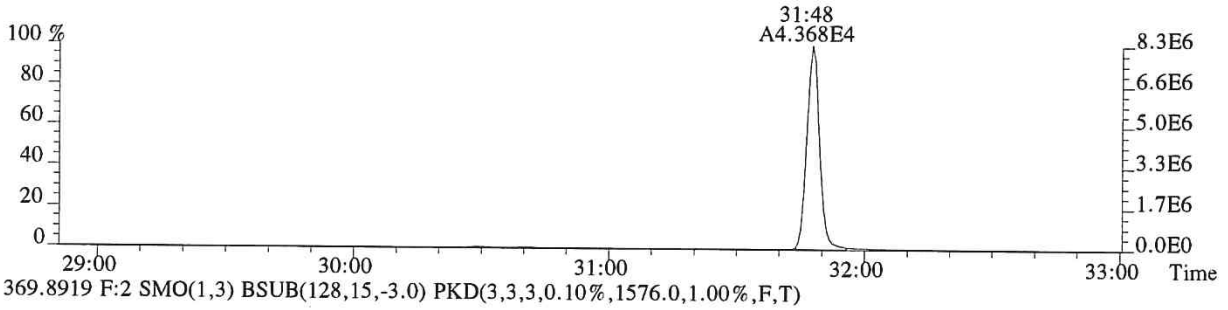
File:P519887 #1-375 Acq:10-JAN-2019 14:48:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-01
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,664.0,1.00%,F,T)



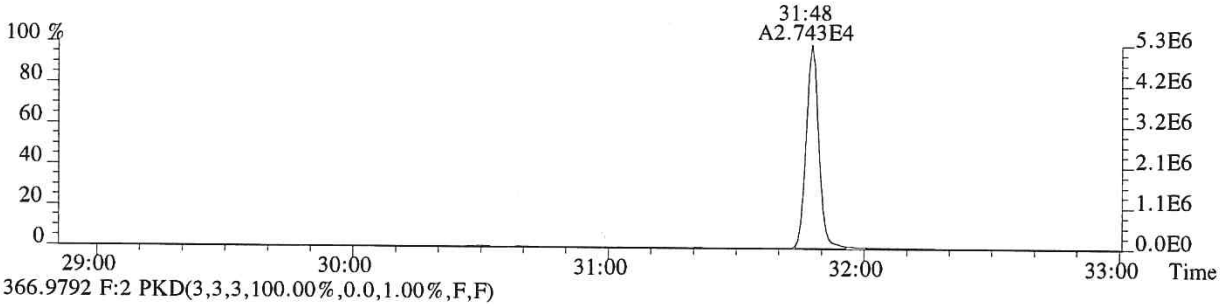
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,952.0,1.00%,F,T)



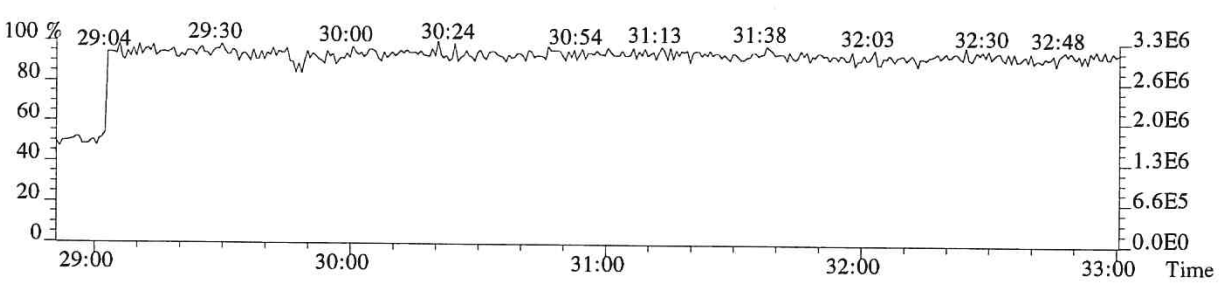
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,940.0,1.00%,F,T)



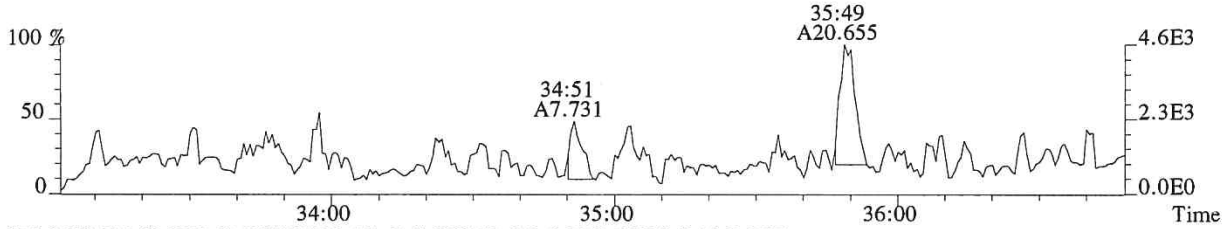
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1576.0,1.00%,F,T)



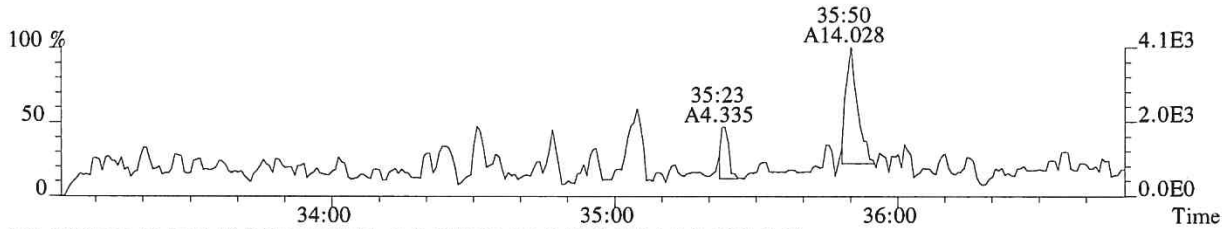
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



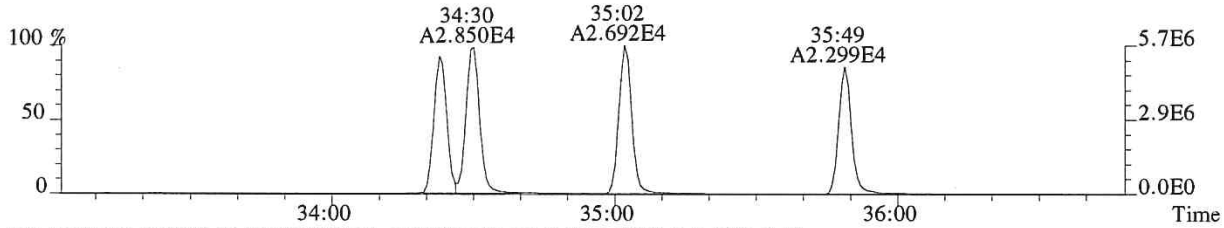
File:P519887 #1-339 Acq:10-JAN-2019 14:48:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-01
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1260.0,0.40%,F,T)



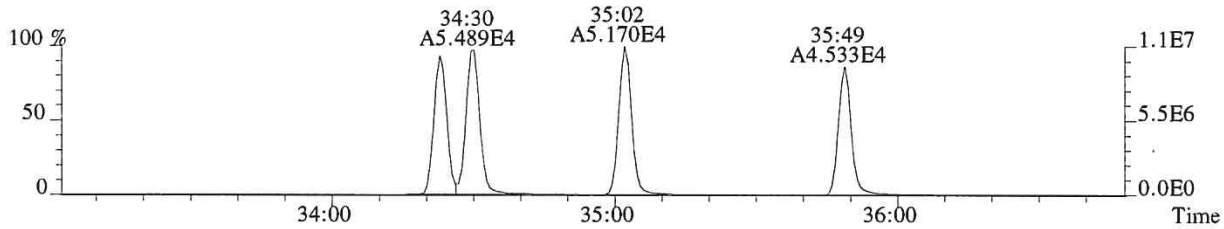
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,956.0,0.40%,F,T)



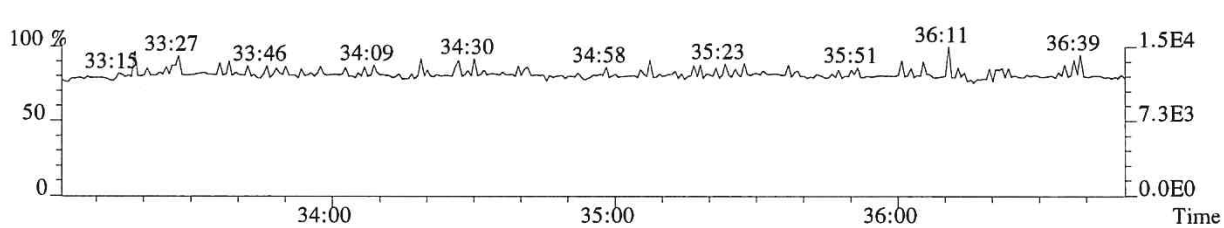
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1444.0,0.40%,F,T)



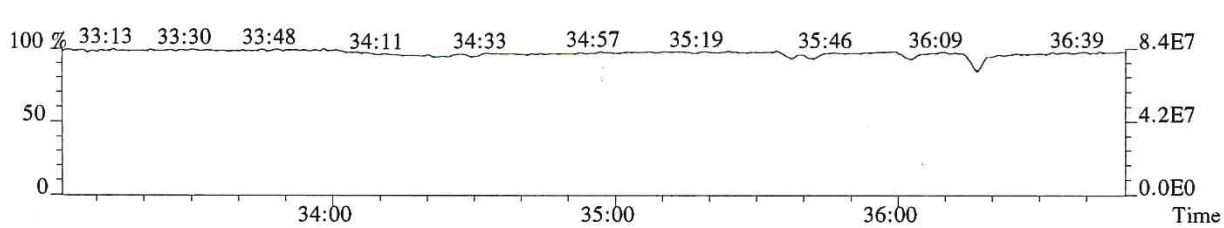
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1932.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

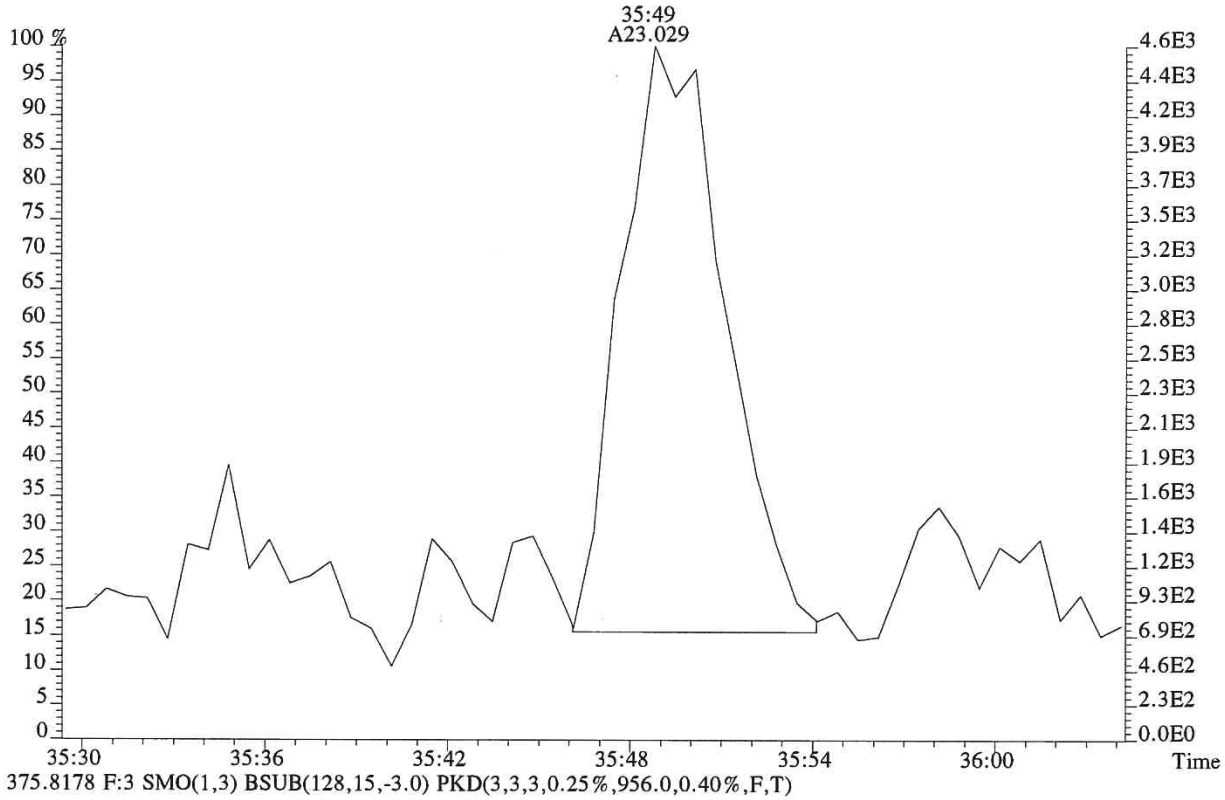


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

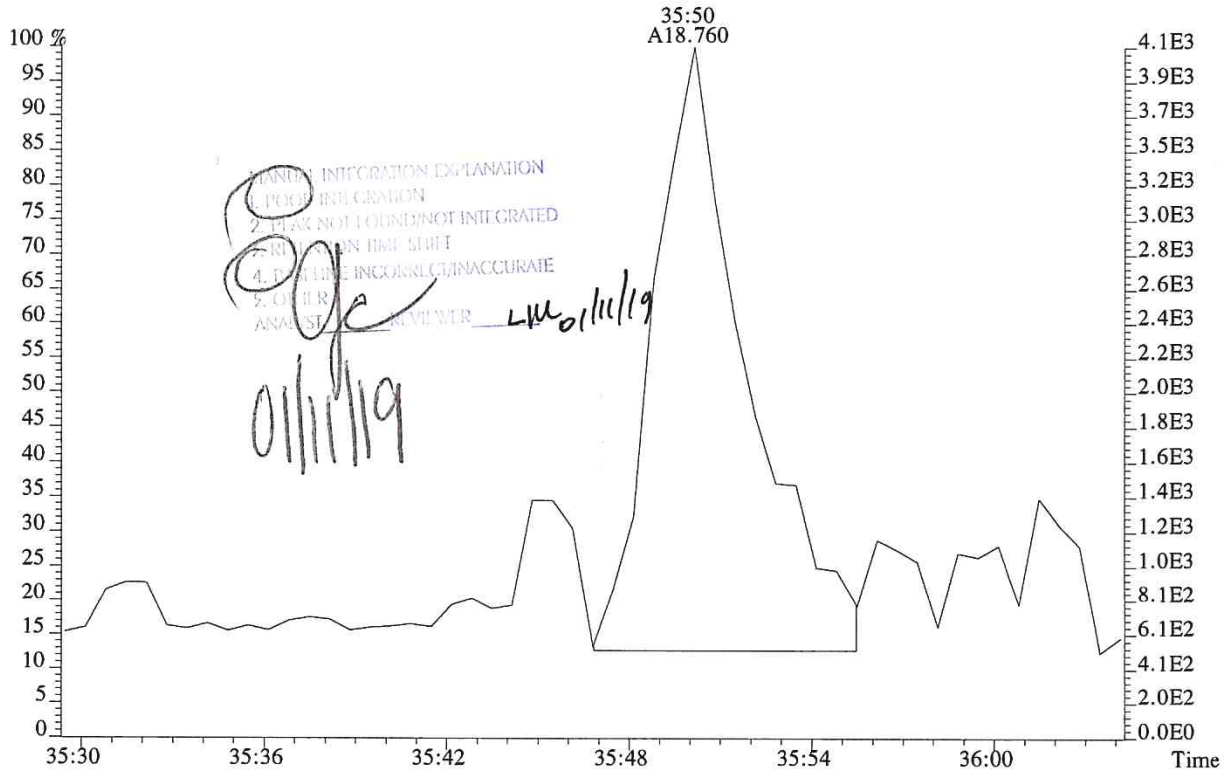


018754

File:P519887 #1-339 Acq:10-JAN-2019 14:48:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-01
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1260.0,0.40%,F,T)



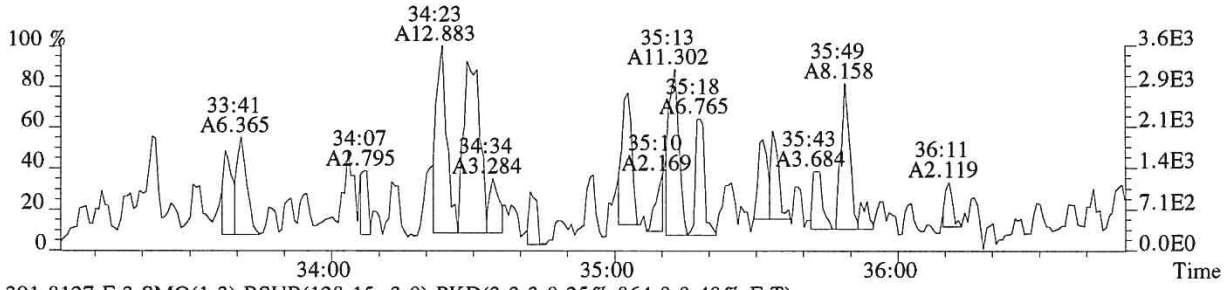
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,956.0,0.40%,F,T)



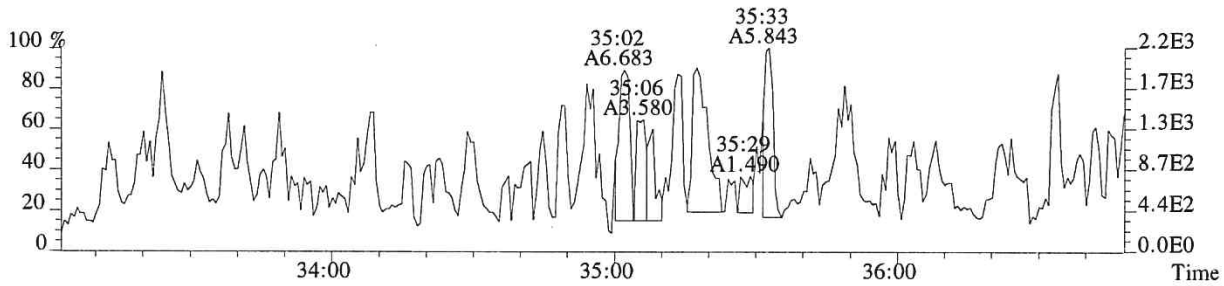
MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. PEAK SHAPE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LMW 01/11/19
01/11/19

018755

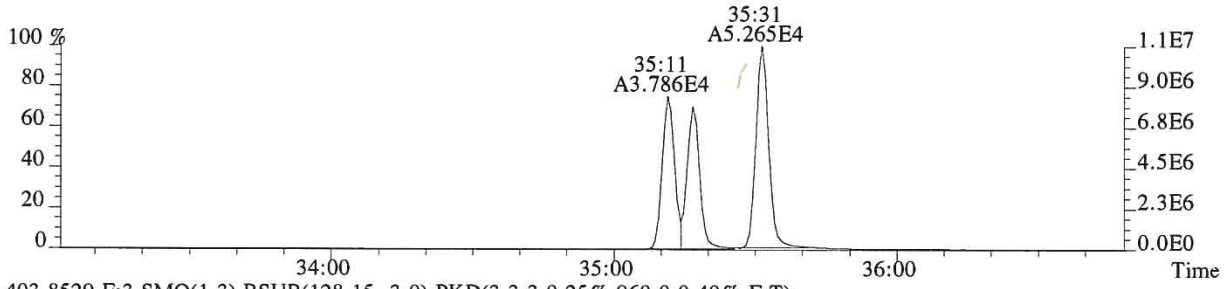
File:P519887 #1-339 Acq:10-JAN-2019 14:48:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-01
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,712.0,0.40%,F,T)



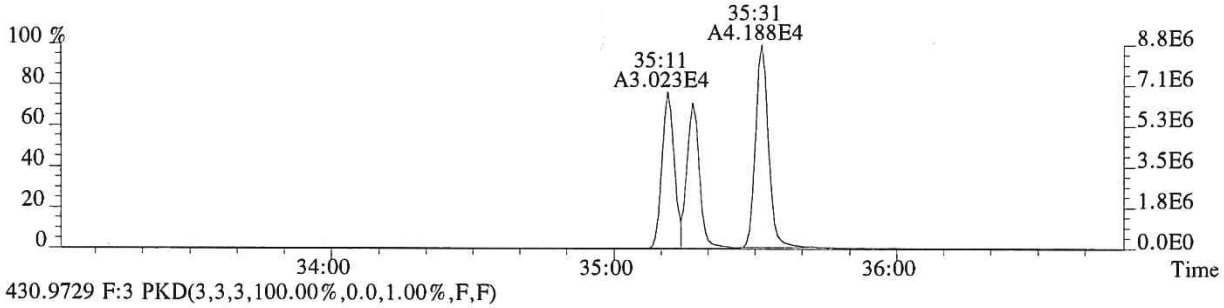
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,864.0,0.40%,F,T)



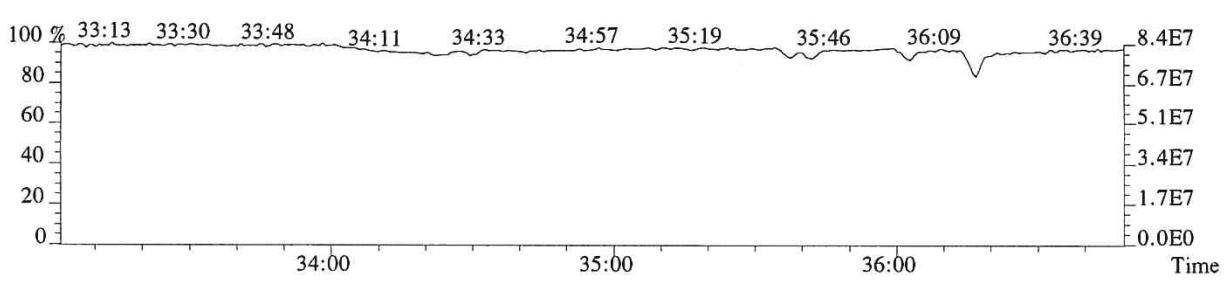
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1640.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,960.0,0.40%,F,T)



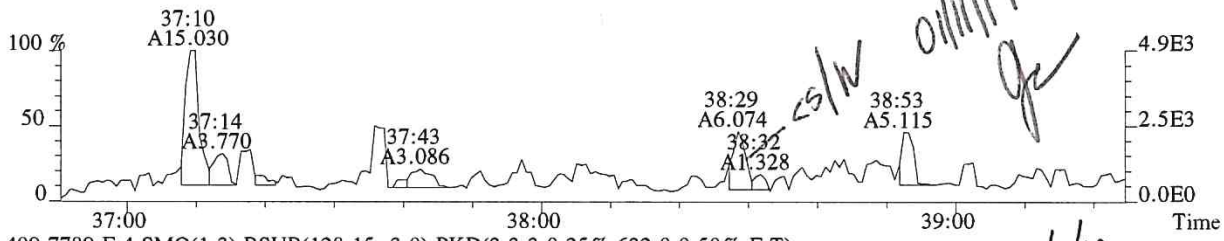
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



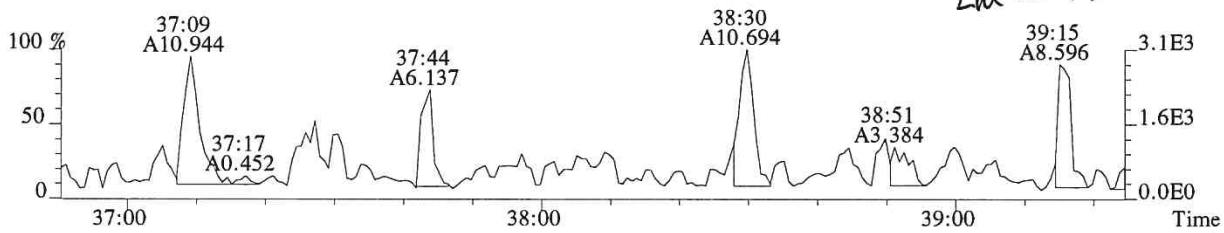
018756

File:P519887 #1-232 Acq:10-JAN-2019 14:48:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-01

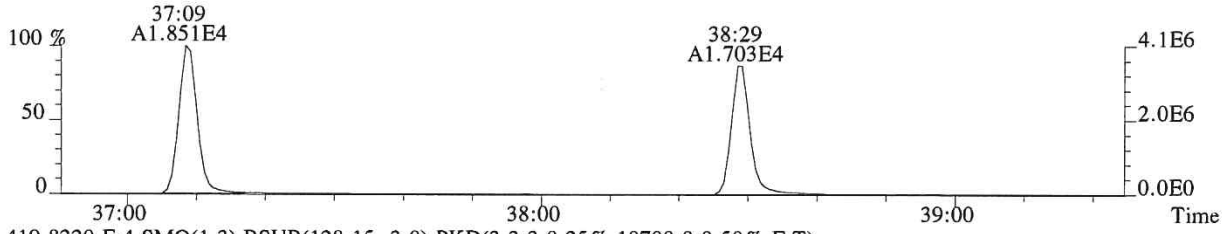
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,840.0,0.50%,F,T)



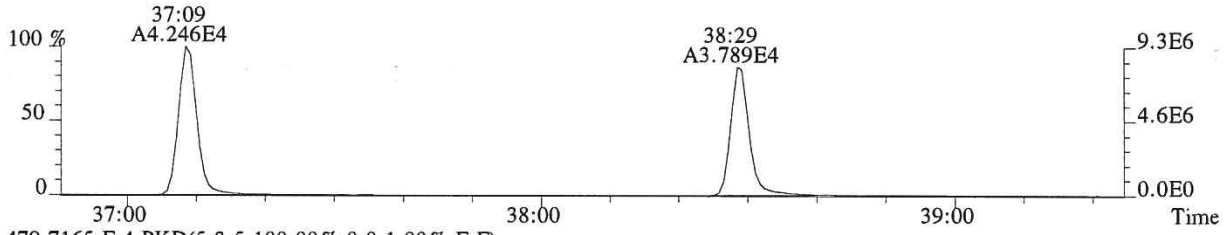
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,632.0,0.50%,F,T)



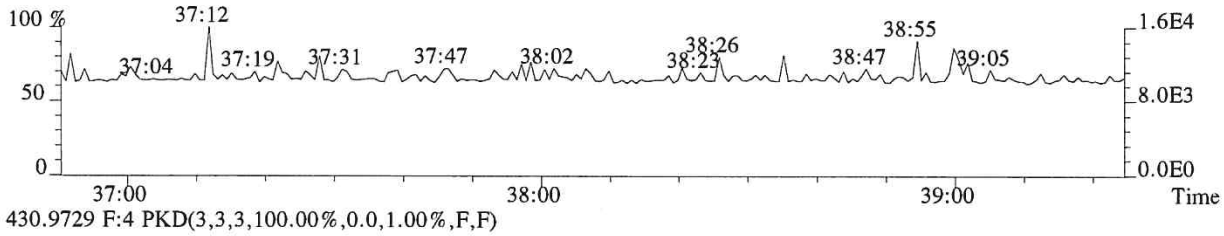
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1796.0,0.50%,F,T)



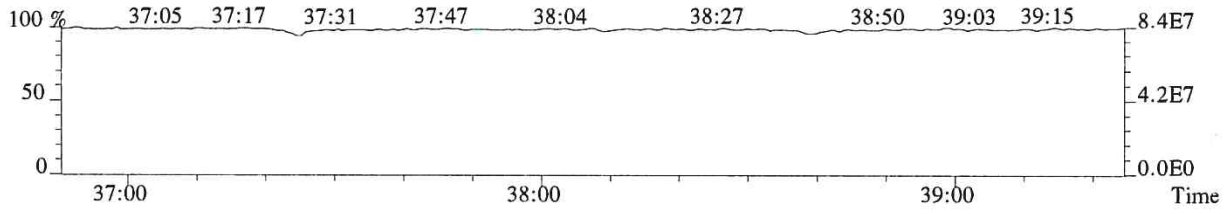
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10700.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

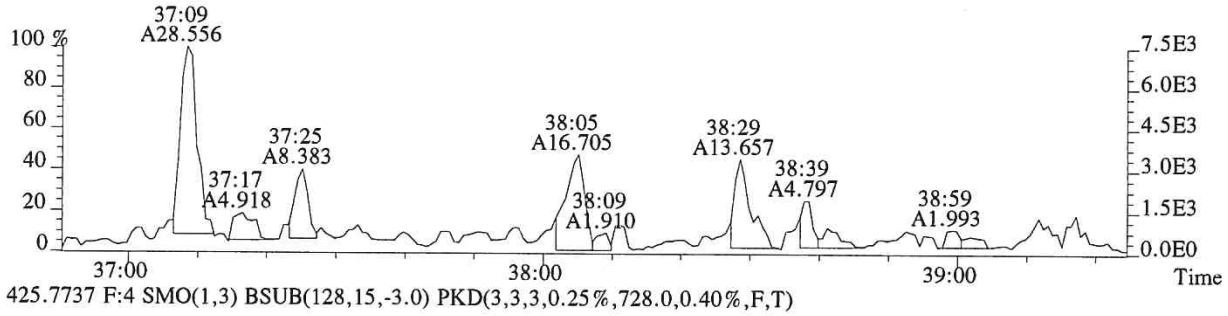


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

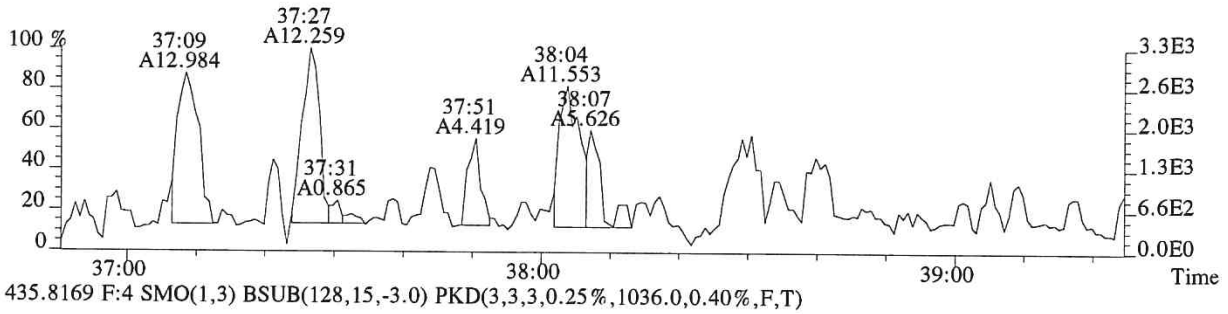


018757

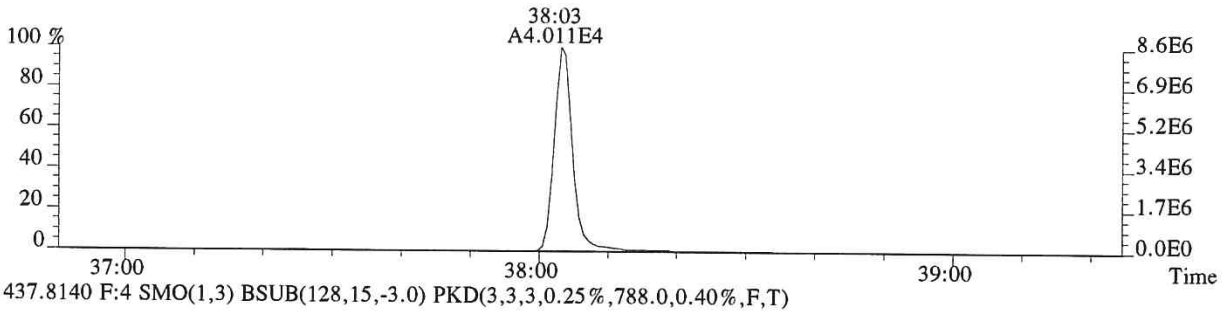
File:P519887 #1-232 Acq:10-JAN-2019 14:48:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-01
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,588.0,0.40%,F,T)



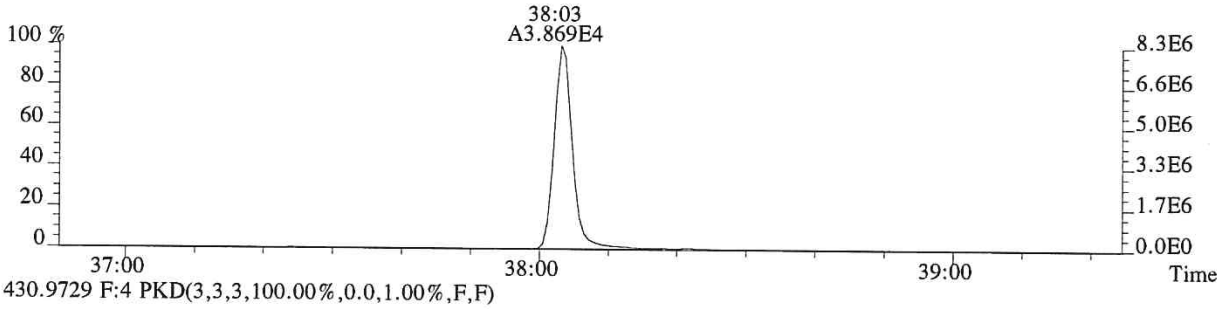
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,728.0,0.40%,F,T)



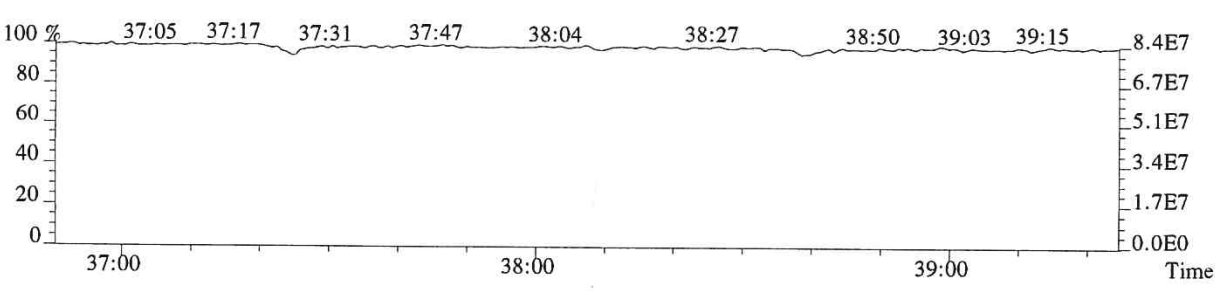
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1036.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,788.0,0.40%,F,T)

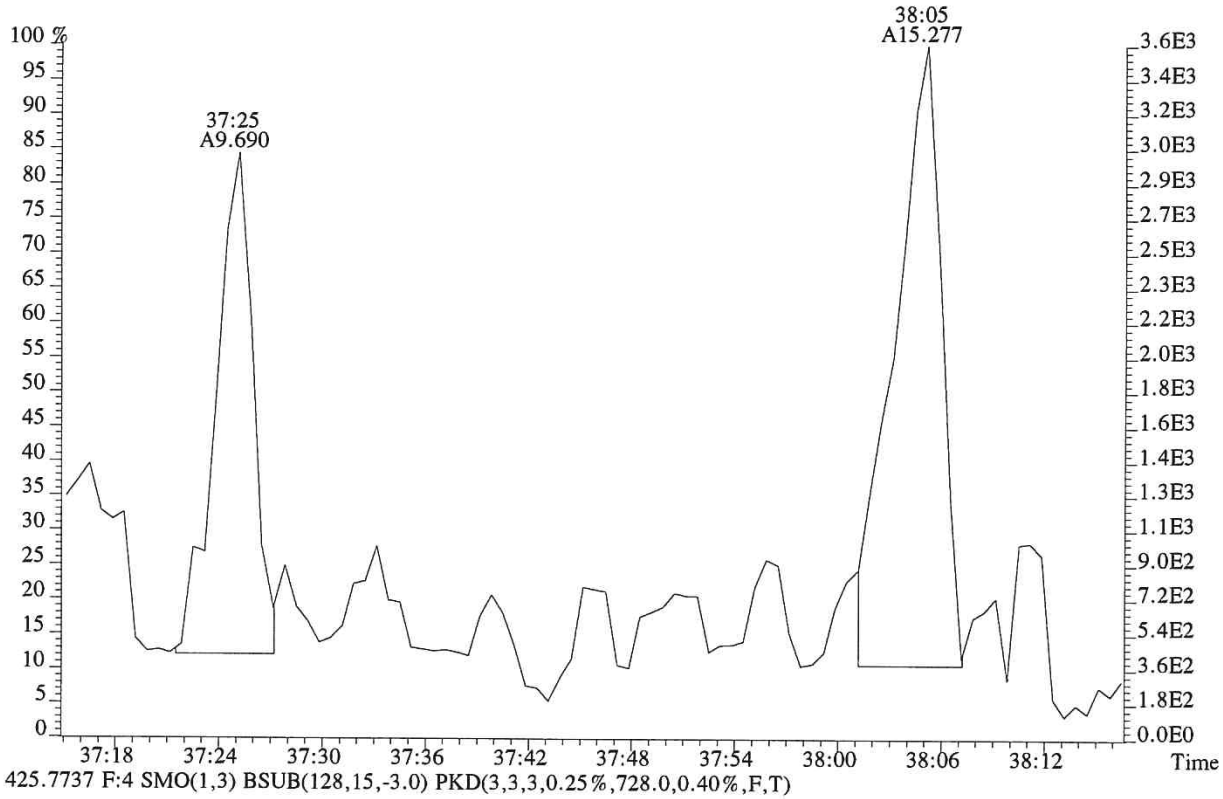


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

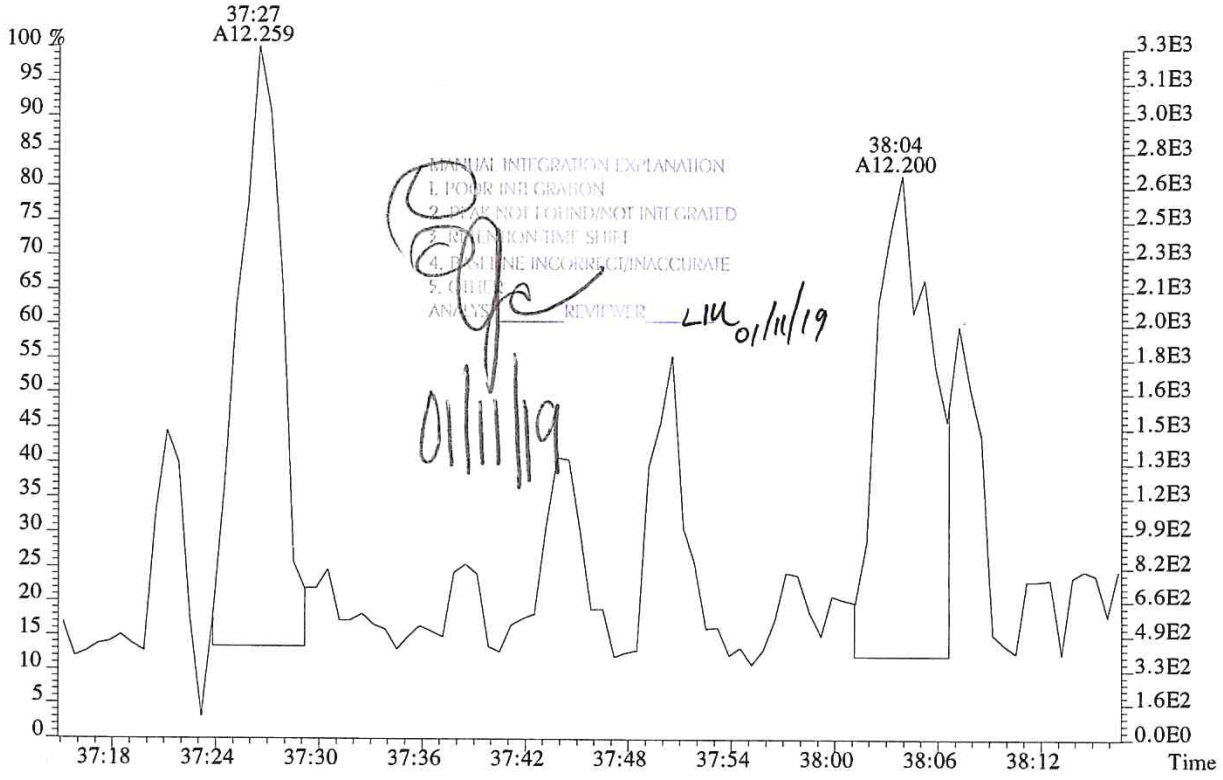


018758

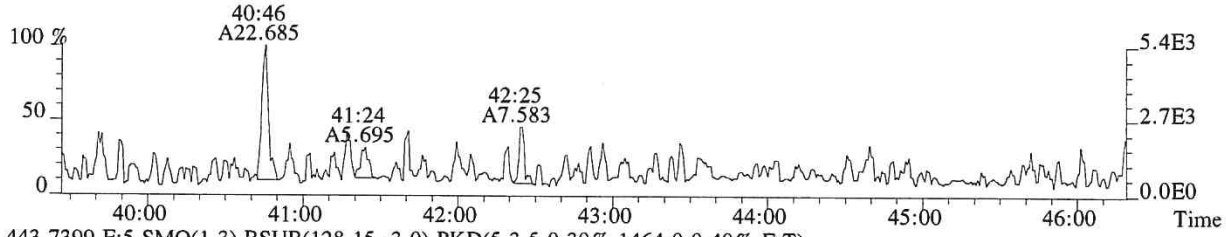
File:P519887 #1-232 Acq:10-JAN-2019 14:48:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-01
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,588.0,0.40%,F,T)



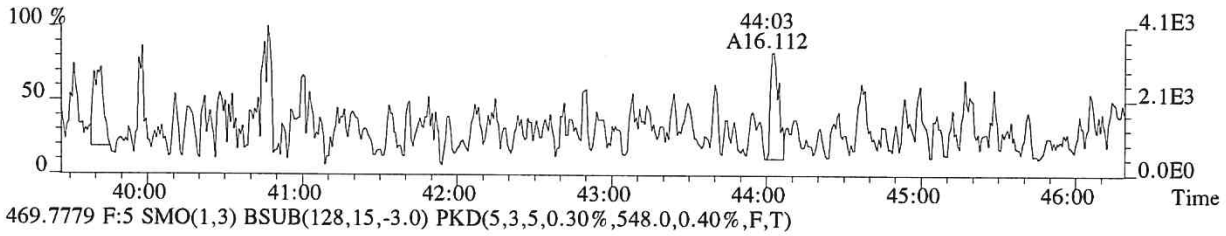
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,728.0,0.40%,F,T)



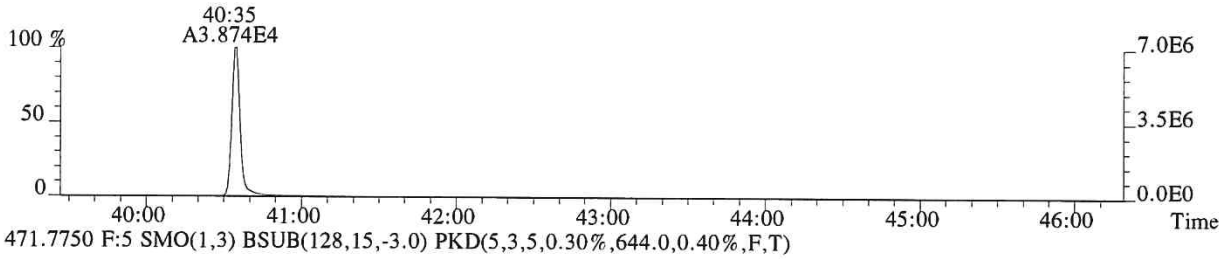
File:P519887 #1-619 Acq:10-JAN-2019 14:48:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-01
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,884.0,0.40%,F,T)



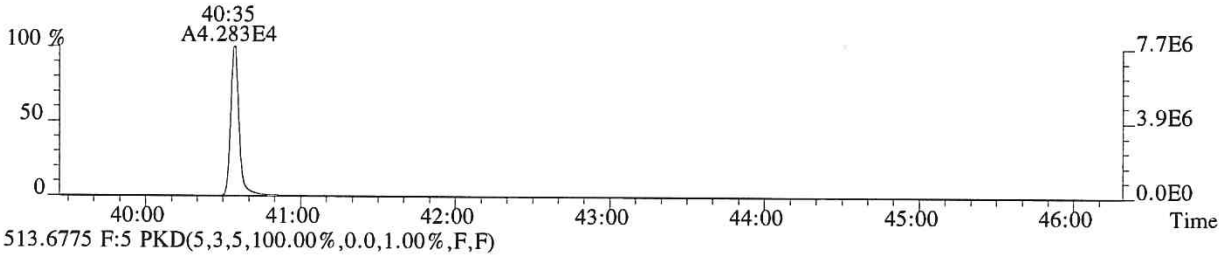
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1464.0,0.40%,F,T)



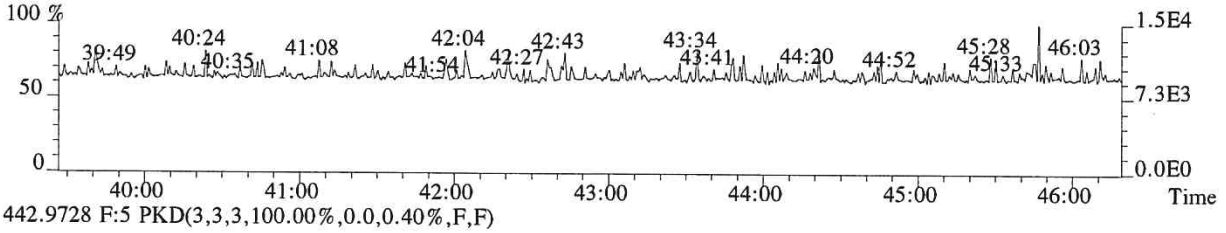
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,548.0,0.40%,F,T)



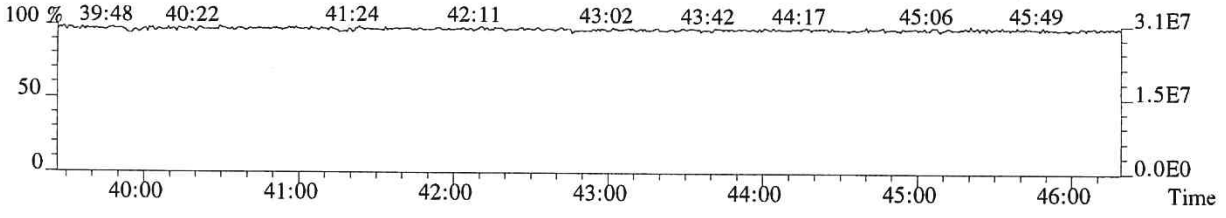
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,644.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

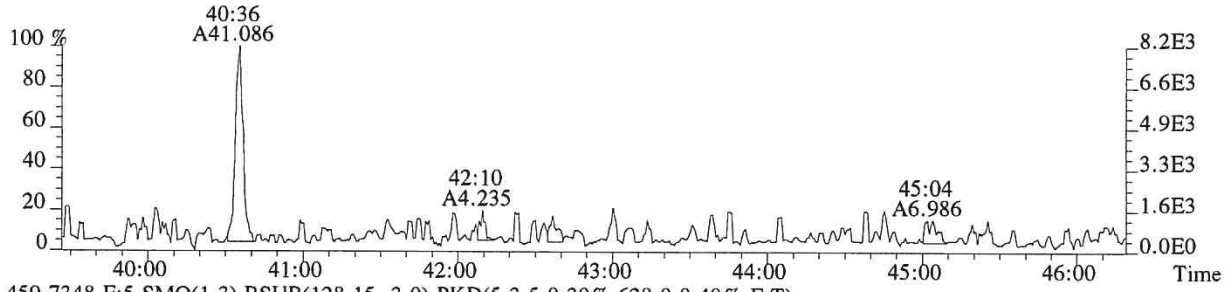


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

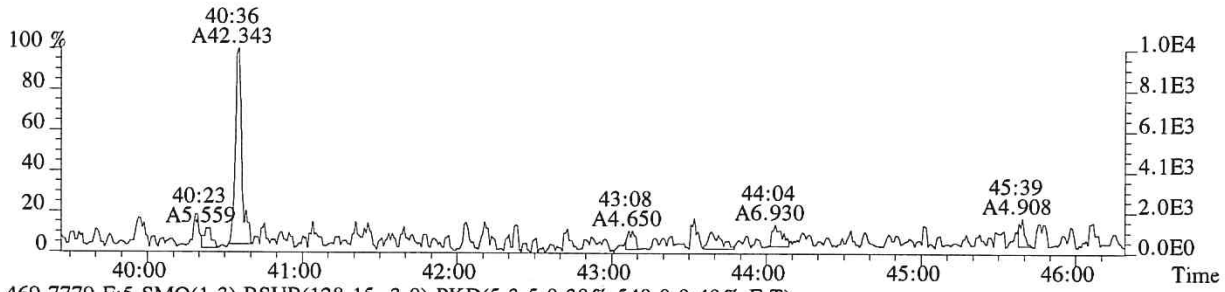


018760

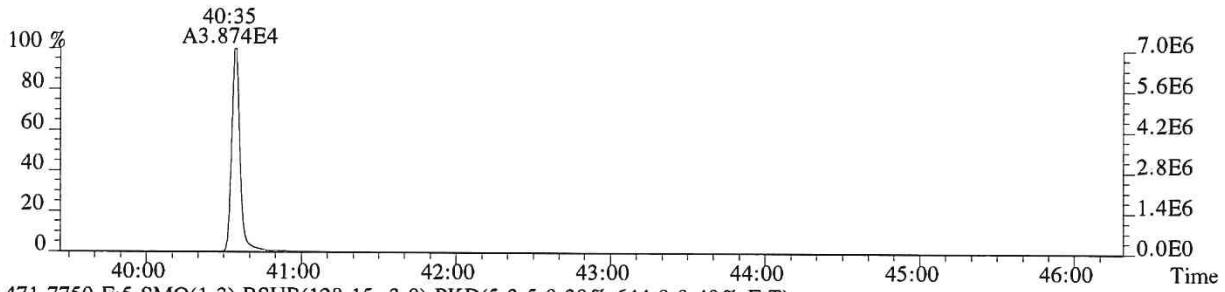
File:P519887 #1-619 Acq:10-JAN-2019 14:48:58 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-01
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,608.0,0.40%,F,T)



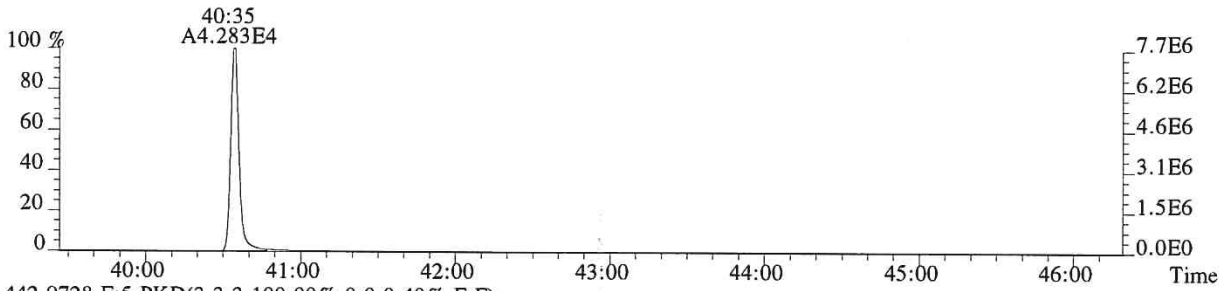
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,628.0,0.40%,F,T)



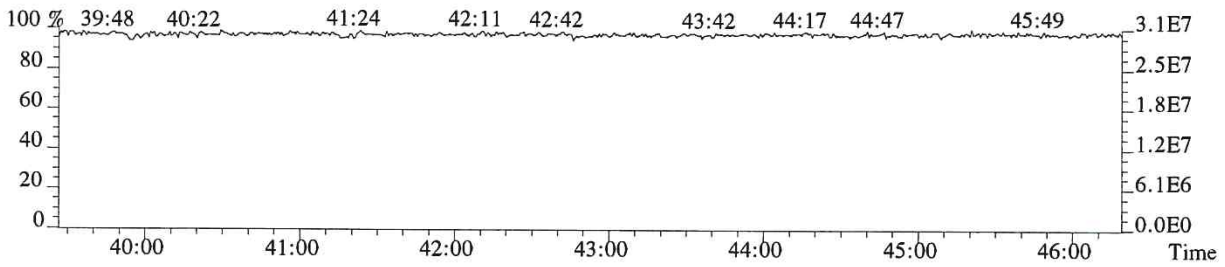
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,548.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,644.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018761

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
LCS

Run #20 Filename P519913 Samp: 1 Inj: 1 Acquired: 11-JAN-19 12:11:11
Processed: 11-JAN-19 14:53:43 Sample ID: EQ1900003-02

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	8.494e+02	1.120e+03	0.76	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:27	9.127e+03	6.121e+03	1.49	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	1.050e+04	6.751e+03	1.55	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	1.050e+04	8.963e+03	1.17	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	1.186e+04	9.872e+03	1.20	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:02	1.134e+04	9.515e+03	1.19	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:48	1.037e+04	8.526e+03	1.22	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:09	1.093e+04	1.084e+04	1.01	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:29	1.038e+04	1.017e+04	1.02	yes	no	1.258
10	Unk	OCDF	40:44	1.685e+04	1.927e+04	0.87	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:24	6.695e+02	8.456e+02	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:48	8.271e+03	5.204e+03	1.59	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:11	8.693e+03	6.761e+03	1.29	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:16	9.571e+03	7.677e+03	1.25	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:31	9.490e+03	7.511e+03	1.26	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	8.700e+03	8.289e+03	1.05	yes	no	1.025
17	Unk	OCDD	40:34	1.331e+04	1.506e+04	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:21	7.690e+03	9.646e+03	0.80	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:26	2.159e+04	1.369e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:27	2.323e+04	1.454e+04	1.60	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:22	1.253e+04	2.364e+04	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.446e+04	2.776e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	1.354e+04	2.623e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	1.248e+04	2.485e+04	0.50	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:08	1.109e+04	2.464e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:28	1.025e+04	2.328e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:22	4.034e+03	5.213e+03	0.77	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:47	1.860e+04	1.160e+04	1.60	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:10	1.961e+04	1.556e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:16	1.981e+04	1.569e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	2.410e+04	2.276e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	40:33	2.467e+04	2.817e+04	0.88	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:39	2.617e+04	3.246e+04	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:30	3.804e+04	3.014e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:24	5.871e+03				no	1.014

$$\text{OCDD} = \frac{(1.331e+04 + 1.506e+04) \times 4000\ \text{pg} \times 1}{(2.467e+04 + 2.817e+04) \times \text{g} \times / 100 \times 1.118}$$

ALS ENVIRONMENTAL -- HOUSTON HRMS
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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
LCS

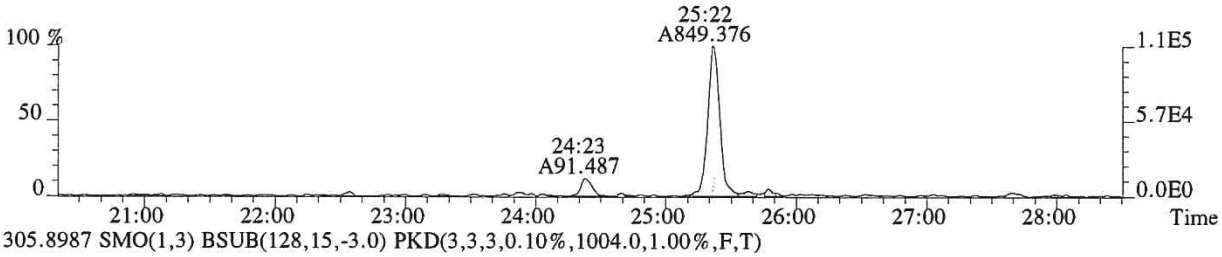
Run #20 Filename P519913 Samp: 1 Inj: 1 Acquired: 11-JAN-19 12:11:11
Processed: 11-JAN-19 14:53:43 LAB. ID: EQ1900003-02

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.13e+05	7.84e+02	1.4e+02	1.45e+05	1.00e+03	1.4e+02
2	1,2,3,7,8-PeCDF	1.51e+06	4.80e+02	3.1e+03	1.03e+06	1.24e+03	8.3e+02
3	2,3,4,7,8-PeCDF	1.92e+06	4.80e+02	4.0e+03	1.21e+06	1.24e+03	9.8e+02
4	1,2,3,4,7,8-HxCDF	2.17e+06	6.52e+02	3.3e+03	1.85e+06	6.60e+02	2.8e+03
5	1,2,3,6,7,8-HxCDF	2.37e+06	6.52e+02	3.6e+03	1.91e+06	6.60e+02	2.9e+03
6	2,3,4,6,7,8-HxCDF	2.33e+06	6.52e+02	3.6e+03	1.89e+06	6.60e+02	2.9e+03
7	1,2,3,7,8,9-HxCDF	1.97e+06	6.52e+02	3.0e+03	1.63e+06	6.60e+02	2.5e+03
8	1,2,3,4,6,7,8-HpCDF	2.24e+06	9.64e+02	2.3e+03	2.16e+06	1.62e+03	1.3e+03
9	1,2,3,4,7,8,9-HpCDF	2.07e+06	9.64e+02	2.1e+03	2.03e+06	1.62e+03	1.3e+03
10	OCDF	2.93e+06	3.20e+02	9.2e+03	3.34e+06	1.32e+03	2.5e+03
11	2,3,7,8-TCDD	1.00e+05	2.13e+03	4.7e+01	1.30e+05	1.00e+03	1.3e+02
12	1,2,3,7,8-PeCDD	1.47e+06	6.56e+02	2.2e+03	9.21e+05	4.44e+02	2.1e+03
13	1,2,3,4,7,8-HxCDD	1.93e+06	5.20e+02	3.7e+03	1.48e+06	4.80e+02	3.1e+03
14	1,2,3,6,7,8-HxCDD	1.90e+06	5.20e+02	3.7e+03	1.52e+06	4.80e+02	3.2e+03
15	1,2,3,7,8,9-HxCDD	1.88e+06	5.20e+02	3.6e+03	1.54e+06	4.80e+02	3.2e+03
16	1,2,3,4,6,7,8-HpCDD	1.79e+06	5.00e+02	3.6e+03	1.71e+06	5.68e+02	3.0e+03
17	OCDD	2.29e+06	4.04e+02	5.7e+03	2.62e+06	6.24e+02	4.2e+03
18	13C-2,3,7,8-TCDF	1.04e+06	4.98e+03	2.1e+02	1.33e+06	2.92e+03	4.6e+02
19	13C-1,2,3,7,8-PeCDF	3.55e+06	5.44e+02	6.5e+03	2.24e+06	7.88e+02	2.8e+03
20	13C-2,3,4,7,8-PeCDF	4.24e+06	5.44e+02	7.8e+03	2.64e+06	7.88e+02	3.4e+03
21	13C-1,2,3,4,7,8-HxCDF	2.60e+06	1.34e+03	1.9e+03	4.82e+06	6.16e+02	7.8e+03
22	13C-1,2,3,6,7,8-HxCDF	2.87e+06	1.34e+03	2.1e+03	5.46e+06	6.16e+02	8.9e+03
23	13C-2,3,4,6,7,8-HxCDF	2.74e+06	1.34e+03	2.1e+03	5.39e+06	6.16e+02	8.7e+03
24	13C-1,2,3,7,8,9-HxCDF	2.39e+06	1.34e+03	1.8e+03	4.82e+06	6.16e+02	7.8e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.26e+06	2.48e+03	9.1e+02	4.95e+06	1.22e+03	4.1e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.11e+06	2.48e+03	8.5e+02	4.64e+06	1.22e+03	3.8e+03
27	13C-2,3,7,8-TCDD	6.36e+05	6.37e+03	1.0e+02	8.09e+05	2.32e+03	3.5e+02
28	13C-1,2,3,7,8-PeCDD	3.27e+06	7.40e+02	4.4e+03	2.04e+06	1.32e+03	1.5e+03
29	13C-1,2,3,4,7,8-HxCDD	4.37e+06	1.17e+03	3.7e+03	3.49e+06	9.00e+02	3.9e+03
30	13C-1,2,3,6,7,8-HxCDD	3.91e+06	1.17e+03	3.4e+03	3.15e+06	9.00e+02	3.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	4.89e+06	6.16e+02	7.9e+03	4.59e+06	3.68e+02	1.2e+04
32	13C-OCDD	4.14e+06	6.56e+02	6.3e+03	4.79e+06	4.88e+02	9.8e+03
33	13C-1,2,3,4-TCDD	3.89e+06	6.37e+03	6.1e+02	4.75e+06	2.32e+03	2.0e+03
34	13C-1,2,3,7,8,9-HxCDD	7.73e+06	1.17e+03	6.6e+03	6.16e+06	9.00e+02	6.8e+03
35	37Cl-2,3,7,8-TCDD	9.19e+05	1.52e+03	6.0e+02			

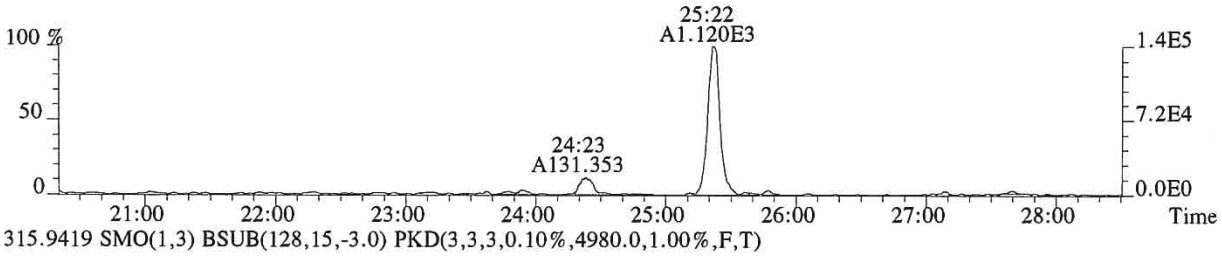
ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
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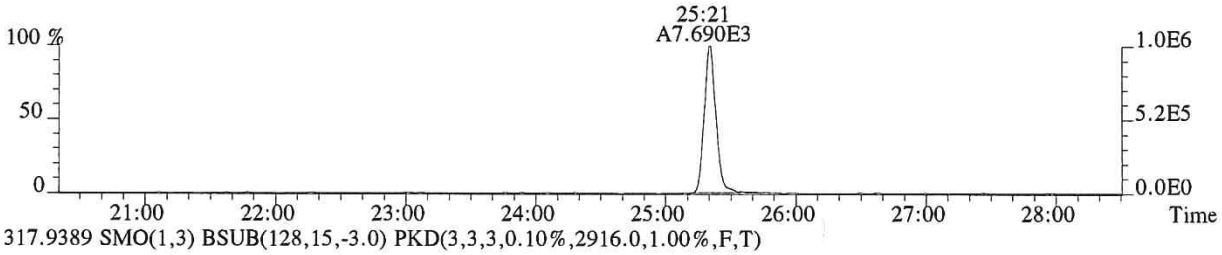
File:P519913 #1-580 Acq:11-JAN-2019 12:11:11 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-02
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,784.0,1.00%,F,T)



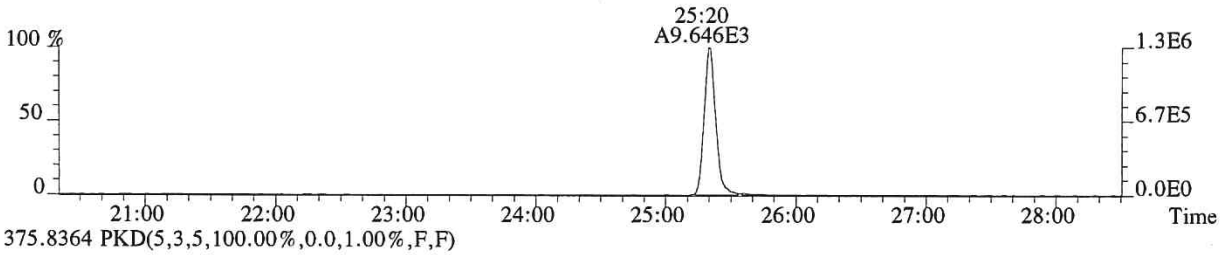
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1004.0,1.00%,F,T)



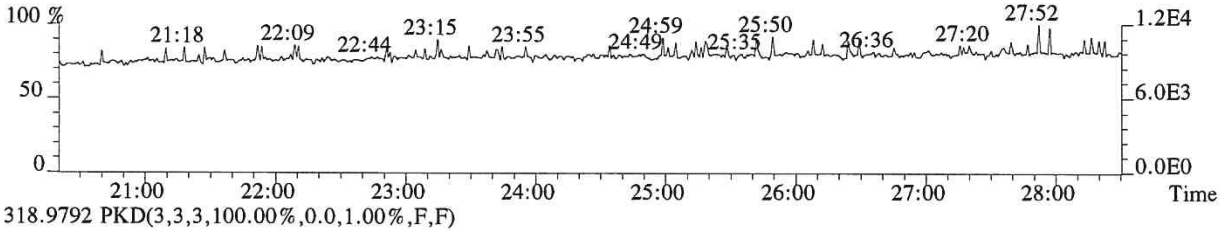
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4980.0,1.00%,F,T)



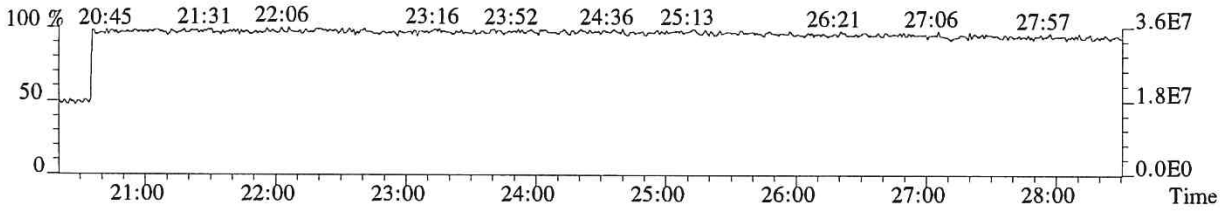
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2916.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

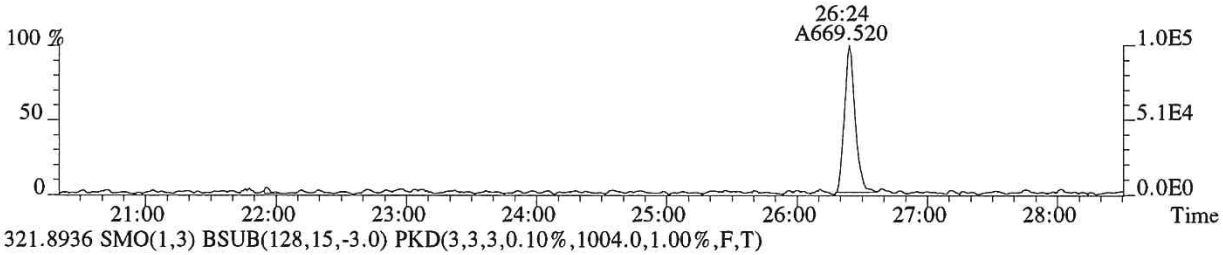


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

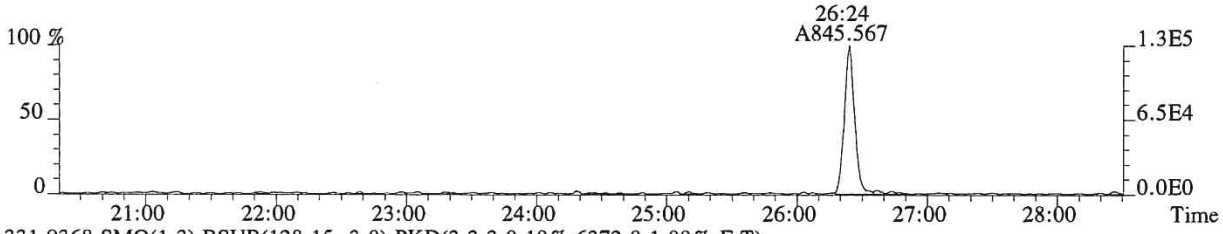


018764

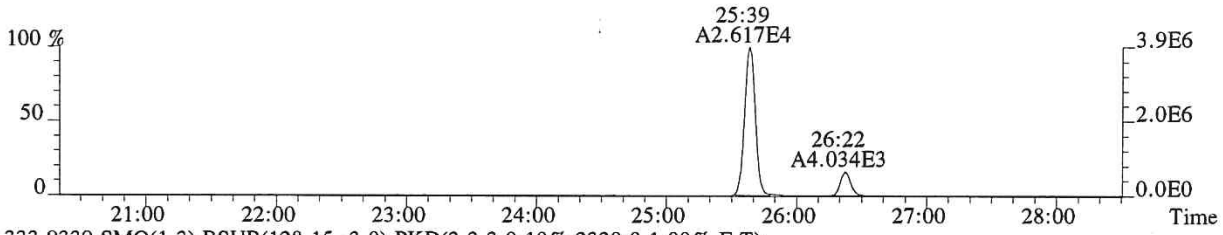
File:P519913 #1-580 Acq:11-JAN-2019 12:11:11 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-02
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2128.0,1.00%,F,T)



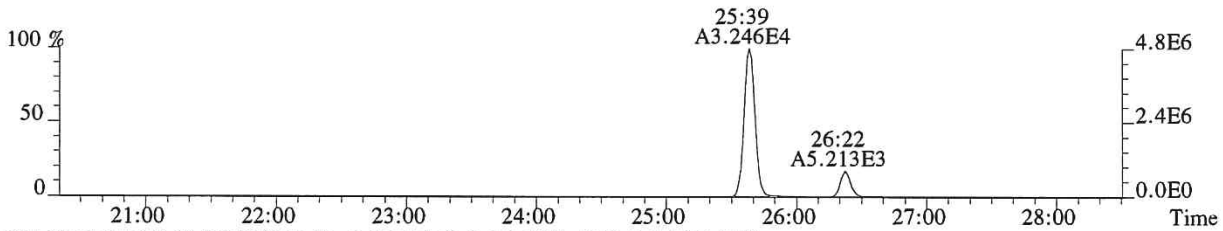
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1004.0,1.00%,F,T)



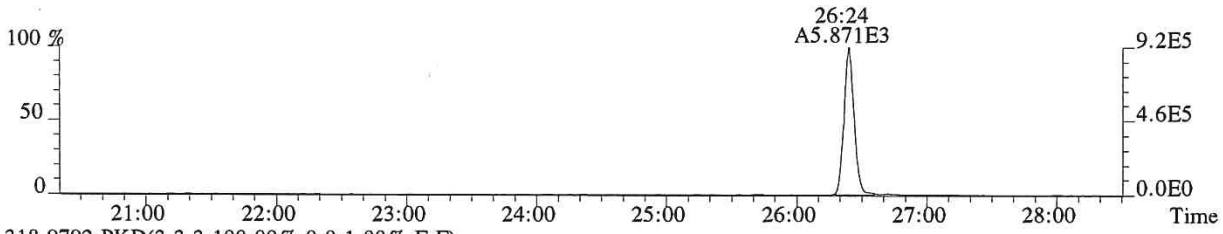
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6372.0,1.00%,F,T)



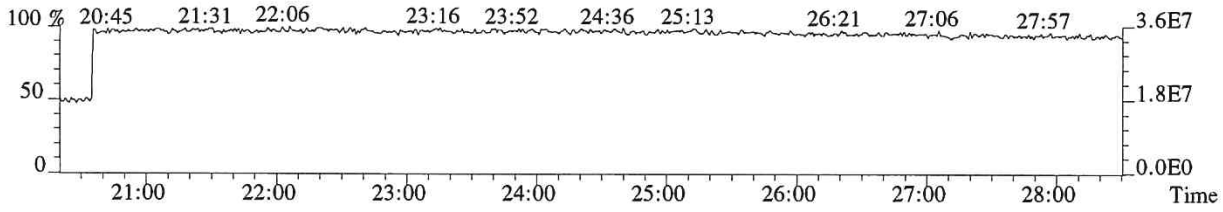
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2320.0,1.00%,F,T)



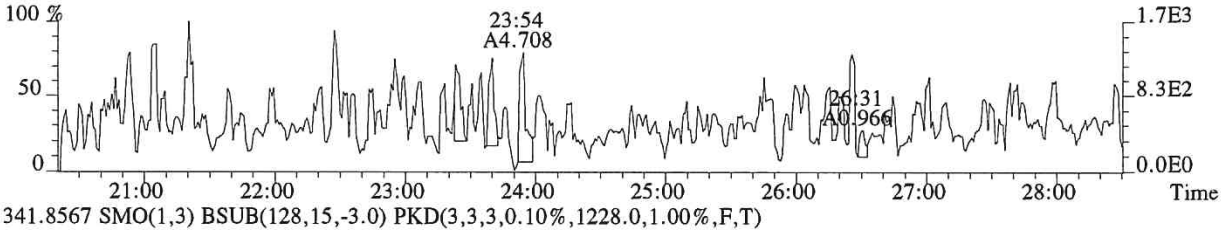
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1520.0,1.00%,F,T)



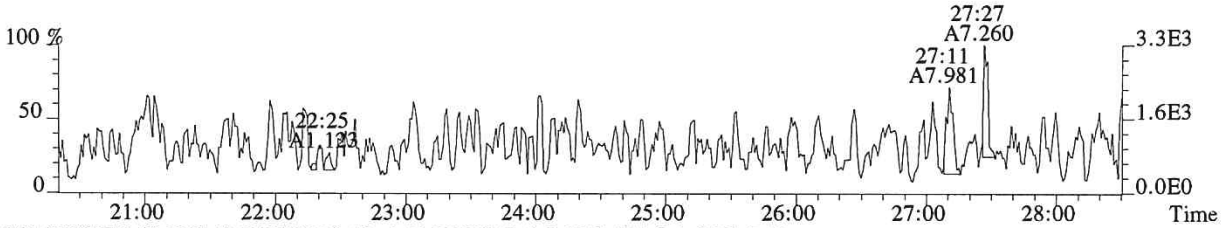
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



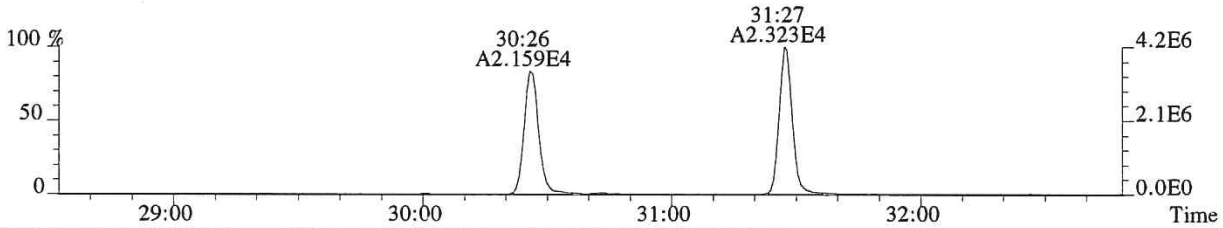
File:P519913 #1-580 Acq:11-JAN-2019 12:11:11 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-02
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,648.0,1.00%,F,T)



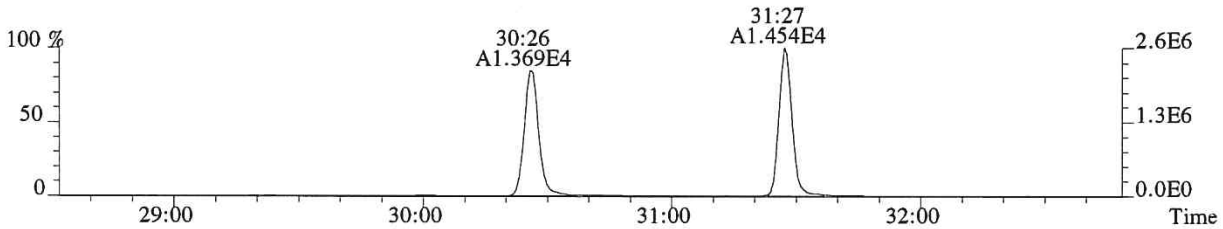
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1228.0,1.00%,F,T)



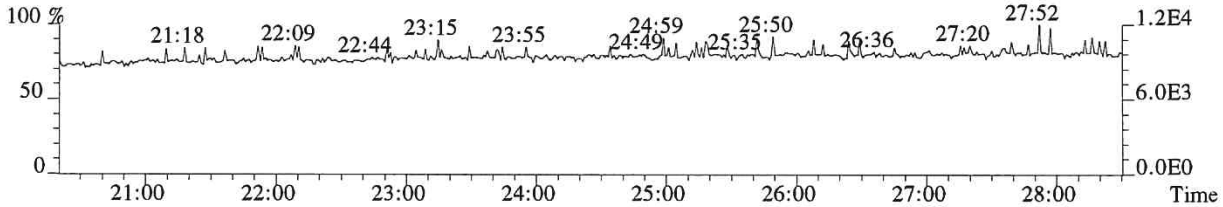
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,544.0,1.00%,F,T)



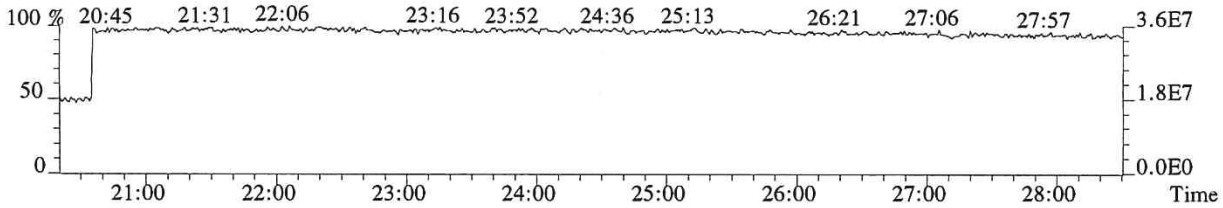
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,788.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

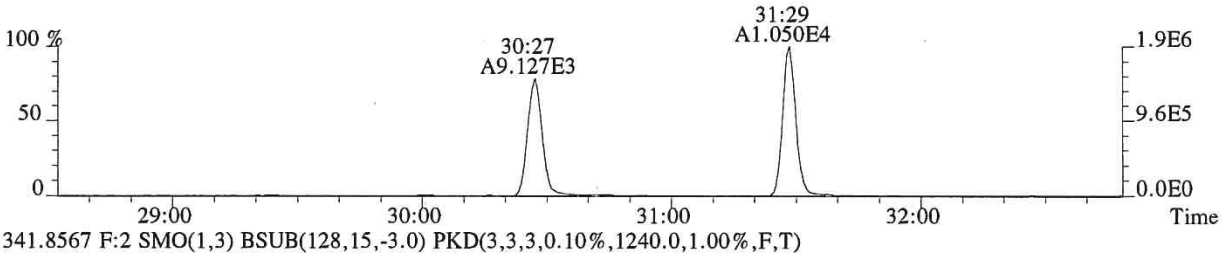


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

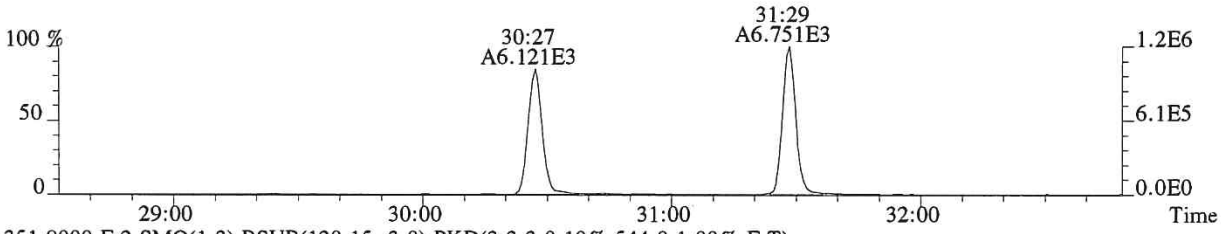


018766

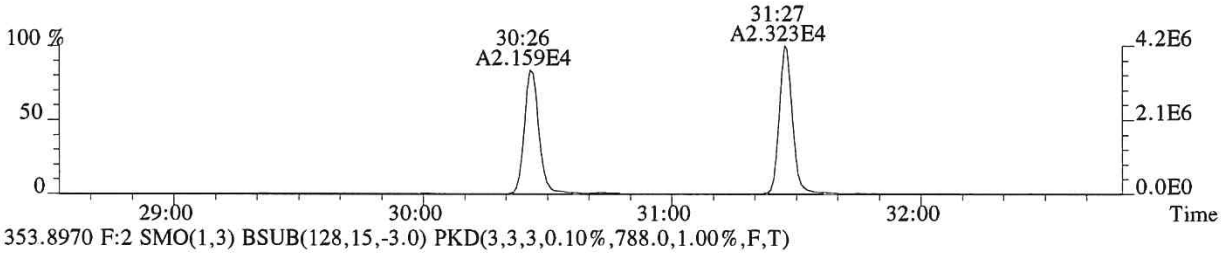
File:P519913 #1-385 Acq:11-JAN-2019 12:11:11 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-02
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,480.0,1.00%,F,T)



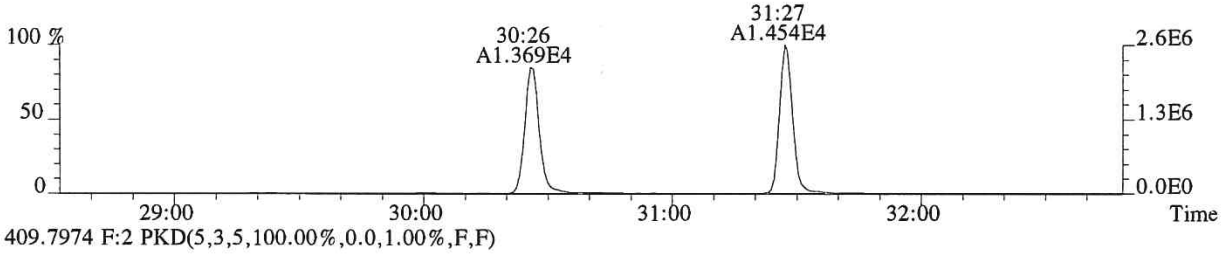
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1240.0,1.00%,F,T)



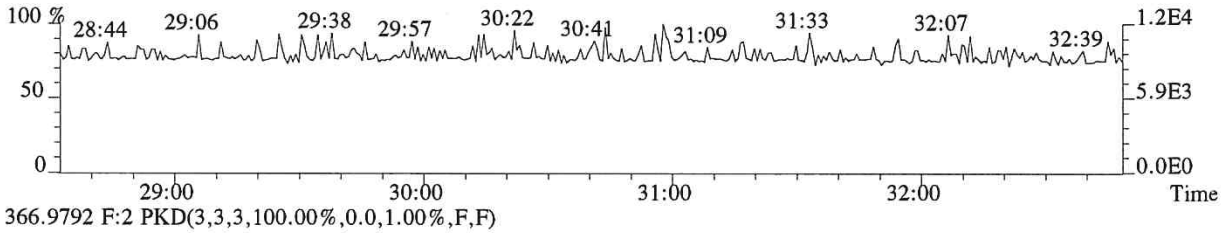
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,544.0,1.00%,F,T)



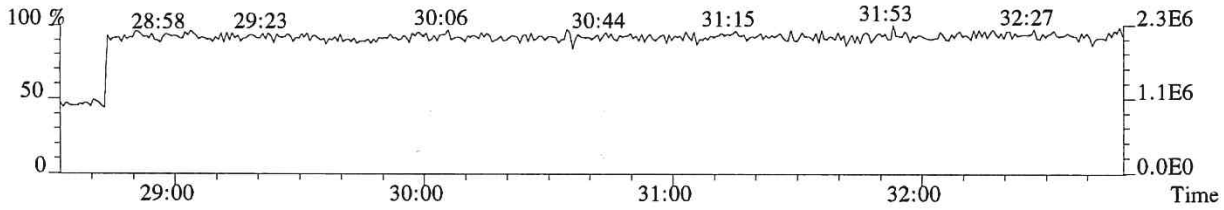
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,788.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

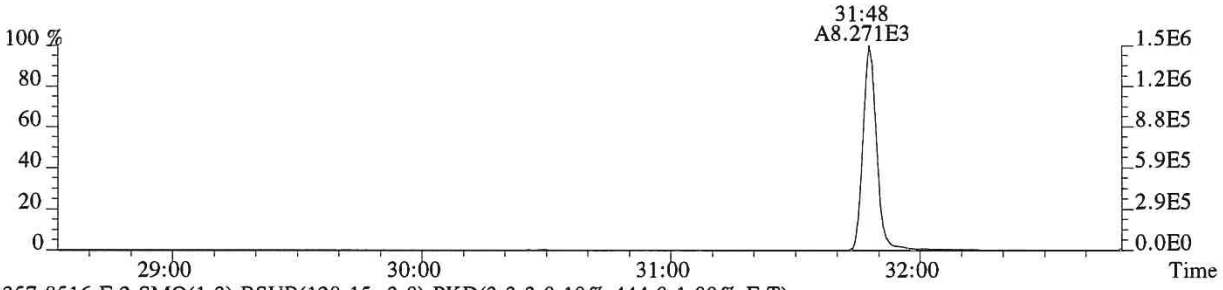


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

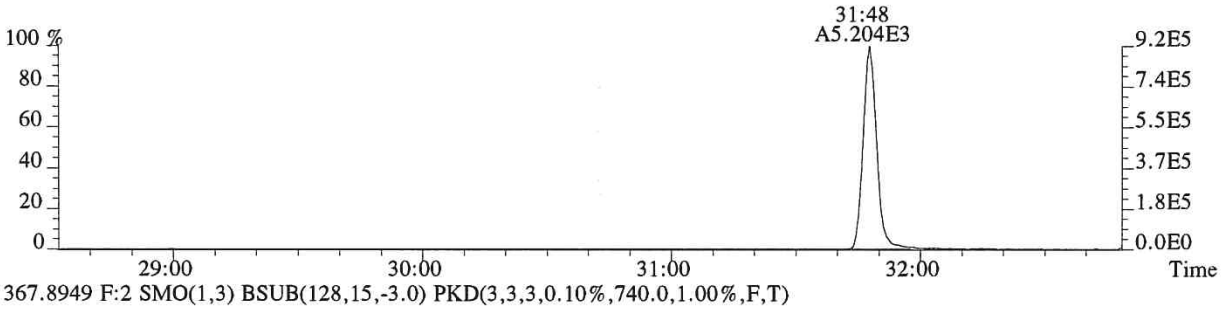


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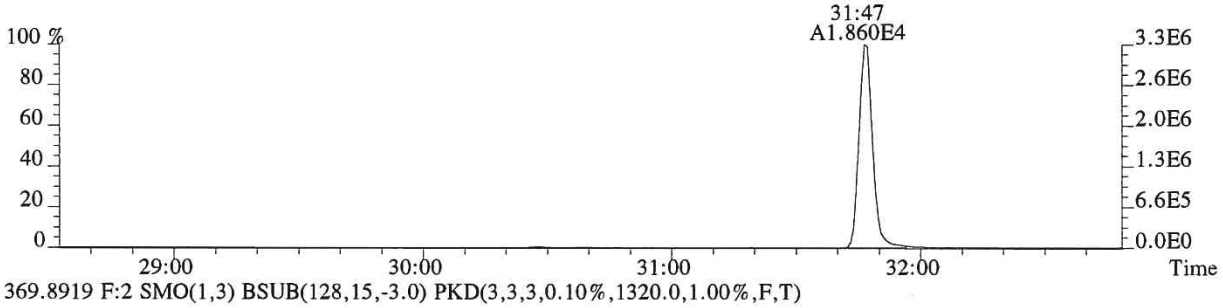
File:P519913 #1-385 Acq:11-JAN-2019 12:11:11 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-02
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,656.0,1.00%,F,T)



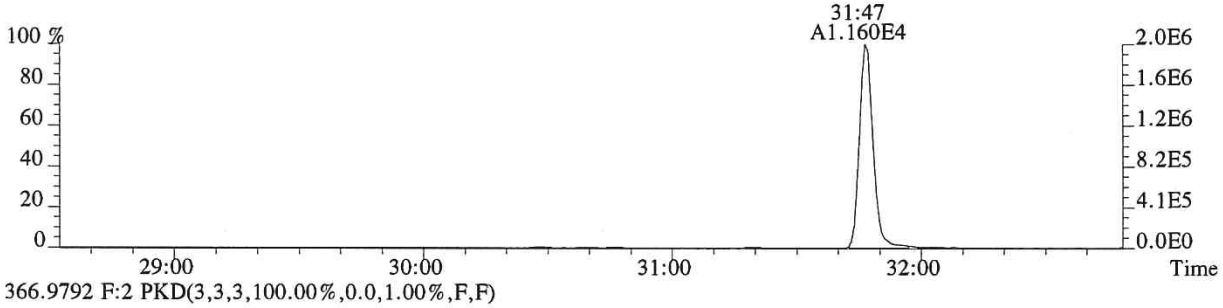
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,444.0,1.00%,F,T)



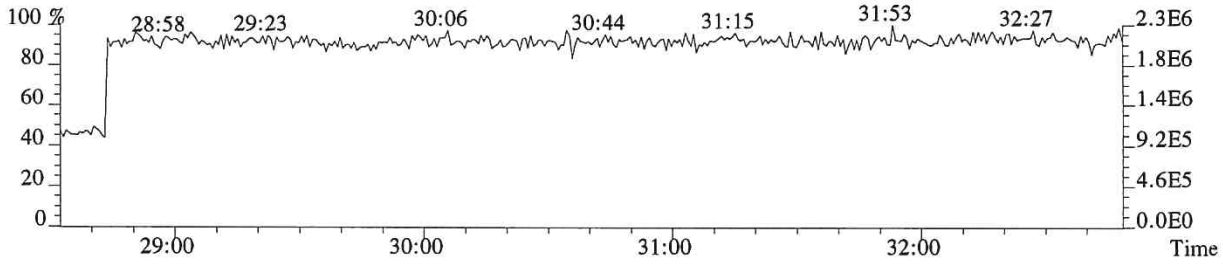
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,740.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1320.0,1.00%,F,T)

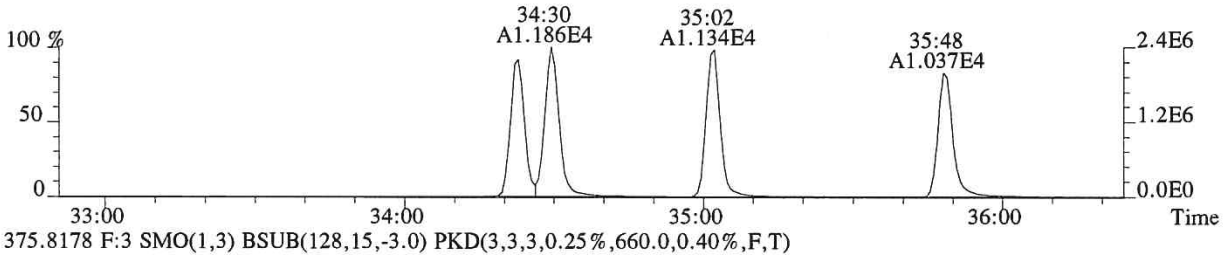


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

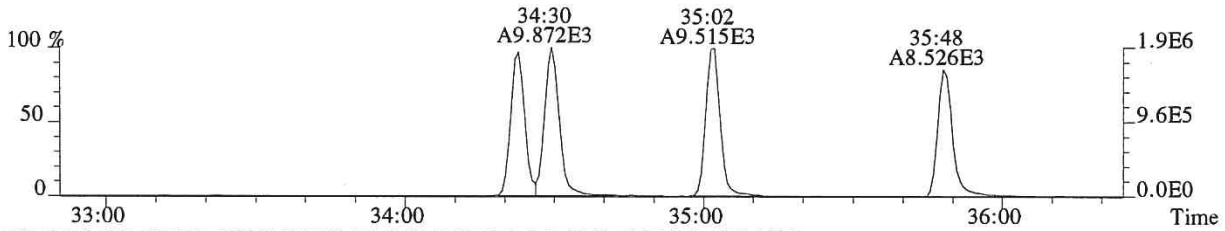


018768

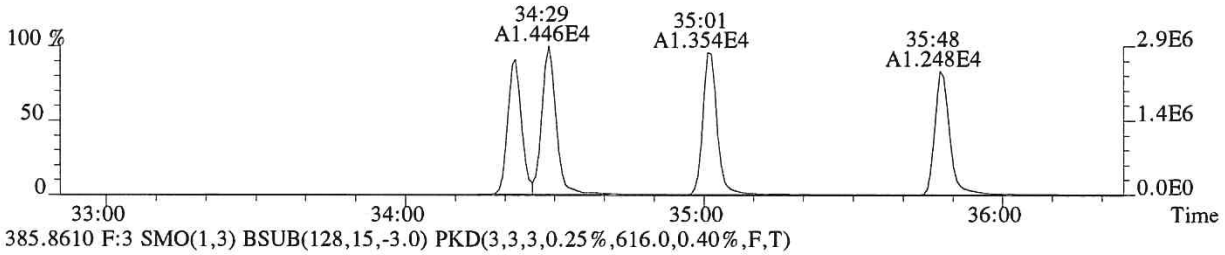
File:P519913 #1-321 Acq:11-JAN-2019 12:11:11 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-02
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,652.0,0.40%,F,T)



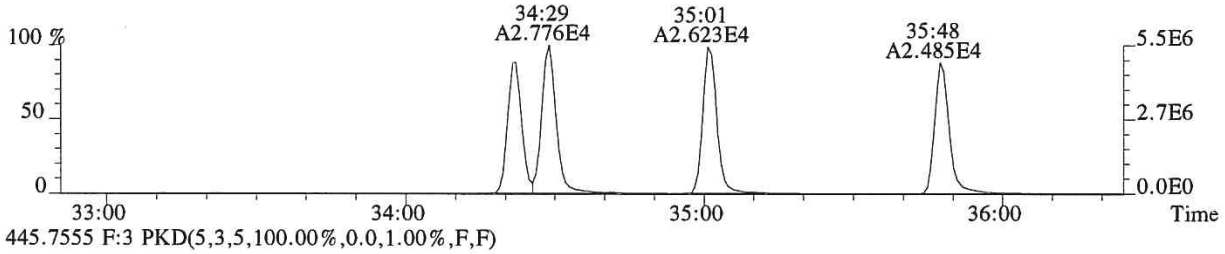
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,660.0,0.40%,F,T)



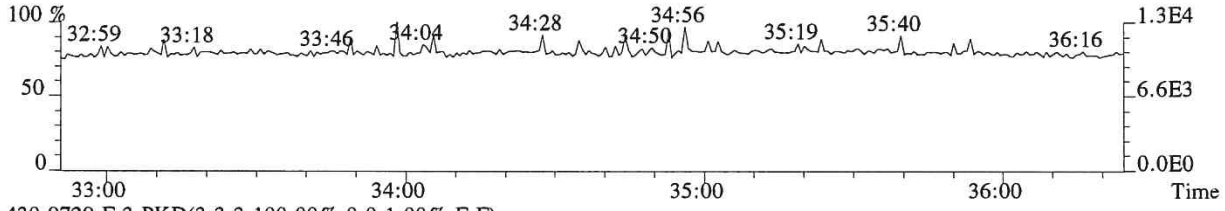
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1336.0,0.40%,F,T)



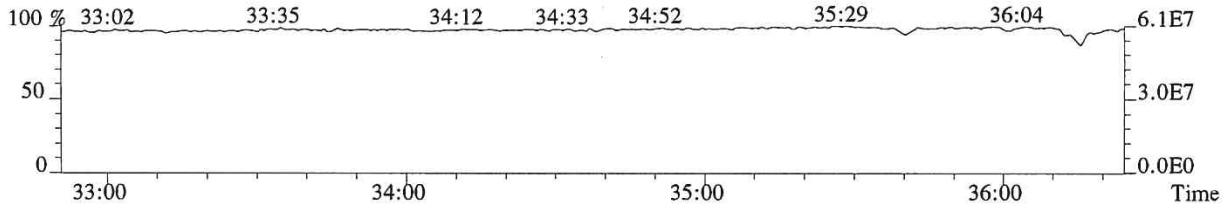
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,616.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

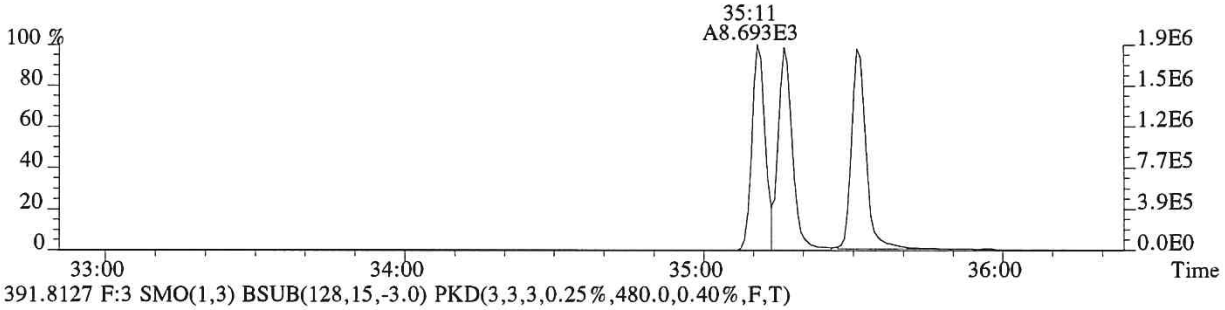


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

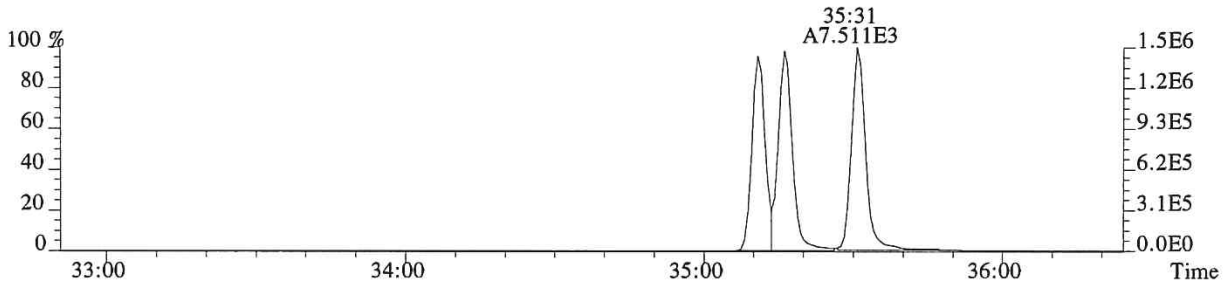


018769

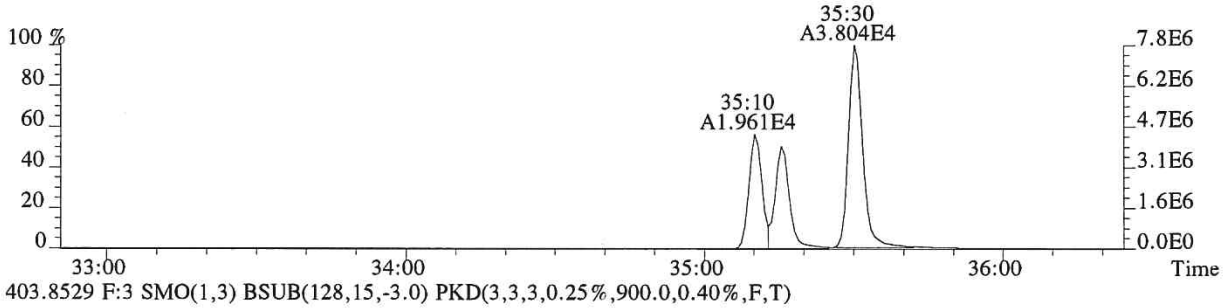
File:P519913 #1-321 Acq:11-JAN-2019 12:11:11 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-02
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,520.0,0.40%,F,T)



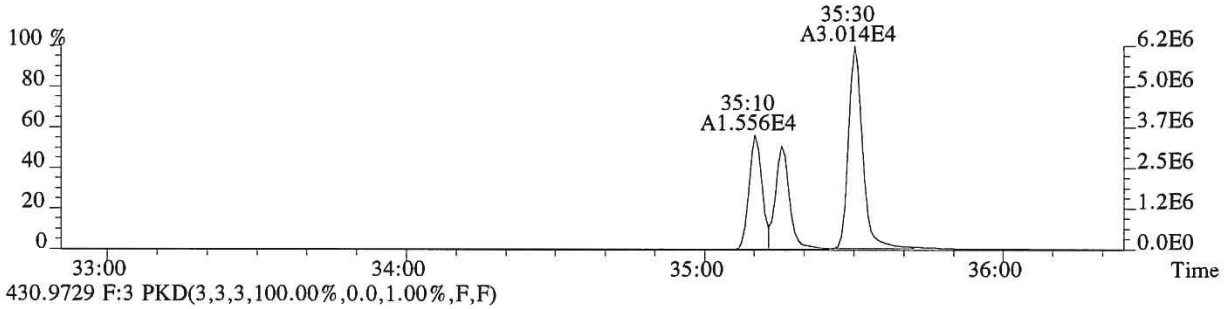
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,480.0,0.40%,F,T)



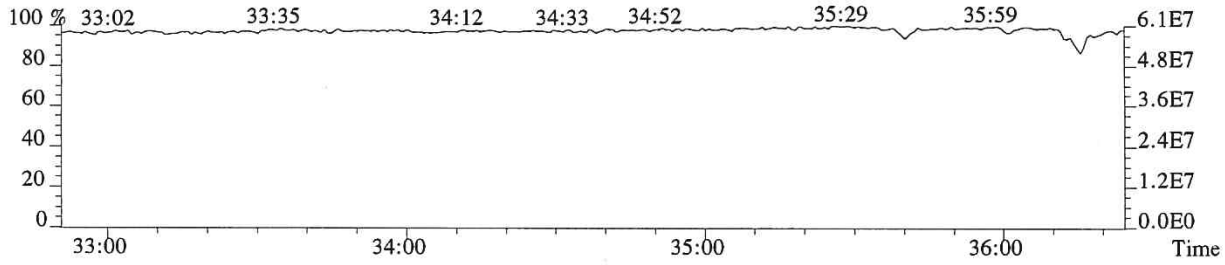
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1168.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,900.0,0.40%,F,T)

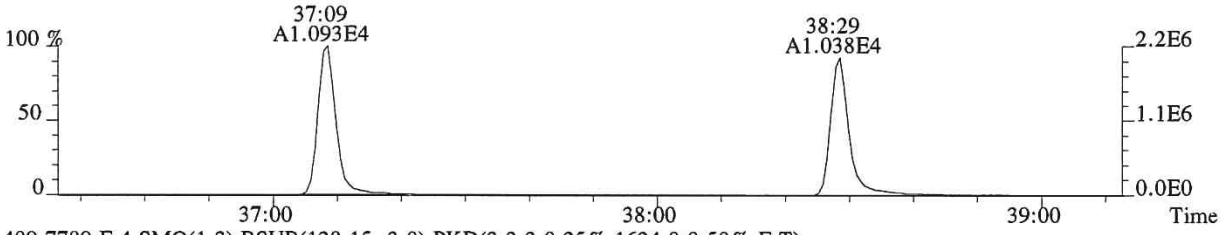


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

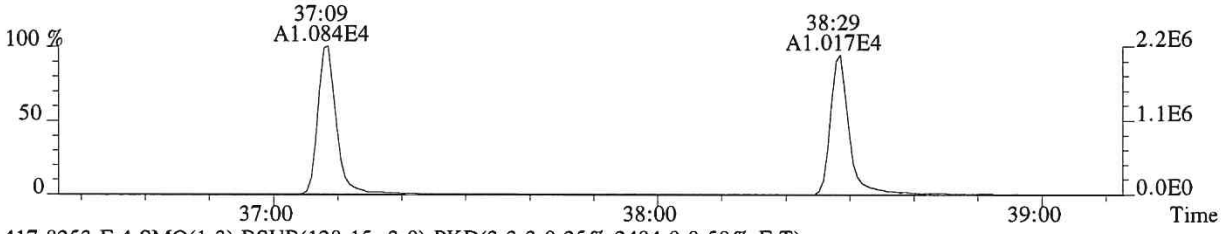


018770

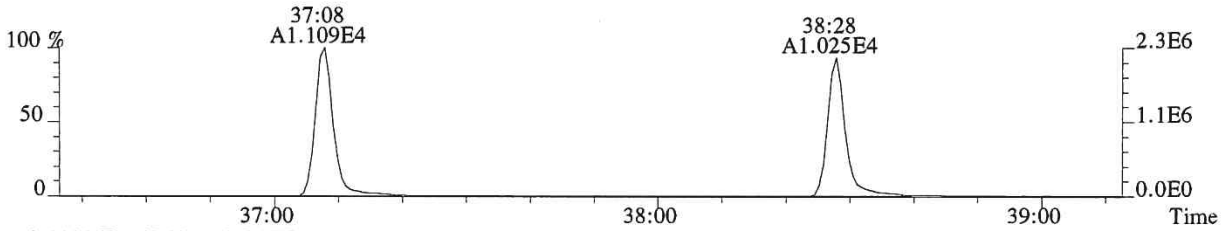
File:P519913 #1-250 Acq:11-JAN-2019 12:11:11 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-02
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,964.0,0.50%,F,T)



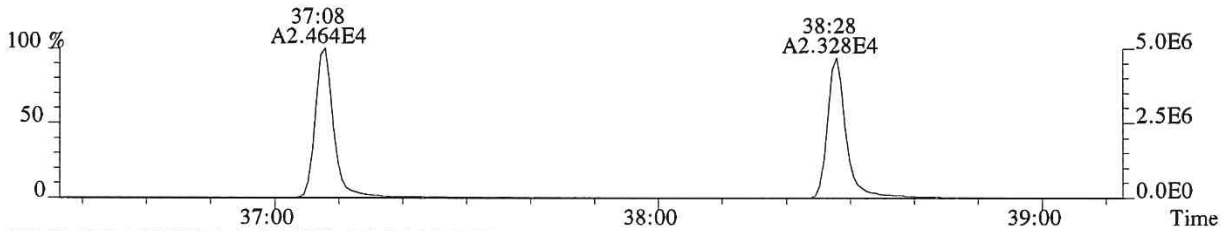
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1624.0,0.50%,F,T)



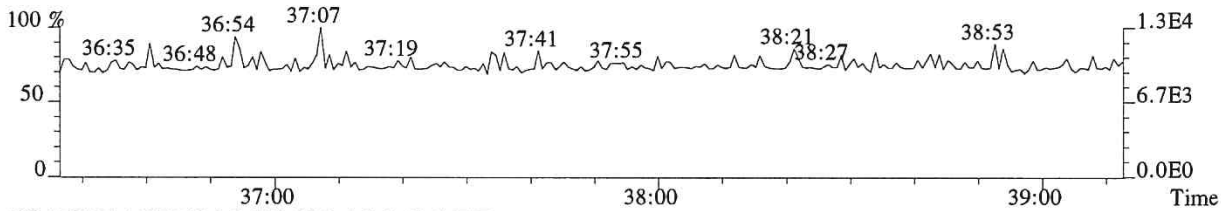
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2484.0,0.50%,F,T)



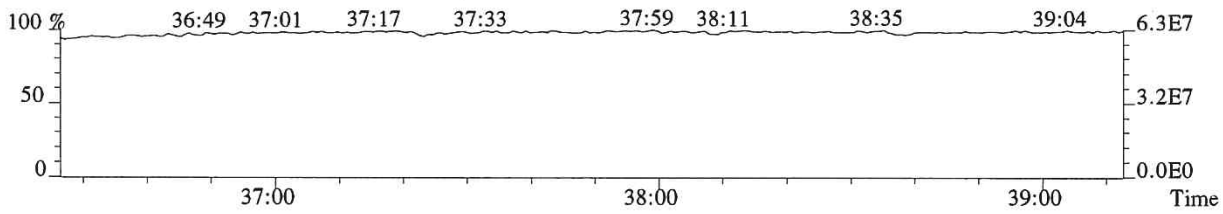
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1216.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

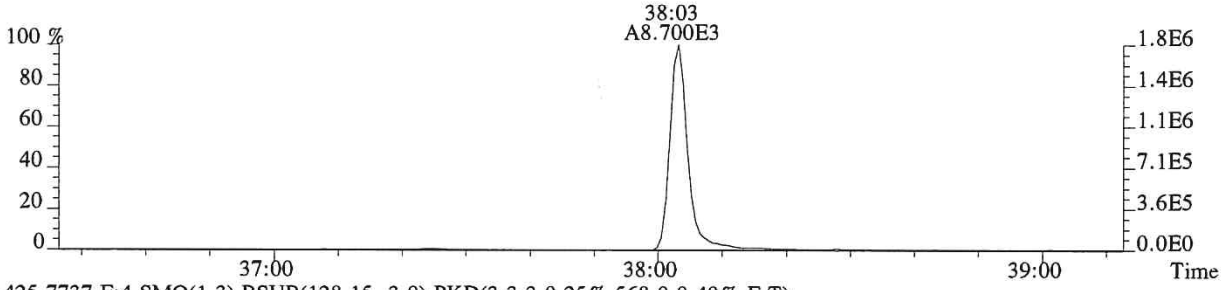


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

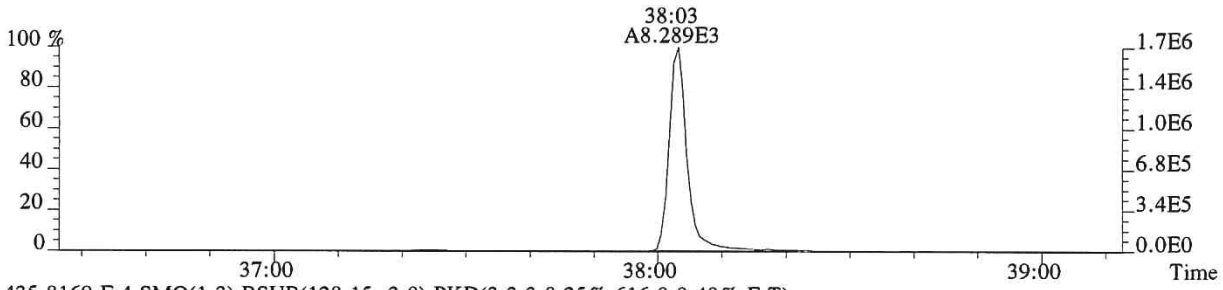


018771

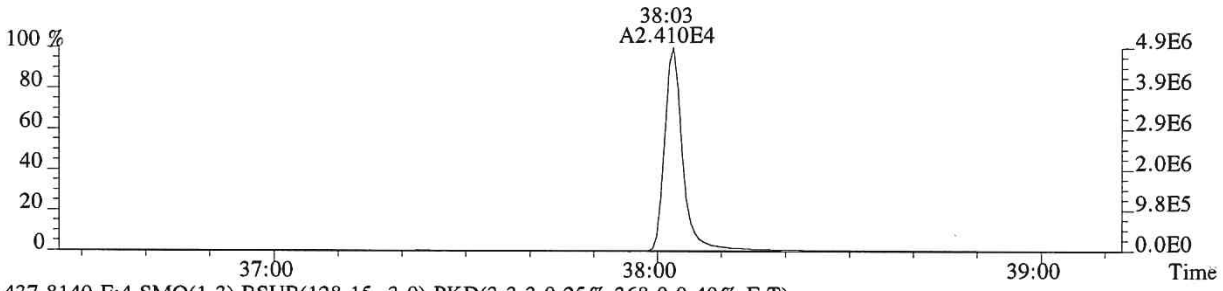
File:P519913 #1-250 Acq:11-JAN-2019 12:11:11 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-02
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,500.0,0.40%,F,T)



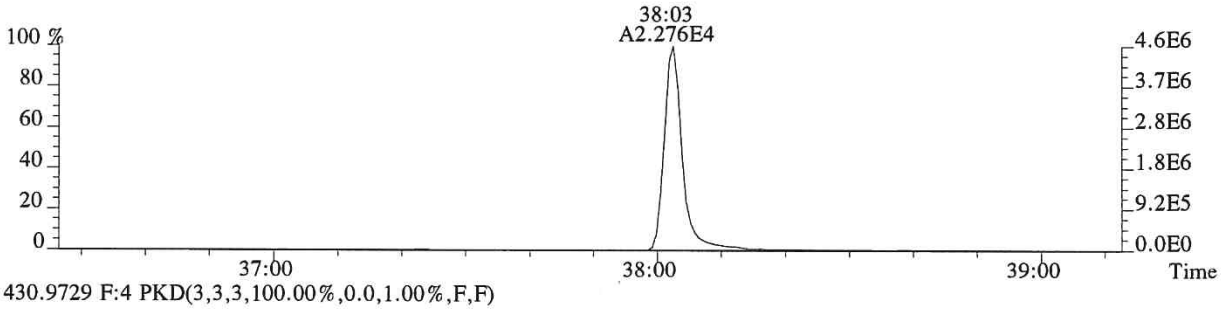
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,568.0,0.40%,F,T)



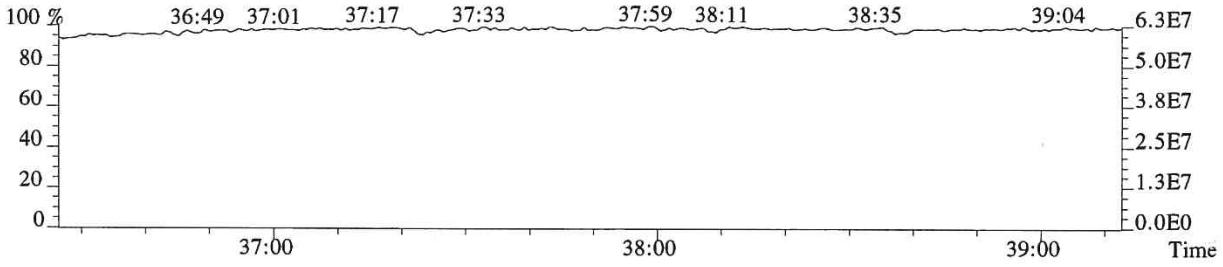
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,616.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,368.0,0.40%,F,T)

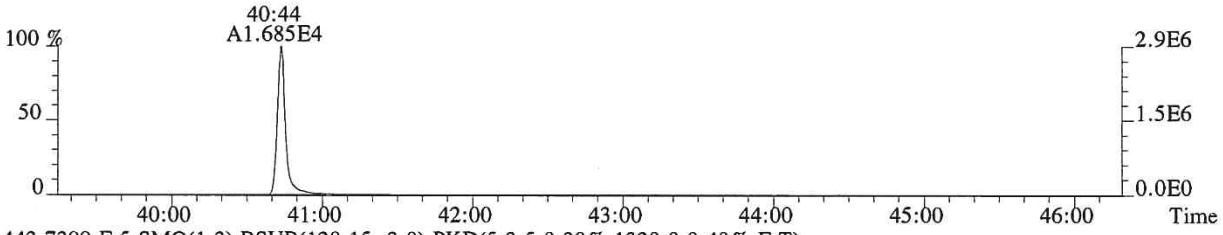


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

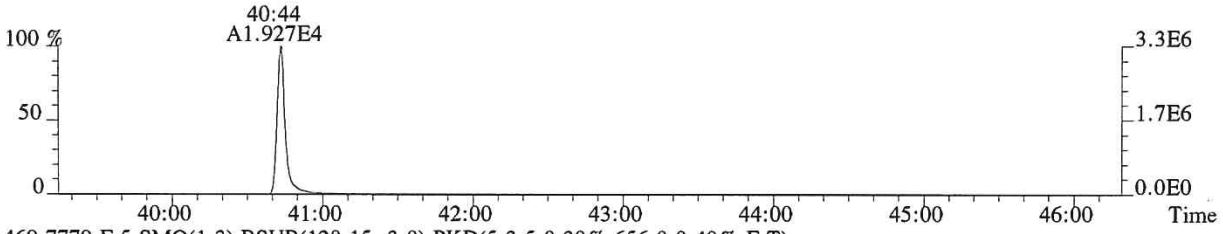


018772

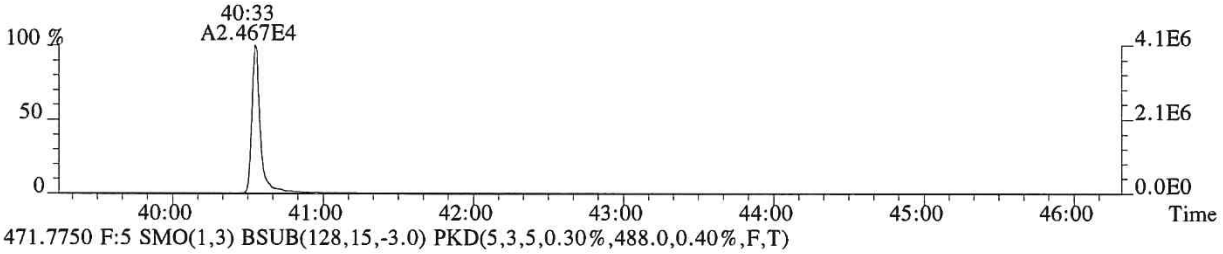
File:P519913 #1-637 Acq:11-JAN-2019 12:11:11 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-02
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,320.0,0.40%,F,T)



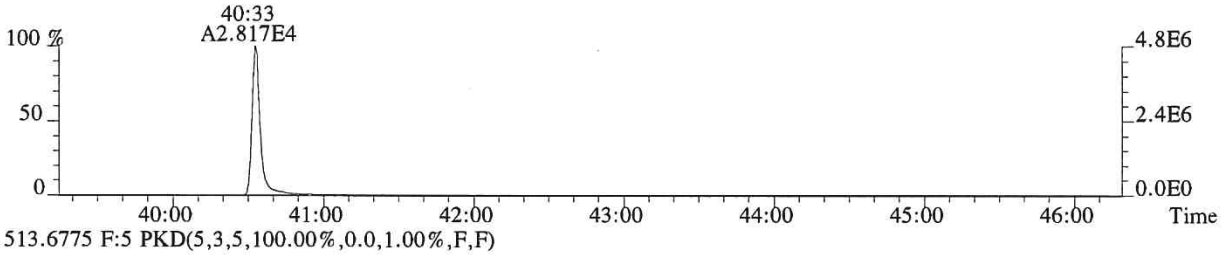
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1320.0,0.40%,F,T)



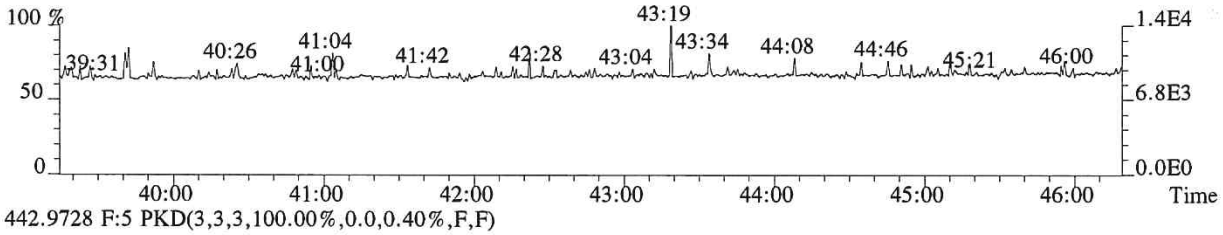
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,656.0,0.40%,F,T)



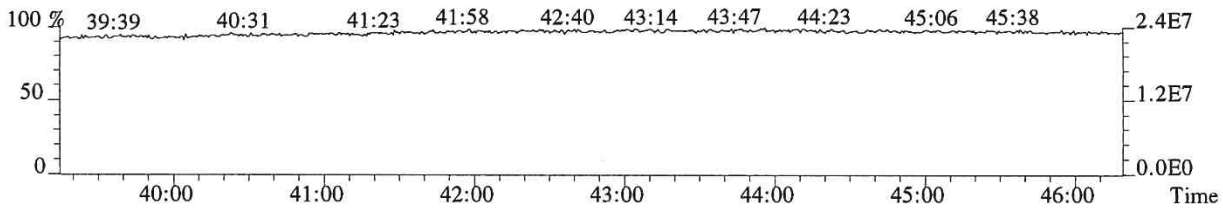
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,488.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

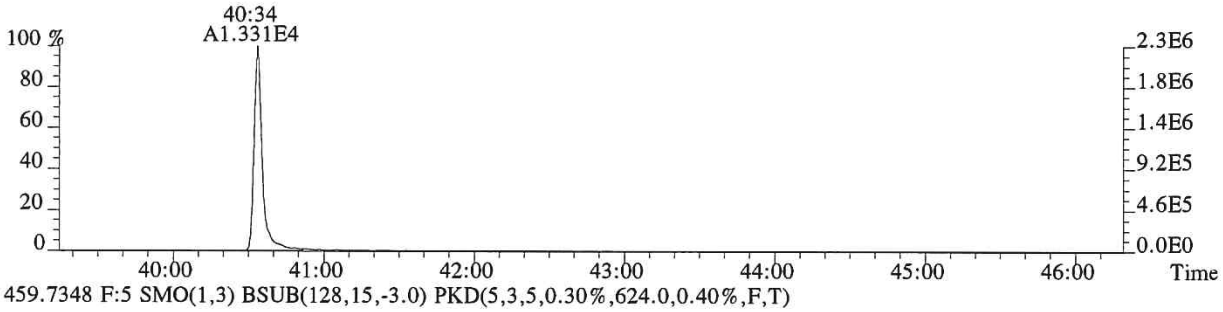


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

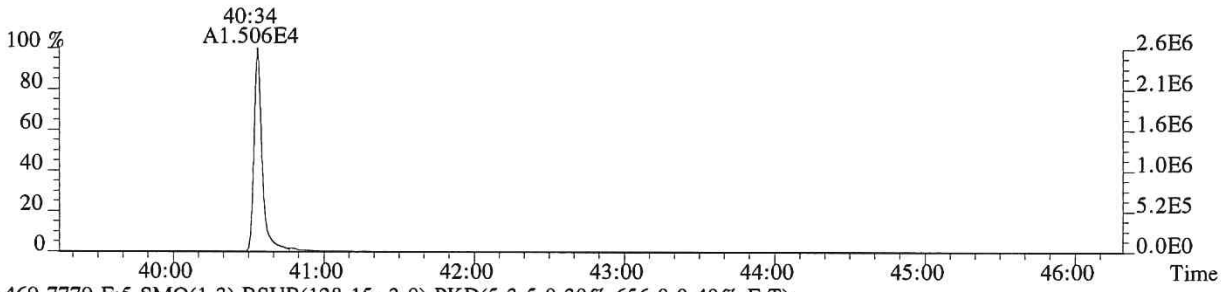


018773

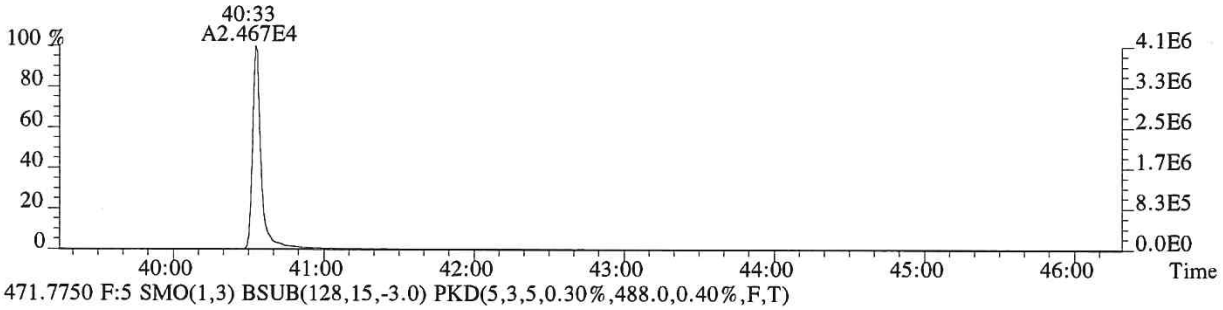
File:P519913 #1-637 Acq:11-JAN-2019 12:11:11 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-02
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,404.0,0.40%,F,T)



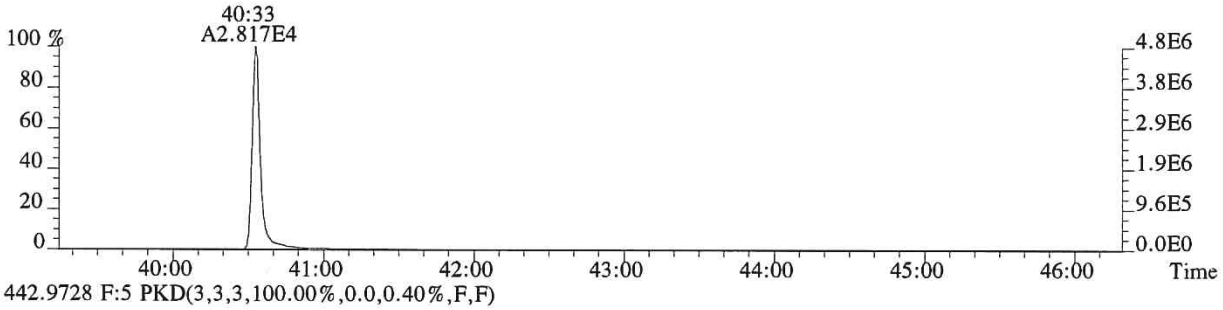
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,624.0,0.40%,F,T)



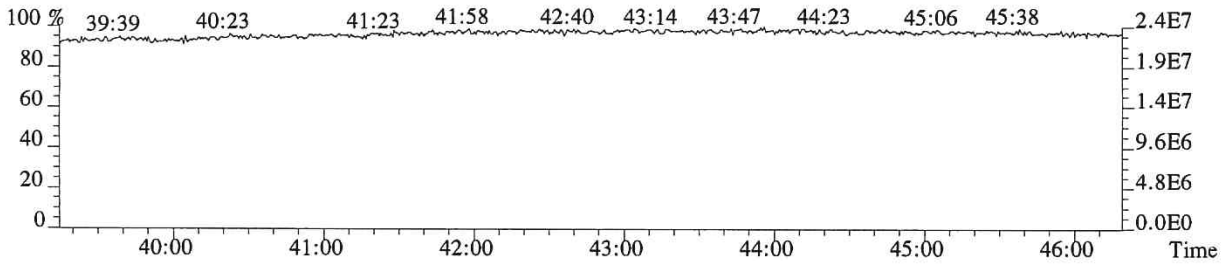
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,656.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,488.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018774

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
DLCS

Run #21 Filename P519914 Samp: 1 Inj: 1 Acquired: 11-JAN-19 12:59:55
Processed: 11-JAN-19 14:53:43 Sample ID: EQ1900003-03

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	1.632e+03	2.099e+03	0.78	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:27	1.411e+04	9.383e+03	1.50	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:28	1.440e+04	9.301e+03	1.55	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:22	1.318e+04	1.058e+04	1.25	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	1.398e+04	1.254e+04	1.11	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:02	1.366e+04	1.105e+04	1.24	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:48	1.150e+04	9.622e+03	1.19	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	1.281e+04	1.284e+04	1.00	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:28	1.157e+04	1.147e+04	1.01	yes	no	1.258
10	Unk	OCDF	40:44	1.956e+04	2.230e+04	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:24	1.313e+03	1.599e+03	0.82	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:47	1.096e+04	7.218e+03	1.52	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:11	1.023e+04	8.178e+03	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:16	1.112e+04	8.648e+03	1.29	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:31	1.118e+04	8.554e+03	1.31	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	9.896e+03	9.426e+03	1.05	yes	no	1.025
17	Unk	OCDD	40:34	1.564e+04	1.788e+04	0.87	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:20	1.771e+04	2.262e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:26	3.242e+04	2.085e+04	1.55	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:27	3.112e+04	1.958e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:22	1.421e+04	2.813e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	1.726e+04	3.362e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	1.578e+04	2.995e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	1.442e+04	2.786e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	1.284e+04	2.905e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:27	1.170e+04	2.650e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:22	8.704e+03	1.089e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:47	2.455e+04	1.513e+04	1.62	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:10	2.258e+04	1.798e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:16	2.227e+04	1.757e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:02	2.699e+04	2.598e+04	1.04	yes	no	0.858
32	IS	13C-OCDD	40:33	2.936e+04	3.307e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:39	2.716e+04	3.348e+04	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:30	3.810e+04	2.926e+04	1.30	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:23	1.299e+04				no	1.014

$$\text{OCDD} = \frac{(1.564e+04 + 1.788e+04) \times 4000\ \text{pg} \times 1}{(2.936e+04 + 3.307e+04) \times \text{g} \times / 100 \times 1.118}$$

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
DLCS

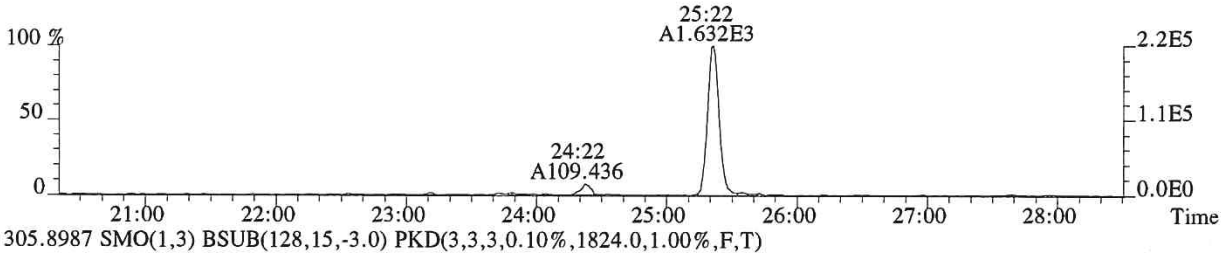
Run #21 Filename P519914 Samp: 1 Inj: 1 Acquired: 11-JAN-19 12:59:55
Processed: 11-JAN-19 14:53:43 LAB. ID: EQ1900003-03

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	2.24e+05	6.08e+02	3.7e+02	2.77e+05	1.82e+03	1.5e+02
2	1,2,3,7,8-PeCDF	2.38e+06	6.68e+02	3.6e+03	1.56e+06	7.68e+02	2.0e+03
3	2,3,4,7,8-PeCDF	2.61e+06	6.68e+02	3.9e+03	1.73e+06	7.68e+02	2.2e+03
4	1,2,3,4,7,8-HxCDF	2.75e+06	6.04e+02	4.5e+03	2.25e+06	3.48e+02	6.5e+03
5	1,2,3,6,7,8-HxCDF	2.69e+06	6.04e+02	4.4e+03	2.34e+06	3.48e+02	6.7e+03
6	2,3,4,6,7,8-HxCDF	2.89e+06	6.04e+02	4.8e+03	2.34e+06	3.48e+02	6.7e+03
7	1,2,3,7,8,9-HxCDF	2.23e+06	6.04e+02	3.7e+03	1.84e+06	3.48e+02	5.3e+03
8	1,2,3,4,6,7,8-HpCDF	2.73e+06	1.20e+03	2.3e+03	2.70e+06	2.76e+02	9.8e+03
9	1,2,3,4,7,8,9-HpCDF	2.33e+06	1.20e+03	1.9e+03	2.29e+06	2.76e+02	8.3e+03
10	OCDF	3.34e+06	3.44e+02	9.7e+03	3.76e+06	1.14e+03	3.3e+03
11	2,3,7,8-TCDD	2.01e+05	1.80e+03	1.1e+02	2.35e+05	1.51e+03	1.6e+02
12	1,2,3,7,8-PeCDD	1.95e+06	5.68e+02	3.4e+03	1.29e+06	4.48e+02	2.9e+03
13	1,2,3,4,7,8-HxCDD	2.20e+06	7.00e+02	3.1e+03	1.71e+06	6.00e+02	2.8e+03
14	1,2,3,6,7,8-HxCDD	2.14e+06	7.00e+02	3.1e+03	1.69e+06	6.00e+02	2.8e+03
15	1,2,3,7,8,9-HxCDD	2.17e+06	7.00e+02	3.1e+03	1.75e+06	6.00e+02	2.9e+03
16	1,2,3,4,6,7,8-HpCDD	1.97e+06	5.60e+02	3.5e+03	1.86e+06	3.56e+02	5.2e+03
17	OCDD	2.69e+06	4.24e+02	6.4e+03	3.08e+06	6.00e+02	5.1e+03
18	13C-2,3,7,8-TCDF	2.39e+06	4.95e+03	4.8e+02	3.12e+06	2.65e+03	1.2e+03
19	13C-1,2,3,7,8-PeCDF	5.48e+06	4.08e+02	1.3e+04	3.48e+06	5.76e+02	6.0e+03
20	13C-2,3,4,7,8-PeCDF	5.60e+06	4.08e+02	1.4e+04	3.57e+06	5.76e+02	6.2e+03
21	13C-1,2,3,4,7,8-HxCDF	3.06e+06	7.04e+02	4.3e+03	5.97e+06	1.40e+03	4.3e+03
22	13C-1,2,3,6,7,8-HxCDF	3.32e+06	7.04e+02	4.7e+03	6.28e+06	1.40e+03	4.5e+03
23	13C-2,3,4,6,7,8-HxCDF	3.30e+06	7.04e+02	4.7e+03	6.32e+06	1.40e+03	4.5e+03
24	13C-1,2,3,7,8,9-HxCDF	2.82e+06	7.04e+02	4.0e+03	5.44e+06	1.40e+03	3.9e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.73e+06	1.45e+03	1.9e+03	6.04e+06	4.65e+03	1.3e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.34e+06	1.45e+03	1.6e+03	5.25e+06	4.65e+03	1.1e+03
27	13C-2,3,7,8-TCDD	1.33e+06	5.01e+03	2.7e+02	1.63e+06	2.47e+03	6.6e+02
28	13C-1,2,3,7,8-PeCDD	4.44e+06	7.48e+02	5.9e+03	2.74e+06	1.11e+03	2.5e+03
29	13C-1,2,3,4,7,8-HxCDD	4.75e+06	6.20e+02	7.7e+03	3.72e+06	8.04e+02	4.6e+03
30	13C-1,2,3,6,7,8-HxCDD	4.34e+06	6.20e+02	7.0e+03	3.43e+06	8.04e+02	4.3e+03
31	13C-1,2,3,4,6,7,8-HpCDD	5.38e+06	6.16e+02	8.7e+03	5.21e+06	5.52e+02	9.4e+03
32	13C-OCDD	5.03e+06	4.76e+02	1.1e+04	5.71e+06	3.12e+02	1.8e+04
33	13C-1,2,3,4-TCDD	3.97e+06	5.01e+03	7.9e+02	4.84e+06	2.47e+03	2.0e+03
34	13C-1,2,3,7,8,9-HxCDD	7.47e+06	6.20e+02	1.2e+04	5.83e+06	8.04e+02	7.2e+03
35	37Cl-2,3,7,8-TCDD	1.96e+06	1.88e+03	1.0e+03			

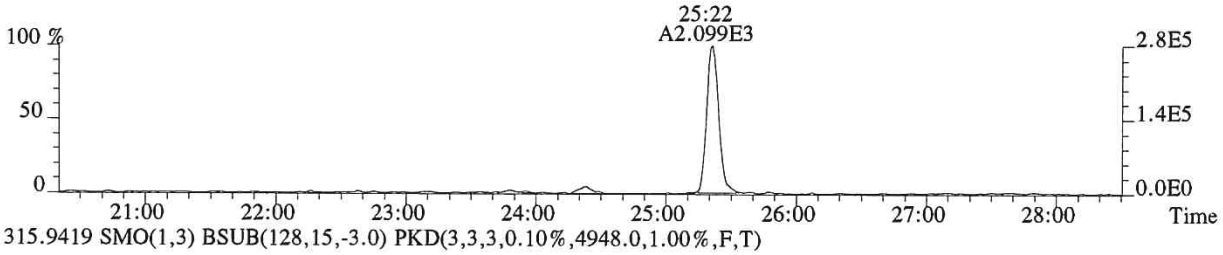
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10450 Stancliff Rd., Suite 115
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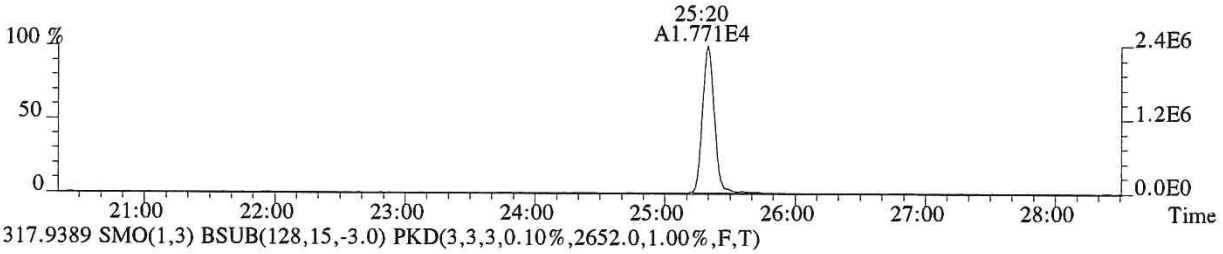
File:P519914 #1-580 Acq:11-JAN-2019 12:59:55 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-03
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,608.0,1.00%,F,T)



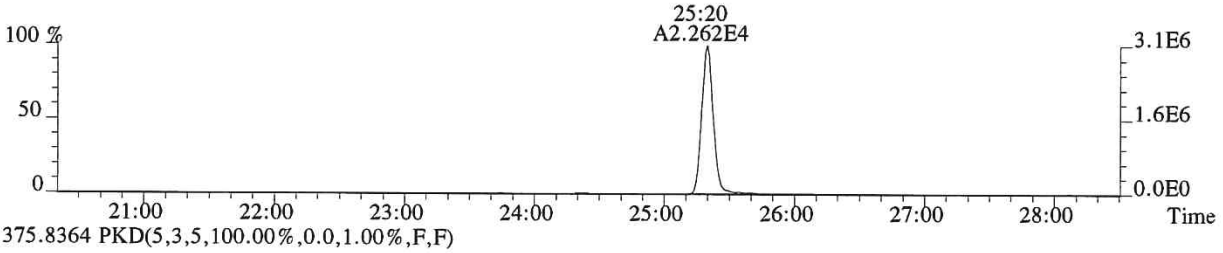
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1824.0,1.00%,F,T)



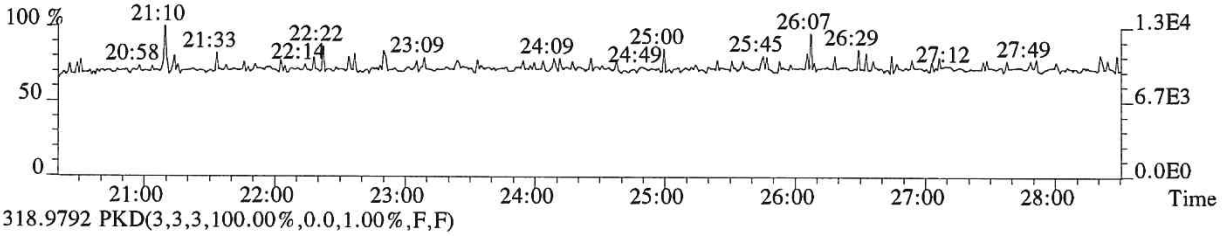
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4948.0,1.00%,F,T)



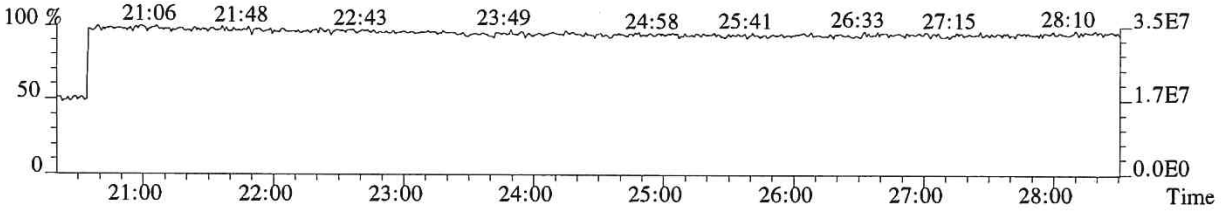
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2652.0,1.00%,F,T)



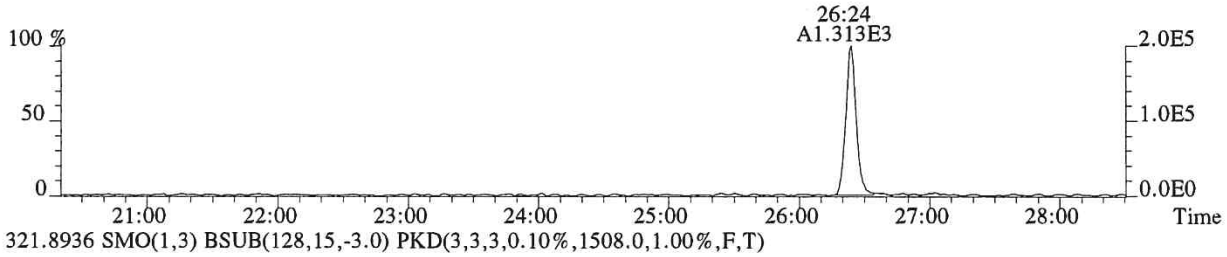
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



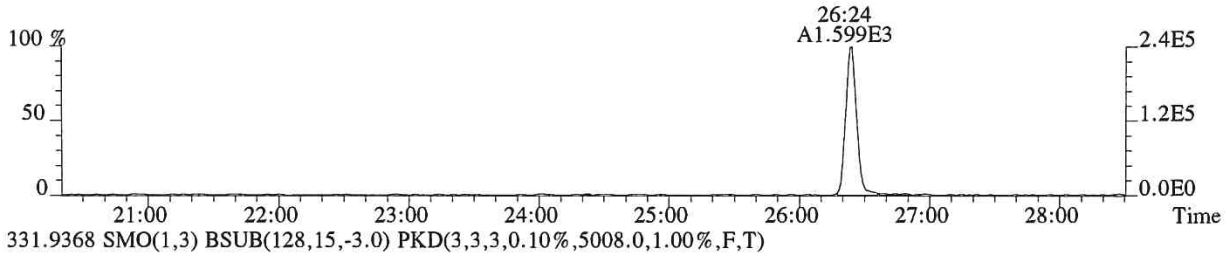
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



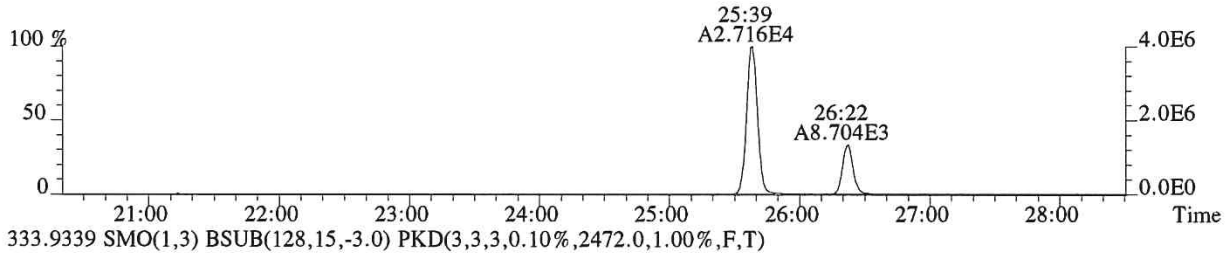
File:P519914 #1-580 Acq:11-JAN-2019 12:59:55 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-03
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1804.0,1.00%,F,T)



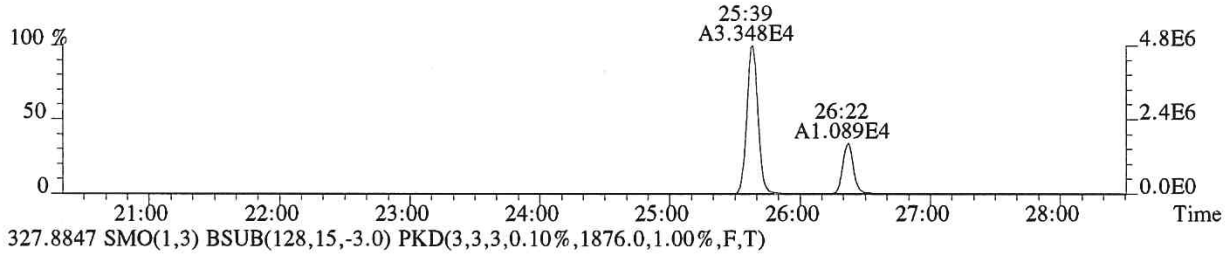
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1508.0,1.00%,F,T)



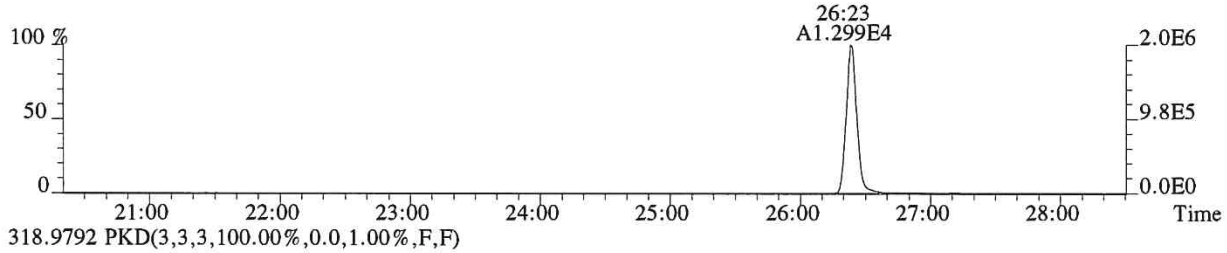
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5008.0,1.00%,F,T)



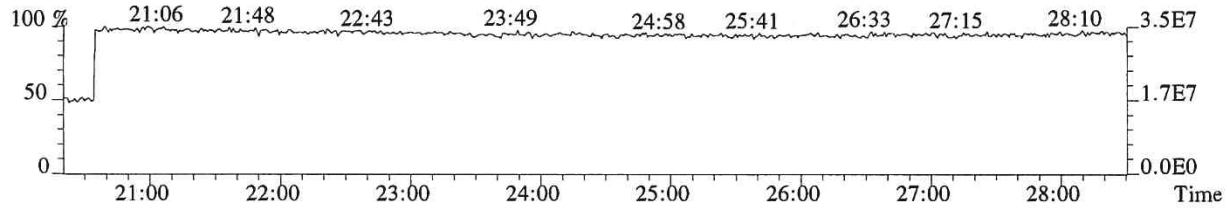
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2472.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1876.0,1.00%,F,T)

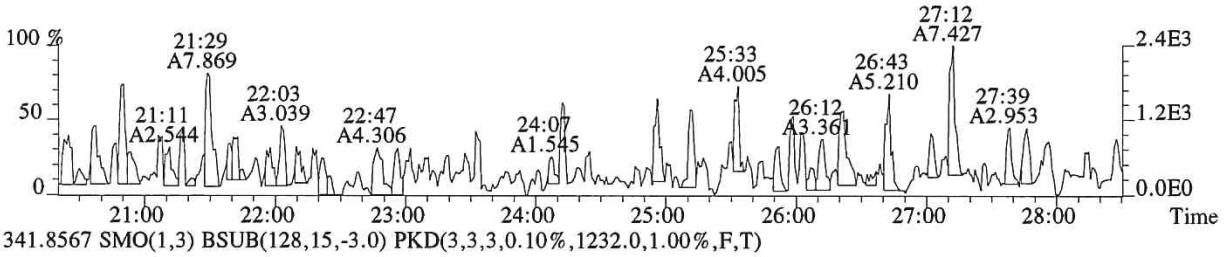


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

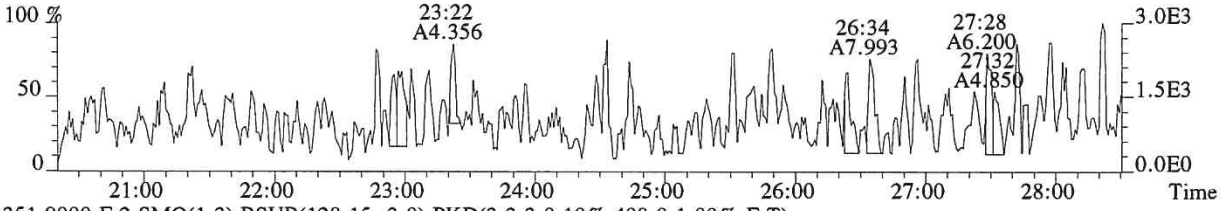


018778

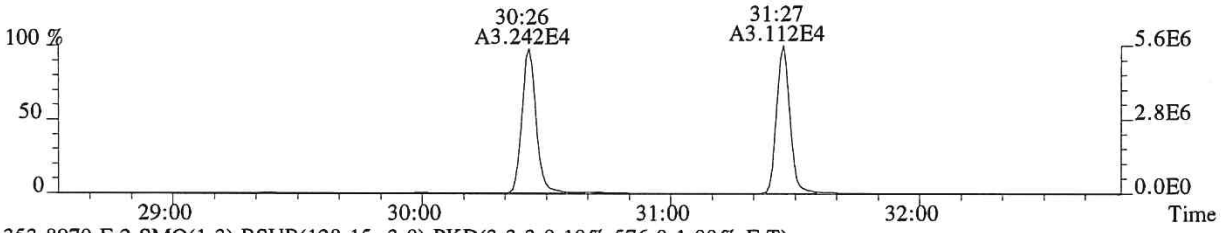
File:P519914 #1-580 Acq:11-JAN-2019 12:59:55 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-03
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,388.0,1.00%,F,T)



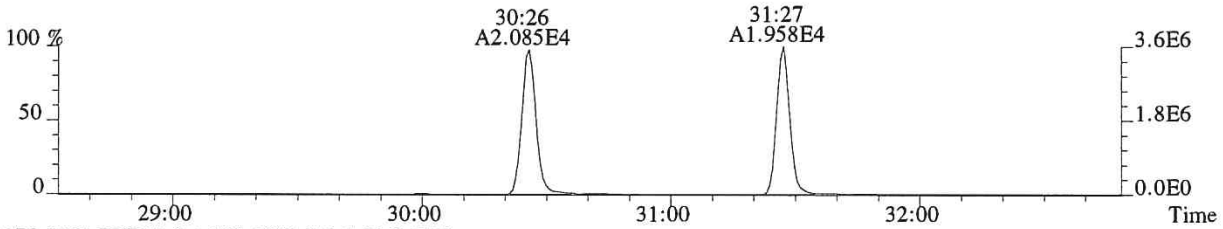
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1232.0,1.00%,F,T)



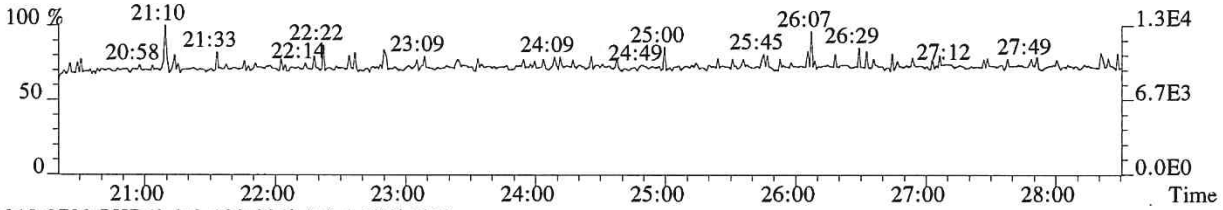
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,408.0,1.00%,F,T)



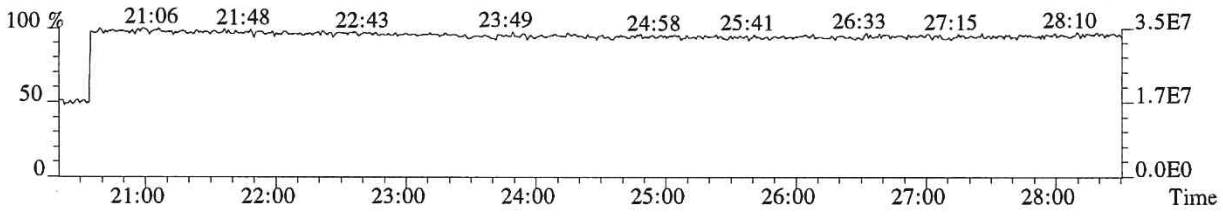
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,576.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

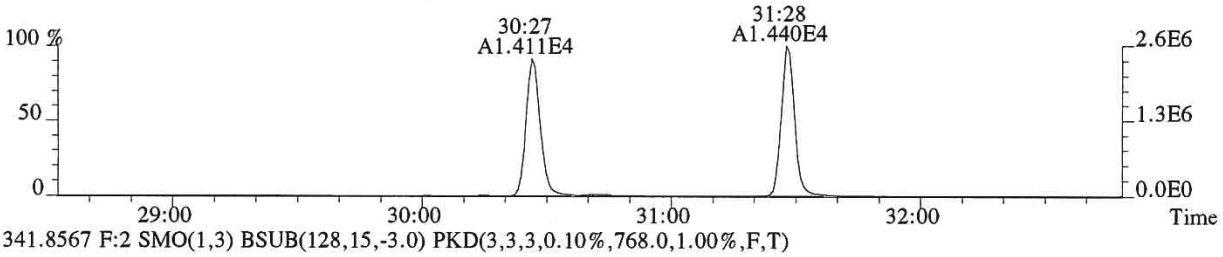


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

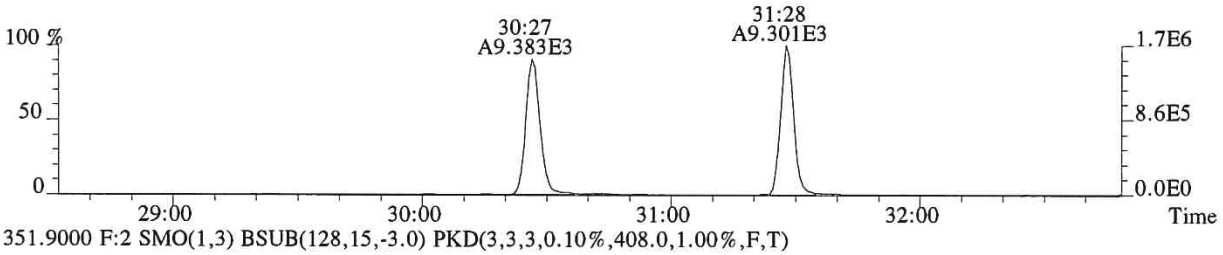


018779

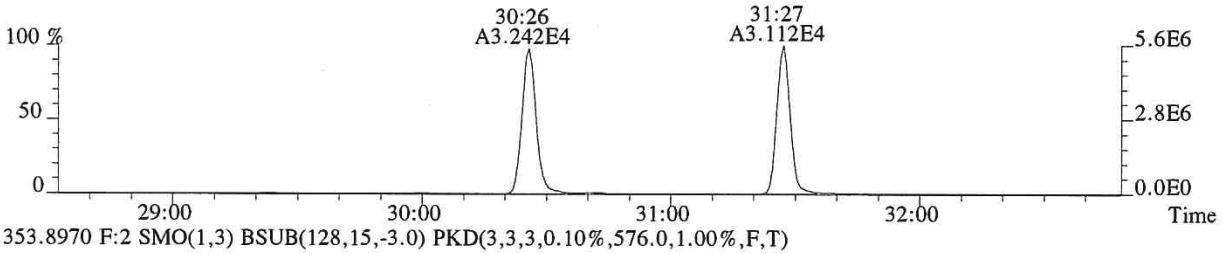
File:P519914 #1-385 Acq:11-JAN-2019 12:59:55 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-03
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,668.0,1.00%,F,T)



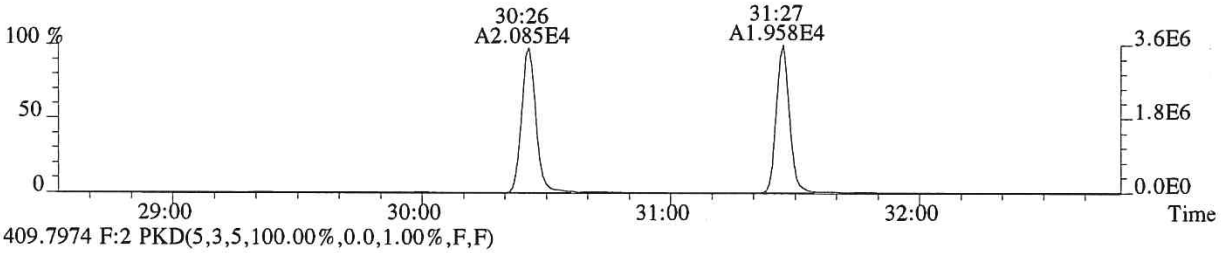
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,768.0,1.00%,F,T)



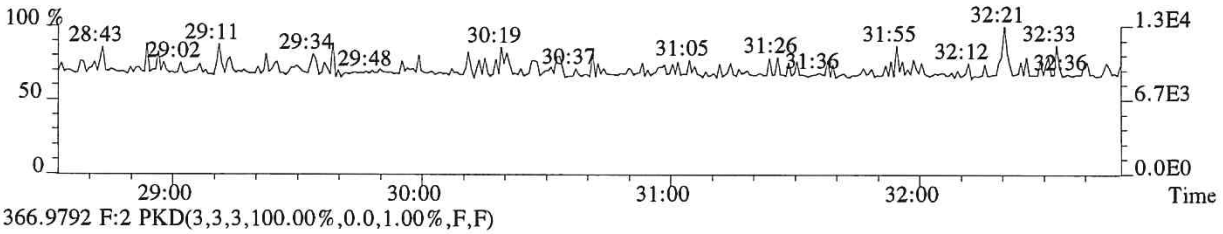
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,408.0,1.00%,F,T)



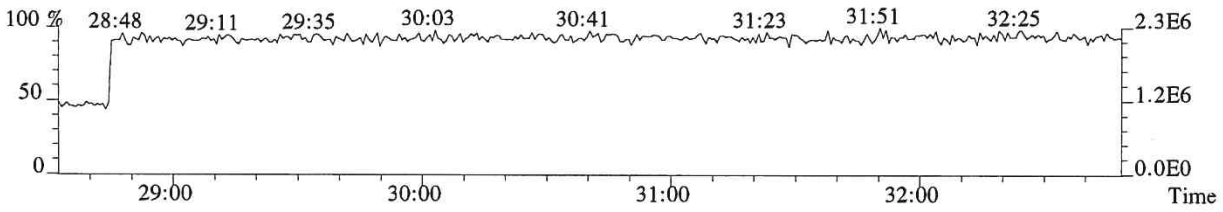
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,576.0,1.00%,F,T)



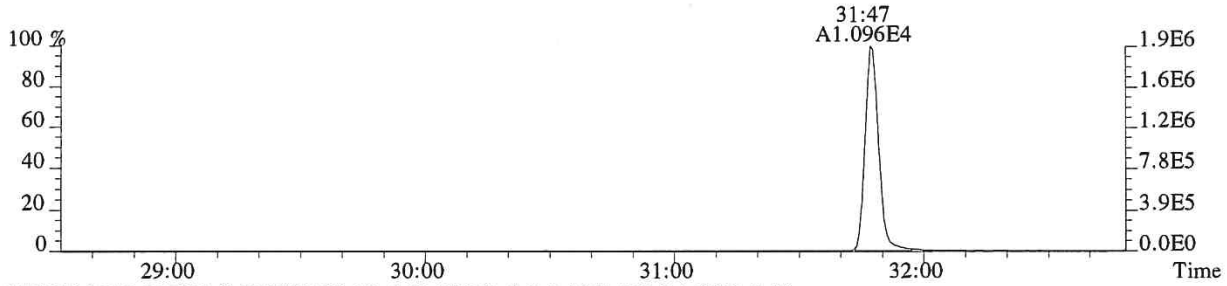
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



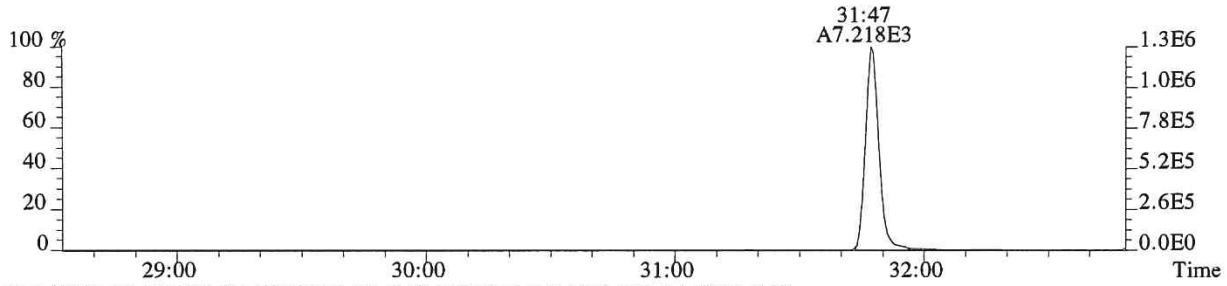
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



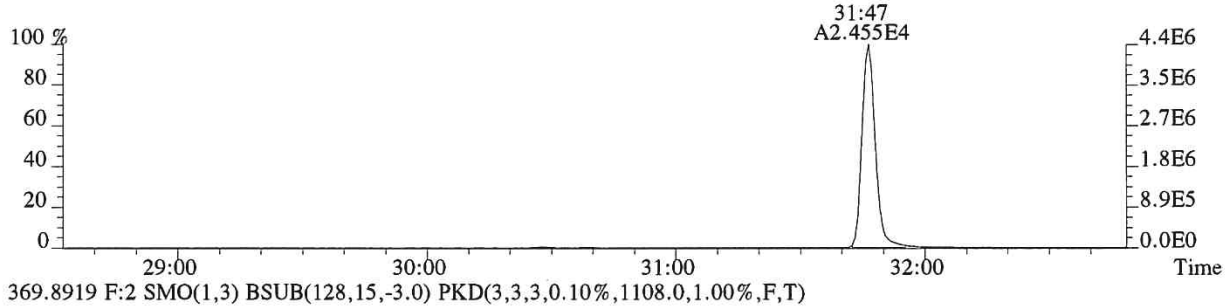
File:P519914 #1-385 Acq:11-JAN-2019 12:59:55 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-03
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,568.0,1.00%,F,T)



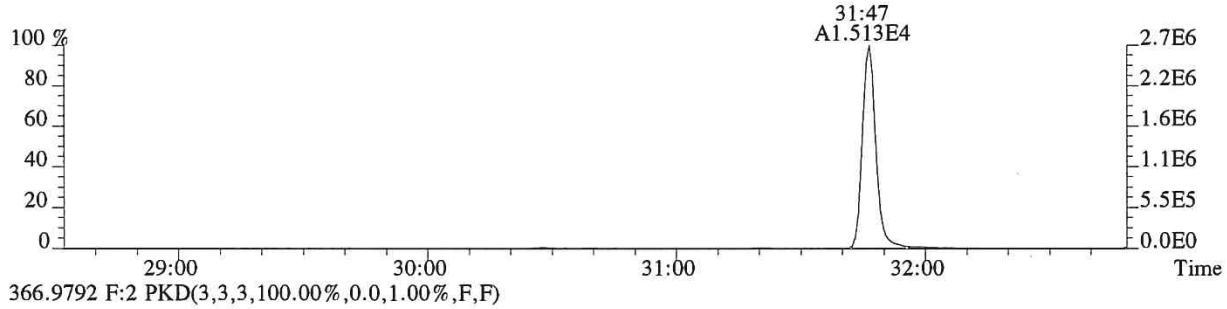
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,448.0,1.00%,F,T)



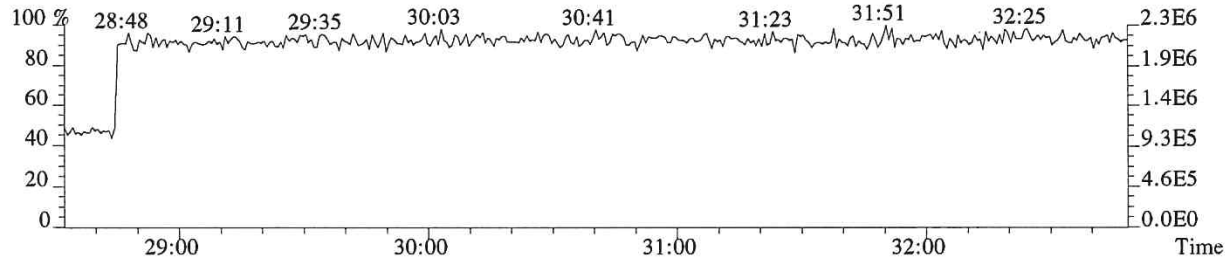
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,748.0,1.00%,F,T)



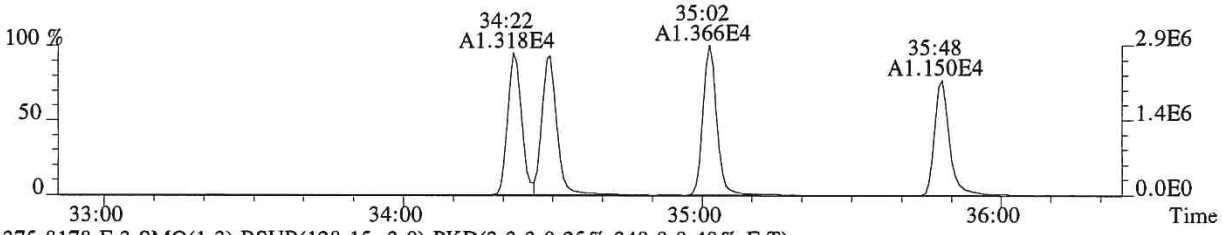
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1108.0,1.00%,F,T)



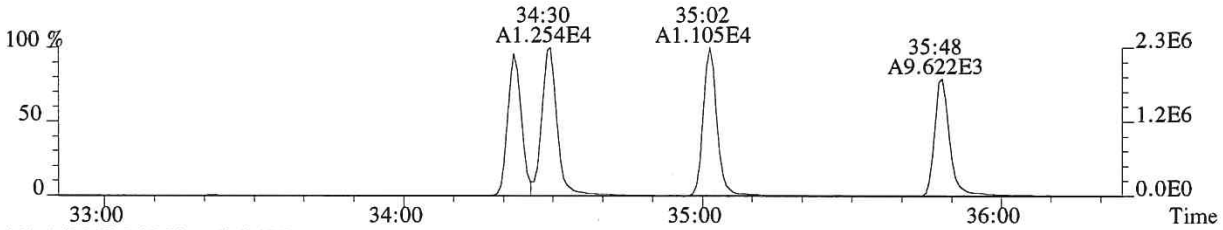
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



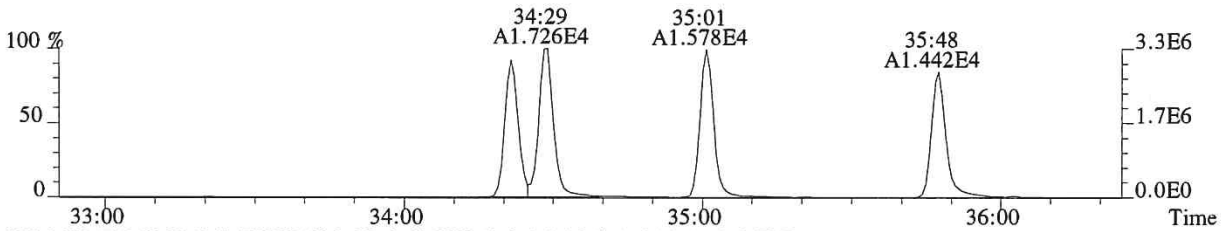
File:P519914 #1-321 Acq:11-JAN-2019 12:59:55 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-03
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,604.0,0.40%,F,T)



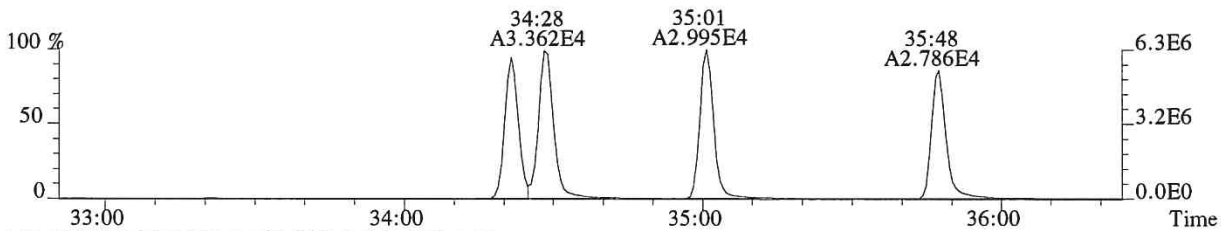
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,348.0,0.40%,F,T)



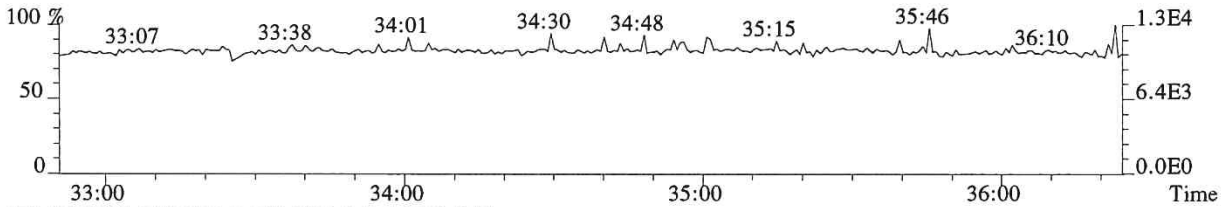
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,704.0,0.40%,F,T)



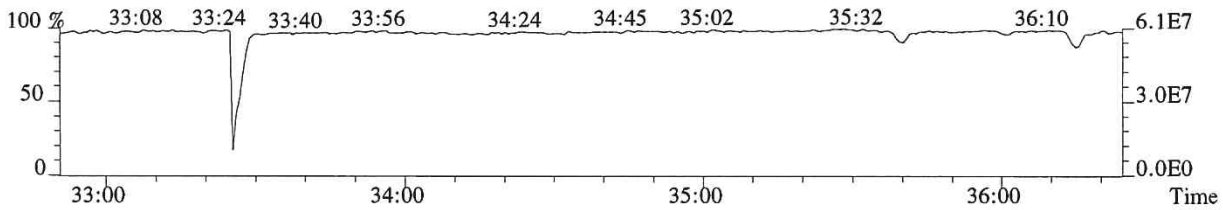
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1404.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

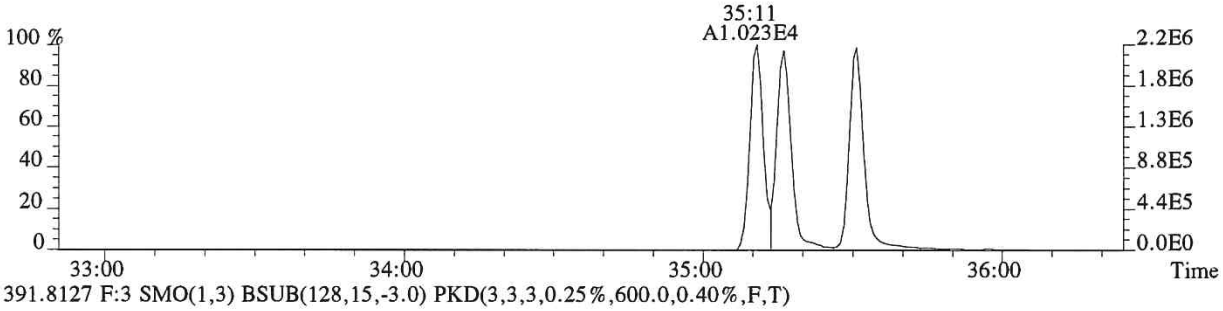


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

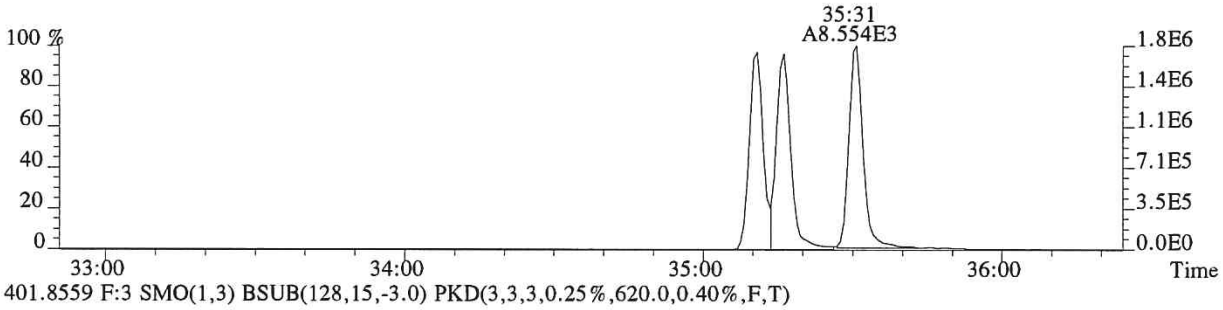


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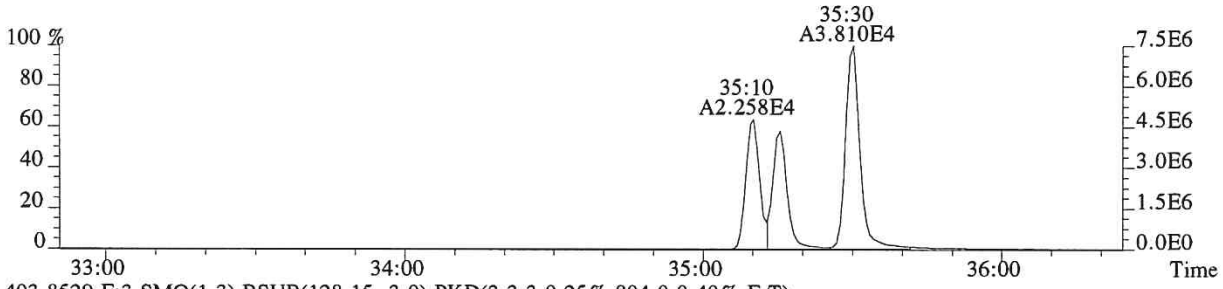
File:P519914 #1-321 Acq:11-JAN-2019 12:59:55 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-03
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,700.0,0.40%,F,T)



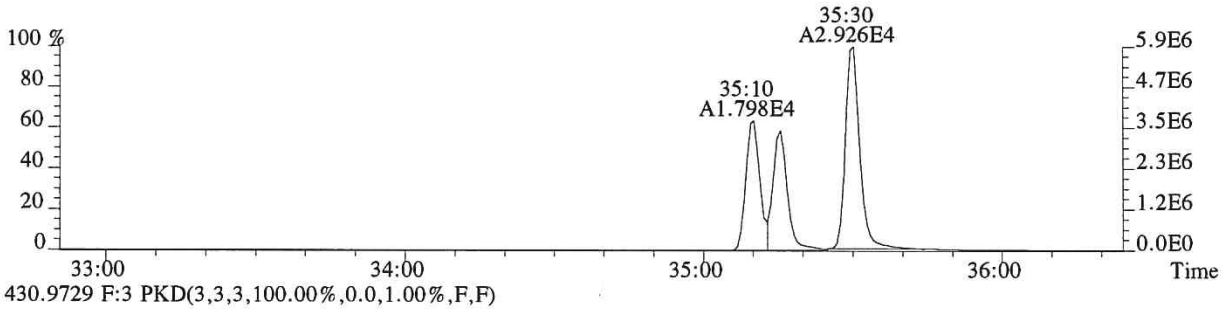
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,600.0,0.40%,F,T)



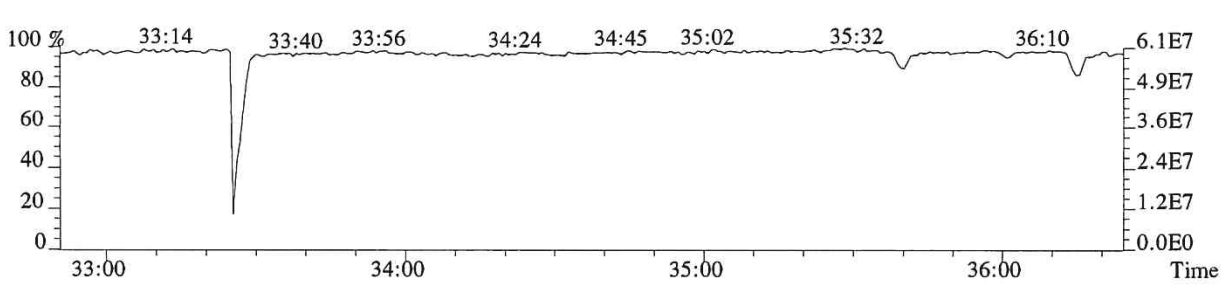
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,620.0,0.40%,F,T)



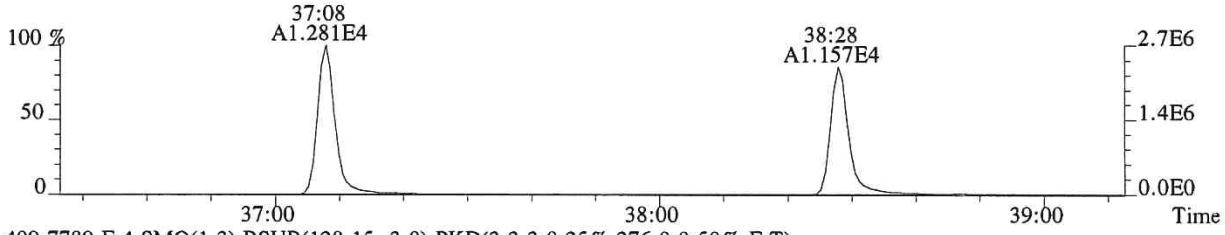
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,804.0,0.40%,F,T)



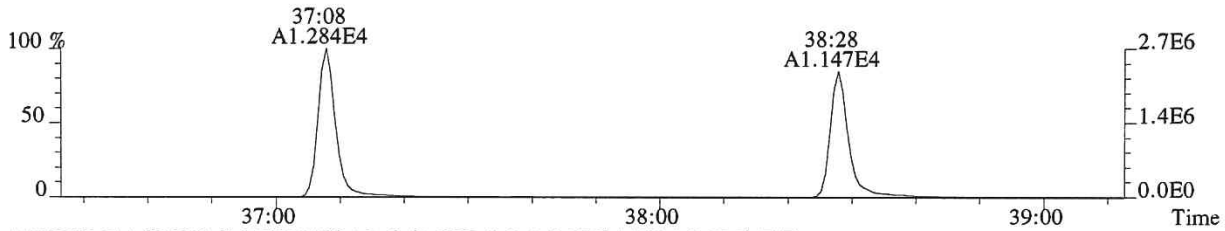
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



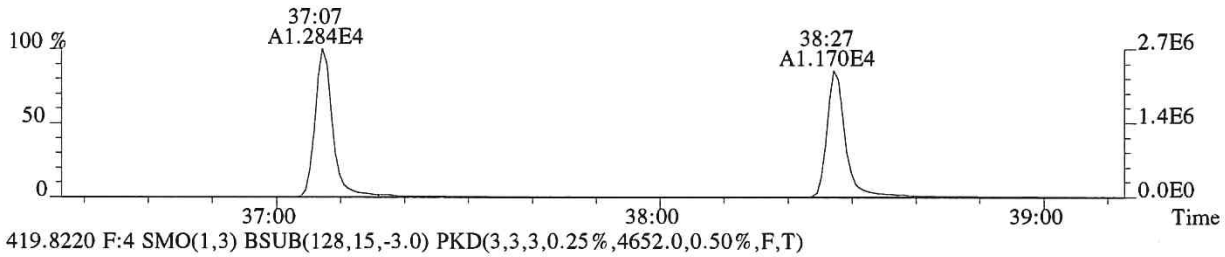
File:P519914 #1-250 Acq:11-JAN-2019 12:59:55 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-03
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1196.0,0.50%,F,T)



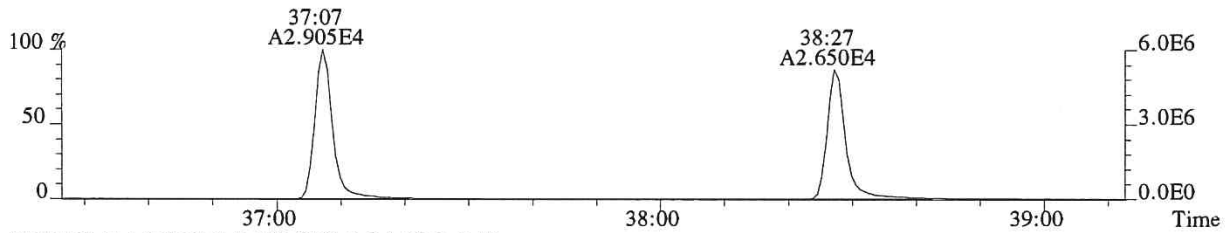
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,276.0,0.50%,F,T)



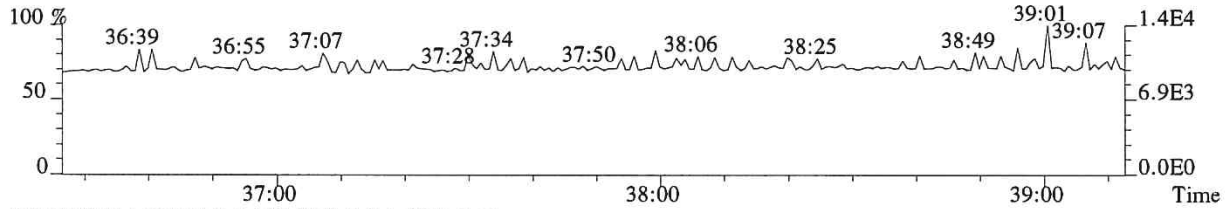
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1452.0,0.50%,F,T)



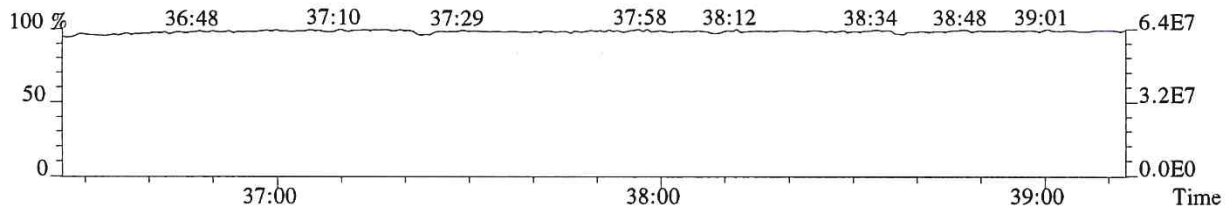
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4652.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

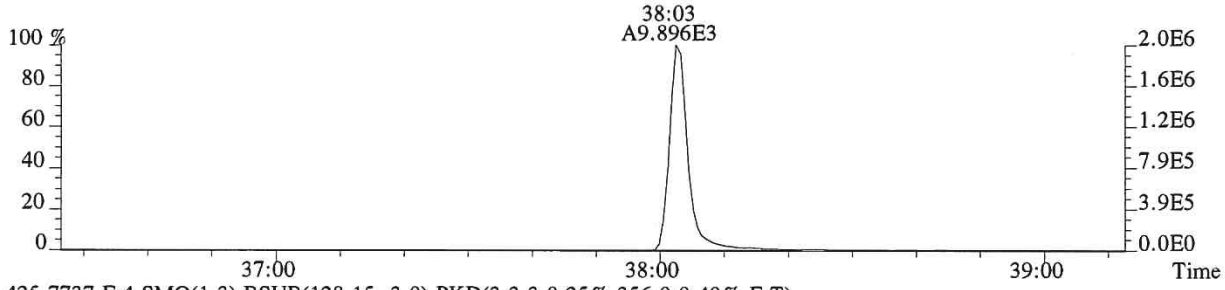


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

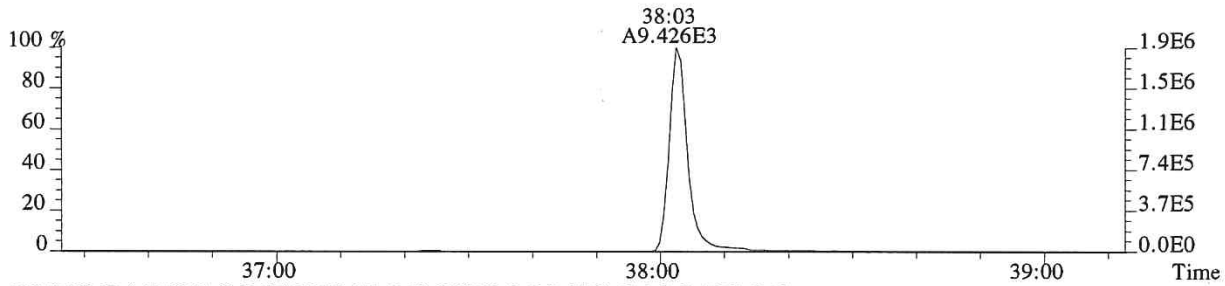


018784

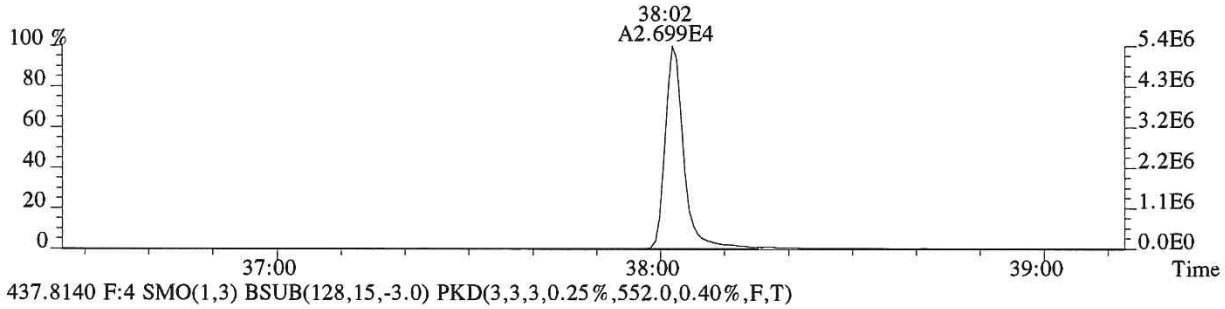
File:P519914 #1-250 Acq:11-JAN-2019 12:59:55 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-03
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,560.0,0.40%,F,T)



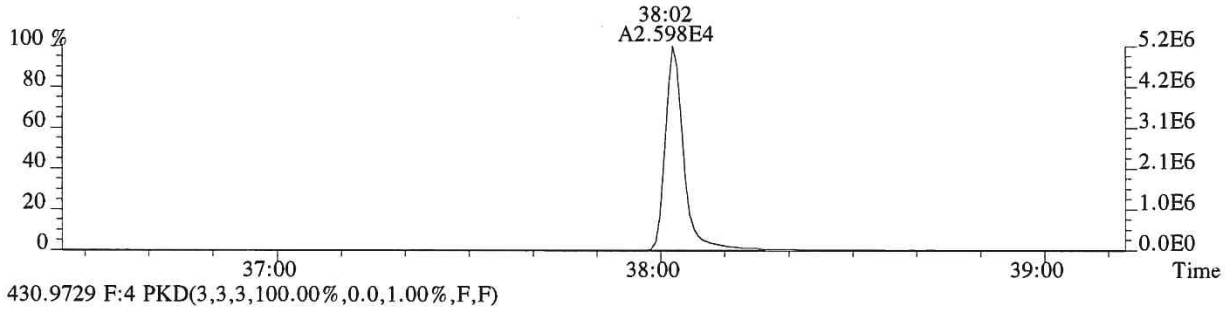
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,356.0,0.40%,F,T)



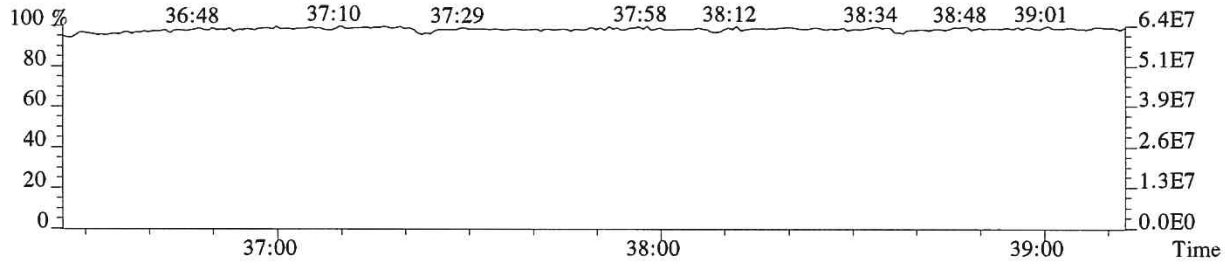
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,616.0,0.40%,F,T)



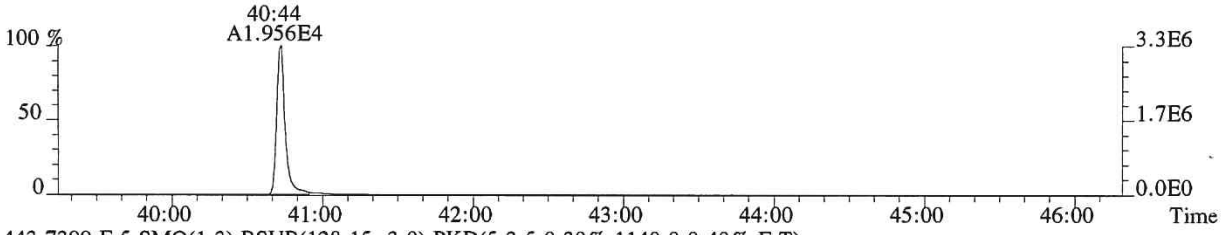
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,552.0,0.40%,F,T)



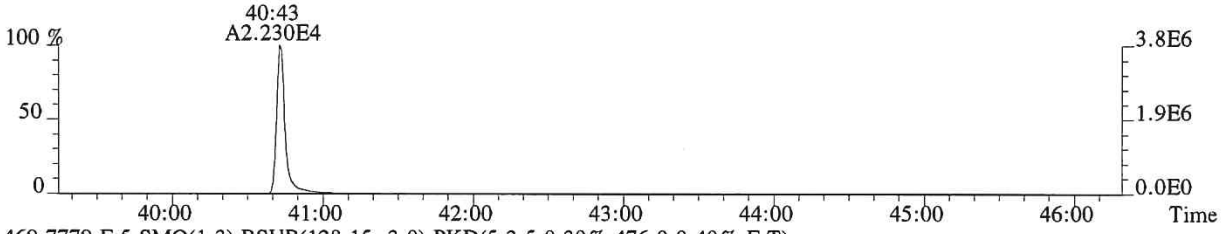
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



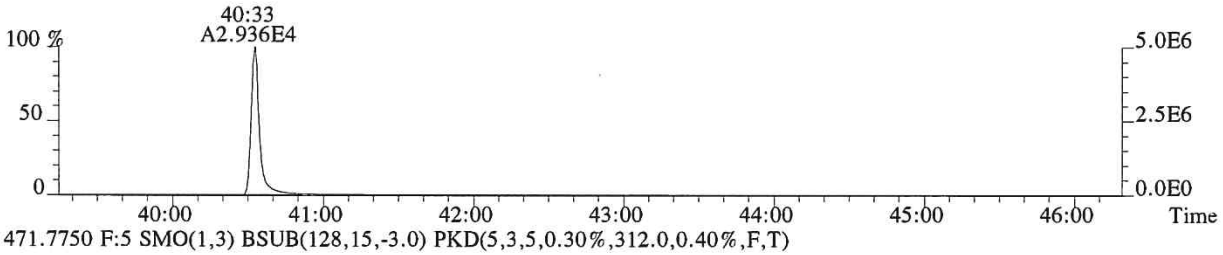
File:P519914 #1-637 Acq:11-JAN-2019 12:59:55 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-03
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,344.0,0.40%,F,T)



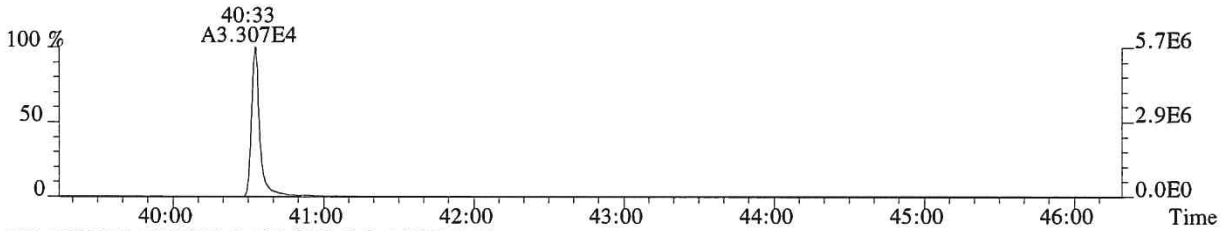
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1140.0,0.40%,F,T)



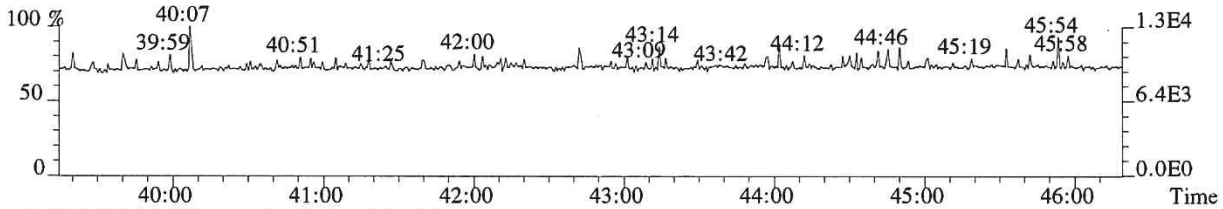
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,476.0,0.40%,F,T)



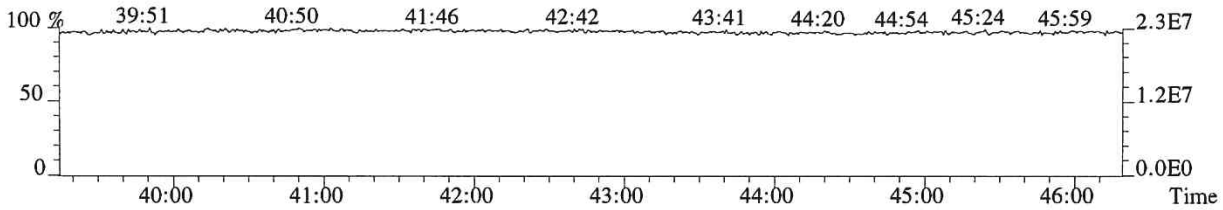
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,312.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

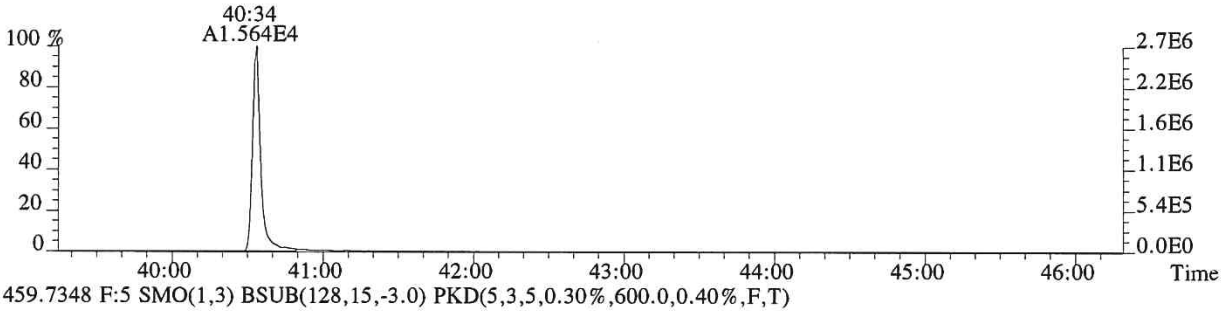


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

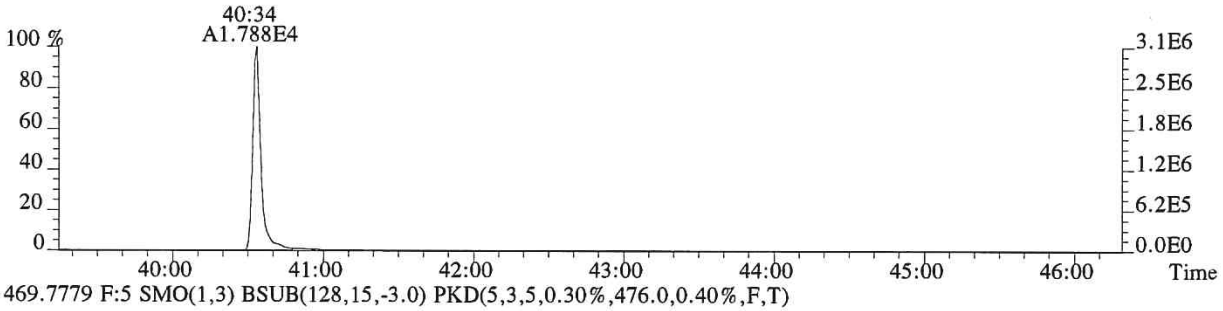


018786

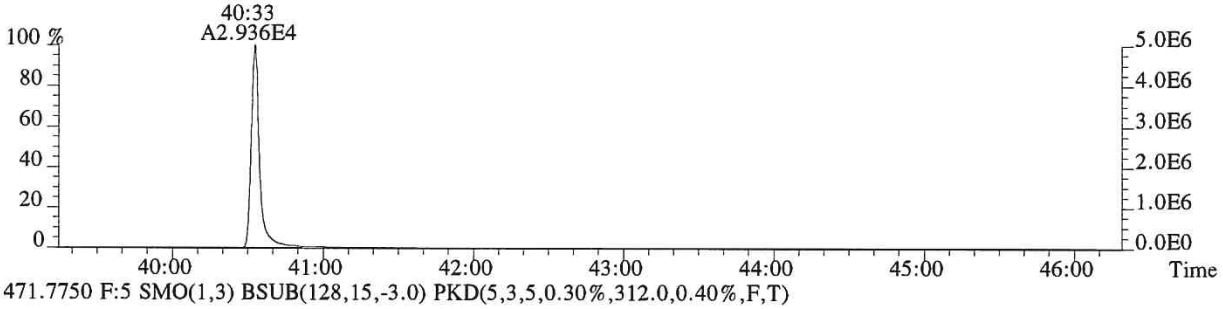
File:P519914 #1-637 Acq:11-JAN-2019 12:59:55 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900003-03
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,424.0,0.40%,F,T)



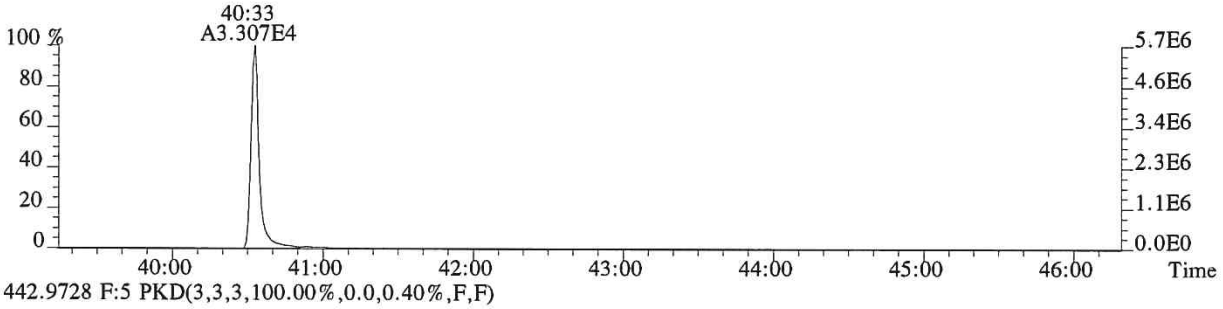
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,600.0,0.40%,F,T)



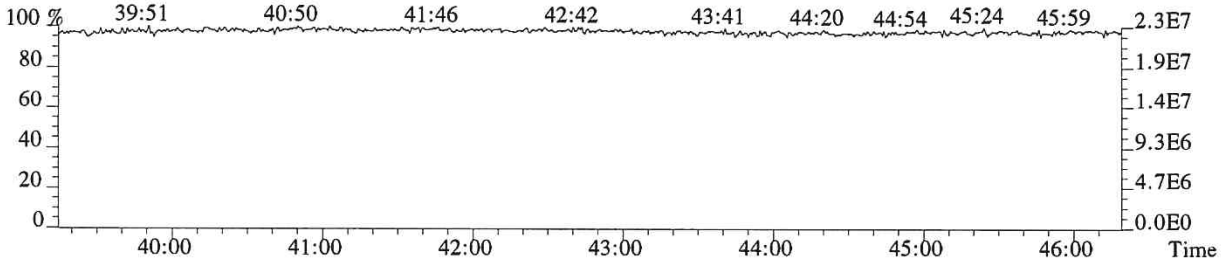
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,476.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,312.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
METHOD BLANK

Run #10 Filename P519999 Samp: 1 Inj: 1 Acquired: 16-JAN-19 14:33:01
Processed: 17-JAN-19 11:27:58 Sample ID: EQ1900017-01

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	NotFnd	*	*	*	no	yes	0.942
2	Unk	1,2,3,7,8-PeCDF	NotFnd	*	*	*	no	no	1.012
3	Unk	2,3,4,7,8-PeCDF	NotFnd	*	*	*	no	yes	0.959
4	Unk	1,2,3,4,7,8-HxCDF	NotFnd	*	*	*	no	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	NotFnd	*	*	*	no	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	NotFnd	*	*	*	no	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:23	2.284e+01	2.496e+01	0.91	no	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:39	1.747e+01	1.447e+01	1.21	no	yes	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	NotFnd	*	*	*	no	yes	1.258
10	Unk	OCDF	NotFnd	*	*	*	no	no	1.359
11	Unk	2,3,7,8-TCDD	NotFnd	*	*	*	no	no	1.085
12	Unk	1,2,3,7,8-PeCDD	NotFnd	*	*	*	no	yes	0.956
13	Unk	1,2,3,4,7,8-HxCDD	NotFnd	*	*	*	no	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:51	1.168e+01	7.863e+00	1.48	no	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	NotFnd	*	*	*	no	yes	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:35	2.604e+01	1.463e+01	1.78	no	no	1.025
17	Unk	OCDD	42:23	5.477e+01	6.314e+01	0.87	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:16	6.594e+04	8.377e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:27	1.075e+05	6.852e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:21	1.011e+05	6.372e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	4.487e+04	8.678e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:08	5.118e+04	9.935e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:38	4.717e+04	9.121e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:23	4.181e+04	8.084e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	3.324e+04	7.260e+04	0.46	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:03	2.925e+04	6.526e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:03	3.286e+04	4.197e+04	0.78	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:38	7.846e+04	4.929e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:46	6.728e+04	5.305e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:51	6.605e+04	5.249e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:34	6.816e+04	6.457e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:23	6.183e+04	6.935e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:30	5.550e+04	6.915e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	7.379e+04	5.667e+04	1.30	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:04	4.462e+04				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
METHOD BLANK

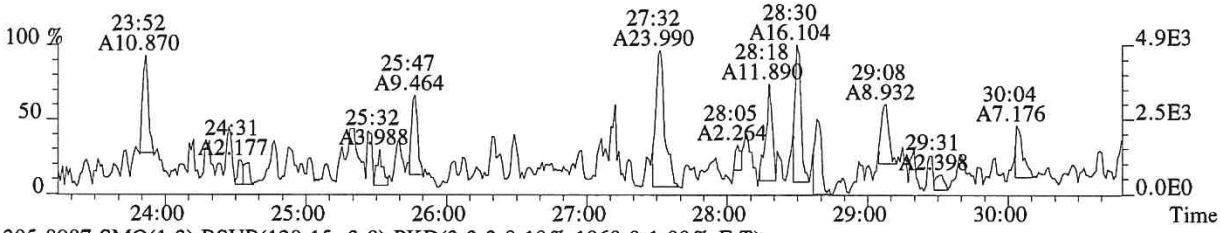
Run #10 Filename P519999 Samp: 1 Inj: 1 Acquired: 16-JAN-19 14:33:01
Processed: 17-JAN-19 11:27:58 LAB. ID: EQ1900017-01

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	*	9.60e+02	*	*	1.86e+03	*
2	1,2,3,7,8-PeCDF	*	6.92e+02	*	*	1.63e+03	*
3	2,3,4,7,8-PeCDF	*	6.92e+02	*	*	1.63e+03	*
4	1,2,3,4,7,8-HxCDF	*	1.40e+03	*	*	9.44e+02	*
5	1,2,3,6,7,8-HxCDF	*	1.40e+03	*	*	9.44e+02	*
6	2,3,4,6,7,8-HxCDF	*	1.40e+03	*	*	9.44e+02	*
7	1,2,3,7,8,9-HxCDF	4.89e+03	1.40e+03	3.5e+00	4.37e+03	9.44e+02	4.6e+00
8	1,2,3,4,6,7,8-HpCDF	3.13e+03	8.48e+02	3.7e+00	2.98e+03	7.76e+02	3.8e+00
9	1,2,3,4,7,8,9-HpCDF	*	8.48e+02	*	*	7.76e+02	*
10	OCDF	*	3.60e+02	*	*	1.44e+03	*
11	2,3,7,8-TCDD	*	3.26e+03	*	*	1.96e+03	*
12	1,2,3,7,8-PeCDD	*	9.60e+02	*	*	3.32e+02	*
13	1,2,3,4,7,8-HxCDD	*	4.64e+02	*	*	8.84e+02	*
14	1,2,3,6,7,8-HxCDD	2.12e+03	4.64e+02	4.6e+00	2.22e+03	8.84e+02	2.5e+00
15	1,2,3,7,8,9-HxCDD	*	4.64e+02	*	*	8.84e+02	*
16	1,2,3,4,6,7,8-HpCDD	4.92e+03	9.40e+02	5.2e+00	3.46e+03	7.56e+02	4.6e+00
17	OCDD	8.60e+03	5.16e+02	1.7e+01	1.02e+04	7.28e+02	1.4e+01
18	13C-2,3,7,8-TCDF	1.24e+07	9.63e+03	1.3e+03	1.57e+07	6.28e+03	2.5e+03
19	13C-1,2,3,7,8-PeCDF	2.07e+07	3.76e+02	5.5e+04	1.33e+07	1.02e+03	1.3e+04
20	13C-2,3,4,7,8-PeCDF	2.06e+07	3.76e+02	5.5e+04	1.30e+07	1.02e+03	1.3e+04
21	13C-1,2,3,4,7,8-HxCDF	9.74e+06	1.05e+03	9.3e+03	1.90e+07	1.05e+03	1.8e+04
22	13C-1,2,3,6,7,8-HxCDF	1.09e+07	1.05e+03	1.0e+04	2.09e+07	1.05e+03	2.0e+04
23	13C-2,3,4,6,7,8-HxCDF	1.03e+07	1.05e+03	9.8e+03	1.98e+07	1.05e+03	1.9e+04
24	13C-1,2,3,7,8,9-HxCDF	8.75e+06	1.05e+03	8.3e+03	1.68e+07	1.05e+03	1.6e+04
25	13C-1,2,3,4,6,7,8-HpCDF	6.93e+06	3.33e+03	2.1e+03	1.53e+07	6.20e+03	2.5e+03
26	13C-1,2,3,4,7,8,9-HpCDF	5.60e+06	3.33e+03	1.7e+03	1.24e+07	6.20e+03	2.0e+03
27	13C-2,3,7,8-TCDD	6.73e+06	6.50e+03	1.0e+03	8.50e+06	2.63e+03	3.2e+03
28	13C-1,2,3,7,8-PeCDD	1.59e+07	1.59e+03	1.0e+04	9.99e+06	1.66e+03	6.0e+03
29	13C-1,2,3,4,7,8-HxCDD	1.53e+07	1.80e+03	8.5e+03	1.20e+07	1.16e+03	1.0e+04
30	13C-1,2,3,6,7,8-HxCDD	1.38e+07	1.80e+03	7.7e+03	1.10e+07	1.16e+03	9.5e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.36e+07	1.24e+03	1.1e+04	1.27e+07	8.12e+02	1.6e+04
32	13C-OCDD	1.01e+07	9.12e+02	1.1e+04	1.13e+07	4.16e+02	2.7e+04
33	13C-1,2,3,4-TCDD	1.09e+07	6.50e+03	1.7e+03	1.35e+07	2.63e+03	5.1e+03
34	13C-1,2,3,7,8,9-HxCDD	1.49e+07	1.80e+03	8.3e+03	1.19e+07	1.16e+03	1.0e+04
35	37Cl-2,3,7,8-TCDD	8.80e+06	2.06e+03	4.3e+03			

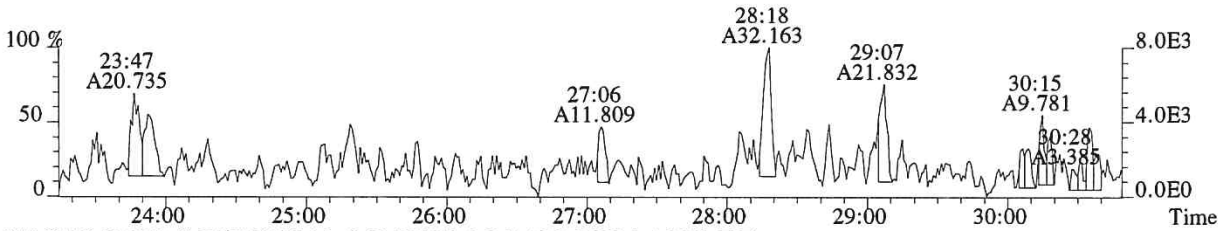
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10450 Stancliff Rd., Suite 115
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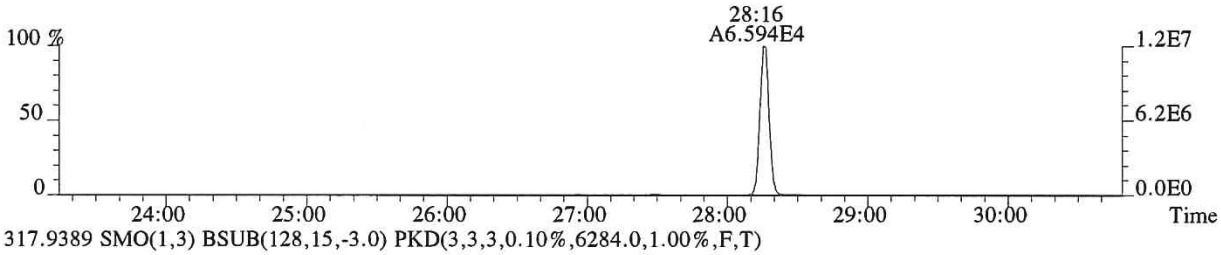
File:P519999 #1-538 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,960.0,1.00%,F,T)



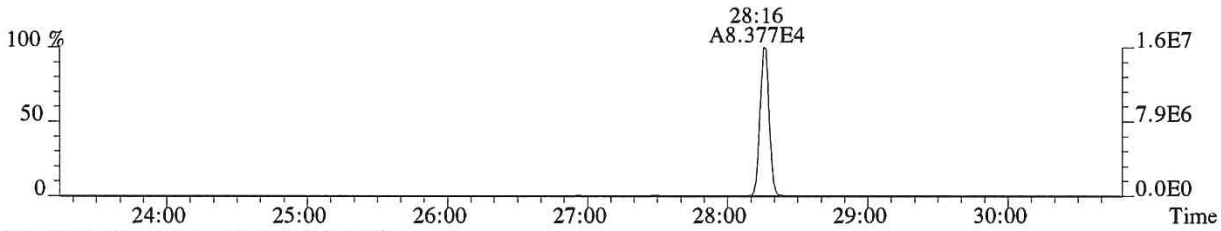
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1860.0,1.00%,F,T)



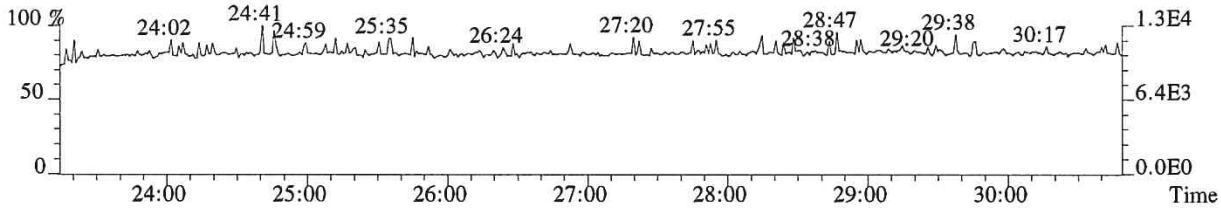
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9632.0,1.00%,F,T)



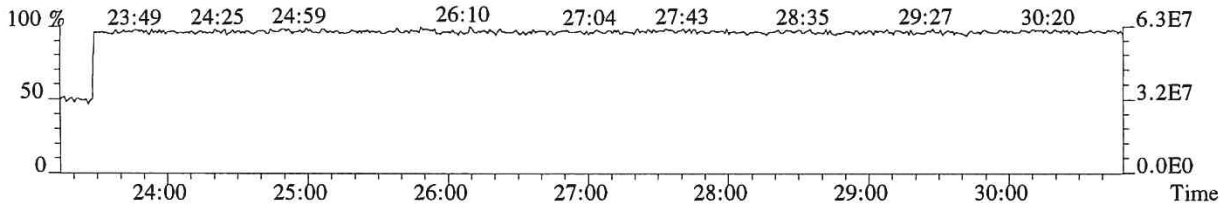
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6284.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

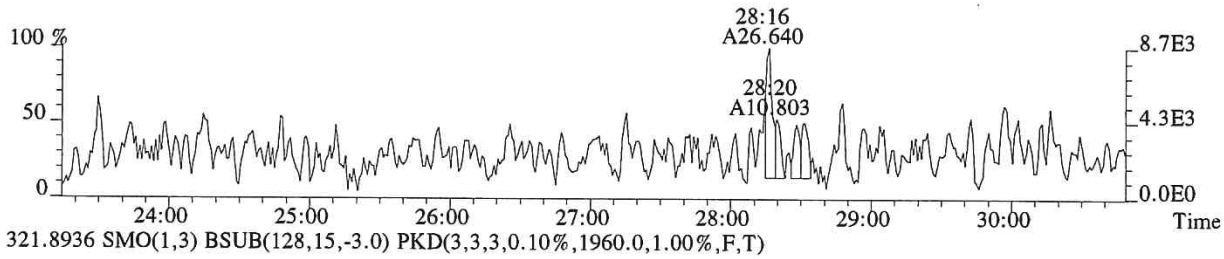


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

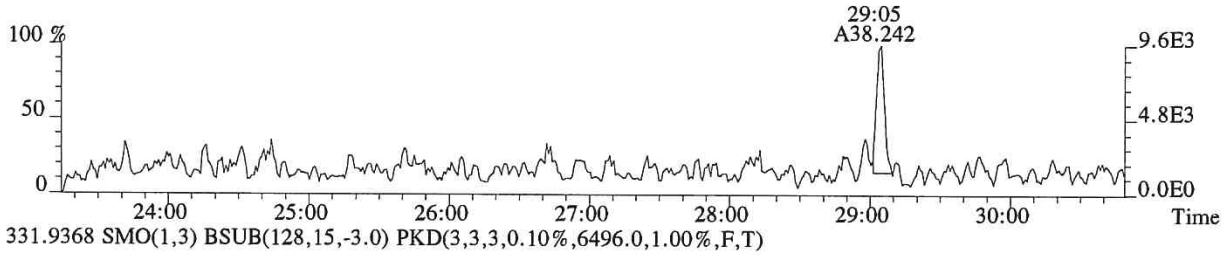


018790

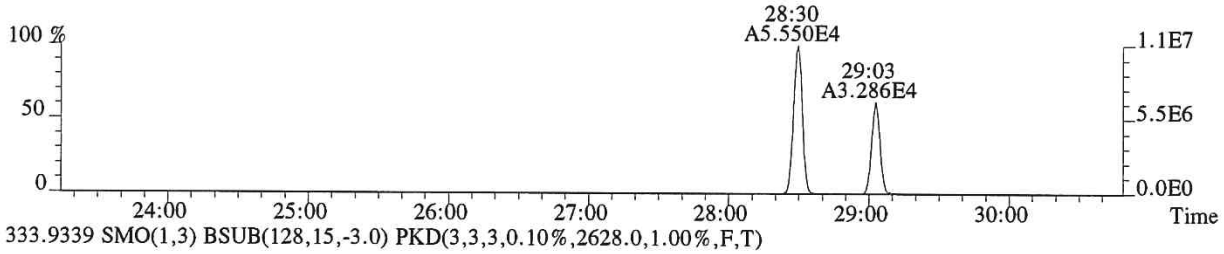
File:P519999 #1-538 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3256.0,1.00%,F,T)



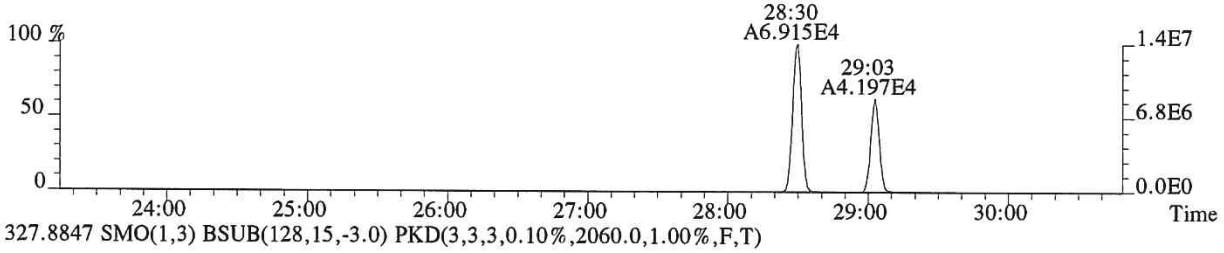
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1960.0,1.00%,F,T)



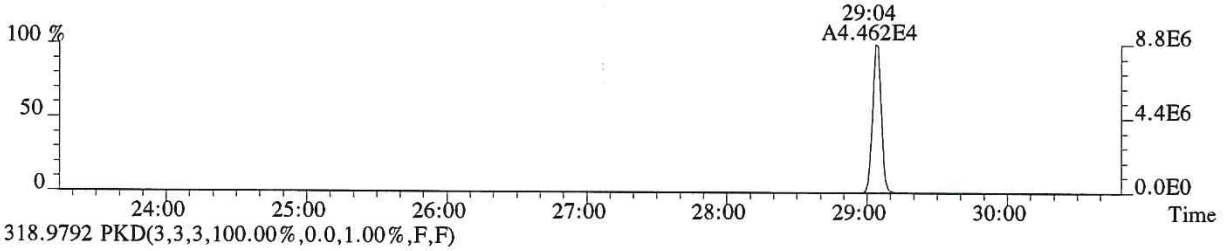
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6496.0,1.00%,F,T)



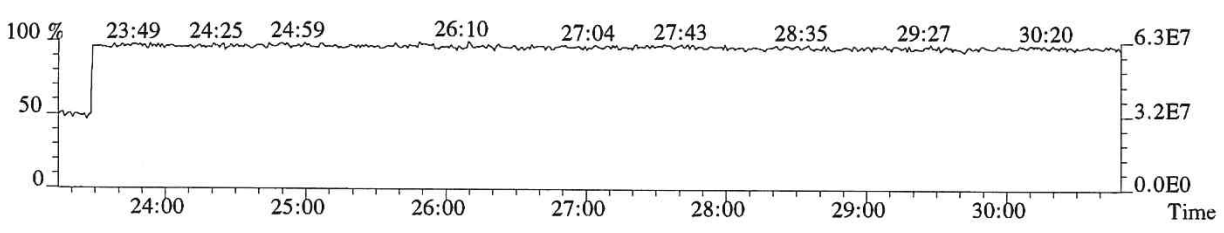
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2628.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2060.0,1.00%,F,T)

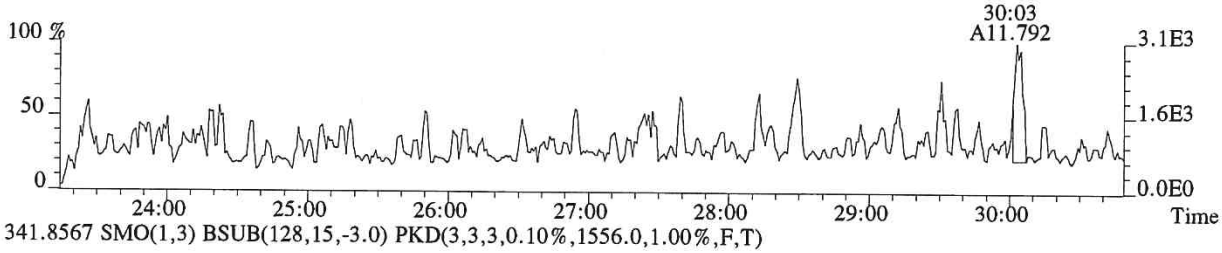


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

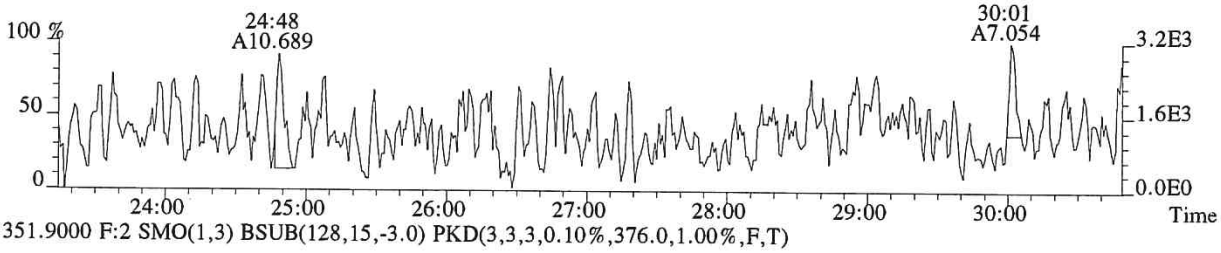


018791

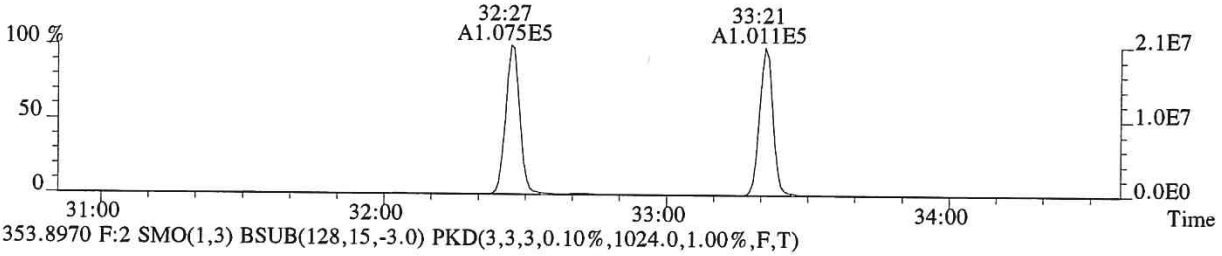
File:P519999 #1-538 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1200.0,1.00%,F,T)



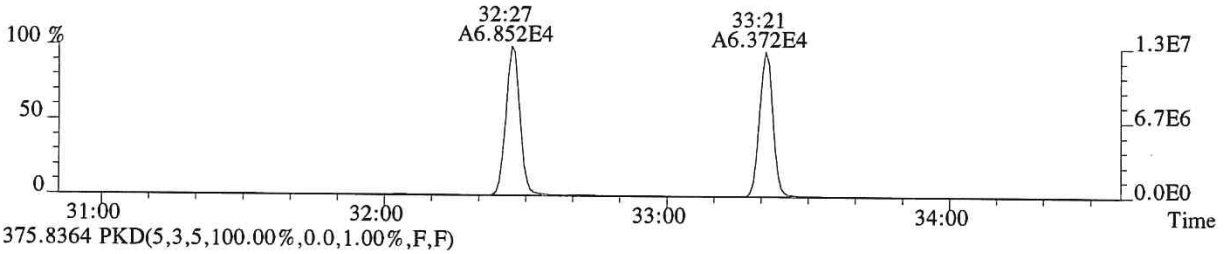
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1556.0,1.00%,F,T)



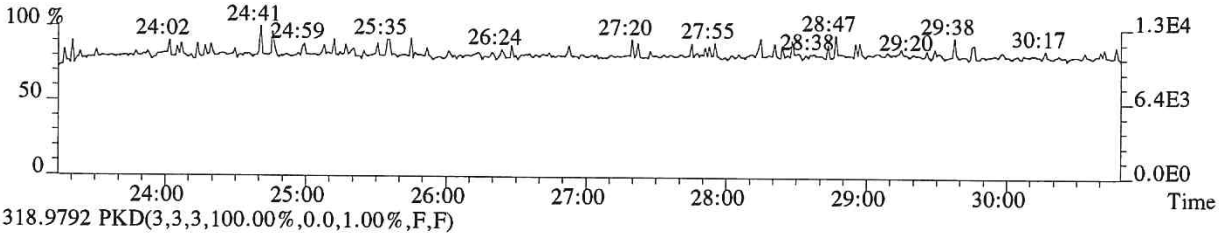
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,376.0,1.00%,F,T)



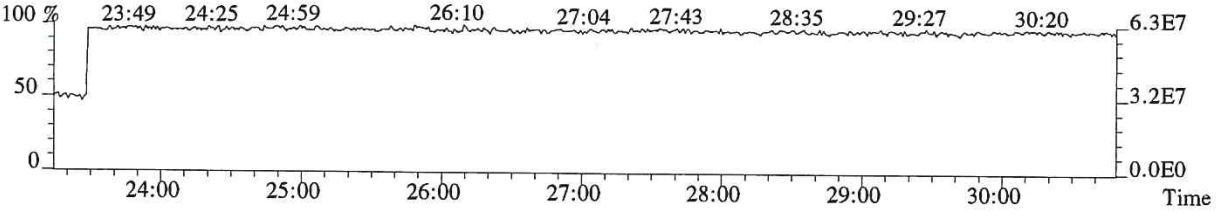
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



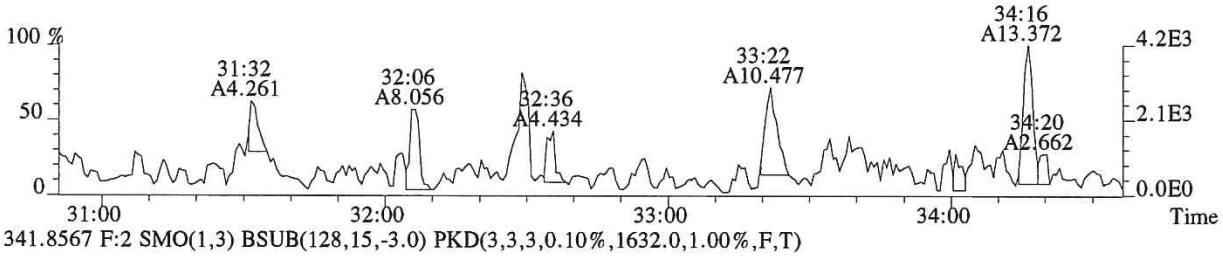
375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



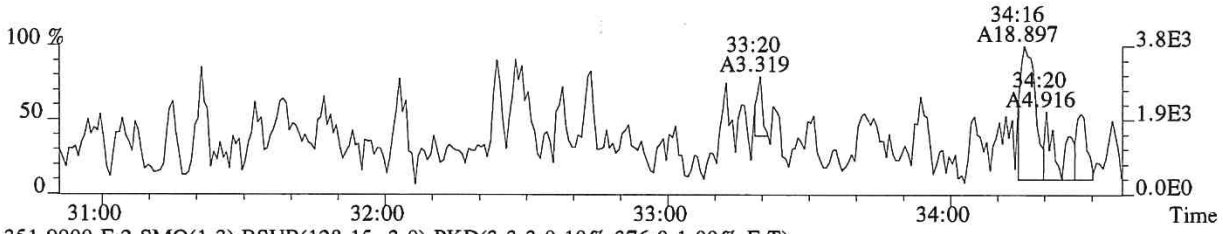
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



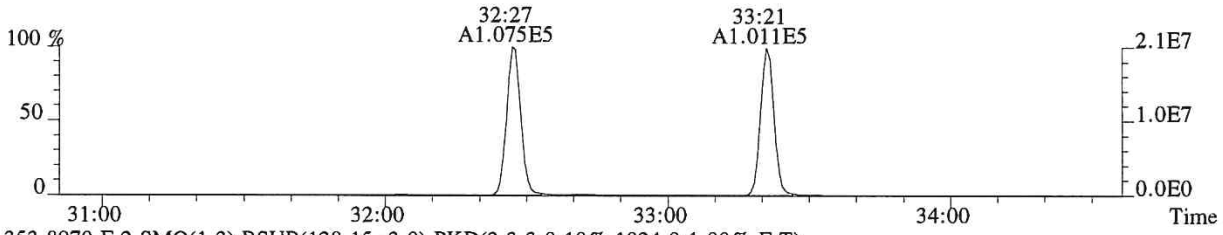
File:P519999 #1-339 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,692.0,1.00%,F,T)



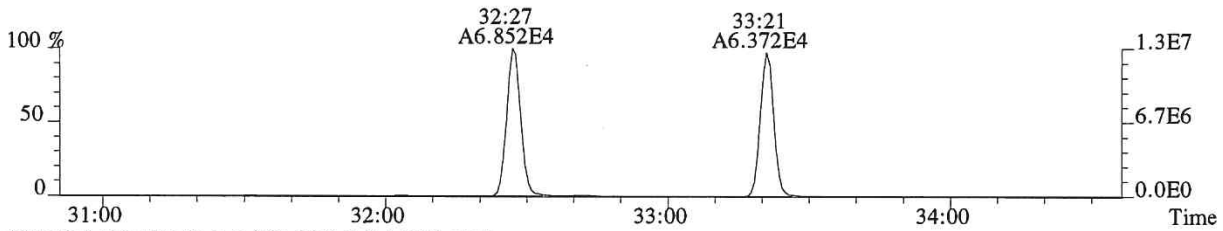
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1632.0,1.00%,F,T)



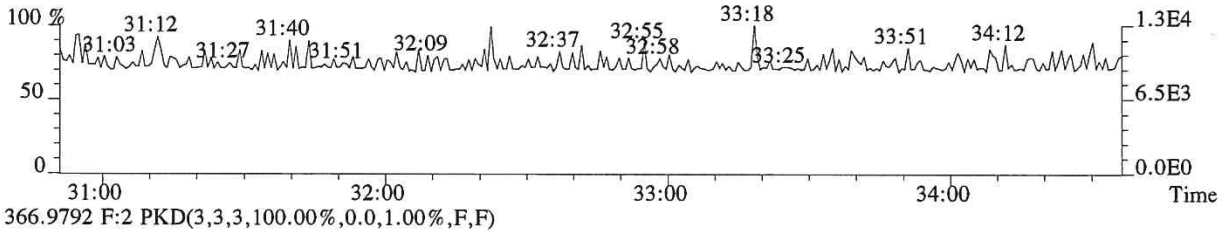
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,376.0,1.00%,F,T)



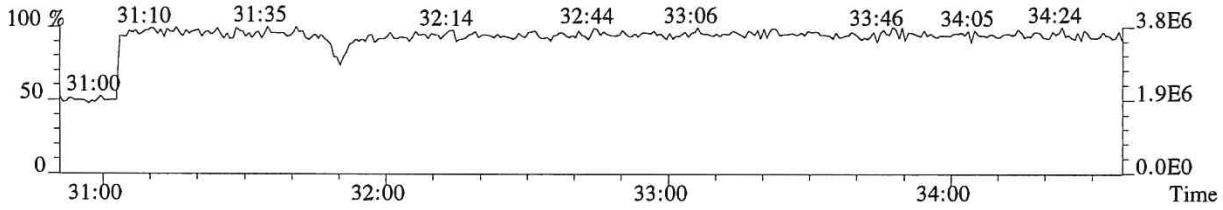
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



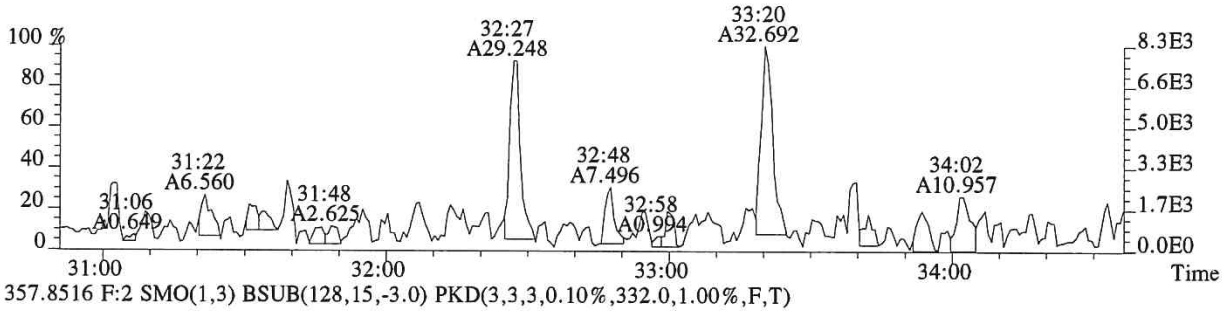
409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



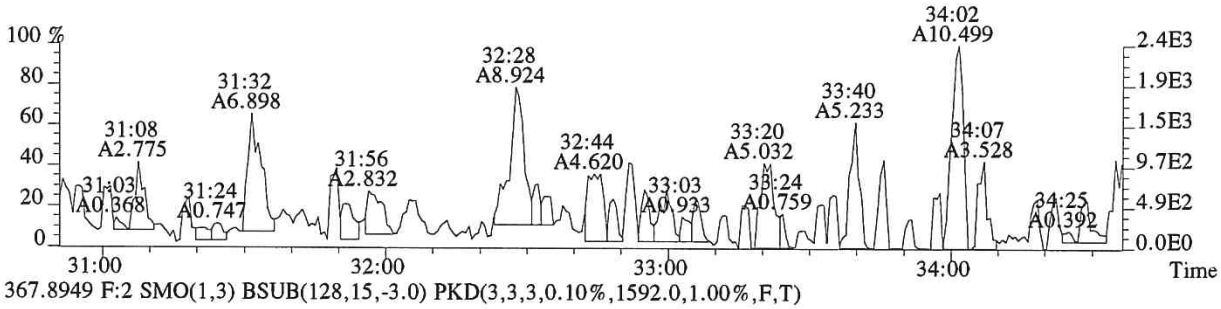
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



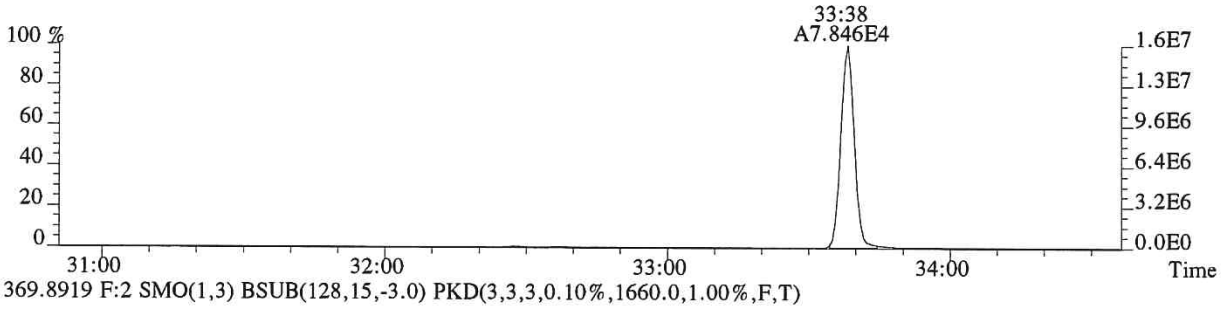
File:P519999 #1-339 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,960.0,1.00%,F,T)



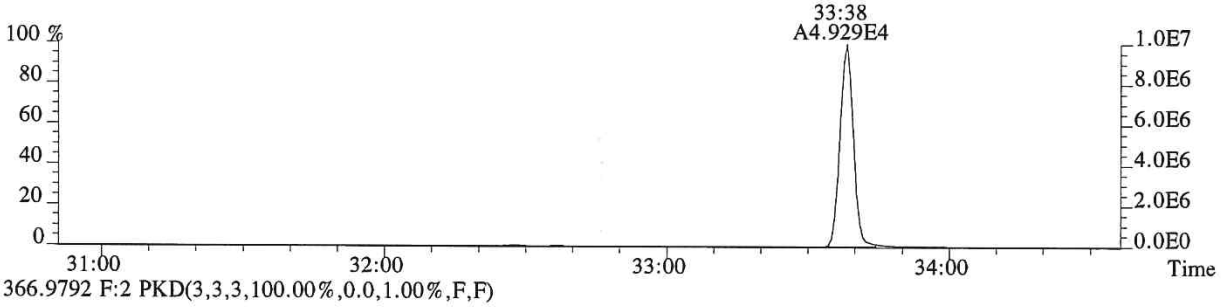
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,332.0,1.00%,F,T)



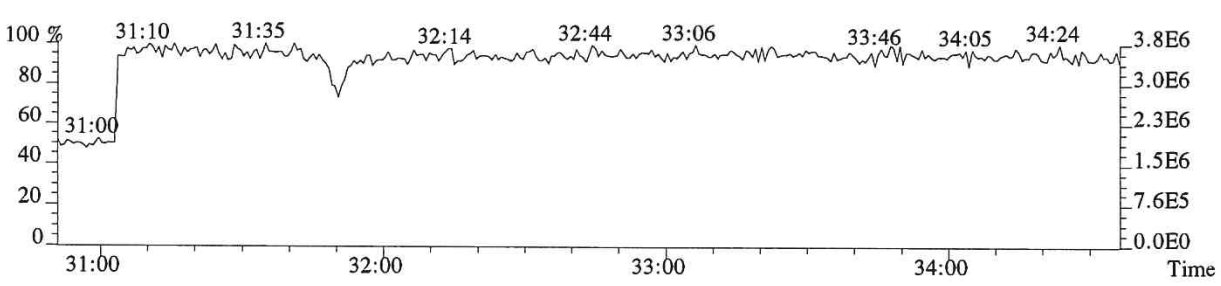
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1592.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1660.0,1.00%,F,T)

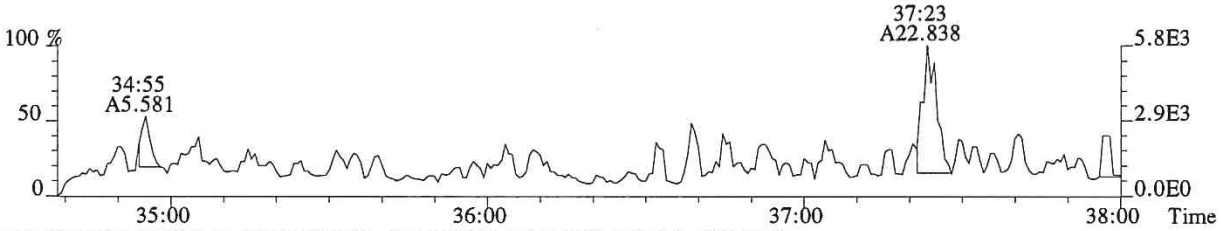


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

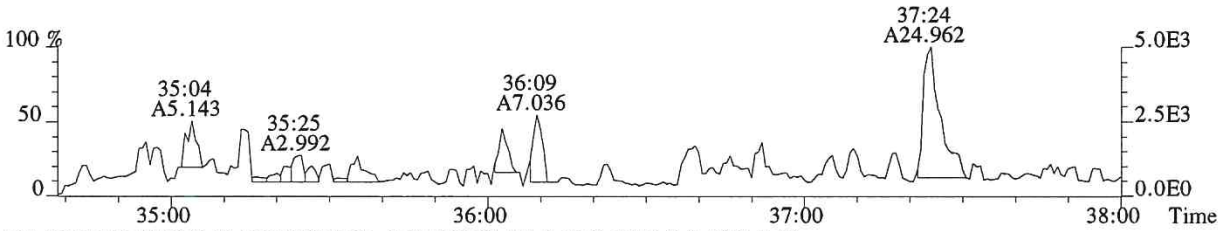


018794

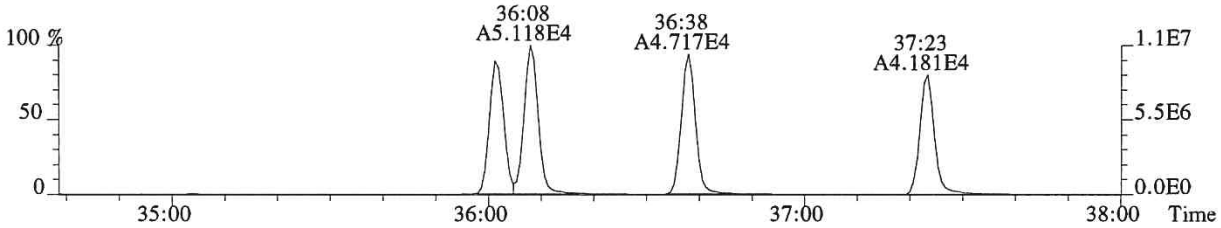
File:P519999 #1-303 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1396.0,0.40%,F,T)



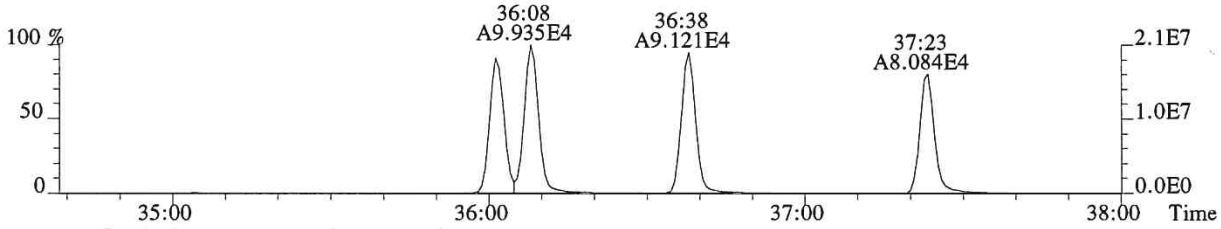
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,944.0,0.40%,F,T)



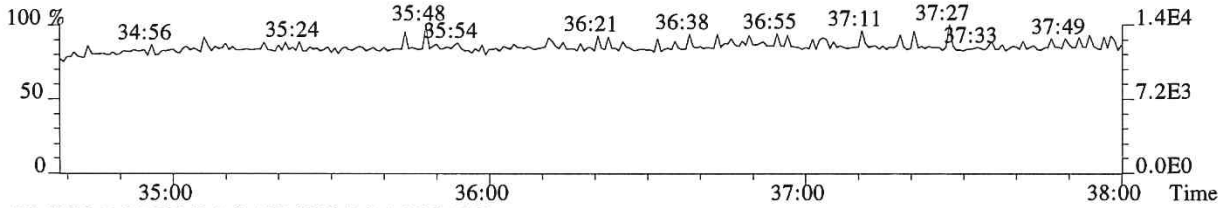
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1048.0,0.40%,F,T)



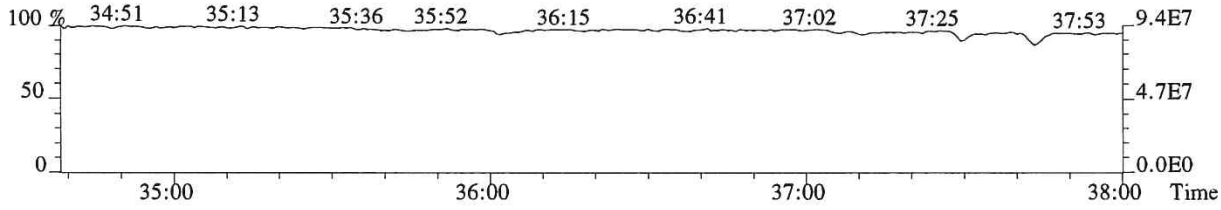
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1052.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

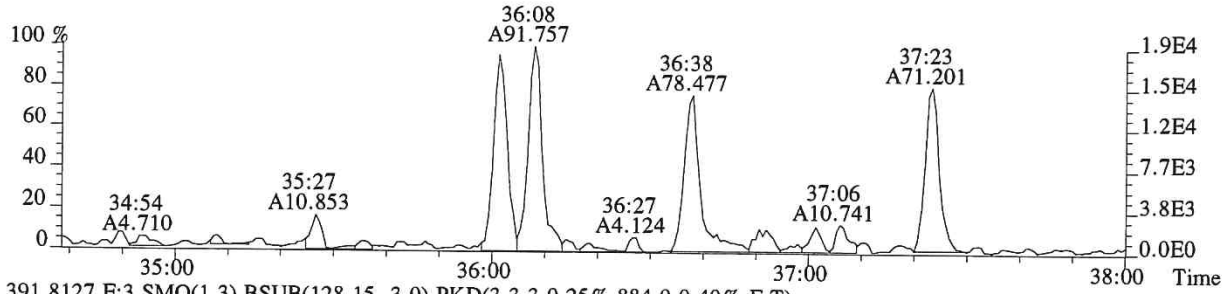


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

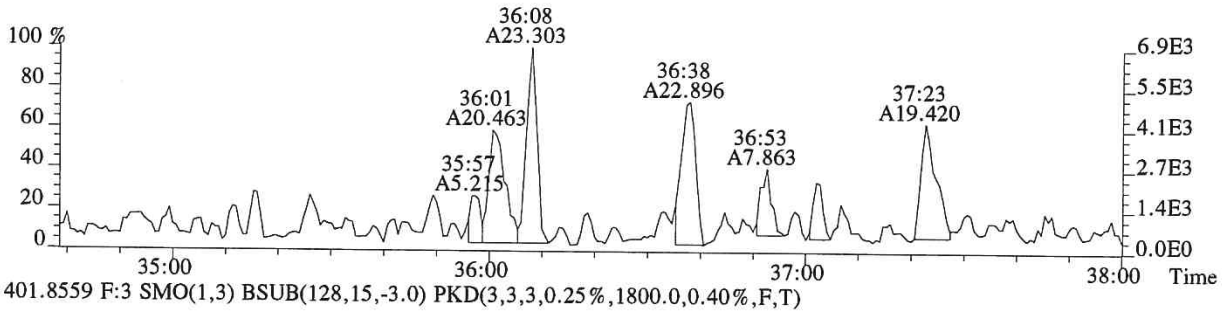


018795

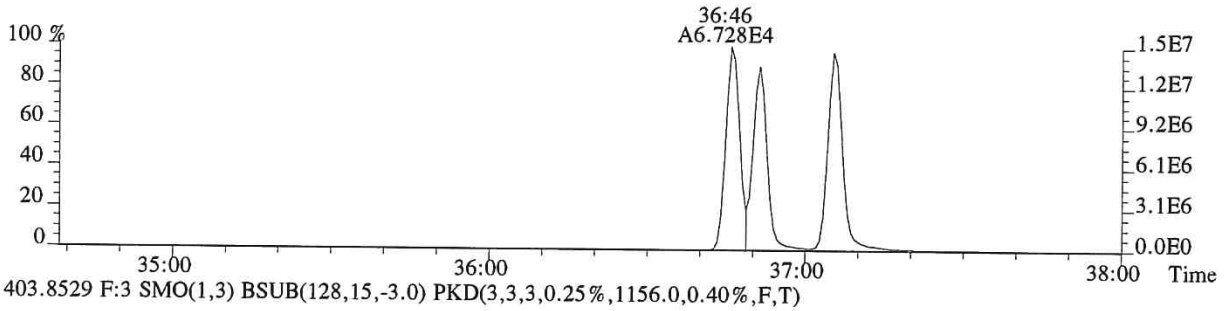
File:P519999 #1-303 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,464.0,0.40%,F,T)



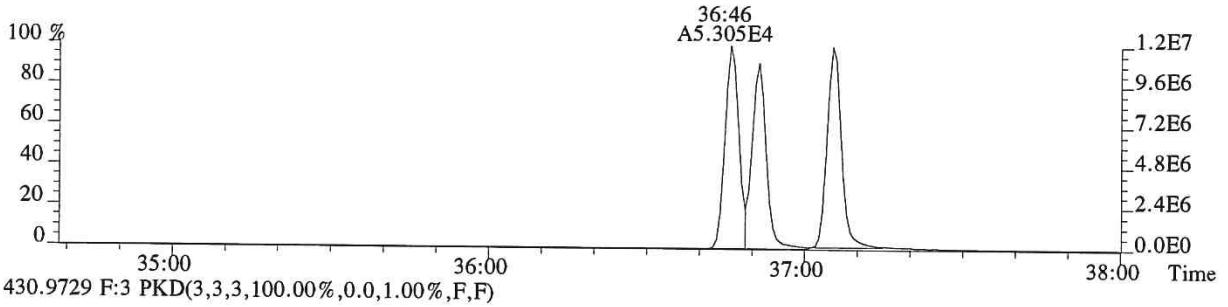
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



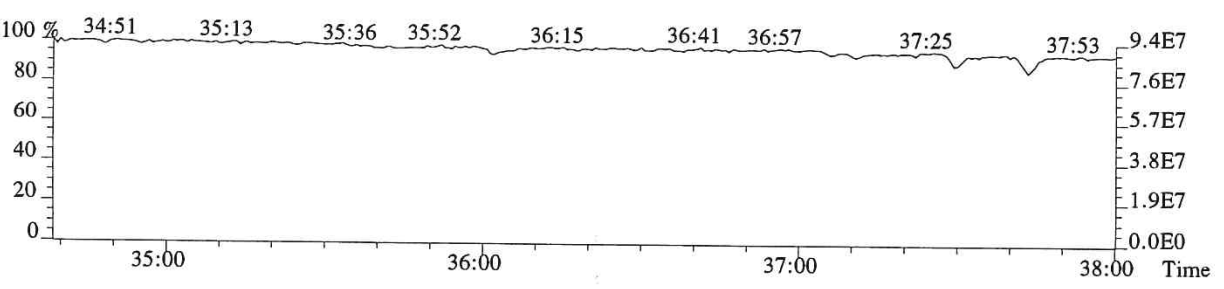
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1800.0,0.40%,F,T)



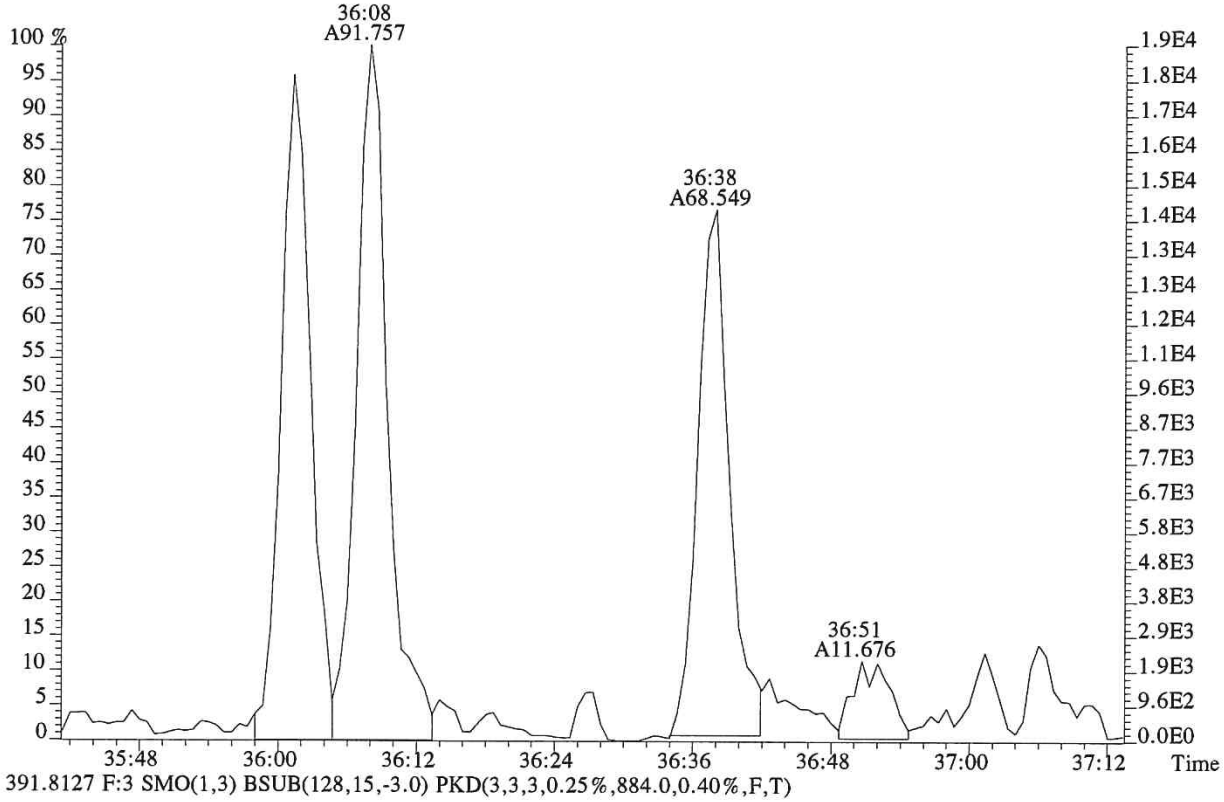
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1156.0,0.40%,F,T)



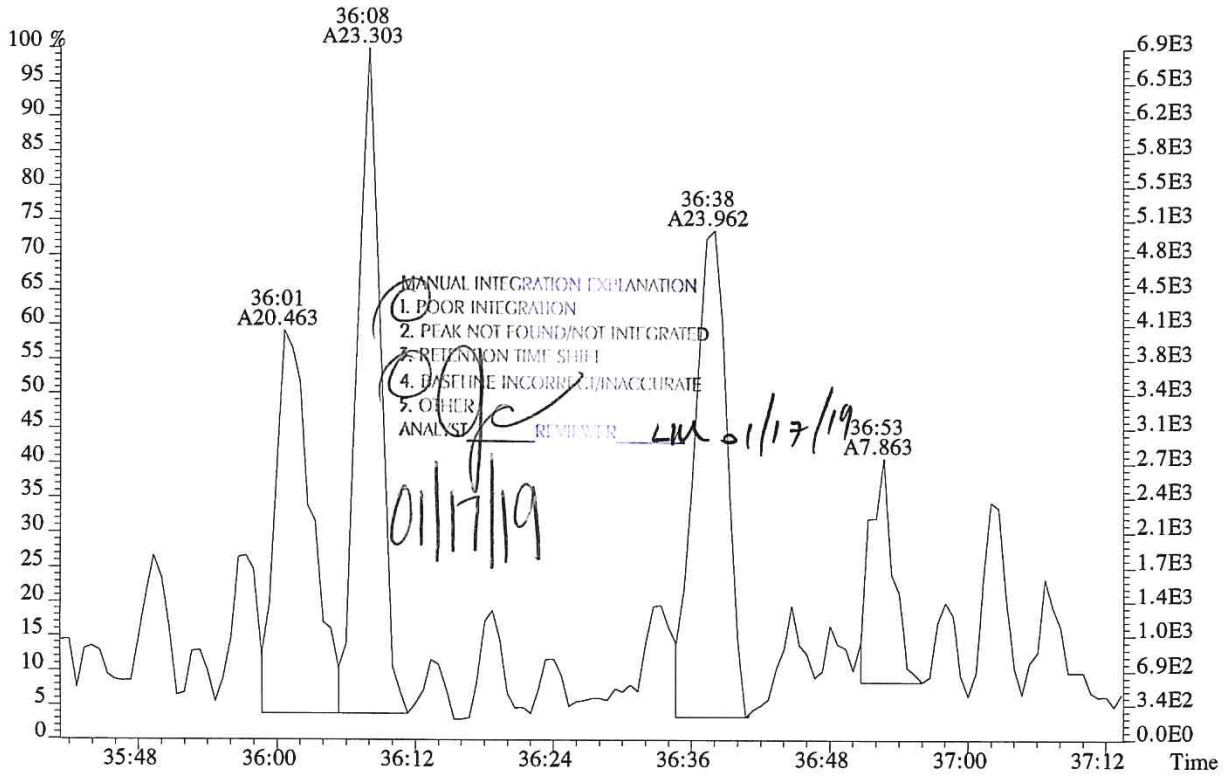
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



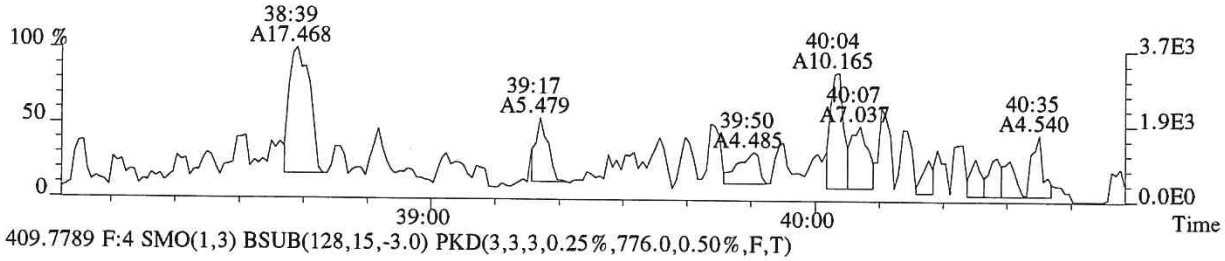
File:P519999 #1-303 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,464.0,0.40%,F,T)



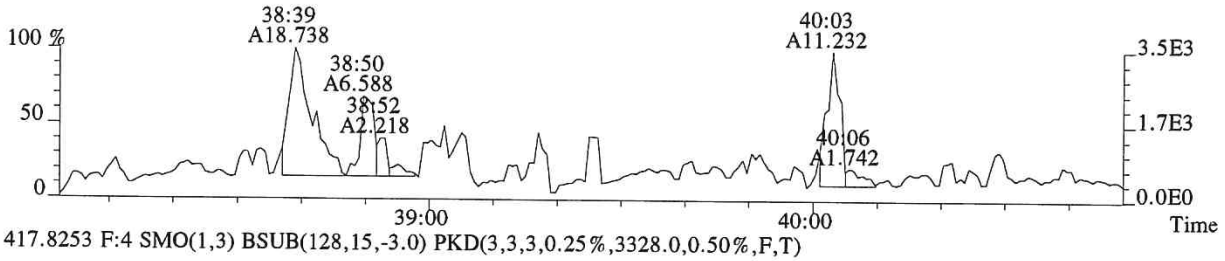
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



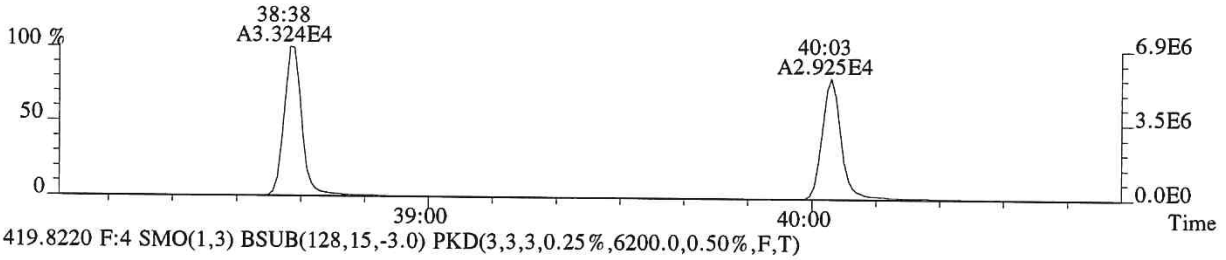
File:P519999 #1-250 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,848.0,0.50%,F,T)



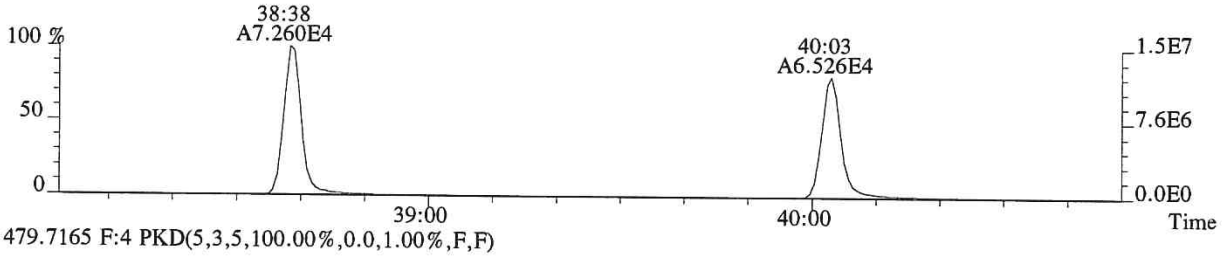
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,776.0,0.50%,F,T)



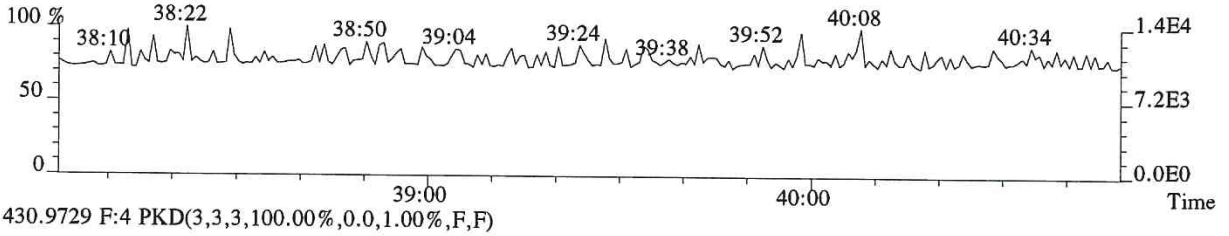
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3328.0,0.50%,F,T)



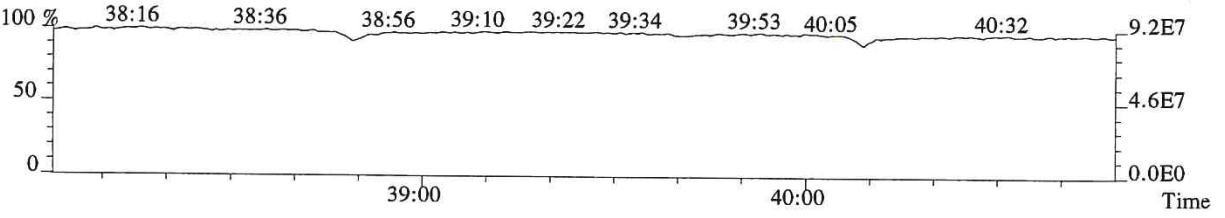
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6200.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

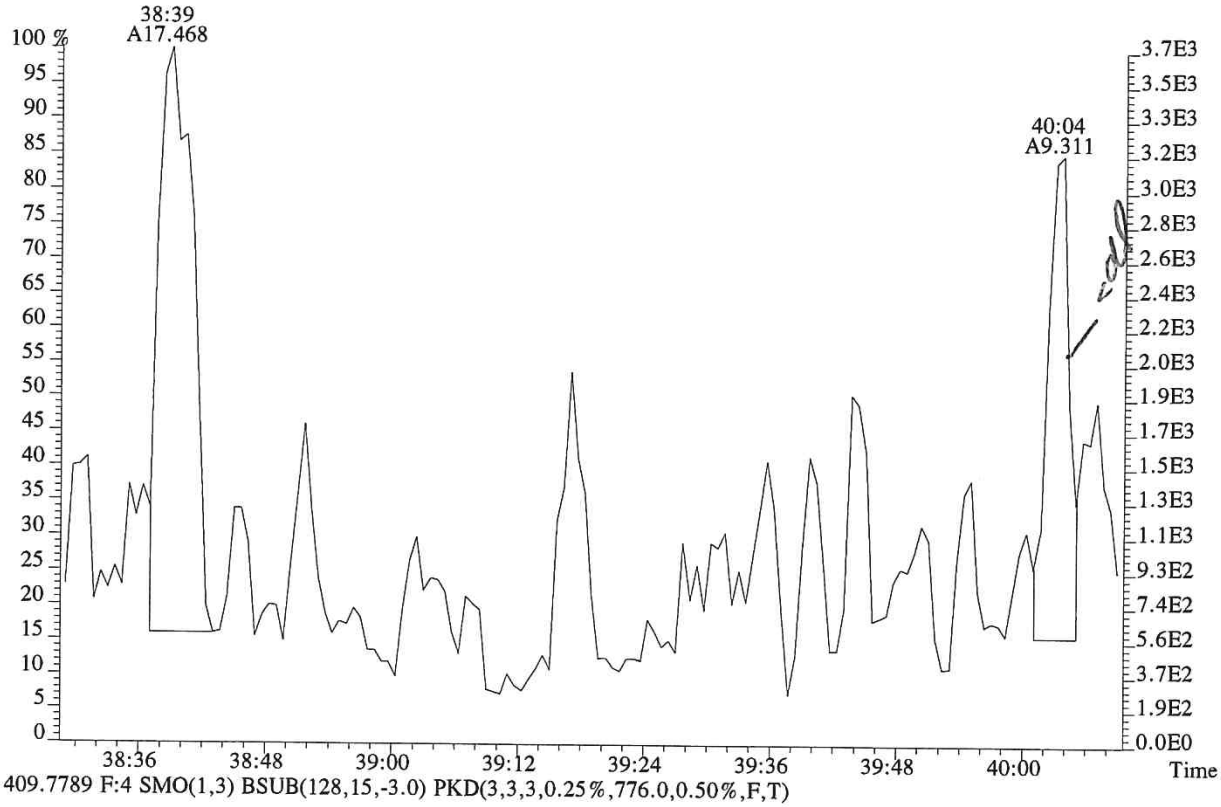


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

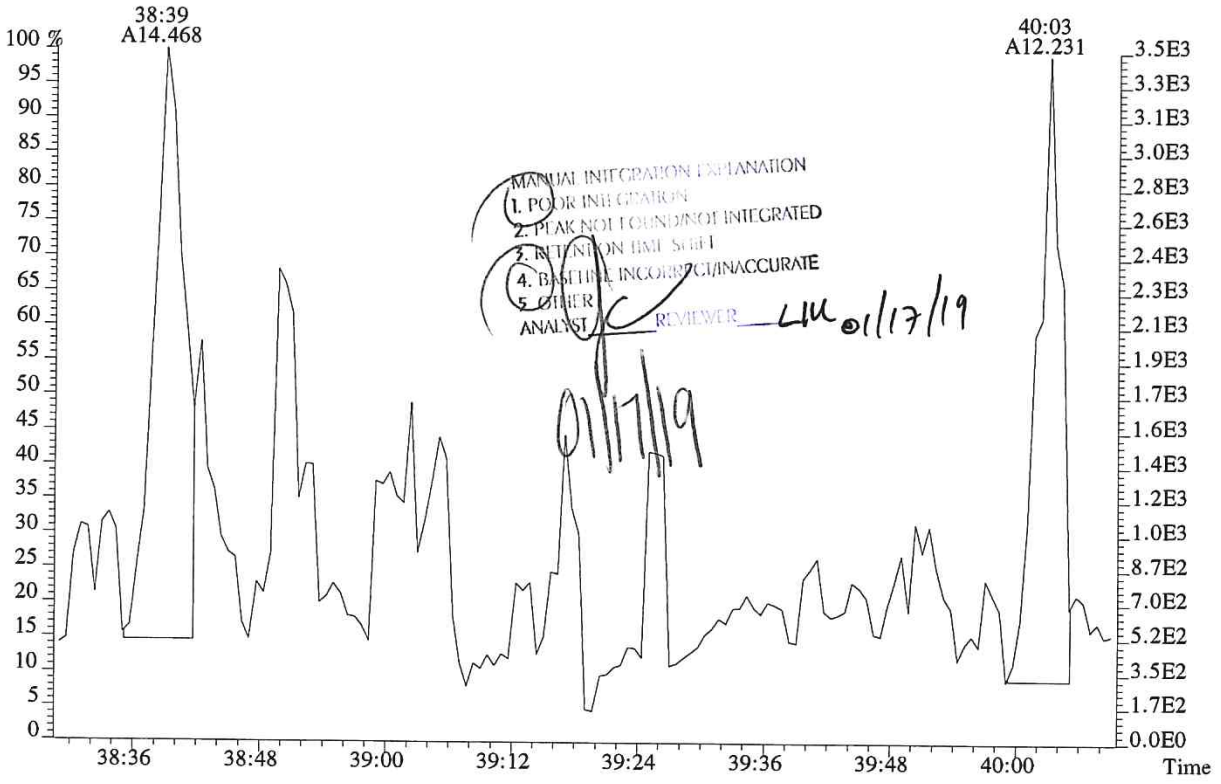


018798

File:P519999 #1-250 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,848.0,0.50%,F,T)

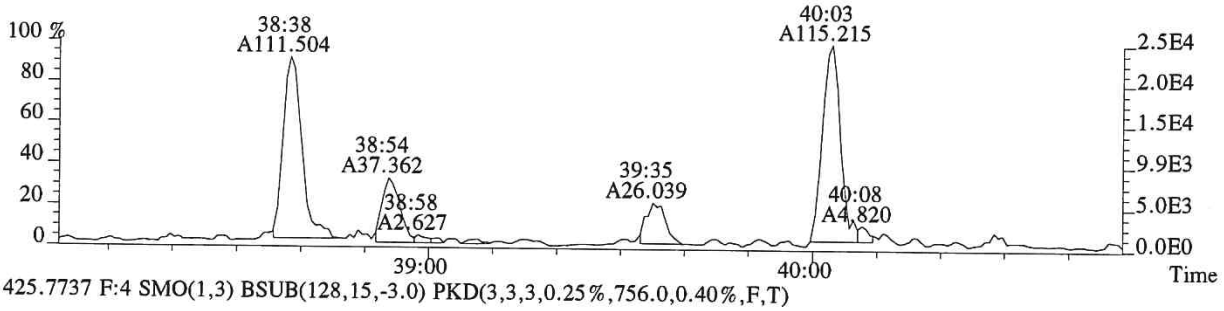


409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,776.0,0.50%,F,T)

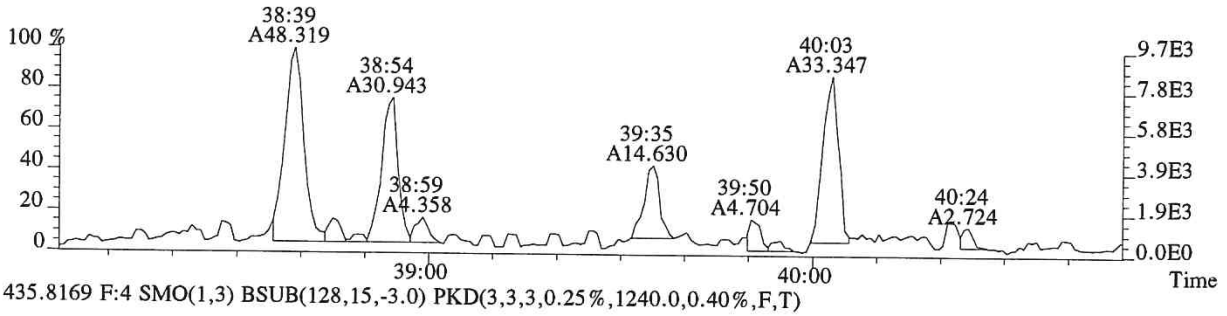


MANUAL INTEGRATION EXPLANATION
1. POOR INTEGRATION
2. PEAK NOT FOUND/NOT INTEGRATED
3. RETENTION TIME SHIFT
4. BASELINE INCORRECT/INACCURATE
5. OTHER
ANALYST REVIEWER LM 01/17/19
01/17/19

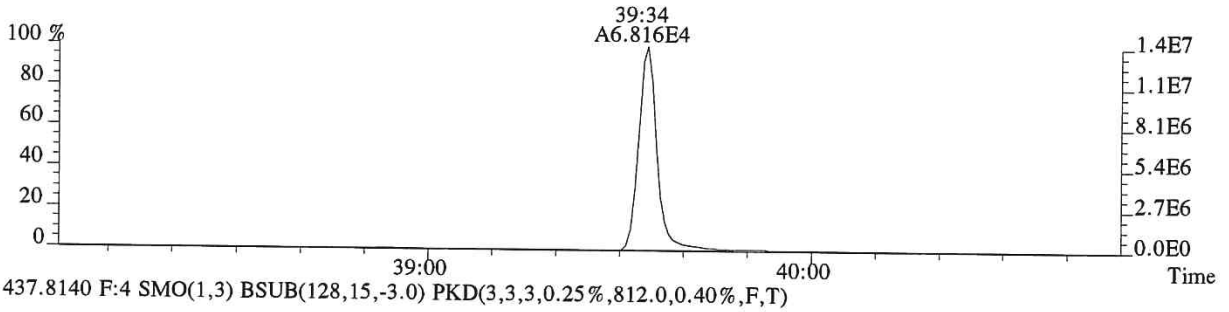
File:P519999 #1-250 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,940.0,0.40%,F,T)



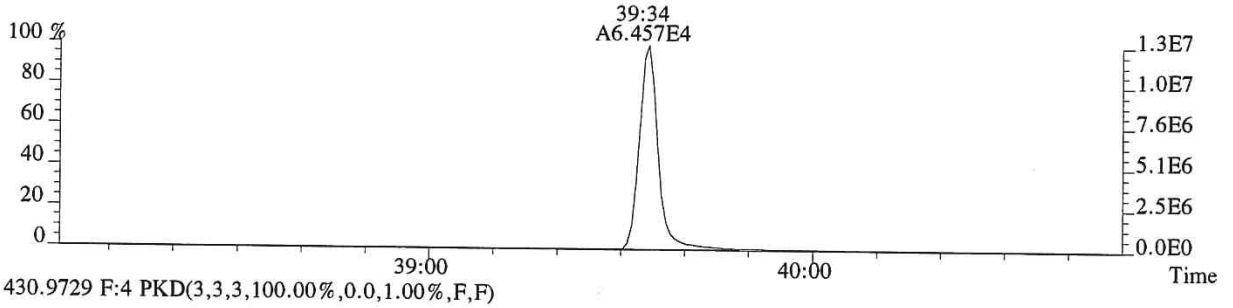
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,756.0,0.40%,F,T)



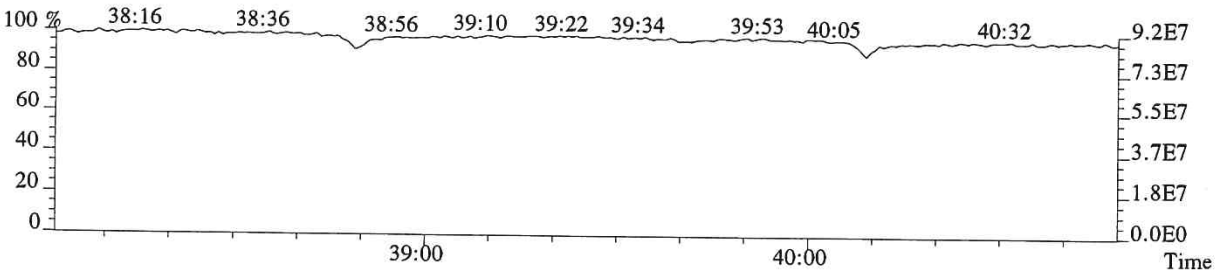
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1240.0,0.40%,F,T)



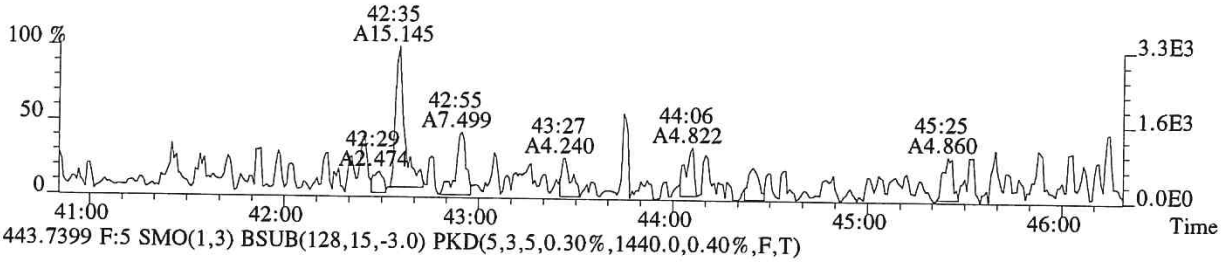
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,812.0,0.40%,F,T)



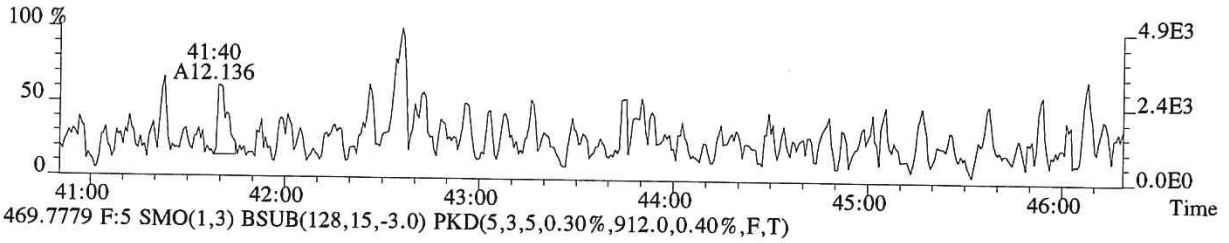
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



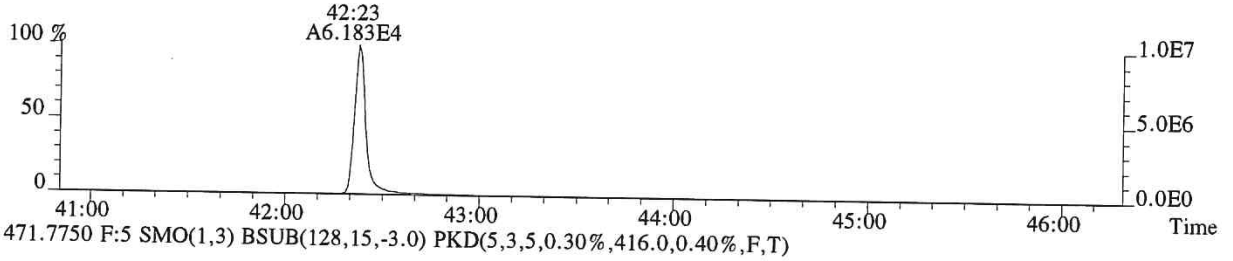
File:P519999 #1-493 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,360.0,0.40%,F,T)



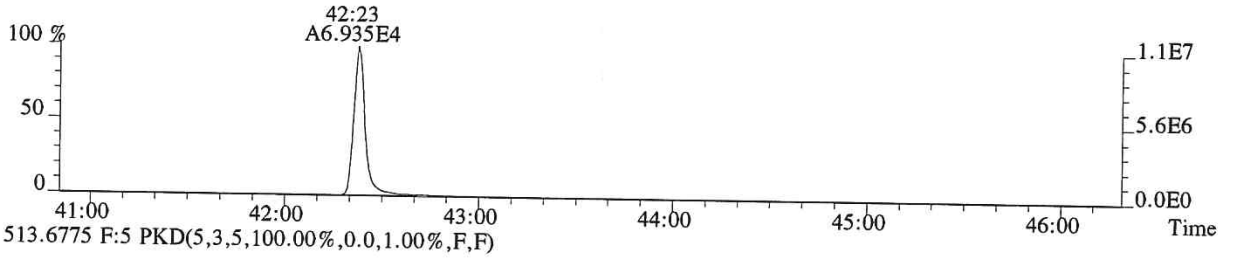
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1440.0,0.40%,F,T)



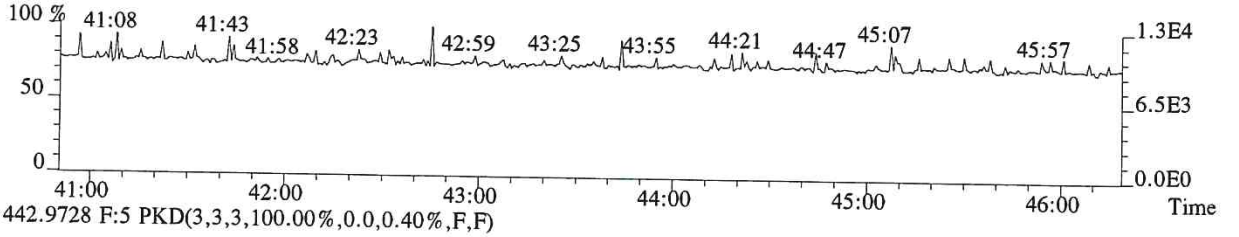
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,912.0,0.40%,F,T)



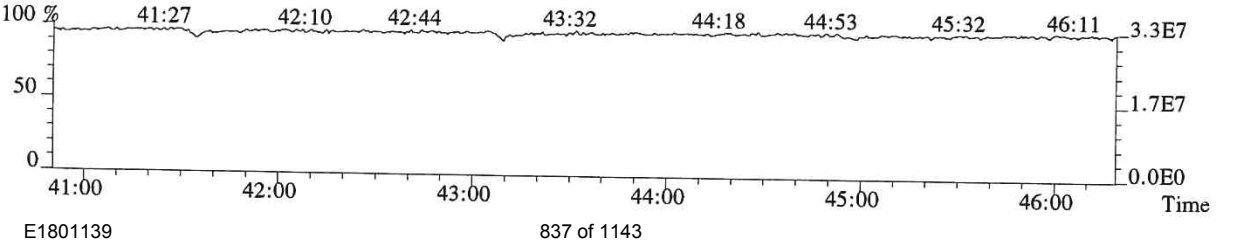
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,416.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

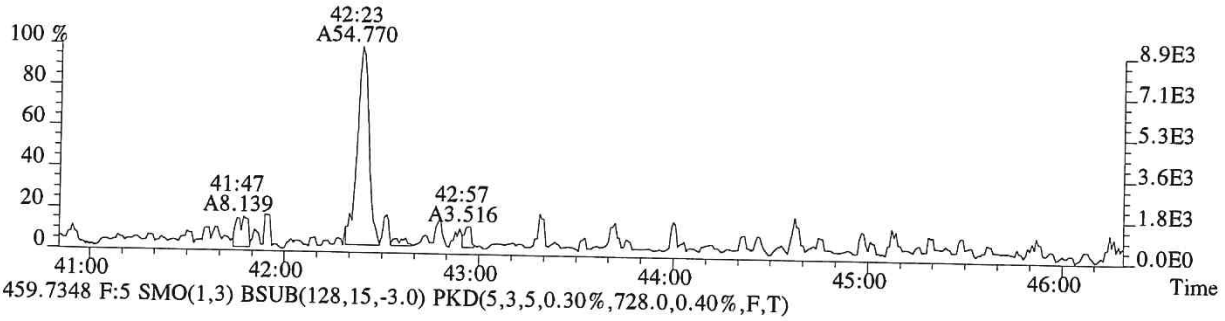


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

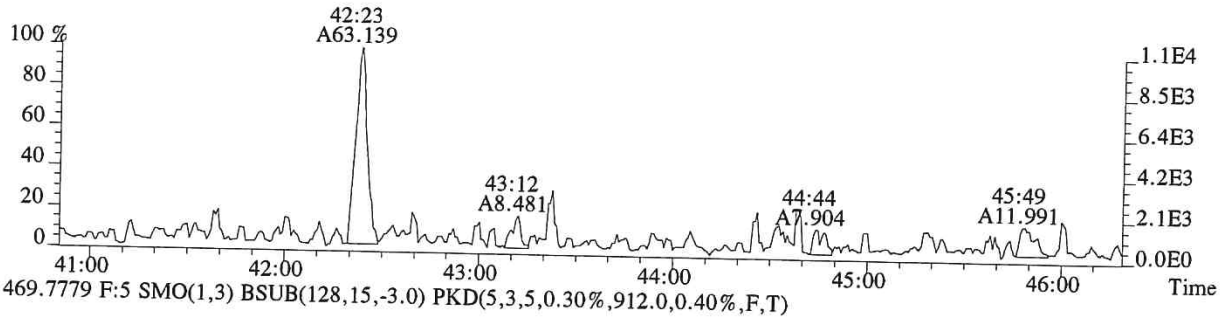


018801

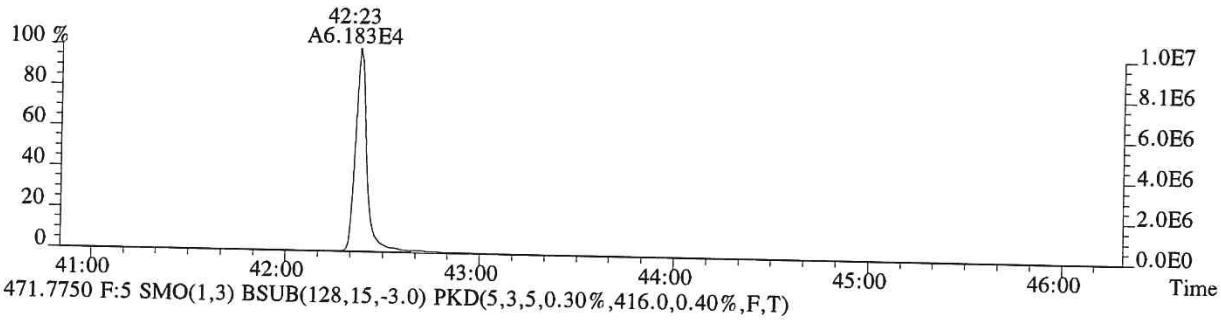
File:P519999 #1-493 Acq:16-JAN-2019 14:33:01 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-01
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,516.0,0.40%,F,T)



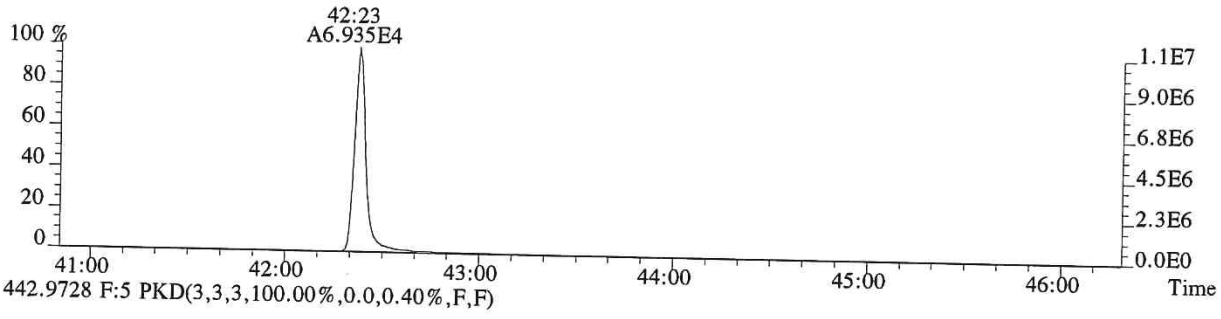
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,728.0,0.40%,F,T)



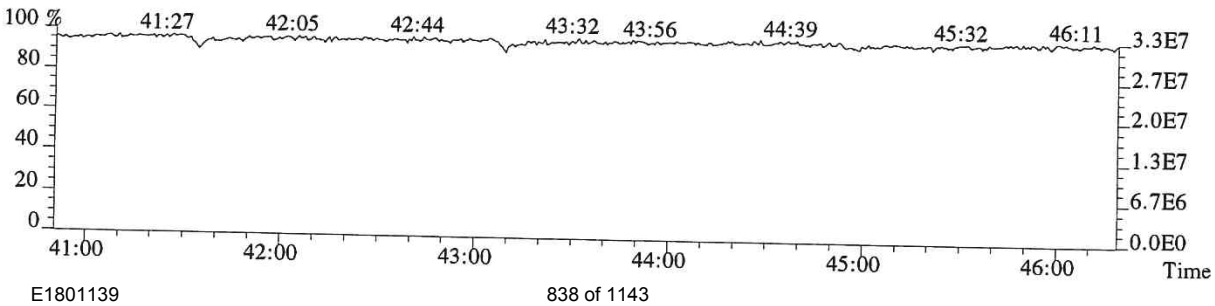
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,912.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,416.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018802

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
LCS

Run #18 Filename P520007 Samp: 1 Inj: 1 Acquired: 16-JAN-19 21:02:38
Processed: 17-JAN-19 11:28:05 Sample ID: EQ1900017-02

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:16	4.831e+03	6.710e+03	0.72	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:28	4.494e+04	2.985e+04	1.51	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:21	4.316e+04	2.891e+04	1.49	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:01	4.158e+04	3.387e+04	1.23	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:08	4.270e+04	3.565e+04	1.20	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:38	3.932e+04	3.321e+04	1.18	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:23	3.577e+04	2.956e+04	1.21	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:38	3.304e+04	3.275e+04	1.01	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:02	2.927e+04	2.848e+04	1.03	yes	no	1.258
10	Unk	OCDF	42:35	3.920e+04	4.470e+04	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:04	4.007e+03	5.174e+03	0.77	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:38	3.310e+04	2.099e+04	1.58	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:46	2.994e+04	2.406e+04	1.24	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:51	3.135e+04	2.477e+04	1.27	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:05	3.212e+04	2.472e+04	1.30	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:34	2.530e+04	2.349e+04	1.08	yes	no	1.025
17	Unk	OCDD	42:23	3.103e+04	3.498e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:16	5.381e+04	6.808e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:26	9.493e+04	6.057e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:20	8.832e+04	5.620e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	4.208e+04	8.231e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:07	4.727e+04	9.164e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:37	4.227e+04	8.161e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:22	3.911e+04	7.636e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	3.036e+04	6.776e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:02	2.764e+04	6.154e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:02	2.724e+04	3.450e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:38	6.869e+04	4.371e+04	1.57	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:45	6.238e+04	4.956e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:51	5.901e+04	4.639e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:33	6.280e+04	5.940e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:22	5.399e+04	5.991e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:29	5.224e+04	6.612e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	7.833e+04	6.149e+04	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:04	3.922e+04				no	1.014

$$\text{OCDD} = \frac{(3.103e{+}04 + 3.498e{+}04) \times 4000\ \text{pg} \times 1}{(5.399e{+}04 + 5.991e{+}04) \times \quad \text{g} \times \quad / 100 \times 1.118}$$

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Houston, TX 77099
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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
LCS

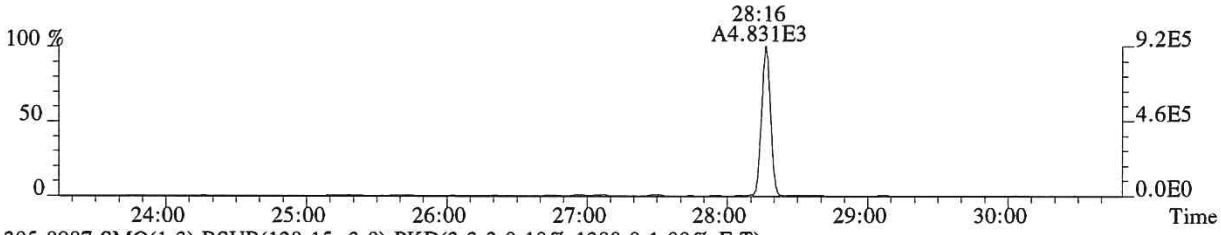
Run #18 Filename P520007 Samp: 1 Inj: 1 Acquired: 16-JAN-19 21:02:38
Processed: 17-JAN-19 11:28:05 LAB. ID: EQ1900017-02

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	9.22e+05	6.92e+02	1.3e+03	1.32e+06	1.39e+03	9.5e+02
2	1,2,3,7,8-PeCDF	8.75e+06	1.08e+03	8.1e+03	5.78e+06	2.07e+03	2.8e+03
3	2,3,4,7,8-PeCDF	8.86e+06	1.08e+03	8.2e+03	5.89e+06	2.07e+03	2.8e+03
4	1,2,3,4,7,8-HxCDF	9.35e+06	1.18e+03	7.9e+03	7.55e+06	1.11e+03	6.8e+03
5	1,2,3,6,7,8-HxCDF	9.21e+06	1.18e+03	7.8e+03	7.68e+06	1.11e+03	6.9e+03
6	2,3,4,6,7,8-HxCDF	8.68e+06	1.18e+03	7.3e+03	7.28e+06	1.11e+03	6.6e+03
7	1,2,3,7,8,9-HxCDF	7.50e+06	1.18e+03	6.3e+03	6.30e+06	1.11e+03	5.7e+03
8	1,2,3,4,6,7,8-HpCDF	7.32e+06	1.58e+03	4.6e+03	7.20e+06	1.12e+03	6.4e+03
9	1,2,3,4,7,8,9-HpCDF	5.71e+06	1.58e+03	3.6e+03	5.59e+06	1.12e+03	5.0e+03
10	OCDF	6.54e+06	5.20e+02	1.3e+04	7.34e+06	1.78e+03	4.1e+03
11	2,3,7,8-TCDD	8.11e+05	3.45e+03	2.3e+02	1.03e+06	1.57e+03	6.6e+02
12	1,2,3,7,8-PeCDD	6.86e+06	1.54e+03	4.5e+03	4.35e+06	5.68e+02	7.7e+03
13	1,2,3,4,7,8-HxCDD	6.87e+06	7.36e+02	9.3e+03	5.42e+06	8.80e+02	6.2e+03
14	1,2,3,6,7,8-HxCDD	6.73e+06	7.36e+02	9.1e+03	5.25e+06	8.80e+02	6.0e+03
15	1,2,3,7,8,9-HxCDD	6.90e+06	7.36e+02	9.4e+03	5.45e+06	8.80e+02	6.2e+03
16	1,2,3,4,6,7,8-HpCDD	5.03e+06	1.09e+03	4.6e+03	4.75e+06	5.00e+02	9.5e+03
17	OCDD	5.21e+06	4.48e+02	1.2e+04	5.71e+06	9.20e+02	6.2e+03
18	13C-2,3,7,8-TCDF	1.01e+07	7.39e+03	1.4e+03	1.28e+07	4.15e+03	3.1e+03
19	13C-1,2,3,7,8-PeCDF	1.85e+07	8.92e+02	2.1e+04	1.18e+07	7.60e+02	1.6e+04
20	13C-2,3,4,7,8-PeCDF	1.82e+07	8.92e+02	2.0e+04	1.17e+07	7.60e+02	1.5e+04
21	13C-1,2,3,4,7,8-HxCDF	9.47e+06	1.43e+03	6.6e+03	1.84e+07	2.30e+03	8.0e+03
22	13C-1,2,3,6,7,8-HxCDF	1.02e+07	1.43e+03	7.2e+03	1.97e+07	2.30e+03	8.6e+03
23	13C-2,3,4,6,7,8-HxCDF	9.19e+06	1.43e+03	6.4e+03	1.77e+07	2.30e+03	7.7e+03
24	13C-1,2,3,7,8,9-HxCDF	8.06e+06	1.43e+03	5.6e+03	1.59e+07	2.30e+03	6.9e+03
25	13C-1,2,3,4,6,7,8-HpCDF	6.64e+06	3.83e+03	1.7e+03	1.48e+07	4.58e+03	3.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	5.35e+06	3.83e+03	1.4e+03	1.19e+07	4.58e+03	2.6e+03
27	13C-2,3,7,8-TCDD	5.48e+06	6.35e+03	8.6e+02	6.93e+06	3.33e+03	2.1e+03
28	13C-1,2,3,7,8-PeCDD	1.41e+07	9.36e+02	1.5e+04	8.85e+06	1.20e+03	7.4e+03
29	13C-1,2,3,4,7,8-HxCDD	1.42e+07	1.96e+03	7.2e+03	1.12e+07	1.36e+03	8.2e+03
30	13C-1,2,3,6,7,8-HxCDD	1.26e+07	1.96e+03	6.4e+03	9.82e+06	1.36e+03	7.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	1.26e+07	1.08e+03	1.2e+04	1.20e+07	7.80e+02	1.5e+04
32	13C-OCDD	8.94e+06	6.24e+02	1.4e+04	9.84e+06	6.76e+02	1.5e+04
33	13C-1,2,3,4-TCDD	1.03e+07	6.35e+03	1.6e+03	1.29e+07	3.33e+03	3.9e+03
34	13C-1,2,3,7,8,9-HxCDD	1.67e+07	1.96e+03	8.5e+03	1.33e+07	1.36e+03	9.7e+03
35	37Cl-2,3,7,8-TCDD	7.93e+06	2.53e+03	3.1e+03			

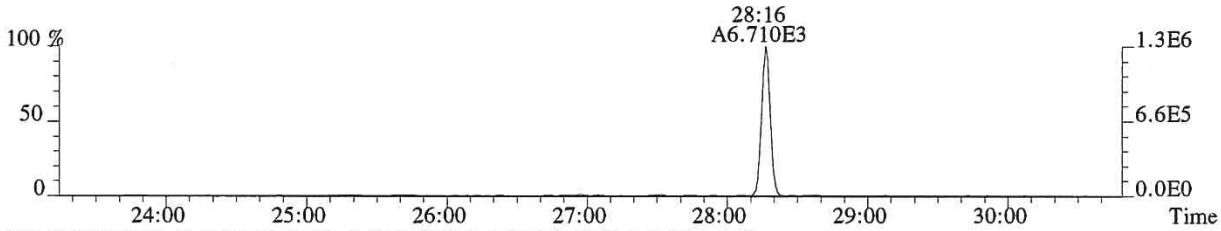
ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
Houston, TX 77099
Office:(713)266-1599. Fax:(713)266-0130

www.alsglobal.com

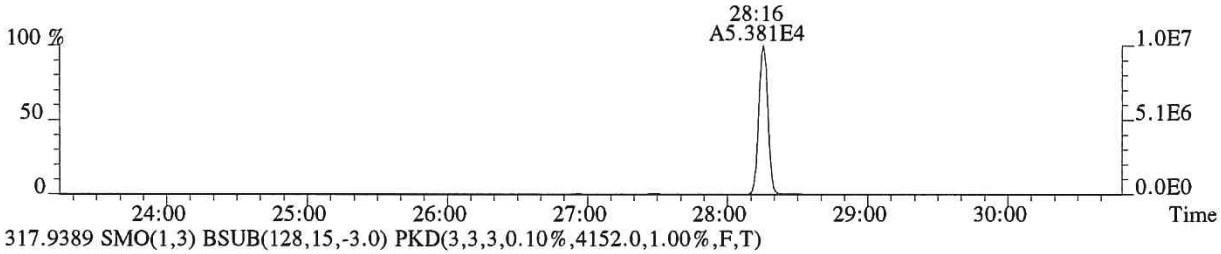
File:P520007 #1-538 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,692.0,1.00%,F,T)



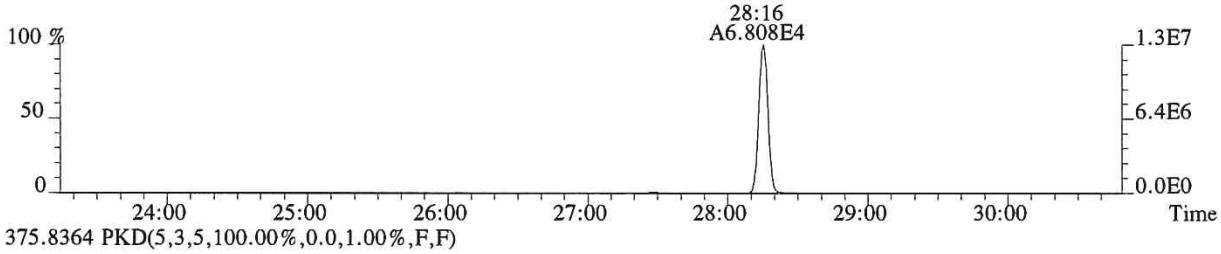
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1388.0,1.00%,F,T)



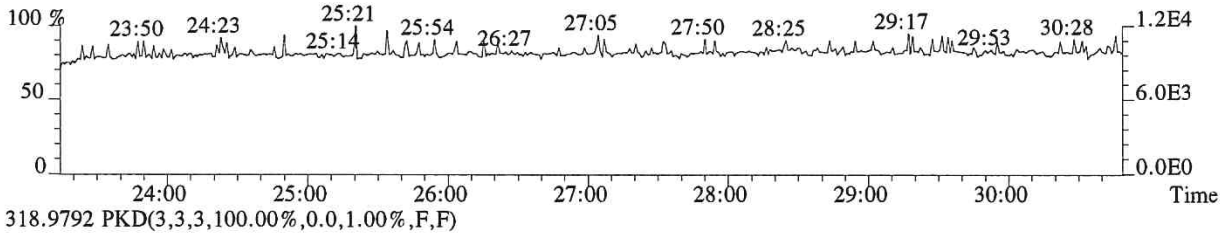
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7388.0,1.00%,F,T)



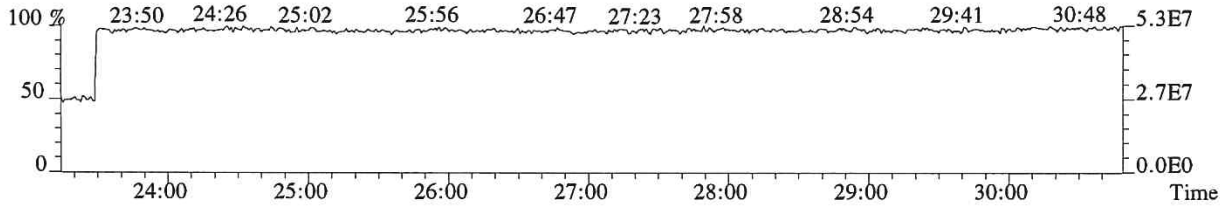
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4152.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

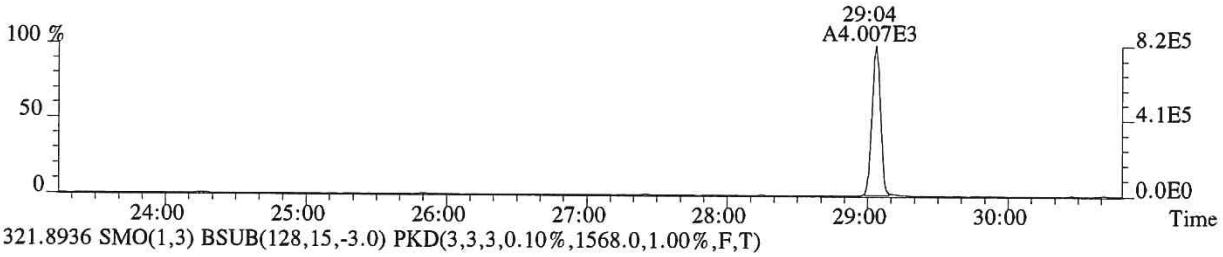


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

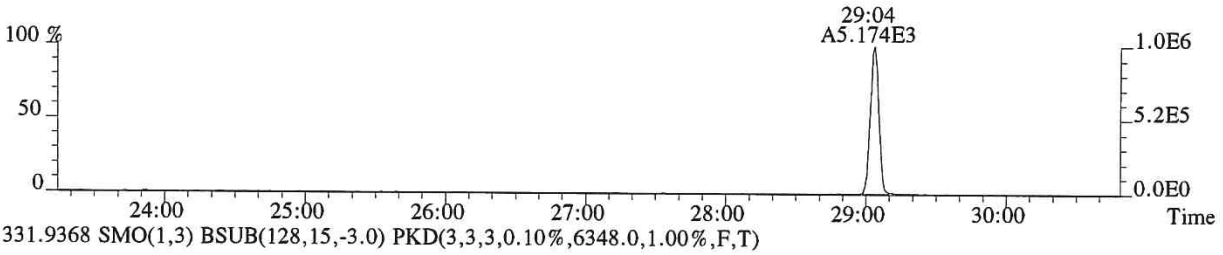


018805

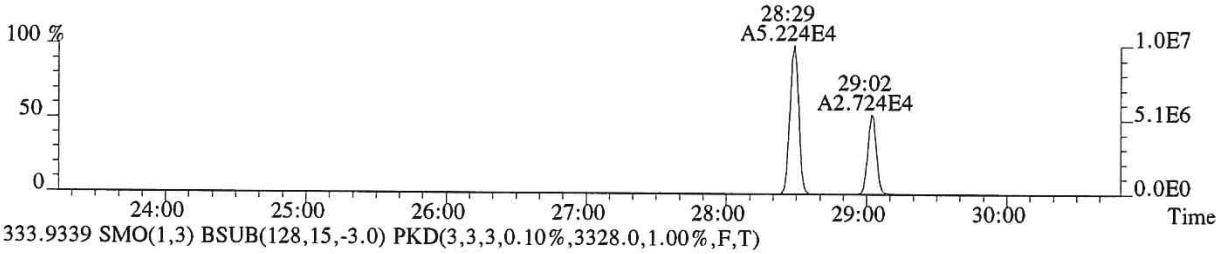
File:P520007 #1-538 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3452.0,1.00%,F,T)



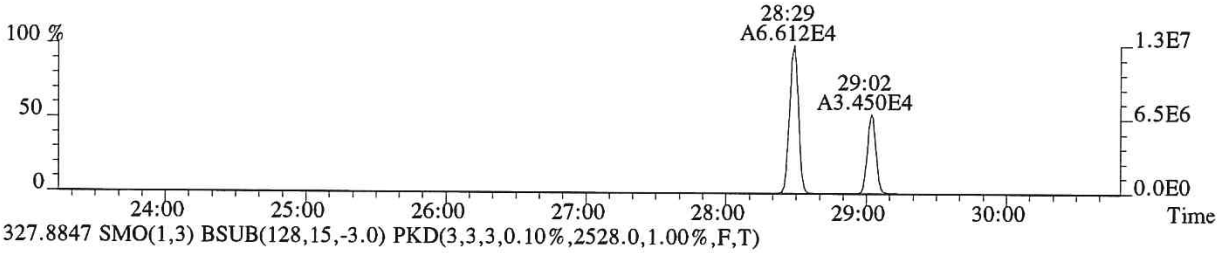
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1568.0,1.00%,F,T)



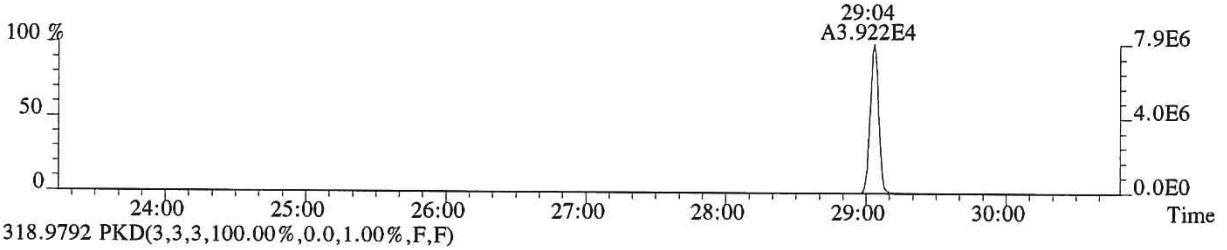
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6348.0,1.00%,F,T)



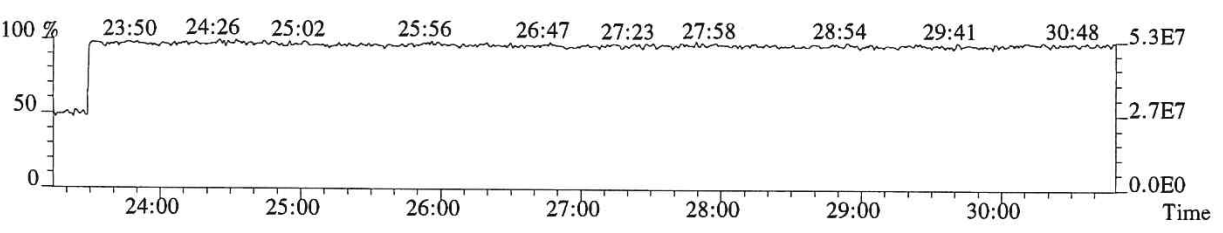
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3328.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2528.0,1.00%,F,T)

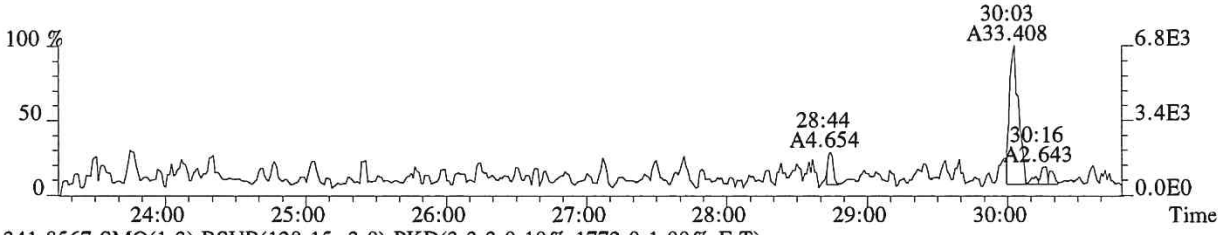


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

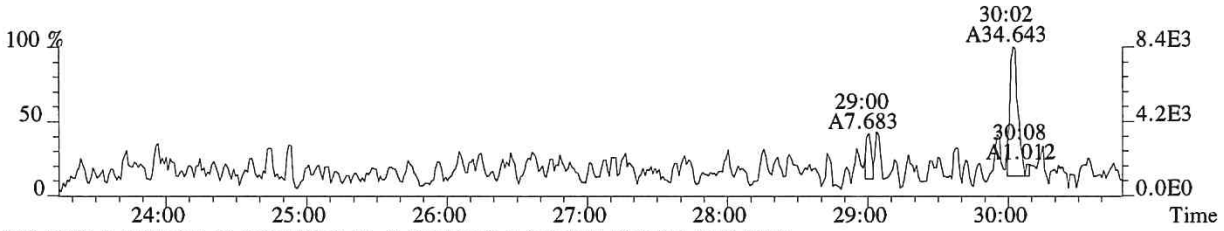


018806

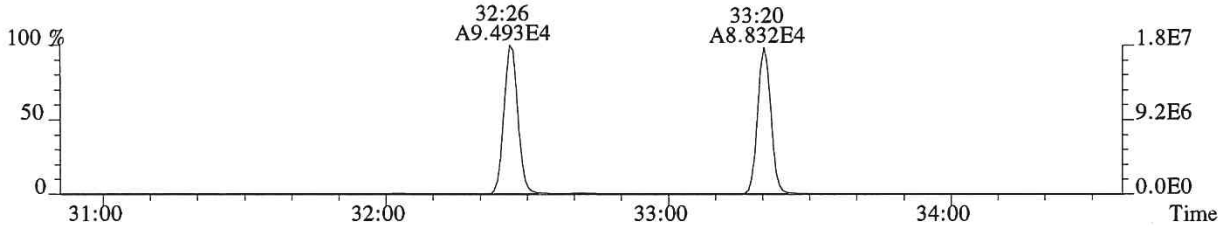
File:P520007 #1-538 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,980.0,1.00%,F,T)



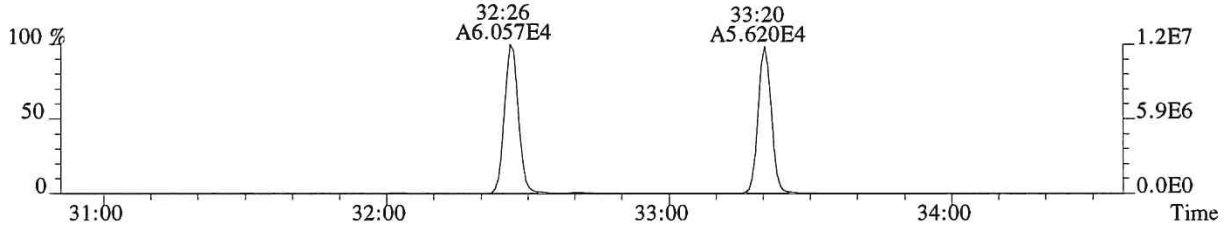
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1772.0,1.00%,F,T)



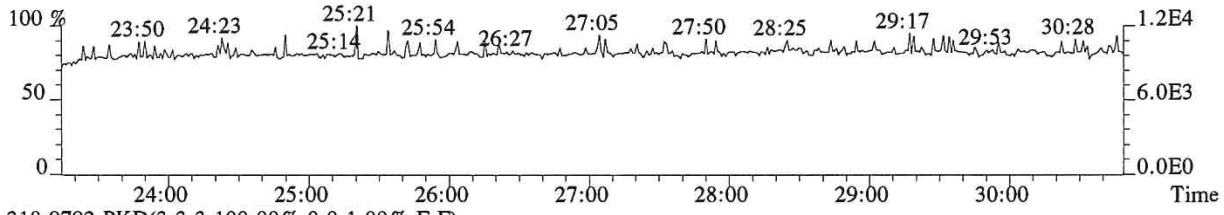
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,892.0,1.00%,F,T)



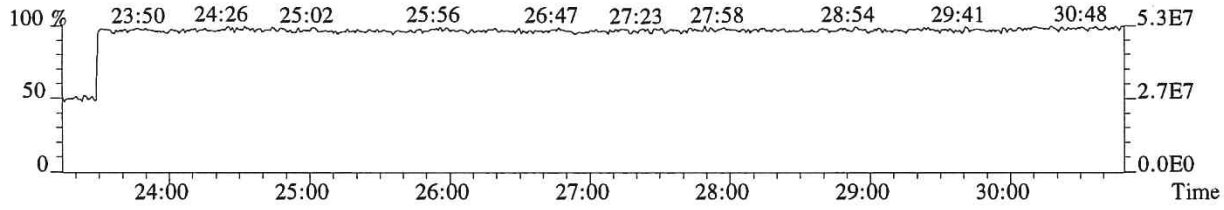
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,760.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

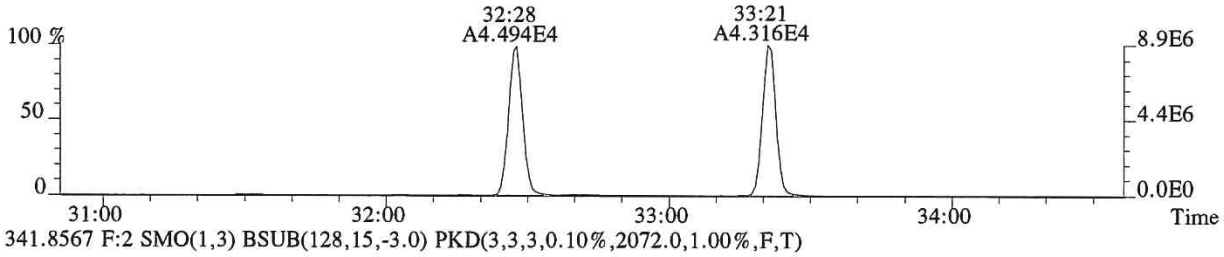


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

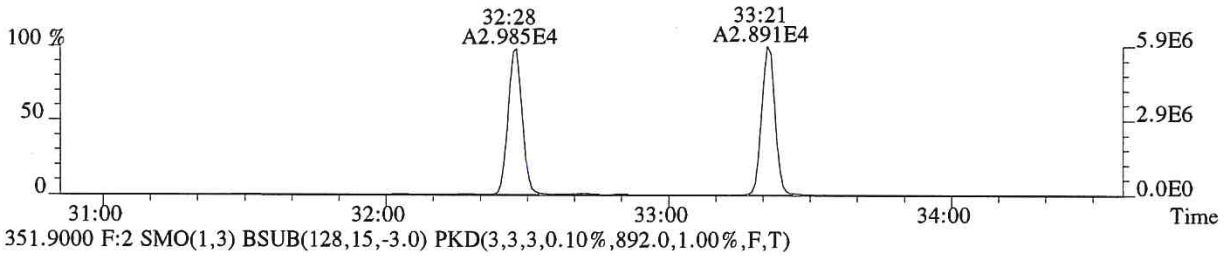


018807

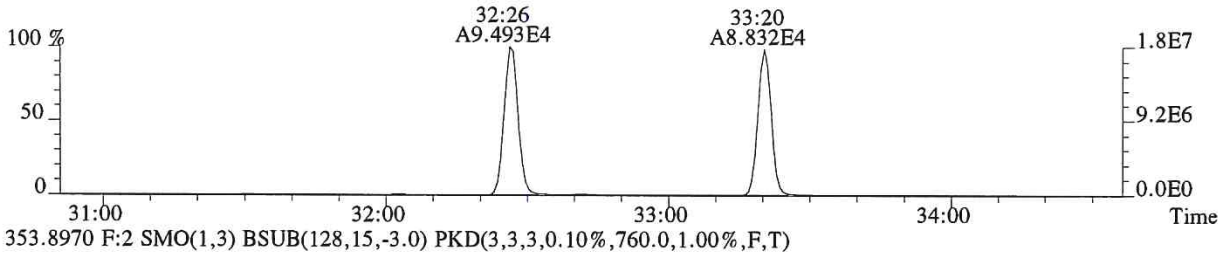
File:P520007 #1-339 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1076.0,1.00%,F,T)



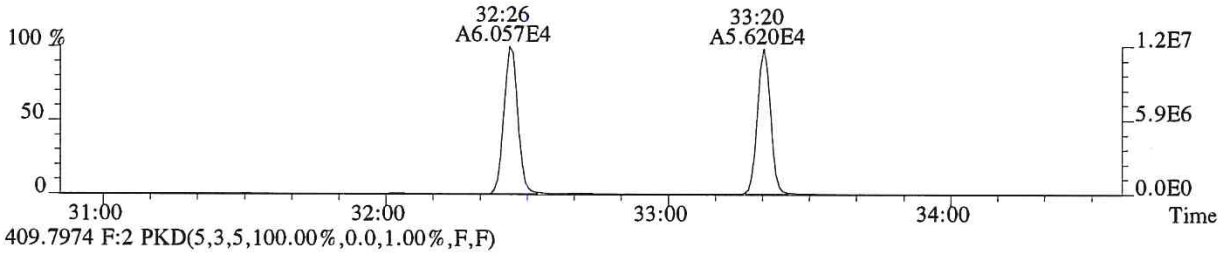
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2072.0,1.00%,F,T)



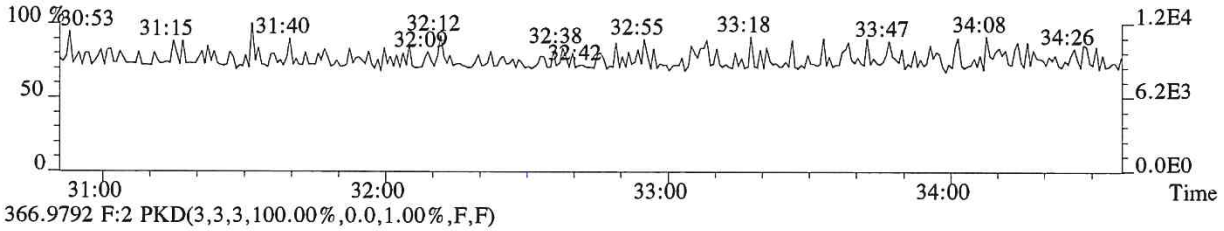
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,892.0,1.00%,F,T)



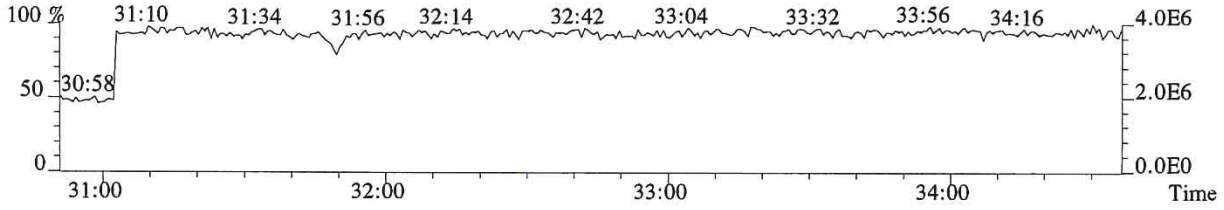
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,760.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

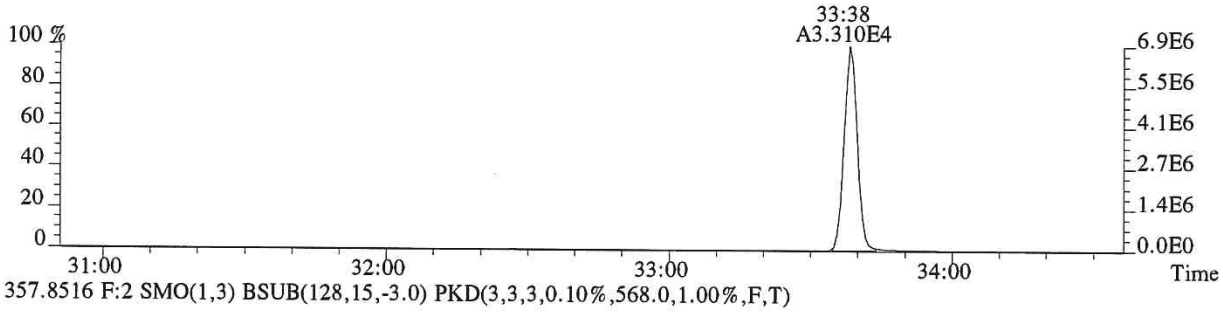


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

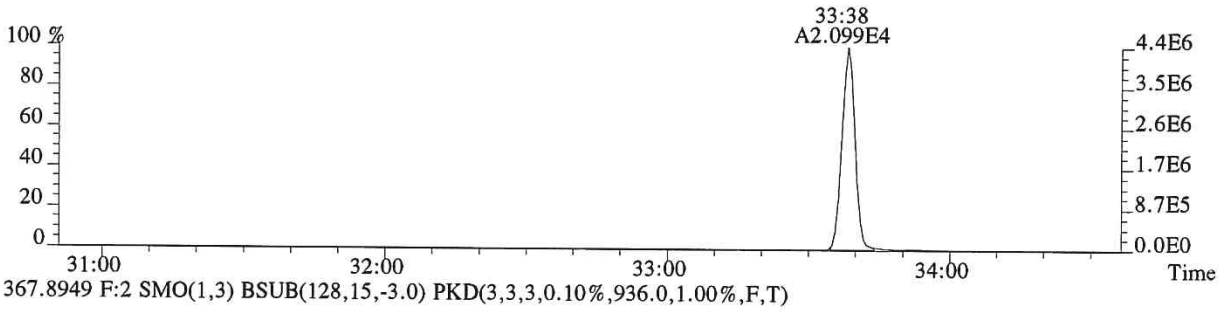


018808

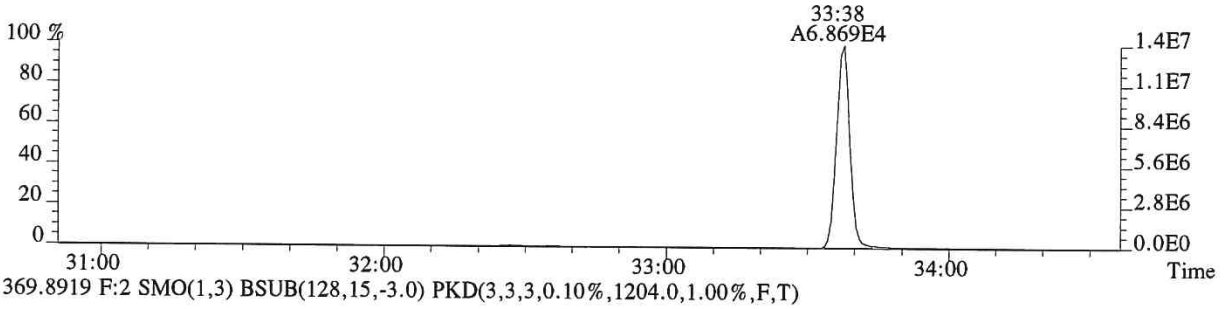
File:P520007 #1-339 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1536.0,1.00%,F,T)



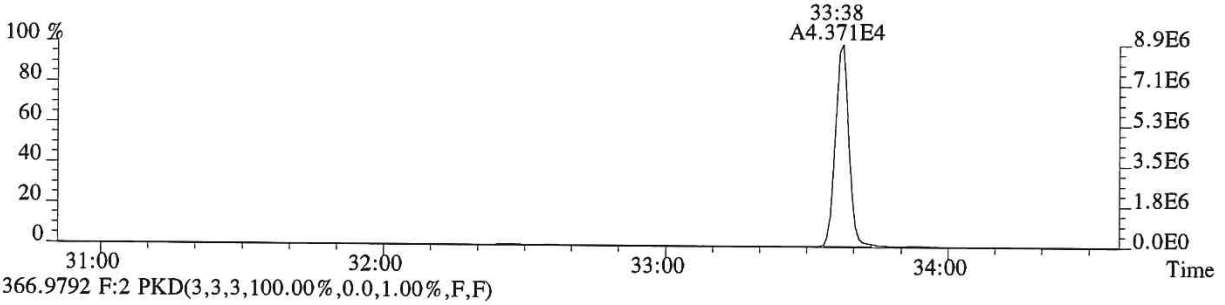
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,568.0,1.00%,F,T)



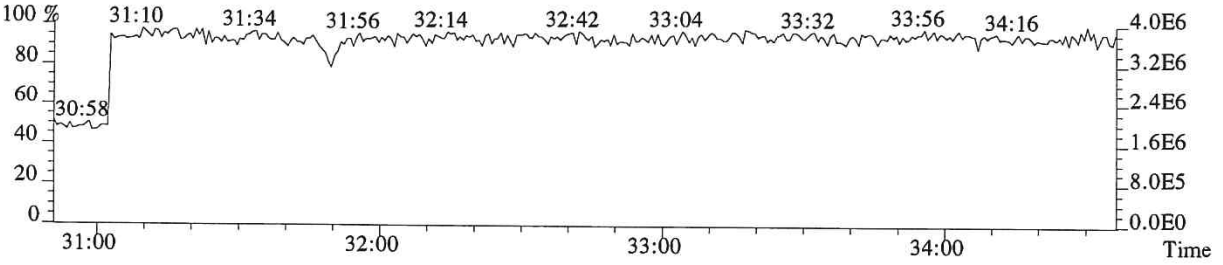
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,936.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1204.0,1.00%,F,T)

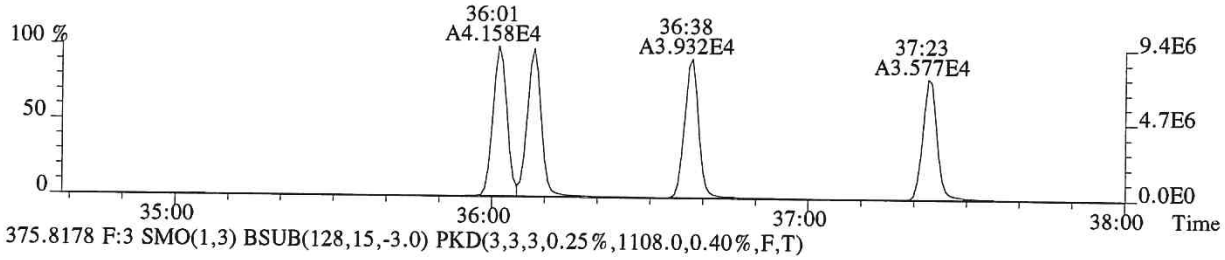


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

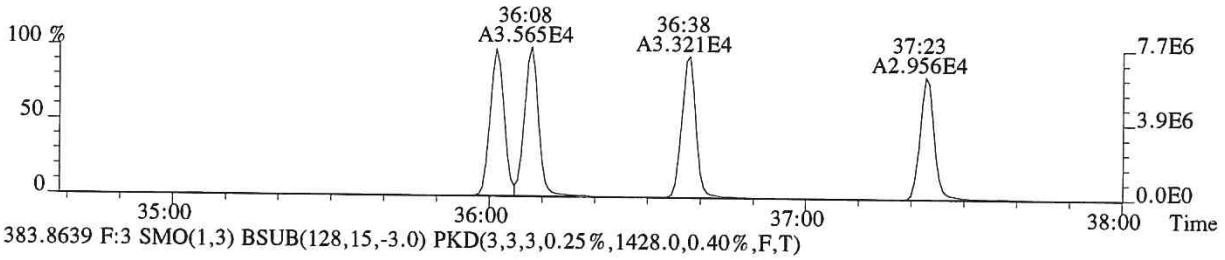


018809

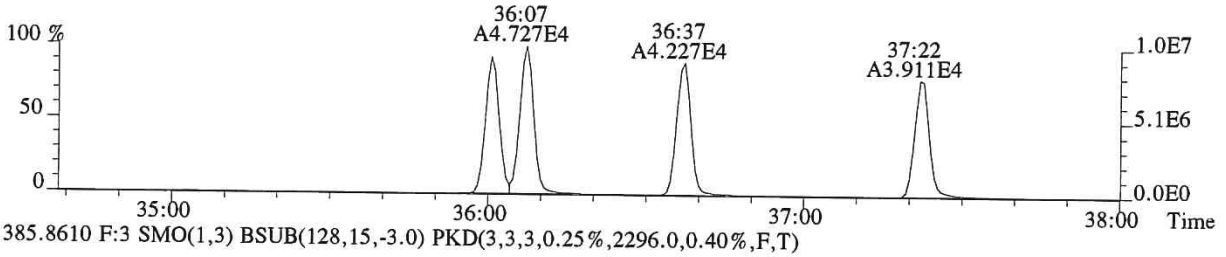
File:P520007 #1-303 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1184.0,0.40%,F,T)



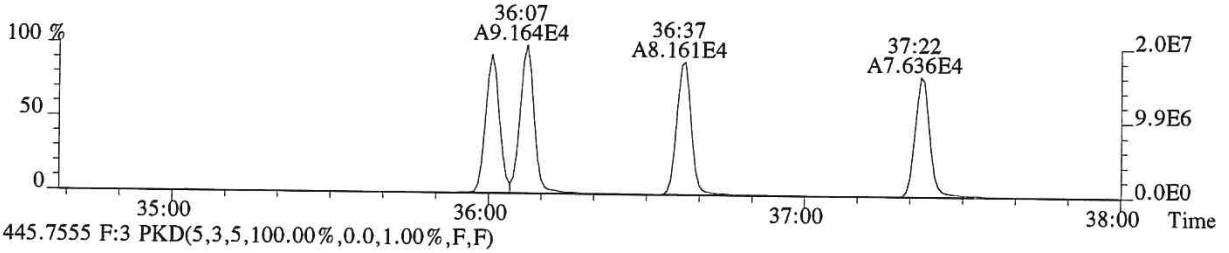
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1108.0,0.40%,F,T)



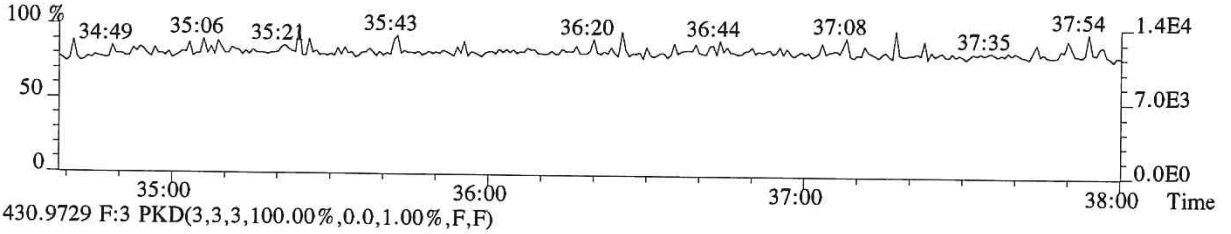
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1428.0,0.40%,F,T)



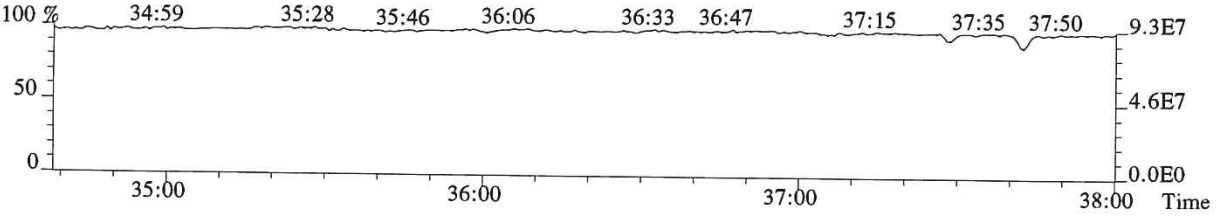
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2296.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

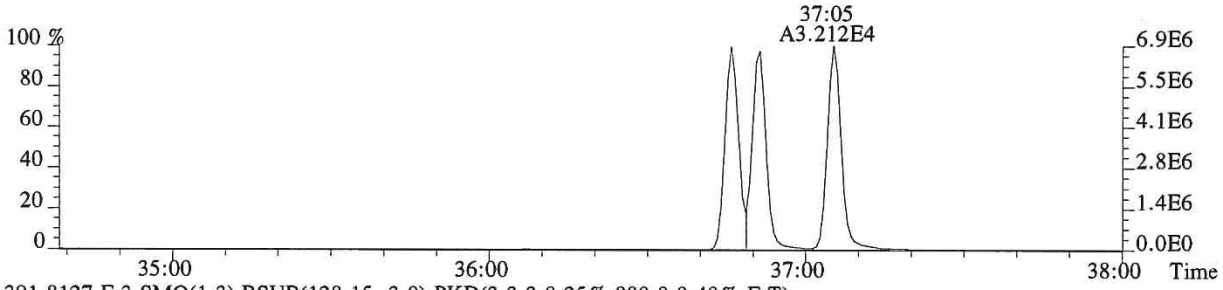


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

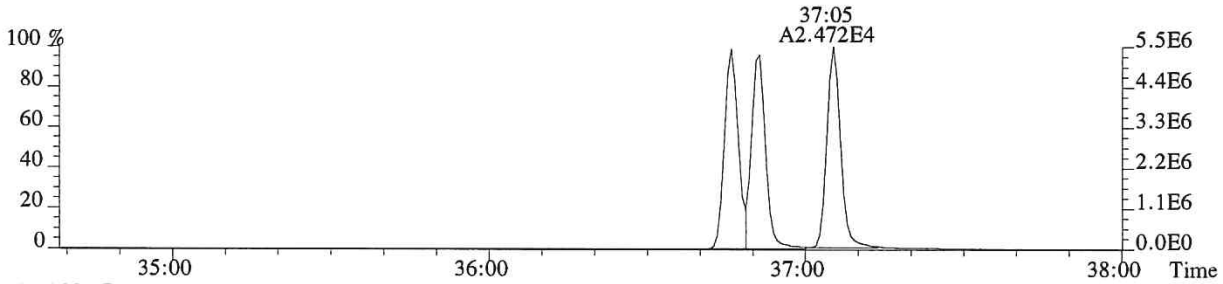


018810

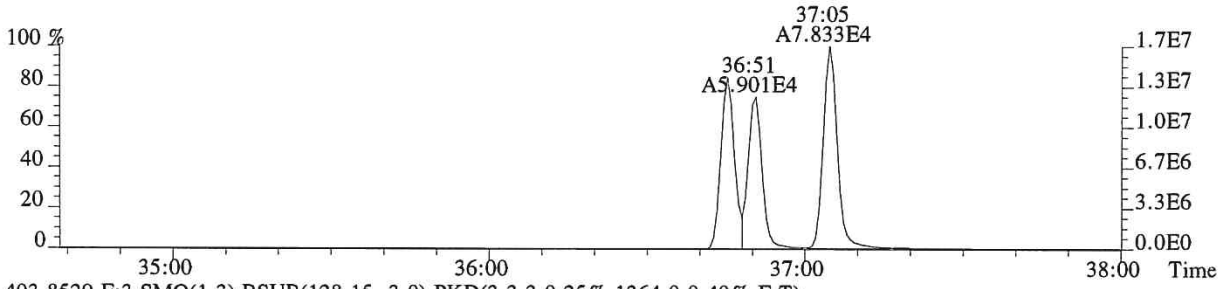
File:P520007 #1-303 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,736.0,0.40%,F,T)



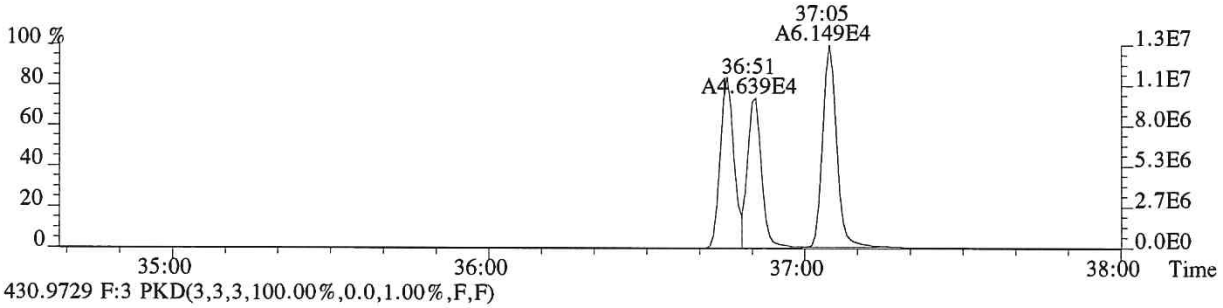
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,880.0,0.40%,F,T)



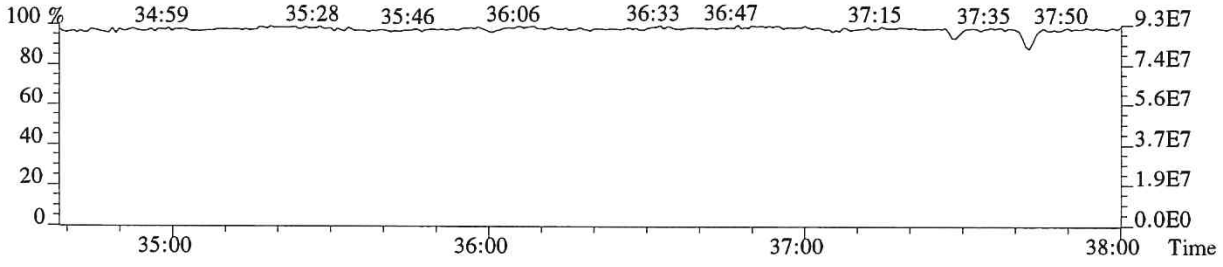
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1956.0,0.40%,F,T)



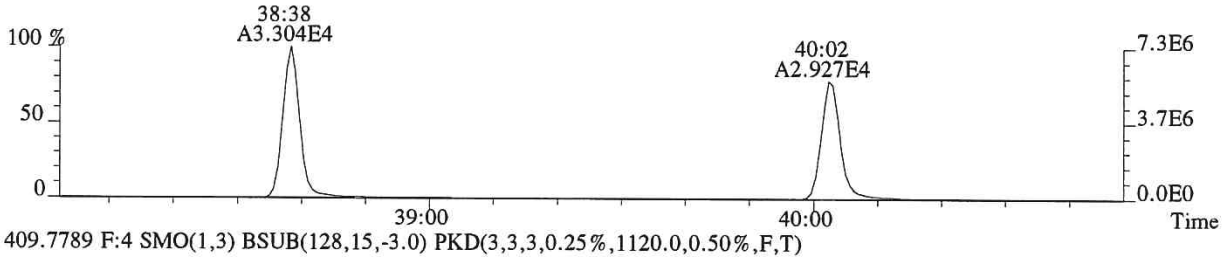
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1364.0,0.40%,F,T)



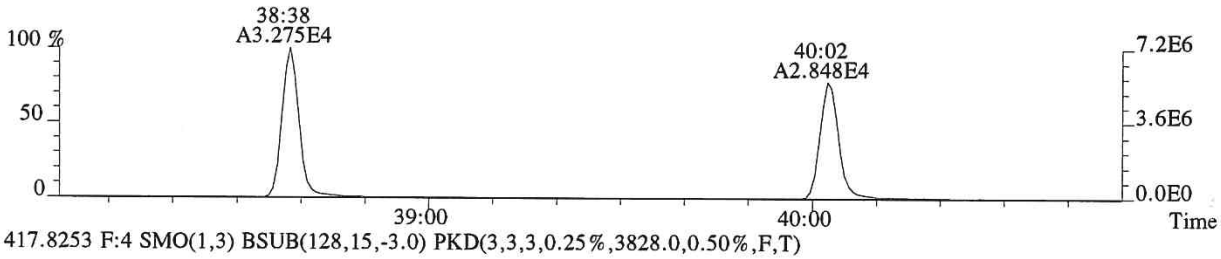
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



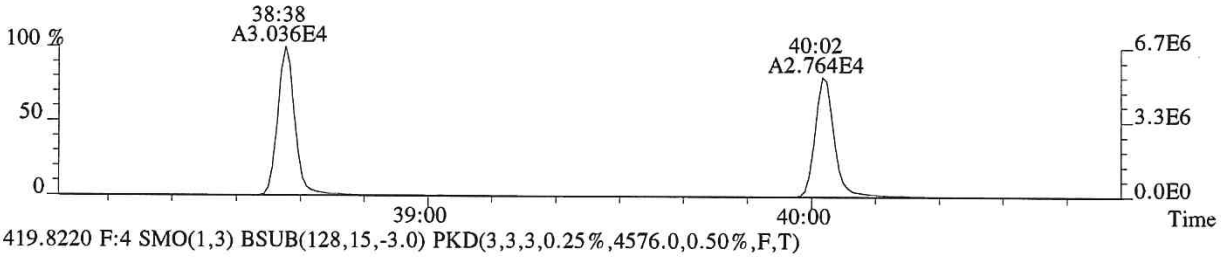
File:P520007 #1-250 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1580.0,0.50%,F,T)



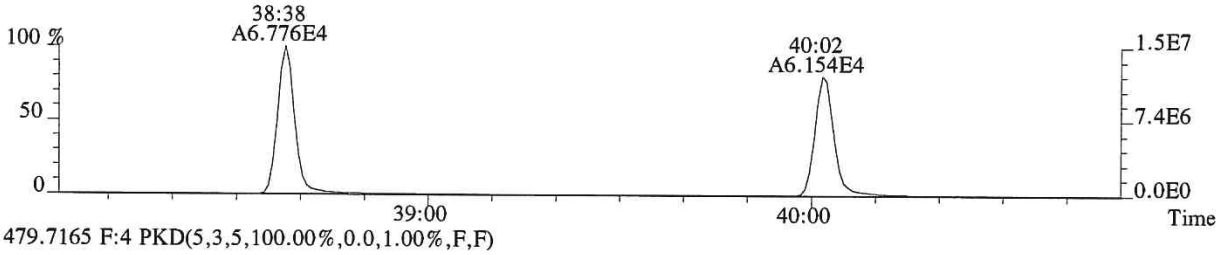
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1120.0,0.50%,F,T)



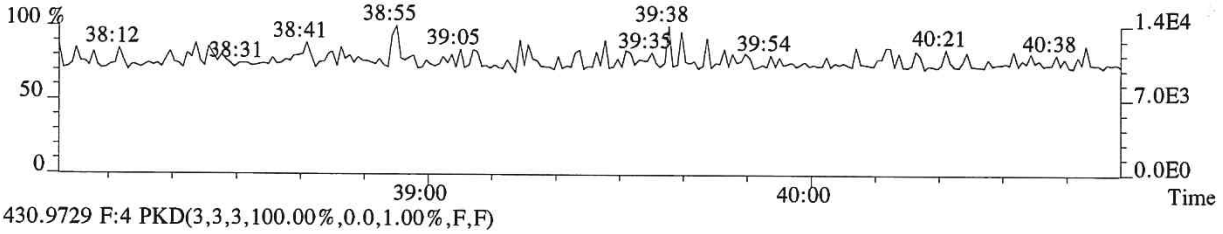
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3828.0,0.50%,F,T)



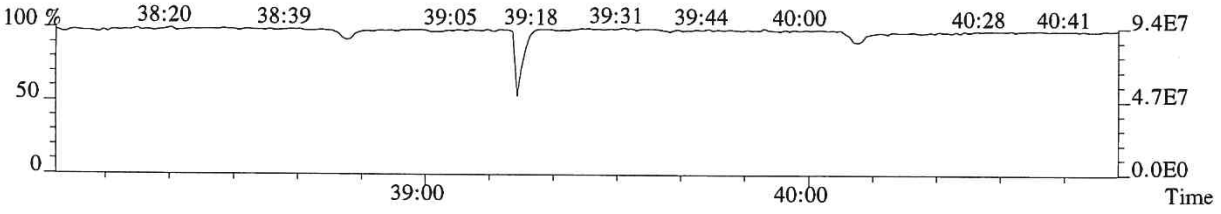
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4576.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

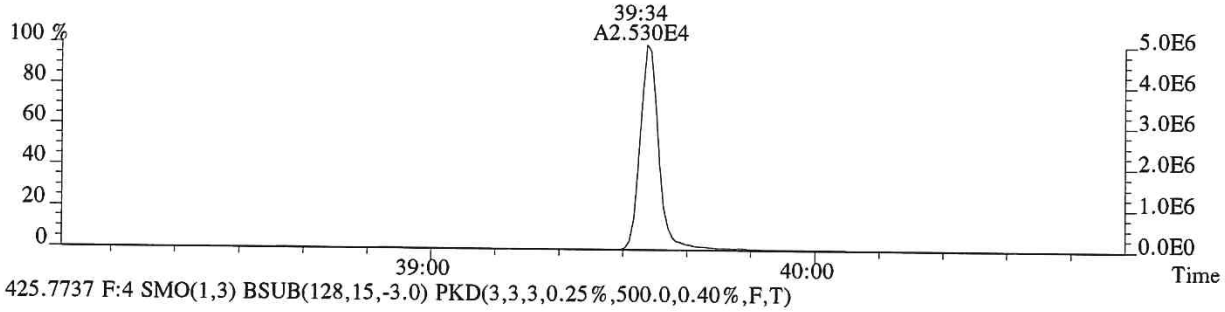


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

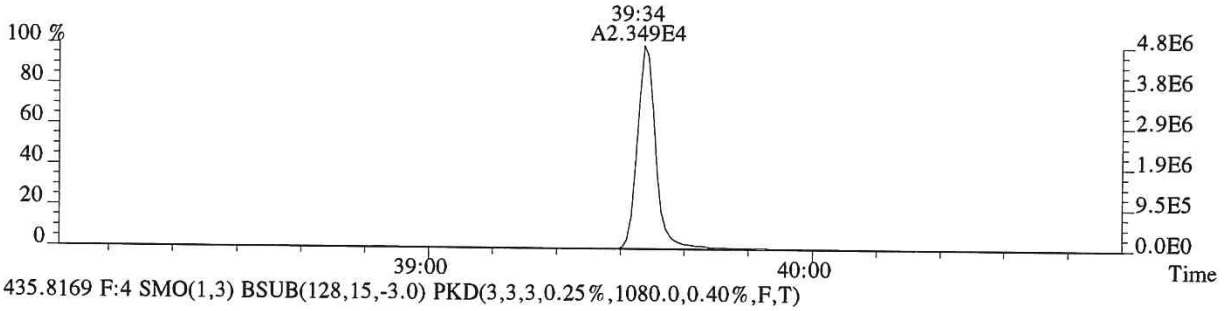


018812

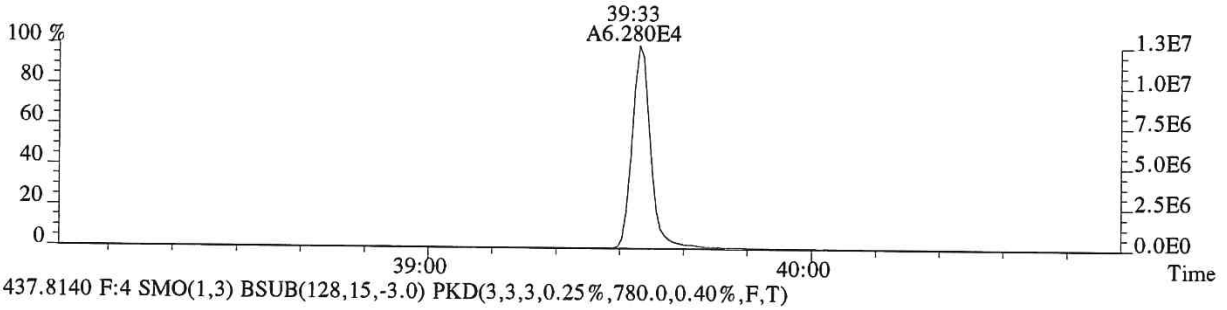
File:P520007 #1-250 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1092.0,0.40%,F,T)



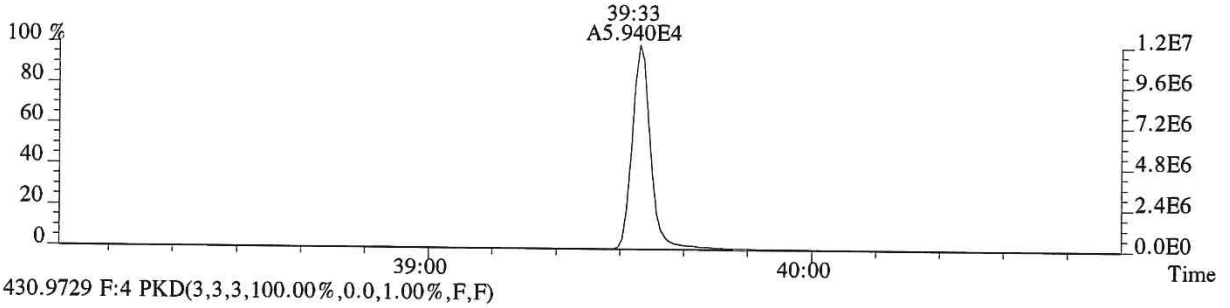
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,500.0,0.40%,F,T)



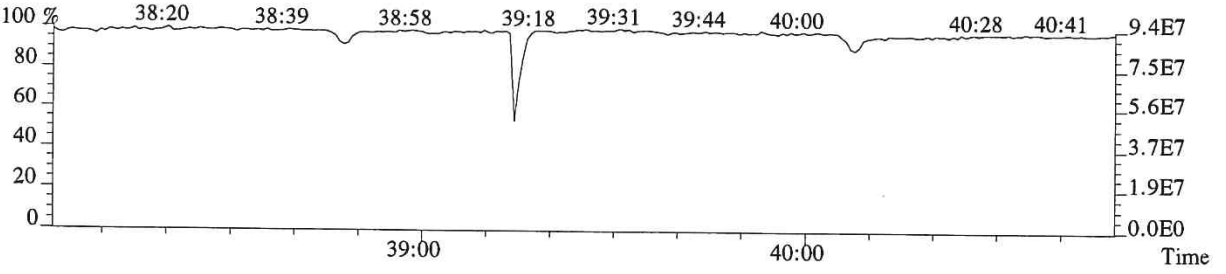
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1080.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,780.0,0.40%,F,T)

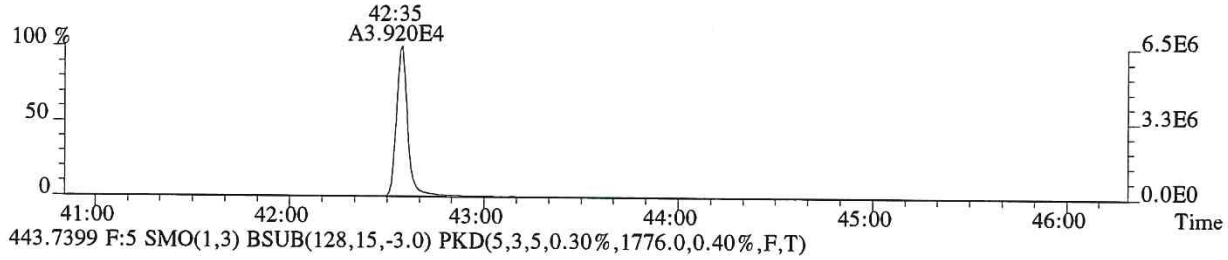


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

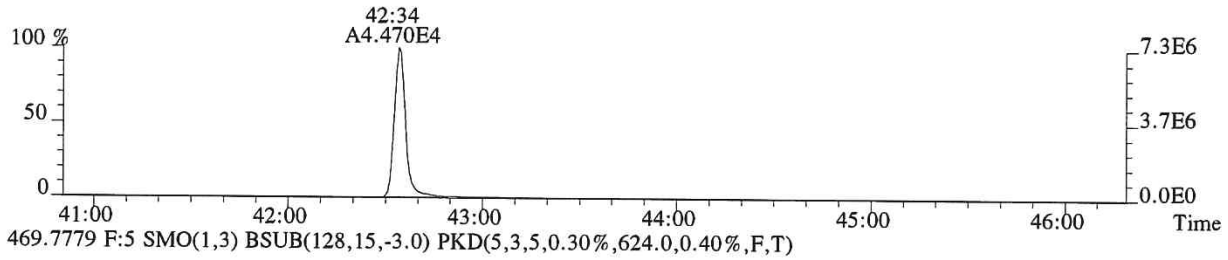


018813

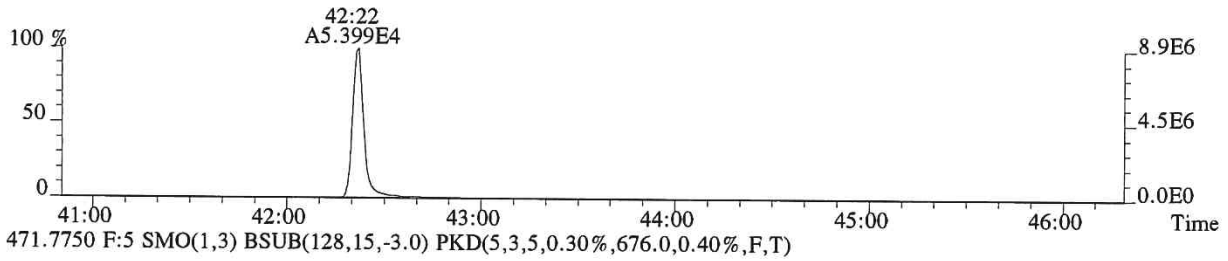
File:P520007 #1-493 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,520.0,0.40%,F,T)



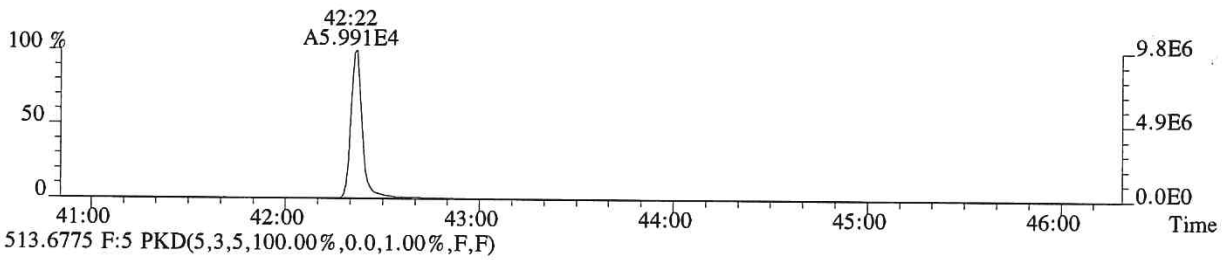
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1776.0,0.40%,F,T)



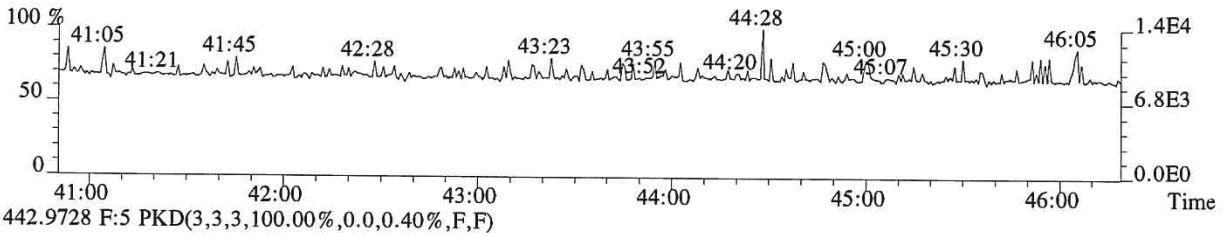
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,624.0,0.40%,F,T)



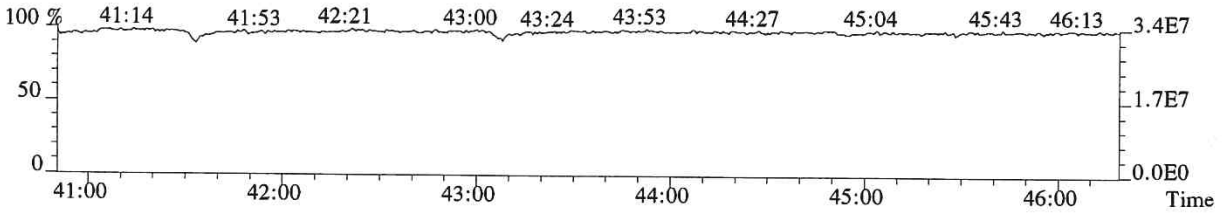
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,676.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

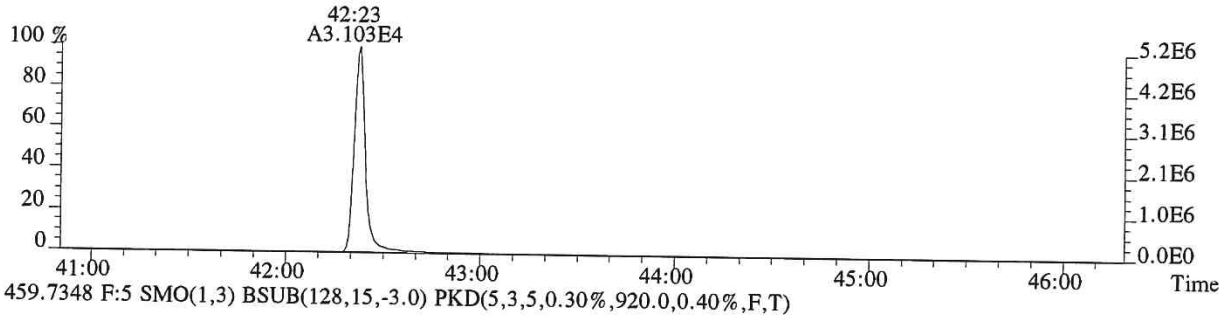


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

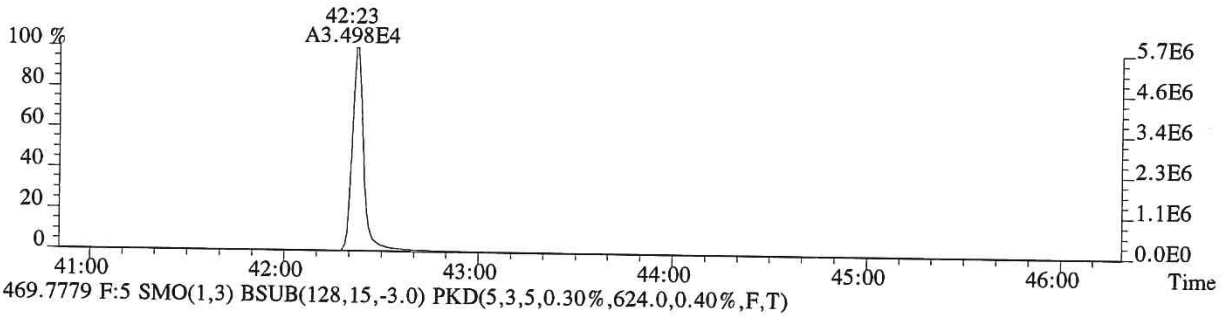


018814

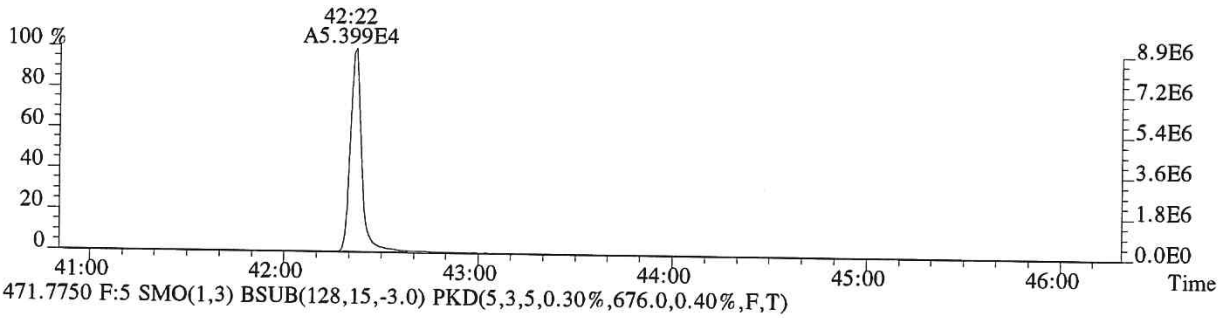
File:P520007 #1-493 Acq:16-JAN-2019 21:02:38 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-02
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,448.0,0.40%,F,T)



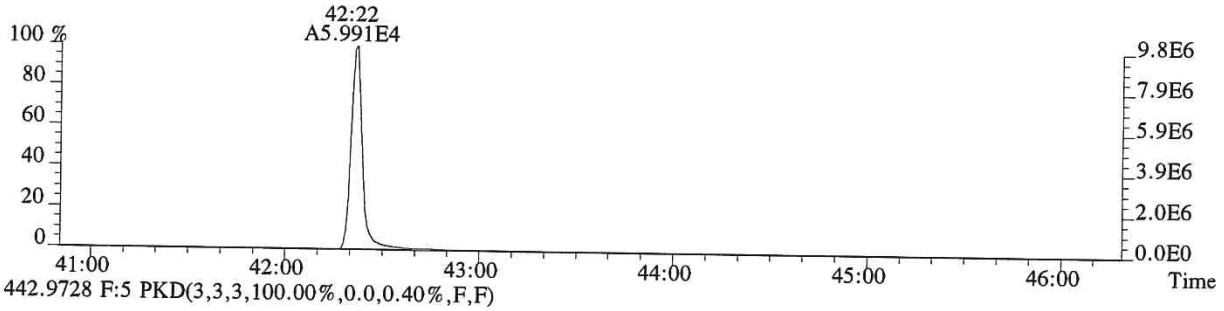
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,920.0,0.40%,F,T)



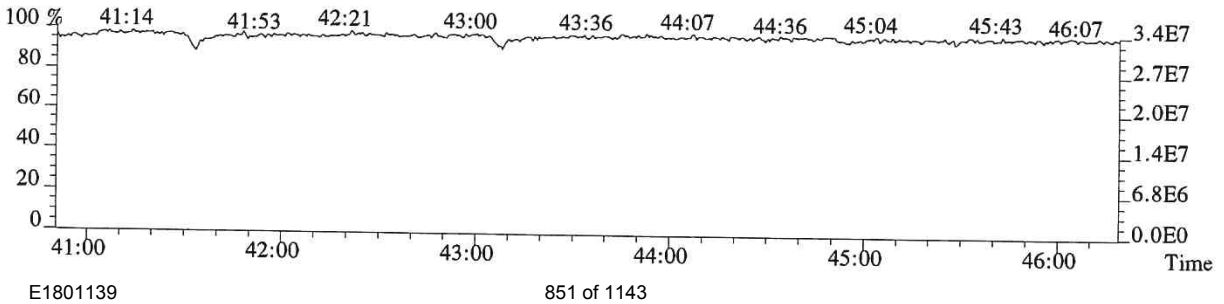
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,624.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,676.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018815

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
DLCS

Run #19 Filename P520008 Samp: 1 Inj: 1 Acquired: 16-JAN-19 21:59:29
Processed: 17-JAN-19 11:28:05 Sample ID: EQ1900017-03

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:17	8.265e+03	1.133e+04	0.73	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:28	6.025e+04	3.998e+04	1.51	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:22	5.998e+04	3.987e+04	1.50	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:02	5.323e+04	4.463e+04	1.19	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:09	5.630e+04	4.639e+04	1.21	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:39	5.308e+04	4.340e+04	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:23	4.772e+04	3.938e+04	1.21	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:39	4.017e+04	3.951e+04	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:03	3.689e+04	3.703e+04	1.00	yes	no	1.258
10	Unk	OCDF	42:35	4.913e+04	5.485e+04	0.90	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:05	5.913e+03	7.686e+03	0.77	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:39	4.549e+04	2.885e+04	1.58	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:47	3.999e+04	3.134e+04	1.28	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:52	4.094e+04	3.203e+04	1.28	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:06	4.213e+04	3.398e+04	1.24	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:34	3.111e+04	3.001e+04	1.04	yes	no	1.025
17	Unk	OCDD	42:23	4.390e+04	4.969e+04	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:16	7.597e+04	9.675e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:27	1.302e+05	8.287e+04	1.57	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:21	1.232e+05	7.837e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	5.554e+04	1.066e+05	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:08	6.112e+04	1.181e+05	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:38	5.837e+04	1.119e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:23	5.313e+04	1.031e+05	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	3.643e+04	8.101e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:02	3.523e+04	7.857e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:03	3.735e+04	4.703e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:38	9.458e+04	5.933e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:46	8.269e+04	6.484e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:51	7.727e+04	6.107e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:34	7.785e+04	7.337e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:23	6.720e+04	7.525e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:30	6.743e+04	8.349e+04	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	9.080e+04	7.368e+04	1.23	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:05	5.320e+04				no	1.014

$$\text{OCDD} = \frac{(4.390e+04 + 4.969e+04) \times 4000\ \text{pg} \times 1}{(6.720e+04 + 7.525e+04) \times \quad \text{g} \quad \times \quad / 100 \times 1.118} =$$

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Houston, TX 77099
Office(281)530-5656. Fax(281)530-5887

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Signal/Noise Height Ratio Summary

CLIENT ID.
DLCS

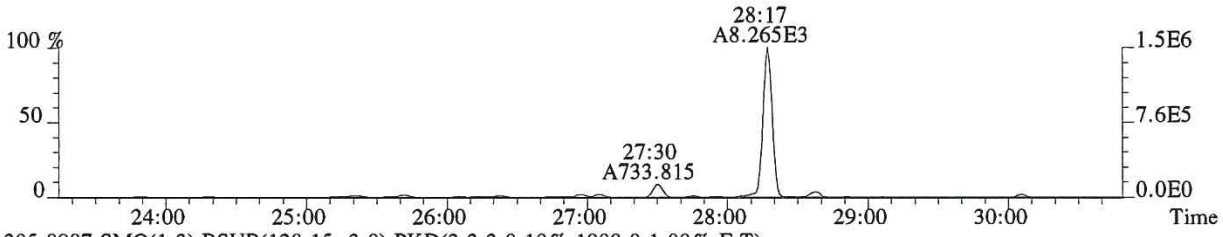
Run #19 Filename P520008 Samp: 1 Inj: 1 Acquired: 16-JAN-19 21:59:29
Processed: 17-JAN-19 11:28:05 LAB. ID: EQ1900017-03

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.51e+06	7.56e+02	2.0e+03	2.17e+06	1.90e+03	1.1e+03
2	1,2,3,7,8-PeCDF	1.15e+07	1.39e+03	8.3e+03	7.65e+06	2.32e+03	3.3e+03
3	2,3,4,7,8-PeCDF	1.23e+07	1.39e+03	8.8e+03	8.21e+06	2.32e+03	3.5e+03
4	1,2,3,4,7,8-HxCDF	1.18e+07	1.91e+03	6.2e+03	9.92e+06	9.84e+02	1.0e+04
5	1,2,3,6,7,8-HxCDF	1.19e+07	1.91e+03	6.2e+03	9.79e+06	9.84e+02	9.9e+03
6	2,3,4,6,7,8-HxCDF	1.13e+07	1.91e+03	5.9e+03	9.26e+06	9.84e+02	9.4e+03
7	1,2,3,7,8,9-HxCDF	9.99e+06	1.91e+03	5.2e+03	8.20e+06	9.84e+02	8.3e+03
8	1,2,3,4,6,7,8-HpCDF	8.74e+06	4.16e+03	2.1e+03	8.56e+06	2.18e+03	3.9e+03
9	1,2,3,4,7,8,9-HpCDF	7.26e+06	4.16e+03	1.7e+03	7.26e+06	2.18e+03	3.3e+03
10	OCDF	8.06e+06	7.84e+02	1.0e+04	8.96e+06	1.64e+03	5.5e+03
11	2,3,7,8-TCDD	1.21e+06	2.88e+03	4.2e+02	1.53e+06	1.84e+03	8.3e+02
12	1,2,3,7,8-PeCDD	9.44e+06	1.20e+03	7.9e+03	5.96e+06	7.32e+02	8.1e+03
13	1,2,3,4,7,8-HxCDD	9.08e+06	8.80e+02	1.0e+04	7.09e+06	5.12e+02	1.4e+04
14	1,2,3,6,7,8-HxCDD	8.72e+06	8.80e+02	9.9e+03	6.80e+06	5.12e+02	1.3e+04
15	1,2,3,7,8,9-HxCDD	8.89e+06	8.80e+02	1.0e+04	7.17e+06	5.12e+02	1.4e+04
16	1,2,3,4,6,7,8-HpCDD	6.20e+06	1.01e+03	6.1e+03	6.01e+06	5.60e+02	1.1e+04
17	OCDD	7.18e+06	6.16e+02	1.2e+04	8.08e+06	9.48e+02	8.5e+03
18	13C-2,3,7,8-TCDF	1.43e+07	6.68e+03	2.1e+03	1.82e+07	3.43e+03	5.3e+03
19	13C-1,2,3,7,8-PeCDF	2.51e+07	1.52e+03	1.7e+04	1.60e+07	1.26e+03	1.3e+04
20	13C-2,3,4,7,8-PeCDF	2.54e+07	1.52e+03	1.7e+04	1.61e+07	1.26e+03	1.3e+04
21	13C-1,2,3,4,7,8-HxCDF	1.23e+07	1.52e+03	8.1e+03	2.37e+07	2.57e+03	9.2e+03
22	13C-1,2,3,6,7,8-HxCDF	1.30e+07	1.52e+03	8.6e+03	2.48e+07	2.57e+03	9.6e+03
23	13C-2,3,4,6,7,8-HxCDF	1.24e+07	1.52e+03	8.2e+03	2.38e+07	2.57e+03	9.3e+03
24	13C-1,2,3,7,8,9-HxCDF	1.10e+07	1.52e+03	7.2e+03	2.14e+07	2.57e+03	8.3e+03
25	13C-1,2,3,4,6,7,8-HpCDF	7.81e+06	5.76e+03	1.4e+03	1.74e+07	4.87e+03	3.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	6.85e+06	5.76e+03	1.2e+03	1.53e+07	4.87e+03	3.1e+03
27	13C-2,3,7,8-TCDD	7.69e+06	8.62e+03	8.9e+02	9.65e+06	3.14e+03	3.1e+03
28	13C-1,2,3,7,8-PeCDD	1.93e+07	1.01e+03	1.9e+04	1.20e+07	1.54e+03	7.8e+03
29	13C-1,2,3,4,7,8-HxCDD	1.87e+07	2.36e+03	7.9e+03	1.46e+07	9.96e+02	1.5e+04
30	13C-1,2,3,6,7,8-HxCDD	1.61e+07	2.36e+03	6.8e+03	1.28e+07	9.96e+02	1.3e+04
31	13C-1,2,3,4,6,7,8-HpCDD	1.54e+07	1.08e+03	1.4e+04	1.45e+07	1.22e+03	1.2e+04
32	13C-OCDD	1.11e+07	9.96e+02	1.1e+04	1.22e+07	8.88e+02	1.4e+04
33	13C-1,2,3,4-TCDD	1.35e+07	8.62e+03	1.6e+03	1.66e+07	3.14e+03	5.3e+03
34	13C-1,2,3,7,8,9-HxCDD	1.92e+07	2.36e+03	8.1e+03	1.52e+07	9.96e+02	1.5e+04
35	37Cl-2,3,7,8-TCDD	1.06e+07	2.39e+03	4.4e+03			

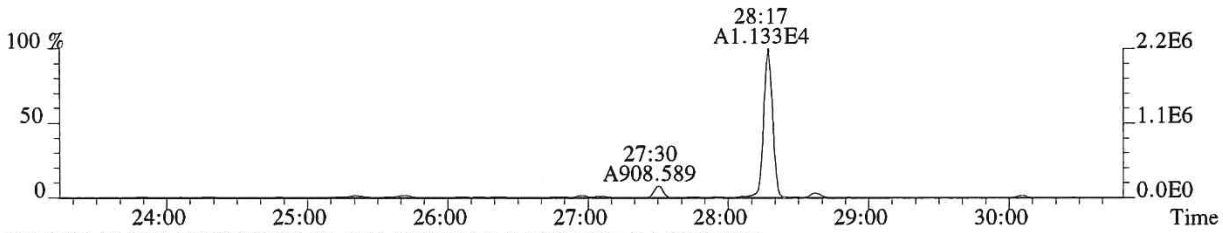
ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 115
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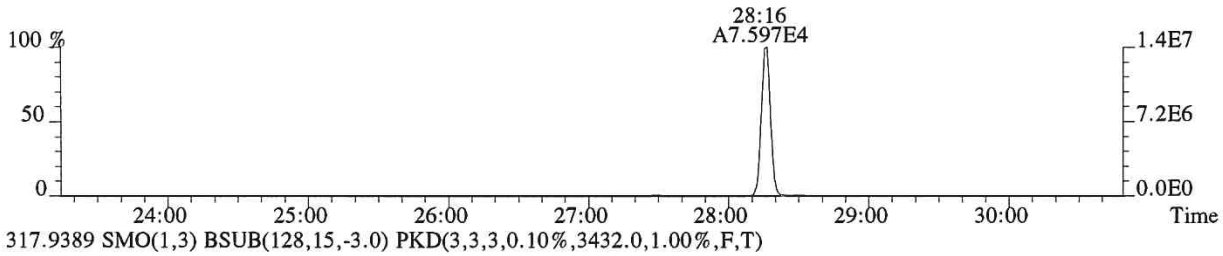
File:P520008 #1-538 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,756.0,1.00%,F,T)



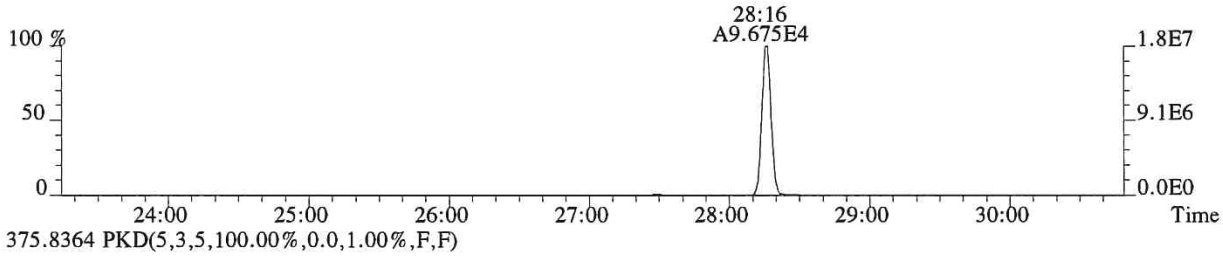
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1900.0,1.00%,F,T)



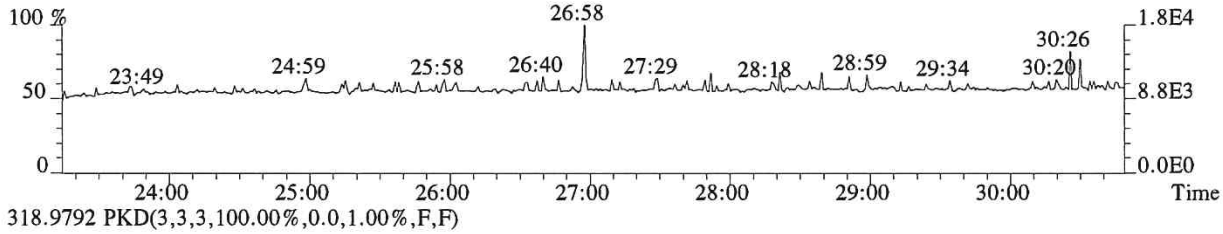
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6684.0,1.00%,F,T)



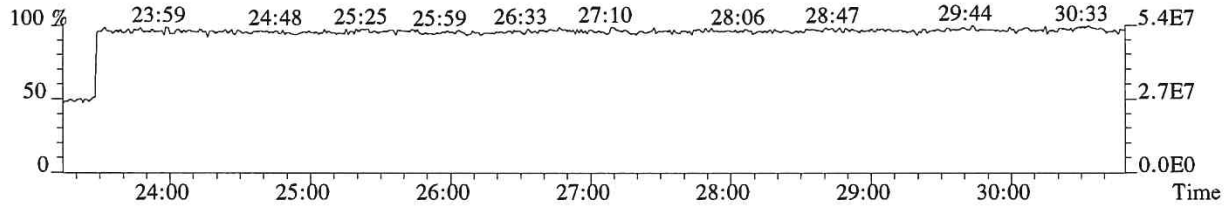
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3432.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

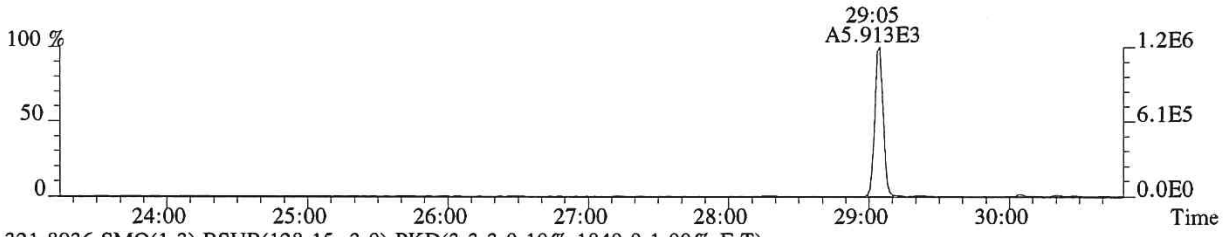


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

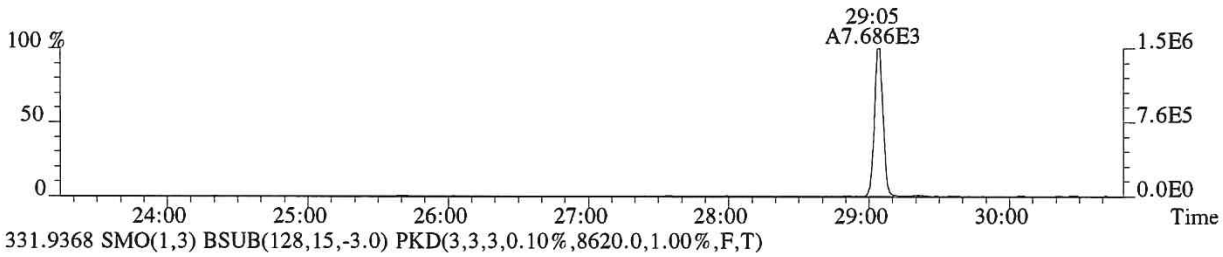


018818

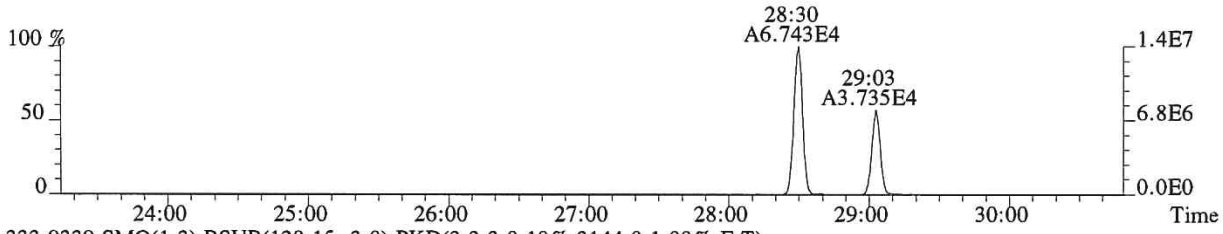
File:P520008 #1-538 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2880.0,1.00%,F,T)



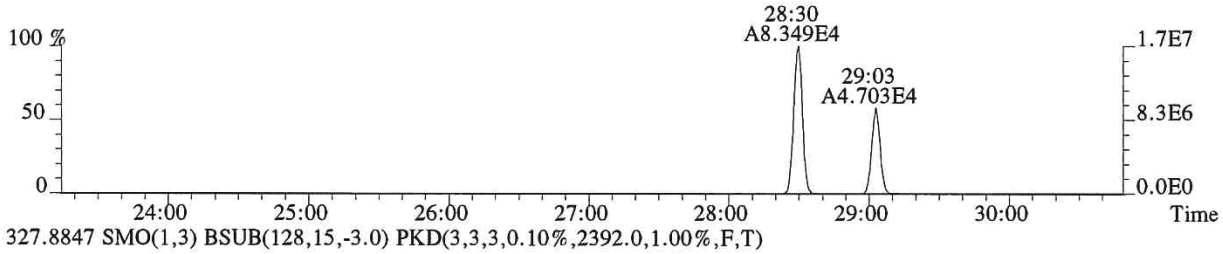
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1840.0,1.00%,F,T)



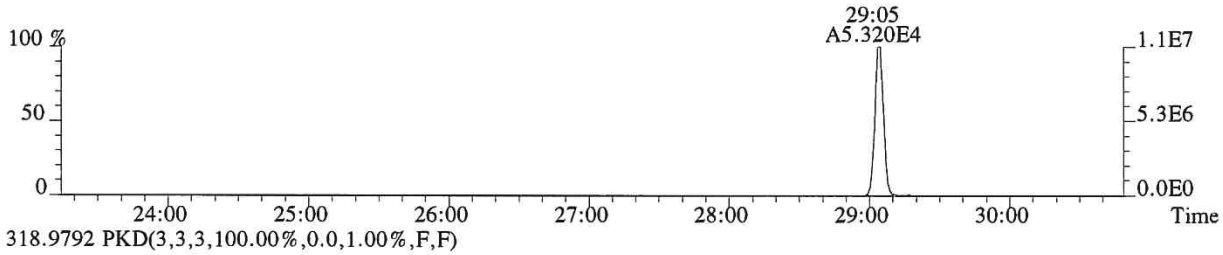
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8620.0,1.00%,F,T)



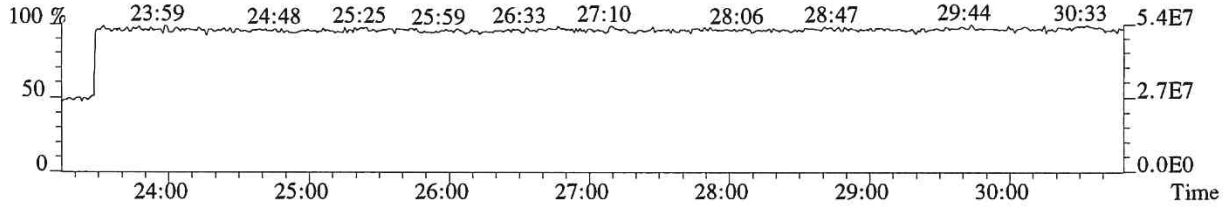
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3144.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2392.0,1.00%,F,T)

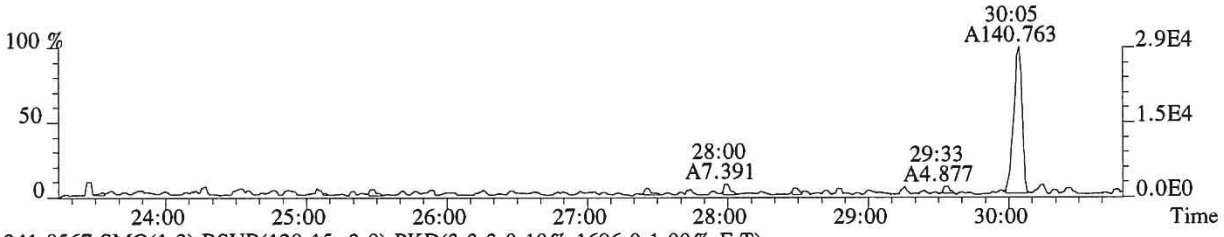


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

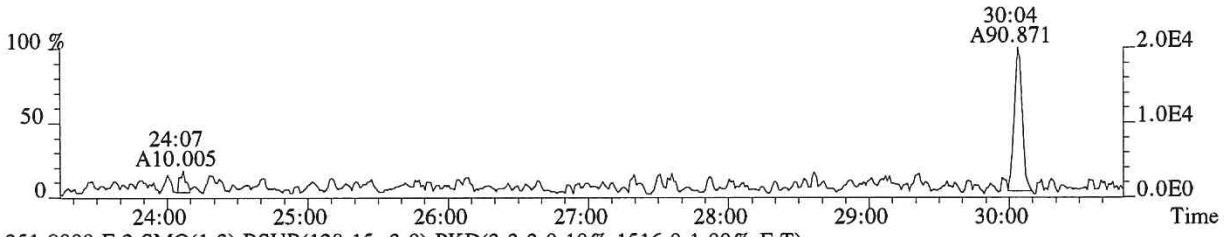


018819

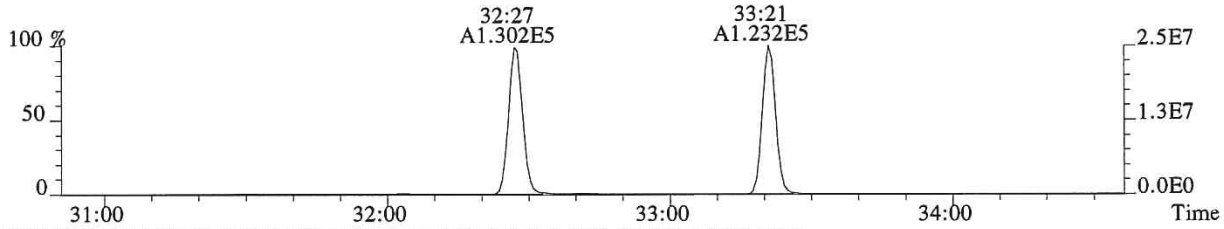
File:P520008 #1-538 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,916.0,1.00%,F,T)



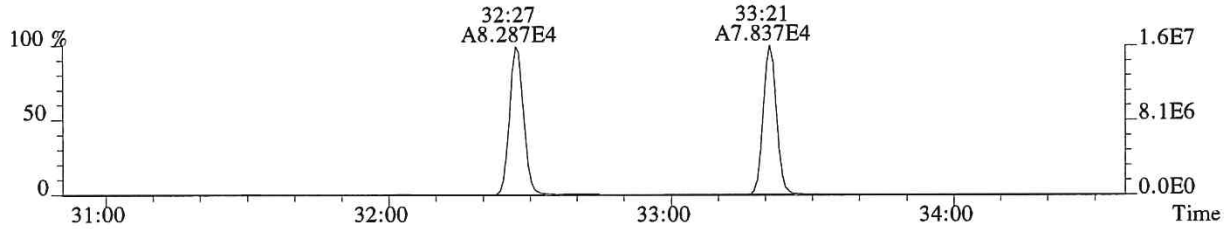
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1696.0,1.00%,F,T)



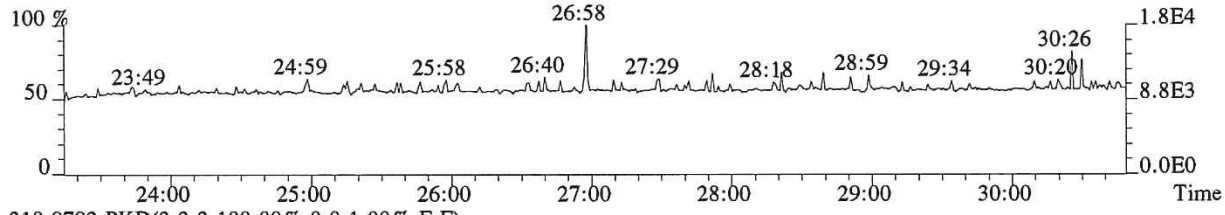
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1516.0,1.00%,F,T)



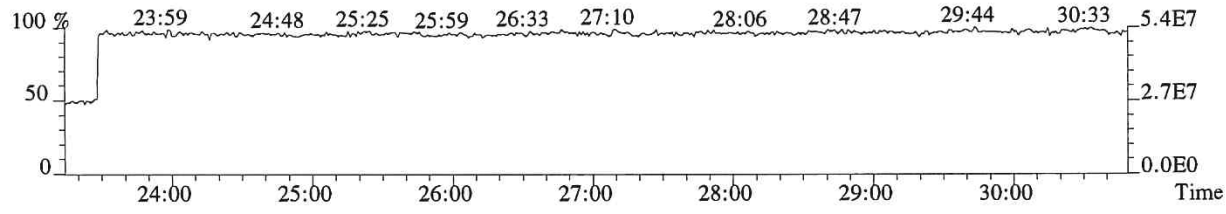
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1260.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

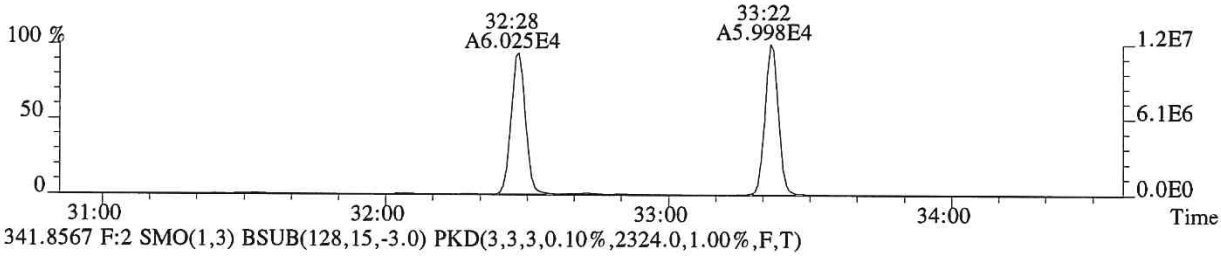


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

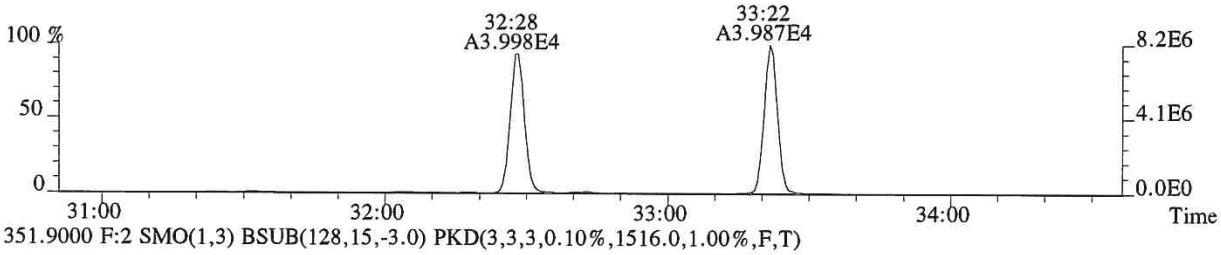


018820

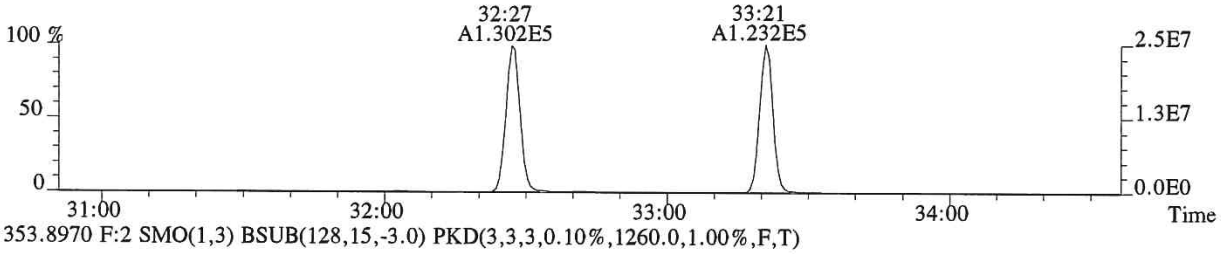
File:P520008 #1-339 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1388.0,1.00%,F,T)



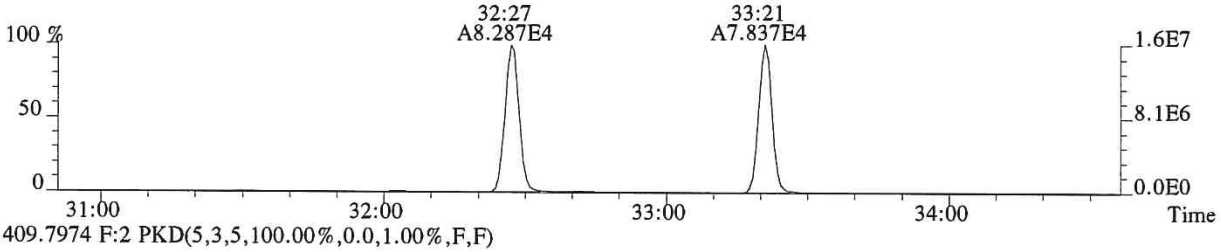
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2324.0,1.00%,F,T)



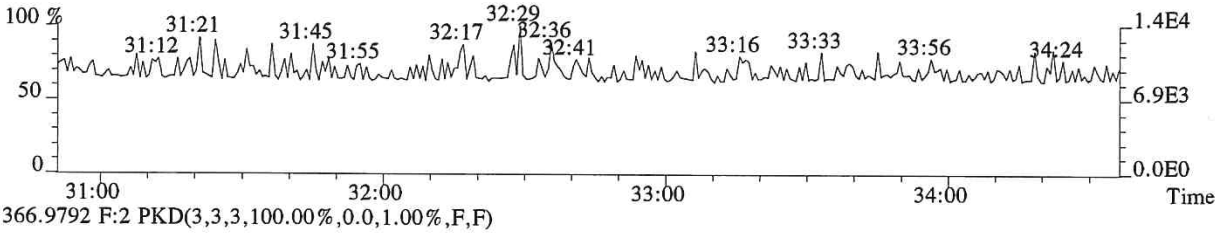
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1516.0,1.00%,F,T)



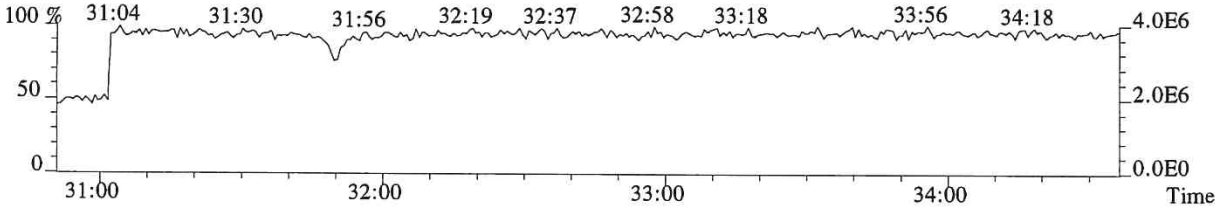
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1260.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

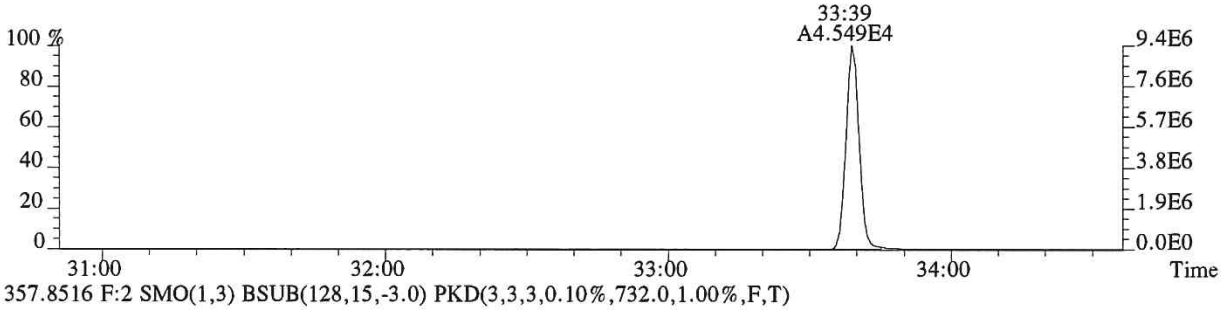


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

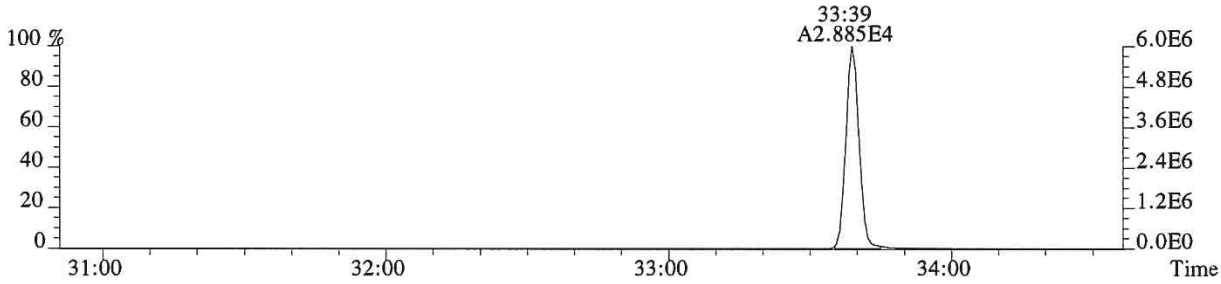


018821

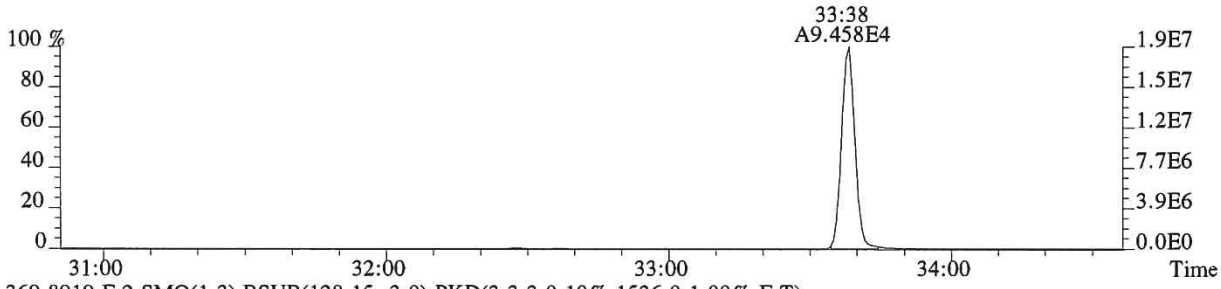
File:P520008 #1-339 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1196.0,1.00%,F,T)



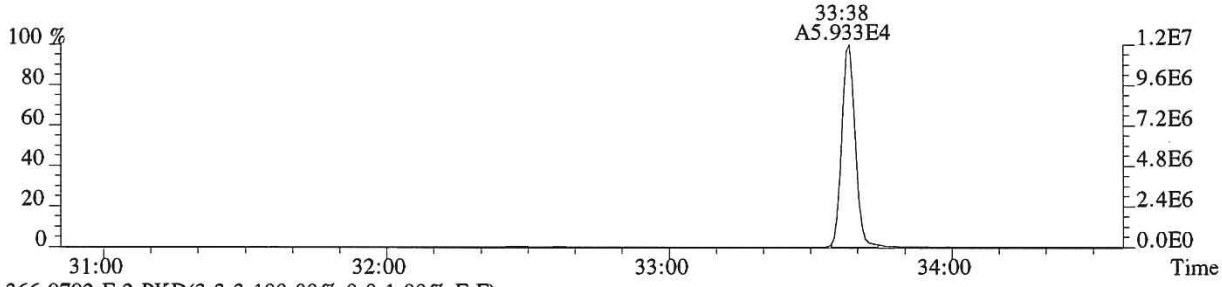
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,732.0,1.00%,F,T)



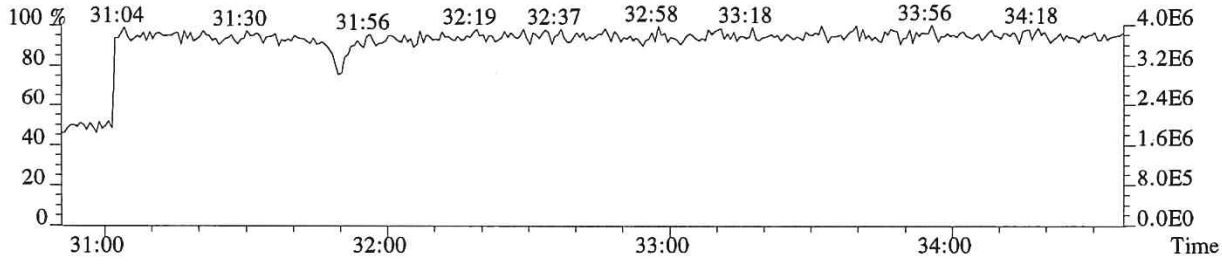
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1008.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1536.0,1.00%,F,T)

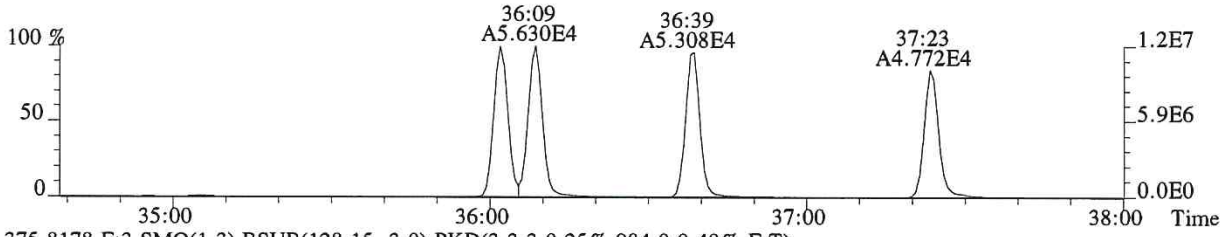


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

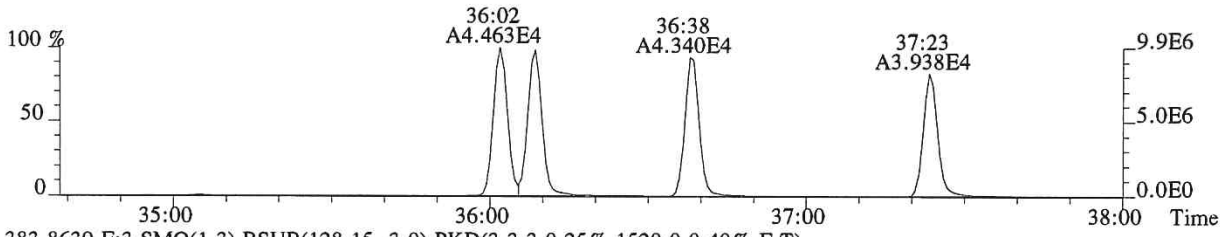


018822

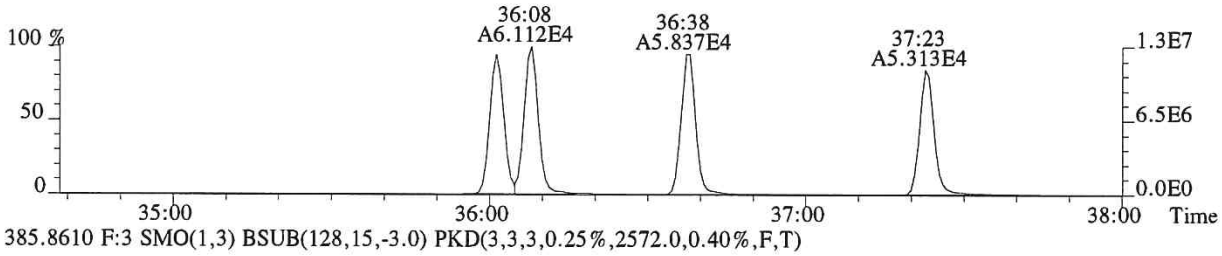
File:P520008 #1-303 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1912.0,0.40%,F,T)



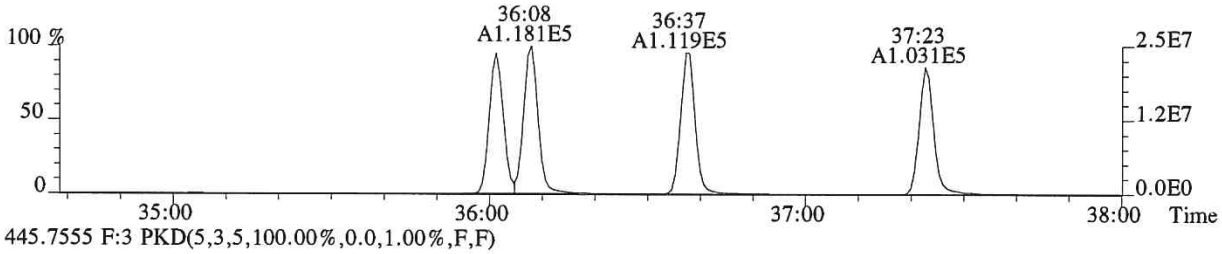
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,984.0,0.40%,F,T)



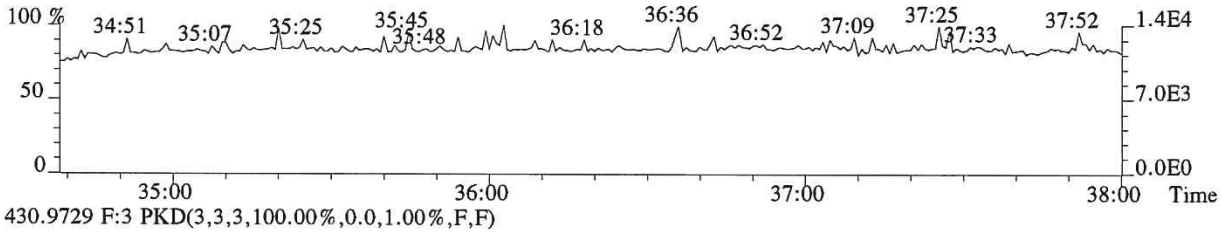
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1520.0,0.40%,F,T)



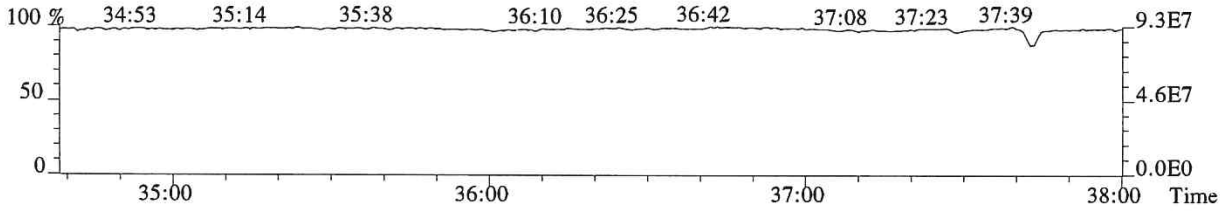
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2572.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

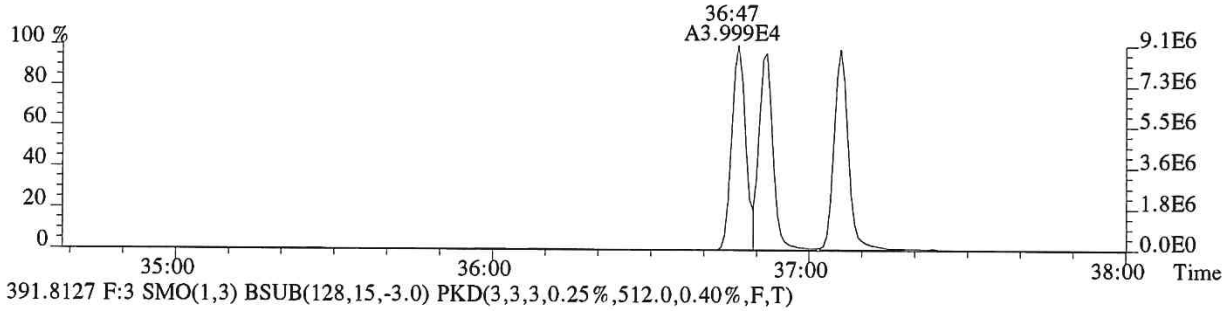


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

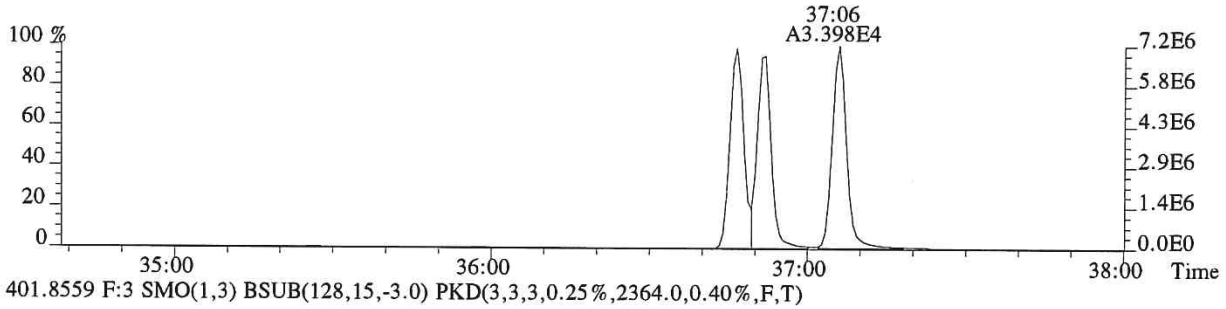


018823

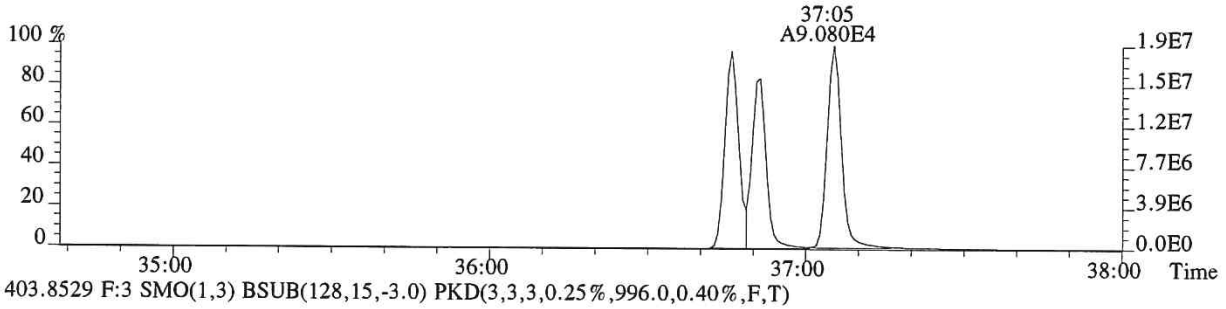
File:P520008 #1-303 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,880.0,0.40%,F,T)



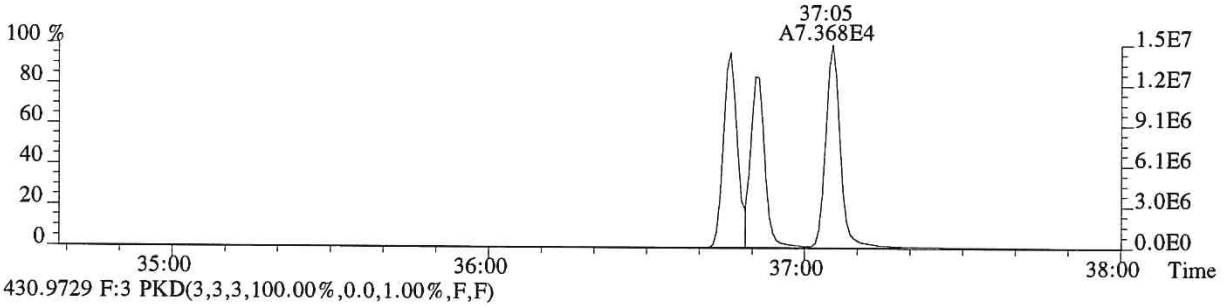
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,512.0,0.40%,F,T)



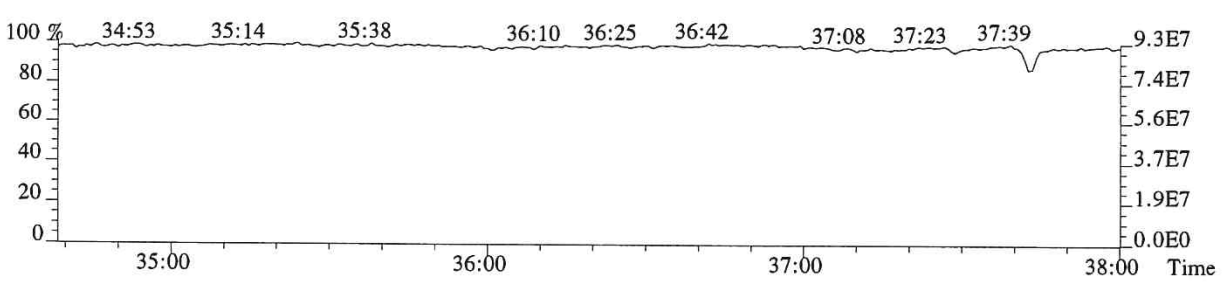
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2364.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,996.0,0.40%,F,T)

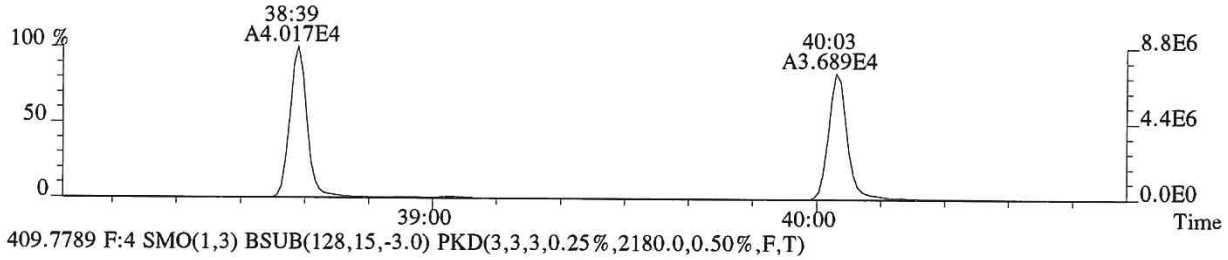


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

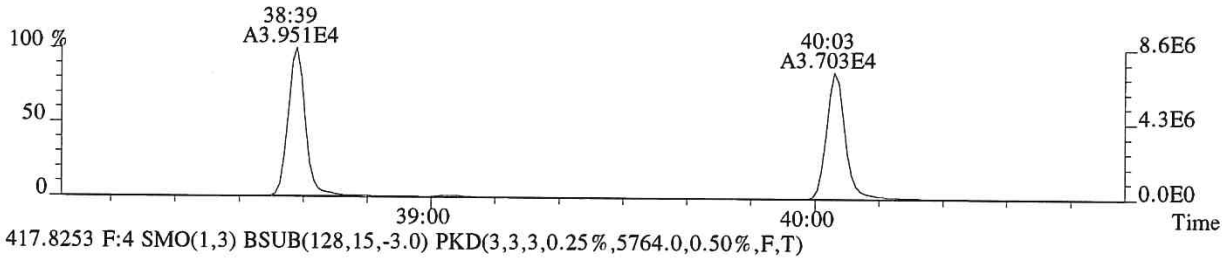


018824

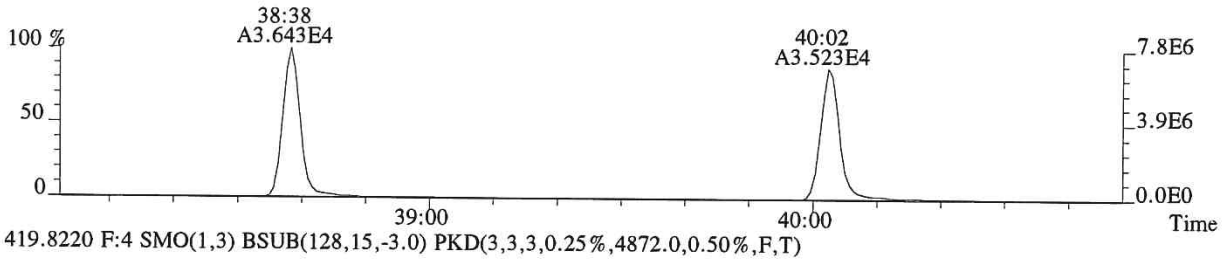
File:P520008 #1-250 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4160.0,0.50%,F,T)



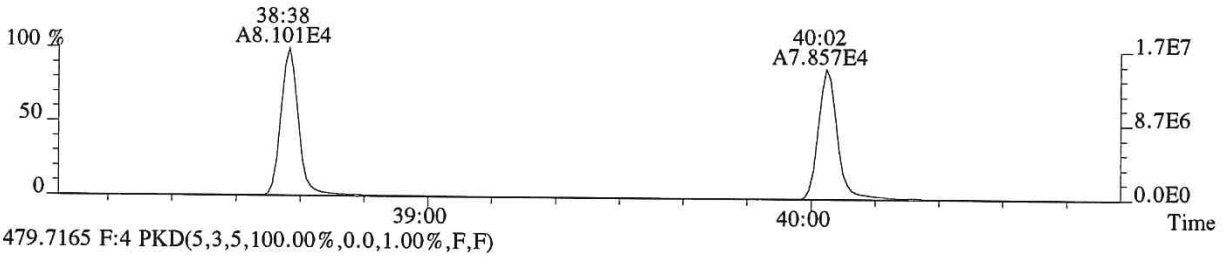
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2180.0,0.50%,F,T)



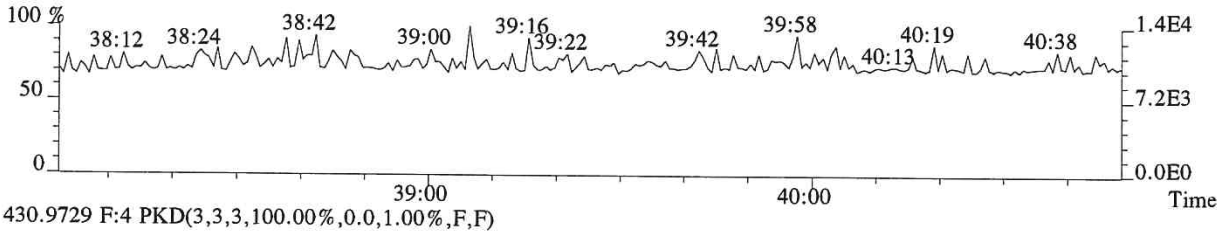
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5764.0,0.50%,F,T)



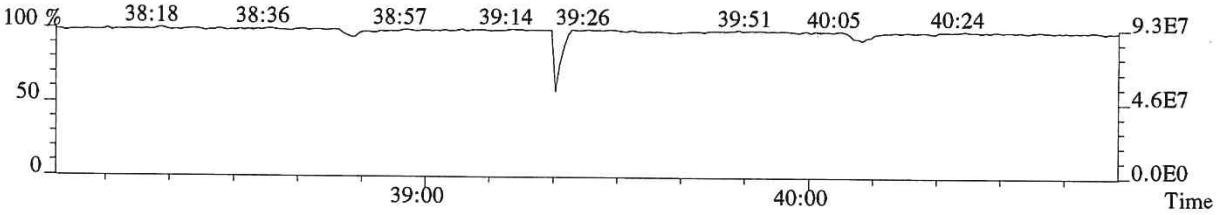
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4872.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

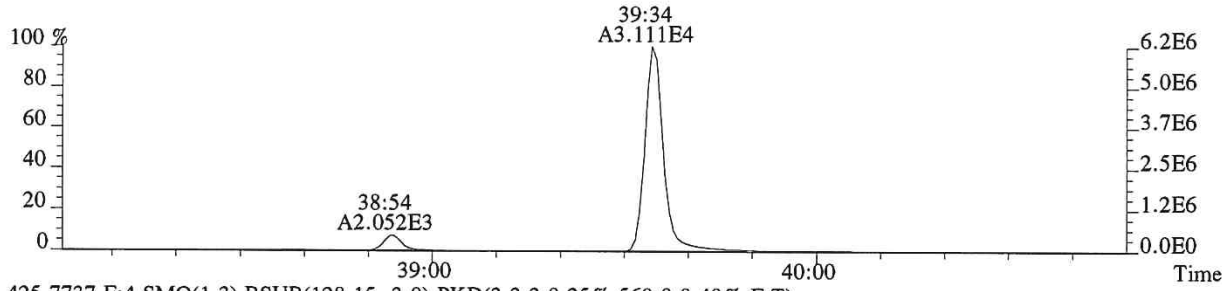


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

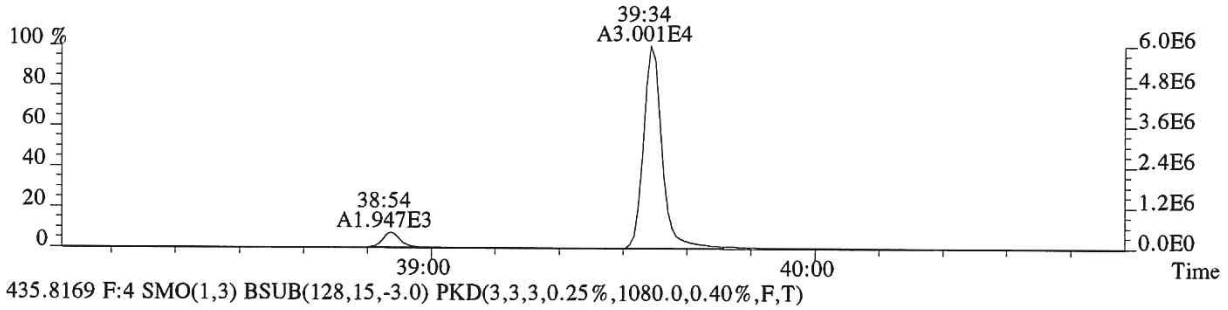


018825

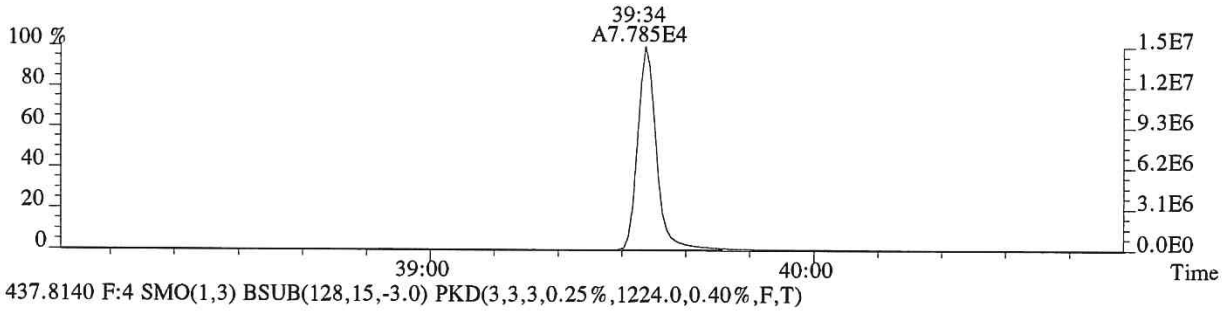
File:P520008 #1-250 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1012.0,0.40%,F,T)



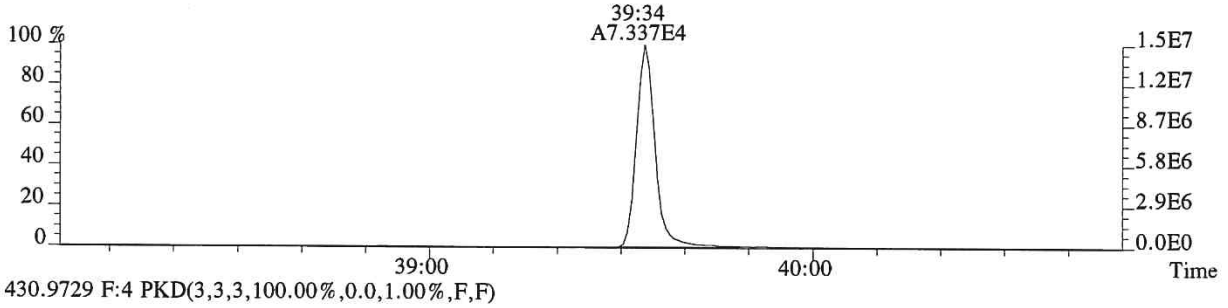
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,560.0,0.40%,F,T)



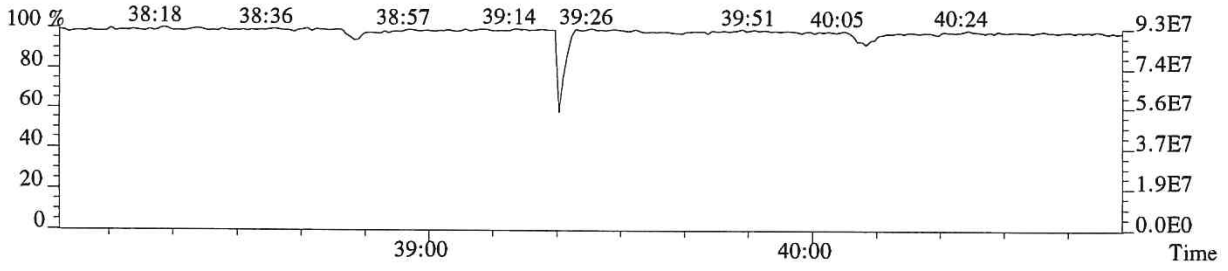
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1080.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1224.0,0.40%,F,T)

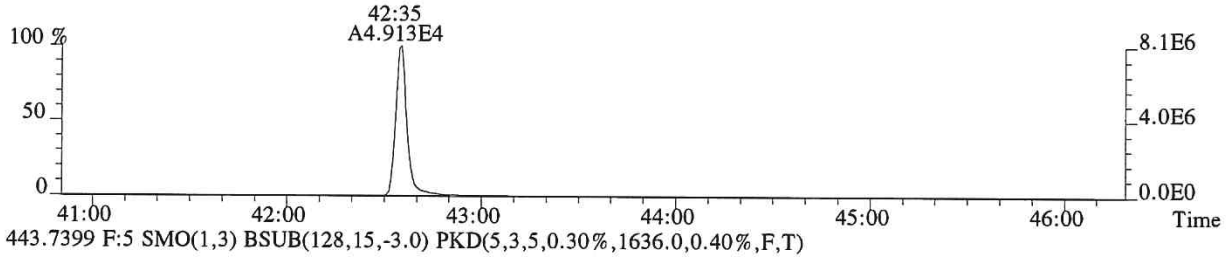


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

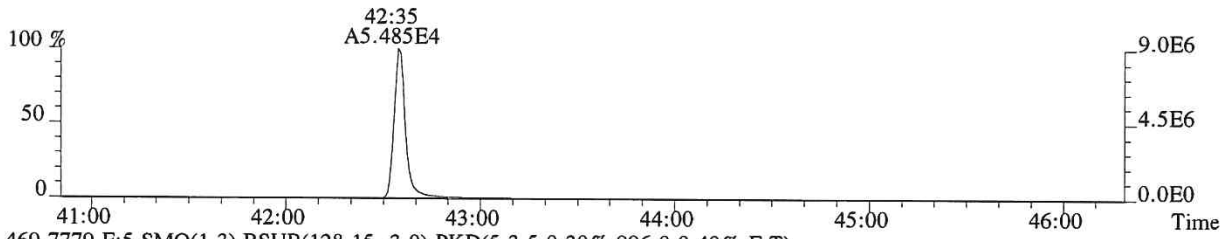


018826

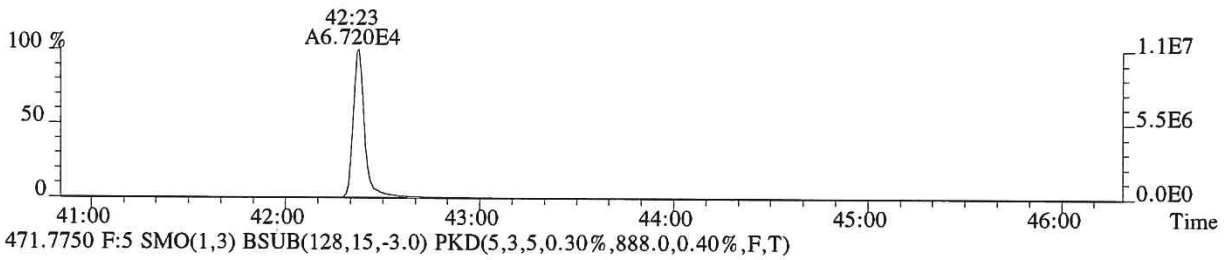
File:P520008 #1-493 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,784.0,0.40%,F,T)



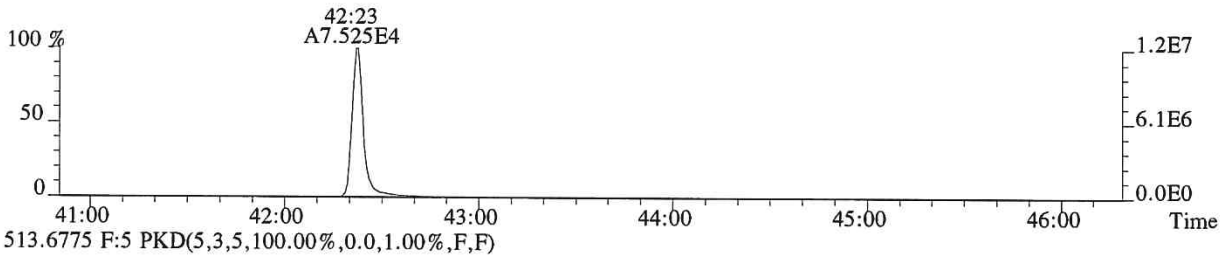
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1636.0,0.40%,F,T)



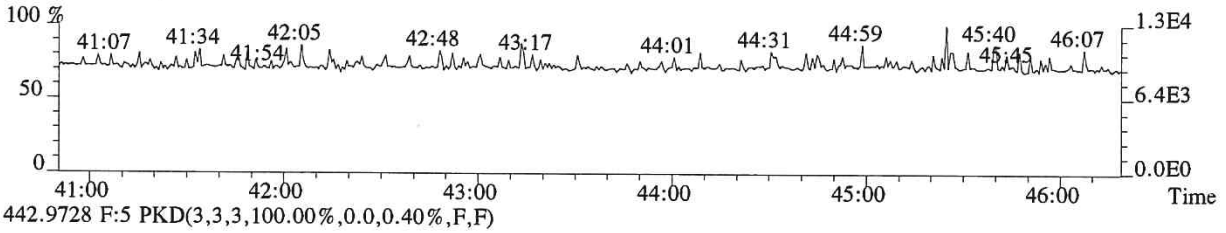
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,996.0,0.40%,F,T)



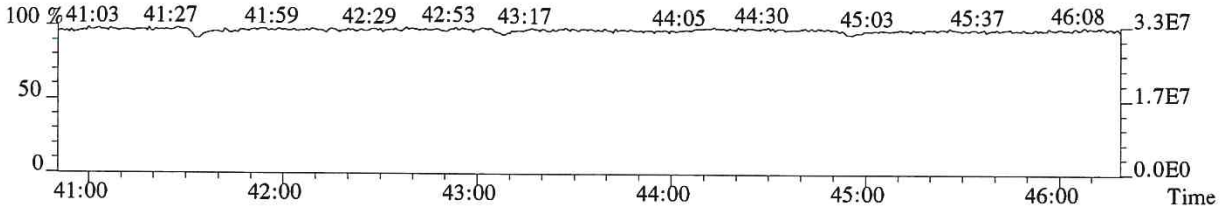
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,888.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

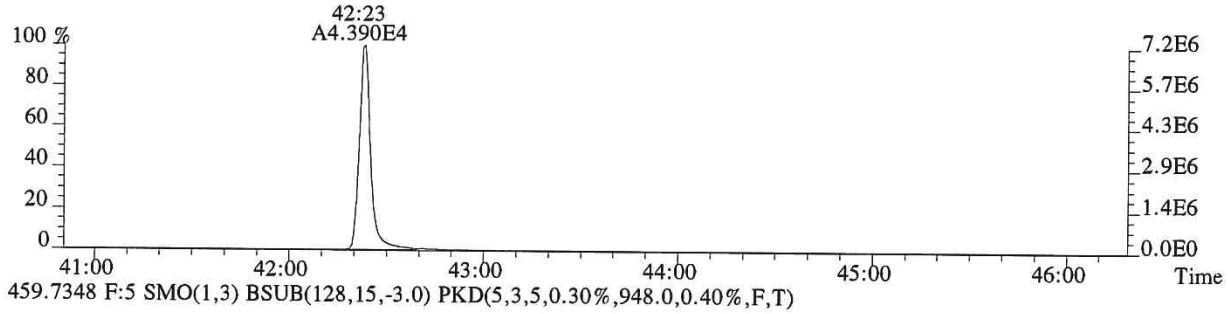


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

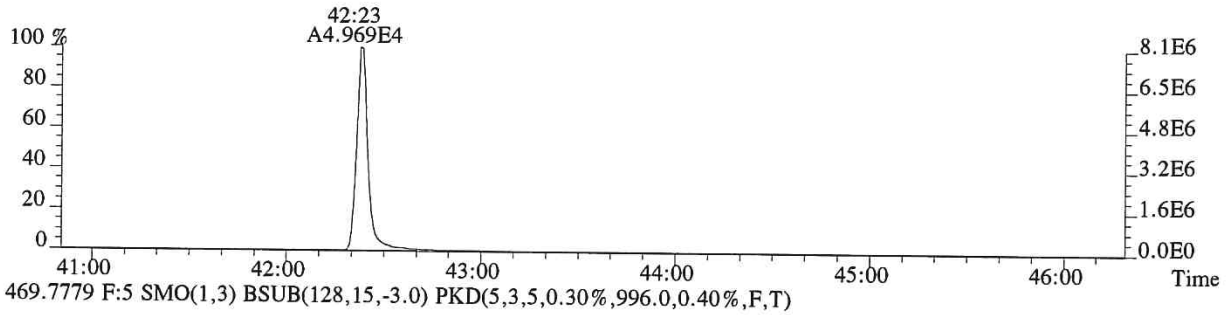


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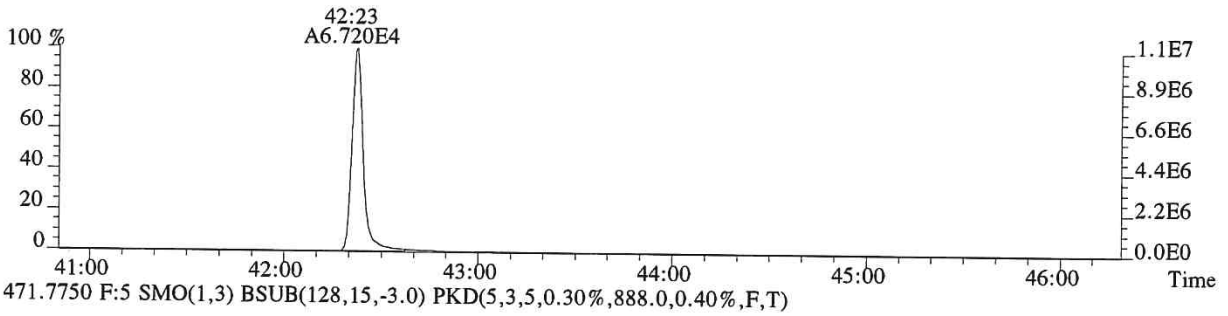
File:P520008 #1-493 Acq:16-JAN-2019 21:59:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:EQ1900017-03
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,616.0,0.40%,F,T)



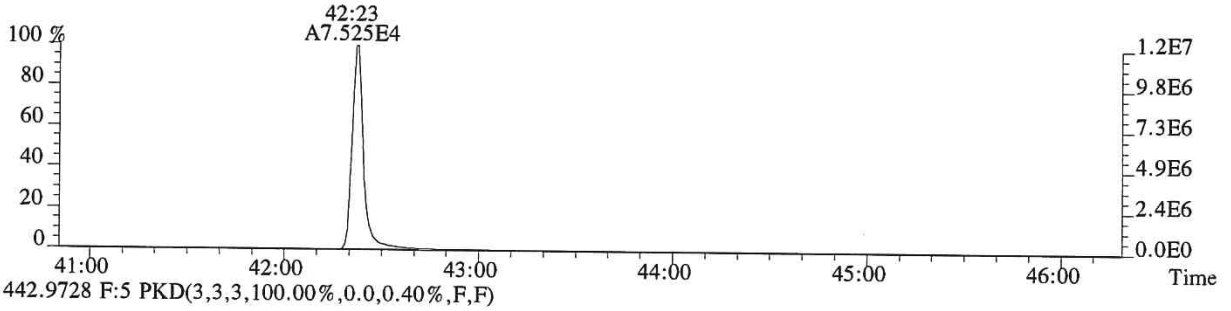
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,948.0,0.40%,F,T)



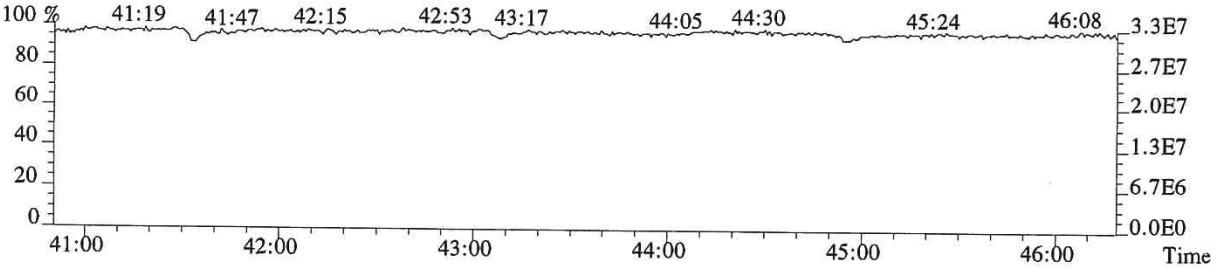
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,996.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,888.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018828

Continuing Calibration

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P5198165

Date: 01/09/19 - 01/10/19

Circle one: (Beginning) / Ending

Method: (1613) / 1613E / 8290/ VCP / Tetra / TCDD Only / TCDF Conf / VCP Conf / 8280 / M23 / TO-9A

Retention Window/Column Performance Check:	Analyst	Second Check
Windows in and first and last eluters labeled	✓	✓
Column Performance shows less than or equal to 25% valley between column specific 2378 isomer and its closest eluters	✓	✓
No QC ion deflections affect column specific 2378 isomer or its closest eluters (HRMS Only)	✓	✓

CS3 Continuing Calibration	Analyst	Second Check
Percent RSD within method criteria	✓	✓
All relative abundance ratios meet method criteria	✓	✓
No QC ion deflections of greater than 20% (HRMS Only)	✓	✓
Mass spectrometer resolution greater than or equal to 10,000 and documented (HRMS Only)	✓	✓
2378-TCDD elutes at 25 minutes or later on the DB-5 column / DB-5MSUI column	✓	✓
Signal-to-noise of all target analytes and their labeled standards at least 10:1	✓	✓
Valley between labeled 123478 and 123678 HxCDD peaks less than or equal to 50% (LRMS Only)	N/A	N/A
Ending Calibration injected prior to end of 12 hour clock	N/A	N/A

Analyst: JC

Second QC: LKL

ccalqc.xls 07/17/12

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: Case No.: Client No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm)

Init. Calib. Date: 01/24/18

Init. Calib.Times: 11:44

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
195556	CS3	P519865	9-JAN-19	16:11:10
192977	WINDOW DEFINE	P519866	9-JAN-19	17:04:38
METHOD BLANK	EQ1900008-01	P519867	9-JAN-19	17:53:20
METHOD BLANK	EQ1900003-01	P519868	9-JAN-19	18:41:07
SL0215	E1801139-002	P519869	9-JAN-19	19:29:44
SL0216	E1801139-003	P519870	9-JAN-19	20:18:21
SL0217	E1801139-004	P519871	9-JAN-19	21:06:58
SL0218	E1801139-005	P519872	9-JAN-19	21:55:36
SL0219	E1801139-006	P519873	9-JAN-19	22:44:14
SL0220	E1801139-007	P519874	9-JAN-19	23:32:51
SL0222	E1801139-008	P519875	10-JAN-19	00:21:27
SL0223	E1801139-009	P519876	10-JAN-19	01:10:06
SL0224	E1801139-010	P519877	10-JAN-19	01:58:43
SL0225	E1801139-011	P519878	10-JAN-19	02:47:20
SL0226	E1801139-012	P519879	10-JAN-19	03:36:06

E1801139

Sample List Report — **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS07.PRO\SampleDB\20190109A.SPL
Last Modified: Thursday, January 10, 2019 06:44:26 Central Standard Time
Printed: Thursday, January 10, 2019 06:44:28 Central Standard Time

Page Position (1, 1)

opus 4: P519865-P519879 res

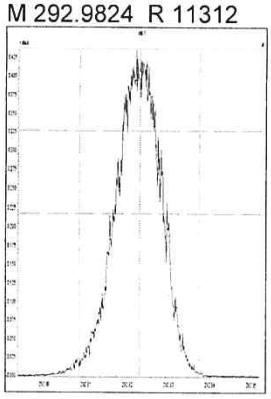
	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	1/9/19	16:11	P519865	CS3	195556	EPA1613_ALS	Dioxin_ALS	Tray1:2	LG	HRMS check 16:07
2		17:04	P519866	WINDOWDEFINE	192977	EPA1613_ALS	Dioxin_ALS	Tray1:1		
3		17:53	P519867	MB	EQ1900008-01	EPA1613_ALS	Dioxin_ALS	Tray1:3		
4		18:41	P519868	MB	EQ1900003-01	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		19:29	P519869	E1801139-002	E1801139-002	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		20:18	P519870	E1801139-003	E1801139-003	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		21:06	P519871	E1801139-004	E1801139-004	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		21:55	P519872	E1801139-005	E1801139-005	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		22:44	P519873	E1801139-006	E1801139-006	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		23:32	P519874	E1801139-007	E1801139-007	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11	1/10/19	00:21	P519875	E1801139-008	E1801139-008	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		01:10	P519876	E1801139-009	E1801139-009	EPA1613_ALS	Dioxin_ALS	Tray1:12		
13		01:58	P519877	E1801139-010	E1801139-010	EPA1613_ALS	Dioxin_ALS	Tray1:13		
14		02:47	P519878	E1801139-011	E1801139-011	EPA1613_ALS	Dioxin_ALS	Tray1:14		
15		03:36	P519879	E1801139-012	E1801139-012	EPA1613_ALS	Dioxin_ALS	Tray1:15		HRMS check 04:32
16	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2	---	---
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---

qc 01/10/19

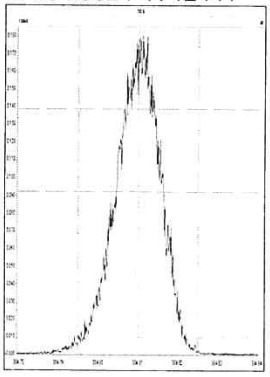
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Wednesday, January 09, 2019 16:07:39 Central Standard Time

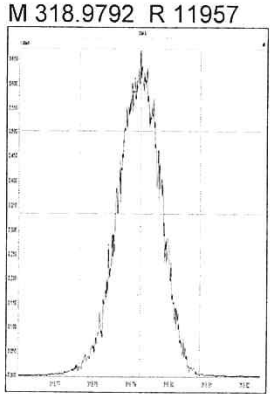
M 292.9824 R 11312



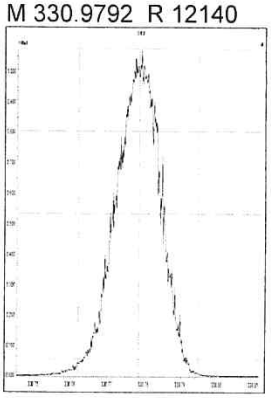
M 304.9824 R 12441



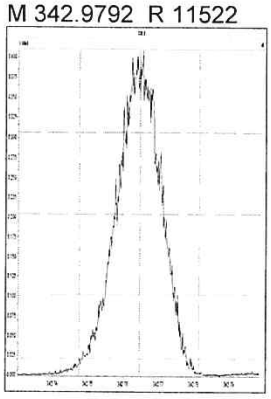
M 318.9792 R 11957



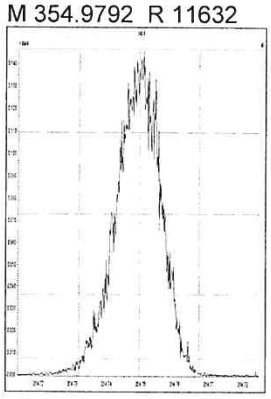
M 330.9792 R 12140



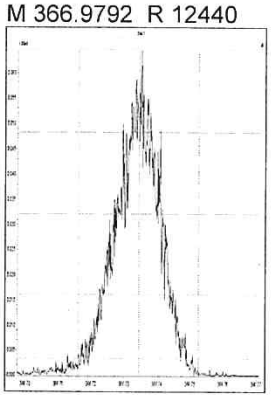
M 342.9792 R 11522



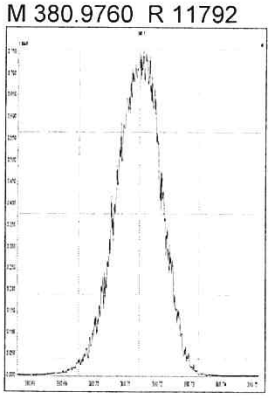
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M 366.9792 R 12440



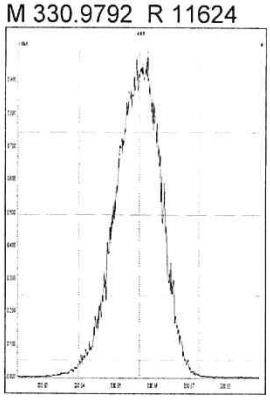
M 380.9760 R 11792



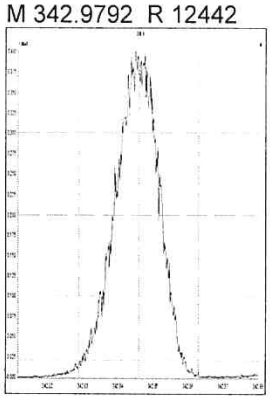
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

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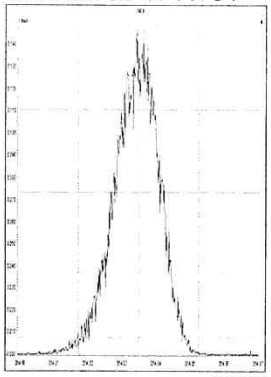
M 330.9792 R 11624



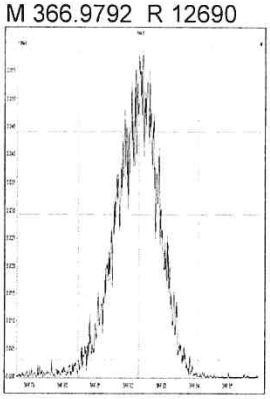
M 342.9792 R 12442



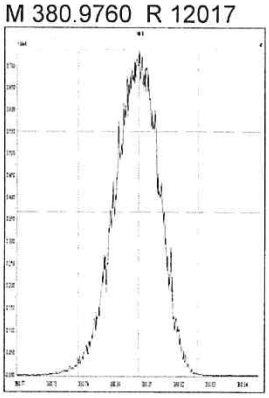
M 354.9792 R 11734



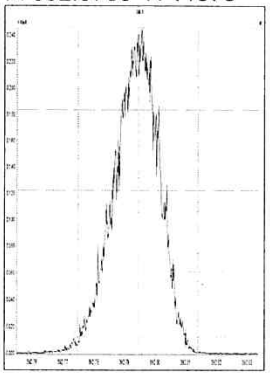
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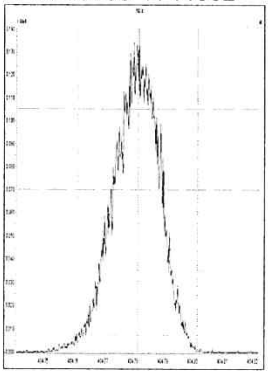
M 380.9760 R 12017



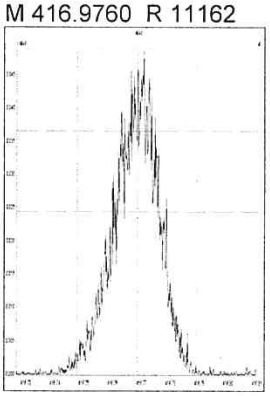
M 392.9760 R 11575



M 404.9760 R 11362



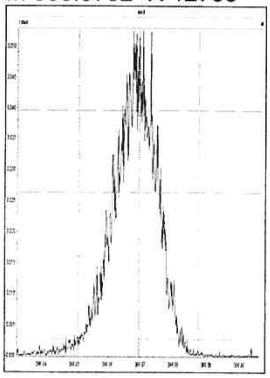
M 416.9760 R 11162



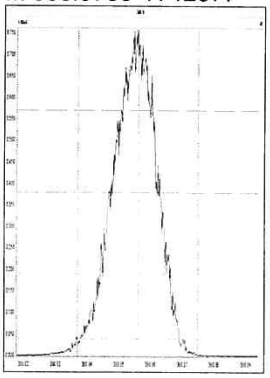
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

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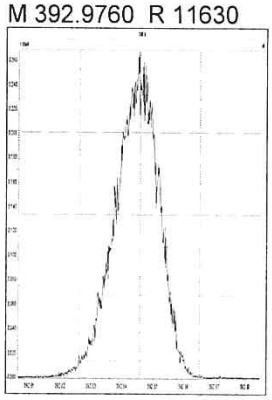
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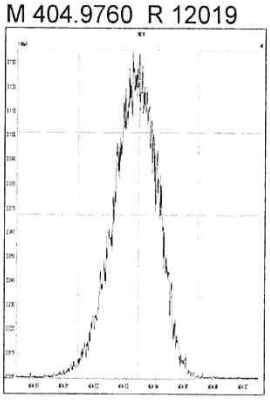
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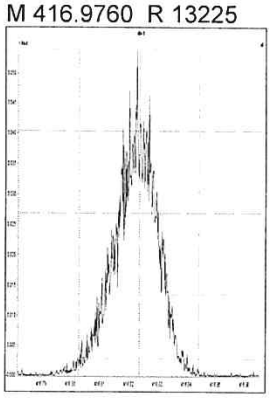
M 392.9760 R 11630



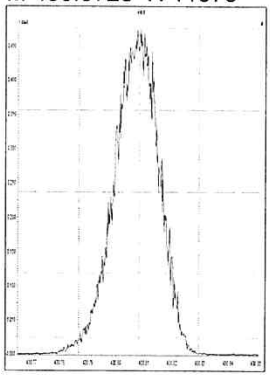
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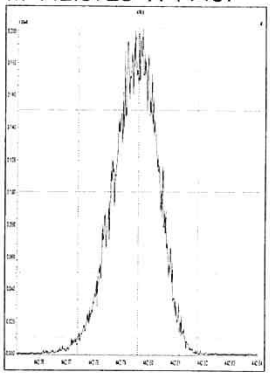
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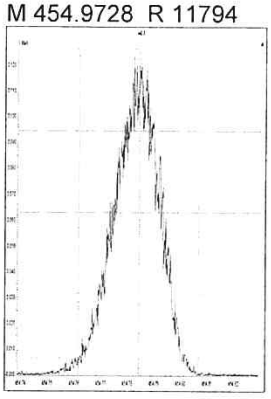
M 430.9728 R 11575



M 442.9728 R 11467



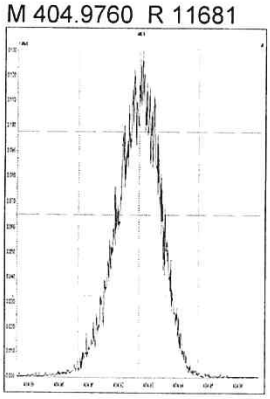
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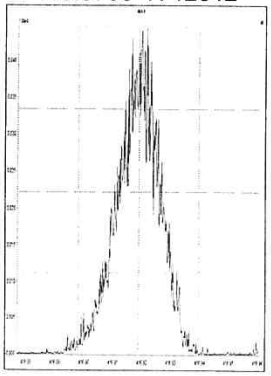
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Wednesday, January 09, 2019 16:09:33 Central Standard Time

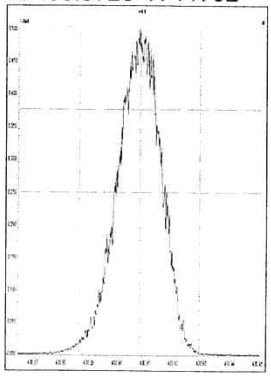
M 404.9760 R 11681



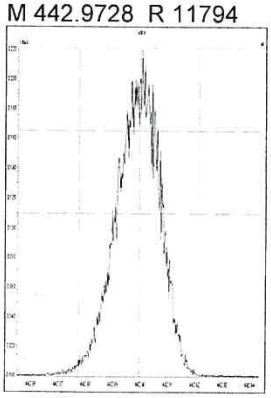
M 416.9760 R 12312



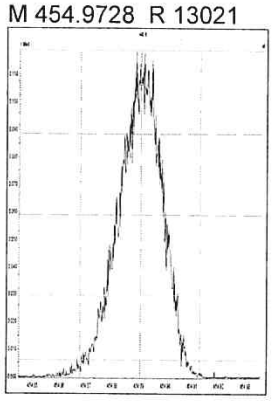
M 430.9728 R 11792



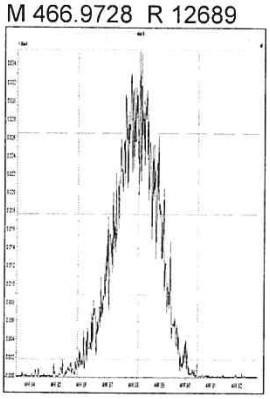
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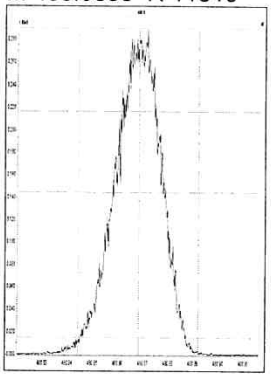
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M 466.9728 R 12689



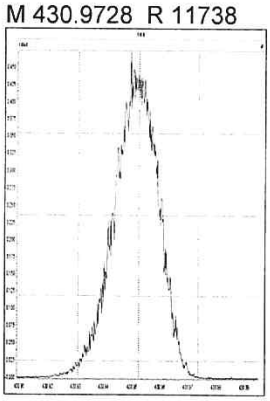
M 480.9696 R 11310



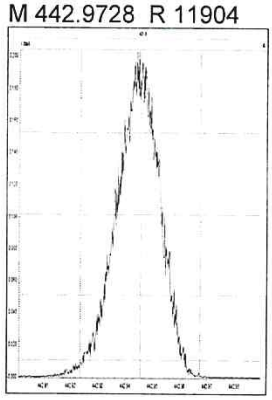
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Wednesday, January 09, 2019 16:10:16 Central Standard Time

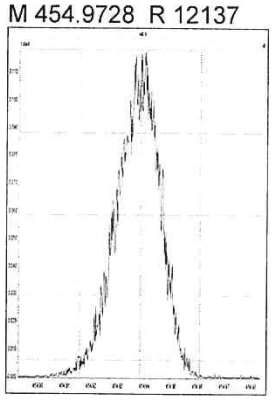
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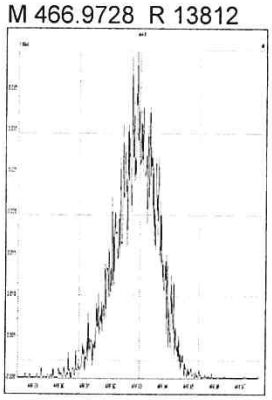
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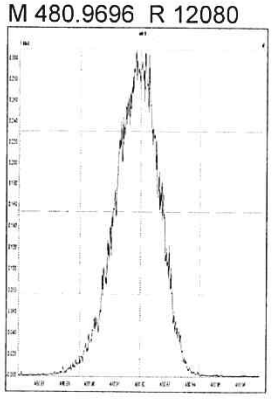
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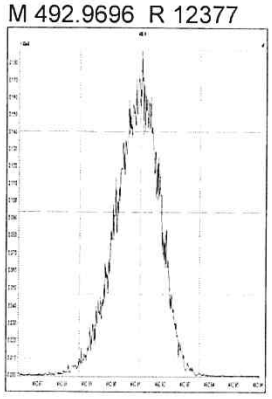
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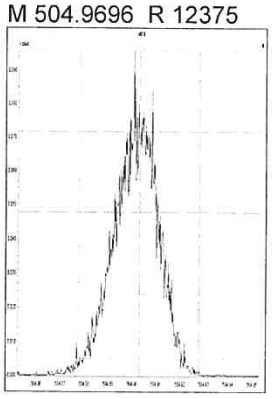
M 480.9696 R 12080



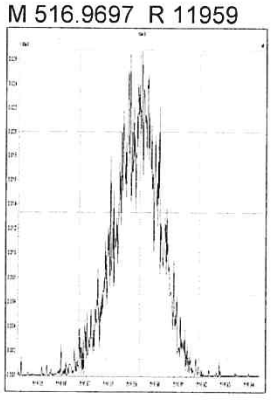
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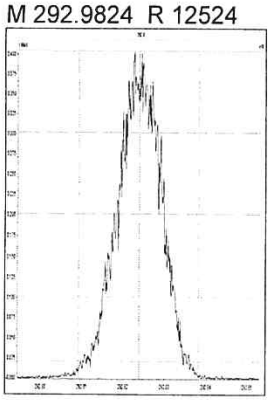
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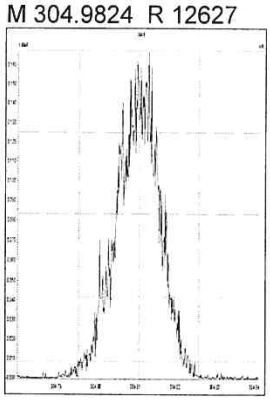
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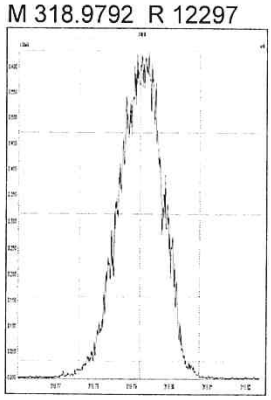
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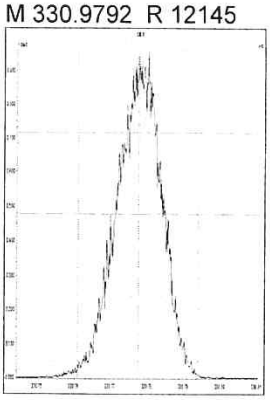
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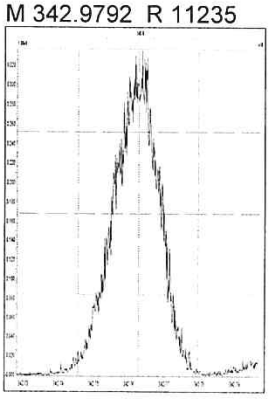
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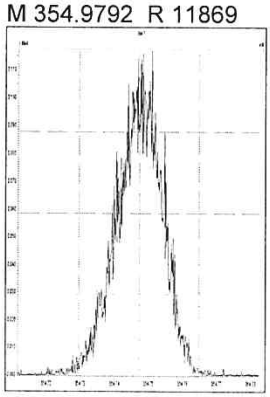
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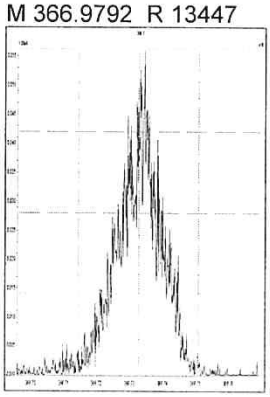
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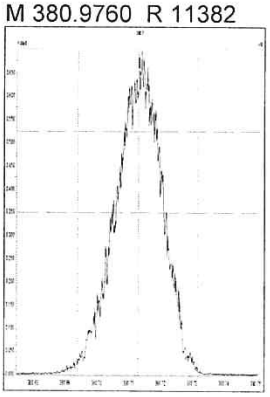
M 354.9792 R 11869



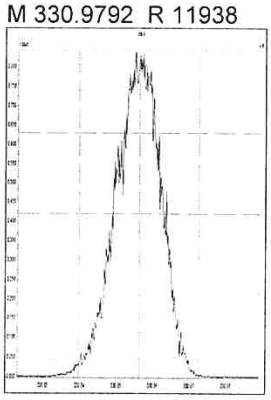
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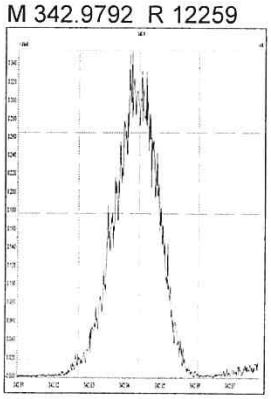
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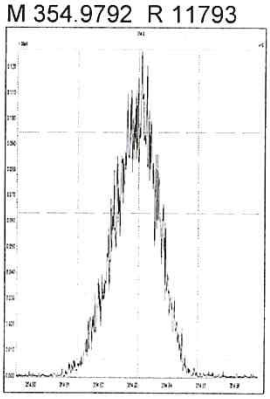
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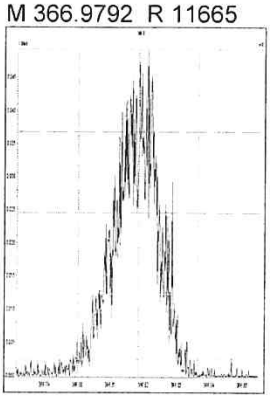
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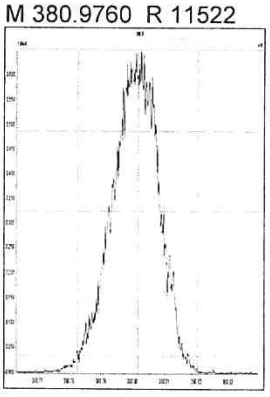
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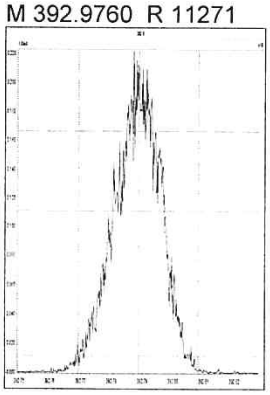
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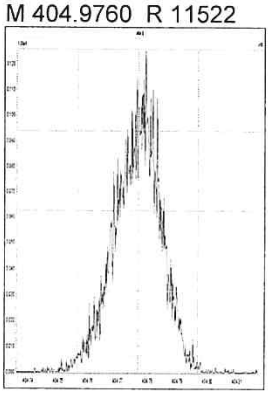
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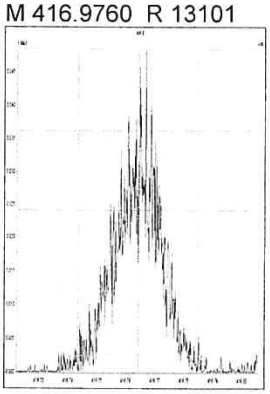
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M 404.9760 R 11522

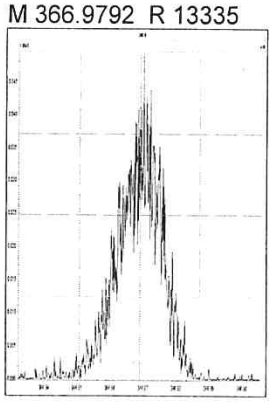


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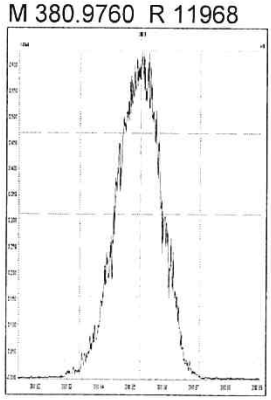


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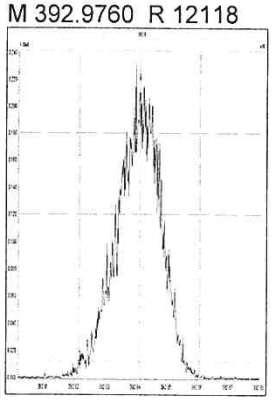
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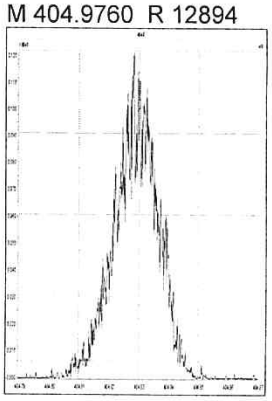
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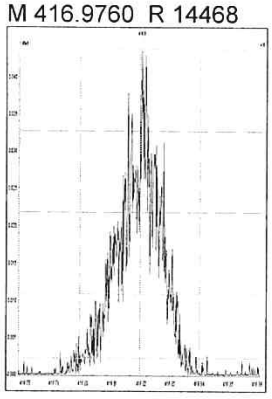
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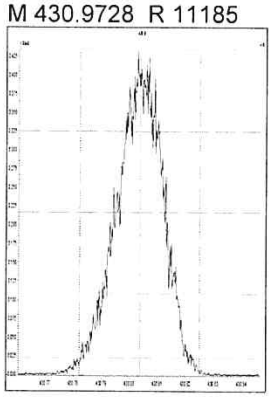
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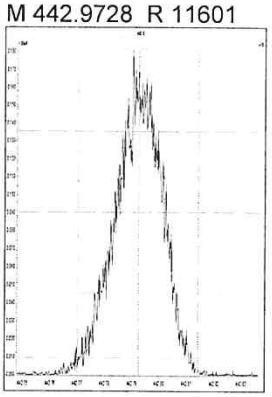
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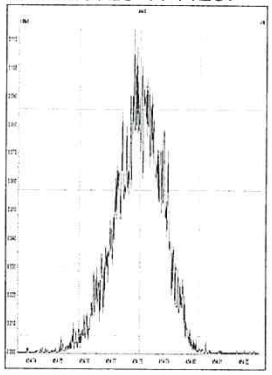
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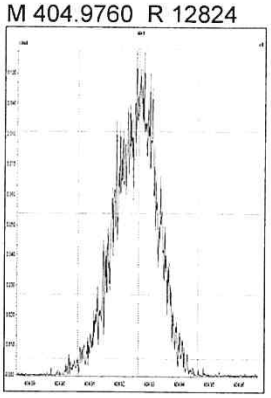
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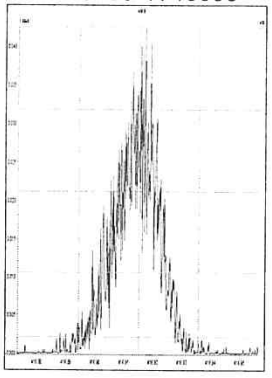
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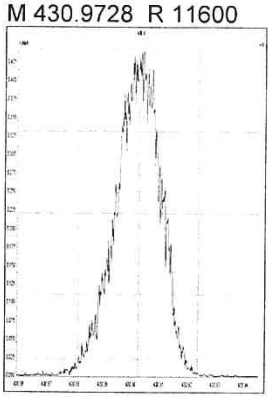
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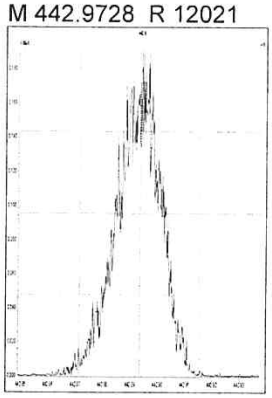
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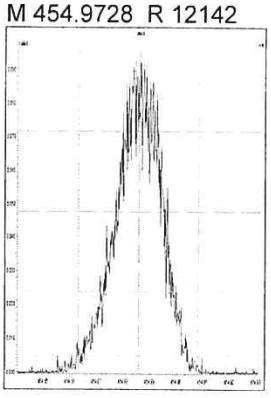
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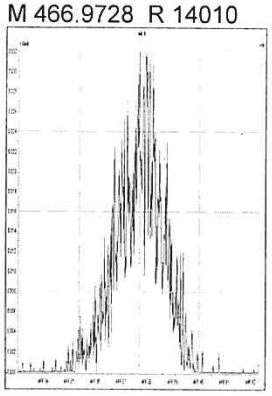
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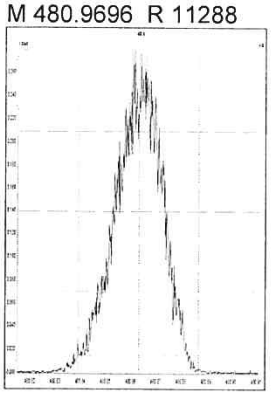
M 454.9728 R 12142



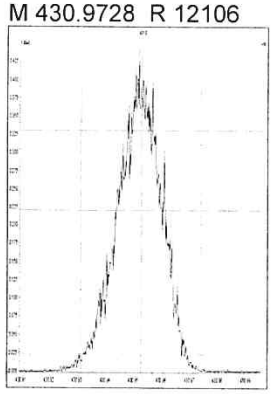
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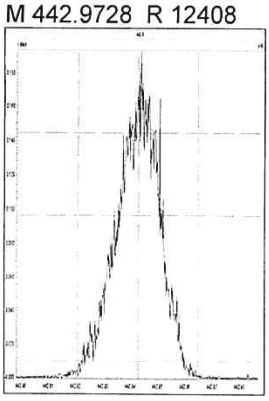
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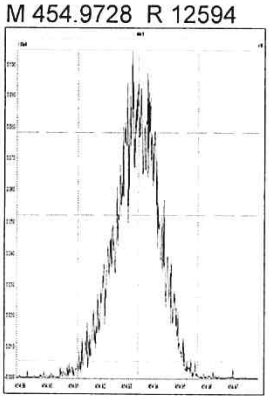
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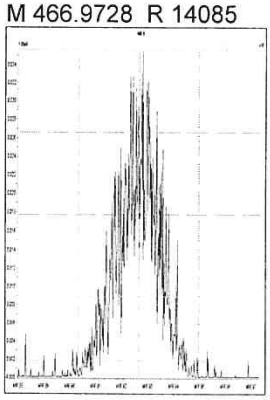
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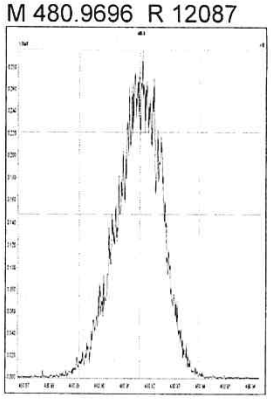
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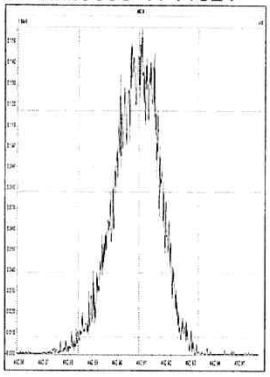
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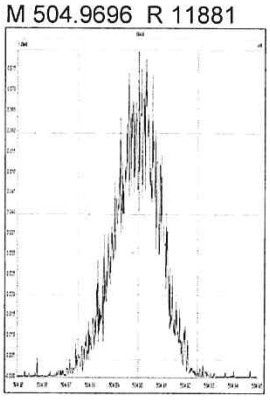
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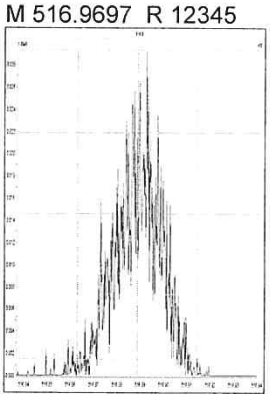
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M 504.9696 R 11881



M 516.9697 R 12345



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

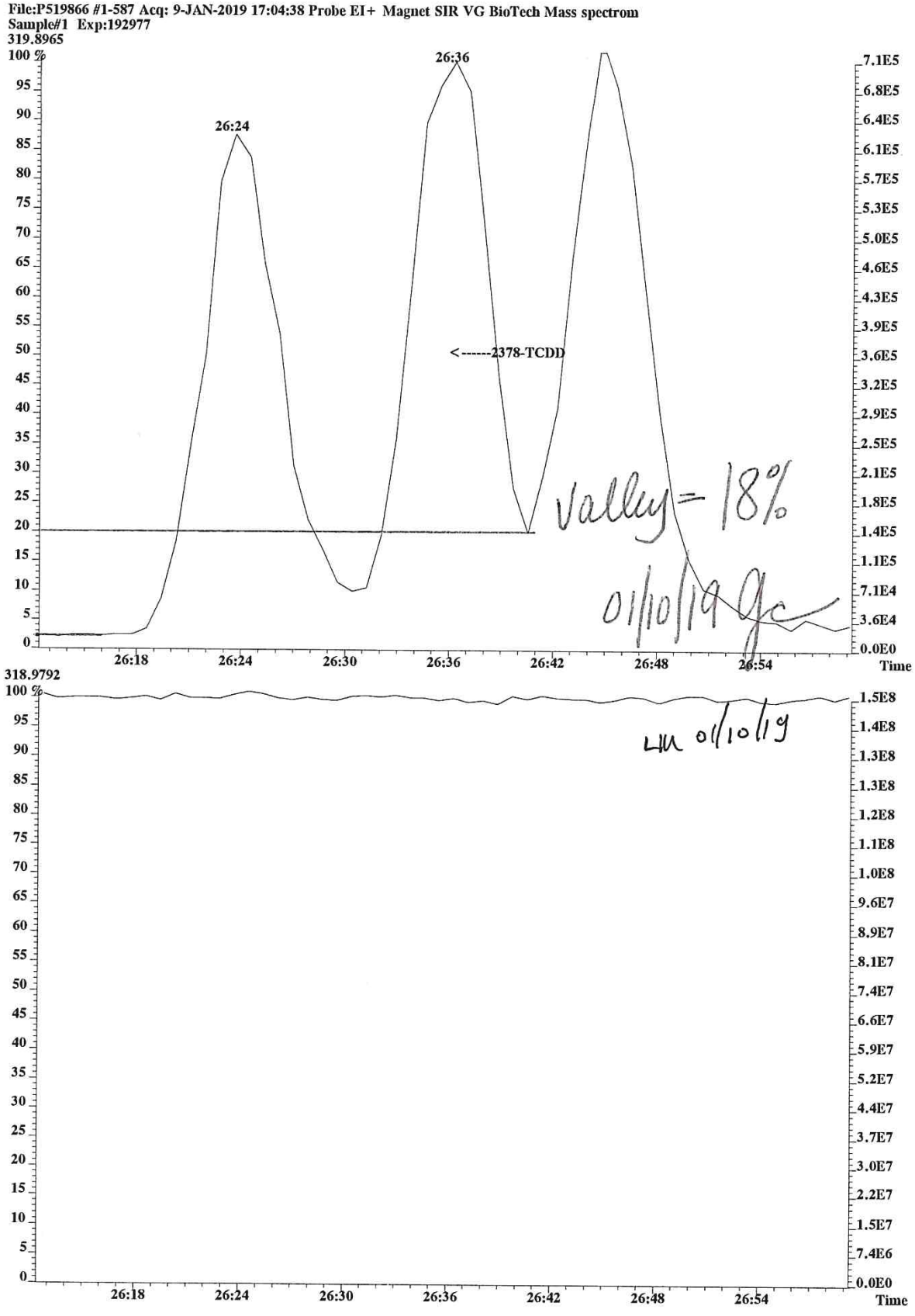
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Lab Code: ALSTX
GC Column: DB-5MSUI

Case No.: _____ SDG No.:
ID: 0.25 (mm)

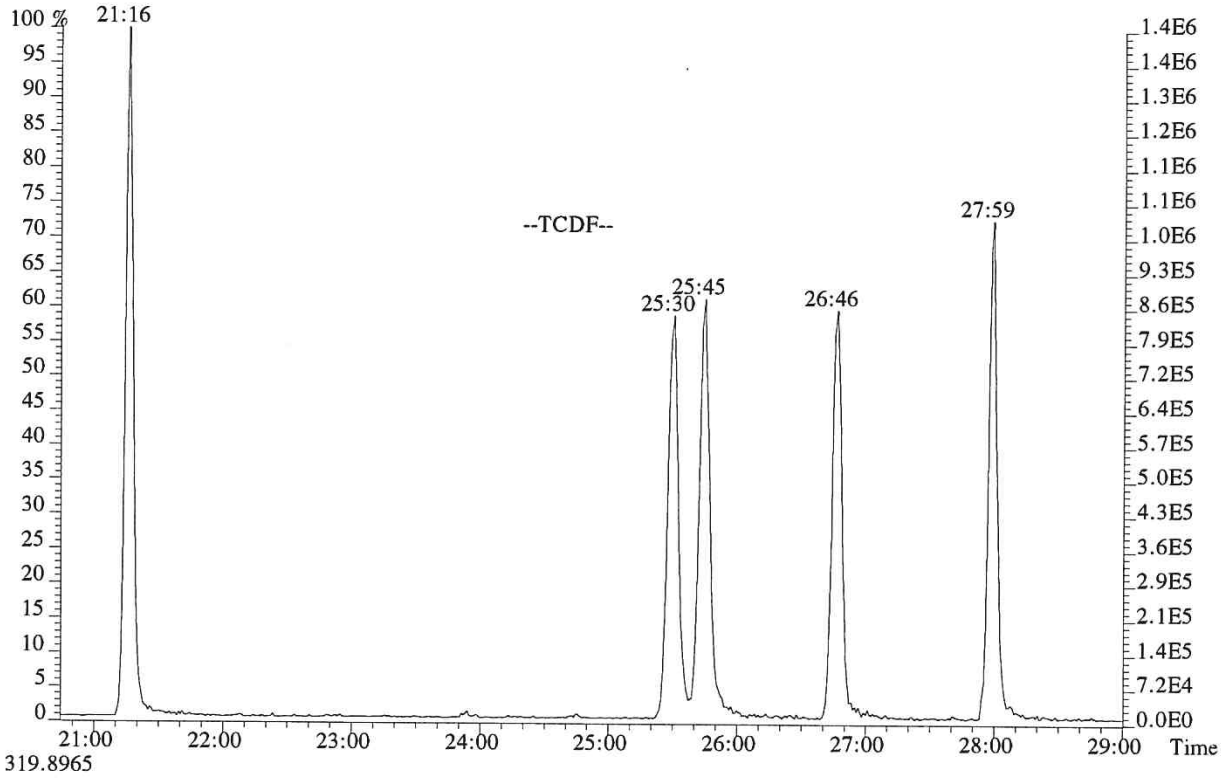
Lab File ID: P519866
Date Analyzed: 9-JAN-2019
Time Analyzed: 17:04:38

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	21:16	27:59
TCDD	22:52	27:48
PeCDF	27:58	32:46
PeCDD	29:46	32:31
HxCDF	33:33	36:17
HxCDD	34:08	35:52
HpCDF	37:42	39:11
HpCDD	38:00	38:43

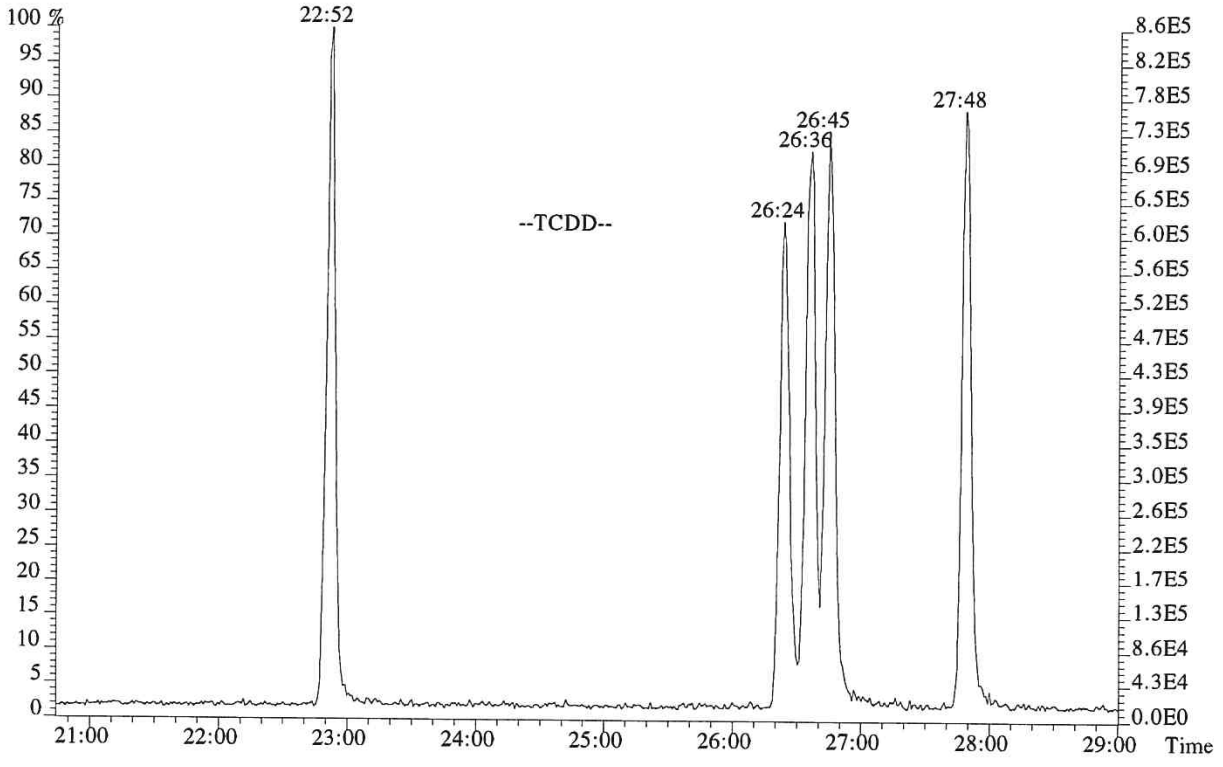
% Valley 2378-TCDD: 18 %


File:P519866 #1-587 Acq: 9-JAN-2019 17:04:38 Probe EI+ Magnet SIR VG BioTech Mass spectrom
Sample#1 Exp:192977
319.8965
26:24
26:36
<------2378-TCDD
Valley = 18%
01/10/19 JC
318.9792
LM 01/10/19
Time

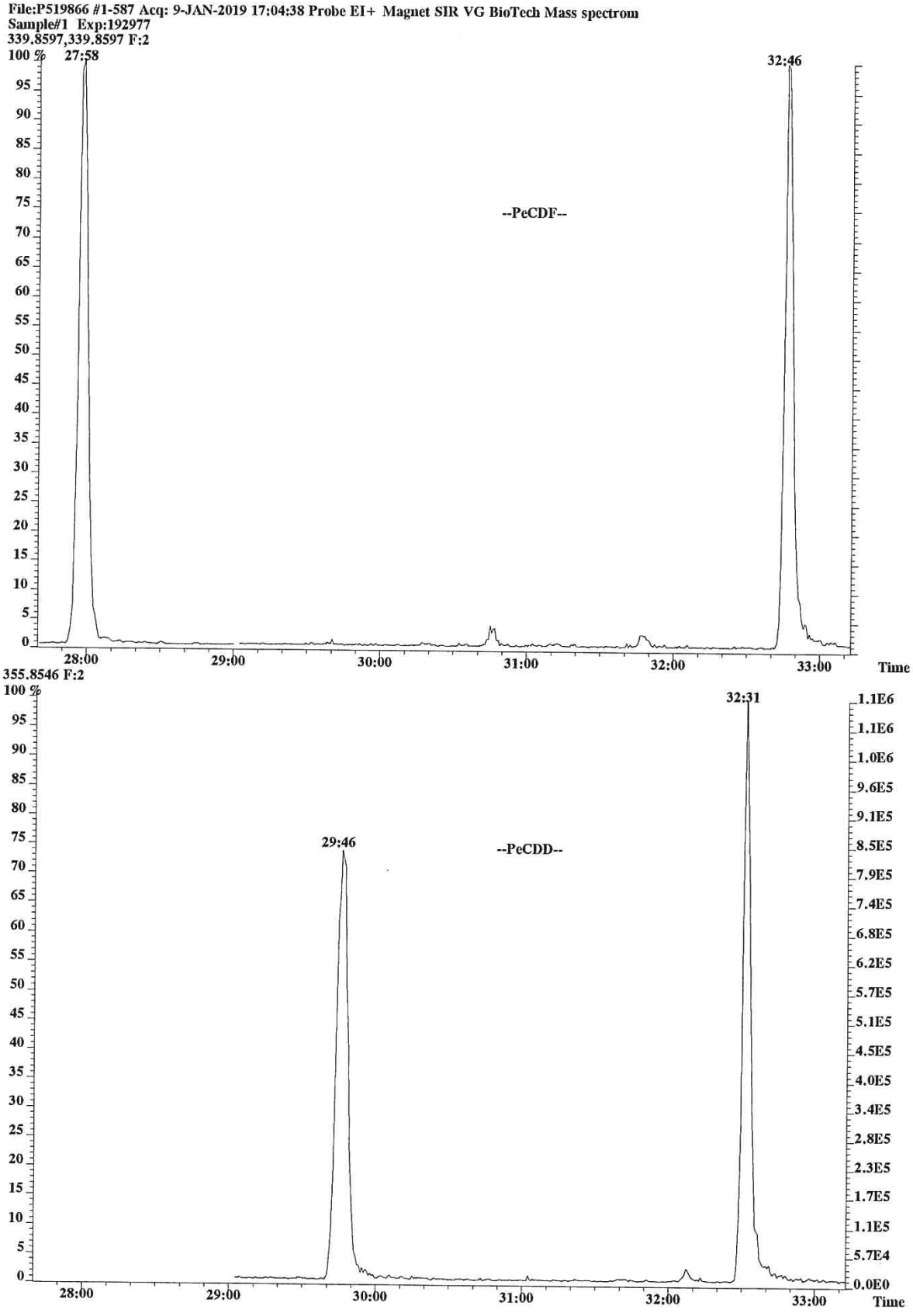
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Sample#1 Exp:192977
303.9016

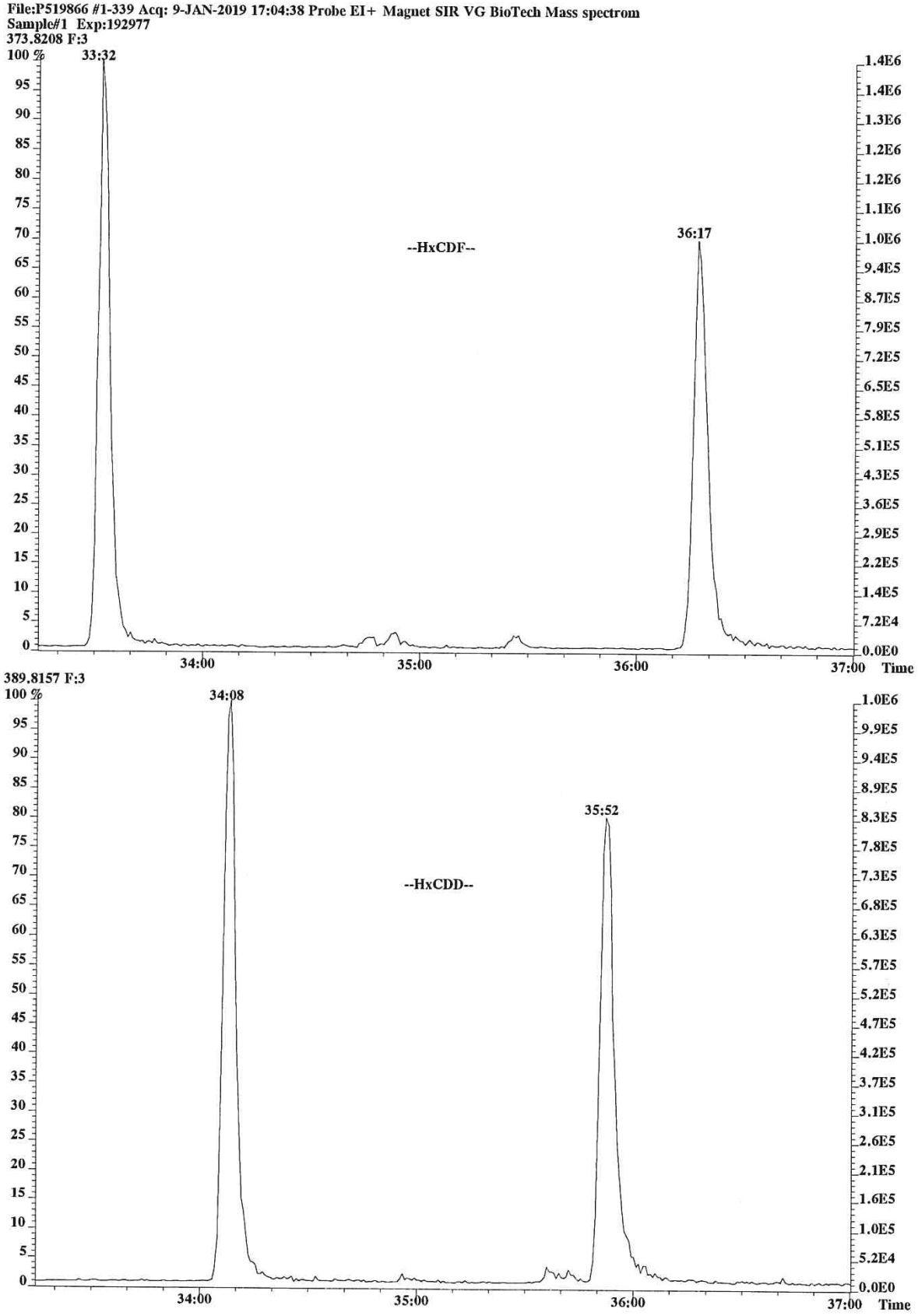


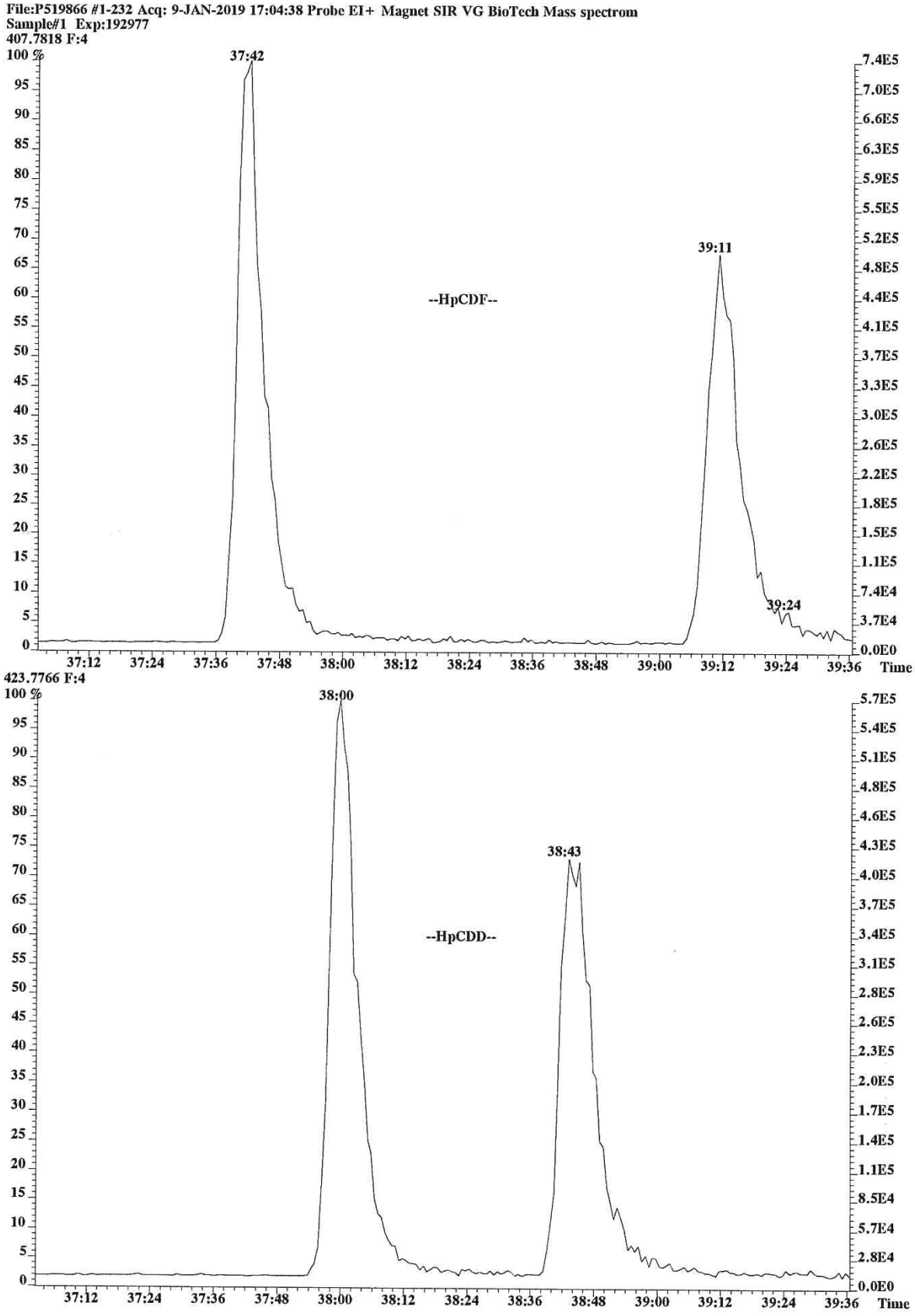
319.8965



018843


File:P519866 #1-587 Acq: 9-JAN-2019 17:04:38 Probe EI+ Magnet SIR VG BioTech Mass spectrom
Sample#1 Exp:192977
339.8597,339.8597 F:2
100 %
27:58
32:46
--PeCDF--
28:00
29:00
30:00
31:00
32:00
33:00
Time
355.8546 F:2
100 %
32:31
29:46
--PeCDD--
1.1E6
1.1E6
1.0E6
9.6E5
9.1E5
8.5E5
7.9E5
7.4E5
6.8E5
6.2E5
5.7E5
5.1E5
4.5E5
4.0E5
3.4E5
2.8E5
2.3E5
1.7E5
1.1E5
5.7E4
0.0E0
28:00
29:00
30:00
31:00
32:00
33:00
Time


File:P519866 #1-339 Acq: 9-JAN-2019 17:04:38 Probe EI+ Magnet SIR VG BioTech Mass spectrom
Sample#1 Exp:192977
373.8208 F:3
33:32
36:17
--HxCDF--
389.8157 F:3
34:08
35:52
--HxCDD--
Time


File:P519866 #1-232 Acq: 9-JAN-2019 17:04:38 Probe EI+ Magnet SIR VG BioTech Mass spectrom
Sample#1 Exp:192977
407.7818 F:4
37:42
39:11
39:24
--HpCDF--
423.7766 F:4
38:00
38:43
--HpCDD--
Time

USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519865 Analysis Date: 9-JAN-19 Time: 16:11:10

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	9.5	7.8 - 12.9	-5.3
1,2,3,7,8-PeCDD	M+2/M+4	1.55	1.32-1.78	51	39 - 65	2.1
1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	50	39 - 64	0.1
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	51	39 - 64	1.1
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	53	41 - 61	6.7
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	51	43 - 58	1.1
OCDD	M+2/M+4	0.90	0.76-1.02	101	79 - 126	1.3
2,3,7,8-TCDF	M/M+2	0.71	0.65-0.89	10.0	8.4 - 12.0	0.3
1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	50	41 - 60	0.4
2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	50	41 - 61	-0.2
1,2,3,4,7,8-HxCDF	M+2/M+4	1.21	1.05-1.43	51	45 - 56	2.6
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	51	44 - 57	2.5
1,2,3,7,8,9-HxCDF	M+2/M+4	1.22	1.05-1.43	50	45 - 56	0.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.21	1.05-1.43	51	44 - 57	1.1
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.01	0.88-1.20	51	45 - 55	1.9
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.00	0.88-1.20	52	43 - 58	3.4
OCDF	M+2/M+4	0.91	0.76-1.02	98	63 - 159	-1.8

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519865 Analysis Date: 9-JAN-19 Time: 16:11:10

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	102	82 - 121	1.9
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.60	1.32-1.78	106	62 - 160	5.6
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	86	85 - 117	-13.9
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	102	85 - 118	2.2
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.08	0.88-1.20	97	72 - 138	-3.5
13C-OCDD	M+2/M+4	0.90	0.76-1.02	220	96 - 415	10.2
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	90	71 - 140	-10.1
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	100	76 - 130	0.2
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	101	77 - 130	1.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	81	76 - 131	-18.8
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	92	70 - 143	-8.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	87	74 - 135	-12.9
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	91	73 - 137	-8.8
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	94	78 - 129	-6.4
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	90	77 - 129	-9.6
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				9.9	7.8 - 12.7	-0.7

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
195556

Run #7 Filename P519865 Samp: 1 Inj: 1 Acquired: 9-JAN-19 16:11:10
Processed: 10-JAN-19 08:15:26 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:46	4.136e+03	5.827e+03	0.71	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:46	3.529e+04	2.284e+04	1.55	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:48	3.310e+04	2.152e+04	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:46	2.668e+04	2.197e+04	1.21	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:53	3.273e+04	2.611e+04	1.25	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:27	2.793e+04	2.317e+04	1.21	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	36:15	2.364e+04	1.933e+04	1.22	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:42	2.481e+04	2.468e+04	1.01	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	39:10	1.911e+04	1.916e+04	1.00	yes	no	1.258
10	Unk	OCDF	41:53	3.234e+04	3.572e+04	0.91	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:46	3.267e+03	4.238e+03	0.77	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	32:08	2.371e+04	1.527e+04	1.55	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:37	1.830e+04	1.459e+04	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:42	2.256e+04	1.789e+04	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:57	2.195e+04	1.787e+04	1.23	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:44	1.723e+04	1.683e+04	1.02	yes	no	1.025
17	Unk	OCDD	41:44	2.740e+04	3.035e+04	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:44	4.671e+04	5.878e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:45	7.029e+04	4.405e+04	1.60	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:47	6.997e+04	4.415e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:45	2.688e+04	5.278e+04	0.51	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:52	3.454e+04	6.774e+04	0.51	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:26	3.112e+04	5.991e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	36:14	2.570e+04	4.945e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:40	2.226e+04	4.961e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	39:10	1.828e+04	4.060e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:45	3.196e+04	4.106e+04	0.78	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	32:06	4.913e+04	3.072e+04	1.60	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:36	3.539e+04	2.788e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:41	4.315e+04	3.393e+04	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:42	3.409e+04	3.168e+04	1.08	yes	no	0.858
32	IS	13C-OCDD	41:42	4.829e+04	5.371e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	26:02	3.440e+04	4.317e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:57	4.420e+04	3.525e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:46	7.809e+03				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
195556

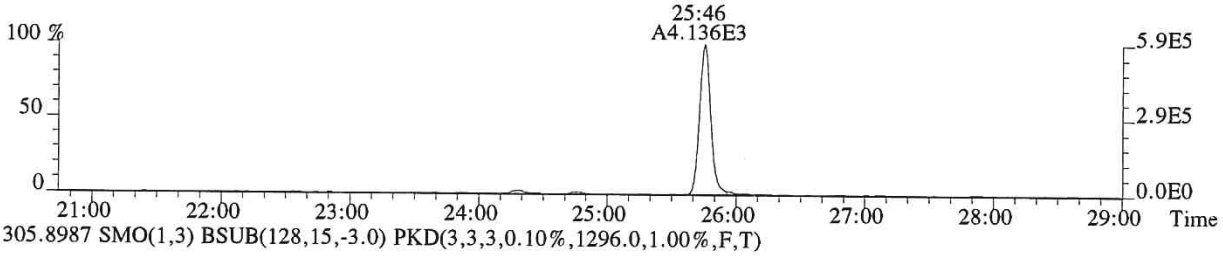
Run #7 Filename P519865 Samp: 1 Inj: 1 Acquired: 9-JAN-19 16:11:10
Processed: 10-JAN-19 08:15:26 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.87e+05	9.68e+02	6.1e+02	8.00e+05	1.30e+03	6.2e+02
2	1,2,3,7,8-PeCDF	5.27e+06	8.00e+02	6.6e+03	3.45e+06	2.12e+03	1.6e+03
3	2,3,4,7,8-PeCDF	5.43e+06	8.00e+02	6.8e+03	3.57e+06	2.12e+03	1.7e+03
4	1,2,3,4,7,8-HxCDF	4.49e+06	9.20e+02	4.9e+03	3.70e+06	8.96e+02	4.1e+03
5	1,2,3,6,7,8-HxCDF	4.61e+06	9.20e+02	5.0e+03	3.76e+06	8.96e+02	4.2e+03
6	2,3,4,6,7,8-HxCDF	4.29e+06	9.20e+02	4.7e+03	3.61e+06	8.96e+02	4.0e+03
7	1,2,3,7,8,9-HxCDF	3.08e+06	9.20e+02	3.3e+03	2.50e+06	8.96e+02	2.8e+03
8	1,2,3,4,6,7,8-HpCDF	2.70e+06	5.72e+03	4.7e+02	2.69e+06	2.46e+03	1.1e+03
9	1,2,3,4,7,8,9-HpCDF	1.62e+06	5.72e+03	2.8e+02	1.57e+06	2.46e+03	6.4e+02
10	OCDF	1.61e+06	4.52e+02	3.6e+03	1.80e+06	1.15e+03	1.6e+03
11	2,3,7,8-TCDD	4.95e+05	2.80e+03	1.8e+02	6.41e+05	1.26e+03	5.1e+02
12	1,2,3,7,8-PeCDD	3.78e+06	8.60e+02	4.4e+03	2.43e+06	3.00e+02	8.1e+03
13	1,2,3,4,7,8-HxCDD	3.00e+06	5.24e+02	5.7e+03	2.38e+06	9.64e+02	2.5e+03
14	1,2,3,6,7,8-HxCDD	3.00e+06	5.24e+02	5.7e+03	2.37e+06	9.64e+02	2.5e+03
15	1,2,3,7,8,9-HxCDD	2.77e+06	5.24e+02	5.3e+03	2.33e+06	9.64e+02	2.4e+03
16	1,2,3,4,6,7,8-HpCDD	1.53e+06	8.64e+02	1.8e+03	1.46e+06	4.96e+02	2.9e+03
17	OCDD	1.33e+06	3.92e+02	3.4e+03	1.49e+06	6.04e+02	2.5e+03
18	13C-2,3,7,8-TCDF	6.49e+06	6.11e+03	1.1e+03	8.15e+06	3.64e+03	2.2e+03
19	13C-1,2,3,7,8-PeCDF	1.06e+07	6.56e+02	1.6e+04	6.73e+06	4.56e+02	1.5e+04
20	13C-2,3,4,7,8-PeCDF	1.11e+07	6.56e+02	1.7e+04	7.01e+06	4.56e+02	1.5e+04
21	13C-1,2,3,4,7,8-HxCDF	4.51e+06	1.02e+03	4.4e+03	8.82e+06	1.20e+03	7.3e+03
22	13C-1,2,3,6,7,8-HxCDF	4.99e+06	1.02e+03	4.9e+03	9.71e+06	1.20e+03	8.1e+03
23	13C-2,3,4,6,7,8-HxCDF	4.67e+06	1.02e+03	4.6e+03	9.09e+06	1.20e+03	7.6e+03
24	13C-1,2,3,7,8,9-HxCDF	3.34e+06	1.02e+03	3.3e+03	6.40e+06	1.20e+03	5.3e+03
25	13C-1,2,3,4,6,7,8-HpCDF	2.44e+06	5.28e+03	4.6e+02	5.37e+06	1.01e+04	5.3e+02
26	13C-1,2,3,4,7,8,9-HpCDF	1.52e+06	5.28e+03	2.9e+02	3.39e+06	1.01e+04	3.4e+02
27	13C-2,3,7,8-TCDD	4.82e+06	8.17e+03	5.9e+02	6.07e+06	3.07e+03	2.0e+03
28	13C-1,2,3,7,8-PeCDD	8.02e+06	7.32e+02	1.1e+04	5.00e+06	9.80e+02	5.1e+03
29	13C-1,2,3,4,7,8-HxCDD	5.71e+06	8.36e+02	6.8e+03	4.47e+06	5.00e+02	8.9e+03
30	13C-1,2,3,6,7,8-HxCDD	5.82e+06	8.36e+02	7.0e+03	4.53e+06	5.00e+02	9.1e+03
31	13C-1,2,3,4,6,7,8-HpCDD	2.98e+06	5.52e+02	5.4e+03	2.84e+06	1.01e+03	2.8e+03
32	13C-OCDD	2.36e+06	4.88e+02	4.8e+03	2.64e+06	4.72e+02	5.6e+03
33	13C-1,2,3,4-TCDD	5.21e+06	8.17e+03	6.4e+02	6.61e+06	3.07e+03	2.2e+03
34	13C-1,2,3,7,8,9-HxCDD	5.57e+06	8.36e+02	6.7e+03	4.38e+06	5.00e+02	8.8e+03
35	37Cl-2,3,7,8-TCDD	1.17e+06	1.21e+03	9.7e+02			

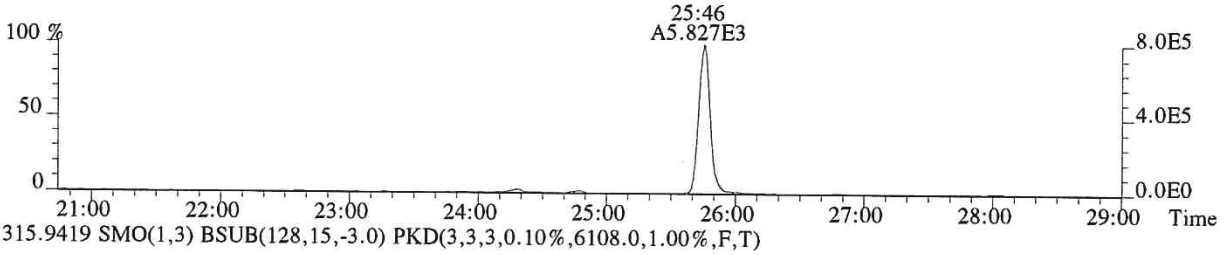
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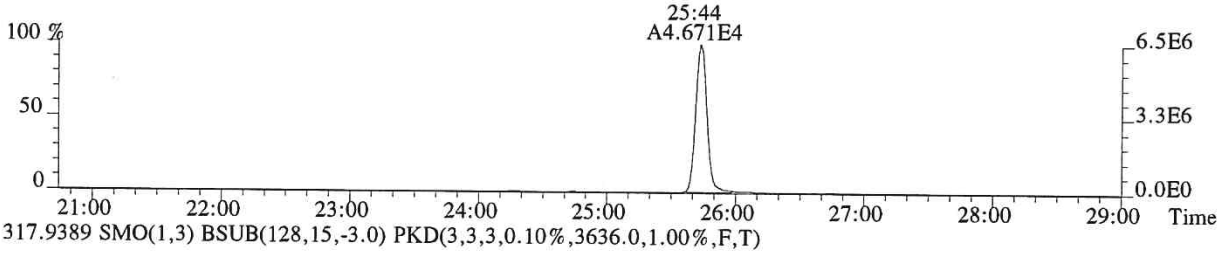
File:P519865 #1-587 Acq: 9-JAN-2019 16:11:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,968.0,1.00%,F,T)



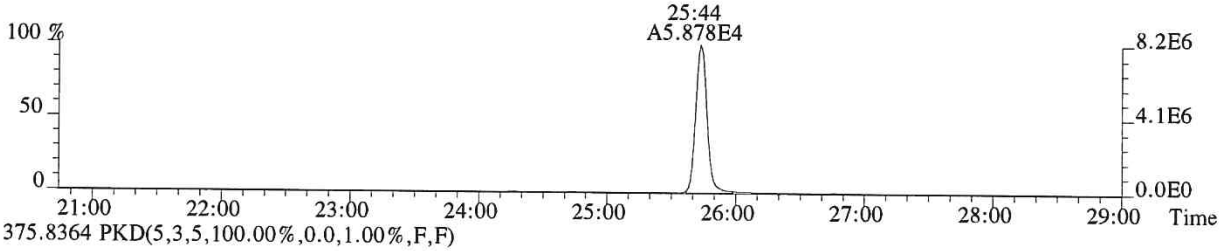
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1296.0,1.00%,F,T)



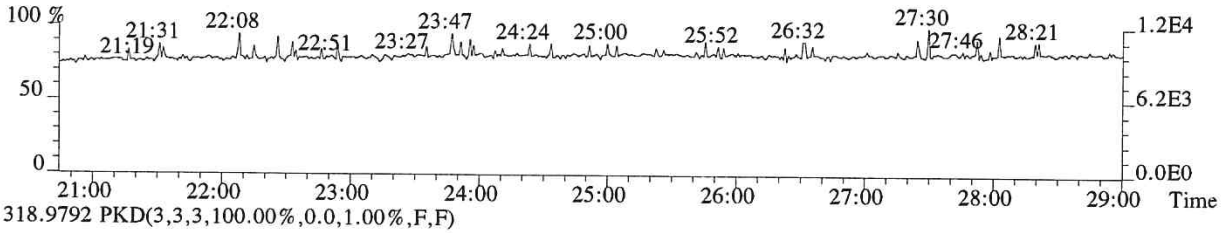
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6108.0,1.00%,F,T)



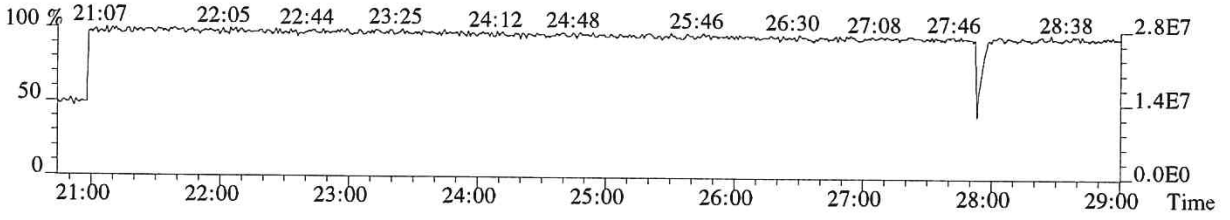
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3636.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

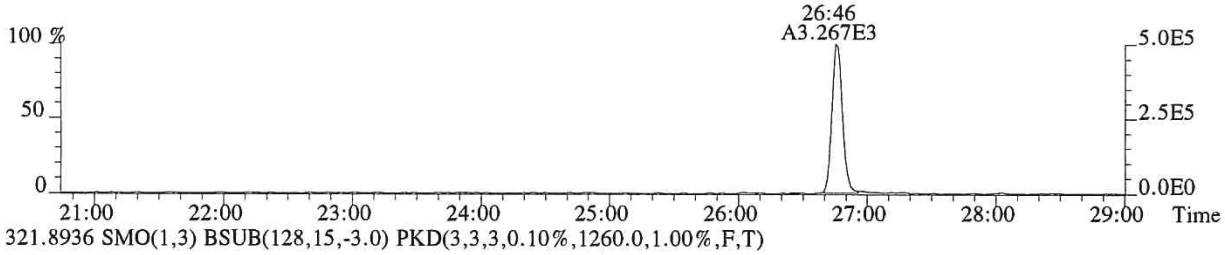


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

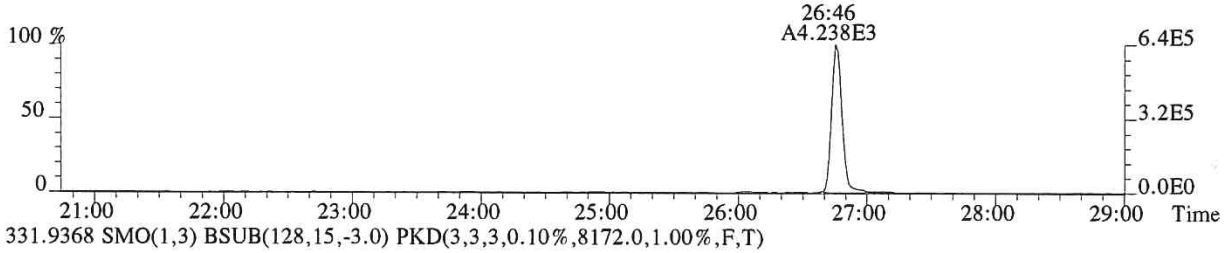


018851

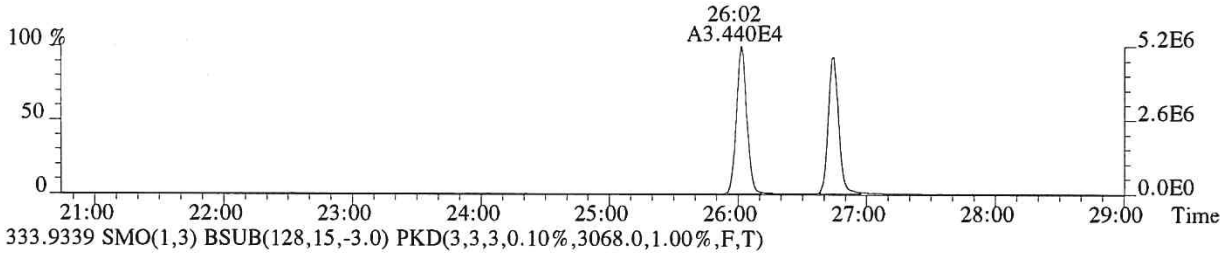
File:P519865 #1-587 Acq: 9-JAN-2019 16:11:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2800.0,1.00%,F,T)



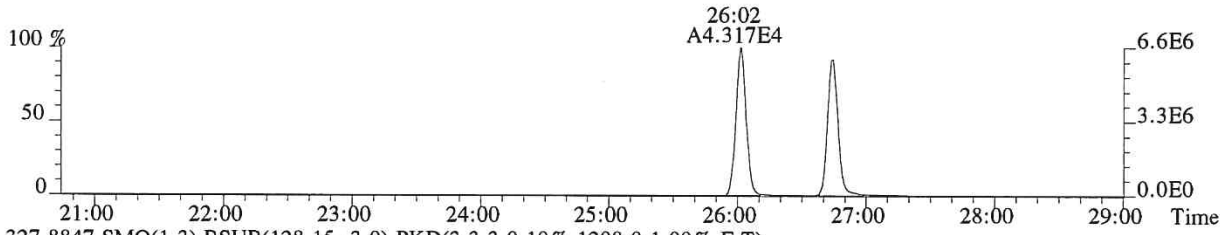
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1260.0,1.00%,F,T)



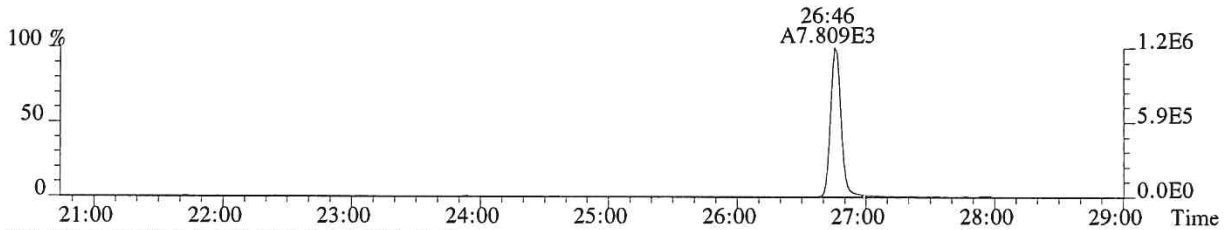
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8172.0,1.00%,F,T)



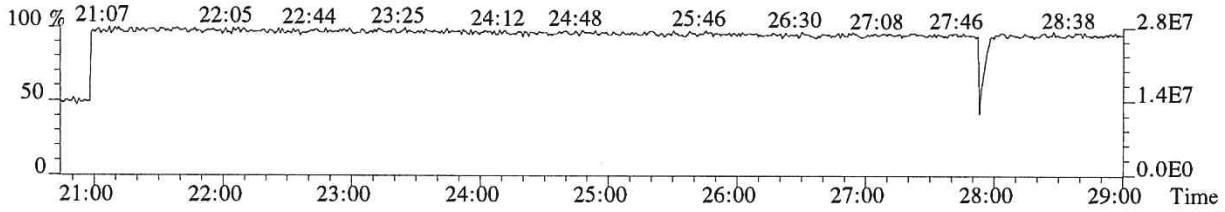
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3068.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1208.0,1.00%,F,T)

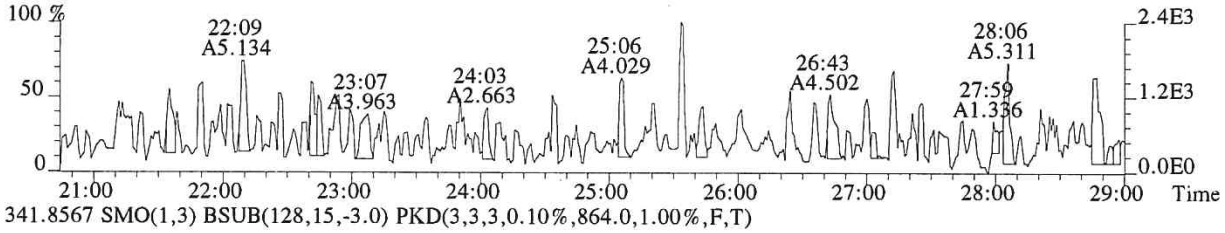


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

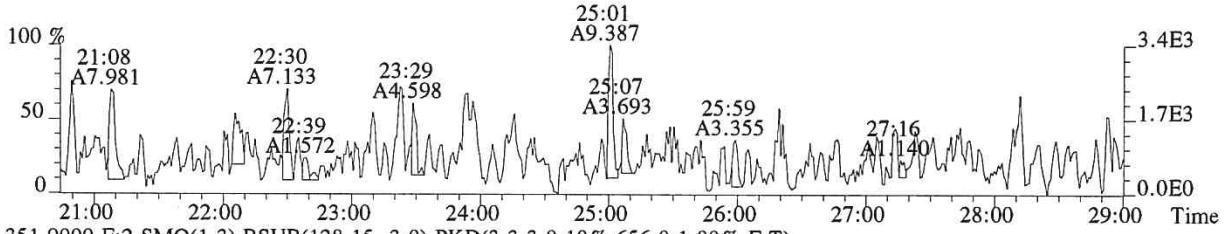


018852

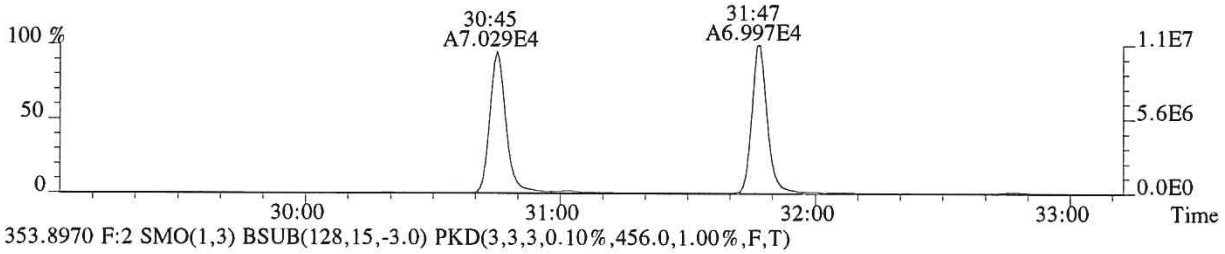
File:P519865 #1-587 Acq: 9-JAN-2019 16:11:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,556.0,1.00%,F,T)



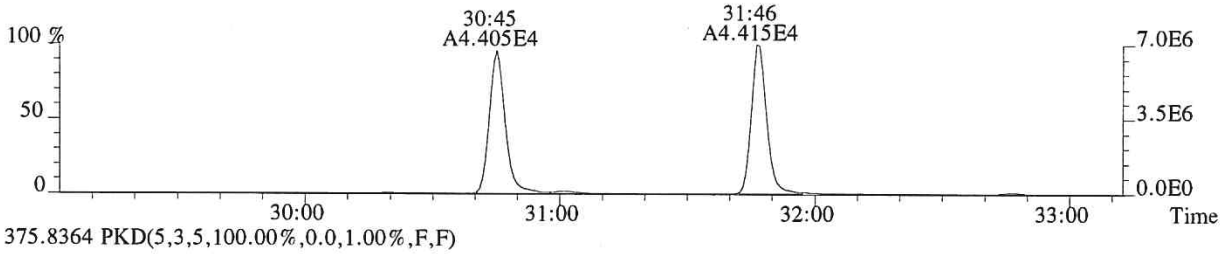
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,864.0,1.00%,F,T)



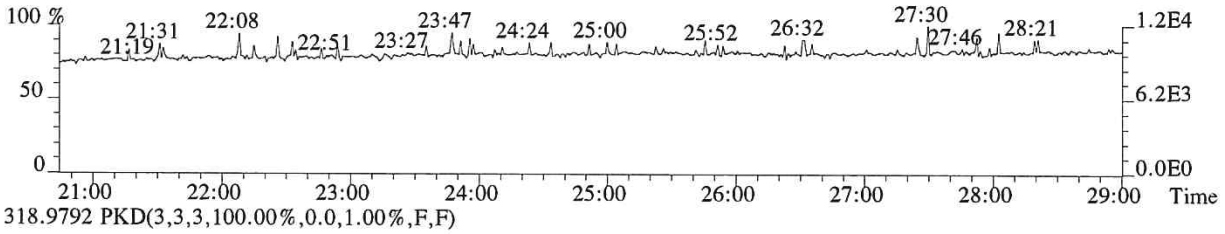
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,656.0,1.00%,F,T)



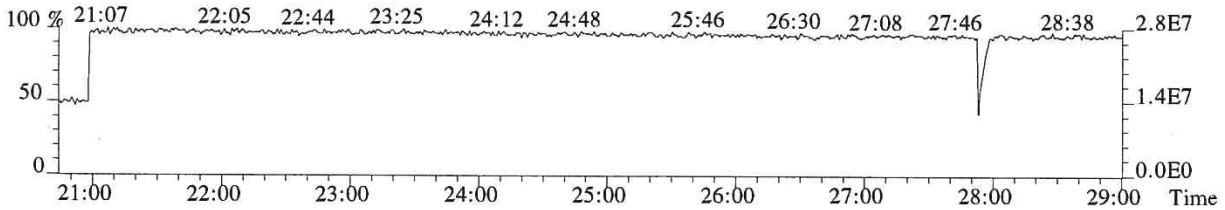
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,456.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

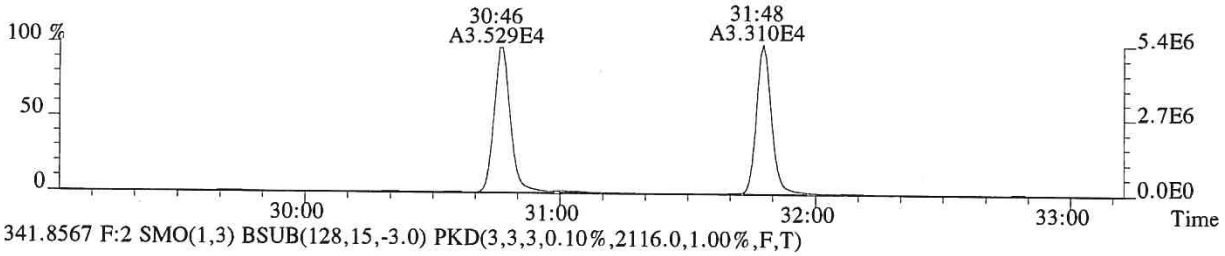


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

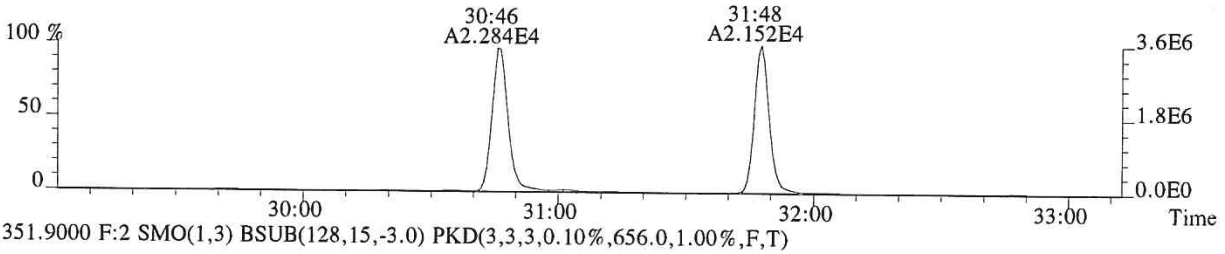


018853

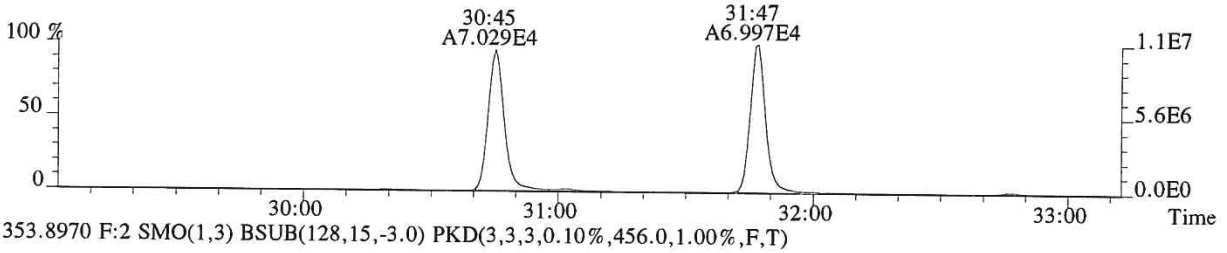
File:P519865 #1-376 Acq: 9-JAN-2019 16:11:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,800.0,1.00%,F,T)



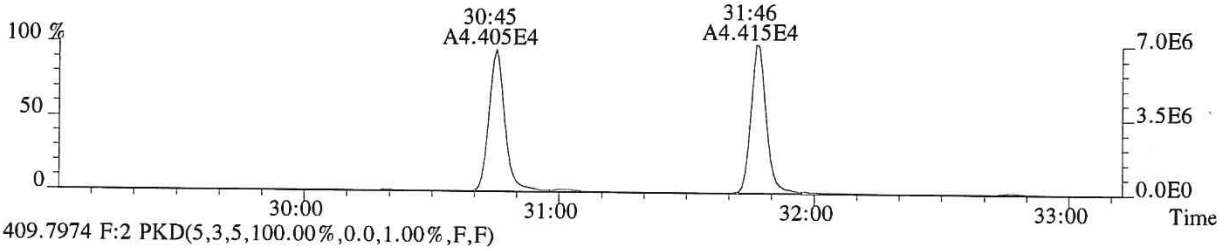
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2116.0,1.00%,F,T)



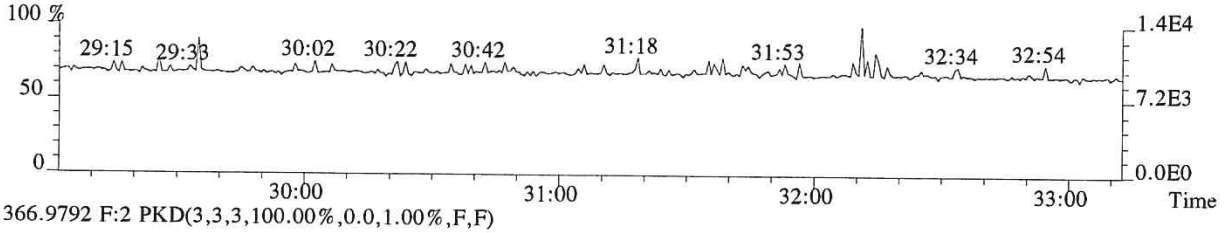
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,656.0,1.00%,F,T)



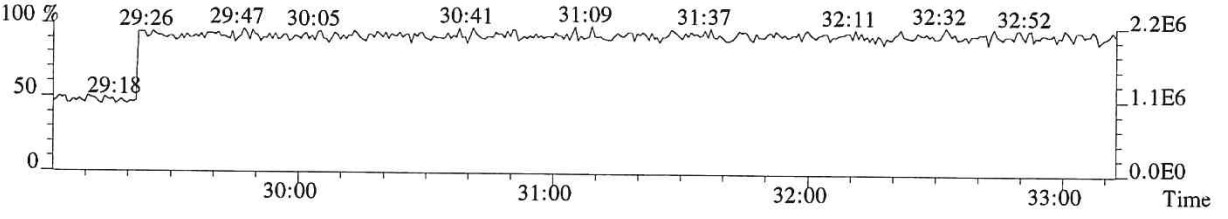
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,456.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

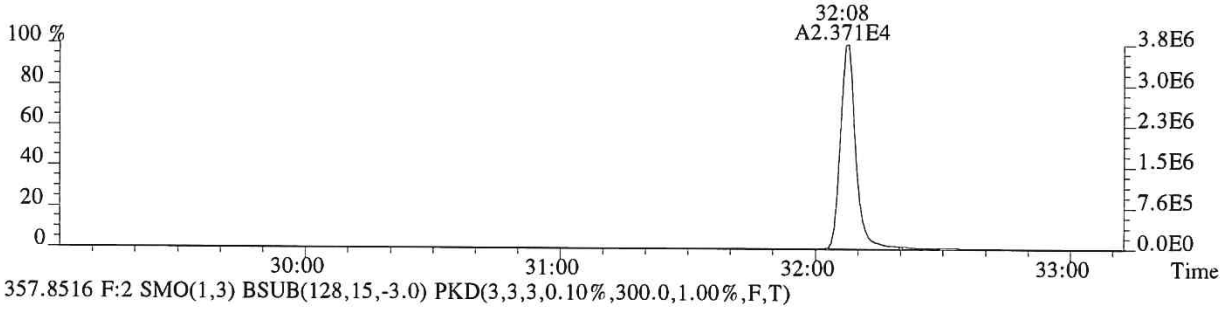


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

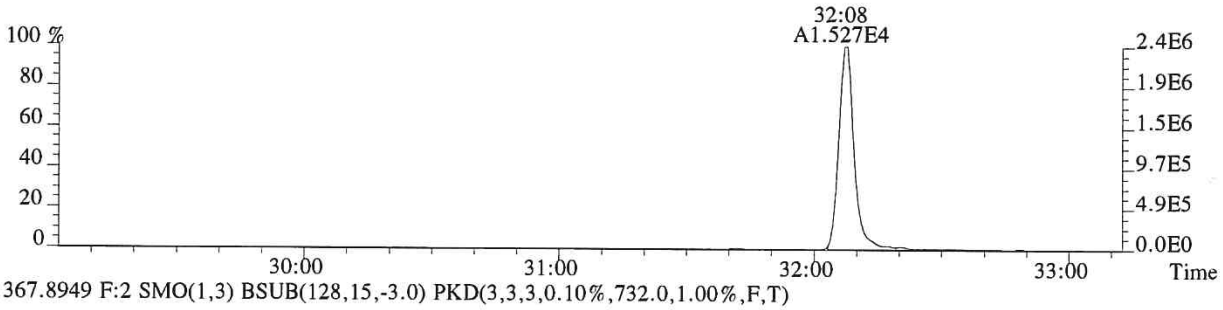


018854

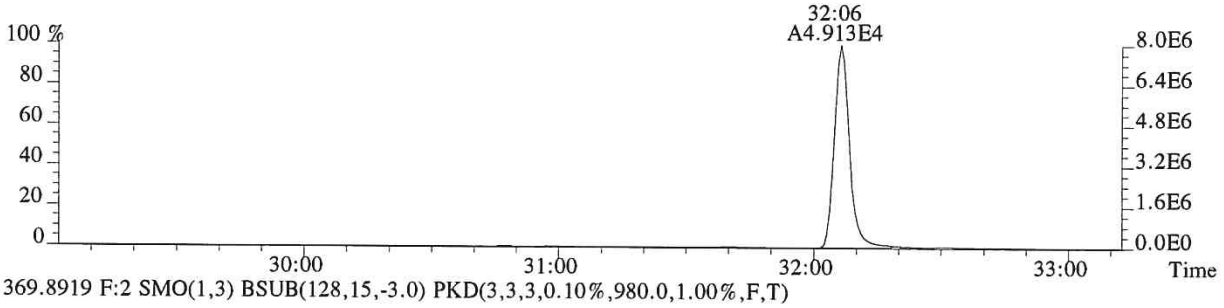
File:P519865 #1-376 Acq: 9-JAN-2019 16:11:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,860.0,1.00%,F,T)



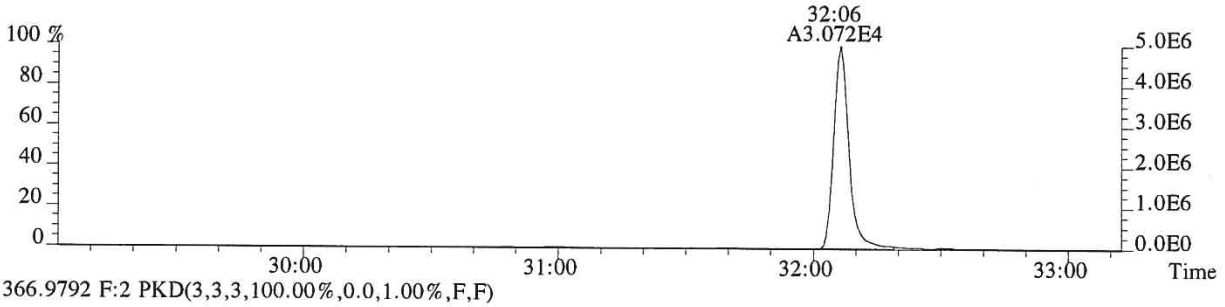
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,300.0,1.00%,F,T)



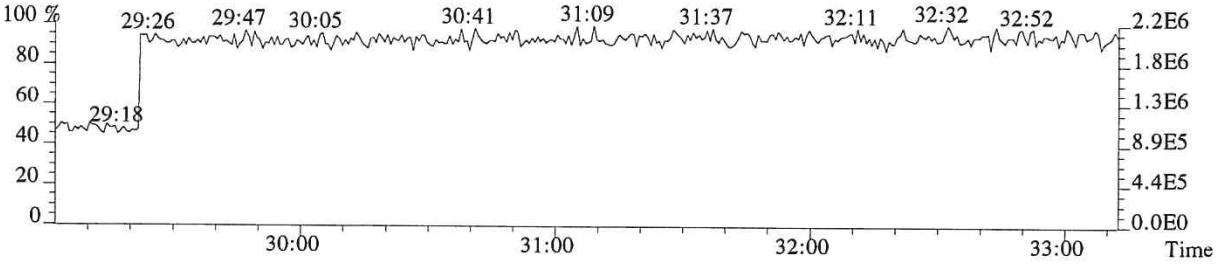
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,732.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,980.0,1.00%,F,T)

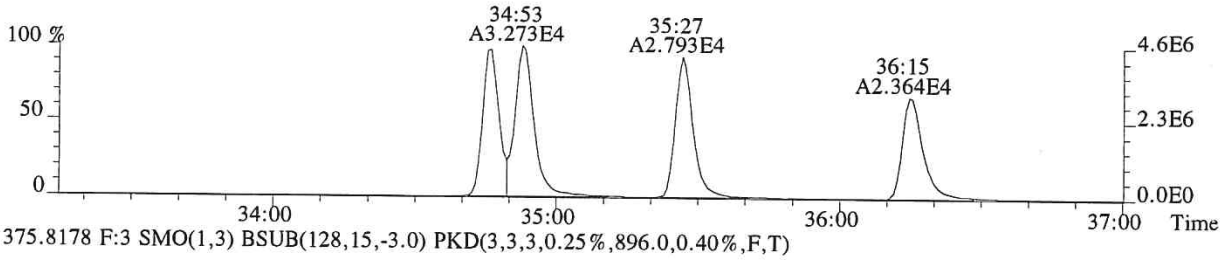


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

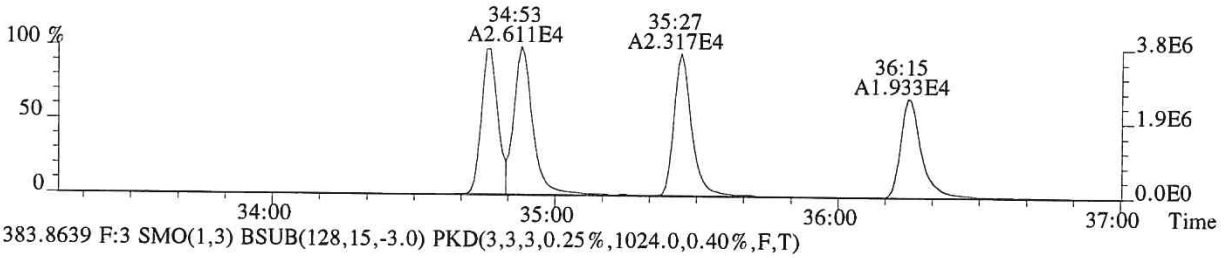


018855

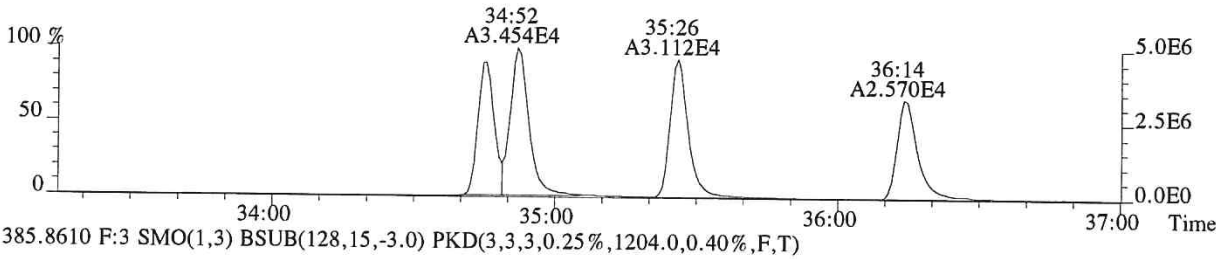
File:P519865 #1-339 Acq: 9-JAN-2019 16:11:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,920.0,0.40%,F,T)



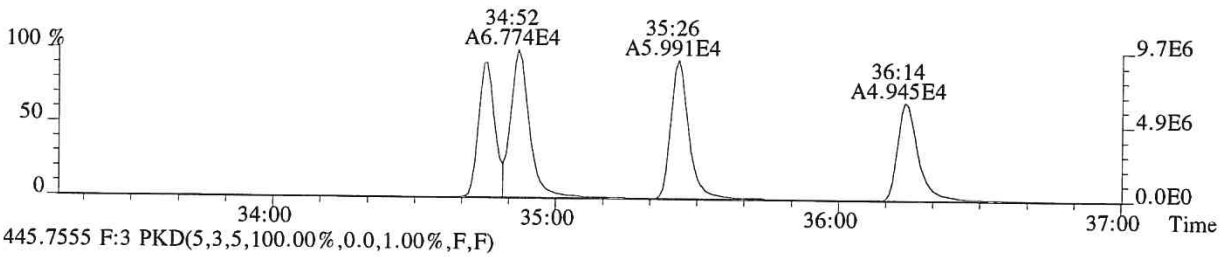
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,896.0,0.40%,F,T)



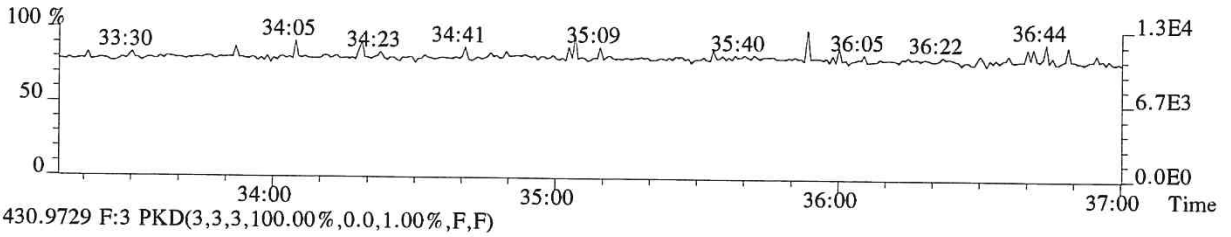
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1024.0,0.40%,F,T)



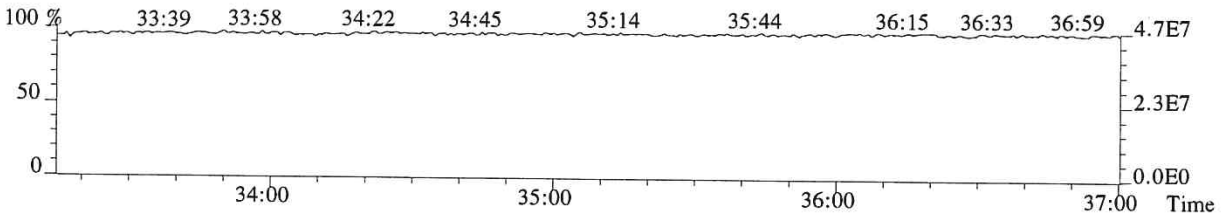
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1204.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

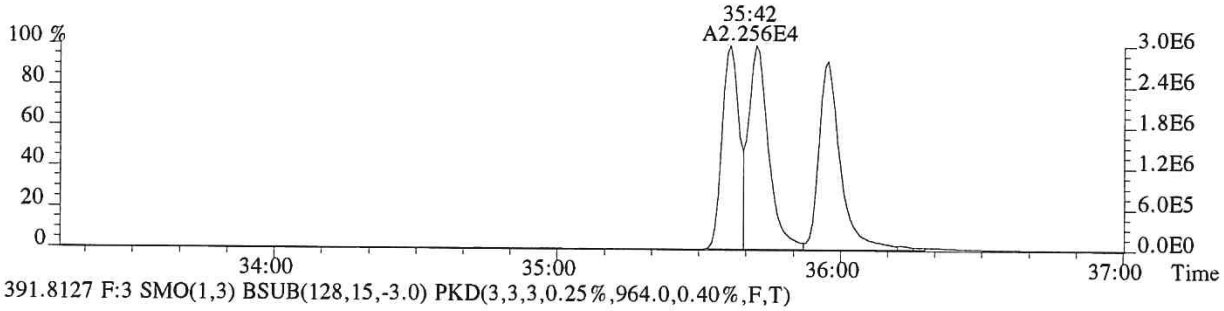


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

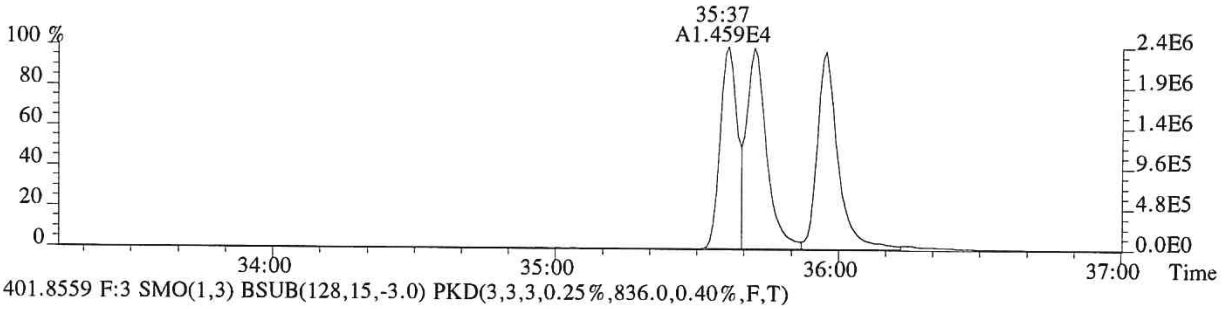


018856

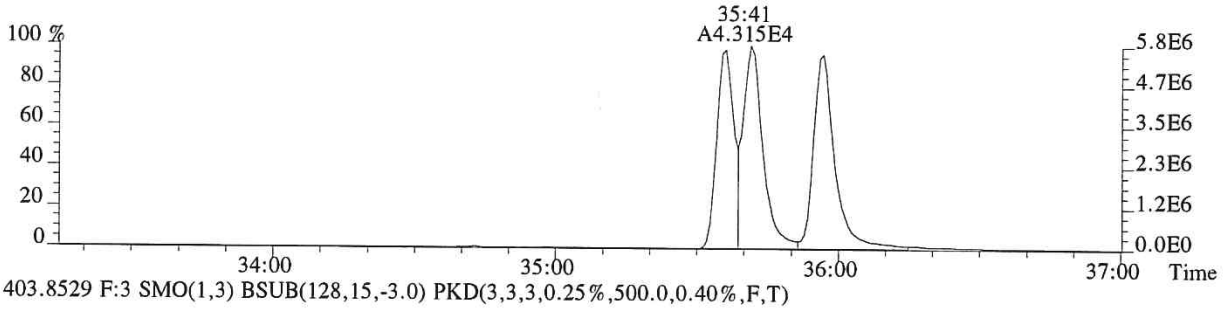
File:P519865 #1-339 Acq: 9-JAN-2019 16:11:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,524.0,0.40%,F,T)



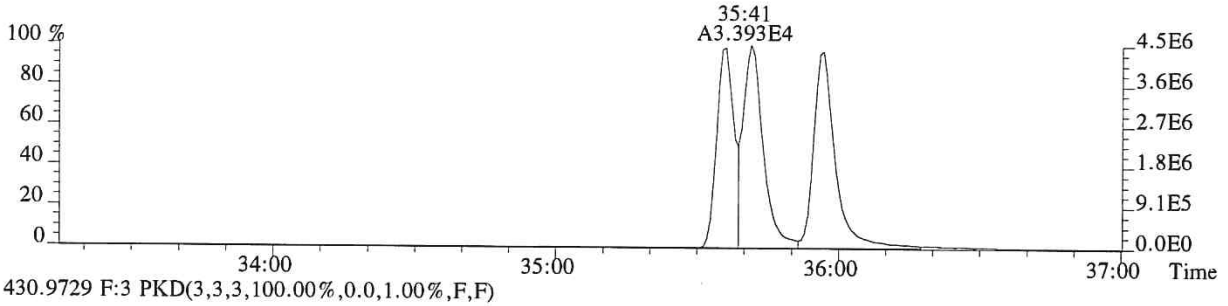
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,964.0,0.40%,F,T)



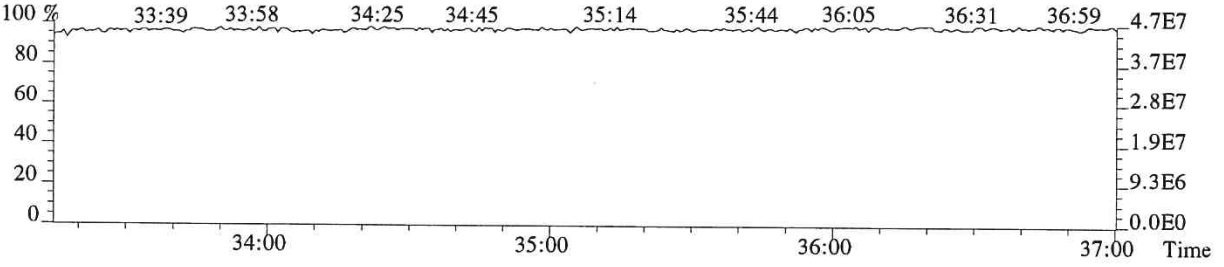
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,836.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,500.0,0.40%,F,T)

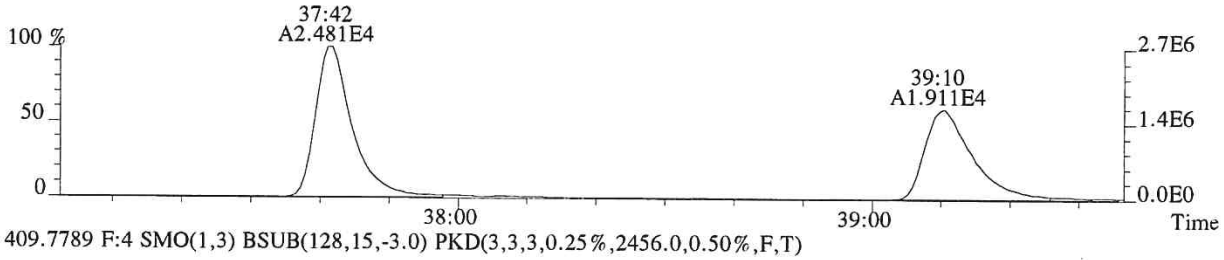


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

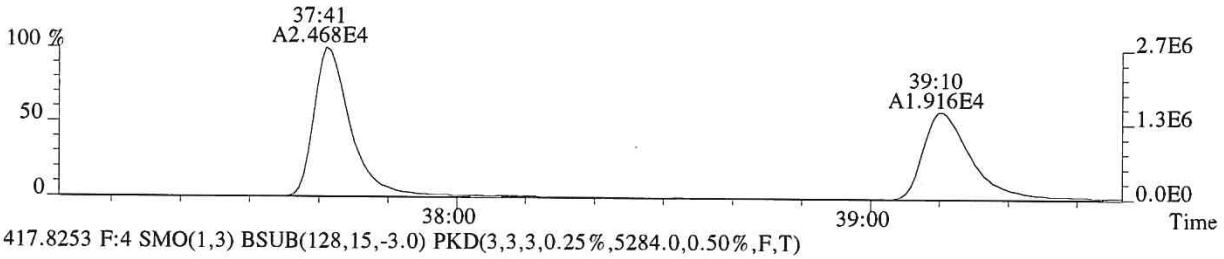


018857

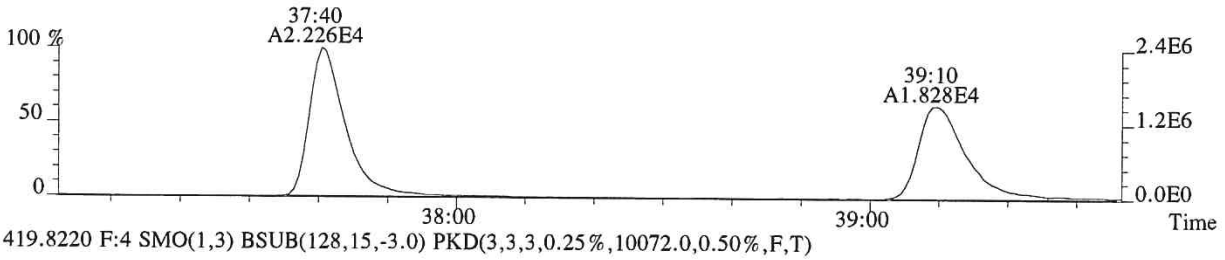
File:P519865 #1-232 Acq: 9-JAN-2019 16:11:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5716.0,0.50%,F,T)



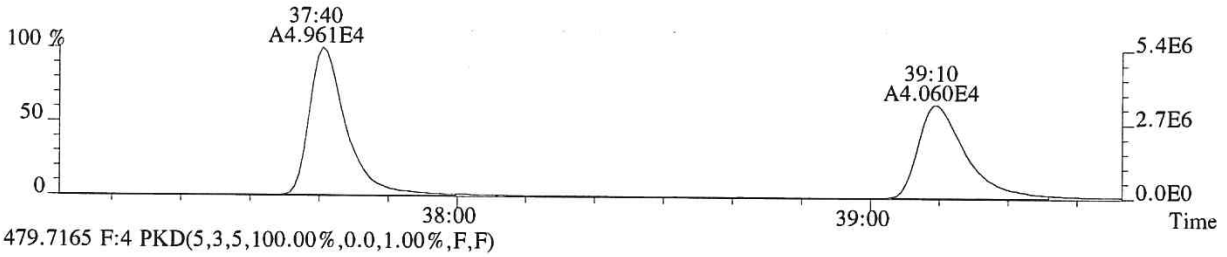
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2456.0,0.50%,F,T)



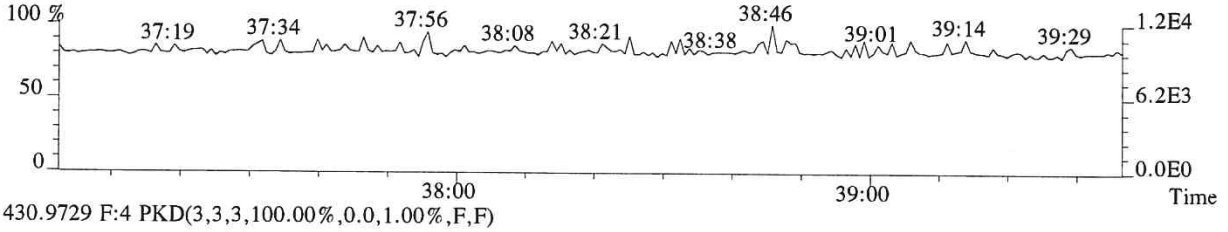
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5284.0,0.50%,F,T)



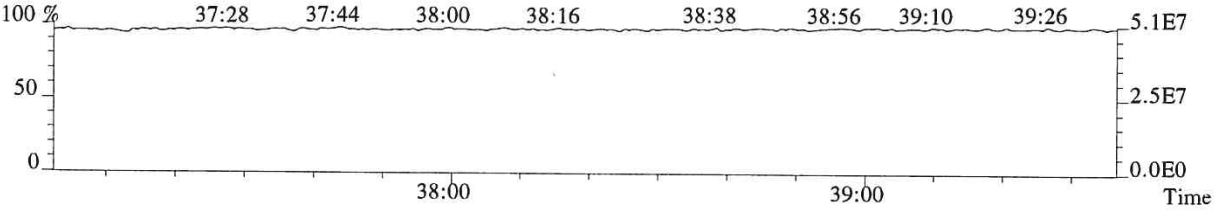
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10072.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

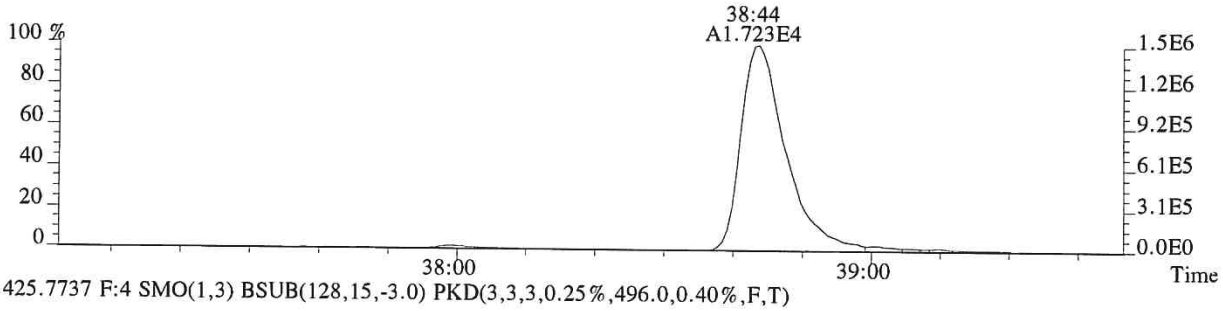


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

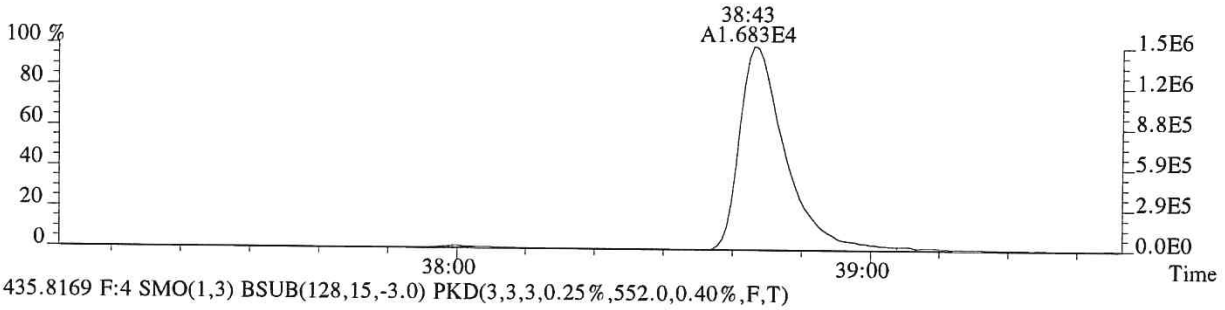


018858

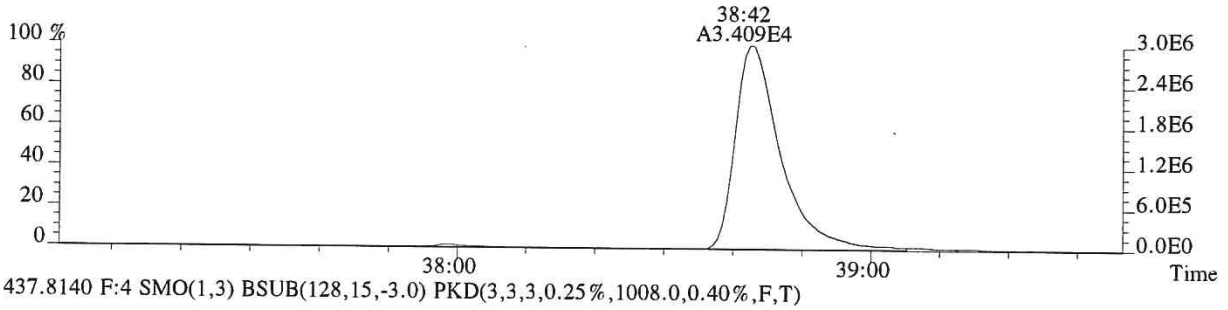
File:P519865 #1-232 Acq: 9-JAN-2019 16:11:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,864.0,0.40%,F,T)



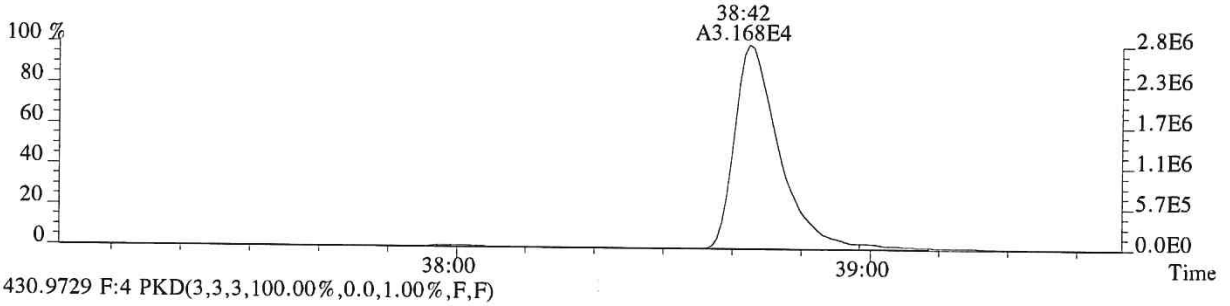
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,496.0,0.40%,F,T)



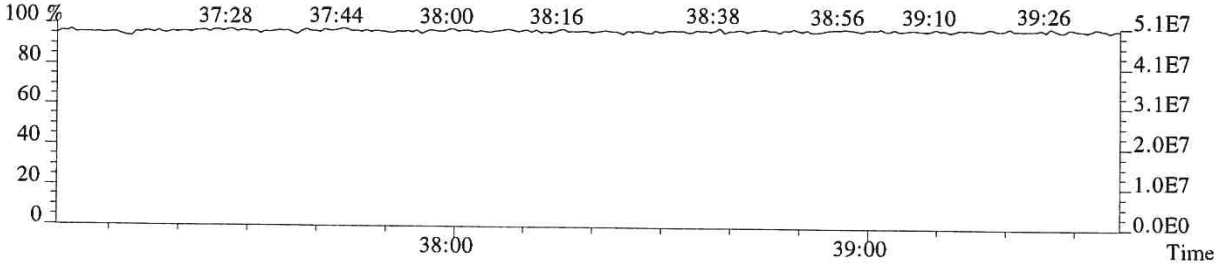
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,552.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1008.0,0.40%,F,T)

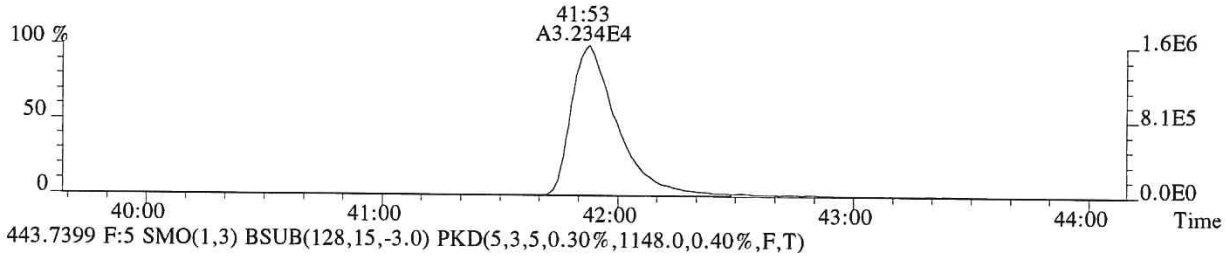


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

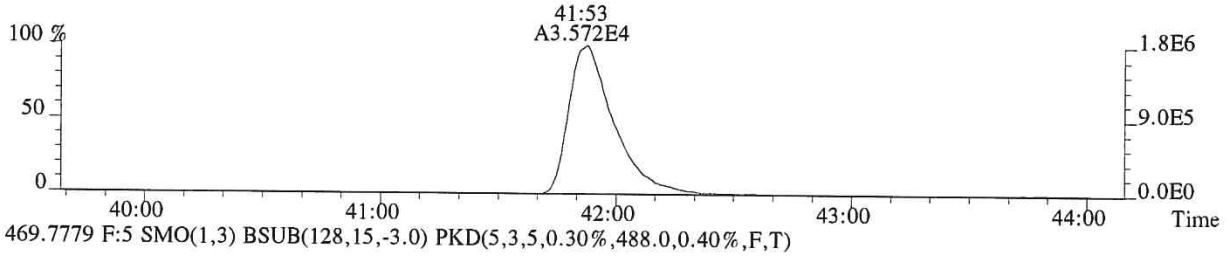


018859

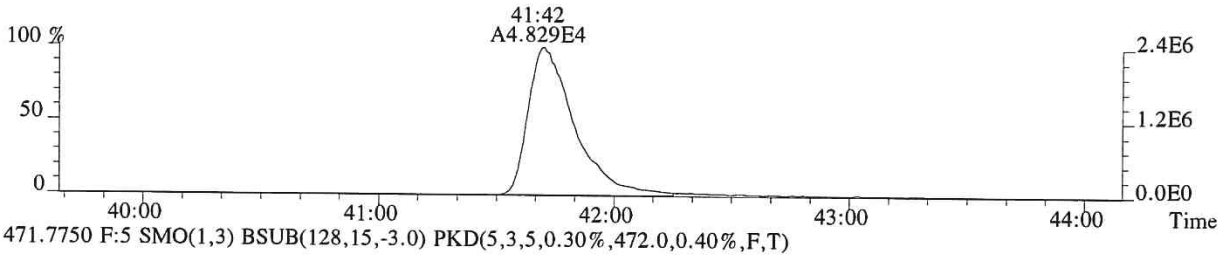
File:P519865 #1-407 Acq: 9-JAN-2019 16:11:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,452.0,0.40%,F,T)



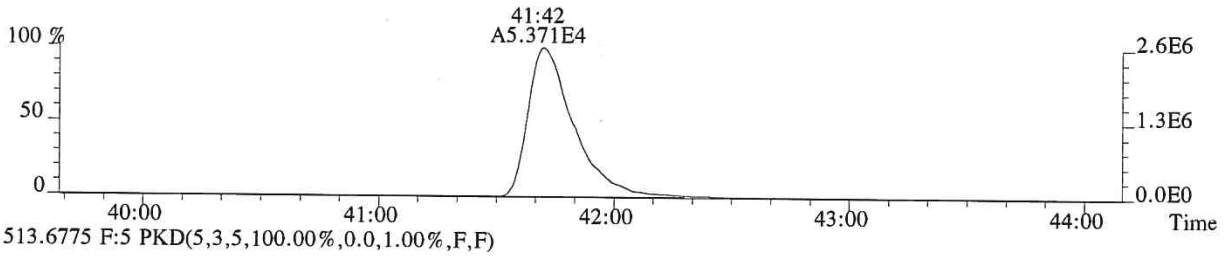
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1148.0,0.40%,F,T)



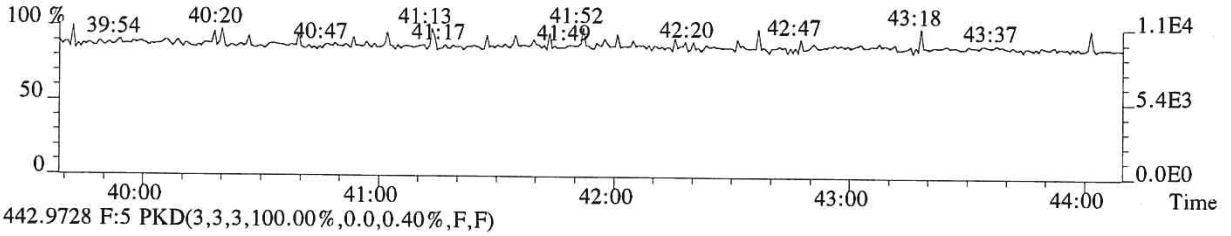
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,488.0,0.40%,F,T)



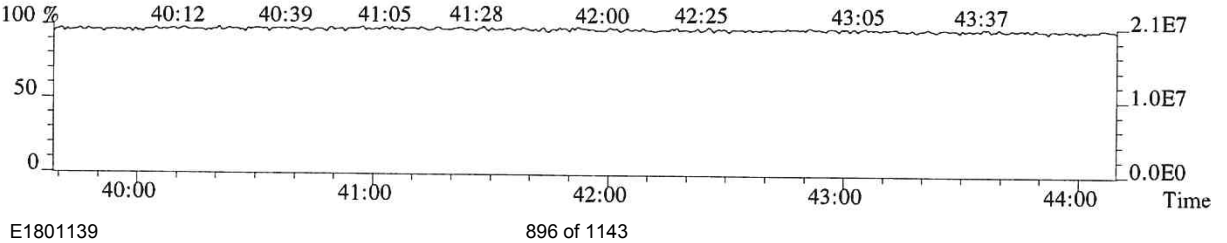
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,472.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

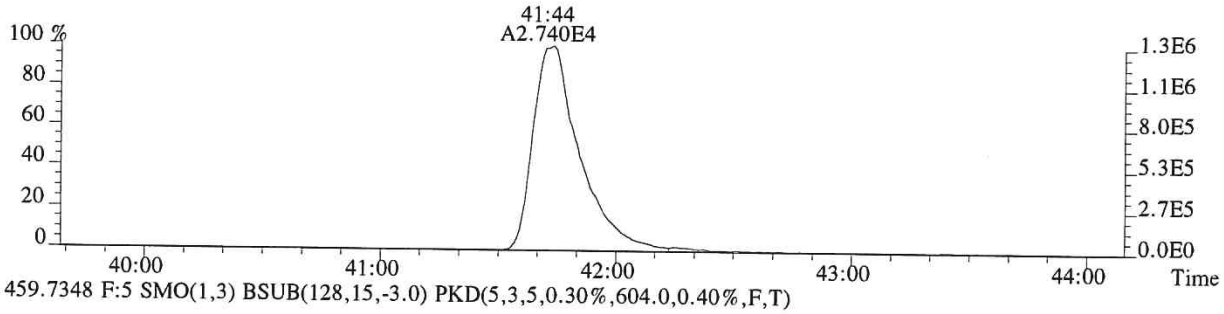


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

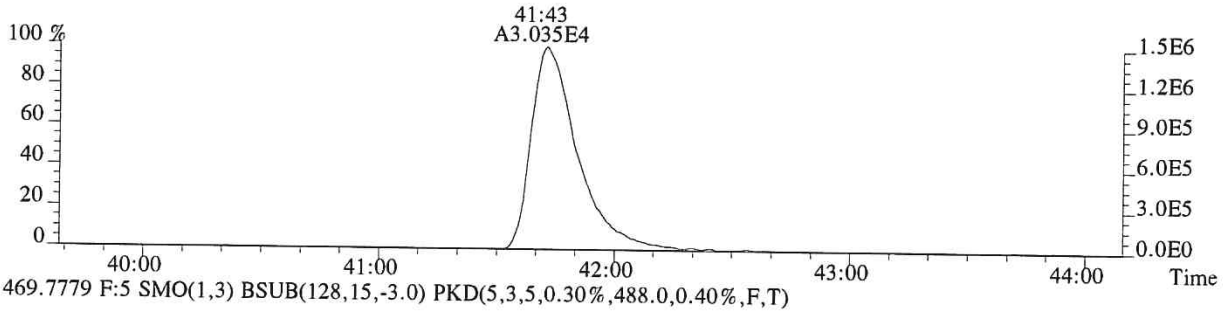


018860

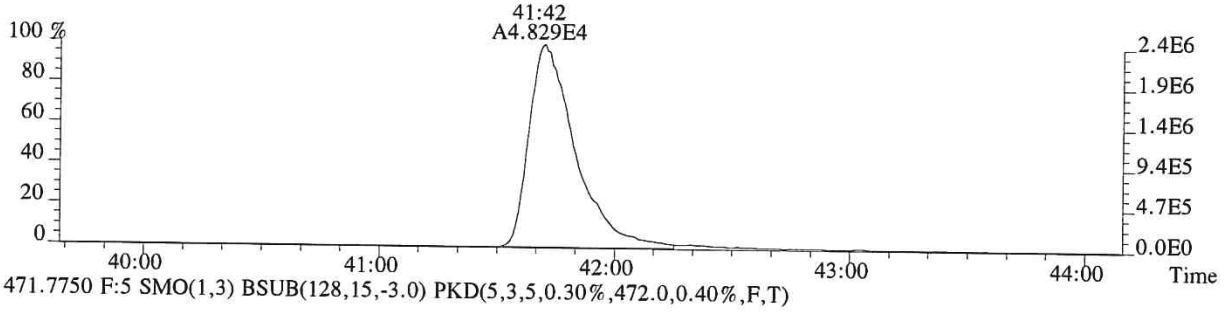
File:P519865 #1-407 Acq: 9-JAN-2019 16:11:10 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,392.0,0.40%,F,T)



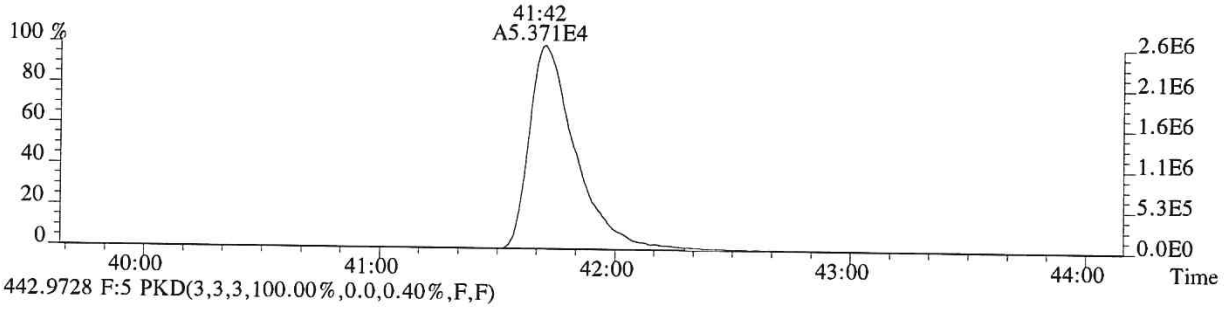
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,604.0,0.40%,F,T)



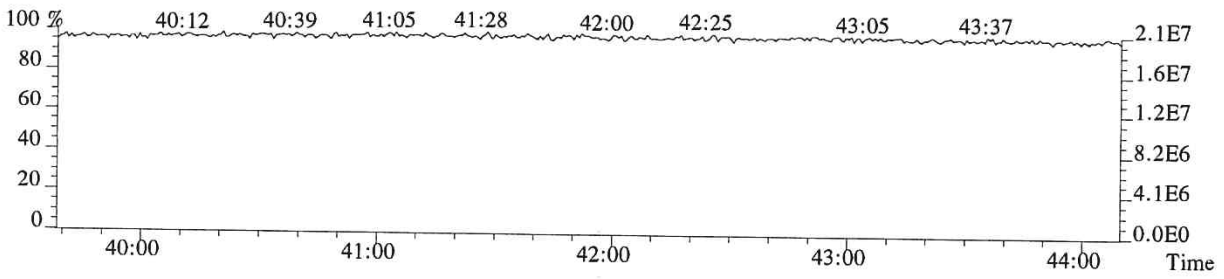
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,488.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,472.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018861

CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P519885

Date: 01/10/19

Circle one: (Beginning) / Ending

Method: (1613) / 1613E / 8290/ VCP / Tetra / TCDD Only / TCDF Conf / VCP Conf / 8280 / M23 / TO-9A

Retention Window/Column Performance Check:	Analyst	Second Check
Windows in and first and last eluters labeled	✓	✓
Column Performance shows less than or equal to 25% valley between column specific 2378 isomer and its closest eluters	✓	✓
No QC ion deflections affect column specific 2378 isomer or its closest eluters (HRMS Only)	✓	✓

CS3 Continuing Calibration	Analyst	Second Check
Percent RSD within method criteria	✓	✓
All relative abundance ratios meet method criteria	✓	✓
No QC ion deflections of greater than 20% (HRMS Only)	✓	✓
Mass spectrometer resolution greater than or equal to 10,000 and documented (HRMS Only)	✓	✓
2378-TCDD elutes at 25 minutes or later on the DB-5 column / DB-5MSUI column	✓	✓
Signal-to-noise of all target analytes and their labeled standards at least 10:1	✓	✓
Valley between labeled 123478 and 123678 HxCDD peaks less than or equal to 50% (LRMS Only)	N/A	N/A
Ending Calibration injected prior to end of 12 hour clock	N/A	N/A

Analyst: JC

Second QC: LKL

ccalqc.xls 07/17/12

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: Case No.: Client No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm)

Init. Calib. Date: 01/24/18

Init. Calib.Times: 11:44

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
192977	WINDOW DEFINE	P519884	10-JAN-19	12:14:15
195556	CS3	P519885	10-JAN-19	13:02:04
METHOD BLANK	EQ1800527-01	P519886	10-JAN-19	13:57:13
METHOD BLANK	EQ1900003-01	P519887	10-JAN-19	14:48:58
METHOD BLANK	EQ1900009-01	P519888	10-JAN-19	15:36:44
SL0132	E1801137-009RE	P519889	10-JAN-19	16:26:20
SL0247	E1801139-021	P519890	10-JAN-19	17:14:09
SL0248	E1801139-022	P519891	10-JAN-19	18:02:46
SL0214	E1801139-001	P519892	10-JAN-19	18:51:24
SL0228	E1801139-013	P519893	10-JAN-19	19:40:00
SL0229	E1801139-014	P519894	10-JAN-19	20:28:38
SL0230	E1801139-015	P519895	10-JAN-19	21:17:25
SL0231	E1801139-016	P519896	10-JAN-19	22:06:01
LCS	EQ1900009-02	P519897	10-JAN-19	22:54:39
DLCS	EQ1900009-03	P519898	10-JAN-19	23:43:16

E1801139

900 of 1143

Sample List Report — **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS07.PRO\SampleDB\20190110A.SPL
Last Modified: Friday, January 11, 2019 06:26:01 Central Standard Time
Printed: Friday, January 11, 2019 06:26:03 Central Standard Time

Page Position (1, 1)

OPUS 4: P519885res

	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	1/10/19	12:14	P519884	WINDOWDEFINE	192977	EPA1613_ALS	Dioxin_ALS	Tray1:1	LGT	HRMS check 12:09
2		13:02	P519885	CS3	195556	EPA1613_ALS	Dioxin_ALS	Tray1:2		
3		13:51	P519886	MB	EQ1800527-01	EPA1613_ALS	Dioxin_ALS	Tray1:3		
4		14:46	P519887	MB	EQ1900003-01	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		15:26	P519888	MB	EQ1900009-01	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		16:20	P519889	E1801137-009RE	E1801137-009RE	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		17:14	P519890	E1801139-021	E1801139-021	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		18:02	P519891	E1801139-022	E1801139-022	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		18:51	P519892	E1801139-001	E1801139-001	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		19:40	P519893	E1801139-013	E1801139-013	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		20:28	P519894	E1801139-014	E1801139-014	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		21:17	P519895	E1801139-015	E1801139-015	EPA1613_ALS	Dioxin_ALS	Tray1:12		
13		22:06	P519896	E1801139-016	E1801139-016	EPA1613_ALS	Dioxin_ALS	Tray1:13		
14		22:54	P519897	LCS	EQ1900009-02	EPA1613_ALS	Dioxin_ALS	Tray1:14		
15		23:43	P519898	DLCS	EQ1900009-03	EPA1613_ALS	Dioxin_ALS	Tray1:15		
16	1/11/19	00:40	P519899	CS3	195556	EPA1613_ALS	Dioxin_ALS	Tray1:2		HRMS check 00:40
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---
21	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:21	---	---

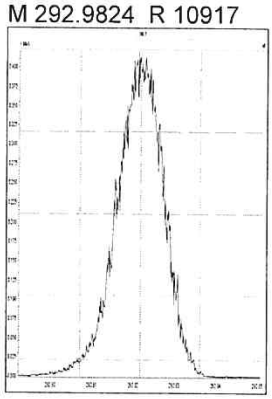
dioxin files P519882 - 883

01/11/19

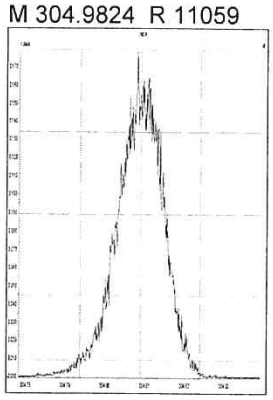
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Printed: Thursday, January 10, 2019 12:09:52 Central Standard Time

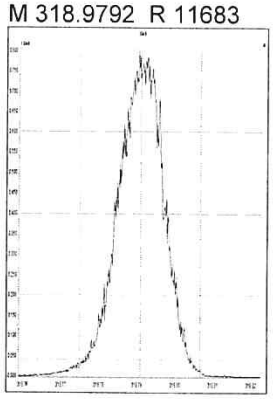
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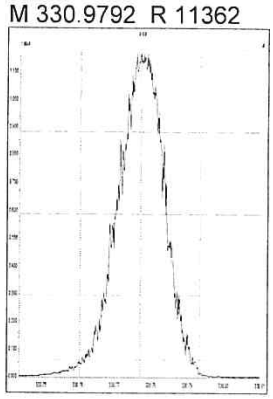
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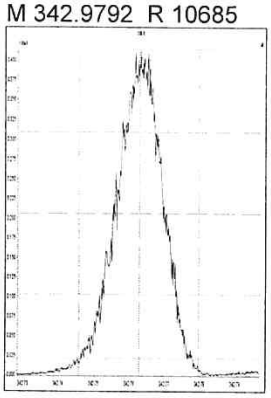
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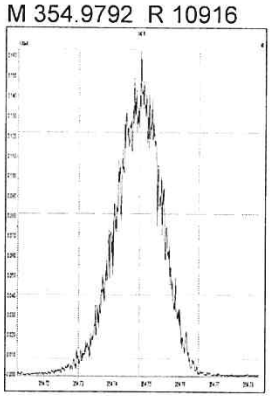
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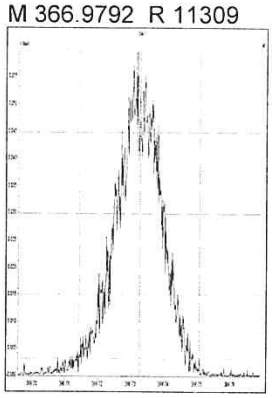
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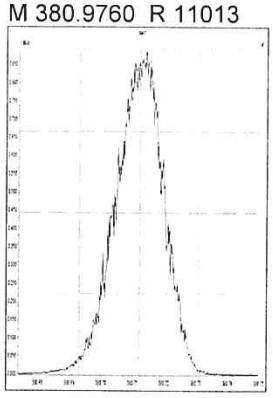
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M 366.9792 R 11309



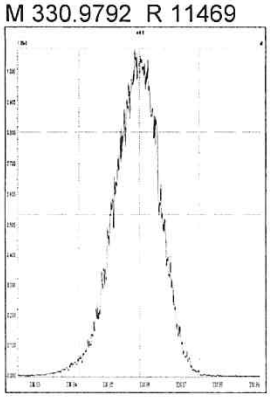
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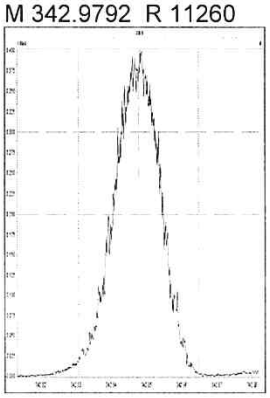
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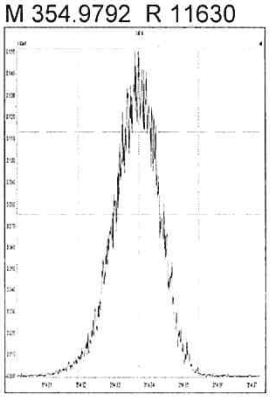
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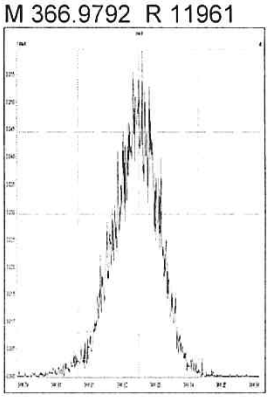
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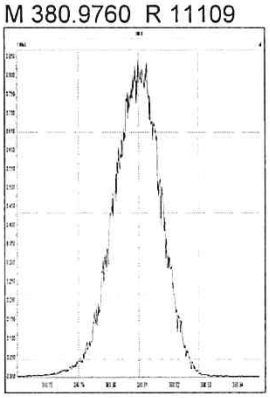
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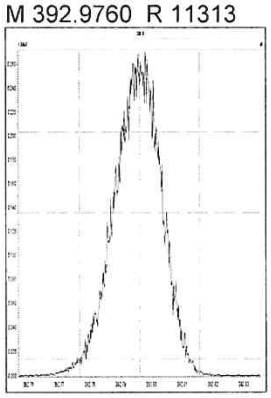
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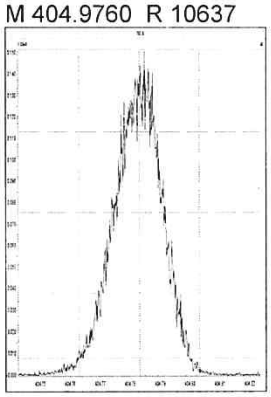
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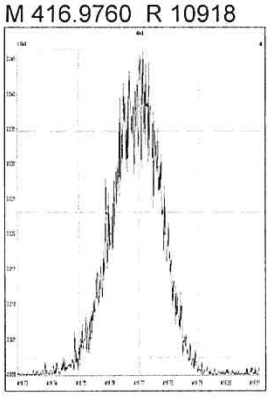
M 392.9760 R 11313



M 404.9760 R 10637



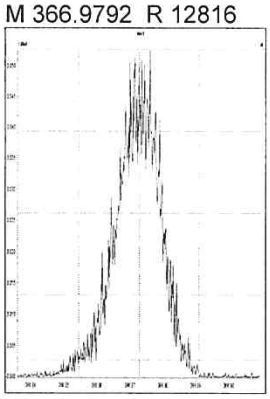
M 416.9760 R 10918



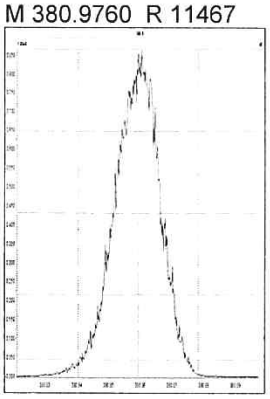
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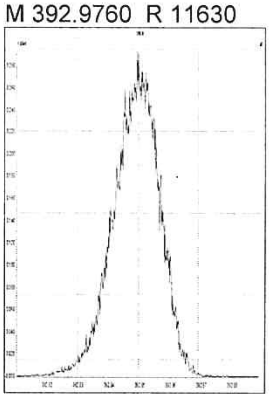
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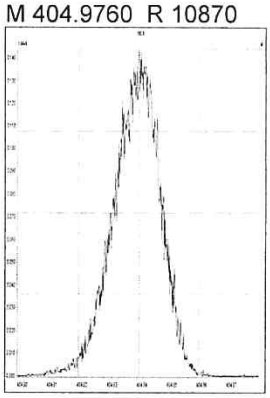
M 380.9760 R 11467



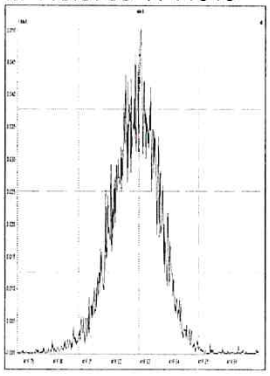
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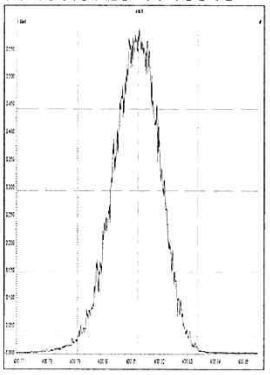
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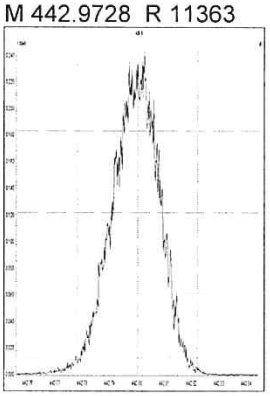
M 416.9760 R 11519



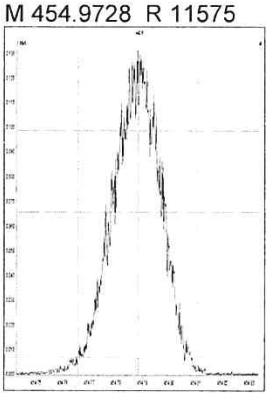
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M 442.9728 R 11363



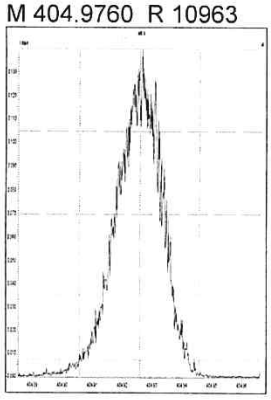
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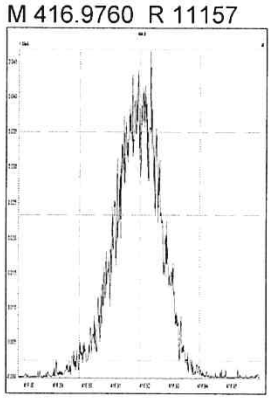
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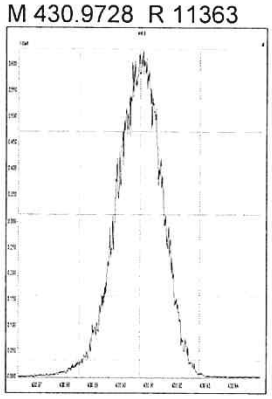
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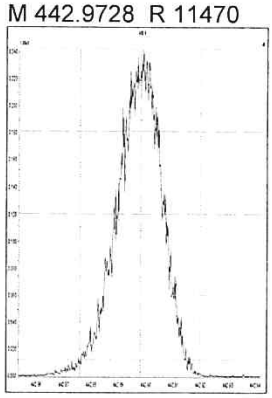
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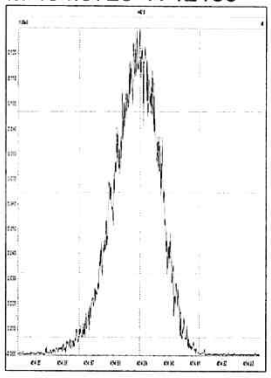
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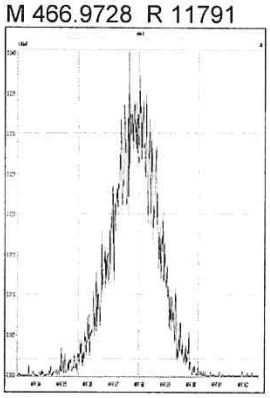
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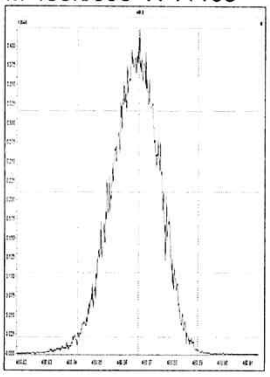
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M 466.9728 R 11791



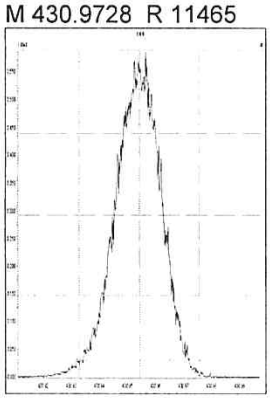
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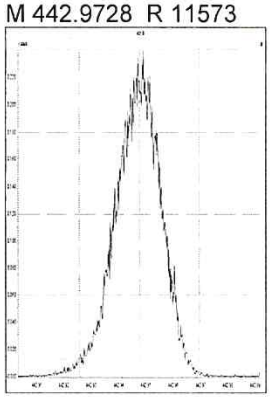
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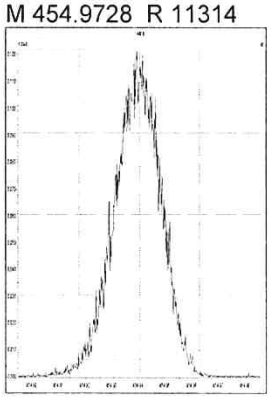
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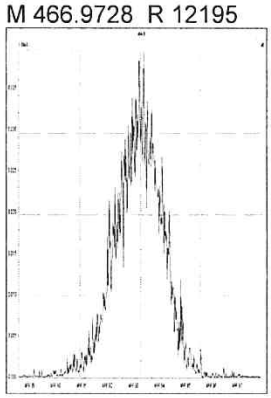
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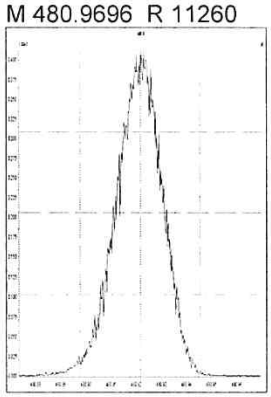
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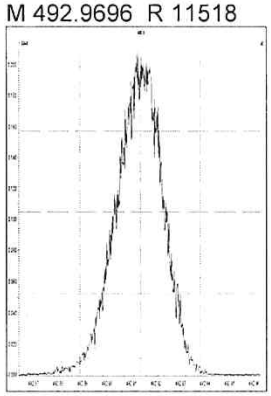
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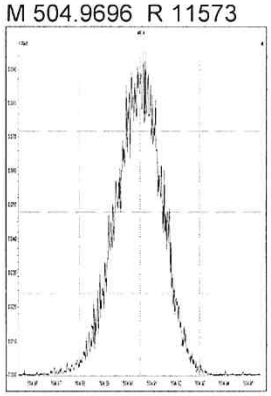
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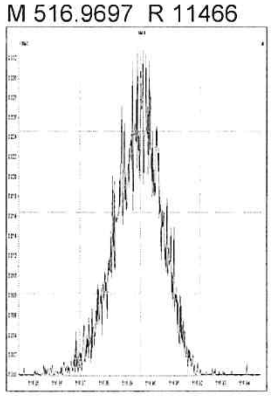
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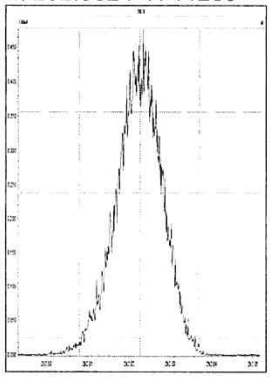


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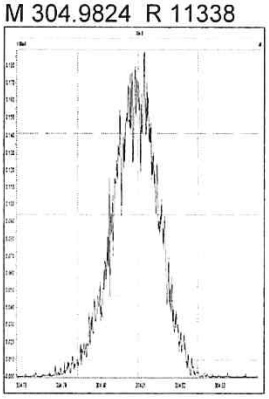


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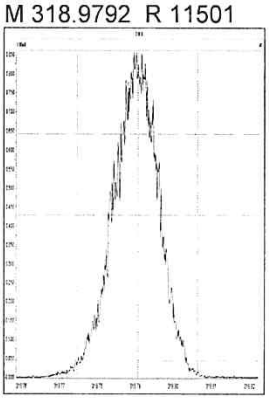
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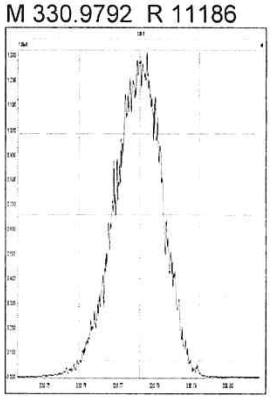
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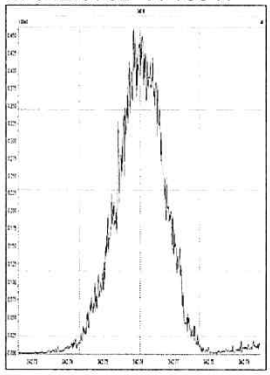
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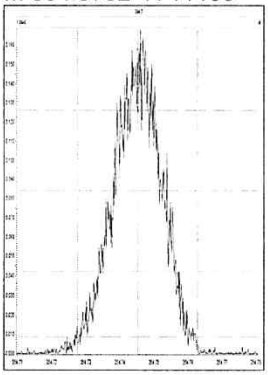
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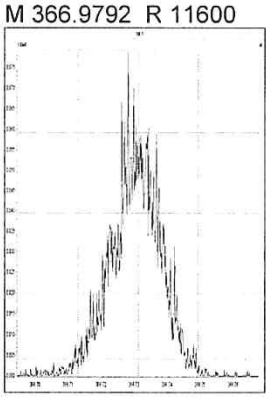
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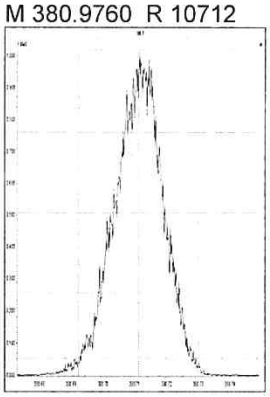
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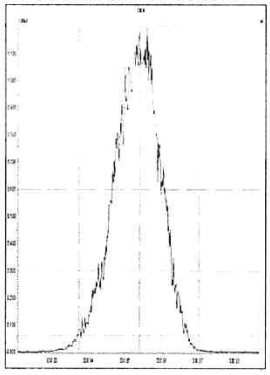
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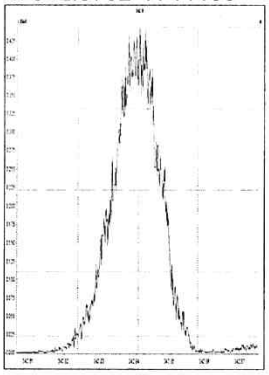
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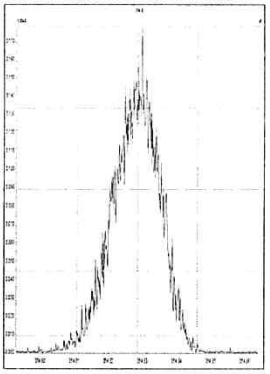
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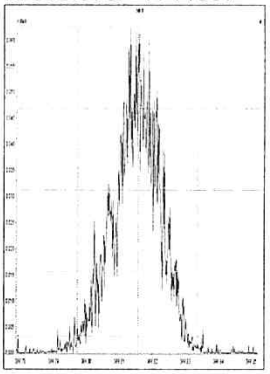
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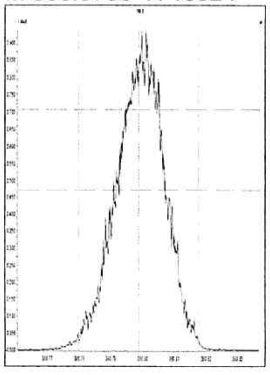
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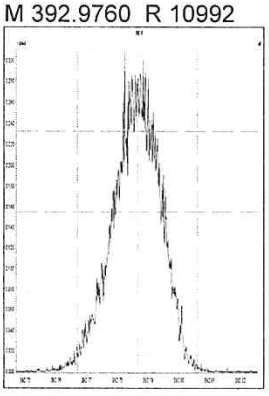
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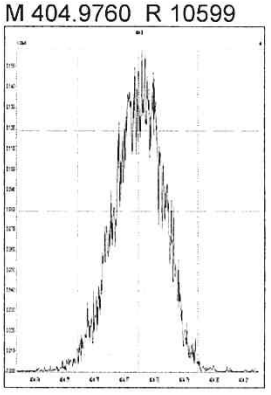
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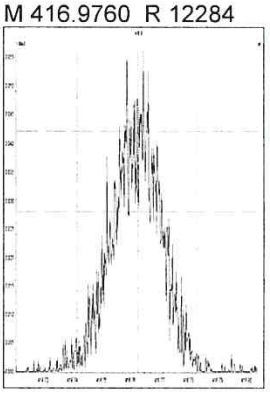
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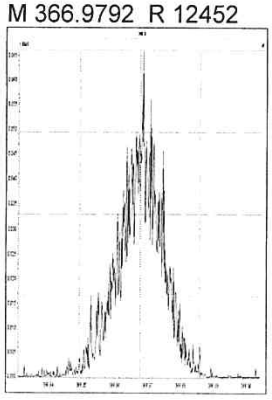
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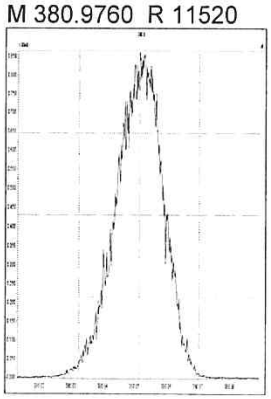
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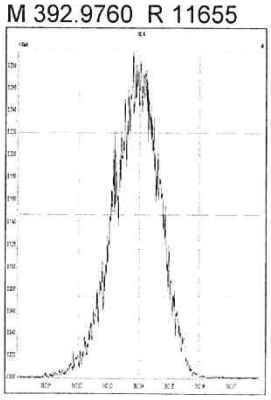
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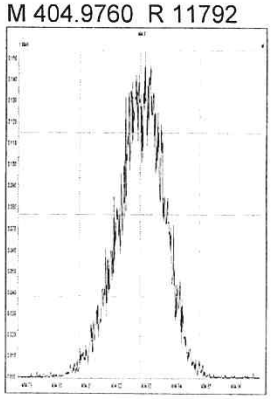
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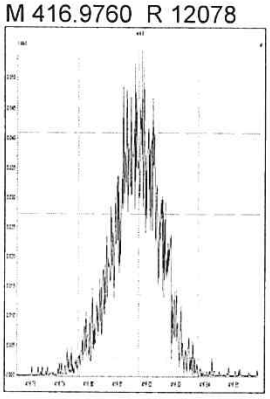
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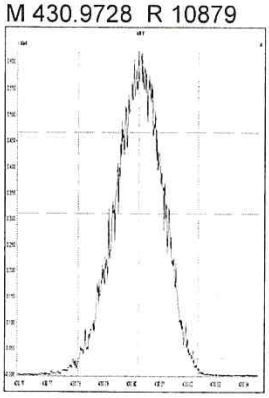
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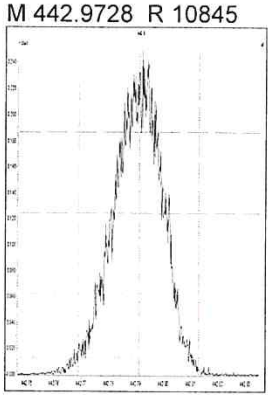
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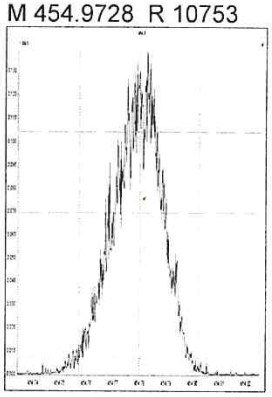
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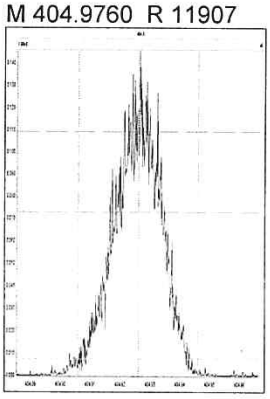
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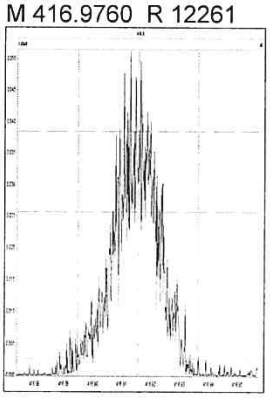
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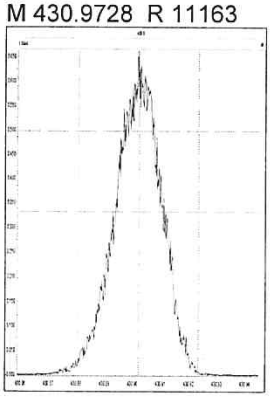
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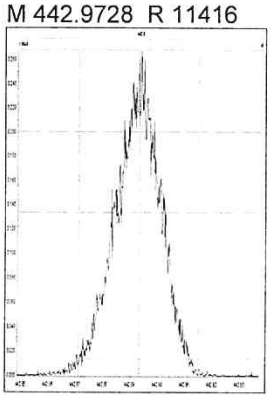
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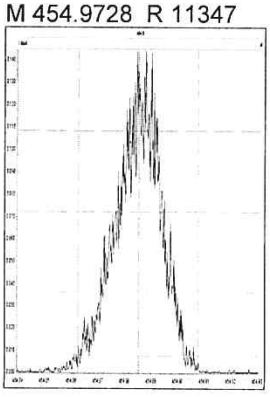
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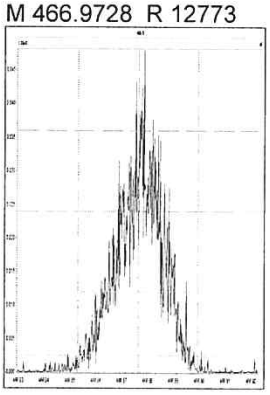
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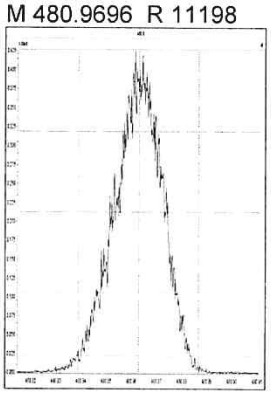
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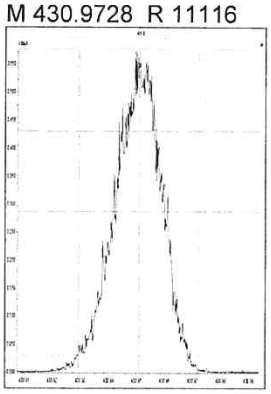
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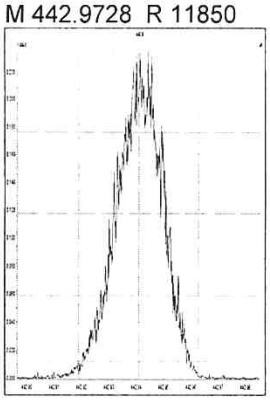
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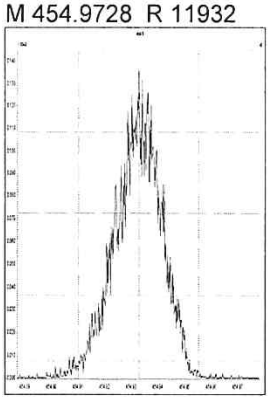
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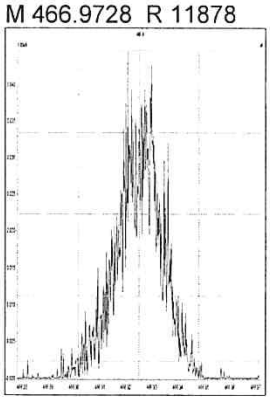
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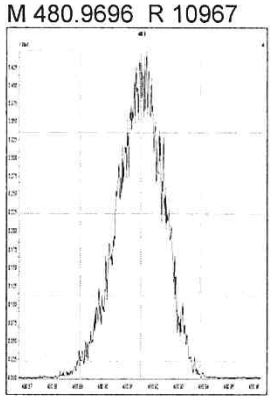
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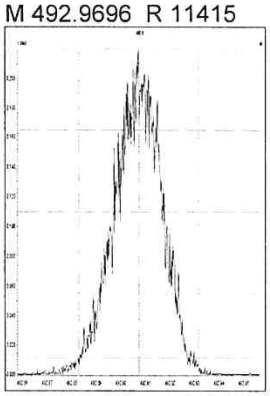
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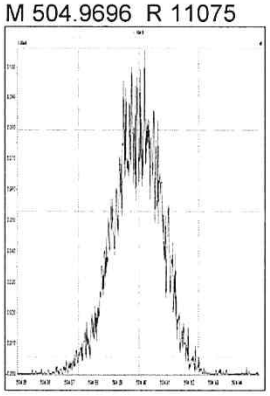
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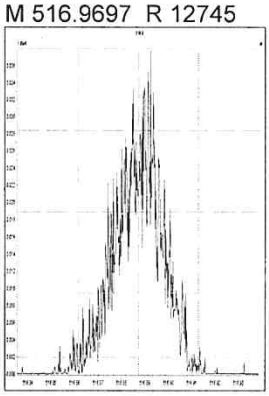
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M 504.9696 R 11075



M 516.9697 R 12745



5DFA

WINDOW DEFINING MIX SUMMARY

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WDM

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Lab Code: ALSTX
GC Column: DB-5MSUI

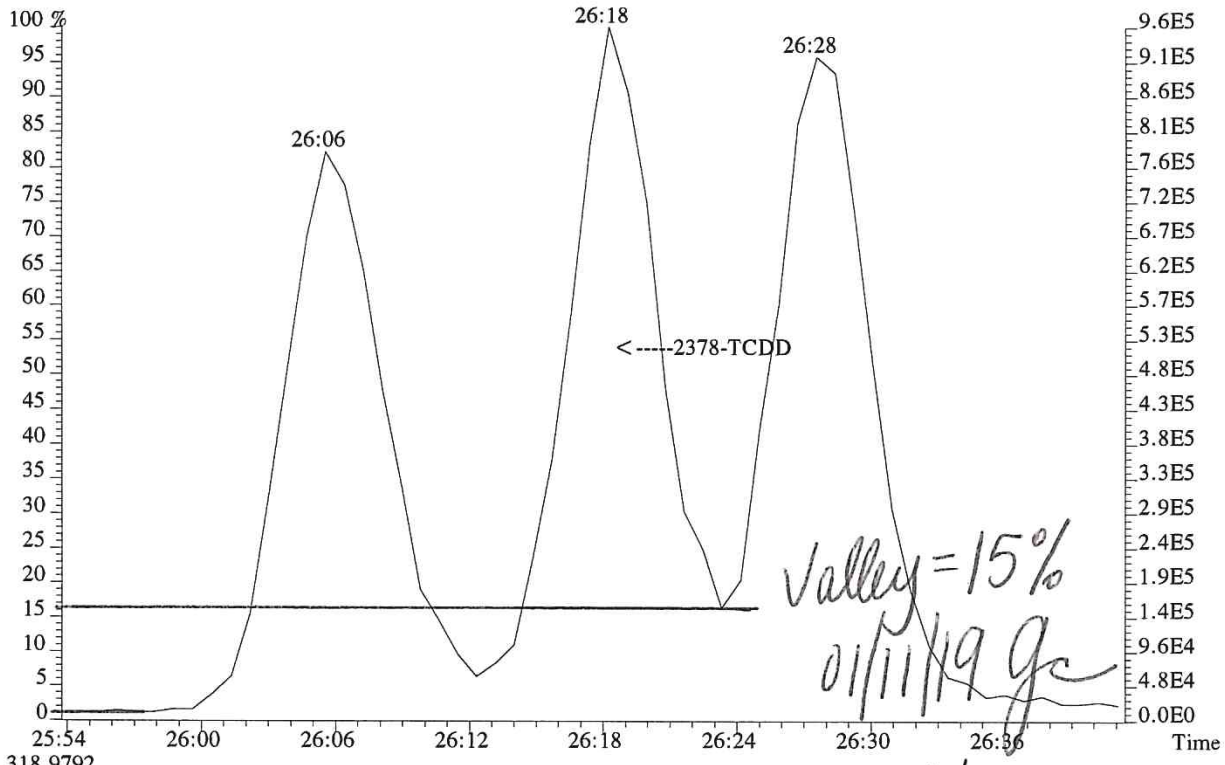
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ID: 0.25 (mm)

Lab File ID: P519884
Date Analyzed: 10-JAN-2019
Time Analyzed: 12:14:15

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TCDD	22:35	27:34
PeCDF	27:42	32:33
PeCDD	29:32	32:18
HxCDF	33:19	36:01
HxCDD	33:54	35:37
HpCDF	37:24	38:49
HpCDD	37:41	38:23

% Valley 2378-TCDD: 15 %

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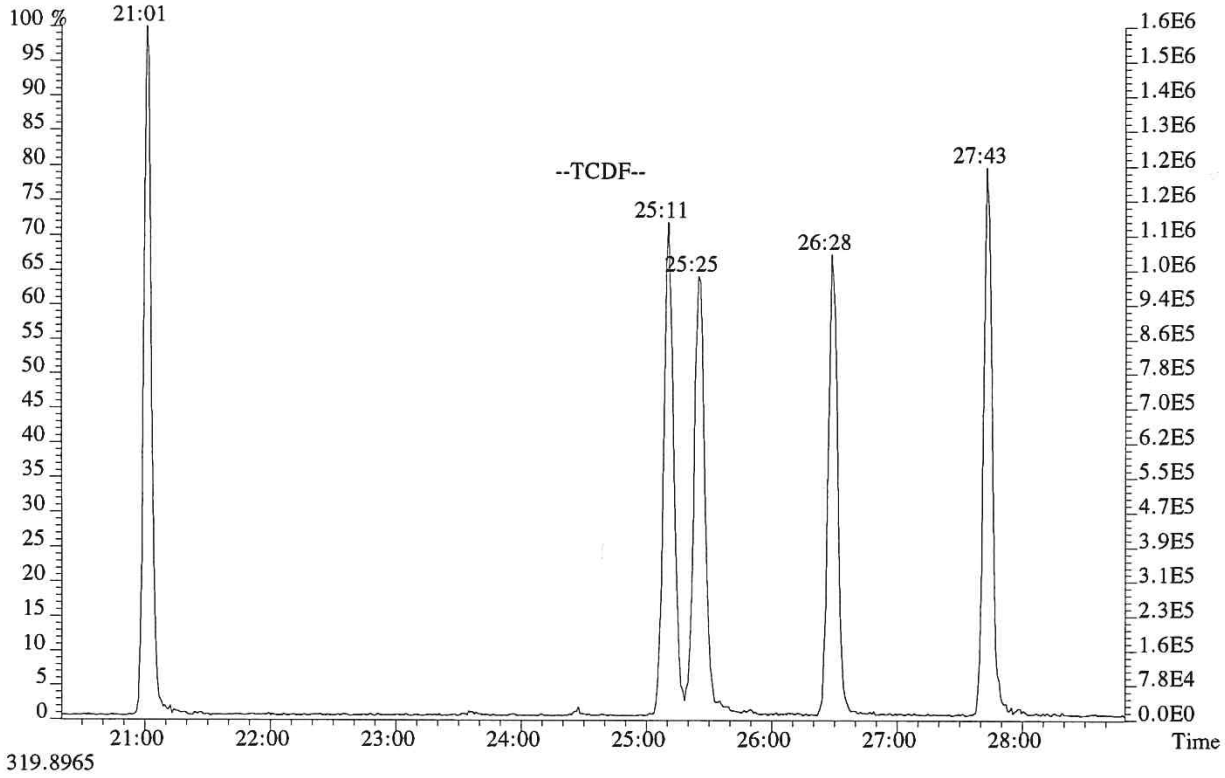


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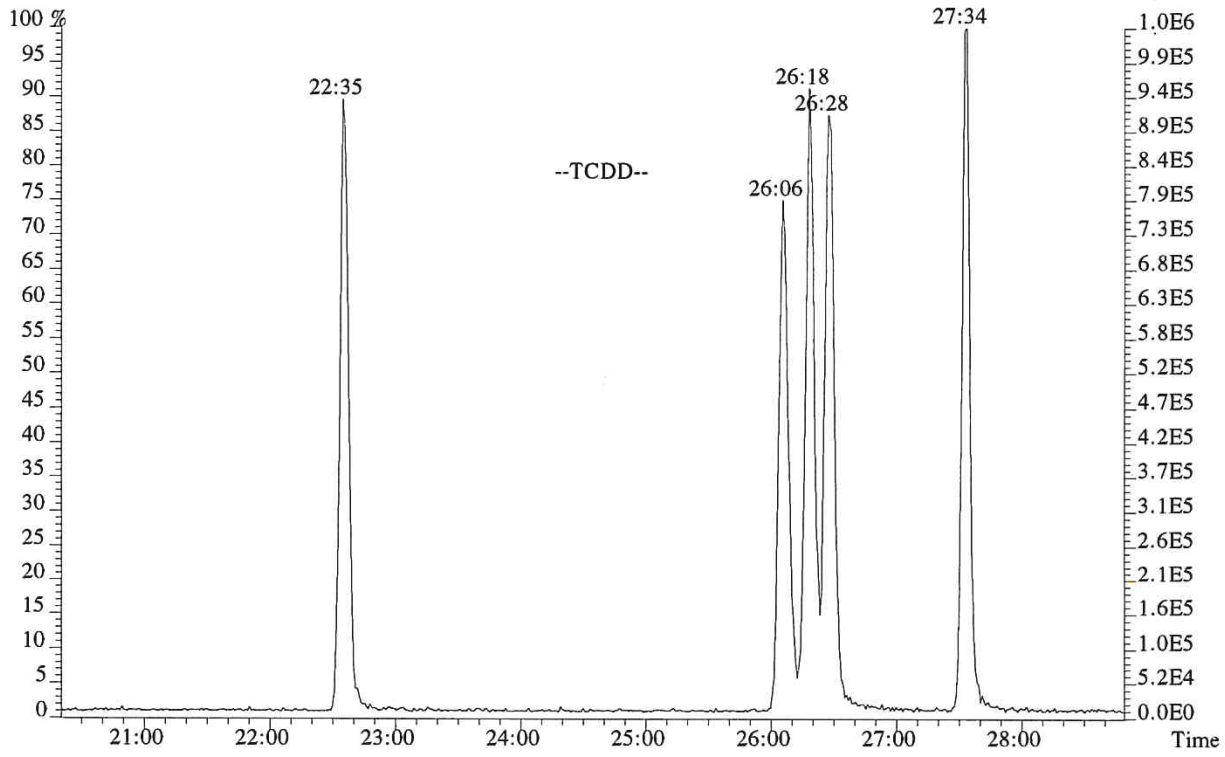
LLM 01/11/19



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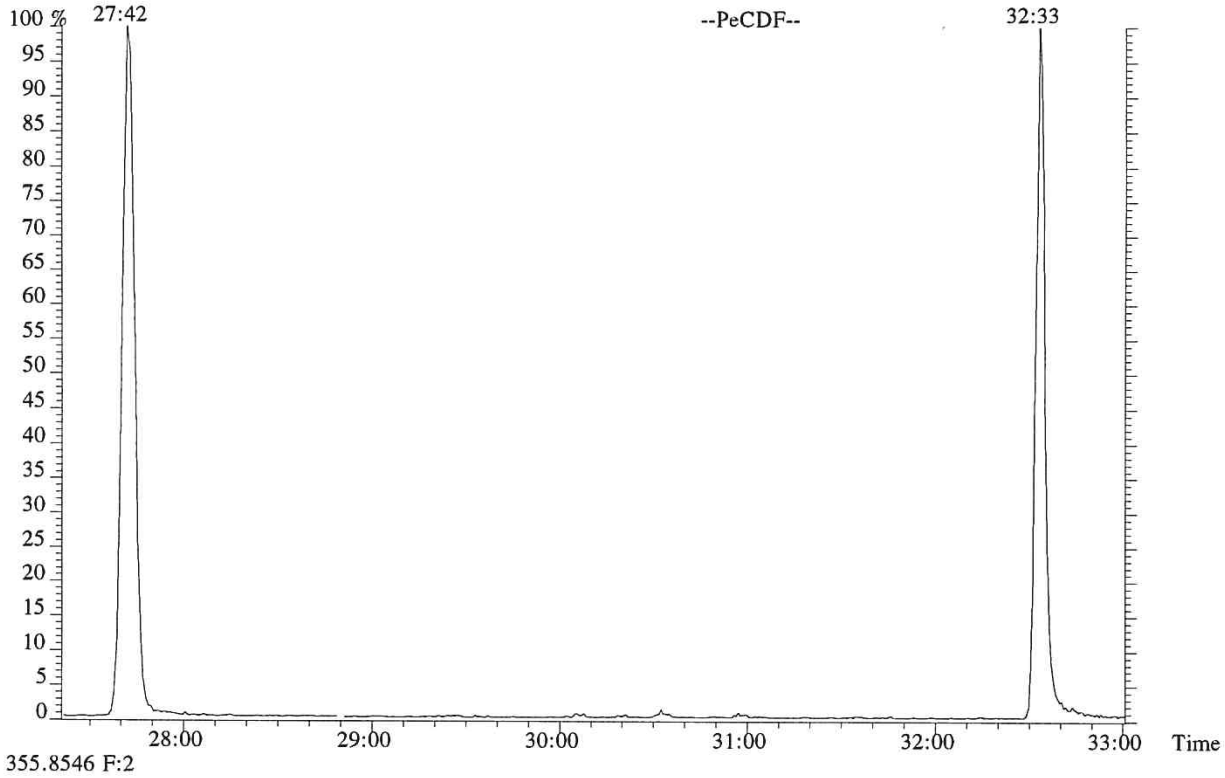


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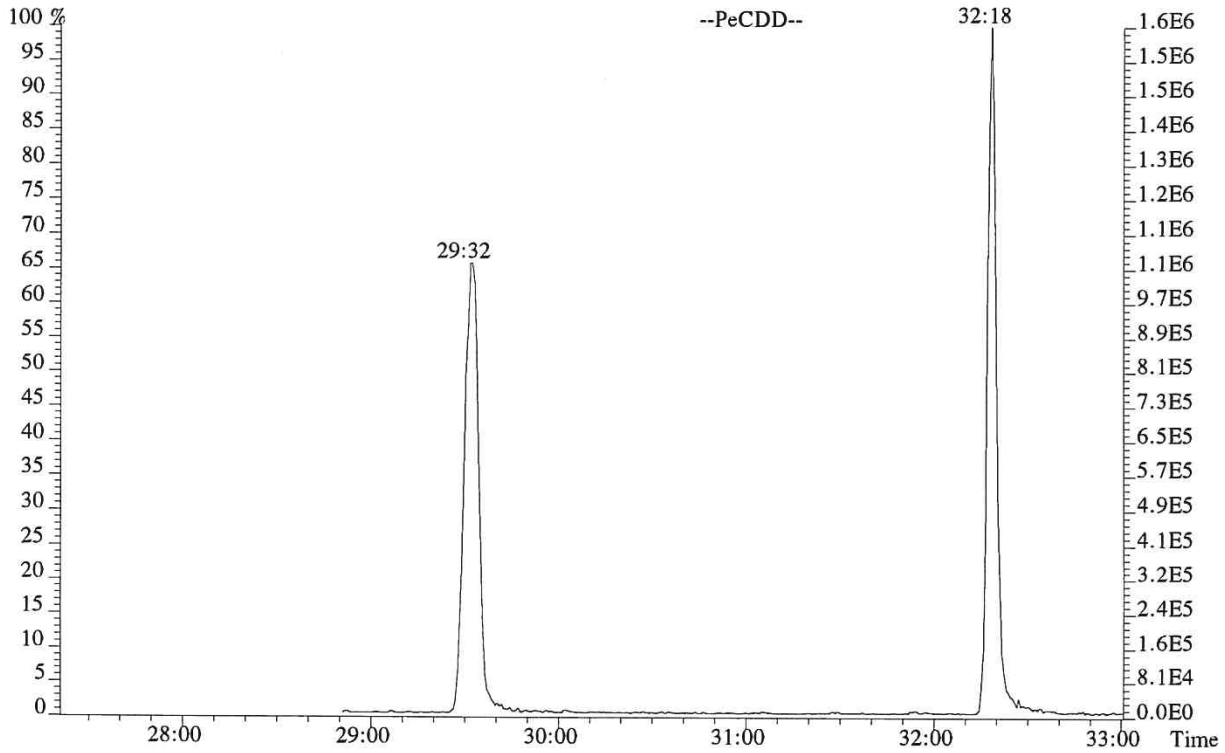


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Sample#1 Exp:192977
339.8597,339.8597 F:2

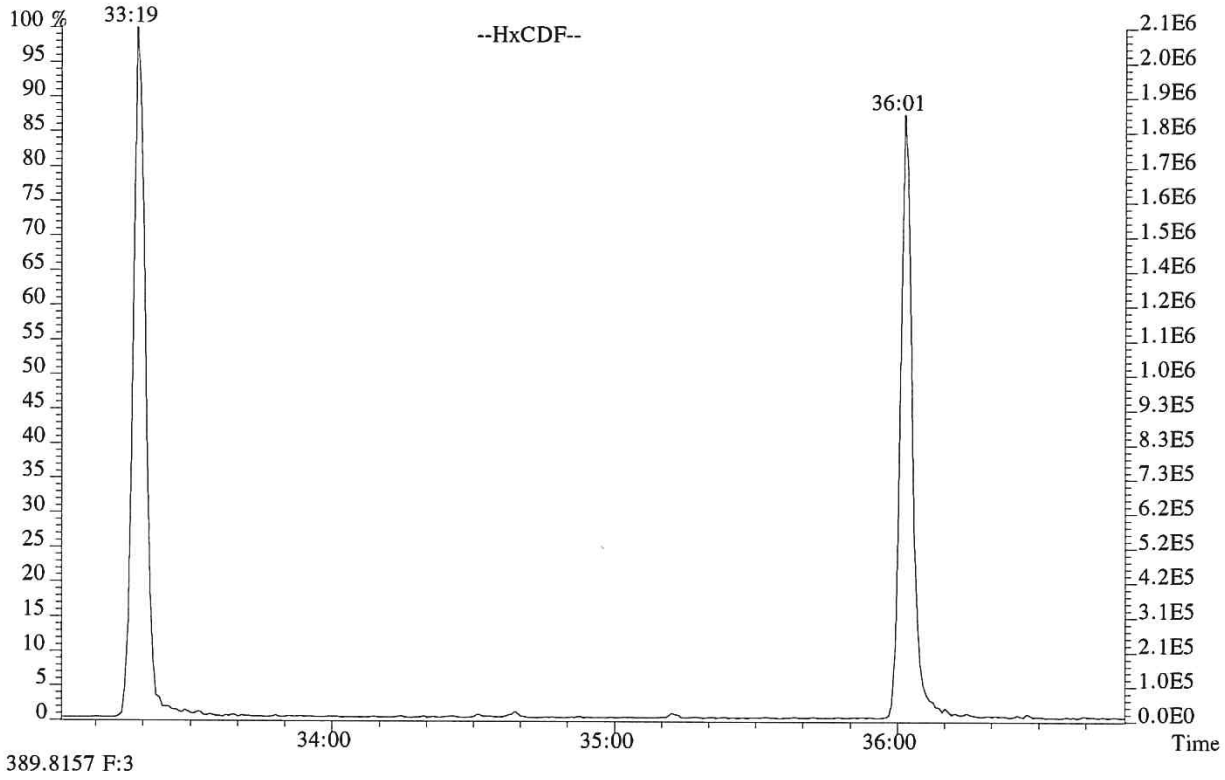


355.8546 F:2

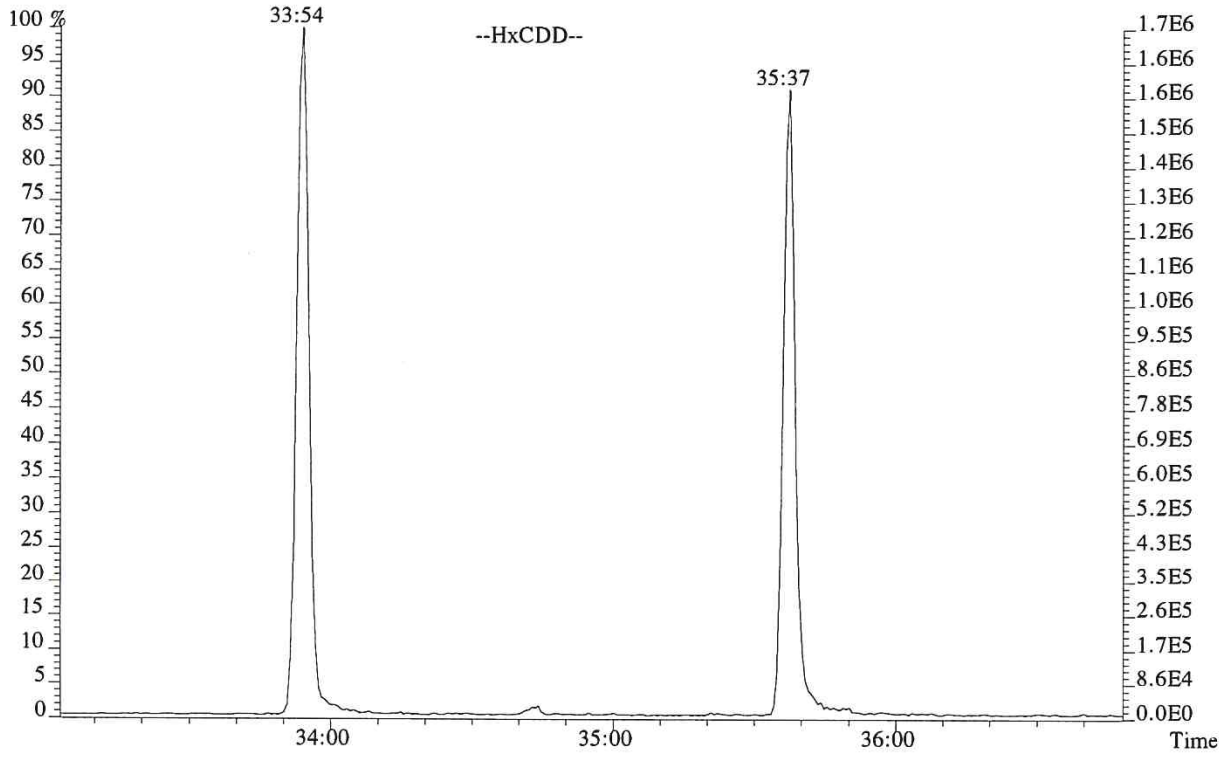


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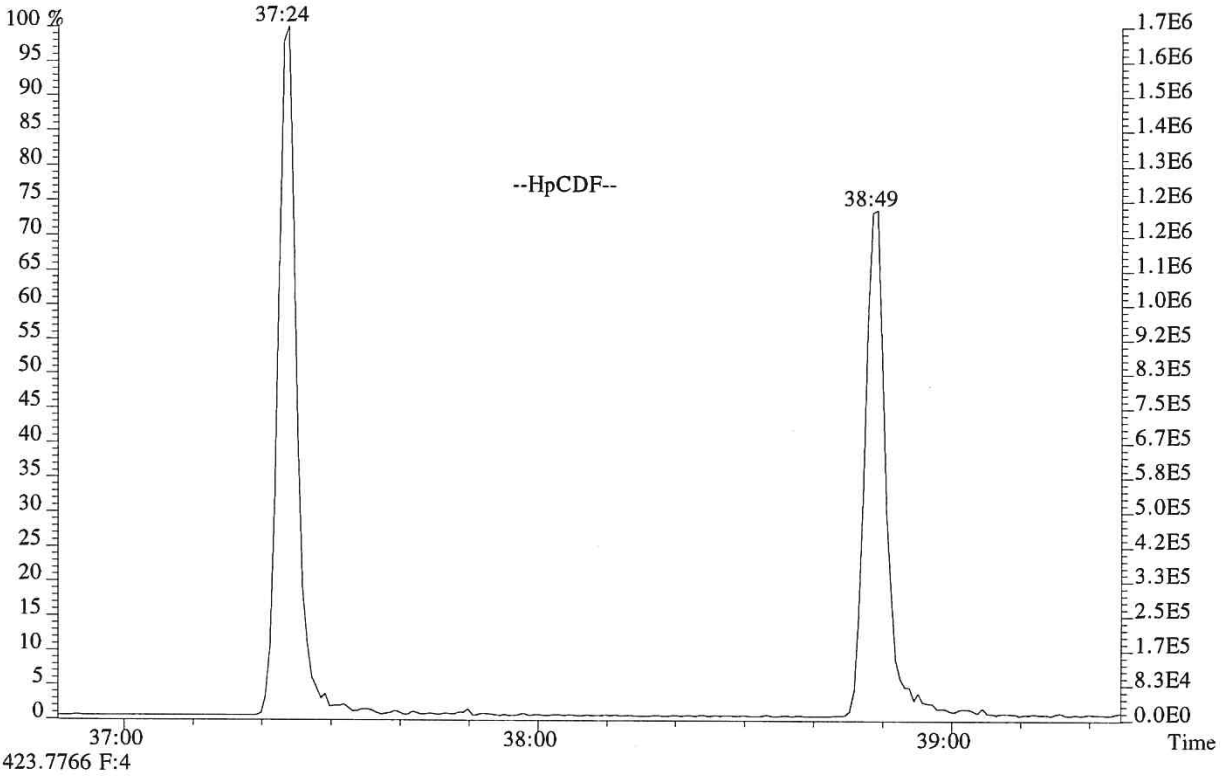
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Sample#1 Exp:192977
373.8208 F:3



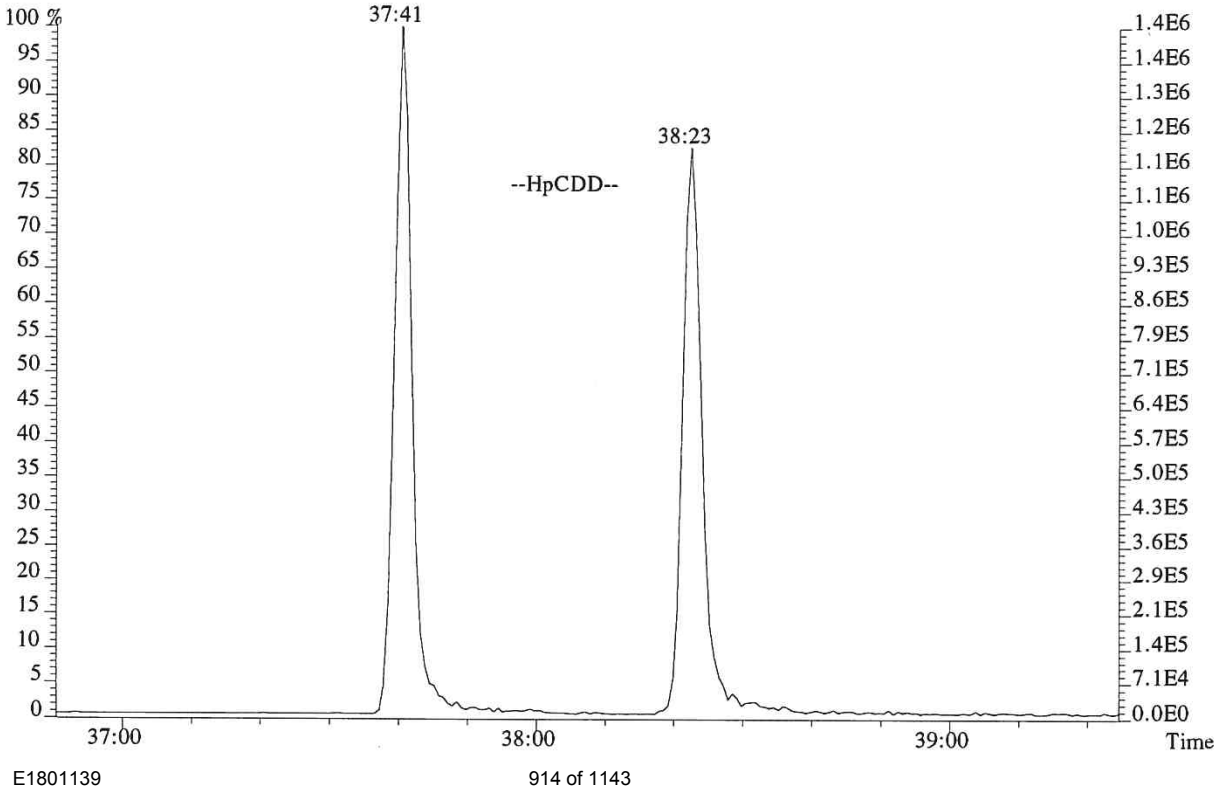
389.8157 F:3



File:P519884 #1-232 Acq:10-JAN-2019 12:14:15 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
407.7818 F:4



423.7766 F:4



USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519885 Analysis Date: 10-JAN-19 Time: 13:02:04

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	9.5	7.8 - 12.9	-5.5
1,2,3,7,8-PeCDD	M+2/M+4	1.59	1.32-1.78	49	39 - 65	-1.4
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	50	39 - 64	-0.3
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	49	39 - 64	-1.6
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	50	41 - 61	-0.4
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	50	43 - 58	-0.4
OCDD	M+2/M+4	0.89	0.76-1.02	99	79 - 126	-1.3
2,3,7,8-TCDF	M/M+2	0.74	0.65-0.89	9.9	8.4 - 12.0	-0.7
1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	51	41 - 60	1.6
2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	51	41 - 61	1.8
1,2,3,4,7,8-HxCDF	M+2/M+4	1.21	1.05-1.43	51	45 - 56	2.5
1,2,3,6,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	51	44 - 57	1.5
1,2,3,7,8,9-HxCDF	M+2/M+4	1.20	1.05-1.43	49	45 - 56	-1.1
2,3,4,6,7,8-HxCDF	M+2/M+4	1.19	1.05-1.43	49	44 - 57	-1.3
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.03	0.88-1.20	49	45 - 55	-1.4
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.01	0.88-1.20	51	43 - 58	1.3
OCDF	M+2/M+4	0.89	0.76-1.02	97	63 - 159	-3.5

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519885 Analysis Date: 10-JAN-19 Time: 13:02:04

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	105	82 - 121	4.6
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.59	1.32-1.78	109	62 - 160	9.3
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	96	85 - 117	-3.9
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	97	85 - 118	-2.5
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	101	72 - 138	0.7
13C-OCDD	M+2/M+4	0.90	0.76-1.02	235	96 - 415	17.7
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	90	71 - 140	-9.6
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	100	76 - 130	0.4
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	102	77 - 130	1.6
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	85	76 - 131	-15.2
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	87	70 - 143	-13.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	90	74 - 135	-10.3
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	92	73 - 137	-7.7
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	94	78 - 129	-5.6
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	97	77 - 129	-3.4
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				10.3	7.8 - 12.7	2.6

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
195556

Run #8 Filename P519885 Samp: 1 Inj: 1 Acquired: 10-JAN-19 13:02:04
Processed: 11-JAN-19 09:26:52 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:23	4.533e+03	6.106e+03	0.74	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:31	3.834e+04	2.480e+04	1.55	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:33	3.643e+04	2.363e+04	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:30	3.092e+04	2.551e+04	1.21	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:37	3.365e+04	2.763e+04	1.22	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:11	3.050e+04	2.566e+04	1.19	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:59	2.655e+04	2.221e+04	1.20	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:22	2.730e+04	2.642e+04	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:48	2.244e+04	2.219e+04	1.01	yes	no	1.258
10	Unk	OCDF	41:17	3.736e+04	4.214e+04	0.89	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:26	3.636e+03	4.604e+03	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:53	2.566e+04	1.610e+04	1.59	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:21	2.266e+04	1.802e+04	1.26	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:26	2.327e+04	1.850e+04	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:41	2.375e+04	1.871e+04	1.27	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:22	2.005e+04	1.895e+04	1.06	yes	no	1.025
17	Unk	OCDD	41:08	3.159e+04	3.533e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:22	5.013e+04	6.366e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:30	7.522e+04	4.758e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:32	7.551e+04	4.761e+04	1.59	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:29	3.170e+04	6.080e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:37	3.683e+04	7.076e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:10	3.533e+04	6.723e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:58	2.927e+04	5.691e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:22	2.462e+04	5.602e+04	0.44	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:47	2.150e+04	4.856e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:24	3.559e+04	4.474e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:52	5.435e+04	3.425e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:20	4.411e+04	3.445e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:25	4.600e+04	3.580e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:21	3.937e+04	3.703e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	41:07	5.730e+04	6.398e+04	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:40	3.707e+04	4.609e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:40	4.931e+04	3.912e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:26	8.648e+03				no	1.014

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
195556

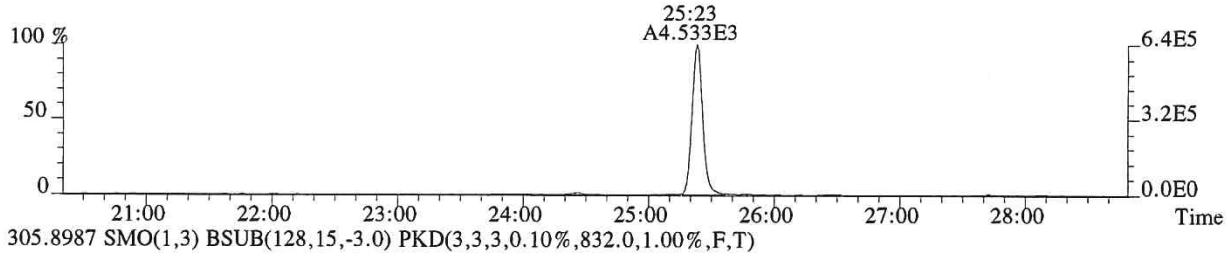
Run #8 Filename P519885 Samp: 1 Inj: 1 Acquired: 10-JAN-19 13:02:04
Processed: 11-JAN-19 09:26:52 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.43e+05	1.13e+03	5.7e+02	8.82e+05	8.32e+02	1.1e+03
2	1,2,3,7,8-PeCDF	6.28e+06	5.88e+02	1.1e+04	4.13e+06	6.96e+02	5.9e+03
3	2,3,4,7,8-PeCDF	6.68e+06	5.88e+02	1.1e+04	4.32e+06	6.96e+02	6.2e+03
4	1,2,3,4,7,8-HxCDF	6.32e+06	8.84e+02	7.1e+03	5.24e+06	6.08e+02	8.6e+03
5	1,2,3,6,7,8-HxCDF	6.64e+06	8.84e+02	7.5e+03	5.43e+06	6.08e+02	8.9e+03
6	2,3,4,6,7,8-HxCDF	6.24e+06	8.84e+02	7.1e+03	5.24e+06	6.08e+02	8.6e+03
7	1,2,3,7,8,9-HxCDF	5.03e+06	8.84e+02	5.7e+03	4.17e+06	6.08e+02	6.9e+03
8	1,2,3,4,6,7,8-HpCDF	5.47e+06	6.50e+03	8.4e+02	5.25e+06	3.50e+03	1.5e+03
9	1,2,3,4,7,8,9-HpCDF	4.03e+06	6.50e+03	6.2e+02	4.00e+06	3.50e+03	1.1e+03
10	OCDF	5.31e+06	4.36e+02	1.2e+04	5.89e+06	6.76e+02	8.7e+03
11	2,3,7,8-TCDD	5.54e+05	1.91e+03	2.9e+02	6.92e+05	9.76e+02	7.1e+02
12	1,2,3,7,8-PeCDD	4.57e+06	8.60e+02	5.3e+03	2.85e+06	4.16e+02	6.9e+03
13	1,2,3,4,7,8-HxCDD	4.71e+06	9.16e+02	5.1e+03	3.68e+06	3.24e+02	1.1e+04
14	1,2,3,6,7,8-HxCDD	4.59e+06	9.16e+02	5.0e+03	3.65e+06	3.24e+02	1.1e+04
15	1,2,3,7,8,9-HxCDD	4.56e+06	9.16e+02	5.0e+03	3.68e+06	3.24e+02	1.1e+04
16	1,2,3,4,6,7,8-HpCDD	3.70e+06	6.24e+02	5.9e+03	3.50e+06	5.84e+02	6.0e+03
17	OCDD	4.36e+06	3.56e+02	1.2e+04	4.93e+06	4.88e+02	1.0e+04
18	13C-2,3,7,8-TCDF	7.07e+06	5.08e+03	1.4e+03	8.95e+06	2.49e+03	3.6e+03
19	13C-1,2,3,7,8-PeCDF	1.26e+07	6.44e+02	2.0e+04	7.98e+06	3.60e+02	2.2e+04
20	13C-2,3,4,7,8-PeCDF	1.35e+07	6.44e+02	2.1e+04	8.56e+06	3.60e+02	2.4e+04
21	13C-1,2,3,4,7,8-HxCDF	6.51e+06	6.20e+02	1.0e+04	1.25e+07	6.20e+02	2.0e+04
22	13C-1,2,3,6,7,8-HxCDF	7.28e+06	6.20e+02	1.2e+04	1.39e+07	6.20e+02	2.2e+04
23	13C-2,3,4,6,7,8-HxCDF	7.15e+06	6.20e+02	1.2e+04	1.35e+07	6.20e+02	2.2e+04
24	13C-1,2,3,7,8,9-HxCDF	5.54e+06	6.20e+02	8.9e+03	1.05e+07	6.20e+02	1.7e+04
25	13C-1,2,3,4,6,7,8-HpCDF	4.85e+06	3.35e+03	1.4e+03	1.09e+07	4.75e+03	2.3e+03
26	13C-1,2,3,4,7,8,9-HpCDF	3.89e+06	3.35e+03	1.2e+03	8.70e+06	4.75e+03	1.8e+03
27	13C-2,3,7,8-TCDD	5.47e+06	4.37e+03	1.3e+03	6.97e+06	1.78e+03	3.9e+03
28	13C-1,2,3,7,8-PeCDD	9.92e+06	5.28e+02	1.9e+04	6.19e+06	8.96e+02	6.9e+03
29	13C-1,2,3,4,7,8-HxCDD	9.03e+06	9.40e+02	9.6e+03	7.03e+06	4.80e+02	1.5e+04
30	13C-1,2,3,6,7,8-HxCDD	9.05e+06	9.40e+02	9.6e+03	7.05e+06	4.80e+02	1.5e+04
31	13C-1,2,3,4,6,7,8-HpCDD	7.24e+06	5.08e+02	1.4e+04	6.67e+06	6.52e+02	1.0e+04
32	13C-OCDD	7.96e+06	3.76e+02	2.1e+04	8.88e+06	2.88e+02	3.1e+04
33	13C-1,2,3,4-TCDD	5.44e+06	4.37e+03	1.2e+03	6.79e+06	1.78e+03	3.8e+03
34	13C-1,2,3,7,8,9-HxCDD	9.26e+06	9.40e+02	9.8e+03	7.35e+06	4.80e+02	1.5e+04
35	37Cl-2,3,7,8-TCDD	1.33e+06	1.24e+03	1.1e+03			

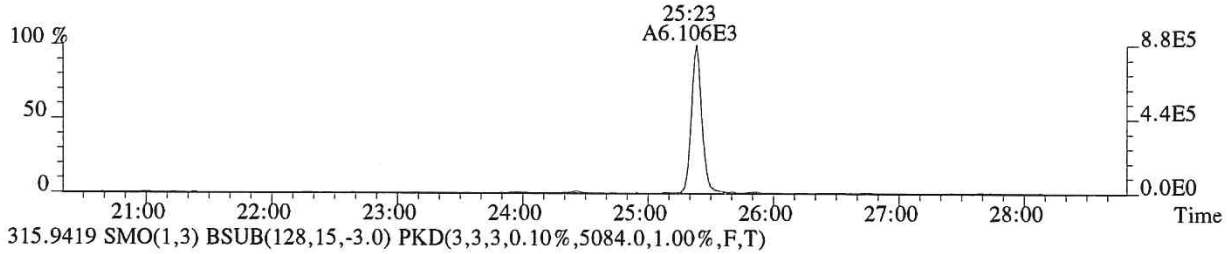
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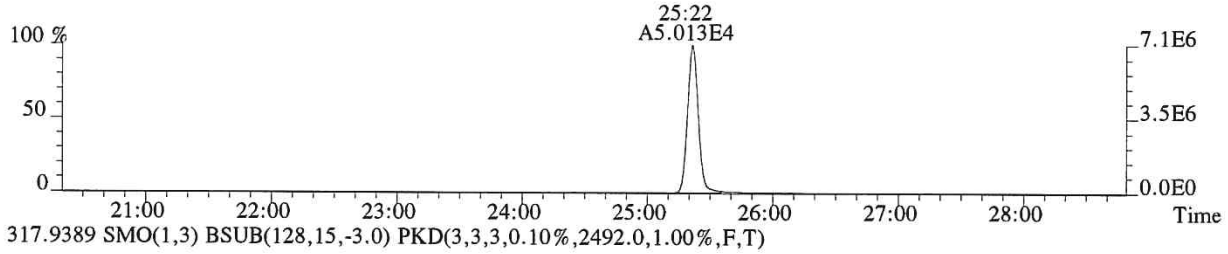
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Sample#1 Exp:195556
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1132.0,1.00%,F,T)



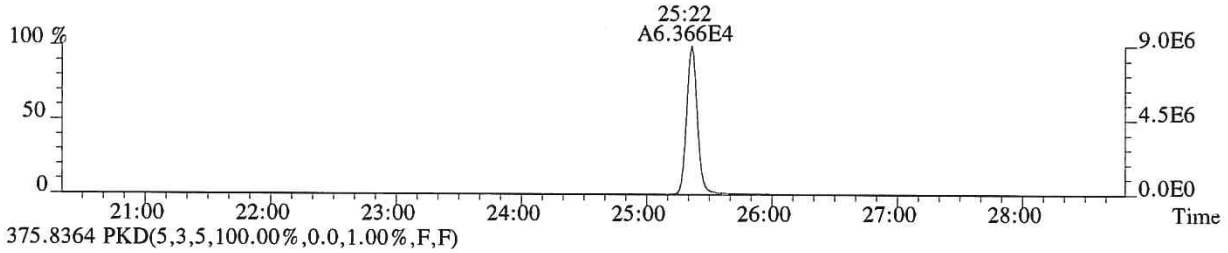
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,832.0,1.00%,F,T)



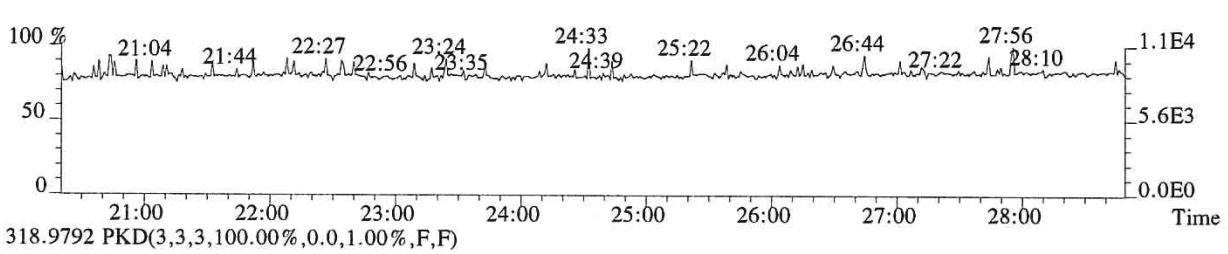
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5084.0,1.00%,F,T)



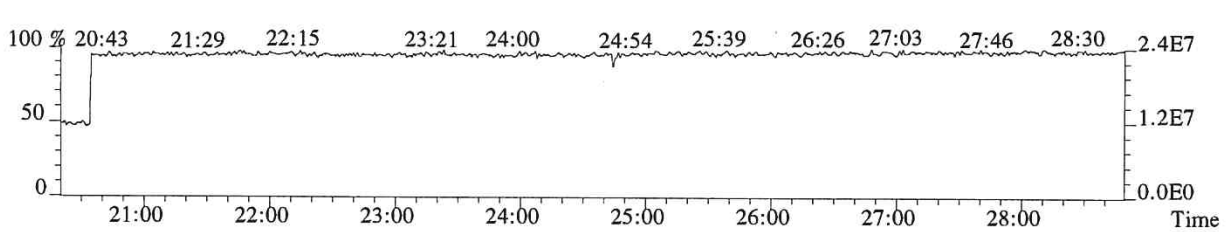
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2492.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

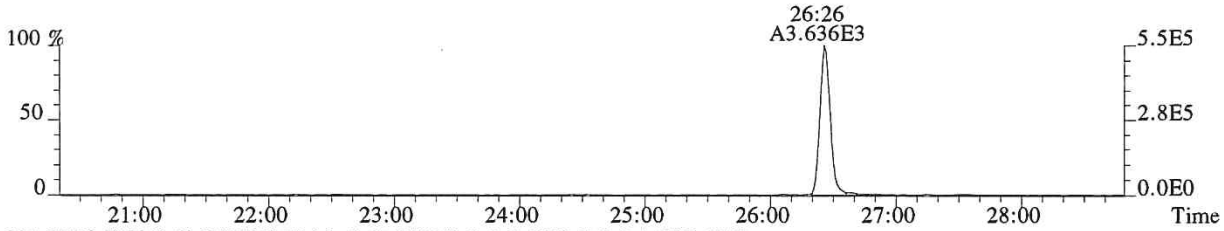


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

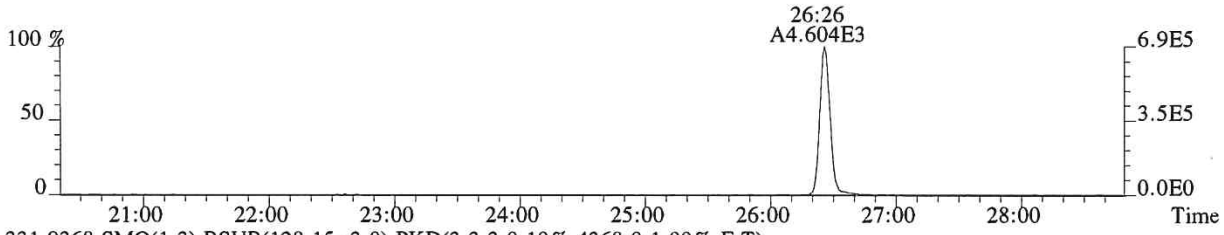


018883

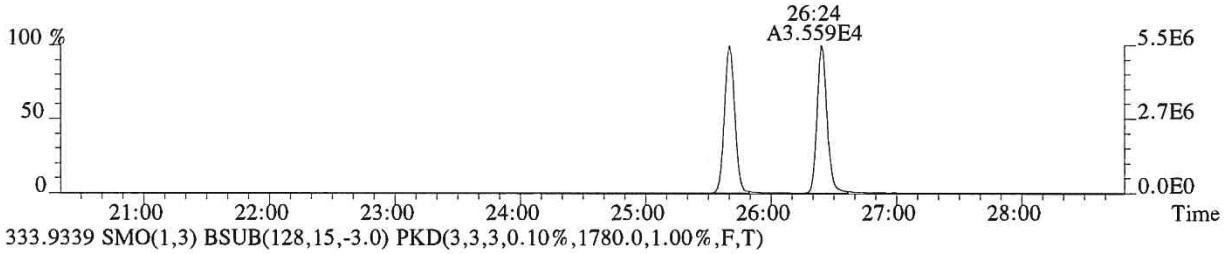
File:P519885 #1-602 Acq:10-JAN-2019 13:02:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1908.0,1.00%,F,T)



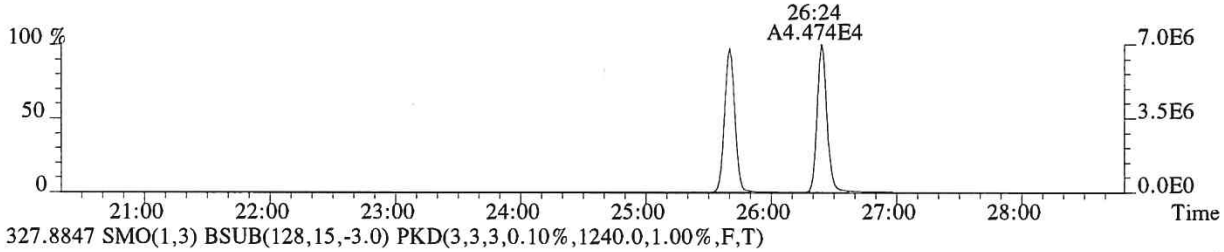
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,976.0,1.00%,F,T)



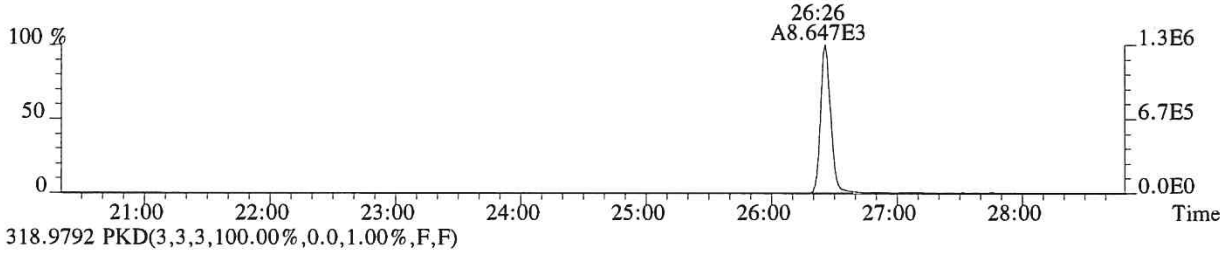
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4368.0,1.00%,F,T)



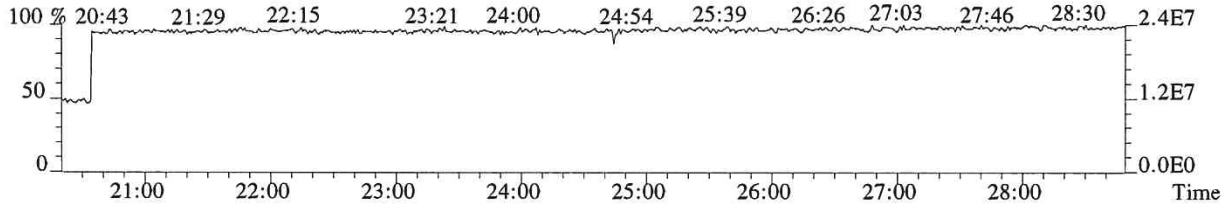
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1780.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1240.0,1.00%,F,T)

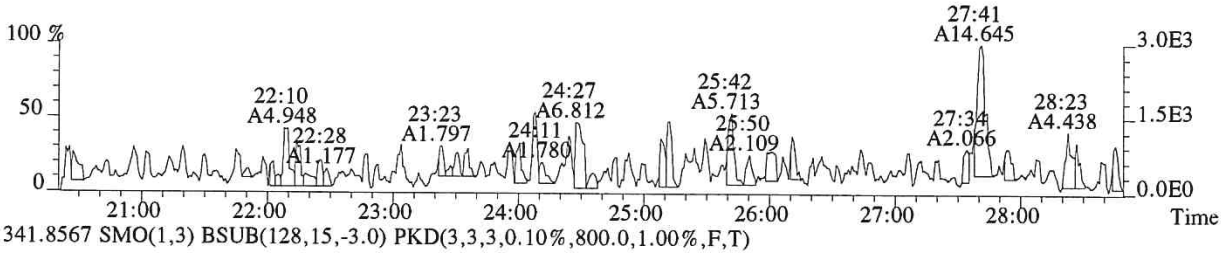


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

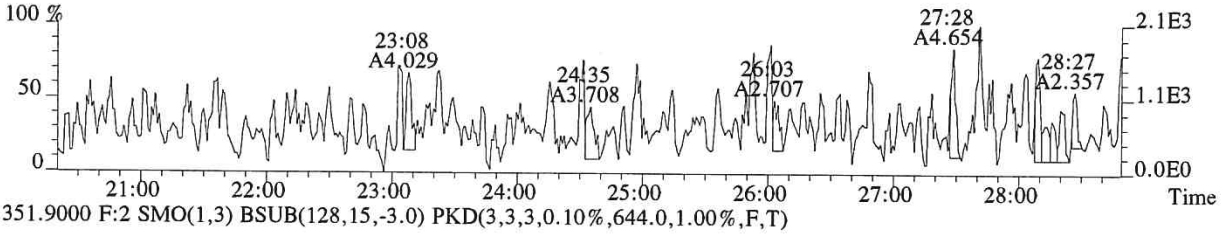


018884

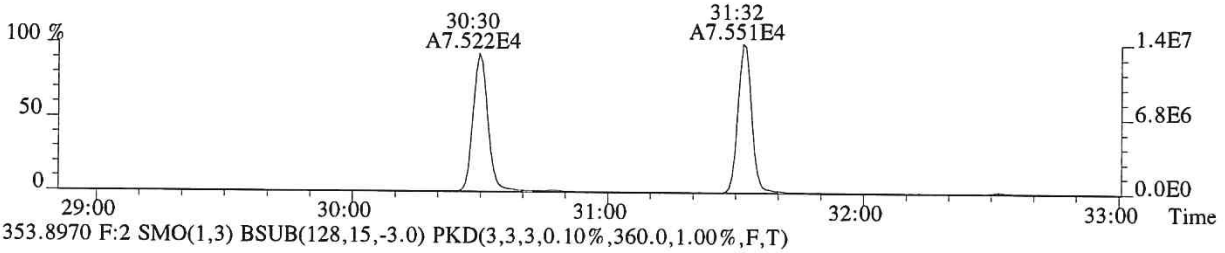
File:P519885 #1-602 Acq:10-JAN-2019 13:02:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,460.0,1.00%,F,T)



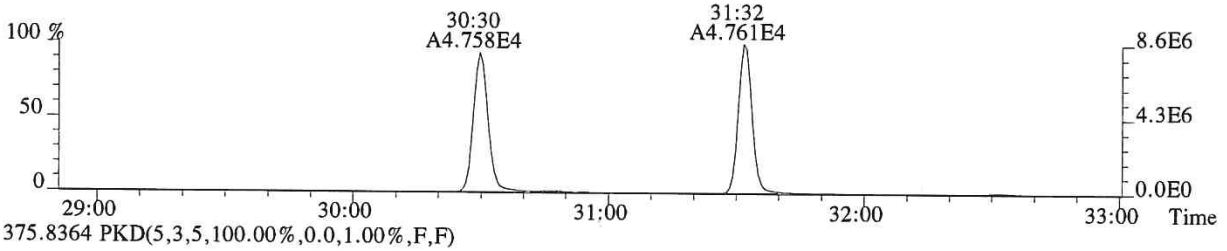
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,800.0,1.00%,F,T)



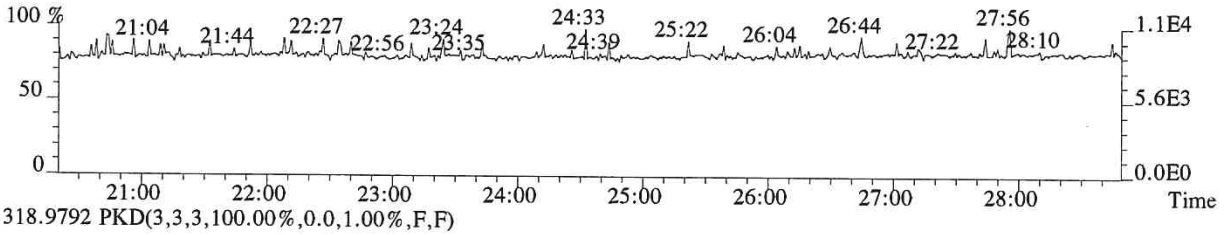
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,644.0,1.00%,F,T)



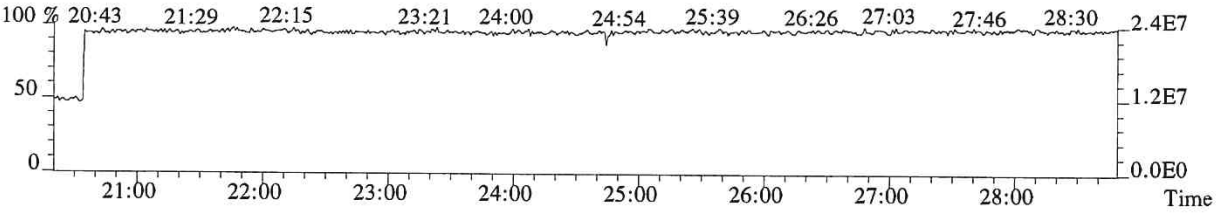
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,360.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

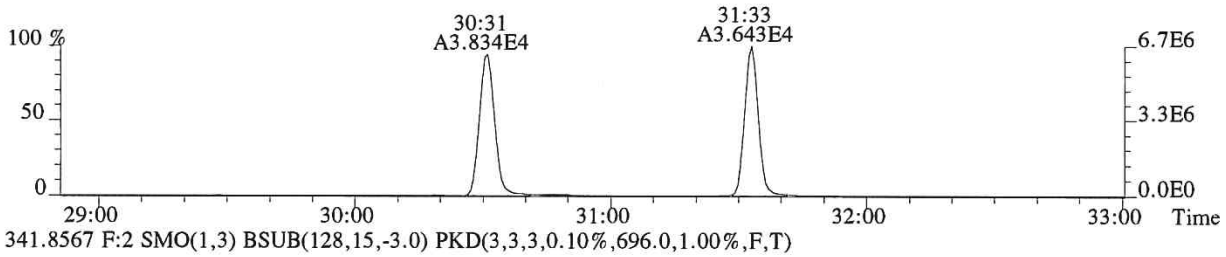


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

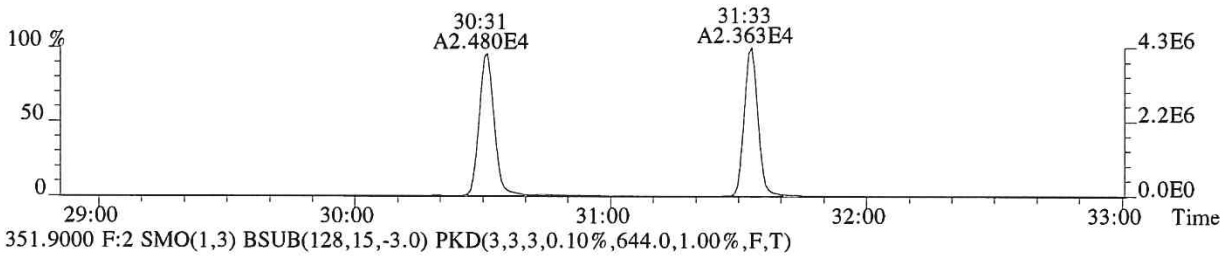


018885

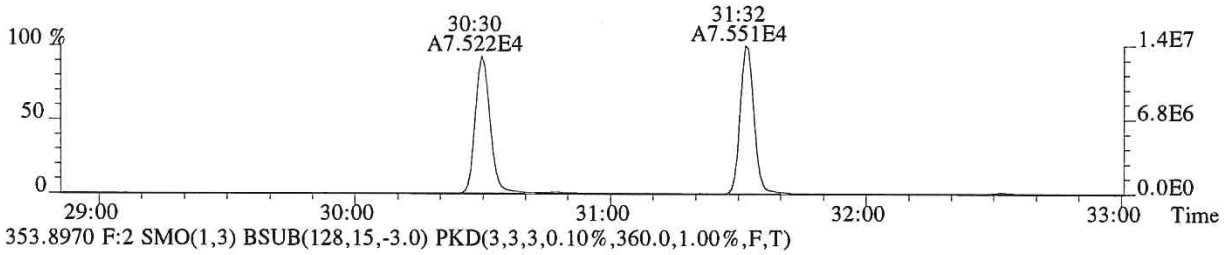
File:P519885 #1-375 Acq:10-JAN-2019 13:02:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,588.0,1.00%,F,T)



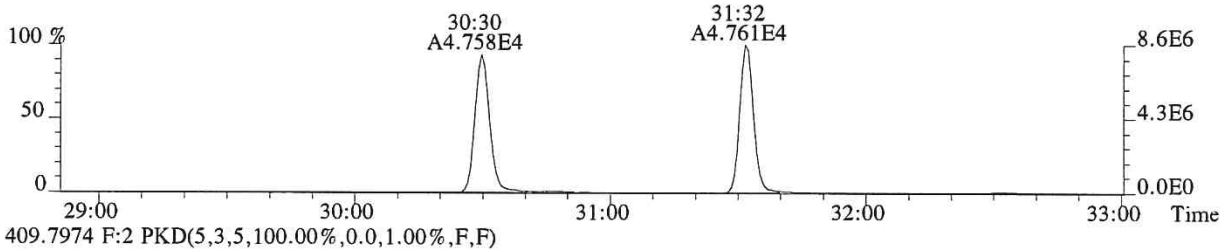
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,696.0,1.00%,F,T)



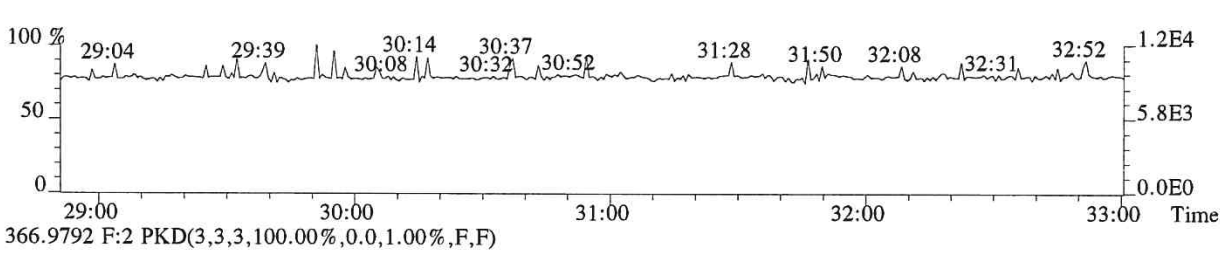
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,644.0,1.00%,F,T)



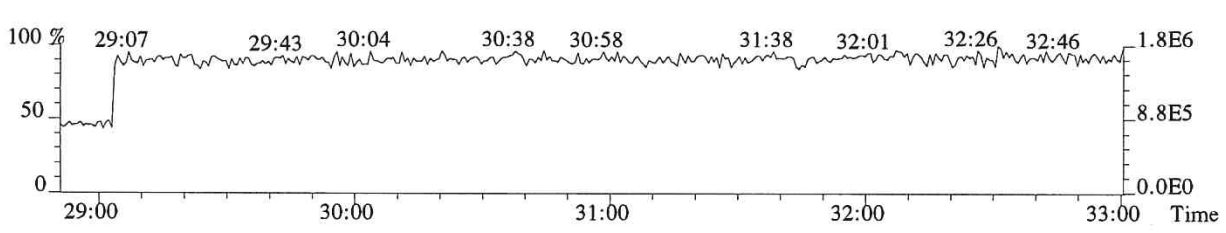
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,360.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

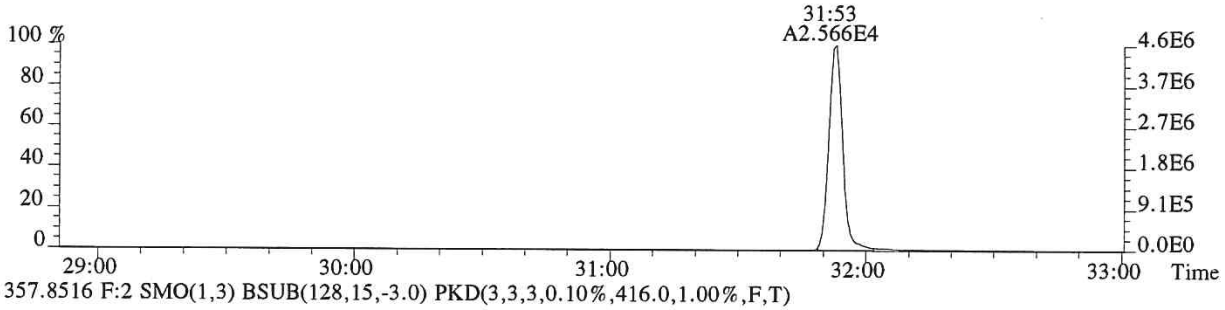


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

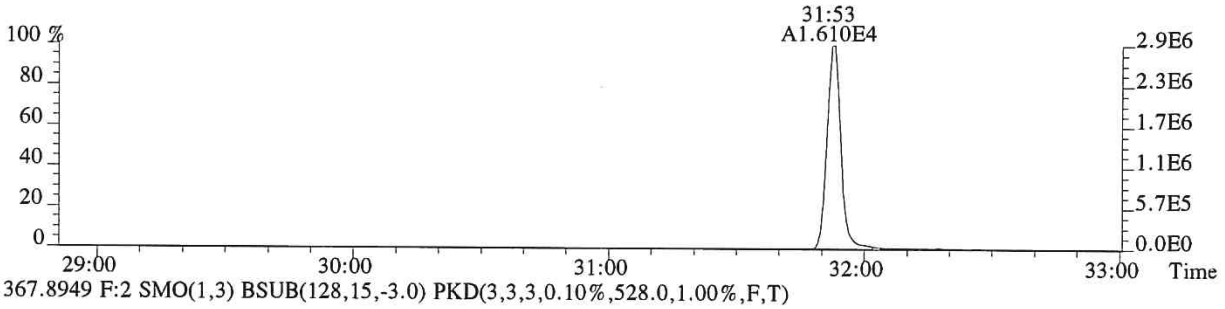


018886

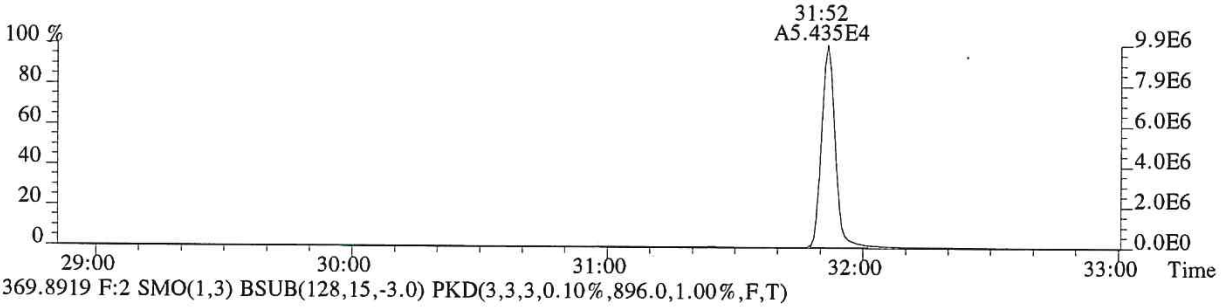
File:P519885 #1-375 Acq:10-JAN-2019 13:02:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,860.0,1.00%,F,T)



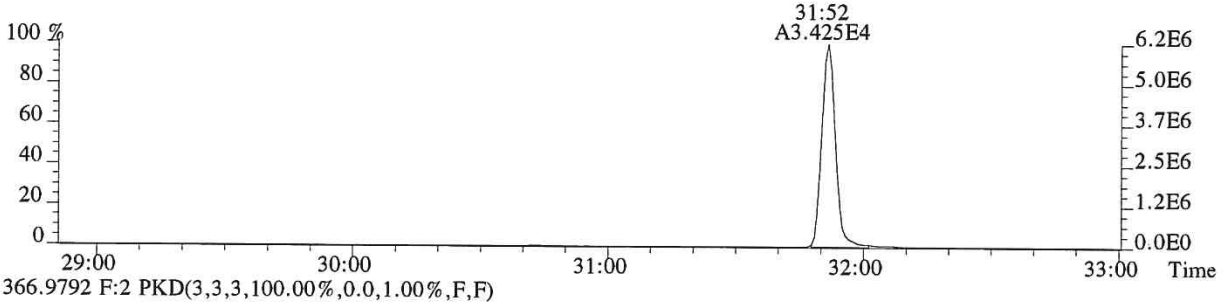
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,416.0,1.00%,F,T)



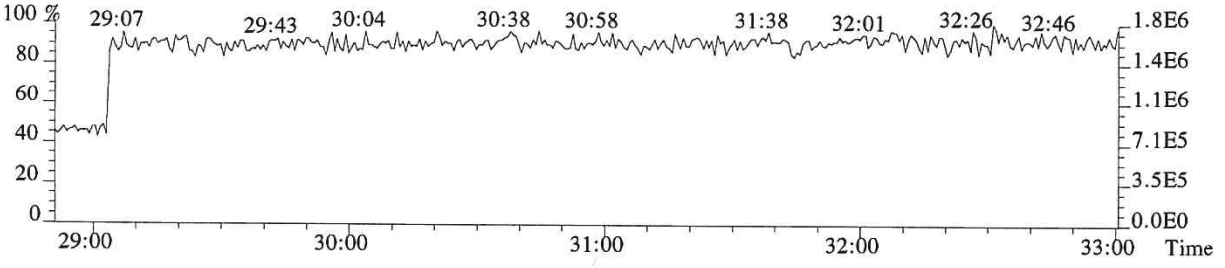
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,528.0,1.00%,F,T)



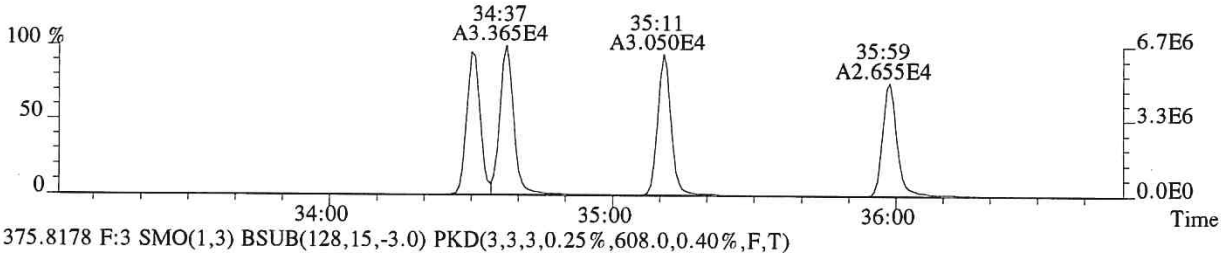
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,896.0,1.00%,F,T)



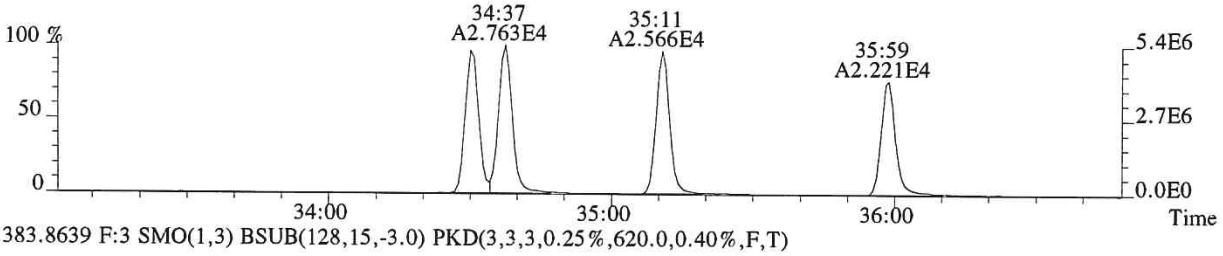
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



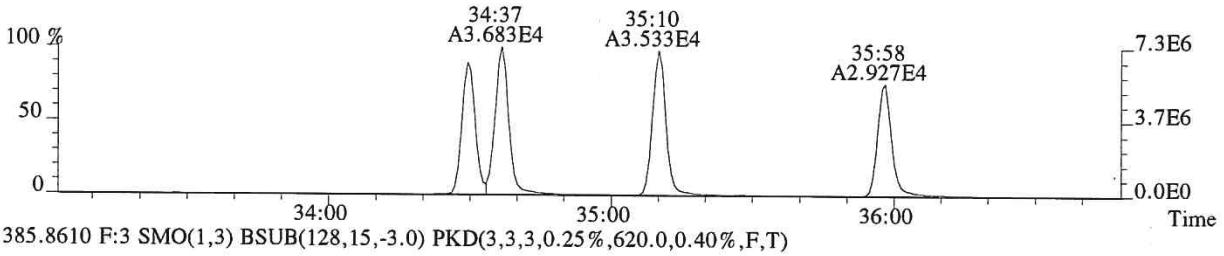
File:P519885 #1-339 Acq:10-JAN-2019 13:02:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



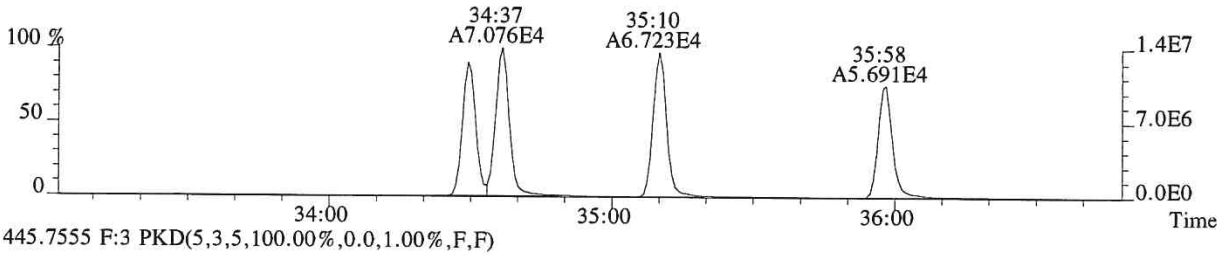
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,608.0,0.40%,F,T)



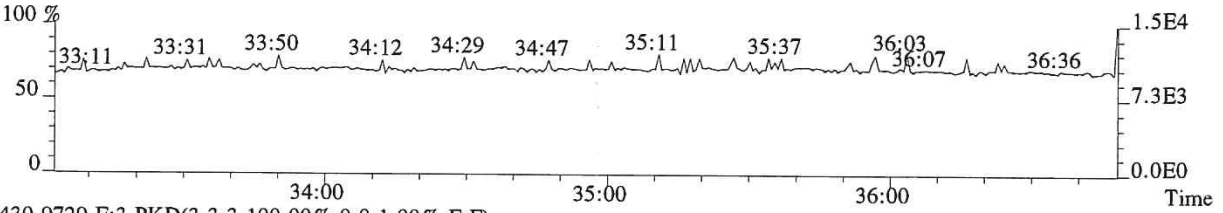
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,620.0,0.40%,F,T)



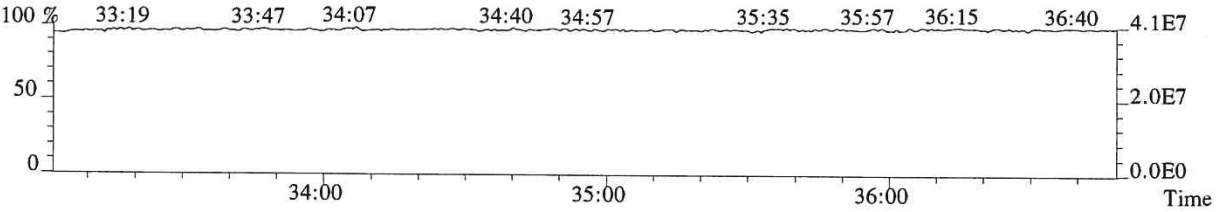
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,620.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

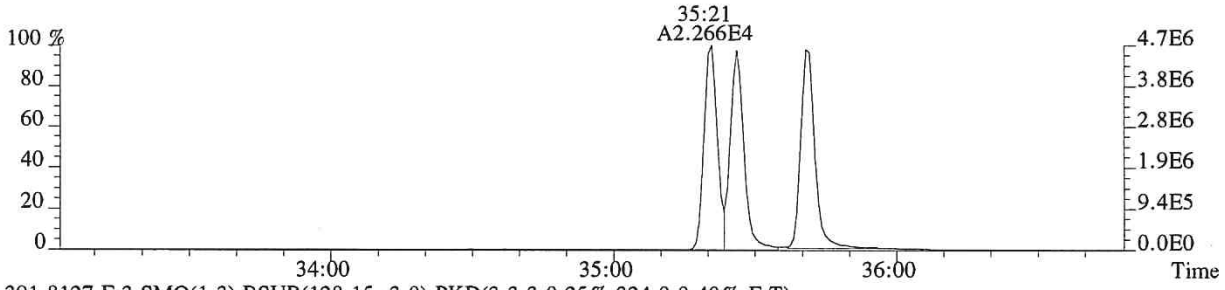


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

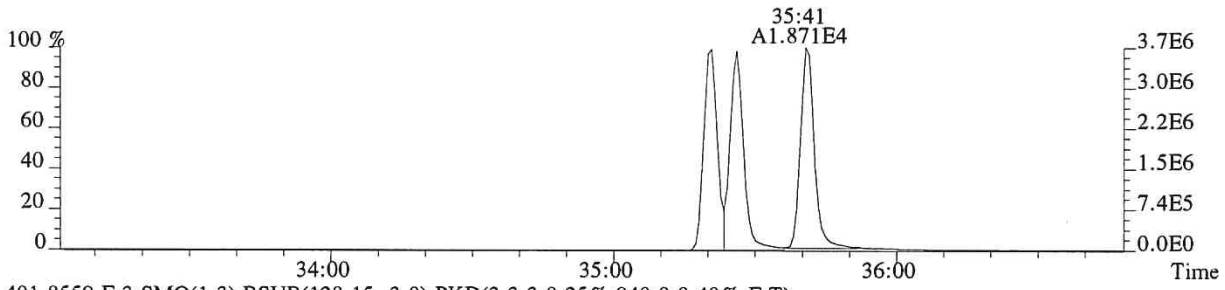


018888

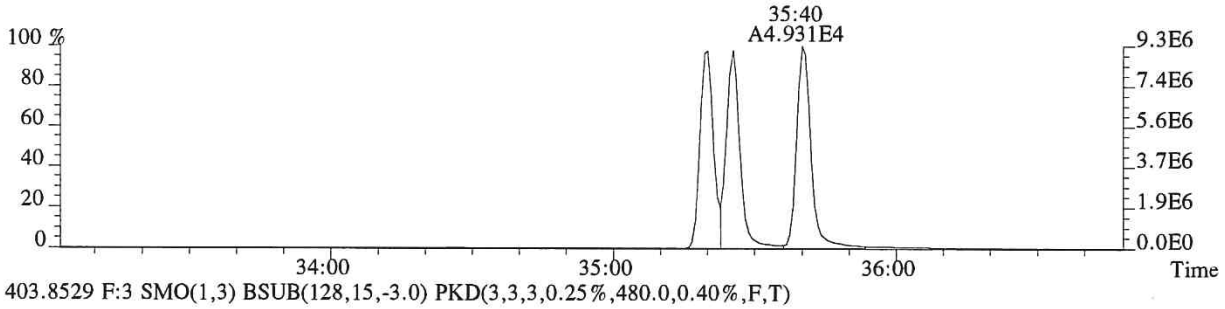
File:P519885 #1-339 Acq:10-JAN-2019 13:02:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,916.0,0.40%,F,T)



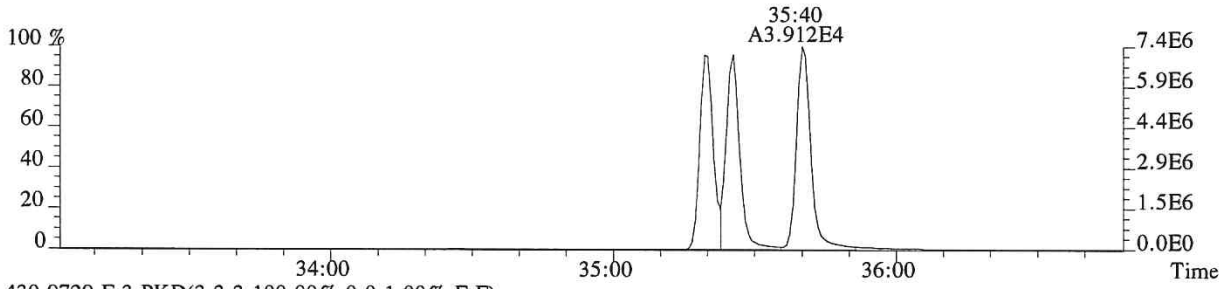
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,324.0,0.40%,F,T)



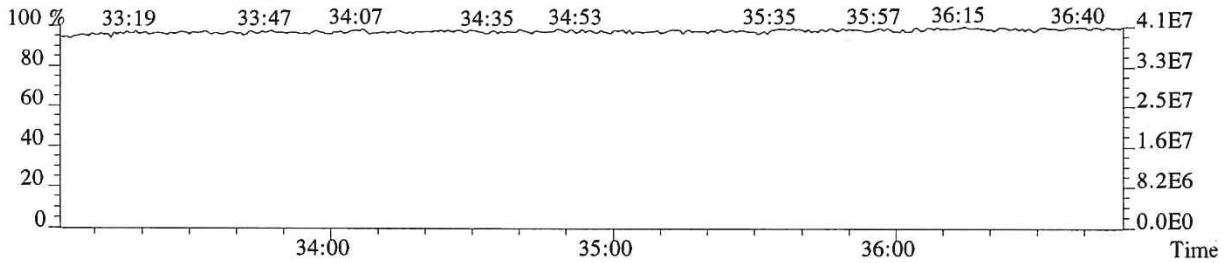
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,940.0,0.40%,F,T)



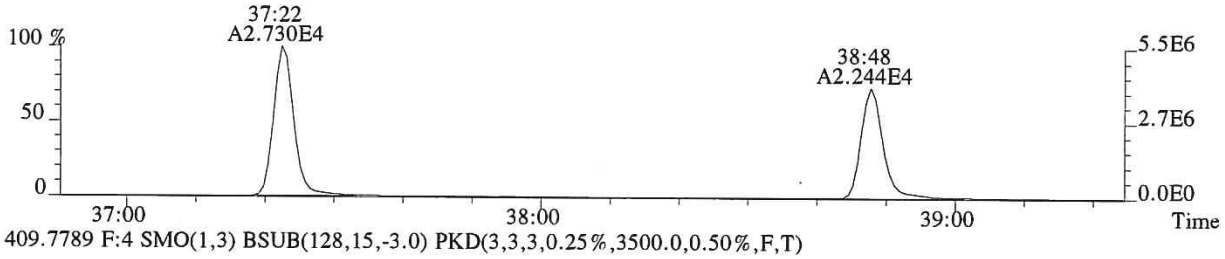
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,480.0,0.40%,F,T)



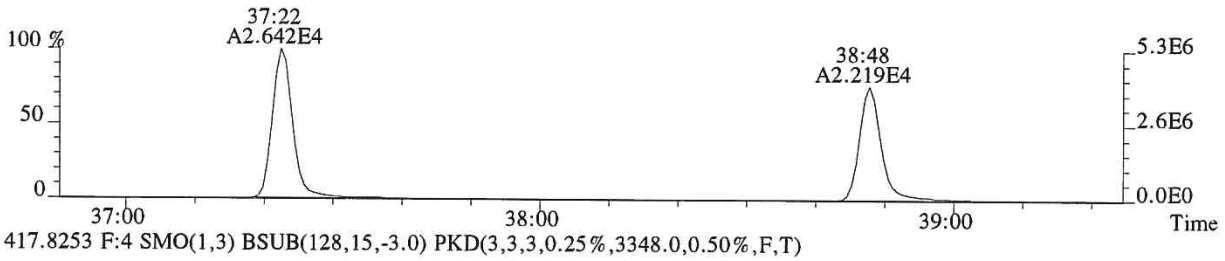
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



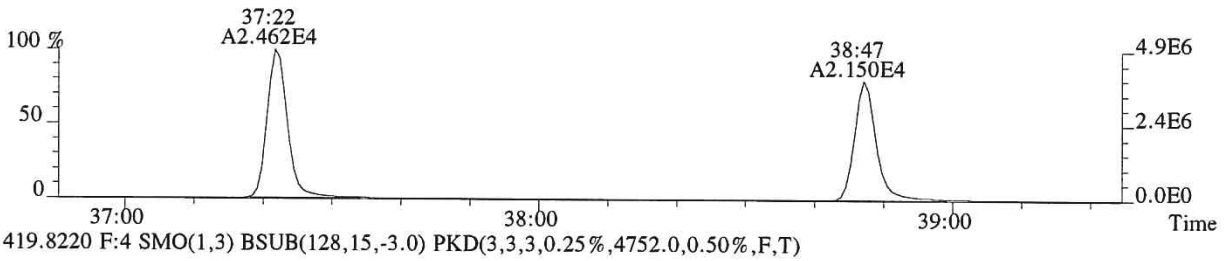
File:P519885 #1-232 Acq:10-JAN-2019 13:02:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6504.0,0.50%,F,T)



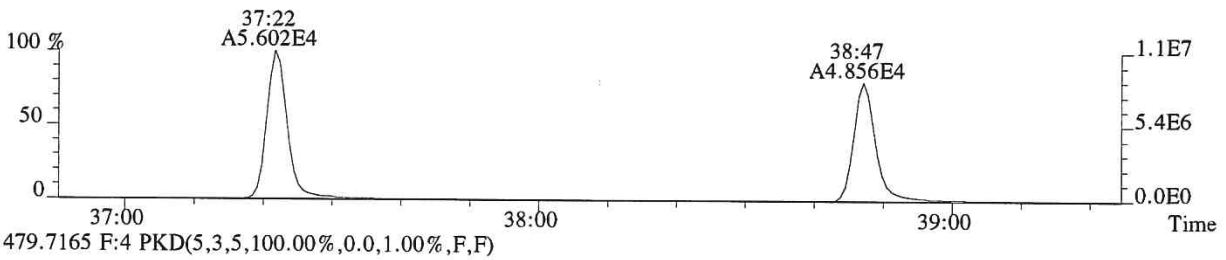
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3500.0,0.50%,F,T)



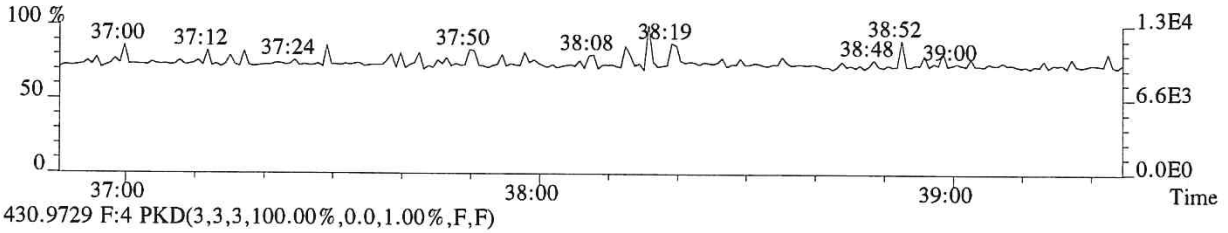
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3348.0,0.50%,F,T)



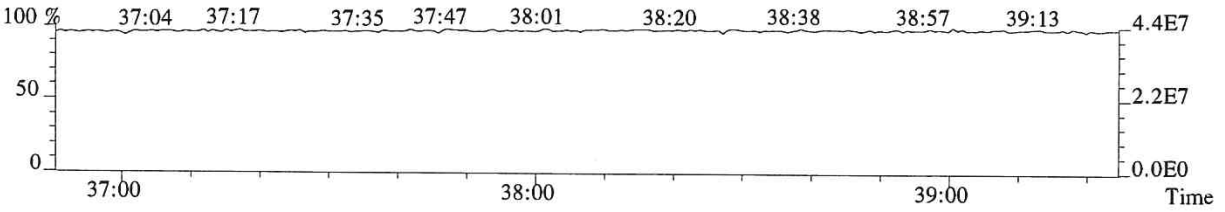
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4752.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

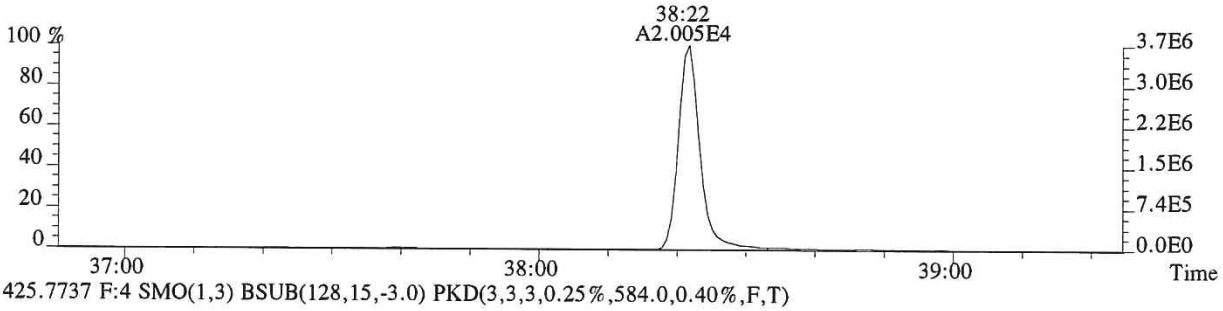


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

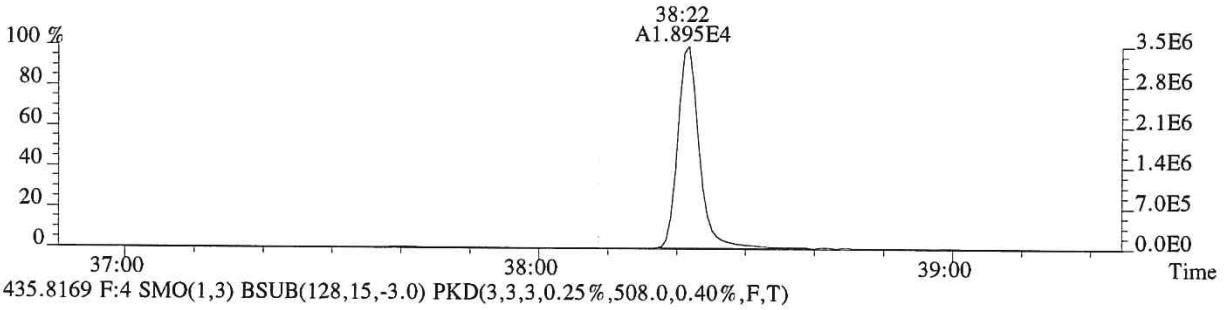


018890

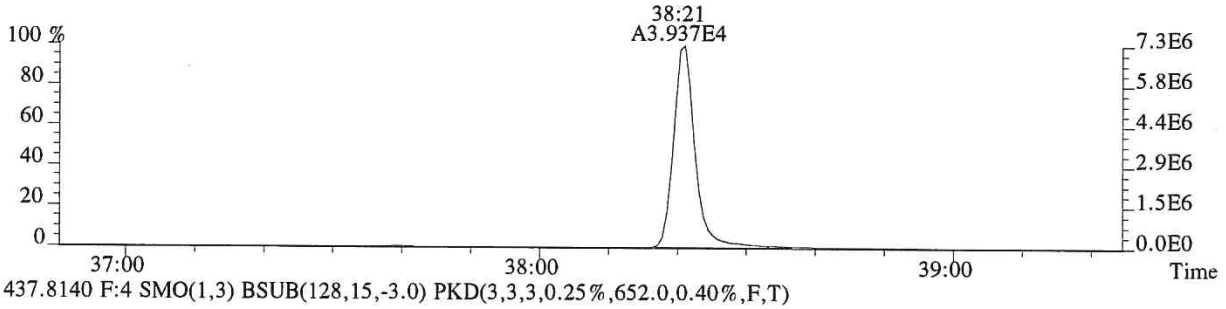
File:P519885 #1-232 Acq:10-JAN-2019 13:02:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,624.0,0.40%,F,T)



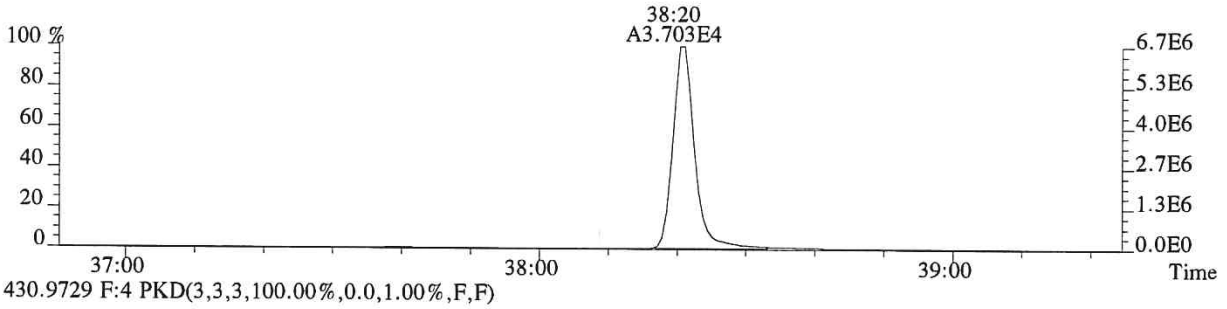
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,584.0,0.40%,F,T)



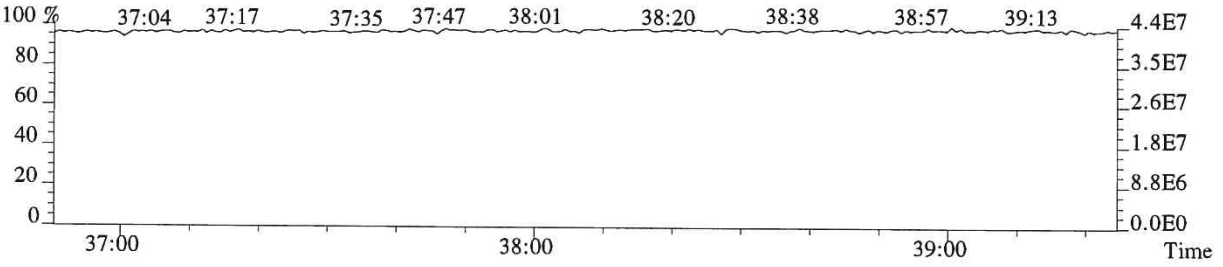
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,508.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,652.0,0.40%,F,T)

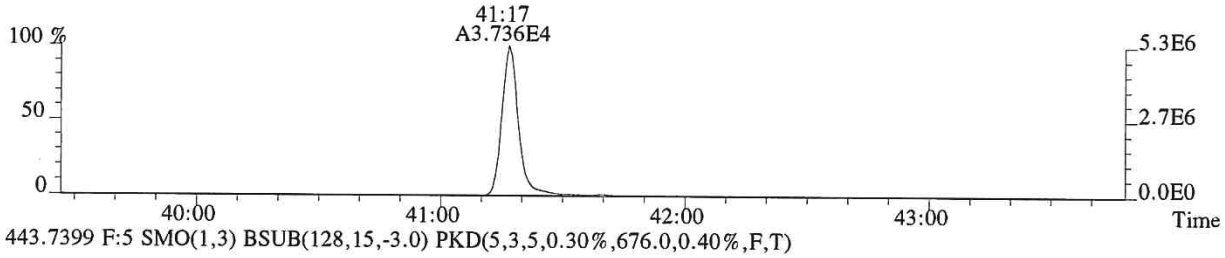


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

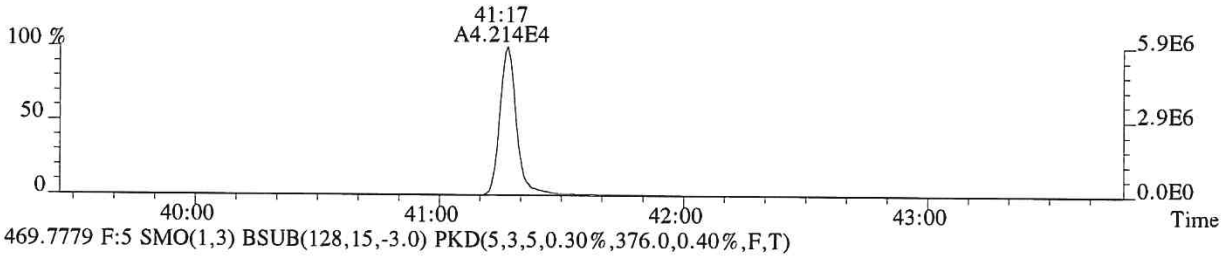


018891

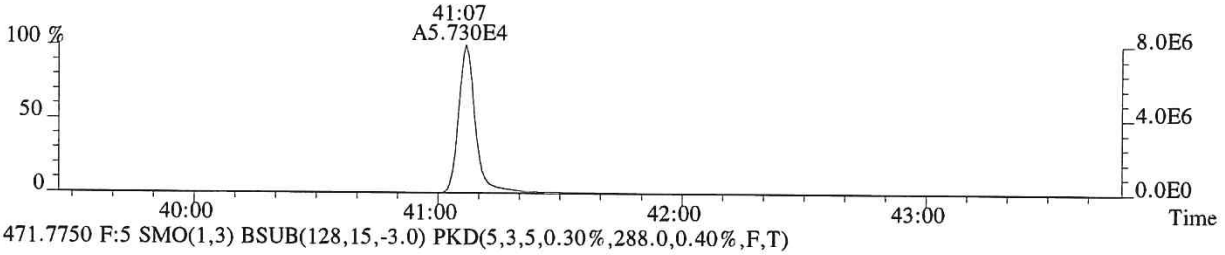
File:P519885 #1-393 Acq:10-JAN-2019 13:02:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,436.0,0.40%,F,T)



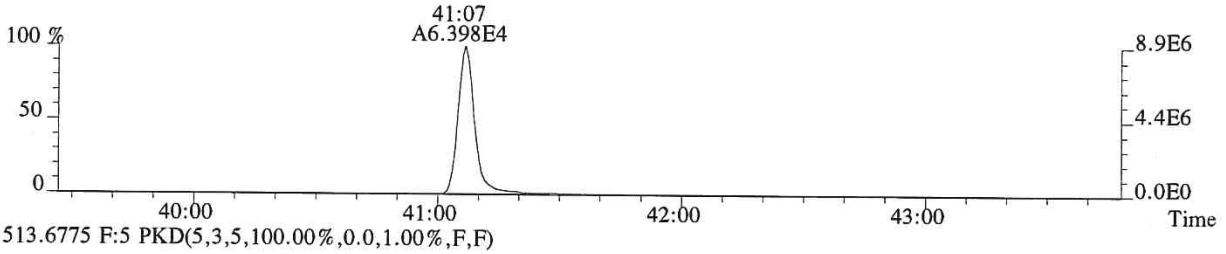
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,676.0,0.40%,F,T)



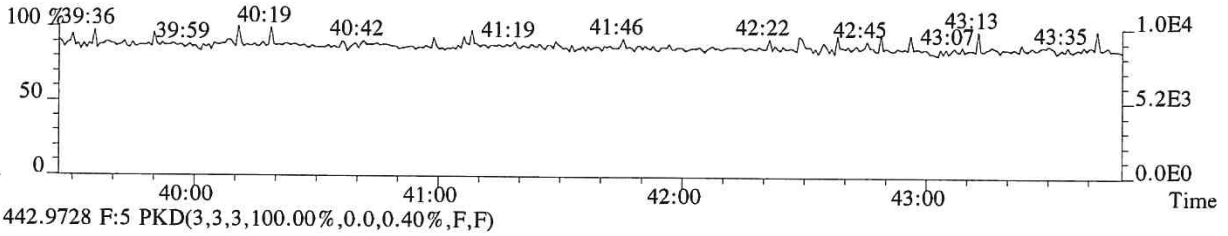
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,376.0,0.40%,F,T)



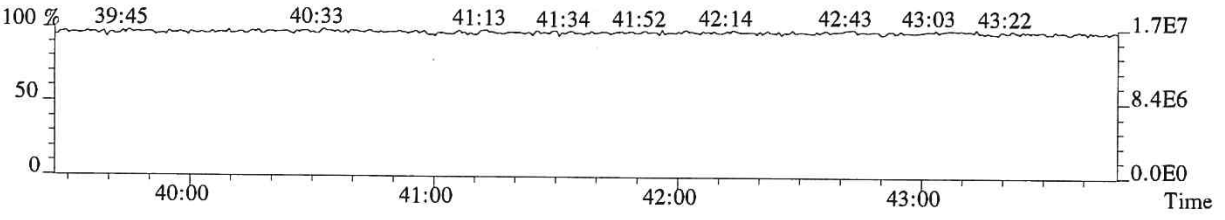
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,288.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

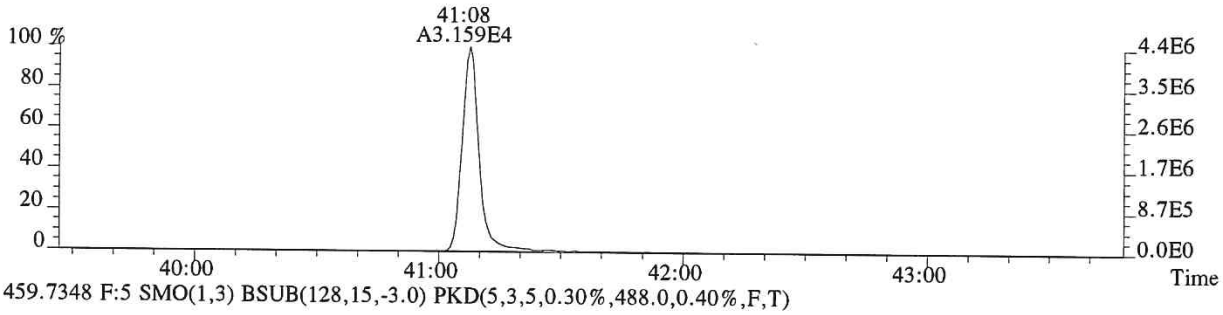


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

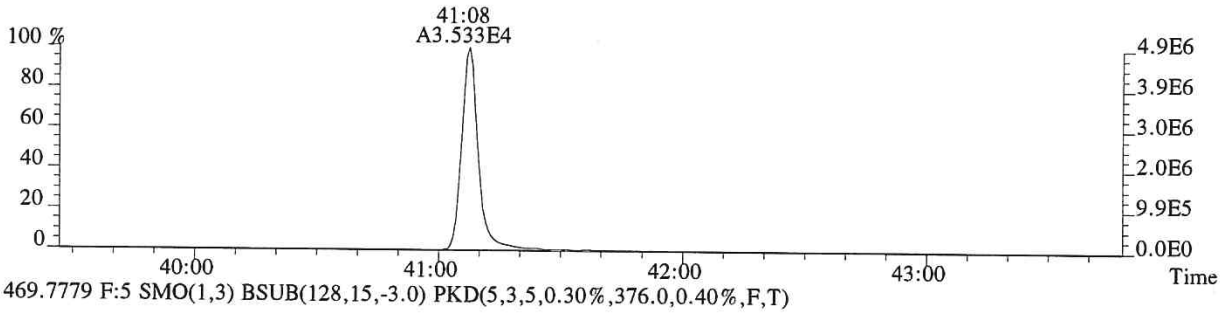


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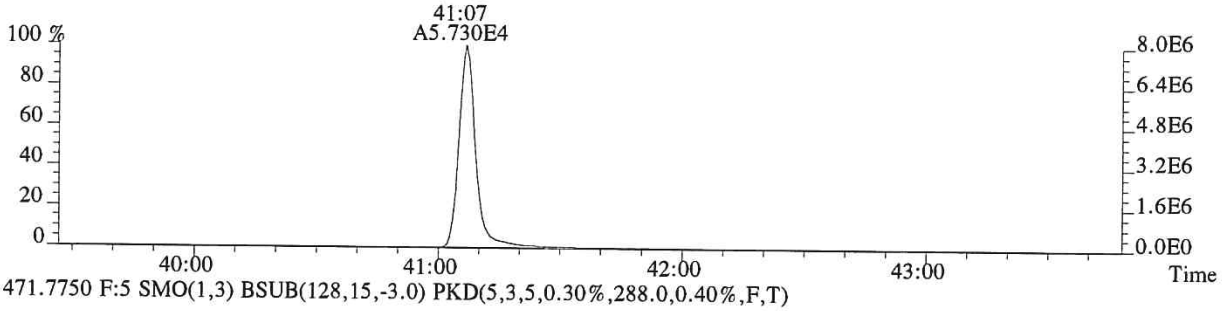
File:P519885 #1-393 Acq:10-JAN-2019 13:02:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,356.0,0.40%,F,T)



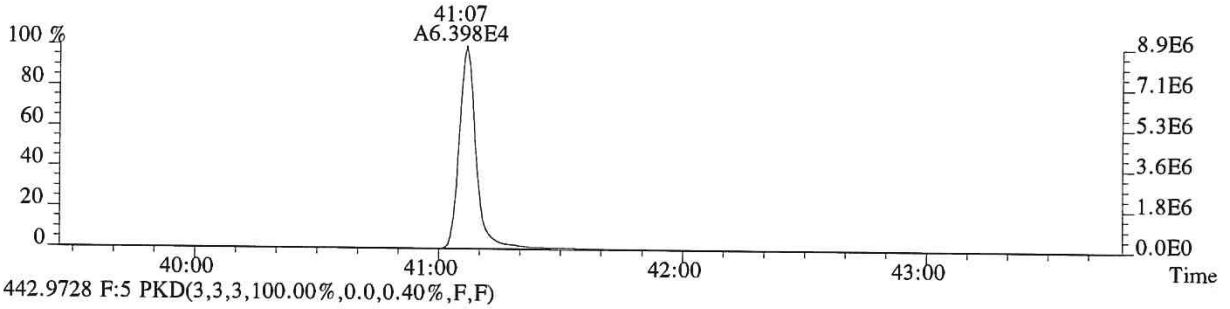
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,488.0,0.40%,F,T)



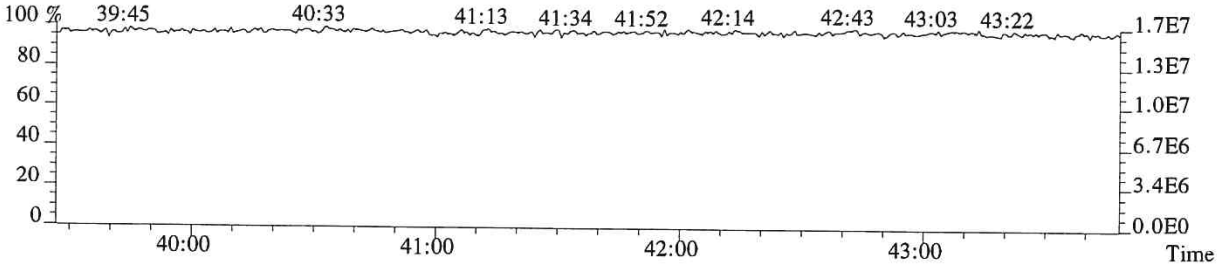
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,376.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,288.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018893

CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P519900

Date: 01/11/19

Circle one: (Beginning) / Ending

Method: (1613) / 1613E / 8290/ VCP / Tetra / TCDD Only / TCDF Conf / VCP Conf / 8280 / M23 / TO-9A

Retention Window/Column Performance Check:	Analyst	Second Check
Windows in and first and last eluters labeled	✓	✓
Column Performance shows less than or equal to 25% valley between column specific 2378 isomer and its closest eluters	✓	✓
No QC ion deflections affect column specific 2378 isomer or its closest eluters (HRMS Only)	✓	✓

CS3 Continuing Calibration	Analyst	Second Check
Percent RSD within method criteria	✓	✓
All relative abundance ratios meet method criteria	✓	✓
No QC ion deflections of greater than 20% (HRMS Only)	✓	✓
Mass spectrometer resolution greater than or equal to 10,000 and documented (HRMS Only)	✓	✓
2378-TCDD elutes at 25 minutes or later on the DB-5 column / DB-5MSUI column	✓	✓
Signal-to-noise of all target analytes and their labeled standards at least 10:1	✓	✓
Valley between labeled 123478 and 123678 HxCDD peaks less than or equal to 50% (LRMS Only)	N/A	N/A
Ending Calibration injected prior to end of 12 hour clock	N/A	N/A

Analyst: _____ Second QC: LKL

ccalqc.xls 07/17/12

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: Case No.: Client No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm)

Init. Calib. Date: 01/24/18

Init. Calib.Times: 11:44

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
195556	CS3	P519900	11-JAN-19	01:36:04
192977	WINDOW DEFINE	P519901	11-JAN-19	02:23:53
METHOD BLANK	EQ1800529-01	P519902	11-JAN-19	03:12:29
SL0232	E1801139-017	P519903	11-JAN-19	04:01:05
SL0244	E1801139-018	P519904	11-JAN-19	04:49:47
SL0245	E1801139-019	P519905	11-JAN-19	05:38:24
SL0246	E1801139-020	P519906	11-JAN-19	06:27:02
SL0216	E1801139-003DL	P519907	11-JAN-19	07:15:39
SL0217	E1801139-004DL	P519908	11-JAN-19	08:04:17
SL0218	E1801139-005DL	P519909	11-JAN-19	08:57:31
SL0222	E1801139-008DL	P519910	11-JAN-19	09:45:20
SL0223	E1801139-009DL	P519911	11-JAN-19	10:33:57
SL0224	E1801139-010DL	P519912	11-JAN-19	11:22:34
LCS	EQ1900003-02	P519913	11-JAN-19	12:11:11
DLCS	EQ1900003-03	P519914	11-JAN-19	12:59:55

E1801139

Sample List Report **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS07.PRO\SampleDB\20190110B.SPL
Last Modified: Friday, January 11, 2019 13:32:58 Central Standard Time
Printed: Friday, January 11, 2019 13:32:59 Central Standard Time

Page Position (1, 1)

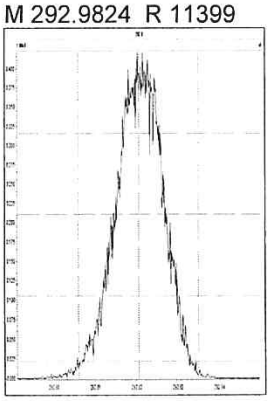
Opus 4: P519900res

	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	1/11/19	01:36	P519900	CS3	195556	EPA1613_ALS	Dioxin_ALS	Tray1:1	LG	HRMS check 01:38
2		02:23	P519901	WINDOWDEFINE	192977	EPA1613_ALS	Dioxin_ALS	Tray1:2		
3		03:12	P519902	MB	EQ1800529-01	EPA1613_ALS	Dioxin_ALS	Tray1:3		
4		04:01	P519903	E1801139-017	E1801139-017	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		04:49	P519904	E1801139-018	E1801139-018	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		05:38	P519905	E1801139-019	E1801139-019	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		06:27	P519906	E1801139-020	E1801139-020	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		07:15	P519907	E1801139-003DL	E1801139-003DL	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		08:04	P519908	E1801139-004DL	E1801139-004DL	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		08:57	P519909	E1801139-005DL	E1801139-005DL	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		09:45	P519910	E1801139-008DL	E1801139-008DL	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		10:33	P519911	E1801139-009DL	E1801139-009DL	EPA1613_ALS	Dioxin_ALS	Tray1:12		
13		11:22	P519912	E1801139-010DL	E1801139-010DL	EPA1613_ALS	Dioxin_ALS	Tray1:13		
14		12:11	P519913	LCS	EQ1900003-02	EPA1613_ALS	Dioxin_ALS	Tray1:14		
15	↓	12:59	P519914	DLCS	EQ1900003-03	EPA1613_ALS	Dioxin_ALS	Tray1:15	↓	HRMS check 14:01
16	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2	---	---
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---

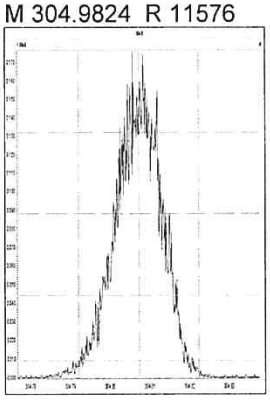
LG 01/11/19

Printed: Friday, January 11, 2019 01:36:02 Central Standard Time

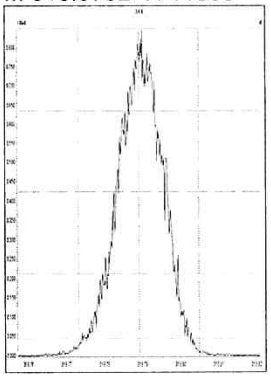
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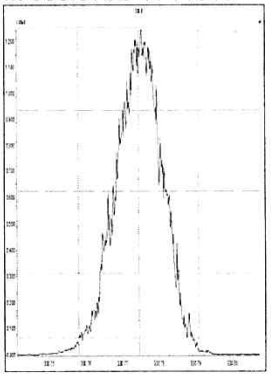
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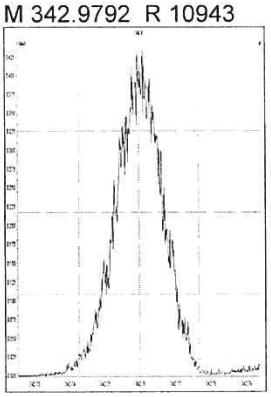
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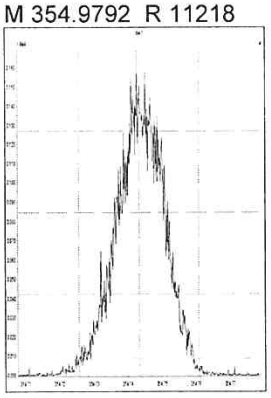
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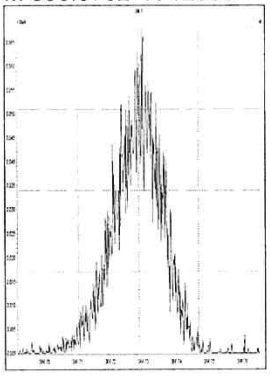
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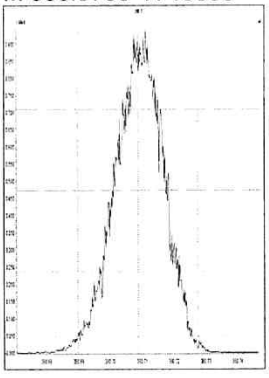
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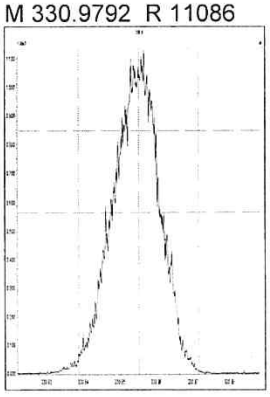
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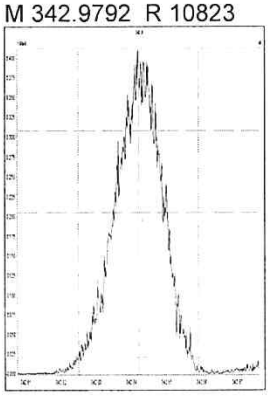
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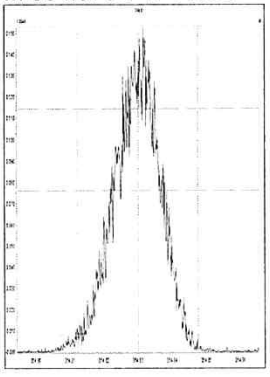
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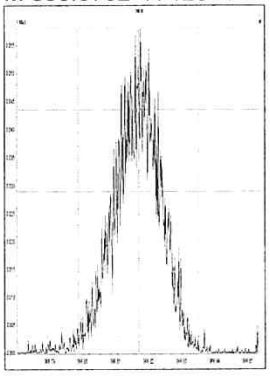
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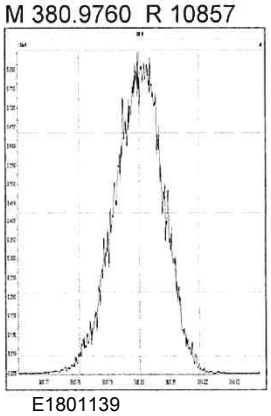
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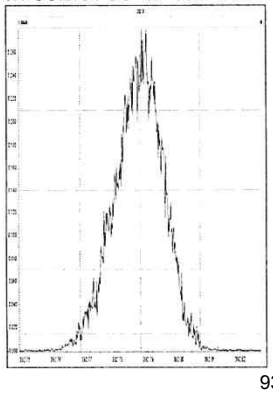
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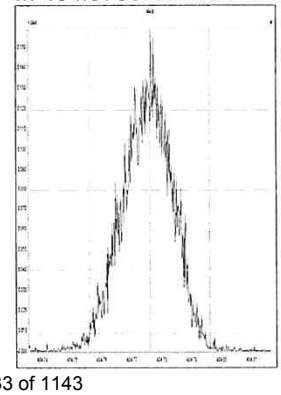
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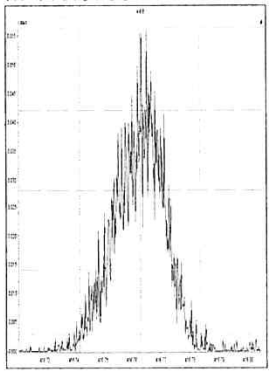
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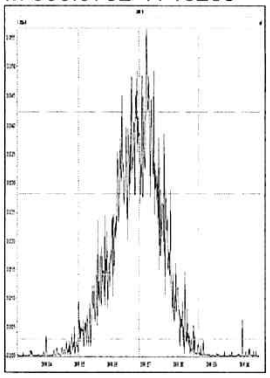
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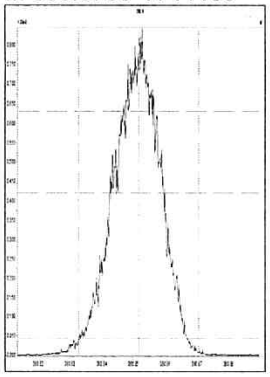
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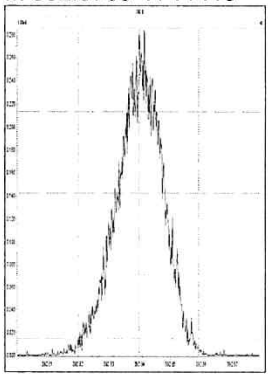
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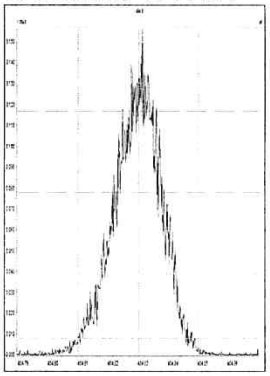
M 380.9760 R 11135



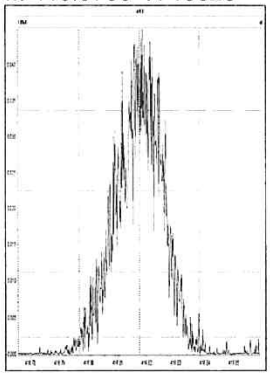
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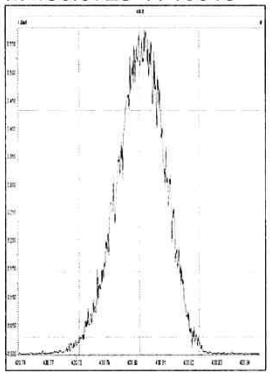
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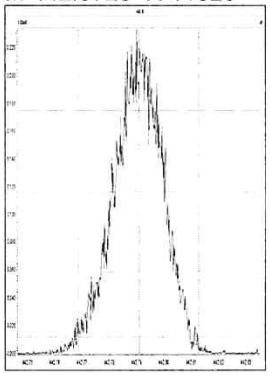
M 416.9760 R 13026



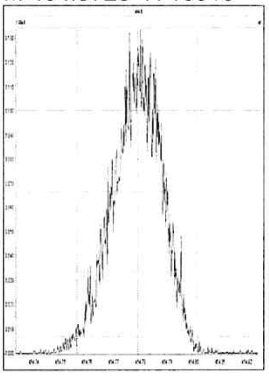
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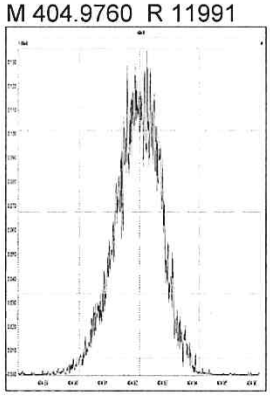
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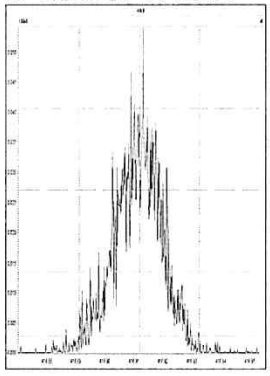
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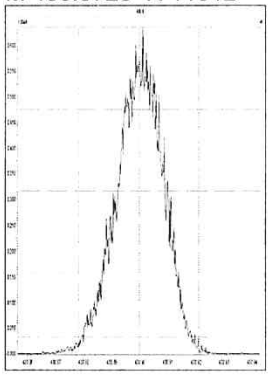
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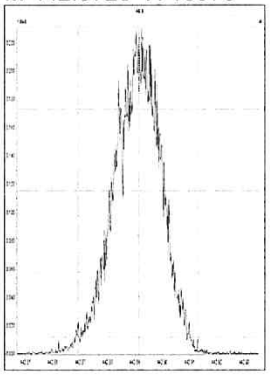
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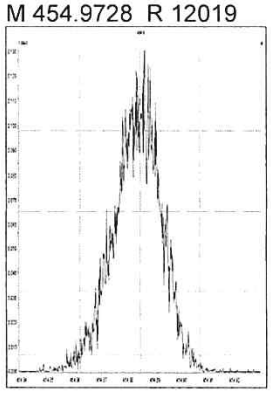
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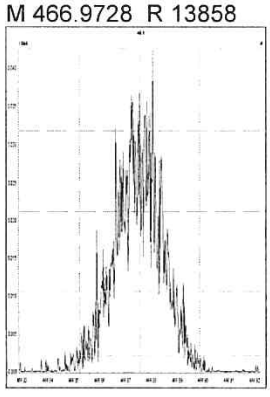
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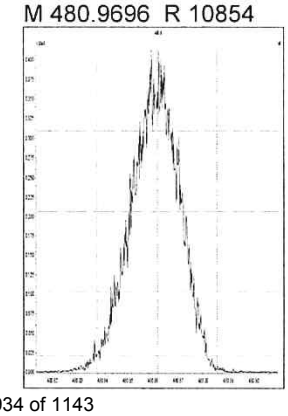
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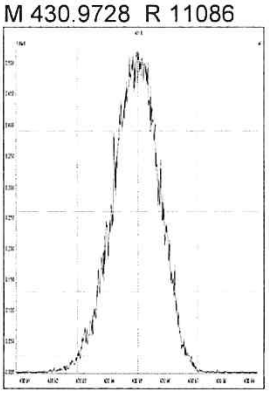
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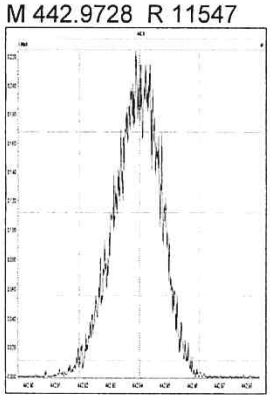
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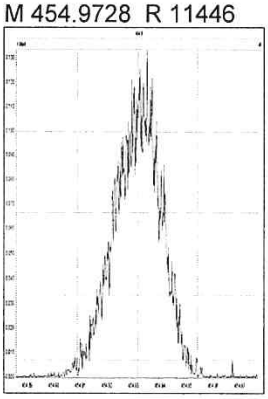
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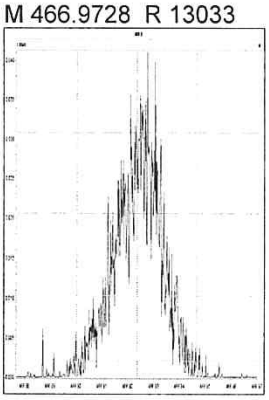
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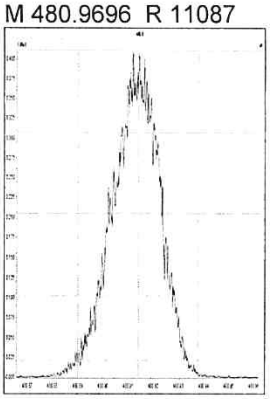
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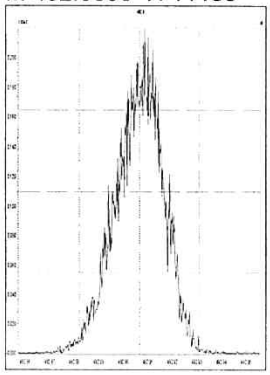
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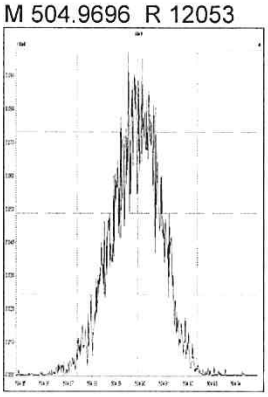
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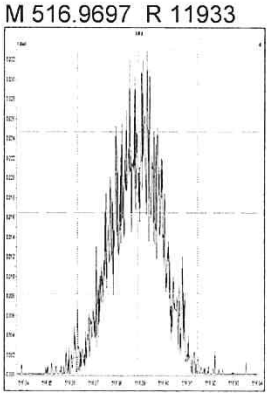
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M 504.9696 R 12053



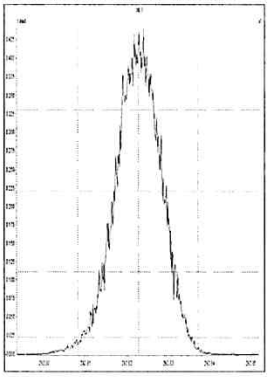
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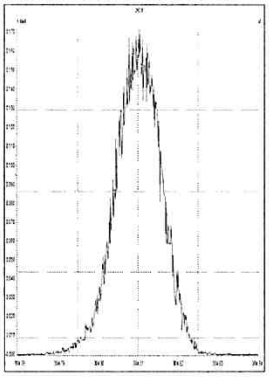
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Printed: Friday, January 11, 2019 14:01:17 Central Standard Time

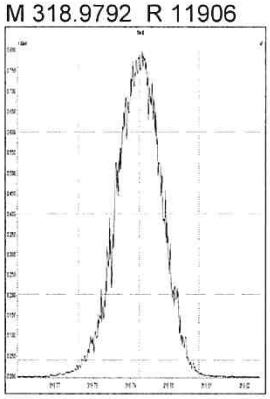
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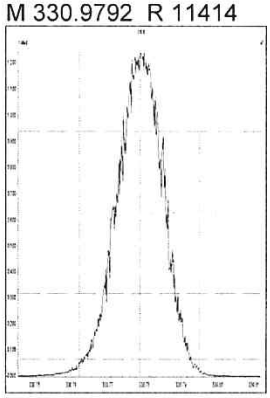
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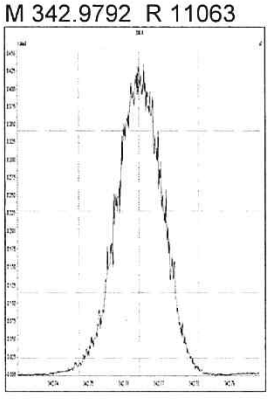
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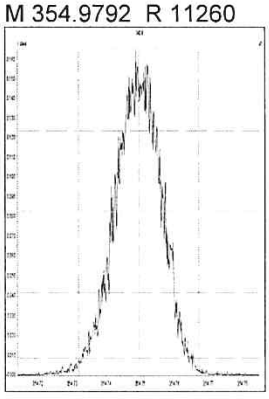
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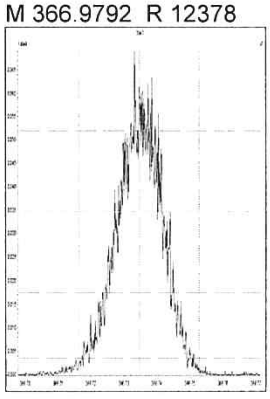
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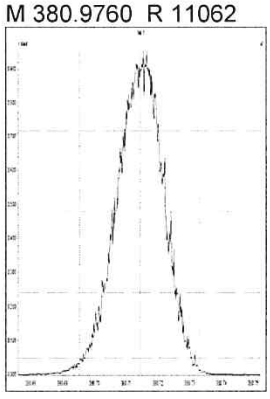
M 354.9792 R 11260



M 366.9792 R 12378



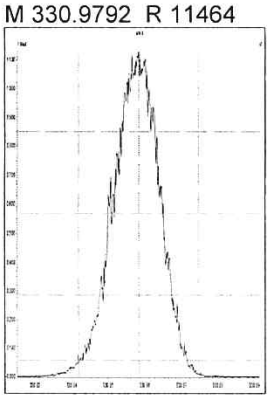
M 380.9760 R 11062



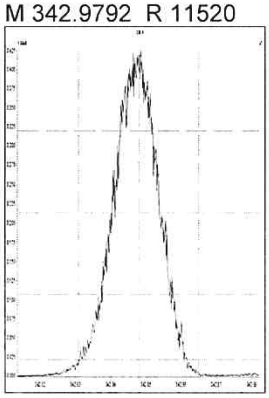
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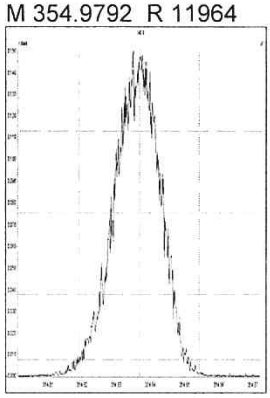
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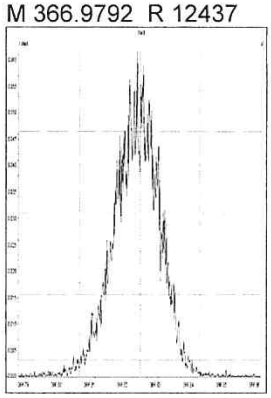
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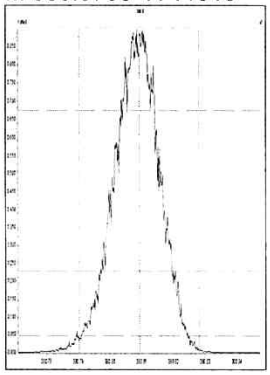
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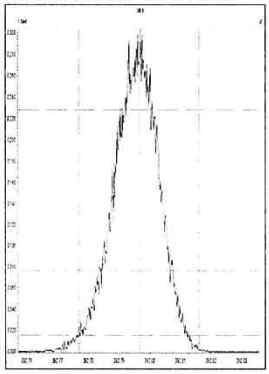
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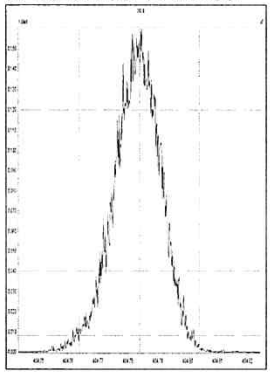
M 380.9760 R 11310



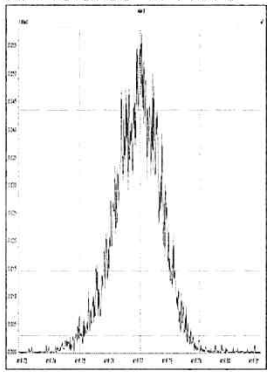
M 392.9760 R 11062



M 404.9760 R 11209



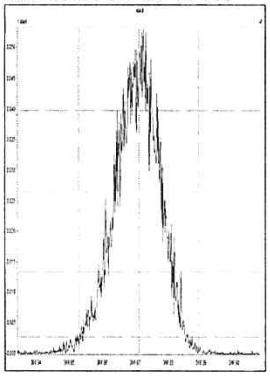
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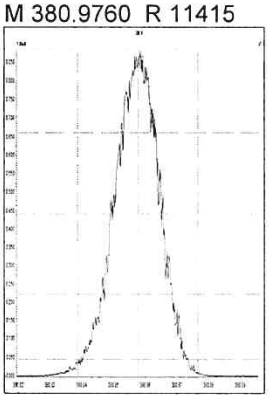
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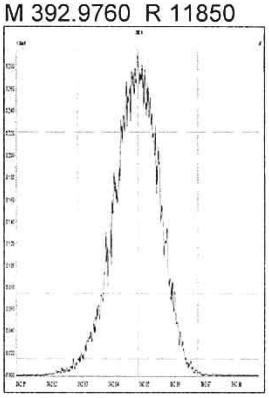
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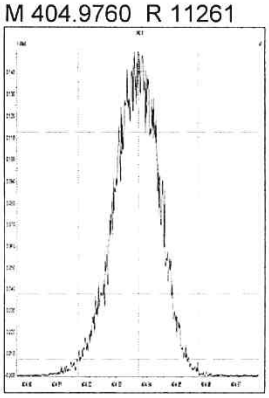
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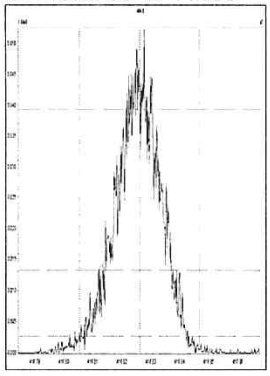
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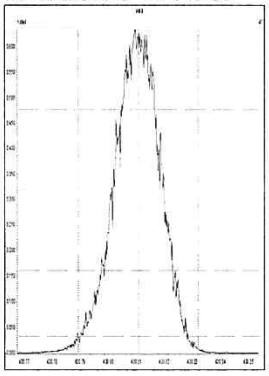
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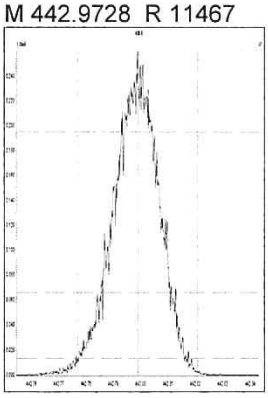
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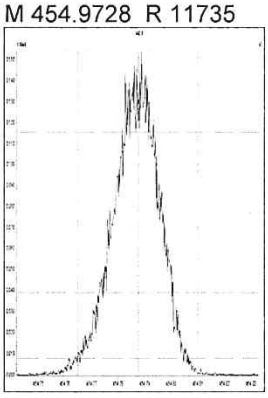
M 430.9728 R 11262



M 442.9728 R 11467



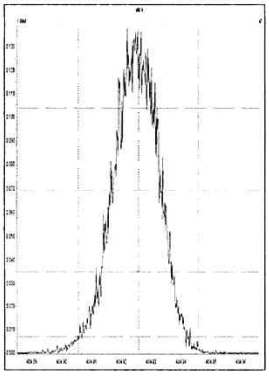
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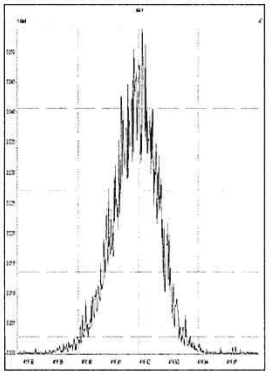
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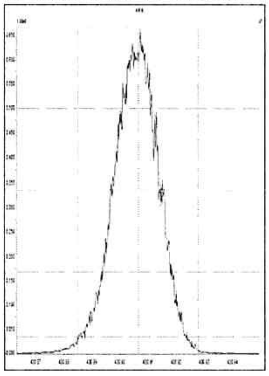
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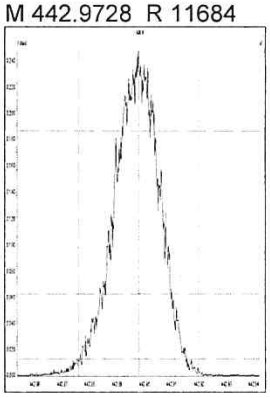
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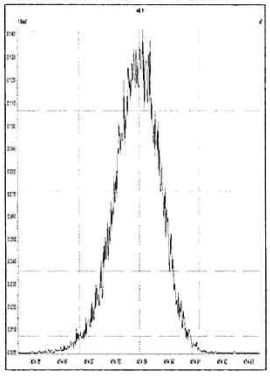
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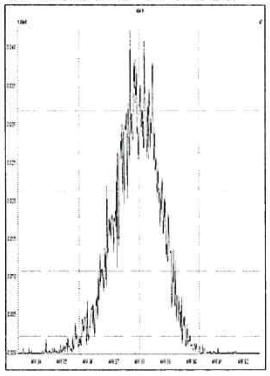
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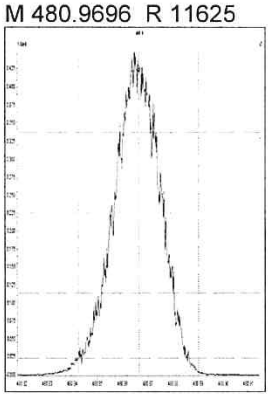
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M 466.9728 R 12689



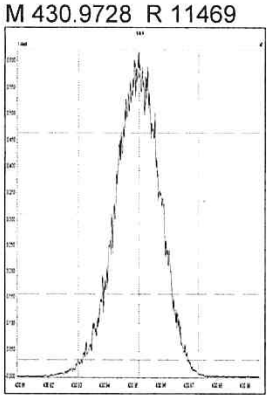
M 480.9696 R 11625



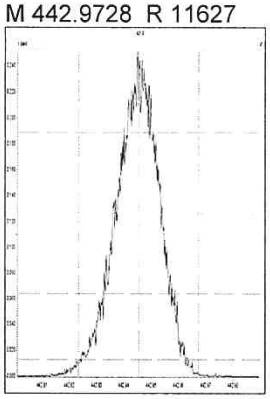
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Friday, January 11, 2019 14:04:10 Central Standard Time

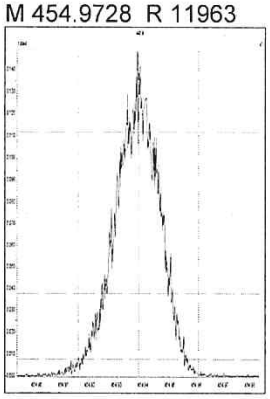
M 430.9728 R 11469



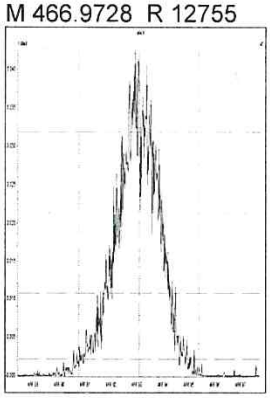
M 442.9728 R 11627



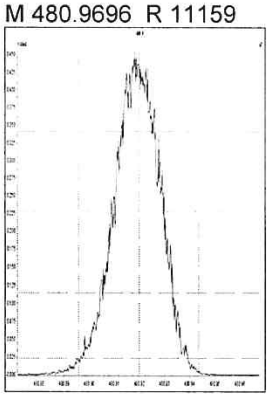
M 454.9728 R 11963



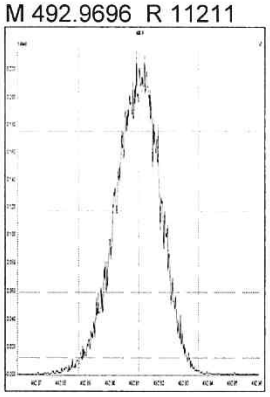
M 466.9728 R 12755



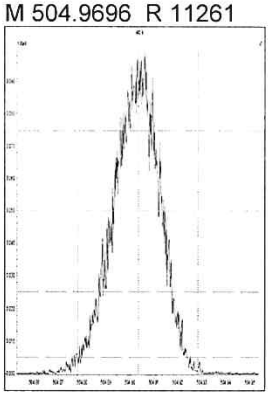
M 480.9696 R 11159



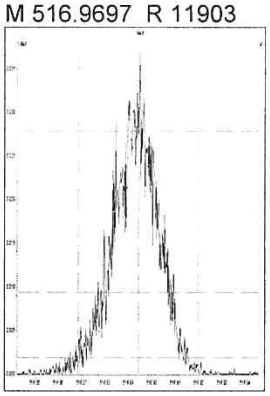
M 492.9696 R 11211



M 504.9696 R 11261



M 516.9697 R 11903



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

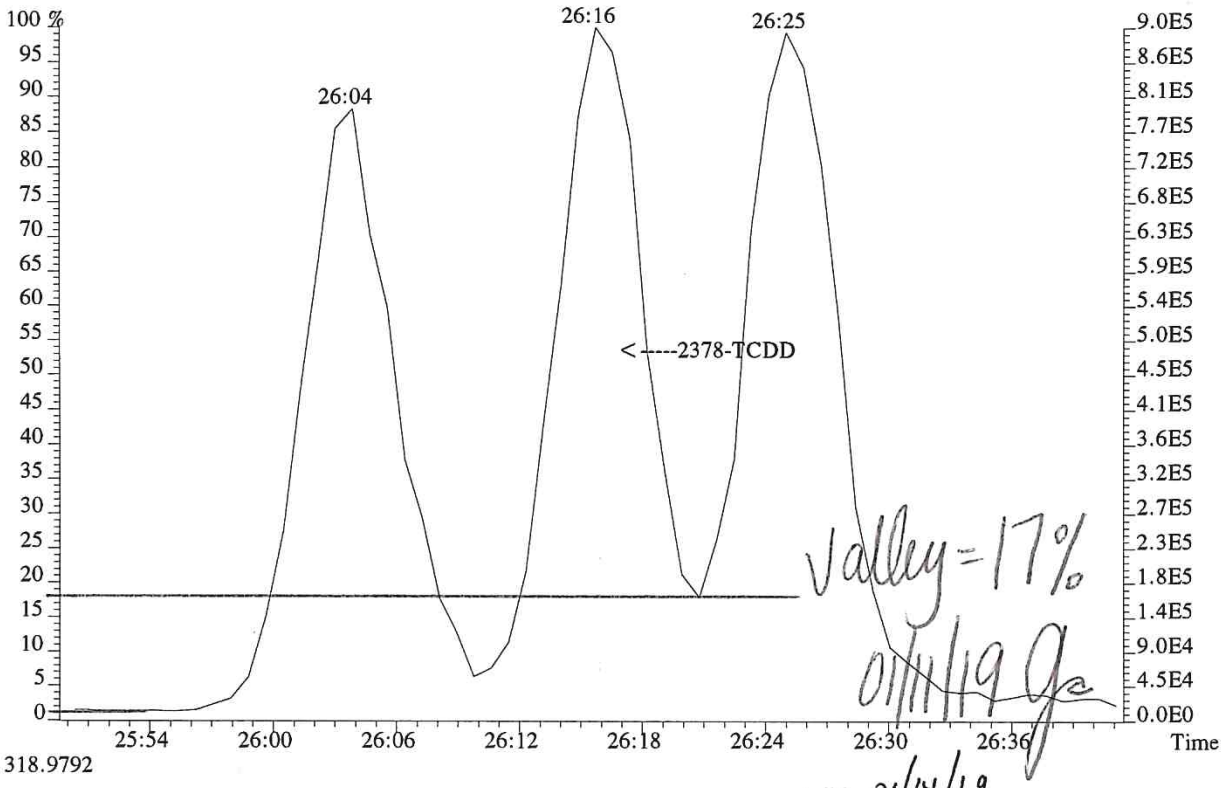
Lab Name: ALS Environmental
Lab Code: ALSTX
GC Column: DB-5MSUI

Case No.: _____ SDG No.:
ID: 0.25 (mm)
Lab File ID: P519901
Date Analyzed: 11-JAN-2019
Time Analyzed: 02:23:53

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	21:00	27:41
TCDD	22:34	27:30
PeCDF	27:39	32:28
PeCDD	29:29	32:13
HxCDF	33:13	35:51
HxCDD	33:47	35:27
HpCDF	37:09	38:29
HpCDD	37:25	38:04

% Valley 2378-TCDD: 17 %

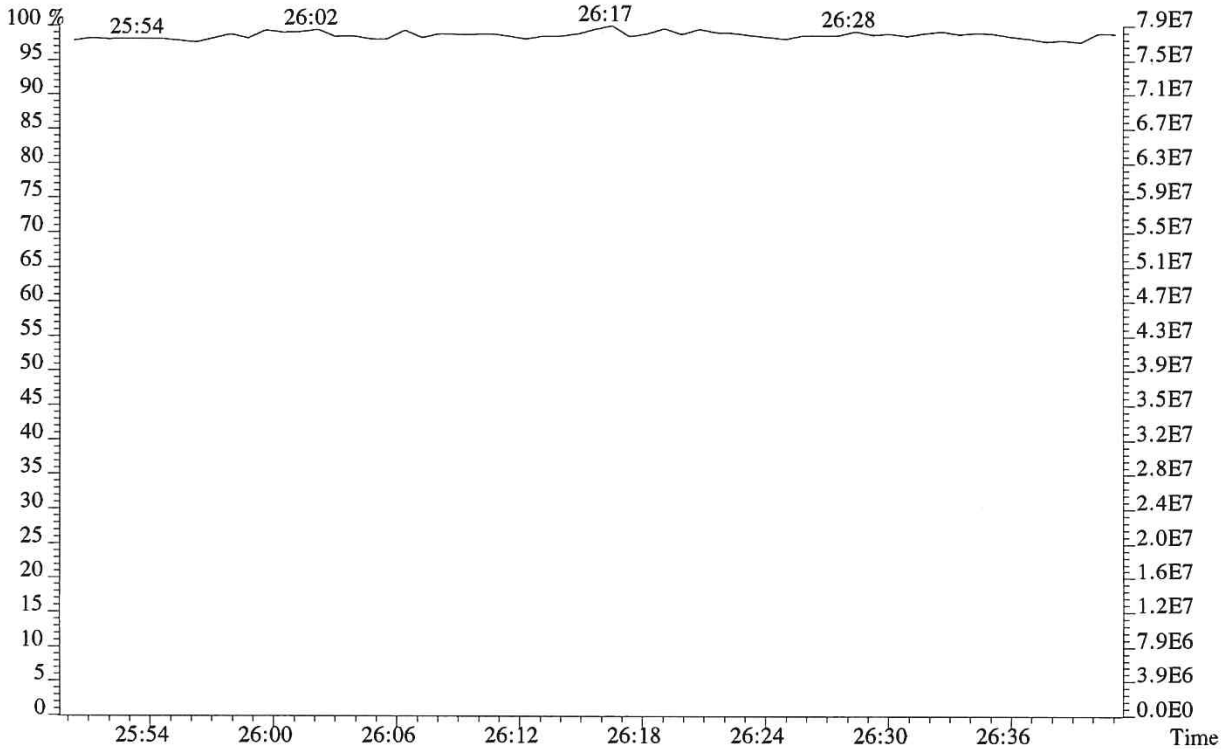
File:P519901 #1-602 Acq:11-JAN-2019 02:23:53 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
319.8965



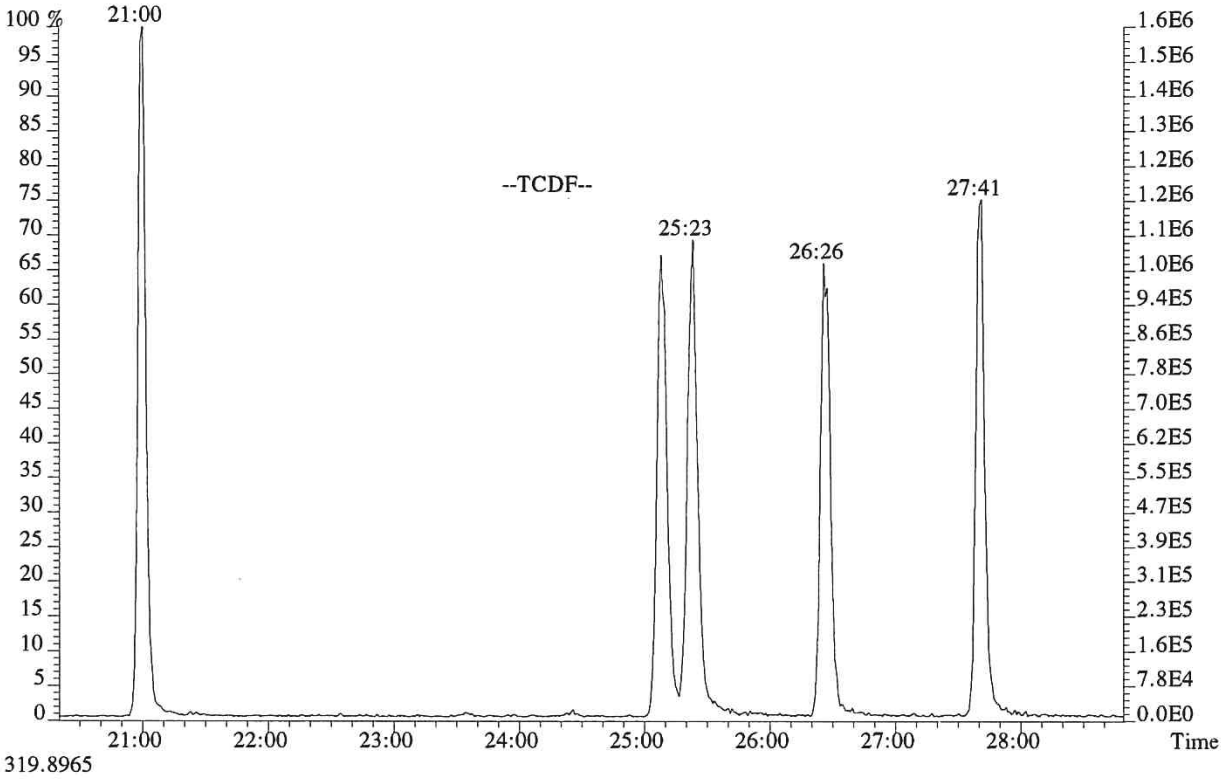
Valley = 17%
01/14/19 gs

318.9792

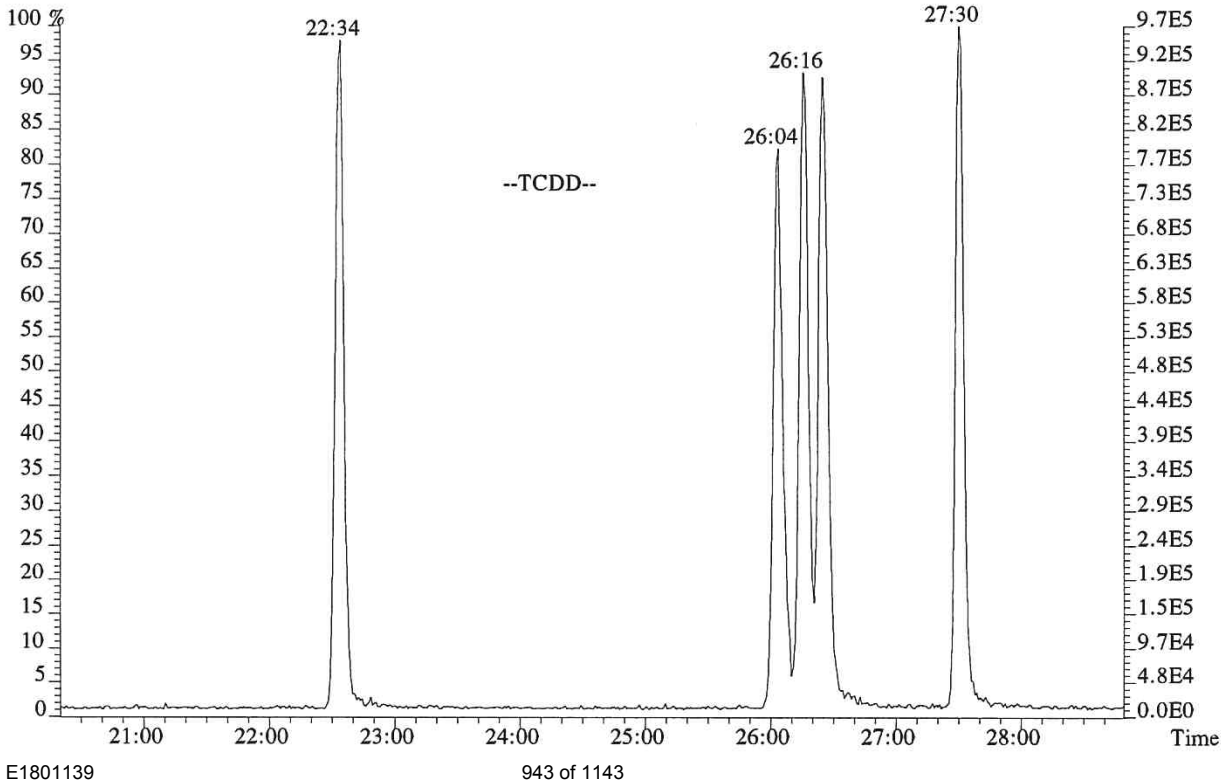
LKK 01/14/19



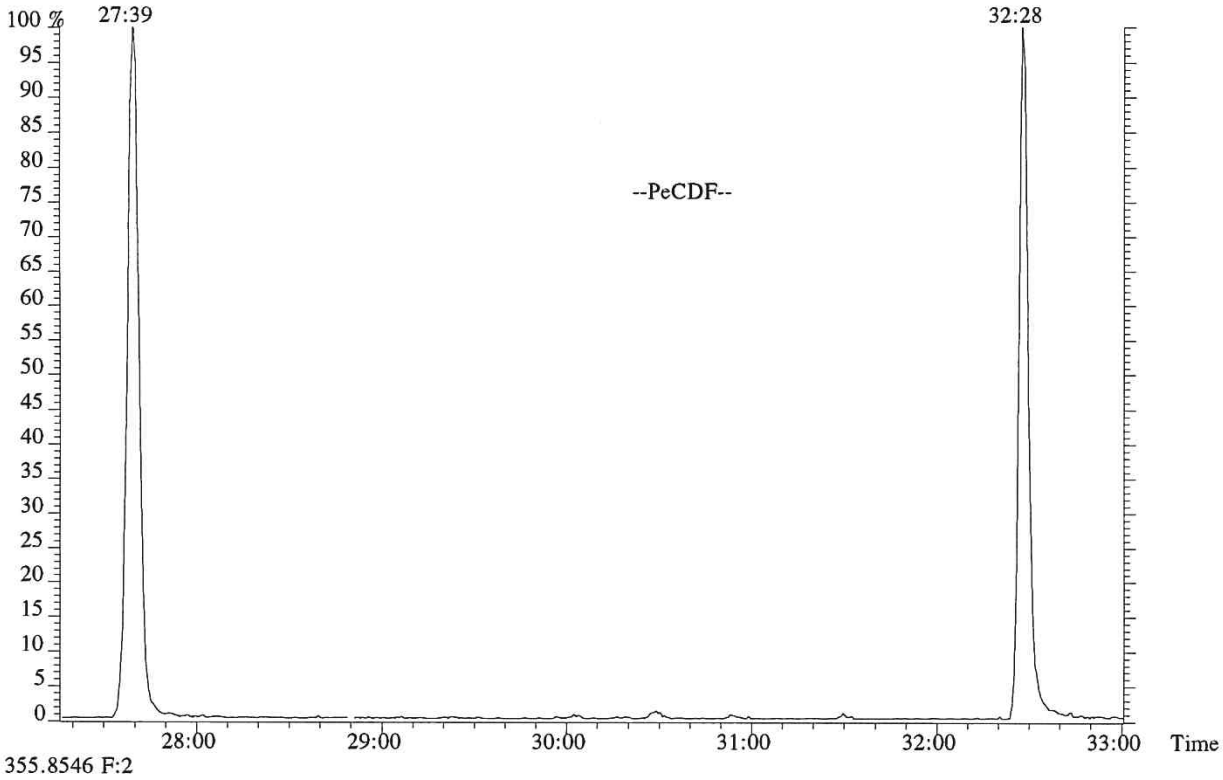
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Sample#1 Exp:192977
303.9016



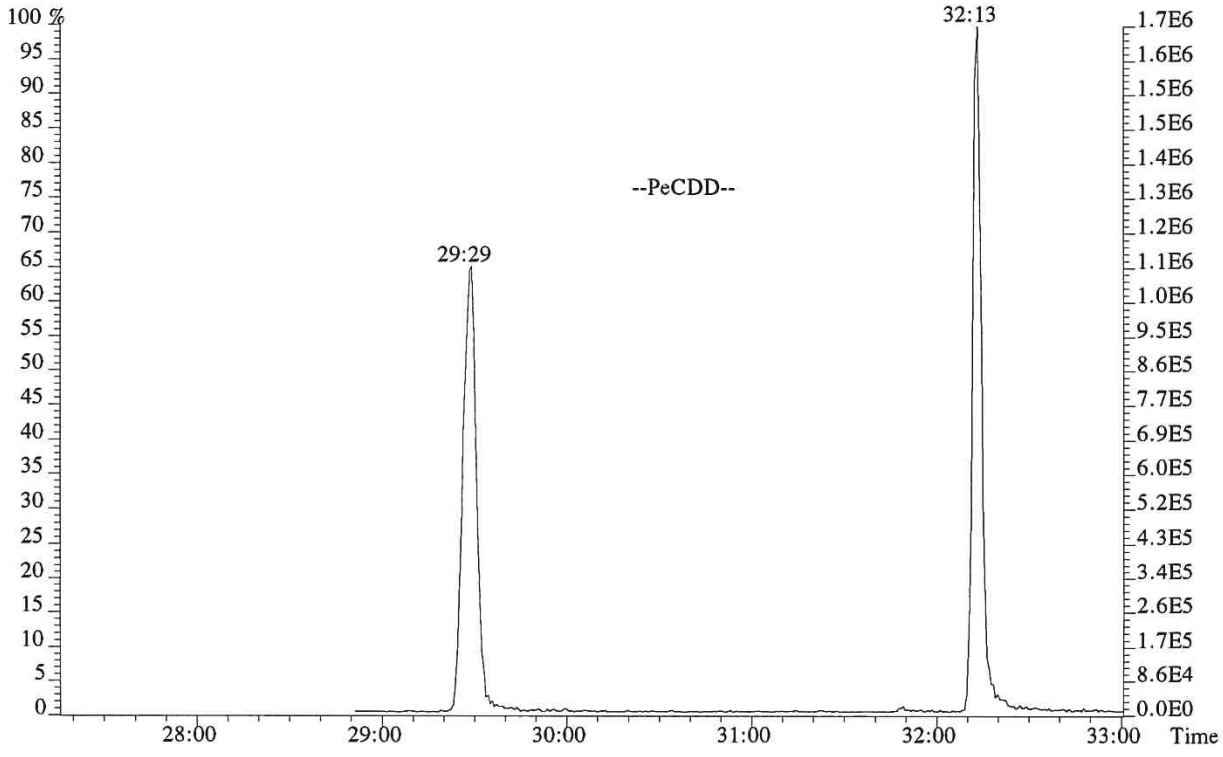
319.8965



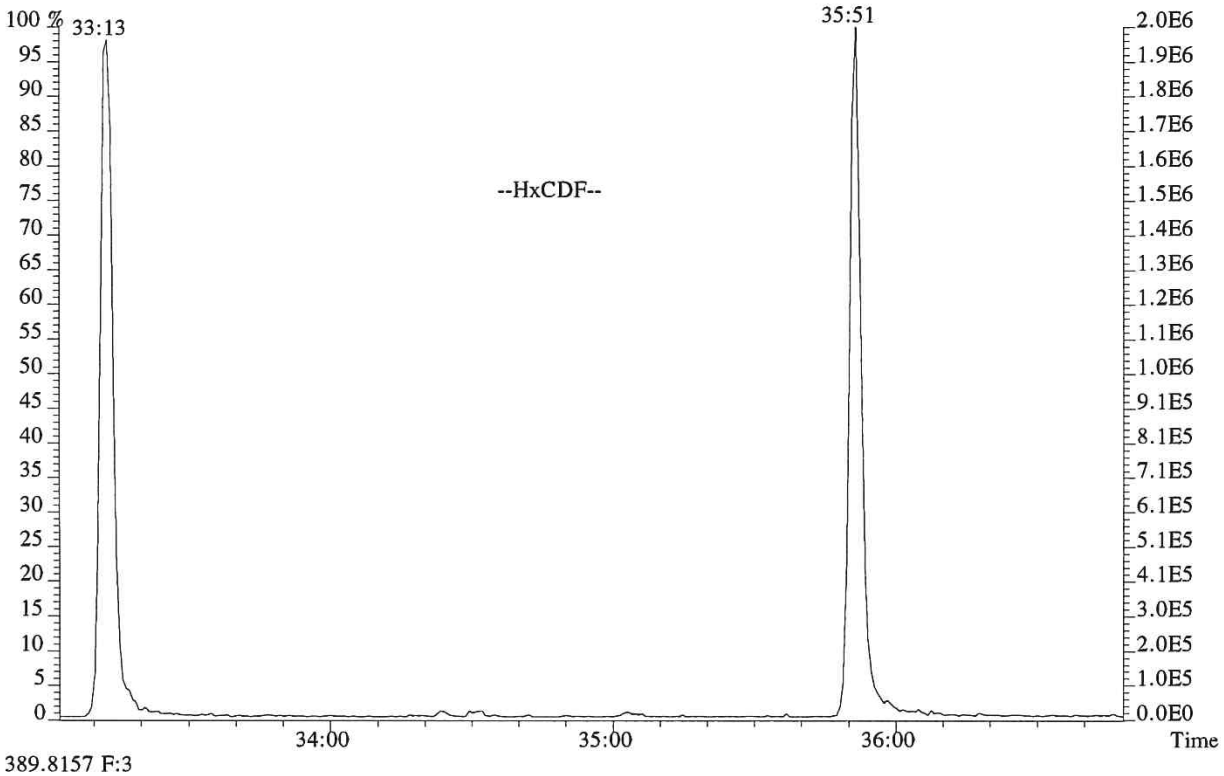
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Sample#1 Exp:192977
339.8597,339.8597 F:2



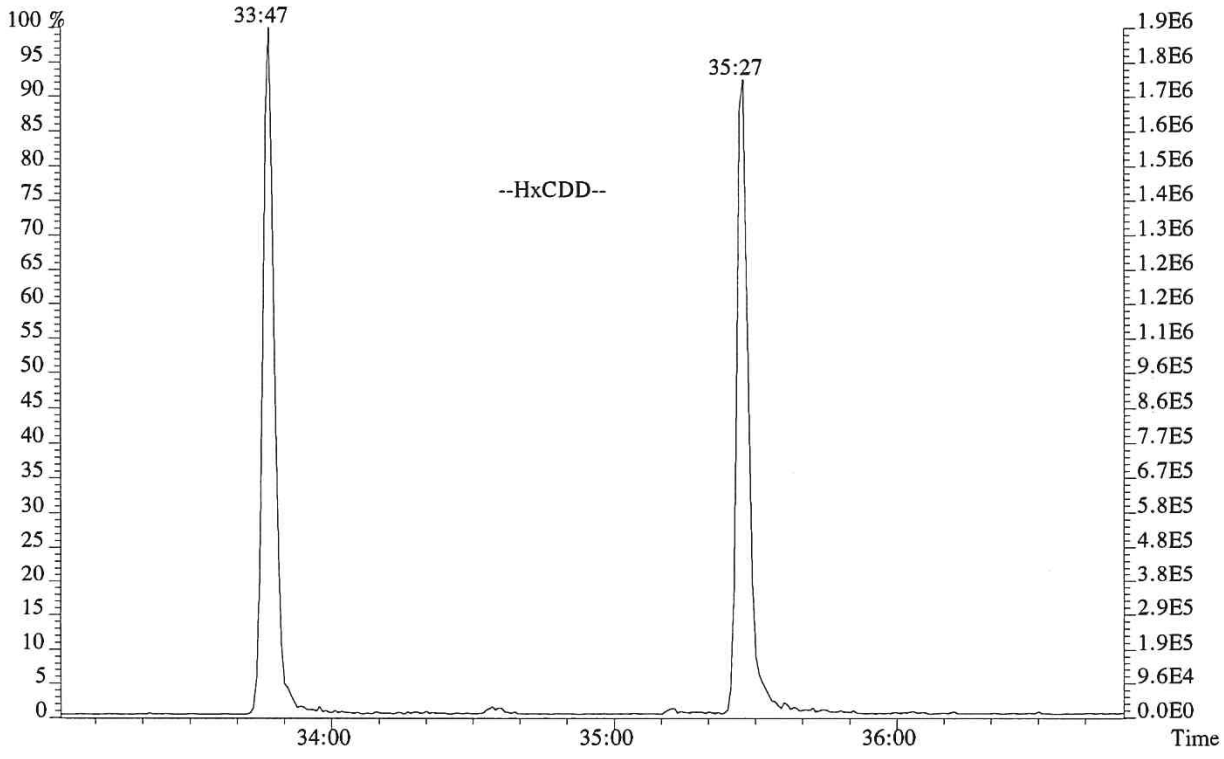
355.8546 F:2



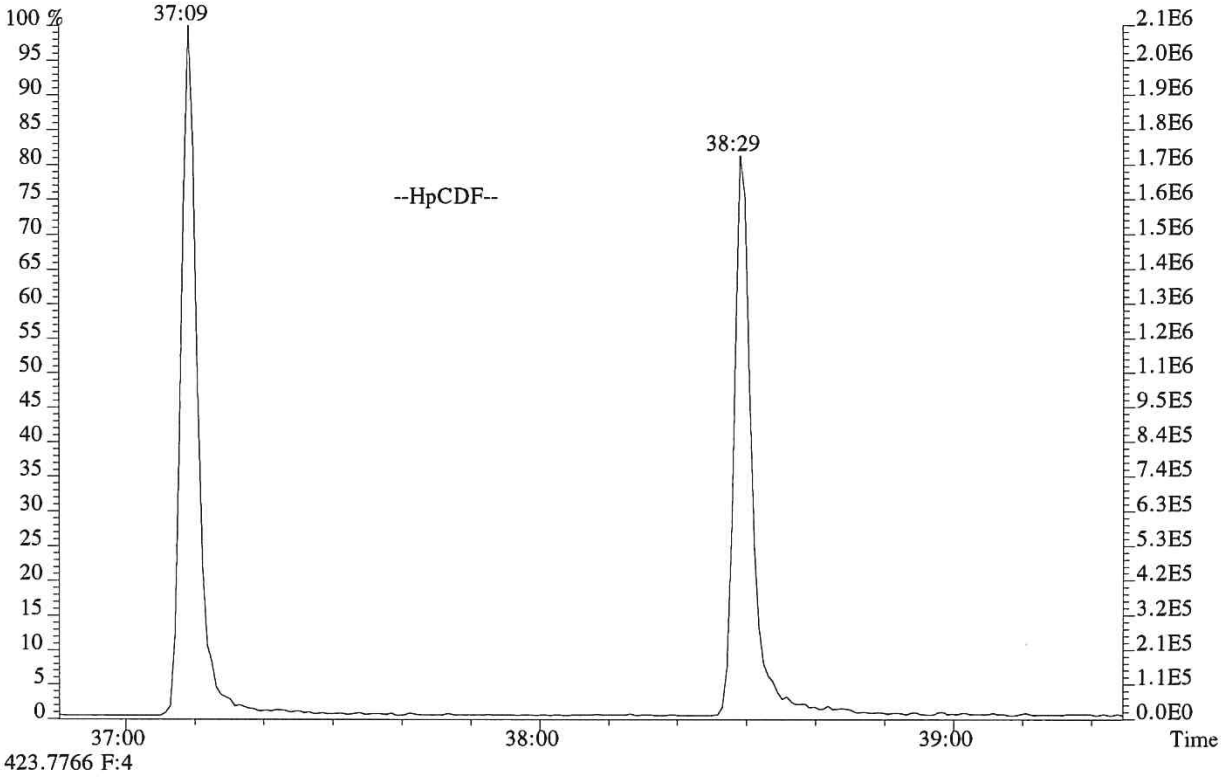
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Sample#1 Exp:192977
373.8208 F:3



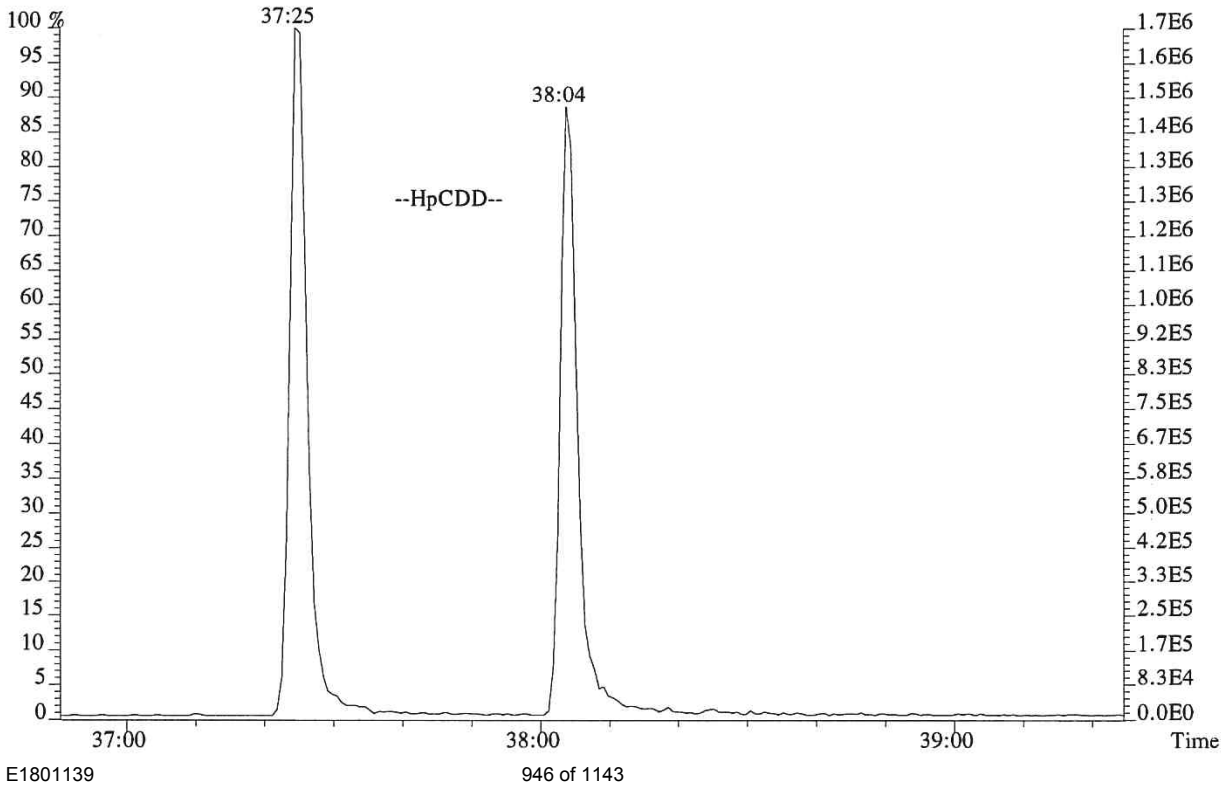
389.8157 F:3



File:P519901 #1-232 Acq:11-JAN-2019 02:23:53 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
407.7818 F:4



423.7766 F:4



USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519900 Analysis Date: 11-JAN-19 Time: 01:36:04

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	9.3	7.8 - 12.9	-7.1
1,2,3,7,8-PeCDD	M+2/M+4	1.55	1.32-1.78	50	39 - 65	-0.2
1,2,3,4,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	50	39 - 64	-0.9
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	50	39 - 64	0.3
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	52	41 - 61	4.6
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	50	43 - 58	0.7
OCDD	M+2/M+4	0.89	0.76-1.02	101	79 - 126	1.1
2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	9.9	8.4 - 12.0	-0.9
1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	50	41 - 60	-0.2
2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	49	41 - 61	-1.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	51	45 - 56	1.7
1,2,3,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	50	44 - 57	0.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.20	1.05-1.43	50	45 - 56	-0.4
2,3,4,6,7,8-HxCDF	M+2/M+4	1.21	1.05-1.43	50	44 - 57	0.3
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.03	0.88-1.20	50	45 - 55	0.9
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	51	43 - 58	1.4
OCDF	M+2/M+4	0.90	0.76-1.02	99	63 - 159	-0.9

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519900 Analysis Date: 11-JAN-19 Time: 01:36:04

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	105	82 - 121	4.9
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.59	1.32-1.78	111	62 - 160	11.4
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	97	85 - 117	-3.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	95	85 - 118	-4.9
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	108	72 - 138	7.7
13C-OCDD	M+2/M+4	0.89	0.76-1.02	259	96 - 415	29.4
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	91	71 - 140	-9.5
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	102	76 - 130	2.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	104	77 - 130	4.3
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	83	76 - 131	-16.9
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	86	70 - 143	-14.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	93	74 - 135	-6.7
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	91	73 - 137	-9.4
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	97	78 - 129	-3.1
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	104	77 - 129	4.2
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				10.1	7.8 - 12.7	1.5

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
195556

Run #7 Filename P519900 Samp: 1 Inj: 1 Acquired: 11-JAN-19 01:36:04
Processed: 11-JAN-19 14:53:31 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	4.797e+03	6.068e+03	0.79	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:28	3.922e+04	2.520e+04	1.56	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:28	3.714e+04	2.408e+04	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:23	3.234e+04	2.661e+04	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	3.498e+04	2.918e+04	1.20	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:02	3.295e+04	2.726e+04	1.21	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:49	2.987e+04	2.493e+04	1.20	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:09	3.073e+04	2.988e+04	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:29	2.634e+04	2.542e+04	1.04	yes	no	1.258
10	Unk	OCDF	40:44	4.574e+04	5.066e+04	0.90	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:25	3.688e+03	4.615e+03	0.80	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:48	2.672e+04	1.728e+04	1.55	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:11	2.413e+04	1.969e+04	1.23	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:17	2.483e+04	1.983e+04	1.25	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:31	2.647e+04	2.105e+04	1.26	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	2.312e+04	2.213e+04	1.04	yes	no	1.025
17	Unk	OCDD	40:34	3.803e+04	4.290e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:22	5.113e+04	6.527e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:26	7.808e+04	4.942e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:28	7.882e+04	5.023e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:22	3.344e+04	6.400e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	3.921e+04	7.503e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	3.714e+04	7.101e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	3.303e+04	6.317e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:08	2.748e+04	6.145e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:28	2.532e+04	5.589e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:23	3.646e+04	4.588e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:47	5.660e+04	3.564e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:11	4.745e+04	3.770e+04	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:16	4.782e+04	3.794e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	4.504e+04	4.270e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	40:34	6.753e+04	7.571e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:39	3.777e+04	4.718e+04	0.80	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:31	5.346e+04	4.153e+04	1.29	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:25	8.741e+03				no	1.014

ALS ENVIRONMENTAL
10450 Stancliff Rd, Suite 115
Houston, TX 77099
Office(713)266-1599. Fax(713)266-0130

www.alsglobal.com

ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
195556

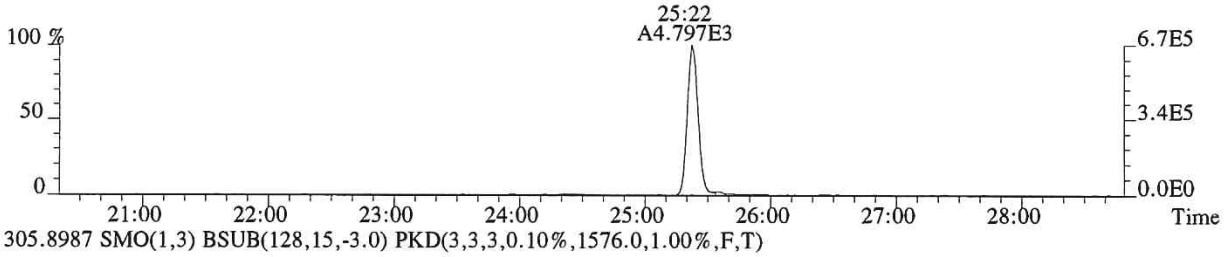
Run #7 Filename P519900 Samp: 1 Inj: 1 Acquired: 11-JAN-19 01:36:04
Processed: 11-JAN-19 14:53:31 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.71e+05	5.56e+02	1.2e+03	8.48e+05	1.58e+03	5.4e+02
2	1,2,3,7,8-PeCDF	6.78e+06	7.16e+02	9.5e+03	4.34e+06	7.56e+02	5.7e+03
3	2,3,4,7,8-PeCDF	6.91e+06	7.16e+02	9.7e+03	4.53e+06	7.56e+02	6.0e+03
4	1,2,3,4,7,8-HxCDF	6.90e+06	1.01e+03	6.8e+03	5.68e+06	2.20e+02	2.6e+04
5	1,2,3,6,7,8-HxCDF	6.82e+06	1.01e+03	6.8e+03	5.70e+06	2.20e+02	2.6e+04
6	2,3,4,6,7,8-HxCDF	7.17e+06	1.01e+03	7.1e+03	5.82e+06	2.20e+02	2.6e+04
7	1,2,3,7,8,9-HxCDF	6.09e+06	1.01e+03	6.0e+03	4.95e+06	2.20e+02	2.2e+04
8	1,2,3,4,6,7,8-HpCDF	6.60e+06	5.72e+03	1.2e+03	6.42e+06	5.55e+03	1.2e+03
9	1,2,3,4,7,8,9-HpCDF	5.59e+06	5.72e+03	9.8e+02	5.38e+06	5.55e+03	9.7e+02
10	OCDF	8.11e+06	4.92e+02	1.6e+04	8.76e+06	1.28e+03	6.8e+03
11	2,3,7,8-TCDD	5.77e+05	2.23e+03	2.6e+02	6.94e+05	8.08e+02	8.6e+02
12	1,2,3,7,8-PeCDD	4.86e+06	1.04e+03	4.7e+03	3.09e+06	2.24e+02	1.4e+04
13	1,2,3,4,7,8-HxCDD	5.25e+06	8.84e+02	5.9e+03	4.29e+06	6.40e+02	6.7e+03
14	1,2,3,6,7,8-HxCDD	5.24e+06	8.84e+02	5.9e+03	4.19e+06	6.40e+02	6.6e+03
15	1,2,3,7,8,9-HxCDD	5.44e+06	8.84e+02	6.2e+03	4.32e+06	6.40e+02	6.7e+03
16	1,2,3,4,6,7,8-HpCDD	4.89e+06	8.76e+02	5.6e+03	4.72e+06	8.12e+02	5.8e+03
17	OCDD	7.05e+06	3.52e+02	2.0e+04	8.08e+06	7.36e+02	1.1e+04
18	13C-2,3,7,8-TCDF	7.10e+06	4.39e+03	1.6e+03	9.09e+06	2.36e+03	3.8e+03
19	13C-1,2,3,7,8-PeCDF	1.34e+07	5.32e+02	2.5e+04	8.51e+06	7.80e+02	1.1e+04
20	13C-2,3,4,7,8-PeCDF	1.49e+07	5.32e+02	2.8e+04	9.45e+06	7.80e+02	1.2e+04
21	13C-1,2,3,4,7,8-HxCDF	7.09e+06	7.12e+02	1.0e+04	1.37e+07	1.18e+03	1.2e+04
22	13C-1,2,3,6,7,8-HxCDF	7.72e+06	7.12e+02	1.1e+04	1.49e+07	1.18e+03	1.3e+04
23	13C-2,3,4,6,7,8-HxCDF	7.93e+06	7.12e+02	1.1e+04	1.53e+07	1.18e+03	1.3e+04
24	13C-1,2,3,7,8,9-HxCDF	6.67e+06	7.12e+02	9.4e+03	1.28e+07	1.18e+03	1.1e+04
25	13C-1,2,3,4,6,7,8-HpCDF	5.93e+06	6.47e+03	9.2e+02	1.31e+07	6.94e+03	1.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	5.27e+06	6.47e+03	8.1e+02	1.17e+07	6.94e+03	1.7e+03
27	13C-2,3,7,8-TCDD	5.66e+06	4.11e+03	1.4e+03	7.08e+06	2.72e+03	2.6e+03
28	13C-1,2,3,7,8-PeCDD	1.03e+07	5.76e+02	1.8e+04	6.55e+06	9.92e+02	6.6e+03
29	13C-1,2,3,4,7,8-HxCDD	1.03e+07	8.40e+02	1.2e+04	8.12e+06	3.24e+02	2.5e+04
30	13C-1,2,3,6,7,8-HxCDD	1.01e+07	8.40e+02	1.2e+04	7.92e+06	3.24e+02	2.4e+04
31	13C-1,2,3,4,6,7,8-HpCDD	9.61e+06	1.02e+03	9.4e+03	9.06e+06	4.12e+02	2.2e+04
32	13C-OCDD	1.24e+07	8.44e+02	1.5e+04	1.41e+07	4.68e+02	3.0e+04
33	13C-1,2,3,4-TCDD	5.59e+06	4.11e+03	1.4e+03	6.95e+06	2.72e+03	2.6e+03
34	13C-1,2,3,7,8,9-HxCDD	1.10e+07	8.40e+02	1.3e+04	8.72e+06	3.24e+02	2.7e+04
35	37Cl-2,3,7,8-TCDD	1.34e+06	1.54e+03	8.7e+02			

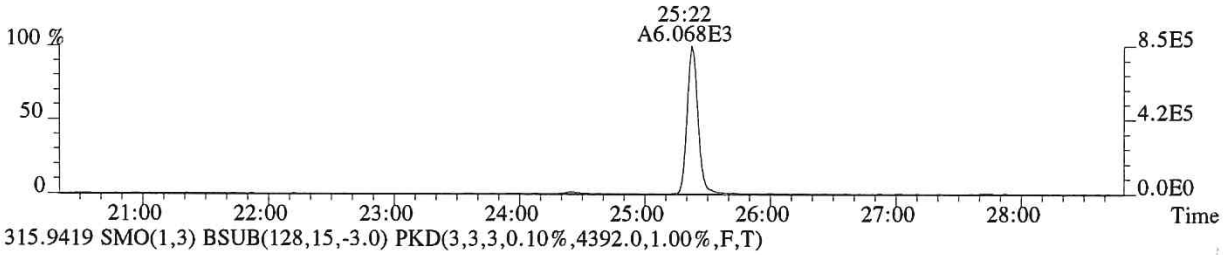
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10450 Stancliff Rd., Suite 115
Houston, TX 77099
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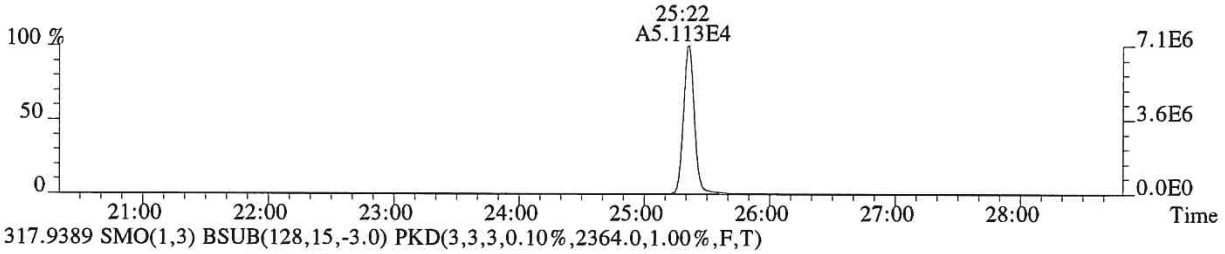
File:P519900 #1-602 Acq:11-JAN-2019 01:36:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,556.0,1.00%,F,T)



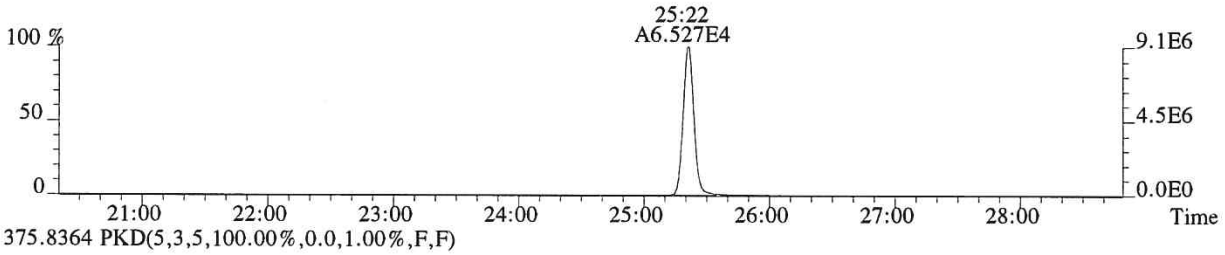
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1576.0,1.00%,F,T)



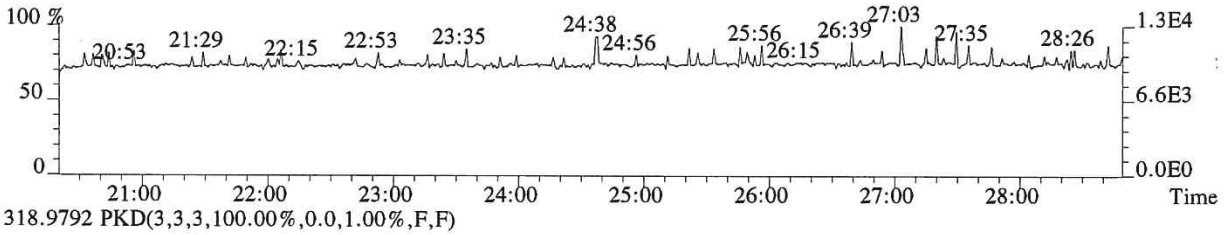
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4392.0,1.00%,F,T)



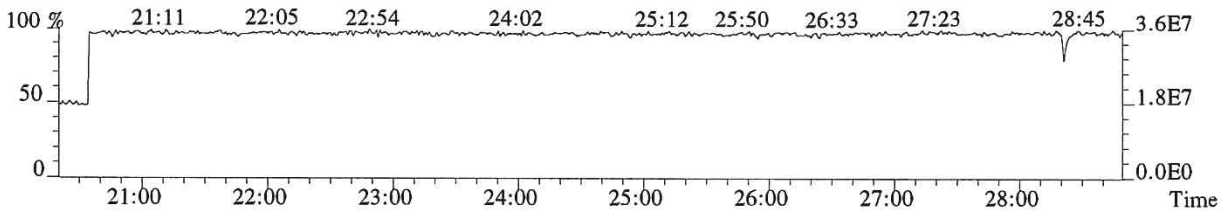
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2364.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

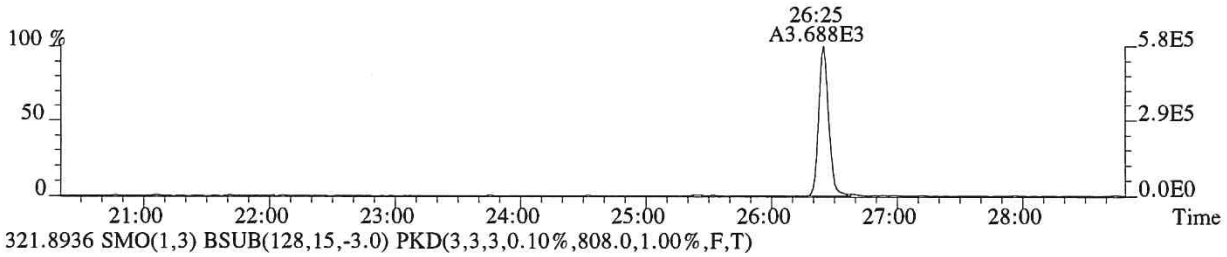


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

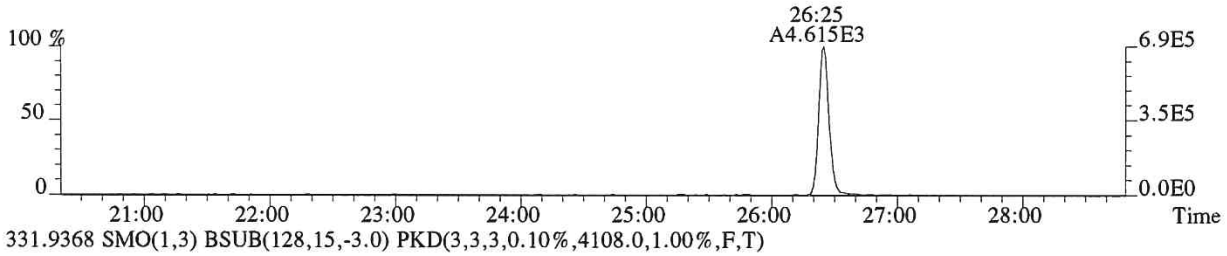


018915

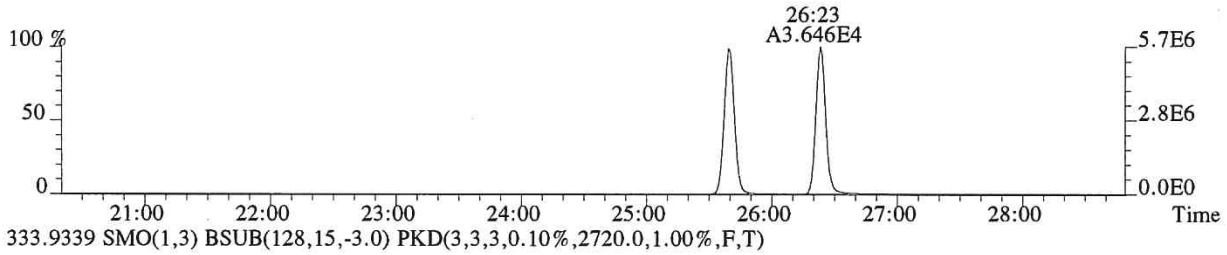
File:P519900 #1-602 Acq:11-JAN-2019 01:36:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2232.0,1.00%,F,T)



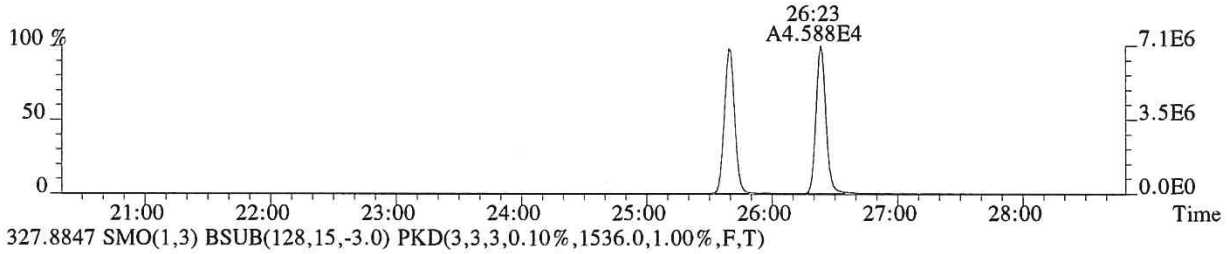
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,808.0,1.00%,F,T)



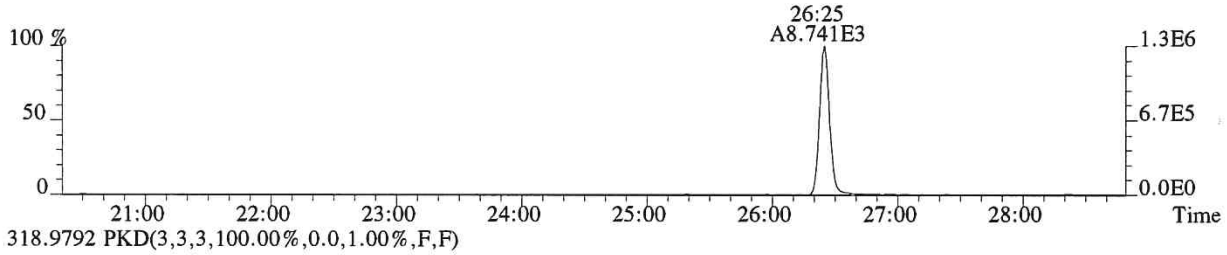
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4108.0,1.00%,F,T)



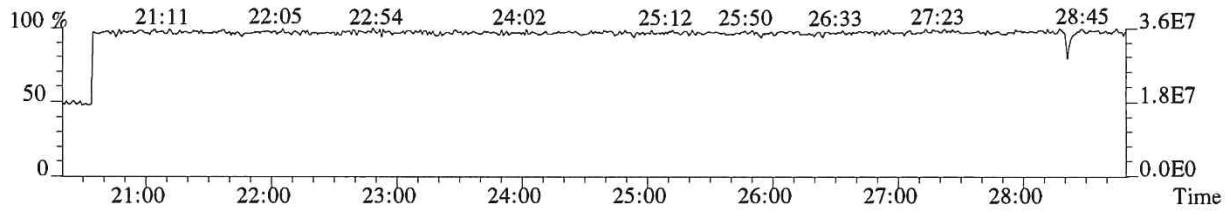
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2720.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1536.0,1.00%,F,T)

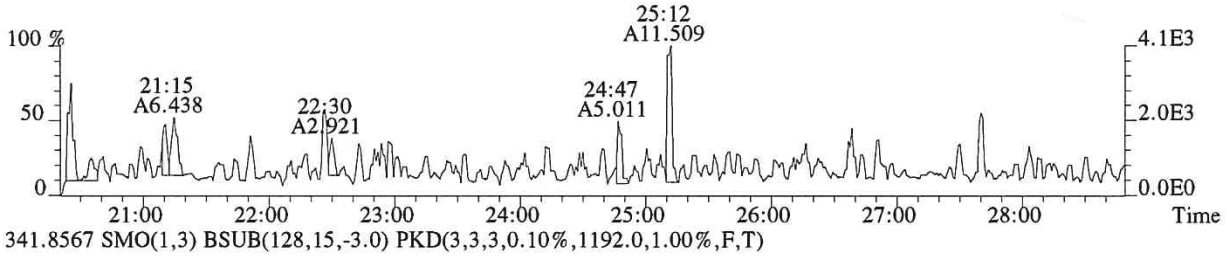


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

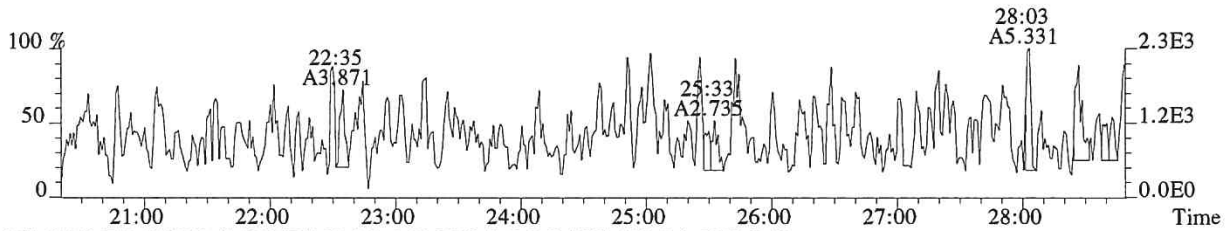


018916

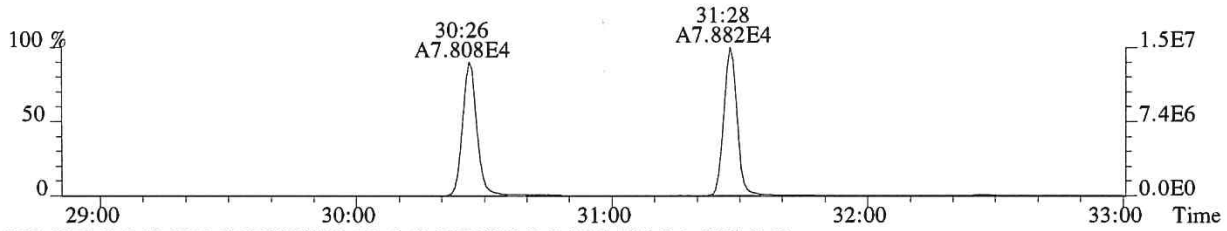
File:P519900 #1-602 Acq:11-JAN-2019 01:36:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,816.0,1.00%,F,T)



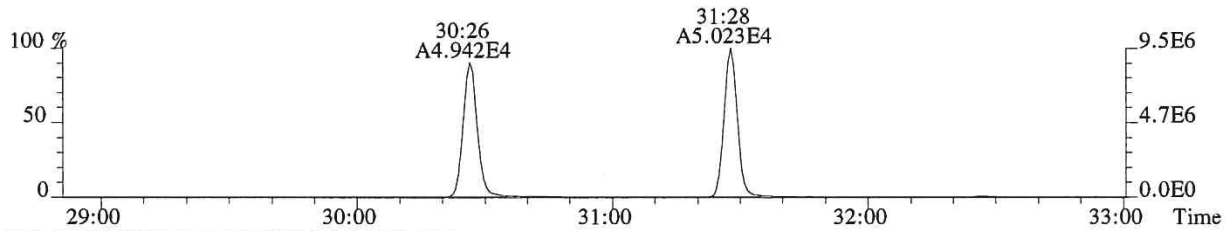
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1192.0,1.00%,F,T)



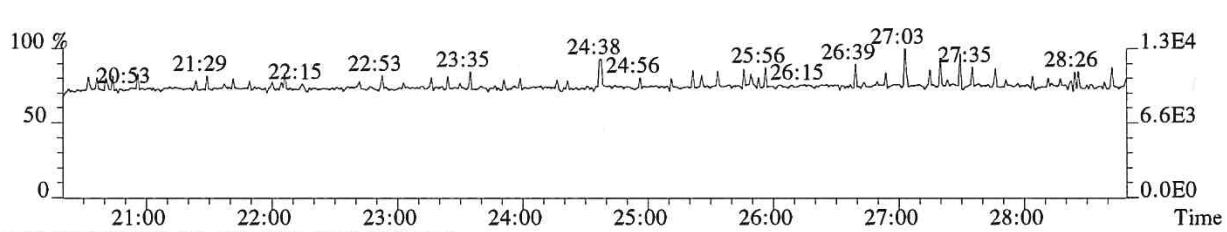
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,532.0,1.00%,F,T)



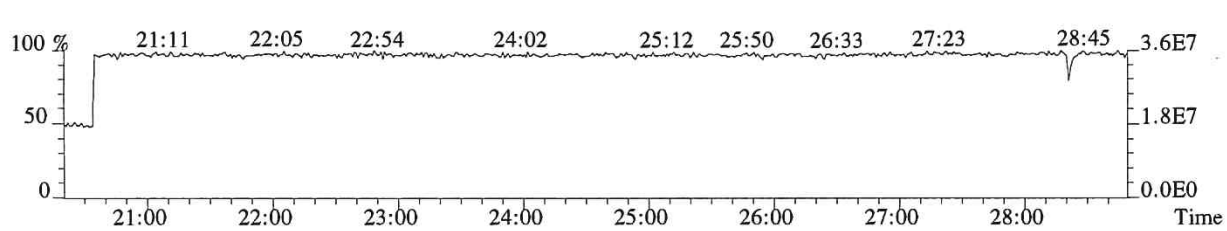
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,780.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

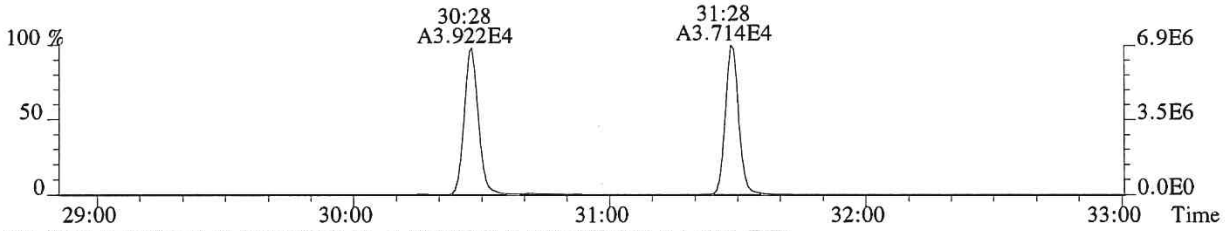


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

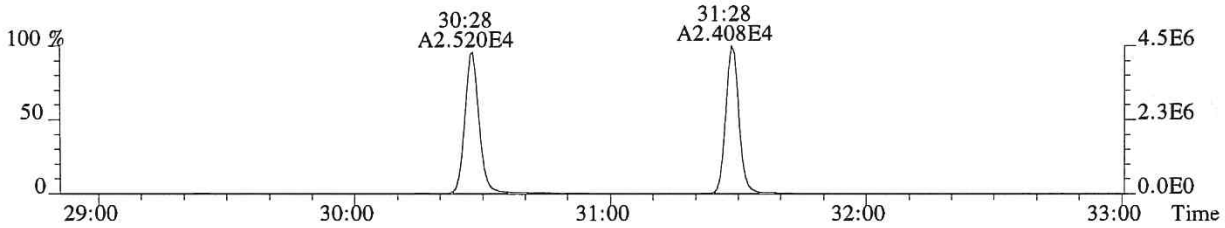


018917

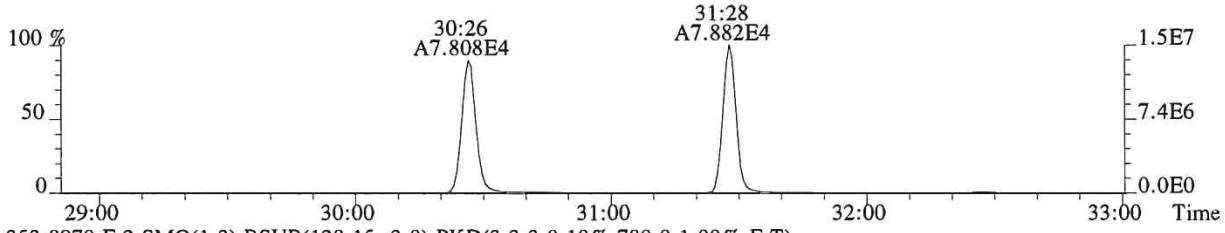
File:P519900 #1-375 Acq:11-JAN-2019 01:36:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,716.0,1.00%,F,T)



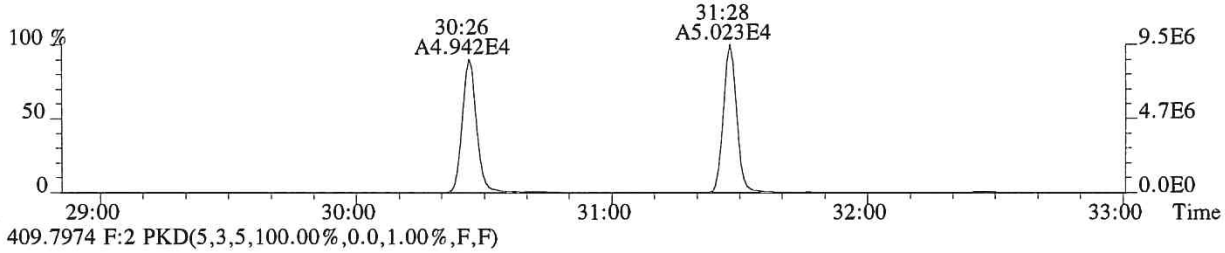
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,756.0,1.00%,F,T)



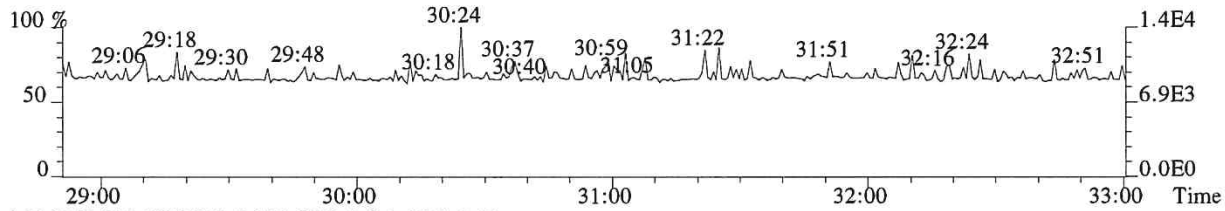
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,532.0,1.00%,F,T)



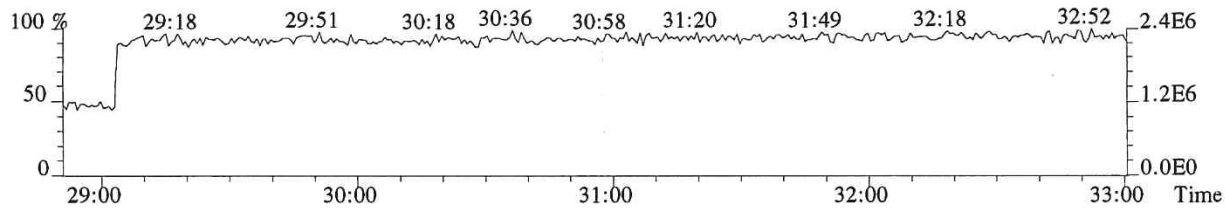
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,780.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

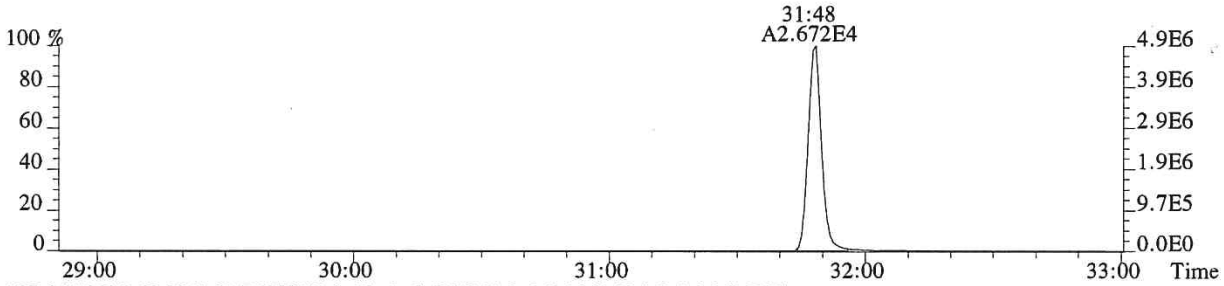


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

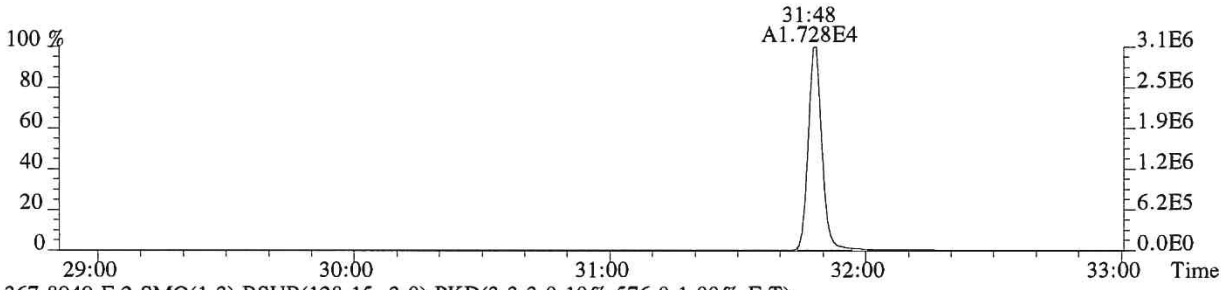


018918

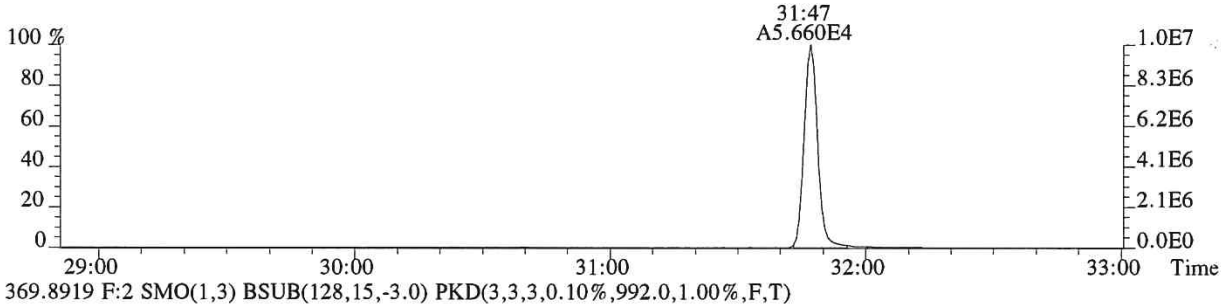
File:P519900 #1-375 Acq:11-JAN-2019 01:36:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1040.0,1.00%,F,T)



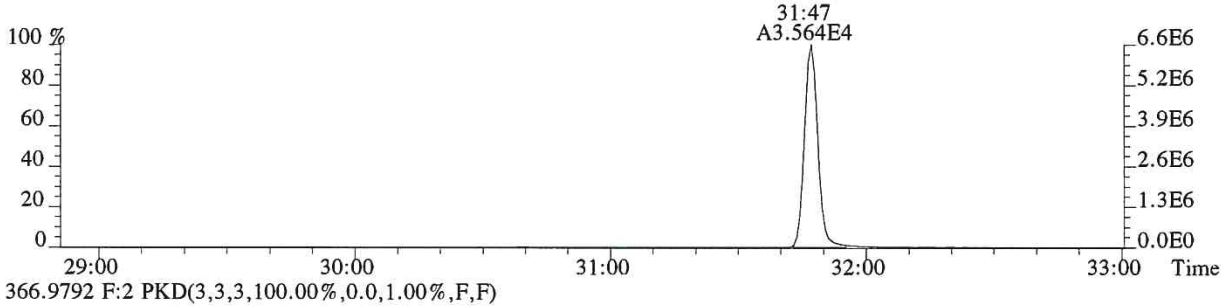
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,224.0,1.00%,F,T)



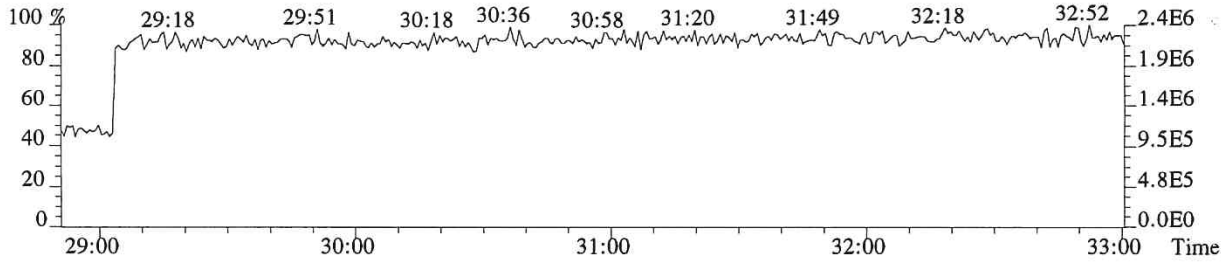
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,576.0,1.00%,F,T)



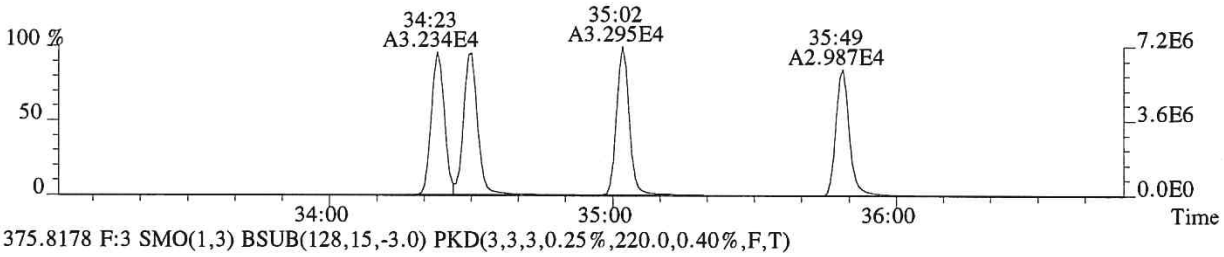
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,992.0,1.00%,F,T)



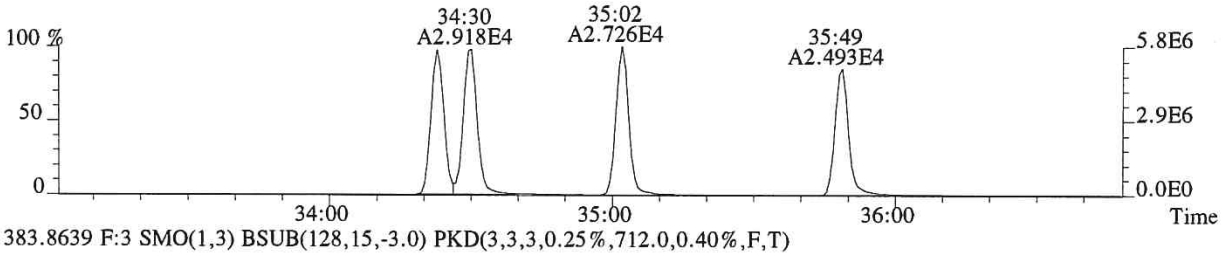
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



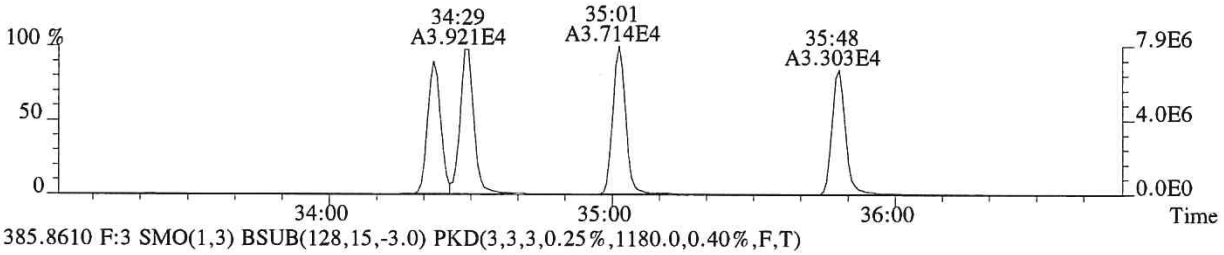
File:P519900 #1-339 Acq:11-JAN-2019 01:36:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1008.0,0.40%,F,T)



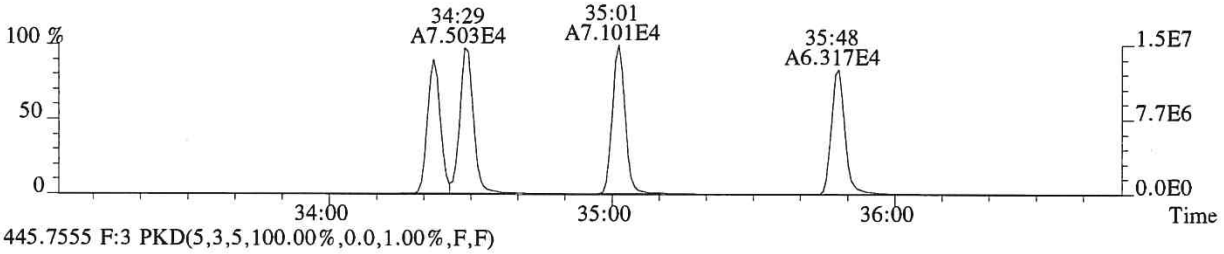
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,220.0,0.40%,F,T)



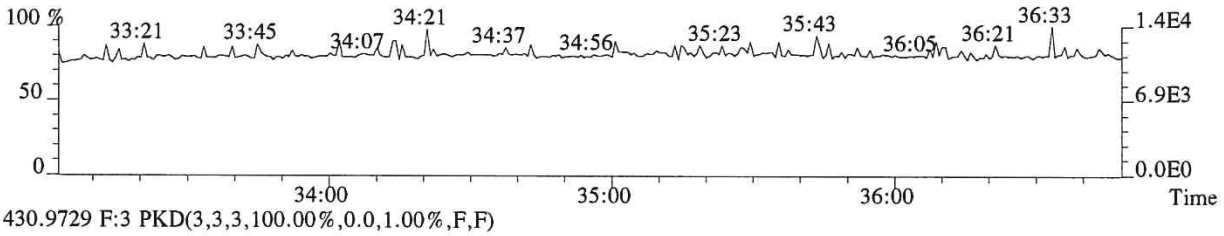
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,712.0,0.40%,F,T)



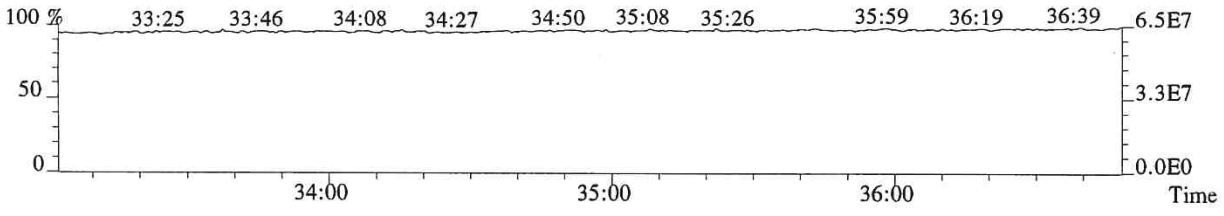
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1180.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

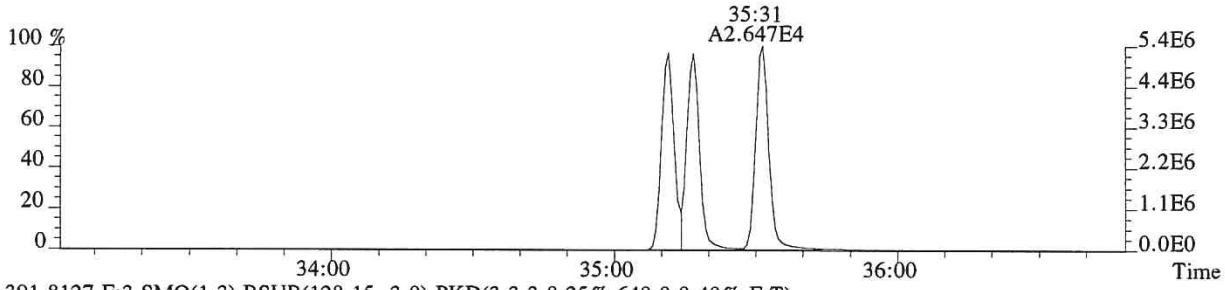


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

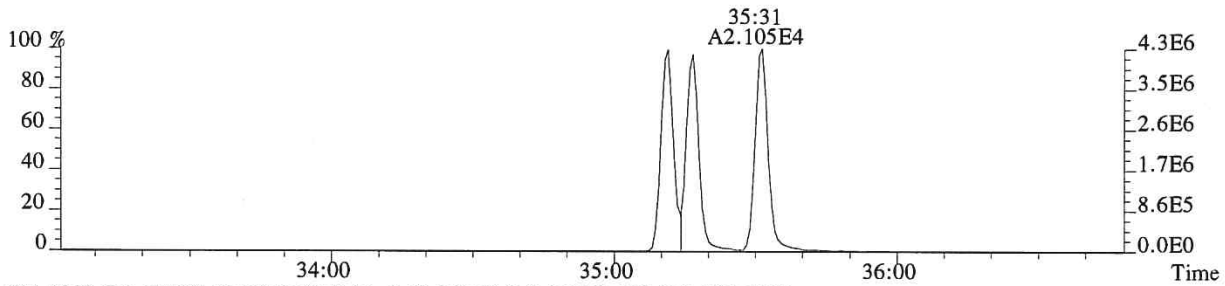


018920

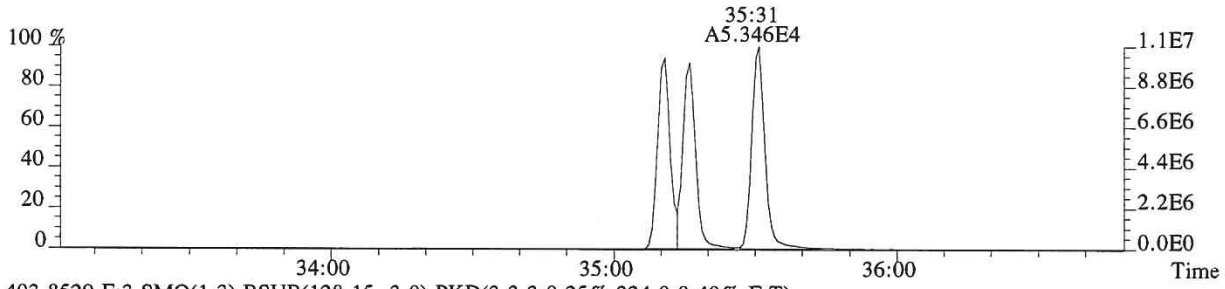
File:P519900 #1-339 Acq:11-JAN-2019 01:36:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



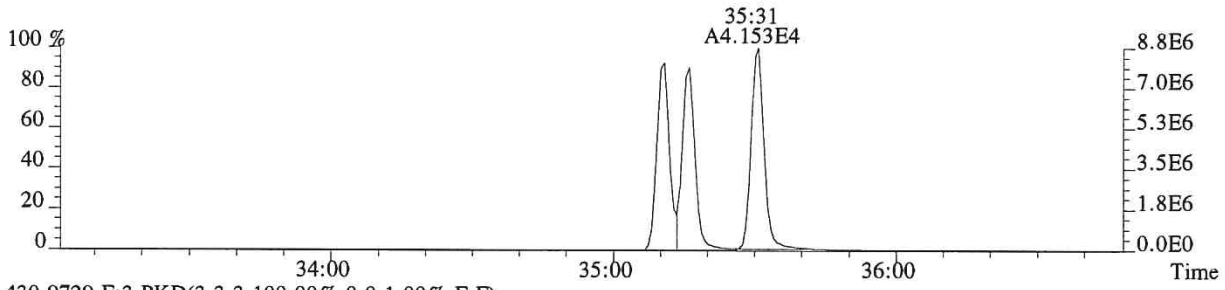
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,640.0,0.40%,F,T)



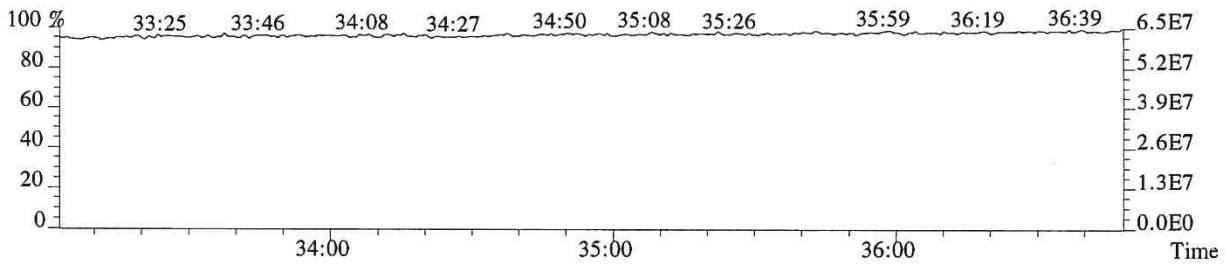
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,840.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,324.0,0.40%,F,T)

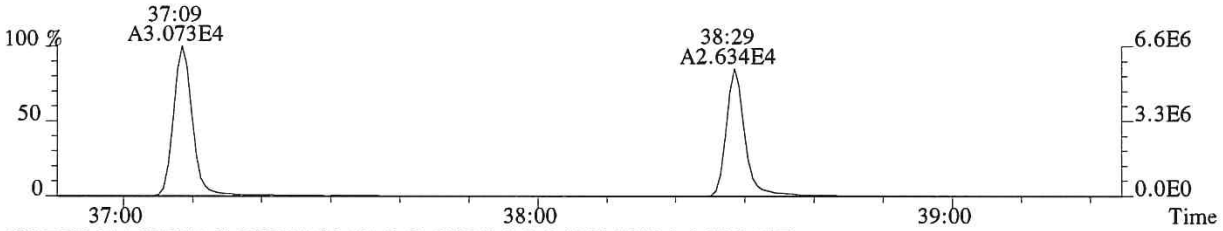


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

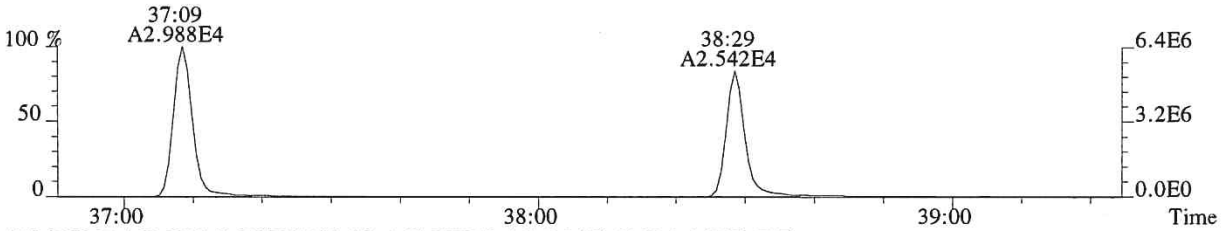


018921

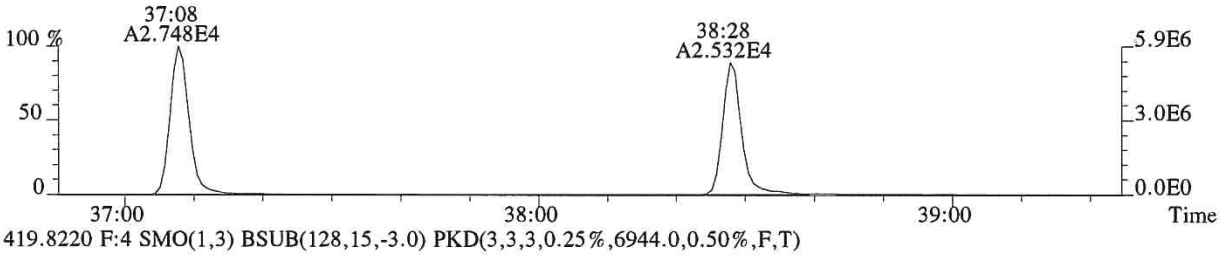
File:P519900 #1-232 Acq:11-JAN-2019 01:36:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5716.0,0.50%,F,T)



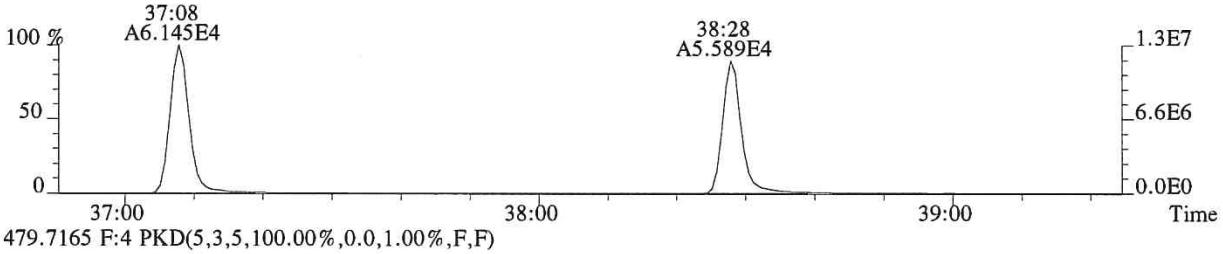
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5548.0,0.50%,F,T)



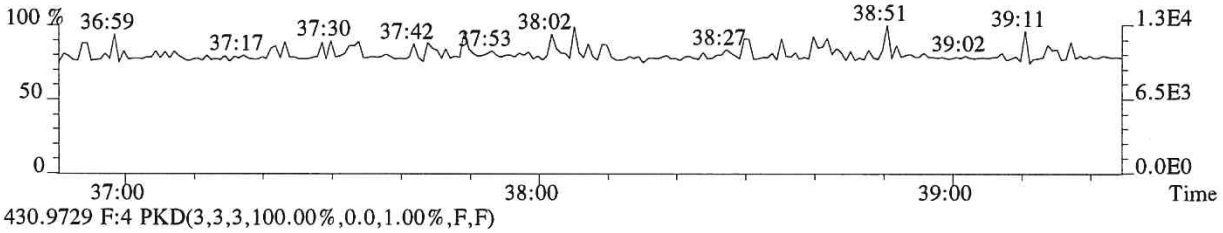
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6468.0,0.50%,F,T)



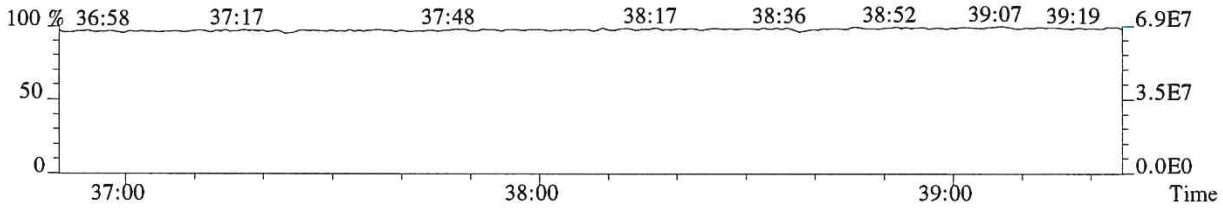
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6944.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

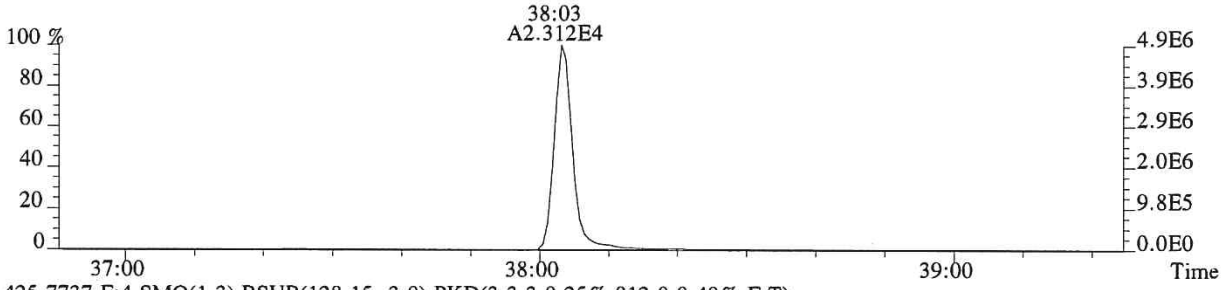


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

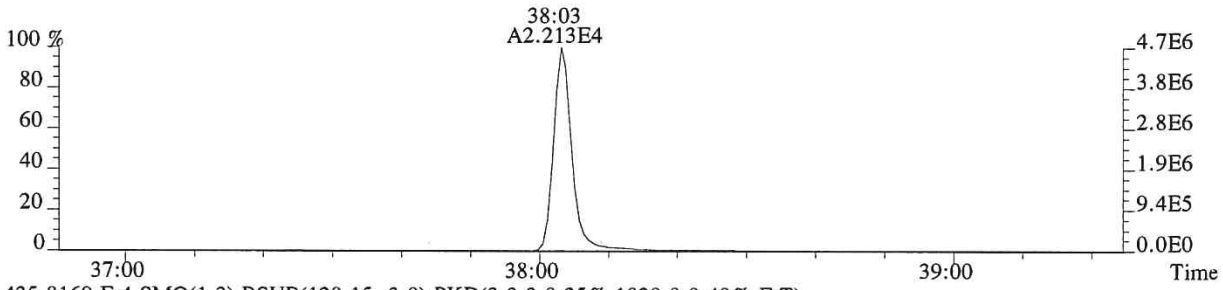


018922

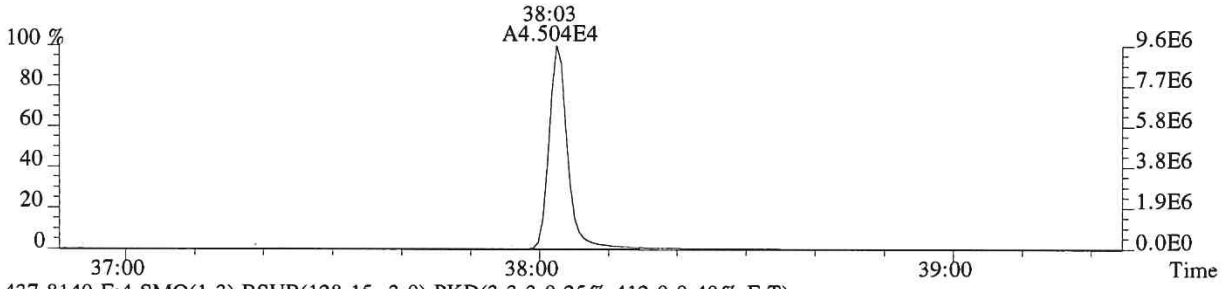
File:P519900 #1-232 Acq:11-JAN-2019 01:36:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,876.0,0.40%,F,T)



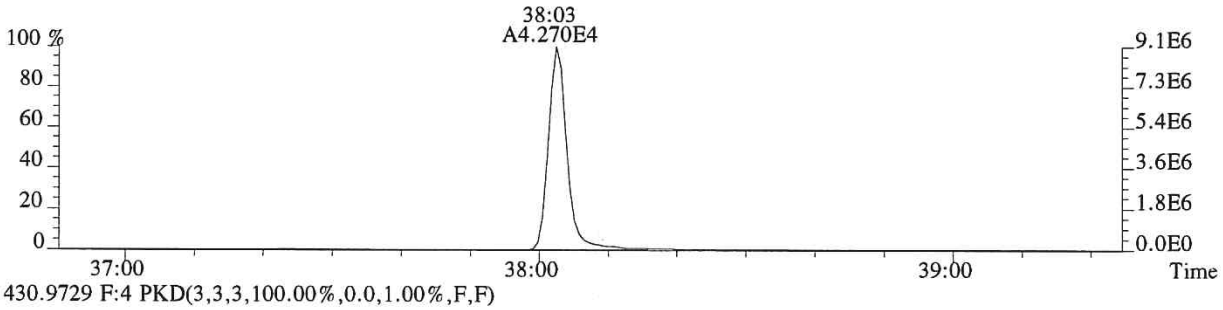
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,812.0,0.40%,F,T)



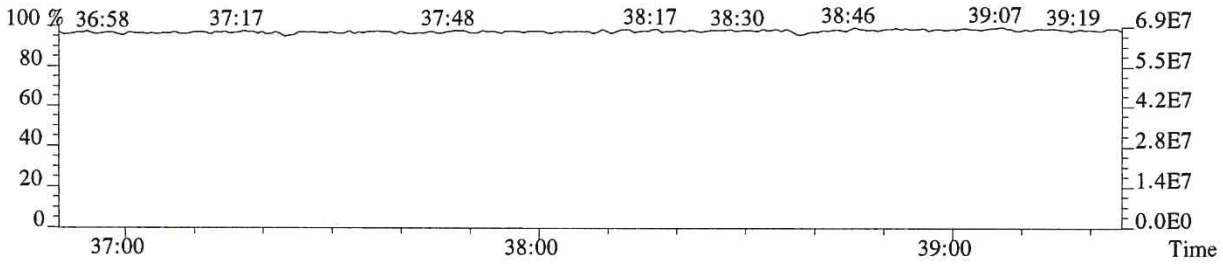
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1020.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,412.0,0.40%,F,T)

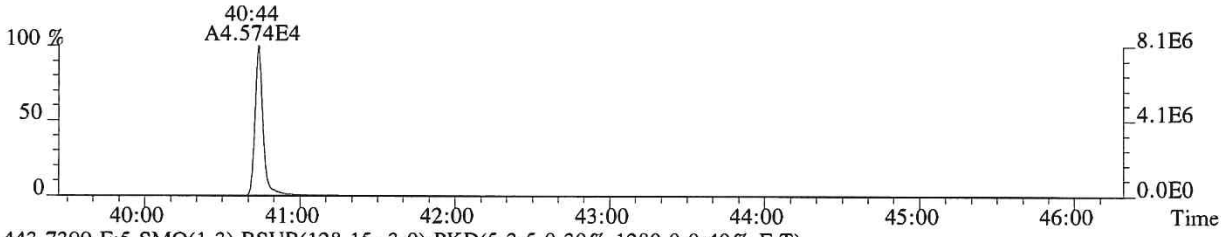


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

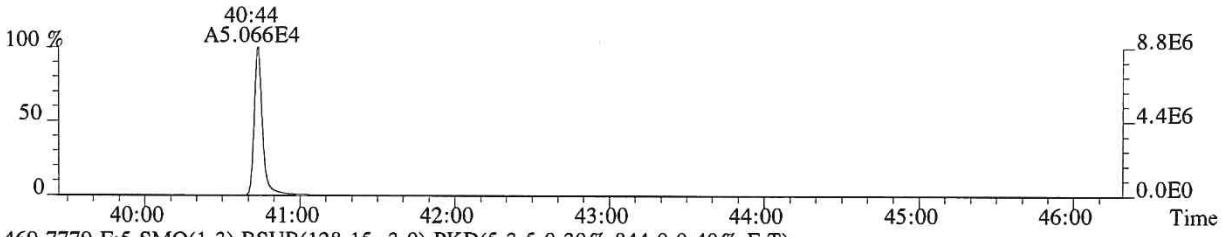


018923

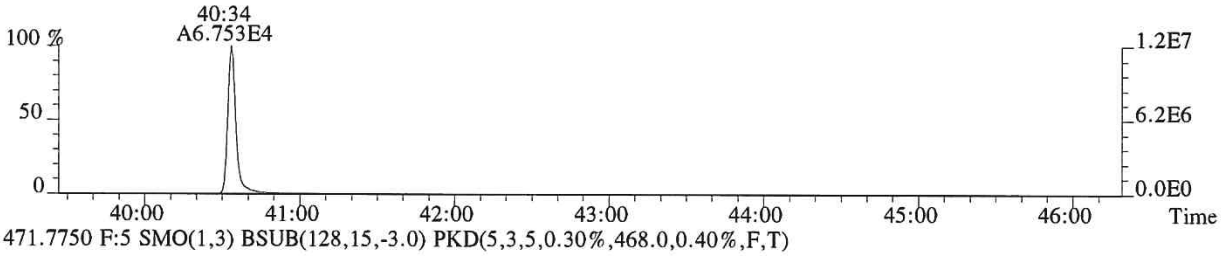
File:P519900 #1-619 Acq:11-JAN-2019 01:36:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,492.0,0.40%,F,T)



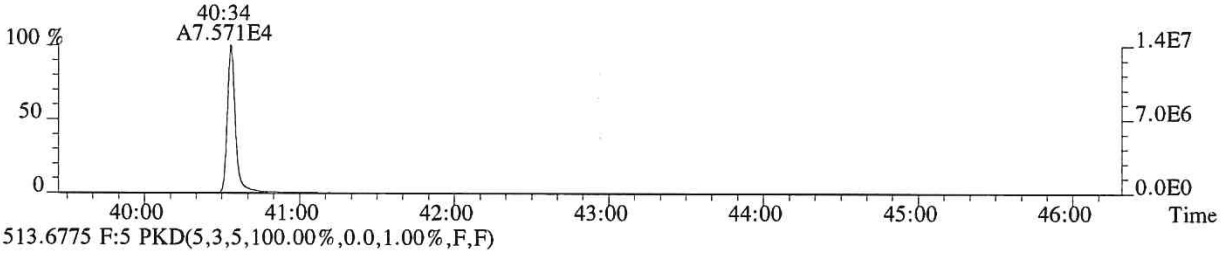
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1280.0,0.40%,F,T)



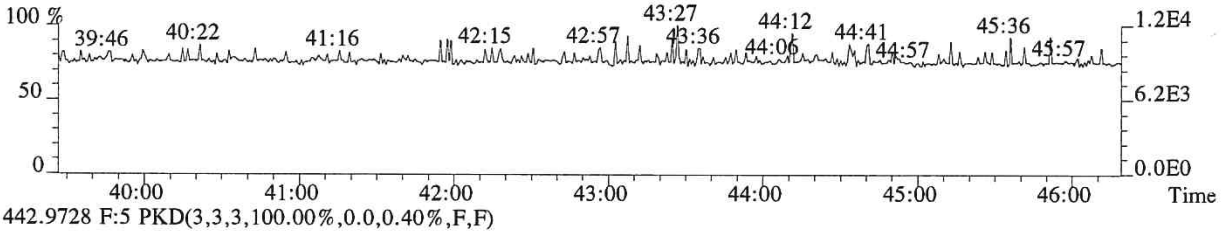
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,844.0,0.40%,F,T)



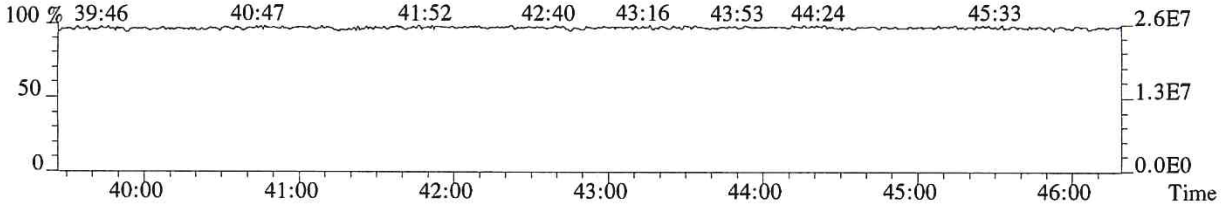
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,468.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

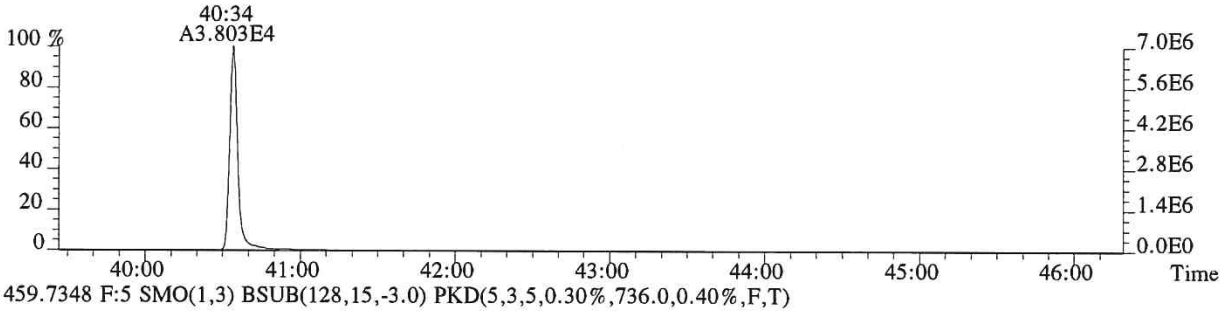


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

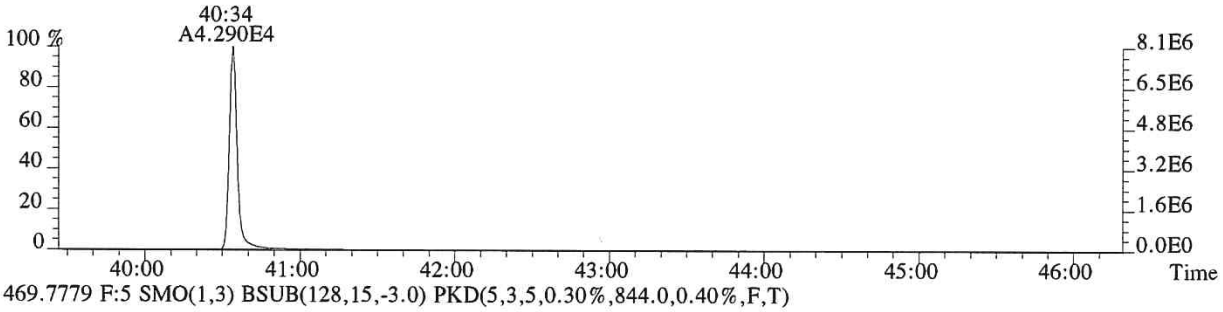


018924

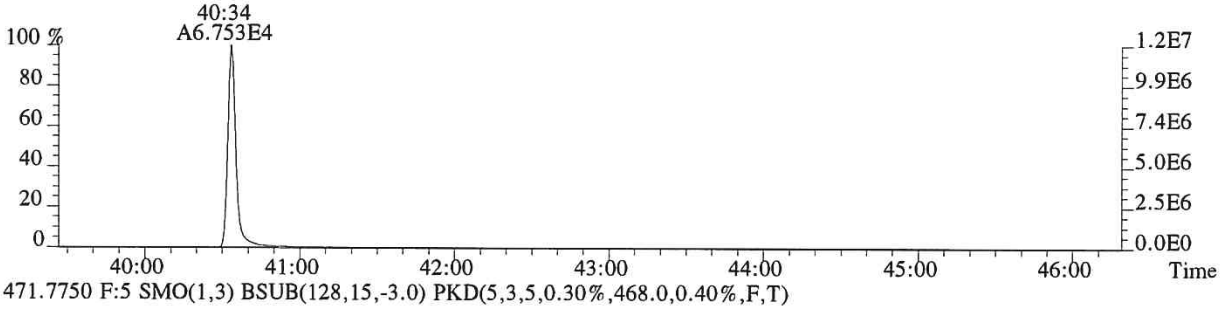
File:P519900 #1-619 Acq:11-JAN-2019 01:36:04 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,352.0,0.40%,F,T)



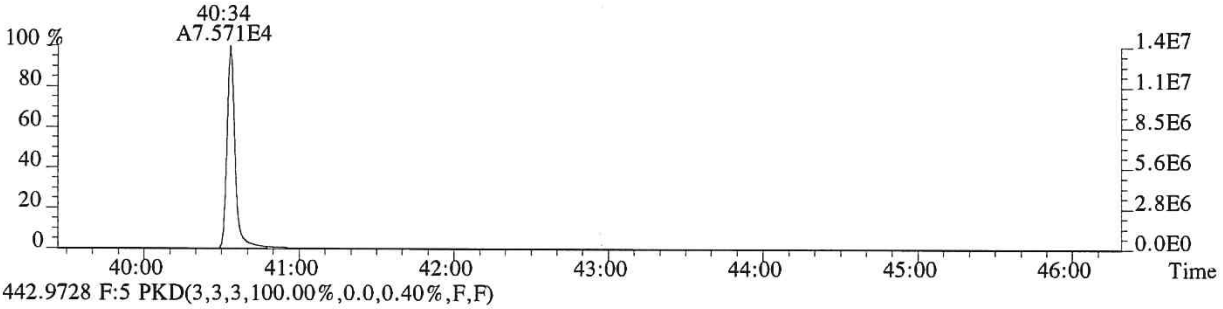
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,736.0,0.40%,F,T)



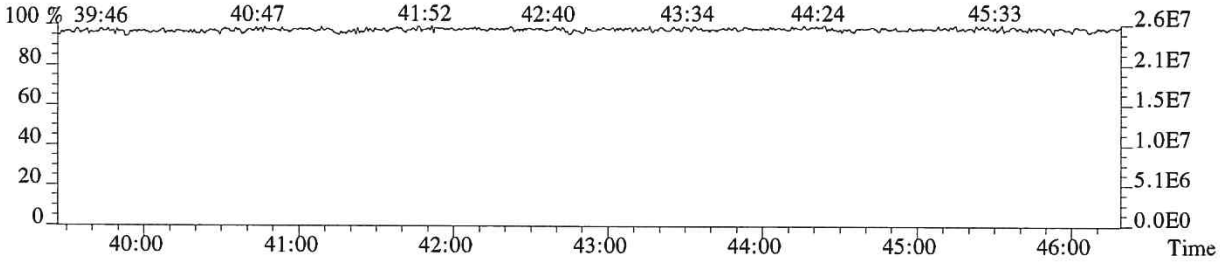
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,844.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,468.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P519915

Date: 01/11/19 - 01/12/19

Circle one: (Beginning) / Ending

Method: (1613) / 1613E / 8290/ VCP / Tetra / TCDD Only / TCDF Conf / VCP Conf / 8280 / M23 / TO-9A

Retention Window/Column Performance Check:	Analyst	Second Check
Windows in and first and last eluters labeled	✓	✓
Column Performance shows less than or equal to 25% valley between column specific 2378 isomer and its closest eluters	✓	✓
No QC ion deflections affect column specific 2378 isomer or its closest eluters (HRMS Only)	✓	✓

CS3 Continuing Calibration	Analyst	Second Check
Percent RSD within method criteria	✓	✓
All relative abundance ratios meet method criteria	✓	✓
No QC ion deflections of greater than 20% (HRMS Only)	✓	✓
Mass spectrometer resolution greater than or equal to 10,000 and documented (HRMS Only)	✓	✓
2378-TCDD elutes at 25 minutes or later on the DB-5 column / DB-5MSUI column	✓	✓
Signal-to-noise of all target analytes and their labeled standards at least 10:1	✓	✓
Valley between labeled 123478 and 123678 HxCDD peaks less than or equal to 50% (LRMS Only)	N/A	N/A
Ending Calibration injected prior to end of 12 hour clock	N/A	N/A

Analyst: JC

Second QC: LKL

ccalqc.xls 07/17/12

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: Case No.: Client No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm)

Init. Calib. Date: 01/24/18

Init. Calib.Times: 11:44

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
195556	CS3	P519915	11-JAN-19	14:05:18
192977	WINDOW DEFINE	P519916	11-JAN-19	14:54:35
METHOD BLANK	EQ1800529-01	P519917	11-JAN-19	15:42:46
METHOD BLANK	EQ1900011-01	P519918	11-JAN-19	16:30:58
SL0548	E1801141-001	P519919	11-JAN-19	17:20:26
SL0555	E1801141-002	P519920	11-JAN-19	18:08:14
SL0594	E1801141-003	P519921	11-JAN-19	18:56:52
SL0228	E1801139-013DL	P519922	11-JAN-19	19:45:29
SL0229	E1801139-014DL	P519923	11-JAN-19	20:34:15
SL0230	E1801139-019DL	P519924	11-JAN-19	21:22:51
LOW BRIGHT MARKETE╗	K1812190-001	P519925	11-JAN-19	22:11:30
NEW AGE MARKETED P╗	K1812189-001	P519926	11-JAN-19	23:00:07
COMPOSITE	K1812211-008	P519927	11-JAN-19	23:48:52
LCS	EQ1900011-02	P519928	12-JAN-19	00:37:29
DLCS	EQ1900011-03	P519929	12-JAN-19	01:26:15

E1801139

964 of 1143

Sample List Report — **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS07.PRO\SampleDB\20190111A.SPL
Last Modified: Monday, January 14, 2019 09:05:33 Central Standard Time
Printed: Monday, January 14, 2019 09:05:37 Central Standard Time

Page Position (1, 1)

OPUS 4: P519915res

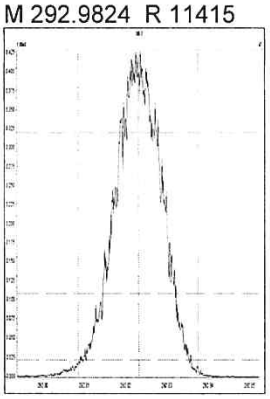
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1	1/11/19	14:05	P519915	CS3	195556	EPA1613_ALS	Dioxin_ALS	Tray1:2	LG	HRMSchk 14:04
2		14:54	P519916	WINDOWDEFINE	192977	EPA1613_ALS	Dioxin_ALS	Tray1:1		
3		15:43	P519917	MB	EQ1800529-01	EPA1613_ALS	Dioxin_ALS	Tray1:3		
4		16:30	P519918	MB	EQ1900011-01	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		17:20	P519919	E1801141-001	E1801141-001	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		18:08	P519920	E1801141-002	E1801141-002	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		18:56	P519921	E1801141-003	E1801141-003	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		19:45	P519922	~~E18001139-013DL~~	E1801139-013DL	EPA1613_ALS	Dioxin_ALS	Tray1:8		E1801139-013DL
9		20:34	P519923	~~E18001139-014DL~~	E1801139-014DL	EPA1613_ALS	Dioxin_ALS	Tray1:9		E1801139-014DL
10		21:23	P519924	~~E18001139-019DL~~	E1801139-019DL	EPA1613_ALS	Dioxin_ALS	Tray1:10		E1801139-019DL
11		22:11	P519925	K1812190-001	K1812190-001	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		23:00	P519926	K1812189-001	K1812189-001	EPA1613_ALS	Dioxin_ALS	Tray1:12		
13		23:48	P519927	K1812211-008	K1812211-008	EPA1613_ALS	Dioxin_ALS	Tray1:13		
14	1/12/19	00:37	P519928	LCS	EQ1900011-02	EPA1613_ALS	Dioxin_ALS	Tray1:14		
15		01:26	P519929	DLCS	EQ1900011-03	EPA1613_ALS	Dioxin_ALS	Tray1:15		
16		02:23	P519930	CS3	195556	EPA1613_ALS	Dioxin_ALS	Tray1:2		HRMSchk 02:23
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---
21	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:21	---	---

01/14/19

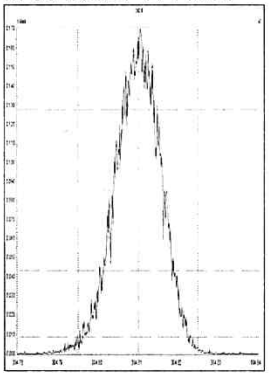
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Printed: Friday, January 11, 2019 14:01:25 Central Standard Time

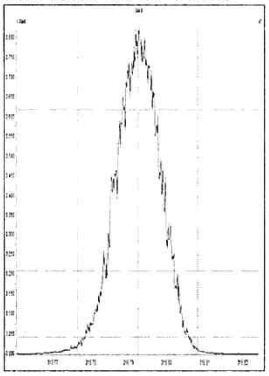
M 292.9824 R 11415



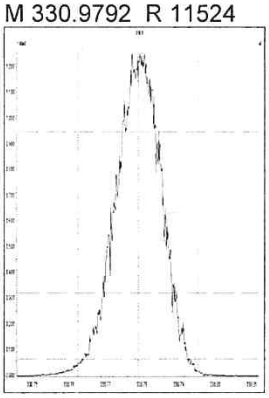
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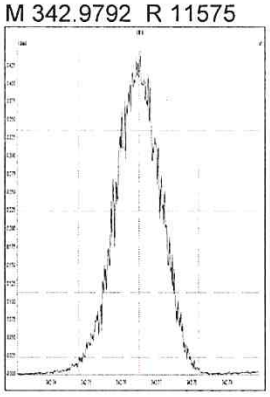
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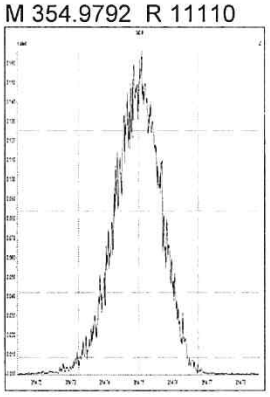
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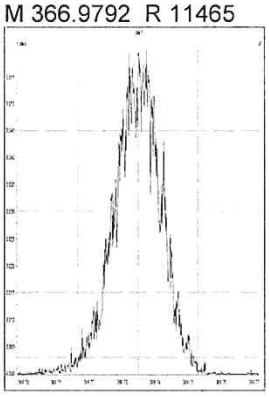
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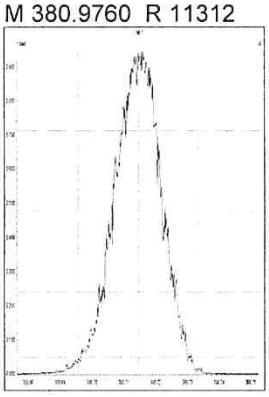
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M 366.9792 R 11465



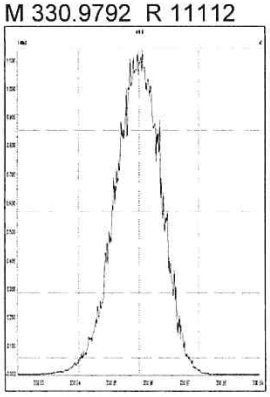
M 380.9760 R 11312



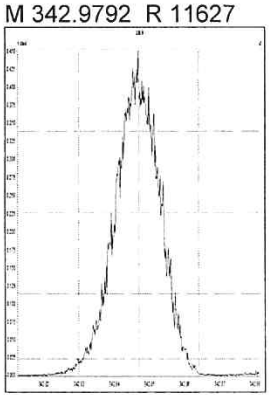
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Printed: Friday, January 11, 2019 14:02:09 Central Standard Time

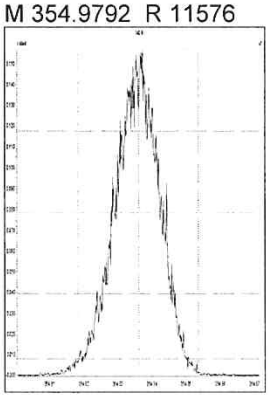
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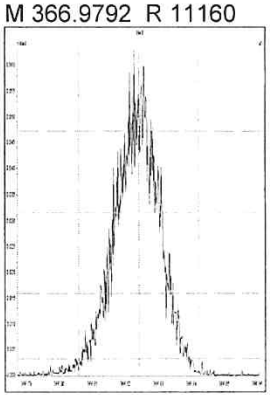
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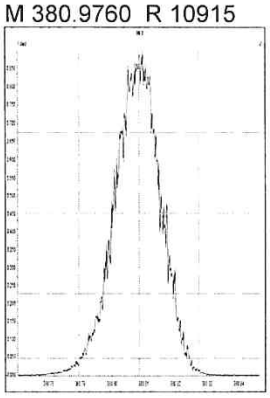
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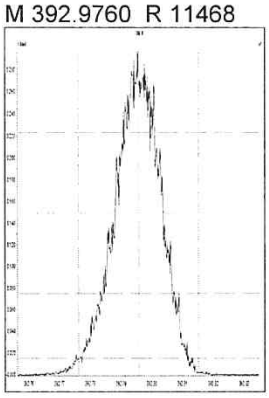
M 366.9792 R 11160



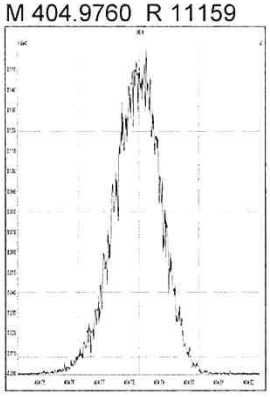
M 380.9760 R 10915



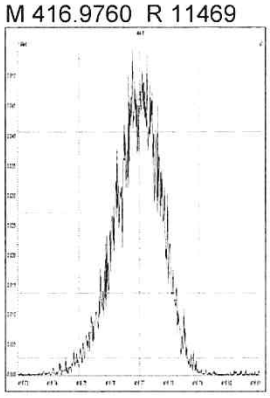
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M 404.9760 R 11159



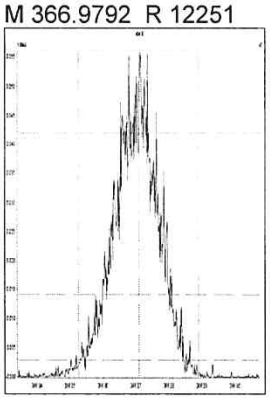
M 416.9760 R 11469



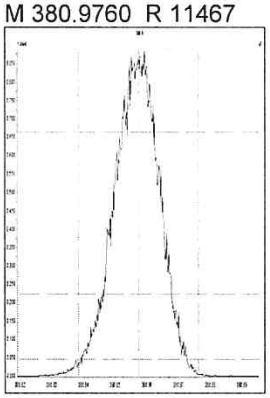
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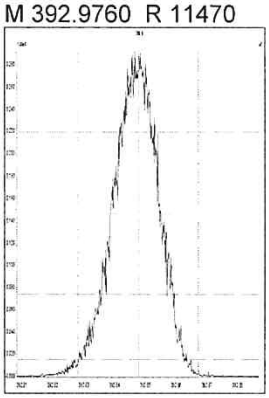
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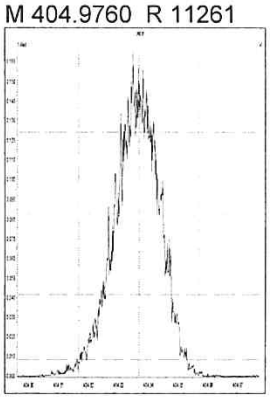
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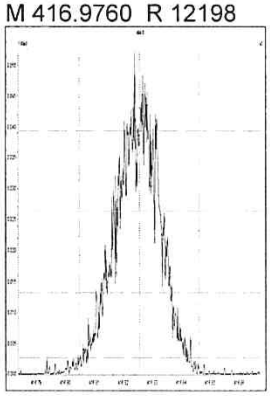
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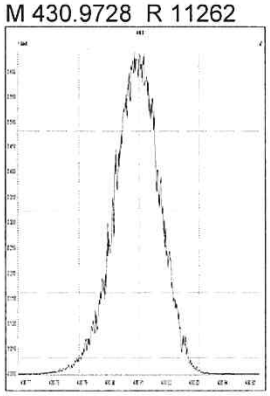
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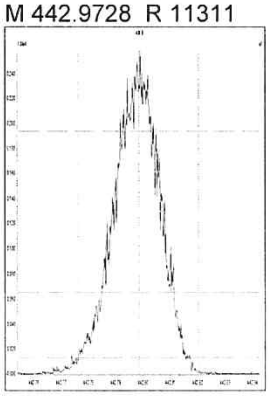
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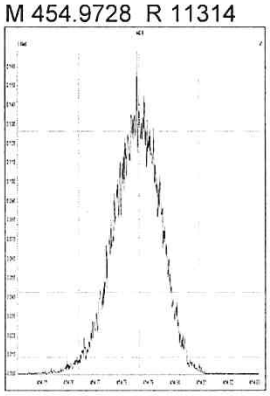
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M 442.9728 R 11311



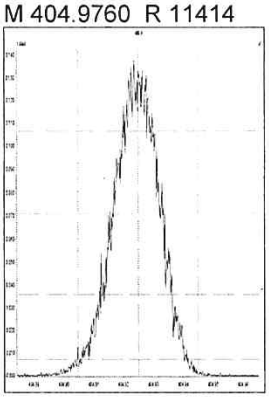
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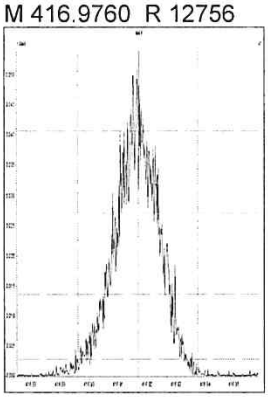
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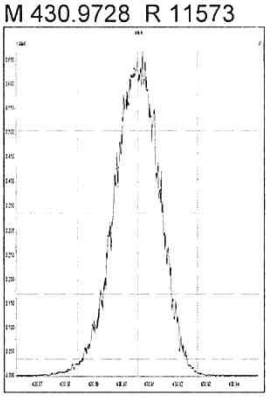
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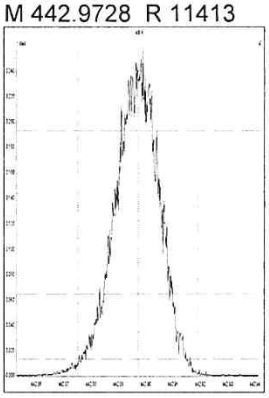
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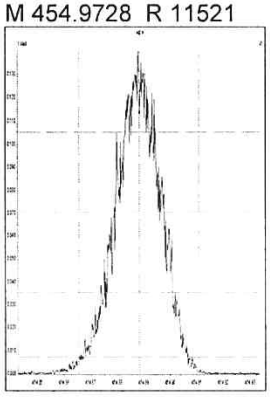
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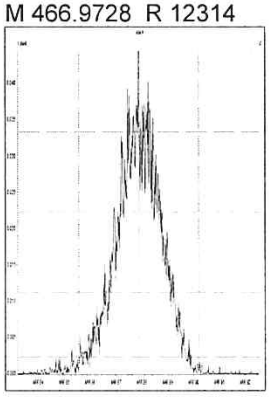
M 442.9728 R 11413



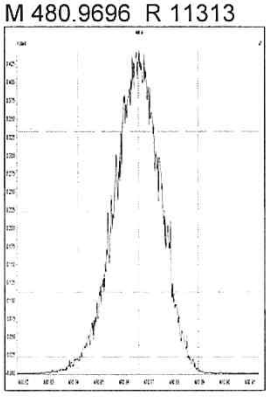
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M 466.9728 R 12314



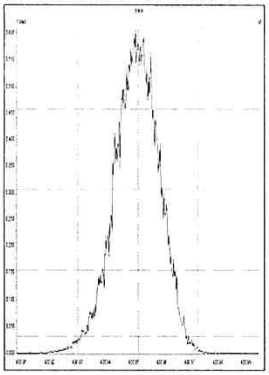
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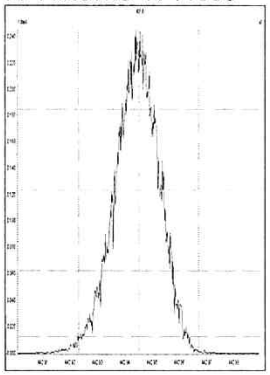
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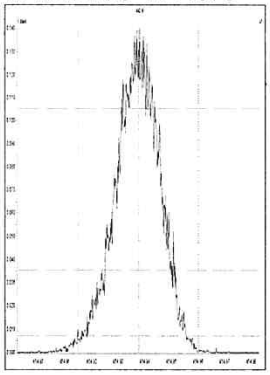
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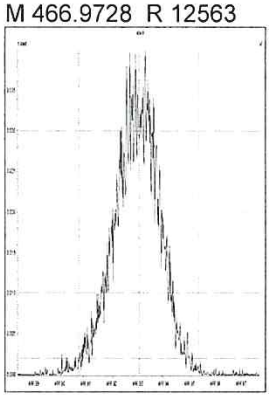
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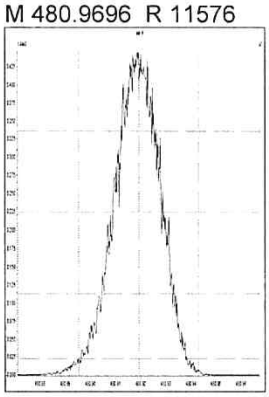
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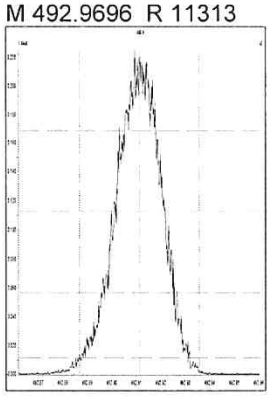
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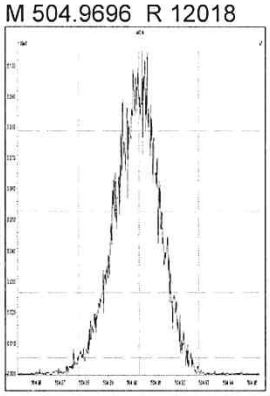
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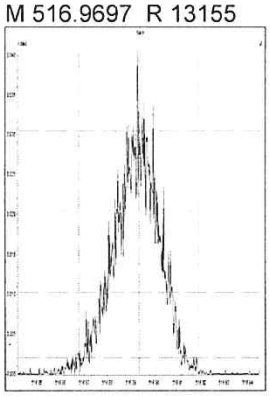
M 492.9696 R 11313



M 504.9696 R 12018

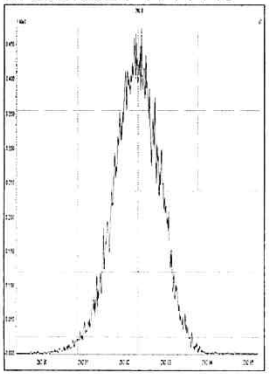


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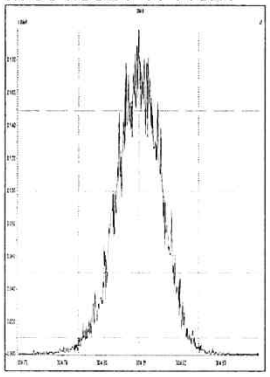


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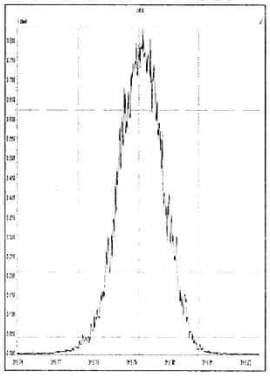
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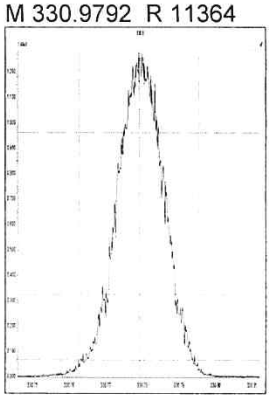
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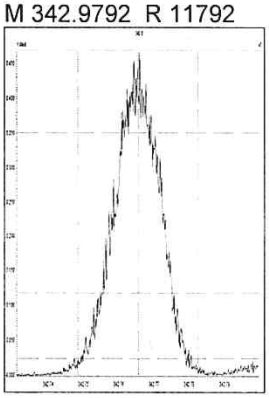
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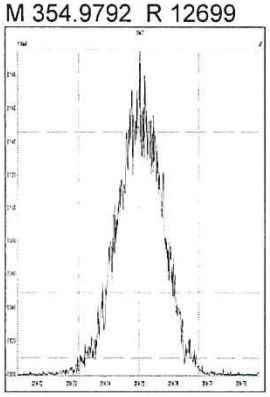
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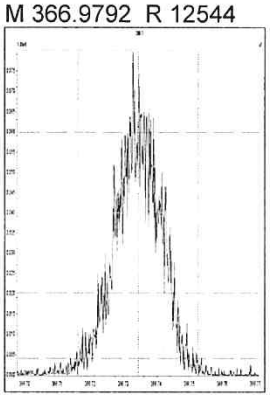
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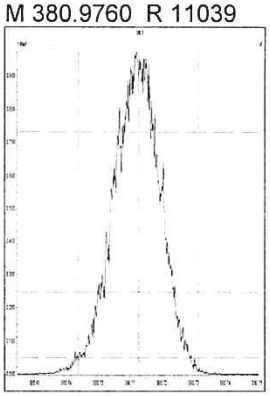
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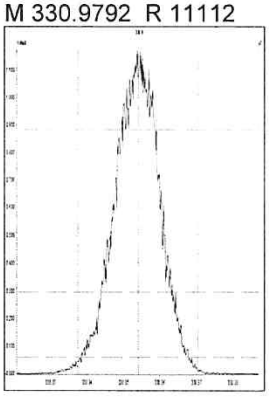
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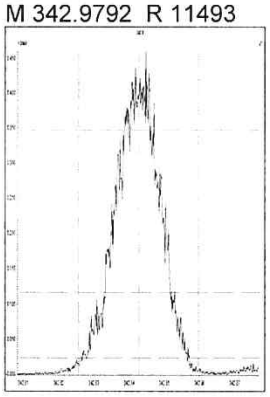
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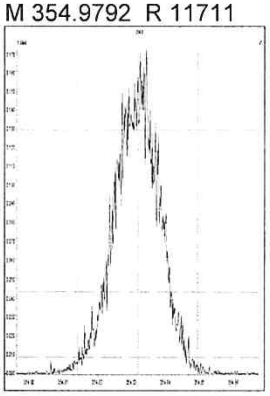
M 330.9792 R 11112



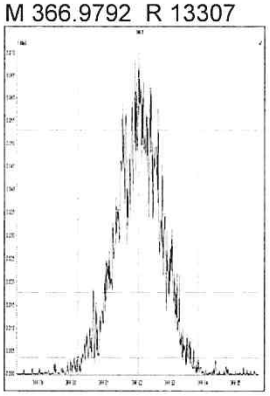
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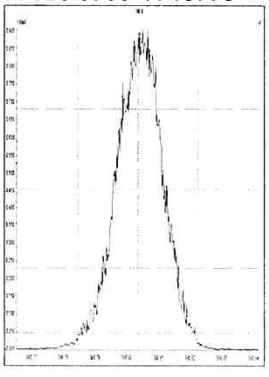
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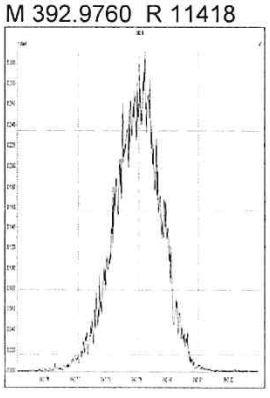
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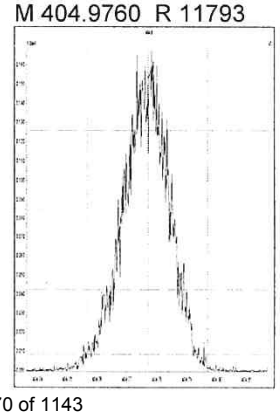
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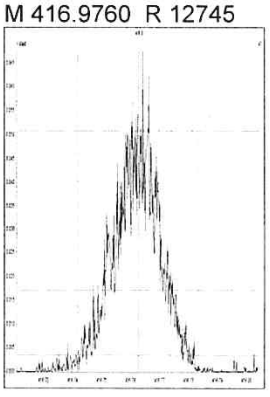
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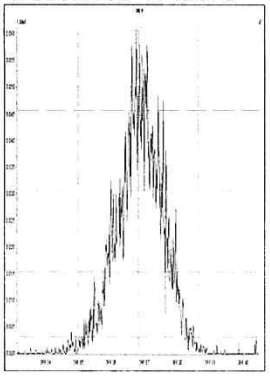
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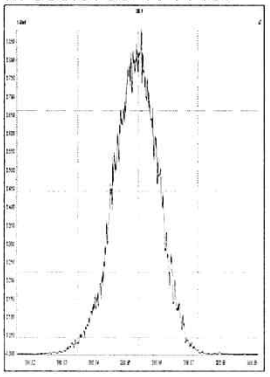
M 416.9760 R 12745



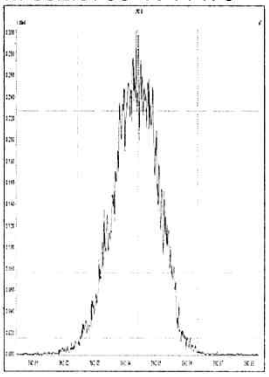
M 366.9792 R 12570



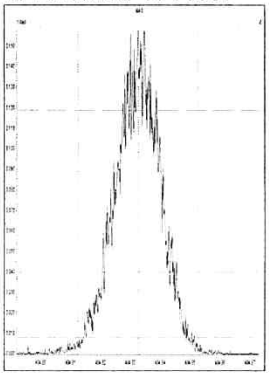
M 380.9760 R 11467



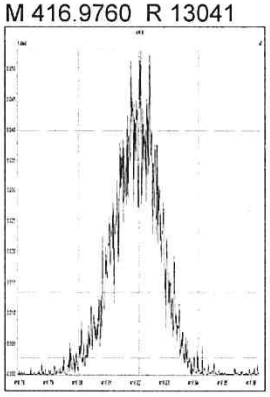
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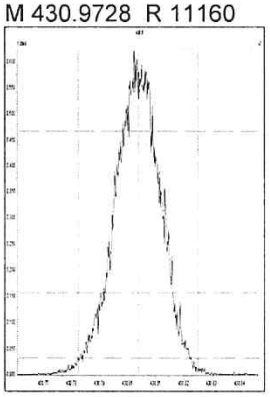
M 404.9760 R 11657



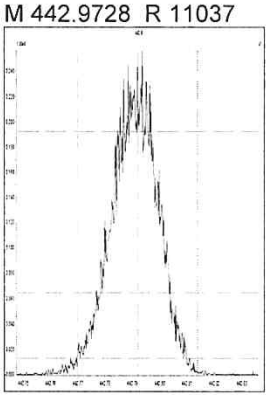
M 416.9760 R 13041



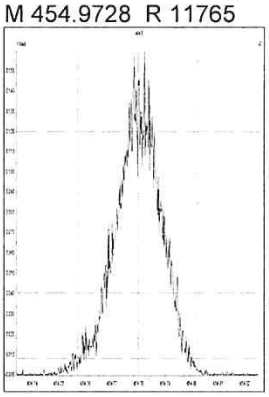
M 430.9728 R 11160



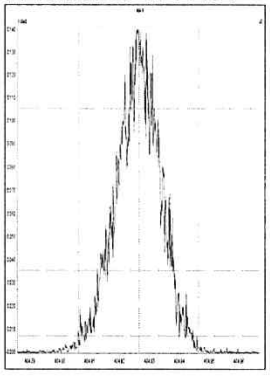
M 442.9728 R 11037



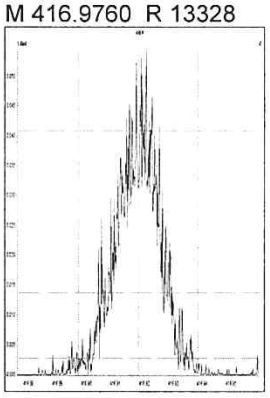
M 454.9728 R 11765



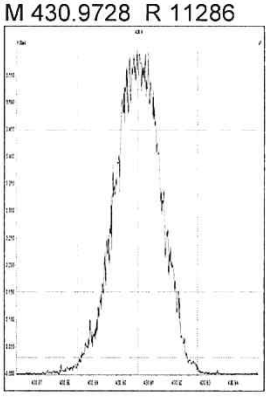
M 404.9760 R 11494



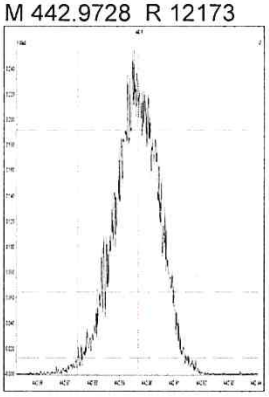
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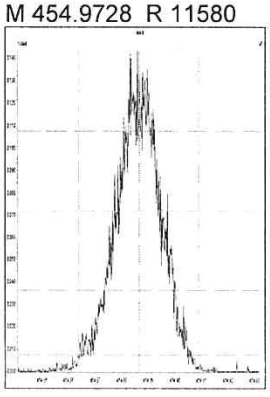
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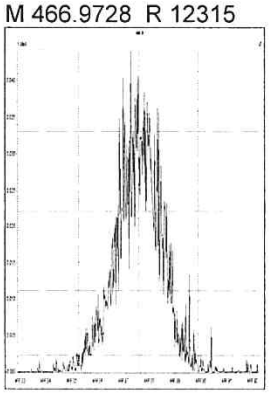
M 442.9728 R 12173



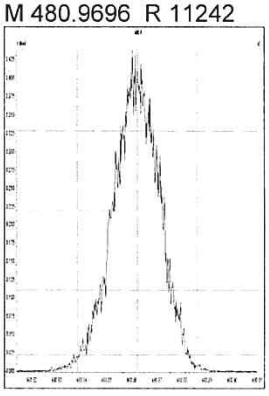
M 454.9728 R 11580



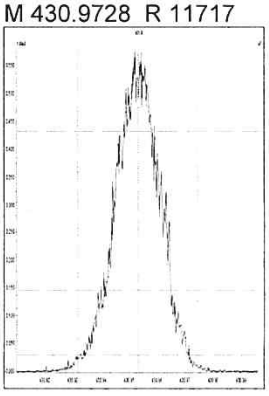
M 466.9728 R 12315



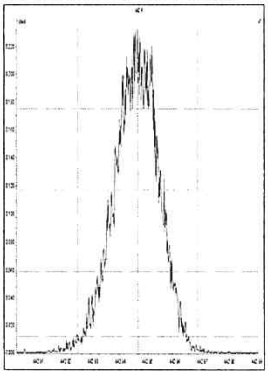
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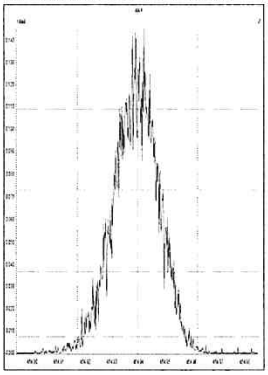
M 430.9728 R 11717



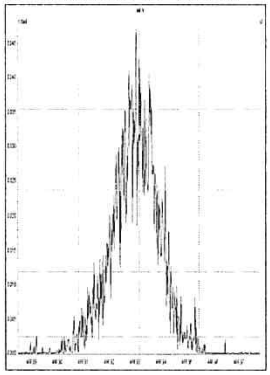
M 442.9728 R 11765



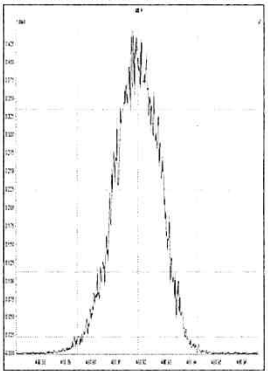
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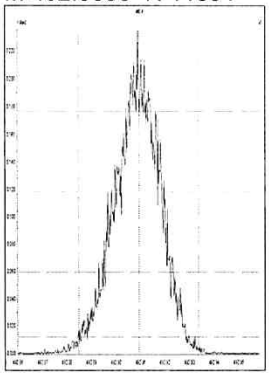
M 466.9728 R 13450



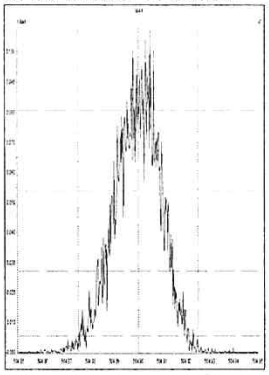
M 480.9696 R 11389



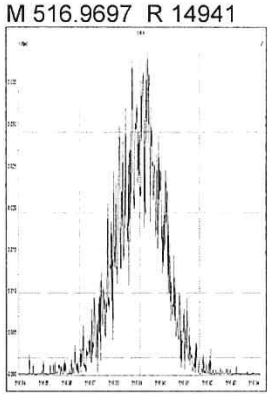
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M 504.9696 R 12354



M 516.9697 R 14941



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

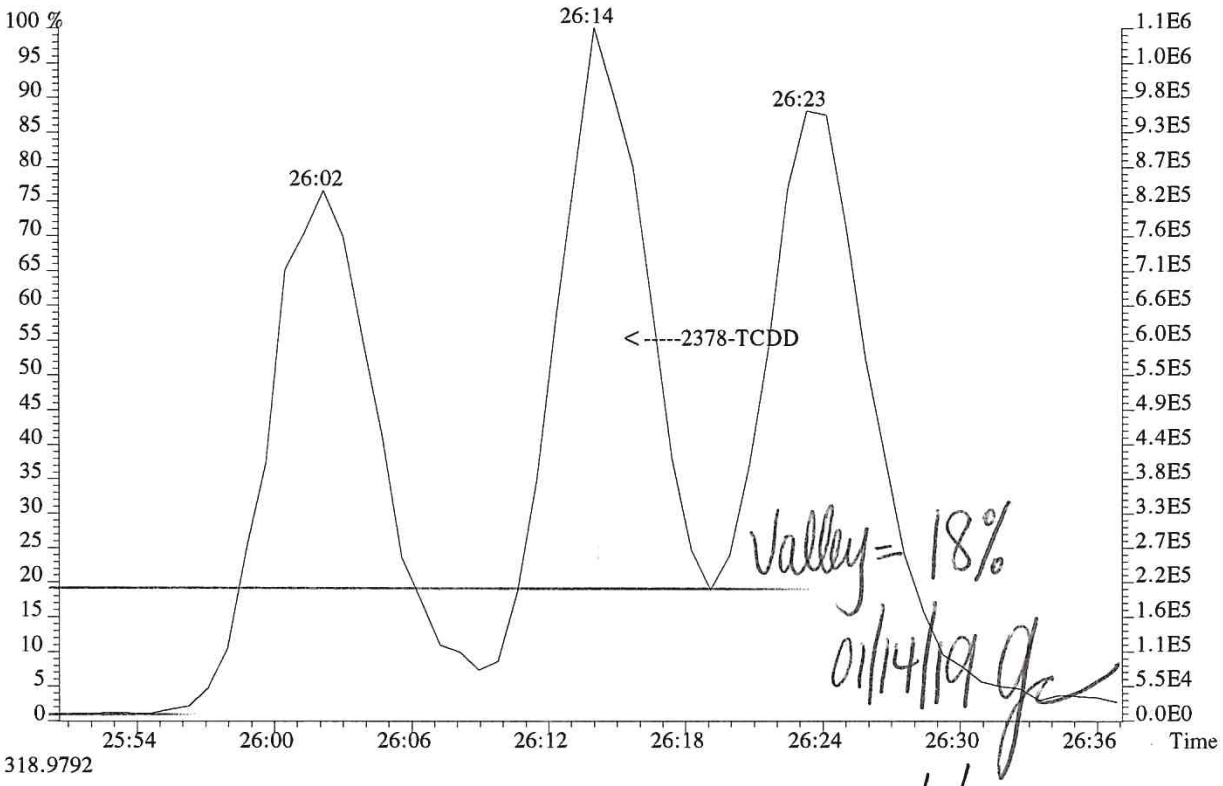
WDM

Lab Name: ALS Environmental
Lab Code: ALSTX Case No.: _____ SDG No.:
GC Column: DB-5MSUI ID: 0.25 (mm) Lab File ID: P519916
Date Analyzed: 11-JAN-2019
Time Analyzed: 14:54:35

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	20:59	27:39
TCDD	22:32	27:29
PeCDF	27:38	32:27
PeCDD	29:28	32:12
HxCDF	33:12	35:50
HxCDD	33:46	35:26
HpCDF	37:08	38:28
HpCDD	37:24	38:03

% Valley 2378-TCDD: 18 %

File:P519916 #1-580 Acq:11-JAN-2019 14:54:35 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
319.8965

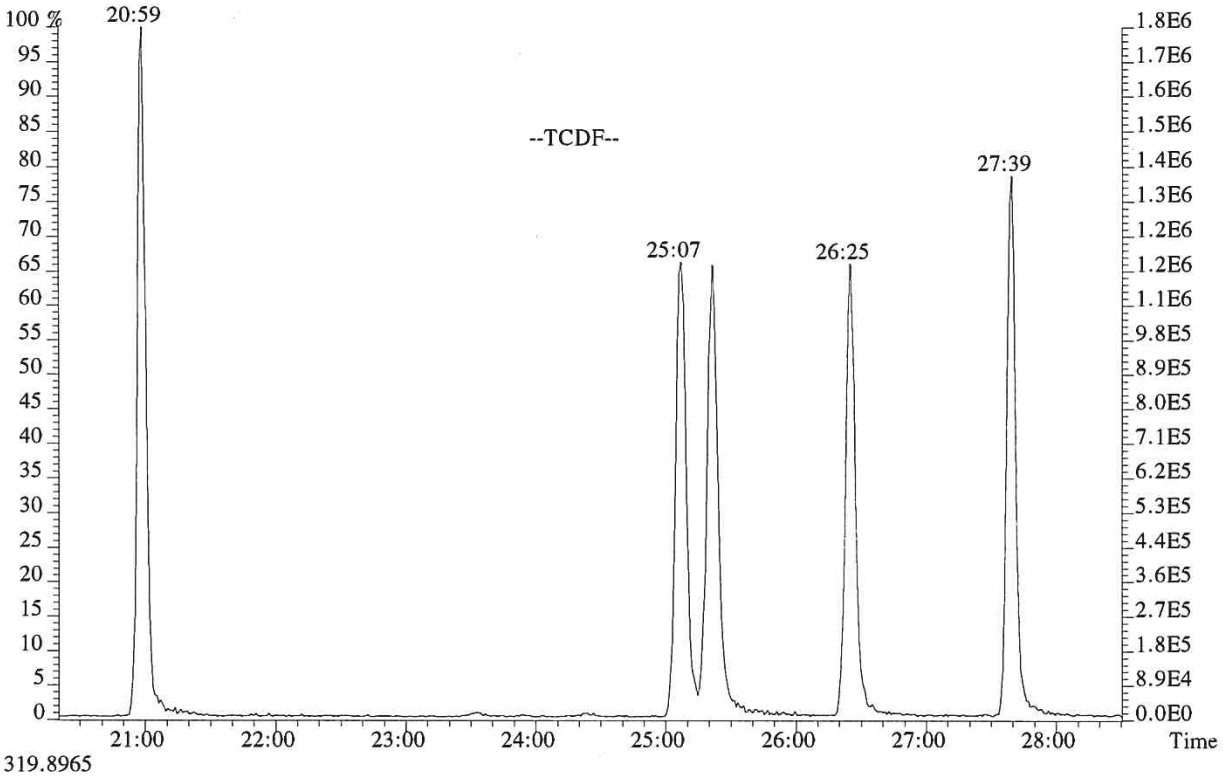


318.9792

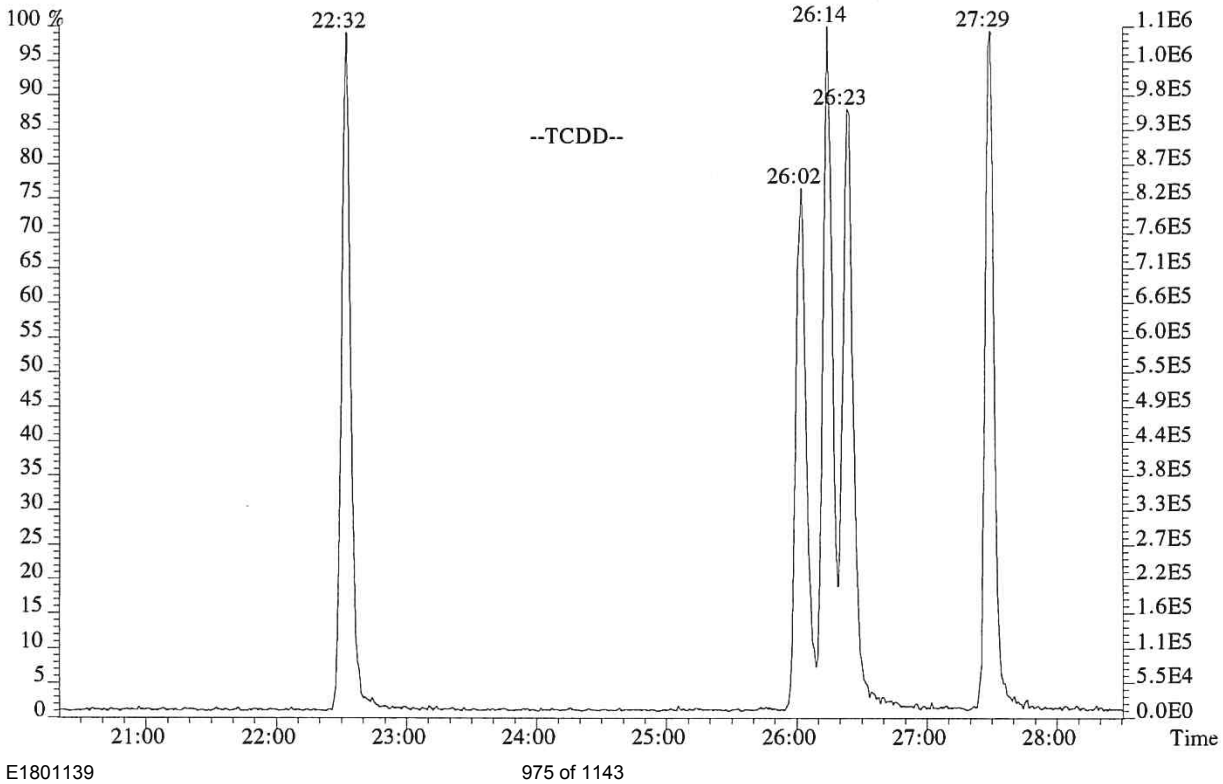


018938

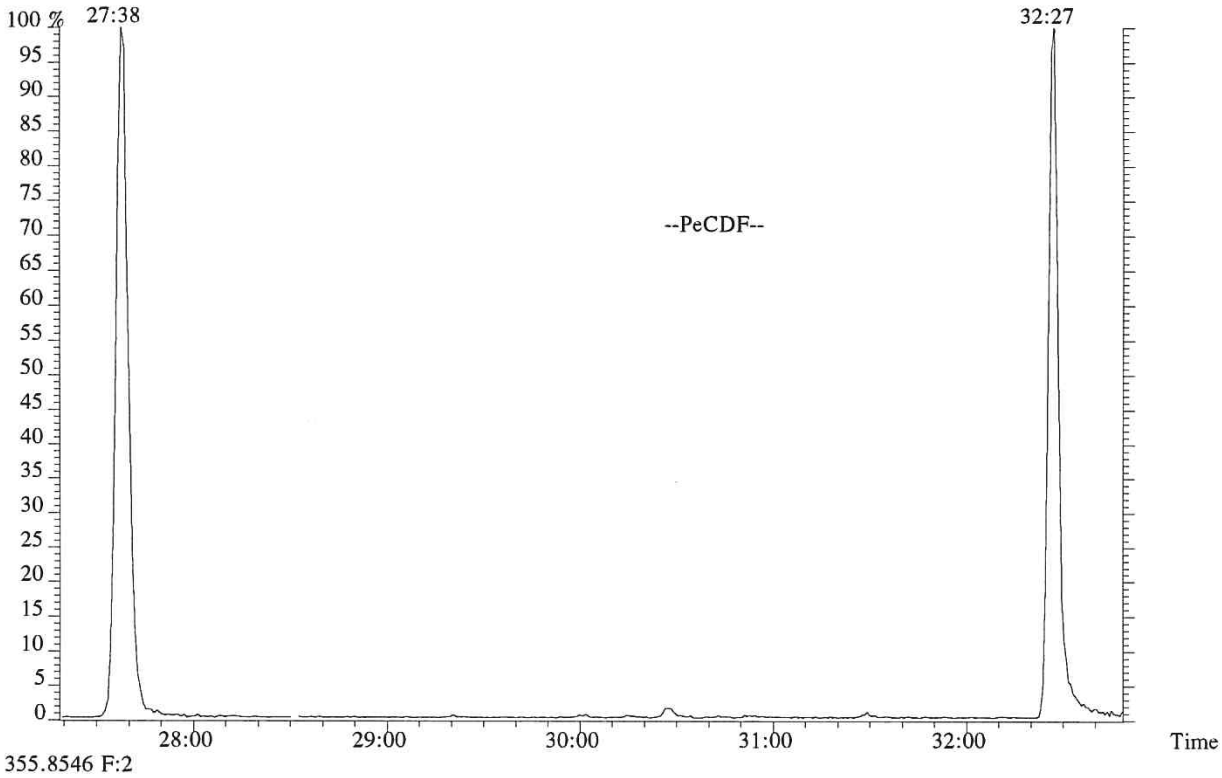
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Sample#1 Exp:192977
303.9016



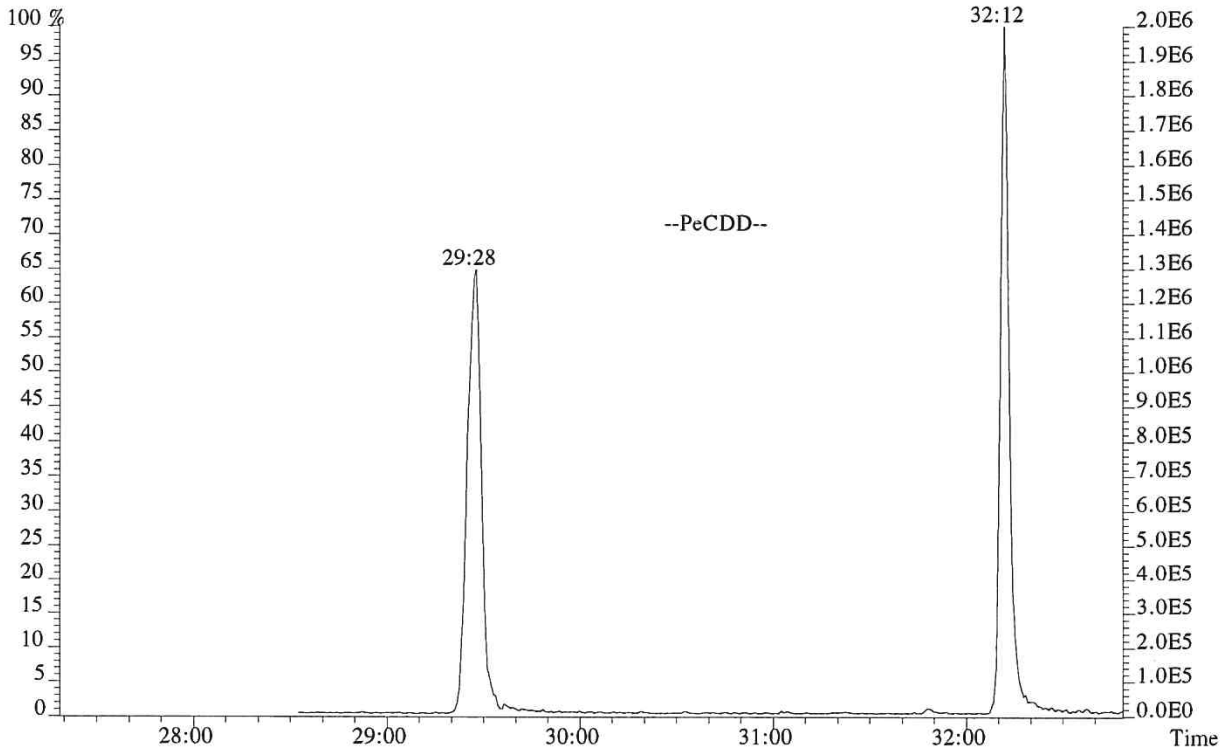
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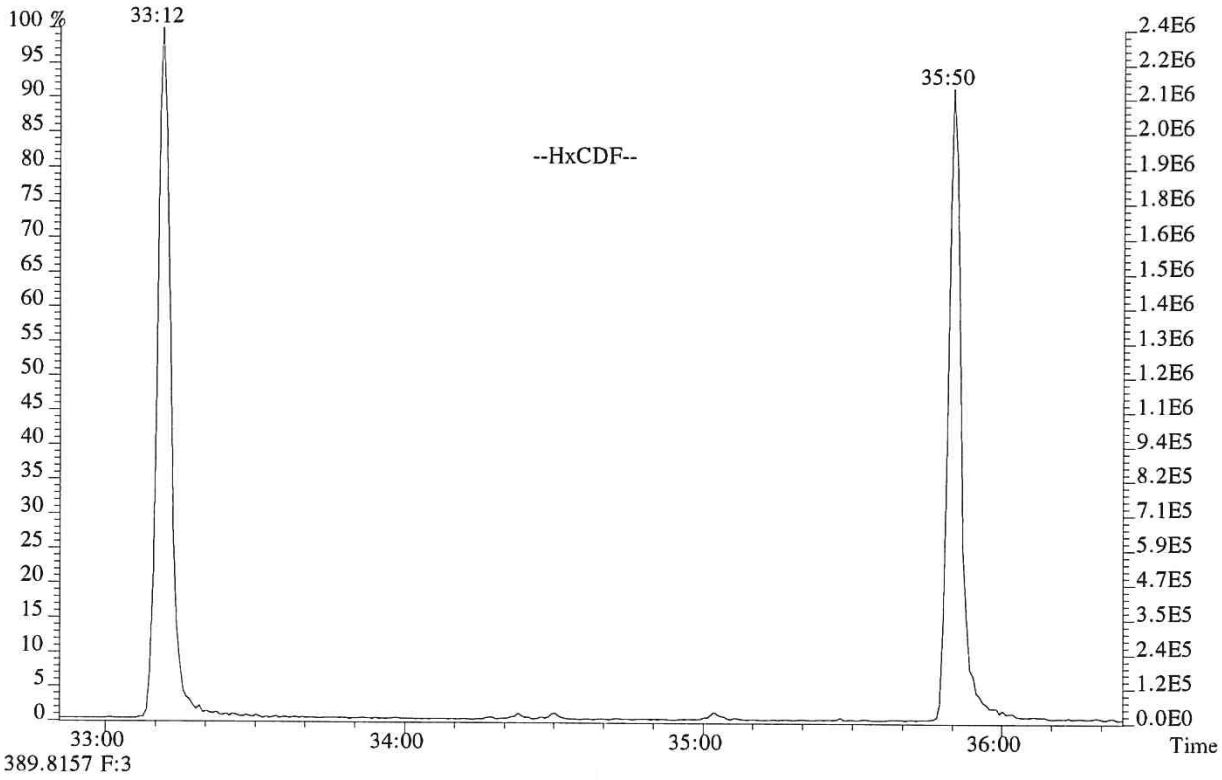
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Sample#1 Exp:192977
339.8597,339.8597 F:2



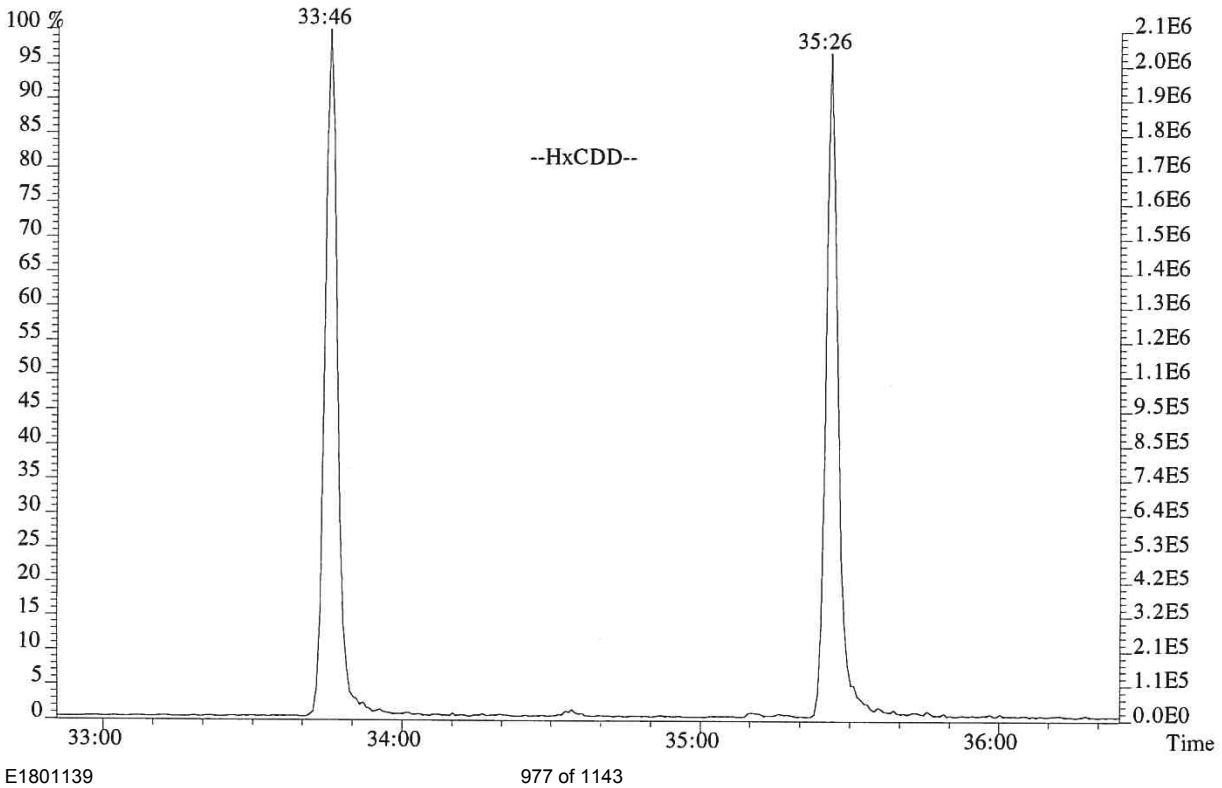
355.8546 F:2



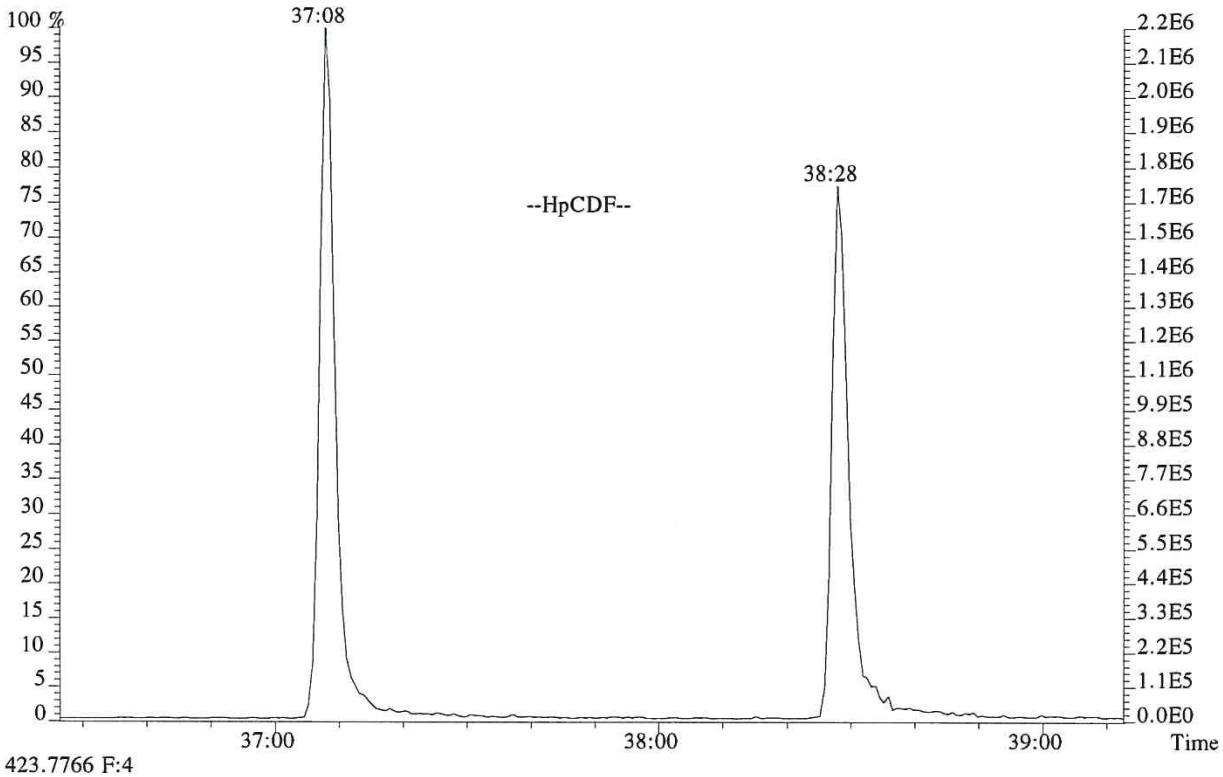
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Sample#1 Exp:192977
373.8208 F:3



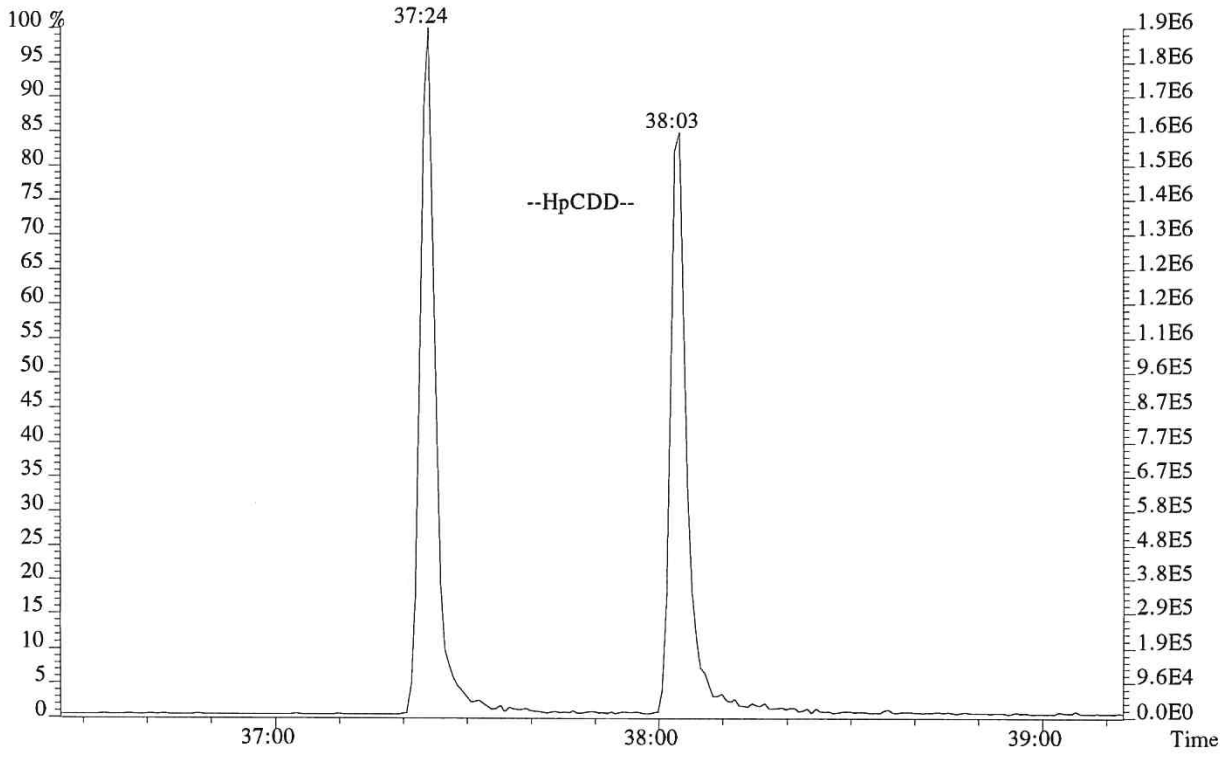
389.8157 F:3



File:P519916 #1-250 Acq:11-JAN-2019 14:54:35 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
407.7818 F:4



423.7766 F:4



USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519915 Analysis Date: 11-JAN-19 Time: 14:05:18

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	9.3	7.8 - 12.9	-7.5
1,2,3,7,8-PeCDD	M+2/M+4	1.58	1.32-1.78	49	39 - 65	-1.1
1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	48	39 - 64	-3.7
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	49	39 - 64	-1.2
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	53	41 - 61	5.2
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	51	43 - 58	1.3
OCDD	M+2/M+4	0.90	0.76-1.02	99	79 - 126	-1.2
2,3,7,8-TCDF	M/M+2	0.75	0.65-0.89	9.7	8.4 - 12.0	-3.2
1,2,3,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	49	41 - 60	-3.0
2,3,4,7,8-PeCDF	M+2/M+4	1.50	1.32-1.78	48	41 - 61	-3.3
1,2,3,4,7,8-HxCDF	M+2/M+4	1.18	1.05-1.43	50	45 - 56	-0.6
1,2,3,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	49	44 - 57	-1.6
1,2,3,7,8,9-HxCDF	M+2/M+4	1.16	1.05-1.43	49	45 - 56	-2.8
2,3,4,6,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	50	44 - 57	-0.6
1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.99	0.88-1.20	49	45 - 55	-2.5
1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.99	0.88-1.20	50	43 - 58	-0.2
OCDF	M+2/M+4	0.89	0.76-1.02	96	63 - 159	-4.4

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519915 Analysis Date: 11-JAN-19 Time: 14:05:18

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	104	82 - 121	4.2
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.58	1.32-1.78	113	62 - 160	12.7
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	94	85 - 117	-6.3
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	97	85 - 118	-2.8
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	106	72 - 138	6.1
13C-OCDD	M+2/M+4	0.89	0.76-1.02	268	96 - 415	34.0
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	90	71 - 140	-10.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	103	76 - 130	3.2
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	105	77 - 130	5.2
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	83	76 - 131	-16.9
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	86	70 - 143	-13.7
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	91	74 - 135	-9.1
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	89	73 - 137	-10.6
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	96	78 - 129	-3.5
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	102	77 - 129	2.0
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				9.9	7.8 - 12.7	-0.6

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
195556

Run #7 Filename P519915 Samp: 1 Inj: 1 Acquired: 11-JAN-19 14:05:18
Processed: 14-JAN-19 08:18:58 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	25:22	5.310e+03	7.101e+03	0.75	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	30:27	4.497e+04	2.964e+04	1.52	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	31:29	4.260e+04	2.849e+04	1.50	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	34:22	3.716e+04	3.137e+04	1.18	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	34:30	4.160e+04	3.381e+04	1.23	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	35:02	3.847e+04	3.160e+04	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	35:48	3.329e+04	2.870e+04	1.16	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	37:08	3.453e+04	3.484e+04	0.99	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	38:28	2.946e+04	2.982e+04	0.99	yes	no	1.258
10	Unk	OCDF	40:44	5.395e+04	6.065e+04	0.89	yes	no	1.359
11	Unk	2,3,7,8-TCDD	26:24	4.222e+03	5.442e+03	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	31:48	3.179e+04	2.018e+04	1.58	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	35:11	2.723e+04	2.174e+04	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	35:16	2.974e+04	2.372e+04	1.25	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	35:31	3.139e+04	2.515e+04	1.25	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	38:03	2.728e+04	2.607e+04	1.05	yes	no	1.025
17	Unk	OCDD	40:34	4.602e+04	5.137e+04	0.90	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	25:21	5.986e+04	7.627e+04	0.78	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	30:27	9.301e+04	5.886e+04	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	31:27	9.451e+04	5.878e+04	1.61	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	34:22	3.997e+04	7.592e+04	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	34:29	4.695e+04	8.952e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	35:01	4.352e+04	8.350e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	35:48	3.780e+04	7.371e+04	0.51	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	37:07	3.256e+04	7.279e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	38:28	2.909e+04	6.541e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	26:23	4.222e+04	5.400e+04	0.78	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	31:47	6.726e+04	4.265e+04	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	35:10	5.499e+04	4.292e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	35:16	5.858e+04	4.567e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	38:03	5.266e+04	5.014e+04	1.05	yes	no	0.858
32	IS	13C-OCDD	40:33	8.318e+04	9.321e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	25:39	4.420e+04	5.580e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	35:30	6.279e+04	5.022e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	26:24	1.008e+04				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
195556

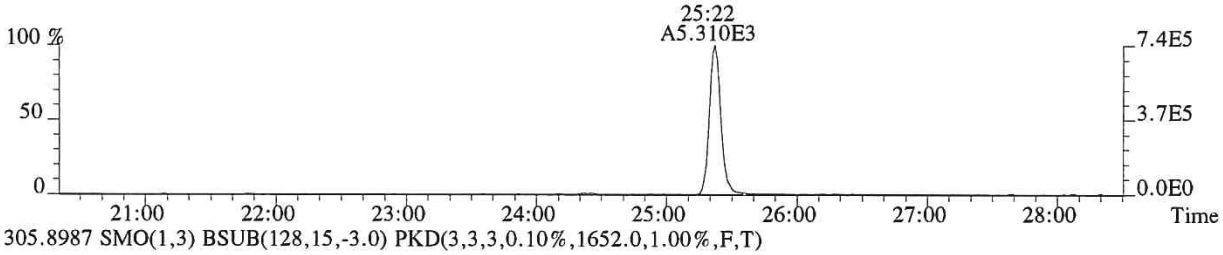
Run #7 Filename P519915 Samp: 1 Inj: 1 Acquired: 11-JAN-19 14:05:18
Processed: 14-JAN-19 08:18:58 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	7.36e+05	6.52e+02	1.1e+03	1.01e+06	1.65e+03	6.1e+02
2	1,2,3,7,8-PeCDF	7.57e+06	1.07e+03	7.1e+03	4.96e+06	1.50e+03	3.3e+03
3	2,3,4,7,8-PeCDF	7.76e+06	1.07e+03	7.3e+03	5.16e+06	1.50e+03	3.4e+03
4	1,2,3,4,7,8-HxCDF	7.68e+06	8.36e+02	9.2e+03	6.49e+06	7.96e+02	8.2e+03
5	1,2,3,6,7,8-HxCDF	7.90e+06	8.36e+02	9.5e+03	6.45e+06	7.96e+02	8.1e+03
6	2,3,4,6,7,8-HxCDF	7.77e+06	8.36e+02	9.3e+03	6.48e+06	7.96e+02	8.1e+03
7	1,2,3,7,8,9-HxCDF	6.47e+06	8.36e+02	7.7e+03	5.49e+06	7.96e+02	6.9e+03
8	1,2,3,4,6,7,8-HpCDF	7.05e+06	3.02e+03	2.3e+03	7.07e+06	2.42e+03	2.9e+03
9	1,2,3,4,7,8,9-HpCDF	5.80e+06	3.02e+03	1.9e+03	5.88e+06	2.42e+03	2.4e+03
10	OCDF	9.31e+06	2.64e+02	3.5e+04	1.04e+07	1.28e+03	8.1e+03
11	2,3,7,8-TCDD	6.15e+05	2.18e+03	2.8e+02	8.60e+05	1.06e+03	8.1e+02
12	1,2,3,7,8-PeCDD	5.79e+06	8.48e+02	6.8e+03	3.70e+06	3.68e+02	1.0e+04
13	1,2,3,4,7,8-HxCDD	6.04e+06	8.72e+02	6.9e+03	4.83e+06	5.76e+02	8.4e+03
14	1,2,3,6,7,8-HxCDD	5.85e+06	8.72e+02	6.7e+03	4.73e+06	5.76e+02	8.2e+03
15	1,2,3,7,8,9-HxCDD	6.12e+06	8.72e+02	7.0e+03	4.85e+06	5.76e+02	8.4e+03
16	1,2,3,4,6,7,8-HpCDD	5.48e+06	4.56e+02	1.2e+04	5.28e+06	5.48e+02	9.6e+03
17	OCDD	7.90e+06	3.36e+02	2.4e+04	8.91e+06	6.28e+02	1.4e+04
18	13C-2,3,7,8-TCDF	8.46e+06	5.06e+03	1.7e+03	1.07e+07	2.34e+03	4.6e+03
19	13C-1,2,3,7,8-PeCDF	1.53e+07	4.44e+02	3.5e+04	9.71e+06	6.92e+02	1.4e+04
20	13C-2,3,4,7,8-PeCDF	1.67e+07	4.44e+02	3.8e+04	1.05e+07	6.92e+02	1.5e+04
21	13C-1,2,3,4,7,8-HxCDF	8.34e+06	7.08e+02	1.2e+04	1.59e+07	1.27e+03	1.3e+04
22	13C-1,2,3,6,7,8-HxCDF	8.99e+06	7.08e+02	1.3e+04	1.69e+07	1.27e+03	1.3e+04
23	13C-2,3,4,6,7,8-HxCDF	8.89e+06	7.08e+02	1.3e+04	1.72e+07	1.27e+03	1.4e+04
24	13C-1,2,3,7,8,9-HxCDF	7.28e+06	7.08e+02	1.0e+04	1.42e+07	1.27e+03	1.1e+04
25	13C-1,2,3,4,6,7,8-HpCDF	6.57e+06	3.95e+03	1.7e+03	1.48e+07	6.78e+03	2.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	5.74e+06	3.95e+03	1.5e+03	1.26e+07	6.78e+03	1.9e+03
27	13C-2,3,7,8-TCDD	6.49e+06	7.31e+03	8.9e+02	8.22e+06	2.48e+03	3.3e+03
28	13C-1,2,3,7,8-PeCDD	1.18e+07	8.32e+02	1.4e+04	7.49e+06	1.49e+03	5.0e+03
29	13C-1,2,3,4,7,8-HxCDD	1.22e+07	1.50e+03	8.2e+03	9.51e+06	7.36e+02	1.3e+04
30	13C-1,2,3,6,7,8-HxCDD	1.16e+07	1.50e+03	7.8e+03	9.18e+06	7.36e+02	1.2e+04
31	13C-1,2,3,4,6,7,8-HpCDD	1.05e+07	1.16e+03	9.0e+03	9.95e+06	5.28e+02	1.9e+04
32	13C-OCDD	1.40e+07	8.64e+02	1.6e+04	1.58e+07	4.72e+02	3.4e+04
33	13C-1,2,3,4-TCDD	6.60e+06	7.31e+03	9.0e+02	8.27e+06	2.48e+03	3.3e+03
34	13C-1,2,3,7,8,9-HxCDD	1.23e+07	1.50e+03	8.2e+03	9.83e+06	7.36e+02	1.3e+04
35	37Cl-2,3,7,8-TCDD	1.54e+06	2.30e+03	6.7e+02			

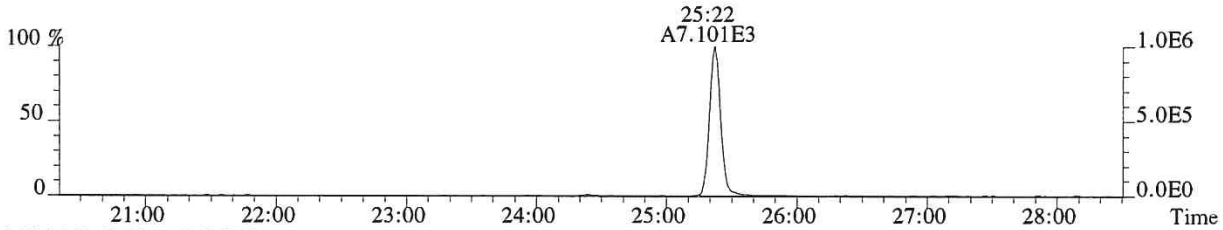
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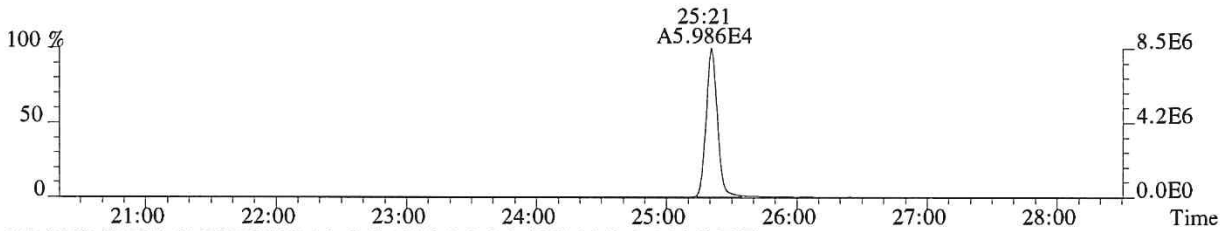
File:P519915 #1-580 Acq:11-JAN-2019 14:05:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,652.0,1.00%,F,T)



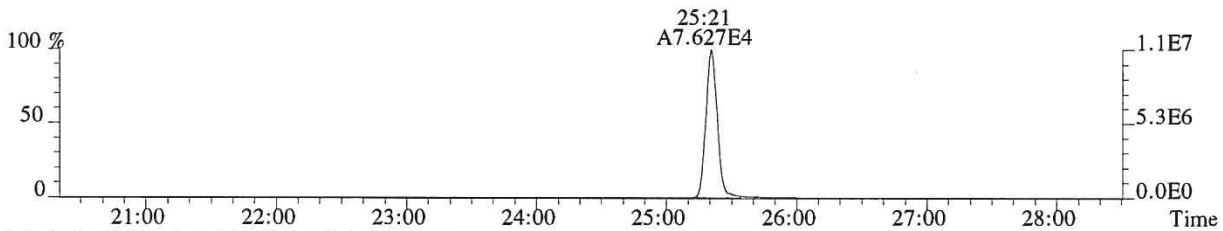
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1652.0,1.00%,F,T)



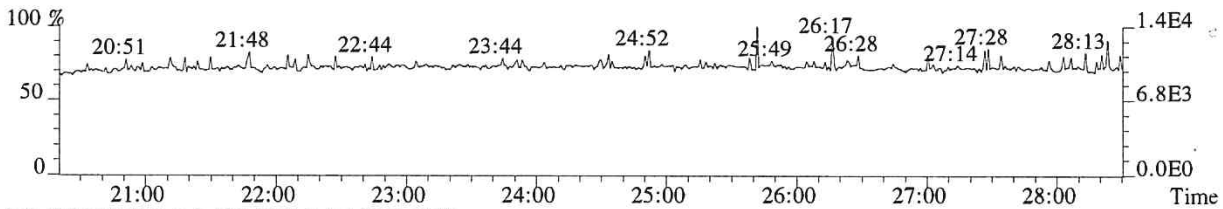
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5056.0,1.00%,F,T)



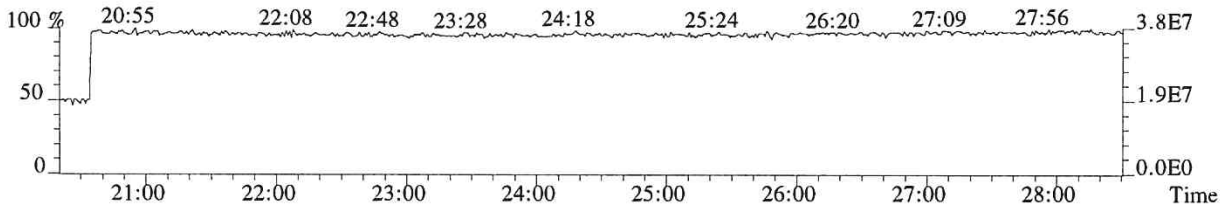
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2340.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

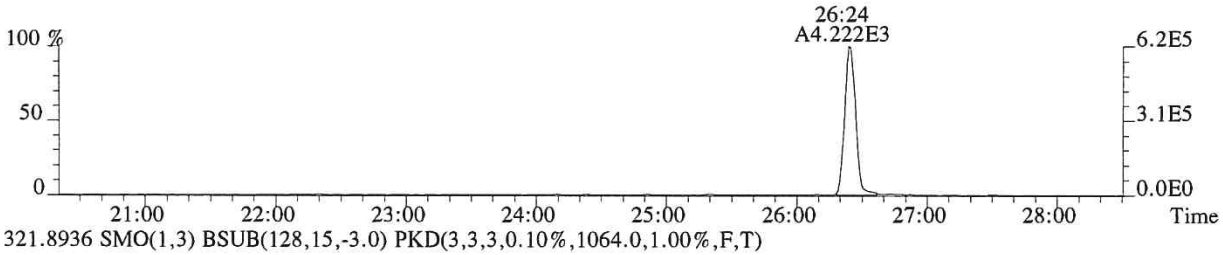


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

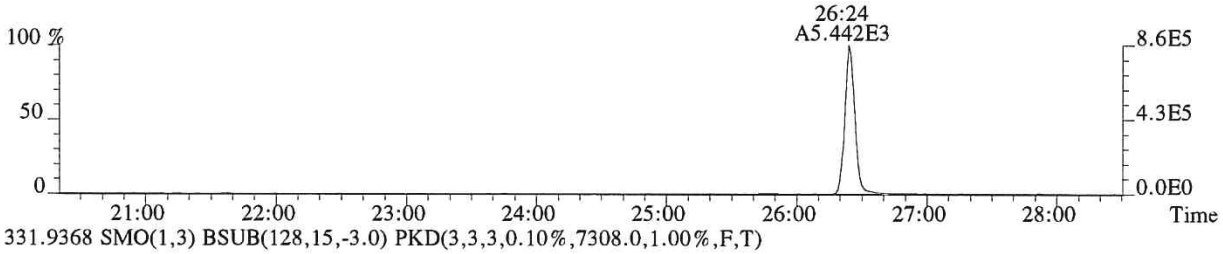


018947

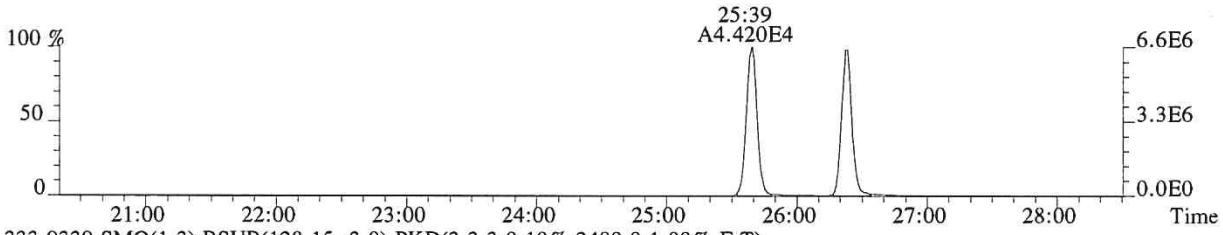
File:P519915 #1-580 Acq:11-JAN-2019 14:05:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2184.0,1.00%,F,T)



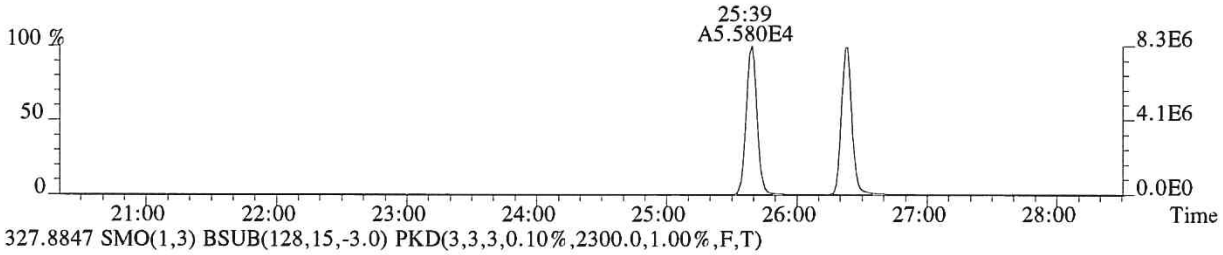
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1064.0,1.00%,F,T)



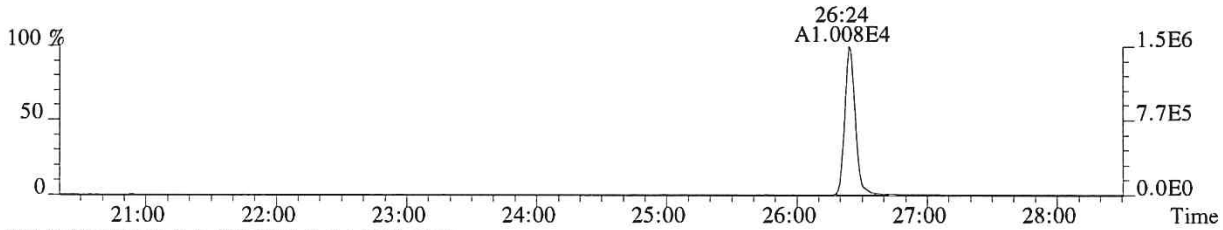
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7308.0,1.00%,F,T)



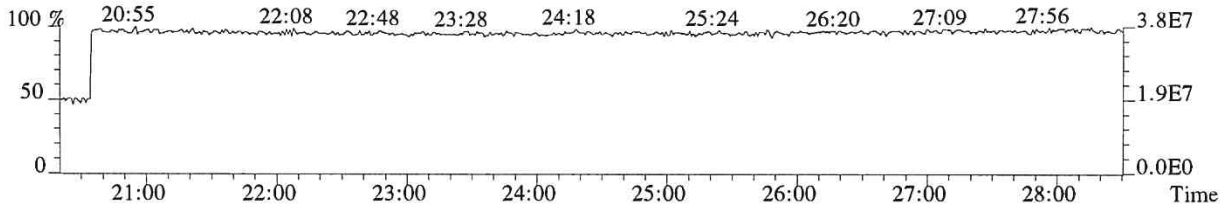
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2480.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2300.0,1.00%,F,T)

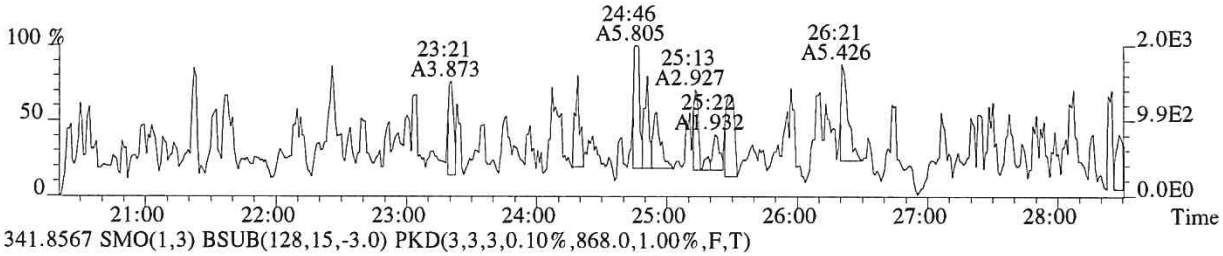


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

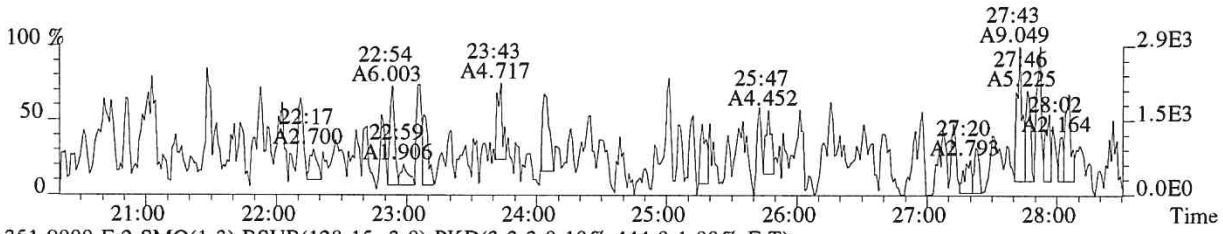


018948

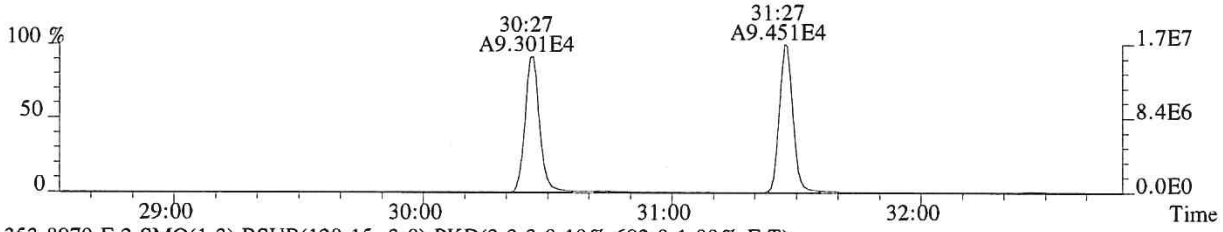
File:P519915 #1-580 Acq:11-JAN-2019 14:05:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,664.0,1.00%,F,T)



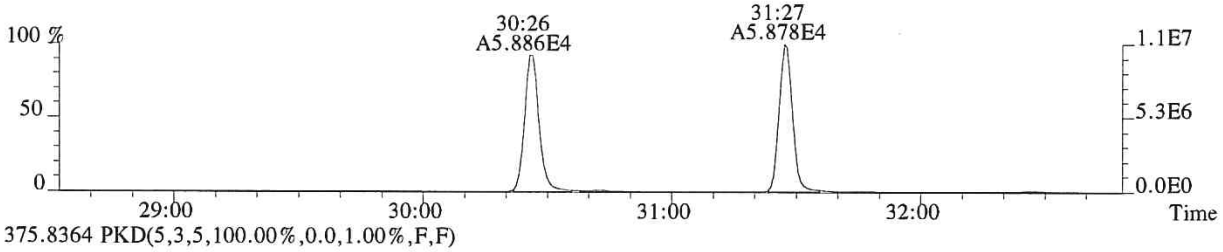
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,868.0,1.00%,F,T)



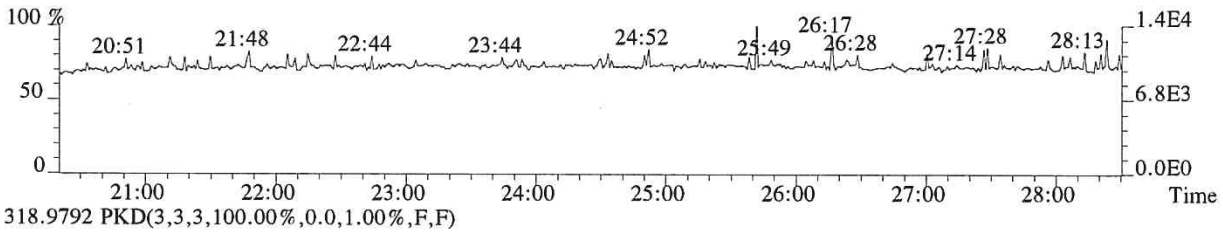
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,444.0,1.00%,F,T)



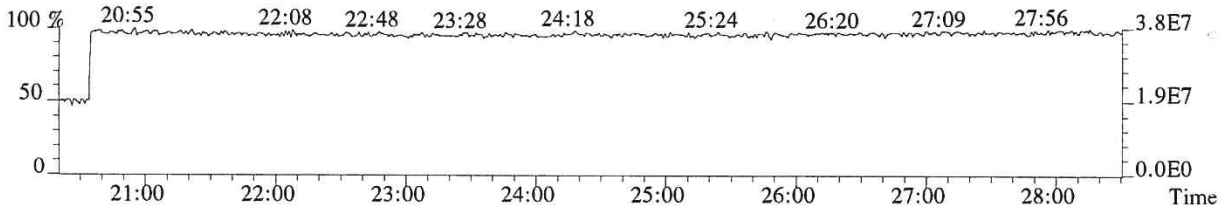
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,692.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

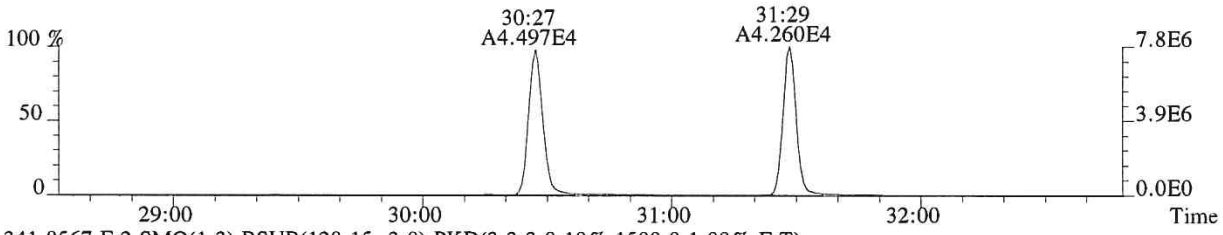


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

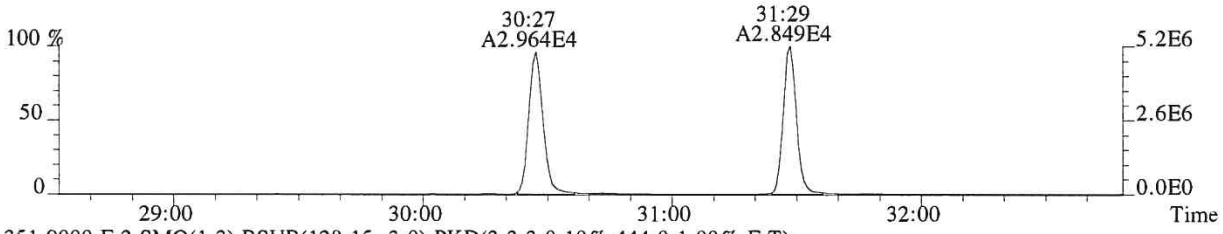


018949

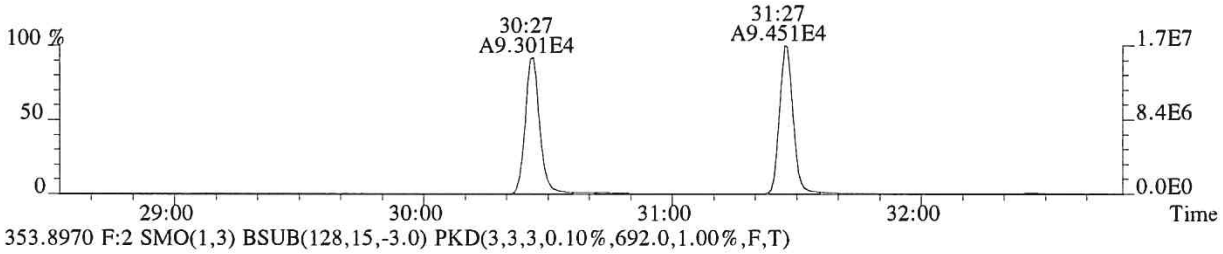
File:P519915 #1-385 Acq:11-JAN-2019 14:05:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1068.0,1.00%,F,T)



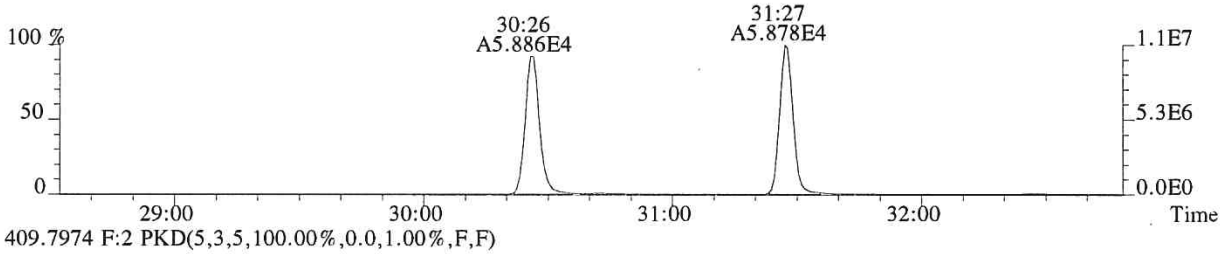
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1500.0,1.00%,F,T)



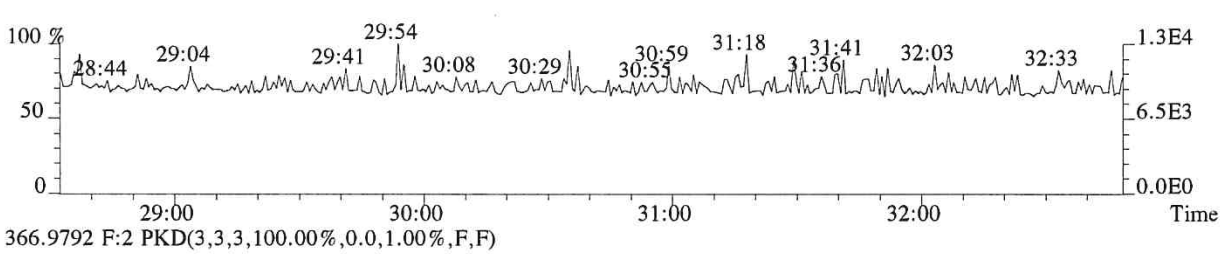
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,444.0,1.00%,F,T)



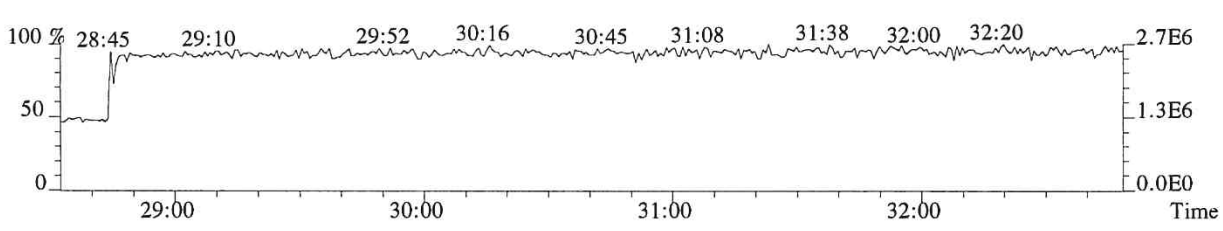
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,692.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

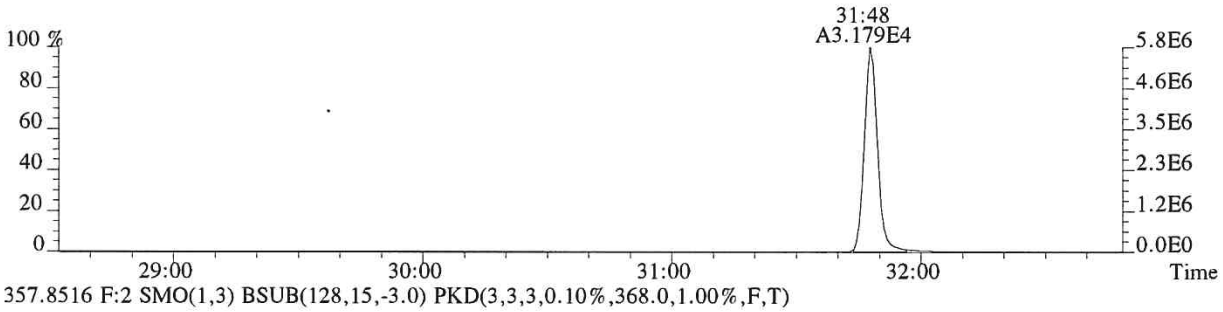


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

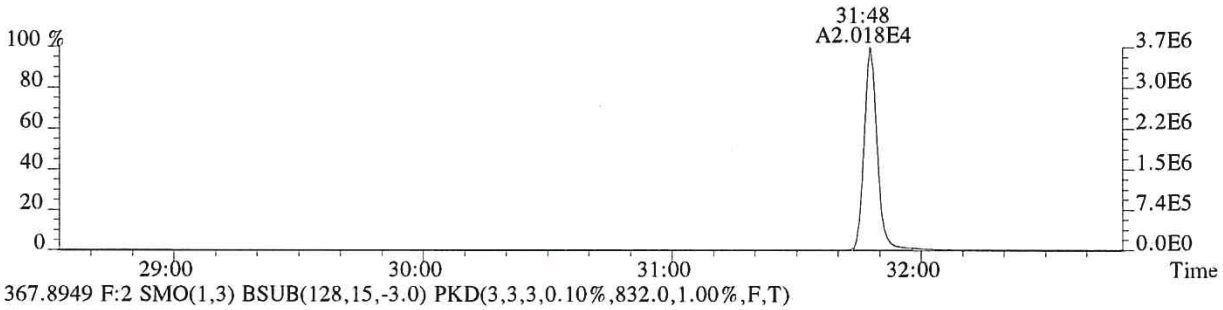


018950

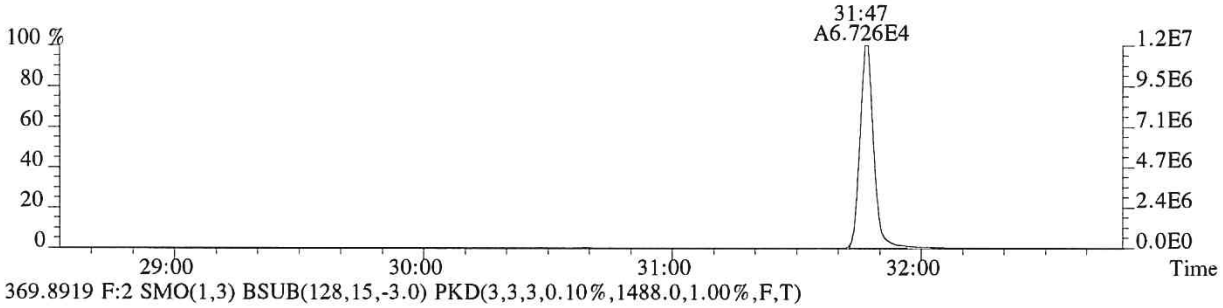
File:P519915 #1-385 Acq:11-JAN-2019 14:05:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,848.0,1.00%,F,T)



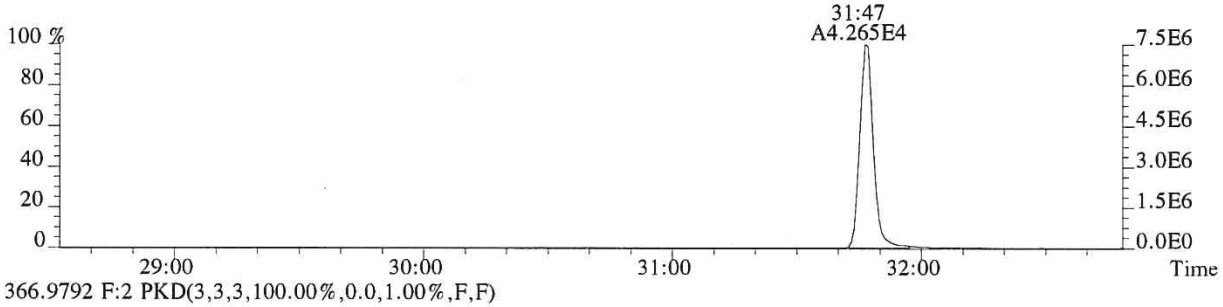
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,368.0,1.00%,F,T)



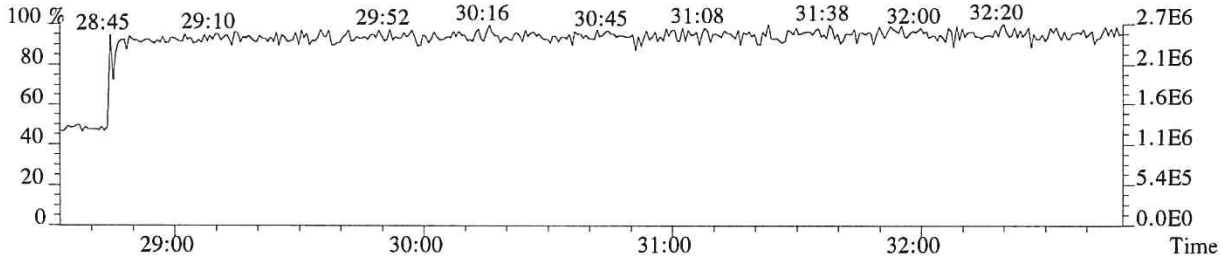
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,832.0,1.00%,F,T)



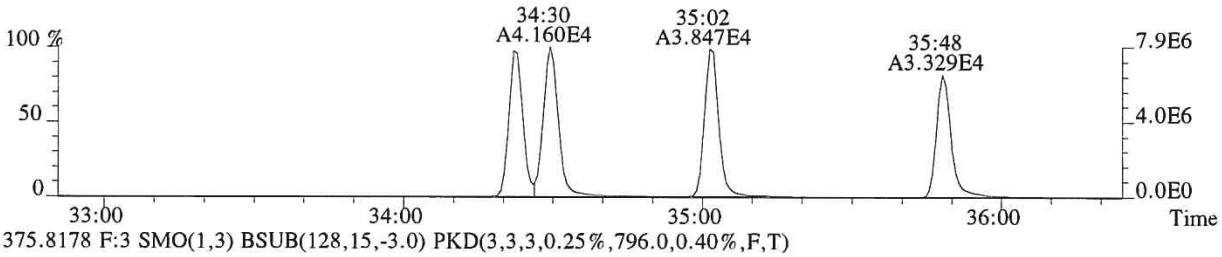
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1488.0,1.00%,F,T)



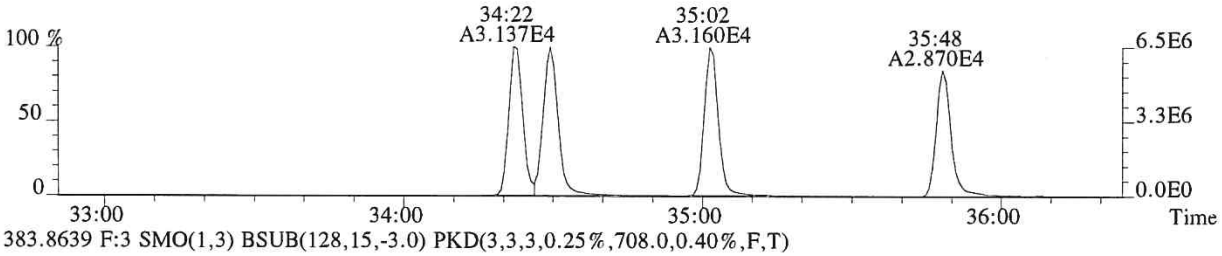
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



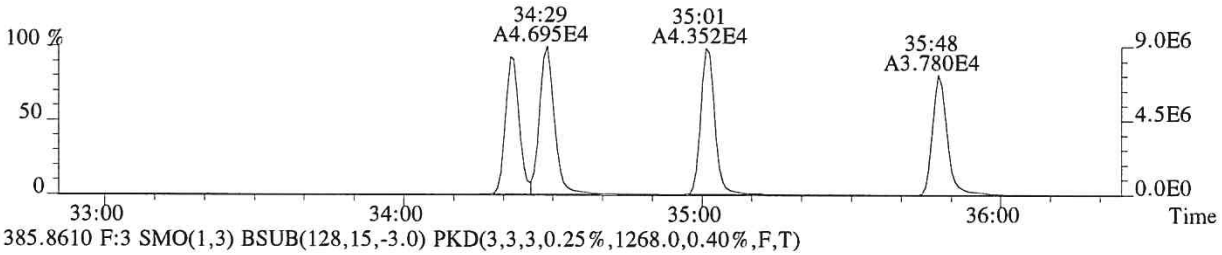
File:P519915 #1-321 Acq:11-JAN-2019 14:05:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,836.0,0.40%,F,T)



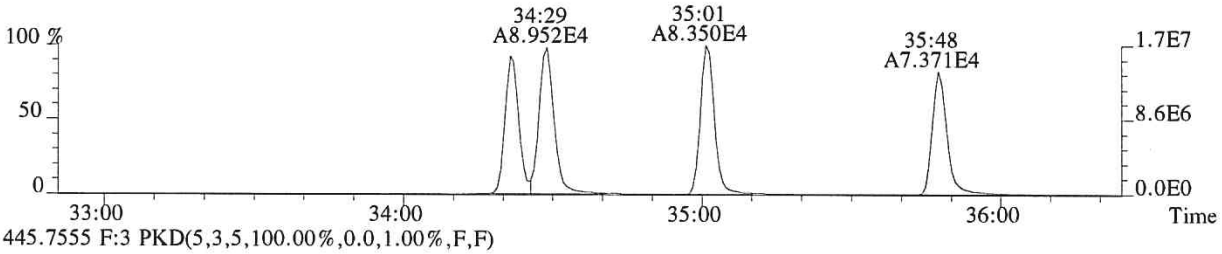
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,796.0,0.40%,F,T)



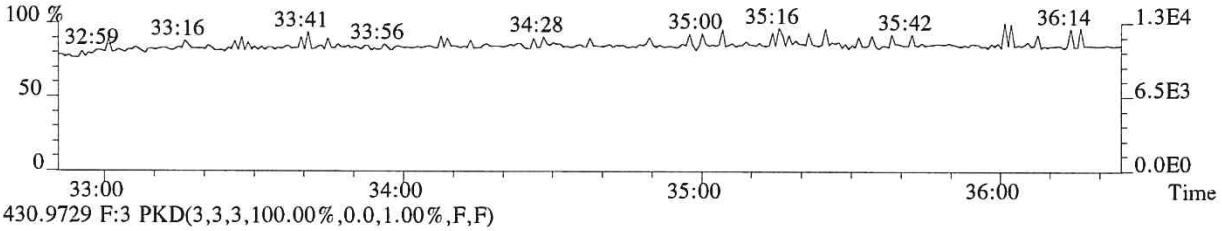
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,708.0,0.40%,F,T)



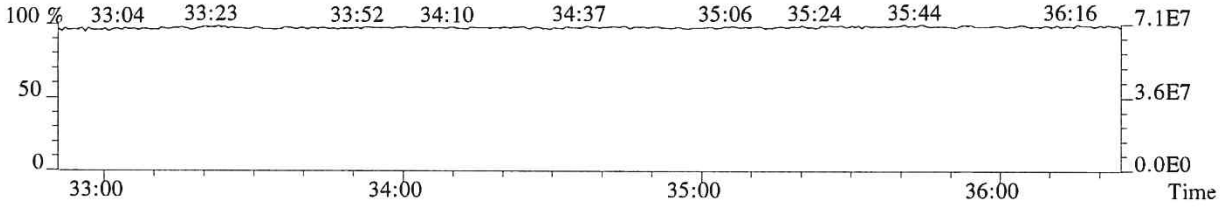
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1268.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

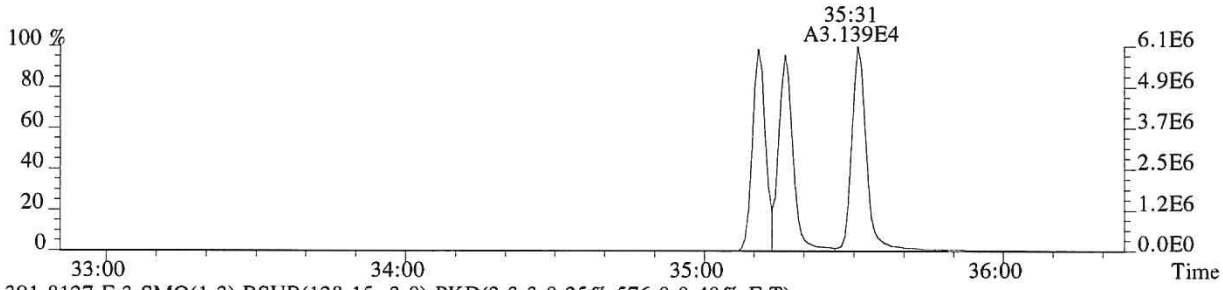


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

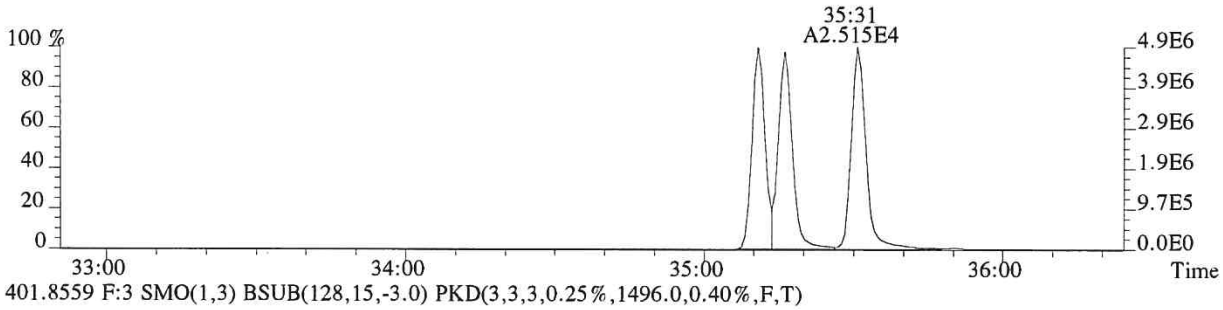


018952

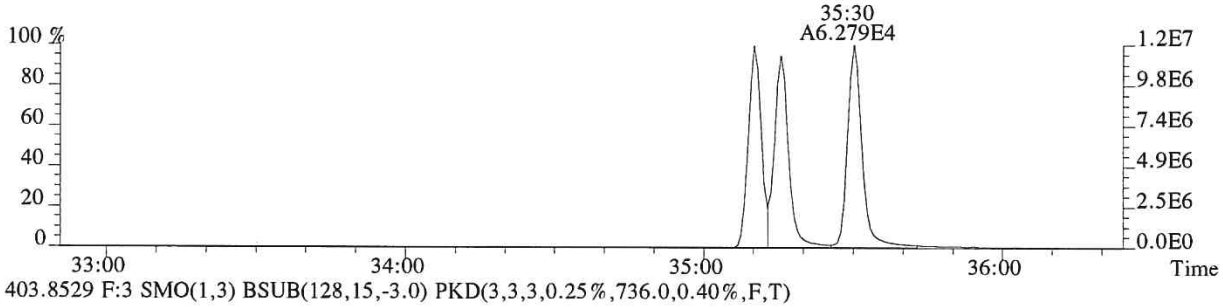
File:P519915 #1-321 Acq:11-JAN-2019 14:05:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,872.0,0.40%,F,T)



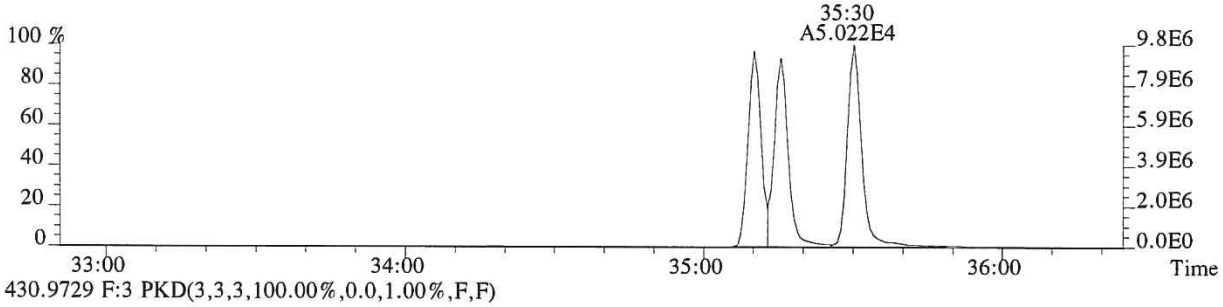
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,576.0,0.40%,F,T)



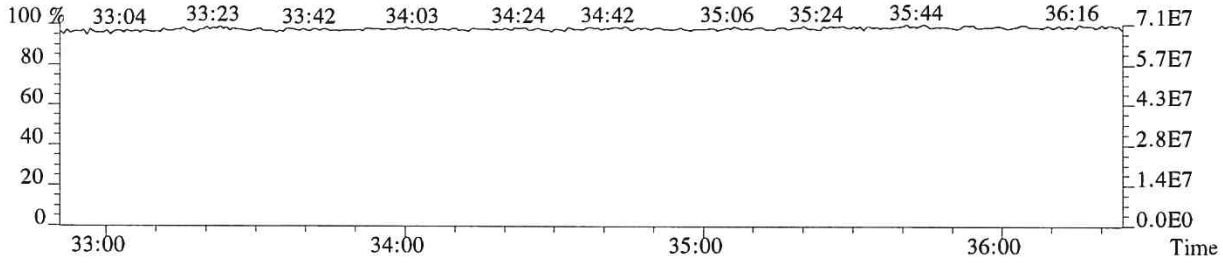
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1496.0,0.40%,F,T)



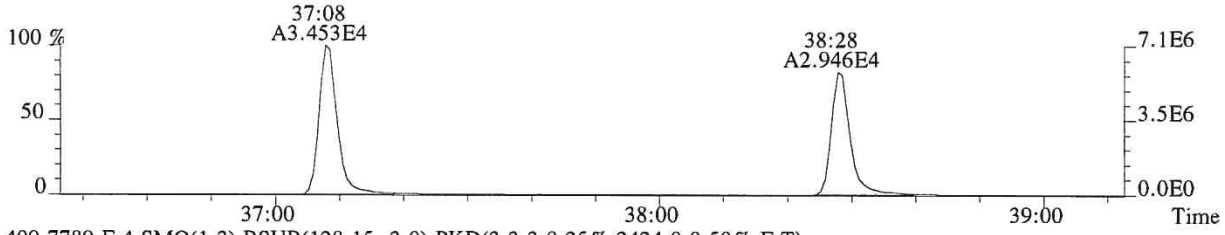
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,736.0,0.40%,F,T)



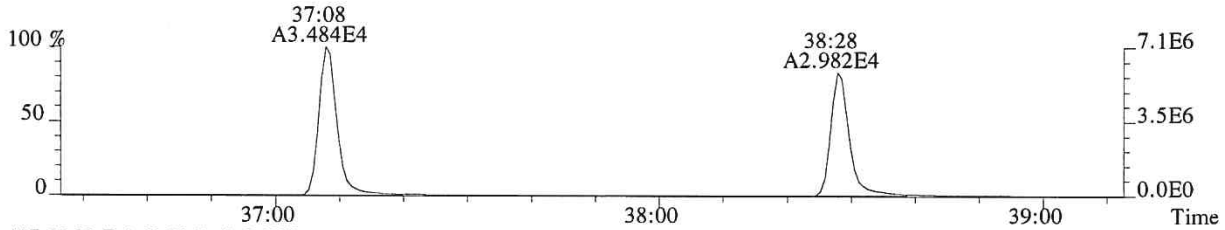
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



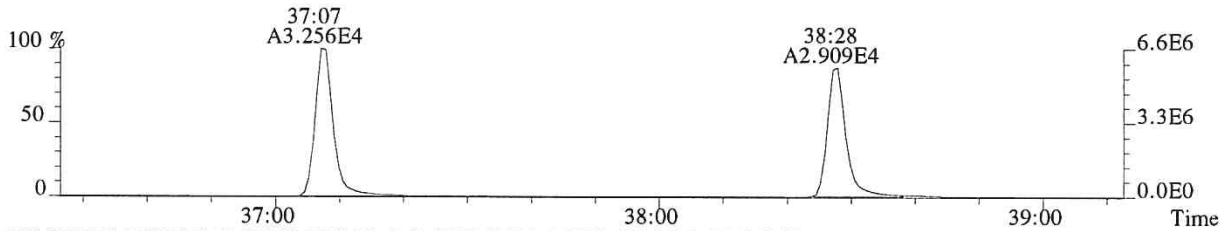
File:P519915 #1-250 Acq:11-JAN-2019 14:05:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3020.0,0.50%,F,T)



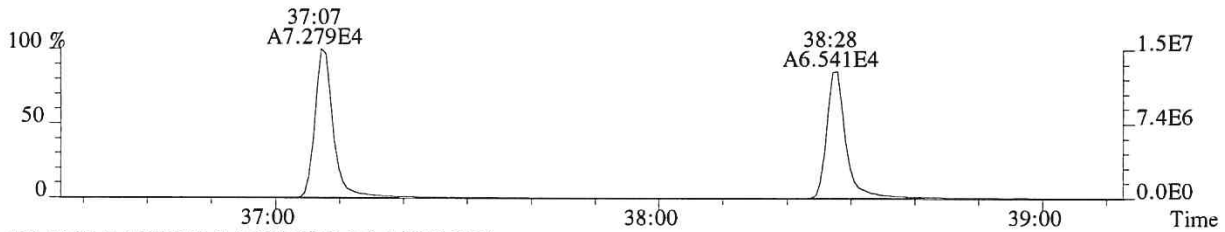
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2424.0,0.50%,F,T)



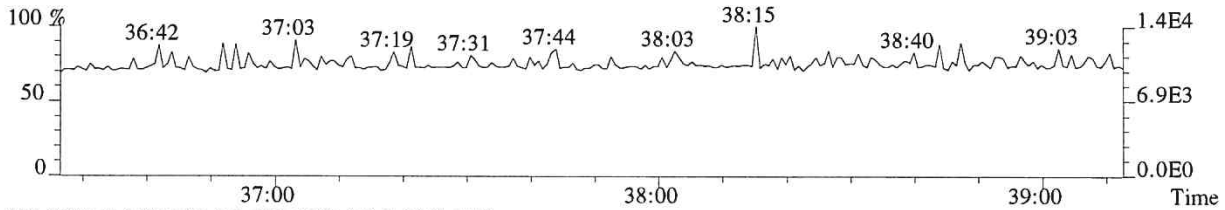
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3952.0,0.50%,F,T)



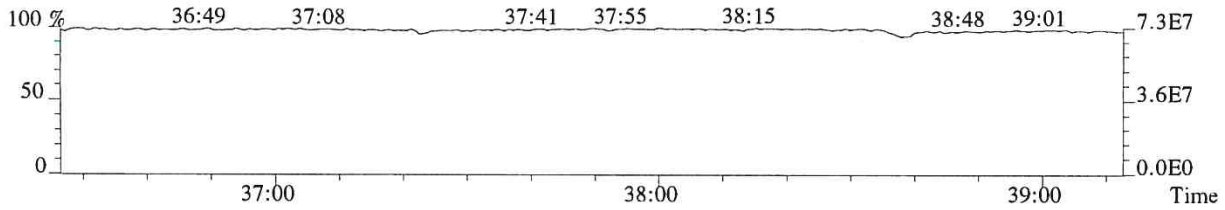
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6780.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

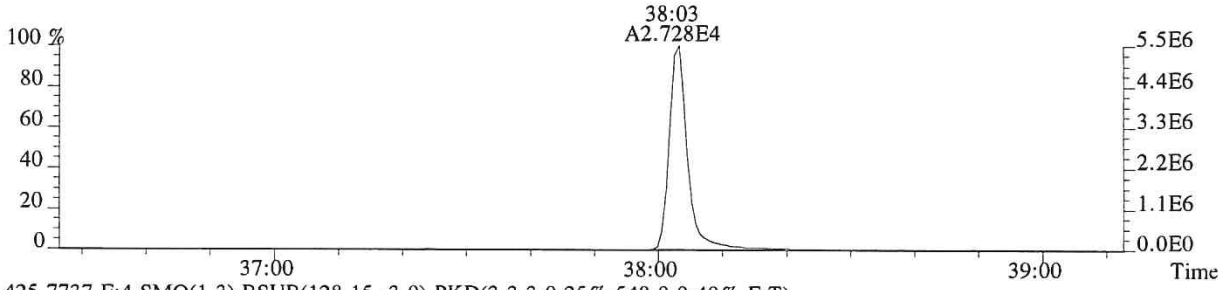


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

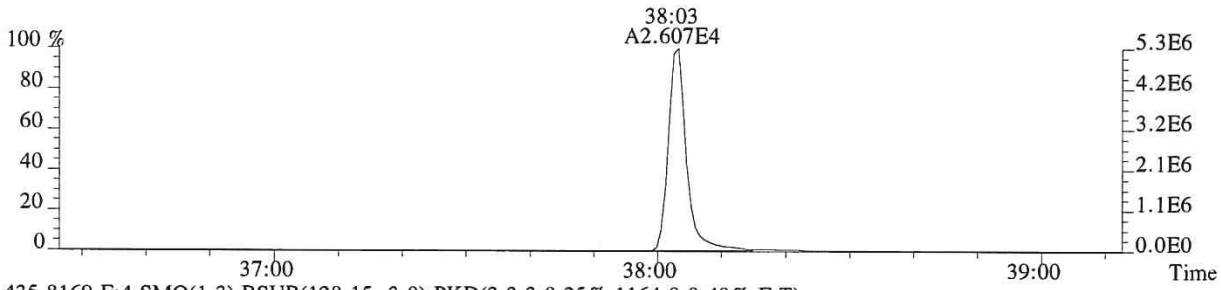


018954

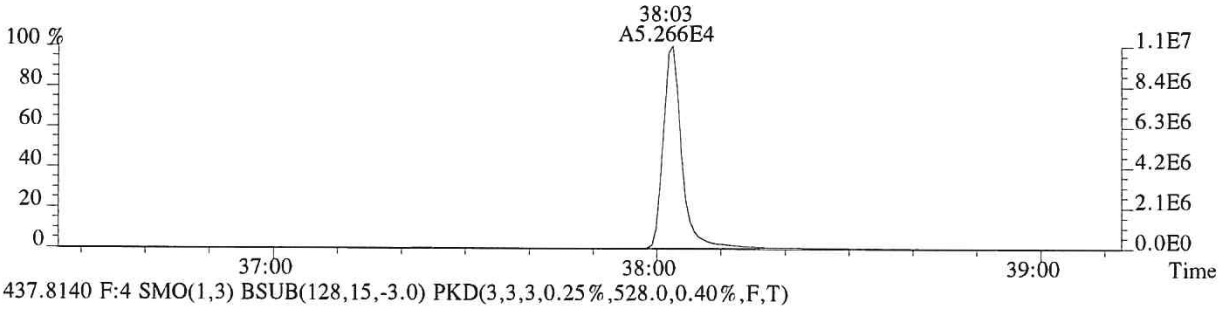
File:P519915 #1-250 Acq:11-JAN-2019 14:05:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,456.0,0.40%,F,T)



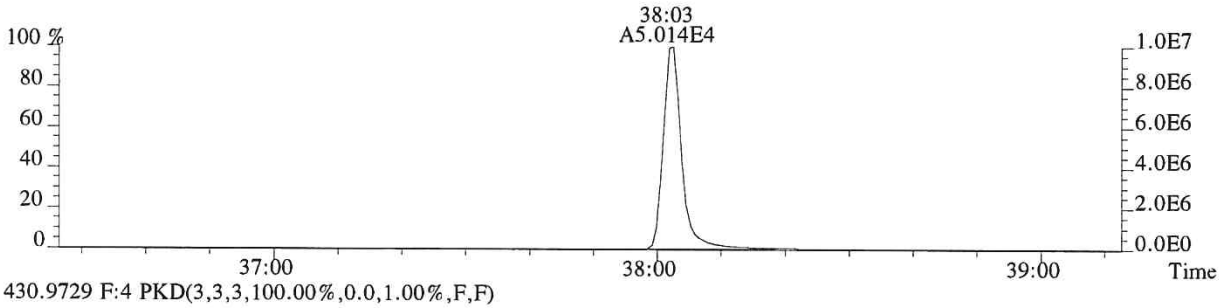
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,548.0,0.40%,F,T)



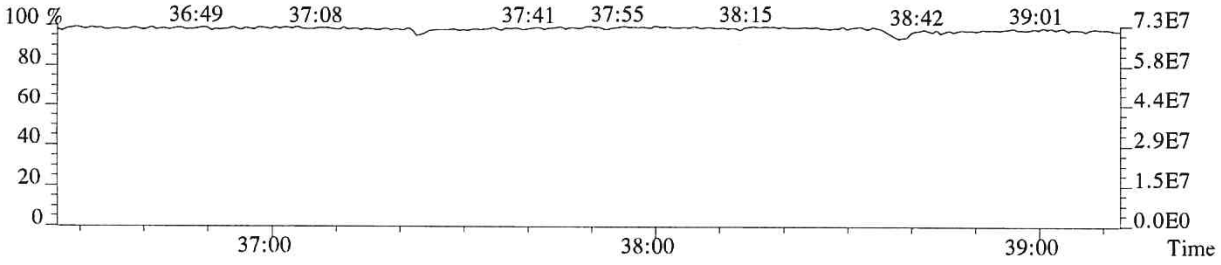
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1164.0,0.40%,F,T)



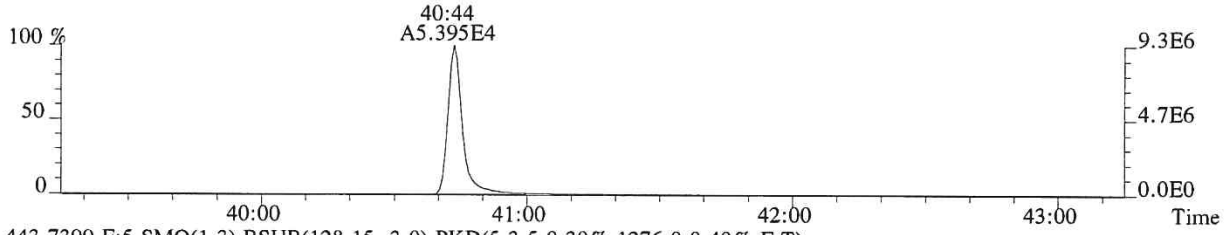
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,528.0,0.40%,F,T)



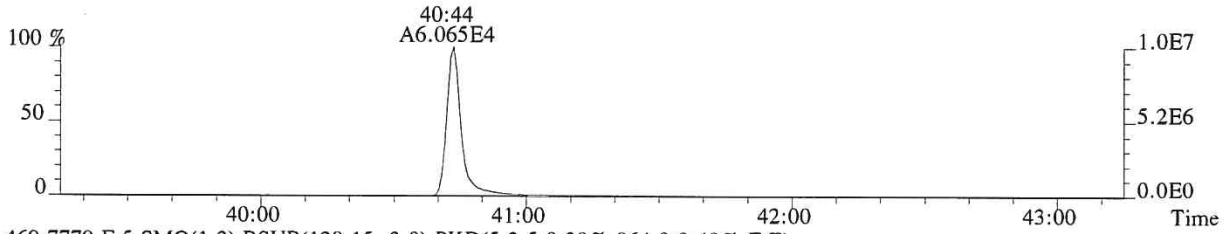
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



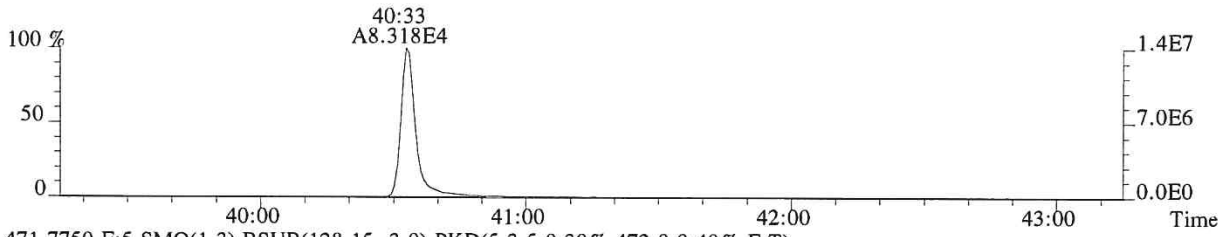
File:P519915 #1-361 Acq:11-JAN-2019 14:05:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,264.0,0.40%,F,T)



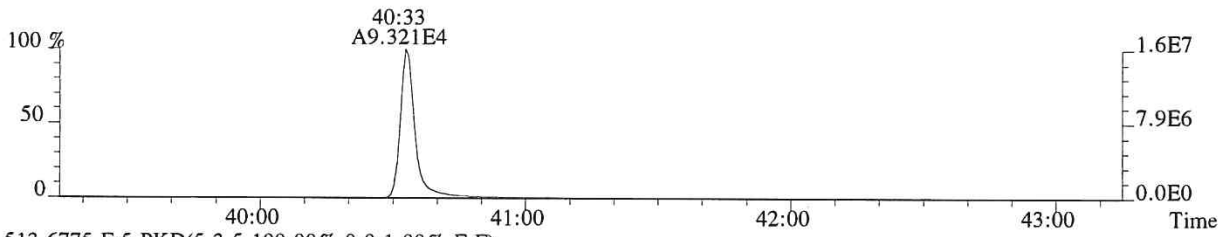
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1276.0,0.40%,F,T)



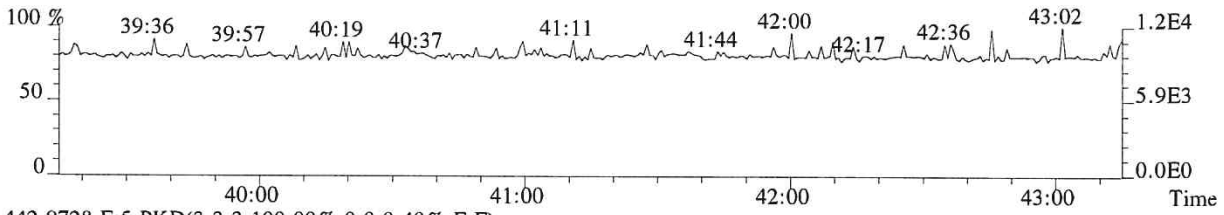
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,864.0,0.40%,F,T)



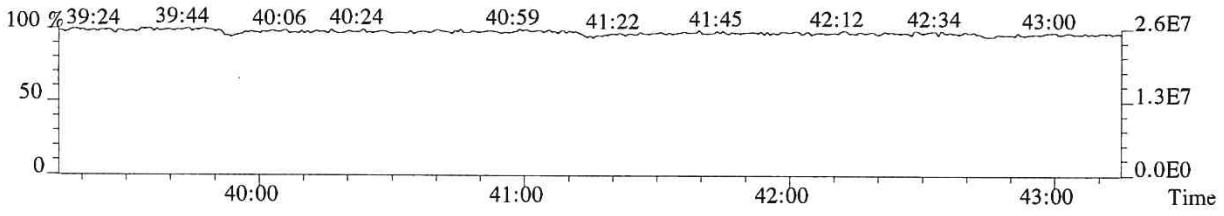
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,472.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

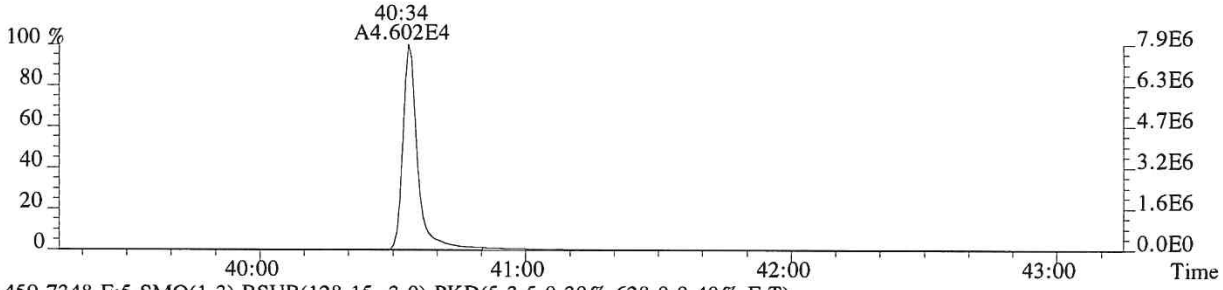


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

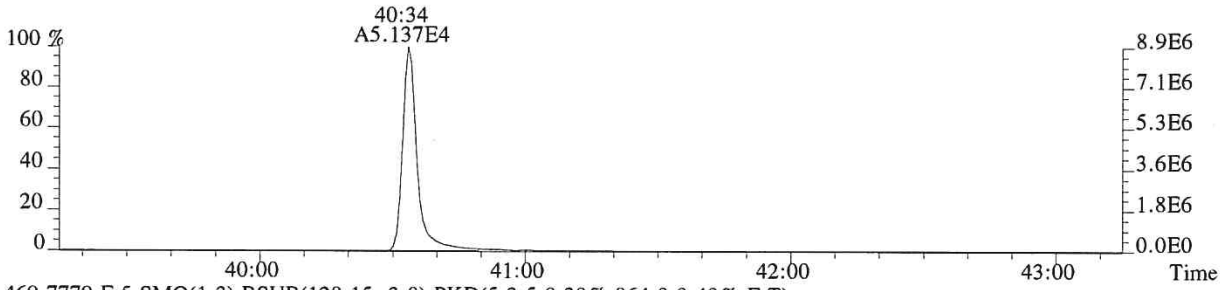


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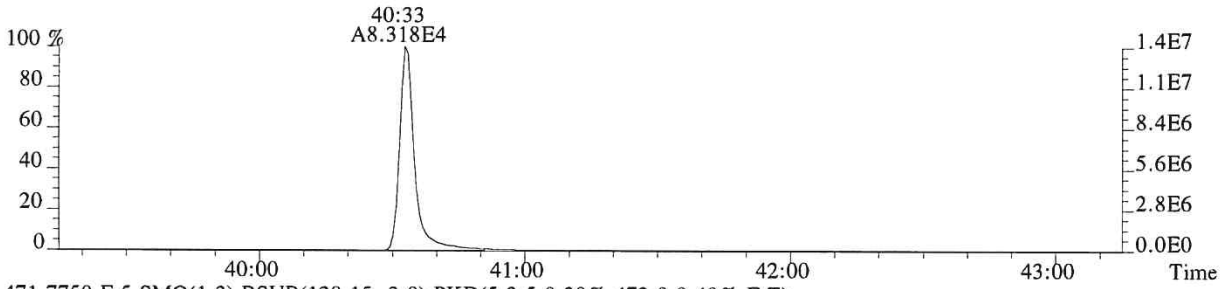
File:P519915 #1-361 Acq:11-JAN-2019 14:05:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,336.0,0.40%,F,T)



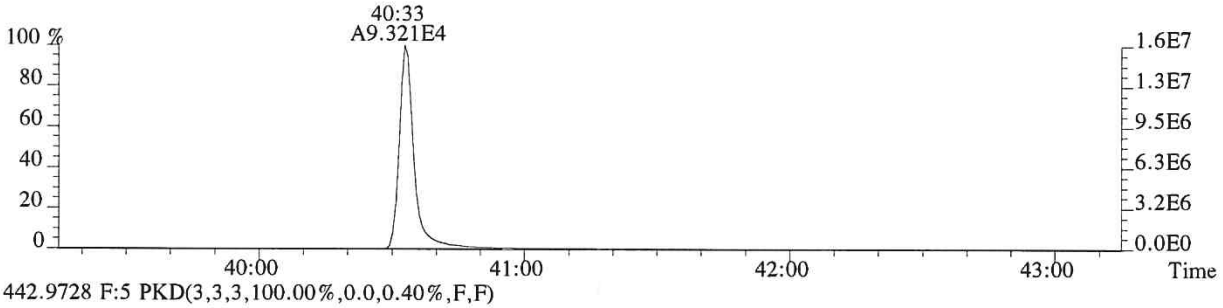
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,628.0,0.40%,F,T)



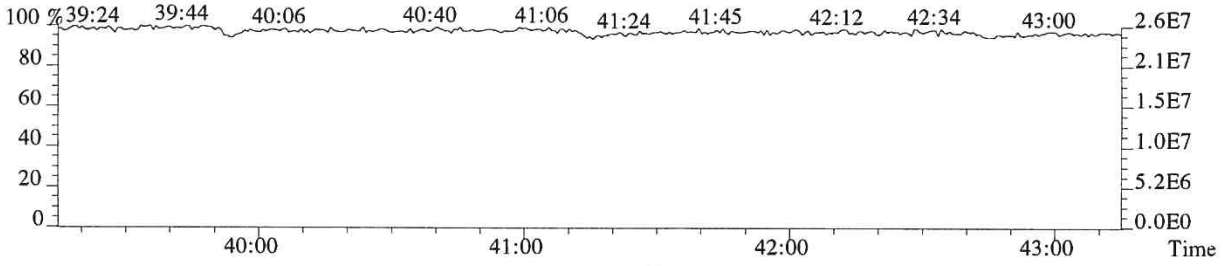
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,864.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,472.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



018957

CCAL HRCC3/CS3 Daily Calibration QC Checklist

Calibration File Name: P519996

Date: 01/16/19

Circle one: (Beginning) / Ending

Method: (1613) / 1613E / 8290/ VCP / Tetra / TCDD Only / TCDF Conf / VCP Conf / 8280 / M23 / TO-9A

Retention Window/Column Performance Check:	Analyst	Second Check
Windows in and first and last eluters labeled	✓	✓
Column Performance shows less than or equal to 25% valley between column specific 2378 isomer and its closest eluters	✓	✓
No QC ion deflections affect column specific 2378 isomer or its closest eluters (HRMS Only)	✓	✓

CS3 Continuing Calibration	Analyst	Second Check
Percent RSD within method criteria	✓	✓
All relative abundance ratios meet method criteria	✓	✓
No QC ion deflections of greater than 20% (HRMS Only)	✓	✓
Mass spectrometer resolution greater than or equal to 10,000 and documented (HRMS Only)	✓	✓
2378-TCDD elutes at 25 minutes or later on the DB-5 column / DB-5MSUI column	✓	✓
Signal-to-noise of all target analytes and their labeled standards at least 10:1	✓	✓
Valley between labeled 123478 and 123678 HxCDD peaks less than or equal to 50% (LRMS Only)	N/A	N/A
Ending Calibration injected prior to end of 12 hour clock	N/A	N/A

Analyst: JC

Second QC: LKL

ccalqc.xls 07/17/12

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: Case No.: Client No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm)

Init. Calib. Date: 01/24/18

Init. Calib.Times: 11:44

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, AND LABORATORY CONTROL SAMPLES (LCSs) IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
195556	CS3	P519996	16-JAN-19	11:58:18
192977	WINDOW DEFINE	P519997	16-JAN-19	12:49:47
METHOD BLANK	EQ1900011-01	P519998	16-JAN-19	13:45:13
METHOD BLANK	EQ1900017-01	P519999	16-JAN-19	14:33:01
SL0132	E1801137-009RE	P520000	16-JAN-19	15:22:42
SL0247	E1801139-021RE	P520001	16-JAN-19	16:10:30
SL0248	E1801139-022RE	P520002	16-JAN-19	16:59:48
SLC-7822-002	E1801142-001RE	P520003	16-JAN-19	17:48:53
GP-BE-12-04-18-B4G	J1808607-001RE	P520004	16-JAN-19	18:36:42
ALKALINE SEWER OUT	K1900281-001	P520005	16-JAN-19	19:25:21
ACID SEWER OUTFALL	K1900281-002	P520006	16-JAN-19	20:13:59
LCS	EQ1900017-02	P520007	16-JAN-19	21:02:38
DLCS	EQ1900017-03	P520008	16-JAN-19	21:59:29
ALKALINE SEWER OUT	EQ1900015-03	P520009	16-JAN-19	22:55:29
ALKALINE SEWER OUT	EQ1900015-04	P520010	16-JAN-19	23:43:16

E1801139

996 of 1143

Sample List Report — **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS07.PRO\SampleDB\20190116A.SPL
Last Modified: Thursday, January 17, 2019 06:29:47 Central Standard Time
Printed: Thursday, January 17, 2019 06:50:23 Central Standard Time

Page Position (1, 1)

OPUS 4: P519996 res

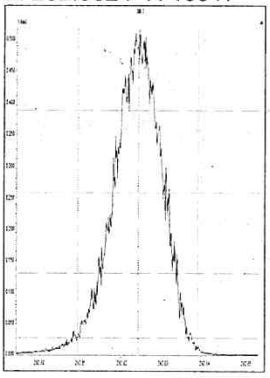
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2		12:49	P519997	WINDOWDEFINE	192977	EPA1613_ALS	Dioxin_ALS	Tray1:1		
3		13:45	P519998	MB	EQ1900011-01	EPA1613_ALS	Dioxin_ALS	Tray1:3		
4		14:38	P519999	MB	EQ1900017-01	EPA1613_ALS	Dioxin_ALS	Tray1:4		
5		15:22	P520000	E1801137-009RE	E1801137-009RE	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		16:10	P520001	E1801139-021RE	E1801139-021RE	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		16:59	P520002	E1801139-022RE	E1801139-022RE	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		17:48	P520003	E1801142-001RE	E1801142-001RE	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		18:36	P520004	J1808607-001RE	J1808607-001RE	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		19:25	P520005	K1900281-001	K1900281-001	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		20:13	P520006	K1900281-002	K1900281-002	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12		21:02	P520007	LCS	EQ1900017-02	EPA1613_ALS	Dioxin_ALS	Tray1:12		
13		21:59	P520008	DLCS	EQ1900017-03	EPA1613_ALS	Dioxin_ALS	Tray1:13		
14		22:55	P520009	MS	EQ1900015-03	EPA1613_ALS	Dioxin_ALS	Tray1:14		
15		23:43	P520010	DMS	EQ1900015-04	EPA1613_ALS	Dioxin_ALS	Tray1:15		
16		00:31	P520011	CS3	195556	EPA1613_ALS	Dioxin_ALS	Tray1:2		HRMS check 07:02 (1/17/19)
17	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:2	---	---
18	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1	---	---
19	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	---
20	---	---	---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:20	---	---
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gc 01/17/19

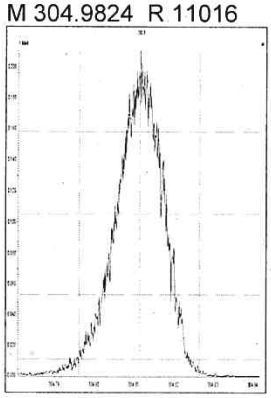
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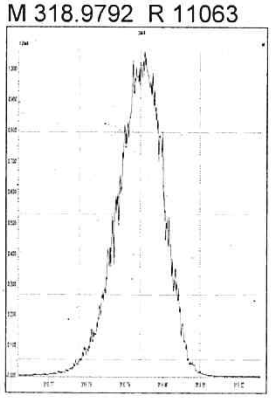
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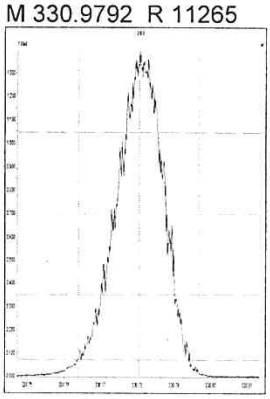
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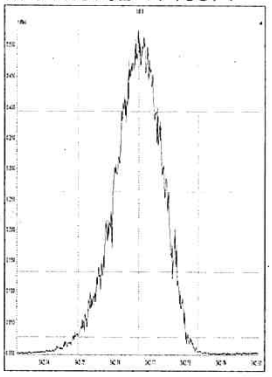
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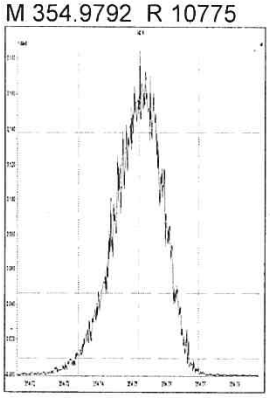
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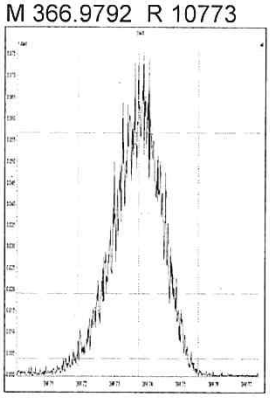
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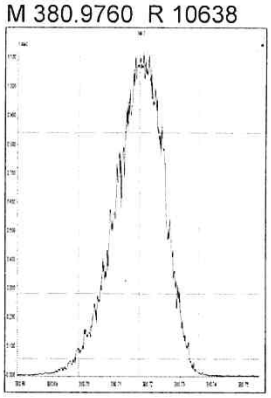
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M 366.9792 R 10773



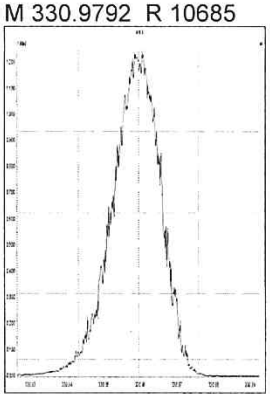
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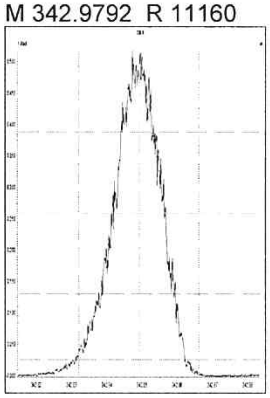
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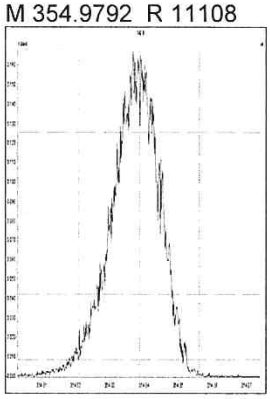
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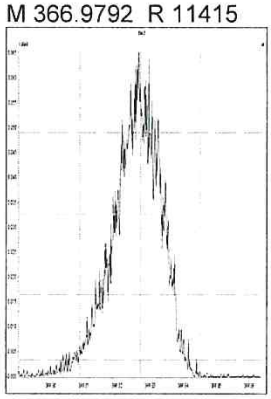
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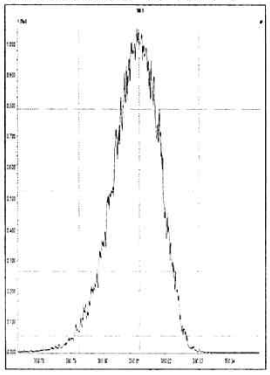
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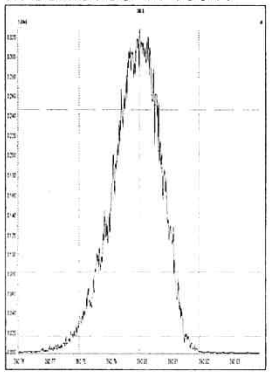
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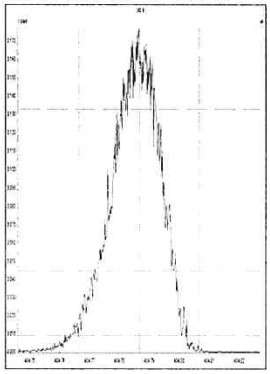
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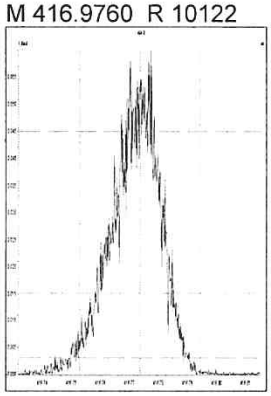
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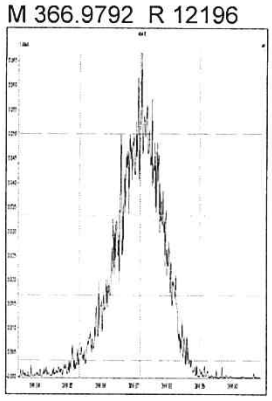
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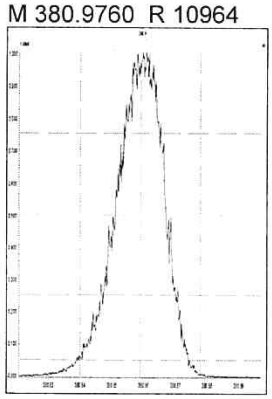
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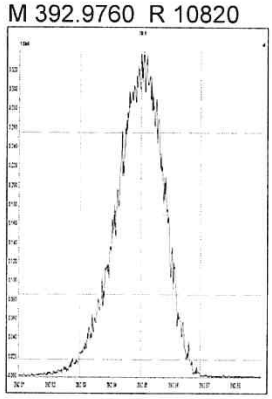
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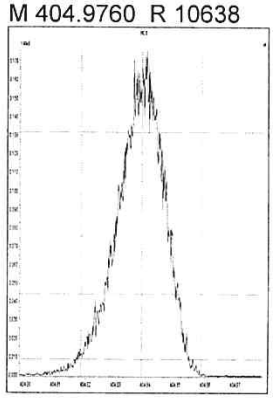
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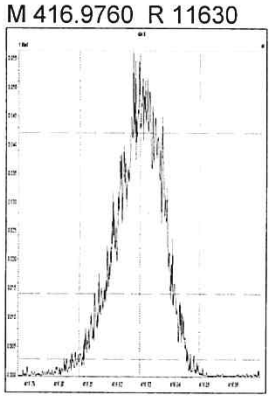
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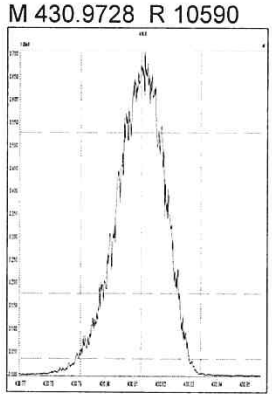
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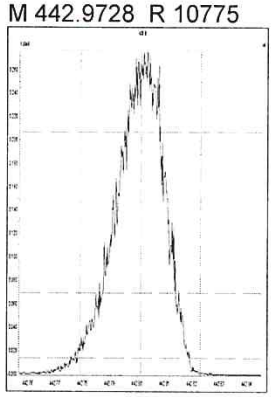
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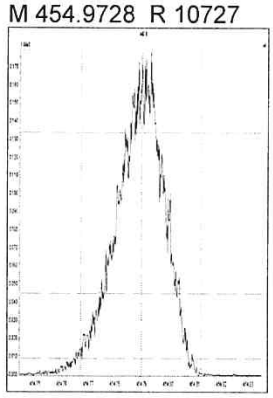
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M 442.9728 R 10775



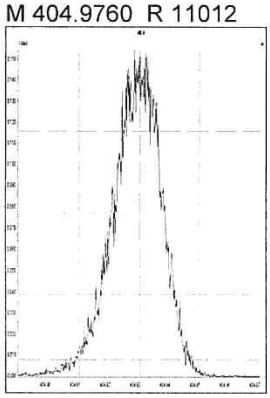
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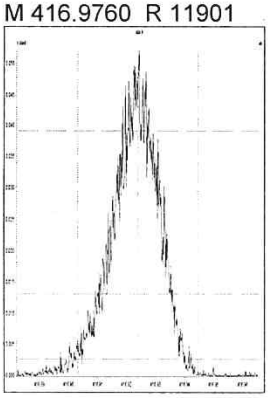
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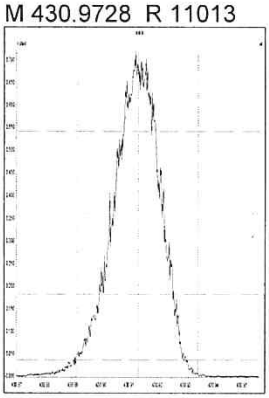
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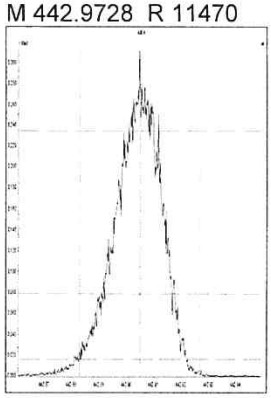
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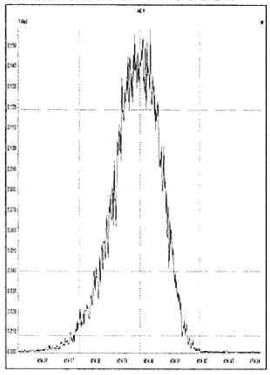
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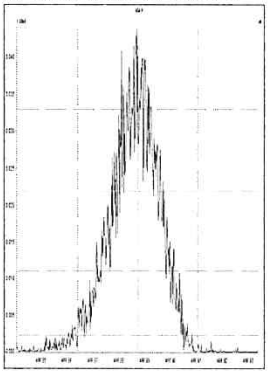
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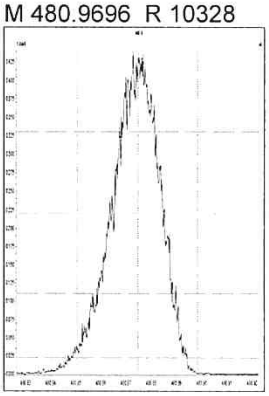
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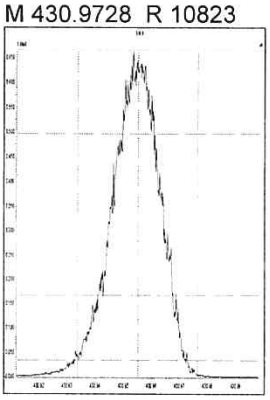
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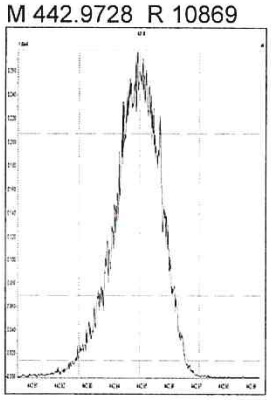
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Printed: Wednesday, January 16, 2019 11:57:00 Central Standard Time

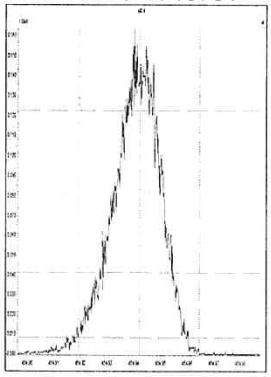
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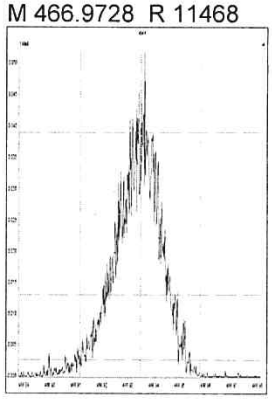
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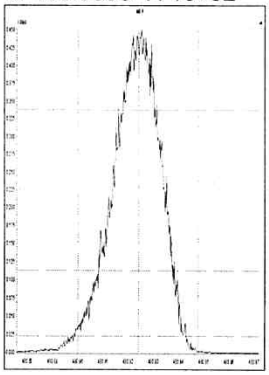
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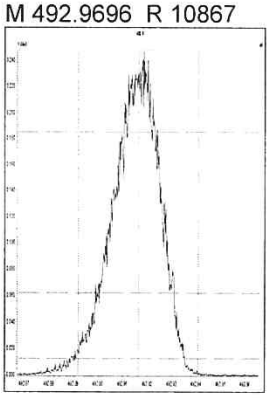
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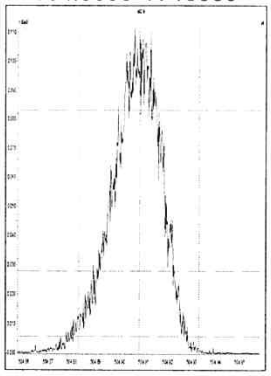
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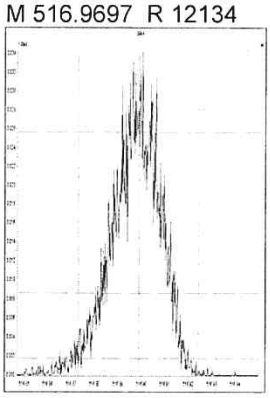
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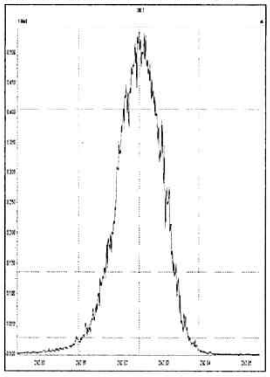
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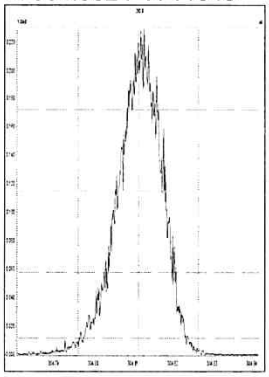
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Printed: Thursday, January 17, 2019 07:02:13 Central Standard Time

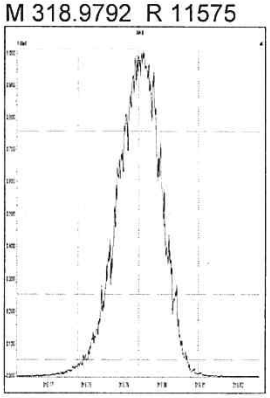
M 292.9824 R 11261



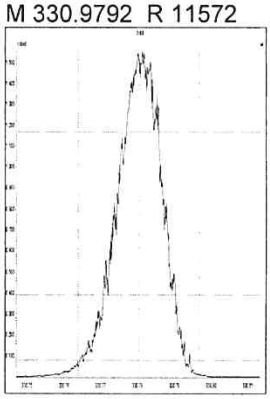
M 304.9824 R 11846



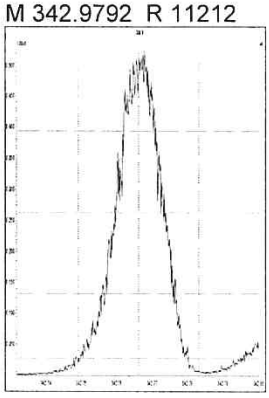
M 318.9792 R 11575



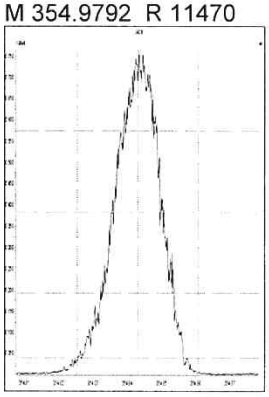
M 330.9792 R 11572



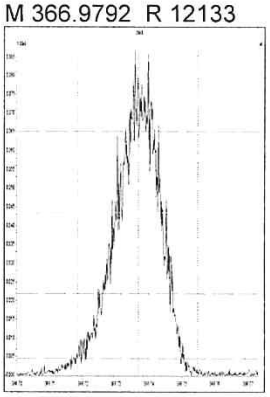
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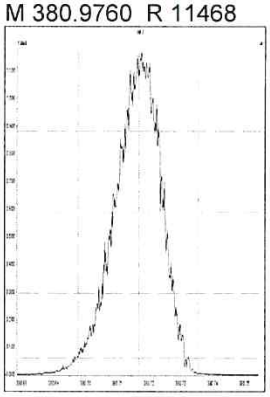
M 354.9792 R 11470



M 366.9792 R 12133



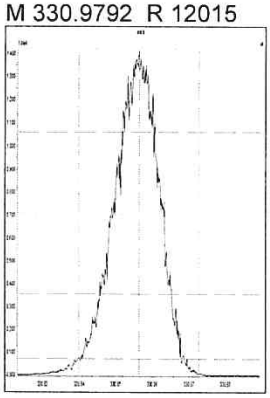
M 380.9760 R 11468



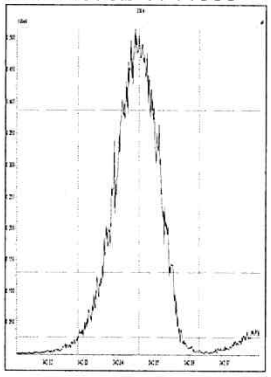
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Printed: Thursday, January 17, 2019 07:02:56 Central Standard Time

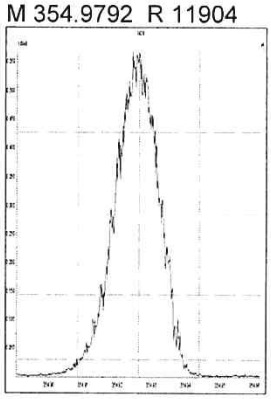
M 330.9792 R 12015



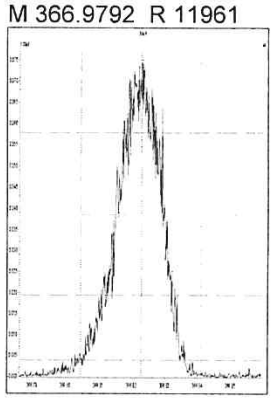
M 342.9792 R 11960



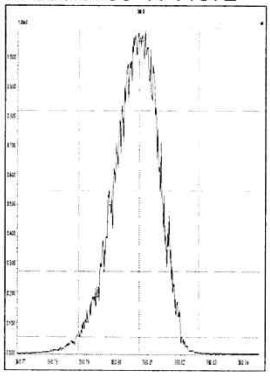
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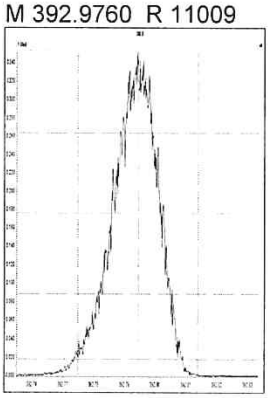
M 366.9792 R 11961



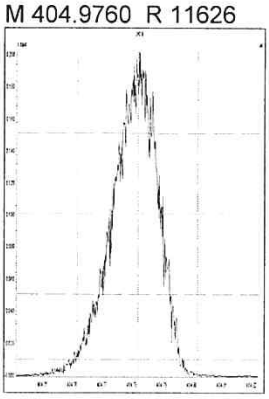
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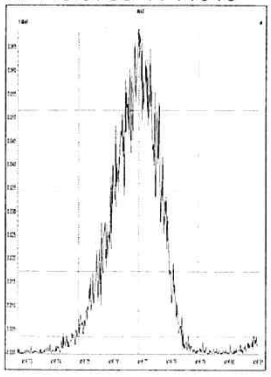
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M 404.9760 R 11626



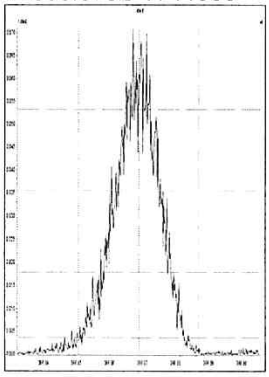
M 416.9760 R 11313



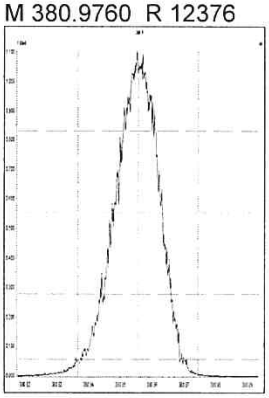
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Printed: Thursday, January 17, 2019 07:03:32 Central Standard Time

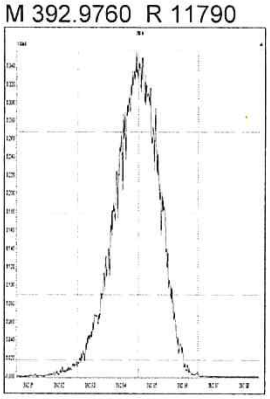
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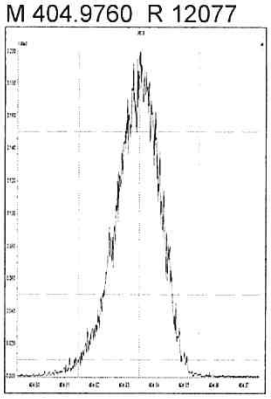
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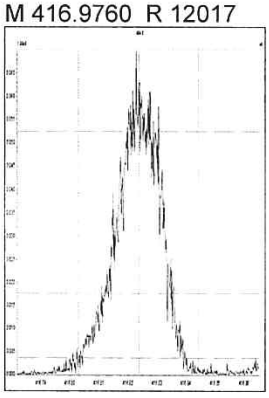
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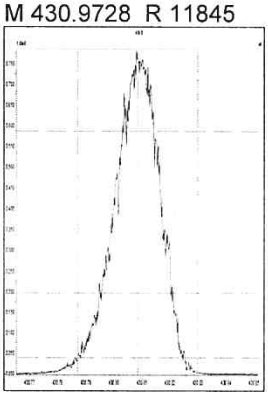
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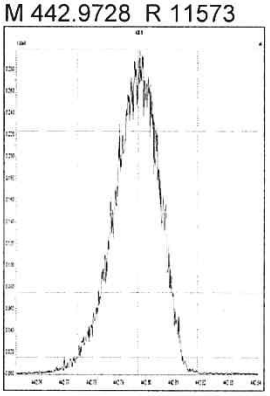
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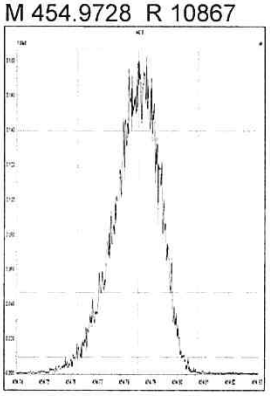
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M 442.9728 R 11573



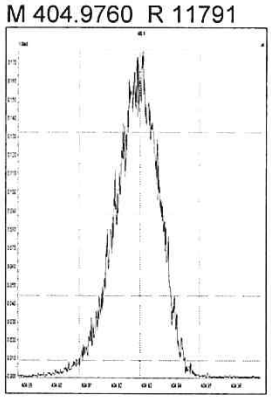
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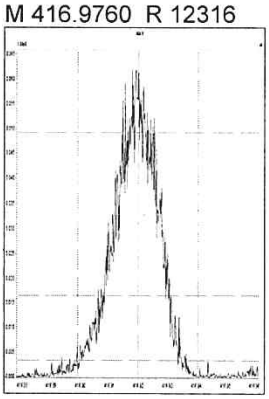
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Printed: Thursday, January 17, 2019 07:04:00 Central Standard Time

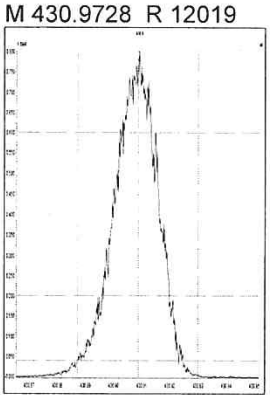
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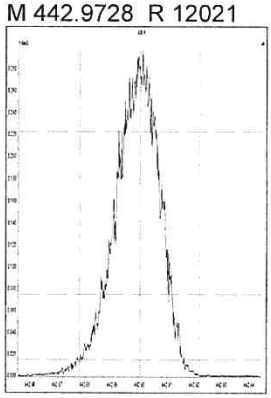
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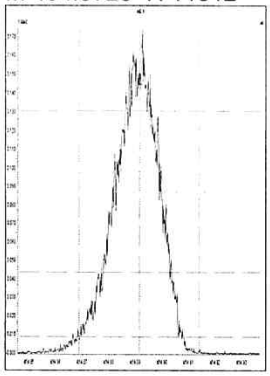
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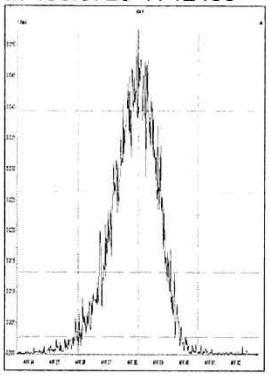
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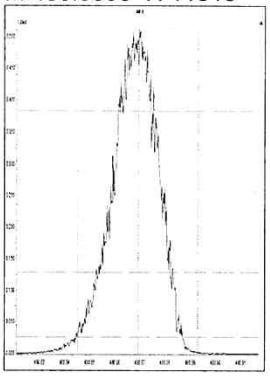
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M 466.9728 R 12436



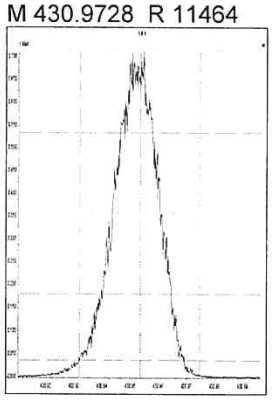
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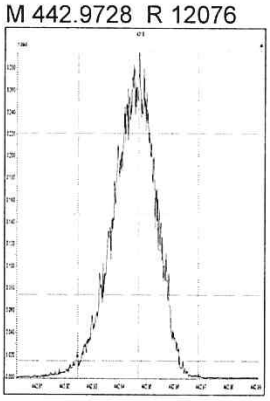
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, January 17, 2019 07:04:22 Central Standard Time

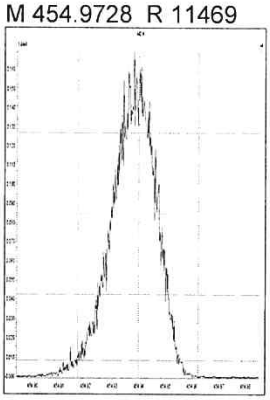
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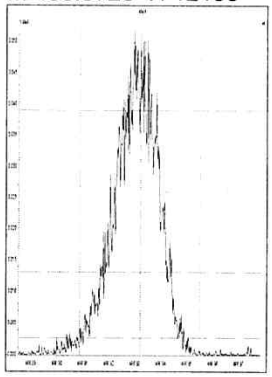
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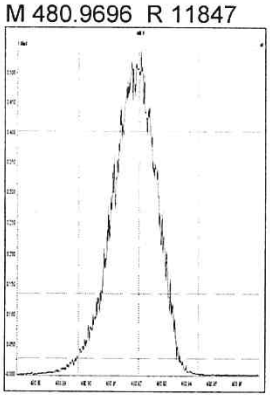
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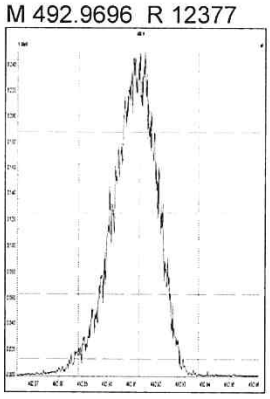
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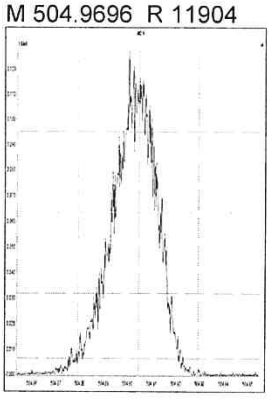
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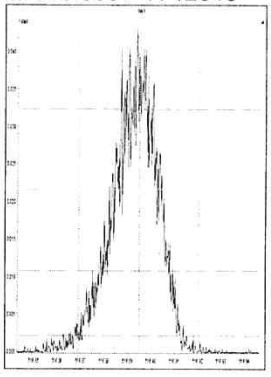
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M 504.9696 R 11904



M 516.9697 R 12313



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

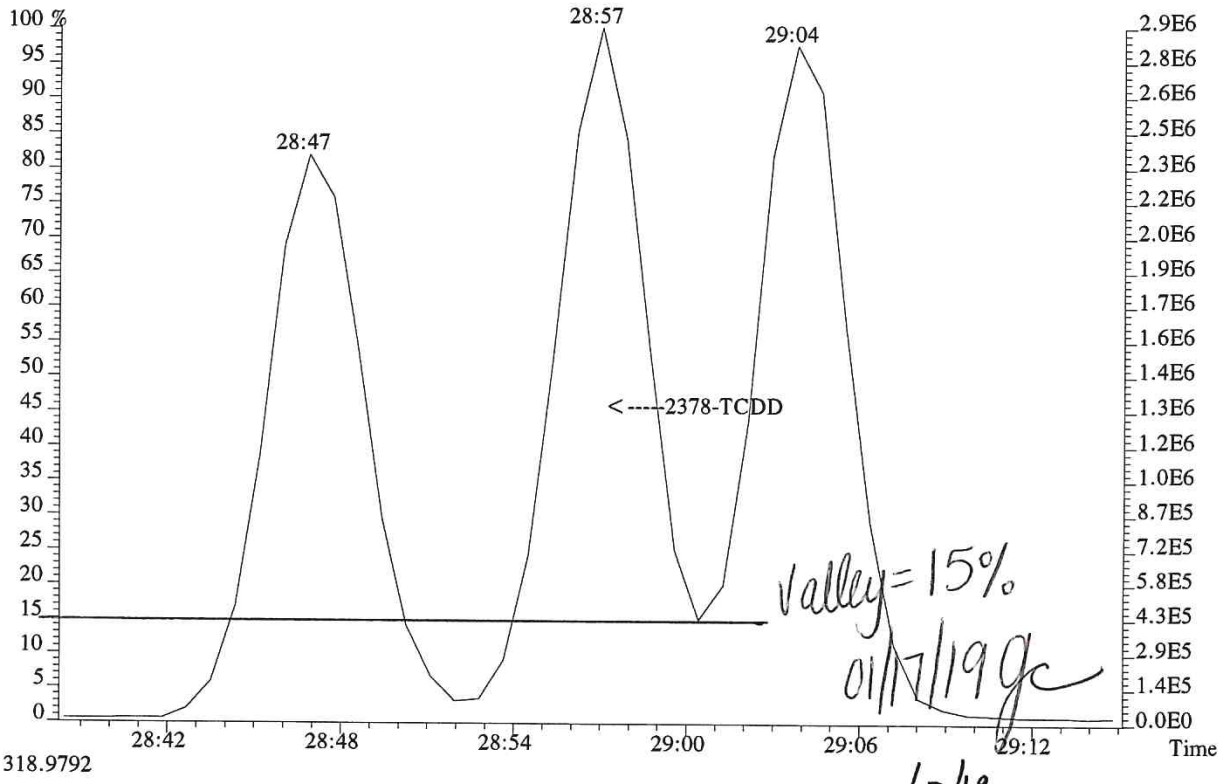
WDM

Lab Name: ALS Environmental
Lab Code: ALSTX Case No.: _____ SDG No.:
GC Column: DB-5MSUI ID: 0.25 (mm) Lab File ID: P519997
Date Analyzed: 16-JAN-2019
Time Analyzed: 12:49:47

Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	23:49	30:06
TCDD	25:41	29:56
PeCDF	30:02	34:16
PeCDD	31:34	34:01
HxCDF	34:55	37:25
HxCDD	35:26	37:01
HpCDF	38:38	40:02
HpCDD	38:53	39:34

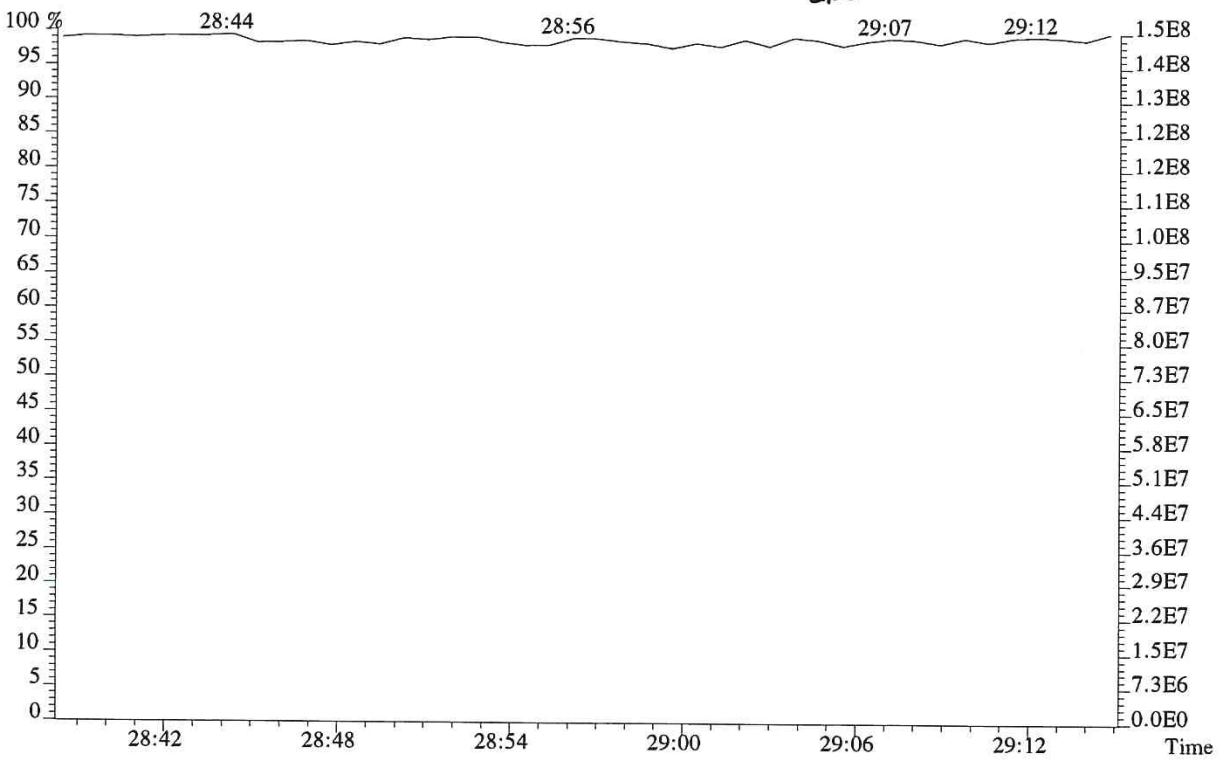
% Valley 2378-TCDD: 15 %

File:P519997 #1-538 Acq:16-JAN-2019 12:49:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
319.8965



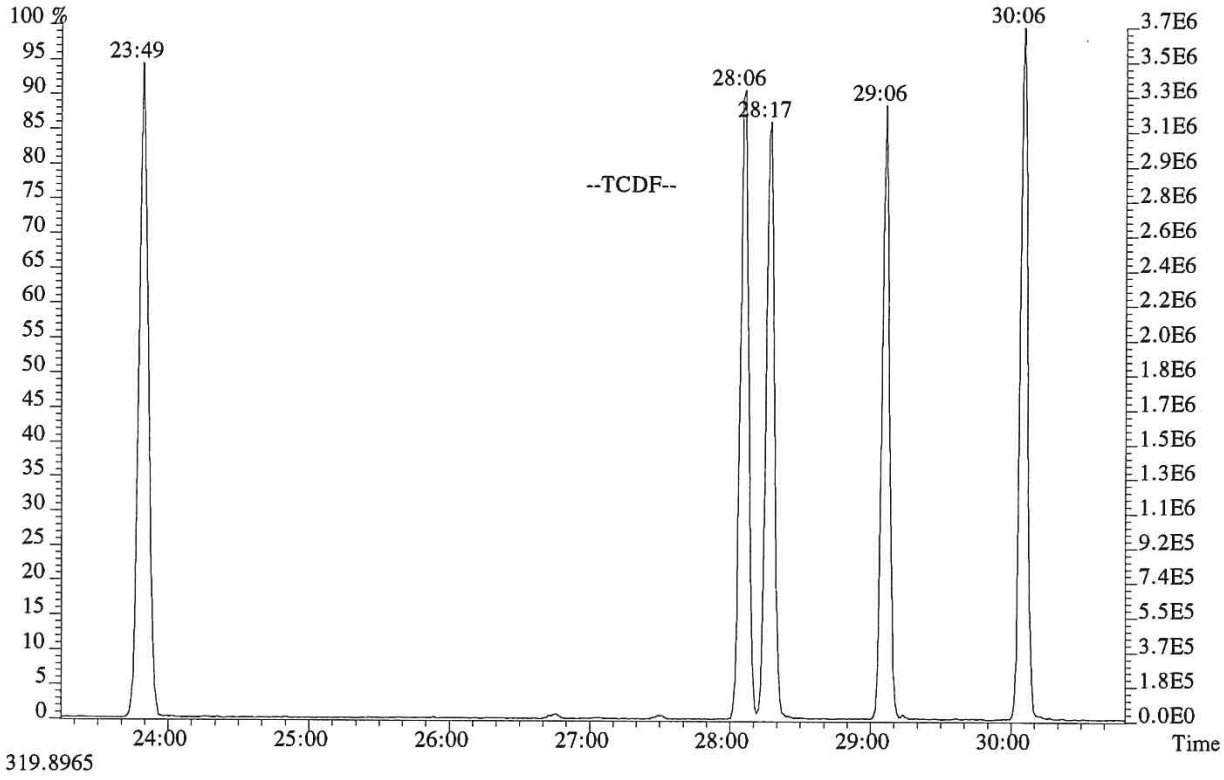
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LM 01/17/19

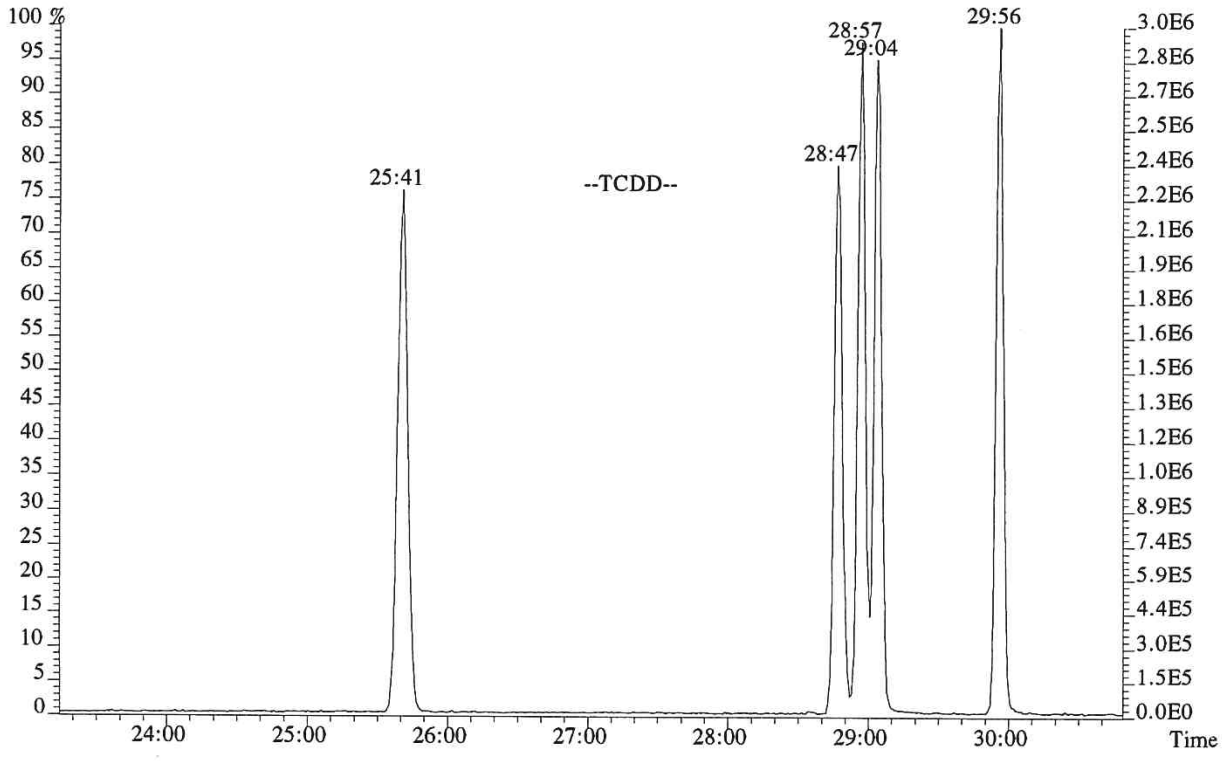


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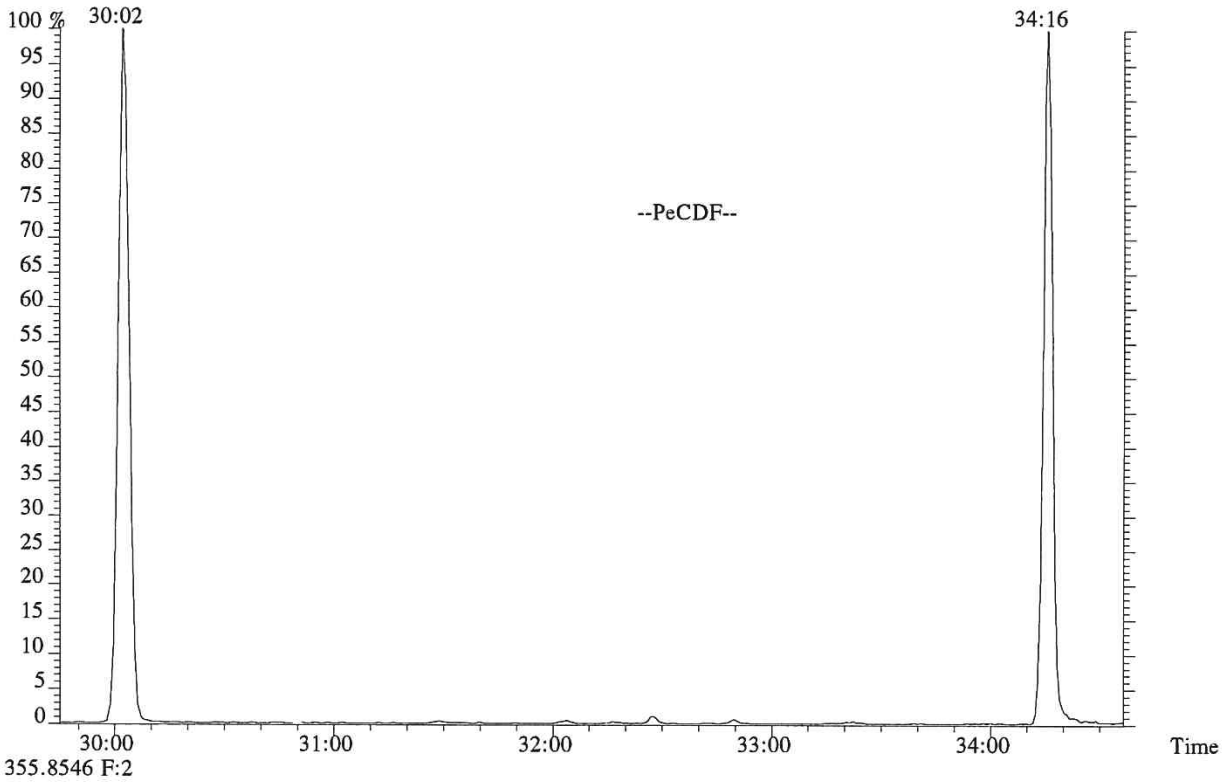
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Sample#1 Exp:192977
303.9016



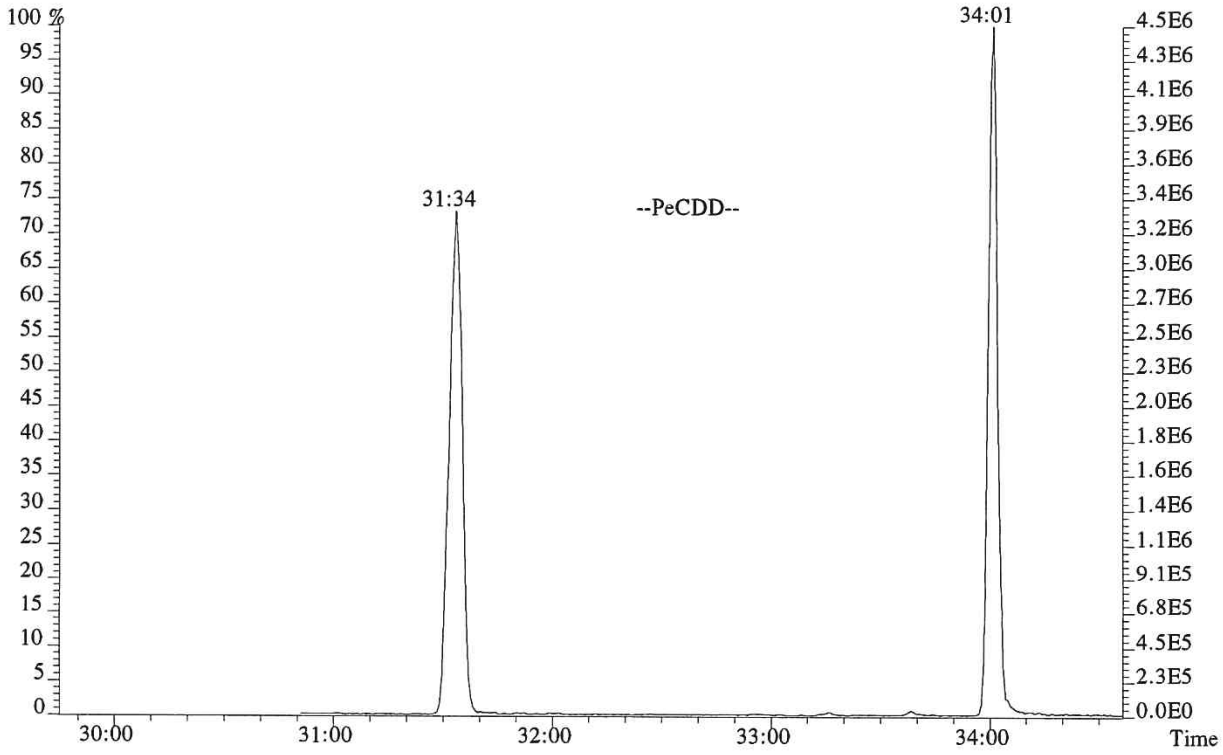
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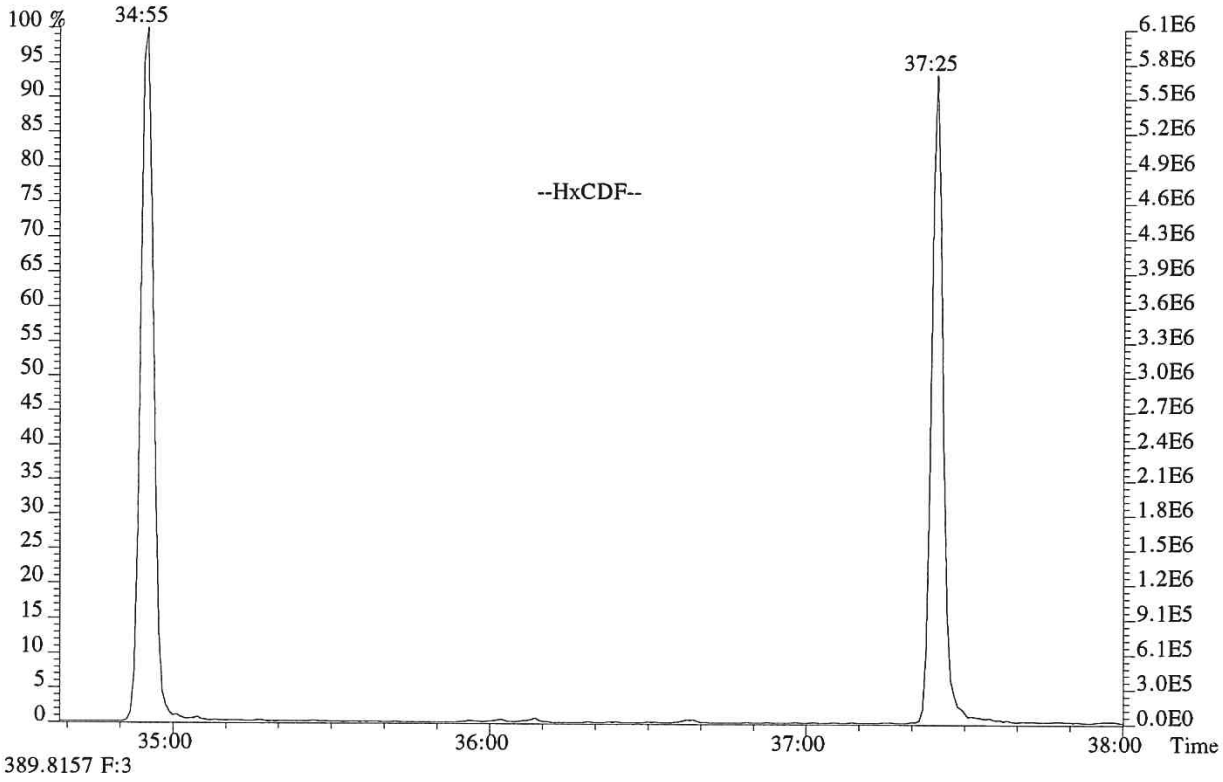
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Sample#1 Exp:192977
339.8597,339.8597 F:2



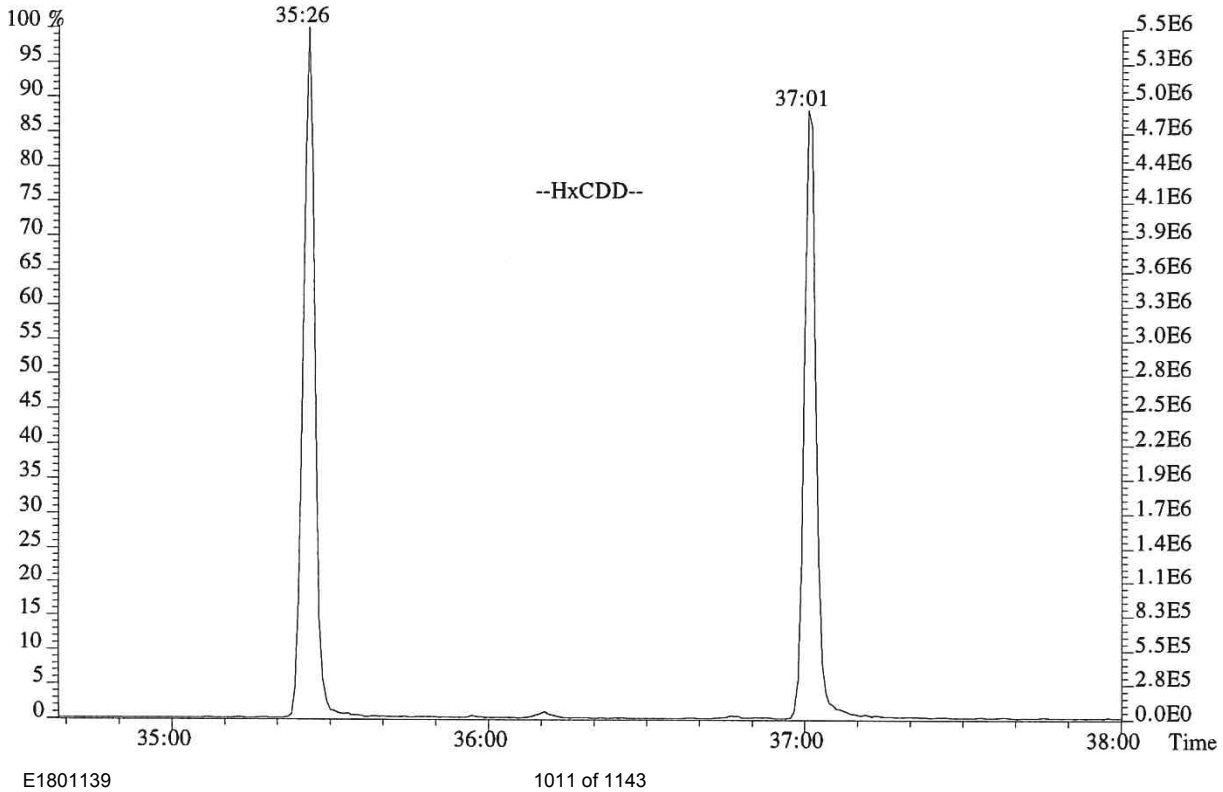
355.8546 F:2



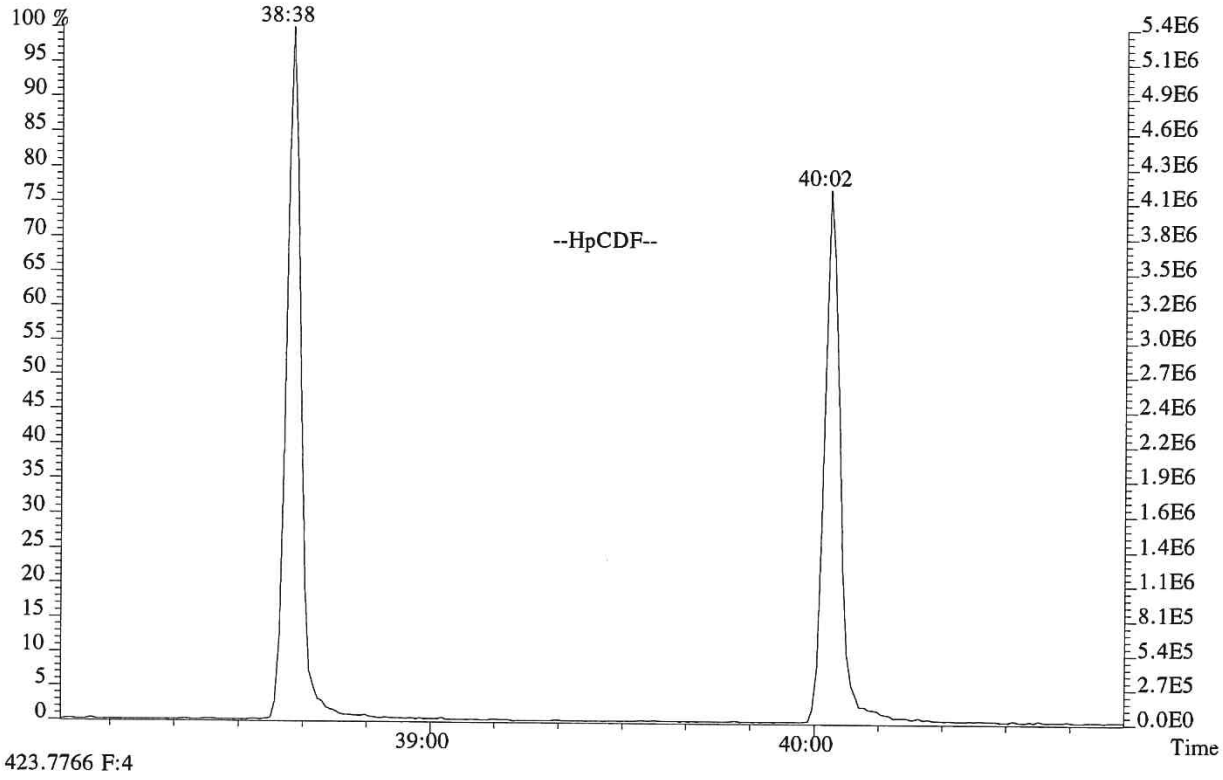
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Sample#1 Exp:192977
373.8208 F:3



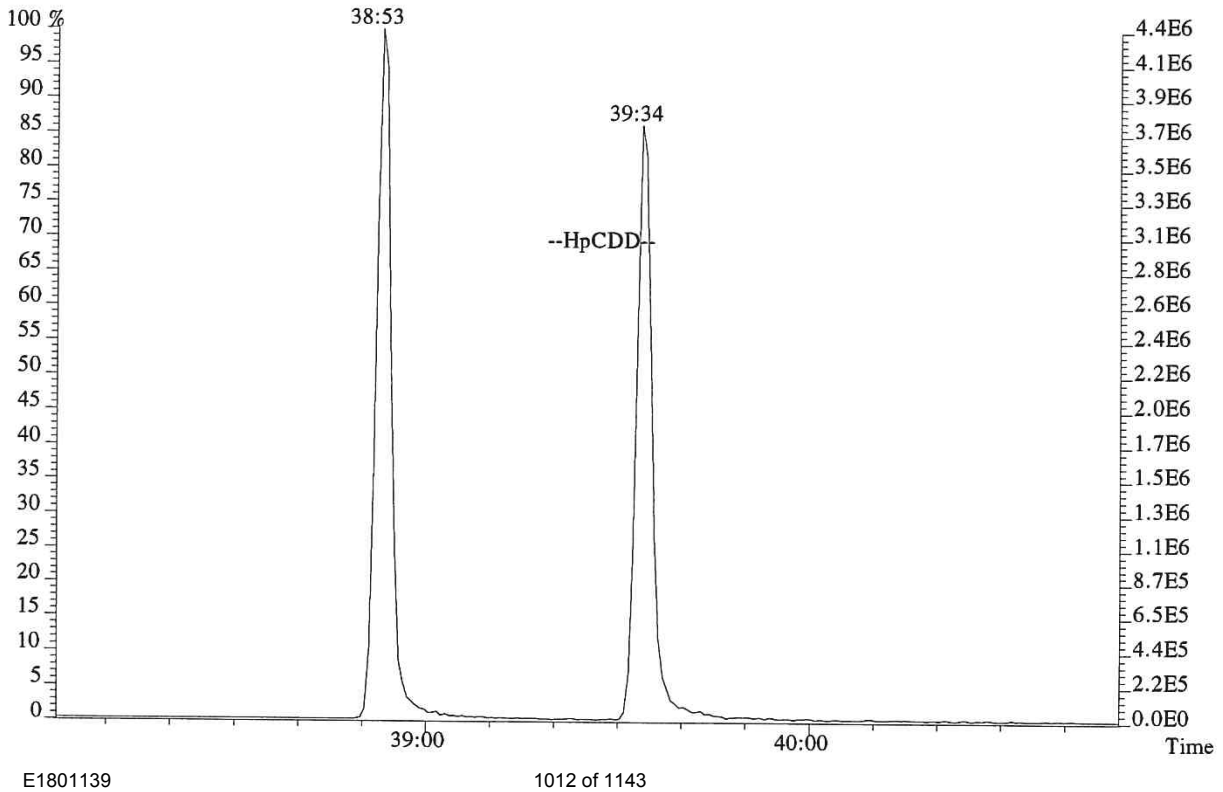
389.8157 F:3



File:P519997 #1-250 Acq:16-JAN-2019 12:49:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:192977
407.7818 F:4



423.7766 F:4



018976

USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519996 Analysis Date: 16-JAN-19 Time: 11:58:18

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	9.3	7.8 - 12.9	-7.0
1,2,3,7,8-PeCDD	M+2/M+4	1.57	1.32-1.78	49	39 - 65	-2.5
1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	49	39 - 64	-1.3
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	50	39 - 64	0.4
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	52	41 - 61	4.7
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	50	43 - 58	-0.3
OCDD	M+2/M+4	0.89	0.76-1.02	100	79 - 126	-0.3
2,3,7,8-TCDF	M/M+2	0.75	0.65-0.89	9.6	8.4 - 12.0	-3.7
1,2,3,7,8-PeCDF	M+2/M+4	1.53	1.32-1.78	49	41 - 60	-2.0
2,3,4,7,8-PeCDF	M+2/M+4	1.50	1.32-1.78	49	41 - 61	-2.2
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	51	45 - 56	1.5
1,2,3,6,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	50	44 - 57	-0.4
1,2,3,7,8,9-HxCDF	M+2/M+4	1.21	1.05-1.43	49	45 - 56	-1.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	51	44 - 57	2.1
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.01	0.88-1.20	49	45 - 55	-1.2
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.02	0.88-1.20	51	43 - 58	1.0
OCDF	M+2/M+4	0.90	0.76-1.02	96	63 - 159	-3.8

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P519996 Analysis Date: 16-JAN-19 Time: 11:58:18

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	106	82 - 121	6.4
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.57	1.32-1.78	112	62 - 160	12.5
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	98	85 - 117	-2.1
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	99	85 - 118	-1.2
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	101	72 - 138	1.2
13C-OCDD	M+2/M+4	0.89	0.76-1.02	224	96 - 415	12.0
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	91	71 - 140	-8.9
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	102	76 - 130	2.1
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	103	77 - 130	2.8
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	85	76 - 131	-14.7
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	88	70 - 143	-11.6
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	94	74 - 135	-5.6
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	90	73 - 137	-10.2
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	94	78 - 129	-6.5
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	96	77 - 129	-4.3
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				10.2	7.8 - 12.7	2.2

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
195556

Run #7 Filename P519996 Samp: 1 Inj: 1 Acquired: 16-JAN-19 11:58:18
Processed: 17-JAN-19 11:27:55 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:17	6.282e+03	8.342e+03	0.75	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:28	5.279e+04	3.441e+04	1.53	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:22	4.921e+04	3.290e+04	1.50	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:01	4.398e+04	3.618e+04	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:08	4.785e+04	3.936e+04	1.22	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:38	4.441e+04	3.626e+04	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:23	4.009e+04	3.309e+04	1.21	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:38	3.816e+04	3.792e+04	1.01	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:03	3.184e+04	3.110e+04	1.02	yes	no	1.258
10	Unk	OCDF	42:35	5.090e+04	5.672e+04	0.90	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:04	4.995e+03	6.604e+03	0.76	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:39	3.655e+04	2.329e+04	1.57	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:46	3.238e+04	2.610e+04	1.24	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	36:51	3.447e+04	2.716e+04	1.27	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:05	3.611e+04	2.858e+04	1.26	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:34	2.870e+04	2.724e+04	1.05	yes	no	1.025
17	Unk	OCDD	42:23	4.318e+04	4.863e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:16	7.114e+04	9.010e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:27	1.078e+05	6.787e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:21	1.066e+05	6.860e+04	1.55	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:01	4.543e+04	8.732e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:07	5.309e+04	1.029e+05	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:37	4.905e+04	9.335e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:23	4.442e+04	8.484e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:38	3.526e+04	7.878e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:02	3.071e+04	6.836e+04	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:03	5.056e+04	6.435e+04	0.79	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:38	7.837e+04	4.992e+04	1.57	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:45	6.400e+04	5.018e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	36:51	6.577e+04	5.246e+04	1.25	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:34	5.649e+04	5.303e+04	1.07	yes	no	0.858
32	IS	13C-OCDD	42:22	7.754e+04	8.713e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:30	5.172e+04	6.524e+04	0.79	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:05	7.030e+04	5.587e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:04	1.212e+04				no	1.014

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
195556

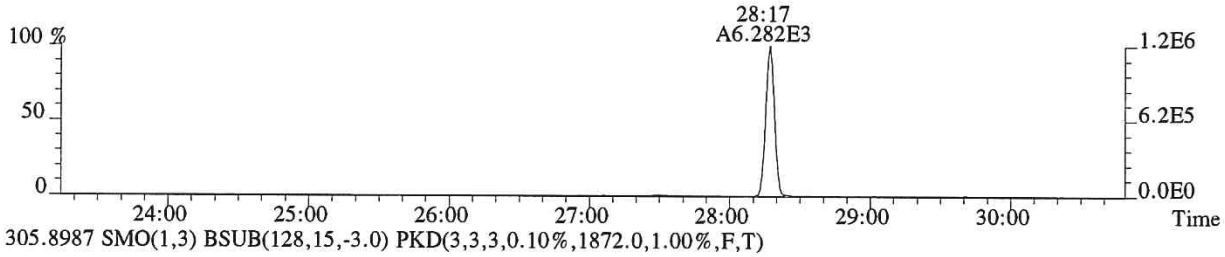
Run #7 Filename P519996 Samp: 1 Inj: 1 Acquired: 16-JAN-19 11:58:18
Processed: 17-JAN-19 11:27:55 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.23e+06	8.60e+02	1.4e+03	1.61e+06	1.87e+03	8.6e+02
2	1,2,3,7,8-PeCDF	1.05e+07	8.76e+02	1.2e+04	6.81e+06	1.67e+03	4.1e+03
3	2,3,4,7,8-PeCDF	1.02e+07	8.76e+02	1.2e+04	6.78e+06	1.67e+03	4.1e+03
4	1,2,3,4,7,8-HxCDF	9.48e+06	5.88e+02	1.6e+04	7.79e+06	7.72e+02	1.0e+04
5	1,2,3,6,7,8-HxCDF	1.01e+07	5.88e+02	1.7e+04	8.39e+06	7.72e+02	1.1e+04
6	2,3,4,6,7,8-HxCDF	9.96e+06	5.88e+02	1.7e+04	8.02e+06	7.72e+02	1.0e+04
7	1,2,3,7,8,9-HxCDF	8.44e+06	5.88e+02	1.4e+04	6.93e+06	7.72e+02	9.0e+03
8	1,2,3,4,6,7,8-HpCDF	8.28e+06	6.13e+03	1.4e+03	8.31e+06	1.64e+03	5.1e+03
9	1,2,3,4,7,8,9-HpCDF	6.20e+06	6.13e+03	1.0e+03	5.94e+06	1.64e+03	3.6e+03
10	OCDF	8.48e+06	3.52e+02	2.4e+04	9.22e+06	1.44e+03	6.4e+03
11	2,3,7,8-TCDD	9.90e+05	2.67e+03	3.7e+02	1.31e+06	1.72e+03	7.6e+02
12	1,2,3,7,8-PeCDD	7.35e+06	1.11e+03	6.6e+03	4.68e+06	6.80e+02	6.9e+03
13	1,2,3,4,7,8-HxCDD	7.38e+06	6.76e+02	1.1e+04	5.95e+06	5.56e+02	1.1e+04
14	1,2,3,6,7,8-HxCDD	7.42e+06	6.76e+02	1.1e+04	5.81e+06	5.56e+02	1.0e+04
15	1,2,3,7,8,9-HxCDD	7.57e+06	6.76e+02	1.1e+04	6.16e+06	5.56e+02	1.1e+04
16	1,2,3,4,6,7,8-HpCDD	5.70e+06	9.44e+02	6.0e+03	5.37e+06	8.12e+02	6.6e+03
17	OCDD	7.18e+06	8.64e+02	8.3e+03	8.11e+06	8.36e+02	9.7e+03
18	13C-2,3,7,8-TCDF	1.34e+07	9.68e+03	1.4e+03	1.70e+07	8.26e+03	2.1e+03
19	13C-1,2,3,7,8-PeCDF	2.09e+07	5.04e+02	4.2e+04	1.32e+07	3.64e+02	3.6e+04
20	13C-2,3,4,7,8-PeCDF	2.12e+07	5.04e+02	4.2e+04	1.38e+07	3.64e+02	3.8e+04
21	13C-1,2,3,4,7,8-HxCDF	9.89e+06	1.15e+03	8.6e+03	1.90e+07	1.58e+03	1.2e+04
22	13C-1,2,3,6,7,8-HxCDF	1.13e+07	1.15e+03	9.8e+03	2.19e+07	1.58e+03	1.4e+04
23	13C-2,3,4,6,7,8-HxCDF	1.08e+07	1.15e+03	9.5e+03	2.08e+07	1.58e+03	1.3e+04
24	13C-1,2,3,7,8,9-HxCDF	9.34e+06	1.15e+03	8.1e+03	1.76e+07	1.58e+03	1.1e+04
25	13C-1,2,3,4,6,7,8-HpCDF	7.54e+06	1.80e+03	4.2e+03	1.69e+07	5.37e+03	3.2e+03
26	13C-1,2,3,4,7,8,9-HpCDF	5.82e+06	1.80e+03	3.2e+03	1.29e+07	5.37e+03	2.4e+03
27	13C-2,3,7,8-TCDD	1.03e+07	7.13e+03	1.4e+03	1.30e+07	2.83e+03	4.6e+03
28	13C-1,2,3,7,8-PeCDD	1.62e+07	1.32e+03	1.2e+04	1.04e+07	2.12e+03	4.9e+03
29	13C-1,2,3,4,7,8-HxCDD	1.45e+07	1.03e+03	1.4e+04	1.14e+07	1.10e+03	1.0e+04
30	13C-1,2,3,6,7,8-HxCDD	1.41e+07	1.03e+03	1.4e+04	1.12e+07	1.10e+03	1.0e+04
31	13C-1,2,3,4,6,7,8-HpCDD	1.09e+07	8.84e+02	1.2e+04	1.01e+07	6.08e+02	1.7e+04
32	13C-OCDD	1.29e+07	9.68e+02	1.3e+04	1.45e+07	6.20e+02	2.3e+04
33	13C-1,2,3,4-TCDD	1.01e+07	7.13e+03	1.4e+03	1.28e+07	2.83e+03	4.5e+03
34	13C-1,2,3,7,8,9-HxCDD	1.52e+07	1.03e+03	1.5e+04	1.20e+07	1.10e+03	1.1e+04
35	37Cl-2,3,7,8-TCDD	2.42e+06	1.84e+03	1.3e+03			

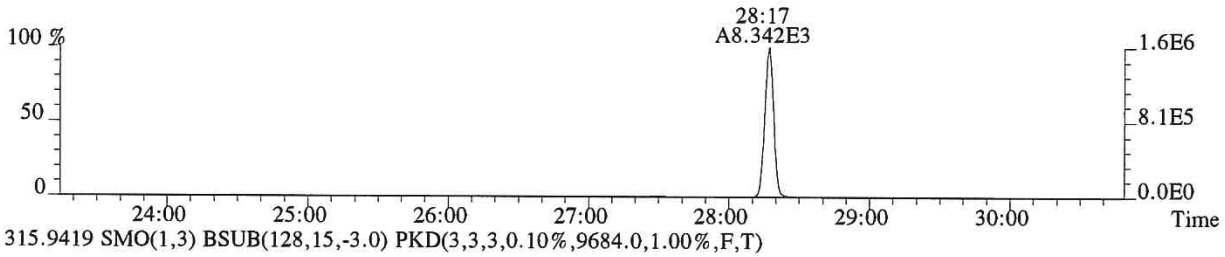
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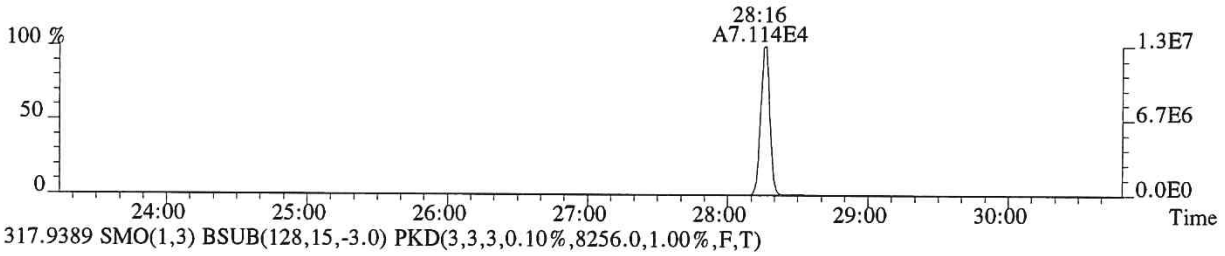
File:P519996 #1-538 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,860.0,1.00%,F,T)



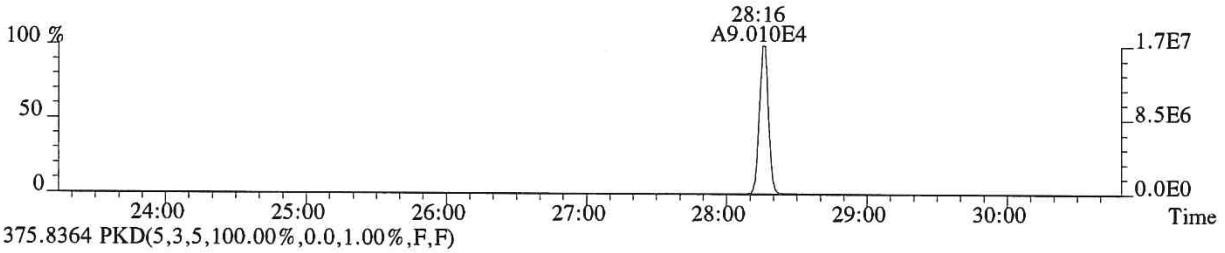
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1872.0,1.00%,F,T)



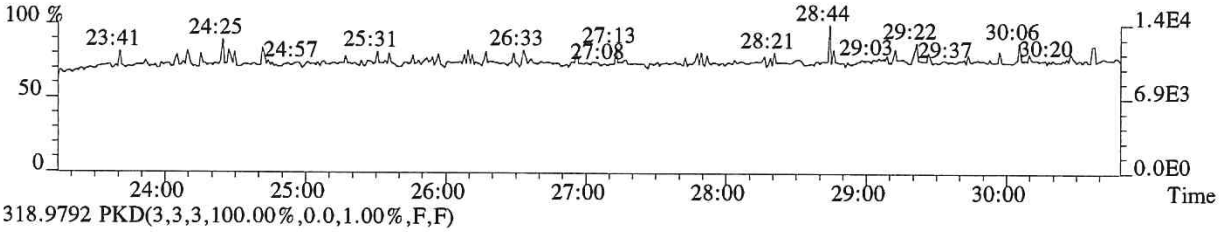
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9684.0,1.00%,F,T)



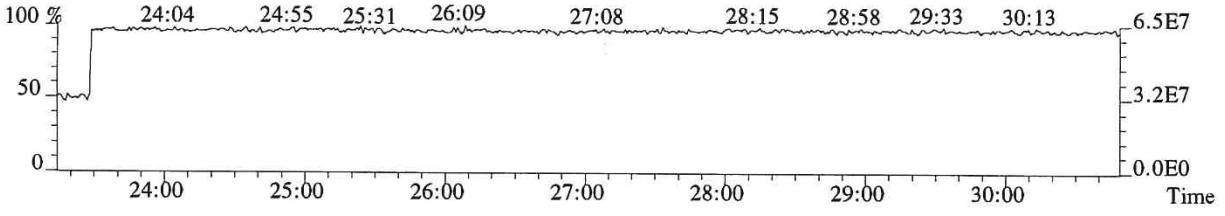
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8256.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

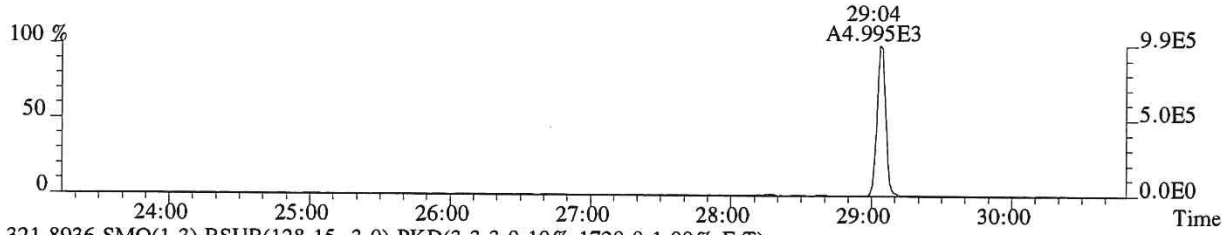


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

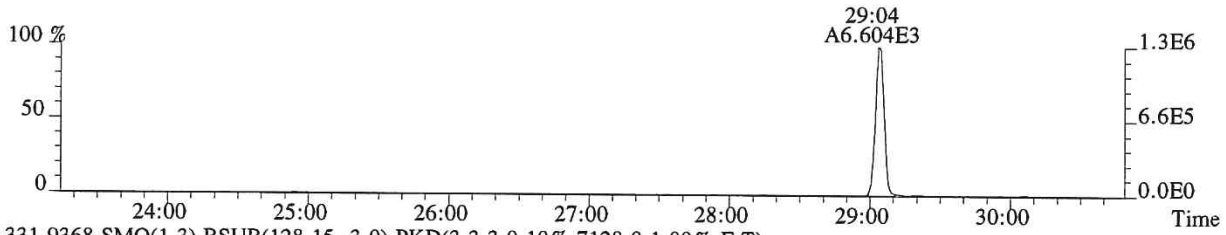


018981

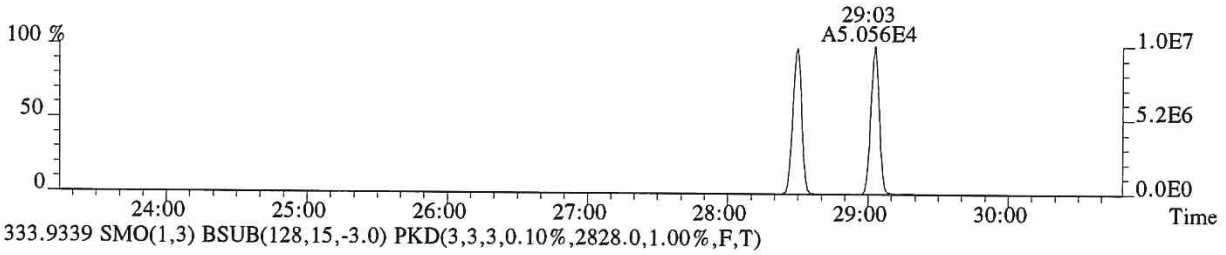
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Sample#1 Exp:195556
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2668.0,1.00%,F,T)



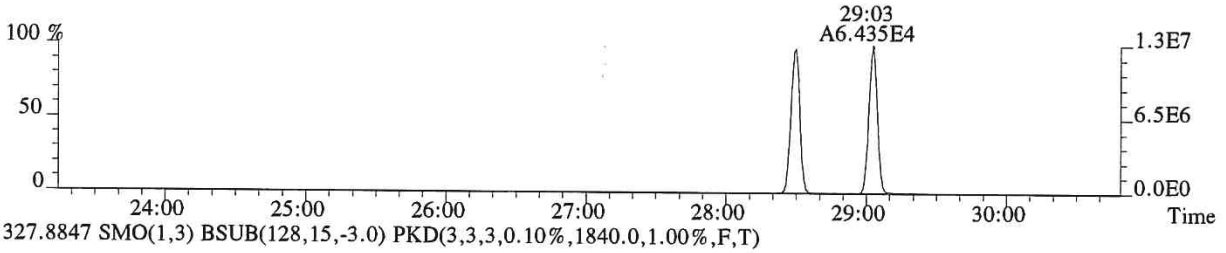
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1720.0,1.00%,F,T)



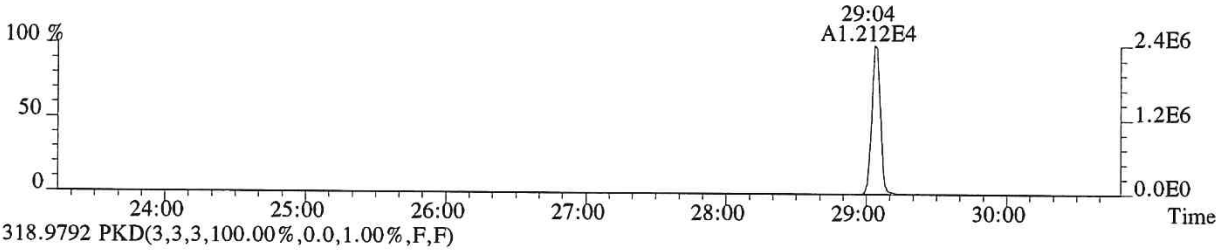
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7128.0,1.00%,F,T)



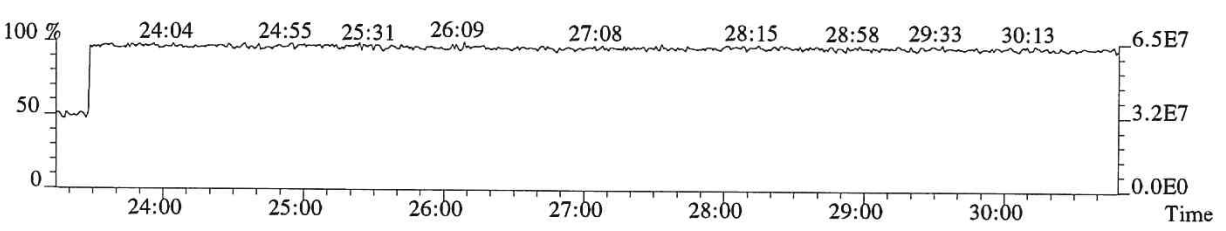
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2828.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1840.0,1.00%,F,T)

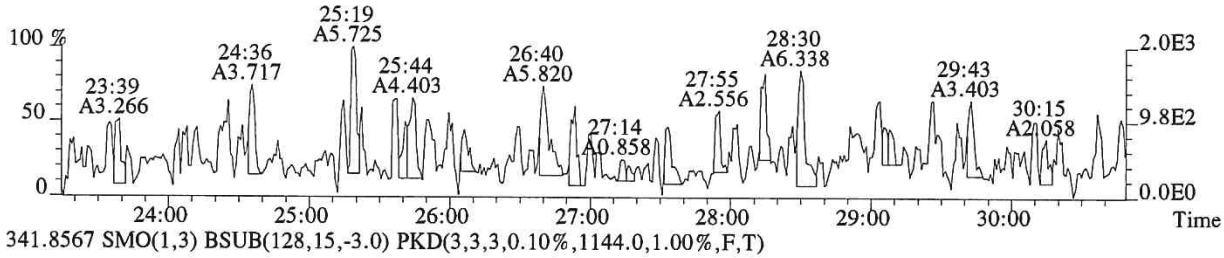


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

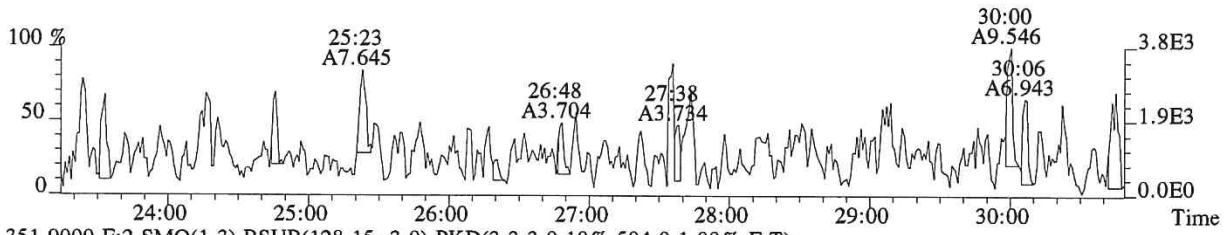


018982

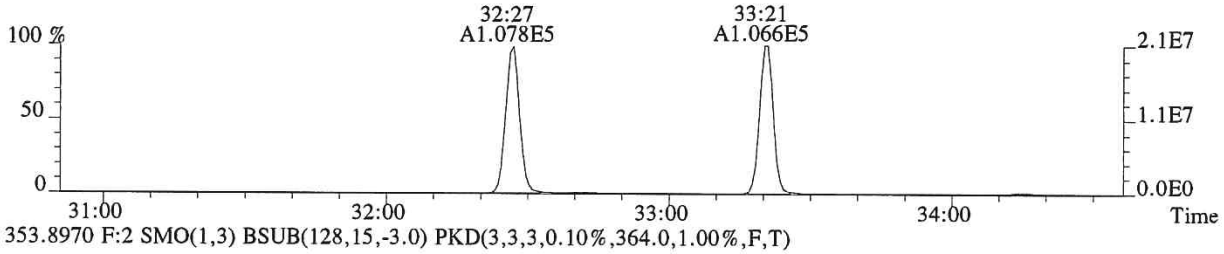
File:P519996 #1-538 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,528.0,1.00%,F,T)



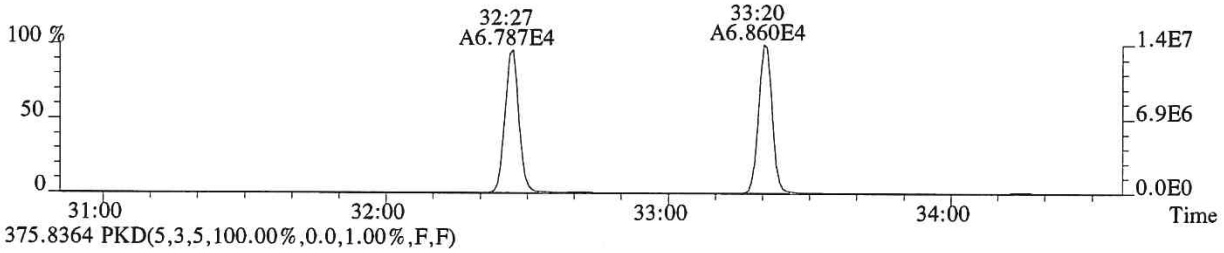
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1144.0,1.00%,F,T)



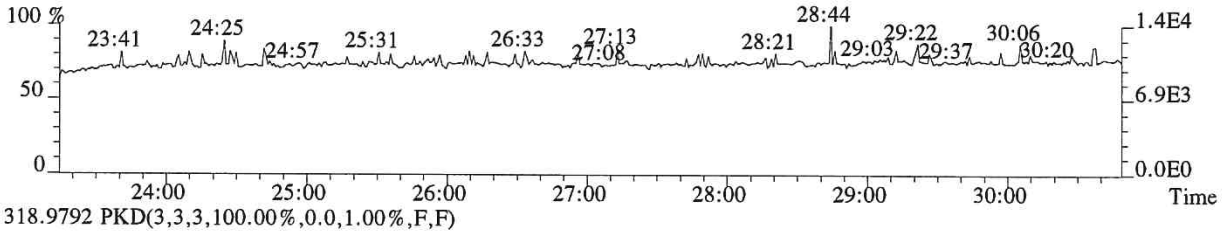
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,504.0,1.00%,F,T)



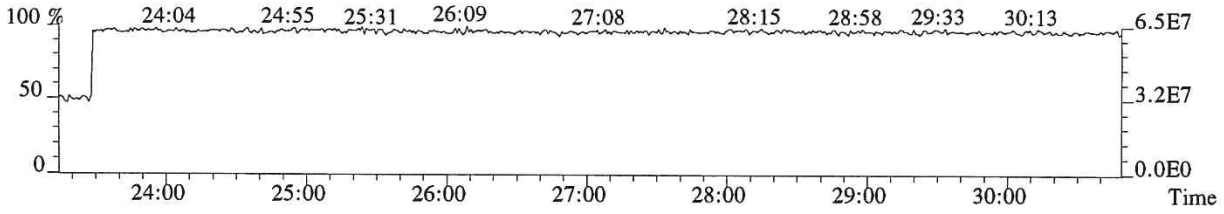
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,364.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

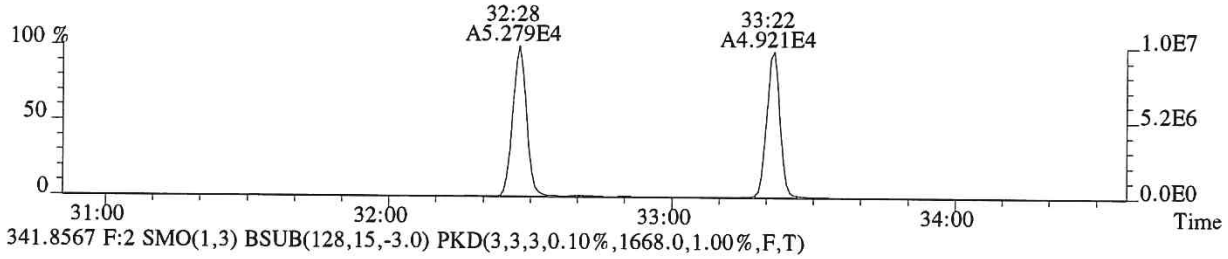


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

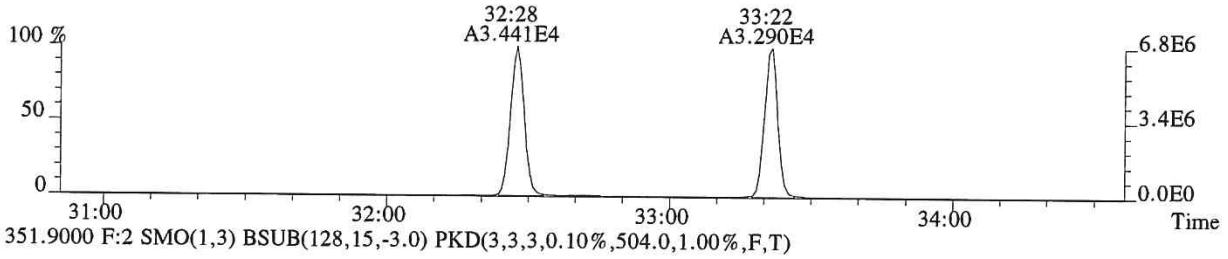


018983

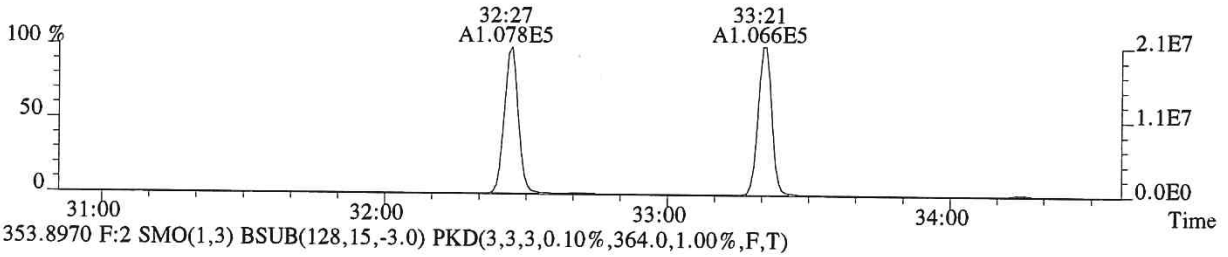
File:P519996 #1-339 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,876.0,1.00%,F,T)



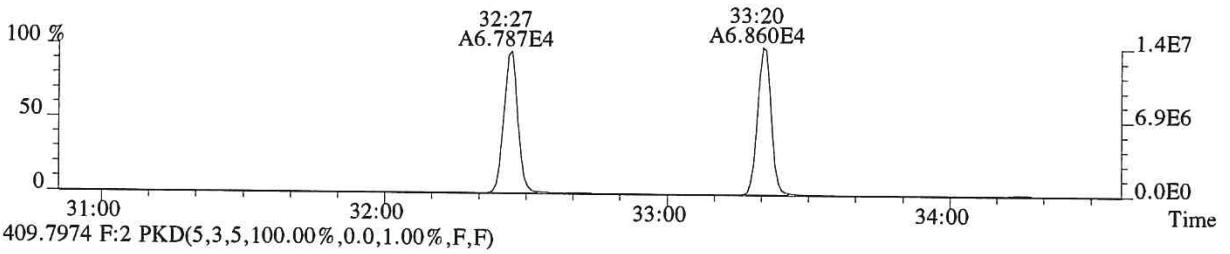
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1668.0,1.00%,F,T)



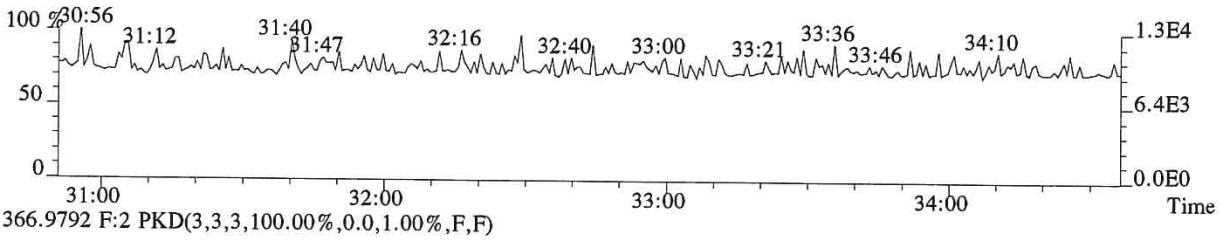
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,504.0,1.00%,F,T)



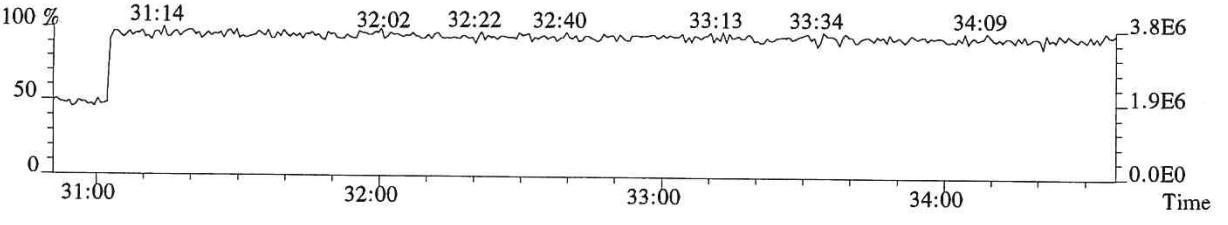
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,364.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

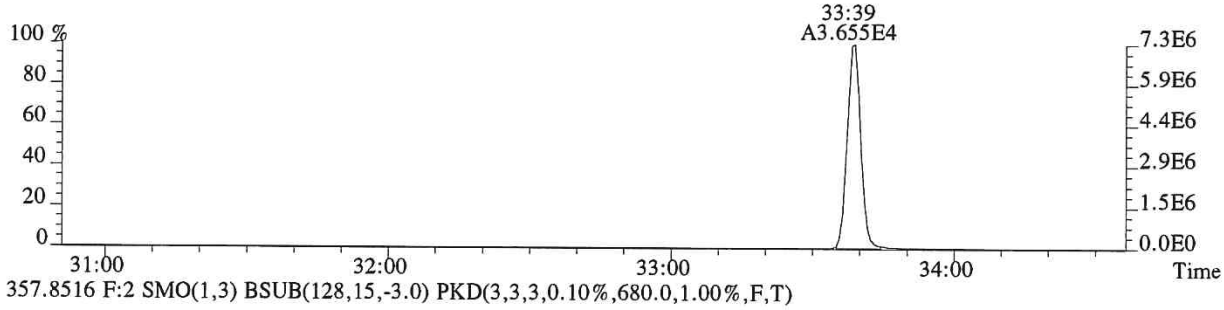


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

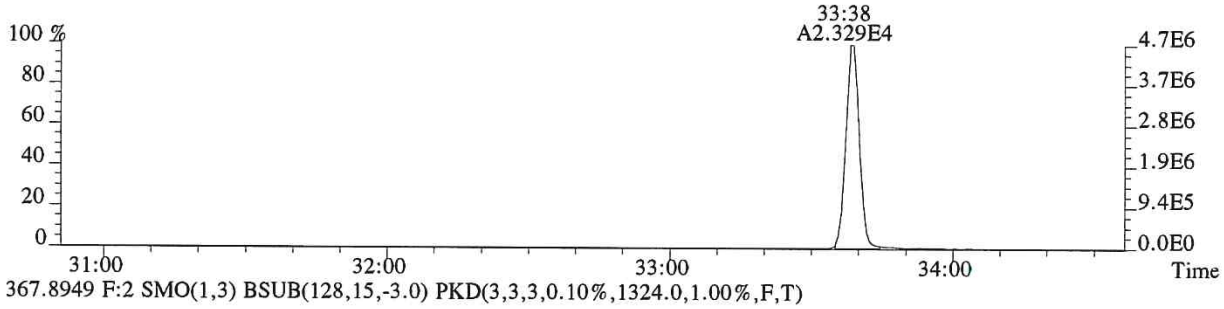


018984

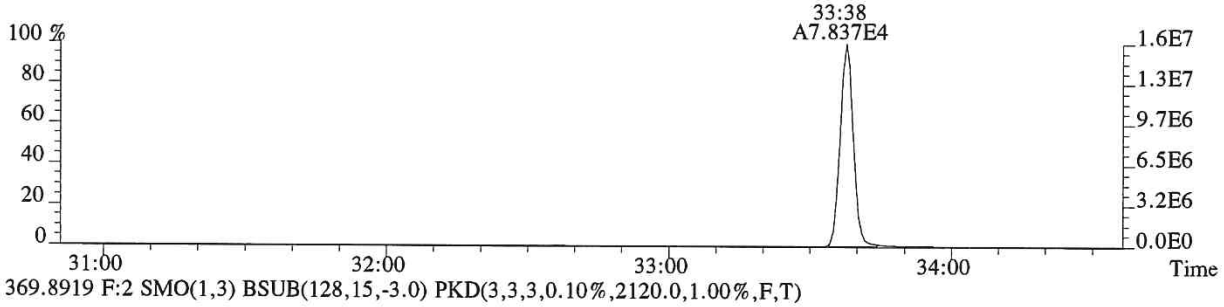
File:P519996 #1-339 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1112.0,1.00%,F,T)



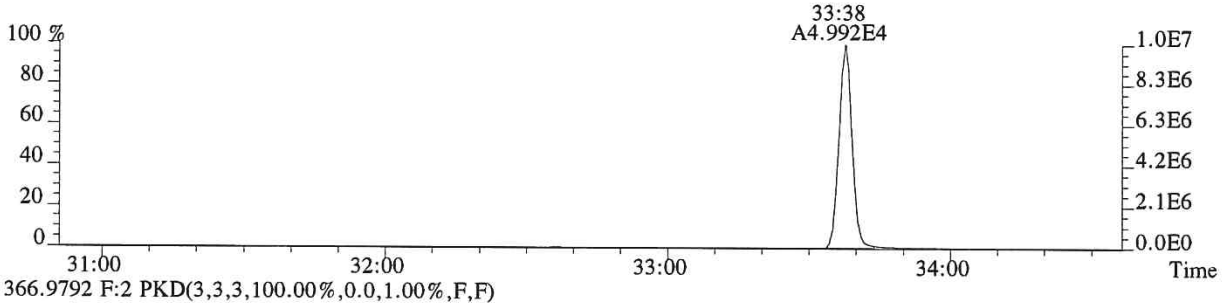
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,680.0,1.00%,F,T)



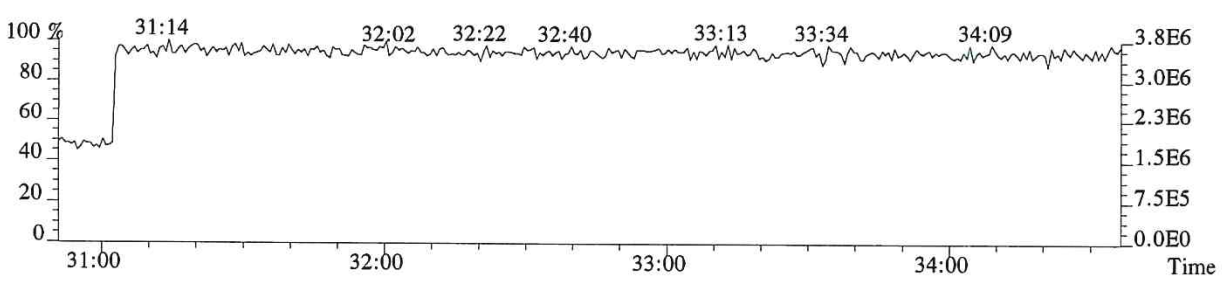
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1324.0,1.00%,F,T)



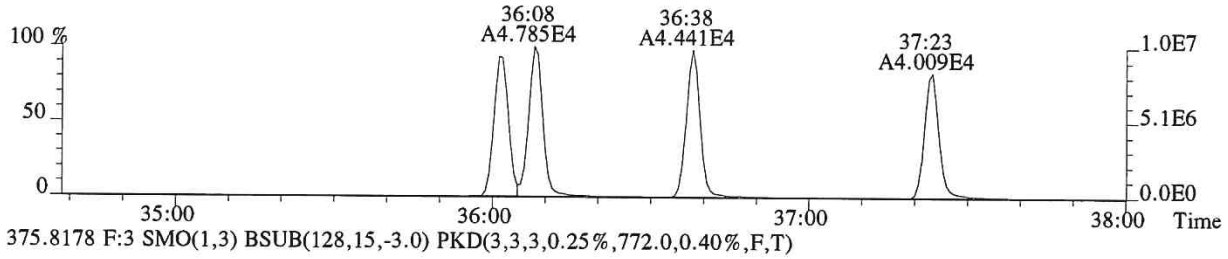
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2120.0,1.00%,F,T)



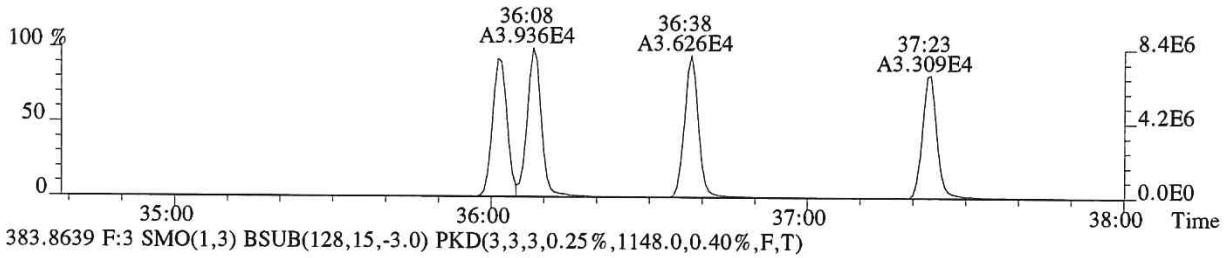
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



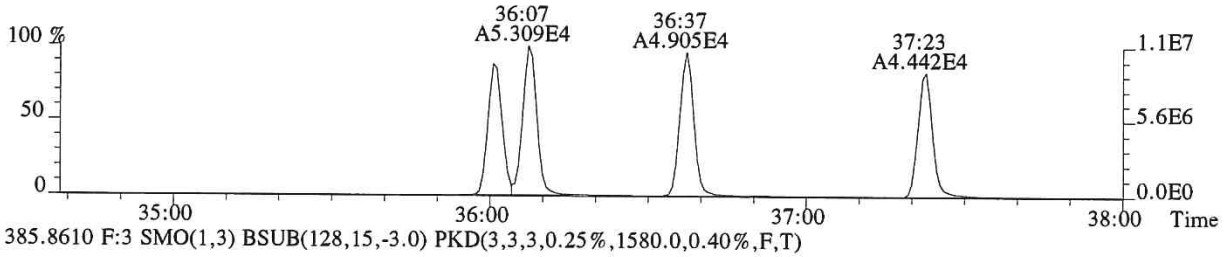
File:P519996 #1-303 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,588.0,0.40%,F,T)



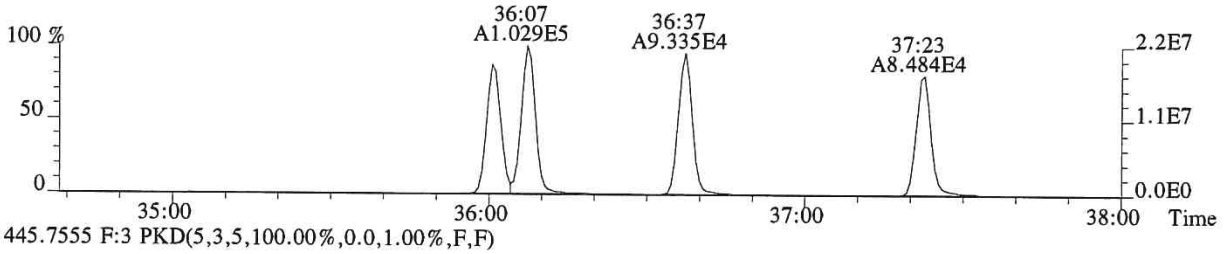
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,772.0,0.40%,F,T)



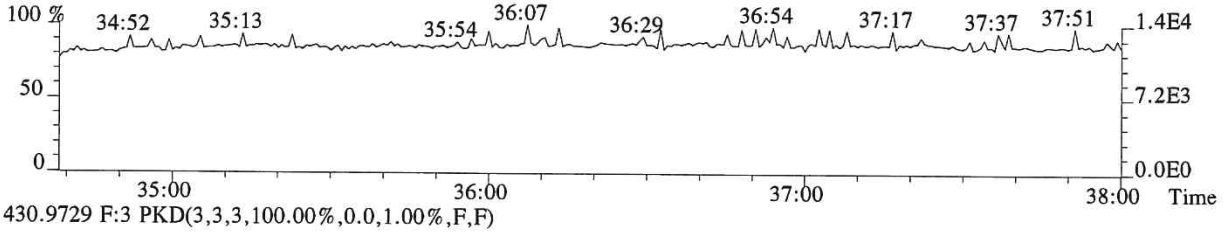
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1148.0,0.40%,F,T)



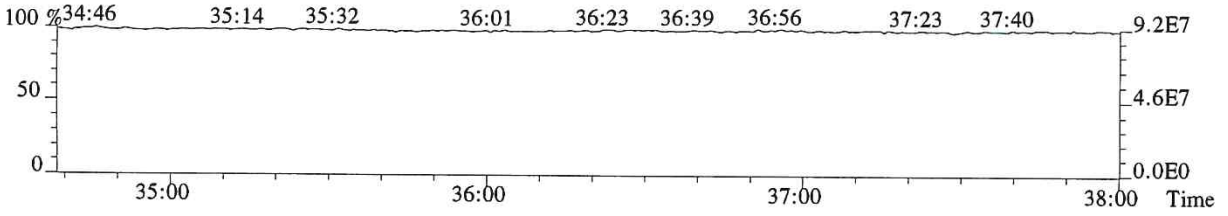
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1580.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

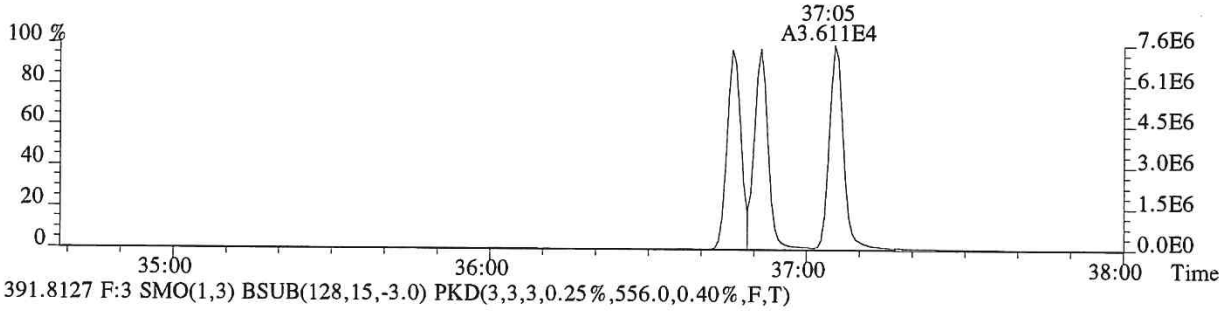


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

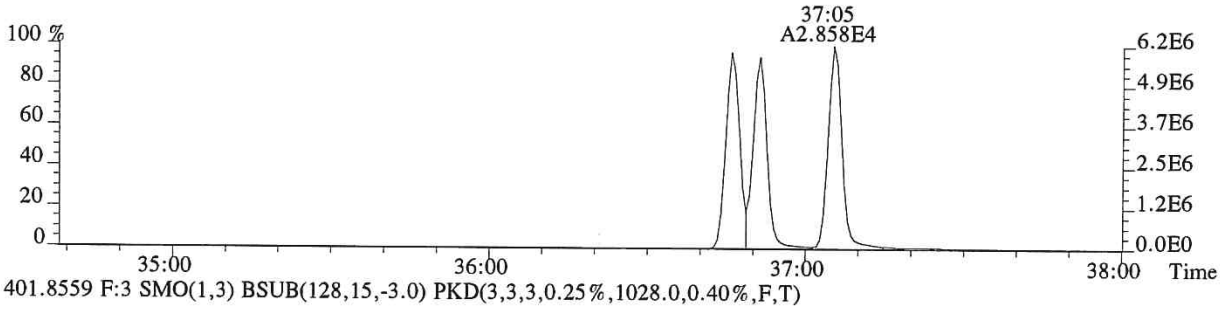


018986

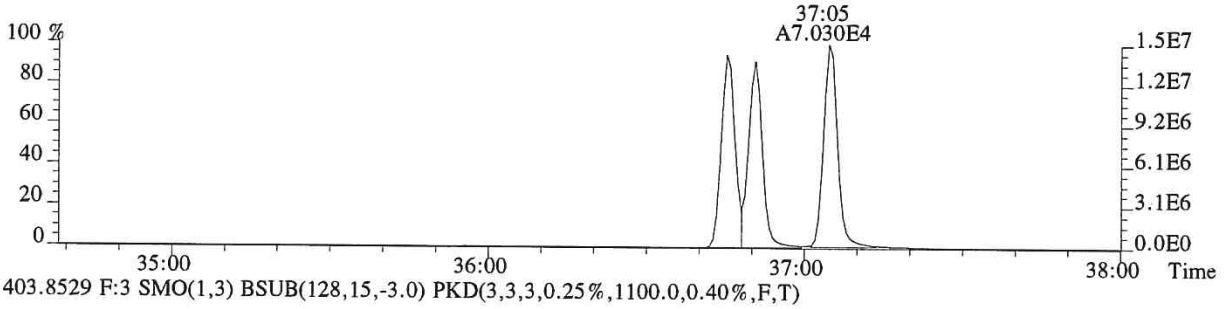
File:P519996 #1-303 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,676.0,0.40%,F,T)



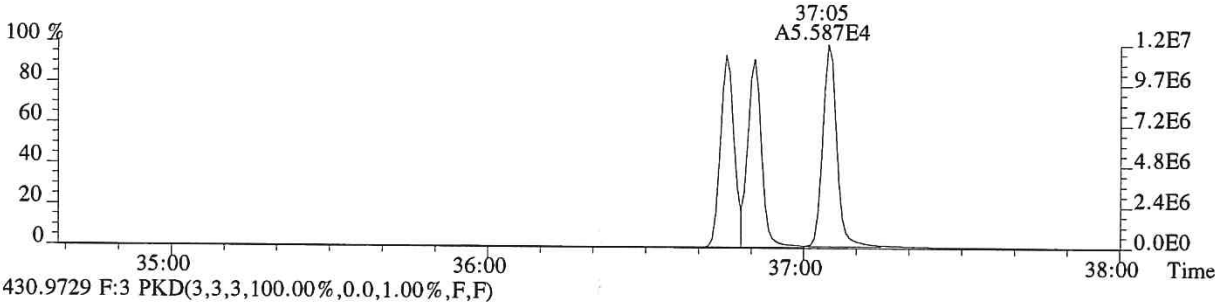
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,556.0,0.40%,F,T)



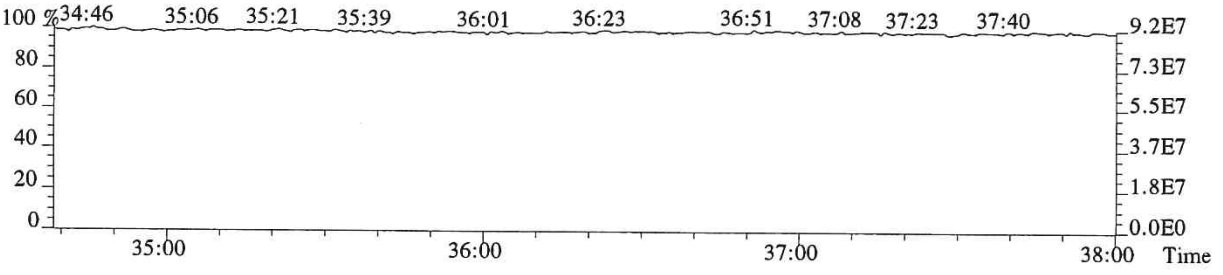
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1028.0,0.40%,F,T)



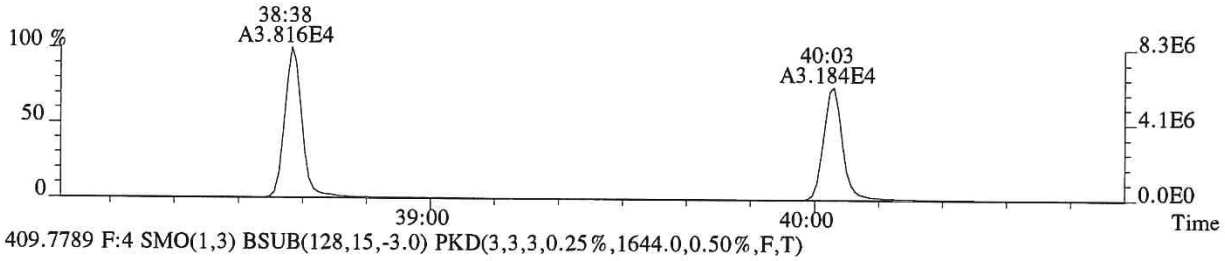
403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1100.0,0.40%,F,T)



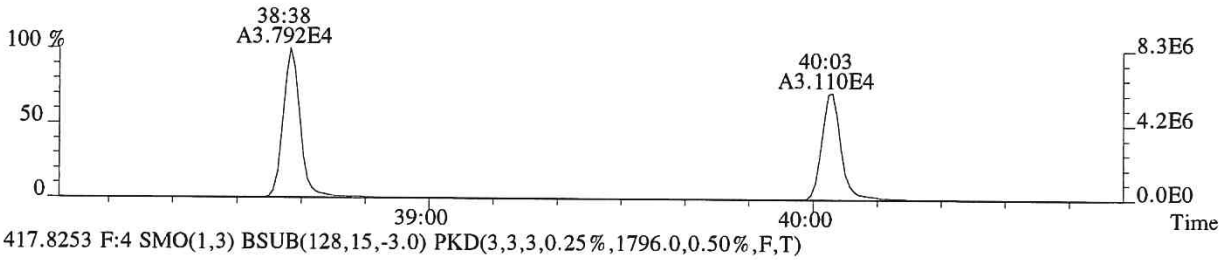
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



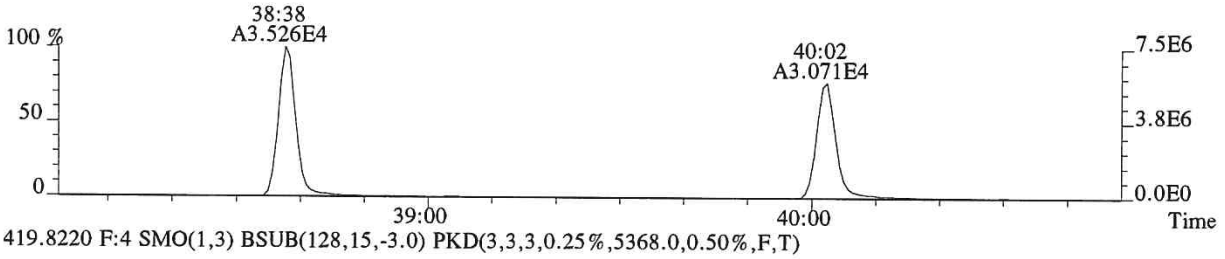
File:P519996 #1-250 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6128.0,0.50%,F,T)



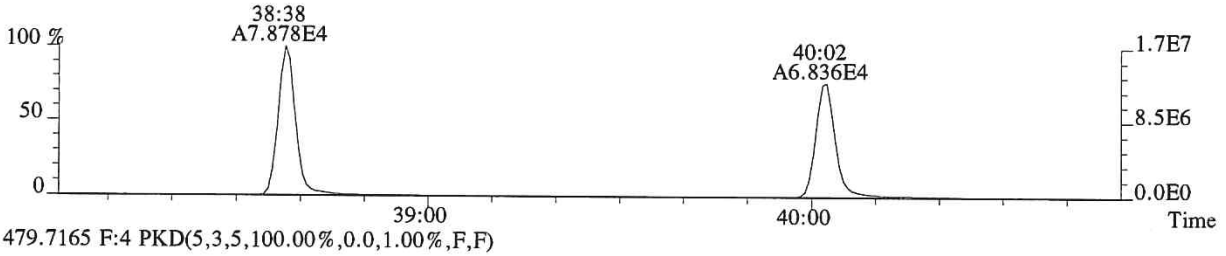
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1644.0,0.50%,F,T)



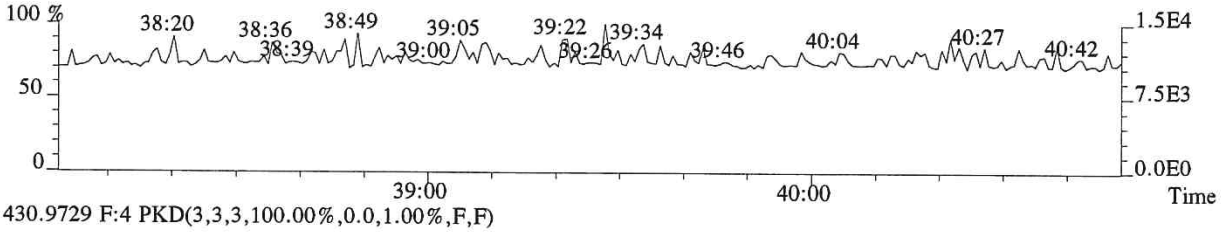
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1796.0,0.50%,F,T)



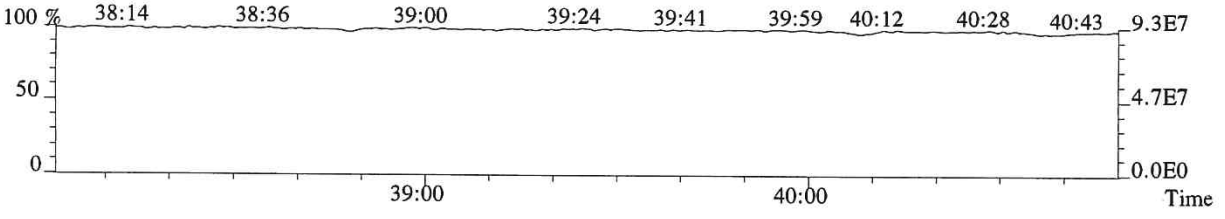
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5368.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

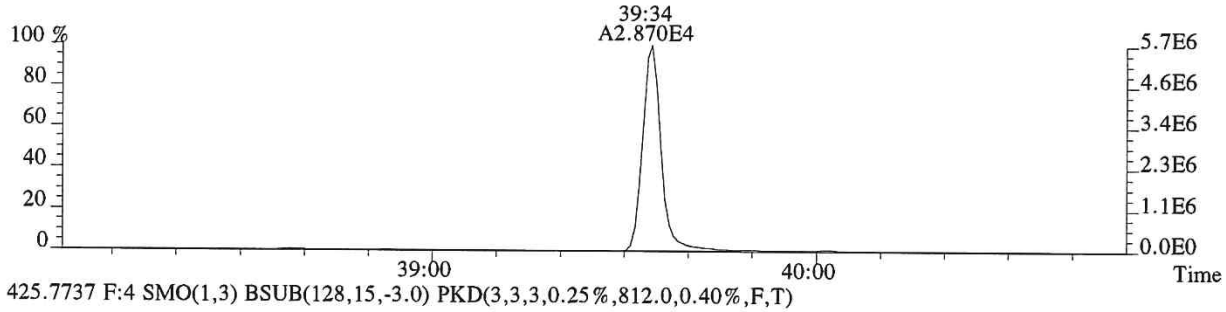


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

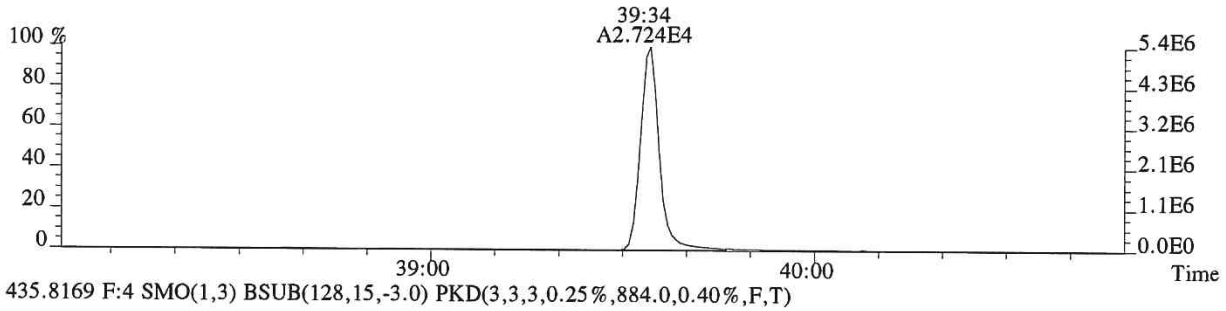


018988

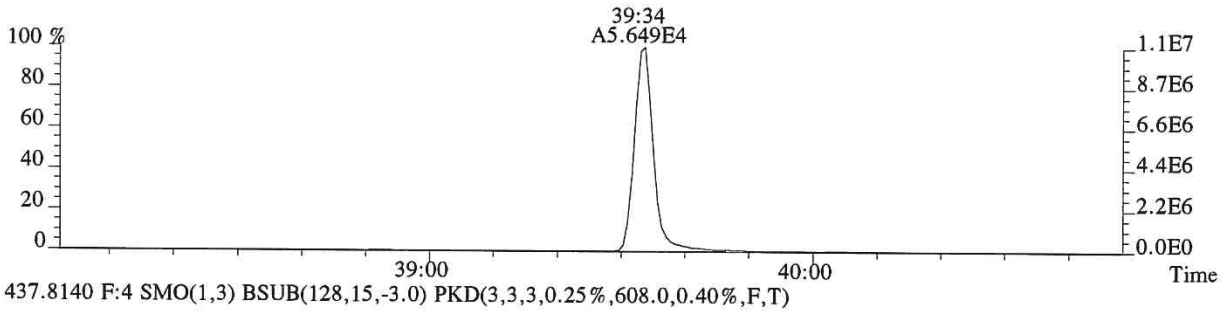
File:P519996 #1-250 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,944.0,0.40%,F,T)



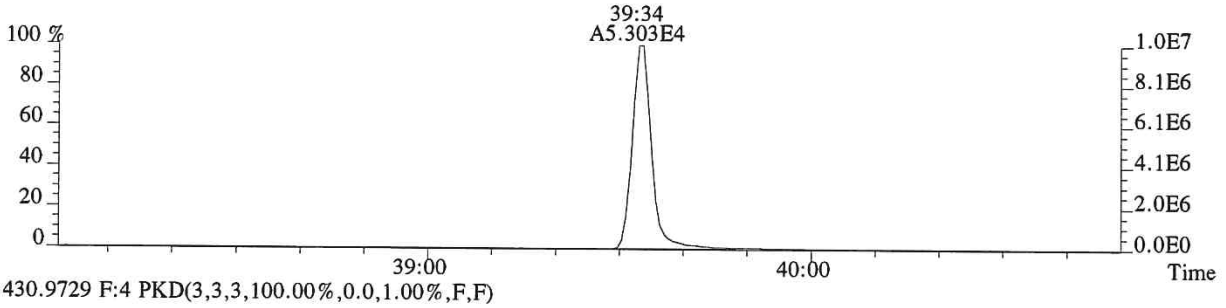
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,812.0,0.40%,F,T)



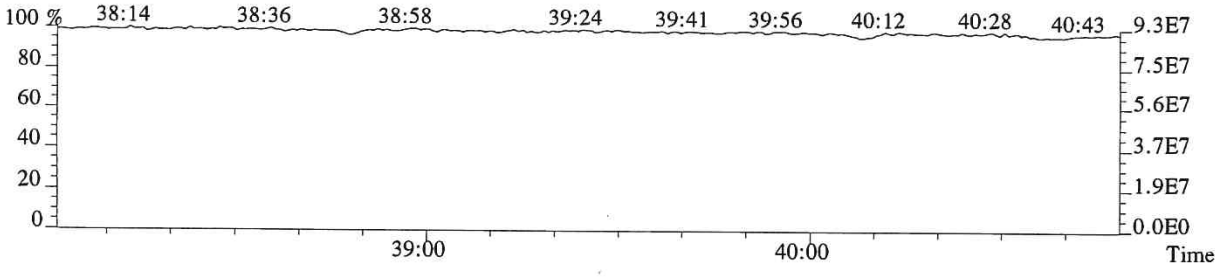
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,884.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,608.0,0.40%,F,T)

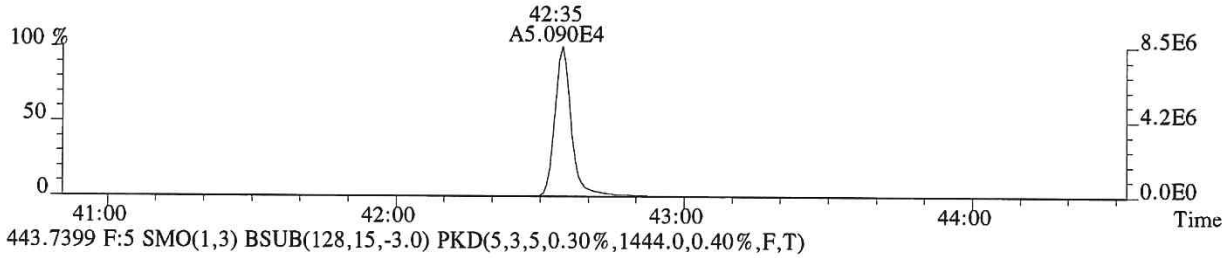


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

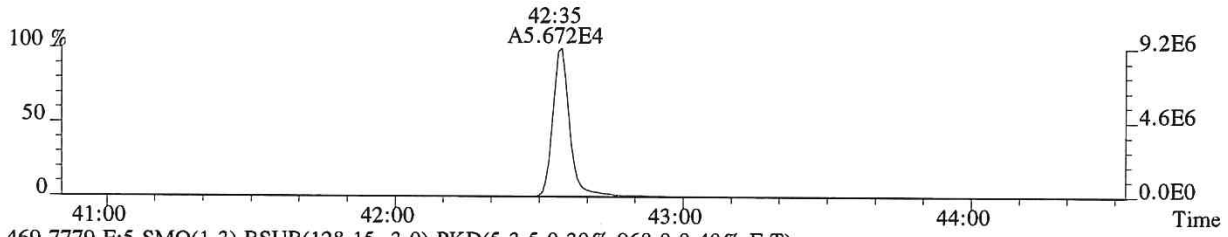


018989

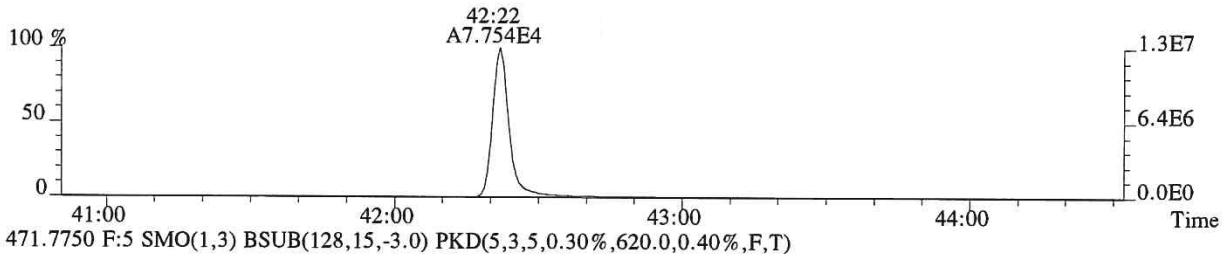
File:P519996 #1-333 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,352.0,0.40%,F,T)



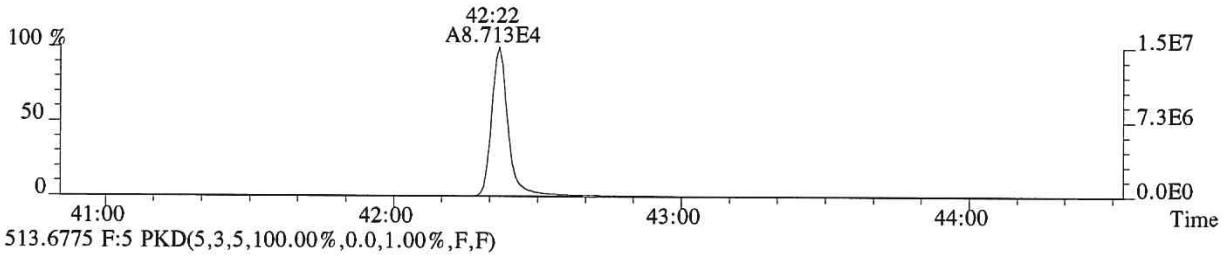
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1444.0,0.40%,F,T)



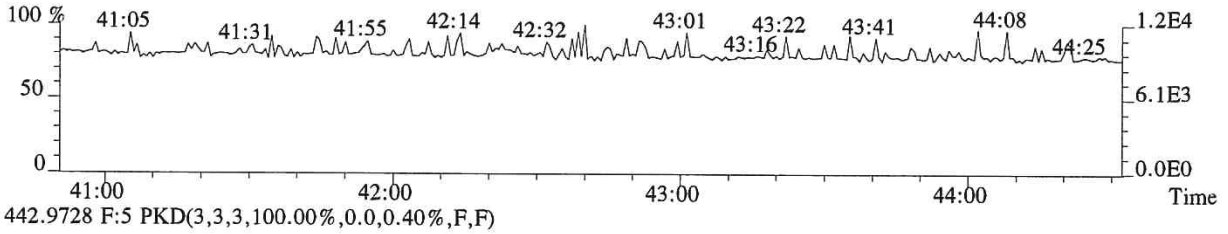
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,968.0,0.40%,F,T)



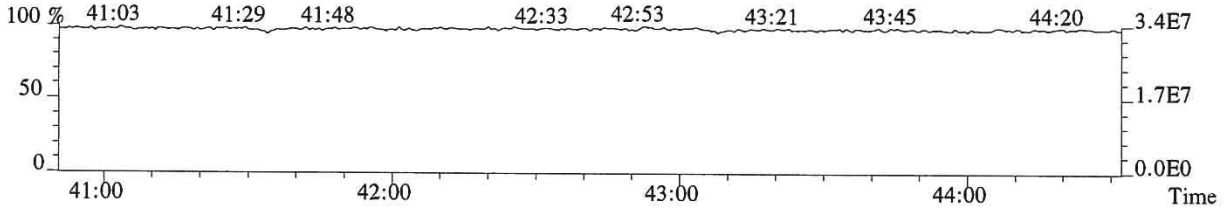
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,620.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

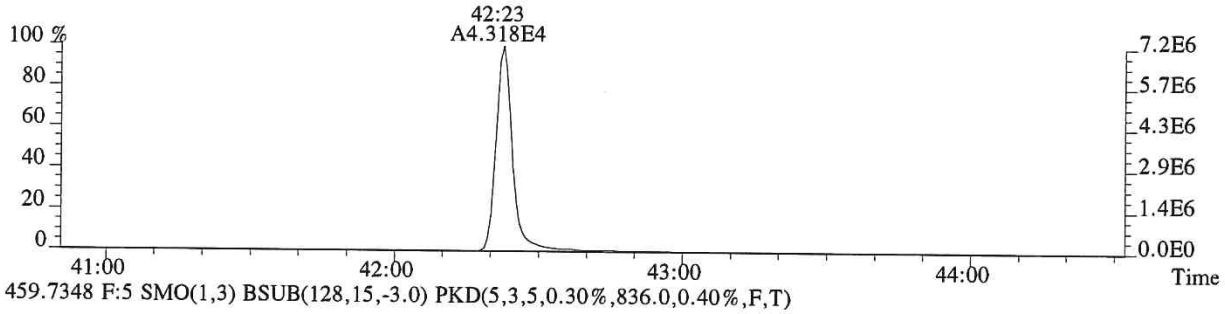


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

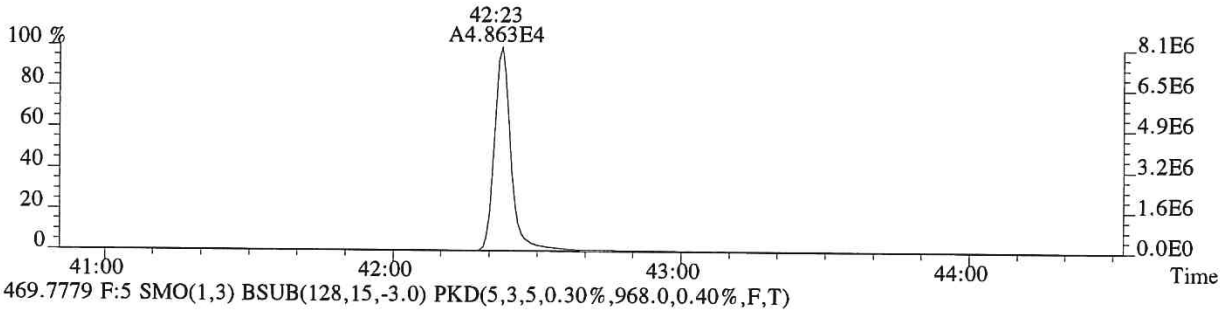


018990

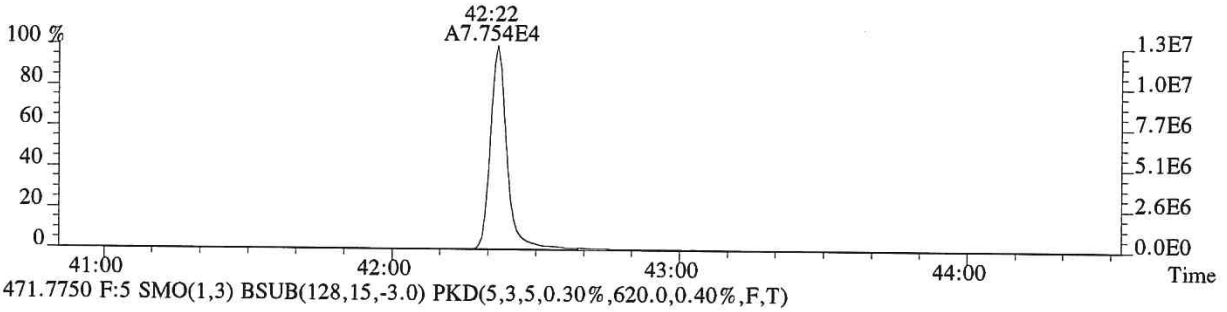
File:P519996 #1-333 Acq:16-JAN-2019 11:58:18 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:195556
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,864.0,0.40%,F,T)



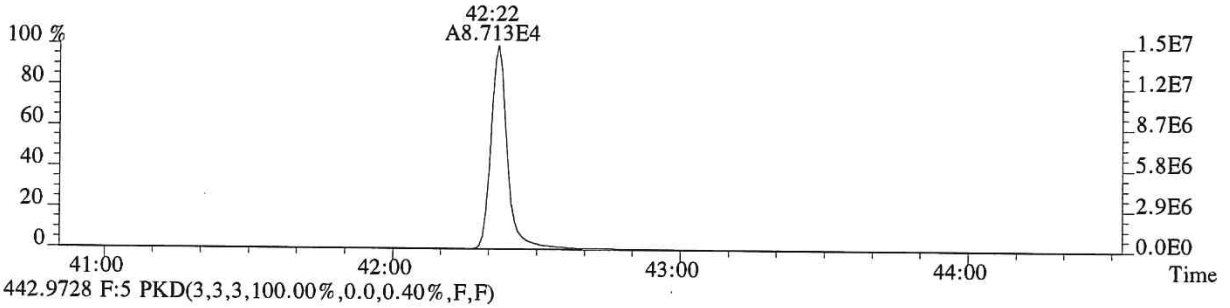
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,836.0,0.40%,F,T)



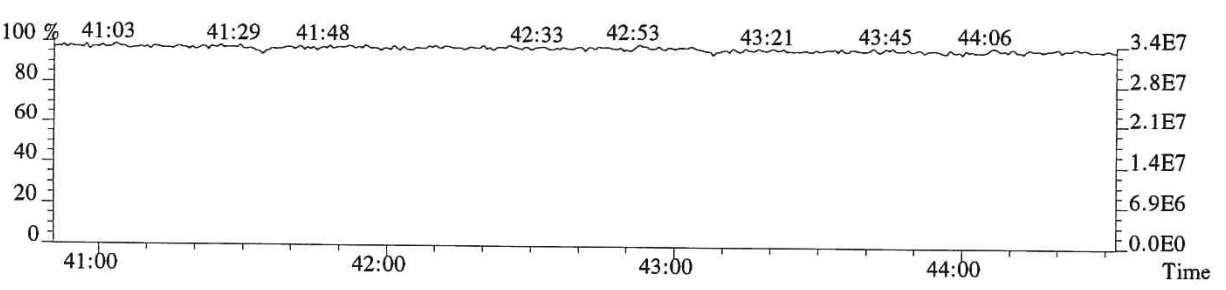
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,968.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,620.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



Initial Calibration

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Laboratory Review Checklist: HRMS Initial Calibration

Method: 1613/8290	Process Date: 01/25/18
Instrument Name: E-HRMS-07	Calibration File Name: P5-1801241613I
Processor Name: Gisela Cruz	Reviewer Name: Loan Leung
Supervisor: Kristin Neir	

Description	Yes	No	NA	NR	ER#
Analytical Sequence					
Does the analytical sequence summary accurately reflect the instrument run log, including ICV?	√				
Was a Mass Resolution Check performed at the beginning and end of the 12-hour sequence?	√				
Were all calibration standards and the ICV analyzed within the same 12-hour sequence?	√				
Were all calibration standards analyzed only once?	√				
Was the ICV analyzed after the ICAL, before analyzing samples?	√				
	√				
Mass Resolution Check					
Are beginning and ending resolution checks provided and legible?	√				
Were all target masses >10,000 resolving power at the beginning of the sequence?	√				
Were all target masses >10,000 resolving power at the end of the sequence?	√				
For PCB analysis, were masses at the low and high end of each function mass range >8,000?			√		
Where automatic printout of the mass resolution were not >10,000, was the resolution inspected by a trained analyst, including manual calculation of the resolution, if warranted?			√		
Window Define/209					
Is the window defining mix summary present, and accompanied by SICPs/Chromatograms for the WDM?	√				
Was the WDM/Column Performance/209 solution analyzed prior to the analysis of the calibration standards?	√				
Was 2,3,7,8-TCDD peak valley <25% to any other TCDD?	√				
Were all first and last eluters adequately resolved in each function?	√				
If first and last eluters were not resolved, was corrective action performed and documented, followed by a reanalysis of the WDM?			√		
Was the retention time of PCB 209 >55 min?			√		
Were the following congeners uniquely resolved (valley height <40% of the shortest peak)? PCB-34 and PCB-23 PCB-187 and PCB-182			√		
Did PCB 156/157 co-elute within 2 seconds at peak maximum?			√		
Calibration Standards					
Were there at least 5 calibration standards analyzed?	√				
If not all calibration standards were used, were the omitted standards either the lowest or highest calibration standard?			√		

Laboratory Review Checklist: HRMS Initial Calibration

Method: 1613/8290	Process Date: 01/25/18
Instrument Name: E-HRMS-07	Calibration File Name: P5-180124161 3I
Processor Name: Gisela Cruz	Reviewer Name: Loan Luong
Supervisor: Kristin Neir	

Description	Yes	No	NA	NR	ER#
Are all sample response summaries, S/N height summaries, and SICPs included (and legible) for the entire sequence?	√				
Did each calibration point meet method criteria for Ion Abundance Ratio for all analytes and labeled standards?	√				
Did each calibration point meet method criteria for signal-to-noise ratios (S/N)?	√				
Were area counts for the highest calibration standard below levels of saturation?	√				
Were manual integrations technically justified to correct for poor software integration?		√			
Response Factors					
Is the ICAL Response Factor Summary present, including RR/RF values for each native/labeled analyte at each level of calibration?	√				
Were all calibration standards used in determining response factors?	√				
Were relative response factors (RR) for each native analyte calculated at each calibration point?	√				
Did the RSD for RRFs for each native analyte meet method criteria?	√				
Were response factors (RF) for each native analyte not having a corresponding labeled compound calculated at each calibration point?	√				
Were RFs for each labeled compound calculated for each calibration point?	√				
Did the RSD for RF for each labeled compound meet method criteria?	√				
Initial Calibration Verification					
Is the calibration verification present, including form 4A/B reflecting results for the ICV (Conc. or %D)	√				
Did all analytes meet method criteria for the ICV.	√				

Laboratory Review Checklist: Initial Calibration

Method: 1613/8290	Process Date: 01/25/18
Instrument Name: E-HRMS-07	Calibration File Name: P5-180124161 3I
Processor Name: Gisela Cruz	Reviewer Name: Loan Luong

ER#[5]	Description

NA = Not Applicable;
NR = Not Reviewed;
R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

5DFC
PCDD/PCDF ANALYTICAL SEQUENCE SUMMARY

Lab Name: ALS ENVIRONMENTAL Contract:

Lab Code: TX01411 Episode No.: SDG No.:

GC Column: DB-5MSUI ID: 0.25 (mm) Instrument ID: E-HRMS-07

Init. Calib. Date: 01/24/18

Init. Calib.Times: 11:44

THE ANALYTICAL SEQUENCE OF STANDARDS, SAMPLES, BLANKS, SPIKES AND DUPLICATES IS AS FOLLOWS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
183360	WINDOW DEFINE	P513848	24-JAN-18	11:44:47
76554	CS0.5	P513850	24-JAN-18	13:32:06
76555	CS1	P513851	24-JAN-18	14:23:56
76556	CS2	P513852	24-JAN-18	15:18:44
76557	CS3	P513853	24-JAN-18	16:06:29
76558	CS4	P513854	24-JAN-18	16:55:09
185657	CS5	P513855	24-JAN-18	17:43:48
75080	2ND SOURCE	P513857	24-JAN-18	19:21:06

Sample List Report — **MassLynx 4.1 SCN815 SCN795**

Sample List: C:\MassLynx\EHRMS07.PRO\SampleDB\20180124A.SPL
Last Modified: Thursday, January 25, 2018 07:09:10 Eastern Standard Time
Printed: Thursday, January 25, 2018 07:24:00 Eastern Standard Time

Page Position (1, 1)

E1801139

Opus 4: P5-180124I613I P513857res

*Opus 4: P5-180124m23I P513857resm23

	Date	Time	File Name	Sample ID	File Text	MS File	Inlet File	Bottle	Analyst	Comments
1	1/24/18	10:39	P513847	CS3	186061	EPA1613_ALS	Dioxin_ALS	Tray1:1	YY	not used
2		11:44	P513848	WINDOWDEFINE	183360	EPA1613_ALS	Dioxin_ALS	Tray1:2		H2Ocheck 11:10
3		12:35	P513849	CS0.5	76554	EPA1613_ALS	Dioxin_ALS	Tray1:3		not used
4		13:32	P513850	CS0.5	76554	EPA1613_ALS	Dioxin_ALS	Tray1:4		~~not used~~ YB 1/25/18
5		14:23	P513851	CS1	76555	EPA1613_ALS	Dioxin_ALS	Tray1:5		
6		15:18	P513852	CS2	76556	EPA1613_ALS	Dioxin_ALS	Tray1:6		
7		16:06	P513853	CS3	76557	EPA1613_ALS	Dioxin_ALS	Tray1:7		
8		16:55	P513854	CS4	76558	EPA1613_ALS	Dioxin_ALS	Tray1:8		
9		17:43	P513855	CS5	185657	EPA1613_ALS	Dioxin_ALS	Tray1:9		
10		18:32	P513856	NONANE	NONANE	EPA1613_ALS	Dioxin_ALS	Tray1:10		
11		19:21	P513857	2ND SOURCE	75080	EPA1613_ALS	Dioxin_ALS	Tray1:11		
12			---	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:1		
13			—	—	—	EPA1613_ALS	Dioxin_ALS	Tray1:1		
14			—	—	---	EPA1613_ALS	Dioxin_ALS	Tray1:2		
15			---	—	---	EPA1613_ALS	Dioxin_ALS	Tray1:15		H2Ocheck 1/25/18 00:51
16		19:21	—	—	—	EPA1613_ALS	Dioxin_ALS	Tray1:16	—	—
17	---	—	—	—	—	EPA1613_ALS	Dioxin_ALS	Tray1:17	—	---
18	---	---	—	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:18	—	—
19	—	—	---	—	---	EPA1613_ALS	Dioxin_ALS	Tray1:19	---	—
20	---	---	—	—	—	EPA1613_ALS	Dioxin_ALS	Tray1:20	—	---
21	---	---	—	---	---	EPA1613_ALS	Dioxin_ALS	Tray1:21	—	—
22	---	---	—	—	---	EPA1613_ALS	Dioxin_ALS	Tray1:22	---	—
23	—	—	---	—	---	EPA1613_ALS	Dioxin_ALS	Tray1:23	---	—
24	—	—	—	—	---	EPA1613_ALS	Dioxin_ALS	Tray1:24	—	—
25	---	---	—	---	—	EPA1613_ALS	Dioxin_ALS	Tray1:25	—	—

1032 of 1143

gc 01/25/18

* gc 01/25/18

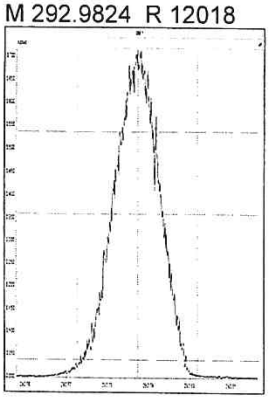
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018996

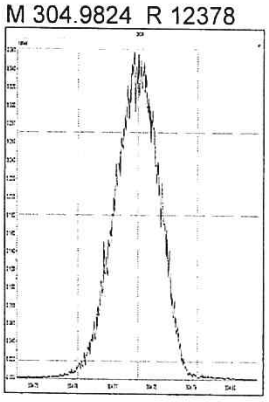
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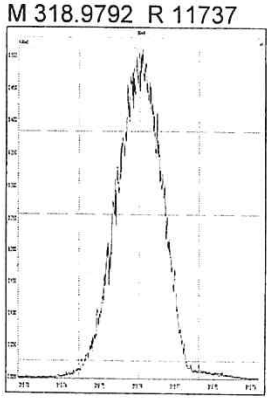
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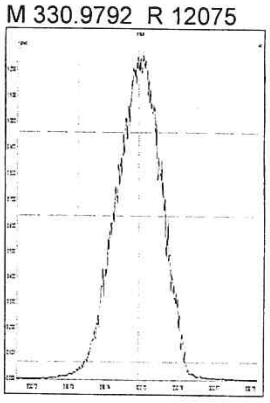
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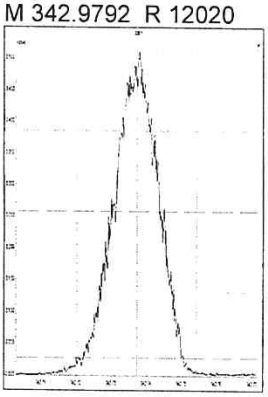
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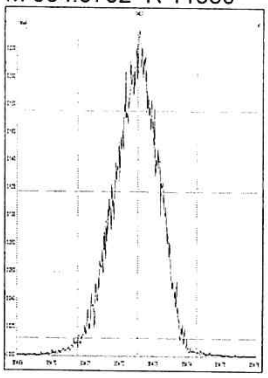
M 330.9792 R 12075



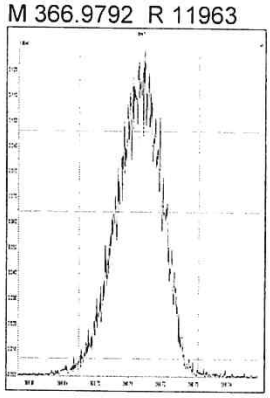
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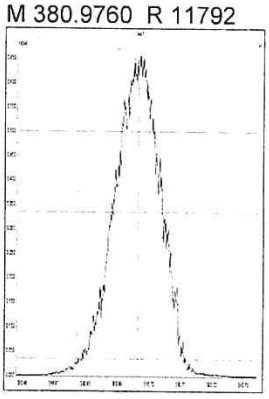
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M 366.9792 R 11963



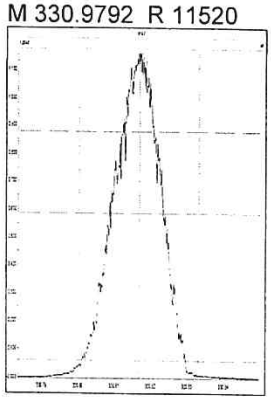
M 380.9760 R 11792



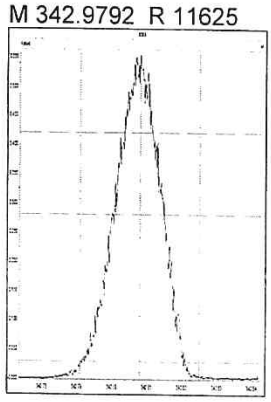
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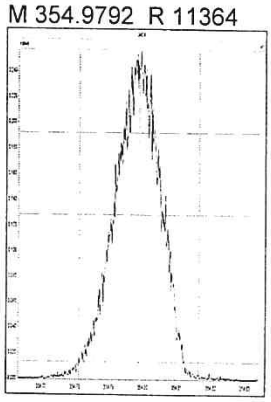
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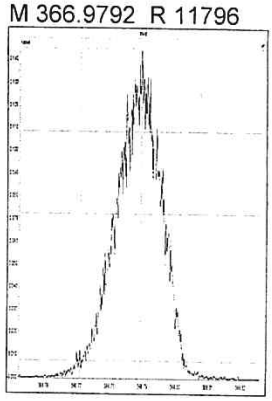
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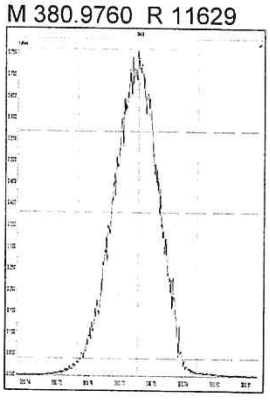
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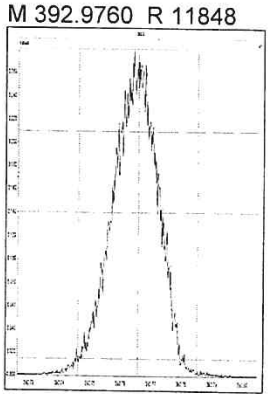
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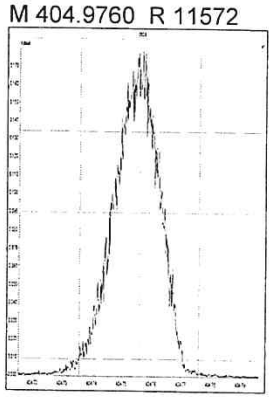
M 380.9760 R 11629



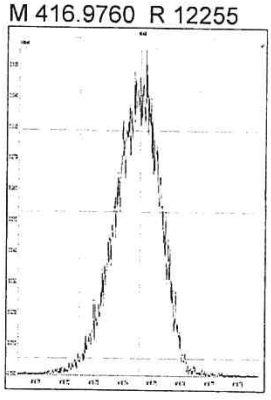
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M 404.9760 R 11572



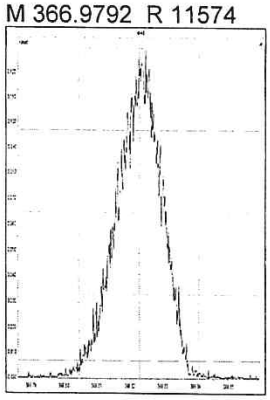
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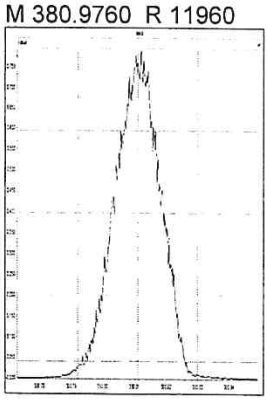
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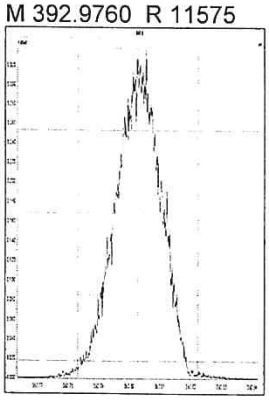
M 366.9792 R 11574



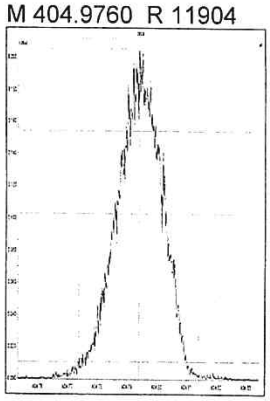
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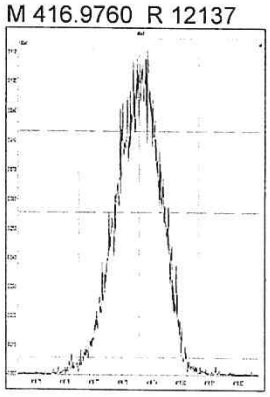
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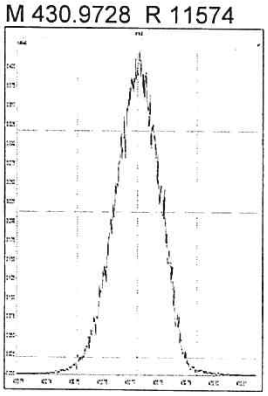
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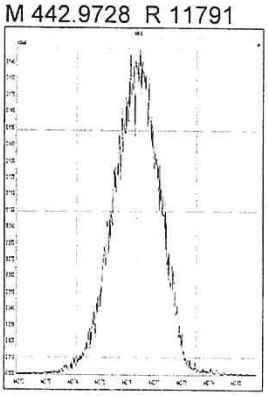
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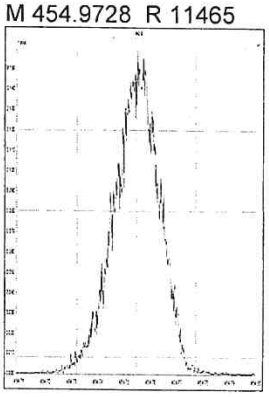
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M 442.9728 R 11791



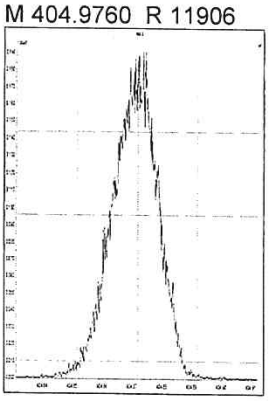
M 454.9728 R 11465



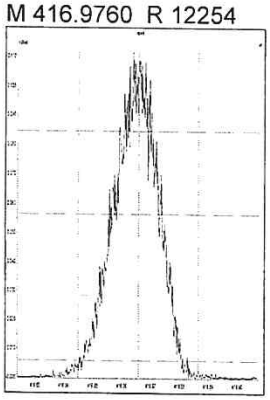
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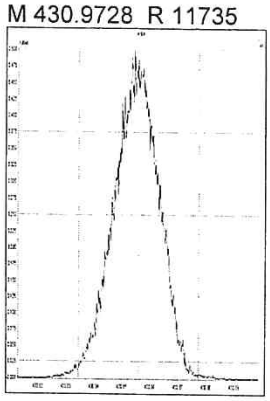
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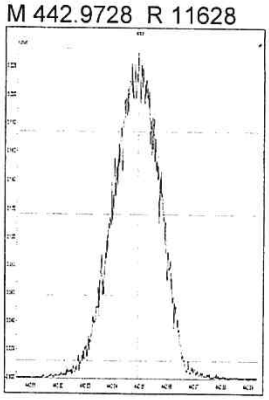
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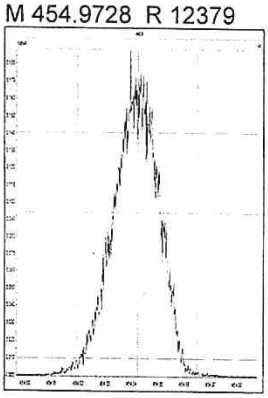
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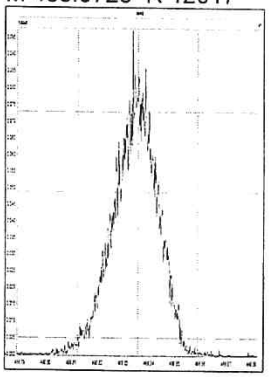
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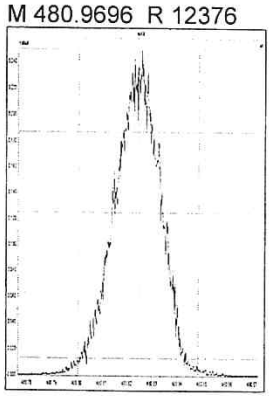
M 454.9728 R 12379



M 466.9728 R 12017



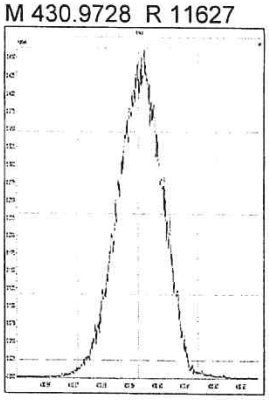
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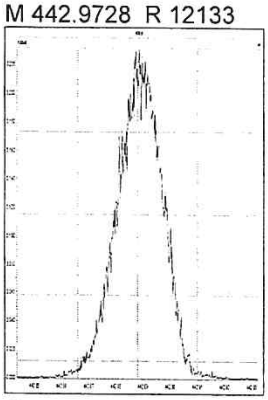
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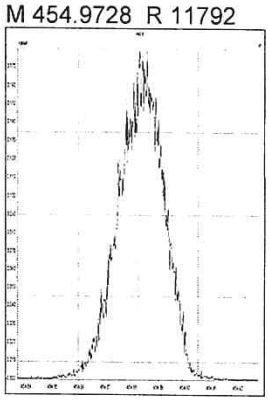
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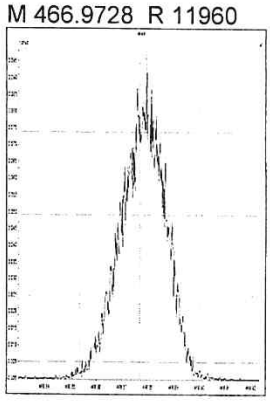
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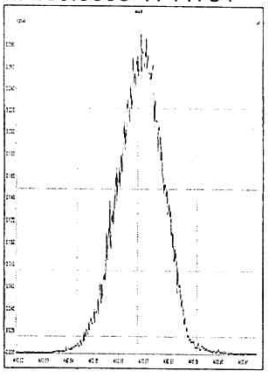
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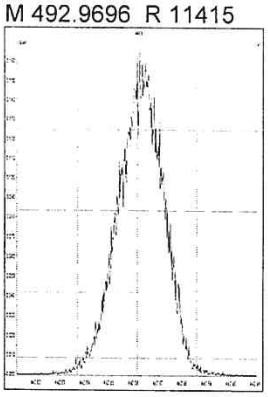
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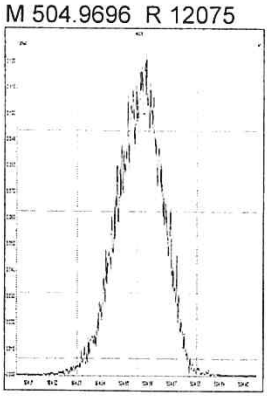
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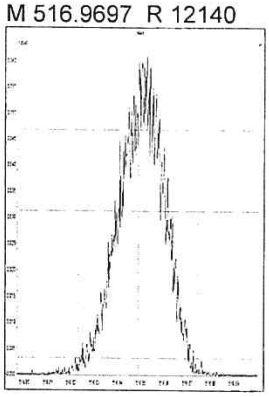
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M 504.9696 R 12075



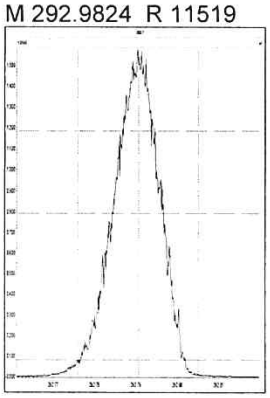
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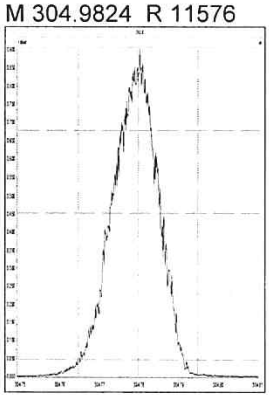
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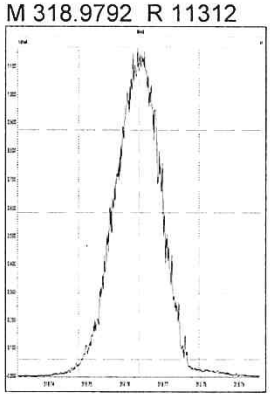
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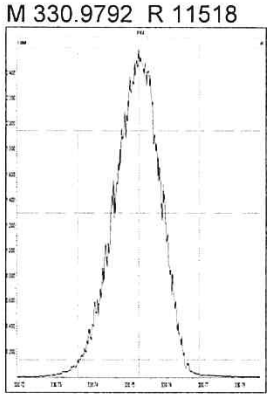
M 304.9824 R 11576



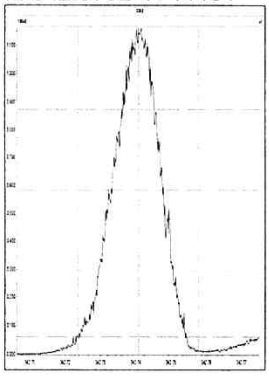
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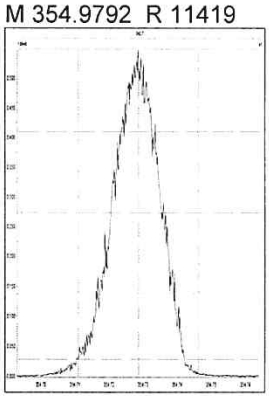
M 330.9792 R 11518



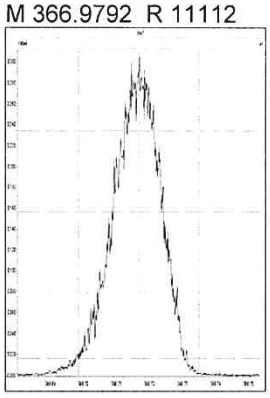
M 342.9792 R 11161



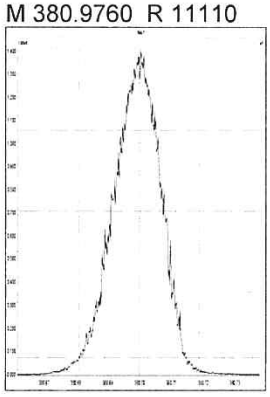
M 354.9792 R 11419



M 366.9792 R 11112



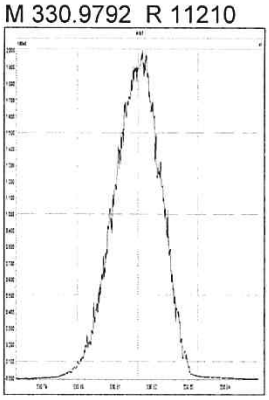
M 380.9760 R 11110



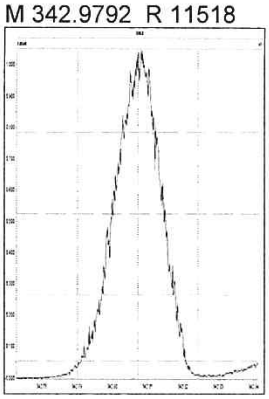
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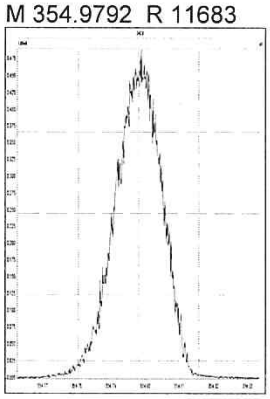
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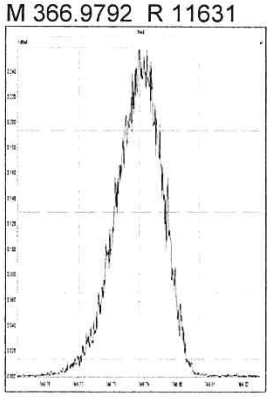
M 342.9792 R 11518



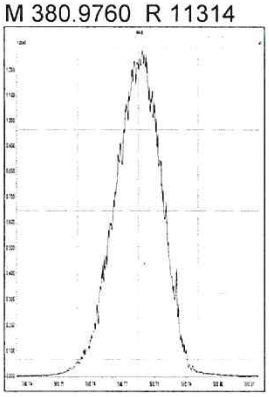
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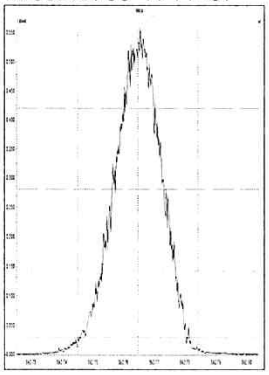
M 366.9792 R 11631



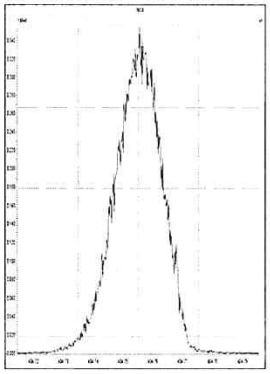
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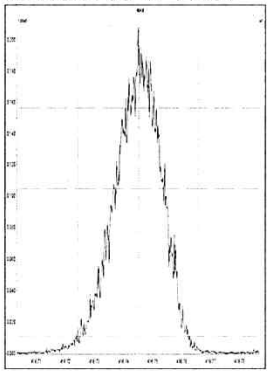
M 392.9760 R 11467



M 404.9760 R 11518



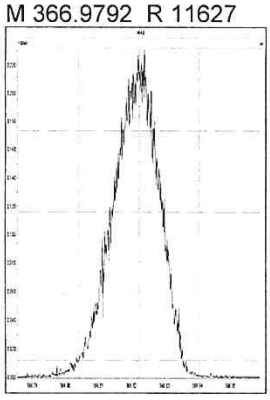
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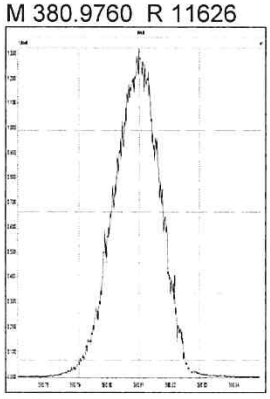
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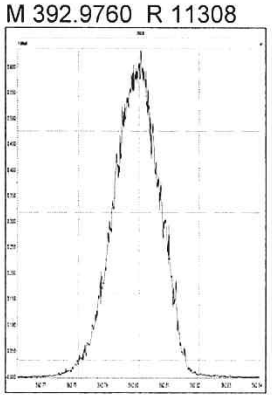
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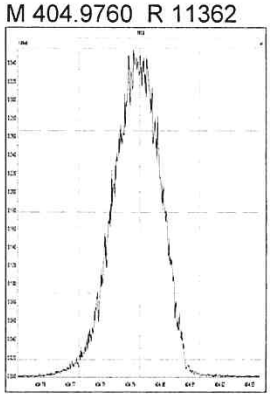
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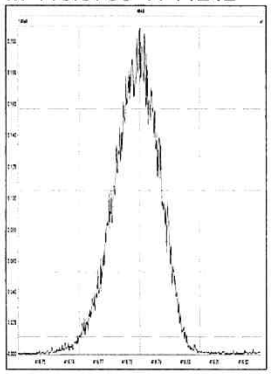
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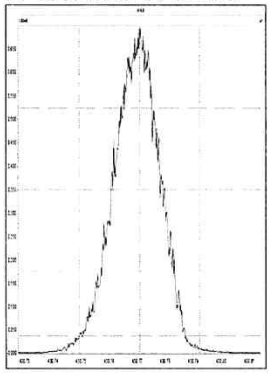
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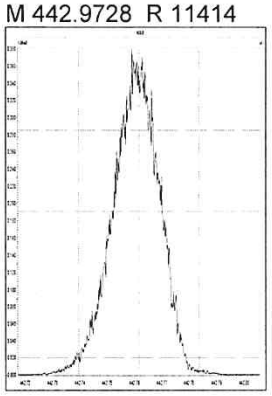
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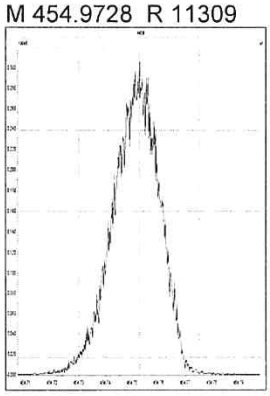
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M 442.9728 R 11414



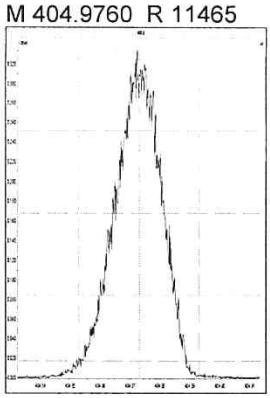
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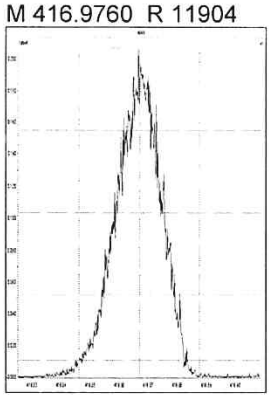
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Printed: Thursday, January 25, 2018 06:53:26 Eastern Standard Time

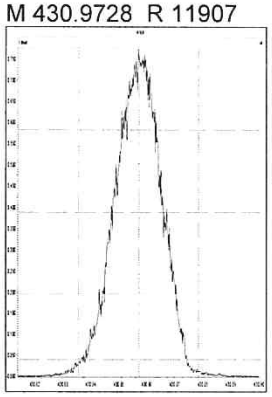
M 404.9760 R 11465



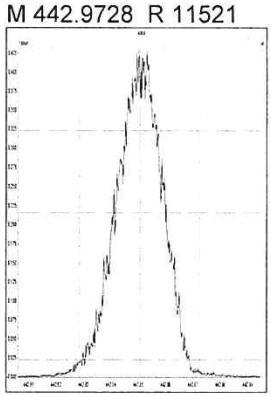
M 416.9760 R 11904



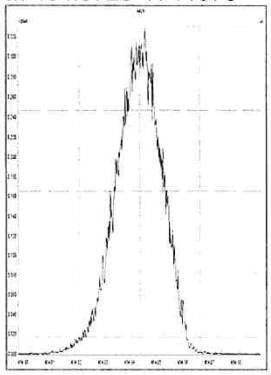
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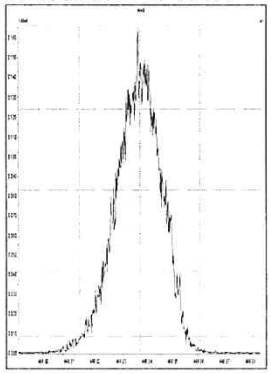
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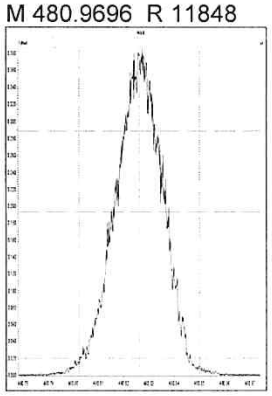
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M 466.9728 R 11417



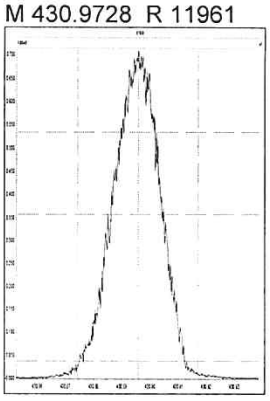
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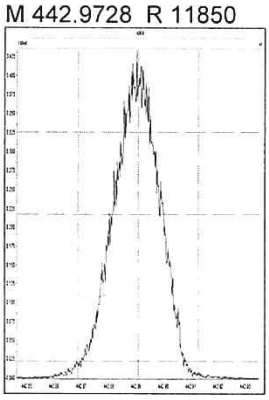
File: Experiment: EPA1613_ALS.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

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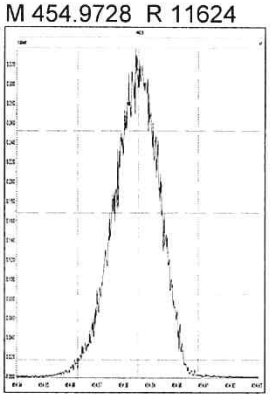
M 430.9728 R 11961



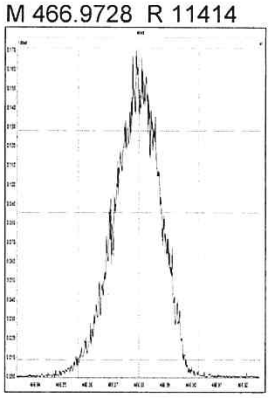
M 442.9728 R 11850



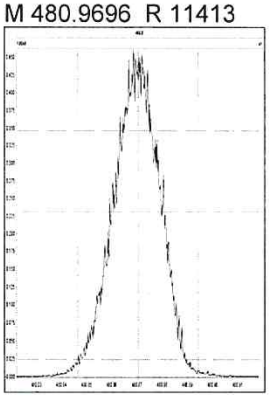
M 454.9728 R 11624



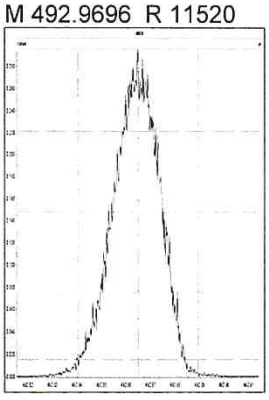
M 466.9728 R 11414



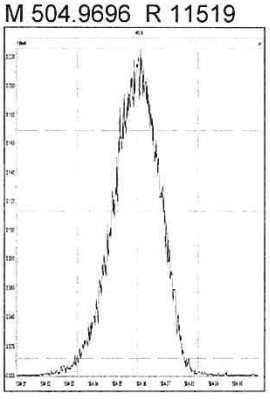
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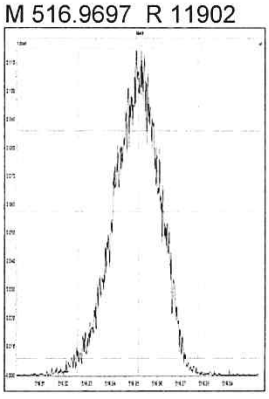
M 492.9696 R 11520



M 504.9696 R 11519



M 516.9697 R 11902



5DFA

WINDOW DEFINING MIX SUMMARY

CLIENT ID:

WDM

Lab Name: ALS Environmental
Lab Code: ALSTX
GC Column: DB-5MSUI

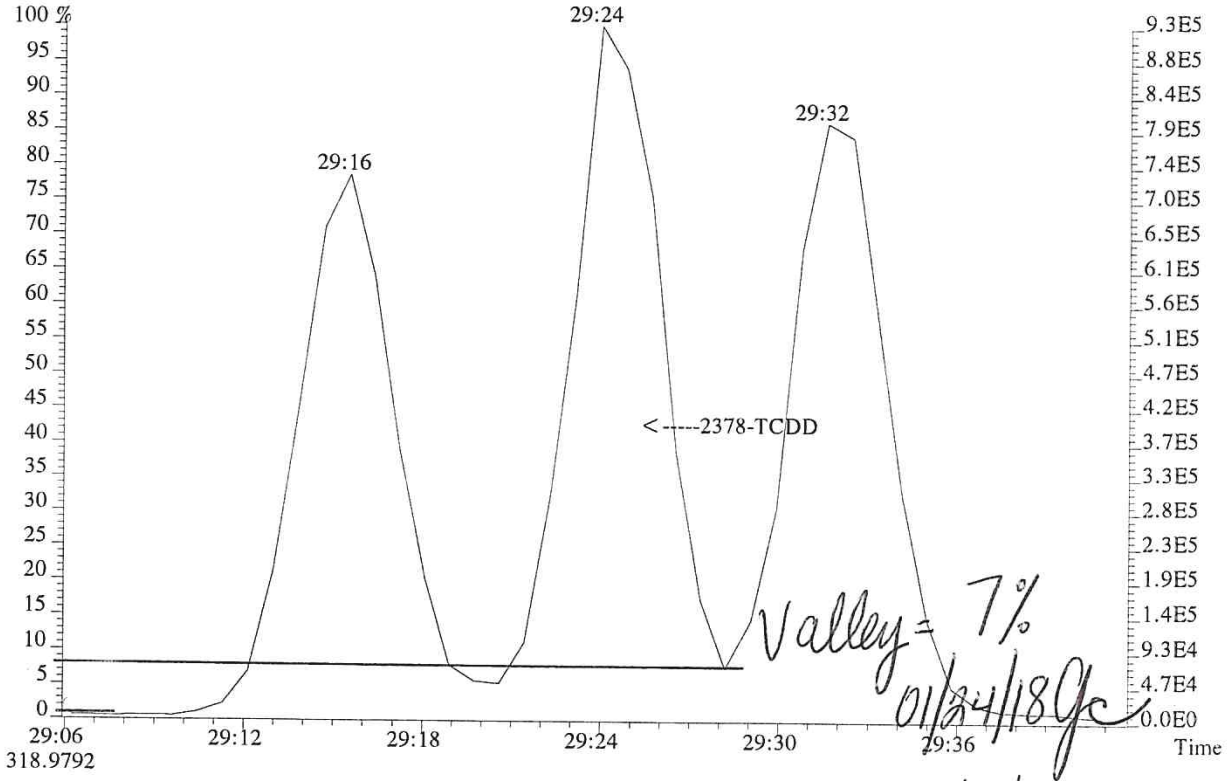
Case No.: _____ SDG No.:
ID: 0.25 (mm)

Lab File ID: P513848
Date Analyzed: 24-JAN-2018
Time Analyzed: 11:44:47

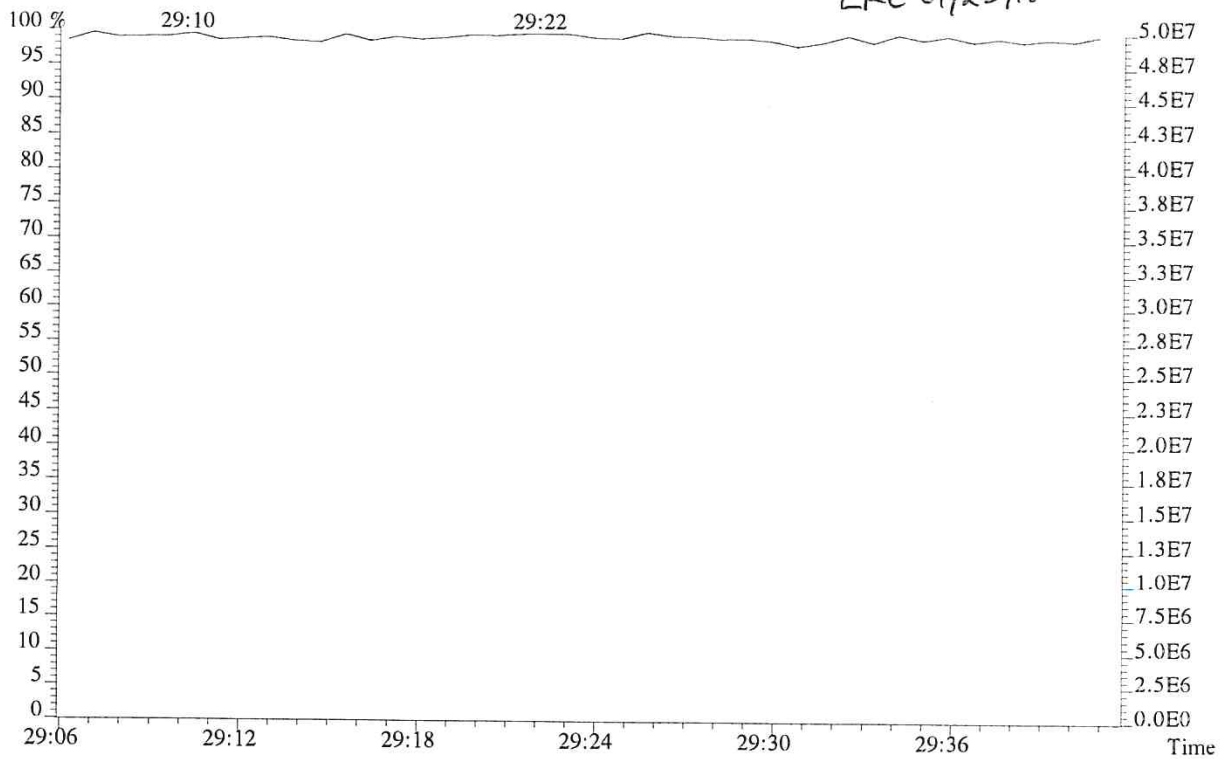
Congener	Retention Time First Eluting	Retention Time Last Eluting
TCDF	24:25	30:32
TCDD	26:17	30:22
PeCDF	30:27	34:34
PeCDD	31:55	34:19
HxCDF	35:11	37:38
HxCDD	35:41	37:14
HpCDF	38:49	40:14
HpCDD	39:04	39:44

% Valley 2378-TCDD: 7 %

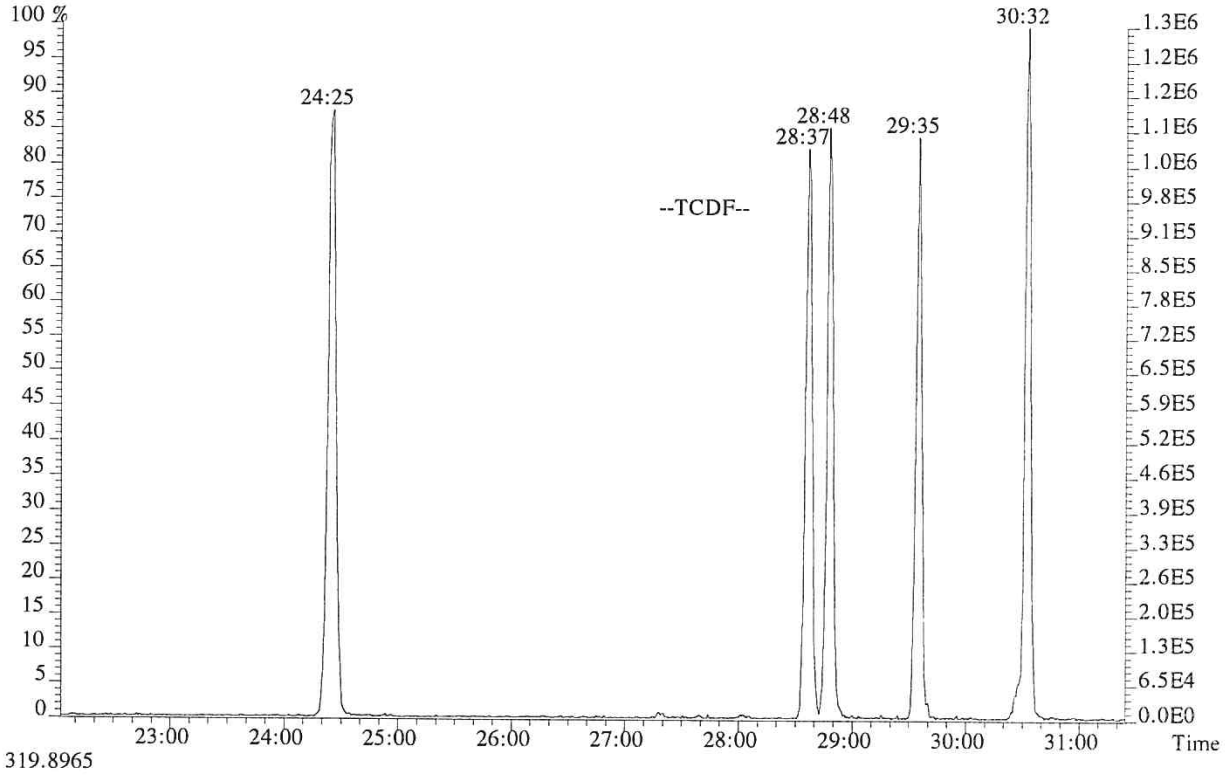
File:P513848 #1-665 Acq:24-JAN-2018 11:44:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:183360
319.8965



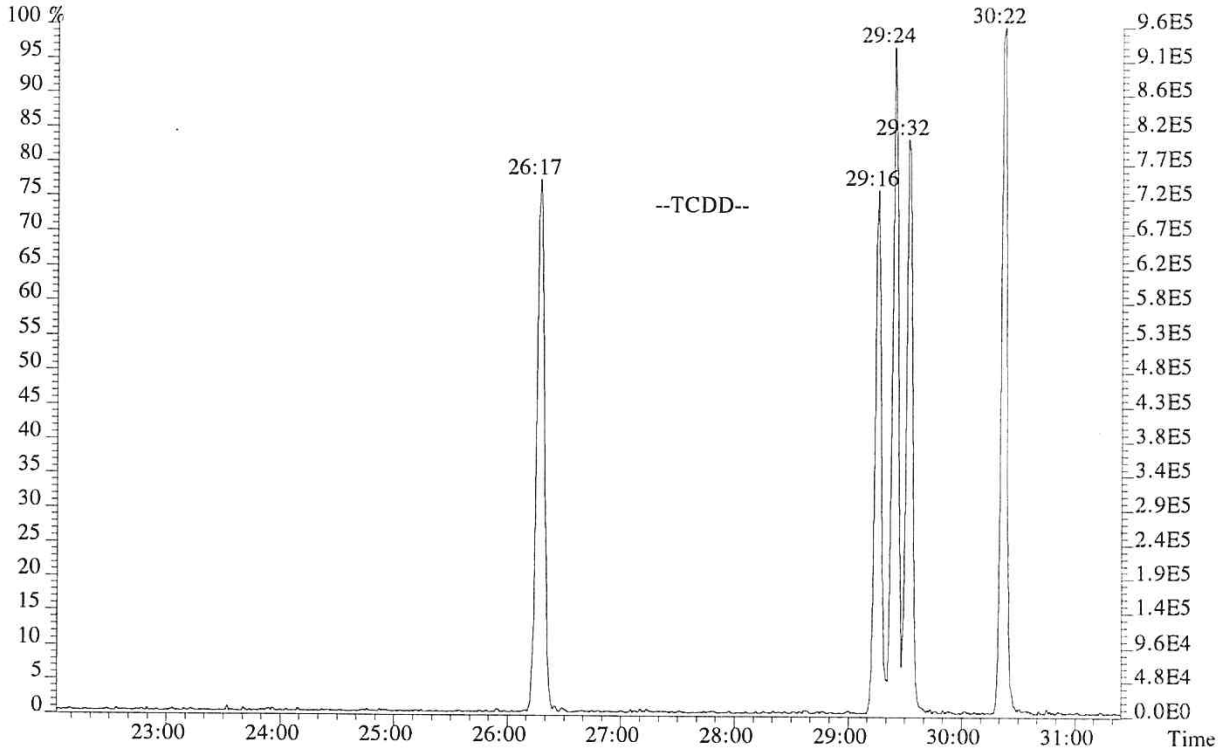
LKL 01/25/18



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Sample#1 Exp:183360
303.9016

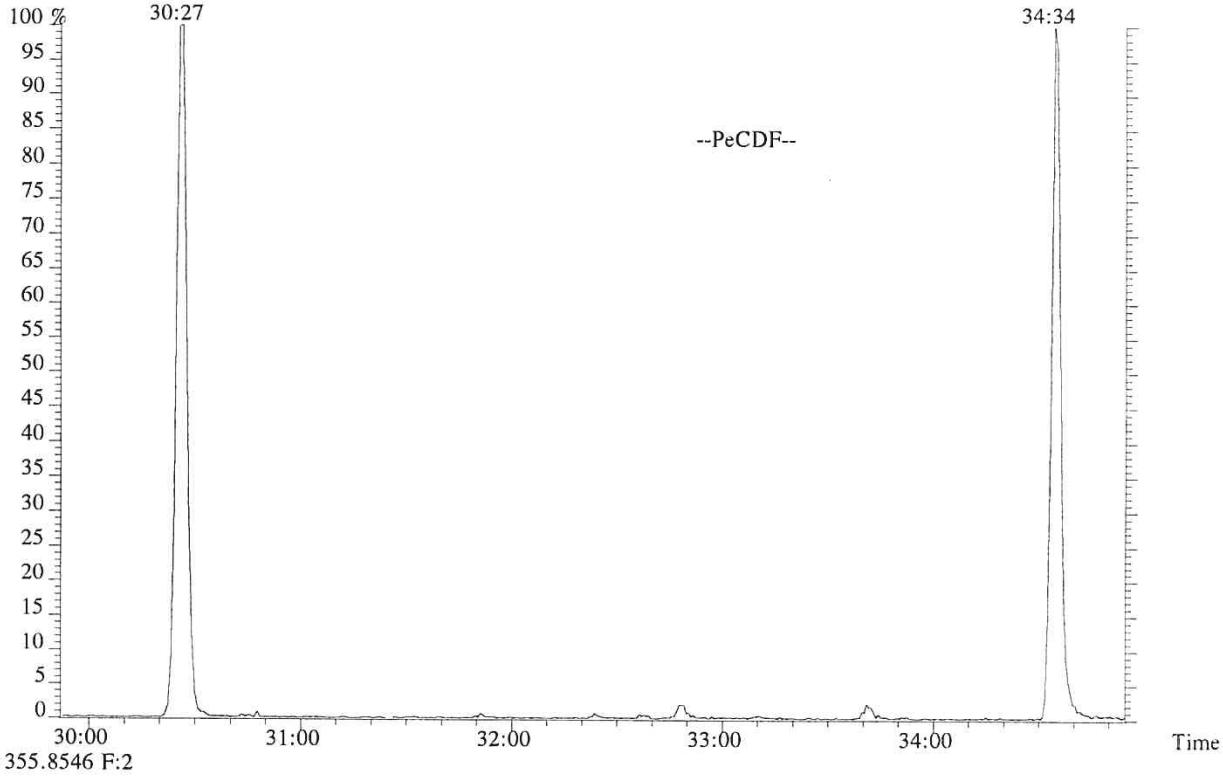


319.8965

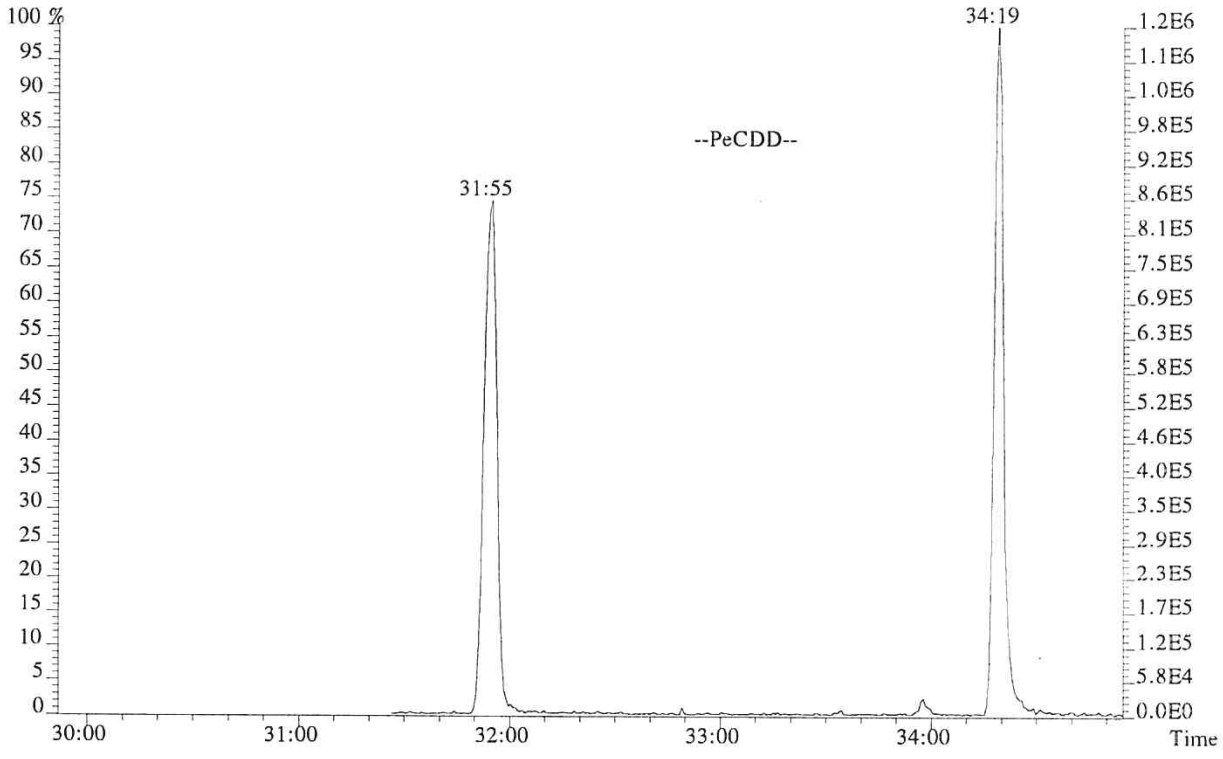


019009

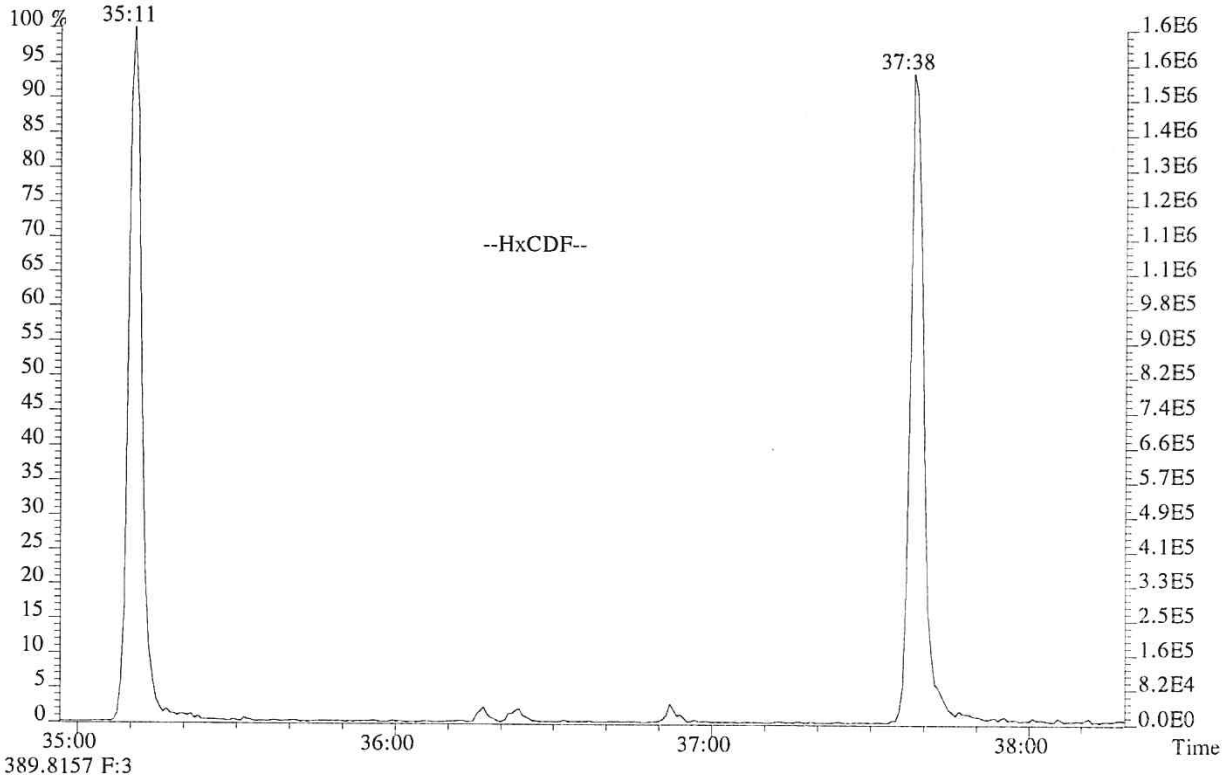
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Sample#1 Exp:183360
339.8597,339.8597 F:2



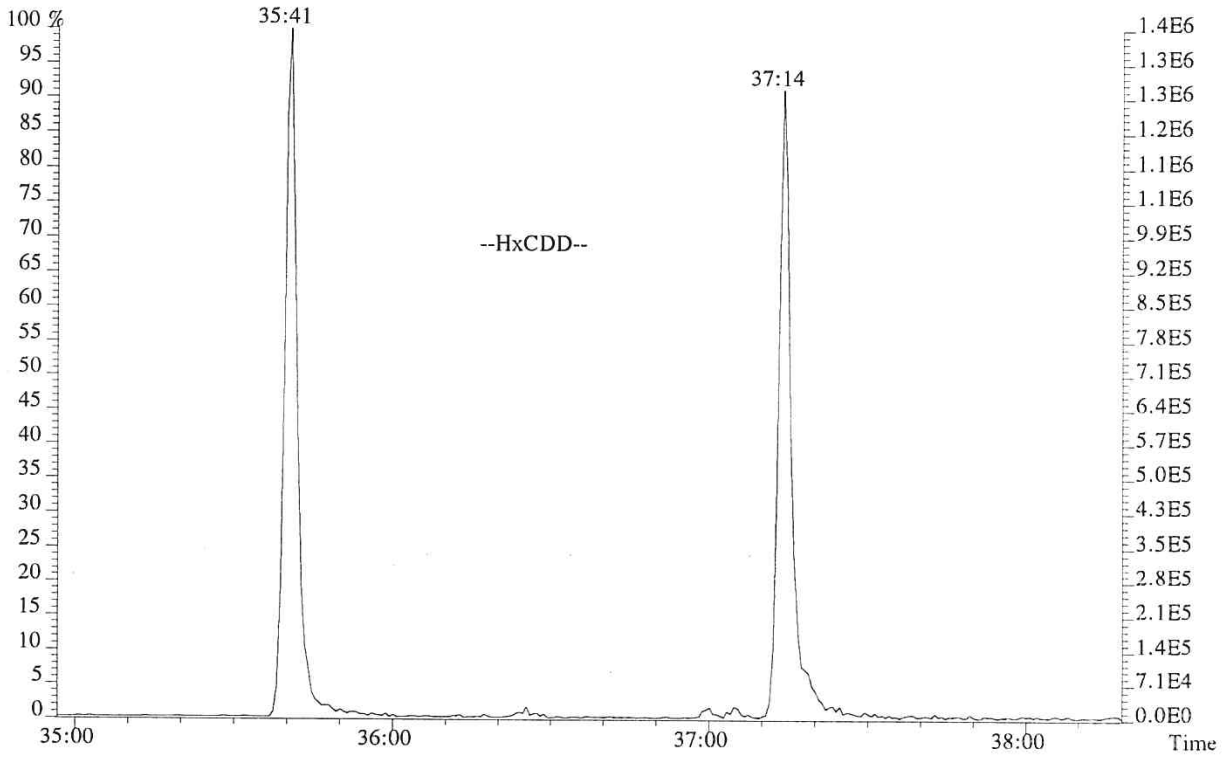
355.8546 F:2



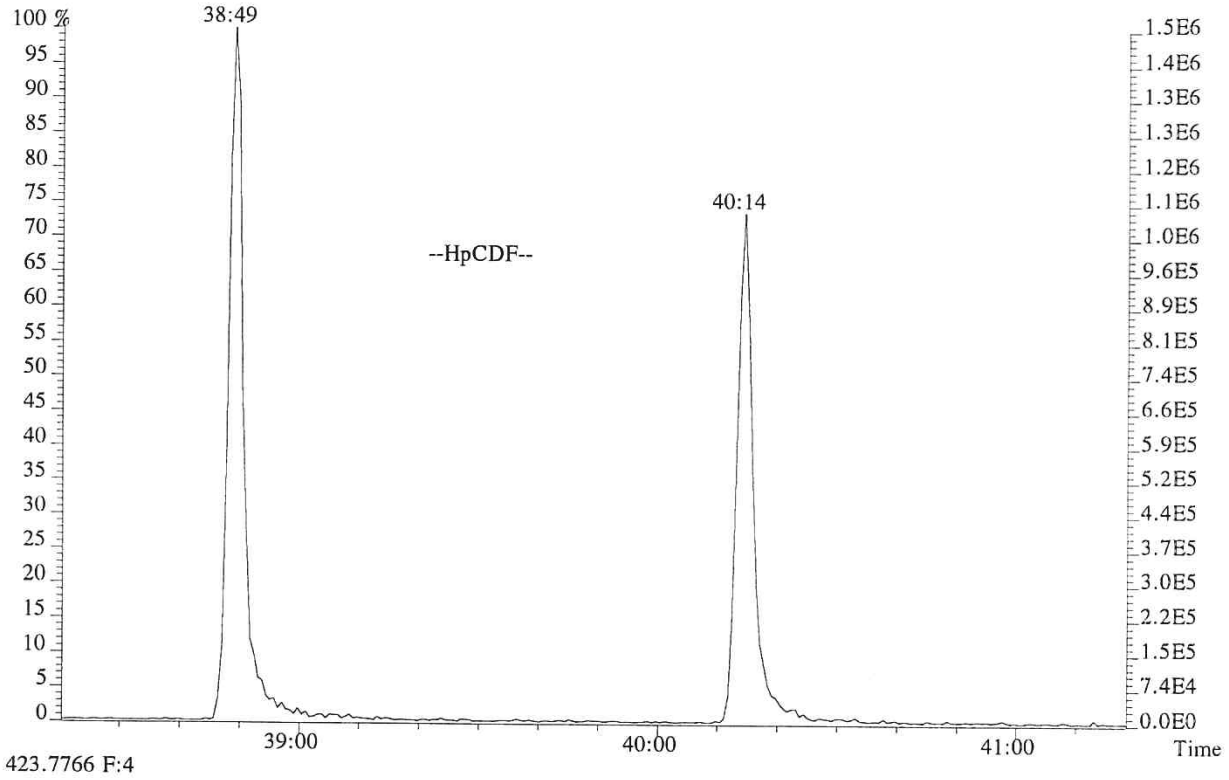
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Sample#1 Exp:183360
373.8208 F:3



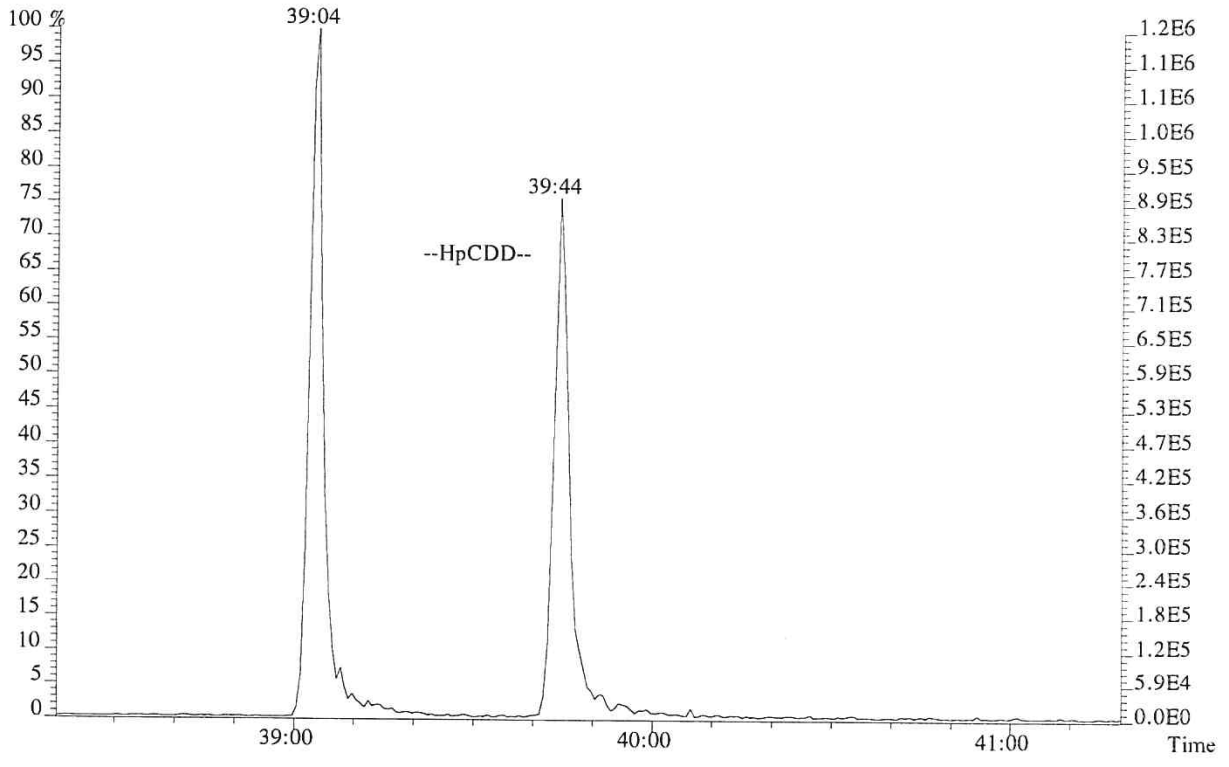
389.8157 F:3



File:P513848 #1-268 Acq:24-JAN-2018 11:44:47 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:183360
407.7818 F:4



423.7766 F:4



USEPA - CLP
6DFA6
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name: ALS Environmental Contract No.:
Lab Code: ALSTX Case No.: TO No.: SDG No.:
GC Column: DB-5MSUI ID: 0.25(mm) Instrument ID: E-HRMS-07
Init. Calib. Date(s).: 01/24/18 Method 1613/8290
Init. Calib. Time.: 11:44

RR/RRF

Target Analytes	CS0.5	CS1	CS2	CS3	CS4	CS5	MEAN RR/RRF	%RSD	QC LIMITS
2,3,7,8-TCDD	1.10	1.07	1.06	1.07	1.10	1.11	1.09	1.96	+/-20%
2,3,7,8-TCDF	0.89	0.96	0.91	0.94	0.96	0.99	0.94	4.09	+/-20%
1,2,3,7,8-PeCDF	0.93	0.98	1.02	1.03	1.06	1.06	1.01	5.02	+/-20%
1,2,3,7,8-PeCDD	0.92	0.97	0.96	0.95	0.97	0.97	0.96	2.08	+/-20%
2,3,4,7,8-PeCDF	0.87	0.94	0.98	0.97	0.99	1.00	0.96	4.97	+/-20%
1,2,3,4,7,8-HxCDF	1.07	1.13	1.22	1.21	1.25	1.26	1.19	6.34	+/-20%
1,2,3,6,7,8-HxCDF	1.06	1.07	1.13	1.13	1.17	1.17	1.12	4.28	+/-20%
1,2,3,4,7,8-HxCDD	0.96	1.04	1.03	1.06	1.06	1.07	1.04	3.78	+/-20%
1,2,3,6,7,8-HxCDD	1.00	1.06	1.03	1.03	1.05	1.06	1.04	2.33	+/-20%
1,2,3,7,8,9-HxCDD	0.98	1.06	1.10	1.06	1.07	1.10	1.06	4.09	+/-20%
2,3,4,6,7,8-HxCDF	1.01	1.09	1.12	1.13	1.15	1.17	1.11	5.18	+/-20%
1,2,3,7,8,9-HxCDF	1.08	1.10	1.15	1.17	1.18	1.18	1.14	3.94	+/-20%
1,2,3,4,6,7,8-HpCDF	1.31	1.32	1.36	1.37	1.37	1.38	1.35	2.22	+/-20%
1,2,3,4,6,7,8-HpCDD	1.00	0.98	1.05	1.03	1.05	1.04	1.02	2.88	+/-20%
1,2,3,4,7,8,9-HpCDF	1.18	1.23	1.29	1.30	1.28	1.27	1.26	3.68	+/-20%
OCDD	1.05	1.14	1.14	1.13	1.12	1.12	1.12	2.97	+/-20%
OCDF	1.26	1.39	1.35	1.33	1.39	1.43	1.36	4.36	+/-20%
Labeled Compounds									
13C-2,3,7,8-TCDD	0.91	0.87	0.93	0.90	0.94	0.98	0.92	4.14	+/-35%
13C-1,2,3,7,8-PeCDD	0.91	0.83	1.03	0.99	1.01	1.08	0.98	9.21	+/-35%
13C-1,2,3,4,7,8-HxCDD	0.94	0.90	0.90	0.95	0.93	0.92	0.92	2.06	+/-35%
13C-1,2,3,6,7,8-HxCDD	0.96	0.96	0.94	0.97	0.97	0.91	0.95	2.50	+/-35%
13C-1,2,3,4,6,7,8-HpCDD	0.81	0.92	0.79	0.88	0.90	0.85	0.86	5.83	+/-35%
13C-OCDD	0.52	0.63	0.58	0.58	0.62	0.57	0.58	6.90	+/-35%
13C-2,3,7,8-TCDF	1.45	1.48	1.53	1.60	1.53	1.49	1.51	3.54	+/-35%
13C-1,2,3,7,8-PeCDF	1.37	1.32	1.50	1.50	1.52	1.62	1.47	7.34	+/-35%
13C-2,3,4,7,8-PeCDF	1.36	1.29	1.50	1.46	1.52	1.61	1.46	7.94	+/-35%
13C-1,2,3,4,7,8-HxCDF	1.22	1.27	1.18	1.29	1.25	1.19	1.23	3.63	+/-35%
13C-1,2,3,6,7,8-HxCDF	1.40	1.48	1.34	1.42	1.41	1.34	1.40	3.84	+/-35%
13C-2,3,4,6,7,8-HxCDF	1.26	1.26	1.23	1.27	1.28	1.23	1.26	1.87	+/-35%
13C-1,2,3,7,8,9-HxCDF	1.03	1.17	1.06	1.00	1.17	1.08	1.09	6.47	+/-35%
13C-1,2,3,4,6,7,8-HpCDF	0.96	1.02	0.92	0.99	0.98	0.93	0.97	3.83	+/-35%
13C-1,2,3,4,7,8,9-HpCDF	0.76	0.95	0.79	0.74	0.86	0.82	0.82	9.19	+/-35%
37Cl-2,3,7,8-TCDD	0.93	0.96	1.03	1.00	1.05	1.11	1.01	6.21	+/-35%

1.123789-HxCDD Relative Response (RR) is calculated based on the labeled analog of the other two HxCDDs.
2. OCDF RR is calculated based on the labeled analog of OCDD

USEPA - CLP
6DFB6
CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY
HIGH RESOLUTION

Lab Name: ALS Environmental Contract No.:
Lab Code: ALSTX Case No.: TO No.: SDG No.:
GC Column: DB-5MSUI ID: 0.25(mm) Instrument ID: E-HRMS-07
Init. Calib. Date(s).: 01/24/18 Method 1613/8290
Init. Calib. Time.: 11:44

Target Analytes	SELECTED IONS	ION ABUNDANCE RATIO CS0.5	CS1	CS2	CS3	CS4	CS5	FLAG	ION RATIO QC LIMITS
2,3,7,8-TCDF	304/306	0.76	0.72	0.74	0.75	0.77	0.77		0.65-0.89
2,3,7,8-TCDD	320/322	0.73	0.88	0.76	0.79	0.78	0.78		0.65-0.89
1,2,3,7,8-PeCDF	340/342	1.42	1.54	1.48	1.53	1.54	1.55		1.32-1.78
2,3,4,7,8-PeCDF	340/342	1.48	1.46	1.50	1.52	1.53	1.54		1.32-1.78
1,2,3,7,8-PeCDD	356/358	1.64	1.66	1.58	1.56	1.56	1.57		1.32-1.78
1,2,3,4,7,8-HxCDF	374/376	1.18	1.20	1.20	1.22	1.22	1.23		1.05-1.43
1,2,3,6,7,8-HxCDF	374/376	1.28	1.17	1.21	1.21	1.22	1.24		1.05-1.43
2,3,4,6,7,8-HxCDF	374/376	1.12	1.24	1.22	1.22	1.21	1.22		1.05-1.43
1,2,3,7,8,9-HxCDF	374/376	1.19	1.33	1.22	1.21	1.24	1.23		1.05-1.43
1,2,3,4,7,8-HxCDD	390/392	1.32	1.26	1.25	1.25	1.25	1.26		1.05-1.43
1,2,3,6,7,8-HxCDD	390/392	1.09	1.35	1.26	1.26	1.26	1.26		1.05-1.43
1,2,3,7,8,9-HxCDD	390/392	1.23	1.21	1.24	1.28	1.26	1.25		1.05-1.43
1,2,3,4,6,7,8-HpCDF	408/410	0.98	1.03	1.02	1.02	1.03	1.04		0.88-1.20
1,2,3,4,7,8,9-HpCDF	408/410	1.03	0.96	1.01	1.03	1.03	1.04		0.88-1.20
1,2,3,4,6,7,8-HpCDD	424/426	0.99	1.11	1.04	1.05	1.05	1.05		0.88-1.20
OCDF	442/444	0.88	0.95	0.89	0.90	0.91	0.91		0.76-1.02
OCDD	458/460	0.86	0.88	0.89	0.89	0.89	0.89		0.76-1.02
13C-2,3,7,8-TCDD	332/334	0.81	0.80	0.80	0.80	0.81	0.80		0.65-0.89
13C-1,2,3,7,8-PeCDD	368/370	1.60	1.59	1.59	1.58	1.59	1.59		1.32-1.78
13C-1,2,3,4,7,8-HxCDD	402/404	1.29	1.27	1.26	1.33	1.27	1.28		1.05-1.43
13C-1,2,3,6,7,8-HxCDD	402/404	1.26	1.28	1.27	1.20	1.26	1.26		1.05-1.43
13C-1,2,3,4,6,7,8-HpCDD	436/438	1.06	1.04	1.06	1.06	1.08	1.06		0.88-1.20
13C-OCDD	470/472	0.90	0.91	0.90	0.89	0.90	0.89		0.76-1.02
13C-2,3,7,8-TCDF	316/318	0.79	0.79	0.80	0.79	0.79	0.79		0.65-0.89
13C-1,2,3,7,8-PeCDF	352/354	1.58	1.60	1.59	1.58	1.58	1.59		1.32-1.78
13C-2,3,4,7,8-PeCDF	352/354	1.58	1.58	1.58	1.58	1.58	1.58		1.32-1.78
13C-1,2,3,4,7,8-HxCDF	384/386	0.53	0.52	0.52	0.53	0.53	0.53		0.43-0.59
13C-1,2,3,6,7,8-HxCDF	384/386	0.53	0.53	0.53	0.53	0.53	0.53		0.43-0.59
13C-2,3,4,6,7,8-HxCDF	384/386	0.52	0.52	0.52	0.52	0.53	0.52		0.43-0.59
13C-1,2,3,7,8,9-HxCDF	384/386	0.52	0.52	0.53	0.53	0.52	0.52		0.43-0.59
13C-1,2,3,4,6,7,8-HpCDF	418/420	0.45	0.45	0.45	0.45	0.45	0.45		0.37-0.51
13C-1,2,3,4,7,8,9-HpCDF	418/420	0.45	0.44	0.45	0.45	0.45	0.45		0.37-0.51
13C-1,2,3,4-TCDD	332/334	0.81	0.82	0.81	0.81	0.82	0.82		0.65-0.89
13C-1,2,3,7,8,9-HxCDD	402/404	1.26	1.25	1.27	1.23	1.25	1.25		1.05-1.43

Quality Control (QC) limits represent +/- 15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76554

Run #1 Filename P513850 Samp: 1 Inj: 1 Acquired: 24-JAN-18 13:32:06
Processed: 24-JAN-18 15:49:37 Sample ID: CS0.5

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	3.276e+02	4.332e+02	0.76	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	2.212e+03	1.557e+03	1.42	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:42	2.093e+03	1.410e+03	1.48	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:17	1.728e+03	1.459e+03	1.18	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	2.025e+03	1.584e+03	1.28	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:53	1.636e+03	1.459e+03	1.12	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.473e+03	1.234e+03	1.19	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	1.513e+03	1.543e+03	0.98	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.104e+03	1.067e+03	1.03	yes	no	1.258
10	Unk	OCDF	42:45	1.481e+03	1.680e+03	0.88	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	2.508e+02	3.419e+02	0.73	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:58	1.543e+03	9.381e+02	1.64	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	37:00	1.247e+03	9.443e+02	1.32	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	1.208e+03	1.105e+03	1.09	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	1.245e+03	1.015e+03	1.23	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	9.700e+02	9.817e+02	0.99	yes	no	1.025
17	Unk	OCDD	42:31	1.223e+03	1.416e+03	0.86	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	1.518e+05	1.920e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:48	1.987e+05	1.259e+05	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:41	1.969e+05	1.249e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:16	8.196e+04	1.558e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:23	9.429e+04	1.782e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:52	8.377e+04	1.622e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:37	6.829e+04	1.322e+05	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	5.778e+04	1.288e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	4.552e+04	1.019e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	9.630e+04	1.195e+05	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	1.330e+05	8.317e+04	1.60	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	1.026e+05	7.962e+04	1.29	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	1.036e+05	8.231e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	8.056e+04	7.625e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	9.520e+04	1.052e+05	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:58	1.055e+05	1.310e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	1.085e+05	8.606e+04	1.26	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	5.518e+02				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
76554

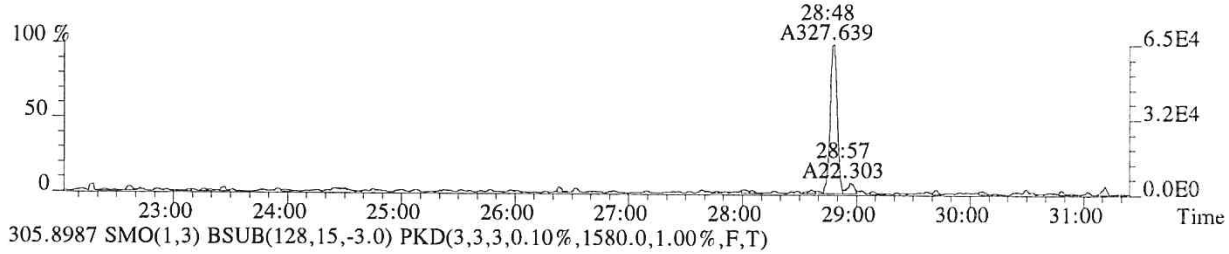
Run #1 Filename P513850 Samp: 1 Inj: 1 Acquired: 24-JAN-18 13:32:06
Processed: 24-JAN-18 15:49:37 LAB. ID: CS0.5

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.43e+04	7.40e+02	8.7e+01	8.19e+04	1.58e+03	5.2e+01
2	1,2,3,7,8-PeCDF	4.30e+05	1.01e+03	4.3e+02	3.00e+05	2.96e+03	1.0e+02
3	2,3,4,7,8-PeCDF	4.25e+05	1.01e+03	4.2e+02	2.98e+05	2.96e+03	1.0e+02
4	1,2,3,4,7,8-HxCDF	3.96e+05	8.76e+02	4.5e+02	3.10e+05	2.44e+02	1.3e+03
5	1,2,3,6,7,8-HxCDF	4.08e+05	8.76e+02	4.7e+02	3.20e+05	2.44e+02	1.3e+03
6	2,3,4,6,7,8-HxCDF	3.56e+05	8.76e+02	4.1e+02	3.17e+05	2.44e+02	1.3e+03
7	1,2,3,7,8,9-HxCDF	3.08e+05	8.76e+02	3.5e+02	2.40e+05	2.44e+02	9.9e+02
8	1,2,3,4,6,7,8-HpCDF	3.07e+05	8.60e+02	3.6e+02	3.29e+05	5.36e+02	6.1e+02
9	1,2,3,4,7,8,9-HpCDF	2.09e+05	8.60e+02	2.4e+02	1.94e+05	5.36e+02	3.6e+02
10	OCDF	2.59e+05	6.40e+02	4.0e+02	2.85e+05	1.05e+03	2.7e+02
11	2,3,7,8-TCDD	4.96e+04	1.22e+03	4.1e+01	7.37e+04	7.32e+02	1.0e+02
12	1,2,3,7,8-PeCDD	3.05e+05	1.17e+03	2.6e+02	1.78e+05	1.88e+02	9.5e+02
13	1,2,3,4,7,8-HxCDD	2.70e+05	5.20e+02	5.2e+02	2.09e+05	4.64e+02	4.5e+02
14	1,2,3,6,7,8-HxCDD	2.52e+05	5.20e+02	4.8e+02	2.26e+05	4.64e+02	4.9e+02
15	1,2,3,7,8,9-HxCDD	2.55e+05	5.20e+02	4.9e+02	2.09e+05	4.64e+02	4.5e+02
16	1,2,3,4,6,7,8-HpCDD	1.84e+05	1.72e+02	1.1e+03	2.04e+05	1.92e+02	1.1e+03
17	OCDD	1.95e+05	1.24e+02	1.6e+03	2.29e+05	1.76e+03	1.3e+02
18	13C-2,3,7,8-TCDF	2.97e+07	7.00e+03	4.2e+03	3.74e+07	3.24e+03	1.2e+04
19	13C-1,2,3,7,8-PeCDF	3.75e+07	6.04e+02	6.2e+04	2.38e+07	1.03e+03	2.3e+04
20	13C-2,3,4,7,8-PeCDF	3.92e+07	6.04e+02	6.5e+04	2.45e+07	1.03e+03	2.4e+04
21	13C-1,2,3,4,7,8-HxCDF	1.77e+07	4.00e+02	4.4e+04	3.34e+07	1.14e+03	2.9e+04
22	13C-1,2,3,6,7,8-HxCDF	1.91e+07	4.00e+02	4.8e+04	3.65e+07	1.14e+03	3.2e+04
23	13C-2,3,4,6,7,8-HxCDF	1.78e+07	4.00e+02	4.5e+04	3.38e+07	1.14e+03	3.0e+04
24	13C-1,2,3,7,8,9-HxCDF	1.38e+07	4.00e+02	3.5e+04	2.65e+07	1.14e+03	2.3e+04
25	13C-1,2,3,4,6,7,8-HpCDF	1.16e+07	1.44e+03	8.1e+03	2.60e+07	5.60e+03	4.6e+03
26	13C-1,2,3,4,7,8,9-HpCDF	8.60e+06	1.44e+03	6.0e+03	1.92e+07	5.60e+03	3.4e+03
27	13C-2,3,7,8-TCDD	1.97e+07	6.10e+03	3.2e+03	2.45e+07	2.10e+03	1.2e+04
28	13C-1,2,3,7,8-PeCDD	2.62e+07	9.88e+02	2.7e+04	1.65e+07	6.72e+02	2.4e+04
29	13C-1,2,3,4,7,8-HxCDD	2.25e+07	4.24e+03	5.3e+03	1.74e+07	9.28e+02	1.9e+04
30	13C-1,2,3,6,7,8-HxCDD	2.12e+07	4.24e+03	5.0e+03	1.71e+07	9.28e+02	1.8e+04
31	13C-1,2,3,4,6,7,8-HpCDD	1.57e+07	9.20e+02	1.7e+04	1.49e+07	8.32e+02	1.8e+04
32	13C-OCDD	1.56e+07	1.68e+02	9.3e+04	1.71e+07	3.40e+02	5.0e+04
33	13C-1,2,3,4-TCDD	2.11e+07	6.10e+03	3.5e+03	2.60e+07	2.10e+03	1.2e+04
34	13C-1,2,3,7,8,9-HxCDD	2.13e+07	4.24e+03	5.0e+03	1.71e+07	9.28e+02	1.8e+04
35	37Cl-2,3,7,8-TCDD	1.10e+05	1.04e+03	1.1e+02			

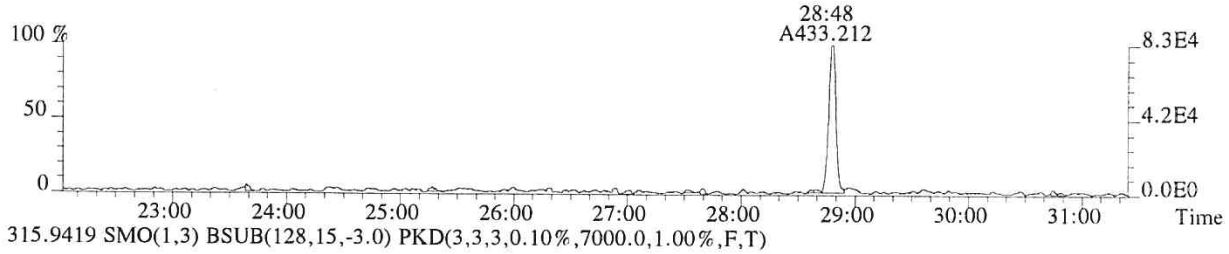
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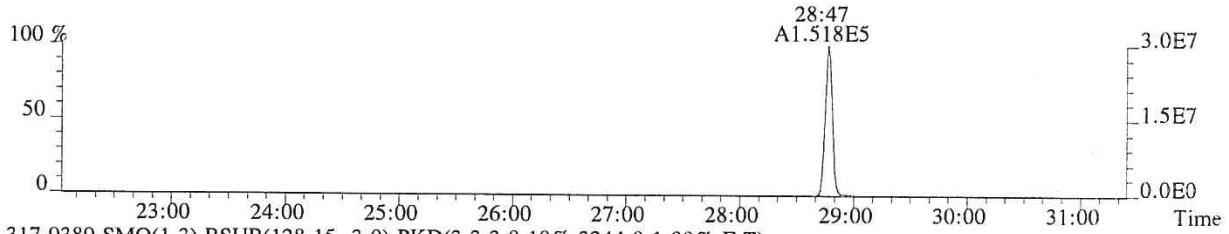
File:P513850 #1-665 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,740.0,1.00%,F,T)



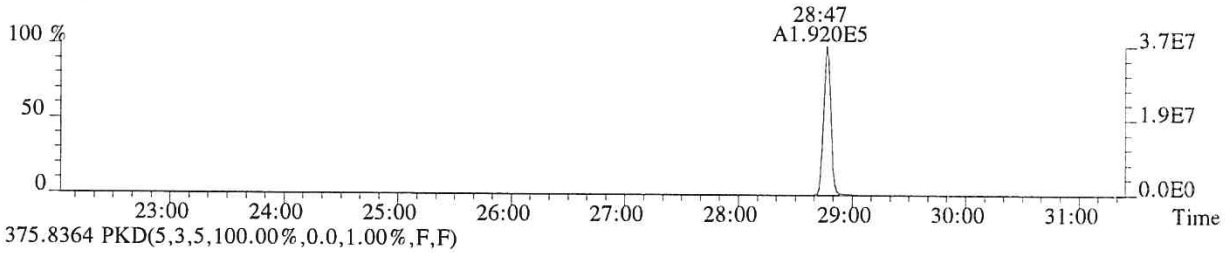
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1580.0,1.00%,F,T)



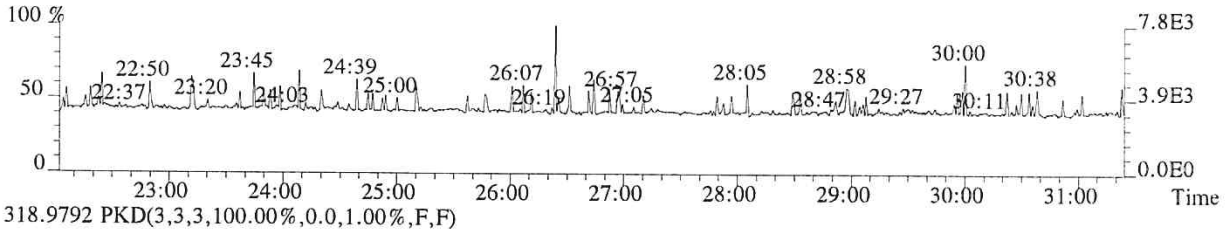
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7000.0,1.00%,F,T)



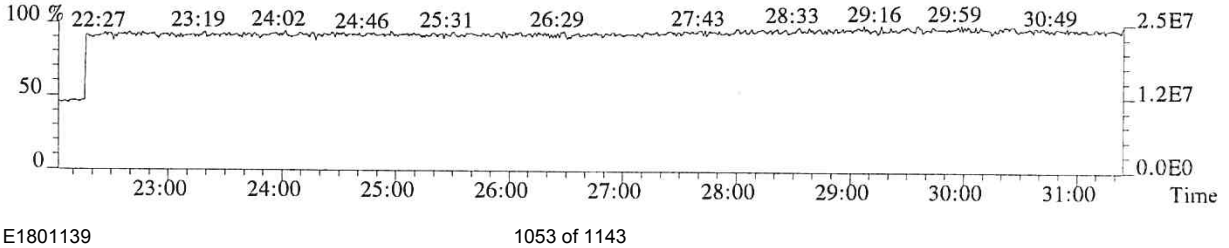
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3244.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

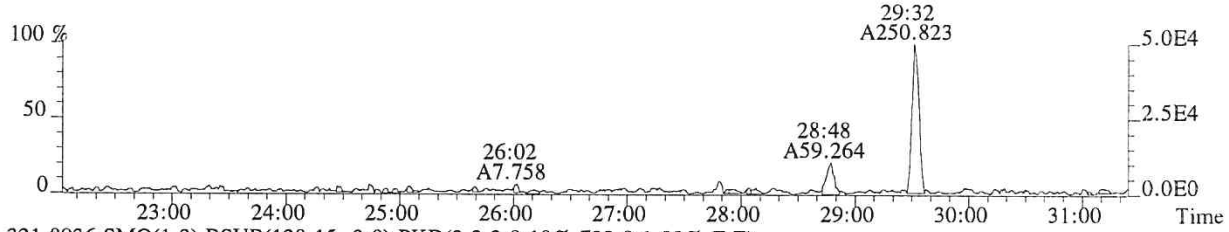


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

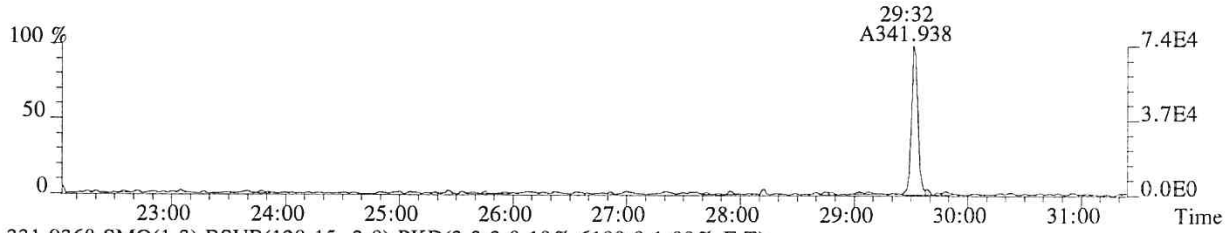


019017

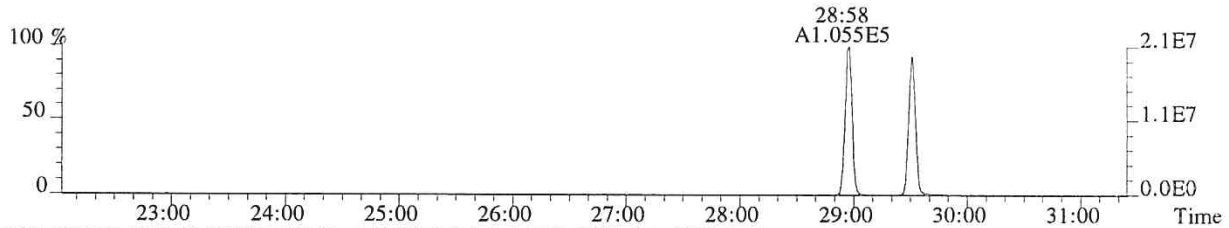
File:P513850 #1-665 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1220.0,1.00%,F,T)



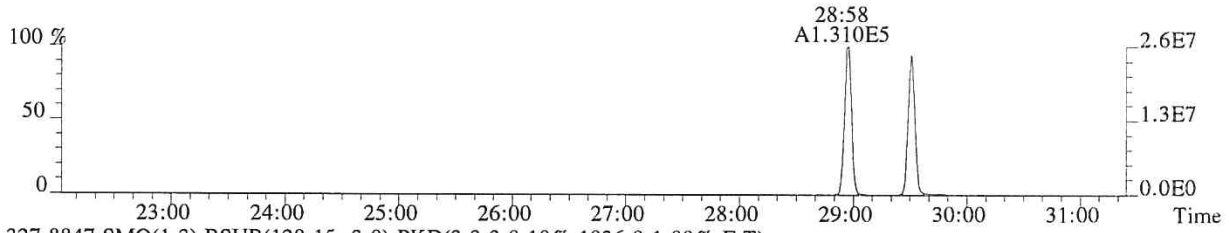
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,732.0,1.00%,F,T)



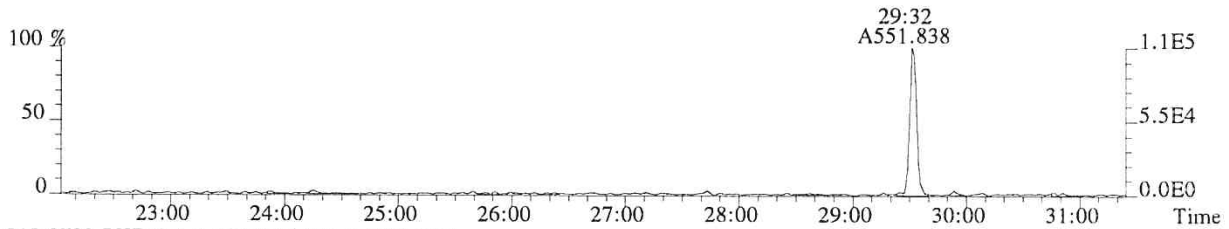
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6100.0,1.00%,F,T)



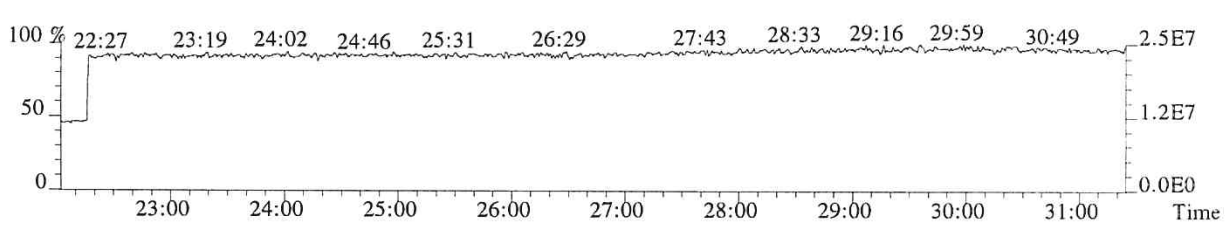
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2096.0,1.00%,F,T)



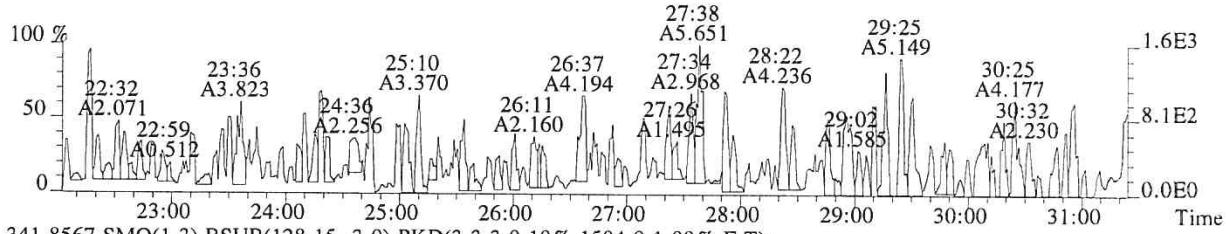
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1036.0,1.00%,F,T)



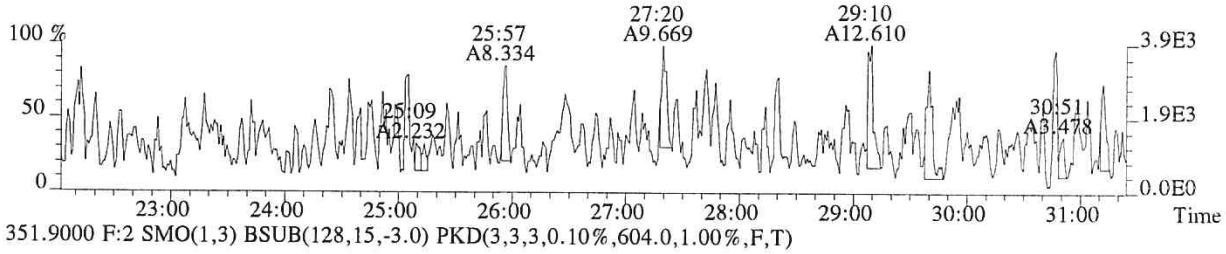
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



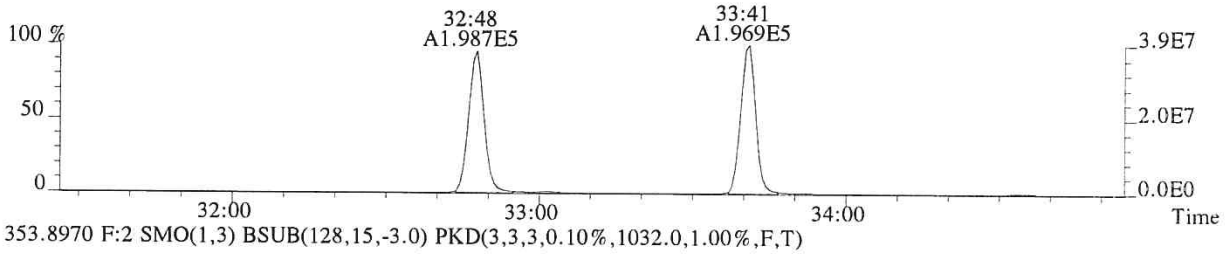
File:P513850 #1-665 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,244.0,1.00%,F,T)



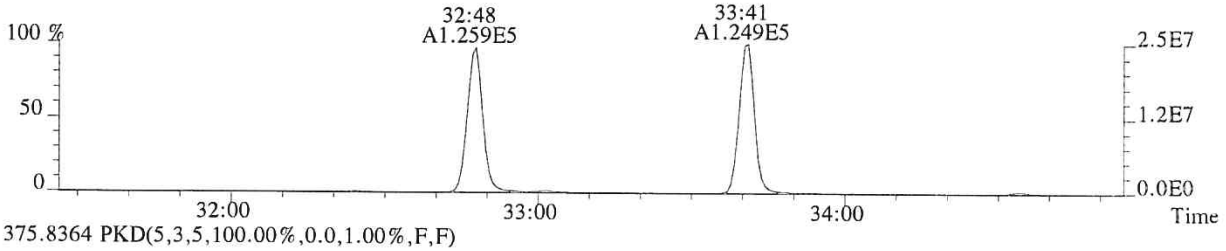
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1504.0,1.00%,F,T)



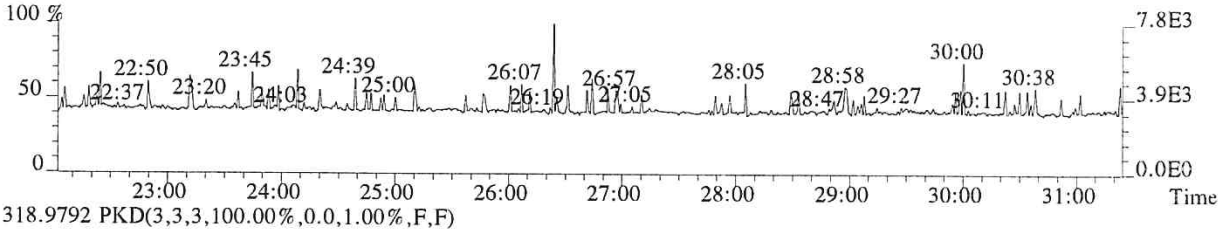
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,604.0,1.00%,F,T)



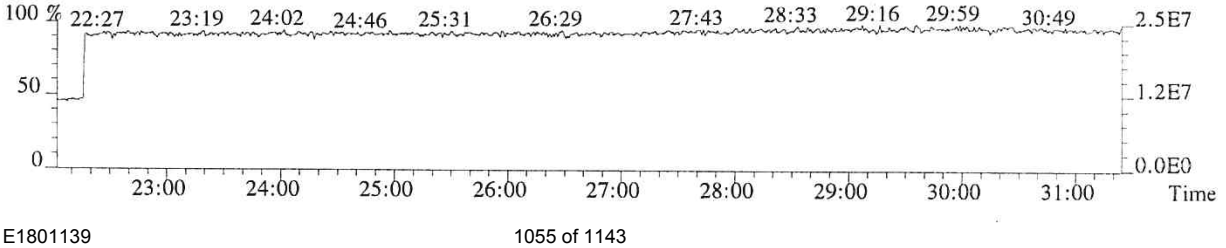
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

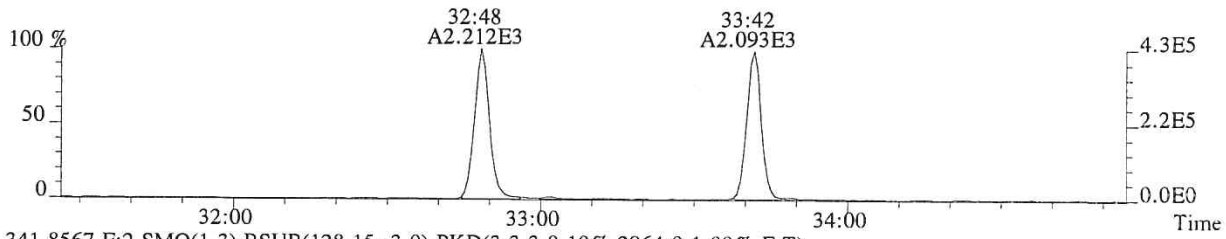


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

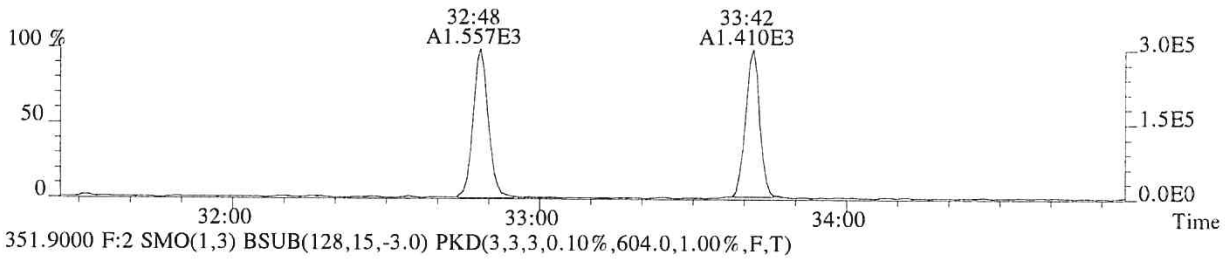


019019

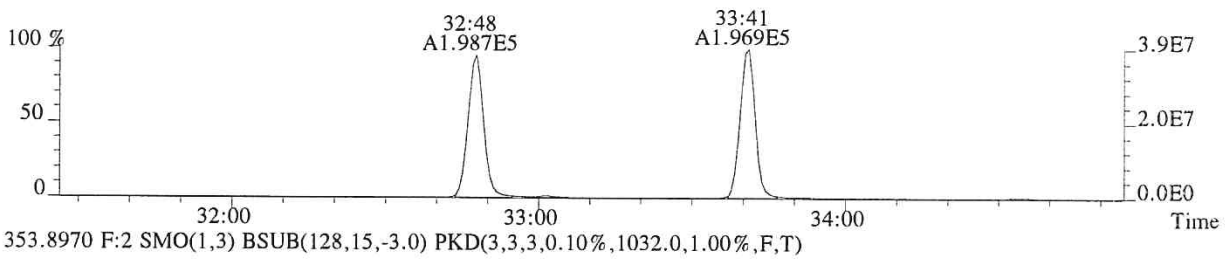
File:P513850 #1-313 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1008.0,1.00%,F,T)



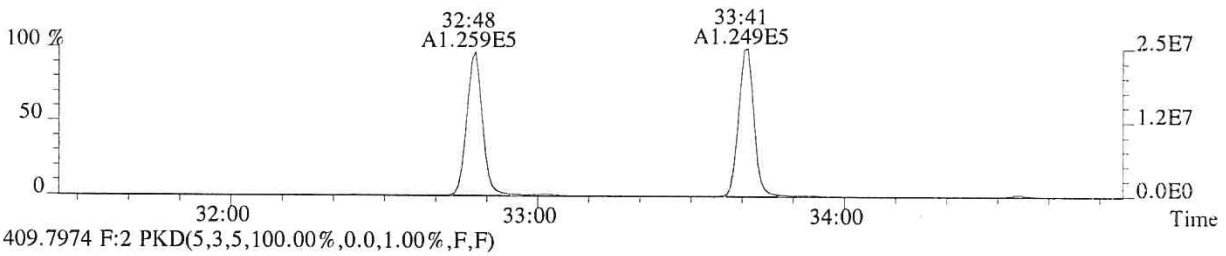
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2964.0,1.00%,F,T)



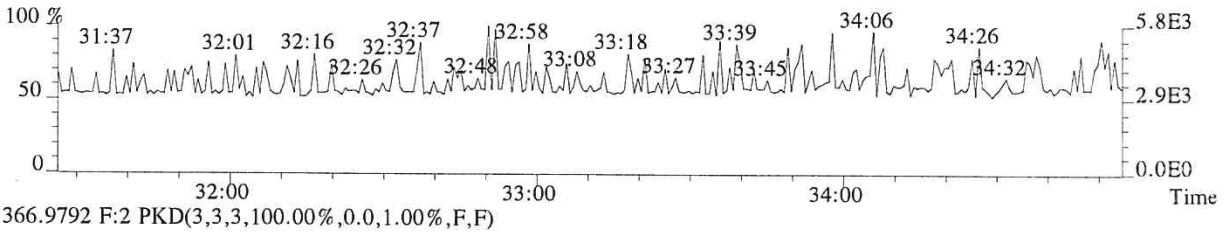
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,604.0,1.00%,F,T)



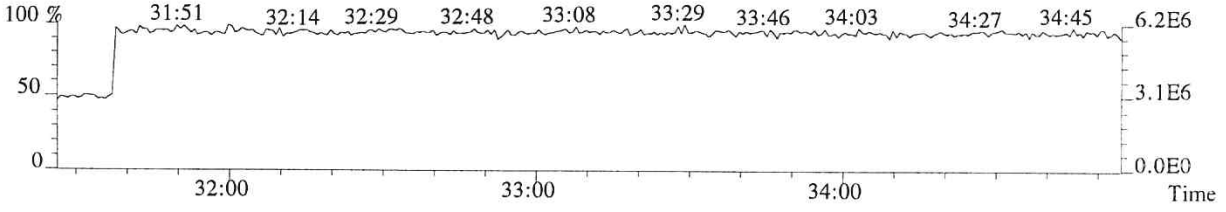
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

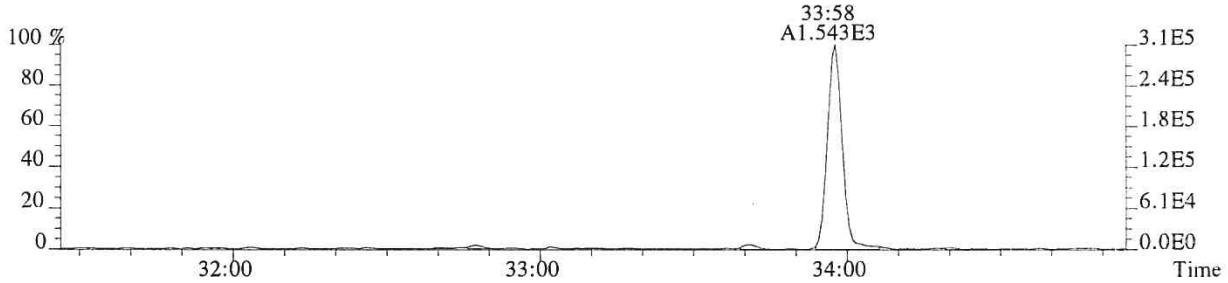


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

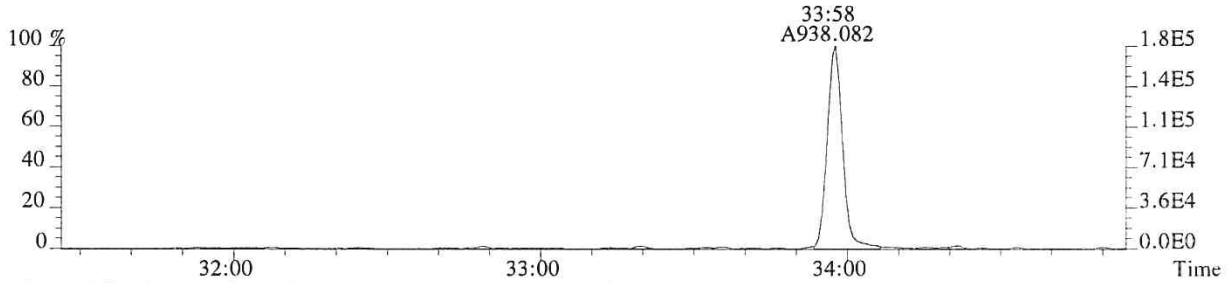


019020

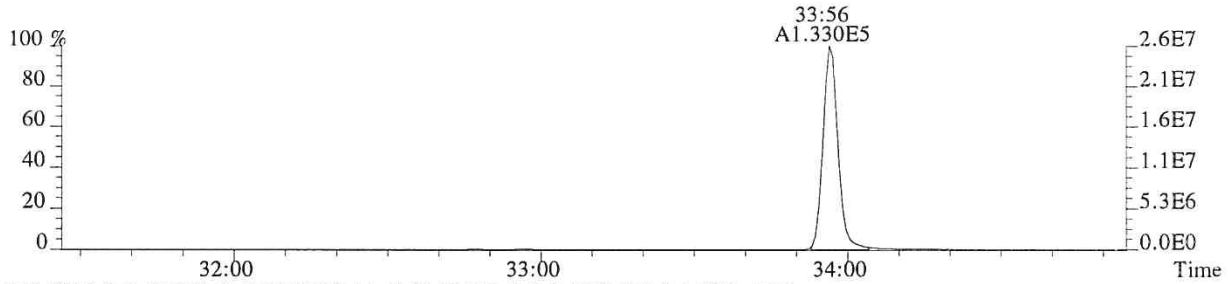
File:P513850 #1-313 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1172.0,1.00%,F,T)



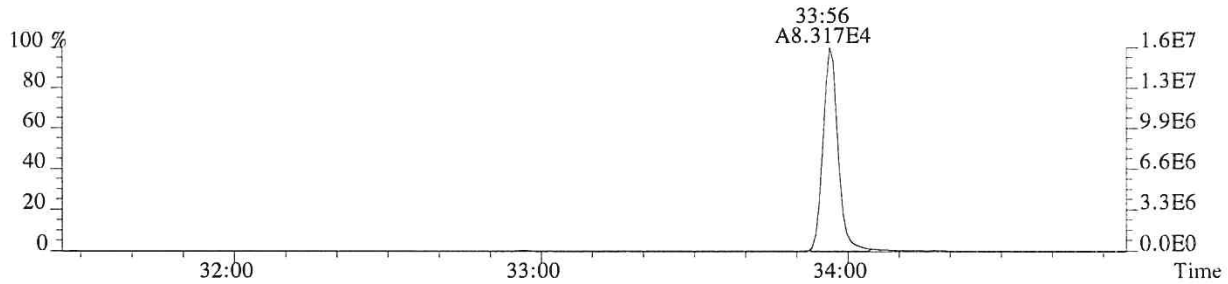
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,188.0,1.00%,F,T)



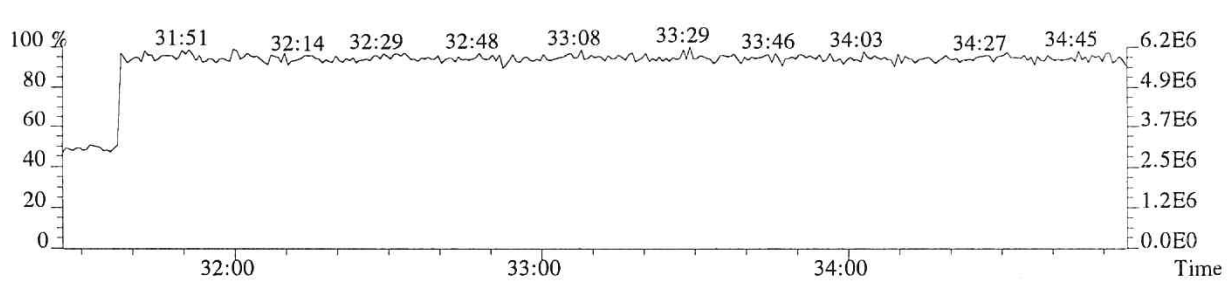
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,988.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,672.0,1.00%,F,T)

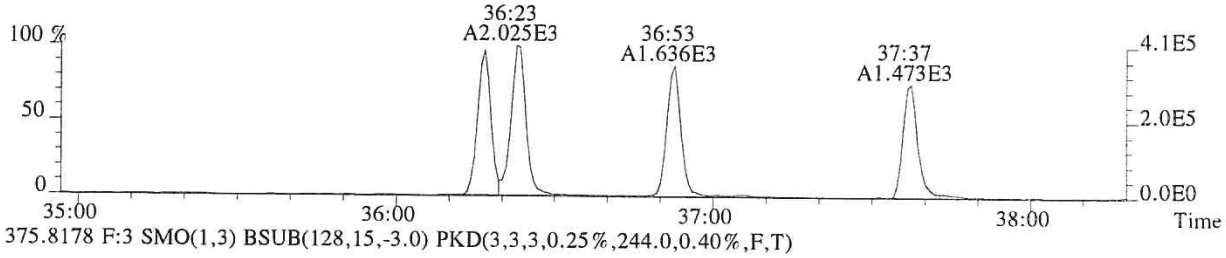


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

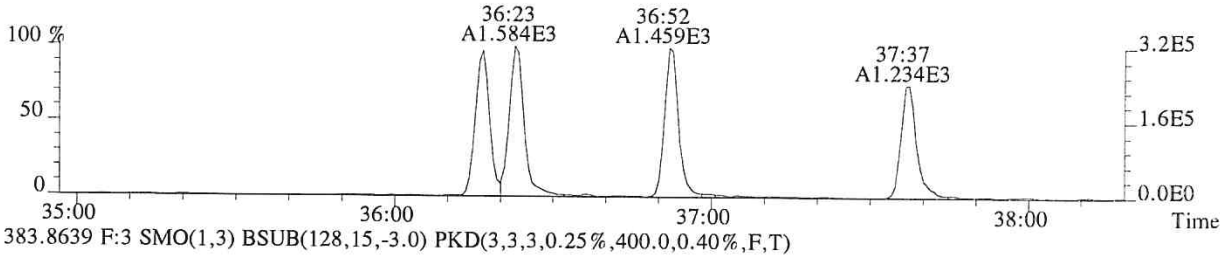


019021

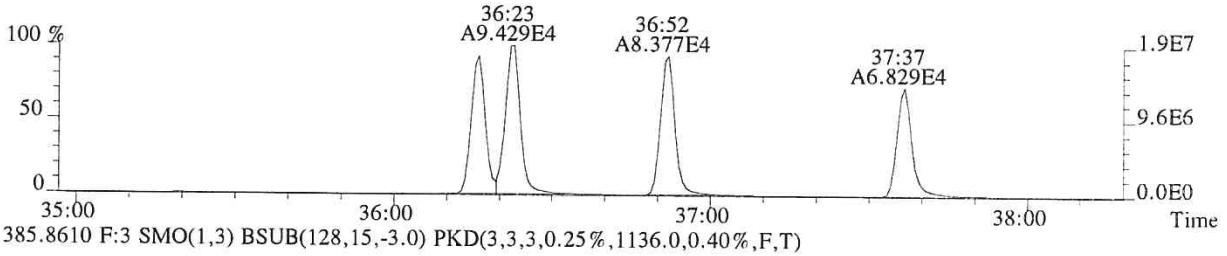
File:P513850 #1-303 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,876.0,0.40%,F,T)



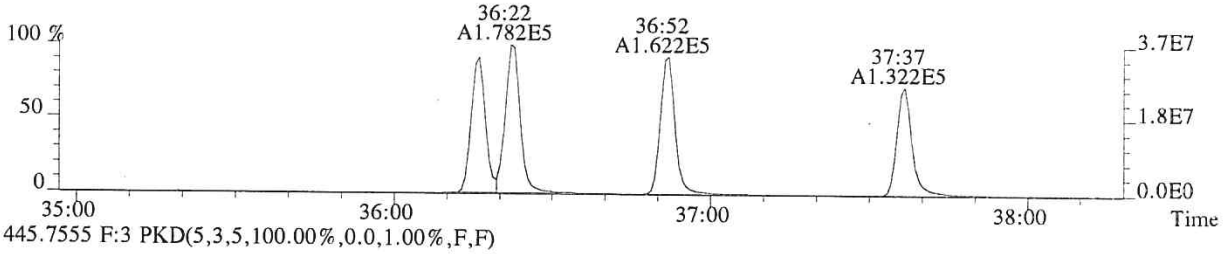
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,244.0,0.40%,F,T)



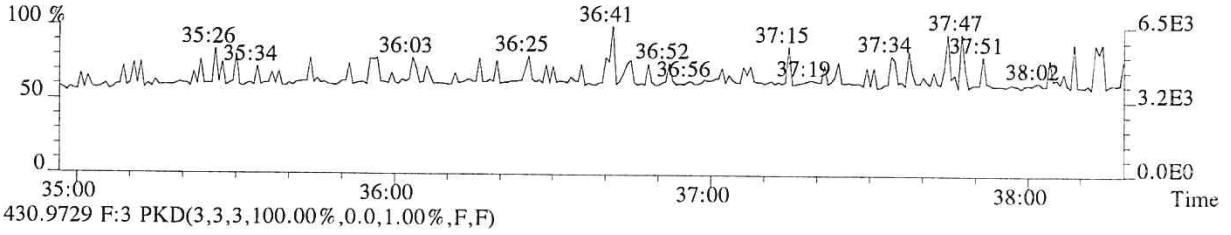
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,400.0,0.40%,F,T)



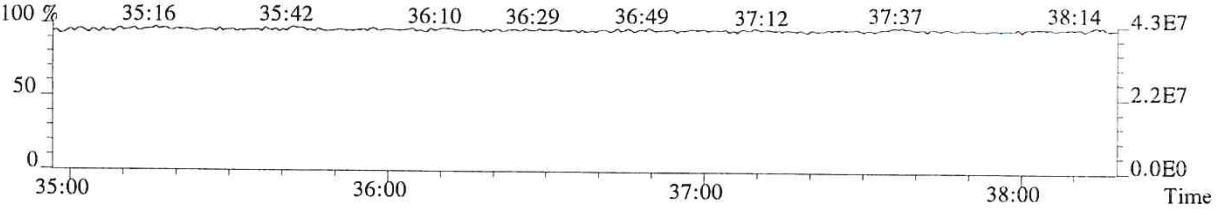
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1136.0,0.40%,F,T)



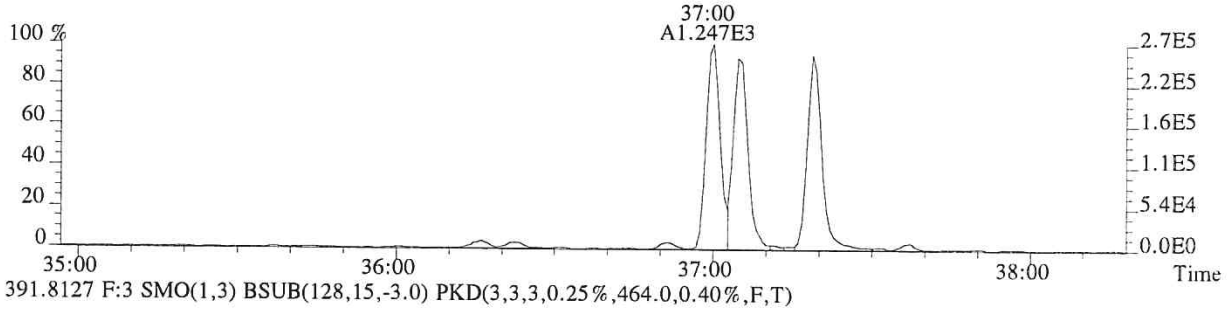
445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



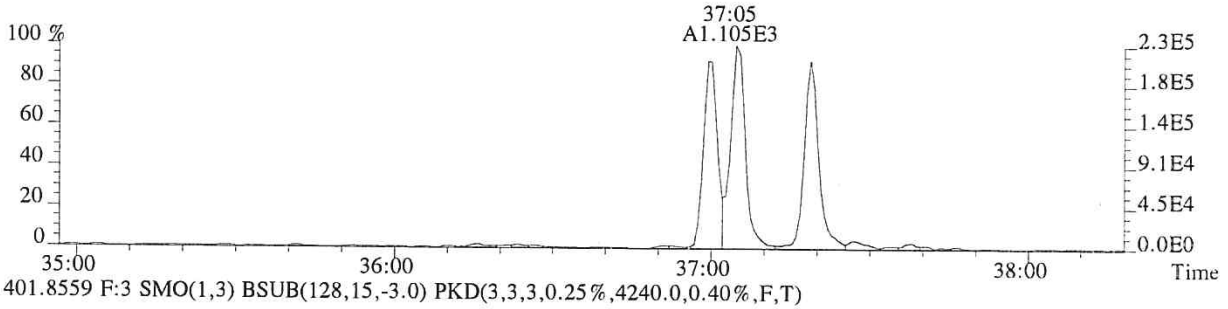
430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



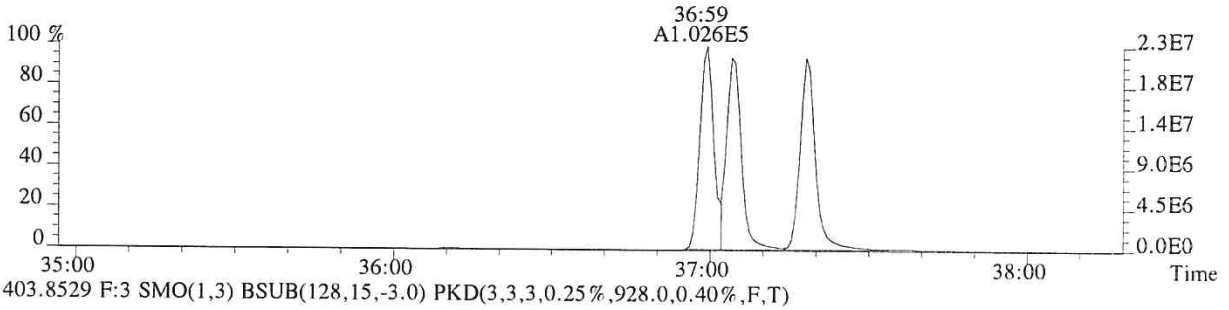
File:P513850 #1-303 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,520.0,0.40%,F,T)



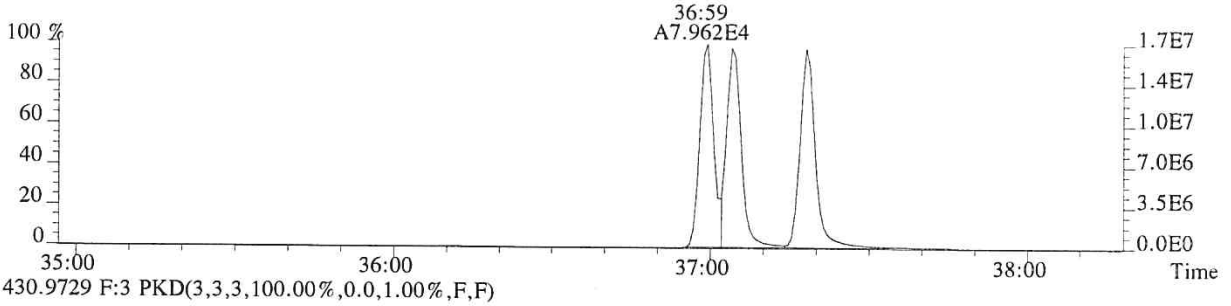
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,464.0,0.40%,F,T)



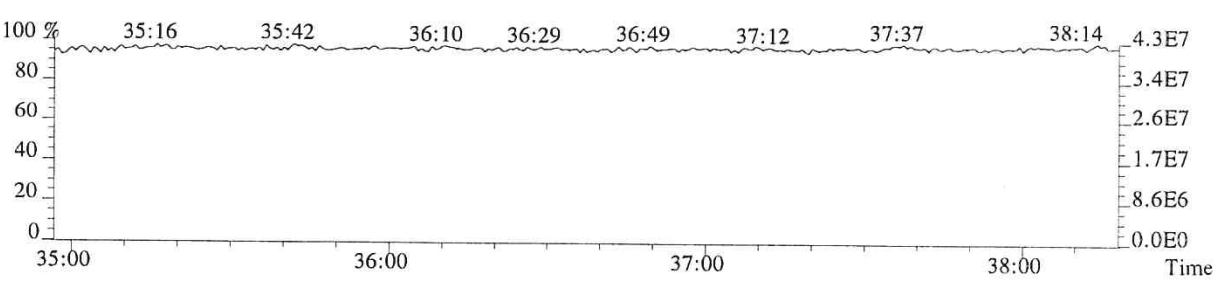
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4240.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,928.0,0.40%,F,T)

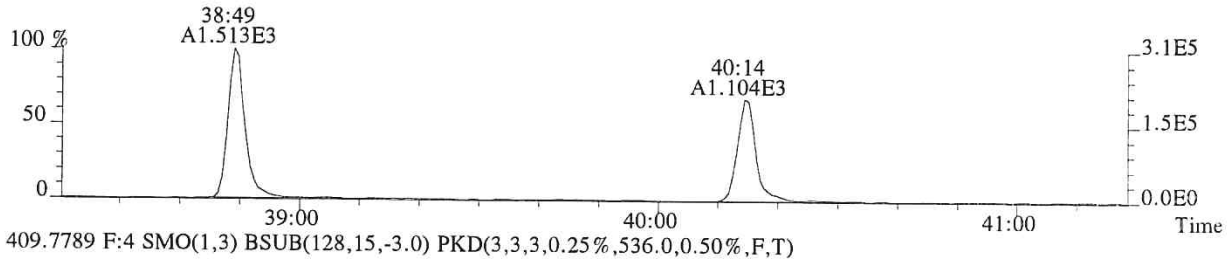


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

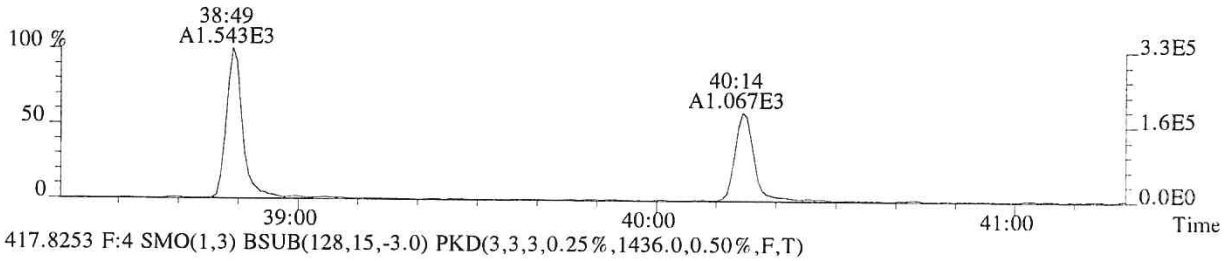


019023

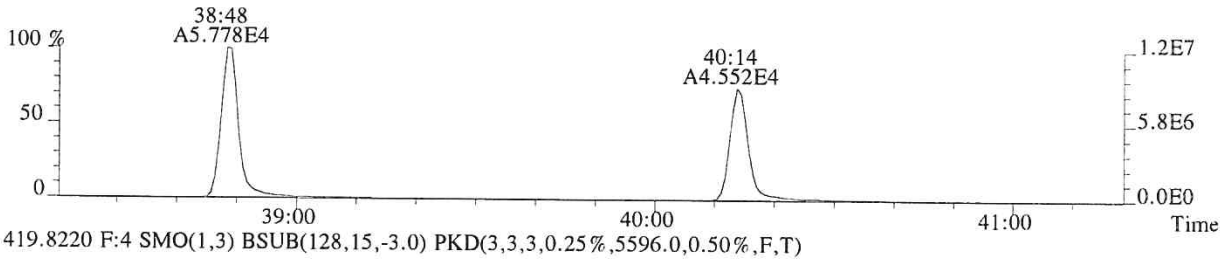
File:P513850 #1-268 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,860.0,0.50%,F,T)



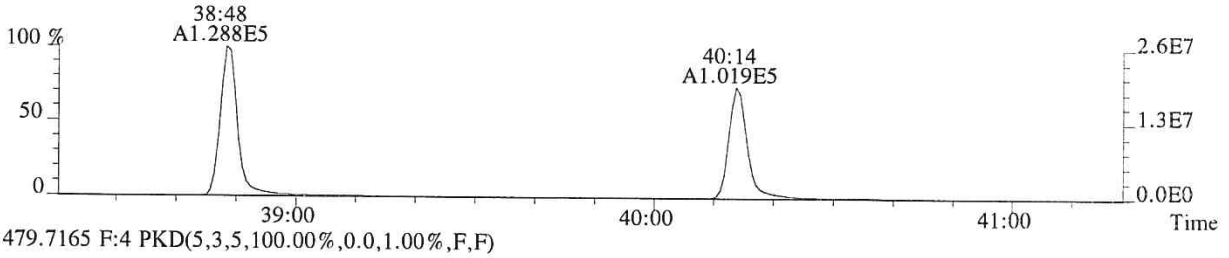
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,536.0,0.50%,F,T)



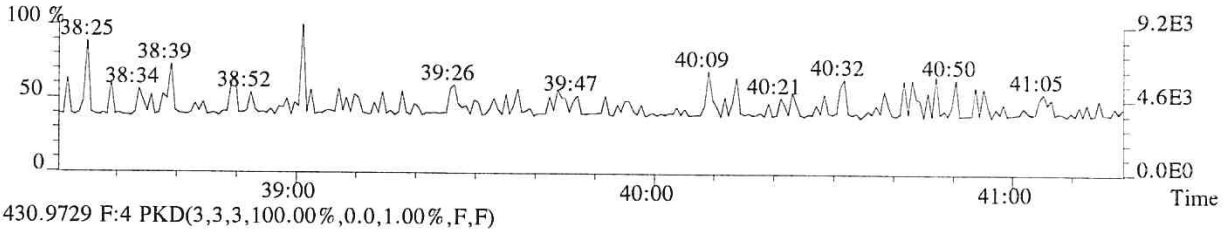
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1436.0,0.50%,F,T)



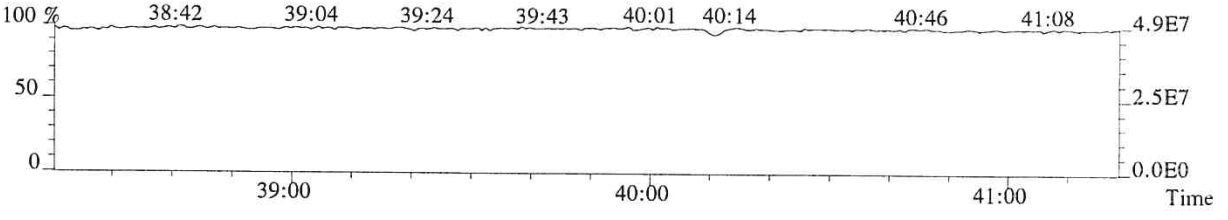
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5596.0,0.50%,F,T)



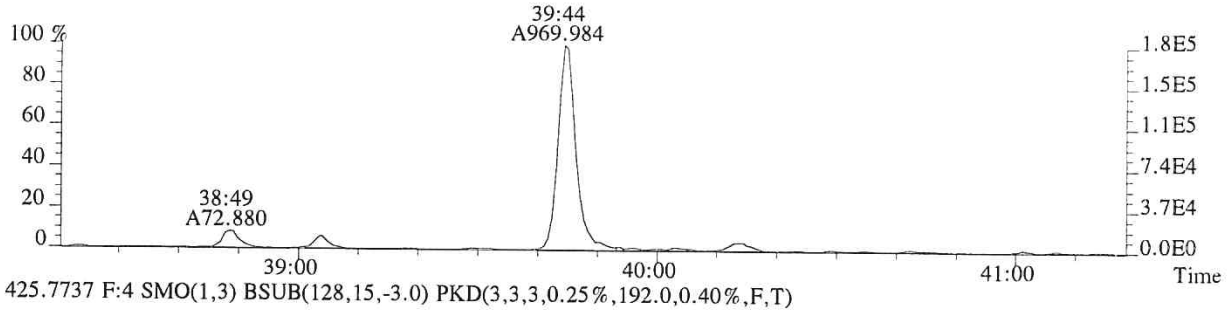
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



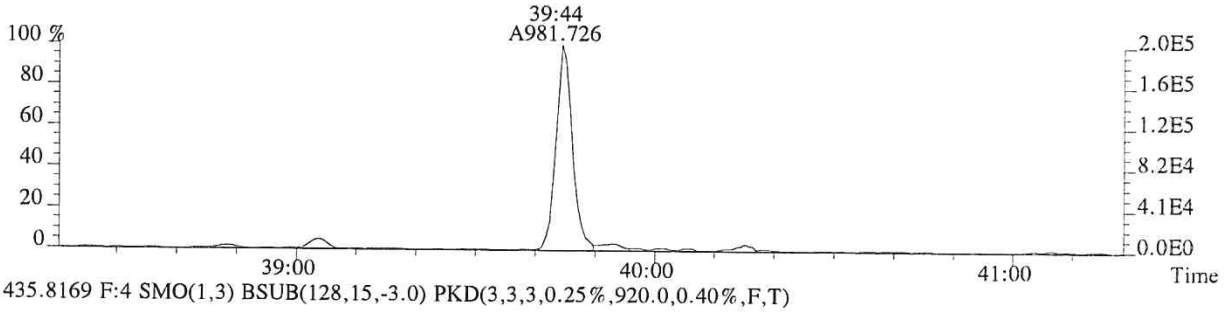
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



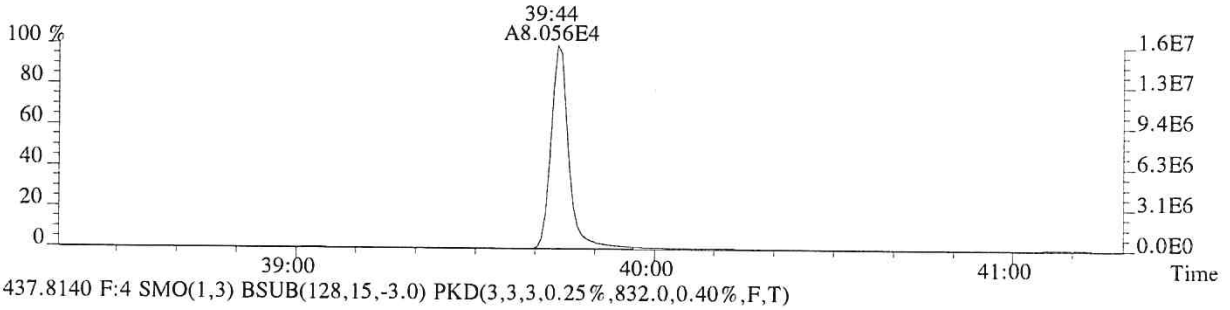
File:P513850 #1-268 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,172.0,0.40%,F,T)



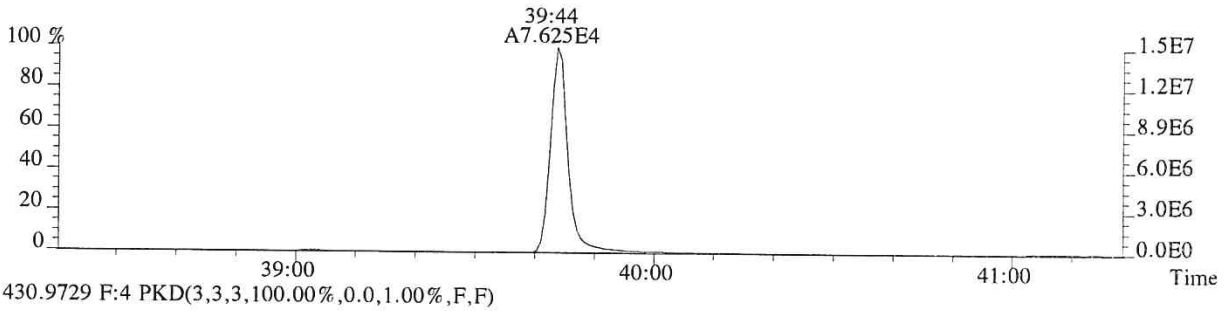
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,192.0,0.40%,F,T)



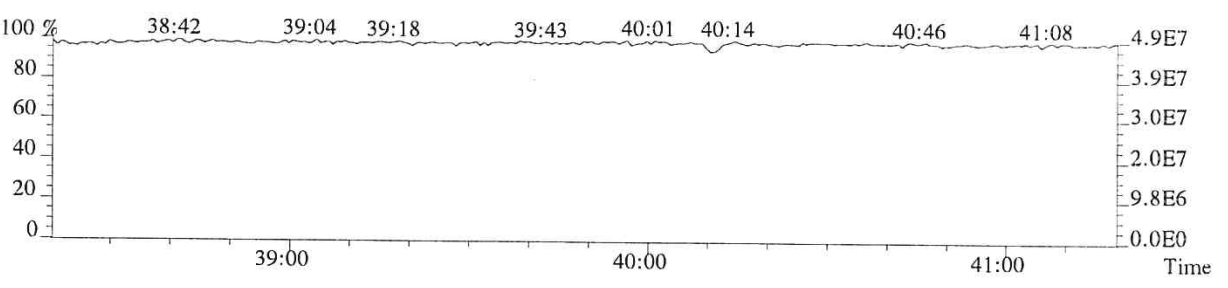
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,920.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,832.0,0.40%,F,T)



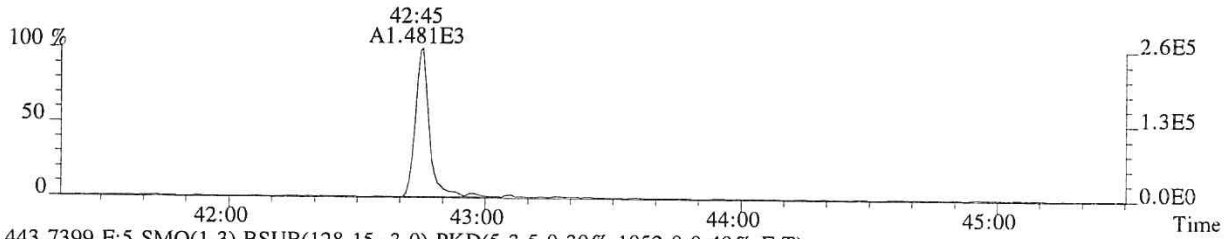
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



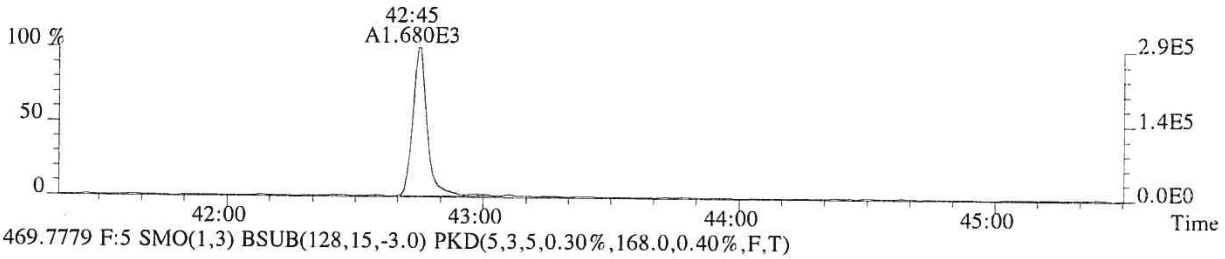
019025

File:P513850 #1-375 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554

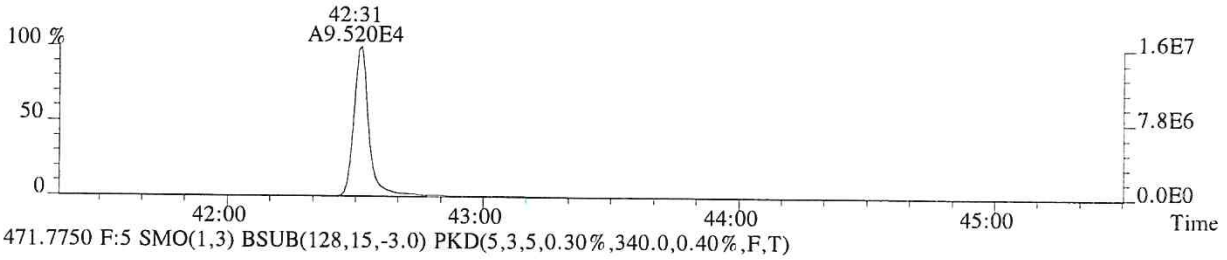
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,640.0,0.40%,F,T)



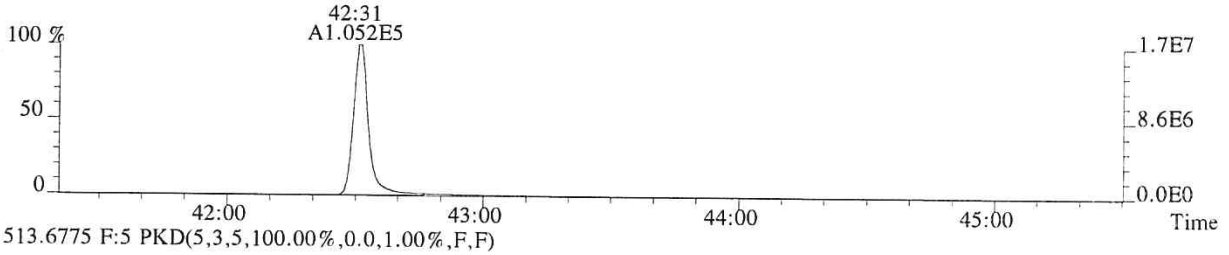
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1052.0,0.40%,F,T)



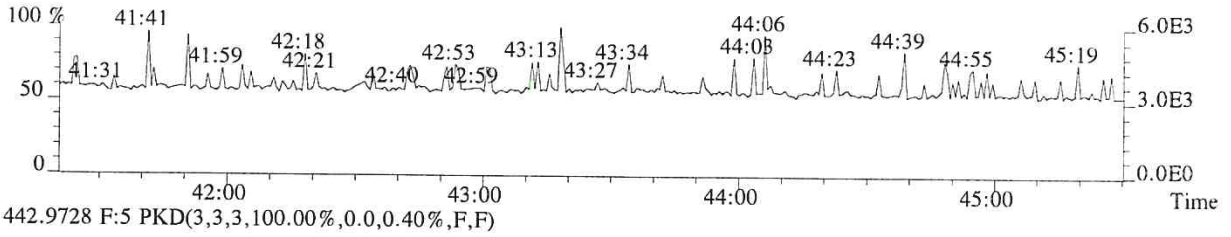
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,168.0,0.40%,F,T)



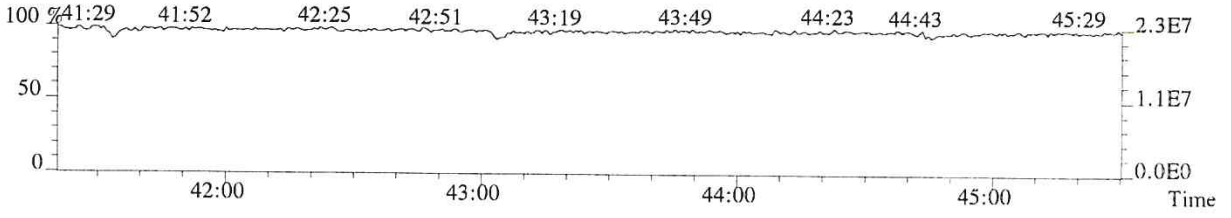
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,340.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

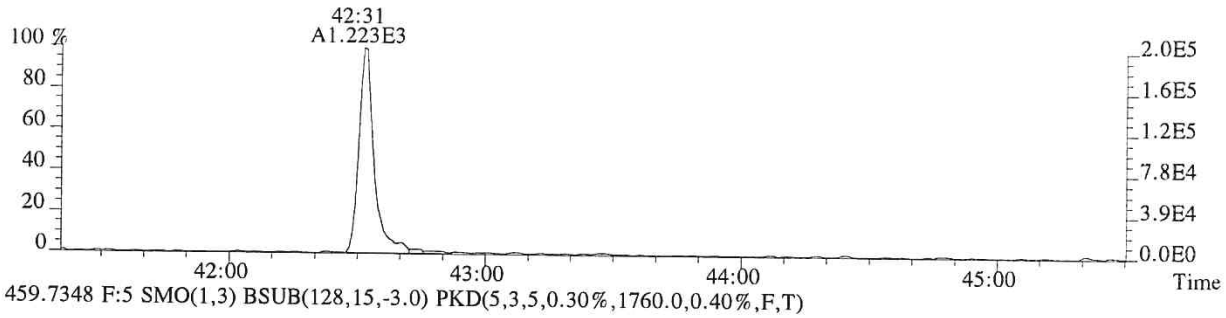


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

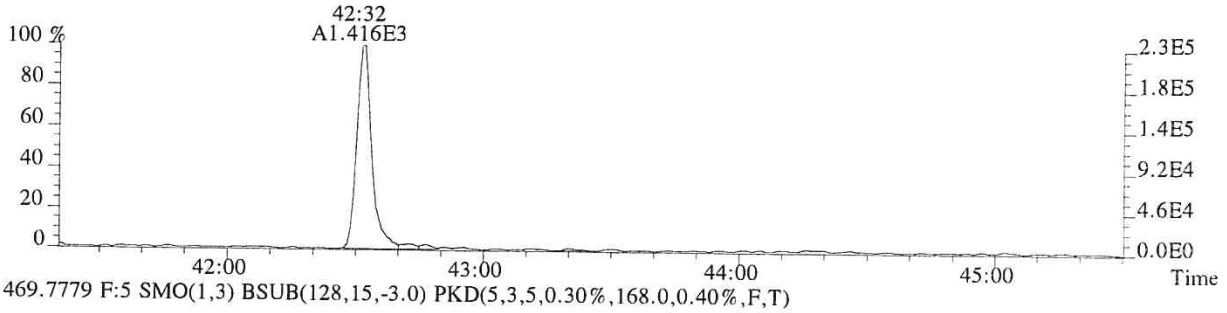


019026

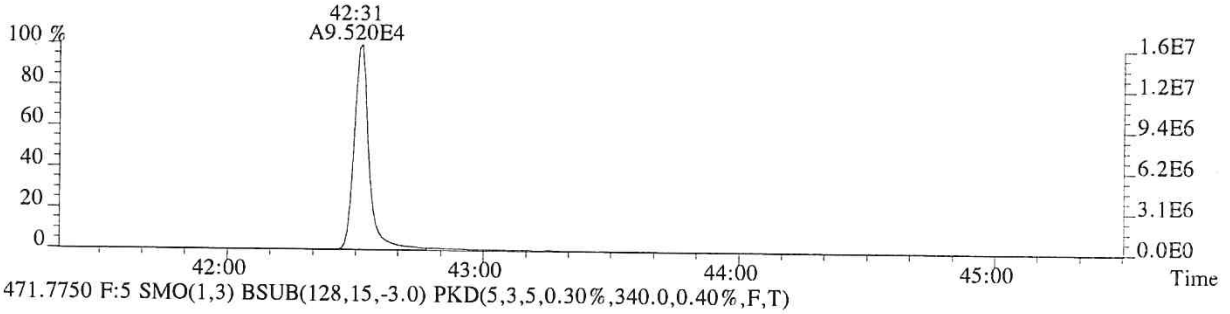
File:P513850 #1-375 Acq:24-JAN-2018 13:32:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76554
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,124.0,0.40%,F,T)



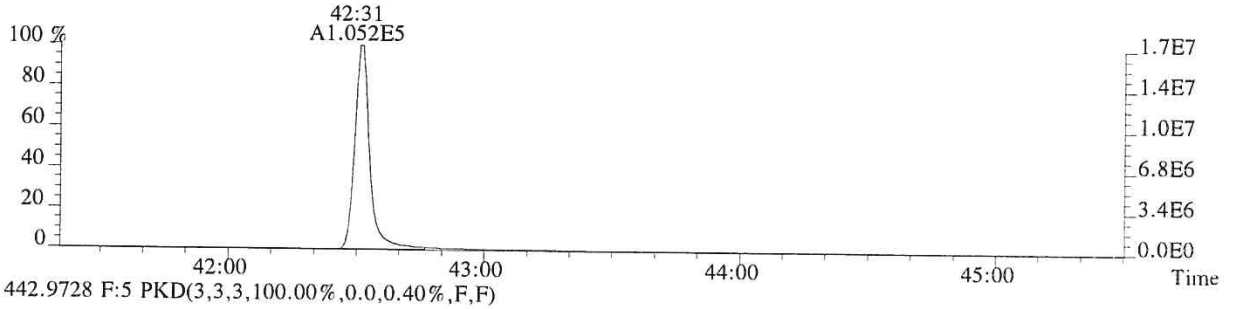
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1760.0,0.40%,F,T)



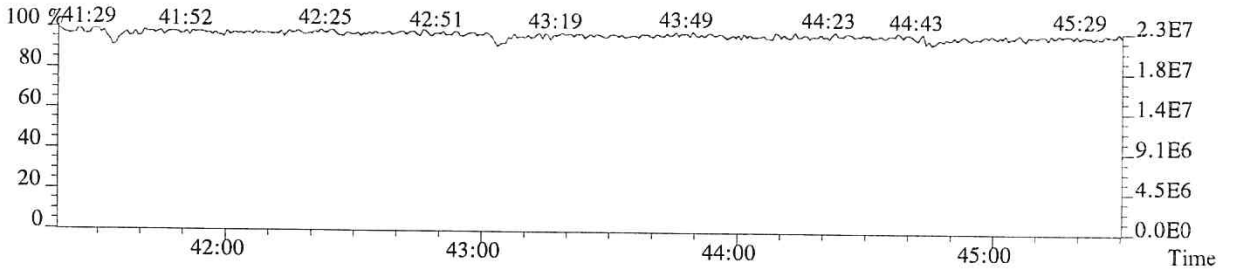
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,168.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,340.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



019027

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76555

Run #2 Filename P513851 Samp: 1 Inj: 1 Acquired: 24-JAN-18 14:23:56
Processed: 24-JAN-18 15:49:38 Sample ID: CS1

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	3.265e+02	4.510e+02	0.72	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	2.143e+03	1.390e+03	1.54	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:41	1.966e+03	1.345e+03	1.46	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:16	1.692e+03	1.406e+03	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	1.851e+03	1.586e+03	1.17	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:52	1.642e+03	1.320e+03	1.24	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.587e+03	1.193e+03	1.33	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	1.464e+03	1.425e+03	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.230e+03	1.277e+03	0.96	yes	no	1.258
10	Unk	OCDF	42:45	1.832e+03	1.936e+03	0.95	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	2.385e+02	2.700e+02	0.88	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:57	1.365e+03	8.234e+02	1.66	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	1.134e+03	9.001e+02	1.26	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	1.250e+03	9.288e+02	1.35	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	1.168e+03	9.616e+02	1.21	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	1.020e+03	9.210e+02	1.11	yes	no	1.025
17	Unk	OCDD	42:31	1.446e+03	1.652e+03	0.88	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	7.137e+04	9.000e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:47	8.867e+04	5.547e+04	1.60	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	8.638e+04	5.480e+04	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	3.777e+04	7.232e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:22	4.414e+04	8.392e+04	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	3.753e+04	7.150e+04	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	3.488e+04	6.647e+04	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	2.710e+04	6.070e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	2.509e+04	5.658e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	4.231e+04	5.302e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	5.560e+04	3.503e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	4.358e+04	3.432e+04	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	4.635e+04	3.621e+04	1.28	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	4.039e+04	3.882e+04	1.04	yes	no	0.858
32	IS	13C-OCDD	42:31	5.166e+04	5.687e+04	0.91	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	4.919e+04	6.018e+04	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	4.800e+04	3.836e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	5.257e+02				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
76555

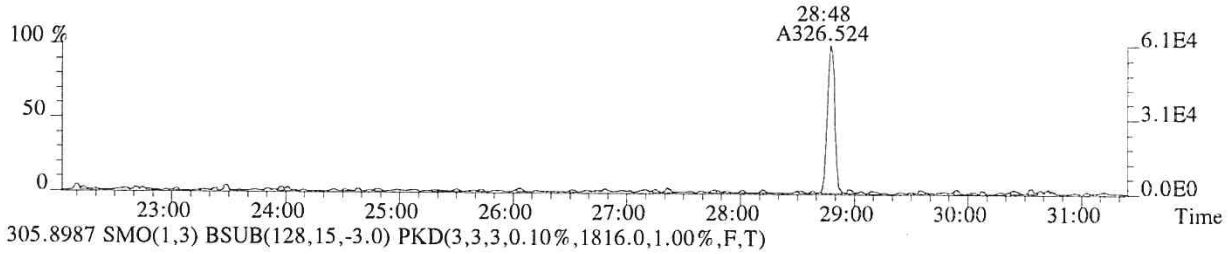
Run #2 Filename P513851 Samp: 1 Inj: 1 Acquired: 24-JAN-18 14:23:56
Processed: 24-JAN-18 15:49:38 LAB. ID: CS1

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	6.11e+04	5.52e+02	1.1e+02	8.10e+04	1.82e+03	4.5e+01
2	1,2,3,7,8-PeCDF	4.20e+05	1.32e+03	3.2e+02	2.59e+05	1.41e+03	1.8e+02
3	2,3,4,7,8-PeCDF	4.04e+05	1.32e+03	3.1e+02	2.67e+05	1.41e+03	1.9e+02
4	1,2,3,4,7,8-HxCDF	3.58e+05	5.32e+02	6.7e+02	3.14e+05	1.28e+02	2.5e+03
5	1,2,3,6,7,8-HxCDF	3.97e+05	5.32e+02	7.5e+02	3.35e+05	1.28e+02	2.6e+03
6	2,3,4,6,7,8-HxCDF	3.52e+05	5.32e+02	6.6e+02	2.91e+05	1.28e+02	2.3e+03
7	1,2,3,7,8,9-HxCDF	3.28e+05	5.32e+02	6.2e+02	2.40e+05	1.28e+02	1.9e+03
8	1,2,3,4,6,7,8-HpCDF	3.00e+05	3.04e+02	9.9e+02	3.07e+05	7.12e+02	4.3e+02
9	1,2,3,4,7,8,9-HpCDF	2.35e+05	3.04e+02	7.7e+02	2.45e+05	7.12e+02	3.4e+02
10	OCDF	3.05e+05	4.12e+02	7.4e+02	3.13e+05	8.20e+02	3.8e+02
11	2,3,7,8-TCDD	5.05e+04	1.50e+03	3.4e+01	5.68e+04	1.02e+03	5.5e+01
12	1,2,3,7,8-PeCDD	2.75e+05	9.88e+02	2.8e+02	1.65e+05	1.80e+02	9.2e+02
13	1,2,3,4,7,8-HxCDD	2.60e+05	5.96e+02	4.4e+02	2.09e+05	7.60e+02	2.7e+02
14	1,2,3,6,7,8-HxCDD	2.55e+05	5.96e+02	4.3e+02	1.96e+05	7.60e+02	2.6e+02
15	1,2,3,7,8,9-HxCDD	2.36e+05	5.96e+02	4.0e+02	1.94e+05	7.60e+02	2.6e+02
16	1,2,3,4,6,7,8-HpCDD	1.99e+05	6.88e+02	2.9e+02	1.95e+05	5.68e+02	3.4e+02
17	OCDD	2.63e+05	1.92e+02	1.4e+03	2.88e+05	1.59e+03	1.8e+02
18	13C-2,3,7,8-TCDF	1.42e+07	6.97e+03	2.0e+03	1.79e+07	2.86e+03	6.3e+03
19	13C-1,2,3,7,8-PeCDF	1.70e+07	6.48e+02	2.6e+04	1.08e+07	1.59e+03	6.8e+03
20	13C-2,3,4,7,8-PeCDF	1.78e+07	6.48e+02	2.7e+04	1.13e+07	1.59e+03	7.1e+03
21	13C-1,2,3,4,7,8-HxCDF	8.20e+06	9.16e+02	9.0e+03	1.58e+07	1.42e+03	1.1e+04
22	13C-1,2,3,6,7,8-HxCDF	9.34e+06	9.16e+02	1.0e+04	1.79e+07	1.42e+03	1.3e+04
23	13C-2,3,4,6,7,8-HxCDF	8.09e+06	9.16e+02	8.8e+03	1.56e+07	1.42e+03	1.1e+04
24	13C-1,2,3,7,8,9-HxCDF	7.17e+06	9.16e+02	7.8e+03	1.36e+07	1.42e+03	9.6e+03
25	13C-1,2,3,4,6,7,8-HpCDF	5.66e+06	2.69e+03	2.1e+03	1.28e+07	9.09e+03	1.4e+03
26	13C-1,2,3,4,7,8,9-HpCDF	4.79e+06	2.69e+03	1.8e+03	1.07e+07	9.09e+03	1.2e+03
27	13C-2,3,7,8-TCDD	8.84e+06	4.39e+03	2.0e+03	1.11e+07	2.59e+03	4.3e+03
28	13C-1,2,3,7,8-PeCDD	1.13e+07	1.11e+03	1.0e+04	7.15e+06	7.88e+02	9.1e+03
29	13C-1,2,3,4,7,8-HxCDD	9.90e+06	2.00e+03	4.9e+03	7.79e+06	1.42e+03	5.5e+03
30	13C-1,2,3,6,7,8-HxCDD	9.60e+06	2.00e+03	4.8e+03	7.47e+06	1.42e+03	5.2e+03
31	13C-1,2,3,4,6,7,8-HpCDD	7.95e+06	1.15e+03	6.9e+03	7.67e+06	8.88e+02	8.6e+03
32	13C-OCDD	8.56e+06	6.00e+01	1.4e+05	9.50e+06	8.00e+02	1.2e+04
33	13C-1,2,3,4-TCDD	9.96e+06	4.39e+03	2.3e+03	1.22e+07	2.59e+03	4.7e+03
34	13C-1,2,3,7,8,9-HxCDD	9.63e+06	2.00e+03	4.8e+03	7.67e+06	1.42e+03	5.4e+03
35	37Cl-2,3,7,8-TCDD	1.07e+05	1.30e+03	8.2e+01			

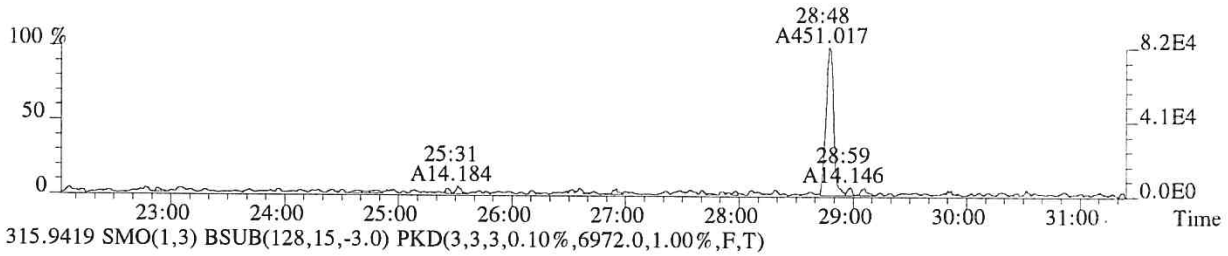
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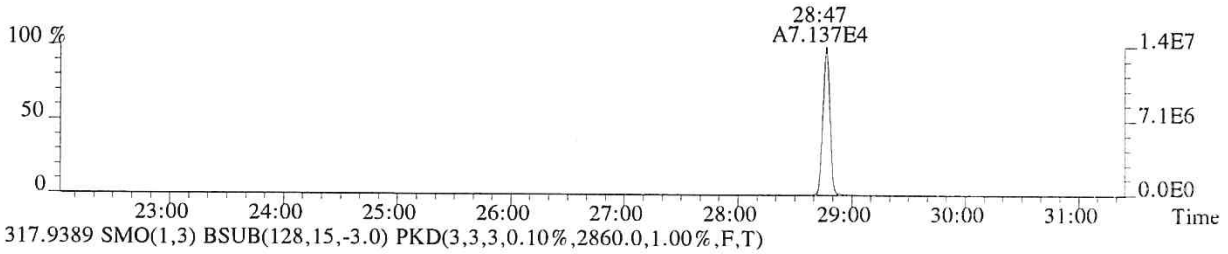
File:P513851 #1-665 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,552.0,1.00%,F,T)



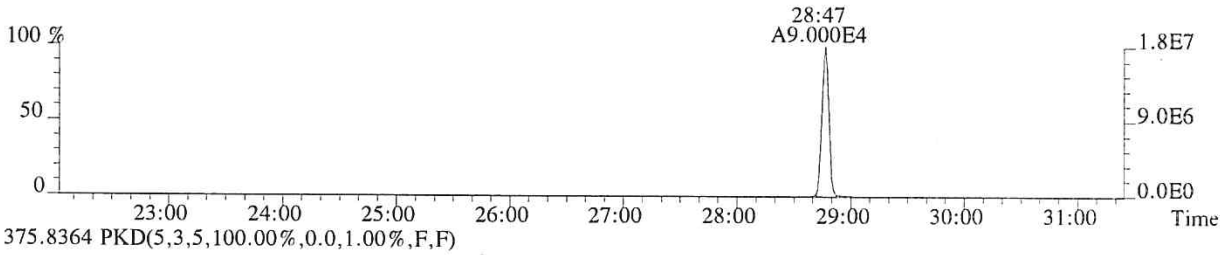
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1816.0,1.00%,F,T)



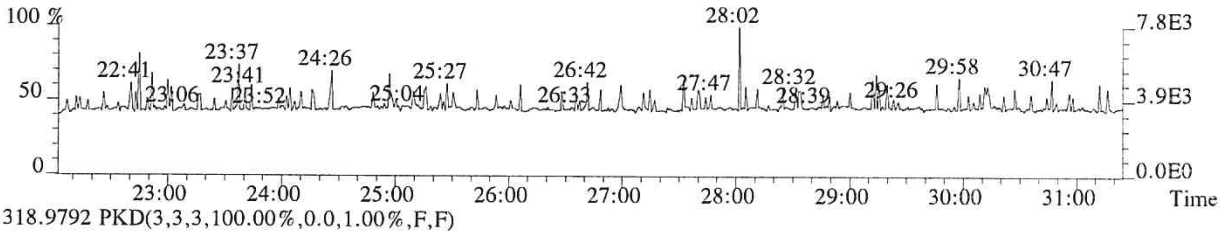
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6972.0,1.00%,F,T)



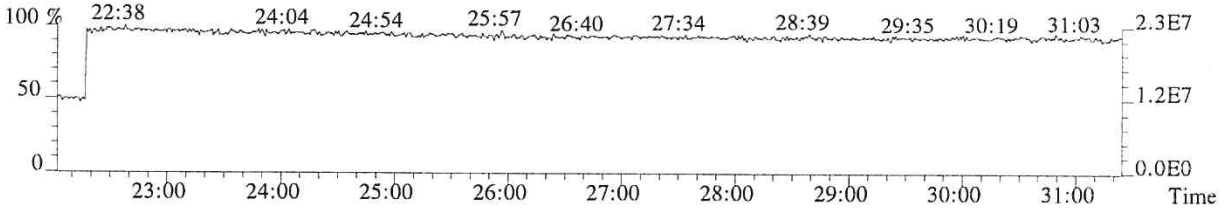
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2860.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

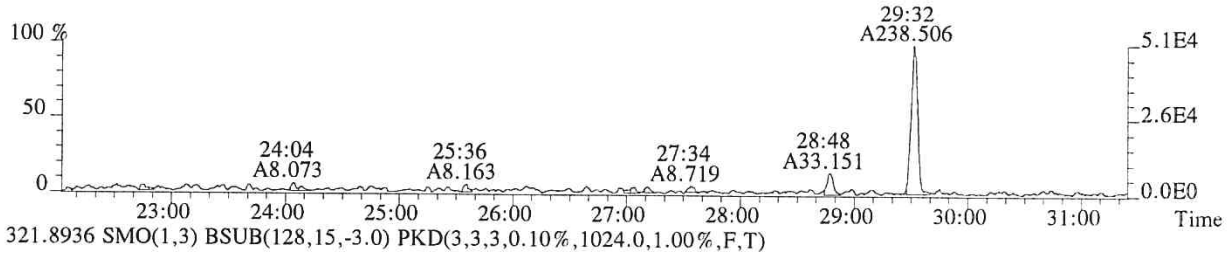


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

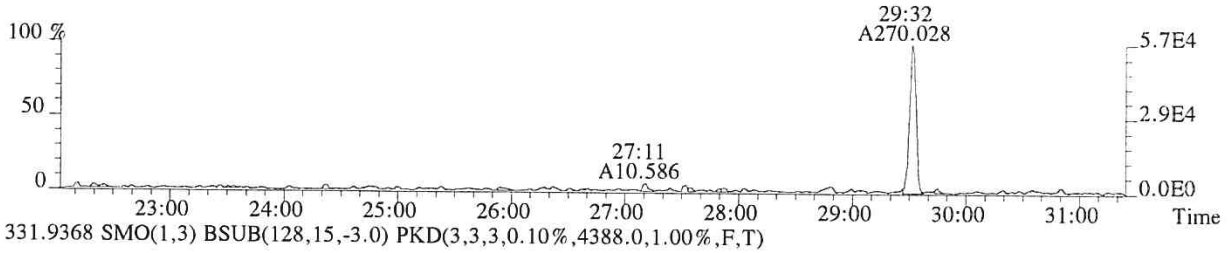


File:P513851 #1-665 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:76555

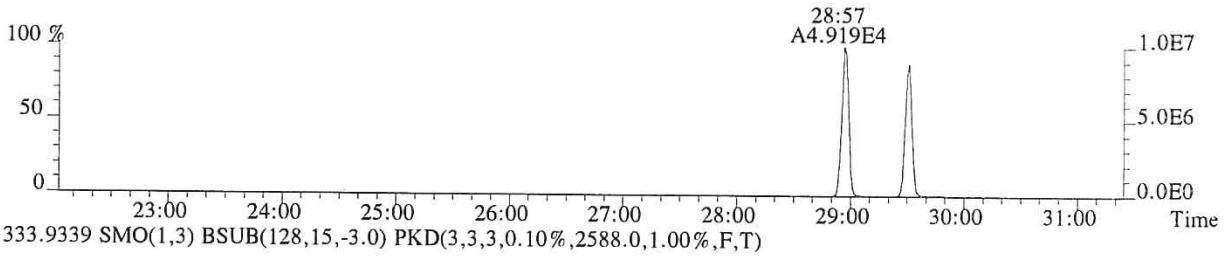
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1496.0,1.00%,F,T)



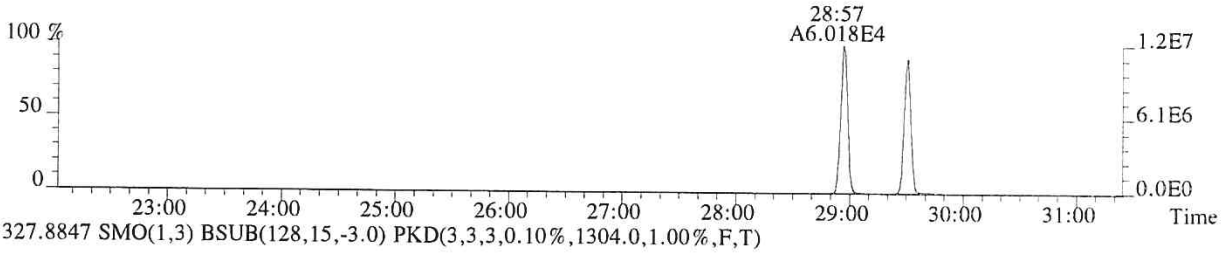
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



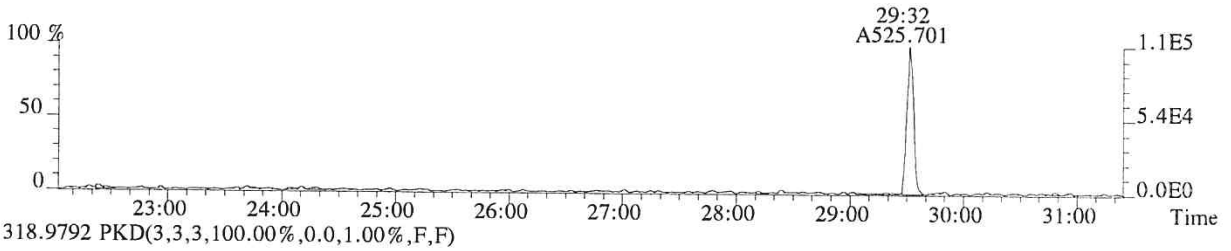
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4388.0,1.00%,F,T)



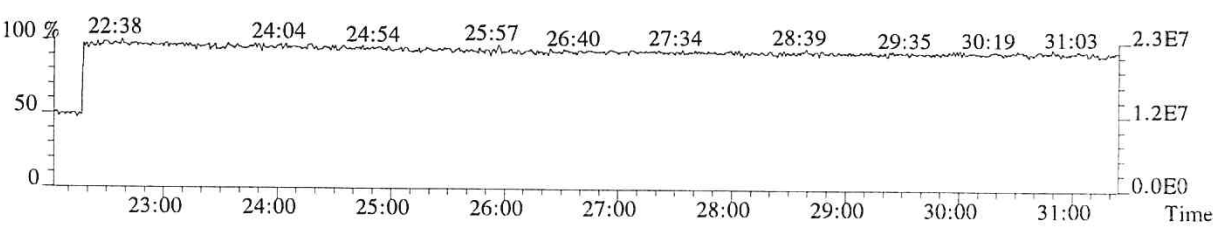
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2588.0,1.00%,F,T)



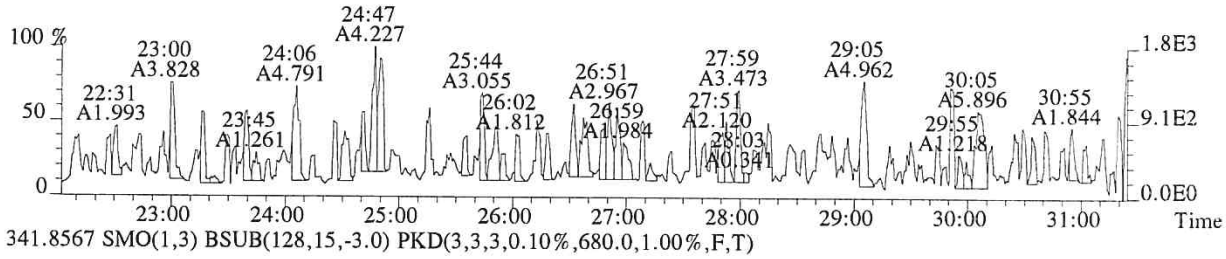
327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1304.0,1.00%,F,T)



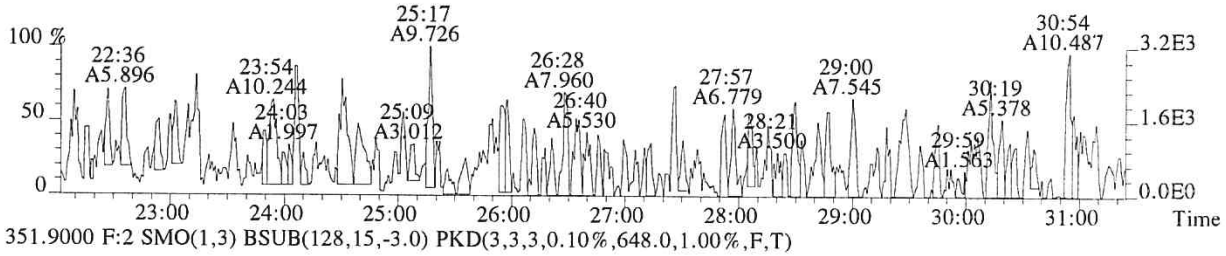
318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



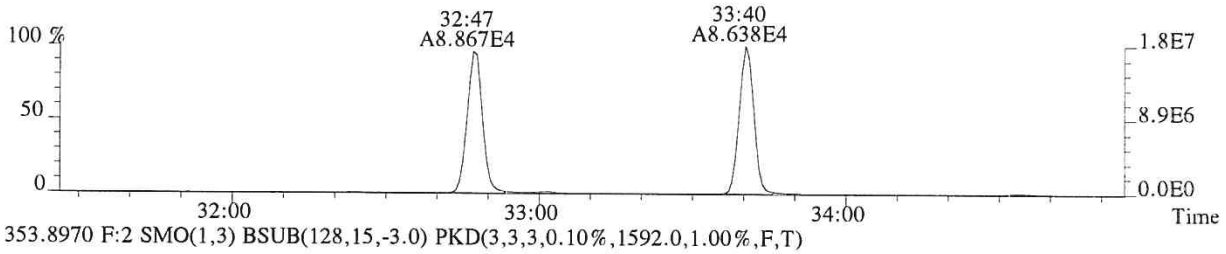
File:P513851 #1-665 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:76555
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,388.0,1.00%,F,T)



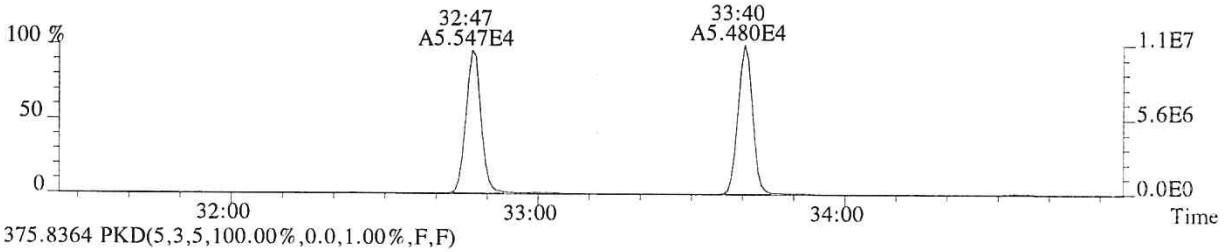
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,680.0,1.00%,F,T)



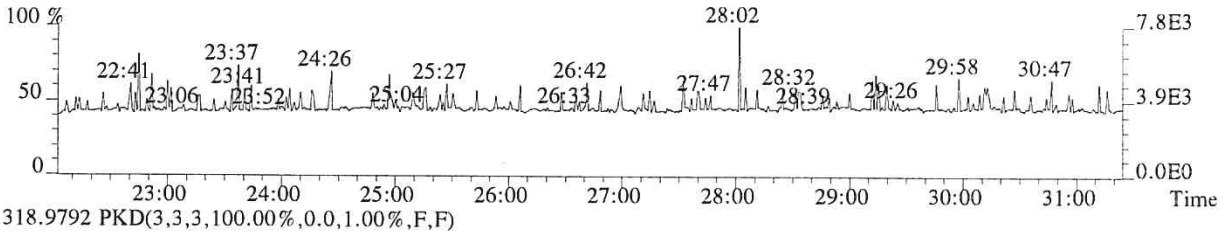
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,648.0,1.00%,F,T)



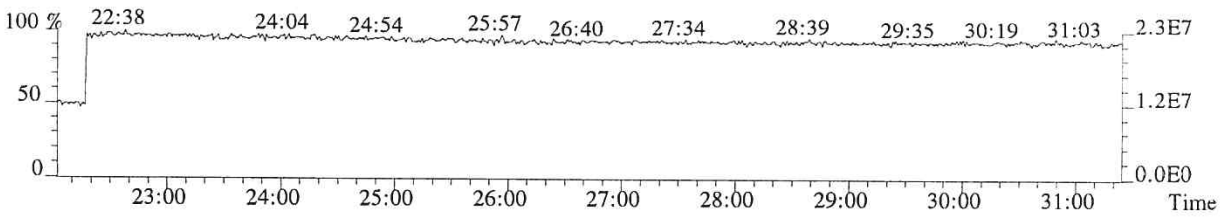
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1592.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

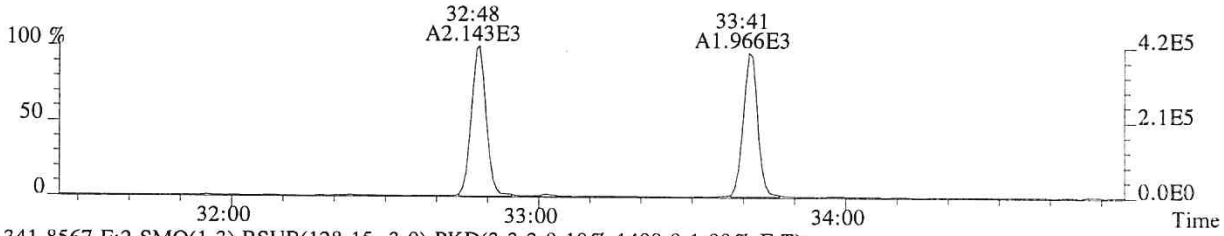


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

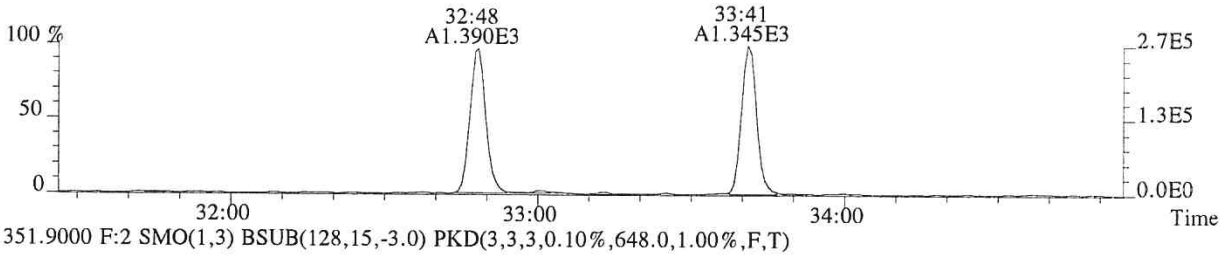


019032

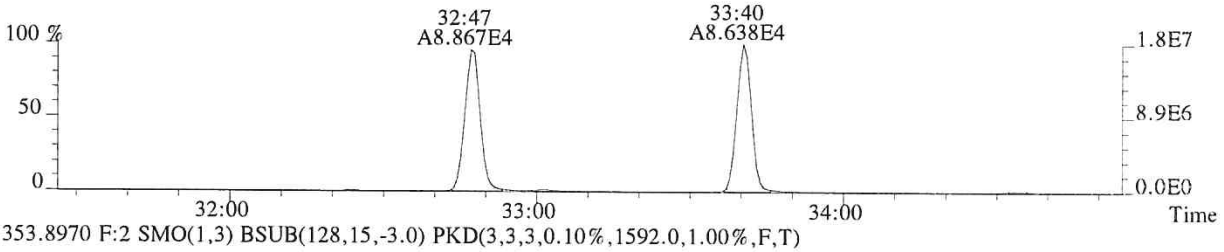
File:P513851 #1-313 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1316.0,1.00%,F,T)



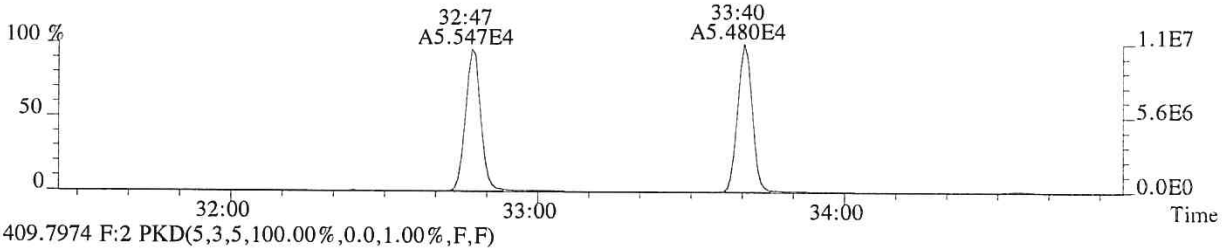
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1408.0,1.00%,F,T)



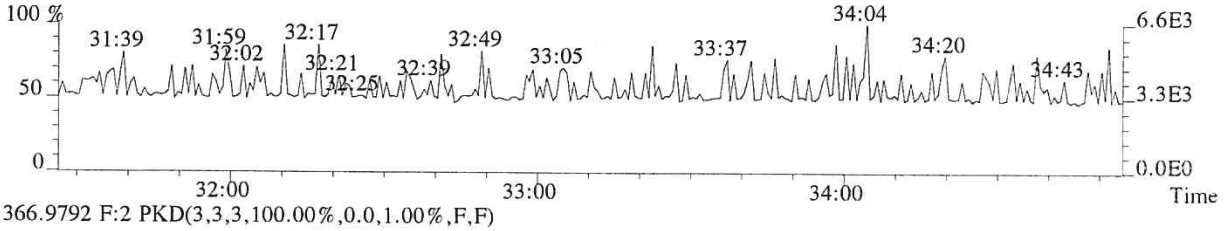
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,648.0,1.00%,F,T)



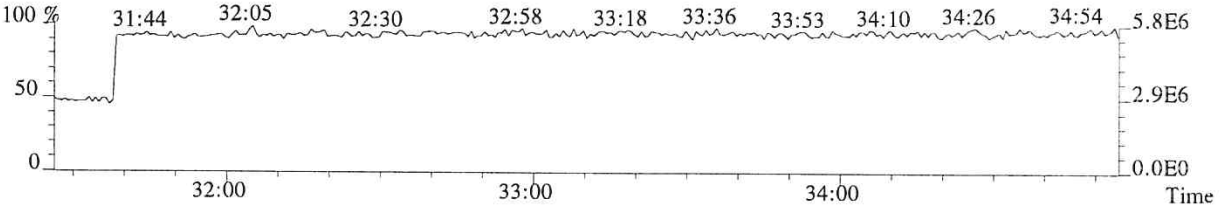
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1592.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

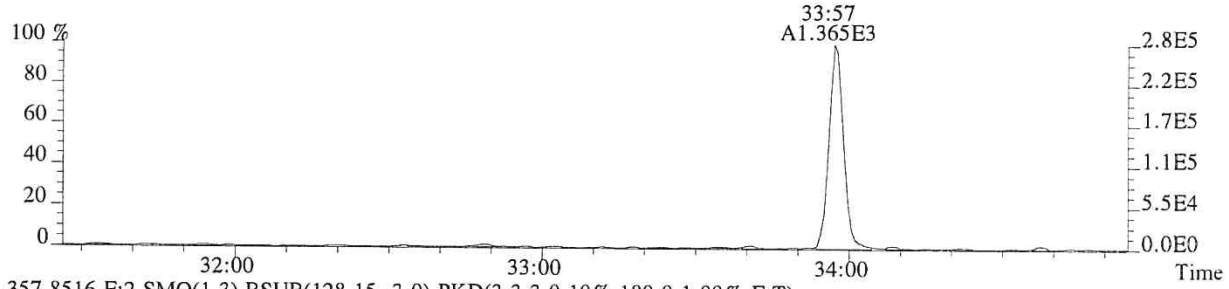


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

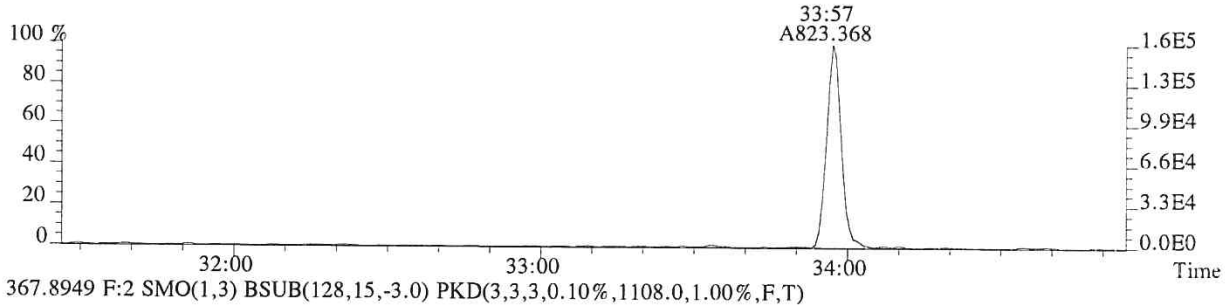


019033

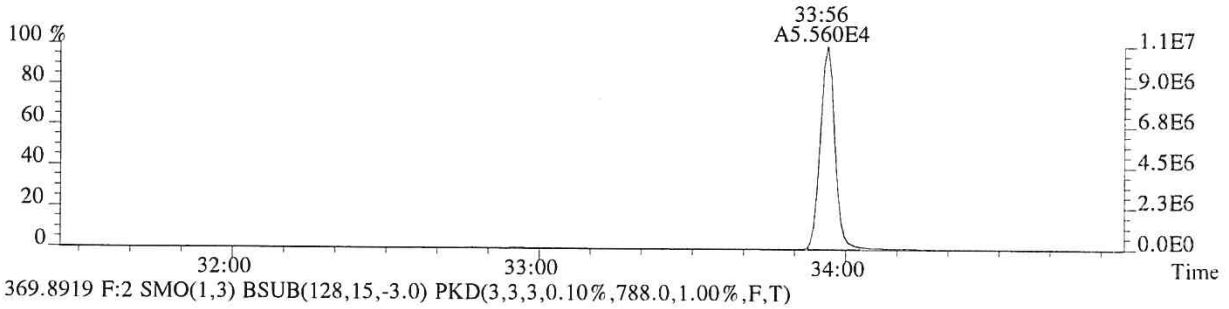
File:P513851 #1-313 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,988.0,1.00%,F,T)



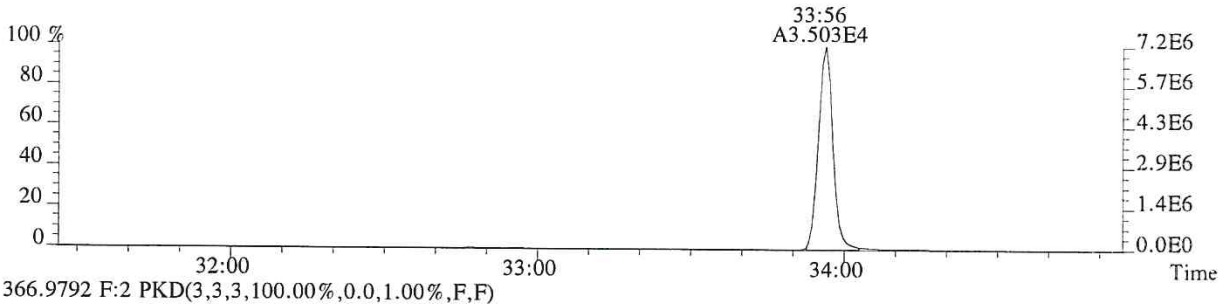
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,180.0,1.00%,F,T)



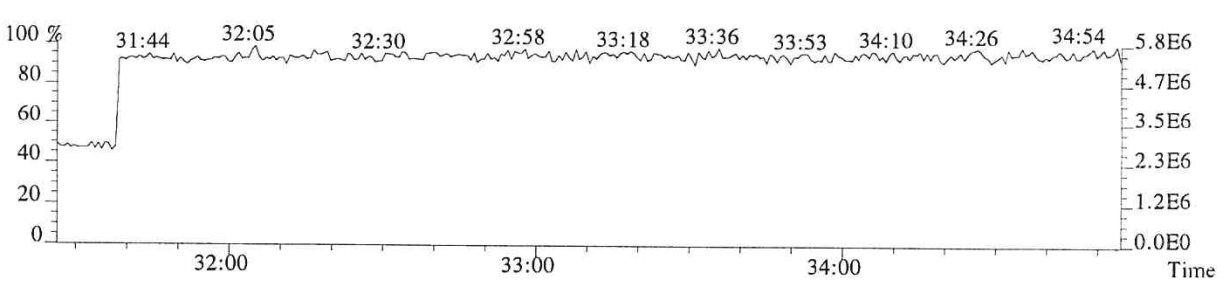
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1108.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,788.0,1.00%,F,T)



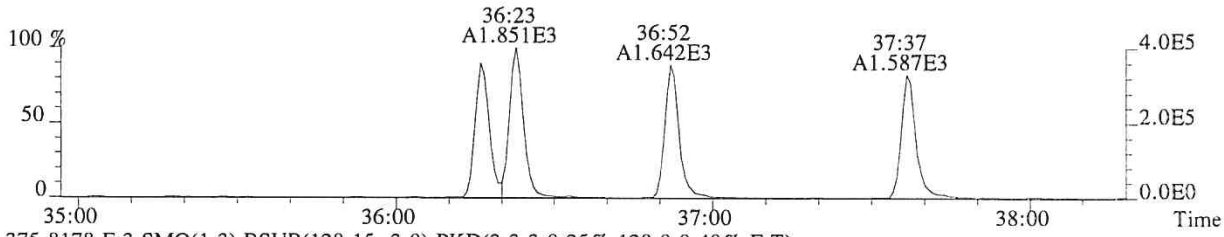
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



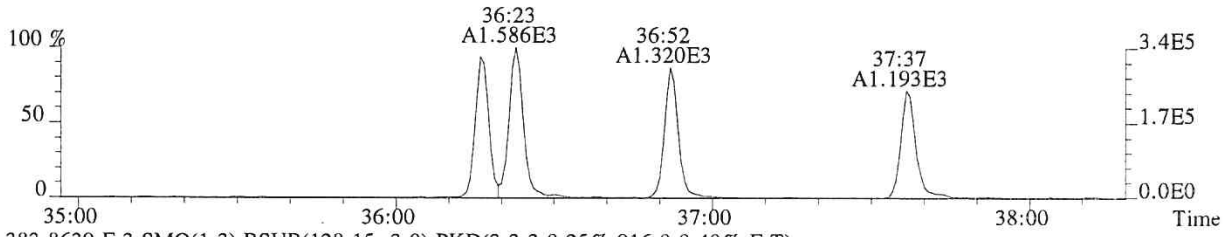
019034

File:P513851 #1-303 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555

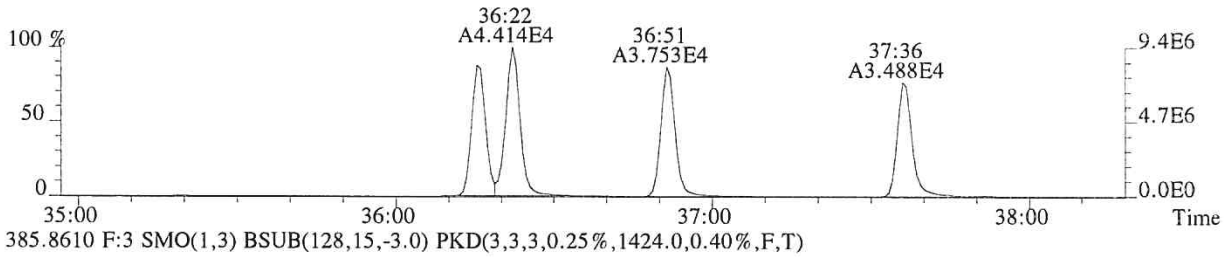
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,532.0,0.40%,F,T)



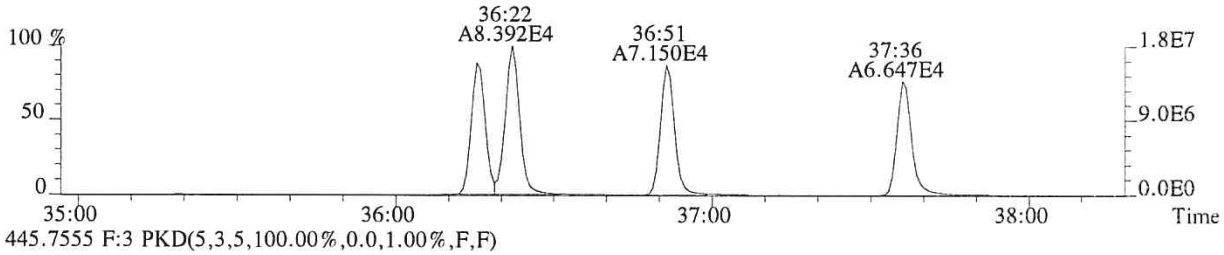
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,128.0,0.40%,F,T)



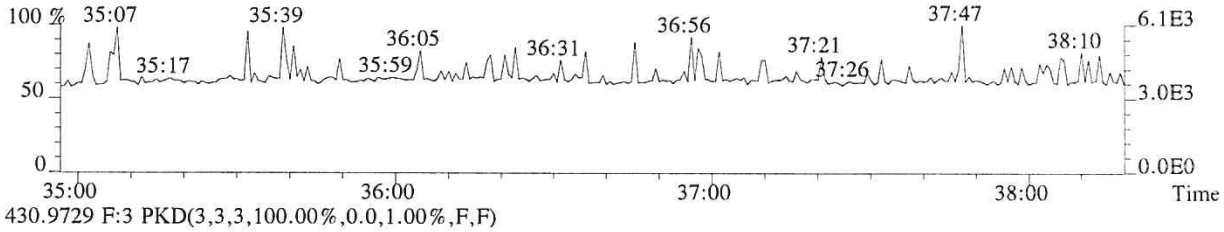
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,916.0,0.40%,F,T)



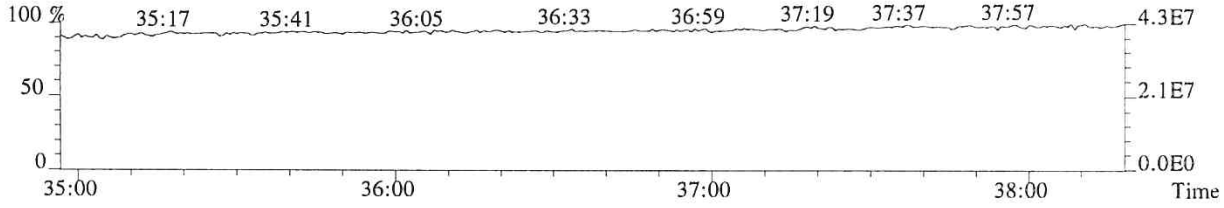
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1424.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

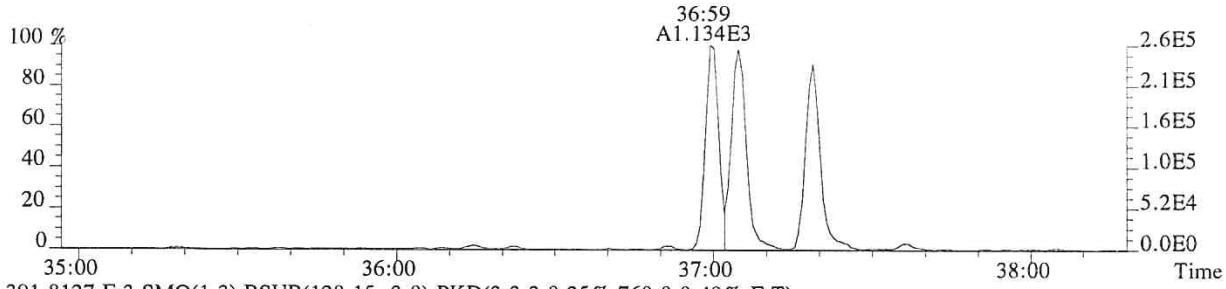


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

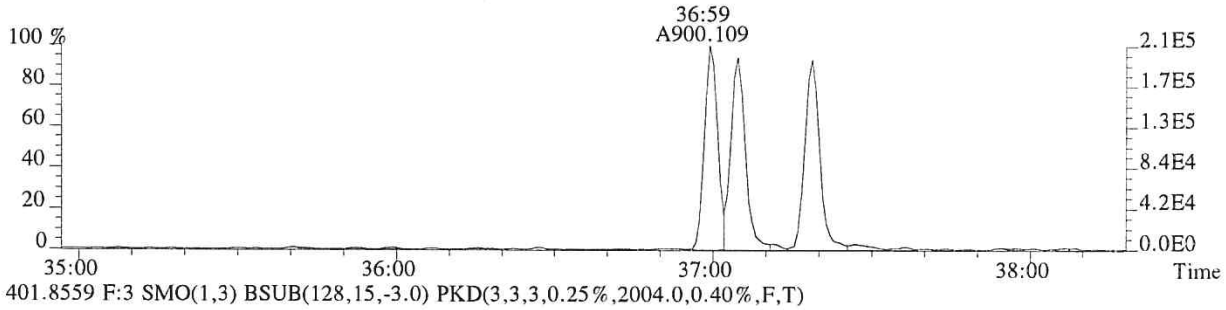


019035

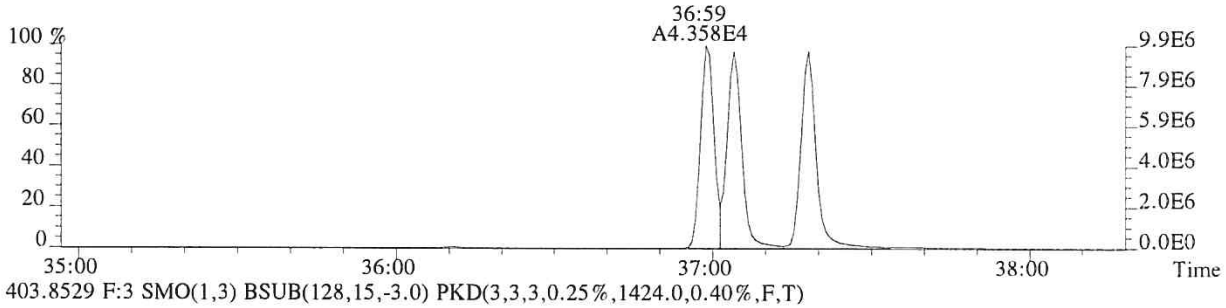
File:P513851 #1-303 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,596.0,0.40%,F,T)



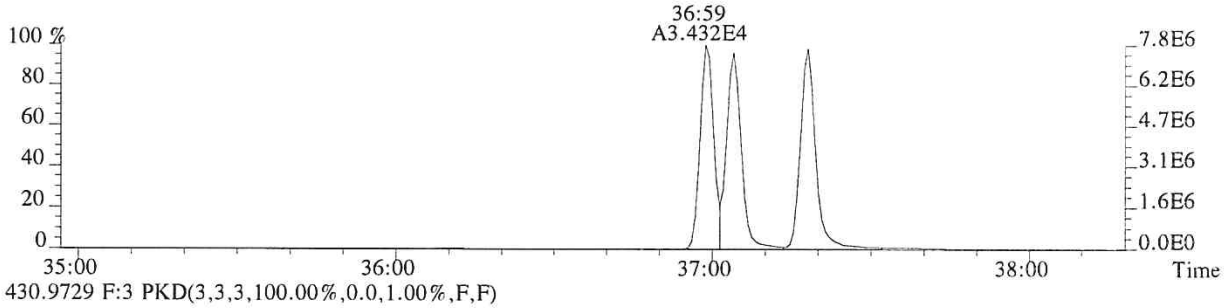
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,760.0,0.40%,F,T)



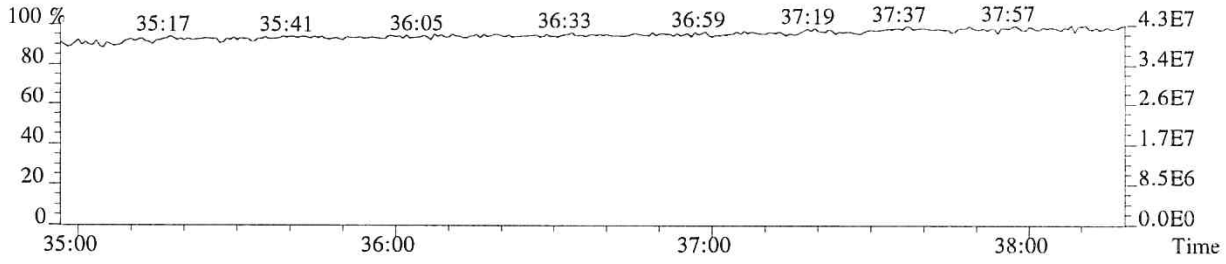
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2004.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1424.0,0.40%,F,T)

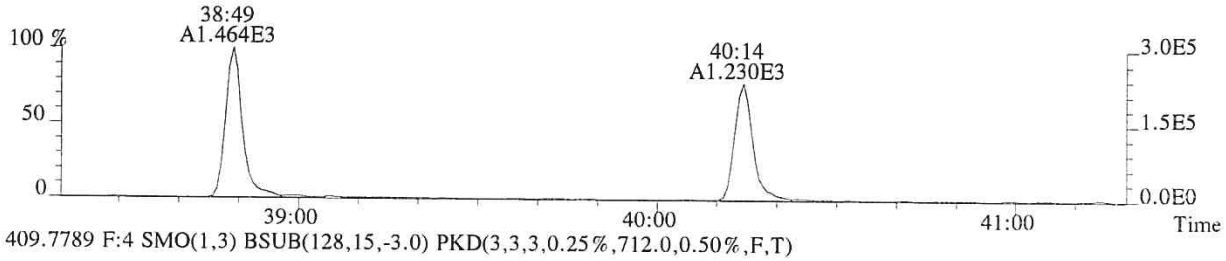


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

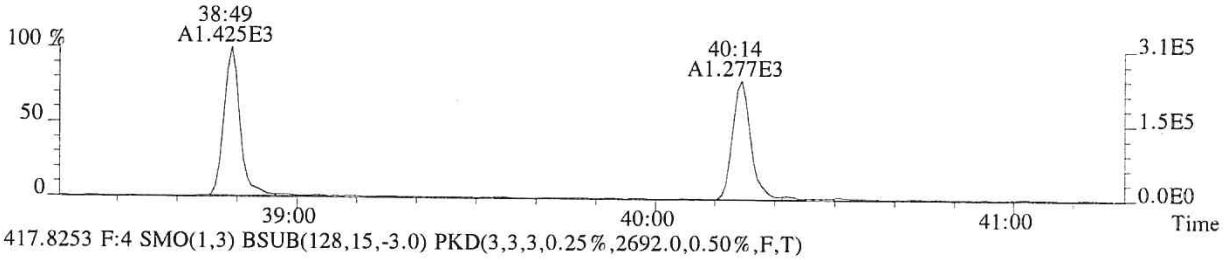


019036

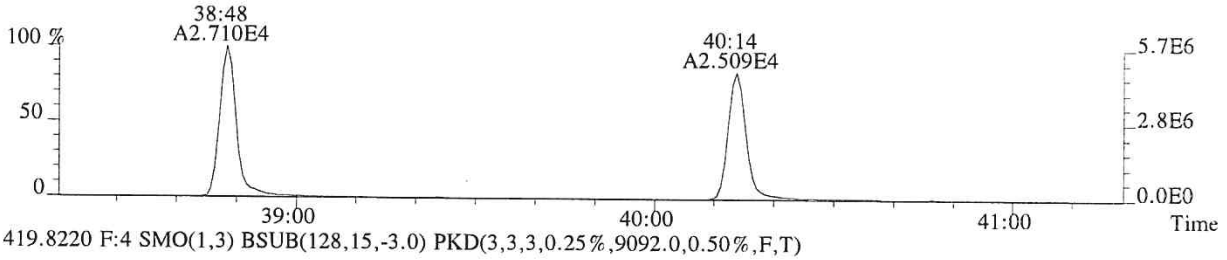
File:P513851 #1-268 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,304.0,0.50%,F,T)



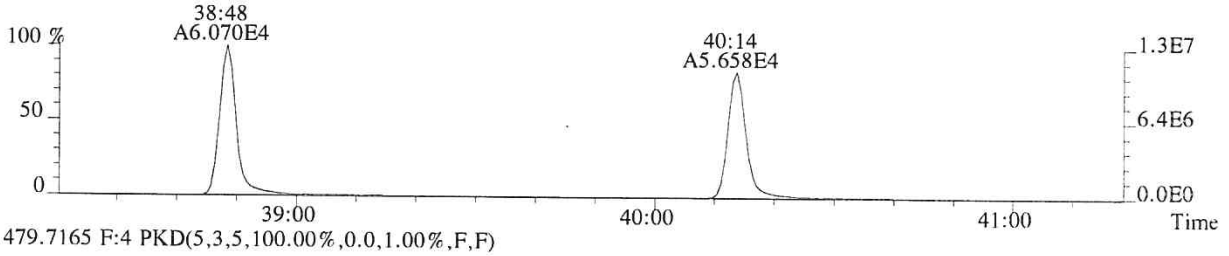
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,712.0,0.50%,F,T)



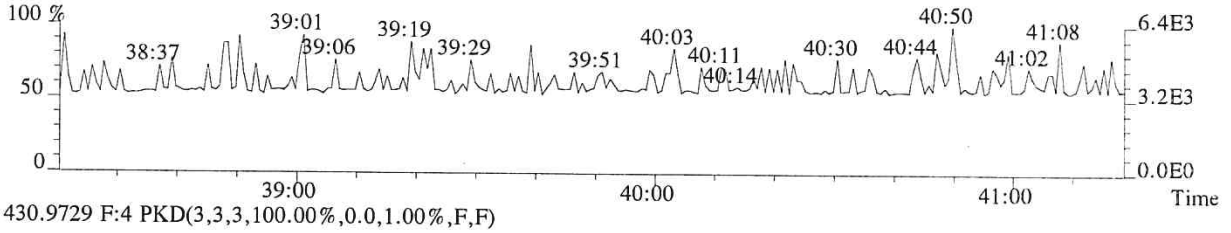
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2692.0,0.50%,F,T)



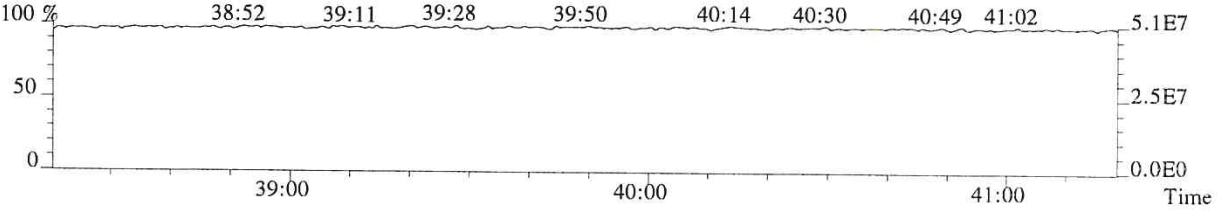
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,9092.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

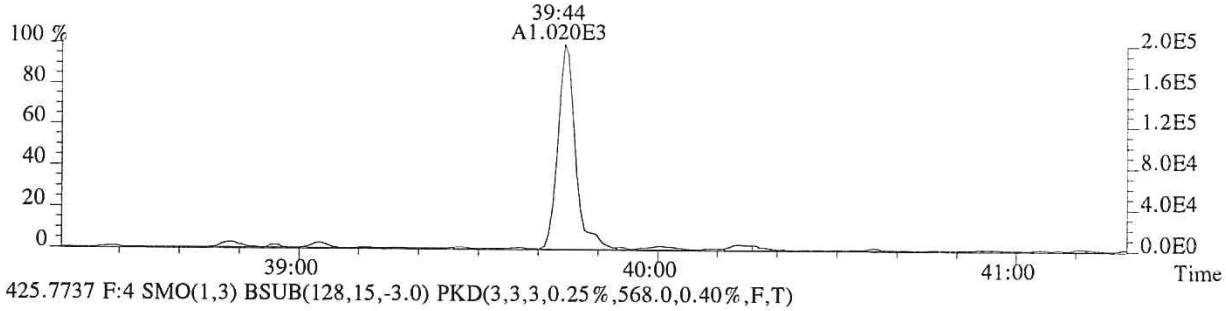


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

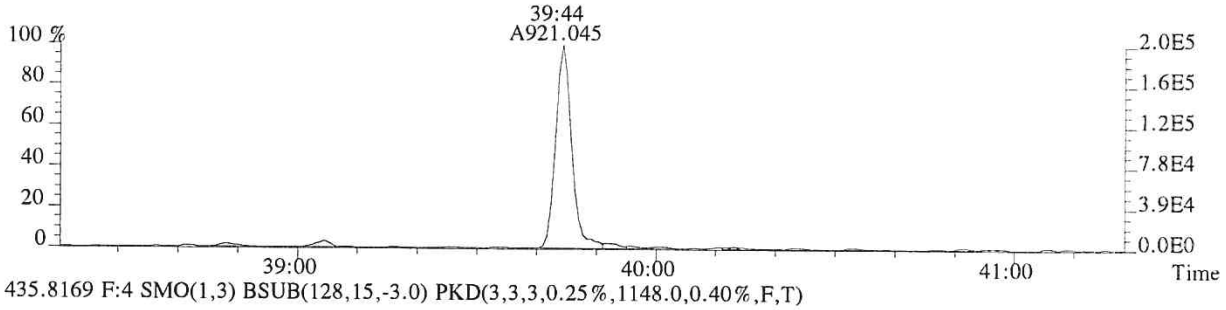


019037

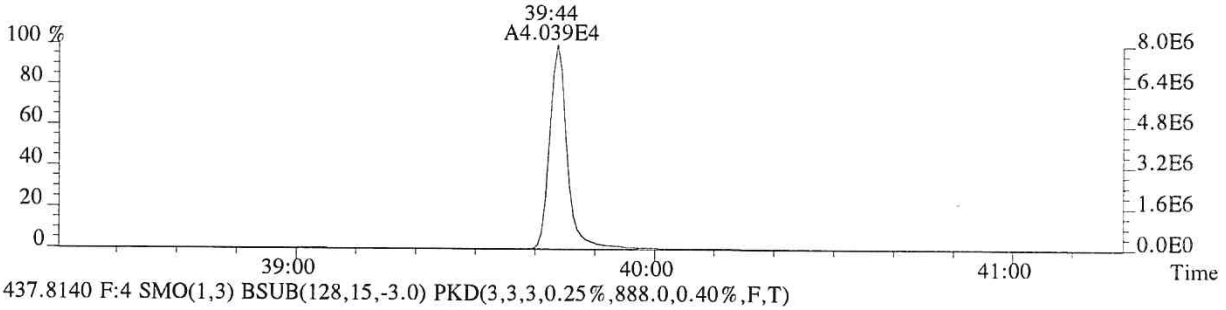
File:P513851 #1-268 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,688.0,0.40%,F,T)



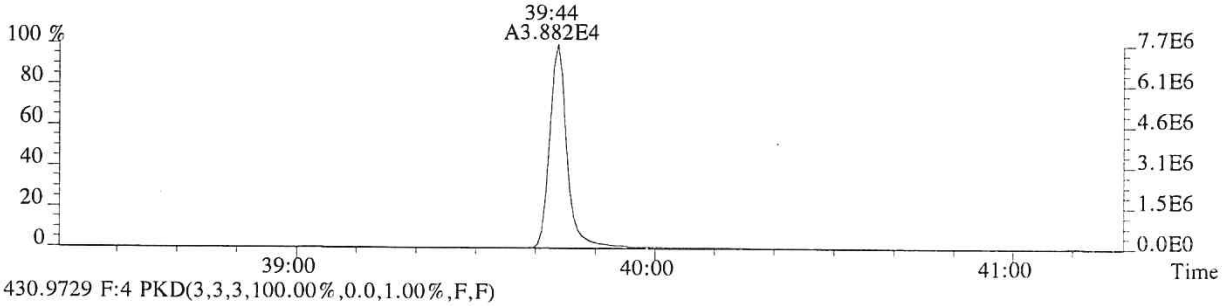
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,568.0,0.40%,F,T)



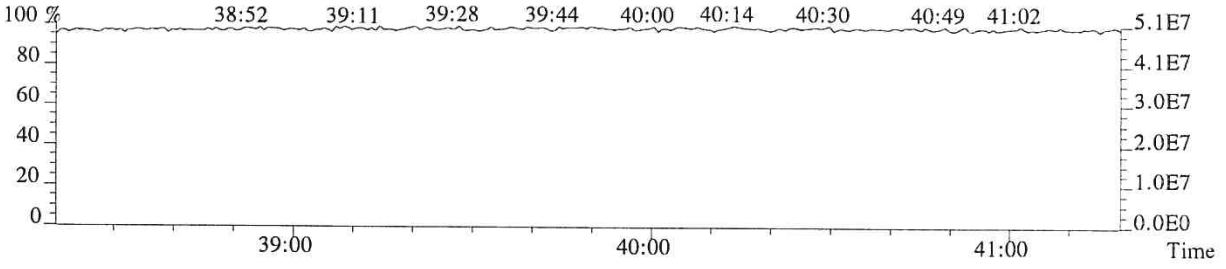
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1148.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,888.0,0.40%,F,T)

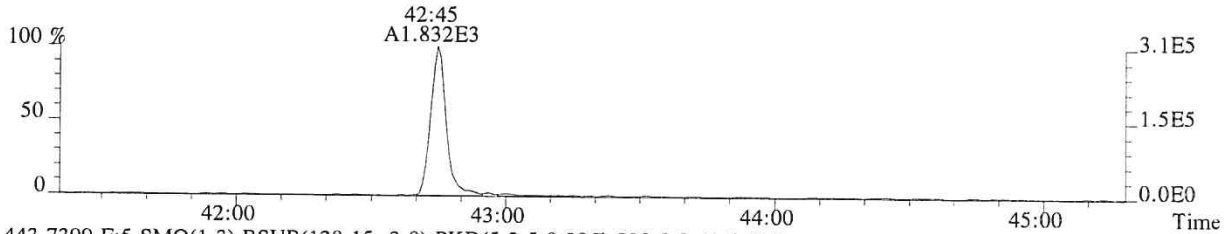


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

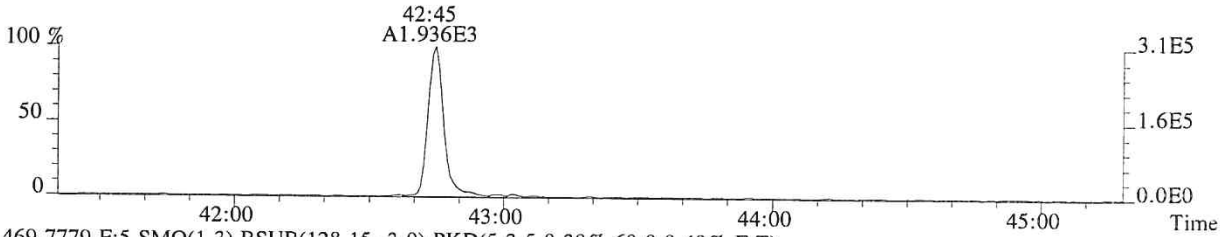


019038

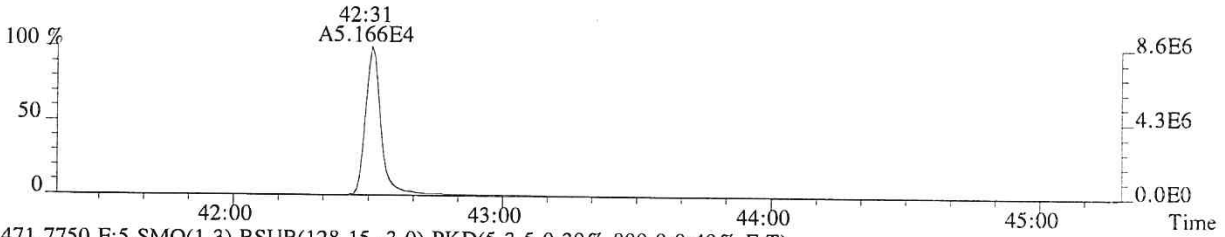
File:P513851 #1-357 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:76555
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,412.0,0.40%,F,T)



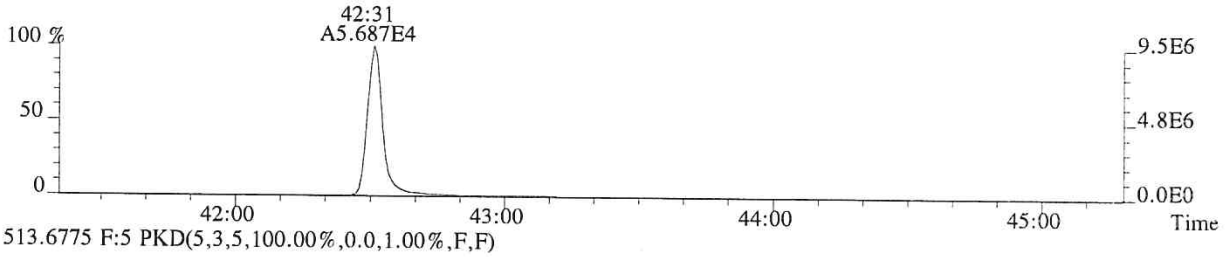
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,820.0,0.40%,F,T)



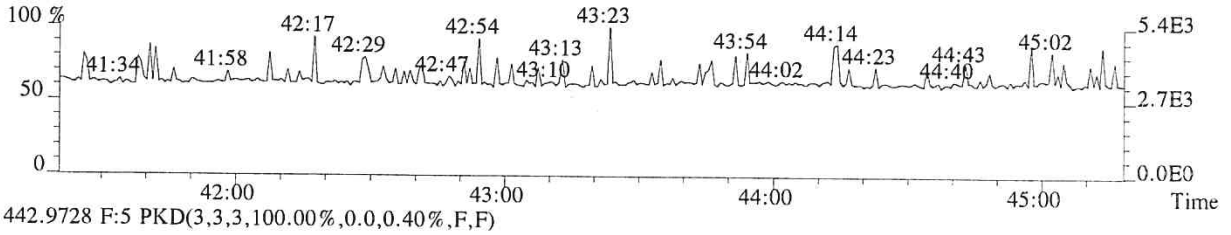
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,60.0,0.40%,F,T)



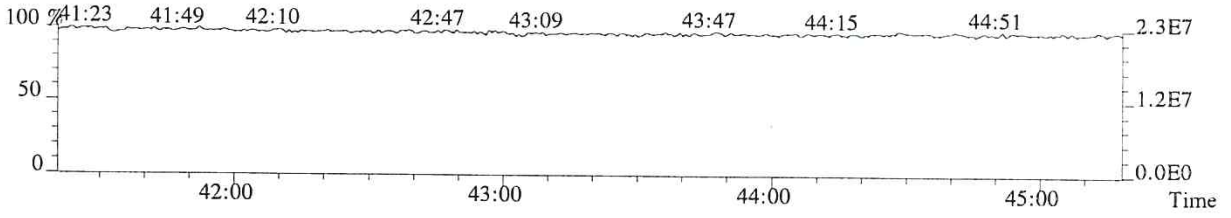
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,800.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

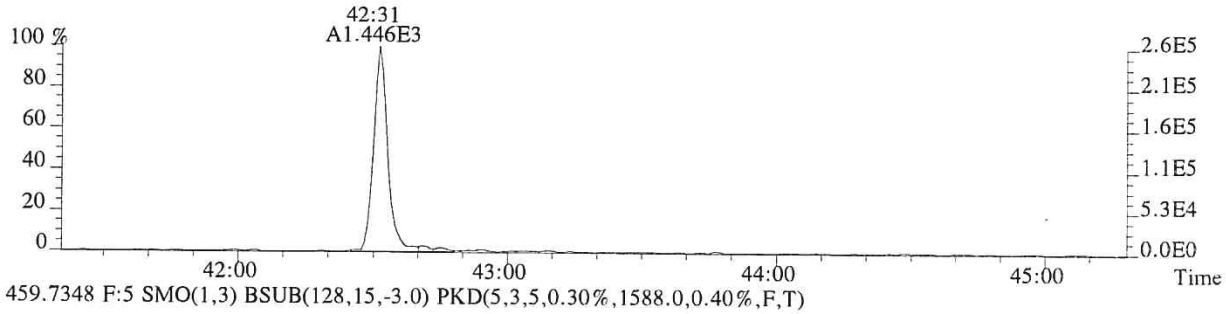


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

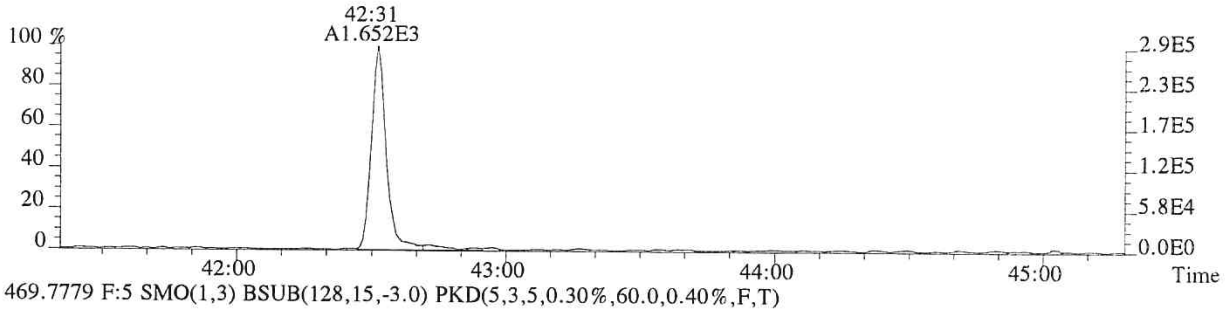


019039

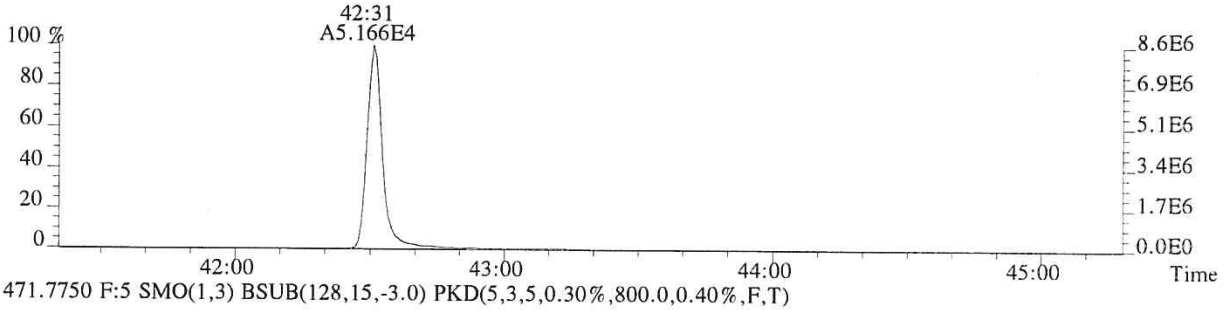
File:P513851 #1-357 Acq:24-JAN-2018 14:23:56 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76555
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,192.0,0.40%,F,T)



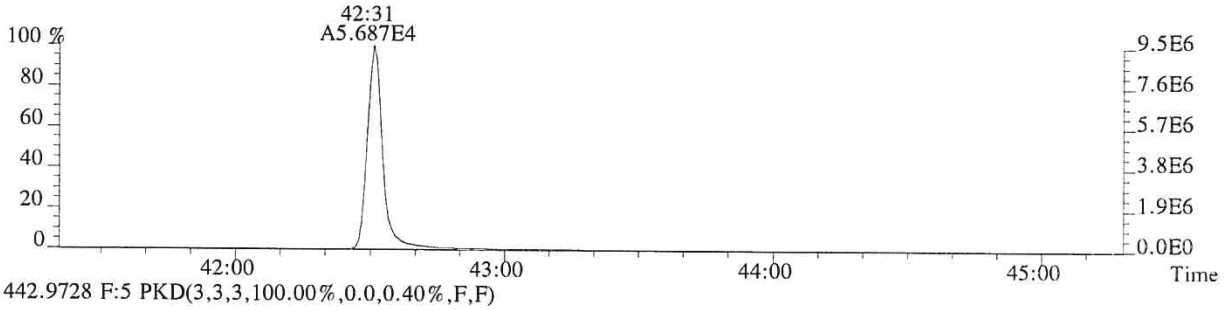
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1588.0,0.40%,F,T)



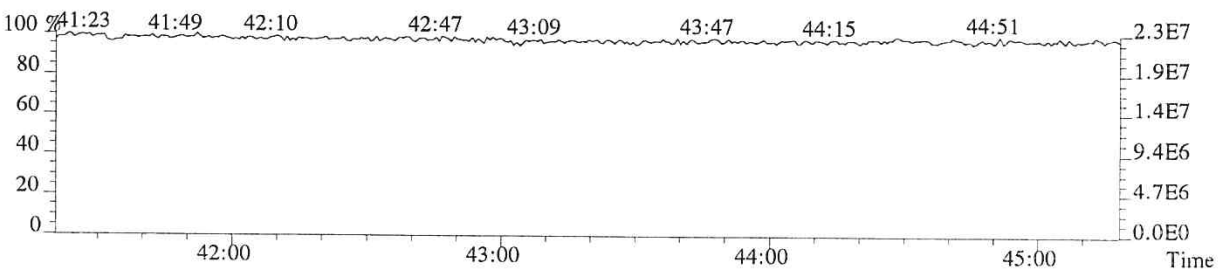
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,60.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,800.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



019040

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76556

Run #3 Filename P513852 Samp: 1 Inj: 1 Acquired: 24-JAN-18 15:18:44
Processed: 24-JAN-18 16:27:06 Sample ID: CS2

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	5.859e+03	7.932e+03	0.74	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	4.499e+04	3.047e+04	1.48	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:42	4.356e+04	2.901e+04	1.50	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:17	4.061e+04	3.382e+04	1.20	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	4.295e+04	3.562e+04	1.21	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:53	3.905e+04	3.212e+04	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	3.479e+04	2.862e+04	1.22	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	3.262e+04	3.207e+04	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	2.654e+04	2.632e+04	1.01	yes	no	1.258
10	Unk	OCDF	42:45	3.789e+04	4.247e+04	0.89	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	4.192e+03	5.525e+03	0.76	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:58	2.973e+04	1.886e+04	1.58	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	37:00	2.687e+04	2.156e+04	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	2.801e+04	2.223e+04	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	2.898e+04	2.343e+04	1.24	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:45	2.194e+04	2.114e+04	1.04	yes	no	1.025
17	Unk	OCDD	42:32	3.213e+04	3.615e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	3.357e+05	4.220e+05	0.80	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:48	4.551e+05	2.871e+05	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	4.534e+05	2.868e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:16	2.091e+05	4.014e+05	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:23	2.405e+05	4.554e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:52	2.176e+05	4.192e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:37	1.900e+05	3.615e+05	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:49	1.476e+05	3.275e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	1.279e+05	2.823e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	2.035e+05	2.546e+05	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	3.112e+05	1.963e+05	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	2.611e+05	2.071e+05	1.26	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:05	2.721e+05	2.137e+05	1.27	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	2.118e+05	1.999e+05	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	2.824e+05	3.150e+05	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	2.212e+05	2.732e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:19	2.902e+05	2.282e+05	1.27	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	1.018e+04				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
76556

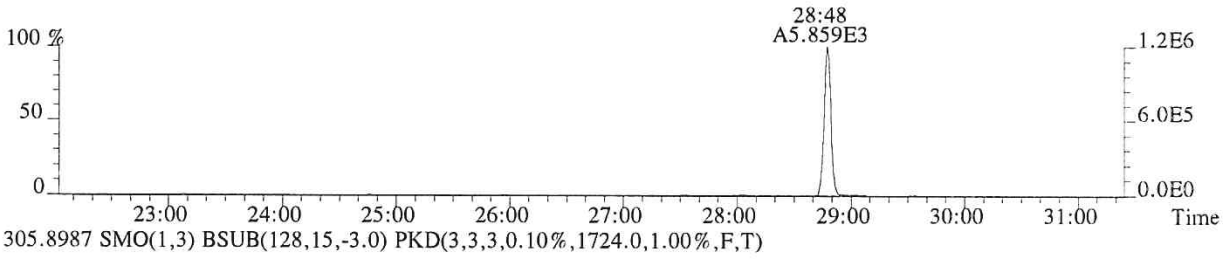
Run #3 Filename P513852 Samp: 1 Inj: 1 Acquired: 24-JAN-18 15:18:44
Processed: 24-JAN-18 16:27:06 LAB. ID: CS2

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.20e+06	7.00e+02	1.7e+03	1.59e+06	1.72e+03	9.3e+02
2	1,2,3,7,8-PeCDF	9.02e+06	1.92e+02	4.7e+04	6.06e+06	3.56e+03	1.7e+03
3	2,3,4,7,8-PeCDF	8.94e+06	1.92e+02	4.7e+04	5.88e+06	3.56e+03	1.7e+03
4	1,2,3,4,7,8-HxCDF	9.11e+06	1.02e+03	9.0e+03	7.52e+06	1.04e+03	7.2e+03
5	1,2,3,6,7,8-HxCDF	8.86e+06	1.02e+03	8.7e+03	7.32e+06	1.04e+03	7.0e+03
6	2,3,4,6,7,8-HxCDF	8.62e+06	1.02e+03	8.5e+03	6.97e+06	1.04e+03	6.7e+03
7	1,2,3,7,8,9-HxCDF	7.31e+06	1.02e+03	7.2e+03	6.00e+06	1.04e+03	5.7e+03
8	1,2,3,4,6,7,8-HpCDF	6.83e+06	3.67e+03	1.9e+03	6.77e+06	3.04e+03	2.2e+03
9	1,2,3,4,7,8,9-HpCDF	5.23e+06	3.67e+03	1.4e+03	5.30e+06	3.04e+03	1.7e+03
10	OCDF	6.47e+06	1.08e+03	6.0e+03	7.24e+06	1.74e+03	4.2e+03
11	2,3,7,8-TCDD	8.47e+05	1.35e+03	6.3e+02	1.14e+06	7.40e+02	1.5e+03
12	1,2,3,7,8-PeCDD	6.05e+06	5.16e+02	1.2e+04	3.80e+06	5.04e+02	7.5e+03
13	1,2,3,4,7,8-HxCDD	6.06e+06	7.48e+02	8.1e+03	4.85e+06	1.29e+03	3.8e+03
14	1,2,3,6,7,8-HxCDD	5.88e+06	7.48e+02	7.9e+03	4.64e+06	1.29e+03	3.6e+03
15	1,2,3,7,8,9-HxCDD	5.73e+06	7.48e+02	7.7e+03	4.69e+06	1.29e+03	3.6e+03
16	1,2,3,4,6,7,8-HpCDD	4.40e+06	1.68e+03	2.6e+03	4.18e+06	7.28e+02	5.7e+03
17	OCDD	5.55e+06	1.60e+02	3.5e+04	6.20e+06	1.07e+03	5.8e+03
18	13C-2,3,7,8-TCDF	6.63e+07	8.64e+03	7.7e+03	8.31e+07	4.36e+03	1.9e+04
19	13C-1,2,3,7,8-PeCDF	8.82e+07	9.44e+02	9.3e+04	5.54e+07	2.55e+03	2.2e+04
20	13C-2,3,4,7,8-PeCDF	9.11e+07	9.44e+02	9.6e+04	5.80e+07	2.55e+03	2.3e+04
21	13C-1,2,3,4,7,8-HxCDF	4.63e+07	1.33e+03	3.5e+04	8.84e+07	3.58e+03	2.5e+04
22	13C-1,2,3,6,7,8-HxCDF	4.97e+07	1.33e+03	3.7e+04	9.31e+07	3.58e+03	2.6e+04
23	13C-2,3,4,6,7,8-HxCDF	4.74e+07	1.33e+03	3.6e+04	9.03e+07	3.58e+03	2.5e+04
24	13C-1,2,3,7,8,9-HxCDF	3.91e+07	1.33e+03	2.9e+04	7.44e+07	3.58e+03	2.1e+04
25	13C-1,2,3,4,6,7,8-HpCDF	3.05e+07	5.18e+03	5.9e+03	6.68e+07	7.38e+03	9.0e+03
26	13C-1,2,3,4,7,8,9-HpCDF	2.48e+07	5.18e+03	4.8e+03	5.51e+07	7.38e+03	7.5e+03
27	13C-2,3,7,8-TCDD	4.21e+07	6.43e+03	6.5e+03	5.22e+07	3.34e+03	1.6e+04
28	13C-1,2,3,7,8-PeCDD	6.30e+07	1.05e+03	6.0e+04	3.99e+07	1.24e+03	3.2e+04
29	13C-1,2,3,4,7,8-HxCDD	5.84e+07	4.36e+03	1.3e+04	4.60e+07	2.04e+03	2.3e+04
30	13C-1,2,3,6,7,8-HxCDD	5.57e+07	4.36e+03	1.3e+04	4.34e+07	2.04e+03	2.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	4.12e+07	2.07e+03	2.0e+04	3.91e+07	2.18e+03	1.8e+04
32	13C-OCDD	4.87e+07	6.80e+01	7.2e+05	5.40e+07	9.12e+02	5.9e+04
33	13C-1,2,3,4-TCDD	4.48e+07	6.43e+03	7.0e+03	5.57e+07	3.34e+03	1.7e+04
34	13C-1,2,3,7,8,9-HxCDD	5.61e+07	4.36e+03	1.3e+04	4.47e+07	2.04e+03	2.2e+04
35	37Cl-2,3,7,8-TCDD	2.10e+06	1.00e+03	2.1e+03			

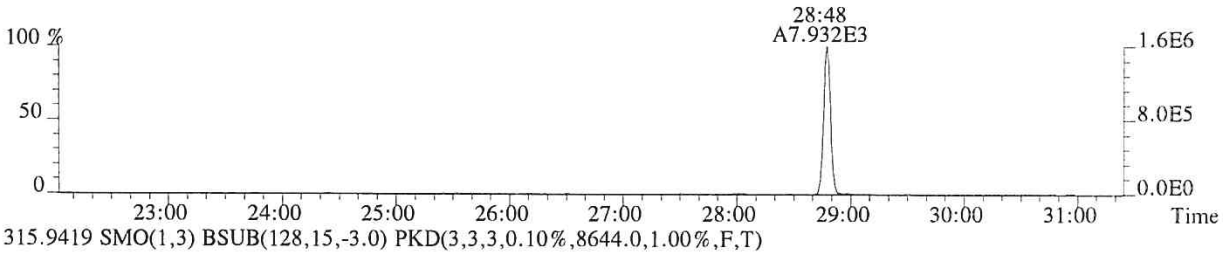
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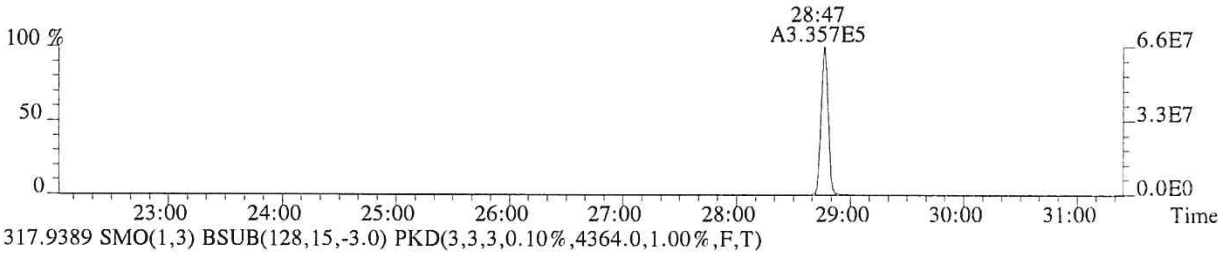
File:P513852 #1-665 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,700.0,1.00%,F,T)



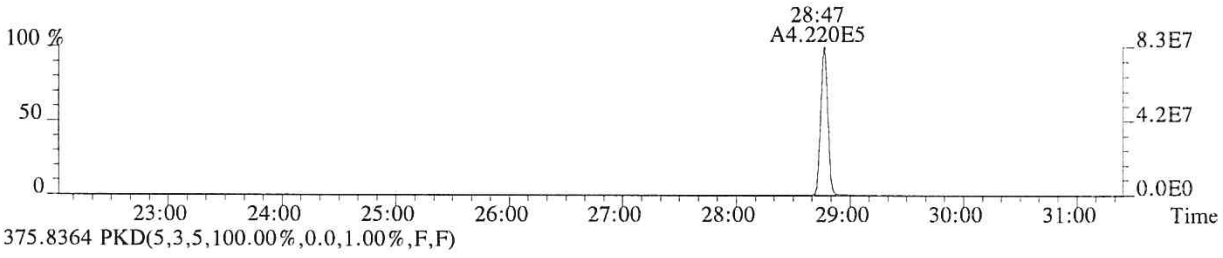
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1724.0,1.00%,F,T)



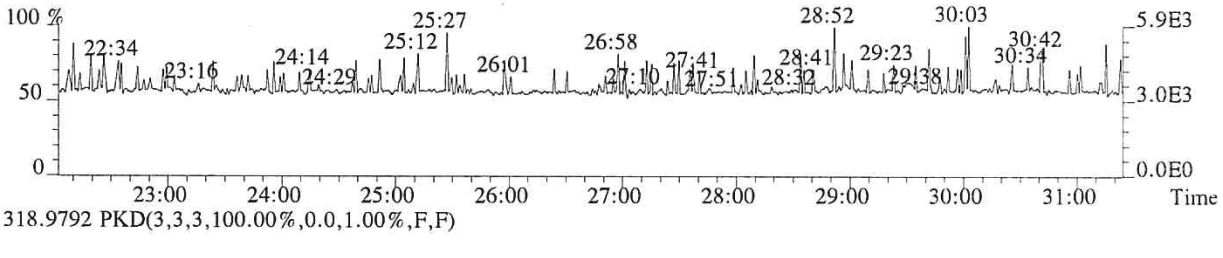
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8644.0,1.00%,F,T)



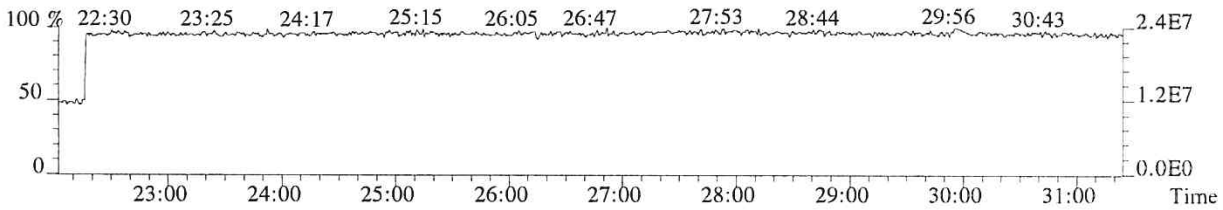
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4364.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

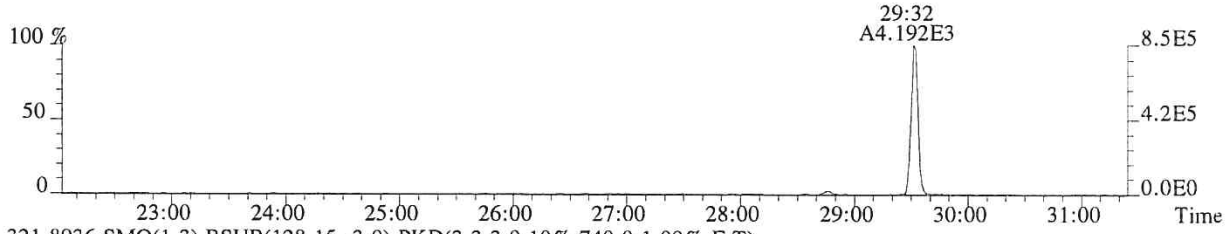


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

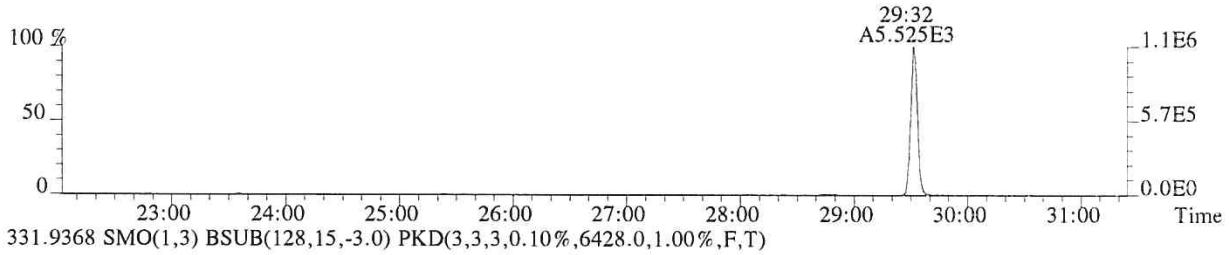


019043

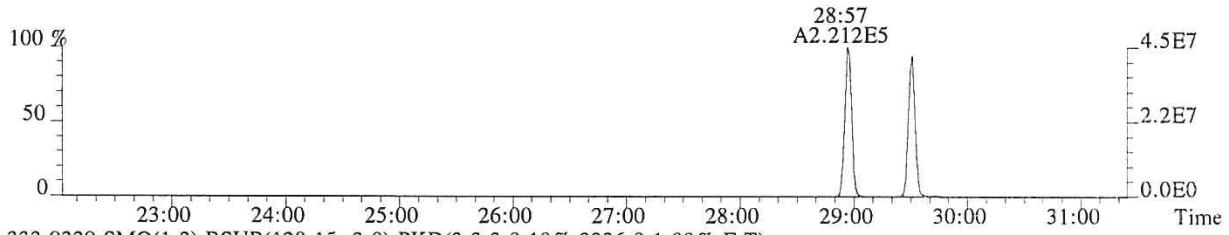
File:P513852 #1-665 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1348.0,1.00%,F,T)



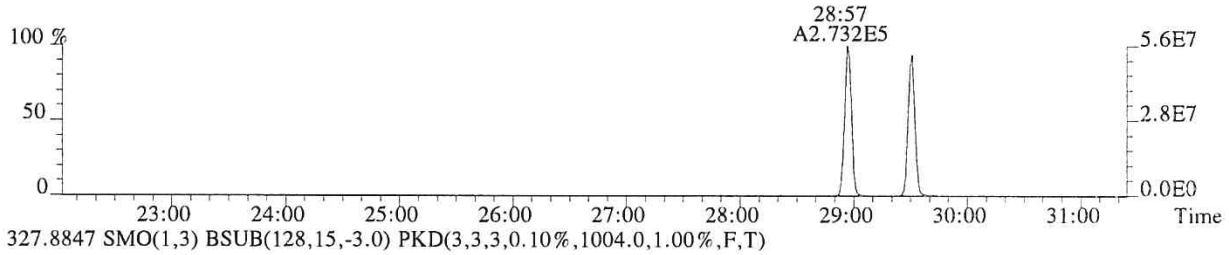
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,740.0,1.00%,F,T)



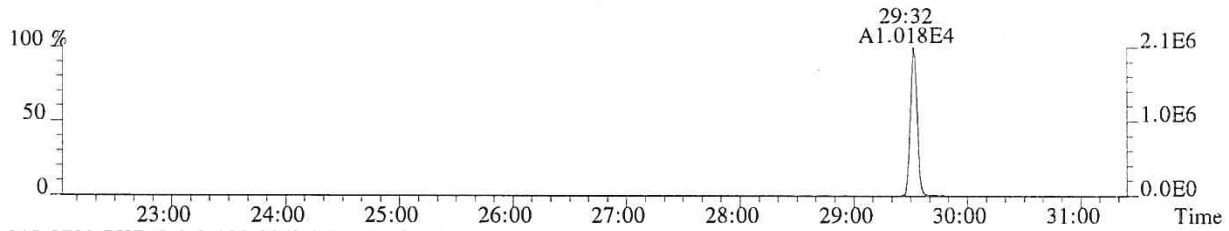
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6428.0,1.00%,F,T)



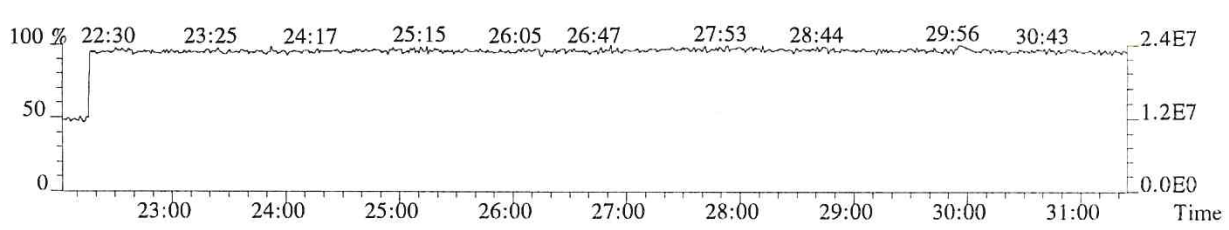
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3336.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1004.0,1.00%,F,T)

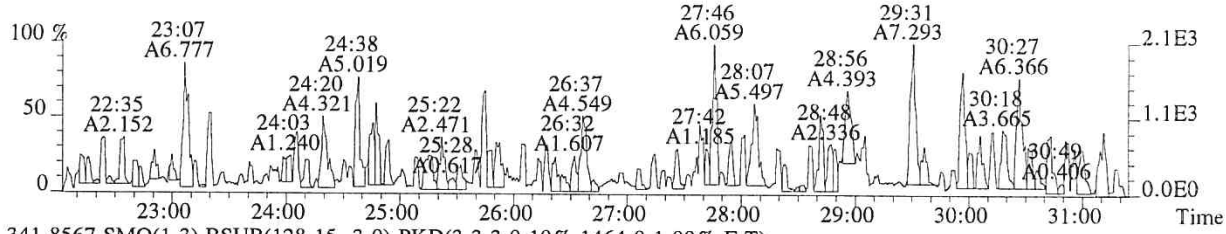


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

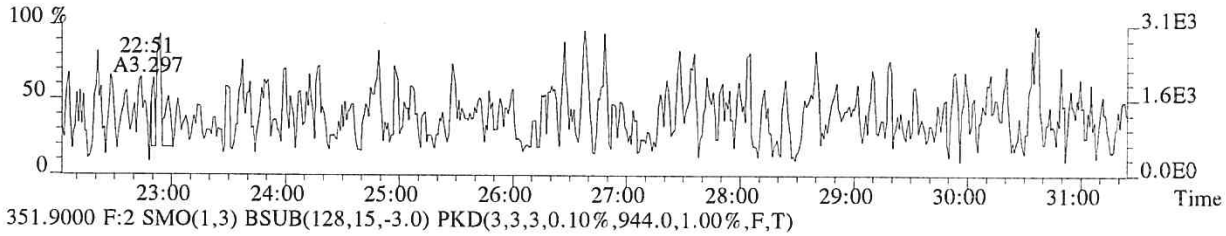


019044

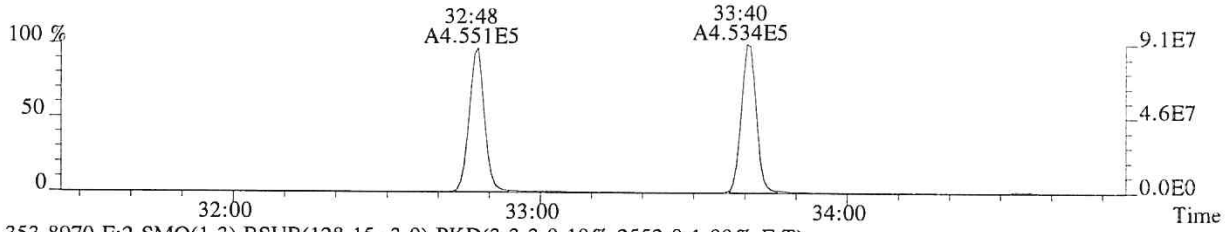
File:P513852 #1-665 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,196.0,1.00%,F,T)



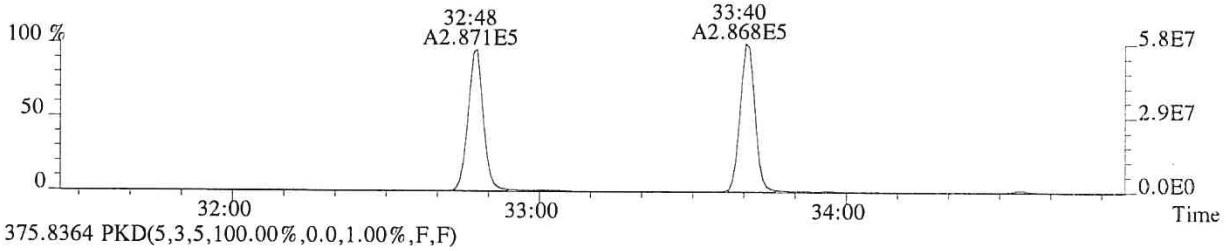
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1464.0,1.00%,F,T)



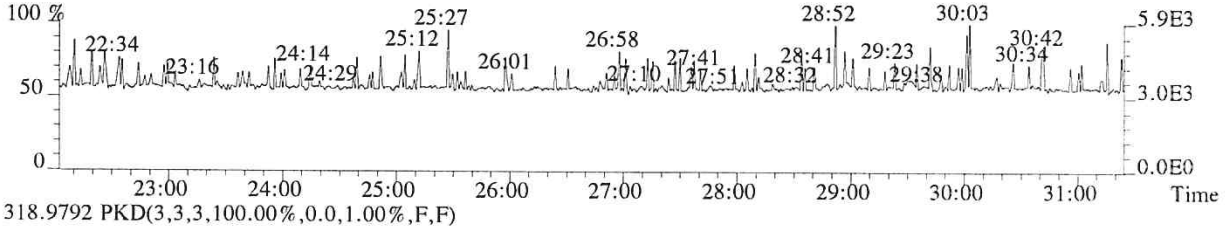
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



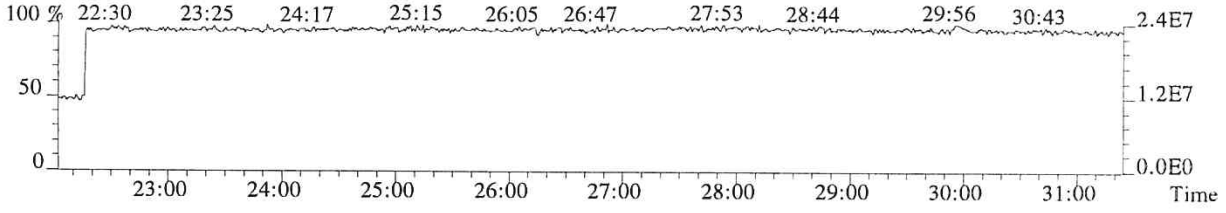
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2552.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

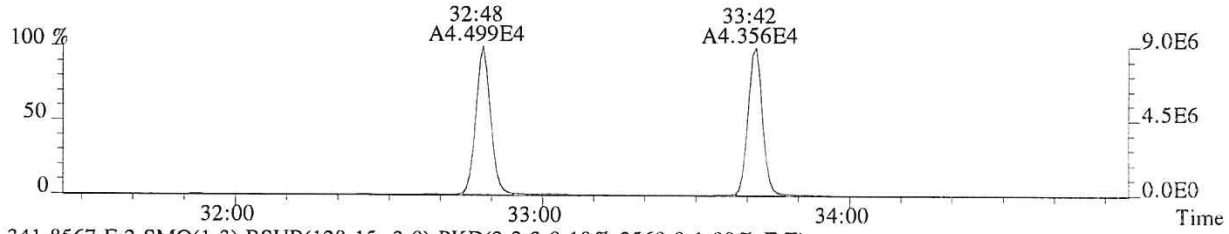


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

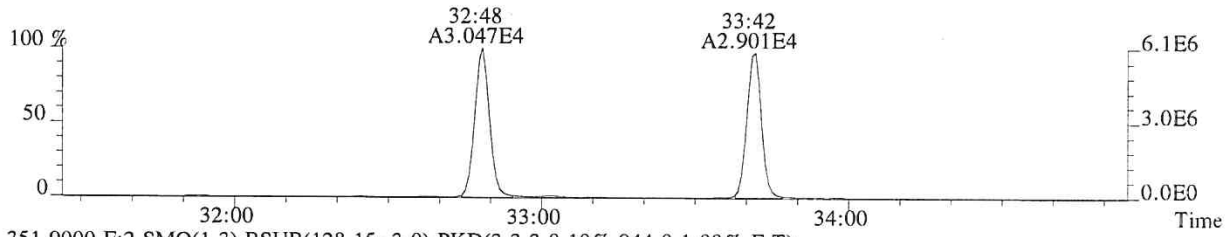


019045

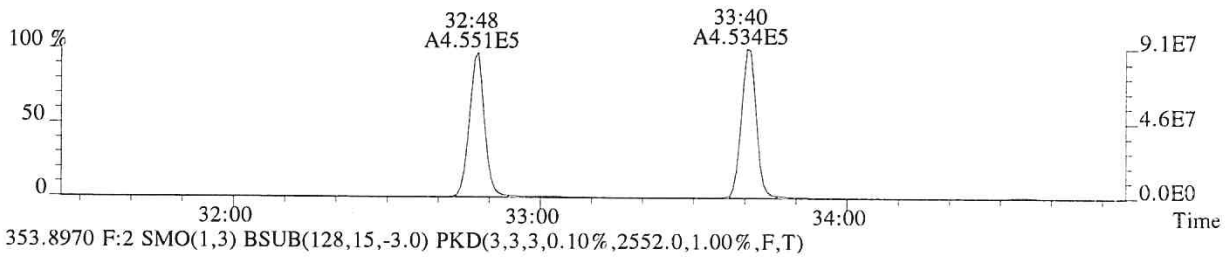
File:P513852 #1-313 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,192.0,1.00%,F,T)



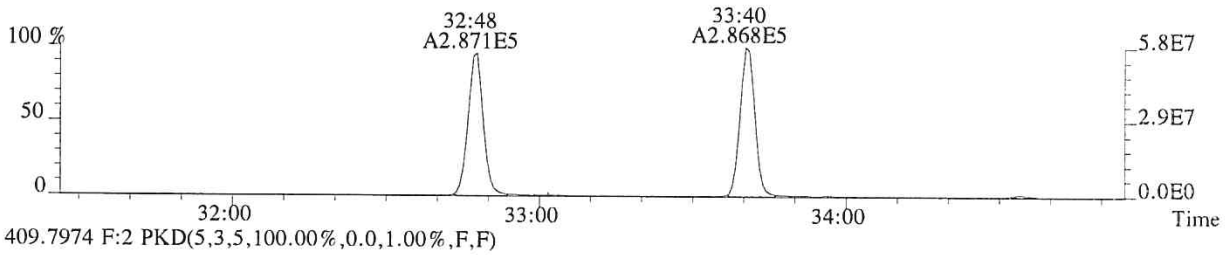
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3560.0,1.00%,F,T)



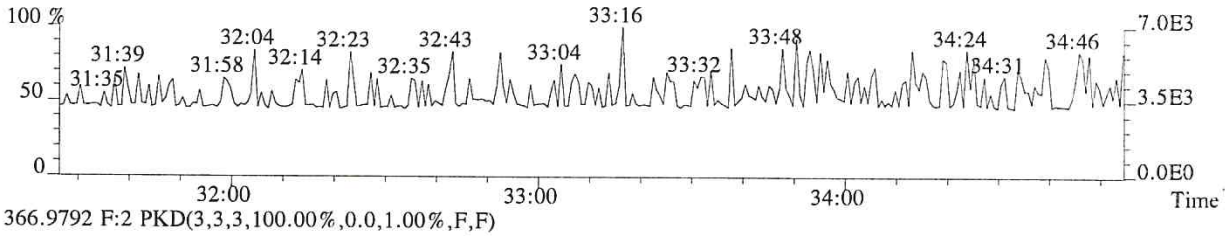
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,944.0,1.00%,F,T)



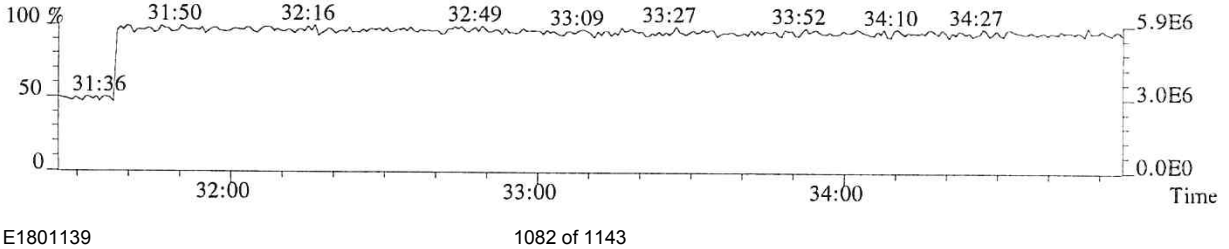
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2552.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

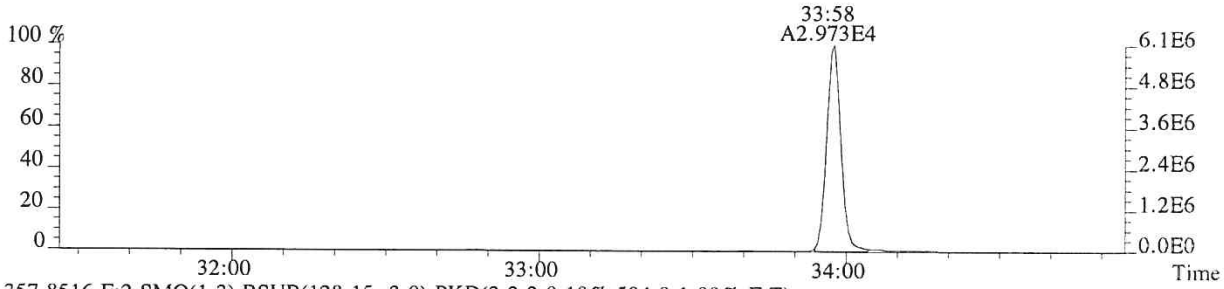


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

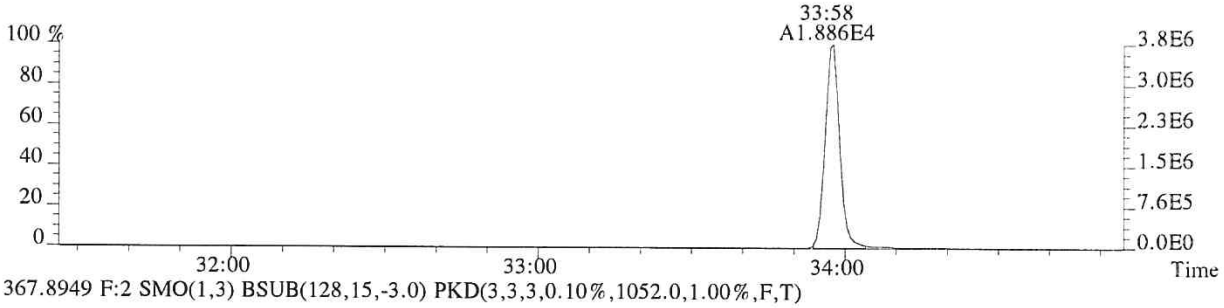


019046

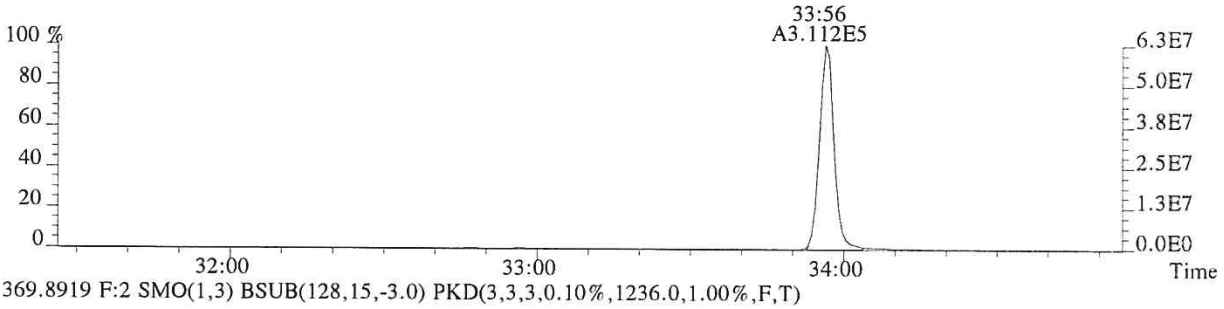
File:P513852 #1-313 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,516.0,1.00%,F,T)



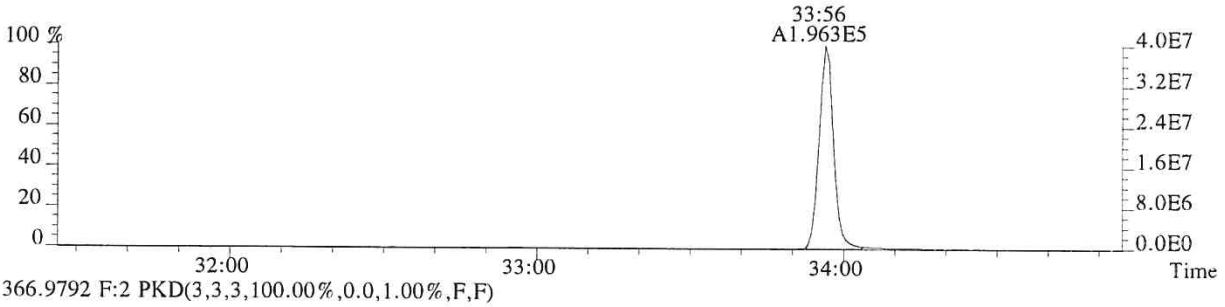
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,504.0,1.00%,F,T)



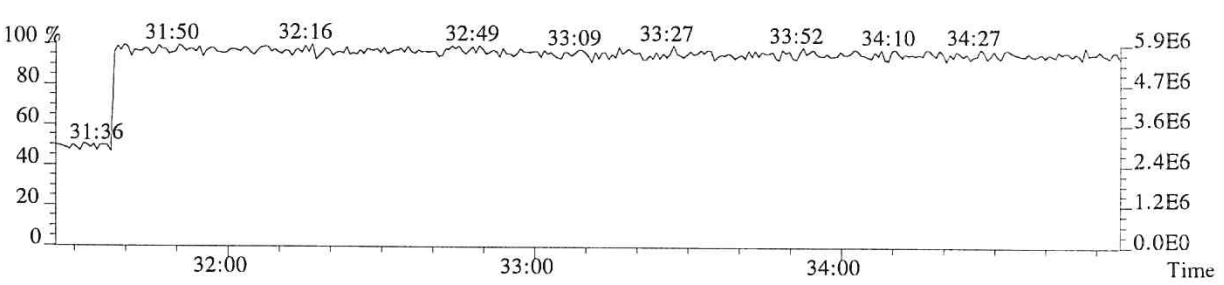
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1052.0,1.00%,F,T)



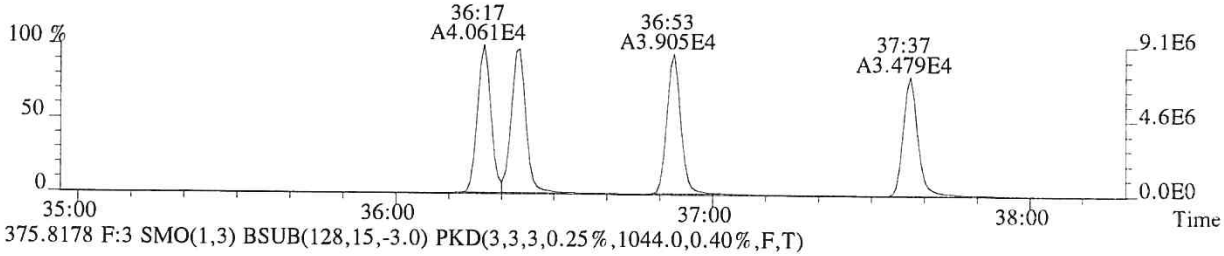
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1236.0,1.00%,F,T)



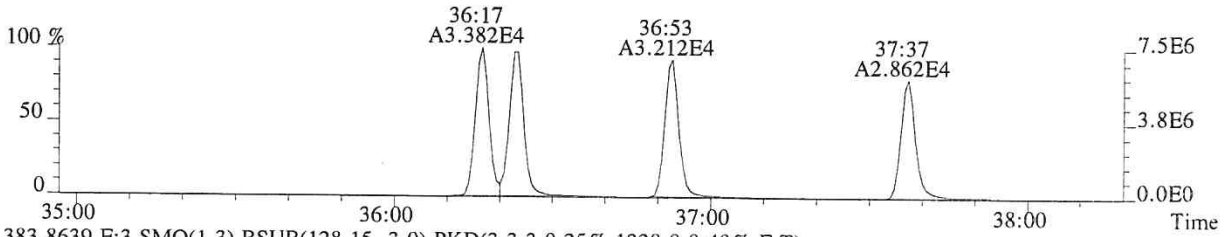
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



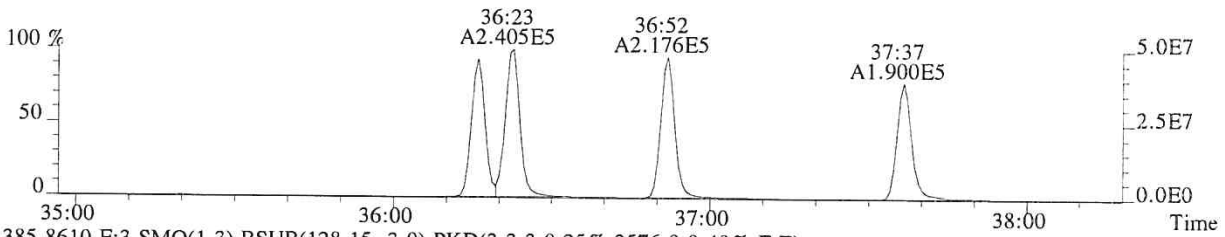
File:P513852 #1-303 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:76556
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1016.0,0.40%,F,T)



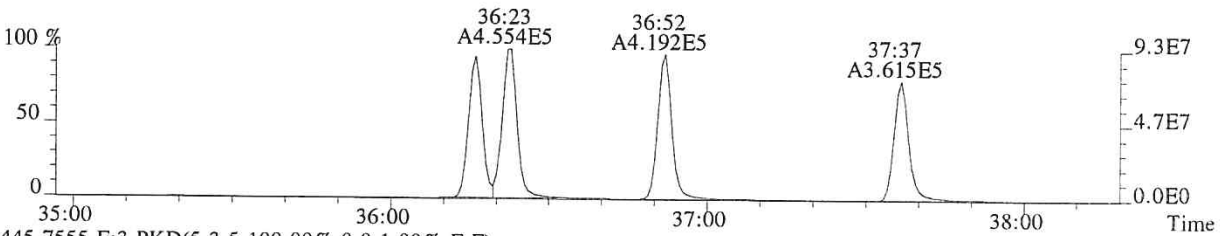
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1044.0,0.40%,F,T)



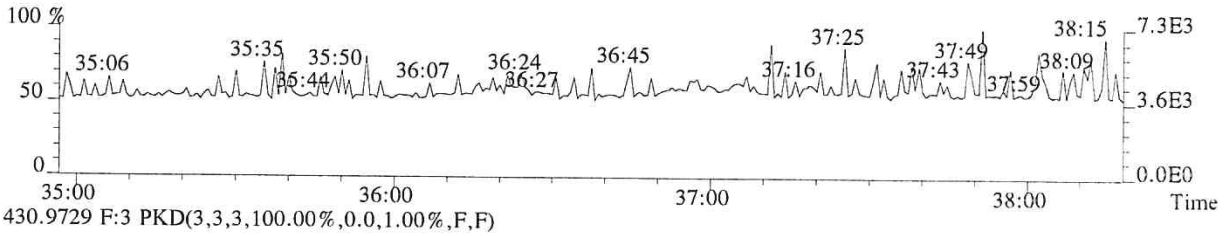
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1328.0,0.40%,F,T)



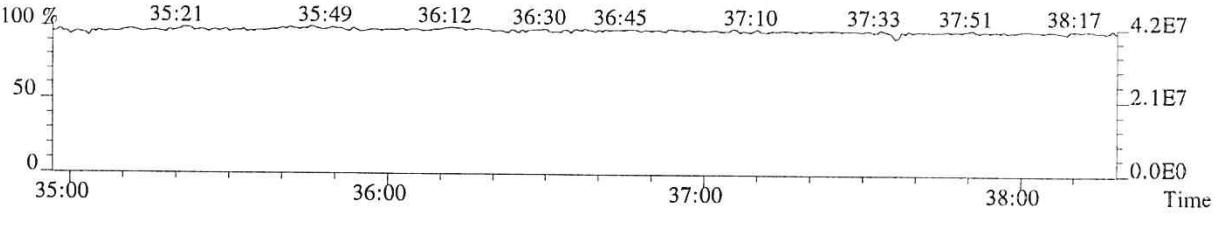
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3576.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

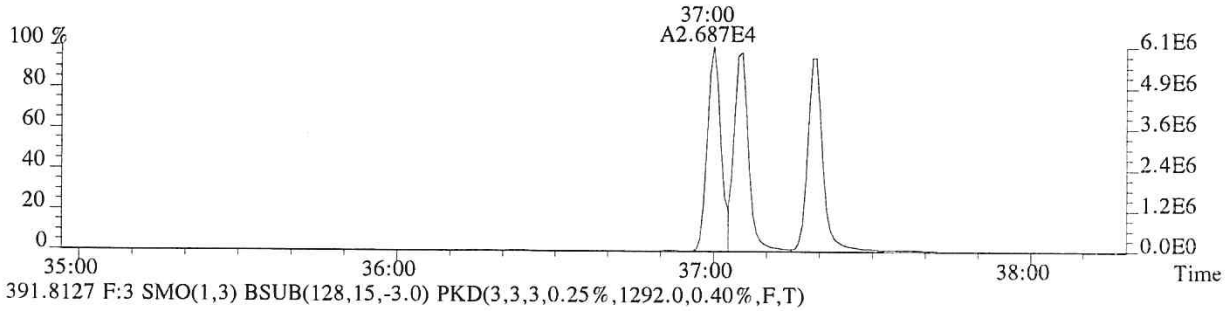


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

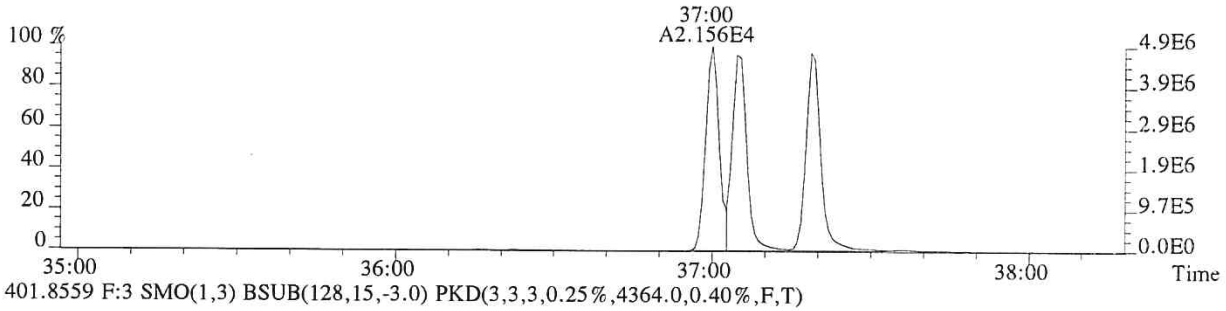


019048

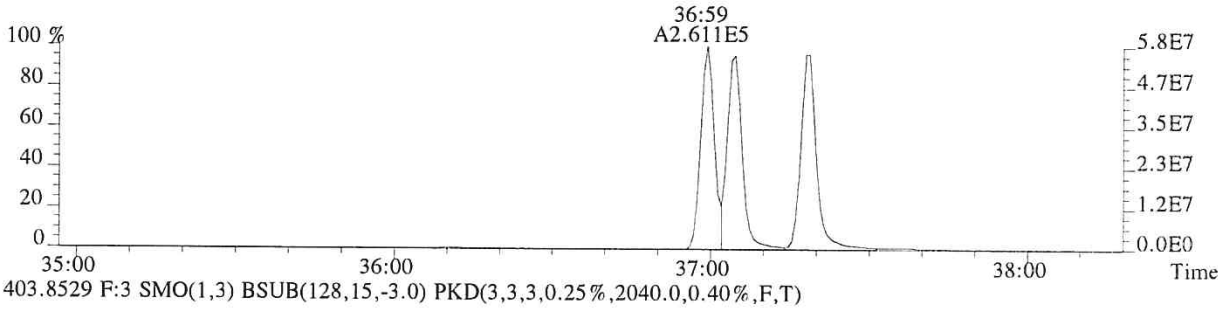
File:P513852 #1-303 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,748.0,0.40%,F,T)



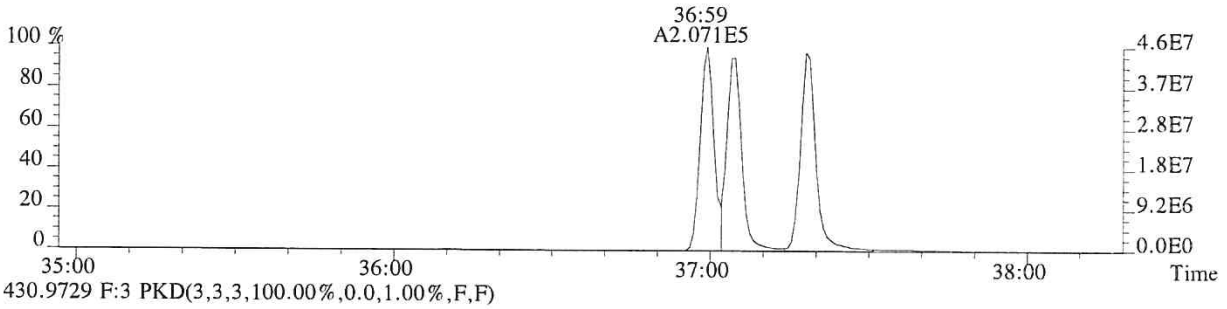
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1292.0,0.40%,F,T)



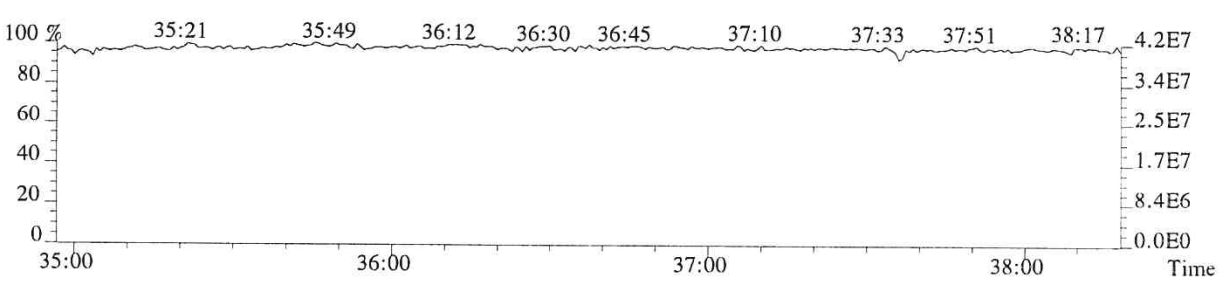
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4364.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2040.0,0.40%,F,T)

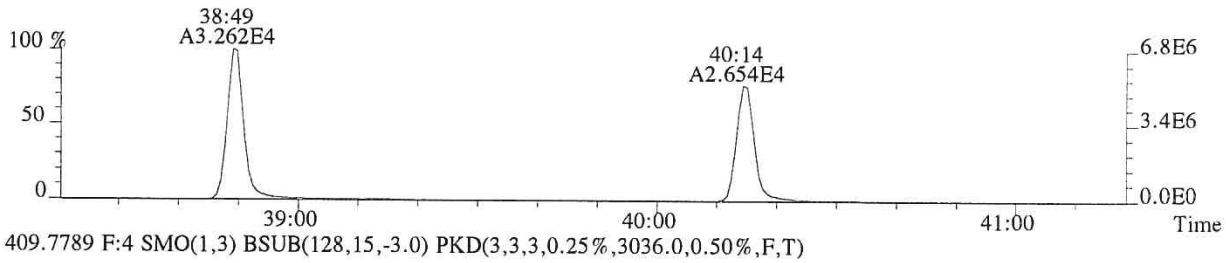


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

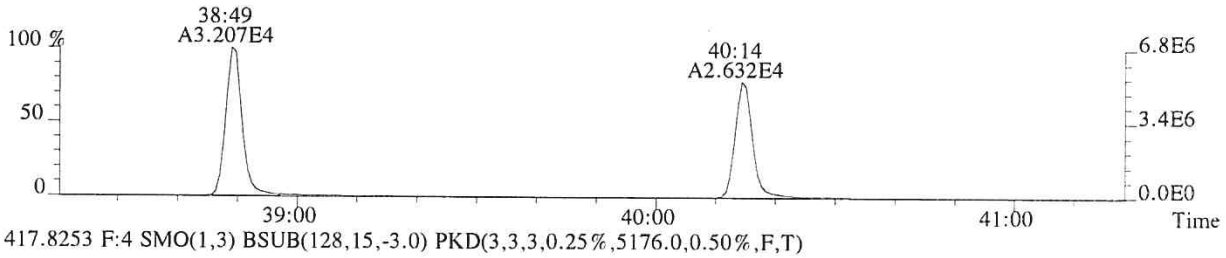


019049

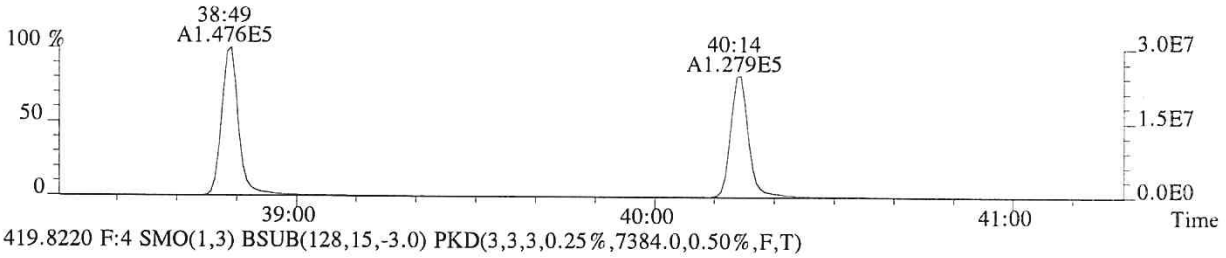
File:P513852 #1-268 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3668.0,0.50%,F,T)



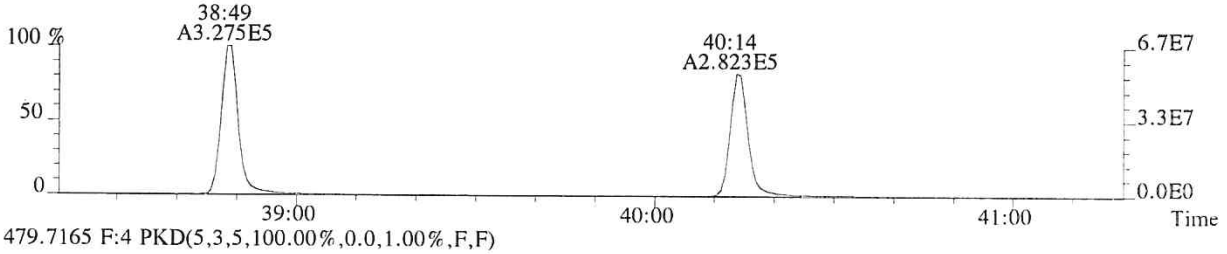
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3036.0,0.50%,F,T)



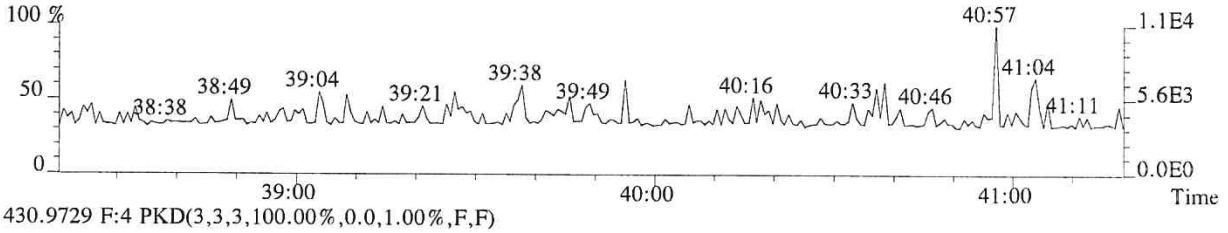
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5176.0,0.50%,F,T)



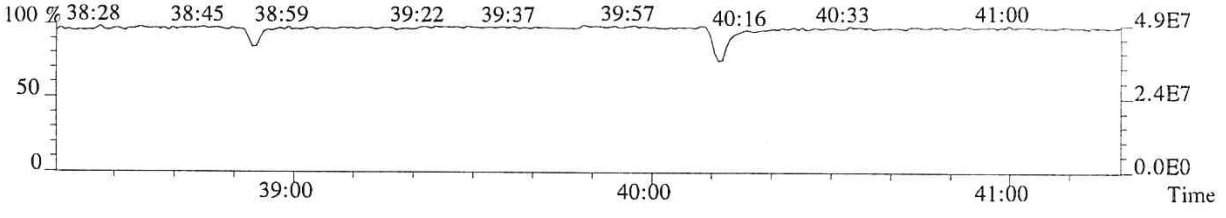
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7384.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

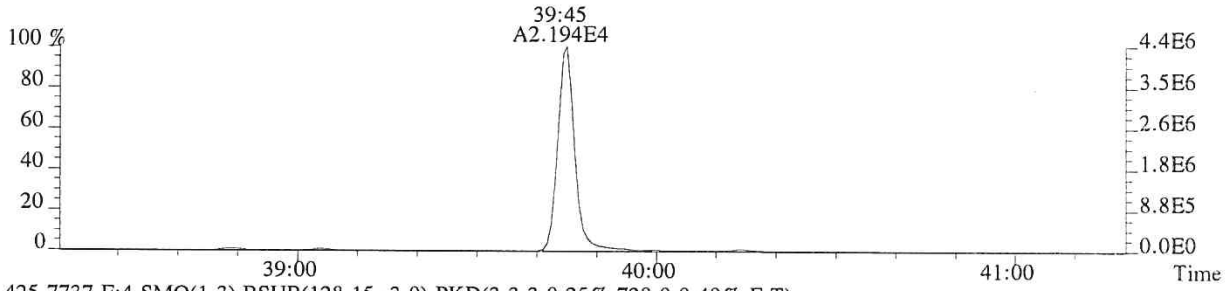


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

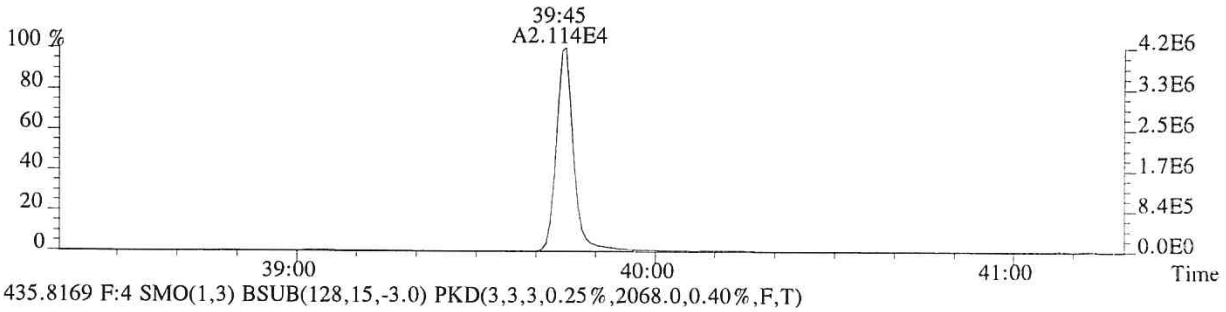


019050

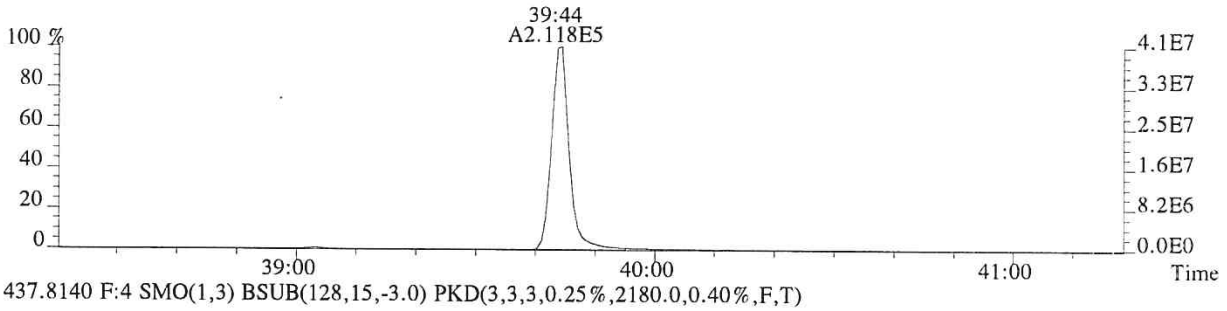
File:P513852 #1-268 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1676.0,0.40%,F,T)



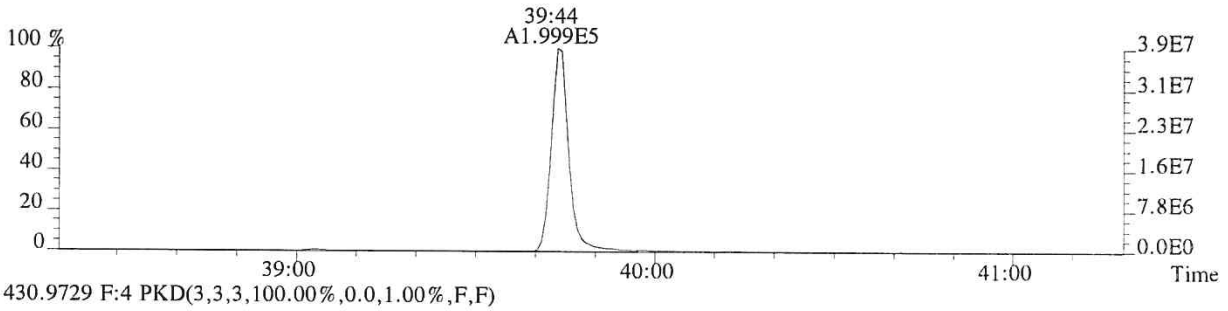
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,728.0,0.40%,F,T)



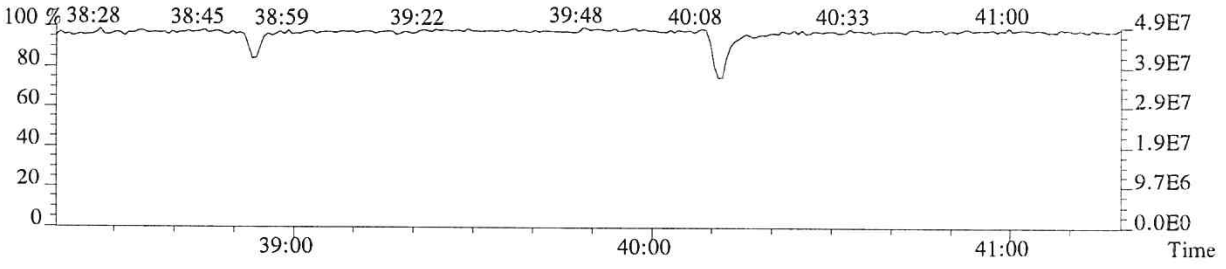
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2068.0,0.40%,F,T)



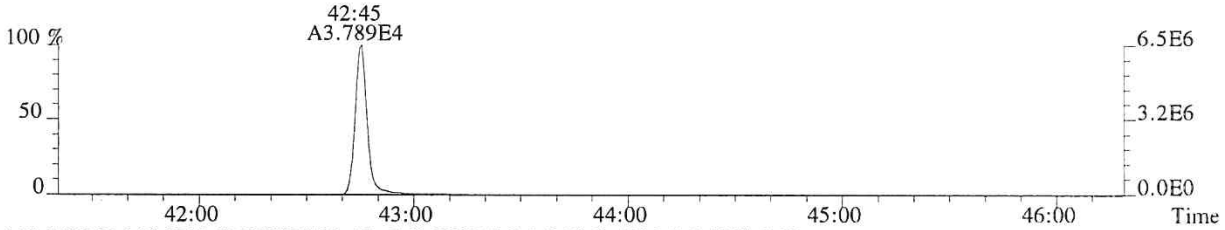
437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2180.0,0.40%,F,T)



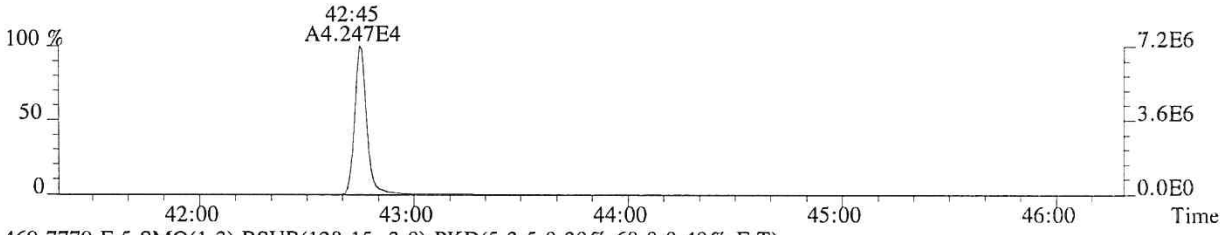
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



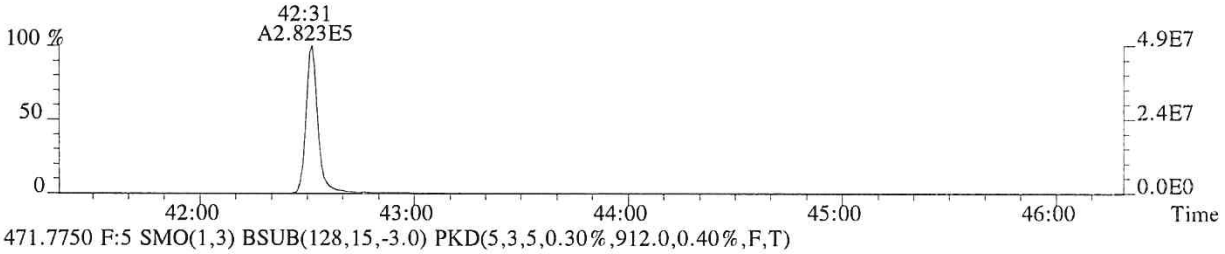
File:P513852 #1-448 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1076.0,0.40%,F,T)



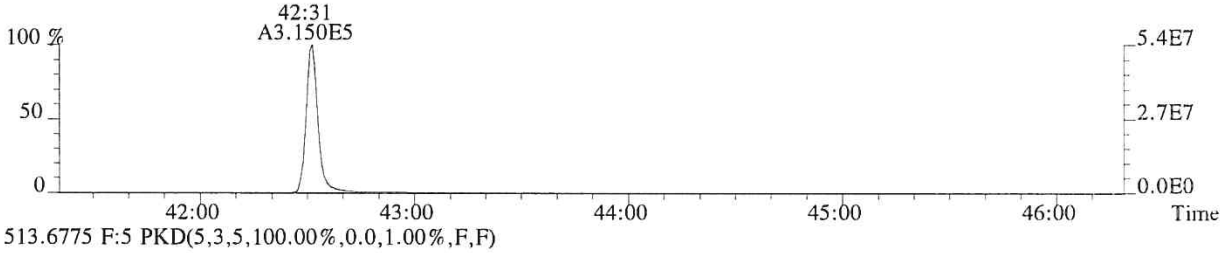
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1736.0,0.40%,F,T)



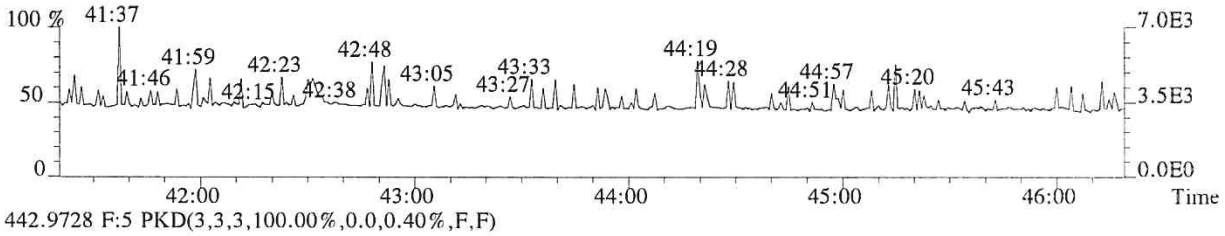
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,68.0,0.40%,F,T)



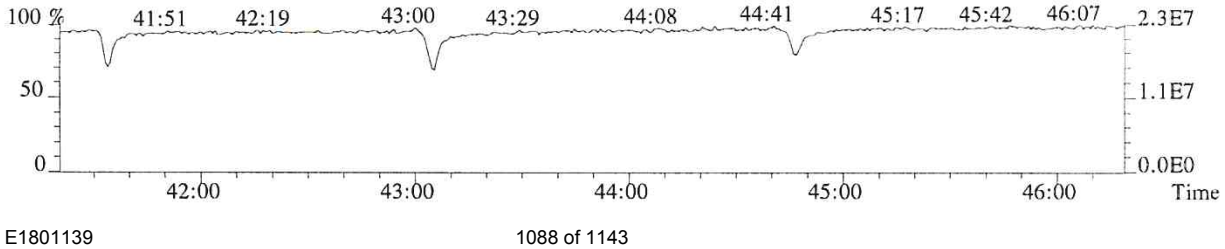
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,912.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

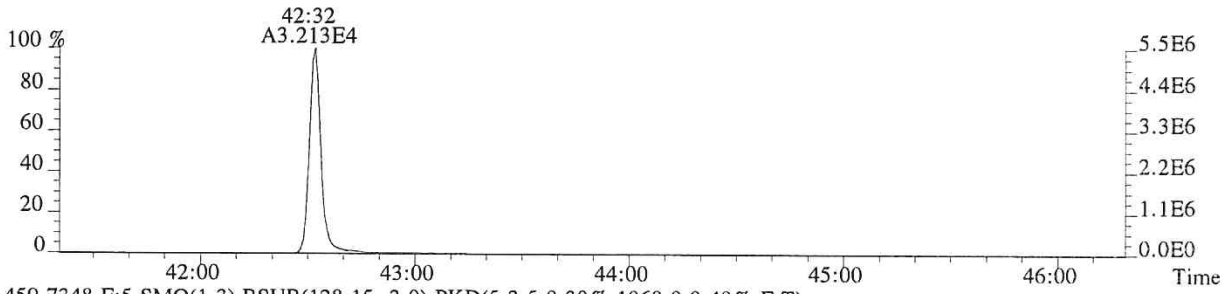


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

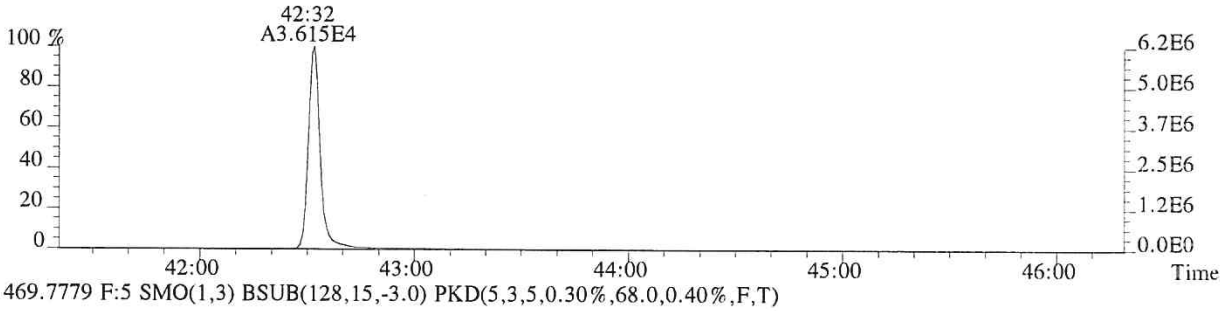


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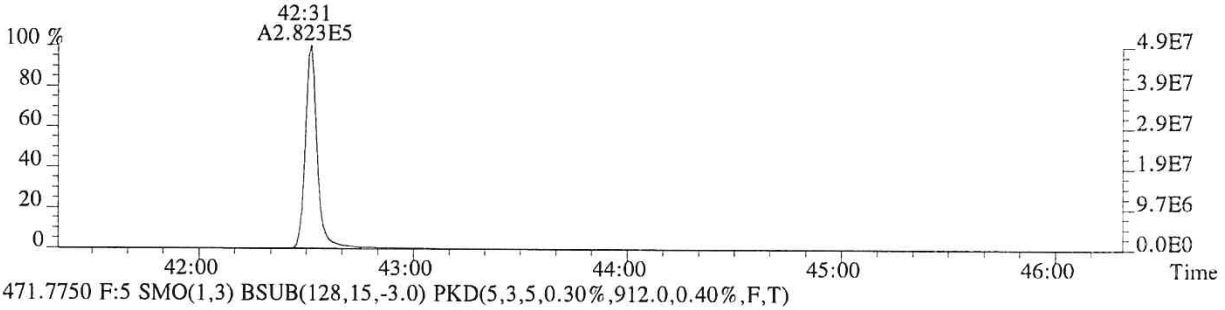
File:P513852 #1-448 Acq:24-JAN-2018 15:18:44 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76556
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,160.0,0.40%,F,T)



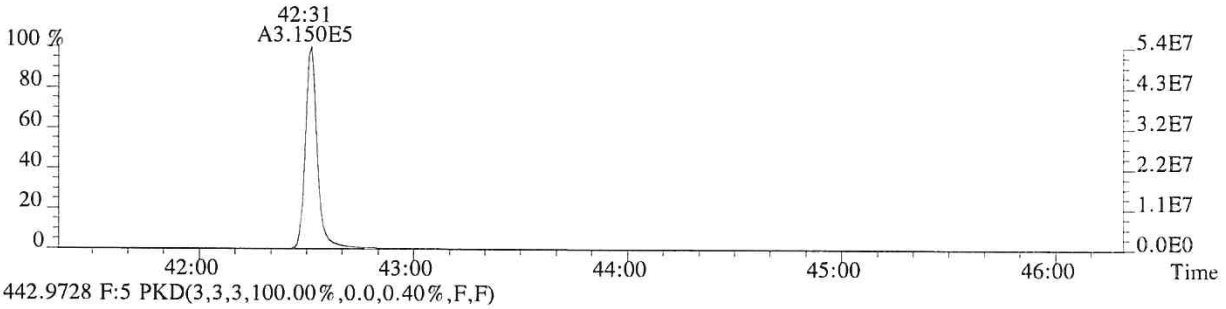
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1068.0,0.40%,F,T)



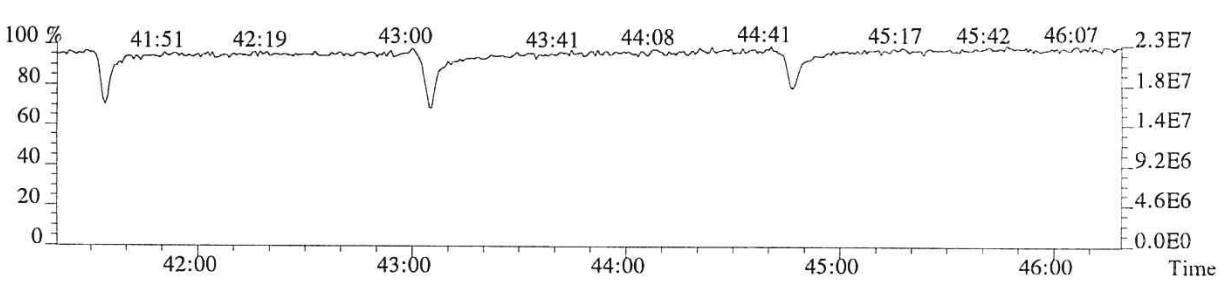
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,68.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,912.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



019053

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76557

Run #4 Filename P513853 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:06:29
Processed: 24-JAN-18 17:13:42 Sample ID: CS3

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:47	4.270e+04	5.692e+04	0.75	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	3.077e+05	2.016e+05	1.53	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:41	2.833e+05	1.864e+05	1.52	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:16	2.625e+05	2.158e+05	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:22	2.702e+05	2.228e+05	1.21	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:52	2.439e+05	2.001e+05	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.977e+05	1.631e+05	1.21	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:48	2.099e+05	2.057e+05	1.02	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.509e+05	1.470e+05	1.03	yes	no	1.258
10	Unk	OCDF	42:45	2.260e+05	2.525e+05	0.90	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:31	2.824e+04	3.588e+04	0.79	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:57	1.903e+05	1.221e+05	1.56	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	1.727e+05	1.384e+05	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:04	1.705e+05	1.356e+05	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:18	1.758e+05	1.371e+05	1.28	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	1.431e+05	1.365e+05	1.05	yes	no	1.025
17	Unk	OCDD	42:31	1.906e+05	2.140e+05	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:46	4.689e+05	5.926e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:47	6.073e+05	3.832e+05	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	5.900e+05	3.740e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	2.738e+05	5.189e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:21	3.023e+05	5.708e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	2.671e+05	5.167e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	2.133e+05	4.042e+05	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	1.882e+05	4.188e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	1.419e+05	3.155e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:30	2.668e+05	3.316e+05	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	4.009e+05	2.534e+05	1.58	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	3.335e+05	2.508e+05	1.33	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:03	3.244e+05	2.699e+05	1.20	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:43	2.779e+05	2.632e+05	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	3.375e+05	3.799e+05	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:56	2.956e+05	3.663e+05	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:17	3.390e+05	2.761e+05	1.23	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:31	6.612e+04				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
76557

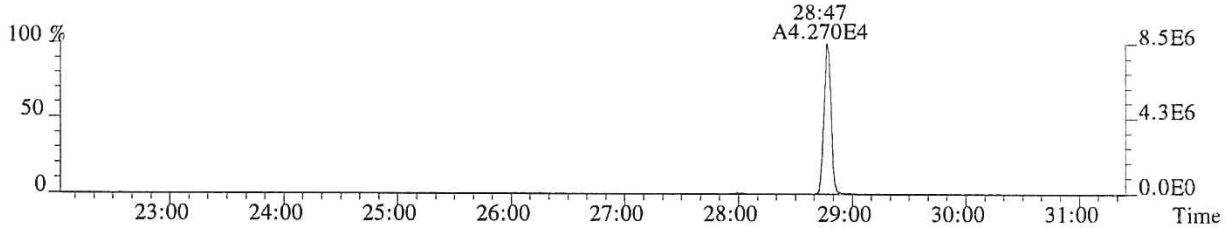
Run #4 Filename P513853 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:06:29
Processed: 24-JAN-18 17:13:42 LAB. ID: CS3

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	8.50e+06	6.40e+02	1.3e+04	1.14e+07	2.11e+03	5.4e+03
2	1,2,3,7,8-PeCDF	6.16e+07	1.61e+03	3.8e+04	4.01e+07	2.10e+03	1.9e+04
3	2,3,4,7,8-PeCDF	5.79e+07	1.61e+03	3.6e+04	3.78e+07	2.10e+03	1.8e+04
4	1,2,3,4,7,8-HxCDF	5.83e+07	1.86e+03	3.1e+04	4.74e+07	2.55e+03	1.9e+04
5	1,2,3,6,7,8-HxCDF	5.80e+07	1.86e+03	3.1e+04	4.80e+07	2.55e+03	1.9e+04
6	2,3,4,6,7,8-HxCDF	5.37e+07	1.86e+03	2.9e+04	4.34e+07	2.55e+03	1.7e+04
7	1,2,3,7,8,9-HxCDF	4.12e+07	1.86e+03	2.2e+04	3.39e+07	2.55e+03	1.3e+04
8	1,2,3,4,6,7,8-HpCDF	4.57e+07	4.44e+03	1.0e+04	4.52e+07	1.05e+04	4.3e+03
9	1,2,3,4,7,8,9-HpCDF	3.06e+07	4.44e+03	6.9e+03	2.99e+07	1.05e+04	2.8e+03
10	OCDF	3.93e+07	1.44e+02	2.7e+05	4.34e+07	1.38e+03	3.1e+04
11	2,3,7,8-TCDD	5.83e+06	1.92e+03	3.0e+03	7.39e+06	1.30e+03	5.7e+03
12	1,2,3,7,8-PeCDD	3.83e+07	1.45e+03	2.6e+04	2.46e+07	7.04e+02	3.5e+04
13	1,2,3,4,7,8-HxCDD	3.89e+07	5.12e+02	7.6e+04	3.08e+07	1.23e+03	2.5e+04
14	1,2,3,6,7,8-HxCDD	3.74e+07	5.12e+02	7.3e+04	3.02e+07	1.23e+03	2.5e+04
15	1,2,3,7,8,9-HxCDD	3.75e+07	5.12e+02	7.3e+04	3.01e+07	1.23e+03	2.5e+04
16	1,2,3,4,6,7,8-HpCDD	2.89e+07	1.84e+03	1.6e+04	2.78e+07	1.41e+03	2.0e+04
17	OCDD	3.41e+07	6.32e+02	5.4e+04	3.81e+07	1.31e+03	2.9e+04
18	13C-2,3,7,8-TCDF	9.47e+07	6.52e+03	1.5e+04	1.19e+08	4.12e+03	2.9e+04
19	13C-1,2,3,7,8-PeCDF	1.17e+08	1.28e+03	9.1e+04	7.33e+07	8.08e+02	9.1e+04
20	13C-2,3,4,7,8-PeCDF	1.21e+08	1.28e+03	9.4e+04	7.72e+07	8.08e+02	9.6e+04
21	13C-1,2,3,4,7,8-HxCDF	6.01e+07	1.97e+03	3.1e+04	1.13e+08	1.75e+03	6.5e+04
22	13C-1,2,3,6,7,8-HxCDF	6.52e+07	1.97e+03	3.3e+04	1.24e+08	1.75e+03	7.1e+04
23	13C-2,3,4,6,7,8-HxCDF	5.86e+07	1.97e+03	3.0e+04	1.11e+08	1.75e+03	6.4e+04
24	13C-1,2,3,7,8,9-HxCDF	4.44e+07	1.97e+03	2.3e+04	8.35e+07	1.75e+03	4.8e+04
25	13C-1,2,3,4,6,7,8-HpCDF	4.03e+07	8.48e+03	4.8e+03	9.01e+07	6.21e+03	1.5e+04
26	13C-1,2,3,4,7,8,9-HpCDF	2.83e+07	8.48e+03	3.3e+03	6.33e+07	6.21e+03	1.0e+04
27	13C-2,3,7,8-TCDD	5.56e+07	5.87e+03	9.5e+03	6.88e+07	2.90e+03	2.4e+04
28	13C-1,2,3,7,8-PeCDD	8.27e+07	1.46e+03	5.7e+04	5.24e+07	1.17e+03	4.5e+04
29	13C-1,2,3,4,7,8-HxCDD	7.51e+07	3.07e+03	2.4e+04	5.90e+07	2.67e+03	2.2e+04
30	13C-1,2,3,6,7,8-HxCDD	7.07e+07	3.07e+03	2.3e+04	5.69e+07	2.67e+03	2.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	5.63e+07	2.93e+03	1.9e+04	5.39e+07	1.32e+03	4.1e+04
32	13C-OCDD	5.98e+07	1.07e+03	5.6e+04	6.69e+07	9.36e+02	7.1e+04
33	13C-1,2,3,4-TCDD	5.97e+07	5.87e+03	1.0e+04	7.42e+07	2.90e+03	2.6e+04
34	13C-1,2,3,7,8,9-HxCDD	7.31e+07	3.07e+03	2.4e+04	5.89e+07	2.67e+03	2.2e+04
35	37Cl-2,3,7,8-TCDD	1.36e+07	1.25e+03	1.1e+04			

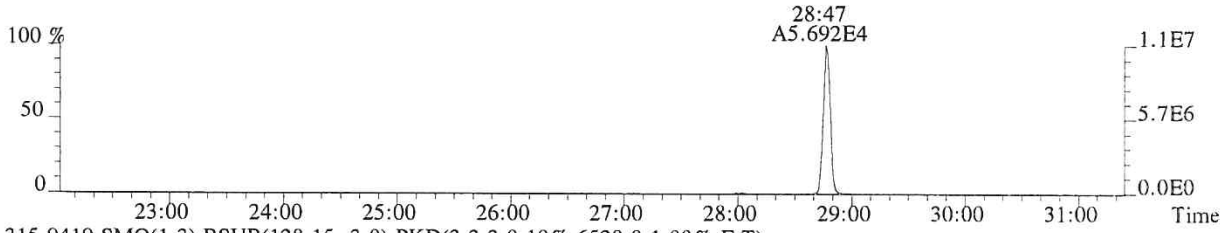
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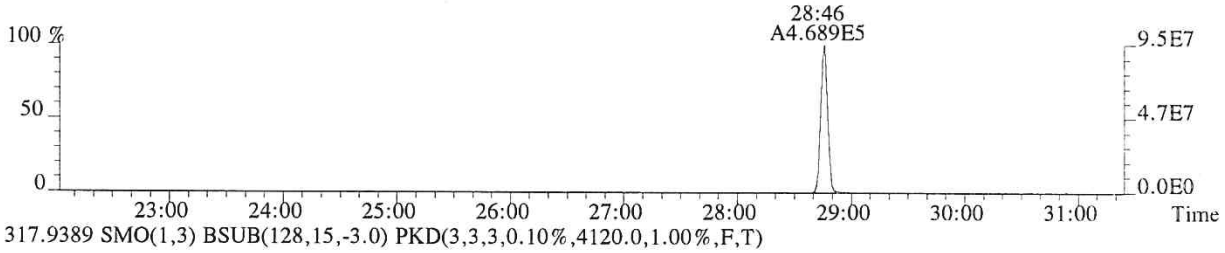
File:P513853 #1-665 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,640.0,1.00%,F,T)



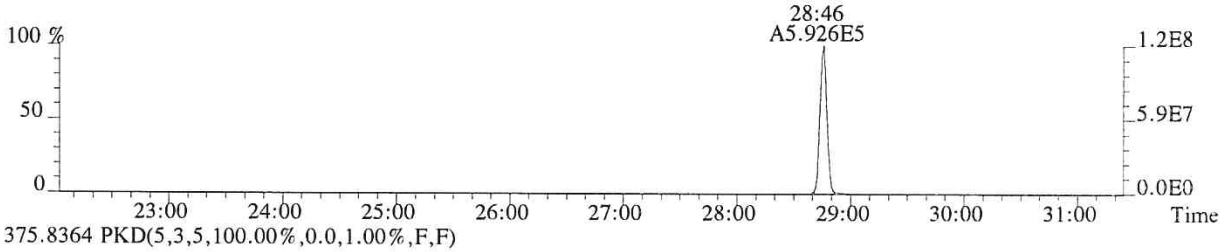
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2108.0,1.00%,F,T)



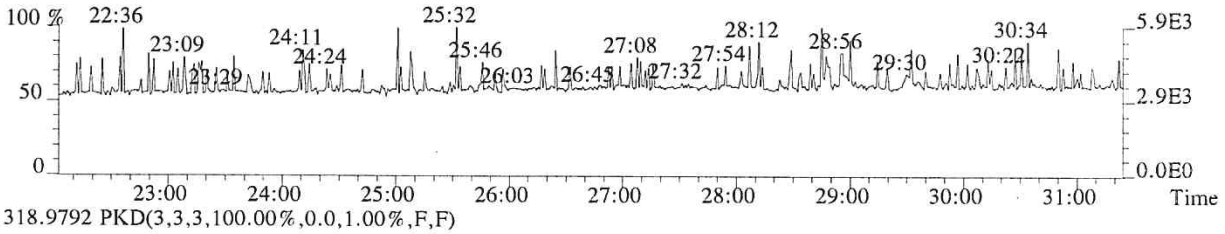
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6520.0,1.00%,F,T)



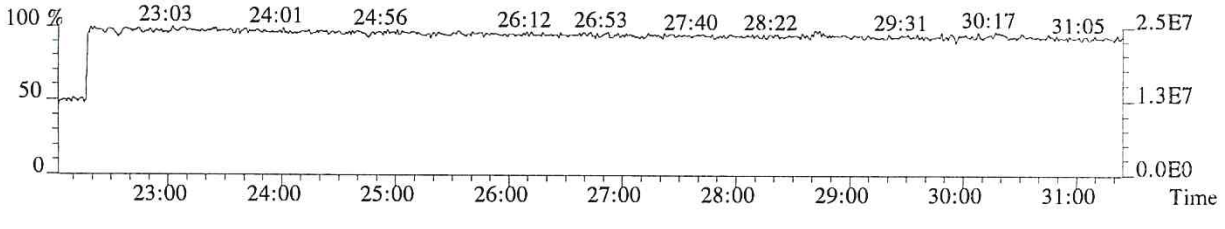
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4120.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

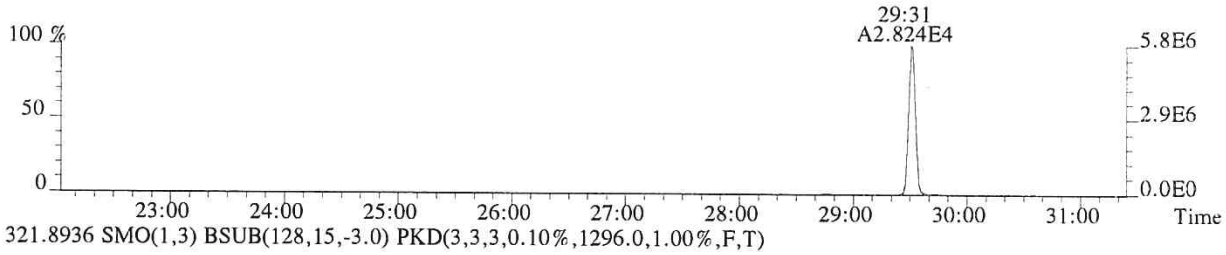


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

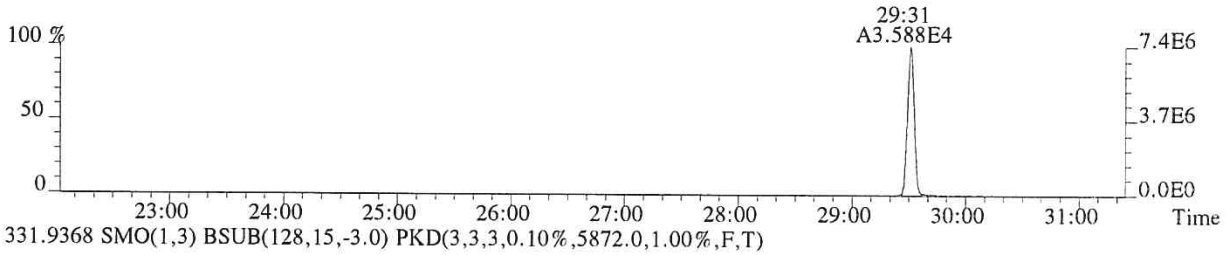


019056

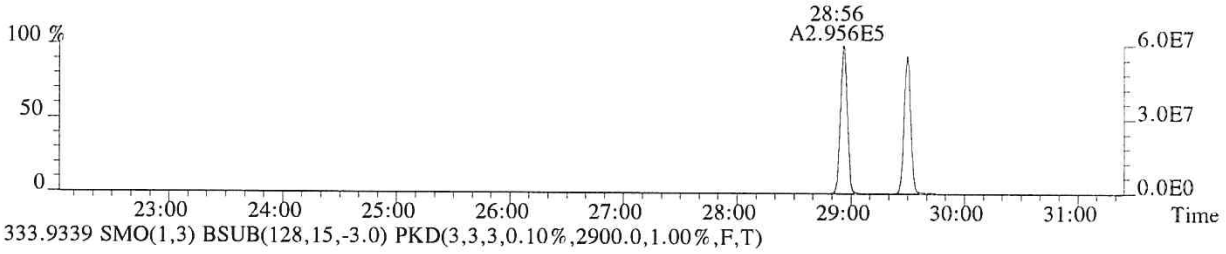
File:P513853 #1-665 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1924.0,1.00%,F,T)



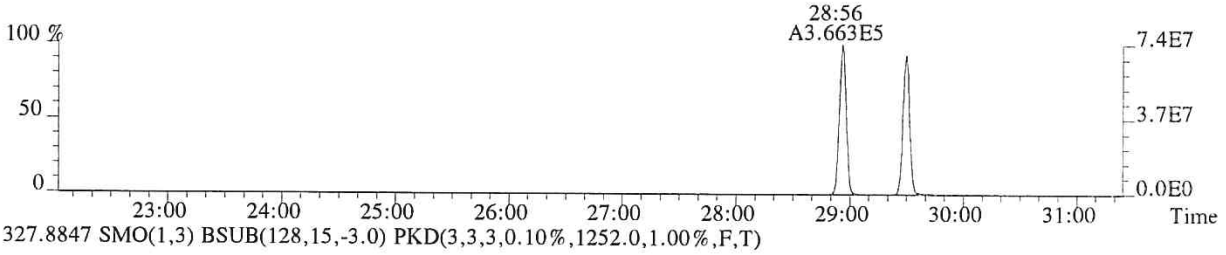
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1296.0,1.00%,F,T)



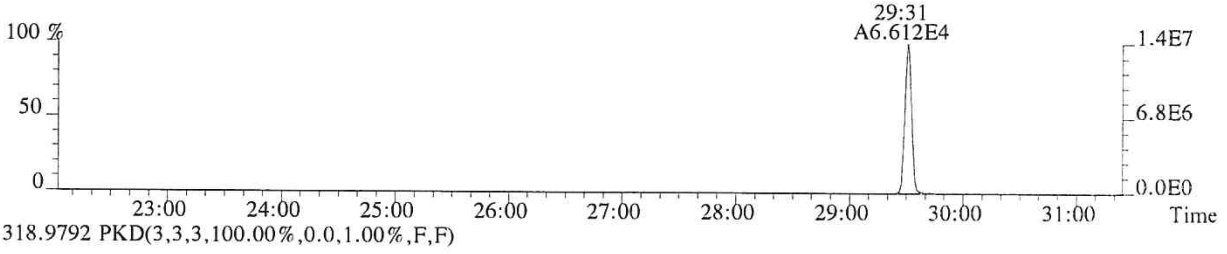
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5872.0,1.00%,F,T)



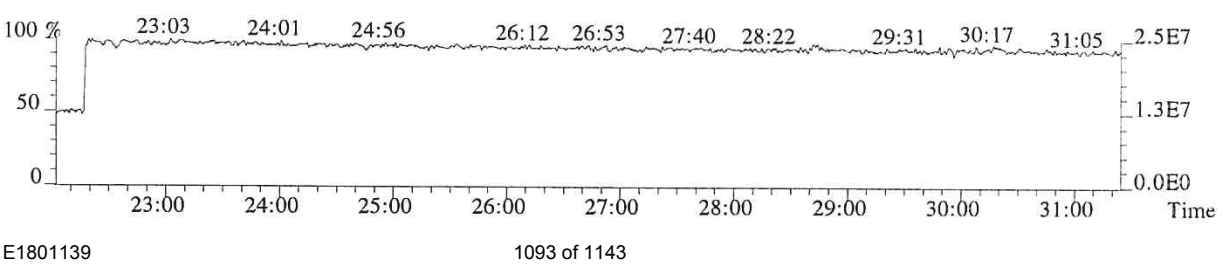
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2900.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1252.0,1.00%,F,T)

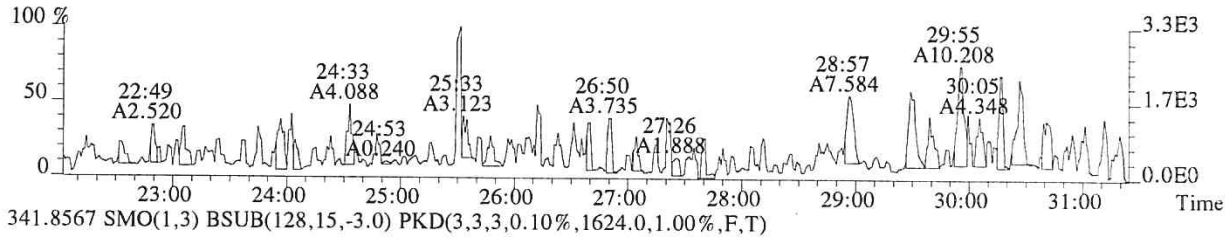


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

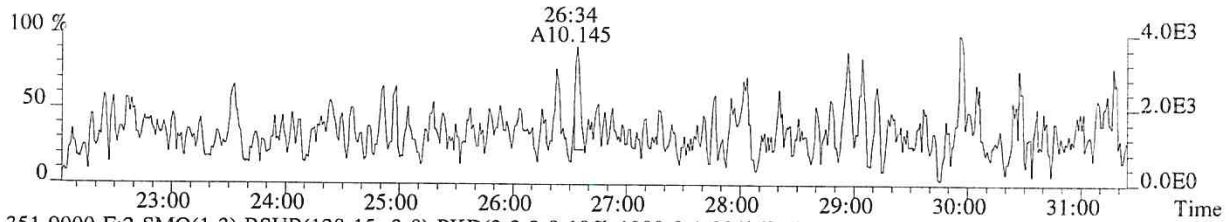


019057

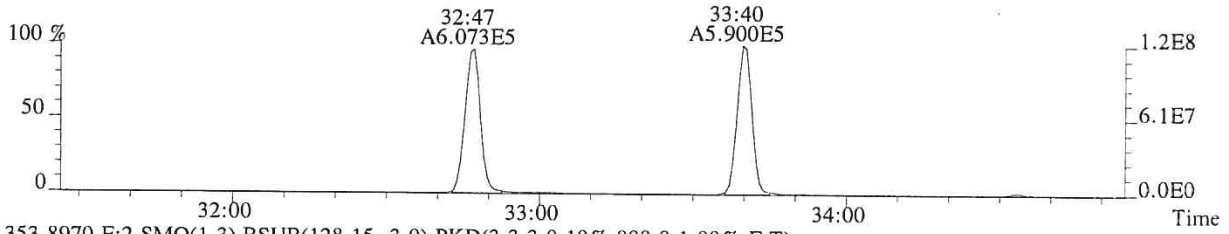
File:P513853 #1-665 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,452.0,1.00%,F,T)



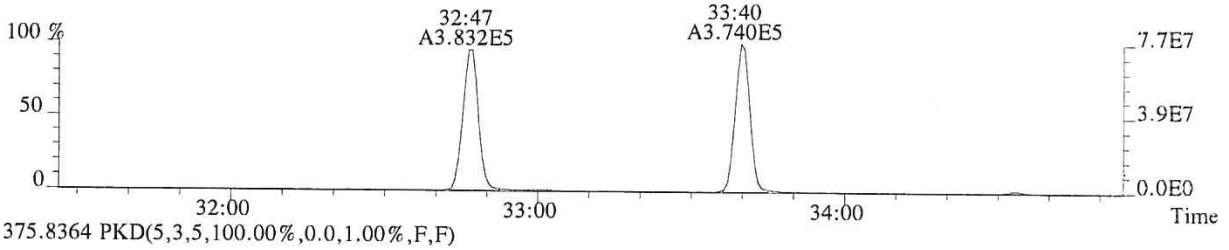
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1624.0,1.00%,F,T)



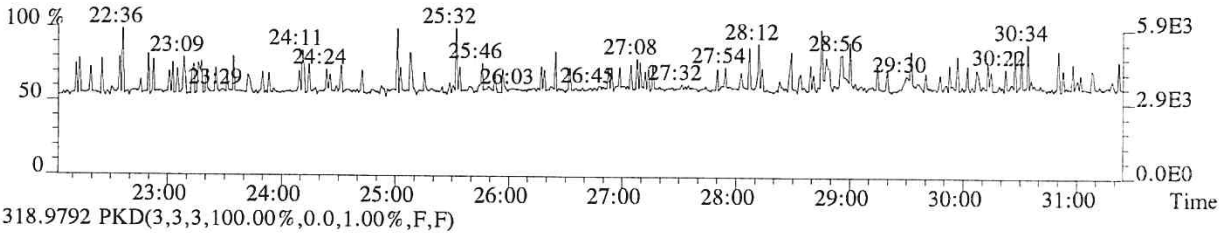
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1280.0,1.00%,F,T)



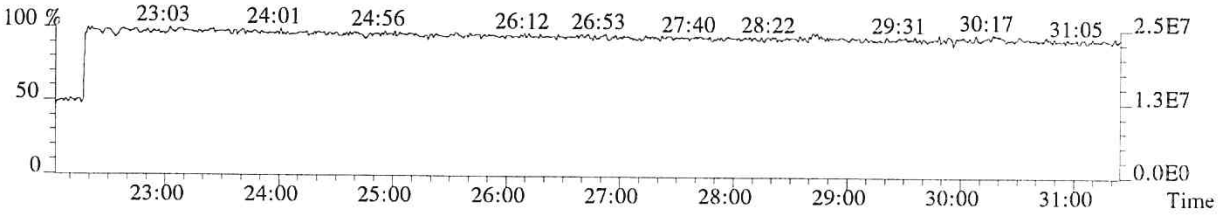
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,808.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

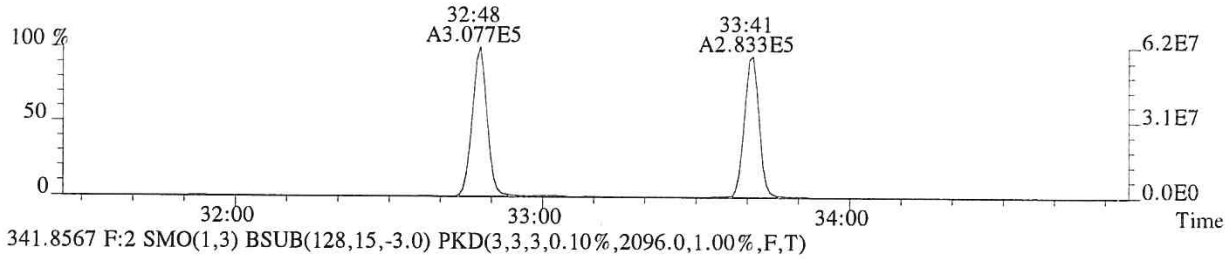


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

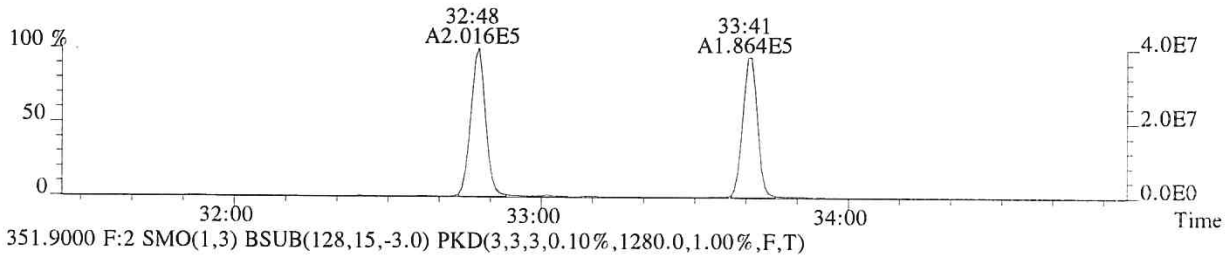


019058

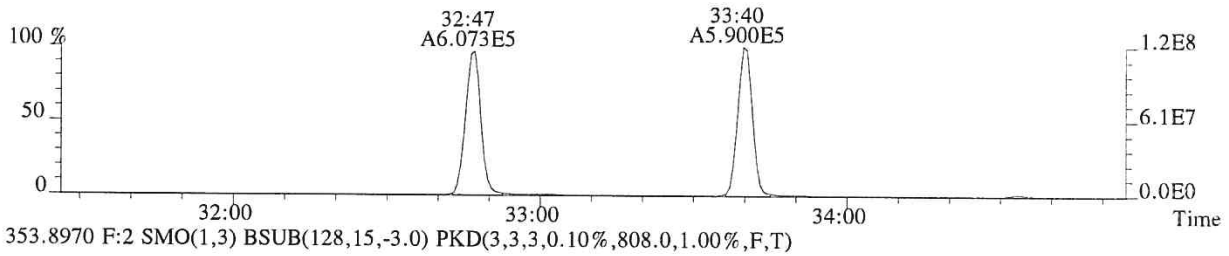
File:P513853 #1-313 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1612.0,1.00%,F,T)



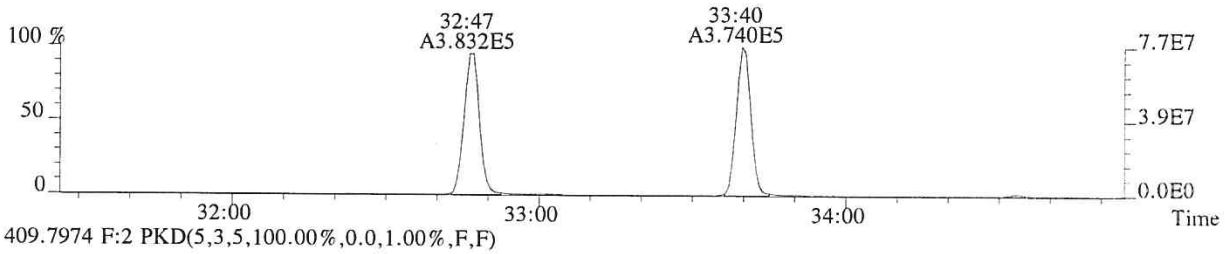
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2096.0,1.00%,F,T)



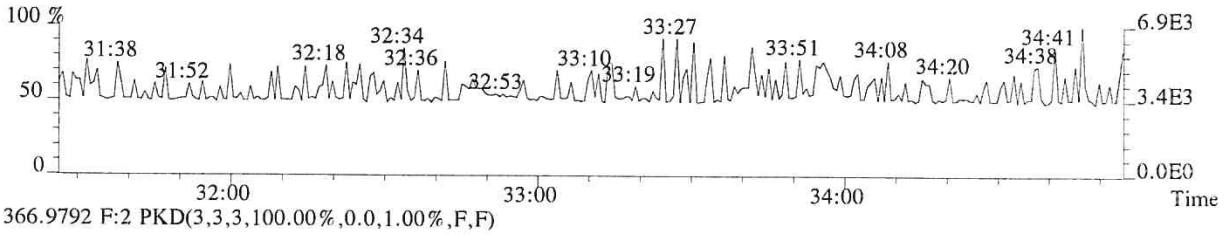
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1280.0,1.00%,F,T)



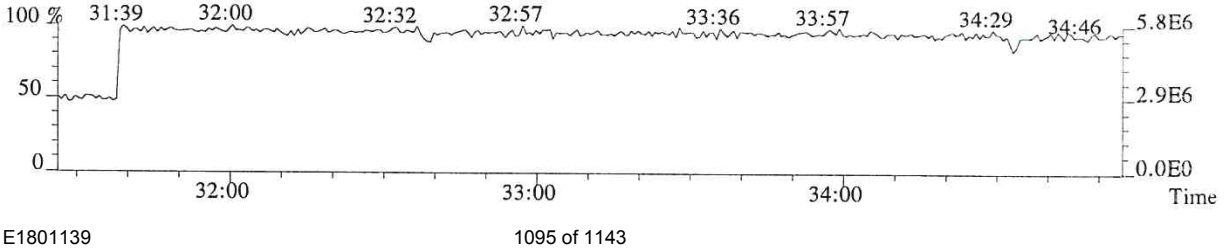
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,808.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

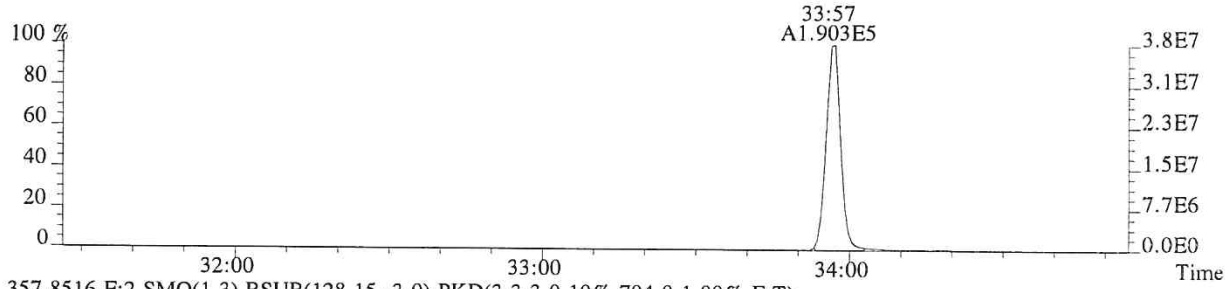


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

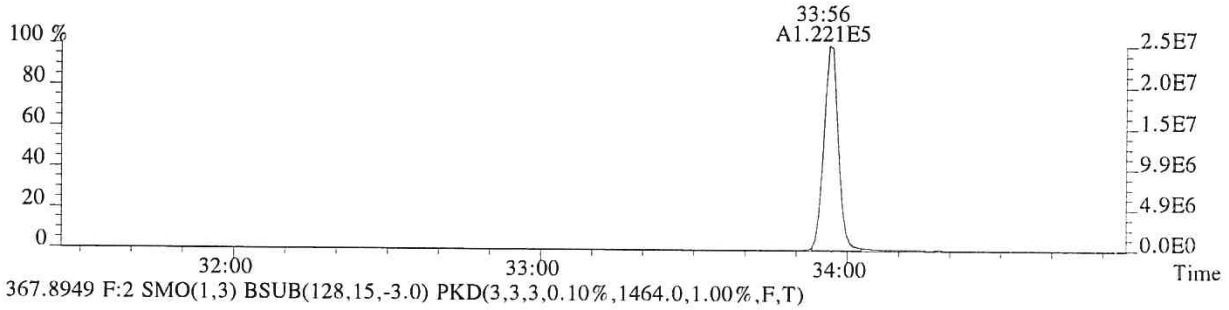


019059

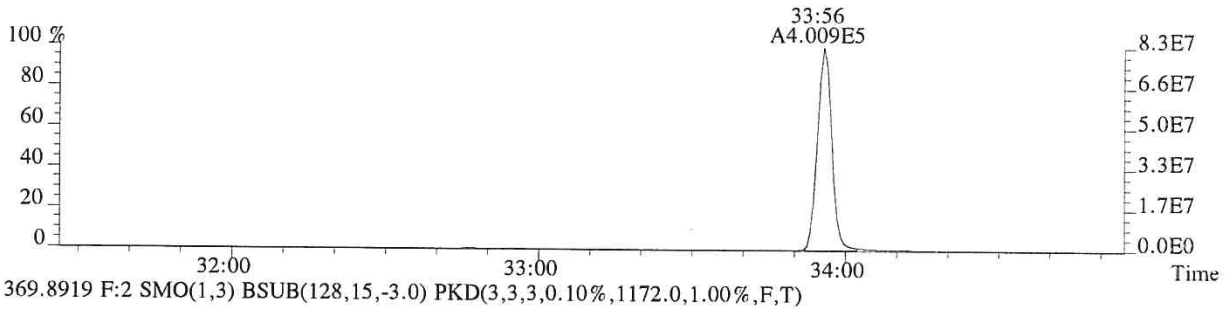
File:P513853 #1-313 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1452.0,1.00%,F,T)



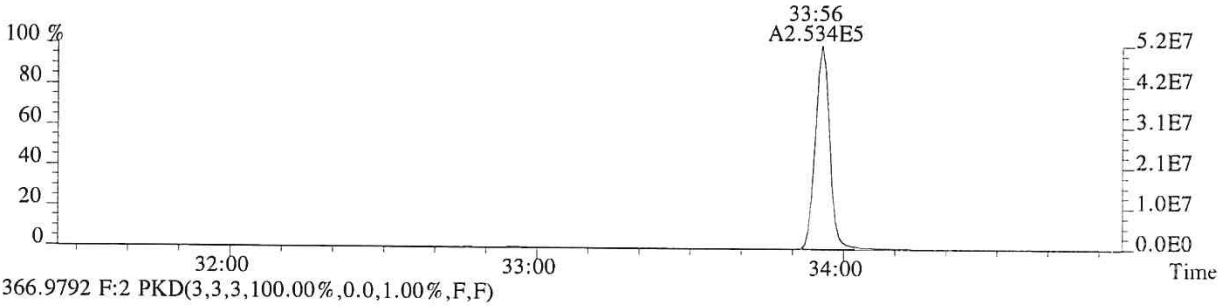
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,704.0,1.00%,F,T)



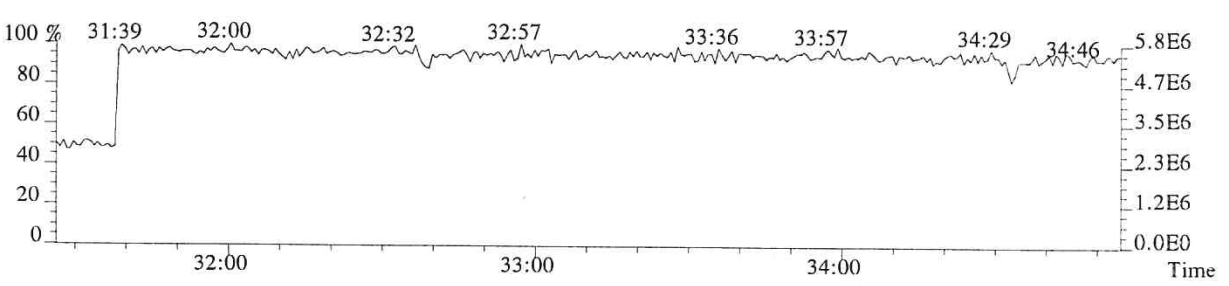
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1464.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1172.0,1.00%,F,T)

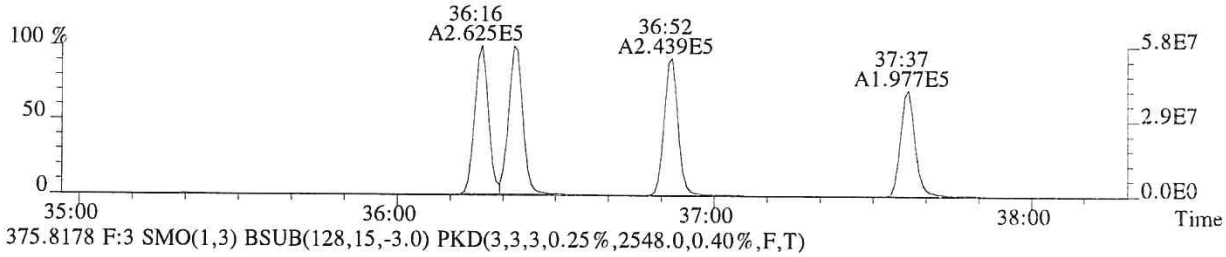


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

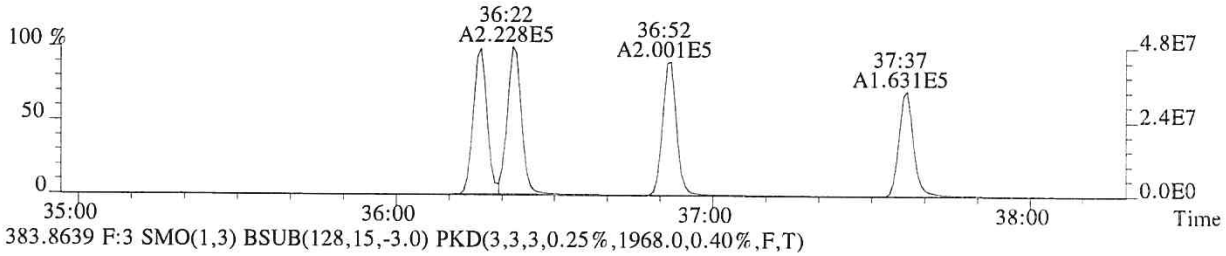


019060

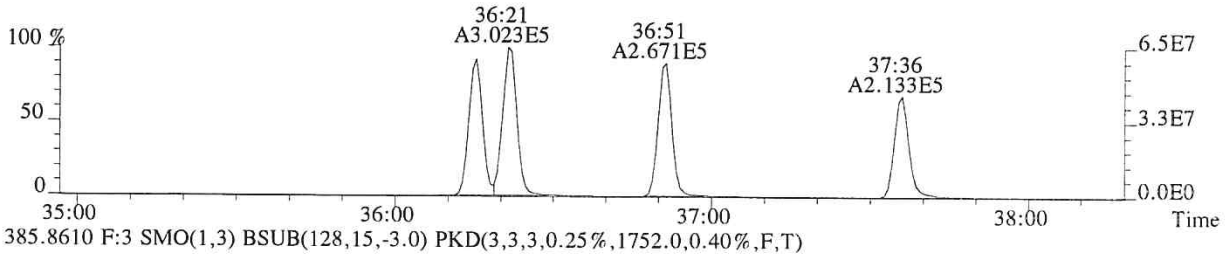
File:P513853 #1-303 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spectℓ
Sample#1 Exp:76557
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1856.0,0.40%,F,T)



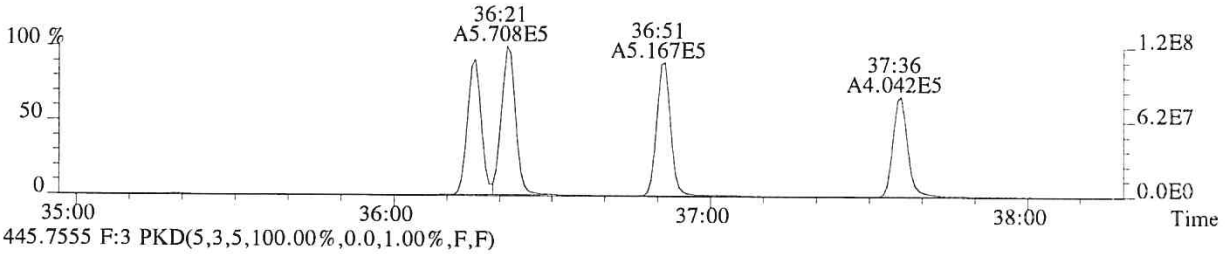
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2548.0,0.40%,F,T)



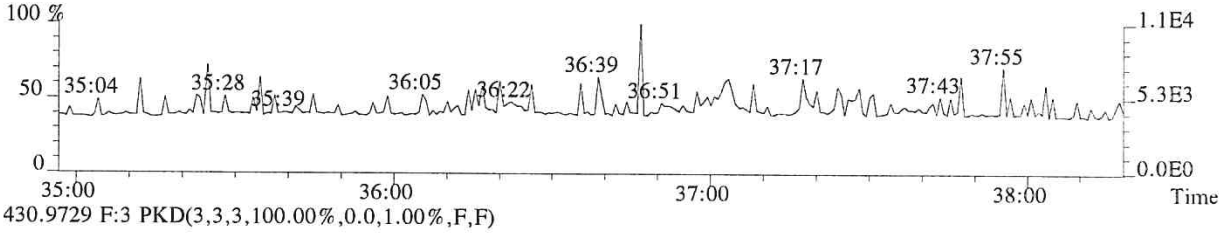
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1968.0,0.40%,F,T)



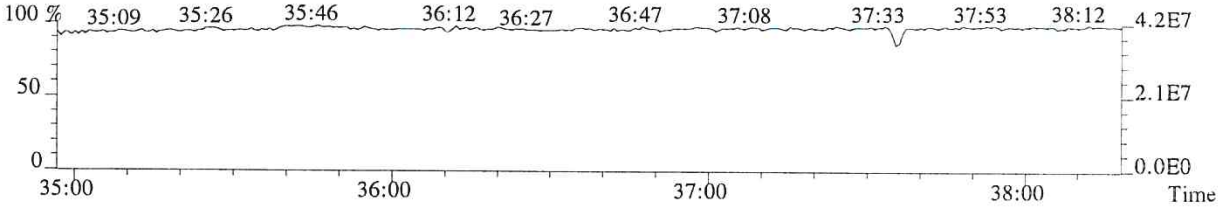
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1752.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

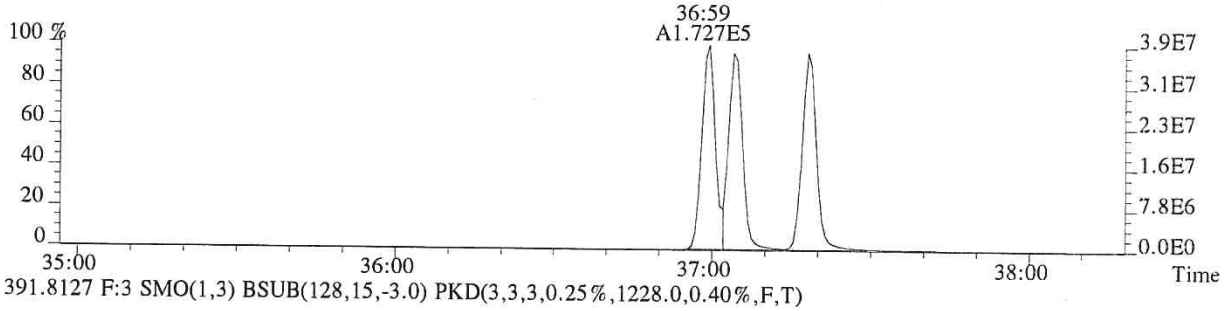


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

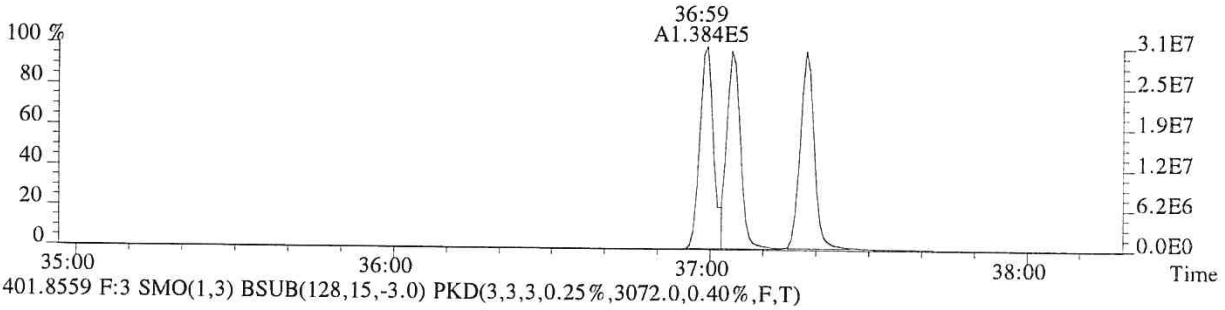


019061

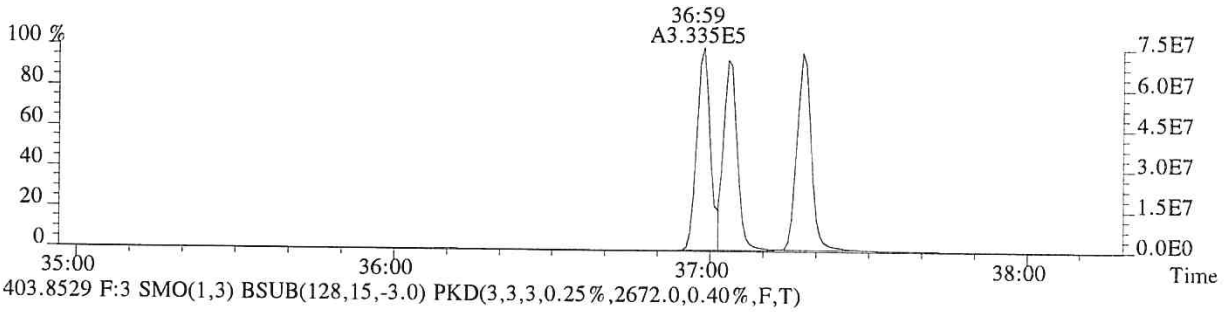
File:P513853 #1-303 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,512.0,0.40%,F,T)



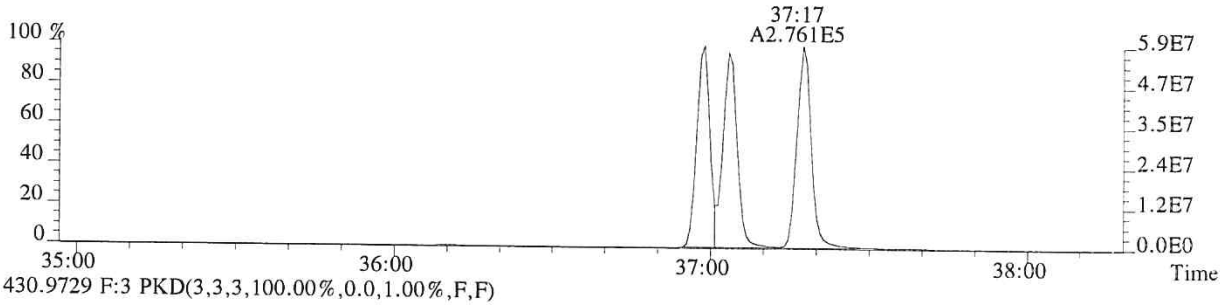
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1228.0,0.40%,F,T)



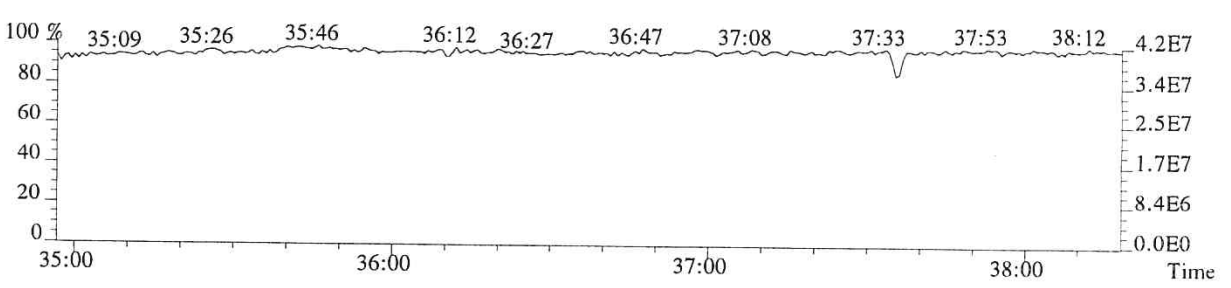
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3072.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2672.0,0.40%,F,T)

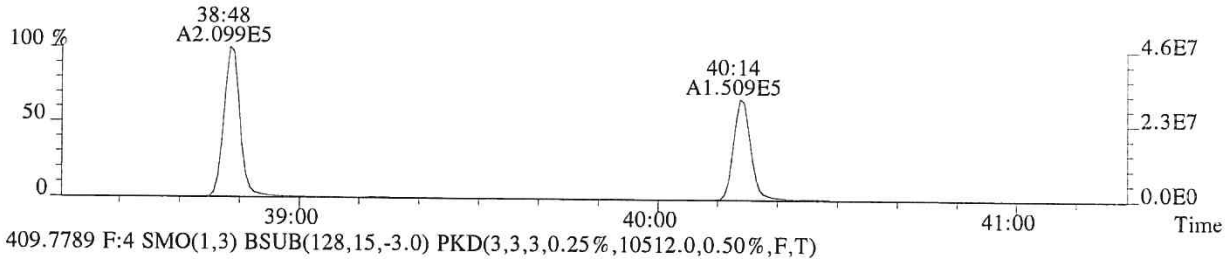


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

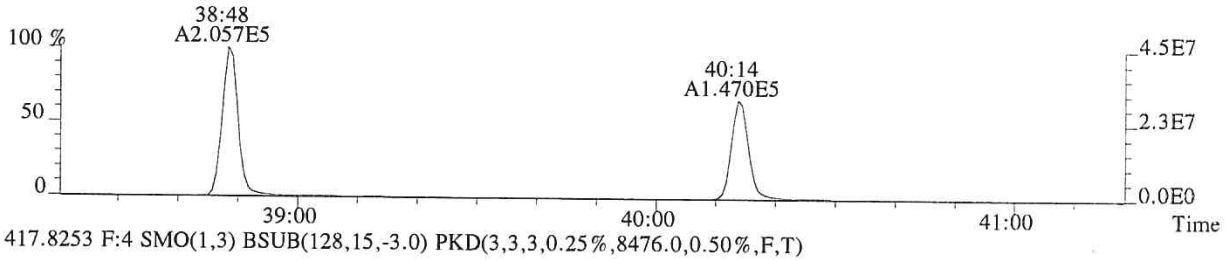


019062

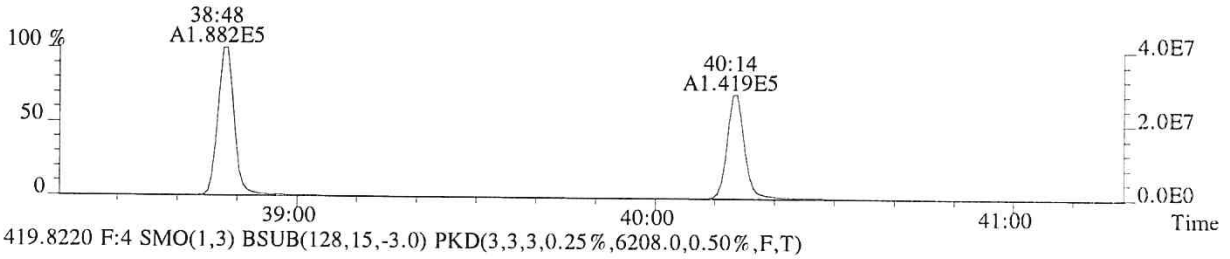
File:P513853 #1-268 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4436.0,0.50%,F,T)



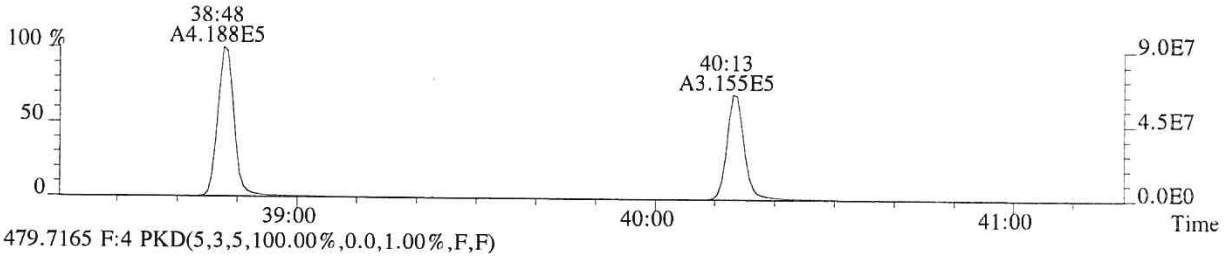
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10512.0,0.50%,F,T)



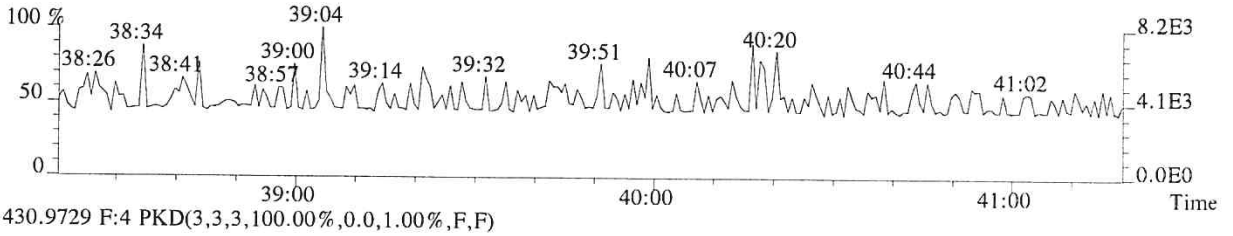
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,8476.0,0.50%,F,T)



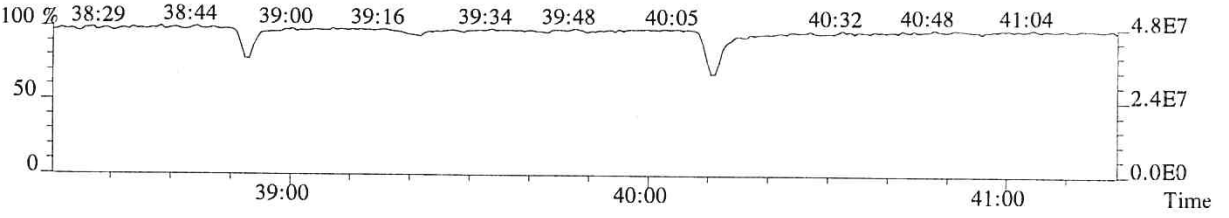
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6208.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

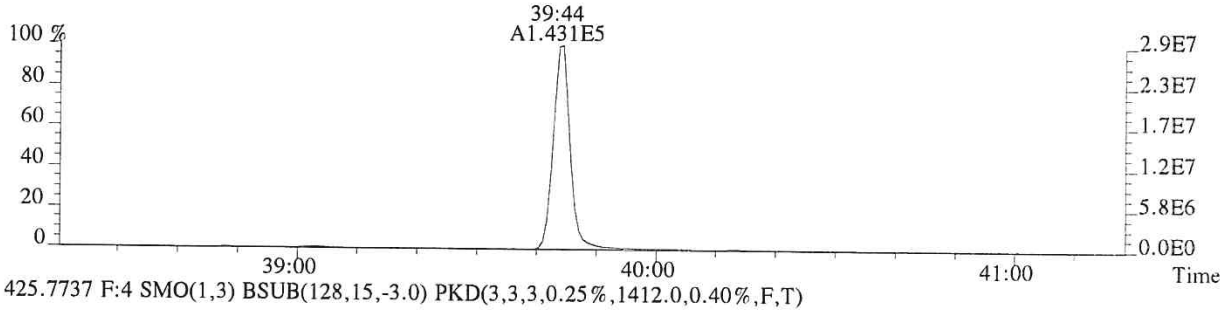


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

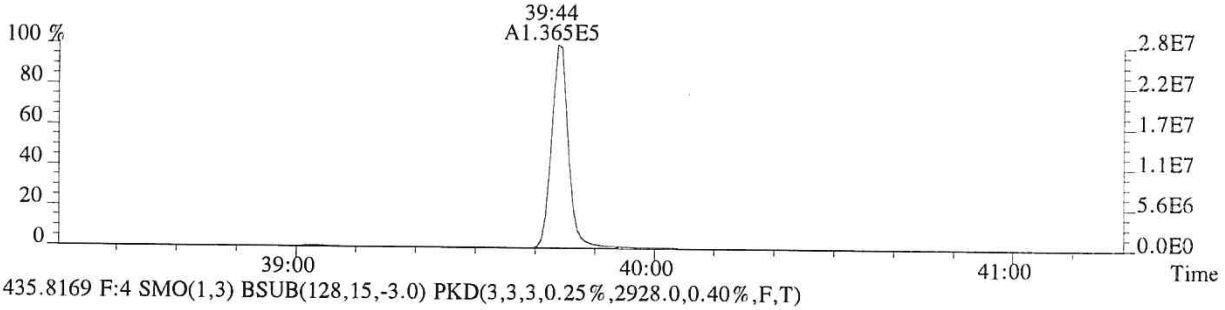


019063

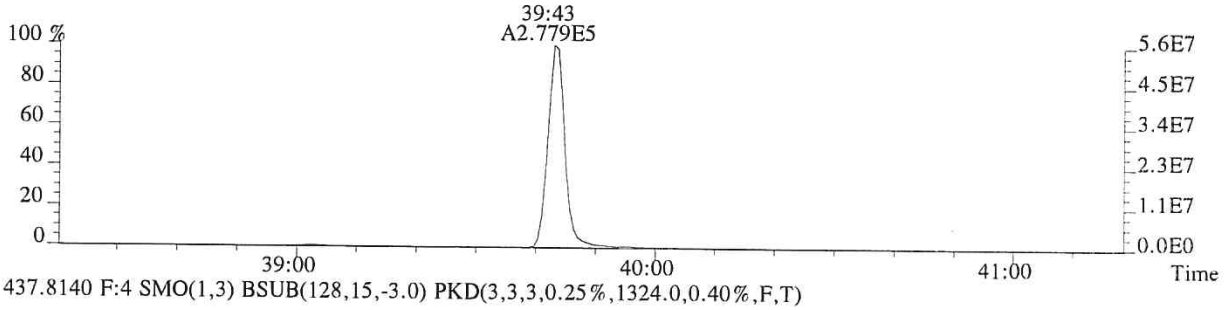
File:P513853 #1-268 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1840.0,0.40%,F,T)



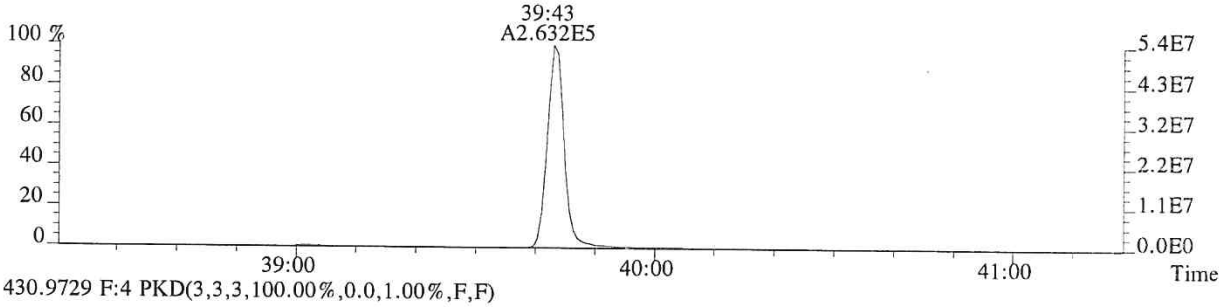
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1412.0,0.40%,F,T)



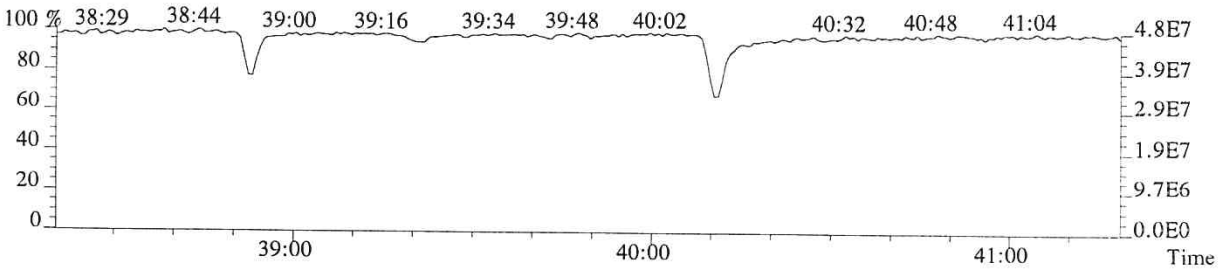
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2928.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1324.0,0.40%,F,T)

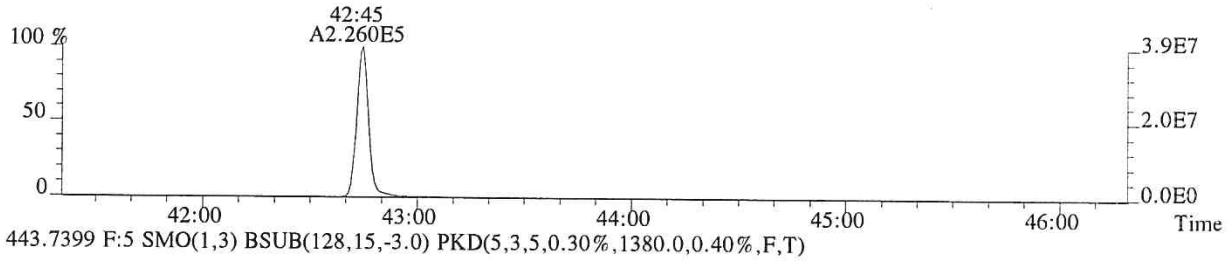


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

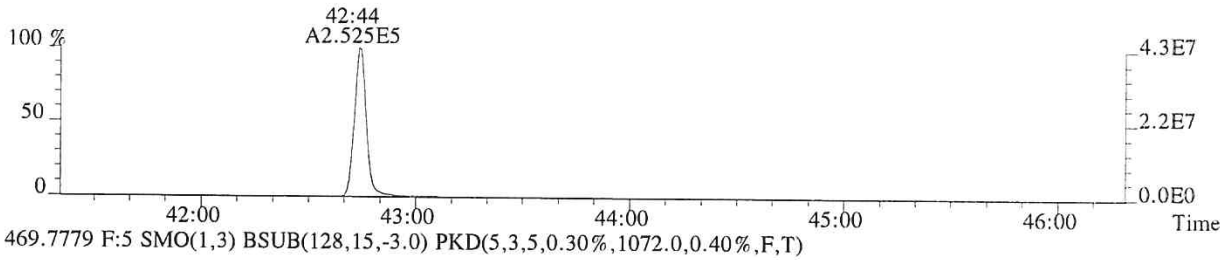


019064

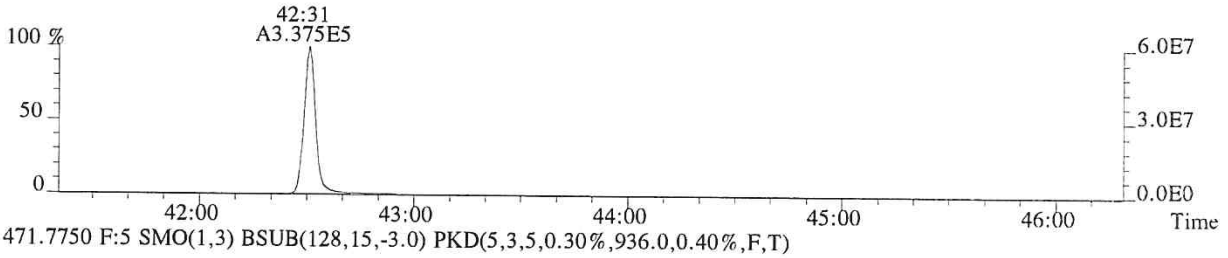
File:P513853 #1-448 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,144.0,0.40%,F,T)



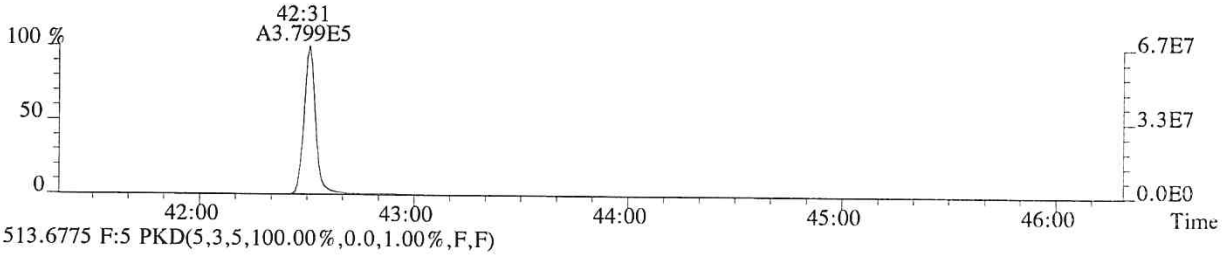
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1380.0,0.40%,F,T)



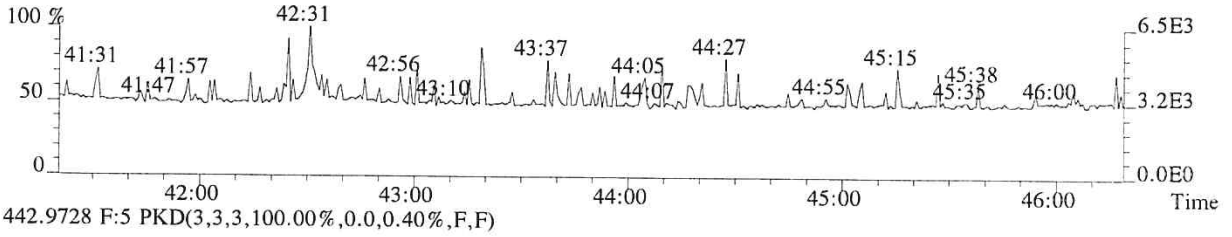
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1072.0,0.40%,F,T)



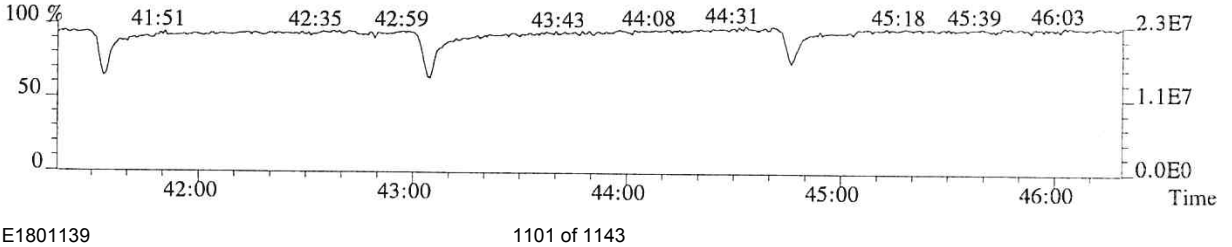
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,936.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

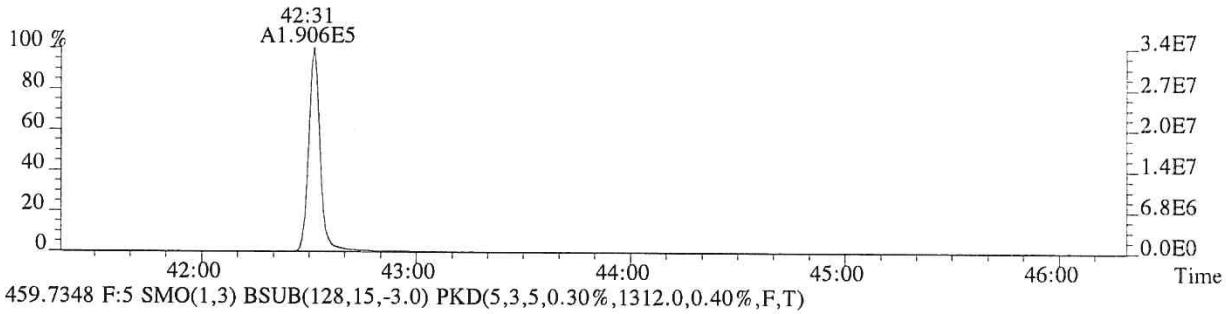


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

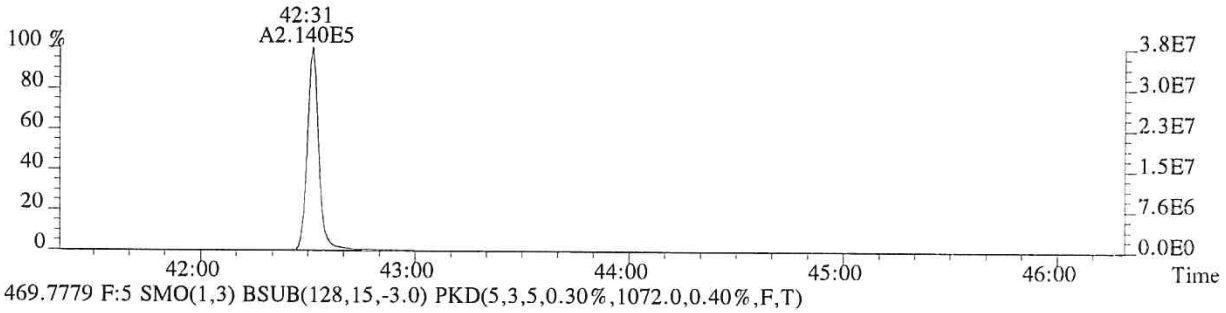


019065

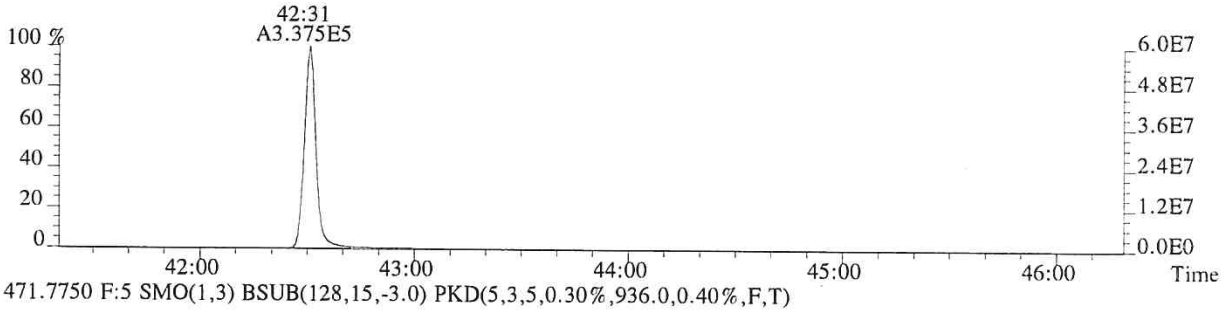
File:P513853 #1-448 Acq:24-JAN-2018 16:06:29 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76557
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,632.0,0.40%,F,T)



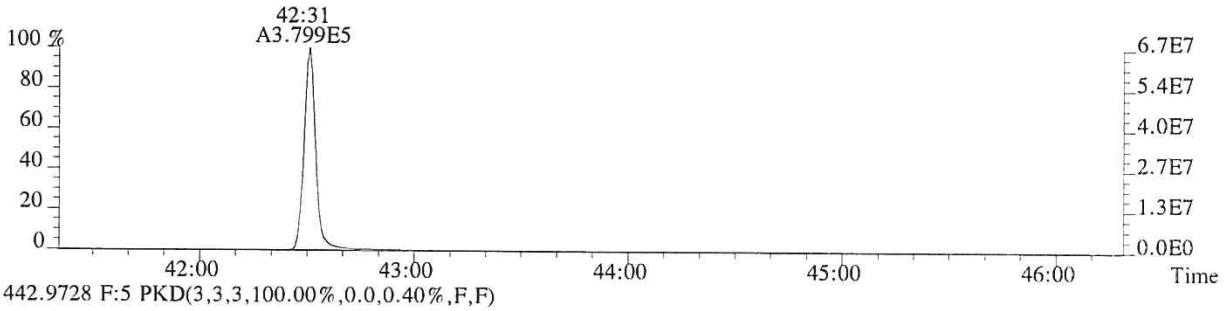
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1312.0,0.40%,F,T)



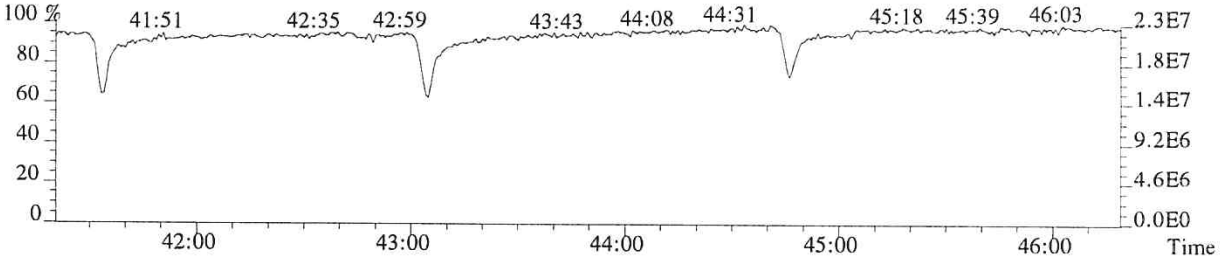
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1072.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,936.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



019066

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
76558

Run #5 Filename P513854 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:55:09
Processed: 24-JAN-18 17:50:33 Sample ID: CS4

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:47	9.367e+04	1.218e+05	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:47	7.158e+05	4.652e+05	1.54	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:40	6.668e+05	4.362e+05	1.53	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:15	6.097e+05	4.979e+05	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:22	6.415e+05	5.246e+05	1.22	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:51	5.685e+05	4.706e+05	1.21	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:36	5.397e+05	4.367e+05	1.24	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:48	4.833e+05	4.698e+05	1.03	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	3.955e+05	3.845e+05	1.03	yes	no	1.258
10	Unk	OCDF	42:44	5.770e+05	6.374e+05	0.91	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:31	6.699e+04	8.569e+04	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:56	4.394e+05	2.817e+05	1.56	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	3.869e+05	3.085e+05	1.25	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:04	4.031e+05	3.210e+05	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:18	4.024e+05	3.196e+05	1.26	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	3.425e+05	3.252e+05	1.05	yes	no	1.025
17	Unk	OCDD	42:31	4.623e+05	5.191e+05	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:46	2.467e+05	3.121e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:46	3.414e+05	2.167e+05	1.58	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	3.412e+05	2.161e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	1.522e+05	2.895e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:21	1.720e+05	3.253e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	1.562e+05	2.969e+05	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	1.406e+05	2.715e+05	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	1.081e+05	2.395e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:13	9.438e+04	2.110e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:30	1.544e+05	1.910e+05	0.81	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	2.282e+05	1.431e+05	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	1.841e+05	1.451e+05	1.27	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:03	1.915e+05	1.516e+05	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:43	1.646e+05	1.528e+05	1.08	yes	no	0.858
32	IS	13C-OCDD	42:31	2.072e+05	2.298e+05	0.90	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:56	1.645e+05	2.018e+05	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:17	1.964e+05	1.566e+05	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:31	1.545e+05				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
76558

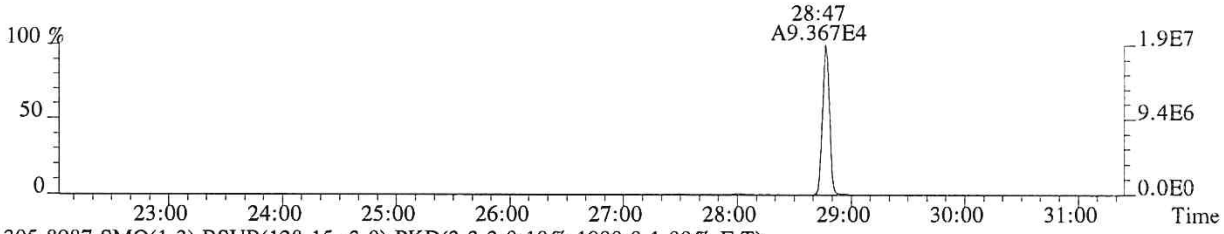
Run #5 Filename P513854 Samp: 1 Inj: 1 Acquired: 24-JAN-18 16:55:09
Processed: 24-JAN-18 17:50:33 LAB. ID: CS4

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.89e+07	1.00e+03	1.9e+04	2.44e+07	1.90e+03	1.3e+04
2	1,2,3,7,8-PeCDF	1.40e+08	2.03e+03	6.9e+04	9.16e+07	1.47e+03	6.2e+04
3	2,3,4,7,8-PeCDF	1.39e+08	2.03e+03	6.9e+04	9.17e+07	1.47e+03	6.2e+04
4	1,2,3,4,7,8-HxCDF	1.35e+08	1.80e+03	7.5e+04	1.11e+08	2.10e+03	5.3e+04
5	1,2,3,6,7,8-HxCDF	1.41e+08	1.80e+03	7.8e+04	1.16e+08	2.10e+03	5.5e+04
6	2,3,4,6,7,8-HxCDF	1.27e+08	1.80e+03	7.0e+04	1.06e+08	2.10e+03	5.0e+04
7	1,2,3,7,8,9-HxCDF	1.14e+08	1.80e+03	6.3e+04	9.30e+07	2.10e+03	4.4e+04
8	1,2,3,4,6,7,8-HpCDF	1.07e+08	1.75e+04	6.1e+03	1.05e+08	2.93e+04	3.6e+03
9	1,2,3,4,7,8,9-HpCDF	8.10e+07	1.75e+04	4.6e+03	7.89e+07	2.93e+04	2.7e+03
10	OCDF	1.02e+08	5.04e+02	2.0e+05	1.14e+08	1.72e+03	6.6e+04
11	2,3,7,8-TCDD	1.41e+07	2.20e+03	6.4e+03	1.80e+07	1.38e+03	1.3e+04
12	1,2,3,7,8-PeCDD	9.08e+07	1.42e+03	6.4e+04	5.86e+07	1.44e+02	4.1e+05
13	1,2,3,4,7,8-HxCDD	8.77e+07	1.20e+03	7.3e+04	7.06e+07	1.58e+03	4.5e+04
14	1,2,3,6,7,8-HxCDD	8.80e+07	1.20e+03	7.3e+04	7.05e+07	1.58e+03	4.5e+04
15	1,2,3,7,8,9-HxCDD	8.97e+07	1.20e+03	7.5e+04	7.13e+07	1.58e+03	4.5e+04
16	1,2,3,4,6,7,8-HpCDD	7.19e+07	1.52e+03	4.7e+04	6.86e+07	1.50e+03	4.6e+04
17	OCDD	8.05e+07	7.36e+02	1.1e+05	9.09e+07	1.16e+03	7.8e+04
18	13C-2,3,7,8-TCDF	4.92e+07	8.28e+03	5.9e+03	6.18e+07	3.78e+03	1.6e+04
19	13C-1,2,3,7,8-PeCDF	6.78e+07	1.09e+03	6.2e+04	4.35e+07	7.12e+02	6.1e+04
20	13C-2,3,4,7,8-PeCDF	7.11e+07	1.09e+03	6.5e+04	4.54e+07	7.12e+02	6.4e+04
21	13C-1,2,3,4,7,8-HxCDF	3.32e+07	1.94e+03	1.7e+04	6.39e+07	1.54e+03	4.2e+04
22	13C-1,2,3,6,7,8-HxCDF	3.76e+07	1.94e+03	1.9e+04	7.17e+07	1.54e+03	4.7e+04
23	13C-2,3,4,6,7,8-HxCDF	3.46e+07	1.94e+03	1.8e+04	6.63e+07	1.54e+03	4.3e+04
24	13C-1,2,3,7,8,9-HxCDF	2.97e+07	1.94e+03	1.5e+04	5.66e+07	1.54e+03	3.7e+04
25	13C-1,2,3,4,6,7,8-HpCDF	2.37e+07	7.11e+03	3.3e+03	5.25e+07	1.03e+04	5.1e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.95e+07	7.11e+03	2.7e+03	4.34e+07	1.03e+04	4.2e+03
27	13C-2,3,7,8-TCDD	3.25e+07	6.40e+03	5.1e+03	3.99e+07	2.77e+03	1.4e+04
28	13C-1,2,3,7,8-PeCDD	4.73e+07	1.13e+03	4.2e+04	2.97e+07	8.40e+02	3.5e+04
29	13C-1,2,3,4,7,8-HxCDD	4.15e+07	3.03e+03	1.4e+04	3.28e+07	2.40e+03	1.4e+04
30	13C-1,2,3,6,7,8-HxCDD	4.14e+07	3.03e+03	1.4e+04	3.31e+07	2.40e+03	1.4e+04
31	13C-1,2,3,4,6,7,8-HpCDD	3.45e+07	1.55e+03	2.2e+04	3.21e+07	1.32e+03	2.4e+04
32	13C-OCDD	3.61e+07	1.25e+03	2.9e+04	4.00e+07	1.19e+03	3.4e+04
33	13C-1,2,3,4-TCDD	3.34e+07	6.40e+03	5.2e+03	4.12e+07	2.77e+03	1.5e+04
34	13C-1,2,3,7,8,9-HxCDD	4.34e+07	3.03e+03	1.4e+04	3.46e+07	2.40e+03	1.4e+04
35	37Cl-2,3,7,8-TCDD	3.25e+07	1.28e+03	2.5e+04			

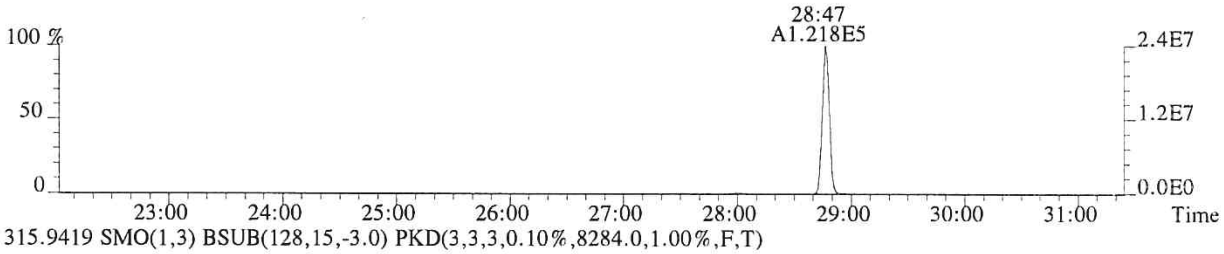
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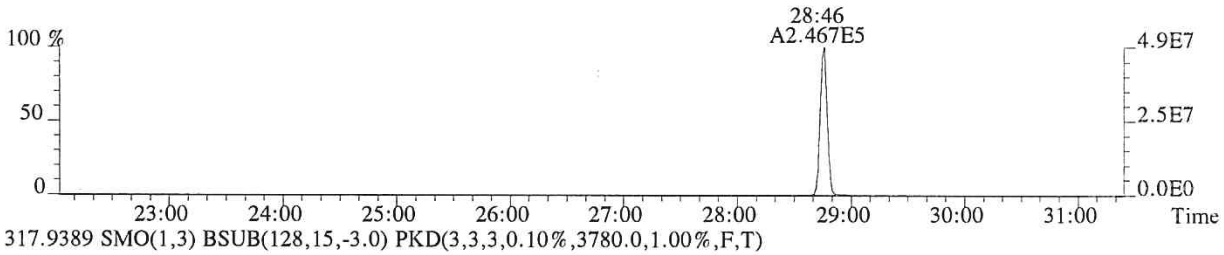
File:P513854 #1-665 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1004.0,1.00%,F,T)



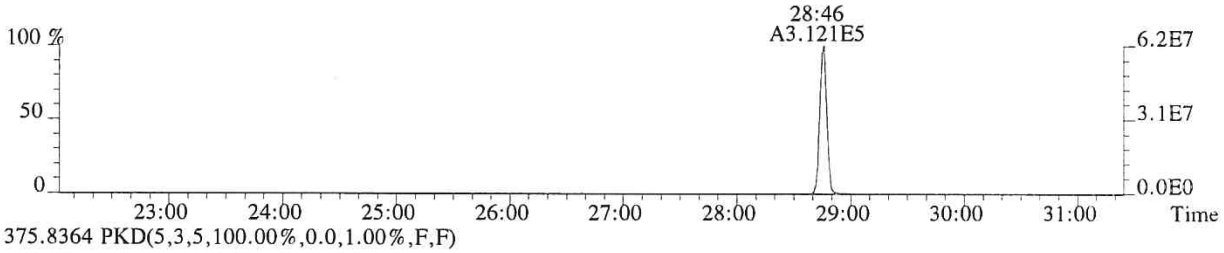
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1900.0,1.00%,F,T)



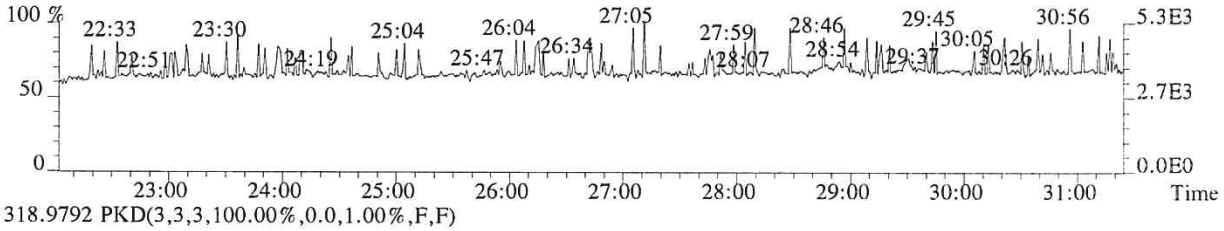
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8284.0,1.00%,F,T)



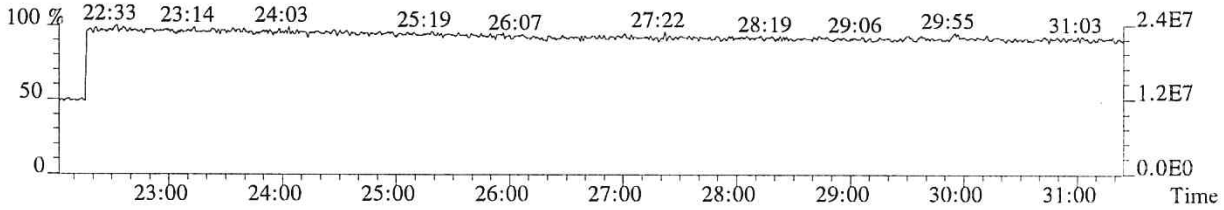
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3780.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

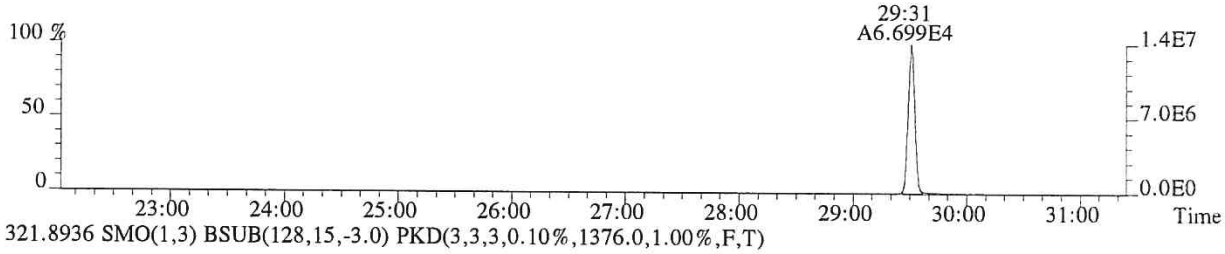


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

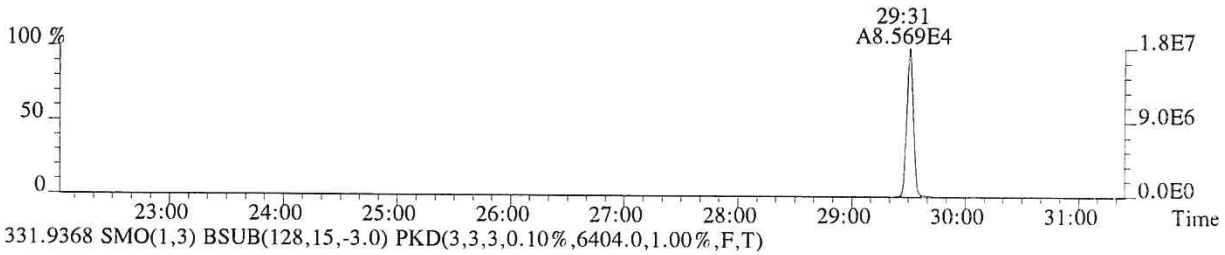


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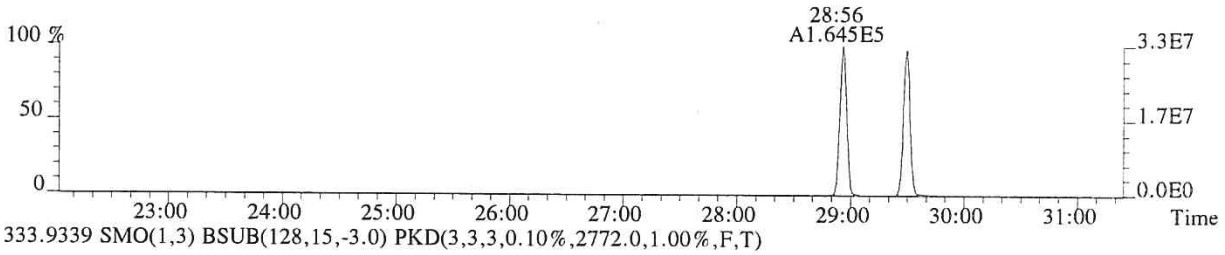
File:P513854 #1-665 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2200.0,1.00%,F,T)



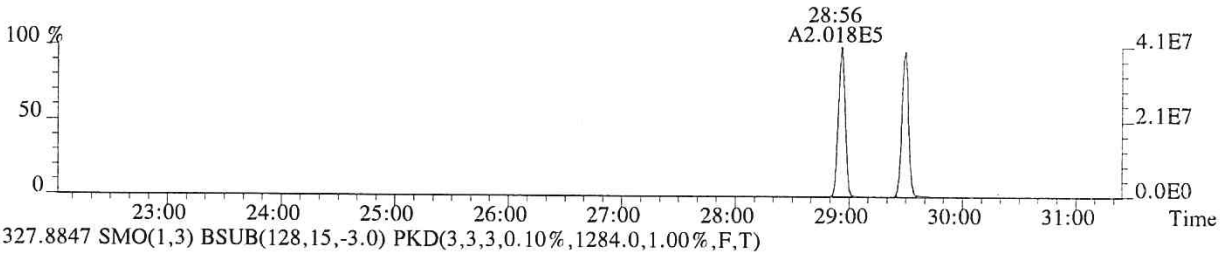
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1376.0,1.00%,F,T)



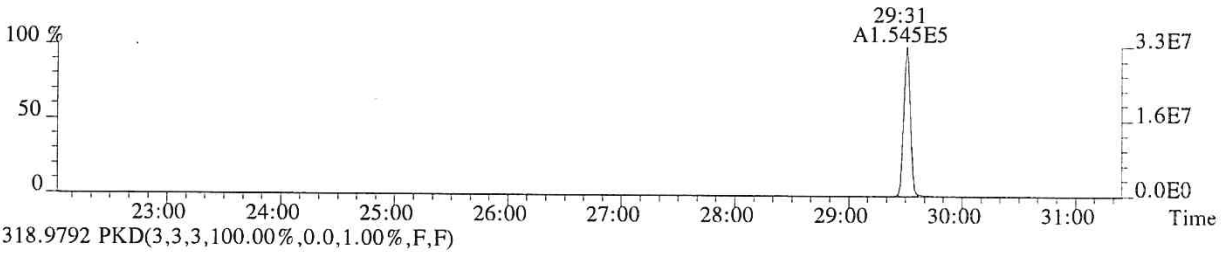
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,6404.0,1.00%,F,T)



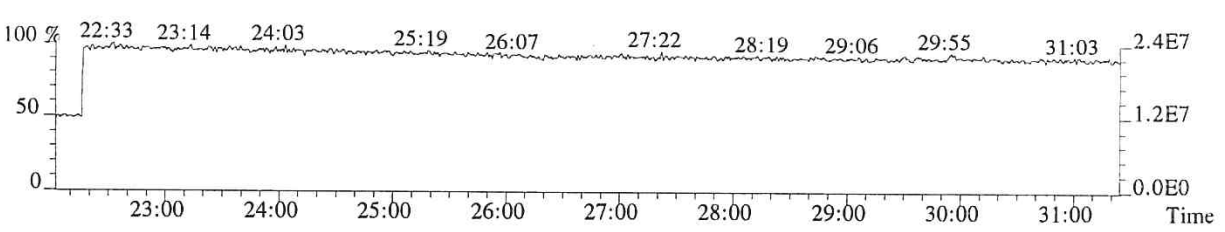
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2772.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1284.0,1.00%,F,T)

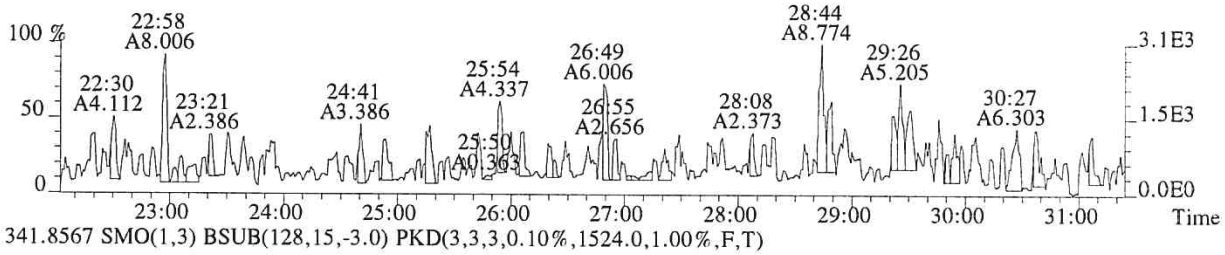


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

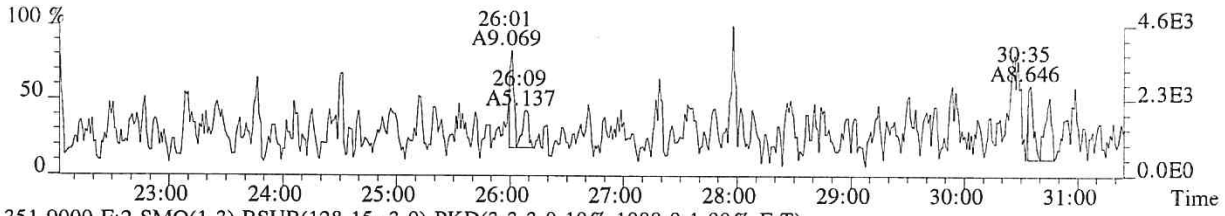


019070

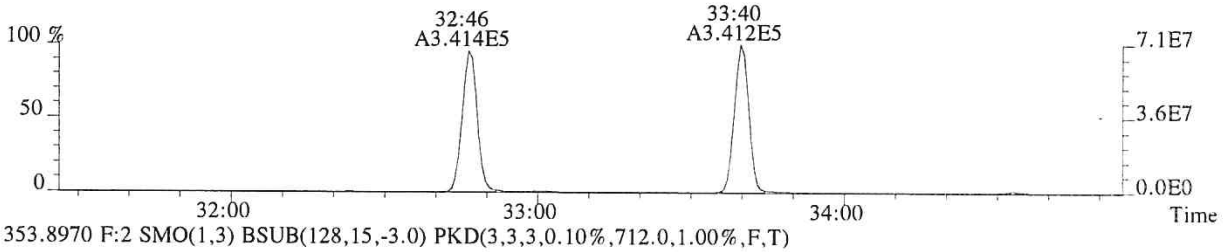
File:P513854 #1-665 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,600.0,1.00%,F,T)



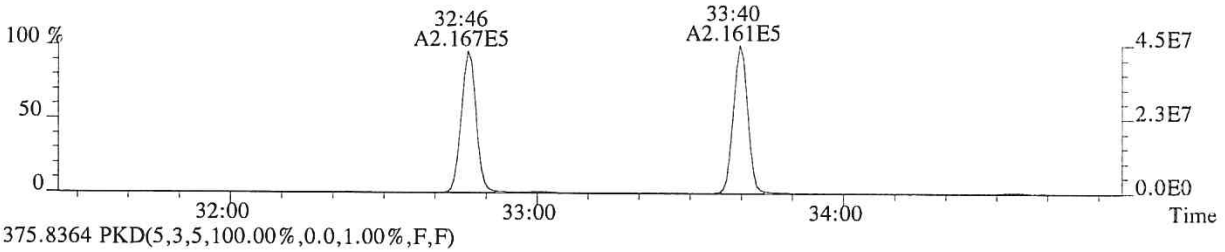
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1524.0,1.00%,F,T)



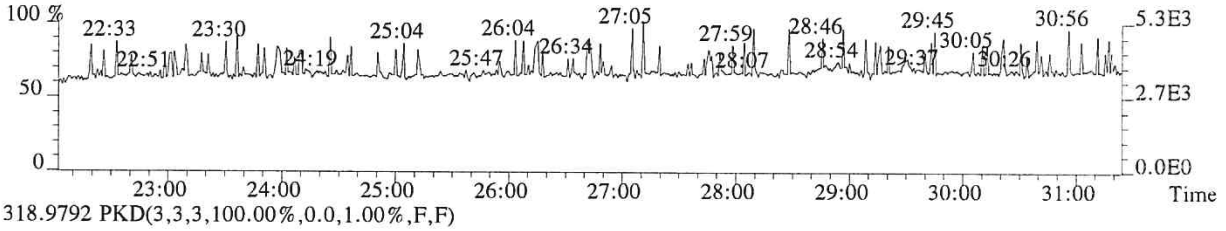
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1088.0,1.00%,F,T)



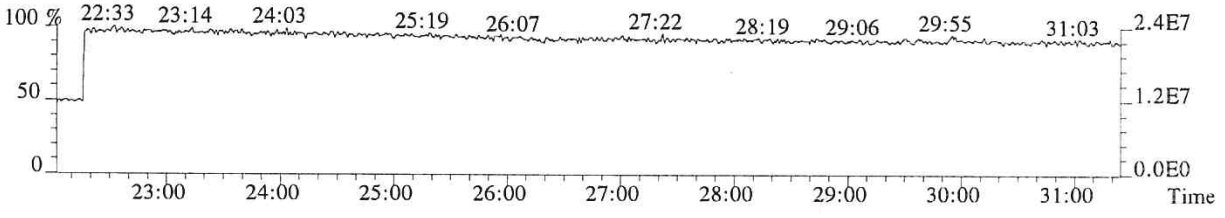
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,712.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

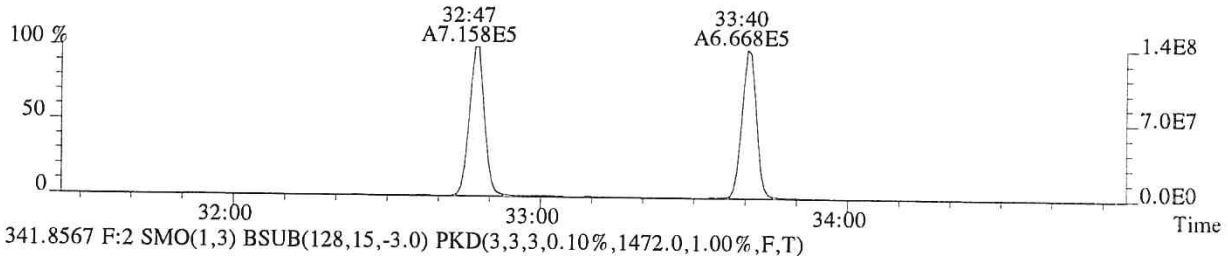


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

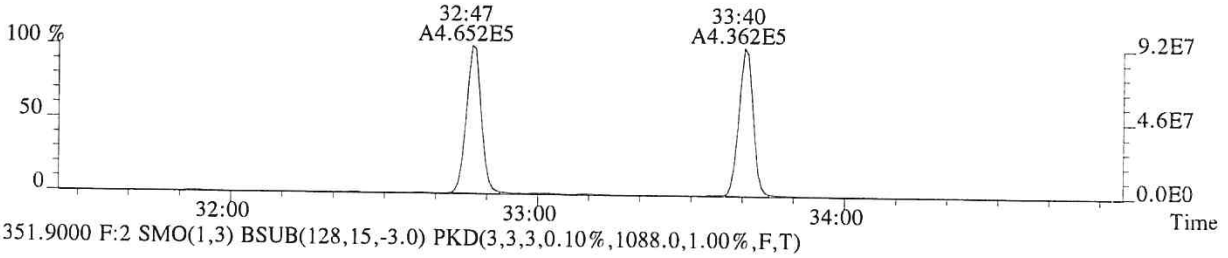


019071

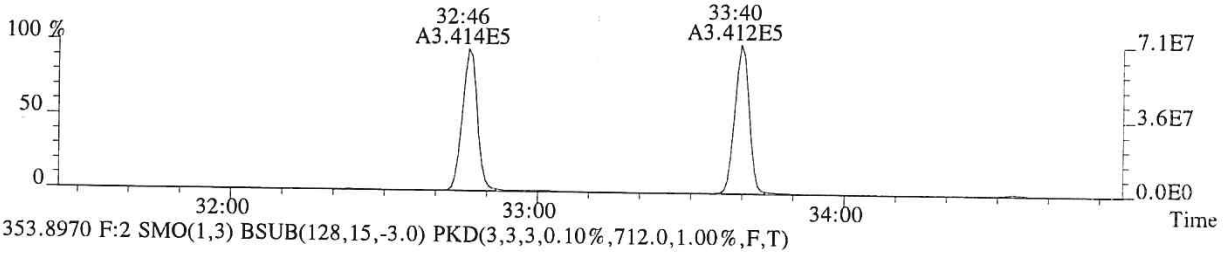
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Sample#1 Exp:76558
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2028.0,1.00%,F,T)



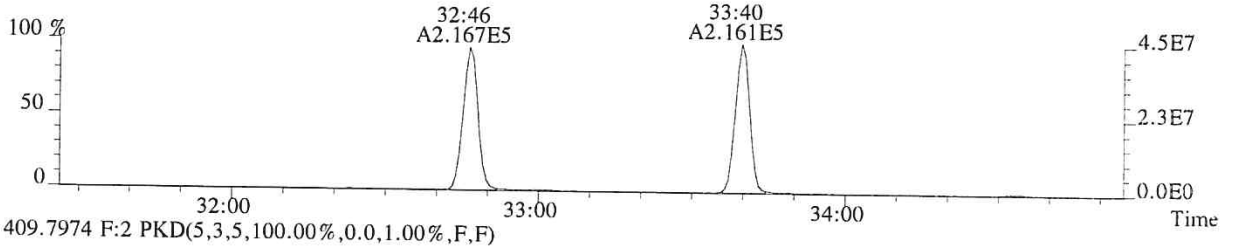
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1472.0,1.00%,F,T)



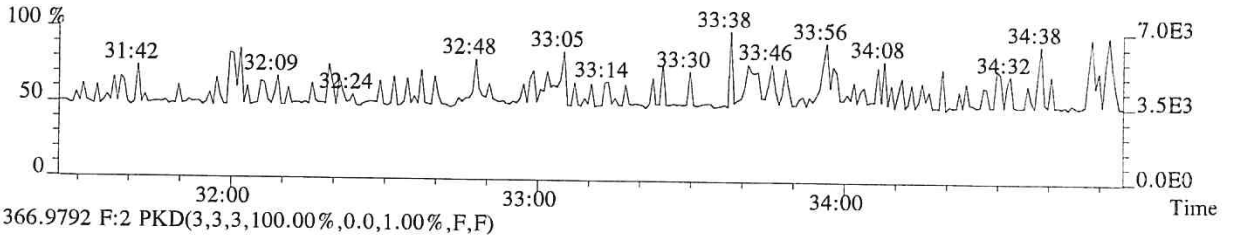
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1088.0,1.00%,F,T)



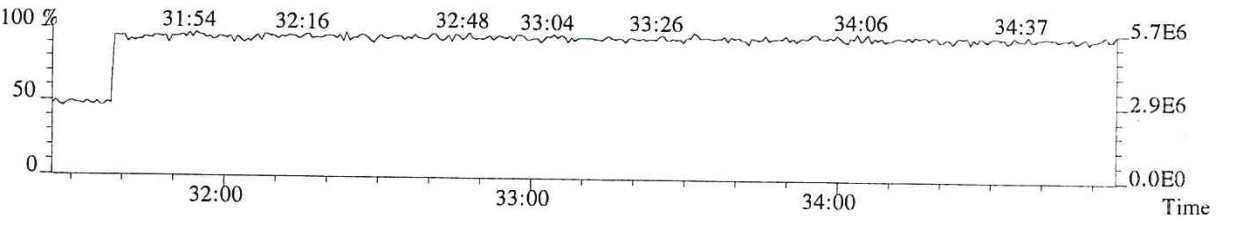
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,712.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

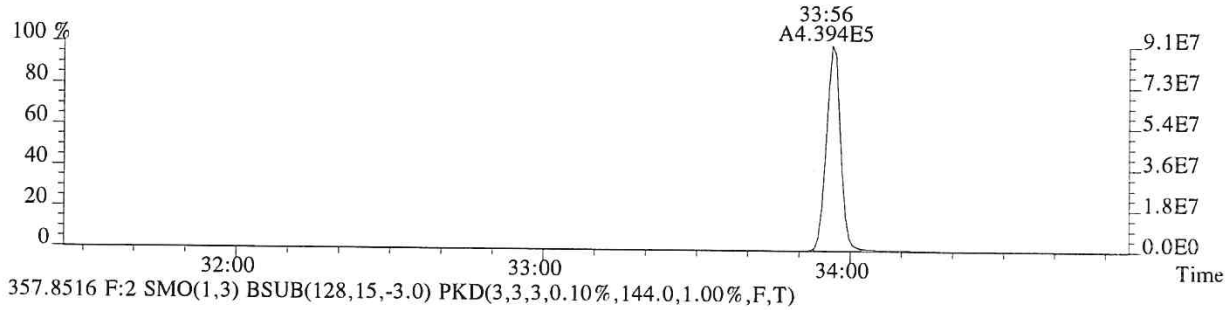


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

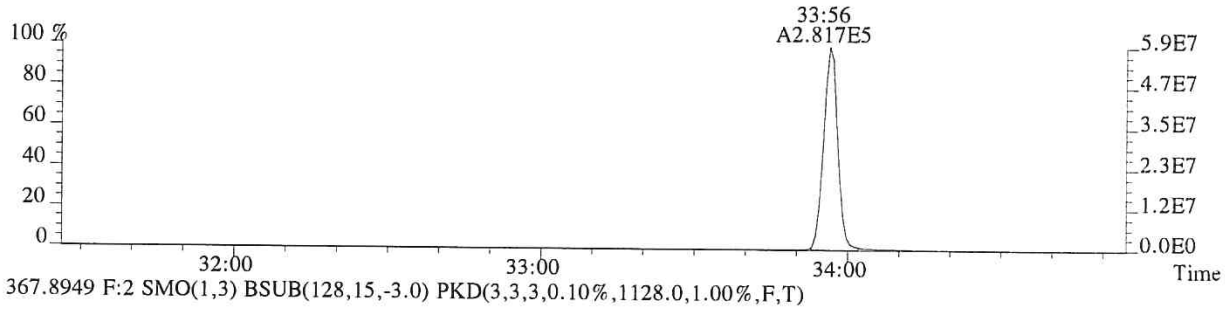


019072

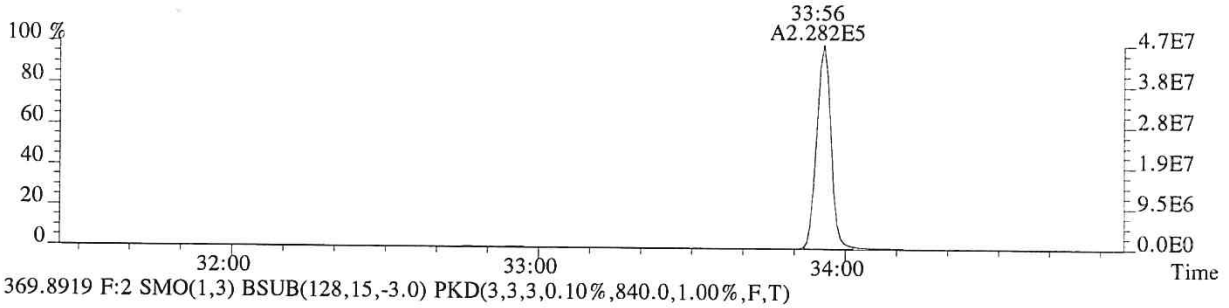
File:P513854 #1-313 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1420.0,1.00%,F,T)



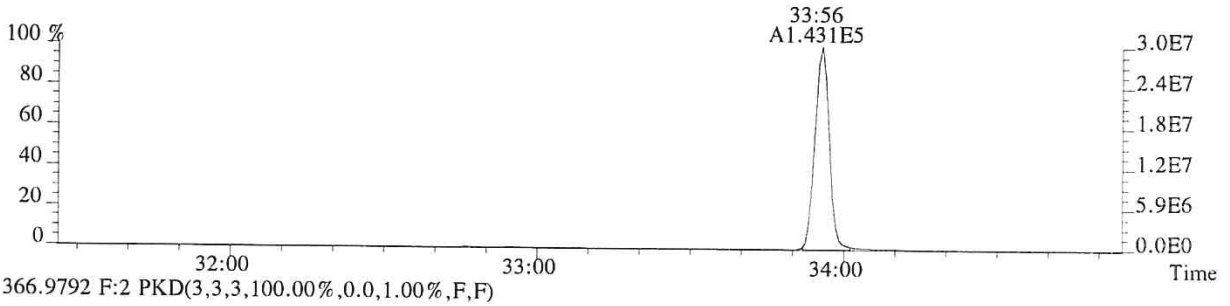
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,144.0,1.00%,F,T)



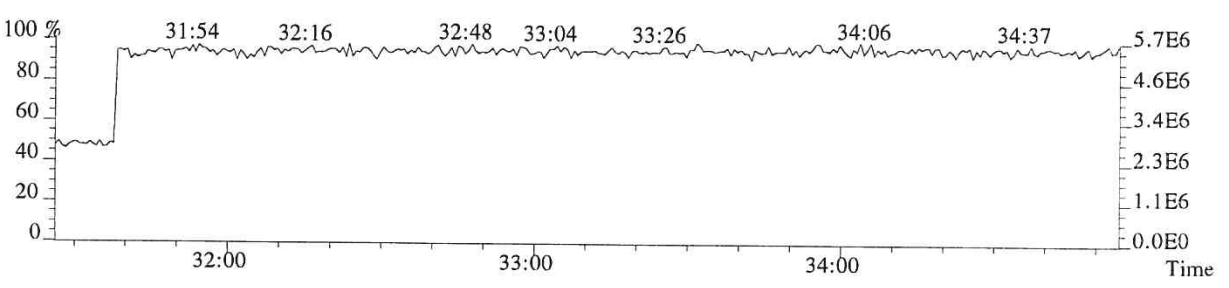
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1128.0,1.00%,F,T)



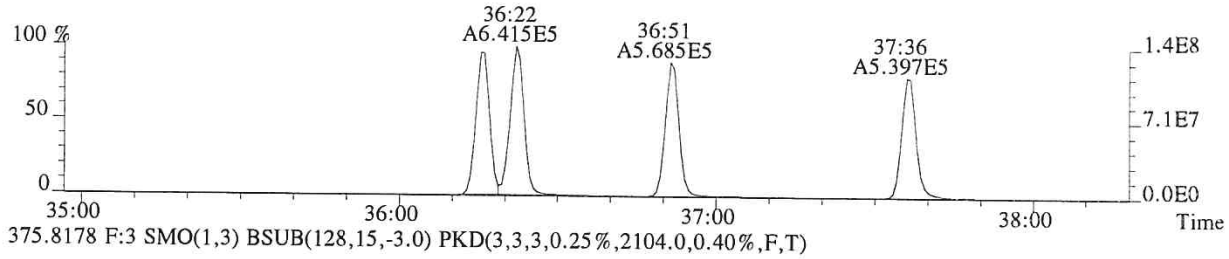
369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,840.0,1.00%,F,T)



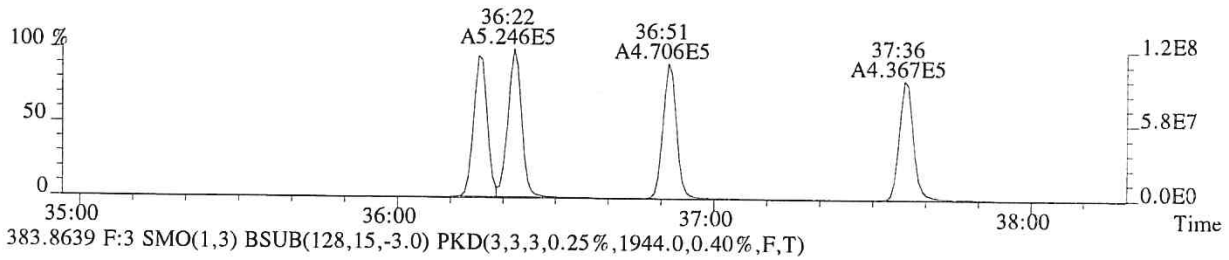
366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



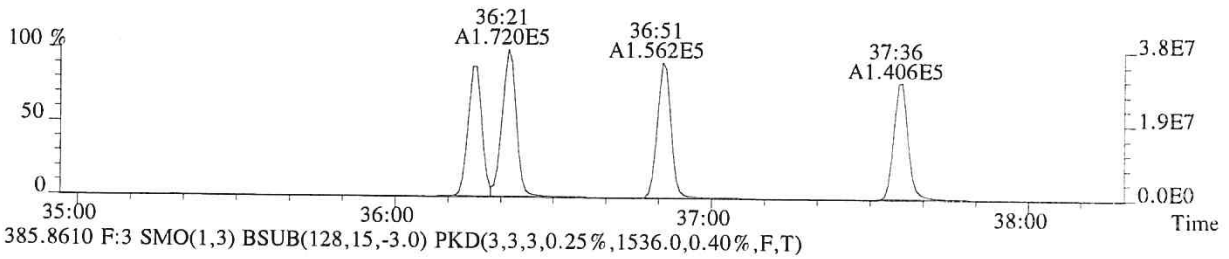
File:P513854 #1-303 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1804.0,0.40%,F,T)



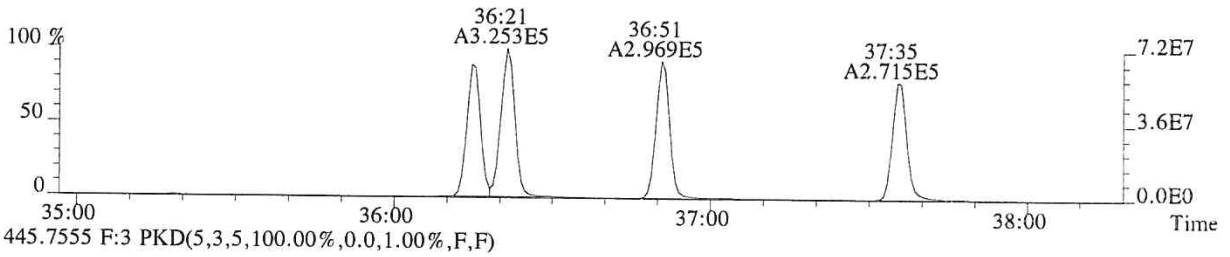
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2104.0,0.40%,F,T)



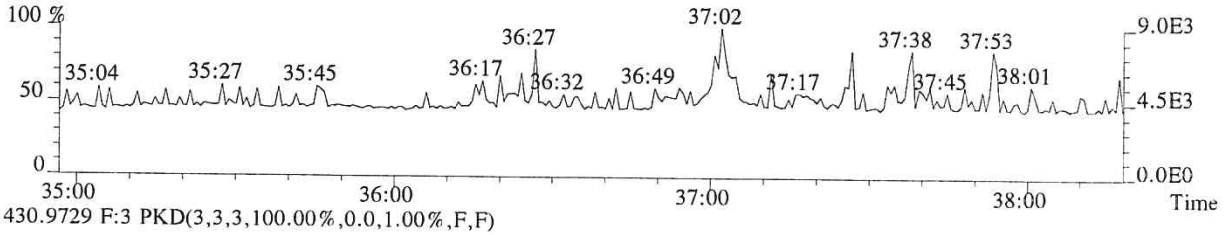
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1944.0,0.40%,F,T)



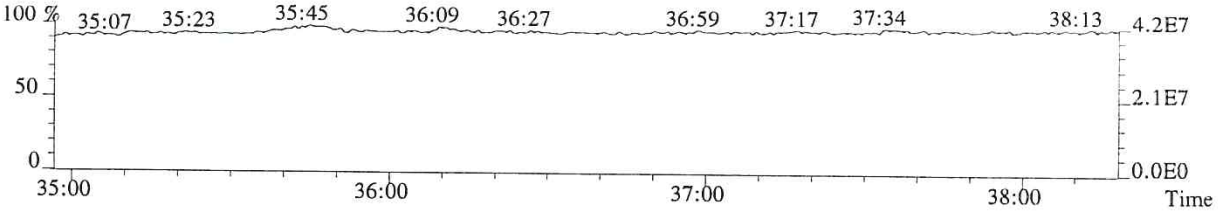
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1536.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

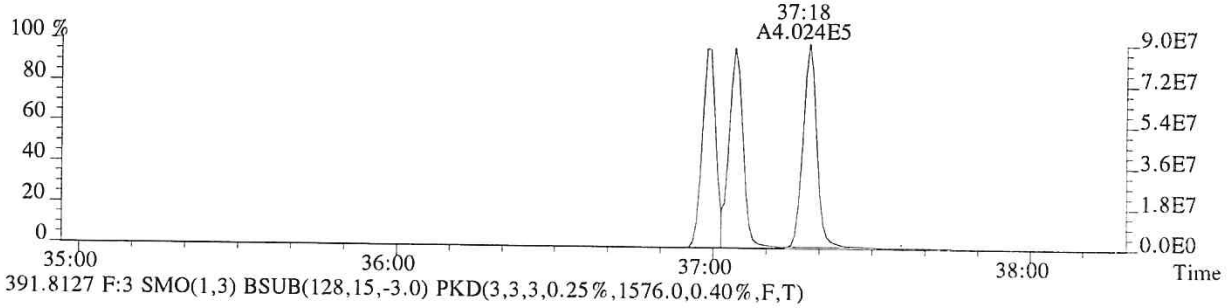


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

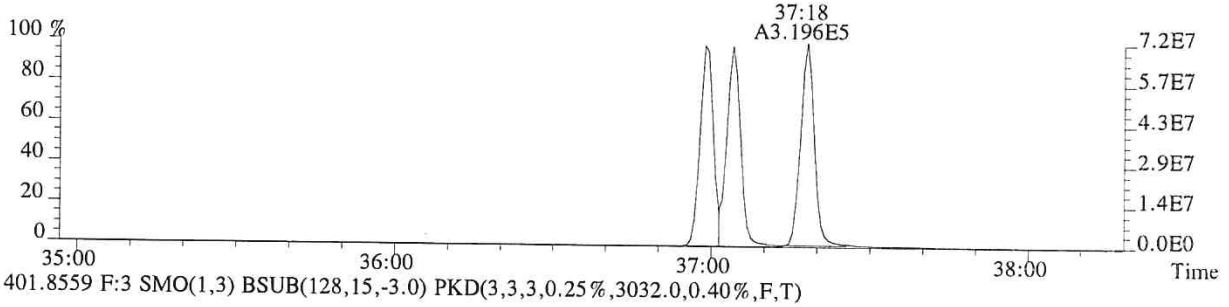


019074

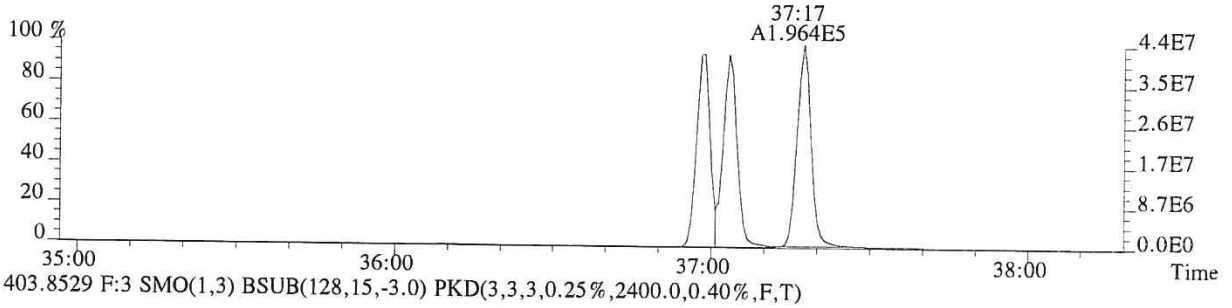
File:P513854 #1-303 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1200.0,0.40%,F,T)



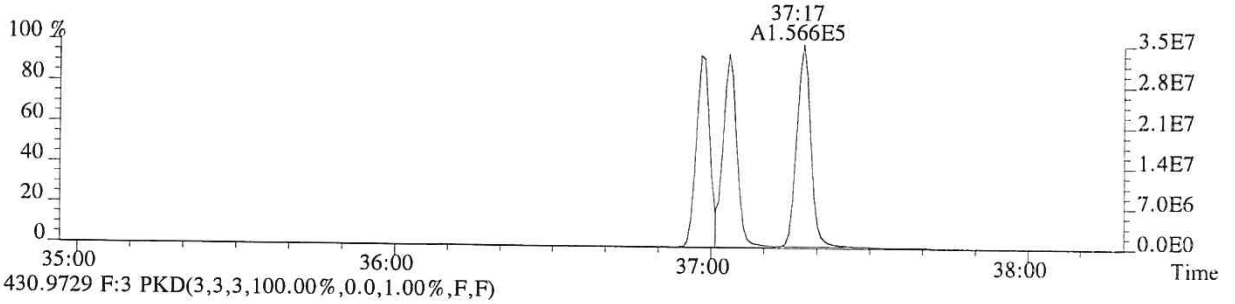
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1576.0,0.40%,F,T)



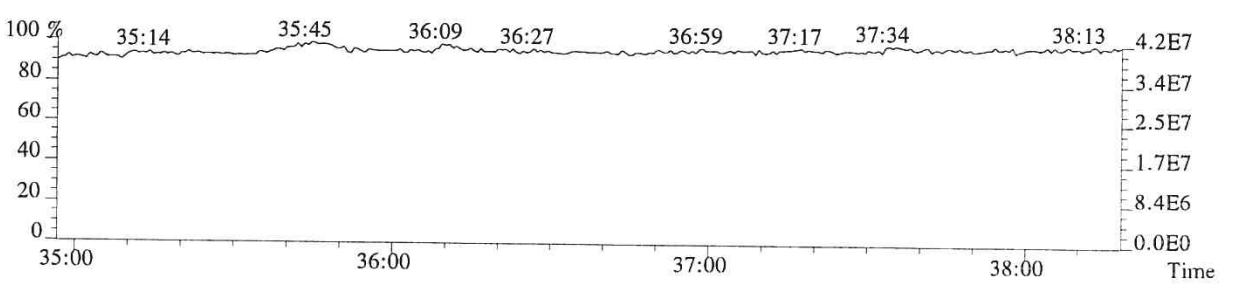
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3032.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2400.0,0.40%,F,T)

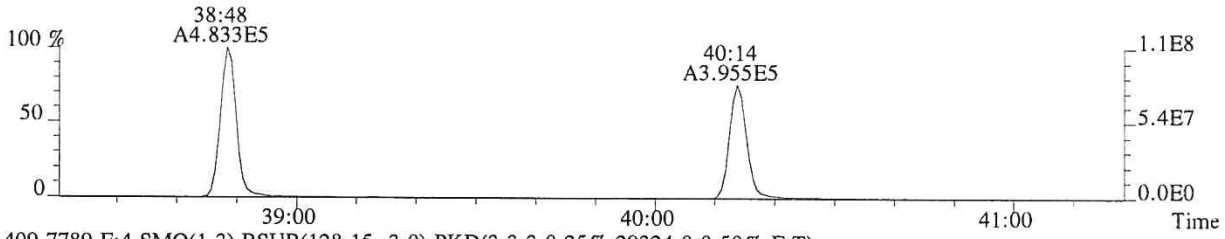


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

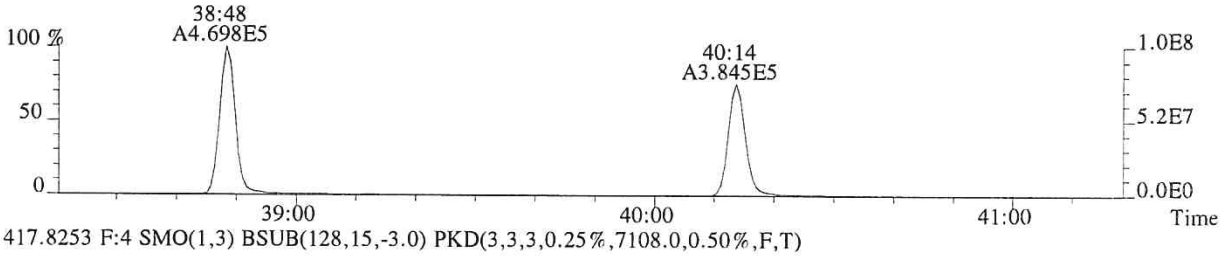


019075

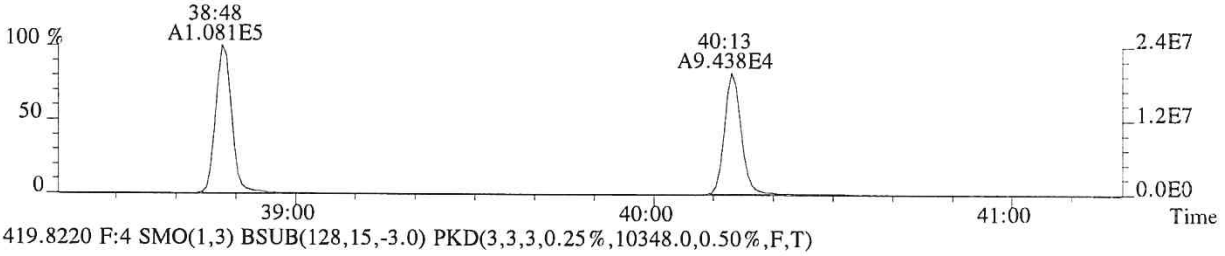
File:P513854 #1-268 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,17516.0,0.50%,F,T)



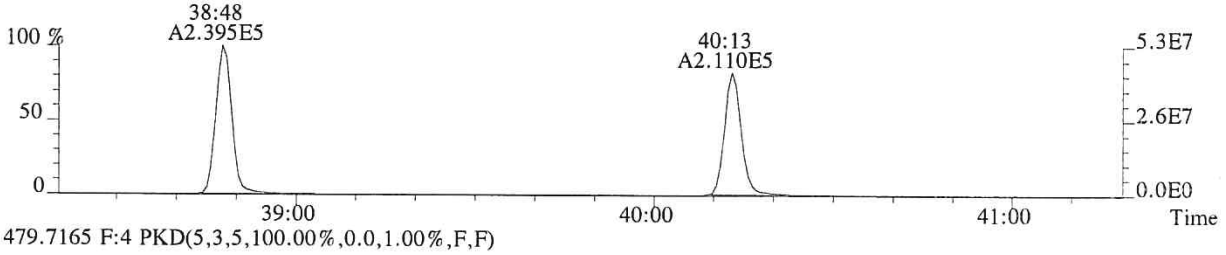
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,29324.0,0.50%,F,T)



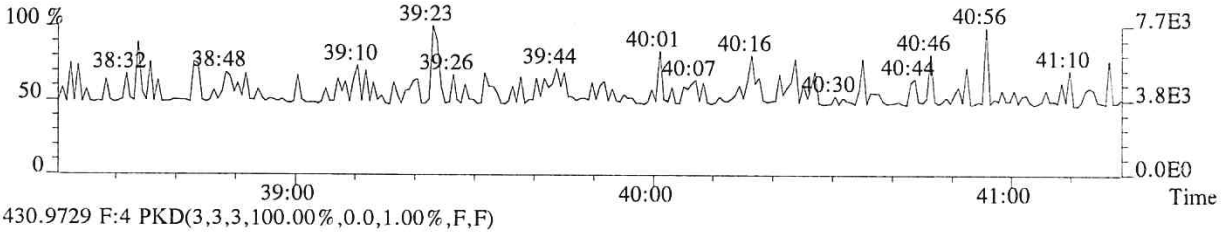
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,7108.0,0.50%,F,T)



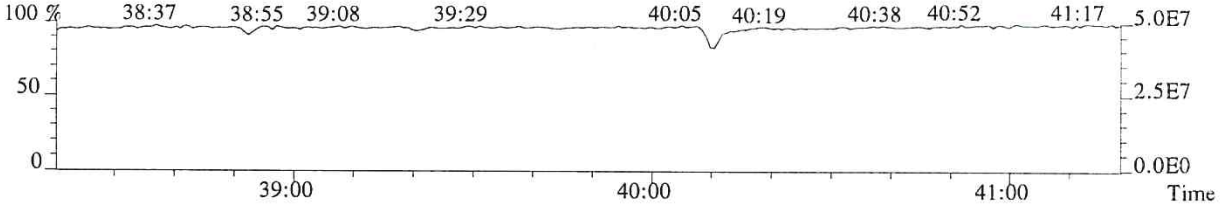
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,10348.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

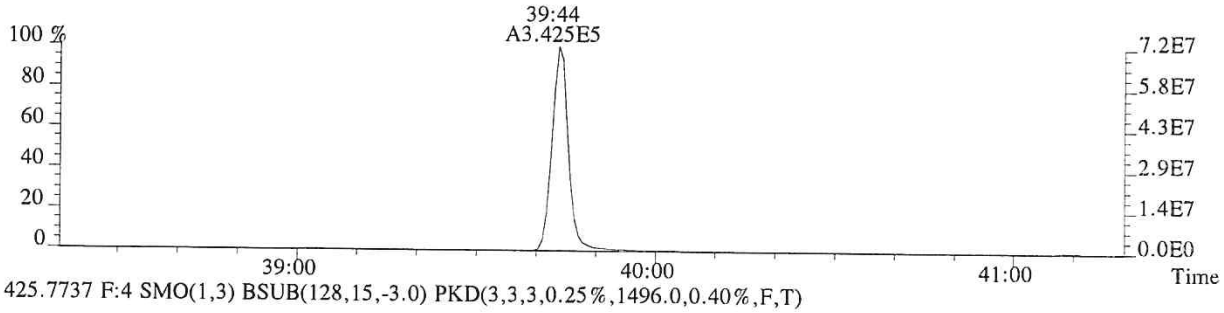


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

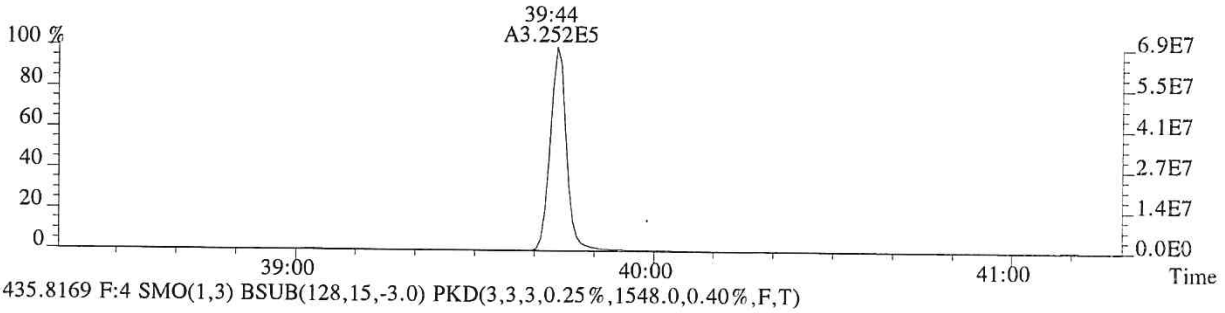


019076

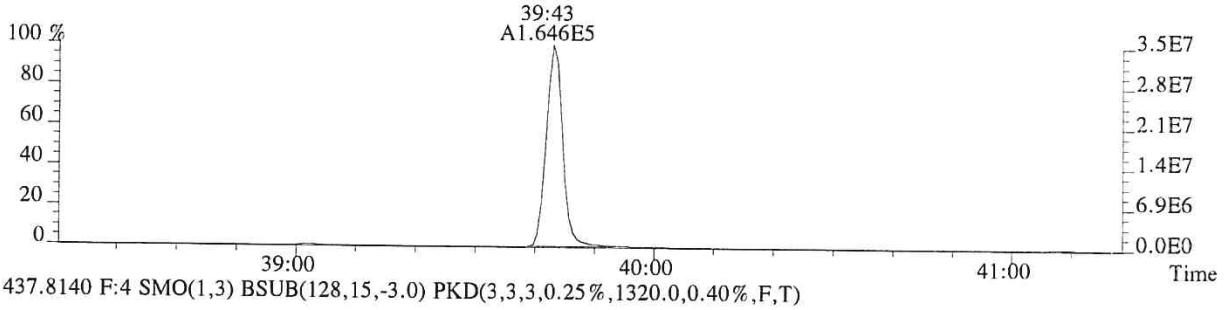
File:P513854 #1-268 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1516.0,0.40%,F,T)



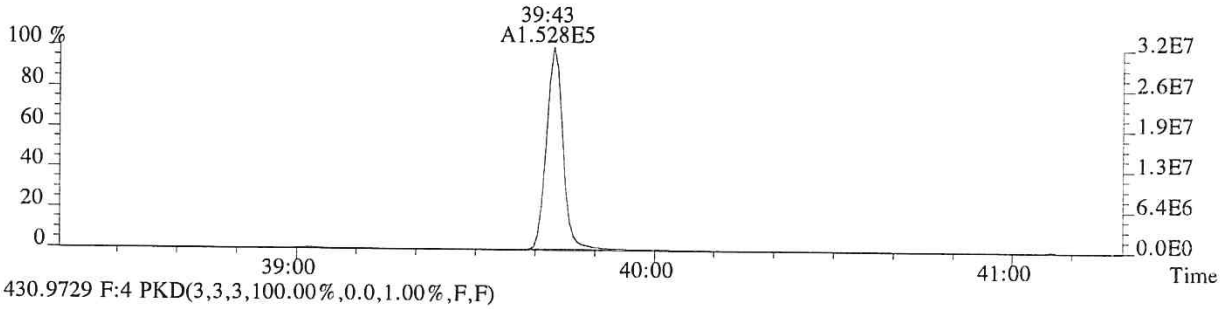
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1496.0,0.40%,F,T)



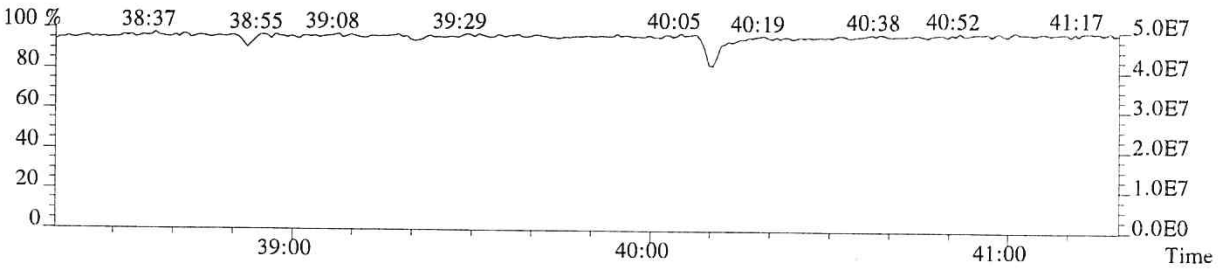
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1548.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1320.0,0.40%,F,T)

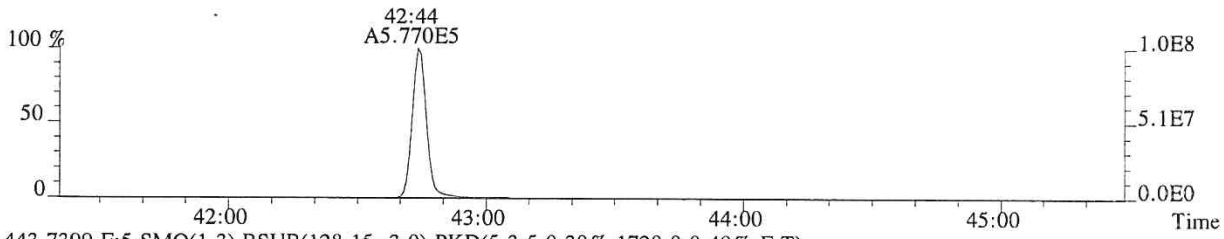


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

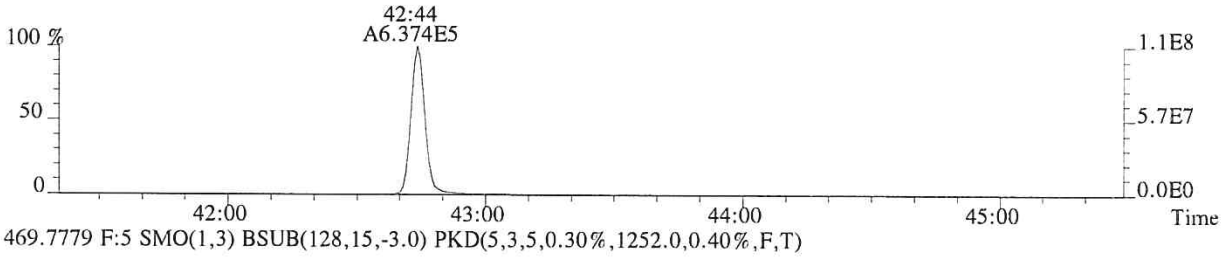


019077

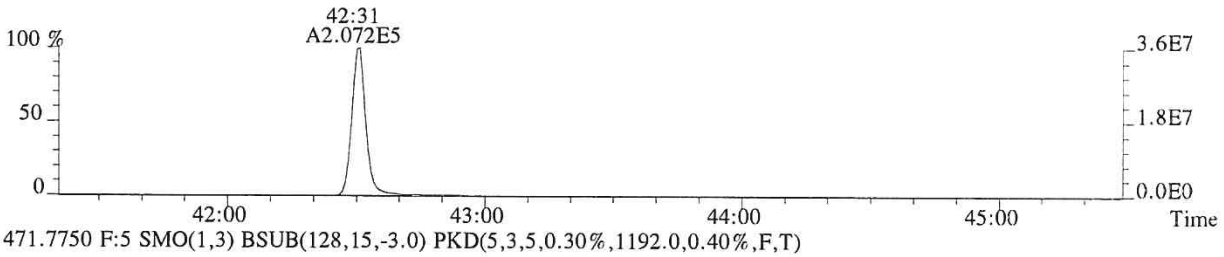
File:P513854 #1-373 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,504.0,0.40%,F,T)



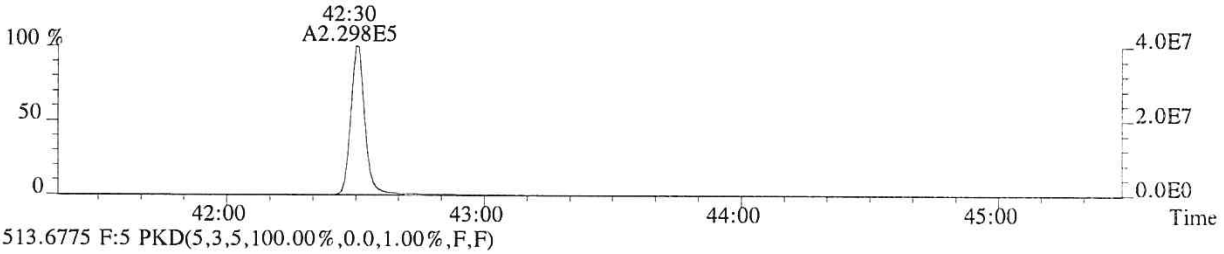
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1720.0,0.40%,F,T)



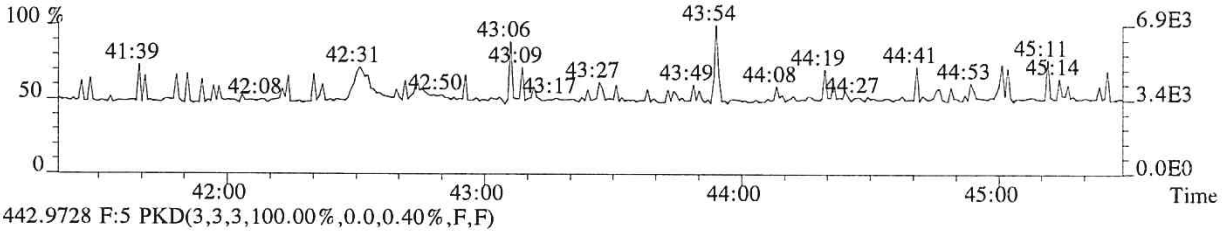
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1252.0,0.40%,F,T)



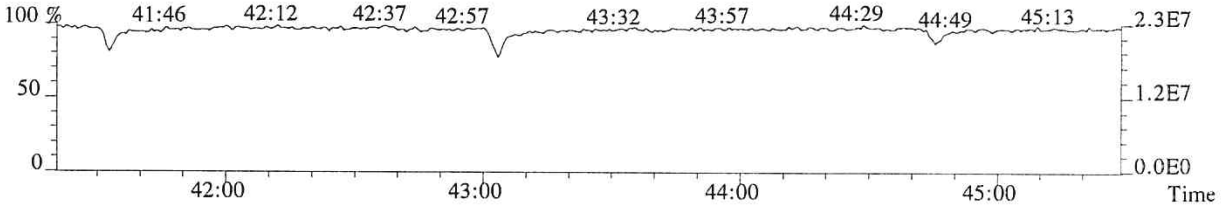
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1192.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

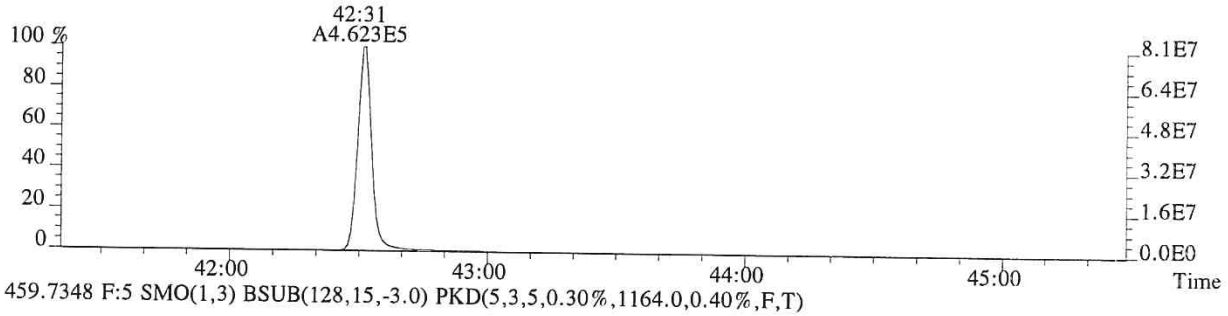


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

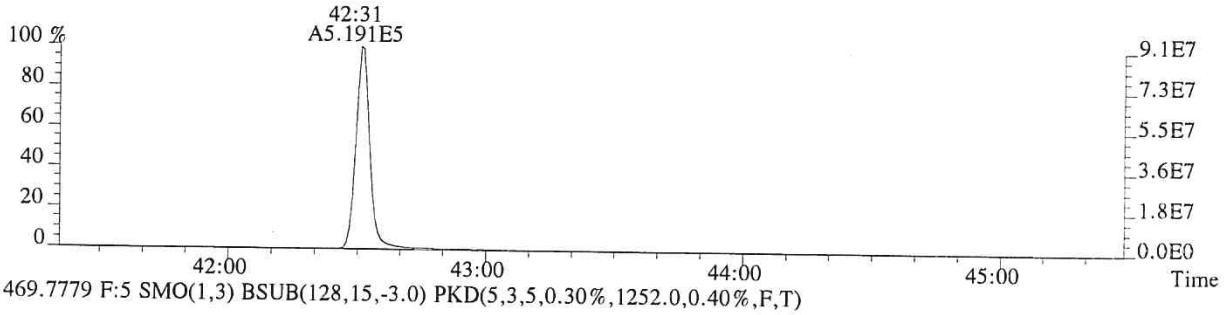


019078

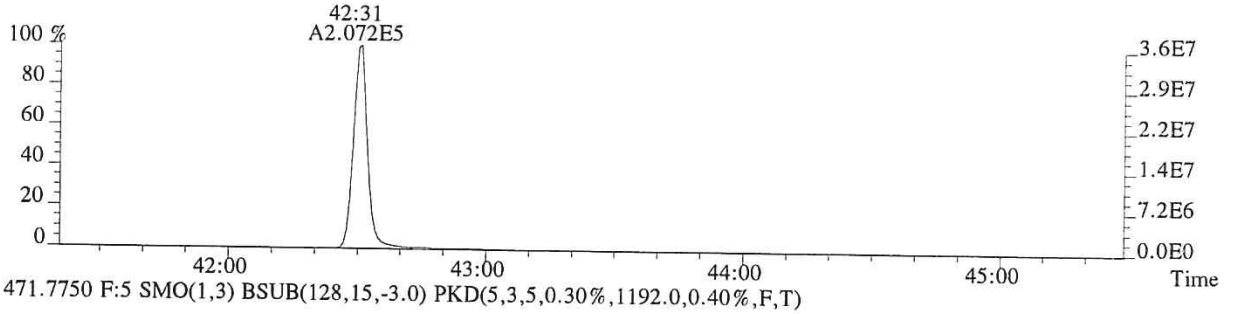
File:P513854 #1-373 Acq:24-JAN-2018 16:55:09 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:76558
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,736.0,0.40%,F,T)



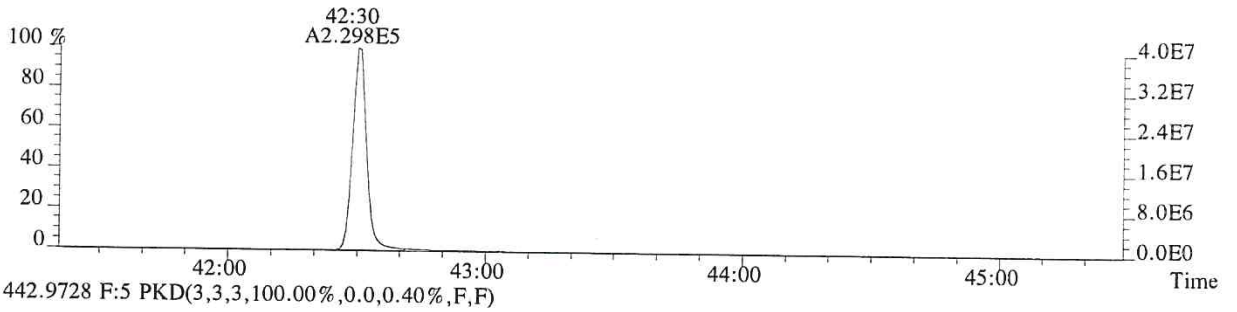
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1164.0,0.40%,F,T)



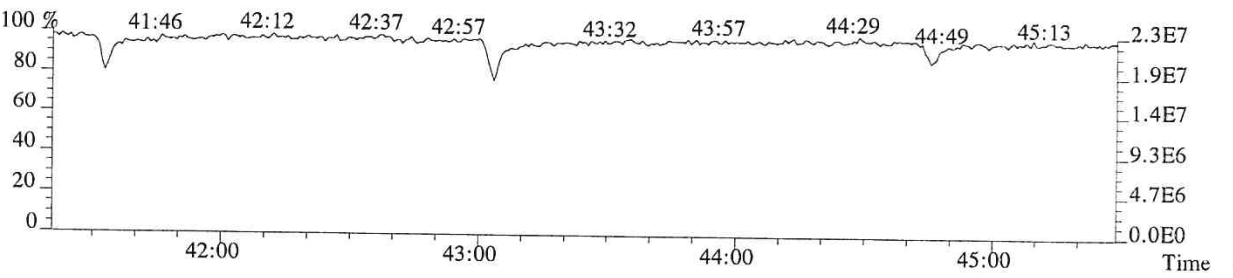
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1252.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1192.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
185657

Run #6 Filename P513855 Samp: 1 Inj: 1 Acquired: 24-JAN-18 17:43:48
Processed: 25-JAN-18 08:12:42 Sample ID: CS5

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	2.519e+05	3.290e+05	0.77	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	2.059e+06	1.330e+06	1.55	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:42	1.928e+06	1.251e+06	1.54	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:17	1.692e+06	1.377e+06	1.23	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	1.772e+06	1.434e+06	1.24	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:53	1.608e+06	1.317e+06	1.22	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	1.433e+06	1.167e+06	1.23	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	1.339e+06	1.290e+06	1.04	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	1.080e+06	1.042e+06	1.04	yes	no	1.258
10	Unk	OCDF	42:45	1.595e+06	1.756e+06	0.91	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	1.888e+05	2.423e+05	0.78	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:58	1.263e+06	8.057e+05	1.57	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	37:00	1.121e+06	8.925e+05	1.26	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	1.092e+06	8.671e+05	1.26	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	1.145e+06	9.139e+05	1.25	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:45	9.236e+05	8.810e+05	1.05	yes	no	1.025
17	Unk	OCDD	42:32	1.236e+06	1.384e+06	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:47	1.298e+05	1.639e+05	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:48	1.958e+05	1.231e+05	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	1.948e+05	1.236e+05	1.58	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:16	8.374e+04	1.594e+05	0.53	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:23	9.521e+04	1.780e+05	0.53	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:52	8.554e+04	1.650e+05	0.52	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:37	7.556e+04	1.441e+05	0.52	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:49	5.927e+04	1.314e+05	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	5.166e+04	1.153e+05	0.45	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:31	8.633e+04	1.080e+05	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	1.308e+05	8.218e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	1.058e+05	8.279e+04	1.28	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	1.031e+05	8.205e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	8.934e+04	8.409e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	1.103e+05	1.236e+05	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	8.893e+04	1.085e+05	0.82	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	1.136e+05	9.051e+04	1.25	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	4.366e+05				no	1.014

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Signal/Noise Height Ratio Summary

CLIENT ID.
185657

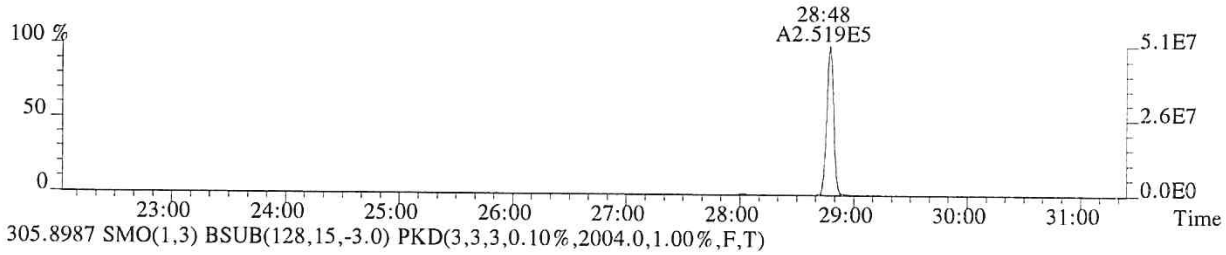
Run #6 Filename P513855 Samp: 1 Inj: 1 Acquired: 24-JAN-18 17:43:48
Processed: 25-JAN-18 08:12:42 LAB. ID: CS5

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	5.13e+07	1.02e+03	5.0e+04	6.69e+07	2.00e+03	3.3e+04
2	1,2,3,7,8-PeCDF	4.18e+08	1.72e+03	2.4e+05	2.69e+08	4.25e+03	6.3e+04
3	2,3,4,7,8-PeCDF	4.06e+08	1.72e+03	2.4e+05	2.60e+08	4.25e+03	6.1e+04
4	1,2,3,4,7,8-HxCDF	3.87e+08	3.18e+03	1.2e+05	3.12e+08	2.28e+03	1.4e+05
5	1,2,3,6,7,8-HxCDF	3.87e+08	3.18e+03	1.2e+05	3.14e+08	2.28e+03	1.4e+05
6	2,3,4,6,7,8-HxCDF	3.59e+08	3.18e+03	1.1e+05	2.88e+08	2.28e+03	1.3e+05
7	1,2,3,7,8,9-HxCDF	3.14e+08	3.18e+03	9.9e+04	2.53e+08	2.28e+03	1.1e+05
8	1,2,3,4,6,7,8-HpCDF	2.94e+08	4.87e+04	6.0e+03	2.86e+08	4.51e+04	6.3e+03
9	1,2,3,4,7,8,9-HpCDF	2.17e+08	4.87e+04	4.5e+03	2.12e+08	4.51e+04	4.7e+03
10	OCDF	2.95e+08	6.68e+02	4.4e+05	3.20e+08	1.53e+03	2.1e+05
11	2,3,7,8-TCDD	4.01e+07	1.56e+03	2.6e+04	5.16e+07	1.78e+03	2.9e+04
12	1,2,3,7,8-PeCDD	2.63e+08	1.48e+03	1.8e+05	1.68e+08	6.04e+02	2.8e+05
13	1,2,3,4,7,8-HxCDD	2.57e+08	1.76e+03	1.5e+05	2.02e+08	1.10e+03	1.8e+05
14	1,2,3,6,7,8-HxCDD	2.40e+08	1.76e+03	1.4e+05	1.94e+08	1.10e+03	1.8e+05
15	1,2,3,7,8,9-HxCDD	2.55e+08	1.76e+03	1.5e+05	2.05e+08	1.10e+03	1.9e+05
16	1,2,3,4,6,7,8-HpCDD	1.92e+08	4.16e+03	4.6e+04	1.82e+08	2.40e+03	7.6e+04
17	OCDD	2.24e+08	1.92e+02	1.2e+06	2.52e+08	1.77e+03	1.4e+05
18	13C-2,3,7,8-TCDF	2.56e+07	8.72e+03	2.9e+03	3.23e+07	4.65e+03	7.0e+03
19	13C-1,2,3,7,8-PeCDF	3.90e+07	1.47e+03	2.7e+04	2.42e+07	1.14e+03	2.1e+04
20	13C-2,3,4,7,8-PeCDF	3.95e+07	1.47e+03	2.7e+04	2.53e+07	1.14e+03	2.2e+04
21	13C-1,2,3,4,7,8-HxCDF	1.87e+07	1.28e+03	1.5e+04	3.55e+07	3.08e+03	1.2e+04
22	13C-1,2,3,6,7,8-HxCDF	2.06e+07	1.28e+03	1.6e+04	3.85e+07	3.08e+03	1.3e+04
23	13C-2,3,4,6,7,8-HxCDF	1.90e+07	1.28e+03	1.5e+04	3.60e+07	3.08e+03	1.2e+04
24	13C-1,2,3,7,8,9-HxCDF	1.65e+07	1.28e+03	1.3e+04	3.12e+07	3.08e+03	1.0e+04
25	13C-1,2,3,4,6,7,8-HpCDF	1.32e+07	1.18e+04	1.1e+03	2.87e+07	5.77e+03	5.0e+03
26	13C-1,2,3,4,7,8,9-HpCDF	1.03e+07	1.18e+04	8.7e+02	2.29e+07	5.77e+03	4.0e+03
27	13C-2,3,7,8-TCDD	1.81e+07	7.00e+03	2.6e+03	2.26e+07	3.08e+03	7.3e+03
28	13C-1,2,3,7,8-PeCDD	2.76e+07	1.47e+03	1.9e+04	1.74e+07	7.76e+02	2.2e+04
29	13C-1,2,3,4,7,8-HxCDD	2.40e+07	2.43e+03	9.9e+03	1.87e+07	1.70e+03	1.1e+04
30	13C-1,2,3,6,7,8-HxCDD	2.24e+07	2.43e+03	9.2e+03	1.82e+07	1.70e+03	1.1e+04
31	13C-1,2,3,4,6,7,8-HpCDD	1.84e+07	1.79e+03	1.0e+04	1.72e+07	1.40e+03	1.2e+04
32	13C-OCDD	1.97e+07	1.62e+03	1.2e+04	2.22e+07	1.42e+03	1.6e+04
33	13C-1,2,3,4-TCDD	1.83e+07	7.00e+03	2.6e+03	2.22e+07	3.08e+03	7.2e+03
34	13C-1,2,3,7,8,9-HxCDD	2.50e+07	2.43e+03	1.0e+04	1.99e+07	1.70e+03	1.2e+04
35	37Cl-2,3,7,8-TCDD	9.29e+07	1.57e+03	5.9e+04			

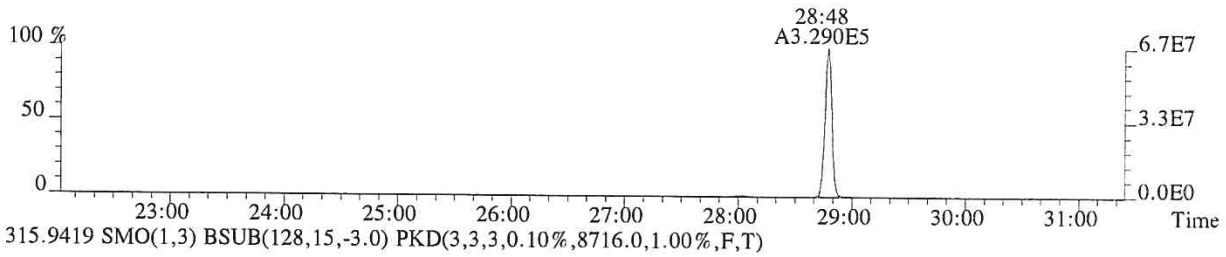
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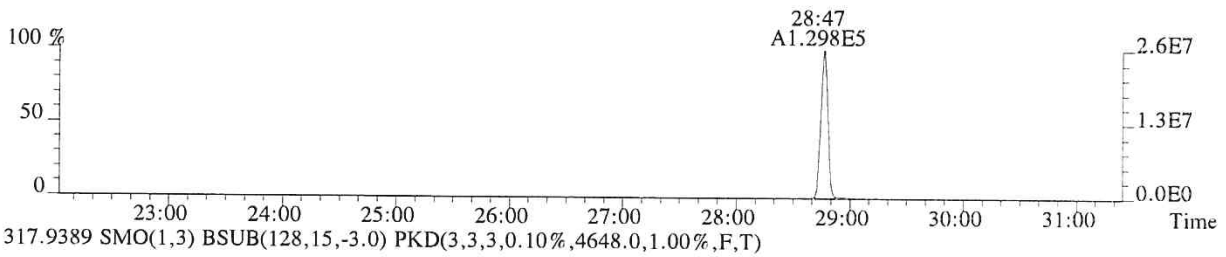
File:P513855 #1-665 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1024.0,1.00%,F,T)



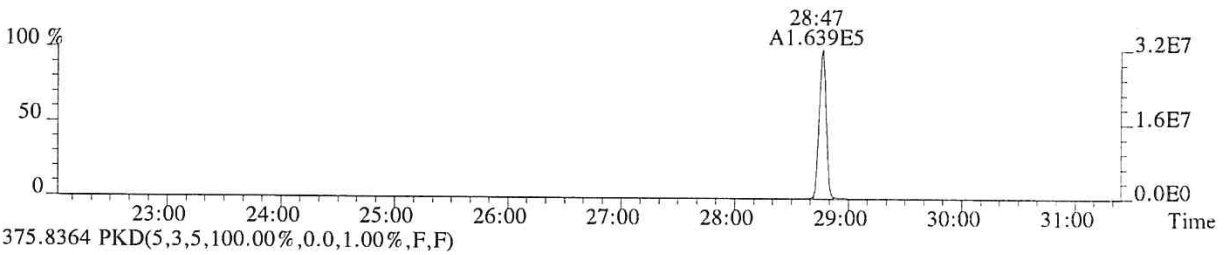
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2004.0,1.00%,F,T)



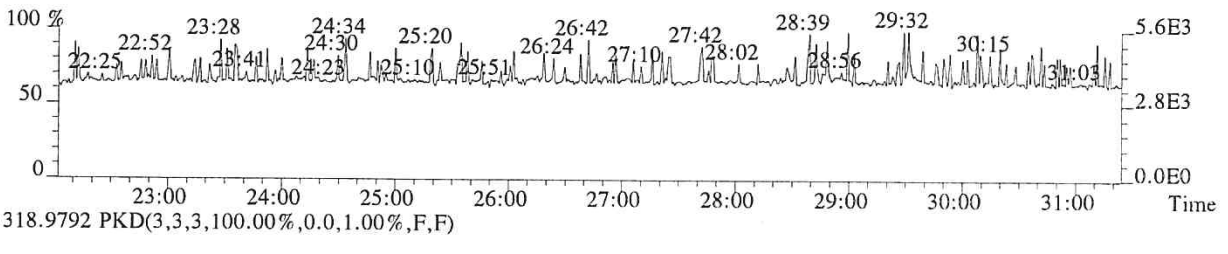
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,8716.0,1.00%,F,T)



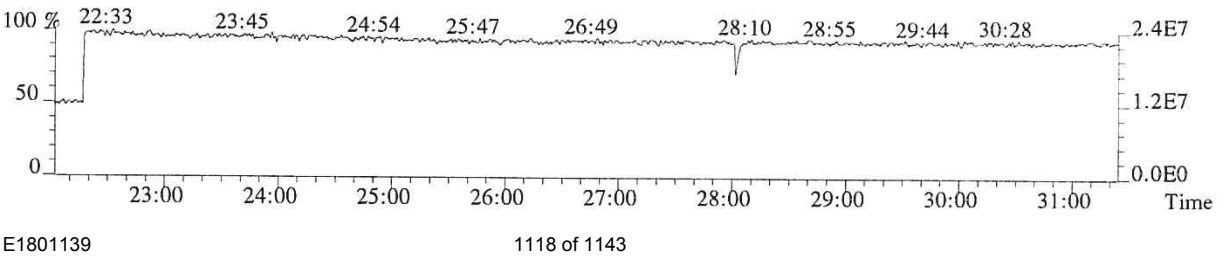
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4648.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

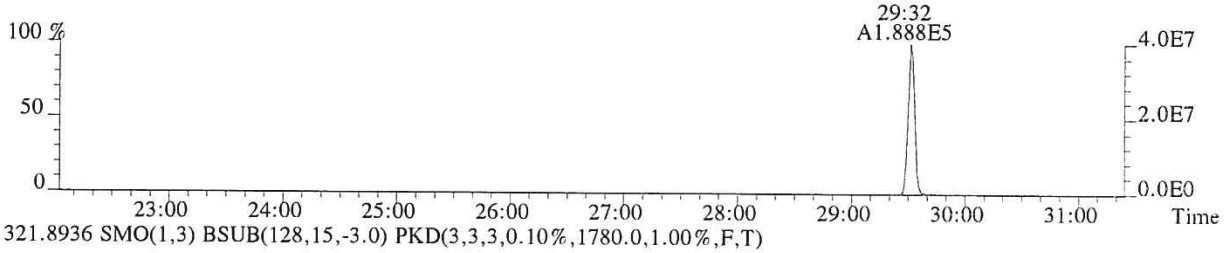


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

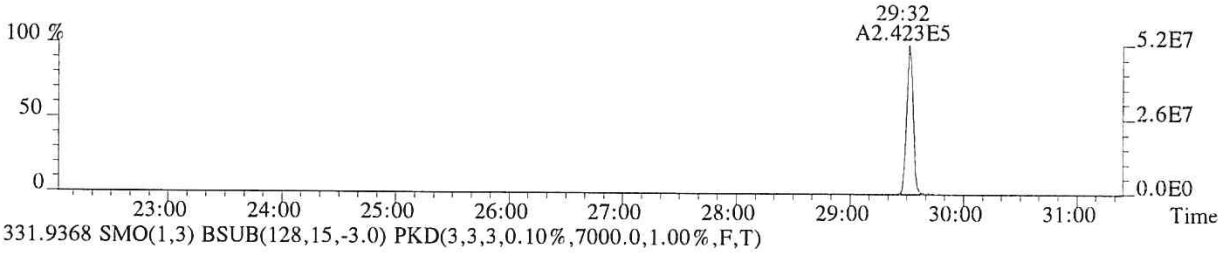


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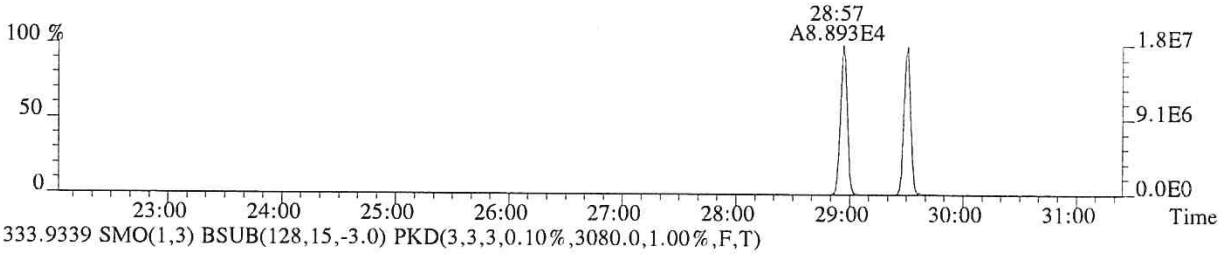
File:P513855 #1-665 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1556.0,1.00%,F,T)



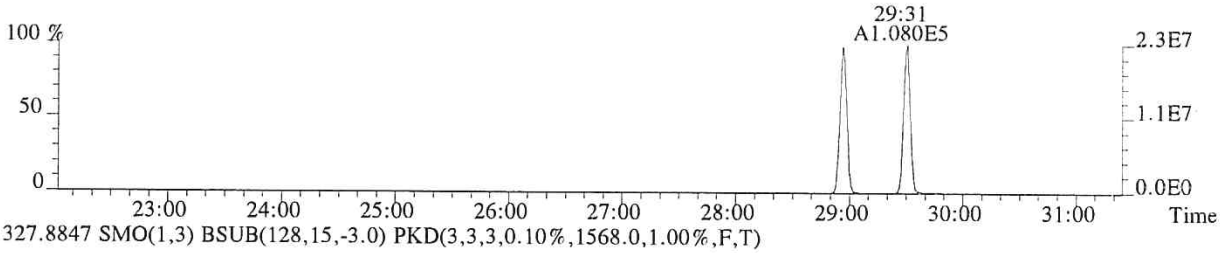
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1780.0,1.00%,F,T)



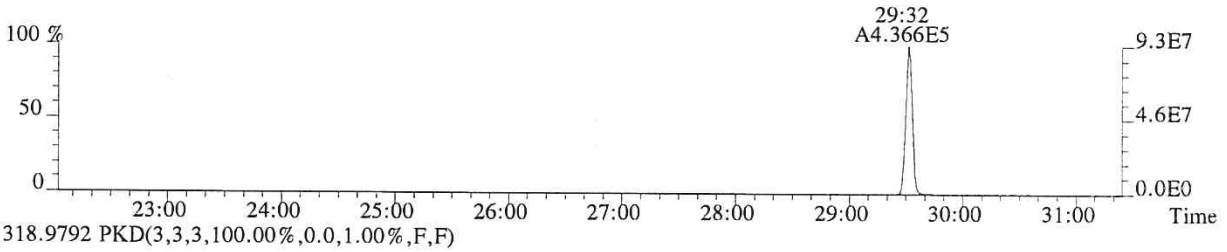
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,7000.0,1.00%,F,T)



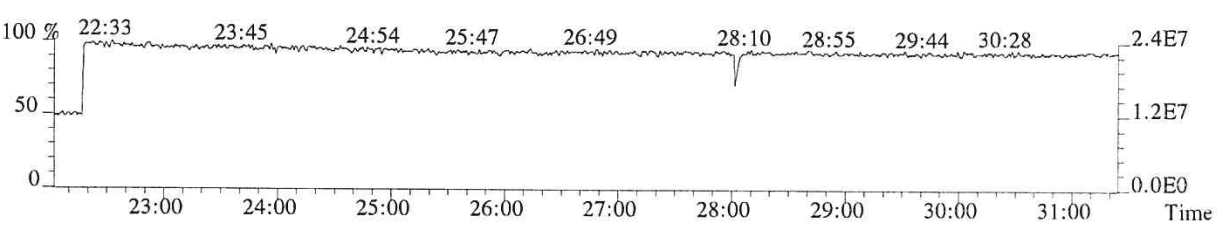
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3080.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1568.0,1.00%,F,T)

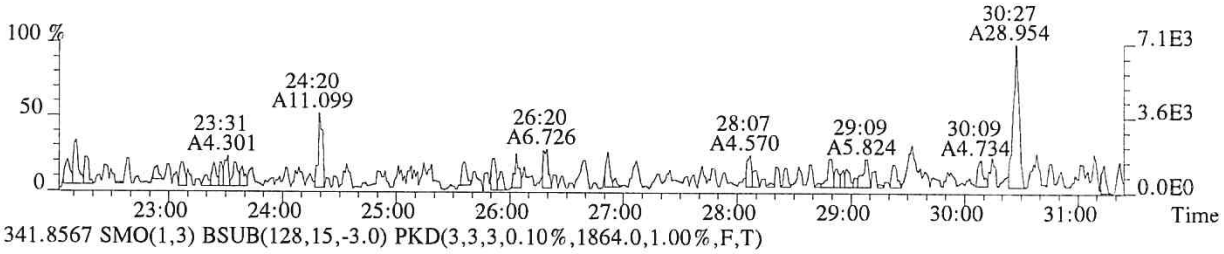


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

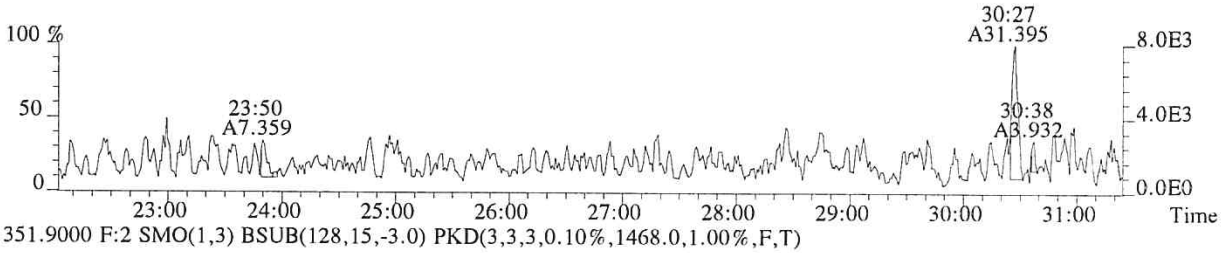


019083

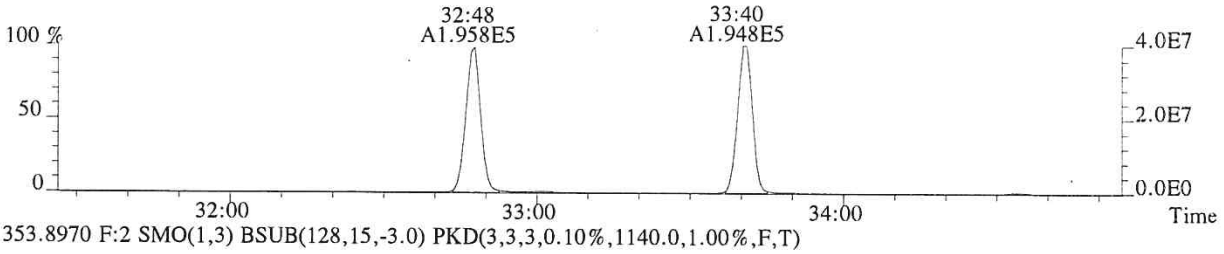
File:P513855 #1-665 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,696.0,1.00%,F,T)



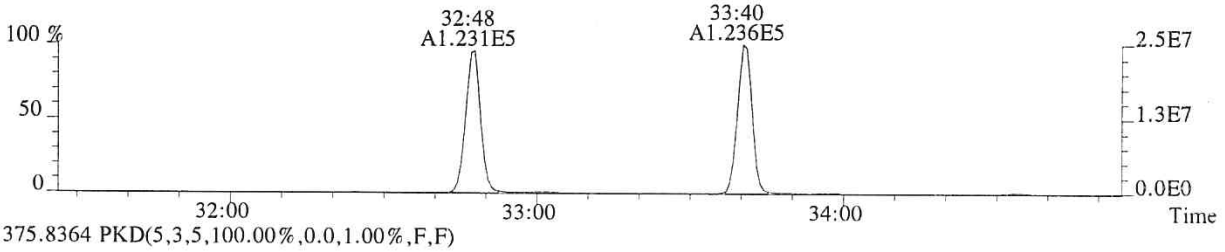
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1864.0,1.00%,F,T)



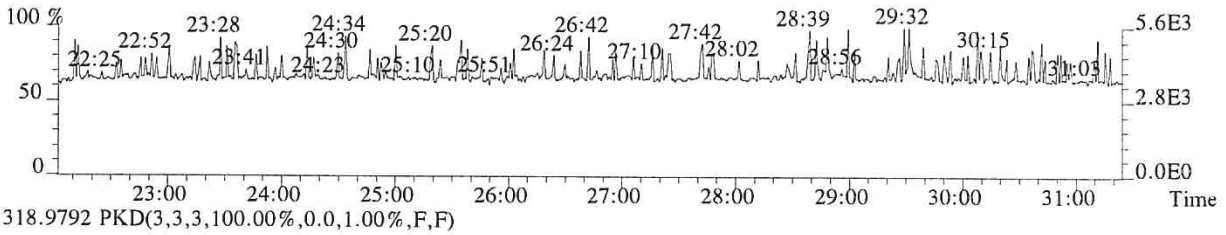
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1468.0,1.00%,F,T)



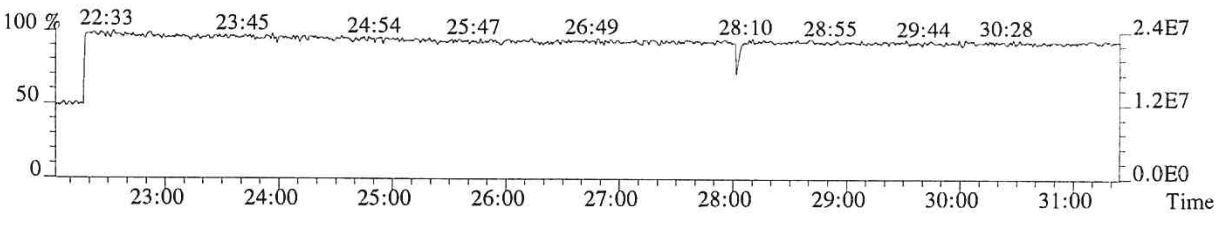
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1140.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

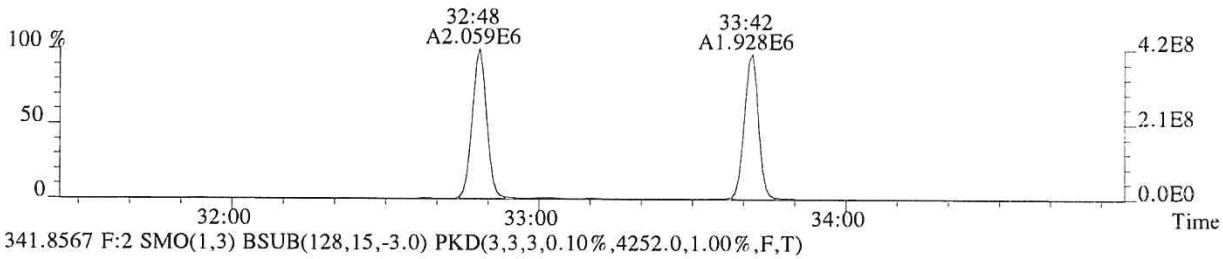


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

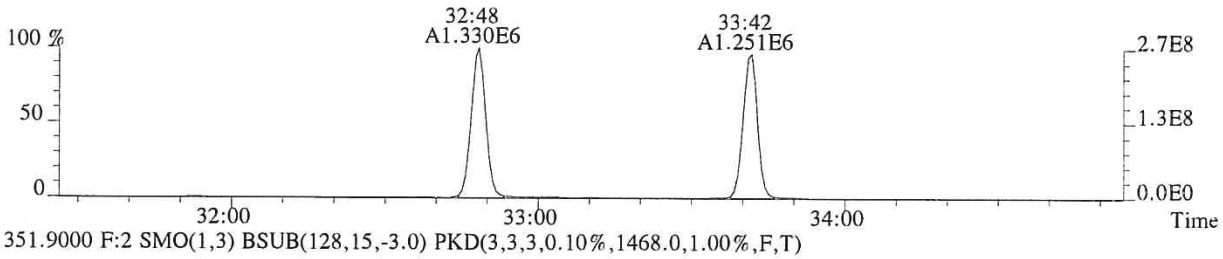


019084

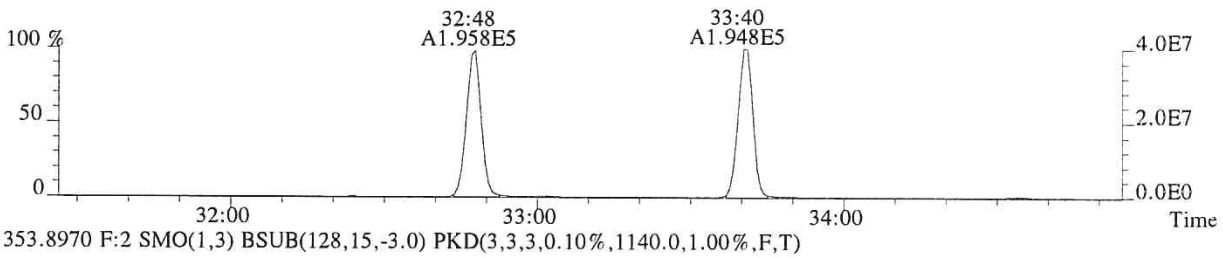
File:P513855 #1-313 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1724.0,1.00%,F,T)



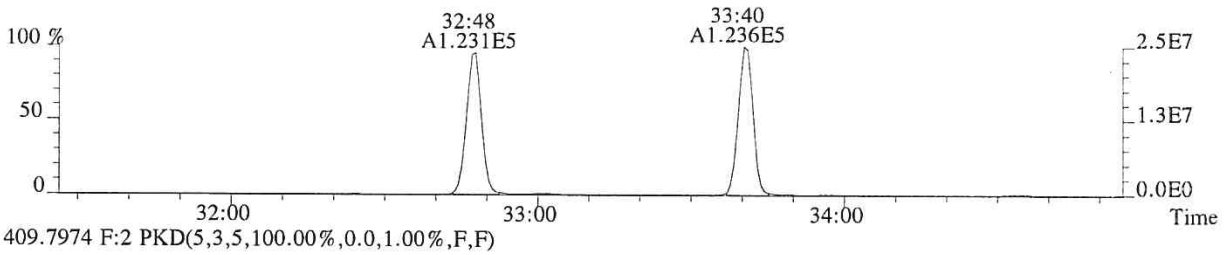
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,4252.0,1.00%,F,T)



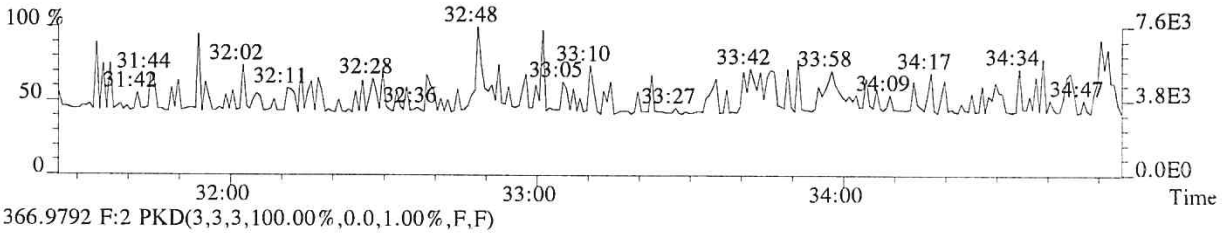
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1468.0,1.00%,F,T)



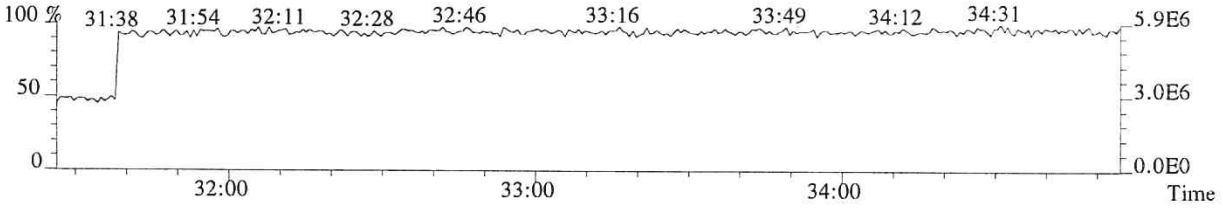
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1140.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

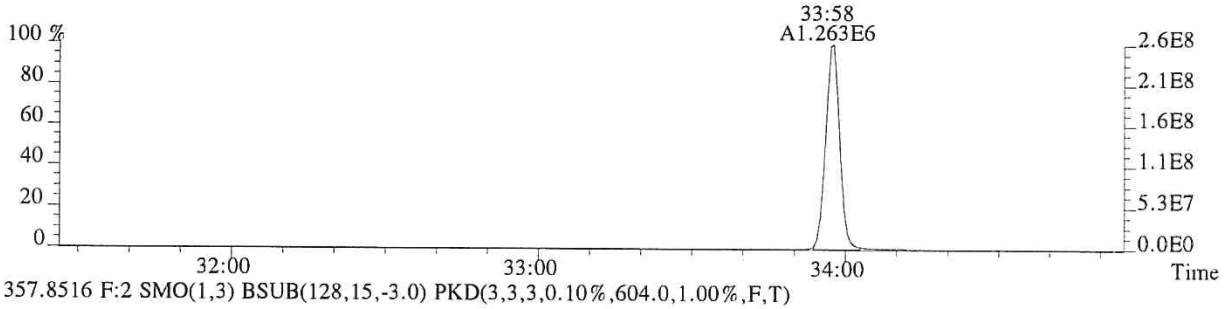


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

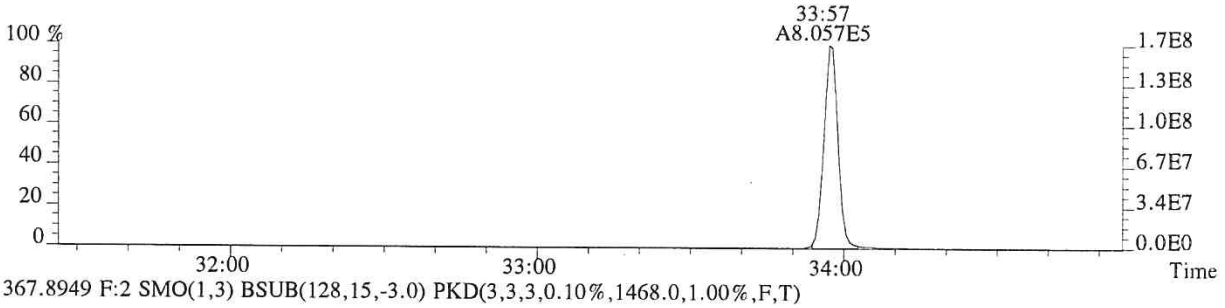


019085

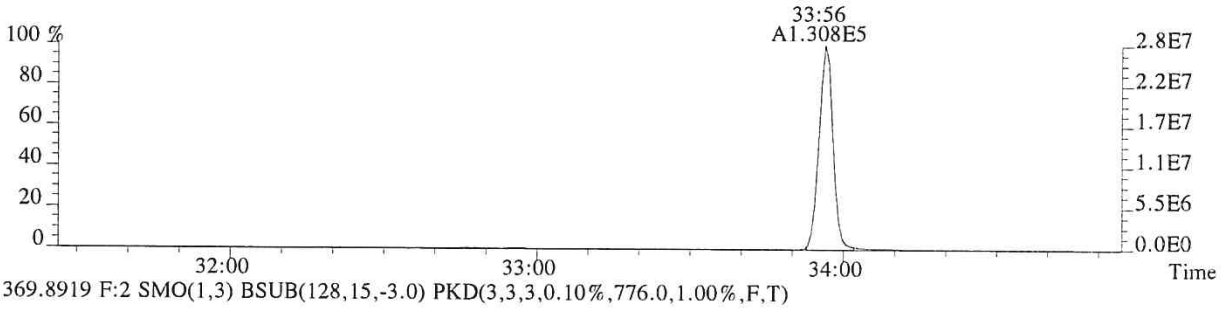
File:P513855 #1-313 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1476.0,1.00%,F,T)



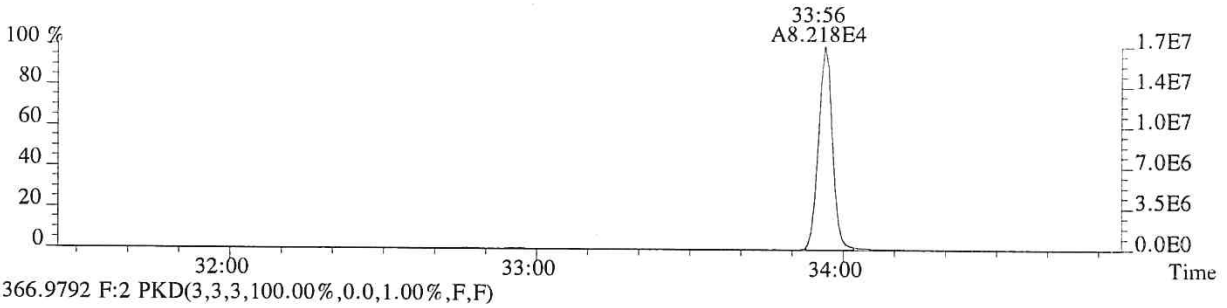
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,604.0,1.00%,F,T)



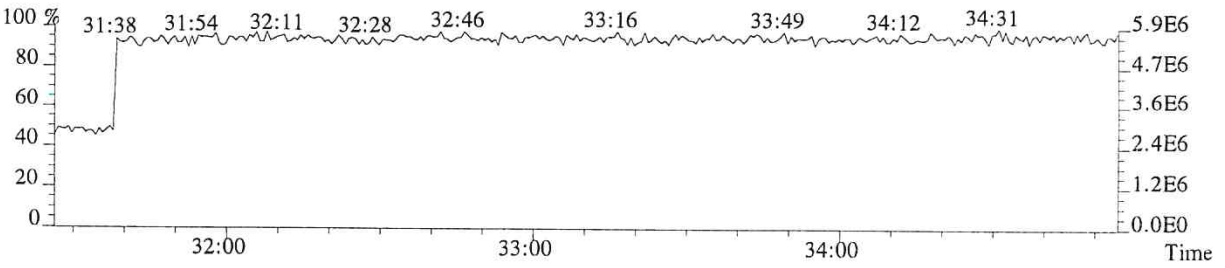
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1468.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,776.0,1.00%,F,T)

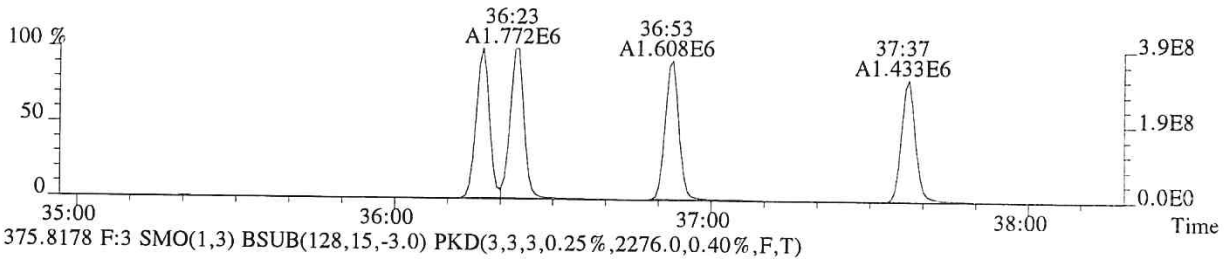


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

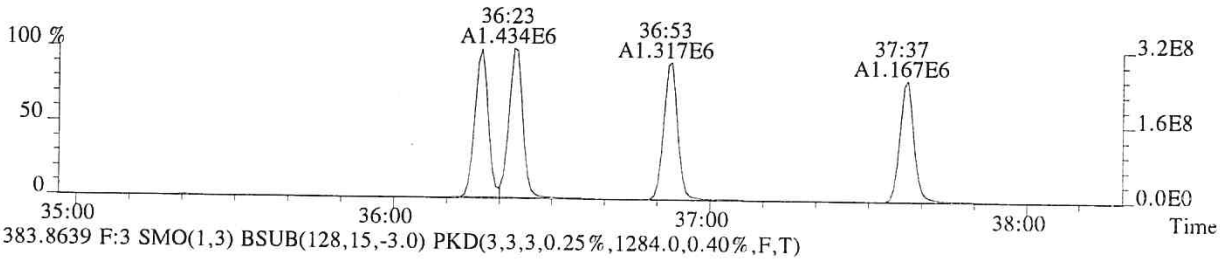


019086

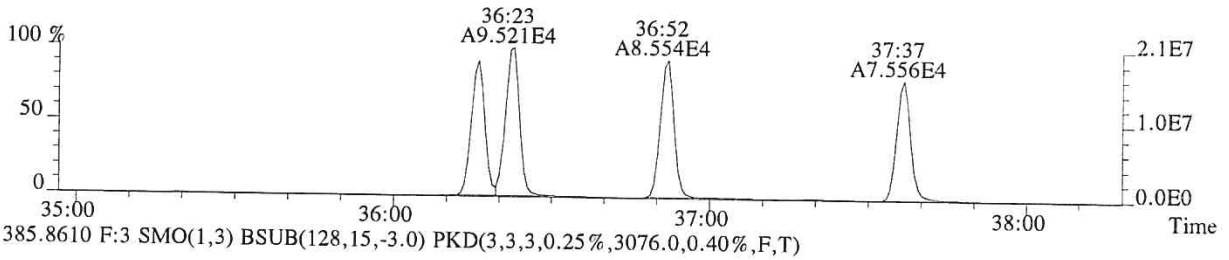
File:P513855 #1-303 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spectr
Sample#1 Exp:185657
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3180.0,0.40%,F,T)



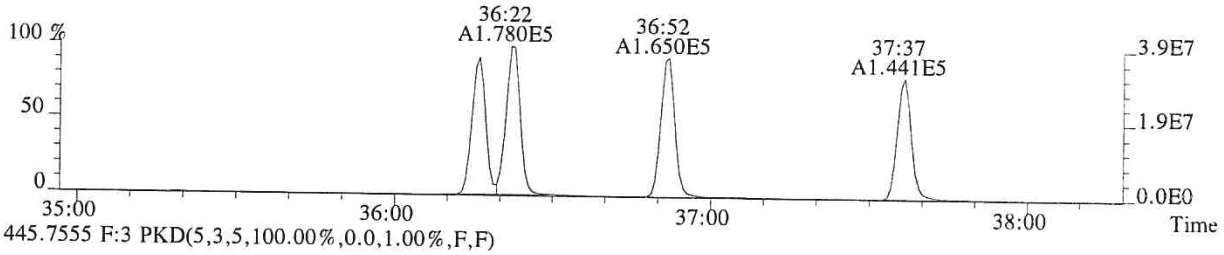
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2276.0,0.40%,F,T)



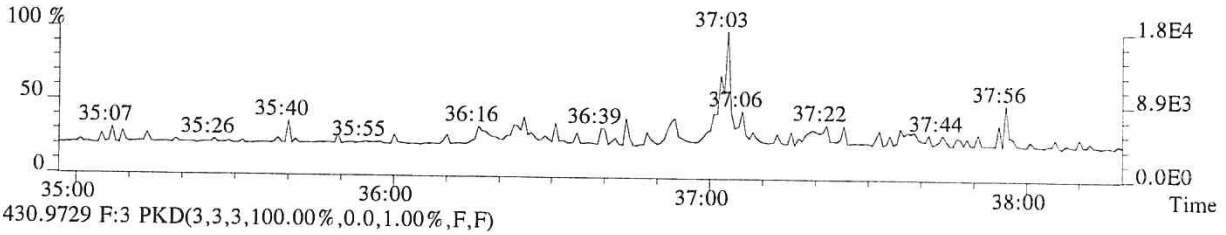
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1284.0,0.40%,F,T)



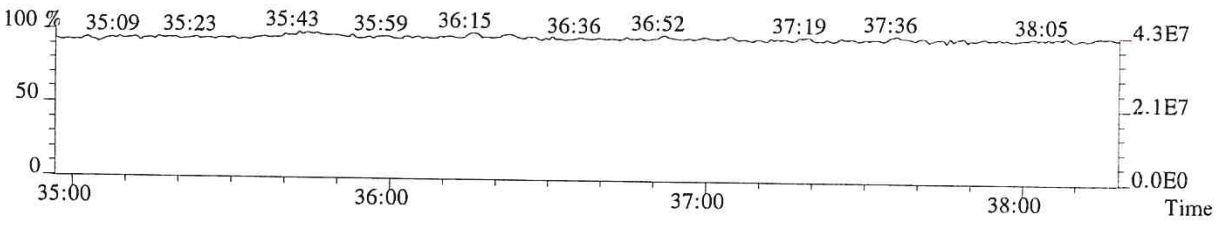
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,3076.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

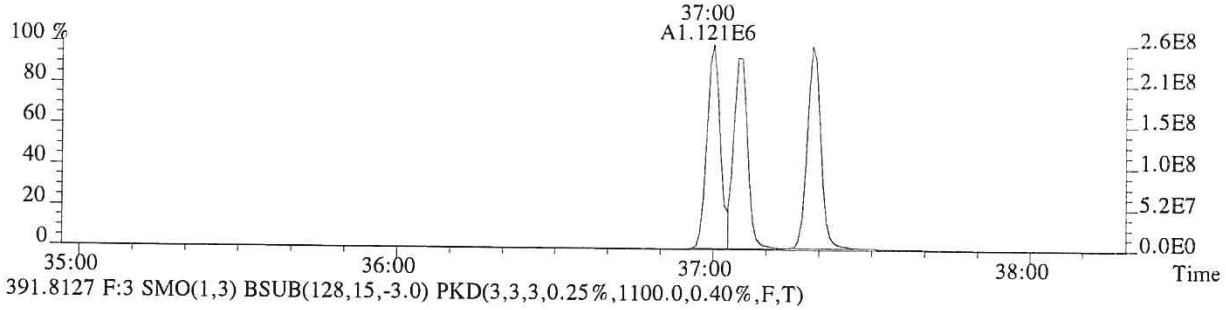


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

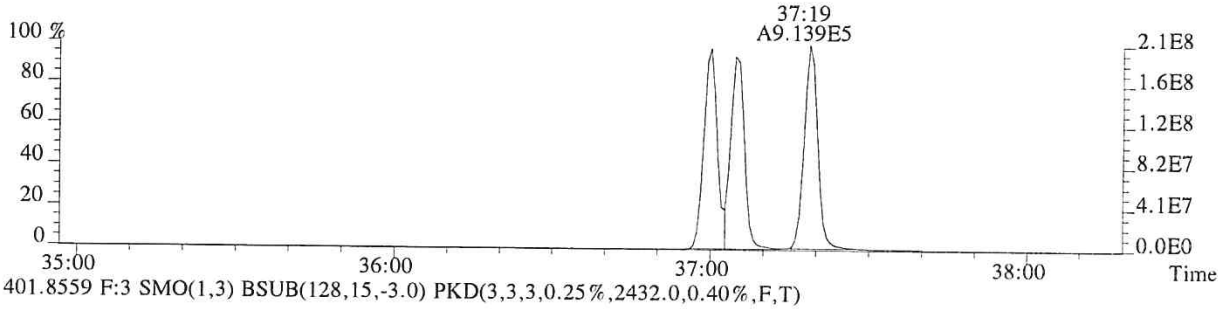


019087

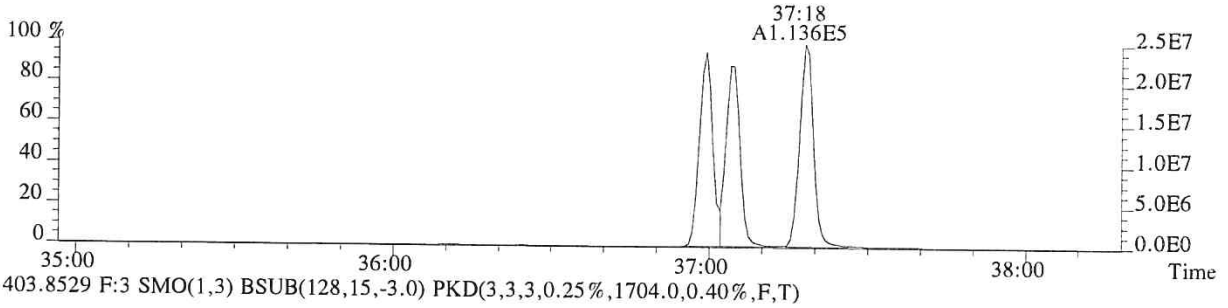
File:P513855 #1-303 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1760.0,0.40%,F,T)



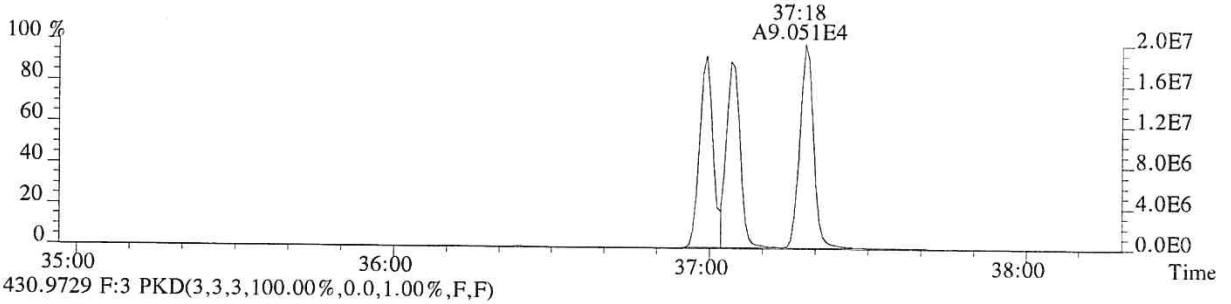
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1100.0,0.40%,F,T)



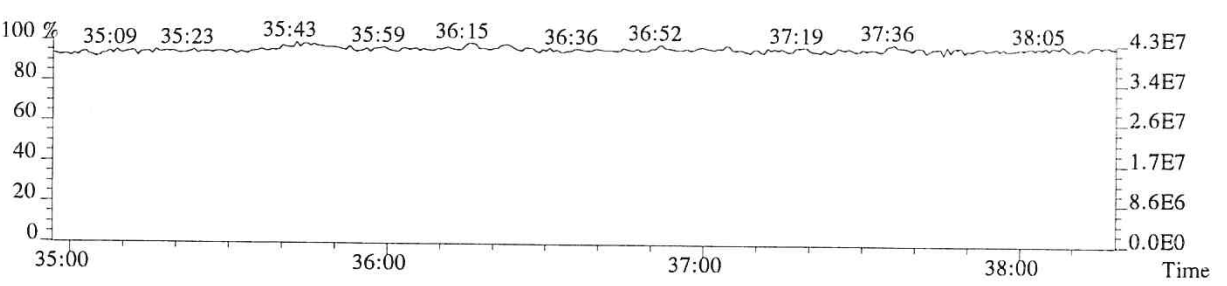
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2432.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1704.0,0.40%,F,T)

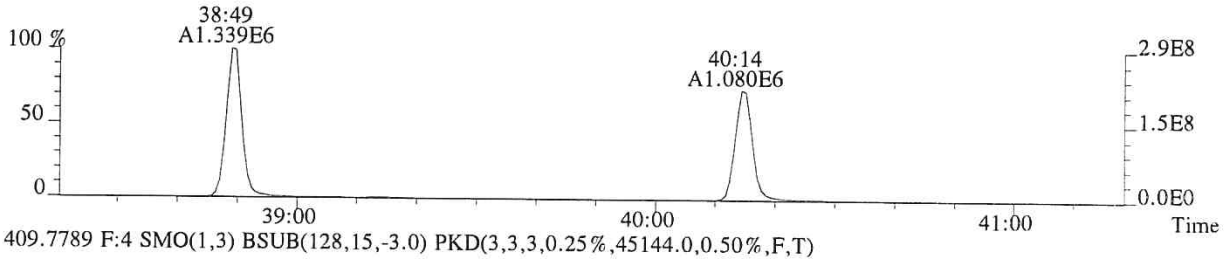


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

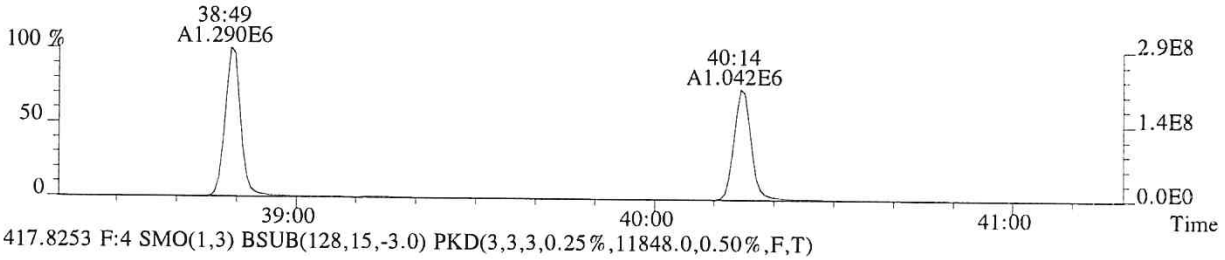


019088

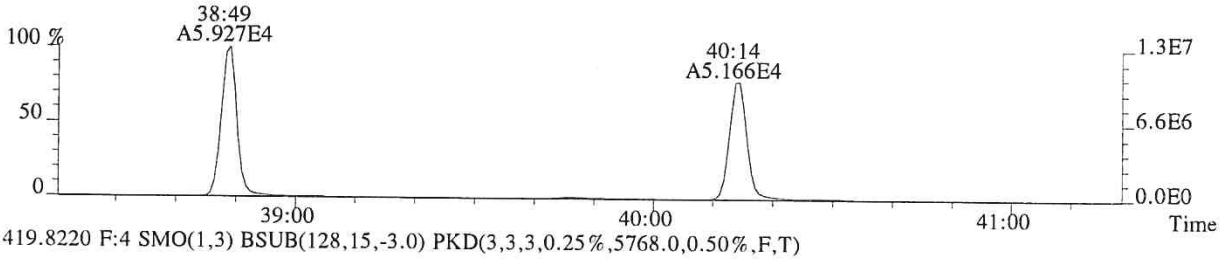
File:P513855 #1-268 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,48736.0,0.50%,F,T)



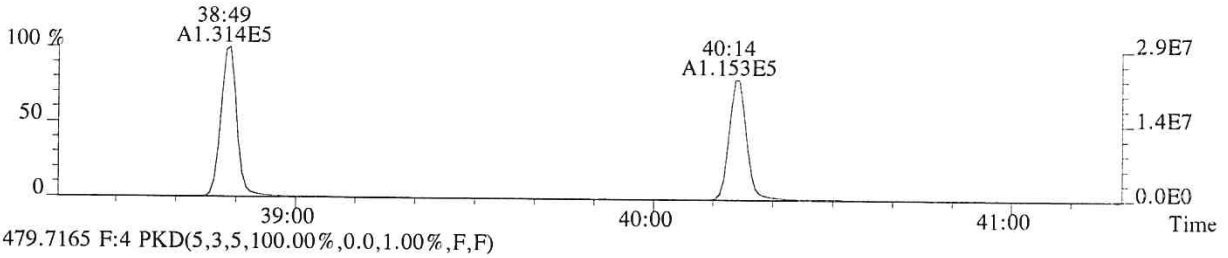
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,45144.0,0.50%,F,T)



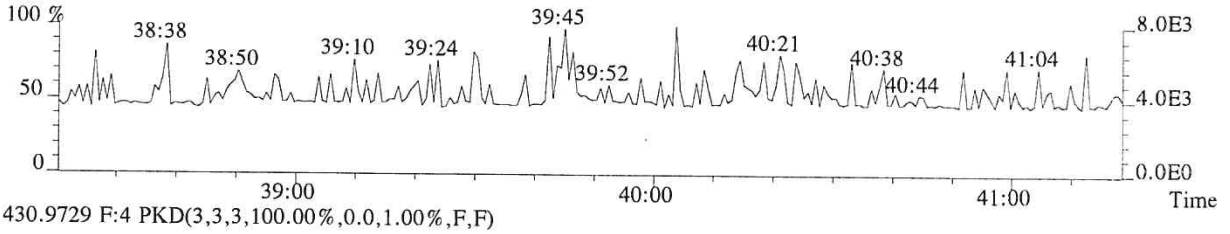
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,11848.0,0.50%,F,T)



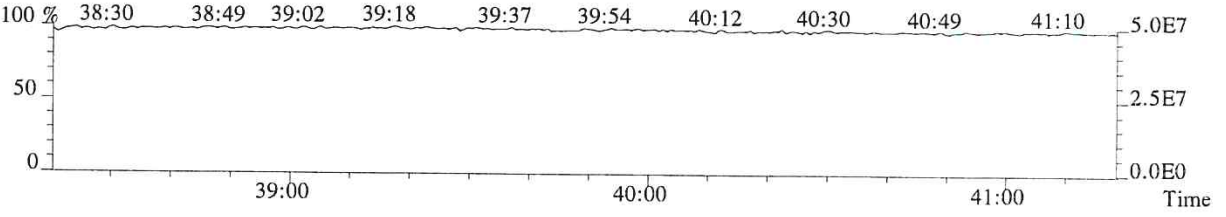
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5768.0,0.50%,F,T)



479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

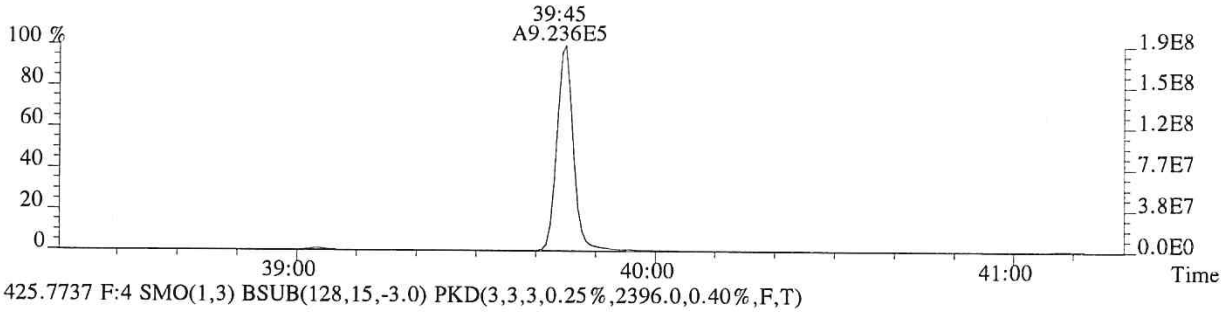


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

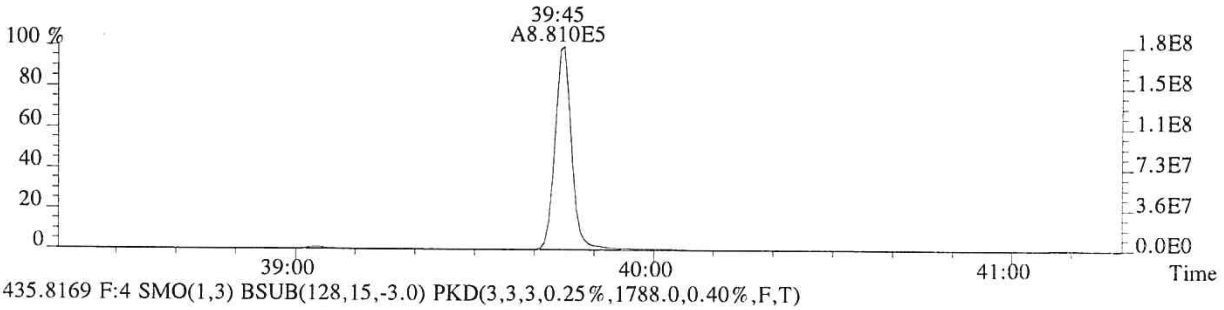


019089

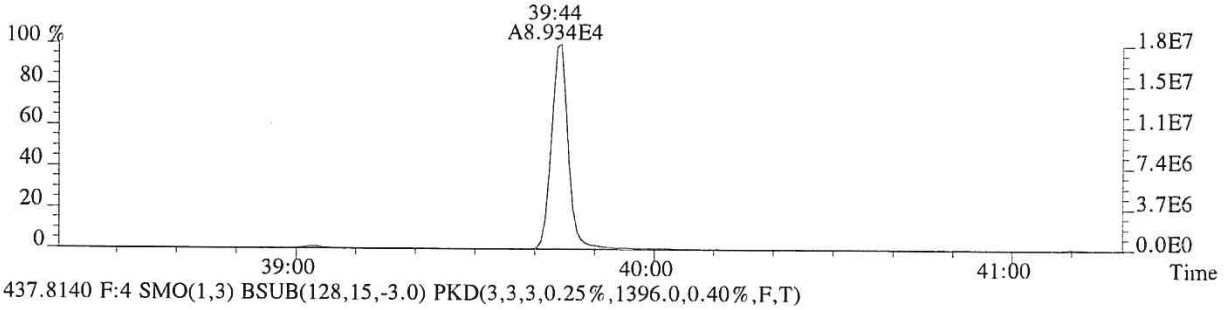
File:P513855 #1-268 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,4156.0,0.40%,F,T)



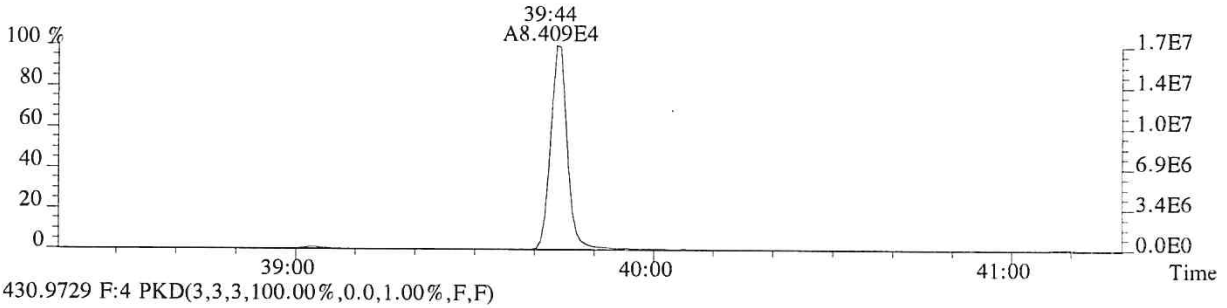
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2396.0,0.40%,F,T)



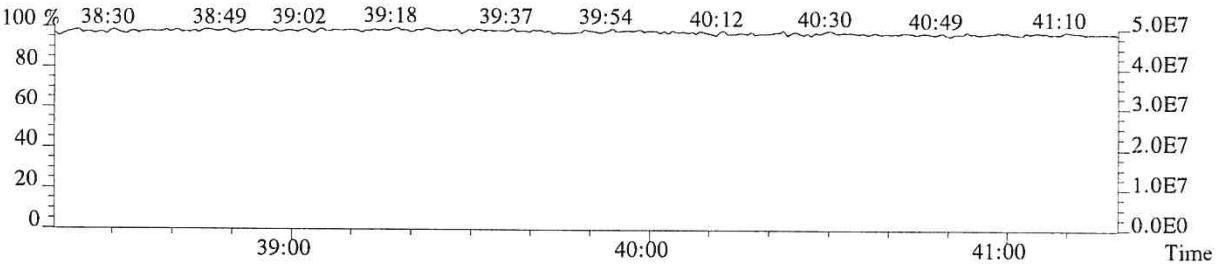
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1788.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1396.0,0.40%,F,T)

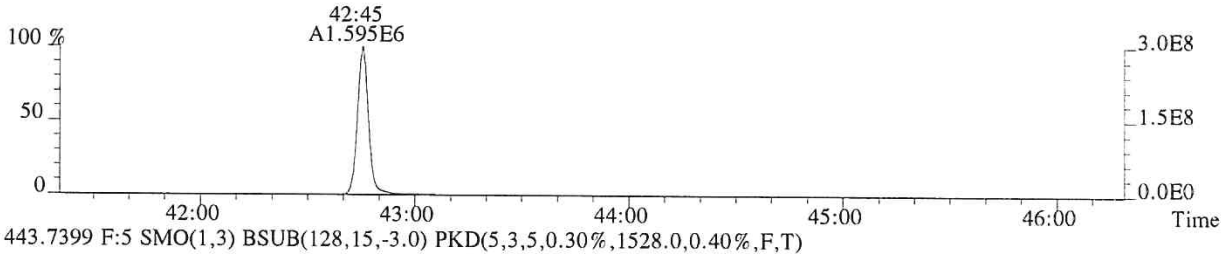


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

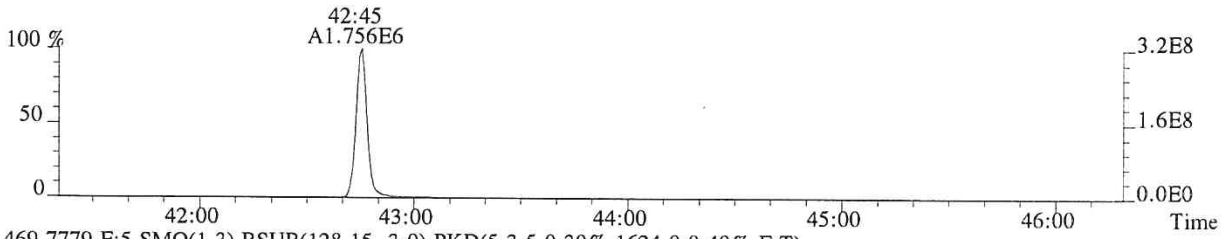


019090

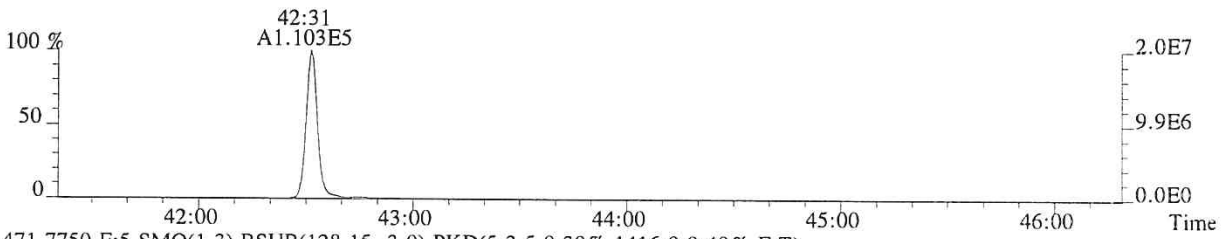
File:P513855 #1-448 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,668.0,0.40%,F,T)



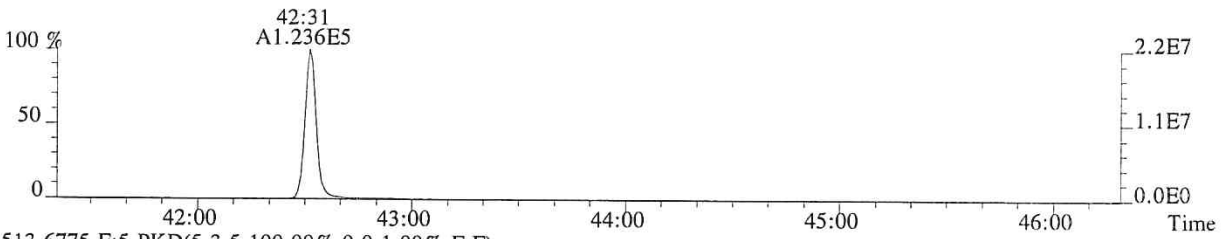
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1528.0,0.40%,F,T)



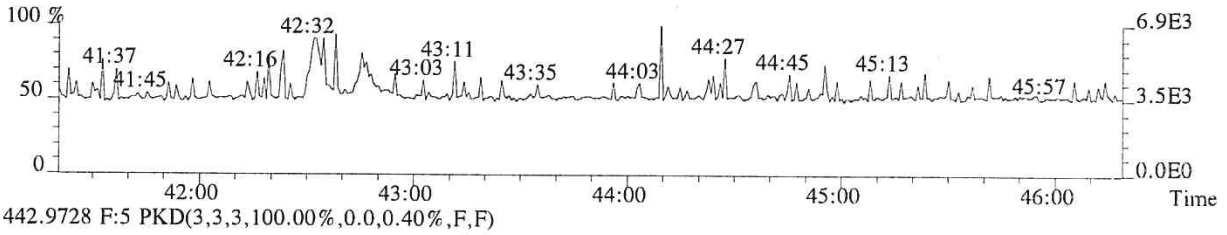
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1624.0,0.40%,F,T)



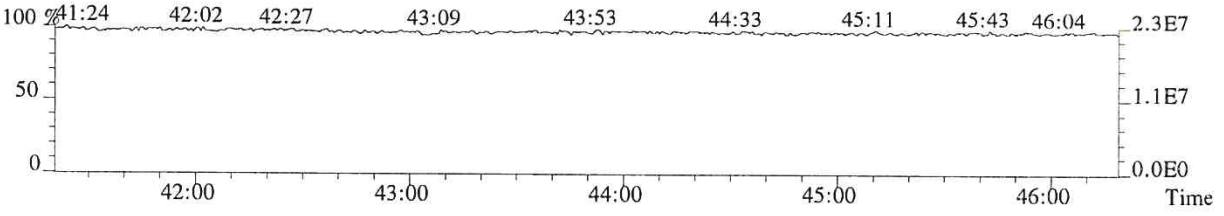
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1416.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

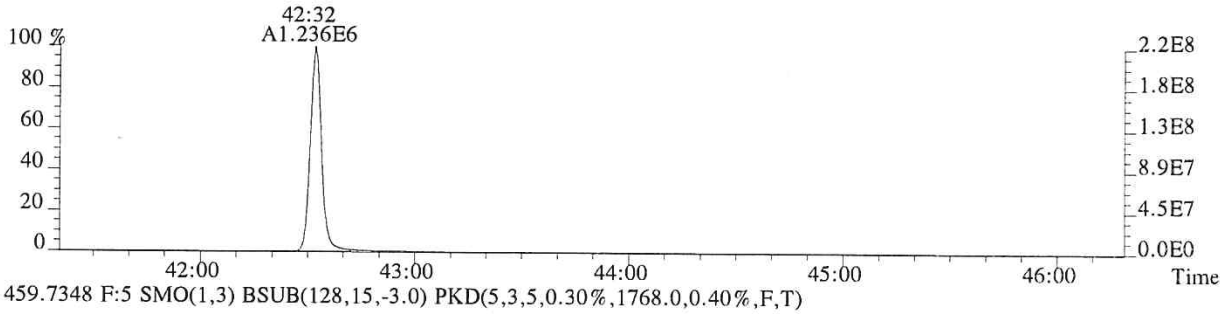


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

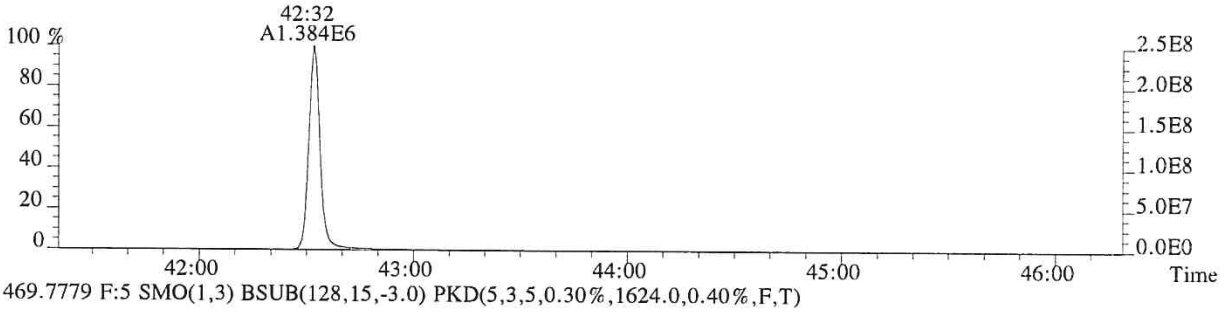


019091

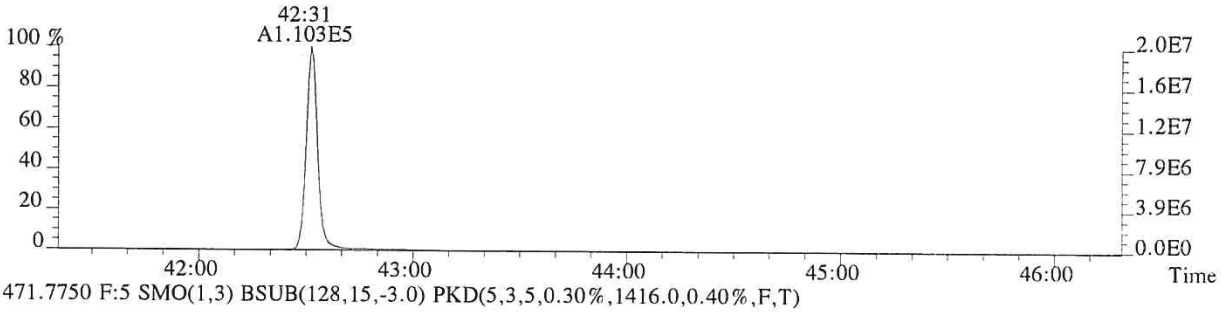
File:P513855 #1-448 Acq:24-JAN-2018 17:43:48 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:185657
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,192.0,0.40%,F,T)



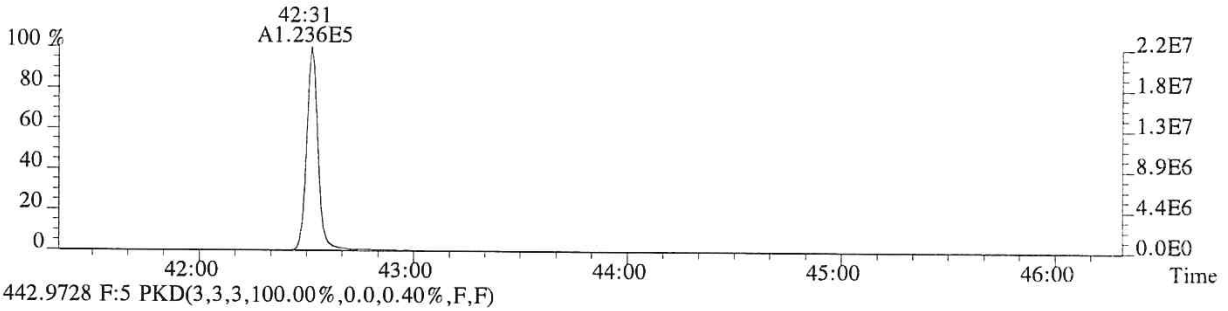
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1768.0,0.40%,F,T)



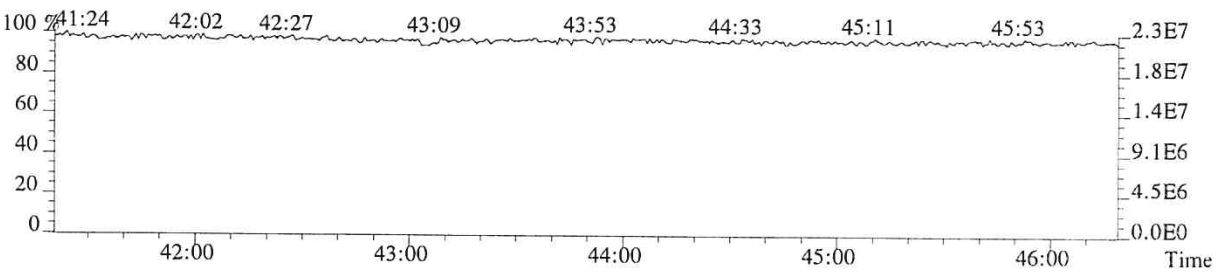
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1624.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1416.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



019092

USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P513857 Analysis Date: 24-JAN-18 Time: 19:21:06

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (4)
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	9.9	7.8 - 12.9	-0.8
1,2,3,7,8-PeCDD	M+2/M+4	1.55	1.32-1.78	50	39 - 65	0.9
1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	50	39 - 64	0.2
1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	50	39 - 64	0.8
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	50	41 - 61	-0.7
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	51	43 - 58	1.6
OCDD	M+2/M+4	0.89	0.76-1.02	101	79 - 126	1.5
2,3,7,8-TCDF	M/M+2	0.71	0.65-0.89	10.2	8.4 - 12.0	2.1
1,2,3,7,8-PeCDF	M+2/M+4	1.51	1.32-1.78	51	41 - 60	2.7
2,3,4,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	50	41 - 61	0.8
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	52	45 - 56	4.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	50	44 - 57	-0.1
1,2,3,7,8,9-HxCDF	M+2/M+4	1.23	1.05-1.43	51	45 - 56	2.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	50	44 - 57	0.8
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.00	0.88-1.20	50	45 - 55	0.3
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.00	0.88-1.20	50	43 - 58	0.1
OCDF	M+2/M+4	0.89	0.76-1.02	100	63 - 159	0.0

(1) See Table 8, Method 1613B, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.

(3) Contract-required concentration range as specified in Table 6, Method 1613B, under VER.

(4) The beginning CCAL %RSD for the 17 unlabeled standard must not exceed +/- 20%, Section 7.7.4.1. The ending CCAL must not exceed +/-25%, Section 8.3.2.4, Method 8290

12/2012
1613F4A.FRM

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: ALS ENVIRONMENTAL Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 01/24/18

Instrument ID: E-HRMS-07 GC Column ID: DB-5MSUI

VER Data Filename: P513857 Analysis Date: 24-JAN-18 Time: 19:21:06

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	CONC. FOUND	CONC. RANGE (3) (ng/mL)	%RSD (5)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	98	82 - 121	-1.7
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.59	1.32-1.78	92	62 - 160	-8.5
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	101	85 - 117	1.4
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	103	85 - 118	2.7
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	113	72 - 138	13.3
13C-OCDD	M+2/M+4	0.89	0.76-1.02	253	96 - 415	26.3
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	94	71 - 140	-6.2
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	94	76 - 130	-6.3
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	94	77 - 130	-6.4
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	97	76 - 131	-2.6
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	102	70 - 143	1.7
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	104	74 - 135	3.6
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	105	73 - 137	4.9
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	112	78 - 129	11.6
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	116	77 - 129	16.1
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD				10.1	7.8 - 12.7	0.9

(1) See Table 8, Method 1613B, for m/z specifications.
(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613B.
(3) Contract-required concentration range, as specified in Table 6, Method 1613B, under VER.
(4) No ion abundance ratio; report concentration found.
(5) The beginnning CCAL %RSD for the labeled standard must not exceed +/- 30% Section 7.7.4.2. The ending CCAL must not exceed +/- 35%, Sec 8.3.2.4 (8290)

12/2012
1613F4B.FRM

ALS ENVIRONMENTAL
Sample Response Summary

CLIENT ID.
75080

Run #7 Filename P513857 Samp: 1 Inj: 1 Acquired: 24-JAN-18 19:21:06
Processed: 25-JAN-18 08:41:26 Sample ID: 2ND SOURCE

	Typ	Name	RT-1	Resp 1	Resp 2	Ratio	Meet	Mod?	RRF
1	Unk	2,3,7,8-TCDF	28:48	5.152e+03	7.223e+03	0.71	yes	no	0.942
2	Unk	1,2,3,7,8-PeCDF	32:48	3.916e+04	2.586e+04	1.51	yes	no	1.012
3	Unk	2,3,4,7,8-PeCDF	33:41	3.607e+04	2.366e+04	1.52	yes	no	0.959
4	Unk	1,2,3,4,7,8-HxCDF	36:16	3.202e+04	2.632e+04	1.22	yes	no	1.190
5	Unk	1,2,3,6,7,8-HxCDF	36:23	3.416e+04	2.839e+04	1.20	yes	no	1.123
6	Unk	2,3,4,6,7,8-HxCDF	36:52	3.150e+04	2.633e+04	1.20	yes	no	1.110
7	Unk	1,2,3,7,8,9-HxCDF	37:37	2.836e+04	2.314e+04	1.23	yes	no	1.144
8	Unk	1,2,3,4,6,7,8-HpCDF	38:49	2.874e+04	2.862e+04	1.00	yes	no	1.351
9	Unk	1,2,3,4,7,8,9-HpCDF	40:14	2.352e+04	2.346e+04	1.00	yes	no	1.258
10	Unk	OCDF	42:45	3.688e+04	4.148e+04	0.89	yes	no	1.359
11	Unk	2,3,7,8-TCDD	29:32	3.845e+03	5.032e+03	0.76	yes	no	1.085
12	Unk	1,2,3,7,8-PeCDD	33:57	2.377e+04	1.531e+04	1.55	yes	no	0.956
13	Unk	1,2,3,4,7,8-HxCDD	36:59	2.145e+04	1.680e+04	1.28	yes	no	1.038
14	Unk	1,2,3,6,7,8-HxCDD	37:05	2.240e+04	1.756e+04	1.28	yes	no	1.038
15	Unk	1,2,3,7,8,9-HxCDD	37:19	2.219e+04	1.741e+04	1.27	yes	no	1.063
16	Unk	1,2,3,4,6,7,8-HpCDD	39:44	2.034e+04	1.933e+04	1.05	yes	no	1.025
17	Unk	OCDD	42:31	3.083e+04	3.462e+04	0.89	yes	no	1.118
18	IS	13C-2,3,7,8-TCDF	28:46	5.681e+04	7.189e+04	0.79	yes	no	1.513
19	IS	13C-1,2,3,7,8-PeCDF	32:47	7.678e+04	4.833e+04	1.59	yes	no	1.471
20	IS	13C-2,3,4,7,8-PeCDF	33:40	7.550e+04	4.814e+04	1.57	yes	no	1.457
21	IS	13C-1,2,3,4,7,8-HxCDF	36:15	3.216e+04	6.216e+04	0.52	yes	no	1.234
22	IS	13C-1,2,3,6,7,8-HxCDF	36:22	3.808e+04	7.348e+04	0.52	yes	no	1.399
23	IS	13C-2,3,4,6,7,8-HxCDF	36:51	3.589e+04	6.747e+04	0.53	yes	no	1.257
24	IS	13C-1,2,3,7,8,9-HxCDF	37:36	3.054e+04	5.771e+04	0.53	yes	no	1.086
25	IS	13C-1,2,3,4,6,7,8-HpCDF	38:48	2.616e+04	5.845e+04	0.45	yes	no	0.966
26	IS	13C-1,2,3,4,7,8,9-HpCDF	40:14	2.287e+04	5.181e+04	0.44	yes	no	0.820
27	IS	13C-2,3,7,8-TCDD	29:30	3.654e+04	4.587e+04	0.80	yes	no	0.924
28	IS	13C-1,2,3,7,8-PeCDD	33:56	4.972e+04	3.125e+04	1.59	yes	no	0.975
29	IS	13C-1,2,3,4,7,8-HxCDD	36:59	4.147e+04	3.207e+04	1.29	yes	no	0.925
30	IS	13C-1,2,3,6,7,8-HxCDD	37:04	4.264e+04	3.379e+04	1.26	yes	no	0.949
31	IS	13C-1,2,3,4,6,7,8-HpCDD	39:44	3.921e+04	3.703e+04	1.06	yes	no	0.858
32	IS	13C-OCDD	42:31	5.445e+04	6.090e+04	0.89	yes	no	0.582
33	RS/RT	13C-1,2,3,4-TCDD	28:57	4.052e+04	5.019e+04	0.81	yes	no	-
34	RS/RT	13C-1,2,3,7,8,9-HxCDD	37:18	4.325e+04	3.518e+04	1.23	yes	no	-
35	C/Up	37Cl-2,3,7,8-TCDD	29:32	9.276e+03				no	1.014

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ALS ENVIRONMENTAL
Signal/Noise Height Ratio Summary

CLIENT ID.
75080

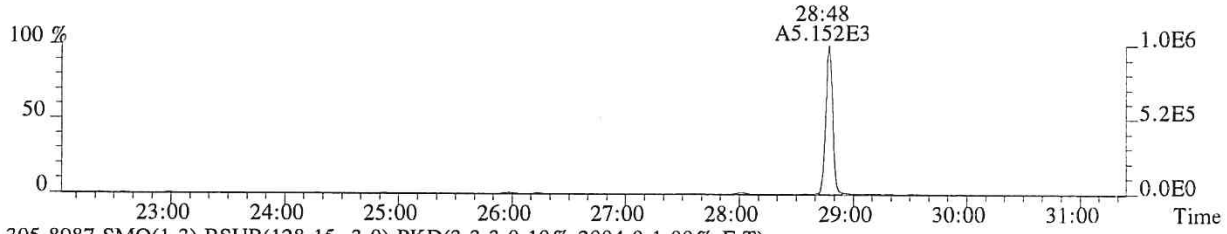
Run #7 Filename P513857 Samp: 1 Inj: 1 Acquired: 24-JAN-18 19:21:06
Processed: 25-JAN-18 08:41:26 LAB. ID: 2ND SOURCE

	Name	Signal 1	Noise 1	S/N Rat.1	Signal 2	Noise 2	S/N Rat.2
1	2,3,7,8-TCDF	1.04e+06	1.03e+03	1.0e+03	1.42e+06	2.00e+03	7.1e+02
2	1,2,3,7,8-PeCDF	7.88e+06	8.44e+02	9.3e+03	5.19e+06	1.52e+03	3.4e+03
3	2,3,4,7,8-PeCDF	7.53e+06	8.44e+02	8.9e+03	4.93e+06	1.52e+03	3.2e+03
4	1,2,3,4,7,8-HxCDF	7.21e+06	1.53e+03	4.7e+03	5.89e+06	1.36e+03	4.3e+03
5	1,2,3,6,7,8-HxCDF	7.34e+06	1.53e+03	4.8e+03	6.08e+06	1.36e+03	4.5e+03
6	2,3,4,6,7,8-HxCDF	7.02e+06	1.53e+03	4.6e+03	5.88e+06	1.36e+03	4.3e+03
7	1,2,3,7,8,9-HxCDF	6.10e+06	1.53e+03	4.0e+03	4.95e+06	1.36e+03	3.6e+03
8	1,2,3,4,6,7,8-HpCDF	6.16e+06	5.00e+03	1.2e+03	6.13e+06	6.59e+03	9.3e+02
9	1,2,3,4,7,8,9-HpCDF	4.58e+06	5.00e+03	9.1e+02	4.45e+06	6.59e+03	6.7e+02
10	OCDF	6.54e+06	1.44e+02	4.5e+04	7.12e+06	8.36e+02	8.5e+03
11	2,3,7,8-TCDD	8.13e+05	1.92e+03	4.2e+02	1.05e+06	1.26e+03	8.3e+02
12	1,2,3,7,8-PeCDD	4.95e+06	8.52e+02	5.8e+03	3.18e+06	2.84e+02	1.1e+04
13	1,2,3,4,7,8-HxCDD	4.98e+06	7.64e+02	6.5e+03	3.93e+06	4.12e+02	9.5e+03
14	1,2,3,6,7,8-HxCDD	4.78e+06	7.64e+02	6.3e+03	3.77e+06	4.12e+02	9.2e+03
15	1,2,3,7,8,9-HxCDD	4.67e+06	7.64e+02	6.1e+03	3.64e+06	4.12e+02	8.8e+03
16	1,2,3,4,6,7,8-HpCDD	4.20e+06	1.17e+03	3.6e+03	3.99e+06	7.20e+01	5.5e+04
17	OCDD	5.25e+06	1.60e+02	3.3e+04	5.90e+06	1.22e+03	4.8e+03
18	13C-2,3,7,8-TCDF	1.11e+07	9.00e+03	1.2e+03	1.40e+07	3.76e+03	3.7e+03
19	13C-1,2,3,7,8-PeCDF	1.52e+07	6.36e+02	2.4e+04	9.62e+06	1.34e+03	7.2e+03
20	13C-2,3,4,7,8-PeCDF	1.56e+07	6.36e+02	2.5e+04	9.99e+06	1.34e+03	7.5e+03
21	13C-1,2,3,4,7,8-HxCDF	7.22e+06	7.60e+02	9.5e+03	1.40e+07	1.60e+03	8.8e+03
22	13C-1,2,3,6,7,8-HxCDF	8.16e+06	7.60e+02	1.1e+04	1.57e+07	1.60e+03	9.8e+03
23	13C-2,3,4,6,7,8-HxCDF	7.92e+06	7.60e+02	1.0e+04	1.49e+07	1.60e+03	9.3e+03
24	13C-1,2,3,7,8,9-HxCDF	6.41e+06	7.60e+02	8.4e+03	1.22e+07	1.60e+03	7.6e+03
25	13C-1,2,3,4,6,7,8-HpCDF	5.67e+06	2.84e+03	2.0e+03	1.26e+07	6.70e+03	1.9e+03
26	13C-1,2,3,4,7,8,9-HpCDF	4.44e+06	2.84e+03	1.6e+03	1.00e+07	6.70e+03	1.5e+03
27	13C-2,3,7,8-TCDD	7.51e+06	5.77e+03	1.3e+03	9.42e+06	2.25e+03	4.2e+03
28	13C-1,2,3,7,8-PeCDD	1.01e+07	1.06e+03	9.5e+03	6.31e+06	5.88e+02	1.1e+04
29	13C-1,2,3,4,7,8-HxCDD	9.57e+06	2.66e+03	3.6e+03	7.40e+06	1.57e+03	4.7e+03
30	13C-1,2,3,6,7,8-HxCDD	9.03e+06	2.66e+03	3.4e+03	7.14e+06	1.57e+03	4.6e+03
31	13C-1,2,3,4,6,7,8-HpCDD	7.97e+06	1.17e+03	6.8e+03	7.51e+06	7.00e+02	1.1e+04
32	13C-OCDD	9.30e+06	2.60e+02	3.6e+04	1.03e+07	4.00e+02	2.6e+04
33	13C-1,2,3,4-TCDD	8.25e+06	5.77e+03	1.4e+03	1.02e+07	2.25e+03	4.5e+03
34	13C-1,2,3,7,8,9-HxCDD	9.23e+06	2.66e+03	3.5e+03	7.29e+06	1.57e+03	4.6e+03
35	37Cl-2,3,7,8-TCDD	1.94e+06	1.18e+03	1.6e+03			

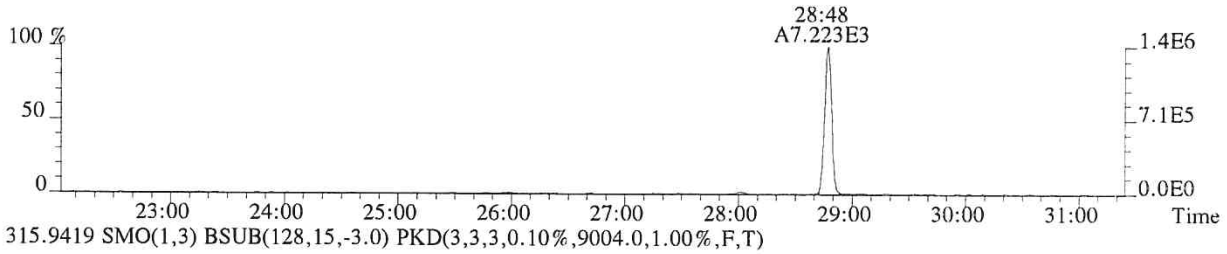
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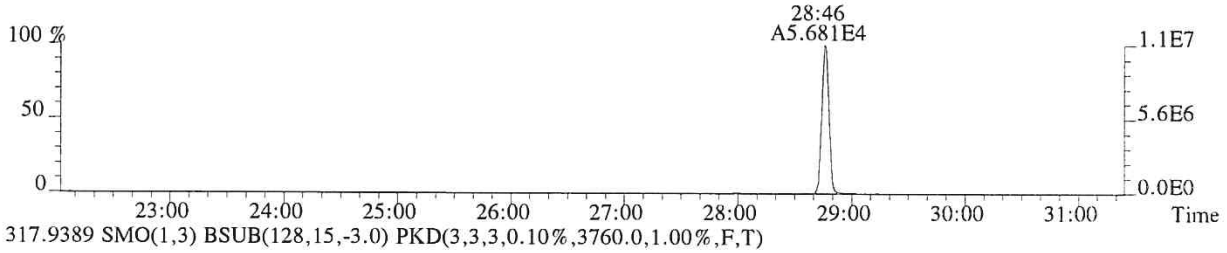
File:P513857 #1-665 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
303.9016 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1032.0,1.00%,F,T)



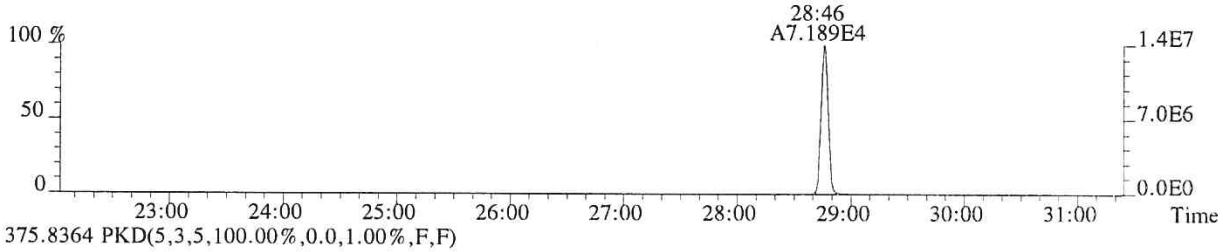
305.8987 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2004.0,1.00%,F,T)



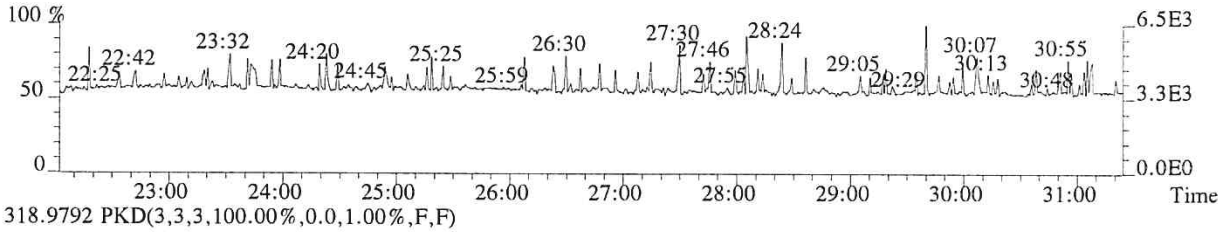
315.9419 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,9004.0,1.00%,F,T)



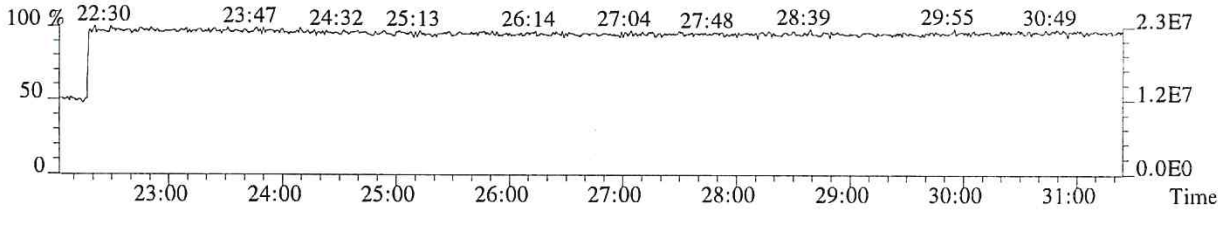
317.9389 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,3760.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

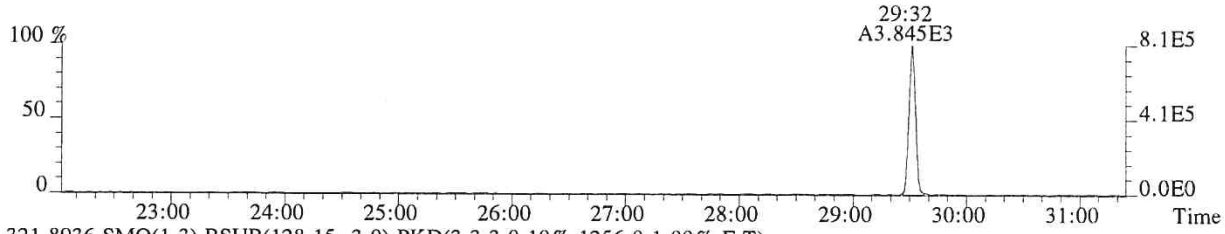


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

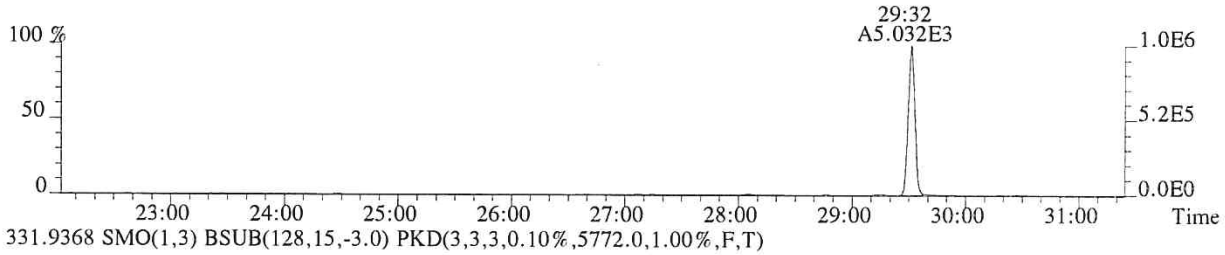


019097

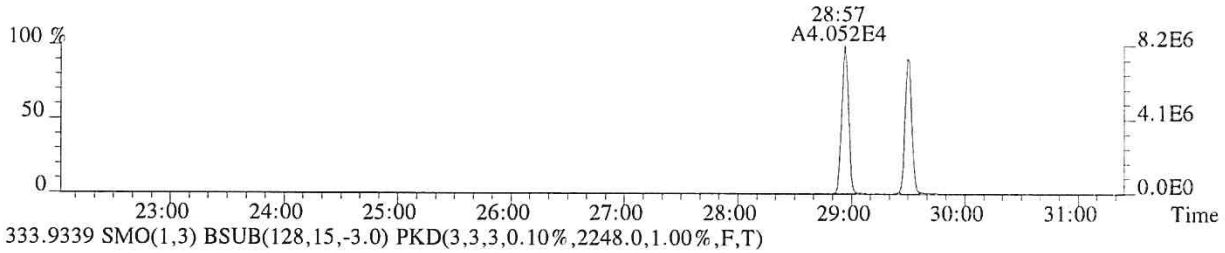
File:P513857 #1-665 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
319.8965 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1924.0,1.00%,F,T)



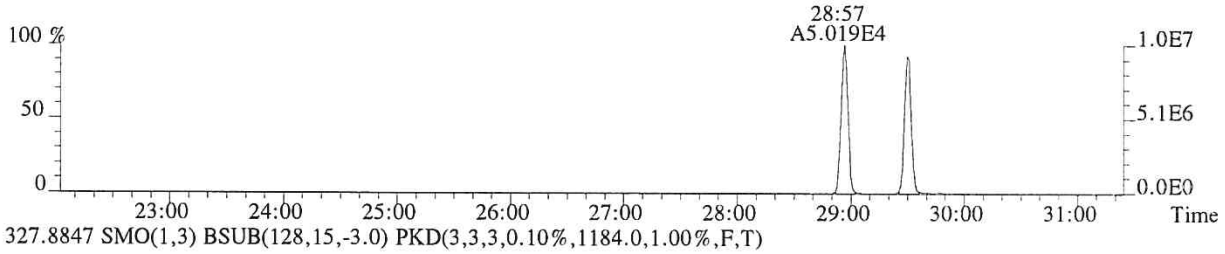
321.8936 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1256.0,1.00%,F,T)



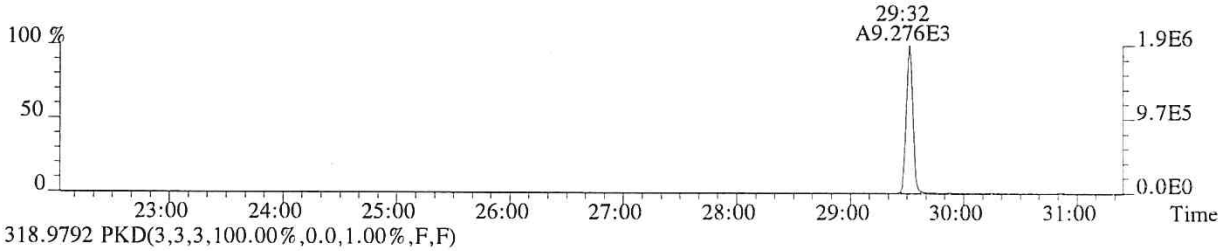
331.9368 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,5772.0,1.00%,F,T)



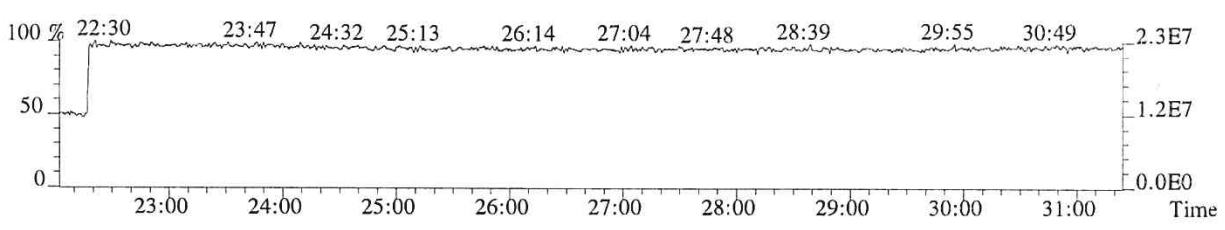
333.9339 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,2248.0,1.00%,F,T)



327.8847 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1184.0,1.00%,F,T)

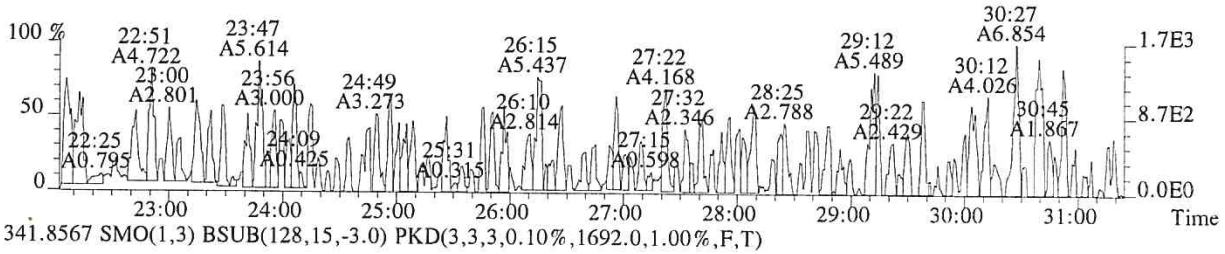


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

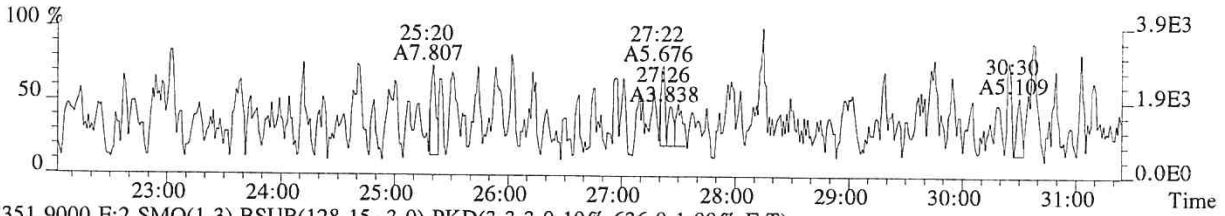


019098

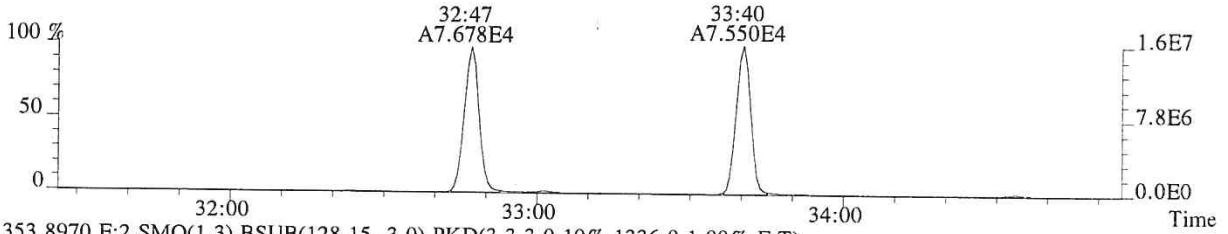
File:P513857 #1-665 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
339.8597 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,188.0,1.00%,F,T)



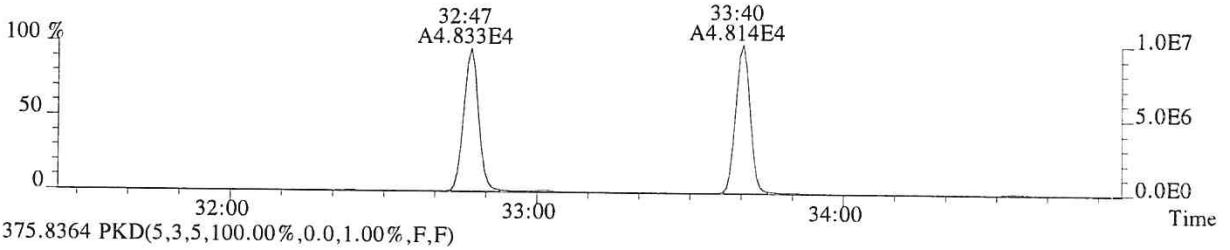
341.8567 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1692.0,1.00%,F,T)



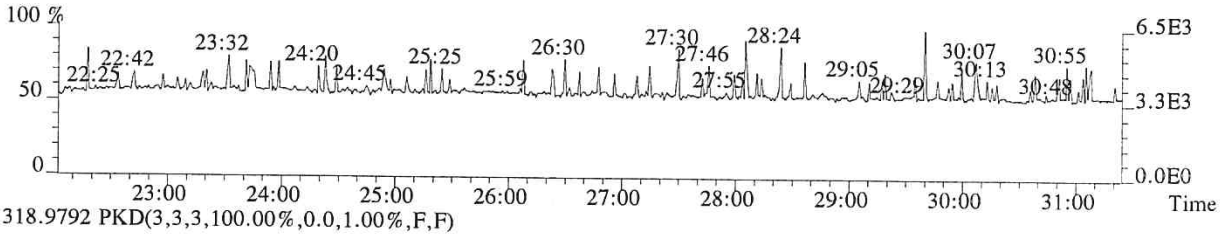
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,636.0,1.00%,F,T)



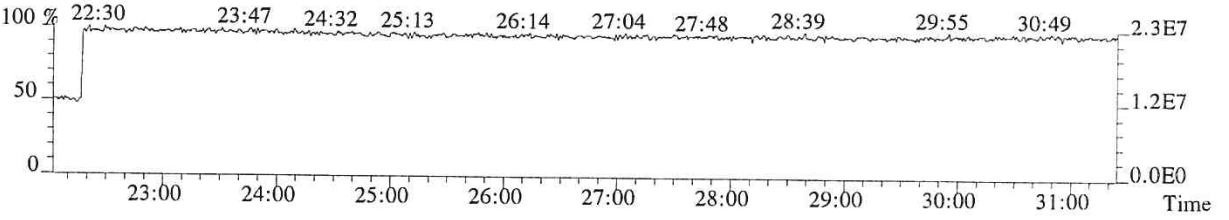
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1336.0,1.00%,F,T)



375.8364 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

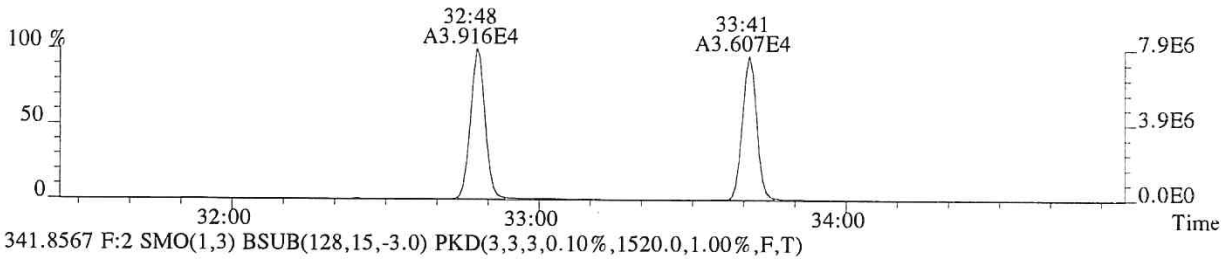


318.9792 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

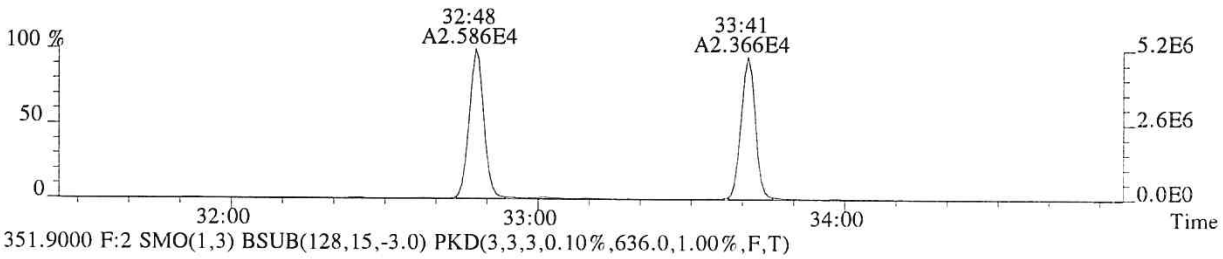


019099

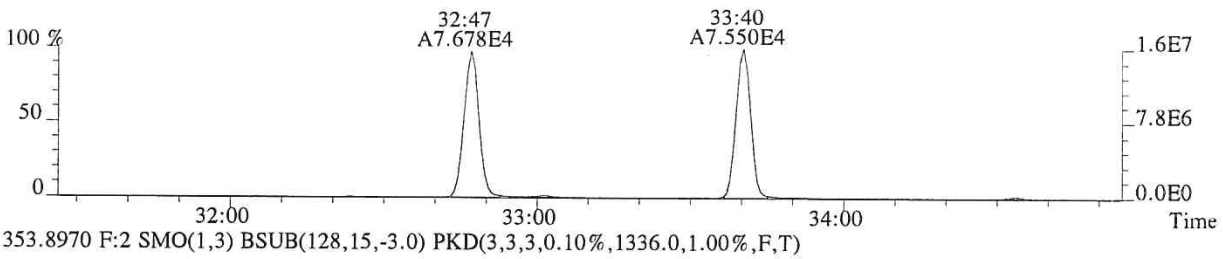
File:P513857 #1-313 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
339.8597 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,844.0,1.00%,F,T)



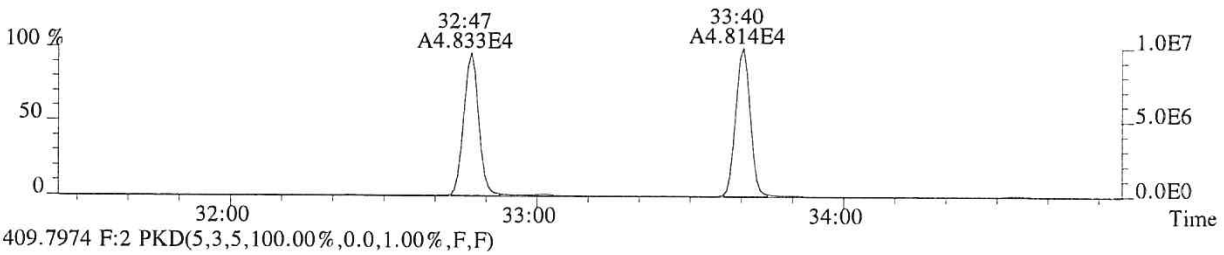
341.8567 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1520.0,1.00%,F,T)



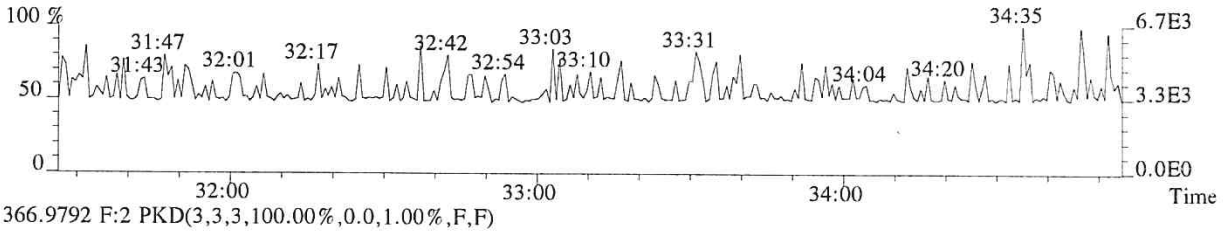
351.9000 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,636.0,1.00%,F,T)



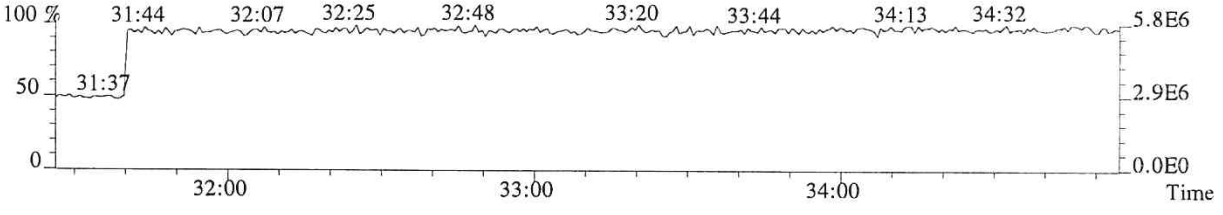
353.8970 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1336.0,1.00%,F,T)



409.7974 F:2 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

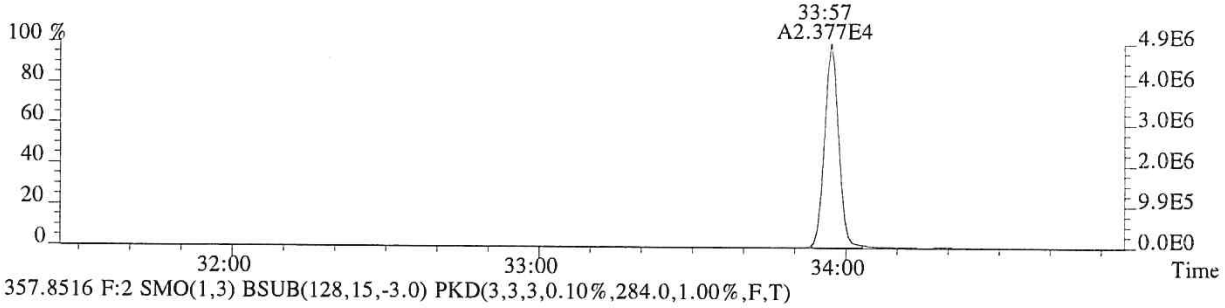


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

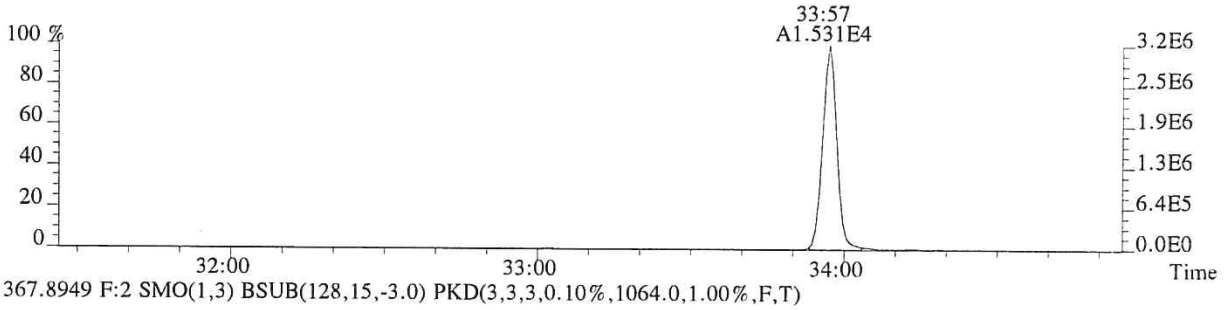


019100

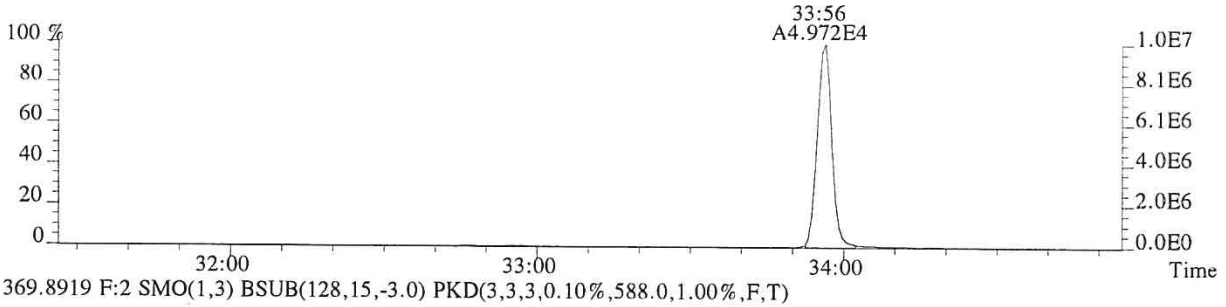
File:P513857 #1-313 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
355.8546 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,852.0,1.00%,F,T)



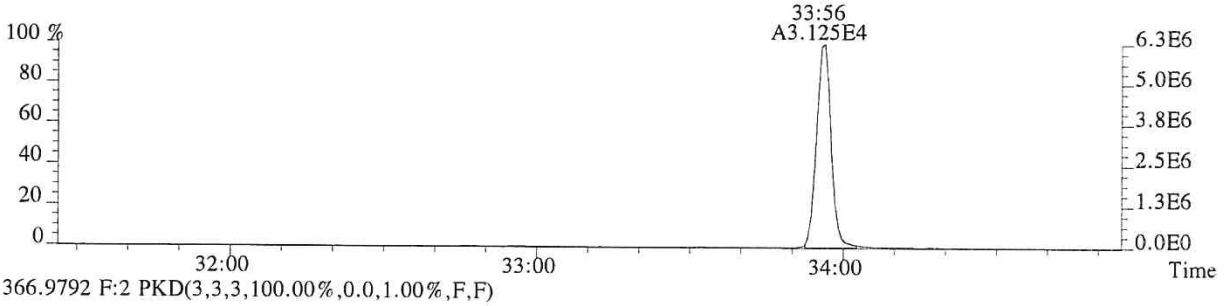
357.8516 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,284.0,1.00%,F,T)



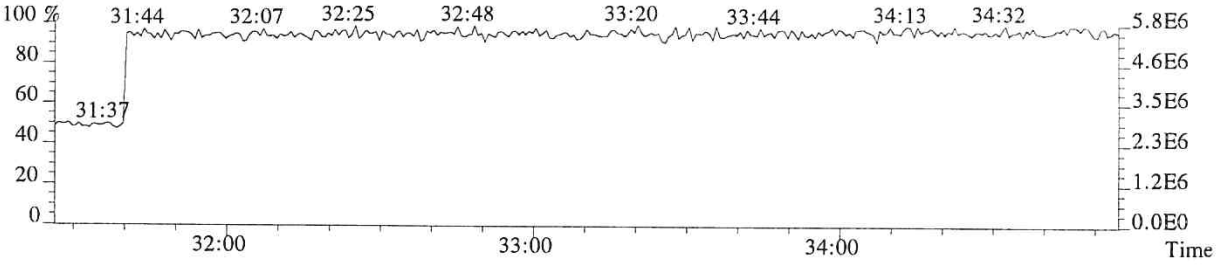
367.8949 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,1064.0,1.00%,F,T)



369.8919 F:2 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.10%,588.0,1.00%,F,T)

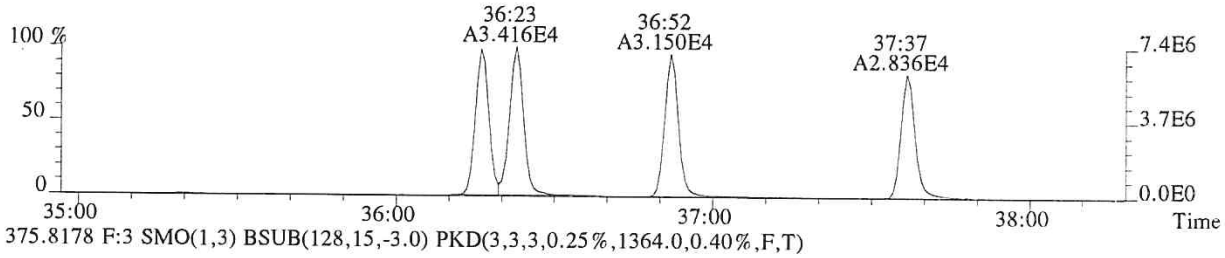


366.9792 F:2 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

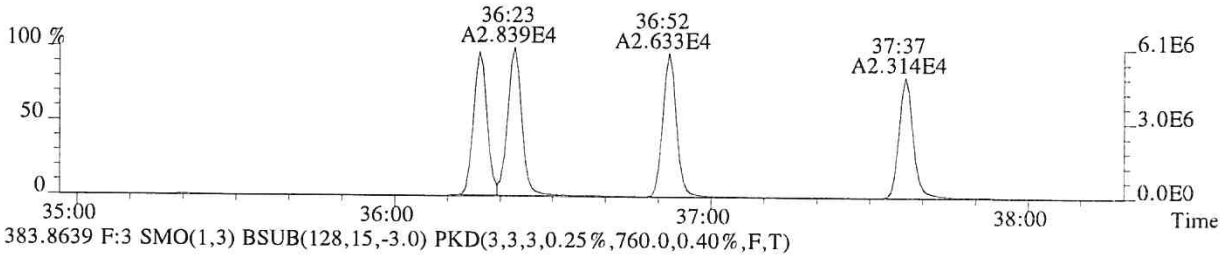


019101

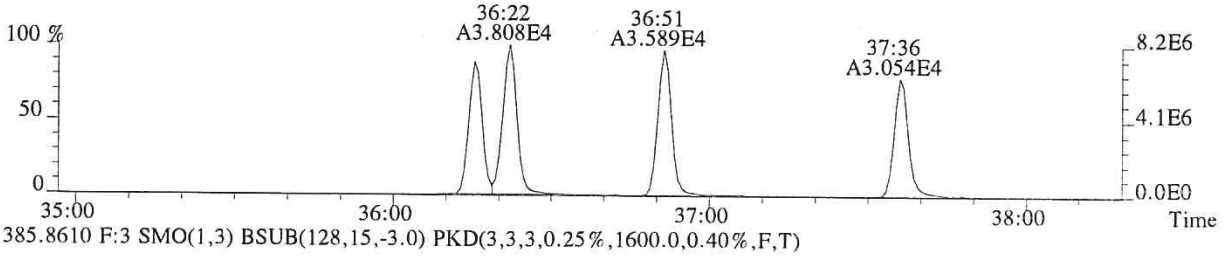
File:P513857 #1-303 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
373.8208 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1528.0,0.40%,F,T)



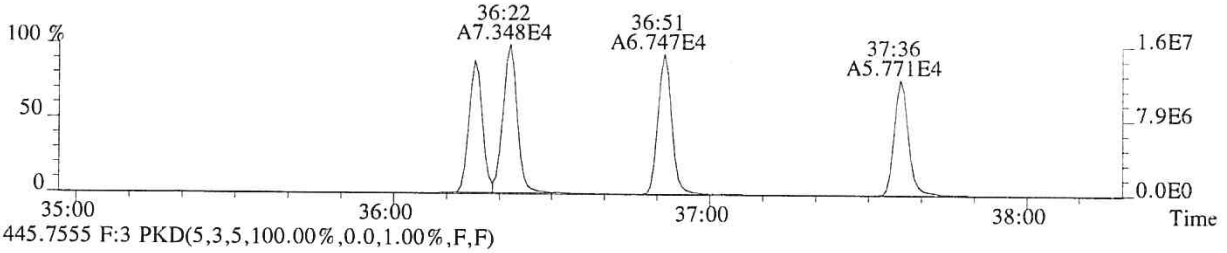
375.8178 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1364.0,0.40%,F,T)



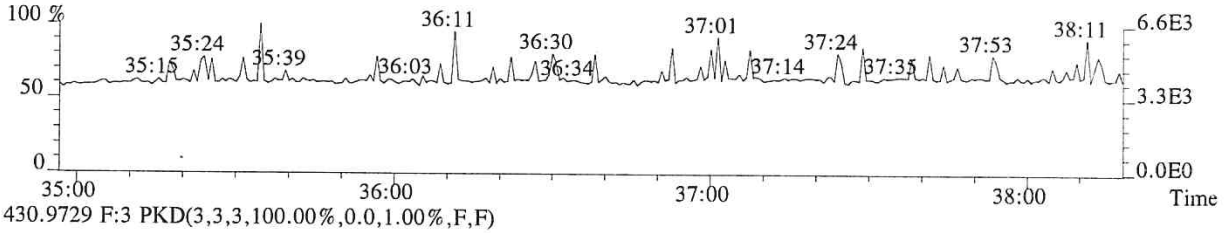
383.8639 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,760.0,0.40%,F,T)



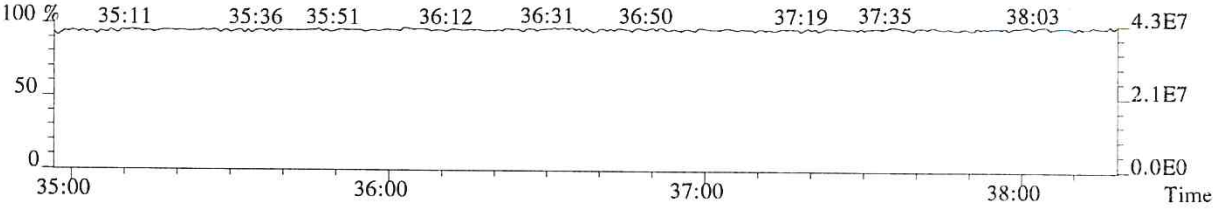
385.8610 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1600.0,0.40%,F,T)



445.7555 F:3 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

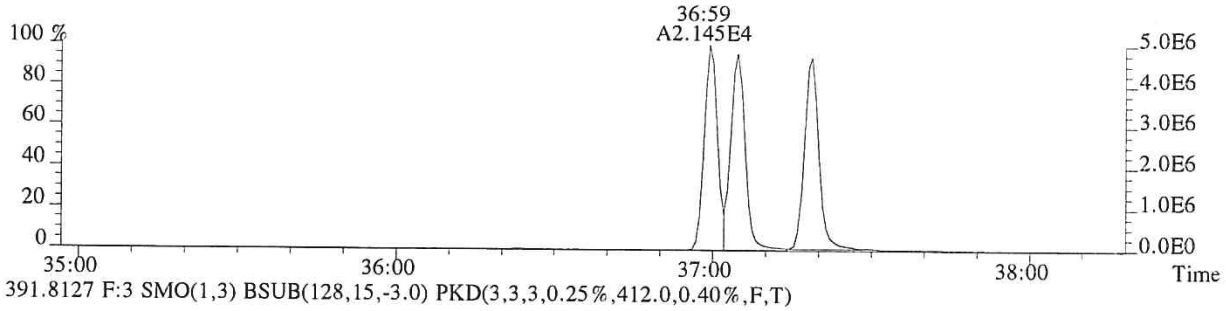


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

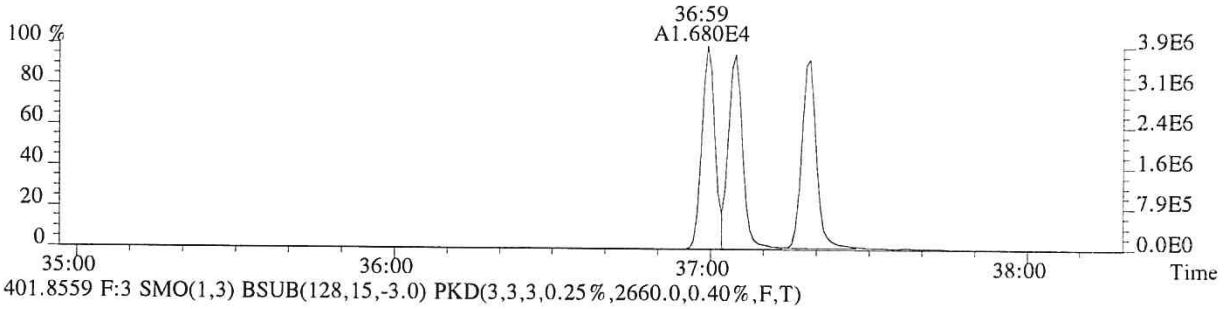


019102

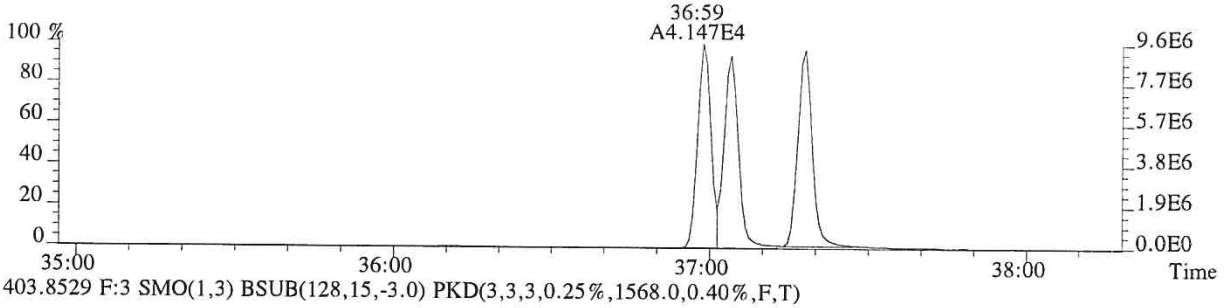
File:P513857 #1-303 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
389.8157 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,764.0,0.40%,F,T)



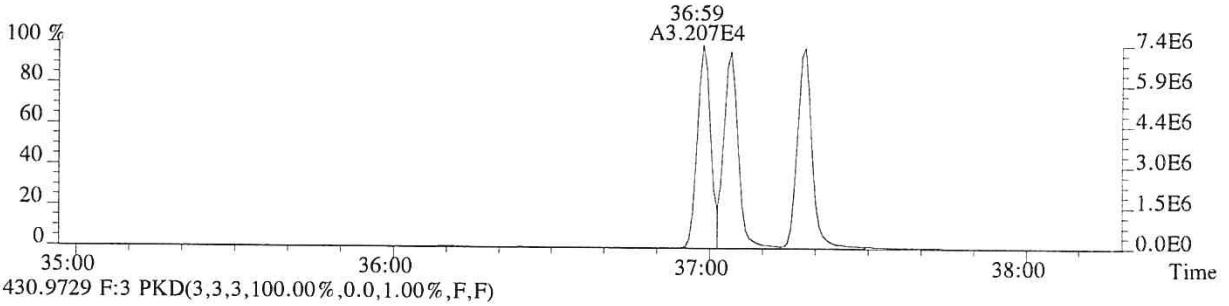
391.8127 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,412.0,0.40%,F,T)



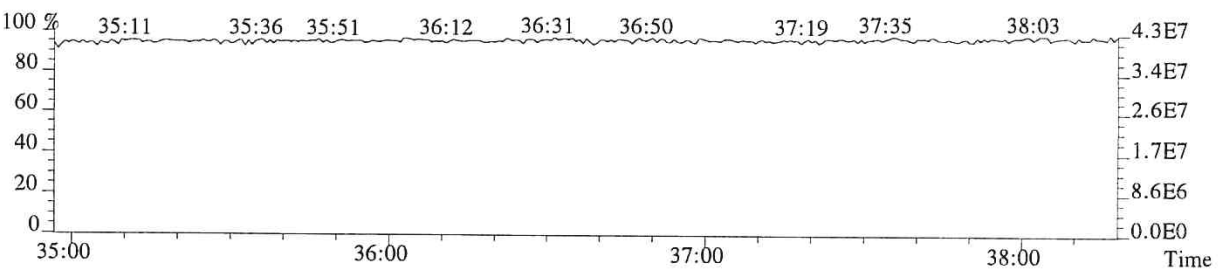
401.8559 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2660.0,0.40%,F,T)



403.8529 F:3 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1568.0,0.40%,F,T)

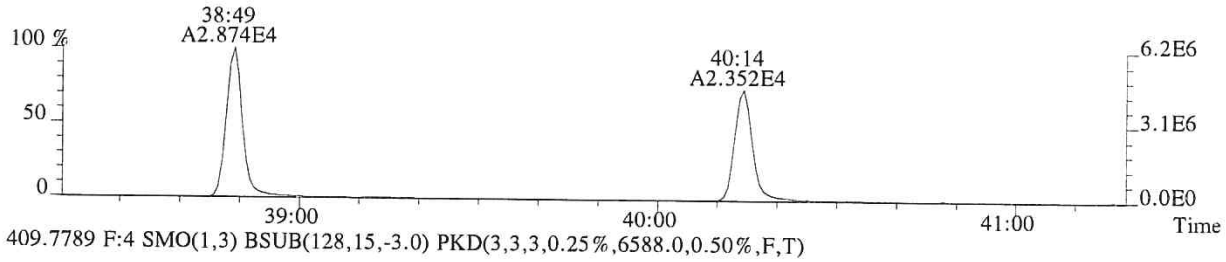


430.9729 F:3 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

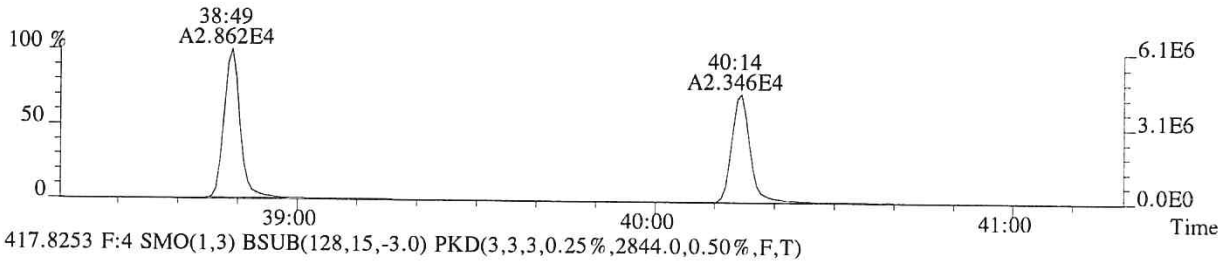


019103

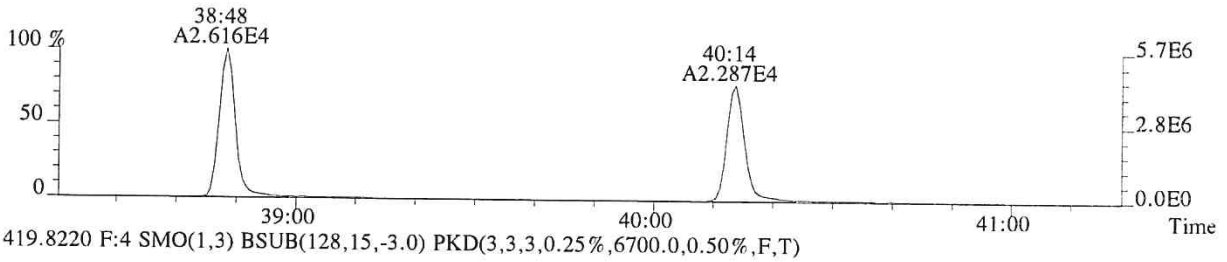
File:P513857 #1-268 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
407.7818 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,5004.0,0.50%,F,T)



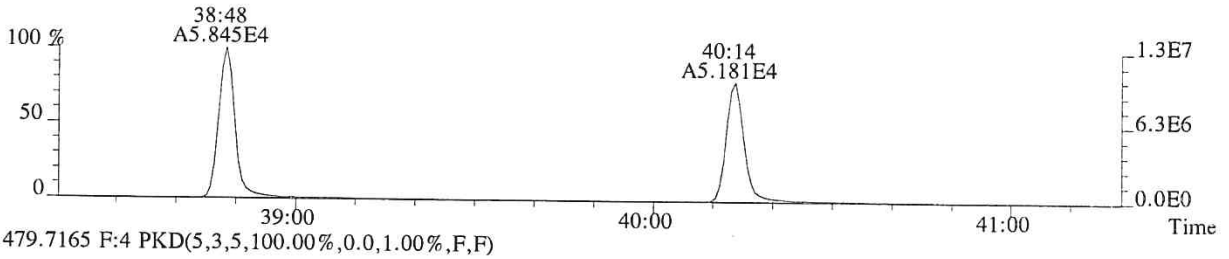
409.7789 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6588.0,0.50%,F,T)



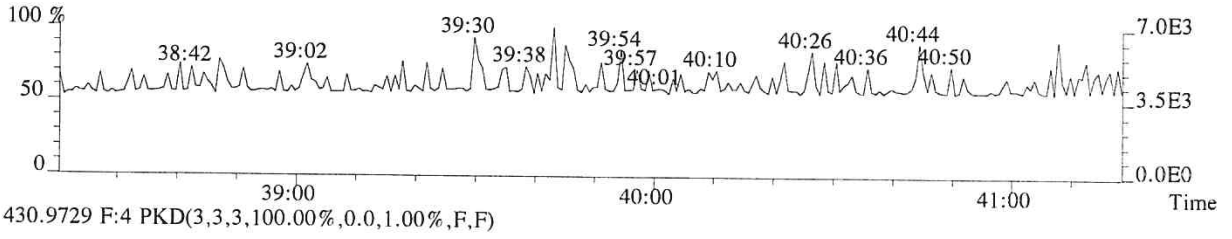
417.8253 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,2844.0,0.50%,F,T)



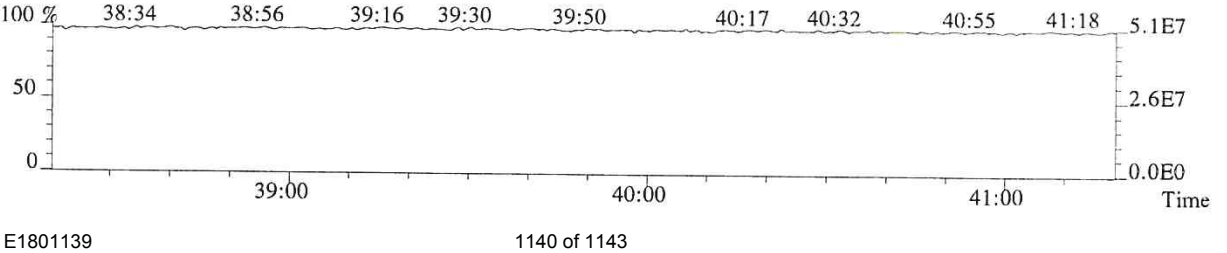
419.8220 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,6700.0,0.50%,F,T)



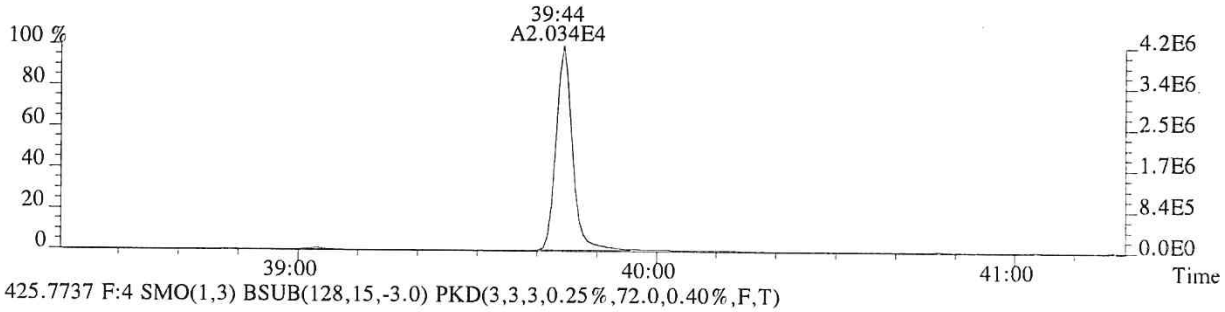
479.7165 F:4 PKD(5,3,5,100.00%,0.0,1.00%,F,F)



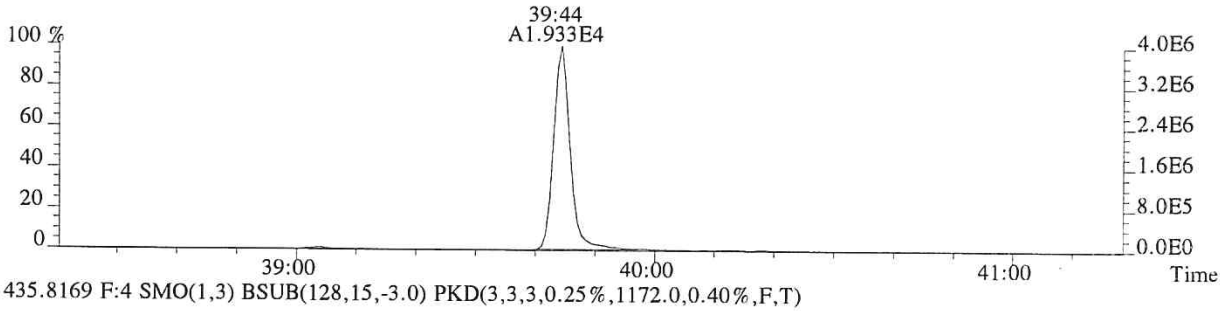
430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)



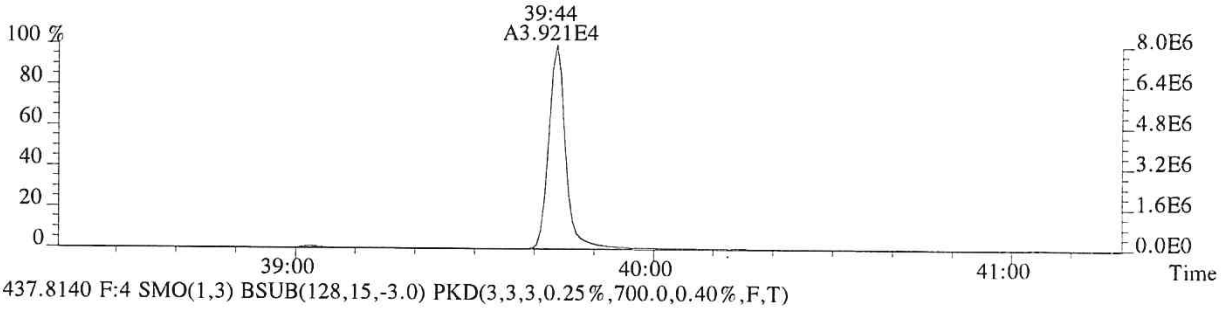
File:P513857 #1-268 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
423.7766 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1168.0,0.40%,F,T)



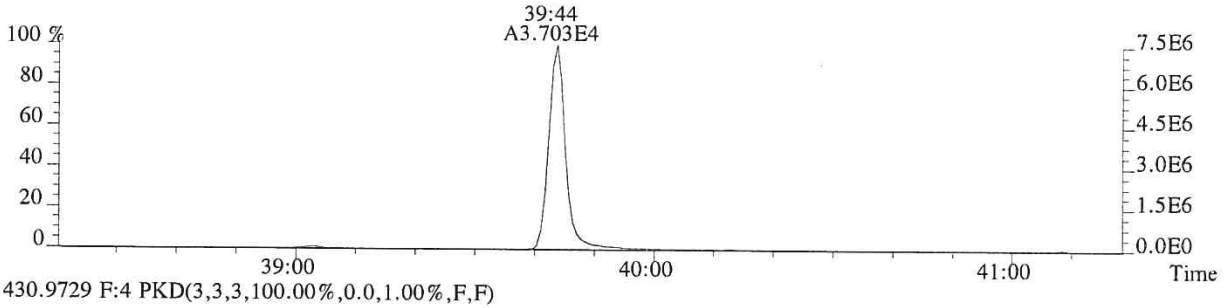
425.7737 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,72.0,0.40%,F,T)



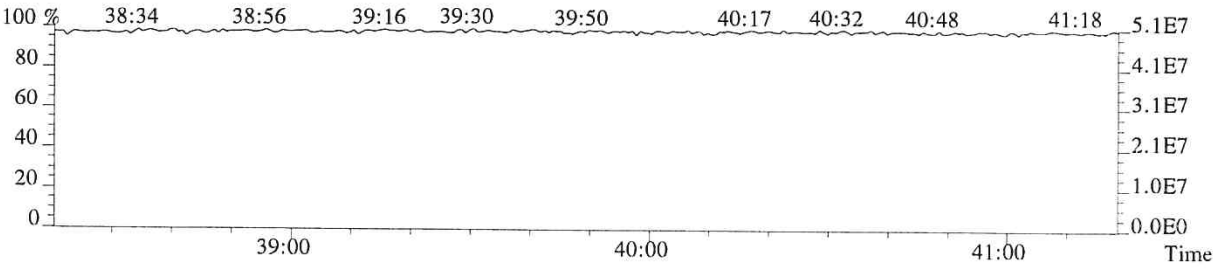
435.8169 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,1172.0,0.40%,F,T)



437.8140 F:4 SMO(1,3) BSUB(128,15,-3.0) PKD(3,3,3,0.25%,700.0,0.40%,F,T)

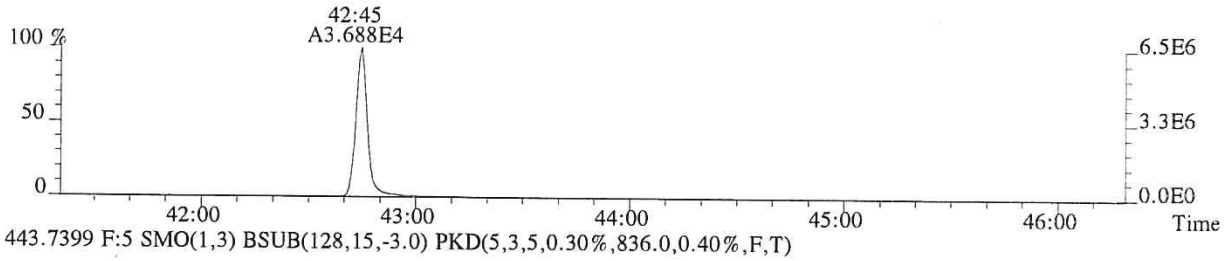


430.9729 F:4 PKD(3,3,3,100.00%,0.0,1.00%,F,F)

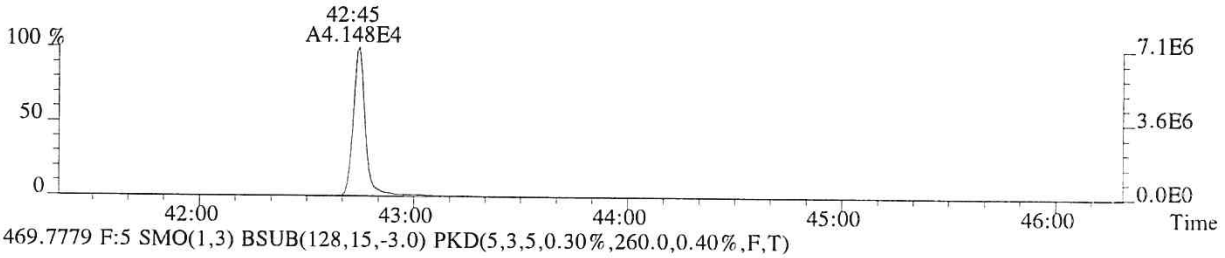


019105

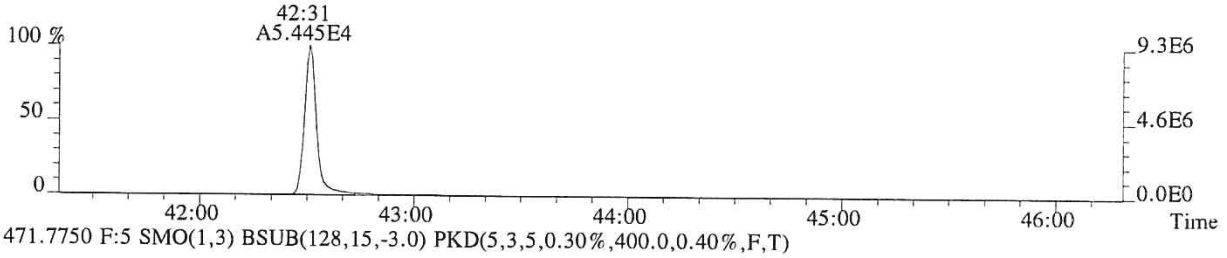
File:P513857 #1-448 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
441.7428 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,144.0,0.40%,F,T)



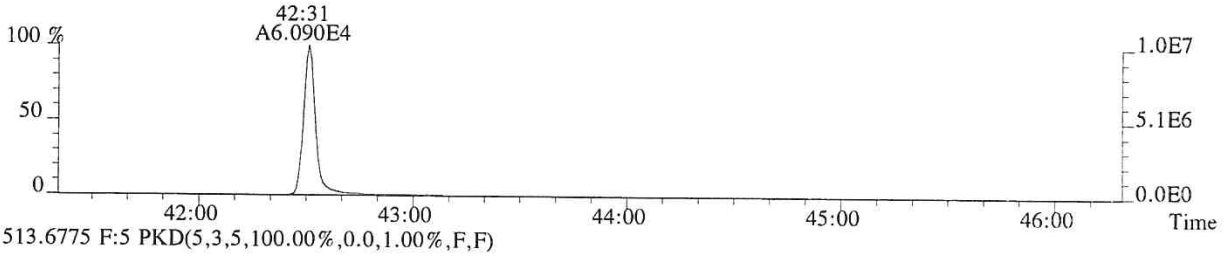
443.7399 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,836.0,0.40%,F,T)



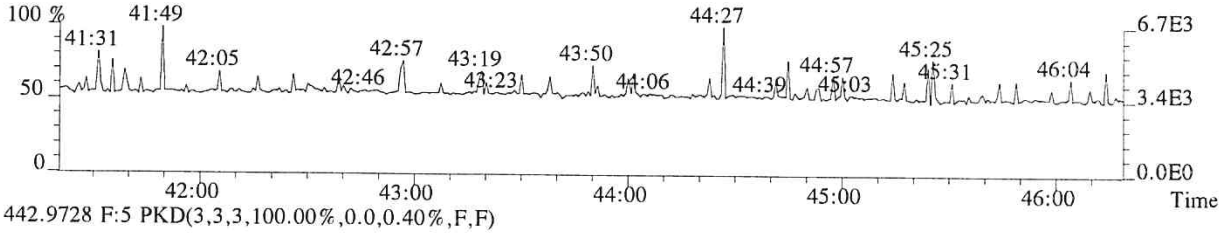
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,260.0,0.40%,F,T)



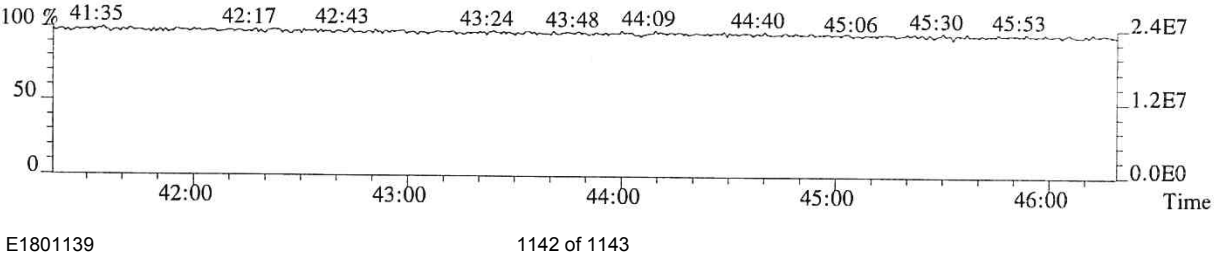
471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,400.0,0.40%,F,T)



513.6775 F:5 PKD(5,3,5,100.00%,0.0,1.00%,F,F)

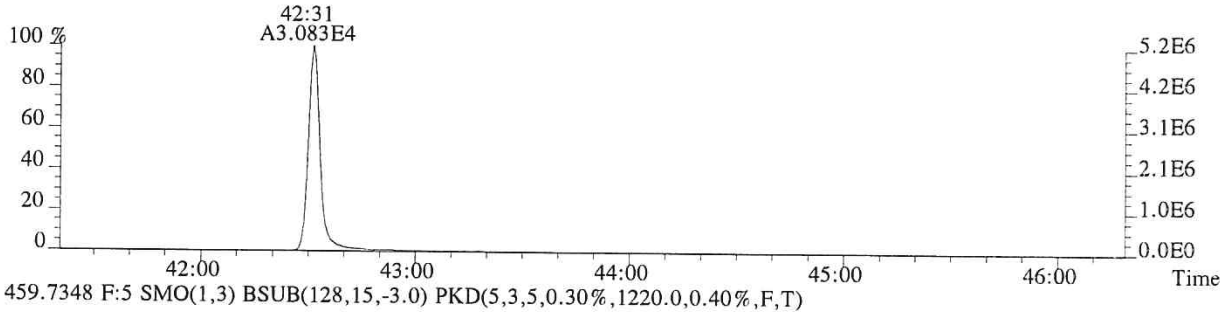


442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)

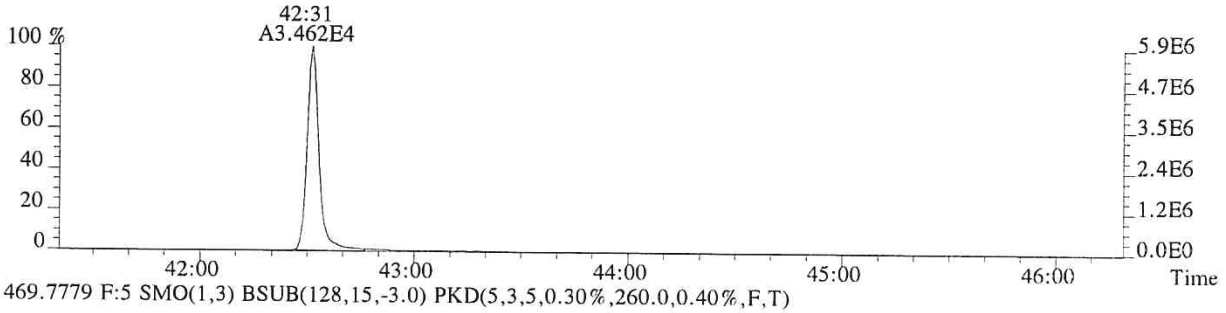


019106

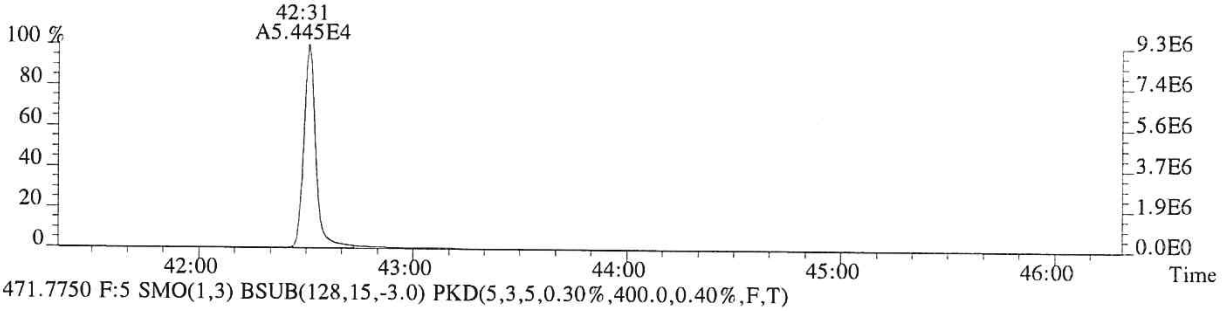
File:P513857 #1-448 Acq:24-JAN-2018 19:21:06 Probe EI+ Magnet SIR VG BioTech Mass spect£
Sample#1 Exp:75080
457.7377 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,160.0,0.40%,F,T)



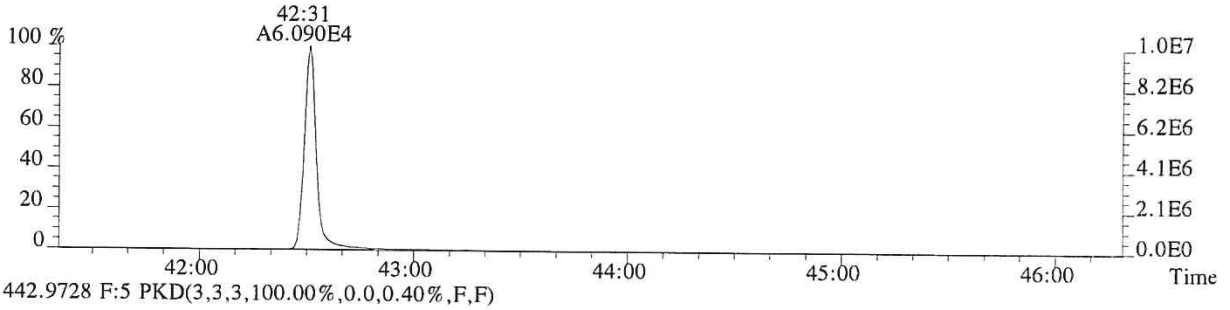
459.7348 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,1220.0,0.40%,F,T)



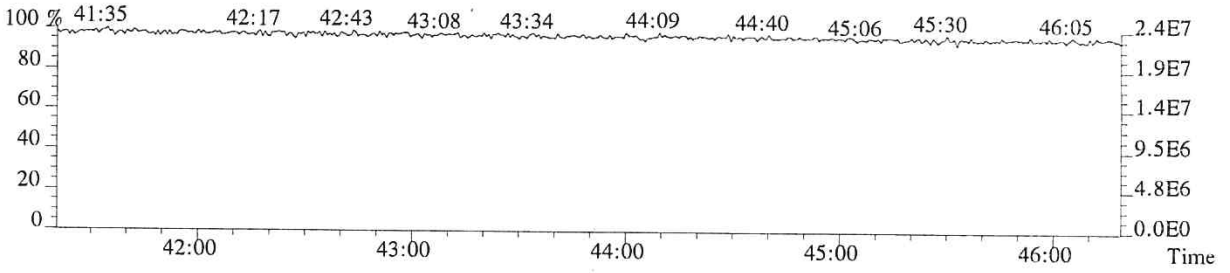
469.7779 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,260.0,0.40%,F,T)



471.7750 F:5 SMO(1,3) BSUB(128,15,-3.0) PKD(5,3,5,0.30%,400.0,0.40%,F,T)



442.9728 F:5 PKD(3,3,3,100.00%,0.0,0.40%,F,F)



019107

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

WorkOrder: HS18110317

E1801020

ALS

Kristin Brown
19408 Park Row, Suite 320
Houston TX 77084

03-Dec-2018

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

November 13, 2018

Kristin Brown
ALS
19408 Park Row, Suite 320
Houston, TX 77084

Work Order: **HS18110317**

Laboratory Results for: **E1801020**

Dear Kristin,

ALS Environmental received 1 sample(s) on Nov 06, 2018 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Corey Grandits
Project Manager

Client: ALS
Project: E1801020
Work Order: HS18110317

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18110317-01	SL0022	Soil		03-Nov-2018 15:40	06-Nov-2018 16:25	☐

Client: ALS **CASE NARRATIVE**
Project: E1801020
Work Order: HS18110317

GC Semivolatiles by Method TX1005

Batch ID: 134303

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: ALS
Project: E1801020
Sample ID: SL0022
Collection Date: 03-Nov-2018 15:40

ANALYTICAL REPORT
WorkOrder:HS18110317
Lab ID:HS18110317-01
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TEXAS TPH BY TX1005	**Method:TX1005**				Prep:TX1005PR / 06-Nov-2018		Analyst: MBG
nC6 to nC12	U		6.5	44	mg/Kg	1	07-Nov-2018 05:34
>nC12 to nC28	**22**	J	**8.5**	**44**	**mg/Kg**	1	07-Nov-2018 05:34
>nC28 to nC35	U		8.5	44	mg/Kg	1	07-Nov-2018 05:34
Total Petroleum Hydrocarbon	**22.0**	J	**6.5**	**44**	**mg/Kg**	1	07-Nov-2018 05:34
Surr: 2-Fluorobiphenyl	*107*			*70-130*	*%REC*	*1*	*07-Nov-2018 05:34*
Surr: Trifluoromethyl benzene	*104*			*70-130*	*%REC*	*1*	*07-Nov-2018 05:34*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

WEIGHT LOG

Client: ALS
Project: E1801020
WorkOrder: HS18110317

Batch ID: 134303 **Method:** TEXAS TPH BY TX1005 **Prep:** TX 1005_S PR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18110317-01	1	11.48	10 (mL)	0.8711

Client: ALS
Project: E1801020
WorkOrder: HS18110317

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 134303	**Test Name :** TEXAS TPH BY TX1005			**Matrix:** Soil		
HS18110317-01	SL0022	03 Nov 2018 15:40		06 Nov 2018 13:09	07 Nov 2018 05:34	1

Client: ALS
Project: E1801020
WorkOrder: HS18110317

QC BATCH REPORT

Batch ID: 134303 **Instrument: FID-12** **Method: TX1005**

MBLK Sample ID: **MBLK-134303** Units: **mg/Kg** Analysis Date: **06-Nov-2018 23:16**
Client ID: Run ID: **FID-12_326925** SeqNo: **4807057** PrepDate: **06-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	U	50								
>nC12 to nC28	U	50								
>nC28 to nC35	U	50								
Total Petroleum Hydrocarbon	U	50								
Surr: 2-Fluorobiphenyl	*29.82*	*0*	*25*	*0*	*119*	*70 - 130*				
Surr: Trifluoromethyl benzene	*28.94*	*0*	*25*	*0*	*116*	*70 - 130*				

LCS Sample ID: **LCS-134303** Units: **mg/Kg** Analysis Date: **06-Nov-2018 23:45**
Client ID: Run ID: **FID-12_326925** SeqNo: **4807058** PrepDate: **06-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	247	50	250	0	98.8	75 - 125				
>nC12 to nC28	226.4	50	250	0	90.6	75 - 125				
Surr: 2-Fluorobiphenyl	*31.77*	*0*	*25*	*0*	*127*	*70 - 130*				
Surr: Trifluoromethyl benzene	*28.69*	*0*	*25*	*0*	*115*	*70 - 130*				

LCSD Sample ID: **LCSD-134303** Units: **mg/Kg** Analysis Date: **07-Nov-2018 00:14**
Client ID: Run ID: **FID-12_326925** SeqNo: **4807055** PrepDate: **06-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	265.2	50	250	0	106	75 - 125	247	7.1	20	
>nC12 to nC28	236.5	50	250	0	94.6	75 - 125	226.4	4.36	20	
Surr: 2-Fluorobiphenyl	*30.88*	*0*	*25*	*0*	*124*	*70 - 130*	*31.77*	*2.82*	*20*	
Surr: Trifluoromethyl benzene	*29.79*	*0*	*25*	*0*	*119*	*70 - 130*	*28.69*	*3.75*	*20*	

MS Sample ID: **HS18110280-04MS** Units: **mg/Kg** Analysis Date: **07-Nov-2018 01:12**
Client ID: Run ID: **FID-12_326925** SeqNo: **4807059** PrepDate: **06-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	283.5	50	249.3	0	114	75 - 125				
>nC12 to nC28	278.8	50	249.3	0	112	75 - 125				
Surr: 2-Fluorobiphenyl	*31.24*	*0*	*24.93*	*0*	*125*	*70 - 130*				
Surr: Trifluoromethyl benzene	*26.12*	*0*	*24.93*	*0*	*105*	*70 - 130*				

Client: ALS
Project: E1801020
WorkOrder: HS18110317

QC BATCH REPORT

Batch ID: 134303 **Instrument: FID-12** **Method: TX1005**

MSD Sample ID: **HS18110280-04MSD** Units: **mg/Kg** Analysis Date: **07-Nov-2018 01:41**
Client ID: Run ID: **FID-12_326925** SeqNo: **4807060** PrepDate: **06-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	278.5	50	248.5	0	112	75 - 125	283.5	1.76	20	
>nC12 to nC28	288.6	50	248.5	0	116	75 - 125	278.8	3.49	20	
Surr: 2-Fluorobiphenyl	*29.85*	*0*	*24.85*	*0*	*120*	*70 - 130*	*31.24*	*4.55*	*20*	
Surr: Trifluoromethyl benzene	*25.91*	*0*	*24.85*	*0*	*104*	*70 - 130*	*26.12*	*0.805*	*20*	

The following samples were analyzed in this batch: HS18110317-01

Client: ALS
Project: E1801020
WorkOrder: **HS18110317**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
North Carolina	624-2018	31-Dec-2018
Arkansas	88-0356	27-Mar-2019
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193 2018-2019	30-Apr-2019
Illinois	004438	29-Jun-2019
Louisiana	03087	30-Jun-2019
Dept of Defense	ANAB L2231	22-Dec-2018
Kentucky	123043 - 2018	30-Apr-2019
Kansas	E-10352 2018-2019	31-Jul-2019
Oklahoma	2018-156	31-Aug-2019

Sample Receipt Checklist

Client Name: ALS-Hou High Res
Work Order: HS18110317

Date/Time Received: **06-Nov-2018 16:25**
Received by: **PMG**

Checklist completed by: *Corey Grandits* eSignature — 13-Nov-2018 Date

Reviewed by: *Corey Grandits* eSignature — 13-Nov-2018 Date

Matrices: **S**

Carrier name: **ALS Courier**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☑	N/A ☐
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.1/1.5 uc/c	SMO4	
Cooler(s)/Kit(s):	na		
Date/Time sample(s) sent to storage:	na		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

ALS Environmental Chain of Custody

10450 Stancliff Rd • Houston, TX 77099 • 281-530-5656 • FAX

ALS Contact: Kristin Brown

Project Number: E1801020
Project Manager: Kristin Brown
QAP: LAB QAP

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	TX1005
E1801020-018	SL0022	1	Sediment	11/3/18	1540	Houston Full	X

Test Comments

Misc Out 1 - None E1801020-018 TX1005 TPH

Special Instructions/Comments	Turnaround Requirements	Report Requirements	Invoice Information
H - Test is On Hold P - Test is Authorized for Prep Only	_X_ **RUSH** (Surcharges Apply) **PLEASE CIRCLE WORK DAYS** 1 2 3 4 5 ____ **STANDARD** Requested FAX Date: _____ Requested Report Date: __	____ I. Results Only _X_ II. Results + QC Summaries ____ III. Results + QC and Calibration Summaries ____ IV. Data Validation Report with Raw Data PQL/MDL/J _Y_ EDD	PO# 55E1801020 Bill to

Relinquished By: COREY G Received By: PARESH G Airbill Number:

RIGHT SOLUTIONS | RIGHT PARTNER

019120

Texas TPH 1005 Raw Data

ALS – Houston (High Res)
PROJECT: E1801020
ALS WO# HS18110317

FORM 2
SOIL TPH SURROGATE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS18110317

Level: (low/med) LOW

	CLIENT SAMPLE NO.	S1 #	S2 (FBP) #	S3 #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	LCSD-134303	119	124							0
02	MBLK-134303	116	119							0
03	LCS-134303	115	127							0
04	HS18110317-0	104	107							0
05										
06										
07										
08										
09										
10										
11										
12										
13										
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22										
23										
24										
25										
26										
27										
28										

QC LIMITS

S1 = Trifluoromethyl benzen (70-130)
S2 (FBP) = 2-Fluorobiphenyl (70-130)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

FID12 -Logbook

Batch: 32917 **Analyst:** Marco Gutierrez
Date: 08-17-2018 **Reviewer:**
Method: tx1005 **Laboratory:** Houston
Comments: target sequence 180817

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	ICAL L1	ICAL1	08-17-2018 08:06 pm	1.00	30.00 mL	3.00 mL	FID12003.D	Liquid	Y	NA
2	ICAL L2	ICAL2	08-17-2018 08:35 pm	1.00	30.00 mL	3.00 mL	FID12004.D	Liquid	Y	NA
3	ICAL L3	ICAL3	08-17-2018 09:04 pm	1.00	30.00 mL	3.00 mL	FID12005.D	Liquid	Y	NA
4	ICAL L4	ICAL4	08-17-2018 09:33 pm	1.00	30.00 mL	3.00 mL	FID12006.D	Liquid	Y	NA
5	ICAL L5	ICAL5	08-17-2018 10:02 pm	1.00	30.00 mL	3.00 mL	FID12007.D	Liquid	Y	NA
6	ICAL L6	ICAL6	08-17-2018 10:31 pm	1.00	30.00 mL	3.00 mL	FID12008.D	Liquid	Y	NA
7	ICAL L7	ICAL7	08-17-2018 11:00 pm	1.00	30.00 mL	3.00 mL	FID12009.D	Liquid	Y	NA
8	ICV	ICV	08-17-2018 11:29 pm	1.00	30.00 mL	3.00 mL	FID12010.D	Liquid	Y	NA

Chemical	Value
ICAL STD ID	3060618-02
MARKER ID	3060617-02
ICV STD ID	3060618-03

FORM 3
WATER TPH METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS18110317

Matrix Spike - Sample No.: ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
nC6 to nC12	250.000	207.306	83	75-125
>nC12 to nC28	250.000	227.397	91	75-125
2-Fluorobiphenyl	25.000	24.535	98	75-125
Trifluoromethyl benzene	25.000	22.154	89	75-125

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

_____

FORM III TPH

FORM 6
TPH INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS18110317

Instrument ID: FID-12 Calibration Date(s): 08/17/18 08/17/18

Column: RTX-5 ID: 530.00 (mm) Calibration Time(s): 2006 2300

LAB FILE ID: RF5: FID12003 RF20: FID12004 RF50: FID12005
RF100: FID12006 RF250: FID12007 RF500: FID12008

COMPOUND	RF5	RF20	RF50	RF100	RF250	RF500
nC6 to nC12	915.400	925.250	680.420	848.140	788.068	772.288
>nC12 to nC28	798.200	600.150	586.880	774.050	686.984	719.862
2-Fluorobiphenyl	1182.000	1112.500	897.000	1067.500	924.240	928.680
Trifluoromethyl benzene	1046.000	824.000	624.000	711.500	627.000	615.740

FORM VI TPH

FORM 6
TPH INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS1811031

Instrument ID: FID-12 Calibration Date(s): 08/17/18 08/17/18

Column: RTX-5 ID: 530.00 (mm) Calibration Time(s): 2006 2300

RF1000: FID12009

COMPOUND	RF1000	CURVE	COEFFICENT A1	%RSD OR R^2	MAX %RSD OR R^2
nC6 to nC12	798.483	AVRG	818.292714	10.488	25.000
>nC12 to nC28	759.039	AVRG	703.595000	11.870	25.000
2-Fluorobiphenyl	973.050	AVRG	1012.13857	10.783	25.000
Trifluoromethyl benzene	630.790	AVRG	725.575714	22.054	25.000

FORM VI TPH

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12003.D
Lab Smp Id: ICAL L1 Client Smp ID: ICAL L1
Inj Date : 17-AUG-2018 20:06
Operator : MG Inst ID: FID-12.i
Smp Info : ICAL L1
Misc Info :
Comment :
Method : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\TX1005-180817.m
Meth Date : 28-Nov-2018 13:49 Marco.Guti Quant Type: ESTD
Cal Date : 17-AUG-2018 23:00 Cal File: FID12009.D
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TX1005ICAL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

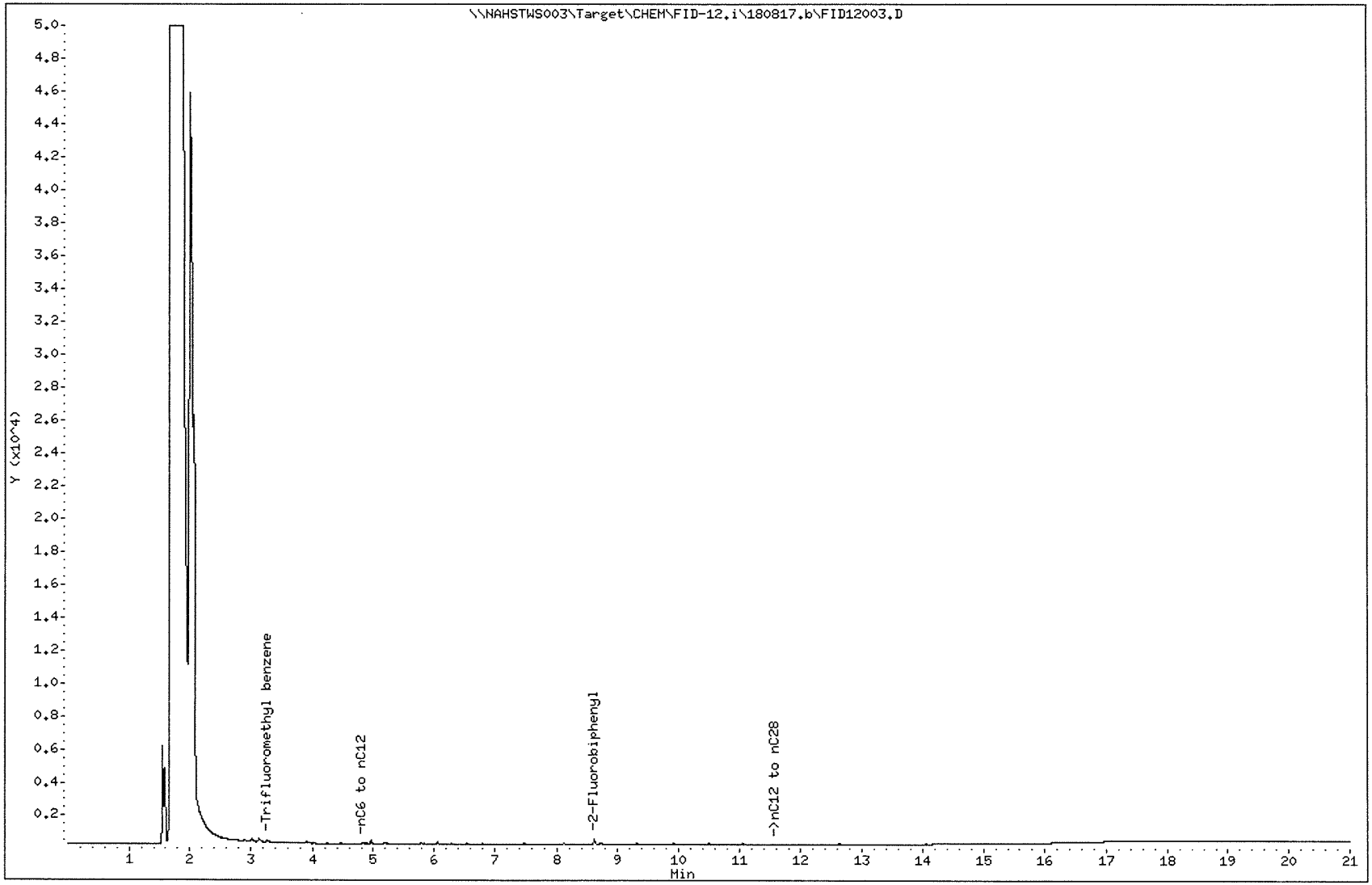
Name	Value	Description
DF	1.000	Dilution Factor
Vt	3.000	Final Volume (mL)
Vo	30.000	Sample Volume (mL)
Vt/Vo	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
$ 1 Trifluoromethyl benzene	3.264	3.268	-0.004	523	0.50000	0.720(M)
S 2 nC6 to nC12	2.150-7.486			4577	5.00000	5.593(M)
$ 3 2-Fluorobiphenyl	8.611	8.608	0.003	591	0.50000	0.583
S 4 >nC12 to nC28	7.550-15.623			3991	5.00000	5.672(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12003.D
Date : 17-AUG-2018 20:06
Client ID: ICAL L1
Instrument: FID-12.i
Sample Info: ICAL L1
Purge Volume: 30.0
Operator: MG
Column phase: RTX-5
Column diameter: 530.00



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Data file : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12004.D
Lab Smp Id: ICAL L2 Client Smp ID: ICAL L2
Inj Date : 17-AUG-2018 20:35
Operator : MG Inst ID: FID-12.i
Smp Info : ICAL L2
Misc Info :
Comment :
Method : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\TX1005-180817.m
Meth Date : 28-Nov-2018 13:49 Marco.Guti Quant Type: ESTD
Cal Date : 17-AUG-2018 20:06 Cal File: FID12003.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TX1005ICAL.sub
Target Version: 4.14

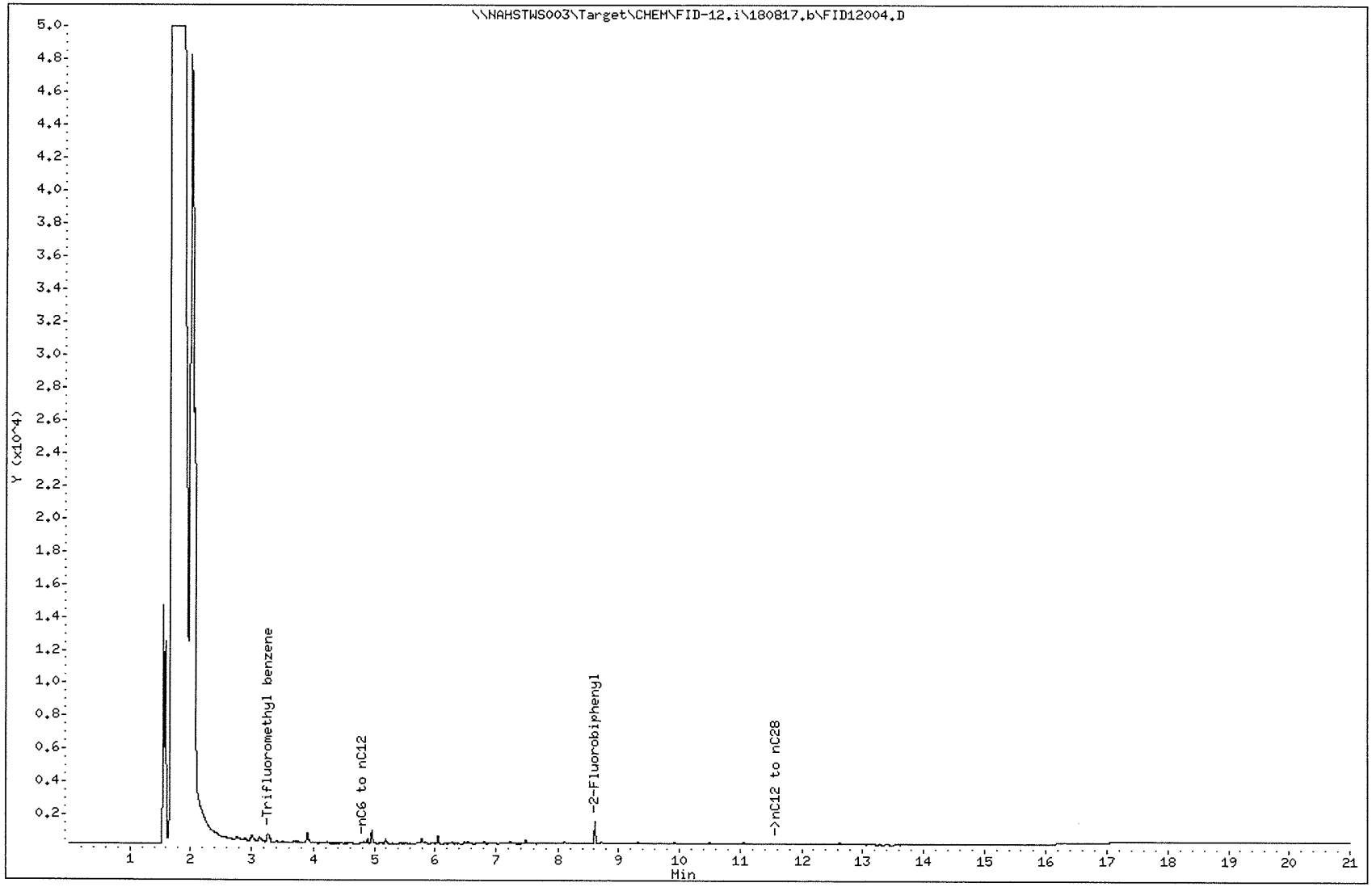
Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	3.000	Final Volume (mL)
Vo	30.000	Sample Volume (mL)
Vt/Vo	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
$ 1 Trifluoromethyl benzene	3.264	3.268	-0.004	1648	2.00000	2.271
S 2 nC6 to nC12	2.150-7.486			18505	20.0000	22.614
$ 3 2-Fluorobiphenyl	8.607	8.608	-0.001	2225	2.00000	2.198
S 4 >nC12 to nC28	7.550-15.623			12003	20.0000	17.059

Data File: \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12004.D
Date : 17-AUG-2018 20:35
Client ID: ICAL L2
Sample Info: ICAL L2
Purge Volume: 30.0
Column phase: RTX-5

Instrument: FID-12.i
Operator: MG
Column diameter: 530.00



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Data file : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12005.D
Lab Smp Id: ICAL L3 Client Smp ID: ICAL L3
Inj Date : 17-AUG-2018 21:04
Operator : MG Inst ID: FID-12.i
Smp Info : ICAL L3
Misc Info :
Comment :
Method : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\TX1005-180817.m
Meth Date : 28-Nov-2018 13:49 Marco.Guti Quant Type: ESTD
Cal Date : 17-AUG-2018 20:35 Cal File: FID12004.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TX1005ICAL.sub
Target Version: 4.14

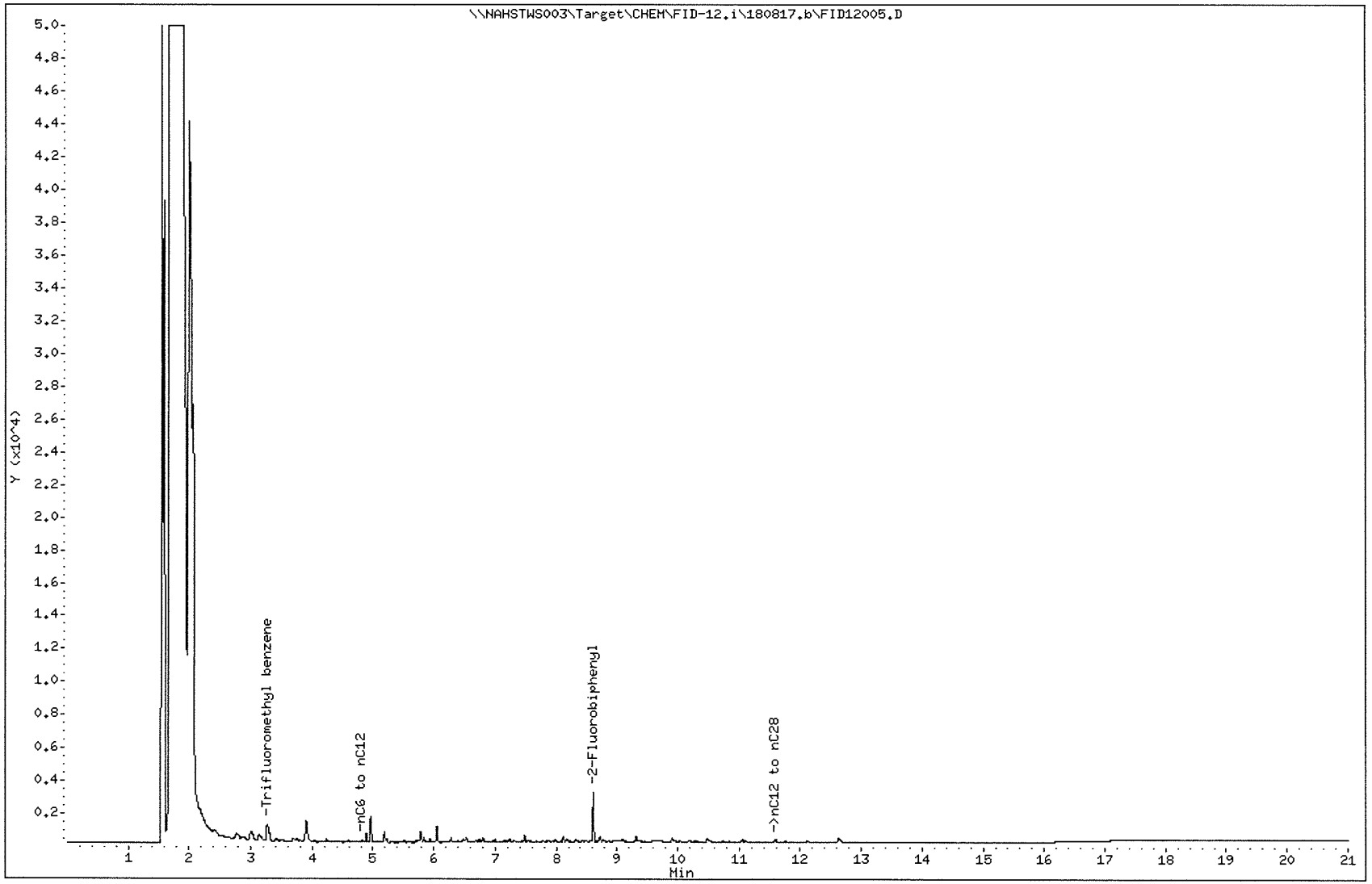
Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	3.000	Final Volume (mL)
Vo	30.000	Sample Volume (mL)
Vt/Vo	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
$ 1 Trifluoromethyl benzene	3.265	3.268	-0.003	3120	5.00000	4.300
S 2 nC6 to nC12	2.150-7.486			34021	50.0000	41.575
$ 3 2-Fluorobiphenyl	8.608	8.608	0.000	4485	5.00000	4.431
S 4 >nC12 to nC28	7.550-15.623			29344	50.0000	41.705

Data File: \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12005.D
Date : 17-AUG-2018 21:04
Client ID: ICAL L3
Sample Info: ICAL L3
Purge Volume: 30.0
Column phase: RTX-5

Instrument: FID-12.i
Operator: MG
Column diameter: 530.00



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Data file : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12006.D
Lab Smp Id: ICAL L4 Client Smp ID: ICAL L4
Inj Date : 17-AUG-2018 21:33
Operator : MG Inst ID: FID-12.i
Smp Info : ICAL L4
Misc Info :
Comment :
Method : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\TX1005-180817.m
Meth Date : 28-Nov-2018 13:49 Marco.Guti Quant Type: ESTD
Cal Date : 17-AUG-2018 21:04 Cal File: FID12005.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TX1005ICAL.sub
Target Version: 4.14

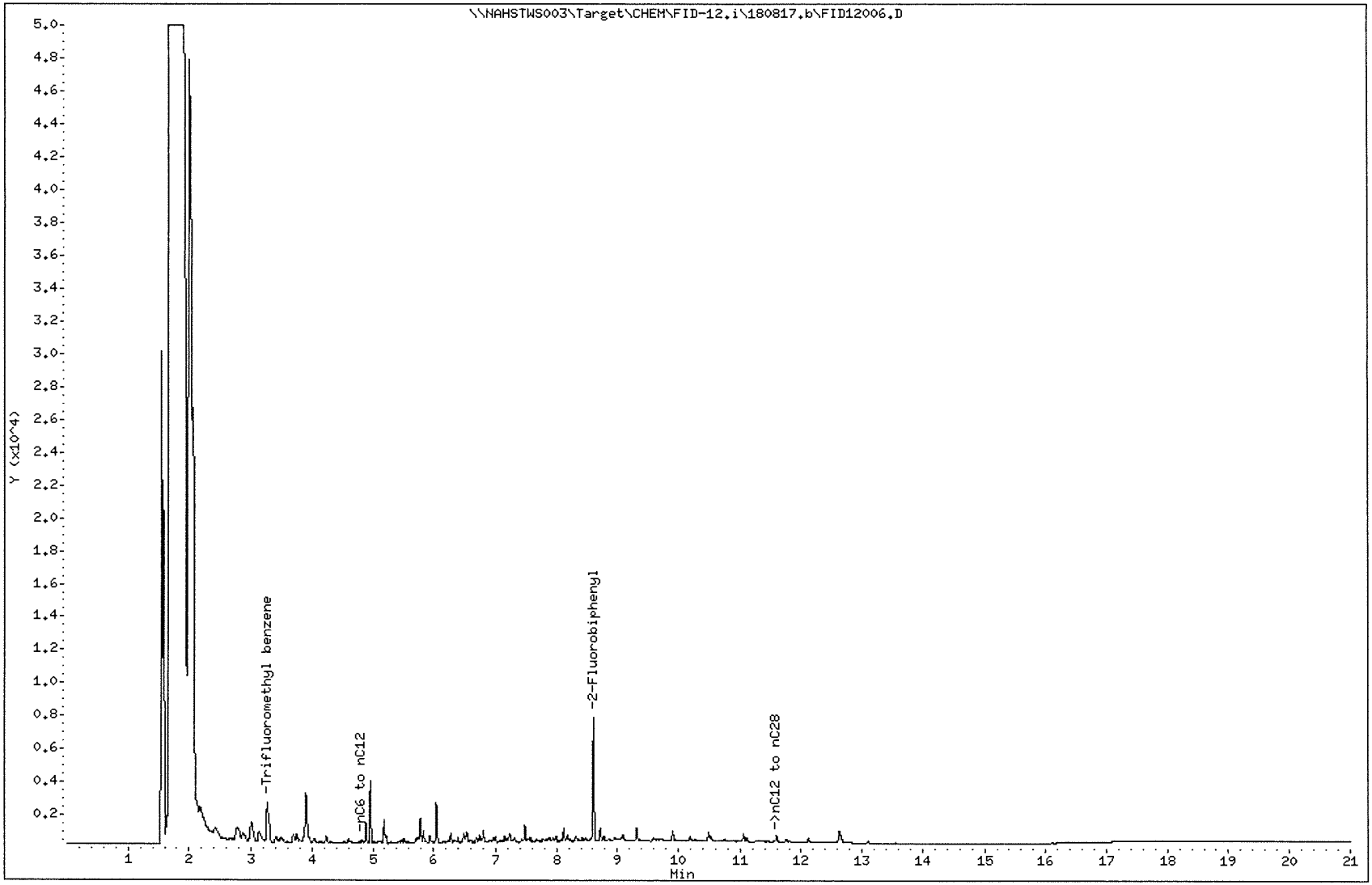
Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	3.000	Final Volume (mL)
Vo	30.000	Sample Volume (mL)
Vt/Vo	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
$ 1 Trifluoromethyl benzene	3.263	3.268	-0.005	7115	10.0000	9.806
S 2 nC6 to nC12	2.150-7.486			84814	100.000	103.647
$ 3 2-Fluorobiphenyl	8.606	8.608	-0.002	10675	10.0000	10.546
S 4 >nC12 to nC28	7.550-15.623			77405	100.000	110.013

Data File: \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12006.D
Date : 17-AUG-2018 21:33
Client ID: ICAL L4
Sample Info: ICAL L4
Purge Volume: 30.0
Column phase: RTX-5

Instrument: FID-12.i
Operator: MC
Column diameter: 530.00



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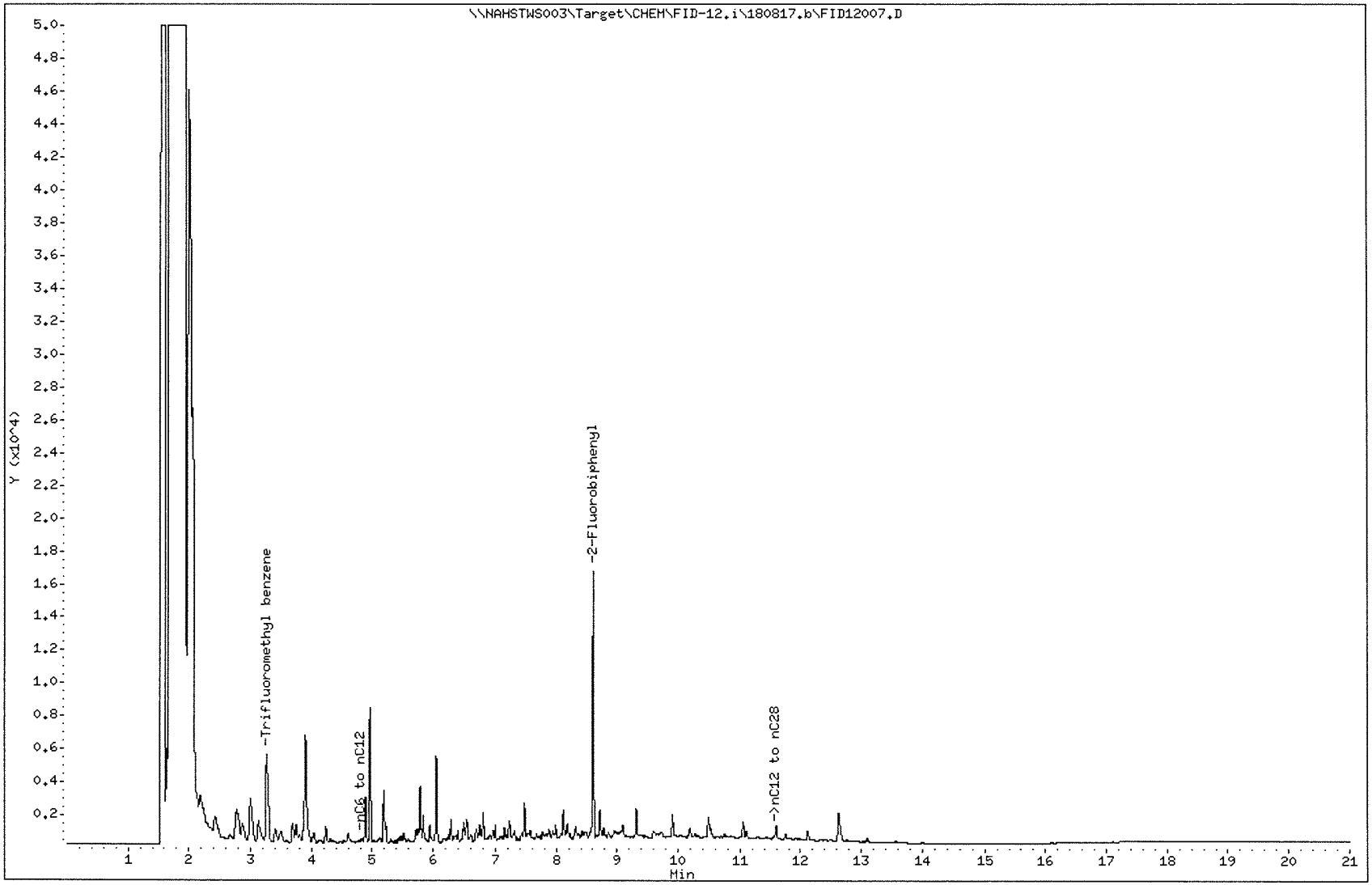
Data file : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12007.D
Lab Smp Id: ICAL L5 Client Smp ID: ICAL L5
Inj Date : 17-AUG-2018 22:02
Operator : MG Inst ID: FID-12.i
Smp Info : ICAL L5
Misc Info :
Comment :
Method : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\TX1005-180817.m
Meth Date : 28-Nov-2018 13:49 Marco.Guti Quant Type: ESTD
Cal Date : 17-AUG-2018 21:33 Cal File: FID12006.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TX1005ICAL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	3.000	Final Volume (mL)
Vo	30.000	Sample Volume (mL)
Vt/Vo	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
$ 1 Trifluoromethyl benzene	3.265	3.268	-0.003	15675	25.0000	21.603
S 2 nC6 to nC12	2.150-7.486			197017	250.000	240.765
$ 3 2-Fluorobiphenyl	8.605	8.608	-0.003	23106	25.0000	22.828
S 4 >nC12 to nC28	7.550-15.623			171746	250.000	244.097

Data File: \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12007.D
Date : 17-AUG-2018 22:02
Client ID: ICAL L5
Instrument: FID-12.i
Sample Info: ICAL L5
Purge Volume: 30.0
Operator: MG
Column phase: RTX-5
Column diameter: 530.00



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Data file : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12008.D
Lab Smp Id: ICAL L6 Client Smp ID: ICAL L6
Inj Date : 17-AUG-2018 22:31
Operator : MG Inst ID: FID-12.i
Smp Info : ICAL L6
Misc Info :
Comment :
Method : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\TX1005-180817.m
Meth Date : 28-Nov-2018 13:49 Marco.Guti Quant Type: ESTD
Cal Date : 17-AUG-2018 22:02 Cal File: FID12007.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TX1005ICAL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

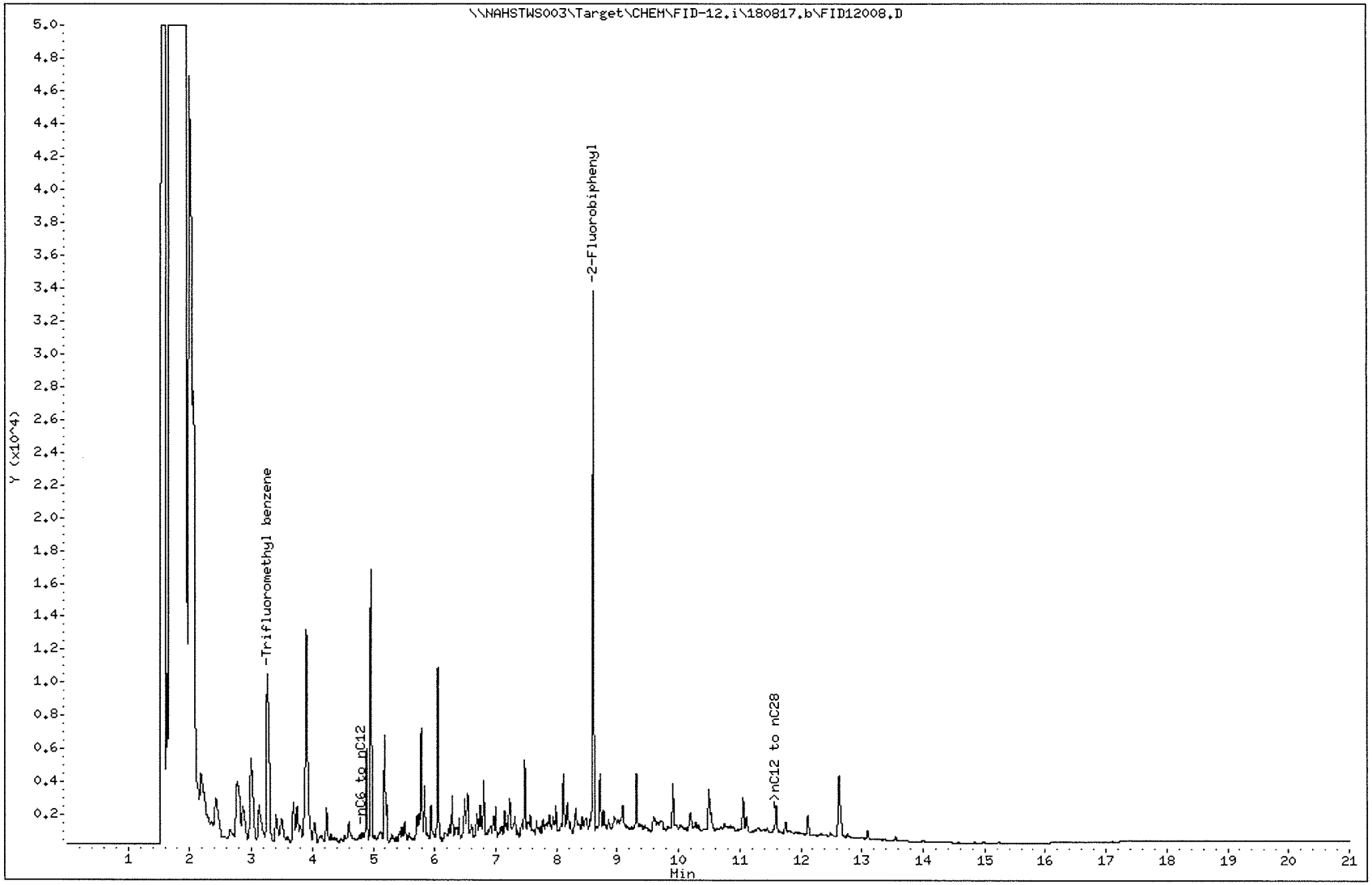
Name	Value	Description
DF	1.000	Dilution Factor
Vt	3.000	Final Volume (mL)
Vo	30.000	Sample Volume (mL)
Vt/Vo	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
$ 1 Trifluoromethyl benzene	3.264	3.268	-0.004	30787	50.0000	42.431
S 2 nC6 to nC12	2.150-7.486			386144	500.000	471.889(M)
$ 3 2-Fluorobiphenyl	8.607	8.608	-0.001	46434	50.0000	45.877
S 4 >nC12 to nC28	7.550-15.623			359931	500.000	511.559(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12008.D
Date : 17-AUG-2018 22:31
Client ID: ICAL L6
Instrument: FID-12.i
Sample Info: ICAL L6
Purge Volume: 30.0
Operator: MC
Column phase: RTX-5
Column diameter: 530.00



ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12009.D
Lab Smp Id: ICAL L7 Client Smp ID: ICAL L7
Inj Date : 17-AUG-2018 23:00
Operator : MG Inst ID: FID-12.i
Smp Info : ICAL L7
Misc Info :
Comment :
Method : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\TX1005-180817.m
Meth Date : 28-Nov-2018 13:49 Marco.Guti Quant Type: ESTD
Cal Date : 17-AUG-2018 22:31 Cal File: FID12008.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TX1005ICAL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	3.000	Final Volume (mL)
Vo	30.000	Sample Volume (mL)
Vt/Vo	0.00000	
Cpnd Variable		Local Compound Variable

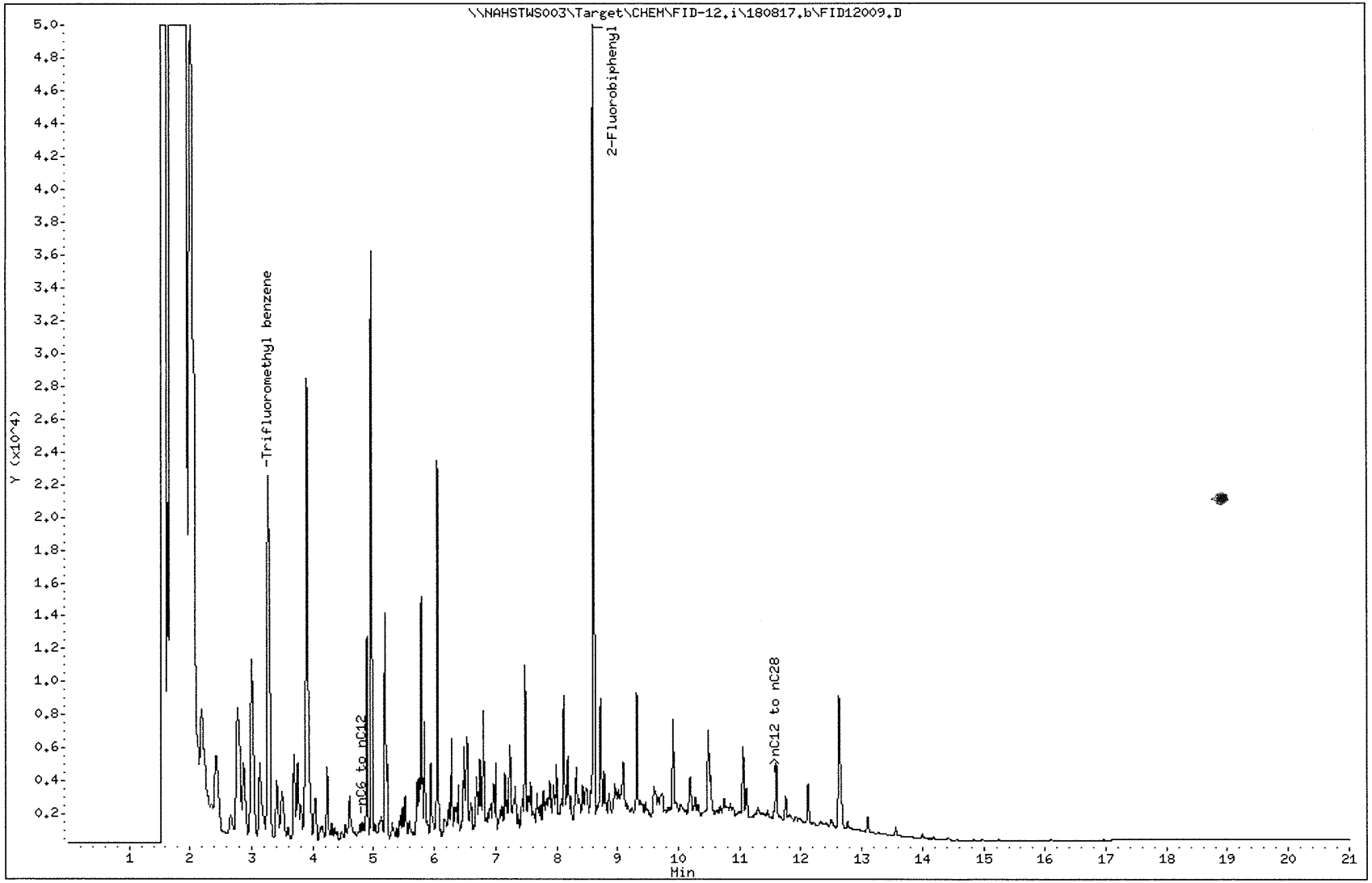
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
$ 1 Trifluoromethyl benzene	3.268	3.268	0.000	63079	100.000	86.936
S 2 nC6 to nC12	2.150-7.486			798483	1000.00	975.791
$ 3 2-Fluorobiphenyl	8.608	8.608	0.000	97305	100.000	96.138
S 4 >nC12 to nC28	7.550-15.623			759039	1000.00	1078.801(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12009.D
Date : 17-AUG-2018 23:00
Client ID: ICAL L7
Sample Info: ICAL L7
Purge Volume: 30.0
Column phase: RTX-5

Instrument: FID-12.i
Operator: MG
Column diameter: 530.00



ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12010.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 17-AUG-2018 23:29
Operator : MG Inst ID: FID-12.i
Smp Info : ICV
Misc Info :
Comment :
Method : \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\TX1005-180817.m
Meth Date : 28-Nov-2018 13:49 Marco.Guti Quant Type: ESTD
Cal Date : 17-AUG-2018 23:00 Cal File: FID12009.D
Als bottle: 10 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TX1005ICAL.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	3.000	Final Volume (mL)
Vo	30.000	Sample Volume (mL)
Vt/Vo	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppm)	CONCENTRATIONS FINAL (mg/L)
$ 1 Trifluoromethyl benzene	3.267	3.268	-0.001	16075	22.1548	2.215
S 2 nC6 to nC12	2.150-7.486			169637	207.306	20.730
$ 3 2-Fluorobiphenyl	8.607	8.608	-0.001	24833	24.5352	2.453
S 4 >nC12 to nC28	7.550-15.623			159996	227.398	22.739

ALS Laboratory Group

RECOVERY REPORT

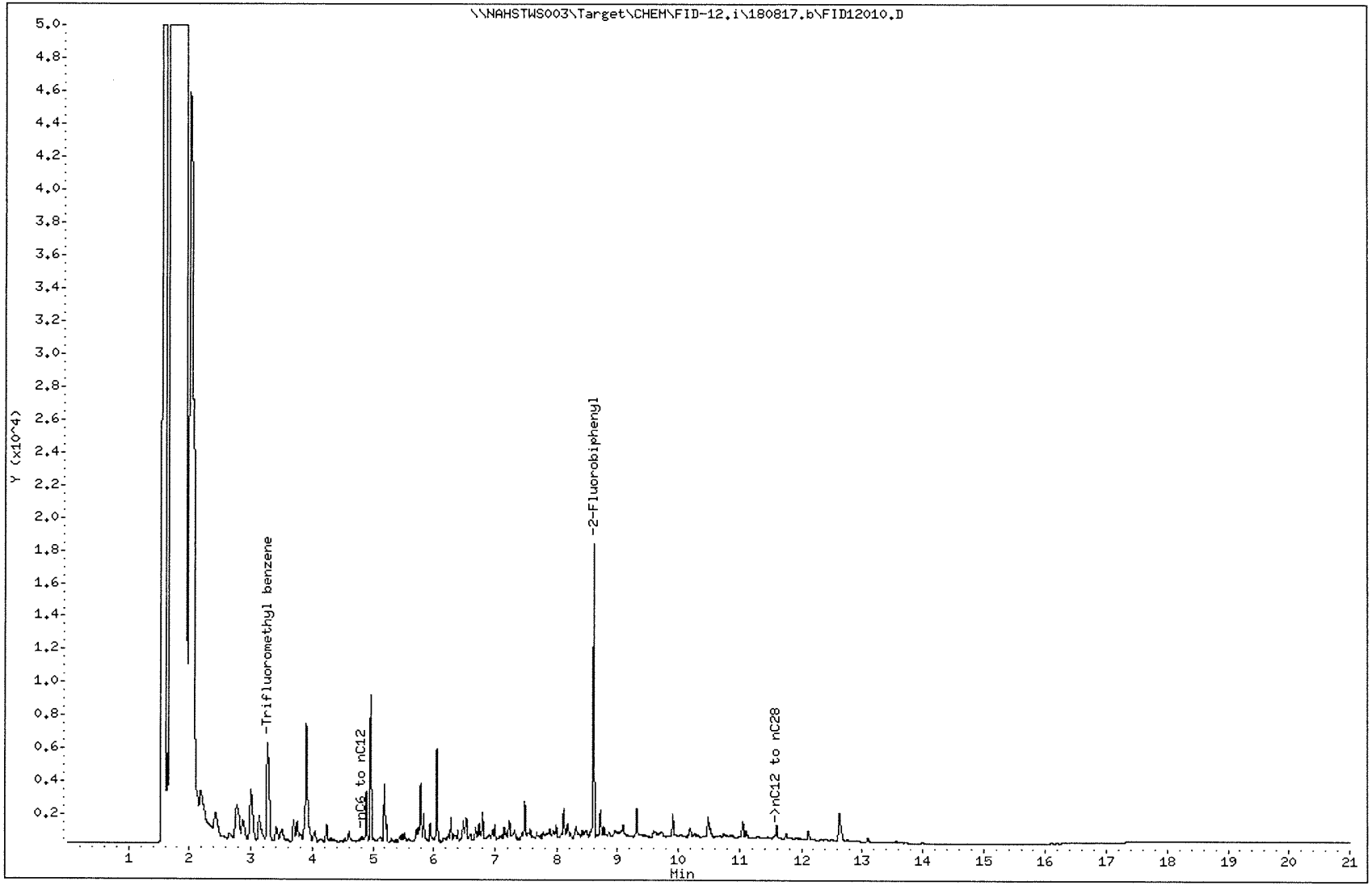
Client Name:
Client SDG: HS18110317
Sample Matrix: LIQUID
Fraction: TPH
Lab Smp Id: ICV
Client Smp ID: ICV
Level: LOW
Operator: MG
Data Type: GC DATA
SampleType: METHSPIKE
SpikeList File: TX1005ICV.spk
Quant Type: ESTD
Sublist File: TX1005ICAL.sub
Method File: \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\TX1005-180817.m
Misc Info:

SPIKE COMPOUND	AMOUNT ADDED ppm	AMOUNT RECOVERED ppm	% RECOVERED	LIMITS
$ 1 Trifluoromethyl be	25.000	22.154	88.62	75-125
S 2 nC6 to nC12	250.000	207.306	82.92	75-125
$ 3 2-Fluorobiphenyl	25.000	24.535	98.14	75-125
S 4 >nC12 to nC28	250.000	227.397	90.96	75-125

SURROGATE COMPOUND	AMOUNT ADDED ppm	AMOUNT RECOVERED ppm	% RECOVERED	LIMITS
$ 1 Trifluoromethyl be	25.000	22.154	88.62	70-130
$ 3 2-Fluorobiphenyl	25.000	24.535	98.14	70-130

Data File: \\NAHSTWS003\Target\CHEM\FID-12.i\180817.b\FID12010.D
Date : 17-AUG-2018 23:29
Client ID: ICV
Sample Info: ICV
Purge Volume: 30.0
Column phase: RTX-5

Instrument: FID-12.i
Operator: MG
Column diameter: 530.00



FID12 -Logbook

Batch: 33568
Date: 11-05-2018
Method: TX1005
Comments: target sequence 181105

Analyst: Marco Gutierrez
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	LCSD-134303	LCSD	11-06-2018 12:14 am	1.00	10.00 gm	10.00 mL	FID12062.D	Solid	Y	NA
2	HS18110280-04	SAMP	11-06-2018 12:43 am	1.00	10.12 gm	10.00 mL	FID12063.D	Solid	Y	NA
3	CCV	CCV	11-06-2018 06:25 pm	1.00	30.00 mL	3.00 mL	FID12050.D	Liquid	Y	NA
4	CCB	SAMP	11-06-2018 06:53 pm	1.00	30.00 mL	3.00 mL	FID12051.D	Liquid	Y	NA
5	MBLK-134308	MBLK	11-06-2018 07:22 pm	1.00	10.00 gm	10.00 mL	FID12052.D	Solid	Y	NA
6	LCS-134308	LCS	11-06-2018 07:52 pm	1.00	10.00 gm	10.00 mL	FID12053.D	Solid	Y	NA
7	LCSD-134308	LCSD	11-06-2018 08:21 pm	1.00	10.00 gm	10.00 mL	FID12054.D	Solid	Y	NA
8	HS18101699-02	SAMP	11-06-2018 08:50 pm	1.00	8.17 gm	10.00 mL	FID12055.D	Solid	Y	NA
9	MBLK-134308	MBLK	11-06-2018 09:19 pm	1.00	10.00 gm	10.00 mL	FID12056.D	Solid	Y	NA
10	LCS-134308	LCS	11-06-2018 09:48 pm	1.00	10.00 gm	10.00 mL	FID12057.D	Solid	Y	NA
11	LCSD-134308	LCSD	11-06-2018 10:18 pm	1.00	10.00 gm	10.00 mL	FID12058.D	Solid	Y	NA
12	HS18101699-02	SAMP	11-06-2018 10:46 pm	1.00	8.17 gm	10.00 mL	FID12059.D	Solid	Y	NA
13	MBLK-134303	MBLK	11-06-2018 11:16 pm	1.00	10.00 gm	10.00 mL	FID12060.D	Solid	Y	NA
14	LCS-134303	LCS	11-06-2018 11:45 pm	1.00	10.00 gm	10.00 mL	FID12061.D	Solid	Y	NA
15	HS18110081-22	SAMP	11-07-2018 12:03 am	1.00	33.12 mL	3.00 mL	FID12103.D	Liquid	Y	NA
16	MBLK-134353	MBLK	11-07-2018 12:32 am	1.00	10.00 gm	10.00 mL	FID12104.D	Solid	Y	NA
17	HS18110280-04MS	MS	11-07-2018 01:12 am	1.00	10.03 gm	10.00 mL	FID12064.D	Solid	Y	NA
18	HS18110280-04MSD	MSD	11-07-2018 01:41 am	1.00	10.06 gm	10.00 mL	FID12065.D	Solid	Y	NA
19	HS18110280-05	SAMP	11-07-2018 02:10 am	1.00	10.16 gm	10.00 mL	FID12066.D	Solid	Y	NA
20	HS18110300-02	SAMP	11-07-2018 02:39 am	1.00	12.40 gm	10.00 mL	FID12067.D	Solid	Y	NA
21	HS18110300-04	SAMP	11-07-2018 03:08 am	1.00	12.72 gm	10.00 mL	FID12068.D	Solid	Y	NA
22	HS18110300-06	SAMP	11-07-2018 03:37 am	1.00	14.77 gm	10.00 mL	FID12069.D	Solid	Y	NA
23	CCV	CCV	11-07-2018 04:06 am	1.00	30.00 mL	3.00 mL	FID12070.D	Liquid	Y	NA
24	CCB	SAMP	11-07-2018 04:35 am	1.00	30.00 mL	3.00 mL	FID12071.D	Liquid	Y	NA
25	HS18110311-01	SAMP	11-07-2018 05:04 am	10.00	11.60 gm	10.00 mL	FID12072.D	Solid	Y	NA
26	HS18110317-01	SAMP	11-07-2018 05:34 am	1.00	11.48 gm	10.00 mL	FID12073.D	Solid	Y	NA
27	MBLK-134311	MBLK	11-07-2018 06:03 am	1.00	30.00 mL	3.00 mL	FID12074.D	Liquid	Y	NA
28	LCS-134311	LCS	11-07-2018 06:32 am	1.00	30.00 mL	3.00 mL	FID12075.D	Liquid	Y	NA
29	LCSD-134311	LCSD	11-07-2018 07:00 am	1.00	30.00 mL	3.00 mL	FID12076.D	Liquid	Y	NA
30	HS18110296-01	SAMP	11-07-2018 07:29 am	1.00	29.50 mL	3.00 mL	FID12077.D	Liquid	Y	NA
31	HS18110300-01	SAMP	11-07-2018 07:59 am	1.00	32.21 mL	3.00 mL	FID12078.D	Liquid	Y	NA
32	HS18110300-01MS	MS	11-07-2018 08:28 am	1.00	30.03 mL	3.00 mL	FID12079.D	Liquid	Y	NA
33	HS18110300-01MSD	MSD	11-07-2018 08:57 am	1.00	30.48 mL	3.00 mL	FID12080.D	Liquid	Y	NA
34	HS18110300-03	SAMP	11-07-2018 09:26 am	1.00	30.46 mL	3.00 mL	FID12081.D	Liquid	Y	NA
35	HS18110300-05	SAMP	11-07-2018 09:55 am	1.00	30.86 mL	3.00 mL	FID12082.D	Liquid	Y	NA
36	HS18110053-01	SAMP	11-07-2018 10:24 am	50.00	10.37 gm	10.00 mL	FID12083.D	Solid	Y	NA
37	HS18110094-02	SAMP	11-07-2018 10:53 am	2.00	10.12 gm	10.00 mL	FID12084.D	Solid	Y	NA
38	CCV	CCV	11-07-2018 11:23 am	1.00	30.00 mL	3.00 mL	FID12085.D	Liquid	Y	NA
39	CCB	SAMP	11-07-2018 11:52 am	1.00	30.00 mL	3.00 mL	FID12086.D	Liquid	Y	NA
40	HS18101320-05	SAMP	11-07-2018 01:26 pm	20.00	29.36 mL	3.00 mL	FID12087.D	Liquid	Y	NA
41	HS18101320-07	SAMP	11-07-2018 01:54 pm	100.0(	1.05 gm	10.00 mL	FID12088.D	Solid	Y	NA

FID12 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
42	CCV	CCV	11-07-2018 03:18 pm	1.00	30.00 mL	3.00 mL	FID12089.D	Liquid	Y	NA
43	CCB	SAMP	11-07-2018 03:46 pm	1.00	30.00 mL	3.00 mL	FID12090.D	Liquid	Y	NA
44	CCV	CCV	11-07-2018 06:16 pm	1.00	30.00 mL	3.00 mL	FID12091.D	Liquid	Y	NA
45	CCB	SAMP	11-07-2018 06:44 pm	1.00	30.00 mL	3.00 mL	FID12092.D	Liquid	Y	NA
46	MBLK-134251	MBLK	11-07-2018 07:13 pm	1.00	30.00 mL	3.00 mL	FID12093.D	Liquid	Y	NA
47	LCS-134251	LCS	11-07-2018 07:42 pm	1.00	30.00 mL	3.00 mL	FID12094.D	Liquid	Y	NA
48	LCSD-134251	LCSD	11-07-2018 08:11 pm	1.00	30.00 mL	3.00 mL	FID12095.D	Liquid	Y	NA
49	HS18110131-02	SAMP	11-07-2018 08:41 pm	1.00	31.31 mL	3.00 mL	FID12096.D	Liquid	Y	NA
50	HS18110131-02MS	MS	11-07-2018 09:10 pm	1.00	30.02 mL	3.00 mL	FID12097.D	Liquid	Y	NA
51	HS18110131-02MSD	MSD	11-07-2018 09:38 pm	1.00	31.25 mL	3.00 mL	FID12098.D	Liquid	Y	NA
52	HS18110081-18	SAMP	11-07-2018 10:07 pm	1.00	30.16 mL	3.00 mL	FID12099.D	Liquid	Y	NA
53	HS18110081-19	SAMP	11-07-2018 10:36 pm	1.00	30.86 mL	3.00 mL	FID12100.D	Liquid	Y	NA
54	HS18110081-20	SAMP	11-07-2018 11:05 pm	1.00	31.25 mL	3.00 mL	FID12101.D	Liquid	Y	NA
55	HS18110081-21	SAMP	11-07-2018 11:34 pm	1.00	31.22 mL	3.00 mL	FID12102.D	Liquid	Y	NA
56	HS18110131-11	SAMP	11-08-2018 12:08 am	1.00	31.78 mL	3.00 mL	FID12151.D	Liquid	Y	NA
57	HS18110131-13	SAMP	11-08-2018 12:37 am	1.00	31.14 mL	3.00 mL	FID12152.D	Liquid	Y	NA
58	LCS-134353	LCS	11-08-2018 01:01 am	1.00	10.00 gm	10.00 mL	FID12105.D	Solid	Y	NA
59	LCSD-134353	LCSD	11-08-2018 01:31 am	1.00	10.00 gm	10.00 mL	FID12106.D	Solid	Y	NA
60	HS18110360-01	SAMP	11-08-2018 02:00 am	1.00	10.13 gm	10.00 mL	FID12107.D	Solid	Y	NA
61	HS18110360-01MS	MS	11-08-2018 02:29 am	1.00	10.27 gm	10.00 mL	FID12108.D	Solid	Y	NA
62	HS18110360-01MSD	MSD	11-08-2018 02:58 am	1.00	12.30 gm	10.00 mL	FID12109.D	Solid	Y	NA
63	HS18110364-16	SAMP	11-08-2018 03:27 am	1.00	8.65 gm	10.00 mL	FID12110.D	Solid	Y	NA
64	CCV	CCV	11-08-2018 03:56 am	1.00	30.00 mL	3.00 mL	FID12111.D	Liquid	Y	NA
65	CCB	SAMP	11-08-2018 04:25 am	1.00	30.00 mL	3.00 mL	FID12112.D	Liquid	Y	NA
66	HS18110364-17	SAMP	11-08-2018 04:54 am	1.00	9.42 gm	10.00 mL	FID12113.D	Solid	Y	NA
67	HS18110364-18	SAMP	11-08-2018 05:23 am	1.00	10.56 gm	10.00 mL	FID12114.D	Solid	Y	NA
68	HS18110364-19	SAMP	11-08-2018 05:52 am	1.00	11.20 gm	10.00 mL	FID12115.D	Solid	Y	NA
69	HS18110364-20	SAMP	11-08-2018 06:21 am	1.00	9.63 gm	10.00 mL	FID12116.D	Solid	Y	NA
70	HS18110364-21	SAMP	11-08-2018 06:50 am	1.00	10.33 gm	10.00 mL	FID12117.D	Solid	Y	NA
71	HS18110364-22	SAMP	11-08-2018 07:19 am	1.00	9.01 gm	10.00 mL	FID12118.D	Solid	Y	NA
72	HS18110364-23	SAMP	11-08-2018 07:48 am	1.00	11.71 gm	10.00 mL	FID12119.D	Solid	Y	NA
73	HS18110364-24	SAMP	11-08-2018 08:17 am	1.00	10.38 gm	10.00 mL	FID12120.D	Solid	Y	NA
74	HS18110364-25	SAMP	11-08-2018 08:46 am	1.00	10.73 gm	10.00 mL	FID12121.D	Solid	Y	NA
75	HS18110364-26	SAMP	11-08-2018 09:15 am	1.00	10.35 gm	10.00 mL	FID12122.D	Solid	Y	NA
76	HS18110364-27	SAMP	11-08-2018 09:44 am	1.00	10.04 gm	10.00 mL	FID12123.D	Solid	Y	NA
77	HS18101738-01	SAMP	11-08-2018 10:13 am	1.00	10.28 gm	10.00 mL	FID12124.D	Solid	Y	NA
78	HS18101738-02	SAMP	11-08-2018 10:42 am	1.00	10.46 gm	10.00 mL	FID12125.D	Solid	Y	NA
79	HS18101738-03	SAMP	11-08-2018 11:12 am	1.00	10.08 gm	10.00 mL	FID12126.D	Solid	Y	NA
80	HS18101738-04	SAMP	11-08-2018 11:41 am	1.00	10.26 gm	10.00 mL	FID12127.D	Solid	Y	NA
81	CCV	CCV	11-08-2018 12:10 pm	1.00	30.00 mL	3.00 mL	FID12128.D	Liquid	Y	NA
82	CCB	SAMP	11-08-2018 12:39 pm	1.00	30.00 mL	3.00 mL	FID12129.D	Liquid	Y	NA
83	HS18110051-01	SAMP	11-08-2018 01:08 pm	1.00	10.19 gm	10.00 mL	FID12130.D	Solid	Y	NA
84	HS18110051-02	SAMP	11-08-2018 01:38 pm	1.00	10.09 gm	10.00 mL	FID12131.D	Solid	Y	NA
85	IBLK	SAMP	11-08-2018 02:07 pm	1.00	30.00 mL	3.00 mL	FID12132.D	Liquid	Y	NA
86	IBLK	SAMP	11-08-2018 02:36 pm	1.00	30.00 mL	3.00 mL	FID12133.D	Liquid	Y	NA

FID12 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
87	HS18110364-16	SAMP	11-08-2018 03:05 pm	1.00	8.65 gm	10.00 mL	FID12134.D	Solid	Y	NA
88	HS18110360-01	SAMP	11-08-2018 03:34 pm	5.00	10.13 gm	10.00 mL	FID12135.D	Solid	Y	NA
89	IBLK	SAMP	11-08-2018 04:04 pm	1.00	30.00 mL	3.00 mL	FID12136.D	Liquid	Y	NA
90	HS18110081-18	SAMP	11-08-2018 04:33 pm	1.00	30.16 mL	3.00 mL	FID12137.D	Liquid	Y	NA
91	HS18110081-21	SAMP	11-08-2018 05:02 pm	5.00	31.22 mL	3.00 mL	FID12138.D	Liquid	Y	NA
92	CCV	CCV	11-08-2018 06:20 pm	1.00	30.00 mL	3.00 mL	FID12139.D	Liquid	Y	NA
93	CCB	SAMP	11-08-2018 06:48 pm	1.00	30.00 mL	3.00 mL	FID12140.D	Liquid	Y	NA
94	HS18110155-01	SAMP	11-08-2018 07:17 pm	1.00	31.21 mL	3.00 mL	FID12141.D	Liquid	Y	NA
95	HS18110157-01	SAMP	11-08-2018 07:46 pm	1.00	31.08 mL	3.00 mL	FID12142.D	Liquid	Y	NA
96	HS18110010-01	SAMP	11-08-2018 08:16 pm	100.0(	30.74 mL	3.00 mL	FID12143.D	Liquid	Y	NA
97	HS18110131-01	SAMP	11-08-2018 08:45 pm	1.00	30.85 mL	3.00 mL	FID12144.D	Liquid	Y	NA
98	HS18110131-03	SAMP	11-08-2018 09:14 pm	1.00	31.04 mL	3.00 mL	FID12145.D	Liquid	Y	NA
99	HS18110131-04	SAMP	11-08-2018 09:43 pm	1.00	31.07 mL	3.00 mL	FID12146.D	Liquid	Y	NA
10(	HS18110131-05	SAMP	11-08-2018 10:12 pm	1.00	30.52 mL	3.00 mL	FID12147.D	Liquid	Y	NA
10'	HS18110131-06	SAMP	11-08-2018 10:41 pm	1.00	30.44 mL	3.00 mL	FID12148.D	Liquid	Y	NA
10:	HS18110131-07	SAMP	11-08-2018 11:10 pm	1.00	30.73 mL	3.00 mL	FID12149.D	Liquid	Y	NA
10:	HS18110131-10	SAMP	11-08-2018 11:39 pm	1.00	31.06 mL	3.00 mL	FID12150.D	Liquid	Y	NA
10-	HS18110478-07	SAMP	11-09-2018 12:17 am	1.00	9.72 gm	10.00 mL	FID12201.D	Solid	Y	NA
10:	HS18110478-08	SAMP	11-09-2018 12:45 am	1.00	11.25 gm	10.00 mL	FID12202.D	Solid	Y	NA
10(	HS18110131-15	SAMP	11-09-2018 01:06 am	1.00	30.66 mL	3.00 mL	FID12153.D	Liquid	Y	NA
10'	HS18110131-16	SAMP	11-09-2018 01:35 am	1.00	30.51 mL	3.00 mL	FID12154.D	Liquid	Y	NA
10(	HS18110131-17	SAMP	11-09-2018 02:04 am	1.00	30.80 mL	3.00 mL	FID12155.D	Liquid	Y	NA
10:	HS18110132-01	SAMP	11-09-2018 02:33 am	1.00	31.10 mL	3.00 mL	FID12156.D	Liquid	Y	NA
11(	HS18110136-01	SAMP	11-09-2018 03:02 am	1.00	31.08 mL	3.00 mL	FID12157.D	Liquid	Y	NA
111	HS18110137-01	SAMP	11-09-2018 03:31 am	1.00	30.86 mL	3.00 mL	FID12158.D	Liquid	Y	NA
11:	CCV	CCV	11-09-2018 04:00 am	1.00	30.00 mL	3.00 mL	FID12159.D	Liquid	Y	NA
11:	CCB	SAMP	11-09-2018 04:29 am	1.00	30.00 mL	3.00 mL	FID12160.D	Liquid	Y	NA
114	HS18110139-01	SAMP	11-09-2018 04:58 am	1.00	30.80 mL	3.00 mL	FID12161.D	Liquid	Y	NA
11:	HS18110144-01	SAMP	11-09-2018 05:27 am	1.00	30.96 mL	3.00 mL	FID12162.D	Liquid	Y	NA
11(	HS18110203-01	SAMP	11-09-2018 05:55 am	1.00	30.66 mL	3.00 mL	FID12163.D	Liquid	Y	NA
117	HS18110204-01	SAMP	11-09-2018 06:24 am	1.00	30.41 mL	3.00 mL	FID12164.D	Liquid	Y	NA
11:	HS18110205-01	SAMP	11-09-2018 06:53 am	1.00	30.71 mL	3.00 mL	FID12165.D	Liquid	Y	NA
11:	HS18110206-01	SAMP	11-09-2018 07:22 am	1.00	30.88 mL	3.00 mL	FID12166.D	Liquid	Y	NA
12(	HS18110207-01	SAMP	11-09-2018 07:51 am	1.00	30.64 mL	3.00 mL	FID12167.D	Liquid	Y	NA
12'	HS18110208-01	SAMP	11-09-2018 08:20 am	1.00	30.46 mL	3.00 mL	FID12168.D	Liquid	Y	NA
12:	MBLK-134360	MBLK	11-09-2018 08:48 am	1.00	10.00 gm	10.00 mL	FID12169.D	Solid	Y	NA
12:	LCS-134360	LCS	11-09-2018 09:17 am	1.00	10.00 gm	10.00 mL	FID12170.D	Solid	Y	NA
12-	LCSD-134360	LCSD	11-09-2018 09:46 am	1.00	10.00 gm	10.00 mL	FID12171.D	Solid	Y	NA
12:	HS18110310-02	SAMP	11-09-2018 10:15 am	1.00	10.33 gm	10.00 mL	FID12172.D	Solid	Y	NA
12(	HS18110310-02MS	MS	11-09-2018 10:44 am	1.00	10.28 gm	10.00 mL	FID12173.D	Solid	Y	NA
12'	HS18110310-02MSD	MSD	11-09-2018 11:13 am	1.00	10.25 gm	10.00 mL	FID12174.D	Solid	Y	NA
12(	HS18110310-10	SAMP	11-09-2018 11:42 am	1.00	10.07 gm	10.00 mL	FID12175.D	Solid	Y	NA
12:	HS18110319-17	SAMP	11-09-2018 12:11 pm	1.00	11.72 gm	10.00 mL	FID12176.D	Solid	Y	NA
13(	HS18110319-20	SAMP	11-09-2018 12:39 pm	1.00	14.06 gm	10.00 mL	FID12177.D	Solid	Y	NA
13'	HS18110319-23	SAMP	11-09-2018 01:08 pm	1.00	10.83 gm	10.00 mL	FID12178.D	Solid	Y	NA

FID12 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
13	CCV	CCV	11-09-2018 01:37 pm	1.00	30.00 mL	3.00 mL	FID12179.D	Liquid	Y	NA
13	CCB	SAMP	11-09-2018 02:07 pm	1.00	30.00 mL	3.00 mL	FID12180.D	Liquid	Y	NA
13	HS18110323-01	SAMP	11-09-2018 02:35 pm	1.00	11.91 gm	10.00 mL	FID12181.D	Solid	Y	NA
13	HS18110323-02	SAMP	11-09-2018 03:04 pm	1.00	12.93 gm	10.00 mL	FID12182.D	Solid	Y	NA
13	HS18110323-03	SAMP	11-09-2018 03:33 pm	1.00	11.45 gm	10.00 mL	FID12183.D	Solid	Y	NA
13	HS18110323-04	SAMP	11-09-2018 04:02 pm	1.00	12.71 gm	10.00 mL	FID12184.D	Solid	Y	NA
13	HS18110323-05	SAMP	11-09-2018 04:31 pm	1.00	10.33 gm	10.00 mL	FID12185.D	Solid	Y	NA
13	HS18110323-06	SAMP	11-09-2018 05:06 pm	1.00	12.29 gm	10.00 mL	FID12186.D	Solid	Y	NA
14	CCV	CCV	11-09-2018 05:35 pm	1.00	30.00 mL	3.00 mL	FID12187.D	Liquid	Y	NA
14	CCB	SAMP	11-09-2018 06:04 pm	1.00	30.00 mL	3.00 mL	FID12188.D	Liquid	Y	NA
14	MBLK-134443	MBLK	11-09-2018 06:33 pm	1.00	10.00 gm	10.00 mL	FID12189.D	Solid	Y	NA
14	LCS-134443	LCS	11-09-2018 07:02 pm	1.00	10.00 gm	10.00 mL	FID12190.D	Solid	Y	NA
14	LCSD-134443	LCSD	11-09-2018 07:30 pm	1.00	10.00 gm	10.00 mL	FID12191.D	Solid	Y	NA
14	HS18110478-14	SAMP	11-09-2018 07:59 pm	1.00	10.05 gm	10.00 mL	FID12192.D	Solid	Y	NA
14	HS18110478-14MS	MS	11-09-2018 08:28 pm	1.00	10.18 gm	10.00 mL	FID12193.D	Solid	Y	NA
14	HS18110478-14MSD	MSD	11-09-2018 08:57 pm	1.00	10.19 gm	10.00 mL	FID12194.D	Solid	Y	NA
14	HS18110478-01	SAMP	11-09-2018 09:25 pm	1.00	10.61 gm	10.00 mL	FID12195.D	Solid	Y	NA
14	HS18110478-02	SAMP	11-09-2018 09:54 pm	1.00	9.15 gm	10.00 mL	FID12196.D	Solid	Y	NA
15	HS18110478-03	SAMP	11-09-2018 10:22 pm	1.00	11.30 gm	10.00 mL	FID12197.D	Solid	Y	NA
15	HS18110478-04	SAMP	11-09-2018 10:51 pm	1.00	10.88 gm	10.00 mL	FID12198.D	Solid	Y	NA
15	HS18110478-05	SAMP	11-09-2018 11:20 pm	1.00	9.68 gm	10.00 mL	FID12199.D	Solid	Y	NA
15	HS18110478-06	SAMP	11-09-2018 11:48 pm	1.00	12.01 gm	10.00 mL	FID12200.D	Solid	Y	NA
15	HS18110449-01	SAMP	11-10-2018 12:01 am	1.00	11.54 gm	10.00 mL	FID12250.D	Solid	Y	NA
15	HS18110449-02	SAMP	11-10-2018 12:30 am	1.00	12.41 gm	10.00 mL	FID12251.D	Solid	Y	NA
15	HS18110449-03	SAMP	11-10-2018 12:58 am	10.00	10.73 gm	10.00 mL	FID12252.D	Solid	Y	NA
15	HS18110478-09	SAMP	11-10-2018 01:14 am	1.00	11.24 gm	10.00 mL	FID12203.D	Solid	Y	NA
15	HS18110478-10	SAMP	11-10-2018 01:42 am	1.00	10.36 gm	10.00 mL	FID12204.D	Solid	Y	NA
15	HS18110478-11	SAMP	11-10-2018 02:11 am	1.00	10.32 gm	10.00 mL	FID12205.D	Solid	Y	NA
16	HS18110478-12	SAMP	11-10-2018 02:40 am	1.00	10.25 gm	10.00 mL	FID12206.D	Solid	Y	NA
16	CCV	CCV	11-10-2018 03:08 am	1.00	30.00 mL	3.00 mL	FID12207.D	Liquid	Y	NA
16	CCB	SAMP	11-10-2018 03:37 am	1.00	30.00 mL	3.00 mL	FID12208.D	Liquid	Y	NA
16	HS18110478-13	SAMP	11-10-2018 04:05 am	1.00	10.46 gm	10.00 mL	FID12209.D	Solid	Y	NA
16	HS18110478-15	SAMP	11-10-2018 04:34 am	1.00	10.16 gm	10.00 mL	FID12210.D	Solid	Y	NA
16	HS18110478-16	SAMP	11-10-2018 05:02 am	1.00	10.53 gm	10.00 mL	FID12211.D	Solid	Y	NA
16	HS18110478-17	SAMP	11-10-2018 05:30 am	1.00	10.06 gm	10.00 mL	FID12212.D	Solid	Y	NA
16	HS18110478-18	SAMP	11-10-2018 05:59 am	1.00	10.89 gm	10.00 mL	FID12213.D	Solid	Y	NA
16	HS18110478-19	SAMP	11-10-2018 06:27 am	1.00	10.58 gm	10.00 mL	FID12214.D	Solid	Y	NA
16	HS18110478-20	SAMP	11-10-2018 06:56 am	1.00	10.50 gm	10.00 mL	FID12215.D	Solid	Y	NA
17	MBLK-134428	MBLK	11-10-2018 07:25 am	1.00	10.00 gm	10.00 mL	FID12216.D	Solid	Y	NA
17	LCS-134428	LCS	11-10-2018 07:53 am	1.00	10.00 gm	10.00 mL	FID12217.D	Solid	Y	NA
17	LCSD-134428	LCSD	11-10-2018 08:21 am	1.00	10.00 gm	10.00 mL	FID12218.D	Solid	Y	NA
17	HS18110442-01	SAMP	11-10-2018 08:50 am	100.0	10.80 gm	10.00 mL	FID12219.D	Solid	Y	NA
17	HS18110443-01	SAMP	11-10-2018 09:18 am	1.00	10.58 gm	10.00 mL	FID12220.D	Solid	Y	NA
17	HS18110443-02	SAMP	11-10-2018 09:47 am	1.00	10.02 gm	10.00 mL	FID12221.D	Solid	Y	NA
17	HS18110443-02MS	MS	11-10-2018 10:15 am	1.00	10.05 gm	10.00 mL	FID12222.D	Solid	Y	NA

FID12 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
177	HS18110443-02MSD	MSD	11-10-2018 10:44 am	1.00	10.04 gm	10.00 mL	FID12223.D	Solid	Y	NA
178	HS18110478-21	SAMP	11-10-2018 11:12 am	1.00	10.49 gm	10.00 mL	FID12224.D	Solid	Y	NA
179	HS18110478-22	SAMP	11-10-2018 11:41 am	1.00	10.59 gm	10.00 mL	FID12225.D	Solid	Y	NA
180	HS18110478-23	SAMP	11-10-2018 12:09 pm	1.00	10.36 gm	10.00 mL	FID12226.D	Solid	Y	NA
181	CCV	CCV	11-10-2018 12:38 pm	1.00	30.00 mL	3.00 mL	FID12227.D	Liquid	Y	NA
182	CCB	SAMP	11-10-2018 01:06 pm	1.00	30.00 mL	3.00 mL	FID12228.D	Liquid	Y	NA
183	HS18110489-01	SAMP	11-10-2018 01:35 pm	1.00	10.07 gm	10.00 mL	FID12229.D	Solid	Y	NA
184	HS18110489-02	SAMP	11-10-2018 02:03 pm	1.00	10.31 gm	10.00 mL	FID12230.D	Solid	Y	NA
185	HS18110489-03	SAMP	11-10-2018 03:00 pm	1.00	10.19 gm	10.00 mL	FID12231.D	Solid	Y	NA
186	HS18110489-04	SAMP	11-10-2018 03:29 pm	1.00	10.23 gm	10.00 mL	FID12232.D	Solid	Y	NA
187	MBLK-134429	MBLK	11-10-2018 03:57 pm	1.00	10.00 gm	10.00 mL	FID12233.D	Solid	Y	NA
188	LCS-134429	LCS	11-10-2018 04:26 pm	1.00	10.00 gm	10.00 mL	FID12234.D	Solid	Y	NA
189	LCSD-134429	LCSD	11-10-2018 04:54 pm	1.00	10.00 gm	10.00 mL	FID12235.D	Solid	Y	NA
190	HS18110441-08	SAMP	11-10-2018 05:23 pm	1.00	10.34 gm	10.00 mL	FID12236.D	Solid	Y	NA
191	HS18110441-08MS	MS	11-10-2018 05:51 pm	1.00	10.28 gm	10.00 mL	FID12237.D	Solid	Y	NA
192	HS18110441-08MSD	MSD	11-10-2018 06:20 pm	1.00	10.29 gm	10.00 mL	FID12238.D	Solid	Y	NA
193	HS18110010-03	SAMP	11-10-2018 06:48 pm	1.00	10.04 gm	10.00 mL	FID12239.D	Solid	Y	NA
194	HS18110396-01	SAMP	11-10-2018 07:17 pm	1.00	9.98 gm	10.00 mL	FID12240.D	Solid	Y	NA
195	HS18110441-01	SAMP	11-10-2018 07:45 pm	1.00	10.27 gm	10.00 mL	FID12241.D	Solid	Y	NA
196	HS18110441-02	SAMP	11-10-2018 08:14 pm	1.00	10.27 gm	10.00 mL	FID12242.D	Solid	Y	NA
197	HS18110441-03	SAMP	11-10-2018 08:42 pm	1.00	10.54 gm	10.00 mL	FID12243.D	Solid	Y	NA
198	HS18110441-04	SAMP	11-10-2018 09:10 pm	1.00	10.07 gm	10.00 mL	FID12244.D	Solid	Y	NA
199	HS18110441-05	SAMP	11-10-2018 09:39 pm	1.00	10.33 gm	10.00 mL	FID12245.D	Solid	Y	NA
200	HS18110441-06	SAMP	11-10-2018 10:07 pm	1.00	10.16 gm	10.00 mL	FID12246.D	Solid	Y	NA
201	CCV	CCV	11-10-2018 10:36 pm	1.00	30.00 mL	3.00 mL	FID12247.D	Liquid	Y	NA
202	CCB	SAMP	11-10-2018 11:04 pm	1.00	30.00 mL	3.00 mL	FID12248.D	Liquid	Y	NA
203	HS18110441-07	SAMP	11-10-2018 11:33 pm	1.00	10.51 gm	10.00 mL	FID12249.D	Solid	Y	NA
204	HS18110449-04	SAMP	11-11-2018 01:26 am	1.00	13.08 gm	10.00 mL	FID12253.D	Solid	Y	NA
205	HS18110449-05	SAMP	11-11-2018 01:55 am	1.00	8.76 gm	10.00 mL	FID12254.D	Solid	Y	NA
206	HS18110449-06	SAMP	11-11-2018 02:23 am	1.00	12.49 gm	10.00 mL	FID12255.D	Solid	Y	NA
207	HS18110449-07	SAMP	11-11-2018 02:52 am	1.00	13.10 gm	10.00 mL	FID12256.D	Solid	Y	NA
208	HS18110449-08	SAMP	11-11-2018 03:20 am	1.00	13.08 gm	10.00 mL	FID12257.D	Solid	Y	NA
209	HS18110449-09	SAMP	11-11-2018 03:49 am	1.00	9.91 gm	10.00 mL	FID12258.D	Solid	Y	NA
210	HS18110449-10	SAMP	11-11-2018 04:17 am	1.00	13.19 gm	10.00 mL	FID12259.D	Solid	Y	NA
211	HS18101714-01	SAMP	11-11-2018 04:46 am	1.00	31.48 mL	3.00 mL	FID12260.D	Liquid	Y	NA
212	HS18101714-02	SAMP	11-11-2018 05:14 am	1.00	31.49 mL	3.00 mL	FID12261.D	Liquid	Y	NA
213	HS18101714-03	SAMP	11-11-2018 05:42 am	1.00	31.10 mL	3.00 mL	FID12262.D	Liquid	Y	NA
214	HS18101714-04	SAMP	11-11-2018 06:11 am	1.00	31.52 mL	3.00 mL	FID12263.D	Liquid	Y	NA
215	HS18101714-05	SAMP	11-11-2018 06:39 am	1.00	30.94 mL	3.00 mL	FID12264.D	Liquid	Y	NA
216	HS18101714-06	SAMP	11-11-2018 07:08 am	1.00	31.74 mL	3.00 mL	FID12265.D	Liquid	Y	NA
217	HS18110020-02	SAMP	11-11-2018 07:36 am	1.00	30.05 mL	3.00 mL	FID12266.D	Liquid	Y	NA
218	CCV	CCV	11-11-2018 08:04 am	1.00	30.00 mL	3.00 mL	FID12267.D	Liquid	Y	NA
219	CCB	SAMP	11-11-2018 08:33 am	1.00	30.00 mL	3.00 mL	FID12268.D	Liquid	Y	NA
220	HS18110020-03	SAMP	11-11-2018 09:01 am	1.00	30.57 mL	3.00 mL	FID12269.D	Liquid	Y	NA
221	HS18110020-04	SAMP	11-11-2018 09:30 am	1.00	30.97 mL	3.00 mL	FID12270.D	Liquid	Y	NA

FID12 -Logbook

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
22	HS18110020-05	SAMP	11-11-2018 09:58 am	1.00	30.37 mL	3.00 mL	FID12271.D	Liquid	Y	NA
22	HS18110020-06	SAMP	11-11-2018 10:27 am	1.00	30.29 mL	3.00 mL	FID12272.D	Liquid	Y	NA
22	CCV	CCV	11-11-2018 10:55 am	1.00	30.00 mL	3.00 mL	FID12273.D	Liquid	Y	NA
22	CCB	SAMP	11-11-2018 11:23 am	1.00	30.00 mL	3.00 mL	FID12274.D	Liquid	Y	NA

Chemical	Value
MARKER ID	3060644-03
CCV	3060645-03

FORM 7B
TPH CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS18110317

Instrument ID: FID-12 Calibration Date: 11/06/18 Time: 1825

Lab File ID: FID12050 Init. Calib. Date(s): 08/17/18 08/17/18

Init. Calib. Times: 2006 2300

GC Column: RTX-5 ID: 530.00 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
nC6 to nC12	818.29300	867.48400	0.01	6.01	25.00	AVRG
>nC12 to nC28	703.59500	818.04400	0.01	16.27	25.00	AVRG
2-Fluorobiphenyl	1012.1380	1201.4800	0.01	18.71	25.00	AVRG
Trifluoromethyl benzene	725.57600	840.64000	0.01	15.86	25.00	AVRG

FORM VII TPH

FORM 7B
TPH CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS18110317

Instrument ID: FID-12 Calibration Date: 11/07/18 Time: 0406

Lab File ID: FID12070 Init. Calib. Date(s): 08/17/18 08/17/18

Init. Calib. Times: 2006 2300

GC Column: RTX-5 ID: 530.00 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
nC6 to nC12	818.29300	978.26000	0.01	19.55	25.00	AVRG
>nC12 to nC28	703.59500	834.36000	0.01	18.58	25.00	AVRG
2-Fluorobiphenyl	1012.1380	1202.8800	0.01	18.84	25.00	AVRG
Trifluoromethyl benzene	725.57600	704.24000	0.01	-2.94	25.00	AVRG

FORM VII TPH

FORM 7B
TPH CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS18110317

Instrument ID: FID-12 Calibration Date: 11/07/18 Time: 1123

Lab File ID: FID12085 Init. Calib. Date(s): 08/17/18 08/17/18

Init. Calib. Times: 2006 2300

GC Column: RTX-5 ID: 530.00 (mm)

COMPOUND	RRF OR AMOUNT	RRF250.00 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
nC6 to nC12	818.29300	914.85600	0.01	11.80	25.00	AVRG
>nC12 to nC28	703.59500	780.48400	0.01	10.93	25.00	AVRG
2-Fluorobiphenyl	1012.1380	1212.2400	0.01	19.77	25.00	AVRG
Trifluoromethyl benzene	725.57600	788.32000	0.01	8.65	25.00	AVRG

FORM VII TPH

ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\FID12050.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 06-NOV-2018 18:25
Operator : MG Inst ID: FID-12.i
Smp Info : CCV;CCV;2;4
Misc Info :
Comment :
Method : \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\TX1005-180817.m
Meth Date : 28-Nov-2018 13:33 Marco.Guti Quant Type: ESTD
Cal Date : 17-AUG-2018 23:00 Cal File: FID12009.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TX1005ICAL.sub
Target Version: 4.14
Processing Host: NAHSTW7095

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	3.000	Final Volume (mL)
Vo	30.000	Sample Volume (mL)
Vt/Vo	0.00000	
Cpnd Variable		Local Compound Variable

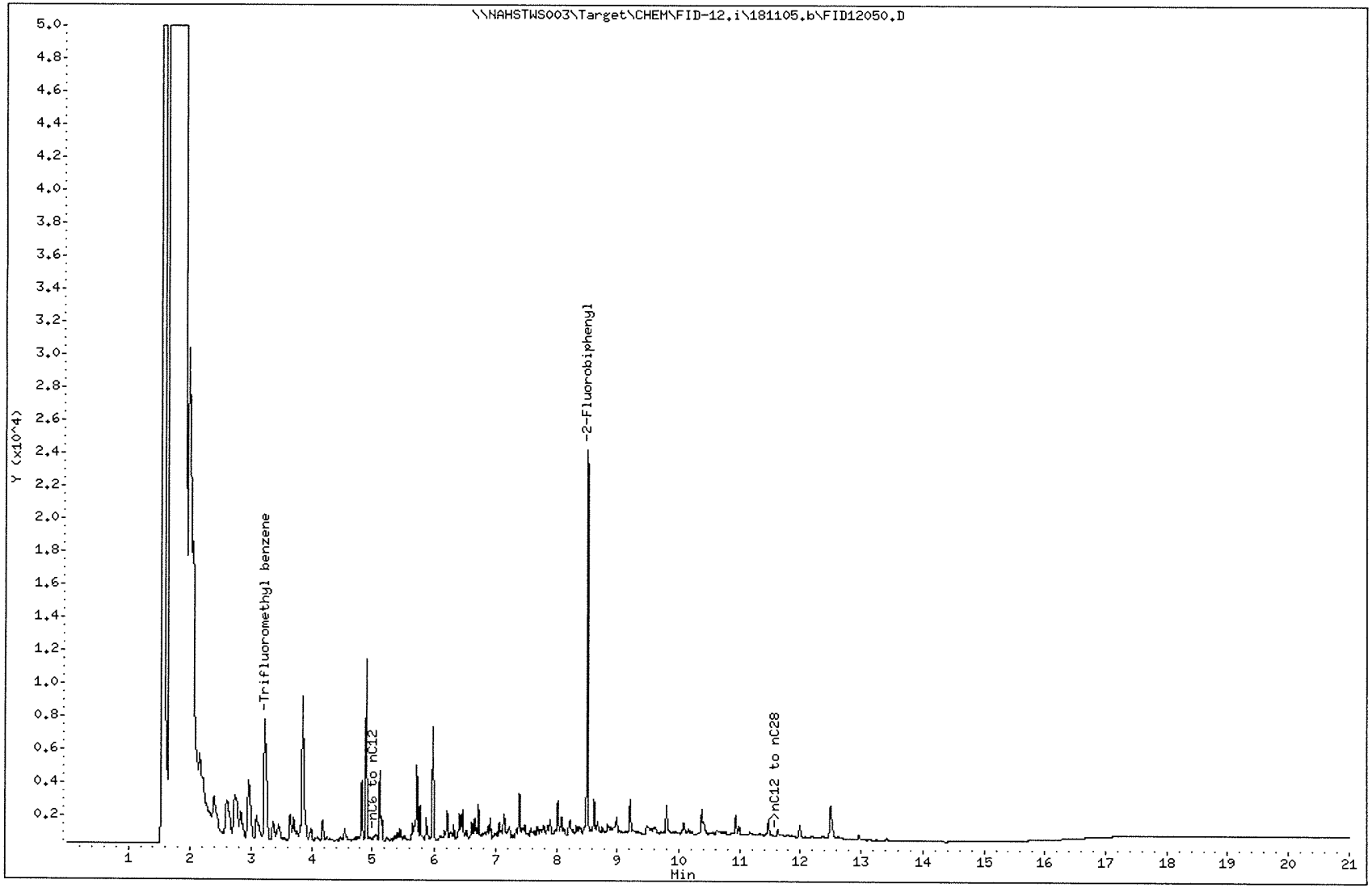
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
$	1 Trifluoromethyl benzene	3.223	3.257	-0.034	21016	25.0000	28.964
S	2 nC6 to nC12	2.554-7.486			216871	250.000	265.028
$	3 2-Fluorobiphenyl	8.509	8.517	-0.008	30037	25.0000	29.676(M)
S	4 >nC12 to nC28	7.550-15.623			204511	250.000	290.665(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\FID12050.D
Date : 06-NOV-2018 18:25
Client ID: CCV
Sample Info: CCV;CCV;2;4
Purge Volume: 30.0
Column phase: RTX-5

Instrument: FID-12.i
Operator: MG
Column diameter: 530.00



ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\FID12060.D
Lab Smp Id: MBLK-134303 Client Smp ID: MBLK-134303
Inj Date : 06-NOV-2018 23:16
Operator : MG Inst ID: FID-12.i
Smp Info : MBLK-134303
Misc Info :
Comment :
Method : \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\TX1005-180817.m
Meth Date : 28-Nov-2018 13:33 Marco.Guti Quant Type: ESTD
Cal Date : 17-AUG-2018 23:00 Cal File: FID12009.D
Als bottle: 11 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: smp.sub
Target Version: 4.14
Processing Host: NAHSTW7095

Concentration Formula: Amt * DF * 100*Vt/(Ws*(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final Volume (mL)
Ws	10.000	Sample Weight (g)
M	0.00000	%Moisture
100*Vt/(Ws*(10	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppm)	CONCENTRATIONS FINAL (mg/Kg)
$ 1 Trifluoromethyl benzene	3.225	3.257	-0.032	20999	28.9412	28.941
$ 3 2-Fluorobiphenyl	8.508	8.517	-0.009	30181	29.8190	29.819

ALS Laboratory Group

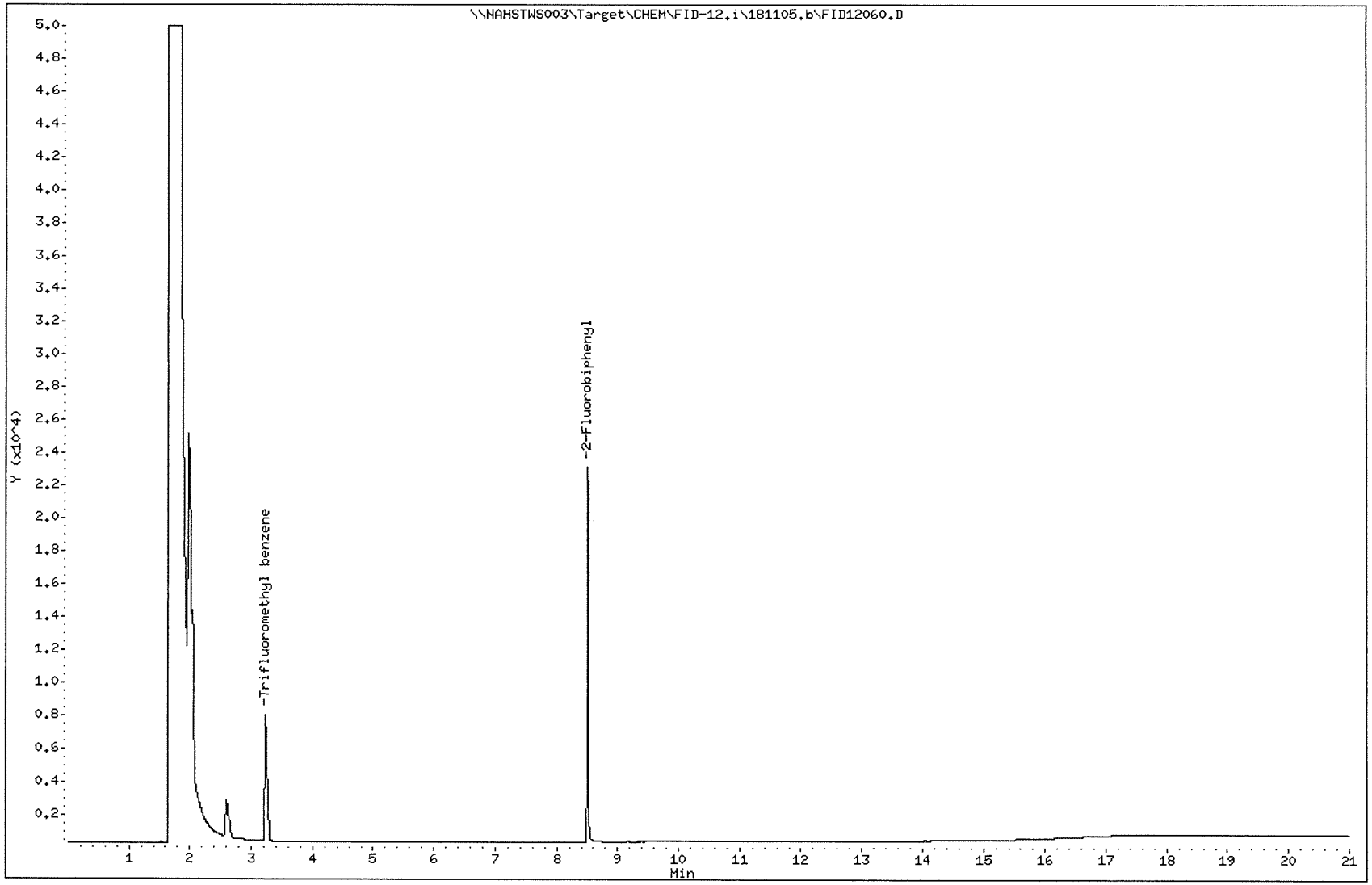
RECOVERY REPORT

Client Name:
Client SDG: HS18110317
Sample Matrix: SOLID
Fraction: TPH
Lab Smp Id: MBLK-134303
Client Smp ID: MBLK-134303
Level: LOW
Operator: MG
Data Type: GC DATA
SampleType: BLANK
SpikeList File: spk.spk
Quant Type: ESTD
Sublist File: smp.sub
Method File: \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\TX1005-180817.m
Misc Info:

SURROGATE COMPOUND	AMOUNT ADDED ppm	AMOUNT RECOVERED ppm	% RECOVERED	LIMITS
$ 1 Trifluoromethyl be	25.000	28.941	115.76	70-130
$ 3 2-Fluorobiphenyl	25.000	29.819	119.28	70-130

Data File: \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\FID12060.D
Date : 06-NOV-2018 23:16
Client ID: MBLK-134303
Sample Info: MBLK-134303

Instrument: FID-12.i
Operator: MG
Column phase: RTX-5
Column diameter: 530.00



ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\FID12061.D
Lab Smp Id: LCS-134303 Client Smp ID: LCS-134303
Inj Date : 06-NOV-2018 23:45
Operator : MG Inst ID: FID-12.i
Smp Info : LCS-134303
Misc Info :
Comment :
Method : \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\TX1005-180817.m
Meth Date : 28-Nov-2018 13:33 Marco.Guti Quant Type: ESTD
Cal Date : 17-AUG-2018 23:00 Cal File: FID12009.D
Als bottle: 12 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: smp.sub
Target Version: 4.14
Processing Host: NAHSTW7095

Concentration Formula: Amt * DF * 100*Vt/(Ws*(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final Volume (mL)
Ws	10.000	Sample Weight (g)
M	0.00000	%Moisture
100*Vt/(Ws*(10	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppm)	CONCENTRATIONS FINAL (mg/Kg)
$ 1 Trifluoromethyl benzene	3.226	3.257	-0.031	20818	28.6917	28.691
S 2 nC6 to nC12	2.554-7.486			202122	247.005	247.004
S 4 >nC12 to nC28	7.550-15.623			159326	226.446	226.445
$ 3 2-Fluorobiphenyl	8.509	8.517	-0.008	32152	31.7664	31.766

ALS Laboratory Group

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: LCS-134303
Level: LOW
Data Type: GC DATA
SpikeList File: spk.spk
Sublist File: smp.sub
Method File: \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\TX1005-180817.m
Misc Info:

Client SDG: HS18110317
Fraction: TPH
Client Smp ID: LCS-134303
Operator: MG
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	AMOUNT ADDED ppm	AMOUNT RECOVERED ppm	% RECOVERED	LIMITS
S 2 nC6 to nC12	250.000	247.004	98.80	70-130
S 4 >nC12 to nC28	250.000	226.445	90.58	70-130

SURROGATE COMPOUND	AMOUNT ADDED ppm	AMOUNT RECOVERED ppm	% RECOVERED	LIMITS
$ 1 Trifluoromethyl be	25.000	28.691	114.77	70-130
$ 3 2-Fluorobiphenyl	25.000	31.766	127.07	70-130

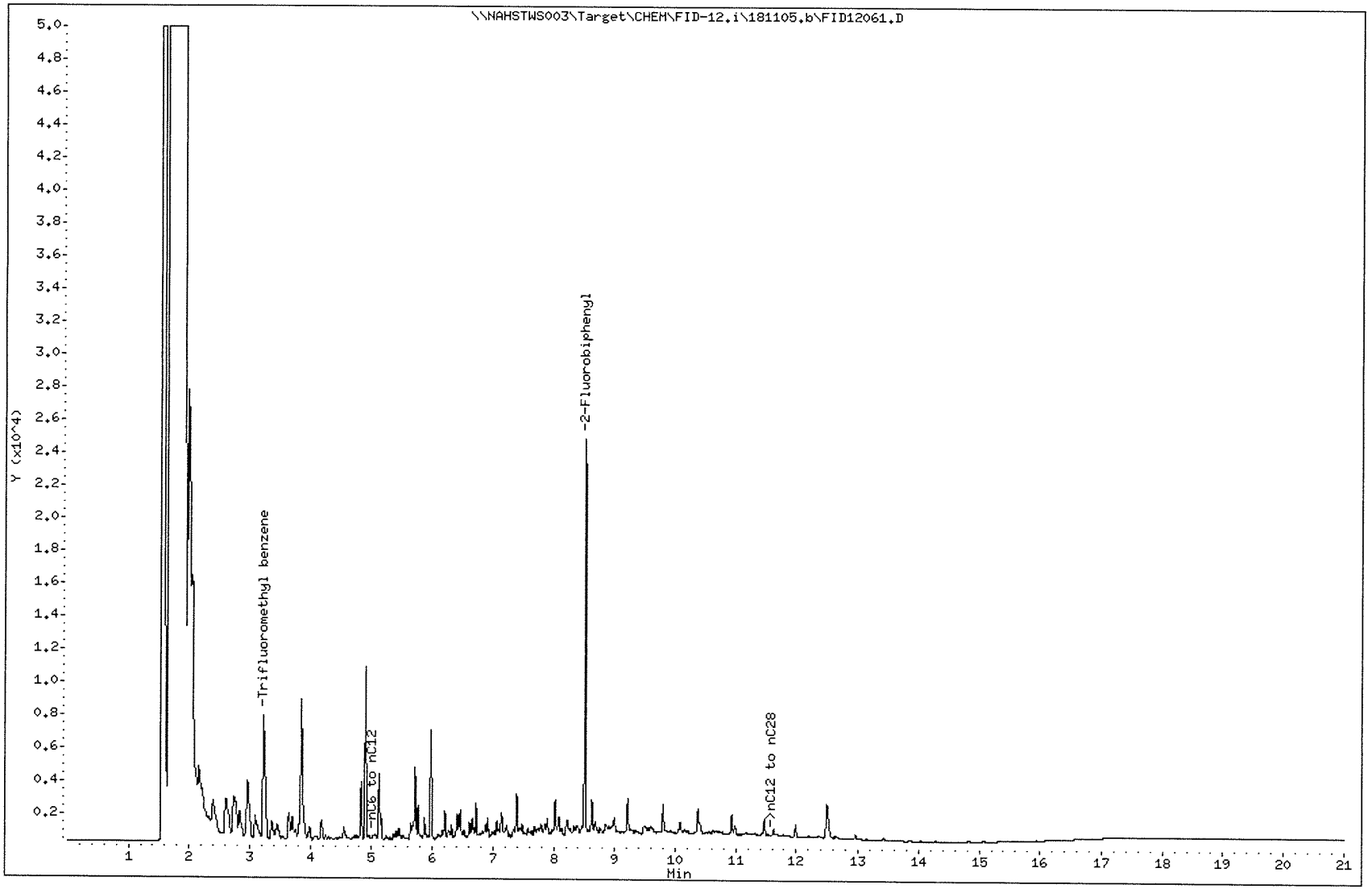
019159

Data File: \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\FID12061.D
Date : 06-NOV-2018 23:45
Client ID: LCS-134303
Sample Info: LCS-134303

Instrument: FID-12.i

Operator: MG
Column diameter: 530.00

Column phase: RTX-5



ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\FID12062.D
Lab Smp Id: LCSD-134303 Client Smp ID: LCSD-134303
Inj Date : 06-NOV-2018 00:14
Operator : MG Inst ID: FID-12.i
Smp Info : LCSD-134303
Misc Info :
Comment :
Method : \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\TX1005-180817.m
Meth Date : 28-Nov-2018 13:33 Marco.Guti Quant Type: ESTD
Cal Date : 17-AUG-2018 23:00 Cal File: FID12009.D
Als bottle: 13 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: smp.sub
Target Version: 4.14
Processing Host: NAHSTW7095

Concentration Formula: Amt * DF * 100*Vt/(Ws*(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final Volume (mL)
Ws	10.000	Sample Weight (g)
M	0.00000	%Moisture
100*Vt/(Ws*(10	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppm)	CONCENTRATIONS FINAL (mg/Kg)
$ 1 Trifluoromethyl benzene	3.227	3.257	-0.030	21613	29.7874	29.787
S 2 nC6 to nC12	2.554-7.486			216996	265.181	265.181
S 4 >nC12 to nC28	7.550-15.623			166429	236.541	236.540(M)
$ 3 2-Fluorobiphenyl	8.511	8.517	-0.006	31257	30.8821	30.882(M)

QC Flag Legend

M - Compound response manually integrated.

ALS Laboratory Group

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: LCSD-134303
Level: LOW
Data Type: GC DATA
SpikeList File: spk.spk
Sublist File: smp.sub
Method File: \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\TX1005-180817.m
Misc Info:

Client SDG: HS18110317
Fraction: TPH
Client Smp ID: LCSD-134303
Operator: MG
SampleType: LCSD
Quant Type: ESTD

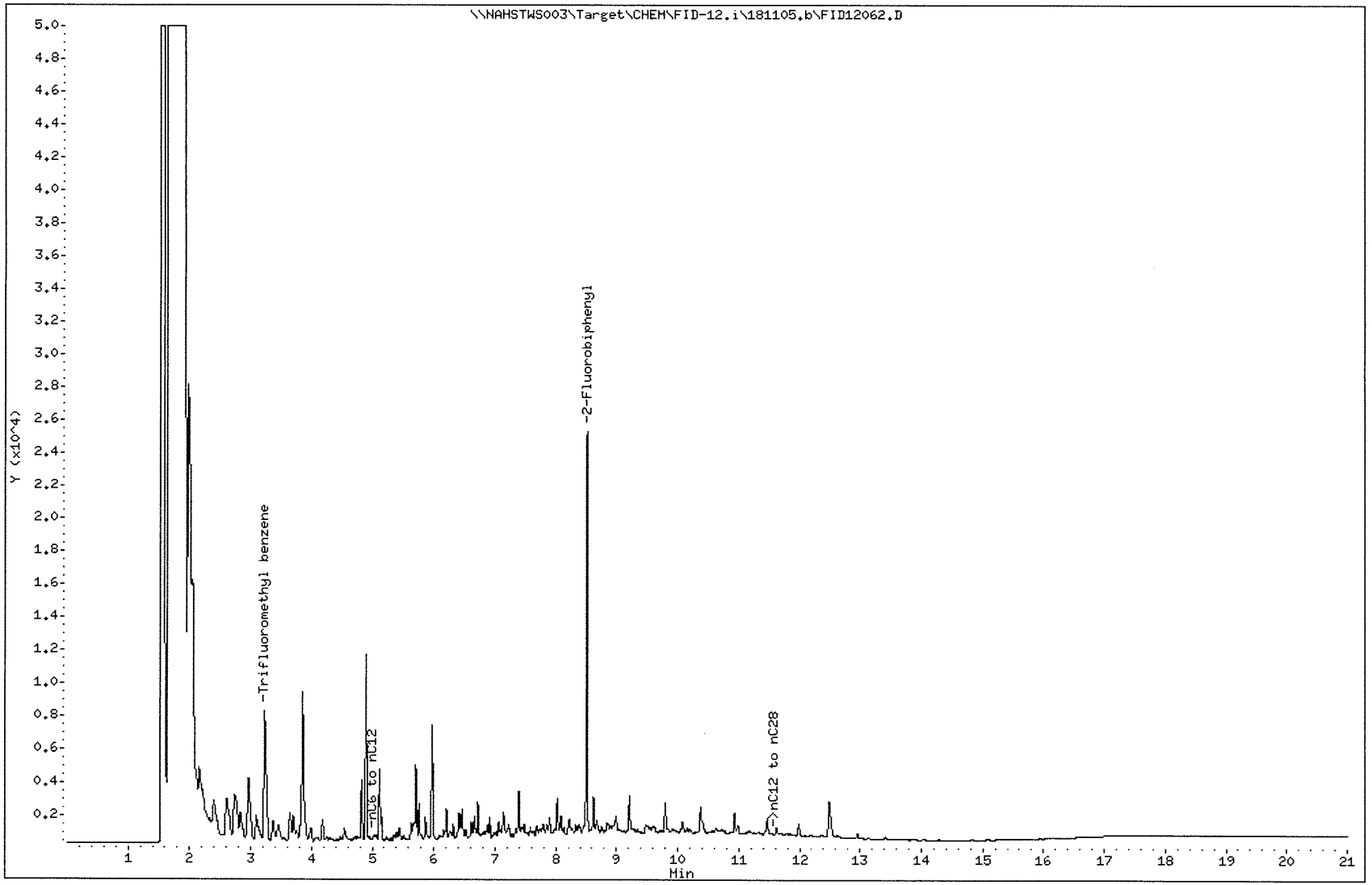
	SPIKE COMPOUND	AMOUNT ADDED ppm	AMOUNT RECOVERED ppm	% RECOVERED	LIMITS
S	2 nC6 to nC12	250.000	265.181	106.07	70-130
S	4 >nC12 to nC28	250.000	236.540	94.62	70-130

	SURROGATE COMPOUND	AMOUNT ADDED ppm	AMOUNT RECOVERED ppm	% RECOVERED	LIMITS
$	1 Trifluoromethyl be	25.000	29.787	119.15	70-130
$	3 2-Fluorobiphenyl	25.000	30.882	123.53	70-130

Data File: \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\FID12062.D
Date : 06-NOV-2018 00:14
Client ID: LCSD-134303
Sample Info: LCSD-134303

Instrument: FID-12.i
Operator: MG
Column diameter: 530.00

Column phase: RTX-5



ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\FID12070.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 07-NOV-2018 04:06
Operator : MG Inst ID: FID-12.i
Smp Info : CCV;CCV;2;4
Misc Info :
Comment :
Method : \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\TX1005-180817.m
Meth Date : 28-Nov-2018 13:33 Marco.Guti Quant Type: ESTD
Cal Date : 17-AUG-2018 23:00 Cal File: FID12009.D
Als bottle: 21 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TX1005ICAL.sub
Target Version: 4.14
Processing Host: NAHSTW7095

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	3.000	Final Volume (mL)
Vo	30.000	Sample Volume (mL)
Vt/Vo	0.00000	
Cpnd Variable		Local Compound Variable

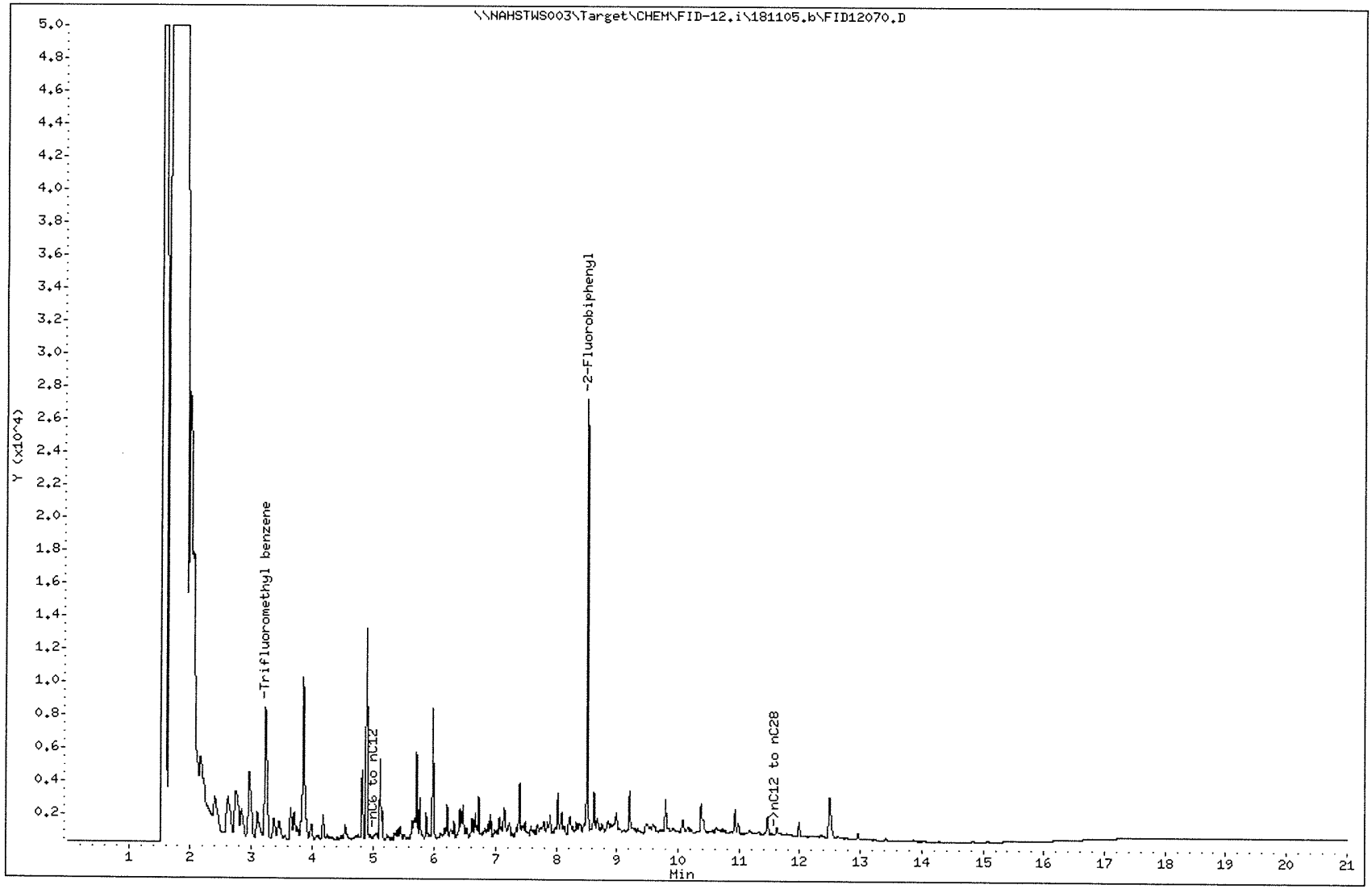
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
$ 1 Trifluoromethyl benzene	3.230	3.257	-0.027	17606	25.0000	24.264(M)
S 2 nC6 to nC12	2.554-7.486			244565	250.000	298.872(M)
$ 3 2-Fluorobiphenyl	8.510	8.517	-0.007	30072	25.0000	29.711(M)
S 4 >nC12 to nC28	7.550-15.623			208590	250.000	296.463(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\FID12070.D
Date : 07-NOV-2018 04:06
Client ID: CCV
Sample Info: CCV;CCV;2;4
Purge Volume: 30.0
Column phase: RTX-5

Instrument: FID-12.i
Operator: MG
Column diameter: 530.00



ALS Laboratory Group

Data file : \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\FID12073.D
Lab Smp Id: HS18110317-01 Client Smp ID: HS18110317-01
Inj Date : 07-NOV-2018 05:34
Operator : MG Inst ID: FID-12.i
Smp Info : HS18110317-01
Misc Info :
Comment :
Method : \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\TX1005-180817.m
Meth Date : 28-Nov-2018 13:33 Marco.Guti Quant Type: ESTD
Cal Date : 17-AUG-2018 23:00 Cal File: FID12009.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: smp.sub
Target Version: 4.14
Processing Host: NAHSTW7095

Concentration Formula: Amt * DF * 100*Vt/(Ws*(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10.000	Final Volume (mL)
Ws	11.480	Sample Weight (g)
M	0.00000	%Moisture
100*Vt/(Ws*(10	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppm)	CONCENTRATIONS FINAL (mg/Kg)
$ 1 Trifluoromethyl benzene	3.228	3.257	-0.029	18943	26.1075	22.741
S 4 >nC12 to nC28	7.550-15.623			17953	25.5161	22.226
S 5 >nC28 to nC35	15.700-18.510			5569	7.91506	6.894
$ 3 2-Fluorobiphenyl	8.508	8.517	-0.009	27172	26.8461	23.385

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RECOVERY REPORT

Client Name:
Client SDG: HS18110317
Sample Matrix: SOLID
Fraction: TPH
Lab Smp Id: HS18110317-01
Client Smp ID: HS18110317-01
Level: LOW
Operator: MG
Data Type: GC DATA
SampleType: SAMPLE
SpikeList File: spk.spk
Quant Type: ESTD
Sublist File: smp.sub
Method File: \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\TX1005-180817.m
Misc Info:

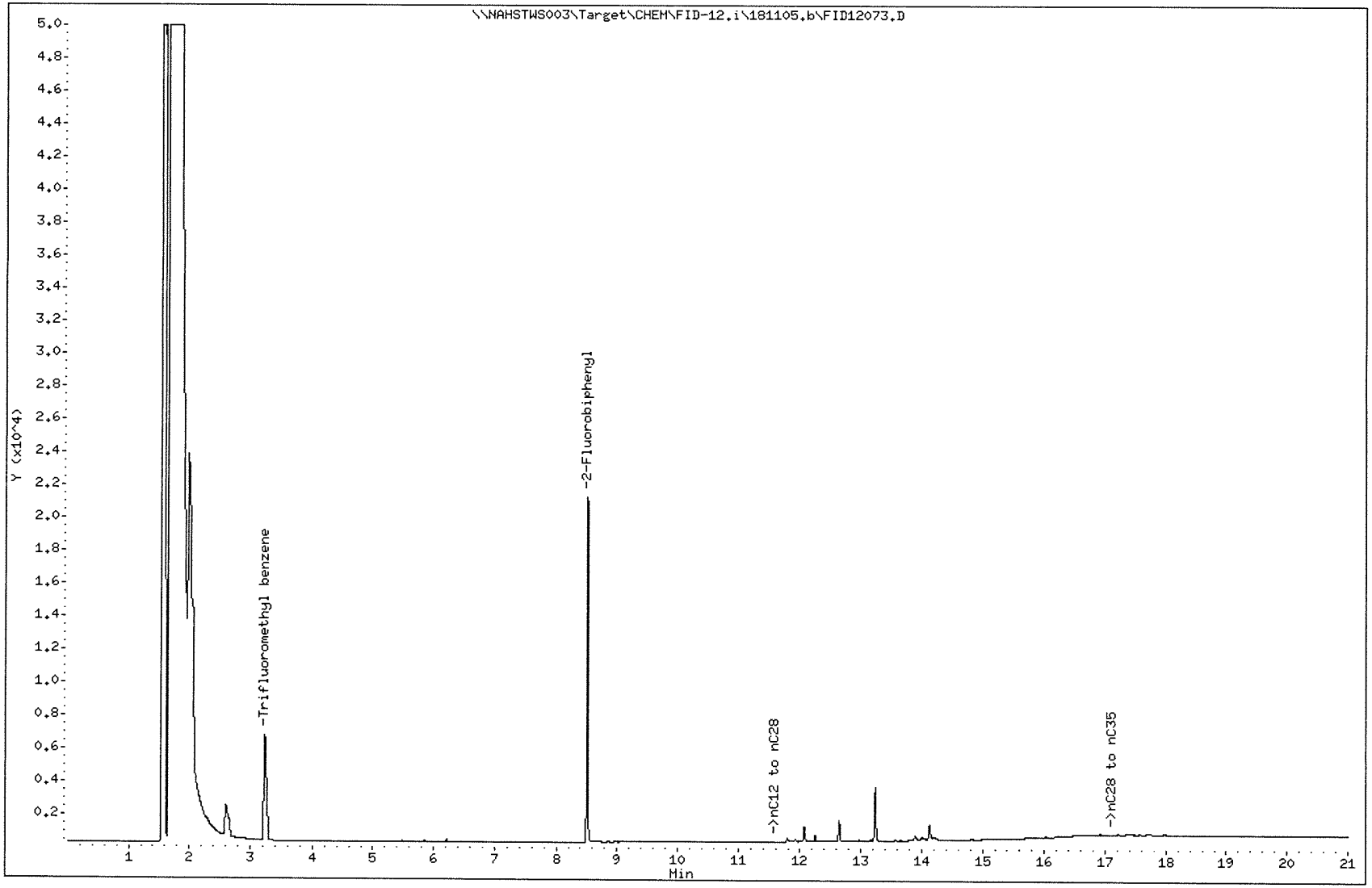
SURROGATE COMPOUND	AMOUNT ADDED ppm	AMOUNT RECOVERED ppm	% RECOVERED	LIMITS
$ 1 Trifluoromethyl be	25.000	26.107	104.43	70-130
$ 3 2-Fluorobiphenyl	25.000	26.846	107.38	70-130

Data File: \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\FID12073.D
Date : 07-NOV-2018 05:34
Client ID: HS18110317-01
Sample Info: HS18110317-01

Instrument: FID-12.i

Operator: MG
Column diameter: 530.00

Column phase: RTX-5



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Data file : \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\FID12085.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 07-NOV-2018 11:23
Operator : MG Inst ID: FID-12.i
Smp Info : CCV;CCV;2;4
Misc Info :
Comment :
Method : \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\TX1005-180817.m
Meth Date : 28-Nov-2018 13:33 Marco.Guti Quant Type: ESTD
Cal Date : 17-AUG-2018 23:00 Cal File: FID12009.D
Als bottle: 36 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TX1005ICAL.sub
Target Version: 4.14
Processing Host: NAHSTW7095

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	3.000	Final Volume (mL)
Vo	30.000	Sample Volume (mL)
Vt/Vo	0.00000	
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
$ 1 Trifluoromethyl benzene	3.227	3.257	-0.030	19708	25.0000	27.161 (M)
S 2 nC6 to nC12	2.554-7.486			228714	250.000	279.501 (M)
$ 3 2-Fluorobiphenyl	8.510	8.517	-0.007	30306	25.0000	29.942 (M)
S 4 >nC12 to nC28	7.550-15.623			195121	250.000	277.320 (M)

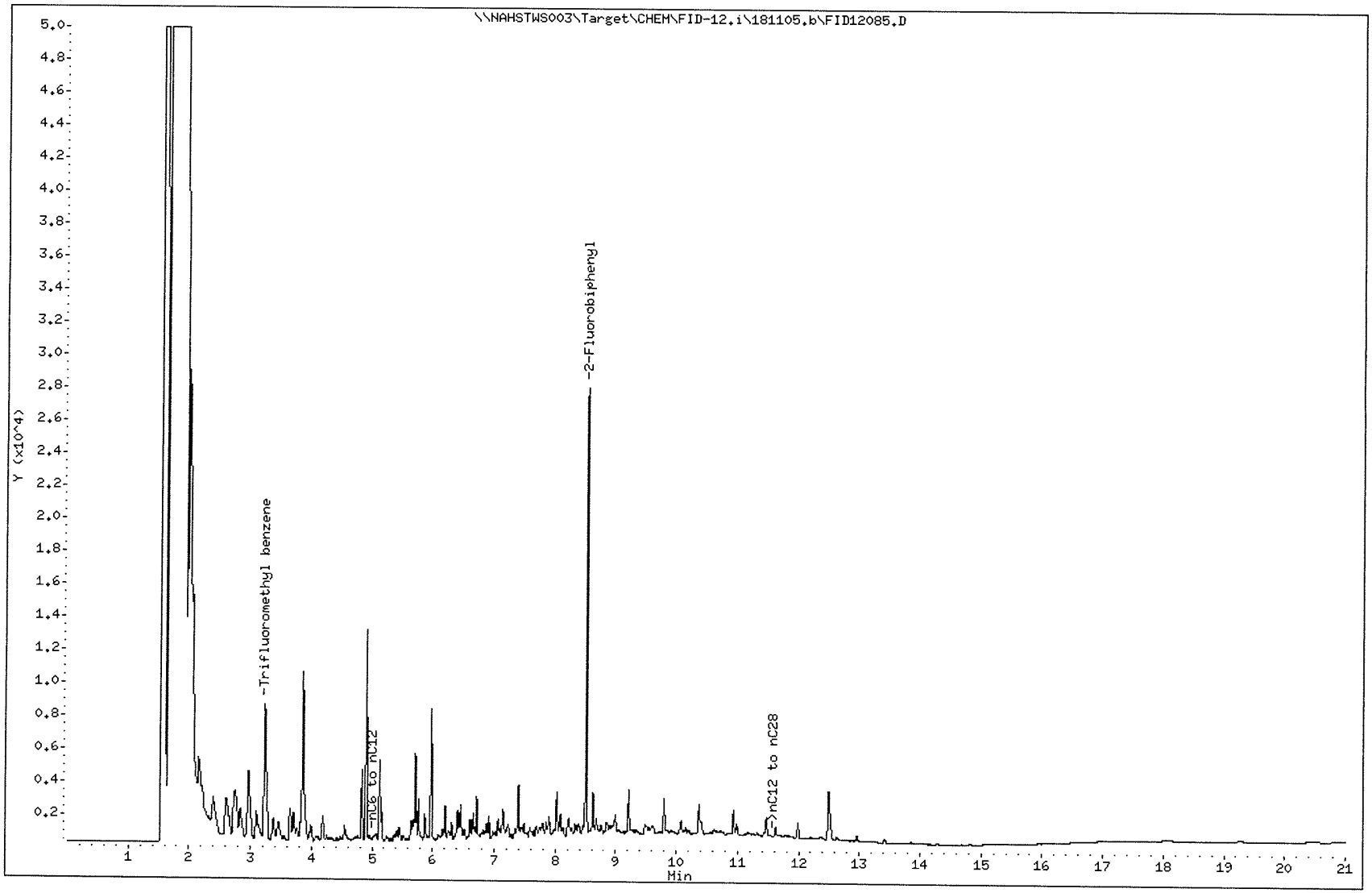
QC Flag Legend

M - Compound response manually integrated.

Data File: \\NAHSTWS003\Target\CHEM\FID-12.i\181105.b\FID12085.D
Date : 07-NOV-2018 11:23
Client ID: CCV
Sample Info: CCV;CCV;2;4
Purge Volume: 30.0
Column phase: RTX-5

Instrument: FID-12.i

Operator: MG
Column diameter: 530.00



PREP BATCH REPORT

Batch ID: **134303**

Prep Code: **TX 1005_S PR**

InitSampWt/Vol 10

FinSampVol: 10

OriginalFac: 1

PrepUnitFac: 1

Start Date: **06-Nov-18 01:09 pm**

End Date:

Technician:

SampID	Frac	Matrix	pH	Init Wt/Vol	FinalVol (mL)	PrepFac	SpkFac	Failsafe	TestDueDate	Comments
HS18110280-04	A	Soil		10.12	10	0.9881	0.9881	11-06-18	11-07-18	
HS18110280-05	A	Soil		10.16	10	0.9843	0.9843	11-06-18	11-07-18	
HS18110280-04MS	A			10.03	10	0.997	0.997			
HS18110280-04MSD	A			10.06	10	0.994	0.994			
MBLK-134303	A			10	10	1	1			
LCS-134303	A			10	10	1	1			
LCSD-134303	A			10	10	1	1			
HS18110300-02	C	Soil		12.4	10	0.8065	0.8065	11-07-18	11-07-18	
HS18110300-04	C	Soil		12.72	10	0.7862	0.7862	11-07-18	11-07-18	
HS18110300-06	C	Soil		14.77	10	0.677	0.677	11-07-18	11-07-18	
HS18110317-01	A	Soil		11.48	10	0.8711	0.8711	11-12-18	11-14-18	
HS18110311-01	A	Sludge		11.6	10	0.8621	0.8621	11-07-18	11-08-18	

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February 13, 2019

Analytical Report for Service Request No: K1811120
Revised Service Request No: K1811120.01

Craig Hutchings
Integral Consulting, Inc.
1205 West Bay Drive NW
Olympia, WA 98502-4670

RE: San Jacinto / C1887-0501

Dear Craig,

Enclosed is the revised report for the sample(s) submitted to our laboratory November 13, 2018 For your reference, these analyses have been assigned our service request number **K1811120.**

The results and its raw data for 8151A Herbicides have been updated and is included in this report.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

We apologize for any inconvenience this may have created.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

REVISED
12:01 pm, Feb 13, 2019

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Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
General Chemistry
Metals
Gasoline Range Organics
Diesel and Residual Range Organics
Organochlorine Pesticides
Polychlorinated Biphenyls (PCBs)
Chlorinated Herbicides
Volatile Organic Compounds
Semi-Volatile Organic Compounds byGC/MS
Subcontract Lab Results
Raw Data
- Total Solids
- General Chemistry
- Metals
- Gasoline Range Organics
- Diesel and Residual Range Organics

Table of Contents (continued)

Organochlorine Pesticides
Polychlorinated Biphenyls (PCBs)
Chlorinated Herbicides
Volatile Organic Compounds
Semi-Volatile Organic Compounds byGC/MS

Table of Contents (continued)

Chlorinated Herbicides
Volatile Organic Compounds
Semi-Volatile Organic Compounds byGC/MS

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

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Client: Integral Consulting, Incorporated
Project: San Jacinto
Sample Matrix: Wipe, Soil

Service Request: K1811120
Date Received: 11/13/2018 - 11/14/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt:

Six soil and two wipe samples were received for analysis at ALS Environmental between 11/13/2018 - 11/14/2018. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Semivolatiles by GC/MS:

Method 8270D, TCLP Semivolatile Organic Compounds by GC/MS 12/08/2018: The spike recovery of 2,4,6-Trichlorophenol, TCLP for Laboratory Control Sample (LCS) KQ1817224-01 was slightly outside the lower control criterion (63, 64-108). The analyte in question was not detected in the associated field samples. The error associated with reduced recovery indicated a potential low bias. Additional analysis of the associated field samples was not performed because insufficient sample holding time remained for testing. Recovery in the associated matrix spikes was acceptable, which indicated the analytical batch was in control. The data was flagged to indicate the problem.

Semivoa GC:

Method 8015C, Diesel and Residual Range Organics 11/20/18: The detection limit was elevated for Diesel Range Organics in sample SL0065. The sample extract was diluted prior to instrumental analysis due to relatively high levels of non-target background components. The extract was highly colored, which indicated the need to perform a dilution prior to injection into the instrument. The result was flagged to indicate the matrix interference.

Method 8015C, Diesel and Residual Range Organics 12/06/18: The recovery of Diesel and Residual Range Organics in Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) KWG1806092-1/2 was outside the control limits listed in the results summary. The limits are default values temporarily in use until sufficient data points are generated to calculate statistical control limits. Based on the method and historic data, the recoveries observed were in the range expected for this procedure. The field samples analyzed in this sequence did not contain the analyte in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8015C, Diesel and Residual Range Organics 12/06/18: Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

Method 8015C, Diesel and Residual Range Organics 12/06/18: The detection limit was elevated for Diesel and Residual Range Organics in samples. The samples were diluted in order to prevent damage to the instrument. Previous attempt to run extracts caused injector error. The results were flagged to indicate the matrix interference.

Method 8015C, Diesel and Residual Range Organics 12/06/18: The upper control criterion was exceeded for Diesel Range Organics and Residual Range Organics in Continuing Calibration Verifications (CCV) KWG1806357-3/4. The field samples analyzed in this sequence did not contain the analytes in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8081B, Organochlorine Pesticides: The recoveries of Methoxychlor and Toxaphene in Laboratory Control Sample

Approved by _____ Date 01/21/2019

KWG1806145-5; Methoxychlor in Matrix Spikes (MS/DMS) KWG1806145-1/2; and Tetrachloro-m-xylene in all samples and Decachlorobiphenyl in Laboratory Control Sample KWG1806145-5 were outside the control limits listed in the results summary (70-130). The limits are default values temporarily in use until sufficient data points are generated to calculate statistical control limits. Based on the method and historic data, the recoveries observed were in the range expected for this procedure. No further corrective action was taken.

Method 8081B, Organochlorine Pesticides: The analysis of samples SL0064, SL0065, and SL0022 was initially performed past the recommended holding time. Analyst misprioritized holding dates of these samples based on the collection date of the initial sample SL0084 which was performed within holding time. The data was flagged to indicate the holding time violation.

Method 8082A, :Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

Metals:

Method 6010C, 12/05/2018: The matrix spike recovery of Silver for sample SL0022 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. The matrix spike outlier suggested a potential low bias in this matrix. No further corrective action was appropriate.

General Chemistry:

Method 9034 Modified, 11/15/2018:Samples SL0084, SL0064, SL0065, SL0022, FW0001 and FB0001 were received past holding time. The analysis was performed as soon as possible after receipt by the laboratory. The data was flagged to indicate the holding time violation.

Subcontracted Analytical Parameters:

Asbestos
The analysis for Asbestos was performed at LabCor, Seattle, Washington. The data for this analysis is included in the corresponding section of this report.

Cyanide Reactivity
This analysis was performed at ALS Environmental in Holland, MI. The data for this analysis is included in the corresponding section of this report.

Volatiles by GC/MS:

Method 8260C, 11/27/2018:The upper control criterion was exceeded for Dibromofluoromethane in samples SL0064, SL0065 and SL0022. No target analytes were detected in the sample. The error associated with an elevated recovery equated to a high bias. The quality of the sample data was not significantly affected. No further corrective action was appropriate.

Method 8260C, 11/27/2018:The spike recovery of 2-Butanone for Laboratory Control Sample (LCS) KWG1806350-1 was outside the lower control criterion. The analyte in question was not detected in the associated field samples. The error associated with reduced recovery indicated a potential low bias. Additional analysis of the associated field sample was not performed because insufficient sample hold time remained for testing. The data was flagged to indicate the problem.

Approved by Noe D. Oan Date 01/21/2019

Chain of Custody

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E1801035 5

Integral Consulting, Inc.
C1844-0501

R1811120

CHAIN OF CUSTODY FORM

Page 1 of 1

Project: C1887 - 0501 South

Samplers: Stephen Sherman, Stefan Wodzicki, Sarah Kissel, Olivia Hargrave, Amber Lutey

integral consulting inc.

Integral Contact: Craig Hutchings
Phone 360-705-3354 ext 417

Ship to: Lab Name ALS - Houston
Address 10450 Stancliff Road
Suite 210
Houston, TX USA 77099
Contact Kristin Brown
Phone 281-575-2195

Sample No.	Tag #	Date	Time	Matrix	PCDD/F by 1613B	Flashpoint by 1020B, pH by 9045D, Reactive Sulfide by 9030M	Reactive Cyanide by EPA 7.3.3.2	TCLP Metals, VOCs, SVOCs, Pesticides, Herbicides	TPH-GRO by 8015C	TPH-DRO by 8015C	PCB Aroclors by 8082	Asbestos by 600/R-93-116	Extra Container	Archive	Comments
SL0079	0232	11/8/18	0845	SL										X	
SL0080	0233		0850											X	
SL0081	0234		0855											X	
SL0082	0235		0900											X	
SL0083	0236		0905											X	
SL0084	0261		0910		X	X	X	X	X*	X	X	X			0260, 0261, 0262, 0263, 0264, 0265
SL0085	0255		1050											X	0266,
SL0086	0256		1055											X	0267
SL0087	0257		1100											X	
SL0088	0258		1105											X	
SL0089	0259		1110											X	
SL0073	0218	11/7/18	1000											X	
SL0074	0219		1004											X	
SL0075	0228		1011											X	
SL0076	0229		1017											X	
SL0077	0230		1021											X	
SL0078	0238		1027		X										
			55	11/9/18											

Analysis Turn Time: Normal ✓ Rush **Rush Results Needed By:**

Shipped by: **Shipping Tracking No.**

Condition of Samples Upon Receipt: **Custody Seal Intact?**

Matrix Code: GW - Groundwater; SL - Soil; SW - Surface water; SD - Sediment; Other:

Relinquished by: (signature) **Date/Time:** 11/9/18 1000 **Received by:** (signature) **Date/Time:** 11/9/18 1000

Relinquished by: (signature) **Date/Time:** 11/9/18 1235 **Received by:** (signature) **Date/Time:**

Special Instructions: If reactive sulfide is detected run sample for total sulfur by 9056A and total sulfate by 300M, For TCLP analyses use methods 601B/7470A for metals, 8260C for VOCs, 8270D for SVOCs, 8081B for pesticides, and 8015C for herbicides.

*Terracore sample date and time: 11/8/18 0910 for SL0084

RELINQUISHED BY: 11/12/18 1500 Rec: KMorrow ALS KL 11/13/18 0930

019183

E1801012 5

Integral Consulting, Inc.
San Jacinto Waste Pits

K181120

CHAIN OF CUSTODY FORM

Project: C1887 - 0501

Samplers: Stephen Sherman, Stefan Wodzicki, Sarah Kissel, Casey Janisch

Integral Contact: Craig Hutchings
Phone 360-705-3354 ext 417

Ship to: Lab Name ALS - Houston
Address 10450 Stancliff Road
Suite 210
Houston, TX USA 77099
Contact Kristin Brown
Phone 281-575-2195

integral consulting inc.

Sample No.	Tag #	Date	Time	Matrix	PCDD/F by 1613B	Flashpoint by 1020B, pH by 9045D, Reactive Sulfide by 9030M	Reactive Cyanide by EPA 7.3.3.2	TCLP Metals, VOCs, SVOCs, Pesticides, Herbicides	TPH-GRO by 8015C	TPH-DRO by 8015C	PCB Aroclors by 8082	Asbestos by 600/R-93-116	Extra Container	Archive	Comments
SL0053	0193	11/5/18	1340	Soil										X	
SL0054	0194		1344											X	
SL0055	0195		1351											X	
SL0056	0196		1357											X	
SL0057	0197		1402											X	
SL0058	0203		1407		X										
SL0059	0198		1450											X	
SL0060	0199		1455											X	
SL0061	0200		1500											X	
SL0062	0201		1505											X	
SL0063	0202		1510											X	
SL0064	0220		1515		X	X	X	X	X*	X		X			221, 222, 223, 224, 225, 226, 227
SL0066	0211	11/6/18	0900											X	
SL0067	0212		0905											X	
SL0068	0213		0910											X	
SL0069	0216		0915											X	
SL0070	0215		0920											X	
SL0071	0214		0925		X										
SL0065	0386	11/5/18	1520		X	X	X	X	X*	X	X	X			0387, 0388, 0389, 0390, 0391, 0392, 0393
SL0072	0061	11/6/18	0930												

ANALYSES REQUESTED

Analysis Turn Time: Normal | Rush | **Rush Results Needed By:**

Matrix Code: GW - Groundwater; SL - Soil; SW - Surface water; SD - Sediment; Other:

Shipped by: **Shipping Tracking No.**

Condition of Samples Upon Receipt: **Custody Seal Intact?**

Relinquished by: Stephen Sherman (signature) Date/Time: 11/7/18 1000 **Received by:** (signature) Date/Time: 11/7/18 1000

Relinquished by: (signature) Date/Time: 11/7/18 1830 **Received by:** (signature) Date/Time:

Special Instructions: If reactive sulfide is detected run sample for total sulfur by 9056A and total sulfate by 300M, For TCLP analyses use methods 601B/7470A for metals, 8260C for VOCs, 8270D for SVOCs, 8081B for pesticides, and 8015C for herbicides.

*Terracore sample date & time: 11/6/18 07:35 for SL0064 tag #223; 11/6/18 0730 for SL0065 tag # 0389

RELINQUISHED BY: 11/12/18 1206 Received: 11/8.8

RECEIVED BY: Rec'd - KMorrow ALS Houston 11/13/18 0930

019184

K1811120

CHAIN OF CUSTODY FORM

Project: C1887 - 0501

Samplers: See Page 1

integral consulting inc.

Integral Contact: Craig Hutchings
Phone 360-705-3354 ext 417

Ship to: Lab Name ALS - Houston
Address 10450 Stancliff Road
Suite 210
Houston, TX USA 77099
Contact Kristin Brown
Phone 281-575-2195

Sample No.	Tag #	Date	Time	Matrix	PCDD/F by 1613B	Flashpoint by 1020B, pH by 9045D, Reactive Sulfide by 9030M	Reactive Cyanide by EPA 7.3.3.2	TCLP Metals, VOCs, SVOCs, Pesticides, Herbicides	TPH-GRO by 8015C	TPH-DRO by 8015C	PCB Aroclors by 8082	Asbestos by 600/R-93-116	Extra Container	Archive	Comments
FW0002	0458	11/5/18	0820	Paper	X										
FW0003	0466	11/6/18	1600	" "	X										

11/6/18

Analysis Turn Time: Normal | Rush | Rush Results Needed By:

Shipped by: Shipping Tracking No.

Condition of Samples Upon Receipt: Custody Seal Intact?

Matrix Code:	
GW - Groundwater	SL - Soil
SW - Surface water	SD -Sediment
Other:	

Relinquished by: Stephen Sherman (signature) Date/Time: 11/7/18 1000 **Received by:** (signature) Date/Time: 11-7-18 1000

Relinquished by: (signature) Date/Time: 11-7-18 1130 **Received by:** (signature) Date/Time:

Special Instructions: If reactive sulfide is detected run sample for total sulfur by 9056A and total sulfate by 300M, For TCLP analyses use methods 601B/7470A for metals, 8260C for VOCs, 8270D for SVOCs, 8081B for pesticides, and 8015C for herbicides.

Received: 11/8/18

K1811120

CHAIN OF CUSTODY FORM

integral consulting inc.

Project: C1887 - 0501

Samplers: Stephen Sherman, Stefan Wodzicki, Sarah Kissel

Integral Contact: Craig Hutchings
Phone 360-705-3354 ext 417

Ship to: Lab Name ALS - Houston
Address 10450 Stancliff Road
Suite 210
Houston, TX USA 77099
Contact Kristin Brown
Phone 281-575-2195

Sample No.	Tag #	Date	Time	Matrix	PCDD/F by 1613B	Flashpoint by 1020B, pH by 9045D, Reactive Sulfide by 9030M	Reactive Cyanide by EPA 7.3.3.2	TCLP Metals, VOCs, SVOCs, Pesticides, Herbicides	TPH-GRO by 8015C	TPH-DRO by 8015C	PCB Aroclors by 8082	Asbestos by 600/R-93-116	Extra Container	Archive	Comments
SL0040	0564	11/4/18	1430	Soil										X	
SL0041	0565		1435											X	
SL0042	0566		1440											X	
SL0043	0567		1445											X	
SL0044	0568		1450											X	
SL0045	0551		1455		X										
SL0047	0187		1520											X	
SL0048	0188		1525											X	
SL0049	0189		1530											X	
SL0050	0190		1535											X	
SL0051	0191		1540											X	
SL0052	0192		1545		X										
SL0017	0157	11/3/18	1515											X	
SL0018	0158		1520											X	
SL0019	0159		1525											X	
SL0020	0160		1530											X	
SL0021	0161		1535											X	
SL0022	0162		1540		X	X	X	X	X	X		X			0175, 0176, 0177, 0178, 0179, 0180, 0181
SL0023	0182		1640											X	
SL0024	0193		1645											X	

E1801020 5
Integral Consulting, Inc.
San Jacinto Waste Pits

Analysis Turn Time: Normal | Rush | Rush Results Needed By:

Shipped by: Shipping Tracking No.

Condition of Samples Upon Receipt: Custody Seal Intact?

Relinquished by: _____ (signature) Date/Time: 11/5/18 0916 **Received by:** _____ (signature) Date/Time: 11/5/18 0916

Relinquished by: _____ (signature) Date/Time: 11-5-18 2230 **Received by:** _____ (signature) Date/Time: _____

Matrix Code:	
GW - Groundwater	
SL - Soil	SW - Surface water
SD - Sediment	Other:

Special Instructions: If reactive sulfide is detected run sample for total sulfur by 9056A and total sulfate by 300M, For TCLP analyses use methods 601B/7470A for metals, 8260C for VOCs, 8270D for SVOCs, 8081B for pesticides, and 8015C for herbicides.

RELINQUISHED BY: _____ 11/12/18 RECEIVED BY: KMorrow ALS-Kelso 11/13/18 0930

019186

K181120

CHAIN OF CUSTODY FORM

Project: C1887 - 0501

Samplers: Stephen Sherman, Stefan Wodzicki, Sarah Kissel

integral consulting inc.

Integral Contact: Craig Hutchings
Phone 360-705-3354 ext 417

Ship to: Lab Name ALS - Houston
Address 10450 Stancliff Road
Suite 210
Houston, TX USA 77099
Contact Kristin Brown
Phone 281-575-2195

Sample No.	Tag #	Date	Time	Matrix	PCDD/F by 1613B	Flashpoint by 1020B, pH by 9045D, Reactive Sulfide by 9030M	Reactive Cyanide by EPA 7.3.3.2	TCLP Metals, VOCs, SVOCs, Pesticides, Herbicides	TPH-GRO by 8015C	TPH-DRO by 8015C	PCB Aroclors by 8082	Asbestos by 600/R-93-116	Extra Container	Archive	Comments
SL0025	0184	11/3/18	1650	Soil										X	
SL0026	0185		1700											X	
SL0027	0186		1710											X	
SL0012	0151		1400											X	
SL0013	0152		1405											X	
SL0014	0153		1411											X	
SL0015	0154		1417											X	
SL0016	0155		1424											X	
SL0006	0169		1120											X	
SL0007	0170		1125											X	
SL0008	0171		1130											X	
SL0009	0172		1135											X	
SL0010	0173		1140											X	
SL0011	0168		1145		X										
SL0001	0163		0915											X	
SL0002	0164		0920											X	
SL0003	0165		0925											X	
SL0004	0166		0930											X	
SL0005	0167		0940											X	
SL0028	0553	11/4/18	1120											X	

ANALYSES REQUESTED

Analysis Turn Time: Normal Rush **Rush Results Needed By:**

Shipped by: **Shipping Tracking No.**

Condition of Samples Upon Receipt: **Custody Seal Intact?**

Relinquished by: (signature) **Date/Time:** 11/5/18 916 **Received by:** (signature) **Date/Time:** 11/5/18 0916

Relinquished by: (signature) **Date/Time:** 11/5/18 1720 **Received by:** (signature) **Date/Time:**

Matrix Code:
GW - Groundwater
SL - Soil
SW - Surface water
SD -Sediment
Other:

Special Instructions: If reactive sulfide is detected run sample for total sulfur by 9056A and total sulfate by 300M, For TCLP analyses use methods 601B/7470A for metals, 8260C for VOCs, 8270D for SVOCs, 8081B for pesticides, and 8015C for herbicides.

019187

K1811120

CHAIN OF CUSTODY FORM

Project: C1887 - 0501

Samplers: Stephen Sherman, Stefan Wedzicki, Sarah Kissel

integral consulting inc.

Integral Contact: Craig Hutchings
Phone 360-705-3354 ext 417

Ship to: Lab Name ALS - Houston
Address 10450 Stancliff Road
Suite 210
Houston, TX USA 77099
Contact Kristin Brown
Phone 281-575-2195

Sample No.	Tag #	Date	Time	Matrix	PCDD/F by 1613B	Flashpoint by 1020B, pH by 9045D, Reactive Sulfide by 9030M	Reactive Cyanide by EPA 7.3.3.2	TCLP Metals, VOCs, SVOCs, Pesticides, Herbicides	TPH-GRO by 8015C	TPH-DRO by 8015C	PCB Aroclors by 8082	Asbestos by 600/R-93-116	Extra Container	Archive	Comments
SL0029	0554	11/4/18	1125	Soil										X	
SL0030	0555		1130											X	
SL0031	0556		1135											X	
SL0032	0557		1140											X	
SL0033	0552		1145		X										
SL0035	0558		1310											X	
SL0036	0559		1315											X	
SL0037	0560		1320											X	
SL0038	0561		1325											X	
SL0039	0562		1330											X	
SL0034	0370	↓	1150	↓	X										
SL0046	0378		1500		X										
EW0001	0450	11/3/18	1740	Paper	X	X	X		X	X	X				0451, 0452, 0453, 0454, 0455, 0456, 0457
EB0001	0530	↓	1720	↓	X	X	X		X	X	X				0531, 0532, 0533, 0534, → 0535, 0536, 0537

SD 11/4/18

Analysis Turn Time: Normal | Rush | **Rush Results Needed By:**

Shipped by: | **Shipping Tracking No.**

Condition of Samples Upon Receipt: | **Custody Seal Intact?**

Matrix Code: GW - Groundwater; SL - Soil; SW - Surface water; SD -Sediment; Other:

Relinquished by: _____ (signature) **Date/Time:** 11/6/18 0916 **Received by:** _____ (signature) **Date/Time:** 11/5/18 0916

Relinquished by: _____ (signature) **Date/Time:** 11/5/18 1700 **Received by:** _____ (signature) **Date/Time:** _____

Special Instructions: If reactive sulfide is detected run sample for total sulfur by 9056A and total sulfate by 300M, For TCLP analyses use methods 601B/7470A for metals, 8260C for VOCs, 8270D for SVOCs, 8081B for pesticides, and 8015C for herbicides.

019188

PC MH

Cooler Receipt and Preservation Form

Client ALS - Houston Service Request *K18* 11120

Received: 11/13/18 Opened: 11/13/18 By: [signature] Unloaded: 11/13/18 By: [signature]

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 1 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
0.7	0.6	0.5	0.4	-0.1	362	E180102O	4380 9534 4881	
-1.1	-1.2	1.1	1.1	0	352	"	4380 9534 4892	

4. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

SOILS SAMPLES FOR CHAIN OF CUSTODY'S RECEIVED IN HELSO YESTERDAY 11/12/18

PARESH CHOKSHI 11/13/18 1700

K 11/11/20

SLC084	11/8/18	0910
SLC064	11/6/18	0735
SLC065	11/6/18	0730

PC MH

Cooler Receipt and Preservation Form

Client ALS Houston Service Request *K18* 11120

Received: 11/14/18 Opened: 11/14/18 By: CG Unloaded: 11/14/18 By: CG

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 1 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
-23.0	-23.1	Frozen		-0.1	351		4380 9534 5248	

4. Packing material: *Inserts* *Baggies* (*Bubble Wrap*) *Gel Packs* *Wet Ice* (*Dry Ice*) *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? (NA) Y N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: (*Frozen*) *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/18 - 11/08/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
SL0084	K1811120-001	**74.3**	-	-	1	NA	
SL0064	K1811120-002	**74.9**	-	-	1	NA	
SL0065	K1811120-003	**65.3**	-	-	1	NA	
SL0022	K1811120-004	**76.7**	-	-	1	NA	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project	San Jacinto	**Date Collected:**	11/08/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
		Date Analyzed:	NA

Replicate Sample Summary
Inorganic Parameters

Sample Name:	SL0084	**Units:**	Percent
Lab Code:	K1811120-001	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1811120-001DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	74.3	76.4	75.4	3	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/18 - 11/08/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
Analysis Method:	1020A Modified	**Units:**	deg C
Prep Method:	None	**Basis:**	As Received

Flash Point

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
SL0084	K1811120-001	**>110**	-	-	1	11/30/18 08:50	
SL0064	K1811120-002	**>110**	-	-	1	11/30/18 08:50	
SL0065	K1811120-003	**>110**	-	-	1	11/30/18 08:50	
SL0022	K1811120-004	**>110**	-	-	1	11/30/18 08:50	
Method Blank	K1811120-MB1	**>110**	-	-	1	11/30/18 08:50	
Method Blank	K1811120-MB2	**>110**	-	-	1	11/30/18 08:50	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/3/18
Sample Matrix:	Wipe	**Date Received:**	11/13/18
Analysis Method:	1020A Modified	**Units:**	deg C
Prep Method:	None	**Basis:**	As Received

Flash Point

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
FW0001	K1811120-005	**>110**	-	-	1	11/30/18 08:50	
FB0001	K1811120-006	**>110**	-	-	1	11/30/18 08:50	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project	San Jacinto	**Date Collected:**	11/03/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
		Date Analyzed:	11/30/18

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	SL0022	**Units:**	deg C
Lab Code:	K1811120-004	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample K1811120-004DUP Result	Average	RPD	RPD Limit
Flash Point	1020A Modified	-	-	>110	>110	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/30/18
Sample Matrix:	Soil	**Date Extracted:**	NA

Lab Control Sample Summary
Flash Point

Analysis Method:	1020A Modified	**Units:**	deg C
Prep Method:	None	**Basis:**	As Received
		Analysis Lot:	616987

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1811120-LCS2	27.0	27.0	100	85-115
Lab Control Sample	K1811120-LCS3	27.0	27.0	100	85-115

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/18 - 11/08/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
Analysis Method:	9034 Modified	**Units:**	mg/Kg
Prep Method:	SW-846 Ch 7, 7.3.4.2	**Basis:**	As Received

Sulfide, Reactive

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
SL0084	K1811120-001	ND U	32	-	1	11/15/18 16:24	11/15/18	
SL0064	K1811120-002	ND U	32	-	1	11/15/18 16:24	11/15/18	*
SL0065	K1811120-003	ND U	32	-	1	11/15/18 16:24	11/15/18	*
SL0022	K1811120-004	ND U	32	-	1	11/15/18 16:24	11/15/18	*
Method Blank	K1811120-MB1	ND U	32	-	1	11/15/18 16:24	11/15/18	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/3/18
Sample Matrix:	Wipe	**Date Received:**	11/13/18
Analysis Method:	9034 Modified	**Units:**	mg/Kg
Prep Method:	SW-846 Ch 7, 7.3.4.2	**Basis:**	As Received

Sulfide, Reactive

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
FW0001	K1811120-005	ND U	32	-	1	11/15/18 16:24	11/15/18	*
FB0001	K1811120-006	ND U	32	-	1	11/15/18 16:24	11/15/18	*

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project	San Jacinto	**Date Collected:**	11/08/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
		Date Analyzed:	11/15/18

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	SL0084	**Units:**	mg/Kg
Lab Code:	K1811120-001	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample K1811120-001DUP Result	Average	RPD	RPD Limit
Sulfide, Reactive	9034 Modified	32	-	ND U	ND U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/15/18
Sample Matrix:	Soil	**Date Extracted:**	11/15/18

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Analysis Method:	9034 Modified	**Units:**	mg/Kg
Prep Method:	SW-846 Ch 7, 7.3.4.2	**Basis:**	As Received
		Analysis Lot:	615395

	Lab Control Sample K1811120-LCS1			Duplicate Lab Control Sample K1811120-DLCS1					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Sulfide, Reactive	777	810	96	785	810	97	60-130	1	20

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/18 - 11/08/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
Analysis Method:	9045D	**Units:**	pH Units
Prep Method:	None	**Basis:**	As Received

pH

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
SL0084	K1811120-001	**8.13**	-	-	1	11/19/18 17:22	H
SL0064	K1811120-002	**8.15**	-	-	1	11/19/18 17:23	H
SL0065	K1811120-003	**8.29**	-	-	1	11/19/18 17:24	H
SL0022	K1811120-004	**8.52**	-	-	1	11/19/18 17:26	H

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/3/18
Sample Matrix:	Wipe	**Date Received:**	11/13/18
Analysis Method:	9045D	**Units:**	pH Units
Prep Method:	None	**Basis:**	As Received

pH

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
FW0001	K1811120-005	**5.53**	-	-	1	11/19/18 17:42	H
FB0001	K1811120-006	**5.43**	-	-	1	11/19/18 17:44	H

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project	San Jacinto	**Date Collected:**	11/05/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
		Date Analyzed:	11/19/18

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	SL0065	**Units:**	pH Units
Lab Code:	K1811120-003	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample K1811120-003DUP Result	Average	RPD	RPD Limit
pH	9045D	-	-	8.29	8.55	8.42	3	20

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/19/18
Sample Matrix:	Soil	**Date Extracted:**	NA

Lab Control Sample Summary
pH

Analysis Method:	9045D	**Units:**	pH Units
Prep Method:	None	**Basis:**	As Received
		Analysis Lot:	615685

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1811120-LCS2	8.50	8.64	98	85-115

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/08/18 09:10
Sample Matrix:	Soil	**Date Received:**	11/13/18 09:30
Sample Name:	SL0084	**Basis:**	NA
Lab Code:	K1811120-001		

TCLP Metals

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND	U	mg/L	0.050	0.020	5	12/05/18 14:49	11/26/18	
Barium	6010C	**1.1**		mg/L	1.0	0.5	5	12/05/18 14:49	11/26/18	
Cadmium	6010C	**0.002**	**J**	mg/L	0.050	0.001	5	12/05/18 14:49	11/26/18	
Chromium	6010C	ND	U	mg/L	0.050	0.010	5	12/05/18 14:49	11/26/18	
Lead	6010C	ND	U	mg/L	0.050	0.015	5	12/05/18 14:49	11/26/18	
Mercury	7470A	ND	U	mg/L	0.0010	0.0001	1	11/27/18 13:15	11/26/18	
Selenium	6010C	ND	U	mg/L	0.10	0.02	5	12/05/18 14:49	11/26/18	
Silver	6010C	ND	U	mg/L	0.050	0.004	5	12/05/18 14:49	11/26/18	

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/05/18 15:15
Sample Matrix:	Soil	**Date Received:**	11/13/18 09:30
Sample Name:	SL0064	**Basis:**	NA
Lab Code:	K1811120-002		

TCLP Metals

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND	U	mg/L	0.050	0.020	5	12/05/18 15:02	11/26/18	
Barium	6010C	**1.3**		mg/L	1.0	0.5	5	12/05/18 15:02	11/26/18	
Cadmium	6010C	**0.003**	**J**	mg/L	0.050	0.001	5	12/05/18 15:02	11/26/18	
Chromium	6010C	ND	U	mg/L	0.050	0.010	5	12/05/18 15:02	11/26/18	
Lead	6010C	**0.024**	**J**	mg/L	0.050	0.015	5	12/05/18 15:02	11/26/18	
Mercury	7470A	ND	U	mg/L	0.0010	0.0001	1	11/27/18 13:25	11/26/18	
Selenium	6010C	**0.02**	**J**	mg/L	0.10	0.02	5	12/05/18 15:02	11/26/18	
Silver	6010C	ND	U	mg/L	0.050	0.004	5	12/05/18 15:02	11/26/18	

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/05/18 15:20
Sample Matrix:	Soil	**Date Received:**	11/13/18 09:30
Sample Name:	SL0065	**Basis:**	NA
Lab Code:	K1811120-003		

TCLP Metals

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND	U	mg/L	0.050	0.020	5	12/05/18 15:05	11/26/18	
Barium	6010C	**1.3**		mg/L	1.0	0.5	5	12/05/18 15:05	11/26/18	
Cadmium	6010C	**0.003**	**J**	mg/L	0.050	0.001	5	12/05/18 15:05	11/26/18	
Chromium	6010C	ND	U	mg/L	0.050	0.010	5	12/05/18 15:05	11/26/18	
Lead	6010C	**0.025**	**J**	mg/L	0.050	0.015	5	12/05/18 15:05	11/26/18	
Mercury	7470A	ND	U	mg/L	0.0010	0.0001	1	11/27/18 13:26	11/26/18	
Selenium	6010C	ND	U	mg/L	0.10	0.02	5	12/05/18 15:05	11/26/18	
Silver	6010C	ND	U	mg/L	0.050	0.004	5	12/05/18 15:05	11/26/18	

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/18 15:40
Sample Matrix:	Soil	**Date Received:**	11/13/18 09:30
Sample Name:	SL0022	**Basis:**	NA
Lab Code:	K1811120-004		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	mg/L	0.050	0.020	5	12/05/18 15:21	11/26/18	
Barium	6010C	**0.9 J**	mg/L	1.0	0.5	5	12/05/18 15:21	11/26/18	
Cadmium	6010C	**0.011 J**	mg/L	0.050	0.001	5	12/05/18 15:21	11/26/18	
Chromium	6010C	ND U	mg/L	0.050	0.010	5	12/05/18 15:21	11/26/18	
Lead	6010C	ND U	mg/L	0.050	0.015	5	12/05/18 15:21	11/26/18	
Mercury	7470A	ND U	mg/L	0.0010	0.0001	1	11/27/18 12:32	11/26/18	
Selenium	6010C	ND U	mg/L	0.10	0.02	5	12/05/18 15:21	11/26/18	
Silver	6010C	ND U	mg/L	0.050	0.004	5	12/05/18 15:21	11/26/18	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1817135-02		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	mg/L	0.050	0.020	5	12/05/18 14:44	11/26/18	
Barium	6010C	ND U	mg/L	1.0	0.5	5	12/05/18 14:44	11/26/18	
Cadmium	6010C	ND U	mg/L	0.050	0.001	5	12/05/18 14:44	11/26/18	
Chromium	6010C	ND U	mg/L	0.050	0.010	5	12/05/18 14:44	11/26/18	
Lead	6010C	ND U	mg/L	0.050	0.015	5	12/05/18 14:44	11/26/18	
Selenium	6010C	ND U	mg/L	0.10	0.02	5	12/05/18 14:44	11/26/18	
Silver	6010C	ND U	mg/L	0.050	0.004	5	12/05/18 14:44	11/26/18	

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1817136-02		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6010C	ND U	mg/L	0.050	0.020	5	12/05/18 15:08	11/26/18	
Barium	6010C	ND U	mg/L	1.0	0.5	5	12/05/18 15:08	11/26/18	
Cadmium	6010C	ND U	mg/L	0.050	0.001	5	12/05/18 15:08	11/26/18	
Chromium	6010C	ND U	mg/L	0.050	0.010	5	12/05/18 15:08	11/26/18	
Lead	6010C	ND U	mg/L	0.050	0.015	5	12/05/18 15:08	11/26/18	
Selenium	6010C	ND U	mg/L	0.10	0.02	5	12/05/18 15:08	11/26/18	
Silver	6010C	ND U	mg/L	0.050	0.004	5	12/05/18 15:08	11/26/18	

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1817185-01		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	mg/L	0.0010	0.0001	1	11/27/18 13:12	11/26/18	

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1817186-01		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	mg/L	0.0010	0.0001	1	11/27/18 12:29	11/26/18	

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project	San Jacinto	**Date Collected:**	11/08/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
		Date Analyzed:	12/05/18

Replicate Sample Summary
TCLP Metals

Sample Name:	SL0084	**Units:**	mg/L
Lab Code:	K1811120-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1817135-03 Result	Average	RPD	RPD Limit
Arsenic	6010C	0.050	0.020	ND U	ND U	ND	-	20
Barium	6010C	1.0	0.5	1.1	1.0	1.1	10	20
Cadmium	6010C	0.050	0.001	0.002 J	0.002 J	0.002	<1	20
Chromium	6010C	0.050	0.010	ND U	ND U	ND	-	20
Lead	6010C	0.050	0.015	ND U	ND U	ND	-	20
Selenium	6010C	0.10	0.02	ND U	ND U	ND	-	20
Silver	6010C	0.050	0.004	ND U	ND U	ND	-	20

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Superset Reference:

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project	San Jacinto	**Date Collected:**	11/03/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
		Date Analyzed:	12/05/18

Replicate Sample Summary

TCLP Metals

Sample Name:	SL0022	**Units:**	mg/L
Lab Code:	K1811120-004	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1817136-03 Result	Average	RPD	RPD Limit
Arsenic	6010C	0.050	0.020	ND U	ND U	ND	-	20
Barium	6010C	1.0	0.5	0.9 J	0.9 J	0.9	<1	20
Cadmium	6010C	0.050	0.001	0.011 J	0.011 J	0.011	<1	20
Chromium	6010C	0.050	0.010	ND U	ND U	ND	-	20
Lead	6010C	0.050	0.015	ND U	ND U	ND	-	20
Selenium	6010C	0.10	0.02	ND U	ND U	ND	-	20
Silver	6010C	0.050	0.004	ND U	ND U	ND	-	20

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project	San Jacinto	**Date Collected:**	11/08/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
		Date Analyzed:	11/27/18

Replicate Sample Summary

TCLP Metals

Sample Name:	SL0084	**Units:**	mg/L
Lab Code:	K1811120-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1817185-03 Result	Average	RPD	RPD Limit
Mercury	7470A	0.0010	0.0001	ND U	ND U	ND	-	20

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Superset Reference:

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project	San Jacinto	**Date Collected:**	11/03/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
		Date Analyzed:	11/27/18

Replicate Sample Summary

TCLP Metals

Sample Name:	SL0022	**Units:**	mg/L
Lab Code:	K1811120-004	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1817186-03 Result	Average	RPD	RPD Limit
Mercury	7470A	0.0010	0.0001	ND U	ND U	ND	-	20

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Superset Reference:

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/08/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
		Date Analyzed:	12/5/18
		Date Extracted:	11/26/18

Matrix Spike Summary
TCLP Metals

Sample Name:	SL0084	**Units:**	mg/L
Lab Code:	K1811120-001	**Basis:**	NA
Analysis Method:	6010C		
Prep Method:	EPA 3010A		

Matrix Spike
KQ1817135-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	ND U	4.94	5.00	99	75-125
Barium	1.1	10.9	10.0	98	75-125
Cadmium	0.002 J	0.974	1.00	97	75-125
Chromium	ND U	4.87	5.00	97	75-125
Lead	ND U	4.64	5.00	93	75-125
Selenium	ND U	0.97	1.00	97	75-125
Silver	ND U	0.883	1.00	88	75-125

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
		Date Analyzed:	12/5/18
		Date Extracted:	11/26/18

Matrix Spike Summary
TCLP Metals

Sample Name:	SL0022	**Units:**	mg/L
Lab Code:	K1811120-004	**Basis:**	NA
Analysis Method:	6010C		
Prep Method:	EPA 3010A		

Matrix Spike
KQ1817136-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	ND U	4.87	5.00	97	75-125
Barium	0.9 J	10.9	10.0	100	75-125
Cadmium	0.011 J	0.979	1.00	97	75-125
Chromium	ND U	4.95	5.00	99	75-125
Lead	ND U	4.70	5.00	94	75-125
Selenium	ND U	0.94	1.00	94	75-125
Silver	ND U	0.568	1.00	57 N	75-125

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/08/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
		Date Analyzed:	11/27/18
		Date Extracted:	11/26/18

Matrix Spike Summary
TCLP Metals

Sample Name:	SL0084	**Units:**	mg/L
Lab Code:	K1811120-001	**Basis:**	NA
Analysis Method:	7470A		
Prep Method:	Method		

Matrix Spike
KQ1817185-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Mercury	ND U	0.0047	0.0050	93	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
		Date Analyzed:	11/27/18
		Date Extracted:	11/26/18

Matrix Spike Summary
TCLP Metals

Sample Name:	SL0022	**Units:**	mg/L
Lab Code:	K1811120-004	**Basis:**	NA
Analysis Method:	7470A		
Prep Method:	Method		

Matrix Spike
KQ1817186-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Mercury	ND U	0.0045	0.0050	90	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto
Sample Matrix: Soil

Service Request: K1811120
Date Analyzed: 12/05/18

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis:NA

Lab Control Sample
KQ1817135-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6010C	5.04	5.00	101	80-120
Barium	6010C	10.8	10.0	108	80-120
Cadmium	6010C	0.998	1.00	100	80-120
Chromium	6010C	5.31	5.00	106	80-120
Lead	6010C	4.67	5.00	93	80-120
Selenium	6010C	0.97	1.00	97	80-120
Silver	6010C	0.886	1.00	89	80-120

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QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto
Sample Matrix: Soil

Service Request: K1811120
Date Analyzed: 12/05/18

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis:NA

Lab Control Sample
KQ1817136-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6010C	5.24	5.00	105	80-120
Barium	6010C	10.5	10.0	105	80-120
Cadmium	6010C	1.03	1.00	103	80-120
Chromium	6010C	5.31	5.00	106	80-120
Lead	6010C	5.11	5.00	102	80-120
Selenium	6010C	0.98	1.00	98	80-120
Silver	6010C	1.05	1.00	105	80-120

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QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto
Sample Matrix: Soil

Service Request: K1811120
Date Analyzed: 11/27/18

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis:NA

Lab Control Sample
KQ1817185-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	0.0046	0.0050	91	80-120

ALS Group USA, Corp.
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QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto
Sample Matrix: Soil

Service Request: K1811120
Date Analyzed: 11/27/18

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis:NA

Lab Control Sample
KQ1817186-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	0.0045	0.0050	91	80-120

ALS Group USA, Corp.
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Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto
Sample Matrix: Soil

Metals

Prep Method: EPA 3010A **Extraction Lot:** 326965
Analytical Method: 6010C **Extraction Date:** 11/26/18 10:40

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0084	K1811120-001	11/8/18	11/13/18	25 mL	25 mL	
SL0064	K1811120-002	11/5/18	11/13/18	25 mL	25 mL	
SL0065	K1811120-003	11/5/18	11/13/18	25 mL	25 mL	
Lab Control Sample	KQ1817135-01LCS	NA	NA	25 mL	25 mL	
Method Blank	KQ1817135-02MB	NA	NA	25 mL	25 mL	
Duplicate	KQ1817135-03DUP	11/8/18	11/13/18	25 mL	25 mL	
Matrix Spike	KQ1817135-04MS	11/8/18	11/13/18	25 mL	25 mL	

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto
Sample Matrix: Soil

Metals

Prep Method: EPA 3010A **Extraction Lot:** 326966
Analytical Method: 6010C **Extraction Date:** 11/26/18 10:40

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0022	K1811120-004	11/3/18	11/13/18	25 mL	25 mL	
Lab Control Sample	KQ1817136-01LCS	NA	NA	25 mL	25 mL	
Method Blank	KQ1817136-02MB	NA	NA	25 mL	25 mL	
Duplicate	KQ1817136-03DUP	11/3/18	11/13/18	25 mL	25 mL	
Matrix Spike	KQ1817136-04MS	11/3/18	11/13/18	25 mL	25 mL	

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto
Sample Matrix: Soil

Metals

Prep Method: Method **Extraction Lot:** 327025
Analytical Method: 7470A **Extraction Date:** 11/26/18 13:50

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0084	K1811120-001	11/8/18	11/13/18	20 mL	20 mL	
SL0064	K1811120-002	11/5/18	11/13/18	20 mL	20 mL	
SL0065	K1811120-003	11/5/18	11/13/18	20 mL	20 mL	
Method Blank	KQ1817185-01MB	NA	NA	20 mL	20 mL	
Lab Control Sample	KQ1817185-02LCS	NA	NA	20 mL	20 mL	
Duplicate	KQ1817185-03DUP	11/8/18	11/13/18	20 mL	20 mL	
Matrix Spike	KQ1817185-04MS	11/8/18	11/13/18	20 mL	20 mL	

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto
Sample Matrix: Soil

Metals

Prep Method: Method **Extraction Lot:** 327026
Analytical Method: 7470A **Extraction Date:** 11/26/18 13:45

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0022	K1811120-004	11/3/18	11/13/18	20 mL	20 mL	
Method Blank	KQ1817186-01MB	NA	NA	20 mL	20 mL	
Lab Control Sample	KQ1817186-02LCS	NA	NA	20 mL	20 mL	
Duplicate	KQ1817186-03DUP	11/3/18	11/13/18	20 mL	20 mL	
Matrix Spike	KQ1817186-04MS	11/3/18	11/13/18	20 mL	20 mL	

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 11/27/18 12:21						
Mercury	7470A	616594	5.1	5.0	102	90-110
CCV 11/27/18 12:26						
Mercury	7470A	616594	5.0	5.0	101	90-110
CCV 11/27/18 12:39						
Mercury	7470A	616594	5.0	5.0	101	90-110
ICV 11/27/18 12:52						
Mercury	7470A	616596	5.2	5.0	105	90-110
CCV 11/27/18 12:57						
Mercury	7470A	616596	5.0	5.0	100	90-110
CCV 11/27/18 13:16						
Mercury	7470A	616596	5.1	5.0	102	90-110
CCV 11/27/18 13:33						
Mercury	7470A	616596	5.0	5.0	101	90-110
ICV 12/05/18 14:01						
Arsenic	6010C	617638	2500	2500	100	90-110
Barium	6010C	617638	4980	5000	100	90-110
Cadmium	6010C	617638	1230	1250	98	90-110
Chromium	6010C	617638	507	500	101	90-110
Lead	6010C	617638	2410	2500	97	90-110
Selenium	6010C	617638	2480	2500	99	90-110
Silver	6010C	617638	582	625	93	90-110
CCVB 12/05/18 14:15						
Arsenic	6010C	617638	1030	1000	103	90-110
Barium	6010C	617638	10200	10000	102	90-110
CCVA 12/05/18 14:18						
Cadmium	6010C	617638	253	250	101	90-110
Chromium	6010C	617638	253	250	101	90-110
Lead	6010C	617638	254	250	102	90-110
Selenium	6010C	617638	251	250	100	90-110
Silver	6010C	617638	250	250	100	90-110
CCVB 12/05/18 15:10						
Arsenic	6010C	617638	1050	1000	105	90-110
Barium	6010C	617638	10100	10000	101	90-110
CCVA 12/05/18 15:13						
Cadmium	6010C	617638	256	250	102	90-110
Chromium	6010C	617638	269	250	108	90-110

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
CCVA	12/05/18 15:13						
	Lead	6010C	617638	252	250	101	90-110
	Selenium	6010C	617638	251	250	101	90-110
	Silver	6010C	617638	259	250	104	90-110
CCVB	12/05/18 15:44						
	Arsenic	6010C	617638	1060	1000	106	90-110
	Barium	6010C	617638	10600	10000	106	90-110
CCVA	12/05/18 15:46						
	Cadmium	6010C	617638	254	250	101	90-110
	Chromium	6010C	617638	260	250	104	90-110
	Lead	6010C	617638	252	250	101	90-110
	Selenium	6010C	617638	252	250	101	90-110
	Silver	6010C	617638	256	250	102	90-110
CCVB	12/05/18 16:18						
	Arsenic	6010C	617638	1030	1000	103	90-110
	Barium	6010C	617638	9930	10000	99	90-110
CCVA	12/05/18 16:21						
	Cadmium	6010C	617638	254	250	101	90-110
	Chromium	6010C	617638	252	250	101	90-110
	Lead	6010C	617638	254	250	102	90-110
	Selenium	6010C	617638	254	250	101	90-110
	Silver	6010C	617638	258	250	103	90-110

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 11/27/18 12:23				
Mercury	7470A	616594	1.0	U
CCB 11/27/18 12:28				
Mercury	7470A	616594	1.0	U
CCB 11/27/18 12:41				
Mercury	7470A	616594	1.0	U
ICB 11/27/18 12:54				
Mercury	7470A	616596	1.0	U
CCB 11/27/18 12:59				
Mercury	7470A	616596	1.0	U
CCB 11/27/18 13:18				
Mercury	7470A	616596	1.0	U
CCB 11/27/18 13:34				
Mercury	7470A	616596	1.0	U
ICB 12/05/18 14:04				
Arsenic	6010C	617638	4	U
Barium	6010C	617638	100	U
Cadmium	6010C	617638	0.2	U
Chromium	6010C	617638	2	U
Lead	6010C	617638	3	U
Selenium	6010C	617638	7	J
Silver	6010C	617638	0.8	U
CCB 12/05/18 14:21				
Arsenic	6010C	617638	4	U
Barium	6010C	617638	100	U
Cadmium	6010C	617638	0.2	U
Chromium	6010C	617638	2	U
Lead	6010C	617638	3	U
Selenium	6010C	617638	4	U
Silver	6010C	617638	0.8	U
CCB 12/05/18 15:16				
Arsenic	6010C	617638	4	U
Barium	6010C	617638	100	U
Cadmium	6010C	617638	0.2	U
Chromium	6010C	617638	2	U
Lead	6010C	617638	3	U
Selenium	6010C	617638	4	U

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
CCB 12/05/18 15:16				
Silver	6010C	617638	0.8	U
CCB 12/05/18 15:49				
Arsenic	6010C	617638	4	U
Barium	6010C	617638	100	U
Cadmium	6010C	617638	-0.200	J
Chromium	6010C	617638	2	U
Lead	6010C	617638	3	U
Selenium	6010C	617638	4	U
Silver	6010C	617638	0.8	U
CCB 12/05/18 16:23				
Arsenic	6010C	617638	4	U
Barium	6010C	617638	100	U
Cadmium	6010C	617638	0.2	U
Chromium	6010C	617638	2	U
Lead	6010C	617638	3	U
Selenium	6010C	617638	4	U
Silver	6010C	617638	0.8	U

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV							
Mercury	7470A	616594	0.19	0.2	93	50-199	11/27/18 12:24
LLICV							
Mercury	7470A	616596	0.19	0.2	95	50-199	11/27/18 12:55
LLICV							
Arsenic	6010C	617638	7.8	10.0	78	70-130	12/05/18 14:07
Cadmium	6010C	617638	1.0	1.0	100	70-130	12/05/18 14:07
Chromium	6010C	617638	4.8	4.0	120	70-130	12/05/18 14:07
Lead	6010C	617638	9.9	10.0	99	70-130	12/05/18 14:07
Selenium	6010C	617638	22.3	20.0	112	70-130	12/05/18 14:07
Silver	6010C	617638	4.3	4.0	108	70-130	12/05/18 14:07
LLICV							
Barium	6010C	617638	201	200	100	70-130	12/05/18 14:13
LLCCV							
Arsenic	6010C	617638	10.6	10.0	106	70-130	12/05/18 16:26
Cadmium	6010C	617638	1.0	1.0	100	70-130	12/05/18 16:26
Chromium	6010C	617638	4.4	4.0	110	70-130	12/05/18 16:26
Lead	6010C	617638	9.6	10.0	96	70-130	12/05/18 16:26
Selenium	6010C	617638	19.4	20.0	97	70-130	12/05/18 16:26
Silver	6010C	617638	4.3	4.0	108	70-130	12/05/18 16:26
LLCCV							
Barium	6010C	617638	195	200	97	70-130	12/05/18 16:31

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** ug/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Arsenic	6010C	617638	4	-	-	-	12/05/18 14:23
Barium	6010C	617638	100	-	-	-	12/05/18 14:23
Cadmium	6010C	617638	-10.0	-	-	-	12/05/18 14:23
Chromium	6010C	617638	2	-	-	-	12/05/18 14:23
Lead	6010C	617638	-17.2	-	-	-	12/05/18 14:23
Selenium	6010C	617638	4	-	-	-	12/05/18 14:23
Silver	6010C	617638	0.9	-	-	-	12/05/18 14:23

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSAB **Concentration Units:** ug/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Arsenic	6010C	617638	4	-	-	-	12/05/18 14:26
Barium	6010C	617638	540	500	107	80-120	12/05/18 14:26
Cadmium	6010C	617638	940	1000	94	80-120	12/05/18 14:26
Chromium	6010C	617638	519	500	104	80-120	12/05/18 14:26
Lead	6010C	617638	893	1000	89	80-120	12/05/18 14:26
Selenium	6010C	617638	5	-	-	-	12/05/18 14:26
Silver	6010C	617638	882	1000	88	80-120	12/05/18 14:26

Client: Integral Consulting, Incorporated **Service Request:** K1811120

Project: San Jacinto

POST SPIKE SAMPLE RECOVERY

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Post Spike Result	True Value	% Rec	% Rec. Limits	Analysis Date
K1811120-004A								
Mercury	7470A	616594	0.1 U	5.0	5.0	100	85-115	11/27/18 12:34
K1811120-001A								
Mercury	7470A	616596	0.1 U	4.9	5.0	98	85-115	11/27/18 13:20
K1811120-001A								
Arsenic	6010C	617638	20 U	4900	5000	98	80-120	12/05/18 15:00
Barium	6010C	617638	500 U	9900	10000	97	80-120	12/05/18 15:00
Cadmium	6010C	617638	1 U	957	1000	96	80-120	12/05/18 15:00
Chromium	6010C	617638	10 U	4890	5000	98	80-120	12/05/18 15:00
Lead	6010C	617638	15 U	4600	5000	92	80-120	12/05/18 15:00
Selenium	6010C	617638	20 U	960	1000	96	80-120	12/05/18 15:00
Silver	6010C	617638	4 U	859	1000	86	80-120	12/05/18 15:00
K1811120-004A								
Arsenic	6010C	617638	20 U	4880	5000	98	80-120	12/05/18 15:31
Barium	6010C	617638	500 U	10200	10000	100	80-120	12/05/18 15:31
Cadmium	6010C	617638	1 U	968	1000	97	80-120	12/05/18 15:31
Chromium	6010C	617638	10 U	4960	5000	99	80-120	12/05/18 15:31
Lead	6010C	617638	15 U	4720	5000	94	80-120	12/05/18 15:31
Selenium	6010C	617638	20 U	960	1000	96	80-120	12/05/18 15:31
Silver	6010C	617638	4 U	883	1000	88	80-120	12/05/18 15:31

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

ICP SERIAL DILUTIONS

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Serial Dillution Result	% Diff	% Diff. Limit	Analysis Date
K1811120-001SDL							
Arsenic	6010C	617638	20 U	-7.50 U	-15	10	12/05/18 14:52
Barium	6010C	617638	1100	1100 U	1	10	12/05/18 14:52
Cadmium	6010C	617638	2 J	0.00 U	100	10	12/05/18 14:52
Chromium	6010C	617638	10 U	20 U	-1600	10	12/05/18 14:52
Lead	6010C	617638	20 U	-27.5 U	1200	10	12/05/18 14:52
Selenium	6010C	617638	20 U	10 U	82	10	12/05/18 14:52
Silver	6010C	617638	4 U	-12.5 U	-733	10	12/05/18 14:52
K1811120-004SDL							
Arsenic	6010C	617638	20 U	10 U	13	10	12/05/18 15:23
Barium	6010C	617638	900 J	900 U	1	10	12/05/18 15:23
Cadmium	6010C	617638	10 J	10 J	9	10	12/05/18 15:23
Chromium	6010C	617638	10 U	-7.50 U	400	10	12/05/18 15:23
Lead	6010C	617638	20 U	0.00 U	100	10	12/05/18 15:23
Selenium	6010C	617638	20 U	40 U	159	10	12/05/18 15:23
Silver	6010C	617638	4 U	-2.50 U	-25	10	12/05/18 15:23

Client: Integral Consulting, Incorporated **Service Request:** K1811120

Project: San Jacinto/

Detection Limits

Instrument: K-CVAA-02 **Matrix:** Soil

Analyte	Wavelength (nm)	Units	MRL	MDL	Method
Mercury	253	ug/L	1.0	0.1	7470A

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto/

Detection Limits

Instrument: K-ICP-AES-03 **Matrix:** Soil

Analyte	Wavelength (nm)	Units	MRL	MDL	Method
Arsenic	1890	ug/L	10	4	6010C
Barium	4554	ug/L	200	100	6010C
Cadmium	2265	ug/L	10	0.2	6010C
Chromium	2677	ug/L	10	2	6010C
Lead	2203	ug/L	10	3	6010C
Selenium	1960	ug/L	20	4	6010C
Silver	3280	ug/L	10	0.8	6010C

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto/

ICP Linear Range (Quarterly)

Instrument: K-CVAA-02

Analyte	Concentration (ug/L)	Method
Mercury	10	7470A

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto/

ICP Linear Range (Quarterly)

Instrument: K-ICP-AES-03

Analyte	Concentration (ug/L)	Method
Arsenic 1890	90000	6010C
Barium 4554	45000	6010C
Cadmium 2265	23500	6010C
Chromium 2677	45000	6010C
Lead 2203	22500	6010C
Selenium 1960	45000	6010C
Silver 3280	1800	6010C

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto/

Analysis Run Log

Instrument ID: **K-CVAA-02** **Analytical BatchID:** **616594**

Sample	Dilution Factor	Date/Time	Hg
ZZZZZZ	1	11/27/18 12:11	
ZZZZZZ	1	11/27/18 12:13	
ZZZZZZ	1	11/27/18 12:15	
ZZZZZZ	1	11/27/18 12:16	
ZZZZZZ	1	11/27/18 12:18	
ZZZZZZ	1	11/27/18 12:20	
ICV1	1	11/27/18 12:21	X
ICB1	1	11/27/18 12:23	X
LLICV1	1	11/27/18 12:24	X
CCV1	1	11/27/18 12:26	X
CCB1	1	11/27/18 12:28	X
KQ1817186-01MB	1	11/27/18 12:29	X
KQ1817186-02LCS	1	11/27/18 12:31	X
K1811120-004	1	11/27/18 12:32	X
K1811120-004PS	1	11/27/18 12:34	X
K1811120-004DUP	1	11/27/18 12:36	X
K1811120-004MS	1	11/27/18 12:37	X
CCV2	1	11/27/18 12:39	X
CCB2	1	11/27/18 12:41	X

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto/

Analysis Run Log

Instrument ID: **K-CVAA-02** **Analytical BatchID:** **616596**

Sample	Dilution Factor	Date/Time	Hg
ZZZZZZ	1	11/27/18 12:42	
ZZZZZZ	1	11/27/18 12:44	
ZZZZZZ	1	11/27/18 12:46	
ZZZZZZ	1	11/27/18 12:47	
ZZZZZZ	1	11/27/18 12:49	
ZZZZZZ	1	11/27/18 12:51	
ICV1	1	11/27/18 12:52	X
ICB1	1	11/27/18 12:54	X
LLICV1	1	11/27/18 12:55	X
CCV1	1	11/27/18 12:57	X
CCB1	1	11/27/18 12:59	X
ZZZZZZ	1	11/27/18 13:00	
ZZZZZZ	1	11/27/18 13:02	
ZZZZZZ	1	11/27/18 13:03	
ZZZZZZ	1	11/27/18 13:05	
ZZZZZZ	1	11/27/18 13:07	
ZZZZZZ	1	11/27/18 13:08	
ZZZZZZ	1	11/27/18 13:10	
KQ1817185-01MB	1	11/27/18 13:12	X
KQ1817185-02LCS	1	11/27/18 13:13	X
K1811120-001	1	11/27/18 13:15	X
CCV2	1	11/27/18 13:16	X
CCB2	1	11/27/18 13:18	X
K1811120-001PS	1	11/27/18 13:20	X
K1811120-001DUP	1	11/27/18 13:21	X
K1811120-001MS	1	11/27/18 13:23	X
K1811120-002	1	11/27/18 13:25	X
K1811120-003	1	11/27/18 13:26	X
ZZZZZZ	1	11/27/18 13:28	
ZZZZZZ	1	11/27/18 13:29	
ZZZZZZ	1	11/27/18 13:31	
CCV3	1	11/27/18 13:33	X
CCB3	1	11/27/18 13:34	X

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto/

Analysis Run Log

Instrument ID: **K-ICP-AES-03** **Analytical BatchID:** **617638**

Sample	Dilution Factor	Date/Time	As	Ba	Cd	Cr	Pb	Se	Ag
ZZZZZZ	1	12/05/18 13:51							
ZZZZZZ	1	12/05/18 13:53							
ZZZZZZ	1	12/05/18 13:56							
ZZZZZZ	1	12/05/18 13:59							
ICV	1	12/05/18 14:01	X	X	X	X	X	X	X
ICB	1	12/05/18 14:04	X	X	X	X	X	X	X
LLICV	1	12/05/18 14:07	X		X	X	X	X	X
ZZZZZZ	0.5	12/05/18 14:09							
LLICV-TCLP	1	12/05/18 14:13		X					
CCVB1	1	12/05/18 14:15	X	X					
CCVA1	1	12/05/18 14:18			X	X	X	X	X
CCB	1	12/05/18 14:21	X	X	X	X	X	X	X
ICSA	1	12/05/18 14:23	X	X	X	X	X	X	X
ICSAB	1	12/05/18 14:26	X	X	X	X	X	X	X
KQ1817135-02MB	5	12/05/18 14:44	X	X	X	X	X	X	X
KQ1817135-01LCS	5	12/05/18 14:47	X	X	X	X	X	X	X
K1811120-001	5	12/05/18 14:49	X	X	X	X	X	X	X
K1811120-001SDL	25	12/05/18 14:52	X	X	X	X	X	X	X
K1811120-001DUP	5	12/05/18 14:55	X	X	X	X	X	X	X
K1811120-001MS	5	12/05/18 14:57	X	X	X	X	X	X	X
K1811120-001PS	5	12/05/18 15:00	X	X	X	X	X	X	X
K1811120-002	5	12/05/18 15:02	X	X	X	X	X	X	X
K1811120-003	5	12/05/18 15:05	X	X	X	X	X	X	X
KQ1817136-02MB	5	12/05/18 15:08	X	X	X	X	X	X	X
CCVB	1	12/05/18 15:10	X	X					
CCVA	1	12/05/18 15:13			X	X	X	X	X
CCB	1	12/05/18 15:16	X	X	X	X	X	X	X
KQ1817136-01LCS	5	12/05/18 15:18	X	X	X	X	X	X	X
K1811120-004	5	12/05/18 15:21	X	X	X	X	X	X	X
K1811120-004SDL	25	12/05/18 15:23	X	X	X	X	X	X	X
K1811120-004DUP	5	12/05/18 15:26	X	X	X	X	X	X	X
K1811120-004MS	5	12/05/18 15:28	X	X	X	X	X	X	X
K1811120-004PS	5	12/05/18 15:31	X	X	X	X	X	X	X
ZZZZZZ	5	12/05/18 15:33							
ZZZZZZ	5	12/05/18 15:36							
ZZZZZZ	5	12/05/18 15:38							
ZZZZZZ	5	12/05/18 15:41							

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto/

Analysis Run Log

Instrument ID: **K-ICP-AES-03** **Analytical BatchID:** **617638**

Sample	Dilution Factor	Date/Time	As	Ba	Cd	Cr	Pb	Se	Ag
CCVB	1	12/05/18 15:44	X	X					
CCVA	1	12/05/18 15:46			X	X	X	X	X
CCB	1	12/05/18 15:49	X	X	X	X	X	X	X
ZZZZZZ	1	12/05/18 15:55							
ZZZZZZ	5	12/05/18 15:58							
ZZZZZZ	5	12/05/18 16:00							
ZZZZZZ	5	12/05/18 16:03							
ZZZZZZ	5	12/05/18 16:05							
ZZZZZZ	5	12/05/18 16:08							
ZZZZZZ	5	12/05/18 16:10							
ZZZZZZ	5	12/05/18 16:13							
ZZZZZZ	5	12/05/18 16:15							
CCVB	1	12/05/18 16:18	X	X					
CCVA	1	12/05/18 16:21			X	X	X	X	X
CCB	1	12/05/18 16:23	X	X	X	X	X	X	X
LLCCV	1	12/05/18 16:26	X		X	X	X	X	X
ZZZZZZ	0.5	12/05/18 16:28							
LLCCV-TCLP	1	12/05/18 16:31		X					

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Al 167.079 {502}	☒	2	Fe	0.001107	0.000000	No
			Mg	0.000027	0.000000	No
Al 394.401 { 85}	☒	4	Ca	0.000032	0.000000	No
			Mg	0.000029	0.000000	No
			Mo	0.000263	0.000000	No
			V	0.000343	0.000000	No
Sb 206.833 {463}	☒	2	Cr	0.014673	0.000000	No
			Ti	0.000551	0.000000	No
Sb 217.581 {455}	☒	5	Fe	-0.000282	0.000000	No
			Pb	-0.000404	0.000000	No
			Mn	-0.000813	0.000000	No
			V	0.002032	0.000000	No
			Cu	-0.000853	0.000000	No
As 189.042 {478}	☒	4	Cr	0.000454	0.000000	No
			Al	0.000046	0.000000	No
			Mn	-0.000282	0.000000	No
			Mo	0.000942	0.000000	No
Ba 455.403 { 74}	☒	None				
Be 234.861 {144}	☒	2	Mn	-0.000061	0.000000	No
			Mo	-0.000388	0.000000	No
B 249.678 {135}	☒	4	Fe	-0.000573	0.000000	No
			Co	0.003033	0.000000	No
			Mo	-0.001572	0.000000	No
			V	-0.000400	0.000000	No
Cd 214.438 {457}	☒	2	Al	-0.000003	0.000000	No
			Fe	0.000029	0.000000	No
Cd 226.502 {449}	☒	3	Fe	0.000142	0.000000	No
			Mo	-0.000024	0.000000	No
			Ti	0.000092	0.000000	No
Ca 315.887 {107}	☒	1	Cr	-0.001266	0.000000	No
Ca 393.366 { 86}	☒	None				
Cr 267.716 {126}	☒	2	Cd	-0.000111	0.000000	No
			Mn	0.000323	0.000000	No
Co 228.616 {447}	☒	4	Mo	-0.000876	0.000000	No
			Ni	0.000137	0.000000	No
			Ti	0.002243	0.000000	No
			Ba	-0.000058	0.000000	No
Co 230.786 {446}	☒	2	Mo	0.000169	0.000000	No
			Ni	0.000907	0.000000	No
Cu 224.700 {450}	☒	6	Fe	0.000480	0.000000	No
			Pb	0.002225	0.000000	No
			Co	0.000179	0.000000	No
			Mo	0.002076	0.000000	No
			Ni	-0.004791	0.000000	No
			Ti	0.000416	0.000000	No
Cu 327.396 {103}	☒	5	Ca	0.000013	0.000000	No
			Co	0.000271	0.000000	No
			Mo	-0.000261	0.000000	No
			Ti	0.000116	0.000000	No
			V	-0.000091	0.000000	No
Fe 259.940 {130}	☒	None				
Pb 220.353 {453}	☒	4	Al	-0.000081	0.000000	No
			Mo	-0.000514	0.000000	No
			Si	0.000255	0.000000	No
			Cu	0.000840	0.000000	No
Li 670.784 { 50}	☒	None				
Mg 279.079 {121}	☒	None				
Mg 279.553 {121}	☒	1	Ca	0.000033	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Mg 285.213 {118}	☒	3	Ca	0.000031	0.000000	No
			Mo	-0.000114	0.000000	No
			V	-0.000108	0.000000	No
Mn 257.610 {131}	☒	1	Fe	0.000008	0.000000	No
Mn 260.569 {129}	☒	None				
Mo 202.030 {467}	☒	None				
Ni 221.647 {452}	☒	4	Cr	-0.000463	0.000000	No
			Co	-0.000144	0.000000	No
			Si	0.000389	0.000000	No
			Ti	-0.001225	0.000000	No
Ni 231.604 {446}	☒	2	Co	-0.000299	0.000000	No
			Mo	-0.000090	0.000000	No
P 178.284 {489}	☒	None				
P 214.914 {457}	☒	6	Al	-0.000698	0.000000	No
			Cd	-0.002905	0.000000	No
			Fe	0.001085	0.000000	No
			Mo	0.007710	0.000000	No
			V	-0.001592	0.000000	No
			Cu	0.001402	0.000000	No
K 766.490 { 44}	☒	None				
Se 196.090 {472}	☒	2	Fe	-0.000219	0.000000	No
			Mn	0.000496	0.000000	No
Si 251.611 {134}	☒	1	Mo	0.011921	0.000000	No
Ag 328.068 {103}	☒	2	Mn	0.000158	0.000000	No
			V	0.000093	0.000000	No
Na 589.592 { 57}	☒	None				
Sr 407.771 { 83}	☒	None				
Tl 190.856 {477}	☒	4	Cr	0.000239	0.000000	No
			Co	0.003317	0.000000	No
			Ti	-0.000314	0.000000	No
			V	0.001634	0.000000	No
Sn 189.989 {477}	☒	None				
Ti 336.121 {100}	☒	3	Ca	0.000012	0.000000	No
			Ni	0.000112	0.000000	No
			V	0.000041	0.000000	No
V 292.402 {115}	☒	4	Cr	-0.006361	0.000000	No
			Mn	-0.000269	0.000000	No
			Mo	-0.000108	0.000000	No
			Ti	0.000520	0.000000	No
Zn 206.200 {463}	☒	2	Cr	-0.000140	0.000000	No
			Mo	0.000288	0.000000	No
Zn 213.856 {458}	☒	5	Fe	0.000107	0.000000	No
			Mo	-0.000105	0.000000	No
			Ni	0.005388	0.000000	No
			Ti	-0.000404	0.000000	No
			Cu	0.001082	0.000000	No
Y 224.306 {450}*	☒	None				
Y 360.073 { 94}*	☒	None				
Y 360.073 { 94}2*	☒	None				
In 230.606 {446}	☒	None				
Bi 223.061 {451}	☒	4	Cr	0.001414	0.000000	No
			Co	-0.004457	0.000000	No
			V	-0.001103	0.000000	No
			Cu	-0.002070	0.000000	No
S 182.034 {485}	☒	1	Mn	0.003490	0.000000	No

Gasoline Range Organics

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Cover Page - Organic Analysis Data Package
Gasoline Range Organics

Sample Name	Lab Code	Date Collected	Date Received
SL0084	K1811120-001	11/08/2018	11/13/2018
SL0064	K1811120-007	11/06/2018	11/14/2018
SL0065	K1811120-008	11/06/2018	11/14/2018
SL0084MS	KWG1805980-1	11/08/2018	11/13/2018
SL0084DMS	KWG1805980-2	11/08/2018	11/13/2018

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/08/2018
Sample Matrix:	Soil	**Date Received:**	11/13/2018

Gasoline Range Organics

Sample Name:	SL0084	**Units:**	mg/Kg
Lab Code:	K1811120-001	**Basis:**	Dry
Extraction Method:	EPA 5030A/5030B	**Level:**	Med
Analysis Method:	8015C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	**1.7**	J	6.7	1.4	1	11/14/18	11/14/18	KWG1805980	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	88	83-119	11/14/18	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/06/2018
Sample Matrix:	Soil	**Date Received:**	11/14/2018

Gasoline Range Organics

Sample Name:	SL0064	**Units:**	mg/Kg
Lab Code:	K1811120-007	**Basis:**	Dry
Extraction Method:	EPA 5030A/5030B	**Level:**	Med
Analysis Method:	8015C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	**8.3**		3.2	1.0	1	11/14/18	11/14/18	KWG1805980	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	83-119	11/14/18	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/06/2018
Sample Matrix:	Soil	**Date Received:**	11/14/2018

Gasoline Range Organics

Sample Name:	SL0065	**Units:**	mg/Kg
Lab Code:	K1811120-008	**Basis:**	Dry
Extraction Method:	EPA 5030A/5030B	**Level:**	Med
Analysis Method:	8015C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	**14**		4.8	1.0	1	11/14/18	11/14/18	KWG1805980	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	101	83-119	11/14/18	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Gasoline Range Organics

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1805980-4	**Basis:**	Dry
Extraction Method:	EPA 5030A/5030B	**Level:**	Med
Analysis Method:	8015C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	2.5	1.0	1	11/14/18	11/14/18	KWG1805980	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	86	83-119	11/14/18	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto
Sample Matrix: Soil

Service Request: K1811120

Surrogate Recovery Summary
Gasoline Range Organics

Extraction Method: EPA 5030A/5030B
Analysis Method: 8015C

Units: Percent
Level: Med

Sample Name	Lab Code	Sur1
SL0084	K1811120-001	88
SL0064	K1811120-007	95
SL0065	K1811120-008	101
Method Blank	KWG1805980-4	86
SL0084MS	KWG1805980-1	93
SL0084DMS	KWG1805980-2	89
Lab Control Sample	KWG1805980-3	84

Surrogate Recovery Control Limits (%)

Sur1	= 4-Bromofluorobenzene	83-119

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/14/2018
Sample Matrix:	Soil	**Date Analyzed:**	11/14/2018

Matrix Spike/Duplicate Matrix Spike Summary
Gasoline Range Organics

Sample Name:	SL0084	**Units:**	mg/Kg
Lab Code:	K1811120-001	**Basis:**	Dry
Extraction Method:	EPA 5030A/5030B	**Level:**	Med
Analysis Method:	8015C	**Extraction Lot:**	KWG1805980

		SL0084MS KWG1805980-1 Matrix Spike			SL0084DMS KWG1805980-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Gasoline Range Organics (GRO)	1.7	72.8	66.9	106	72.2	66.9	105	68-112	1	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/14/2018
Sample Matrix:	Soil	**Date Analyzed:**	11/14/2018

Lab Control Spike Summary
Gasoline Range Organics

Extraction Method:	EPA 5030A/5030B	**Units:**	mg/Kg
Analysis Method:	8015C	**Basis:**	Dry
		Level:	Med
		Extraction Lot:	KWG1805980

Lab Control Sample
KWG1805980-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Gasoline Range Organics (GRO)	24.7	25.0	99	76-123

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/14/2018
Sample Matrix:	Soil	**Date Analyzed:**	11/14/2018
		Time Analyzed:	11:17

Method Blank Summary
Gasoline Range Organics

Sample Name:	Method Blank	**Instrument ID:**	GC39
Lab Code:	KWG1805980-4	**File ID:**	J:\GC39\DATA\111418\1114F007.D
Extraction Method:	EPA 5030A/5030B	**Level:**	Med
Analysis Method:	8015C	**Extraction Lot:**	KWG1805980

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1805980-3	J:\GC39\DATA\111418\1114F006.D	11/14/18	10:34
SL0084MS	KWG1805980-1	J:\GC39\DATA\111418\1114F008.D	11/14/18	13:26
SL0084DMS	KWG1805980-2	J:\GC39\DATA\111418\1114F009.D	11/14/18	13:50
SL0084	K1811120-001	J:\GC39\DATA\111418\1114F010.D	11/14/18	14:14
SL0064	K1811120-007	J:\GC39\DATA\111418\1114F017.D	11/14/18	17:02
SL0065	K1811120-008	J:\GC39\DATA\111418\1114F020.D	11/14/18	18:15

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/14/2018
Sample Matrix:	Soil	**Date Analyzed:**	11/14/2018
		Time Analyzed:	10:34

Lab Control Sample Summary
Gasoline Range Organics

Sample Name:	Lab Control Sample	**Instrument ID:**	GC39
Lab Code:	KWG1805980-3	**File ID:**	J:\GC39\DATA\111418\1114F006.D
Extraction Method:	EPA 5030A/5030B	**Level:**	Med
Analysis Method:	8015C	**Extraction Lot:**	KWG1805980

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1805980-4	J:\GC39\DATA\111418\1114F007.D	11/14/18	11:17
SL0084MS	KWG1805980-1	J:\GC39\DATA\111418\1114F008.D	11/14/18	13:26
SL0084DMS	KWG1805980-2	J:\GC39\DATA\111418\1114F009.D	11/14/18	13:50
SL0084	K1811120-001	J:\GC39\DATA\111418\1114F010.D	11/14/18	14:14
SL0064	K1811120-007	J:\GC39\DATA\111418\1114F017.D	11/14/18	17:02
SL0065	K1811120-008	J:\GC39\DATA\111418\1114F020.D	11/14/18	18:15

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 06/14/2018

Initial Calibration Summary
Gasoline Range Organics

Calibration ID: CAL15764
Instrument ID: GC39

Column: DB-624

Level ID	File ID
A	J:\GC39\DATA\061418\0614F006.D
B	J:\GC39\DATA\061418\0614F007.D
C	J:\GC39\DATA\061418\0614F008.D
D	J:\GC39\DATA\061418\0614F009.D
E	J:\GC39\DATA\061418\0614F010.D
F	J:\GC39\DATA\061418\0614F011.D
G	J:\GC39\DATA\061418\0614F012.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Gasoline Range Organics (GRO)	A	50	1.46E+5	B	100	1.32E+5	C	200	1.40E+5	D	500	1.32E+5	E	1000	1.35E+5
	F	5000	1.36E+5	G	10000	1.34E+5									
4-Bromofluorobenzene	A	20	89300	B	25	89800	C	50	87800	D	100	90300	E	150	88800

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 06/14/2018

Initial Calibration Summary
Gasoline Range Organics

Calibration ID: CAL15764
Instrument ID: GC39

Column: DB-624

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Gasoline Range Organics (GRO)	MS	AverageRF	% RSD	3.8		≤ 20
4-Bromofluorobenzene	SURR	AverageRF	% RSD	1.1		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 06/14/2018
Date Analyzed: 06/14/2018

Second Source Calibration Verification
Gasoline Range Organics

Calibration Type: External Standard
Analysis Method: 8015C

Calibration ID: CAL15764
Units: ug/L

File ID: J:\GC39\DATA\061418\0614F014.D

Column ID: DB-624

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics (GRO)	500	530	136000	143000	5	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/14/2018

Continuing Calibration Verification Summary
Gasoline Range Organics

Calibration Type:	External Standard	**Calibration Date:**	06/14/2018
Analysis Method:	8015C	**Calibration ID:**	CAL15764
		Analysis Lot:	KWG1805982
		Units:	ug/L
File ID:	J:\GC39\DATA\111418\1114F003.D	**Column ID:**	DB-624

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics (GRO)	500	510	136000	139000	2	NA	± 20	AverageRF
4-Bromofluorobenzene	100	86	89200	76900	-14	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/14/2018

Continuing Calibration Verification Summary
Gasoline Range Organics

Calibration Type:	External Standard	**Calibration Date:**	06/14/2018
Analysis Method:	8015C	**Calibration ID:**	CAL15764
		Analysis Lot:	KWG1805982
		Units:	ug/L
File ID:	J:\GC39\DATA\111418\1114F018.D	**Column ID:**	DB-624

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics (GRO)	500	520	136000	142000	4	NA	± 20	AverageRF
4-Bromofluorobenzene	100	82	89200	73500	-18	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Date Analyzed: 11/14/2018

Continuing Calibration Verification Summary
Gasoline Range Organics

Calibration Type: External Standard
Analysis Method: 8015C

Calibration Date: 06/14/2018
Calibration ID: CAL15764
Analysis Lot: KWG1805982
Units: ug/L

File ID: J:\GC39\DATA\111418\1114F021.D

Column ID: DB-624

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics (GRO)	500	510	136000	138000	1	NA	± 20	AverageRF
4-Bromofluorobenzene	100	89	89200	79000	-11	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Analysis Run Log
Gasoline Range Organics

Analysis Method: 8015C **Analysis Lot:** KWG1805982
Instrument ID: GC39
Column: DB-624

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1114F003.D	Continuing Calibration Verification	KWG1805982-1	11/14/2018	09:22		11/14/2018	09:37
1114F004.D	Instrument Blank	KWG1805982-2	11/14/2018	09:46		11/14/2018	10:01
1114F006.D	ZZZZZZ	ZZZZZZ	11/14/2018	10:34		11/14/2018	10:49
1114F006.D	Lab Control Sample	KWG1805980-3	11/14/2018	10:34		11/14/2018	10:49
1114F007.D	Method Blank	KWG1805980-4	11/14/2018	11:17		11/14/2018	11:32
1114F007.D	ZZZZZZ	ZZZZZZ	11/14/2018	11:17		11/14/2018	11:32
1114F008.D	SL0084MS	KWG1805980-1	11/14/2018	13:26		11/14/2018	13:41
1114F009.D	SL0084DMS	KWG1805980-2	11/14/2018	13:50		11/14/2018	14:05
1114F010.D	SL0084	K1811120-001	11/14/2018	14:14		11/14/2018	14:29
1114F013.D	ZZZZZZ	ZZZZZZ	11/14/2018	15:26		11/14/2018	15:41
1114F014.D	ZZZZZZ	ZZZZZZ	11/14/2018	15:50		11/14/2018	16:05
1114F015.D	ZZZZZZ	ZZZZZZ	11/14/2018	16:14		11/14/2018	16:29
1114F016.D	ZZZZZZ	ZZZZZZ	11/14/2018	16:38		11/14/2018	16:53
1114F017.D	SL0064	K1811120-007	11/14/2018	17:02		11/14/2018	17:17
1114F018.D	Continuing Calibration Verification	KWG1805982-3	11/14/2018	17:26		11/14/2018	17:41
1114F019.D	Instrument Blank	KWG1805982-4	11/14/2018	17:50		11/14/2018	18:05
1114F020.D	SL0065	K1811120-008	11/14/2018	18:15		11/14/2018	18:30
1114F021.D	Continuing Calibration Verification	KWG1805982-5	11/14/2018	18:39		11/14/2018	18:54
1114F022.D	Instrument Blank	KWG1805982-6	11/14/2018	19:03		11/14/2018	19:18

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/14/2018
Sample Matrix:	Soil		

Extraction Prep Log
Gasoline Range Organics

Extraction Method:	EPA 5030A/5030B	**Extraction Lot:**	KWG1805980
Analysis Method:	8015C	**Level:**	Med

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	MeOH Volume	MeOH Aliquot	Final Volume	% Solids	Note
SL0084	K1811120-001	11/08/18	11/13/18	5.030g	10.0ml	1000uL	50.0ml	74.3	
SL0064	K1811120-007	11/06/18	11/14/18	7.11g	6.8ml	1000uL	50.0ml	74.9	
SL0065	K1811120-008	11/06/18	11/14/18	5.70g	7.0ml	1000uL	50.0ml	65.3	
Method Blank	KWG1805980-4	NA	NA	25.0g	25.0ml	1000uL	50.0ml	NA	
SL0084MS	KWG1805980-1	11/08/18	11/13/18	5.030g	10.0ml	1000uL	50.0ml	74.3	
SL0084DMS	KWG1805980-2	11/08/18	11/13/18	5.030g	10.0ml	1000uL	50.0ml	74.3	
Lab Control Sample	KWG1805980-3	NA	NA	25.0g	25.0ml	1000uL	50.0ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Cover Page - Organic Analysis Data Package
Gasoline Range Organics

Sample Name	Lab Code	Date Collected	Date Received
FW0001	K1811120-005	11/03/2018	11/13/2018
FB0001	K1811120-006	11/03/2018	11/13/2018
FB0001MS	KWG1806088-1	11/03/2018	11/13/2018
FB0001DMS	KWG1806088-2	11/03/2018	11/13/2018

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/2018
Sample Matrix:	Wipe	**Date Received:**	11/13/2018

Gasoline Range Organics

Sample Name:	FW0001	**Units:**	ug/WIPE
Lab Code:	K1811120-005	**Basis:**	Wet
Extraction Method:	EPA 5030A/5030B	**Level:**	Med
Analysis Method:	8015C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	25	25	1	11/14/18	11/14/18	KWG1806088	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	88	70-130	11/14/18	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/2018
Sample Matrix:	Wipe	**Date Received:**	11/13/2018

Gasoline Range Organics

Sample Name:	FB0001	**Units:**	ug/WIPE
Lab Code:	K1811120-006	**Basis:**	Wet
Extraction Method:	EPA 5030A/5030B	**Level:**	Med
Analysis Method:	8015C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	25	25	1	11/14/18	11/14/18	KWG1806088	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	87	70-130	11/14/18	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Wipe	**Date Received:**	NA

Gasoline Range Organics

Sample Name:	Method Blank	**Units:**	ug/WIPE
Lab Code:	KWG1806088-4	**Basis:**	Wet
Extraction Method:	EPA 5030A/5030B	**Level:**	Med
Analysis Method:	8015C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics (GRO)	ND	U	25	25	1	11/14/18	11/14/18	KWG1806088	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	86	70-130	11/14/18	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto
Sample Matrix: Wipe

Service Request: K1811120

Surrogate Recovery Summary
Gasoline Range Organics

Extraction Method: EPA 5030A/5030B
Analysis Method: 8015C

Units: Percent
Level: Med

Sample Name	Lab Code	Sur1
FW0001	K1811120-005	88
FB0001	K1811120-006	87
Method Blank	KWG1806088-4	86
FB0001MS	KWG1806088-1	91
FB0001DMS	KWG1806088-2	87
Lab Control Sample	KWG1806088-3	84

Surrogate Recovery Control Limits (%)

Sur1	= 4-Bromofluorobenzene	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/14/2018
Sample Matrix:	Wipe	**Date Analyzed:**	11/14/2018

Matrix Spike Summary
Gasoline Range Organics

Sample Name:	FB0001	**Units:**	ug/WIPE
Lab Code:	K1811120-006	**Basis:**	Wet
Extraction Method:	EPA 5030A/5030B	**Level:**	Med
Analysis Method:	8015C	**Extraction Lot:**	KWG1806088

FB0001MS
KWG1806088-1
Matrix Spike

Analyte Name	Sample Result	Result	Spike Amount	%Rec	%Rec Limits
Gasoline Range Organics (GRO)	ND	258	250	103	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/14/2018
Sample Matrix:	Wipe	**Date Analyzed:**	11/14/2018

Lab Control Spike Summary
Gasoline Range Organics

Extraction Method:	EPA 5030A/5030B	**Units:**	ug/WIPE
Analysis Method:	8015C	**Basis:**	Wet
		Level:	Med
		Extraction Lot:	KWG1806088

	Lab Control Sample KWG1806088-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Gasoline Range Organics (GRO)	247	250	99	76-123

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/14/2018
Sample Matrix:	Wipe	**Date Analyzed:**	11/14/2018
		Time Analyzed:	11:17

Method Blank Summary
Gasoline Range Organics

Sample Name:	Method Blank	**Instrument ID:**	GC39
Lab Code:	KWG1806088-4	**File ID:**	J:\GC39\DATA\11142018A\1114F007.D
Extraction Method:	EPA 5030A/5030B	**Level:**	Med
Analysis Method:	8015C	**Extraction Lot:**	KWG1806088

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1806088-3	J:\GC39\DATA\11142018A\1114F006.D	11/14/18	10:34
FW0001	K1811120-005	J:\GC39\DATA\111418\1114F013.D	11/14/18	15:26
FB0001MS	KWG1806088-1	J:\GC39\DATA\111418\1114F014.D	11/14/18	15:50
FB0001DMS	KWG1806088-2	J:\GC39\DATA\111418\1114F015.D	11/14/18	16:14
FB0001	K1811120-006	J:\GC39\DATA\111418\1114F016.D	11/14/18	16:38

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/14/2018
Sample Matrix:	Wipe	**Date Analyzed:**	11/14/2018
		Time Analyzed:	10:34

Lab Control Sample Summary
Gasoline Range Organics

Sample Name:	Lab Control Sample	**Instrument ID:**	GC39
Lab Code:	KWG1806088-3	**File ID:**	J:\GC39\DATA\11142018A\1114F006.D
Extraction Method:	EPA 5030A/5030B	**Level:**	Med
Analysis Method:	8015C	**Extraction Lot:**	KWG1806088

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1806088-4	J:\GC39\DATA\11142018A\1114F007.D	11/14/18	11:17
FW0001	K1811120-005	J:\GC39\DATA\111418\1114F013.D	11/14/18	15:26
FB0001MS	KWG1806088-1	J:\GC39\DATA\111418\1114F014.D	11/14/18	15:50
FB0001DMS	KWG1806088-2	J:\GC39\DATA\111418\1114F015.D	11/14/18	16:14
FB0001	K1811120-006	J:\GC39\DATA\111418\1114F016.D	11/14/18	16:38

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 06/14/2018

Initial Calibration Summary
Gasoline Range Organics

Calibration ID: CAL15764
Instrument ID: GC39

Column: DB-624

Level ID	File ID
A	J:\GC39\DATA\061418\0614F006.D
B	J:\GC39\DATA\061418\0614F007.D
C	J:\GC39\DATA\061418\0614F008.D
D	J:\GC39\DATA\061418\0614F009.D
E	J:\GC39\DATA\061418\0614F010.D
F	J:\GC39\DATA\061418\0614F011.D
G	J:\GC39\DATA\061418\0614F012.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Gasoline Range Organics (GRO)	A	50	1.46E+5	B	100	1.32E+5	C	200	1.40E+5	D	500	1.32E+5	E	1000	1.35E+5
	F	5000	1.36E+5	G	10000	1.34E+5									
4-Bromofluorobenzene	A	20	89300	B	25	89800	C	50	87800	D	100	90300	E	150	88800

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 06/14/2018

Initial Calibration Summary
Gasoline Range Organics

Calibration ID: CAL15764
Instrument ID: GC39

Column: DB-624

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Gasoline Range Organics (GRO)	MS	AverageRF	% RSD	3.8		≤ 20
4-Bromofluorobenzene	SURR	AverageRF	% RSD	1.1		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 06/14/2018
Date Analyzed: 06/14/2018

Second Source Calibration Verification
Gasoline Range Organics

Calibration Type: External Standard
Analysis Method: 8015C

Calibration ID: CAL15764
Units: ug/L

File ID: J:\GC39\DATA\061418\0614F014.D

Column ID: DB-624

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics (GRO)	500	530	136000	143000	5	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/14/2018

Continuing Calibration Verification Summary
Gasoline Range Organics

Calibration Type:	External Standard	**Calibration Date:**	06/14/2018
Analysis Method:	8015C	**Calibration ID:**	CAL15764
		Analysis Lot:	KWG1805982
		Units:	ug/L
File ID:	J:\GC39\DATA\111418\1114F003.D	**Column ID:**	DB-624

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics (GRO)	500	510	136000	139000	2	NA	± 20	AverageRF
4-Bromofluorobenzene	100	86	89200	76900	-14	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/14/2018

Continuing Calibration Verification Summary
Gasoline Range Organics

Calibration Type:	External Standard	**Calibration Date:**	06/14/2018
Analysis Method:	8015C	**Calibration ID:**	CAL15764
		Analysis Lot:	KWG1805982
		Units:	ug/L
File ID:	J:\GC39\DATA\111418\1114F018.D	**Column ID:**	DB-624

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics (GRO)	500	520	136000	142000	4	NA	± 20	AverageRF
4-Bromofluorobenzene	100	82	89200	73500	-18	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Analysis Run Log
Gasoline Range Organics

Analysis Method: 8015C **Analysis Lot:** KWG1805982
Instrument ID: GC39
Column: DB-624

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1114F003.D	Continuing Calibration Verification	KWG1805982-1	11/14/2018	09:22		11/14/2018	09:37
1114F004.D	Instrument Blank	KWG1805982-2	11/14/2018	09:46		11/14/2018	10:01
1114F006.D	Lab Control Sample	KWG1806088-3	11/14/2018	10:34		11/14/2018	10:49
1114F006.D	ZZZZZZ	ZZZZZZ	11/14/2018	10:34		11/14/2018	10:49
1114F007.D	ZZZZZZ	ZZZZZZ	11/14/2018	11:17		11/14/2018	11:32
1114F007.D	Method Blank	KWG1806088-4	11/14/2018	11:17		11/14/2018	11:32
1114F008.D	ZZZZZZ	ZZZZZZ	11/14/2018	13:26		11/14/2018	13:41
1114F009.D	ZZZZZZ	ZZZZZZ	11/14/2018	13:50		11/14/2018	14:05
1114F010.D	ZZZZZZ	ZZZZZZ	11/14/2018	14:14		11/14/2018	14:29
1114F013.D	FW0001	K1811120-005	11/14/2018	15:26		11/14/2018	15:41
1114F014.D	FB0001MS	KWG1806088-1	11/14/2018	15:50		11/14/2018	16:05
1114F015.D	FB0001DMS	KWG1806088-2	11/14/2018	16:14		11/14/2018	16:29
1114F016.D	FB0001	K1811120-006	11/14/2018	16:38		11/14/2018	16:53
1114F017.D	ZZZZZZ	ZZZZZZ	11/14/2018	17:02		11/14/2018	17:17
1114F018.D	Continuing Calibration Verification	KWG1805982-3	11/14/2018	17:26		11/14/2018	17:41
1114F019.D	Instrument Blank	KWG1805982-4	11/14/2018	17:50		11/14/2018	18:05
1114F020.D	ZZZZZZ	ZZZZZZ	11/14/2018	18:15		11/14/2018	18:30
1114F021.D	Continuing Calibration Verification	KWG1805982-5	11/14/2018	18:39		11/14/2018	18:54
1114F022.D	Instrument Blank	KWG1805982-6	11/14/2018	19:03		11/14/2018	19:18

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/14/2018
Sample Matrix:	Wipe		

Extraction Prep Log
Gasoline Range Organics

Extraction Method:	EPA 5030A/5030B	**Extraction Lot:**	KWG1806088
Analysis Method:	8015C	**Level:**	Med

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	MeOH Volume	MeOH Aliquot	Final Volume	% Solids	Note
FW0001	K1811120-005	11/03/18	11/13/18	1.00Wipe	10.0ml	1000uL	50.0ml	NA	
FB0001	K1811120-006	11/03/18	11/13/18	1.00Wipe	10.0ml	1000uL	50.0ml	NA	
Method Blank	KWG1806088-4	NA	NA	1.00Wipe	10.0ml	1000uL	50.0ml	NA	
FB0001MS	KWG1806088-1	11/03/18	11/13/18	1.00Wipe	10.0ml	1000uL	50.0ml	NA	
FB0001DMS	KWG1806088-2	11/03/18	11/13/18	1.00Wipe	10.0ml	1000uL	50.0ml	NA	
Lab Control Sample	KWG1806088-3	NA	NA	1.00Wipe	10.0ml	1000uL	50.0ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Diesel and Residual Range Organics

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Cover Page - Organic Analysis Data Package
Diesel and Residual Range Organics

Sample Name	Lab Code	Date Collected	Date Received
SL0084	K1811120-001	11/08/2018	11/13/2018
SL0064	K1811120-002	11/05/2018	11/13/2018
SL0065	K1811120-003	11/05/2018	11/13/2018
SL0084MS	KWG1806057-1	11/08/2018	11/13/2018
SL0084DMS	KWG1806057-2	11/08/2018	11/13/2018

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/08/2018
Sample Matrix:	Soil	**Date Received:**	11/13/2018

Diesel and Residual Range Organics

Sample Name:	SL0084	**Units:**	mg/Kg
Lab Code:	K1811120-001	**Basis:**	Dry
Extraction Method:	EPA 3550B	**Level:**	Low
Analysis Method:	8015C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	**33**	J	34	2.2	1	11/19/18	11/20/18	KWG1806057	
Residual Range Organics (RRO)	**130**	O	34	3.9	1	11/19/18	11/20/18	KWG1806057	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	93	51-126	11/20/18	Acceptable
n-Triacontane	100	50-150	11/20/18	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/05/2018
Sample Matrix:	Soil	**Date Received:**	11/13/2018

Diesel and Residual Range Organics

Sample Name:	SL0064	**Units:**	mg/Kg
Lab Code:	K1811120-002	**Basis:**	Dry
Extraction Method:	EPA 3550B	**Level:**	Low
Analysis Method:	8015C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	**340**	Y	66	4.3	1	11/19/18	11/20/18	KWG1806057	
Residual Range Organics (RRO)	**510**	O	66	7.7	1	11/19/18	11/20/18	KWG1806057	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	101	51-126	11/20/18	Acceptable
n-Triacontane	109	50-150	11/20/18	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/05/2018
Sample Matrix:	Soil	**Date Received:**	11/13/2018

Diesel and Residual Range Organics

Sample Name:	SL0065	**Units:**	mg/Kg
Lab Code:	K1811120-003	**Basis:**	Dry
Extraction Method:	EPA 3550B	**Level:**	Low
Analysis Method:	8015C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	**430**	DY	77	4.9	2	11/19/18	11/20/18	KWG1806057	
Residual Range Organics (RRO)	**600**	DO	77	8.9	2	11/19/18	11/20/18	KWG1806057	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	90	51-126	11/20/18	Acceptable
n-Triacontane	101	50-150	11/20/18	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Diesel and Residual Range Organics

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1806057-4	**Basis:**	Dry
Extraction Method:	EPA 3550B	**Level:**	Low
Analysis Method:	8015C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	**2.4**	J	25	1.6	1	11/19/18	11/20/18	KWG1806057	
Residual Range Organics (RRO)	**5.9**	J	25	2.9	1	11/19/18	11/20/18	KWG1806057	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	106	51-126	11/20/18	Acceptable
n-Triacontane	112	50-150	11/20/18	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto
Sample Matrix: Soil

Surrogate Recovery Summary
Diesel and Residual Range Organics

Extraction Method: EPA 3550B **Units:** Percent
Analysis Method: 8015C **Level:** Low

Sample Name	Lab Code	Sur1	Sur2
SL0084	K1811120-001	93	100
SL0064	K1811120-002	101	109
SL0065	K1811120-003	90 D	101 D
Method Blank	KWG1806057-4	106	112
SL0084MS	KWG1806057-1	109	111
SL0084DMS	KWG1806057-2	84	88
Lab Control Sample	KWG1806057-3	104	107

Surrogate Recovery Control Limits (%)

Sur1	= o-Terphenyl	51-126
Sur2	= n-Triacontane	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/19/2018
Sample Matrix:	Soil	**Date Analyzed:**	11/20/2018

Matrix Spike/Duplicate Matrix Spike Summary
Diesel and Residual Range Organics

Sample Name:	SL0084	**Units:**	mg/Kg
Lab Code:	K1811120-001	**Basis:**	Dry
Extraction Method:	EPA 3550B	**Level:**	Low
Analysis Method:	8015C	**Extraction Lot:**	KWG1806057

		SL0084MS KWG1806057-1 Matrix Spike			SL0084DMS KWG1806057-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Diesel Range Organics (DRO)	33	534	359	140	428	358	110	23-144	22	40
Residual Range Organics (RRO)	130	413	179	158	306	179	98	29-167	30	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/19/2018
Sample Matrix:	Soil	**Date Analyzed:**	11/20/2018

Lab Control Spike Summary
Diesel and Residual Range Organics

Extraction Method:	EPA 3550B	**Units:**	mg/Kg
Analysis Method:	8015C	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1806057

	Lab Control Sample KWG1806057-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Diesel Range Organics (DRO)	352	267	132	42-134
Residual Range Organics (RRO)	174	133	130	48-141

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/19/2018
Sample Matrix:	Soil	**Date Analyzed:**	11/20/2018
		Time Analyzed:	18:48

Method Blank Summary
Diesel and Residual Range Organics

Sample Name:	Method Blank	**Instrument ID:**	GC21
Lab Code:	KWG1806057-4	**File ID:**	J:\GC21\DATA\112018F\1120F133.D
Extraction Method:	EPA 3550B	**Level:**	Low
Analysis Method:	8015C	**Extraction Lot:**	KWG1806057

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1806057-3	J:\GC21\DATA\112018F\1120F132.D	11/20/18	18:26
SL0084	K1811120-001	J:\GC21\DATA\112018F\1120F134.D	11/20/18	19:09
SL0084MS	KWG1806057-1	J:\GC21\DATA\112018F\1120F135.D	11/20/18	19:31
SL0084DMS	KWG1806057-2	J:\GC21\DATA\112018F\1120F136.D	11/20/18	19:53
SL0064	K1811120-002	J:\GC21\DATA\112018F\1120F137.D	11/20/18	20:14
SL0065	K1811120-003	J:\GC21\DATA\112018F\1120F138.D	11/20/18	20:36

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/19/2018
Sample Matrix:	Soil	**Date Analyzed:**	11/20/2018
		Time Analyzed:	18:26

Lab Control Sample Summary
Diesel and Residual Range Organics

Sample Name:	Lab Control Sample	**Instrument ID:**	GC21
Lab Code:	KWG1806057-3	**File ID:**	J:\GC21\DATA\112018F\1120F132.D
Extraction Method:	EPA 3550B	**Level:**	Low
Analysis Method:	8015C	**Extraction Lot:**	KWG1806057

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1806057-4	J:\GC21\DATA\112018F\1120F133.D	11/20/18	18:48
SL0084	K1811120-001	J:\GC21\DATA\112018F\1120F134.D	11/20/18	19:09
SL0084MS	KWG1806057-1	J:\GC21\DATA\112018F\1120F135.D	11/20/18	19:31
SL0084DMS	KWG1806057-2	J:\GC21\DATA\112018F\1120F136.D	11/20/18	19:53
SL0064	K1811120-002	J:\GC21\DATA\112018F\1120F137.D	11/20/18	20:14
SL0065	K1811120-003	J:\GC21\DATA\112018F\1120F138.D	11/20/18	20:36

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 08/20/2018

Initial Calibration Summary
Diesel and Residual Range Organics

Calibration ID: CAL15807
Instrument ID: GC21

Column: ZB-1

Level ID	File ID
A	J:\GC21\DATA\082018F\082036.D
B	J:\GC21\DATA\082018F\082037.D
C	J:\GC21\DATA\082018F\082038.D
D	J:\GC21\DATA\082018F\082039.D
E	J:\GC21\DATA\082018F\082040.D
F	J:\GC21\DATA\082018F\082043.D
G	J:\GC21\DATA\082018F\082044.D
H	J:\GC21\DATA\082018F\082045.D
I	J:\GC21\DATA\082018F\082046.D
J	J:\GC21\DATA\082018F\082047.D
K	J:\GC21\DATA\082018F\082048.D
L	J:\GC21\DATA\082018F\082049.D
M	J:\GC21\DATA\082018F\082050.D
N	J:\GC21\DATA\082018F\082053.D
O	J:\GC21\DATA\082018F\082054.D
P	J:\GC21\DATA\082018F\082055.D
Q	J:\GC21\DATA\082018F\082056.D
R	J:\GC21\DATA\082018F\082057.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Diesel Range Organics (DRO)	F	20	1420	G	50	1130	H	200	1240	I	500	1160	J	2000	1290
	K	5000	1220	L	20000	1250	M	50000	1110						
Residual Range Organics (RRO)										N	50	665	O	200	633
	P	500	589	Q	2000	619	R	5000	605						
o-Terphenyl	F	1.0	1770	G	2.5	1520	H	10	1860	I	25	1770	J	100	1940
	K	250	1820												
n-Triacontane	F	1.0	1440	G	2.5	1230	H	10	1480	I	25	1410	J	100	1530
	K	250	1430												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 08/20/2018

Initial Calibration Summary
Diesel and Residual Range Organics

Calibration ID: CAL15807
Instrument ID: GC21

Column: ZB-1

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Diesel Range Organics (DRO)	MS	AverageRF	% RSD	8.1		≤ 20
Residual Range Organics (RRO)	MS	AverageRF	% RSD	4.6		≤ 20
o-Terphenyl	SURR	AverageRF	% RSD	8.1		≤ 20
n-Triacontane	SURR	AverageRF	% RSD	7.1		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 08/20/2018
Date Analyzed: 08/20/2018

Second Source Calibration Verification
Diesel and Residual Range Organics

Calibration Type: External Standard
Analysis Method: 8015C

Calibration ID: CAL15807
Units: ppm

File ID: J:\GC21\DATA\082018F\082041.D
J:\GC21\DATA\082018F\082051.D
J:\GC21\DATA\082018F\082058.D

Column ID: ZB-1

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	1000	1230	1260	3	NA	± 20 %	AverageRF
Residual Range Organics (RRO)	1000	920	622	574	-8	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

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QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Date Analyzed: 11/20/2018

Continuing Calibration Verification Summary
Diesel and Residual Range Organics

Calibration Type: External Standard
Analysis Method: 8015C

Calibration Date: 08/20/2018
Calibration ID: CAL15807
Analysis Lot: KWG1806091
Units: ppm

File ID: J:\GC21\DATA\112018F\1120F128.D
J:\GC21\DATA\112018F\1120F129.D

Column ID: ZB-1

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	1200	1230	1470	20	NA	± 20	AverageRF
Residual Range Organics (RRO)	1000	930	622	579	-7	NA	± 20	AverageRF
o-Terphenyl	50	57	1780	2010	13	NA	± 20	AverageRF
n-Triacontane	50	57	1420	1610	13	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Date Analyzed: 11/20/2018

Continuing Calibration Verification Summary
Diesel and Residual Range Organics

Calibration Type: External Standard
Analysis Method: 8015C

Calibration Date: 08/20/2018
Calibration ID: CAL15807
Analysis Lot: KWG1806091
Units: ppm

File ID: J:\GC21\DATA\112018F\1120F146.D
J:\GC21\DATA\112018F\1120F147.D

Column ID: ZB-1

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	1200	1230	1440	18	NA	± 20	AverageRF
Residual Range Organics (RRO)	1000	960	622	599	-4	NA	± 20	AverageRF
o-Terphenyl	50	56	1780	1990	12	NA	± 20	AverageRF
n-Triacontane	50	55	1420	1560	10	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Analysis Run Log
Diesel and Residual Range Organics

Analysis Method: 8015C **Analysis Lot:** KWG1806091
Instrument ID: GC21
Column: ZB-1

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1120F111.D	Continuing Calibration Verification	KWG1806091-1	11/20/2018	10:51		11/20/2018	11:07
1120F113.D	Instrument Blank	KWG1806091-5	11/20/2018	11:35		11/20/2018	11:51
1120F115.D	ZZZZZZ	ZZZZZZ	11/20/2018	12:18		11/20/2018	12:34
1120F116.D	ZZZZZZ	ZZZZZZ	11/20/2018	12:39		11/20/2018	12:55
1120F117.D	ZZZZZZ	ZZZZZZ	11/20/2018	13:01		11/20/2018	13:17
1120F118.D	ZZZZZZ	ZZZZZZ	11/20/2018	13:23		11/20/2018	13:39
1120F119.D	ZZZZZZ	ZZZZZZ	11/20/2018	13:44		11/20/2018	14:00
1120F120.D	ZZZZZZ	ZZZZZZ	11/20/2018	14:06		11/20/2018	14:22
1120F121.D	ZZZZZZ	ZZZZZZ	11/20/2018	14:28		11/20/2018	14:44
1120F122.D	ZZZZZZ	ZZZZZZ	11/20/2018	14:49		11/20/2018	15:05
1120F123.D	ZZZZZZ	ZZZZZZ	11/20/2018	15:11		11/20/2018	15:27
1120F124.D	ZZZZZZ	ZZZZZZ	11/20/2018	15:33		11/20/2018	15:49
1120F125.D	ZZZZZZ	ZZZZZZ	11/20/2018	15:54		11/20/2018	16:10
1120F126.D	ZZZZZZ	ZZZZZZ	11/20/2018	16:16		11/20/2018	16:32
1120F127.D	ZZZZZZ	ZZZZZZ	11/20/2018	16:38		11/20/2018	16:54
1120F128.D	Continuing Calibration Verification	KWG1806091-2	11/20/2018	16:59		11/20/2018	17:15
1120F129.D	Continuing Calibration Verification	KWG1806091-2	11/20/2018	17:21		11/20/2018	17:37
1120F130.D	Instrument Blank	KWG1806091-6	11/20/2018	17:43		11/20/2018	17:59
1120F131.D	ZZZZZZ	ZZZZZZ	11/20/2018	18:04		11/20/2018	18:20
1120F132.D	Lab Control Sample	KWG1806057-3	11/20/2018	18:26		11/20/2018	18:42
1120F133.D	Method Blank	KWG1806057-4	11/20/2018	18:48		11/20/2018	19:04
1120F134.D	SL0084	K1811120-001	11/20/2018	19:09		11/20/2018	19:25
1120F135.D	SL0084MS	KWG1806057-1	11/20/2018	19:31		11/20/2018	19:47
1120F136.D	SL0084DMS	KWG1806057-2	11/20/2018	19:53		11/20/2018	20:09
1120F137.D	SL0064	K1811120-002	11/20/2018	20:14		11/20/2018	20:30
1120F138.D	SL0065	K1811120-003	11/20/2018	20:36		11/20/2018	20:52
1120F139.D	ZZZZZZ	ZZZZZZ	11/20/2018	20:57		11/20/2018	21:13
1120F140.D	ZZZZZZ	ZZZZZZ	11/20/2018	21:19		11/20/2018	21:35
1120F141.D	ZZZZZZ	ZZZZZZ	11/20/2018	21:41		11/20/2018	21:57
1120F142.D	ZZZZZZ	ZZZZZZ	11/20/2018	22:02		11/20/2018	22:18
1120F143.D	ZZZZZZ	ZZZZZZ	11/20/2018	22:24		11/20/2018	22:40
1120F144.D	ZZZZZZ	ZZZZZZ	11/20/2018	22:45		11/20/2018	23:01
1120F145.D	ZZZZZZ	ZZZZZZ	11/20/2018	23:07		11/20/2018	23:23
1120F146.D	Continuing Calibration Verification	KWG1806091-3	11/20/2018	23:29		11/20/2018	23:45

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Analysis Run Log
Diesel and Residual Range Organics

Analysis Method: 8015C

Analysis Lot: KWG1806091
Instrument ID: GC21
Column: ZB-1

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1120F147.D	Continuing Calibration Verification	KWG1806091-3	11/20/2018	23:50		11/21/2018	00:06
1120F148.D	Instrument Blank	KWG1806091-7	11/21/2018	00:12		11/21/2018	00:28
1120F149.D	ZZZZZZ	ZZZZZZ	11/21/2018	00:34		11/21/2018	00:50
1120F150.D	ZZZZZZ	ZZZZZZ	11/21/2018	00:55		11/21/2018	01:11
1120F151.D	ZZZZZZ	ZZZZZZ	11/21/2018	01:17		11/21/2018	01:33
1120F152.D	ZZZZZZ	ZZZZZZ	11/21/2018	01:38		11/21/2018	01:54
1120F157.D	ZZZZZZ	ZZZZZZ	11/21/2018	03:26		11/21/2018	03:42
1120F158.D	ZZZZZZ	ZZZZZZ	11/21/2018	03:48		11/21/2018	04:04
1120F161.D	Continuing Calibration Verification	KWG1806091-4	11/21/2018	04:53		11/21/2018	05:09
1120F162.D	Continuing Calibration Verification	KWG1806091-4	11/21/2018	05:14		11/21/2018	05:30
1120F163.D	Instrument Blank	KWG1806091-8	11/21/2018	05:36		11/21/2018	05:52

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/19/2018
Sample Matrix:	Soil		

Extraction Prep Log
Diesel and Residual Range Organics

Extraction Method:	EPA 3550B	**Extraction Lot:**	KWG1806057
Analysis Method:	8015C	**Level:**	Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SL0084	K1811120-001	11/08/18	11/13/18	30.036g	10ml	74.3	
SL0064	K1811120-002	11/05/18	11/13/18	15.228g	10ml	74.9	
SL0065	K1811120-003	11/05/18	11/13/18	30.024g	10ml	65.3	
Method Blank	KWG1806057-4	NA	NA	30.369g	10ml	NA	
SL0084MS	KWG1806057-1	11/08/18	11/13/18	30.023g	10ml	74.3	
SL0084DMS	KWG1806057-2	11/08/18	11/13/18	30.048g	10ml	74.3	
Lab Control Sample	KWG1806057-3	NA	NA	30.000g	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Cover Page - Organic Analysis Data Package
Diesel and Residual Range Organics

Sample Name	Lab Code	Date Collected	Date Received
FW0001	K1811120-005	11/03/2018	11/13/2018
FB0001	K1811120-006	11/03/2018	11/13/2018

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/2018
Sample Matrix:	Wipe	**Date Received:**	11/13/2018

Diesel and Residual Range Organics

Sample Name:	FW0001	**Units:**	ug/WIPE
Lab Code:	K1811120-005	**Basis:**	Wet
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8015C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	800	800	10	11/21/18	12/06/18	KWG1806092	*
Residual Range Organics (RRO)	ND	U	2000	2000	10	11/21/18	12/06/18	KWG1806092	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	104	50-150	12/06/18	Acceptable
n-Triacontane	99	50-150	12/06/18	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/2018
Sample Matrix:	Wipe	**Date Received:**	11/13/2018

Diesel and Residual Range Organics

Sample Name:	FB0001	**Units:**	ug/WIPE
Lab Code:	K1811120-006	**Basis:**	Wet
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8015C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	1600	1600	10	11/21/18	12/06/18	KWG1806092	*
Residual Range Organics (RRO)	ND	U	4000	4000	10	11/21/18	12/06/18	KWG1806092	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	97	50-150	12/06/18	Acceptable
n-Triacontane	92	50-150	12/06/18	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Wipe	**Date Received:**	NA

Diesel and Residual Range Organics

Sample Name:	Method Blank	**Units:**	ug/WIPE
Lab Code:	KWG1806092-3	**Basis:**	Wet
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8015C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	80	80	1	11/21/18	12/06/18	KWG1806092	*
Residual Range Organics (RRO)	ND	U	200	200	1	11/21/18	12/06/18	KWG1806092	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	109	50-150	12/06/18	Acceptable
n-Triacontane	115	50-150	12/06/18	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto
Sample Matrix: Wipe

Surrogate Recovery Summary
Diesel and Residual Range Organics

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8015C **Level:** Low

Sample Name	Lab Code	Sur1	Sur2
FW0001	K1811120-005	104 D	99 D
FB0001	K1811120-006	97 D	92 D
Method Blank	KWG1806092-3	109	115
Lab Control Sample	KWG1806092-1	115	116
Duplicate Lab Control Sample	KWG1806092-2	111	113

Surrogate Recovery Control Limits (%)

Sur1	= o-Terphenyl	50-150
Sur2	= n-Triacontane	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/21/2018
Sample Matrix:	Wipe	**Date Analyzed:**	12/06/2018

Lab Control Spike/Duplicate Lab Control Spike Summary
Diesel and Residual Range Organics

Extraction Method:	EPA 3541	**Units:**	ug/WIPE
Analysis Method:	8015C	**Basis:**	Wet
		Level:	Low
		Extraction Lot:	KWG1806092

	Lab Control Sample KWG1806092-1 Lab Control Spike			Duplicate Lab Control Sample KWG1806092-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Diesel Range Organics (DRO)	4540	3200	142 *	4490	3200	140 *	70-130	1	40
Residual Range Organics (RRO)	2400	1600	150 *	2370	1600	148 *	70-130	1	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/21/2018
Sample Matrix:	Wipe	**Date Analyzed:**	12/06/2018
		Time Analyzed:	21:39

Method Blank Summary
Diesel and Residual Range Organics

Sample Name:	Method Blank	**Instrument ID:**	GC21
Lab Code:	KWG1806092-3	**File ID:**	J:\GC21\DATA\120618F\1206F135.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8015C	**Extraction Lot:**	KWG1806092

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1806092-1	J:\GC21\DATA\120618F\1206F133.D	12/06/18	20:56
Duplicate Lab Control Sample	KWG1806092-2	J:\GC21\DATA\120618F\1206F134.D	12/06/18	21:17
FW0001	K1811120-005	J:\GC21\DATA\120618F\1206F136.D	12/06/18	22:00
FB0001	K1811120-006	J:\GC21\DATA\120618F\1206F137.D	12/06/18	22:22

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/21/2018
Sample Matrix:	Wipe	**Date Analyzed:**	12/06/2018
		Time Analyzed:	20:56

Lab Control Sample Summary
Diesel and Residual Range Organics

Sample Name:	Lab Control Sample	**Instrument ID:**	GC21
Lab Code:	KWG1806092-1	**File ID:**	J:\GC21\DATA\120618F\1206F133.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8015C	**Extraction Lot:**	KWG1806092

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1806092-3	J:\GC21\DATA\120618F\1206F135.D	12/06/18	21:39
FW0001	K1811120-005	J:\GC21\DATA\120618F\1206F136.D	12/06/18	22:00
FB0001	K1811120-006	J:\GC21\DATA\120618F\1206F137.D	12/06/18	22:22

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 08/20/2018

Initial Calibration Summary
Diesel and Residual Range Organics

Calibration ID: CAL15807
Instrument ID: GC21

Column: ZB-1

Level ID	File ID
A	J:\GC21\DATA\082018F\082036.D
B	J:\GC21\DATA\082018F\082037.D
C	J:\GC21\DATA\082018F\082038.D
D	J:\GC21\DATA\082018F\082039.D
E	J:\GC21\DATA\082018F\082040.D
F	J:\GC21\DATA\082018F\082043.D
G	J:\GC21\DATA\082018F\082044.D
H	J:\GC21\DATA\082018F\082045.D
I	J:\GC21\DATA\082018F\082046.D
J	J:\GC21\DATA\082018F\082047.D
K	J:\GC21\DATA\082018F\082048.D
L	J:\GC21\DATA\082018F\082049.D
M	J:\GC21\DATA\082018F\082050.D
N	J:\GC21\DATA\082018F\082053.D
O	J:\GC21\DATA\082018F\082054.D
P	J:\GC21\DATA\082018F\082055.D
Q	J:\GC21\DATA\082018F\082056.D
R	J:\GC21\DATA\082018F\082057.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Diesel Range Organics (DRO)	F	20	1420	G	50	1130	H	200	1240	I	500	1160	J	2000	1290
	K	5000	1220	L	20000	1250	M	50000	1110						
Residual Range Organics (RRO)										N	50	665	O	200	633
	P	500	589	Q	2000	619	R	5000	605						
o-Terphenyl	F	1.0	1770	G	2.5	1520	H	10	1860	I	25	1770	J	100	1940
	K	250	1820												
n-Triacontane	F	1.0	1440	G	2.5	1230	H	10	1480	I	25	1410	J	100	1530
	K	250	1430												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 08/20/2018

Initial Calibration Summary
Diesel and Residual Range Organics

Calibration ID: CAL15807
Instrument ID: GC21

Column: ZB-1

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Diesel Range Organics (DRO)	MS	AverageRF	% RSD	8.1		≤ 20
Residual Range Organics (RRO)	MS	AverageRF	% RSD	4.6		≤ 20
o-Terphenyl	SURR	AverageRF	% RSD	8.1		≤ 20
n-Triacontane	SURR	AverageRF	% RSD	7.1		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 08/20/2018
Date Analyzed: 08/20/2018

Second Source Calibration Verification
Diesel and Residual Range Organics

Calibration Type: External Standard
Analysis Method: 8015C

Calibration ID: CAL15807
Units: ppm

File ID: J:\GC21\DATA\082018F\082041.D
J:\GC21\DATA\082018F\082051.D
J:\GC21\DATA\082018F\082058.D

Column ID: ZB-1

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	1000	1230	1260	3	NA	± 20 %	AverageRF
Residual Range Organics (RRO)	1000	920	622	574	-8	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Date Analyzed: 12/06/2018

Continuing Calibration Verification Summary
Diesel and Residual Range Organics

Calibration Type: External Standard
Analysis Method: 8015C

Calibration Date: 08/20/2018
Calibration ID: CAL15807
Analysis Lot: KWG1806357
Units: ppm

File ID: J:\GC21\DATA\120618F\1206F130.D
J:\GC21\DATA\120618F\1206F131.D

Column ID: ZB-1

Analyte Name	Expected	Result	Average RF	CCV RF	%D		%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	1200	1230	1480	21	*	NA	± 20	AverageRF
Residual Range Organics (RRO)	1000	1200	622	748	20		NA	± 20	AverageRF
o-Terphenyl	50	55	1780	1950	10		NA	± 20	AverageRF
n-Triacontane	50	57	1420	1620	14		NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Date Analyzed: 12/06/2018

Continuing Calibration Verification Summary
Diesel and Residual Range Organics

Calibration Type: External Standard
Analysis Method: 8015C

Calibration Date: 08/20/2018
Calibration ID: CAL15807
Analysis Lot: KWG1806357
Units: ppm

File ID: J:\GC21\DATA\120618F\1206F138.D
J:\GC21\DATA\120618F\1206F139.D

Column ID: ZB-1

Analyte Name	Expected	Result	Average RF	CCV RF	%D		%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	1200	1230	1450	18		NA	± 20	AverageRF
Residual Range Organics (RRO)	1000	1200	622	763	23	*	NA	± 20	AverageRF
o-Terphenyl	50	54	1780	1900	7		NA	± 20	AverageRF
n-Triacontane	50	56	1420	1580	11		NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Analysis Run Log
Diesel and Residual Range Organics

Analysis Method: 8015C **Analysis Lot:** KWG1806357
Instrument ID: GC21
Column: ZB-1

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1206F103.D	Continuing Calibration Verification	KWG1806357-1	12/6/2018	10:05		12/6/2018	10:21
1206F104.D	Continuing Calibration Verification	KWG1806357-1	12/6/2018	10:27		12/6/2018	10:43
1206F105.D	Instrument Blank	KWG1806357-5	12/6/2018	10:49		12/6/2018	11:05
1206F106.D	ZZZZZZ	ZZZZZZ	12/6/2018	11:10		12/6/2018	11:26
1206F107.D	ZZZZZZ	ZZZZZZ	12/6/2018	11:32		12/6/2018	11:48
1206F108.D	ZZZZZZ	ZZZZZZ	12/6/2018	11:54		12/6/2018	12:10
1206F109.D	ZZZZZZ	ZZZZZZ	12/6/2018	12:15		12/6/2018	12:31
1206F110.D	ZZZZZZ	ZZZZZZ	12/6/2018	12:37		12/6/2018	12:53
1206F111.D	ZZZZZZ	ZZZZZZ	12/6/2018	12:59		12/6/2018	13:15
1206F112.D	ZZZZZZ	ZZZZZZ	12/6/2018	13:20		12/6/2018	13:36
1206F113.D	ZZZZZZ	ZZZZZZ	12/6/2018	13:42		12/6/2018	13:58
1206F114.D	ZZZZZZ	ZZZZZZ	12/6/2018	14:04		12/6/2018	14:20
1206F115.D	ZZZZZZ	ZZZZZZ	12/6/2018	14:26		12/6/2018	14:42
1206F116.D	ZZZZZZ	ZZZZZZ	12/6/2018	14:47		12/6/2018	15:03
1206F117.D	ZZZZZZ	ZZZZZZ	12/6/2018	15:09		12/6/2018	15:25
1206F118.D	ZZZZZZ	ZZZZZZ	12/6/2018	15:30		12/6/2018	15:46
1206F119.D	Continuing Calibration Verification	KWG1806357-2	12/6/2018	15:52		12/6/2018	16:08
1206F120.D	Continuing Calibration Verification	KWG1806357-2	12/6/2018	16:14		12/6/2018	16:30
1206F121.D	Instrument Blank	KWG1806357-6	12/6/2018	16:36		12/6/2018	16:52
1206F122.D	ZZZZZZ	ZZZZZZ	12/6/2018	16:57		12/6/2018	17:13
1206F123.D	ZZZZZZ	ZZZZZZ	12/6/2018	17:19		12/6/2018	17:35
1206F124.D	ZZZZZZ	ZZZZZZ	12/6/2018	17:41		12/6/2018	17:57
1206F125.D	ZZZZZZ	ZZZZZZ	12/6/2018	18:02		12/6/2018	18:18
1206F126.D	ZZZZZZ	ZZZZZZ	12/6/2018	18:24		12/6/2018	18:40
1206F127.D	ZZZZZZ	ZZZZZZ	12/6/2018	18:46		12/6/2018	19:02
1206F128.D	ZZZZZZ	ZZZZZZ	12/6/2018	19:07		12/6/2018	19:23
1206F129.D	ZZZZZZ	ZZZZZZ	12/6/2018	19:29		12/6/2018	19:45
1206F130.D	Continuing Calibration Verification	KWG1806357-3	12/6/2018	19:51		12/6/2018	20:07
1206F131.D	Continuing Calibration Verification	KWG1806357-3	12/6/2018	20:12		12/6/2018	20:28
1206F132.D	Instrument Blank	KWG1806357-7	12/6/2018	20:34		12/6/2018	20:50
1206F133.D	Lab Control Sample	KWG1806092-1	12/6/2018	20:56		12/6/2018	21:12
1206F134.D	Duplicate Lab Control Sample	KWG1806092-2	12/6/2018	21:17		12/6/2018	21:33
1206F135.D	Method Blank	KWG1806092-3	12/6/2018	21:39		12/6/2018	21:55
1206F136.D	FW0001	K1811120-005	12/6/2018	22:00		12/6/2018	22:16

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Analysis Run Log
Diesel and Residual Range Organics

Analysis Method: 8015C **Analysis Lot:** KWG1806357
Instrument ID: GC21
Column: ZB-1

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1206F137.D	FB0001	K1811120-006	12/6/2018	22:22		12/6/2018	22:38
1206F138.D	Continuing Calibration Verification	KWG1806357-4	12/6/2018	22:44		12/6/2018	23:00
1206F139.D	Continuing Calibration Verification	KWG1806357-4	12/6/2018	23:05		12/6/2018	23:21
1206F140.D	Instrument Blank	KWG1806357-8	12/6/2018	23:27		12/6/2018	23:43

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto
Sample Matrix: Wipe

Service Request: K1811120
Date Extracted: 11/21/2018

Extraction Prep Log
Diesel and Residual Range Organics

Extraction Method: EPA 3541
Analysis Method: 8015C

Extraction Lot: KWG1806092
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FW0001	K1811120-005	11/03/18	11/13/18	1Wipe	4ml	NA	
FB0001	K1811120-006	11/03/18	11/13/18	0.5Wipe	4ml	NA	
Method Blank	KWG1806092-3	NA	NA	1Wipe	4ml	NA	
Lab Control Sample	KWG1806092-1	NA	NA	1Wipe	4ml	NA	
Duplicate Lab Control Sample	KWG1806092-2	NA	NA	1Wipe	4ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Organochlorine Pesticides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Cover Page - Organic Analysis Data Package
Organochlorine Pesticides

Sample Name	Lab Code	Date Collected	Date Received
SL0084	K1811120-001	11/08/2018	11/13/2018
SL0064	K1811120-002	11/05/2018	11/13/2018
SL0065	K1811120-003	11/05/2018	11/13/2018
SL0022	K1811120-004	11/03/2018	11/13/2018
SL0084MS	KWG1806145-1	11/08/2018	11/13/2018
SL0084DMS	KWG1806145-2	11/08/2018	11/13/2018

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/08/2018
Sample Matrix:	Soil	**Date Received:**	11/13/2018
		Date Prepared:	11/20/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Sample Name:	SL0084	**Units:**	mg/L
Lab Code:	K1811120-001	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3511		
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
gamma-BHC (Lindane)	ND	U	0.00010	0.00010	0.4	1	11/27/18	12/12/18	
Heptachlor	ND	U	0.00010	0.00010	0.008	1	11/27/18	12/12/18	
Heptachlor Epoxide	ND	U	0.00010	0.00010	0.008	1	11/27/18	12/12/18	
Endrin	ND	U	0.00010	0.00010	0.02	1	11/27/18	12/12/18	
Methoxychlor	ND	U	0.00010	0.00010	10	1	11/27/18	12/12/18	*
Chlordane	ND	U	0.0010	0.0010	0.03	1	11/27/18	12/12/18	
Toxaphene	ND	U	0.0020	0.0020	0.5	1	11/27/18	12/12/18	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Tetrachloro-m-xylene	59	70-130	Outside Control Limits
Decachlorobiphenyl	88	70-130	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/05/2018
Sample Matrix:	Soil	**Date Received:**	11/13/2018
		Date Prepared:	11/20/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Sample Name:	SL0064	**Units:**	mg/L
Lab Code:	K1811120-002	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3511		
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
gamma-BHC (Lindane)	ND	U	0.00010	0.00010	0.4	1	11/27/18	12/12/18	*
Heptachlor	ND	U	0.00010	0.00010	0.008	1	11/27/18	12/12/18	*
Heptachlor Epoxide	ND	U	0.00010	0.00010	0.008	1	11/27/18	12/12/18	*
Endrin	ND	U	0.00010	0.00010	0.02	1	11/27/18	12/12/18	*
Methoxychlor	ND	U	0.00010	0.00010	10	1	11/27/18	12/12/18	*
Chlordane	ND	U	0.0010	0.0010	0.03	1	11/27/18	12/12/18	*
Toxaphene	ND	U	0.0020	0.0020	0.5	1	11/27/18	12/12/18	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Tetrachloro-m-xylene	63	70-130	Outside Control Limits
Decachlorobiphenyl	74	70-130	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/05/2018
Sample Matrix:	Soil	**Date Received:**	11/13/2018
		Date Prepared:	11/20/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Sample Name:	SL0065	**Units:**	mg/L
Lab Code:	K1811120-003	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3511		
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
gamma-BHC (Lindane)	ND	U	0.00010	0.00010	0.4	1	11/27/18	12/12/18	*
Heptachlor	ND	U	0.00010	0.00010	0.008	1	11/27/18	12/12/18	*
Heptachlor Epoxide	ND	U	0.00010	0.00010	0.008	1	11/27/18	12/12/18	*
Endrin	ND	U	0.00010	0.00010	0.02	1	11/27/18	12/12/18	*
Methoxychlor	ND	U	0.00010	0.00010	10	1	11/27/18	12/12/18	*
Chlordane	ND	U	0.0010	0.0010	0.03	1	11/27/18	12/12/18	*
Toxaphene	ND	U	0.0020	0.0020	0.5	1	11/27/18	12/12/18	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Tetrachloro-m-xylene	60	70-130	Outside Control Limits
Decachlorobiphenyl	72	70-130	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/2018
Sample Matrix:	Soil	**Date Received:**	11/13/2018
		Date Prepared:	11/20/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Sample Name:	SL0022	**Units:**	mg/L
Lab Code:	K1811120-004	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3511		
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
gamma-BHC (Lindane)	ND	U	0.00010	0.00010	0.4	1	11/27/18	12/12/18	*
Heptachlor	ND	U	0.00010	0.00010	0.008	1	11/27/18	12/12/18	*
Heptachlor Epoxide	ND	U	0.00010	0.00010	0.008	1	11/27/18	12/12/18	*
Endrin	ND	U	0.00010	0.00010	0.02	1	11/27/18	12/12/18	*
Methoxychlor	ND	U	0.00010	0.00010	10	1	11/27/18	12/12/18	*
Chlordane	ND	U	0.0010	0.0010	0.03	1	11/27/18	12/12/18	*
Toxaphene	ND	U	0.0020	0.0020	0.5	1	11/27/18	12/12/18	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Tetrachloro-m-xylene	64	70-130	Outside Control Limits
Decachlorobiphenyl	70	70-130	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Prepared:	11/20/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KWG1806145-7	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3511		
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
gamma-BHC (Lindane)	ND	U	0.00010	0.00010	0.4	1	11/27/18	12/12/18	
Heptachlor	ND	U	0.00010	0.00010	0.008	1	11/27/18	12/12/18	
Heptachlor Epoxide	ND	U	0.00010	0.00010	0.008	1	11/27/18	12/12/18	
Endrin	ND	U	0.00010	0.00010	0.02	1	11/27/18	12/12/18	
Methoxychlor	ND	U	0.00010	0.00010	10	1	11/27/18	12/12/18	*
Chlordane	ND	U	0.0010	0.0010	0.03	1	11/27/18	12/12/18	
Toxaphene	ND	U	0.0020	0.0020	0.5	1	11/27/18	12/12/18	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Tetrachloro-m-xylene	67	70-130	Outside Control Limits
Decachlorobiphenyl	84	70-130	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Prepared:	11/20/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KWG1806145-8	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3511		
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
gamma-BHC (Lindane)	ND	U	0.00010	0.00010	0.4	1	11/27/18	12/12/18	
Heptachlor	ND	U	0.00010	0.00010	0.008	1	11/27/18	12/12/18	
Heptachlor Epoxide	ND	U	0.00010	0.00010	0.008	1	11/27/18	12/12/18	
Endrin	ND	U	0.00010	0.00010	0.02	1	11/27/18	12/12/18	
Methoxychlor	ND	U	0.00010	0.00010	10	1	11/27/18	12/12/18	*
Chlordane	ND	U	0.0010	0.0010	0.03	1	11/27/18	12/12/18	
Toxaphene	ND	U	0.0020	0.0020	0.5	1	11/27/18	12/12/18	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Tetrachloro-m-xylene	62	70-130	Outside Control Limits
Decachlorobiphenyl	83	70-130	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Prepared:	11/20/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KWG1806145-9	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 3511		
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
gamma-BHC (Lindane)	ND	U	0.00010	0.00010	0.4	1	11/27/18	12/12/18	
Heptachlor	ND	U	0.00010	0.00010	0.008	1	11/27/18	12/12/18	
Heptachlor Epoxide	ND	U	0.00010	0.00010	0.008	1	11/27/18	12/12/18	
Endrin	ND	U	0.00010	0.00010	0.02	1	11/27/18	12/12/18	
Methoxychlor	ND	U	0.00010	0.00010	10	1	11/27/18	12/12/18	*
Chlordane	ND	U	0.0010	0.0010	0.03	1	11/27/18	12/12/18	
Toxaphene	ND	U	0.0020	0.0020	0.5	1	11/27/18	12/12/18	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Tetrachloro-m-xylene	59	70-130	Outside Control Limits
Decachlorobiphenyl	76	70-130	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto
Sample Matrix: Soil

Surrogate Recovery Summary
Toxicity Characteristic Leaching Procedure (TCLP)
Organochlorine Pesticides

Preparation Method: EPA 1311 **Units:** Percent
Extraction Method: EPA 3511 **Level:** Low
Analysis Method: 8081B

Sample Name	Lab Code	Sur1		Sur2	
SL0084	K1811120-001	59	*	88	
SL0064	K1811120-002	63	*	74	
SL0065	K1811120-003	60	*	72	
SL0022	K1811120-004	64	*	70	
Method Blank	KWG1806145-7	67	*	84	
Method Blank	KWG1806145-8	62	*	83	
Method Blank	KWG1806145-9	59	*	76	
SL0084MS	KWG1806145-1	58	*	78	
SL0084DMS	KWG1806145-2	63	*	75	
Lab Control Sample	KWG1806145-5	51	*	67	*

Surrogate Recovery Control Limits (%)

Sur1	=	Tetrachloro-m-xylene	70-130
Sur2	=	Decachlorobiphenyl	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	12/12/2018
		Time Analyzed:	10:58

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC23\DATA\121218\1212F004.D	**Lab Code:**	KWG1806469-3
Instrument ID:	GC23	**Analysis Lot:**	KWG1806469
Analysis Method:	8081B	**Column :**	DB XLB

		1-Bromo-2-nitrobenzene	
		Area	**RT**
	ICAL Average ==>	800,486	6.06
	Upper Limit ==>	1,600,972	6.56
	Lower Limit ==>	400,243	5.56
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1806469-3	594,729	6.01
Method Blank	KWG1806145-7	572,816	6.02
Method Blank	KWG1806145-8	570,486	6.01
Method Blank	KWG1806145-9	569,592	6.02
Lab Control Sample	KWG1806145-5	586,048	6.01
SL0084	K1811120-001	541,811	6.01
SL0084MS	KWG1806145-1	585,194	6.02
SL0084DMS	KWG1806145-2	601,958	6.01
SL0064	K1811120-002	634,612	6.01
SL0065	K1811120-003	660,814	6.01
SL0022	K1811120-004	653,916	6.01

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	12/12/2018
		Time Analyzed:	10:58

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC23\DATA\121218\1212F004.D\1212F004C.D	**Lab Code:**	KWG1806469-3
Instrument ID:	GC23	**Analysis Lot:**	KWG1806469
Analysis Method:	8081B	**Column :**	DB-35MS

		1-Bromo-2-nitrobenzene	
		Area	**RT**
	ICAL Average ==>	2,582,561	5.38
	Upper Limit ==>	5,165,122	5.88
	Lower Limit ==>	1,291,281	4.88
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1806469-3	2,146,777	5.34
Method Blank	KWG1806145-7	2,100,947	5.34
Method Blank	KWG1806145-8	2,047,436	5.34
Method Blank	KWG1806145-9	2,019,086	5.35
Lab Control Sample	KWG1806145-5	2,070,136	5.34
SL0084	K1811120-001	1,796,242	5.34
SL0084MS	KWG1806145-1	2,014,703	5.34
SL0084DMS	KWG1806145-2	2,023,449	5.34
SL0064	K1811120-002	2,117,126	5.34
SL0065	K1811120-003	2,173,222	5.34
SL0022	K1811120-004	2,192,595	5.34

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	12/12/2018
		Time Analyzed:	11:28

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC23\DATA\121218\1212F005.D	**Lab Code:**	KWG1806469-3
Instrument ID:	GC23	**Analysis Lot:**	KWG1806469
Analysis Method:	8081B	**Column :**	DB XLB

		1-Bromo-2-nitrobenzene {2}	
		Area	**RT**
	ICAL Average ==>	1,046,566	6.11
	Upper Limit ==>	2,093,132	6.61
	Lower Limit ==>	523,283	5.61
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1806469-3	577,808	6.01
Method Blank	KWG1806145-7	572,816	6.02
Method Blank	KWG1806145-8	570,486	6.01
Method Blank	KWG1806145-9	569,592	6.02
Lab Control Sample	KWG1806145-5	598,912	6.01
SL0084	K1811120-001	541,811	6.01
SL0084MS	KWG1806145-1	612,510	6.01
SL0084DMS	KWG1806145-2	629,446	6.01
SL0064	K1811120-002	634,612	6.01
SL0065	K1811120-003	660,814	6.01
SL0022	K1811120-004	653,916	6.01

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	12/12/2018
		Time Analyzed:	11:28

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC23\DATA\121218\1212F005.D\1212F005C.D	**Lab Code:**	KWG1806469-3
Instrument ID:	GC23	**Analysis Lot:**	KWG1806469
Analysis Method:	8081B	**Column :**	DB-35MS

		1-Bromo-2-nitrobenzene {2}	
		Area	**RT**
	ICAL Average ==>	3,234,035	5.42
	Upper Limit ==>	6,468,070	5.92
	Lower Limit ==>	1,617,018	4.92
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1806469-3	2,224,734	5.34
Method Blank	KWG1806145-7	2,100,947	5.34
Method Blank	KWG1806145-8	2,047,436	5.34
Method Blank	KWG1806145-9	2,019,086	5.35
Lab Control Sample	KWG1806145-5	1,964,040	5.34
SL0084	K1811120-001	1,796,242	5.34
SL0084MS	KWG1806145-1	2,085,748	5.34
SL0084DMS	KWG1806145-2	2,065,709	5.35
SL0064	K1811120-002	2,117,126	5.34
SL0065	K1811120-003	2,173,222	5.34
SL0022	K1811120-004	2,192,595	5.34

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	12/12/2018
		Time Analyzed:	11:57

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC23\DATA\121218\1212F006.D	**Lab Code:**	KWG1806469-3
Instrument ID:	GC23	**Analysis Lot:**	KWG1806469
Analysis Method:	8081B	**Column :**	DB XLB

		1-Bromo-2-nitrobenzene {3}	
		Area	**RT**
	ICAL Average ==>	1,060,568	6.11
	Upper Limit ==>	2,121,136	6.61
	Lower Limit ==>	530,284	5.61
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1806469-3	607,795	6.01
Method Blank	KWG1806145-7	572,816	6.02
Method Blank	KWG1806145-8	570,486	6.01
Method Blank	KWG1806145-9	569,592	6.02
Lab Control Sample	KWG1806145-5	598,912	6.01
SL0084	K1811120-001	541,811	6.01
SL0084MS	KWG1806145-1	612,510	6.01
SL0084DMS	KWG1806145-2	629,446	6.01
SL0064	K1811120-002	634,612	6.01
SL0065	K1811120-003	660,814	6.01
SL0022	K1811120-004	653,916	6.01

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	12/12/2018
		Time Analyzed:	11:57

Internal Standard Area and RT Summary
Organochlorine Pesticides

File ID:	J:\GC23\DATA\121218\1212F006.D\1212F006C.D	**Lab Code:**	KWG1806469-3
Instrument ID:	GC23	**Analysis Lot:**	KWG1806469
Analysis Method:	8081B	**Column :**	DB-35MS

		1-Bromo-2-nitrobenzene {3}	
		Area	**RT**
	ICAL Average ==>	3,224,098	5.42
	Upper Limit ==>	6,448,196	5.92
	Lower Limit ==>	1,612,049	4.92
Associated Analyses			
Continuing Calibration VerificationCCV	KWG1806469-3	2,351,773	5.34
Method Blank	KWG1806145-7	2,100,947	5.34
Method Blank	KWG1806145-8	2,047,436	5.34
Method Blank	KWG1806145-9	2,019,086	5.35
Lab Control Sample	KWG1806145-5	1,964,040	5.34
SL0084	K1811120-001	1,796,242	5.34
SL0084MS	KWG1806145-1	2,085,748	5.34
SL0084DMS	KWG1806145-2	2,065,709	5.35
SL0064	K1811120-002	2,117,126	5.34
SL0065	K1811120-003	2,173,222	5.34
SL0022	K1811120-004	2,192,595	5.34

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Prepared:**	11/20/2018
Sample Matrix:	Soil	**Date Extracted:**	11/27/2018
		Date Analyzed:	12/12/2018

Matrix Spike/Duplicate Matrix Spike Summary
Organochlorine Pesticides

Sample Name:	SL0084	**Units:**	mg/L
Lab Code:	K1811120-001	**Basis:**	NA
Extraction Method:	EPA 1311/EPA 3511	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1806145

		SL0084MS KWG1806145-1 Matrix Spike				SL0084DMS KWG1806145-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**		**Result**	**Spike Amount**	**%Rec**		**%Rec Limits**	**RPD**	**RPD Limit**
gamma-BHC (Lindane)	ND	0.000320	0.000250	128		0.000311	0.000250	124		70-130	3	30
Heptachlor	ND	0.000286	0.000250	114		0.000294	0.000250	118		70-130	3	30
Heptachlor Epoxide	ND	0.000307	0.000250	123		0.000299	0.000250	120		70-130	3	30
Endrin	ND	0.000308	0.000250	123		0.000295	0.000250	118		70-130	4	30
Methoxychlor	ND	0.000349	0.000250	140	*	0.000346	0.000250	138	*	70-130	1	30
Chlordane	ND	0.00515	0.00500	103		0.00497	0.00500	99		70-130	4	30
Toxaphene	ND	0.0106	0.0100	106		0.0110	0.0100	110		70-130	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Prepared:**	11/20/2018
Sample Matrix:	Soil	**Date Extracted:**	11/27/2018
		Date Analyzed:	12/12/2018

Lab Control Spike Summary
Organochlorine Pesticides

Extraction Method:	EPA 1311/EPA 3511	**Units:**	mg/L
Analysis Method:	8081B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1806145

Lab Control Sample
KWG1806145-5
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec		%Rec Limits
gamma-BHC (Lindane)	0.000302	0.000250	121		70-130
Heptachlor	0.000271	0.000250	108		70-130
Heptachlor Epoxide	0.000290	0.000250	116		70-130
Endrin	0.000302	0.000250	121		70-130
Methoxychlor	0.000334	0.000250	134	*	70-130
Chlordane	0.00530	0.00500	106		70-130
Toxaphene	0.0139	0.0100	139	*	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/27/2018
Sample Matrix:	Soil	**Date Analyzed:**	12/12/2018
		Time Analyzed:	12:57

Method Blank Summary
Organochlorine Pesticides

Sample Name:	Method Blank	**Instrument ID:**	GC23
Lab Code:	KWG1806145-7	**File ID:**	J:\GC23\DATA\121218\1212F008.D
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1806145

This Method Blank applies to the following analyses:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/27/2018
Sample Matrix:	Soil	**Date Analyzed:**	12/12/2018
		Time Analyzed:	13:26

Method Blank Summary
Organochlorine Pesticides

Sample Name:	Method Blank	**Instrument ID:**	GC23
Lab Code:	KWG1806145-8	**File ID:**	J:\GC23\DATA\121218\1212F009.D
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1806145

This Method Blank applies to the following analyses:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/27/2018
Sample Matrix:	Soil	**Date Analyzed:**	12/12/2018
		Time Analyzed:	13:56

Method Blank Summary
Organochlorine Pesticides

Sample Name:	Method Blank	**Instrument ID:**	GC23
Lab Code:	KWG1806145-9	**File ID:**	J:\GC23\DATA\121218\1212F010.D
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1806145

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1806145-5	J:\GC23\DATA\121218\1212F011.D	12/12/18	14:25
Lab Control Sample	KWG1806145-5	J:\GC23\DATA\121218\1212F012.D	12/12/18	14:55
SL0084	K1811120-001	J:\GC23\DATA\121218\1212F017.D	12/12/18	17:23
SL0084MS	KWG1806145-1	J:\GC23\DATA\121218\1212F018.D	12/12/18	17:53
SL0084DMS	KWG1806145-2	J:\GC23\DATA\121218\1212F019.D	12/12/18	18:23
SL0084MS	KWG1806145-1	J:\GC23\DATA\121218\1212F020.D	12/12/18	18:53
SL0084DMS	KWG1806145-2	J:\GC23\DATA\121218\1212F021.D	12/12/18	19:22
SL0064	K1811120-002	J:\GC23\DATA\121218\1212F022.D	12/12/18	19:52
SL0065	K1811120-003	J:\GC23\DATA\121218\1212F023.D	12/12/18	20:21
SL0022	K1811120-004	J:\GC23\DATA\121218\1212F024.D	12/12/18	20:50

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/27/2018
Sample Matrix:	Soil	**Date Analyzed:**	12/12/2018
		Time Analyzed:	14:25

Lab Control Sample Summary
Organochlorine Pesticides

Sample Name:	Lab Control Sample	**Instrument ID:**	GC23
Lab Code:	KWG1806145-5	**File ID:**	J:\GC23\DATA\121218\1212F011.D
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1806145

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1806145-7	J:\GC23\DATA\121218\1212F008.D	12/12/18	12:57
Method Blank	KWG1806145-8	J:\GC23\DATA\121218\1212F009.D	12/12/18	13:26
Method Blank	KWG1806145-9	J:\GC23\DATA\121218\1212F010.D	12/12/18	13:56
SL0084	K1811120-001	J:\GC23\DATA\121218\1212F017.D	12/12/18	17:23
SL0084MS	KWG1806145-1	J:\GC23\DATA\121218\1212F018.D	12/12/18	17:53
SL0084DMS	KWG1806145-2	J:\GC23\DATA\121218\1212F019.D	12/12/18	18:23
SL0084MS	KWG1806145-1	J:\GC23\DATA\121218\1212F020.D	12/12/18	18:53
SL0084DMS	KWG1806145-2	J:\GC23\DATA\121218\1212F021.D	12/12/18	19:22
SL0064	K1811120-002	J:\GC23\DATA\121218\1212F022.D	12/12/18	19:52
SL0065	K1811120-003	J:\GC23\DATA\121218\1212F023.D	12/12/18	20:21
SL0022	K1811120-004	J:\GC23\DATA\121218\1212F024.D	12/12/18	20:50

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/27/2018
Sample Matrix:	Soil	**Date Analyzed:**	12/12/2018
		Time Analyzed:	14:55

Lab Control Sample Summary
Organochlorine Pesticides

Sample Name:	Lab Control Sample	**Instrument ID:**	GC23
Lab Code:	KWG1806145-5	**File ID:**	J:\GC23\DATA\121218\1212F012.D
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1806145

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
SL0084	K1811120-001	J:\GC23\DATA\121218\1212F017.D	12/12/18	17:23
SL0084MS	KWG1806145-1	J:\GC23\DATA\121218\1212F018.D	12/12/18	17:53
SL0084DMS	KWG1806145-2	J:\GC23\DATA\121218\1212F019.D	12/12/18	18:23
SL0084MS	KWG1806145-1	J:\GC23\DATA\121218\1212F020.D	12/12/18	18:53
SL0084DMS	KWG1806145-2	J:\GC23\DATA\121218\1212F021.D	12/12/18	19:22
SL0064	K1811120-002	J:\GC23\DATA\121218\1212F022.D	12/12/18	19:52
SL0065	K1811120-003	J:\GC23\DATA\121218\1212F023.D	12/12/18	20:21
SL0022	K1811120-004	J:\GC23\DATA\121218\1212F024.D	12/12/18	20:50

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15907
Instrument ID: GC23

Column: DB XLB

Level ID	File ID
A	J:\GC23\data\100918CAL\1009F023.D
B	J:\GC23\data\100918CAL\1009F024.D
C	J:\GC23\data\100918CAL\1009F025.D
D	J:\GC23\data\100918CAL\1009F026.D
E	J:\GC23\data\100918CAL\1009F027.D
F	J:\GC23\data\100918CAL\1009F028.D
G	J:\GC23\data\100918CAL\1009F031.D
H	J:\GC23\data\100918CAL\1009F032.D
I	J:\GC23\data\100918CAL\1009F033.D
J	J:\GC23\data\100918CAL\1009F034.D
K	J:\GC23\data\100918CAL\1009F035.D
L	J:\GC23\data\100918CAL\1009F036.D
M	J:\GC23\data\100918CAL\1009F039.D
N	J:\GC23\data\100918CAL\1009F040.D
O	J:\GC23\data\100918CAL\1009F041.D
P	J:\GC23\data\100918CAL\1009F042.D
Q	J:\GC23\data\100918CAL\1009F043.D
R	J:\GC23\data\100918CAL\1009F044.D
S	J:\GC23\data\101018CAL\1010F006.D
T	J:\GC23\data\101518CAL\1015F013.D
U	J:\GC23\data\101518CAL\1015F015.D
V	J:\GC23\data\101518CAL\1015F016.D
W	J:\GC23\data\101518CAL\1016F007.D
X	J:\GC23\data\101518CAL\1016F010.D
Y	J:\GC23\data\101518CAL\1016F013.D
Z	J:\GC23\data\120718CAL\1207F003.D
AA	J:\GC23\data\120718CAL\1207F006.D
AB	J:\GC23\data\120718CAL\1207F007.D
AC	J:\GC23\data\120718CAL\1207F008.D
AD	J:\GC23\data\121018CAL\1210F004.D
AE	J:\GC23\data\121018CAL\1210F005.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Tetrachloro-m-xylene	Z	0.20	2.42	AA	2.0	2.06	AB	5.0	2.02	AC	10	1.85	AD	0.50	3.01
	AE	1.0	2.79												
Decachlorobiphenyl	Z	0.20	2.33	AA	2.0	2.00	AB	5.0	1.96	AC	10	1.84	AD	0.50	2.71
	AE	1.0	2.78												
gamma-BHC (Lindane)	Z	0.20	1.48	AA	2.0	1.43	AB	5.0	1.41	AC	10	1.37	AD	0.50	1.62
	AE	1.0	1.84												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15907
Instrument ID: GC23

Column: DB XLB

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Heptachlor	Z	0.20	3.11	AA	2.0	1.40	AB	5.0	1.45	AC	10	1.29	AD	0.50	1.95
	AE	1.0	1.85												
Heptachlor Epoxide	Z	0.20	1.47	AA	2.0	1.50	AB	5.0	1.47	AC	10	1.36	AD	0.50	1.79
	AE	1.0	1.82												
Endrin	Z	0.20	1.74	AA	2.0	1.35	AB	5.0	1.35	AC	10	1.25	AD	0.50	1.75
	AE	1.0	1.71												
Methoxychlor	Z	0.20	1.63	AA	2.0	0.578	AB	5.0	0.562	AC	10	0.570	AD	0.50	0.807
	AE	1.0	0.829												
Chlordane {1}							M	5.0	0.0662	N	10	0.0564	O	20	0.0614
	P	50	0.0567	Q	100	0.0544	R	200	0.0462	S	2.0	0.0592			

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15907
Instrument ID: GC23

Column: DB XLB

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Chlordane {2}							M	5.0	0.0725	N	10	0.0718	O	20	0.0742
	P	50	0.0708	Q	100	0.0674	R	200	0.0581	S	2.0	0.0903			
Chlordane {3}							M	5.0	0.0524	N	10	0.0495	O	20	0.0515
	P	50	0.0510	Q	100	0.0468	R	200	0.0395	S	2.0	0.0542			
Chlordane {4}							M	5.0	0.152	N	10	0.148	O	20	0.155
	P	50	0.141	Q	100	0.138	R	200	0.121	S	2.0	0.153			
Chlordane {5}							M	5.0	0.130	N	10	0.123	O	20	0.131
	P	50	0.122	Q	100	0.117	R	200	0.100	S	2.0	0.131			
Chlordane {6}							M	5.0	0.0883	N	10	0.0939	O	20	0.0984
	P	50	0.0882	Q	100	0.0849	R	200	0.0718	S	2.0	0.103			

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15907
Instrument ID: GC23

Column: DB XLB

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Toxaphene {1}				G	10	0.0221	H	25	0.0237	I	50	0.0252	J	100	0.0230
	K	250	0.0215	L	500	0.0215									
Toxaphene {2}				G	10	0.0154	H	25	0.0135	I	50	0.0121	J	100	0.0106
	K	250	0.00908	L	500	0.00865									
Toxaphene {3}				G	10	0.0212	H	25	0.0179	I	50	0.0180	J	100	0.0160
	K	250	0.0149	L	500	0.0150									
Toxaphene {4}				G	10	0.00901	H	25	0.00687	I	50	0.00695	J	100	0.00690
	K	250	0.00637	L	500	0.00609									
Toxaphene {5}				G	10	0.0115	H	25	0.00978	I	50	0.00893	J	100	0.00871
	K	250	0.00820	L	500	0.00812									

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15907
Instrument ID: GC23

Column: DB XLB

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Toxaphene {6}															
				G	10	0.0252	H	25	0.0271	I	50	0.0274	J	100	0.0258
	K	250	0.0252	L	500	0.0246									

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15907
Instrument ID: GC23

Column: DB XLB

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Tetrachloro-m-xylene	SURR	Quadratic	COD	0.997		≥ 0.990	2.36		
Decachlorobiphenyl	SURR	AverageRF	% RSD	17.8		≤ 20	2.27		
gamma-BHC (Lindane)	MS	AverageRF	% RSD	11.7		≤ 20	1.52		
Heptachlor	MS	Quadratic	COD	0.998		≥ 0.990	1.84		
Heptachlor Epoxide	MS	AverageRF	% RSD	12.1		≤ 20	1.57		
Endrin	MS	AverageRF	% RSD	15.3		≤ 20	1.52		
Methoxychlor	MS	Linear	R2	0.998		≥ 0.990	0.829		
Chlordane {1}	MULTI	AverageRF	% RSD	10.9		≤ 20	0.0572		
Chlordane {2}	MULTI	AverageRF	% RSD	13.3		≤ 20	0.0722		
Chlordane {3}	MULTI	AverageRF	% RSD	9.9		≤ 20	0.0493		
Chlordane {4}	MULTI	AverageRF	% RSD	8.4		≤ 20	0.144		
Chlordane {5}	MULTI	AverageRF	% RSD	9.0		≤ 20	0.122		
Chlordane {6}	MULTI	AverageRF	% RSD	11.2		≤ 20	0.0898		
Toxaphene {1}	MULTI	AverageRF	% RSD	6.4		≤ 20	0.0228		
Toxaphene {2}	MULTI	Quadratic	COD	0.998		≥ 0.990	0.0116		
Toxaphene {3}	MULTI	AverageRF	% RSD	13.9		≤ 20	0.0172		
Toxaphene {4}	MULTI	AverageRF	% RSD	14.6		≤ 20	0.00703		
Toxaphene {5}	MULTI	AverageRF	% RSD	13.8		≤ 20	0.00920		
Toxaphene {6}	MULTI	AverageRF	% RSD	4.4		≤ 20	0.0259		

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 10/09/2018
Date Analyzed: 10/10/2018 - 12/10/2018

Second Source Calibration Verification
Organochlorine Pesticides

Calibration Type: Internal Standard
Analysis Method: 8081B

Calibration ID: CAL15907
Units: ug/L

File ID: J:\GC23\data\121018CAL\1210F006.D
J:\GC23\data\100918CAL\1009F029.D
J:\GC23\data\100918CAL\1009F030.D
J:\GC23\data\101018CAL\1010F007.D
J:\GC23\data\101018CAL\1010F008.D
J:\GC23\data\101718ICV\1017F006.D

Column ID: DB XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
gamma-BHC (Lindane)	2.0	2.1	1.52	1.58	4	NA	± 20 %	AverageRF
Heptachlor	2.0	2.0	1.84	1.56	NA	0	± 20 %	Quadratic
Heptachlor Epoxide	2.0	2.0	1.57	1.56	-1	NA	± 20 %	AverageRF
Endrin	2.0	1.9	1.52	1.43	-6	NA	± 20 %	AverageRF
Methoxychlor	2.0	1.9	0.829	0.607	NA	-4	± 20 %	Linear
Chlordane {1}	50	40	0.0572	0.0458	-20	NA	± 100 %	AverageRF
Chlordane {2}	50	35	0.0722	0.0502	-30	NA	± 100 %	AverageRF
Chlordane {3}	50	62	0.0493	0.0615	25	NA	± 100 %	AverageRF
Chlordane {4}	50	48	0.144	0.139	-3	NA	± 100 %	AverageRF
Chlordane {5}	50	49	0.122	0.118	-3	NA	± 100 %	AverageRF
Chlordane {6}	50	53	0.0898	0.0948	6	NA	± 100 %	AverageRF
Chlordane	50	48	NA	NA	NA	-4	± 20 %	NA
Toxaphene {1}	200	180	0.0228	0.0208	-9	NA	± 100 %	AverageRF
Toxaphene {2}	200	190	0.0116	0.00910	NA	-7	± 100 %	Quadratic
Toxaphene {3}	200	180	0.0172	0.0156	-9	NA	± 100 %	AverageRF
Toxaphene {4}	200	180	0.00703	0.00643	-9	NA	± 100 %	AverageRF
Toxaphene {5}	200	180	0.00920	0.00821	-11	NA	± 100 %	AverageRF
Toxaphene {6}	200	180	0.0259	0.0227	-12	NA	± 100 %	AverageRF
Toxaphene	200	180	NA	NA	NA	-10	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15907
Instrument ID: GC23

Column: DB-35MS

Level ID	File ID
A	J:\GC23\data\100918CAL\1009F023.D\1009F023c.d
B	J:\GC23\data\100918CAL\1009F024.D\1009F024c.d
C	J:\GC23\data\100918CAL\1009F025.D\1009F025c.d
D	J:\GC23\data\100918CAL\1009F026.D\1009F026c.d
E	J:\GC23\data\100918CAL\1009F027.D\1009F027c.d
F	J:\GC23\data\100918CAL\1009F028.D\1009F028c.d
G	J:\GC23\data\100918CAL\1009F031.D\1009F031c.d
H	J:\GC23\data\100918CAL\1009F032.D\1009F032c.d
I	J:\GC23\data\100918CAL\1009F033.D\1009F033c.d
J	J:\GC23\data\100918CAL\1009F034.D\1009F034c.d
K	J:\GC23\data\100918CAL\1009F035.D\1009F035c.d
L	J:\GC23\data\100918CAL\1009F036.D\1009F036c.d
M	J:\GC23\data\100918CAL\1009F039.D\1009F039c.d
N	J:\GC23\data\100918CAL\1009F040.D\1009F040c.d
O	J:\GC23\data\100918CAL\1009F041.D\1009F041c.d
P	J:\GC23\data\100918CAL\1009F042.D\1009F042c.d
Q	J:\GC23\data\100918CAL\1009F043.D\1009F043c.d
R	J:\GC23\data\100918CAL\1009F044.D\1009F044c.d
S	J:\GC23\data\101018CAL\1010F006.D\1010F006c.d
T	J:\GC23\data\101518CAL\1015F013.D\1015F013c.d
U	J:\GC23\data\101518CAL\1015F015.D\1015F015c.d
V	J:\GC23\data\101518CAL\1015F016.D\1015F016c.d
W	J:\GC23\data\101518CAL\1016F007.D\1016F007c.d
X	J:\GC23\data\101518CAL\1016F010.D\1016F010c.d
Y	J:\GC23\data\101518CAL\1016F013.D\1016F013c.d
Z	J:\GC23\data\120718CAL\1207F003.D\1207F003c.d
AA	J:\GC23\data\120718CAL\1207F006.D\1207F006c.d
AB	J:\GC23\data\120718CAL\1207F007.D\1207F007c.d
AC	J:\GC23\data\120718CAL\1207F008.D\1207F008c.d
AD	J:\GC23\data\121018CAL\1210F004.D\1210F004c.d
AE	J:\GC23\data\121018CAL\1210F005.D\1210F005c.d

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Tetrachloro-m-xylene															
	Z	0.20	1.76	AA	2.0	1.55	AB	5.0	1.55	AC	10	1.48	AD	0.50	1.78
	AE	1.0	1.72												
Decachlorobiphenyl															
	Z	0.20	1.45	AA	2.0	1.29	AB	5.0	1.28	AC	10	1.19	AD	0.50	1.52
	AE	1.0	1.52												
gamma-BHC (Lindane)															
	Z	0.20	1.46	AA	2.0	1.18	AB	5.0	1.21	AC	10	1.16	AD	0.50	1.35
	AE	1.0	1.35												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15907
Instrument ID: GC23

Column: DB-35MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Heptachlor	Z	0.20	1.56	AA	2.0	1.29	AB	5.0	1.29	AC	10	1.21	AD	0.50	1.42
	AE	1.0	1.49												
Heptachlor Epoxide	Z	0.20	1.27	AA	2.0	1.14	AB	5.0	1.19	AC	10	1.10	AD	0.50	1.31
	AE	1.0	1.39												
Endrin	Z	0.20	1.27	AA	2.0	1.03	AB	5.0	1.06	AC	10	1.01	AD	0.50	1.23
	AE	1.0	1.22												
Methoxychlor	Z	0.20	0.603	AA	2.0	0.512	AB	5.0	0.510	AC	10	0.489	AD	0.50	0.501
	AE	1.0	0.543												
Chlordane {1}							M	5.0	0.0463	N	10	0.0435	O	20	0.0443
	P	50	0.0425	Q	100	0.0406	R	200	0.0349	S	2.0	0.0502			

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15907
Instrument ID: GC23

Column: DB-35MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Chlordane {2}							M	5.0	0.0279	N	10	0.0296	O	20	0.0292
	P	50	0.0282	Q	100	0.0270	R	200	0.0235	S	2.0	0.0278			
Chlordane {3}							M	5.0	0.113	N	10	0.111	O	20	0.110
	P	50	0.110	Q	100	0.105	R	200	0.0968	S	2.0	0.118			
Chlordane {4}							M	5.0	0.0705	N	10	0.0686	O	20	0.0686
	P	50	0.0662	Q	100	0.0610	R	200	0.0542	S	2.0	0.0818			
Chlordane {5}							M	5.0	0.0311	N	10	0.0317	O	20	0.0354
	P	50	0.0341	Q	100	0.0318	R	200	0.0276	S	2.0	0.0314			
Chlordane {6}							M	5.0	0.101	N	10	0.101	O	20	0.0991
	P	50	0.0985	Q	100	0.0930	R	200	0.0850	S	2.0	0.108			

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15907
Instrument ID: GC23

Column: DB-35MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Toxaphene {1}				G	10	0.0201	H	25	0.0171	I	50	0.0182	J	100	0.0169
	K	250	0.0155	L	500	0.0161									
Toxaphene {2}				G	10	0.00736	H	25	0.00634	I	50	0.00659	J	100	0.00613
	K	250	0.00555	L	500	0.00560									
Toxaphene {3}				G	10	0.00649	H	25	0.00622	I	50	0.00580	J	100	0.00513
	K	250	0.00479	L	500	0.00476									
Toxaphene {4}				G	10	0.0115	H	25	0.0108	I	50	0.0106	J	100	0.00995
	K	250	0.00948	L	500	0.00972									
Toxaphene {5}				G	10	0.0242	H	25	0.0186	I	50	0.0209	J	100	0.0194
	K	250	0.0186	L	500	0.0187									

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15907
Instrument ID: GC23

Column: DB-35MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Toxaphene {6}															
				G	10	0.0174	H	25	0.0166	I	50	0.0173	J	100	0.0162
	K	250	0.0143	L	500	0.0155									

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 10/09/2018

Initial Calibration Summary
Organochlorine Pesticides

Calibration ID: CAL15907
Instrument ID: GC23

Column: DB-35MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Tetrachloro-m-xylene	SURR	AverageRF	% RSD	7.9		≤ 20	1.64		
Decachlorobiphenyl	SURR	AverageRF	% RSD	10.1		≤ 20	1.37		
gamma-BHC (Lindane)	MS	AverageRF	% RSD	9.3		≤ 20	1.28		
Heptachlor	MS	AverageRF	% RSD	9.8		≤ 20	1.38		
Heptachlor Epoxide	MS	AverageRF	% RSD	8.9		≤ 20	1.23		
Endrin	MS	AverageRF	% RSD	10.4		≤ 20	1.14		
Methoxychlor	MS	AverageRF	% RSD	7.9		≤ 20	0.526		
Chlordane {1}	MULTI	AverageRF	% RSD	11.0		≤ 20	0.0432		
Chlordane {2}	MULTI	AverageRF	% RSD	7.3		≤ 20	0.0276		
Chlordane {3}	MULTI	AverageRF	% RSD	6.2		≤ 20	0.109		
Chlordane {4}	MULTI	AverageRF	% RSD	12.7		≤ 20	0.0673		
Chlordane {5}	MULTI	AverageRF	% RSD	7.7		≤ 20	0.0319		
Chlordane {6}	MULTI	AverageRF	% RSD	7.5		≤ 20	0.0980		
Toxaphene {1}	MULTI	AverageRF	% RSD	9.5		≤ 20	0.0173		
Toxaphene {2}	MULTI	AverageRF	% RSD	10.8		≤ 20	0.00626		
Toxaphene {3}	MULTI	AverageRF	% RSD	13.5		≤ 20	0.00553		
Toxaphene {4}	MULTI	AverageRF	% RSD	7.3		≤ 20	0.0103		
Toxaphene {5}	MULTI	AverageRF	% RSD	11.1		≤ 20	0.0201		
Toxaphene {6}	MULTI	AverageRF	% RSD	7.2		≤ 20	0.0162		

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 10/09/2018
Date Analyzed: 10/10/2018 - 12/10/2018

Second Source Calibration Verification
Organochlorine Pesticides

Calibration Type: Internal Standard
Analysis Method: 8081B

Calibration ID: CAL15907
Units: ug/L

File ID: J:\GC23\data\121018CAL\1210F006.D\1210F006c.d
J:\GC23\data\100918CAL\1009F029.D\1009F029c.d
J:\GC23\data\100918CAL\1009F030.D\1009F030c.d
J:\GC23\data\101018CAL\1010F007.D\1010F007c.d
J:\GC23\data\101018CAL\1010F008.D\1010F008c.d
J:\GC23\data\101718ICV\1017F006.D\1017F006c.d

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
gamma-BHC (Lindane)	2.0	1.9	1.28	1.22	-5	NA	± 20 %	AverageRF
Heptachlor	2.0	1.9	1.38	1.34	-3	NA	± 20 %	AverageRF
Heptachlor Epoxide	2.0	1.8	1.23	1.13	-8	NA	± 20 %	AverageRF
Endrin	2.0	1.8	1.14	1.04	-9	NA	± 20 %	AverageRF
Methoxychlor	2.0	1.9	0.526	0.490	-7	NA	± 20 %	AverageRF
Chlordane {1}	50	38	0.0432	0.0328	-24	NA	± 100 %	AverageRF
Chlordane {2}	50	57	0.0276	0.0316	15	NA	± 100 %	AverageRF
Chlordane {3}	50	47	0.109	0.102	-7	NA	± 100 %	AverageRF
Chlordane {4}	50	52	0.0673	0.0693	3	NA	± 100 %	AverageRF
Chlordane {5}	50	58	0.0319	0.0369	16	NA	± 100 %	AverageRF
Chlordane {6}	50	47	0.0980	0.0916	-6	NA	± 100 %	AverageRF
Chlordane	50	50	NA	NA	NA	-1	± 20 %	NA
Toxaphene {1}	200	170	0.0173	0.0146	-16	NA	± 100 %	AverageRF
Toxaphene {2}	200	170	0.00626	0.00539	-14	NA	± 100 %	AverageRF
Toxaphene {3}	200	170	0.00553	0.00472	-15	NA	± 100 %	AverageRF
Toxaphene {4}	200	180	0.0103	0.00911	-12	NA	± 100 %	AverageRF
Toxaphene {5}	200	180	0.0201	0.0182	-9	NA	± 100 %	AverageRF
Toxaphene {6}	200	180	0.0162	0.0147	-10	NA	± 100 %	AverageRF
Toxaphene	200	170	NA	NA	NA	-13	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Date Analyzed: 12/12/2018

Continuing Calibration Verification Summary
Organochlorine Pesticides

Calibration Type: External Standard
Analysis Method: 8081B

Calibration Date: 10/09/2018
Calibration ID: CAL15907
Analysis Lot: KWG1806469
Units: ug/L

File ID: J:\GC23\DATA\121218\1212F004.D
J:\GC23\DATA\121218\1212F005.D
J:\GC23\DATA\121218\1212F006.D

Column ID: DB XLB

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift		Criteria	Curve Fit
Tetrachloro-m-xylene	2.0	2.0		2.36	2.24	NA	-1		± 20	Quadratic
Decachlorobiphenyl	2.0	2.0		2.27	2.24	-1	NA		± 20	AverageRF
gamma-BHC (Lindane)	2.0	2.0		1.52	1.50	-2	NA		± 20	AverageRF
Heptachlor	2.0	2.0		1.84	1.52	NA	-2		± 20	Quadratic
Heptachlor Epoxide	2.0	1.9		1.57	1.52	-3	NA		± 20	AverageRF
Endrin	2.0	1.8		1.52	1.41	-8	NA		± 20	AverageRF
Methoxychlor	2.0	1.7		0.829	0.537	NA	-17		± 20	Linear
Chlordane {1}	20	23		0.0572	0.0657	15	NA		± 100	AverageRF
Chlordane {2}	20	24		0.0722	0.0872	21	NA		± 100	AverageRF
Chlordane {3}	20	22		0.0493	0.0545	11	NA		± 100	AverageRF
Chlordane {4}	20	27		0.144	0.194	35	NA		± 100	AverageRF
Chlordane {5}	20	28		0.122	0.173	42	NA		± 100	AverageRF
Chlordane {6}	20	24		0.0898	0.107	20	NA		± 100	AverageRF
Chlordane	20	25		NA	NA	NA	24	*	± 20	NA
Toxaphene {1}	100	120		0.0228	0.0285	25	NA		± 100	AverageRF
Toxaphene {2}	100	120		0.0116	0.0120	NA	17		± 100	Quadratic
Toxaphene {3}	100	120		0.0172	0.0209	22	NA		± 100	AverageRF
Toxaphene {4}	100	110		0.00703	0.00758	8	NA		± 100	AverageRF
Toxaphene {5}	100	90		0.00920	0.00830	-10	NA		± 100	AverageRF
Toxaphene {6}	100	120		0.0259	0.0302	17	NA		± 100	AverageRF
Toxaphene	100	110		NA	NA	NA	13		± 20	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Date Analyzed: 12/12/2018

Continuing Calibration Verification Summary
Organochlorine Pesticides

Calibration Type: External Standard
Analysis Method: 8081B

Calibration Date: 10/09/2018
Calibration ID: CAL15907
Analysis Lot: KWG1806469
Units: ug/L

File ID: J:\GC23\DATA\121218\1212F004.D\1212F004C.D
J:\GC23\DATA\121218\1212F005.D\1212F005C.D
J:\GC23\DATA\121218\1212F006.D\1212F006C.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Tetrachloro-m-xylene	2.0	1.8		1.64	1.49	-9	NA	± 20	AverageRF
Decachlorobiphenyl	2.0	2.0		1.37	1.36	-1	NA	± 20	AverageRF
gamma-BHC (Lindane)	2.0	1.9		1.28	1.19	-7	NA	± 20	AverageRF
Heptachlor	2.0	1.8		1.38	1.27	-8	NA	± 20	AverageRF
Heptachlor Epoxide	2.0	1.9		1.23	1.18	-5	NA	± 20	AverageRF
Endrin	2.0	1.8		1.14	1.03	-10	NA	± 20	AverageRF
Methoxychlor	2.0	1.8		0.526	0.481	-9	NA	± 20	AverageRF
Chlordane {1}	20	21		0.0432	0.0462	7	NA	± 100	AverageRF
Chlordane {2}	20	20		0.0276	0.0277	0	NA	± 100	AverageRF
Chlordane {3}	20	21		0.109	0.116	6	NA	± 100	AverageRF
Chlordane {4}	20	20		0.0673	0.0684	2	NA	± 100	AverageRF
Chlordane {5}	20	23		0.0319	0.0364	14	NA	± 100	AverageRF
Chlordane {6}	20	21		0.0980	0.101	3	NA	± 100	AverageRF
Chlordane	20	21		NA	NA	NA	5	± 20	NA
Toxaphene {1}	100	110		0.0173	0.0183	5	NA	± 100	AverageRF
Toxaphene {2}	100	110		0.00626	0.00664	6	NA	± 100	AverageRF
Toxaphene {3}	100	130		0.00553	0.00726	31	NA	± 100	AverageRF
Toxaphene {4}	100	100		0.0103	0.0106	3	NA	± 100	AverageRF
Toxaphene {5}	100	100		0.0201	0.0208	4	NA	± 100	AverageRF
Toxaphene {6}	100	100		0.0162	0.0169	5	NA	± 100	AverageRF
Toxaphene	100	110		NA	NA	NA	9	± 20	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Analysis Run Log
Organochlorine Pesticides

Analysis Method: 8081B **Analysis Lot:** KWG1806469
Instrument ID: GC23
Column: DB XLB

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1212F003.D	Performance Evaluation Mixture	KWG1806469-1	12/12/2018	10:29		12/12/2018	10:51
1212F004.D	Continuing Calibration Verification	KWG1806469-3	12/12/2018	10:58		12/12/2018	11:20
1212F005.D	Continuing Calibration Verification	KWG1806469-3	12/12/2018	11:28		12/12/2018	11:50
1212F006.D	Continuing Calibration Verification	KWG1806469-3	12/12/2018	11:57		12/12/2018	12:19
1212F007.D	Instrument Blank	KWG1806469-2	12/12/2018	12:27		12/12/2018	12:49
1212F008.D	Method Blank	KWG1806145-7	12/12/2018	12:57		12/12/2018	13:19
1212F009.D	Method Blank	KWG1806145-8	12/12/2018	13:26		12/12/2018	13:48
1212F010.D	Method Blank	KWG1806145-9	12/12/2018	13:56		12/12/2018	14:18
1212F011.D	Lab Control Sample	KWG1806145-5	12/12/2018	14:25		12/12/2018	14:47
1212F012.D	Lab Control Sample	KWG1806145-5	12/12/2018	14:55		12/12/2018	15:17
1212F016.D	ZZZZZZ	ZZZZZZ	12/12/2018	16:53		12/12/2018	17:15
1212F017.D	SL0084	K1811120-001	12/12/2018	17:23		12/12/2018	17:45
1212F018.D	SL0084MS	KWG1806145-1	12/12/2018	17:53		12/12/2018	18:15
1212F019.D	SL0084DMS	KWG1806145-2	12/12/2018	18:23		12/12/2018	18:45
1212F020.D	SL0084MS	KWG1806145-1	12/12/2018	18:53		12/12/2018	19:15
1212F021.D	SL0084DMS	KWG1806145-2	12/12/2018	19:22		12/12/2018	19:44
1212F022.D	SL0064	K1811120-002	12/12/2018	19:52		12/12/2018	20:14
1212F023.D	SL0065	K1811120-003	12/12/2018	20:21		12/12/2018	20:43
1212F024.D	SL0022	K1811120-004	12/12/2018	20:50		12/12/2018	21:12
1212F025.D	Performance Evaluation Mixture	KWG1806469-4	12/12/2018	21:20		12/12/2018	21:42
1212F026.D	Continuing Calibration Verification	KWG1806469-6	12/12/2018	21:50		12/12/2018	22:12
1212F027.D	Instrument Blank	KWG1806469-5	12/12/2018	22:19		12/12/2018	22:41
1212F028.D	ZZZZZZ	ZZZZZZ	12/12/2018	22:50		12/12/2018	23:12
1212F029.D	ZZZZZZ	ZZZZZZ	12/12/2018	23:19		12/12/2018	23:41
1212F030.D	ZZZZZZ	ZZZZZZ	12/12/2018	23:49		12/13/2018	00:11
1212F031.D	ZZZZZZ	ZZZZZZ	12/13/2018	00:19		12/13/2018	00:41
1212F032.D	ZZZZZZ	ZZZZZZ	12/13/2018	00:48		12/13/2018	01:10
1212F033.D	ZZZZZZ	ZZZZZZ	12/13/2018	01:18		12/13/2018	01:40
1212F034.D	ZZZZZZ	ZZZZZZ	12/13/2018	01:47		12/13/2018	02:09
1212F035.D	ZZZZZZ	ZZZZZZ	12/13/2018	02:17		12/13/2018	02:39
1212F036.D	ZZZZZZ	ZZZZZZ	12/13/2018	02:47		12/13/2018	03:09
1212F037.D	ZZZZZZ	ZZZZZZ	12/13/2018	03:17		12/13/2018	03:39
1212F038.D	ZZZZZZ	ZZZZZZ	12/13/2018	03:47		12/13/2018	04:09

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Prepared:**	11/20/2018
Sample Matrix:	Soil	**Date Extracted:**	11/27/2018

Extraction Prep Log
Organochlorine Pesticides

Preparation Method:	EPA 1311	**Extraction Lot:**	KWG1806145
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8081B		

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SL0084	K1811120-001	11/08/18	11/13/18	100ml	5ml	NA	
SL0064	K1811120-002	11/05/18	11/13/18	100ml	5ml	NA	
SL0065	K1811120-003	11/05/18	11/13/18	100ml	5ml	NA	
SL0022	K1811120-004	11/03/18	11/13/18	100ml	5ml	NA	
Method Blank	KWG1806145-7	NA	NA	100ml	5ml	NA	
Method Blank	KWG1806145-8	NA	NA	100ml	5ml	NA	
Method Blank	KWG1806145-9	NA	NA	100ml	5ml	NA	
SL0084MS	KWG1806145-1	11/08/18	11/13/18	100ml	5ml	NA	
SL0084DMS	KWG1806145-2	11/08/18	11/13/18	100ml	5ml	NA	
Lab Control Sample	KWG1806145-5	NA	NA	100ml	5ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Polychlorinated Biphenyls (PCBs)

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Cover Page - Organic Analysis Data Package
Polychlorinated Biphenyls (PCBs)

Sample Name	Lab Code	Date Collected	Date Received
FW0001	K1811120-005	11/03/2018	11/13/2018
FB0001	K1811120-006	11/03/2018	11/13/2018

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/2018
Sample Matrix:	Wipe	**Date Received:**	11/13/2018

Polychlorinated Biphenyls (PCBs)

Sample Name:	FW0001	**Units:**	ug/WIPE
Lab Code:	K1811120-005	**Basis:**	Wet
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1221	ND	U	8.0	8.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1232	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1242	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1248	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1254	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1260	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1262	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1268	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	72	70-130	01/11/19	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/2018
Sample Matrix:	Wipe	**Date Received:**	11/13/2018

Polychlorinated Biphenyls (PCBs)

Sample Name:	FB0001	**Units:**	ug/WIPE
Lab Code:	K1811120-006	**Basis:**	Wet
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	8.0	8.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1221	ND	U	16	16	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1232	ND	U	8.0	8.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1242	ND	U	8.0	8.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1248	ND	U	8.0	8.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1254	ND	U	8.0	8.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1260	ND	U	8.0	8.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1262	ND	U	8.0	8.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1268	ND	U	8.0	8.0	10	01/03/19	01/11/19	KWG1900137	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	72	70-130	01/11/19	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Wipe	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	ug/WIPE
Lab Code:	KWG1900137-3	**Basis:**	Wet
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1221	ND	U	8.0	8.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1232	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1242	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1248	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1254	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1260	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1262	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	
Aroclor 1268	ND	U	4.0	4.0	10	01/03/19	01/11/19	KWG1900137	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	73	70-130	01/11/19	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto
Sample Matrix: Wipe

Service Request: K1811120

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3541
Analysis Method: 8082A

Units: Percent
Level: Low

Sample Name	Lab Code	Sur1
FW0001	K1811120-005	72 D
FB0001	K1811120-006	72 D
Method Blank	KWG1900137-3	73 D
Lab Control Sample	KWG1900137-1	71 D
Duplicate Lab Control Sample	KWG1900137-2	72 D

Surrogate Recovery Control Limits (%)

Sur1	= Decachlorobiphenyl	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	01/03/2019
Sample Matrix:	Wipe	**Date Analyzed:**	01/11/2019

Lab Control Spike/Duplicate Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3541	**Units:**	ug/WIPE
Analysis Method:	8082A	**Basis:**	Wet
		Level:	Low
		Extraction Lot:	KWG1900137

	Lab Control Sample KWG1900137-1 Lab Control Spike			Duplicate Lab Control Sample KWG1900137-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	7.36	10.0	74	7.92	10.0	79	70-130		40
Aroclor 1260	8.07	10.0	81	8.35	10.0	84	70-130		40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	01/03/2019
Sample Matrix:	Wipe	**Date Analyzed:**	01/11/2019
		Time Analyzed:	14:06

Method Blank Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Instrument ID:**	GC27.i
Lab Code:	KWG1900137-3	**File ID:**	J:\GC27\DATA\011119.B\0111F007.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A	**Extraction Lot:**	KWG1900137

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1900137-1	J:\GC27\DATA\011119.B\0111F005.D	01/11/19	13:03
Duplicate Lab Control Sample	KWG1900137-2	J:\GC27\DATA\011119.B\0111F006.D	01/11/19	13:34
FW0001	K1811120-005	J:\GC27\DATA\011119.B\0111F008.D	01/11/19	14:37
FB0001	K1811120-006	J:\GC27\DATA\011119.B\0111F009.D	01/11/19	15:09

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	01/03/2019
Sample Matrix:	Wipe	**Date Analyzed:**	01/11/2019
		Time Analyzed:	13:03

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Lab Control Sample	**Instrument ID:**	GC27.i
Lab Code:	KWG1900137-1	**File ID:**	J:\GC27\DATA\011119.B\0111F005.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A	**Extraction Lot:**	KWG1900137

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1900137-3	J:\GC27\DATA\011119.B\0111F007.D	01/11/19	14:06
FW0001	K1811120-005	J:\GC27\DATA\011119.B\0111F008.D	01/11/19	14:37
FB0001	K1811120-006	J:\GC27\DATA\011119.B\0111F009.D	01/11/19	15:09

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 12/07/2018

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL15912
Instrument ID: GC27.i

Column: DB-35MS

Level ID	File ID
A	\\alklsws002\instdata\GC27\Data\120718.b\1207F008.D
B	\\alklsws002\instdata\GC27\Data\120718.b\1207F009.D
C	\\alklsws002\instdata\GC27\Data\120718.b\1207F010.D
D	\\alklsws002\instdata\GC27\Data\120718.b\1207F011.D
E	\\alklsws002\instdata\GC27\Data\120718.b\1207F012.D
F	\\alklsws002\instdata\GC27\Data\120718.b\1207F013.D
G	\\alklsws002\instdata\GC27\Data\120718.b\1207F014.D
H	\\alklsws002\instdata\GC27\Data\120718.b\1207F015.D
I	\\alklsws002\instdata\GC27\Data\120718.b\1207F016.D
J	\\alklsws002\instdata\GC27\Data\120718.b\1207F017.D
K	\\alklsws002\instdata\GC27\Data\120718.b\1207F018.D
L	\\alklsws002\instdata\GC27\Data\120718.b\1207F019.D
M	\\alklsws002\instdata\GC27\Data\120718.b\1207F020.D
N	\\alklsws002\instdata\GC27\Data\120718.b\1207F021.D
O	\\alklsws002\instdata\GC27\Data\120718.b\1207F022.D
P	\\alklsws002\instdata\GC27\Data\120718.b\1207F023.D
Q	\\alklsws002\instdata\GC27\Data\120718.b\1207F024.D
R	\\alklsws002\instdata\GC27\Data\120718.b\1207F025.D
S	\\alklsws002\instdata\GC27\Data\120718.b\1207F026.D
T	\\alklsws002\instdata\GC27\Data\120718.b\1207F027.D
U	\\alklsws002\instdata\GC27\Data\120718.b\1207F028.D
V	\\alklsws002\instdata\GC27\Data\120718.b\1207F029.D
W	\\alklsws002\instdata\GC27\Data\120718.b\1207F030.D
X	\\alklsws002\instdata\GC27\Data\120718.b\1207F031.D
Y	\\alklsws002\instdata\GC27\Data\120718.b\1207F032.D
Z	\\alklsws002\instdata\GC27\Data\120718.b\1207F033.D
AA	\\alklsws002\instdata\GC27\Data\120718.b\1207F034.D
AB	\\alklsws002\instdata\GC27\Data\120718.b\1207F035.D
AC	\\alklsws002\instdata\GC27\Data\120718.b\1207F036.D
AD	\\alklsws002\instdata\GC27\Data\120718.b\1207F037.D
AE	\\alklsws002\instdata\GC27\Data\120718.b\1207F038.D
AF	\\alklsws002\instdata\GC27\Data\120718.b\1207F039.D
AG	\\alklsws002\instdata\GC27\Data\120718.b\1207F040.D
AH	\\alklsws002\instdata\GC27\Data\120718.b\1207F041.D
AI	\\alklsws002\instdata\GC27\Data\120718.b\1207F042.D
AJ	\\alklsws002\instdata\GC27\Data\120718.b\1207F043.D
AK	\\alklsws002\instdata\GC27\Data\120718.b\1207F044.D
AL	\\alklsws002\instdata\GC27\Data\120718.b\1207F045.D
AM	\\alklsws002\instdata\GC27\Data\120718.b\1207F046.D
AN	\\alklsws002\instdata\GC27\Data\120718.b\1207F047.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl	A	0.10	1.40E+6	B	0.20	1.29E+6	C	0.50	1.22E+6	D	1.0	1.21E+6	E	2.0	1.26E+6
	F	5.0	1.04E+6	G	10	1.14E+6	H	20	1.11E+6						
Aroclor 1016 {1}	A	1.0	27600	B	2.0	29800	C	5.0	27400	D	10	28000	E	20	26900
	F	50	23700	G	100	26500	H	200	25500						
Aroclor 1016 {2}	A	1.0	33600	B	2.0	30100	C	5.0	25200	D	10	26300	E	20	23300
	F	50	20900	G	100	22700	H	200	22100						
Aroclor 1016 {3}	A	1.0	59600	B	2.0	60600	C	5.0	59100	D	10	56700	E	20	50400
	F	50	45200	G	100	50800	H	200	44500						
Aroclor 1016 {4}	A	1.0	83800	B	2.0	77000	C	5.0	71700	D	10	72200	E	20	70900
	F	50	63000	G	100	65600	H	200	69100						
Aroclor 1016 {5}	A	1.0	42900	B	2.0	37000	C	5.0	33200	D	10	31500	E	20	29900
	F	50	26400	G	100	28800	H	200	27800						
Aroclor 1260 {1}	A	1.0	97900	B	2.0	91600	C	5.0	84600	D	10	79400	E	20	78900
	F	50	66000	G	100	70600	H	200	67300						
Aroclor 1260 {2}	A	1.0	45300	B	2.0	42300	C	5.0	37900	D	10	36800	E	20	38100
	F	50	32700	G	100	35500	H	200	35000						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 12/07/2018

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL15912
Instrument ID: GC27.i

Column: DB-35MS

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {3}	A	1.0	80500	B	2.0	62800	C	5.0	59200	D	10	55900	E	20	56500
	F	50	48500	G	100	53100	H	200	50900						
Aroclor 1260 {4}	A	1.0	64600	B	2.0	62200	C	5.0	59900	D	10	58600	E	20	58600
	F	50	50600	G	100	56100	H	200	54000						
Aroclor 1260 {5}	A	1.0	1.04E+5	B	2.0	97800	C	5.0	96100	D	10	91700	E	20	92800
	F	50	80300	G	100	89700	H	200	87100						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 12/07/2018

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL15912
Instrument ID: GC27.i

Column: DB-35MS

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Decachlorobiphenyl	SURR	AverageRF	% RSD	9.4		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	6.7		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	17.0		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	12.2		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	9.1		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	16.9		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	14.4		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	10.8		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	17.1		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	7.7		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	7.8		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 12/07/2018
Date Analyzed: 12/08/2018

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082A

Calibration ID: CAL15912
Units: ng/mL

File ID: \\alklsws002\instdata\GC27\Data\120718.b\1207F049.D
\\alklsws002\instdata\GC27\Data\120718.b\1207F050.D
\\alklsws002\instdata\GC27\Data\120718.b\1207F051.D
\\alklsws002\instdata\GC27\Data\120718.b\1207F052.D
\\alklsws002\instdata\GC27\Data\120718.b\1207F053.D
\\alklsws002\instdata\GC27\Data\120718.b\1207F054.D
\\alklsws002\instdata\GC27\Data\120718.b\1207F055.D
\\alklsws002\instdata\GC27\Data\120718.b\1207F056.D
\\alklsws002\instdata\GC27\Data\120718.b\1207F057.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift		Criteria	Curve Fit
Aroclor 1016 {1}	20	23	26900	31200	16	NA		± 100 %	AverageRF
Aroclor 1016 {2}	20	21	25500	26800	5	NA		± 100 %	AverageRF
Aroclor 1016 {3}	20	22	53400	59400	11	NA		± 100 %	AverageRF
Aroclor 1016 {4}	20	21	71700	74200	3	NA		± 100 %	AverageRF
Aroclor 1016 {5}	20	20	32200	33000	2	NA		± 100 %	AverageRF
Aroclor 1016	20	22	NA	NA	NA	8		± 20 %	NA
Aroclor 1260 {1}	20	22	79500	88300	11	NA		± 100 %	AverageRF
Aroclor 1260 {2}	20	22	38000	41800	10	NA		± 100 %	AverageRF
Aroclor 1260 {3}	20	27	58400	78600	34	NA		± 100 %	AverageRF
Aroclor 1260 {4}	20	27	58100	78800	36	NA		± 100 %	AverageRF
Aroclor 1260 {5}	20	26	92400	122000	32	NA		± 100 %	AverageRF
Aroclor 1260	20	25	NA	NA	NA	25	*	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 12/07/2018

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL15912
Instrument ID: GC27.i

Column: DB-XLB

Level ID	File ID
A	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F008.D
B	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F009.D
C	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F010.D
D	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F011.D
E	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F012.D
F	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F013.D
G	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F014.D
H	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F015.D
I	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F016.D
J	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F017.D
K	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F018.D
L	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F019.D
M	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F020.D
N	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F021.D
O	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F022.D
P	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F023.D
Q	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F024.D
R	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F025.D
S	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F026.D
T	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F027.D
U	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F028.D
V	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F029.D
W	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F030.D
X	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F031.D
Y	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F032.D
Z	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F033.D
AA	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F034.D
AB	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F035.D
AC	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F036.D
AD	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F037.D
AE	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F038.D
AF	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F039.D
AG	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F040.D
AH	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F041.D
AI	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F042.D
AJ	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F043.D
AK	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F044.D
AL	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F045.D
AM	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F046.D
AN	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F047.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl	A	0.10	7.33E+5	B	0.20	6.81E+5	C	0.50	6.46E+5	D	1.0	6.33E+5	E	2.0	6.45E+5
	F	5.0	5.24E+5	G	10	5.58E+5	H	20	5.20E+5						
Aroclor 1016 {1}	A	1.0	27400	B	2.0	22200	C	5.0	20700	D	10	21200	E	20	19900
	F	50	17800	G	100	18800	H	200	17400						
Aroclor 1016 {2}	A	1.0	41700	B	2.0	32600	C	5.0	28800	D	10	30100	E	20	27900
	F	50	24400	G	100	26200	H	200	23700						
Aroclor 1016 {3}	A	1.0	21500	B	2.0	19800	C	5.0	21300	D	10	23300	E	20	21700
	F	50	19400	G	100	20600	H	200	19200						
Aroclor 1016 {4}	A	1.0	16200	B	2.0	16400	C	5.0	16100	D	10	17300	E	20	16700
	F	50	14700	G	100	15900	H	200	14600						
Aroclor 1016 {5}	A	1.0	16100	B	2.0	15600	C	5.0	13400	D	10	14500	E	20	14700
	F	50	12400	G	100	13600	H	200	12400						
Aroclor 1260 {1}	A	1.0	20000	B	2.0	20500	C	5.0	19400	D	10	19300	E	20	18000
	F	50	15100	G	100	16400	H	200	14400						
Aroclor 1260 {2}	A	1.0	46300	B	2.0	50000	C	5.0	45100	D	10	46700	E	20	44300
	F	50	36300	G	100	37900	H	200	33900						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 12/07/2018

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL15912
Instrument ID: GC27.i

Column: DB-XLB

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {3}	A	1.0	18300	B	2.0	15000	C	5.0	14200	D	10	14700	E	20	14900
	F	50	12700	G	100	13800	H	200	12500						
Aroclor 1260 {4}	A	1.0	35600	B	2.0	32900	C	5.0	29600	D	10	29700	E	20	28500
	F	50	23700	G	100	25200	H	200	22900						
Aroclor 1260 {5}	A	1.0	51200	B	2.0	46100	C	5.0	43000	D	10	40400	E	20	39400
	F	50	33100	G	100	34500	H	200	31900						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 12/07/2018

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL15912
Instrument ID: GC27.i

Column: DB-XLB

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Decachlorobiphenyl	SURR	AverageRF	% RSD	12.4		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	15.4		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	19.6		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	6.7		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	5.8		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	9.6		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	13.0		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	13.5		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	12.5		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	15.5		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	16.8		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 12/07/2018
Date Analyzed: 12/08/2018

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082A

Calibration ID: CAL15912
Units: ng/mL

File ID: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F049.D
\\alklsws002\instdata\GC27\Data\120718_r.b\1207F050.D
\\alklsws002\instdata\GC27\Data\120718_r.b\1207F051.D
\\alklsws002\instdata\GC27\Data\120718_r.b\1207F052.D
\\alklsws002\instdata\GC27\Data\120718_r.b\1207F053.D
\\alklsws002\instdata\GC27\Data\120718_r.b\1207F054.D
\\alklsws002\instdata\GC27\Data\120718_r.b\1207F055.D
\\alklsws002\instdata\GC27\Data\120718_r.b\1207F056.D
\\alklsws002\instdata\GC27\Data\120718_r.b\1207F057.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016 {1}	20	19	20700	19700	-5	NA	± 100 %	AverageRF
Aroclor 1016 {2}	20	18	29400	27100	-8	NA	± 100 %	AverageRF
Aroclor 1016 {3}	20	20	20800	21100	1	NA	± 100 %	AverageRF
Aroclor 1016 {4}	20	17	16000	13500	-15	NA	± 100 %	AverageRF
Aroclor 1016 {5}	20	23	14100	16000	13	NA	± 100 %	AverageRF
Aroclor 1016	20	19	NA	NA	NA	-3	± 20 %	NA
Aroclor 1260 {1}	20	21	17900	18900	6	NA	± 100 %	AverageRF
Aroclor 1260 {2}	20	22	42600	46200	8	NA	± 100 %	AverageRF
Aroclor 1260 {3}	20	24	14500	17500	21	NA	± 100 %	AverageRF
Aroclor 1260 {4}	20	23	28500	32700	15	NA	± 100 %	AverageRF
Aroclor 1260 {5}	20	21	39900	42800	7	NA	± 100 %	AverageRF
Aroclor 1260	20	22	NA	NA	NA	11	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Date Analyzed: 01/11/2019

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082A

Calibration Date: 12/07/2018
Calibration ID: CAL15912
Analysis Lot: KWG1900315
Units: ng/mL

File ID: \\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\0111F003.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	2.0	1.6	1210000	995000	-18	NA	± 20	AverageRF
Aroclor 1016 {1}	20	19	26900	25600	-5	NA	± 100	AverageRF
Aroclor 1016 {2}	20	19	25500	23700	-7	NA	± 100	AverageRF
Aroclor 1016 {3}	20	20	53400	54000	1	NA	± 100	AverageRF
Aroclor 1016 {4}	20	19	71700	66300	-7	NA	± 100	AverageRF
Aroclor 1016 {5}	20	19	32200	30100	-7	NA	± 100	AverageRF
Aroclor 1016	20	19	NA	NA	NA	-5	± 20	NA
Aroclor 1260 {1}	20	18	79500	70400	-12	NA	± 100	AverageRF
Aroclor 1260 {2}	20	18	38000	33500	-12	NA	± 100	AverageRF
Aroclor 1260 {3}	20	17	58400	49800	-15	NA	± 100	AverageRF
Aroclor 1260 {4}	20	18	58100	52600	-9	NA	± 100	AverageRF
Aroclor 1260 {5}	20	17	92400	78900	-15	NA	± 100	AverageRF
Aroclor 1260	20	18	NA	NA	NA	-12	± 20	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Date Analyzed: 01/11/2019

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082A

Calibration Date: 12/07/2018
Calibration ID: CAL15912
Analysis Lot: KWG1900315
Units: ng/mL

File ID: \\ALKLSWS002\INSTDATA\GC27\DATA\011119_R.B\0111F003.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	2.0	1.8	618000	549000	-11	NA	± 20	AverageRF
Aroclor 1016 {1}	20	20	20700	20500	-1	NA	± 100	AverageRF
Aroclor 1016 {2}	20	20	29400	28700	-2	NA	± 100	AverageRF
Aroclor 1016 {3}	20	22	20800	23000	10	NA	± 100	AverageRF
Aroclor 1016 {4}	20	21	16000	16800	5	NA	± 100	AverageRF
Aroclor 1016 {5}	20	20	14100	14100	0	NA	± 100	AverageRF
Aroclor 1016	20	20	NA	NA	NA	2	± 20	NA
Aroclor 1260 {1}	20	20	17900	17500	-2	NA	± 100	AverageRF
Aroclor 1260 {2}	20	20	42600	42600	0	NA	± 100	AverageRF
Aroclor 1260 {3}	20	20	14500	14300	-1	NA	± 100	AverageRF
Aroclor 1260 {4}	20	19	28500	27100	-5	NA	± 100	AverageRF
Aroclor 1260 {5}	20	18	39900	35400	-11	NA	± 100	AverageRF
Aroclor 1260	20	19	NA	NA	NA	-4	± 20	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Date Analyzed: 01/11/2019

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082A

Calibration Date: 12/07/2018
Calibration ID: CAL15912
Analysis Lot: KWG1900315
Units: ng/mL

File ID: \\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\0111F010.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	2.0	1.7	1210000	1040000	-14	NA	± 20	AverageRF
Aroclor 1016 {1}	20	20	26900	26800	0	NA	± 100	AverageRF
Aroclor 1016 {2}	20	19	25500	24000	-6	NA	± 100	AverageRF
Aroclor 1016 {3}	20	18	53400	49300	-8	NA	± 100	AverageRF
Aroclor 1016 {4}	20	21	71700	76500	7	NA	± 100	AverageRF
Aroclor 1016 {5}	20	20	32200	31900	-1	NA	± 100	AverageRF
Aroclor 1016	20	20	NA	NA	NA	-2	± 20	NA
Aroclor 1260 {1}	20	19	79500	74400	-6	NA	± 100	AverageRF
Aroclor 1260 {2}	20	18	38000	35100	-8	NA	± 100	AverageRF
Aroclor 1260 {3}	20	18	58400	52900	-9	NA	± 100	AverageRF
Aroclor 1260 {4}	20	19	58100	54500	-6	NA	± 100	AverageRF
Aroclor 1260 {5}	20	18	92400	82400	-11	NA	± 100	AverageRF
Aroclor 1260	20	18	NA	NA	NA	-8	± 20	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Date Analyzed: 01/11/2019

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082A

Calibration Date: 12/07/2018
Calibration ID: CAL15912
Analysis Lot: KWG1900315
Units: ng/mL

File ID: \\ALKLSWS002\INSTDATA\GC27\DATA\011119_R.B\0111F010.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	2.0	1.8	618000	570000	-8	NA	± 20	AverageRF
Aroclor 1016 {1}	20	19	20700	20100	-3	NA	± 100	AverageRF
Aroclor 1016 {2}	20	20	29400	29100	-1	NA	± 100	AverageRF
Aroclor 1016 {3}	20	21	20800	22400	7	NA	± 100	AverageRF
Aroclor 1016 {4}	20	21	16000	17000	6	NA	± 100	AverageRF
Aroclor 1016 {5}	20	21	14100	14600	4	NA	± 100	AverageRF
Aroclor 1016	20	21	NA	NA	NA	3	± 20	NA
Aroclor 1260 {1}	20	19	17900	16800	-6	NA	± 100	AverageRF
Aroclor 1260 {2}	20	22	42600	46100	8	NA	± 100	AverageRF
Aroclor 1260 {3}	20	20	14500	14400	-1	NA	± 100	AverageRF
Aroclor 1260 {4}	20	19	28500	27200	-5	NA	± 100	AverageRF
Aroclor 1260 {5}	20	18	39900	35300	-12	NA	± 100	AverageRF
Aroclor 1260	20	19	NA	NA	NA	-3	± 20	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

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QA/QC Results

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Analysis Run Log
Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082A **Analysis Lot:** KWG1900315
Instrument ID: GC27.i
Column: DB-35MS

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0111F003.D	Continuing Calibration Verification	KWG1900315-1	1/11/2019	12:01		1/11/2019	12:01
0111F004.D	Instrument Blank	KWG1900315-2	1/11/2019	12:32		1/11/2019	12:32
0111F005.D	Lab Control Sample	KWG1900137-1	1/11/2019	13:03		1/11/2019	13:03
0111F006.D	Duplicate Lab Control Sample	KWG1900137-2	1/11/2019	13:34		1/11/2019	13:34
0111F007.D	Method Blank	KWG1900137-3	1/11/2019	14:06		1/11/2019	14:06
0111F008.D	FW0001	K1811120-005	1/11/2019	14:37		1/11/2019	14:37
0111F009.D	FB0001	K1811120-006	1/11/2019	15:09		1/11/2019	15:09
0111F010.D	Continuing Calibration Verification	KWG1900315-3	1/11/2019	15:40		1/11/2019	15:40
0111F011.D	Instrument Blank	KWG1900315-4	1/11/2019	16:12		1/11/2019	16:12

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto
Sample Matrix: Wipe

Service Request: K1811120
Date Extracted: 01/03/2019

Extraction Prep Log
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3541
Analysis Method: 8082A

Extraction Lot: KWG1900137
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FW0001	K1811120-005	11/03/18	11/13/18	1.000g	8ml	NA	
FB0001	K1811120-006	11/03/18	11/13/18	0.500g	8ml	NA	
Method Blank	KWG1900137-3	NA	NA	1.000g	8ml	NA	
Lab Control Sample	KWG1900137-1	NA	NA	1.000g	8ml	NA	
Duplicate Lab Control Sample	KWG1900137-2	NA	NA	1.000g	8ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Chlorinated Herbicides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

REVISED
12:04 pm, Feb 13, 2019

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto/C1887-0501	**Date Collected:**	11/08/18 09:10
Sample Matrix:	Soil	**Date Received:**	11/13/18 09:30
Sample Name:	SL0084	**Units:**	ug/L
Lab Code:	K1811120-001	**Basis:**	As Received

TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Pre-Prep Method:**	EPA 1311
Prep Method:	Method	**Pre-Prep Date:**	11/20/18

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D, TCLP	ND U	100	100	1	11/30/18 18:13	11/27/18	
2,4,5-TP (Silvex), TCLP	ND U	20	20	1	11/30/18 18:13	11/27/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	74	17 - 113	11/30/18 18:13	

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto/C1887-0501	**Date Collected:**	11/05/18 15:15
Sample Matrix:	Soil	**Date Received:**	11/13/18 09:30
Sample Name:	SL0064	**Units:**	ug/L
Lab Code:	K1811120-002	**Basis:**	As Received

TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Pre-Prep Method:**	EPA 1311
Prep Method:	Method	**Pre-Prep Date:**	11/20/18

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D, TCLP	ND U	100	100	1	11/30/18 18:37	11/27/18	
2,4,5-TP (Silvex), TCLP	ND U	20	20	1	11/30/18 18:37	11/27/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	74	17 - 113	11/30/18 18:37	

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto/C1887-0501	**Date Collected:**	11/05/18 15:20
Sample Matrix:	Soil	**Date Received:**	11/13/18 09:30
Sample Name:	SL0065	**Units:**	ug/L
Lab Code:	K1811120-003	**Basis:**	As Received

TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Pre-Prep Method:**	EPA 1311
Prep Method:	Method	**Pre-Prep Date:**	11/20/18

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D, TCLP	ND U	100	100	1	11/30/18 19:00	11/27/18	
2,4,5-TP (Silvex), TCLP	ND U	20	20	1	11/30/18 19:00	11/27/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	78	17 - 113	11/30/18 19:00	

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto/C1887-0501	**Date Collected:**	11/03/18 15:40
Sample Matrix:	Soil	**Date Received:**	11/13/18 09:30
Sample Name:	SL0022	**Units:**	ug/L
Lab Code:	K1811120-004	**Basis:**	As Received

TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Pre-Prep Method:**	EPA 1311
Prep Method:	Method	**Pre-Prep Date:**	11/20/18

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D, TCLP	ND U	100	100	1	11/30/18 19:24	11/27/18	
2,4,5-TP (Silvex), TCLP	ND U	20	20	1	11/30/18 19:24	11/27/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	80	17 - 113	11/30/18 19:24	

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dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ1817270-04	**Basis:**	As Received

TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D, TCLP	ND U	100	100	1	11/30/18 16:16	11/27/18	
2,4,5-TP (Silvex), TCLP	ND U	20	20	1	11/30/18 16:16	11/27/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	82	17 - 113	11/30/18 16:16	

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ1817270-05	**Basis:**	As Received

TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D, TCLP	ND U	100	100	1	11/30/18 15:53	11/27/18	
2,4,5-TP (Silvex), TCLP	ND U	20	20	1	11/30/18 15:53	11/27/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	80	17 - 113	11/30/18 15:53	

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KQ1817270-06	**Basis:**	As Received

TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D, TCLP	ND U	100	100	1	11/30/18 15:29	11/27/18	
2,4,5-TP (Silvex), TCLP	ND U	20	20	1	11/30/18 15:29	11/27/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	71	17 - 113	11/30/18 15:29	

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Confirmation Results

Client: Integral Consulting, Incorporated
Project: San Jacinto
SRM Matrix: Soil

Service Request: K1811120
Date Collected: 11/03/18 15:40
Date Received: 11/13/18

Sample Name: SL0022
Lab Code: KQ1817270-01

Units: ug/L
Basis: As Received

TCLP Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-TP (Silvex), TCLP	20	227	237	4		1	11/30/18 19:48
2,4-D, TCLP	100	225	231	3		1	11/30/18 19:48

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Confirmation Results

Client: Integral Consulting, Incorporated
Project: San Jacinto
SRM Matrix: Soil

Service Request: K1811120
Date Collected: 11/03/18 15:40
Date Received: 11/13/18

Sample Name: SL0022
Lab Code: KQ1817270-02

Units: ug/L
Basis: As Received

TCLP Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-TP (Silvex), TCLP	20	237	246	4		1	11/30/18 20:11
2,4-D, TCLP	100	235	239	2		1	11/30/18 20:11

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Confirmation Results

Client: Integral Consulting, Incorporated
Project: San Jacinto
SRM Matrix: Soil

Service Request: K1811120
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ1817270-03

Units: ug/L
Basis: As Received

TCLP Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-TP (Silvex), TCLP	20	232	240	3		1	11/30/18 16:40
2,4-D, TCLP	100	229	230	<1		1	11/30/18 16:40

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto/C1887-0501
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	DCAA 17-113
SL0084	K1811120-001	74
SL0064	K1811120-002	74
SL0065	K1811120-003	78
SL0022	K1811120-004	80
Method Blank	KQ1817270-04	82
Method Blank	KQ1817270-05	80
Method Blank	KQ1817270-06	71
Lab Control Sample	KQ1817270-03	78
SL0022	KQ1817270-01	84
SL0022	KQ1817270-02	87

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/18
Sample Matrix:	Soil	**Date Received:**	11/13/18
		Date Analyzed:	11/30/18
		Date Extracted:	11/27/18

Duplicate Matrix Spike Summary
TCLP Chlorinated Herbicides by GC

Sample Name:	SL0022	**Units:**	ug/L
Lab Code:	K1811120-004	**Basis:**	As Received
Analysis Method:	8151A		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		KQ1817270-01			KQ1817270-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
2,4-D, TCLP	ND U	225	250	90	235	250	94	41-108	4	30
2,4,5-TP (Silvex), TCLP	ND U	227	250	91	237	250	95	44-108	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/30/18
Sample Matrix:	Soil	**Date Extracted:**	11/27/18

Lab Control Sample Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Units:**	ug/L
Prep Method:	Method	**Basis:**	As Received
		Analysis Lot:	616064

Lab Control Sample
KQ1817270-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-TP (Silvex), TCLP	232	250	93	37-114
2,4-D, TCLP	229	250	91	35-110

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dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/30/18 16:16
Sample Matrix:	Soil	**Date Extracted:**	11/27/18

Method Blank Summary
TCLP Chlorinated Herbicides by GC

Sample Name:	Method Blank	**Instrument ID:**	K-GC-24
Lab Code:	KQ1817270-04	**File ID:**	J:\gc24\data\113018\11300015.D\
Analysis Method:	8151A	**Analysis Lot:**	616064
Prep Method:	Method	**Extraction Lot:**	327135

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1817270-03	J:\gc24\data\113018\11300016.D\	11/30/18 16:40
SL0084	K1811120-001	J:\gc24\data\113018\11300020.D\	11/30/18 18:13
SL0064	K1811120-002	J:\gc24\data\113018\11300021.D\	11/30/18 18:37
SL0065	K1811120-003	J:\gc24\data\113018\11300022.D\	11/30/18 19:00
SL0022	K1811120-004	J:\gc24\data\113018\11300023.D\	11/30/18 19:24
SL0022MS	KQ1817270-01	J:\gc24\data\113018\11300024.D\	11/30/18 19:48
SL0022DMS	KQ1817270-02	J:\gc24\data\113018\11300025.D\	11/30/18 20:11

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/30/18 16:16
Sample Matrix:	Soil	**Date Extracted:**	11/27/18

Method Blank Summary
TCLP Chlorinated Herbicides by GC

Sample Name:	Method Blank	**Instrument ID:**	K-GC-24
Lab Code:	KQ1817270-04	**File ID:**	J:\gc24\data\113018\11300015.D\
Analysis Method:	8151A	**Analysis Lot:**	616064
Prep Method:	Method	**Extraction Lot:**	327135

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1817270-03	J:\gc24\data\113018\11300016.D\	11/30/18 16:40
SL0084	K1811120-001	J:\gc24\data\113018\11300020.D\	11/30/18 18:13
SL0064	K1811120-002	J:\gc24\data\113018\11300021.D\	11/30/18 18:37
SL0065	K1811120-003	J:\gc24\data\113018\11300022.D\	11/30/18 19:00
SL0022	K1811120-004	J:\gc24\data\113018\11300023.D\	11/30/18 19:24
SL0022MS	KQ1817270-01	J:\gc24\data\113018\11300024.D\	11/30/18 19:48
SL0022DMS	KQ1817270-02	J:\gc24\data\113018\11300025.D\	11/30/18 20:11

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/30/18 16:16
Sample Matrix:	Soil	**Date Extracted:**	11/27/18

Method Blank Summary
TCLP Chlorinated Herbicides by GC

Sample Name:	Method Blank	**Instrument ID:**	K-GC-24
Lab Code:	KQ1817270-04	**File ID:**	J:\gc24\data\113018\11300015.D\
Analysis Method:	8151A	**Analysis Lot:**	616064
Prep Method:	Method	**Extraction Lot:**	327135

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1817270-03	J:\gc24\data\113018\11300016.D\	11/30/18 16:40
SL0084	K1811120-001	J:\gc24\data\113018\11300020.D\	11/30/18 18:13
SL0064	K1811120-002	J:\gc24\data\113018\11300021.D\	11/30/18 18:37
SL0065	K1811120-003	J:\gc24\data\113018\11300022.D\	11/30/18 19:00
SL0022	K1811120-004	J:\gc24\data\113018\11300023.D\	11/30/18 19:24
SL0022MS	KQ1817270-01	J:\gc24\data\113018\11300024.D\	11/30/18 19:48
SL0022DMS	KQ1817270-02	J:\gc24\data\113018\11300025.D\	11/30/18 20:11

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/30/18 16:40
Sample Matrix:	Soil	**Date Extracted:**	11/27/18

Lab Control Sample Summary
TCLP Chlorinated Herbicides by GC

Sample Name:	Lab Control Sample	**Instrument ID:**	K-GC-24
Lab Code:	KQ1817270-03	**File ID:**	J:\gc24\data\113018\11300016.D\
Analysis Method:	8151A	**Analysis Lot:**	616064
Prep Method:	Method	**Extraction Lot:**	327135

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1817270-06	J:\gc24\data\113018\11300013.D\	11/30/18 15:29
Method Blank	KQ1817270-05	J:\gc24\data\113018\11300014.D\	11/30/18 15:53
Method Blank	KQ1817270-04	J:\gc24\data\113018\11300015.D\	11/30/18 16:16
SL0084	K1811120-001	J:\gc24\data\113018\11300020.D\	11/30/18 18:13
SL0064	K1811120-002	J:\gc24\data\113018\11300021.D\	11/30/18 18:37
SL0065	K1811120-003	J:\gc24\data\113018\11300022.D\	11/30/18 19:00
SL0022	K1811120-004	J:\gc24\data\113018\11300023.D\	11/30/18 19:24
SL0022MS	KQ1817270-01	J:\gc24\data\113018\11300024.D\	11/30/18 19:48
SL0022DMS	KQ1817270-02	J:\gc24\data\113018\11300025.D\	11/30/18 20:11

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QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto **Calibration Date:** 10/31/2018

Initial Calibration Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** RTX-CLP2
Instrument ID: K-GC-24

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800499-01	HERB ICAL 10	J:\gc24\data\103118\10310103.D	10/31/2018 16:27
02	KC1800499-02	HERB ICAL 25	J:\gc24\data\103118\10310104.D	10/31/2018 16:51
03	KC1800499-03	HERB ICAL 100	J:\gc24\data\103118\10310106.D	10/31/2018 17:40
04	KC1800499-04	HERB ICAL 125	J:\gc24\data\103118\10310107.D	10/31/2018 18:05
05	KC1800499-05	HERB ICAL 150	J:\gc24\data\103118\10310108.D	10/31/2018 18:29
06	KC1800499-06	HERB ICAL 175	J:\gc24\data\103118\10310109.D	10/31/2018 18:54
07	KC1800499-07	HERB ICAL 200	J:\gc24\data\103118\10310110.D	10/31/2018 19:18
08	KC1800499-08	HERB ICAL 75	J:\gc24\data\110118\11010003.D	11/01/2018 10:58

Analyte

2,4,5-TP (Silvex), TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.510	8.153E4	02	23.760	7.593E4	08	71.300	7.174E4	03	95.100	6.98E4
04	118.820	6.871E4	05	142.580	6.525E4	06	166.340	6.468E4	07	190.100	6.407E4

2,4-D, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.400	2.227E4	02	23.510	1.997E4	08	70.500	1.83E4	03	94.000	1.781E4
04	117.540	1.735E4	05	141.050	1.651E4	06	164.560	1.627E4	07	188.060	1.594E4

DCAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.020	2.092E4	02	22.550	1.879E4	08	67.600	1.66E4	03	90.200	1.594E4
04	112.730	1.556E4	05	135.280	1.47E4	06	157.830	1.446E4	07	180.370	1.405E4

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QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto **Calibration Date:** 10/31/2018

Initial Calibration Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** RTX-CLP2
Instrument ID: K-GC-24

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
2,4,5-TP (Silvex), TCLP	TRG	Average RF	% RSD	8.7	≤20	7.021E4	
2,4-D, TCLP	TRG	Average RF	% RSD	11.9	≤20	1.805E4	
DCAA	SURR	Average RF	% RSD	14.4	≤20	1.638E4	

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QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto **Calibration Date:** 10/31/2018

Initial Calibration Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** ZB-XLB-HT
Instrument ID: K-GC-24

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800499-01	HERB ICAL 10	J:\gc24\data\103118\10310103.D	10/31/2018 16:27
02	KC1800499-02	HERB ICAL 25	J:\gc24\data\103118\10310104.D	10/31/2018 16:51
03	KC1800499-03	HERB ICAL 100	J:\gc24\data\103118\10310106.D	10/31/2018 17:40
04	KC1800499-04	HERB ICAL 125	J:\gc24\data\103118\10310107.D	10/31/2018 18:05
05	KC1800499-05	HERB ICAL 150	J:\gc24\data\103118\10310108.D	10/31/2018 18:29
06	KC1800499-06	HERB ICAL 175	J:\gc24\data\103118\10310109.D	10/31/2018 18:54
07	KC1800499-07	HERB ICAL 200	J:\gc24\data\103118\10310110.D	10/31/2018 19:18
08	KC1800499-08	HERB ICAL 75	J:\gc24\data\110118\11010003.D	11/01/2018 10:58

Analyte

2,4,5-TP (Silvex), TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.510	7.003E4	02	23.760	6.444E4	08	71.300	6.354E4	03	95.100	6.156E4
04	118.820	6.158E4	05	142.580	6E4	06	166.340	6.189E4	07	190.100	5.884E4

2,4-D, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.400	2.057E4	02	23.510	1.77E4	08	70.500	1.61E4	03	94.000	1.539E4
04	117.540	1.519E4	05	141.050	1.477E4	06	164.560	1.514E4	07	188.060	1.419E4

DCAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	9.020	1.961E4	02	22.550	1.67E4	08	67.600	1.425E4	03	90.200	1.383E4
04	112.730	1.356E4	05	135.280	1.31E4	06	157.830	1.335E4	07	180.370	1.251E4

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QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto **Calibration Date:** 10/31/2018

Initial Calibration Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** ZB-XLB-HT
Instrument ID: K-GC-24

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
2,4,5-TP (Silvex), TCLP	TRG	Average RF	% RSD	5.5	≤20	6.274E4	
2,4-D, TCLP	TRG	Average RF	% RSD	12.9	≤20	1.613E4	
DCAA	SURR	Average RF	% RSD	16.3	≤20	1.461E4	

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QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto **Calibration Date:** 10/31/2018

Initial Calibration Verification Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** RTX-CLP2
Instrument ID: K-GC-24

#	Lab Code	Sample Name	File Location	Acquisition Date
09	KC1800499-09	HERB ICV 100	J:\gc24\data\110118\11010004.D	11/01/2018 11:23

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4-D, TCLP	94.0	94.0	1.805E4	1.805E4	-0.022	±20	Average RF
2,4,5-TP (Silvex), TCLP	95.1	102	7.021E4	7.562E4	7.70	±20	Average RF

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QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto **Calibration Date:** 10/31/2018

Initial Calibration Verification Summary
TCLP Chlorinated Herbicides by GC

Calibration ID: KC1800499 **Signal ID:** ZB-XLB-HT
Instrument ID: K-GC-24

#	Lab Code	Sample Name	File Location	Acquisition Date
09	KC1800499-09	HERB ICV 100	J:\gc24\data\110118\11010004.D	11/01/2018 11:23

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4-D, TCLP	94.0	90.8	1.613E4	1.558E4	-3.432	±20	Average RF
2,4,5-TP (Silvex), TCLP	95.1	102	6.274E4	6.709E4	6.94	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/30/18 17:03

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\113018\11300017.D\	**Calibration ID:**	KC1800499
Signal ID:	ZB-XLB-HT	**Analysis Lot:**	616064
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	101	1.613E4	1.637E4	1.5	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	105	6.274E4	6.576E4	4.8	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	92.0	1.461E4	1.345E4	-8.0	NA	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/30/18 17:03

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\113018\11300017.D\	**Calibration ID:**	KC1800499
Signal ID:	RTX-CLP2	**Analysis Lot:**	616064
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	105	1.805E4	1.889E4	4.7	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	107	7.021E4	7.508E4	6.9	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	94.8	1.638E4	1.553E4	-5.2	NA	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/30/18 21:45

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\113018\11300029.D\	**Calibration ID:**	KC1800499
Signal ID:	RTX-CLP2	**Analysis Lot:**	616064
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	105	1.805E4	1.897E4	5.1	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	107	7.021E4	7.51E4	7.0	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	95.2	1.638E4	1.559E4	-4.8	NA	±20	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	11/30/18 21:45

Continuing Calibration Verification (CCV) Summary
TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Calibration Date:**	10/31/2018
File ID:	J:\gc24\data\113018\11300029.D\	**Calibration ID:**	KC1800499
Signal ID:	ZB-XLB-HT	**Analysis Lot:**	616064
		Units:	ppb

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4-D, TCLP	100	106	1.613E4	1.706E4	5.8	NA	±20	Average RF
2,4,5-TP (Silvex), TCLP	100	110	6.274E4	6.915E4	10.2	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
DCAA	100	96.7	1.461E4	1.414E4	-3.3	NA	±20	Average RF

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QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:**K1811120
Project: San Jacinto

Analysis Run Log
TCLP Chlorinated Herbicides by GC

Analysis Method: **Analysis Lot:**616064
Instrument ID:K-GC-24

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\gc24\data\113018\11300003.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	11:24:00	
J:\gc24\data\113018\11300004.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	11:48:00	
J:\gc24\data\113018\11300006.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	12:44:00	
J:\gc24\data\113018\11300007.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	13:07:00	
J:\gc24\data\113018\11300008.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	13:31:00	
J:\gc24\data\113018\11300009.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	13:55:00	
J:\gc24\data\113018\11300010.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	14:18:00	
J:\gc24\data\113018\11300011.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	14:42:00	
J:\gc24\data\113018\11300012.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	15:05:00	
J:\gc24\data\113018\11300013.D\	Method Blank	KQ1817270-06	11/30/2018	15:29:00	
J:\gc24\data\113018\11300014.D\	Method Blank	KQ1817270-05	11/30/2018	15:53:00	
J:\gc24\data\113018\11300015.D\	Method Blank	KQ1817270-04	11/30/2018	16:16:00	
J:\gc24\data\113018\11300016.D\	Lab Control Sample	KQ1817270-03	11/30/2018	16:40:00	
J:\gc24\data\113018\11300017.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	17:03:00	
J:\gc24\data\113018\11300017.D\	Continuing Calibration Verification	KQ1817113-11	11/30/2018	17:03:00	
J:\gc24\data\113018\11300018.D\	Continuing Calibration Blank	KQ1817113-12	11/30/2018	17:26:00	
J:\gc24\data\113018\11300018.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	17:26:00	
J:\gc24\data\113018\11300019.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	17:49:00	
J:\gc24\data\113018\11300020.D\	SL0084	K1811120-001	11/30/2018	18:13:00	
J:\gc24\data\113018\11300021.D\	SL0064	K1811120-002	11/30/2018	18:37:00	
J:\gc24\data\113018\11300022.D\	SL0065	K1811120-003	11/30/2018	19:00:00	
J:\gc24\data\113018\11300023.D\	SL0022	K1811120-004	11/30/2018	19:24:00	
J:\gc24\data\113018\11300024.D\	SL0022 MS	KQ1817270-01	11/30/2018	19:48:00	
J:\gc24\data\113018\11300025.D\	SL0022 DMS	KQ1817270-02	11/30/2018	20:11:00	
J:\gc24\data\113018\11300026.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	20:34:00	
J:\gc24\data\113018\11300027.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	20:58:00	
J:\gc24\data\113018\11300028.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	21:21:00	
J:\gc24\data\113018\11300029.D\	Continuing Calibration Verification	KQ1817113-13	11/30/2018	21:45:00	
J:\gc24\data\113018\11300029.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	21:45:00	
J:\gc24\data\113018\11300030.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	22:09:00	
J:\gc24\data\113018\11300030.D\	Continuing Calibration Blank	KQ1817113-14	11/30/2018	22:09:00	
J:\gc24\data\113018\11300031.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	22:33:00	
J:\gc24\data\113018\11300032.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	22:56:00	
J:\gc24\data\113018\11300033.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	23:20:00	
J:\gc24\data\113018\11300034.D\	ZZZZZZZ	ZZZZZZZ	11/30/2018	23:44:00	
J:\gc24\data\113018\11300035.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	00:07:00	
J:\gc24\data\113018\11300036.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	00:30:00	
J:\gc24\data\113018\11300037.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	00:53:00	
J:\gc24\data\113018\11300038.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	01:17:00	
J:\gc24\data\113018\11300039.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	01:41:00	
J:\gc24\data\113018\11300040.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	02:04:00	
J:\gc24\data\113018\11300041.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	02:28:00	
J:\gc24\data\113018\11300042.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	02:52:00	
J:\gc24\data\113018\11300043.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	03:16:00	
J:\gc24\data\113018\11300044.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	03:39:00	
J:\gc24\data\113018\11300045.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	04:03:00	

Printed 2/12/2019 2:11:52 PM Superset Reference:

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QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:**K1811120
Project: San Jacinto

Analysis Run Log
TCLP Chlorinated Herbicides by GC

Analysis Method:

Analysis Lot:616064
Instrument ID:K-GC-24

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\gc24\data\113018\11300046.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	04:27:00	
J:\gc24\data\113018\11300047.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	04:50:00	
J:\gc24\data\113018\11300048.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	05:13:00	
J:\gc24\data\113018\11300049.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	05:36:00	
J:\gc24\data\113018\11300050.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	06:00:00	
J:\gc24\data\113018\11300051.D\	ZZZZZZZ	ZZZZZZZ	12/1/2018	06:24:00	

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Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:**K1811120
Project: San Jacinto/C1887-0501
Sample Matrix: Soil

Toxicity Characteristics Leachate Procedure (TCLP)
TCLP Chlorinated Herbicides by GC

Prep Method: Method **Extraction Lot:** 327135
Analytical Method: 8151A **Extraction Date:** 11/27/18 14:37

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0084	K1811120-001	11/8/18	11/13/18	10.00 mL	20 mL	
SL0064	K1811120-002	11/5/18	11/13/18	10.00 mL	20 mL	
SL0065	K1811120-003	11/5/18	11/13/18	10.00 mL	20 mL	
SL0022	K1811120-004	11/3/18	11/13/18	10.00 mL	20 mL	
Matrix Spike	KQ1817270-01MS	11/3/18	11/13/18	10.00 mL	20 mL	
Duplicate Matrix Spike	KQ1817270-02DMS	11/3/18	11/13/18	10.00 mL	20 mL	
Lab Control Sample	KQ1817270-03LCS	NA	NA	10.00 mL	20 mL	
Method Blank	KQ1817270-04MB	NA	NA	10.00 mL	20 mL	
Method Blank	KQ1817270-05MB	NA	NA	10.00 mL	20 mL	
Method Blank	KQ1817270-06MB	NA	NA	10.00 mL	20 mL	

Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Cover Page - Organic Analysis Data Package
Volatile Organic Compounds

Sample Name	Lab Code	Date Collected	Date Received
SL0084	K1811120-001	11/08/2018	11/13/2018
SL0064	K1811120-002	11/05/2018	11/13/2018
SL0065	K1811120-003	11/05/2018	11/13/2018
SL0022	K1811120-004	11/03/2018	11/13/2018

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/08/2018
Sample Matrix:	Soil	**Date Received:**	11/13/2018
		Date Prepared:	11/15/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Volatile Organic Compounds

Sample Name:	SL0084	**Units:**	mg/L
Lab Code:	K1811120-001	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 5035A/5030B		
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
Vinyl Chloride	ND	U	0.080	0.030	0.2	1	11/27/18	11/27/18	
1,1-Dichloroethene	ND	U	0.20	0.032	0.7	1	11/27/18	11/27/18	
2-Butanone (MEK)	ND	U	8.0	0.76	200	1	11/27/18	11/27/18	*
Chloroform	ND	U	0.20	0.029	6	1	11/27/18	11/27/18	
Carbon Tetrachloride	ND	U	0.20	0.039	0.5	1	11/27/18	11/27/18	
Benzene	ND	U	0.20	0.025	0.5	1	11/27/18	11/27/18	
1,2-Dichloroethane (EDC)	ND	U	0.20	0.032	0.5	1	11/27/18	11/27/18	
Trichloroethene (TCE)	ND	U	0.20	0.040	0.5	1	11/27/18	11/27/18	
Tetrachloroethene (PCE)	ND	U	0.20	0.040	0.7	1	11/27/18	11/27/18	
Chlorobenzene	ND	U	0.20	0.044	100	1	11/27/18	11/27/18	
1,4-Dichlorobenzene	ND	U	0.20	0.048	7.5	1	11/27/18	11/27/18	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Dibromofluoromethane	121	73-122	Acceptable
Toluene-d8	101	65-144	Acceptable
4-Bromofluorobenzene	93	68-117	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/05/2018
Sample Matrix:	Soil	**Date Received:**	11/13/2018
		Date Prepared:	11/15/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Volatile Organic Compounds

Sample Name:	SL0064	**Units:**	mg/L
Lab Code:	K1811120-002	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 5035A/5030B		
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
Vinyl Chloride	ND	U	0.080	0.030	0.2	1	11/27/18	11/27/18	
1,1-Dichloroethene	ND	U	0.20	0.032	0.7	1	11/27/18	11/27/18	
2-Butanone (MEK)	ND	U	8.0	0.76	200	1	11/27/18	11/27/18	*
Chloroform	ND	U	0.20	0.029	6	1	11/27/18	11/27/18	
Carbon Tetrachloride	ND	U	0.20	0.039	0.5	1	11/27/18	11/27/18	
Benzene	ND	U	0.20	0.025	0.5	1	11/27/18	11/27/18	
1,2-Dichloroethane (EDC)	ND	U	0.20	0.032	0.5	1	11/27/18	11/27/18	
Trichloroethene (TCE)	ND	U	0.20	0.040	0.5	1	11/27/18	11/27/18	
Tetrachloroethene (PCE)	ND	U	0.20	0.040	0.7	1	11/27/18	11/27/18	
Chlorobenzene	ND	U	0.20	0.044	100	1	11/27/18	11/27/18	
1,4-Dichlorobenzene	ND	U	0.20	0.048	7.5	1	11/27/18	11/27/18	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Dibromofluoromethane	124	73-122	Outside Control Limits
Toluene-d8	103	65-144	Acceptable
4-Bromofluorobenzene	89	68-117	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/05/2018
Sample Matrix:	Soil	**Date Received:**	11/13/2018
		Date Prepared:	11/15/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Volatile Organic Compounds

Sample Name:	SL0065	**Units:**	mg/L
Lab Code:	K1811120-003	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 5035A/5030B		
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
Vinyl Chloride	ND	U	0.080	0.030	0.2	1	11/27/18	11/27/18	
1,1-Dichloroethene	ND	U	0.20	0.032	0.7	1	11/27/18	11/27/18	
2-Butanone (MEK)	ND	U	8.0	0.76	200	1	11/27/18	11/27/18	*
Chloroform	ND	U	0.20	0.029	6	1	11/27/18	11/27/18	
Carbon Tetrachloride	ND	U	0.20	0.039	0.5	1	11/27/18	11/27/18	
Benzene	ND	U	0.20	0.025	0.5	1	11/27/18	11/27/18	
1,2-Dichloroethane (EDC)	ND	U	0.20	0.032	0.5	1	11/27/18	11/27/18	
Trichloroethene (TCE)	ND	U	0.20	0.040	0.5	1	11/27/18	11/27/18	
Tetrachloroethene (PCE)	ND	U	0.20	0.040	0.7	1	11/27/18	11/27/18	
Chlorobenzene	ND	U	0.20	0.044	100	1	11/27/18	11/27/18	
1,4-Dichlorobenzene	ND	U	0.20	0.048	7.5	1	11/27/18	11/27/18	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Dibromofluoromethane	126	73-122	Outside Control Limits
Toluene-d8	103	65-144	Acceptable
4-Bromofluorobenzene	91	68-117	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/2018
Sample Matrix:	Soil	**Date Received:**	11/13/2018
		Date Prepared:	11/15/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Volatile Organic Compounds

Sample Name:	SL0022	**Units:**	mg/L
Lab Code:	K1811120-004	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 5035A/5030B		
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
Vinyl Chloride	ND	U	0.080	0.030	0.2	1	11/27/18	11/27/18	
1,1-Dichloroethene	ND	U	0.20	0.032	0.7	1	11/27/18	11/27/18	
2-Butanone (MEK)	ND	U	8.0	0.76	200	1	11/27/18	11/27/18	*
Chloroform	ND	U	0.20	0.029	6	1	11/27/18	11/27/18	
Carbon Tetrachloride	ND	U	0.20	0.039	0.5	1	11/27/18	11/27/18	
Benzene	ND	U	0.20	0.025	0.5	1	11/27/18	11/27/18	
1,2-Dichloroethane (EDC)	ND	U	0.20	0.032	0.5	1	11/27/18	11/27/18	
Trichloroethene (TCE)	ND	U	0.20	0.040	0.5	1	11/27/18	11/27/18	
Tetrachloroethene (PCE)	ND	U	0.20	0.040	0.7	1	11/27/18	11/27/18	
Chlorobenzene	ND	U	0.20	0.044	100	1	11/27/18	11/27/18	
1,4-Dichlorobenzene	ND	U	0.20	0.048	7.5	1	11/27/18	11/27/18	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Dibromofluoromethane	124	73-122	Outside Control Limits
Toluene-d8	102	65-144	Acceptable
4-Bromofluorobenzene	90	68-117	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Solid waste	**Date Received:**	NA
		Date Prepared:	11/19/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KWG1806349-3	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 5035A/5030B		
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
Vinyl Chloride	ND	U	0.080	0.030	0.2	1	11/27/18	11/27/18	
1,1-Dichloroethene	ND	U	0.20	0.032	0.7	1	11/27/18	11/27/18	
2-Butanone (MEK)	ND	U	8.0	0.76	200	1	11/27/18	11/27/18	*
Chloroform	ND	U	0.20	0.029	6	1	11/27/18	11/27/18	
Carbon Tetrachloride	ND	U	0.20	0.039	0.5	1	11/27/18	11/27/18	
Benzene	ND	U	0.20	0.025	0.5	1	11/27/18	11/27/18	
1,2-Dichloroethane (EDC)	ND	U	0.20	0.032	0.5	1	11/27/18	11/27/18	
Trichloroethene (TCE)	ND	U	0.20	0.040	0.5	1	11/27/18	11/27/18	
Tetrachloroethene (PCE)	ND	U	0.20	0.040	0.7	1	11/27/18	11/27/18	
Chlorobenzene	ND	U	0.20	0.044	100	1	11/27/18	11/27/18	
1,4-Dichlorobenzene	ND	U	0.20	0.048	7.5	1	11/27/18	11/27/18	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Dibromofluoromethane	120	73-122	Acceptable
Toluene-d8	102	65-144	Acceptable
4-Bromofluorobenzene	89	68-117	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Prepared:	11/15/2018

Toxicity Characteristic Leaching Procedure (TCLP)
Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KWG1806350-2	**Basis:**	NA
Preparation Method:	EPA 1311	**Level:**	Low
Extraction Method:	EPA 5035A/5030B		
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Regulatory Limit	Dilution Factor	Date Extracted	Date Analyzed	Note
Vinyl Chloride	ND	U	0.080	0.030	0.2	1	11/27/18	11/27/18	
1,1-Dichloroethene	ND	U	0.20	0.032	0.7	1	11/27/18	11/27/18	
2-Butanone (MEK)	ND	U	8.0	0.76	200	1	11/27/18	11/27/18	*
Chloroform	ND	U	0.20	0.029	6	1	11/27/18	11/27/18	
Carbon Tetrachloride	ND	U	0.20	0.039	0.5	1	11/27/18	11/27/18	
Benzene	ND	U	0.20	0.025	0.5	1	11/27/18	11/27/18	
1,2-Dichloroethane (EDC)	ND	U	0.20	0.032	0.5	1	11/27/18	11/27/18	
Trichloroethene (TCE)	ND	U	0.20	0.040	0.5	1	11/27/18	11/27/18	
Tetrachloroethene (PCE)	ND	U	0.20	0.040	0.7	1	11/27/18	11/27/18	
Chlorobenzene	ND	U	0.20	0.044	100	1	11/27/18	11/27/18	
1,4-Dichlorobenzene	ND	U	0.20	0.048	7.5	1	11/27/18	11/27/18	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Note
Dibromofluoromethane	122	73-122	Acceptable
Toluene-d8	102	65-144	Acceptable
4-Bromofluorobenzene	90	68-117	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto
Sample Matrix: Soil

Service Request: K1811120

Surrogate Recovery Summary
Toxicity Characteristic Leaching Procedure (TCLP)
Volatile Organic Compounds

Preparation Method: EPA 1311
Extraction Method: EPA 5035A/5030B
Analysis Method: 8260C

Units: Percent
Level: Low

Sample Name	Lab Code	Sur1		Sur2	Sur3
SL0084	K1811120-001	121		101	93
SL0064	K1811120-002	124	*	103	89
SL0065	K1811120-003	126	*	103	91
SL0022	K1811120-004	124	*	102	90
Method Blank	KWG1806349-3	120		102	89
Method Blank	KWG1806350-2	122		102	90
Lab Control Sample	KWG1806350-1	113		111	103

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	73-122
Sur2	=	Toluene-d8	65-144
Sur3	=	4-Bromofluorobenzene	68-117

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Date Analyzed: 11/27/2018
Time Analyzed: 10:58

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: J:\MS27\DATA\112718\1127F005.D
Instrument ID: MS27
Analysis Method: 8260C

Lab Code: KWG1806328-2
Analysis Lot: KWG1806328

		Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	675,814	6.51	276,059	9.68	276,591	12.01
	Upper Limit ==>	1,351,628	7.01	552,118	10.18	553,182	12.51
	Lower Limit ==>	337,907	6.01	138,030	9.18	138,296	11.51
	ICAL Result ==>	667,944	6.52	267,768	9.68	262,009	12.01
Associated Analyses							
Lab Control Sample	KWG1806350-1	656,207	6.51	284,376	9.68	292,479	12.01
Method Blank	KWG1806349-3	560,036	6.52	226,939	9.68	202,530	12.01
Method Blank	KWG1806350-2	539,469	6.52	220,076	9.68	194,406	12.01
SL0084	K1811120-001	541,421	6.52	210,129	9.68	193,170	12.01
SL0064	K1811120-002	501,253	6.52	204,119	9.68	183,087	12.01
SL0065	K1811120-003	501,121	6.52	203,011	9.68	177,859	12.01
SL0022	K1811120-004	520,243	6.52	210,238	9.68	183,349	12.01

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Prepared:**	11/15/2018
Sample Matrix:	Soil	**Date Extracted:**	11/27/2018
		Date Analyzed:	11/27/2018

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 1311/EPA 5035A/5030B	**Units:**	mg/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1806350

	Lab Control Sample KWG1806350-1 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Vinyl Chloride	4.89	4.00	122	55-123
1,1-Dichloroethene	4.51	4.00	113	66-129
2-Butanone (MEK)	13.1	20.0	66 *	71-149
Chloroform	4.47	4.00	112	70-129
Carbon Tetrachloride	5.07	4.00	127	55-140
Benzene	4.60	4.00	115	69-124
1,2-Dichloroethane (EDC)	4.38	4.00	110	56-142
Trichloroethene (TCE)	4.71	4.00	118	67-128
Tetrachloroethene (PCE)	4.56	4.00	114	62-126
Chlorobenzene	4.40	4.00	110	72-116
1,4-Dichlorobenzene	4.22	4.00	106	73-115

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/27/2018
Sample Matrix:	Solid waste	**Date Analyzed:**	11/27/2018
		Time Analyzed:	16:06

Method Blank Summary
Volatile Organic Compounds

Sample Name:	Method Blank	**Instrument ID:**	MS27
Lab Code:	KWG1806349-3	**File ID:**	J:\MS27\DATA\112718\1127F013.D
Extraction Method:	EPA 5035A/5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1806349

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1806350-1	J:\MS27\DATA\112718\1127F008.D	11/27/18	14:16

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/27/2018
Sample Matrix:	Soil	**Date Analyzed:**	11/27/2018
		Time Analyzed:	16:28

Method Blank Summary
Volatile Organic Compounds

Sample Name:	Method Blank	**Instrument ID:**	MS27
Lab Code:	KWG1806350-2	**File ID:**	J:\MS27\DATA\112718\1127F014.D
Extraction Method:	EPA 5035A/5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1806350

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
SL0084	K1811120-001	J:\MS27\DATA\112718\1127F017.D	11/27/18	17:34
SL0064	K1811120-002	J:\MS27\DATA\112718\1127F018.D	11/27/18	17:56
SL0065	K1811120-003	J:\MS27\DATA\112718\1127F019.D	11/27/18	18:18
SL0022	K1811120-004	J:\MS27\DATA\112718\1127F020.D	11/27/18	18:40

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Extracted:**	11/27/2018
Sample Matrix:	Soil	**Date Analyzed:**	11/27/2018
		Time Analyzed:	14:16

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name:	Lab Control Sample	**Instrument ID:**	MS27
Lab Code:	KWG1806350-1	**File ID:**	J:\MS27\DATA\112718\1127F008.D
Extraction Method:	EPA 5035A/5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1806350

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1806349-3	J:\MS27\DATA\112718\1127F013.D	11/27/18	16:06
Method Blank	KWG1806350-2	J:\MS27\DATA\112718\1127F014.D	11/27/18	16:28
SL0084	K1811120-001	J:\MS27\DATA\112718\1127F017.D	11/27/18	17:34
SL0064	K1811120-002	J:\MS27\DATA\112718\1127F018.D	11/27/18	17:56
SL0065	K1811120-003	J:\MS27\DATA\112718\1127F019.D	11/27/18	18:18
SL0022	K1811120-004	J:\MS27\DATA\112718\1127F020.D	11/27/18	18:40

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Date Analyzed: 11/27/2018
Time Analyzed: 10:38

Tune Summary
Volatile Organic Compounds

File ID: J:\MS27\DATA\112718\1127F004.D
Instrument ID: MS27
Column:

Analysis Method: 8260C
Analysis Lot: KWG1806328

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	16.4	13638	PASS
75	95	30	60	46.1	38213	PASS
95	95	100	100	100.0	82930	PASS
96	95	5	9	7.0	5791	PASS
173	174	0	2	1.7	1264	PASS
174	95	50	120	89.7	74421	PASS
175	174	5	9	8.6	6415	PASS
176	174	95	101	99.2	73792	PASS
177	176	5	9	6.9	5116	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1806328-2	J:\MS27\DATA\112718\1127F005.D	11/27/2018	10:58	
Lab Control Sample	KWG1806350-1	J:\MS27\DATA\112718\1127F008.D	11/27/2018	14:16	
Method Blank	KWG1806349-3	J:\MS27\DATA\112718\1127F013.D	11/27/2018	16:06	
Method Blank	KWG1806350-2	J:\MS27\DATA\112718\1127F014.D	11/27/2018	16:28	
SL0084	K1811120-001	J:\MS27\DATA\112718\1127F017.D	11/27/2018	17:34	
SL0064	K1811120-002	J:\MS27\DATA\112718\1127F018.D	11/27/2018	17:56	
SL0065	K1811120-003	J:\MS27\DATA\112718\1127F019.D	11/27/2018	18:18	
SL0022	K1811120-004	J:\MS27\DATA\112718\1127F020.D	11/27/2018	18:40	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto **Calibration Date:** 11/08/2018

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15885 **Column:** MS
Instrument ID: MS27

Level ID	File ID	Level ID	File ID
A	J:\MS27\DATA\110818\1108F005.D	G	J:\MS27\DATA\110818\1108F011.D
B	J:\MS27\DATA\110818\1108F006.D	H	J:\MS27\DATA\110818\1108F012.D
C	J:\MS27\DATA\110818\1108F007.D	I	J:\MS27\DATA\110818\1108F013.D
D	J:\MS27\DATA\110818\1108F008.D	J	J:\MS27\DATA\110818\1108F014.D
E	J:\MS27\DATA\110818\1108F009.D	K	J:\MS27\DATA\110818\1108F015.D
F	J:\MS27\DATA\110818\1108F010.D		

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Vinyl Chloride	A	0.10	0.244	B	0.20	0.319	C	0.50	0.303	D	1.0	0.317	E	2.0	0.346
	F	5.0	0.360	G	10	0.342	H	20	0.290	I	40	0.308	J	60	0.330
	K	80	0.324												
1,1-Dichloroethene	A	0.10	0.274	B	0.20	0.247	C	0.50	0.263	D	1.0	0.251	E	2.0	0.255
	F	5.0	0.272	G	10	0.250	H	20	0.216	I	40	0.228	J	60	0.247
	K	80	0.241												
2-Butanone (MEK)	A	4.0	0.0184	B	8.0	0.0173	C	20	0.0169	D	40	0.0177	E	80	0.0178
	F	100	0.0168	G	200	0.0176	H	400	0.0179	I	800	0.0173	J	1600	0.0190
	K	2000	0.0188												
Chloroform	A	0.10	0.551	B	0.20	0.544	C	0.50	0.493	D	1.0	0.546	E	2.0	0.530
	F	5.0	0.537	G	10	0.500	H	20	0.474	I	40	0.482	J	60	0.484
	K	80	0.479												
Carbon Tetrachloride	A	0.10	0.258	B	0.20	0.280	C	0.50	0.313	D	1.0	0.364	E	2.0	0.371
	F	5.0	0.394	G	10	0.361	H	20	0.318	I	40	0.342	J	60	0.370
	K	80	0.364												
Benzene	A	0.10	1.11	B	0.20	1.04	C	0.50	1.05	D	1.0	1.08	E	2.0	1.10
	F	5.0	1.13	G	10	1.09	H	20	1.01	I	40	1.06	J	60	1.10
	K	80	1.08												
1,2-Dichloroethane (EDC)	A	0.10	0.302	B	0.20	0.333	C	0.50	0.321	D	1.0	0.351	E	2.0	0.342
	F	5.0	0.346	G	10	0.334	H	20	0.323	I	40	0.315	J	60	0.316
	K	80	0.308												
Trichloroethene (TCE)	A	0.10	0.228	B	0.20	0.279	C	0.50	0.268	D	1.0	0.307	E	2.0	0.295
	F	5.0	0.304	G	10	0.290	H	20	0.264	I	40	0.275	J	60	0.288
	K	80	0.285												
Tetrachloroethene (PCE)	A	0.10	0.520	B	0.20	0.624	C	0.50	0.547	D	1.0	0.602	E	2.0	0.608
	F	5.0	0.669	G	10	0.616	H	20	0.548	I	40	0.590	J	60	0.628
	K	80	0.620												
Chlorobenzene	A	0.10	1.90	B	0.20	1.75	C	0.50	1.97	D	1.0	1.94	E	2.0	2.02
	F	5.0	2.03	G	10	1.97	H	20	1.89	I	40	1.97	J	60	1.99
	K	80	1.95												

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 11/08/2018

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15885
Instrument ID: MS27

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
1,4-Dichlorobenzene	A	0.10	1.61	B	0.20	1.61	C	0.50	1.74	D	1.0	1.68	E	2.0	1.76
	F	5.0	1.70	G	10	1.67	H	20	1.61	I	40	1.63	J	60	1.69
	K	80	1.65												
Dibromofluoromethane										D	4.0	0.277	E	6.0	0.265
	F	8.0	0.268	G	10	0.264	H	12	0.249	I	14	0.247	J	16	0.246
	K	20	0.250												
Toluene-d8										D	4.0	0.746	E	6.0	0.909
	F	8.0	0.891	G	10	0.950	H	12	0.859	I	14	0.840	J	16	0.852
	K	20	0.878												
4-Bromofluorobenzene										D	4.0	0.740	E	6.0	0.812
	F	8.0	0.868	G	10	0.878	H	12	0.848	I	14	0.830	J	16	0.815
	K	20	0.800												

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 11/08/2018

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15885
Instrument ID: MS27

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Vinyl Chloride	MS	AverageRF	% RSD	9.9		≤ 20	0.317		0.1
1,1-Dichloroethene	MS	AverageRF	% RSD	6.9		≤ 20	0.250		0.1
2-Butanone (MEK)	MS	AverageRF	% RSD	4.1		≤ 20	0.0178		0.01
Chloroform	MS	AverageRF	% RSD	6.0		≤ 20	0.511		0.2
Carbon Tetrachloride	MS	AverageRF	% RSD	12.4		≤ 20	0.340		0.1
Benzene	MS	AverageRF	% RSD	3.2		≤ 20	1.08		0.5
1,2-Dichloroethane (EDC)	MS	AverageRF	% RSD	4.9		≤ 20	0.326		0.1
Trichloroethene (TCE)	MS	AverageRF	% RSD	7.9		≤ 20	0.280		0.2
Tetrachloroethene (PCE)	MS	AverageRF	% RSD	7.3		≤ 20	0.598		0.2
Chlorobenzene	MS	AverageRF	% RSD	4.0		≤ 20	1.94		0.5
1,4-Dichlorobenzene	MS	AverageRF	% RSD	3.1		≤ 20	1.67		0.5
Dibromofluoromethane	SURR	AverageRF	% RSD	4.6		≤ 20	0.258		0.01
Toluene-d8	SURR	AverageRF	% RSD	6.9		≤ 20	0.866		0.01
4-Bromofluorobenzene	SURR	AverageRF	% RSD	5.3		≤ 20	0.824		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Calibration Date: 11/08/2018
Date Analyzed: 11/08/2018

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL15885
Units: PPB

File ID: J:\MS27\DATA\110818\1108F019.D
J:\MS27\DATA\110818\1108F020.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Vinyl Chloride	10	11	0.317	0.342	8	NA	± 30 %	AverageRF
1,1-Dichloroethene	10	9.8	0.250	0.245	-2	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	50	0.0178	0.0178	0	NA	± 30 %	AverageRF
Chloroform	10	9.4	0.511	0.481	-6	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	11	0.340	0.368	8	NA	± 30 %	AverageRF
Benzene	10	10	1.08	1.07	0	NA	± 30 %	AverageRF
1,2-Dichloroethane (EDC)	10	9.6	0.326	0.313	-4	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	10	0.280	0.285	2	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	10	0.598	0.626	5	NA	± 30 %	AverageRF
Chlorobenzene	10	10	1.94	1.94	0	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	9.9	1.67	1.65	-1	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated
Project: San Jacinto

Service Request: K1811120
Date Analyzed: 11/27/2018

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 11/08/2018
Calibration ID: CAL15885
Analysis Lot: KWG1806328
Units: PPB

File ID: J:\MS27\DATA\112718\1127F005.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Vinyl Chloride	10	12	0.1	0.317	0.380	20	NA	± 20	AverageRF
1,1-Dichloroethene	10	10	0.1	0.250	0.258	3	NA	± 20	AverageRF
2-Butanone (MEK)	200	190	0.01	0.0178	0.0173	-3	NA	± 20	AverageRF
Chloroform	10	10	0.2	0.511	0.534	5	NA	± 20	AverageRF
Carbon Tetrachloride	10	11	0.1	0.340	0.380	12	NA	± 20	AverageRF
Benzene	10	11	0.5	1.08	1.16	7	NA	± 20	AverageRF
1,2-Dichloroethane (EDC)	10	10	0.1	0.326	0.339	4	NA	± 20	AverageRF
Trichloroethene (TCE)	10	11	0.2	0.280	0.314	12	NA	± 20	AverageRF
Tetrachloroethene (PCE)	10	11	0.2	0.598	0.652	9	NA	± 20	AverageRF
Chlorobenzene	10	11	0.5	1.94	2.07	7	NA	± 20	AverageRF
1,4-Dichlorobenzene	10	10	0.5	1.67	1.75	5	NA	± 20	AverageRF
Dibromofluoromethane	10	11	0.01	0.258	0.278	8	NA	± 20	AverageRF
Toluene-d8	10	12	0.01	0.866	1.02	18	NA	± 20	AverageRF
4-Bromofluorobenzene	10	11	0.01	0.824	0.915	11	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C **Analysis Lot:** KWG1806328
Instrument ID: MS27

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1127F004.D	GC/MS Tuning - Bromofluorobenzene	KWG1806328-1	11/27/2018	10:38		11/27/2018	10:41
1127F005.D	Continuing Calibration Verification	KWG1806328-2	11/27/2018	10:58		11/27/2018	11:15
1127F006.D	ZZZZZZ	ZZZZZZ	11/27/2018	11:33		11/27/2018	11:50
1127F007.D	ZZZZZZ	ZZZZZZ	11/27/2018	11:55		11/27/2018	12:12
1127F008.D	Lab Control Sample	KWG1806350-1	11/27/2018	14:16		11/27/2018	14:33
1127F009.D	ZZZZZZ	ZZZZZZ	11/27/2018	14:38		11/27/2018	14:55
1127F012.D	ZZZZZZ	ZZZZZZ	11/27/2018	15:44		11/27/2018	16:01
1127F013.D	Method Blank	KWG1806349-3	11/27/2018	16:06		11/27/2018	16:23
1127F014.D	Method Blank	KWG1806350-2	11/27/2018	16:28		11/27/2018	16:45
1127F015.D	ZZZZZZ	ZZZZZZ	11/27/2018	16:50		11/27/2018	17:07
1127F016.D	ZZZZZZ	ZZZZZZ	11/27/2018	17:12		11/27/2018	17:29
1127F017.D	SL0084	K1811120-001	11/27/2018	17:34		11/27/2018	17:51
1127F018.D	SL0064	K1811120-002	11/27/2018	17:56		11/27/2018	18:13
1127F019.D	SL0065	K1811120-003	11/27/2018	18:18		11/27/2018	18:35
1127F020.D	SL0022	K1811120-004	11/27/2018	18:40		11/27/2018	18:57
1127F021.D	ZZZZZZ	ZZZZZZ	11/27/2018	19:02		11/27/2018	19:19
1127F022.D	ZZZZZZ	ZZZZZZ	11/27/2018	19:24		11/27/2018	19:41
1127F023.D	ZZZZZZ	ZZZZZZ	11/27/2018	19:46		11/27/2018	20:03
1127F024.D	ZZZZZZ	ZZZZZZ	11/27/2018	20:08		11/27/2018	20:25
1127F025.D	ZZZZZZ	ZZZZZZ	11/27/2018	20:30		11/27/2018	20:47
1127F026.D	ZZZZZZ	ZZZZZZ	11/27/2018	20:52		11/27/2018	21:09
1127F027.D	ZZZZZZ	ZZZZZZ	11/27/2018	21:14		11/27/2018	21:31
1127F028.D	ZZZZZZ	ZZZZZZ	11/27/2018	21:36		11/27/2018	21:53
1127F029.D	ZZZZZZ	ZZZZZZ	11/27/2018	21:58		11/27/2018	22:15

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Prepared:**	11/19/2018
Sample Matrix:	Solid waste	**Date Extracted:**	11/27/2018

Extraction Prep Log
Volatile Organic Compounds

Preparation Method:	EPA 1311	**Extraction Lot:**	KWG1806349
Extraction Method:	EPA 5035A/5030B	**Level:**	Low
Analysis Method:	8260C		

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
Method Blank	KWG1806349-3	NA	NA	125uL	50ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Prepared:**	11/15/2018
Sample Matrix:	Soil	**Date Extracted:**	11/27/2018

Extraction Prep Log
Volatile Organic Compounds

Preparation Method:	EPA 1311	**Extraction Lot:**	KWG1806350
Extraction Method:	EPA 5035A/5030B	**Level:**	Low
Analysis Method:	8260C		

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SL0084	K1811120-001	11/08/18	11/13/18	125uL	50ml	NA	
SL0064	K1811120-002	11/05/18	11/13/18	125uL	50ml	NA	
SL0065	K1811120-003	11/05/18	11/13/18	125uL	50ml	NA	
SL0022	K1811120-004	11/03/18	11/13/18	125uL	50ml	NA	
Method Blank	KWG1806350-2	NA	NA	125uL	50ml	NA	
Lab Control Sample	KWG1806350-1	NA	NA	125uL	50ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Semi-Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/08/18 09:10
Sample Matrix:	Soil	**Date Received:**	11/13/18 09:30
Sample Name:	SL0084	**Units:**	mg/L
Lab Code:	K1811120-001	**Basis:**	As Received

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	11/20/18

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-Trichlorophenol, TCLP	ND U	0.10	0.0087	1	12/08/18 09:36	11/27/18	
2,4,6-Trichlorophenol, TCLP	ND U	0.10	0.0069	1	12/08/18 09:36	11/27/18	*
2,4-Dinitrotoluene, TCLP	ND U	0.10	0.013	1	12/08/18 09:36	11/27/18	
2-Methylphenol, TCLP	ND U	0.10	0.0086	1	12/08/18 09:36	11/27/18	
4-Methylphenol, TCLP	ND U	0.10	0.0047	1	12/08/18 09:36	11/27/18	
Hexachlorobenzene, TCLP	ND U	0.10	0.0094	1	12/08/18 09:36	11/27/18	
Hexachlorobutadiene, TCLP	ND U	0.10	0.0064	1	12/08/18 09:36	11/27/18	
Hexachloroethane, TCLP	ND U	0.10	0.0048	1	12/08/18 09:36	11/27/18	
Nitrobenzene, TCLP	ND U	0.10	0.0079	1	12/08/18 09:36	11/27/18	
Pentachlorophenol (PCP), TCLP	ND U	0.25	0.011	1	12/08/18 09:36	11/27/18	
Pyridine, TCLP	ND U	0.50	0.25	1	12/08/18 09:36	11/27/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	80	52 - 122	12/08/18 09:36	
2-Fluorobiphenyl	64	44 - 114	12/08/18 09:36	
Nitrobenzene-d5	68	45 - 122	12/08/18 09:36	
Phenol-d6	48	35 - 105	12/08/18 09:36	
p-Terphenyl-d14	68	50 - 145	12/08/18 09:36	

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/05/18 15:15
Sample Matrix:	Soil	**Date Received:**	11/13/18 09:30
Sample Name:	SL0064	**Units:**	mg/L
Lab Code:	K1811120-002	**Basis:**	As Received

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	11/20/18

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-Trichlorophenol, TCLP	ND U	0.10	0.0087	1	12/08/18 10:17	11/27/18	
2,4,6-Trichlorophenol, TCLP	ND U	0.10	0.0069	1	12/08/18 10:17	11/27/18	*
2,4-Dinitrotoluene, TCLP	ND U	0.10	0.013	1	12/08/18 10:17	11/27/18	
2-Methylphenol, TCLP	ND U	0.10	0.0086	1	12/08/18 10:17	11/27/18	
4-Methylphenol, TCLP	ND U	0.10	0.0047	1	12/08/18 10:17	11/27/18	
Hexachlorobenzene, TCLP	ND U	0.10	0.0094	1	12/08/18 10:17	11/27/18	
Hexachlorobutadiene, TCLP	ND U	0.10	0.0064	1	12/08/18 10:17	11/27/18	
Hexachloroethane, TCLP	ND U	0.10	0.0048	1	12/08/18 10:17	11/27/18	
Nitrobenzene, TCLP	ND U	0.10	0.0079	1	12/08/18 10:17	11/27/18	
Pentachlorophenol (PCP), TCLP	ND U	0.25	0.011	1	12/08/18 10:17	11/27/18	
Pyridine, TCLP	ND U	0.50	0.25	1	12/08/18 10:17	11/27/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	102	52 - 122	12/08/18 10:17	
2-Fluorobiphenyl	77	44 - 114	12/08/18 10:17	
Nitrobenzene-d5	85	45 - 122	12/08/18 10:17	
Phenol-d6	63	35 - 105	12/08/18 10:17	
p-Terphenyl-d14	89	50 - 145	12/08/18 10:17	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/05/18 15:20
Sample Matrix:	Soil	**Date Received:**	11/13/18 09:30
Sample Name:	SL0065	**Units:**	mg/L
Lab Code:	K1811120-003	**Basis:**	As Received

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	11/20/18

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-Trichlorophenol, TCLP	ND U	0.10	0.0087	1	12/08/18 10:58	11/27/18	
2,4,6-Trichlorophenol, TCLP	ND U	0.10	0.0069	1	12/08/18 10:58	11/27/18	*
2,4-Dinitrotoluene, TCLP	ND U	0.10	0.013	1	12/08/18 10:58	11/27/18	
2-Methylphenol, TCLP	ND U	0.10	0.0086	1	12/08/18 10:58	11/27/18	
4-Methylphenol, TCLP	ND U	0.10	0.0047	1	12/08/18 10:58	11/27/18	
Hexachlorobenzene, TCLP	ND U	0.10	0.0094	1	12/08/18 10:58	11/27/18	
Hexachlorobutadiene, TCLP	ND U	0.10	0.0064	1	12/08/18 10:58	11/27/18	
Hexachloroethane, TCLP	ND U	0.10	0.0048	1	12/08/18 10:58	11/27/18	
Nitrobenzene, TCLP	ND U	0.10	0.0079	1	12/08/18 10:58	11/27/18	
Pentachlorophenol (PCP), TCLP	ND U	0.25	0.011	1	12/08/18 10:58	11/27/18	
Pyridine, TCLP	ND U	0.50	0.25	1	12/08/18 10:58	11/27/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	100	52 - 122	12/08/18 10:58	
2-Fluorobiphenyl	80	44 - 114	12/08/18 10:58	
Nitrobenzene-d5	86	45 - 122	12/08/18 10:58	
Phenol-d6	65	35 - 105	12/08/18 10:58	
p-Terphenyl-d14	86	50 - 145	12/08/18 10:58	

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	11/03/18 15:40
Sample Matrix:	Soil	**Date Received:**	11/13/18 09:30
Sample Name:	SL0022	**Units:**	mg/L
Lab Code:	K1811120-004	**Basis:**	As Received

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	11/20/18

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-Trichlorophenol, TCLP	ND U	0.10	0.0087	1	12/08/18 11:39	11/27/18	
2,4,6-Trichlorophenol, TCLP	ND U	0.10	0.0069	1	12/08/18 11:39	11/27/18	*
2,4-Dinitrotoluene, TCLP	ND U	0.10	0.013	1	12/08/18 11:39	11/27/18	
2-Methylphenol, TCLP	ND U	0.10	0.0086	1	12/08/18 11:39	11/27/18	
4-Methylphenol, TCLP	ND U	0.10	0.0047	1	12/08/18 11:39	11/27/18	
Hexachlorobenzene, TCLP	ND U	0.10	0.0094	1	12/08/18 11:39	11/27/18	
Hexachlorobutadiene, TCLP	ND U	0.10	0.0064	1	12/08/18 11:39	11/27/18	
Hexachloroethane, TCLP	ND U	0.10	0.0048	1	12/08/18 11:39	11/27/18	
Nitrobenzene, TCLP	ND U	0.10	0.0079	1	12/08/18 11:39	11/27/18	
Pentachlorophenol (PCP), TCLP	ND U	0.25	0.011	1	12/08/18 11:39	11/27/18	
Pyridine, TCLP	ND U	0.50	0.25	1	12/08/18 11:39	11/27/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	94	52 - 122	12/08/18 11:39	
2-Fluorobiphenyl	70	44 - 114	12/08/18 11:39	
Nitrobenzene-d5	76	45 - 122	12/08/18 11:39	
Phenol-d6	56	35 - 105	12/08/18 11:39	
p-Terphenyl-d14	82	50 - 145	12/08/18 11:39	

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KQ1817224-03	**Basis:**	As Received

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-Trichlorophenol, TCLP	ND	U	0.10	0.0087	1	12/08/18 04:09	11/27/18	
2,4,6-Trichlorophenol, TCLP	ND	U	0.10	0.0069	1	12/08/18 04:09	11/27/18	
2,4-Dinitrotoluene, TCLP	ND	U	0.10	0.013	1	12/08/18 04:09	11/27/18	
2-Methylphenol, TCLP	ND	U	0.10	0.0086	1	12/08/18 04:09	11/27/18	
4-Methylphenol, TCLP	ND	U	0.10	0.0047	1	12/08/18 04:09	11/27/18	
Hexachlorobenzene, TCLP	ND	U	0.10	0.0094	1	12/08/18 04:09	11/27/18	
Hexachlorobutadiene, TCLP	ND	U	0.10	0.0064	1	12/08/18 04:09	11/27/18	
Hexachloroethane, TCLP	ND	U	0.10	0.0048	1	12/08/18 04:09	11/27/18	
Nitrobenzene, TCLP	ND	U	0.10	0.0079	1	12/08/18 04:09	11/27/18	
Pentachlorophenol (PCP), TCLP	ND	U	0.25	0.011	1	12/08/18 04:09	11/27/18	
Pyridine, TCLP	ND	U	0.50	0.25	1	12/08/18 04:09	11/27/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	95	52 - 122	12/08/18 04:09	
2-Fluorobiphenyl	77	44 - 114	12/08/18 04:09	
Nitrobenzene-d5	83	45 - 122	12/08/18 04:09	
Phenol-d6	67	35 - 105	12/08/18 04:09	
p-Terphenyl-d14	86	50 - 145	12/08/18 04:09	

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KQ1817224-06	**Basis:**	As Received

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-Trichlorophenol, TCLP	ND	U	0.10	0.0087	1	12/08/18 04:50	11/27/18	
2,4,6-Trichlorophenol, TCLP	ND	U	0.10	0.0069	1	12/08/18 04:50	11/27/18	
2,4-Dinitrotoluene, TCLP	ND	U	0.10	0.013	1	12/08/18 04:50	11/27/18	
2-Methylphenol, TCLP	ND	U	0.10	0.0086	1	12/08/18 04:50	11/27/18	
4-Methylphenol, TCLP	ND	U	0.10	0.0047	1	12/08/18 04:50	11/27/18	
Hexachlorobenzene, TCLP	ND	U	0.10	0.0094	1	12/08/18 04:50	11/27/18	
Hexachlorobutadiene, TCLP	ND	U	0.10	0.0064	1	12/08/18 04:50	11/27/18	
Hexachloroethane, TCLP	ND	U	0.10	0.0048	1	12/08/18 04:50	11/27/18	
Nitrobenzene, TCLP	ND	U	0.10	0.0079	1	12/08/18 04:50	11/27/18	
Pentachlorophenol (PCP), TCLP	ND	U	0.25	0.011	1	12/08/18 04:50	11/27/18	
Pyridine, TCLP	ND	U	0.50	0.25	1	12/08/18 04:50	11/27/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	92	52 - 122	12/08/18 04:50	
2-Fluorobiphenyl	70	44 - 114	12/08/18 04:50	
Nitrobenzene-d5	74	45 - 122	12/08/18 04:50	
Phenol-d6	62	35 - 105	12/08/18 04:50	
p-Terphenyl-d14	80	50 - 145	12/08/18 04:50	

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Analytical Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	mg/L
Lab Code:	KQ1817224-07	**Basis:**	As Received

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-Trichlorophenol, TCLP	ND	U	0.10	0.0087	1	12/08/18 03:28	11/27/18	
2,4,6-Trichlorophenol, TCLP	ND	U	0.10	0.0069	1	12/08/18 03:28	11/27/18	
2,4-Dinitrotoluene, TCLP	ND	U	0.10	0.013	1	12/08/18 03:28	11/27/18	
2-Methylphenol, TCLP	ND	U	0.10	0.0086	1	12/08/18 03:28	11/27/18	
4-Methylphenol, TCLP	ND	U	0.10	0.0047	1	12/08/18 03:28	11/27/18	
Hexachlorobenzene, TCLP	ND	U	0.10	0.0094	1	12/08/18 03:28	11/27/18	
Hexachlorobutadiene, TCLP	ND	U	0.10	0.0064	1	12/08/18 03:28	11/27/18	
Hexachloroethane, TCLP	ND	U	0.10	0.0048	1	12/08/18 03:28	11/27/18	
Nitrobenzene, TCLP	ND	U	0.10	0.0079	1	12/08/18 03:28	11/27/18	
Pentachlorophenol (PCP), TCLP	ND	U	0.25	0.011	1	12/08/18 03:28	11/27/18	
Pyridine, TCLP	ND	U	0.50	0.25	1	12/08/18 03:28	11/27/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	73	52 - 122	12/08/18 03:28	
2-Fluorobiphenyl	65	44 - 114	12/08/18 03:28	
Nitrobenzene-d5	67	45 - 122	12/08/18 03:28	
Phenol-d6	55	35 - 105	12/08/18 03:28	
p-Terphenyl-d14	75	50 - 145	12/08/18 03:28	

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3510C

Sample Name	Lab Code	2,4,6-Tribromophenol 52-122	2-Fluorobiphenyl 44-114	Nitrobenzene-d5 45-122
SL0084	K1811120-001	80	64	68
SL0064	K1811120-002	102	77	85
SL0065	K1811120-003	100	80	86
SL0022	K1811120-004	94	70	76
Method Blank	KQ1817224-03	95	77	83
Method Blank	KQ1817224-06	92	70	74
Method Blank	KQ1817224-07	73	65	67
Lab Control Sample	KQ1817224-01	72	61	60

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3510C

Sample Name	Lab Code	Phenol-d6 35-105	p-Terphenyl-d14 50-145
SL0084	K1811120-001	48	68
SL0064	K1811120-002	63	89
SL0065	K1811120-003	65	86
SL0022	K1811120-004	56	82
Method Blank	KQ1817224-03	67	86
Method Blank	KQ1817224-06	62	80
Method Blank	KQ1817224-07	55	75
Lab Control Sample	KQ1817224-01	46	58

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QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:**K1811120
Project: San Jacinto **Date Analyzed:**12/08/18 02:47

Internal Standard Area and RT SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\120818\1208F002.D\ **Lab Code:**KQ1817955-02
Instrument ID: K-MS-07 **Analysis Lot:**618118
Analysis Method: 8270D **Signal ID:**1

		1,4-Dichlorobenzene-d4		Acenaphthene-d10		Chrysene-d12	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	44,353	9.42	87,091	14.38	113,426	21.27
	Upper Limit ==>	88,706	9.92	174,182	14.88	226,852	21.77
	Lower Limit ==>	22,177	8.92	43,546	13.88	56,713	20.77
Associated Analyses							
Method Blank	KQ1817224-07	42990	9.41	92425	14.38	107224	21.26
Method Blank	KQ1817224-03	43244	9.42	93510	14.37	107940	21.26
Method Blank	KQ1817224-06	42283	9.42	90427	14.37	105320	21.26
Lab Control Sample	KQ1817224-01	42217	9.42	86565	14.38	113642	21.26
SL0084	K1811120-001	41412	9.41	87312	14.37	101348	21.25
SL0064	K1811120-002	42168	9.42	90886	14.37	98438	21.25
SL0065	K1811120-003	41750	9.41	89870	14.37	102431	21.25
SL0022	K1811120-004	40132	9.41	86451	14.38	100640	21.26

QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:**K1811120
Project: San Jacinto **Date Analyzed:**12/08/18 02:47

Internal Standard Area and RT SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\120818\1208F002.D\ **Lab Code:**KQ1817955-02
Instrument ID: K-MS-07 **Analysis Lot:**618118
Analysis Method: 8270D **Signal ID:**1

		Naphthalene-d8		Perylene-d12		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Result ==>	164,765	11.52	116,051	24.50	115,528	16.80
	Upper Limit ==>	329,530	12.02	232,102	25.00	231,056	17.30
	Lower Limit ==>	82,383	11.02	58,026	24.00	57,764	16.30
Associated Analyses							
Method Blank	KQ1817224-07	157868	11.51	99586	24.49	149844	16.79
Method Blank	KQ1817224-03	158763	11.51	100306	24.48	146830	16.79
Method Blank	KQ1817224-06	153726	11.51	97462	24.49	135277	16.79
Lab Control Sample	KQ1817224-01	157897	11.52	107045	24.49	124299	16.79
SL0084	K1811120-001	150757	11.51	95512	24.48	129919	16.79
SL0064	K1811120-002	158039	11.50	94310	24.48	130296	16.78
SL0065	K1811120-003	153211	11.51	96803	24.48	137726	16.79
SL0022	K1811120-004	150824	11.51	93000	24.49	128420	16.79

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	12/08/18
Sample Matrix:	Soil	**Date Extracted:**	11/27/18

Lab Control Sample Summary
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Units:**	mg/L
Prep Method:	EPA 3510C	**Basis:**	As Received
		Analysis Lot:	618118

Lab Control Sample
KQ1817224-01

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-Trichlorophenol, TCLP	0.633	1.00	63	63-107
2,4,6-Trichlorophenol, TCLP	0.632	1.00	63 *	64-108
2,4-Dinitrotoluene, TCLP	0.691	1.00	69	55-121
2-Methylphenol, TCLP	0.553	1.00	55	51-104
4-Methylphenol, TCLP	0.570	1.00	57	53-101
Hexachlorobenzene, TCLP	0.671	1.00	67	59-113
Hexachlorobutadiene, TCLP	0.568	1.00	57	45-98
Hexachloroethane, TCLP	0.569	1.00	57	41-97
Nitrobenzene, TCLP	0.596	1.00	60	50-107
Pentachlorophenol (PCP), TCLP	0.638	1.00	64	52-122
Pyridine, TCLP	0.812	2.00	41	10-117

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	12/08/18 04:50
Sample Matrix:	Soil	**Date Extracted:**	11/27/18

Method Blank Summary
TCLP Semivolatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-07
Lab Code:	KQ1817224-06	**File ID:**	J:\MS07\DATA\120818\1208F005.D\
Analysis Method:	8270D	**Analysis Lot:**	618118
Prep Method:	EPA 3510C	**Extraction Lot:**	327060

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1817224-01	J:\MS07\DATA\120818\1208F006.D\	12/08/18 05:31
SL0084	K1811120-001	J:\MS07\DATA\120818\1208F012.D\	12/08/18 09:36
SL0064	K1811120-002	J:\MS07\DATA\120818\1208F013.D\	12/08/18 10:17
SL0065	K1811120-003	J:\MS07\DATA\120818\1208F014.D\	12/08/18 10:58
SL0022	K1811120-004	J:\MS07\DATA\120818\1208F015.D\	12/08/18 11:39

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	12/08/18 04:50
Sample Matrix:	Soil	**Date Extracted:**	11/27/18

Method Blank Summary
TCLP Semivolatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-07
Lab Code:	KQ1817224-06	**File ID:**	J:\MS07\DATA\120818\1208F005.D\
Analysis Method:	8270D	**Analysis Lot:**	618118
Prep Method:	EPA 3510C	**Extraction Lot:**	327060

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1817224-01	J:\MS07\DATA\120818\1208F006.D\	12/08/18 05:31
SL0084	K1811120-001	J:\MS07\DATA\120818\1208F012.D\	12/08/18 09:36
SL0064	K1811120-002	J:\MS07\DATA\120818\1208F013.D\	12/08/18 10:17
SL0065	K1811120-003	J:\MS07\DATA\120818\1208F014.D\	12/08/18 10:58
SL0022	K1811120-004	J:\MS07\DATA\120818\1208F015.D\	12/08/18 11:39

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	12/08/18 04:50
Sample Matrix:	Soil	**Date Extracted:**	11/27/18

Method Blank Summary
TCLP Semivolatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-MS-07
Lab Code:	KQ1817224-06	**File ID:**	J:\MS07\DATA\120818\1208F005.D\
Analysis Method:	8270D	**Analysis Lot:**	618118
Prep Method:	EPA 3510C	**Extraction Lot:**	327060

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1817224-01	J:\MS07\DATA\120818\1208F006.D\	12/08/18 05:31
SL0084	K1811120-001	J:\MS07\DATA\120818\1208F012.D\	12/08/18 09:36
SL0064	K1811120-002	J:\MS07\DATA\120818\1208F013.D\	12/08/18 10:17
SL0065	K1811120-003	J:\MS07\DATA\120818\1208F014.D\	12/08/18 10:58
SL0022	K1811120-004	J:\MS07\DATA\120818\1208F015.D\	12/08/18 11:39

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QA/QC Report

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	12/08/18 05:31
Sample Matrix:	Soil	**Date Extracted:**	11/27/18

Lab Control Sample Summary
TCLP Semivolatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	K-MS-07
Lab Code:	KQ1817224-01	**File ID:**	J:\MS07\DATA\120818\1208F006.D\
Analysis Method:	8270D	**Analysis Lot:**	618118
Prep Method:	EPA 3510C	**Extraction Lot:**	327060

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1817224-07	J:\MS07\DATA\120818\1208F003.D\	12/08/18 03:28
Method Blank	KQ1817224-03	J:\MS07\DATA\120818\1208F004.D\	12/08/18 04:09
Method Blank	KQ1817224-06	J:\MS07\DATA\120818\1208F005.D\	12/08/18 04:50
SL0084	K1811120-001	J:\MS07\DATA\120818\1208F012.D\	12/08/18 09:36
SL0064	K1811120-002	J:\MS07\DATA\120818\1208F013.D\	12/08/18 10:17
SL0065	K1811120-003	J:\MS07\DATA\120818\1208F014.D\	12/08/18 10:58
SL0022	K1811120-004	J:\MS07\DATA\120818\1208F015.D\	12/08/18 11:39

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QC/QC Report

Client: Integral Consulting, Incorporated **Service Request:**K1811120
Project: San Jacinto **Date Analyzed:**12/08/18 02:06

Tune Summary
TCLP Semivolatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\120818\1208F001.D\ **Analytical Method:** 8270D
Instrument ID: K-MS-07 **Analysis Lot:** 618118

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
443	442	15	24	18.94	3109	Pass
51	198	30	80	68.02	21169	Pass
68	69	0	2	0.00	0	Pass
69	198	0	100	63.77	19848	Pass
70	69	0	2	0.00	0	Pass
127	198	25	75	44.16	13742	Pass
197	198	0	1	0.00	0	Pass
198	198	100	100	100.00	31122	Pass
199	198	5	9	6.98	2171	Pass
275	198	10	30	24.93	7760	Pass
365	198	0.75	100	3.69	1149	Pass
441	443	0.01	100	80.03	2488	Pass
442	198	40	110	52.74	16413	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	KQ1817955-02	J:\MS07\DATA\120818\1208F002.D\	12/08/18 02:47	
Method Blank	KQ1817224-07	J:\MS07\DATA\120818\1208F003.D\	12/08/18 03:28	
Method Blank	KQ1817224-03	J:\MS07\DATA\120818\1208F004.D\	12/08/18 04:09	
Method Blank	KQ1817224-06	J:\MS07\DATA\120818\1208F005.D\	12/08/18 04:50	
Lab Control Sample	KQ1817224-01	J:\MS07\DATA\120818\1208F006.D\	12/08/18 05:31	
SL0084	K1811120-001	J:\MS07\DATA\120818\1208F012.D\	12/08/18 09:36	
SL0064	K1811120-002	J:\MS07\DATA\120818\1208F013.D\	12/08/18 10:17	
SL0065	K1811120-003	J:\MS07\DATA\120818\1208F014.D\	12/08/18 10:58	
SL0022	K1811120-004	J:\MS07\DATA\120818\1208F015.D\	12/08/18 11:39	

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto **Calibration Date:** 12/7/2018

Initial Calibration Summary
TCLP Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800550 **Signal ID:** 1
Instrument ID: K-MS-07

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800550-01	8270/P ICAL @ 1ppm | SVM59-92D	J:\MS07\DATA\120718\1207F003.D	12/07/2018 16:32
02	KC1800550-02	8270/P ICAL @ 5ppm | SVM59-92E	J:\MS07\DATA\120718\1207F004.D	12/07/2018 17:13
03	KC1800550-03	8270/P ICAL @ 10ppm | SVM59-92F	J:\MS07\DATA\120718\1207F005.D	12/07/2018 17:54
04	KC1800550-04	8270/P ICAL @ 20ppm | SVM59-92G	J:\MS07\DATA\120718\1207F006.D	12/07/2018 18:35
05	KC1800550-05	8270/P ICAL @ 50ppm | SVM59-92H	J:\MS07\DATA\120718\1207F007.D	12/07/2018 19:16
06	KC1800550-06	8270/P ICAL @ 80ppm | SVM59-92I	J:\MS07\DATA\120718\1207F008.D	12/07/2018 19:57
07	KC1800550-07	8270/P ICAL @ 100ppm | SVM59-92J	J:\MS07\DATA\120718\1207F009.D	12/07/2018 20:38
08	KC1800550-08	8270/P ICAL @ 120ppm | SVM59-92K	J:\MS07\DATA\120718\1207F010.D	12/07/2018 21:19
09	KC1800550-09	8270/P ICAL @ 160ppm | SVM59-92L	J:\MS07\DATA\120718\1207F011.D	12/07/2018 22:00
10	KC1800550-10	8270/P ICAL @ 200ppm | SVM59-92M	J:\MS07\DATA\120718\1207F012.D	12/07/2018 22:41

Analyte

2,4,5-Trichlorophenol, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.3342	03	10.000	0.3787	04	20.000	0.4188	05	50.000	0.4343
06	80.000	0.4482	07	100.000	0.4467	08	120.000	0.4492	09	160.000	0.4659
10	200.000	0.4681									

2,4,6-Tribromophenol

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.08702	03	10.000	0.09326	04	20.000	0.108	05	50.000	0.1188
06	80.000	0.1161	07	100.000	0.1209	08	120.000	0.1225	09	160.000	0.1323
10	200.000	0.1368									

2,4,6-Trichlorophenol, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
03	10.000	0.3219	04	20.000	0.372	05	50.000	0.4205	06	80.000	0.4115
07	100.000	0.4363	08	120.000	0.4615	09	160.000	0.4781	10	200.000	0.458

2,4-Dinitrotoluene, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.2905	03	10.000	0.3367	04	20.000	0.3639	05	50.000	0.3729
06	80.000	0.3707	07	100.000	0.3847	08	120.000	0.4266	09	160.000	0.4107
10	200.000	0.3948									

2-Fluorobiphenyl

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	1.342	03	10.000	1.346	04	20.000	1.373	05	50.000	1.441
06	80.000	1.441	07	100.000	1.539	08	120.000	1.602	09	160.000	1.677
10	200.000	1.677									

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto **Calibration Date:** 12/7/2018

Initial Calibration Summary
TCLP Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800550 **Signal ID:** 1
Instrument ID: K-MS-07

Analyte

2-Methylphenol, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.8401	03	10.000	0.8617	04	20.000	0.8502	05	50.000	0.9191
06	80.000	0.872	07	100.000	0.8993	08	120.000	0.9072	09	160.000	0.9818
10	200.000	0.9986									

4-Methylphenol, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	1.203	03	10.000	1.327	04	20.000	1.359	05	50.000	1.443
06	80.000	1.368	07	100.000	1.396	08	120.000	1.408	09	160.000	1.568
10	200.000	1.552									

Hexachlorobenzene, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.218	03	10.000	0.2389	04	20.000	0.2346	05	50.000	0.2423
06	80.000	0.2363	07	100.000	0.2444	08	120.000	0.2466	09	160.000	0.2577
10	200.000	0.2661									

Hexachlorobutadiene, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.254	03	10.000	0.2551	04	20.000	0.2655	05	50.000	0.2789
06	80.000	0.2722	07	100.000	0.2757	08	120.000	0.2938	09	160.000	0.3003
10	200.000	0.3227									

Hexachloroethane, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.6058	03	10.000	0.6486	04	20.000	0.6865	05	50.000	0.6912
06	80.000	0.6937	07	100.000	0.6824	08	120.000	0.726	09	160.000	0.7366
10	200.000	0.7723									

Nitrobenzene, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	1.254	03	10.000	1.274	04	20.000	1.313	05	50.000	1.439
06	80.000	1.359	07	100.000	1.351	08	120.000	1.387	09	160.000	1.493
10	200.000	1.528									

Nitrobenzene-d5

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	1.3	03	10.000	1.212	04	20.000	1.347	05	50.000	1.428
06	80.000	1.352	07	100.000	1.386	08	120.000	1.385	09	160.000	1.471
10	200.000	1.468									

Pentachlorophenol (PCP), TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
04	20.000	0.1084	05	50.000	0.1372	06	80.000	0.1556	07	100.000	0.1606
08	120.000	0.1759	09	160.000	0.1842	10	200.000	0.2013			

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto **Calibration Date:** 12/7/2018

Initial Calibration Summary
TCLP Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800550 **Signal ID:** 1
Instrument ID: K-MS-07

Analyte

Phenol-d6

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	1.099	03	10.000	1.161	04	20.000	1.244	05	50.000	1.317
06	80.000	1.267	07	100.000	1.284	08	120.000	1.332	09	160.000	1.46
10	200.000	1.504									

Pyridine, TCLP

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	5.000	0.8956	03	10.000	0.9641	04	20.000	0.9161	05	50.000	0.9975
06	80.000	0.9927	07	100.000	1.008	08	120.000	1.065	09	160.000	1.107
10	200.000	1.125									

p-Terphenyl-d14

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.000	1.068	02	5.000	0.7574	03	10.000	0.7451	04	20.000	0.7884
05	50.000	0.8636	06	80.000	0.9328	07	100.000	0.9382	08	120.000	0.9779
09	160.000	1.053	10	200.000	1.042						

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto **Calibration Date:** 12/7/2018

Initial Calibration Summary
TCLP Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800550 **Signal ID:** 1
Instrument ID: K-MS-07

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
2,4,5-Trichlorophenol, TCLP	TRG	Average RF	% RSD	10.3	≤20	0.4271	0.200
2,4,6-Tribromophenol	SURR	Average RF	% RSD	14.4	≤20	0.1151	0.010
2,4,6-Trichlorophenol, TCLP	TRG	Average RF	% RSD	12.3	≤20	0.42	0.200
2,4-Dinitrotoluene, TCLP	TRG	Average RF	% RSD	10.9	≤20	0.3724	0.200
2-Fluorobiphenyl	SURR	Average RF	% RSD	9.1	≤20	1.493	0.010
2-Methylphenol, TCLP	TRG	Average RF	% RSD	6.2	≤20	0.9033	0.700
4-Methylphenol, TCLP	TRG	Average RF	% RSD	8.0	≤20	1.403	0.600
Hexachlorobenzene, TCLP	TRG	Average RF	% RSD	5.7	≤20	0.2428	0.100
Hexachlorobutadiene, TCLP	TRG	Average RF	% RSD	8.0	≤20	0.2798	0.010
Hexachloroethane, TCLP	TRG	Average RF	% RSD	7.0	≤20	0.6937	0.300
Nitrobenzene, TCLP	TRG	Average RF	% RSD	6.9	≤20	1.377	0.200
Nitrobenzene-d5	SURR	Average RF	% RSD	6.0	≤20	1.372	0.010
Pentachlorophenol (PCP), TCLP	TRG	Quadratic	COD	0.9994	≥0.990	0.1605	0.050
Phenol-d6	SURR	Average RF	% RSD	9.9	≤20	1.296	0.010
Pyridine, TCLP	TRG	Average RF	% RSD	7.9	≤20	1.008	0.010
p-Terphenyl-d14	SURR	Average RF	% RSD	13.4	≤20	0.9166	0.010

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QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:** K1811120
Project: San Jacinto **Calibration Date:** 12/7/2018

Initial Calibration Verification Summary
TCLP Semivolatile Organic Compounds by GC/MS

Calibration ID: KC1800550 **Signal ID:** 1
Instrument ID: K-MS-07

#	Lab Code	Sample Name	File Location	Acquisition Date
11	KC1800550-11	8270 ICV @ 80ppm | SVM59-93C	J:\MS07\DATA\120718\1207F013.D	12/07/2018 23:22
12	KC1800550-12	PAPER ICV @ 80ppm | SVM58-87A	J:\MS07\DATA\120718\1207F014.D	12/08/2018 00:03
13	KC1800550-13	Benzidine ICV @ 50ppm | SVM59-93D	J:\MS07\DATA\120718\1207F015.D	12/08/2018 00:44

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4,5-Trichlorophenol, TCLP	80.0	91.0	4.271E-1	4.859E-1	13.75	±30	Average RF
2,4,6-Trichlorophenol, TCLP	80.0	83.8	4.2E-1	4.4E-1	4.78	±30	Average RF
2,4-Dinitrotoluene, TCLP	80.0	85.7	3.724E-1	3.991E-1	7.18	±30	Average RF
2-Methylphenol, TCLP	80.0	81.1	9.033E-1	9.159E-1	1.40	±30	Average RF
4-Methylphenol, TCLP	160	147	1.403E0	1.286E0	-8.287	±30	Average RF
Hexachlorobenzene, TCLP	80.0	84.3	2.428E-1	2.557E-1	5.35	±30	Average RF
Hexachlorobutadiene, TCLP	80.0	81.1	2.798E-1	2.837E-1	1.41	±30	Average RF
Hexachloroethane, TCLP	80.0	79.4	6.937E-1	6.885E-1	-0.748	±30	Average RF
Nitrobenzene, TCLP	80.0	82.9	1.377E0	1.428E0	3.69	±30	Average RF
Pentachlorophenol (PCP), TCLP	80.0	84.5	1.605E-1	1.657E-1	5.62	±30	Quadratic
Pyridine, TCLP	80.0	76.2	1.008E0	9.602E-1	-4.735	±30	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
2,4,6-Tribromophenol	80.0	89.4	1.151E-1	1.285E-1	11.70	±30	Average RF
2-Fluorobiphenyl	80.0	80.5	1.493E0	1.502E0	0.574	±30	Average RF
Nitrobenzene-d5	80.0	81.1	1.372E0	1.391E0	1.35	±30	Average RF
Phenol-d6	80.0	77.4	1.296E0	1.254E0	-3.277	±30	Average RF
p-Terphenyl-d14	80.0	79.7	9.166E-1	9.129E-1	-0.401	±30	Average RF

Client:	Integral Consulting, Incorporated	**Service Request:**	K1811120
Project:	San Jacinto	**Date Analyzed:**	12/08/18 02:47

Continuing Calibration Verification (CCV) Summary
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Calibration Date:**	12/7/2018
File ID:	J:\MS07\DATA\120818\1208F002.D\	**Calibration ID:**	KC1800550
Signal ID:	1	**Analysis Lot:**	618118
		Units:	ug/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4,5-Trichlorophenol, TCLP	80.0	87.1	0.4271	0.4648	8.8	NA	±20	Average RF
2,4,6-Trichlorophenol, TCLP	80.0	84.5	0.42	0.4437	5.7	NA	±20	Average RF
2,4-Dinitrotoluene, TCLP	80.0	84.2	0.3724	0.3919	5.2	NA	±20	Average RF
2-Methylphenol, TCLP	80.0	87.6	0.9033	0.9896	9.6	NA	±20	Average RF
4-Methylphenol, TCLP	80.0	87.4	1.4026	1.5327	9.3	NA	±20	Average RF
Hexachlorobenzene, TCLP	80.0	88.9	0.2428	0.2699	11.2	NA	±20	Average RF
Hexachlorobutadiene, TCLP	80.0	87.4	0.2798	0.3056	9.2	NA	±20	Average RF
Hexachloroethane, TCLP	80.0	88.5	0.6937	0.7671	10.6	NA	±20	Average RF
Nitrobenzene, TCLP	80.0	87.6	1.3775	1.5078	9.5	NA	±20	Average RF
Pentachlorophenol (PCP), TCLP	80.0	88.8	0.1605	0.1763	NA	11.1	±20	Quadratic
Pyridine, TCLP	80.0	78.3	1.0079	0.9866	-2.1	NA	±20	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
2,4,6-Tribromophenol	80.0	94.6	0.1151	0.1361	18.3	NA	±20	Average RF
2-Fluorobiphenyl	80.0	85.2	1.4933	1.5912	6.6	NA	±20	Average RF
Nitrobenzene-d5	80.0	88.5	1.3722	1.5183	10.6	NA	±20	Average RF
Phenol-d6	80.0	84.8	1.2965	1.3749	6.1	NA	±20	Average RF
p-Terphenyl-d14	80.0	81.2	0.9166	0.9297	1.4	NA	±20	Average RF

ALS Group USA, Corp.
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QA/QC Report

Client: Integral Consulting, Incorporated **Service Request:**K1811120
Project: San Jacinto

Analysis Run Log
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: **Analysis Lot:**618118
Instrument ID:K-MS-07

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\MS07\DATA\120818\1208F001.D\	ZZZZZZZ	ZZZZZZZ	12/8/2018	02:06:00	
J:\MS07\DATA\120818\1208F001.D\	ZZZZZZZ	ZZZZZZZ	12/8/2018	02:06:00	
J:\MS07\DATA\120818\1208F002.D\	ZZZZZZZ	ZZZZZZZ	12/8/2018	02:47:00	
J:\MS07\DATA\120818\1208F002.D\	Continuing Calibration Verification	KQ1817955-02	12/8/2018	02:47:00	
J:\MS07\DATA\120818\1208F003.D\	Method Blank	KQ1817224-07	12/8/2018	03:28:00	
J:\MS07\DATA\120818\1208F004.D\	Method Blank	KQ1817224-03	12/8/2018	04:09:00	
J:\MS07\DATA\120818\1208F005.D\	Method Blank	KQ1817224-06	12/8/2018	04:50:00	
J:\MS07\DATA\120818\1208F006.D\	Lab Control Sample	KQ1817224-01	12/8/2018	05:31:00	
J:\MS07\DATA\120818\1208F007.D\	ZZZZZZZ	ZZZZZZZ	12/8/2018	06:12:00	
J:\MS07\DATA\120818\1208F008.D\	ZZZZZZZ	ZZZZZZZ	12/8/2018	06:53:00	
J:\MS07\DATA\120818\1208F009.D\	ZZZZZZZ	ZZZZZZZ	12/8/2018	07:34:00	
J:\MS07\DATA\120818\1208F010.D\	ZZZZZZZ	ZZZZZZZ	12/8/2018	08:15:00	
J:\MS07\DATA\120818\1208F011.D\	ZZZZZZZ	ZZZZZZZ	12/8/2018	08:55:00	
J:\MS07\DATA\120818\1208F012.D\	SL0084	K1811120-001	12/8/2018	09:36:00	
J:\MS07\DATA\120818\1208F013.D\	SL0064	K1811120-002	12/8/2018	10:17:00	
J:\MS07\DATA\120818\1208F014.D\	SL0065	K1811120-003	12/8/2018	10:58:00	
J:\MS07\DATA\120818\1208F015.D\	SL0022	K1811120-004	12/8/2018	11:39:00	
J:\MS07\DATA\120818\1208F016.D\	ZZZZZZZ	ZZZZZZZ	12/8/2018	12:20:00	

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: Integral Consulting, Incorporated **Service Request:**K1811120
Project: San Jacinto
Sample Matrix: Soil

Toxicity Characteristics Leachate Procedure (TCLP)
TCLP Semivolatile Organic Compounds by GC/MS

Prep Method: EPA 3510C **Extraction Lot:** 327060
Analytical Method: 8270D **Extraction Date:** 11/27/18 12:28

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
SL0084	K1811120-001	11/8/18	11/13/18	100 mL	1 mL	
SL0064	K1811120-002	11/5/18	11/13/18	100 mL	1 mL	
SL0065	K1811120-003	11/5/18	11/13/18	100 mL	1 mL	
SL0022	K1811120-004	11/3/18	11/13/18	100 mL	1 mL	
Lab Control Sample	KQ1817224-01LCS	NA	NA	100 mL	1 mL	
Method Blank	KQ1817224-03MB	NA	NA	100 mL	1 mL	
Method Blank	KQ1817224-06MB	NA	NA	100 mL	1 mL	
Method Blank	KQ1817224-07MB	NA	NA	100 mL	1 mL	

Subcontract Lab Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

15-Jan-2019

Mark Harris
ALS Environmental
1317 S. 13th Avenue
Kelso, WA 98626

Re: **K1811120** Work Order: **1901287**

Dear Mark,

ALS Environmental received 6 samples on 08-Jan-2019 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 15.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Ehrland Bosworth

Electronically approved by: Ehrland Bosworth

Ehrland Bosworth
Project Manager

Report of Laboratory Analysis

Certificate No: MN 026-999-449

Client: ALS Environmental
Project: K1811120
Work Order: **1901287**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1901287-01	K1811120-001	Soil		11/8/2018	1/8/2019 09:30	☐
1901287-02	K1811120-002	Soil		11/5/2018	1/8/2019 09:30	☐
1901287-03	K1811120-003	Soil		11/5/2018	1/8/2019 09:30	☐
1901287-04	K1811120-004	Soil		11/3/2018	1/8/2019 09:30	☐
1901287-05	K1811120-005	Wipe		11/3/2018	1/8/2019 09:30	☐
1901287-06	K1811120-006	Wipe		11/3/2018	1/8/2019 09:30	☐

Client: ALS Environmental
Project: K1811120
WorkOrder: **1901287**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
mg/Kg	Milligrams per Kilogram
mg/Kg-dry	Milligrams per Kilogram Dry Weight

Client: ALS Environmental
Project: K1811120
Work Order: 1901287

Case Narrative

Sample Comments:
Batch R252797, Method CNR_7.3.3.2_WST, Sample 1901287-01A: Sample holding time expired before receipt by laboratory.

Batch R252797, Method CNR_7.3.3.2_WST, Sample 1901287-02A: Sample holding time expired before receipt by laboratory.

Batch R252797, Method CNR_7.3.3.2_WST, Sample 1901287-03A: Sample holding time expired before receipt by laboratory.

Batch R252797, Method CNR_7.3.3.2_WST, Sample 1901287-04A: Sample holding time expired before receipt by laboratory.

Batch R252797, Method CNR_7.3.3.2_WST, Sample 1901287-05A: Sample holding time expired before receipt by laboratory.

Batch R252797, Method CNR_7.3.3.2_WST, Sample 1901287-06A: Sample holding time expired before receipt by laboratory.

Batch R252841, Method MOISTURE, Sample 1901287-01A: Sample holding time expired before receipt by laboratory.

Batch R252841, Method MOISTURE, Sample 1901287-02A: Sample holding time expired before receipt by laboratory.

Batch R252841, Method MOISTURE, Sample 1901287-03A: Sample holding time expired before receipt by laboratory.

Batch R252841, Method MOISTURE, Sample 1901287-04A: Sample holding time expired before receipt by laboratory.

ALS Group, USA

Date: *15-Jan-19*

Client: ALS Environmental
Project: K1811120
Sample ID: K1811120-001
Collection Date: 11/8/2018

Work Order: 1901287
Lab ID: 1901287-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE		Method: **SW7.3.3.2**					Analyst: **DTV**
Cyanide, Reactive	U	H	22	130	mg/Kg-dry	1	1/8/2019 09:00
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**22**	H	**0.10**	**0.10**	**% of sample**	1	1/8/2019 13:09

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ALS Environmental
Project: K1811120
Sample ID: K1811120-002
Collection Date: 11/5/2018

Work Order: 1901287
Lab ID: 1901287-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE		Method: **SW7.3.3.2**					Analyst: **DTV**
Cyanide, Reactive	U	H	23	130	mg/Kg-dry	1	1/8/2019 09:00
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**26**	H	**0.10**	**0.10**	**% of sample**	1	1/8/2019 13:09

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ALS Environmental
Project: K1811120
Sample ID: K1811120-003
Collection Date: 11/5/2018

Work Order: 1901287
Lab ID: 1901287-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE		Method: **SW7.3.3.2**					Analyst: **DTV**
Cyanide, Reactive	U	H	27	160	mg/Kg-dry	1	1/8/2019 09:00
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**36**	H	**0.10**	**0.10**	**% of sample**	1	1/8/2019 13:09

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ALS Environmental
Project: K1811120
Sample ID: K1811120-004
Collection Date: 11/3/2018

Work Order: 1901287
Lab ID: 1901287-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE		Method: **SW7.3.3.2**					Analyst: **DTV**
Cyanide, Reactive	U	H	23	130	mg/Kg-dry	1	1/8/2019 09:00
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**24**	H	**0.10**	**0.10**	**% of sample**	1	1/8/2019 13:09

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ALS Environmental
Project: K1811120
Sample ID: K1811120-005
Collection Date: 11/3/2018

Work Order: 1901287
Lab ID: 1901287-05
Matrix: WIPE

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE		Method: **SW7.3.3.2**					Analyst: **DTV**
Cyanide, Reactive	U	H	17	100	mg/Kg	1	1/8/2019 09:00

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ALS Environmental
Project: K1811120
Sample ID: K1811120-006
Collection Date: 11/3/2018

Work Order: 1901287
Lab ID: 1901287-06
Matrix: WIPE

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE		Method: **SW7.3.3.2**					Analyst: **DTV**
Cyanide, Reactive	U	H	17	100	mg/Kg	1	1/8/2019 09:00

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 15-Jan-19

Client: ALS Environmental
Work Order: 1901287
Project: K1811120

QC BATCH REPORT

Batch ID: **R252797** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **MB-R252797-R252797** Units: **mg/Kg** Analysis Date: **1/8/2019 09:00 AM**
Client ID: Run ID: **WETCHEM_190108H** SeqNo: **5473083** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	U	17	100								

LCS Sample ID: **LCS-R252797-R252797** Units: **mg/Kg** Analysis Date: **1/8/2019 09:00 AM**
Client ID: Run ID: **WETCHEM_190108H** SeqNo: **5473084** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	117.4	17	100	125	0	94	84-112	0			

MS Sample ID: **1901272-01A MS** Units: **mg/Kg** Analysis Date: **1/8/2019 09:00 AM**
Client ID: Run ID: **WETCHEM_190108H** SeqNo: **5473086** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	234.9	17	100	250	0	94	84-112	0			

MSD Sample ID: **1901272-01A MSD** Units: **mg/Kg** Analysis Date: **1/8/2019 09:00 AM**
Client ID: Run ID: **WETCHEM_190108H** SeqNo: **5473087** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	264.2	17	100	250	0	106	84-112	234.9	11.8	8	R

The following samples were analyzed in this batch:

1901287-01A	1901287-02A	1901287-03A
1901287-04A	1901287-05A	1901287-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ALS Environmental
Work Order: 1901287
Project: K1811120

QC BATCH REPORT

Batch ID: **R252841** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R252841** Units: **% of sample** Analysis Date: **1/8/2019 01:09 PM**
Client ID: Run ID: **MOIST_190108A** SeqNo: **5474123** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.1	0.10								

LCS Sample ID: **LCS-R252841** Units: **% of sample** Analysis Date: **1/8/2019 01:09 PM**
Client ID: Run ID: **MOIST_190108A** SeqNo: **5474120** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	99.99	0.1	0.10	100	0	100	98-102	0			

DUP Sample ID: **1901287-01A DUP** Units: **% of sample** Analysis Date: **1/8/2019 01:09 PM**
Client ID: **K1811120-001** Run ID: **MOIST_190108A** SeqNo: **5474088** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	21.47	0.1	0.10	0	0	0	0-0	21.7	1.07	10	H

DUP Sample ID: **1901289-03A DUP** Units: **% of sample** Analysis Date: **1/8/2019 01:09 PM**
Client ID: Run ID: **MOIST_190108A** SeqNo: **5474100** Prep Date: DF: **1**

Analyte	Result	MDL	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	12.25	0.1	0.10	0	0	0	0-0	12.36	0.894	10	

The following samples were analyzed in this batch: 1901287-01A 1901287-02A 1901287-03A 1901287-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact:	Mark Harris

1901287

Project Number: K1811120
Project Manager: Mark Harris
QAP: LAB QAP

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	CN React 9014
K1811120-001	SL0084	1	Soil	11/8/18	0910	Holland ALS	X
K1811120-002	SL0064		Soil	11/5/18	1515	Holland ALS	X
K1811120-003	SL0065		Soil	11/5/18	1520	Holland ALS	X
K1811120-004	SL0022		Soil	11/3/18	1540	Holland ALS	X
K1811120-005	FW0001		Wipe	11/3/18	1740	Holland ALS	X
K1811120-006	FB0001		Wipe	11/3/18	1720	Holland ALS	X

Test Comments
CN React - 9014 K1811120-001,2,3,4,5,6 EPA 7.3.3.2 ✓

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com.

H - Test is On Hold P - Test is Authorized for Prep Only

Turnaround Requirements
____**RUSH** (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
✓ **STANDARD**
Requested FAX Date: _____
Requested Report Date: 12/05/18

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
✓ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD Y

Invoice Information
PO# 51K1811120
Bill to

Relinquished By: [signature] 1/7/19 1000 Received By: [signature] 01/08/19 0930 Airbill Number: _____

019480

ALS Group, USA

Sample Receipt Checklist

Client Name: **ALS - KELSO** Date/Time Received: **08-Jan-19 09:30**

Work Order: **1901287** Received by: **TBB**

Checklist completed by Tom Bramish eSignature 08-Jan-19 Date Reviewed by: Alex J. Csaszar eSignature 08-Jan-19 Date

Matrices: soils & wipes
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☐	No ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.8 / 4.8 C	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	1/8/2019 1035		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

Lab/Cor Portland, Inc.
4321 SW Corbett Ave., Ste A
Portland, OR 97239

Analysis Report Cover

Final Report

Asbestos and Environmental Analysis

Phone: (503) 224-5055
http://www.labcorpdx.net

Job Number: 188387 **PDX**
Client: ALS Environmental
Address: 1317 South 13th Avenue
Kelso, WA 98626
Project Name: K1811120
Project Num:
PO Number:
Sub Project:

Report Number: 188387R01
Report Date: 12/5/2018

Enclosed please find results for samples submitted to our laboratory. A list of samples and analyses follows:

Lab/Cor Sample #	Client Sample # and Description	Analysis	Analysis Notes	Date Received:
188387 - S1	K1811120-001 - SL0084	CARB 435 - PLM		11/16/2018
188387 - S2	K1811120-002 - SL0064	CARB 435 - PLM		11/16/2018
188387 - S3	K1811120-003 - SL0065	CARB 435 - PLM		11/16/2018
188387 - S4	K1811120-004 - SL0022	CARB 435 - PLM		11/16/2018

CARB 435 - PLM - The submitted samples were analyzed using the CARB 435 method "Determination of Asbestos Content of Serpentine Aggregate" April 2017. The samples were weighed and dried overnight in an oven in order to remove moisture from the soil. After drying, the samples were weighed again and then manually crushed. The sample size was then reduced through the use of a riffle splitter in order to achieve approximately a one pint sub-sample for grinding. The remaining material was archived. The sub-sample was analyzed with a stereomicroscope in order to determine the presence of asbestos. After the stereomicroscope examination, the sub-sample was ground with a Bico plate grinder to a particle size of between 75µm and 250µm.

The ground soil was then analyzed with a stereomicroscope to further determine homogeneity and check for any potential asbestos fibers. A sub-portion of the ground sample was then pulled for a 400 field of view point-count. Any observed asbestos fibers were confirmed through morphological and optical characteristics as outlined by the CARB 435 method and the EPA 600/R-93/116 method.

Disclaimer The results reported relate only to the samples tested or analyzed; the laboratory is not responsible for data collected by personnel who are not affiliated with the laboratory. Results reported in both structures/cm3 and structures/mm2 are dependent on the sample volume and area. These parameters are measured and recorded by non-laboratory personnel and are not covered by the laboratory's accreditation. Interpretation of these results is the sole responsibility of the client.

If further clarification of these results is needed, please call us. Thank you for allowing the staff at Lab/Cor Portland, Inc. the opportunity to provide you with the analytical services.

Sincerely,

X

Ryan Brown
PLM Technical Manager

NVLAP TESTING
NVLAP Lab Code: 200741-0

Lab/Cor Portland, Inc.
4321 SW Corbett Ave., Ste A
Portland, OR 97239

BULK SAMPLE ASBESTOS ANALYSIS

Asbestos and Environmental Analysis

Phone: (503) 224-5055
http://www.labcorpdx.net

Client: ALS Environmental
1317 South 13th Avenue
Kelso, WA 98626

Report Number: 188387R01
Report Date: 12/05/2018

P.O. No: n/a

Job Number: **188387**
Project Name: K1811120
Project Number:
Project Notes:

Client Sample ID: **K1811120-001** **Sample ID:** S1 **Date Analyzed:** 12/05/2018
Client Sample Description: SL0084 **Analyst:** Ryan Brown

Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite			**Percent Asbestos:**
Homogeneous					**Point Count:** 0	**Point Count Fields:** 400	
fine powder, gray	100 %	-	-	-			**NAD**

Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other		Matrix
	-	-	-	-	-	-	100 %

Client Sample ID: **K1811120-002** **Sample ID:** S2 **Date Analyzed:** 12/05/2018
Client Sample Description: SL0064 **Analyst:** Ryan Brown

Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite			**Percent Asbestos:**
Homogeneous					**Point Count:** 0	**Point Count Fields:** 400	
fine powder, gray	100 %	-	-	-			**NAD**

Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other		Matrix
	-	-	-	-	-	-	100 %

Client Sample ID: **K1811120-003** **Sample ID:** S3 **Date Analyzed:** 12/05/2018
Client Sample Description: SL0065 **Analyst:** Ryan Brown

Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite			**Percent Asbestos:**
Homogeneous					**Point Count:** 0	**Point Count Fields:** 400	
fine powder, gray	100 %	Trace	-	-			**< 0.25 %**

Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other		Matrix
	-	-	-	-	-	-	100 %

Client Sample ID: **K1811120-004** **Sample ID:** S4 **Date Analyzed:** 12/05/2018
Client Sample Description: SL0022 **Analyst:** Ryan Brown

Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite			**Percent Asbestos:**
Homogeneous					**Point Count:** 0	**Point Count Fields:** 400	
fine powder, gray	100 %	-	-	-			**NAD**

Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other		Matrix
	-	-	-	-	-	-	100 %

NVLAP TESTING
NVLAP Lab Code: 200741-0

019483

Lab/Cor Portland, Inc.
4321 SW Corbett Ave., Ste A
Portland, OR 97239

BULK SAMPLE ASBESTOS ANALYSIS

Asbestos and Environmental Analysis

Phone: (503) 224-5055
http://www.labcorpdx.net

Client: ALS Environmental
1317 South 13th Avenue
Kelso, WA 98626

Report Number: 188387R01
Report Date: 12/05/2018

P.O. No: n/a

Job Number: **188387**
Project Name: K1811120
Project Number:
Project Notes:

This laboratory participates in the National Voluntary Laboratory Accreditation Program (NVLAP). Testing method is per 40 CFR 763 Subpart E, Appendix E, PLM. This report and the data contained therein cannot be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

- "NAD" is No Asbestos Detected.
- Asbestos consists of the following minerals: chrysotile, amosite, crocidolite, tremolite, actinolite, anthophyllite.
- Material binders, such as those found in vinyl floor tiles, may prevent the detection of small diameter asbestos fibers. A gravimetric preparation and point-count is recommended for such samples.
- Quantitative analysis by PLM point count or TEM may be recommended for samples testing at < or = to 1% asbestos.
- The following estimate of error for this method by visual estimation of asbestos percent are as follows:
1% asbestos: 0-3% error, 5% asbestos: 1-9% error, 10% asbestos: 5-15% error, 20% asbestos: 10-30% error.
- This report pertains only to the samples listed on the report. Report considered valid only when signed by analyst.

Reviewed by:

X

Ryan Brown
PLM Technical Manager

NVLAP TESTING
NVLAP Lab Code: 200741-0

019484

Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

REVISED
12:02 pm, Feb 13, 2019

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Benchsheet

Service Request #:	**K1810934, KQ1816719, K1811120, K1811153**	**Run #:**	**615103**
Test:	**TS**	**Balance ID:**	**K-BALANCE-48**
Method:	**160.3 Modified**		

Matrix	Lab Code	Tare (g)	Wet Wt. (g)	Tare + Dry Wt. (g)	Dry Weight (g)	% Total Solids	RPD
Paint Chips	K1810934-001	1.299	1.237	2.520	1.22	98.7	
Paint Chips	K1810934-001DUP	1.280	1.210	2.476	1.20	98.8	<1
Soil	K1811120-001	1.281	12.543	10.606	9.33	74.3	
Soil	K1811120-001DUP	1.272	12.094	10.509	9.24	76.4	3
Soil	K1811120-002	1.282	13.872	11.671	10.4	74.9	
Soil	K1811120-003	1.280	12.479	9.424	8.14	65.3	
Soil	K1811120-004	1.280	12.862	11.150	9.87	76.7	
Sludge, Solid	K1811153-001	1.278	19.805	1.821	0.543	2.74	
Sludge, Solid	K1811153-001DUP	1.292	19.914	1.841	0.549	2.76	<1

	Oven ID	Temp In	Temp Out	Date In	Time In	Date Out	Time Out	Thermometer ID
Oven1	**K-OVEN-07**	**105**	**105**	**11/14/2018**	**17:14**	**11/15/2018**	**08:15**	

	Cal EQID	Cal Start Value	Cal End Value	Start Date	Start Time	End Date	End Time
Calibration1	**K-BALANCE-48**	**1.000, 100.000**	**1.000, 100.000**	**11/14/2018**	**10:44**	**11/14/2018**	**17:12**
Calibration2	**K-BALANCE-48**	**1.000, 100.000**	**1.000, 100.000**	**11/15/2018**	**09:16**	**11/15/2018**	**09:18**

Comments: APosey SN#42868 Reviewed by SC 11/15/18

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Work Request # K1811542, 11120

Tier: IV IV

Date Analyzed: 11/30/18

Analyst: Jonathan Madison Run # 616987

Analysis: 1020A/Flashpoint

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA See below

COMMENTS:

K1811542 due 11/29/18.

Final Approved by: [signature] Date: 11/30/18

DQREPORT

019489

Analytical Results Summary

Instrument Name: K-FlashPoint-01 **Analyst:** JMADISON **Analysis Lot:** 616987 **Method/Testcode:** 1020A Modified/IgnitClosedCup

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1811120-001	Flash Point	N/A		Soil	>110 deg C	g	>110 deg C	1					11/30/18 08:50:00	N	IV
K1811120-002	Flash Point	N/A		Soil	>110 deg C	g	>110 deg C	1					11/30/18 08:50:00	N	IV
K1811120-003	Flash Point	N/A		Soil	>110 deg C	g	>110 deg C	1					11/30/18 08:50:00	N	IV
K1811120-004	Flash Point	N/A		Soil	>110 deg C	g	>110 deg C	1					11/30/18 08:50:00	N	IV
K1811120-005	Flash Point	N/A		Wipe	>110 deg C	g	>110 deg C	1					11/30/18 08:50:00	N	IV
K1811120-006	Flash Point	N/A		Wipe	>110 deg C	g	>110 deg C	1					11/30/18 08:50:00	N	IV
K1811542-001	Flash Point	N/A		Water	>110 deg C	2 mL	>110 deg C	1					11/30/18 08:50:00	N	IV
KQ1817532-01	Flash Point	MB		Water	>110 deg C	2 mL	>110 deg C	1					11/30/18 08:50:00	N	IV
KQ1817532-02	Flash Point	LCS		Water	27.00 deg C	2 mL	27 deg C	1					11/30/18 08:50:00	N	IV
KQ1817532-03	Flash Point	DUP	K1811542-001	Water	>110 deg C	2 mL	>110 deg C	1				NC	11/30/18 08:50:00	N	IV
KQ1817532-04	Flash Point	DUP	K1811120-004	Soil	>110 deg C	g	>110 deg C	1				NC	11/30/18 08:50:00	N	IV

11/30/18

11/30/18

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

ALS Environmental

Service Request: K1811542, 11120

Analysis For: Flashpoint Method: EPA 1020

p-xylene STD 1			1-butanol STD 2			DI Water Blank			Sample #: K1811542-001			Sample #: K1811542-001D		
°C	Yes	No	°C	Yes	No	°C	Yes	No	°C	Yes	No	°C	Yes	No
20			20			20		X	20		X	20		
25		X	25			25			25			25		
30			30			30			30			30		
35			35		X	35			35			35		
40			40			40		X	40		X	40		
45			45			45			45			45		
50			50			50			50			50		
55			55			55			55			55		
60			60			60		X	60		X	60		
65			65			65			65			65		
70			70			70			70			70		
75			75			75			75			75		
80			80			80		X	80		X	80		
85			85			85			85			85		
90			90			90			90			90		
95			95			95			95			95		
100			100			100		X	100		X	100		
105			105			105			105			105		
110			110			110		X	110		X	110		X
26		X	36		X									
27	X		37	X										
Verification			Verification			Verification			Verification			Verification		
26		X	36		X	110		X	110		X	110		X
27	X		37	X										
Obs. Flash =		27	Obs. Flash =		37	Obs. Flash =		>110	Obs. Flash =		>110	Obs. Flash =		>110
Flashpoint =		27	Flashpoint =		37	Flashpoint =		>110	Flashpoint =		>110	Flashpoint =		>110

Standard 1: **p-xylene T.V. = 27.0 °C ±0.5 °C** **Lot #:** **10191795** **%REC=**

Standard 2: **1-butanol T.V. = 37.0 °C ±1.0 °C** **Lot #:** **186512** **%REC=**

Actual Flashpoint (°C) = Observed flashpoint + 0.03 (760 - Avg. barometric pressure (mm Hg))

Barometric Pressure

Beginning : **762.762**

763 End : **762.762**

Comments: Instrument ID: K-Flashpoint-01

Analyst: JM	Date: 11/30/2018	Time: 8:50
Reviewed By:	Date: 11/30/18	

Revision 1-R:/WET/ANALYSES/FLASH/TEMPLATE/fpointF&C

019491

ALS Environmental

Service Request:

Analysis For: Flashpoint Method: EPA 1020

Sample #:	K1811120-001	Sample #:	K1811120-002	Sample #:	K1811120-003	Sample #:	K1811120-004	Sample #:	K1811120-004D

°C	Yes	No	°C	Yes	No	°C	Yes	No	°C	Yes	No	°C	Yes	No
20		X	20		X	20		X	20		X	20		
25			25			25			25			25		
30			30			30			30			30		
35			35			35			35			35		
40		X	40		X	40		X	40		X	40		
45			45			45			45			45		
50			50			50			50			50		
55			55			55			55			55		
60		X	60		X	60		X	60		X	60		
65			65			65			65			65		
70			70			70			70			70		
75			75			75			75			75		
80		X	80		X	80		X	80		X	80		
85			85			85			85			85		
90			90			90			90			90		
95			95			95			95			95		
100		X	100		X	100		X	100		X	100		
105			105			105			105			105		
110		X	110		X	110		X	110		X	110		X
Verification			Verification			Verification			Verification			Verification		
110		X	110		X	110		X	110		X	110		X
Obs. Flash =		>110	Obs. Flash =		>110	Obs. Flash =		>110	Obs. Flash =		>110	Obs. Flash =		>110
Flashpoint =		>110	Flashpoint =		>110	Flashpoint =		>110	Flashpoint =		>110	Flashpoint =		>110

Comments:

Analyst: JM	Date: 11/30/2018	Time: 8:50
Reviewed By:	Date: 11/30/18	

019492

ALS Environmental

Service Request:
Analysis For: Flashpoint Method: EPA 1020

Sample #:	K1811120-005		Sample #:	K1811120-006		Sample #:			Sample #:			Sample #:		
°C	Yes	No	°C	Yes	No	°C	Yes	No	°C	Yes	No	°C	Yes	No
20		X	20		X	20			20			20		
25			25			25			25			25		
30			30			30			30			30		
35			35			35			35			35		
40		X	40		X	40			40			40		
45			45			45			45			45		
50			50			50			50			50		
55			55			55			55			55		
60		X	60		X	60			60			60		
65			65			65			65			65		
70			70			70			70			70		
75			75			75			75			75		
80		X	80		X	80			80			80		
85			85			85			85			85		
90			90			90			90			90		
95			95			95			95			95		
100		X	100		X	100			100			100		
105			105			105			105			105		
110		X	110		X	110			110			110		
Verification			Verification			Verification			Verification			Verification		
110		X	110		X									
Obs. Flash =		>110	Obs. Flash =		>110	Obs. Flash =			Obs. Flash =			Obs. Flash =		
Flashpoint =		>110	Flashpoint =		>110	Flashpoint =			Flashpoint =			Flashpoint =		

Comments:

Analyst: JM		Date: 11/30/2018	Time: 8:50
Reviewed By:		Date: 11/30/18	

019493

Work Request # (Original) K1811120

Tier: IV

Date Analyzed: 11/15/18

Analyst: CES / BCD

Run # 615395

Analysis: reactive sulfide

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	(yes)/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	(yes)/no/NA
4.	Is the reporting basis correct? (Dry Weight)	(yes)/no/NA
5.	All quality control criteria met?	(yes)/no/NA
6.	Is the calibration curve correlation coefficient ≥ 0.995?	(yes)/no
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	(yes)/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	(yes)/no/NA
9.	Are results for methods blanks all ND?	(yes)/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	(yes)/no/NA
11.	Are all exceptions explained?	(yes)/no/NA
12.	Have all applicable service requests been reviewed?	(yes)/no/NA
13.	Are all samples labeled correctly?	(yes)/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	(yes)/no/NA
15.	Are detection limits and units reported correctly?	(yes)/no/NA
16.	Is the unused space on the benchsheet crossed out?	(yes)/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	(yes)/no/NA

COMMENTS: K1811120-2/3/4/5/6 were received past hold time.

Final Approved by: [signature] Date: 11/26/18

DQREPORT

C:\Documents and Settings\adam.bradbury\My Documents\DATAQUAL.DOC

019494

Analytical Results Summary

Instrument Name: K-Buret-01 **Analyst:** BDITZLER **Analysis Lot:** 615395 **Method/Testcode:** 9034 Modified/Sulfide React

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1811120-001	Sulfide, Reactive	N/A		Soil	0.00 mg/Kg	2.8340 g	32 mg/Kg U	1		32			11/15/18 16:24:00	N	IV
K1811120-002	Sulfide, Reactive	N/A		Soil	10.00 mg/Kg	2.7970 g	32 mg/Kg U	1		32			11/15/18 16:24:00	N	IV
K1811120-003	Sulfide, Reactive	N/A		Soil	14.40 mg/Kg	2.5090 g	32 mg/Kg U	1		32			11/15/18 16:24:00	N	IV
K1811120-004	Sulfide, Reactive	N/A		Soil	2.90 mg/Kg	2.7540 g	32 mg/Kg U	1		32			11/15/18 16:24:00	N	IV
K1811120-005	Sulfide, Reactive	N/A		Wipe	0.00 mg/Kg	1.2170 g	32 mg/Kg U	1		32			11/15/18 16:24:00	N	IV
K1811120-006	Sulfide, Reactive	N/A		Wipe	0.00 mg/Kg	3.8140 g	32 mg/Kg U	1		32			11/15/18 16:24:00	N	IV
KQ1816851-01	Sulfide, Reactive	DUP	K1811120-001	Soil	0.00 mg/Kg	3.3260 g	32 mg/Kg U	1		32		NC	11/15/18 16:24:00	N	IV
KQ1816851-02	Sulfide, Reactive	MB		Soil	0.00 mg/Kg	2.5000 g	32 mg/Kg U	1		32			11/15/18 16:24:00	N	IV
KQ1816851-03	Sulfide, Reactive	LCS		Soil	777.00 mg/Kg	2.5000 g	777 mg/Kg	1		32	96		11/15/18 16:24:00	N	IV
KQ1816851-04	Sulfide, Reactive	DLCS		Soil	785.00 mg/Kg	2.5000 g	785 mg/Kg	1		32	97	1	11/15/18 16:24:00	N	IV

BCD 11/26/18

11/26/18

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

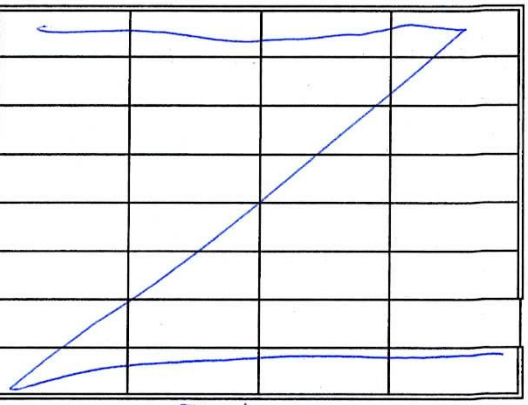
Work Order #.: K1811120 Method: SM 9034M or SM 9034 Distilled

Analysis: Reactive Sulfides

K1811120-1 K1811120-1d -2 -3

Sample Number	MB	LCS	DLCSK18	1120-1	1120-1d	1120-2	1120-3
Sample Wt./Vol. (g) or (ml)	2.5	2.5	2.5	2.834	3.526	2.797	2.509
Scrubber Volume (ml)	40	40	40	40	40	40	40
Titrated Volume (ml)	40	40	40	40	40	40	40
I_2 Volume (ml)	1.0	5.0	5.0	1.0	1.0	1.0	1.0
S_2O_3 Volume (ml)	1.04	0.15	0.10	1.04	1.01	0.93	0.91
S as received mg/Kg/mg/L	0.0	777	785	0.0	0.0	10.0	14.4
S Dry Weight mg/Kg							

Sample Number K18	1120-4	1120-5	1120-6				
Sample Wt./Vol. (g) or (ml)	2.754	1.210	3.814				
Scrubber Volume (ml)	40	40	40				
Titrated Volume (ml)	40	40	40				
I_2 Volume (ml)	1.0	1.0	1.0				
S_2O_3 Volume (ml)	0.98	1.00	1.01				
S as received mg/Kg/mg/L	2.9	0.0	0.0				
S Dry Weight mg/Kg							



$[S_2O_3] = 0.025N$ $[I_2] = 0.025$ N Titrated 5.0 mls I2 with 5.01 mls S_2O_3.

Sulfide Standard ID# = S2/3-2-E 4050 mg/L

Comments:

LCS= (0.5ml)(4050 mg/L)/2.5g = 810 mg/Kg

X=78 RPD=1.0%

Sulfide mg/Kg or mg/L = [(ml of I_2 X N of I_2)-(ml of titrant X N of titrant)](16030)(Scrubber Vol)

sample weight (g) x Scrubber Titrated (ml)

Analyst: CES/BCD	Date Analyzed: 11/15/18 16:24
Reviewed By: [signature]	Date Reviewed: 11/26/18

StarLims Run #: 615395

Analysis: **Reactive Sulfide**

Method: **9034M**

Iodine Solution: S2/4-62-Z

HCl (6N): S2/4-62-J

Sodium Thiosulfate 0.025N: 1807J62

Sodium Thiosulfate 0.025N (ICV): 18D255005

Starch Indicator Solution: 17D075007

Sulfide Standard: S2/3-2-E

Equipment: K-Buret-01

Pipettes: N11314F

Analyzed By:	BCD for CES	Date Analyzed:	11/15/18
Reviewed By:	[signature]	Date Reviewed:	11/26/18

Work Request # 11120 10945 11234 11169

Tier: IV II IV II

Date Analyzed: 11-19-18

Analyst: A Chaffey

Run # 615685

Analysis: PH/Soil 9045 D

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

Final Approved by: [signature] Date: 11/21/18

DQREPORT

Analytical Results Summary

Instrument Name: K-pH-14 **Analyst:** ACHEATLEY **Analysis Lot:** 615685 **Method/Testcode:** 9045D/pH

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1810945-003	pH	N/A		Biosolids Solids	6.40 pH Units	10.274 g	6.40 pH Units	1					11/19/18 17:27:00	N	II
K1811120-001	pH	N/A		Soil	8.13 pH Units	10.016 g	8.13 pH Units	1					11/19/18 17:22:00	N	IV
K1811120-002	pH	N/A		Soil	8.15 pH Units	10.168 g	8.15 pH Units	1					11/19/18 17:23:00	N	IV
K1811120-003	pH	N/A		Soil	8.29 pH Units	10.183 g	8.29 pH Units	1					11/19/18 17:24:00	N	IV
K1811120-004	pH	N/A		Soil	8.52 pH Units	10.236 g	8.52 pH Units	1					11/19/18 17:26:00	N	IV
K1811120-005	pH	N/A		Wipe	5.53 pH Units	1.1358 g	5.53 pH Units	1					11/19/18 17:42:00	N	IV
K1811120-006	pH	N/A		Wipe	5.43 pH Units	1.2426 g	5.43 pH Units	1					11/19/18 17:44:00	N	IV
K1811169-001	pH	N/A		Paint Chips	9.69 pH Units	5.011 g	9.69 pH Units	1					11/19/18 17:28:00	N	II
K1811234-001	pH	N/A		Soil	7.15 pH Units	10.5568 g	7.15 pH Units	1					11/19/18 17:29:00	N	IV
K1811234-002	pH	N/A		Soil	7.05 pH Units	10.0823 g	7.05 pH Units	1					11/19/18 17:30:00	N	IV
K1811234-003	pH	N/A		Soil	6.69 pH Units	10.3846 g	6.69 pH Units	1					11/19/18 17:35:00	N	IV
K1811234-004	pH	N/A		Soil	4.92 pH Units	10.3862 g	4.92 pH Units	1					11/19/18 17:37:00	N	IV
K1811234-005	pH	N/A		Soil	4.78 pH Units	10.5004 g	4.78 pH Units	1					11/19/18 17:38:00	N	IV
K1811234-006	pH	N/A		Soil	5.29 pH Units	10.6021 g	5.29 pH Units	1					11/19/18 17:39:00	N	IV
KQ1817022-01	pH	DUP	K1811120-003	Soil	8.55 pH Units	10.248 g	8.55 pH Units	1				3	11/19/18 17:25:00	N	IV
KQ1817022-02	pH	DUP	K1811234-006	Soil	5.33 pH Units	10.3215 g	5.33 pH Units	1				<1	11/19/18 17:41:00	N	IV
KQ1817022-03	pH	LCS		Soil	8.50 pH Units	10.0000 g	8.50 pH Units	1			98		11/19/18 17:21:00	N	IV

11/21/18

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

ALS ENVIRONMENTAL

Service Request #: _____ Method: 9045D

Analysis: pH Corrosivity Matrix: Soil/Solid

Calibration						
Buffer	1.00	4.00	7.00	10.00	12.45	Value of Buffers at 25 °C
Reading	1.00	4.00	7.00	10.00	12.45	pH Slope: _____
Temp °C	25.3 ~~1.44~~	~~1.44~~ 25.5	25.2	25.2	25.1	Slope Acceptance: 92-102%

Sample Number	Sample Wt. (g)	Vol of Ext Sol (mLs)	pH	Time Analyzed	Temp °C	% Solids
Buffer Check	**Buffer Value:**	4.00	3.99	1720	24.4	
LCS	--	--	8.50	1721	25.0	
11120 - 1	10.014	10	8.13	1722	25.1	
-2	10.148		8.15	1723	24.6	
-3	10.183		8.29	1724	24.8	
-3d	10.248		8.55	1725	24.1	
-4	10.236		8.52	1726	24.3	
10945.3	10.274		4.40	1727	24.2	
11169-1	5.011	5	9.69	1728	24.8	
11234-1	10.5568	10	7.15	1729	24.1	
-2	10.0823		7.05	1730	24.6	
Buffer Check	**Buffer Value:**	4.00	3.99	1731	25.2	
11234-3	10.3846	10	6.69	1735	24.8	
-4	10.3862		4.92	1737	24.0	
-5	10.5004		4.78	1738	24.2	
-6	10.6021		5.29	1739	24.0	
-6d	10.3215		5.33	1741	24.3	
11120 - 5	0.5478 x 2 = 1.1358		5.53	1742	24.0	
11120 - 6	0.6213 x 2 = 1.2426		5.43	1744	25.7	
Buffer Check	Buf Val.	4.00	3.98	1745	24.2	
Buffer Check	**Buffer Value:**					

LCS: ERA Lot# ~~P2S~~ S244-779 **ID #** 12-GEN.ph-001-36 **T. V. =** 8.64 **% REC =** _____

pH 4.00 buffer: 12-GEN. pH-001-22 G pH 7.00 buffer: 12-GEN. pH-001-36 D pH 10.00 buffer: 12-GEN. pH-001-50 D

ph 1.00 buffer: 12-GEN. pH-001-12 A pH 12.45 buffer: 12-GEN. pH-001-64 D

Probe ID# 12-GEN.pH-001-73-E Meter ID# K-pH-14 Water Bath ID# K-Waterbath-pH

Extraction Solution: DI Water

Comments:

Analyst: A Chaffey	Date: 11-19-18 1447
Reviewed By: Harris	Date: 11/21/18

R: WET/Analysis/PH/Templates/SOILPH Revison: 2

K181120-58 6used ½ filter, weighed then x2 per Mark Harris OKEE 11-19-18

SOILPH2

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet

Prep Run: 326966
Team: Metals
Analyst: JHINSON

Prep Workflow: MetDigLP
Prep Method: EPA 3010A
Rush/NPDES: N/A

Status: Prepped
Current Step: Digestion

Prep Date: 11/26/2018 10:40
Due Date: 11/23/2018
Hold Date: 05/19/2019

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1817136-02	Method Blank		25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
KQ1817136-01	Lab Control Sample		25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl
K1811120-004	SL0022	.01	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811120-004: KQ1817136-03	Duplicate	.01	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811120-004: KQ1817136-04	Matrix Spike	.01	25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl

5 Total Samples consisting of 1 Client Sample, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET TCLP (ALS-57-R1)	Spike	189554	4/19/2019

Preparation Materials

Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	192468
Digestion	K-MET HNO3	193780

Step	Name	ID
Digestion	K-MET HCL	194595

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-DG 250C			
Digestion	K-HotPlate-03	Corrected Temperature	95	deg C
Digestion	K-HotPlate-03	Correction Factor	0	deg C

Step	Name	Property	Value	
Digestion	K-HotPlate-03	Observed Temperature	95	deg C
Digestion	K-HotPlate-03	Thermometer ID 662788		deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	26-NOV-18 10:40	26-NOV-18 15:06	JHINSON		N	

Comments

Review

Reviewed by: _____ Date: 11/26/18

TCLP Spike Solution

Lims Solution ID 189554

Expires 4/19/19

Analyte	Solution Concentration
Ag	100
Pb	500
As	500
Ba	1000
Cd	100
Cr	500
Se	100
Cu	100
Ni	100
Zn	1000

Additional spikes

Element	Source	Lot #	mls of	ppm	Exp. date	Initials and date

This solution is a custom mix: ALS-57-R1

1040 - 1506
HP3

Preparation Information Benchsheet

Prep Run: 326966
Team: Metals
Analyst: JHINSON

Prep Workflow: MetDigLP
Prep Method: EPA 3010A
Rush/NPDES: N/A

Status: Draft
Current Step: Digestion

Prep Date: 11/21/2018 12:57
Due Date: 11/23/2018
Hold Date: 05/19/2019

12/5

5

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1817136-02	Method Blank		25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
KQ1817136-01	Lab Control Sample		25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl
K1811120-004	SL0022	.01	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811120-004: KQ1817136-03	Duplicate	.01	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811120-004: KQ1817136-04	Matrix Spike	.01	25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl

5 Total Samples consisting of 1 Client Sample, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET TCLP (ALS-57-R1)	Spike	189554	4/19/2019

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion					N	

Comments

Review

Reviewed by: _____ Date: _____

Preparation Information Benchsheet

Prep Run: 326965
Team: Metals
Analyst: JHINSON

Prep Workflow: MetDigLP
Prep Method: EPA 3010A
Rush/NPDES: N/A

Status: Prepped
Current Step: Digestion

Prep Date: 11/26/2018 10:40
Due Date: 11/23/2018
Hold Date: 05/19/2019

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1817135-02	Method Blank		25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
KQ1817135-01	Lab Control Sample		25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl
K1811120-001	SL0084	.01	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811120-001: KQ1817135-03	Duplicate	.01	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811120-001: KQ1817135-04	Matrix Spike	.01	25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl
K1811120-002	SL0064	.01	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811120-003	SL0065	.01	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl

7 Total Samples consisting of 3 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET TCLP (ALS-57-R1)	Spike	189554	4/19/2019

Preparation Materials

Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	192468
Digestion	K-MET HNO3	193780

Step	Name	ID
Digestion	K-MET HCL	194595

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-DG 250C			
Digestion	K-HotPlate-02	Corrected Temperature	95	deg C
Digestion	K-HotPlate-02	Correction Factor	0	deg C

Step	Name	Property	Value	
Digestion	K-HotPlate-02	Observed Temperature	95	deg C
Digestion	K-HotPlate-02	Thermometer ID 662485		deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	26-NOV-18 10:40	26-NOV-18 15:06	JHINSON		N	

Comments

Review

Reviewed by: _____ Date: 11/26/18

TCLP Spike Solution

Lims Solution ID 189554

Expires 4/19/19

Analyte	Solution Concentration
Ag	100
Pb	500
As	500
Ba	1000
Cd	100
Cr	500
Se	100
Cu	100
Ni	100
Zn	1000

Additional spikes

Element	Source	Lot #	mls of	ppm	Exp. date	Initials and date

This solution is a custom mix: ALS-57-R1

10410-150C
MP 2

Preparation Information Benchsheet

Prep Run: 326965
Team: Metals
Analyst: JHINSON

Prep Workflow: MetDigLP
Prep Method: EPA 3010A
Rush/NPDES: N/A

Status: Draft
Current Step: Digestion

Prep Date: 11/21/2018 12:55
Due Date: 11/23/2018
Hold Date: 05/19/2019

12/5

7

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1817135-02	Method Blank		25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
KQ1817135-01	Lab Control Sample		25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl
K1811120-001	SL0084	.01	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811120-001: KQ1817135-03	Duplicate	.01	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811120-001: KQ1817135-04	Matrix Spike	.01	25 mL	25 mL	0.25 mL	189554	Metals TCLP	6%HNO3, 5%HCl
K1811120-002	SL0064	.01	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl
K1811120-003	SL0065	.01	25 mL	25 mL			Metals TCLP	6%HNO3, 5%HCl

7 Total Samples consisting of 3 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET TCLP (ALS-57-R1)	Spike	189554	4/19/2019

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion					N	

Comments

Review

Reviewed by: _____ Date: _____

TCLP Extraction Worksheet

Service Request Number(s): K1811120, 1269

Method : TCLP 1311 ☒ SPLP 1312 ☐ Wet Ext. ☐ MEP ☐ If Autofluff sample is used please place an X in this box ☐ Prep Run# : 326859

Note: 1 Blank needed per every 20 extracts.

Sample Number	Teflon Extraction Vessel #	Sample Description (Solid, Liquid, Multiphasic)	Partical Size < 1cm ?	Solution Determination Weight (g)	Initial pH	Aliquot of 1N HCl (mL)	Final pH	Solution To Be Used	Extraction Weight (g)	Extraction Solution Volume (mL)	Post-Extraction pH
K1811120-1	34	S	Y	5.110	9.13	3.5	1.84	1	100.06	2000	5.48
2	36			5.070	9.13		1.91	1	100.16		5.85
3	31			5.086	9.18		1.89	1	100.19		5.68
4	39			5.307	9.42		5.56	2	100.06		5.66
K1811269-1	24			5.119	8.08		1.88	1	100.68		4.95
2	5			5.310	8.34		1.88	1	100.48		4.98
3	28			5.165	8.55		1.90	1	100.79		5.13
MB	40	L						1	—		—
MB	26							2	—		—

CCL 11/20

pH Meter Calibrated at pH4 & pH7 Today? ☒ 11/20/18 11/21/18 pH Meter I.D. K-pH-08 Balance I.D. 4852 Date Balance Checked: 11/14/18, 11/20/18

Extraction Solution Prep date: 11/20/18, 11/6/18 Tumbler # 3 Thermometer# 664244 Hot Plate Temp °C(50°C): 50

Today's Solution pH: 4.95, 2.83 11/20/18 Extraction Solution I.D. MET-0626-C Filter Lot # 162105 HCl I.D. RE1-48_A

Extraction Started Time: 16:37 Date: 11/20/18 MET-0626-I Disposable Extraction Vessel Lot #: —

Extraction Finished Time: 8:40 Date: ~~11/20~~ 11/21/18 LS 11/26/18

Tumbler Rotational Speed (28 - 32 rpm): 29.6

Room Temperature at the Beginning of Extraction (Temp. Range 21° C - 25°C): 21.92

Analyst: Caly Cal Date: 11/20/18 Reviewer: [signature] Date: 11/26/18

r: tcp misc digforms TCLP Extraction Benchsheet 10-10-171

Pre-Prep Information Benchsheet

Prep Run #: ~~326472~~ 326859 **Prep Method:** CCL 4720 **Team:** **Container Lot No:** 100ml-1802043/ Nalgene 2L **Prep Due Date:** Nov-23-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1811120-001	.01	TCLP	100.06g	thick, sticky Clay #34	PrepComments:APOSEY K-BALANCE-52 11142018
2	K1811120-001 DUP KQ1816762-01	.01	TCLP	5.110g		PrepComments:APOSEY K-BALANCE-48 11142018
3	K1811120-002	.01	TCLP	100.16g	Fuel smell. Thick, sticky Clay. #36	PrepComments:APOSEY K-BALANCE-52 11142018
4	K1811120-002 DUP KQ1816762-02	.01	TCLP	5.070g		PrepComments:APOSEY K-BALANCE-48 11142018
5	K1811120-003	.01	TCLP	100.19g	standing water. Thick, sticky Clay. #31	PrepComments:APOSEY K-BALANCE-52 11142018
6	K1811120-003 DUP KQ1816762-03	.01	TCLP	5.086g		PrepComments:APOSEY K-BALANCE-48 11142018
7	K1811120-004	.01	TCLP	100.06g	thick, sticky Clay. #39	PrepComments:APOSEY K-BALANCE-52 11142018
8	K1811120-004 DUP KQ1816762-04	.01	TCLP	5.307g		PrepComments:APOSEY K-BALANCE-48 11142018

Relinquished By:	Date/Time:	Received By:	Date/Time:
	11.14.2018 1639		11/20/18 13:31

Printed 11/14/2018 4:37:22 PM

Preparation Information Benchsheet

Page 1 of 1

Pre-Prep Information Benchsheet

Prep Run #: 326859 **Prep Method:** **Team:** **Container Lot No:** 1802043 **Prep Due Date:** Nov-22-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1811269-001	.01	TCLP	100.68g	Btl 24. lots of rocks	PrepComments:APOSEY K-BALANCE-52 11202018
2	K1811269-001 DUP KQ1817056-01	.01	TCLP	5.119g		PrepComments:APOSEY K-BALANCE-48 11202018
3	K1811269-002	.01	TCLP	100.48g	Btl 5. Mostly paper small amount of soil.	PrepComments:APOSEY K-BALANCE-52 11202018
4	K1811269-002 DUP KQ1817056-02	.01	TCLP	5.310g		PrepComments:APOSEY K-BALANCE-48 11202018
5	K1811269-003	.01	TCLP	100.79g	Btl 28. Mostly paper small amount of soil.	PrepComments:APOSEY K-BALANCE-52 11202018
6	K1811269-003 DUP KQ1817056-03	.01	TCLP	5.165g		PrepComments:APOSEY K-BALANCE-48 11202018APOSEY K-BALANCE-48 11202018

Relinquished By: Date/Time: 11-20-2018 10:46 Received By: Date/Time: 11/20/18 13:31

Printed 11/20/2018 10:41:23 AM

Preparation Information Benchsheet

Page 1 of 1

Service Request # K1811120 (TCLP), K1811358 (TCLP), K1811512 (TCLP)
Instrument ID# K-ICP-AES-03
Calibration 120518BICP03
ALS LIMS Run # 617638
Pipette IDs: OU18256, 242761252, DJ07632
Pipette Calibration Due: 12/25/18

ICP-OES Data Review Form

		Yes	No
1.	Appropriate standardization completed	X	
2.	ICV within control limits	X	
3.	CCV's in control	X	
4.	ICB/CCB's below MRL	X	
4.	LLICV standard analyzed and in control	X	
5.	ICS standards within 20% of true value	X	
7.	All analytes within instrument linear range	X	
7.	Adequate rinse out time allowed	X	
8.	Was the run terminated? If so, why.		X

See Benchsheet exception report for sample batch QC information.
Comments:
6010: NR Sb, Ti

Primary Review by AKm Date 12/5/18

Secondary Review by RRm Date 12/5/18

Data Review Form

Instrument ID#: **K-ICP-AES-03**
DataFile Name: **R:\ICP\WIP\DATA\K-ICP-AES-03 (6500)\120518BICP03.txt**
RUNNO: **617638**

K1811120

K1811120-004MS - Metals TCLP -
MS Recovery
6010C/Metals TCLP - Ag3280 - Recovery: 57 Limits: 75 - 125 / PS is in control

K1811358

No exceptions to report.

K1811512

No exceptions to report.

Primary Approver: 12/5/18
Secondary Approver: 12/5/18

Sample Name: BLK Acquired: 12/5/2018 13:51:20 Type: Cal
Method: 2018B-6010-ICP-03(v20) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: INT.STD.ICP17-85-C

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.0003	-69.75	3.507	3.451	.0377	4.9949	19.03
Stddev	.0001	6.07	.583	.341	.0015	2.5393	4.93
%RSD	48.79	8.695	16.61	9.871	4.060	50.838	25.90
#1	-.0002	-65.46	3.095	3.210	.0366	6.7905	22.52
#2	-.0004	-74.04	3.918	3.692	.0388	3.1994	15.55

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.0005	.0000	.0021	.0703	-.0001	.0006	-.0004
Stddev	.0001	.0000	.0002	.0003	.0000	.0000	.0001
%RSD	20.16	20.88	10.47	.3684	17.61	3.646	26.01
#1	-.0004	.0000	.0020	.0705	-.0001	.0006	-.0004
#2	-.0006	.0000	.0023	.0701	-.0001	.0006	-.0003

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-176.2	.0006	.0000	-116.2	-.0005	.0008	-8.875
Stddev	7.6	.0003	.0003	2.1	.0001	.0002	1.874
%RSD	4.316	49.02	675.0	1.792	10.34	22.09	21.11
#1	-170.8	.0008	-.0002	-114.7	-.0005	.0009	-7.550
#2	-181.6	.0004	.0003	-117.7	-.0005	.0007	-10.20

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00004	.0000	.0000	.0006	.0002	87.41	.0000
Stddev	.00004	.0001	.0001	.0003	.0002	11.50	.0001
%RSD	94.133	205.2	198.1	44.27	67.91	13.16	976.3
#1	.00001	.0000	.0001	.0008	.0003	79.27	.0000
#2	.00007	.0001	.0000	.0004	.0001	95.54	.0000

Sample Name: BLK Acquired: 12/5/2018 13:51:20 Type: Cal
Method: 2018B-6010-ICP-03(v20) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: INT.STD.ICP17-85-C

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4.500	-23.96	19.29	-.00283	-.0001	.0001	.0051
Stddev	4.243	2.25	12.57	.00036	.0000	.0000	.0000
%RSD	94.28	9.375	65.16	12.739	21.13	21.24	.5022
#1	1.500	-22.37	28.18	-.00257	-.0001	.0001	.0051
#2	7.500	-25.54	10.40	-.00308	-.0001	.0001	.0052

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0001	-.0003	.8525	.0016	-2.009
Stddev	.0000	.0000	.9418	.0001	.192
%RSD	8.364	4.713	110.5	6.016	9.574
#1	.0001	-.0003	1.518	.0015	-2.145
#2	.0001	-.0003	.1866	.0016	-1.873

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5570.1	90425.	5581.0
Stddev	2.7	317.	23.2
%RSD	.04770	.35045	.41557
#1	5572.0	90201.	5597.4
#2	5568.3	90649.	5564.6

12/5/18

Sample Name: STD A Acquired: 12/5/2018 13:53:53 Type: Cal
Method: 2018B-6010-ICP-03(v20) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-82-A

Elem	Al1670	Sb2068	Be2348	B_2496	Cd2144	Cd2265	Ca3933	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.1249	250.8	25875.	2531.	1.495	1.195	17.13	.0652
Stddev	.0007	.3	23.	15.	.000	.001	.03	.0003
%RSD	.5313	.1393	.08834	.5745	.0165	.0401	.1578	.4580
#1	.1244	250.5	25891.	2520.	1.495	1.194	17.11	.0650
#2	.1253	251.0	25858.	2541.	1.495	1.195	17.15	.0654

Elem	Co2307	Cu2247	Cu3273	Pb2203	Mg2795	Mn2576	Mo2020	Ni2216
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.4201	.2417	7423.	.0983	2.728	.46388	.3173	.4714
Stddev	.0000	.0000	14.	.0002	.007	.00053	.0002	.0004
%RSD	.0066	.0134	.1950	.1840	.2670	.11414	.0551	.0831
#1	.4201	.2416	7413.	.0982	2.723	.46425	.3174	.4711
#2	.4200	.2417	7433.	.0985	2.734	.46351	.3172	.4717

Elem	Se1960	Ag3280	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0333	10510.	.0618	.0766	.2801	.0919	.3985	5732.
Stddev	.0001	27.	.0003	.0000	.0014	.0004	.0001	12.
%RSD	.3036	.2539	.4445	.0082	.5147	.4565	.0247	.2016
#1	.0334	10490.	.0620	.0766	.2811	.0922	.3985	5723.
#2	.0332	10520.	.0616	.0766	.2791	.0916	.3984	5740.

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5565.6	90843.	5592.2
Stddev	.6	143.	.7
%RSD	.01038	.15733	.01194
#1	5566.0	90742.	5592.7
#2	5565.2	90944.	5591.7

Sample Name: STD B Acquired: 12/5/2018 13:56:14 Type: Cal
Method: 2018B-6010-ICP-03(v20) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-85-B

Elem	Al3944	As1890	Ba4554	Ca3158	Fe2599	Li6707	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	105500.	697.1	106.2	2.394	2.069	18910.	.4482
Stddev	204.	2.0	.7	.027	.015	31.	.0041
%RSD	.1932	.2807	.6798	1.136	.7014	.1629	.9193
#1	105600.	698.5	106.7	2.414	2.079	18930.	.4511
#2	105300.	695.8	105.7	2.375	2.059	18890.	.4452

Elem	Mg2852	Mn2605	P_1782	K_7664	Si2516	Na5895	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	34740.	.0386	1.228	7139.	3222.	30490.	22.166
Stddev	77.	.0002	.000	3.	3.	18.	.187
%RSD	.2229	.5716	.0150	.0479	.0822	.0597	.84164
#1	34790.	.0388	1.229	7141.	3224.	30510.	22.298
#2	34680.	.0385	1.228	7136.	3220.	30480.	22.034

Elem	Bi2230	S_1820
Units	Cts/S	Cts/S
Avg	.2485	361.5
Stddev	.0002	1.3
%RSD	.0773	.3689
#1	.2484	362.4
#2	.2487	360.5

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5461.0	86453.	5460.4
Stddev	20.9	239.	30.8
%RSD	.38222	.27649	.56416
#1	5475.7	86284.	5438.6
#2	5446.2	86622.	5482.2

Sample Name: ICVB Acquired: 12/5/2018 13:59:03 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-82-D

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9210	.9953	-.0003	.0063	.0015	.00009	2.013	-.0001
Stddev	.0057	.0057	.0004	.0002	.0002	.00001	.010	.0000
%RSD	.6181	.5731	154.2	3.164	10.30	10.728	.4816	23.14
#1	.9250	.9912	.0000	.0061	.0014	.00010	2.006	-.0001
#2	.9169	.9993	-.0006	.0064	.0016	.00009	2.019	-.0001
Check ?	Chk Pass	None	None	None	None	None	Chk Pass	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	5.084	5.012	.0005	-.0001	.0007	.0003	10.15
Stddev	.0001	.037	.005	.0008	.0002	.0003	.0014	.08
%RSD	31.20	.7357	.1043	165.7	225.6	47.79	463.7	.8222
#1	-.0004	5.057	5.008	-.0001	-.0003	.0009	-.0007	10.09
#2	-.0006	5.110	5.016	.0010	.0001	.0004	.0013	10.21
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	2.032	5.037	5.080	5.077	9.5781	9.835	.0001
Stddev	.0005	.005	.014	.043	.023	.0269	.025	.0000
%RSD	147.7	.2273	.2713	.8550	.4553	.28082	.2507	35.99
#1	.0007	2.029	5.027	5.049	5.060	9.5590	9.817	.0001
#2	.0000	2.036	5.046	5.111	5.093	9.5971	9.852	.0001
Check ?	None	Chk Pass	None	Chk Pass	None	None	Chk Pass	None
Value								
Range								

Sample Name: ICVB Acquired: 12/5/2018 13:59:03 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-82-D

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	4.975	-.0446	.0023	5.072	.0000	14.07	2.0555
Stddev	.0004	.001	.0732	.0030	.036	.000	.04	.0166
%RSD	119.3	.0170	164.0	129.1	.7104	111.3	.2586	.80741
#1	.0007	4.975	.0071	.0002	5.047	.0000	14.04	2.0437
#2	.0001	4.976	-.0964	.0045	5.097	-.0001	14.09	2.0672
Check ?	None	Chk Pass	None	None	Chk Pass	None	None	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	4.886	.0006	.0018	.0005	.0004	5.073	4.948
Stddev	.0008	.004	.0003	.0002	.0001	.0001	.006	.007
%RSD	129.5	.0845	50.92	9.612	23.96	22.31	.1229	.1345
#1	.0011	4.889	.0004	.0020	.0006	.0004	5.069	4.953
#2	.0000	4.883	.0009	.0017	.0005	.0005	5.078	4.944
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5514.7	87938.	5421.5
Stddev	9.8	168.	31.5
%RSD	.17728	.19096	.58029
#1	5507.7	87819.	5443.7
#2	5521.6	88057.	5399.2

Sample Name: ICV Acquired: 12/5/2018 14:01:45 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-90-A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.436	5.135	2.417	2.496	4.978	.12228	.0032	1.222
Stddev	.013	.026	.007	.001	.005	.00036	.0013	.004
%RSD	.2957	.5162	.2791	.0234	.1024	.29131	39.35	.3515
#1	4.426	5.116	2.422	2.495	4.981	.12203	.0041	1.225
#2	4.445	5.154	2.412	2.496	4.974	.12254	.0023	1.219
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.230	12.55	12.12	.5067	1.206	.6002	.5897	2.507
Stddev	.004	.00	.09	.0008	.004	.0004	.0020	.000
%RSD	.3466	.0345	.7346	.1626	.3705	.0595	.3353	.0122
#1	1.233	12.55	12.06	.5073	1.209	.6000	.5883	2.507
#2	1.227	12.56	12.18	.5061	1.203	.6005	.5911	2.506
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.414	-.0017	12.29	12.23	12.45	1.2094	1.208	.5026
Stddev	.006	.0011	.03	.00	.05	.0044	.012	.0014
%RSD	.2705	64.99	.2598	.0092	.4325	.36495	.9932	.2819
#1	2.419	-.0009	12.27	12.23	12.49	1.2125	1.217	.5036
#2	2.409	-.0024	12.31	12.23	12.42	1.2063	1.200	.5016
Check ?	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: ICV Acquired: 12/5/2018 14:01:45 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-90-A

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.203	-.0009	12.43	2.476	-.0079	.5824	12.44	.00017
Stddev	.004	.0016	.05	.000	.0074	.0024	.06	.00009
%RSD	.3512	187.7	.4158	.0169	93.66	.4144	.4762	53.197
#1	1.206	-.0020	12.46	2.476	-.0132	.5807	12.48	.00024
#2	1.200	.0003	12.39	2.477	-.0027	.5841	12.39	.00011
Check ?	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.432	.0045	2.008	1.257	1.211	1.203	.0017	.0029
Stddev	.007	.0007	.002	.003	.007	.002	.0003	.0022
%RSD	.2800	14.50	.1209	.2200	.5420	.1257	19.56	75.05
#1	2.437	.0050	2.006	1.255	1.216	1.204	.0020	.0013
#2	2.428	.0041	2.010	1.259	1.206	1.202	.0015	.0044
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5480.3	87524.	5432.1
Stddev	9.6	410.	30.6
%RSD	.17551	.46792	.56355
#1	5473.5	87235.	5453.8
#2	5487.1	87814.	5410.5

Sample Name: ICB Acquired: 12/5/2018 14:04:12 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	-.0008	F .0211	.0022	.0004	.00002	.0020	.0001
Stddev	.0004	.0005	.0025	.0021	.0002	.00003	.0016	.0000
%RSD	56.59	67.17	11.89	97.22	48.89	163.96	76.13	19.75
#1	.0004	-.0012	.0194	.0007	.0005	.00000	.0031	.0001
#2	.0010	-.0004	.0229	.0037	.0003	.00004	.0009	.0001
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			.0200					
Low Limit			-.0200					

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0004	.0005	.0002	-.0007	-.0003	.0007	.0031
Stddev	.0001	.0035	.0000	.0001	.0001	.0003	.0005	.0018
%RSD	92.69	858.1	1.130	79.31	7.655	84.03	82.13	57.98
#1	.0000	.0021	.0005	.0001	-.0006	-.0001	.0003	.0044
#2	-.0001	-.0029	.0005	.0002	-.0007	-.0005	.0010	.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0011	-.0065	.0125	.0002	-.0025	-.00002	-.0029	.0021
Stddev	.0001	.0009	.0019	.0001	.0013	.00007	.0013	.0001
%RSD	9.006	13.65	15.30	39.38	52.74	325.01	46.90	2.576
#1	-.0011	-.0072	.0112	.0002	-.0016	-.00008	-.0019	.0022
#2	-.0010	-.0059	.0139	.0001	-.0035	.00003	-.0038	.0021
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

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12/5/18

Sample Name: ICB Acquired: 12/5/2018 14:04:12 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0009	-.0438	.0067	.0051	.0002	-.0210	-.00007
Stddev	.0001	.0013	.0281	.0024	.0029	.0001	.0046	.00010
%RSD	84.61	147.4	64.22	36.05	56.00	52.15	21.85	143.75
#1	-.0002	.0018	-.0239	.0084	.0031	.0002	-.0178	-.00014
#2	.0000	.0000	-.0637	.0050	.0071	.0003	-.0243	.00000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	.0007	.0017	.0000	.0004	.0001	.0002	.0070
Stddev	.0012	.0010	.0002	.0003	.0000	.0001	.0006	.0034
%RSD	35.92	148.1	13.00	1029.	7.294	159.2	274.1	48.71
#1	.0026	.0014	.0015	-.0002	.0004	.0002	.0007	.0046
#2	.0043	.0000	.0018	.0003	.0004	.0000	-.0002	.0094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5537.2	88444.	5377.7
Stddev	13.8	38.	7.3
%RSD	.24871	.04280	.13609
#1	5546.9	88471.	5372.5
#2	5527.5	88418.	5382.9

Sample Name: LLICV Acquired: 12/5/2018 14:07:20 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-78-A 0.05/50mL

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	.0104	.0246	.0078	.0044	.00099	.0203	.0012
Stddev	.0000	.0009	.0016	.0002	.0004	.00002	.0004	.0000
%RSD	.1699	8.804	6.417	2.145	8.234	1.8434	1.907	2.699
#1	.0103	.0110	.0235	.0077	.0046	.00101	.0206	.0011
#2	.0103	.0097	.0258	.0079	.0041	.00098	.0200	.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.0254	.0208	.0048	.0017	.0036	.0037	.0251
Stddev	.0000	.0019	.0000	.0005	.0002	.0002	.0005	.0015
%RSD	.2482	7.563	.1958	10.72	10.21	6.100	12.93	5.822
#1	.0010	.0268	.0208	.0045	.0016	.0034	.0033	.0261
#2	.0010	.0241	.0208	.0052	.0018	.0037	.0040	.0241
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0099	.0187	.0117	.0055	F .0081	.00101	-.0016	.0046
Stddev	.0002	.0021	.0160	.0002	.0006	.00000	.0018	.0002
%RSD	1.915	11.12	136.5	3.216	7.536	.07446	114.0	4.208
#1	.0097	.0201	.0004	.0056	.0077	.00101	-.0003	.0044
#2	.0100	.0172	.0230	.0053	.0085	.00101	-.0028	.0047
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass
Value					.0050			
Range					30.00%			

Sample Name: LLICV Acquired: 12/5/2018 14:07:20 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-78-A 0.05/50mL

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	.0402	.1628	.0223	.1954	.0043	.1875	.00121
Stddev	.0004	.0018	.0762	.0017	.0105	.0004	.0078	.00007
%RSD	9.741	4.595	46.82	7.601	5.396	9.140	4.185	5.8142
#1	.0044	.0389	.1089	.0211	.1880	.0045	.1820	.00116
#2	.0038	.0415	.2167	.0235	.2029	.0040	.1931	.00126
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0107	.0212	F .0032	.0035	.0045	.0042	.0194	.0469
Stddev	.0011	.0007	.0001	.0001	.0001	.0001	.0014	.0007
%RSD	10.55	3.372	2.771	3.593	1.772	1.866	7.179	1.575
#1	.0114	.0217	.0033	.0036	.0045	.0042	.0204	.0474
#2	.0099	.0207	.0031	.0034	.0044	.0041	.0184	.0464
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.0020					
Range			30.00%					

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5677.0	89719.	5436.2
Stddev	12.4	294.	2.7
%RSD	.21846	.32786	.04878
#1	5668.3	89927.	5434.3
#2	5685.8	89511.	5438.1

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ARm 12/15/18

Sample Name: LLICV,0.5 Acquired: 12/5/2018 14:09:56 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-78-A 0.1/50mL

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0206	.0207	.0446	.0208	.0083	.00201	.0409	.0022
Stddev	.0001	.0017	.0026	.0018	.0004	.00004	.0007	.0000
%RSD	.3738	8.291	5.741	8.646	4.220	2.0853	1.631	.2973
#1	.0206	.0195	.0464	.0220	.0086	.00204	.0413	.0022
#2	.0205	.0219	.0428	.0195	.0081	.00198	.0404	.0022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0445	.0407	.0091	.0037	.0079	.0083	.0461
Stddev	.0000	.0038	.0002	.0006	.0001	.0003	.0006	.0032
%RSD	1.653	8.648	.5872	6.329	2.285	3.380	7.402	6.971
#1	.0021	.0418	.0405	.0087	.0036	.0081	.0087	.0483
#2	.0020	.0472	.0409	.0095	.0037	.0077	.0078	.0438
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0180	.0422	.0211	.0107	.0105	.00195	-.0014	.0082
Stddev	.0003	.0015	.0078	.0001	.0011	.00001	.0001	.0000
%RSD	1.813	3.626	37.09	.6998	10.09	.71676	10.39	.1136
#1	.0182	.0432	.0266	.0107	.0097	.00196	-.0013	.0083
#2	.0177	.0411	.0156	.0108	.0112	.00194	-.0015	.0082
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

12/5/18

Sample Name: LLICV,0.5 Acquired: 12/5/2018 14:09:56 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-78-A 0.1/50mL

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080	.0789	F .5253	.0399	.3996	.0085	.4337	.00222
Stddev	.0000	.0021	.0817	.0003	.0202	.0004	.0186	.00006
%RSD	.1795	2.718	15.56	.7599	5.060	4.994	4.282	2.7565
#1	.0080	.0774	.5831	.0401	.4139	.0088	.4206	.00218
#2	.0080	.0804	.4676	.0397	.3853	.0082	.4469	.00227
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.4000					
Range			30.00%					

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0198	.0407	F .0062	.0073	.0086	.0087	.0409	.0885
Stddev	.0011	.0006	.0002	.0002	.0000	.0000	.0014	.0005
%RSD	5.550	1.520	3.730	2.547	.1812	.5000	3.539	.5522
#1	.0190	.0411	.0060	.0072	.0086	.0086	.0398	.0881
#2	.0206	.0403	.0063	.0074	.0086	.0087	.0419	.0888
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.0040					
Range			30.00%					

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5753.1	88843.	5473.1
Stddev	6.3	331.	22.6
%RSD	.10994	.37295	.41214
#1	5748.6	89077.	5457.1
#2	5757.6	88609.	5489.0

ptam 12/5/18

019526

Sample Name: LLICV-TCLP Acquired: 12/5/2018 14:13:02 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-81-I 0.2/10 mL

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0005	.0003	-.0016	.2006	-.00003	.0011	.0001
Stddev	.0001	.0014	.0001	.0006	.0008	.00008	.0011	.0000
%RSD	37.52	260.0	43.27	36.98	.4174	267.69	106.0	15.15
#1	.0003	-.0015	.0004	-.0012	.2000	-.00009	.0003	.0001
#2	.0002	.0005	.0002	-.0020	.2012	.00003	.0019	.0001
Check ?	None	None	None	None	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0133	.0113	.0002	-.0002	-.0001	-.0003	.0006
Stddev	.0001	.0061	.0001	.0003	.0001	.0006	.0016	.0008
%RSD	177.1	45.67	.4864	112.4	53.96	687.2	588.9	129.5
#1	.0000	.0090	.0112	.0004	-.0002	.0003	-.0014	.0012
#2	-.0001	.0176	.0113	.0001	-.0001	-.0005	.0009	.0001
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0020	.0107	.0002	.0017	.00001	-.0029	.0001
Stddev	.0006	.0020	.0627	.0000	.0000	.00001	.0009	.0001
%RSD	260.5	99.81	586.5	13.56	.0105	63.974	30.08	66.42
#1	-.0002	-.0034	-.0336	.0002	.0017	.00001	-.0023	.0002
#2	.0006	-.0006	.0550	.0002	.0017	.00002	-.0035	.0001
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: LLICV-TCLP Acquired: 12/5/2018 14:13:02 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-81-I 0.2/10 mL

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0012	.0227	.0005	-.0263	.0000	.0072	-.00001
Stddev	.0001	.0001	.0297	.0012	.0020	.0003	.0105	.00000
%RSD	285.4	12.76	131.2	247.5	7.534	831.2	145.7	57.972
#1	-.0002	-.0013	.0016	.0013	-.0277	.0003	.0147	.00000
#2	.0001	-.0011	.0437	-.0004	-.0249	-.0002	-.0002	-.00001
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	-.0002	.0016	-.0003	.1940	.1973	-.0015	-.0015
Stddev	.0010	.0001	.0002	.0006	.0001	.0001	.0011	.0015
%RSD	39.83	40.72	15.06	238.9	.0677	.0705	69.01	102.0
#1	.0034	-.0003	.0015	.0002	.1941	.1974	-.0023	-.0004
#2	.0019	-.0002	.0018	-.0007	.1939	.1972	-.0008	-.0025
Check ?	None	None	None	None	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5655.8	88209.	5481.5
Stddev	2.7	448.	51.5
%RSD	.04710	.50810	.94040
#1	5653.9	88525.	5518.0
#2	5657.7	87892.	5445.1

019528

Sample Name: CCVB1 Acquired: 12/5/2018 14:15:58 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.736	10.56	-.0009	1.027	10.20	.00004	-.0001	.0000
Stddev	.015	.04	.0009	.001	.17	.00004	.0002	.000
%RSD	.1989	.3310	106.3	.1050	1.621	80.493	136.0	81.57
#1	7.725	10.53	-.0016	1.028	10.08	.00007	-.0003	.0000
#2	7.747	10.58	-.0002	1.027	10.32	.00002	.0000	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	10.29	9.962	.0003	.0001	.0003	-.0002	10.21
Stddev	.0000	.07	.124	.0003	.0001	.0001	.0001	.09
%RSD	9.770	.7260	1.242	76.65	159.6	42.80	37.19	.8389
#1	-.0005	10.24	9.874	.0005	.0001	.0002	-.0002	10.15
#2	-.0005	10.34	10.05	.0002	.0000	.0004	-.0003	10.27
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	1.026	10.25	10.28	10.31	.99715	1.013	.0000
Stddev	.000	.005	.12	.14	.04	.00157	.000	.0002
%RSD	506.8	.4742	1.190	1.376	.3864	.15788	.0424	565.1
#1	.0001	1.030	10.16	10.18	10.34	.99826	1.013	-.0001
#2	-.0002	1.023	10.33	10.38	10.28	.99603	1.013	.0002
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

019529

Sample Name: CCVB1 Acquired: 12/5/2018 14:15:58 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0011	10.11	10.34	.0024	10.17	.0000	10.28	1.0230
Stddev	.0000	.00	.03	.0018	.04	.000	.08	.0044
%RSD	.7415	.0094	.2539	76.32	.4261	23.29	.7450	.42884
#1	-.0011	10.11	10.36	.0011	10.20	-.0001	10.34	1.0199
#2	-.0011	10.11	10.32	.0037	10.14	.0000	10.23	1.0261
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0002	.0016	.0000	.0004	.0000	1.023	1.020
Stddev	.0013	.0002	.0002	.0004	.0001	.0000	.004	.003
%RSD	217.7	90.49	15.42	1430.	28.10	47.69	.4035	.3230
#1	.0016	.0004	.0017	.0003	.0004	.0001	1.026	1.022
#2	-.0003	.0001	.0014	-.0003	.0003	.0000	1.020	1.018
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5572.0	87781.	5458.5
Stddev	1.8	103.	49.4
%RSD	.03262	.11681	.90521
#1	5573.3	87708.	5493.5
#2	5570.7	87853.	5423.6

Sample Name: CCVA1 Acquired: 12/5/2018 14:18:45 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2491	.2794	.2527	.2581	.2540	.25093	.2484	.2536
Stddev	.0020	.0034	.0009	.0036	.0035	.00003	.0004	.0000
%RSD	.8091	1.206	.3677	1.407	1.387	.01086	.1452	.0059
#1	.2506	.2817	.2533	.2555	.2515	.25095	.2486	.2536
#2	.2477	.2770	.2520	.2607	.2565	.25091	.2481	.2535
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2534	.5201	.5043	.2534	.2519	.2520	.2507	.2641
Stddev	.0000	.0004	.0019	.0010	.0003	.0005	.0005	.0004
%RSD	.0135	.0727	.3775	.3846	.1255	.1867	.2167	.1383
#1	.2534	.5204	.5030	.2541	.2516	.2517	.2511	.2639
#2	.2535	.5199	.5057	.2527	.2521	.2524	.2504	.2644
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2538	-.0011	.2647	.2593	.2590	.25387	.2463	.2508
Stddev	.0001	.0004	.0015	.0015	.0001	.00135	.0022	.0004
%RSD	.0242	33.75	.5640	.5741	.0474	.53200	.8845	.1443
#1	.2538	-.0014	.2636	.2582	.2589	.25483	.2478	.2511
#2	.2538	-.0009	.2657	.2603	.2591	.25292	.2448	.2506
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA1 Acquired: 12/5/2018 14:18:45 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2523	.0011	2.599	.2507	.1148	.2501	.2698	.00000
Stddev	.0008	.0007	.006	.0032	.0074	.0003	.0001	.0001
%RSD	.2994	58.94	.2339	1.285	6.420	.1279	.0233	4776.8
#1	.2529	.0007	2.595	.2529	.1200	.2498	.2698	.00006
#2	.2518	.0016	2.604	.2484	.1095	.2503	.2697	-.00006
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2524	.2533	.2526	.2520	.2524	.2554	-.0007	-.0011
Stddev	.0010	.0006	.0019	.0011	.0005	.0005	.0007	.0014
%RSD	.4084	.2544	.7342	.4270	.2052	.2083	92.30	130.7
#1	.2531	.2528	.2540	.2527	.2528	.2557	-.0012	-.0021
#2	.2517	.2537	.2513	.2512	.2520	.2550	-.0003	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5592.0	90121.	5528.2
Stddev	19.5	459.	55.0
%RSD	.34872	.50977	.99437
#1	5605.8	89796.	5567.1
#2	5578.2	90445.	5489.4

Sample Name: CCB Acquired: 12/5/2018 14:21:09 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0018	.0040	-.0002	.0001	.00013	-.0010	.0001
Stddev	.000	.0016	.0002	.0002	.0005	.00003	.0007	.0001
%RSD	1347.	89.17	3.816	105.5	361.2	23.167	73.36	60.18
#1	.0001	-.0007	.0041	-.0001	.0005	.00015	-.0015	.0001
#2	-.0002	-.0029	.0039	-.0004	-.0002	.00011	-.0005	.0002
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0008	-.0001	-.0002	-.0004	-.0008	-.0005	-.0010
Stddev	.0002	.0046	.0000	.0003	.0007	.0005	.0001	.0018
%RSD	171.7	600.9	16.15	132.9	176.8	57.19	29.14	177.6
#1	.0000	.0040	-.0001	-.0004	-.0009	-.0005	-.0006	-.0023
#2	-.0002	-.0025	-.0001	.0000	.0001	-.0012	-.0004	.0003
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	-.0028	.0005	.0000	.0010	-.00004	-.0043	.0009
Stddev	.0005	.0019	.0108	.000	.0007	.00008	.0009	.0000
%RSD	58.73	67.81	2354.	182.1	73.77	190.68	20.61	3.640
#1	-.0011	-.0015	-.0072	.0000	.0015	-.00010	-.0037	.0009
#2	-.0005	-.0041	.0081	-.0001	.0005	.00001	-.0050	.0009
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 12/5/2018 14:21:09 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0010	.0491	-.0001	-.0059	-.0001	-.0140	.00006
Stddev	.0005	.0035	.0662	.0008	.0088	.0001	.0034	.00013
%RSD	519.7	354.1	134.7	1356.	148.6	142.8	24.17	207.61
#1	-.0005	-.0015	.0023	.0005	.0003	-.0002	-.0164	.00016
#2	.0003	.0035	.0959	-.0006	-.0121	.0000	-.0116	-.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0010	.0002	-.0003	.0003	.0001	-.0026	.0032
Stddev	.0003	.0001	.0001	.0000	.0000	.0001	.0022	.0030
%RSD	16.35	9.437	68.68	18.01	8.695	64.94	87.70	92.52
#1	.0018	.0010	.0001	-.0002	.0003	.0001	-.0041	.0054
#2	.0022	.0011	.0003	-.0003	.0003	.0000	-.0010	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5551.6	90876.	5507.3
Stddev	14.3	238.	8.0
%RSD	.25718	.26191	.14509
#1	5561.7	91045.	5512.9
#2	5541.5	90708.	5501.6

Sample Name: ICSA Acquired: 12/5/2018 14:23:44 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-79-A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.69	382.4	.0069	.0015	.0011	.00104	.0128	-.0020
Stddev	.09	2.8	.0033	.0014	.0004	.00001	.0017	.0001
%RSD	.3716	.7247	47.95	93.06	38.53	.74409	13.11	7.315
#1	23.75	380.4	.0092	.0005	.0008	.00105	.0116	-.0019
#2	23.62	384.3	.0045	.0025	.0013	.00104	.0140	-.0021
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0100	475.9	*****	.0020	-.0020	.0075	.0004	188.8
Stddev	.0002	3.0	-----	.0001	.0004	.0002	.0007	.6
%RSD	2.104	.6383	-----	4.404	20.29	2.670	184.1	.3168
#1	-.0101	473.7	-----	.0021	-.0023	.0074	-.0001	188.3
#2	-.0098	478.0	-----	.0020	-.0018	.0077	.0009	189.2
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0172	.0051	498.7	*****	441.3	-.00157	-.0177	-.0004
Stddev	.0001	.0036	2.7	-----	1.8	.00007	.0022	.0004
%RSD	.3313	69.85	.5413	-----	.3994	4.7703	12.23	90.93
#1	-.0171	.0076	496.8	-----	442.6	-.00162	-.0161	-.0002
#2	-.0172	.0026	500.6	-----	440.1	-.00151	-.0192	-.0007
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Sample Name: ICSA Acquired: 12/5/2018 14:23:44 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-79-A

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	.0067	.0069	.0025	-.0120	.0009	.0225	.00458
Stddev	.0005	.0007	.0063	.0005	.0046	.0000	.0110	.00015
%RSD	27.46	10.70	91.55	20.94	38.62	3.832	48.92	3.3024
#1	.0014	.0062	.0114	.0022	-.0087	.0009	.0147	.00447
#2	.0020	.0073	.0024	.0029	-.0153	.0009	.0303	.00469
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	.0028	.0016	.0030	.0010	-.0027	.0182	.0126
Stddev	.0013	.0020	.0003	.0003	.0003	.0001	.0024	.0018
%RSD	38.75	69.93	18.76	9.196	26.23	2.575	13.30	14.58
#1	.0042	.0014	.0018	.0028	.0008	-.0026	.0199	.0139
#2	.0024	.0042	.0014	.0032	.0012	-.0027	.0165	.0113
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4939.8	78160.	5212.8
Stddev	4.2	207.	26.1
%RSD	.08442	.26440	.50154
#1	4936.9	78013.	5231.3
#2	4942.8	78306.	5194.3

Sample Name: ICSAB Acquired: 12/5/2018 14:26:33 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-74-C

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.69	396.9	.9009	-.0022	.5372	.47346	.0130	.9525
Stddev	.19	8.7	.0060	.0012	.0073	.00075	.0003	.0011
%RSD	.8174	2.194	.6706	53.48	1.362	.15922	2.314	.1201
#1	23.56	390.8	.9052	-.0031	.5321	.47293	.0128	.9533
#2	23.83	403.1	.8966	-.0014	.5424	.47400	.0132	.9517
Check ?	None	None	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9402	506.3	*****	.5189	.4693	.4836	.4550	198.0
Stddev	.0007	1.5	-----	.0008	.0016	.0017	.0006	.2
%RSD	.0745	.3048	-----	.1606	.3473	.3597	.1320	.0764
#1	.9407	505.2	-----	.5195	.4704	.4848	.4554	197.9
#2	.9397	507.4	-----	.5183	.4681	.4824	.4546	198.1
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8933	.0040	524.9	*****	468.9	.49163	.5239	-.0006
Stddev	.0007	.0015	3.8	-----	3.2	.00098	.0026	.0000
%RSD	.0743	37.71	.7327	-----	.6798	.19938	.5006	4.075
#1	.8929	.0050	522.2	-----	471.2	.49093	.5221	-.0005
#2	.8938	.0029	527.7	-----	466.7	.49232	.5258	-.0006
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	None
Value								
Range								

019537

Sample Name: ICSAB Acquired: 12/5/2018 14:26:33 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP17-74-C

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9195	.0079	-.0161	.0054	-.0084	.8816	.0196	.00496
Stddev	.0001	.0020	.0381	.0007	.0084	.0034	.0025	.00001
%RSD	.0094	25.92	237.2	12.01	99.33	.3906	12.87	.26085
#1	.9195	.0064	.0109	.0059	-.0025	.8792	.0214	.00495
#2	.9196	.0093	-.0430	.0050	-.0143	.8840	.0178	.00496
Check ?	Chk Pass	None	None	None	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028	.0020	.0014	.5403	.9357	.8797	.0222	.0122
Stddev	.0012	.0009	.0001	.0012	.0019	.0006	.0002	.0035
%RSD	44.96	42.25	3.796	.2271	.1980	.0686	.7169	28.49
#1	.0037	.0014	.0015	.5395	.9370	.8793	.0223	.0147
#2	.0019	.0026	.0014	.5412	.9343	.8801	.0220	.0098
Check ?	None	None	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	4890.4	77066.	5192.6
Stddev	15.4	34.	47.3
%RSD	.31548	.04444	.91171
#1	4879.5	77090.	5226.1
#2	4901.3	77041.	5159.2

019538

Sample Name: KQ1817135-02 Acquired: 12/5/2018 14:44:34 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811120-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	.0004	-.0040	.0009	.00002	.0021	.0000	.0000
#1	.0054	.0014	-.0024	.0008	.00000	.0019	.0000	-.0001
#2	.0058	-.0006	-.0056	.0009	.00004	.0023	-.0001	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0255	.0011	-.0003	.0000	-.0008	.0081	-.0007	-.0007
#1	.0254	.0011	-.0003	.0000	-.0010	.0039	-.0011	-.0013
#2	.0255	.0011	-.0003	.0001	-.0005	.0123	-.0004	-.0001

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	.00004	.0000	.0007	.0012	.0154	.0011	.0219
#1	.0043	.00002	-.0003	.0006	.0002	-.0013	-.0015	.0187
#2	.0041	.00006	.0003	.0007	.0021	.0322	.0037	.0252

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	303.3	.00041	-.0011	-.0001	.0016	-.0002	.0012
#1	.0005	303.0	.00055	-.0012	-.0003	.0015	-.0003	.0011
#2	.0003	303.5	.00027	-.0011	.0001	.0018	-.0002	.0013

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0008	-.0002	.0044
#1	.0008	.0002	.0049
#2	.0008	-.0006	.0039

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5452.7	81053.	5266.6
#1	5457.0	81026.	5259.3
#2	5448.5	81079.	5274.0

Sample Name: KQ1817135-01 Acquired: 12/5/2018 14:47:14 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811120-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058	-.0011	1.007	2.163	-.00003	.0039	.2011	.1995
#1	.0058	-.0009	1.008	2.196	.00005	.0038	.2016	.2000
#2	.0059	-.0014	1.006	2.130	-.00011	.0040	.2006	.1991

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0330	1.062	-.0002	.1917	.1882	.0059	.9339	-.0004
#1	.0331	1.059	-.0003	.1925	.1868	.0097	.9337	-.0009
#2	.0328	1.066	-.0001	.1910	.1896	.0021	.9341	.0001

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	.00007	.0001	.1936	.0027	.0893	.1943	.0544
#1	.0043	.00006	.0001	.1941	.0040	.1236	.1939	.0588
#2	.0039	.00008	.0001	.1930	.0015	.0549	.1947	.0500

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1771	309.4	.00032	.0003	.0006	.0012	.0033	2.003
#1	.1770	306.4	.00041	-.0001	.0003	.0009	.0031	2.011
#2	.1773	312.3	.00023	.0008	.0008	.0015	.0035	1.995

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.917	-.0035	.0047
#1	1.915	-.0058	.0067
#2	1.920	-.0012	.0026

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5404.3	82161.	5280.2
#1	5387.6	82310.	5202.8
#2	5421.1	82011.	5357.5

Sample Name: K1811120-001 Acquired: 12/5/2018 14:49:46 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105	.0012	-.0013	.2130	.00004	.0087	.0003	.0004
#1	.0105	.0020	-.0023	.2123	.00000	.0077	.0004	.0003
#2	.0105	.0005	-.0002	.2137	.00007	.0097	.0003	.0004

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	97.42	-.0002	.0026	.0003	-.0013	.0054	.0005	-.0003
#1	97.63	-.0002	.0025	.0004	-.0008	.0063	.0002	-.0004
#2	97.21	-.0002	.0026	.0001	-.0017	.0046	.0009	-.0003

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.699	.45002	.0003	.0040	.0158	1.522	.0011	.8223
#1	4.699	.45170	.0001	.0040	.0161	1.526	.0014	.8063
#2	4.699	.44834	.0005	.0040	.0155	1.519	.0008	.8382

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	301.8	.21891	-.0005	.0018	.0008	.0009	.0397
#1	-.0003	301.2	.21977	-.0008	.0025	.0009	.0014	.0398
#2	-.0002	302.4	.21805	-.0002	.0011	.0007	.0004	.0395

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0386	-.0007	.4936
#1	.0386	-.0006	.4907
#2	.0385	-.0007	.4965

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5394.3	83524.	5402.9
#1	5383.1	83083.	5402.6
#2	5405.5	83966.	5403.2

019541

Sample Name: K1811120-001L Acquired: 12/5/2018 14:52:27 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 25 Test Type: E Sample Type:
Comment: AM 120518B 1/25 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025	-.0016	-.0003	.0423	.00004	.0008	.0001	.0000
#1	.0024	-.0026	-.0008	.0428	.00010	.0015	.0002	.0000
#2	.0026	-.0007	.0002	.0418	-.00001	.0001	.0001	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.59	.0006	.0003	.0001	-.0006	.0005	-.0011	-.0011
#1	19.65	.0011	.0004	-.0002	-.0001	.0008	-.0011	-.0028
#2	19.53	.0000	.0002	.0004	-.0012	.0002	-.0011	.0006

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9491	.09176	-.0002	.0009	.0036	.3219	.0004	.1510
#1	.9555	.09183	-.0003	.0010	.0024	.2951	.0015	.1468
#2	.9427	.09169	-.0001	.0008	.0048	.3486	-.0008	.1552

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	62.44	.04391	.0012	.0004	.0009	-.0005	.0084
#1	.0002	62.25	.04421	.0007	.0007	.0007	-.0005	.0084
#2	-.0012	62.63	.04360	.0016	.0001	.0011	-.0005	.0084

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0081	-.0010	.0947
#1	.0083	-.0004	.0948
#2	.0080	-.0016	.0946

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5565.7	87821.	5520.7
#1	5562.6	87372.	5480.1
#2	5568.7	88270.	5561.3

019542

Sample Name: KQ1817135-03 Acquired: 12/5/2018 14:55:06 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811120-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	.0001	-.0015	.2008	.00004	.0070	.0004	.0003
#1	.0051	.0012	-.0011	.2006	-.00006	.0071	.0004	.0004
#2	.0048	-.0010	-.0018	.2010	.00014	.0069	.0005	.0003

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	94.22	-.0002	.0021	.0007	-.0010	.0020	.0003	-.0012
#1	94.05	.0000	.0021	.0007	-.0016	.0009	-.0005	-.0020
#2	94.40	-.0004	.0022	.0007	-.0004	.0031	.0011	-.0004

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.477	.43603	.0002	.0041	.0117	1.465	.0011	.8071
#1	4.464	.43814	.0004	.0041	.0130	1.484	.0032	.8119
#2	4.491	.43391	.0001	.0040	.0103	1.445	-.0011	.8023

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	297.7	.21206	.0006	.0003	-.0003	.0002	.0385
#1	.0002	297.2	.21139	.0000	.0005	-.0001	-.0001	.0384
#2	.0004	298.1	.21274	.0012	.0000	-.0005	.0005	.0386

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0373	-.0018	.4698
#1	.0373	-.0020	.4733
#2	.0372	-.0016	.4662

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5325.8	84681.	5448.4
#1	5345.7	84294.	5442.4
#2	5305.8	85069.	5454.4

019543

Sample Name: KQ1817135-04 Acquired: 12/5/2018 14:57:46 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811120-001S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063	.0020	.9884	2.173	.00002	.0069	.1968	.1947
#1	.0063	.0036	.9871	2.180	-.00004	.0090	.1970	.1948
#2	.0064	.0004	.9897	2.165	.00007	.0048	.1966	.1945

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	93.16	.9743	.0023	.1911	.1800	.0084	.9280	-.0005
#1	93.52	.9745	.0022	.1904	.1796	.0083	.9302	.0013
#2	92.81	.9740	.0023	.1917	.1804	.0085	.9257	-.0022

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.420	.43565	.0001	.1936	.0122	1.460	.1933	.8135
#1	4.428	.43568	.0002	.1939	.0113	1.481	.1966	.8083
#2	4.413	.43563	.0000	.1933	.0131	1.439	.1900	.8187

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1766	298.3	.21110	.0015	.0010	-.0002	.0036	1.988
#1	.1764	297.0	.21201	.0009	.0016	-.0002	.0038	1.992
#2	.1769	299.5	.21019	.0021	.0003	-.0002	.0034	1.984

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.907	-.0024	.4764
#1	1.907	-.0026	.4768
#2	1.908	-.0023	.4759

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5318.4	84531.	5557.7
#1	5308.9	84323.	5560.3
#2	5327.8	84739.	5555.1

019544

Sample Name: K1811120-001A Acquired: 12/5/2018 15:00:19 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E A=0.1/10mL MET3-37-D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0117	.0066	4.901	9.906	.00001	.0100	.9635	.9568
#1	.0120	.0102	4.912	9.895	.00001	.0100	.9642	.9562
#2	.0115	.0030	4.889	9.917	.00001	.0101	.9629	.9574

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	94.20	4.891	.0022	.9508	.9014	.0040	4.603	-.0011
#1	94.06	4.893	.0022	.9523	.9001	-.0009	4.602	-.0003
#2	94.33	4.890	.0023	.9493	.9027	.0089	4.604	-.0019

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.485	.44229	.0004	.9441	.0151	1.451	.9597	.8439
#1	4.478	.44273	.0005	.9432	.0159	1.411	.9624	.8621
#2	4.492	.44184	.0002	.9450	.0143	1.492	.9570	.8257

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8585	305.3	.21349	.0004	.0010	-.0002	.0166	9.602
#1	.8593	305.5	.21292	.0007	.0013	-.0003	.0169	9.609
#2	.8577	305.1	.21405	.0001	.0007	-.0001	.0163	9.594

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	-.0008	.4868
#1	9.034	-.0028	.4897
#2	9.023	.0011	.4838

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5297.2	85011.	5564.8
#1	5296.4	85034.	5578.8
#2	5298.0	84988.	5550.8

019545

Sample Name: K1811120-002 Acquired: 12/5/2018 15:02:58 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	-.0039	.0025	.2591	.00003	.0101	.0007	.0005
#1	.0031	-.0034	.0017	.2572	.00006	.0099	.0006	.0004
#2	.0039	-.0044	.0033	.2610	-.00001	.0102	.0007	.0007

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	127.4	-.0002	.0028	.0003	-.0013	.0058	.0048	.0014
#1	126.9	.0001	.0030	.0003	-.0014	.0067	.0044	.0014
#2	127.8	-.0005	.0025	.0003	-.0011	.0049	.0052	.0014

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.666	.69378	.0005	.0050	.0211	2.113	.0045	.5947
#1	4.650	.69298	.0005	.0048	.0208	2.094	.0030	.5804
#2	4.683	.69458	.0005	.0052	.0214	2.133	.0060	.6089

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	306.0	.36849	-.0010	.0010	.0003	.0002	.0738
#1	.0009	306.5	.36814	-.0015	.0010	.0005	-.0001	.0739
#2	.0000	305.5	.36883	-.0006	.0010	.0002	.0005	.0737

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0720	.0014	.8141
#1	.0722	.0002	.8138
#2	.0717	.0026	.8143

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5336.9	84723.	5564.7
#1	5362.7	84676.	5574.2
#2	5311.1	84770.	5555.1

019546

Sample Name: K1811120-003 Acquired: 12/5/2018 15:05:38 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057	.0006	-.0011	.2545	.00004	.0107	.0007	.0005
#1	.0055	.0009	.0016	.2518	.00006	.0103	.0007	.0004
#2	.0059	.0003	-.0038	.2573	.00002	.0110	.0007	.0006

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	111.3	-.0008	.0036	.0005	.0000	.0055	.0050	-.0015
#1	111.0	-.0007	.0036	.0000	.0006	.0076	.0063	-.0040
#2	111.5	-.0010	.0037	.0011	-.0006	.0033	.0036	.0009

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.748	.69708	.0007	.0059	.0147	2.264	.0023	.7341
#1	4.719	.69795	.0008	.0060	.0164	2.324	.0026	.7335
#2	4.777	.69621	.0005	.0059	.0130	2.205	.0021	.7347

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	299.3	.33512	.0005	.0006	.0000	.0005	.0792
#1	-.0004	300.6	.33461	-.0006	.0010	.0000	.0003	.0792
#2	.0006	298.0	.33564	.0015	.0001	.0001	.0008	.0792

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0760	-.0002	.7035
#1	.0765	.0009	.7108
#2	.0756	-.0013	.6962

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5255.3	83234.	5373.8
#1	5273.6	82808.	5396.1
#2	5236.9	83661.	5351.5

019547

Sample Name: KQ1817136-02 Acquired: 12/5/2018 15:08:17 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811120-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029	-.0004	-.0018	.0002	-.00008	.0020	.0000	-.0001
#1	.0030	.0003	-.0012	.0003	-.00012	.0031	.0000	-.0001
#2	.0029	-.0012	-.0024	.0000	-.00004	.0008	.0000	-.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0374	.0003	-.0003	-.0001	.0004	.0088	.0001	-.0035
#1	.0376	.0006	-.0001	-.0001	.0008	.0088	-.0003	-.0026
#2	.0372	.0000	-.0004	-.0001	-.0001	.0087	.0004	-.0045

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038	.00004	.0001	.0001	.0062	-.0418	.0012	.0337
#1	.0039	.00001	-.0001	-.0002	.0061	-.0043	-.0002	.0339
#2	.0038	.00008	.0003	.0003	.0063	-.0793	.0025	.0336

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.1068	.00023	.0002	.0009	.0005	-.0005	.0012
#1	.0004	.1146	.00027	-.0008	.0010	.0004	-.0006	.0012
#2	-.0005	.0990	.00020	.0011	.0008	.0006	-.0004	.0012

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0013	-.0027	.0063
#1	.0013	-.0038	.0053
#2	.0013	-.0016	.0073

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5620.7	90903.	5442.8
#1	5620.6	90767.	5463.0
#2	5620.9	91040.	5422.7

019548

Sample Name: CCVB Acquired: 12/5/2018 15:10:53 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.388	10.76	.0000	1.048	10.05	.00005	.0000	.0000
Stddev	.044	.06	.0017	.004	.13	.00002	.0005	.000
%RSD	.5995	.5402	22840.	.3932	1.253	42.806	5428.	277.4
#1	7.420	10.72	.0012	1.051	9.962	.00007	-.0004	-.0001
#2	7.357	10.80	-.0012	1.045	10.14	.00004	.0004	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	10.07	9.868	.0005	.0000	.0005	-.0007	10.11
Stddev	.0001	.04	.042	.0008	.000	.0004	.0014	.03
%RSD	10.07	.3785	.4227	151.9	1097.	81.97	189.6	.2882
#1	-.0006	10.04	9.838	.0000	-.0002	.0008	.0002	10.09
#2	-.0005	10.09	9.897	.0010	.0002	.0002	-.0017	10.13
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	1.035	10.08	10.01	10.37	.99097	.9979	.0000
Stddev	.0002	.008	.08	.13	.08	.00182	.0105	.001
%RSD	12.94	.7885	.8105	1.327	.7366	.18355	1.051	2640.
#1	-.0015	1.029	10.02	10.11	10.31	.98968	.9904	-.0004
#2	-.0012	1.041	10.14	9.919	10.42	.99225	1.005	.0003
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

019549

Sample Name: CCVB Acquired: 12/5/2018 15:10:53 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	10.15	10.24	.0006	10.27	.0003	10.35	1.0108
Stddev	.0003	.00	.09	.0024	.14	.0004	.06	.0059
%RSD	20.73	.0313	.8691	384.6	1.348	125.9	.5891	.57850
#1	-.0010	10.15	10.18	-.0011	10.17	.0007	10.31	1.0067
#2	-.0014	10.15	10.30	.0023	10.37	.0000	10.40	1.0150
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0004	.0011	.0001	.0003	.0002	1.028	1.047
Stddev	.0003	.0005	.0001	.0001	.0003	.0000	.002	.000
%RSD	2071.	132.3	11.10	124.9	86.47	10.92	.1765	.0395
#1	.0002	.0000	.0010	.0002	.0001	.0001	1.030	1.047
#2	-.0002	.0008	.0012	.0000	.0005	.0002	1.027	1.048
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5662.7	89437.	5575.7
Stddev	1.4	203.	25.5
%RSD	.02472	.22721	.45817
#1	5663.7	89581.	5557.6
#2	5661.7	89294.	5593.7

Sample Name: CCVA Acquired: 12/5/2018 15:13:40 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2525	.3035	.2643	.2715	.2642	.25815	.2588	.2552
Stddev	.0008	.0010	.0024	.0003	.0008	.00143	.0002	.0000
%RSD	.3154	.3244	.9169	.1205	.3202	.55408	.0821	.0136
#1	.2519	.3042	.2660	.2717	.2636	.25916	.2586	.2552
#2	.2530	.3028	.2626	.2713	.2648	.25714	.2589	.2553
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2557	.5347	.5097	.2688	.2537	.2502	.2670	.2653
Stddev	.0008	.0091	.0004	.0005	.0002	.0001	.0022	.0044
%RSD	.3027	1.695	.0868	.1829	.0920	.0402	.8113	1.652
#1	.2563	.5411	.5100	.2691	.2539	.2501	.2655	.2684
#2	.2552	.5283	.5094	.2684	.2535	.2503	.2685	.2622
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2515	-.0027	.2773	.2693	.2701	.26123	.2580	.2521
Stddev	.0014	.0004	.0236	.0026	.0017	.00080	.0031	.0009
%RSD	.5515	14.83	8.518	.9515	.6174	.30597	1.189	.3547
#1	.2525	-.0024	.2606	.2675	.2713	.26179	.2558	.2527
#2	.2506	-.0030	.2940	.2711	.2689	.26066	.2601	.2515
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 12/5/2018 15:13:40 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2529	.0002	2.728	.2514	.1157	.2589	.3012	-.00002
Stddev	.0007	.0003	.082	.0025	.0075	.0009	.0098	.00014
%RSD	.2959	178.7	2.997	1.007	6.503	.3581	3.244	560.90
#1	.2534	.0004	2.671	.2532	.1103	.2595	.2943	-.00012
#2	.2523	.0000	2.786	.2496	.1210	.2582	.3081	.00007
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2538	.2552	.2582	.2564	.2533	.2661	-.0005	.0015
Stddev	.0005	.0005	.0005	.0003	.0001	.0013	.0036	.0061
%RSD	.2023	.2116	.1844	.1202	.0436	.4841	790.9	392.9
#1	.2542	.2548	.2578	.2562	.2532	.2670	-.0030	-.0028
#2	.2534	.2556	.2585	.2566	.2534	.2651	.0021	.0059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5811.4	90094.	5585.2
Stddev	14.0	122.	21.2
%RSD	.24168	.13544	.38015
#1	5821.3	90008.	5570.2
#2	5801.4	90180.	5600.2

Sample Name: CCB Acquired: 12/5/2018 15:16:03 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0029	-.0004	-.0015	.0002	.00002	-.0014	.0001
Stddev	.000	.0001	.0000	.0025	.0004	.00000	.0001	.0001
%RSD	182.8	2.939	10.42	162.9	229.5	1.3549	9.842	73.25
#1	-.0001	-.0030	-.0004	.0002	.0004	.00002	-.0015	.0001
#2	.0000	-.0029	-.0004	-.0032	-.0001	.00002	-.0013	.0002
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0069	.0002	.0008	-.0001	-.0001	-.0006	-.0002
Stddev	.0001	.0027	.0000	.0008	.0006	.0002	.0010	.0053
%RSD	8360.	39.64	14.13	94.36	483.0	191.9	150.5	2364.
#1	.0001	.0049	.0002	.0014	.0003	-.0002	-.0013	-.0039
#2	-.0001	.0088	.0002	.0003	-.0005	.0000	.0000	.0035
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	-.0032	-.0042	.0000	.0006	.00000	-.0020	.0008
Stddev	.0015	.0005	.0514	.000	.0008	.00003	.0015	.0002
%RSD	224.9	14.86	1232.	470.6	124.6	1013.3	75.37	23.11
#1	.0017	-.0029	-.0406	.0000	.0011	.00002	-.0031	.0007
#2	-.0004	-.0036	.0322	-.0001	.0001	-.00002	-.0009	.0009
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 12/5/2018 15:16:03 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0021	.0467	.0003	-.0106	.0000	.0407	.00017
Stddev	.0001	.0025	.0123	.0021	.0009	.000	.0019	.00002
%RSD	353.4	120.1	26.30	721.7	8.332	265.1	4.739	10.740
#1	.0000	.0003	.0553	-.0012	-.0100	.0000	.0421	.00019
#2	.0001	.0038	.0380	.0018	-.0112	-.0001	.0393	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0007	F .0024	.0002	.0003	.0001	-.0015	.0006
Stddev	.0004	.0000	.0001	.0001	.0001	.0001	.0021	.0036
%RSD	19.49	6.219	3.658	49.31	21.28	135.6	133.8	650.7
#1	.0023	.0006	.0023	.0002	.0003	.0000	-.0001	.0031
#2	.0017	.0007	.0024	.0001	.0002	.0002	-.0030	-.0020
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			.0020					
Low Limit			-.0020					

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5730.8	89059.	5419.5
Stddev	22.8	543.	22.5
%RSD	.39860	.60977	.41556
#1	5746.9	88675.	5435.5
#2	5714.6	89443.	5403.6

Sample Name: KQ1817136-01 Acquired: 12/5/2018 15:18:41 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811120-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049	-.0016	1.048	2.102	-.00002	.0029	.2049	.2051
#1	.0048	-.0026	1.048	2.106	.00000	.0029	.2049	.2055
#2	.0049	-.0006	1.049	2.098	-.00004	.0030	.2050	.2047

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0370	1.061	-.0001	.2044	.2166	.0069	1.022	-.0031
#1	.0371	1.070	-.0002	.2040	.2178	.0033	1.020	-.0045
#2	.0369	1.052	.0000	.2048	.2155	.0104	1.023	-.0016

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039	.00006	.0008	.2044	.0034	.0087	.1969	.0962
#1	.0040	.00002	.0008	.2042	.0056	.0005	.1955	.0913
#2	.0038	.00010	.0008	.2045	.0012	.0169	.1983	.1010

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2099	.0668	.00021	.0003	.0011	.0016	.0029	2.009
#1	.2092	.0703	.00015	.0007	.0011	.0016	.0031	2.011
#2	.2106	.0632	.00027	-.0001	.0011	.0016	.0027	2.008

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	2.064	-.0032	.0051
#1	2.066	-.0039	.0044
#2	2.061	-.0025	.0057

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5745.7	91262.	5625.8
#1	5749.1	90468.	5618.6
#2	5742.2	92057.	5633.1

Sample Name: K1811120-004 Acquired: 12/5/2018 15:21:08 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0321	.0053	.0023	.1849	.00003	.0164	.0023	.0022
#1	.0326	.0065	.0038	.1847	.00005	.0166	.0023	.0021
#2	.0316	.0040	.0007	.1850	.00002	.0162	.0023	.0022

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	347.1	.0005	.0036	.0042	.0045	.0054	.0019	.0065
#1	347.7	.0002	.0038	.0046	.0042	.0072	.0016	.0062
#2	346.5	.0008	.0034	.0038	.0048	.0037	.0023	.0069

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.137	1.0386	.0030	.0094	.0272	13.68	.0027	1.576
#1	4.137	1.0395	.0028	.0093	.0262	13.73	.0029	1.590
#2	4.136	1.0377	.0032	.0095	.0283	13.63	.0025	1.563

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	3.293	.67024	-.0006	.0004	.0016	.0018	.1120
#1	-.0003	3.304	.67100	-.0014	.0008	.0017	.0018	.1122
#2	-.0004	3.281	.66947	.0002	.0001	.0015	.0019	.1119

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1097	-.0004	2.714
#1	.1098	-.0015	2.719
#2	.1097	.0007	2.710

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5331.1	84826.	5514.7
#1	5332.5	84709.	5524.5
#2	5329.7	84944.	5504.8

019556

Sample Name: K1811120-004L Acquired: 12/5/2018 15:23:40 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 25 Test Type: E Sample Type:
Comment: AM 120518B 1/25 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069	.0011	.0004	.0375	.00002	.0030	.0005	.0004
#1	.0070	.0001	.0024	.0375	.00004	.0024	.0005	.0004
#2	.0068	.0020	-.0017	.0375	.00000	.0036	.0005	.0003

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	69.86	-.0003	.0006	.0002	.0002	.0038	.0000	.0002
#1	69.51	-.0008	.0006	.0003	.0003	.0018	.0008	.0002
#2	70.20	.0002	.0006	.0001	.0000	.0057	-.0008	.0002

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8471	.21224	.0008	.0021	.0058	2.775	.0014	.3022
#1	.8426	.21138	.0005	.0021	.0055	2.749	.0009	.2976
#2	.8515	.21309	.0010	.0021	.0060	2.800	.0018	.3068

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.6726	.13579	.0005	-.0002	.0008	.0003	.0231
#1	-.0002	.6893	.13521	.0005	-.0001	.0005	.0001	.0233
#2	.0001	.6559	.13638	.0005	-.0002	.0011	.0006	.0229

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0233	-.0018	.5532
#1	.0235	-.0013	.5604
#2	.0231	-.0022	.5461

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5562.0	89173.	5571.5
#1	5559.3	89853.	5574.0
#2	5564.7	88493.	5568.9

019557

Sample Name: KQ1817136-03 Acquired: 12/5/2018 15:26:15 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811120-004D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0328	.0066	-.0002	.1843	.00006	.0178	.0023	.0022
#1	.0329	.0062	-.0010	.1852	.00009	.0169	.0023	.0022
#2	.0328	.0071	.0006	.1833	.00003	.0187	.0024	.0023

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	346.4	.0001	.0035	.0036	.0042	.0120	.0025	.0064
#1	349.4	-.0001	.0035	.0031	.0036	.0162	.0020	.0073
#2	343.4	.0004	.0036	.0040	.0048	.0078	.0031	.0056

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.098	1.0416	.0032	.0102	.0300	13.70	.0017	1.552
#1	4.131	1.0439	.0032	.0103	.0294	13.82	.0047	1.563
#2	4.066	1.0392	.0033	.0101	.0307	13.59	-.0013	1.541

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	3.286	.67407	.0004	.0008	.0010	.0018	.1117
#1	-.0004	3.301	.67955	.0009	.0003	.0012	.0019	.1120
#2	.0006	3.270	.66859	-.0001	.0013	.0008	.0017	.1115

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1107	.0010	2.719
#1	.1108	.0010	2.737
#2	.1105	.0010	2.702

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5319.5	85662.	5544.0
#1	5328.8	85576.	5517.8
#2	5310.3	85749.	5570.2

019558

Sample Name: KQ1817136-04 Acquired: 12/5/2018 15:28:47 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811120-004S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0356	.0041	.9743	2.186	.00007	.0185	.1952	.1957
#1	.0354	.0033	.9759	2.187	.00000	.0201	.1944	.1953
#2	.0357	.0049	.9728	2.186	.00013	.0170	.1960	.1960

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	343.8	.9896	.0037	.1943	.1916	.0083	.9398	.0063
#1	343.5	.9907	.0039	.1937	.1921	.0050	.9366	.0067
#2	344.0	.9885	.0035	.1949	.1911	.0115	.9429	.0060

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.074	1.0364	.0030	.1994	.0317	13.53	.1873	1.372
#1	4.074	1.0380	.0030	.1988	.0321	13.56	.1850	1.380
#2	4.074	1.0347	.0031	.1999	.0313	13.50	.1895	1.364

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1136	3.289	.66884	.0009	.0011	.0016	.0057	1.989
#1	.1135	3.286	.66827	.0020	.0009	.0018	.0062	1.983
#2	.1137	3.293	.66940	-.0002	.0012	.0013	.0052	1.995

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.955	.0011	2.686
#1	1.953	.0003	2.692
#2	1.957	.0019	2.681

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5299.0	84901.	5533.5
#1	5301.5	85097.	5559.7
#2	5296.4	84706.	5507.3

X - PS is in control

AEm 12/5/18

Sample Name: K1811120-004A Acquired: 12/5/2018 15:31:14 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E A=0.1/10mL MET3-37-D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0348	.0077	4.879	10.22	.00006	.0192	.9618	.9682
#1	.0356	.0067	4.873	10.11	.00000	.0197	.9627	.9675
#2	.0339	.0086	4.886	10.32	.00011	.0187	.9608	.9689

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	346.3	4.962	.0039	.9640	.9316	.0129	4.721	.0051
#1	343.4	4.981	.0041	.9641	.9315	.0157	4.720	.0036
#2	349.2	4.943	.0036	.9638	.9316	.0101	4.723	.0065

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.110	1.0407	.0035	.9620	.0285	13.58	.9582	1.574
#1	4.068	1.0423	.0035	.9615	.0302	13.58	.9578	1.577
#2	4.152	1.0390	.0034	.9626	.0267	13.57	.9586	1.571

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8826	3.239	.67481	-.0007	.0006	.0014	.0183	9.453
#1	.8819	3.231	.66886	-.0007	.0014	.0015	.0184	9.477
#2	.8834	3.246	.68077	-.0008	-.0003	.0013	.0181	9.429

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	.0030	2.705
#1	9.059	.0024	2.701
#2	9.060	.0036	2.709

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5255.5	84890.	5482.3
#1	5250.1	84599.	5535.7
#2	5260.9	85182.	5428.9

019560

Sample Name: KQ1817279-02 Acquired: 12/5/2018 15:33:45 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811358-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	.0015	.0011	F .0115	-.00001	F .0339	.0001	-.0002
#1	.0036	.0007	.0019	.0111	-.00002	.0343	.0001	-.0002
#2	.0034	.0024	.0004	.0119	.00000	.0335	.0000	-.0003

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .4712	.0001	-.0008	-.0001	-.0005	-.0001	.0008	-.0020
#1	.4745	-.0001	-.0009	.0000	.0001	-.0005	.0012	-.0046
#2	.4680	.0002	-.0006	-.0002	-.0010	.0003	.0004	.0005

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0711	.00039	.0000	.0007	.0036	.1338	.0012	.0161
#1	.0712	.00034	.0000	.0007	.0031	.1506	-.0017	.0242
#2	.0709	.00045	-.0001	.0006	.0040	.1171	.0040	.0080

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	F 285.6	.00060	.0001	.0016	.0001	.0001	.0036
#1	.0007	285.4	.00066	.0005	.0023	.0001	.0000	.0034
#2	-.0001	285.9	.00055	-.0002	.0010	.0001	.0001	.0038

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0033	-.0022	.0031
#1	.0033	-.0015	.0005
#2	.0034	-.0030	.0057

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5386.3	84726.	5487.8
#1	5414.9	84534.	5501.1
#2	5357.6	84919.	5474.4

Carryover.
See rerun
AKm 12/5/18

019561

Sample Name: KQ1817279-01 Acquired: 12/5/2018 15:36:25 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811358-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	-.0024	.9903	2.028	-.00004	.0381	.2003	.1999
#1	.0049	-.0012	.9943	2.020	-.00006	.0395	.2004	.1997
#2	.0051	-.0037	.9863	2.036	-.00003	.0367	.2001	.2002

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4929	1.023	-.0002	.1919	.1832	.0037	.9451	-.0032
#1	.4916	1.030	-.0001	.1917	.1834	.0065	.9434	-.0037
#2	.4942	1.017	-.0002	.1920	.1830	.0008	.9469	-.0027

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0758	.00036	.0003	.1944	.0022	.0956	.1921	.0488
#1	.0752	.00036	.0005	.1945	.0004	.0282	.1923	.0320
#2	.0764	.00036	.0001	.1943	.0041	.1629	.1918	.0657

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1797	299.4	.00086	.0009	.0003	.0003	.0025	1.985
#1	.1796	299.2	.00087	.0004	.0003	.0003	.0023	1.984
#2	.1798	299.6	.00086	.0013	.0004	.0003	.0028	1.987

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.881	-.0018	.0053
#1	1.884	-.0016	.0065
#2	1.877	-.0020	.0041

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5300.8	84055.	5446.8
#1	5315.6	84366.	5418.4
#2	5285.9	83744.	5475.3

019562

Sample Name: K1811358-001 Acquired: 12/5/2018 15:38:58 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0827	-.0012	.0006	.1141	.00001	.4143	.0010	.0006
#1	.0823	.0017	.0008	.1131	.00005	.4144	.0010	.0006
#2	.0831	-.0041	.0004	.1152	-.00002	.4141	.0010	.0007

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.924	.0020	.0198	.1653	.1617	3.429	.0010	.0750
#1	1.925	.0018	.0199	.1653	.1619	3.444	.0001	.0761
#2	1.924	.0023	.0196	.1652	.1614	3.415	.0018	.0740

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5008	.11460	.0002	.0352	.0148	.3836	.0015	.5645
#1	.4982	.11460	.0003	.0354	.0145	.4110	.0008	.5636
#2	.5034	.11459	.0001	.0351	.0150	.3563	.0021	.5653

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	295.4	.00864	.0000	.0004	.0003	.0002	.1528
#1	.0004	295.1	.00864	.0000	-.0004	.0004	-.0001	.1526
#2	.0006	295.7	.00864	.0000	.0013	.0002	.0006	.1530

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1493	.0000	.1055
#1	.1489	.0021	.1053
#2	.1497	-.0021	.1057

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5456.4	85615.	5457.6
#1	5443.3	85739.	5459.3
#2	5469.5	85491.	5455.9

019563

Sample Name: KQ1817279-03 Acquired: 12/5/2018 15:41:34 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811358-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0833	.0004	.0010	.1149	.00007	.4036	.0009	.0007
#1	.0835	.0002	.0007	.1141	.00008	.4076	.0009	.0009
#2	.0832	.0005	.0013	.1157	.00007	.3996	.0009	.0006

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.858	.0020	.0192	.1584	.1594	3.349	.0009	.0757
#1	1.858	.0020	.0192	.1590	.1600	3.348	.0025	.0765
#2	1.858	.0021	.0191	.1579	.1589	3.350	-.0007	.0750

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4990	.11104	.0002	.0336	.0142	.4849	.0005	.5218
#1	.4964	.11055	.0001	.0339	.0133	.4760	-.0007	.5196
#2	.5016	.11154	.0002	.0334	.0151	.4937	.0018	.5240

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	284.4	.00869	.0015	.0009	.0013	-.0001	.1479
#1	-.0005	286.2	.00883	.0021	.0018	.0014	-.0002	.1482
#2	.0003	282.7	.00855	.0009	.0001	.0013	-.0001	.1476

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.1453	-.0011	.1000
#1	.1455	-.0032	.0991
#2	.1451	.0010	.1008

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5543.6	85025.	5479.0
#1	5537.0	86062.	5482.6
#2	5550.2	83988.	5475.4

Sample Name: CCVB Acquired: 12/5/2018 15:44:12 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.562	10.90	.0003	1.058	10.63	.00014	-.0001	.0000
Stddev	.003	.09	.0017	.000	.12	.00008	.0005	.000
%RSD	.0451	.7924	578.7	.0161	1.149	54.936	822.5	318.1
#1	7.564	10.96	.0015	1.058	10.71	.00008	-.0004	.0000
#2	7.560	10.84	-.0009	1.058	10.54	.00019	.0003	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	10.48	10.13	.0002	-.0002	.0007	-.0017	10.31
Stddev	.0002	.07	.10	.0005	.0001	.0001	.0000	.04
%RSD	33.53	.6875	.9741	279.3	27.35	11.88	2.024	.3736
#1	-.0006	10.53	10.20	-.0002	-.0003	.0006	-.0017	10.33
#2	-.0004	10.43	10.06	.0006	-.0002	.0007	-.0017	10.28
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	1.069	10.35	10.32	10.62	1.0158	1.031	.0000
Stddev	.0027	.005	.07	.07	.08	.0007	.009	.0002
%RSD	371.9	.5054	.6799	.6971	.7604	.07255	.8679	539.9
#1	-.0026	1.073	10.40	10.37	10.68	1.0163	1.038	-.0001
#2	.0012	1.065	10.30	10.27	10.57	1.0152	1.025	.0002
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 12/5/2018 15:44:12 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0010	10.11	10.81	.0010	10.40	.0005	10.69	1.0443
Stddev	.0001	.02	.14	.0011	.01	.0002	.07	.0081
%RSD	12.53	.2206	1.334	116.2	.0714	51.99	.6855	.77542
#1	-.0011	10.12	10.91	.0002	10.40	.0007	10.74	1.0500
#2	-.0009	10.09	10.71	.0017	10.41	.0003	10.64	1.0385
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0003	.0022	.0000	.0004	.0000	1.030	1.050
Stddev	.0006	.0003	.0003	.0002	.0001	.0001	.000	.002
%RSD	155.2	112.1	14.42	242100.	15.12	209.7	.0003	.1417
#1	-.0008	-.0001	.0019	.0002	.0004	.0001	1.030	1.051
#2	.0000	-.0005	.0024	-.0002	.0004	.0000	1.030	1.049
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5708.5	88390.	5545.1
Stddev	4.1	134.	5.6
%RSD	.07193	.15133	.10185
#1	5705.6	88295.	5541.1
#2	5711.4	88484.	5549.1

Sample Name: CCVA Acquired: 12/5/2018 15:46:58 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2472	.2918	.2660	.2661	.2573	.25576	.2557	.2532
Stddev	.0013	.0019	.0006	.0026	.0028	.00156	.0013	.0008
%RSD	.5132	.6467	.2119	.9657	1.081	.61018	.5262	.3295
#1	.2481	.2931	.2656	.2643	.2593	.25686	.2567	.2526
#2	.2463	.2904	.2664	.2679	.2553	.25465	.2548	.2538
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2536	.5186	.5064	.2598	.2525	.2511	.2594	.2598
Stddev	.0004	.0068	.0003	.0003	.0003	.0001	.0024	.0030
%RSD	.1725	1.303	.0545	.1109	.1378	.0462	.9258	1.164
#1	.2533	.5233	.5066	.2600	.2523	.2510	.2611	.2619
#2	.2539	.5138	.5062	.2596	.2528	.2512	.2577	.2577
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2515	-.0033	.2523	.2618	.2678	.25738	.2565	.2510
Stddev	.0022	.0005	.0029	.0023	.0011	.00067	.0005	.0003
%RSD	.8645	15.27	1.167	.8639	.4216	.26199	.1782	.1222
#1	.2500	-.0037	.2544	.2634	.2670	.25786	.2568	.2508
#2	.2531	-.0029	.2502	.2602	.2686	.25691	.2562	.2512
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

019567

Sample Name: CCVA Acquired: 12/5/2018 15:46:58 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2524	.0003	2.735	.2520	.1172	.2555	.3022	.00003
Stddev	.0002	.0001	.076	.0022	.0154	.0027	.0033	.00003
%RSD	.0685	23.73	2.793	.8657	13.16	1.071	1.080	101.24
#1	.2525	.0003	2.789	.2536	.1063	.2574	.3045	.00005
#2	.2523	.0004	2.681	.2505	.1282	.2535	.2999	.00001
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2523	.2520	.2569	.2552	.2520	.2633	-.0011	-.0020
Stddev	.0017	.0001	.0001	.0000	.0010	.0011	.0004	.0026
%RSD	.6705	.0556	.0357	.0131	.4160	.4357	36.67	130.8
#1	.2511	.2521	.2569	.2551	.2513	.2624	-.0008	-.0002
#2	.2535	.2519	.2568	.2552	.2528	.2641	-.0014	-.0038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5771.0	90280.	5652.1
Stddev	14.6	434.	69.2
%RSD	.25293	.48066	1.2240
#1	5760.6	90587.	5603.2
#2	5781.3	89973.	5701.1

Sample Name: CCB Acquired: 12/5/2018 15:49:21 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0032	.0005	.0005	-.0002	.00001	-.0012	.0001
Stddev	.0001	.0024	.0033	.0007	.0000	.00002	.0004	.0001
%RSD	171.2	75.59	658.8	143.4	12.39	228.23	34.92	84.81
#1	-.0001	-.0050	.0028	.0000	-.0002	.00000	-.0009	.0000
#2	.0000	-.0015	-.0018	.0010	-.0002	.00002	-.0015	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0048	.0001	.0005	-.0002	.0000	-.0008	.0005
Stddev	.0000	.0102	.0001	.0001	.0002	.0005	.0006	.0020
%RSD	15.38	213.0	100.2	27.78	71.46	2989.	75.23	374.9
#1	-.0002	.0120	.0001	.0004	-.0004	.0003	-.0012	.0020
#2	-.0002	-.0024	.0000	.0006	-.0001	-.0003	-.0004	-.0009
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	-.0039	.0125	.0000	.0004	-.00002	-.0029	.0007
Stddev	.0003	.0017	.0002	.0000	.0000	.00007	.0006	.0003
%RSD	41.73	43.76	1.212	240.9	.0443	445.56	19.68	46.53
#1	-.0008	-.0027	.0126	.0000	.0004	.00003	-.0033	.0010
#2	-.0004	-.0051	.0124	.0000	.0004	-.00006	-.0025	.0005
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

019569

Sample Name: CCB Acquired: 12/5/2018 15:49:21 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0004	.0456	.0004	.0028	-.0003	.0199	.00015
Stddev	.000	.0001	.0055	.0001	.0176	.0003	.0025	.00018
%RSD	2052.	16.17	12.03	28.74	630.7	89.08	12.48	122.87
#1	.0002	-.0004	.0417	.0003	-.0096	-.0005	.0217	.00002
#2	-.0002	-.0005	.0495	.0005	.0152	-.0001	.0182	.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023	-.0002	.0009	-.0006	.0003	.0001	-.0011	-.0023
Stddev	.0011	.0001	.0001	.0007	.0001	.0001	.0009	.0002
%RSD	49.66	29.22	12.72	110.7	19.68	100.8	79.77	9.133
#1	.0015	-.0002	.0010	-.0011	.0002	.0000	-.0005	-.0021
#2	.0031	-.0003	.0008	-.0001	.0003	.0002	-.0017	-.0024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5684.3	91617.	5610.2
Stddev	.9	414.	9.6
%RSD	.01621	.45227	.17078
#1	5683.6	91324.	5603.4
#2	5684.9	91910.	5617.0

019570

Sample Name: KQ1817279-02 Acquired: 12/5/2018 15:55:37 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: AM 120518B 1/5 E K1811358-MB RERUN

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	.0001	-.0019	.0111	.00001	.0364	.0000	.0000
#1	.0031	.0033	-.0033	.0111	.00003	.0364	.0000	.0000
#2	.0034	-.0032	-.0004	.0111	.00000	.0365	.0000	.0000

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4675	.0005	.0000	-.0004	-.0016	.0024	-.0002	-.0019
#1	.4679	.0004	.0001	-.0003	-.0018	-.0011	-.0015	-.0032
#2	.4671	.0005	-.0002	-.0005	-.0014	.0058	.0011	-.0007

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0707	.00034	.0002	.0006	.0026	.1327	.0020	.0177
#1	.0706	.00033	.0001	.0009	.0021	.1055	.0016	.0355
#2	.0708	.00035	.0002	.0004	.0031	.1599	.0024	-.0001

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	276.8	.00084	-.0003	.0003	-.0002	-.0005	.0036
#1	-.0003	277.2	.00093	-.0004	.0005	.0000	-.0004	.0037
#2	-.0005	276.3	.00076	-.0003	.0001	-.0004	-.0005	.0034

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0032	-.0019	.0061
#1	.0031	-.0021	.0020
#2	.0033	-.0017	.0103

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5429.6	84651.	5391.4
#1	5408.7	83924.	5367.6
#2	5450.5	85377.	5415.2

Sample Name: KQ1817279-04 Acquired: 12/5/2018 15:58:08 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811358-001S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0889	-.0001	.9872	2.108	-.00001	.4033	.1988	.1978
#1	.0894	-.0011	.9896	2.110	.00000	.4050	.1990	.1976
#2	.0884	.0008	.9847	2.105	-.00002	.4016	.1986	.1981

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.902	1.018	.0198	.3552	.3399	3.391	.9371	.0752
#1	1.907	1.025	.0198	.3560	.3429	3.397	.9337	.0751
#2	1.897	1.010	.0198	.3545	.3369	3.385	.9406	.0752

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4889	.11230	.0003	.2261	.0123	.4368	.1911	.5489
#1	.4890	.11280	.0003	.2253	.0138	.3932	.1891	.5568
#2	.4888	.11180	.0004	.2269	.0108	.4804	.1930	.5411

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1780	291.1	.00856	.0013	-.0001	.0001	.0028	2.110
#1	.1780	291.2	.00865	.0022	-.0001	.0002	.0022	2.114
#2	.1779	291.0	.00847	.0004	-.0001	.0000	.0034	2.106

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	2.011	.0000	.1057
#1	2.012	-.0010	.1088
#2	2.011	.0011	.1027

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5337.5	84526.	5565.1
#1	5342.9	84359.	5548.3
#2	5332.1	84693.	5581.9

Sample Name: K1811358-001A Acquired: 12/5/2018 16:00:38 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E A=0.1/10mL MET3-37-D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0904	.0072	5.017	10.07	-.00003	.4191	.9815	.9824
#1	.0898	.0052	5.042	10.19	-.00010	.4157	.9801	.9823
#2	.0910	.0091	4.991	9.947	.00003	.4225	.9830	.9825

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.920	5.056	.0203	1.125	1.083	3.430	4.686	.0774
#1	1.923	5.071	.0204	1.124	1.074	3.434	4.682	.0785
#2	1.917	5.040	.0203	1.125	1.091	3.425	4.690	.0764

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4941	.11437	.0004	.9911	.0129	.4177	.9670	.5495
#1	.4997	.11482	.0004	.9913	.0125	.4518	.9673	.5322
#2	.4884	.11393	.0003	.9909	.0133	.3835	.9667	.5667

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8797	291.3	.00887	.0011	.0010	.0001	.0165	9.839
#1	.8770	294.4	.00881	.0010	.0015	.0001	.0162	9.823
#2	.8825	288.1	.00892	.0011	.0004	.0002	.0168	9.855

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	-.0020	.1072
#1	9.345	-.0026	.1064
#2	9.279	-.0013	.1079

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5377.4	85736.	5522.5
#1	5398.2	85250.	5485.9
#2	5356.6	86223.	5559.1

Sample Name: KQ1817414-02 Acquired: 12/5/2018 16:03:14 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811512-MB

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091	.0007	.0041	.0000	.00002	.0059	.0000	-.0002
#1	.0093	-.0012	.0057	-.0001	.00003	.0054	.0000	-.0003
#2	.0090	.0027	.0025	.0001	.00001	.0065	.0001	-.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0066	.0002	-.0003	.0004	-.0006	.0038	-.0001	-.0030
#1	.0042	.0001	-.0001	.0005	-.0006	-.0009	-.0010	-.0019
#2	.0091	.0004	-.0006	.0003	-.0005	.0085	.0007	-.0042

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023	.00004	.0002	.0000	.0012	-.0589	.0018	.1204
#1	.0005	.00000	-.0002	.0000	.0012	-.0678	.0025	.1172
#2	.0040	.00008	.0005	-.0001	.0012	-.0500	.0012	.1237

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0689	.00002	-.0001	.0004	.0011	-.0004	.0009
#1	.0005	.0760	-.00003	.0004	.0010	.0013	-.0005	.0008
#2	-.0006	.0618	.00006	-.0007	-.0002	.0010	-.0003	.0009

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0007	-.0035	.0057
#1	.0007	-.0045	.0053
#2	.0007	-.0025	.0061

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5677.5	91456.	5521.1
#1	5663.0	91111.	5544.2
#2	5692.1	91800.	5498.0

019574

Sample Name: KQ1817414-01 Acquired: 12/5/2018 16:05:50 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811512-LCSE

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	.0015	1.013	2.052	-.00003	.0023	.2020	.2030
#1	.0024	.0014	1.016	2.061	-.00009	.0010	.2021	.2029
#2	.0020	.0015	1.011	2.043	.00002	.0035	.2020	.2031

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	1.039	-.0001	.2013	.2081	-.0002	1.013	-.0022
#1	.0033	1.044	-.0001	.2016	.2098	-.0007	1.015	-.0019
#2	.0034	1.034	.0000	.2010	.2065	.0003	1.012	-.0026

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.00002	-.0002	.2024	.0016	-.0612	.1912	.0247
#1	.0003	-.00004	-.0001	.2024	.0023	-.0696	.1921	.0296
#2	.0004	.00008	-.0003	.2025	.0010	-.0527	.1903	.0197

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2050	.0526	.00006	-.0002	.0005	.0010	.0037	1.977
#1	.2058	.0638	.00008	.0001	.0004	.0010	.0030	1.978
#2	.2042	.0414	.00004	-.0005	.0006	.0010	.0043	1.977

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.990	-.0031	.0019
#1	1.987	-.0048	.0005
#2	1.992	-.0014	.0034

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5642.1	90496.	5543.8
#1	5635.1	90483.	5553.9
#2	5649.0	90510.	5533.8

Sample Name: K1811512-001 Acquired: 12/5/2018 16:08:16 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0361	.0010	.0009	.0185	-.00015	.0484	.0358	.0360
#1	.0356	.0017	.0025	.0187	-.00018	.0473	.0359	.0361
#2	.0367	.0003	-.0008	.0183	-.00012	.0494	.0357	.0359

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.625	.0217	.0009	.0132	.0120	.0288	.0001	-.0022
#1	2.630	.0214	.0009	.0131	.0113	.0340	.0010	-.0010
#2	2.619	.0220	.0009	.0133	.0126	.0235	-.0008	-.0033

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.117	.01565	.0007	.0021	.0701	.0874	.0002	1.958
#1	1.118	.01562	.0008	.0021	.0724	.1016	.0004	1.962
#2	1.115	.01569	.0007	.0021	.0678	.0732	.0000	1.953

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	7.950	.04393	.0007	.0006	.0025	.0013	.0105
#1	.0012	7.944	.04386	-.0002	.0005	.0023	.0020	.0105
#2	.0003	7.956	.04400	.0016	.0006	.0027	.0007	.0105

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0110	-.0029	.3067
#1	.0110	-.0041	.3080
#2	.0110	-.0016	.3054

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5837.3	90133.	5584.1
#1	5817.6	89803.	5568.0
#2	5856.9	90462.	5600.3

Sample Name: KQ1817414-03 Acquired: 12/5/2018 16:10:53 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811512-001D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0361	.0021	-.0012	.0181	-.00007	.0417	.0348	.0352
#1	.0360	.0017	-.0005	.0183	-.00005	.0418	.0349	.0352
#2	.0362	.0025	-.0020	.0180	-.00009	.0417	.0348	.0352

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.557	.0221	.0010	.0123	.0111	.0285	-.0003	.0002
#1	2.553	.0220	.0013	.0124	.0115	.0305	-.0013	-.0003
#2	2.561	.0222	.0008	.0123	.0108	.0264	.0008	.0007

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.105	.01523	.0028	.0018	.0686	.1761	.0026	3.561
#1	1.104	.01521	.0028	.0017	.0678	.1928	.0010	3.573
#2	1.106	.01524	.0028	.0019	.0694	.1595	.0041	3.549

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	7.799	.04304	-.0014	.0013	.0031	.0017	.0098
#1	.0001	7.815	.04319	-.0010	.0007	.0029	.0020	.0096
#2	.0008	7.783	.04290	-.0017	.0018	.0034	.0013	.0100

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	.0104	-.0008	.2942
#1	.0105	.0011	.2943
#2	.0103	-.0027	.2942

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5874.2	90530.	5576.5
#1	5886.5	90560.	5593.5
#2	5862.0	90499.	5559.4

Sample Name: KQ1817414-04 Acquired: 12/5/2018 16:13:27 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E K1811512-001S

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0386	.0042	1.011	2.043	.00004	.0445	.2235	.2265
#1	.0387	.0038	1.009	2.048	.00006	.0446	.2242	.2270
#2	.0385	.0046	1.013	2.038	.00002	.0444	.2229	.2261

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.523	1.025	.0010	.2029	.2238	.0233	.9566	.0003
#1	2.550	1.018	.0010	.2033	.2222	.0282	.9583	.0017
#2	2.497	1.031	.0010	.2025	.2254	.0183	.9549	-.0012

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.084	.01508	.0005	.1918	.0697	.1048	.1875	3.541
#1	1.085	.01503	.0006	.1921	.0701	.0963	.1889	3.532
#2	1.083	.01513	.0005	.1915	.0693	.1132	.1862	3.550

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2003	7.720	.04251	.0001	.0012	.0027	.0053	1.865
#1	.2003	7.729	.04273	.0007	.0014	.0025	.0053	1.872
#2	.2004	7.711	.04229	-.0005	.0010	.0030	.0054	1.857

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	1.993	-.0008	.2925
#1	1.991	-.0023	.2916
#2	1.996	.0007	.2934

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5808.8	91102.	5599.8
#1	5797.5	91376.	5596.5
#2	5820.1	90828.	5603.0

019578

Sample Name: K1811512-001A Acquired: 12/5/2018 16:15:59 Type: Unk
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: E Sample Type:
Comment: AM 120518B 1/5 E A=0.1/10mL MET3-37-D

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0398	.0088	5.167	10.46	-.00010	.0511	1.019	1.028
#1	.0401	.0086	5.180	10.43	-.00012	.0518	1.021	1.029
#2	.0394	.0089	5.153	10.49	-.00008	.0504	1.017	1.027

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.659	5.163	.0012	1.012	1.091	.0296	4.988	-.0014
#1	2.642	5.157	.0015	1.011	1.100	.0280	4.991	-.0015
#2	2.676	5.168	.0010	1.012	1.082	.0311	4.986	-.0013

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.116	.01569	.0012	.9913	.0715	.1206	.9966	1.955
#1	1.120	.01558	.0012	.9919	.0713	.1560	.9990	1.940
#2	1.111	.01580	.0011	.9906	.0717	.0851	.9943	1.971

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.005	7.997	.04459	-.0007	.0005	.0018	.0188	9.622
#1	1.013	8.026	.04461	.0003	.0011	.0016	.0192	9.635
#2	.9974	7.968	.04458	-.0017	-.0001	.0020	.0184	9.609

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	>4.500	-.0021	.2972
#1	9.811	-.0057	.2996
#2	9.763	.0016	.2947

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5672.9	90529.	5560.2
#1	5685.2	91152.	5554.5
#2	5660.6	89907.	5565.9

Sample Name: CCVB Acquired: 12/5/2018 16:18:37 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.764	10.77	-.0006	1.034	9.934	.00007	.0000	.0000
Stddev	.015	.07	.0014	.007	.211	.00003	.001	.000
%RSD	.1888	.6071	235.5	.7238	2.127	46.451	4984.	197.9
#1	7.774	10.82	.0004	1.040	9.784	.00010	-.0005	.0000
#2	7.753	10.72	-.0016	1.029	10.08	.00005	.0005	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	9.950	9.832	.0006	.0002	.0010	-.0007	10.05
Stddev	.0000	.026	.168	.0005	.0000	.0002	.0006	.04
%RSD	8.584	.2586	1.707	77.32	.8045	15.62	79.10	.3641
#1	-.0005	9.932	9.951	.0009	.0002	.0011	-.0012	10.02
#2	-.0005	9.969	9.713	.0003	.0002	.0009	-.0003	10.07
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	1.035	9.898	9.768	10.30	.97752	.9815	-.0003
Stddev	.0003	.008	.015	.065	.06	.00334	.0116	.0001
%RSD	131.2	.8047	.1486	.6648	.5548	.34189	1.177	36.85
#1	.0000	1.041	9.888	9.814	10.34	.97516	.9896	-.0003
#2	.0004	1.029	9.909	9.722	10.26	.97989	.9733	-.0002
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 12/5/2018 16:18:37 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	10.12	10.29	.0029	10.26	.0002	10.37	.99990
Stddev	.0001	.02	.12	.0018	.09	.0003	.07	.00116
%RSD	13.74	.2302	1.198	62.47	.8428	171.2	.6515	.11558
#1	-.0008	10.13	10.37	.0042	10.32	.0000	10.42	1.0007
#2	-.0006	10.10	10.20	.0016	10.20	.0004	10.32	.99908
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	.0000	.0011	-.0004	.0006	.0003	1.024	1.029
Stddev	.0002	.0007	.0003	.0007	.0003	.0002	.002	.001
%RSD	12.69	4300.	29.49	164.3	44.95	43.81	.2055	.0738
#1	.0019	-.0005	.0013	.0001	.0008	.0004	1.025	1.030
#2	.0016	.0005	.0008	-.0009	.0004	.0002	1.022	1.029
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5662.3	90717.	5641.2
Stddev	7.9	83.	40.9
%RSD	.13991	.09161	.72556
#1	5667.9	90776.	5670.1
#2	5656.7	90658.	5612.2

019581

Sample Name: CCVA Acquired: 12/5/2018 16:21:24 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2564	.2875	.2578	.2641	.2475	.25613	.2528	.2533
Stddev	.0003	.0038	.0024	.0014	.0004	.00129	.0019	.0001
%RSD	.1011	1.315	.9335	.5238	.1531	.50264	.7553	.0205
#1	.2562	.2848	.2595	.2651	.2478	.25522	.2515	.2533
#2	.2566	.2902	.2561	.2631	.2473	.25704	.2542	.2533
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2537	.5136	.5025	.2516	.2507	.2515	.2546	.2575
Stddev	.0002	.0038	.0015	.0019	.0000	.0005	.0015	.0058
%RSD	.0815	.7473	.3036	.7463	.0152	.1956	.5810	2.242
#1	.2536	.5163	.5014	.2503	.2507	.2512	.2536	.2616
#2	.2539	.5109	.5036	.2529	.2507	.2519	.2557	.2534
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2542	-.0018	.2908	.2531	.2649	.25285	.2437	.2510
Stddev	.0007	.0018	.0069	.0006	.0001	.00054	.0058	.0001
%RSD	.2600	101.4	2.385	.2429	.0198	.21363	2.376	.0565
#1	.2546	-.0005	.2957	.2535	.2650	.25247	.2396	.2511
#2	.2537	-.0030	.2859	.2527	.2649	.25323	.2478	.2509
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

019582

Sample Name: CCVA Acquired: 12/5/2018 16:21:24 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2530	.0007	2.557	.2537	.1121	.2576	.2809	.00018
Stddev	.0000	.0012	.033	.0011	.0063	.0006	.0104	.00009
%RSD	.0125	164.3	1.289	.4427	5.628	.2485	3.712	47.473
#1	.2530	.0016	2.534	.2529	.1165	.2571	.2735	.00012
#2	.2530	-.0001	2.581	.2545	.1076	.2580	.2882	.00024
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2518	.2508	.2515	.2512	.2520	.2589	-.0010	-.0028
Stddev	.0011	.0009	.0011	.0001	.0001	.0004	.0006	.0007
%RSD	.4394	.3469	.4422	.0372	.0440	.1662	64.23	23.78
#1	.2526	.2514	.2507	.2513	.2521	.2586	-.0006	-.0023
#2	.2510	.2501	.2523	.2512	.2520	.2592	-.0015	-.0032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5677.2	92080.	5697.2
Stddev	2.2	60.	46.9
%RSD	.03825	.06487	.82394
#1	5678.7	92122.	5664.0
#2	5675.7	92038.	5730.4

Sample Name: CCB Acquired: 12/5/2018 16:23:47 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0005	-.0012	.0017	.0003	.00000	-.0014	.0000
Stddev	.0005	.0010	.0033	.0010	.0003	.0001	.0007	.0000
%RSD	370.1	179.1	277.7	62.23	91.94	1010.4	48.03	40.01
#1	-.0002	-.0001	-.0036	.0024	.0001	.00003	-.0010	.0001
#2	.0004	.0012	.0012	.0009	.0005	-.00004	-.0019	.0000
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0002	.0001	.0000	-.0002	-.0003	.0002	.0000
Stddev	.0000	.0098	.0001	.000	.0003	.0004	.0009	.0035
%RSD	699.8	5247.	122.1	1434.	158.5	136.3	463.7	19090.
#1	.0000	-.0067	.0000	.0002	-.0003	.0000	-.0004	.0025
#2	.0000	.0071	.0001	-.0002	.0000	-.0006	.0008	-.0025
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.0023	.0183	.0000	.0001	.00000	-.0018	.0009
Stddev	.0004	.0019	.0306	.0001	.0005	.00003	.0004	.0001
%RSD	438.6	84.22	167.1	192.8	810.5	3179.3	21.06	14.29
#1	.0002	-.0036	-.0033	.0001	-.0003	.00003	-.0021	.0010
#2	-.0004	-.0009	.0399	.0000	.0004	-.00002	-.0015	.0008
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

019584

Sample Name: CCB Acquired: 12/5/2018 16:23:47 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0000	-.0639	.0000	-.0257	-.0003	-.0189	.00001
Stddev	.0004	.0015	.0268	.0001	.0257	.0002	.0170	.00001
%RSD	568.1	11780.	41.87	145.5	100.2	62.32	90.18	145.70
#1	.0002	.0011	-.0450	.0000	-.0075	-.0002	-.0309	.00001
#2	-.0003	-.0010	-.0828	.0001	-.0438	-.0005	-.0068	.00000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	.0012	.0002	.0006	.0004	.0000	-.0017	-.0036
Stddev	.0005	.0002	.0001	.0003	.0000	.0000	.0015	.0012
%RSD	11.75	17.04	39.21	41.42	13.55	513.5	89.90	33.80
#1	.0042	.0013	.0002	.0008	.0003	.0000	-.0006	-.0045
#2	.0049	.0011	.0003	.0005	.0004	.0000	-.0028	-.0027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5660.5	91245.	5561.8
Stddev	23.3	59.	18.1
%RSD	.41249	.06492	.32610
#1	5644.0	91203.	5574.7
#2	5677.1	91287.	5549.0

019585

Sample Name: LLCCV Acquired: 12/5/2018 16:26:22 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0107	.0102	.0218	.0106	.0042	.00112	.0205	.0011
Stddev	.0002	.0008	.0032	.0018	.0001	.00005	.0012	.0001
%RSD	1.939	8.180	14.51	17.38	2.039	4.4456	6.002	6.160
#1	.0106	.0096	.0241	.0093	.0041	.00115	.0213	.0011
#2	.0109	.0108	.0196	.0119	.0042	.00108	.0196	.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.0157	.0207	.0044	.0016	.0032	.0038	.0227
Stddev	.0000	.0166	.0001	.0005	.0004	.0001	.0001	.0043
%RSD	2.945	105.7	.2928	10.80	22.77	4.240	3.472	19.01
#1	.0010	.0274	.0207	.0040	.0018	.0031	.0038	.0258
#2	.0010	.0040	.0208	.0047	.0013	.0033	.0039	.0197
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0096	.0180	.0099	.0052	.0076	.00105	-.0028	.0044
Stddev	.0007	.0021	.0023	.0001	.0015	.00004	.0007	.0001
%RSD	7.793	11.47	23.55	1.121	20.31	3.7128	23.30	2.040
#1	.0101	.0195	.0115	.0052	.0087	.00102	-.0033	.0045
#2	.0091	.0166	.0082	.0051	.0065	.00108	-.0023	.0044
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV Acquired: 12/5/2018 16:26:22 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	.0391	.1654	.0194	.2003	.0043	.1980	.00098
Stddev	.0002	.0003	.0106	.0005	.0130	.0001	.0047	.00014
%RSD	3.614	.6799	6.386	2.628	6.474	1.492	2.350	13.946
#1	.0041	.0389	.1579	.0197	.2094	.0044	.2013	.00088
#2	.0043	.0392	.1728	.0190	.1911	.0043	.1947	.00107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0115	.0203	F .0026	.0035	.0044	.0043	.0190	.0394
Stddev	.0000	.0006	.0003	.0007	.0002	.0001	.0025	.0009
%RSD	.3565	2.877	9.796	19.72	4.232	2.629	13.19	2.293
#1	.0114	.0199	.0024	.0039	.0043	.0043	.0173	.0400
#2	.0115	.0207	.0028	.0030	.0045	.0042	.0208	.0387
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.0020					
Range			30.00%					

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5634.8	89654.	5472.8
Stddev	19.3	113.	34.9
%RSD	.34185	.12560	.63762
#1	5648.5	89575.	5497.5
#2	5621.2	89734.	5448.2

Sample Name: LLCCV,0.5 Acquired: 12/5/2018 16:28:56 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0208	.0217	.0432	.0203	.0077	.00209	.0393	.0021
Stddev	.0001	.0015	.0010	.0023	.0004	.00000	.0005	.0000
%RSD	.2935	6.722	2.205	11.41	5.196	.02190	1.300	.6280
#1	.0208	.0227	.0425	.0186	.0074	.00209	.0397	.0021
#2	.0209	.0207	.0439	.0219	.0080	.00209	.0389	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0486	.0407	.0078	.0037	.0072	.0090	.0459
Stddev	.0001	.0183	.0002	.0004	.0002	.0001	.0011	.0027
%RSD	3.724	37.57	.5786	4.914	6.609	2.039	11.94	5.825
#1	.0022	.0615	.0409	.0080	.0039	.0071	.0082	.0440
#2	.0020	.0357	.0405	.0075	.0035	.0073	.0098	.0478
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0197	.0354	.0186	.0103	.0090	.00197	.0008	.0083
Stddev	.0009	.0026	.0061	.0003	.0015	.00001	.0006	.0001
%RSD	4.705	7.331	33.12	3.185	17.05	.58344	72.77	1.405
#1	.0204	.0336	.0142	.0105	.0100	.00198	.0004	.0083
#2	.0190	.0372	.0229	.0100	.0079	.00196	.0012	.0082
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

APam 12/5/18

019588

Sample Name: LLCCV,0.5 Acquired: 12/5/2018 16:28:56 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0083	.0762	.3895	.0414	.3982	.0086	.4175	.00200
Stddev	.0001	.0018	.0185	.0008	.0002	.0000	.0009	.00001
%RSD	1.763	2.389	4.753	1.852	.0548	.3452	.2179	.37241
#1	.0084	.0749	.4026	.0419	.3983	.0086	.4181	.00201
#2	.0082	.0775	.3764	.0409	.3980	.0087	.4168	.00200
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0202	.0398	.0048	.0074	.0084	.0085	.0398	.0850
Stddev	.0012	.0014	.0003	.0004	.0001	.0000	.0005	.0009
%RSD	6.079	3.482	6.363	6.039	1.095	.0036	1.367	1.017
#1	.0194	.0408	.0050	.0077	.0085	.0085	.0394	.0857
#2	.0211	.0389	.0046	.0071	.0083	.0085	.0402	.0844
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5664.0	90521.	5497.5
Stddev	14.4	389.	60.0
%RSD	.25405	.42947	1.0914
#1	5674.2	90796.	5455.1
#2	5653.8	90246.	5539.9

APan 12/5/18

019589

Sample Name: LLCCV-TCLP Acquired: 12/5/2018 16:31:46 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.0003	-.0004	-.0007	.1948	-.00002	-.0013	.0000
Stddev	.0002	.0012	.0032	.0042	.0000	.00009	.0013	.000
%RSD	63.71	404.7	779.2	615.0	.0097	599.48	99.86	402.3
#1	.0004	.0005	.0018	.0023	.1948	-.00008	-.0004	.0000
#2	.0001	-.0011	-.0027	-.0037	.1948	.00005	-.0022	.0000
Check ?	None	None	None	None	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0146	.0113	.0000	-.0004	-.0005	.0006	-.0013
Stddev	.000	.0110	.0001	.0006	.0002	.0002	.0006	.0031
%RSD	38.53	75.36	.9425	1349.	55.86	33.87	112.3	242.1
#1	.0000	.0223	.0114	-.0004	-.0005	-.0004	.0010	-.0035
#2	.0000	.0068	.0112	.0005	-.0002	-.0006	.0001	.0009
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0011	-.0027	.0032	.0002	.0019	.00002	-.0010	.0003
Stddev	.0003	.0014	.0064	.0001	.0018	.00008	.0003	.0001
%RSD	27.53	51.11	201.7	25.62	91.85	404.26	30.51	52.55
#1	-.0008	-.0017	-.0014	.0002	.0007	-.00004	-.0012	.0004
#2	-.0013	-.0037	.0077	.0002	.0032	.00008	-.0008	.0002
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: LLCCV-TCLP Acquired: 12/5/2018 16:31:46 Type: QC
Method: 2018B-6010-ICP-03(v20) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0036	-.0171	.0013	-.0208	.0001	-.0133	-.00012
Stddev	.0003	.0002	.0274	.0012	.0000	.0004	.0077	.00004
%RSD	21060.	6.570	160.0	93.11	.0083	446.4	57.98	33.373
#1	.0002	.0038	-.0365	.0022	-.0208	.0004	-.0188	-.00015
#2	-.0002	.0034	.0022	.0005	-.0208	-.0002	-.0079	-.00009
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0001	.0005	.0000	.1895	.1938	-.0034	.0016
Stddev	.0007	.0004	.0002	.000	.0005	.0007	.0038	.0018
%RSD	61.50	537.4	44.88	915.3	.2425	.3401	110.9	110.5
#1	.0016	-.0002	.0004	-.0002	.1898	.1942	-.0061	.0028
#2	.0006	.0004	.0007	.0002	.1892	.1933	-.0007	.0003
Check ?	None	None	None	None	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	5633.5	89970.	5446.0
Stddev	4.8	268.	27.9
%RSD	.08544	.29808	.51287
#1	5636.9	90160.	5426.2
#2	5630.1	89780.	5465.7

CVAA Mercury Data Review Form

K-CVAA-02

Element: Hg

Analysis Lot #: 112718D HG2

Starlims #: 616594

Cal. STD/CCV Source: HG3-15-U

Pipette IDs: U52540, HG2-5.0

16mL Tube Lot #: P7233936

Service Request Numbers:

K1811120-004

	Yes	No	NA
1) Appropriate standardization completed	X		
2) ICV within 10% of true value	X		
3) CCVs in control (+/- 10%)	X		
4) CCBs and or ICBs below MRL	X		
5) CCV/CCB check run every 10 samples	X		
6) All reported samples within calibration range	X		
7) Calculations correct	X		

Comments:

Data reviewed against service request(s) to ensure no samples were omitted: KL (Initials)

Primary Reviewed By: Kathy J Date: 11-28-18

Secondary Reviewed By: J Date: 11/26/18

019592

Data Review Form

Instrument ID#: **K-CVAA-02**
DataFile Name: **R:\ICP\WIP\DATA\K-CVAA-02 (QUICKTRACE)\112718D HG2.csv**
RUNNO: **616594**

K1811120

No exceptions to report.

Primary Approver: 11-28-18
Secondary Approver: 11/28/18

CVAA Hg ANALYTICAL WORKSHEET

Method: 7470A TCLP	**Cal. Inter. Std* (100ppb):** HG3-15-U **2nd Source Inter Std** (1ppm):** HG3-15-A

Analysis For: Hg **DATA**

Pos.	SAMPLE NUMBER	Measured (µg/L)	Dilution Factor	Recoveries (ICV, CCV, LCS, MS)		Comments:
1	Cal. Blk.	0.000	~	~		
2	Std 0.2*	0.200	~	(0.10-50mL)		
3	Std 0.5*	0.500	~	(0.25-50mL)		
4	Std 1.0*	1.000	~	(0.5-50mL)		
5	Std 5.0*	5.000	~	(2.5-50mL)		
6	Std 10.0*	10.000	~	(5.0-50mL)		
7	ICV1**	5.120	~	102%		
8	ICB1	-0.010	~	~		
9	LLICV1*	0.186	~	93%		
10	CCV1*	5.040	~	101%		
11	CCB1	0.001	~	~		
12	KQ1817186-01	-0.002	~			
13	KQ1817186-02	4.530	~	91%		
14	K1811120-004 E	-0.010	~			
15	K1811120-004A E	4.970	~	99%		
16	KQ1817186-03	-0.015	~			
17	KQ1817186-04	4.500	~	90%		
18	CCV2	5.030	~	101%		
19	CCB2	-0.009	~			
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

Comments:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD	Post-Spike @ 5ppb
7470A Water	5.0 µg/L	0.2 µg/L	80-120%	75-125%	20%	+/- 20%
245.1 Water	5.0 µg/L	0.2 µg/L	85-115%	70-130%	20%	+/- 20%
7470A TCLP	5.0 µg/L	1.0 µg/L	80-120%	75-125%	20%	+/- 20%
7471A Soil LCSS	12mg/kg	0.02 mg/kg	51-149%	80-120%	20%	+/- 20%
7471A Tissue Dorm	0.41 mg/kg	0.02 mg/kg	68-136%	80-120%	20%	+/- 20%

[112718D HG2 TCLP] HG1.XLS

019594

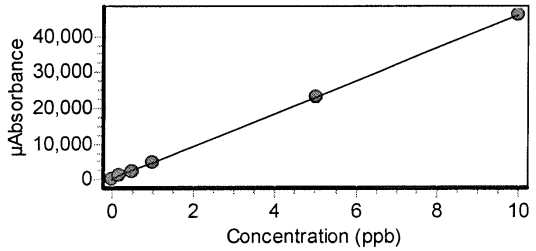
Report Generated By CETAC QuickTrace
Analyst: alkls.alklsxp196
Worksheet file: C:\Program Files\QuickTrace\Worksheets\112718D HG2.wsz
Date Started: 11/27/2018 12:02:45 PM
Comment:

Results

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
Calibration Blank					STD	11/27/18 12:11:59 pm	0.000	125	7.34	
Replicates	118.9	120.2	123.6	138.9						
Standard #1					STD	11/27/18 12:13:35 pm	0.200	1000	4.64	
Replicates	986.1	988.7	1066.3	958.5						
Standard #2					STD	11/27/18 12:15:12 pm	0.500	2377	2.19	
Replicates	2348.0	2336.2	2451.6	2371.2						
Standard #3					STD	11/27/18 12:16:49 pm	1.000	4729	1.26	
Replicates	4679.3	4683.5	4748.5	4804.9						
Standard #4					STD	11/27/18 12:18:27 pm	5.000	23183	1.26	
Replicates	22879.0	23037.8	23266.8	23549.9						
Standard #5					STD	11/27/18 12:20:06 pm	10.000	45905	0.47	
Replicates	45990.5	46087.8	45944.2	45596.9						

Calibration

Equation: A = 125.388 + 4584.599C
R2: 0.99998
SEE: 93.9724
Flags:



ICV1					ICV	11/27/18 12:21:45 pm	5.120	23594	1.62	
Replicates	23188.2	23365.0	23809.1	24014.7						
% Recovery	102.38									
ICB1					ICB	11/27/18 12:23:21 pm	-0.010	78	40.19	
Replicates	48.2	85.5	118.9	59.6						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
LLICV1					CRDL	11/27/18 12:24:57 pm	0.186	979	3.41	
	Replicates	968.7	1017.4	992.5	939.1					
	% Recovery	93.14								
CCV1					CCV	11/27/18 12:26:35 pm	5.040	23221	0.44	
	Replicates	23089.5	23336.6	23226.2	23231.5					
	% Recovery	100.75								
CCB1					CCB	11/27/18 12:28:11 pm	0.001	129	22.53	
	Replicates	137.3	86.6	140.4	152.2					
KQ1817186-01					UNK	11/27/18 12:29:47 pm	-0.002	116	22.33	
	Replicates	151.4	94.8	98.6	119.8					
KQ1817186-02					UNK	11/27/18 12:31:23 pm	4.530	20901	0.75	
	Replicates	20902.4	21029.9	20990.5	20681.5					
K1811120-004 E					UNK	11/27/18 12:32:59 pm	-0.010	79	47.80	
	Replicates	83.2	25.2	98.0	111.6					
K1811120-004A E					UNK	11/27/18 12:34:35 pm	4.970	22933	0.60	
	Replicates	22787.2	22843.1	23045.8	23057.6					
KQ1817186-03					UNK	11/27/18 12:36:12 pm	-0.015	54	85.15	
	Replicates	6.2	104.7	25.2	81.7					
KQ1817186-04					UNK	11/27/18 12:37:49 pm	4.500	20774	0.98	
	Replicates	20537.8	20671.3	20971.5	20915.8					
CCV2					CCV	11/27/18 12:39:27 pm	5.030	23172	1.38	
	Replicates	22827.2	23011.4	23298.3	23551.8					
	% Recovery	100.54								
CCB2					CCB	11/27/18 12:41:03 pm	-0.009	85	15.98	
	Replicates	68.8	88.6	82.5	101.7					

Preparation Information Benchsheet

Prep Run#: 327026
Team: Metals/KLINN
Number of Copies to make: 1

Prep WorkFlow: HgDigLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/26/18 01:45 PM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	KQ1817186-01	MB		7470A/Hg TCLP		Solid	20mL	20.00mL	
2	KQ1817186-02	LCS		7470A/Hg TCLP		Solid	20mL	20.00mL	
3	K1811120-004	SL0022	.12	7470A/Hg TCLP		Soil	20mL	20.00mL	thick, sticky Clay. #39
4	KQ1817186-03	K1811120-004 DUP	.12	7470A/Hg TCLP		Solid	20mL	20.00mL	
5	KQ1817186-04	K1811120-004 MS	.12	7470A/Hg TCLP		Solid	20mL	20.00mL	

Spiking Solutions

Name: K-MET Hg Source Standard 1000 ug/L Inventory ID 194629 Logbook Ref: HG3-15-A Expires On: 12/01/2018

KQ1817186-02 0.10mL KQ1817186-04 0.10mL

Preparation Materials

K-MET 100ml Centrifuge Tube	1712272 (188568)	K-MET 50ml Centrifuge Tube	P7265114 (192825)	K-MET H2SO4 Hg	57011 (185918)
K-MET HCl Hg	0000192813 (194700)	K-MET K2S2O8 Hg	0000166617 (186360)	K-MET NH2OH-HCl Hg	0000199595 (193565)
K-MET HNO3 Hg	0000197345 (194625)	K-MET SnCl Hg	0000208736 (195097)	K-MET NACl Hg	0000164455 (184228)
K-MET KMnO4 Hg	0000177909 (190708)				

Preparation Steps

Step: Digestion
Started: 11/26/18 13:45
Finished: 11/26/18 15:45
By: KLINN
Comments

Preparation Equipment

K-BlockDigester-08	Digestion	Corrected Temperature	95 deg C	K-BlockDigester-08	Digestion	Correction Factor	0 deg C
K-BlockDigester-08	Digestion	Observed Temperature	95 deg C	K-BlockDigester-08	Digestion	Thermometer ID 4184960	NONE
K-BlockDigester-08	Digestion	Thermometer Location	7 NONE	K-BlockDigester-15	Digestion	Corrected Temperature	95 deg C
K-BlockDigester-15	Digestion	Correction Factor	0 deg C	K-BlockDigester-15	Digestion	Observed Temperature	95 deg C
K-BlockDigester-15	Digestion	Thermometer ID 664243	NONE	K-BlockDigester-15	Digestion	Thermometer Location	20 NONE
K-U52540	Digestion			K-HG2-5.0	Digestion		
K-DG250A	Digestion			K-DG1000C	Digestion		
K-DG500A	Digestion			K-DG100A	Digestion		

Comments: Cal. Std./CCV Source: HG3-15-U.

Reviewed By: _____ Date: 11/28/18

019597

Preparation Information Benchsheet

Prep Run#: 327026
Team: Metals/KLINN
Number of Copies to make: 1

Prep WorkFlow: HgDigLP
Prep Method: Method

TCLP 2

Status: Draft
Prep Date/Time: 11/26/18 09:05 AM

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext.	pH	Int. Vol	Final Vol	Surr Amt	Spike Amt
1	**KQ1817186-01**	MB			7470A / Hg TCLP	Solid						
2	**KQ1817186-02**	LCS			7470A / Hg TCLP	Solid						
3	**K1811120-004**	SL0022	.12		7470A / Hg TCLP	Soil						
4	**KQ1817186-03**	K1811120-004 DUP	.12		7470A / Hg TCLP	Solid						
5	**KQ1817186-04**	K1811120-004 MS	.12		7470A / Hg TCLP	Solid						

616594

Comments: HG3-15-U BD8 T95 R7 11.26.18 1345-1545
BD15 T95 R20

Surrogate ID: _____ Spike ID: _____

Witnessed By: _____

Analyst: _____ Assisted By: _____

CVAA Mercury Data Review Form

K-CVAA-02

Element: Hg

Analysis Lot #: 112718E HG2

Starlims #: ~~626596~~ 616596

Cal. STD/CCV Source: HG3-15-U

Pipette IDs: U52540, HG2-5.0

16mL Tube Lot #: P7233936

Service Request Numbers:

K1811067, K1811086, K1811120 (-001-003), K1811269

	Yes	No	NA
1) Appropriate standardization completed	X		
2) ICV within 10% of true value	X		
3) CCVs in control (+/- 10%)	X		
4) CCBs and or ICBs below MRL	X		
5) CCV/CCB check run every 10 samples	X		
6) All reported samples within calibration range	X		
7) Calculations correct	X		

Comments:

Data reviewed against service request(s) to ensure no samples were omitted: KL (Initials)

Primary Reviewed By: [signature] Date: 11-28-18

Secondary Reviewed By: [signature] Date: 11/28/18

Data Review Form

Instrument ID#: **K-CVAA-02**
DataFile Name: **R:\ICP\WIP\DATA\K-CVAA-02 (QUICKTRACE)\112718E HG2.csv**
RUNNO: **616596**

K1811067

No exceptions to report.

K1811086

No exceptions to report.

K1811120

No exceptions to report.

K1811269

No exceptions to report.

Primary Approver: 11.28.18
Secondary Approver: 11/28/18

CVAA Hg ANALYTICAL WORKSHEET

Method: 7470A TCLP	**Cal. Inter. Std* (100ppb):** HG3-15-U **2nd Source Inter Std** (1ppm):** HG3-15-A

Analysis For: Hg **DATA**

Pos.	SAMPLE NUMBER	Measured (µg/L)	Dilution Factor	Recoveries (ICV, CCV, LCS, MS)		Comments:
1	Cal. Blk.	0.000	~	~		
2	Std 0.2*	0.200	~	(0.10-50mL)		
3	Std 0.5*	0.500	~	(0.25-50mL)		
4	Std 1.0*	1.000	~	(0.5-50mL)		
5	Std 5.0*	5.000	~	(2.5-50mL)		
6	Std 10.0*	10.000	~	(5.0-50mL)		
7	ICV1**	5.240	~	105%		
8	ICB1	0.000	~	~		
9	LLICV1*	0.190	~	95%		
10	CCV1*	5.000	~	100%		
11	CCB1	-0.014	~	~		
12	KQ1817184-01	-0.002	~			
13	KQ1817184-02	4.540	~	91%		
14	K1811067-001 E	-0.009	~			
15	K1811067-001A E	5.070	~	101%		
16	KQ1817184-03	-0.018	~			
17	KQ1817184-04	4.760	~	95%		
18	K1811086-001 E	-0.020	~			
19	KQ1817185-01	-0.004	~			
20	KQ1817185-02	4.560	~	91%		
21	K1811120-001 E	-0.017	~			
22	CCV2	5.110	~	102%		
23	CCB2	-0.014	~			
24	K1811120-001A E	4.940	~	99%		
25	KQ1817185-03	-0.030	~			
26	KQ1817185-04	4.650	~	93%		
27	K1811120-002 E	-0.030	~			
28	K1811120-003 E	-0.008	~			
29	K1811269-001 E	0.008	~			
30	K1811269-002 E	0.011	~			
31	K1811269-003 E	0.001	~			
32	CCV3	5.030	~	101%		
33	CCB3	-0.009	~			

Comments:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD	Post-Spike @ 5ppb
7470A Water	5.0 µg/L	0.2 µg/L	80-120%	75-125%	20%	+/- 20%
245.1 Water	5.0 µg/L	0.2 µg/L	85-115%	70-130%	20%	+/- 20%
7470A TCLP	5.0 µg/L	1.0 µg/L	80-120%	75-125%	20%	+/- 20%
7471A Soil LCSS	12mg/kg	0.02 mg/kg	51-149%	80-120%	20%	+/- 20%
7471A Tissue Dorm	0.41 mg/kg	0.02 mg/kg	68-136%	80-120%	20%	+/- 20%

[112718E HG2 TCLP] HG1.XLS

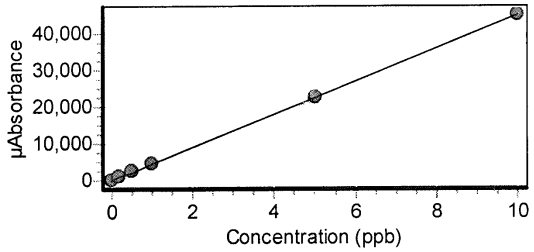
Report Generated By CETAC QuickTrace
Analyst: alkls.alklsxp196
Worksheet file: C:\Program Files\QuickTrace\Worksheets\112718E HG2.wsz
Date Started: 11/27/2018 12:25:27 PM
Comment:

Results

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
Calibration Blank					STD	11/27/18 12:42:59 pm	0.000	136	18.56	
Replicates	165.6	141.2	104.4	132.7						
Standard #1					STD	11/27/18 12:44:36 pm	0.200	1030	2.57	
Replicates	1046.7	1049.9	992.1	1030.1						
Standard #2					STD	11/27/18 12:46:12 pm	0.500	2385	1.32	
Replicates	2390.9	2340.4	2412.9	2397.6						
Standard #3					STD	11/27/18 12:47:50 pm	1.000	4642	0.31	
Replicates	4624.9	4642.4	4659.8	4641.7						
Standard #4					STD	11/27/18 12:49:28 pm	5.000	22802	0.92	
Replicates	22636.6	22609.1	22945.6	23018.0						
Standard #5					STD	11/27/18 12:51:07 pm	10.000	45032	2.23	
Replicates	44205.4	44204.4	45472.3	46246.9						

Calibration

Equation: A = 135.973 + 4498.410C
R2: 0.99997
SEE: 112.8248
Flags:



ICV1					ICV	11/27/18 12:52:46 pm	5.240	23708	0.27	
Replicates	23772.4	23632.9	23679.6	23747.8						
% Recovery	104.80									
ICB1					ICB	11/27/18 12:54:21 pm	0.000	134	25.26	
Replicates	143.6	119.0	97.0	175.8						

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
LLICV1					CRDL	11/27/18 12:55:58 pm	0.190	991	4.33	
	Replicates	969.6	986.5	954.9	1052.2					
	% Recovery	95.01								
CCV1					CCV	11/27/18 12:57:36 pm	5.000	22635	0.48	
	Replicates	22595.7	22503.0	22699.1	22742.9					
	% Recovery	100.03								
CCB1					CCB	11/27/18 12:59:11 pm	-0.014	73	22.26	
	Replicates	71.6	55.4	69.5	94.5					
KQ1817184-01					UNK	11/27/18 01:00:47 pm	-0.002	126	23.82	
	Replicates	118.1	137.5	160.0	89.1					
KQ1817184-02					UNK	11/27/18 01:02:23 pm	4.540	20537	0.79	
	Replicates	20577.9	20686.4	20577.3	20307.3					
K1811067-001 E					UNK	11/27/18 01:03:59 pm	-0.009	95	40.26	
	Replicates	76.4	145.7	98.9	57.4					
K1811067-001A E					UNK	11/27/18 01:05:36 pm	5.070	22959	1.05	
	Replicates	23195.2	23016.1	23002.4	22623.6					
KQ1817184-03					UNK	11/27/18 01:07:13 pm	-0.018	57	87.04	
	Replicates	22.4	106.7	91.3	7.0					
KQ1817184-04					UNK	11/27/18 01:08:50 pm	4.760	21554	0.65	
	Replicates	21569.1	21672.3	21621.9	21353.1					
K1811086-001 E					UNK	11/27/18 01:10:27 pm	-0.020	44	120.51	
	Replicates	66.7	4.3	109.7	-2.9					
KQ1817185-01					UNK	11/27/18 01:12:05 pm	-0.004	117	42.91	
	Replicates	62.8	168.0	150.2	86.7					
KQ1817185-02					UNK	11/27/18 01:13:43 pm	4.560	20634	0.60	
	Replicates	20582.9	20511.8	20638.7	20800.8					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1811120-001 E				UNK	11/27/18 01:15:21 pm	-0.017	59	70.23	
Replicates	69.6	98.7	67.1	0.7					
CCV2				CCV	11/27/18 01:16:59 pm	5.110	23121	1.23	
Replicates	22728.5	23322.8	23338.9	23095.2					
% Recovery	102.19								
CCB2				CCB	11/27/18 01:18:35 pm	-0.014	74	60.95	
Replicates	53.0	116.4	20.6	105.1					
K1811120-001A E				UNK	11/27/18 01:20:14 pm	4.940	22368	0.09	
Replicates	22386.9	22342.0	22362.2	22379.0					
KQ1817185-03				UNK	11/27/18 01:21:52 pm	-0.030	0	483.35	
Replicates	11.4	31.1	-27.7	-15.6					
KQ1817185-04				UNK	11/27/18 01:23:28 pm	4.650	21042	0.65	
Replicates	20865.1	21074.9	21032.1	21197.0					
K1811120-002 E				UNK	11/27/18 01:25:03 pm	-0.030	0	056.94	
Replicates	3.5	29.2	-16.2	-17.9					
K1811120-003 E				UNK	11/27/18 01:26:39 pm	-0.008	101	20.79	
Replicates	95.2	131.2	91.8	84.2					
K1811269-001 E				UNK	11/27/18 01:28:16 pm	0.008	172	15.21	
Replicates	181.7	139.1	200.9	165.6					
K1811269-002 E				UNK	11/27/18 01:29:52 pm	0.011	187	13.30	
Replicates	202.8	213.8	163.6	168.5					
K1811269-003 E				UNK	11/27/18 01:31:29 pm	0.001	142	10.99	
Replicates	153.0	131.4	158.1	126.4					
CCV3				CCV	11/27/18 01:33:07 pm	5.030	22777	0.54	
Replicates	22789.5	22661.1	22712.2	22944.9					
% Recovery	100.66								

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
CCB3				CCB	11/27/18 01:34:43 pm	-0.009	97	30.97	
Replicates	112.1	77.1	131.2	66.9					

Preparation Information Benchsheet

Prep Run#: 327024
Team: Metals/KLINN
Number of Copies to make: 2

Prep WorkFlow: HgDigLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/26/18 01:50 PM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	KQ1817184-01	MB		7470A/Hg TCLP		Solid	20mL	20.00mL	
2	KQ1817184-02	LCS		7470A/Hg TCLP		Solid	20mL	20.00mL	
3	K1811067-001	IP-PaintBooth Filters	.02	7470A/Hg TCLP		Soil	20mL	20.00mL	Limited sample used all. filter
4	KQ1817184-03	K1811067-001 DUP	.02	7470A/Hg TCLP		Solid	20mL	20.00mL	
5	KQ1817184-04	K1811067-001 MS	.02	7470A/Hg TCLP		Solid	20mL	20.00mL	
6	K1811086-001	Kiln Brick	.07	7470A/Hg TCLP		Solid Waste	20mL	20.00mL	

Spiking Solutions

Name: K-MET Hg Source Standard 1000 ug/L Inventory ID 194629 Logbook Ref: HG3-15-A Expires On: 12/01/2018

KQ1817184-02 0.10mL KQ1817184-04 0.10mL

Preparation Materials

K-MET 100ml Centrifuge Tube	1712272 (188568)	K-MET 50ml Centrifuge Tube	P7265114 (192825)	K-MET H2SO4 Hg	57011 (185918)
K-MET HCl Hg	0000192813 (194700)	K-MET K2S2O8 Hg	0000166617 (186360)	K-MET NH2OH-HCl Hg	0000199595 (193565)
K-MET HNO3 Hg	0000197345 (194625)	K-MET SnCl Hg	0000208736 (195097)	K-MET NACl Hg	0000164455 (184228)
K-MET KMnO4 Hg	0000177909 (190708)				

Preparation Steps

Step: Digestion
Started: 11/26/18 13:50
Finished: 11/26/18 15:50
By: KLINN
Comments

Preparation Equipment

K-Block-Digester-14	Digestion	Corrected Temperature	95 deg C	K-Block-Digester-14	Digestion	Correction Factor	0 deg C
K-Block-Digester-14	Digestion	Observed Temperature	95 deg C	K-Block-Digester-14	Digestion	Thermometer ID 661495	NONE
K-Block-Digester-14	Digestion	Thermometer Location	20 NONE	K-BlockDigester-08	Digestion	Corrected Temperature	95 deg C
K-BlockDigester-08	Digestion	Correction Factor	0 deg C	K-BlockDigester-08	Digestion	Observed Temperature	95 deg C
K-BlockDigester-08	Digestion	Thermometer ID 4184960	NONE	K-BlockDigester-08	Digestion	Thermometer Location	7 NONE
K-DG1000C	Digestion			K-HG2-5.0	Digestion		
K-DG500A	Digestion			K-U52540	Digestion		
K-DG250A	Digestion			K-DG100A	Digestion		

Comments: Cal. Std./CCV Source: HG3-15-U.

019606

Preparation Information Benchsheet

Prep Run#: 327024
Team: Metals/KLINN

Prep WorkFlow: HgDigLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/26/18 01:50 PM

Reviewed By: _____ Date: 11/26/18

Preparation Information Benchsheet

Prep Run#: 327024
Team: Metals/KLINN
Number of Copies to make: 2

Prep WorkFlow: HgDigLP
Prep Method: Method

TCLP 1

Status: Draft
Prep Date/Time: 11/26/18 09:05 AM

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext.	pH	Int. Vol	Final Vol	Surr Amt	Spike Amt
1	**KQ1817184-01**	MB			7470A / Hg TCLP	Solid						
2	**KQ1817184-02**	LCS			7470A / Hg TCLP	Solid						
3	**K1811067-001**	IP-PaintBooth Filters	.02		7470A / Hg TCLP	Soil						
4	**KQ1817184-03**	K1811067-001 DUP	.02		7470A / Hg TCLP	Solid						
5	**KQ1817184-04**	K1811067-001 MS	.02		7470A / Hg TCLP	Solid						
6	**K1811086-001**	Kiln Brick	.07		7470A / Hg TCLP	Solid Waste						

616596

Page 437 of 2473

Comments: HG3-15-U BD 8 T95 TL 7 11·26·18 1350-1550
BD 14 T95 TL 20

Surrogate ID: _____ Spike ID: _____

Witnessed By: _____

Analyst: _____ Assisted By: _____

019608

Preparation Information Benchsheet

Prep Run#: 327025
Team: Metals/KLINN
Number of Copies to make: 2

Prep WorkFlow: HgDigLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/26/18 01:50 PM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	KQ1817185-01	MB		7470A/Hg TCLP		Solid	20mL	20.00mL	
2	KQ1817185-02	LCS		7470A/Hg TCLP		Solid	20mL	20.00mL	
3	K1811120-001	SL0084	.16	7470A/Hg TCLP		Soil	20mL	20.00mL	thick, sticky Clay #34
4	KQ1817185-03	K1811120-001 DUP	.16	7470A/Hg TCLP		Solid	20mL	20.00mL	
5	KQ1817185-04	K1811120-001 MS	.16	7470A/Hg TCLP		Solid	20mL	20.00mL	
6	K1811120-002	SL0064	.12	7470A/Hg TCLP		Soil	20mL	20.00mL	Fuel smell. Thick, sticky Clay. #36
7	K1811120-003	SL0065	.12	7470A/Hg TCLP		Soil	20mL	20.00mL	standing water. Thick, sticky Clay. #31
8	K1811269-001	11158-1	.03	7470A/Hg TCLP		Solid	20mL	20.00mL	Btl 24. lots of rocks
9	K1811269-002	11158-2	.03	7470A/Hg TCLP		Solid	20mL	20.00mL	Btl 5. Mostly paper small amount of soil.
10	K1811269-003	11158-3	.03	7470A/Hg TCLP		Solid	20mL	20.00mL	Btl 28. Mostly paper small amount of soil.

Spiking Solutions

Name: K-MET Hg Source Standard 1000 ug/L Inventory ID 194629 Logbook Ref: HG3-15-A Expires On: 12/01/2018

KQ1817185-02 0.10mL KQ1817185-04 0.10mL

Preparation Materials

K-MET 100ml Centrifuge Tube	1712272 (188568)	K-MET 50ml Centrifuge Tube	P7265114 (192825)	K-MET H2SO4 Hg	57011 (185918)
K-MET HCl Hg	0000192813 (194700)	K-MET K2S2O8 Hg	0000166617 (186360)	K-MET KMnO4 Hg	0000177909 (190708)
K-MET NACl Hg	0000164455 (184228)	K-MET NH2OH-HCl Hg	0000199595 (193565)	K-MET HNO3 Hg	0000197345 (194625)
K-MET SnCl Hg	0000208736 (195097)				

Preparation Steps

Step: Digestion
Started: 11/26/18 13:50
Finished: 11/26/18 15:50
By: KLINN
Comments

Preparation Information Benchsheet

Prep Run#: 327025
Team: Metals/KLINN

Prep WorkFlow: HgDigLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/26/18 01:50 PM

Preparation Equipment

K-Block-Digester-14	Digestion	Corrected Temperature	95 deg C	K-Block-Digester-14	Digestion	Correction Factor	0 deg C
K-Block-Digester-14	Digestion	Observed Temperature	95 deg C	K-Block-Digester-14	Digestion	Thermometer ID 661495	NONE
K-Block-Digester-14	Digestion	Thermometer Location	20 NONE	K-BlockDigester-08	Digestion	Corrected Temperature	95 deg C
K-BlockDigester-08	Digestion	Correction Factor	0 deg C	K-BlockDigester-08	Digestion	Observed Temperature	95 deg C
K-BlockDigester-08	Digestion	Thermometer ID 4184960	NONE	K-BlockDigester-08	Digestion	Thermometer Location	7 NONE
K-DG250A	Digestion			K-DG500A	Digestion		
K-DG1000C	Digestion			K-U52540	Digestion		
K-DG100A	Digestion			K-HG2-5.0	Digestion		

Comments: Cal. Std./CCV Source: HG3-15-U.

Reviewed By: _____ Date: 11/26/18

Preparation Information Benchsheet

Prep Run#: 327025
Team: Metals/KLINN
Number of Copies to make: 2

Prep WorkFlow: HgDigLP
Prep Method: Method TCLP 1

Status: Draft
Prep Date/Time: 11/26/18 09:05 AM

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext.	pH	Int. Vol	Final Vol	Surr Amt	Spike Amt
1	**KQ1817185-01**	MB			7470A / Hg TCLP	Solid						
2	**KQ1817185-02**	LCS			7470A / Hg TCLP	Solid						
3	**K1811120-001**	SL0084	.16		7470A / Hg TCLP	Soil						
4	**KQ1817185-03**	K1811120-001 DUP	.16		7470A / Hg TCLP	Solid						
5	**KQ1817185-04**	K1811120-001 MS	.16		7470A / Hg TCLP	Solid						
6	**K1811120-002**	SL0064	.12		7470A / Hg TCLP	Soil						
7	**K1811120-003**	SL0065	.12		7470A / Hg TCLP	Soil						
8	**K1811269-001**	11158-1	.03		7470A / Hg TCLP	Solid						
9	**K1811269-002**	11158-2	.03		7470A / Hg TCLP	Solid						
10	**K1811269-003**	11158-3	.03		7470A / Hg TCLP	Solid						

Comments: HG3-15-U BD 8 T95 T27 11-26-18 1350-1550
BD 14 T95 T220

Surrogate ID: _____ Spike ID: _____

Witnessed By: _____

Analyst: _____ Assisted By: _____

019611

Gasoline Range Organics

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F010.D
Lab ID: K1811120-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 11/14/2018 14:14
Date Quantitated: 11/14/2018 14:31
Batch ID: KWG1805982
Analysis Method: 8015C
ListJoinID: LJ1016

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F010.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 14:14	**Quant Date:**	11/14/2018 14:31	**Vial:**	10
Run Type:	SMPL	**ListJoinID:**	LJ1016	**Dilution:**	1.0
Lab ID:	K1811120-001			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**	11/08/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1805980	**Report Group:**	K1811120
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1703508	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:	Gasoline Range Organics	**Report List ID:**	LJ1016
		Method ID:	MJ184
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Report List**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.17	-0.01	3943939	44.22	88	83-119	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Gasoline Range Organics (GRO)	2.36		1752515	12.86	1.7	J	

Prep Amount:	5.030 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	10.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	74.3 %				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F010.D Vial: 10
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 2:14 pm Operator: KW
Sample : K1120-001 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 14:31:57 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	1,4-Difluorobenzene	4.494	13932241	89.009 ug/L
2) S	4-Bromofluorobenzene	8.175	3943939	44.219 ug/L
	Target Compounds			
3) H	AK101 GRO (C6-C10)	2.773	1513971	12.885 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	1752515	12.861 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.714	1126993	14.138 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

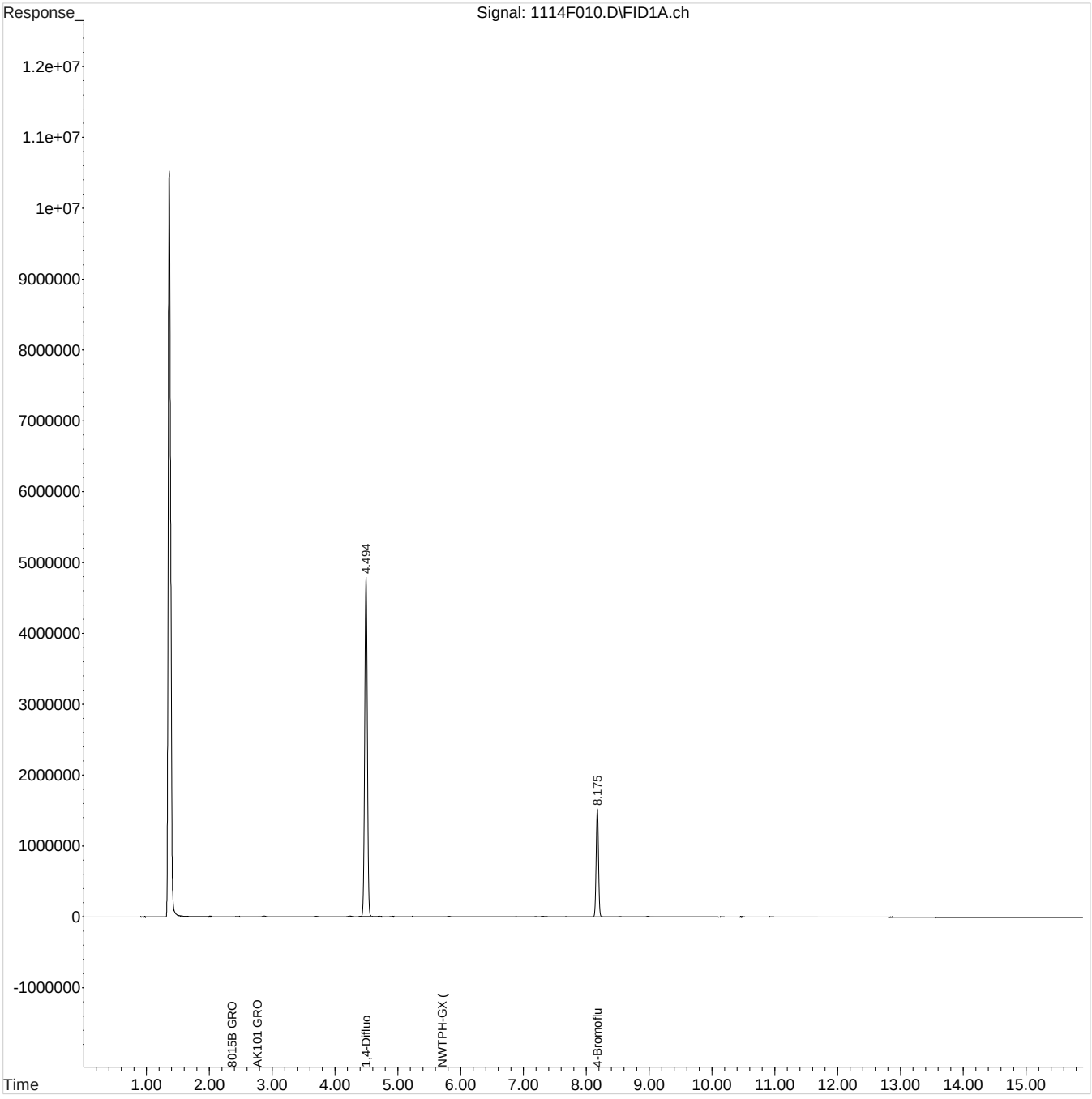
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F010.D Vial: 10
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 2:14 pm Operator: KW
Sample : K1120-001 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 14:31:57 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F017.D
Lab ID: K1811120-007
RunType: SMPL
Matrix: SOIL

Date Acquired: 11/14/2018 17:02
Date Quantitated: 11/14/2018 17:18
Batch ID: KWG1805982
Analysis Method: 8015C
ListJoinID: LJ1016

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F017.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 17:02	**Quant Date:**	11/14/2018 17:18	**Vial:**	17
Run Type:	SMPL	**ListJoinID:**	LJ1016	**Dilution:**	1.0
Lab ID:	K1811120-007			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**	11/06/2018	**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1805980	**Report Group:**	K1811120
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1703511	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:	Gasoline Range Organics	**Report List ID:**	LJ1016
		Method ID:	MJ184
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Report List**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18	0.00	4226530	47.39	95	83-119	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Gasoline Range Organics (GRO)	2.36		17636639	129.43	8.3		

Prep Amount:	7.11 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	6.8 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	74.9 %				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F017.D Vial: 17
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 5:02 pm Operator: KW
Sample : K1120-007 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 17:18:34 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.493	13733783	87.742	ug/L
2) S	4-Bromofluorobenzene	8.176	4226530	47.387	ug/L
	Target Compounds				
3) H	AK101 GRO (C6-C10)	2.773	14666352	124.823	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	17636639	129.432	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.714	25671012	322.049	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

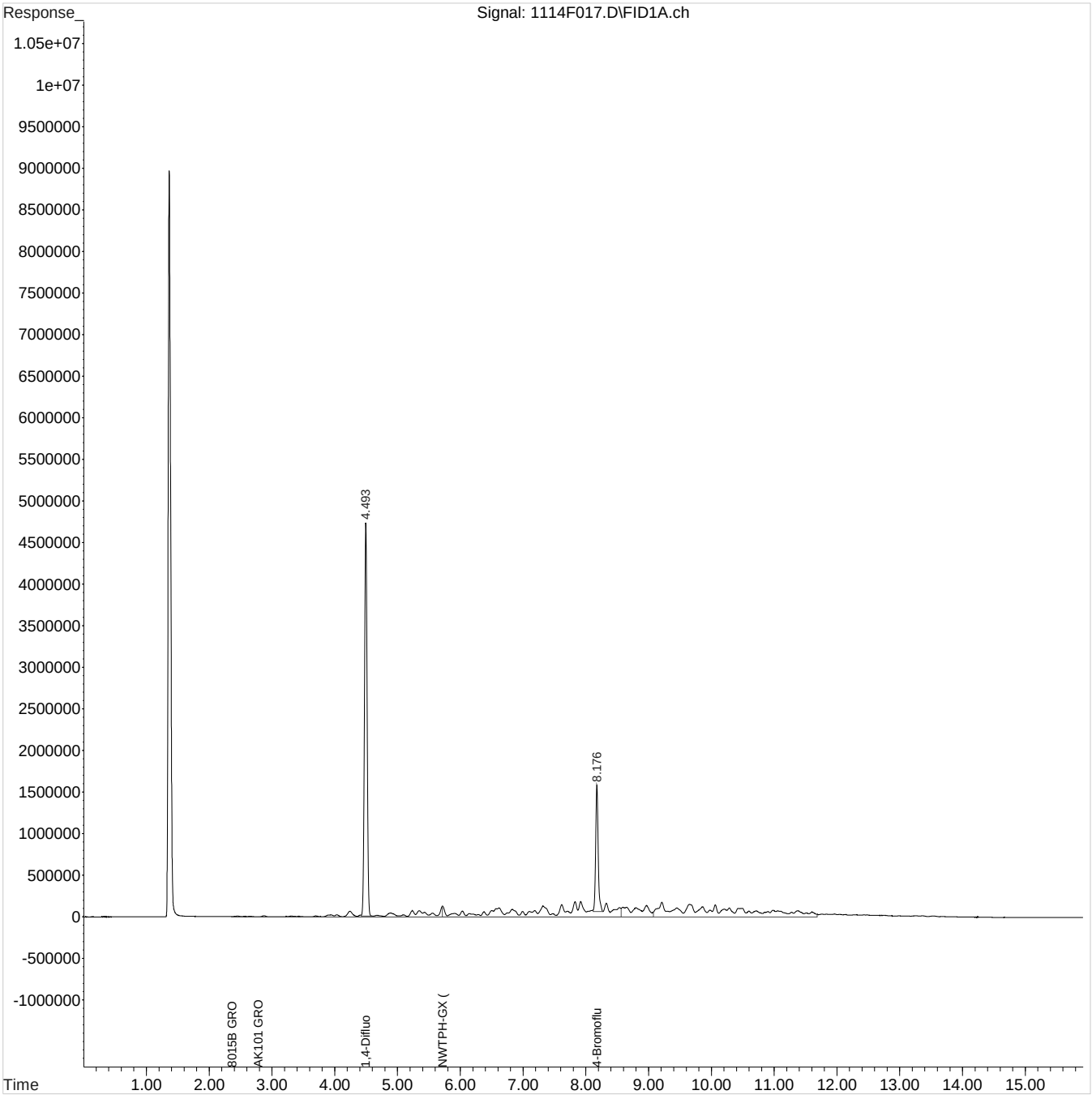
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F017.D Vial: 17
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 5:02 pm Operator: KW
Sample : K1120-007 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 17:18:34 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F020.D
Lab ID: K1811120-008
RunType: SMPL
Matrix: SOIL

Date Acquired: 11/14/2018 18:15
Date Quantitated: 11/15/2018 07:25
Batch ID: KWG1805982
Analysis Method: 8015C
ListJoinID: LJ1016

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F020.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 18:15	**Quant Date:**	11/15/2018 07:25	**Vial:**	20
Run Type:	SMPL	**ListJoinID:**	LJ1016	**Dilution:**	1.0
Lab ID:	K1811120-008			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**	11/06/2018	**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1805980	**Report Group:**	K1811120
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1703512	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:	Gasoline Range Organics	**Report List ID:**	LJ1016
		Method ID:	MJ184
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Report List**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18	0.00	4495234	50.40	101	83-119	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Gasoline Range Organics (GRO)	2.36		20031632	147.01	14		

Prep Amount:	5.70 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	7.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	65.3 %				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F020.D Vial: 20
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 6:15 pm Operator: KW
Sample : K1120-008 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 15 07:25:14 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.493	13920087	88.932	ug/L
2) S	4-Bromofluorobenzene	8.175	4495234	50.400	ug/L
	Target Compounds				
3) H	AK101 GRO (C6-C10)	2.773	16346084	139.119	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	20031632	147.008	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.714	30827747	386.741	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

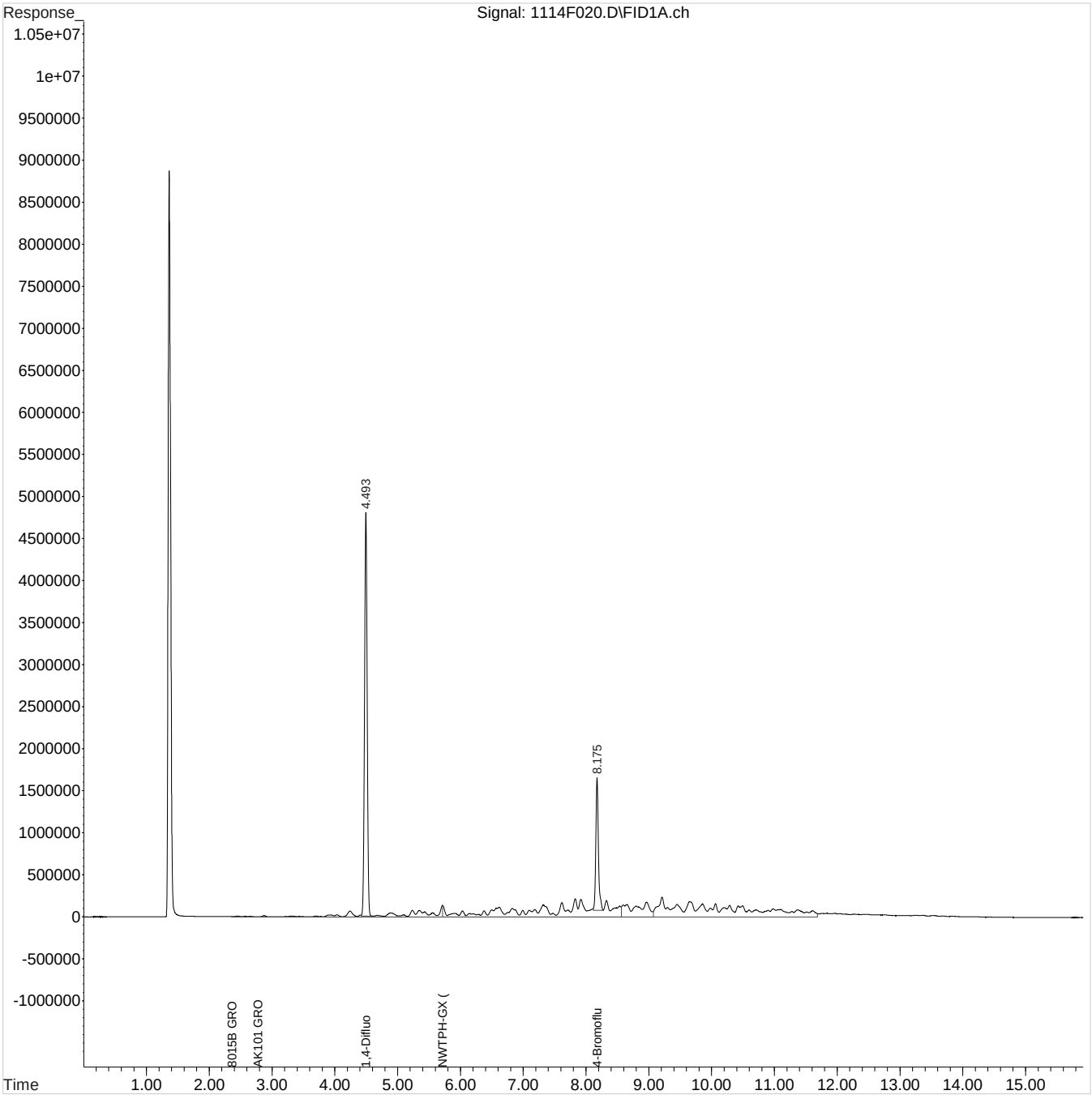
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F020.D Vial: 20
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 6:15 pm Operator: KW
Sample : K1120-008 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 15 07:25:14 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F007.D
Lab ID: KWG1805980-4
RunType: MB
Matrix: SOIL

Date Acquired: 11/14/2018 11:17
Date Quantitated: 11/14/2018 11:59
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F007.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 11:17	**Quant Date:**	11/14/2018 11:59	**Vial:**	7
Run Type:	MB	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1805980-4			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/15/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1805980	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1703516	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.17	-0.01	3826557	42.90	86	70-130	OK	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		1551497	13.21	2.5	U	
Gasoline Range Organics (GRO)	2.36		1776065	13.03	2.5	U	

Prep Amount:	25.0 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	25.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F007.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 11:17	**Quant Date:**	11/14/2018 11:59	**Vial:**	7
Run Type:	MB	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805980-4			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/15/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1805980	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1703516	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.17	-0.01	3826557	42.90	86	83-119	OK	

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		1551497	13.21	1.0	U	
Gasoline Range Organics (GRO)	2.36		1776065	13.03	1.0	U	

Prep Amount:	25.0 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	25.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F007.D Vial: 7
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 11:17 am Operator: KW
Sample : MB RR Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 11:59:03 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	1,4-Difluorobenzene	4.491	14153958	90.426 ug/L
2) S	4-Bromofluorobenzene	8.175	3826557	42.903 ug/L
	Target Compounds			
3) H	AK101 GRO (C6-C10)	2.773	1551497	13.205 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	1776065	13.034 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.714	1130712	14.185 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

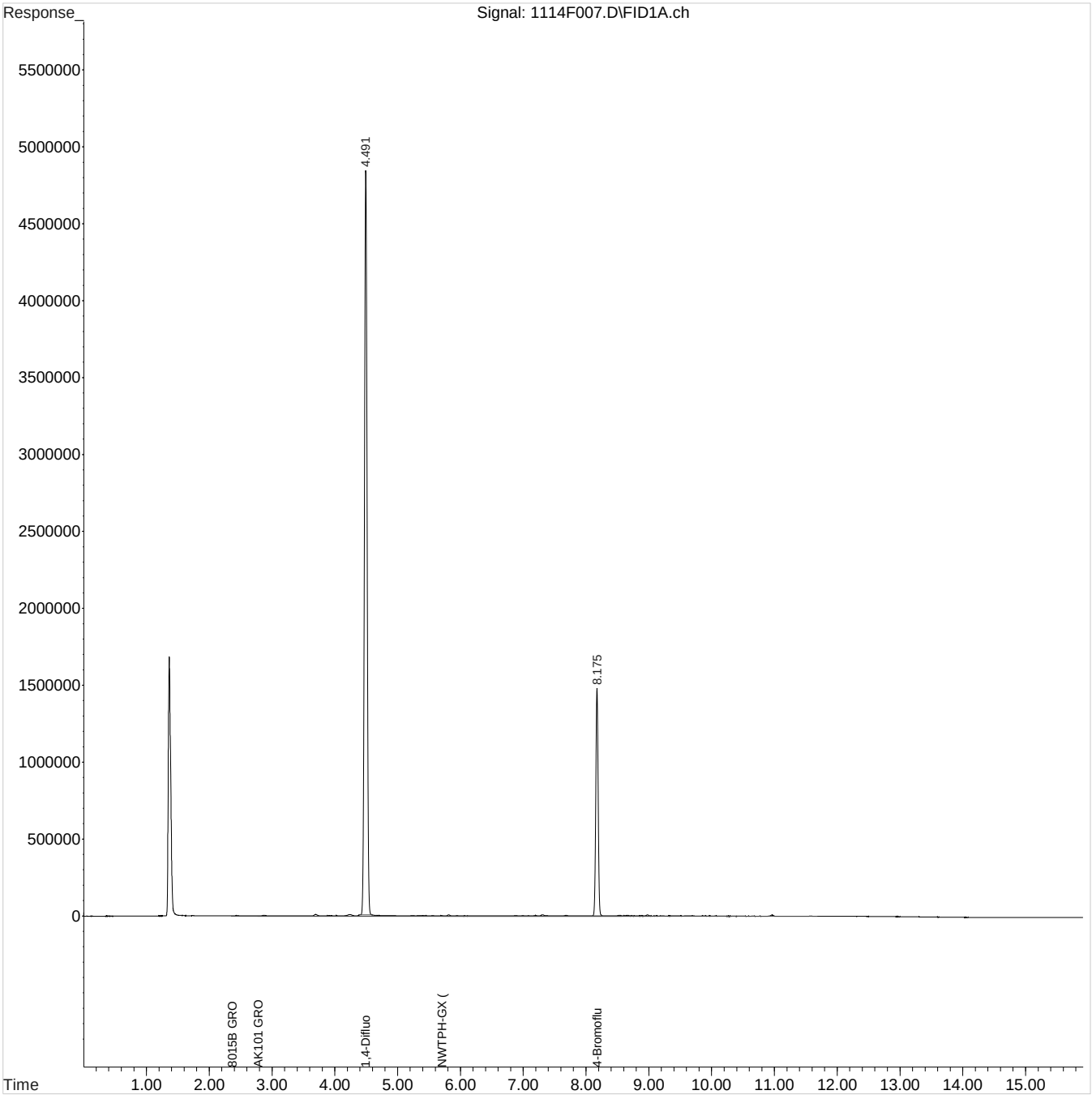
Quantitation Report (Not Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F007.D Vial: 7
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 11:17 am Operator: KW
Sample : MB RR Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 11:59:03 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F008.D
Lab ID: KWG1805980-1 -- K1811120-001MS
RunType: MS
Matrix: SOIL

Date Acquired: 11/14/2018 13:26
Date Quantitated: 11/14/2018 13:43
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F008.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 13:26	**Quant Date:**	11/14/2018 13:43	**Vial:**	8
Run Type:	MS	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1805980-1 -- K1811120-001MS			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	12/04/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1805980	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1703513	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18	0.00	4166579	46.72	93	70-130	OK	

Target Compounds

Final Conc. Units: ug/WIPE Dry Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		63995841	544.66	72.9		
Gasoline Range Organics (GRO)	2.36		74195122	544.50	72.8		

Prep Amount:	5.030 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	10.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	74.3 %				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F008.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 13:26	**Quant Date:**	11/14/2018 13:43	**Vial:**	8
Run Type:	MS	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805980-1 -- K1811120-001MS			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	12/04/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1805980	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1703513	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18	0.00	4166579	46.72	93	83-119	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		63995841	544.66	72.9		
Gasoline Range Organics (GRO)	2.36		74195122	544.50	72.8		

Prep Amount:	5.030 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	10.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	74.3 %				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F008.D Vial: 8
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 1:26 pm Operator: KW
Sample : K1120-001 MS Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 13:43:18 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.493	14490415	92.575	ug/L
2) S	4-Bromofluorobenzene	8.175	4166579	46.715	ug/L
	Target Compounds				
3) H	AK101 GRO (C6-C10)	2.773	63995841	544.658	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	74195122	544.503	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.714	41205711	516.936	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

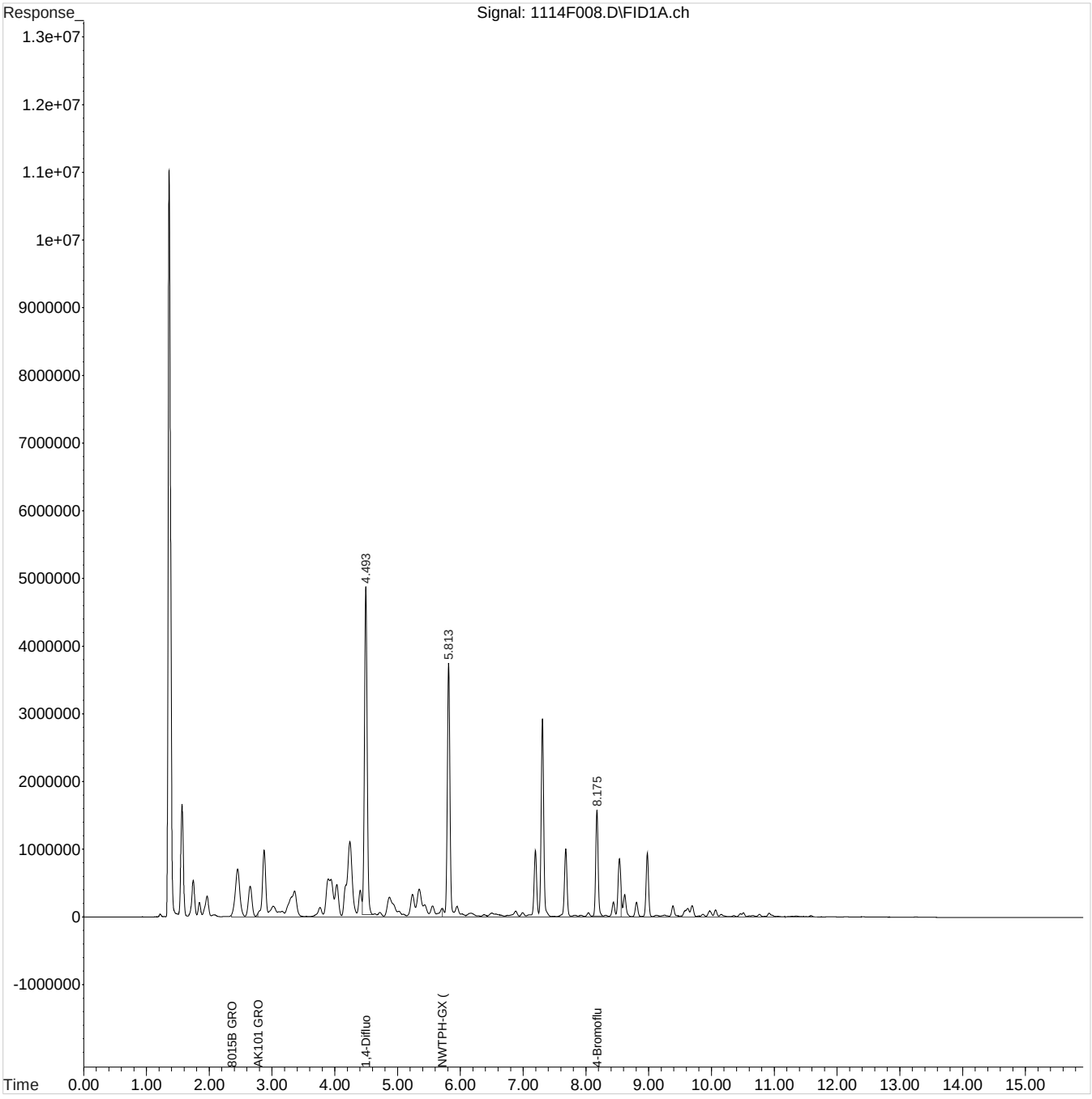
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F008.D Vial: 8
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 1:26 pm Operator: KW
Sample : K1120-001 MS Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 13:43:18 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F009.D
Lab ID: KWG1805980-2 -- K1811120-001DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 11/14/2018 13:50
Date Quantitated: 11/14/2018 14:10
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F009.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 13:50	**Quant Date:**	11/14/2018 14:10	**Vial:**	9
Run Type:	DMS	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1805980-2 -- K1811120-001DMS			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	12/04/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1805980	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1703514	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.17	-0.01	3949470	44.28	89	70-130	OK	

Target Compounds

Final Conc. Units: ug/WIPE Dry Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		63506795	540.50	72.3		
Gasoline Range Organics (GRO)	2.36		73567696	539.90	72.2		

Prep Amount:	5.030 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	10.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	74.3 %				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F009.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 13:50	**Quant Date:**	11/14/2018 14:10	**Vial:**	9
Run Type:	DMS	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805980-2 -- K1811120-001DMS			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	12/04/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1805980	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1703514	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.17	-0.01	3949470	44.28	89	83-119	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		63506795	540.50	72.3		
Gasoline Range Organics (GRO)	2.36		73567696	539.90	72.2		

Prep Amount:	5.030 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	10.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	74.3 %				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F009.D Vial: 9
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 1:50 pm Operator: KW
Sample : K1120-001 DMS Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 14:10:38 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.494	14691954	93.863	ug/L
2) S	4-Bromofluorobenzene	8.175	3949470	44.281	ug/L
	Target Compounds				
3) H	AK101 GRO (C6-C10)	2.773	63506795	540.496	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	73567696	539.898	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.714	41066137	515.185	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

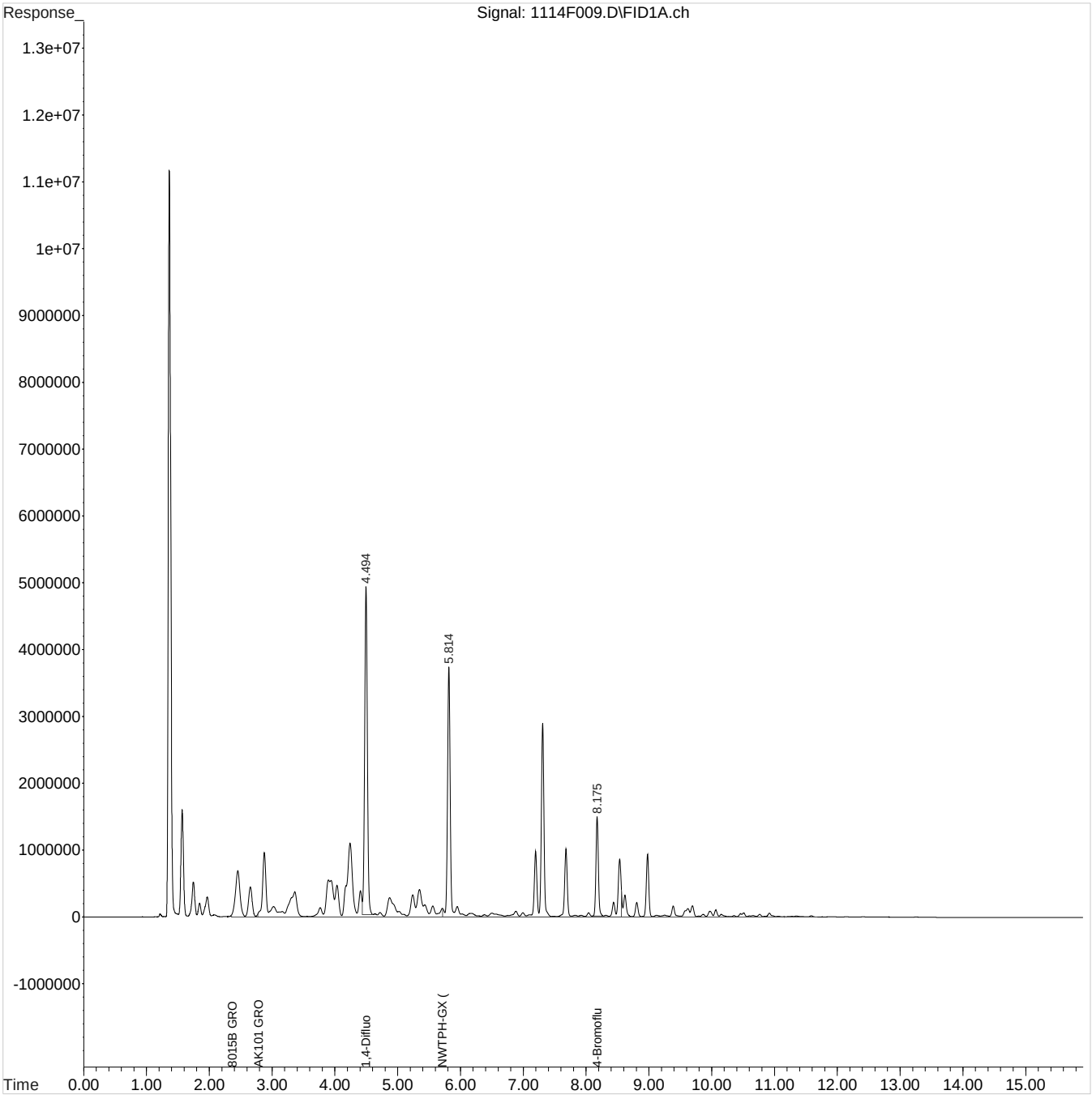
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F009.D Vial: 9
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 1:50 pm Operator: KW
Sample : K1120-001 DMS Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 14:10:38 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st KW 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F006.D
Lab ID: KWG1805980-3
RunType: LCS
Matrix: SOIL

Date Acquired: 11/14/2018 10:34
Date Quantitated: 11/14/2018 10:50
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F006.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 10:34	**Quant Date:**	11/14/2018 10:50	**Vial:**	6
Run Type:	LCS	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1805980-3			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/15/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1805980	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1703515	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18	0.00	3738254	41.91	84	70-130	OK	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		57740536	491.42	24.6		
Gasoline Range Organics (GRO)	2.36		67224246	493.35	24.7		

Prep Amount:	25.0 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	25.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F006.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 10:34	**Quant Date:**	11/14/2018 10:50	**Vial:**	6
Run Type:	LCS	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805980-3			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/15/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1805980	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1703515	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18	0.00	3738254	41.91	84	83-119	OK	

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		57740536	491.42	24.6		
Gasoline Range Organics (GRO)	2.36		67224246	493.35	24.7		

Prep Amount:	25.0 g	**Dilution:**	1.0	**MeOH Ext. Vol:**	25.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (Not Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F006.D Vial: 6
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 10:34 am Operator: KW
Sample : LCS Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 10:50:49 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	1,4-Difluorobenzene	4.494	14342483	91.630 ug/L
2) S	4-Bromofluorobenzene	8.175	3738254	41.913 ug/L
	Target Compounds			
3) H	AK101 GRO (C6-C10)	2.773	57740536	491.420 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	67224246	493.345 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.714	36124692	453.193 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

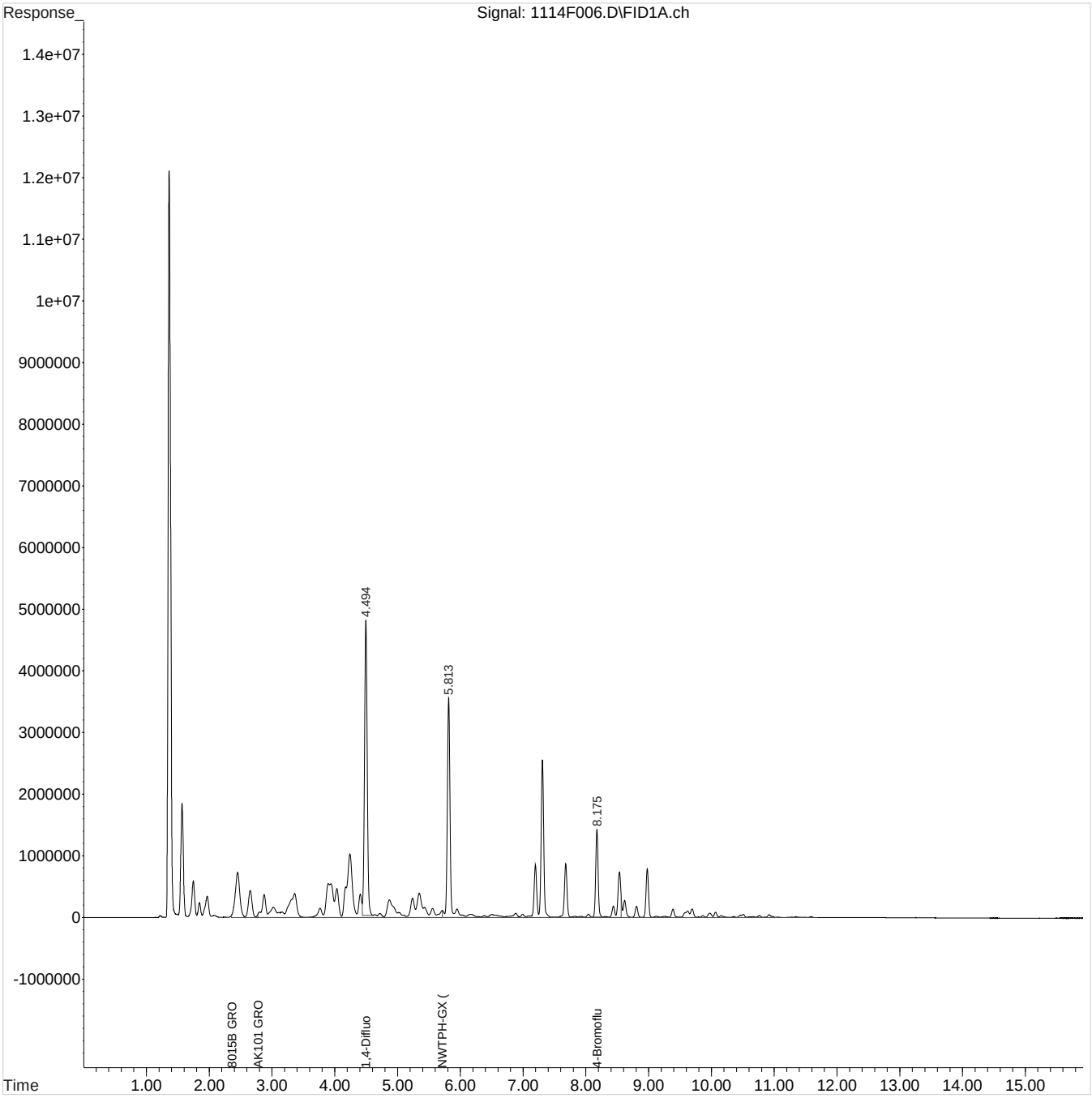
Quantitation Report (Not Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F006.D Vial: 6
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 10:34 am Operator: KW
Sample : LCS Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 10:50:49 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F003.D
Lab ID: KWG1805982-1
RunType: CCV
Matrix: SOIL

Date Acquired: 11/14/2018 09:22
Date Quantitated: 11/14/2018 09:52
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F003.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 09:22	**Quant Date:**	11/14/2018 09:52	**Vial:**	3
Run Type:	CCV	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1805982-1			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18		7686534	86.18		70-130	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		59872744	509.57			
Gasoline Range Organics (GRO)	2.36		69455714	509.72			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F003.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 09:22	**Quant Date:**	11/14/2018 09:52	**Vial:**	3
Run Type:	CCV	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805982-1			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18		7686534	86.18		83-119	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		59872744	509.57			
Gasoline Range Organics (GRO)	2.36		69455714	509.72			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F003.D Vial: 3
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 9:22 am Operator: KW
Sample : CCV Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 09:52:03 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.494	14671280	93.731	ug/L
2) S	4-Bromofluorobenzene	8.175	7686534	86.181	ug/L
	Target Compounds				
3) H	AK101 GRO (C6-C10)	2.773	59872744	509.567	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	69455714	509.721	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.714	38614708	484.431	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

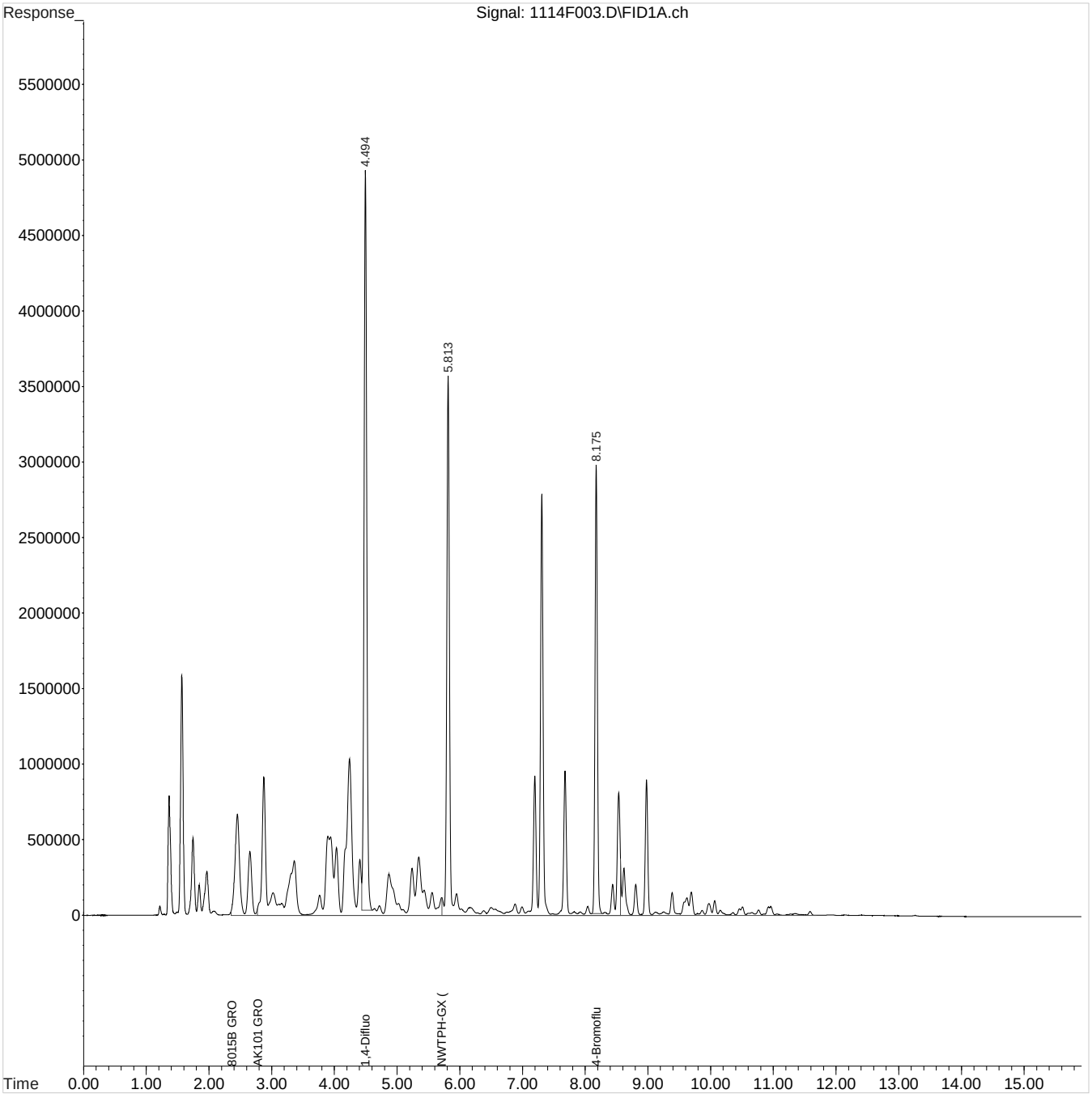
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F003.D Vial: 3
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 9:22 am Operator: KW
Sample : CCV Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 09:52:03 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F018.D
Lab ID: KWG1805982-3
RunType: CCV
Matrix: SOIL

Date Acquired: 11/14/2018 17:26
Date Quantitated: 11/14/2018 17:42
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F018.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 17:26	**Quant Date:**	11/14/2018 17:42	**Vial:**	18
Run Type:	CCV	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1805982-3			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18		7346141	82.36		70-130	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		60854192	517.92			
Gasoline Range Organics (GRO)	2.36		70758062	519.28			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F018.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 17:26	**Quant Date:**	11/14/2018 17:42	**Vial:**	18
Run Type:	CCV	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805982-3			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18		7346141	82.36		83-119	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		60854192	517.92			
Gasoline Range Organics (GRO)	2.36		70758062	519.28			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F018.D Vial: 18
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 5:26 pm Operator: KW
Sample : CCV Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 17:42:45 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.493	14171743	90.540	ug/L
2) S	4-Bromofluorobenzene	8.176	7346141	82.364	ug/L
	Target Compounds				
3) H	AK101 GRO (C6-C10)	2.773	60854192	517.920	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	70758062	519.279	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.714	40817849	512.070	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

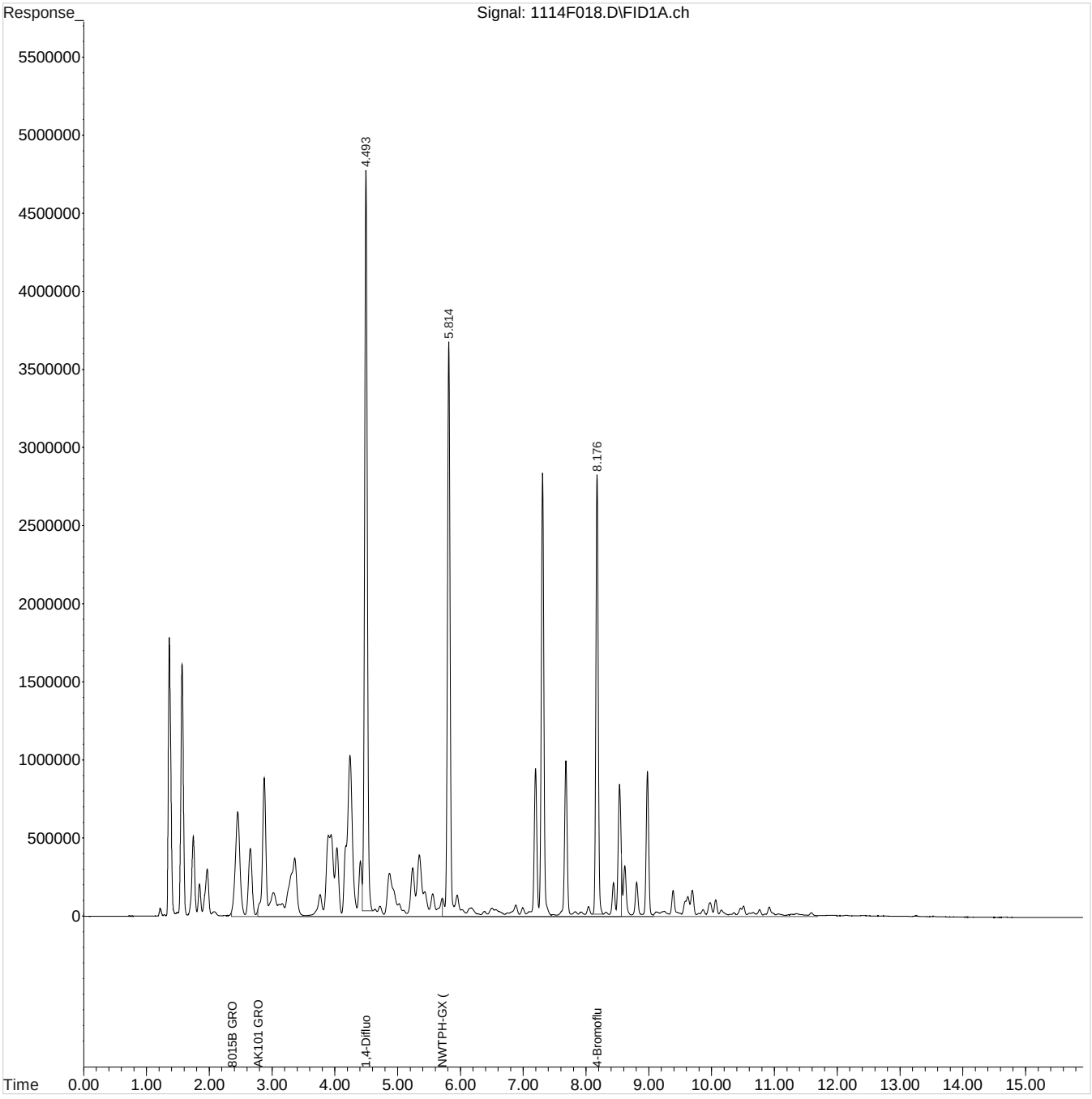
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F018.D Vial: 18
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 5:26 pm Operator: KW
Sample : CCV Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 17:42:45 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F021.D
Lab ID: KWG1805982-5
RunType: CCV
Matrix: SOIL

Date Acquired: 11/14/2018 18:39
Date Quantitated: 11/15/2018 07:25
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F021.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 18:39	**Quant Date:**	11/15/2018 07:25	**Vial:**	21
Run Type:	CCV	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1805982-5			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.17		7901578	88.59		70-130	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		59342264	505.05			
Gasoline Range Organics (GRO)	2.36		69015440	506.49			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F021.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 18:39	**Quant Date:**	11/15/2018 07:25	**Vial:**	21
Run Type:	CCV	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805982-5			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.17		7901578	88.59		83-119	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		59342264	505.05			
Gasoline Range Organics (GRO)	2.36		69015440	506.49			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F021.D Vial: 21
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 6:39 pm Operator: KW
Sample : CCV Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 15 07:25:35 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.493	14514861	92.732	ug/L
2) S	4-Bromofluorobenzene	8.174	7901578	88.592	ug/L
	Target Compounds				
3) H	AK101 GRO (C6-C10)	2.773	59342264	505.052	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	69015440	506.490	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.714	40250710	504.955	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

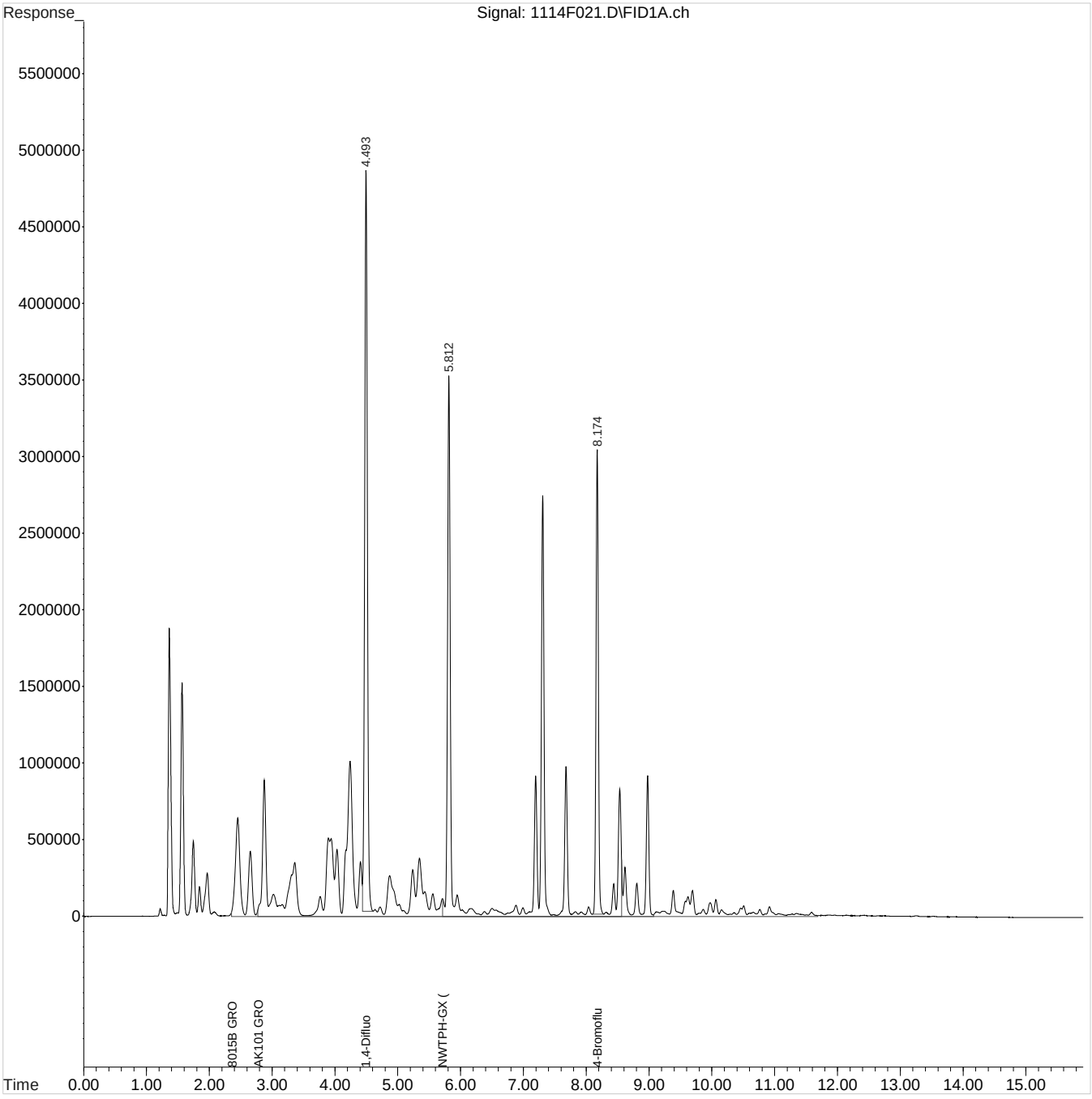
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F021.D Vial: 21
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 6:39 pm Operator: KW
Sample : CCV Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 15 07:25:35 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F004.D
Lab ID: KWG1805982-2
RunType: IB
Matrix: SOIL

Date Acquired: 11/14/2018 09:46
Date Quantitated: 11/14/2018 16:55
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F004.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 09:46	**Quant Date:**	11/14/2018 16:55	**Vial:**	4
Run Type:	IB	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1805982-2			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0**d**			70-130	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		1439806	12.25			
Gasoline Range Organics (GRO)	2.36		1667314	12.24			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F004.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 09:46	**Quant Date:**	11/14/2018 16:55	**Vial:**	4
Run Type:	IB	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805982-2			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0**d**			83-119	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		1439806	12.25			
Gasoline Range Organics (GRO)	2.36		1667314	12.24			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F004.D Vial: 4
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 9:46 am Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:55:10 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds						
1) S	1,4-Difluorobenzene	4.494	13768402	87.963	ug/L	m
2) S	4-Bromofluorobenzene	0.000	0	N.D.	ug/L	d
Target Compounds						
3) H	AK101 GRO (C6-C10)	2.773	1439806	12.254	ug/L	
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	1667314	12.236	ug/L	
5) H	NWTPH-GX (Tol.-Naph.)	5.714	1106649	13.883	ug/L	

(f)=RT Delta > 1/2 Window (m)=manual int.

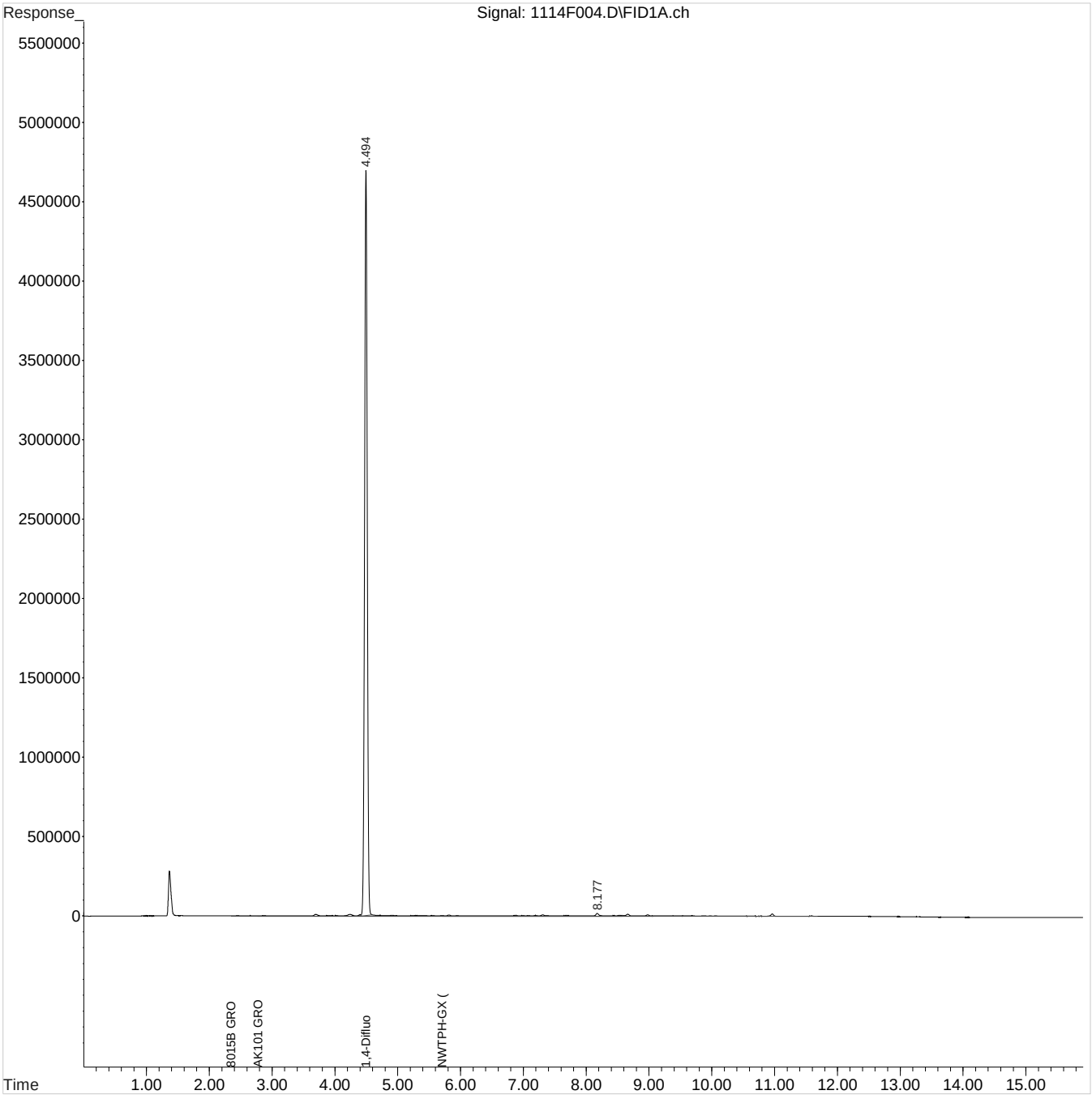
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F004.D Vial: 4
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 9:46 am Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:55:10 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



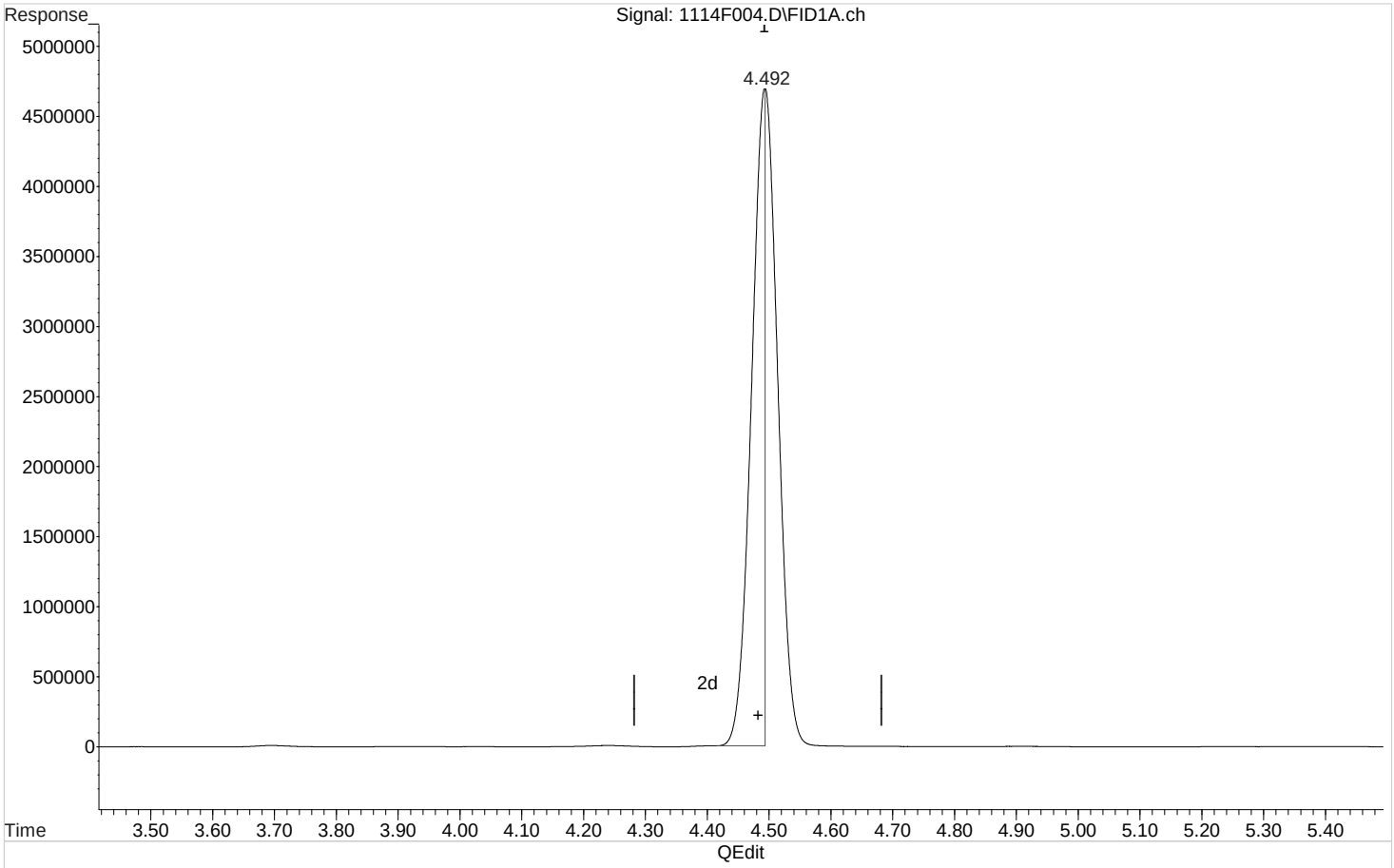
Quantitation Report (Qedit)

1st 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F004.D Vial: 4
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 9:46 am Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:54:51 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(1) 1,4-Difluorobenzene (S)

4.492min 44.473 ug/L

response 6961173

Manual Integration:

Before

11/14/18

(+) = Expected Retention Time

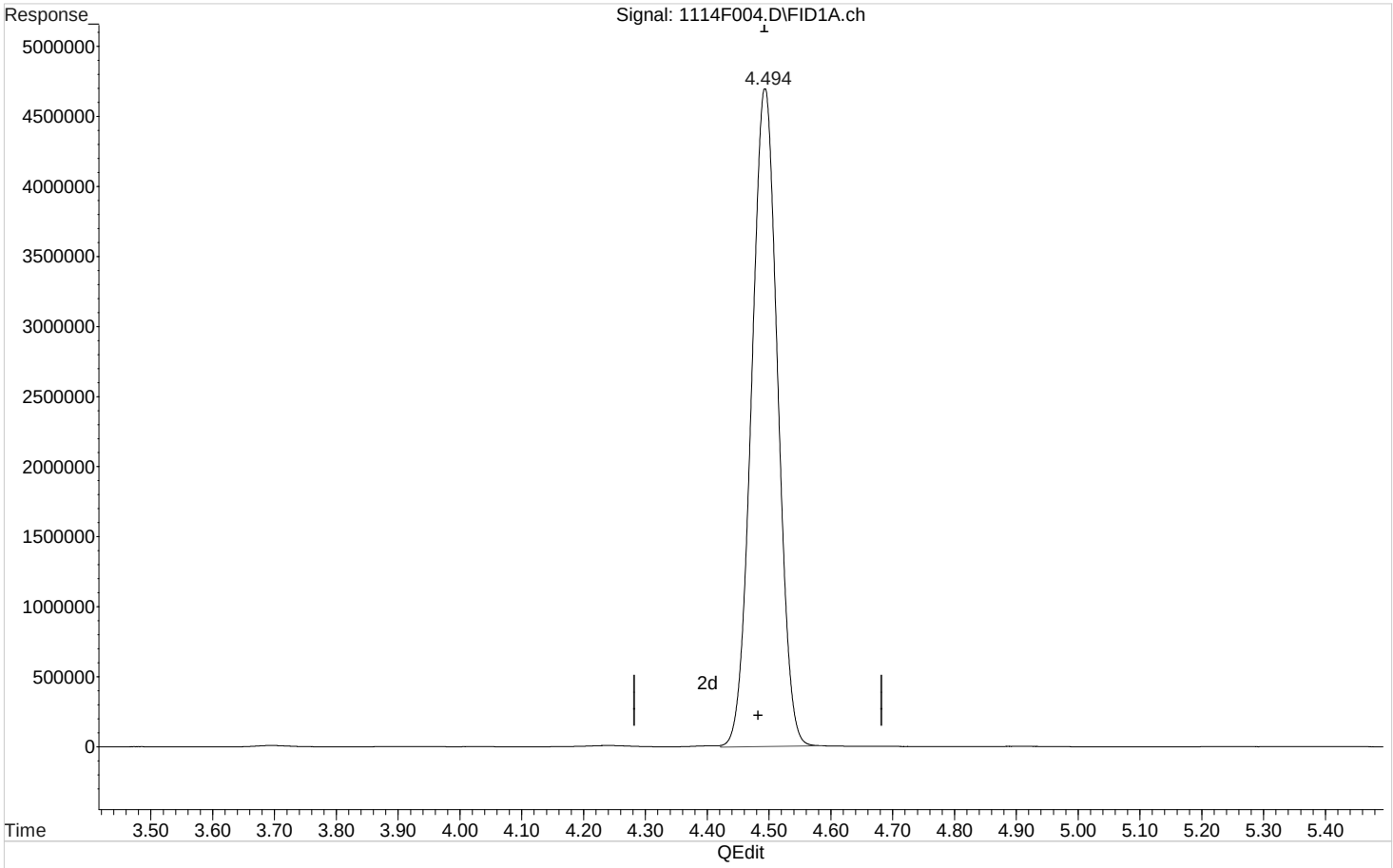
Quantitation Report (Qedit)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F004.D Vial: 4
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 9:46 am Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:54:51 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(1) 1,4-Difluorobenzene (S)

4.494min 87.963 ug/L m

response 13768402

Manual Integration:

After

Split peak

11/14/18

(+) = Expected Retention Time

1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F019.D
Lab ID: KWG1805982-4
RunType: IB
Matrix: SOIL

Date Acquired: 11/14/2018 17:50
Date Quantitated: 11/15/2018 07:25
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F019.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 17:50	**Quant Date:**	11/15/2018 07:25	**Vial:**	19
Run Type:	IB	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1805982-4			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0**d**			70-130	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		1507924	12.83			
Gasoline Range Organics (GRO)	2.36		1748245	12.83			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F019.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 17:50	**Quant Date:**	11/15/2018 07:25	**Vial:**	19
Run Type:	IB	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805982-4			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0**d**			83-119	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		1507924	12.83			
Gasoline Range Organics (GRO)	2.36		1748245	12.83			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F019.D Vial: 19
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 5:50 pm Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 15 07:25:04 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds						
1) S	1,4-Difluorobenzene	4.493	13772828	87.991	ug/L	
2) S	4-Bromofluorobenzene	0.000	0	N.D.	ug/L	d
Target Compounds						
3) H	AK101 GRO (C6-C10)	2.773	1507924	12.834	ug/L	
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	1748245	12.830	ug/L	
5) H	NWTPH-GX (Tol.-Naph.)	5.714	1391717	17.459	ug/L	

(f)=RT Delta > 1/2 Window (m)=manual int.

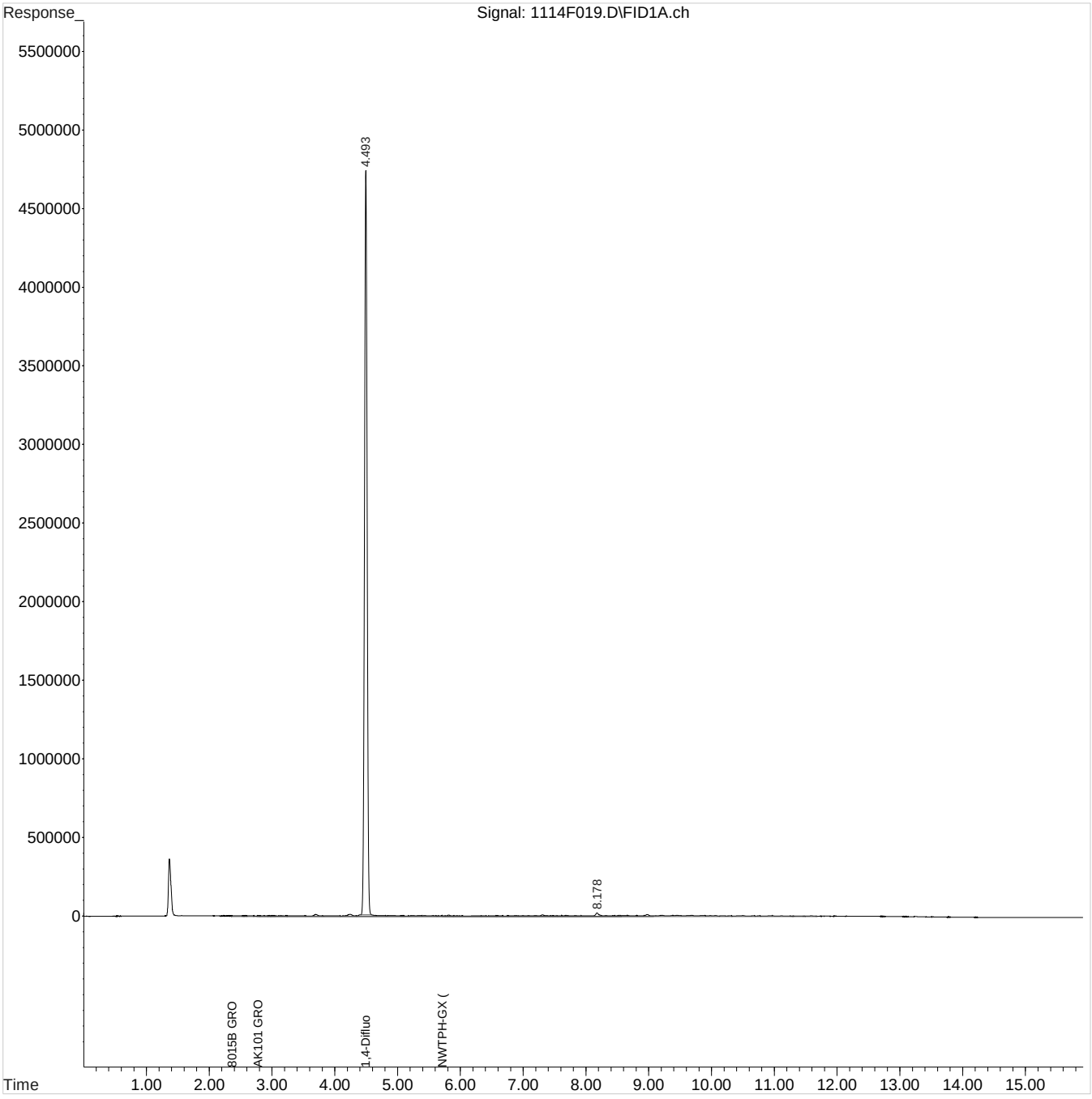
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F019.D Vial: 19
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 5:50 pm Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 15 07:25:04 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F022.D
Lab ID: KWG1805982-6
RunType: IB
Matrix: SOIL

Date Acquired: 11/14/2018 19:03
Date Quantitated: 11/15/2018 07:26
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F022.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 19:03	**Quant Date:**	11/15/2018 07:26	**Vial:**	22
Run Type:	IB	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1805982-6			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0**d**			70-130	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		1513371	12.88			
Gasoline Range Organics (GRO)	2.36		1763941	12.95			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F022.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 19:03	**Quant Date:**	11/15/2018 07:26	**Vial:**	22
Run Type:	IB	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805982-6			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0**d**			83-119	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		1513371	12.88			
Gasoline Range Organics (GRO)	2.36		1763941	12.95			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F022.D Vial: 22
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 7:03 pm Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 15 07:26:06 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1) S	1,4-Difluorobenzene	4.492	14096911	90.061	ug/L	
2) S	4-Bromofluorobenzene	0.000	0	N.D.	ug/L	d
	Target Compounds					
3) H	AK101 GRO (C6-C10)	2.773	1513371	12.880	ug/L	
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	1763941	12.945	ug/L	
5) H	NWTPH-GX (Tol.-Naph.)	5.714	1487972	18.667	ug/L	

(f)=RT Delta > 1/2 Window (m)=manual int.

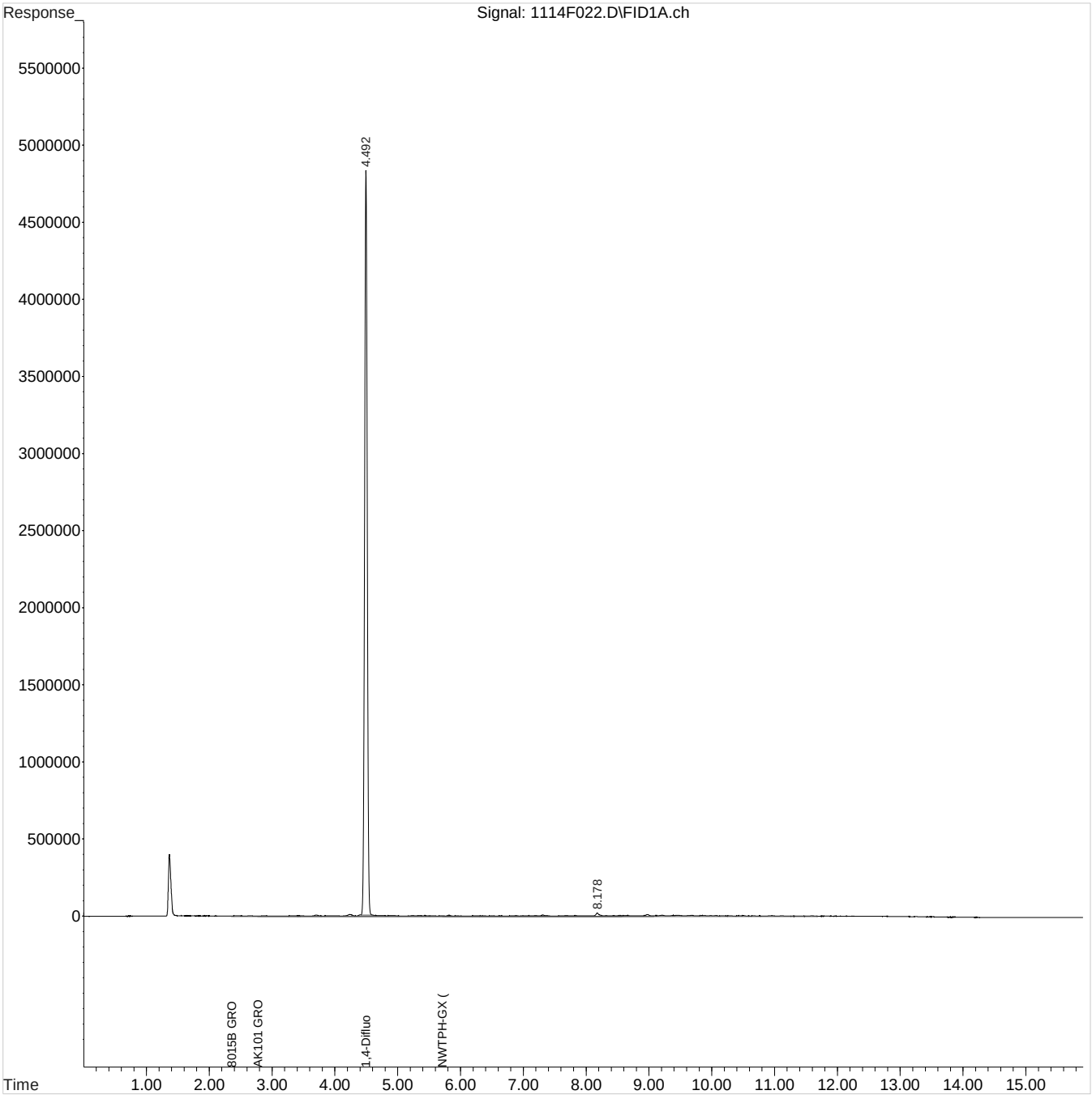
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F022.D Vial: 22
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 7:03 pm Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 15 07:26:06 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Date: 6.14.18

By: KW

IS/SS Std. ID: _____

CCV Std ID: HCV7 88E XP: 6.21.18 / HCV7 88B XP: 7.14.18

MS/DMS/LCS/ICV Std ID: HCV7 88M XP: 6.21.18

Marker Std. ID: HCV7.83J XP: NA

ALS Environmental
Injection Log
GC39 Agilent 7890B

LIMS ID _____

ICAL Date: 6.14.18 1576

Second RV: JUN 19 2018

Stealth ID: _____

		Sample Name	File Name	Method	Dilution	pH<2	Comments
✓	1	MARKER	0614F001	8015C.M	10UL→5ML		
	2	CCV	002				MR
	3	IB	003				
→	4	IB	004				
→	5	IB	005				
✓	6	ICAL 50/20	006		5/5UL→10ML		HCV7 88D XP 6.21.18 6.15.18 KW
✓	7	100/25	007		5/5UL→5ML		88G See standard BA
✓	8	200/50	008		10/10UL→5ML		88H
→	9	500/100	009		25/20UL→5ML		88I
✓	10	1000/150	010		50/50UL→5ML		88J
✓	11	5000	011		50UL→5ML		88K
✓	12	10,000	012		100UL→5ML		88L
→	13	IB	013				
✓	14	ICV 500/100	014		25/20UL→5ML		HCV7.88N See standard BO
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						
	26						KW 6.15.18
	27						

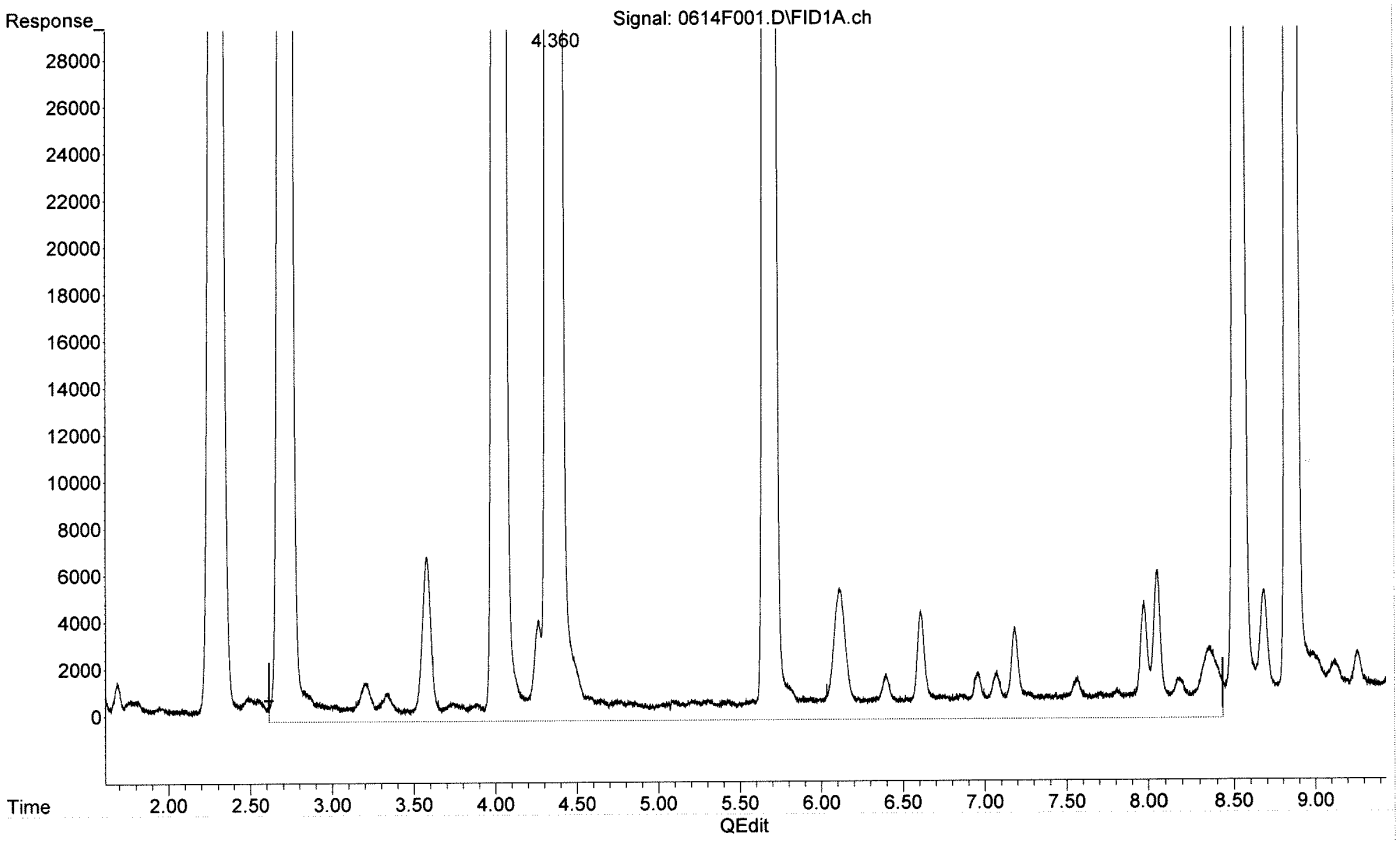
R:\VOA\Injection Logs\INJLOG_GC39_Rev1

019677

Data File : J:\GC60\Data\061418\0614F001.D Vial: 1
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 7:55 am Operator: KW
Sample : MARKER Inst : GC60
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 16:19:10 2018
Quant Results File: 061418GAS_GC60.RES

Quant Method : J:\GC60\Methods\061418GAS_GC60.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(3) AK101 GRO (C6-C10) (H)

2.614min 35.647 ug/L m

response 4188472

JUN 19 2018

KW 6-15-18

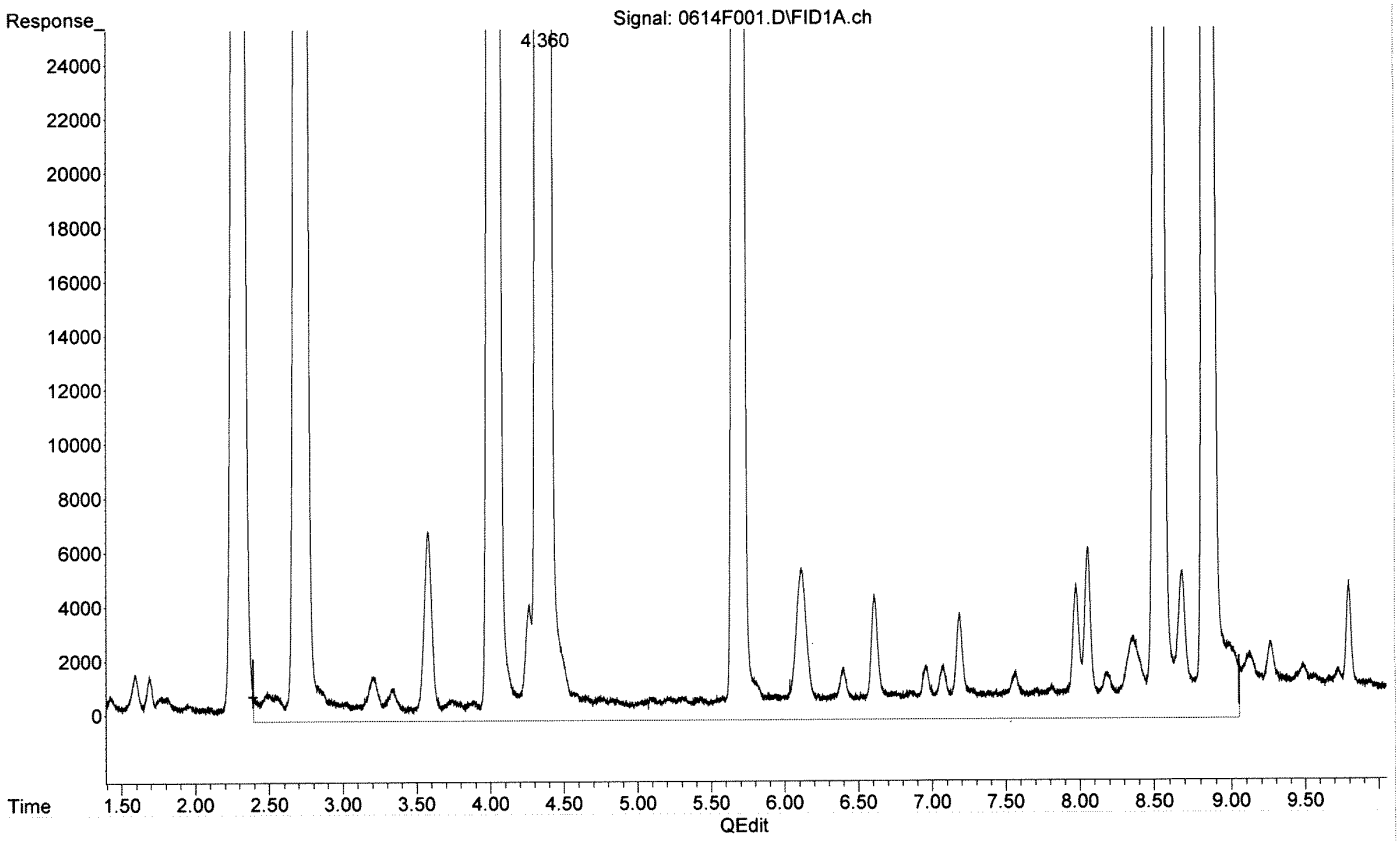
(+) = Expected Retention Time
061418GAS_GC60.M Thu Jun 14 16:19:53 2018 Page: 1

019678

Data File : J:\GC60\Data\061418\0614F001.D Vial: 1
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 7:55 am Operator: KW
Sample : MARKER Inst : GC60
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 16:19:10 2018
Quant Results File: 061418GAS_GC60.RES

Quant Method : J:\GC60\Methods\061418GAS_GC60.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(4) 8015B GRO (2mp-1,2,4tmb) (H)

2.392min 44.880 ug/L m

response 6115404

JUN 19 2018

KW 6-15-18

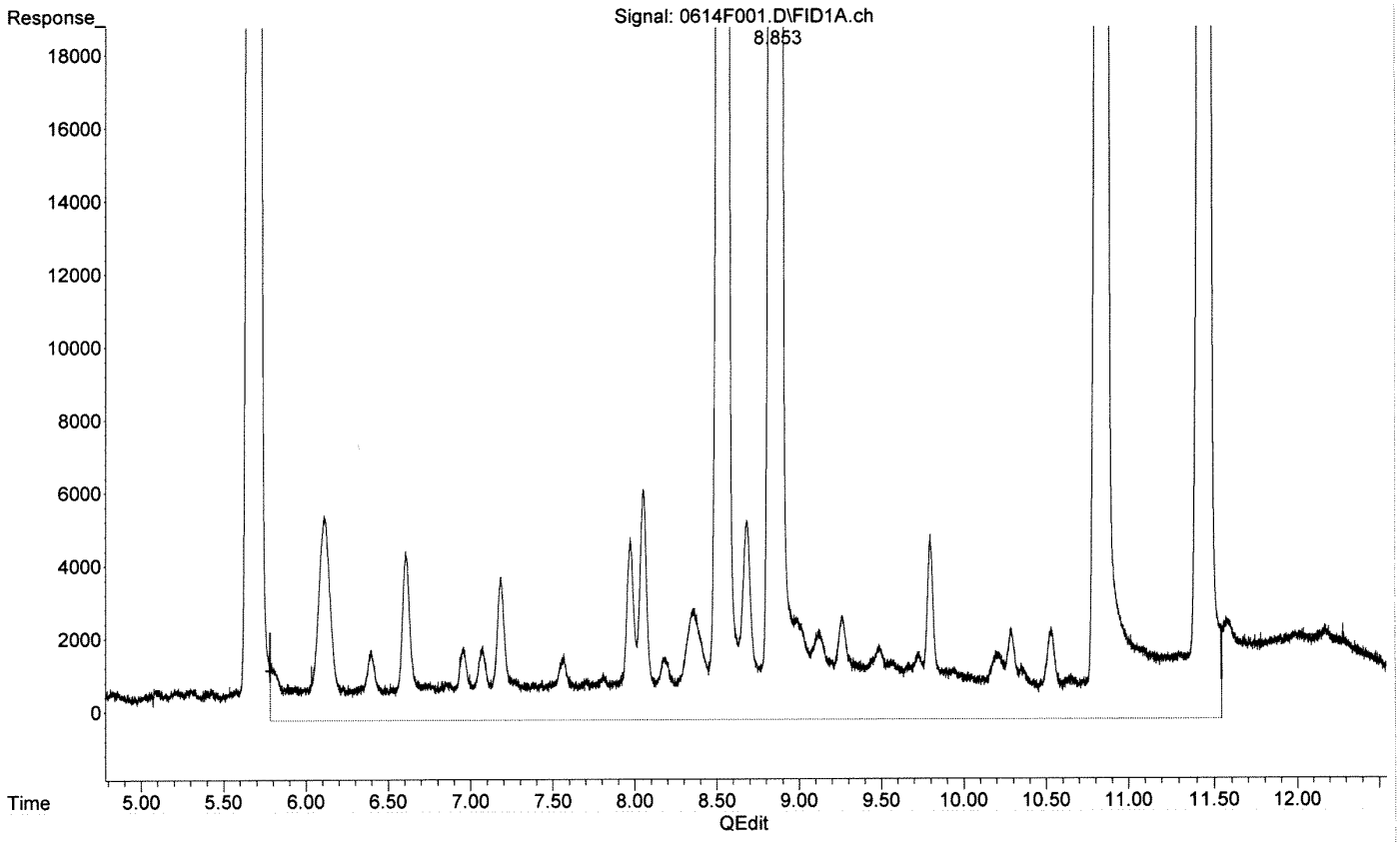
(+) = Expected Retention Time
061418GAS_GC60.M Thu Jun 14 16:20:00 2018

Page: 1

Data File : J:\GC60\Data\061418\0614F001.D Vial: 1
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 7:55 am Operator: KW
Sample : MARKER Inst : GC60
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 16:19:10 2018
Quant Results File: 061418GAS_GC60.RES

Quant Method : J:\GC60\Methods\061418GAS_GC60.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(5) NWTPH-GX (Tol.-Naph.) (H)

5.783min 46.770 ug/L m

response 3728144

JUN 19 2018

KW 6.15.18

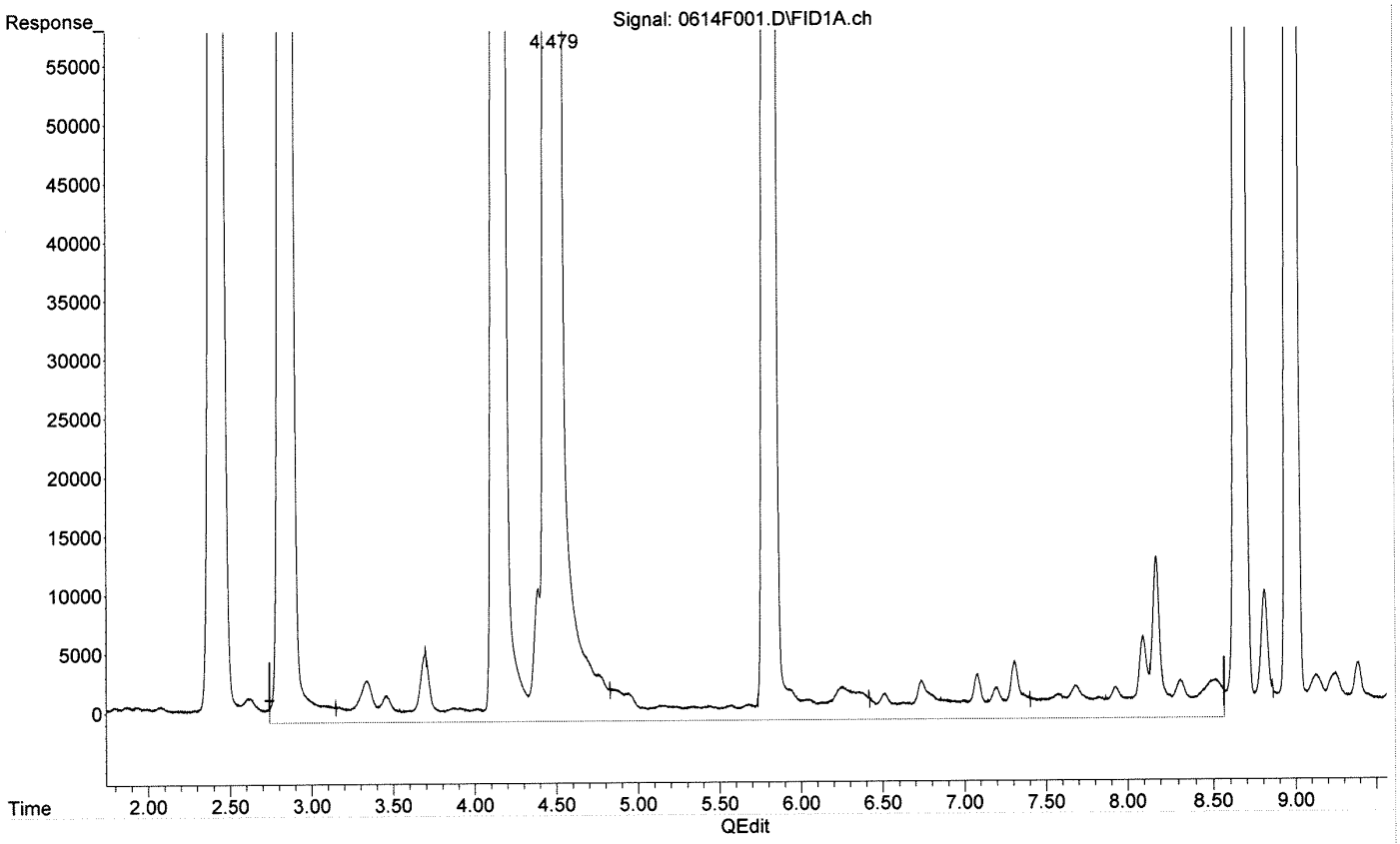
(+) = Expected Retention Time
061418GAS_GC60.M Thu Jun 14 16:20:06 2018 Page: 1

019680

Data File : J:\GC39\DATA\061418\0614F001.D Vial: 1
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 7:56 am Operator: KW
Sample : MARKER Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 14:53:09 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Fri May 25 09:08:39 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(3) AK101 GRO (C6-C10) (H)

2.743min 87.838 ug/L m

response 9262645

JUN 19 2018

KW 6-15-18

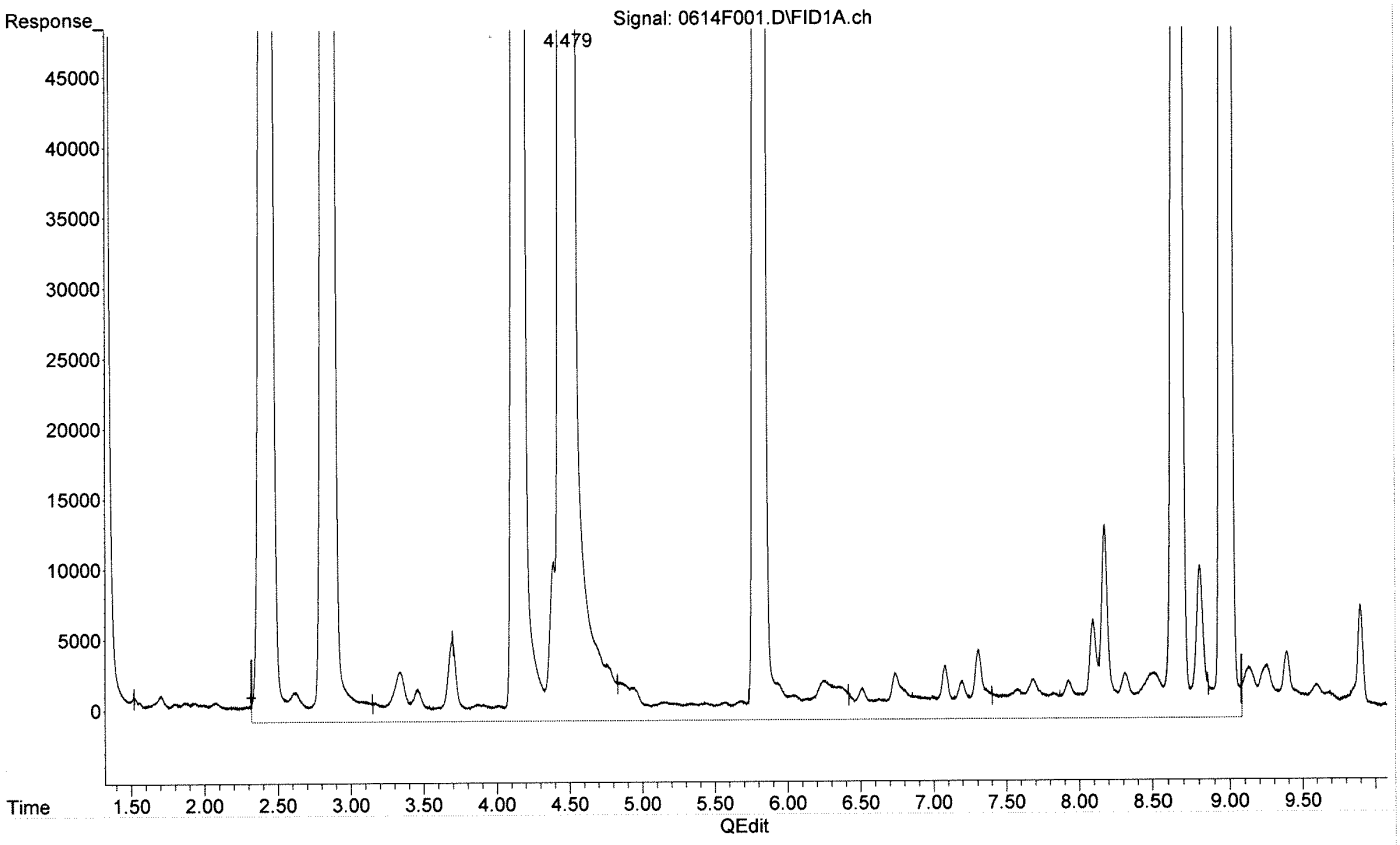
(+) = Expected Retention Time
061418GAS_GC39.M Thu Jun 14 14:54:02 2018 Page: 1

019681

Data File : J:\GC39\DATA\061418\0614F001.D Vial: 1
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 7:56 am Operator: KW
Sample : MARKER Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 14:53:09 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Fri May 25 09:08:39 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(4) 8015B GRO (2mp-1,2,4tmb) (H)

2.319min 117.691 ug/L m

response 14621665

JUN 19 2018

KW 6-15-18

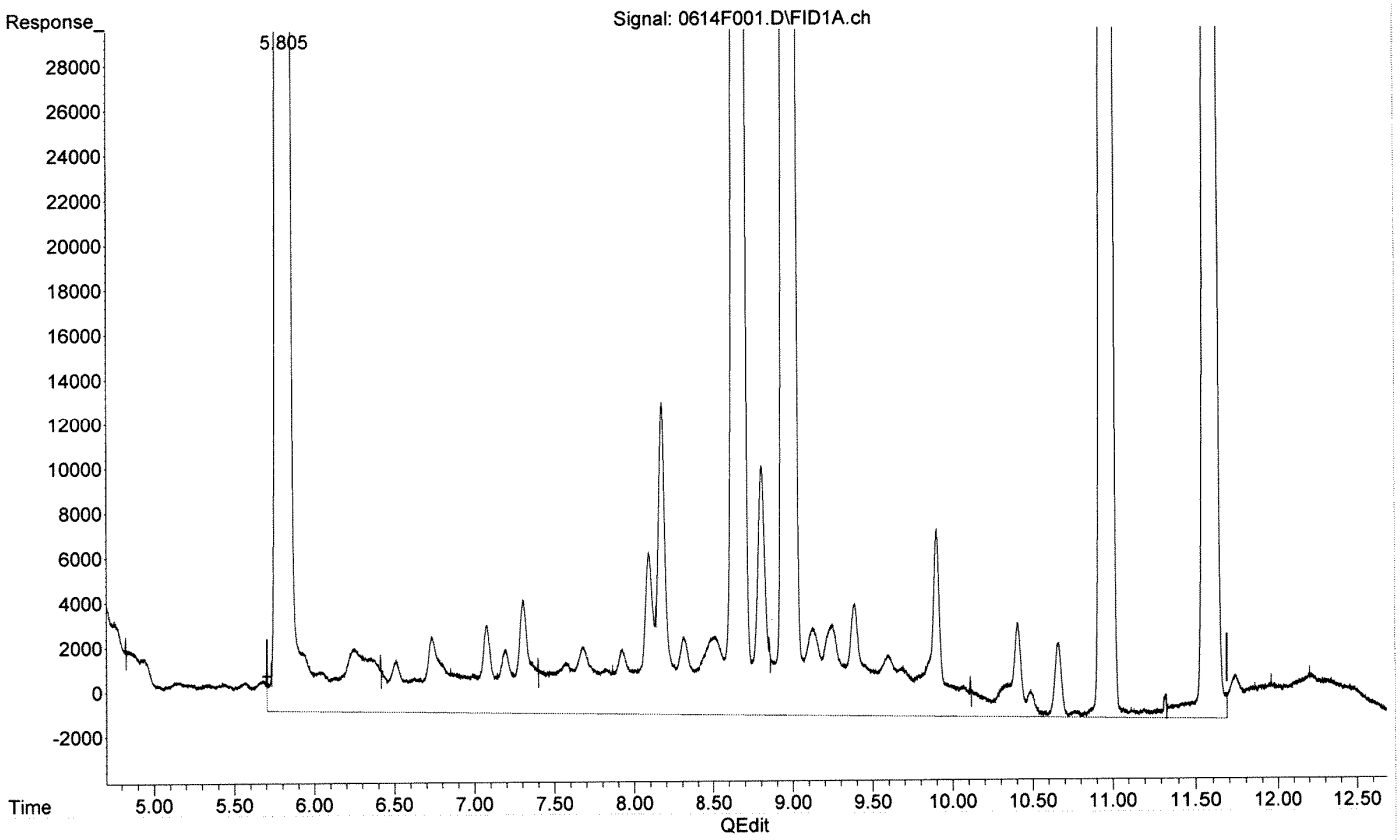
(+) = Expected Retention Time
061418GAS_GC39.M Thu Jun 14 14:54:11 2018 Page: 1

019682

Data File : J:\GC39\DATA\061418\0614F001.D Vial: 1
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 7:56 am Operator: KW
Sample : MARKER Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 14:53:09 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Fri May 25 09:08:39 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(5) NWTPH-GX (Tol.-Naph.) (H)

5.705min 159.264 ug/L m

response 10536767

JUN 19 2018

KW 6.15.18

(+) = Expected Retention Time
061418GAS_GC39.M Thu Jun 14 14:54:33 2018 Page: 1

019683

Data File : J:\GC39\DATA\061418\0614F005.D Vial: 5
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 10:42 am Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 15 07:56:24 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	1,4-Difluorobenzene	4.470	1194	0.008 ug/L
2) S	4-Bromofluorobenzene	0.000	0	N.D. ug/L
	Target Compounds			
3) H	AK101 GRO (C6-C10)	2.743	344732	2.934 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.319	396078	2.907 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	448846	5.631 ug/L

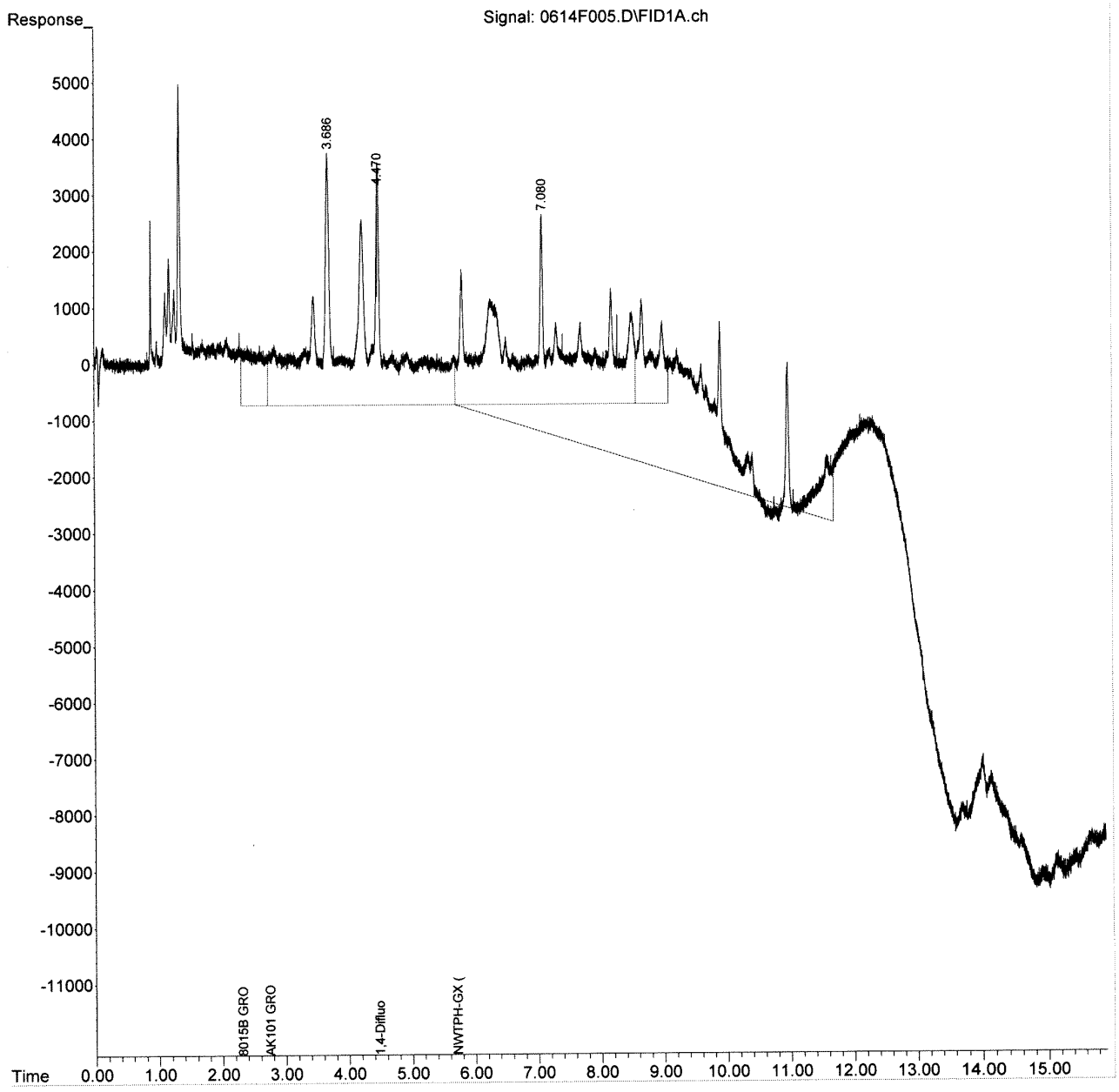
(f)=RT Delta > 1/2 Window (m)=manual int.

JUN 19 2018
KW 6/19/18

Data File : J:\GC39\DATA\061418\0614F005.D Vial: 5
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 10:42 am Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 15 07:56:24 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Data File : J:\GC39\DATA\061418\0614F006.D Vial: 6
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 11:32 am Operator: KW
Sample : ICAL 1 50/20 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:04:24 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	1,4-Difluorobenzene	4.478	3251592	21.080 ug/L m
2) S	4-Bromofluorobenzene	8.173	1785678	19.782 ug/L
	Target Compounds			
3) H	AK101 GRO (C6-C10)	2.743	6262618	55.319 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.319	7291444	55.437 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	4307873	56.733 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

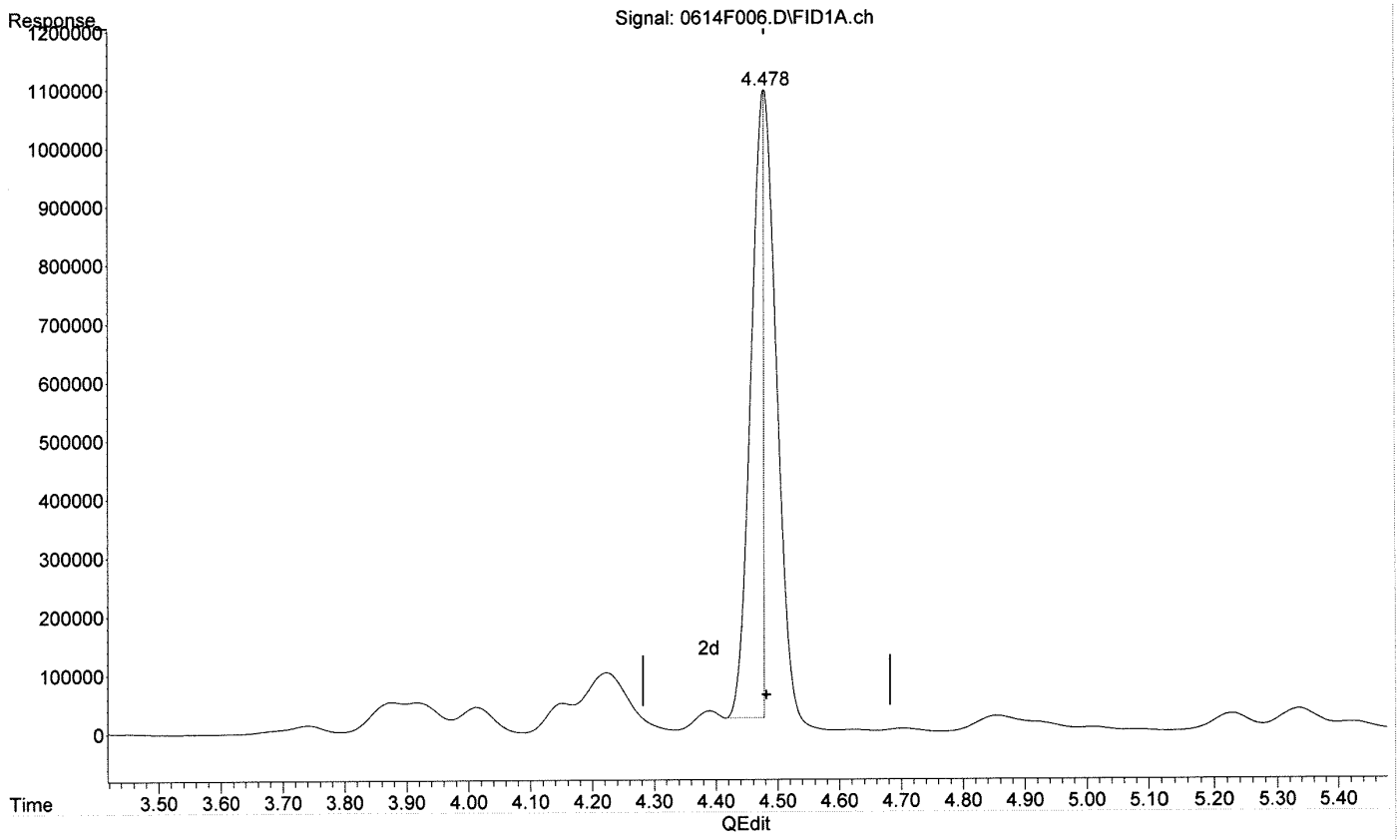
JUN 19 2018

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Data File : J:\GC39\DATA\061418\0614F006.D Vial: 6
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 11:32 am Operator: KW
Sample : ICAL 1 50/20 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:11 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(1) 1,4-Difluorobenzene (S)

4.478min 9.874 ug/L

response 1523071

Manual Integration:

Before

06/14/18

JUN 19 2018

KW 6-15-18

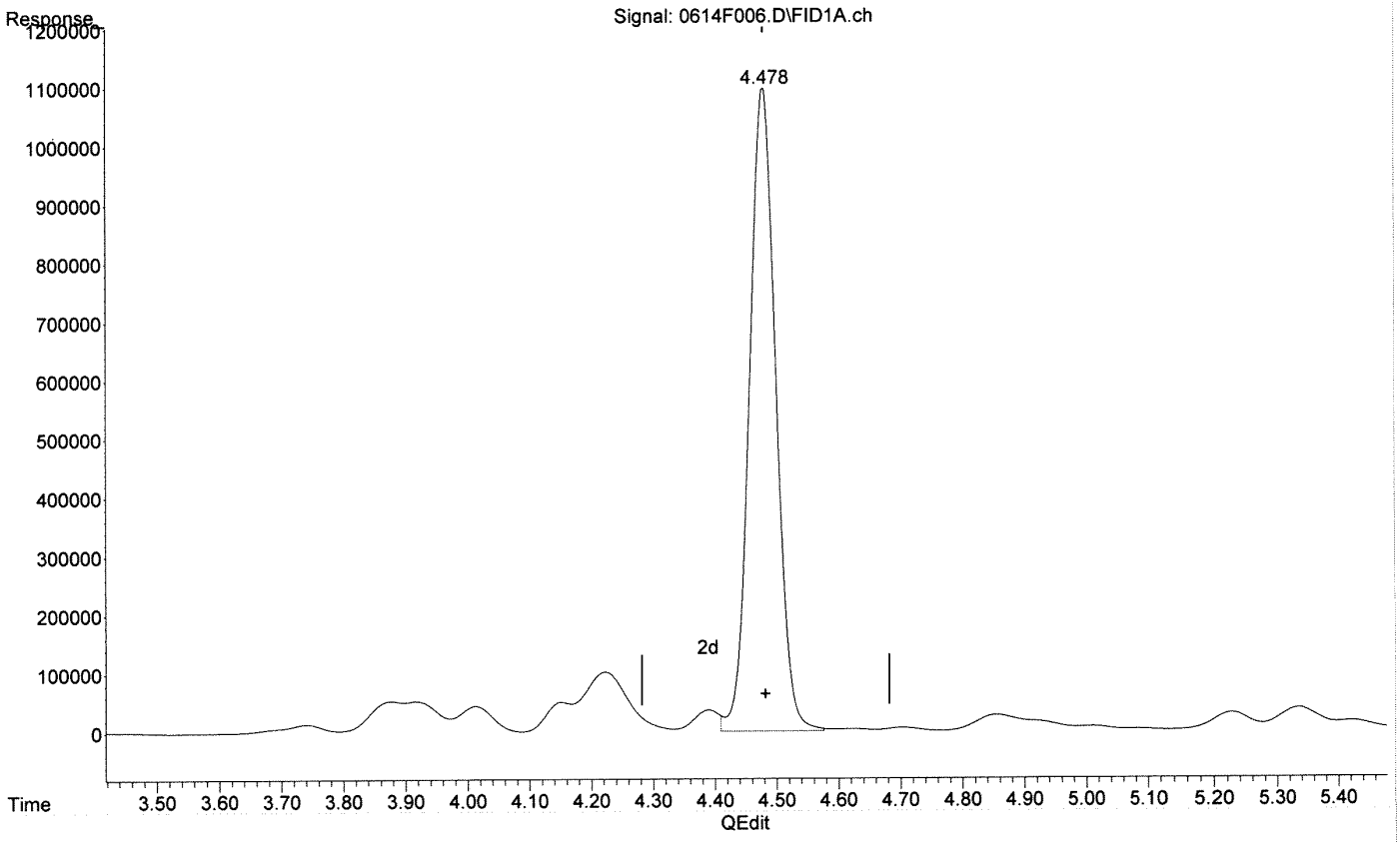
(+) = Expected Retention Time
061418GAS_GC39.M Thu Jun 14 15:04:12 2018 Page: 1

019687

Data File : J:\GC39\DATA\061418\0614F006.D Vial: 6
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 11:32 am Operator: KW
Sample : ICAL 1 50/20 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:11 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(1) 1,4-Difluorobenzene (S)
4.478min 21.080 ug/L m
response 3251592

Manual Integration:
After
Split peak
06/14/18

JUN 19 2018
KW 6-15-18

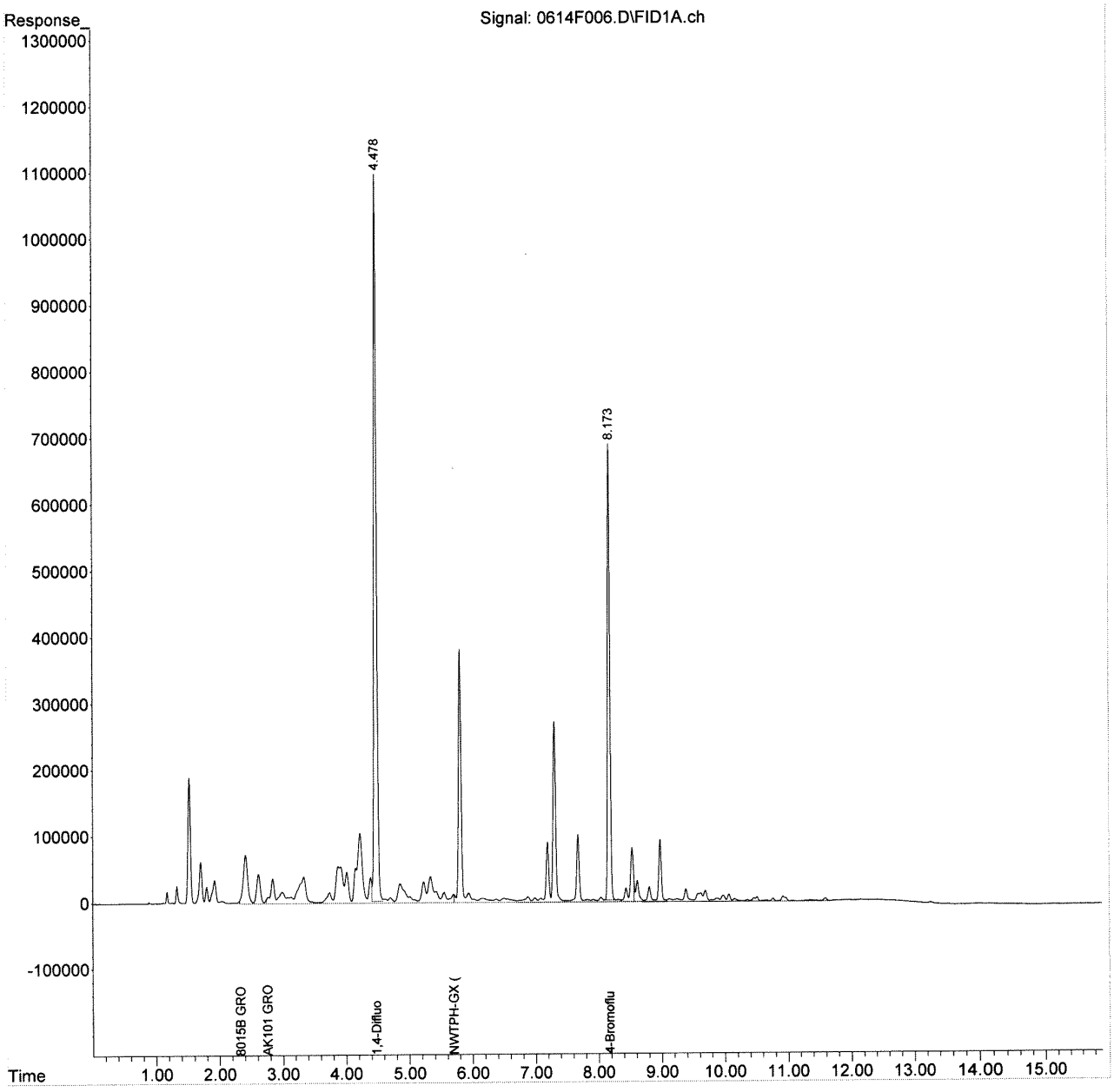
(+) = Expected Retention Time
061418GAS_GC39.M Thu Jun 14 15:04:31 2018 Page: 1

019688

Data File : J:\GC39\DATA\061418\0614F006.D Vial: 6
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 11:32 am Operator: KW
Sample : ICAL 1 50/20 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:04:24 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Data File : J:\GC39\DATA\061418\0614F007.D Vial: 7
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 11:58 am Operator: KW
Sample : ICAL 2 100/25 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:14 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	1,4-Difluorobenzene	4.481	3898048	25.271 ug/L
2) S	4-Bromofluorobenzene	8.174	2244346	24.863 ug/L
	Target Compounds			
3) H	AK101 GRO (C6-C10)	2.743	11321073	100.002 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.319	13175855	100.176 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	7787571	102.559 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

JUN 19 2018

KW 6.15.18

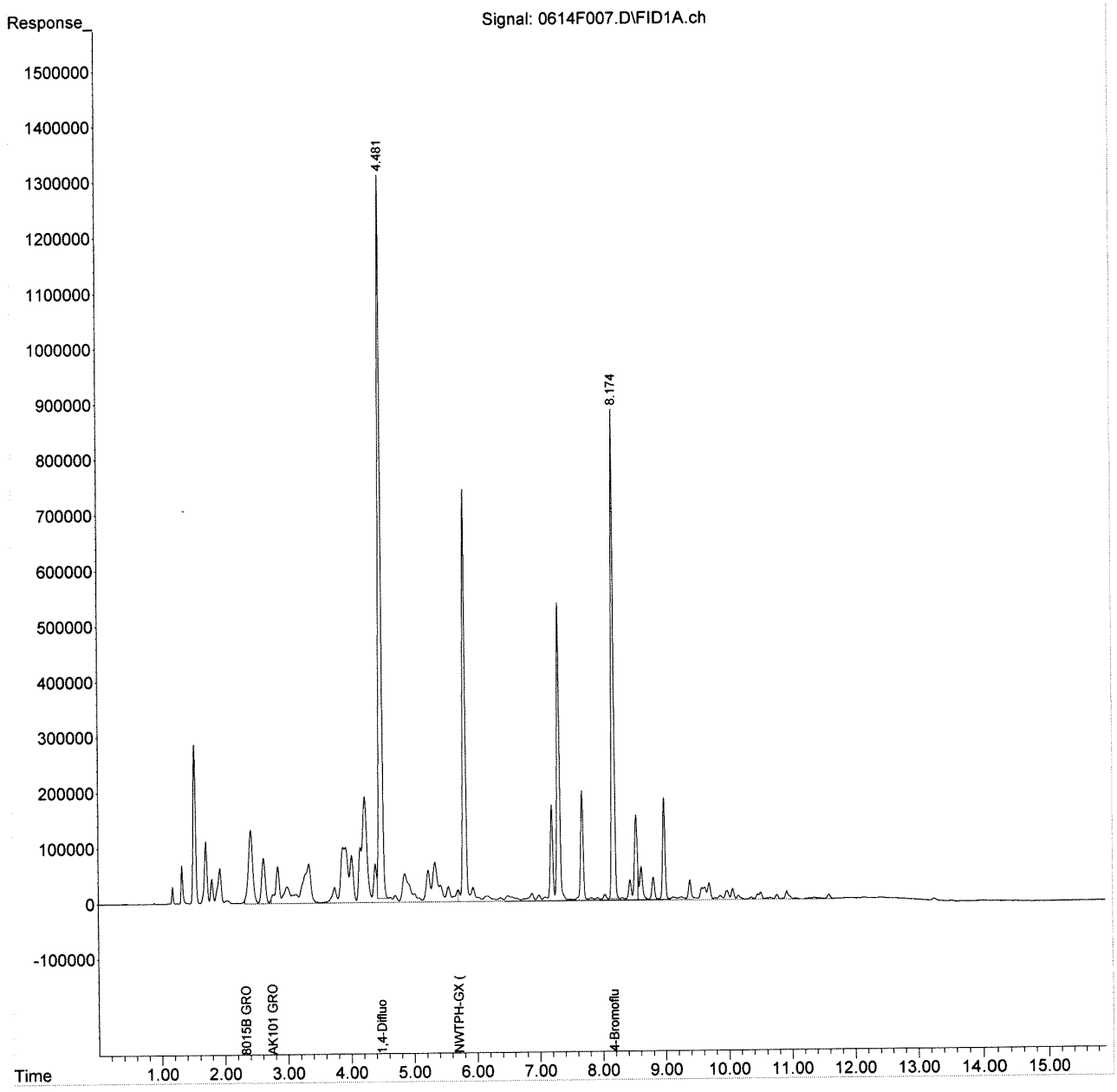
Data File : J:\GC39\DATA\061418\0614F007.D
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 11:58 am
Sample : ICAL 2 100/25
Misc :
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:14 2018
Quant Results File: 061418GAS_GC39.RES

Vial: 7

Operator: KW
Inst : GC39
Multiplr: 1.00

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Data File : J:\GC39\DATA\061418\0614F008.D Vial: 8
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 12:22 pm Operator: KW
Sample : ICAL 3 200/50 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:18 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	1,4-Difluorobenzene	4.481	7842287	50.842 ug/L
2) S	4-Bromofluorobenzene	8.174	4389823	48.630 ug/L
	Target Compounds			
3) H	AK101 GRO (C6-C10)	2.743	24113800	213.004 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.319	28030098	213.113 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	15916486	209.612 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

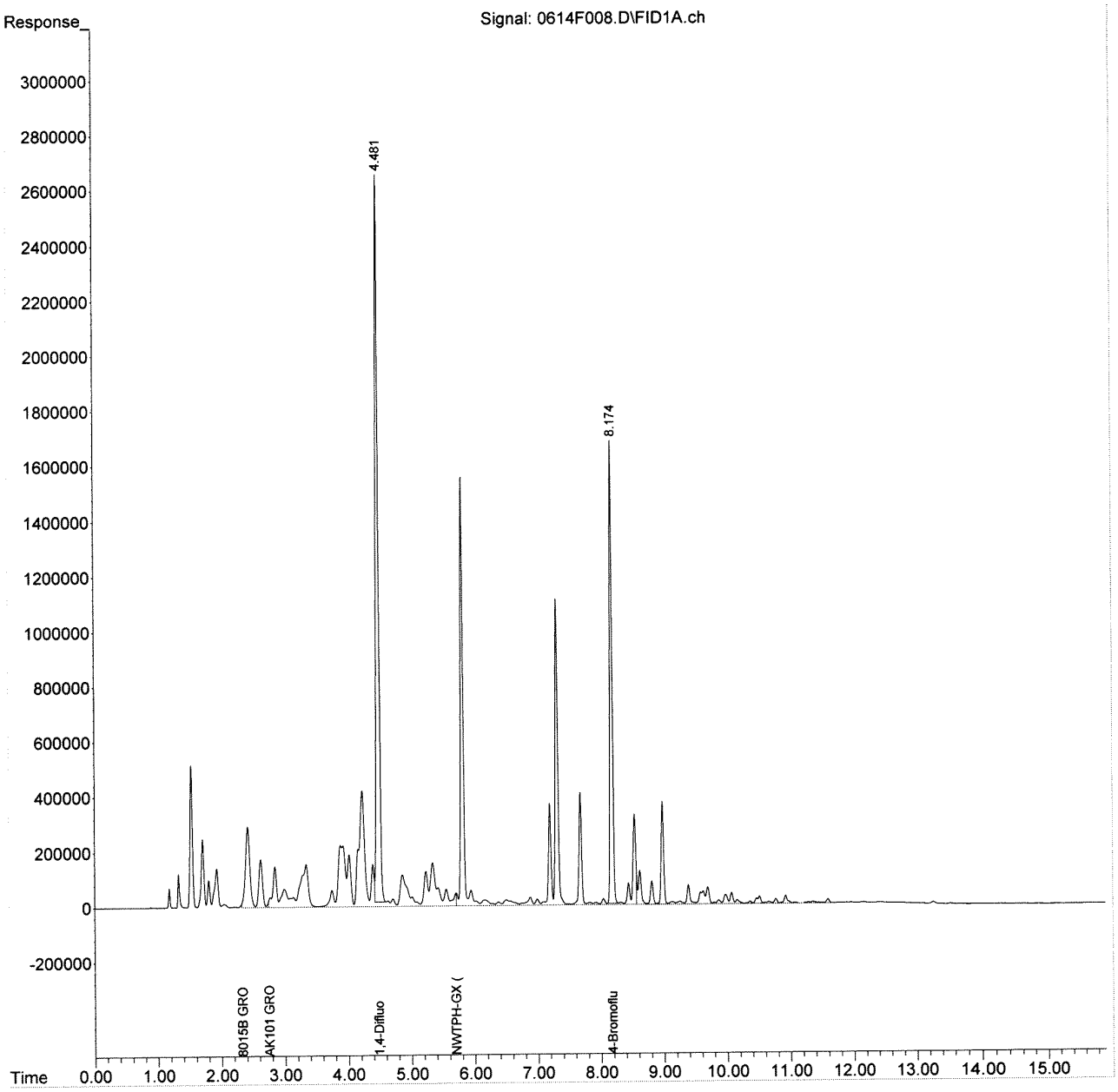
JUN 19 2018

KW 6.15.18

Data File : J:\GC39\DATA\061418\0614F008.D Vial: 8
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 12:22 pm Operator: KW
Sample : ICAL 3 200/50 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:18 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Data File : J:\GC39\DATA\061418\0614F009.D Vial: 9
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 12:46 pm Operator: KW
Sample : ICAL 4 500/100 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 18 15:35:14 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1)	S 1,4-Difluorobenzene	4.482	15424909	98.546 ug/L
2)	S 4-Bromofluorobenzene	8.175	9026967	101.209 ug/L
	Target Compounds			
3)	H AK101 GRO (C6-C10)	2.751	56538167	481.187 ug/L
4)	H 8015B GRO (2mp-1,2,4tmb)	2.327	65748104	482.512 ug/L
5)	H NWTPH-GX (Tol.-Naph.)	5.709	37939917	475.965 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

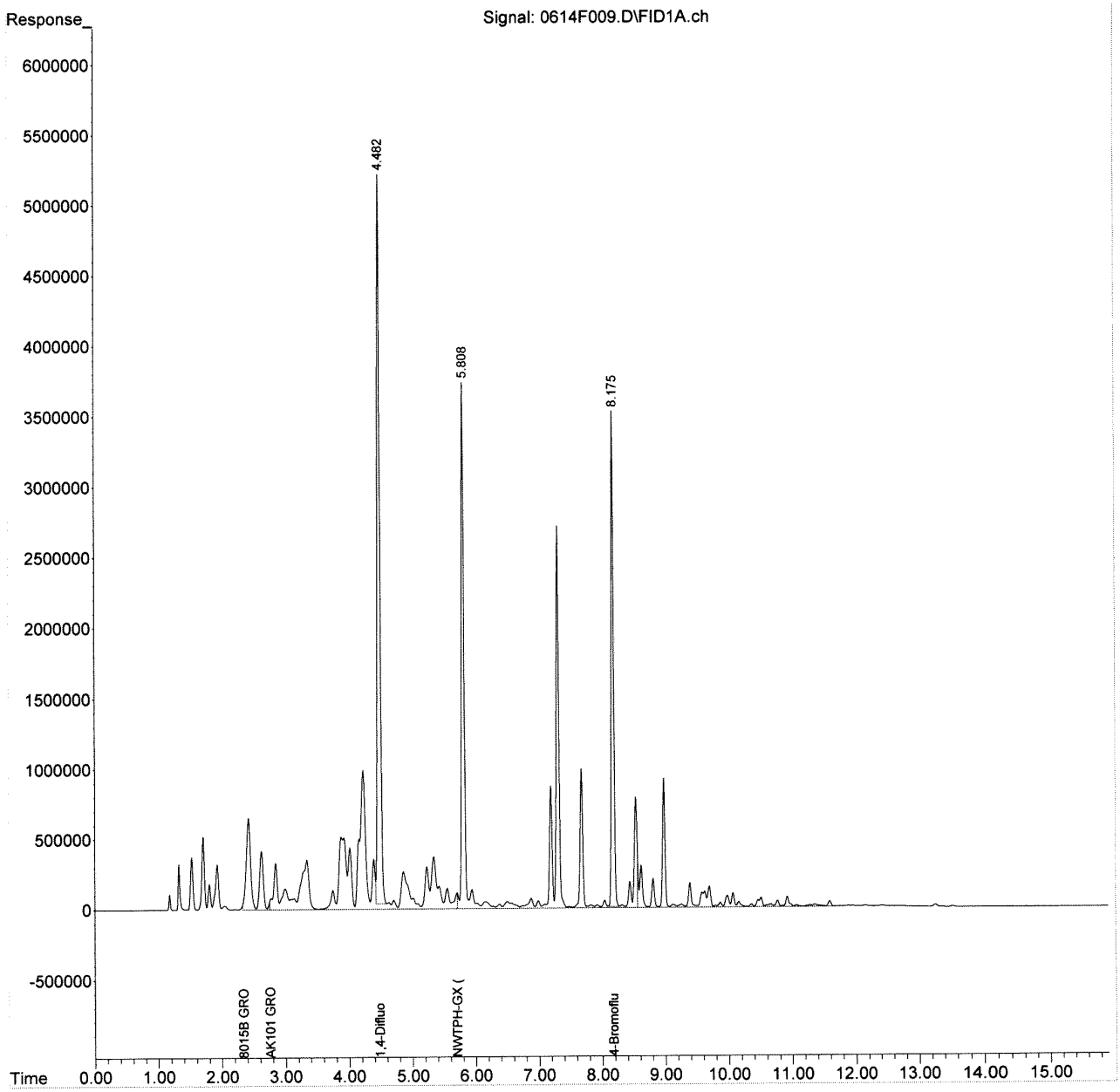
JUN 19 2018

KW 6/19/18

Data File : J:\GC39\DATA\061418\0614F009.D Vial: 9
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 12:46 pm Operator: KW
Sample : ICAL 4 500/100 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 18 15:35:14 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



061418GAS_GC39.M Tue Jun 19 09:26:17 2018 Page: 2

019695

Data File : J:\GC39\DATA\061418\0614F010.D Vial: 10
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 1:10 pm Operator: KW
Sample : ICAL 5 1000/150 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:25 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S 1,4-Difluorobenzene	4.484	22954655	148.815	ug/L
2)	S 4-Bromofluorobenzene	8.176	13324671	147.610	ug/L
	Target Compounds				
3)	H AK101 GRO (C6-C10)	2.743	115785403	1022.763	ug/L
4)	H 8015B GRO (2mp-1,2,4tmb)	2.319	134758996	1024.574	ug/L
5)	H NWTPH-GX (Tol.-Naph.)	5.705	77734868	1023.730	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

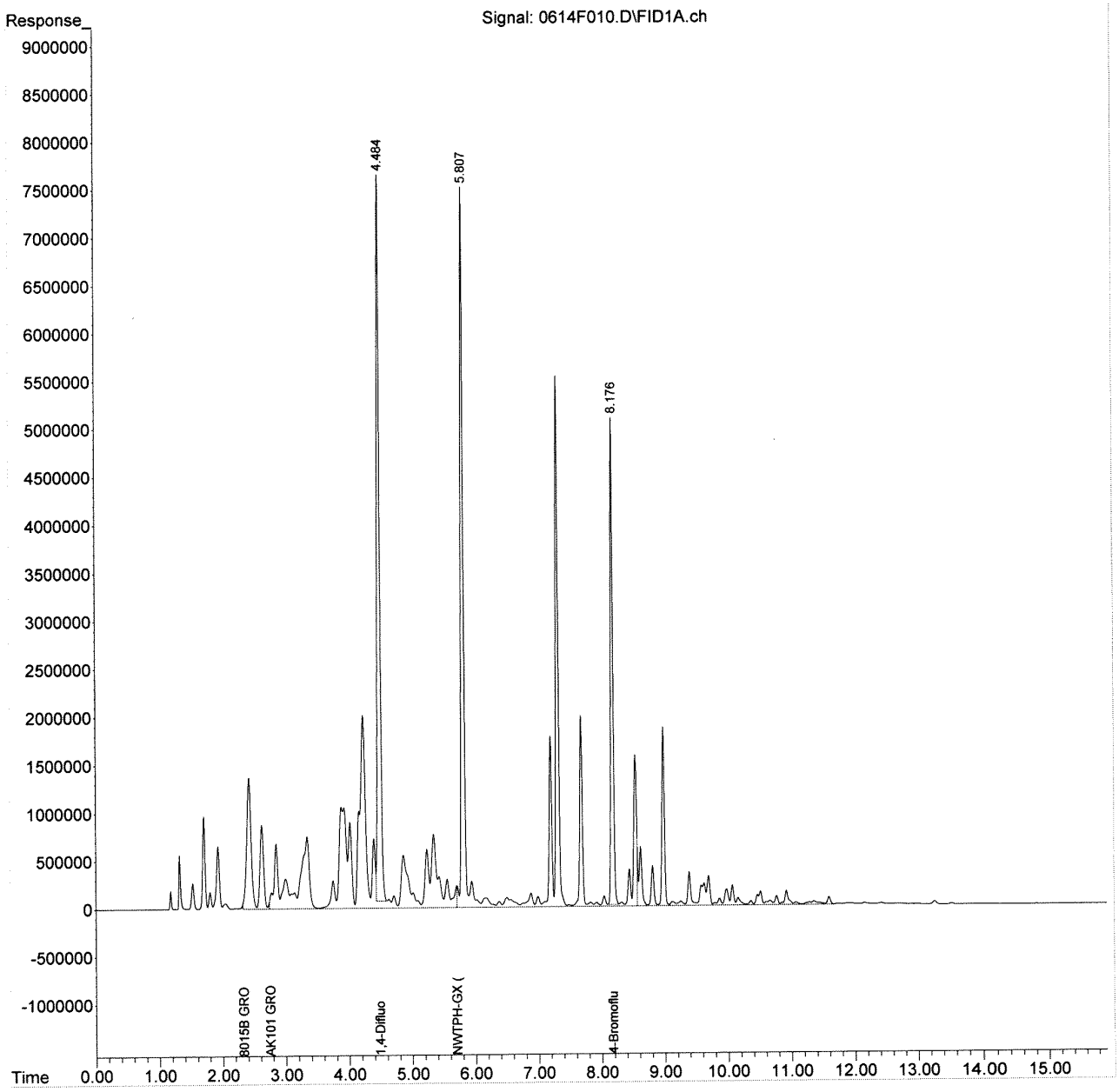
JUN 19 2018

KW 6-15-18

Data File : J:\GC39\DATA\061418\0614F010.D Vial: 10
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 1:10 pm Operator: KW
Sample : ICAL 5 1000/150 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:25 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Data File : J:\GC39\DATA\061418\0614F011.D Vial: 11
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 1:34 pm Operator: KW
Sample : ICAL 6 5000 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:08:34 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	1,4-Difluorobenzene	0.000	0	N.D.	ug/L d
2) S	4-Bromofluorobenzene	0.000	0	N.D.	ug/L d
	Target Compounds				
3) H	AK101 GRO (C6-C10)	2.743	583995742	5158.587	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.319	679253341	5164.372	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	395666291	5210.732	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

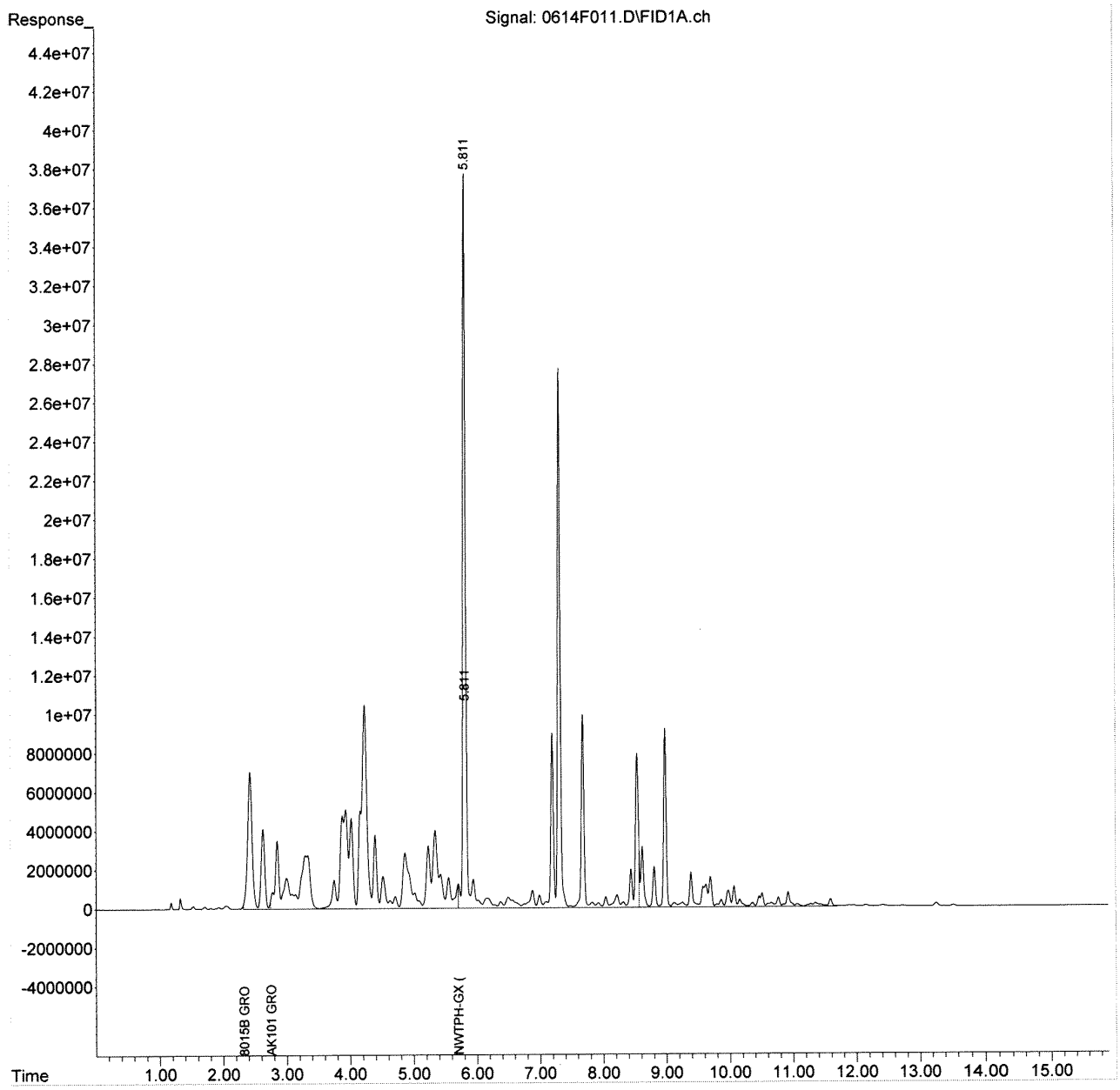
JUN 19 2018

KW 6.15.18

Data File : J:\GC39\DATA\061418\0614F011.D Vial: 11
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 1:34 pm Operator: KW
Sample : ICAL 6 5000 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:08:34 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Data File : J:\GC39\DATA\061418\0614F012.D Vial: 12
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 1:58 pm Operator: KW
Sample : ICAL 7 10000 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:09:14 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	1,4-Difluorobenzene	0.000	0	N.D.	ug/L d
2) S	4-Bromofluorobenzene	0.000	0	N.D.	ug/L d
Target Compounds					
3) H	AK101 GRO (C6-C10)	2.743	1176557506	10392.841	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.319	1339609928	10185.072	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	815639097	10741.569	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

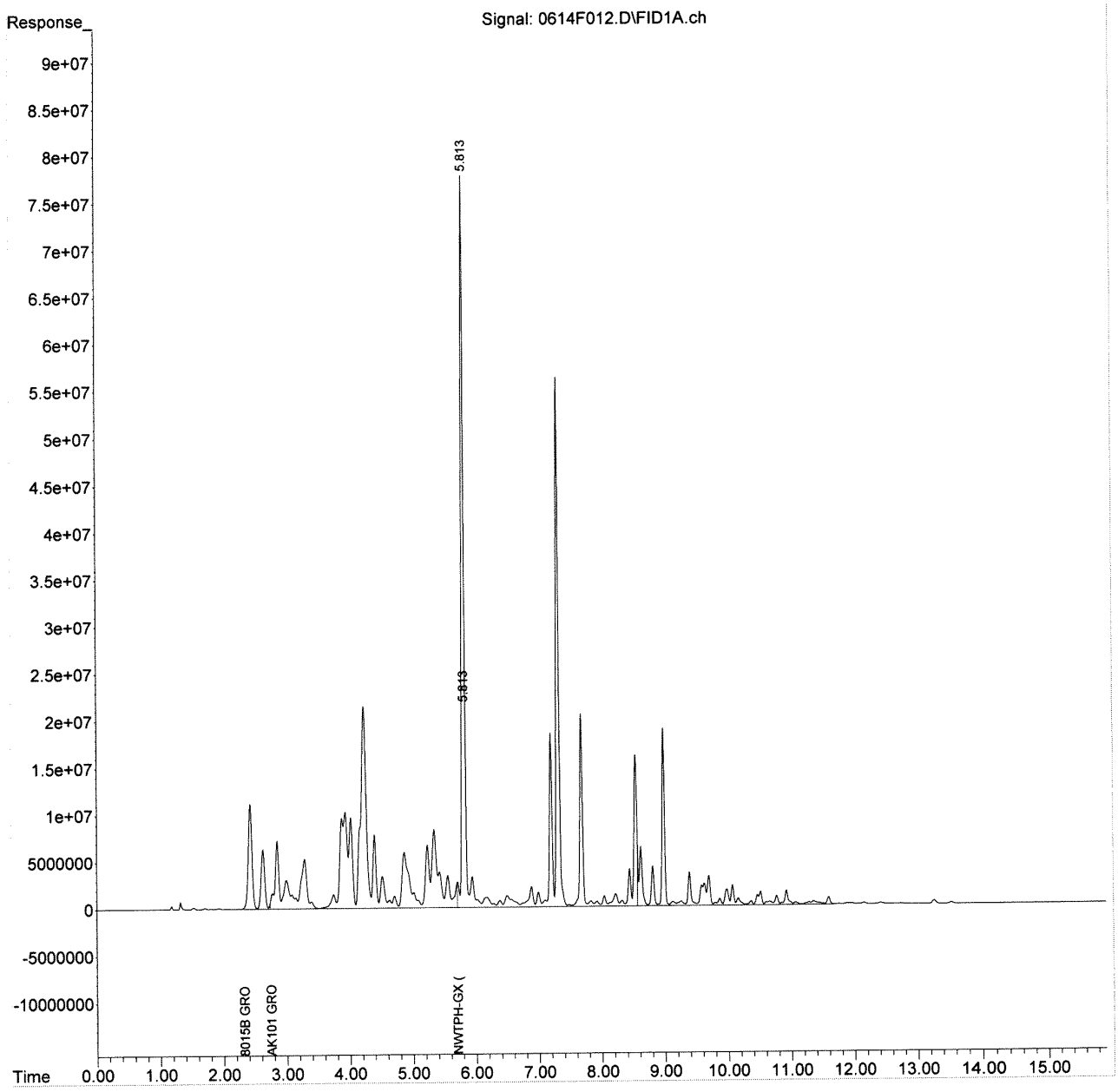
JUN 19 2018

KW 6-15-18

Data File : J:\GC39\DATA\061418\0614F012.D Vial: 12
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 1:58 pm Operator: KW
Sample : ICAL 7 10000 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:09:14 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Data File : J:\GC39\DATA\061418\0614F013.D Vial: 13
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 2:22 pm Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 19 09:28:35 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	1,4-Difluorobenzene	4.390	19890	0.127 ug/L
2) S	4-Bromofluorobenzene	8.214	60587	0.679 ug/L
	Target Compounds			
3) H	AK101 GRO (C6-C10)	2.751	4049034	34.461 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.327	4596485	33.733 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.709	3760966	47.182 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

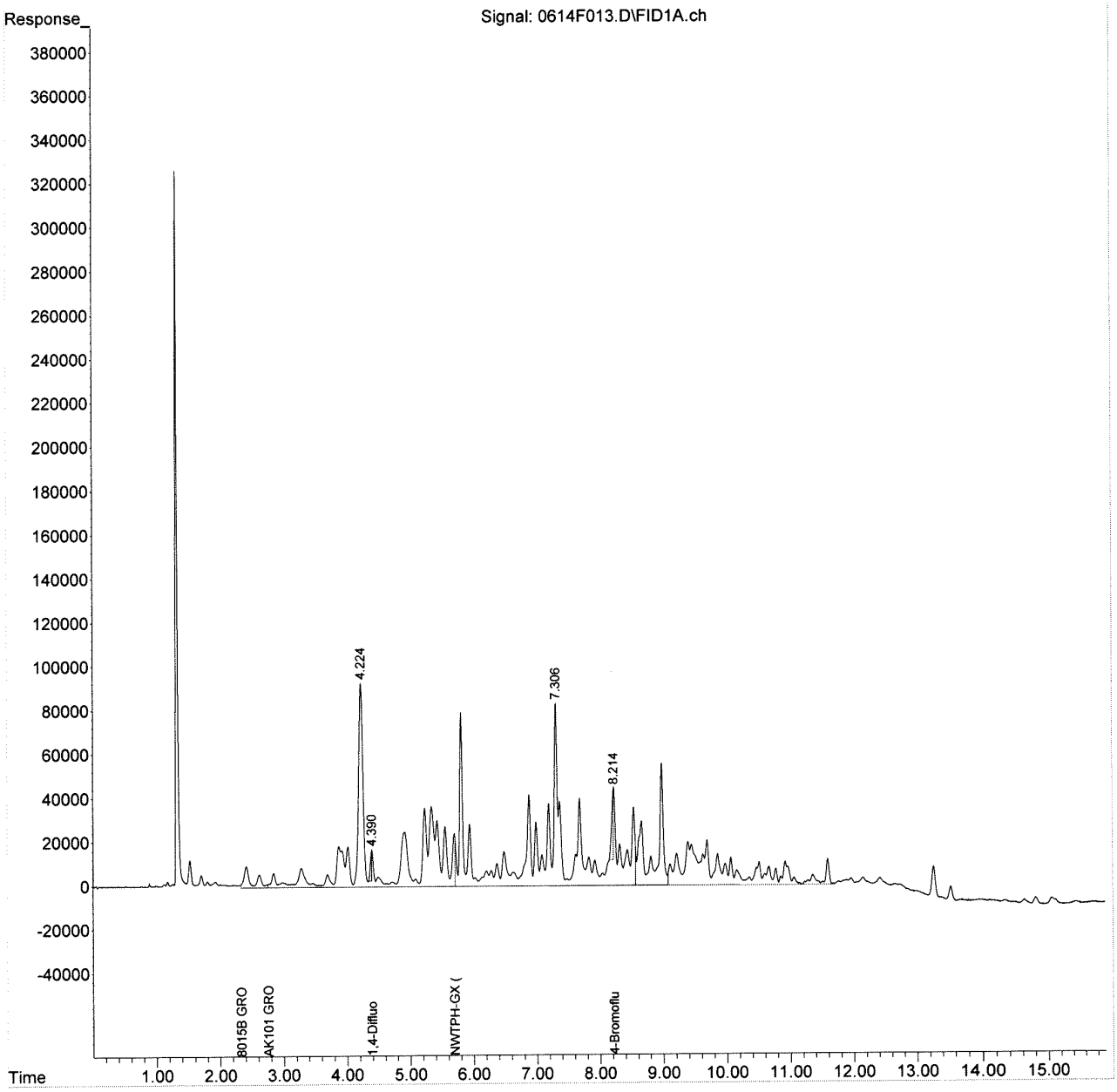
JUN 19 2018

KW 6-19-18

Data File : J:\GC39\DATA\061418\0614F013.D Vial: 13
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 2:22 pm Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 19 09:28:35 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Data File : J:\GC39\DATA\061418\0614F014.D Vial: 14
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 2:46 pm Operator: KW
Sample : ICV 500/100 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:14:22 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.483	15322994	97.895	ug/L
2) S	4-Bromofluorobenzene	8.176	8876290	99.520	ug/L
	Target Compounds				
3) H	AK101 GRO (C6-C10)	2.743	63219901	538.054	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.319	71547224	525.070	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	45539940	571.309	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

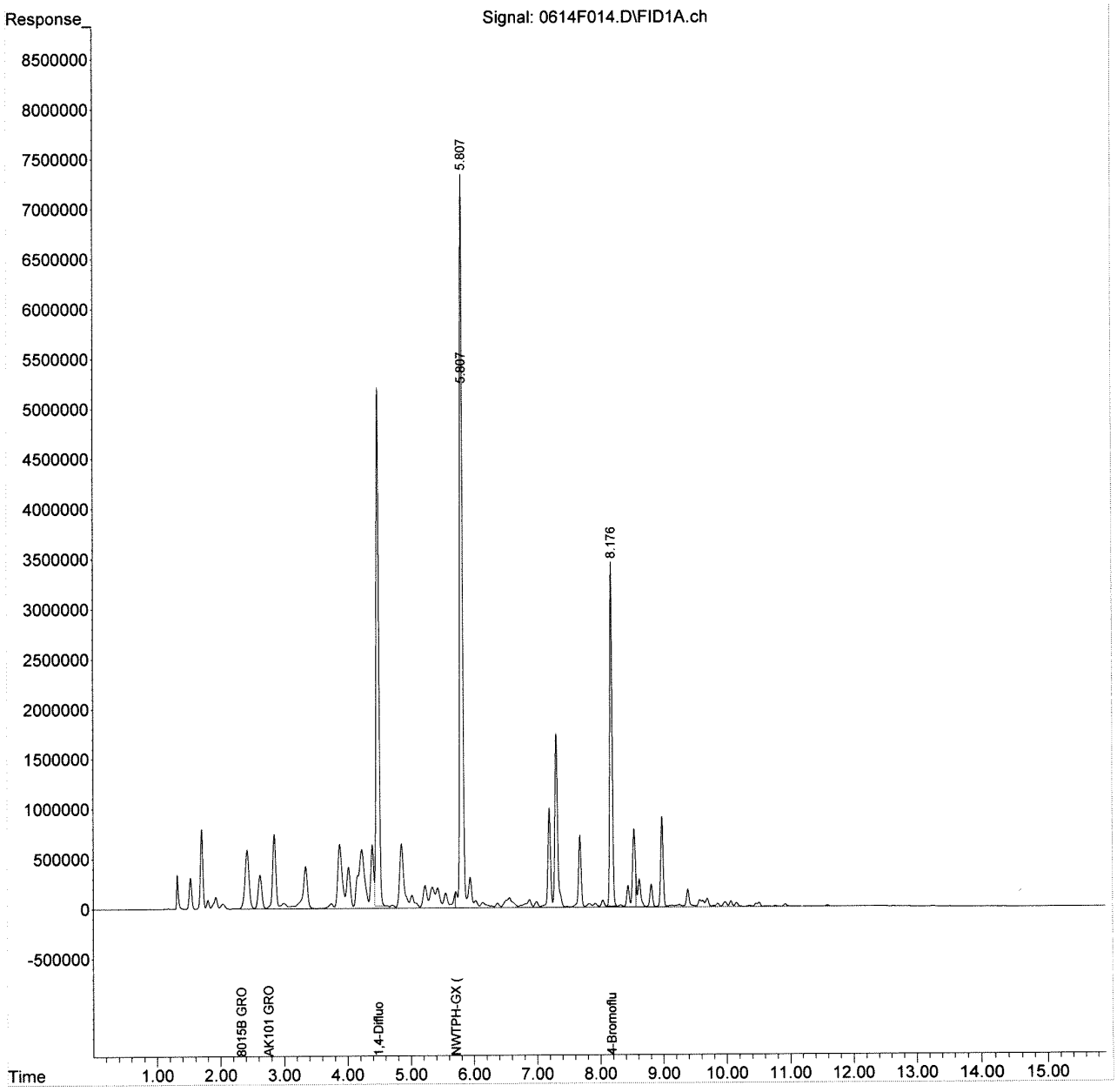
JUN 19 2018

KW 6-15-18

Data File : J:\GC39\DATA\061418\0614F014.D Vial: 14
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 2:46 pm Operator: KW
Sample : ICV 500/100 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:14:22 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Preparation Information

Group ID:	KWG1805980	**Prep Method:**	EPA 5030A/5030B	**Prep Date:**	11/14/18 09:00
Department:	VOA GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	MeOH Vol.	MeOH Aliq.	Final Vol.	Solids
K1811120-001	SL0084	8015C VOC GRO	SOIL	5.030g	10.0ml	1000uL	50.0ml	74.3
K1811120-007	SL0064	8015C VOC GRO	SOIL	7.11g	6.8ml	1000uL	50.0ml	74.9
K1811120-008	SL0065	8015C VOC GRO	SOIL	5.70g	7.0ml	1000uL	50.0ml	65.3
KWG1805980-1	Matrix Spike	8015C VOC GRO	SOIL	5.030g	10.0ml	1000uL	50.0ml	74.3
KWG1805980-2	Duplicate Matrix Spike	8015C VOC GRO	SOIL	5.030g	10.0ml	1000uL	50.0ml	74.3
KWG1805980-3	Lab Control Sample	8015C VOC GRO	SOIL	25.0g	25.0ml	1000uL	50.0ml	
KWG1805980-4	Method Blank	8015C VOC GRO	SOIL	25.0g	25.0ml	1000uL	50.0ml	

Lab Code	Parent Lab Code	Comments
KWG1805980-1	K1811120-001	
KWG1805980-2	K1811120-001	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1811120-001	1703508	HCV7-91K 12/2/1	10.0uL			
K1811120-007	1703511	HCV7-91K 12/2/1	10.0uL			
K1811120-008	1703512	HCV7-91K 12/2/1	10.0uL			
KWG1805980-1	1703513	HCV7-91K 12/2/1	10.0uL	HCV7-91 11/16/1	25.0uL	
KWG1805980-2	1703514	HCV7-91K 12/2/1	10.0uL	HCV7-91 11/16/1	25.0uL	
KWG1805980-3	1703515	HCV7-91K 12/2/1	100uL	HCV7-91H 11/30/	50uL	
KWG1805980-4	1703516	HCV7-91K 12/2/1	100uL			

Comments:

Started By: KWinston Assisted By: Training Yes No

Completed By: KWinston Assisted By: Yes No

Reviewed By: Date: DEC 0 4 2018 Storage:

Chain of Custody

Relinquished By: Date: Extracts Examined

Received By: Date: Yes No

Date: 11·14·18

By: KW

IS/SS Std. ID: HW791J XP: 12-2-18

CCV Std ID: HW791L XP: 11·16·18

MS/DMS/LCS/ICV Std ID: HW791L XP: 11·16·18

Marker Std. ID: HW790N XP: NA HW791H 11·30·18

ALS Environmental
Injection Log
GC39 Agilent 7890B

LIMS ID 65154

ICAL Date: RF764 6·14·18

Second RV: DEC 0 4 2018

Stealth ID: 180598[illegible] 180598[illegible] 180598241 KW 11·15·18 180600[illegible] WIPE

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	Marker	1114F002	8015C.M	10UL→5ML		
2	CCV	003		20x25UL→5ML		HW791K XP: 12·2·18
3	IB	004				
4	MB	005		5DX 1ML→5ML		NR Low BFB Recovery
5	LCS	1114F006A and 006				
6	MB RR	1114F007A and 007				Use this run.
7	K1120-001MS	008	5.03g			Report Both Runs 1114F[illegible] 006 007
8	001DMS	009				
9	001	010				
10	002	011				Canceled
11	003	012				
12	005	013				WIPE
13	006MS	014				
14	006DMS	015				
15	006	016				
16	007	017				
17	CCV	018		20x25UL→5ML		HW791K XP: 12·2·18
18	IB	019				
19	K1120-008	020				
20	CCV	021		20x25UL→5ML		HW791K XP: 12·2·18
21	IB	022				
22						
23						
24						
25						
26						KW 11-4-18
27						

DEC 0 4 2018

R:\VOA\Injection Logs\INJLOG_GC39_Rev1

DEC 0 4 2018

019707

8015 GRO Smpl	Tare (grams)	Tare + Sample (grams)	Label (grams)	Vol. MeOH/H2O (mL)	Solids (percent)	Moisture (percent)	Mass SAMPLE (grams)	Final Vol (mL)	Mass (Excel rounded)	Final Vol (Excel rounded)	Smpl
K18111120-001	33.47	40.121	0.10	5	74.3	25.7	6.55	6.683607	6.55	6.7	K18111120-001
K18111120-007	33.64	40.845	0.10	5	74.9	25.1	7.11	6.783355	7.11	6.8	K18111120-007
K18111120-008	33.75	39.546	0.10	5	65.3	34.7	5.70	6.976512	5.7	7.0	K18111120-008

6.55 for 11/16/18
7.11 and 5.7 for 11/14/18

DEC 0 6 2018

Service Request No.: K1811120 Analysis: 8015C M

Analyst: KW Date: 11.14.18

Sample Number	Weight (g)	Label Weight (g)	Tare Weight (g)	Weight Sample + Vial (g)	Volume of P&T MeOH / Water	% Moisture	F.V. MeOH/Water (mL)	BFB CF.
K1120-01	5.030							
02	5.076							
03	5.052							
04	5.050							

Start Time: 12:30 Stop Time: 12:40 Reviewed by and date: DEC 04 2018

P&T MeOH Lot No (ML only).: DT532 Voa Vial Lot No (ML only) 10617-3305

Balance ID: BNC14

Comments: MB LCS 5UL HLW791K XP.12.2.18 10UL→5ML MeOH LCS HLW791 HXP11.30.18 Spike 5UL→10ML MeOH
HLW791K XP.11.16.18
MS/MSD Spike 25UL→5ML MS/MSD 10UL→5ML Samples 5UL 10UL→5ML
HLW791K XP.12.2.18 HLW791K XP 12.2.18

Final Volume MeOH and Water = mL of solvent + ((%Moisture x Sample Wt.(g)) / 100)

BFB CF (for shared jar AK101/8260) = ((25ug/ml x 25ml) /FV Meoh and H2O) + 10ppb (added by 8260 inst.) / 10

25ml MeOH= 19.79g Sample label, tape, barcode = 0.35g Barcode label and tape = 0.12g Barcode only = 0.1g

SoilPrepSheetRev3

Service Request No.: K1811120 Analysis: 8015 8260

Analyst: KW Date: _____

Sample Number	Weight (g)	Label Weight (g)	Tare Weight (g)	Weight Sample + Vial (g)	Volume of P&T MeOH / Water	% Moisture	F.V. MeOH/Water (mL)	BFB CF.
K1120-07		0.1	33.64	40.845	5mL			
CS		〃	33.75	39.546	〃			

Start Time: 3:00 Stop Time: 3:05 Reviewed by and date: DEC 0 4 2018

P&T MeOH Lot No (ML only).: _____ Voa Vial Lot No (ML only) 032183

Balance ID: BAL14

Comments: MB LCS HLW91K XP:12.2.18 SURR 100UL→10mL MeOH LCS HLW91H XP:11.30.18 KW 11.14.18 SPIKE 100UL→10mL MeOH
MS/MSD HLW91L XP:11.16.18 SPKE 25UL→5mL MS/MSD 10UL→5mL SAMPLES 10UL→5mL
HLW91K XP:12.2.18 SURR HLW91K XP:12.2.18

Final Volume MeOH and Water = mL of solvent ÷ ((%Moisture x Sample Wt.(g)) / 100)

BFB CF (for shared jar AK101/8260) = ((25ug/ml x 25ml) /FV Meoh and H2O) + 10ppb (added by 8260 inst.) / 10

25ml MeOH= 19.79g Sample label, tape, barcode = 0.35g Barcode label and tape = 0.12g Barcode only = 0.1g

SoilPrepSheetRev3

1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F013.D
Lab ID: K1811120-005
RunType: SMPL
Matrix: WIPE

Date Acquired: 11/14/2018 15:26
Date Quantitated: 11/14/2018 16:02
Batch ID: KWG1805982
Analysis Method: 8015C
ListJoinID: LJ19821

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F013.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 15:26	**Quant Date:**	11/14/2018 16:02	**Vial:**	13
Run Type:	SMPL	**ListJoinID:**	LJ19799	**Dilution:**	1.0
Lab ID:	K1811120-005			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**	IV	**Matrix:**	WIPE
Prod Code:	8015C VOC GRO	**Collect Date:**	11/03/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1805980	**Report Group:**	K1811120
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1703625	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:	Gasoline Range Organics	**Report List ID:**	LJ19799
		Method ID:	MJ184
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Report List**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.17	-0.01	3925221	44.01	88	83-119	OK	

Target Compounds

Final Conc. Units: mg/wipe Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Gasoline Range Organics (GRO)	2.36		1943376	14.26	5.0	U	

Prep Amount:	1.00 Wipe	**Dilution:**	1.0	**MeOH Ext. Vol:**	10.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	0.001	**MeOH Aliq. Vol:**	1000 uL
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F013.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 15:26	**Quant Date:**	11/14/2018 16:02	**Vial:**	13
Run Type:	SMPL	**ListJoinID:**	LJ19821	**Dilution:**	1.0
Lab ID:	K1811120-005			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**	IV	**Matrix:**	WIPE
Prod Code:	8015C VOC GRO	**Collect Date:**	11/03/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1806088	**Report Group:**	K1811120
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1704287	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:	Gasoline Range Organics	**Report List ID:**	LJ19821
		Method ID:	MJ1777
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Report List**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.17	-0.01	3925221	44.01	88	70-130	OK	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Gasoline Range Organics (GRO)	2.36		1943376	14.26	25	U	

Prep Amount:	1.00 Wipe	**Dilution:**	1.0	**MeOH Ext. Vol:**	10.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F013.D Vial: 13
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 3:26 pm Operator: KW
Sample : K1120-005 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:02:47 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.493	13756297	87.885	ug/L
2) S	4-Bromofluorobenzene	8.174	3925221	44.009	ug/L
	Target Compounds				
3) H	AK101 GRO (C6-C10)	2.773	1609341	13.697	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	1943376	14.262	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.714	1939047	24.326	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

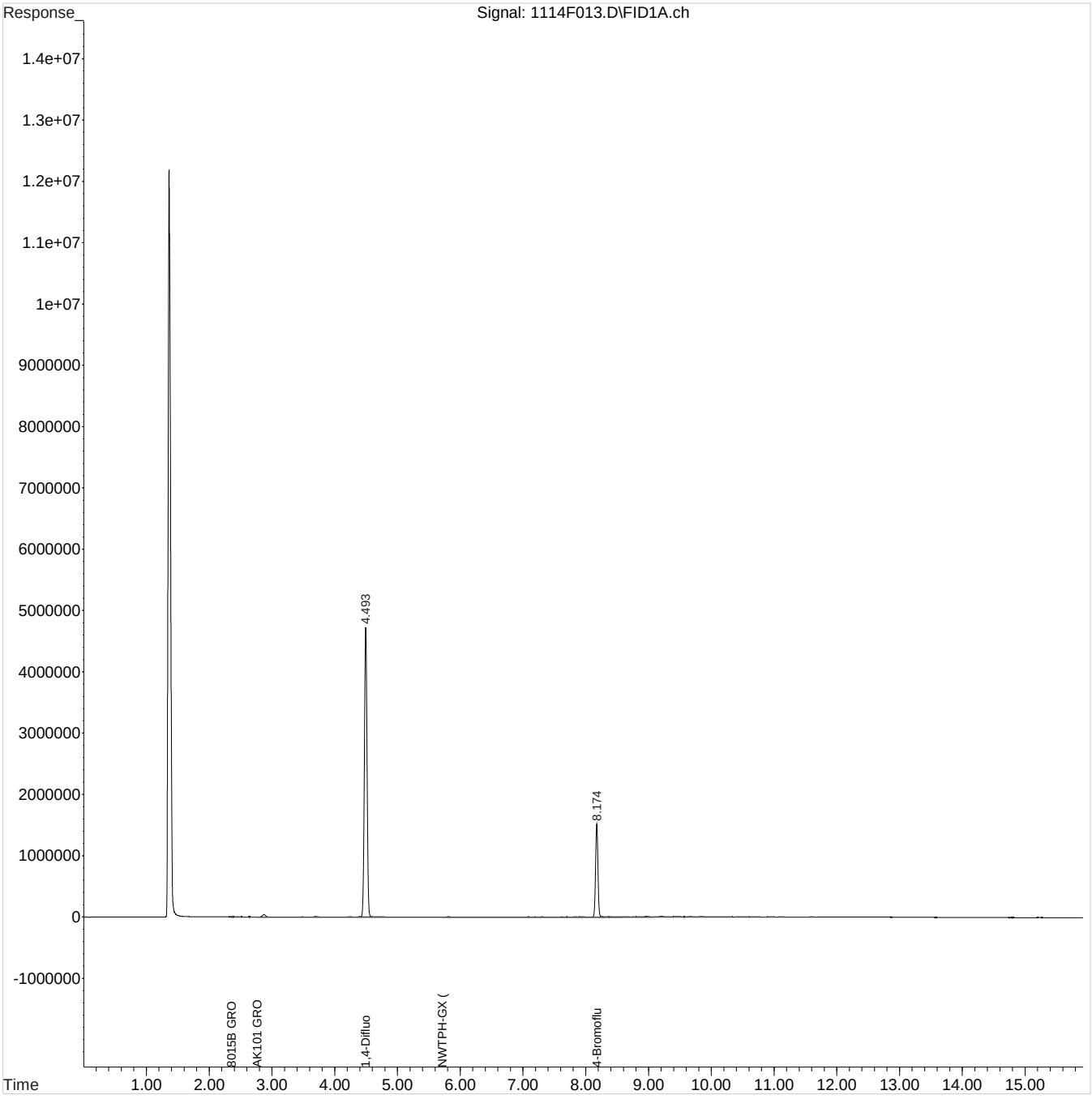
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F013.D Vial: 13
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 3:26 pm Operator: KW
Sample : K1120-005 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:02:47 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F016.D
Lab ID: K1811120-006
RunType: SMPL
Matrix: WIPE

Date Acquired: 11/14/2018 16:38
Date Quantitated: 11/14/2018 16:55
Batch ID: KWG1805982
Analysis Method: 8015C
ListJoinID: LJ19821

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F016.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 16:38	**Quant Date:**	11/14/2018 16:55	**Vial:**	16
Run Type:	SMPL	**ListJoinID:**	LJ19799	**Dilution:**	1.0
Lab ID:	K1811120-006			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**	IV	**Matrix:**	WIPE
Prod Code:	8015C VOC GRO	**Collect Date:**	11/03/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1805980	**Report Group:**	K1811120
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1703624	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:	Gasoline Range Organics	**Report List ID:**	LJ19799
		Method ID:	MJ184
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Report List**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18	0.00	3899179	43.72	87	83-119	OK	

Target Compounds

Final Conc. Units: mg/wipe Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Gasoline Range Organics (GRO)	2.36		2091606	15.35	5.0	U	

Prep Amount:	1.00 Wipe	**Dilution:**	1.0	**MeOH Ext. Vol:**	10.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	0.001	**MeOH Aliq. Vol:**	1000 uL
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F016.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 16:38	**Quant Date:**	11/14/2018 16:55	**Vial:**	16
Run Type:	SMPL	**ListJoinID:**	LJ19821	**Dilution:**	1.0
Lab ID:	K1811120-006			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**	IV	**Matrix:**	WIPE
Prod Code:	8015C VOC GRO	**Collect Date:**	11/03/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1806088	**Report Group:**	K1811120
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1704286	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:	Gasoline Range Organics	**Report List ID:**	LJ19821
		Method ID:	MJ1777
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Report List**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18	0.00	3899179	43.72	87	70-130	OK	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Gasoline Range Organics (GRO)	2.36		2091606	15.35	25	U	

Prep Amount:	1.00 Wipe	**Dilution:**	1.0	**MeOH Ext. Vol:**	10.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F016.D Vial: 16
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 4:38 pm Operator: KW
Sample : K1120-006 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:55:23 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.494	13659494	87.267 ug/L
2) S	4-Bromofluorobenzene	8.176	3899179	43.717 ug/L
Target Compounds				
3) H	AK101 GRO (C6-C10)	2.773	1821514	15.503 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	2091606	15.350 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.714	1325107	16.624 ug/L

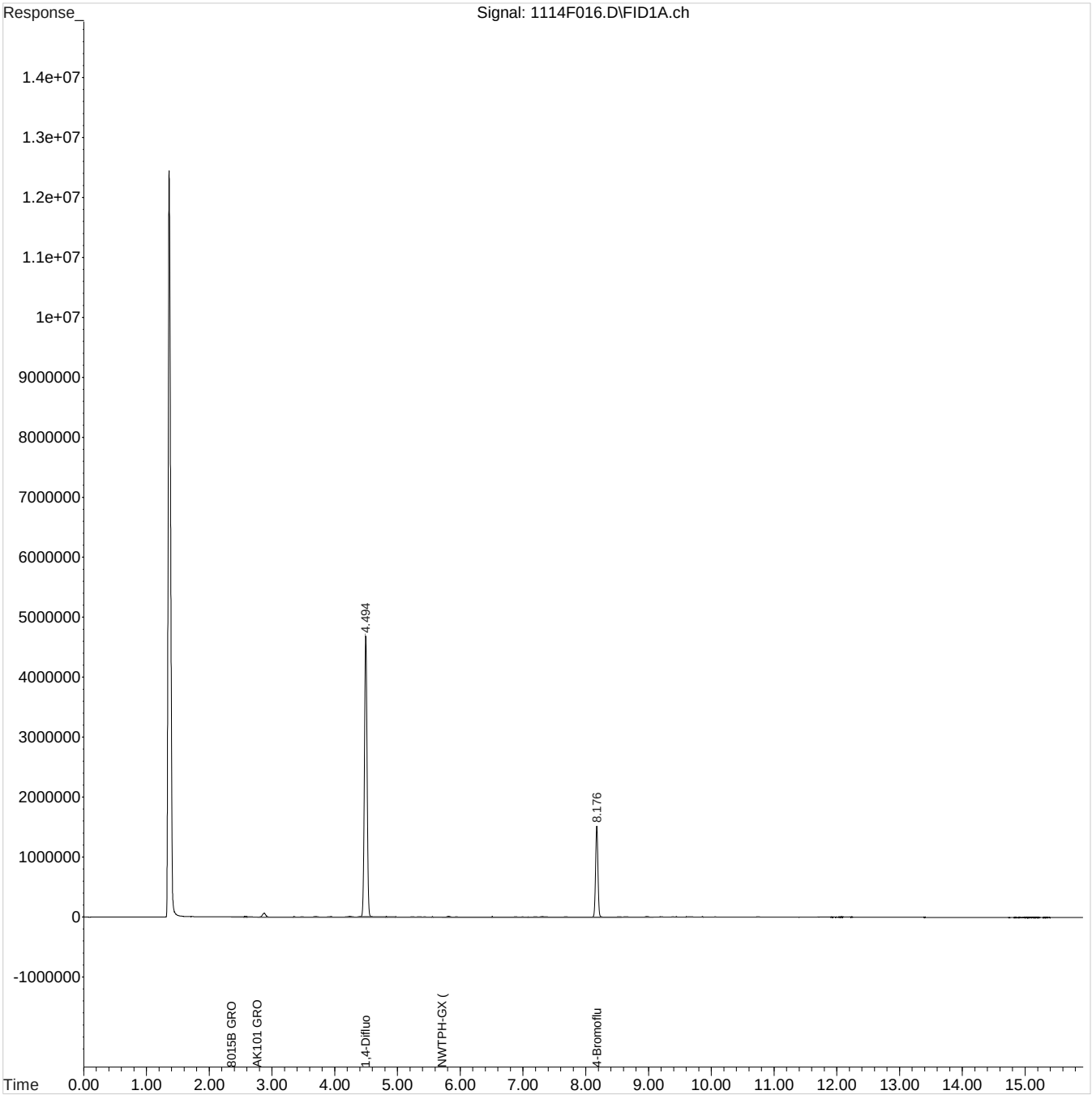
(f)=RT Delta > 1/2 Window (m)=manual int.

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F016.D Vial: 16
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 4:38 pm Operator: KW
Sample : K1120-006 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:55:23 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Exception Report

Data File: J:\GC39\DATA\11142018A\1114F007.D
Lab ID: KWG1806088-4
RunType: MB
Matrix: WIPE

Date Acquired: 11/14/2018 11:17
Date Quantitated: 11/20/2018 11:01
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File:	J:\GC39\DATA\11142018A\1114F007.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 11:17	**Quant Date:**	11/20/2018 11:01	**Vial:**	7
Run Type:	MB	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1806088-4			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	WIPE
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	12/04/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1806088	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1704291	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.17	-0.01	3826557	42.90	86	70-130	OK	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.75	-0.02	1557676	13.26	25	U	
Gasoline Range Organics (GRO)	2.32	-0.04	1784222	13.09	25	U	

Prep Amount:	1.00 Wipe	**Dilution:**	1.0	**MeOH Ext. Vol:**	10.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC39\DATA\11142018A\1114F007.D Vial: 7
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 11:17 am Operator: KW
Sample : MB RR Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 20 11:01:21 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	1,4-Difluorobenzene	4.491	14153958	90.426 ug/L
2) S	4-Bromofluorobenzene	8.175	3826557	42.903 ug/L
	Target Compounds			
3) H	AK101 GRO (C6-C10)	2.746	1557676	13.257 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.321	1784222	13.094 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	1133375	14.218 ug/L

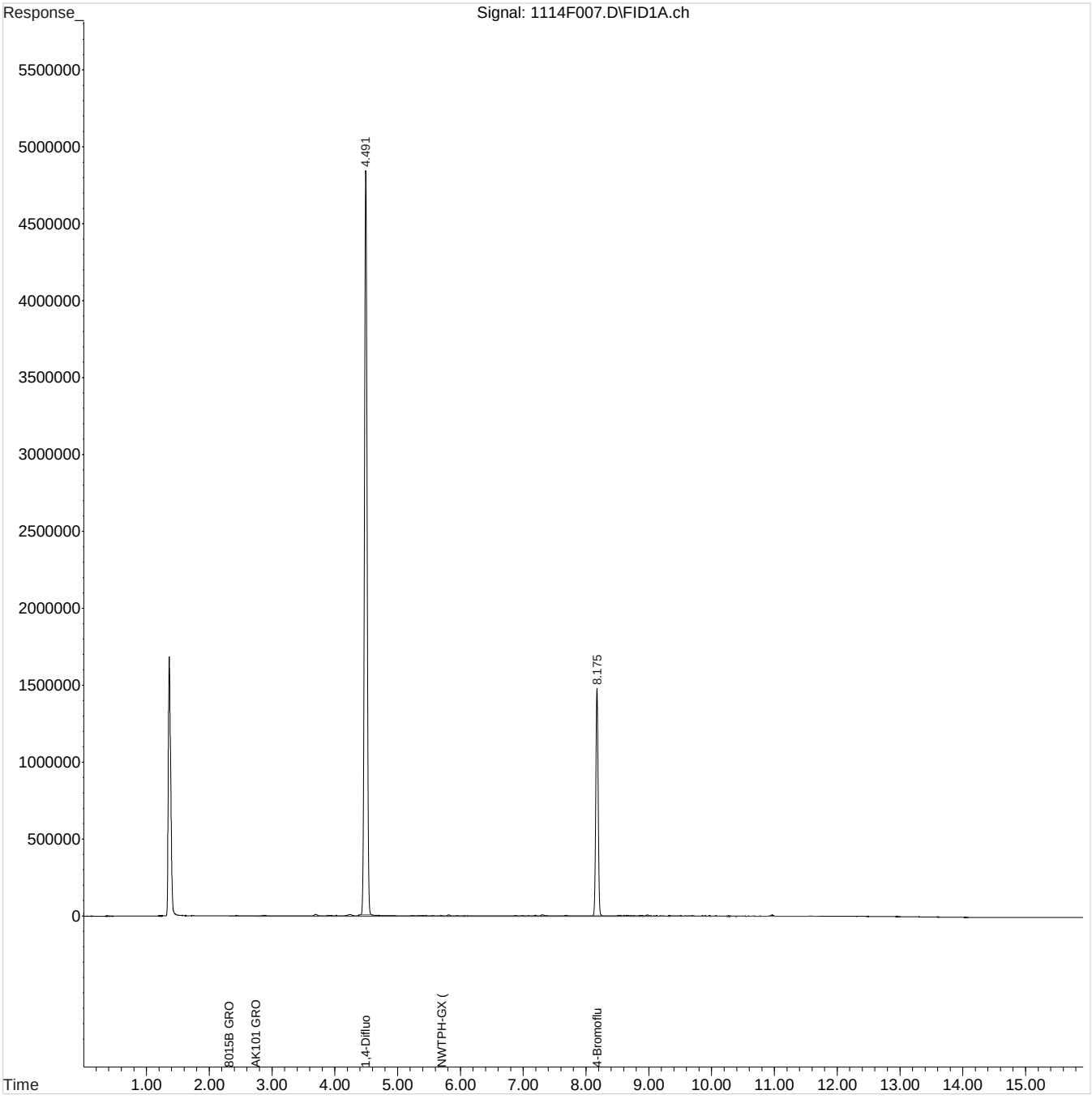
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC39\DATA\11142018A\1114F007.D Vial: 7
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 11:17 am Operator: KW
Sample : MB RR Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 20 11:01:21 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F014.D
Lab ID: KWG1806088-1 -- K1811120-006MS
RunType: MS
Matrix: WIPE

Date Acquired: 11/14/2018 15:50
Date Quantitated: 11/14/2018 16:08
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F014.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 15:50	**Quant Date:**	11/14/2018 16:08	**Vial:**	14
Run Type:	MS	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1806088-1 -- K1811120-006MS			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	WIPE
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	12/04/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1806088	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1704288	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.17	-0.01	4045024	45.35	91	70-130	OK	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		60709164	516.69	258		
Gasoline Range Organics (GRO)	2.36		70429461	516.87	258		

Prep Amount:	1.00 Wipe	**Dilution:**	1.0	**MeOH Ext. Vol:**	10.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F014.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 15:50	**Quant Date:**	11/14/2018 16:08	**Vial:**	14
Run Type:	MS	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805980-5 -- K1811120-006MS			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	WIPE
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/15/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1805980	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1703626	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.17	-0.01	4045024	45.35	91	83-119	OK	

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		60709164	516.69	258		
Gasoline Range Organics (GRO)	2.36		70429461	516.87	258		

Prep Amount:	1.00 Wipe	**Dilution:**	1.0	**MeOH Ext. Vol:**	10.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F014.D Vial: 14
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 3:50 pm Operator: KW
Sample : K1120-006 MS Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:08:37 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds						
1) S	1,4-Difluorobenzene	4.496	14235344	90.946	ug/L	m
2) S	4-Bromofluorobenzene	8.174	4045024	45.352	ug/L	
Target Compounds						
3) H	AK101 GRO (C6-C10)	2.773	60709164	516.686	ug/L	
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	70429461	516.867	ug/L	
5) H	NWTPH-GX (Tol.-Naph.)	5.714	39389797	494.154	ug/L	

(f)=RT Delta > 1/2 Window (m)=manual int.

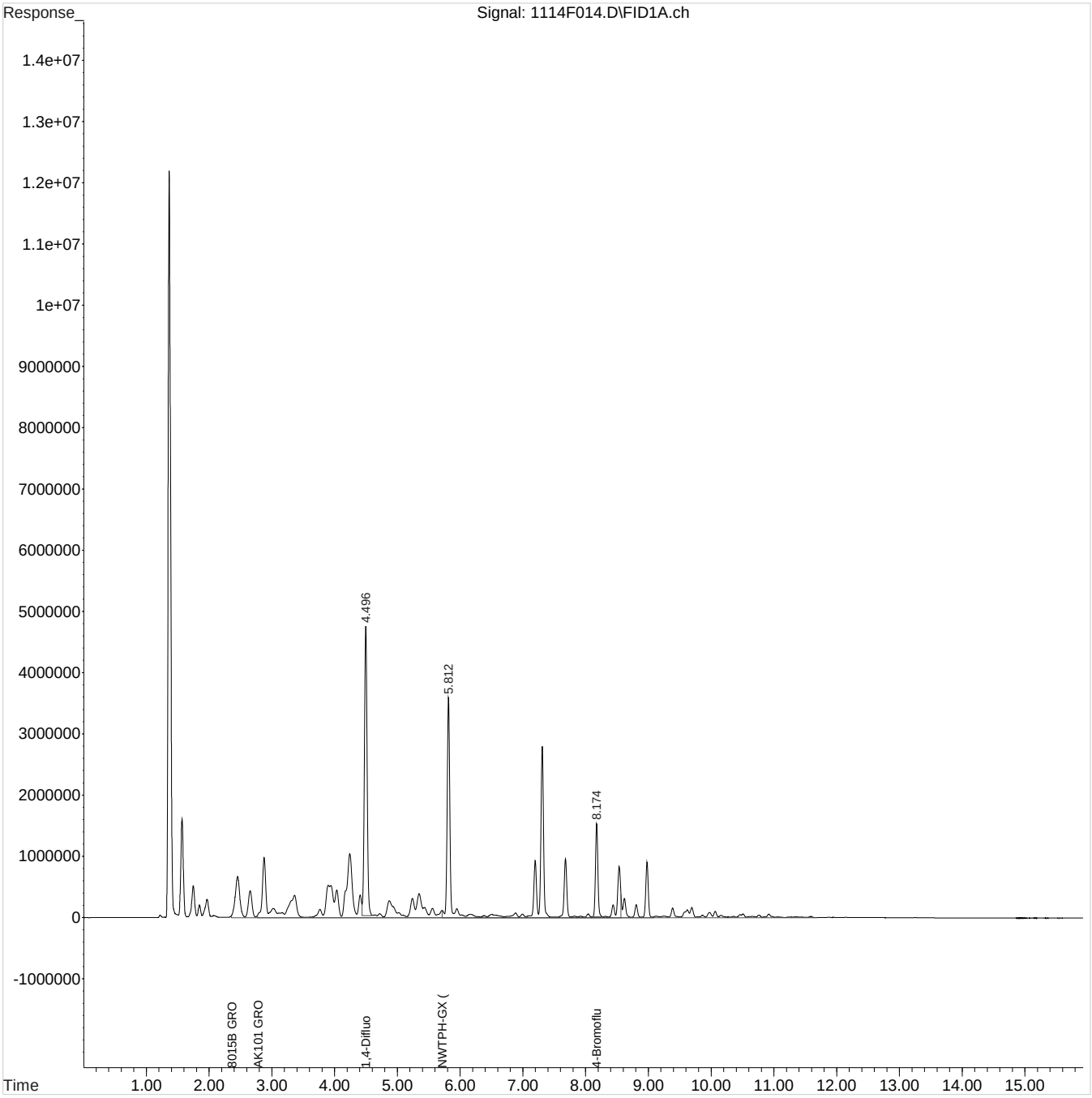
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F014.D Vial: 14
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 3:50 pm Operator: KW
Sample : K1120-006 MS Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:08:37 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



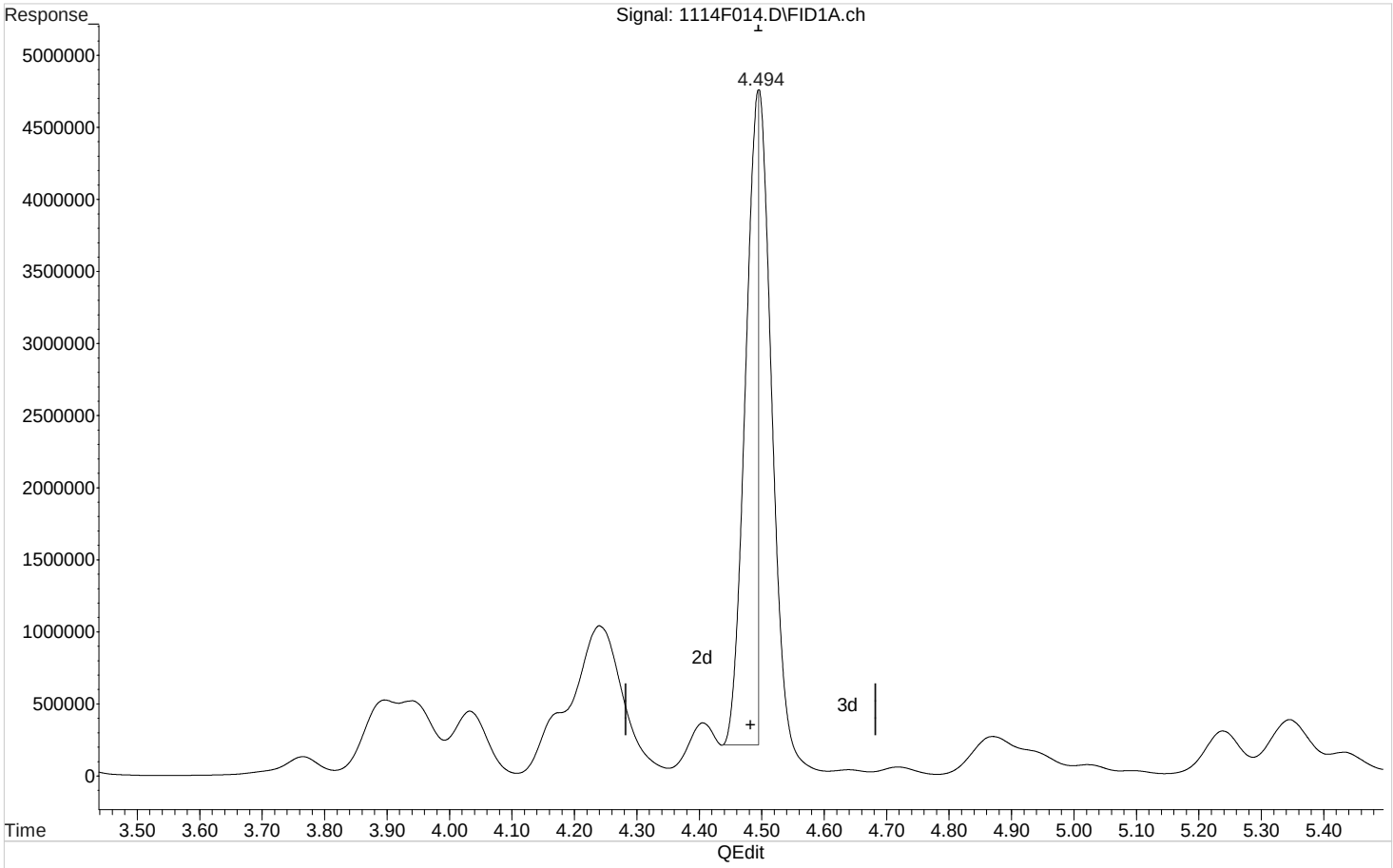
Quantitation Report (Qedit)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F014.D Vial: 14
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 3:50 pm Operator: KW
Sample : K1120-006 MS Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:07:48 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(1) 1,4-Difluorobenzene (S)

4.494min 41.780 ug/L

response 6539707

Manual Integration:

Before

11/14/18

(+) = Expected Retention Time

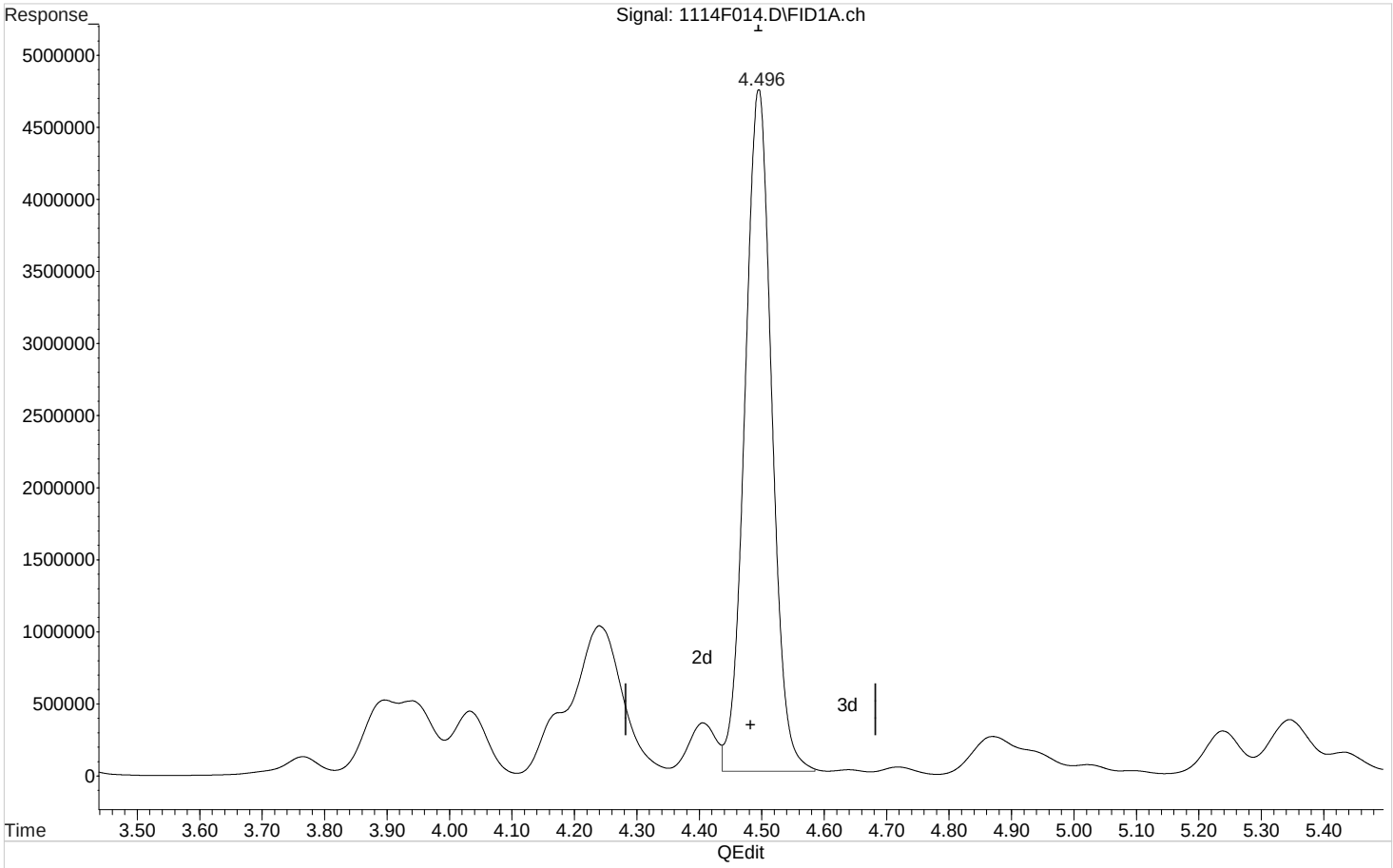
Quantitation Report (Qedit)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F014.D Vial: 14
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 3:50 pm Operator: KW
Sample : K1120-006 MS Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:07:48 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(1) 1,4-Difluorobenzene (S)

4.496min 90.946 ug/L m

response 14235344

Manual Integration:

After

Split peak

11/14/18

(+) = Expected Retention Time

1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F015.D
Lab ID: KWG1806088-2 -- K1811120-006DMS
RunType: DMS
Matrix: WIPE

Date Acquired: 11/14/2018 16:14
Date Quantitated: 11/14/2018 16:31
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F015.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 16:14	**Quant Date:**	11/14/2018 16:31	**Vial:**	15
Run Type:	DMS	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1806088-2 -- K1811120-006DMS			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	WIPE
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	12/04/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1806088	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1704289	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18	0.00	3901766	43.75	87	70-130	OK	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		60054970	511.12	256		
Gasoline Range Organics (GRO)	2.36		69642311	511.09	256		

Prep Amount:	1.00 Wipe	**Dilution:**	1.0	**MeOH Ext. Vol:**	10.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F015.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 16:14	**Quant Date:**	11/14/2018 16:31	**Vial:**	15
Run Type:	DMS	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805980-6 -- K1811120-006DMS			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	WIPE
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/15/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1805980	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1703627	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:	J:\GC39\DATA\111418\1114F007.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18	0.00	3901766	43.75	87	83-119	OK	

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		60054970	511.12	256		
Gasoline Range Organics (GRO)	2.36		69642311	511.09	256		

Prep Amount:	1.00 Wipe	**Dilution:**	1.0	**MeOH Ext. Vol:**	10.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F015.D Vial: 15
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 4:14 pm Operator: KW
Sample : K1120-006 DMS Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:31:17 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.495	14231781	90.923	ug/L
2) S	4-Bromofluorobenzene	8.175	3901766	43.746	ug/L
	Target Compounds				
3) H	AK101 GRO (C6-C10)	2.773	60054970	511.118	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	69642311	511.090	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.714	39346636	493.613	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

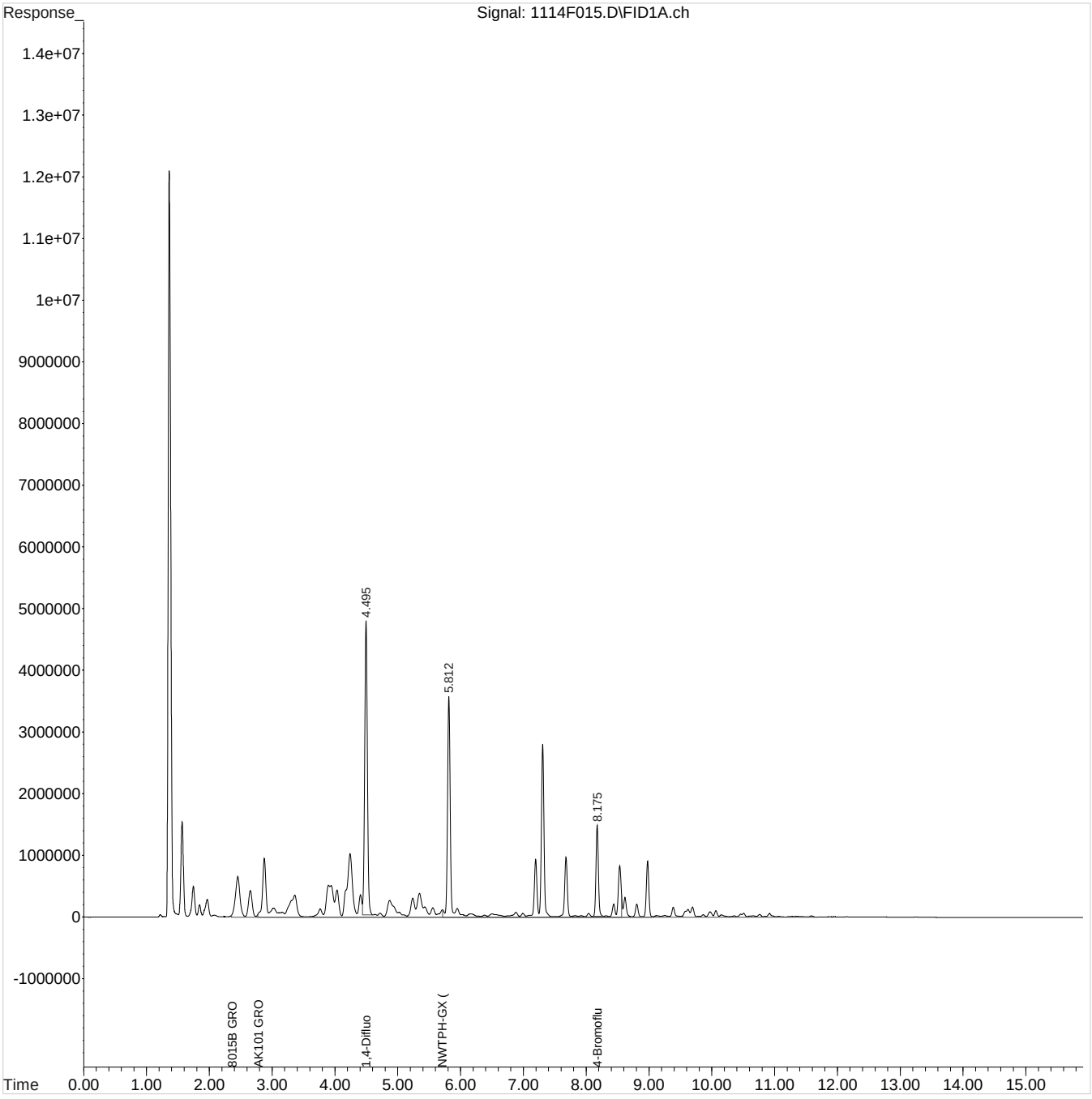
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F015.D Vial: 15
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 4:14 pm Operator: KW
Sample : K1120-006 DMS Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:31:17 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Exception Report

Data File: J:\GC39\DATA\11142018A\1114F006.D
Lab ID: KWG1806088-3
RunType: LCS
Matrix: WIPE

Date Acquired: 11/14/2018 10:34
Date Quantitated: 11/20/2018 11:01
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File:	J:\GC39\DATA\11142018A\1114F006.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 10:34	**Quant Date:**	11/20/2018 11:01	**Vial:**	6
Run Type:	LCS	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1806088-3			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	WIPE
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	12/04/2018

Analysis Lot:	KWG1805982	**Prep Lot:**	KWG1806088	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 5030A/5030B		
Prep Ref:	1704290	**Prep Date:**	11/14/2018		

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:	J:\GC39\DATA\11142018A\1114F007.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18	0.00	3738254	41.91	84	70-130	OK	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.75	-0.02	57845929	492.32	246		
Gasoline Range Organics (GRO)	2.32	-0.04	67268125	493.67	247		

Prep Amount:	1.00 Wipe	**Dilution:**	1.0	**MeOH Ext. Vol:**	10.0 ml
Prep Final Vol:	50.0 ml	**Unit Factor:**	1	**MeOH Aliq. Vol:**	1000 uL
Solids:	%				

Final Concentration = ((Soln Conc x MeOH Ext. Vol x Prep Final Vol x Dilution) / (Prep Amount x MeOH Aliq. x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC39\DATA\11142018A\1114F006.D Vial: 6
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 10:34 am Operator: KW
Sample : LCS Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 20 11:01:00 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.494	14342483	91.630 ug/L
2) S	4-Bromofluorobenzene	8.175	3738254	41.913 ug/L
Target Compounds				
3) H	AK101 GRO (C6-C10)	2.746	57845929	492.317 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.321	67268125	493.667 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	36189010	454.000 ug/L

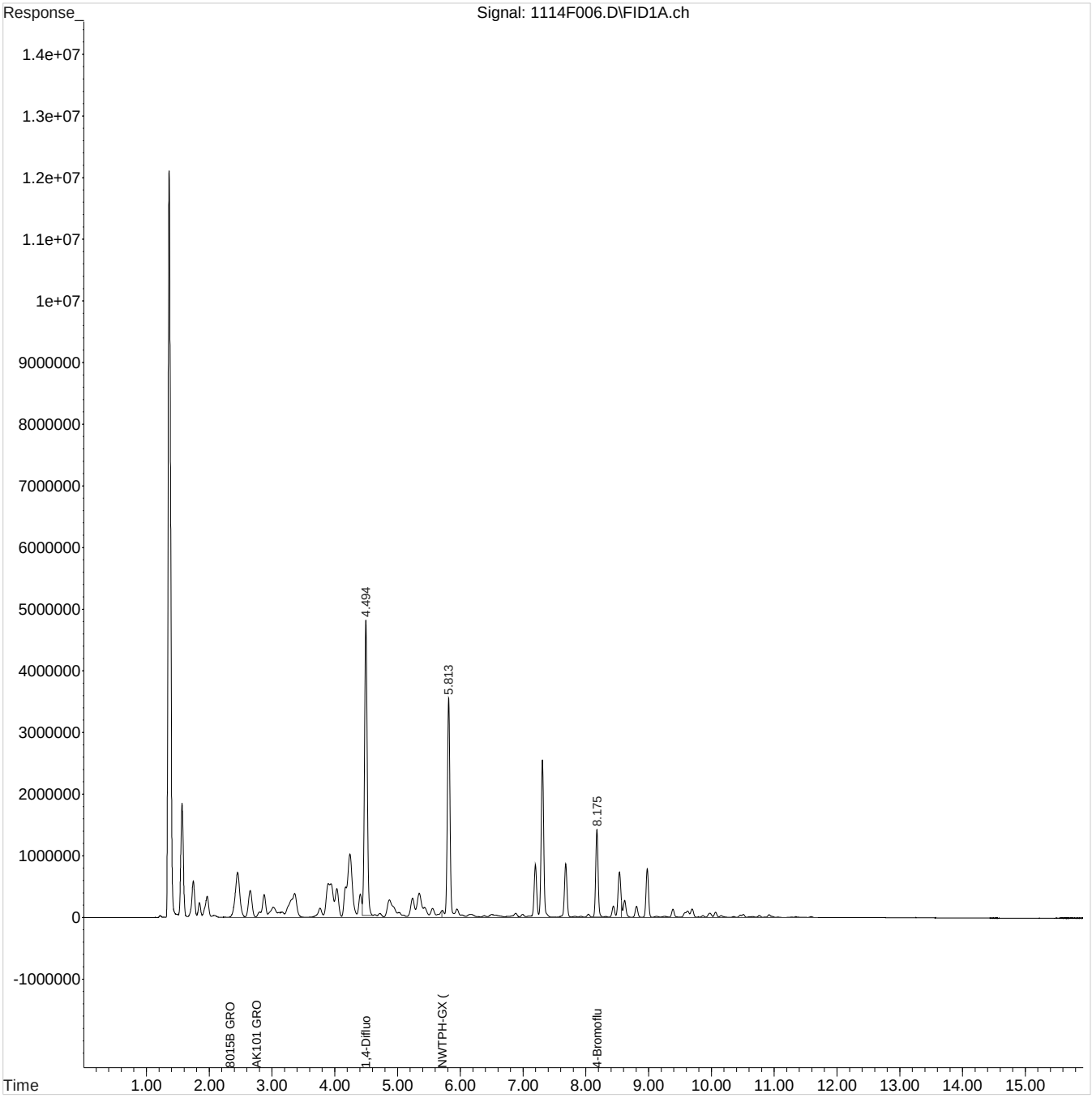
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC39\DATA\11142018A\1114F006.D Vial: 6
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 10:34 am Operator: KW
Sample : LCS Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 20 11:01:00 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F003.D
Lab ID: KWG1805982-1
RunType: CCV
Matrix: SOIL

Date Acquired: 11/14/2018 09:22
Date Quantitated: 11/14/2018 09:52
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F003.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 09:22	**Quant Date:**	11/14/2018 09:52	**Vial:**	3
Run Type:	CCV	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1805982-1			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18		7686534	86.18		70-130	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		59872744	509.57			
Gasoline Range Organics (GRO)	2.36		69455714	509.72			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F003.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 09:22	**Quant Date:**	11/14/2018 09:52	**Vial:**	3
Run Type:	CCV	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805982-1			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18		7686534	86.18		83-119	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		59872744	509.57			
Gasoline Range Organics (GRO)	2.36		69455714	509.72			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F003.D Vial: 3
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 9:22 am Operator: KW
Sample : CCV Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 09:52:03 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.494	14671280	93.731	ug/L
2) S	4-Bromofluorobenzene	8.175	7686534	86.181	ug/L
	Target Compounds				
3) H	AK101 GRO (C6-C10)	2.773	59872744	509.567	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	69455714	509.721	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.714	38614708	484.431	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

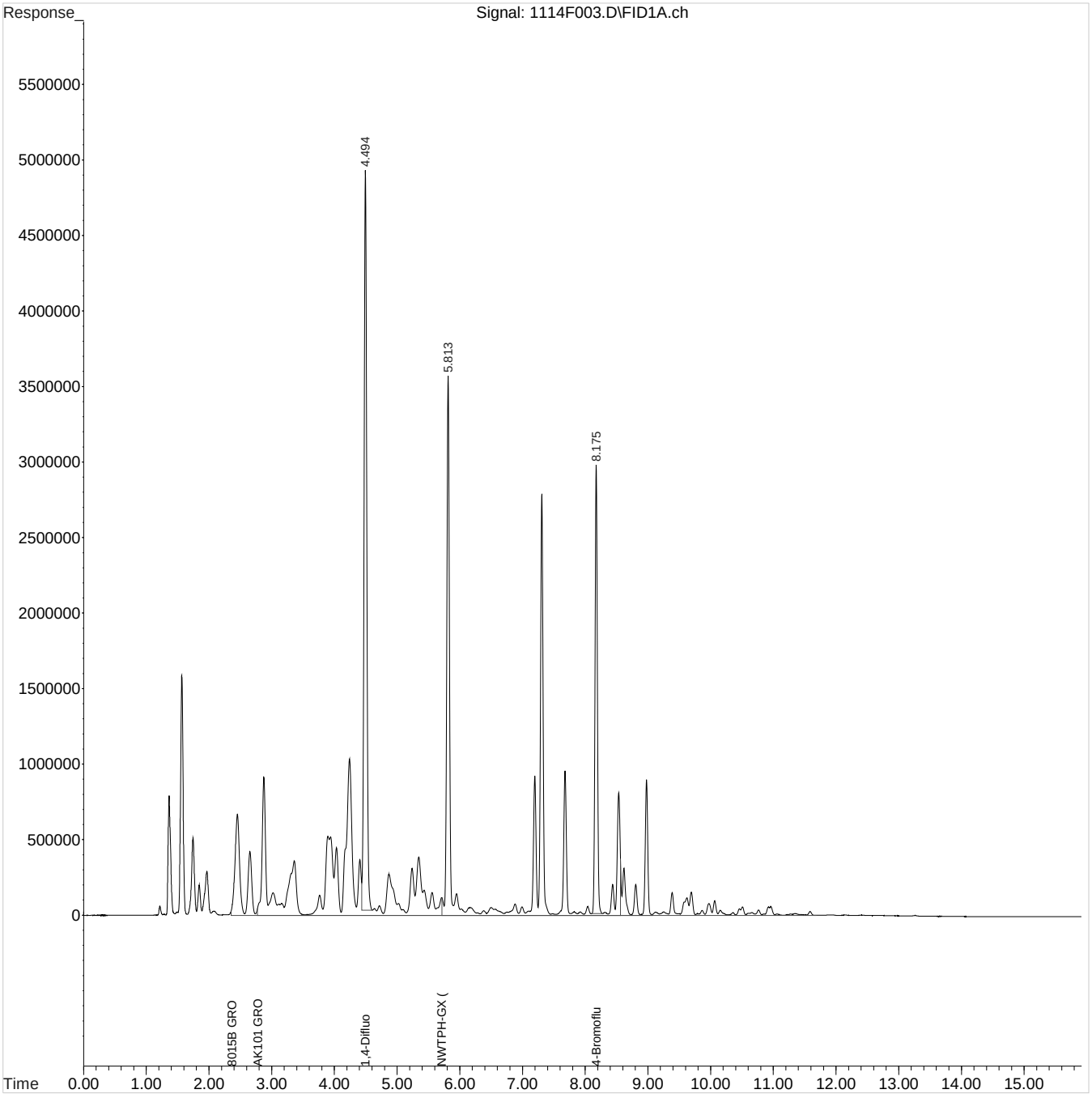
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F003.D Vial: 3
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 9:22 am Operator: KW
Sample : CCV Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 09:52:03 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F018.D
Lab ID: KWG1805982-3
RunType: CCV
Matrix: SOIL

Date Acquired: 11/14/2018 17:26
Date Quantitated: 11/14/2018 17:42
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F018.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 17:26	**Quant Date:**	11/14/2018 17:42	**Vial:**	18
Run Type:	CCV	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1805982-3			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18		7346141	82.36		70-130	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		60854192	517.92			
Gasoline Range Organics (GRO)	2.36		70758062	519.28			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F018.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 17:26	**Quant Date:**	11/14/2018 17:42	**Vial:**	18
Run Type:	CCV	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805982-3			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	8.18		7346141	82.36		83-119	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		60854192	517.92			
Gasoline Range Organics (GRO)	2.36		70758062	519.28			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F018.D Vial: 18
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 5:26 pm Operator: KW
Sample : CCV Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 17:42:45 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.493	14171743	90.540	ug/L
2) S	4-Bromofluorobenzene	8.176	7346141	82.364	ug/L
	Target Compounds				
3) H	AK101 GRO (C6-C10)	2.773	60854192	517.920	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	70758062	519.279	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.714	40817849	512.070	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

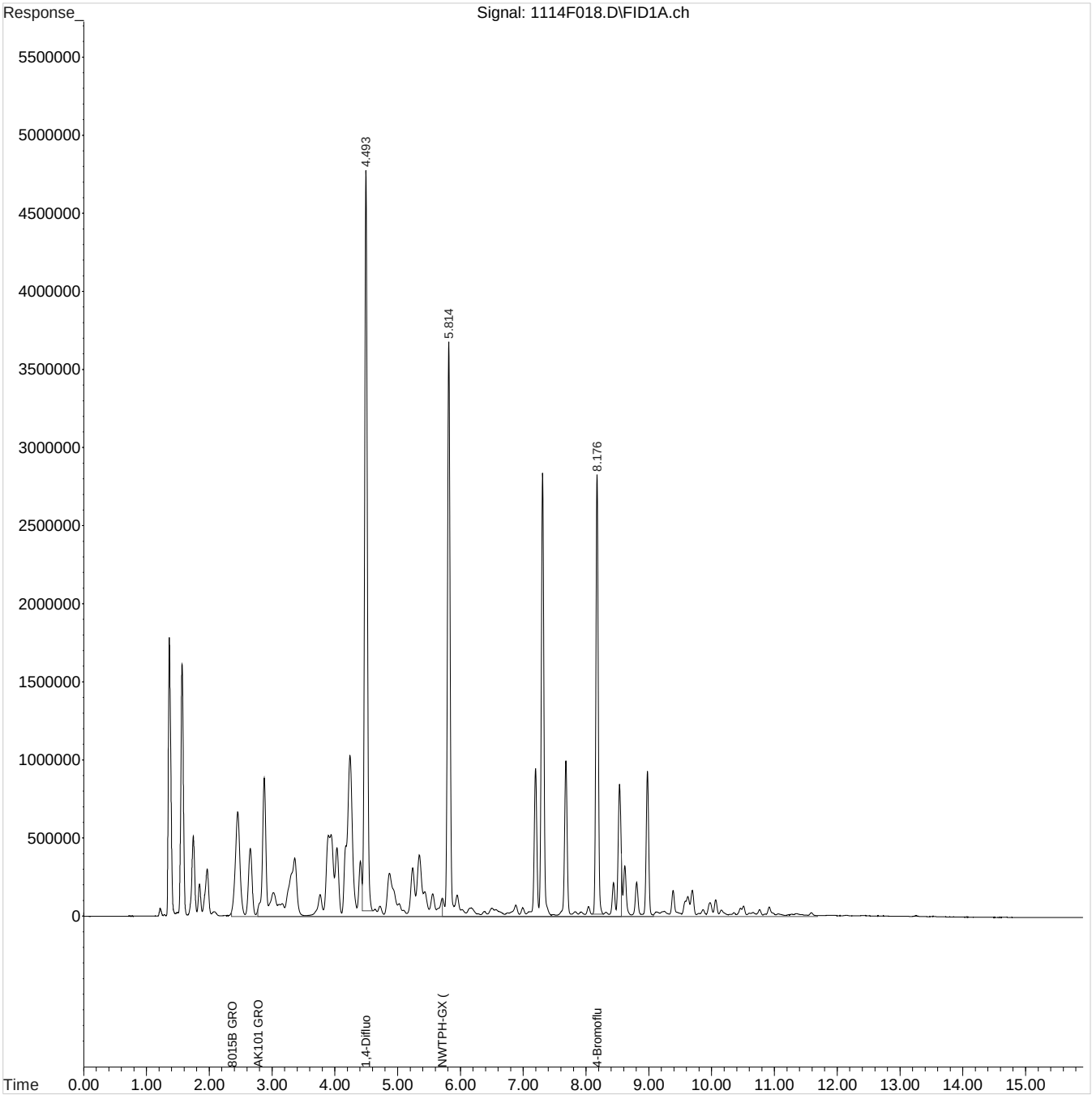
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F018.D Vial: 18
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 5:26 pm Operator: KW
Sample : CCV Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 17:42:45 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F004.D
Lab ID: KWG1805982-2
RunType: IB
Matrix: SOIL

Date Acquired: 11/14/2018 09:46
Date Quantitated: 11/14/2018 16:55
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F004.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 09:46	**Quant Date:**	11/14/2018 16:55	**Vial:**	4
Run Type:	IB	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1805982-2			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC			**Calibration ID:**	CAL15764
Title:					
				Method ID:	MJ1777
MB Ref:				**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0**d**			70-130	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		1439806	12.25			
Gasoline Range Organics (GRO)	2.36		1667314	12.24			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F004.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 09:46	**Quant Date:**	11/14/2018 16:55	**Vial:**	4
Run Type:	IB	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805982-2			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0**d**			83-119	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		1439806	12.25			
Gasoline Range Organics (GRO)	2.36		1667314	12.24			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F004.D Vial: 4
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 9:46 am Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:55:10 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds						
1) S	1,4-Difluorobenzene	4.494	13768402	87.963	ug/L	m
2) S	4-Bromofluorobenzene	0.000	0	N.D.	ug/L	d
Target Compounds						
3) H	AK101 GRO (C6-C10)	2.773	1439806	12.254	ug/L	
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	1667314	12.236	ug/L	
5) H	NWTPH-GX (Tol.-Naph.)	5.714	1106649	13.883	ug/L	

(f)=RT Delta > 1/2 Window (m)=manual int.

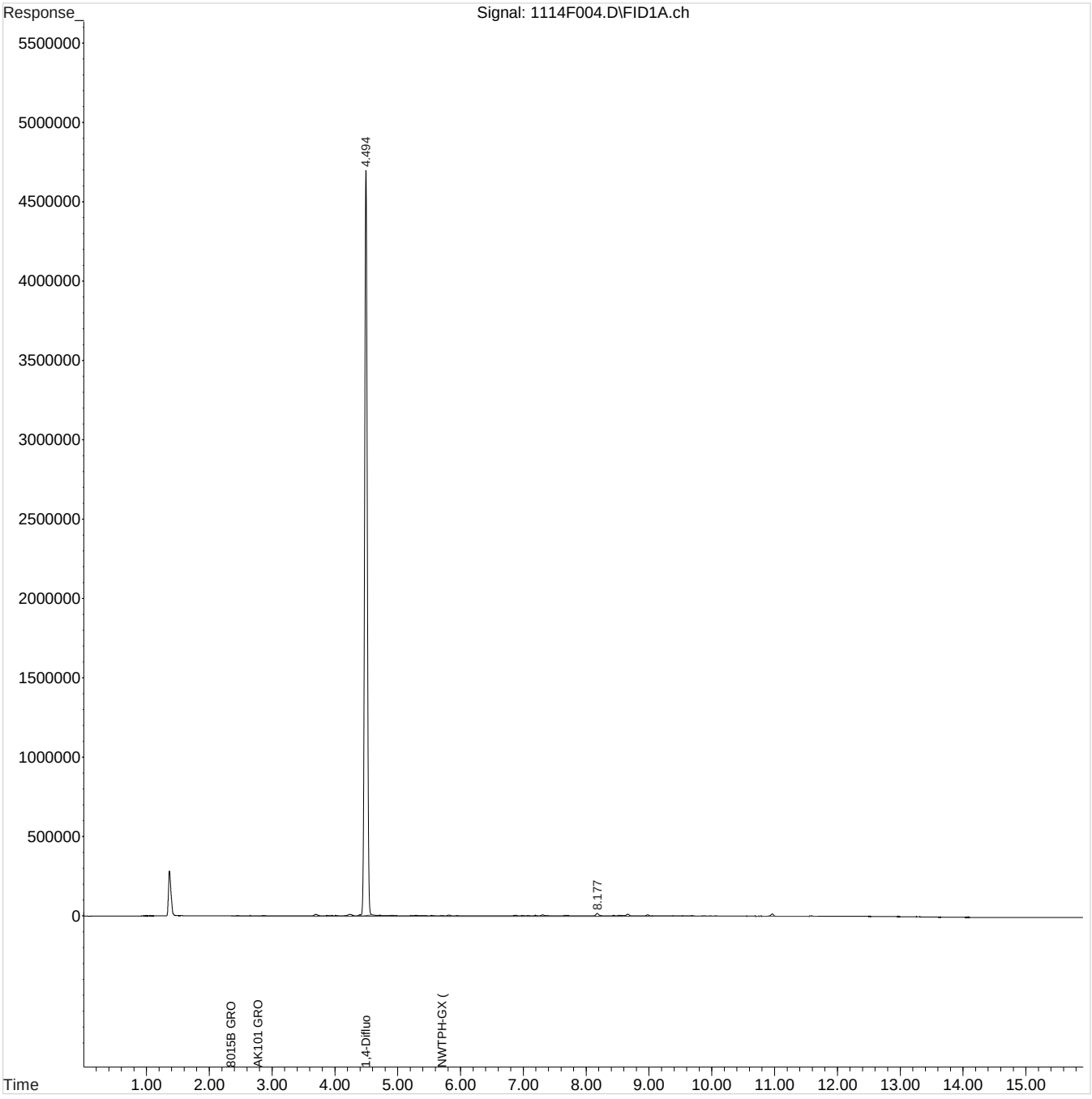
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F004.D Vial: 4
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 9:46 am Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:55:10 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



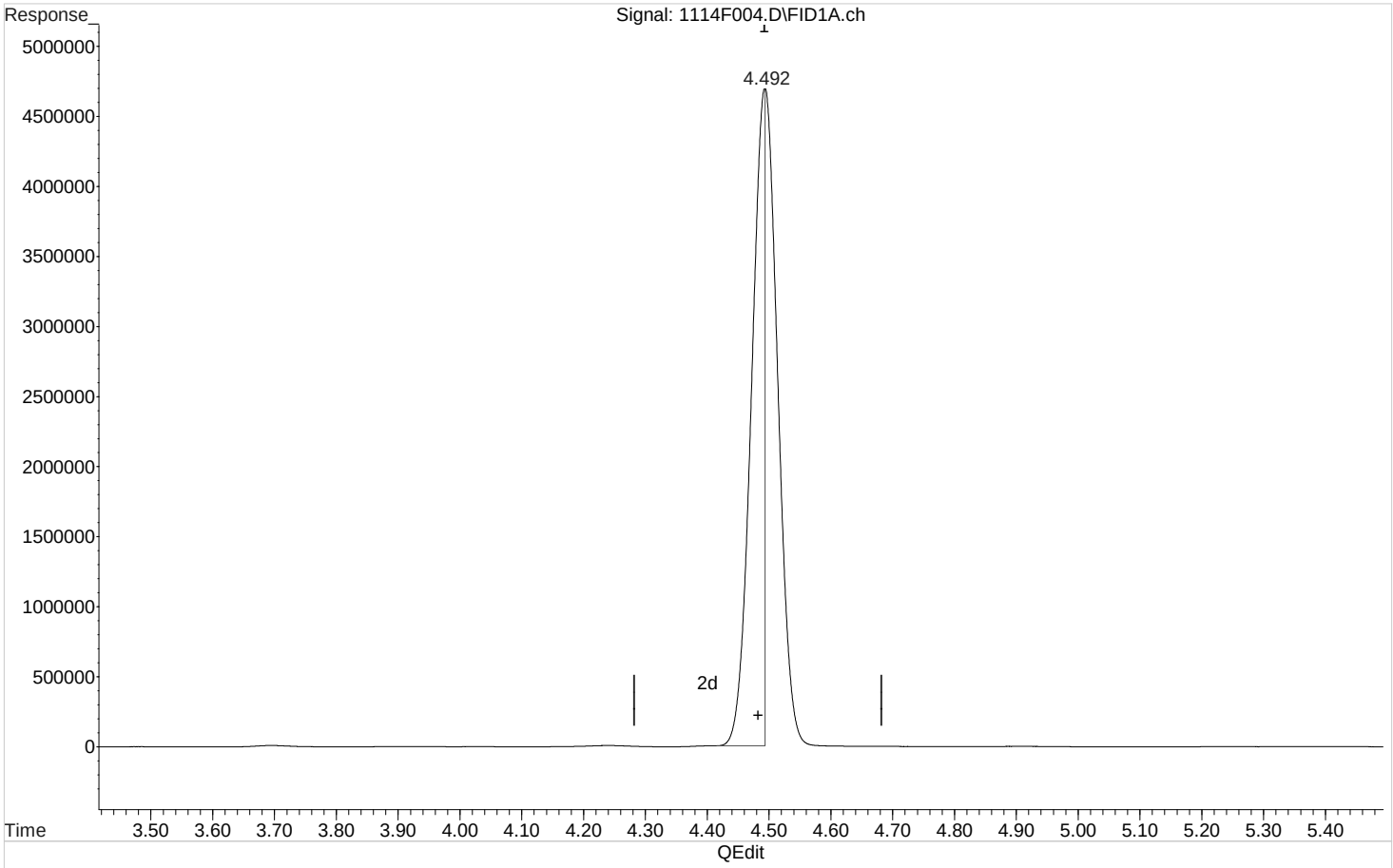
Quantitation Report (Qedit)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F004.D Vial: 4
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 9:46 am Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:54:51 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(1) 1,4-Difluorobenzene (S)

4.492min 44.473 ug/L

response 6961173

Manual Integration:

Before

11/14/18

(+) = Expected Retention Time

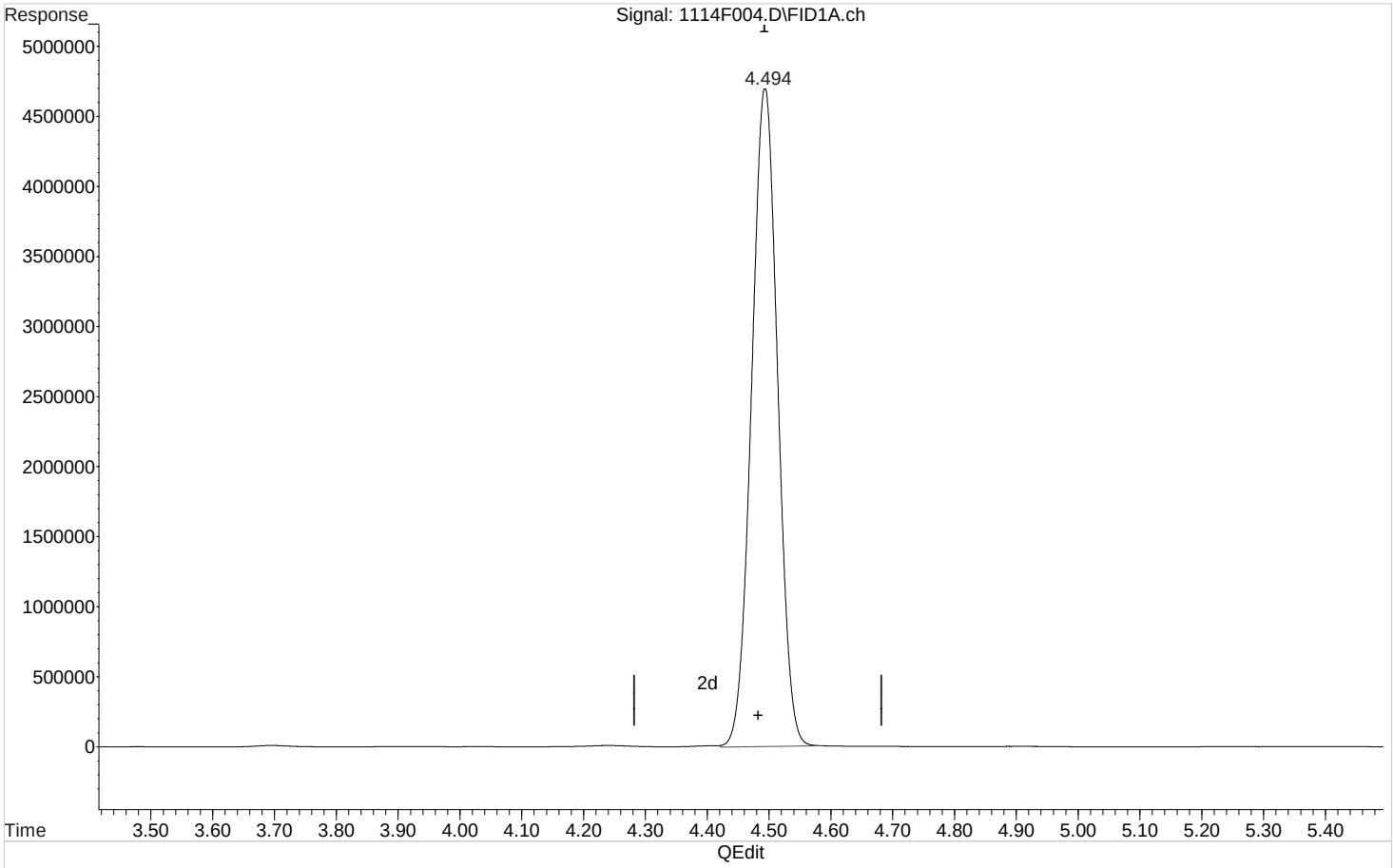
Quantitation Report (Qedit)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F004.D Vial: 4
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 9:46 am Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 14 16:54:51 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(1) 1,4-Difluorobenzene (S)

4.494min 87.963 ug/L m

response 13768402

Manual Integration:

After

Split peak

11/14/18

(+) = Expected Retention Time

1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F019.D
Lab ID: KWG1805982-4
RunType: IB
Matrix: SOIL

Date Acquired: 11/14/2018 17:50
Date Quantitated: 11/15/2018 07:25
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F019.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 17:50	**Quant Date:**	11/15/2018 07:25	**Vial:**	19
Run Type:	IB	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1805982-4			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0**d**			70-130	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		1507924	12.83			
Gasoline Range Organics (GRO)	2.36		1748245	12.83			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F019.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 17:50	**Quant Date:**	11/15/2018 07:25	**Vial:**	19
Run Type:	IB	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805982-4			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0**d**			83-119	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		1507924	12.83			
Gasoline Range Organics (GRO)	2.36		1748245	12.83			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F019.D Vial: 19
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 5:50 pm Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 15 07:25:04 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds						
1) S	1,4-Difluorobenzene	4.493	13772828	87.991	ug/L	
2) S	4-Bromofluorobenzene	0.000	0	N.D.	ug/L	d
Target Compounds						
3) H	AK101 GRO (C6-C10)	2.773	1507924	12.834	ug/L	
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	1748245	12.830	ug/L	
5) H	NWTPH-GX (Tol.-Naph.)	5.714	1391717	17.459	ug/L	

(f)=RT Delta > 1/2 Window (m)=manual int.

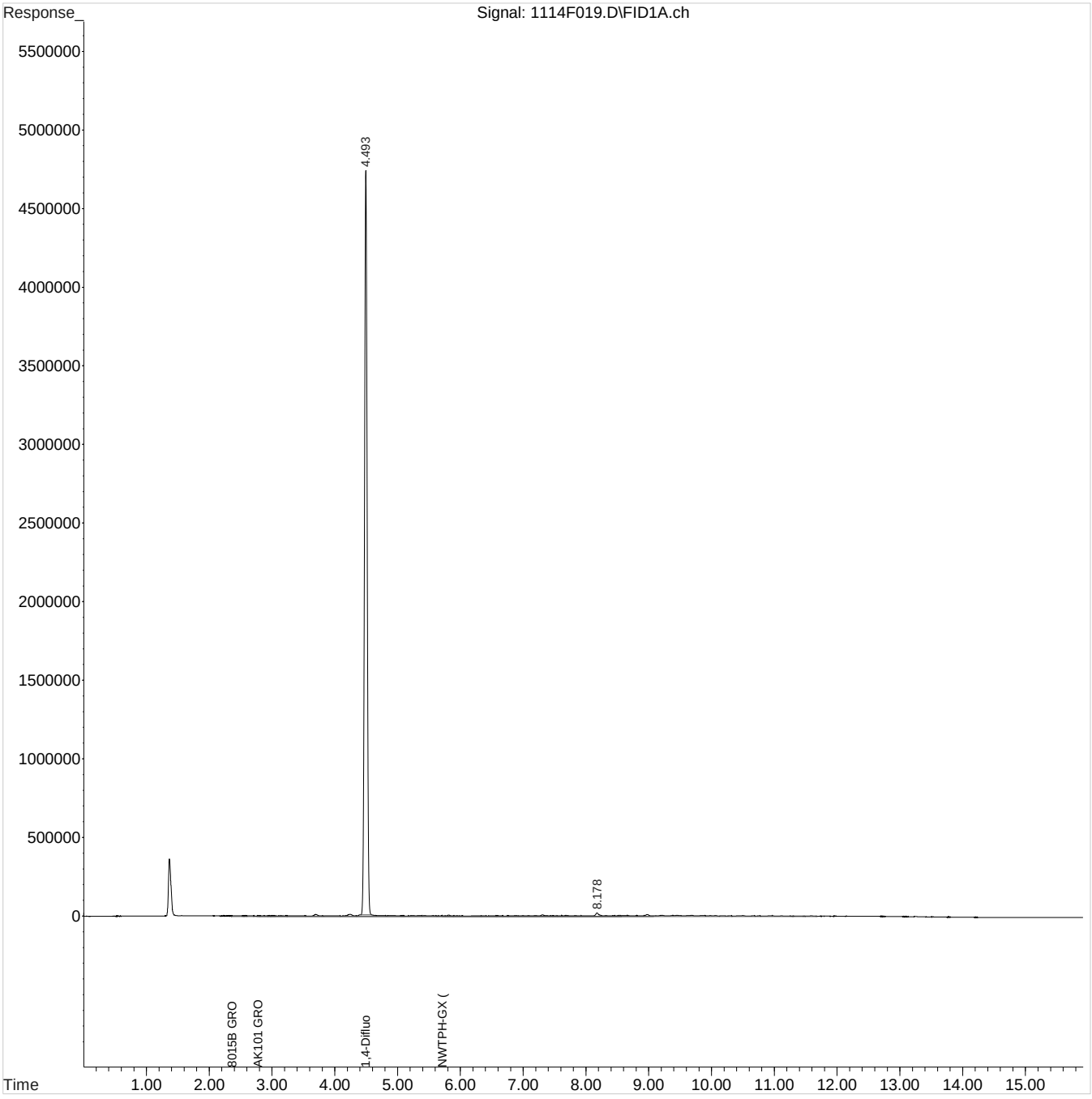
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F019.D Vial: 19
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 5:50 pm Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 15 07:25:04 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



1st 12/04/18
2nd 12/04/18

Exception Report

Data File: J:\GC39\DATA\111418\1114F022.D
Lab ID: KWG1805982-6
RunType: IB
Matrix: SOIL

Date Acquired: 11/14/2018 19:03
Date Quantitated: 11/15/2018 07:26
Batch ID: KWG1805982
Analysis Method: 8015C
MethodJoinID: MJ1777

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F022.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 19:03	**Quant Date:**	11/15/2018 07:26	**Vial:**	22
Run Type:	IB	**MethodJoinID:**	MJ1777	**Dilution:**	1.0
Lab ID:	KWG1805982-6			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ1777
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0**d**			70-130	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		1513371	12.88			
Gasoline Range Organics (GRO)	2.36		1763941	12.95			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st KW 12/04/18
2nd 12/04/18

Quantitation Report

Data File:	J:\GC39\DATA\111418\1114F022.D			**Instrument:**	GC39
Acqu Date:	11/14/2018 19:03	**Quant Date:**	11/15/2018 07:26	**Vial:**	22
Run Type:	IB	**MethodJoinID:**	MJ184	**Dilution:**	1.0
Lab ID:	KWG1805982-6			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C VOC GRO	**Collect Date:**		**Receive Date:**	11/14/2018

Analysis Lot:	KWG1805982	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC39\METHODS\061418GAS_GC	**Calibration ID:**	CAL15764
Title:			
		Method ID:	MJ184
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0**d**			83-119	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C6 - C10 GRO	2.77		1513371	12.88			
Gasoline Range Organics (GRO)	2.36		1763941	12.95			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F022.D Vial: 22
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 7:03 pm Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 15 07:26:06 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1) S	1,4-Difluorobenzene	4.492	14096911	90.061	ug/L	
2) S	4-Bromofluorobenzene	0.000	0	N.D.	ug/L	d
	Target Compounds					
3) H	AK101 GRO (C6-C10)	2.773	1513371	12.880	ug/L	
4) H	8015B GRO (2mp-1,2,4tmb)	2.355	1763941	12.945	ug/L	
5) H	NWTPH-GX (Tol.-Naph.)	5.714	1487972	18.667	ug/L	

(f)=RT Delta > 1/2 Window (m)=manual int.

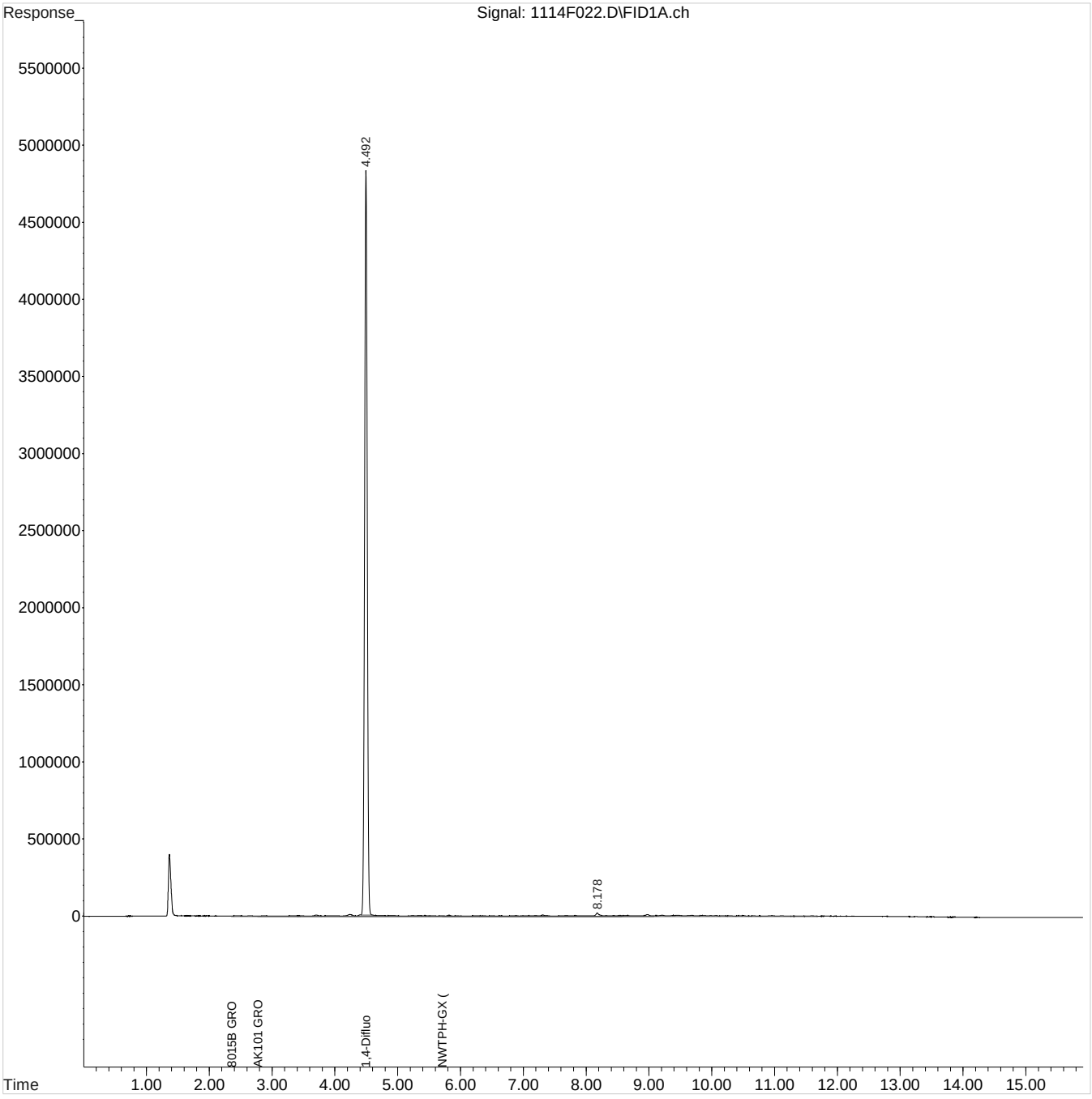
Quantitation Report (QT Reviewed)

1st KW 12/04/18
2nd 12/04/18

Data File : J:\GC39\DATA\111418\1114F022.D Vial: 22
Signal(s) : FID1A.ch
Acq On : 14 Nov 2018 7:03 pm Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Nov 15 07:26:06 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Date: 6.14.18

By: KW

IS/SS Std. ID: _____

CCV Std ID: HCV7 88E XP: 6.21.18 HCV7 88B XP: 7.14.18

MS/DMS/LCS/ICV Std ID: HCV7 88M XP: 6.21.18

Marker Std. ID: HCV7.83J XP: NA

ALS Environmental
Injection Log
GC39 Agilent 7890B

LIMS ID _____

ICAL Date: 6.14.18 1576

Second RV: JUN 19 2018

Stealth ID: _____

		Sample Name	File Name	Method	Dilution	pH<2	Comments
✓	1	MARKER	0614F001	8015C.M	10UL→5ML		
	2	CCV	002				MR
	3	IB	003				
→	4	IB	004				
→	5	IB	005				
✓	6	ICAL 50/20	006		5/5UL→10ML		HCV7 88D XP 6.21.18 6.15.18 KW
✓	7	100/25	007		5/5UL→5ML		88G See standard BA
✓	8	200/50	008		10/10UL→5ML		88H
→	9	500/100	009		25/20UL→5ML		88I
✓	10	1000/150	010		50/30UL→5ML		88J
✓	11	5000	011		50UL→5ML		88K
✓	12	10,000	012		100UL→5ML		88L
→	13	IB	013				
✓	14	ICV 500/100	014		25/20UL→5ML		HCV7.88N See standard BO
	15						
	16						
	17						
	18						
	19						
	20						
	21						
	22						
	23						
	24						
	25						
	26						KW 6/15/18
	27						

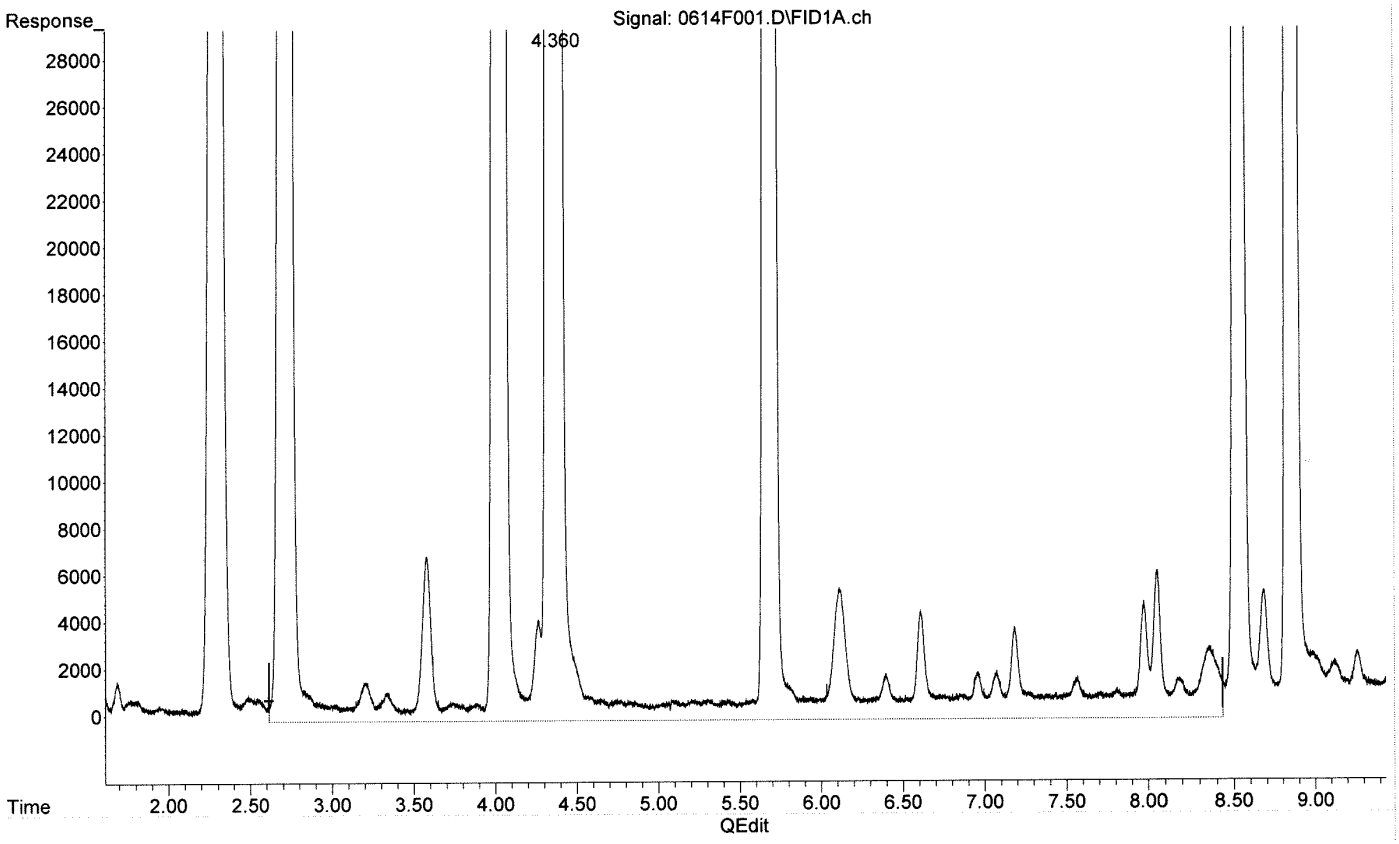
R:\VOA\Injection Logs\INJLOG_GC39_Rev1

019768

Data File : J:\GC60\Data\061418\0614F001.D Vial: 1
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 7:55 am Operator: KW
Sample : MARKER Inst : GC60
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 16:19:10 2018
Quant Results File: 061418GAS_GC60.RES

Quant Method : J:\GC60\Methods\061418GAS_GC60.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(3) AK101 GRO (C6-C10) (H)

2.614min 35.647 ug/L m

response 4188472

JUN 19 2018

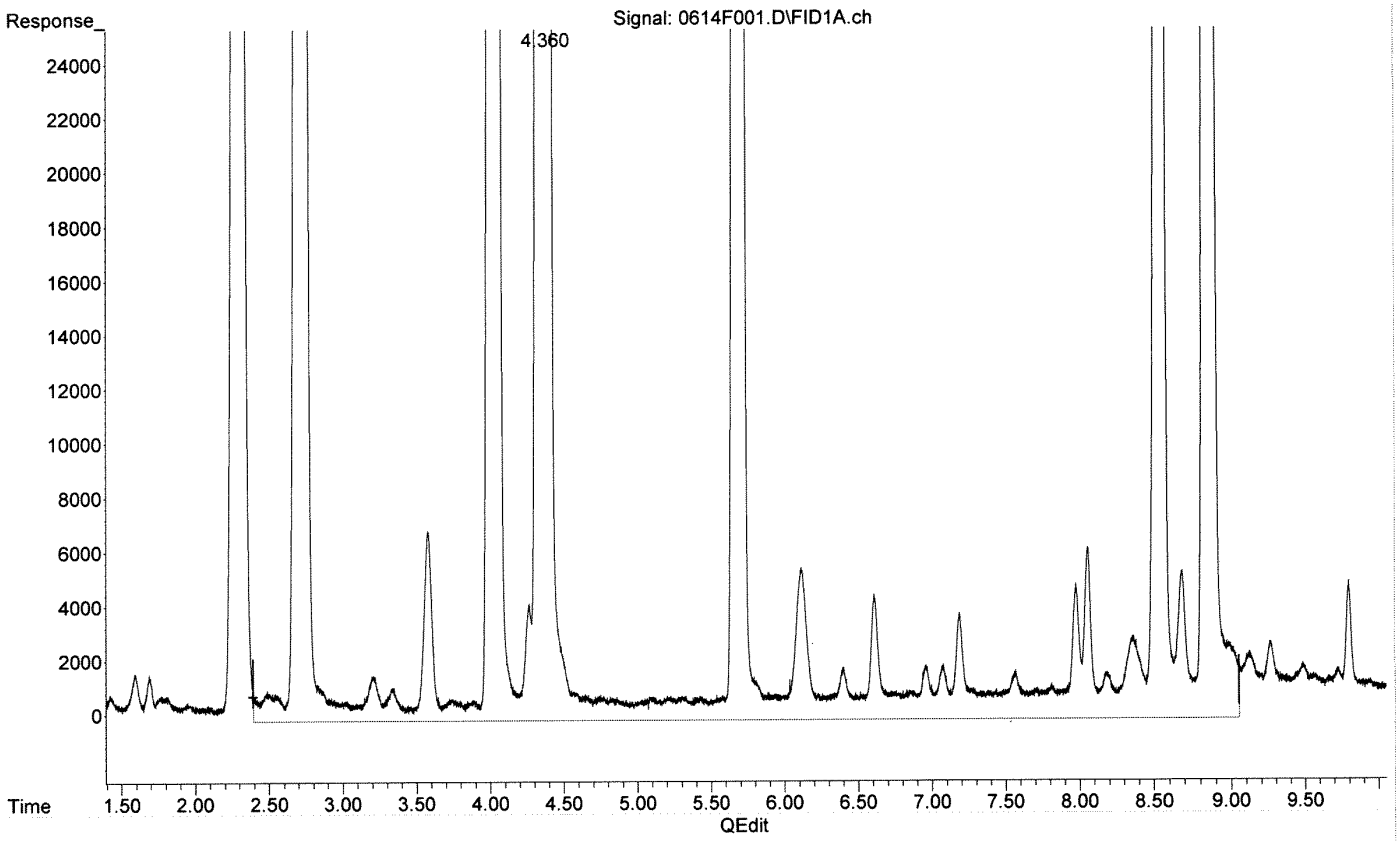
KW 6-15-18

(+) = Expected Retention Time
061418GAS_GC60.M Thu Jun 14 16:19:53 2018 Page: 1

Data File : J:\GC60\Data\061418\0614F001.D Vial: 1
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 7:55 am Operator: KW
Sample : MARKER Inst : GC60
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 16:19:10 2018
Quant Results File: 061418GAS_GC60.RES

Quant Method : J:\GC60\Methods\061418GAS_GC60.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(4) 8015B GRO (2mp-1,2,4tmb) (H)

2.392min 44.880 ug/L m

response 6115404

JUN 19 2018

KW 6-15-18

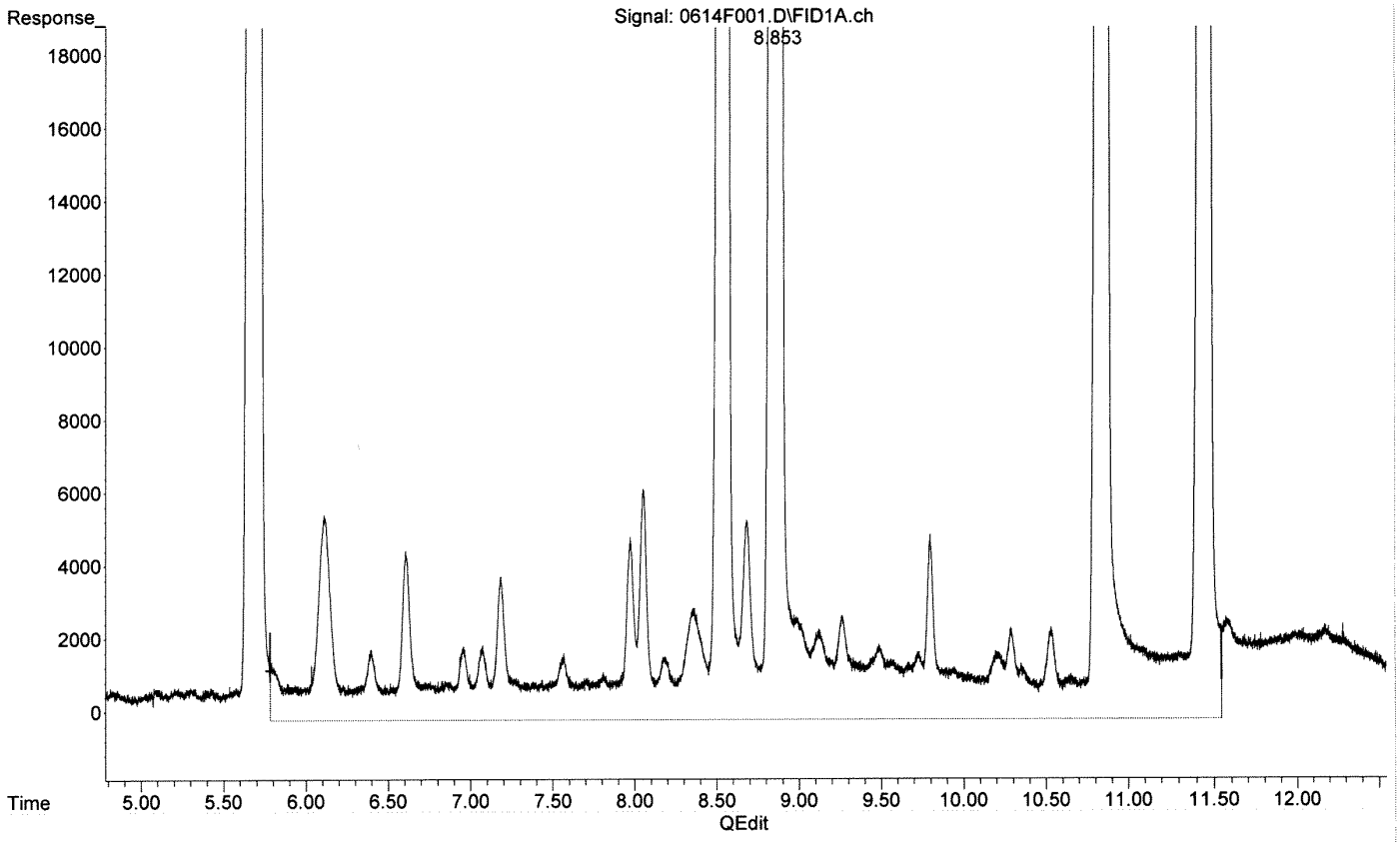
(+) = Expected Retention Time
061418GAS_GC60.M Thu Jun 14 16:20:00 2018

Page: 1

Data File : J:\GC60\Data\061418\0614F001.D Vial: 1
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 7:55 am Operator: KW
Sample : MARKER Inst : GC60
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 16:19:10 2018
Quant Results File: 061418GAS_GC60.RES

Quant Method : J:\GC60\Methods\061418GAS_GC60.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(5) NWTPH-GX (Tol.-Naph.) (H)

5.783min 46.770 ug/L m

response 3728144

JUN 19 2018

KW 6.15.18

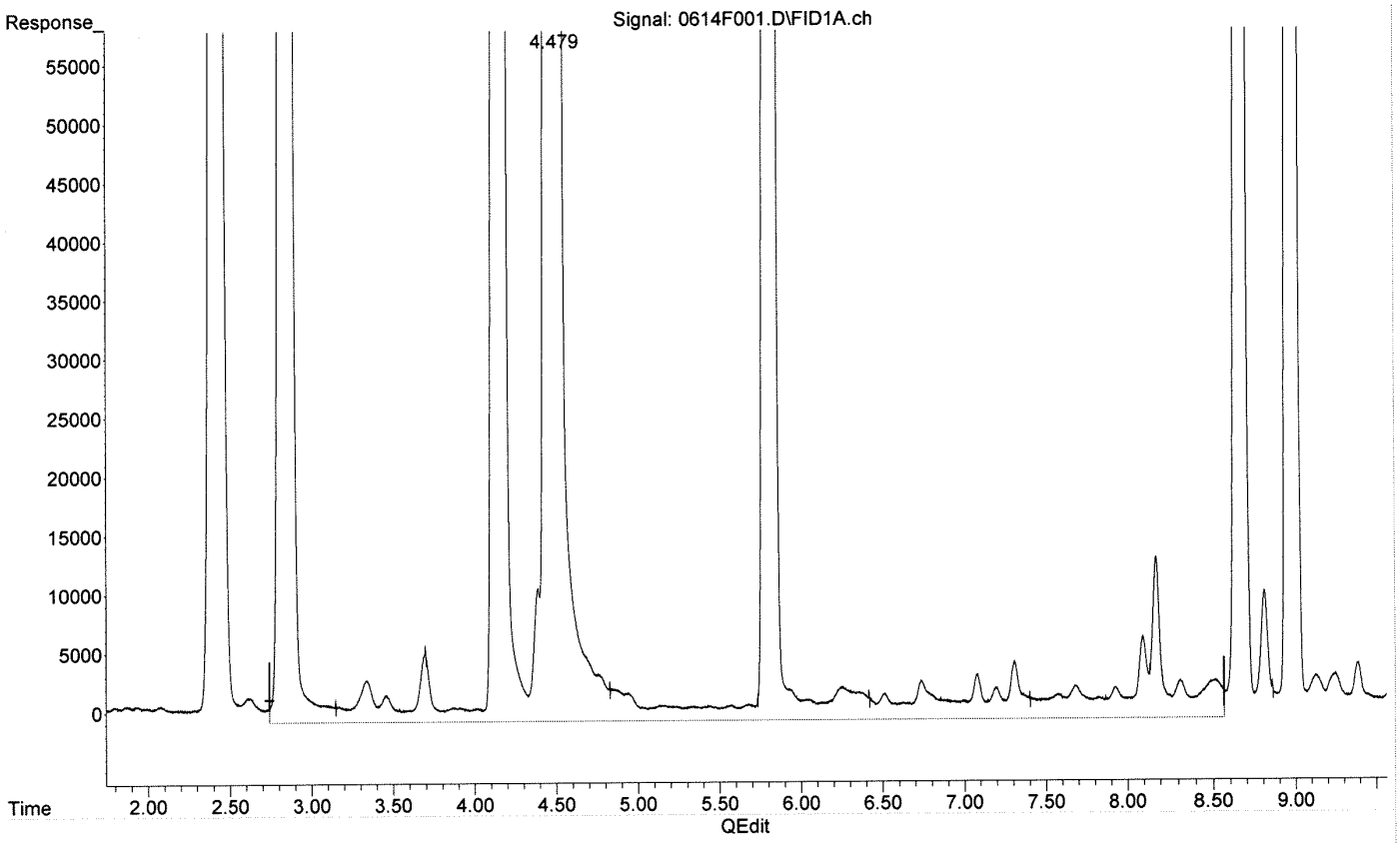
(+) = Expected Retention Time
061418GAS_GC60.M Thu Jun 14 16:20:06 2018 Page: 1

019771

Data File : J:\GC39\DATA\061418\0614F001.D Vial: 1
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 7:56 am Operator: KW
Sample : MARKER Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 14:53:09 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Fri May 25 09:08:39 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(3) AK101 GRO (C6-C10) (H)

2.743min 87.838 ug/L m

response 9262645

JUN 19 2018

KW 6-15-18

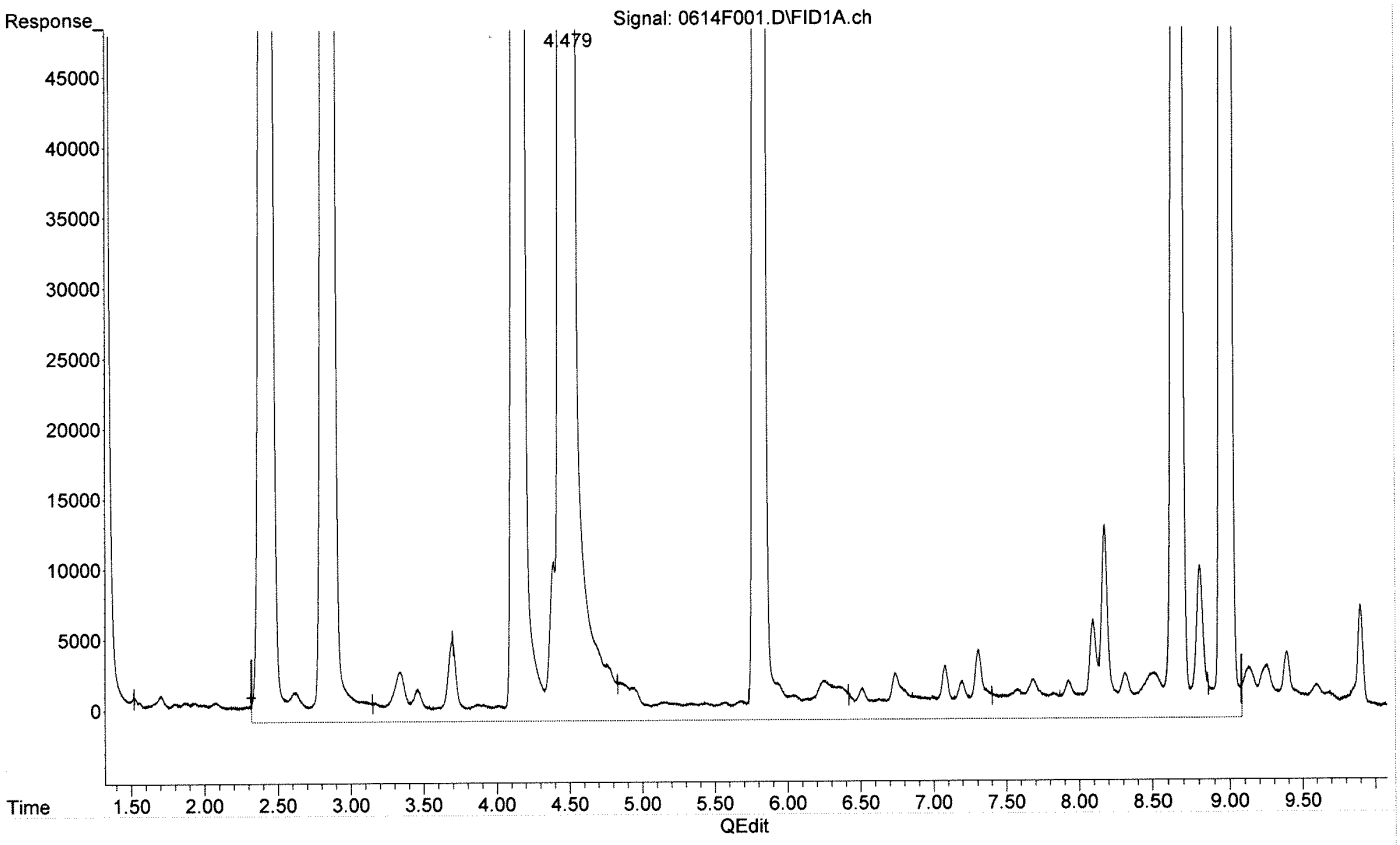
(+) = Expected Retention Time
061418GAS_GC39.M Thu Jun 14 14:54:02 2018 Page: 1

019772

Data File : J:\GC39\DATA\061418\0614F001.D Vial: 1
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 7:56 am Operator: KW
Sample : MARKER Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 14:53:09 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Fri May 25 09:08:39 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(4) 8015B GRO (2mp-1,2,4tmb) (H)

2.319min 117.691 ug/L m

response 14621665

JUN 19 2018

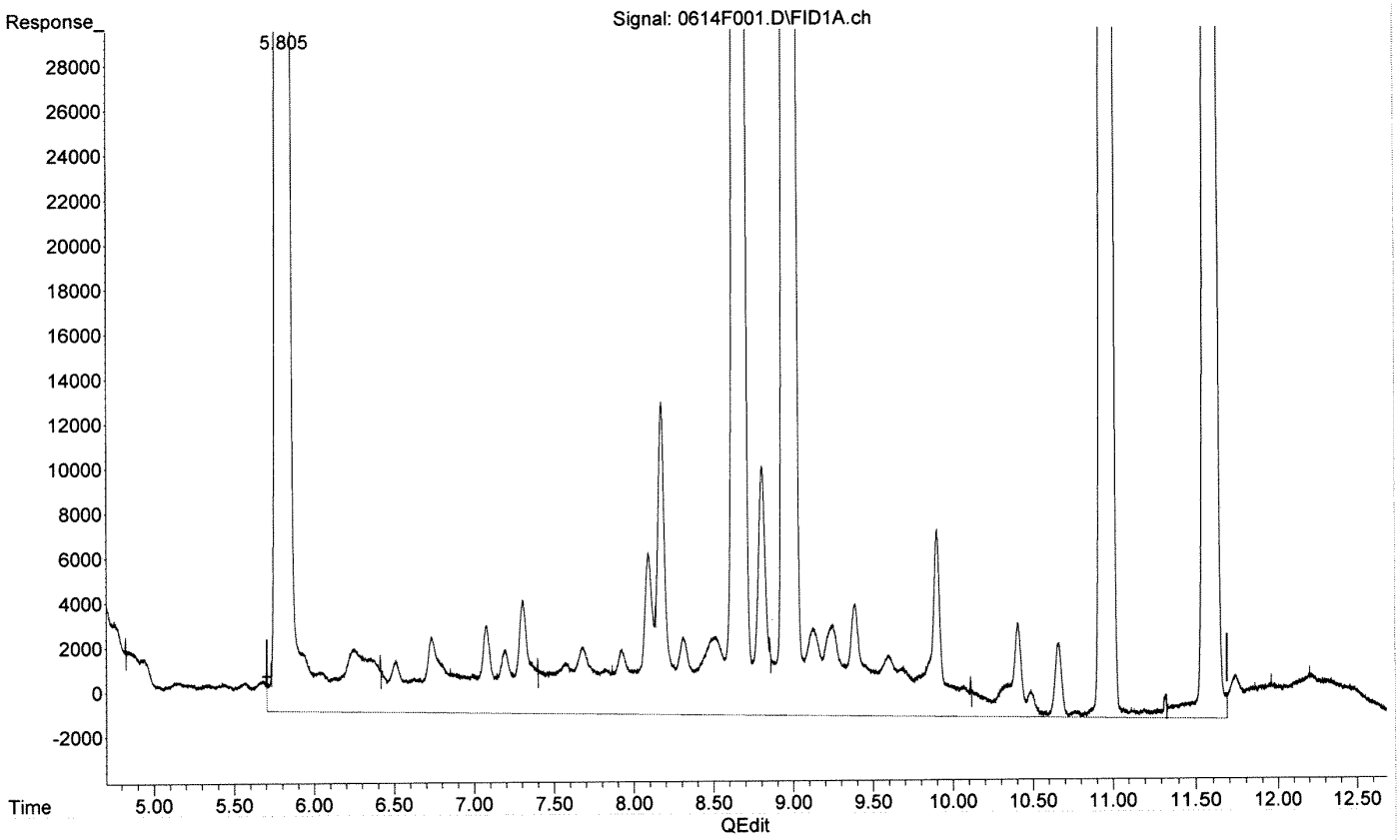
KW 6-15-18

(+) = Expected Retention Time
061418GAS_GC39.M Thu Jun 14 14:54:11 2018 Page: 1

Data File : J:\GC39\DATA\061418\0614F001.D Vial: 1
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 7:56 am Operator: KW
Sample : MARKER Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 14:53:09 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Fri May 25 09:08:39 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(5) NWTPH-GX (Tol.-Naph.) (H)

5.705min 159.264 ug/L m

response 10536767

JUN 19 2018

KW 6.15.18

(+) = Expected Retention Time
061418GAS_GC39.M Thu Jun 14 14:54:33 2018 Page: 1

Data File : J:\GC39\DATA\061418\0614F005.D Vial: 5
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 10:42 am Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 15 07:56:24 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	1,4-Difluorobenzene	4.470	1194	0.008 ug/L
2) S	4-Bromofluorobenzene	0.000	0	N.D. ug/L
	Target Compounds			
3) H	AK101 GRO (C6-C10)	2.743	344732	2.934 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.319	396078	2.907 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	448846	5.631 ug/L

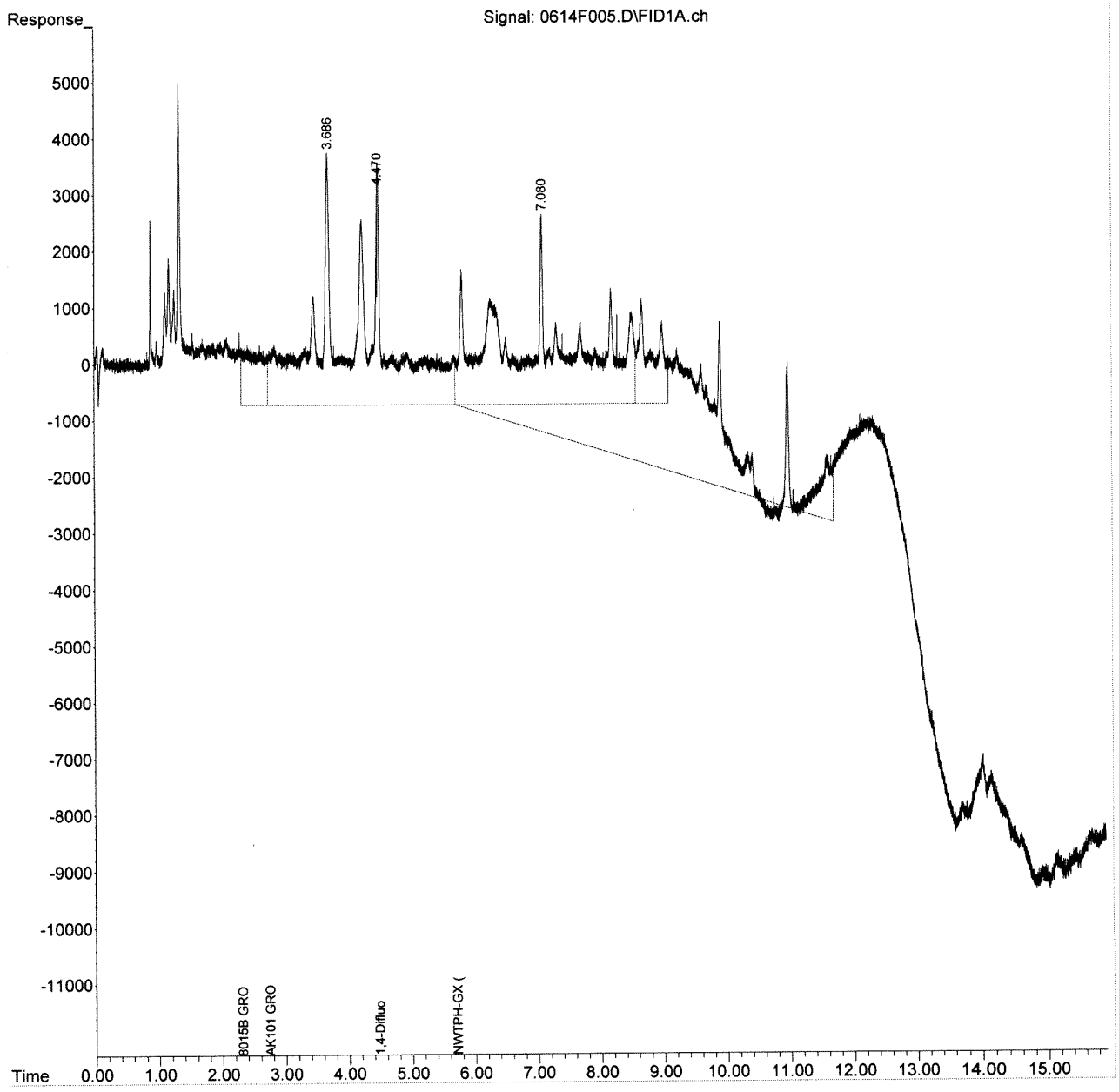
(f)=RT Delta > 1/2 Window (m)=manual int.

JUN 19 2018
KW 6/19/18

Data File : J:\GC39\DATA\061418\0614F005.D Vial: 5
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 10:42 am Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 15 07:56:24 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



061418GAS_GC39.M Tue Jun 19 09:27:03 2018 Page: 2

Data File : J:\GC39\DATA\061418\0614F006.D Vial: 6
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 11:32 am Operator: KW
Sample : ICAL 1 50/20 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:04:24 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	1,4-Difluorobenzene	4.478	3251592	21.080 ug/L m
2) S	4-Bromofluorobenzene	8.173	1785678	19.782 ug/L
	Target Compounds			
3) H	AK101 GRO (C6-C10)	2.743	6262618	55.319 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.319	7291444	55.437 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	4307873	56.733 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

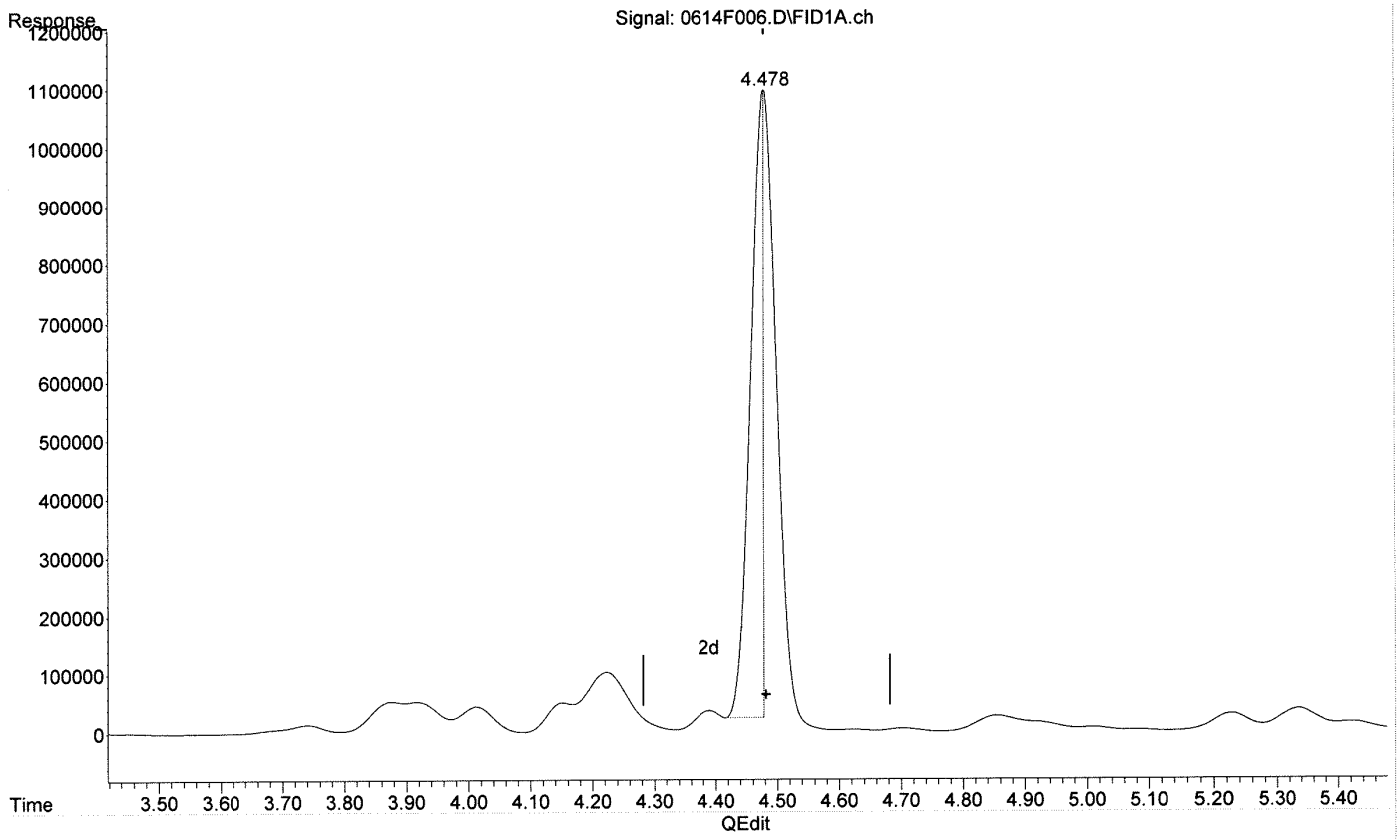
JUN 19 2018

KW 6.15.18

Data File : J:\GC39\DATA\061418\0614F006.D Vial: 6
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 11:32 am Operator: KW
Sample : ICAL 1 50/20 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:11 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(1) 1,4-Difluorobenzene (S)

4.478min 9.874 ug/L

response 1523071

Manual Integration:

Before

06/14/18

JUN 19 2018

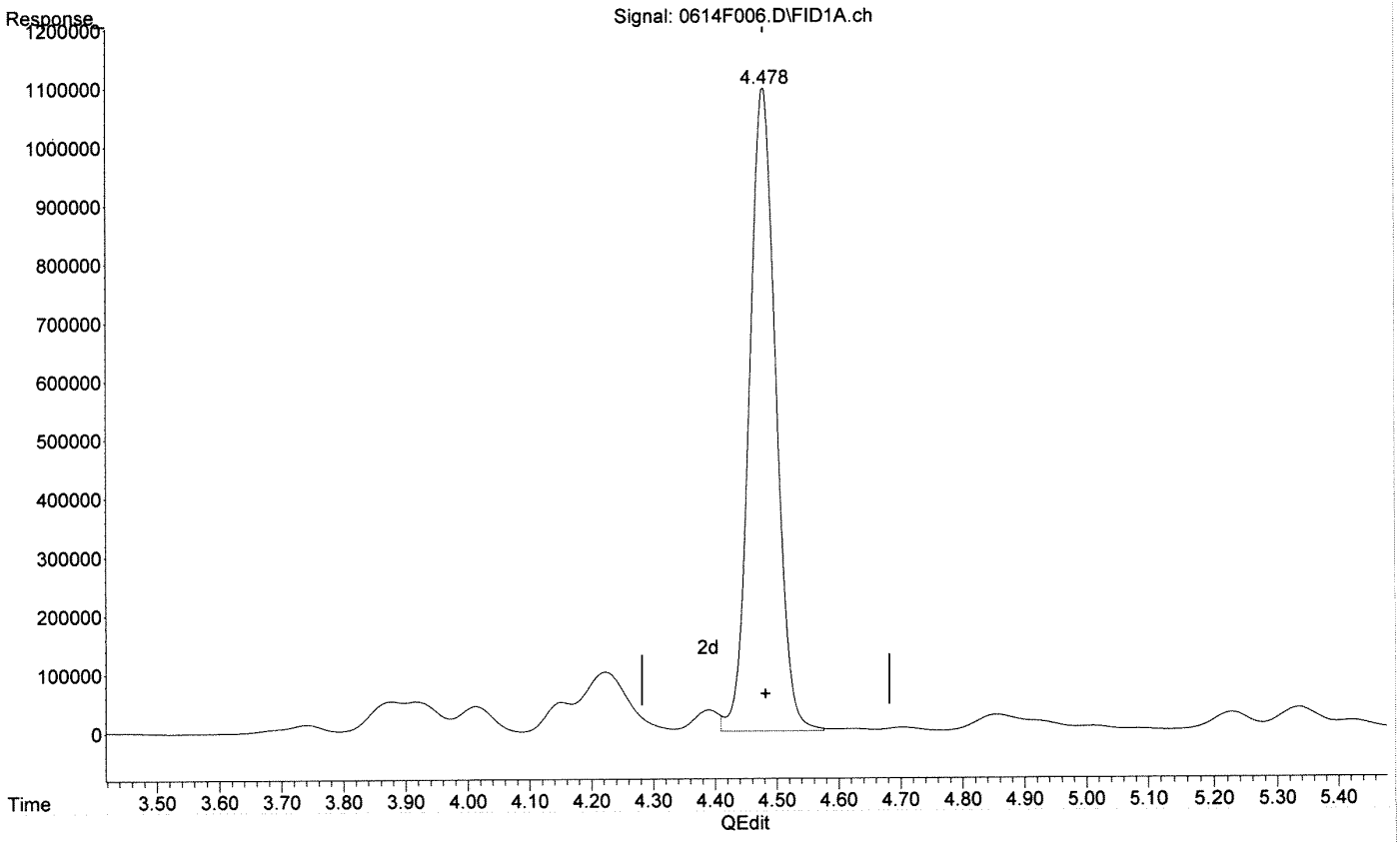
KW 6-15-18

(+) = Expected Retention Time
061418GAS_GC39.M Thu Jun 14 15:04:12 2018 Page: 1

Data File : J:\GC39\DATA\061418\0614F006.D Vial: 6
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 11:32 am Operator: KW
Sample : ICAL 1 50/20 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:11 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



(1) 1,4-Difluorobenzene (S)
4.478min 21.080 ug/L m
response 3251592

Manual Integration:
After
Split peak
06/14/18

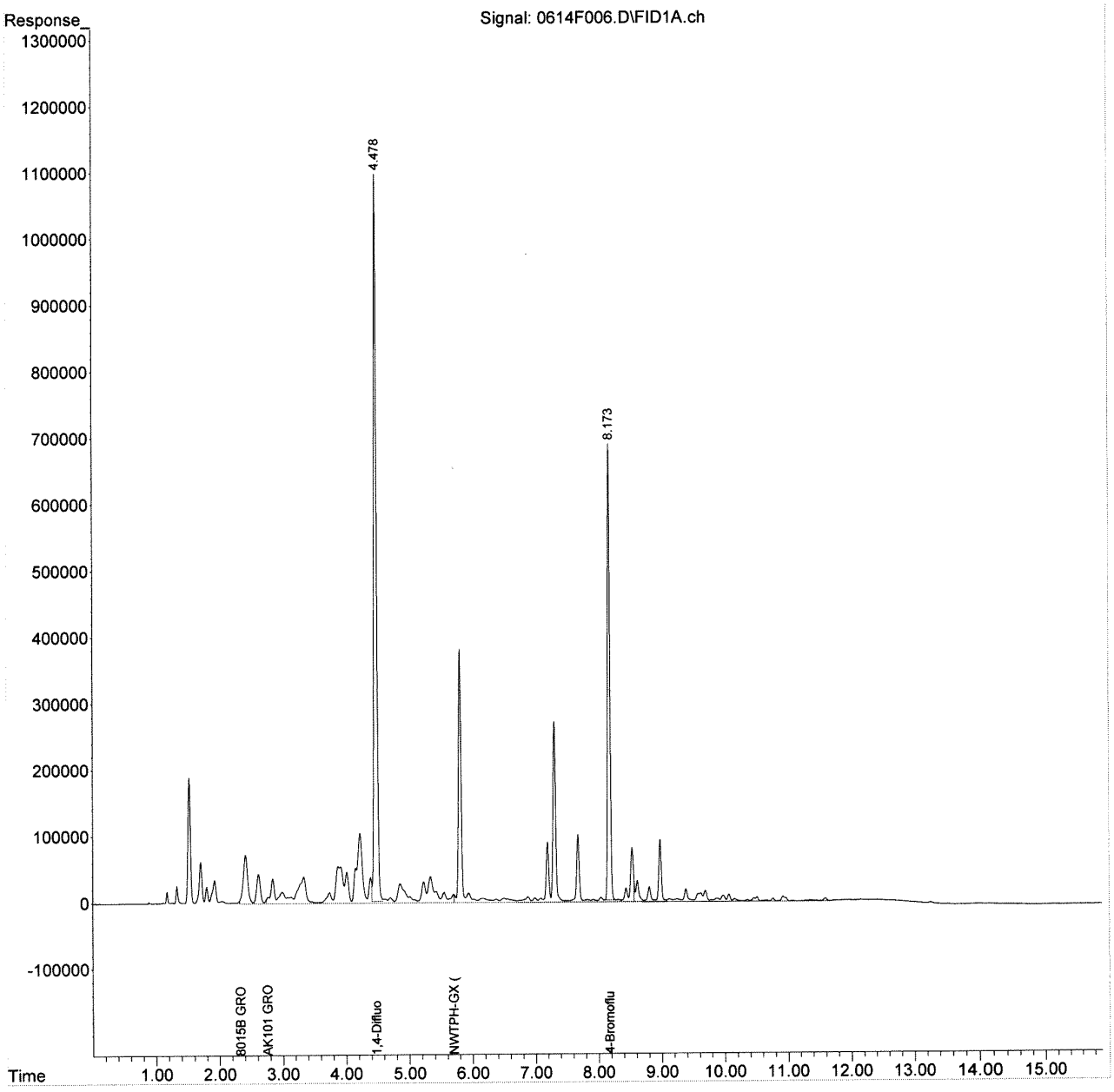
JUN 19 2018
KW 6-15-18

(+) = Expected Retention Time
061418GAS_GC39.M Thu Jun 14 15:04:31 2018 Page: 1

Data File : J:\GC39\DATA\061418\0614F006.D Vial: 6
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 11:32 am Operator: KW
Sample : ICAL 1 50/20 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:04:24 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



061418GAS_GC39.M Fri Jun 15 07:52:07 2018 Page: 2

019780

Data File : J:\GC39\DATA\061418\0614F007.D Vial: 7
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 11:58 am Operator: KW
Sample : ICAL 2 100/25 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:14 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	1,4-Difluorobenzene	4.481	3898048	25.271 ug/L
2) S	4-Bromofluorobenzene	8.174	2244346	24.863 ug/L
	Target Compounds			
3) H	AK101 GRO (C6-C10)	2.743	11321073	100.002 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.319	13175855	100.176 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	7787571	102.559 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

JUN 19 2018

KW 6.15.18

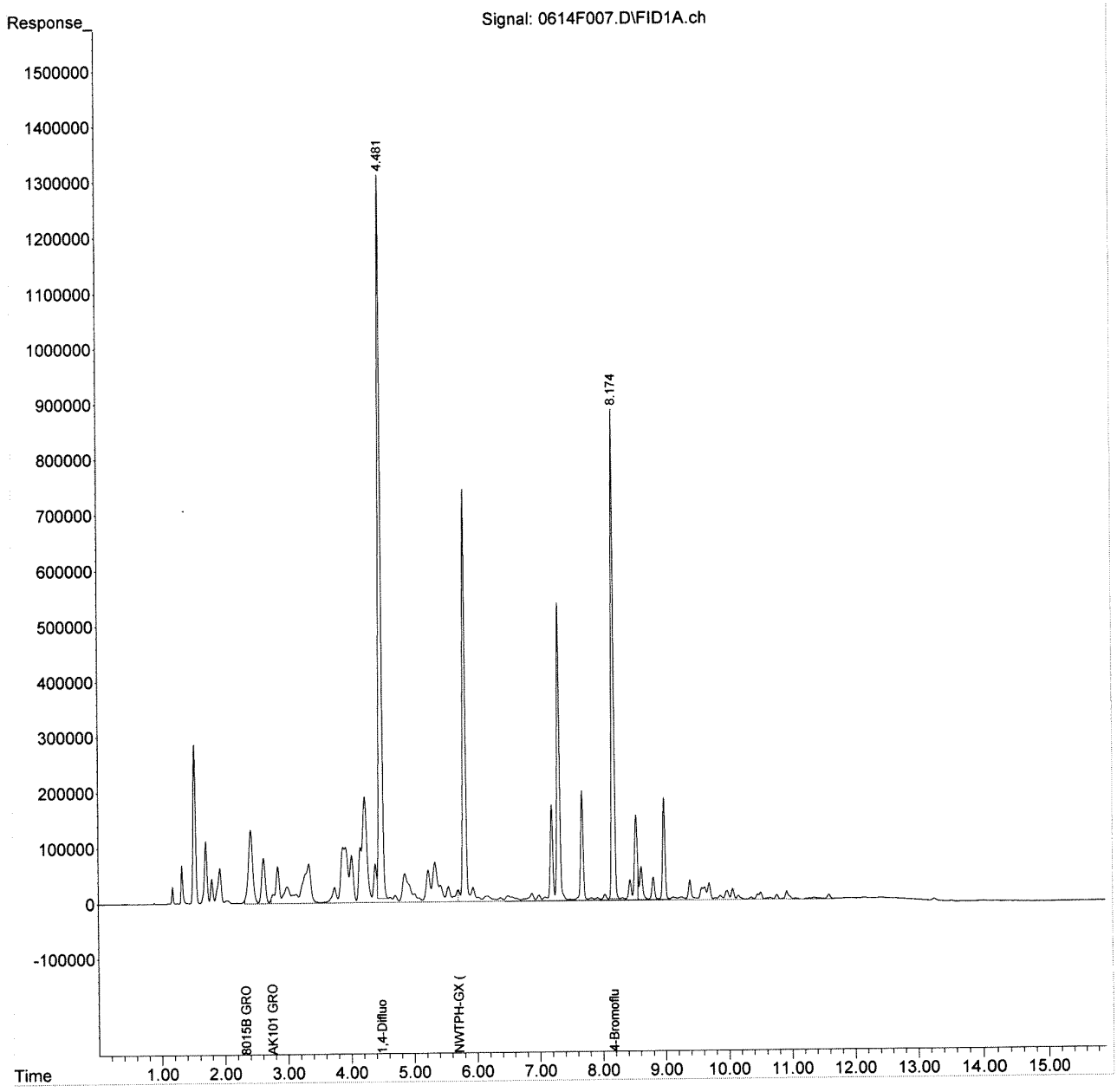
Data File : J:\GC39\DATA\061418\0614F007.D
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 11:58 am
Sample : ICAL 2 100/25
Misc :
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:14 2018
Quant Results File: 061418GAS_GC39.RES

Vial: 7

Operator: KW
Inst : GC39
Multiplr: 1.00

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Data File : J:\GC39\DATA\061418\0614F008.D Vial: 8
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 12:22 pm Operator: KW
Sample : ICAL 3 200/50 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:18 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.481	7842287	50.842 ug/L
2) S	4-Bromofluorobenzene	8.174	4389823	48.630 ug/L
Target Compounds				
3) H	AK101 GRO (C6-C10)	2.743	24113800	213.004 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.319	28030098	213.113 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	15916486	209.612 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

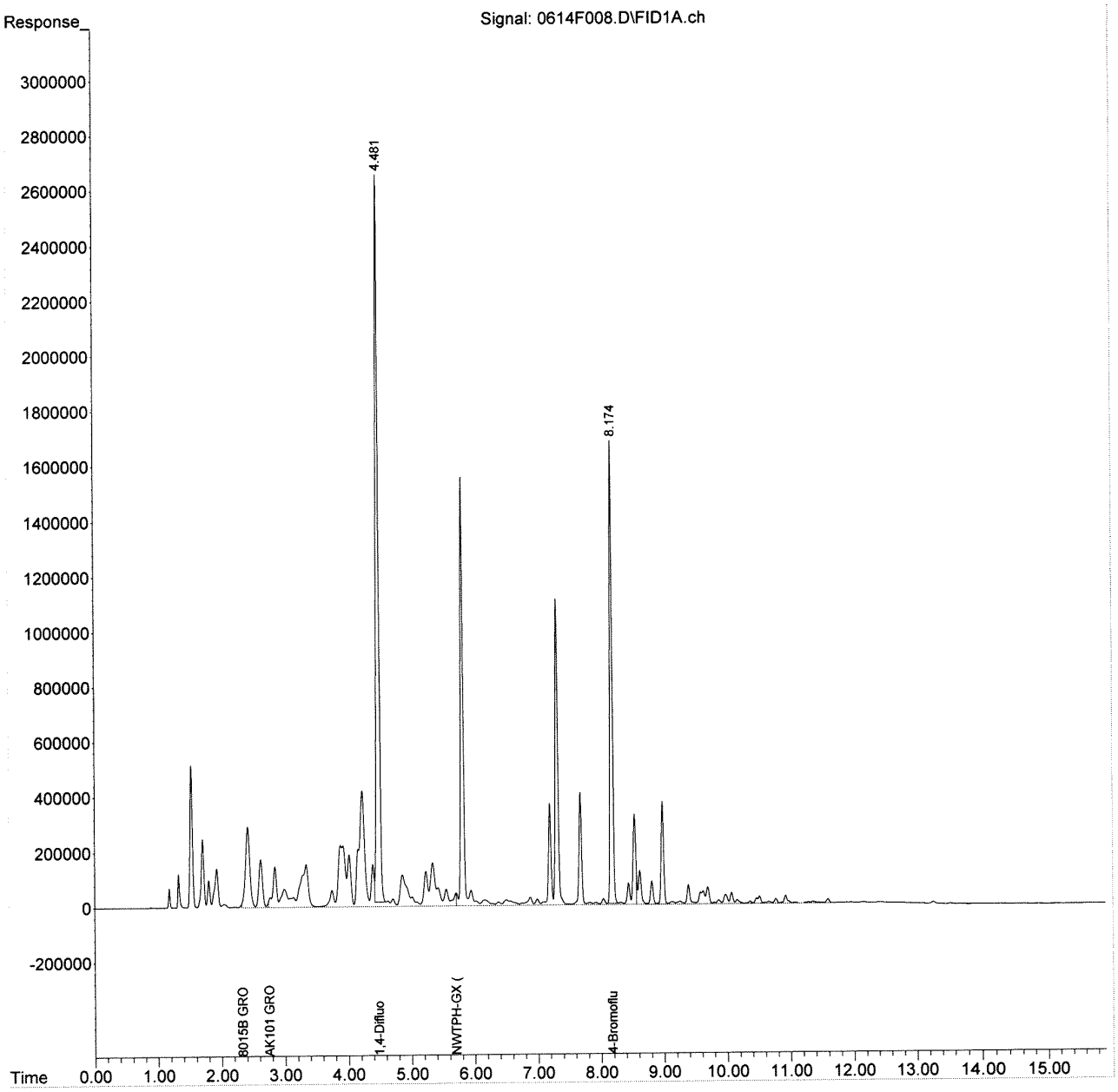
JUN 19 2018

KW 6.15.18

Data File : J:\GC39\DATA\061418\0614F008.D Vial: 8
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 12:22 pm Operator: KW
Sample : ICAL 3 200/50 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:18 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Data File : J:\GC39\DATA\061418\0614F009.D Vial: 9
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 12:46 pm Operator: KW
Sample : ICAL 4 500/100 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 18 15:35:14 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1)	S 1,4-Difluorobenzene	4.482	15424909	98.546 ug/L
2)	S 4-Bromofluorobenzene	8.175	9026967	101.209 ug/L
	Target Compounds			
3)	H AK101 GRO (C6-C10)	2.751	56538167	481.187 ug/L
4)	H 8015B GRO (2mp-1,2,4tmb)	2.327	65748104	482.512 ug/L
5)	H NWTPH-GX (Tol.-Naph.)	5.709	37939917	475.965 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

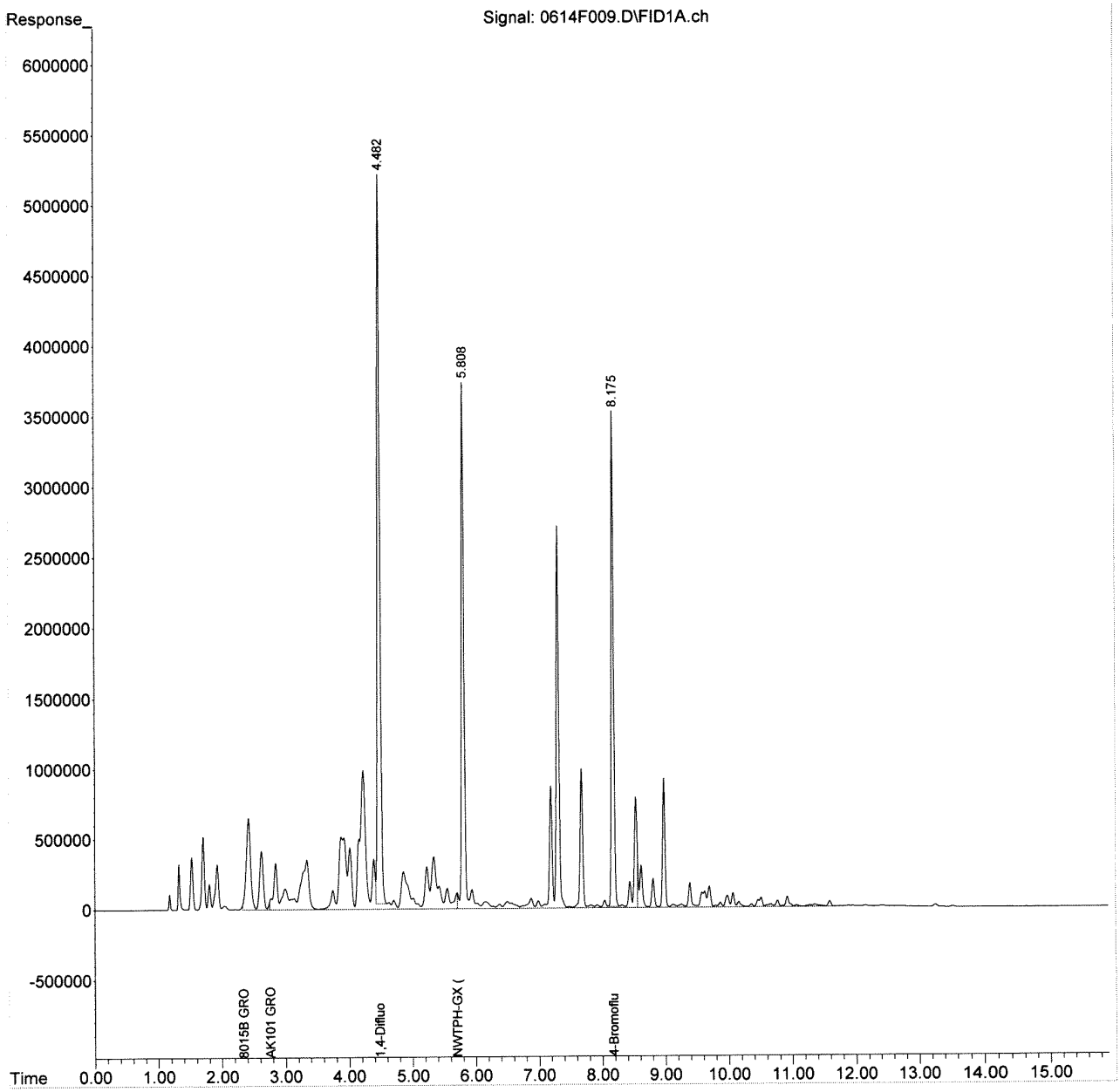
JUN 19 2018

KW 6/19/18

Data File : J:\GC39\DATA\061418\0614F009.D Vial: 9
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 12:46 pm Operator: KW
Sample : ICAL 4 500/100 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 18 15:35:14 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



061418GAS_GC39.M Tue Jun 19 09:26:17 2018 Page: 2

Data File : J:\GC39\DATA\061418\0614F010.D Vial: 10
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 1:10 pm Operator: KW
Sample : ICAL 5 1000/150 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:25 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	1,4-Difluorobenzene	4.484	22954655	148.815	ug/L
2) S	4-Bromofluorobenzene	8.176	13324671	147.610	ug/L
Target Compounds					
3) H	AK101 GRO (C6-C10)	2.743	115785403	1022.763	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.319	134758996	1024.574	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	77734868	1023.730	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

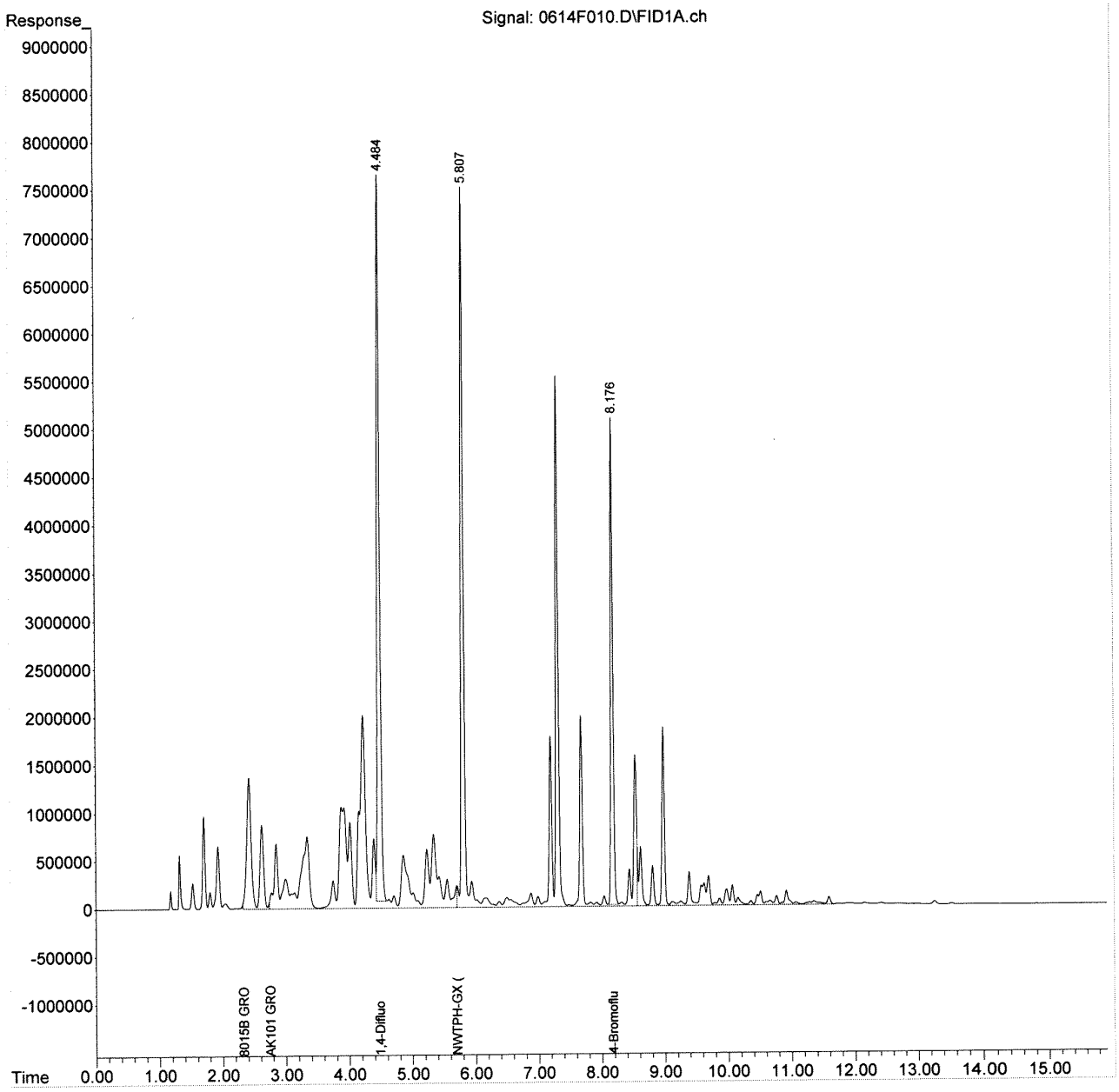
JUN 19 2018

KW 6-15-18

Data File : J:\GC39\DATA\061418\0614F010.D Vial: 10
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 1:10 pm Operator: KW
Sample : ICAL 5 1000/150 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:03:25 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Data File : J:\GC39\DATA\061418\0614F011.D Vial: 11
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 1:34 pm Operator: KW
Sample : ICAL 6 5000 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:08:34 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	1,4-Difluorobenzene	0.000	0	N.D.	ug/L d
2) S	4-Bromofluorobenzene	0.000	0	N.D.	ug/L d
	Target Compounds				
3) H	AK101 GRO (C6-C10)	2.743	583995742	5158.587	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.319	679253341	5164.372	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	395666291	5210.732	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

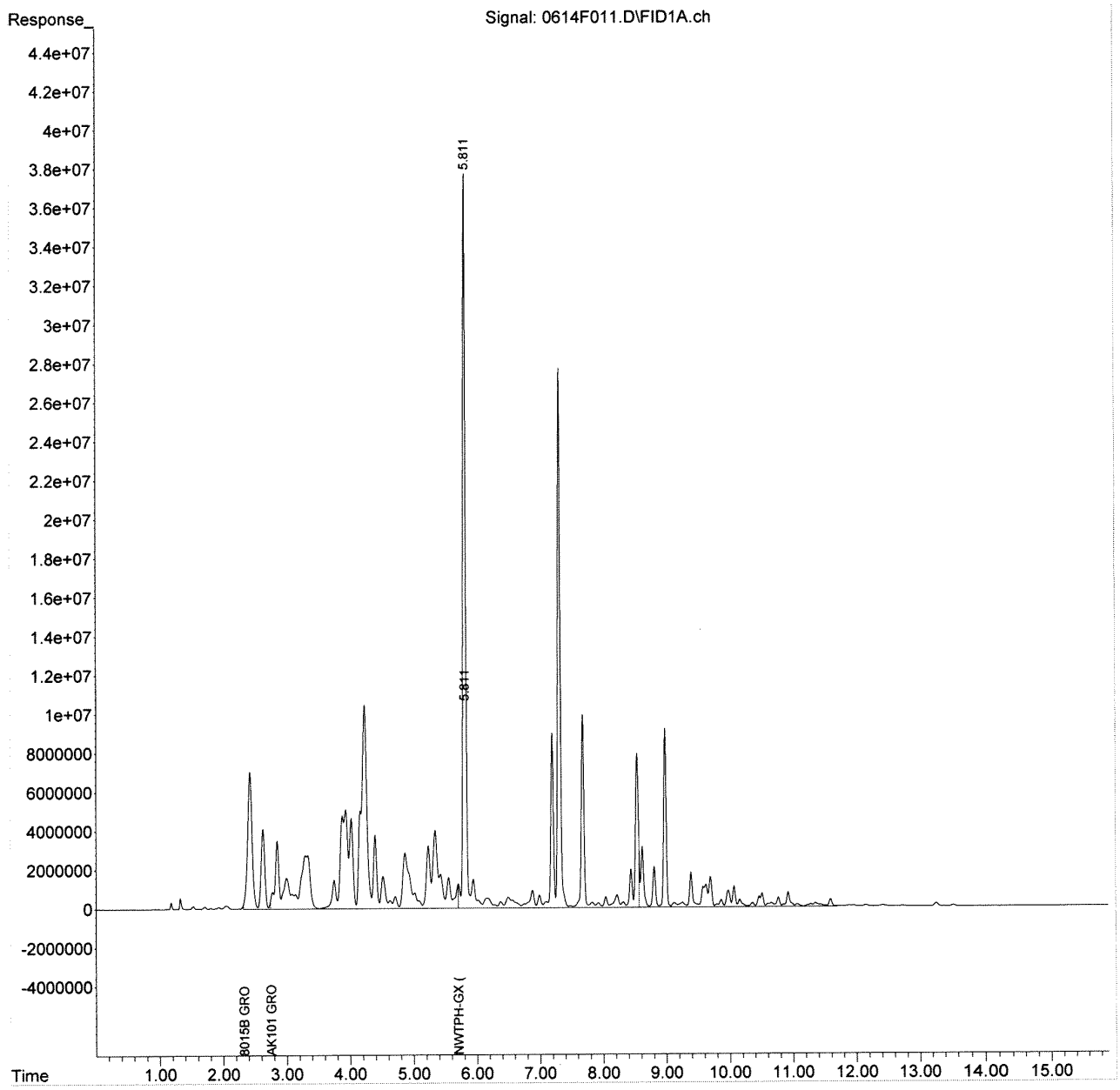
JUN 19 2018

KW 6.15.18

Data File : J:\GC39\DATA\061418\0614F011.D Vial: 11
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 1:34 pm Operator: KW
Sample : ICAL 6 5000 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:08:34 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Data File : J:\GC39\DATA\061418\0614F012.D Vial: 12
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 1:58 pm Operator: KW
Sample : ICAL 7 10000 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:09:14 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	1,4-Difluorobenzene	0.000	0	N.D.	ug/L d
2) S	4-Bromofluorobenzene	0.000	0	N.D.	ug/L d
Target Compounds					
3) H	AK101 GRO (C6-C10)	2.743	1176557506	10392.841	ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.319	1339609928	10185.072	ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	815639097	10741.569	ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

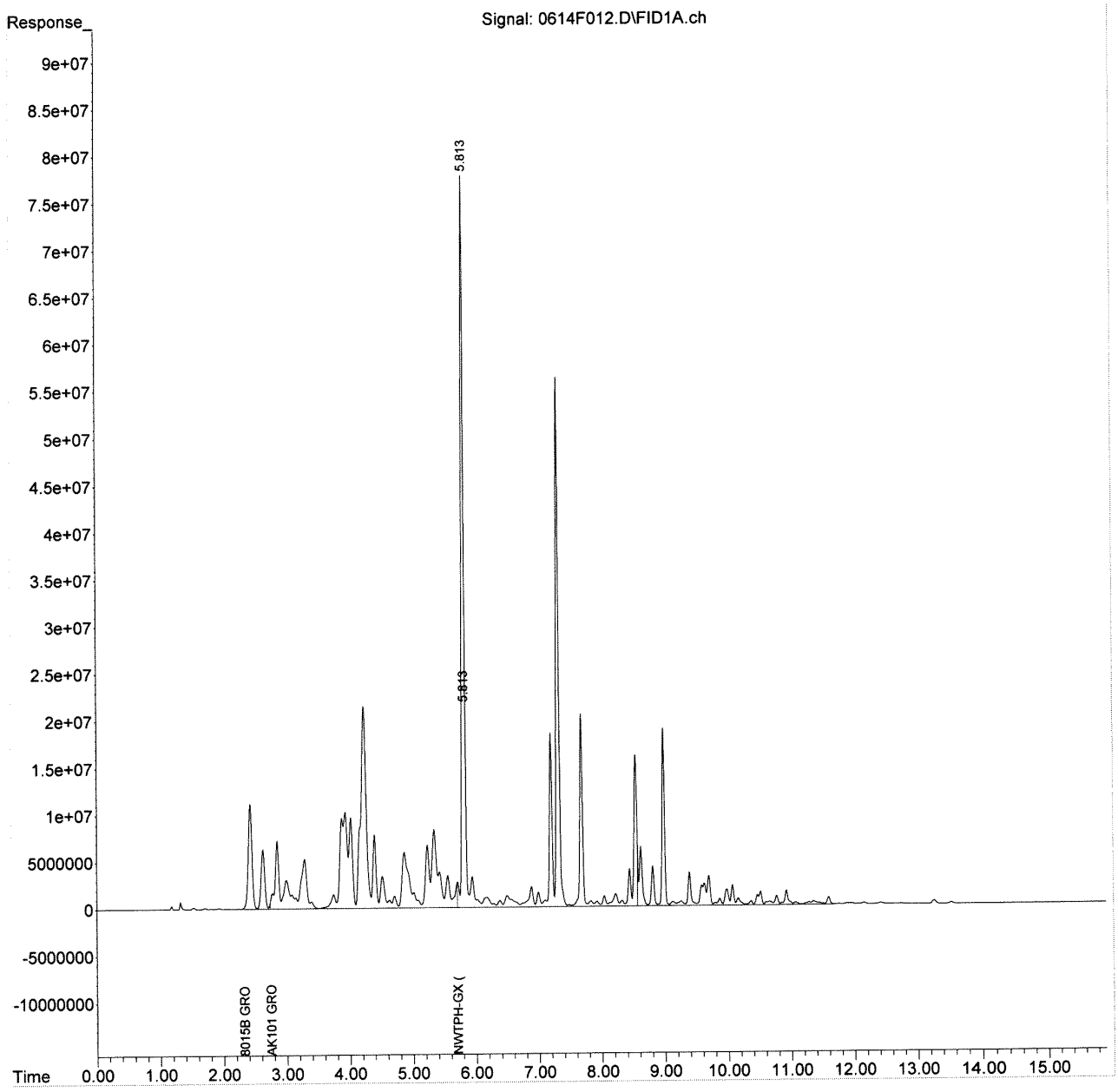
JUN 19 2018

KW 6-15-18

Data File : J:\GC39\DATA\061418\0614F012.D Vial: 12
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 1:58 pm Operator: KW
Sample : ICAL 7 10000 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:09:14 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:01:44 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Data File : J:\GC39\DATA\061418\0614F013.D Vial: 13
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 2:22 pm Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 19 09:28:35 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	1,4-Difluorobenzene	4.390	19890	0.127 ug/L
2) S	4-Bromofluorobenzene	8.214	60587	0.679 ug/L
	Target Compounds			
3) H	AK101 GRO (C6-C10)	2.751	4049034	34.461 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.327	4596485	33.733 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.709	3760966	47.182 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

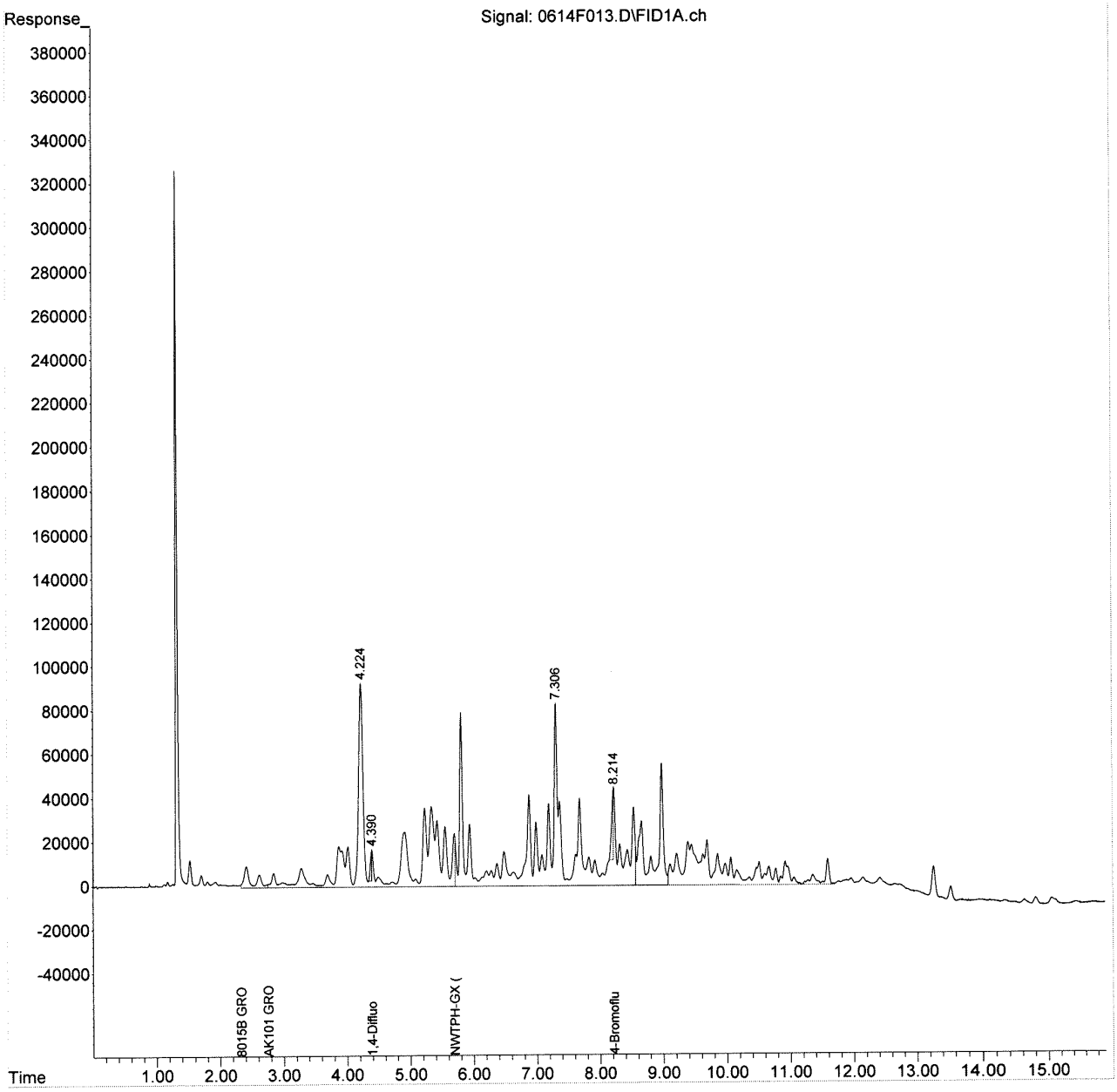
JUN 19 2018

KW 6-19-18

Data File : J:\GC39\DATA\061418\0614F013.D Vial: 13
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 2:22 pm Operator: KW
Sample : IB Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 19 09:28:35 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL 15764
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Data File : J:\GC39\DATA\061418\0614F014.D Vial: 14
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 2:46 pm Operator: KW
Sample : ICV 500/100 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:14:22 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm

	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	1,4-Difluorobenzene	4.483	15322994	97.895 ug/L
2) S	4-Bromofluorobenzene	8.176	8876290	99.520 ug/L
Target Compounds				
3) H	AK101 GRO (C6-C10)	2.743	63219901	538.054 ug/L
4) H	8015B GRO (2mp-1,2,4tmb)	2.319	71547224	525.070 ug/L
5) H	NWTPH-GX (Tol.-Naph.)	5.705	45539940	571.309 ug/L

(f)=RT Delta > 1/2 Window (m)=manual int.

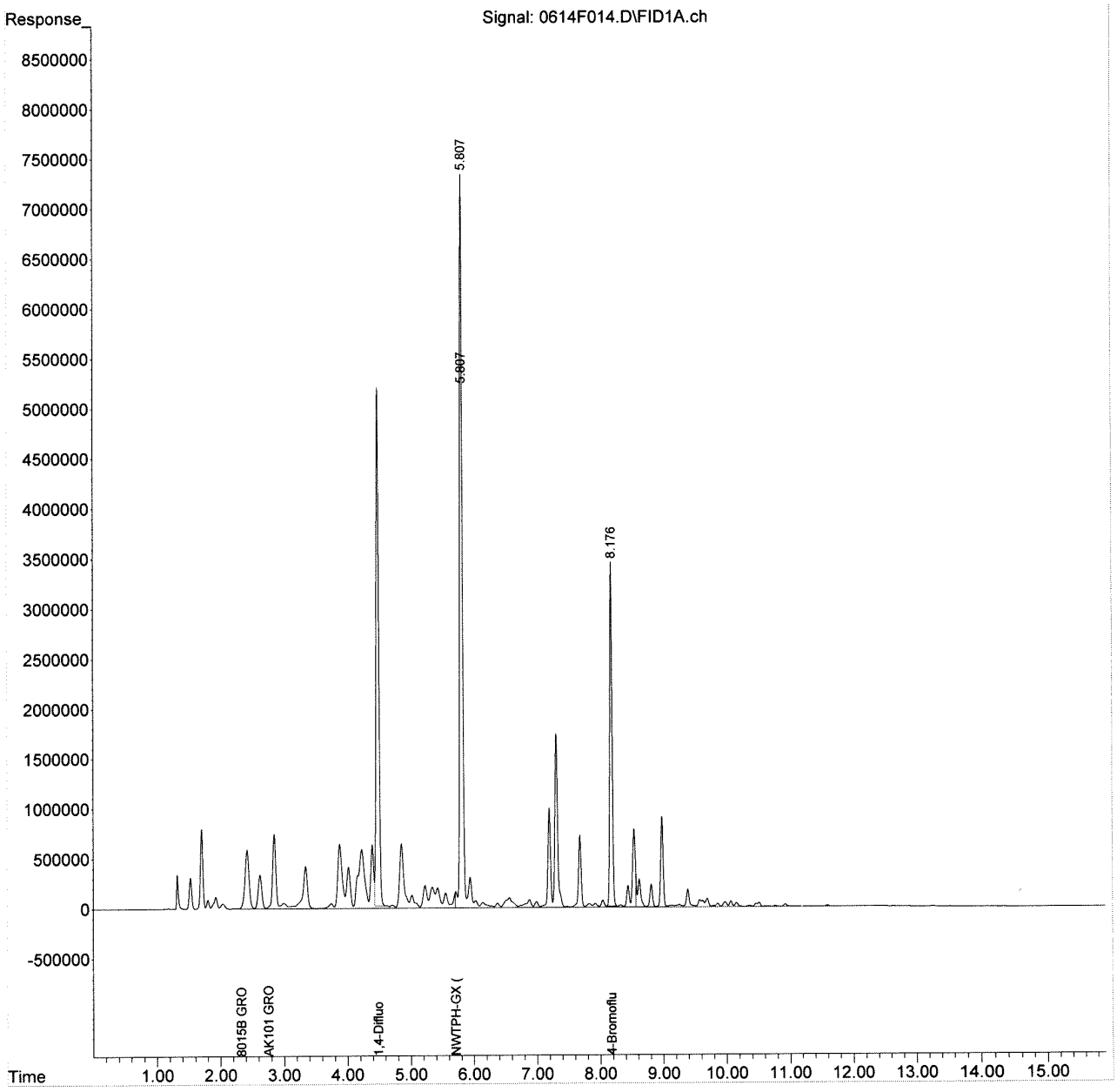
JUN 19 2018

KW 6-15-18

Data File : J:\GC39\DATA\061418\0614F014.D Vial: 14
Signal(s) : FID1A.ch
Acq On : 14 Jun 2018 2:46 pm Operator: KW
Sample : ICV 500/100 Inst : GC39
Misc : Multiplr: 1.00
Integration File: RTEINT.P
Quant Time: Jun 14 15:14:22 2018
Quant Results File: 061418GAS_GC39.RES

Quant Method : J:\GC39\Methods\061418GAS_GC39.M
Quant Title : GAS CAL
QLast Update : Thu Jun 14 15:11:51 2018
Response via : Initial Calibration
DataAcq Meth:8015C.M

Volume Inj. : 10mL
Signal Phase : DB-624
Signal Info : 0.53mm



Preparation Information

Group ID:	KWG1806088	**Prep Method:**	EPA 5030A/5030B	**Prep Date:**	11/14/18 09:00
Department:	VOA GCMS				

ıb Code	Client ID	Product	Matrix	Amt. Ext.	MeOH Vol.	MeOH Aliq.	Final Vol.	Solids
1811120-005	FW0001	8015C VOC GRO	WIPE	1.00Wipe	10.0ml	1000uL	50.0ml	
1811120-006	FB0001	8015C VOC GRO	WIPE	1.00Wipe	10.0ml	1000uL	50.0ml	
WG1806088-1	Matrix Spike	8015C VOC GRO	WIPE	1.00Wipe	10.0ml	1000uL	50.0ml	
WG1806088-2	Duplicate Matrix Spike	8015C VOC GRO	WIPE	1.00Wipe	10.0ml	1000uL	50.0ml	
WG1806088-3	Lab Control Sample	8015C VOC GRO	WIPE	1.00Wipe	10.0ml	1000uL	50.0ml	
WG1806088-4	Method Blank	8015C VOC GRO	WIPE	1.00Wipe	10.0ml	1000uL	50.0ml	

Lab Code	Parent Lab Code	Comments
KWG1806088-1	K1811120-006	
KWG1806088-2	K1811120-006	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1811120-005	1704287	HCV7-91K 12/2/1	10.0uL			
K1811120-006	1704286	HCV7-91K 12/2/1	10.0uL			
KWG1806088-1	1704288	HCV7-91K 12/2/1	10.0uL	HCV7-91L 11/16/	25.0uL	
KWG1806088-2	1704289	HCV7-91K 12/2/1	10.0uL	HCV7-91L 11/16/	25.0uL	
KWG1806088-3	1704290	HCV7-91K 12/2/1	100uL	HCV7-91H 11/30/	50.0uL	
KWG1806088-4	1704291	HCV7-91K 12/2/1	100uL			

Comments:

Started By: KWinston Assisted By: Training Yes No

Completed By: KWinston Assisted By: Yes No

Reviewed By: Date: DEC 0 4 2018 Storage:

Chain of Custody

Relinquished By: Date: Extracts Examined

Received By: Date: Yes No

Date: 11·14·18

By: KW

IS/SS Std. ID: HW791J xp:12-2-18

CCV Std ID: HW791L xp:11·16·18

MS/DMS/LCS/ICV Std ID: HW791L xp:11·16·18

Marker Std. ID: HW790N xp:NA HW791H 11·30·18

ALS Environmental
Injection Log
GC39 Agilent 7890B

LIMS ID 65154

ICAL Date: 15764 6·14·18

Second RV: DEC 0 4 2018

Stealth ID: 180598DP 180598LP 180598241 KW 11·15·18 180608DP WIPE

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	Marker	1114F002	8015C.M	10UL→5ML		
2	CCV	003		20x25UL→5ML		HW791K xp:12-2-18
3	IB	004				
4	MB	005		5DX 1ML→5ML		NR Low BFB Recovery
5	LCS	1114F006A and 006				
6	MB RR	1114F007A and 007				Use this run.
7	K1120-001MS	008	5.03g			Report both runs 1114B & 1114F0[illegible] 006 007
8	001DMS	009				
9	001	010				
10	002	011				Canceled
11	003	012				
12	005	013				WIPE
13	006MS	014				
14	006DMS	015				
15	006	016				
16	007	017				
17	CCV	018		20x25UL→5ML		HW791K xp:12-2-18
18	IB	019				
19	K1120-008	020				
20	CCV	021		20x25UL→5ML		HW791K xp:12-2-18
21	IB	022				
22						
23						
24						
25						
26						KW 11-4-18
27						

DEC 0 4 2018

R:\VOA\Injection Logs\INJLOG_GC39_Rev1

DEC 0 4 2018

019798

8015 GRO Smpl	Tare (grams)	Tare + Sample (grams)	Label (grams)	Vol. MeOH/H2O (mL)	Solids (percent)	Moisture (percent)	Mass SAMPLE (grams)	Final Vol (mL)	Mass (Excel rounded)	Final Vol (Excel rounded)	Smpl
K18111120-001	33.47	40.121	0.10	5	74.3	25.7	6.55	6.683607	6.55	6.7	K18111120-001
K18111120-007	33.64	40.845	0.10	5	74.9	25.1	7.11	6.783355	7.11	6.8	K18111120-007
K18111120-008	33.75	39.546	0.10	5	65.3	34.7	5.70	6.976512	5.7	7.0	K18111120-008

6.55 for 11/16/18
7.11 and 5.7 for 11/14/18

DEC 0 6 2018

Service Request No.: 1811120 Analysis: 8015C M

Analyst: KW Date: 11.14.18

Sample Number	Weight (g)	Label Weight (g)	Tare Weight (g)	Weight Sample + Vial (g)	Volume of P&T MeOH / Water	% Moisture	F.V. MeOH/Water (mL)	BFB CF.
K1120-01	5.030							
02	5.076							
03	5.052							
04	5.050							

Start Time: 12:30 Stop Time: 12:40 Reviewed by and date: DEC 04 2018

P&T MeOH Lot No (ML only).: DT532 Voa Vial Lot No (ML only) 10617-3305

Balance ID: BNC14

Comments: MB LCS 5UL HLW791K XP.12.2.18 10UL→5ML MeOH LCS HLW791 HXP11.30.18 Spike 5UL→10ML MeOH
HLW791K XP.11.16.18
MS/MSD Spike 25UL→5ML MS/MSD 10UL→5ML Samples 5UL 10UL→5ML
HLW791K XP.12.2.18 HLW791K XP 12.2.18

Final Volume MeOH and Water = mL of solvent + ((%Moisture x Sample Wt.(g)) / 100)

BFB CF (for shared jar AK101/8260) = ((25ug/ml x 25ml) /FV Meoh and H2O) + 10ppb (added by 8260 inst.) / 10

25ml MeOH= 19.79g Sample label, tape, barcode = 0.35g Barcode label and tape = 0.12g Barcode only = 0.1g

SoilPrepSheetRev3

Service Request No.: K1811120 Analysis: 8015 8260

Analyst: KW Date: _____

Sample Number	Weight (g)	Label Weight (g)	Tare Weight (g)	Weight Sample + Vial (g)	Volume of P&T (MeOH / Water	% Moisture	F.V. MeOH/Water (mL)	BFB CF.
K1120-07		0.1	33.64	40.545	5mL			
CS		〃	33.75	36.546	〃			

Start Time: 3:00 Stop Time: 3:05 Reviewed by and date: DEC 0 4 2018

P&T MeOH Lot No (ML only).: _____ Voa Vial Lot No (ML only) 03218-3

Balance ID: BAL14

Comments: MB LCS HLW91K XP:12.2.18 SURR 100UL→10mL MeOH LCS HLW91H XP:11.30.18 KW 11.14.18 SPIKE 100UL→10mL MeOH
MS/MSD HLW91L XP:11.16.18 SPKE 25UL→5mL MS/MSD 10UL→5mL SAMPLES 10UL→5mL
HLW91K XP:12.2.18 SURR HLW91K XP:12.2.18

Final Volume MeOH and Water = mL of solvent ÷ ((%Moisture x Sample Wt.(g)) / 100)

BFB CF (for shared jar AK101/8260) = ((25ug/ml x 25ml) /FV Meoh and H2O) + 10ppb (added by 8260 inst.) / 10

25ml MeOH= 19.79g Sample label, tape, barcode = 0.35g Barcode label and tape = 0.12g Barcode only = 0.1g

SoilPrepSheetRev3

Diesel and Residual Range Organics

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1st 11/21/18
2nd 11/21/18

Exception Report

Data File: J:\GC21\DATA\112018F\1120F134.D
Lab ID: K1811120-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 11/20/2018 19:09
Date Quantitated: 11/21/2018 07:24
Batch ID: KWG1806091
Analysis Method: 8015C
ListJoinID: LJ3073

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F134.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 19:09	**Quant Date:**	11/21/2018 07:24	**Vial:**	18
Run Type:	SMPL	**ListJoinID:**	LJ3073	**Dilution:**	1.0
Lab ID:	K1811120-001			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8015C DRO RRO	**Collect Date:**	11/08/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1806091	**Prep Lot:**	KWG1806057	**Report Group:**	K1811120
Analysis Method:	8015C	**Prep Method:**	EPA 3550B		
Prep Ref:	1704001	**Prep Date:**	11/19/2018		

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:	Diesel and Residual Range Organics	**Report List ID:**	LJ3073
		Method ID:	MJ234
MB Ref:	J:\GC21\DATA\112018F\1120F133.D	**Quant based on Report List**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
o-Terphenyl	5.46	0.00?	41270	23.19	93	51-126	OK	
n-Triacontane	7.60	0.00?	35549	25.04	100	50-150	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.78		89259	72.65	33	J	
Residual Range Organics (RRO)	6.64		180523	290.11	130	O	

Prep Amount:	30.036 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	74.3 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SMS 11/21/18
2nd TP 11/21/18

Data File : J:\GC21\DATA\112018F\1120F134.D Vial: 18
Acq On : 20 Nov 2018 7:09 pm Operator: SMS
Sample : k1811120-001 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 07:24:09 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.79	19446	21.340	ppm
Spiked Amount	50.000	Recovery	=	42.68%	
2) S	o-Terphenyl	5.46	41270	23.194	ppm
Spiked Amount	50.000	Recovery	=	46.39%	
3) S	n-Triacontane	7.60	35549	25.041	ppm
Spiked Amount	50.000	Recovery	=	50.08%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	96612	66.338	ppm
7) H	C10-C28in DRO [8015]	3.23	150929	101.357	ppm
8) H	C12-C25ex DRO [NWTPH]	3.78	89259	72.652	ppm
10) H	C25-C36in RRO [NWTPH]	6.64	180523	290.106	ppm
11) H	C25-C36in RRO [AK103]	6.74	180523	230.193	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

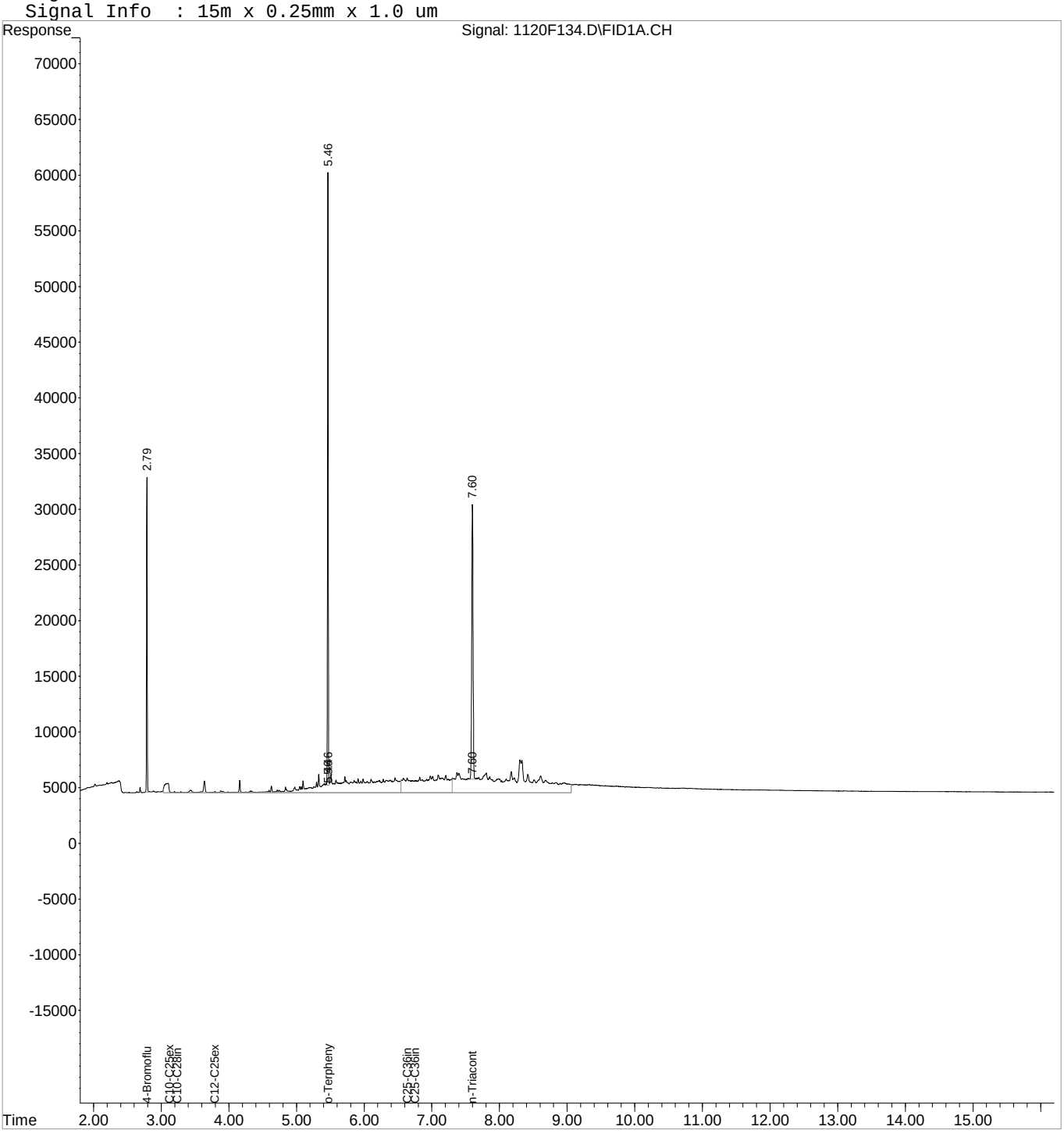
Quantitation Report (QT Reviewed)

1st 11/21/18
2nd 11/21/18

Data File : J:\GC21\DATA\112018F\1120F134.D Vial: 18
Acq On : 20 Nov 2018 7:09 pm Operator: SMS
Sample : k1811120-001 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 7:24 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 11/21/18
2nd 11/21/18

Exception Report

Data File: J:\GC21\DATA\112018F\1120F137.D
Lab ID: K1811120-002
RunType: SMPL
Matrix: SOIL

Date Acquired: 11/20/2018 20:14
Date Quantitated: 11/21/2018 07:24
Batch ID: KWG1806091
Analysis Method: 8015C
ListJoinID: LJ3073

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F137.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 20:14	**Quant Date:**	11/21/2018 07:24	**Vial:**	21
Run Type:	SMPL	**ListJoinID:**	LJ3073	**Dilution:**	1.0
Lab ID:	K1811120-002			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8015C DRO RRO	**Collect Date:**	11/05/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1806091	**Prep Lot:**	KWG1806057	**Report Group:**	K1811120
Analysis Method:	8015C	**Prep Method:**	EPA 3550B		
Prep Ref:	1704002	**Prep Date:**	11/19/2018		

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:	Diesel and Residual Range Organics	**Report List ID:**	LJ3073
		Method ID:	MJ234
MB Ref:	J:\GC21\DATA\112018F\1120F133.D	**Quant based on Report List**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
o-Terphenyl	5.46	0.00?	45115	25.36	101	51-126	OK	
n-Triacontane	7.60	0.00?	38554	27.16	109	50-150	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.78		476911	388.18	340	Y	
Residual Range Organics (RRO)	6.64		364738	586.15	510	O	

Prep Amount:	15.228 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	74.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 11/21/18
2nd TP 11/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\112018F\1120F137.D Vial: 21
Acq On : 20 Nov 2018 8:14 pm Operator: SMS
Sample : k1811120-002 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 07:24:12 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	4-Bromofluorobenzene	2.79	21592	23.695 ppm
Spiked Amount	50.000	Recovery	=	47.39%
2) S	o-Terphenyl	5.46	45115	25.355 ppm
Spiked Amount	50.000	Recovery	=	50.71%
3) S	n-Triacontane	7.60	38554	27.157 ppm
Spiked Amount	50.000	Recovery	=	54.31%
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.13	495510	340.241 ppm
7) H	C10-C28in DRO [8015]	3.23	622319	417.923 ppm
8) H	C12-C25ex DRO [NWTPH]	3.78	476911	388.180 ppm
10) H	C25-C36in RRO [NWTPH]	6.64	364738	586.146 ppm
11) H	C25-C36in RRO [AK103]	6.74	364738	465.094 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

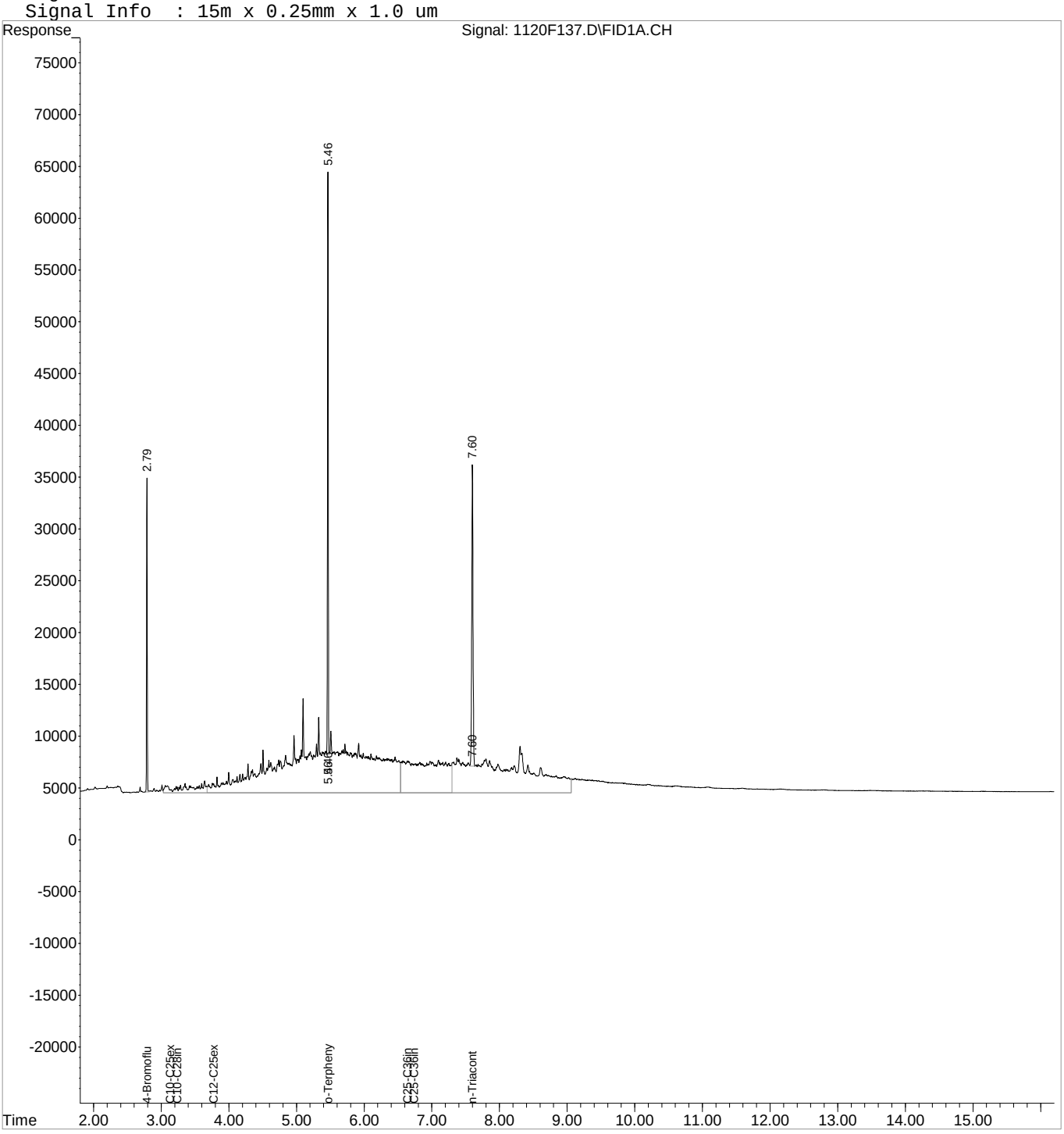
Quantitation Report (QT Reviewed)

1st SMS 11/21/18
2nd TP 11/21/18

Data File : J:\GC21\DATA\112018F\1120F137.D Vial: 21
Acq On : 20 Nov 2018 8:14 pm Operator: SMS
Sample : k1811120-002 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 7:24 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 11/21/18
2nd 11/21/18

Exception Report

Data File: J:\GC21\DATA\112018F\1120F138.D
Lab ID: K1811120-003
RunType: SMPL
Matrix: SOIL

Date Acquired: 11/20/2018 20:36
Date Quantitated: 11/21/2018 07:24
Batch ID: KWG1806091
Analysis Method: 8015C
ListJoinID: LJ3073

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: _____

Secondary Review: _____

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F138.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 20:36	**Quant Date:**	11/21/2018 07:24	**Vial:**	22
Run Type:	SMPL	**ListJoinID:**	LJ3073	**Dilution:**	2.0
Lab ID:	K1811120-003			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8015C DRO RRO	**Collect Date:**	11/05/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1806091	**Prep Lot:**	KWG1806057	**Report Group:**	K1811120
Analysis Method:	8015C	**Prep Method:**	EPA 3550B		
Prep Ref:	1704003	**Prep Date:**	11/19/2018		

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:	Diesel and Residual Range Organics	**Report List ID:**	LJ3073
		Method ID:	MJ234
MB Ref:	J:\GC21\DATA\112018F\1120F133.D	**Quant based on Report List**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
o-Terphenyl	5.46	0.00?	20010	11.25	90	51-126	OK	
n-Triacontane	7.60	0.00?	17865	12.58	101	50-150	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.78		520365	423.55	430	DY	
Residual Range Organics (RRO)	6.64		368546	592.27	600	DO	

Prep Amount:	30.024 g	**Dilution:**	2.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	65.3 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 11/21/18
2nd TP 11/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\112018F\1120F138.D Vial: 22
Acq On : 20 Nov 2018 8:36 pm Operator: SMS
Sample : k1811120-003 2x Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 07:24:13 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.79	9328	10.237	ppm
Spiked Amount	50.000	Recovery	=	20.47%	
2) S	o-Terphenyl	5.46	20010	11.246	ppm
Spiked Amount	50.000	Recovery	=	22.49%	
3) S	n-Triacontane	7.60	17865	12.584	ppm
Spiked Amount	50.000	Recovery	=	25.17%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	549182	377.095	ppm
7) H	C10-C28in DRO [8015]	3.23	678924	455.936	ppm
8) H	C12-C25ex DRO [NWTPH]	3.78	520365	423.549	ppm
10) H	C25-C36in RRO [NWTPH]	6.64	368546	592.265	ppm
11) H	C25-C36in RRO [AK103]	6.74	368546	469.950	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

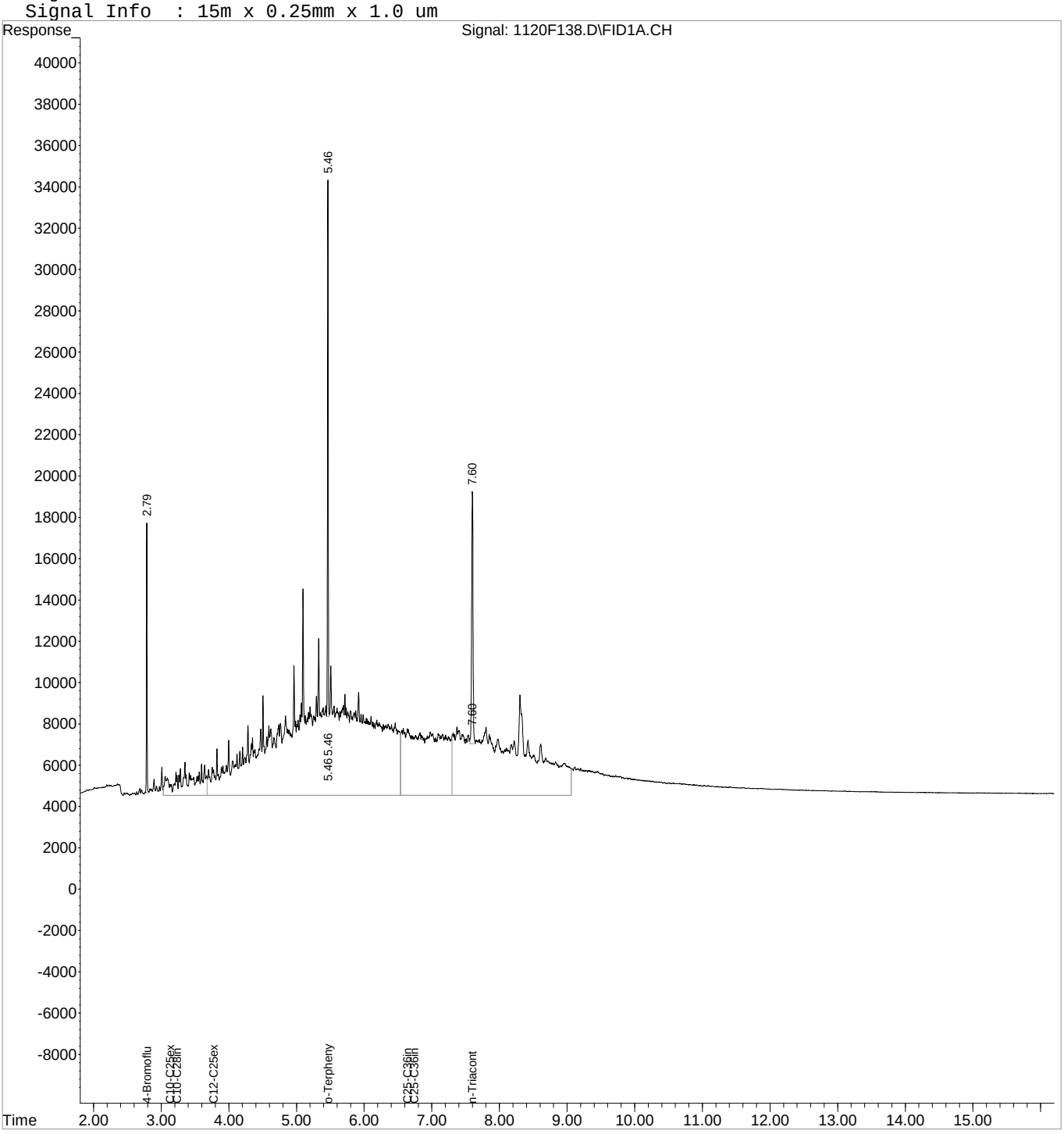
Quantitation Report (QT Reviewed)

1st 11/21/18
2nd 11/21/18

Data File : J:\GC21\DATA\112018F\1120F138.D Vial: 22
Acq On : 20 Nov 2018 8:36 pm Operator: SMS
Sample : k1811120-003 2x Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 7:24 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 11/21/18
2nd 11/21/18

Exception Report

Data File: J:\GC21\DATA\112018F\1120F133.D
Lab ID: KWG1806057-4
RunType: MB
Matrix: SOIL

Date Acquired: 11/20/2018 18:48
Date Quantitated: 11/21/2018 07:24
Batch ID: KWG1806091
Analysis Method: 8015C
MethodJoinID: MJ234

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F133.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 18:48	**Quant Date:**	11/21/2018 07:24	**Vial:**	17
Run Type:	MB	**MethodJoinID:**	MJ234	**Dilution:**	1.0
Lab ID:	KWG1806057-4			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	11/19/2018

Analysis Lot:	KWG1806091	**Prep Lot:**	KWG1806057	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 3550B		
Prep Ref:	1704008	**Prep Date:**	11/19/2018		

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ234
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	2.79	0.00?	22254	24.42	98	50-150	OK	
o-Terphenyl	5.46	0.00?	47055	26.45	106	51-126	OK	
n-Triacontane	7.60	0.00?	39780	28.02	112	50-150	OK	

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		17123				
C10 - C25 DRO	3.13		15460	10.62	3.50	J	
C10 - C28 DRO	3.23		18412	12.37	4.07	J	
Diesel Range Organics (DRO)	3.78		8776	7.14	2.35	J	
Residual Range Organics (RRO)	6.64		11057	17.77	5.85	J	
C25 - C44 RRO	6.90		20845				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 11/21/18
2nd TP 11/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\112018F\1120F133.D Vial: 17
Acq On : 20 Nov 2018 6:48 pm Operator: SMS
Sample : kwg1806057-4mb Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 07:24:08 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.79	22254	24.421	ppm
Spiked Amount	50.000	Recovery	=	48.84%	
2) S	o-Terphenyl	5.46	47055	26.446	ppm
Spiked Amount	50.000	Recovery	=	52.89%	
3) S	n-Triacontane	7.60	39780	28.021	ppm
Spiked Amount	50.000	Recovery	=	56.04%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	15460	10.616	ppm
7) H	C10-C28in DRO [8015]	3.23	18412	12.365	ppm
8) H	C12-C25ex DRO [NWTPH]	3.78	8776	7.143	ppm
10) H	C25-C36in RRO [NWTPH]	6.64	11057	17.769	ppm
11) H	C25-C36in RRO [AK103]	6.74	11057	14.099	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

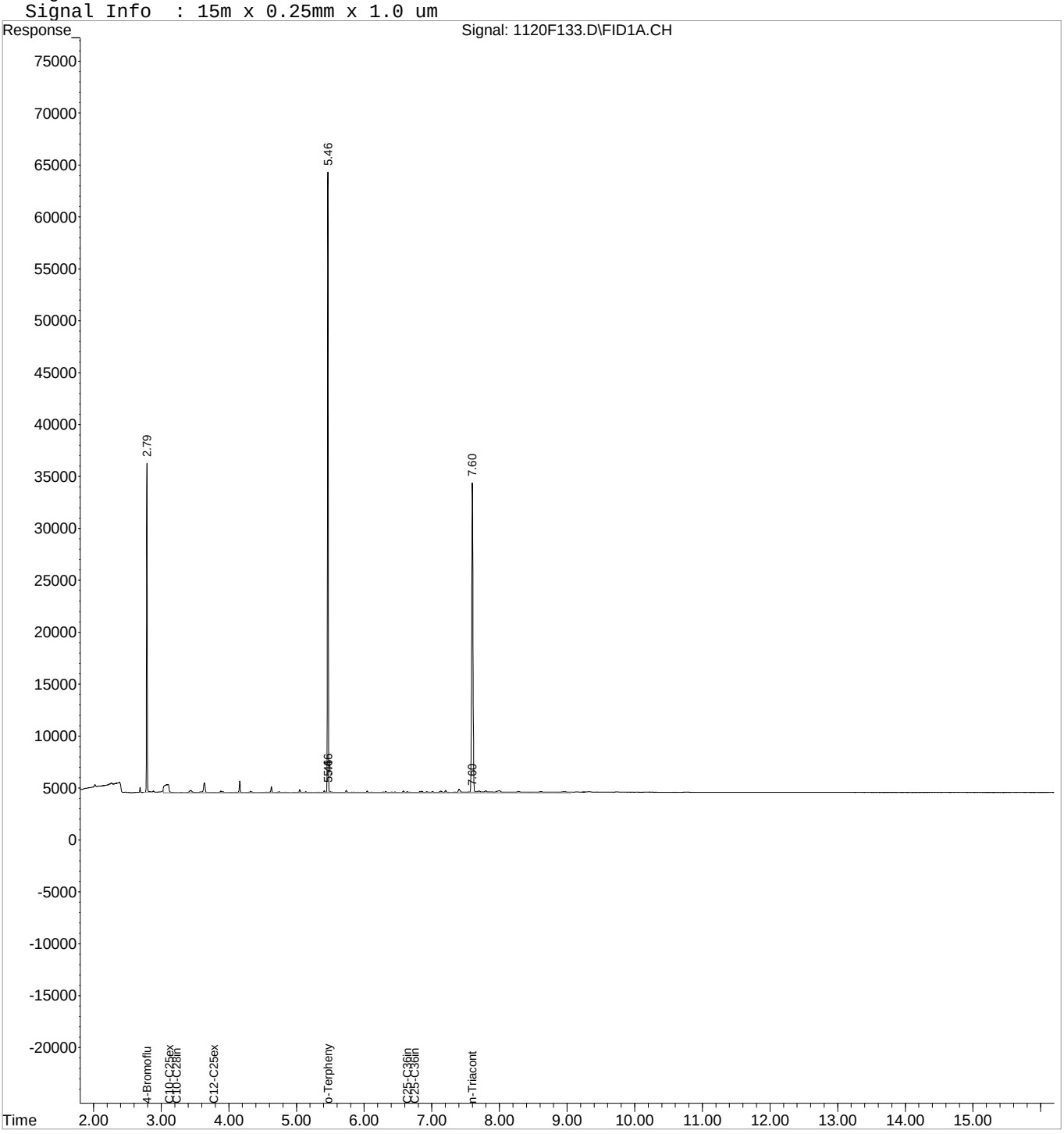
Quantitation Report (QT Reviewed)

1st 11/21/18
2nd 11/21/18

Data File : J:\GC21\DATA\112018F\1120F133.D Vial: 17
Acq On : 20 Nov 2018 6:48 pm Operator: SMS
Sample : kwg1806057-4mb Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 7:24 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 11/21/18
2nd 11/21/18

Exception Report

Data File: J:\GC21\DATA\112018F\1120F135.D
Lab ID: KWG1806057-1 -- K1811120-001MS
RunType: MS
Matrix: SOIL

Date Acquired: 11/20/2018 19:31
Date Quantitated: 11/21/2018 07:24
Batch ID: KWG1806091
Analysis Method: 8015C
MethodJoinID: MJ234

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F135.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 19:31	**Quant Date:**	11/21/2018 07:24	**Vial:**	19
Run Type:	MS	**MethodJoinID:**	MJ234	**Dilution:**	1.0
Lab ID:	KWG1806057-1 -- K1811120-001MS			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	11/19/2018

Analysis Lot:	KWG1806091	**Prep Lot:**	KWG1806057	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 3550B		
Prep Ref:	1704005	**Prep Date:**	11/19/2018		

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ234
MB Ref:	J:\GC21\DATA\112018F\1120F133.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	2.79	0.00?	23752	26.07	104	50-150	OK	
o-Terphenyl	5.46	0.00?	48457	27.23	109	51-126	OK	
n-Triacontane	7.60	0.00?	39544	27.86	111	50-150	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		1724932				
C10 - C25 DRO	3.13		1670845	1,147	514		
C10 - C28 DRO	3.23		1826529	1,227	550		
Diesel Range Organics (DRO)	3.78		1463744	1,191	534		
Residual Range Organics (RRO)	6.64		573259	921.25	413		
C25 - C44 RRO	6.90		905209				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 11/21/18
2nd TP 11/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\112018F\1120F135.D Vial: 19
Acq On : 20 Nov 2018 7:31 pm Operator: SMS
Sample : k1811120-001ms Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 07:24:10 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.79	23752	26.065	ppm
Spiked Amount	50.000	Recovery	=	52.13%	
2) S	o-Terphenyl	5.46	48457	27.233	ppm
Spiked Amount	50.000	Recovery	=	54.47%	
3) S	n-Triacontane	7.60	39544	27.855	ppm
Spiked Amount	50.000	Recovery	=	55.71%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	1670845	1147.283	ppm
7) H	C10-C28in DRO [8015]	3.23	1826529	1226.619	ppm
8) H	C12-C25ex DRO [NWTPH]	3.78	1463744	1191.409	ppm
10) H	C25-C36in RRO [NWTPH]	6.64	573259	921.245	ppm
11) H	C25-C36in RRO [AK103]	6.74	573259	730.988	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

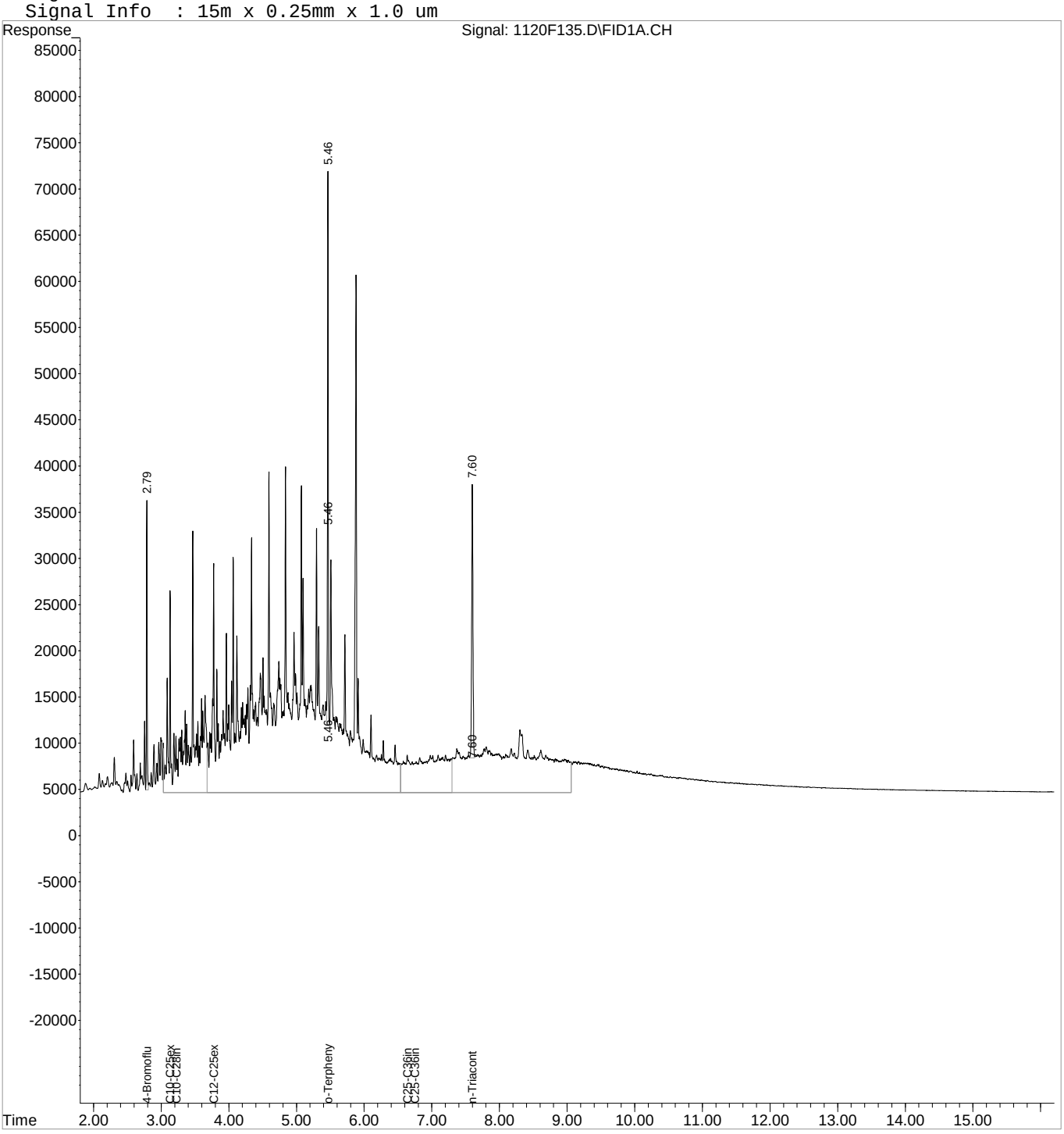
Quantitation Report (QT Reviewed)

1st 11/21/18
2nd 11/21/18

Data File : J:\GC21\DATA\112018F\1120F135.D Vial: 19
Acq On : 20 Nov 2018 7:31 pm Operator: SMS
Sample : k1811120-001ms Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 7:24 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st DMS 11/21/18
2nd TP 11/21/18

Exception Report

Data File: J:\GC21\DATA\112018F\1120F136.D
Lab ID: KWG1806057-2 -- K1811120-001DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 11/20/2018 19:53
Date Quantitated: 11/21/2018 07:24
Batch ID: KWG1806091
Analysis Method: 8015C
MethodJoinID: MJ234

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st DMS 11/21/18
2nd TP 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F136.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 19:53	**Quant Date:**	11/21/2018 07:24	**Vial:**	20
Run Type:	DMS	**MethodJoinID:**	MJ234	**Dilution:**	1.0
Lab ID:	KWG1806057-2 -- K1811120-001DMS			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	11/19/2018

Analysis Lot:	KWG1806091	**Prep Lot:**	KWG1806057	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 3550B		
Prep Ref:	1704006	**Prep Date:**	11/19/2018		

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ234
MB Ref:	J:\GC21\DATA\112018F\1120F133.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	2.79	0.00?	18608	20.42	82	50-150	OK	
o-Terphenyl	5.46	0.00?	37478	21.06	84	51-126	OK	
n-Triacontane	7.60	0.00?	31342	22.08	88	50-150	OK	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		1383675				
C10 - C25 DRO	3.13		1340516	920.46	412		
C10 - C28 DRO	3.23		1452650	975.54	437		
Diesel Range Organics (DRO)	3.78		1172776	954.58	428		
Residual Range Organics (RRO)	6.64		425489	683.77	306		
C25 - C44 RRO	6.90		694597				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 11/21/18
2nd 11/21/18

Data File : J:\GC21\DATA\112018F\1120F136.D Vial: 20
Acq On : 20 Nov 2018 7:53 pm Operator: SMS
Sample : k1811120-001dms Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 07:24:11 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	4-Bromofluorobenzene	2.79	18608	20.420 ppm
Spiked Amount	50.000	Recovery	=	40.84%
2) S	o-Terphenyl	5.46	37478	21.063 ppm
Spiked Amount	50.000	Recovery	=	42.13%
3) S	n-Triacontane	7.60	31342	22.077 ppm
Spiked Amount	50.000	Recovery	=	44.15%
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.13	1340516	920.463 ppm
7) H	C10-C28in DRO [8015]	3.23	1452650	975.538 ppm
8) H	C12-C25ex DRO [NWTPH]	3.78	1172776	954.577 ppm
10) H	C25-C36in RRO [NWTPH]	6.64	425489	683.774 ppm
11) H	C25-C36in RRO [AK103]	6.74	425489	542.560 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

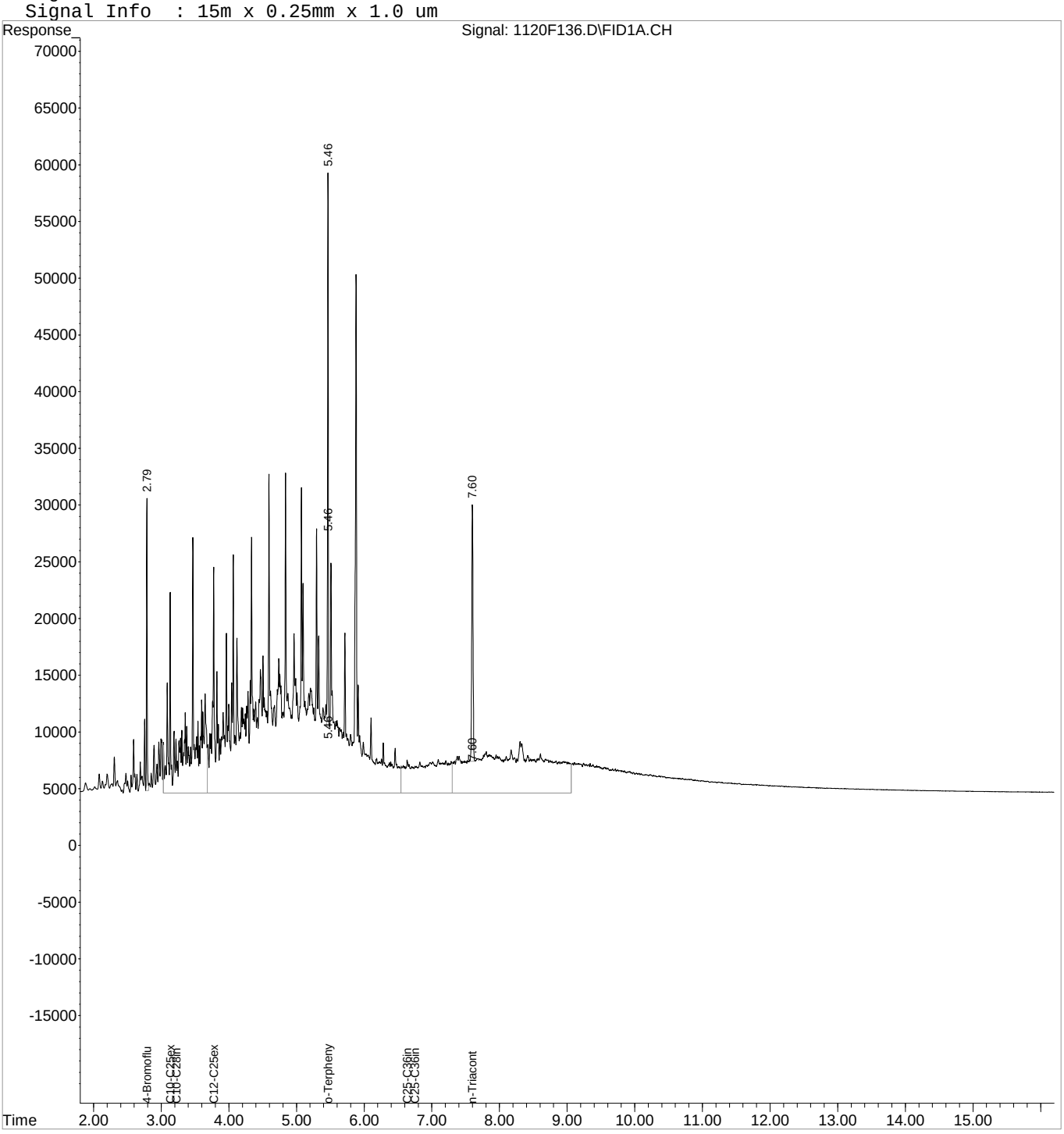
Quantitation Report (QT Reviewed)

1st SMS 11/21/18
2nd TP 11/21/18

Data File : J:\GC21\DATA\112018F\1120F136.D Vial: 20
Acq On : 20 Nov 2018 7:53 pm Operator: SMS
Sample : k1811120-001dms Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 7:24 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 11/21/18
2nd 11/21/18

Exception Report

Data File: J:\GC21\DATA\112018F\1120F132.D
Lab ID: KWG1806057-3
RunType: LCS
Matrix: SOIL

Date Acquired: 11/20/2018 18:26
Date Quantitated: 11/21/2018 07:24
Batch ID: KWG1806091
Analysis Method: 8015C
MethodJoinID: MJ234

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F132.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 18:26	**Quant Date:**	11/21/2018 07:24	**Vial:**	16
Run Type:	LCS	**MethodJoinID:**	MJ234	**Dilution:**	1.0
Lab ID:	KWG1806057-3			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	11/19/2018

Analysis Lot:	KWG1806091	**Prep Lot:**	KWG1806057	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 3550B		
Prep Ref:	1704007	**Prep Date:**	11/19/2018		

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ234
MB Ref:	J:\GC21\DATA\112018F\1120F133.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	2.79	0.00?	22539	24.73	99	50-150	OK	
o-Terphenyl	5.46	0.00?	46279	26.01	104	51-126	OK	
n-Triacontane	7.60	0.00?	38014	26.78	107	50-150	OK	

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		1541465				
C10 - C25 DRO	3.13		1495125	1,027	342		
C10 - C28 DRO	3.23		1577818	1,060	353		
Diesel Range Organics (DRO)	3.78		1295865	1,055	352		
Residual Range Organics (RRO)	6.64		324052	520.76	174		
C25 - C44 RRO	6.90		523774				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SMS 11/21/18
2nd TP 11/21/18

Data File : J:\GC21\DATA\112018F\1120F132.D Vial: 16
Acq On : 20 Nov 2018 6:26 pm Operator: SMS
Sample : kwg1806057-3lcs Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 07:24:07 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.79	22539	24.734	ppm
Spiked Amount	50.000	Recovery	=	49.47%	
2) S	o-Terphenyl	5.46	46279	26.009	ppm
Spiked Amount	50.000	Recovery	=	52.02%	
3) S	n-Triacontane	7.60	38014	26.777	ppm
Spiked Amount	50.000	Recovery	=	53.55%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	1495125	1026.625	ppm
7) H	C10-C28in DRO [8015]	3.23	1577818	1059.595	ppm
8) H	C12-C25ex DRO [NWTPH]	3.78	1295865	1054.765	ppm
10) H	C25-C36in RRO [NWTPH]	6.64	324052	520.762	ppm
11) H	C25-C36in RRO [AK103]	6.74	324052	413.213	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

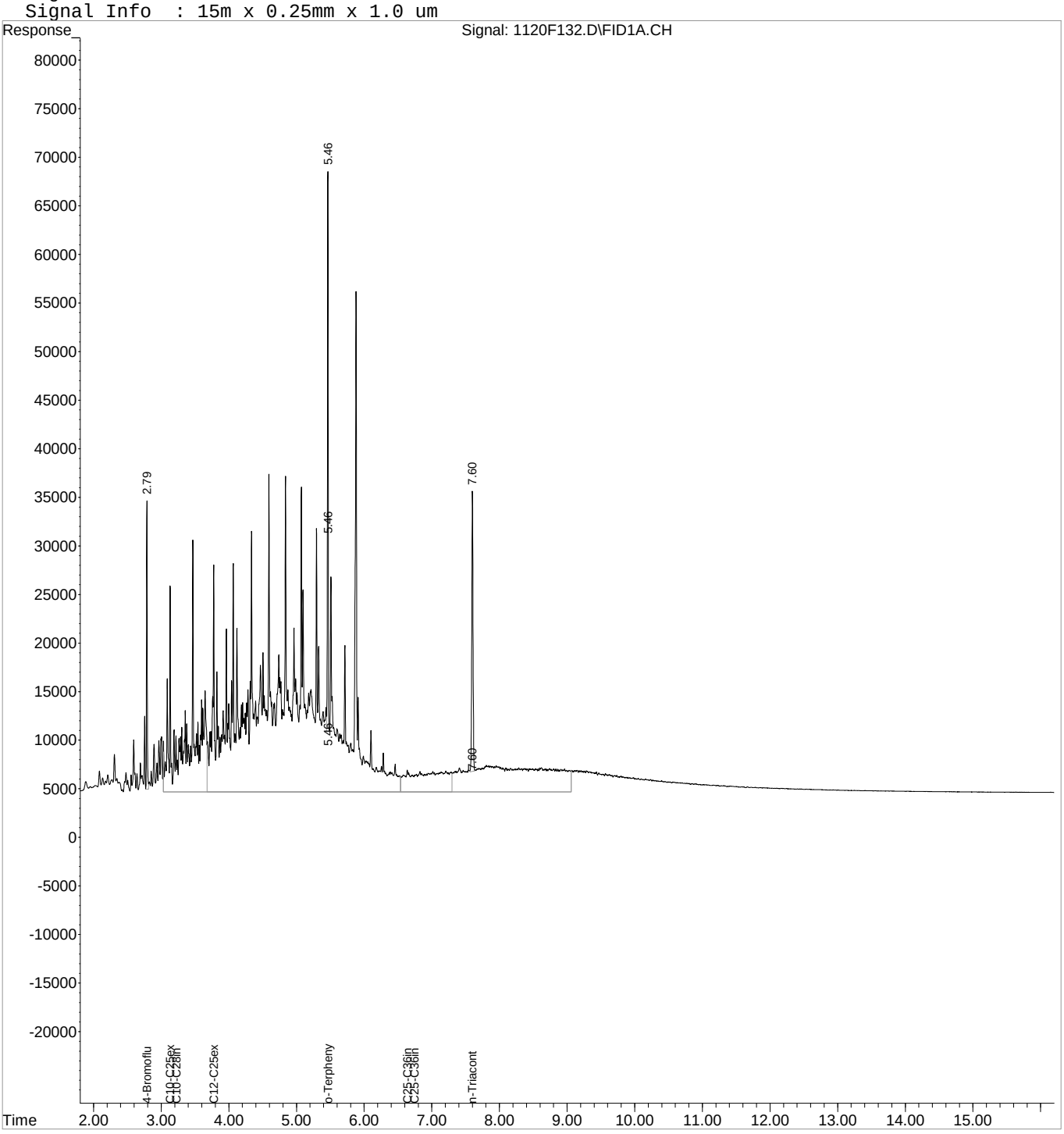
Quantitation Report (QT Reviewed)

1st 11/21/18
2nd 11/21/18

Data File : J:\GC21\DATA\112018F\1120F132.D Vial: 16
Acq On : 20 Nov 2018 6:26 pm Operator: SMS
Sample : kwg1806057-3lcs Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 7:24 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 11/21/18
2nd 11/21/18

Exception Report

Data File: J:\GC21\DATA\112018F\1120F128.D
Lab ID: KWG1806091-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 11/20/2018 16:59
Date Quantitated: 11/21/2018 07:15
Batch ID: KWG1806091
Analysis Method: AK102
MethodJoinID: MJ1166

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F128.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 16:59	**Quant Date:**	11/21/2018 07:15	**Vial:**	96
Run Type:	CCV	**MethodJoinID:**	MJ1166	**Dilution:**	1.0
Lab ID:	KWG1806091-2			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	AK102	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ1166
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
o-Terphenyl	5.46		100653	56.57		50-150	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C10 - C25 DRO	3.13		1692616	1,162			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F128.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 16:59	**Quant Date:**	11/21/2018 07:15	**Vial:**	96
Run Type:	CCV	**MethodJoinID:**	MJ234	**Dilution:**	1.0
Lab ID:	KWG1806091-2			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ234
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	2.79	?	48933	53.70		50-150	NA	
o-Terphenyl	5.46	?	100653	56.57		51-126	NA	
n-Triacontane	7.60	?	80455	56.67		50-150	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		1733453				
C10 - C25 DRO	3.13		1692616	1,162			
C10 - C28 DRO	3.23		1710809	1,149			
Diesel Range Organics (DRO)	3.78		1474014	1,200			
Residual Range Organics (RRO)	6.64		22603	36.32			NR
C25 - C44 RRO	6.90		25855				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F128.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 16:59	**Quant Date:**	11/21/2018 07:15	**Vial:**	96
Run Type:	CCV	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806091-2			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	2.79	?	48933	53.70		50-150	NA	
o-Terphenyl	5.46	?	100653	56.57		55-133	NA	
n-Triacontane	7.60	?	80455	56.67		54-136	NA	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		1733453				
C10 - C25 DRO	3.13		1692616	1,162			
C10 - C28 DRO	3.23		1710809	1,149			
Diesel Range Organics (DRO)	3.78		1474014	1,200			
Residual Range Organics (RRO)	6.64		22603	36.32			NR
C25 - C44 RRO	6.90		25855				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SMS 11/21/18
2nd TP 11/21/18

Data File : J:\GC21\DATA\112018F\1120F128.D Vial: 96
Acq On : 20 Nov 2018 4:59 pm Operator: SMS
Sample : dro@1000/50 svf02-49h Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 07:15:37 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S 4-Bromofluorobenzene	2.79	48933	53.699	ppm
Spiked Amount	50.000	Recovery	=	107.40%	
2)	S o-Terphenyl	5.46	100653	56.568	ppm
Spiked Amount	50.000	Recovery	=	113.14%	
3)	S n-Triacontane	7.60	80455	56.672	ppm
Spiked Amount	50.000	Recovery	=	113.34%	
	Target Compounds				
6)	H C10-C25ex DRO [AK102]	3.13	1692616	1162.232	ppm
7)	H C10-C28in DRO [8015]	3.23	1710809	1148.906	ppm
8)	H C12-C25ex DRO [NWTPH]	3.78	1474014	1199.768	ppm
10)	H C25-C36in RRO [NWTPH]	6.64	22603	36.324	ppm
11)	H C25-C36in RRO [AK103]	6.74	22603	28.822	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

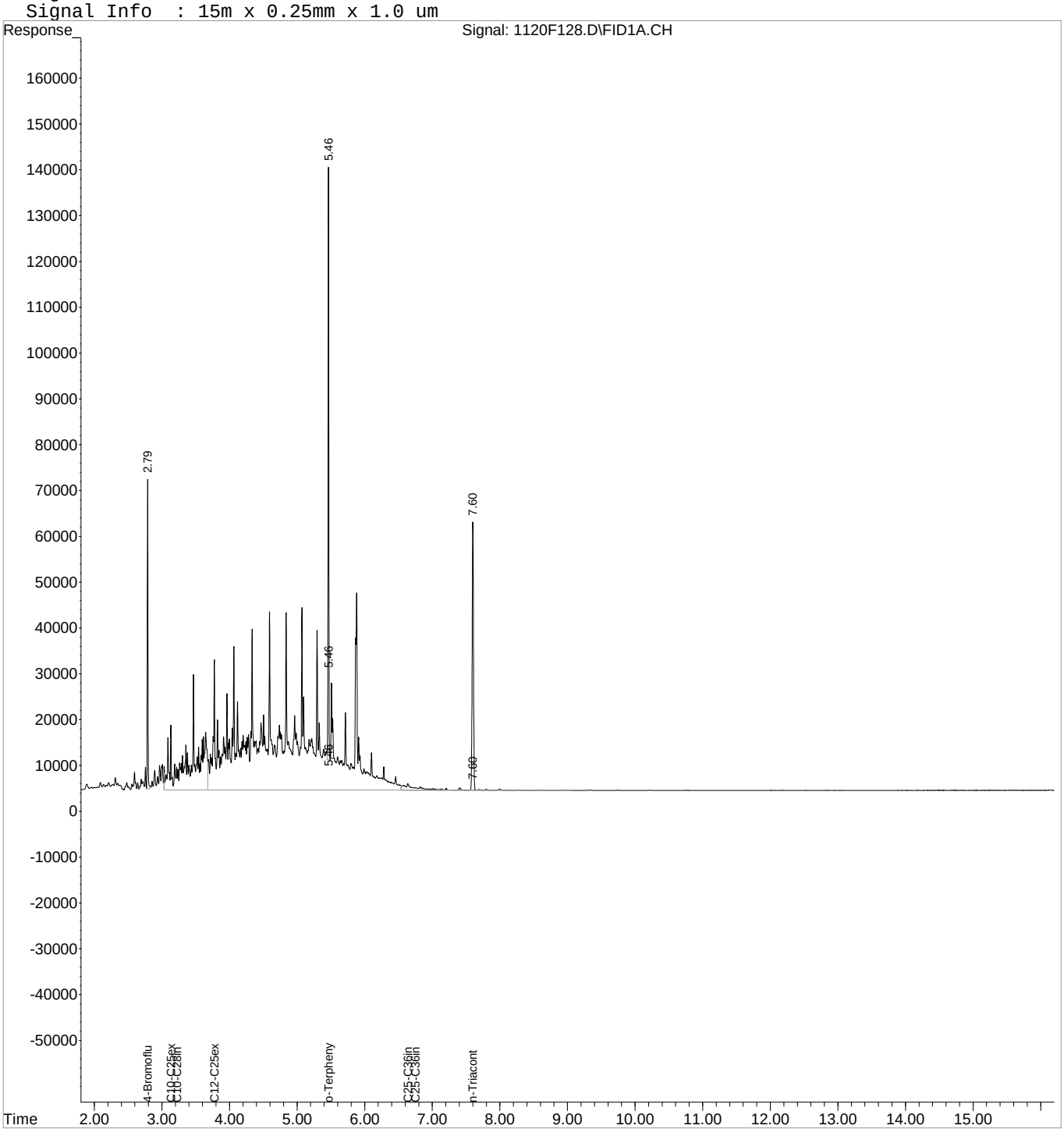
Quantitation Report (QT Reviewed)

1st SMS 11/21/18
2nd TP 11/21/18

Data File : J:\GC21\DATA\112018F\1120F128.D Vial: 96
Acq On : 20 Nov 2018 4:59 pm Operator: SMS
Sample : dro@1000/50 svf02-49h Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 7:15 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 11/21/18
2nd 11/21/18

Exception Report

Data File: J:\GC21\DATA\112018F\1120F129.D
Lab ID: KWG1806091-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 11/20/2018 17:21
Date Quantitated: 11/21/2018 07:16
Batch ID: KWG1806091
Analysis Method: AK102
MethodJoinID: MJ1166

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F129.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 17:21	**Quant Date:**	11/21/2018 07:16	**Vial:**	97
Run Type:	CCV	**MethodJoinID:**	MJ1166	**Dilution:**	1.0
Lab ID:	KWG1806091-2			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	AK102	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ1166
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
o-Terphenyl			0			50-150	NA	NR

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C10 - C25 DRO	3.13		49312	33.86			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F129.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 17:21	**Quant Date:**	11/21/2018 07:16	**Vial:**	97
Run Type:	CCV	**MethodJoinID:**	MJ234	**Dilution:**	1.0
Lab ID:	KWG1806091-2			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ234
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			51-126	NA	NR
n-Triacontane	7.62	?	209	0.1470		50-150	NA	NR

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		57433				
C10 - C25 DRO	3.13		49312	33.86			
C10 - C28 DRO	3.23		179173	120.33			
Diesel Range Organics (DRO)	3.78		41556	33.82			NR
Residual Range Organics (RRO)	6.64		578941	930.38			
C25 - C44 RRO	6.90		1011540				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F129.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 17:21	**Quant Date:**	11/21/2018 07:16	**Vial:**	97
Run Type:	CCV	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806091-2			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			55-133	NA	NR
n-Triacontane	7.62	?	209	0.1470		54-136	NA	NR

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		57433				
C10 - C25 DRO	3.13		49312	33.86			
C10 - C28 DRO	3.23		179173	120.33			
Diesel Range Organics (DRO)	3.78		41556	33.82			NR
Residual Range Organics (RRO)	6.64		578941	930.38			
C25 - C44 RRO	6.90		1011540				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 11/21/18
2nd TP 11/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\112018F\1120F129.D Vial: 97
Acq On : 20 Nov 2018 5:21 pm Operator: SMS
Sample : rro@1000 svf02-51a Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 07:16:05 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
3) S	n-Triacontane	7.62	209	0.147	ppm
Spiked Amount	50.000	Recovery	=	0.29%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	49312	33.860	ppm
7) H	C10-C28in DRO [8015]	3.23	179173	120.325	ppm
8) H	C12-C25ex DRO [NWTPH]	3.78	41556	33.824	ppm
10) H	C25-C36in RRO [NWTPH]	6.64	578941	930.377	ppm
11) H	C25-C36in RRO [AK103]	6.74	578941	738.234	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

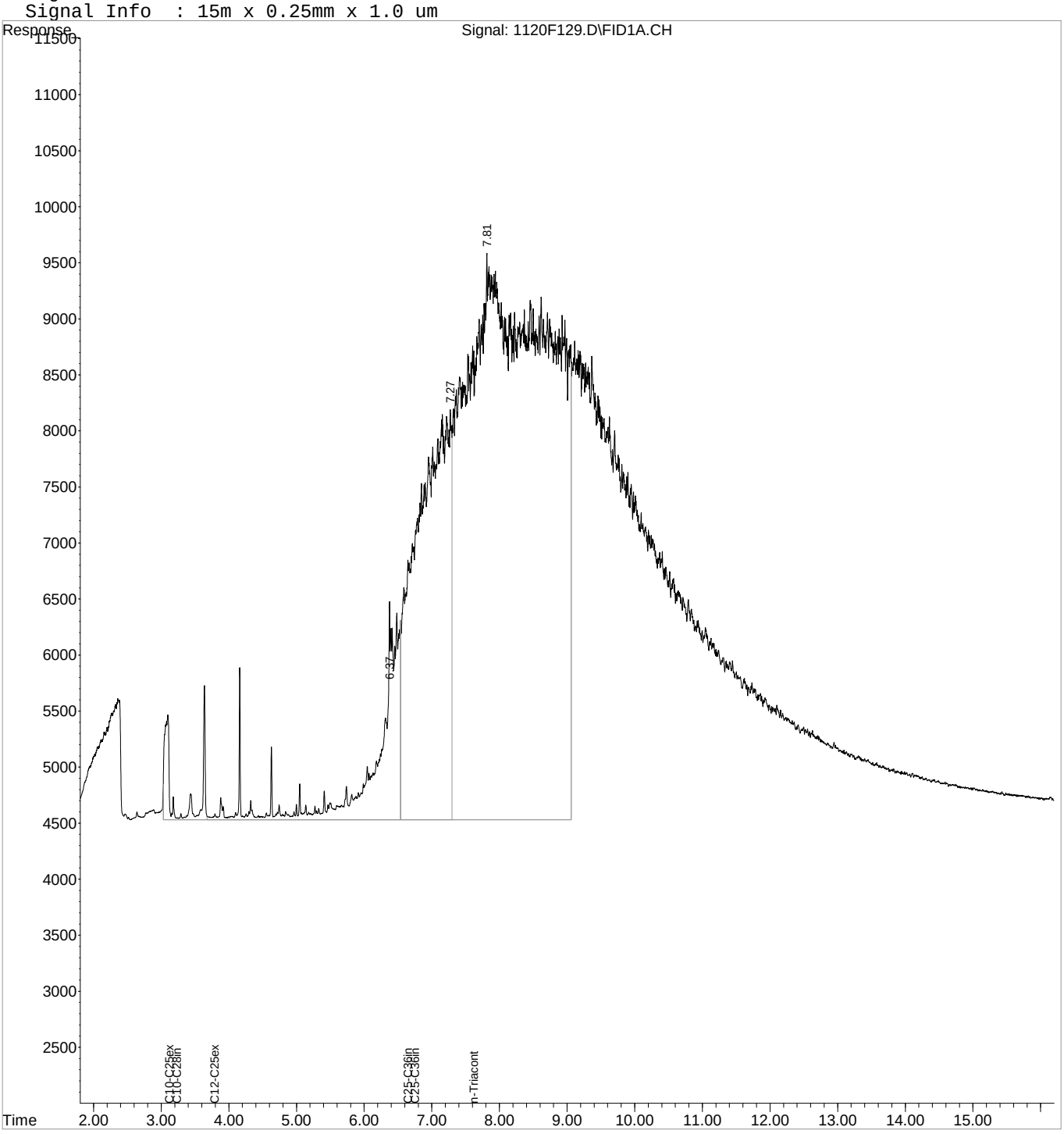
Quantitation Report (QT Reviewed)

1st 11/21/18
2nd 11/21/18

Data File : J:\GC21\DATA\112018F\1120F129.D Vial: 97
Acq On : 20 Nov 2018 5:21 pm Operator: SMS
Sample : rro@1000 svf02-51a Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 7:16 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 11/21/18
2nd 11/21/18

Exception Report

Data File: J:\GC21\DATA\112018F\1120F146.D
Lab ID: KWG1806091-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 11/20/2018 23:29
Date Quantitated: 11/21/2018 07:16
Batch ID: KWG1806091
Analysis Method: AK102
MethodJoinID: MJ1166

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F146.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 23:29	**Quant Date:**	11/21/2018 07:16	**Vial:**	96
Run Type:	CCV	**MethodJoinID:**	MJ1166	**Dilution:**	1.0
Lab ID:	KWG1806091-3			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	AK102	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ1166
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
o-Terphenyl	5.46		99598	55.98		50-150	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C10 - C25 DRO	3.13		1651825	1,134			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F146.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 23:29	**Quant Date:**	11/21/2018 07:16	**Vial:**	96
Run Type:	CCV	**MethodJoinID:**	MJ234	**Dilution:**	1.0
Lab ID:	KWG1806091-3			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ234
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	2.79	?	47107	51.70		50-150	NA	
o-Terphenyl	5.46	?	99598	55.98		51-126	NA	
n-Triacontane	7.60	?	78016	54.95		50-150	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		1691662				
C10 - C25 DRO	3.13		1651825	1,134			
C10 - C28 DRO	3.23		1668780	1,121			
Diesel Range Organics (DRO)	3.78		1443781	1,175			
Residual Range Organics (RRO)	6.64		21054	33.83			NR
C25 - C44 RRO	6.90		23971				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F146.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 23:29	**Quant Date:**	11/21/2018 07:16	**Vial:**	96
Run Type:	CCV	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806091-3			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	2.79	?	47107	51.70		50-150	NA	
o-Terphenyl	5.46	?	99598	55.98		55-133	NA	
n-Triacontane	7.60	?	78016	54.95		54-136	NA	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		1691662				
C10 - C25 DRO	3.13		1651825	1,134			
C10 - C28 DRO	3.23		1668780	1,121			
Diesel Range Organics (DRO)	3.78		1443781	1,175			
Residual Range Organics (RRO)	6.64		21054	33.83			NR
C25 - C44 RRO	6.90		23971				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 11/21/18
2nd TP 11/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\112018F\1120F146.D Vial: 96
Acq On : 20 Nov 2018 11:29 pm Operator: SMS
Sample : dro@1000/50 svf02-49h Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 07:16:23 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.79	47107	51.695	ppm
Spiked Amount	50.000	Recovery	=	103.39%	
2) S	o-Terphenyl	5.46	99598	55.975	ppm
Spiked Amount	50.000	Recovery	=	111.95%	
3) S	n-Triacontane	7.60	78016	54.954	ppm
Spiked Amount	50.000	Recovery	=	109.91%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	1651825	1134.223	ppm
7) H	C10-C28in DRO [8015]	3.23	1668780	1120.681	ppm
8) H	C12-C25ex DRO [NWTPH]	3.78	1443781	1175.160	ppm
10) H	C25-C36in RRO [NWTPH]	6.64	21054	33.834	ppm
11) H	C25-C36in RRO [AK103]	6.74	21054	26.847	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

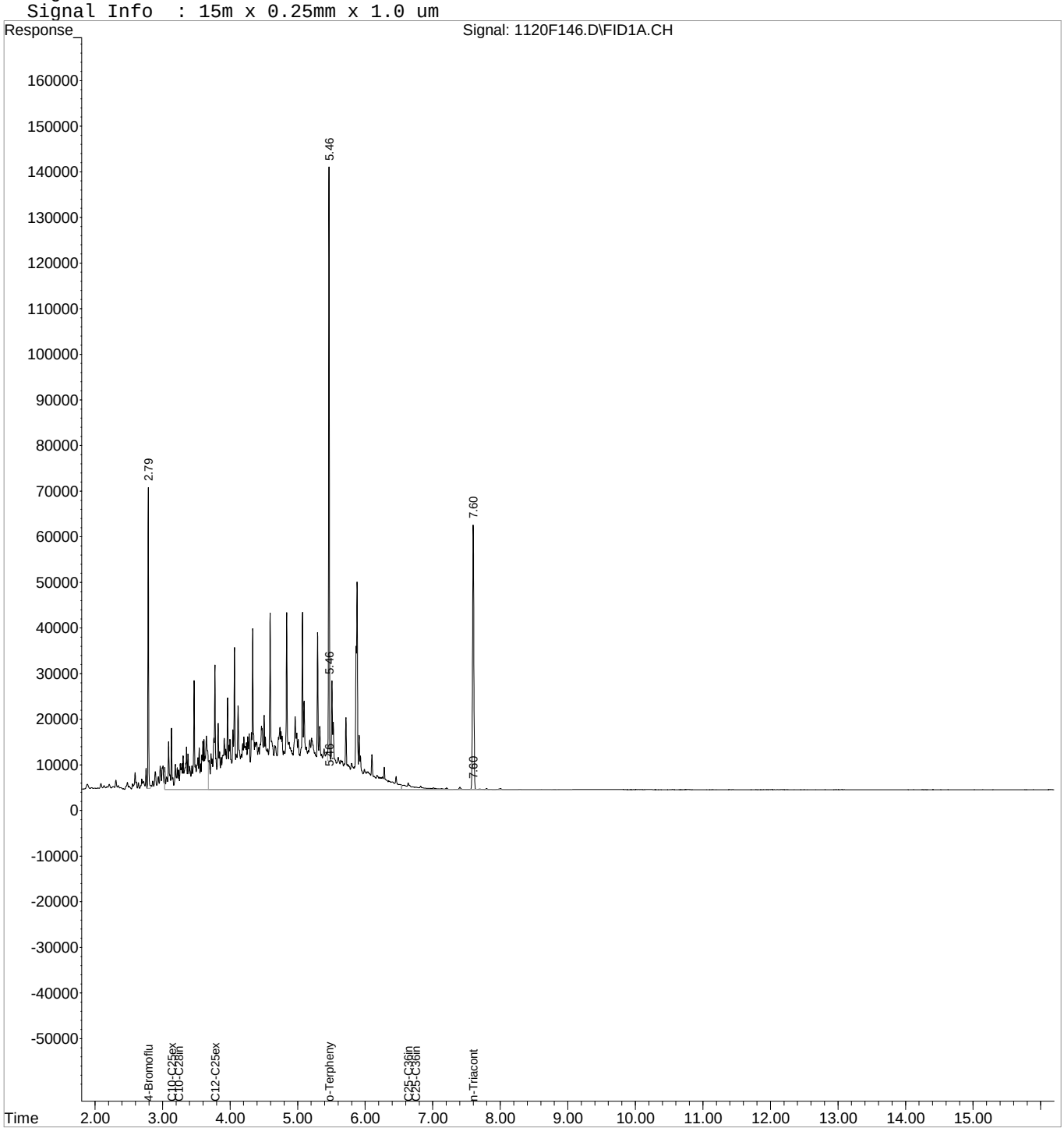
1st SMS 11/21/18
2nd TP 11/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\112018F\1120F146.D Vial: 96
Acq On : 20 Nov 2018 11:29 pm Operator: SMS
Sample : dro@1000/50 svf02-49h Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 7:16 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 11/21/18
2nd 11/21/18

Exception Report

Data File: J:\GC21\DATA\112018F\1120F147.D
Lab ID: KWG1806091-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 11/20/2018 23:50
Date Quantitated: 11/21/2018 07:16
Batch ID: KWG1806091
Analysis Method: AK102
MethodJoinID: MJ1166

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F147.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 23:50	**Quant Date:**	11/21/2018 07:16	**Vial:**	97
Run Type:	CCV	**MethodJoinID:**	MJ1166	**Dilution:**	1.0
Lab ID:	KWG1806091-3			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	AK102	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ1166
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
o-Terphenyl			0			50-150	NA	NR

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C10 - C25 DRO	3.13		46256	31.76			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F147.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 23:50	**Quant Date:**	11/21/2018 07:16	**Vial:**	97
Run Type:	CCV	**MethodJoinID:**	MJ234	**Dilution:**	1.0
Lab ID:	KWG1806091-3			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ234
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			51-126	NA	NR
n-Triacontane	7.61	?	479	0.3370		50-150	NA	NR

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		0				
C10 - C25 DRO	3.13		46256	31.76			
C10 - C28 DRO	3.23		180709	121.36			
Diesel Range Organics (DRO)	3.78		42666	34.73			NR
Residual Range Organics (RRO)	6.64		598578	961.93			
C25 - C44 RRO	6.90		1046091				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F147.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 23:50	**Quant Date:**	11/21/2018 07:16	**Vial:**	97
Run Type:	CCV	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806091-3			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			55-133	NA	NR
n-Triacontane	7.61	?	479	0.3370		54-136	NA	NR

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		0				
C10 - C25 DRO	3.13		46256	31.76			
C10 - C28 DRO	3.23		180709	121.36			
Diesel Range Organics (DRO)	3.78		42666	34.73			NR
Residual Range Organics (RRO)	6.64		598578	961.93			
C25 - C44 RRO	6.90		1046091				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 11/21/18
2nd TP 11/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\112018F\1120F147.D Vial: 97
Acq On : 20 Nov 2018 11:50 pm Operator: SMS
Sample : rro@1000 svf02-51a Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 07:16:33 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
3) S	n-Triacontane	7.61	479	0.337	ppm
Spiked Amount	50.000	Recovery	=	0.67%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	46256	31.762	ppm
7) H	C10-C28in DRO [8015]	3.23	180709	121.356	ppm
8) H	C12-C25ex DRO [NWTPH]	3.78	42666	34.728	ppm
10) H	C25-C36in RRO [NWTPH]	6.64	598578	961.934	ppm
11) H	C25-C36in RRO [AK103]	6.74	598578	763.274	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

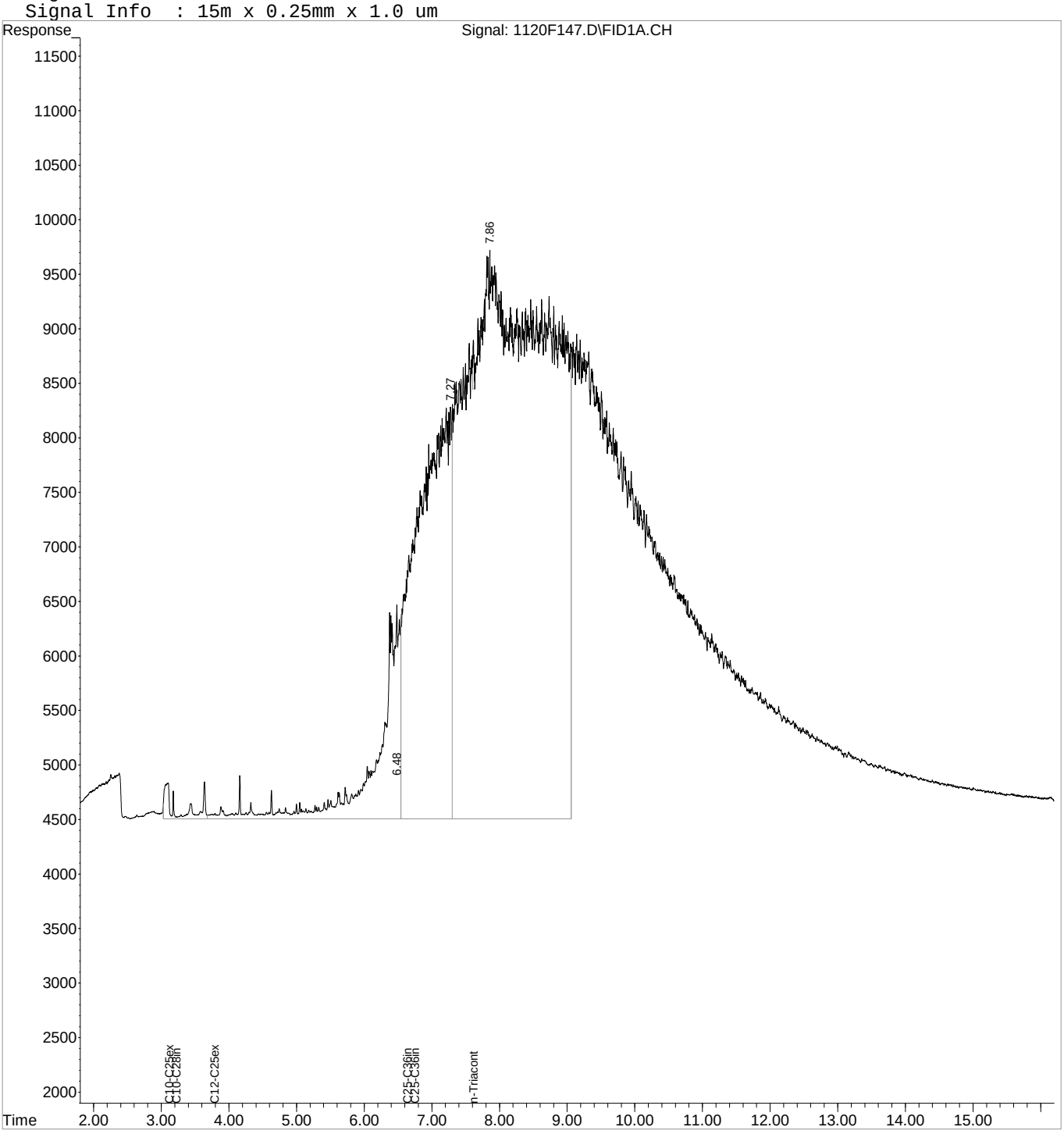
Quantitation Report (QT Reviewed)

1st SMS 11/21/18
2nd TP 11/21/18

Data File : J:\GC21\DATA\112018F\1120F147.D Vial: 97
Acq On : 20 Nov 2018 11:50 pm Operator: SMS
Sample : rro@1000 svf02-51a Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 7:16 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 11/21/18
2nd 11/21/18

Exception Report

Data File: J:\GC21\DATA\112018F\1120F113.D
Lab ID: KWG1806091-5
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/20/2018 11:35
Date Quantitated: 11/20/2018 11:53
Batch ID: KWG1806091
Analysis Method: AK102
MethodJoinID: MJ1166

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F113.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 11:35	**Quant Date:**	11/20/2018 11:53	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ1166	**Dilution:**	1.0
Lab ID:	KWG1806091-5			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	AK102	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ1166
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
o-Terphenyl			0			50-150	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C10 - C25 DRO	3.13		9138	6.28			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F113.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 11:35	**Quant Date:**	11/20/2018 11:53	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ234	**Dilution:**	1.0
Lab ID:	KWG1806091-5			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ234
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			51-126	NA	
n-Triacontane			0			50-150	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		10245				
C10 - C25 DRO	3.13		9138	6.28			
C10 - C28 DRO	3.23		10944	7.35			
Diesel Range Organics (DRO)	3.78		5469	4.45			
Residual Range Organics (RRO)	6.64		10674	17.15			
C25 - C44 RRO	6.90		31812				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F113.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 11:35	**Quant Date:**	11/20/2018 11:53	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806091-5			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			55-133	NA	
n-Triacontane			0			54-136	NA	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		10245				
C10 - C25 DRO	3.13		9138	6.28			
C10 - C28 DRO	3.23		10944	7.35			
Diesel Range Organics (DRO)	3.78		5469	4.45			
Residual Range Organics (RRO)	6.64		10674	17.15			
C25 - C44 RRO	6.90		31812				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SMS 11/21/18
2nd TP 11/21/18

Data File : J:\GC21\DATA\112018F\1120F113.D Vial: 86
Acq On : 20 Nov 2018 11:35 am Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 20 11:53:29 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.13	9138	6.275 ppm
7) H	C10-C28in DRO [8015]	3.23	10944	7.350 ppm
8) H	C12-C25ex DRO [NWTPH]	3.78	5469	4.451 ppm
10) H	C25-C36in RRO [NWTPH]	6.64	10674	17.153 ppm
11) H	C25-C36in RRO [AK103]	6.74	10674	13.611 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

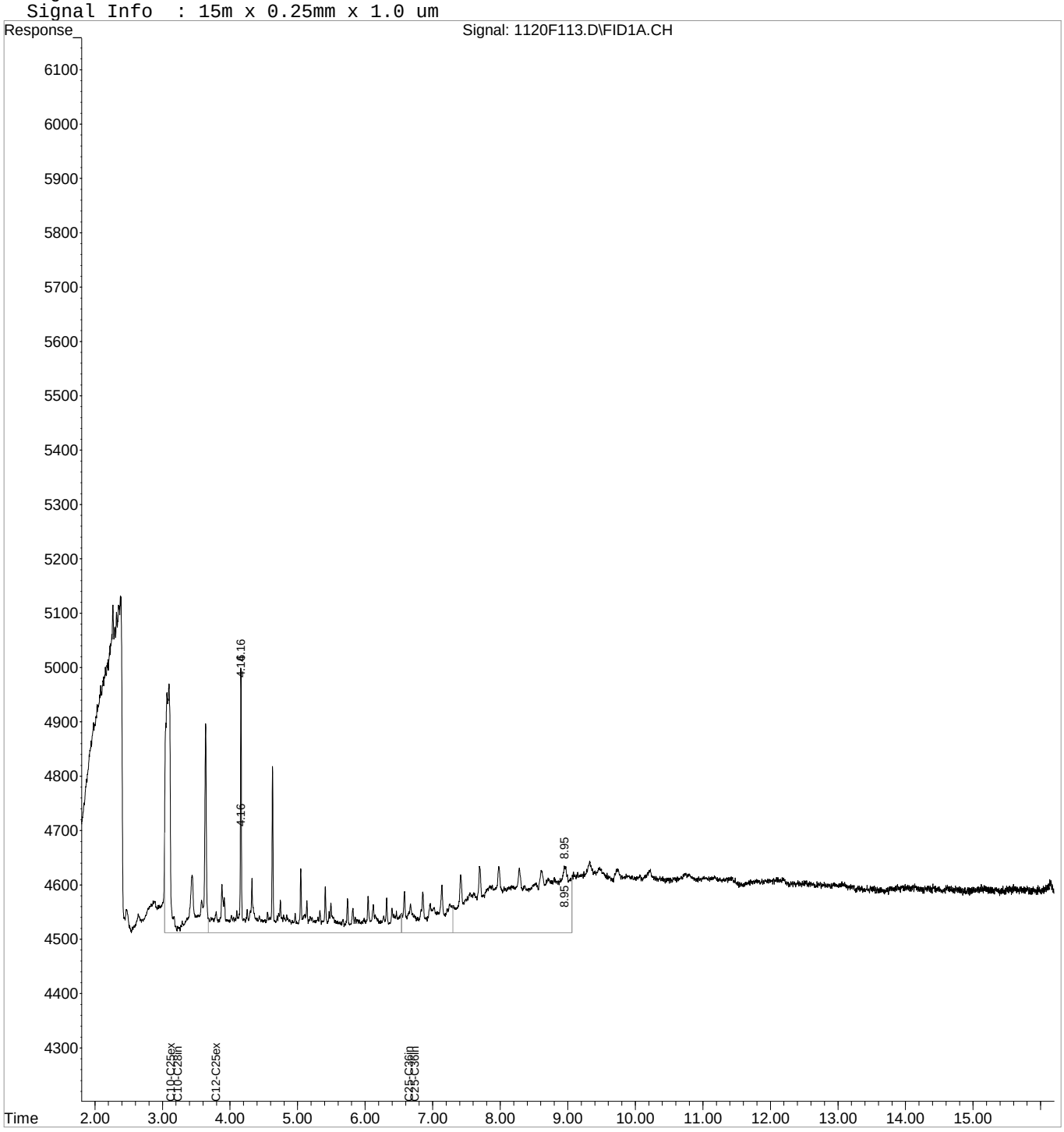
Quantitation Report (QT Reviewed)

1st SMS 11/21/18
2nd TP 11/21/18

Data File : J:\GC21\DATA\112018F\1120F113.D Vial: 86
Acq On : 20 Nov 2018 11:35 am Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 20 11:53 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 11/21/18
2nd 11/21/18

Exception Report

Data File: J:\GC21\DATA\112018F\1120F130.D
Lab ID: KWG1806091-6
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/20/2018 17:43
Date Quantitated: 11/21/2018 07:31
Batch ID: KWG1806091
Analysis Method: AK102
MethodJoinID: MJ1166

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F130.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 17:43	**Quant Date:**	11/21/2018 07:31	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ1166	**Dilution:**	1.0
Lab ID:	KWG1806091-6			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	AK102	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ1166
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
o-Terphenyl			0			50-150	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C10 - C25 DRO	3.13		13919	9.56			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F130.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 17:43	**Quant Date:**	11/21/2018 07:31	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ234	**Dilution:**	1.0
Lab ID:	KWG1806091-6			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ234
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			51-126	NA	
n-Triacontane			0			50-150	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		15780				
C10 - C25 DRO	3.13		13919	9.56			
C10 - C28 DRO	3.23		15260	10.25			
Diesel Range Organics (DRO)	3.78		6395	5.21			
Residual Range Organics (RRO)	6.64		7399	11.89			
C25 - C44 RRO	6.90		19586				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F130.D			**Instrument:**	GC21
Acqu Date:	11/20/2018 17:43	**Quant Date:**	11/21/2018 07:31	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806091-6			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			55-133	NA	
n-Triacontane			0			54-136	NA	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		15780				
C10 - C25 DRO	3.13		13919	9.56			
C10 - C28 DRO	3.23		15260	10.25			
Diesel Range Organics (DRO)	3.78		6395	5.21			
Residual Range Organics (RRO)	6.64		7399	11.89			
C25 - C44 RRO	6.90		19586				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SMS 11/21/18
2nd TP 11/21/18

Data File : J:\GC21\DATA\112018F\1120F130.D Vial: 86
Acq On : 20 Nov 2018 5:43 pm Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 07:31:42 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.13	13919	9.557 ppm
7) H	C10-C28in DRO [8015]	3.23	15260	10.248 ppm
8) H	C12-C25ex DRO [NWTPH]	3.78	6395	5.205 ppm
10) H	C25-C36in RRO [NWTPH]	6.64	7399	11.890 ppm
11) H	C25-C36in RRO [AK103]	6.74	7399	9.435 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

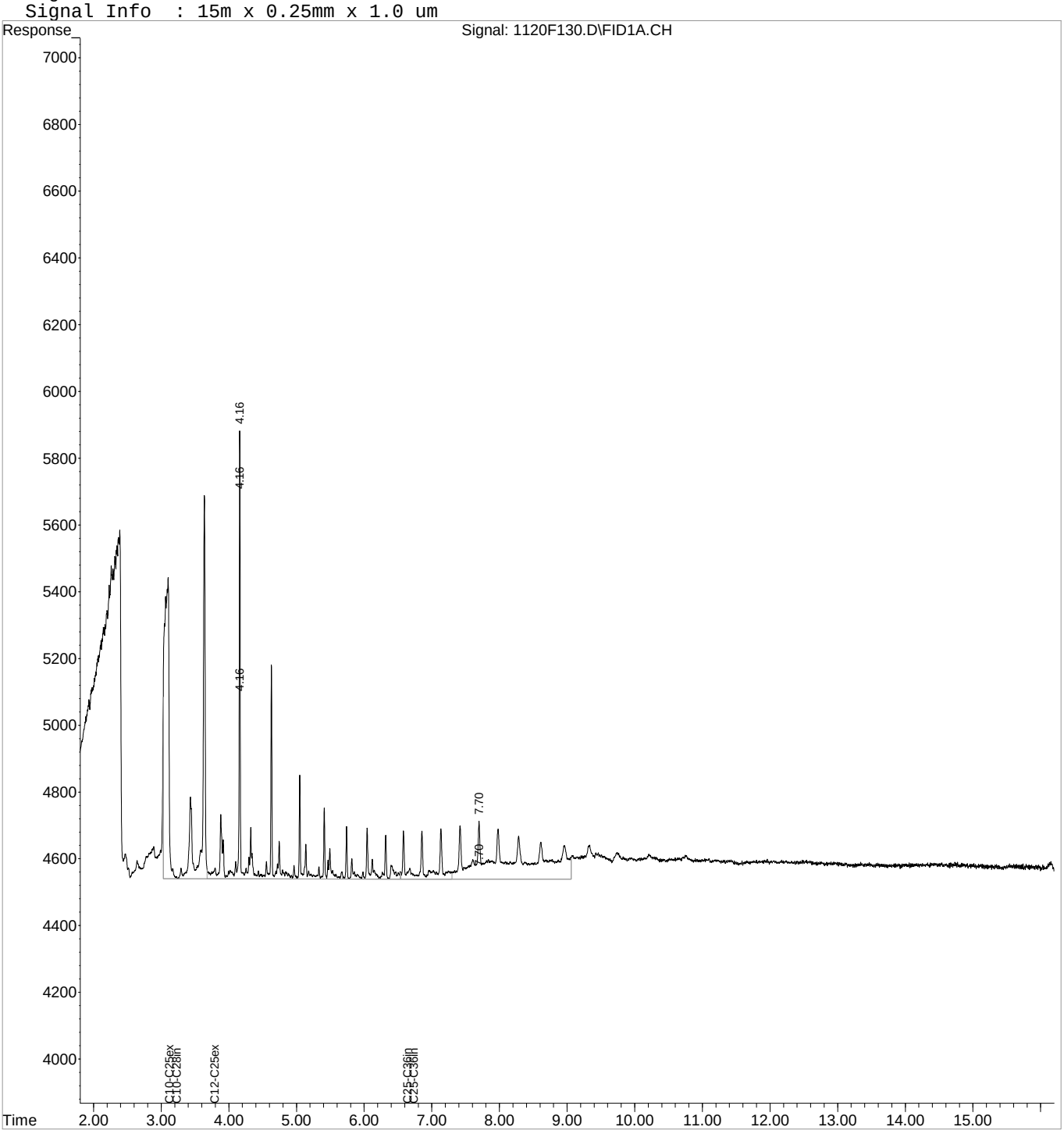
Quantitation Report (QT Reviewed)

1st 11/21/18
2nd 11/21/18

Data File : J:\GC21\DATA\112018F\1120F130.D Vial: 86
Acq On : 20 Nov 2018 5:43 pm Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 7:31 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 11/21/18
2nd 11/21/18

Exception Report

Data File: J:\GC21\DATA\112018F\1120F148.D
Lab ID: KWG1806091-7
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/21/2018 00:12
Date Quantitated: 11/21/2018 07:42
Batch ID: KWG1806091
Analysis Method: AK102
MethodJoinID: MJ1166

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F148.D			**Instrument:**	GC21
Acqu Date:	11/21/2018 00:12	**Quant Date:**	11/21/2018 07:42	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ1166	**Dilution:**	1.0
Lab ID:	KWG1806091-7			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	AK102	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ1166
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
o-Terphenyl			0			50-150	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C10 - C25 DRO	3.13		8638	5.93			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F148.D			**Instrument:**	GC21
Acqu Date:	11/21/2018 00:12	**Quant Date:**	11/21/2018 07:42	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ234	**Dilution:**	1.0
Lab ID:	KWG1806091-7			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ234
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			51-126	NA	
n-Triacontane			0			50-150	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		9767				
C10 - C25 DRO	3.13		8638	5.93			
C10 - C28 DRO	3.23		10320	6.93			
Diesel Range Organics (DRO)	3.78		5426	4.42			
Residual Range Organics (RRO)	6.64		9074	14.58			
C25 - C44 RRO	6.90		23687				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F148.D			**Instrument:**	GC21
Acqu Date:	11/21/2018 00:12	**Quant Date:**	11/21/2018 07:42	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806091-7			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			55-133	NA	
n-Triacontane			0			54-136	NA	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		9767				
C10 - C25 DRO	3.13		8638	5.93			
C10 - C28 DRO	3.23		10320	6.93			
Diesel Range Organics (DRO)	3.78		5426	4.42			
Residual Range Organics (RRO)	6.64		9074	14.58			
C25 - C44 RRO	6.90		23687				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SMS 11/21/18
2nd TP 11/21/18

Data File : J:\GC21\DATA\112018F\1120F148.D Vial: 86
Acq On : 21 Nov 2018 12:12 am Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 07:42:56 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.13	8638	5.931 ppm
7) H	C10-C28in DRO [8015]	3.23	10320	6.930 ppm
8) H	C12-C25ex DRO [NWTPH]	3.78	5426	4.416 ppm
10) H	C25-C36in RRO [NWTPH]	6.64	9074	14.582 ppm
11) H	C25-C36in RRO [AK103]	6.74	9074	11.571 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

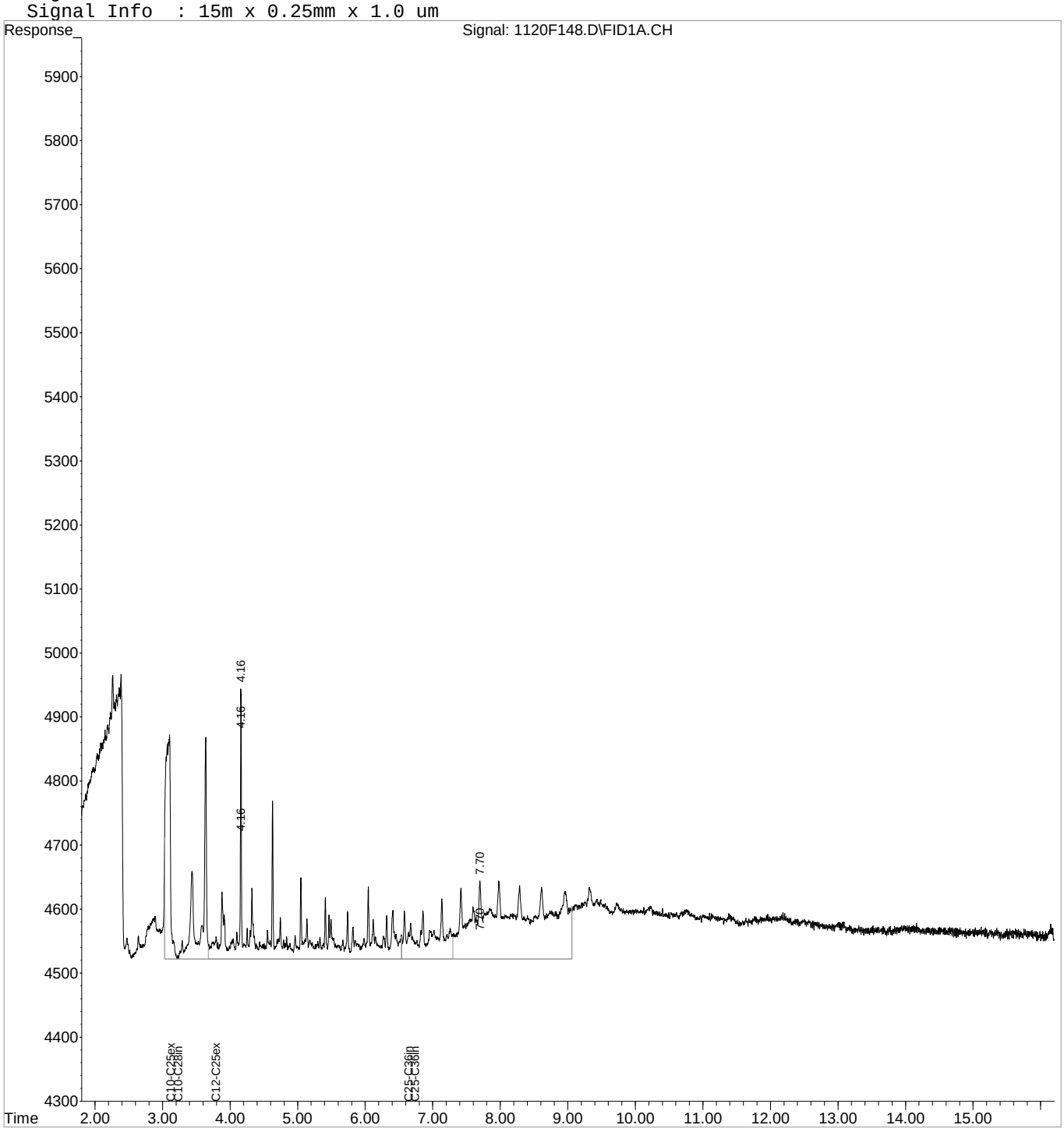
Quantitation Report (QT Reviewed)

1st 11/21/18
2nd 11/21/18

Data File : J:\GC21\DATA\112018F\1120F148.D Vial: 86
Acq On : 21 Nov 2018 12:12 am Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 7:42 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 11/21/18
2nd 11/21/18

Exception Report

Data File: J:\GC21\DATA\112018F\1120F163.D
Lab ID: KWG1806091-8
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 11/21/2018 05:36
Date Quantitated: 11/21/2018 08:43
Batch ID: KWG1806091
Analysis Method: AK102
MethodJoinID: MJ1166

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F163.D			**Instrument:**	GC21
Acqu Date:	11/21/2018 05:36	**Quant Date:**	11/21/2018 08:43	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ1166	**Dilution:**	1.0
Lab ID:	KWG1806091-8			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	AK102	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ1166
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
o-Terphenyl			0			50-150	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C10 - C25 DRO	3.13		8837	6.07			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F163.D			**Instrument:**	GC21
Acqu Date:	11/21/2018 05:36	**Quant Date:**	11/21/2018 08:43	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ234	**Dilution:**	1.0
Lab ID:	KWG1806091-8			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ234
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
4-Bromofluorobenzene			0			50-150 NA	
o-Terphenyl			0			51-126 NA	
n-Triacontane			0			50-150 NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		10057				
C10 - C25 DRO	3.13		8837	6.07			
C10 - C28 DRO	3.23		11089	7.45			
Diesel Range Organics (DRO)	3.78		5785	4.71			
Residual Range Organics (RRO)	6.64		11701	18.80			
C25 - C44 RRO	6.90		29085				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/21/18
2nd 11/21/18

Quantitation Report

Data File:	J:\GC21\DATA\112018F\1120F163.D			**Instrument:**	GC21
Acqu Date:	11/21/2018 05:36	**Quant Date:**	11/21/2018 08:43	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806091-8			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	AK102 AK_DRO	**Collect Date:**		**Receive Date:**	11/21/2018

Analysis Lot:	KWG1806091	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			55-133	NA	
n-Triacontane			0			54-136	NA	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		10057				
C10 - C25 DRO	3.13		8837	6.07			
C10 - C28 DRO	3.23		11089	7.45			
Diesel Range Organics (DRO)	3.78		5785	4.71			
Residual Range Organics (RRO)	6.64		11701	18.80			
C25 - C44 RRO	6.90		29085				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 11/21/18
2nd TP 11/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\112018F\1120F163.D Vial: 86
Acq On : 21 Nov 2018 5:36 am Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 08:43:35 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	8837	6.068	ppm
7) H	C10-C28in DRO [8015]	3.23	11089	7.447	ppm
8) H	C12-C25ex DRO [NWTPH]	3.78	5785	4.709	ppm
10) H	C25-C36in RRO [NWTPH]	6.64	11701	18.804	ppm
11) H	C25-C36in RRO [AK103]	6.74	11701	14.920	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

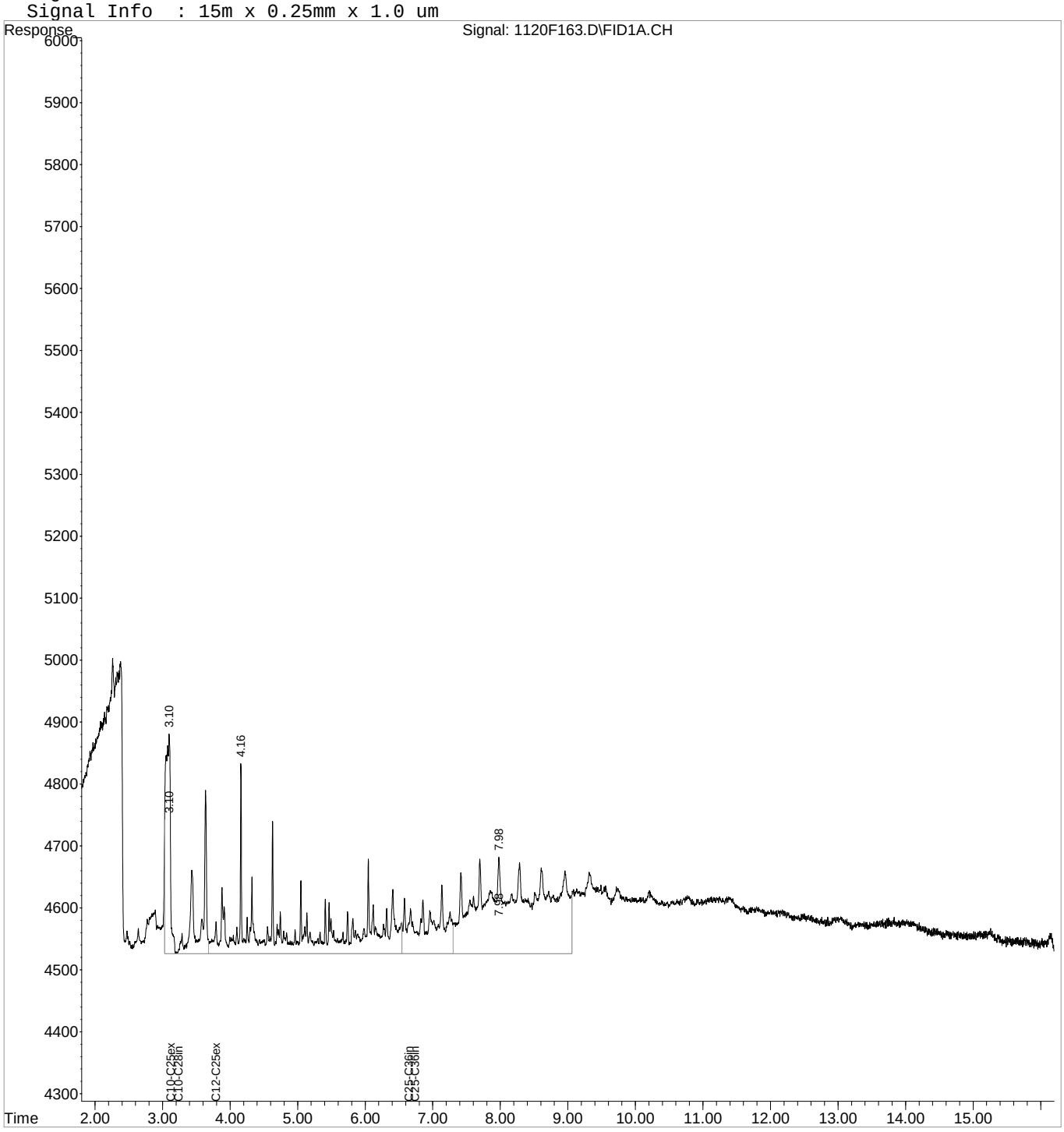
Quantitation Report (QT Reviewed)

1st 11/21/18
2nd 11/21/18

Data File : J:\GC21\DATA\112018F\1120F163.D Vial: 86
Acq On : 21 Nov 2018 5:36 am Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Nov 21 8:43 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Tue Nov 20 10:53:43 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Injection Log

Directory: J:\GC21\DATA\082018F

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	90	082018.D	1.	DCM		08/20/22018 7:4(
2	90	082019.D	1.	DCM		08/20/22018 8:01
3	90	082020.D	1.	DCM		08/20/22018 8:2:
4	90	082021.D	1.	DCM		08/20/22018 8:44
5	90	082022.D	1.	DCM		08/20/22018 9:0(
6	90	082023.D	1.	DCM		08/20/22018 9:27
7	90	082024.D	1.	DCM		08/20/22018 9:4(
8	90	082025.D	1.	IB		08/20/22018 10:1
9	90	082026.D	1.	IB		08/20/22018 10:3:
10	90	082027.D	1.	IB		08/20/22018 10:5·
11	90	082028.D	1.	IB		08/20/22018 11:1:
12	90	082029.D	1.	IB		08/20/22018 11:3'
13	90	082030.D	1.	IB		08/20/22018 11:5:
14	99	082031.D	1.	MC252	CAL 15807	08/20/22018 1:02
15	91	082032.D	1.	ALIPHATICS	MJ257	08/20/22018 1:2:
16	92	082033.D	1.	AROMATICS		08/20/22018 1:45
17	93	082034.D	1.	PAH		08/20/22018 2:07
18	86	082035.D	1.	IB		08/20/22018 2:2(
19	1	082036.D	1.	SVF02-44M 50 AK103		08/20/22018 2:5(
20	2	082037.D	1.	SVF02-44L 200 AK103		08/20/22018 3:11
21	3	082038.D	1.	SVF02-44K 500 AK103		08/20/22018 3:3:
22	4	082039.D	1.	SVF02-44J 2K AK103		08/20/22018 3:5(
23	5	082040.D	1.	SVF02-44I 5K AK103		08/20/22018 4:1(
24	6	082041.D	1.	SVF02-45A ICV AK103		08/20/22018 4:3(
25	86	082042.D	1.	IB		08/20/22018 5:0(
26	7	082043.D	1.	DRO 20/1 SVF02-45I		08/20/22018 5:21
27	8	082044.D	1.	DRO 50/2.5 SVF02-45H		08/20/22018 5:4:
28	9	082045.D	1.	DRO 200/10 SVF02-45G		08/20/22018 6:04
29	10	082046.D	1.	DRO 500/25 SVF02-45F		08/20/22018 6:2(
30	11	082047.D	1.	DRO 2K/100 SVF02-45E		08/20/22018 6:4(
31	12	082048.D	1.	DRO 5K/250 SVF02-45D		08/20/22018 7:0(
32	13	082049.D	1.	DRO 20K SVF02-45C		08/20/22018 7:31
33	14	082050.D	1.	DRO 50K SVF02-45B		08/20/22018 7:5:
34	15	082051.D	1.	DRO ICV SVF02-45L		08/20/22018 8:14
35	86	082052.D	1.	IB		08/20/22018 8:3(
36	16	082053.D	1.	RRO 50 SVF02-46F		08/20/22018 8:5(
37	17	082054.D	1.	RRO 200 SVF02-46F		08/20/22018 9:1(
38	18	082055.D	1.	RRO 500 SVF02-46H		08/20/22018 9:41
39	19	082056.D	1.	RRO 2K SVF02-46G		08/20/22018 10:0:
40	20	082057.D	1.	RRO 46F 5K		08/20/22018 10:2·
41	21	082058.D	1.	RRO ICV SVF02-47A		08/20/22018 10:4(
42	86	082059.D	1.	IB		08/20/22018 11:0'
43	22	082060.D	1.	KWG1803734-1SGT		08/20/22018 11:2(
44	23	082061.D	1.	KWG1803734-2SGT		08/20/22018 11:5'
45	24	082062.D	1.	KWG1803734-3SGT	RR poss mis-inject	08/21/22018 12:1:
46	25	082063.D	1.	KWG1803734-4SGT		08/21/22018 12:3·
47	26	082064.D	1.	KWG1803734-6MB SGT		08/21/22018 12:5:
48	90	082065.D	1.	IB		08/21/22018 1:17
49	90	082066.D	1.	IB		08/21/22018 1:3(
50	90	082067.D	1.	IB		08/21/22018 2:0(
51	90	082068.D	1.	IB		08/21/22018 2:22
52	90	082069.D	1.	IB		08/21/22018 2:44
53	90	082070.D	1.	IB		08/21/22018 3:0(
54	90	082071.D	1.	IB		08/21/22018 3:27
55	90	082072.D	1.	IB		08/21/22018 3:4(

Initial Calibration - Summary Report

Calibration ID:	CAL15807	**Instrument ID:**	GC21
Method ID:	MJ257	**Column Name:**	ZB-1

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
4-Bromofluorobenzene	SURR	AverageRF		9.1E+2	20	6.9			NA	
o-Terphenyl	SURR	AverageRF		1.8E+3	20	8.1			NA	
n-Triacontane	SURR	AverageRF		1.4E+3	20	7.1			NA	
C10 - C25 DRO	MS	AverageRF		1.5E+3	20	11.1			OK	
Diesel Range Organics	MS	AverageRF		1.5E+3	20	12.9			OK	
Diesel Range Organics (DRO)	MS	AverageRF		1.2E+3	20	8.1			OK	
Residual Range Organics (RRO)	MS	AverageRF		6.2E+2	20	4.6			OK	
C25 - C36 RRO	MS	AverageRF		7.8E+2	20	6.3			OK	

Initial Calibration - Detailed Report

Calibration ID:	CAL15807	**Instrument ID:**	GC21
Method ID:	MJ257	**Column Name:**	ZB-1
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284095	J:\GC21\DATA\082018F\082036.D	08/20/2018 14:50	08/21/2018 07:07	08/21/2018 07:39
2	284096	J:\GC21\DATA\082018F\082037.D	08/20/2018 15:11	08/21/2018 07:07	08/21/2018 07:39
3	284097	J:\GC21\DATA\082018F\082038.D	08/20/2018 15:33	08/21/2018 07:08	08/21/2018 07:39
4	284098	J:\GC21\DATA\082018F\082039.D	08/20/2018 15:55	08/21/2018 07:05	08/21/2018 07:39
5	284099	J:\GC21\DATA\082018F\082040.D	08/20/2018 16:16	08/21/2018 07:06	08/21/2018 07:39
6	284101	J:\GC21\DATA\082018F\082043.D	08/20/2018 17:21	08/21/2018 07:22	08/21/2018 07:39
7	284102	J:\GC21\DATA\082018F\082044.D	08/20/2018 17:43	08/21/2018 07:15	08/21/2018 07:39
8	284103	J:\GC21\DATA\082018F\082045.D	08/20/2018 18:04	08/21/2018 07:15	08/21/2018 07:39
9	284104	J:\GC21\DATA\082018F\082046.D	08/20/2018 18:26	08/21/2018 07:16	08/21/2018 07:39
10	284105	J:\GC21\DATA\082018F\082047.D	08/20/2018 18:48	08/21/2018 07:16	08/21/2018 07:39
11	284106	J:\GC21\DATA\082018F\082048.D	08/20/2018 19:09	08/21/2018 07:17	08/21/2018 07:39
12	284107	J:\GC21\DATA\082018F\082049.D	08/20/2018 19:31	08/21/2018 07:17	08/21/2018 07:39
13	284108	J:\GC21\DATA\082018F\082050.D	08/20/2018 19:53	08/21/2018 07:17	08/21/2018 07:39
14	284110	J:\GC21\DATA\082018F\082053.D	08/20/2018 20:58	08/21/2018 07:28	08/21/2018 07:39
15	284111	J:\GC21\DATA\082018F\082054.D	08/20/2018 21:19	08/21/2018 07:28	08/21/2018 07:39
16	284112	J:\GC21\DATA\082018F\082055.D	08/20/2018 21:41	08/21/2018 07:30	08/21/2018 07:39
17	284113	J:\GC21\DATA\082018F\082056.D	08/20/2018 22:02	08/21/2018 07:30	08/21/2018 07:39
18	284114	J:\GC21\DATA\082018F\082057.D	08/20/2018 22:24	08/21/2018 07:30	08/21/2018 07:39

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
4-Bromofluorobenzene											6	9.2E+2	9.1E+2	6.9
	7	8.0E+2	8	9.4E+2	9	8.9E+2	10	9.8E+2	11	9.4E+2				
o-Terphenyl											6	1.8E+3	1.8E+3	8.1
	7	1.5E+3	8	1.9E+3	9	1.8E+3	10	1.9E+3	11	1.8E+3				
n-Triacontane											6	1.4E+3	1.4E+3	7.1
	7	1.2E+3	8	1.5E+3	9	1.4E+3	10	1.5E+3	11	1.4E+3				
C10 - C25 DRO											6	1.8E+3	1.5E+3	11.1
	7	1.4E+3	8	1.4E+3	9	1.3E+3	10	1.5E+3	11	1.4E+3	12	1.4E+3		
	13	1.3E+3												
Diesel Range Organics											6	1.9E+3	1.5E+3	12.9
	7	1.4E+3	8	1.5E+3	9	1.4E+3	10	1.5E+3	11	1.4E+3	12	1.5E+3		
	13	1.3E+3												
Diesel Range Organics (DRO)											6	1.4E+3	1.2E+3	8.1
	7	1.1E+3	8	1.2E+3	9	1.2E+3	10	1.3E+3	11	1.2E+3	12	1.3E+3		
	13	1.1E+3												
Residual Range Organics (RRO)													6.2E+2	4.6
			14	6.6E+2	15	6.3E+2	16	5.9E+2	17	6.2E+2	18	6.0E+2		
C25 - C36 RRO	1	8.6E+2	2	7.9E+2	3	7.9E+2	4	7.2E+2	5	7.7E+2			7.8E+2	6.3

Initial Calibration - Detailed Report

Calibration ID:	CAL15807	**Instrument ID:**	GC21
Method ID:	MJ257	**Column Name:**	ZB-1

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284095	J:\GC21\DATA\082018F\082036.D	08/20/2018 14:50	08/21/2018 07:07	08/21/2018 07:39
2	284096	J:\GC21\DATA\082018F\082037.D	08/20/2018 15:11	08/21/2018 07:07	08/21/2018 07:39
3	284097	J:\GC21\DATA\082018F\082038.D	08/20/2018 15:33	08/21/2018 07:08	08/21/2018 07:39
4	284098	J:\GC21\DATA\082018F\082039.D	08/20/2018 15:55	08/21/2018 07:05	08/21/2018 07:39
5	284099	J:\GC21\DATA\082018F\082040.D	08/20/2018 16:16	08/21/2018 07:06	08/21/2018 07:39
6	284101	J:\GC21\DATA\082018F\082043.D	08/20/2018 17:21	08/21/2018 07:22	08/21/2018 07:39
7	284102	J:\GC21\DATA\082018F\082044.D	08/20/2018 17:43	08/21/2018 07:15	08/21/2018 07:39
8	284103	J:\GC21\DATA\082018F\082045.D	08/20/2018 18:04	08/21/2018 07:15	08/21/2018 07:39
9	284104	J:\GC21\DATA\082018F\082046.D	08/20/2018 18:26	08/21/2018 07:16	08/21/2018 07:39
10	284105	J:\GC21\DATA\082018F\082047.D	08/20/2018 18:48	08/21/2018 07:16	08/21/2018 07:39
11	284106	J:\GC21\DATA\082018F\082048.D	08/20/2018 19:09	08/21/2018 07:17	08/21/2018 07:39
12	284107	J:\GC21\DATA\082018F\082049.D	08/20/2018 19:31	08/21/2018 07:17	08/21/2018 07:39
13	284108	J:\GC21\DATA\082018F\082050.D	08/20/2018 19:53	08/21/2018 07:17	08/21/2018 07:39
14	284110	J:\GC21\DATA\082018F\082053.D	08/20/2018 20:58	08/21/2018 07:28	08/21/2018 07:39
15	284111	J:\GC21\DATA\082018F\082054.D	08/20/2018 21:19	08/21/2018 07:28	08/21/2018 07:39
16	284112	J:\GC21\DATA\082018F\082055.D	08/20/2018 21:41	08/21/2018 07:30	08/21/2018 07:39
17	284113	J:\GC21\DATA\082018F\082056.D	08/20/2018 22:02	08/21/2018 07:30	08/21/2018 07:39
18	284114	J:\GC21\DATA\082018F\082057.D	08/20/2018 22:24	08/21/2018 07:30	08/21/2018 07:39

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4-Bromofluorobenzene									6	1	1.013	1.3
	7	2.5	2.190	-12.4	8	10	10.28	2.8	9	25	24.33	-2.7
	10	100	107.3	7.3	11	250	259.3	3.7				
o-Terphenyl									6	1	0.9920	-0.8
	7	2.5	2.132	-14.7	8	10	10.48	4.8	9	25	24.85	-0.6
	10	100	109.2	9.2	11	250	255.4	2.1				
n-Triacontane									6	1	1.012	1.2
	7	2.5	2.170	-13.2	8	10	10.39	3.9	9	25	24.91	-0.4
	10	100	107.9	7.9	11	250	251.7	0.7				
C10 - C25 DRO									6	20	25.01	25.1
	7	50	48.01	-4.0	8	200	199.1	-0.5	9	500	462.6	-7.5
	10	2000	2050	2.5	11	5000	4844	-3.1	12	20000	19870	-0.7
	13	50000	44060	-11.9								

Initial Calibration - Detailed Report

Calibration ID:	CAL15807	**Instrument ID:**	GC21
Method ID:	MJ257	**Column Name:**	ZB-1

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Diesel Range Organics												
									6	20	26.01	**30.1**
	7	50	48.35	-3.3	8	200	198.1	-0.9	9	500	457.7	-8.5
	10	2000	2026	1.3	11	5000	4791	-4.2	12	20000	19660	-1.7
	13	50000	43620	-12.8								
Diesel Range Organics (DRO)												
									6	20	23.14	15.7
	7	50	46.12	-7.8	8	200	201.8	0.9	9	500	472.8	-5.4
	10	2000	2104	5.2	11	5000	4961	-0.8	12	20000	20380	1.9
	13	50000	45150	-9.7								
Residual Range Organics (RRO)												
					14	50	53.41	6.8	15	200	203.5	1.7
	16	500	473.4	-5.3	17	2000	1991	-0.5	18	5000	4861	-2.8
C25 - C36 RRO	1	50	54.55	9.1	2	200	202.0	1.0	3	500	501.6	0.3
	4	2000	1831	-8.5	5	5000	4902	-2.0				

Second Source Calibration Verification Summary

CalibrationID: CAL15807

Method ID: MJ257

DataFile Location: J:\GC21\DATA\082018F\082051.D

Units: mg/L

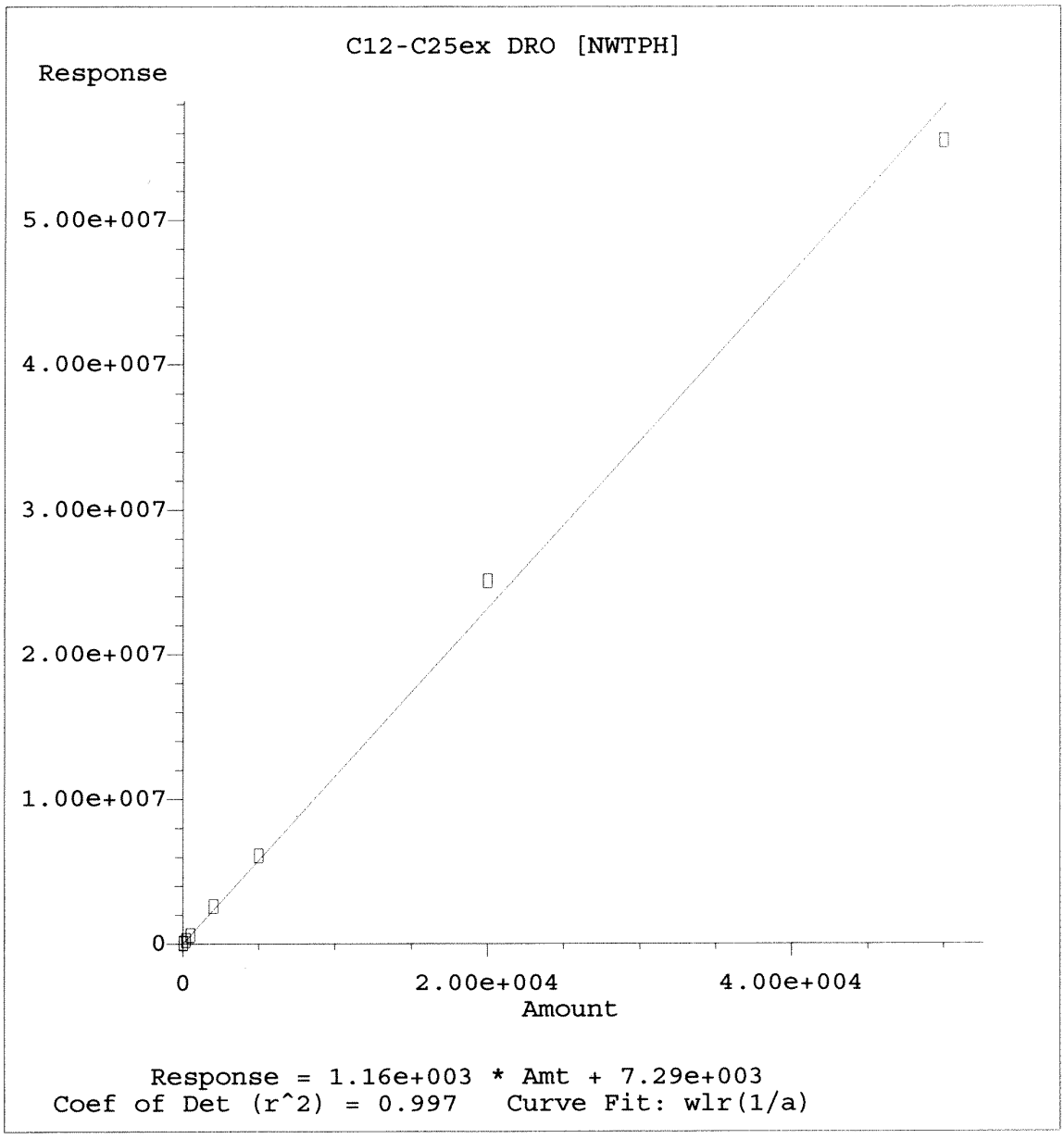
Column: ZB-1

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
C10 - C25 DRO	284109	AverageRF	25	1.5E+3	1.4E+3	-0.7	1000.00	993.1	
Diesel Range Organics	284109	AverageRF	20	1.5E+3	1.5E+3	-1.9	1000.00	981.1	
Diesel Range Organics (DRO)	284109	AverageRF	15	1.2E+3	1.3E+3	2.6	1000.00	1026.3	
Residual Range Organics (RRO)	284115	AverageRF	15	6.2E+2	5.7E+2	-7.8	1000.00	922.0	
C25 - C36 RRO	284100	AverageRF	25	7.8E+2	8.6E+2	9.8	1000.00	1097.9	

Initial Calibration - Detailed Report

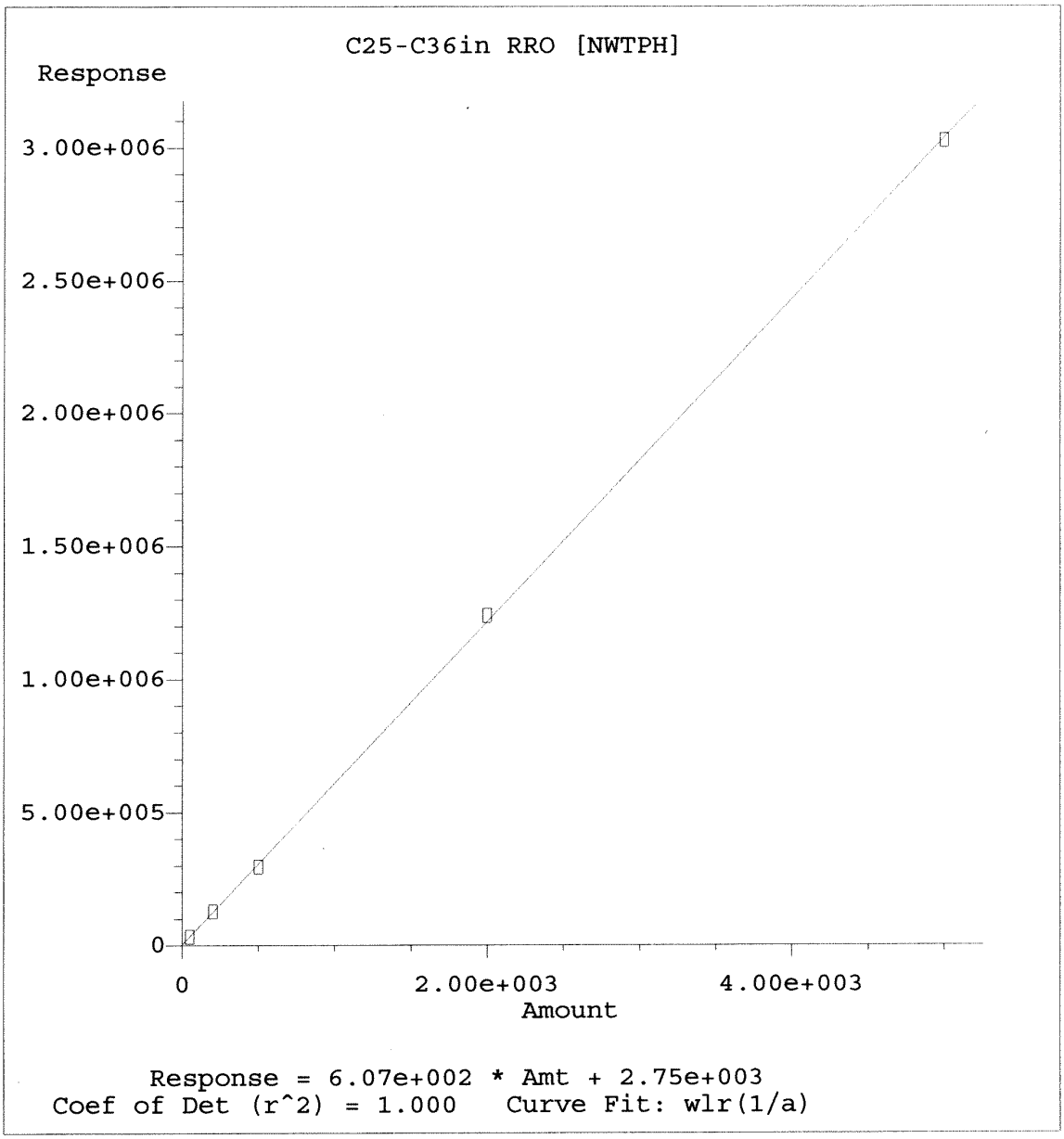
Calibration ID: CAL15807 **Instrument ID:** GC21
Method ID: MJ257 **Column Name:** ZB-1

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Diesel Range Organics												
									6	20	26.01	**30.1**
	7	50	48.35	-3.3	8	200	198.1	-0.9	9	500	457.7	-8.5
	10	2000	2026	1.3	11	5000	4791	-4.2	12	20000	19660	-1.7
	13	50000	43620	-12.8								
Diesel Range Organics (DRO)												
									6	20	18.27	-8.7
	7	50	42.65	-14.7	8	200	207.8	3.9	9	500	495.4	-0.9
	10	2000	2226	11.3	11	5000	5258	5.2	12	20000	21620	8.1
	13	50000	47900	-4.2								
Linear Check												
Residual Range Organics (RRO)												
					14	50	50.22	0.4	15	200	204.0	2.0
Linear Check	16	500	480.8	-3.8	17	2000	2036	1.8	18	5000	4979	-0.4
C25 - C36 RRO	1	50	54.55	9.1	2	200	202.0	1.0	3	500	501.6	0.3
	4	2000	1831	-8.5	5	5000	4902	-2.0				



Method Name: J:\GC21\METHODS\082018F.M
Calibration Table Last Updated: Tue Aug 21 07:32:16 2018

Linear Check



Method Name: J:\GC21\METHODS\082018F.M
Calibration Table Last Updated: Tue Aug 21 07:32:16 2018

Linear Check

1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (Not Reviewed)

Data File : J:\GC21\DATA\082018F\082032.D Vial: 91
Acq On : 20 Aug 2018 1:23 pm Operator: SMS
Sample : ALIPHATICS Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 08:24:50 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:32:16 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.77f	56436	61.933	ppm
Spiked Amount	50.000	Recovery	=	123.87%	
2) S	o-Terphenyl	5.49	220	0.124	ppm
Spiked Amount	50.000	Recovery	=	0.25%	
3) S	n-Triacontane	7.62	49835	35.103	ppm
Spiked Amount	50.000	Recovery	=	70.21%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.14	979284	672.424	ppm
7) H	C10-C28in DRO [8015]	3.24	1188142	797.905	ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	859651	699.710	ppm
10) H	C25-C36in RRO [NWTPH]	6.65	611679	982.988	ppm
11) H	C25-C36in RRO [AK103]	6.75	611679	779.979	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

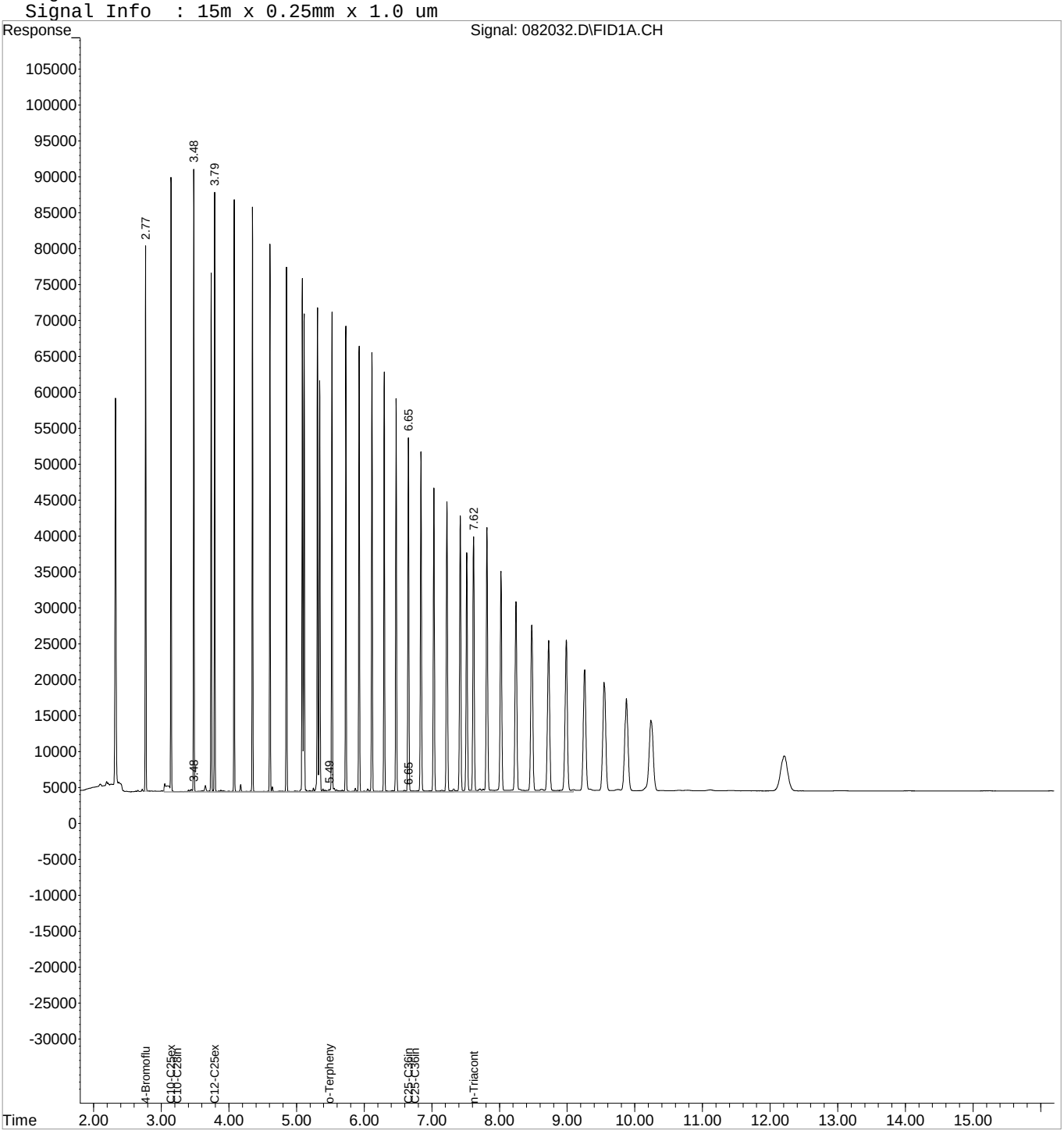
Quantitation Report (Not Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082032.D Vial: 91
Acq On : 20 Aug 2018 1:23 pm Operator: SMS
Sample : ALIPHATICS Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 8:24 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:32:16 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082035.D Vial: 86
Acq On : 20 Aug 2018 2:28 pm Operator: SMS
Sample : IB Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:03:04 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
11) H	C25-C36in RRO [AK103]	6.75	11721	14.419 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

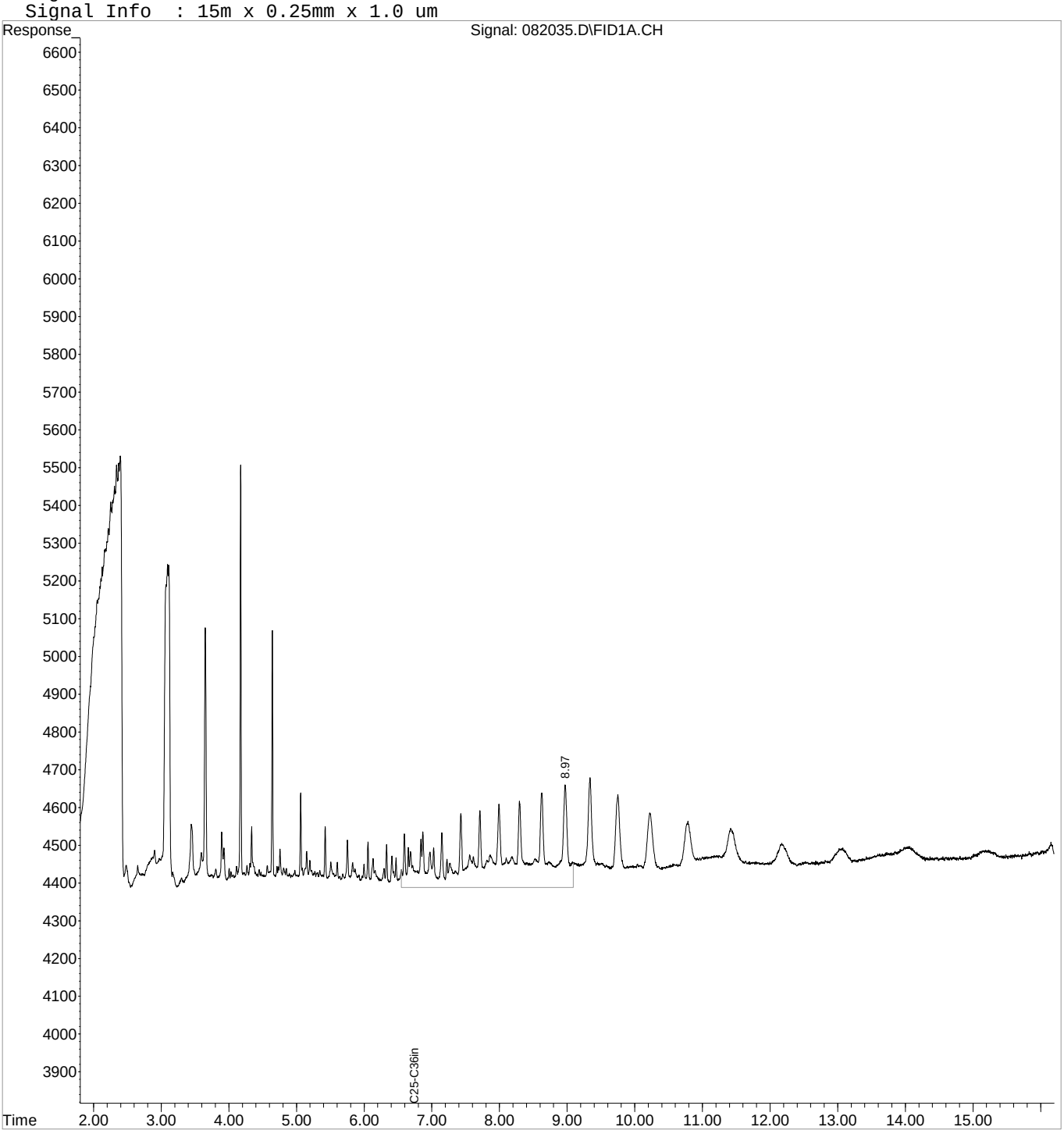
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082035.D Vial: 86
Acq On : 20 Aug 2018 2:28 pm Operator: SMS
Sample : IB Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:03 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082036.D Vial: 1
Acq On : 20 Aug 2018 2:50 pm Operator: SMS
Sample : SVF02-44M 50 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:08 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
11) H	C25-C36in RRO [AK103]	6.75	42780	52.627 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

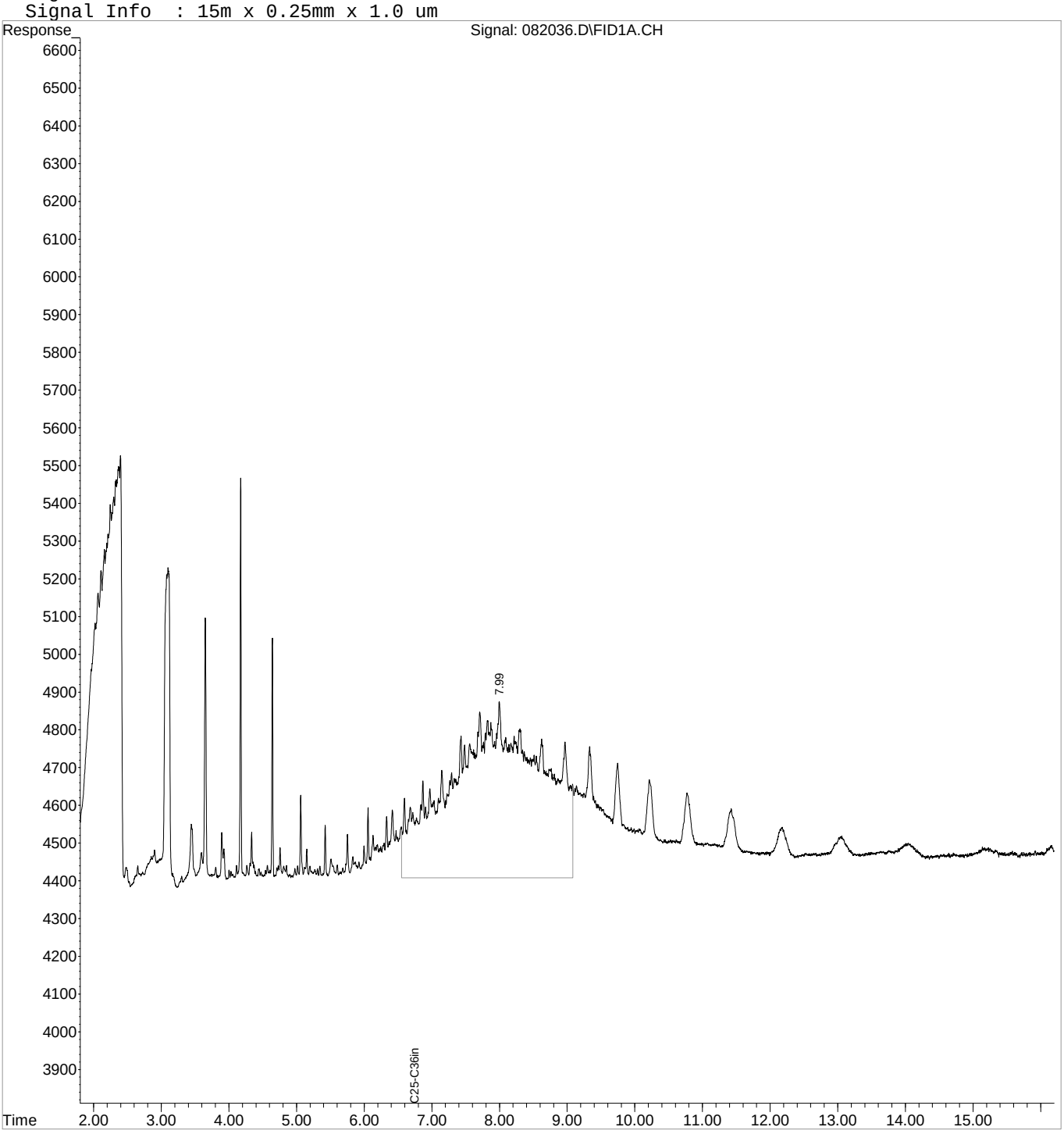
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082036.D Vial: 1
Acq On : 20 Aug 2018 2:50 pm Operator: SMS
Sample : SVF02-44M 50 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:07 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

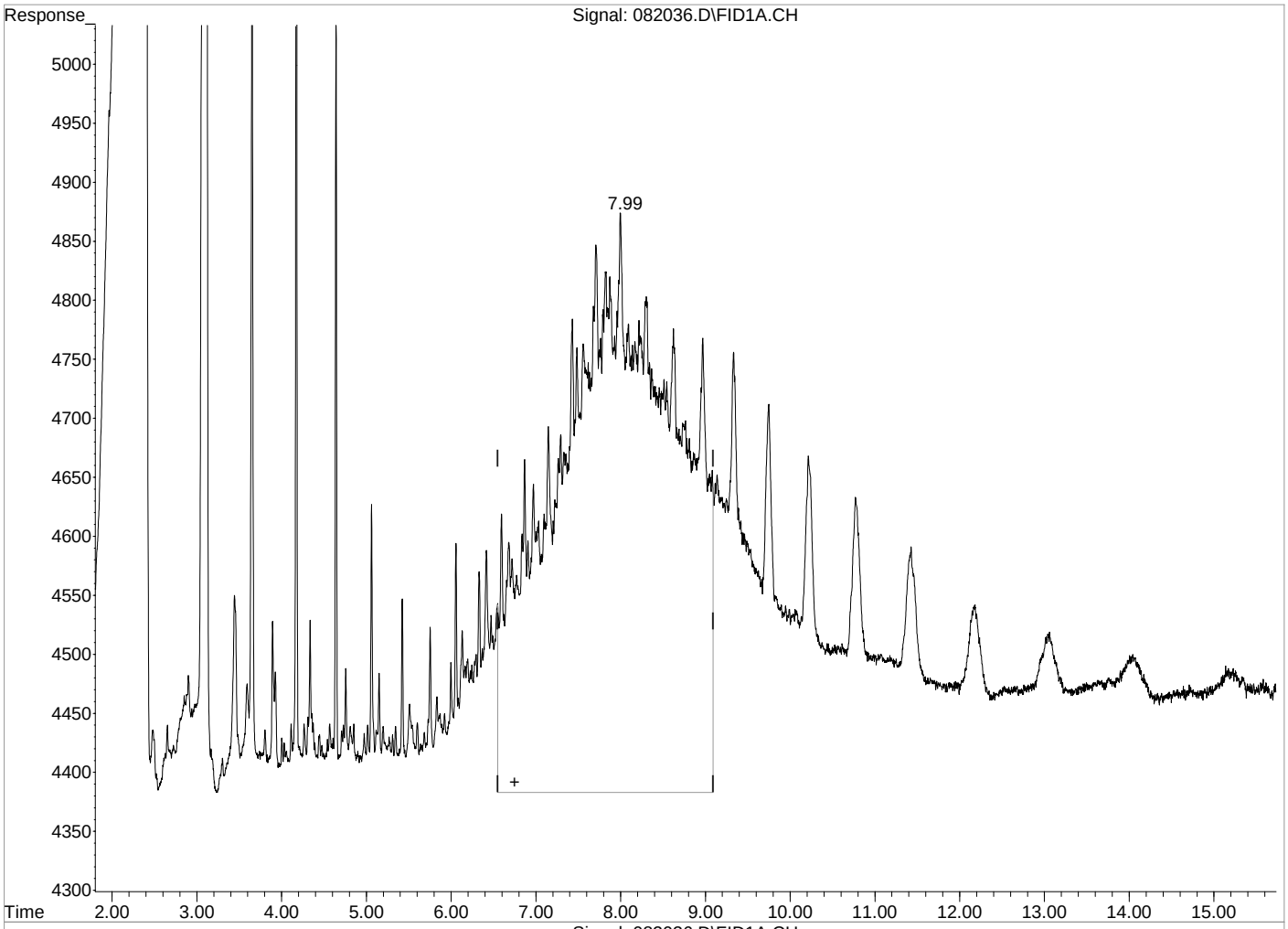


Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082036.D Vial: 1
Acq On : 20 Aug 2018 2:50 pm Operator: SMS
Sample : SVF02-44M 50 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:04 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Multiple Level Calibration



Signal: 082036.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 57.462ppm

response 46710

Manual Integration:

Before

08/21/18

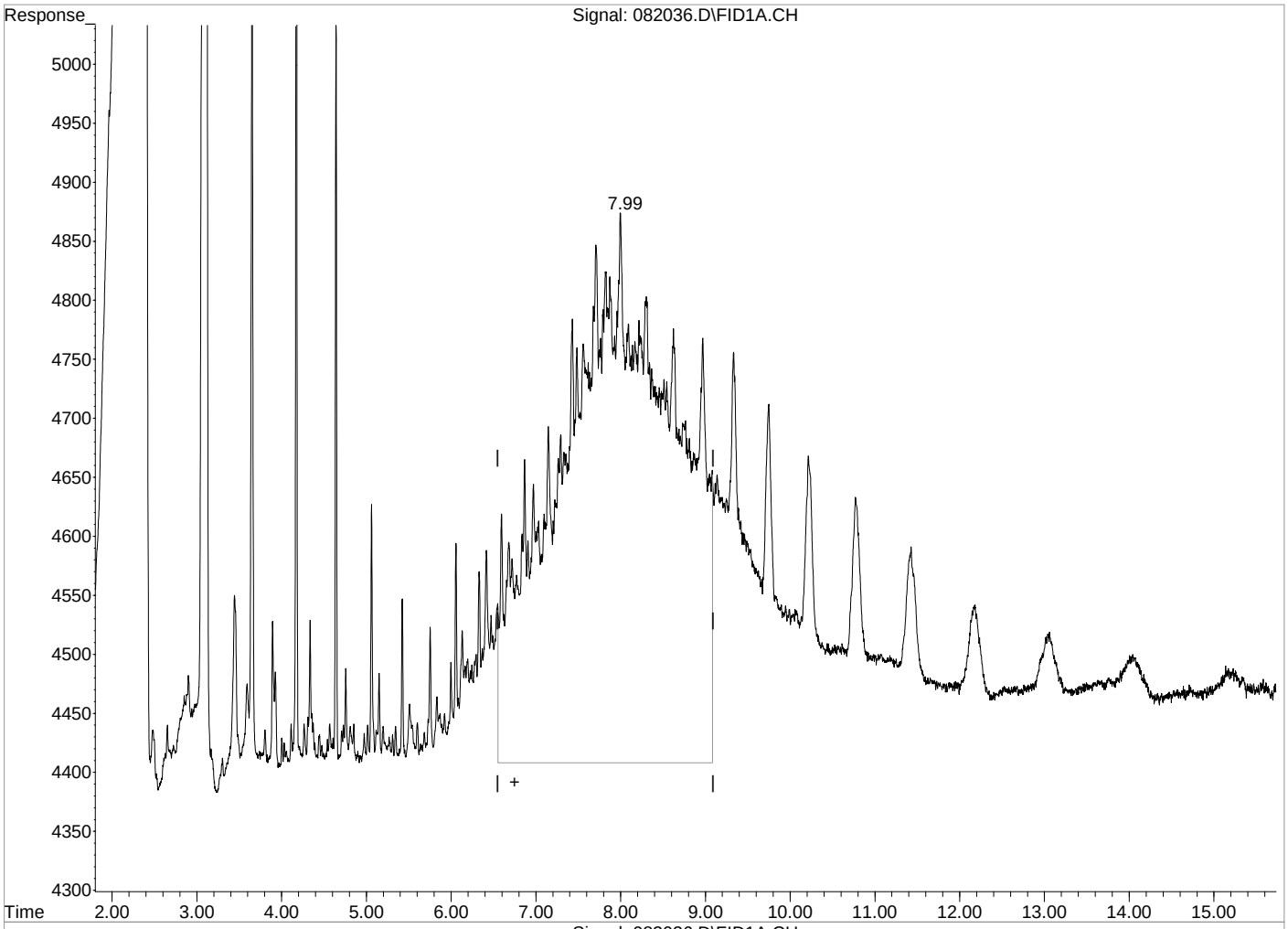
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082036.D Vial: 1
Acq On : 20 Aug 2018 2:50 pm Operator: SMS
Sample : SVF02-44M 50 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:04 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Multiple Level Calibration



Signal: 082036.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 52.627ppm

response 42780

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082037.D Vial: 2
Acq On : 20 Aug 2018 3:11 pm Operator: SMS
Sample : SVF02-44L 200 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:09 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
11) H	C25-C36in RRO [AK103]	6.75	158420	194.885 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

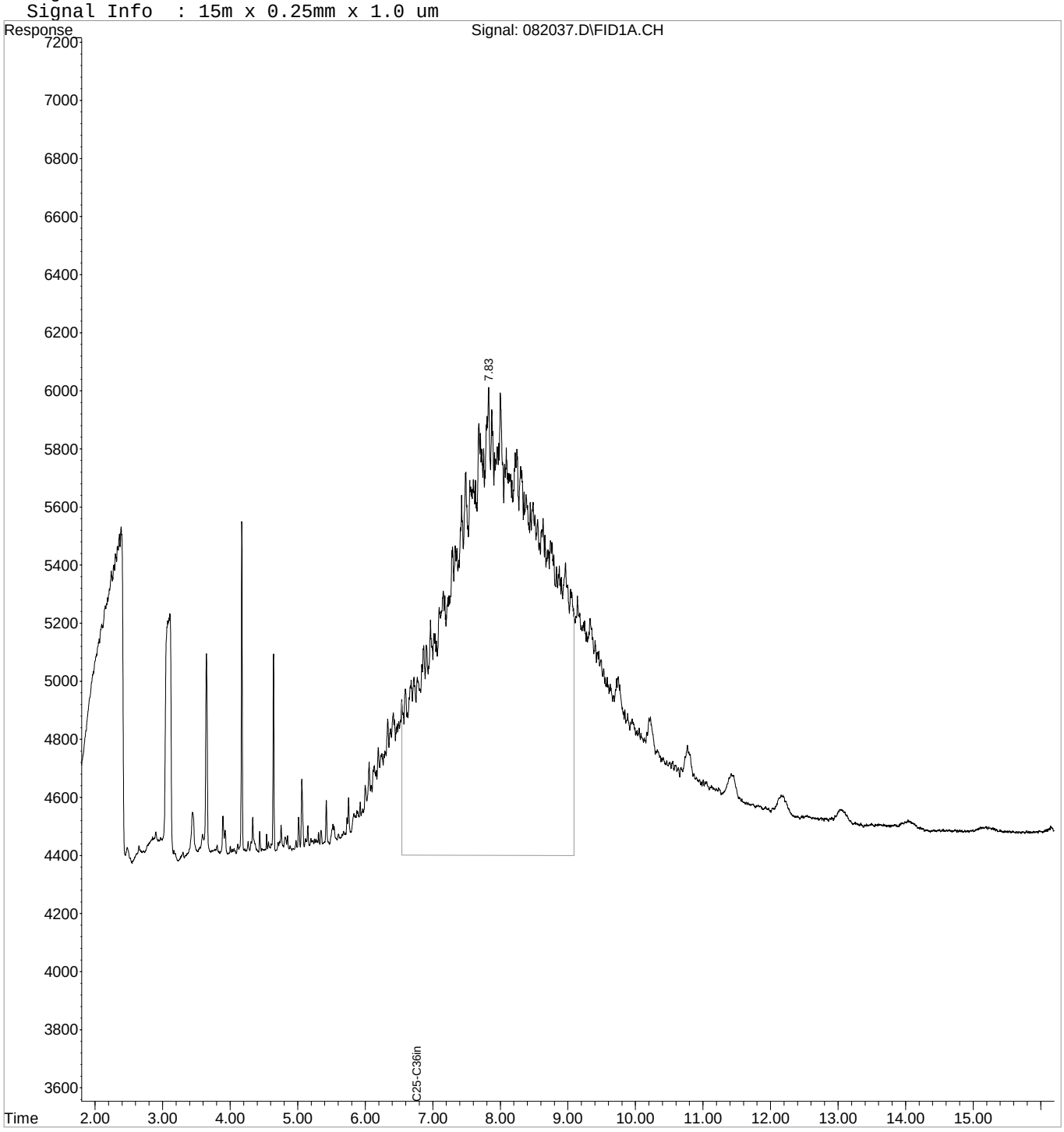
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082037.D Vial: 2
Acq On : 20 Aug 2018 3:11 pm Operator: SMS
Sample : SVF02-44L 200 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:07 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

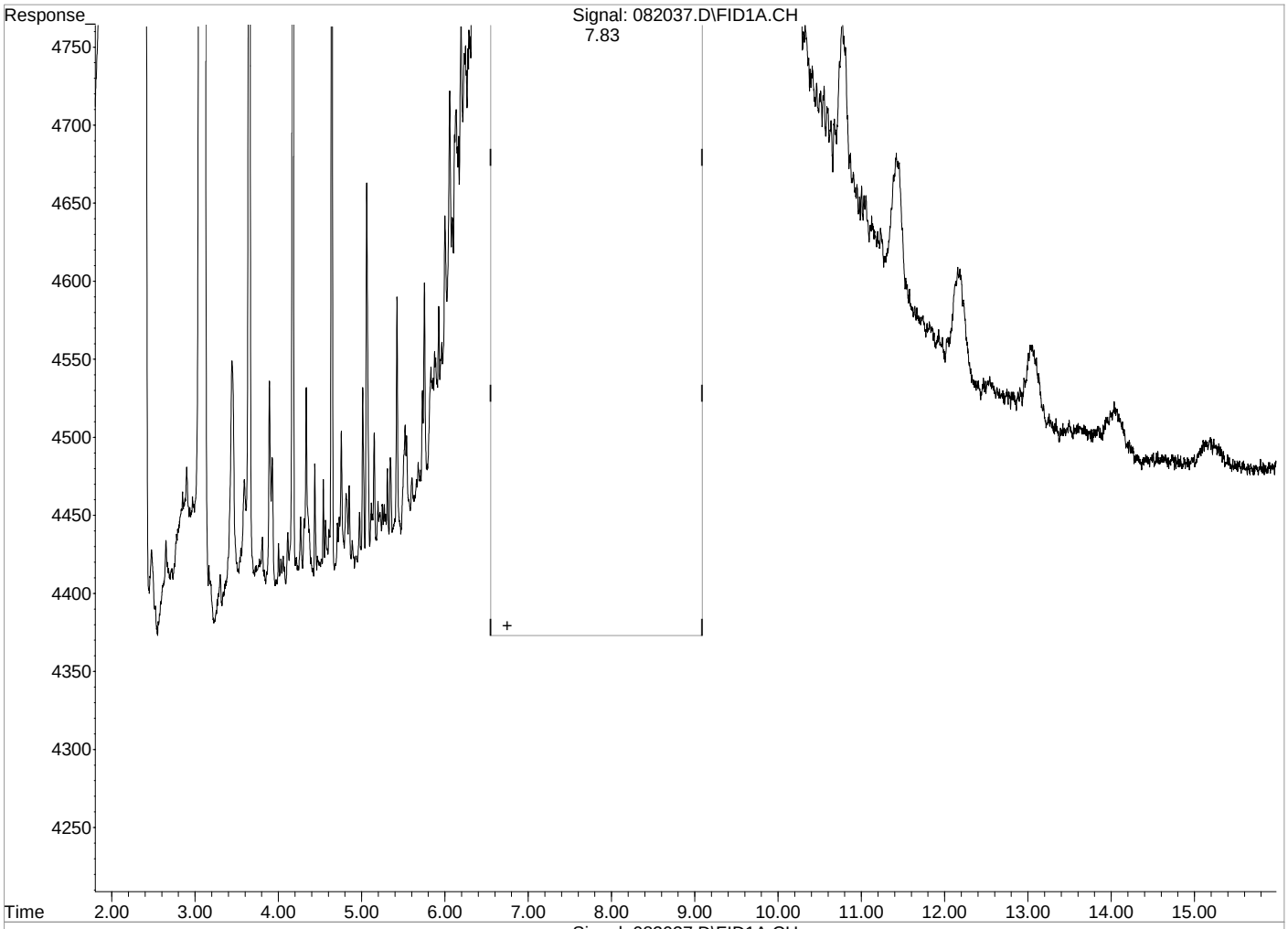


Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082037.D Vial: 2
Acq On : 20 Aug 2018 3:11 pm Operator: SMS
Sample : SVF02-44L 200 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:04 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Multiple Level Calibration



Signal: 082037.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 199.147ppm

response 161884

Manual Integration:

Before

08/21/18

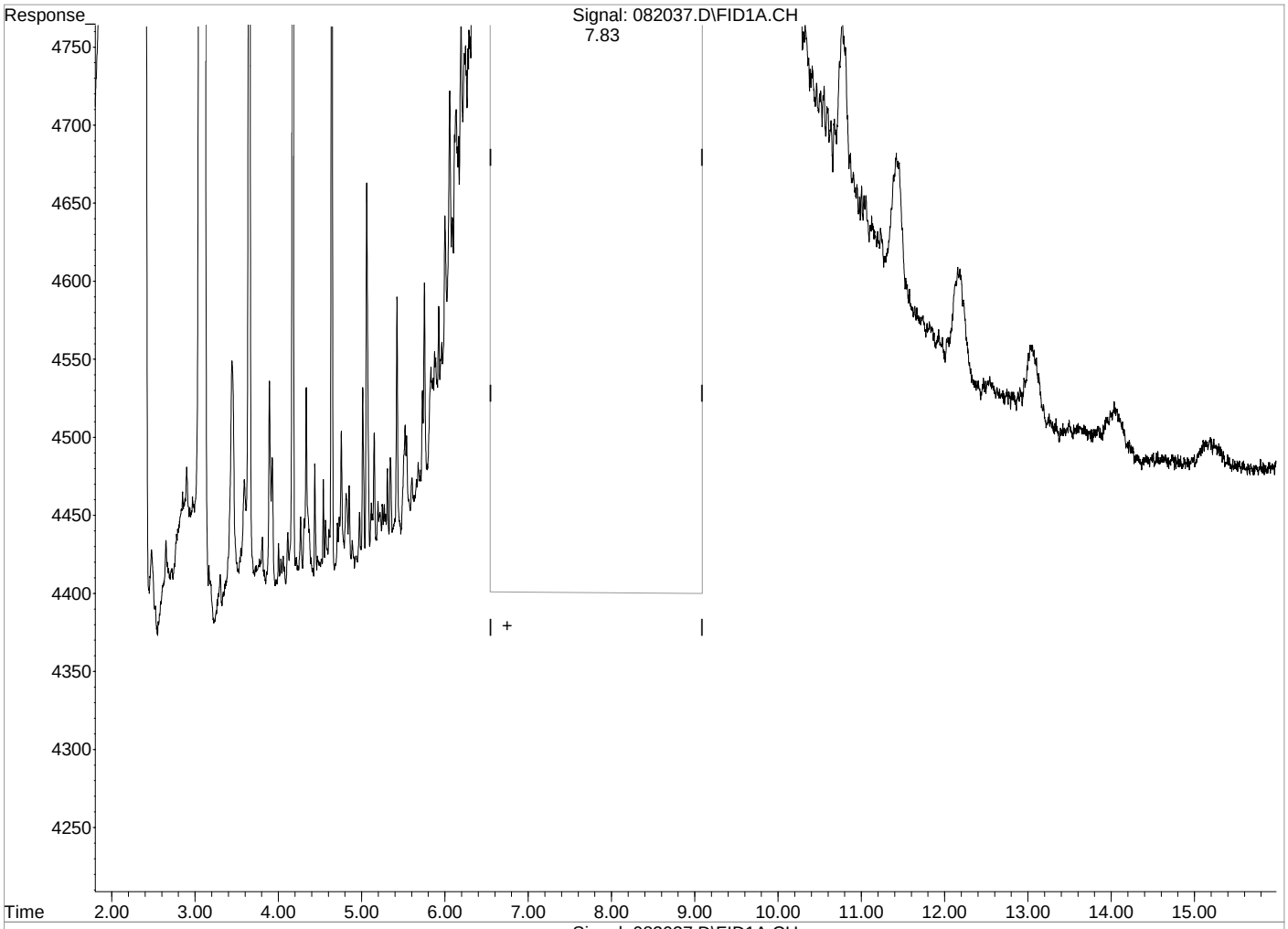
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082037.D Vial: 2
Acq On : 20 Aug 2018 3:11 pm Operator: SMS
Sample : SVF02-44L 200 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:04 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Multiple Level Calibration



Signal: 082037.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 194.885ppm

response 158420

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082038.D Vial: 3
Acq On : 20 Aug 2018 3:33 pm Operator: SMS
Sample : SVF02-44K 500 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:10 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
11) H C25-C36in RRO [AK103]	6.75	393336	483.875 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

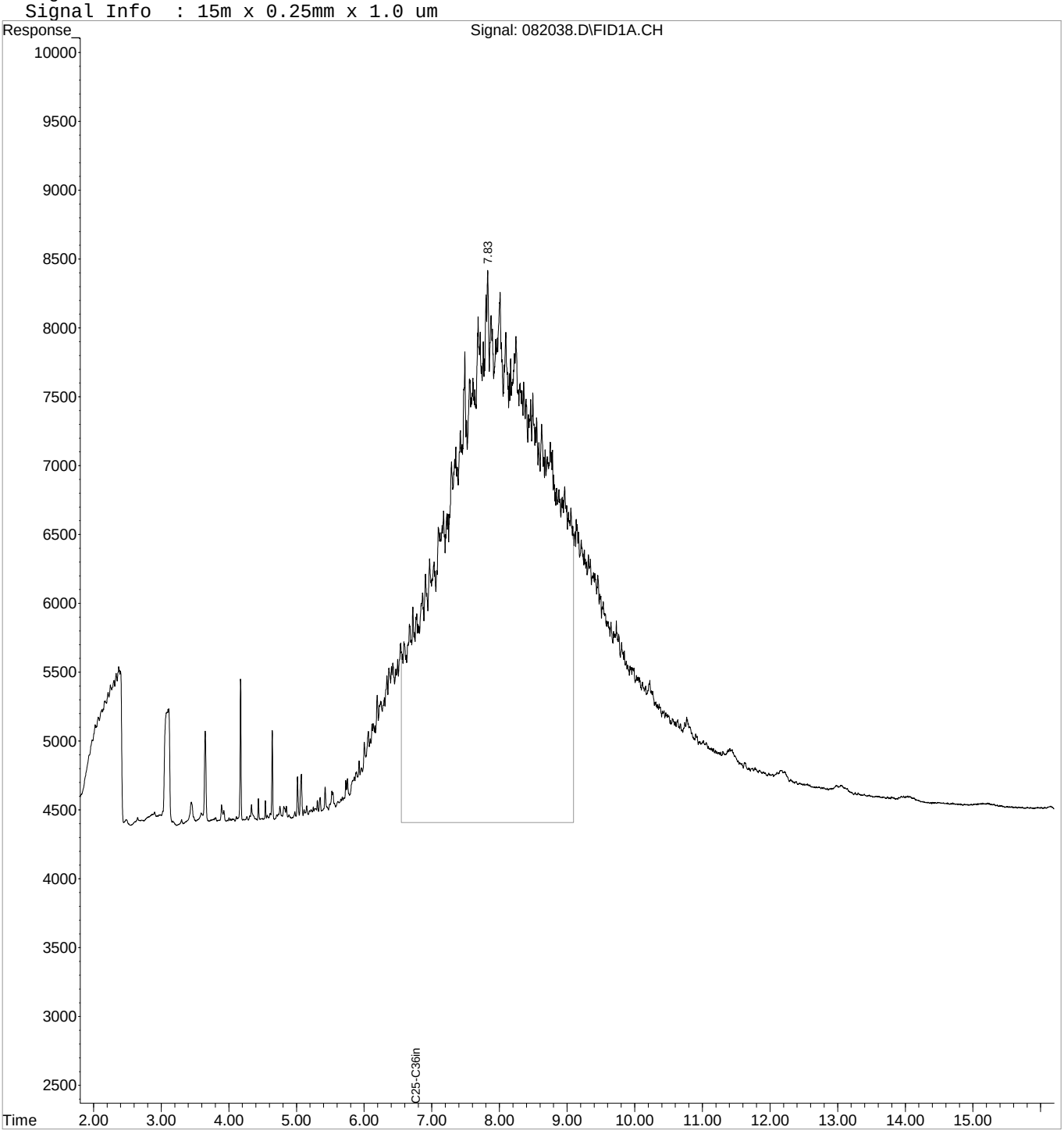
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082038.D Vial: 3
Acq On : 20 Aug 2018 3:33 pm Operator: SMS
Sample : SVF02-44K 500 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:08 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

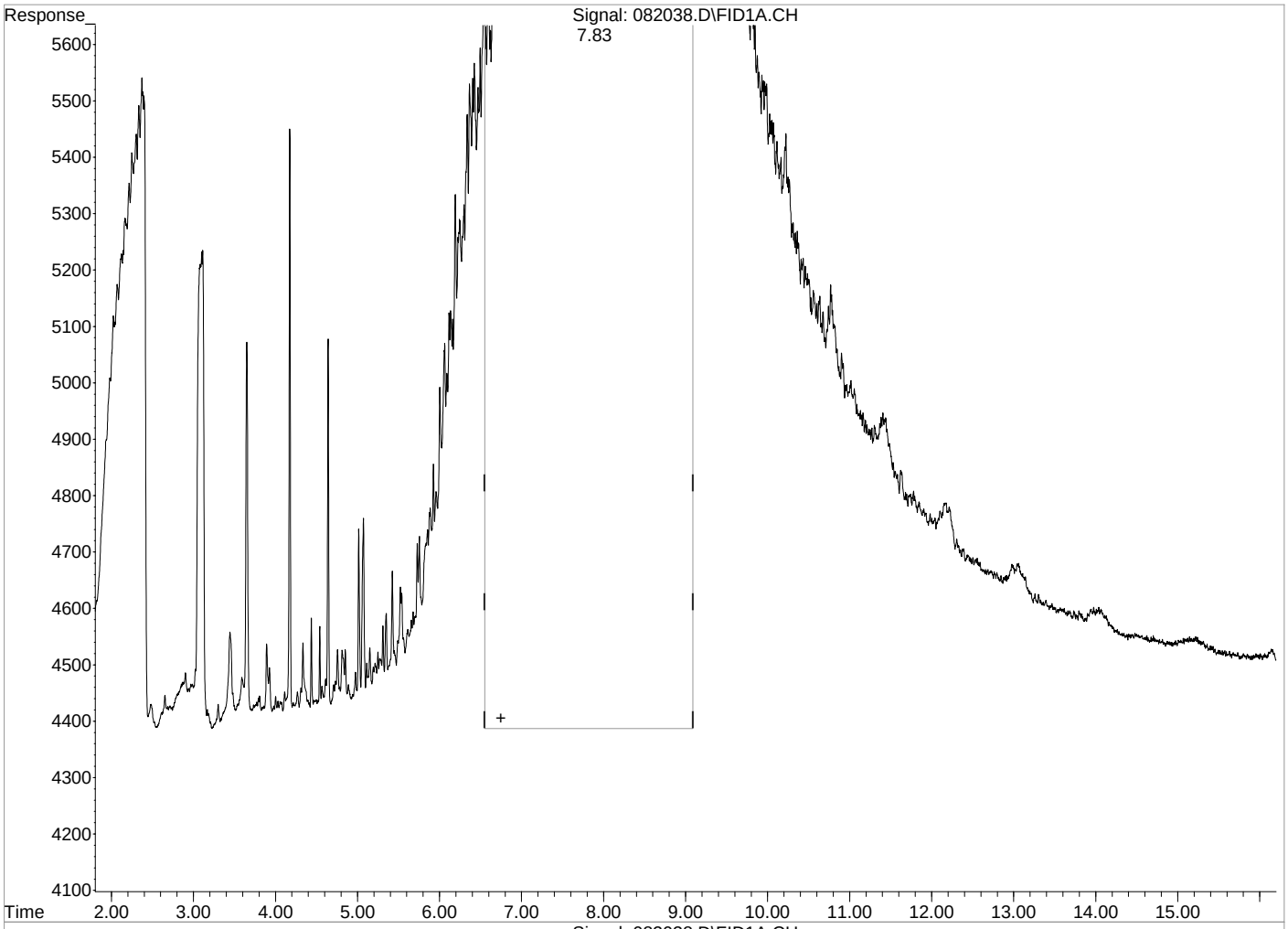


Quantitation Report (Qedit)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082038.D Vial: 3
Acq On : 20 Aug 2018 3:33 pm Operator: SMS
Sample : SVF02-44K 500 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:05 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Multiple Level Calibration



Signal: 082038.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 485.748ppm

response 394859

Manual Integration:

Before

08/21/18

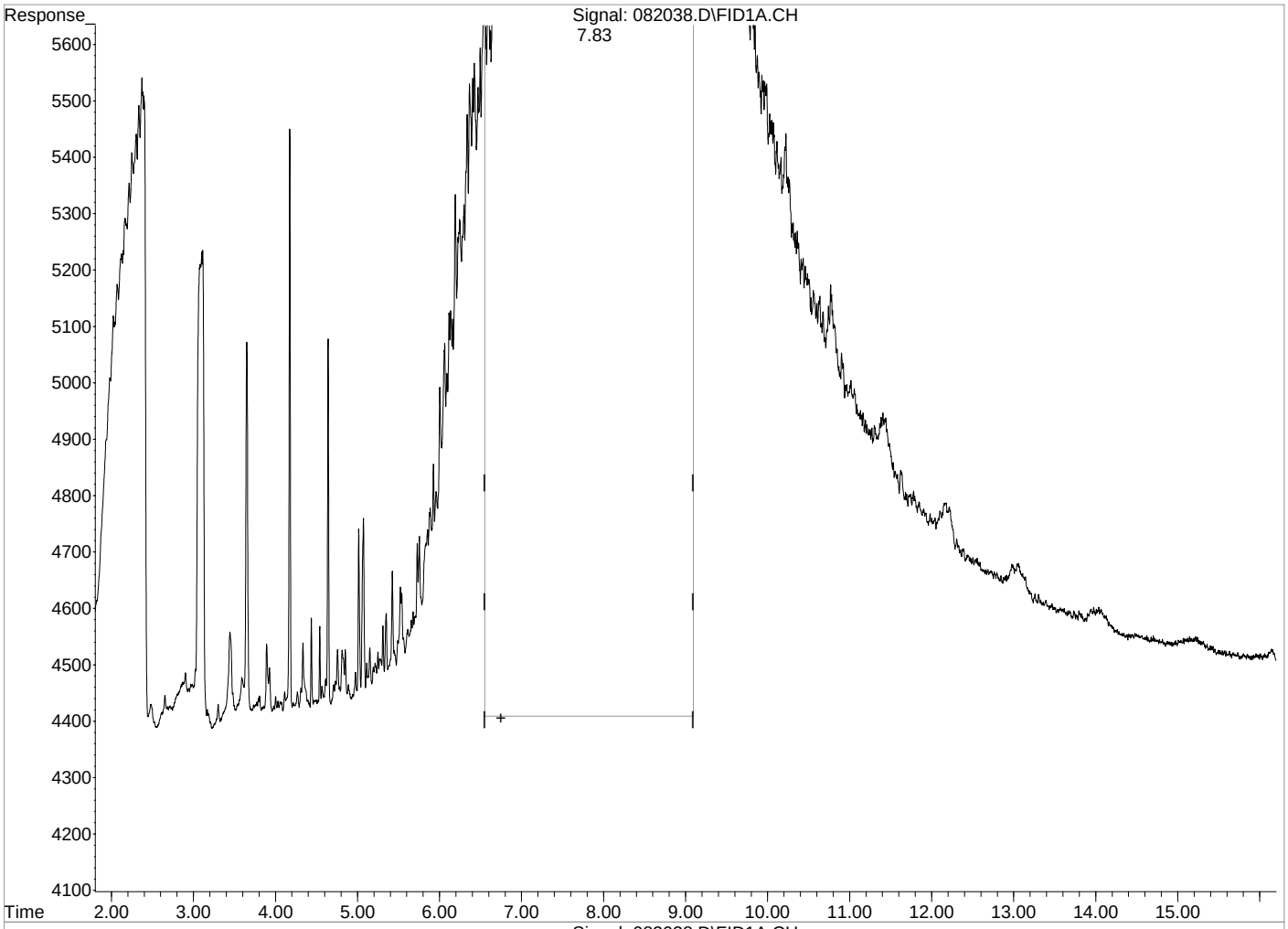
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082038.D Vial: 3
Acq On : 20 Aug 2018 3:33 pm Operator: SMS
Sample : SVF02-44K 500 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:05 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Multiple Level Calibration



Signal: 082038.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 483.875ppm

response 393336

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082039.D Vial: 4
Acq On : 20 Aug 2018 3:55 pm Operator: SMS
Sample : SVF02-44J 2K AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:10 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
11) H	C25-C36in RRO [AK103]	6.75	1435647	1766.107 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

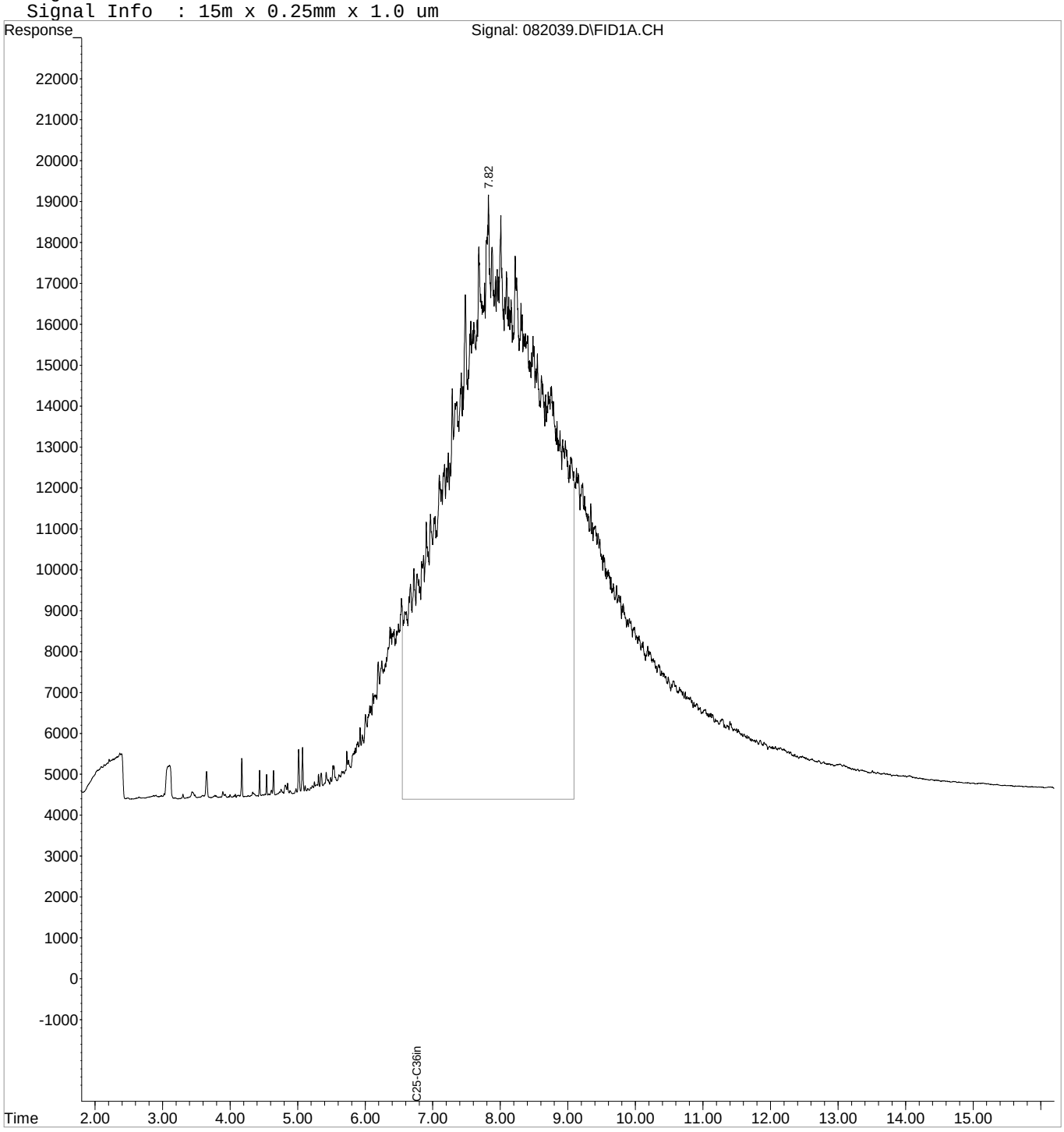
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082039.D Vial: 4
Acq On : 20 Aug 2018 3:55 pm Operator: SMS
Sample : SVF02-44J 2K AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:05 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082040.D Vial: 5
Acq On : 20 Aug 2018 4:16 pm Operator: SMS
Sample : SVF02-44I 5K AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:11 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
	Target Compounds				
11) H	C25-C36in RRO [AK103]	6.75	3844636	4729.602	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

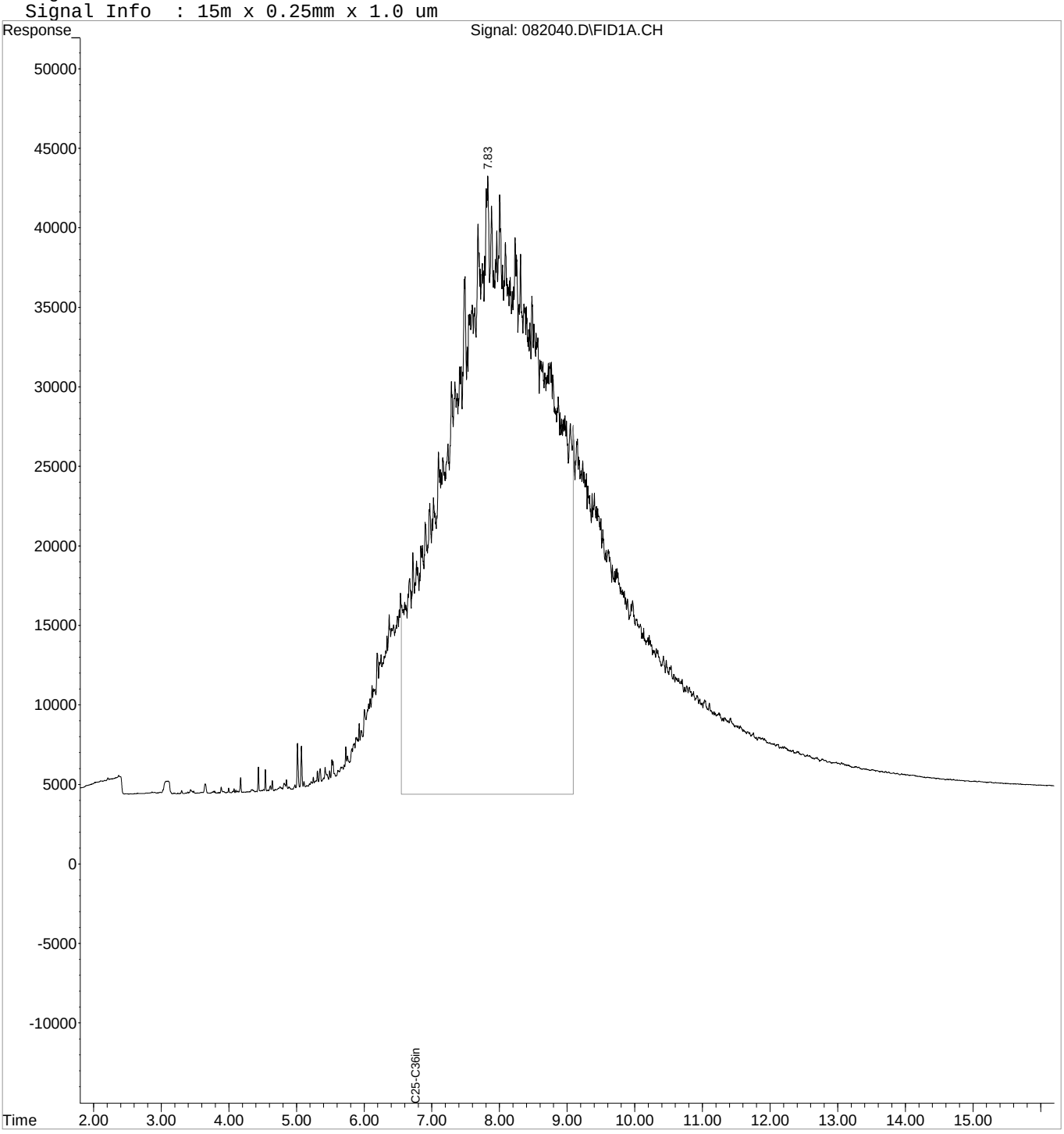
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082040.D Vial: 5
Acq On : 20 Aug 2018 4:16 pm Operator: SMS
Sample : SVF02-44I 5K AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:06 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082041.D Vial: 6
Acq On : 20 Aug 2018 4:38 pm Operator: SMS
Sample : SVF02-45A ICV AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:10:30 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:09:56 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
	Target Compounds				
11) H	C25-C36in RRO [AK103]	6.75	861038	1097.948	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

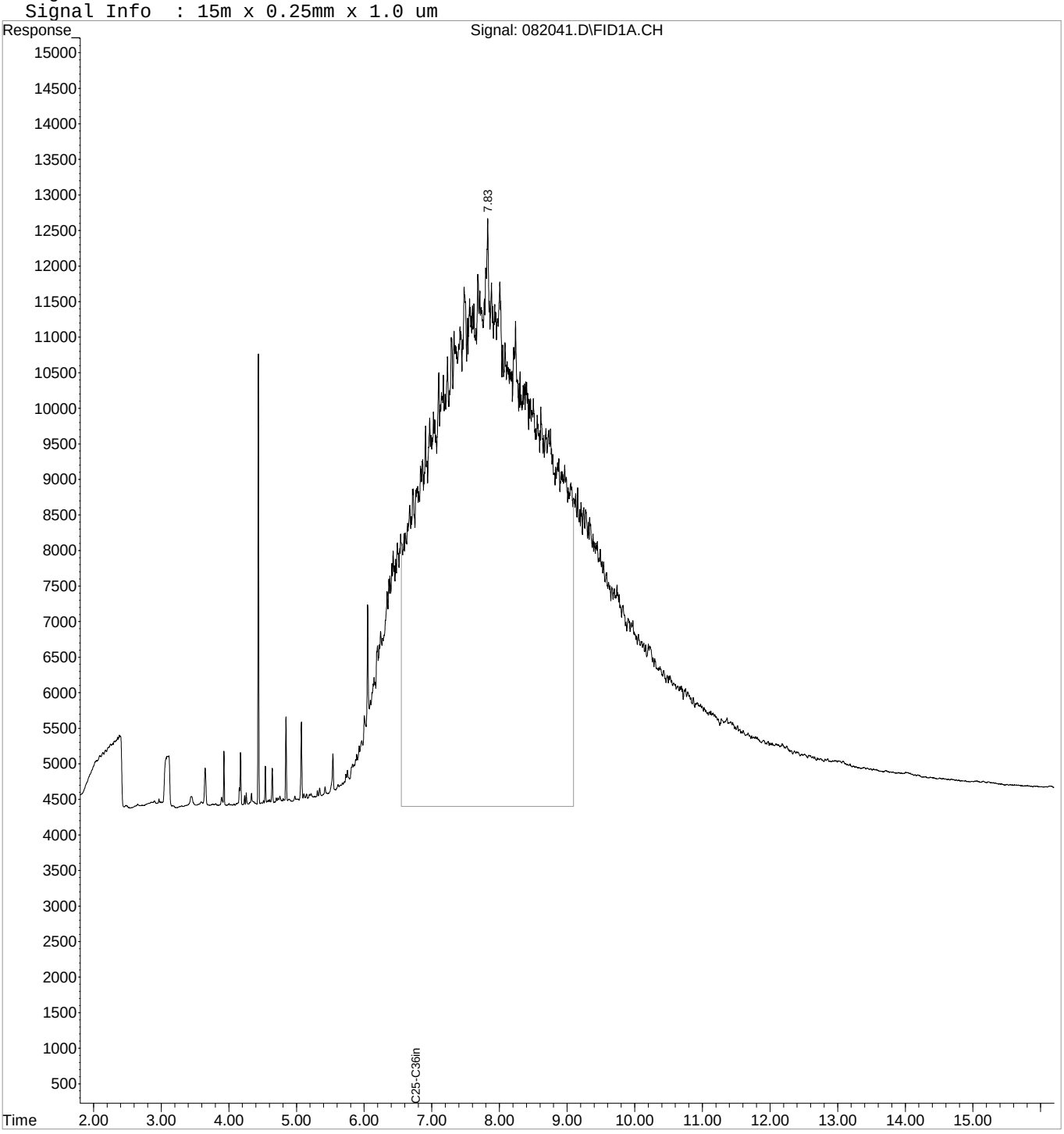
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082041.D Vial: 6
Acq On : 20 Aug 2018 4:38 pm Operator: SMS
Sample : SVF02-45A ICV AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:11 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:09:56 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

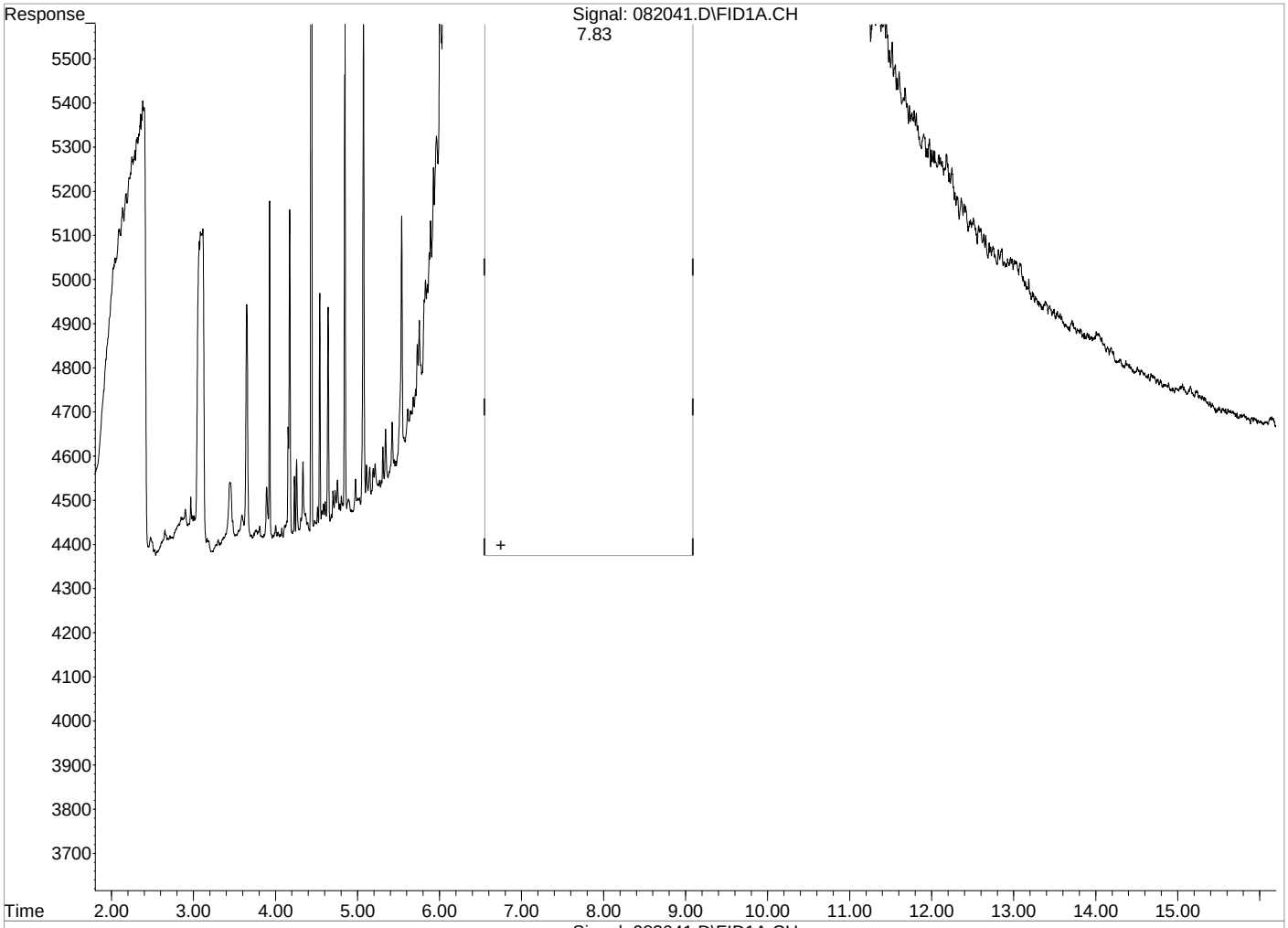


Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082041.D Vial: 6
Acq On : 20 Aug 2018 4:38 pm Operator: SMS
Sample : SVF02-45A ICV AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:10 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:09:56 2018
Response via : Multiple Level Calibration



Signal: 082041.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 1101.367ppm

response 863719

Manual Integration:

Before

08/21/18

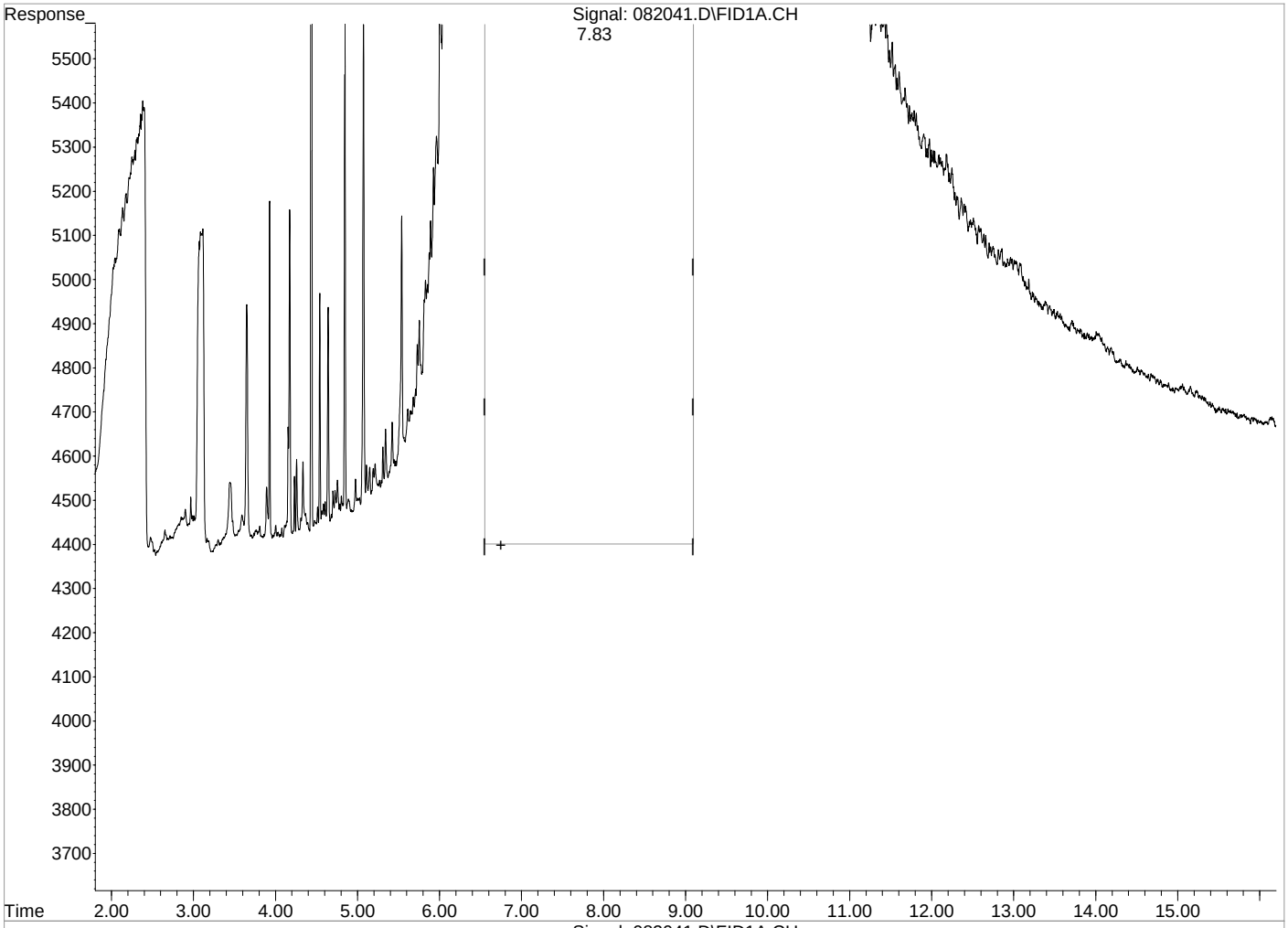
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082041.D Vial: 6
Acq On : 20 Aug 2018 4:38 pm Operator: SMS
Sample : SVF02-45A ICV AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:10 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:09:56 2018
Response via : Multiple Level Calibration



Signal: 082041.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 1097.948ppm

response 861038

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\082018F\082042.D Vial: 86
Acq On : 20 Aug 2018 5:00 pm Operator: SMS
Sample : IB Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:11:21 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:09:56 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.14	14617	9.657 ppm
7) H	C10-C28in DRO [8015]	3.24	17611	11.186 ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	8746	6.761 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

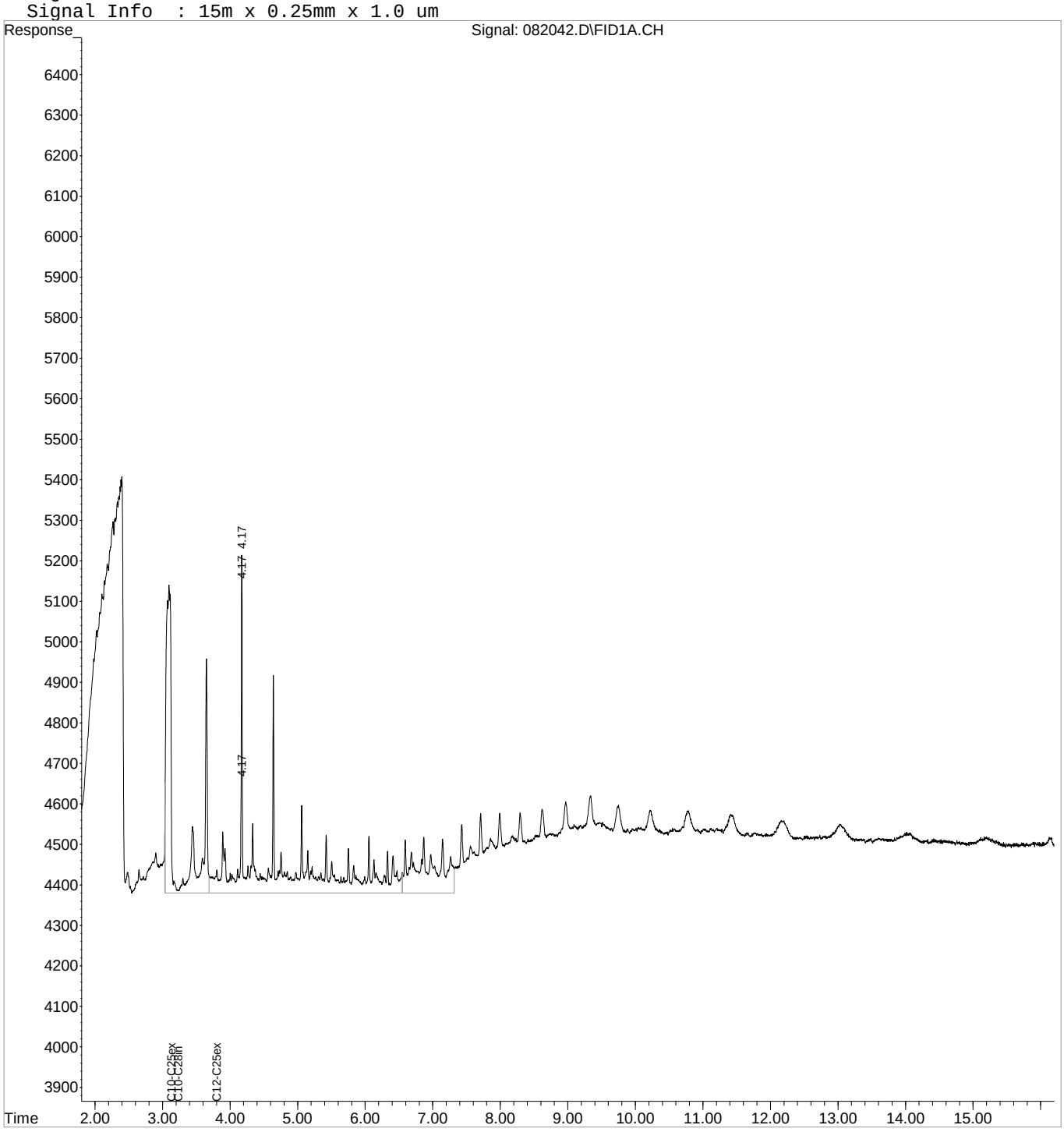
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082042.D Vial: 86
Acq On : 20 Aug 2018 5:00 pm Operator: SMS
Sample : IB Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:11 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:09:56 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:23 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.80	923	1.106	ppm
Spiked Amount	50.000	Recovery	=	2.21%	
2) S	o-Terphenyl	5.48	1765	0.973	ppm
Spiked Amount	50.000	Recovery	=	1.95%	
3) S	n-Triacontane	7.61	1436	1.047	ppm
Spiked Amount	50.000	Recovery	=	2.09%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.14	36430	24.068	ppm
7) H	C10-C28in DRO [8015]	3.24	38735	24.603	ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	28435	21.981	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

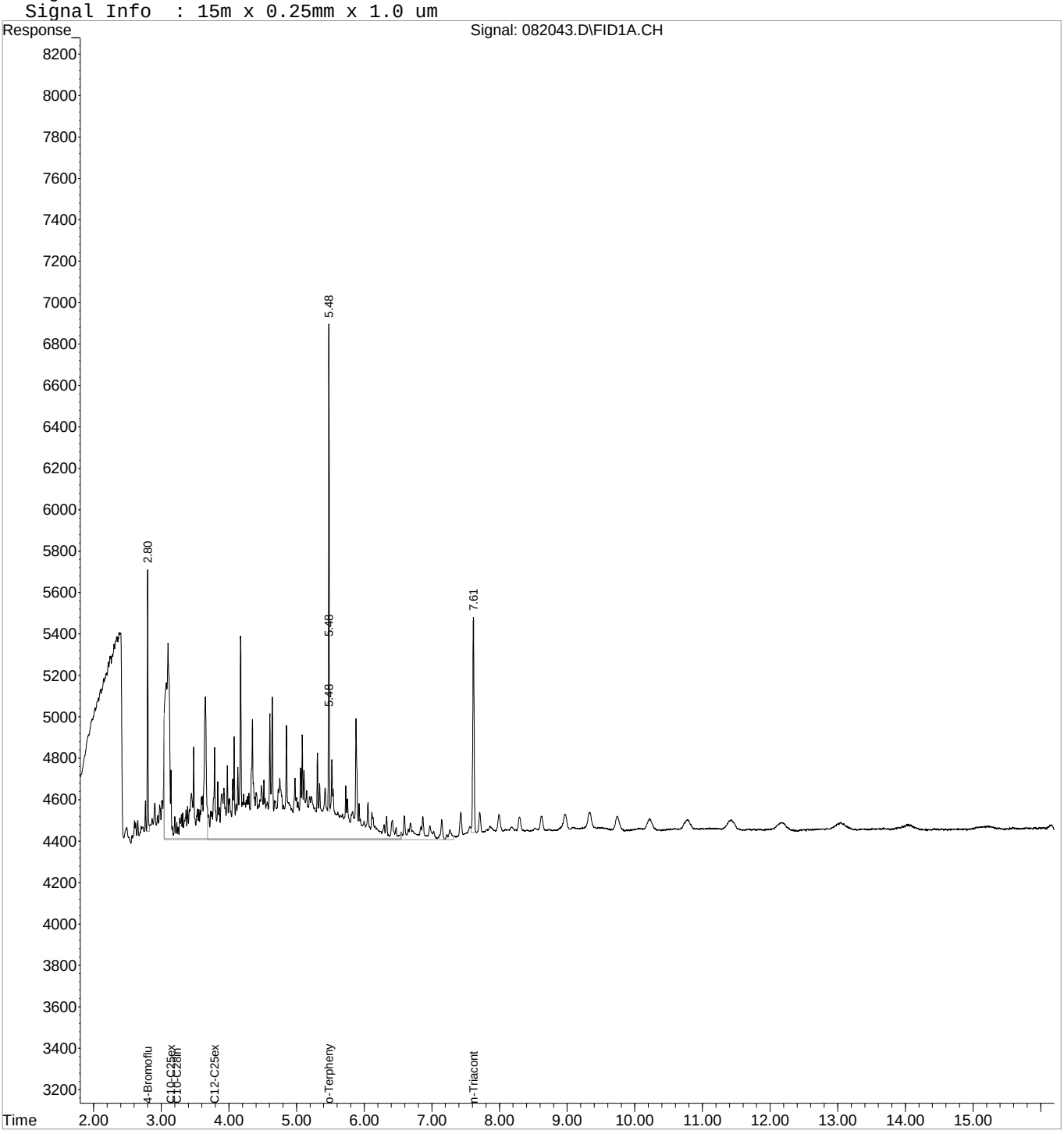
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:22 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

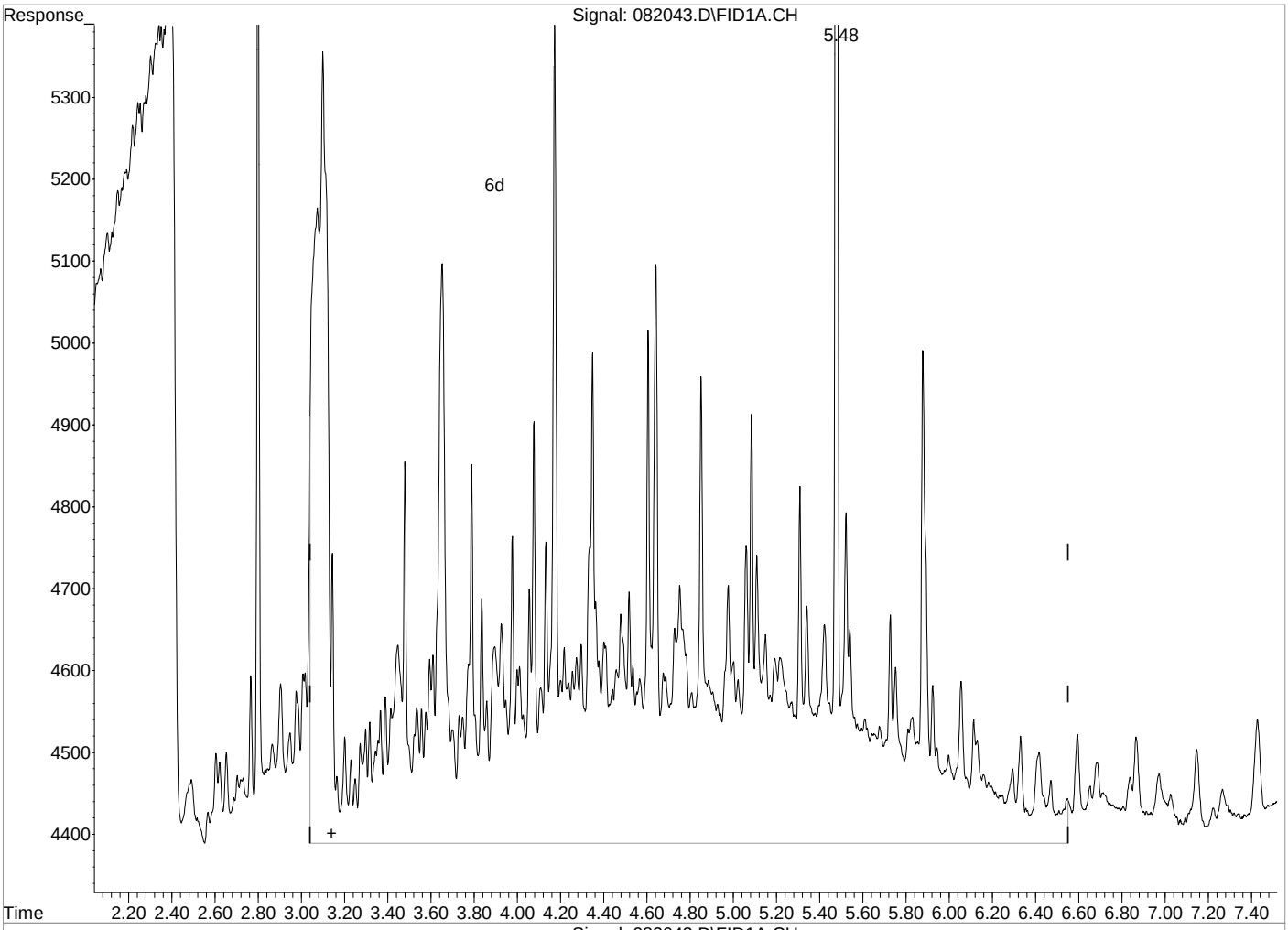


Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:14 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:20:01 2018
Response via : Multiple Level Calibration



Signal: 082043.D\FID1A.CH

(6) C10-C25ex DRO [AK102] (H)

3.14min 27.270ppm

response 41277

Manual Integration:

Before

08/21/18

(+) = Expected Retention Time

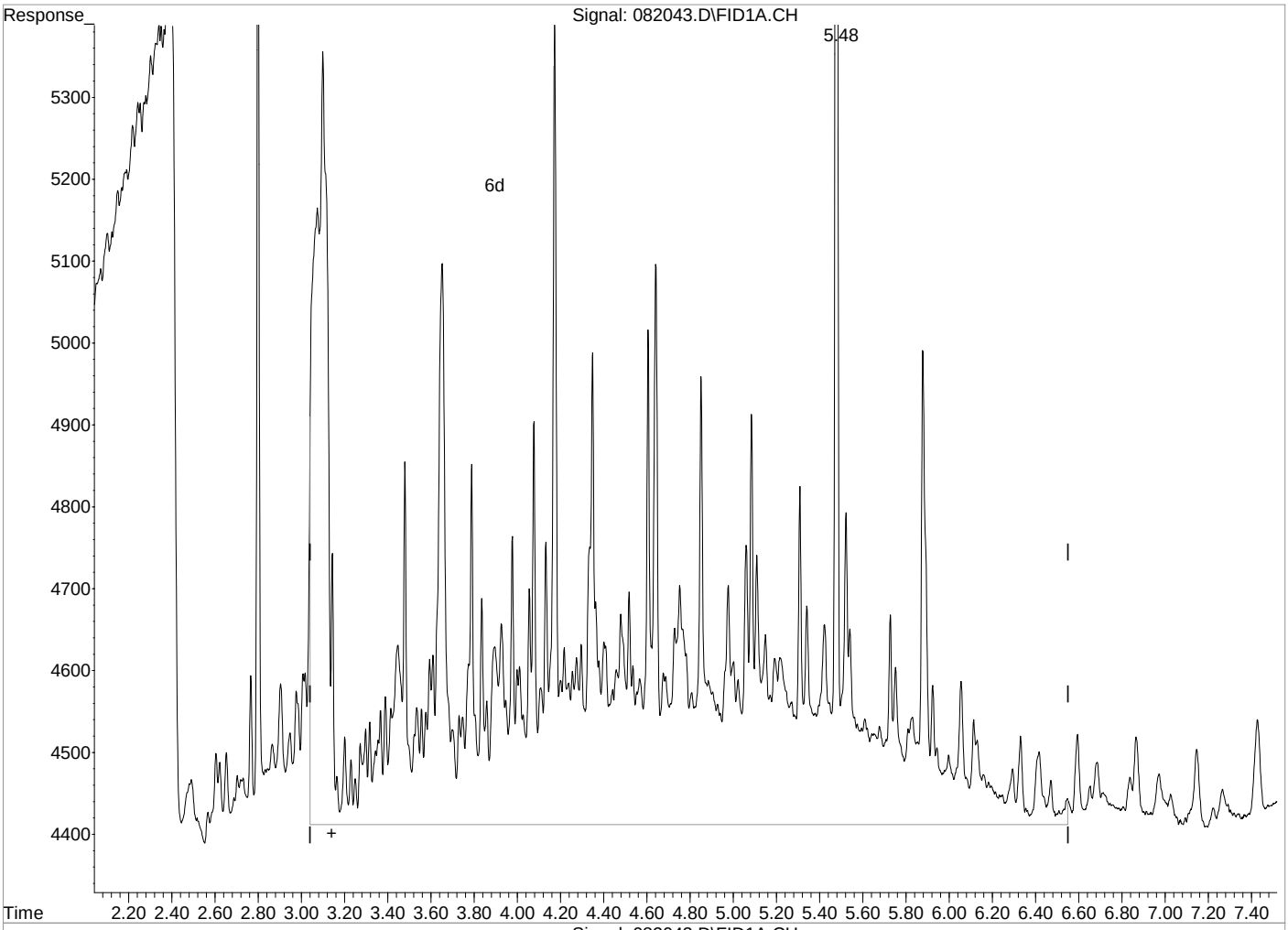
082043.D 082018F.M Tue Aug 21 07:21:44 2018

Quantitation Report (Qedit)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:14 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:20:01 2018
Response via : Multiple Level Calibration



Signal: 082043.D\FID1A.CH

(6) C10-C25ex DRO [AK102] (H)

3.14min 24.068ppm

response 36430

Manual Integration:

After

Baseline/Shoulder

08/21/18

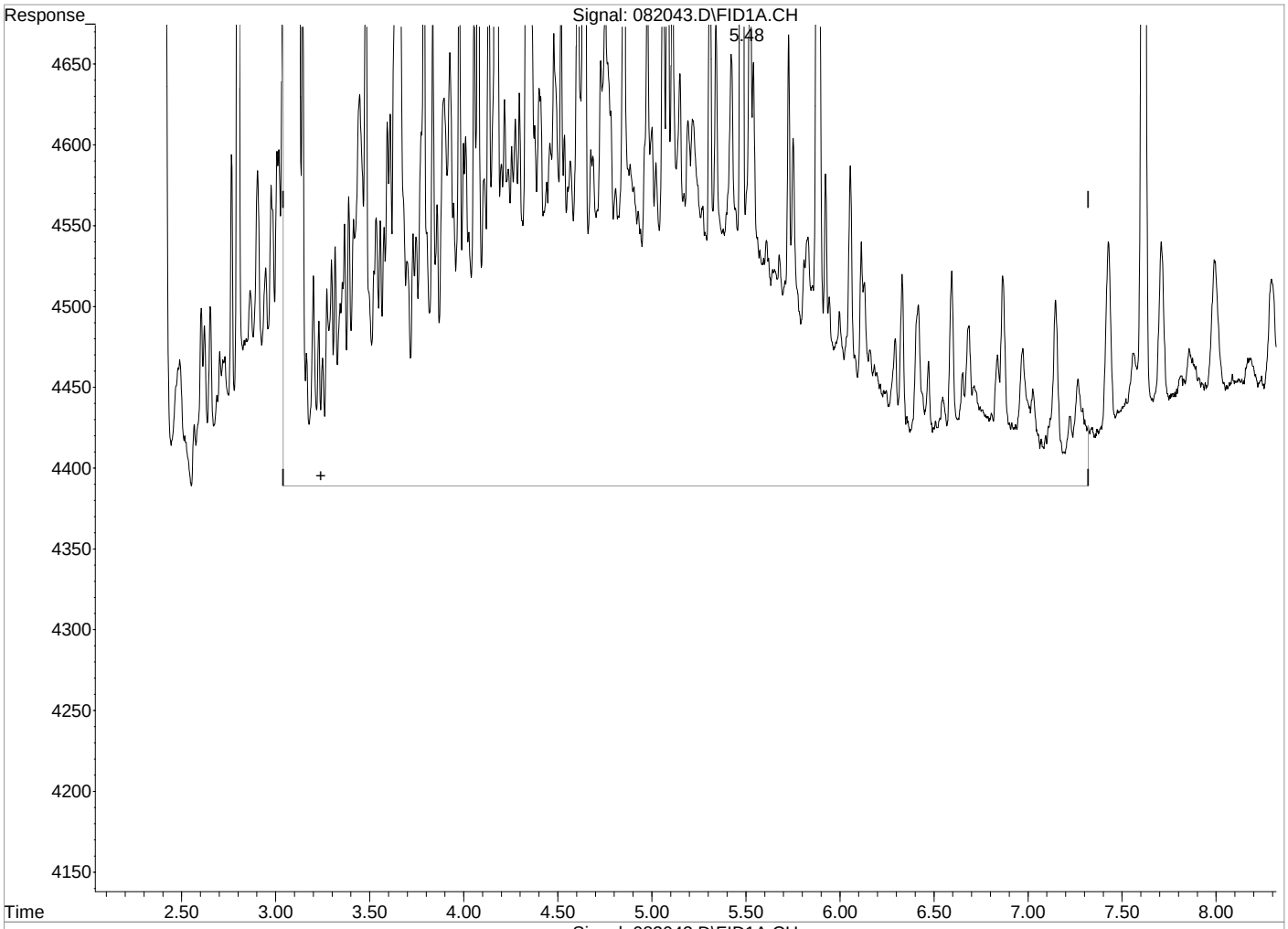
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:14 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:20:01 2018
Response via : Multiple Level Calibration



Signal: 082043.D\FID1A.CH

(7) C10-C28in DRO [8015] (H)

3.24min 27.775ppm

response 43729

Manual Integration:

Before

08/21/18

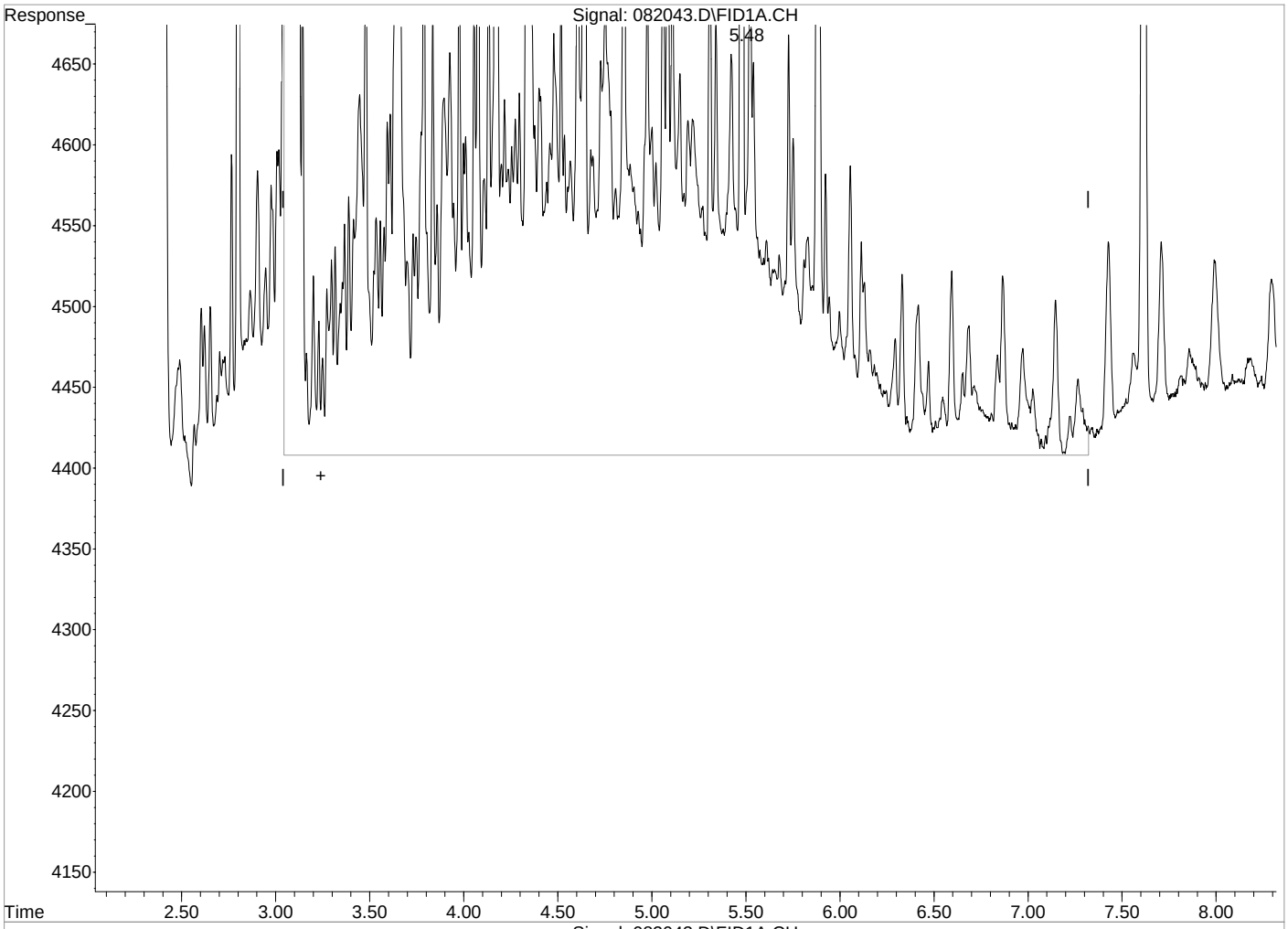
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:14 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:20:01 2018
Response via : Multiple Level Calibration



Signal: 082043.D\FID1A.CH

(7) C10-C28in DRO [8015] (H)

3.24min 24.603ppm

response 38735

Manual Integration:

After

Baseline/Shoulder

08/21/18

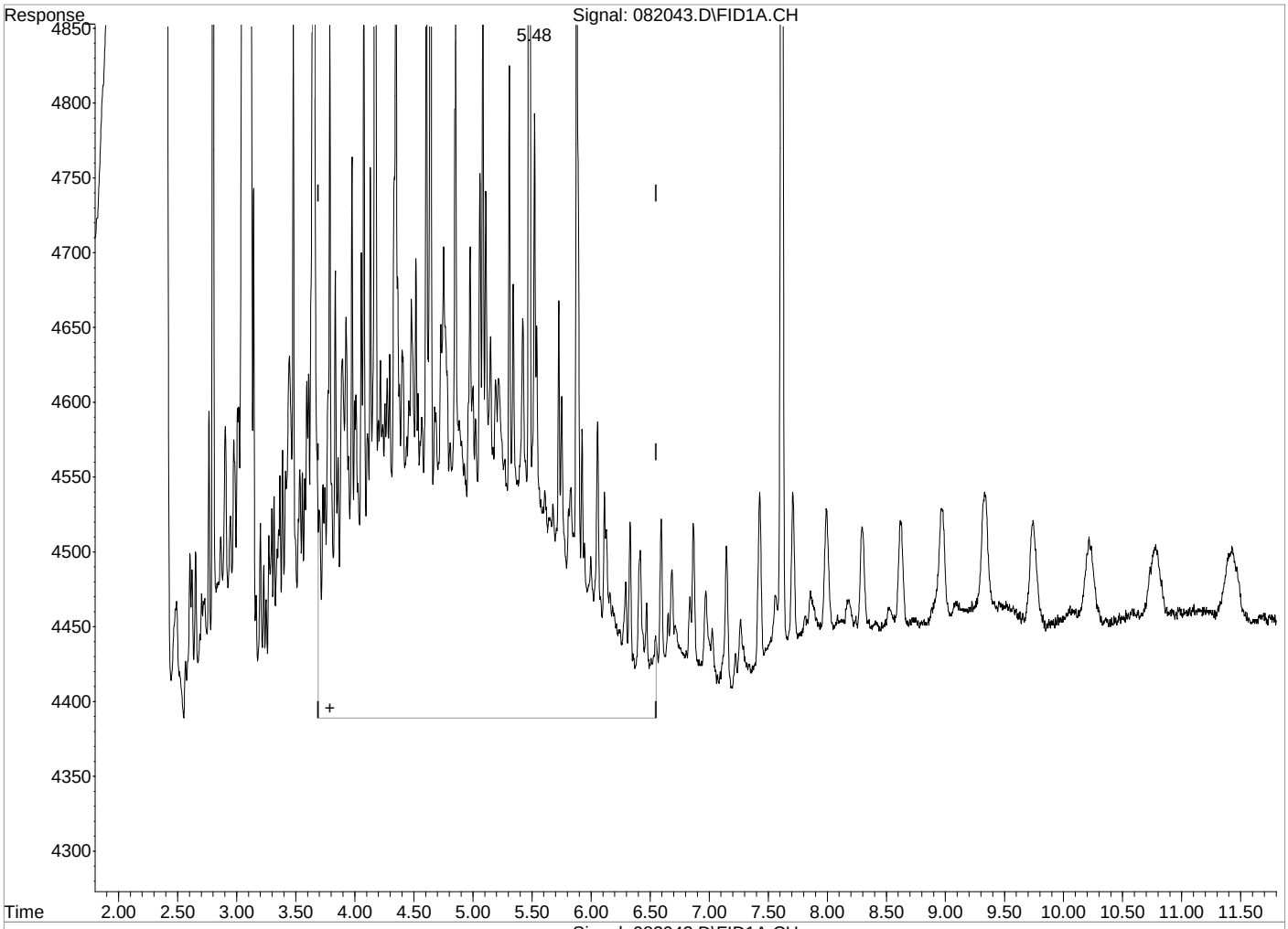
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:14 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:20:01 2018
Response via : Multiple Level Calibration



Signal: 082043.D\FID1A.CH

(8) C12-C25ex DRO [NWTPH] (H)

3.79min 24.474ppm

response 31659

Manual Integration:

Before

08/21/18

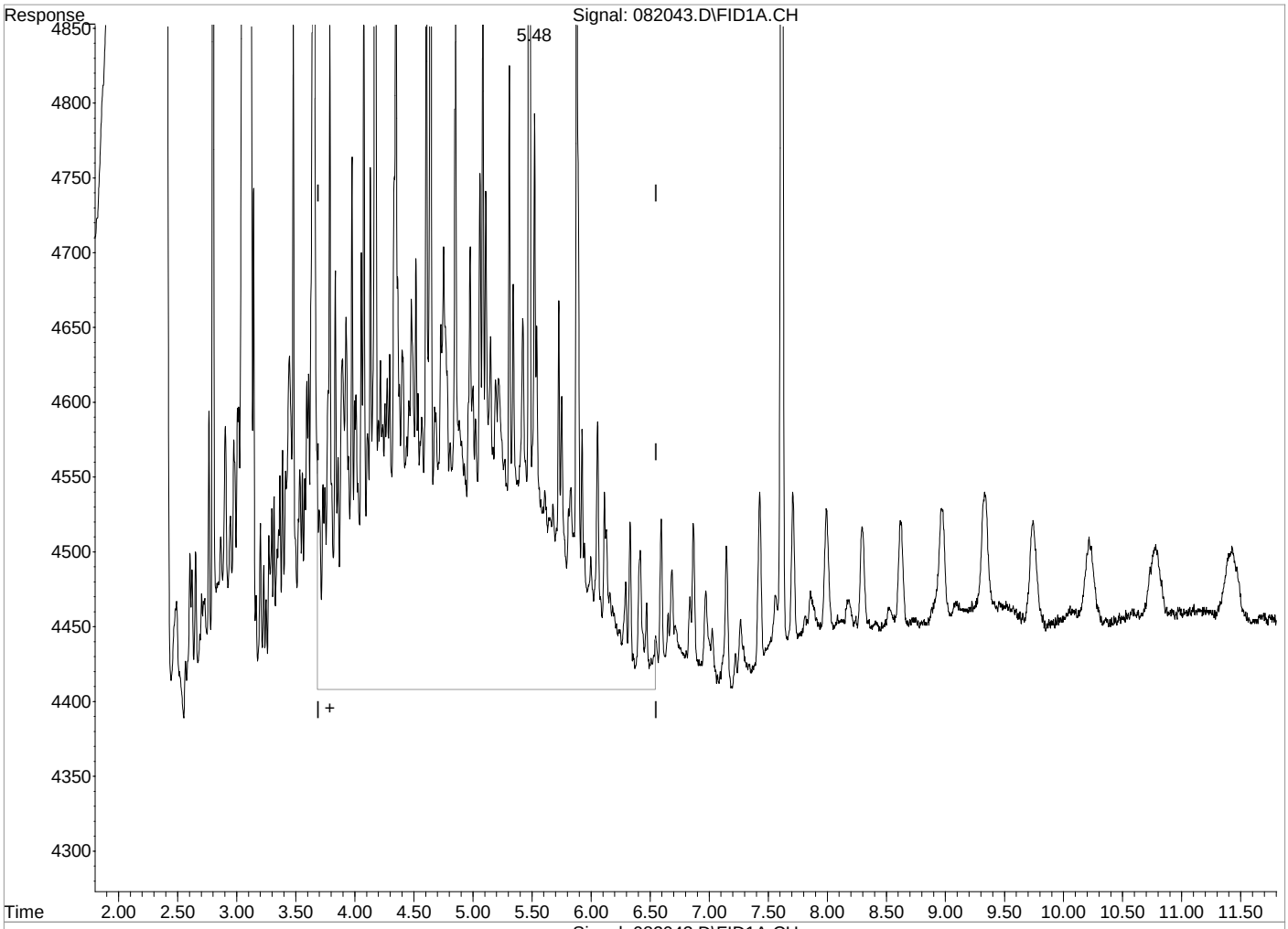
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:14 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:20:01 2018
Response via : Multiple Level Calibration



Signal: 082043.D\FID1A.CH

(8) C12-C25ex DRO [NWTPH] (H)

3.79min 21.981ppm

response 28435

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082044.D Vial: 8
Acq On : 20 Aug 2018 5:43 pm Operator: SMS
Sample : DRO 50/2.5 SVF02-45H Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:24 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.80	1996	2.393	ppm
Spiked Amount	50.000	Recovery	=	4.79%	
2) S	o-Terphenyl	5.48	3794	2.092	ppm
Spiked Amount	50.000	Recovery	=	4.18%	
3) S	n-Triacontane	7.61	3080	2.245	ppm
Spiked Amount	50.000	Recovery	=	4.49%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.14	69919	46.193	ppm
7) H	C10-C28in DRO [8015]	3.24	72003	45.733	ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	56661	43.801	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

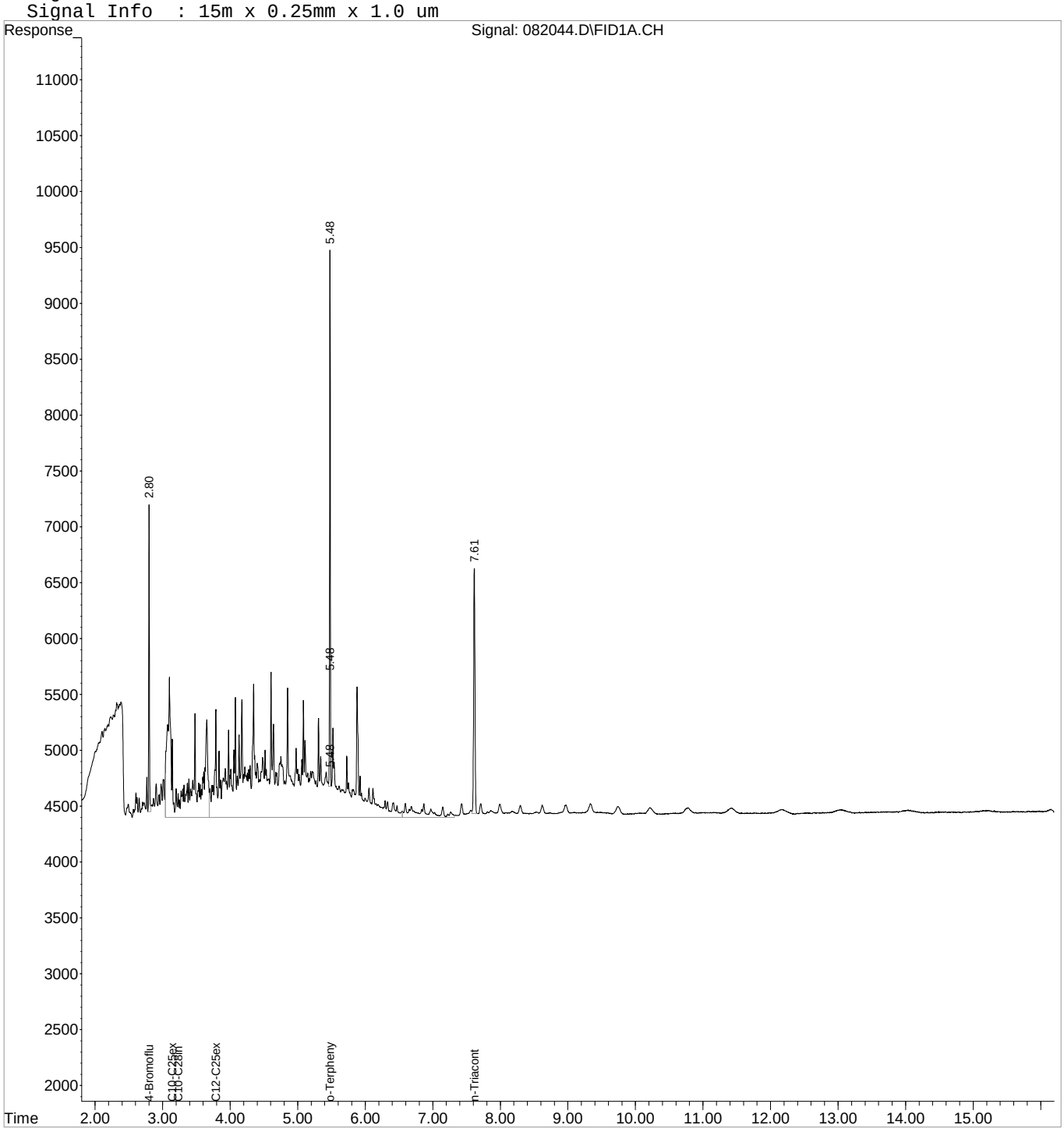
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082044.D Vial: 8
Acq On : 20 Aug 2018 5:43 pm Operator: SMS
Sample : DRO 50/2.5 SVF02-45H Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:15 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\082018F\082045.D Vial: 9
Acq On : 20 Aug 2018 6:04 pm Operator: SMS
Sample : DRO 200/10 SVF02-45G Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:25 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.80	9367	11.228	ppm
Spiked Amount	50.000	Recovery	=	22.46%	
2) S	o-Terphenyl	5.48	18644	10.278	ppm
Spiked Amount	50.000	Recovery	=	20.56%	
3) S	n-Triacontane	7.61	14750	10.749	ppm
Spiked Amount	50.000	Recovery	=	21.50%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.14	289945	191.555	ppm
7) H	C10-C28in DRO [8015]	3.24	295006	187.373	ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	247885	191.624	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

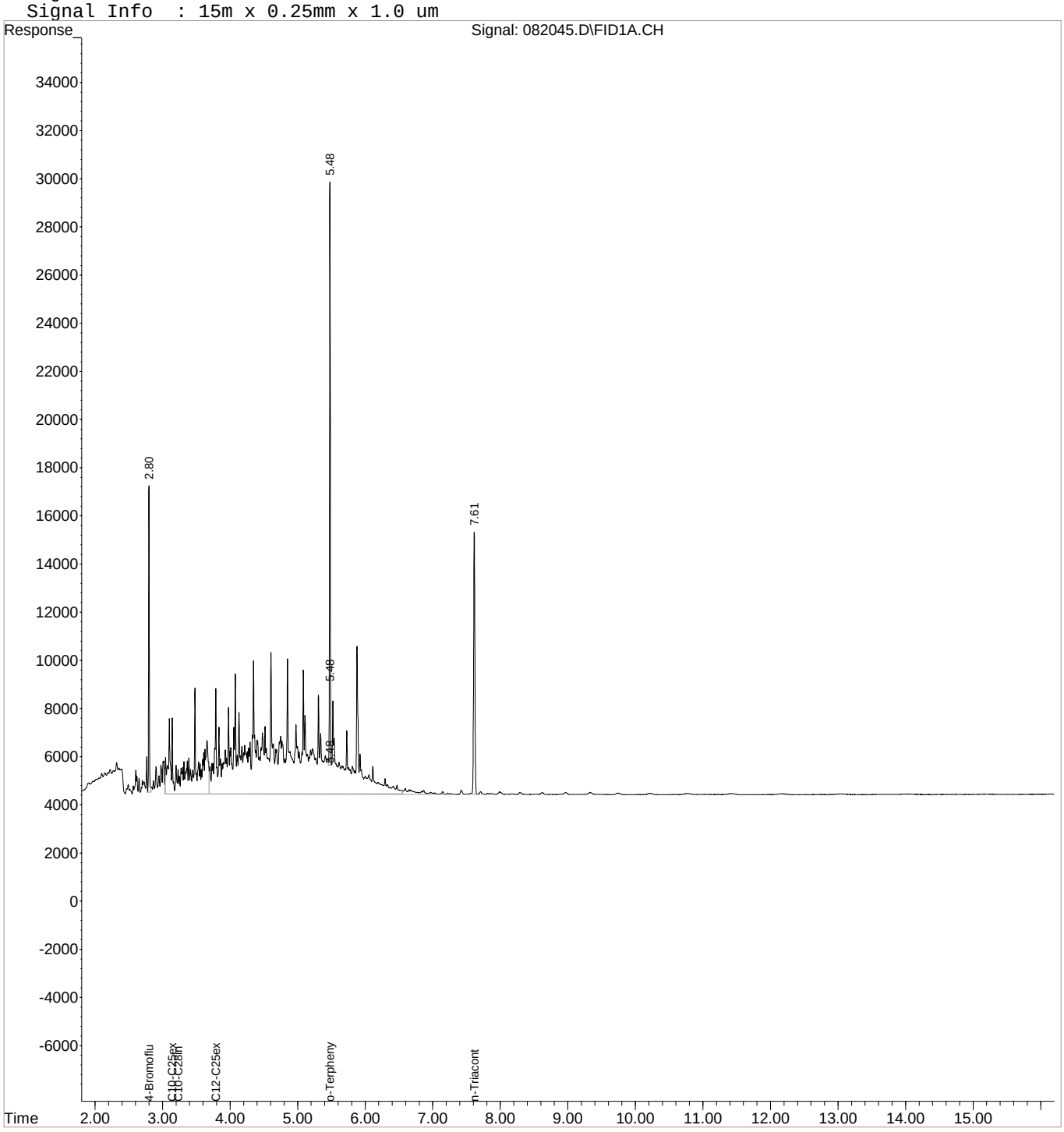
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082045.D Vial: 9
Acq On : 20 Aug 2018 6:04 pm Operator: SMS
Sample : DRO 200/10 SVF02-45G Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:15 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\082018F\082046.D Vial: 10
Acq On : 20 Aug 2018 6:26 pm Operator: SMS
Sample : DRO 500/25 SVF02-45F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:26 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 4-Bromofluorobenzene	2.80	22169	26.573 ppm
Spiked Amount 50.000	Recovery =		53.15%
2) S o-Terphenyl	5.48	44220	24.378 ppm
Spiked Amount 50.000	Recovery =		48.76%
3) S n-Triacontane	7.61	35361	25.770 ppm
Spiked Amount 50.000	Recovery =		51.54%
Target Compounds			
6) H C10-C25ex DRO [AK102]	3.14	673684	445.077 ppm
7) H C10-C28in DRO [8015]	3.24	681608	432.924 ppm
8) H C12-C25ex DRO [NWTPH]	3.79	580834	449.006 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

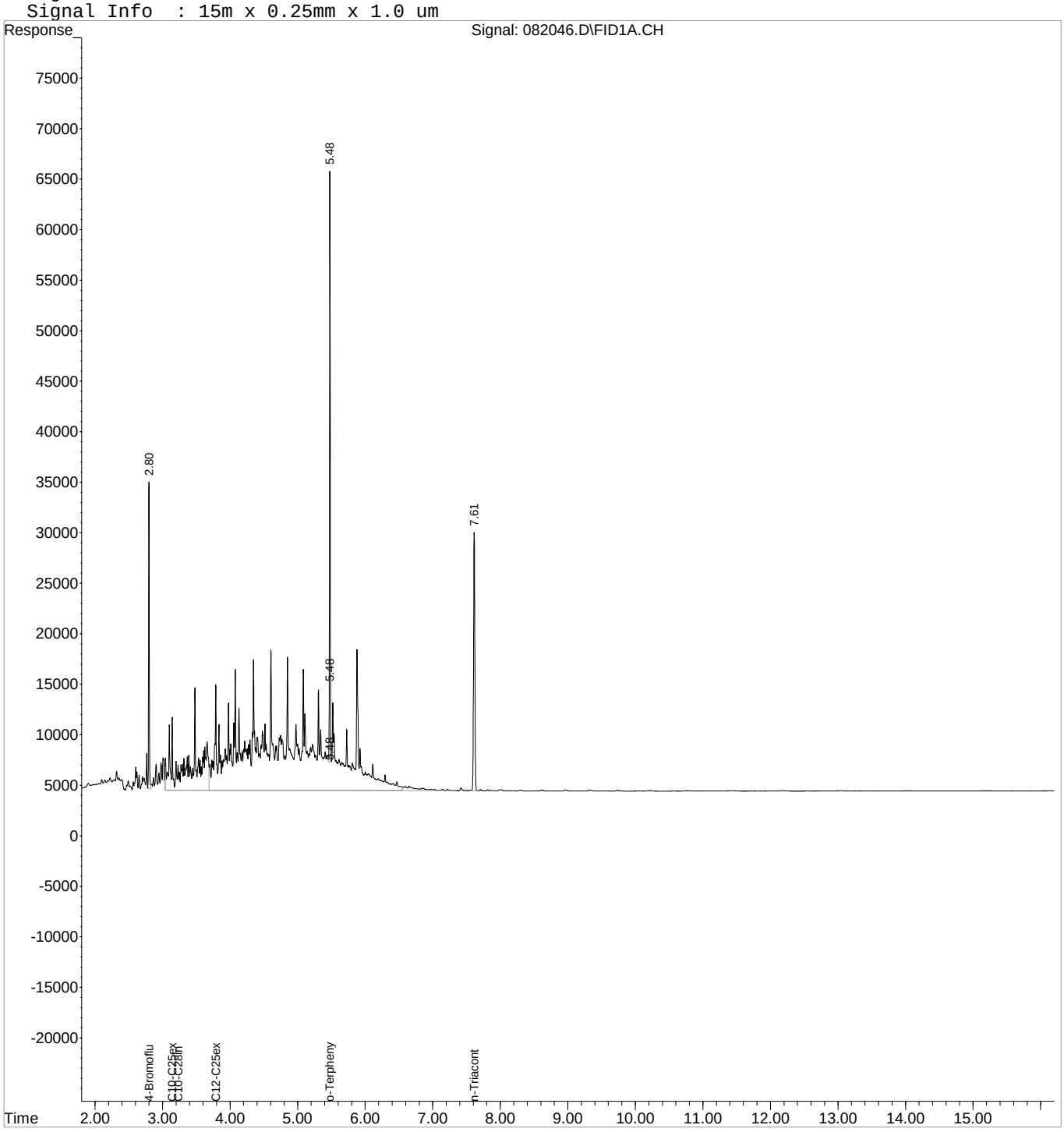
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082046.D Vial: 10
Acq On : 20 Aug 2018 6:26 pm Operator: SMS
Sample : DRO 500/25 SVF02-45F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:16 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\082018F\082047.D Vial: 11
Acq On : 20 Aug 2018 6:48 pm Operator: SMS
Sample : DRO 2K/100 SVF02-45E Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:27 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	4-Bromofluorobenzene	2.80	97765	117.187 ppm
Spiked Amount	50.000	Recovery	=	234.37%
2) S	o-Terphenyl	5.48	194267	107.097 ppm
Spiked Amount	50.000	Recovery	=	214.19%
3) S	n-Triacontane	7.62	153112	111.582 ppm
Spiked Amount	50.000	Recovery	=	223.16%
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.14	2985881	1972.655 ppm
7) H	C10-C28in DRO [8015]	3.24	3016434	1915.892 ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	2585018	1998.314 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

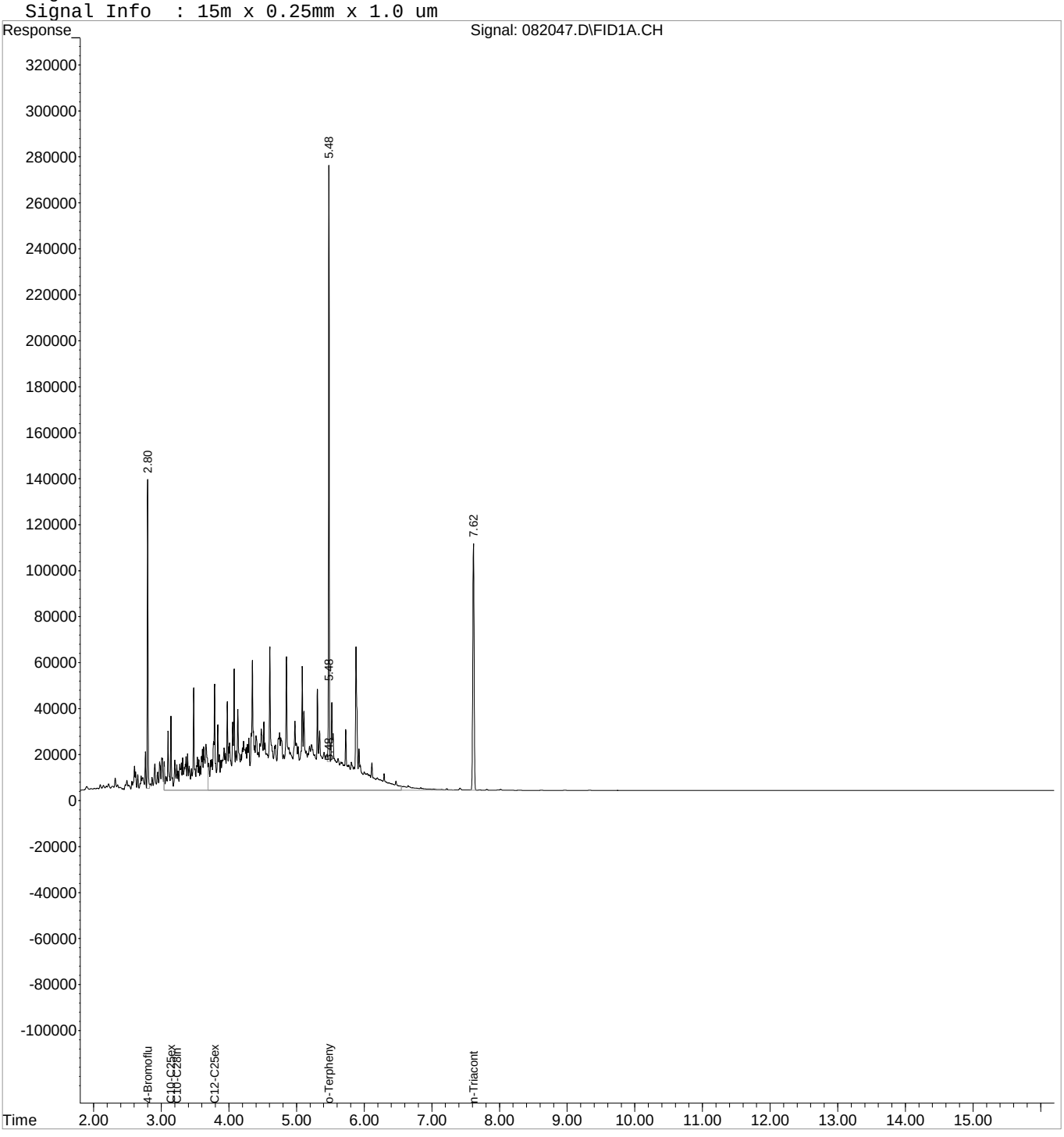
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082047.D Vial: 11
Acq On : 20 Aug 2018 6:48 pm Operator: SMS
Sample : DRO 2K/100 SVF02-45E Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:16 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\082018F\082048.D Vial: 12
Acq On : 20 Aug 2018 7:09 pm Operator: SMS
Sample : DRO 5K/250 SVF02-45D Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:27 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	4-Bromofluorobenzene	2.80	236245	283.178 ppm
Spiked Amount	50.000	Recovery	=	566.36%
2) S	o-Terphenyl	5.48	454361	250.483 ppm
Spiked Amount	50.000	Recovery	=	500.97%
3) S	n-Triacontane	7.62	357350	260.423 ppm
Spiked Amount	50.000	Recovery	=	520.85%
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.14	7054270	4660.480 ppm
7) H	C10-C28in DRO [8015]	3.24	7134065	4531.211 ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	6094740	4711.457 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

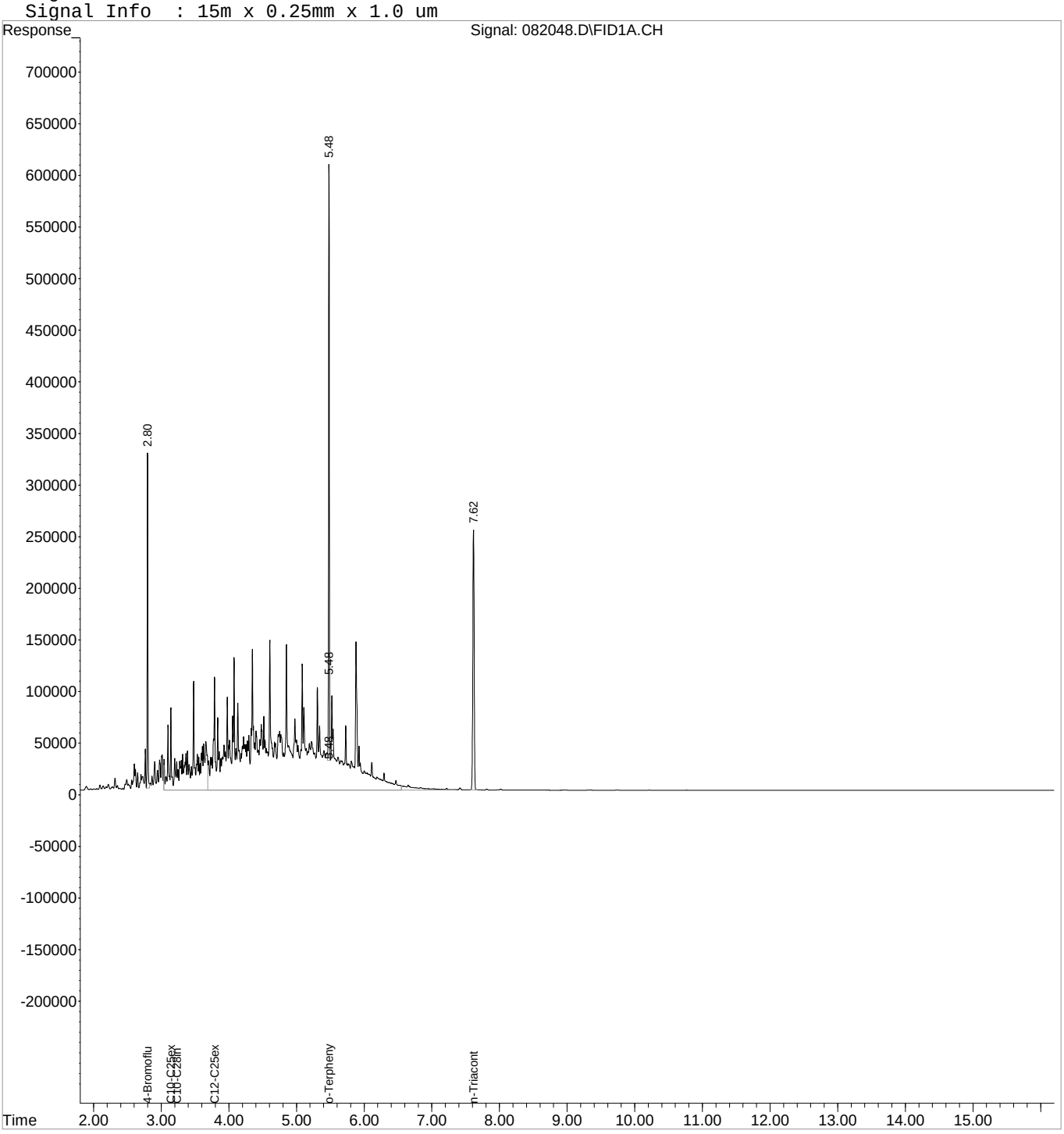
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082048.D Vial: 12
Acq On : 20 Aug 2018 7:09 pm Operator: SMS
Sample : DRO 5K/250 SVF02-45D Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:17 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082049.D Vial: 13
Acq On : 20 Aug 2018 7:31 pm Operator: SMS
Sample : DRO 20K SVF02-45C Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:28 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.14	28933871	19115.476 ppm
7) H	C10-C28in DRO [8015]	3.24	29269769	18590.733 ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	25035514	19353.370 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

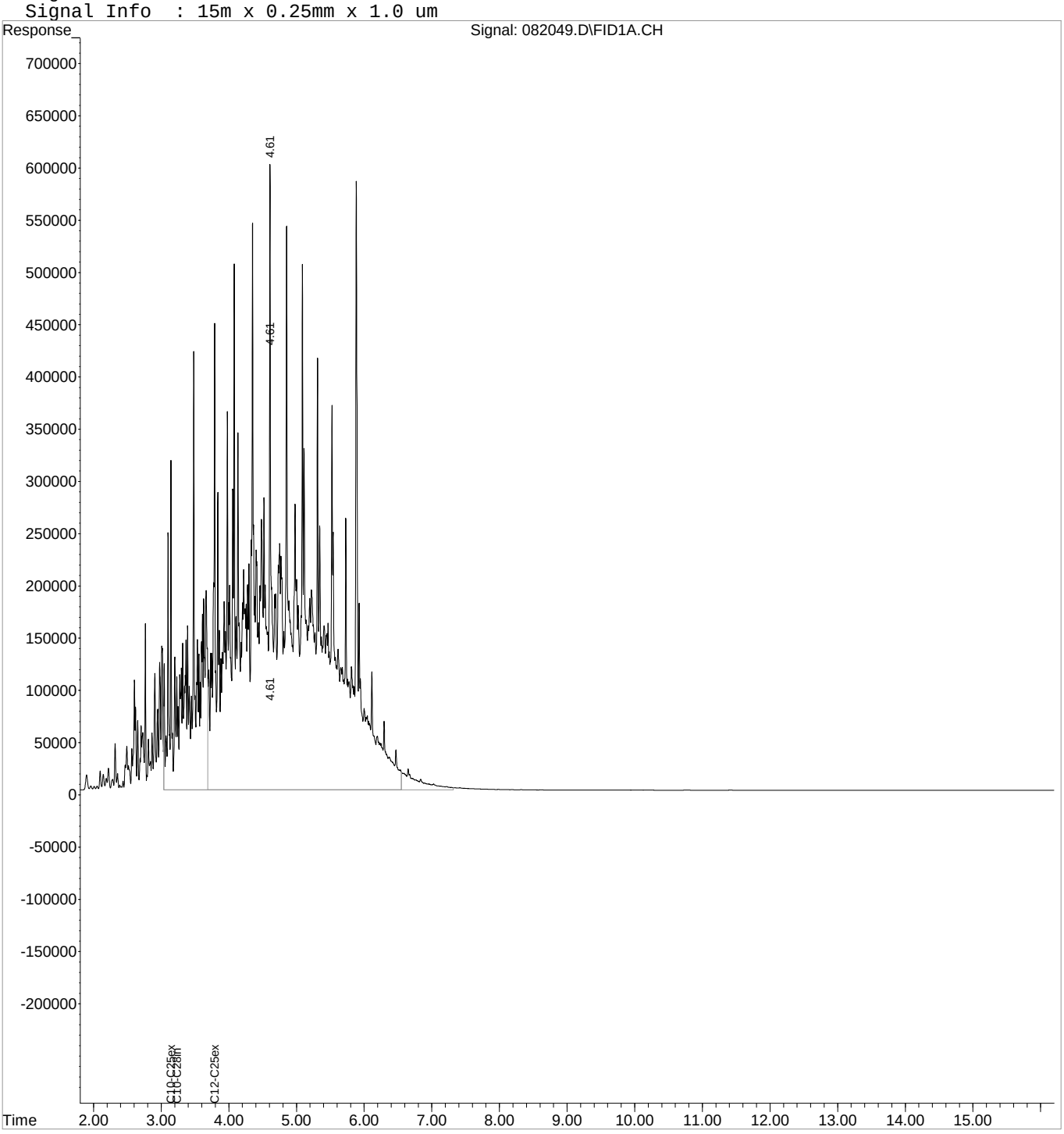
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082049.D Vial: 13
Acq On : 20 Aug 2018 7:31 pm Operator: SMS
Sample : DRO 20K SVF02-45C Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:17 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082050.D Vial: 14
Acq On : 20 Aug 2018 7:53 pm Operator: SMS
Sample : DRO 50K SVF02-45B Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:29 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.14	64166966	42392.604 ppm
7) H	C10-C28in DRO [8015]	3.24	64951715	41254.168 ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	55468082	42878.860 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

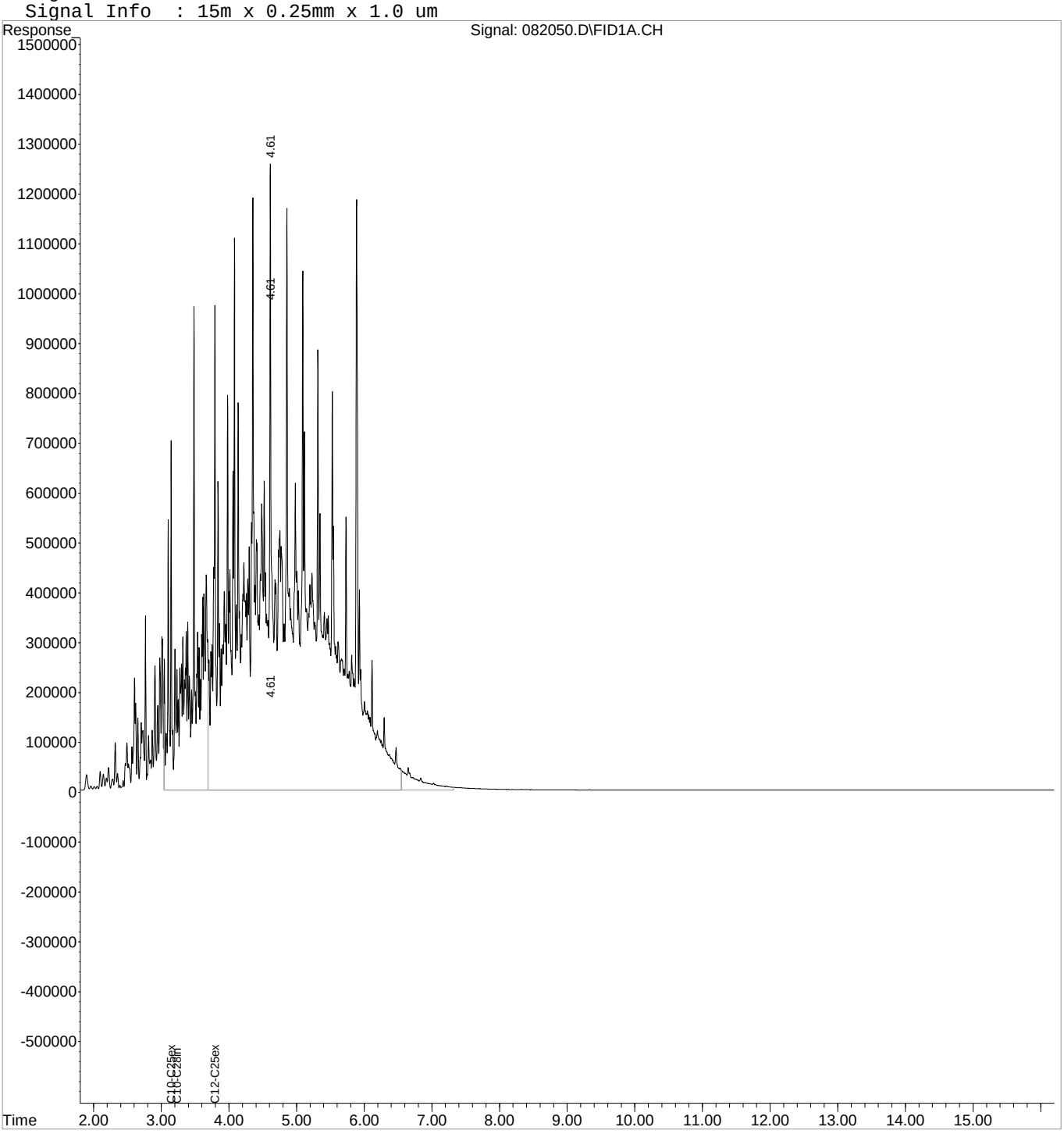
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082050.D Vial: 14
Acq On : 20 Aug 2018 7:53 pm Operator: SMS
Sample : DRO 50K SVF02-45B Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:17 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082051.D Vial: 15
Acq On : 20 Aug 2018 8:14 pm Operator: SMS
Sample : DRO ICV SVF02-45L Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:26:16 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.14	1446232	993.052 ppm
7) H	C10-C28in DRO [8015]	3.24	1460915	981.088 ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	1260884	1026.292 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

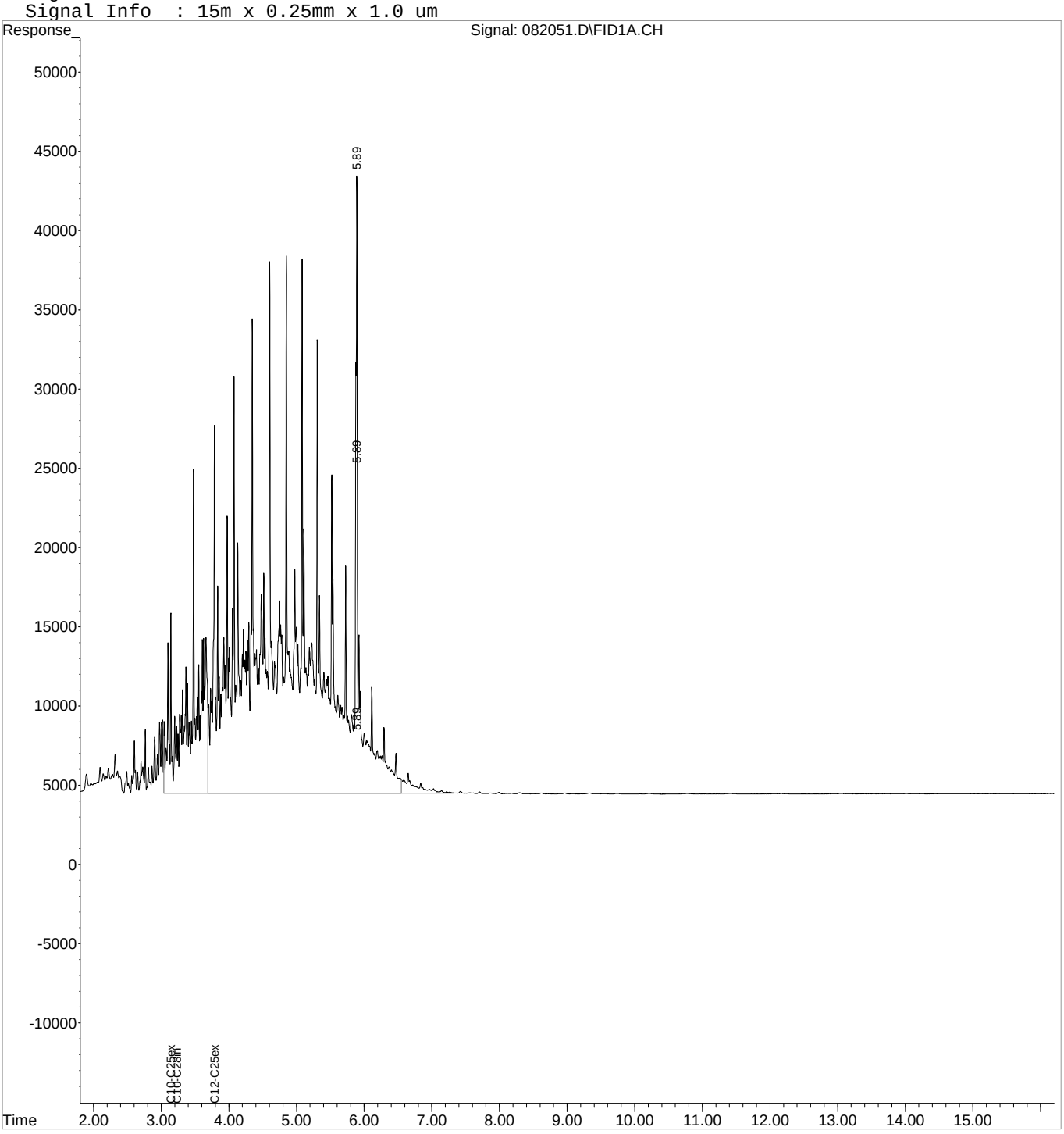
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082051.D Vial: 15
Acq On : 20 Aug 2018 8:14 pm Operator: SMS
Sample : DRO ICV SVF02-45L Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:26 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082052.D Vial: 86
Acq On : 20 Aug 2018 8:36 pm Operator: SMS
Sample : IB Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:26:52 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
10)	H C25-C36in RRO [NWTPH]	6.65	6502	9.384 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

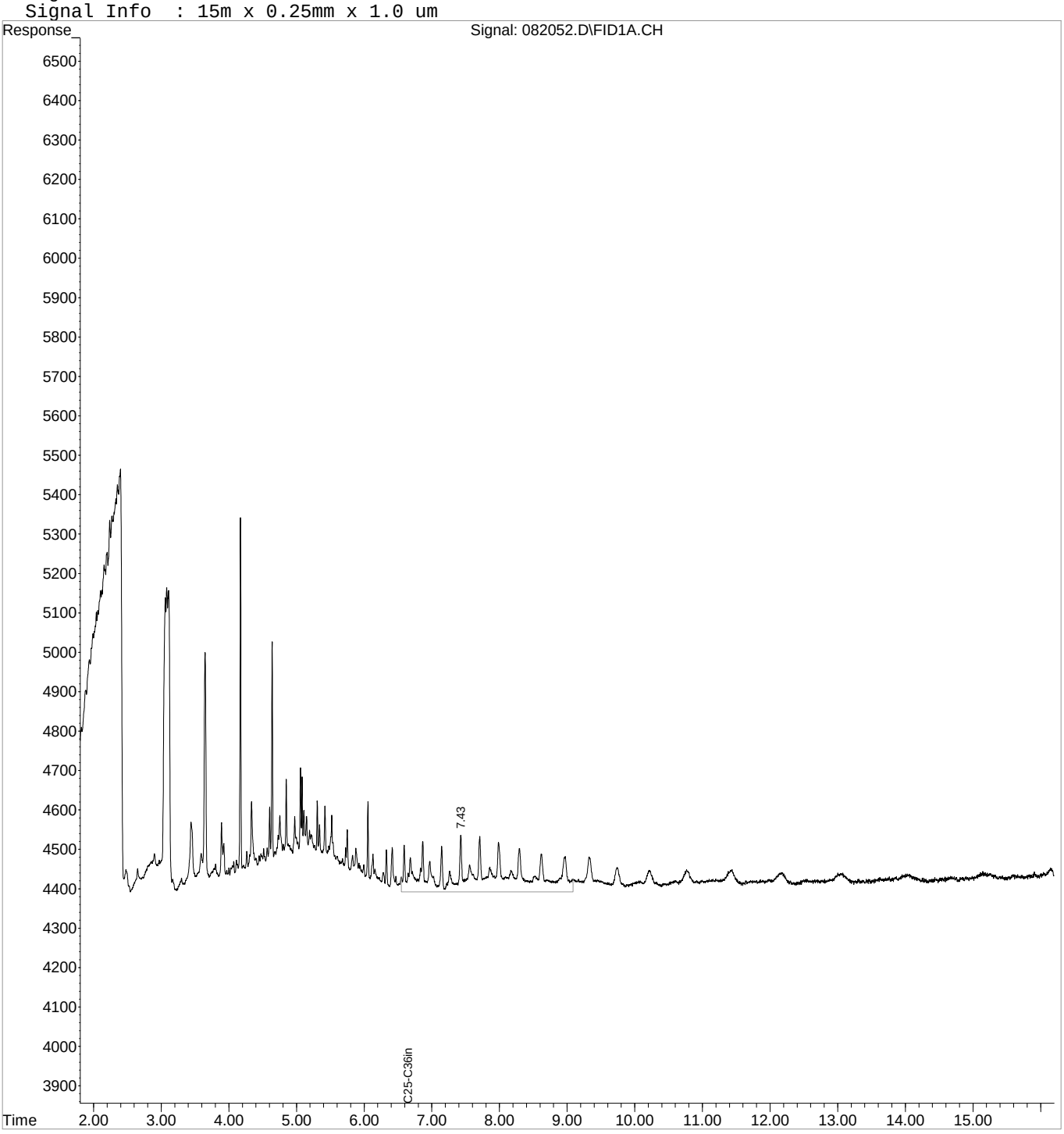
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082052.D Vial: 86
Acq On : 20 Aug 2018 8:36 pm Operator: SMS
Sample : IB Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:27 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082053.D Vial: 16
Acq On : 20 Aug 2018 8:58 pm Operator: SMS
Sample : RRO 50 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:19 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
10) H	C25-C36in RRO [NWTPH]	6.65	33233	47.963 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

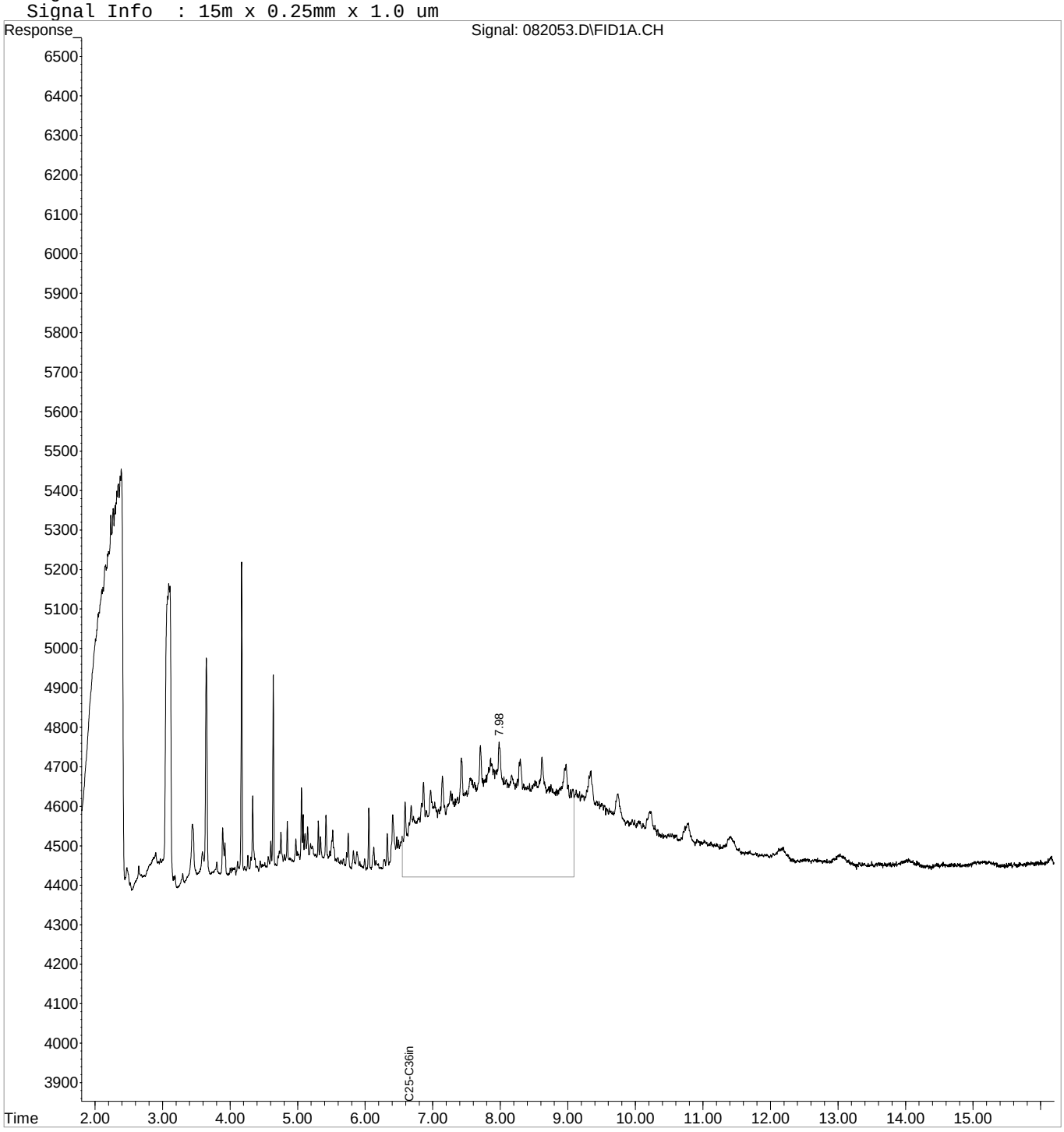
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082053.D Vial: 16
Acq On : 20 Aug 2018 8:58 pm Operator: SMS
Sample : RRO 50 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:28 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

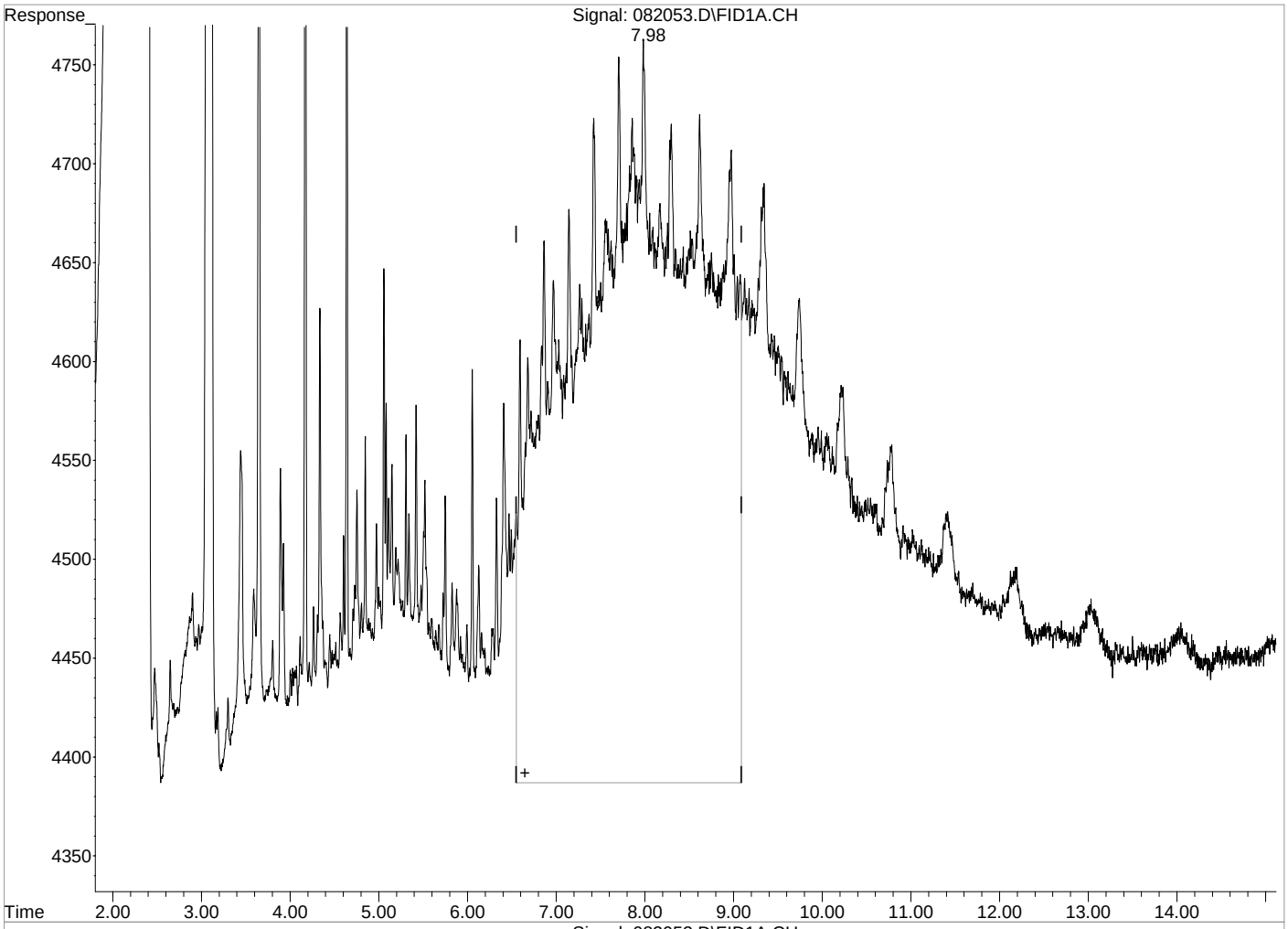


Quantitation Report (Qedit)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082053.D Vial: 16
Acq On : 20 Aug 2018 8:58 pm Operator: SMS
Sample : RRO 50 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:00 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Multiple Level Calibration



Signal: 082053.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.65min 55.397ppm

response 38384

Manual Integration:

Before

08/21/18

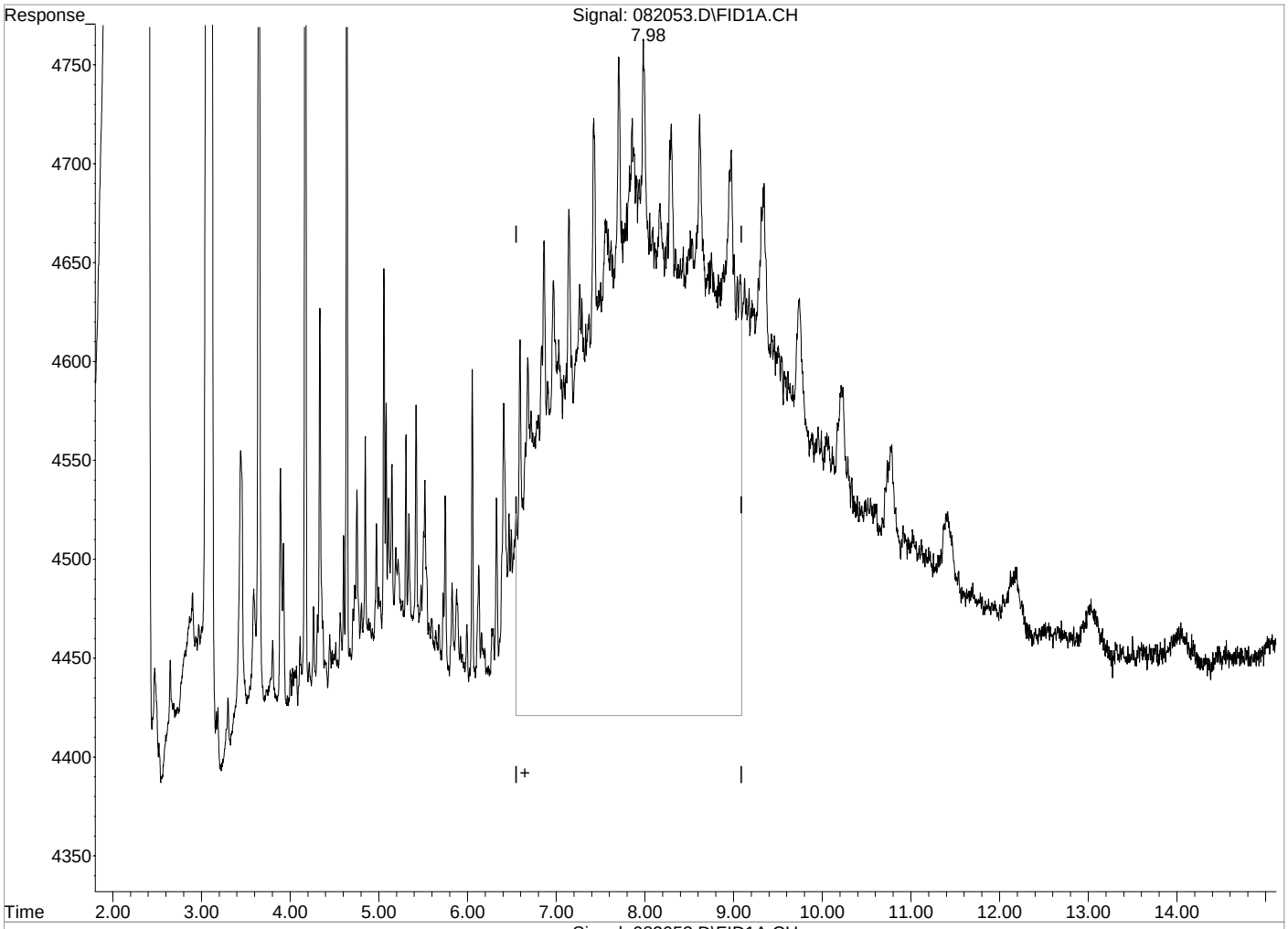
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082053.D Vial: 16
Acq On : 20 Aug 2018 8:58 pm Operator: SMS
Sample : RRO 50 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:00 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Multiple Level Calibration



Signal: 082053.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.65min 47.963ppm

response 33233

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082054.D Vial: 17
Acq On : 20 Aug 2018 9:19 pm Operator: SMS
Sample : RRO 200 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:19 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
10) H	C25-C36in RRO [NWTPH]	6.65	126607	182.723 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

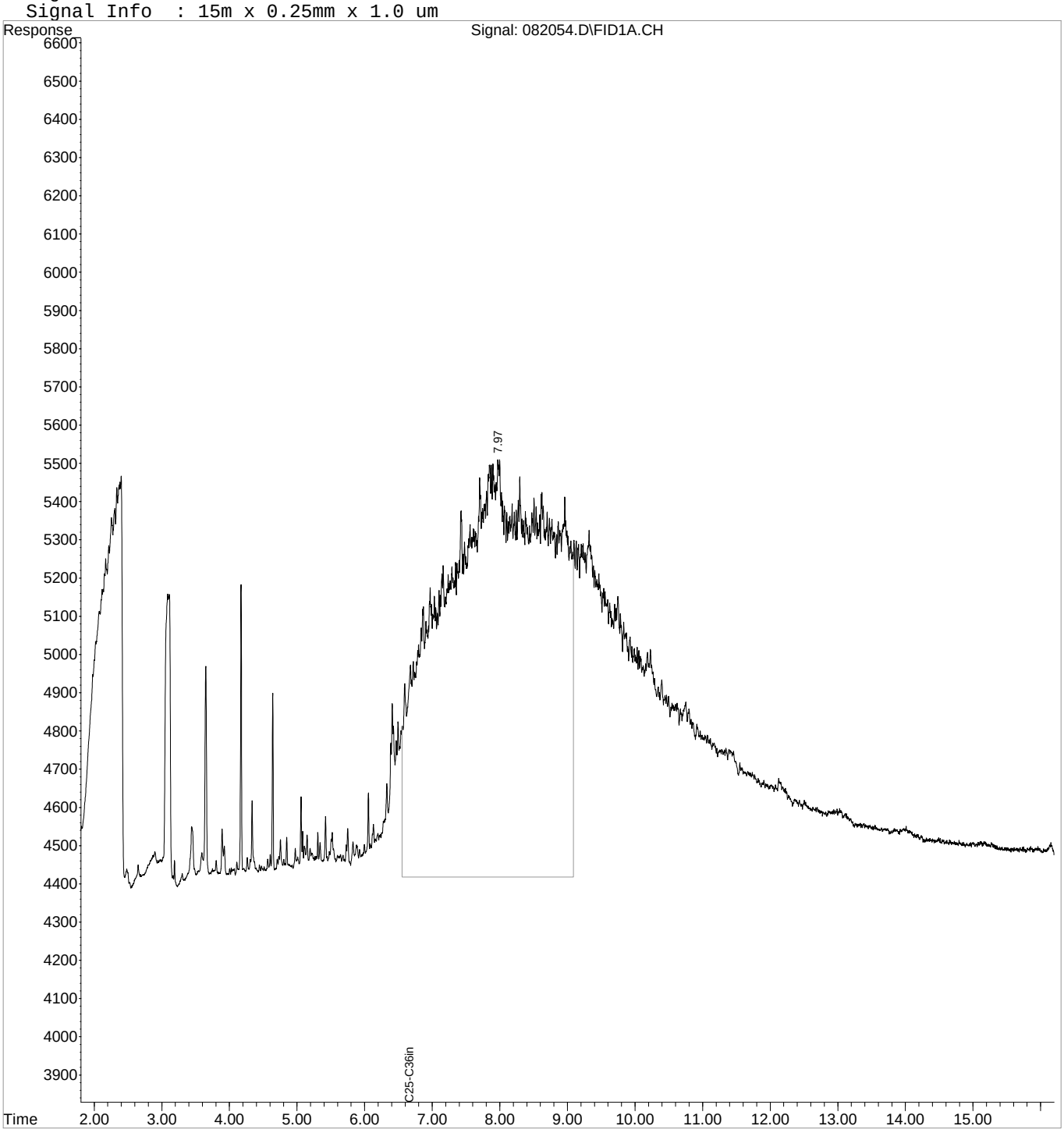
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082054.D Vial: 17
Acq On : 20 Aug 2018 9:19 pm Operator: SMS
Sample : RRO 200 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:28 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

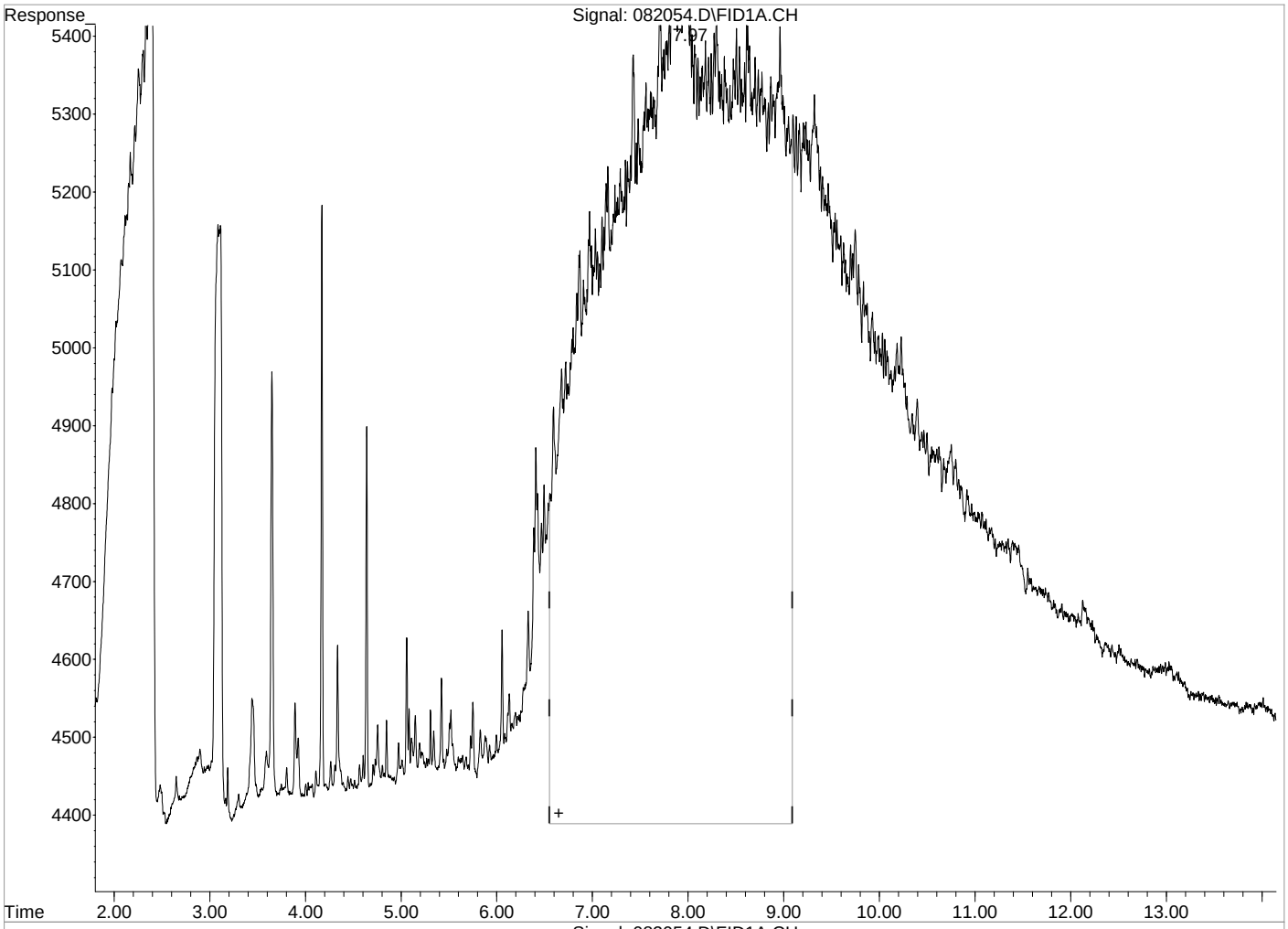


Quantitation Report (Qedit)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082054.D Vial: 17
Acq On : 20 Aug 2018 9:19 pm Operator: SMS
Sample : RRO 200 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:00 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Multiple Level Calibration



Signal: 082054.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.65min 189.337ppm

response 131190

Manual Integration:

Before

08/21/18

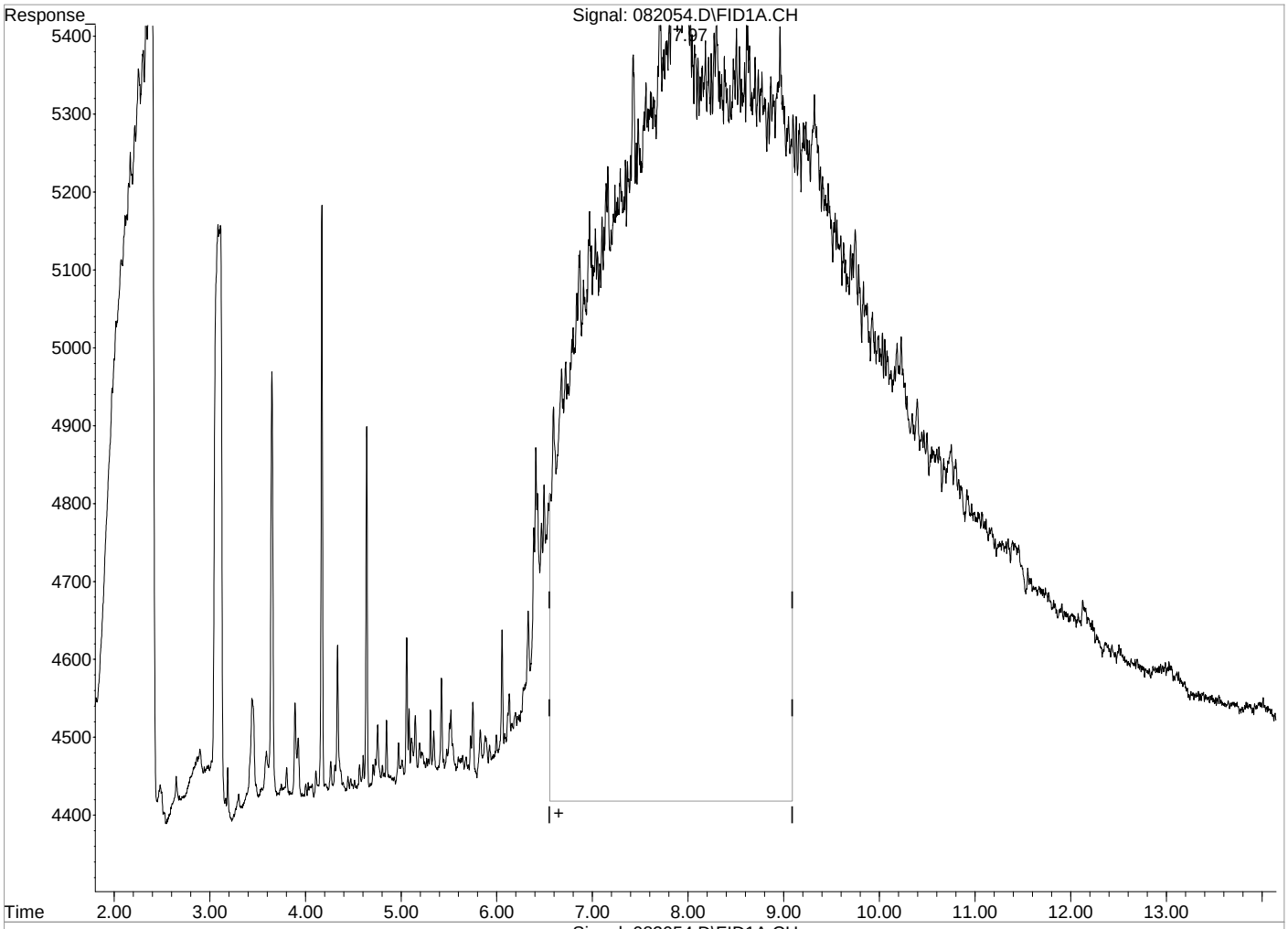
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082054.D Vial: 17
Acq On : 20 Aug 2018 9:19 pm Operator: SMS
Sample : RRO 200 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:00 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Multiple Level Calibration



Signal: 082054.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.65min 182.723ppm

response 126607

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082055.D Vial: 18
Acq On : 20 Aug 2018 9:41 pm Operator: SMS
Sample : RRO 500 SVF02-46H Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:20 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
10)	H C25-C36in RRO [NWTPH]	6.65	294609	425.189 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

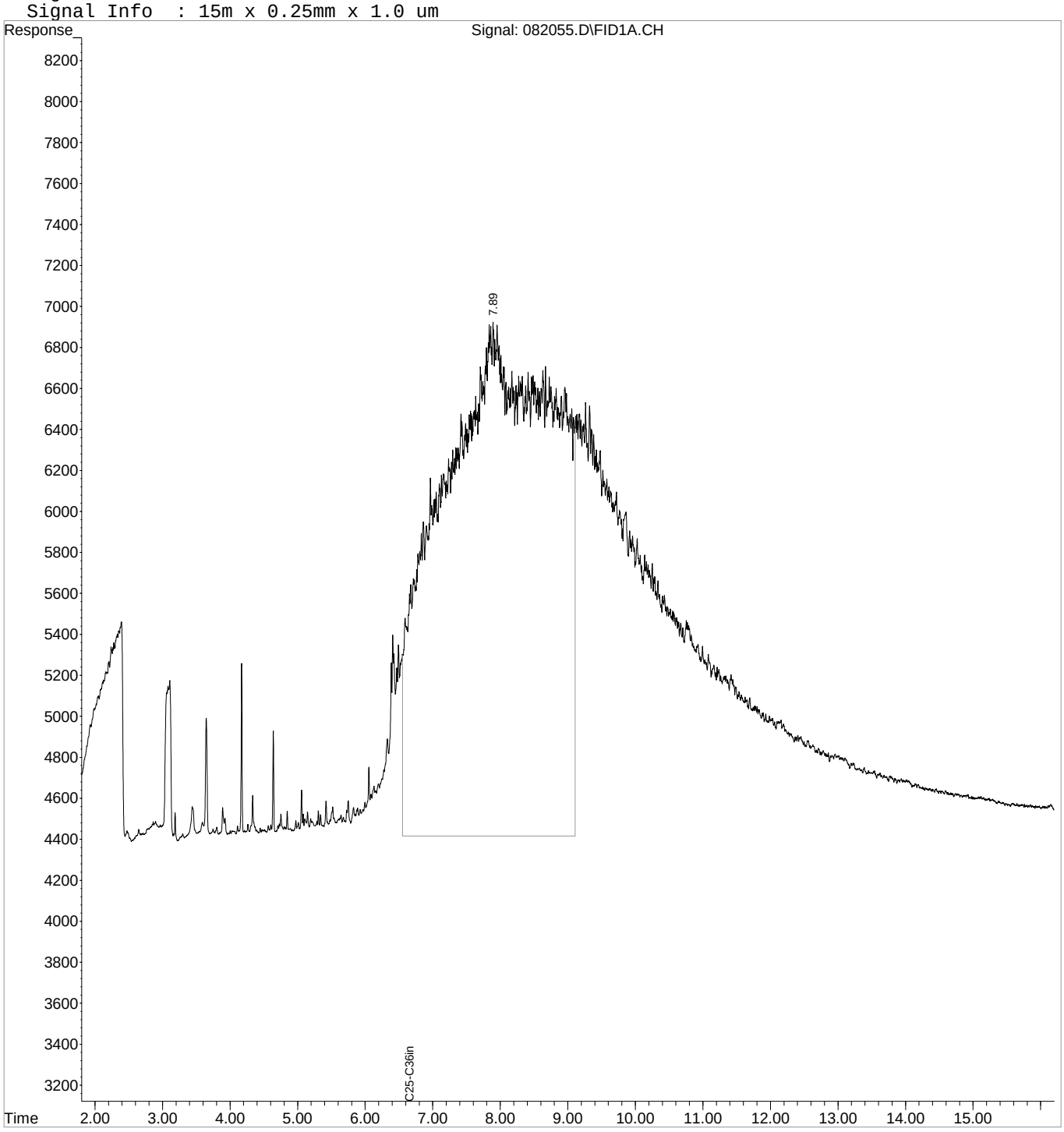
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082055.D Vial: 18
Acq On : 20 Aug 2018 9:41 pm Operator: SMS
Sample : RRO 500 SVF02-46H Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:30 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

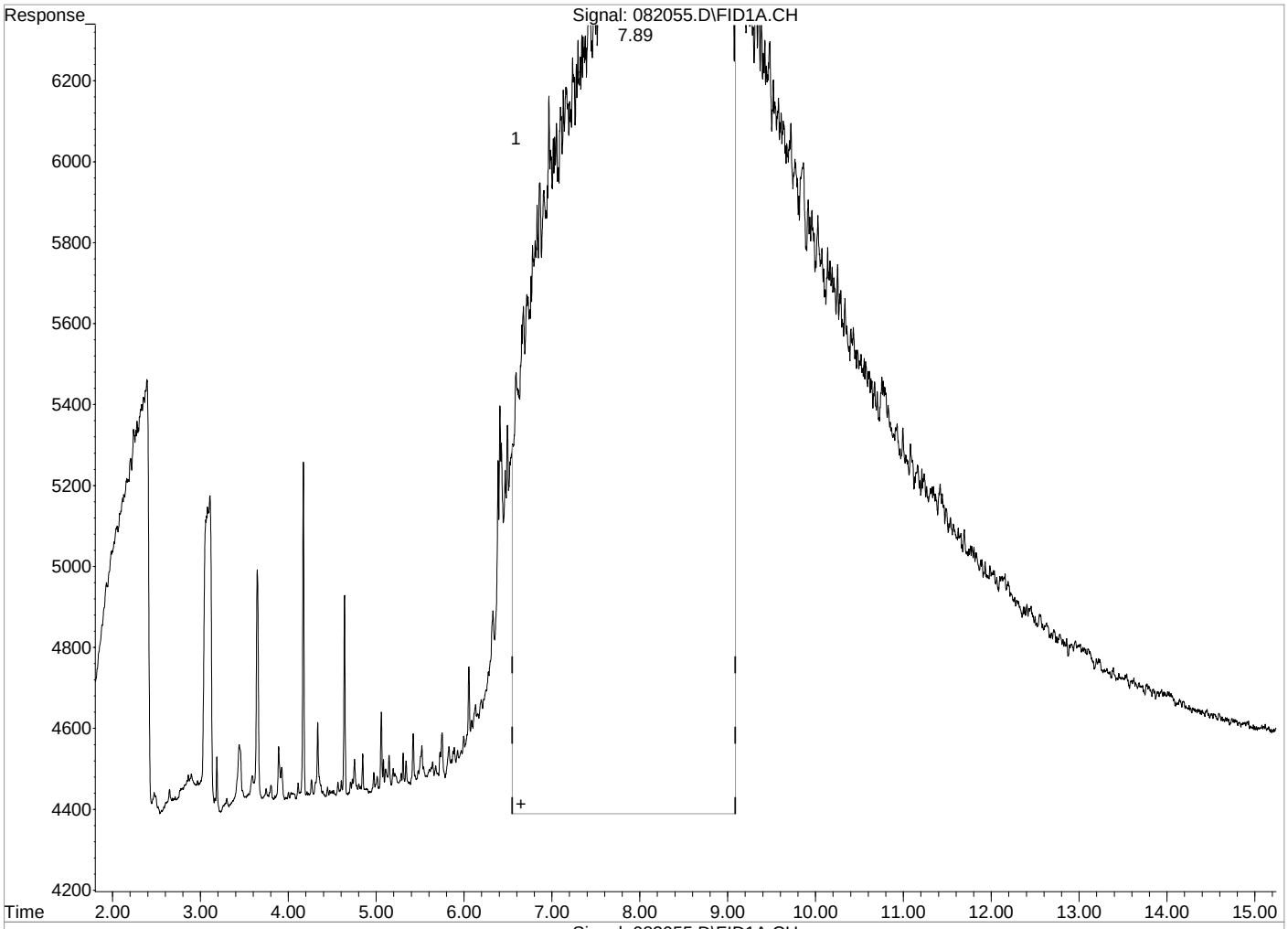


Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082055.D Vial: 18
Acq On : 20 Aug 2018 9:41 pm Operator: SMS
Sample : RRO 500 SVF02-46H Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:00 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Multiple Level Calibration



Signal: 082055.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.65min 428.225ppm

response 296713

Manual Integration:

Before

08/21/18

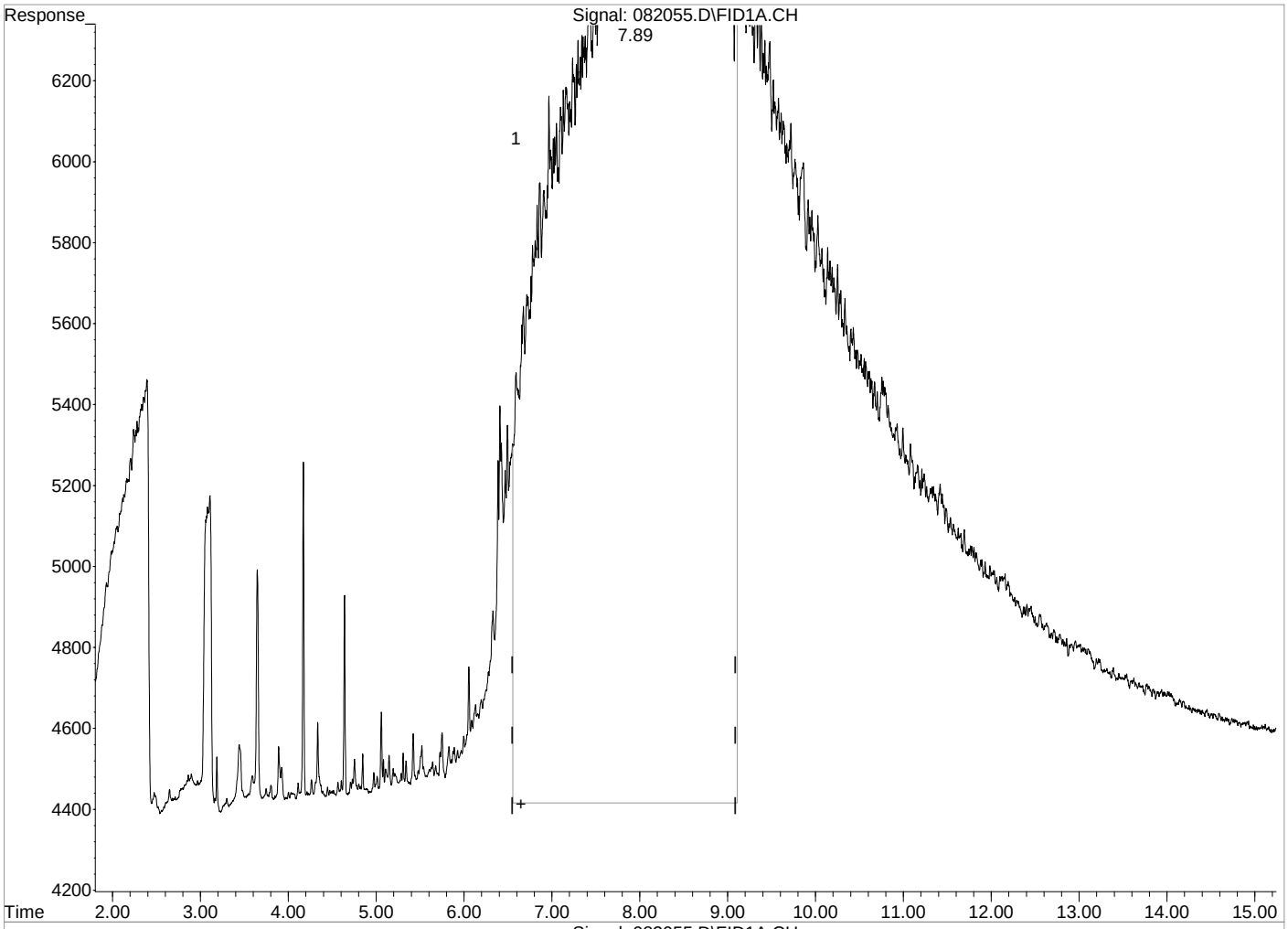
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082055.D Vial: 18
Acq On : 20 Aug 2018 9:41 pm Operator: SMS
Sample : RRO 500 SVF02-46H Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:00 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Multiple Level Calibration



(10) C25-C36in RRO [NWTPH] (H)

6.65min 425.189ppm

response 294609

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082056.D Vial: 19
Acq On : 20 Aug 2018 10:02 pm Operator: SMS
Sample : RRO 2K SVF02-46G Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:21 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
	Target Compounds				
10) H	C25-C36in RRO [NWTPH]	6.65	1238836	1787.926	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

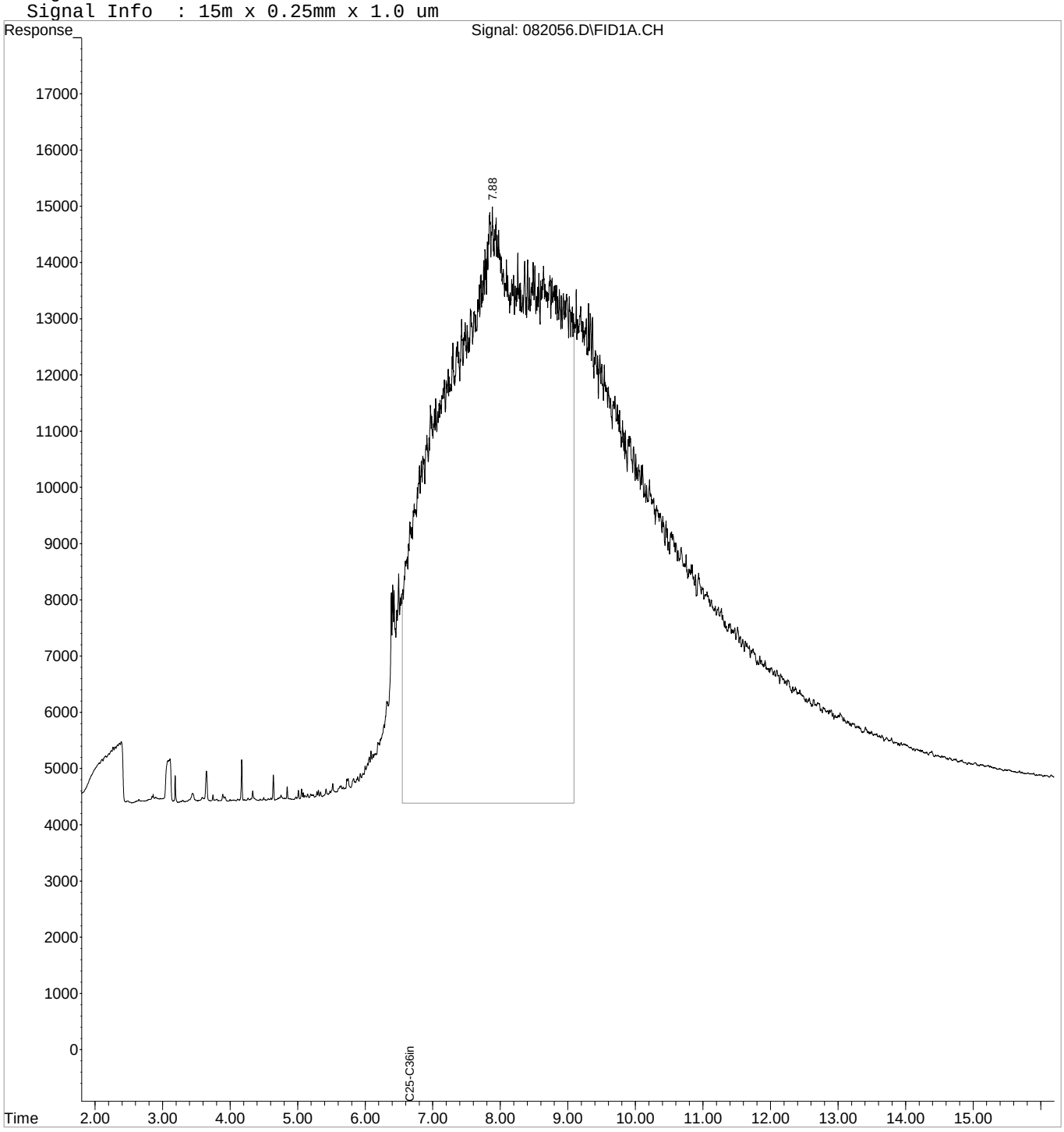
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082056.D Vial: 19
Acq On : 20 Aug 2018 10:02 pm Operator: SMS
Sample : RRO 2K SVF02-46G Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:30 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082057.D Vial: 20
Acq On : 20 Aug 2018 10:24 pm Operator: SMS
Sample : RRO 46F 5K Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:22 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
10) H	C25-C36in RRO [NWTPH]	6.65	3024976	4365.739 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

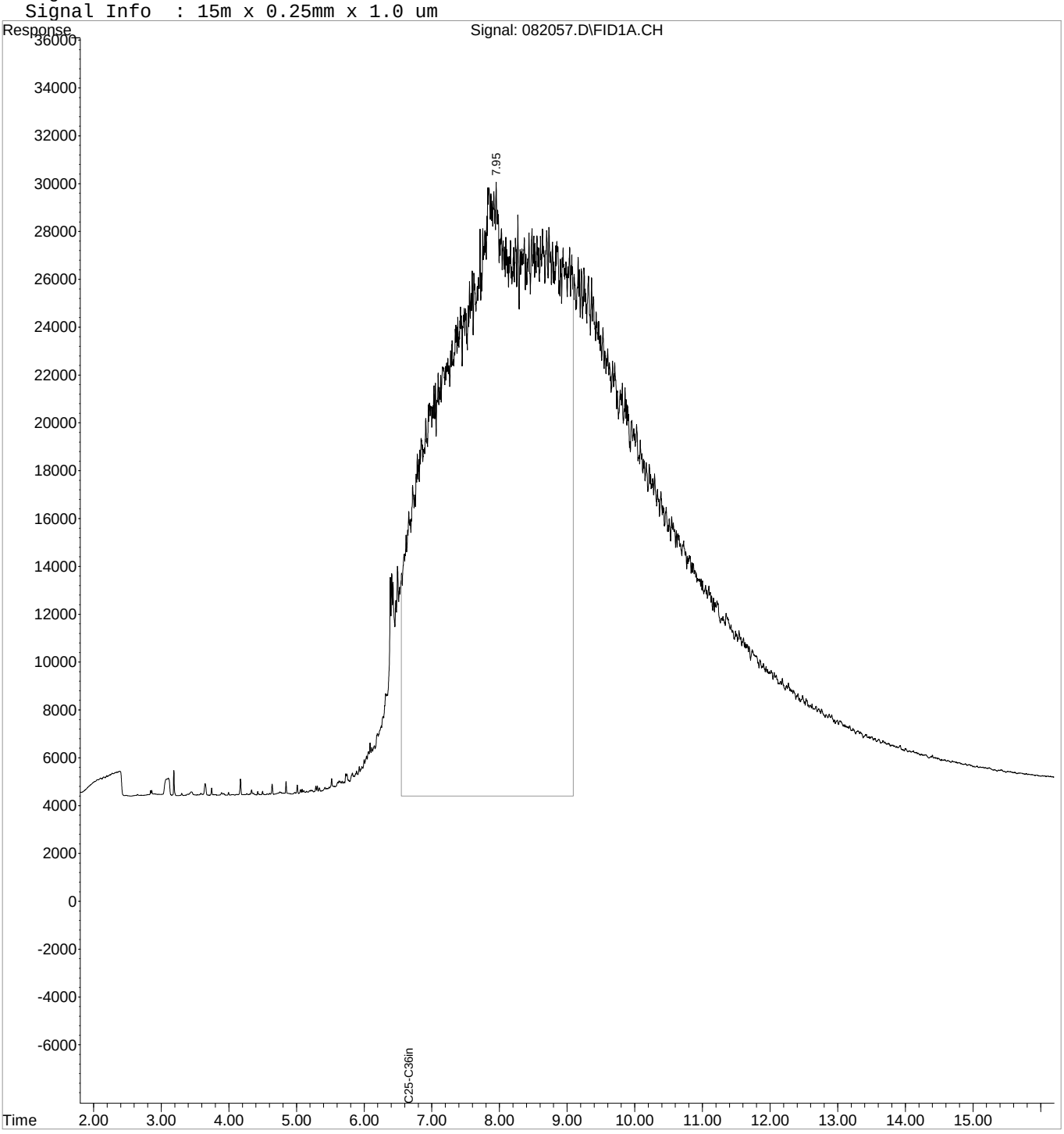
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082057.D Vial: 20
Acq On : 20 Aug 2018 10:24 pm Operator: SMS
Sample : RRO 46F 5K Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:30 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082058.D Vial: 21
Acq On : 20 Aug 2018 10:46 pm Operator: SMS
Sample : RRO ICV SVF02-47A Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:32:42 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:32:16 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
10) H	C25-C36in RRO [NWTPH]	6.65	573732	922.006 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

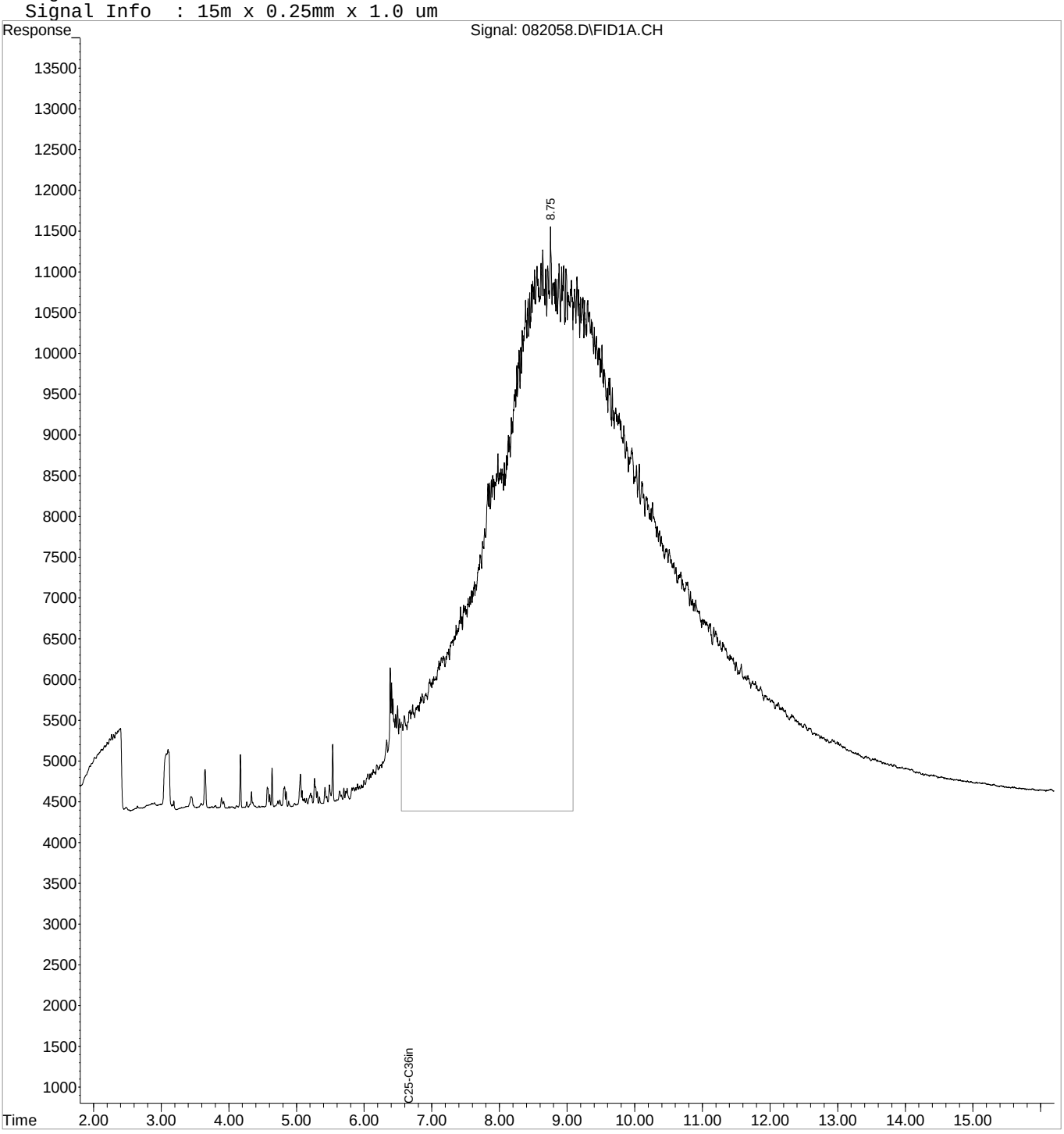
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082058.D Vial: 21
Acq On : 20 Aug 2018 10:46 pm Operator: SMS
Sample : RRO ICV SVF02-47A Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:32 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:32:16 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Preparation Information

Group ID:	KWG1806057	**Prep Method:**	EPA 3550B	**Prep Date:**	11/19/18 14:20
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1811120-001	SL0084	8015C DRO RRO	SOIL	30.036g	10ml	
K1811120-002	SL0064	8015C DRO RRO	SOIL	15.228g	10ml	
K1811120-003	SL0065	8015C DRO RRO	SOIL	30.024g	10ml	
~~K1811120-004~~	~~SL0022~~	~~8015C DRO RRO~~	~~SOIL~~	~~30.369g~~	~~10ml~~	canceled by PC JW 11/20/18
KWG1806057-1	Matrix Spike	8015C DRO RRO	SOIL	30.023g	10ml	
KWG1806057-2	Duplicate Matrix Spike	8015C DRO RRO	SOIL	30.048g	10ml	
KWG1806057-3	Lab Control Sample	8015C DRO RRO	SOIL	30.000g	10ml	
KWG1806057-4	Method Blank	8015C DRO RRO	SOIL	30.369g	10ml	

Lab Code	Parent Lab Code	Comments
KWG1806057-1	K1811120-001	KQ1816738-01
KWG1806057-2	K1811120-001	KQ1816738-02

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1811120-001	1704001					
K1811120-002	1704002					
K1811120-003	1704003					
K1811120-004	1704004					
KWG1806057-1	1704005					
KWG1806057-2	1704006					
KWG1806057-3	1704007					
KWG1806057-4	1704008					

Comments:

Started By: WVANDERH Assisted By:

Completed By: WVanderh Assisted By:

Reviewed By: Date: 11/20/18 Storage:

Training: Yes / No; Yes / No

Chain of Custody

Relinquished By: Date: 11/19/18

Received By: Date: 11/20/18

Extracts Examined: Yes / No

Preparation Information

Group ID: KWG1806057 **Prep Method:** EPA 3550B **Prep Date:** 11/19/18 00:00
Department: Semivoa GC

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol.	Final Vol. ml	Surr. Added	Spike Added
1	K1811120-001	SL0084	*	✓	8015C DRO RRO	SOIL	*	NA		10	500	—
2	K1811120-002	SL0064		✓	8015C DRO RRO	SOIL				10		—
3	K1811120-003	SL0065		✓	8015C DRO RRO	SOIL				10		—
4	K1811120-004	SL0022 Canceled by R JW 11/20		✓	8015C DRO RRO	SOIL				10		—
5	KWG1806057-1 K1811120-001	Matrix Spike		✓	8015C DRO RRO	SOIL				10		500
6	KWG1806057-2 K1811120-001	Duplicate Matrix Spike		✓	8015C DRO RRO	SOIL				10		
7	KWG1806057-3	Lab Control Sample		✓	8015C DRO RRO	SOIL	30.000			10		
8	KWG1806057-4	Method Blank		✓	8015C DRO RRO	SOIL	30.369			10		-

Comments: * See pre prep information benchsheet 11-19-18 WS prep run# 326459

Surrogate ID: 5VF02-50A 500 ppm 500 µL xp. 4-26-19
Spike ID: 5VF02-45D 16000/8000 ppm 500 µL xp. 12-20-18
Witness: BWilland 11/19/18

Started By: WVANDERH Assisted By:
Completed By: WVanderh Assisted By:

Printed: 11/19/2018 09:50:30 Preparation Information Page 1 of 1
u:\Stealth\Crystal.rpt\prep2.rpt

019959

Service Request # K1811120 Work Group # KWG1806057

Clean-Up Work Group #

Weighed (time/date/initial): Balance ID: K-Bal- Calibration Verified ☐

Storage Location (if not extracted same day):

DCM Lot # DU912 Sulfate Lot # 18E08520 Matrix Lot # 081717 Glass Wool Lot # 21317999

Sonic Horns Tuned (date/initial): 11-19-18 WS

Extraction Start (time/date/initial): 14:20 11-19-18 WS

Extraction Stop (time/date/initial): 14:47 11-19-18 WS

S-Evap (time/date/initial): 14:35 11-19-18 WS S-Evap Thermometer ID: EXT-001

Temp as measured: 15 °C Correction factor: 0.0 °C Adjusted temp: 15 °C

N-Evap (time/date/initial): N-Evap Thermometer ID:

Temp as measured: °C Correction factor: °C Adjusted temp: °C

Pipette (5 mL) Lot # 14918647

Sulfuric Acid Clean-up (3665) (time/date/initial): Acid Lot #:

Silica Gel Clean-up (3630) (time/date/initial): Silica Gel Lot #:

Pipette (1 mL) Lot # 20717645

Vial: clear w/fuel cap Vial Storage: Hybrid B 1-8

Clean-up Vial Storage:

Archived Extract Storage: beachboys

Additional Comments:

Bench Sheet Review Check List	
☑	Hold times met (if no, reason: 4 canceled)
☑	Prep date, time, method, department, product code correct in stealth
☑	Spike information and Q.C. correct (insufficient volume or mass recorded if no Q.C.)
☑	Weights/Volumes and units correct on raw and final bench sheets
☐	Sample IDs have been checked - bottle numbers appended if required
☑	Names present for: started by, completed by, relinquished by, and witnessed by. Training circled.
☑	Extract storage recorded
☑	Additional prep sheet completely filled out (NA or line out blanks)
☐	All clean-ups have been noted on additional prep sheet
☐	Signed service request with Form V, if applicable, has been attached

Pre-Prep Information Benchsheet

Prep Run #: 326459 **Prep Method:** **Team:** **Container Lot No:** 100118-1TW **Prep Due Date:** Nov-27-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1811120-001	.02	DRO RRO	30.036g	thick, sticky Clay	PrepComments:APOSEY K-BALANCE-48 11142018
2	K1811120-001 MS KQ1816738-01	.02	DRO RRO	30.023g		PrepComments:APOSEY K-BALANCE-48 11142018
3	K1811120-001 DMS KQ1816738-02	.02	DRO RRO	30.048g		PrepComments:APOSEY K-BALANCE-48 11142018
4	K1811120-002	.03	DRO RRO	15.228g	Fuel smell. Thick, sticky Clay	PrepComments:APOSEY K-BALANCE-48 11142018
5	K1811120-003	.03	DRO RRO	30.024g	standing water. Thick, sticky Clay	PrepComments:APOSEY K-BALANCE-48 11142018
6	K1811120-004	.03	DRO RRO	30.369g	thick, sticky Clay	PrepComments:APOSEY K-BALANCE-48 11142018

Relinquished By:	Date/Time: 11-14-2018 14:10	Received By:	Date/Time: 11-14-18 14:20

DILUTION LOG

LAB ID	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	DATE	ANALYST	SOLVENT LOT	COMMENTS
11207-1	300µl	600µl	2X	112018	RMS	DCM	Amber
-2	200µl	1ml	5X	↓	↓	↓	Dark Brown
-2MS	↓	↓	↓	↓	↓	↓	↓
-2DMS	↓	↓	↓	↓	↓	↓	↓
11120-3	300µl	600µl	2X	↓	↓	↓	Dark yellow

1st 12/07/18
2nd 12/13/18

Exception Report

Data File: J:\GC21\DATA\120618F\1206F136.D
Lab ID: K1811120-005
RunType: SMPL
Matrix: WIPE

Date Acquired: 12/06/2018 22:00
Date Quantitated: 12/07/2018 07:34
Batch ID: KWG1806357
Analysis Method: 8015C
ListJoinID: LJ6796

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Diesel Range Organics (DRO)	142	70	130	narr
	Residual Range Organics (RRO)	150	70	130	narr
Duplicate Lab Control Spike	Diesel Range Organics (DRO)	140	70	130	narr
	Residual Range Organics (RRO)	148	70	130	narr

Primary Review: _____

Secondary Review: _____

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F136.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 22:00	**Quant Date:**	12/07/2018 07:34	**Vial:**	25
Run Type:	SMPL	**ListJoinID:**	LJ6796	**Dilution:**	10.0
Lab ID:	K1811120-005			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**	IV	**Matrix:**	WIPE
Prod Code:	8015C DRO RRO	**Collect Date:**	11/03/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1806357	**Prep Lot:**	KWG1806092	**Report Group:**	K1811120
Analysis Method:	8015C	**Prep Method:**	EPA 3541		
Prep Ref:	1704293	**Prep Date:**	11/21/2018		

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:	Diesel and Residual Range Organics	**Report List ID:**	LJ6796
		Method ID:	MJ752
MB Ref:	J:\GC21\DATA\120618F\1206F135.D	**Quant based on Report List**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
o-Terphenyl	5.46	0.00?	4620	2.60	104	50-150	OK	
n-Triacontane	7.60	0.00?	3509	2.47	99	50-150	OK	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.77		10431	8.49	800	U	
Residual Range Organics (RRO)	6.63		19571	31.45	2000	U	

Prep Amount:	1 Wipe	**Dilution:**	10.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 12/07/18
2nd TP 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\120618F\1206F136.D Vial: 25
Acq On : 06 Dec 2018 10:00 pm Operator: SMS
Sample : k1811120-005 10x Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 07 07:34:09 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S 4-Bromofluorobenzene	2.79	2113	2.319	ppm
Spiked Amount	50.000	Recovery	=	4.64%	
2)	S o-Terphenyl	5.46	4620	2.596	ppm
Spiked Amount	50.000	Recovery	=	5.19%	
3)	S n-Triacontane	7.60	3509	2.472	ppm
Spiked Amount	50.000	Recovery	=	4.94%	
	Target Compounds				
6)	H C10-C25ex DRO [AK102]	3.13	15204	10.440	ppm
7)	H C10-C28in DRO [8015]	3.23	19013	12.768	ppm
8)	H C12-C25ex DRO [NWTPH]	3.77	10431	8.490	ppm
10)	H C25-C36in RRO [NWTPH]	6.63	19571	31.451	ppm
11)	H C25-C36in RRO [AK103]	6.73	19571	24.956	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

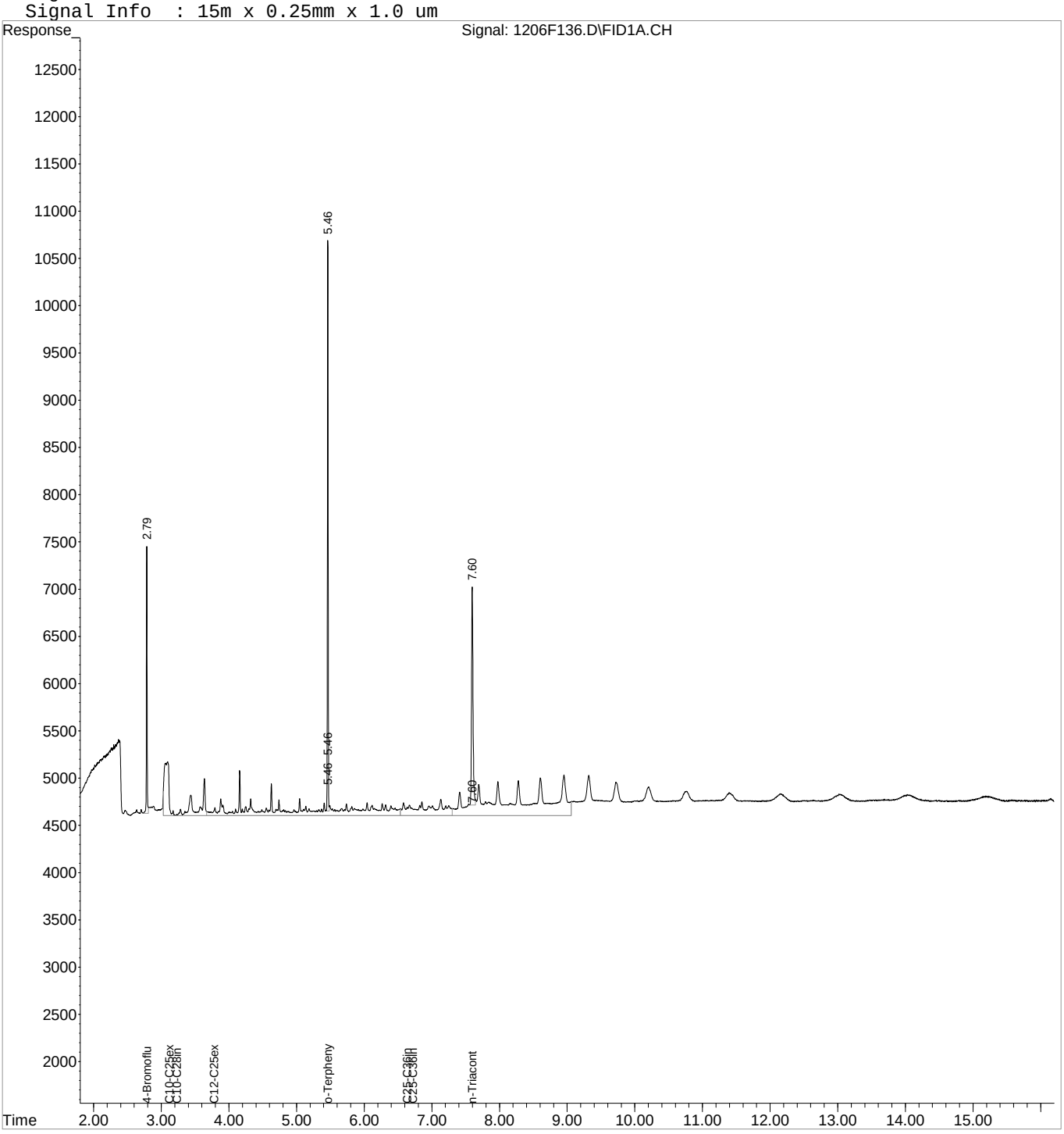
Quantitation Report (QT Reviewed)

1st 12/07/18
2nd 12/13/18

Data File : J:\GC21\DATA\120618F\1206F136.D Vial: 25
Acq On : 06 Dec 2018 10:00 pm Operator: SMS
Sample : k1811120-005 10x Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 7 7:34 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 12/07/18
2nd 12/13/18

Exception Report

Data File: J:\GC21\DATA\120618F\1206F137.D
Lab ID: K1811120-006
RunType: SMPL
Matrix: WIPE

Date Acquired: 12/06/2018 22:22
Date Quantitated: 12/07/2018 07:34
Batch ID: KWG1806357
Analysis Method: 8015C
ListJoinID: LJ6796

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Diesel Range Organics (DRO)	142	70	130	narr
	Residual Range Organics (RRO)	150	70	130	narr
Duplicate Lab Control Spike	Diesel Range Organics (DRO)	140	70	130	narr
	Residual Range Organics (RRO)	148	70	130	narr

Primary Review: _____

Secondary Review: _____

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F137.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 22:22	**Quant Date:**	12/07/2018 07:34	**Vial:**	26
Run Type:	SMPL	**ListJoinID:**	LJ6796	**Dilution:**	10.0
Lab ID:	K1811120-006			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**	IV	**Matrix:**	WIPE
Prod Code:	8015C DRO RRO	**Collect Date:**	11/03/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1806357	**Prep Lot:**	KWG1806092	**Report Group:**	K1811120
Analysis Method:	8015C	**Prep Method:**	EPA 3541		
Prep Ref:	1704292	**Prep Date:**	11/21/2018		

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:	Diesel and Residual Range Organics	**Report List ID:**	LJ6796
		Method ID:	MJ752
MB Ref:	J:\GC21\DATA\120618F\1206F135.D	**Quant based on Report List**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
o-Terphenyl	5.46	0.00?	4299	2.42	97	50-150	OK	
n-Triacontane	7.60	0.00?	3273	2.31	92	50-150	OK	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.77		10360	8.43	1600	U	
Residual Range Organics (RRO)	6.63		23074	37.08	4000	U	

Prep Amount:	0.5 Wipe	**Dilution:**	10.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 12/07/18
2nd TP 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\120618F\1206F137.D Vial: 26
Acq On : 06 Dec 2018 10:22 pm Operator: SMS
Sample : k1811120-006 10x Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 07 07:34:33 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S 4-Bromofluorobenzene	2.78	2071	2.273	ppm
Spiked Amount	50.000	Recovery	=	4.55%	
2)	S o-Terphenyl	5.46	4299	2.416	ppm
Spiked Amount	50.000	Recovery	=	4.83%	
3)	S n-Triacontane	7.60	3273	2.305	ppm
Spiked Amount	50.000	Recovery	=	4.61%	
	Target Compounds				
6)	H C10-C25ex DRO [AK102]	3.13	15584	10.701	ppm
7)	H C10-C28in DRO [8015]	3.23	19684	13.219	ppm
8)	H C12-C25ex DRO [NWTPH]	3.77	10360	8.432	ppm
10)	H C25-C36in RRO [NWTPH]	6.63	23074	37.081	ppm
11)	H C25-C36in RRO [AK103]	6.73	23074	29.423	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

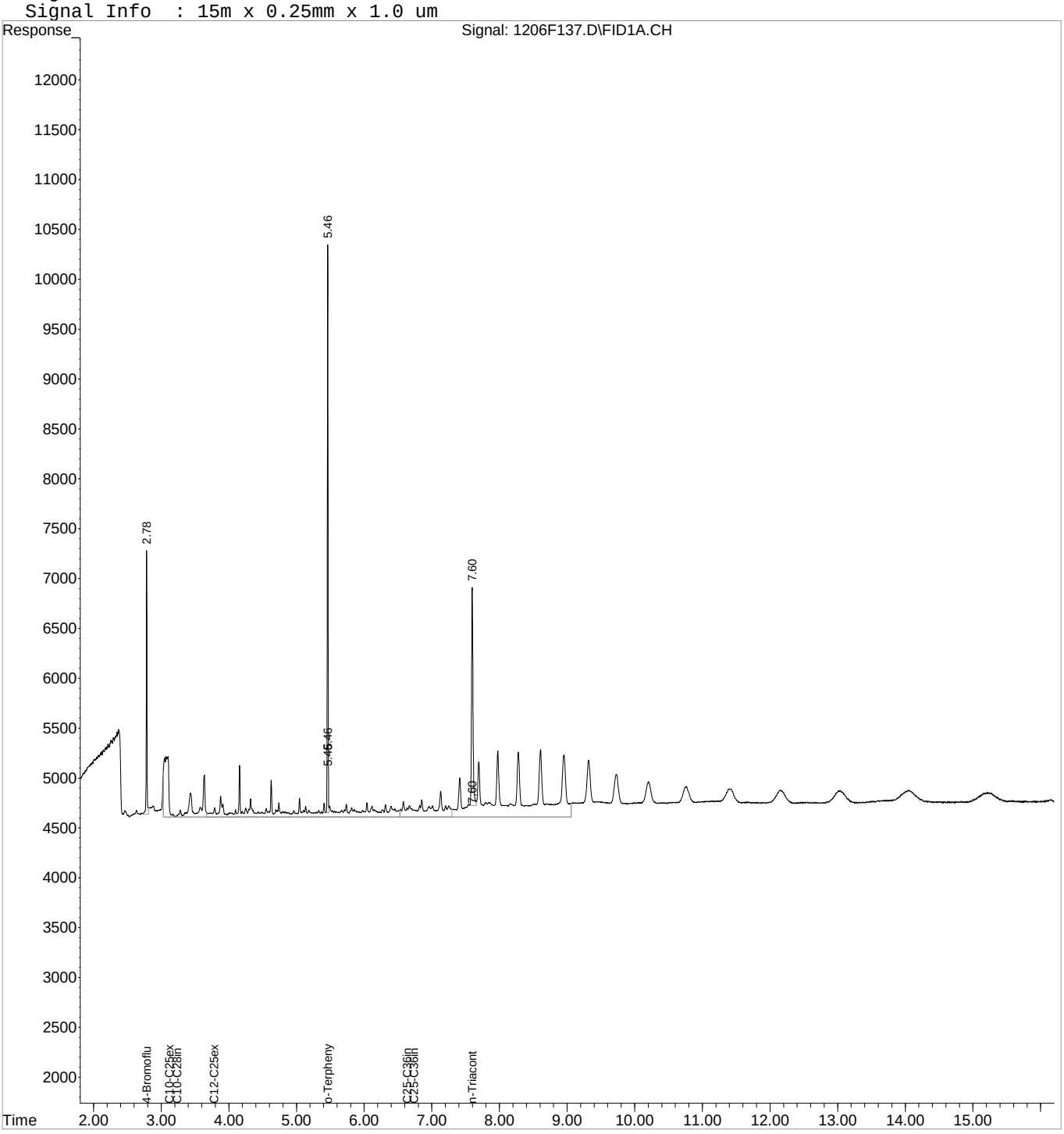
Quantitation Report (QT Reviewed)

1st 12/07/18
2nd 12/13/18

Data File : J:\GC21\DATA\120618F\1206F137.D Vial: 26
Acq On : 06 Dec 2018 10:22 pm Operator: SMS
Sample : k1811120-006 10x Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 7 7:34 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 12/07/18
2nd 12/13/18

Exception Report

Data File: J:\GC21\DATA\120618F\1206F135.D
Lab ID: KWG1806092-3
RunType: MB
Matrix: WIPE

Date Acquired: 12/06/2018 21:39
Date Quantitated: 12/07/2018 07:33
Batch ID: KWG1806357
Analysis Method: 8015C
MethodJoinID: MJ752

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	4-Bromofluorobenzene	385	50	150	NR

Primary Review: _____

Secondary Review: _____

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F135.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 21:39	**Quant Date:**	12/07/2018 07:33	**Vial:**	24
Run Type:	MB	**MethodJoinID:**	MJ752	**Dilution:**	1.0
Lab ID:	KWG1806092-3			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	WIPE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	11/28/2018

Analysis Lot:	KWG1806357	**Prep Lot:**	KWG1806092	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 3541		
Prep Ref:	1704296	**Prep Date:**	11/21/2018		

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ752
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	2.78	0.00?	21903	24.04	385	50-150	*	
o-Terphenyl	5.46	0.00?	48434	27.22	109	50-150	OK	
n-Triacontane	7.60	0.00?	40924	28.83	115	50-150	OK	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.77		10921	8.89	80	U	
Residual Range Organics (RRO)	6.63		25212	40.52	200	U	

Prep Amount:	1 Wipe	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 12/07/18
2nd TP 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\120618F\1206F135.D Vial: 24
Acq On : 06 Dec 2018 9:39 pm Operator: SMS
Sample : kwg1806092-3mb Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 07 07:33:38 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S 4-Bromofluorobenzene	2.78	21903	24.036	ppm
Spiked Amount	50.000	Recovery	=	48.07%	
2)	S o-Terphenyl	5.46	48434	27.221	ppm
Spiked Amount	50.000	Recovery	=	54.44%	
3)	S n-Triacontane	7.60	40924	28.827	ppm
Spiked Amount	50.000	Recovery	=	57.65%	
	Target Compounds				
6)	H C10-C25ex DRO [AK102]	3.13	17153	11.778	ppm
7)	H C10-C28in DRO [8015]	3.23	22888	15.371	ppm
8)	H C12-C25ex DRO [NWTPH]	3.77	10921	8.889	ppm
10)	H C25-C36in RRO [NWTPH]	6.63	25212	40.516	ppm
11)	H C25-C36in RRO [AK103]	6.73	25212	32.149	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

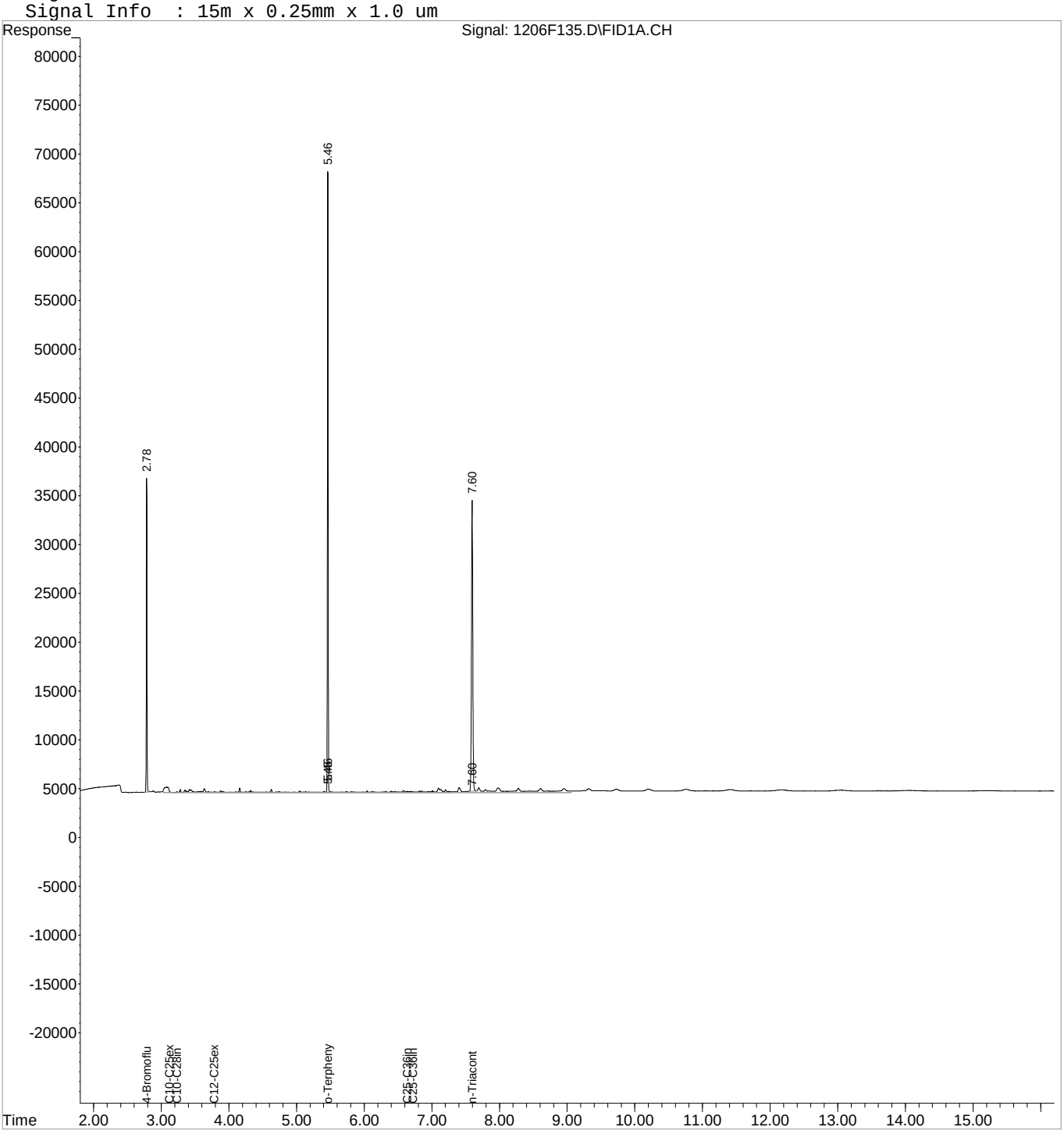
Quantitation Report (QT Reviewed)

1st 12/07/18
2nd 12/13/18

Data File : J:\GC21\DATA\120618F\1206F135.D Vial: 24
Acq On : 06 Dec 2018 9:39 pm Operator: SMS
Sample : kwg1806092-3mb Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 7 7:33 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 12/07/18
2nd 12/13/18

Exception Report

Data File: J:\GC21\DATA\120618F\1206F133.D
Lab ID: KWG1806092-1
RunType: LCS
Matrix: WIPE

Date Acquired: 12/06/2018 20:56
Date Quantitated: 12/07/2018 07:32
Batch ID: KWG1806357
Analysis Method: 8015C
MethodJoinID: MJ752

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Diesel Range Organics (DRO)	20.6	NA	20	narr
Continuing Calibration Recovery (Closing)	Residual Range Organics (RRO)	22.6	NA	20	narr
Surrogates	4-Bromofluorobenzene	387	50	150	NR

Primary Review: _____

Secondary Review: _____

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F133.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 20:56	**Quant Date:**	12/07/2018 07:32	**Vial:**	22
Run Type:	LCS	**MethodJoinID:**	MJ752	**Dilution:**	1.0
Lab ID:	KWG1806092-1			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	WIPE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	11/28/2018

Analysis Lot:	KWG1806357	**Prep Lot:**	KWG1806092	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 3541		
Prep Ref:	1704294	**Prep Date:**	11/21/2018		

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ752
MB Ref:	J:\GC21\DATA\120618F\1206F135.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	2.78	0.00?	22027	24.17	387	50-150	*	
o-Terphenyl	5.46	0.00?	51041	28.69	115	50-150	OK	
n-Triacontane	7.60	0.00?	41285	29.08	116	50-150	OK	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.77		1393748	1,134	4540		
Residual Range Organics (RRO)	6.63		372994	599.41	2400		

Prep Amount:	1 Wipe	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 12/07/18
2nd TP 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\120618F\1206F133.D Vial: 22
Acq On : 06 Dec 2018 8:56 pm Operator: SMS
Sample : kwg1806092-1lcs Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 07 07:32:55 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.78	22027	24.172	ppm
Spiked Amount	50.000	Recovery	=	48.34%	
2) S	o-Terphenyl	5.46	51041	28.686	ppm
Spiked Amount	50.000	Recovery	=	57.37%	
3) S	n-Triacontane	7.60	41285	29.081	ppm
Spiked Amount	50.000	Recovery	=	58.16%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	1591863	1093.050	ppm
7) H	C10-C28in DRO [8015]	3.23	1688339	1133.816	ppm
8) H	C12-C25ex DRO [NWTPH]	3.77	1393748	1134.436	ppm
10) H	C25-C36in RRO [NWTPH]	6.63	372994	599.413	ppm
11) H	C25-C36in RRO [AK103]	6.73	372994	475.621	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

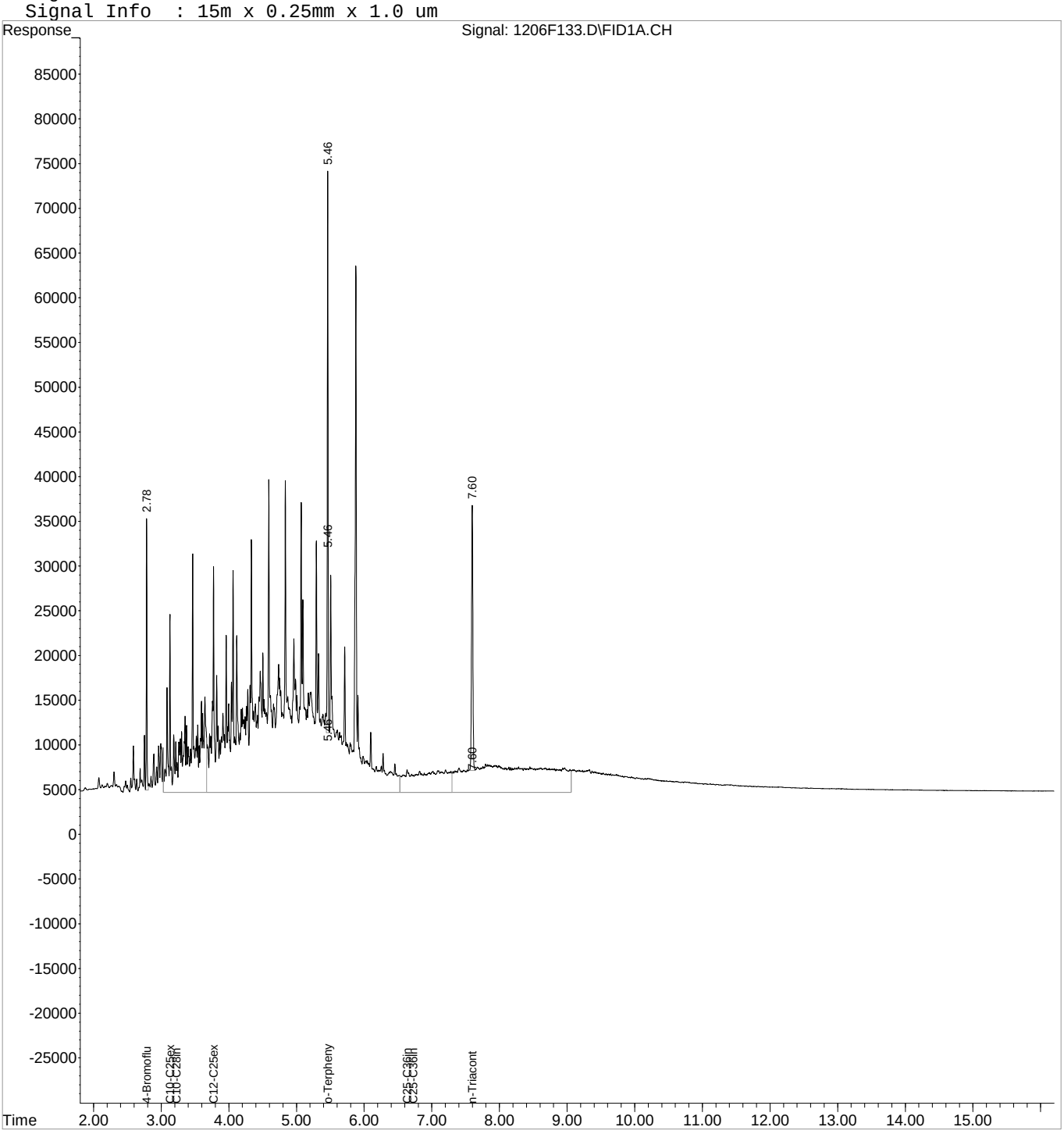
Quantitation Report (QT Reviewed)

1st 12/07/18
2nd 12/13/18

Data File : J:\GC21\DATA\120618F\1206F133.D Vial: 22
Acq On : 06 Dec 2018 8:56 pm Operator: SMS
Sample : kwg1806092-1lcs Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 7 7:32 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 12/07/18
2nd 12/13/18

Exception Report

Data File: J:\GC21\DATA\120618F\1206F134.D
Lab ID: KWG1806092-2
RunType: DLCS
Matrix: WIPE

Date Acquired: 12/06/2018 21:17
Date Quantitated: 12/07/2018 07:33
Batch ID: KWG1806357
Analysis Method: 8015C
MethodJoinID: MJ752

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Diesel Range Organics (DRO)	20.6	NA	20	narr
Continuing Calibration Recovery (Closing)	Residual Range Organics (RRO)	22.6	NA	20	narr
Surrogates	4-Bromofluorobenzene	391	50	150	NR

Primary Review: _____

Secondary Review: _____

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F134.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 21:17	**Quant Date:**	12/07/2018 07:33	**Vial:**	23
Run Type:	DLCS	**MethodJoinID:**	MJ752	**Dilution:**	1.0
Lab ID:	KWG1806092-2			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	WIPE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	11/28/2018

Analysis Lot:	KWG1806357	**Prep Lot:**	KWG1806092	**Report Group:**	
Analysis Method:	8015C	**Prep Method:**	EPA 3541		
Prep Ref:	1704295	**Prep Date:**	11/21/2018		

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ752
MB Ref:	J:\GC21\DATA\120618F\1206F135.D	**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	2.79	0.01?	22262	24.43	391	50-150	*	
o-Terphenyl	5.46	0.00?	49589	27.87	111	50-150	OK	
n-Triacontane	7.60	0.00?	40051	28.21	113	50-150	OK	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.77		1377688	1,121	4490		
Residual Range Organics (RRO)	6.63		368146	591.62	2370		

Prep Amount:	1 Wipe	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 12/07/18
2nd TP 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\120618F\1206F134.D Vial: 23
Acq On : 06 Dec 2018 9:17 pm Operator: SMS
Sample : kwg1806092-2dlcs Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 07 07:33:15 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.79	22262	24.430	ppm
Spiked Amount	50.000	Recovery	=	48.86%	
2) S	o-Terphenyl	5.46	49589	27.870	ppm
Spiked Amount	50.000	Recovery	=	55.74%	
3) S	n-Triacontane	7.60	40051	28.212	ppm
Spiked Amount	50.000	Recovery	=	56.42%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	1577396	1083.116	ppm
7) H	C10-C28in DRO [8015]	3.23	1671567	1122.553	ppm
8) H	C12-C25ex DRO [NWTPH]	3.77	1377688	1121.364	ppm
10) H	C25-C36in RRO [NWTPH]	6.63	368146	591.622	ppm
11) H	C25-C36in RRO [AK103]	6.73	368146	469.440	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

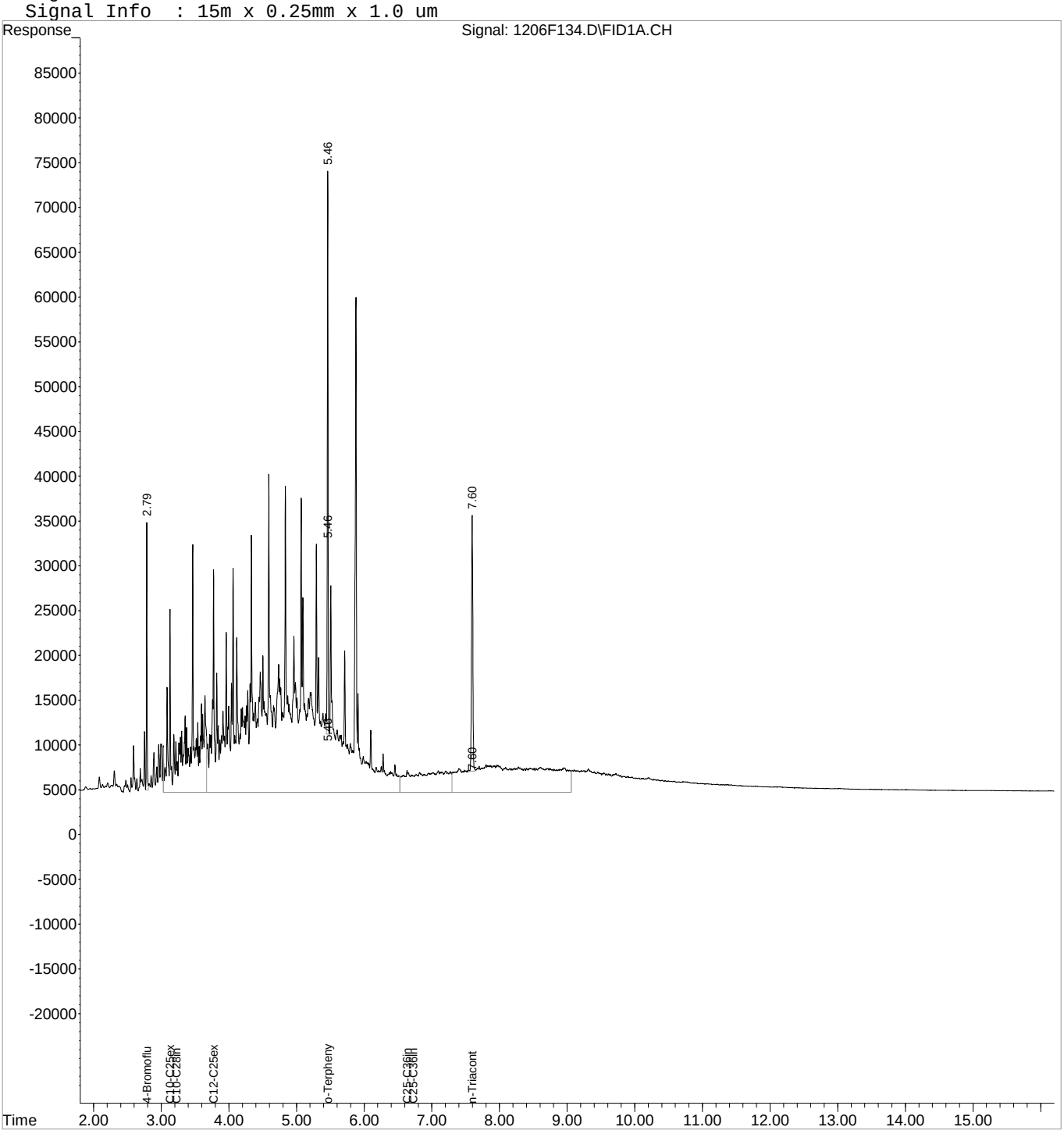
Quantitation Report (QT Reviewed)

1st 12/07/18
2nd 12/13/18

Data File : J:\GC21\DATA\120618F\1206F134.D Vial: 23
Acq On : 06 Dec 2018 9:17 pm Operator: SMS
Sample : kwg1806092-2dlcs Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 7 7:33 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 12/07/18
2nd 12/13/18

Exception Report

Data File: J:\GC21\DATA\120618F\1206F130.D
Lab ID: KWG1806357-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/06/2018 19:51
Date Quantitated: 12/07/2018 07:14
Batch ID: KWG1806357
Analysis Method: 8015C
MethodJoinID: MJ745

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Enviroquant/Stealth Calibration Check	C10 - C25 DRO	Calc	S-0.000	I-1160.636	NA
	C10 - C28 DRO	Calc	S-0.000	I-1149.481	NA

Primary Review: _____

Secondary Review: _____

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F130.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 19:51	**Quant Date:**	12/07/2018 07:14	**Vial:**	98
Run Type:	CCV	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806357-3			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	12/07/2018

Analysis Lot:	KWG1806357	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	2.78	?	47573	52.21		50-150	NA	
o-Terphenyl	5.46	?	97467	54.78		55-133	NA	
n-Triacontane	7.60	?	81134	57.15		54-136	NA	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		1733261				
C10 - C25 DRO	3.13		1690293	1,161			
C10 - C28 DRO	3.23		1711665	1,149			
Diesel Range Organics (DRO)	3.77		1481087	1,206			
Residual Range Organics (RRO)	6.63		37310	59.96			NR
C25 - C44 RRO	6.90		70655				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F130.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 19:51	**Quant Date:**	12/07/2018 07:14	**Vial:**	98
Run Type:	CCV	**MethodJoinID:**	MJ752	**Dilution:**	1.0
Lab ID:	KWG1806357-3			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	12/07/2018

Analysis Lot:	KWG1806357	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ752
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	2.78	?	47573	52.21		50-150	NA	
o-Terphenyl	5.46	?	97467	54.78		50-150	NA	
n-Triacontane	7.60	?	81134	57.15		50-150	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.77		1481087	1,206			
Residual Range Organics (RRO)	6.63		37310	59.96			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SMS 12/07/18
2nd TP 12/13/18

Data File : J:\GC21\DATA\120618F\1206F130.D Vial: 98
Acq On : 06 Dec 2018 7:51 pm Operator: SMS
Sample : dro@1000/50 svf02-51d Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 07 07:14:20 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.78	47573	52.206	ppm
Spiked Amount	50.000	Recovery =		104.41%	
2) S	o-Terphenyl	5.46	97467	54.778	ppm
Spiked Amount	50.000	Recovery =		109.56%	
3) S	n-Triacontane	7.60	81134	57.150	ppm
Spiked Amount	50.000	Recovery =		114.30%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	1690293	1160.636	ppm
7) H	C10-C28in DRO [8015]	3.23	1711665	1149.481	ppm
8) H	C12-C25ex DRO [NWTPH]	3.77	1481087	1205.525	ppm
10) H	C25-C36in RRO [NWTPH]	6.63	37310	59.958	ppm
11) H	C25-C36in RRO [AK103]	6.73	37310	47.576	ppm

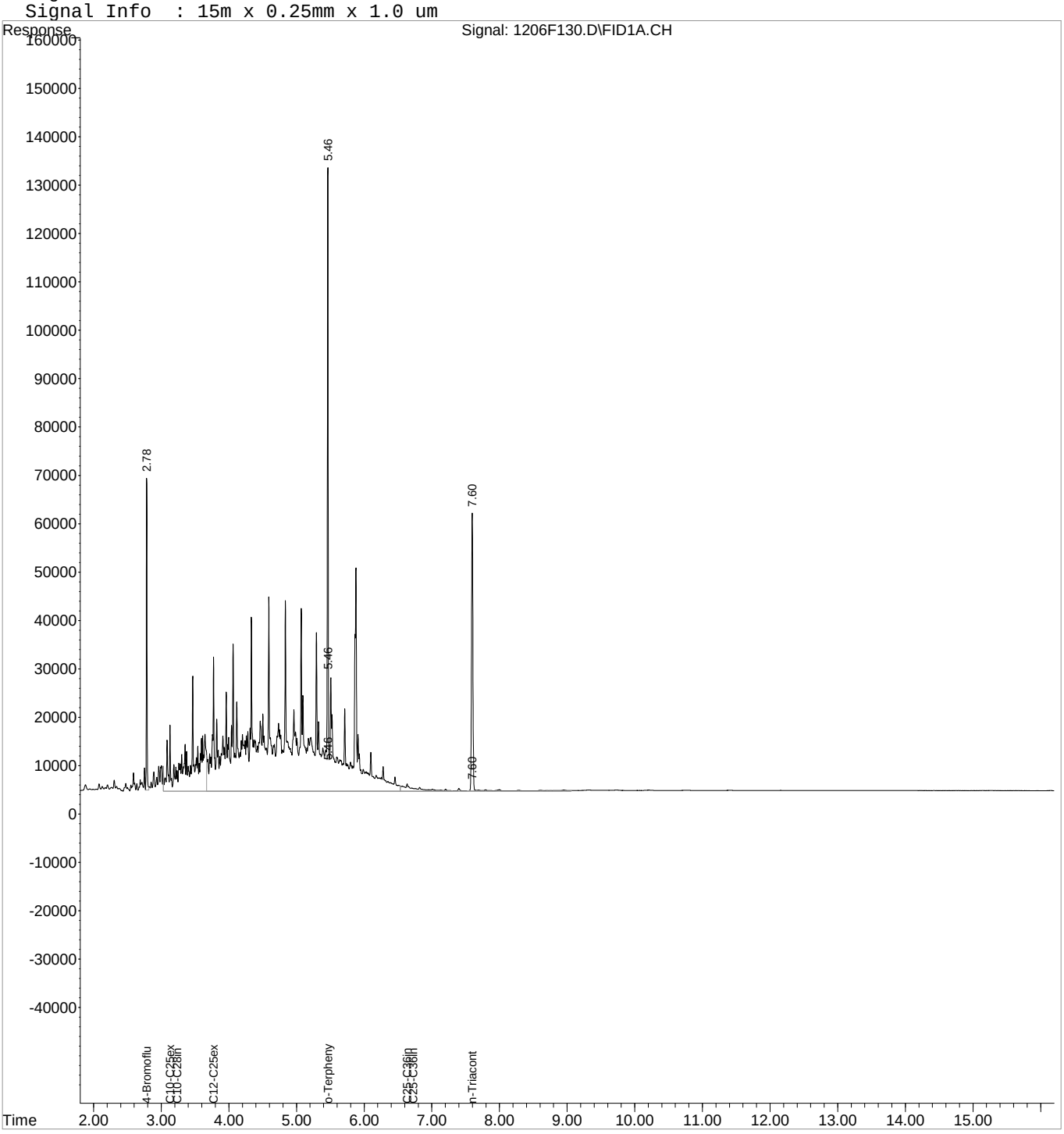
Quantitation Report (QT Reviewed)

1st 12/07/18
2nd 12/13/18

Data File : J:\GC21\DATA\120618F\1206F130.D Vial: 98
Acq On : 06 Dec 2018 7:51 pm Operator: SMS
Sample : dro@1000/50 svf02-51d Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 7 7:14 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 12/07/18
2nd 12/13/18

Exception Report

Data File: J:\GC21\DATA\120618F\1206F131.D
Lab ID: KWG1806357-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/06/2018 20:12
Date Quantitated: 12/07/2018 07:14
Batch ID: KWG1806357
Analysis Method: 8015C
MethodJoinID: MJ745

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Enviroquant/Stealth Calibration Check	C10 - C25 DRO	Calc	S-0.000	I-39.56	NA
	C10 - C28 DRO	Calc	S-0.000	I-153.19	NA

Primary Review: _____

Secondary Review: _____

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F131.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 20:12	**Quant Date:**	12/07/2018 07:14	**Vial:**	97
Run Type:	CCV	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806357-3			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	12/07/2018

Analysis Lot:	KWG1806357	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			55-133	NA	NR
n-Triacontane	7.62	?	477	0.3360		54-136	NA	NR

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		69218				
C10 - C25 DRO	3.13		57613	39.56			
C10 - C28 DRO	3.23		228112	153.19			
Diesel Range Organics (DRO)	3.77		53189	43.29			NR
Residual Range Organics (RRO)	6.63		748179	1,202			
C25 - C44 RRO	6.90		1295322				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F131.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 20:12	**Quant Date:**	12/07/2018 07:14	**Vial:**	97
Run Type:	CCV	**MethodJoinID:**	MJ752	**Dilution:**	1.0
Lab ID:	KWG1806357-3			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	12/07/2018

Analysis Lot:	KWG1806357	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ752
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			50-150	NA	NR
n-Triacontane	7.62	?	477	0.3360		50-150	NA	NR

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.77		53189	43.29			NR
Residual Range Organics (RRO)	6.63		748179	1,202			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 12/07/18
2nd TP 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\120618F\1206F131.D Vial: 97
Acq On : 06 Dec 2018 8:12 pm Operator: SMS
Sample : rro@1000 svf02-51a Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 07 07:14:30 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
3) S	n-Triacontane	7.62	477	0.336	ppm
Spiked Amount	50.000	Recovery	=	0.67%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	57613	39.560	ppm
7) H	C10-C28in DRO [8015]	3.23	228112	153.190	ppm
8) H	C12-C25ex DRO [NWTPH]	3.77	53189	43.293	ppm
10) H	C25-C36in RRO [NWTPH]	6.63	748179	1202.347	ppm
11) H	C25-C36in RRO [AK103]	6.73	748179	954.037	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

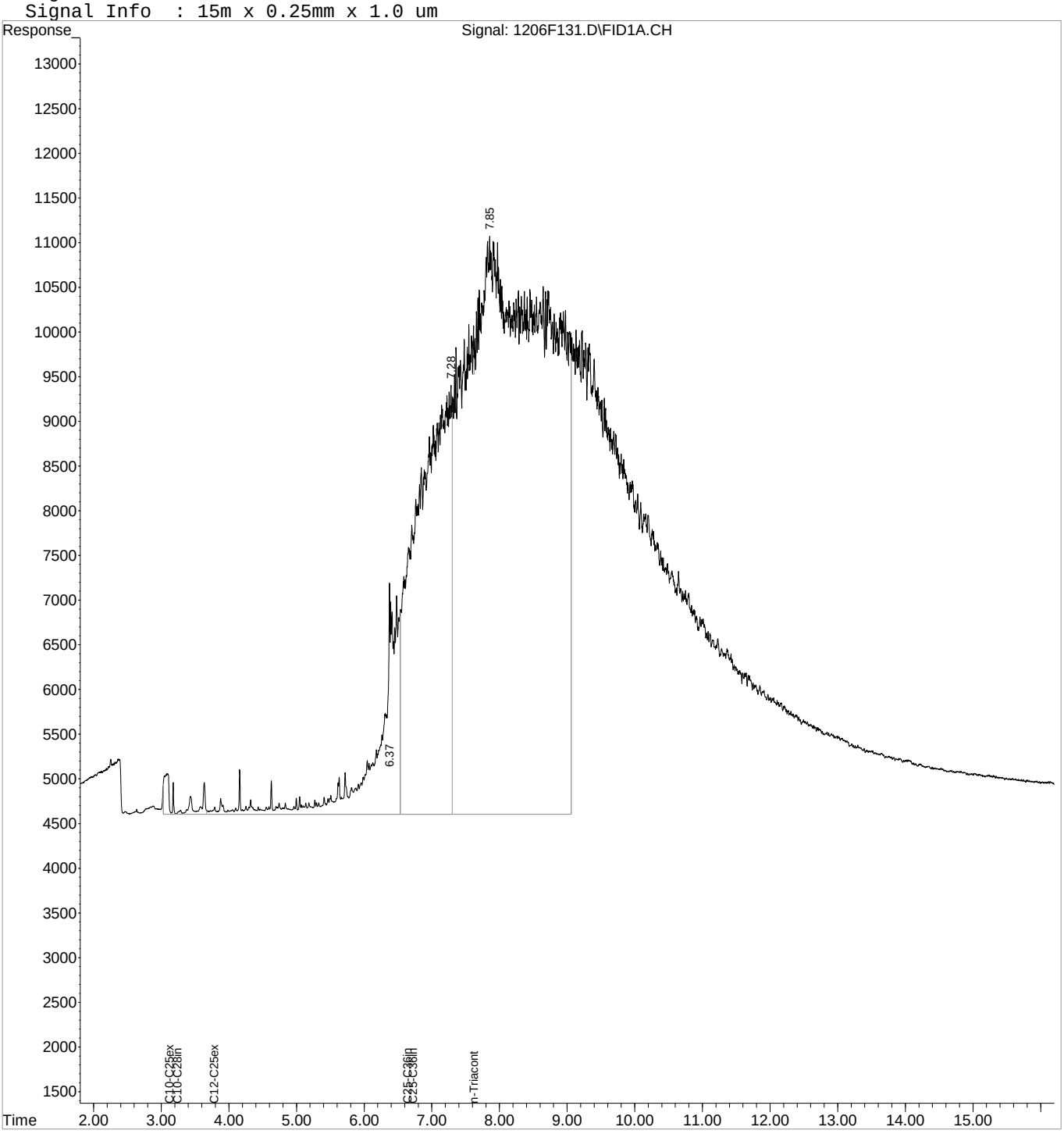
Quantitation Report (QT Reviewed)

1st 12/07/18
2nd 12/13/18

Data File : J:\GC21\DATA\120618F\1206F131.D Vial: 97
Acq On : 06 Dec 2018 8:12 pm Operator: SMS
Sample : rro@1000 svf02-51a Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 7 7:14 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 12/07/18
2nd 12/13/18

Exception Report

Data File: J:\GC21\DATA\120618F\1206F138.D
Lab ID: KWG1806357-4
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/06/2018 22:44
Date Quantitated: 12/07/2018 07:15
Batch ID: KWG1806357
Analysis Method: 8015C
MethodJoinID: MJ745

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Enviroquant/Stealth Calibration Check	C10 - C25 DRO	Calc	S-0.000	I-1139.111	NA
	C10 - C28 DRO	Calc	S-0.000	I-1127.132	NA

Primary Review: _____

Secondary Review: _____

1st DMS 12/07/18
2nd TP 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F138.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 22:44	**Quant Date:**	12/07/2018 07:15	**Vial:**	100
Run Type:	CCV	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806357-4			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	12/07/2018

Analysis Lot:	KWG1806357	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	2.79	?	46798	51.36		50-150	NA	
o-Terphenyl	5.46	?	95218	53.51		55-133	NA	
n-Triacontane	7.60	?	79140	55.75		54-136	NA	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		1700606				
C10 - C25 DRO	3.13		1658944	1,139			
C10 - C28 DRO	3.23		1678385	1,127			
Diesel Range Organics (DRO)	3.77		1452537	1,182			
Residual Range Organics (RRO)	6.63		29606	47.58			NR
C25 - C44 RRO	6.90		42073				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F138.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 22:44	**Quant Date:**	12/07/2018 07:15	**Vial:**	100
Run Type:	CCV	**MethodJoinID:**	MJ752	**Dilution:**	1.0
Lab ID:	KWG1806357-4			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	12/07/2018

Analysis Lot:	KWG1806357	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ752
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene	2.79	?	46798	51.36		50-150	NA	
o-Terphenyl	5.46	?	95218	53.51		50-150	NA	
n-Triacontane	7.60	?	79140	55.75		50-150	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.77		1452537	1,182			
Residual Range Organics (RRO)	6.63		29606	47.58			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 12/07/18
2nd TP 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\120618F\1206F138.D Vial: 100
Acq On : 06 Dec 2018 10:44 pm Operator: SMS
Sample : dro@1000/50 svf02-51d Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 07 07:15:00 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.79	46798	51.356	ppm
Spiked Amount	50.000	Recovery	=	102.71%	
2) S	o-Terphenyl	5.46	95218	53.514	ppm
Spiked Amount	50.000	Recovery	=	107.03%	
3) S	n-Triacontane	7.60	79140	55.746	ppm
Spiked Amount	50.000	Recovery	=	111.49%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	1658944	1139.111	ppm
7) H	C10-C28in DRO [8015]	3.23	1678385	1127.132	ppm
8) H	C12-C25ex DRO [NWTPH]	3.77	1452537	1182.287	ppm
10) H	C25-C36in RRO [NWTPH]	6.63	29606	47.578	ppm
11) H	C25-C36in RRO [AK103]	6.73	29606	37.752	ppm

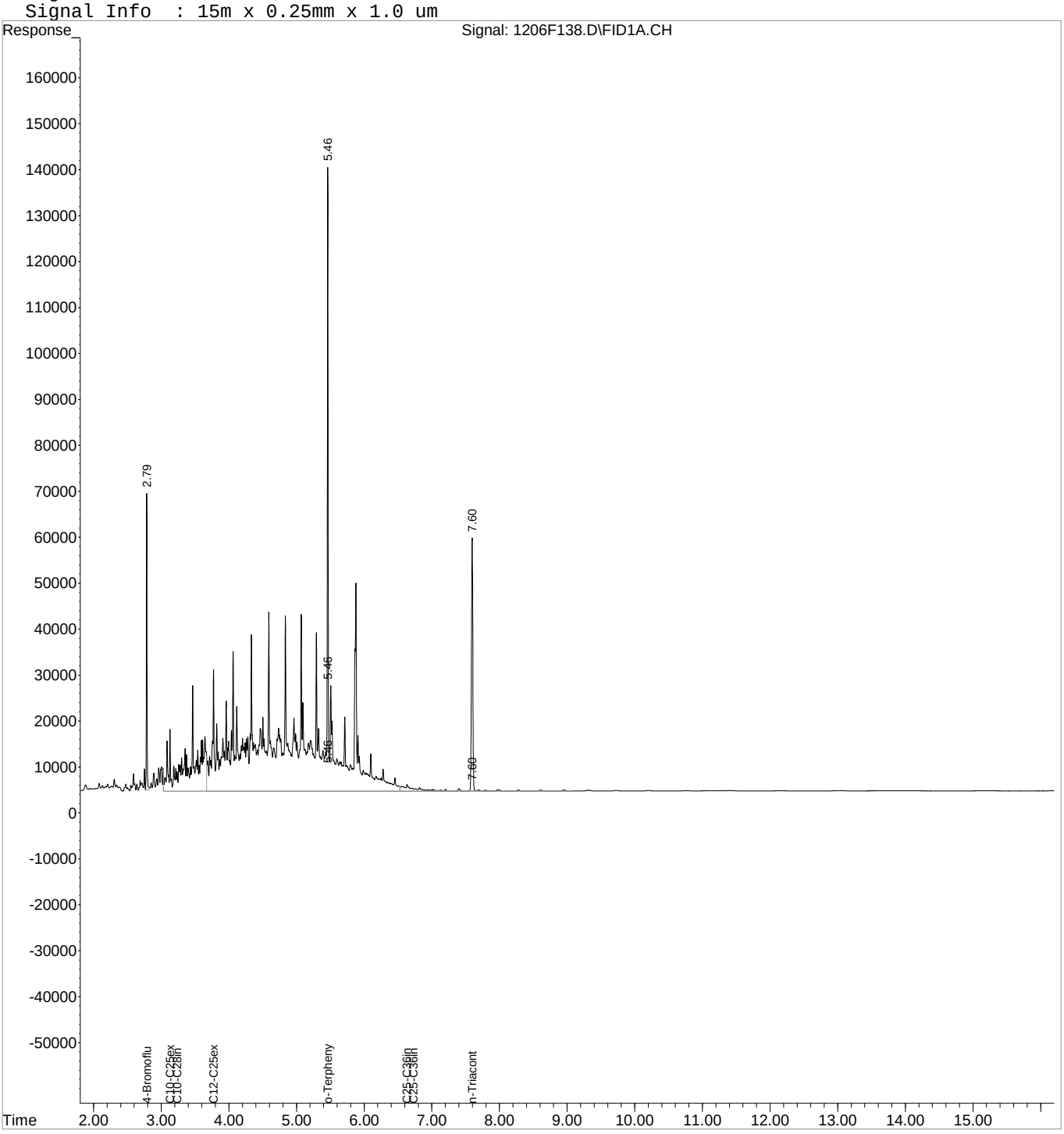
Quantitation Report (QT Reviewed)

1st 12/07/18
2nd 12/13/18

Data File : J:\GC21\DATA\120618F\1206F138.D Vial: 100
Acq On : 06 Dec 2018 10:44 pm Operator: SMS
Sample : dro@1000/50 svf02-51d Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 7 7:15 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 12/07/18
2nd 12/13/18

Exception Report

Data File: J:\GC21\DATA\120618F\1206F139.D
Lab ID: KWG1806357-4
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/06/2018 23:05
Date Quantitated: 12/07/2018 07:14
Batch ID: KWG1806357
Analysis Method: 8015C
MethodJoinID: MJ745

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Enviroquant/Stealth Calibration Check	C10 - C25 DRO	Calc	S-0.000	I-38.686	NA
	C10 - C28 DRO	Calc	S-0.000	I-152.742	NA

Primary Review: _____

Secondary Review: _____

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F139.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 23:05	**Quant Date:**	12/07/2018 07:14	**Vial:**	97
Run Type:	CCV	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806357-4			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	12/07/2018

Analysis Lot:	KWG1806357	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			55-133	NA	NR
n-Triacontane	7.62	?	262	0.1850		54-136	NA	NR

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		67877				
C10 - C25 DRO	3.13		56340	38.69			
C10 - C28 DRO	3.23		227444	152.74			
Diesel Range Organics (DRO)	3.77		51131	41.62			NR
Residual Range Organics (RRO)	6.63		762869	1,226			
C25 - C44 RRO	6.90		1289121				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F139.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 23:05	**Quant Date:**	12/07/2018 07:14	**Vial:**	97
Run Type:	CCV	**MethodJoinID:**	MJ752	**Dilution:**	1.0
Lab ID:	KWG1806357-4			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	12/07/2018

Analysis Lot:	KWG1806357	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ752
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			50-150	NA	NR
n-Triacontane	7.62	?	262	0.1850		50-150	NA	NR

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.77		51131	41.62			NR
Residual Range Organics (RRO)	6.63		762869	1,226			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st SMS 12/07/18
2nd TP 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\120618F\1206F139.D Vial: 97
Acq On : 06 Dec 2018 11:05 pm Operator: SMS
Sample : rro@1000 svf02-51a Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 07 07:14:46 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
3) S	n-Triacontane	7.62	262	0.185	ppm
Spiked Amount	50.000	Recovery	=	0.37%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	56340	38.686	ppm
7) H	C10-C28in DRO [8015]	3.23	227444	152.742	ppm
8) H	C12-C25ex DRO [NWTPH]	3.77	51131	41.618	ppm
10) H	C25-C36in RRO [NWTPH]	6.63	762869	1225.955	ppm
11) H	C25-C36in RRO [AK103]	6.73	762869	972.769	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

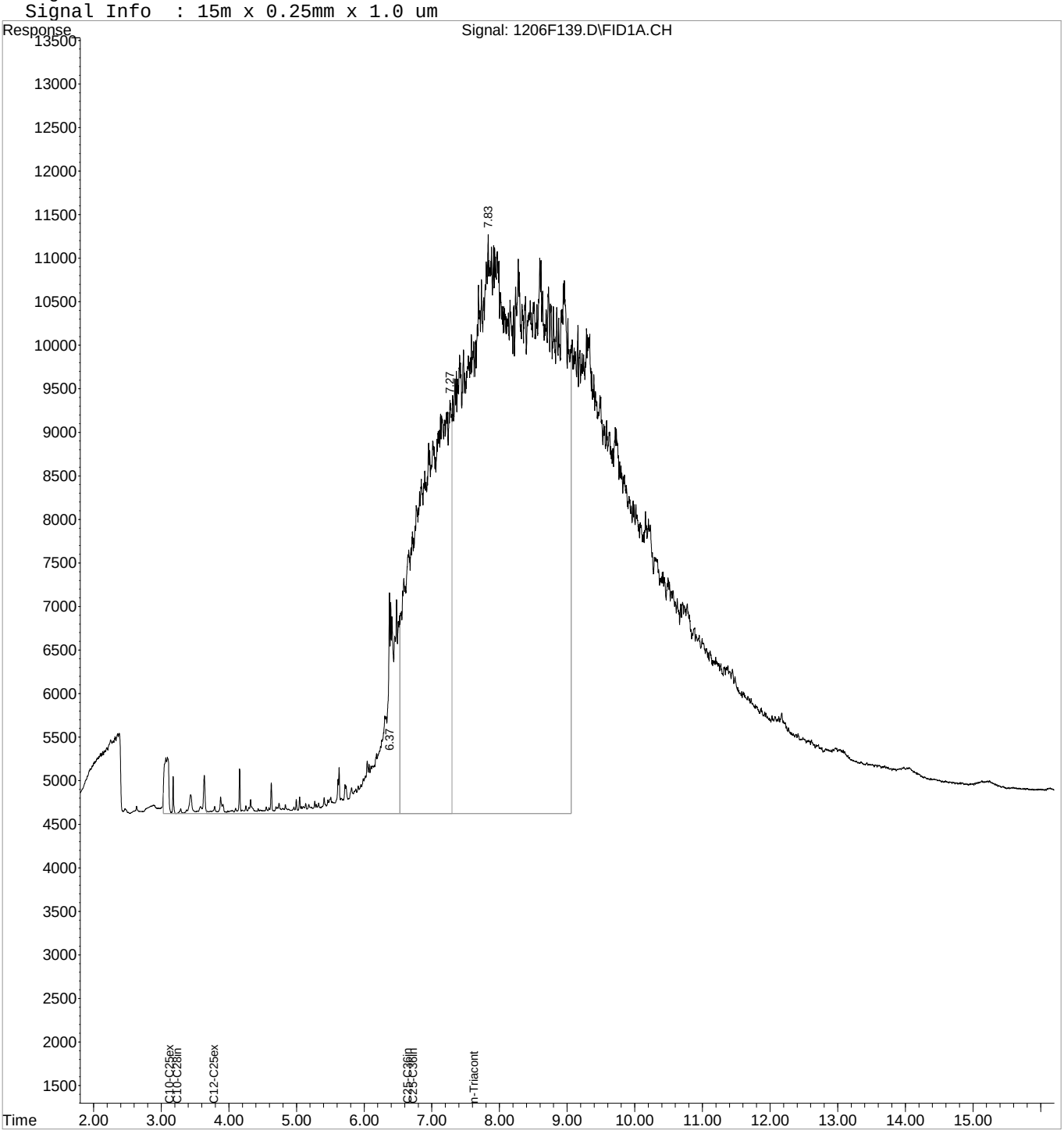
Quantitation Report (QT Reviewed)

1st 12/07/18
2nd 12/13/18

Data File : J:\GC21\DATA\120618F\1206F139.D Vial: 97
Acq On : 06 Dec 2018 11:05 pm Operator: SMS
Sample : rro@1000 svf02-51a Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 7 7:14 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 12/07/18
2nd 12/13/18

Exception Report

Data File: J:\GC21\DATA\120618F\1206F105.D
Lab ID: KWG1806357-5
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/06/2018 10:49
Date Quantitated: 12/06/2018 11:17
Batch ID: KWG1806357
Analysis Method: 8015C
MethodJoinID: MJ745

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F105.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 10:49	**Quant Date:**	12/06/2018 11:17	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806357-5			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	12/07/2018

Analysis Lot:	KWG1806357	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			55-133	NA	
n-Triacontane			0			54-136	NA	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		14520				
C10 - C25 DRO	3.13		12945	8.89			
C10 - C28 DRO	3.23		15657	10.52			
Diesel Range Organics (DRO)	3.77		7705	6.27			
Residual Range Organics (RRO)	6.63		15501	24.91			
C25 - C44 RRO	6.90		45420				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SMS 12/07/18
2nd TP 12/13/18

Data File : J:\GC21\DATA\120618F\1206F105.D Vial: 86
Acq On : 06 Dec 2018 10:49 am Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 06 11:17:55 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.13	12945	8.889	ppm
7) H	C10-C28in DRO [8015]	3.23	15657	10.515	ppm
8) H	C12-C25ex DRO [NWTPH]	3.77	7705	6.271	ppm
10) H	C25-C36in RRO [NWTPH]	6.63	15501	24.911	ppm
11) H	C25-C36in RRO [AK103]	6.73	15501	19.766	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

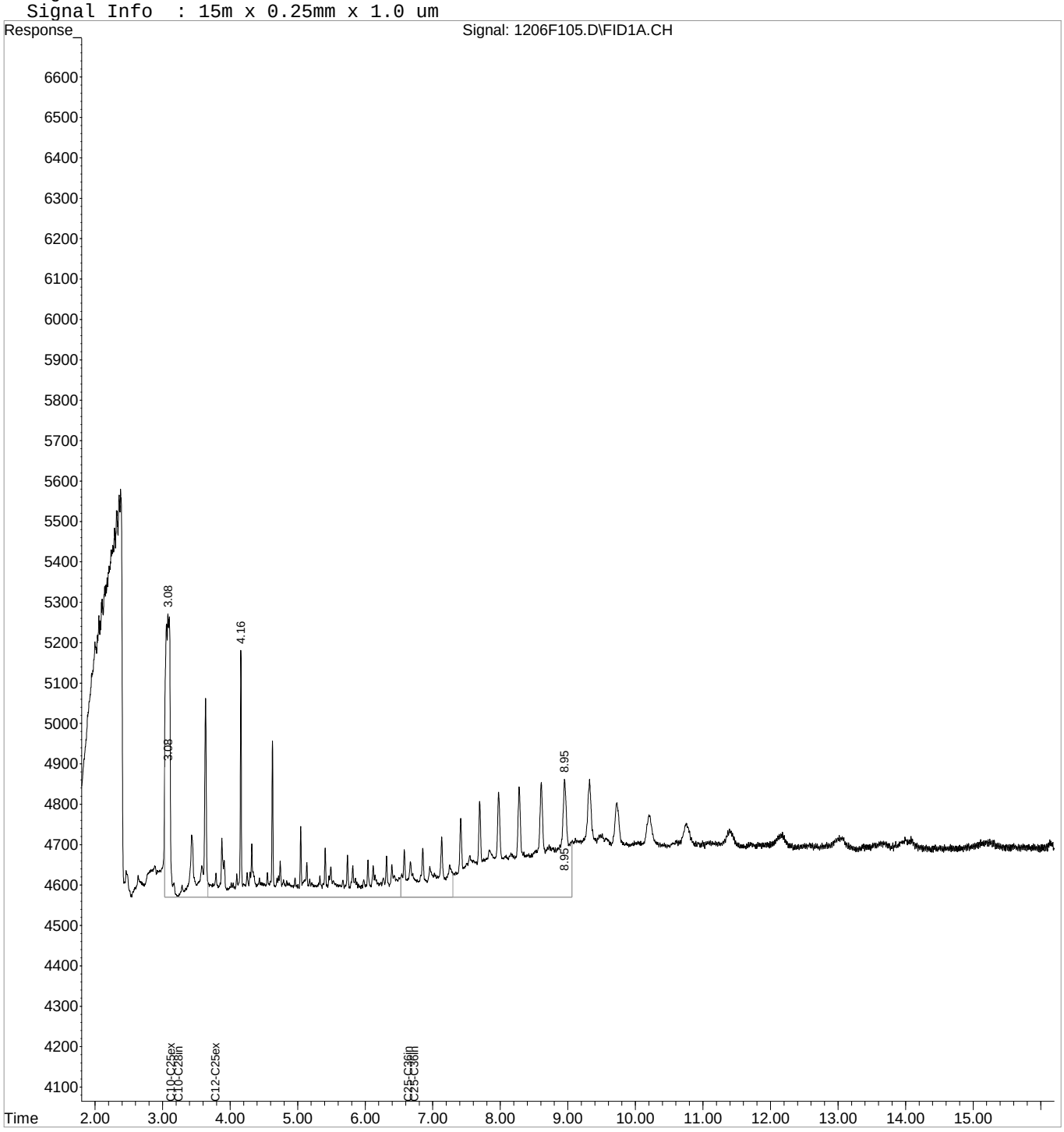
Quantitation Report (QT Reviewed)

1st 12/07/18
2nd 12/13/18

Data File : J:\GC21\DATA\120618F\1206F105.D Vial: 86
Acq On : 06 Dec 2018 10:49 am Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 6 11:17 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 12/07/18
2nd 12/13/18

Exception Report

Data File: J:\GC21\DATA\120618F\1206F121.D
Lab ID: KWG1806357-6
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/06/2018 16:36
Date Quantitated: 12/07/2018 07:27
Batch ID: KWG1806357
Analysis Method: 8015C
MethodJoinID: MJ745

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F121.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 16:36	**Quant Date:**	12/07/2018 07:27	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806357-6			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	12/07/2018

Analysis Lot:	KWG1806357	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			55-133	NA	
n-Triacontane			0			54-136	NA	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		16801				
C10 - C25 DRO	3.13		15115	10.38			
C10 - C28 DRO	3.23		19729	13.25			
Diesel Range Organics (DRO)	3.77		10799	8.79			
Residual Range Organics (RRO)	6.63		23583	37.90			
C25 - C44 RRO	6.90		69215				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SMS 12/07/18
2nd TP 12/13/18

Data File : J:\GC21\DATA\120618F\1206F121.D Vial: 86
Acq On : 06 Dec 2018 4:36 pm Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 07 07:27:55 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
6)	H C10-C25ex DRO [AK102]	3.13	15115	10.379 ppm
7)	H C10-C28in DRO [8015]	3.23	19729	13.249 ppm
8)	H C12-C25ex DRO [NWTPH]	3.77	10799	8.790 ppm
10)	H C25-C36in RRO [NWTPH]	6.63	23583	37.899 ppm
11)	H C25-C36in RRO [AK103]	6.73	23583	30.072 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

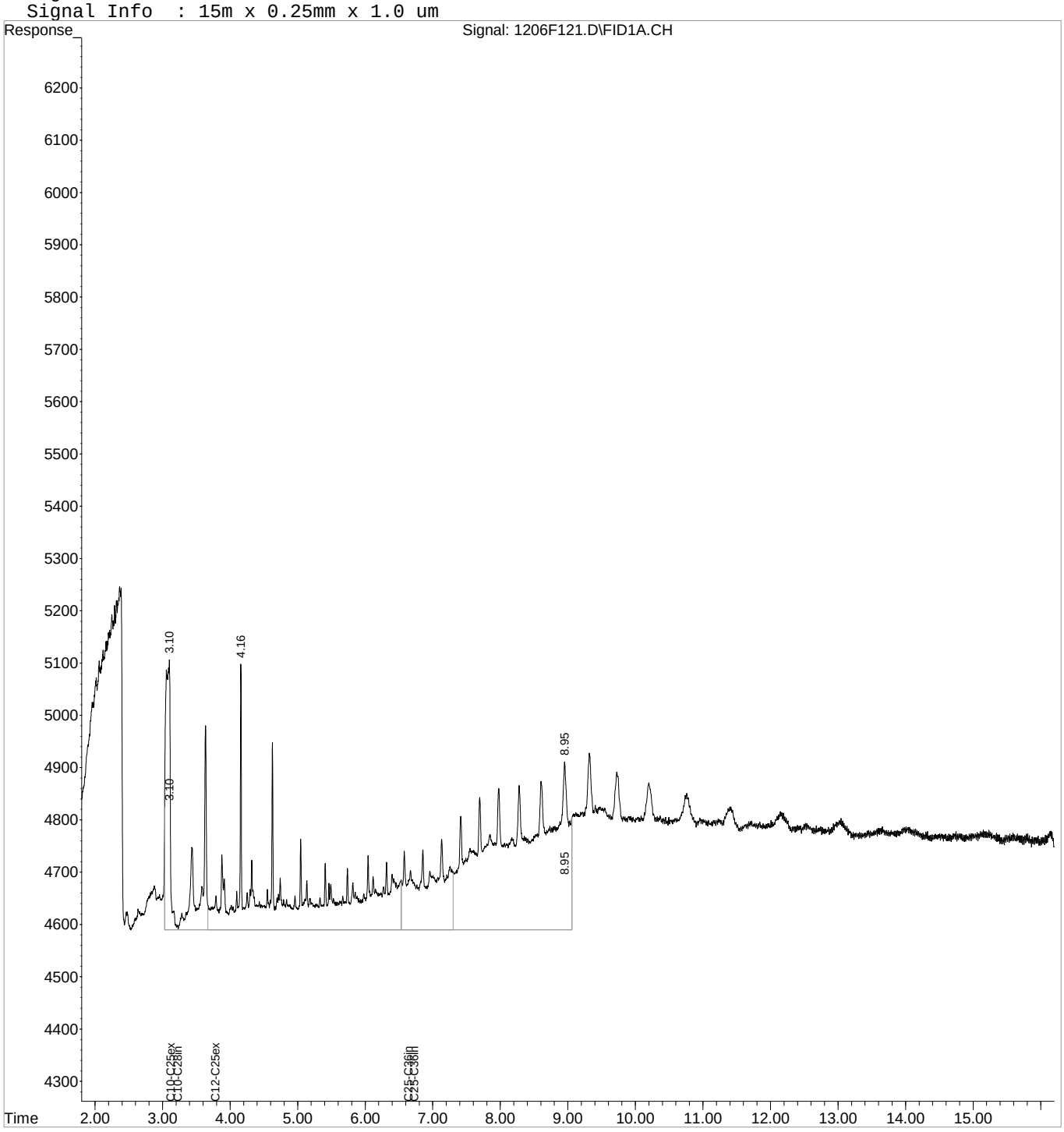
Quantitation Report (QT Reviewed)

1st 12/07/18
2nd 12/13/18

Data File : J:\GC21\DATA\120618F\1206F121.D Vial: 86
Acq On : 06 Dec 2018 4:36 pm Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 7 7:27 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 12/07/18
2nd 12/13/18

Exception Report

Data File: J:\GC21\DATA\120618F\1206F132.D
Lab ID: KWG1806357-7
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/06/2018 20:34
Date Quantitated: 12/07/2018 07:32
Batch ID: KWG1806357
Analysis Method: 8015C
MethodJoinID: MJ745

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Enviroquant/Stealth Calibration Check	C10 - C25 DRO	Calc	S-0.000	I-8.779	NA
	C10 - C28 DRO	Calc	S-0.000	I-11.168	NA

Primary Review: _____

Secondary Review: _____

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F132.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 20:34	**Quant Date:**	12/07/2018 07:32	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806357-7			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	12/07/2018

Analysis Lot:	KWG1806357	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			55-133	NA	
n-Triacontane			0			54-136	NA	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		14348				
C10 - C25 DRO	3.13		12786	8.78			
C10 - C28 DRO	3.23		16630	11.17			
Diesel Range Organics (DRO)	3.77		8737	7.11			
Residual Range Organics (RRO)	6.63		21127	33.95			
C25 - C44 RRO	6.90		67034				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F132.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 20:34	**Quant Date:**	12/07/2018 07:32	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ752	**Dilution:**	1.0
Lab ID:	KWG1806357-7			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	12/07/2018

Analysis Lot:	KWG1806357	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ752
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			50-150	NA	
n-Triacontane			0			50-150	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.77		8737	7.11			
Residual Range Organics (RRO)	6.63		21127	33.95			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SMS 12/07/18
2nd TP 12/13/18

Data File : J:\GC21\DATA\120618F\1206F132.D Vial: 86
Acq On : 06 Dec 2018 8:34 pm Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 07 07:32:20 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.13	12786	8.779 ppm
7) H	C10-C28in DRO [8015]	3.23	16630	11.168 ppm
8) H	C12-C25ex DRO [NWTPH]	3.77	8737	7.111 ppm
10) H	C25-C36in RRO [NWTPH]	6.63	21127	33.952 ppm
11) H	C25-C36in RRO [AK103]	6.73	21127	26.940 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

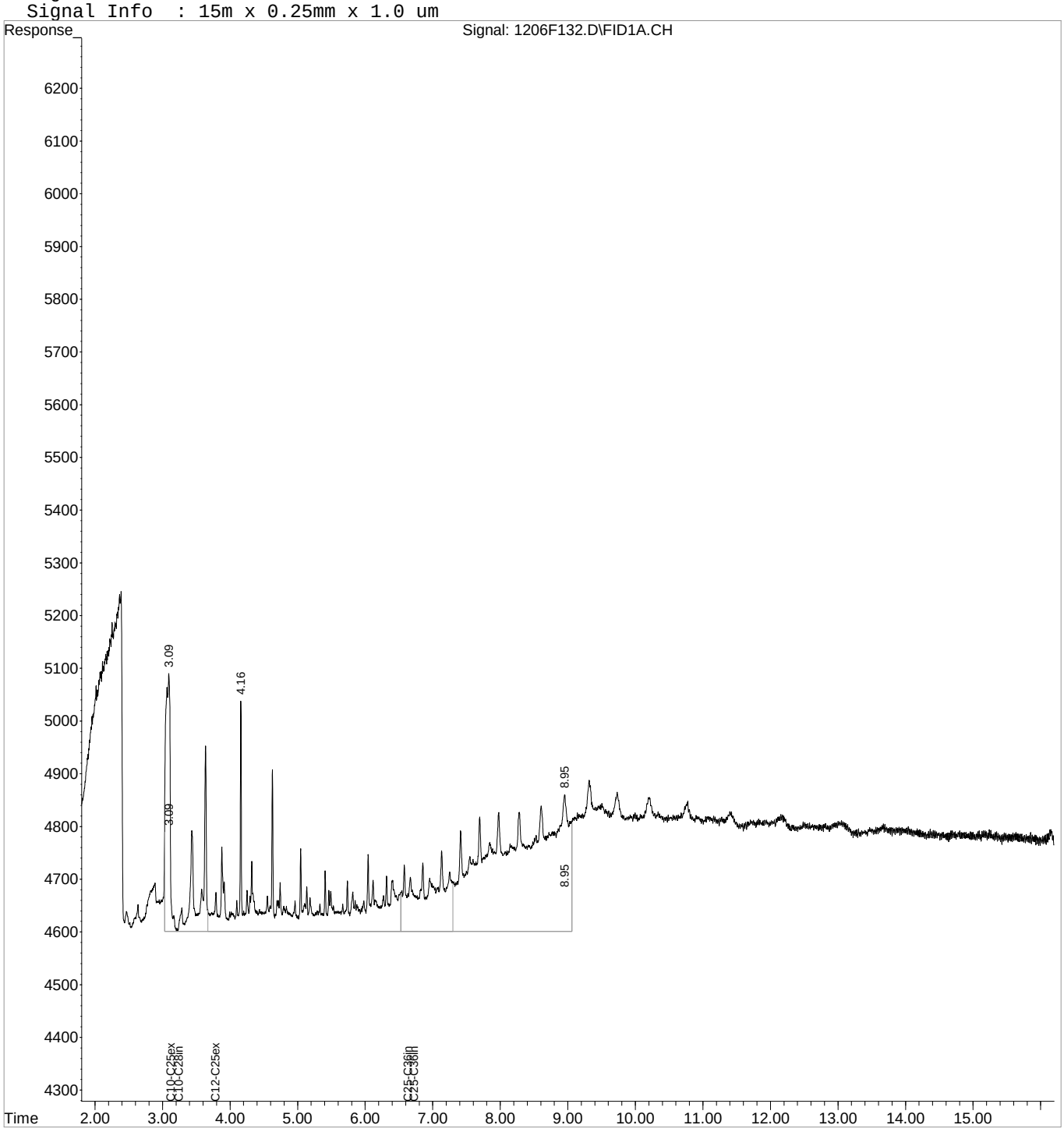
Quantitation Report (QT Reviewed)

1st 12/07/18
2nd 12/13/18

Data File : J:\GC21\DATA\120618F\1206F132.D Vial: 86
Acq On : 06 Dec 2018 8:34 pm Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 7 7:32 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st 12/07/18
2nd 12/13/18

Exception Report

Data File: J:\GC21\DATA\120618F\1206F140.D
Lab ID: KWG1806357-8
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/06/2018 23:27
Date Quantitated: 12/07/2018 07:35
Batch ID: KWG1806357
Analysis Method: 8015C
MethodJoinID: MJ745

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Enviroquant/Stealth Calibration Check	C10 - C25 DRO	Calc	S-0.000	I-10.215	NA
	C10 - C28 DRO	Calc	S-0.000	I-12.197	NA

Primary Review: _____

Secondary Review: _____

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F140.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 23:27	**Quant Date:**	12/07/2018 07:35	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ745	**Dilution:**	1.0
Lab ID:	KWG1806357-8			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	12/07/2018

Analysis Lot:	KWG1806357	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ745
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			55-133	NA	
n-Triacontane			0			54-136	NA	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
C9 - C24 DRO	2.80		17151				
C10 - C25 DRO	3.13		14877	10.22			
C10 - C28 DRO	3.23		18163	12.20			
Diesel Range Organics (DRO)	3.77		9055	7.37			
Residual Range Organics (RRO)	6.63		18629	29.94			
C25 - C44 RRO	6.90		56179				

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 12/07/18
2nd 12/13/18

Quantitation Report

Data File:	J:\GC21\DATA\120618F\1206F140.D			**Instrument:**	GC21
Acqu Date:	12/06/2018 23:27	**Quant Date:**	12/07/2018 07:35	**Vial:**	86
Run Type:	IB	**MethodJoinID:**	MJ752	**Dilution:**	1.0
Lab ID:	KWG1806357-8			**Soln Conc. Units:**	ppm

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8015C DRO RRO	**Collect Date:**		**Receive Date:**	12/07/2018

Analysis Lot:	KWG1806357	**Prep Lot:**		**Report Group:**	
Analysis Method:	8015C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC21\METHODS\082018F.M	**Calibration ID:**	CAL15807
Title:			
		Method ID:	MJ752
MB Ref:		**Quant based on Method**	

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
4-Bromofluorobenzene			0			50-150	NA	
o-Terphenyl			0			50-150	NA	
n-Triacontane			0			50-150	NA	

Target Compounds

Final Conc. Units:

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Diesel Range Organics (DRO)	3.77		9055	7.37			
Residual Range Organics (RRO)	6.63		18629	29.94			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st SMS 12/07/18
2nd TP 12/13/18

Data File : J:\GC21\DATA\120618F\1206F140.D Vial: 86
Acq On : 06 Dec 2018 11:27 pm Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 07 07:35:25 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.13	14877	10.215 ppm
7) H	C10-C28in DRO [8015]	3.23	18163	12.197 ppm
8) H	C12-C25ex DRO [NWTPH]	3.77	9055	7.370 ppm
10) H	C25-C36in RRO [NWTPH]	6.63	18629	29.937 ppm
11) H	C25-C36in RRO [AK103]	6.73	18629	23.755 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

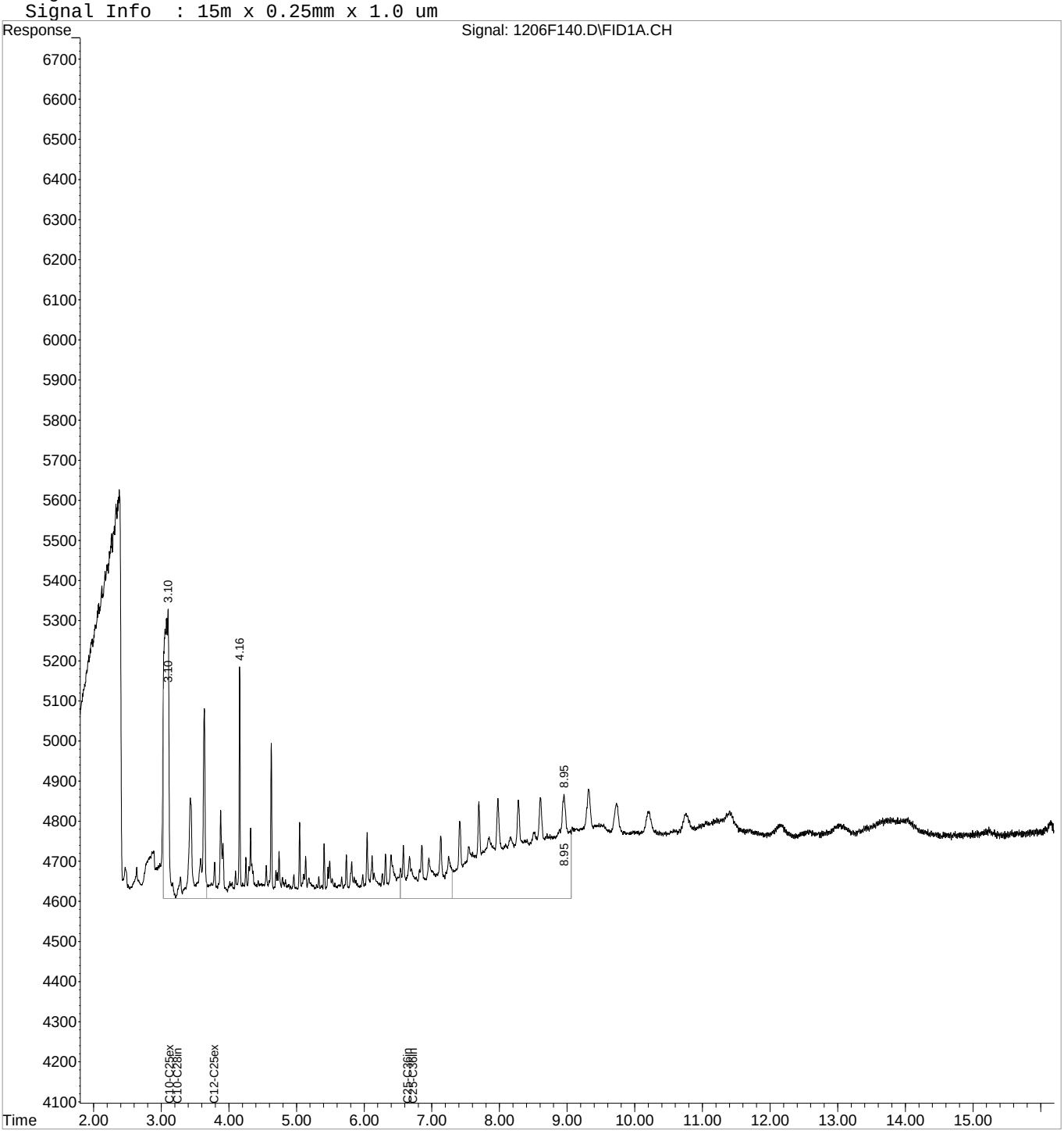
Quantitation Report (QT Reviewed)

1st 12/07/18
2nd 12/13/18

Data File : J:\GC21\DATA\120618F\1206F140.D Vial: 86
Acq On : 06 Dec 2018 11:27 pm Operator: SMS
Sample : ib Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Dec 7 7:35 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15807
Last Update : Thu Dec 06 10:07:25 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX32.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Injection Log

Directory: J:\GC21\DATA\082018F

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	90	082018.D	1.	DCM		08/20/22018 7:4(
2	90	082019.D	1.	DCM		08/20/22018 8:01
3	90	082020.D	1.	DCM		08/20/22018 8:2:
4	90	082021.D	1.	DCM		08/20/22018 8:44
5	90	082022.D	1.	DCM		08/20/22018 9:0(
6	90	082023.D	1.	DCM		08/20/22018 9:27
7	90	082024.D	1.	DCM		08/20/22018 9:4(
8	90	082025.D	1.	IB		08/20/22018 10:1
9	90	082026.D	1.	IB		08/20/22018 10:3:
10	90	082027.D	1.	IB		08/20/22018 10:5·
11	90	082028.D	1.	IB		08/20/22018 11:1:
12	90	082029.D	1.	IB		08/20/22018 11:3
13	90	082030.D	1.	IB		08/20/22018 11:5:
14	99	082031.D	1.	MC252	CAL 15807	08/20/22018 1:02
15	91	082032.D	1.	ALIPHATICS	MJ257	08/20/22018 1:2:
16	92	082033.D	1.	AROMATICS		08/20/22018 1:45
17	93	082034.D	1.	PAH		08/20/22018 2:07
18	86	082035.D	1.	IB		08/20/22018 2:2(
19	1	082036.D	1.	SVF02-44M 50 AK103		08/20/22018 2:5(
20	2	082037.D	1.	SVF02-44L 200 AK103		08/20/22018 3:11
21	3	082038.D	1.	SVF02-44K 500 AK103		08/20/22018 3:3:
22	4	082039.D	1.	SVF02-44J 2K AK103		08/20/22018 3:5(
23	5	082040.D	1.	SVF02-44I 5K AK103		08/20/22018 4:1(
24	6	082041.D	1.	SVF02-45A ICV AK103		08/20/22018 4:3(
25	86	082042.D	1.	IB		08/20/22018 5:0(
26	7	082043.D	1.	DRO 20/1 SVF02-45I		08/20/22018 5:21
27	8	082044.D	1.	DRO 50/2.5 SVF02-45H		08/20/22018 5:4:
28	9	082045.D	1.	DRO 200/10 SVF02-45G		08/20/22018 6:04
29	10	082046.D	1.	DRO 500/25 SVF02-45F		08/20/22018 6:2(
30	11	082047.D	1.	DRO 2K/100 SVF02-45E		08/20/22018 6:4(
31	12	082048.D	1.	DRO 5K/250 SVF02-45D		08/20/22018 7:0(
32	13	082049.D	1.	DRO 20K SVF02-45C		08/20/22018 7:31
33	14	082050.D	1.	DRO 50K SVF02-45B		08/20/22018 7:5:
34	15	082051.D	1.	DRO ICV SVF02-45L		08/20/22018 8:14
35	86	082052.D	1.	IB		08/20/22018 8:3(
36	16	082053.D	1.	RRO 50 SVF02-46F		08/20/22018 8:5(
37	17	082054.D	1.	RRO 200 SVF02-46F		08/20/22018 9:1(
38	18	082055.D	1.	RRO 500 SVF02-46H		08/20/22018 9:41
39	19	082056.D	1.	RRO 2K SVF02-46G		08/20/22018 10:0:
40	20	082057.D	1.	RRO 46F 5K		08/20/22018 10:2·
41	21	082058.D	1.	RRO ICV SVF02-47A		08/20/22018 10:4(
42	86	082059.D	1.	IB		08/20/22018 11:0
43	22	082060.D	1.	KWG1803734-1SGT		08/20/22018 11:2:
44	23	082061.D	1.	KWG1803734-2SGT		08/20/22018 11:5
45	24	082062.D	1.	KWG1803734-3SGT	RR pass ms - inject	08/21/22018 12:1:
46	25	082063.D	1.	KWG1803734-4SGT		08/21/22018 12:3·
47	26	082064.D	1.	KWG1803734-6MB SGT		08/21/22018 12:5:
48	90	082065.D	1.	IB		08/21/22018 1:17
49	90	082066.D	1.	IB		08/21/22018 1:3(
50	90	082067.D	1.	IB		08/21/22018 2:0(
51	90	082068.D	1.	IB		08/21/22018 2:22
52	90	082069.D	1.	IB		08/21/22018 2:44
53	90	082070.D	1.	IB		08/21/22018 3:0:
54	90	082071.D	1.	IB		08/21/22018 3:27
55	90	082072.D	1.	IB		08/21/22018 3:4(

Initial Calibration - Summary Report

Calibration ID:	CAL15807	**Instrument ID:**	GC21
Method ID:	MJ257	**Column Name:**	ZB-1

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
4-Bromofluorobenzene	SURR	AverageRF		9.1E+2	20	6.9			NA	
o-Terphenyl	SURR	AverageRF		1.8E+3	20	8.1			NA	
n-Triacontane	SURR	AverageRF		1.4E+3	20	7.1			NA	
C10 - C25 DRO	MS	AverageRF		1.5E+3	20	11.1			OK	
Diesel Range Organics	MS	AverageRF		1.5E+3	20	12.9			OK	
Diesel Range Organics (DRO)	MS	AverageRF		1.2E+3	20	8.1			OK	
Residual Range Organics (RRO)	MS	AverageRF		6.2E+2	20	4.6			OK	
C25 - C36 RRO	MS	AverageRF		7.8E+2	20	6.3			OK	

Initial Calibration - Detailed Report

Calibration ID:	CAL15807	**Instrument ID:**	GC21
Method ID:	MJ257	**Column Name:**	ZB-1
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284095	J:\GC21\DATA\082018F\082036.D	08/20/2018 14:50	08/21/2018 07:07	08/21/2018 07:39
2	284096	J:\GC21\DATA\082018F\082037.D	08/20/2018 15:11	08/21/2018 07:07	08/21/2018 07:39
3	284097	J:\GC21\DATA\082018F\082038.D	08/20/2018 15:33	08/21/2018 07:08	08/21/2018 07:39
4	284098	J:\GC21\DATA\082018F\082039.D	08/20/2018 15:55	08/21/2018 07:05	08/21/2018 07:39
5	284099	J:\GC21\DATA\082018F\082040.D	08/20/2018 16:16	08/21/2018 07:06	08/21/2018 07:39
6	284101	J:\GC21\DATA\082018F\082043.D	08/20/2018 17:21	08/21/2018 07:22	08/21/2018 07:39
7	284102	J:\GC21\DATA\082018F\082044.D	08/20/2018 17:43	08/21/2018 07:15	08/21/2018 07:39
8	284103	J:\GC21\DATA\082018F\082045.D	08/20/2018 18:04	08/21/2018 07:15	08/21/2018 07:39
9	284104	J:\GC21\DATA\082018F\082046.D	08/20/2018 18:26	08/21/2018 07:16	08/21/2018 07:39
10	284105	J:\GC21\DATA\082018F\082047.D	08/20/2018 18:48	08/21/2018 07:16	08/21/2018 07:39
11	284106	J:\GC21\DATA\082018F\082048.D	08/20/2018 19:09	08/21/2018 07:17	08/21/2018 07:39
12	284107	J:\GC21\DATA\082018F\082049.D	08/20/2018 19:31	08/21/2018 07:17	08/21/2018 07:39
13	284108	J:\GC21\DATA\082018F\082050.D	08/20/2018 19:53	08/21/2018 07:17	08/21/2018 07:39
14	284110	J:\GC21\DATA\082018F\082053.D	08/20/2018 20:58	08/21/2018 07:28	08/21/2018 07:39
15	284111	J:\GC21\DATA\082018F\082054.D	08/20/2018 21:19	08/21/2018 07:28	08/21/2018 07:39
16	284112	J:\GC21\DATA\082018F\082055.D	08/20/2018 21:41	08/21/2018 07:30	08/21/2018 07:39
17	284113	J:\GC21\DATA\082018F\082056.D	08/20/2018 22:02	08/21/2018 07:30	08/21/2018 07:39
18	284114	J:\GC21\DATA\082018F\082057.D	08/20/2018 22:24	08/21/2018 07:30	08/21/2018 07:39

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
4-Bromofluorobenzene											6	9.2E+2	9.1E+2	6.9
	7	8.0E+2	8	9.4E+2	9	8.9E+2	10	9.8E+2	11	9.4E+2				
o-Terphenyl											6	1.8E+3	1.8E+3	8.1
	7	1.5E+3	8	1.9E+3	9	1.8E+3	10	1.9E+3	11	1.8E+3				
n-Triacontane											6	1.4E+3	1.4E+3	7.1
	7	1.2E+3	8	1.5E+3	9	1.4E+3	10	1.5E+3	11	1.4E+3				
C10 - C25 DRO											6	1.8E+3	1.5E+3	11.1
	7	1.4E+3	8	1.4E+3	9	1.3E+3	10	1.5E+3	11	1.4E+3	12	1.4E+3		
	13	1.3E+3												
Diesel Range Organics											6	1.9E+3	1.5E+3	12.9
	7	1.4E+3	8	1.5E+3	9	1.4E+3	10	1.5E+3	11	1.4E+3	12	1.5E+3		
	13	1.3E+3												
Diesel Range Organics (DRO)											6	1.4E+3	1.2E+3	8.1
	7	1.1E+3	8	1.2E+3	9	1.2E+3	10	1.3E+3	11	1.2E+3	12	1.3E+3		
	13	1.1E+3												
Residual Range Organics (RRO)													6.2E+2	4.6
			14	6.6E+2	15	6.3E+2	16	5.9E+2	17	6.2E+2	18	6.0E+2		
C25 - C36 RRO	1	8.6E+2	2	7.9E+2	3	7.9E+2	4	7.2E+2	5	7.7E+2			7.8E+2	6.3

Initial Calibration - Detailed Report

Calibration ID:	CAL15807	**Instrument ID:**	GC21
Method ID:	MJ257	**Column Name:**	ZB-1

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284095	J:\GC21\DATA\082018F\082036.D	08/20/2018 14:50	08/21/2018 07:07	08/21/2018 07:39
2	284096	J:\GC21\DATA\082018F\082037.D	08/20/2018 15:11	08/21/2018 07:07	08/21/2018 07:39
3	284097	J:\GC21\DATA\082018F\082038.D	08/20/2018 15:33	08/21/2018 07:08	08/21/2018 07:39
4	284098	J:\GC21\DATA\082018F\082039.D	08/20/2018 15:55	08/21/2018 07:05	08/21/2018 07:39
5	284099	J:\GC21\DATA\082018F\082040.D	08/20/2018 16:16	08/21/2018 07:06	08/21/2018 07:39
6	284101	J:\GC21\DATA\082018F\082043.D	08/20/2018 17:21	08/21/2018 07:22	08/21/2018 07:39
7	284102	J:\GC21\DATA\082018F\082044.D	08/20/2018 17:43	08/21/2018 07:15	08/21/2018 07:39
8	284103	J:\GC21\DATA\082018F\082045.D	08/20/2018 18:04	08/21/2018 07:15	08/21/2018 07:39
9	284104	J:\GC21\DATA\082018F\082046.D	08/20/2018 18:26	08/21/2018 07:16	08/21/2018 07:39
10	284105	J:\GC21\DATA\082018F\082047.D	08/20/2018 18:48	08/21/2018 07:16	08/21/2018 07:39
11	284106	J:\GC21\DATA\082018F\082048.D	08/20/2018 19:09	08/21/2018 07:17	08/21/2018 07:39
12	284107	J:\GC21\DATA\082018F\082049.D	08/20/2018 19:31	08/21/2018 07:17	08/21/2018 07:39
13	284108	J:\GC21\DATA\082018F\082050.D	08/20/2018 19:53	08/21/2018 07:17	08/21/2018 07:39
14	284110	J:\GC21\DATA\082018F\082053.D	08/20/2018 20:58	08/21/2018 07:28	08/21/2018 07:39
15	284111	J:\GC21\DATA\082018F\082054.D	08/20/2018 21:19	08/21/2018 07:28	08/21/2018 07:39
16	284112	J:\GC21\DATA\082018F\082055.D	08/20/2018 21:41	08/21/2018 07:30	08/21/2018 07:39
17	284113	J:\GC21\DATA\082018F\082056.D	08/20/2018 22:02	08/21/2018 07:30	08/21/2018 07:39
18	284114	J:\GC21\DATA\082018F\082057.D	08/20/2018 22:24	08/21/2018 07:30	08/21/2018 07:39

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4-Bromofluorobenzene									6	1	1.013	1.3
	7	2.5	2.190	-12.4	8	10	10.28	2.8	9	25	24.33	-2.7
	10	100	107.3	7.3	11	250	259.3	3.7				
o-Terphenyl									6	1	0.9920	-0.8
	7	2.5	2.132	-14.7	8	10	10.48	4.8	9	25	24.85	-0.6
	10	100	109.2	9.2	11	250	255.4	2.1				
n-Triacontane									6	1	1.012	1.2
	7	2.5	2.170	-13.2	8	10	10.39	3.9	9	25	24.91	-0.4
	10	100	107.9	7.9	11	250	251.7	0.7				
C10 - C25 DRO									6	20	25.01	25.1
	7	50	48.01	-4.0	8	200	199.1	-0.5	9	500	462.6	-7.5
	10	2000	2050	2.5	11	5000	4844	-3.1	12	20000	19870	-0.7
	13	50000	44060	-11.9								

Initial Calibration - Detailed Report

Calibration ID:	CAL15807	**Instrument ID:**	GC21
Method ID:	MJ257	**Column Name:**	ZB-1

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Diesel Range Organics												
									6	20	26.01	**30.1**
	7	50	48.35	-3.3	8	200	198.1	-0.9	9	500	457.7	-8.5
	10	2000	2026	1.3	11	5000	4791	-4.2	12	20000	19660	-1.7
	13	50000	43620	-12.8								
Diesel Range Organics (DRO)												
									6	20	23.14	15.7
	7	50	46.12	-7.8	8	200	201.8	0.9	9	500	472.8	-5.4
	10	2000	2104	5.2	11	5000	4961	-0.8	12	20000	20380	1.9
	13	50000	45150	-9.7								
Residual Range Organics (RRO)												
					14	50	53.41	6.8	15	200	203.5	1.7
	16	500	473.4	-5.3	17	2000	1991	-0.5	18	5000	4861	-2.8
C25 - C36 RRO	1	50	54.55	9.1	2	200	202.0	1.0	3	500	501.6	0.3
	4	2000	1831	-8.5	5	5000	4902	-2.0				

Second Source Calibration Verification Summary

CalibrationID: CAL15807

Method ID: MJ257

DataFile Location: J:\GC21\DATA\082018F\082051.D

Units: mg/L

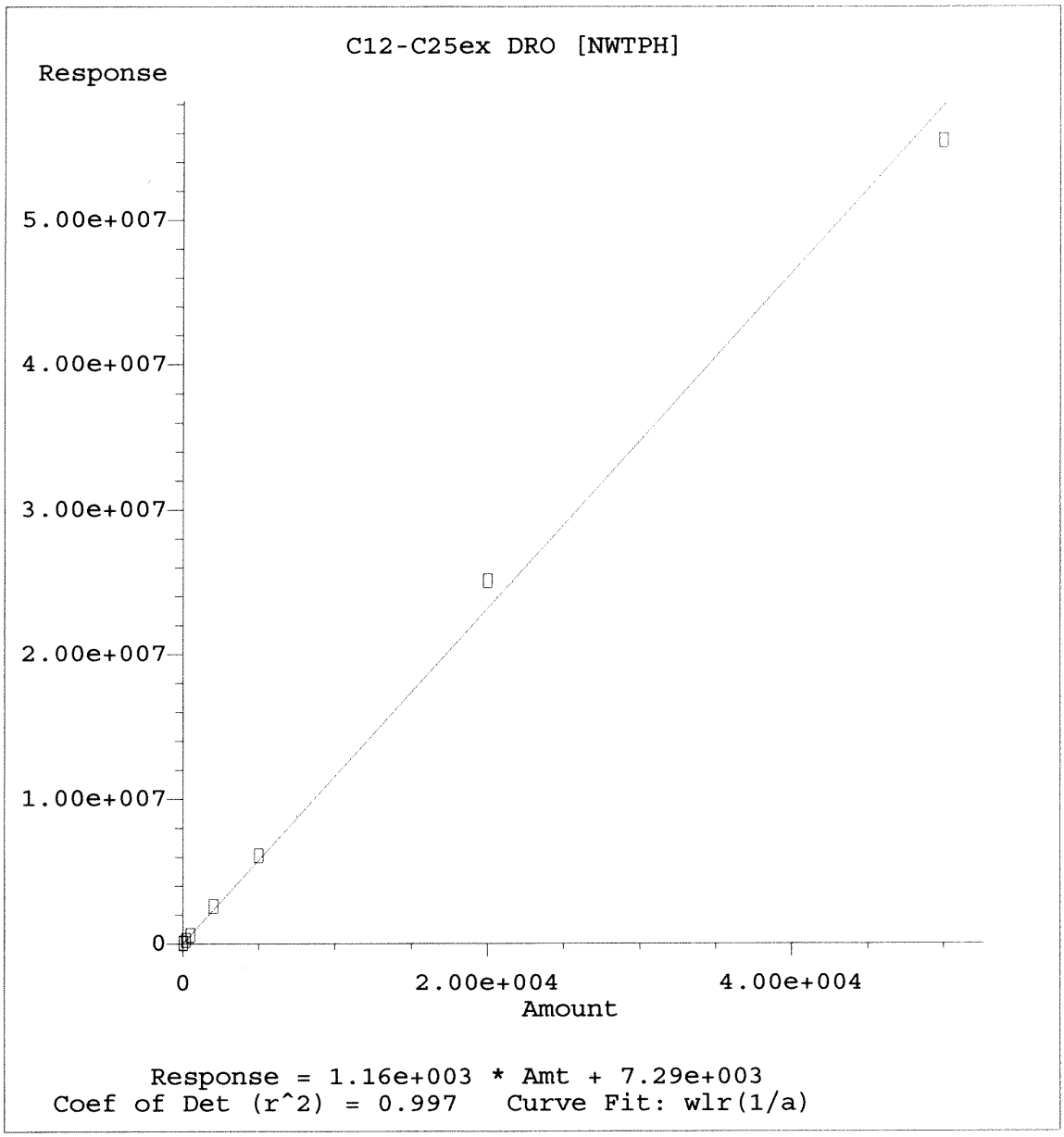
Column: ZB-1

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
C10 - C25 DRO	284109	AverageRF	25	1.5E+3	1.4E+3	-0.7	1000.00	993.1	
Diesel Range Organics	284109	AverageRF	20	1.5E+3	1.5E+3	-1.9	1000.00	981.1	
Diesel Range Organics (DRO)	284109	AverageRF	15	1.2E+3	1.3E+3	2.6	1000.00	1026.3	
Residual Range Organics (RRO)	284115	AverageRF	15	6.2E+2	5.7E+2	-7.8	1000.00	922.0	
C25 - C36 RRO	284100	AverageRF	25	7.8E+2	8.6E+2	9.8	1000.00	1097.9	

Initial Calibration - Detailed Report

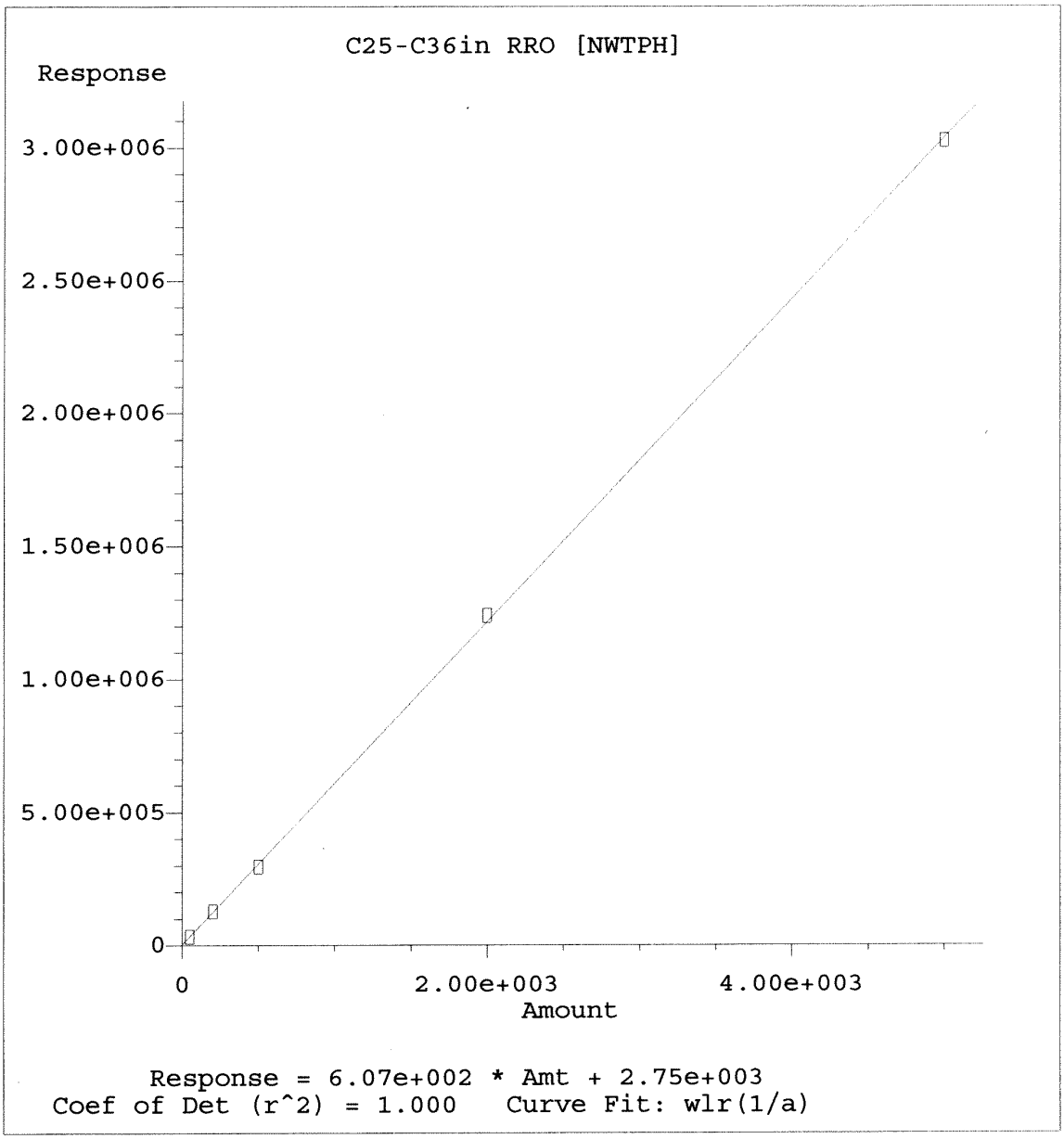
Calibration ID:	CAL15807	**Instrument ID:**	GC21
Method ID:	MJ257	**Column Name:**	ZB-1

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Diesel Range Organics												
									6	20	26.01	**30.1**
	7	50	48.35	-3.3	8	200	198.1	-0.9	9	500	457.7	-8.5
	10	2000	2026	1.3	11	5000	4791	-4.2	12	20000	19660	-1.7
	13	50000	43620	-12.8								
Diesel Range Organics (DRO)												
									6	20	18.27	-8.7
	7	50	42.65	-14.7	8	200	207.8	3.9	9	500	495.4	-0.9
	10	2000	2226	11.3	11	5000	5258	5.2	12	20000	21620	8.1
	13	50000	47900	-4.2								
Linear Check												
Residual Range Organics (RRO)												
					14	50	50.22	0.4	15	200	204.0	2.0
Linear Check	16	500	480.8	-3.8	17	2000	2036	1.8	18	5000	4979	-0.4
C25 - C36 RRO	1	50	54.55	9.1	2	200	202.0	1.0	3	500	501.6	0.3
	4	2000	1831	-8.5	5	5000	4902	-2.0				



Method Name: J:\GC21\METHODS\082018F.M
Calibration Table Last Updated: Tue Aug 21 07:32:16 2018

Linear Check



Method Name: J:\GC21\METHODS\082018F.M
Calibration Table Last Updated: Tue Aug 21 07:32:16 2018

Linear Check

1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (Not Reviewed)

Data File : J:\GC21\DATA\082018F\082032.D Vial: 91
Acq On : 20 Aug 2018 1:23 pm Operator: SMS
Sample : ALIPHATICS Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 08:24:50 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:32:16 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.77f	56436	61.933	ppm
Spiked Amount	50.000	Recovery	=	123.87%	
2) S	o-Terphenyl	5.49	220	0.124	ppm
Spiked Amount	50.000	Recovery	=	0.25%	
3) S	n-Triacontane	7.62	49835	35.103	ppm
Spiked Amount	50.000	Recovery	=	70.21%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.14	979284	672.424	ppm
7) H	C10-C28in DRO [8015]	3.24	1188142	797.905	ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	859651	699.710	ppm
10) H	C25-C36in RRO [NWTPH]	6.65	611679	982.988	ppm
11) H	C25-C36in RRO [AK103]	6.75	611679	779.979	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

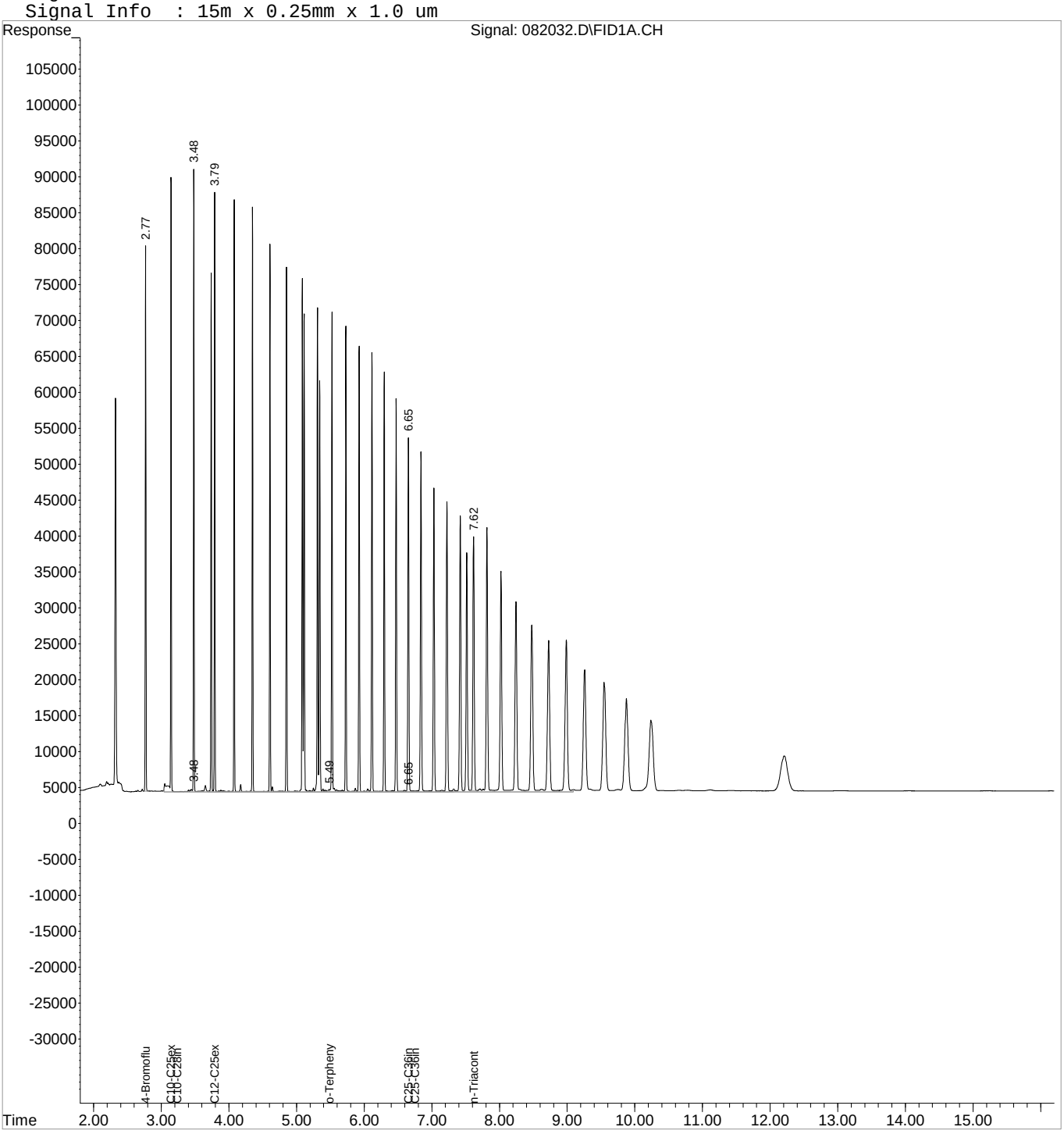
Quantitation Report (Not Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082032.D Vial: 91
Acq On : 20 Aug 2018 1:23 pm Operator: SMS
Sample : ALIPHATICS Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 8:24 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:32:16 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082035.D Vial: 86
Acq On : 20 Aug 2018 2:28 pm Operator: SMS
Sample : IB Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:03:04 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
11) H	C25-C36in RRO [AK103]	6.75	11721	14.419 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

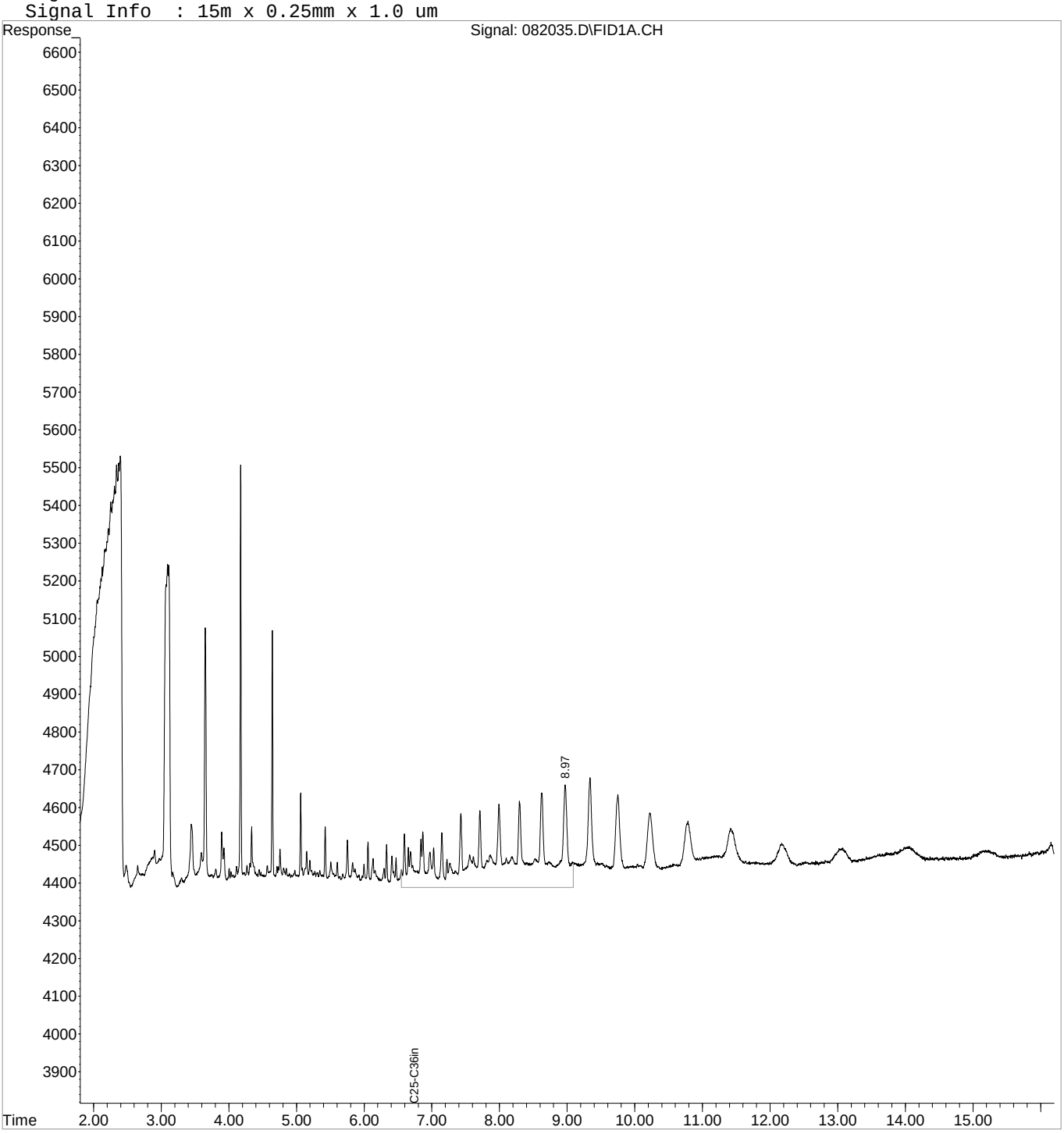
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082035.D Vial: 86
Acq On : 20 Aug 2018 2:28 pm Operator: SMS
Sample : IB Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:03 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082036.D Vial: 1
Acq On : 20 Aug 2018 2:50 pm Operator: SMS
Sample : SVF02-44M 50 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:08 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
11) H C25-C36in RRO [AK103]	6.75	42780	52.627 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

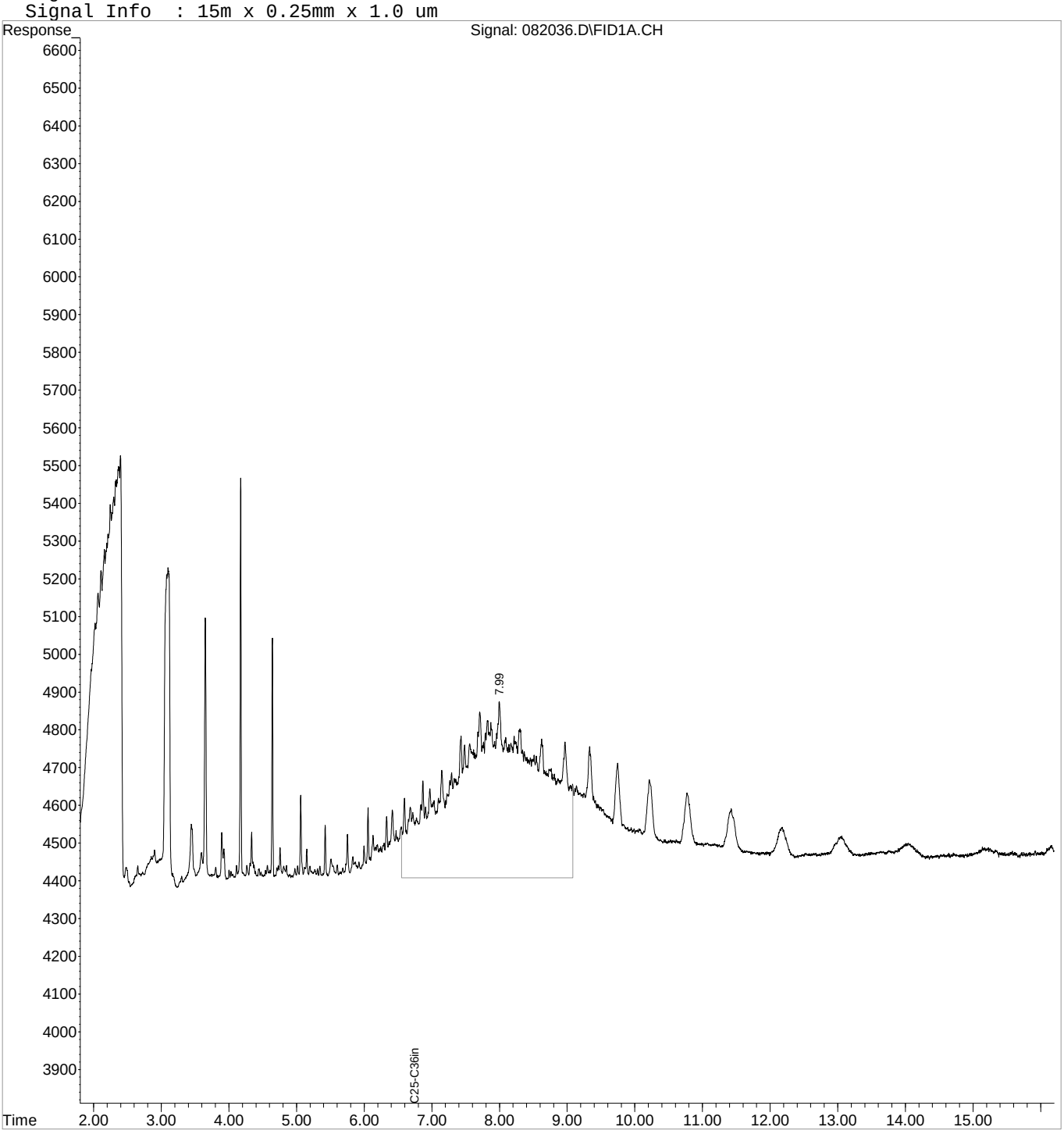
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082036.D Vial: 1
Acq On : 20 Aug 2018 2:50 pm Operator: SMS
Sample : SVF02-44M 50 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:07 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

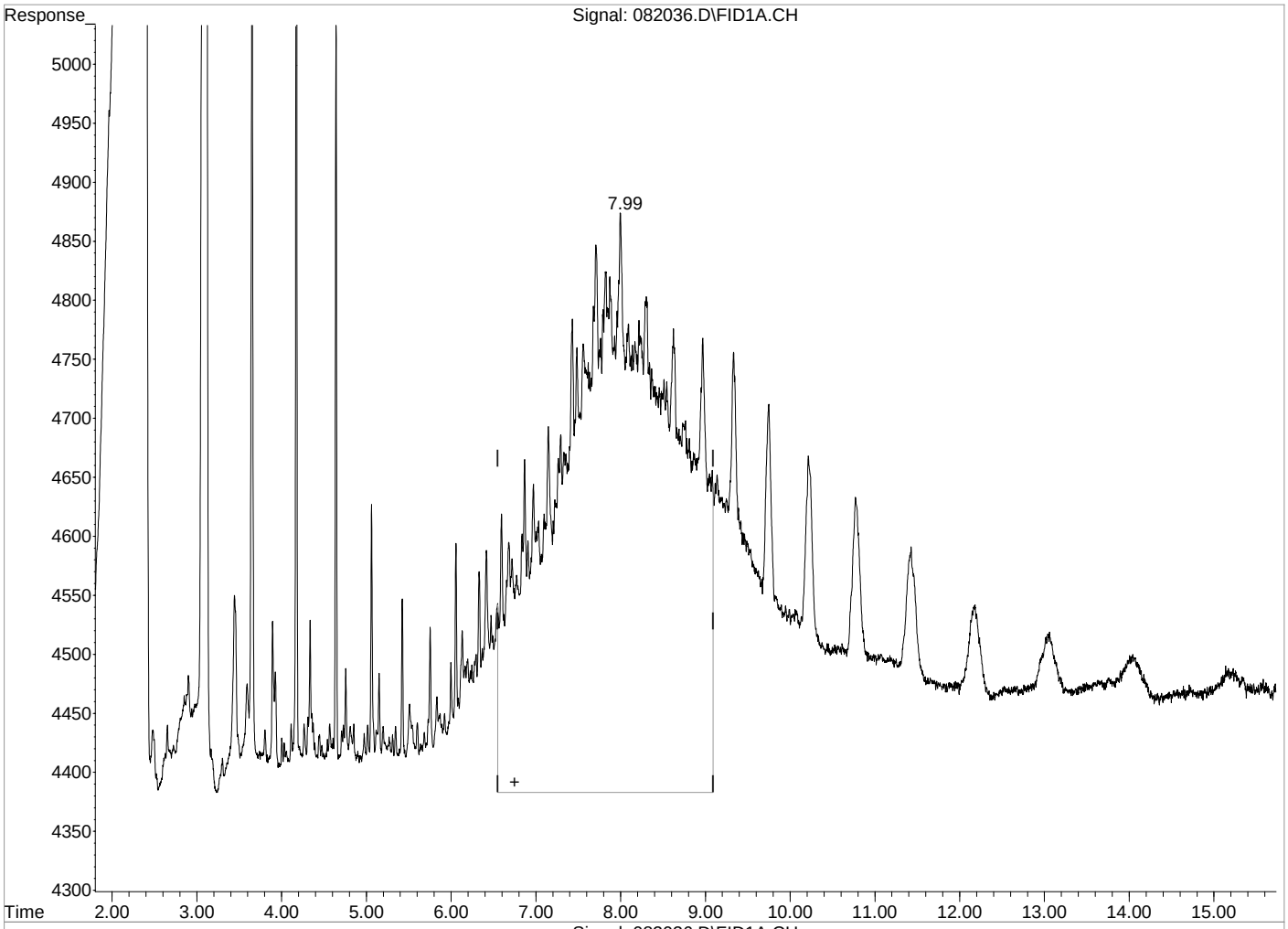


Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082036.D Vial: 1
Acq On : 20 Aug 2018 2:50 pm Operator: SMS
Sample : SVF02-44M 50 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:04 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Multiple Level Calibration



Signal: 082036.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 57.462ppm

response 46710

Manual Integration:

Before

08/21/18

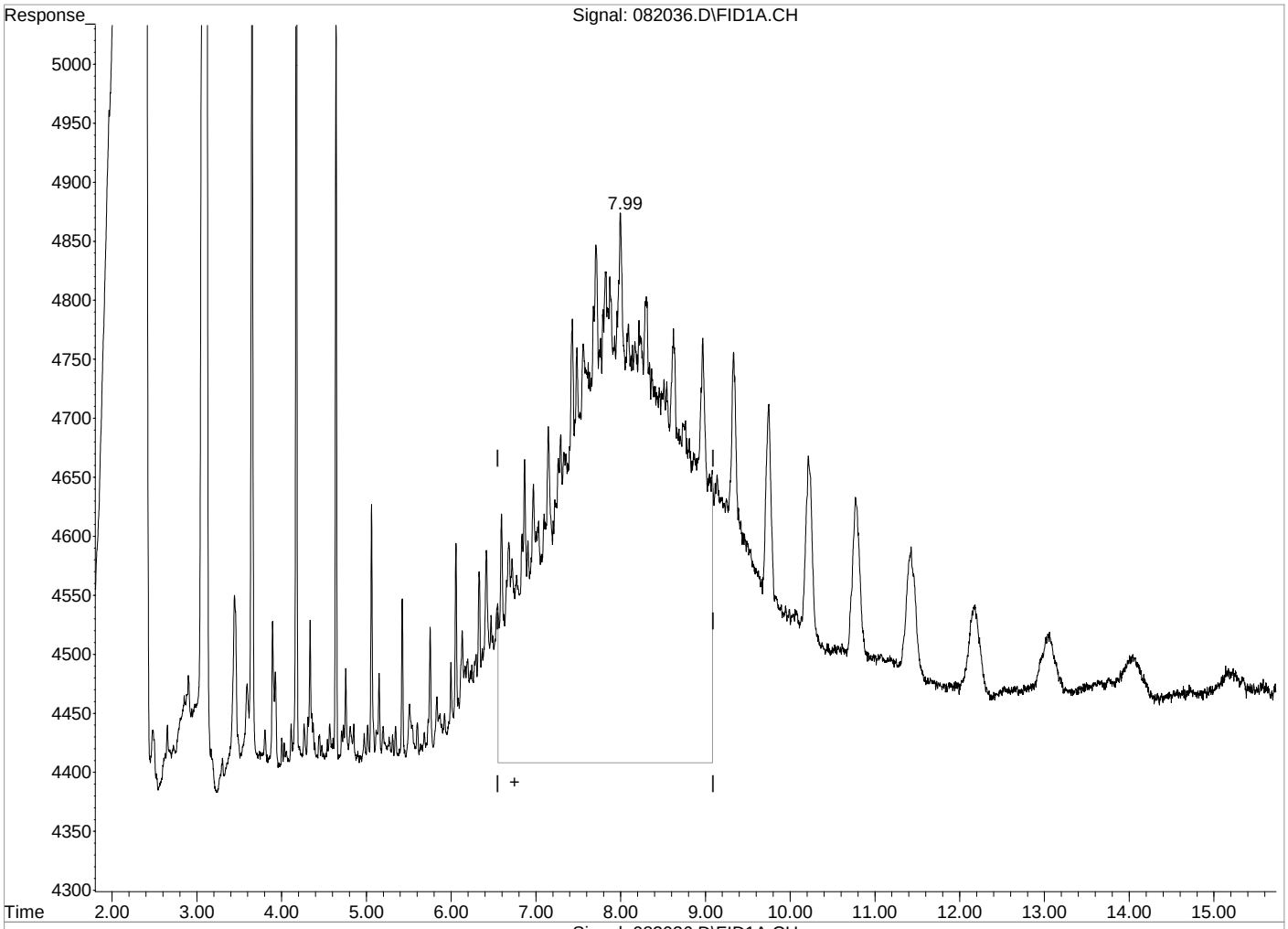
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082036.D Vial: 1
Acq On : 20 Aug 2018 2:50 pm Operator: SMS
Sample : SVF02-44M 50 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:04 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Multiple Level Calibration



Signal: 082036.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 52.627ppm

response 42780

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082037.D Vial: 2
Acq On : 20 Aug 2018 3:11 pm Operator: SMS
Sample : SVF02-44L 200 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:09 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
11) H	C25-C36in RRO [AK103]	6.75	158420	194.885 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

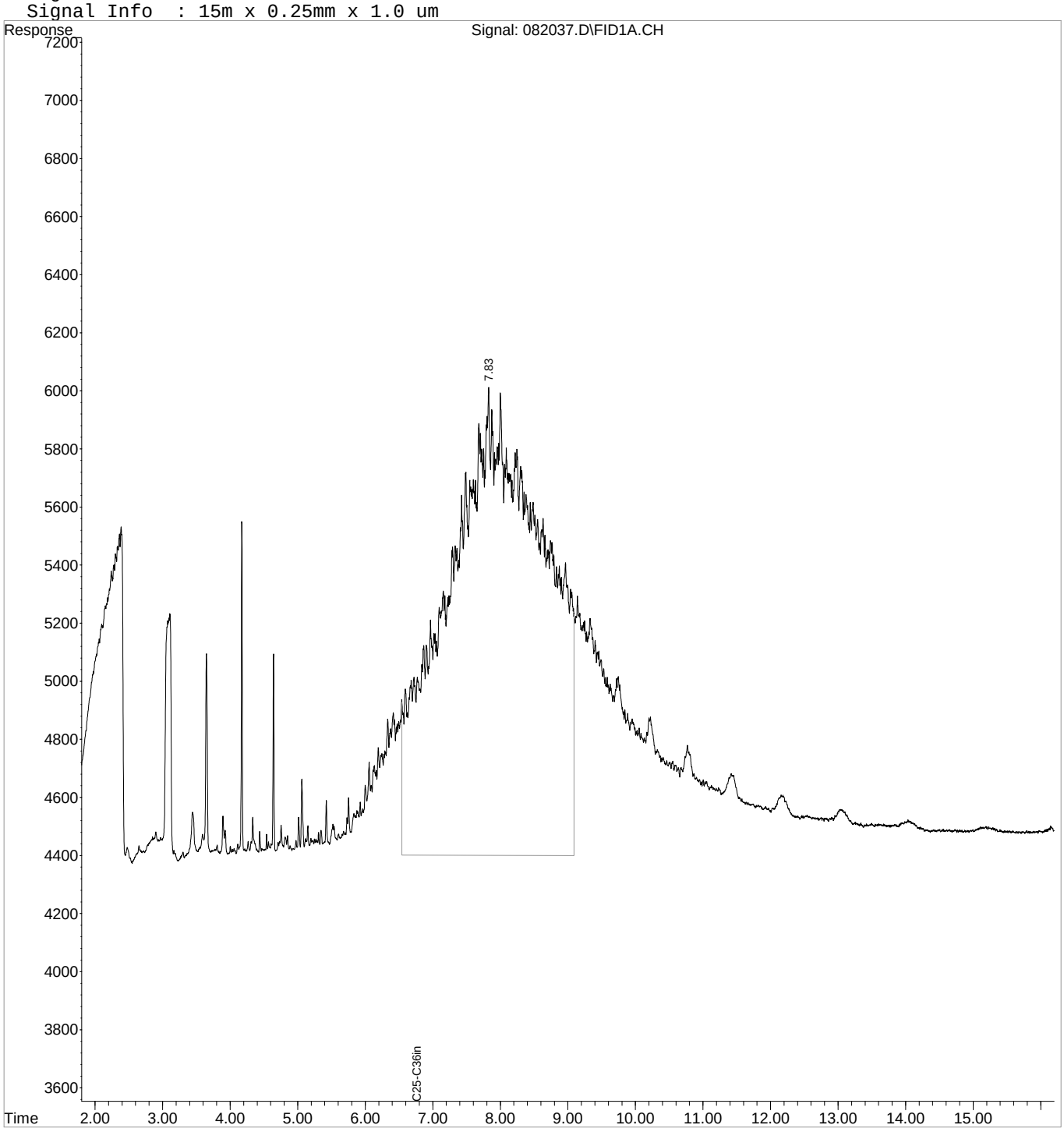
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082037.D Vial: 2
Acq On : 20 Aug 2018 3:11 pm Operator: SMS
Sample : SVF02-44L 200 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:07 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

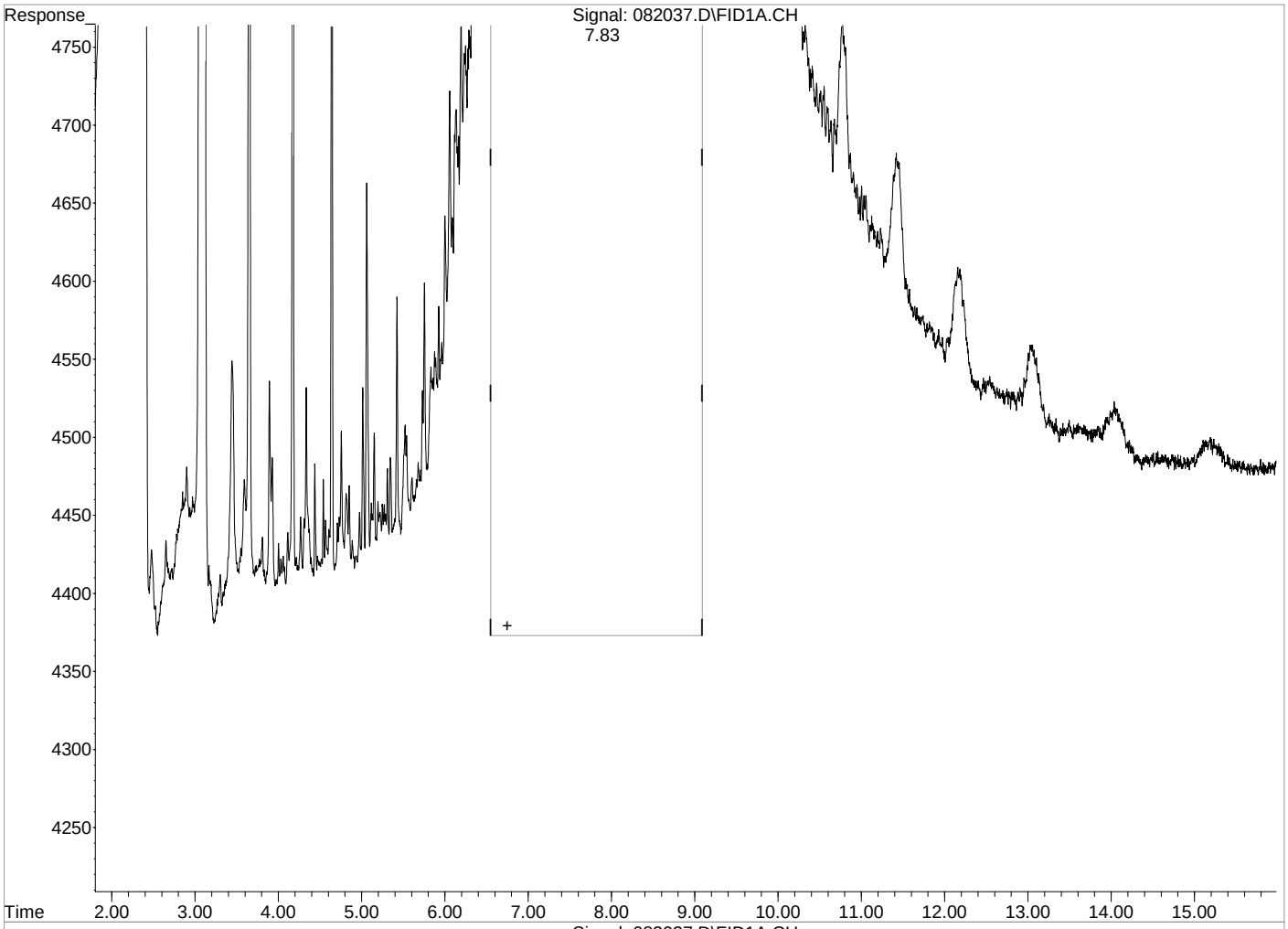


Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082037.D Vial: 2
Acq On : 20 Aug 2018 3:11 pm Operator: SMS
Sample : SVF02-44L 200 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:04 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Multiple Level Calibration



Signal: 082037.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 199.147ppm

response 161884

Manual Integration:

Before

08/21/18

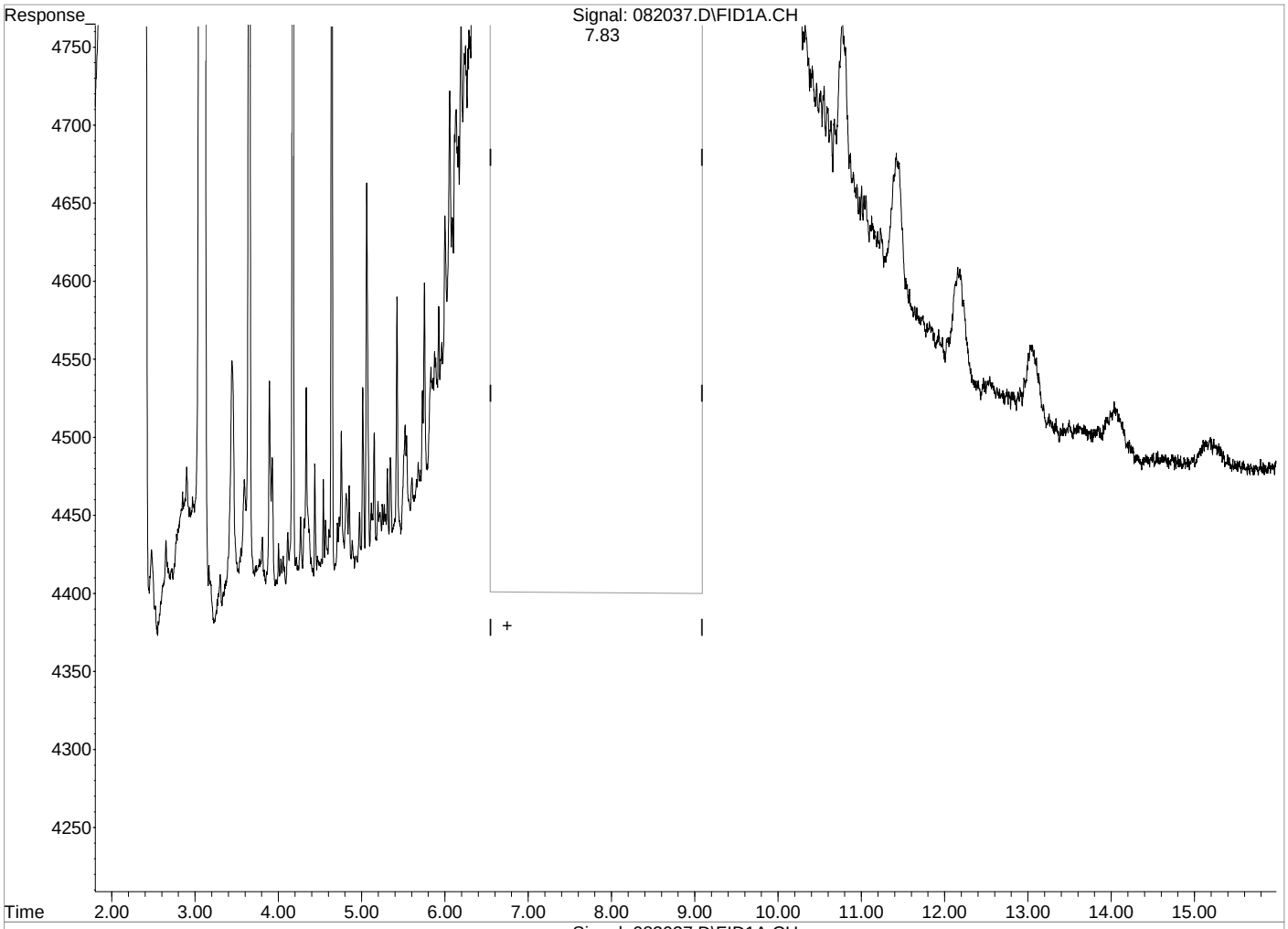
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082037.D Vial: 2
Acq On : 20 Aug 2018 3:11 pm Operator: SMS
Sample : SVF02-44L 200 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:04 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Multiple Level Calibration



Signal: 082037.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 194.885ppm

response 158420

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082038.D Vial: 3
Acq On : 20 Aug 2018 3:33 pm Operator: SMS
Sample : SVF02-44K 500 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:10 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
11) H	C25-C36in RRO [AK103]	6.75	393336	483.875 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

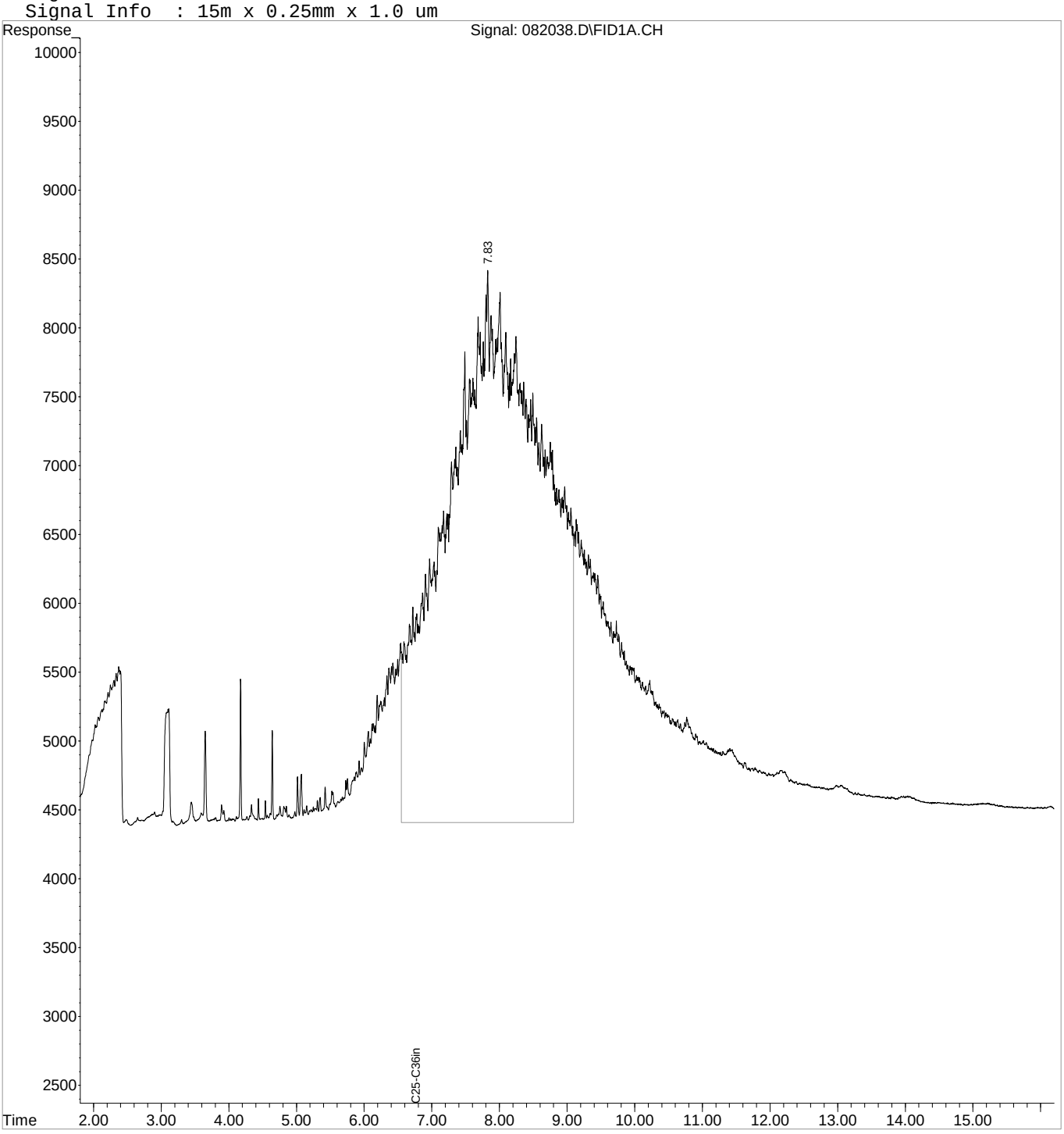
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082038.D Vial: 3
Acq On : 20 Aug 2018 3:33 pm Operator: SMS
Sample : SVF02-44K 500 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:08 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

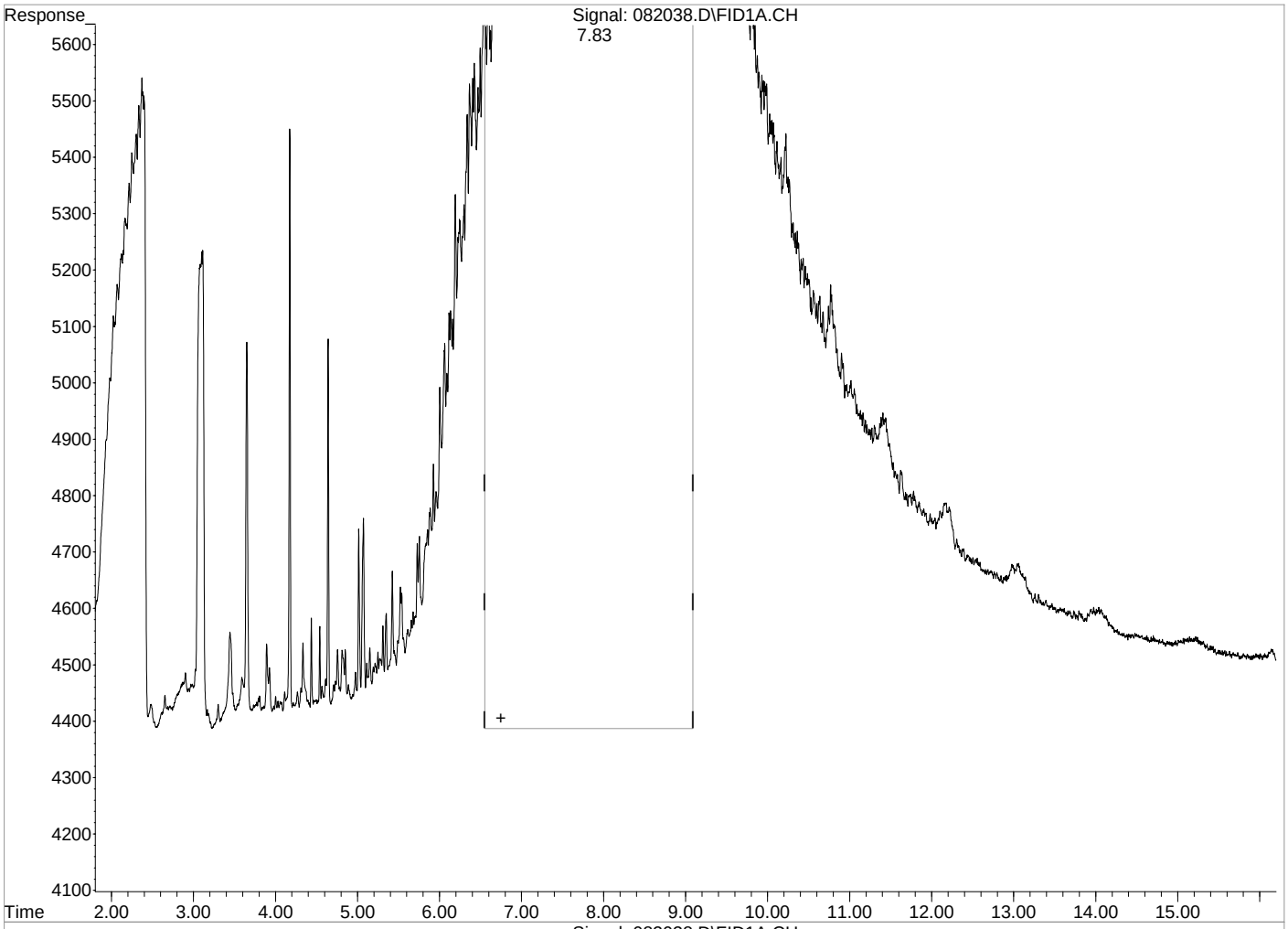


Quantitation Report (Qedit)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082038.D Vial: 3
Acq On : 20 Aug 2018 3:33 pm Operator: SMS
Sample : SVF02-44K 500 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:05 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Multiple Level Calibration



Signal: 082038.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 485.748ppm

response 394859

Manual Integration:

Before

08/21/18

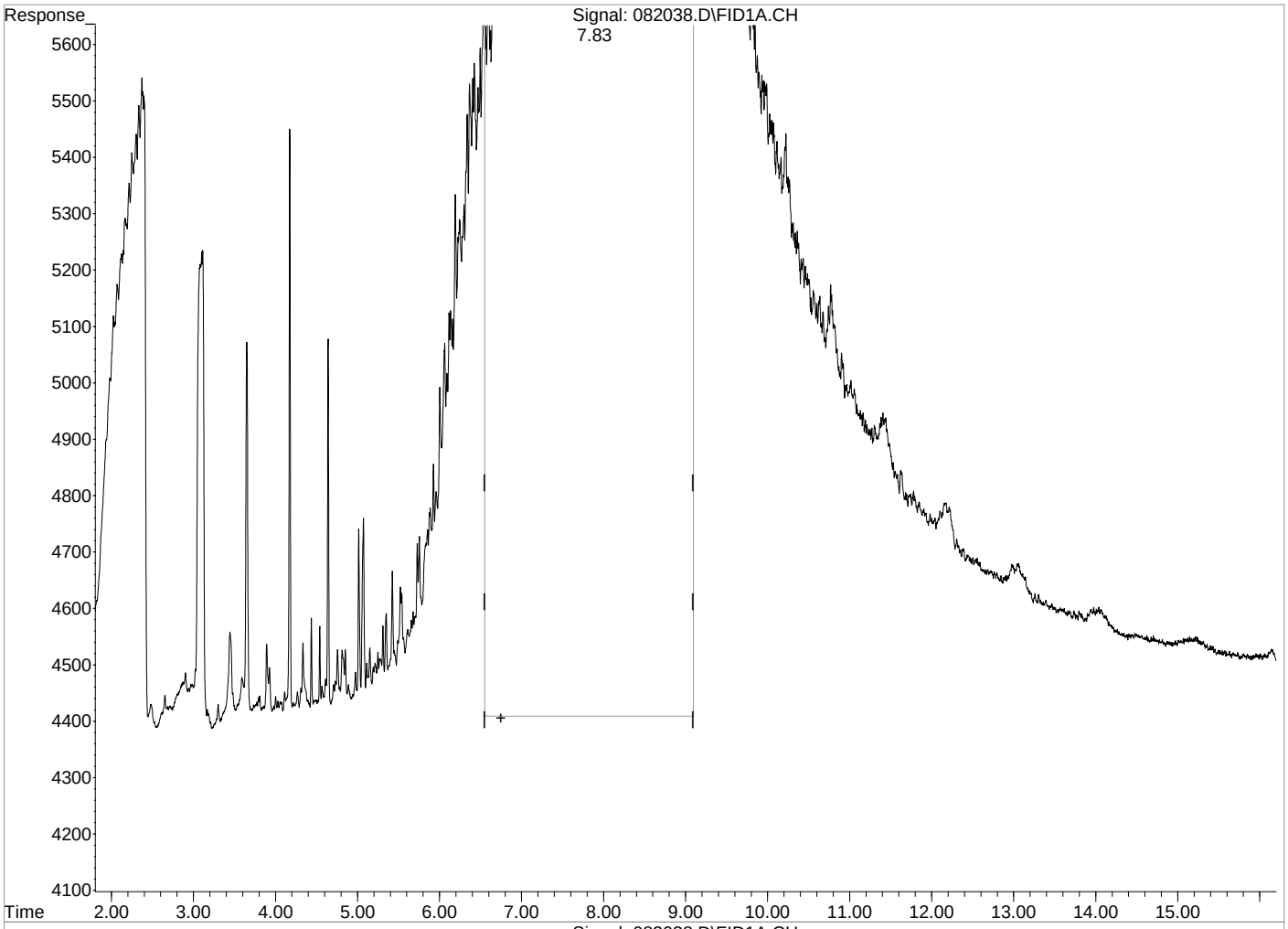
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082038.D Vial: 3
Acq On : 20 Aug 2018 3:33 pm Operator: SMS
Sample : SVF02-44K 500 AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:05 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Multiple Level Calibration



Signal: 082038.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 483.875ppm

response 393336

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082039.D Vial: 4
Acq On : 20 Aug 2018 3:55 pm Operator: SMS
Sample : SVF02-44J 2K AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:10 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
	Target Compounds				
11) H	C25-C36in RRO [AK103]	6.75	1435647	1766.107	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

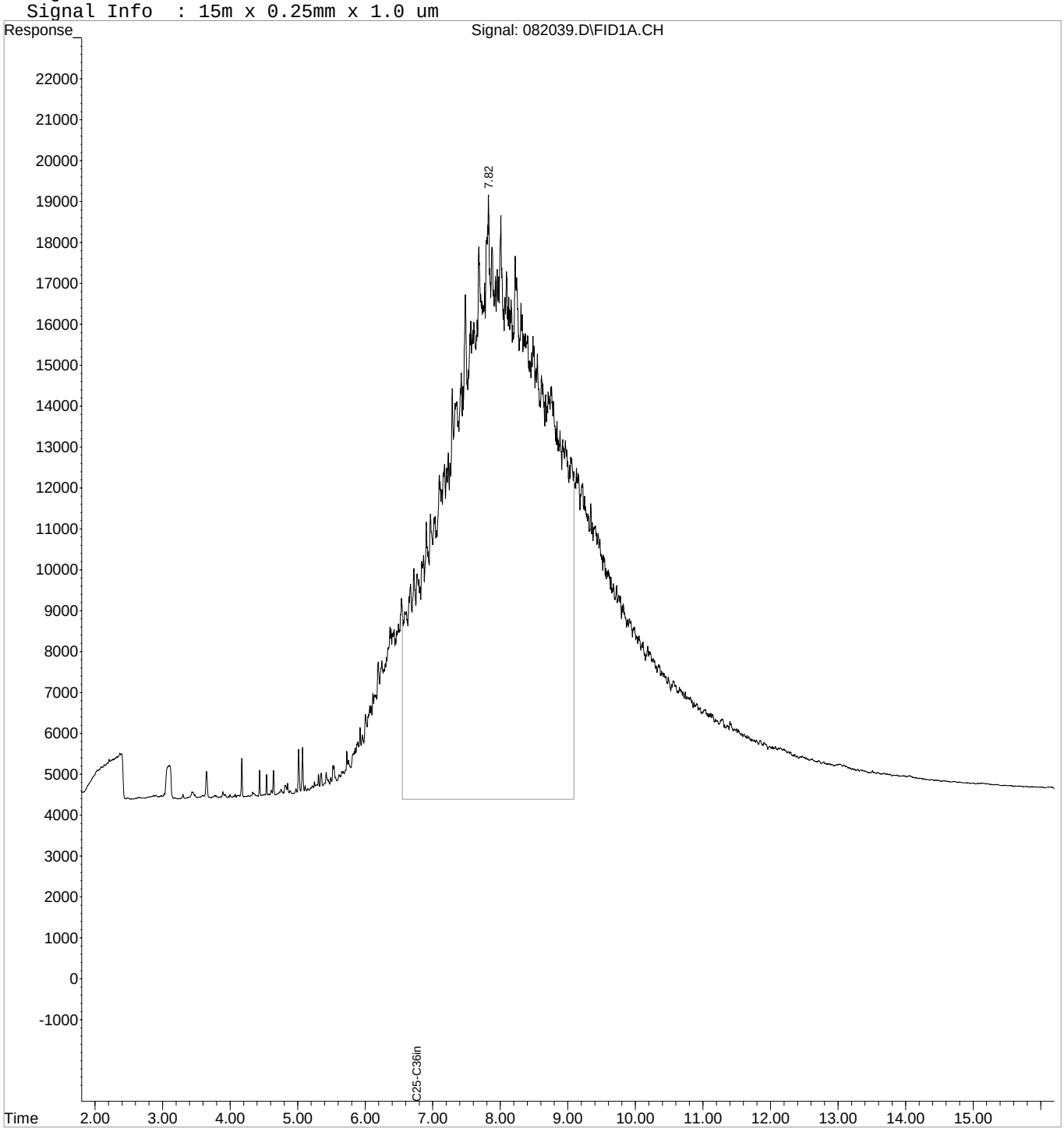
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082039.D Vial: 4
Acq On : 20 Aug 2018 3:55 pm Operator: SMS
Sample : SVF02-44J 2K AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:05 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082040.D Vial: 5
Acq On : 20 Aug 2018 4:16 pm Operator: SMS
Sample : SVF02-44I 5K AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:11 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
11) H C25-C36in RRO [AK103]	6.75	3844636	4729.602 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

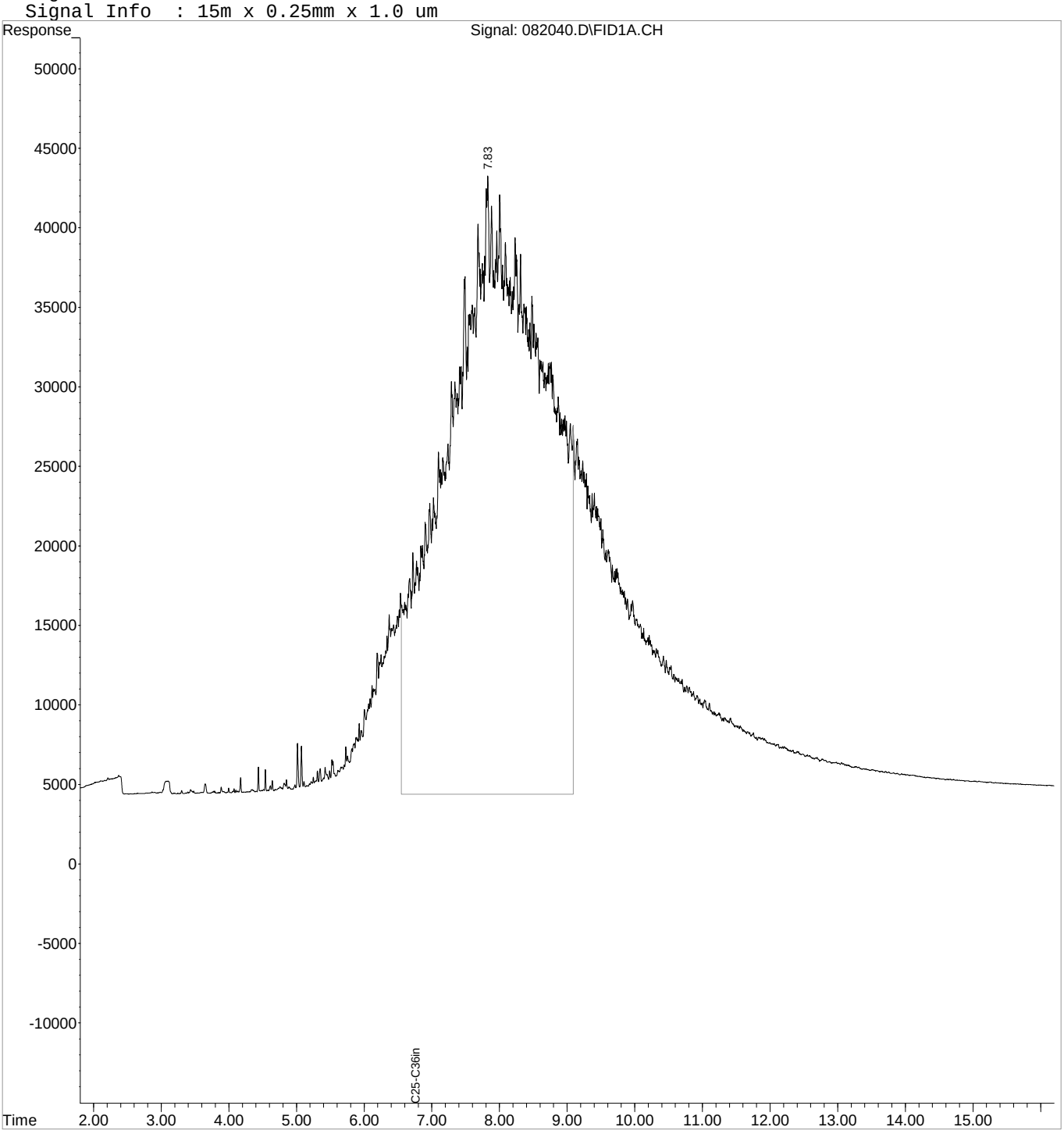
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082040.D Vial: 5
Acq On : 20 Aug 2018 4:16 pm Operator: SMS
Sample : SVF02-44I 5K AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:06 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082041.D Vial: 6
Acq On : 20 Aug 2018 4:38 pm Operator: SMS
Sample : SVF02-45A ICV AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:10:30 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:09:56 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
	Target Compounds				
11) H	C25-C36in RRO [AK103]	6.75	861038	1097.948	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

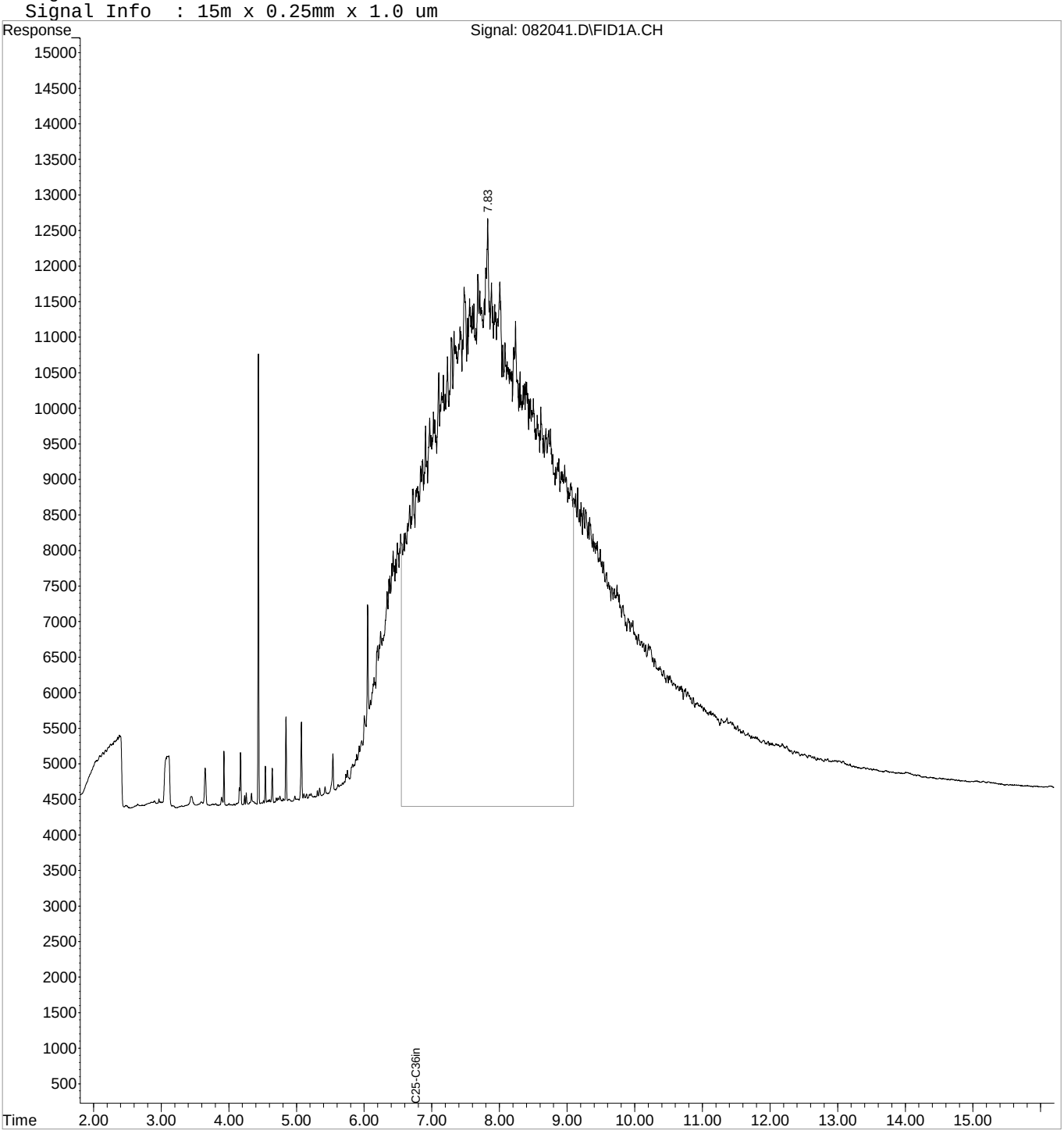
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082041.D Vial: 6
Acq On : 20 Aug 2018 4:38 pm Operator: SMS
Sample : SVF02-45A ICV AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:11 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:09:56 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

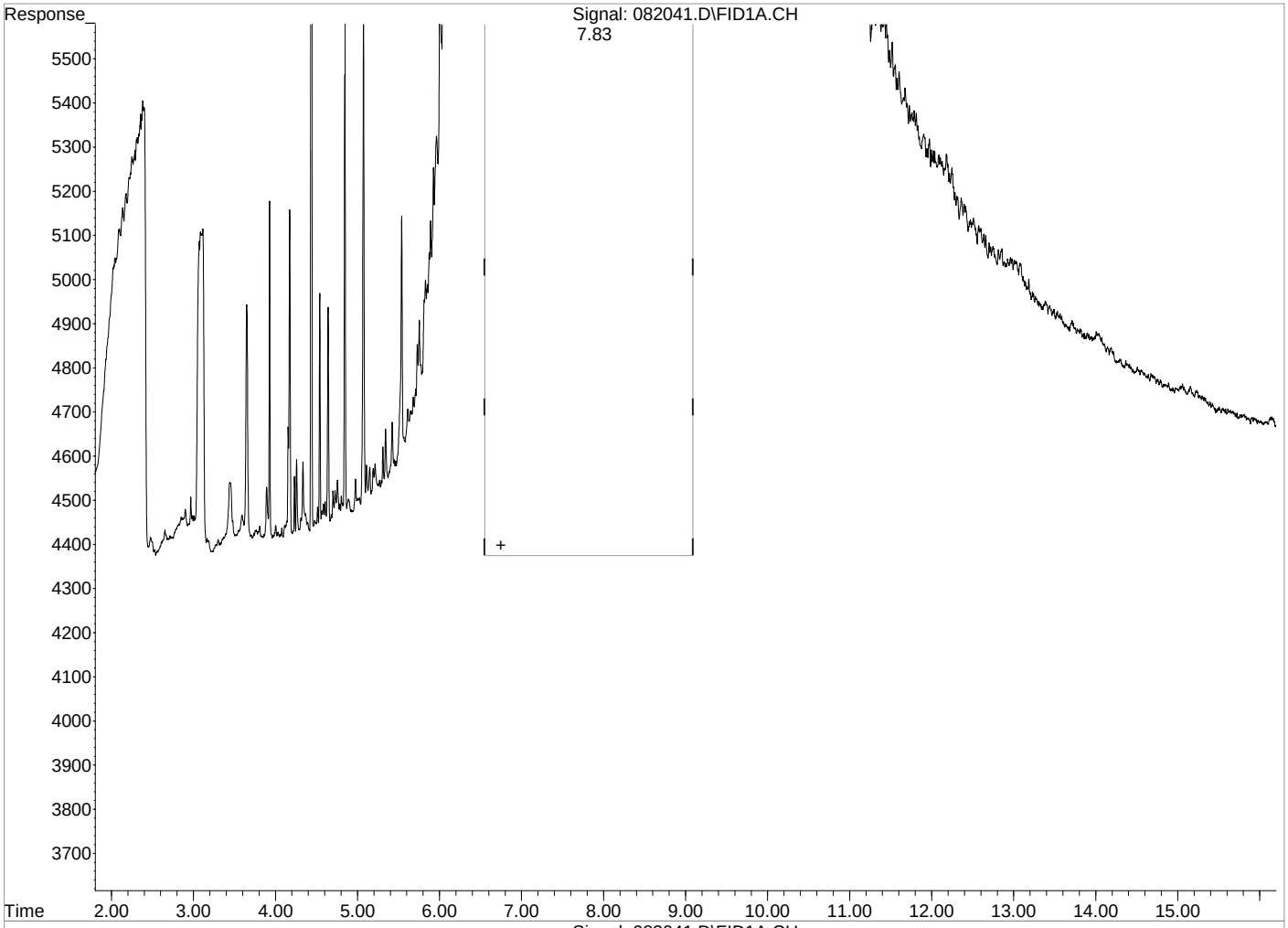


Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082041.D Vial: 6
Acq On : 20 Aug 2018 4:38 pm Operator: SMS
Sample : SVF02-45A ICV AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:10 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:09:56 2018
Response via : Multiple Level Calibration



Signal: 082041.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 1101.367ppm

response 863719

Manual Integration:

Before

08/21/18

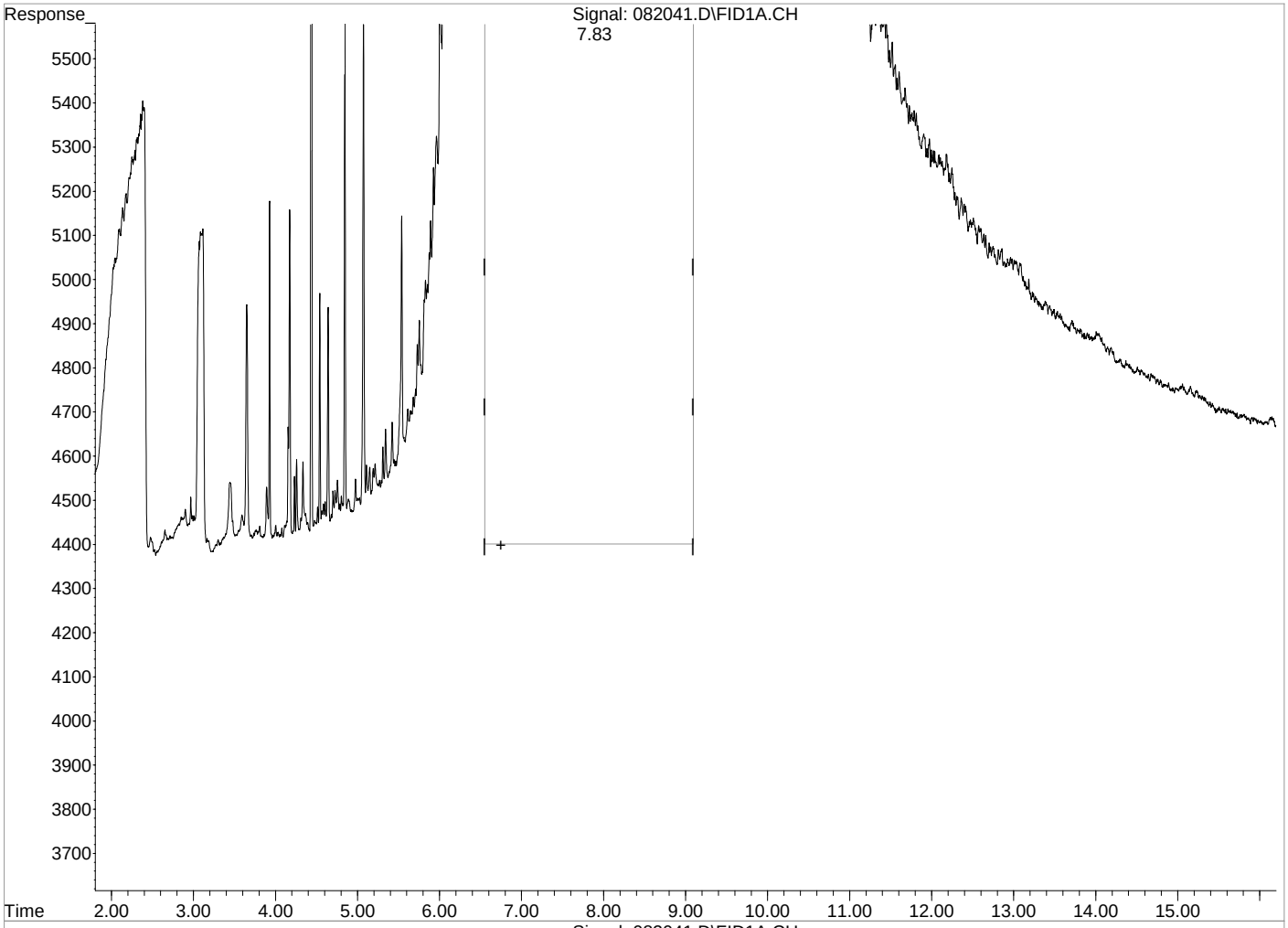
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082041.D Vial: 6
Acq On : 20 Aug 2018 4:38 pm Operator: SMS
Sample : SVF02-45A ICV AK103 Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:10 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:09:56 2018
Response via : Multiple Level Calibration



Signal: 082041.D\FID1A.CH

(11) C25-C36in RRO [AK103] (H)

6.75min 1097.948ppm

response 861038

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\082018F\082042.D Vial: 86
Acq On : 20 Aug 2018 5:00 pm Operator: SMS
Sample : IB Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:11:21 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:09:56 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
	Target Compounds				
6)	H C10-C25ex DRO [AK102]	3.14	14617	9.657	ppm
7)	H C10-C28in DRO [8015]	3.24	17611	11.186	ppm
8)	H C12-C25ex DRO [NWTPH]	3.79	8746	6.761	ppm

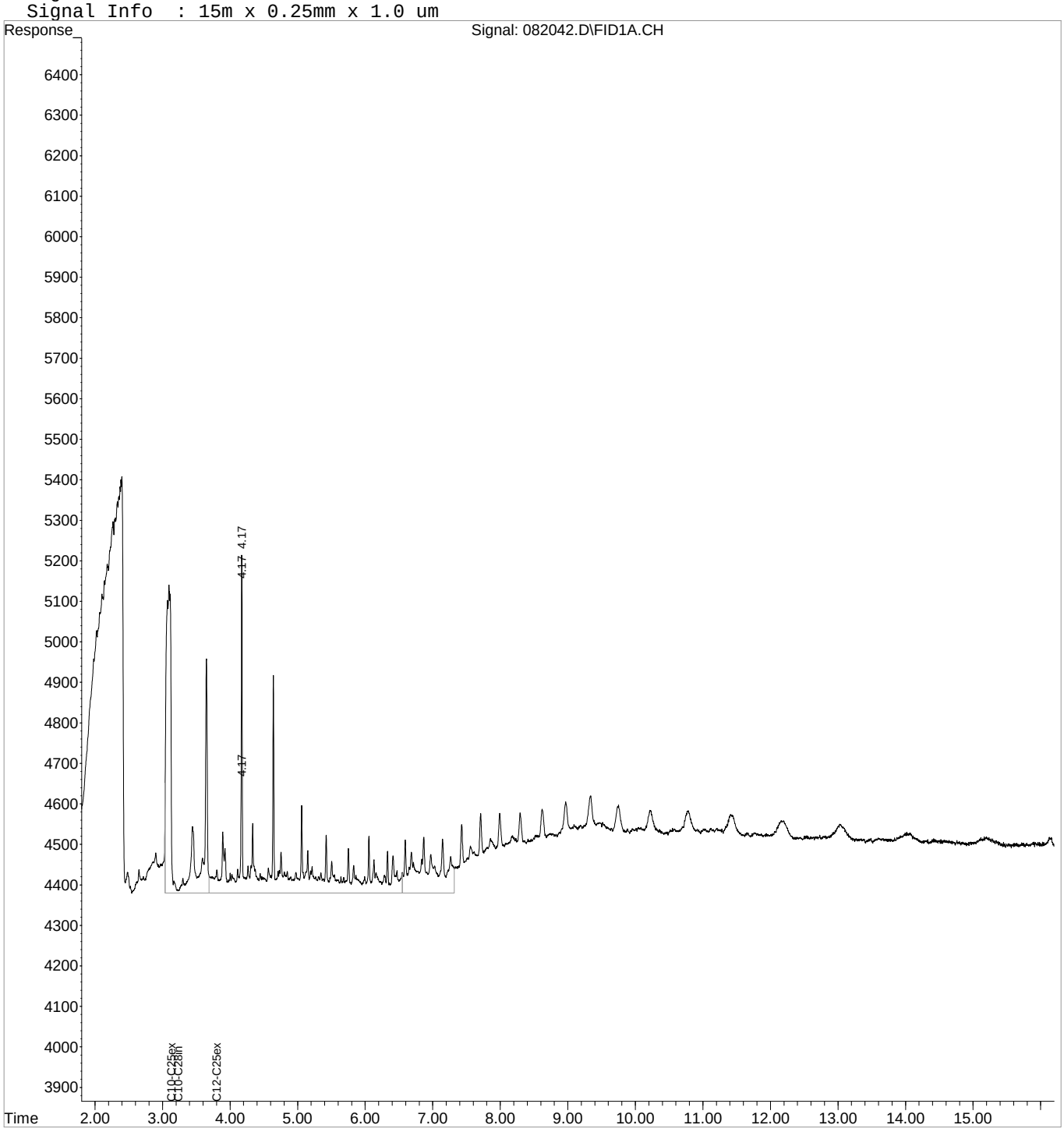
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082042.D Vial: 86
Acq On : 20 Aug 2018 5:00 pm Operator: SMS
Sample : IB Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:11 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:09:56 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:23 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.80	923	1.106	ppm
Spiked Amount	50.000	Recovery	=	2.21%	
2) S	o-Terphenyl	5.48	1765	0.973	ppm
Spiked Amount	50.000	Recovery	=	1.95%	
3) S	n-Triacontane	7.61	1436	1.047	ppm
Spiked Amount	50.000	Recovery	=	2.09%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.14	36430	24.068	ppm
7) H	C10-C28in DRO [8015]	3.24	38735	24.603	ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	28435	21.981	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

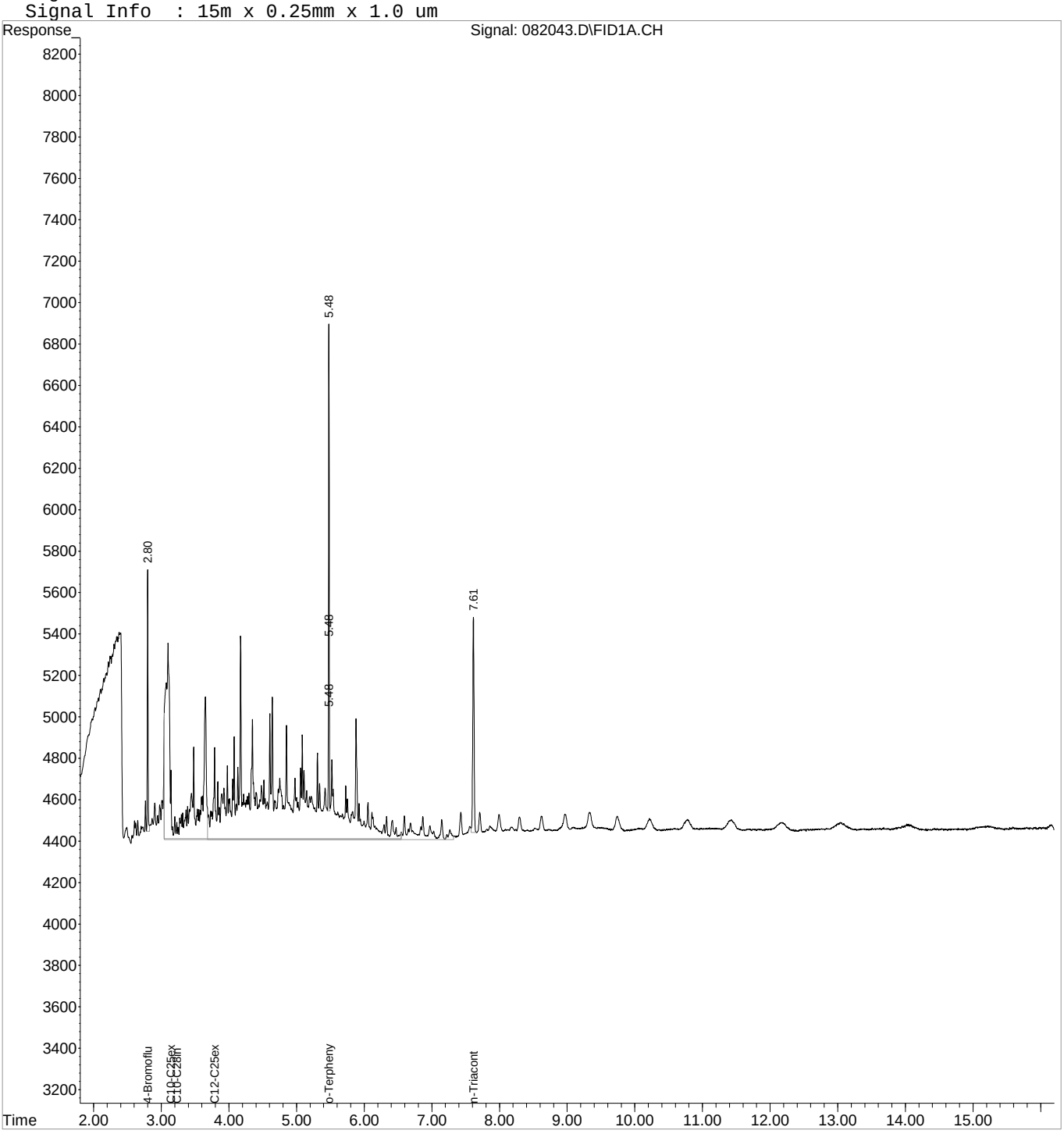
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:22 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

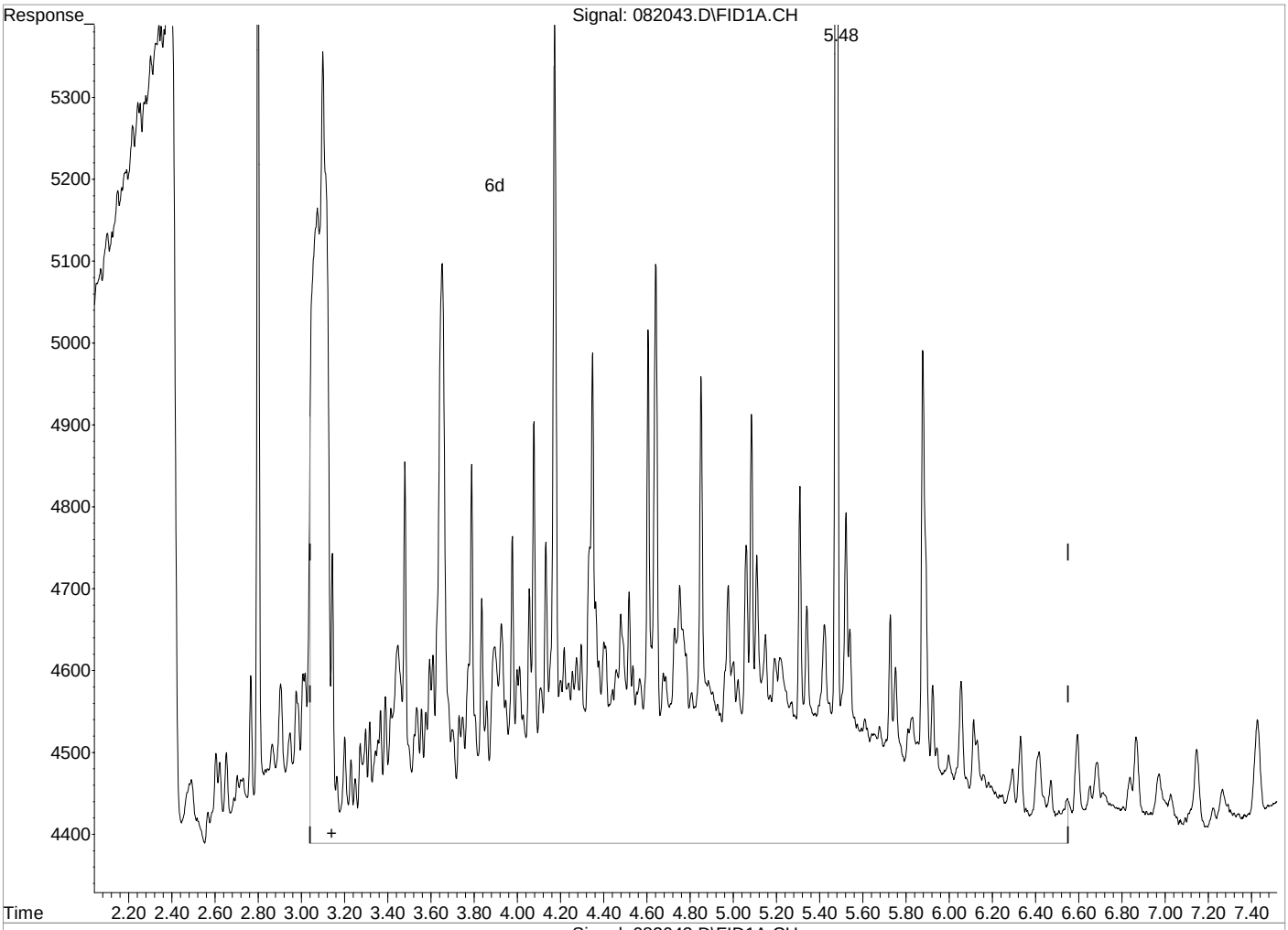


Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:14 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:20:01 2018
Response via : Multiple Level Calibration



Signal: 082043.D\FID1A.CH

(6) C10-C25ex DRO [AK102] (H)

3.14min 27.270ppm

response 41277

Manual Integration:

Before

08/21/18

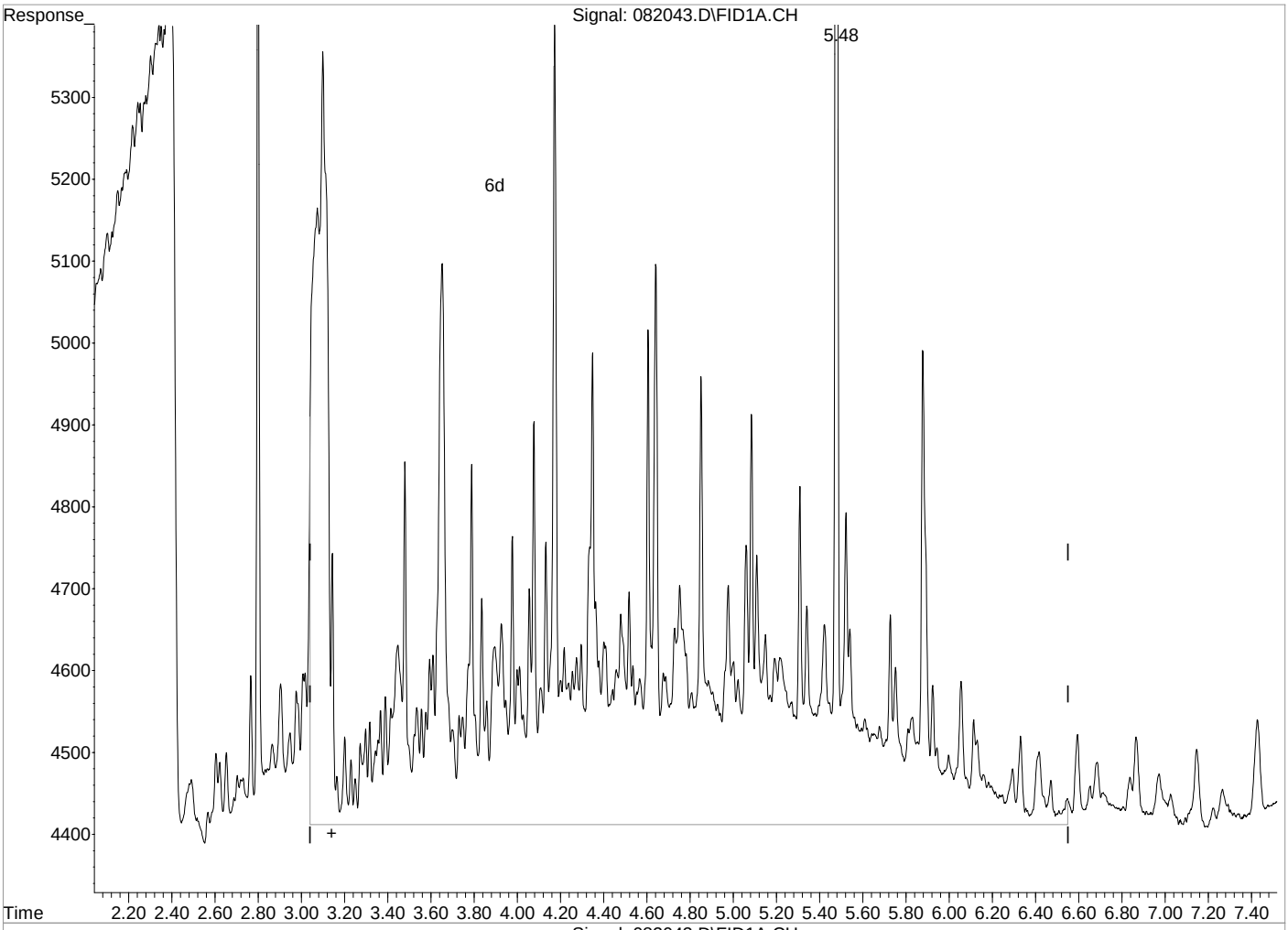
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:14 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:20:01 2018
Response via : Multiple Level Calibration



Signal: 082043.D\FID1A.CH

(6) C10-C25ex DRO [AK102] (H)

3.14min 24.068ppm

response 36430

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

082043.D 082018F.M Tue Aug 21 07:22:08 2018

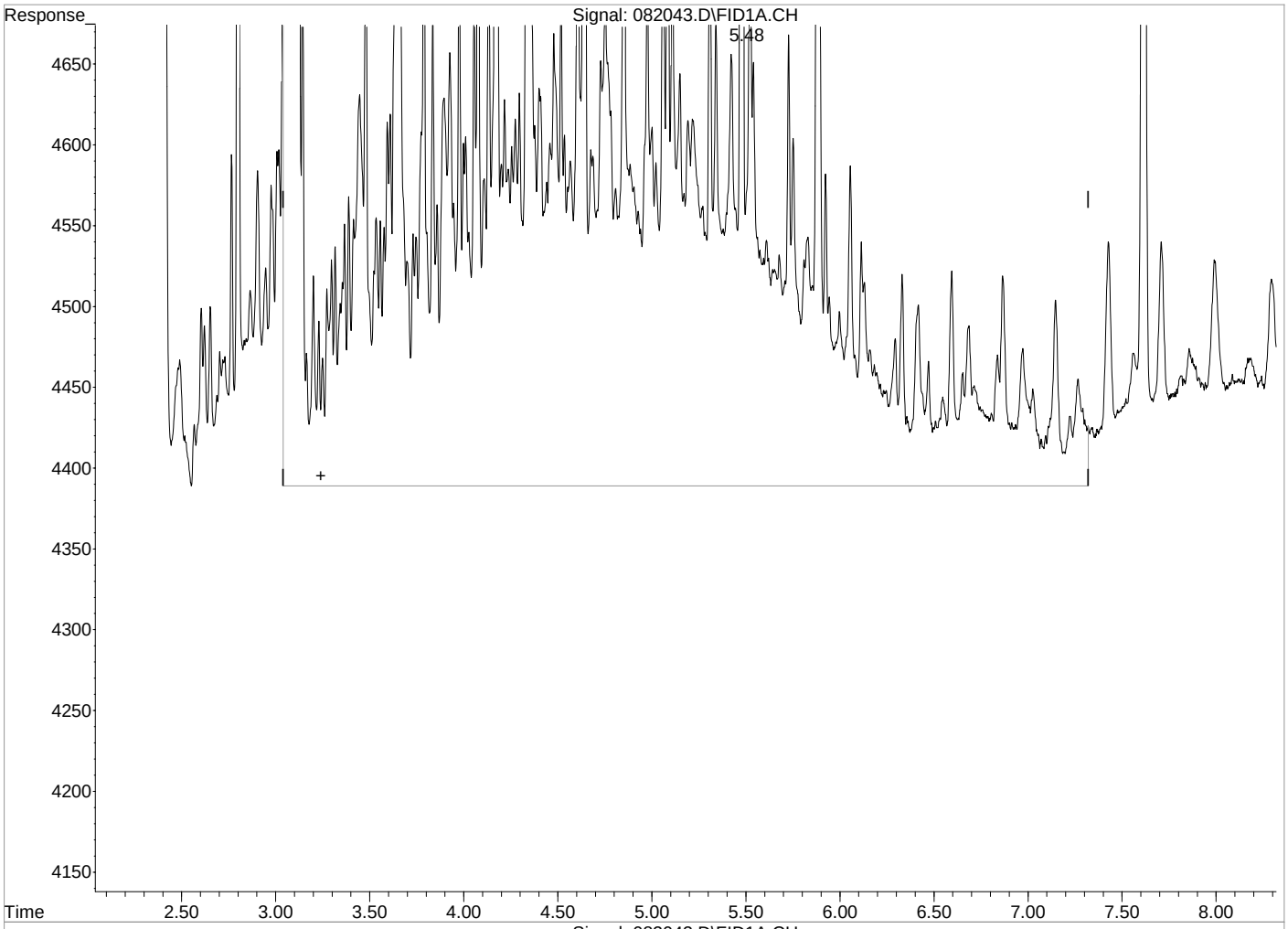
020059

Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:14 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:20:01 2018
Response via : Multiple Level Calibration



Signal: 082043.D\FID1A.CH

(7) C10-C28in DRO [8015] (H)

3.24min 27.775ppm

response 43729

Manual Integration:

Before

08/21/18

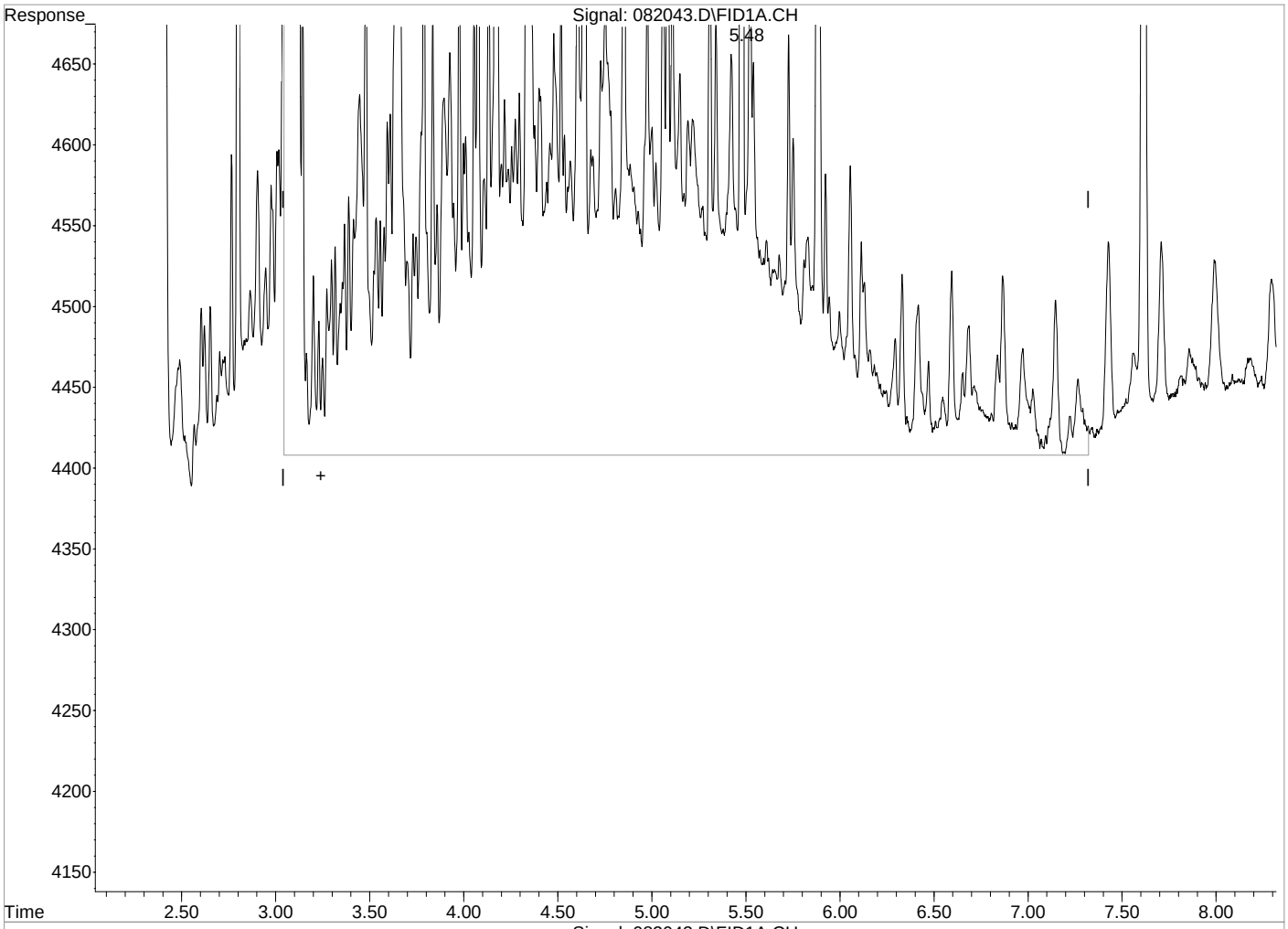
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:14 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:20:01 2018
Response via : Multiple Level Calibration



Signal: 082043.D\FID1A.CH

(7) C10-C28in DRO [8015] (H)

3.24min 24.603ppm

response 38735

Manual Integration:

After

Baseline/Shoulder

08/21/18

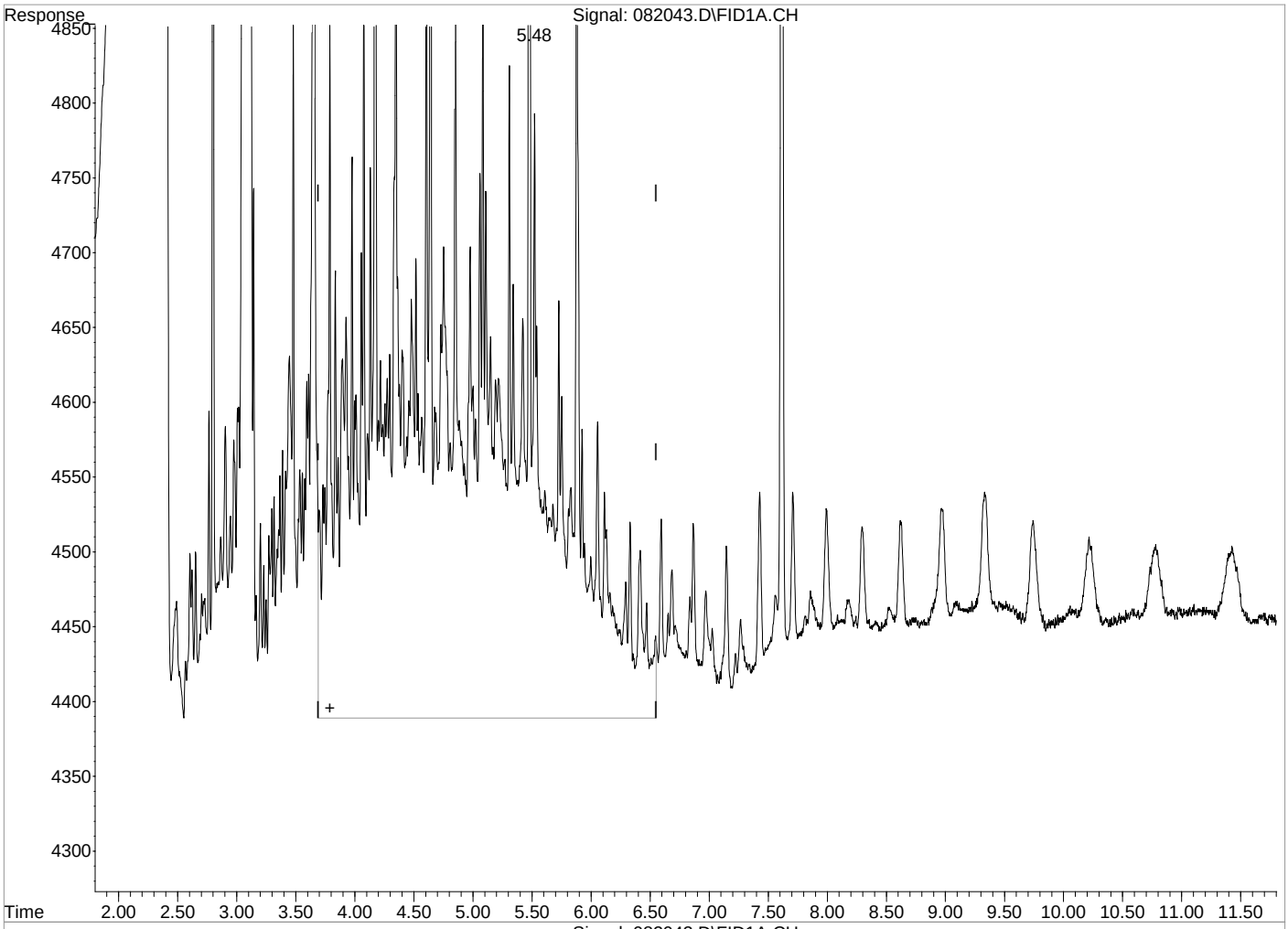
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:14 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:20:01 2018
Response via : Multiple Level Calibration



Signal: 082043.D\FID1A.CH

(8) C12-C25ex DRO [NWTPH] (H)

3.79min 24.474ppm

response 31659

Manual Integration:

Before

08/21/18

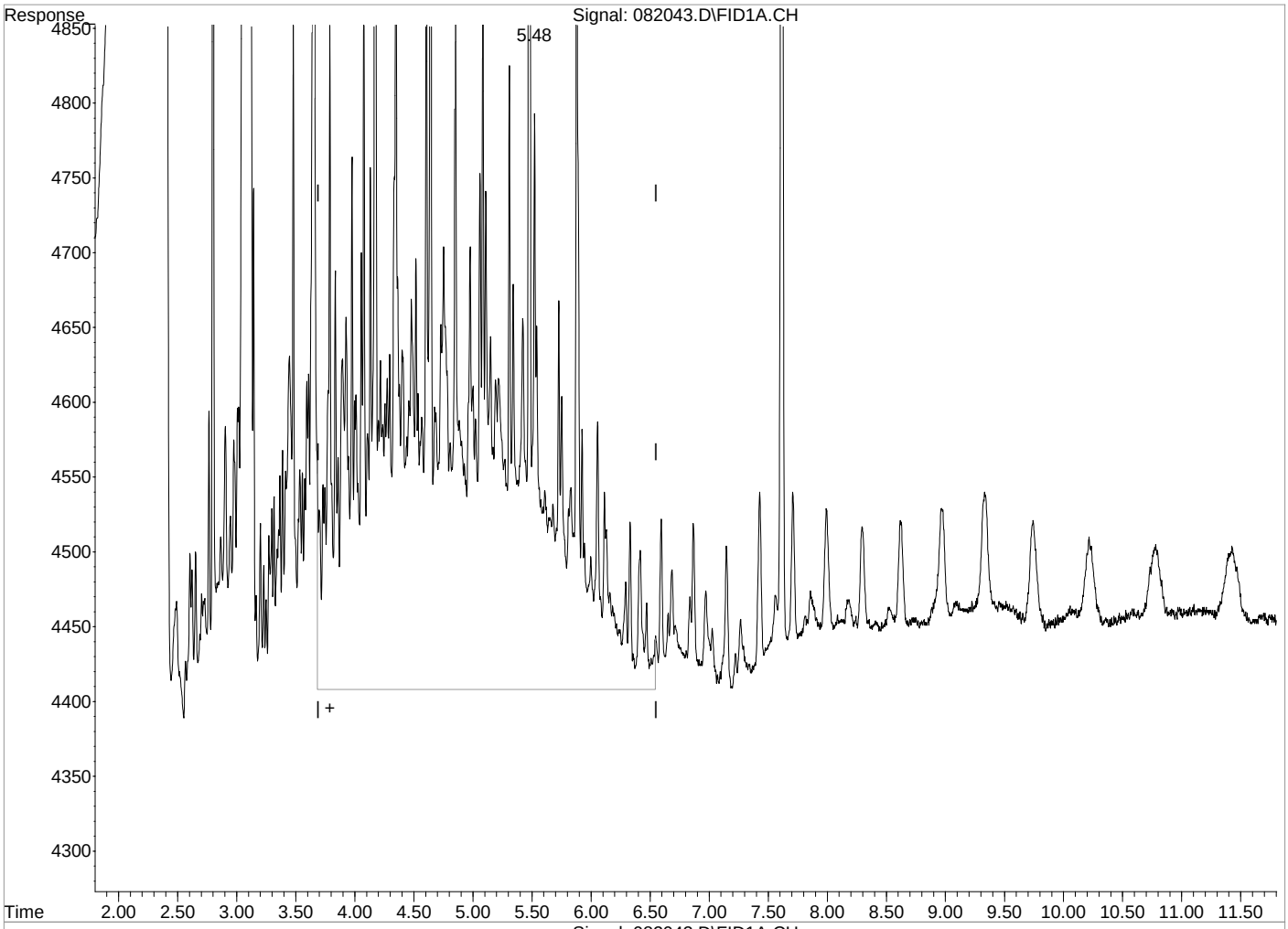
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082043.D Vial: 7
Acq On : 20 Aug 2018 5:21 pm Operator: SMS
Sample : DRO 20/1 SVF02-45I Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:14 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:20:01 2018
Response via : Multiple Level Calibration



Signal: 082043.D\FID1A.CH

(8) C12-C25ex DRO [NWTPH] (H)

3.79min 21.981ppm

response 28435

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\082018F\082044.D Vial: 8
Acq On : 20 Aug 2018 5:43 pm Operator: SMS
Sample : DRO 50/2.5 SVF02-45H Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:24 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	4-Bromofluorobenzene	2.80	1996	2.393 ppm
Spiked Amount	50.000	Recovery	=	4.79%
2) S	o-Terphenyl	5.48	3794	2.092 ppm
Spiked Amount	50.000	Recovery	=	4.18%
3) S	n-Triacontane	7.61	3080	2.245 ppm
Spiked Amount	50.000	Recovery	=	4.49%
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.14	69919	46.193 ppm
7) H	C10-C28in DRO [8015]	3.24	72003	45.733 ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	56661	43.801 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

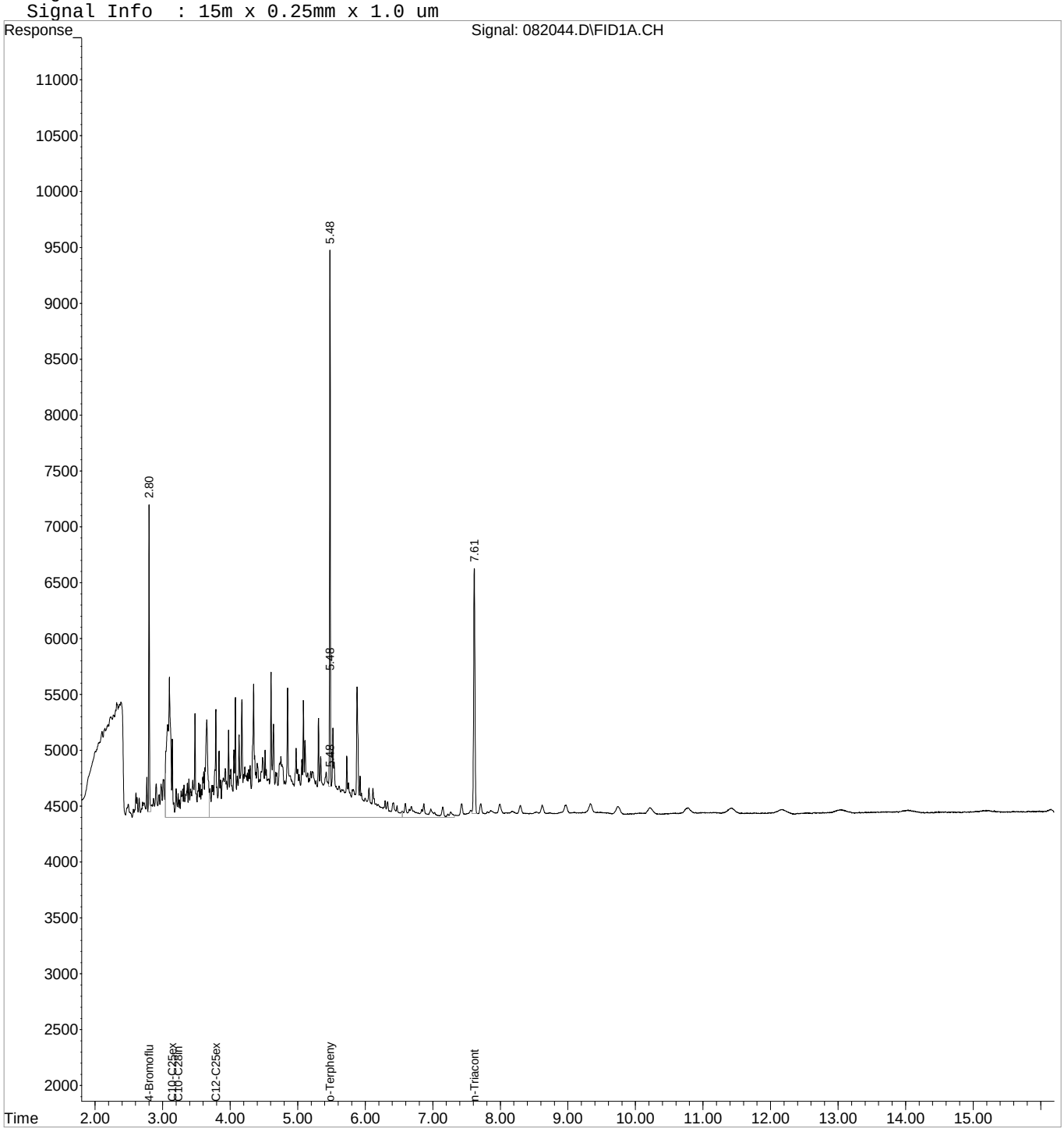
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082044.D Vial: 8
Acq On : 20 Aug 2018 5:43 pm Operator: SMS
Sample : DRO 50/2.5 SVF02-45H Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:15 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\082018F\082045.D Vial: 9
Acq On : 20 Aug 2018 6:04 pm Operator: SMS
Sample : DRO 200/10 SVF02-45G Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:25 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.80	9367	11.228	ppm
Spiked Amount	50.000	Recovery	=	22.46%	
2) S	o-Terphenyl	5.48	18644	10.278	ppm
Spiked Amount	50.000	Recovery	=	20.56%	
3) S	n-Triacontane	7.61	14750	10.749	ppm
Spiked Amount	50.000	Recovery	=	21.50%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.14	289945	191.555	ppm
7) H	C10-C28in DRO [8015]	3.24	295006	187.373	ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	247885	191.624	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

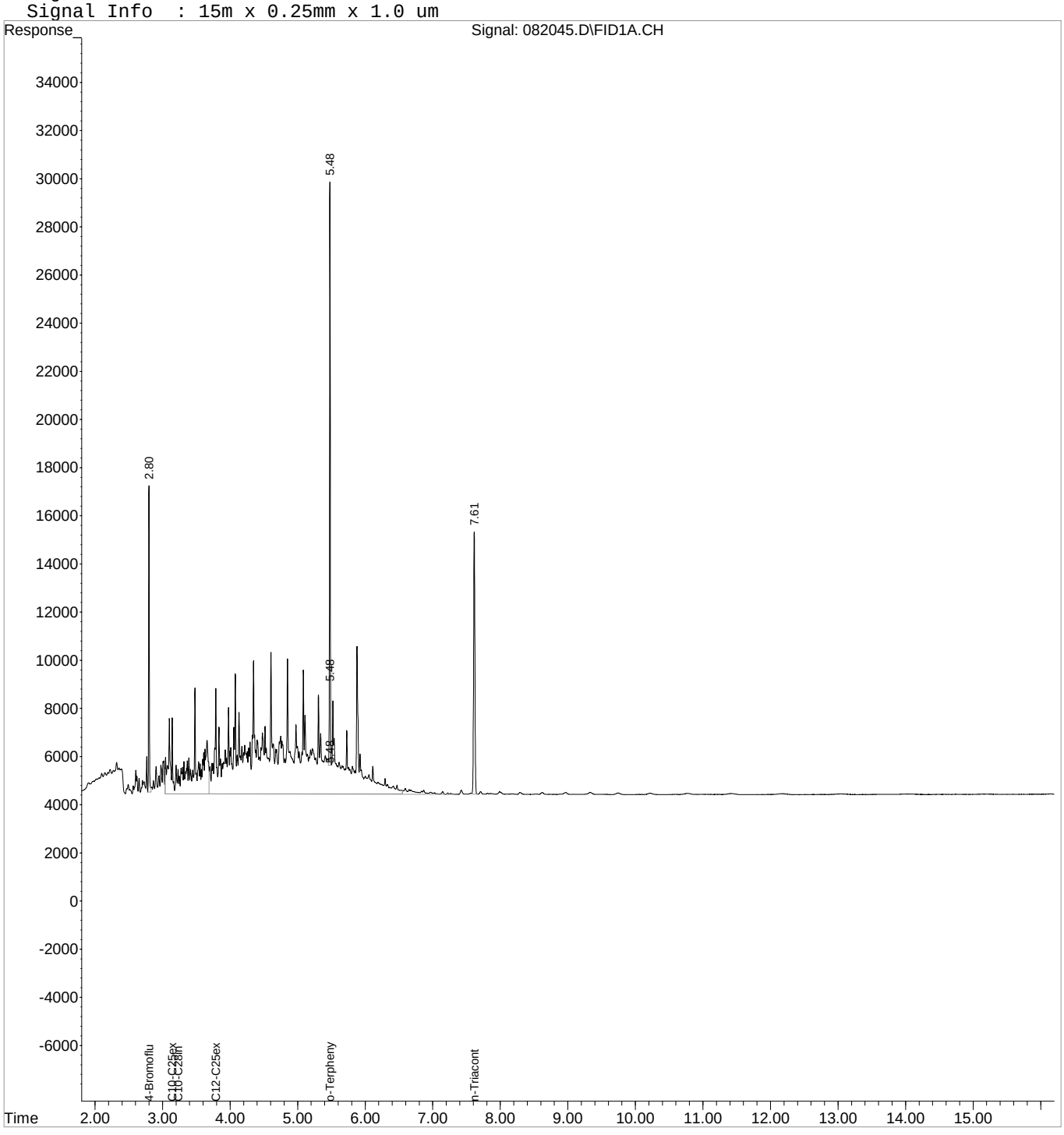
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082045.D Vial: 9
Acq On : 20 Aug 2018 6:04 pm Operator: SMS
Sample : DRO 200/10 SVF02-45G Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:15 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\082018F\082046.D Vial: 10
Acq On : 20 Aug 2018 6:26 pm Operator: SMS
Sample : DRO 500/25 SVF02-45F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:26 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 4-Bromofluorobenzene	2.80	22169	26.573 ppm
Spiked Amount 50.000	Recovery =		53.15%
2) S o-Terphenyl	5.48	44220	24.378 ppm
Spiked Amount 50.000	Recovery =		48.76%
3) S n-Triacontane	7.61	35361	25.770 ppm
Spiked Amount 50.000	Recovery =		51.54%
Target Compounds			
6) H C10-C25ex DRO [AK102]	3.14	673684	445.077 ppm
7) H C10-C28in DRO [8015]	3.24	681608	432.924 ppm
8) H C12-C25ex DRO [NWTPH]	3.79	580834	449.006 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

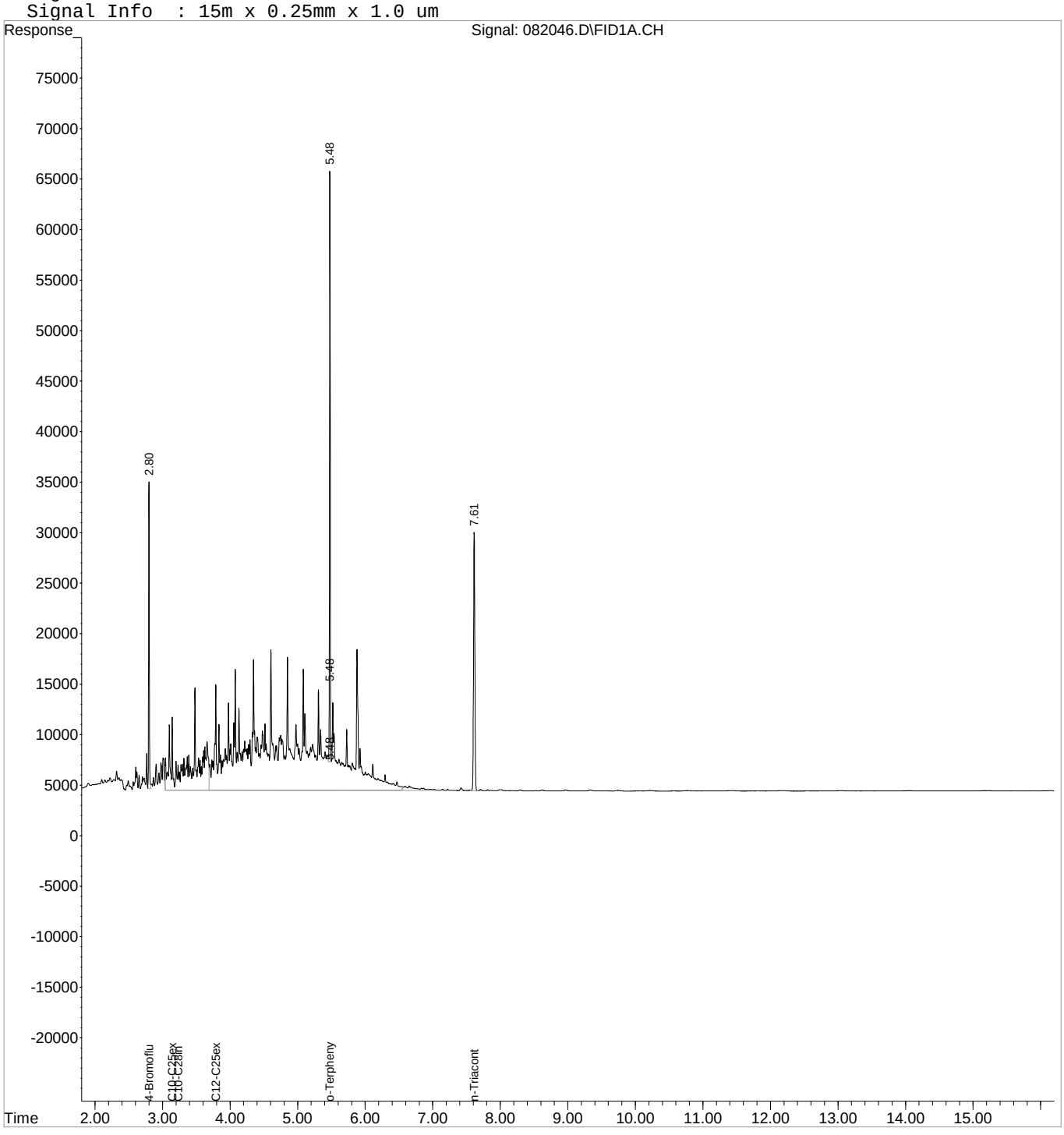
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082046.D Vial: 10
Acq On : 20 Aug 2018 6:26 pm Operator: SMS
Sample : DRO 500/25 SVF02-45F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:16 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\082018F\082047.D Vial: 11
Acq On : 20 Aug 2018 6:48 pm Operator: SMS
Sample : DRO 2K/100 SVF02-45E Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:27 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	4-Bromofluorobenzene	2.80	97765	117.187 ppm
Spiked Amount	50.000	Recovery	=	234.37%
2) S	o-Terphenyl	5.48	194267	107.097 ppm
Spiked Amount	50.000	Recovery	=	214.19%
3) S	n-Triacontane	7.62	153112	111.582 ppm
Spiked Amount	50.000	Recovery	=	223.16%
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.14	2985881	1972.655 ppm
7) H	C10-C28in DRO [8015]	3.24	3016434	1915.892 ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	2585018	1998.314 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

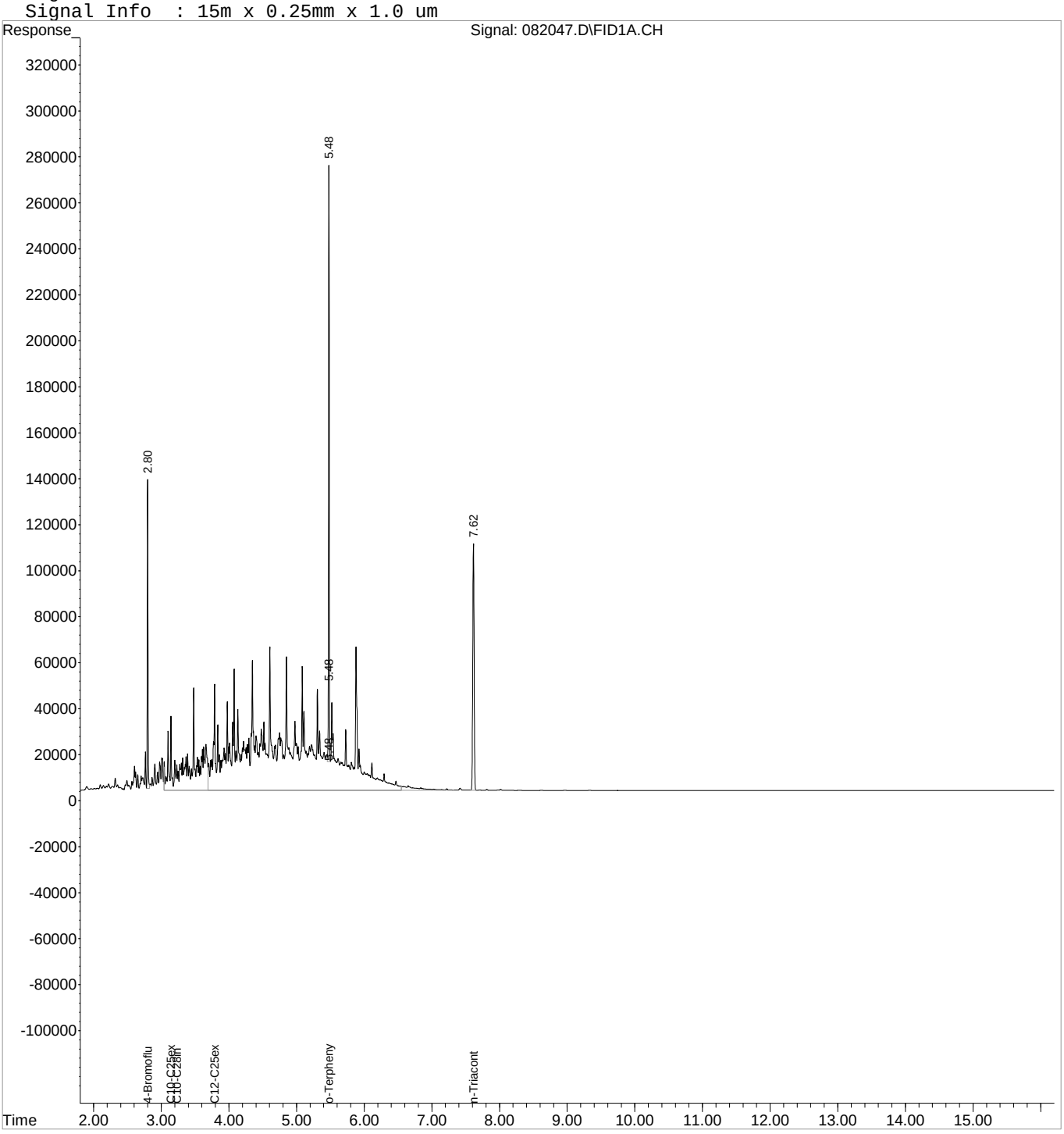
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082047.D Vial: 11
Acq On : 20 Aug 2018 6:48 pm Operator: SMS
Sample : DRO 2K/100 SVF02-45E Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:16 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\082018F\082048.D Vial: 12
Acq On : 20 Aug 2018 7:09 pm Operator: SMS
Sample : DRO 5K/250 SVF02-45D Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:27 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	4-Bromofluorobenzene	2.80	236245	283.178	ppm
Spiked Amount	50.000	Recovery	=	566.36%	
2) S	o-Terphenyl	5.48	454361	250.483	ppm
Spiked Amount	50.000	Recovery	=	500.97%	
3) S	n-Triacontane	7.62	357350	260.423	ppm
Spiked Amount	50.000	Recovery	=	520.85%	
	Target Compounds				
6) H	C10-C25ex DRO [AK102]	3.14	7054270	4660.480	ppm
7) H	C10-C28in DRO [8015]	3.24	7134065	4531.211	ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	6094740	4711.457	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

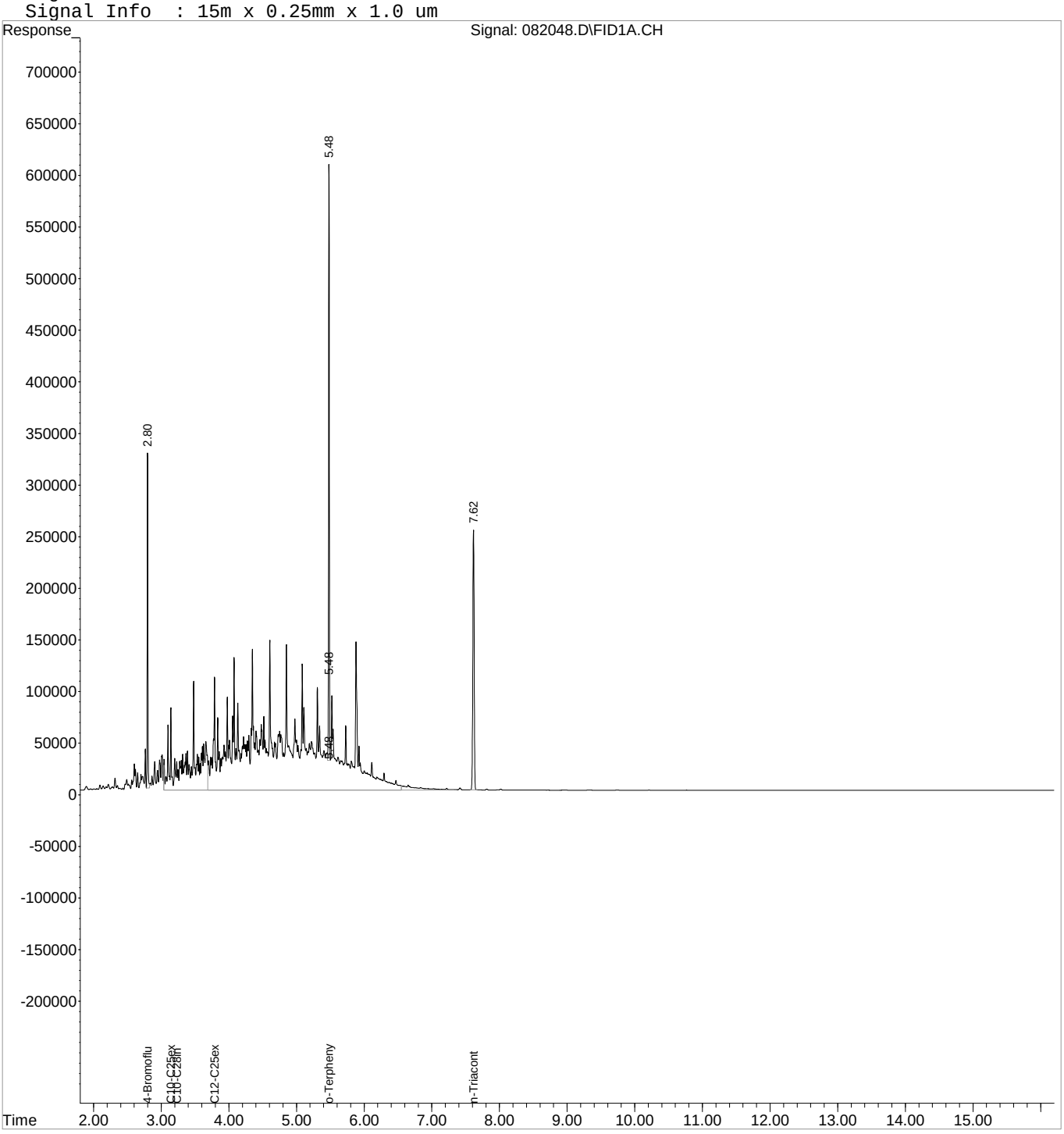
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082048.D Vial: 12
Acq On : 20 Aug 2018 7:09 pm Operator: SMS
Sample : DRO 5K/250 SVF02-45D Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:17 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082049.D Vial: 13
Acq On : 20 Aug 2018 7:31 pm Operator: SMS
Sample : DRO 20K SVF02-45C Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:28 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.14	28933871	19115.476 ppm
7) H	C10-C28in DRO [8015]	3.24	29269769	18590.733 ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	25035514	19353.370 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

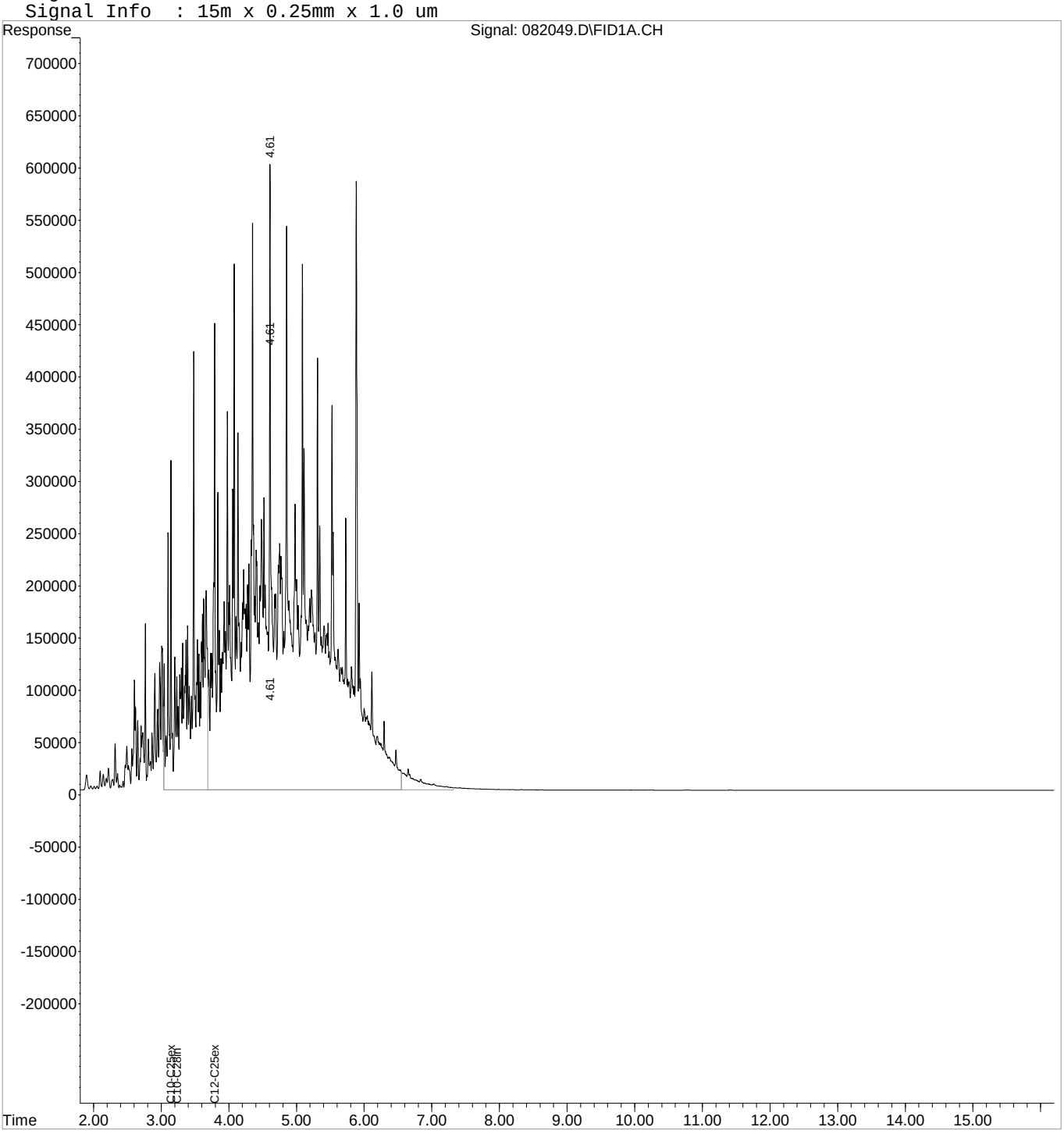
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082049.D Vial: 13
Acq On : 20 Aug 2018 7:31 pm Operator: SMS
Sample : DRO 20K SVF02-45C Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:17 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



1st SMS 08/21/18
2nd TP 08/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC21\DATA\082018F\082050.D Vial: 14
Acq On : 20 Aug 2018 7:53 pm Operator: SMS
Sample : DRO 50K SVF02-45B Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:13:29 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.14	64166966	42392.604 ppm
7) H	C10-C28in DRO [8015]	3.24	64951715	41254.168 ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	55468082	42878.860 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

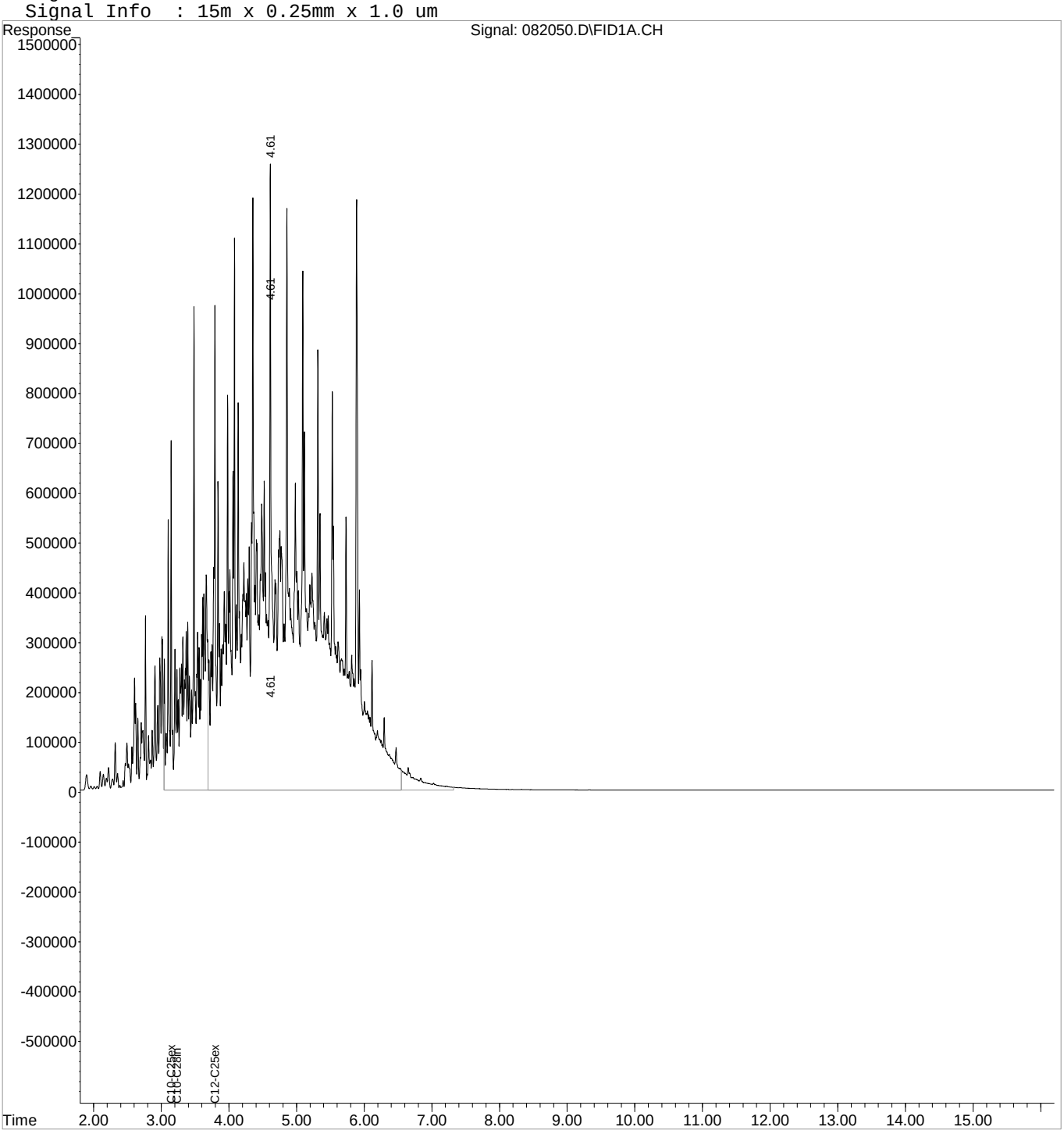
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082050.D Vial: 14
Acq On : 20 Aug 2018 7:53 pm Operator: SMS
Sample : DRO 50K SVF02-45B Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:17 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:12:55 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082051.D Vial: 15
Acq On : 20 Aug 2018 8:14 pm Operator: SMS
Sample : DRO ICV SVF02-45L Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:26:16 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
6) H	C10-C25ex DRO [AK102]	3.14	1446232	993.052 ppm
7) H	C10-C28in DRO [8015]	3.24	1460915	981.088 ppm
8) H	C12-C25ex DRO [NWTPH]	3.79	1260884	1026.292 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

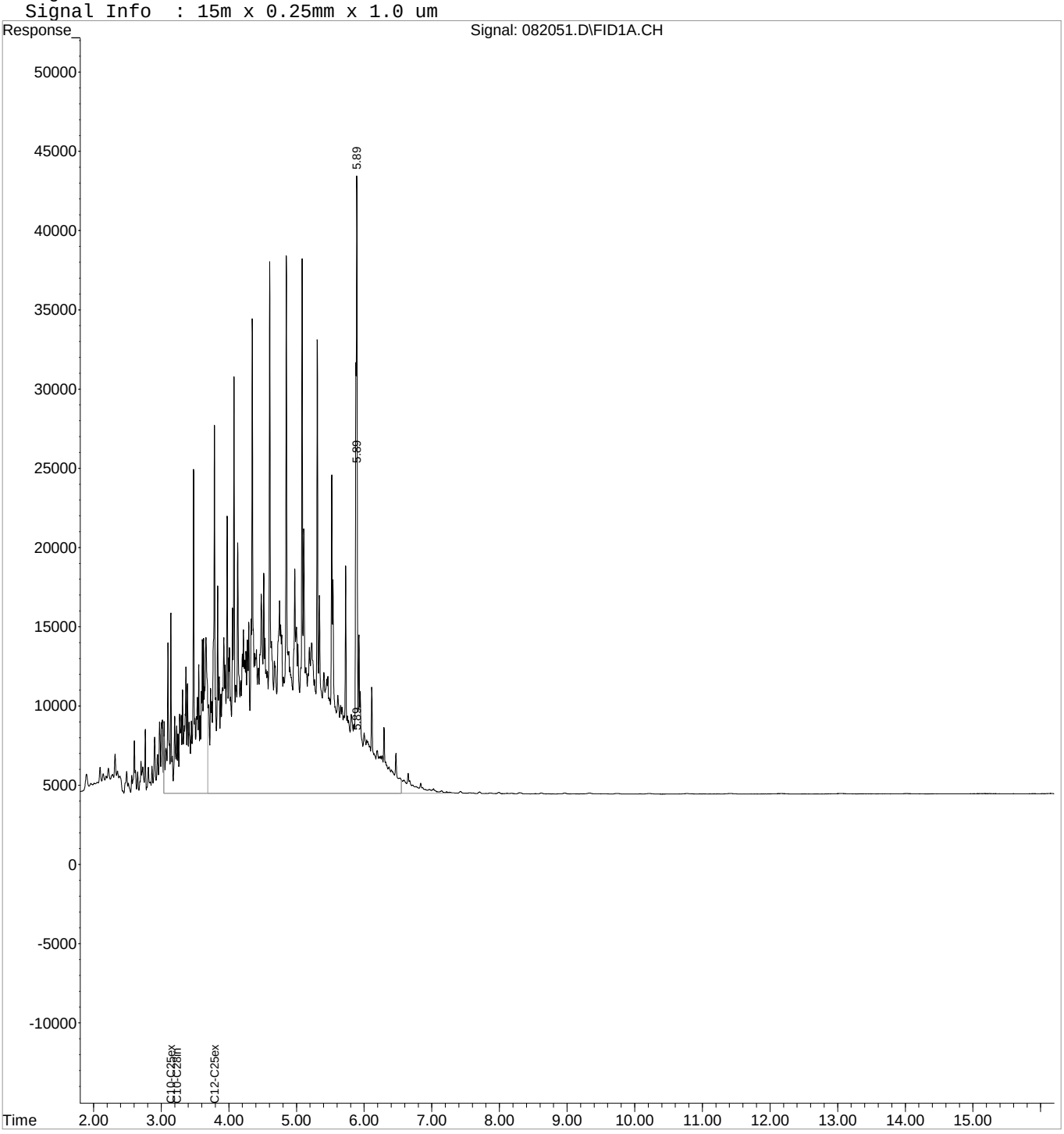
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082051.D Vial: 15
Acq On : 20 Aug 2018 8:14 pm Operator: SMS
Sample : DRO ICV SVF02-45L Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:26 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082052.D Vial: 86
Acq On : 20 Aug 2018 8:36 pm Operator: SMS
Sample : IB Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:26:52 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
10)	H C25-C36in RRO [NWTPH]	6.65	6502	9.384 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

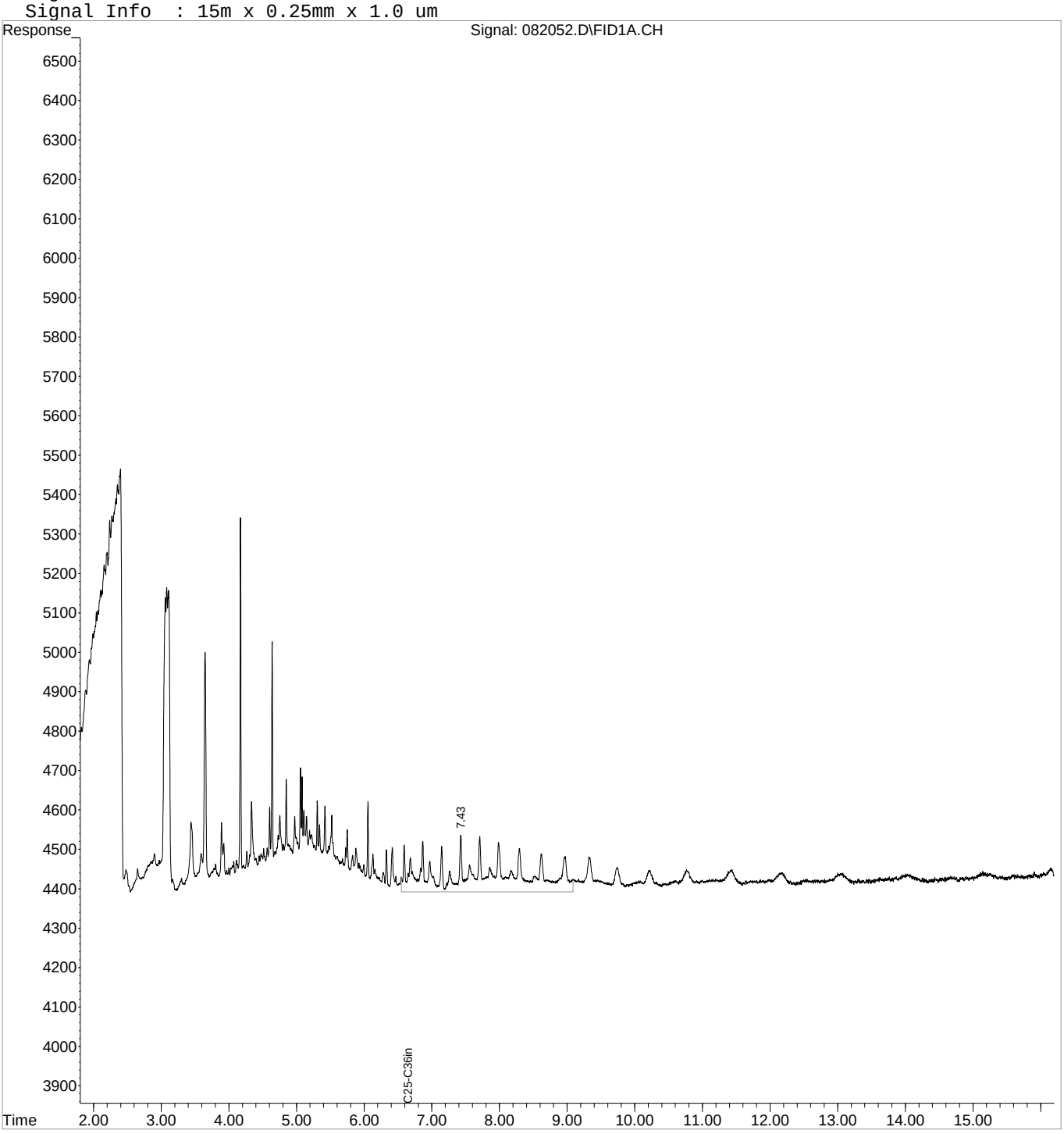
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082052.D Vial: 86
Acq On : 20 Aug 2018 8:36 pm Operator: SMS
Sample : IB Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:27 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082053.D Vial: 16
Acq On : 20 Aug 2018 8:58 pm Operator: SMS
Sample : RRO 50 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:19 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
10) H	C25-C36in RRO [NWTPH]	6.65	33233	47.963 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

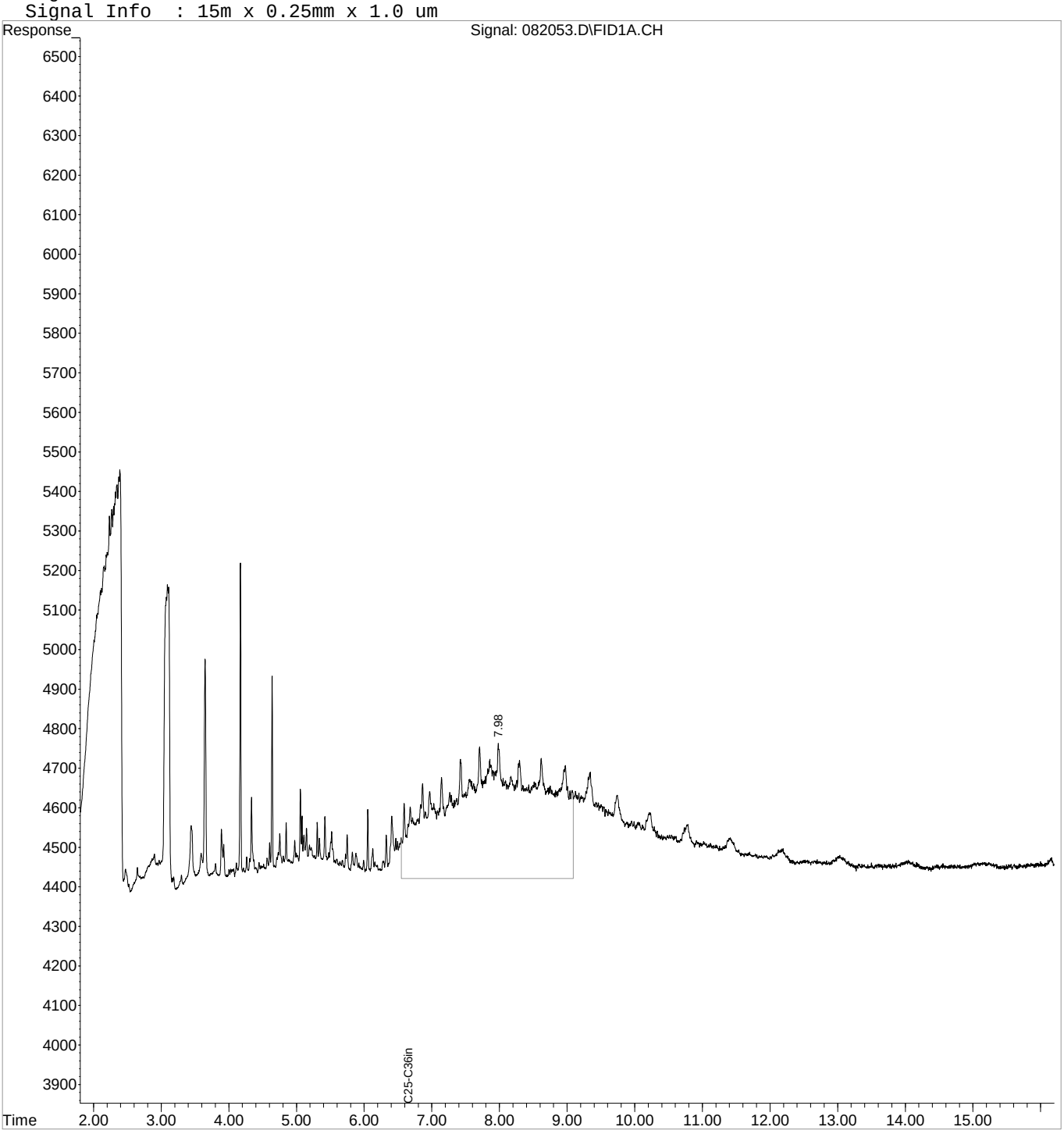
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082053.D Vial: 16
Acq On : 20 Aug 2018 8:58 pm Operator: SMS
Sample : RRO 50 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:28 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

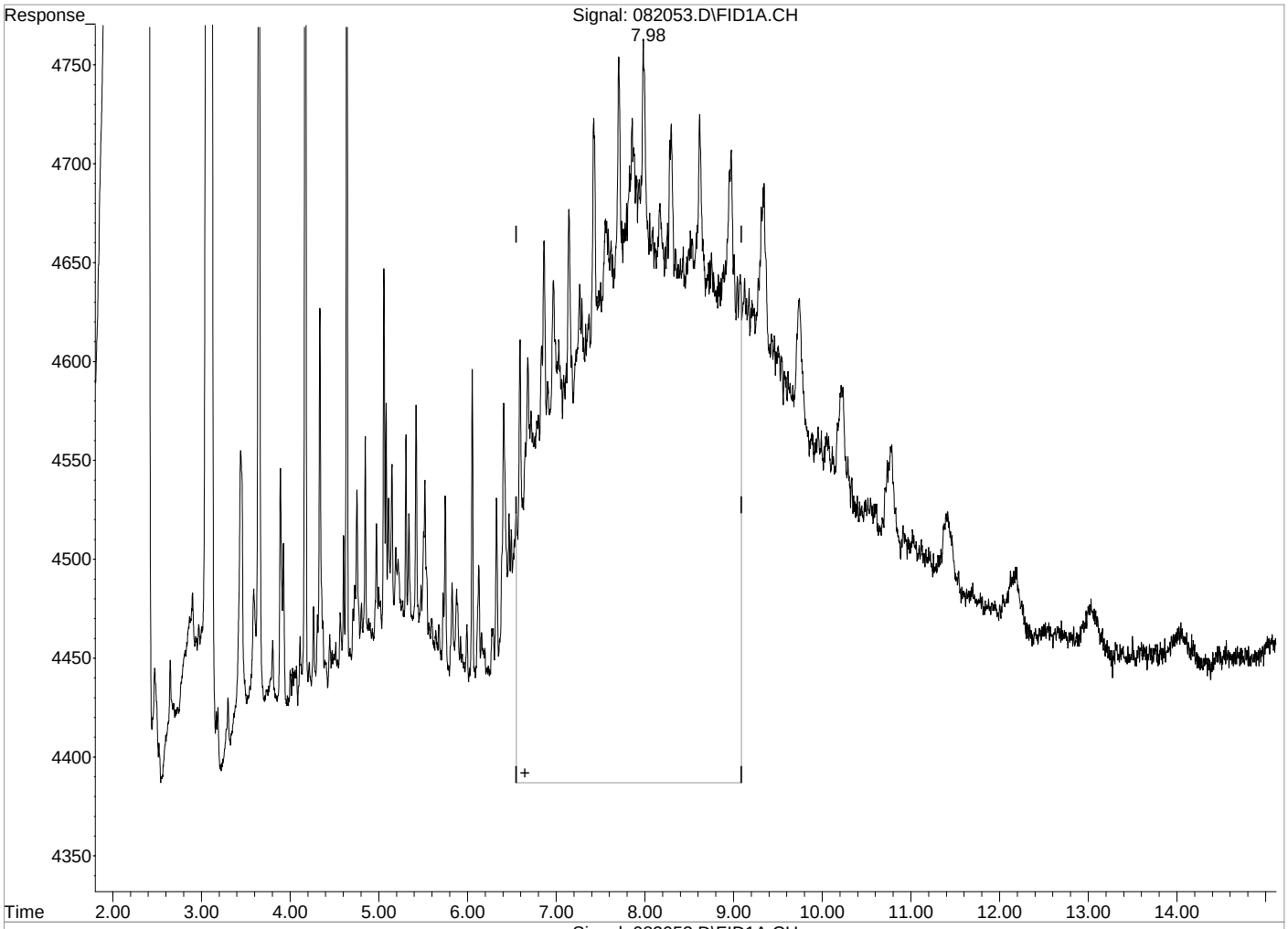


Quantitation Report (Qedit)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082053.D Vial: 16
Acq On : 20 Aug 2018 8:58 pm Operator: SMS
Sample : RRO 50 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:00 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Multiple Level Calibration



Signal: 082053.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.65min 55.397ppm

response 38384

Manual Integration:

Before

08/21/18

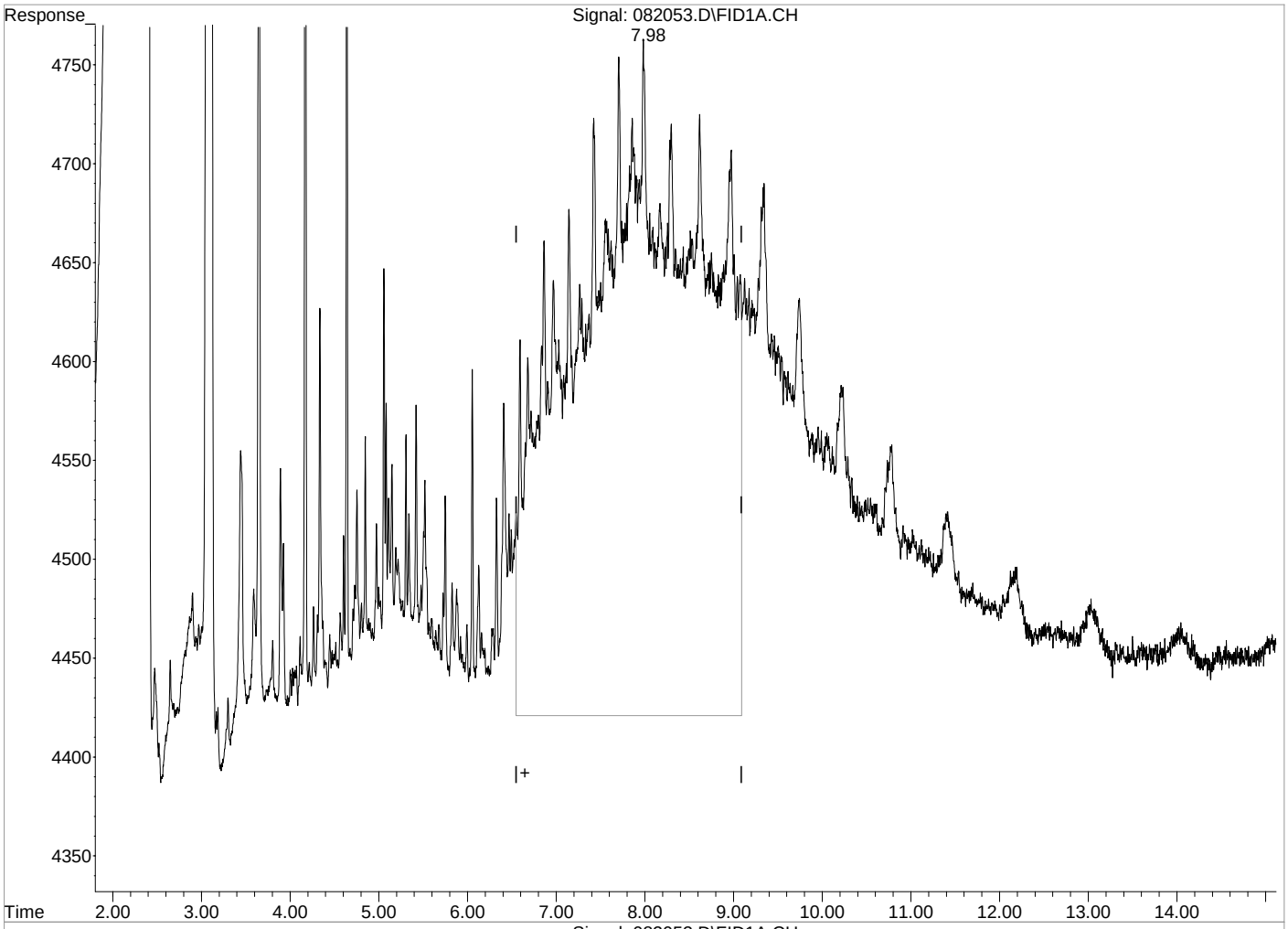
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082053.D Vial: 16
Acq On : 20 Aug 2018 8:58 pm Operator: SMS
Sample : RRO 50 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:00 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Multiple Level Calibration



Signal: 082053.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.65min 47.963ppm

response 33233

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082054.D Vial: 17
Acq On : 20 Aug 2018 9:19 pm Operator: SMS
Sample : RRO 200 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:19 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
10) H	C25-C36in RRO [NWTPH]	6.65	126607	182.723 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

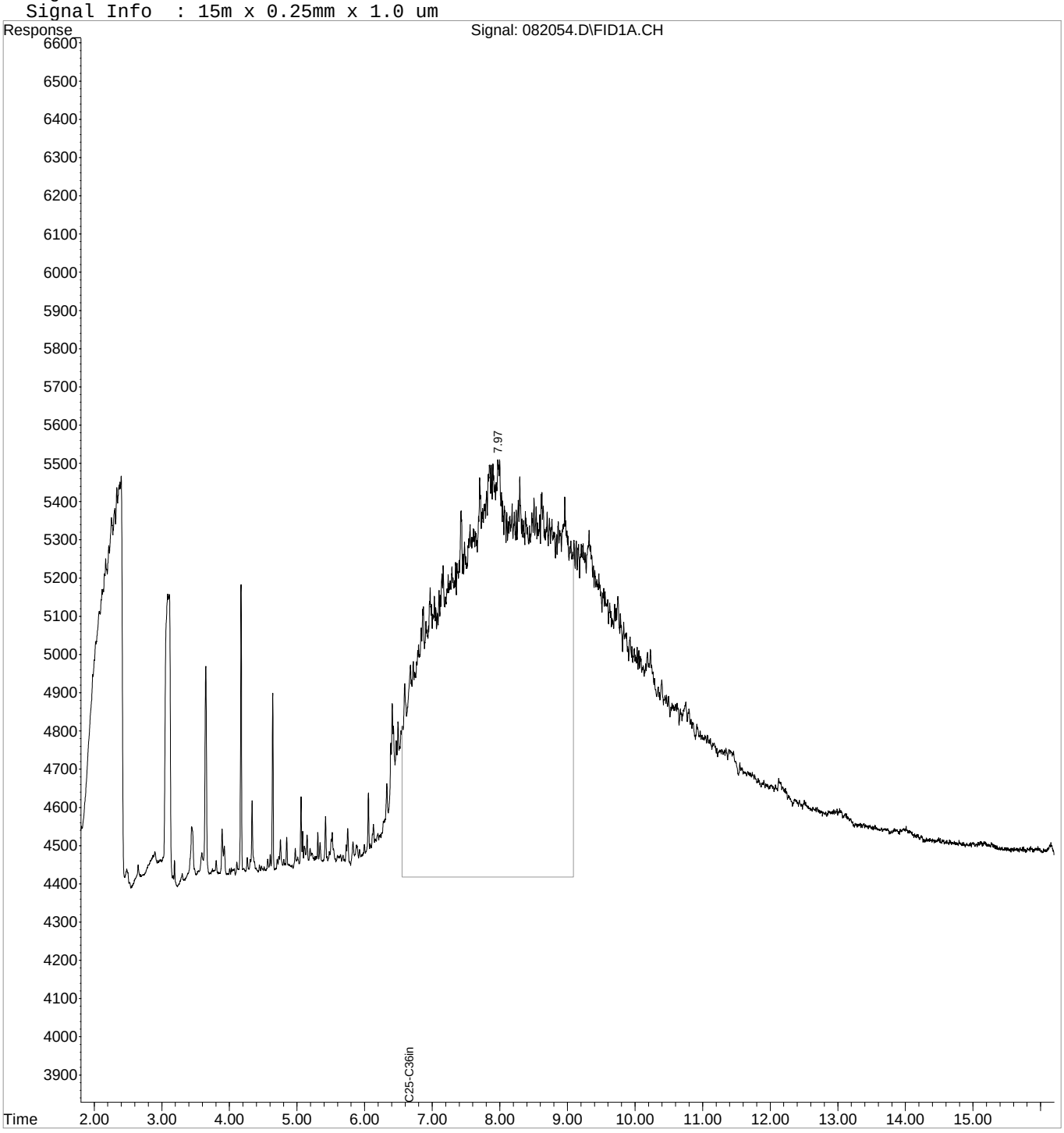
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082054.D Vial: 17
Acq On : 20 Aug 2018 9:19 pm Operator: SMS
Sample : RRO 200 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:28 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

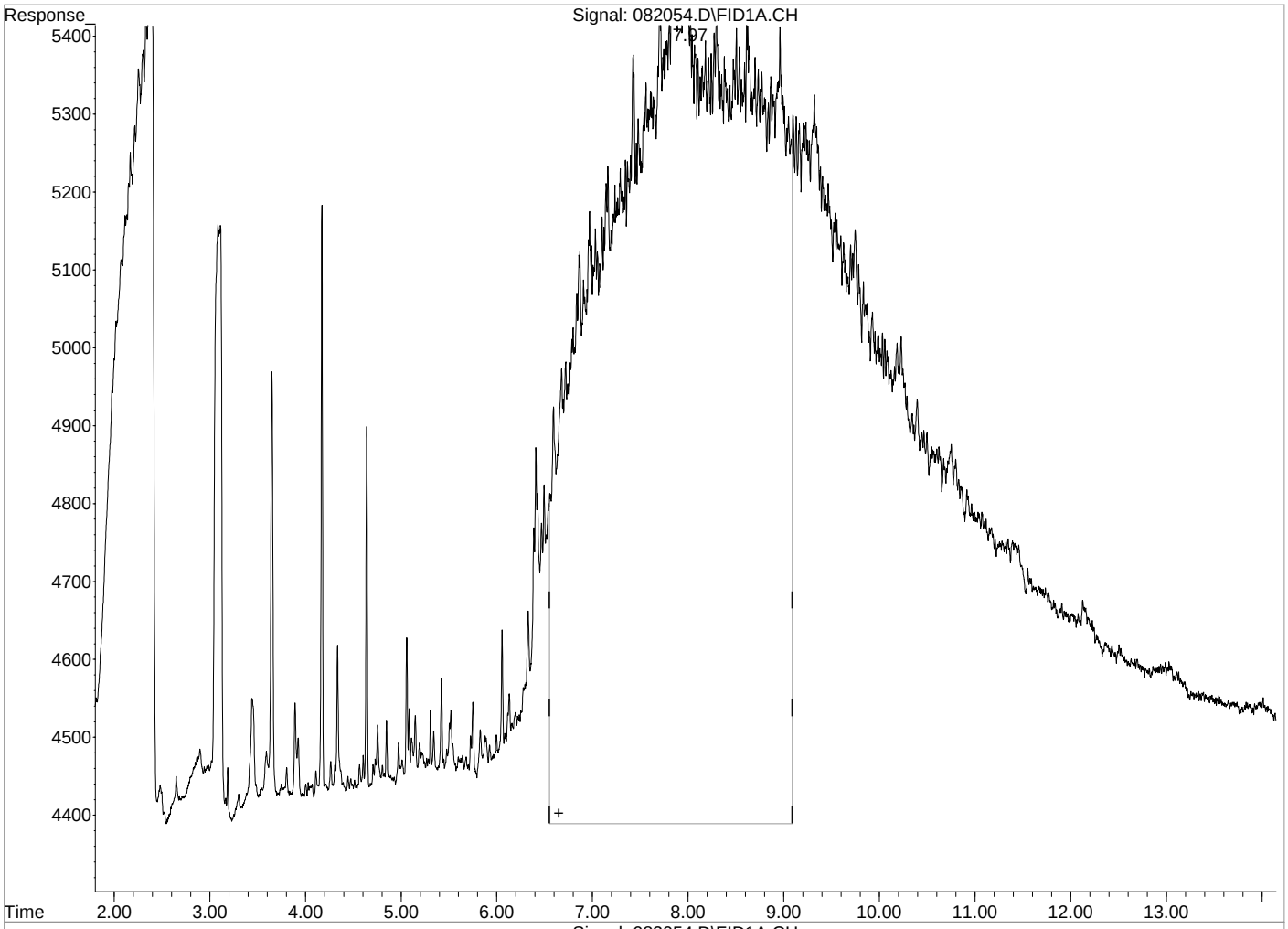


Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082054.D Vial: 17
Acq On : 20 Aug 2018 9:19 pm Operator: SMS
Sample : RRO 200 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:00 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Multiple Level Calibration



Signal: 082054.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.65min 189.337ppm

response 131190

Manual Integration:

Before

08/21/18

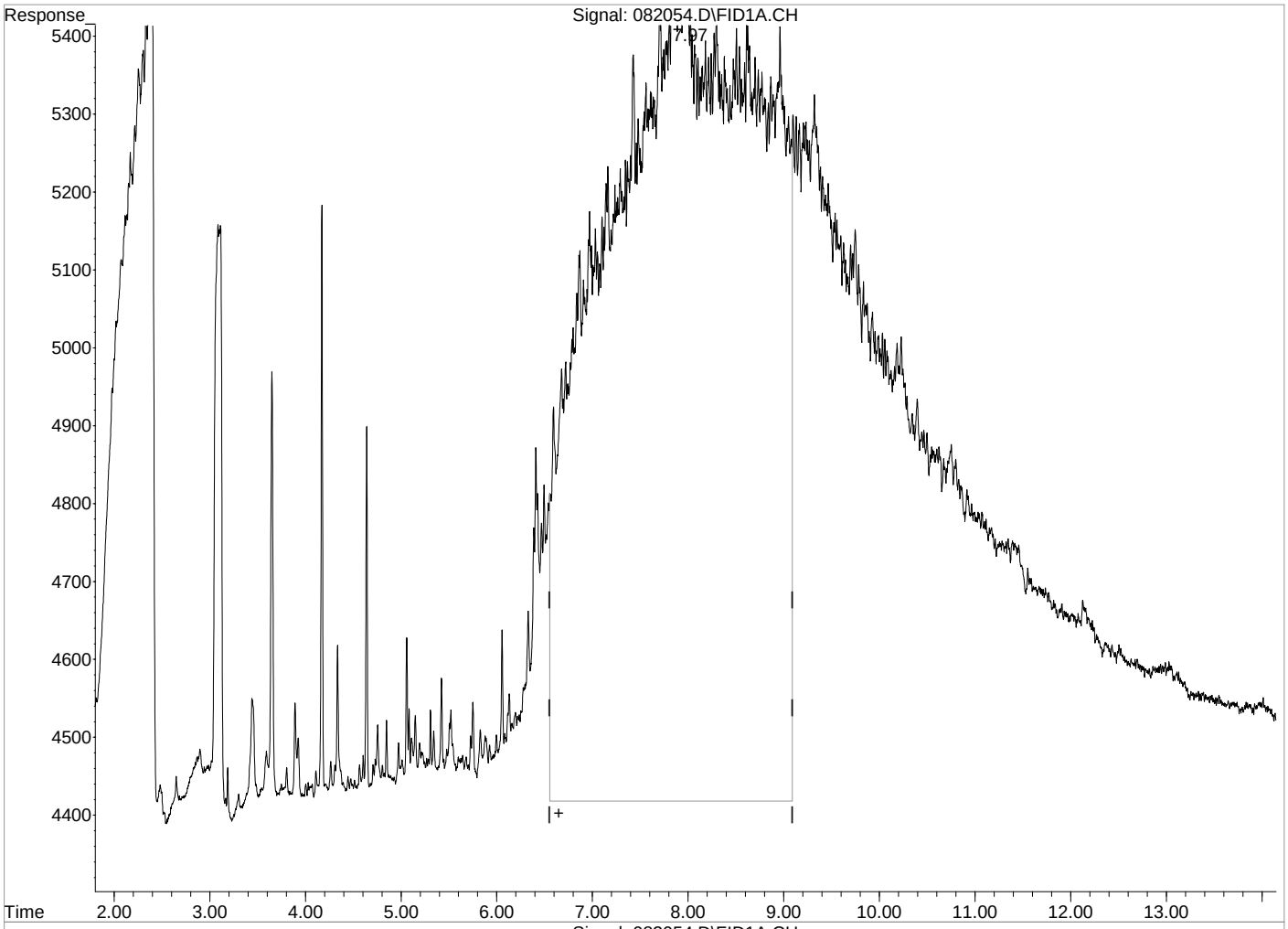
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082054.D Vial: 17
Acq On : 20 Aug 2018 9:19 pm Operator: SMS
Sample : RRO 200 SVF02-46F Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:00 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Multiple Level Calibration



Signal: 082054.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.65min 182.723ppm

response 126607

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082055.D Vial: 18
Acq On : 20 Aug 2018 9:41 pm Operator: SMS
Sample : RRO 500 SVF02-46H Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:20 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
10) H	C25-C36in RRO [NWTPH]	6.65	294609	425.189 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

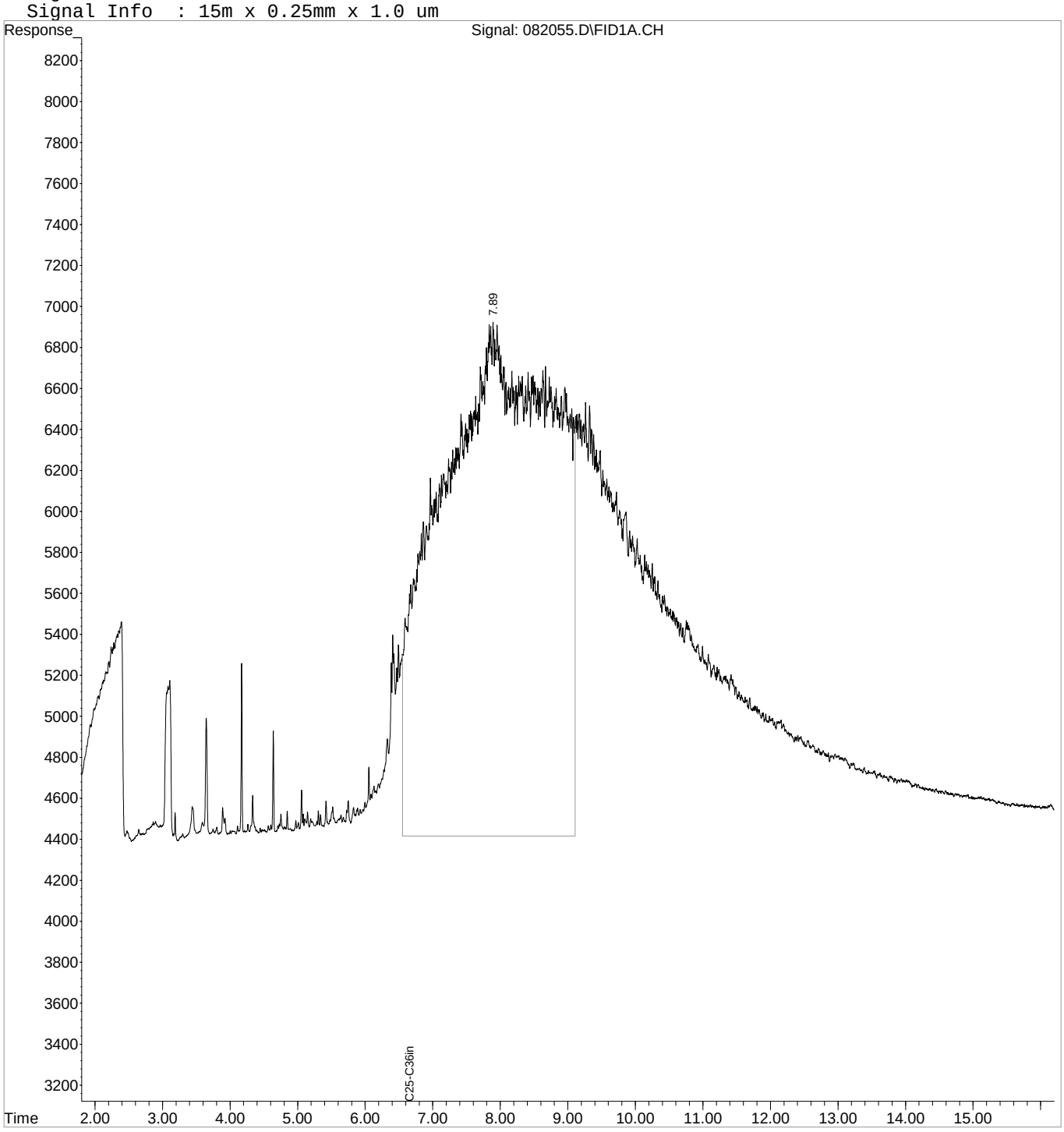
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082055.D Vial: 18
Acq On : 20 Aug 2018 9:41 pm Operator: SMS
Sample : RRO 500 SVF02-46H Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:30 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

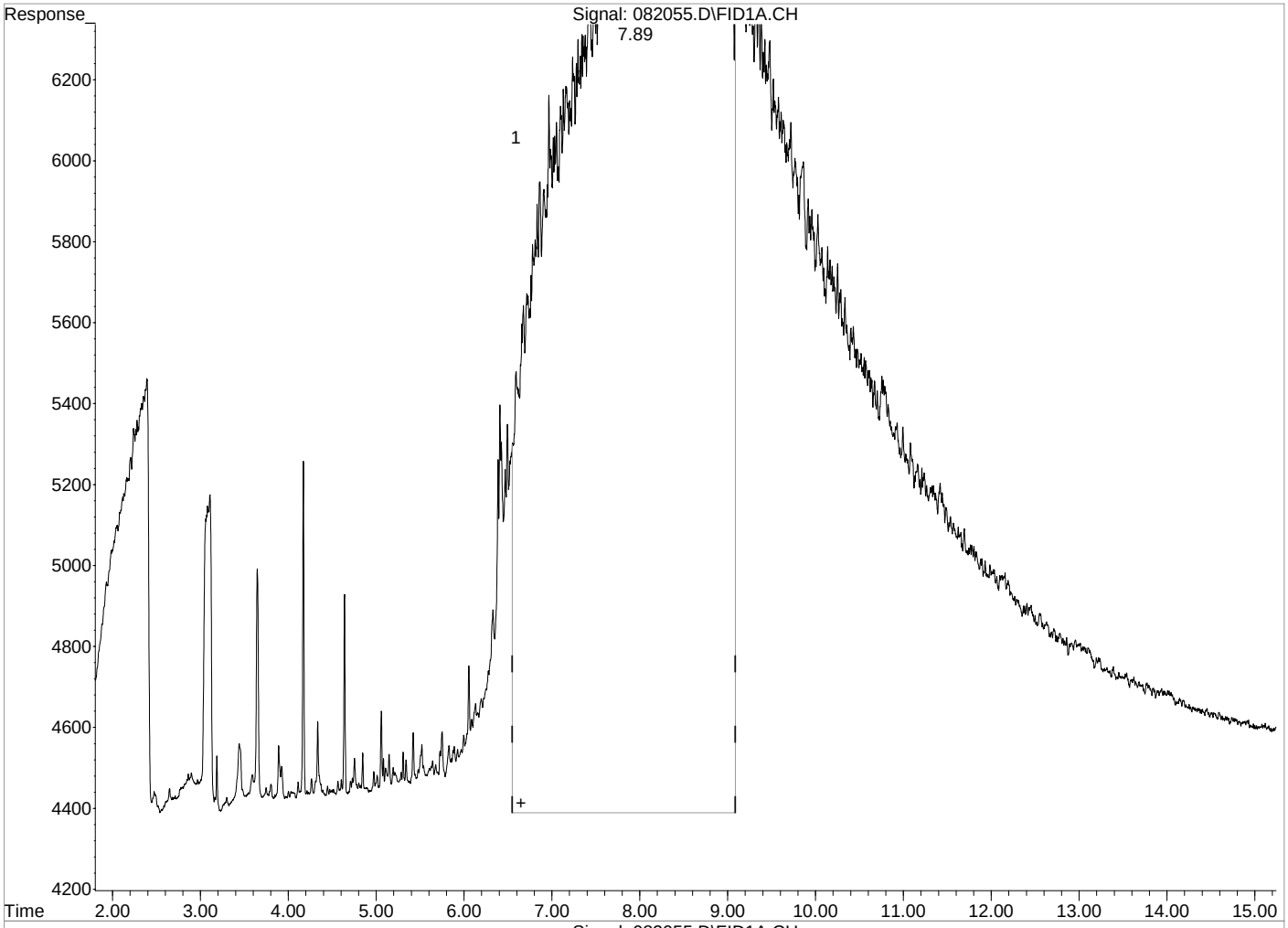


Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082055.D Vial: 18
Acq On : 20 Aug 2018 9:41 pm Operator: SMS
Sample : RRO 500 SVF02-46H Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:00 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Multiple Level Calibration



Signal: 082055.D\FID1A.CH

(10) C25-C36in RRO [NWTPH] (H)

6.65min 428.225ppm

response 296713

Manual Integration:

Before

08/21/18

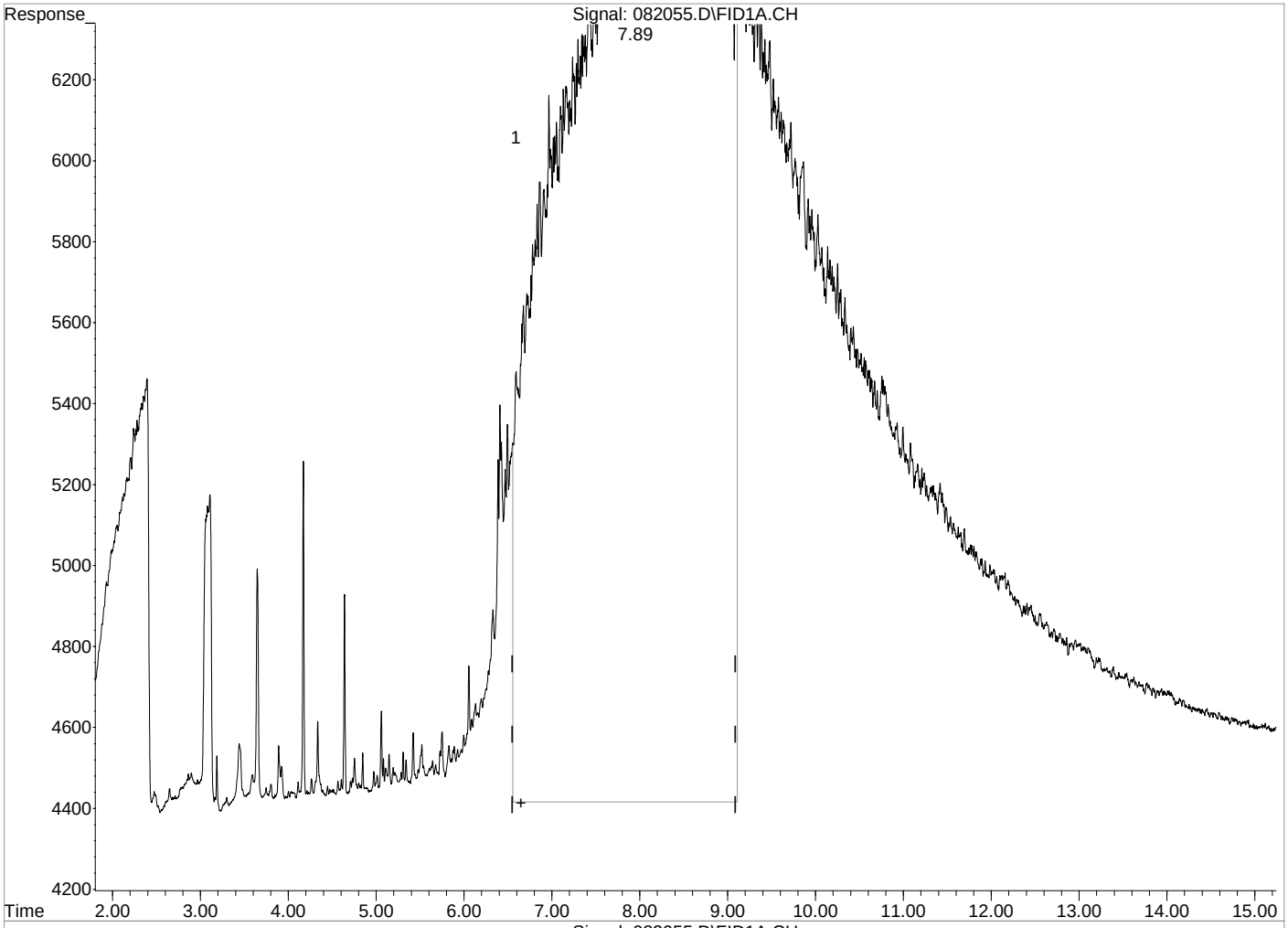
(+) = Expected Retention Time

Quantitation Report (Qedit)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082055.D Vial: 18
Acq On : 20 Aug 2018 9:41 pm Operator: SMS
Sample : RRO 500 SVF02-46H Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:00 2018 Quant Results File: 082018F.RES

Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:23:32 2018
Response via : Multiple Level Calibration



(10) C25-C36in RRO [NWTPH] (H)

6.65min 425.189ppm

response 294609

Manual Integration:

After

Baseline/Shoulder

08/21/18

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082056.D Vial: 19
Acq On : 20 Aug 2018 10:02 pm Operator: SMS
Sample : RRO 2K SVF02-46G Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:21 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
	Target Compounds				
10) H	C25-C36in RRO [NWTPH]	6.65	1238836	1787.926	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

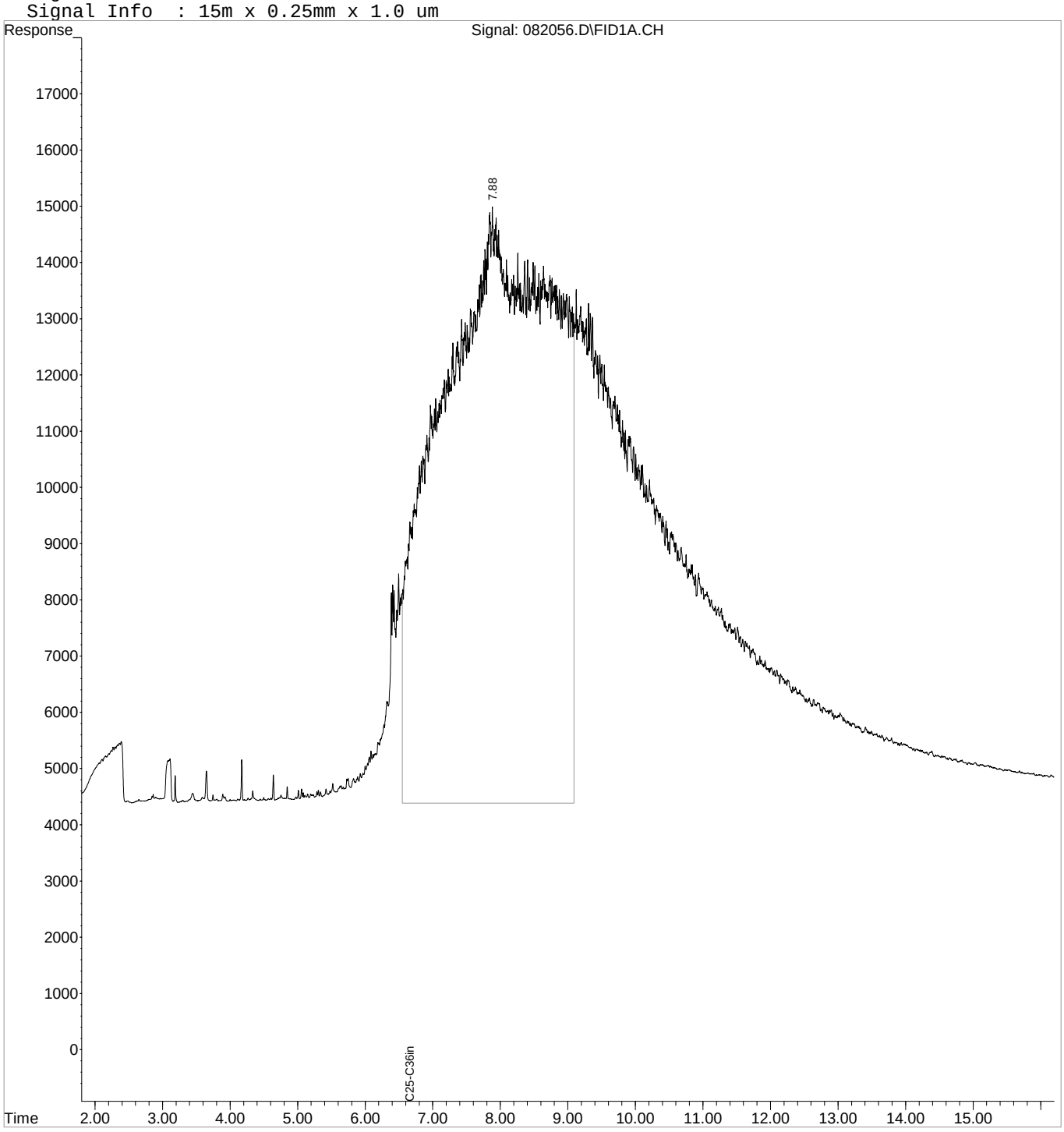
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082056.D Vial: 19
Acq On : 20 Aug 2018 10:02 pm Operator: SMS
Sample : RRO 2K SVF02-46G Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:30 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082057.D Vial: 20
Acq On : 20 Aug 2018 10:24 pm Operator: SMS
Sample : RRO 46F 5K Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:00:22 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
	Target Compounds				
10) H	C25-C36in RRO [NWTPH]	6.65	3024976	4365.739	ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

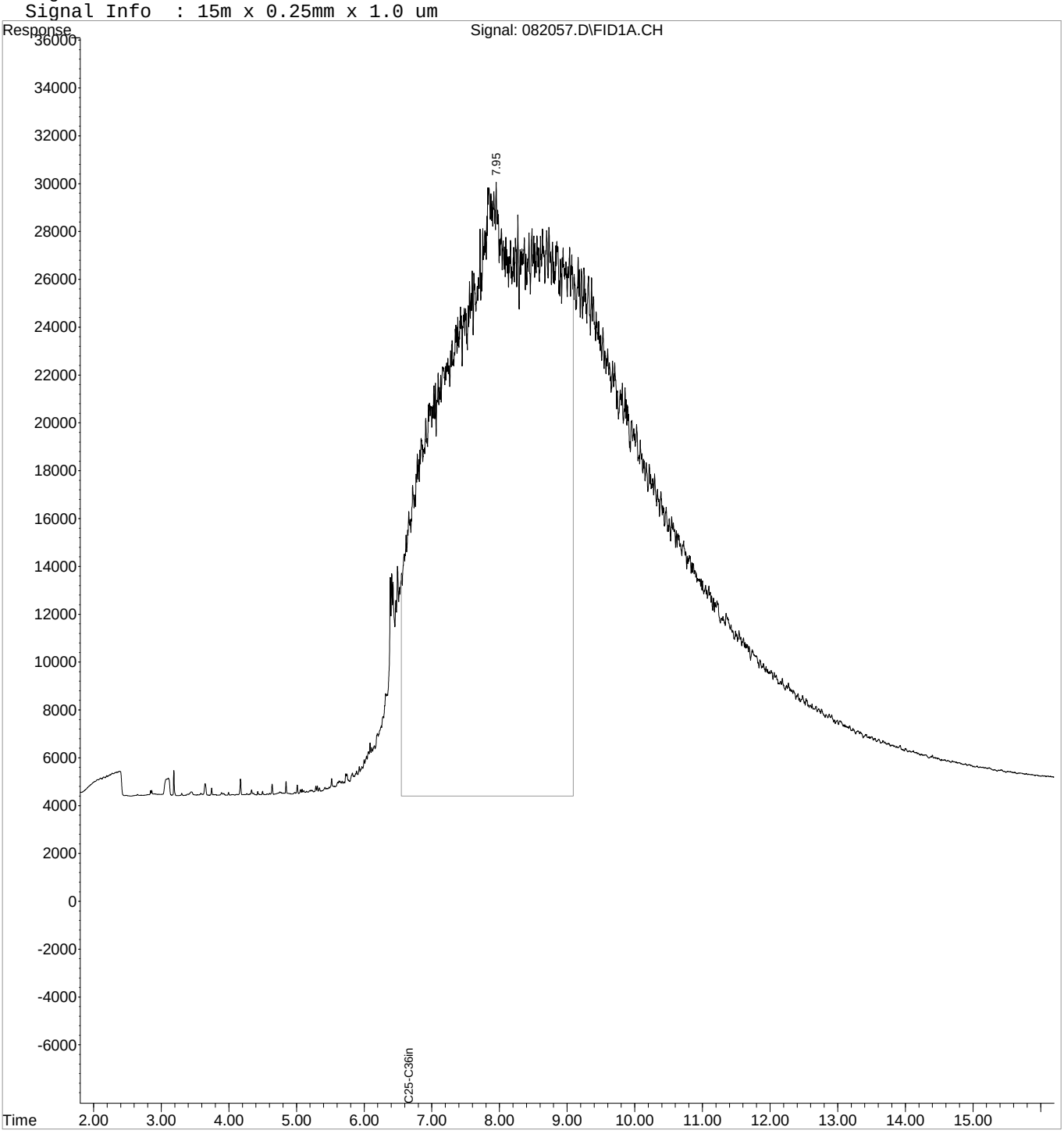
Quantitation Report (QT Reviewed)

1st 08/21/18
2nd 08/21/18

Data File : J:\GC21\DATA\082018F\082057.D Vial: 20
Acq On : 20 Aug 2018 10:24 pm Operator: SMS
Sample : RRO 46F 5K Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:30 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Mon Aug 20 14:03:42 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082058.D Vial: 21
Acq On : 20 Aug 2018 10:46 pm Operator: SMS
Sample : RRO ICV SVF02-47A Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 07:32:42 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:32:16 2018
Response via : Initial Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
	Target Compounds			
10)	H C25-C36in RRO [NWTPH]	6.65	573732	922.006 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

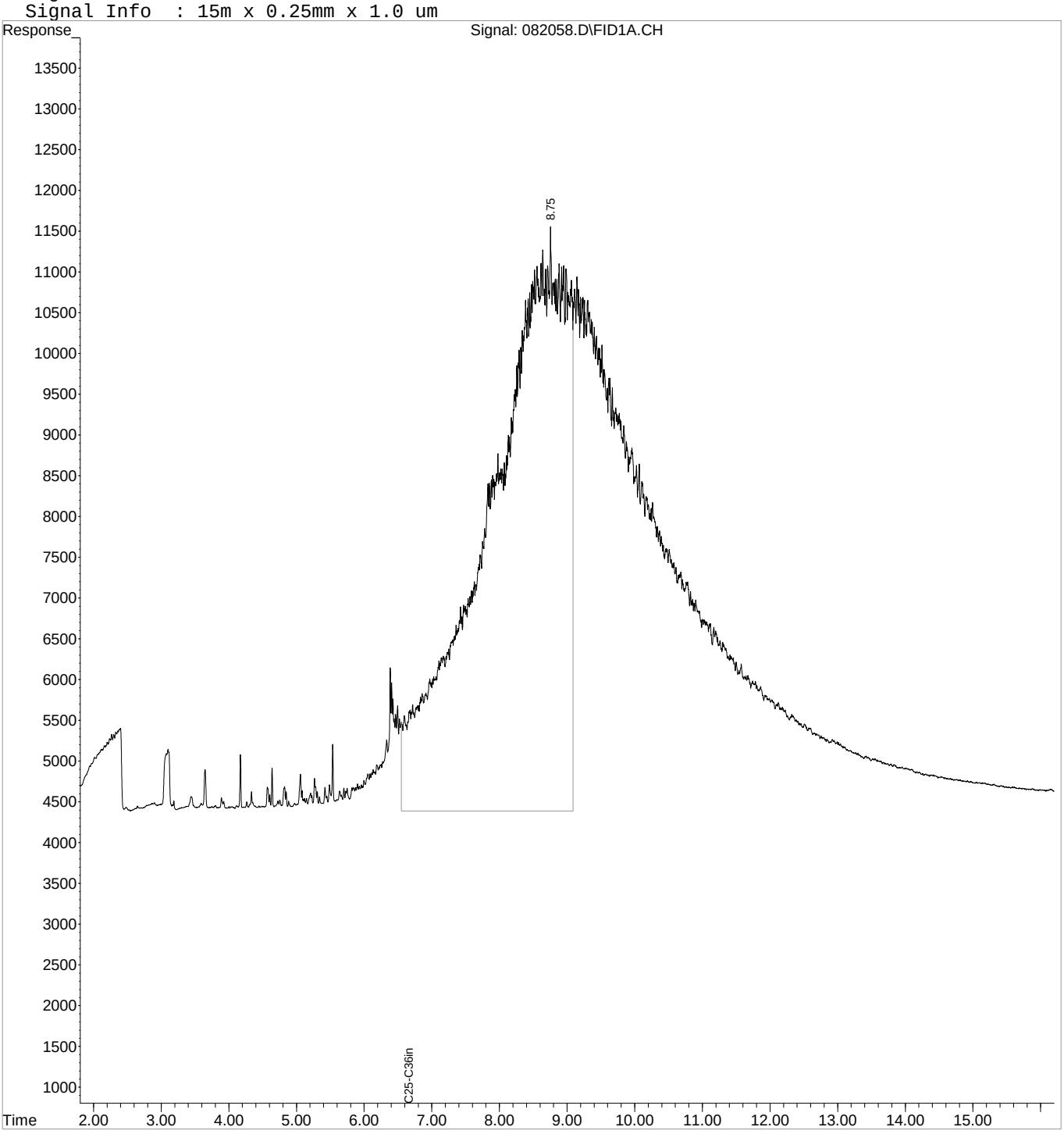
Quantitation Report (QT Reviewed)

1st SMS 08/21/18
2nd TP 08/21/18

Data File : J:\GC21\DATA\082018F\082058.D Vial: 21
Acq On : 20 Aug 2018 10:46 pm Operator: SMS
Sample : RRO ICV SVF02-47A Inst : GC21
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Aug 21 7:32 2018 Quant Results File: 082018F.RES

Quant Method : J:\GC21\METHODS\082018F.M (RTE Integrator)
Title : 8015/NWTPH/AK SVF MJ257 CAL15680
Last Update : Tue Aug 21 07:32:16 2018
Response via : Single Level Calibration
DataAcq Meth : SVF_FX.M

Volume Inj. : 1 uL
Signal Phase : ZB-1
Signal Info : 15m x 0.25mm x 1.0 um



Preparation Information

Group ID:	KWG1806092	**Prep Method:**	EPA 3541	**Prep Date:**	11/21/18 10:33
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1811120-005	FW0001	8015C DRO RRO	WIPE	1Wipe	4ml	
K1811120-006	FB0001	8015C DRO RRO	WIPE	0.5Wipe	4ml	
KWG1806092-1	Lab Control Sample	8015C DRO RRO	WIPE	1Wipe	4ml	
KWG1806092-2	Duplicate Lab Control Sample	8015C DRO RRO	WIPE	1Wipe	4ml	
KWG1806092-3	Method Blank	8015C DRO RRO	WIPE	1Wipe	4ml	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1811120-005	1704293					
K1811120-006	1704292					
KWG1806092-1	1704294					
KWG1806092-2	1704295					
KWG1806092-3	1704296					

Comments: 1h5

Started By: KPrescot Assisted By:

Completed By: SEldridg Assisted By:

Reviewed By: Date: 11/29/18 Storage:

Training: Yes / No (No circled)

Yes / No

Chain of Custody

Relinquished By: SE Date: 11-29-18

Received By: Date: 11/29/18

Extracts Examined: Yes / No

Preparation Information

Group ID:	KWG1806092	**Prep Method:**	EPA 3541	**Prep Date:**	11/21/18 00:00
Department:	Semivoa GC				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. WIPE	pH	Int. Vol. mL	Final Vol. mL	Surr. Added µL	Spike Added µL
1	K1811120-005	FW0001 7B	.02	✓	8015C DRO RRO	WIPE	1	N/A	NA	4	200	-
2	K1811120-006	FB0001 7C	.02	✓	8015C DRO RRO	WIPE	1/2	N/A		4		-
3	KWG1806092-1	Lab Control Sample 7D	-	-	8015C DRO RRO	WIPE	1	N/A		4		200
4	KWG1806092-2	Duplicate Lab Control Sample 7E	-	-	8015C DRO RRO	WIPE	1	N/A		4		1
5	KWG1806092-3	Method Blank 7F	-	-	8015C DRO RRO	WIPE	1	N/A		4	1	-

Comments: K1811120-006 was split in half and extracted per PM/ PREPRUN: 326949
client request. The other half will be used for the PCB portion. KRP 11/21/18.

Surrogate ID: SVF02-50A 500ppm XP:04/26/19 200µL epp.10D

Spike ID: SVF02-43D 1600/800ppm XP:12/20/18 200µL epp.10D

Witness: [signature] 11-21-18

Started By: KPrescot Assisted By: —

Completed By: [signature] 11-28-18 Assisted By:

Additional Prep Information for EPA 3541
Hydrocarbons in Soils/Filters/Wipes

Service Request # K1811120 **Work Group #** KWG1806092

Weighed (time/date/initial): — Balance ID: K-Bal- — Calibration Verified ☐

Storage Location (if not extracted same day): —

DCM Lot # DU541 Sulfate Lot # 18C085209 Matrix Lot # — Glass Wool Lot # 21317999

Soxtherm/s unit I.D# K-SOX-07

Soxtherm Start (time/date/initial): 1033 11/21/18 ~~KH~~

Soxtherm Stop (time/date/initial): 1341 11/21/18 ~~KH~~

Pipette (5 mL) Lot # 14918647

N-Evap (time/date/initial): 1150/ 11-28-18/se N-Evap Thermometer ID: SVM-001

Temp as measured: — °C Correction factor: — °C Adjusted temp: — °C

Sulfuric Acid Clean-up (3665)(time/date/initial): — Acid Lot # —

Silica Gel Clean-up (3630)(time/date/initial): — Silica Gel Lot # —

Pipette (2 mL) Lot # —

Vial: white Vial Storage: hagrid a1.a5

Archived Extract Storage: Luna

Additional Comments:

Bench Sheet Review Check List	
☑	Hold times met (if no, reason:)
☑	Prep date, time, method, department, product code correct in stealth
☑	Spike information and Q.C. correct (insufficient volume or mass recorded if no Q.C.)
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked - bottle numbers appended if required
☑	Names present for: started by, completed by, relinquished by, and witnessed by. Training circled.
☑	Extract storage recorded
☑	Additional prep sheet completely filled out (NA or line out blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

DILUTION LOG

LAB ID	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	DATE	ANALYST	SOLVENT LOT	COMMENTS
11120-5	100ml	1ml	1x	120618	MMS	DCM	Pass. Matrix Interference
↓ -6	↓	↓	↓	↓	↓	↓	↓

Injection Log

12/5

Directory: J:\GC21\DATA\120618F

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	99	1206F101.D	1.	mc252		12/06/22018 9:22
2	91	1206F102.D	1.	aliphstics		12/06/22018 9:44
3	96	1206F103.D	1.	dro@1000/50 svf02-51d		12/06/22018 10:0
4	97	1206F104.D	1.	rro@1000 svf02-51a		12/06/22018 10:2
5	86	1206F105.D	1.	ib		12/06/22018 10:4
6	1	1206F106.D	1.	kwg1806163-1lcs	Run 61608Hz	12/06/22018 11:1
7	2	1206F107.D	1.	kwg1806163-2dlcs		12/06/22018 11:3
8	3	1206F108.D	1.	kwg1806163-3mb	CA15807	12/06/22018 11:5
9	4	1206F109.D	1.	k1810982-002	Rpt Nam	12/06/22018 12:1
10	5	1206F110.D	1.	k1810982-004		12/06/22018 12:3
11	6	1206F111.D	1.	k1810982-005		12/06/22018 12:5
12	7	1206F112.D	1.	k1810982-007		12/06/22018 1:20
13	8	1206F113.D	1.	k1810982-008		12/06/22018 1:42
14	9	1206F114.D	1.	k1810982-010		12/06/22018 2:04
15	10	1206F115.D	1.	k1810982-009		12/06/22018 2:26
16	11	1206F116.D	1.	k1810982-006		12/06/22018 2:47
17	12	1206F117.D	1.	k1810982-011		12/06/22018 3:09
18	13	1206F118.D	1.	k1810982-003		12/06/22018 3:30
19	96	1206F119.D	1.	dro@100/50 svf02-51d ↑		12/06/22018 3:52
20	97	1206F120.D	1.	rro@1000 svf02-51a ok		12/06/22018 4:14
21	86	1206F121.D	1.	ib		12/06/22018 4:36
22	14	1206F122.D	1.	k1810982-012 ↓ RR		12/06/22018 4:57
23	15	1206F123.D	1.	k1810982-001		12/06/22018 5:19
24	16	1206F124.D	1.	kwg1806131-3lcs		12/06/22018 5:41
25	17	1206F125.D	1.	kwg1806131-4mb		12/06/22018 6:02
26	18	1206F126.D	1.	k1811381-004		12/06/22018 6:24
27	19	1206F127.D	1.	k1811381-004ms	RR	12/06/22018 6:46
28	20	1206F128.D	1.	k1811381-004dms		12/06/22018 7:07
29	21	1206F129.D	1.	k1811381-005		12/06/22018 7:29
30	98	1206F130.D	1.	dro@1000/50 svf02-51d ↑		12/06/22018 7:51
31	97	1206F131.D	1.	rro@1000 svf02-51a		12/06/22018 8:12
32	86	1206F132.D	1.	ib	KWG1806357	12/06/22018 8:34
33	22	1206F133.D	1.	kwg1806092-1lcs		12/06/22018 8:56
34	23	1206F134.D	1.	kwg1806092-2dlcs		12/06/22018 9:17
35	24	1206F135.D	1.	kwg1806092-3mb		12/06/22018 9:39
36	25	1206F136.D	1.	k1811120-005 10x		12/06/22018 10:0
37	26	1206F137.D	1.	k1811120-006 10x		12/06/22018 10:2
38	100	1206F138.D	1.	dro@1000/50 svf02-51d ok		12/06/22018 10:4
39	97	1206F139.D	1.	rro@1000 svf02-51a ↑		12/06/22018 11:0
40	86	1206F140.D	1.	ib		12/06/22018 11:2
41	90	1206F141.D	1.	IB		12/06/22018 11:4
42	90	1206F142.D	1.	IB		12/07/22018 12:1
43	90	1206F143.D	1.	IB		12/07/22018 12:3
44	90	1206F144.D	1.	IB		12/07/22018 12:5
45	90	1206F145.D	1.	IB		12/07/22018 1:15
46	90	1206F146.D	1.	IB		12/07/22018 1:37
47	90	1206F147.D	1.	IB		12/07/22018 1:58
48	90	1206F148.D	1.	IB		12/07/22018 2:20
49	90	1206F149.D	1.	IB		12/07/22018 2:42
50	90	1206F150.D	1.	IB		12/07/22018 3:03
51	90	1206F151.D	1.	IB		12/07/22018 3:25
52	90	1206F152.D	1.	IB		12/07/22018 3:46
53	90	1206F153.D	1.	IB		12/07/22018 4:08
54	90	1206F154.D	1.	IB		12/07/22018 4:29
55	90	1206F155.D	1.	IB		12/07/22018 4:51

Injection Log

Directory: J:\GC21\DATA\120618F

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	99	1206F101.D	1.	mc252		12/06/22018 9:22
2	91	1206F102.D	1.	aliphstics		12/06/22018 9:44
3	96	1206F103.D	1.	dro@1000/50 svf02-51d		12/06/22018 10:0
4	97	1206F104.D	1.	rro@1000 svf02-51a		12/06/22018 10:2
5	86	1206F105.D	1.	ib		12/06/22018 10:4
6	1	1206F106.D	1.	kwg1806163-1lcs		12/06/22018 11:1
7	2	1206F107.D	1.	kwg1806163-2dlcs		12/06/22018 11:3
8	3	1206F108.D	1.	kwg1806163-3mb		12/06/22018 11:5
9	4	1206F109.D	1.	k1810982-002		12/06/22018 12:1
10	5	1206F110.D	1.	k1810982-004		12/06/22018 12:3
11	6	1206F111.D	1.	k1810982-005		12/06/22018 12:5
12	7	1206F112.D	1.	k1810982-007		12/06/22018 1:20
13	8	1206F113.D	1.	k1810982-008		12/06/22018 1:42
14	9	1206F114.D	1.	k1810982-010		12/06/22018 2:04
15	10	1206F115.D	1.	k1810982-009		12/06/22018 2:26
16	11	1206F116.D	1.	k1810982-006		12/06/22018 2:47
17	12	1206F117.D	1.	k1810982-011		12/06/22018 3:09
18	13	1206F118.D	1.	k1810982-003		12/06/22018 3:30
19	96	1206F119.D	1.	dro@100/50 svf02-51d		12/06/22018 3:52
20	97	1206F120.D	1.	rro@1000 svf02-51a		12/06/22018 4:14
21	86	1206F121.D	1.	ib		12/06/22018 4:36
22	14	1206F122.D	1.	k1810982-012		12/06/22018 4:57
23	15	1206F123.D	1.	k1810982-001		12/06/22018 5:19
24	16	1206F124.D	1.	kwg1806131-3lcs		12/06/22018 5:41
25	17	1206F125.D	1.	kwg1806131-4mb		12/06/22018 6:02
26	18	1206F126.D	1.	k1811381-004		12/06/22018 6:24
27	19	1206F127.D	1.	k1811381-004ms		12/06/22018 6:46
28	20	1206F128.D	1.	k1811381-004dms		12/06/22018 7:07
29	21	1206F129.D	1.	k1811381-005		12/06/22018 7:29
30	98	1206F130.D	1.	dro@1000/50 svf02-51d		12/06/22018 7:51
31	97	1206F131.D	1.	rro@1000 svf02-51a		12/06/22018 8:12
32	86	1206F132.D	1.	ib		12/06/22018 8:34
33	22	1206F133.D	1.	kwg1806092-1lcs		12/06/22018 8:56
34	23	1206F134.D	1.	kwg1806092-2dlcs		12/06/22018 9:17
35	24	1206F135.D	1.	kwg1806092-3mb		12/06/22018 9:39
36	25	1206F136.D	1.	k1811120-005 10x		12/06/22018 10:0
37	26	1206F137.D	1.	k1811120-006 10x		12/06/22018 10:2
38	100	1206F138.D	1.	dro@1000/50 svf02-51d		12/06/22018 10:4
39	97	1206F139.D	1.	rro@1000 svf02-51a		12/06/22018 11:0
40	86	1206F140.D	1.	ib		12/06/22018 11:2
41	90	1206F141.D	1.	IB		12/06/22018 11:4
42	90	1206F142.D	1.	IB		12/07/22018 12:1
43	90	1206F143.D	1.	IB		12/07/22018 12:3
44	90	1206F144.D	1.	IB		12/07/22018 12:5
45	90	1206F145.D	1.	IB		12/07/22018 1:15
46	90	1206F146.D	1.	IB		12/07/22018 1:37
47	90	1206F147.D	1.	IB		12/07/22018 1:58
48	90	1206F148.D	1.	IB		12/07/22018 2:20
49	90	1206F149.D	1.	IB		12/07/22018 2:42
50	90	1206F150.D	1.	IB		12/07/22018 3:03
51	90	1206F151.D	1.	IB		12/07/22018 3:25
52	90	1206F152.D	1.	IB		12/07/22018 3:46
53	90	1206F153.D	1.	IB		12/07/22018 4:08
54	90	1206F154.D	1.	IB		12/07/22018 4:29
55	90	1206F155.D	1.	IB		12/07/22018 4:51

Organochlorine Pesticides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F017.D
Lab ID: K1811120-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/12/2018 17:23
Date Quantitated: 12/13/2018 09:07
Batch ID: KWG1806469
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Tetrachloro-m-xylene	51	70	130	ODL
	Methoxychlor	134	70	130	
	Decachlorobiphenyl	67	70	130	
	Toxaphene	139	70	130	
	Toxaphene {1}	242	70	130	MCavg
	Toxaphene {3}	132	70	130	MCavg
	Chlordane {2}	63	70	130	MCavg
Surrogates	Tetrachloro-m-xylene	59	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F017.D\1212F017C.D
Lab ID: K1811120-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/12/2018 17:23
Date Quantitated: 12/13/2018 09:07
Batch ID: KWG1806469
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Tetrachloro-m-xylene	51	70	130	ODL
	Methoxychlor	134	70	130	
	Decachlorobiphenyl	67	70	130	
	Toxaphene {1}	242	70	130	MCavg
	Toxaphene	139	70	130	ODL
	Toxaphene {3}	132	70	130	MCavg
	Chlordane {2}	63	70	130	MCavg
Surrogates	Tetrachloro-m-xylene	59	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F017.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F017.D\1212F017c.d			**Vial:**	12
Acqu Date:	12/12/2018 17:23	**Quant Date:**	12/13/2018 09:07	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1811120-001				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**	11/08/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	K1811120
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
Prep Ref:	1704566	**Prep Date:**	11/27/2018	**Pre-Prep Date:**	11/20/2018

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:	Organochlorine Pesticides	**Report List ID:**	LJ19075
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1711
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05 c	5.34	-0.04 c	541811	1796242	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	-0.10 c	5.34	-0.08 c	541811	1796242	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	-0.10 c	5.34	-0.08 c	541811	1796242	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt	
1	Tetrachloro-m-xylene	8.74	+0.01	7.11		34815	86081	2.93	2.93			59	*
						%Recovery =		59 *	59 *	**Limits =**	70-130		
1	Decachlorobiphenyl	18.42		16.87	+0.01	50335	108627	4.09	4.41			88	OK
						%Recovery =		82 OK	88 OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-BHC (Lindane)					0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor			9.76	+0.01	0	18951	0.0000	0.7660	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide			11.42	+0.01	0d	2215	0.0000	0.1000	0.00010U	0.00010U	0.00010U
1	Endrin			12.96	+0.02	0	1024	0.0000	0.0500	0.00010U	0.00010U	0.00010U
1	Methoxychlor			14.73	+0.01	0	1107	0.0000	0.1170	0.00010U	0.00010U	0.00010U
2	Toxaphene {1}					0	0d	0.0000	0.0000	0.0020U	0.0020U	
	Toxaphene					0	0	0.0000	0.0000	0.0020U	0.0020U	0.0020U
2	Toxaphene {2}					0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}					0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}					0	0	0.0000	0.0000	0.0020U	0.0020U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F017.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F017.D\1212F017c.d			**Vial:**	12
Acqu Date:	12/12/2018 17:23	**Quant Date:**	12/13/2018 09:07	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1811120-001				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
2	Toxaphene {5}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0	0d	0.0000	0.0000	0.0020U	0.0020U	
3	Chlordane {1}			0	0d	0.0000	0.0000	0.0010U	0.0010U	
	Chlordane			0	0	0.0000	0.0000	0.0010U	0.0010U	0.0010U
3	Chlordane {2}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0	0	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st mc 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F017.D Vial: 12
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 5:23 pm Operator: MC
Sample : K1811120-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:07:33 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.014	5.342	541811	1796242	100.000	100.000	
29)	1-Bromo-2...	6.014	5.342	541811	1796242	100.000	100.000	
36)	1-Bromo-2...	6.014	5.342	541811	1796242	100.000	100.000	
43)	1-Bromo-2...	6.014	5.342	541811	1796242	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.741	7.109	34815	86081	2.932	2.925	
28) s	Decachlor...	18.421	16.869	50335	108627	4.094	4.405	
	Target Compounds							
3)	alpha-BHC	0.000	8.376f	0	3339	N.D.	0.133	#
5)	beta-BHC	0.000	9.616	0	1245	N.D.	0.100	#
8)	Heptachlor	0.000	9.762	0	18951	N.D.	0.766	#
9)	Aldrin	0.000	10.386f	0	2363	N.D.	0.102	#
10)	Isodrin	0.000	11.092f	0	3649	N.D.	0.181	#
11)	Heptachlo...	0.000	11.419	0	2215	N.D. d	0.100	
13)	Endosulfan I	0.000	12.026	0	1064	N.D.	0.052	#
14)	alpha-Chl...	0.000	12.026f	0	1064	N.D.	0.049	#
16)	4,4'-DDE	0.000	12.326	0	1480	N.D.	0.066	#
17)	Endrin	0.000	12.956	0	1024	N.D.	0.050	#
18)	Endosulfa...	14.594	0.000	1407	0	0.052	N.D.	#
19)	4,4'-DDD	0.000	13.182f	0	1585	N.D.	0.096	#
20)	Endrin Al...	0.000	13.702f	0	834	N.D.	0.048	#
21)	Endosulfa...	0.000	14.032f	0	1447	N.D.	0.076	#
22)	4,4'-DDT	0.000	13.659	0	2996	N.D.	0.089	#
23)	Endrin Ke...	0.000	15.022	0	782	N.D.	0.037	#
24)	Methoxychlor	0.000	14.732	0	1107	N.D.	0.117	#
27)	2,4'-DDT	0.000	13.092f	0	1099	N.D.	0.072	#
46)	cis-Nonac...	0.000	13.092f	0	1099	N.D.	0.043	#
48)	Mirex	0.000	15.209f	0	1918	N.D.	0.091	#
50)	HCBD	4.824f	0.000	1209	0	0.123	N.D.	#
52)	Perthane	13.918f	0.000	1271	0	6.700	N.D.	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

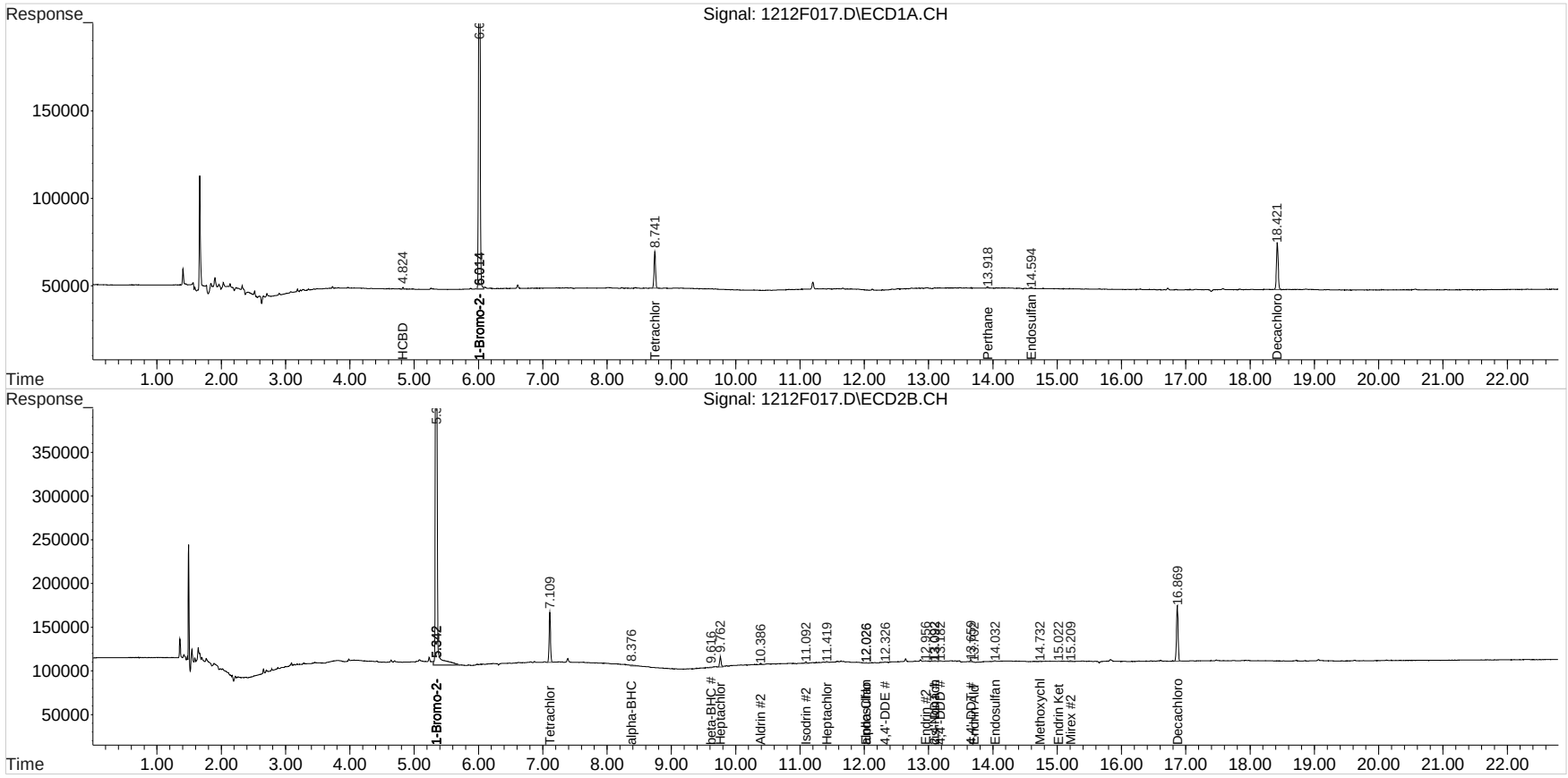
1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F017.D Vial: 12
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 5:23 pm Operator: MC
Sample : K1811120-001 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:07:33 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020112

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F022.D
Lab ID: K1811120-002
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/12/2018 19:52
Date Quantitated: 12/13/2018 09:21
Batch ID: KWG1806469
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	15	NA	14		x
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Tetrachloro-m-xylene	51	70	130	ODL
	Methoxychlor	134	70	130	
	Decachlorobiphenyl	67	70	130	
	Toxaphene	139	70	130	
	Toxaphene {1}	242	70	130	MCavg
	Toxaphene {3}	132	70	130	MCavg
	Chlordane {2}	63	70	130	MCavg
Surrogates	Tetrachloro-m-xylene	63	70	130	ODL
	Decachlorobiphenyl	69	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F022.D\1212F022C.D
Lab ID: K1811120-002
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/12/2018 19:52
Date Quantitated: 12/13/2018 09:21
Batch ID: KWG1806469
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	15	NA	14		x
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Tetrachloro-m-xylene	51	70	130	ODL
	Methoxychlor	134	70	130	
	Decachlorobiphenyl	67	70	130	
	Toxaphene {1}	242	70	130	MCavg
	Toxaphene	139	70	130	ODL
	Toxaphene {3}	132	70	130	MCavg
	Chlordane {2}	63	70	130	MCavg
Surrogates	Tetrachloro-m-xylene	60	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F022.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F022.D\1212F022c.d			**Vial:**	17
Acqu Date:	12/12/2018 19:52	**Quant Date:**	12/13/2018 09:21	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1811120-002				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**	11/05/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	K1811120
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
Prep Ref:	1704567	**Prep Date:**	11/27/2018	**Pre-Prep Date:**	11/20/2018

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:	Organochlorine Pesticides	**Report List ID:**	LJ19075
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1711
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05 c	5.34	-0.04 c	634612	2117126	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	-0.10 c	5.34	-0.08 c	634612	2117126	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	-0.10 c	5.34	-0.08 c	634612	2117126	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt	
1	Tetrachloro-m-xylene	8.74	+0.01	7.11		43233	104210	3.13	3.00			63	*
						%Recovery =		63 *	60 *	**Limits =**	70-130		
1	Decachlorobiphenyl	18.42		16.87	+0.01	49553	108182	3.44	3.72			74	OK
						%Recovery =		69 *	74 OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-BHC (Lindane)			9.07		0	1485	0.0000	0.0550	0.00010U	0.00010U	0.00010U
1	Heptachlor	11.45	+0.01	9.76	+0.01	3548	15788	0.2010	0.5420	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide	12.74	+0.03	11.44	+0.03	503m	10117	0.0510	0.3880	0.00010U	0.00010U	0.00010U
1	Endrin	14.17	+0.03	12.93	-0.01	2801	2955	0.2900	0.1230	0.00010U	0.00010U	0.00010U
1	Methoxychlor	15.70	+0.03	14.74	+0.02	1283	2402	0.0730	0.2160	0.00010U	0.00010U	0.00010U
2	Toxaphene {1}					0	0d	0.0000	0.0000	0.0020U	0.0020U	
	Toxaphene					0	0	0.0000	0.0000	0.0020U	0.0020U	0.0020U
2	Toxaphene {2}					0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}					0d	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}					0d	0d	0.0000	0.0000	0.0020U	0.0020U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F022.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F022.D\1212F022c.d			**Vial:**	17
Acqu Date:	12/12/2018 19:52	**Quant Date:**	12/13/2018 09:21	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1811120-002				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
2	Toxaphene {5}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0	0d	0.0000	0.0000	0.0020U	0.0020U	
3	Chlordane {1}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
	Chlordane			0	0	0.0000	0.0000	0.0010U	0.0010U	0.0010U
3	Chlordane {2}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0d	0	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F022.D Vial: 17
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:52 pm Operator: MC
Sample : K1811120-002 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:21:39 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.014	5.342	634612	2117126	100.000	100.000	
29)	1-Bromo-2...	6.014	5.342	634612	2117126	100.000	100.000	
36)	1-Bromo-2...	6.014	5.342	634612	2117126	100.000	100.000	
43)	1-Bromo-2...	6.014	5.342	634612	2117126	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.741	7.106	43233	104210	3.126	3.004	
28) s	Decachlor...	18.421	16.866	49553	108182	3.441	3.722	
	Target Compounds							
3)	alpha-BHC	9.624f	8.336	1655	3590	0.147	0.121	
4)	Hexachlor...	9.724	8.112	3454	3581	0.042	0.087	#
5)	beta-BHC	0.000	9.606	0	5935	N.D. d	0.406	
6)	gamma-BHC...	0.000	9.072	0	1485	N.D.	0.055	#
7)	delta-BHC	11.364	10.142	1651	3935	0.165	0.151	
8)	Heptachlor	11.454	9.759	3548	15788	0.201	0.542	#
9)	Aldrin	12.051f	0.000	1839	0	0.168	N.D.	d#
10)	Isodrin	12.518	0.000	1638	0	0.178	N.D.	d#
11)	Heptachlo...	12.738	11.436	503	10117	0.051m	0.388	#
12)	gamma-Chl...	13.258	0.000	1820	0	0.180	N.D.	d#
13)	Endosulfan I	13.351	12.036	2585	1010	0.255	0.042	#
14)	alpha-Chl...	13.351f	0.000	2585	0	0.238	N.D.	#
16)	4,4'-DDE	13.584	0.000	2577	0	0.225	N.D.	d#
17)	Endrin	14.168	12.929f	2801	2955	0.290	0.123	#
18)	Endosulfa...	0.000	13.376	0	6152	N.D. d	0.276	
19)	4,4'-DDD	0.000	13.182f	0	7265	N.D. d	0.372	
20)	Endrin Al...	14.794	13.779f	2465	1198	0.282	0.059	#
21)	Endosulfa...	0.000	14.032f	0	4271	N.D. d	0.191	
22)	4,4'-DDT	14.951	13.656	2083	2832	0.311	0.050	#
24)	Methoxychlor	15.704	14.736	1283	2402	0.073	0.216	#
25)	2,4'-DDE	13.091	11.902f	6013	8889	0.943	0.518	#
26)	2,4'-DDD	13.844	0.000	2575	0	0.446	N.D.	#
27)	2,4'-DDT	14.328	13.102	2442	3221	0.426	0.179	#
44)	Chlorpyrifos	11.911	10.732	3100	4216	0.739	0.304	#
45)	Oxychlordane	12.658f	11.176f	2729	10699	0.322	0.396	
46)	cis-Nonac...	14.431	13.102f	1363	3221	0.142	0.106	
47)	trans-Non...	13.351f	11.902f	2585	8889	0.281	0.315	
48)	Mirex	0.000	15.206	0	11117	N.D.	0.446	#
49)	HCE	0.000	3.346	0	4487	N.D.	0.112	#
52)	Perthane	13.844f	0.000	2575	0	11.590	N.D.	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

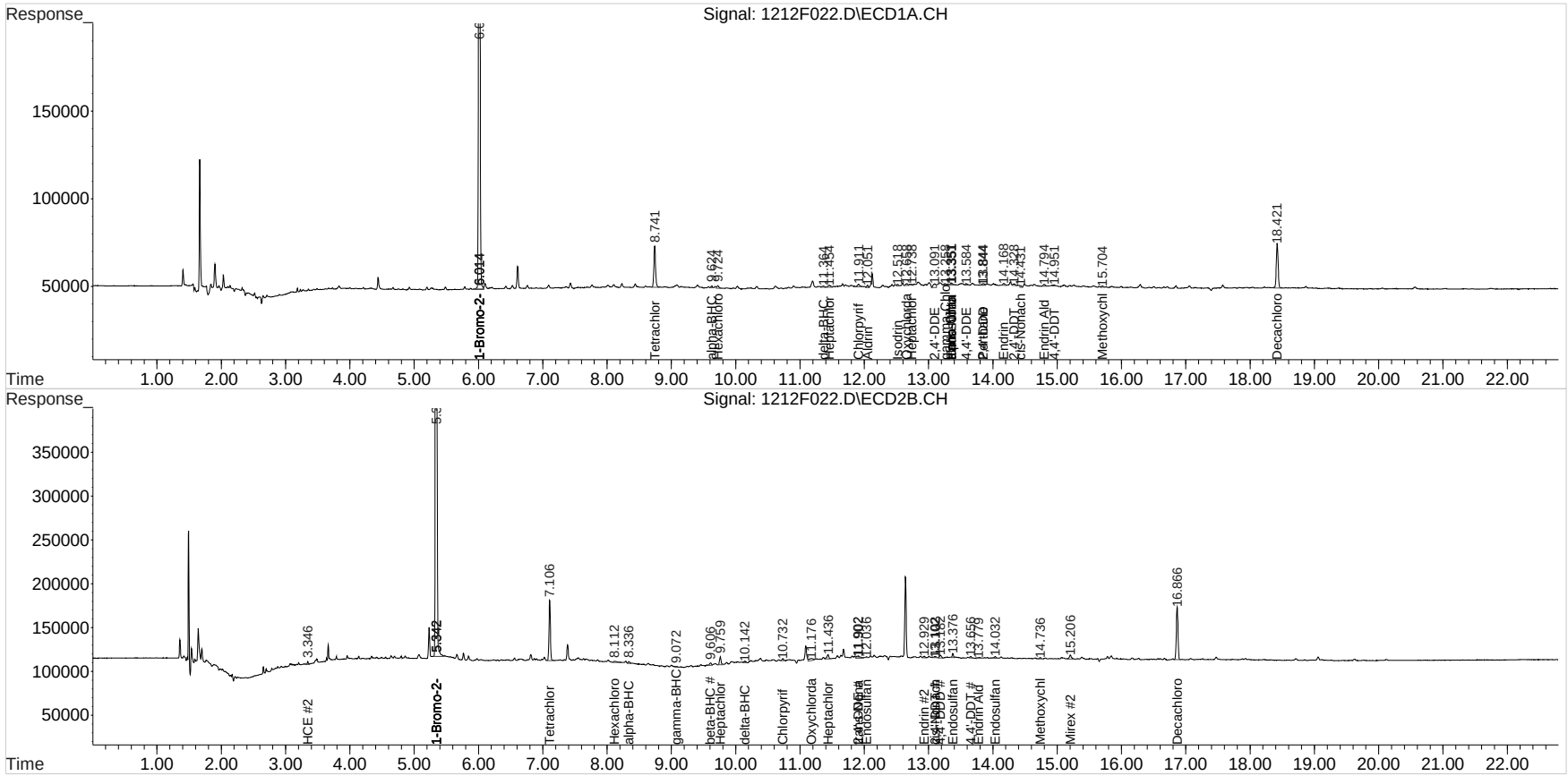
1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F022.D Vial: 17
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:52 pm Operator: MC
Sample : K1811120-002 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:21:39 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020118

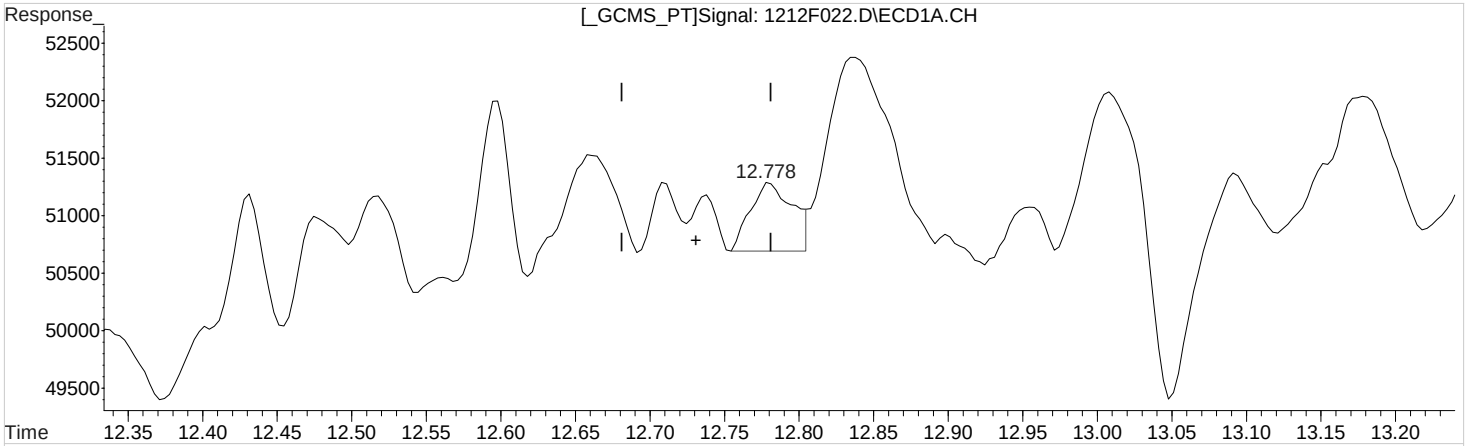
Quantitation Report (Qedit)

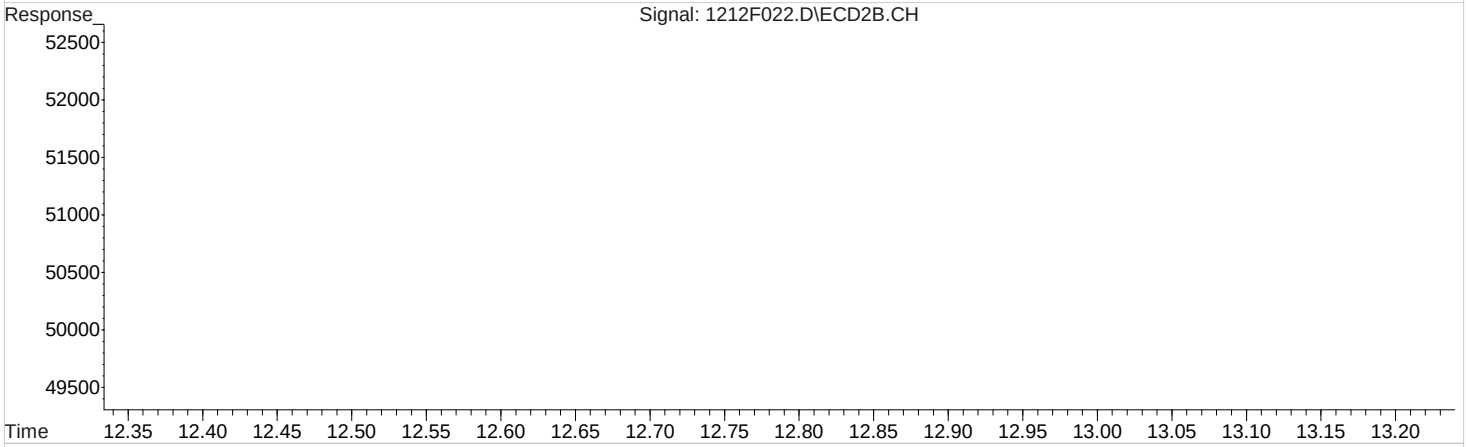
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F022.D Vial: 17
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:52 pm Operator: MC
Sample : K1811120-002 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:51 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(11) Heptachlor Epoxide

12.778min 0.121 ug/L

response 1206

Manual Integration:

Before

12/13/18

(11) Heptachlor Epoxide #2

11.436min 0.388 ug/L

response 10117

(+) = Expected Retention Time

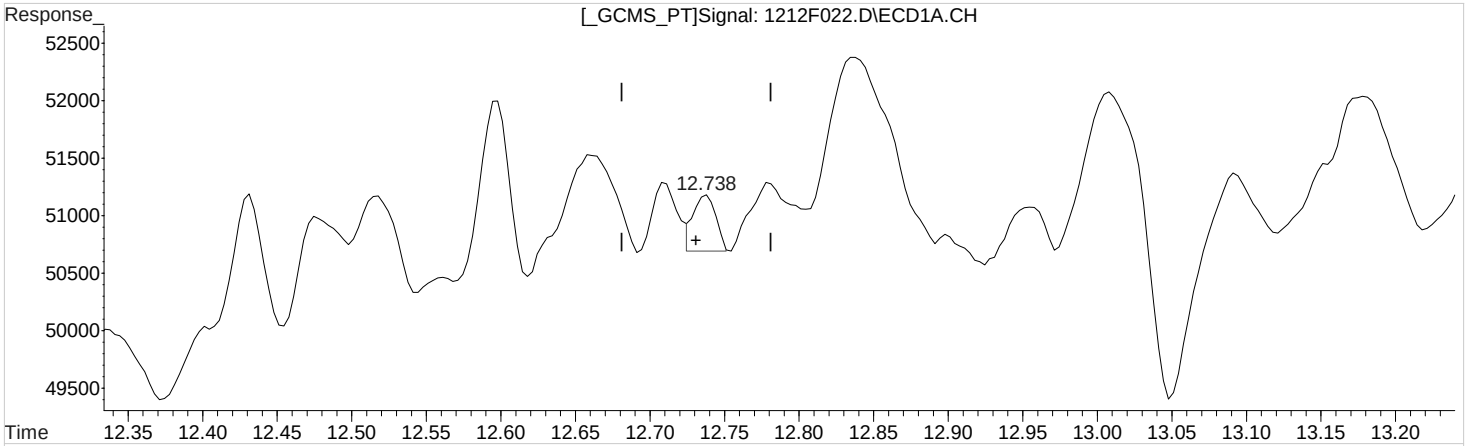
Quantitation Report (Qedit)

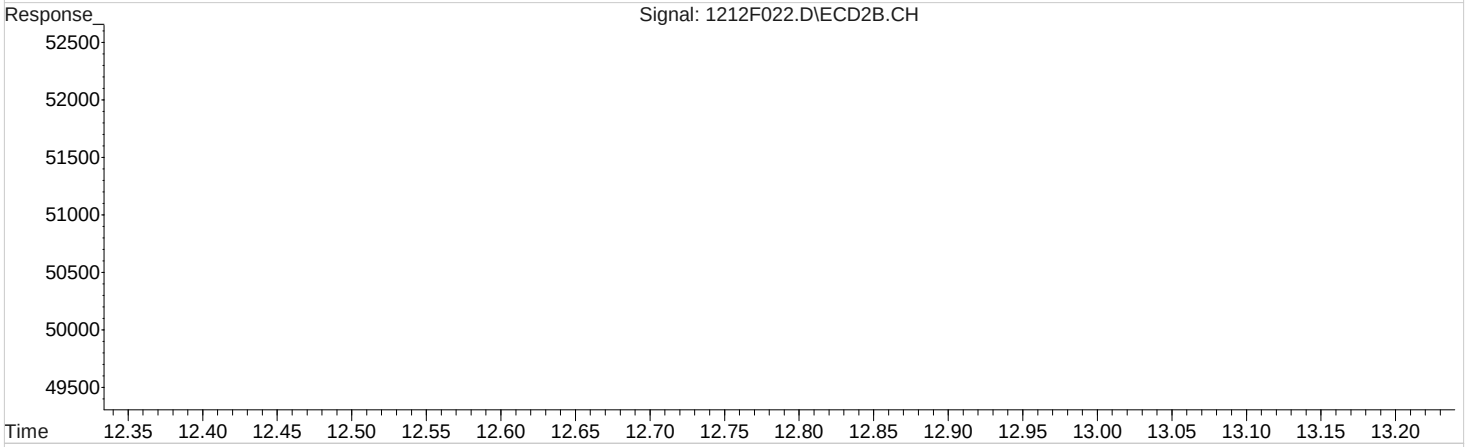
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F022.D Vial: 17
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:52 pm Operator: MC
Sample : K1811120-002 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:51 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(11) Heptachlor Epoxide

12.738min 0.051 ug/L m

response 503

Manual Integration:

After

Wrong Peak

12/13/18

(11) Heptachlor Epoxide #2

11.436min 0.388 ug/L

response 10117

(+) = Expected Retention Time

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F023.D
Lab ID: K1811120-003
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/12/2018 20:21
Date Quantitated: 12/13/2018 09:23
Batch ID: KWG1806469
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	15	NA	14		x
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Tetrachloro-m-xylene	51	70	130	ODL
	Methoxychlor	134	70	130	
	Decachlorobiphenyl	67	70	130	
	Toxaphene	139	70	130	
	Toxaphene {1}	242	70	130	MCavg
	Toxaphene {3}	132	70	130	MCavg
	Chlordane {2}	63	70	130	MCavg
Surrogates	Tetrachloro-m-xylene	60	70	130	ODL
	Decachlorobiphenyl	66	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F023.D\1212F023C.D
Lab ID: K1811120-003
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/12/2018 20:21
Date Quantitated: 12/13/2018 09:23
Batch ID: KWG1806469
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	15	NA	14		x
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Tetrachloro-m-xylene	51	70	130	ODL
	Methoxychlor	134	70	130	
	Decachlorobiphenyl	67	70	130	
	Toxaphene {1}	242	70	130	MCavg
	Toxaphene	139	70	130	ODL
	Toxaphene {3}	132	70	130	MCavg
	Chlordane {2}	63	70	130	MCavg
Surrogates	Tetrachloro-m-xylene	60	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F023.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F023.D\1212F023c.d			**Vial:**	18
Acqu Date:	12/12/2018 20:21	**Quant Date:**	12/13/2018 09:23	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1811120-003				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**	11/05/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	K1811120
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
Prep Ref:	1704568	**Prep Date:**	11/27/2018	**Pre-Prep Date:**	11/20/2018

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:	Organochlorine Pesticides	**Report List ID:**	LJ19075
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1711
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05 c	5.34	-0.04 c	660814	2173222	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	-0.10 c	5.34	-0.08 c	660814	2173222	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	-0.10 c	5.34	-0.08 c	660814	2173222	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt	
1	Tetrachloro-m-xylene	8.74	+0.01	7.10	-0.01	43542	107186	3.01	3.01			60	*
						%Recovery =		60 *	60 *	**Limits =**	70-130		
1	Decachlorobiphenyl	18.42		16.87	+0.01	49594	106750	3.31	3.58			72	OK
						%Recovery =		66 *	72 OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-BHC (Lindane)		9.07		0	1850	0.0000	0.0660	0.00010U	0.00010U	0.00010U
1	Heptachlor		9.76	+0.01	0d	8221	0.0000	0.2750	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide		11.43	+0.02	0	8679	0.0000	0.3240	0.00010U	0.00010U	0.00010U
1	Endrin		12.93	-0.01	0	2118	0.0000	0.0860	0.00010U	0.00010U	0.00010U
1	Methoxychlor		14.73	+0.01	0	2388	0.0000	0.2090	0.00010U	0.00010U	0.00010U
2	Toxaphene {1}				0	0d	0.0000	0.0000	0.0020U	0.0020U	
	Toxaphene				0	0	0.0000	0.0000	0.0020U	0.0020U	0.0020U
2	Toxaphene {2}				0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}				0	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}				0d	0d	0.0000	0.0000	0.0020U	0.0020U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F023.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F023.D\1212F023c.d			**Vial:**	18
Acqu Date:	12/12/2018 20:21	**Quant Date:**	12/13/2018 09:23	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1811120-003				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
2	Toxaphene {5}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0	0d	0.0000	0.0000	0.0020U	0.0020U	
3	Chlordane {1}			0	0d	0.0000	0.0000	0.0010U	0.0010U	
	Chlordane			0	0	0.0000	0.0000	0.0010U	0.0010U	0.0010U
3	Chlordane {2}			0d	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0	0d	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st mc 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F023.D Vial: 18
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 8:21 pm Operator: MC
Sample : K1811120-003 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:23:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.010	5.338	660814	2173222	100.000	100.000	
29)	1-Bromo-2...	6.010	5.338	660814	2173222	100.000	100.000	
36)	1-Bromo-2...	6.010	5.338	660814	2173222	100.000	100.000	
43)	1-Bromo-2...	6.010	5.338	660814	2173222	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.737	7.105	43542	107186	3.014	3.010	
28) s	Decachlor...	18.423	16.868	49594	106750	3.308	3.578	
	Target Compounds							
3)	alpha-BHC	9.623f	8.335	1572	2892	0.134	0.095	#
4)	Hexachlor...	0.000	8.118	0	3991	N.D. d	0.095	
5)	beta-BHC	10.893	9.601	1072	4009	0.186	0.267	#
6)	gamma-BHC...	0.000	9.071	0	1850	N.D.	0.066	#
7)	delta-BHC	11.367	10.141	1577	3634	0.151	0.136	
8)	Heptachlor	0.000	9.758	0	8221	N.D. d	0.275	
9)	Aldrin	12.050f	10.381f	1688	5386	0.148	0.192	#
10)	Isodrin	12.517	11.088f	1213	26604	0.127	1.091	#
11)	Heptachlo...	0.000	11.431	0	8679	N.D.	0.324	#
12)	gamma-Chl...	13.260	11.811	1359	1945	0.129	0.074	#
13)	Endosulfan I	0.000	12.031	0	859	N.D.	0.035	#
14)	alpha-Chl...	0.000	12.001	0	1025	N.D.	0.039	#
15)	Dieldrin	0.000	12.448f	0	761	N.D.	0.030	#
16)	4,4'-DDE	0.000	12.351	0	743	N.D.	0.027	#
17)	Endrin	0.000	12.928f	0	2118	N.D.	0.086	#
18)	Endosulfa...	14.597	13.375	2305	7054	0.120	0.308	#
19)	4,4'-DDD	0.000	13.191f	0	3619	N.D.	0.181	#
21)	Endosulfa...	0.000	14.038f	0	2820	N.D.	0.123	#
22)	4,4'-DDT	14.920	13.655	1114	4531	0.160	0.138	
24)	Methoxychlor	0.000	14.735	0	2388	N.D.	0.209	#
25)	2,4'-DDE	13.090	11.945	1644	1023	0.248	0.058	#
27)	2,4'-DDT	14.273f	13.111	5205	971	0.873	0.053	#
44)	Chlorpyrifos	11.903f	10.728	1870	4183	0.428	0.294	#
45)	Oxychlordane	12.667	11.195	1327	1003	0.151	0.036	#
47)	trans-Non...	0.000	11.898	0	3437	N.D.	0.119	#
48)	Mirex	0.000	15.205	0	10177	N.D.	0.398	#
49)	HCE	0.000	3.345	0	2028	N.D.	0.049	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

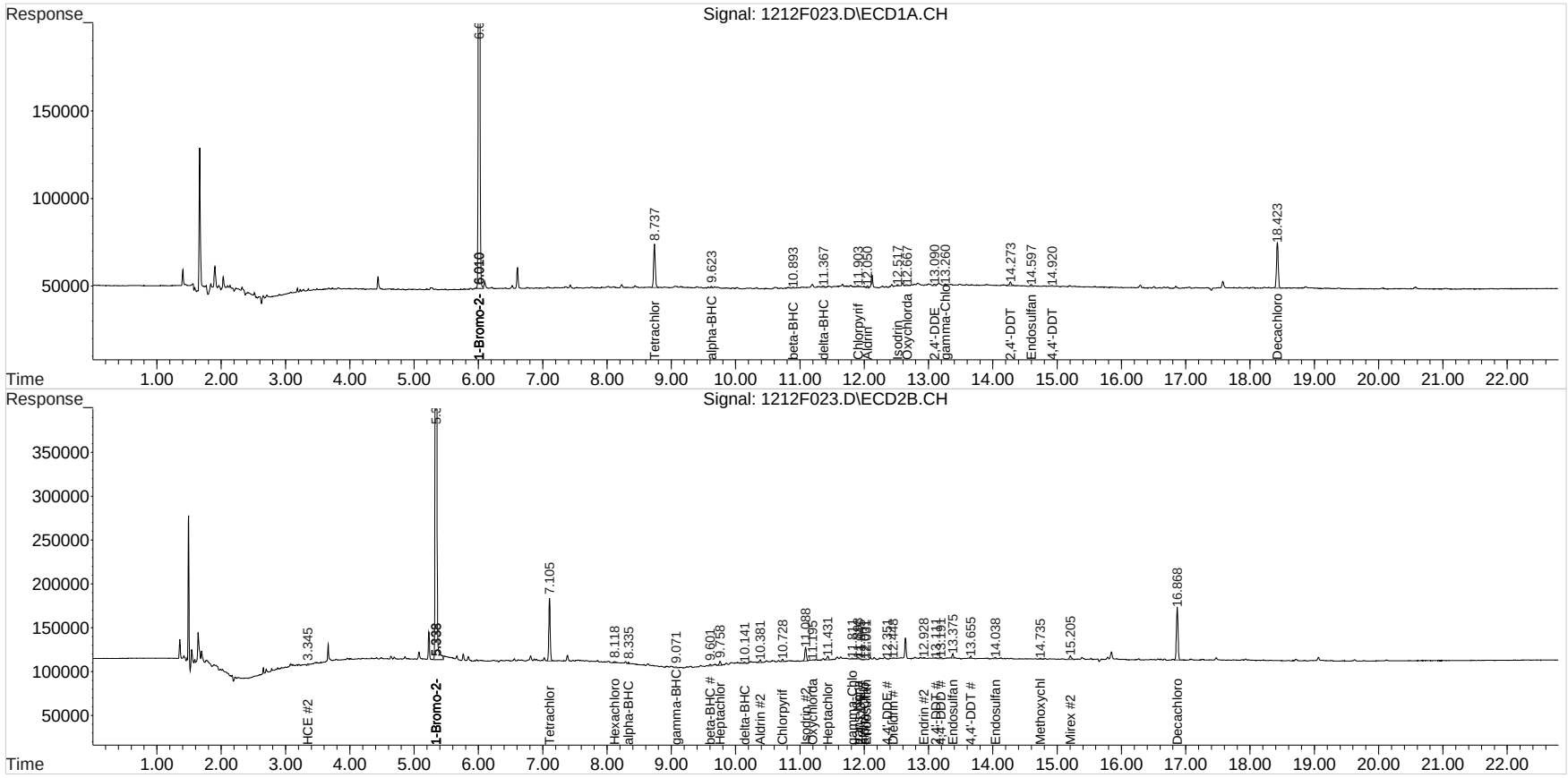
1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F023.D Vial: 18
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 8:21 pm Operator: MC
Sample : K1811120-003 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:23:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020126

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F024.D
Lab ID: K1811120-004
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/12/2018 20:50
Date Quantitated: 12/13/2018 09:25
Batch ID: KWG1806469
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	17	NA	14		x
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Tetrachloro-m-xylene	51	70	130	ODL
	Methoxychlor	134	70	130	ODL
	Decachlorobiphenyl	67	70	130	ODL
	Toxaphene	139	70	130	ODL
	Toxaphene {1}	242	70	130	MCavg
	Toxaphene {3}	132	70	130	MCavg
	Chlordane {2}	63	70	130	MCavg
Surrogates	Tetrachloro-m-xylene	64	70	130	ODL
	Decachlorobiphenyl	65	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F024.D\1212F024C.D
Lab ID: K1811120-004
RunType: SMPL
Matrix: SOIL

Date Acquired: 12/12/2018 20:50
Date Quantitated: 12/13/2018 09:25
Batch ID: KWG1806469
Analysis Method: 8081B
ListJoinID: LJ19075

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	17	NA	14		x
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Tetrachloro-m-xylene	51	70	130	ODL
	Methoxychlor	134	70	130	ODL
	Decachlorobiphenyl	67	70	130	ODL
	Toxaphene {1}	242	70	130	MCavg
	Toxaphene	139	70	130	ODL
	Toxaphene {3}	132	70	130	MCavg
	Chlordane {2}	63	70	130	MCavg
Surrogates	Tetrachloro-m-xylene	61	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F024.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F024.D\1212F024c.d			**Vial:**	19
Acqu Date:	12/12/2018 20:50	**Quant Date:**	12/13/2018 09:25	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1811120-004				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**	11/03/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	K1811120
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
Prep Ref:	1704565	**Prep Date:**	11/27/2018	**Pre-Prep Date:**	11/20/2018

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:	Organochlorine Pesticides	**Report List ID:**	LJ19075
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1711
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05 c	5.34	-0.04 c	653916	2192595	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	-0.10 c	5.34	-0.08 c	653916	2192595	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	-0.10 c	5.34	-0.08 c	653916	2192595	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt	
1	Tetrachloro-m-xylene	8.74	+0.01	7.10	-0.01	45444	109481	3.20	3.05			64	*
							%Recovery =	64 *	61 *	Limits =	70-130		
1	Decachlorobiphenyl	18.42		16.86		48542	104608	3.27	3.48			70	OK
							%Recovery =	65 *	70 OK	Limits =	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-BHC (Lindane)			9.07		0	1228	0.0000	0.0440	0.00010U	0.00010U	0.00010U
1	Heptachlor	11.45	+0.01	9.76	+0.01	3006	7547	0.1320	0.2500	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide			11.43	+0.02	0	8264	0.0000	0.3060	0.00010U	0.00010U	0.00010U
1	Endrin	14.17	+0.03	12.92	-0.02	1099	2193	0.1100	0.0880	0.00010U	0.00010U	0.00010U
1	Methoxychlor			14.73	+0.01	0	1551	0.0000	0.1340	0.00010U	0.00010U	0.00010U
2	Toxaphene {1}					0	0d	0.0000	0.0000	0.0020U	0.0020U	
	Toxaphene					0	0	0.0000	0.0000	0.0020U	0.0020U	0.0020U
2	Toxaphene {2}					0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}					0	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}					0	0	0.0000	0.0000	0.0020U	0.0020U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F024.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F024.D\1212F024c.d			**Vial:**	19
Acqu Date:	12/12/2018 20:50	**Quant Date:**	12/13/2018 09:25	**Dilution:**	1.0
Run Type:	SMPL	**ListJoinID:**	LJ19075	**Soln Conc. Units:**	ug/L
Lab ID:	K1811120-004				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
2	Toxaphene {5}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0	0d	0.0000	0.0000	0.0020U	0.0020U	
3	Chlordane {1}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
	Chlordane			0	0	0.0000	0.0000	0.0010U	0.0010U	0.0010U
3	Chlordane {2}			0d	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0d	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0	0d	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F024.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 8:50 pm Operator: MC
Sample : K1811120-004 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:25:39 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.010	5.342	653916	2192595	100.000	100.000	
29)	1-Bromo-2...	6.010	5.342	653916	2192595	100.000	100.000	
36)	1-Bromo-2...	6.010	5.342	653916	2192595	100.000	100.000	
43)	1-Bromo-2...	6.010	5.342	653916	2192595	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.737	7.105	45444	109481	3.195	3.047	
28) s	Decachlor...	18.420	16.865	48542	104608	3.271	3.475	
	Target Compounds							
3)	alpha-BHC	0.000	8.345	0	1675	N.D.	0.055	#
4)	Hexachlor...	9.720f	8.112	3083	3571	0.013	0.084	#
5)	beta-BHC	10.900f	9.608	3206	4638	0.562	0.306	#
6)	gamma-BHC...	0.000	9.075	0	1228	N.D.	0.044	#
7)	delta-BHC	0.000	10.138	0	871	N.D.	0.032	#
8)	Heptachlor	11.450	9.758	3006	7547	0.132	0.250	#
9)	Aldrin	0.000	10.312f	0	1448	N.D.	0.051	#
10)	Isodrin	12.520	11.178f	1018	1175	0.108	0.048	#
11)	Heptachlo...	0.000	11.432	0	8264	N.D.	0.306	#
12)	gamma-Chl...	0.000	11.848	0	881	N.D. d	0.033	
13)	Endosulfan I	0.000	12.032	0	2066	N.D. d	0.083	
14)	alpha-Chl...	0.000	11.952f	0	801	N.D. d	0.030	
15)	Dieldrin	0.000	12.462	0	5807	N.D.	0.230	#
16)	4,4'-DDE	13.577f	0.000	1426	0	0.121	N.D.	d#
17)	Endrin	14.170	12.922f	1099	2193	0.110	0.088	
18)	Endosulfa...	0.000	13.375	0	1513	N.D. d	0.065	
19)	4,4'-DDD	0.000	13.182f	0	5072	N.D. d	0.251	
20)	Endrin Al...	0.000	13.698f	0	1307	N.D.	0.062	#
21)	Endosulfa...	0.000	14.038f	0	11279	N.D.	0.488	#
22)	4,4'-DDT	0.000	13.655	0	2288	N.D.	0.015	#
24)	Methoxychlor	0.000	14.735	0	1551	N.D.	0.134	#
25)	2,4'-DDE	0.000	11.952	0	801	N.D. d	0.045	
26)	2,4'-DDD	0.000	12.752f	0	946	N.D.	0.061	#
27)	2,4'-DDT	0.000	13.115	0	894	N.D.	0.048	#
44)	Chlorpyrifos	11.907f	10.728	3613	1971	0.836	0.137	#
45)	Oxychlordane	12.660f	11.178	3127	1175	0.358	0.042	#
46)	cis-Nonac...	14.420	13.042	3252	2777	0.328	0.089	#
47)	trans-Non...	0.000	11.895	0	2296	N.D.	0.078	#
48)	Mirex	0.000	15.205	0	7833	N.D.	0.303	#
49)	HCE	3.970f	3.345	20013	3749	1.407	0.091	#
50)	HCBD	4.770	3.892	3582	2742	0.302	0.081	#
52)	Perthane	0.000	12.752	0	946	N.D.	1.248	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

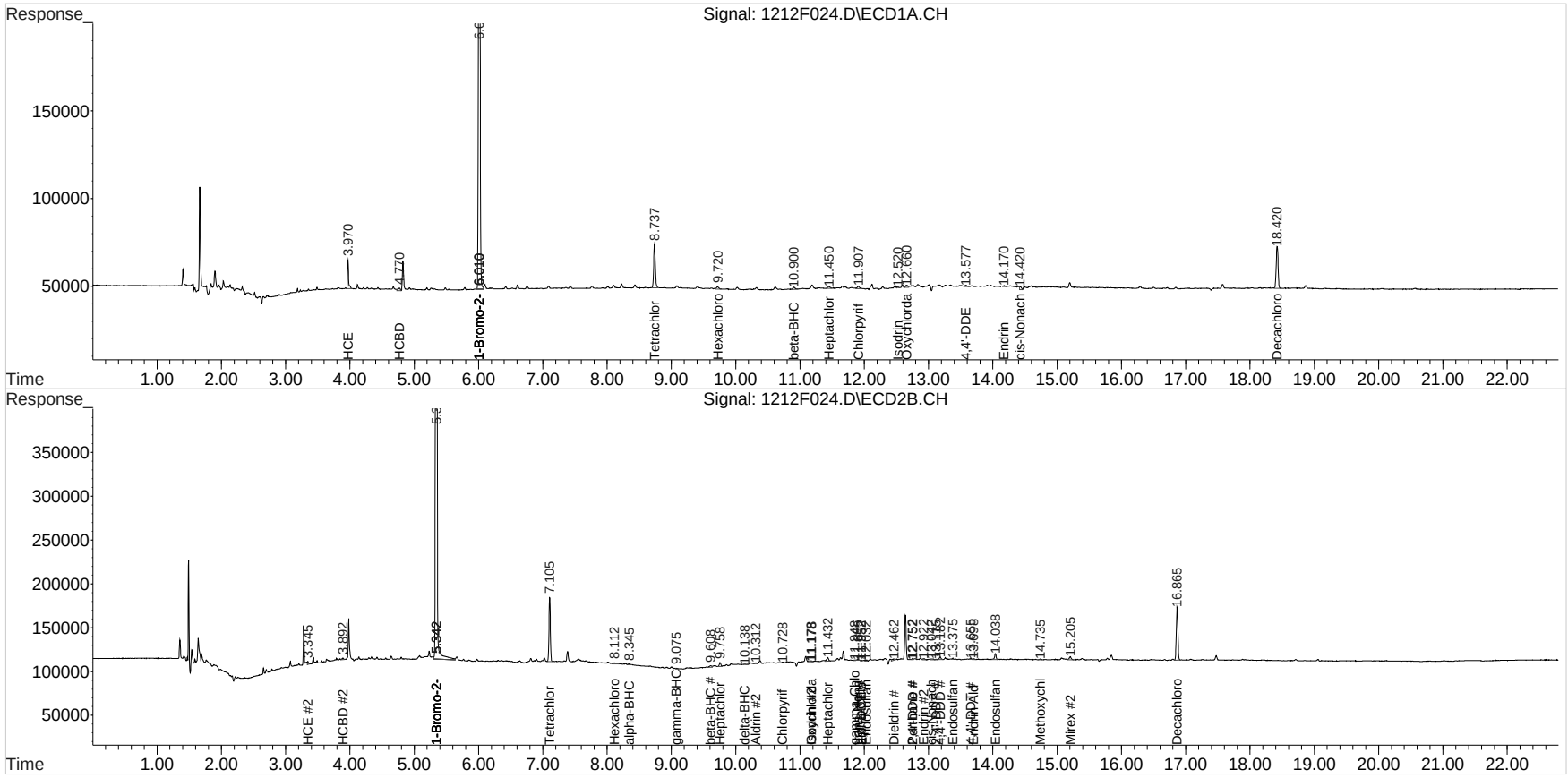
1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F024.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 8:50 pm Operator: MC
Sample : K1811120-004 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:25:39 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020132

1st MC 12/12/18
2nd TP 12/13/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F008.D
Lab ID: KWG1806145-7
RunType: SRM
Matrix: SOIL

Date Acquired: 12/12/2018 12:57
Date Quantitated: 12/12/2018 17:09
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	2,4'-DDE	27.0	NA	20	ICVOK
	2,4'-DDT	20.4	NA	20	ICVOK
Surrogates	Tetrachloro-m-xylene	67	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/12/18
2nd TP 12/13/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F008.D\1212F008C.D
Lab ID: KWG1806145-7
RunType: SRM
Matrix: SOIL

Date Acquired: 12/12/2018 12:57
Date Quantitated: 12/12/2018 17:09
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Tetrachloro-m-xylene	62	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F008.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F008.D\1212F008c.d			**Vial:**	6
Acqu Date:	12/12/2018 12:57	**Quant Date:**	12/12/2018 17:09	**Dilution:**	1.0
Run Type:	SRM	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
		Prep Date:	11/27/2018	**Pre-Prep Date:**	11/20/2018
Prep Ref:	1704575				

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.02	-0.04 c	5.34	-0.04 c	572816	2100947	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.02	-0.09 c	5.34	-0.08 c	572816	2100947	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.02	-0.09 c	5.34	-0.08 c	572816	2100947	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.02	c	5.34	c	572816	2100947	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt	
1	Tetrachloro-m-xylene	8.74	+0.01	7.11		41770	107199	3.37	3.11			67	*
						%Recovery =		67 *	62 *	**Limits =**	70-130		
1	Decachlorobiphenyl	18.43	+0.01	16.87	+0.01	53877	120915	4.15	4.19			84	OK
						%Recovery =		83 OK	84 OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC					0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Hexachlorobenzene			8.11		0	1509	0.0000	0.0370	0.00010U	0.00010U	0.00010U
1	beta-BHC					0	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	gamma-BHC (Lindane)			9.06	-0.01	0	822	0.0000	0.0300	0.00010U	0.00010U	0.00010U
1	delta-BHC					0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor			9.76	+0.01	0	19886	0.0000	0.6880	0.00010U	0.00010U	0.00010U
1	Aldrin			10.33		0	1110	0.0000	0.0410	0.00010U	0.00010U	0.00010U
1	Isodrin			11.18	+0.06	0	843	0.0000	0.0360	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide					0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F008.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F008.D\1212F008c.d			**Vial:**	6
Acqu Date:	12/12/2018 12:57	**Quant Date:**	12/12/2018 17:09	**Dilution:**	1.0
Run Type:	SRM	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan I			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	alpha-Chlordane			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Dieldrin			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDE			0	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan II			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDD		13.18 -0.03	0d	1260	0.0000	0.0650	0.00010U	0.00010U	0.00010U
1	Endrin Aldehyde			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan Sulfate		14.03 -0.03	0	1914	0.0000	0.0860	0.00010U	0.00010U	0.00010U
1	4,4'-DDT			0	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Ketone			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Methoxychlor			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDE			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT		13.09	0	834	0.0000	0.0470	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	0.0000	0.0000	0.00200U	0.00200U	0.00200U
2	Toxaphene {1}			0	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}			0	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {5}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0	0d	0.0000	0.0000	0.0020U	0.0020U	
	Chlordane			0	0	0.0000	0.0000	0.00100U	0.00100U	0.00100U
3	Chlordane {1}			0	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {2}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0	0	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/12/18
2nd TP 12/13/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F008.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F008.D\1212F008c.d			**Vial:**	6
Acqu Date:	12/12/2018 12:57	**Quant Date:**	12/12/2018 17:09	**Dilution:**	1.0
Run Type:	SRM	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
		Prep Date:	11/27/2018	**Pre-Prep Date:**	11/20/2018
Prep Ref:	1704575				

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1778
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.02 -0.04 c	5.34 -0.04 c	572816	2100947	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.02 -0.09 c	5.34 -0.08 c	572816	2100947	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.02 -0.09 c	5.34 -0.08 c	572816	2100947	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.02 c	5.34 c	572816	2100947	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.74 +0.01	7.11	41770	107199	3.37	3.11			67 *
				%Recovery =		67 *	62 *	**Limits =**	70-130	ODL
1	Decachlorobiphenyl	18.43 +0.01	16.87 +0.01	53877	120915	4.15	4.19			84 OK
				%Recovery =		83 OK	84 OK	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Hexachlorobenzene		8.11	0	1509	0.0000	0.0370	0.100U	0.100U	0.100U
1	beta-BHC			0	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	gamma-BHC (Lindane)		9.06 -0.01	0	822	0.0000	0.0300	0.100U	0.100U	0.100U
1	delta-BHC			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Heptachlor		9.76 +0.01	0	19886	0.0000	0.6880	0.100U	0.100U	0.100U
1	Aldrin		10.33	0	1110	0.0000	0.0410	0.100U	0.100U	0.100U
1	Isodrin		11.18 +0.06	0	843	0.0000	0.0360	0.100U	0.100U	0.100U
1	Heptachlor Epoxide			0	0	0.0000	0.0000	0.100U	0.100U	0.100U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/12/18
2nd TP 12/13/18

Data File #1:	J:\GC23\DATA\121218\1212F008.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F008.D\1212F008c.d			**Vial:**	6
Acqu Date:	12/12/2018 12:57	**Quant Date:**	12/12/2018 17:09	**Dilution:**	1.0
Run Type:	SRM	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-7				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endosulfan I			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	alpha-Chlordane			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Dieldrin			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	4,4'-DDE			0	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endrin			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endosulfan II			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	4,4'-DDD		13.18 -0.03	0**d**	1260	0.0000	0.0650	0.100U	0.100U	0.100U
1	Endrin Aldehyde			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endosulfan Sulfate		14.03 -0.03	0	1914	0.0000	0.0860	0.100U	0.100U	0.100U
1	4,4'-DDT			0	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endrin Ketone			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Methoxychlor			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDE			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDD			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDT		13.09	0	834	0.0000	0.0470	0.100U	0.100U	0.100U
	Toxaphene			0	0	0.0000	0.0000	2.00U	2.00U	2.00U
2	Toxaphene {1}			0	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {2}			0	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {3}			0	0	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {4}			0	0	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {5}			0	0	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {6}			0	0**d**	0.0000	0.0000	2.00U	2.00U	
	Chlordane			0	0	0.0000	0.0000	1.00U	1.00U	1.00U
3	Chlordane {1}			0	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {2}			0	0	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {3}			0	0	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {4}			0	0	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {5}			0	0	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {6}			0	0	0.0000	0.0000	1.00U	1.00U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F008.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 12:57 pm Operator: MC
Sample : KWG1806145-7 LB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 17:09:20 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.015	5.343	572816	2100947	100.000	100.000
29)	1-Bromo-2...	6.015	5.343	572816	2100947	100.000	100.000
36)	1-Bromo-2...	6.015	5.343	572816	2100947	100.000	100.000
43)	1-Bromo-2...	6.015	5.343	572816	2100947	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.742	7.110	41770	107199	3.368	3.114
28) s	Decachlor...	18.425	16.866	53877	120915	4.145	4.192
	Target Compounds						
4)	Hexachlor...	0.000	8.113	0	1509	N.D.	0.037 #
6)	gamma-BHC...	0.000	9.060	0	822	N.D.	0.030 #
8)	Heptachlor	0.000	9.763	0	19886	N.D.	0.688 #
9)	Aldrin	0.000	10.326	0	1110	N.D.	0.041 #
10)	Isodrin	0.000	11.176f	0	843	N.D.	0.036 #
19)	4,4'-DDD	0.000	13.183f	0	1260	N.D. d	0.065
21)	Endosulfa...	0.000	14.030f	0	1914	N.D.	0.086 #
27)	2,4'-DDT	0.000	13.093f	0	834	N.D.	0.047 #
45)	Oxychlordane	0.000	11.176f	0	843	N.D.	0.031 #
46)	cis-Nonac...	0.000	13.093f	0	834	N.D. d	0.028
49)	HCE	3.972f	3.323f	49422	16084	3.965	0.406 #
50)	HCBD	4.772	0.000	1236	0	0.119	N.D. d#
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

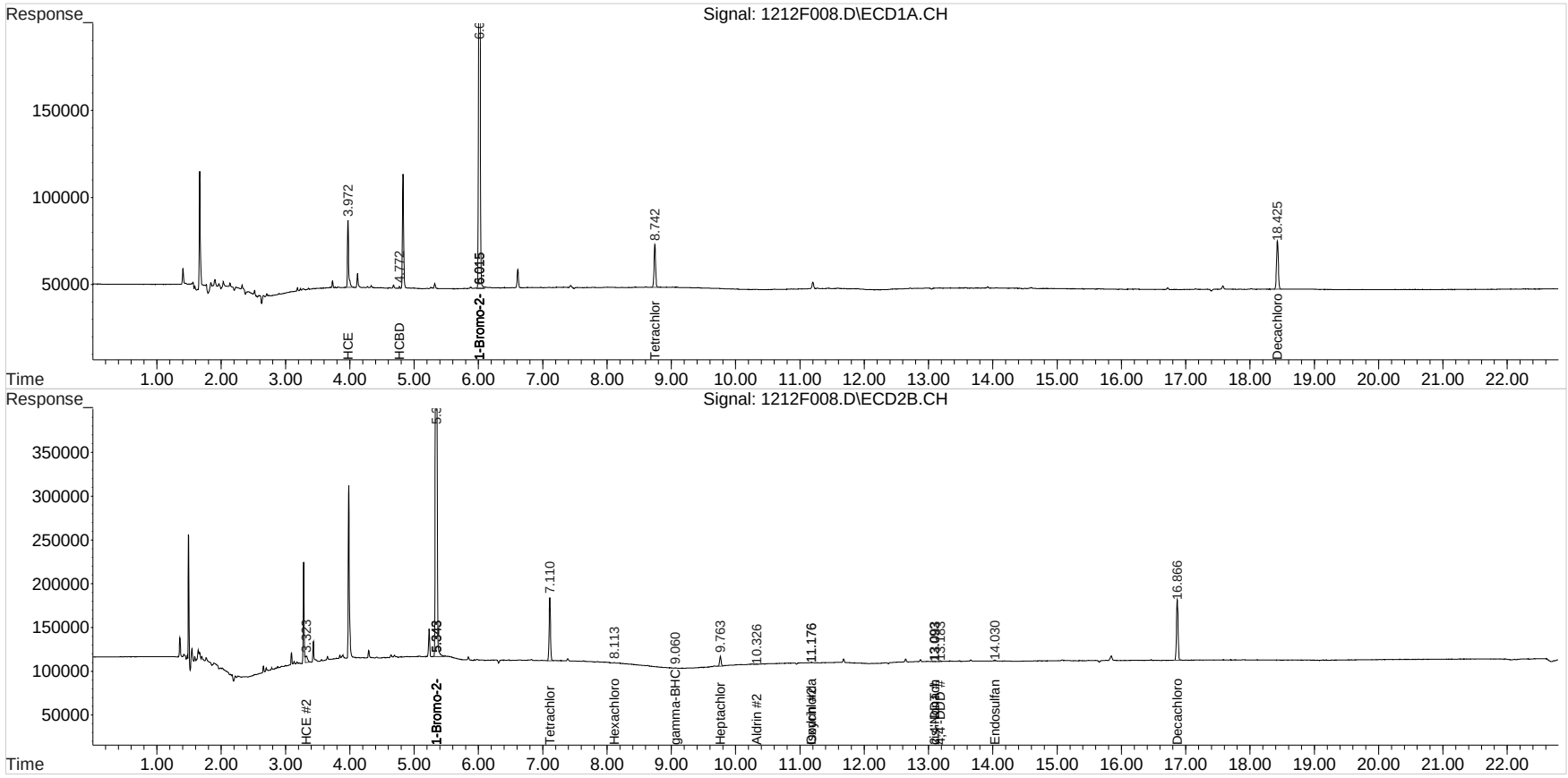
1st MC 12/12/18
2nd TP 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F008.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 12:57 pm Operator: MC
Sample : KWG1806145-7 LB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 17:09:20 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020140

1st MC 12/12/18
2nd TP 12/13/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F009.D
Lab ID: KWG1806145-8
RunType: SRM
Matrix: SOIL

Date Acquired: 12/12/2018 13:26
Date Quantitated: 12/12/2018 13:52
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	2,4'-DDE	27.0	NA	20	ICVOK
	2,4'-DDT	20.4	NA	20	ICVOK
Surrogates	Tetrachloro-m-xylene	62	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/12/18
2nd TP 12/13/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F009.D\1212F009C.D
Lab ID: KWG1806145-8
RunType: SRM
Matrix: SOIL

Date Acquired: 12/12/2018 13:26
Date Quantitated: 12/12/2018 13:52
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Tetrachloro-m-xylene	58	70	130	RO

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F009.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F009.D\1212F009c.d			**Vial:**	7
Acqu Date:	12/12/2018 13:26	**Quant Date:**	12/12/2018 13:52	**Dilution:**	1.0
Run Type:	SRM	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-8				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
		Prep Date:	11/27/2018	**Pre-Prep Date:**	11/20/2018
Prep Ref:	1704576				

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05 c	5.34	-0.04 c	570486	2047436	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	-0.10 c	5.34	-0.08 c	570486	2047436	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	-0.10 c	5.34	-0.08 c	570486	2047436	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.01	c	5.34	c	570486	2047436	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt	
1	Tetrachloro-m-xylene	8.74	+0.01	7.11		38481	97774	3.09	2.92			62	*
						%Recovery =		62 *	58 *	**Limits =**	70-130		
1	Decachlorobiphenyl	18.43	+0.01	16.87	+0.01	52982	116110	4.09	4.13			83	OK
						%Recovery =		82 OK	83 OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			8.37	+0.04	0	741	0.0000	0.0260	0.00010U	0.00010U	0.00010U
1	Hexachlorobenzene			8.11		0**d**	1194	0.0000	0.0300	0.00010U	0.00010U	0.00010U
1	beta-BHC					0	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	gamma-BHC (Lindane)			9.06	-0.01	0	994	0.0000	0.0380	0.00010U	0.00010U	0.00010U
1	delta-BHC			10.11	-0.02	0	1230	0.0000	0.0490	0.00010U	0.00010U	0.00010U
1	Heptachlor			9.76	+0.01	0	19052**m**	0.0000	0.6760	0.00010U	0.00010U	0.00010U
1	Aldrin			10.32	-0.01	0	1104	0.0000	0.0420	0.00010U	0.00010U	0.00010U
1	Isodrin			11.09	-0.03	0	1009	0.0000	0.0440	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide					0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F009.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F009.D\1212F009c.d			**Vial:**	7
Acqu Date:	12/12/2018 13:26	**Quant Date:**	12/12/2018 13:52	**Dilution:**	1.0
Run Type:	SRM	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-8				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan I			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	alpha-Chlordane			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Dieldrin		12.47	0	791	0.0000	0.0330	0.00010U	0.00010U	0.00010U
1	4,4'-DDE			0	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan II	14.60 +0.01	13.35 -0.03	1479	788	0.0510	0.0360	0.00010U	0.00010U	0.00010U
1	4,4'-DDD		13.19 -0.02	0**d**	1218	0.0000	0.0650	0.00010U	0.00010U	0.00010U
1	Endrin Aldehyde			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan Sulfate			0	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDT		13.66 +0.04	0	2977	0.0000	0.0630	0.00010U	0.00010U	0.00010U
1	Endrin Ketone			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Methoxychlor			0	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDE			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT		13.09	0	1171	0.0000	0.0670	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	0.0000	0.0000	0.00200U	0.00200U	0.00200U
2	Toxaphene {1}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {5}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0	0**d**	0.0000	0.0000	0.0020U	0.0020U	
	Chlordane			0	0	0.0000	0.0000	0.00100U	0.00100U	0.00100U
3	Chlordane {1}			0	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {2}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0	0	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/12/18
2nd TP 12/13/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F009.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F009.D\1212F009c.d			**Vial:**	7
Acqu Date:	12/12/2018 13:26	**Quant Date:**	12/12/2018 13:52	**Dilution:**	1.0
Run Type:	SRM	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-8				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
		Prep Date:	11/27/2018	**Pre-Prep Date:**	11/20/2018
Prep Ref:	1704576				

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1778
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05 c	5.34	-0.04 c	570486	2047436	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	-0.10 c	5.34	-0.08 c	570486	2047436	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	-0.10 c	5.34	-0.08 c	570486	2047436	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.01	c	5.34	c	570486	2047436	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.74	+0.01	7.11		38481	97774	3.09	2.92			62 *
						%Recovery =		62 *	58 *	**Limits =**	70-130	ODL
1	Decachlorobiphenyl	18.43	+0.01	16.87	+0.01	52982	116110	4.09	4.13			83 OK
						%Recovery =		82 OK	83 OK	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC		8.37	+0.04	0	741	0.0000	0.0260	0.100U	0.100U	0.100U
1	Hexachlorobenzene		8.11		0d	1194	0.0000	0.0300	0.100U	0.100U	0.100U
1	beta-BHC				0	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	gamma-BHC (Lindane)		9.06	-0.01	0	994	0.0000	0.0380	0.100U	0.100U	0.100U
1	delta-BHC		10.11	-0.02	0	1230	0.0000	0.0490	0.100U	0.100U	0.100U
1	Heptachlor		9.76	+0.01	0	19052m	0.0000	0.6760	0.100U	0.100U	0.100U
1	Aldrin		10.32	-0.01	0	1104	0.0000	0.0420	0.100U	0.100U	0.100U
1	Isodrin		11.09	-0.03	0	1009	0.0000	0.0440	0.100U	0.100U	0.100U
1	Heptachlor Epoxide				0	0	0.0000	0.0000	0.100U	0.100U	0.100U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/12/18
2nd TP 12/13/18

Data File #1:	J:\GC23\DATA\121218\1212F009.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F009.D\1212F009c.d			**Vial:**	7
Acqu Date:	12/12/2018 13:26	**Quant Date:**	12/12/2018 13:52	**Dilution:**	1.0
Run Type:	SRM	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-8				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endosulfan I			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	alpha-Chlordane			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Dieldrin		12.47	0	791	0.0000	0.0330	0.100U	0.100U	0.100U
1	4,4'-DDE			0	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endrin			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endosulfan II	14.60 +0.01	13.35 -0.03	1479	788	0.0510	0.0360	0.100U	0.100U	0.100U
1	4,4'-DDD		13.19 -0.02	0**d**	1218	0.0000	0.0650	0.100U	0.100U	0.100U
1	Endrin Aldehyde			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endosulfan Sulfate			0	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	4,4'-DDT		13.66 +0.04	0	2977	0.0000	0.0630	0.100U	0.100U	0.100U
1	Endrin Ketone			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Methoxychlor			0	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDE			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDD			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDT		13.09	0	1171	0.0000	0.0670	0.100U	0.100U	0.100U
	Toxaphene			0	0	0.0000	0.0000	2.00U	2.00U	2.00U
2	Toxaphene {1}			0	0	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {3}			0	0	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {4}			0	0	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {5}			0	0	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {6}			0	0**d**	0.0000	0.0000	2.00U	2.00U	
	Chlordane			0	0	0.0000	0.0000	1.00U	1.00U	1.00U
3	Chlordane {1}			0	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {2}			0	0	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {3}			0	0	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {4}			0	0	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {5}			0	0	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {6}			0	0	0.0000	0.0000	1.00U	1.00U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F009.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 1:26 pm Operator: MC
Sample : KWG1806145-8 LB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 13:52:29 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.012	5.340	570486	2047436	100.000	100.000
29)	1-Bromo-2...	6.012	5.340	570486	2047436	100.000	100.000
36)	1-Bromo-2...	6.012	5.340	570486	2047436	100.000	100.000
43)	1-Bromo-2...	6.012	5.340	570486	2047436	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.742	7.106	38481	97774	3.092	2.915
28) s	Decachlor...	18.428	16.873	52982	116110	4.093	4.131
	Target Compounds						
3)	alpha-BHC	0.000	8.373f	0	741	N.D.	0.026 #
4)	Hexachlor...	0.000	8.106	0	1194	N.D. d	0.030
6)	gamma-BHC...	0.000	9.063	0	994	N.D.	0.038 #
7)	delta-BHC	0.000	10.110f	0	1230	N.D.	0.049 #
8)	Heptachlor	0.000	9.763	0	19052	N.D.	0.676m#
9)	Aldrin	0.000	10.320	0	1104	N.D.	0.042 #
10)	Isodrin	0.000	11.090f	0	1009	N.D.	0.044 #
15)	Dieldrin	0.000	12.466	0	791	N.D.	0.033 #
18)	Endosulfa...	14.598	13.353f	1479	788	0.051	0.036 #
19)	4,4'-DDD	0.000	13.186f	0	1218	N.D. d	0.065
22)	4,4'-DDT	0.000	13.660	0	2977	N.D.	0.063 #
27)	2,4'-DDT	0.000	13.093f	0	1171	N.D.	0.067 #
46)	cis-Nonac...	0.000	13.093f	0	1171	N.D. d	0.040
49)	HCE	0.000	3.346	0	1051	N.D.	0.027 #
50)	HCBD	0.000	3.856f	0	1291	N.D.	0.041 #
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

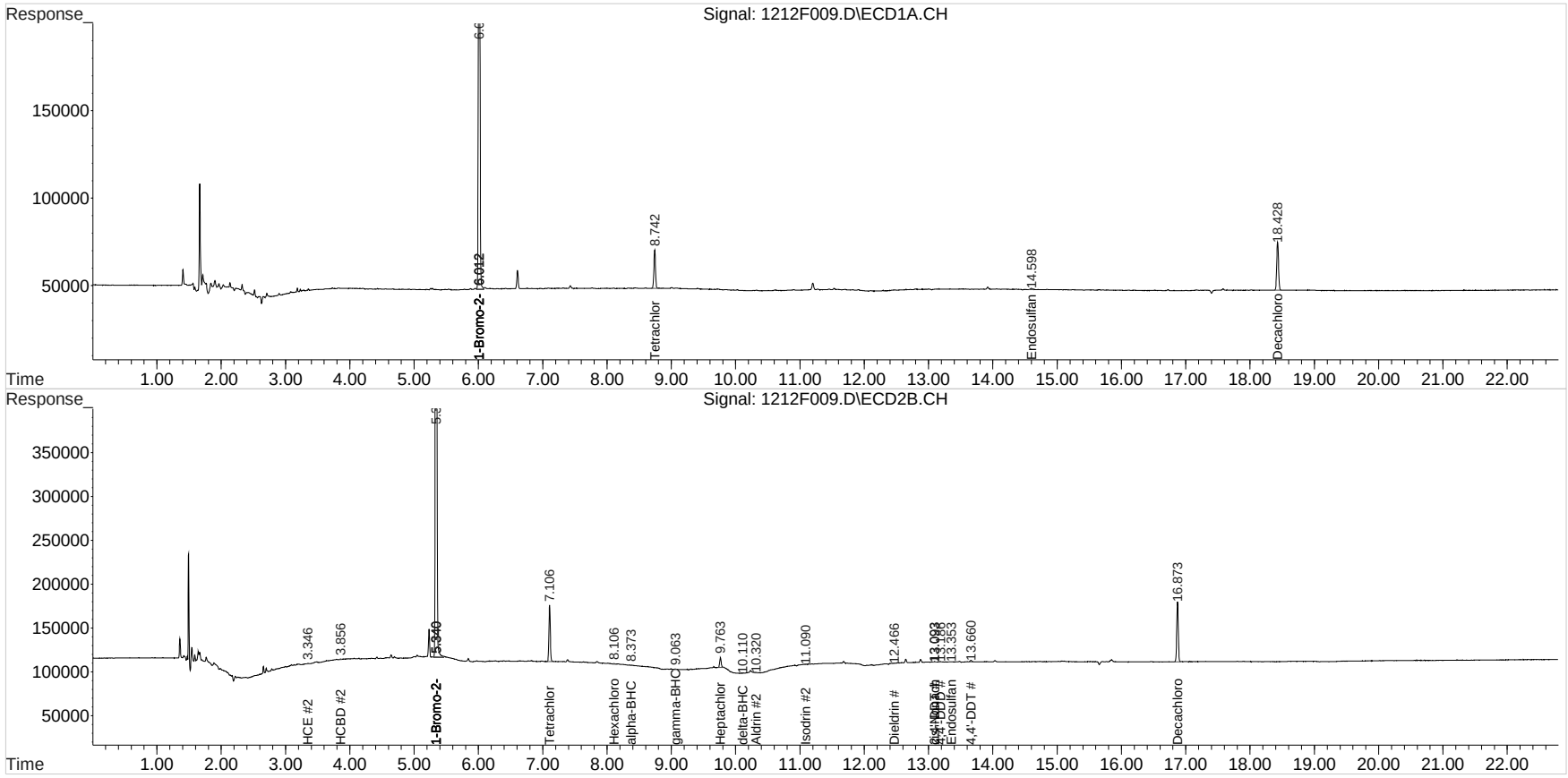
1st MC 12/12/18
2nd TP 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F009.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 1:26 pm Operator: MC
Sample : KWG1806145-8 LB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 13:52:29 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020148

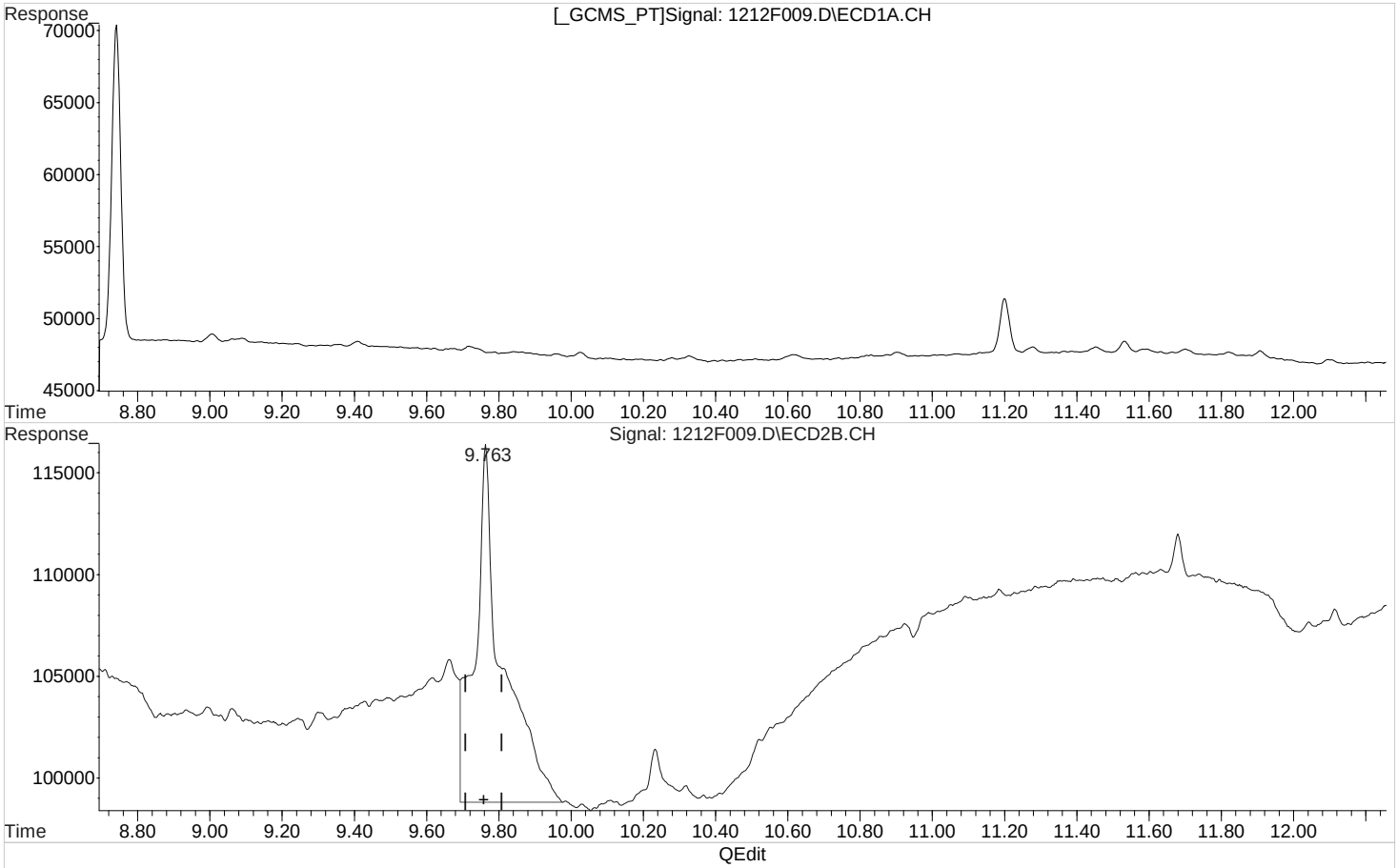
Quantitation Report (Qedit)

1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F009.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 1:26 pm Operator: MC
Sample : KWG1806145-8 LB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 13:50:39 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(8) Heptachlor

0.000min 0.000 ug/L

response 0

Manual Integration:

Before

12/12/18

(8) Heptachlor #2

9.763min 3.282 ug/L

response 92480

(+) = Expected Retention Time

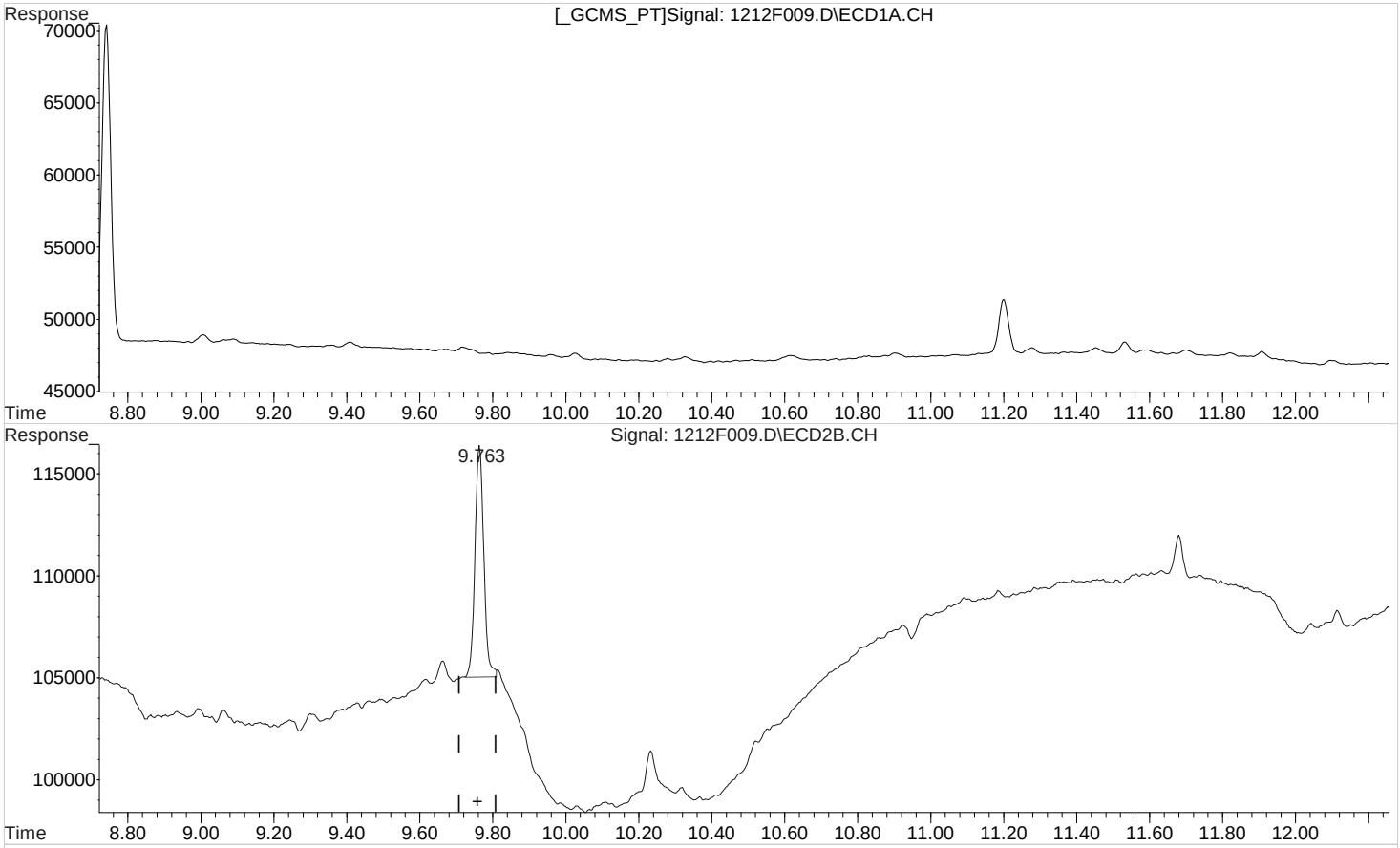
Quantitation Report (Qedit)

1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F009.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 1:26 pm Operator: MC
Sample : KWG1806145-8 LB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 13:50:39 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(8) Heptachlor

0.000min 0.000 ug/L

response 0

Manual Integration:

After

Baseline/Shoulder

12/12/18

(8) Heptachlor #2

9.763min 0.676 ug/L m

response 19052

(+) = Expected Retention Time

1st MC 12/12/18
2nd TP 12/13/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F010.D
Lab ID: KWG1806145-9
RunType: MB
Matrix: SOIL

Date Acquired: 12/12/2018 13:56
Date Quantitated: 12/12/2018 14:22
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	2,4'-DDE	27.0	NA	20	ICVOK
	2,4'-DDT	20.4	NA	20	ICVOK
Surrogates	Tetrachloro-m-xylene	59	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/12/18
2nd TP 12/13/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F010.D\1212F010C.D
Lab ID: KWG1806145-9
RunType: MB
Matrix: SOIL

Date Acquired: 12/12/2018 13:56
Date Quantitated: 12/12/2018 14:22
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Tetrachloro-m-xylene	55	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F010.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F010.D\1212F010c.d			**Vial:**	8
Acqu Date:	12/12/2018 13:56	**Quant Date:**	12/12/2018 14:22	**Dilution:**	1.0
Run Type:	MB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
		Prep Date:	11/27/2018	**Pre-Prep Date:**	11/20/2018
Prep Ref:	1704577				

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.02	-0.04 c	5.35	-0.03 c	569592	2019086	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.02	-0.09 c	5.35	-0.07 c	569592	2019086	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.02	-0.09 c	5.35	-0.07 c	569592	2019086	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.02	c	5.35	c	569592	2019086	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt	
1	Tetrachloro-m-xylene	8.75	+0.02	7.11		36971	91552	2.96	2.77			59	*
						%Recovery =		59 *	55 *	**Limits =**	70-130		
1	Decachlorobiphenyl	18.43	+0.01	16.87	+0.01	48244	105854	3.73	3.82			76	OK
						%Recovery =		75 OK	76 OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Hexachlorobenzene			0d	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	beta-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	delta-BHC			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor		9.77 +0.02	0d	7138	0.0000	0.2570	0.00010U	0.00010U	0.00010U
1	Aldrin		10.32 -0.01	0	1593	0.0000	0.0610	0.00010U	0.00010U	0.00010U
1	Isodrin		11.10 -0.02	0	1662	0.0000	0.0730	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F010.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F010.D\1212F010c.d			**Vial:**	8
Acqu Date:	12/12/2018 13:56	**Quant Date:**	12/12/2018 14:22	**Dilution:**	1.0
Run Type:	MB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane		11.86 +0.04	0	1005	0.0000	0.0410	0.00010U	0.00010U	0.00010U
1	Endosulfan I			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	alpha-Chlordane			0d	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Dieldrin			0	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDE			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin		12.92 -0.02	0d	838	0.0000	0.0360	0.00010U	0.00010U	0.00010U
1	Endosulfan II			0d	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDD		13.18 -0.03	0	1275	0.0000	0.0680	0.00010U	0.00010U	0.00010U
1	Endrin Aldehyde		13.79 +0.06	0d	1665	0.0000	0.0860	0.00010U	0.00010U	0.00010U
1	Endosulfan Sulfate	15.26 +0.02	14.03 -0.03	1596	3152	0.1930	0.1480	0.00010U	0.00010U	0.00010U
1	4,4'-DDT			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Ketone			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Methoxychlor			0d	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDE			0	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD		12.75	0d	813	0.0000	0.0570	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0d	0	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	0.0000	0.0000	0.00200U	0.00200U	0.00200U
2	Toxaphene {1}			0	0	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {5}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
	Chlordane			0	0	0.0000	0.0000	0.00100U	0.00100U	0.00100U
3	Chlordane {1}			0	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {2}			0d	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0	0d	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0d	0	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0d	0	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/12/18
2nd TP 12/13/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F010.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F010.D\1212F010c.d			**Vial:**	8
Acqu Date:	12/12/2018 13:56	**Quant Date:**	12/12/2018 14:22	**Dilution:**	1.0
Run Type:	MB	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
		Prep Date:	11/27/2018	**Pre-Prep Date:**	11/20/2018
Prep Ref:	1704577				

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:		**Method ID:**	MJ1778
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.02	-0.04 c	5.35	-0.03 c	569592	2019086	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.02	-0.09 c	5.35	-0.07 c	569592	2019086	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.02	-0.09 c	5.35	-0.07 c	569592	2019086	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.02	c	5.35	c	569592	2019086	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.75	+0.02	7.11		36971	91552	2.96	2.77			59 *
						%Recovery =		59 *	55 *	**Limits =**	70-130	
1	Decachlorobiphenyl	18.43	+0.01	16.87	+0.01	48244	105854	3.73	3.82			76 OK
						%Recovery =		75 OK	76 OK	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC				0	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Hexachlorobenzene				0d	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	beta-BHC				0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	gamma-BHC (Lindane)				0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	delta-BHC				0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Heptachlor		9.77	+0.02	0d	7138	0.0000	0.2570	0.100U	0.100U	0.100U
1	Aldrin		10.32	-0.01	0	1593	0.0000	0.0610	0.100U	0.100U	0.100U
1	Isodrin		11.10	-0.02	0	1662	0.0000	0.0730	0.100U	0.100U	0.100U
1	Heptachlor Epoxide				0	0	0.0000	0.0000	0.100U	0.100U	0.100U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/12/18
2nd TP 12/13/18

Data File #1:	J:\GC23\DATA\121218\1212F010.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F010.D\1212F010c.d			**Vial:**	8
Acqu Date:	12/12/2018 13:56	**Quant Date:**	12/12/2018 14:22	**Dilution:**	1.0
Run Type:	MB	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-9				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane		11.86 +0.04	0	1005	0.0000	0.0410	0.100U	0.100U	0.100U
1	Endosulfan I			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	alpha-Chlordane			0d	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Dieldrin			0	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	4,4'-DDE			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endrin		12.92 -0.02	0d	838	0.0000	0.0360	0.100U	0.100U	0.100U
1	Endosulfan II			0d	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	4,4'-DDD		13.18 -0.03	0	1275	0.0000	0.0680	0.100U	0.100U	0.100U
1	Endrin Aldehyde		13.79 +0.06	0d	1665	0.0000	0.0860	0.100U	0.100U	0.100U
1	Endosulfan Sulfate	15.26 +0.02	14.03 -0.03	1596	3152	0.1930	0.1480	0.100U	0.100U	0.100U
1	4,4'-DDT			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endrin Ketone			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	Methoxychlor			0d	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDE			0	0	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDD		12.75	0d	813	0.0000	0.0570	0.100U	0.100U	0.100U
1	2,4'-DDT			0d	0	0.0000	0.0000	0.100U	0.100U	0.100U
	Toxaphene			0	0	0.0000	0.0000	2.00U	2.00U	2.00U
2	Toxaphene {1}			0	0	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {2}			0d	0d	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {3}			0d	0d	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {4}			0d	0d	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {5}			0d	0d	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {6}			0d	0d	0.0000	0.0000	2.00U	2.00U	
	Chlordane			0	0	0.0000	0.0000	1.00U	1.00U	1.00U
3	Chlordane {1}			0	0d	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {2}			0d	0	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {3}			0	0d	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {4}			0	0d	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {5}			0d	0	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {6}			0d	0	0.0000	0.0000	1.00U	1.00U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F010.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 1:56 pm Operator: MC
Sample : KWG1806145-9 MB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 14:22:59 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.018	5.346	569592	2019086	100.000	100.000	
29)	1-Bromo-2...	6.018	5.346	569592	2019086	100.000	100.000	
36)	1-Bromo-2...	6.018	5.346	569592	2019086	100.000	100.000	
43)	1-Bromo-2...	6.018	5.346	569592	2019086	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.748	7.113	36971	91552	2.964	2.767	
28) s	Decachlor...	18.431	16.873	48244	105854	3.733	3.819	
	Target Compounds							
8)	Heptachlor	0.000	9.766	0	7138	N.D. d	0.257	
9)	Aldrin	0.000	10.323	0	1593	N.D.	0.061	#
10)	Isodrin	0.000	11.099f	0	1662	N.D.	0.073	#
12)	gamma-Chl...	0.000	11.856	0	1005	N.D.	0.041	#
17)	Endrin	0.000	12.923f	0	838	N.D. d	0.036	
19)	4,4'-DDD	0.000	13.183f	0	1275	N.D.	0.068	#
20)	Endrin Al...	0.000	13.786f	0	1665	N.D. d	0.086	
21)	Endosulfa...	15.261	14.033f	1596	3152	0.193	0.148	
26)	2,4'-DDD	0.000	12.753f	0	813	N.D. d	0.057	
45)	Oxychlordane	12.655f	0.000	2195	0	0.289	N.D.	#
47)	trans-Non...	0.000	11.856	0	1005	N.D. d	0.037	
52)	Perthane	0.000	12.753	0	813	N.D. d	1.165	
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

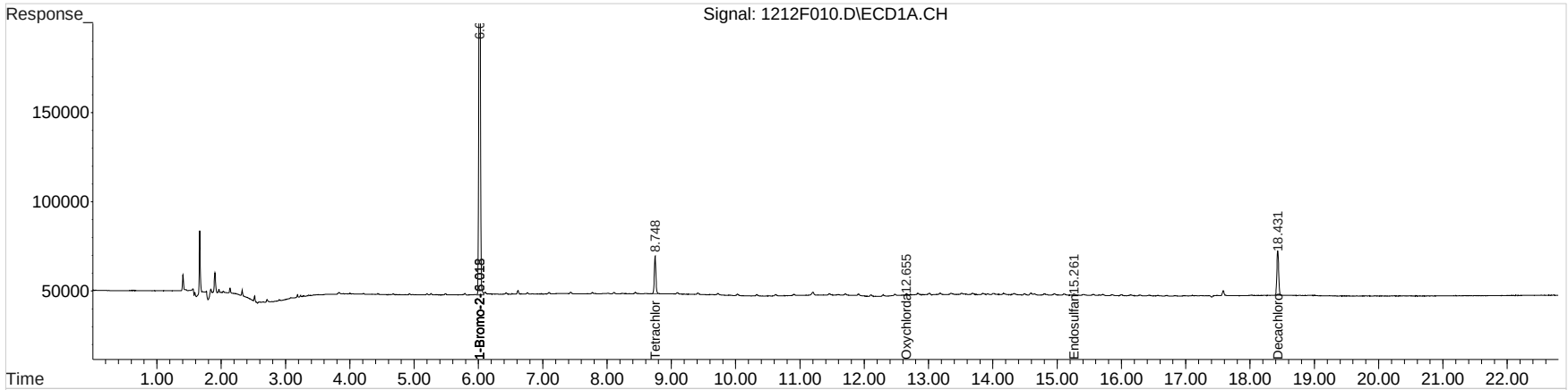
1st MC 12/12/18
2nd TP 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F010.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 1:56 pm Operator: MC
Sample : KWG1806145-9 MB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 14:22:59 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F018.D
Lab ID: KWG1806145-1 -- K1811120-001MS
RunType: MS
Matrix: SOIL

Date Acquired: 12/12/2018 17:53
Date Quantitated: 12/13/2018 09:08
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	2,4'-DDE	27.0	NA	20	ICVOK
	2,4'-DDT	20.4	NA	20	ICVOK
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	523283	2093132	NR
	1-Bromo-2-nitrobenzene {3}	0	)284.071428	21136.28571	NR
Surrogates	Tetrachloro-m-xylene	58	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F018.D\1212F018C.D
Lab ID: KWG1806145-1 -- K1811120-001MS
RunType: MS
Matrix: SOIL

Date Acquired: 12/12/2018 17:53
Date Quantitated: 12/13/2018 09:08
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	17017.33333	58069.33333	NR
	1-Bromo-2-nitrobenzene {3}	0	12049.14285	48196.57142	NR
Surrogates	Tetrachloro-m-xylene	58	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F018.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F018.D\1212F018c.d			**Vial:**	13
Acqu Date:	12/12/2018 17:53	**Quant Date:**	12/13/2018 09:08	**Dilution:**	1.0
Run Type:	MS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-1 -- K1811120-001MS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/12/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
Prep Ref:	1704569	**Prep Date:**	11/27/2018	**Pre-Prep Date:**	11/20/2018

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.02	-0.04	5.34	-0.04	585194	2014703	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt	
1	Tetrachloro-m-xylene	8.75	+0.02	7.11		37241	96252	2.90	2.92			58	*
						%Recovery =		58 *	58 *	**Limits =**	70-130		
1	Decachlorobiphenyl	18.43	+0.01	16.87	+0.01	49136	108543	3.70	3.92			78	OK
						%Recovery =		74 OK	78 OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC	9.59	+0.01	8.33		65556	176970	6.31	6.28	0.000316	0.000314	**0.000314**
1	Hexachlorobenzene	9.75	+0.02	8.12	+0.01	45228	114231	3.03	2.93	0.000151	0.000146	**0.000146**
1	beta-BHC	10.87	+0.02	9.61		33499	84623	6.57	6.08	0.000328	0.000304	**0.000304**
1	gamma-BHC (Lindane)	10.26	+0.01	9.07		59542	165450	6.68	6.39	0.000334	0.000320	**0.000320**
1	delta-BHC	11.37	+0.02	10.14	+0.01	59846	163050	6.48	6.58	0.000324	0.000329	**0.000324**
1	Heptachlor	11.45	+0.01	9.75		47373	158455	5.81	5.71	0.000291	0.000286	**0.000286**
1	Aldrin	12.00	+0.01	10.34	+0.01	49355	127174	4.88	4.89	0.000244	0.000244	**0.000244**
1	Isodrin	12.53	+0.01	11.13	+0.01	36730	96295	4.34	4.26	0.000217	0.000213	**0.000213**
1	Heptachlor Epoxide	12.73	+0.02	11.42	+0.01	56376	153819	6.15	6.19	0.000307	0.000310	**0.000307**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F018.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F018.D\1212F018c.d			**Vial:**	13
Acqu Date:	12/12/2018 17:53	**Quant Date:**	12/13/2018 09:08	**Dilution:**	1.0
Run Type:	MS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-1 -- K1811120-001MS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane	13.24 +0.01	11.83 +0.01	60123	158821	6.45	6.52	0.000322	0.000326	**0.000322**
1	Endosulfan I	13.37 +0.02	12.04 +0.01	50153	130652	5.37	5.74	0.000268	0.000287	**0.000268**
1	alpha-Chlordane	13.32 +0.02	11.97	62561	160073	6.24	6.53	0.000312	0.000326	**0.000312**
1	Dieldrin	13.79 +0.02	12.48 +0.01	57145	148126	6.01	6.37	0.000301	0.000319	**0.000301**
1	4,4'-DDE	13.60 +0.02	12.33	64634	156047	6.13	6.22	0.000307	0.000311	**0.000307**
1	Endrin	14.15 +0.01	12.95 +0.01	54957	155761	6.16	6.80	0.000308	0.000340	**0.000308**
1	Endosulfan II	14.60 +0.01	13.38	50600	131151	6.81	6.17	0.000341	0.000309	**0.000309**
1	4,4'-DDD	14.43 +0.01	13.22 +0.01	47522	125014	6.66	6.73	0.000333	0.000337	**0.000333**
1	Endrin Aldehyde	14.78 +0.01	13.74 +0.01	49015	124187	6.08	6.42	0.000304	0.000321	**0.000304**
1	Endosulfan Sulfate	15.25 +0.01	14.07 +0.01	51844	135646**m**	6.09	6.38	0.000305	0.000319	**0.000305**
1	4,4'-DDT	14.93 +0.01	13.63 +0.01	41213	124223	6.67	7.28	0.000333	0.000364	**0.000333**
1	Endrin Ketone	15.94 +0.02	15.00 +0.01	52801	149769	6.27	6.38	0.000314	0.000319	**0.000314**
1	Methoxychlor	15.68 +0.01	14.73 +0.01	24641	74012	7.39	6.98	0.000369	0.000349	**0.000349**
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	0.0000	0.0000	0.00200U	0.00200U	NR
2	Toxaphene {1}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
	Chlordane			0	0	0.0000	0.0000	0.00100U	0.00100U	NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F018.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F018.D\1212F018c.d			**Vial:**	13
Acqu Date:	12/12/2018 17:53	**Quant Date:**	12/13/2018 09:08	**Dilution:**	1.0
Run Type:	MS	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-1 -- K1811120-001MS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/12/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
Prep Ref:	1704569	**Prep Date:**	11/27/2018	**Pre-Prep Date:**	11/20/2018

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1778
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.02	-0.04	5.34	-0.04	585194	2014703	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt	
1	Tetrachloro-m-xylene	8.75	+0.02	7.11		37241	96252	2.90	2.92			58	*
						%Recovery =		58 *	58 *	**Limits =**	70-130		
1	Decachlorobiphenyl	18.43	+0.01	16.87	+0.01	49136	108543	3.70	3.92			78	OK
						%Recovery =		74 OK	78 OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC	9.59	+0.01	8.33		65556	176970	6.31	6.28	0.316	0.314	**0.316**
1	Hexachlorobenzene	9.75	+0.02	8.12	+0.01	45228	114231	3.03	2.93	0.151	0.146	**0.151**
1	beta-BHC	10.87	+0.02	9.61		33499	84623	6.57	6.08	0.328	0.304	**0.328**
1	gamma-BHC (Lindane)	10.26	+0.01	9.07		59542	165450	6.68	6.39	0.334	0.320	**0.320**
1	delta-BHC	11.37	+0.02	10.14	+0.01	59846	163050	6.48	6.58	0.324	0.329	**0.324**
1	Heptachlor	11.45	+0.01	9.75		47373	158455	5.81	5.71	0.291	0.286	**0.286**
1	Aldrin	12.00	+0.01	10.34	+0.01	49355	127174	4.88	4.89	0.244	0.244	**0.244**
1	Isodrin	12.53	+0.01	11.13	+0.01	36730	96295	4.34	4.26	0.217	0.213	**0.217**
1	Heptachlor Epoxide	12.73	+0.02	11.42	+0.01	56376	153819	6.15	6.19	0.307	0.310	**0.307**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F018.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F018.D\1212F018c.d			**Vial:**	13
Acqu Date:	12/12/2018 17:53	**Quant Date:**	12/13/2018 09:08	**Dilution:**	1.0
Run Type:	MS	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-1 -- K1811120-001MS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane	13.24 +0.01	11.83 +0.01	60123	158821	6.45	6.52	0.322	0.326	**0.322**
1	Endosulfan I	13.37 +0.02	12.04 +0.01	50153	130652	5.37	5.74	0.268	0.287	**0.268**
1	alpha-Chlordane	13.32 +0.02	11.97	62561	160073	6.24	6.53	0.312	0.326	**0.312**
1	Dieldrin	13.79 +0.02	12.48 +0.01	57145	148126	6.01	6.37	0.301	0.319	**0.301**
1	4,4'-DDE	13.60 +0.02	12.33	64634	156047	6.13	6.22	0.307	0.311	**0.307**
1	Endrin	14.15 +0.01	12.95 +0.01	54957	155761	6.16	6.80	0.308	0.340	**0.308**
1	Endosulfan II	14.60 +0.01	13.38	50600	131151	6.81	6.17	0.341	0.309	**0.341**
1	4,4'-DDD	14.43 +0.01	13.22 +0.01	47522	125014	6.66	6.73	0.333	0.337	**0.333**
1	Endrin Aldehyde	14.78 +0.01	13.74 +0.01	49015	124187	6.08	6.42	0.304	0.321	**0.304**
1	Endosulfan Sulfate	15.25 +0.01	14.07 +0.01	51844	135646**m**	6.09	6.38	0.305	0.319	**0.305**
1	4,4'-DDT	14.93 +0.01	13.63 +0.01	41213	124223	6.67	7.28	0.333	0.364	**0.333**
1	Endrin Ketone	15.94 +0.02	15.00 +0.01	52801	149769	6.27	6.38	0.314	0.319	**0.314**
1	Methoxychlor	15.68 +0.01	14.73 +0.01	24641	74012	7.39	6.98	0.369	0.349	**0.349**
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
	Toxaphene			0	0	0.0000	0.0000	2.00U	2.00U	NR
2	Toxaphene {1}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {3}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
	Chlordane			0	0	0.0000	0.0000	1.00U	1.00U	NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F018.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 5:53 pm Operator: MC
Sample : K1811120-001MS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:08:50 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.020	5.344	585194	2014703	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.746	7.111	37241	96252	2.901	2.916
28) s	Decachlor...	18.430	16.871	49136	108543	3.700	3.924
	Target Compounds						
3)	alpha-BHC	9.590	8.334	65556	176970	6.310	6.284
4)	Hexachlor...	9.746	8.121	45228	114231	3.026	2.929
5)	beta-BHC	10.866	9.614	33499	84623	6.567	6.079
6)	gamma-BHC...	10.260	9.074	59542	165450	6.675	6.394
7)	delta-BHC	11.366	10.138	59846	163050	6.483	6.576
8)	Heptachlor	11.450	9.754	47373	158455	5.813	5.714
9)	Aldrin	12.003	10.341	49355	127174	4.881	4.888
10)	Isodrin	12.533	11.131	36730	96295	4.335	4.258
11)	Heptachlo...	12.726	11.421	56376	153819	6.146	6.193
12)	gamma-Chl...	13.243	11.831	60123	158821	6.448	6.518
13)	Endosulfan I	13.366	12.038	50153	130652	5.365	5.741
14)	alpha-Chl...	13.320	11.974	62561	160073	6.240	6.525
15)	Dieldrin	13.786	12.478	57145	148126	6.011	6.371
16)	4,4'-DDE	13.596	12.334	64634	156047	6.132	6.219
17)	Endrin	14.153	12.951	54957	155761	6.161	6.796
18)	Endosulfa...	14.603	13.384	50600	131151	6.811	6.173
19)	4,4'-DDD	14.433	13.218	47522	125014	6.664	6.730
20)	Endrin Al...	14.780	13.744	49015	124187	6.076	6.416
21)	Endosulfa...	15.253	14.068	51844	135646	6.093	6.383m
22)	4,4'-DDT	14.930	13.634	41213	124223	6.666	7.278
23)	Endrin Ke...	15.940	14.998	52801	149769	6.270	6.375
24)	Methoxychlor	15.676	14.731	24641	74012	7.387	6.981
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

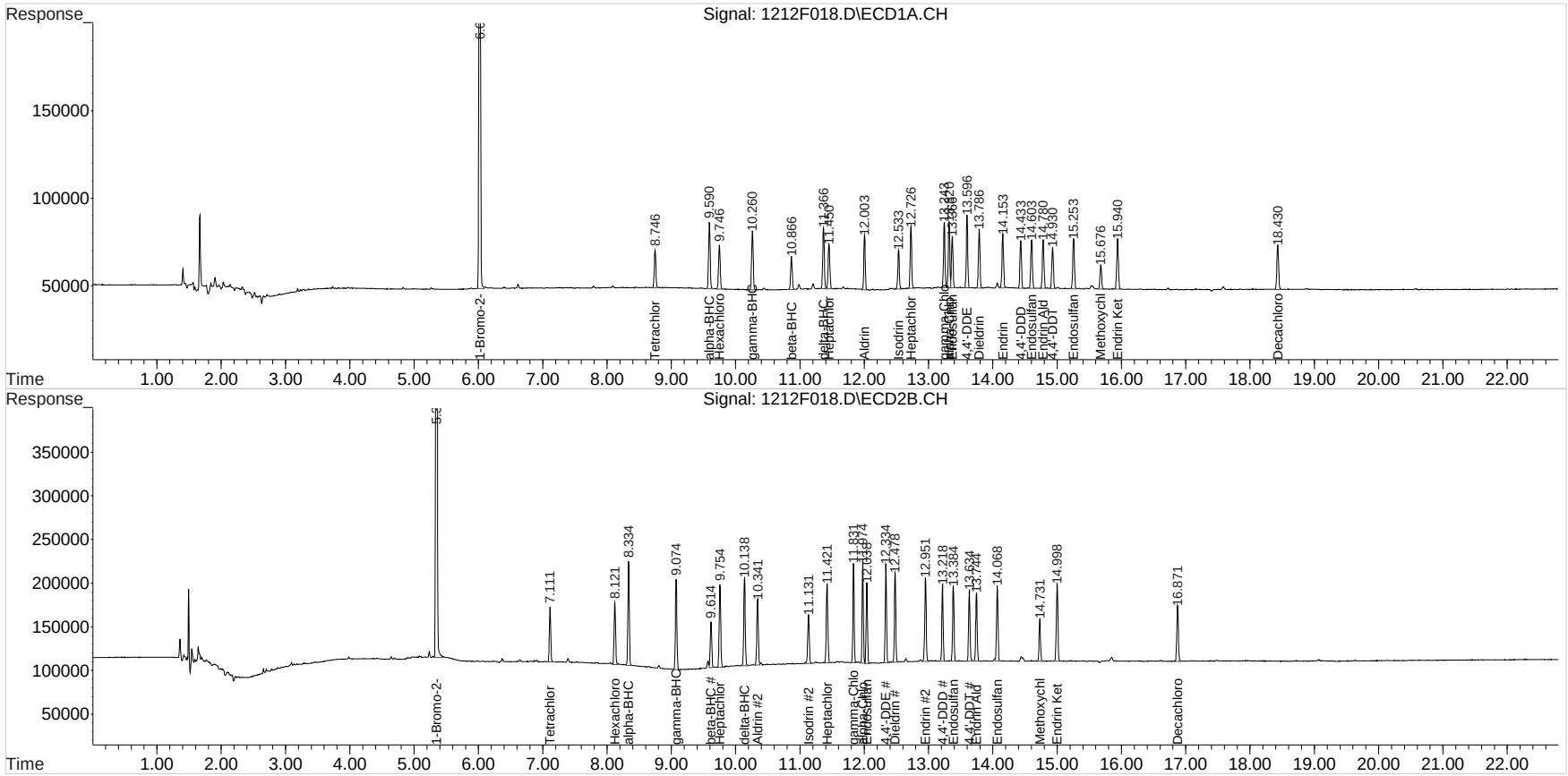
1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F018.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 5:53 pm Operator: MC
Sample : K1811120-001MS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:08:50 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020166

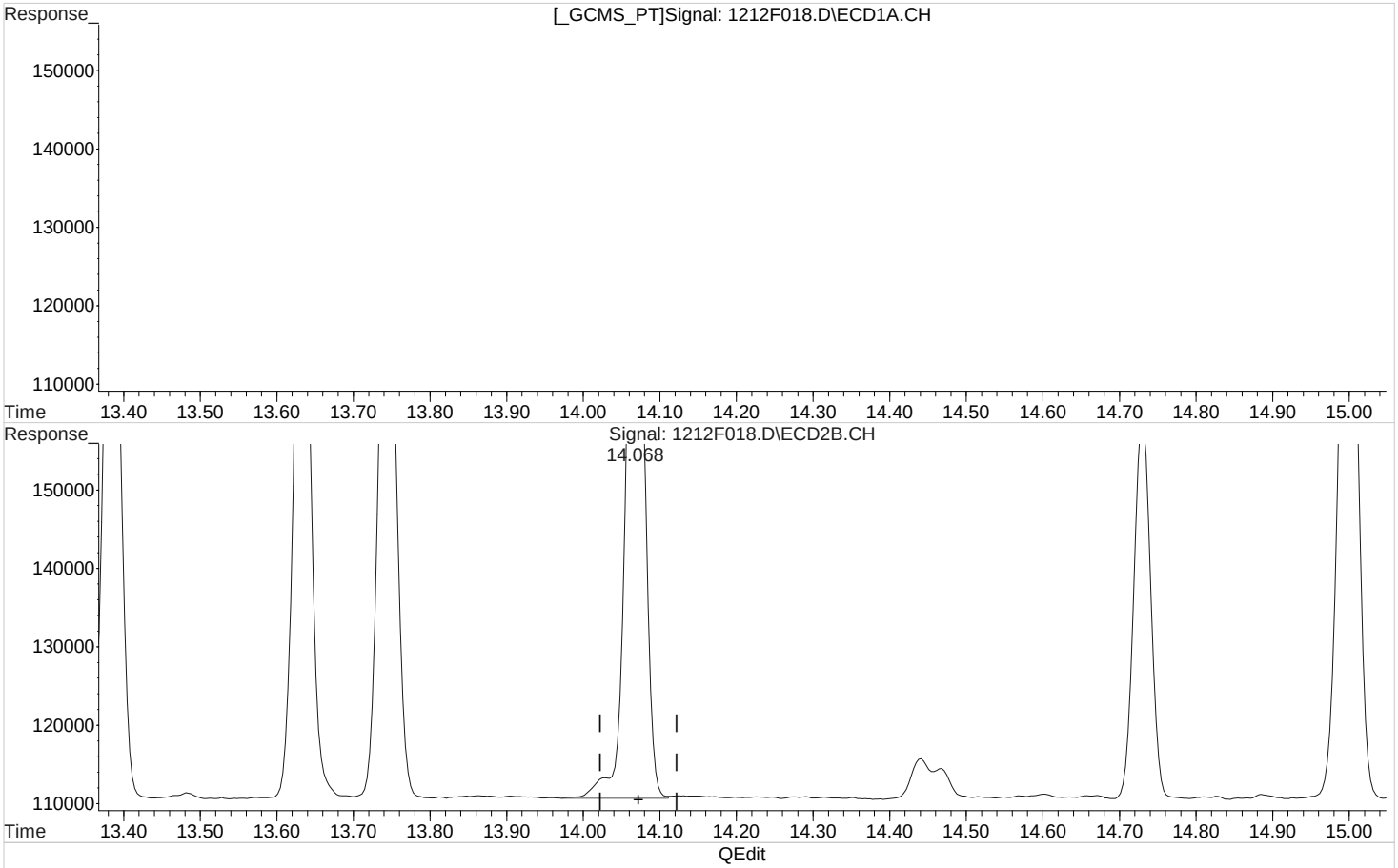
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F018.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 5:53 pm Operator: MC
Sample : K1811120-001MS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:35 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(21) Endosulfan Sulfate

15.253min 6.093 ug/L

response 51844

Manual Integration:

Before

12/13/18

(21) Endosulfan Sulfate #2

14.068min 6.626 ug/L

response 140822

(+) = Expected Retention Time

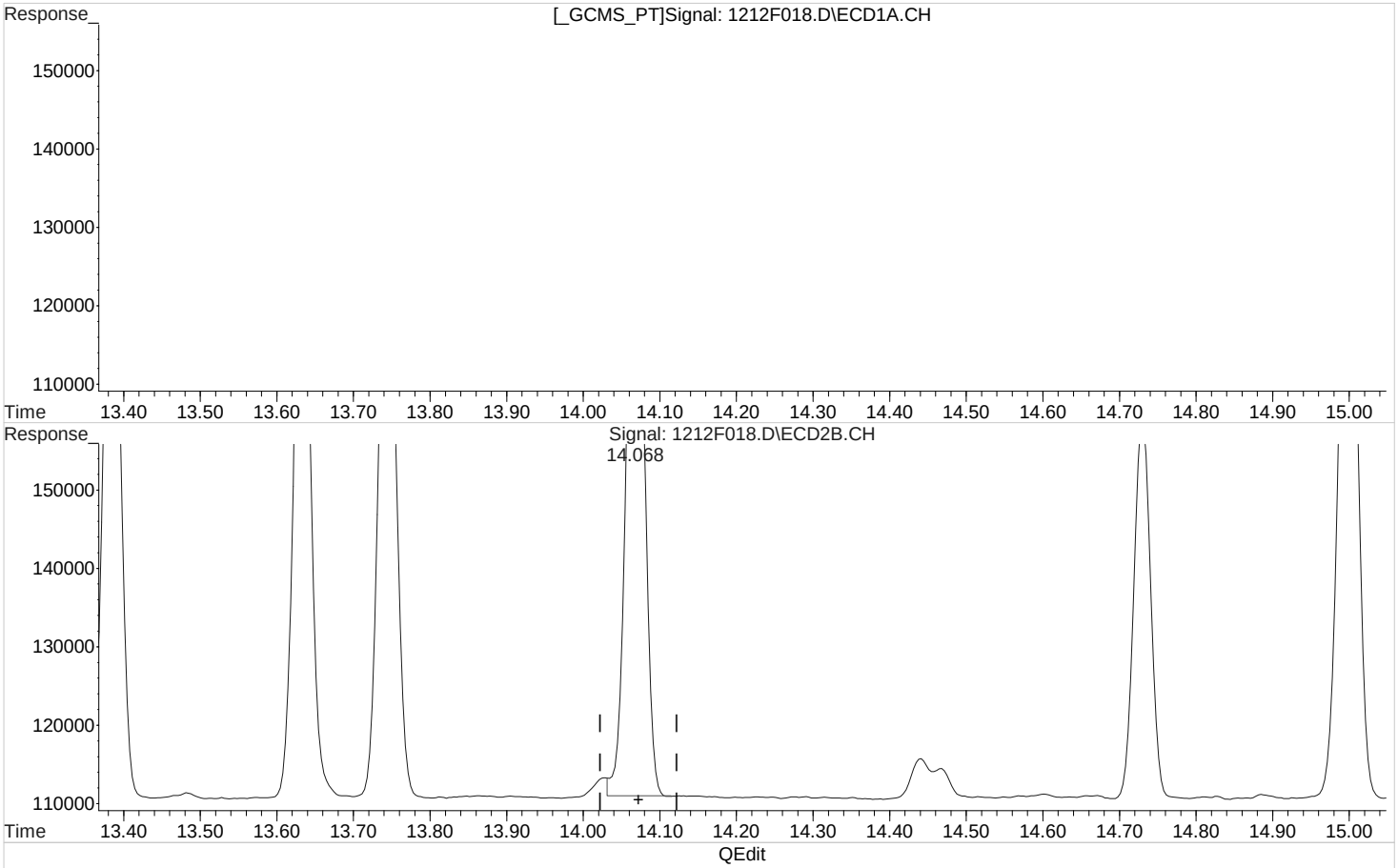
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F018.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 5:53 pm Operator: MC
Sample : K1811120-001MS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:35 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(21) Endosulfan Sulfate

15.253min 6.093 ug/L

response 51844

Manual Integration:

After

Baseline/Shoulder

12/13/18

(21) Endosulfan Sulfate #2

14.068min 6.383 ug/L m

response 135646

(+) = Expected Retention Time

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F020.D
Lab ID: KWG1806145-1 -- K1811120-001MS
RunType: MS
Matrix: SOIL

Date Acquired: 12/12/2018 18:53
Date Quantitated: 12/13/2018 09:15
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	2,4'-DDE	27.0	NA	20	NR
	2,4'-DDT	20.4	NA	20	NR
Continuing Calibration Recovery	Chlordane	23.8	NA	20	sample ND _ high bias
Surrogates	Tetrachloro-m-xylene	59	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F020.D\1212F020C.D
Lab ID: KWG1806145-1 -- K1811120-001MS
RunType: MS
Matrix: SOIL

Date Acquired: 12/12/2018 18:53
Date Quantitated: 12/13/2018 09:15
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Tetrachloro-m-xylene	59	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F020.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F020.D\1212F020c.d			**Vial:**	15
Acqu Date:	12/12/2018 18:53	**Quant Date:**	12/13/2018 09:15	**Dilution:**	1.0
Run Type:	MS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-1 -- K1811120-001MS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/12/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
		Prep Date:	11/27/2018	**Pre-Prep Date:**	11/20/2018
Prep Ref:	1704569				

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01 -0.05 c	5.34 -0.04 c	612510	2085748	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01 -0.10 c	5.34 -0.08 c	612510	2085748	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01 -0.10 c	5.34 -0.08 c	612510	2085748	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}			0d	0d	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.74 +0.01	7.11	39521	100589	2.95	2.94			NR
					%Recovery =	59 *	59 *	**Limits =**	70-130	
1	Decachlorobiphenyl	18.42	16.87 +0.01	52429	114466	3.77	4.00			NR
					%Recovery =	75 OK	80 OK	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Hexachlorobenzene			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	beta-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	delta-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	Aldrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Isodrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F020.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F020.D\1212F020c.d			**Vial:**	15
Acqu Date:	12/12/2018 18:53	**Quant Date:**	12/13/2018 09:15	**Dilution:**	1.0
Run Type:	MS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-1 -- K1811120-001MS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds **Final Conc. Units:** mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan I			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	alpha-Chlordane			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Dieldrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDE			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	Endosulfan II			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDD			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Aldehyde			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDT			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Ketone			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Methoxychlor			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	2,4'-DDE			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	240.09	212.86	0.0120	0.0106	**0.0106**
2	Toxaphene {1}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}	14.58	13.49	14378m	25891m	246.01	198.26	0.0123	0.00991	
2	Toxaphene {3}	15.12	13.96	24063	29665m	228.94	257.12	0.0114	0.0129	
2	Toxaphene {4}	15.30	14.11	14949	46098	347.12	213.74	0.0174	0.0107	
2	Toxaphene {5}	15.56 -0.01	14.48 -0.01	8679	84471	153.95	201.94	0.00770	0.0101	
2	Toxaphene {6}	15.99 -0.01	14.68 -0.01	35578	65298m	224.41	193.26	0.0112	0.00966	
	Chlordane			0	0	104.75CCV	103.01	0.00524	0.00515	**0.00515**
3	Chlordane {1}	11.02	9.39	28816	68420	82.24	75.99	0.00411	0.00380	
3	Chlordane {2}	11.45	11.49	28228	60611m	63.87	105.30	0.00319	0.00527	
3	Chlordane {3}	12.05	11.83	38290	248757	126.87	109.18	0.00634	0.00546	
3	Chlordane {4}	13.24	11.87	108788	171242	123.49	122.04	0.00617	0.00610	
3	Chlordane {5}	13.31 -0.01	11.94	86653	71682m	116.16	107.87	0.00581	0.00539	
3	Chlordane {6}	13.39 -0.01	11.97	63723	199571m	115.90	97.68	0.00580	0.00488	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F020.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F020.D\1212F020c.d			**Vial:**	15
Acqu Date:	12/12/2018 18:53	**Quant Date:**	12/13/2018 09:15	**Dilution:**	1.0
Run Type:	MS	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-1 -- K1811120-001MS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/12/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
		Prep Date:	11/27/2018	**Pre-Prep Date:**	11/20/2018
Prep Ref:	1704569				

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1778
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01 -0.05 c	5.34 -0.04 c	612510	2085748	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01 -0.10 c	5.34 -0.08 c	612510	2085748	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01 -0.10 c	5.34 -0.08 c	612510	2085748	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}			0d	0d	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.74 +0.01	7.11	39521	100589	2.95	2.94			NR
					%Recovery =	59 *	59 *	Limits =	70-130	
1	Decachlorobiphenyl	18.42	16.87 +0.01	52429	114466	3.77	4.00			NR
					%Recovery =	75 OK	80 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Hexachlorobenzene			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	beta-BHC			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000	0.100U	0.100U	NR
1	delta-BHC			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Heptachlor			0d	0d	0.0000	0.0000	0.100U	0.100U	NR
1	Aldrin			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Isodrin			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000	0.100U	0.100U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F020.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F020.D\1212F020c.d			**Vial:**	15
Acqu Date:	12/12/2018 18:53	**Quant Date:**	12/13/2018 09:15	**Dilution:**	1.0
Run Type:	MS	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-1 -- K1811120-001MS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endosulfan I			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	alpha-Chlordane			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Dieldrin			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	4,4'-DDE			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endrin			0d	0d	0.0000	0.0000	0.100U	0.100U	NR
1	Endosulfan II			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	4,4'-DDD			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endrin Aldehyde			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	4,4'-DDT			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endrin Ketone			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Methoxychlor			0d	0d	0.0000	0.0000	0.100U	0.100U	NR
1	2,4'-DDE			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDD			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDT			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
	Toxaphene			0	0	240.09	212.86	12.0	10.6	**10.6**
2	Toxaphene {1}			0d	0d	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {2}	14.58	13.49	14378m	25891m	246.01	198.26	12.3	9.91	
2	Toxaphene {3}	15.12	13.96	24063	29665m	228.94	257.12	11.4	12.9	
2	Toxaphene {4}	15.30	14.11	14949	46098	347.12	213.74	17.4	10.7	
2	Toxaphene {5}	15.56 -0.01	14.48 -0.01	8679	84471	153.95	201.94	7.70	10.1	
2	Toxaphene {6}	15.99 -0.01	14.68 -0.01	35578	65298m	224.41	193.26	11.2	9.66	
	Chlordane			0	0	104.75CCV	103.01	5.24	5.15	**5.15**
3	Chlordane {1}	11.02	9.39	28816	68420	82.24	75.99	4.11	3.80	
3	Chlordane {2}	11.45	11.49	28228	60611m	63.87	105.30	3.19	5.27	
3	Chlordane {3}	12.05	11.83	38290	248757	126.87	109.18	6.34	5.46	
3	Chlordane {4}	13.24	11.87	108788	171242	123.49	122.04	6.17	6.10	
3	Chlordane {5}	13.31 -0.01	11.94	86653	71682m	116.16	107.87	5.81	5.39	
3	Chlordane {6}	13.39 -0.01	11.97	63723	199571m	115.90	97.68	5.80	4.88	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:53 pm Operator: MC
Sample : K1811120-001MS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:15:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.014	5.345	612510	2085748	100.000	100.000
29)	1-Bromo-2...	6.014	5.345	612510	2085748	100.000	100.000
36)	1-Bromo-2...	6.014	5.345	612510	2085748	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.740	7.108	39521	100589	2.945	2.943
28) s	Decachlor...	18.424	16.868	52429	114466	3.772	3.998
	Target Compounds						
31)	Toxaphene...	14.584	13.495	14378	25891	246.006m	198.264m
32)	Toxaphene...	15.117	13.965	24063	29665	228.942	257.116m
33)	Toxaphene...	15.297	14.108	14949	46098	347.119	213.735 #
34)	Toxaphene...	15.564	14.485	8679	84471	153.946	201.939 #
35)	Toxaphene...	15.994	14.685	35578	65298	224.412	193.257m
37)	Chlordane	11.017	9.395	28816	68420	82.238	75.988
38)	Chlordane...	11.447	11.495	28228	60611	63.873	105.301m#
39)	Chlordane...	12.050	11.828	38290	248757	126.871	109.178
40)	Chlordane...	13.240	11.875	108788	171242	123.485	122.040
41)	Chlordane...	13.314	11.938	86653	71682	116.156	107.867m
42)	Chlordane...	13.394	11.972	63723	199571	115.900	97.678m
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

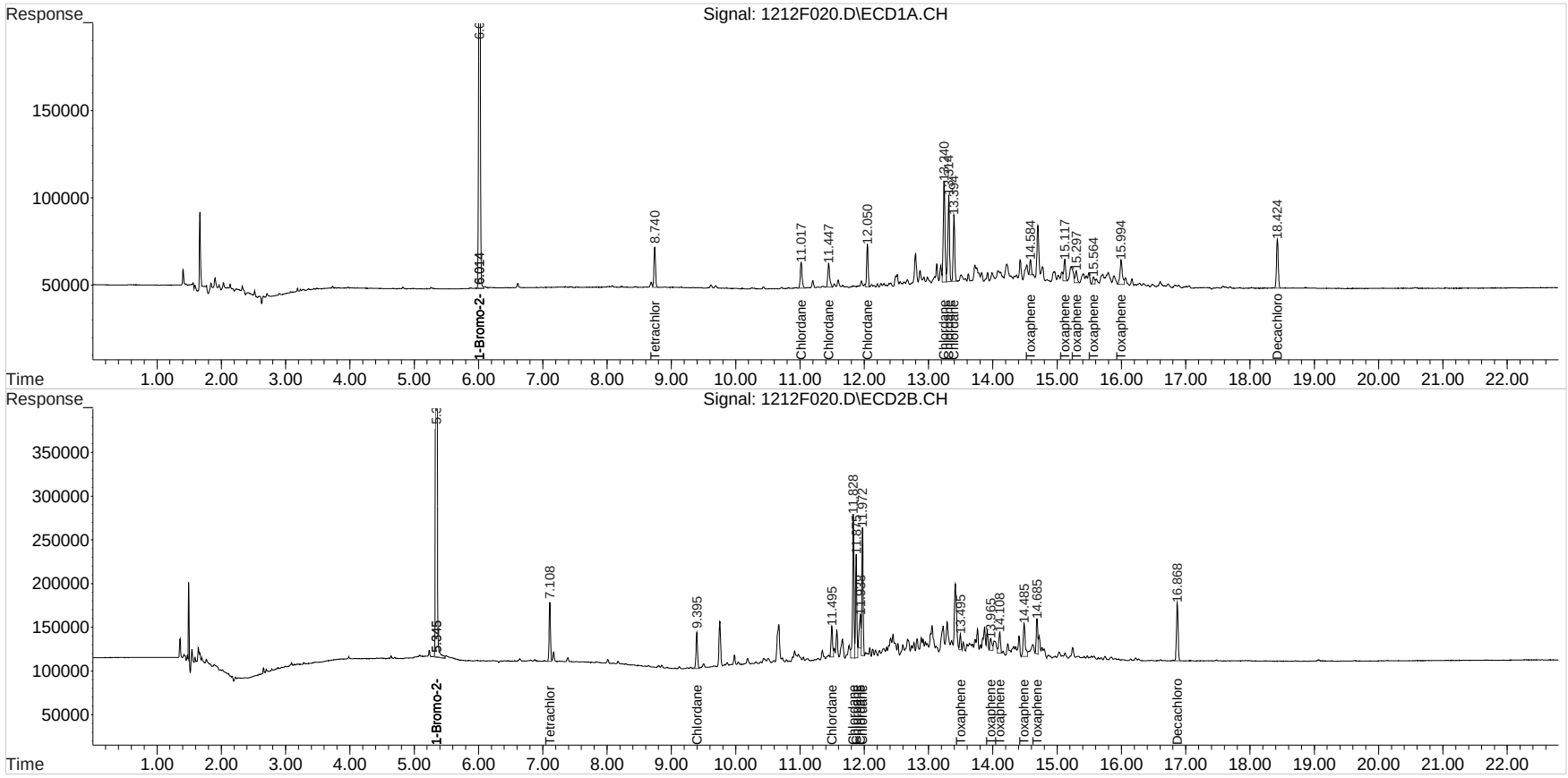
1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:53 pm Operator: MC
Sample : K1811120-001MS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:15:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020176

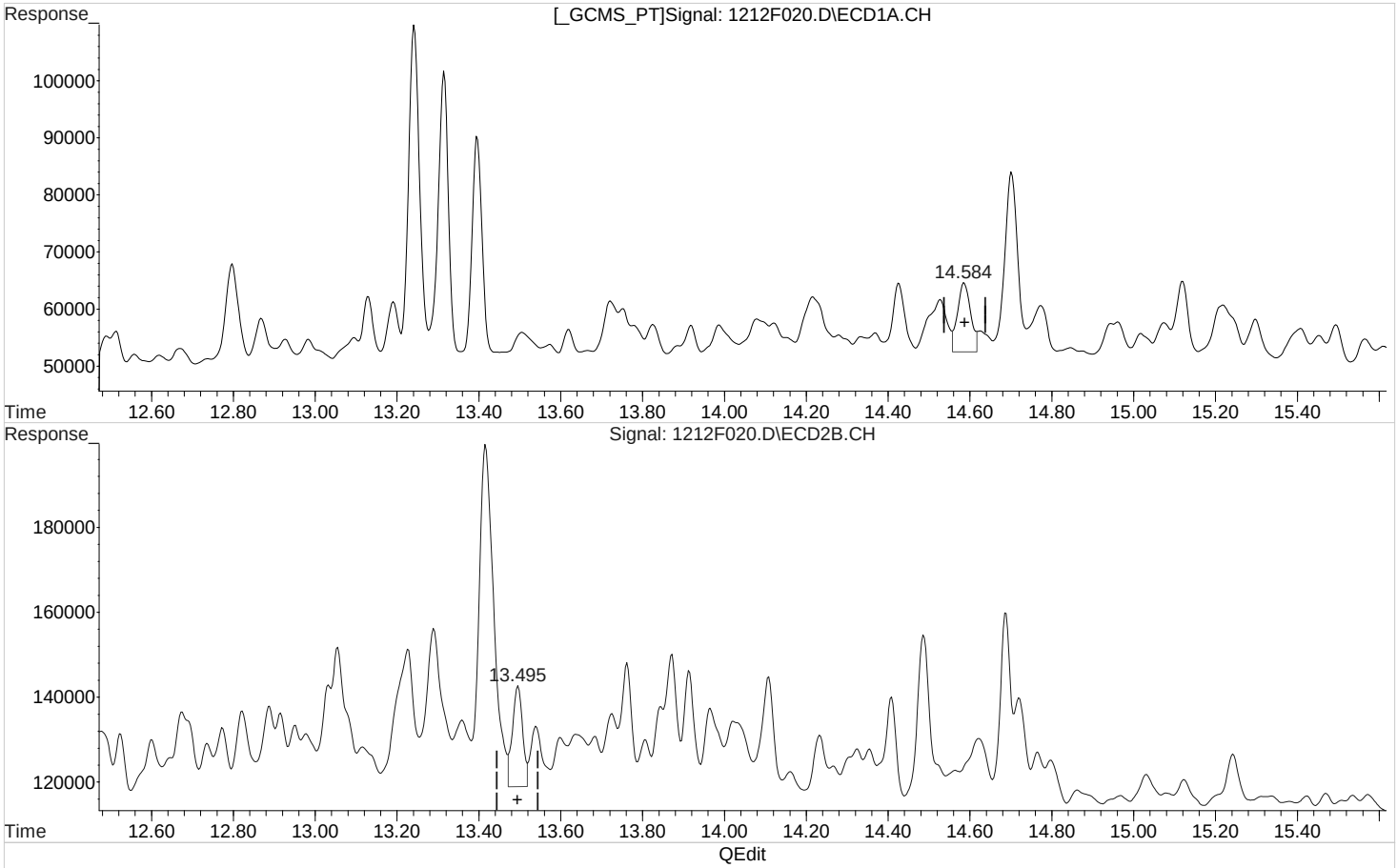
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:53 pm Operator: MC
Sample : K1811120-001MS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:43 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(31) Toxaphene {2}

14.584min 527.241 ug/L

response 27298

Manual Integration:

Before

12/13/18

(31) Toxaphene {2} #2

13.495min 313.588 ug/L

response 40951

(+) = Expected Retention Time

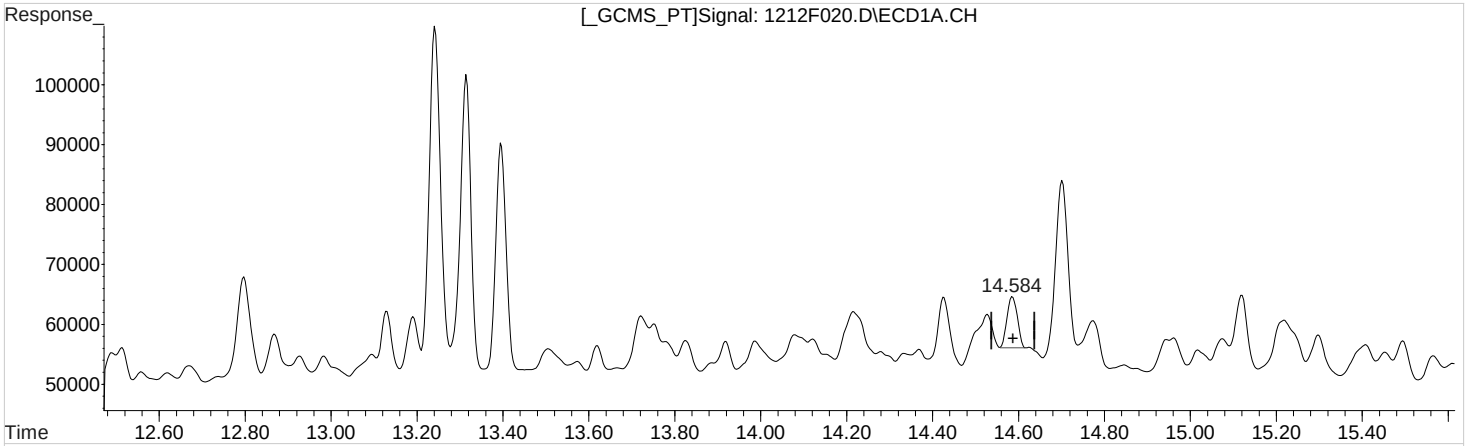
Quantitation Report (Qedit)

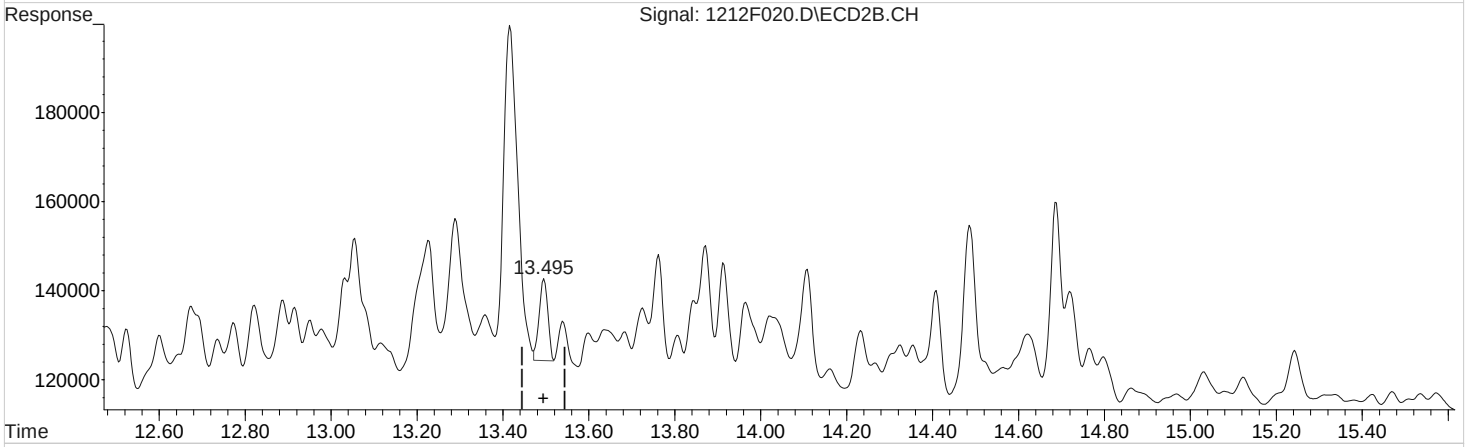
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:53 pm Operator: MC
Sample : K1811120-001MS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:43 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(31) Toxaphene {2}

14.584min 246.006 ug/L m

response 14378

Manual Integration:

After

Baseline/Shoulder

12/13/18

(31) Toxaphene {2} #2

13.495min 198.264 ug/L m

response 25891

(+) = Expected Retention Time

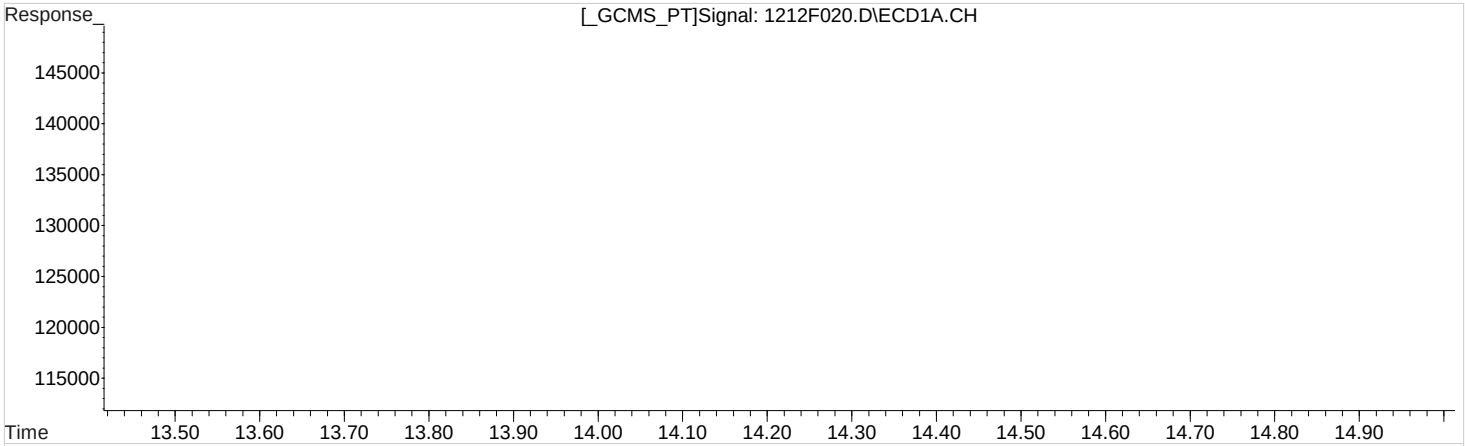
Quantitation Report (Qedit)

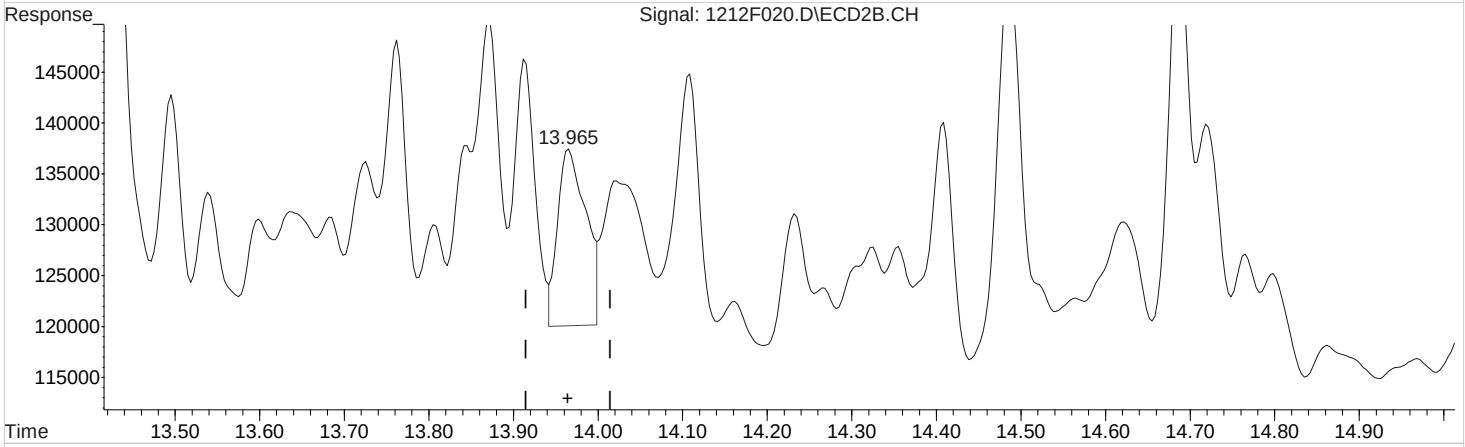
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:53 pm Operator: MC
Sample : K1811120-001MS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:43 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(32) Toxaphene {3}

15.117min 228.942 ug/L

response 24063

Manual Integration:

Before

12/13/18

(32) Toxaphene {3} #2

13.965min 354.354 ug/L

response 40884

(+) = Expected Retention Time

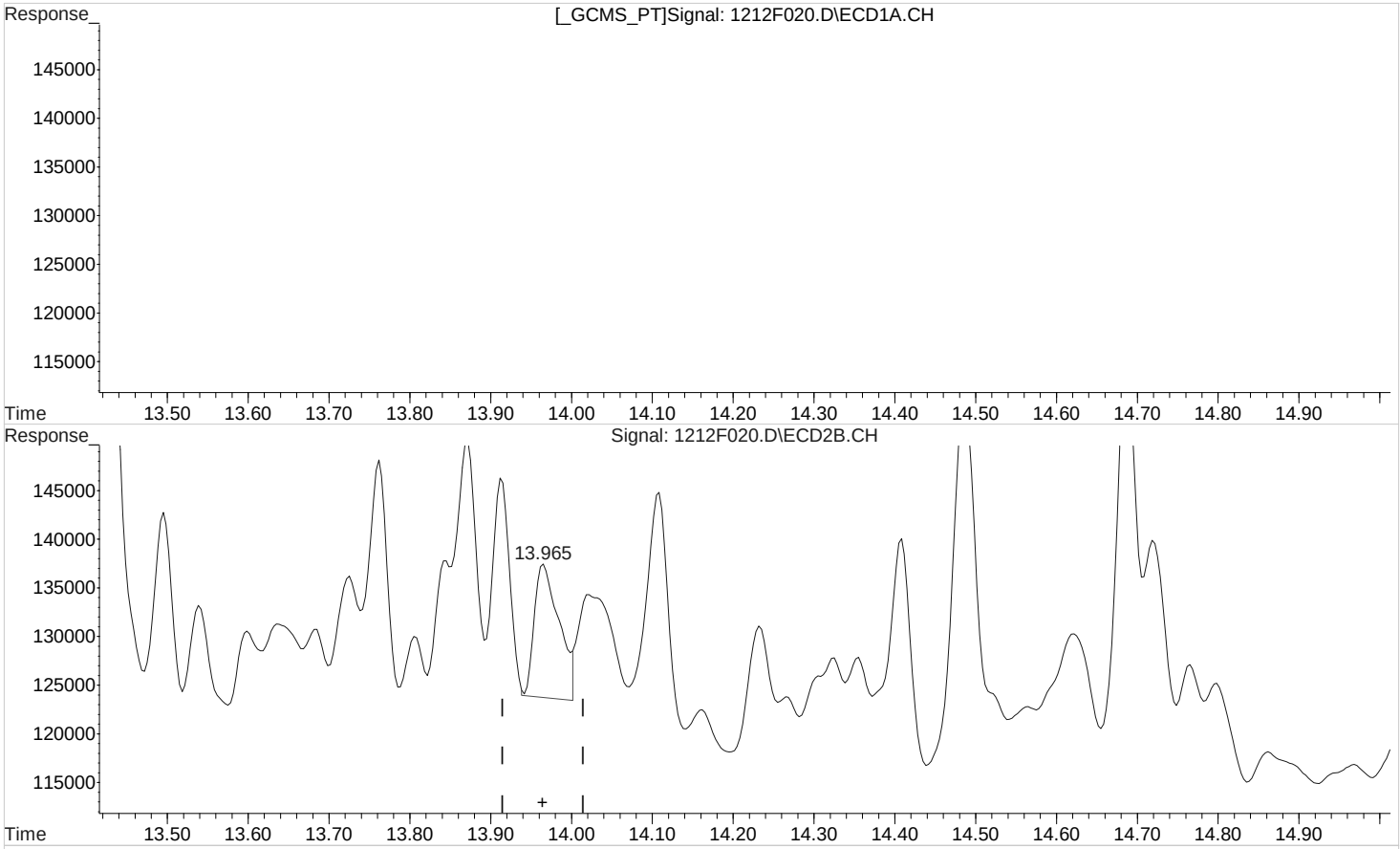
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:53 pm Operator: MC
Sample : K1811120-001MS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:43 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(32) Toxaphene {3}

15.117min 228.942 ug/L

response 24063

Manual Integration:

After

Baseline/Shoulder

12/13/18

(32) Toxaphene {3} #2

13.965min 257.116 ug/L m

response 29665

(+) = Expected Retention Time

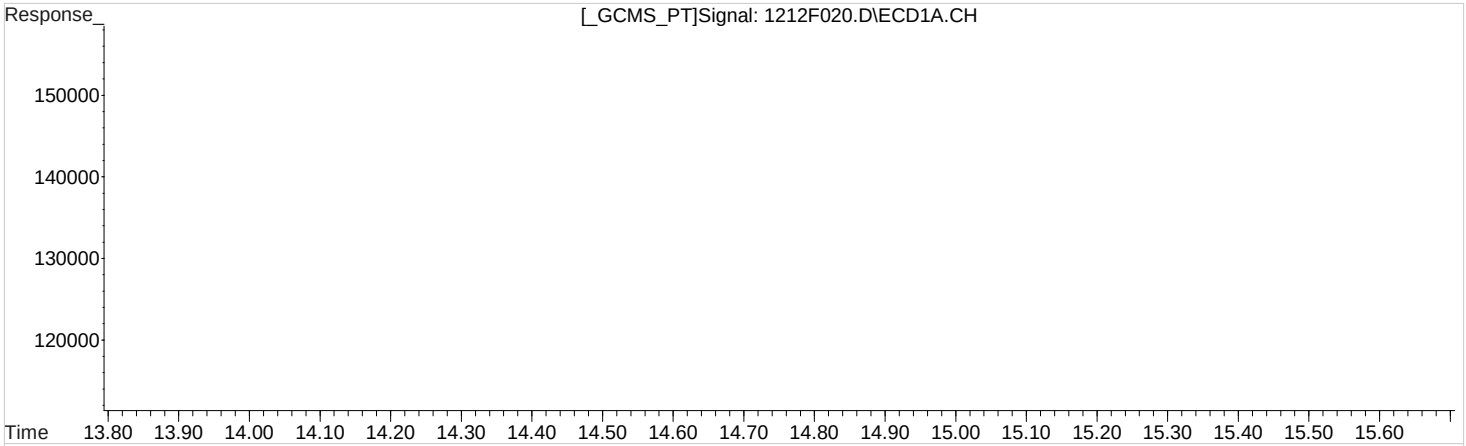
Quantitation Report (Qedit)

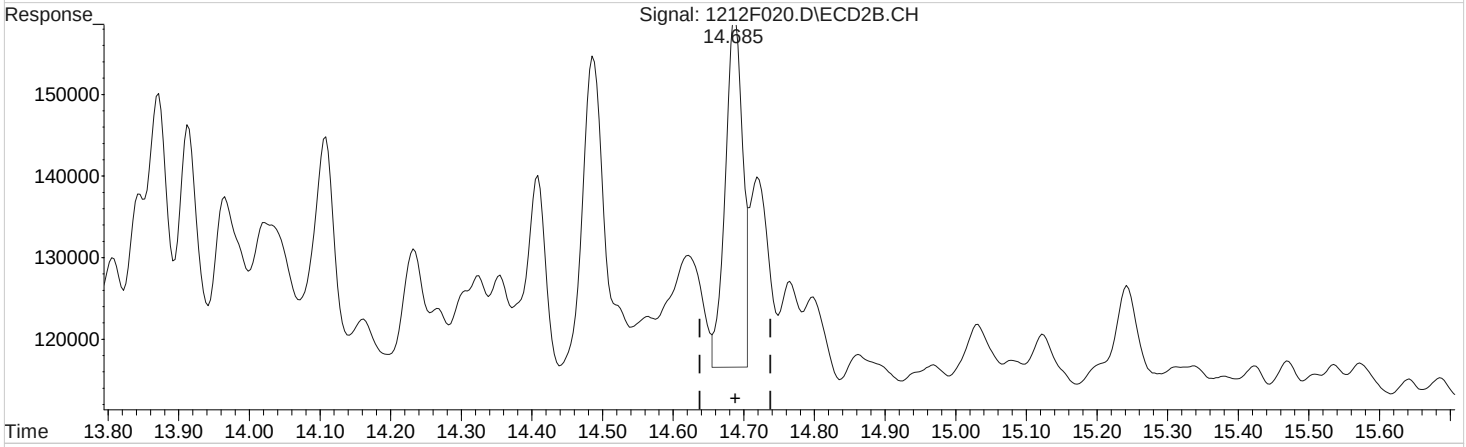
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:53 pm Operator: MC
Sample : K1811120-001MS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:13:15 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

15.994min 224.412 ug/L

response 35578

(35) Toxaphene {6} #2

14.685min 222.066 ug/L

response 75032

Manual Integration:

Before

12/13/18

(+) = Expected Retention Time

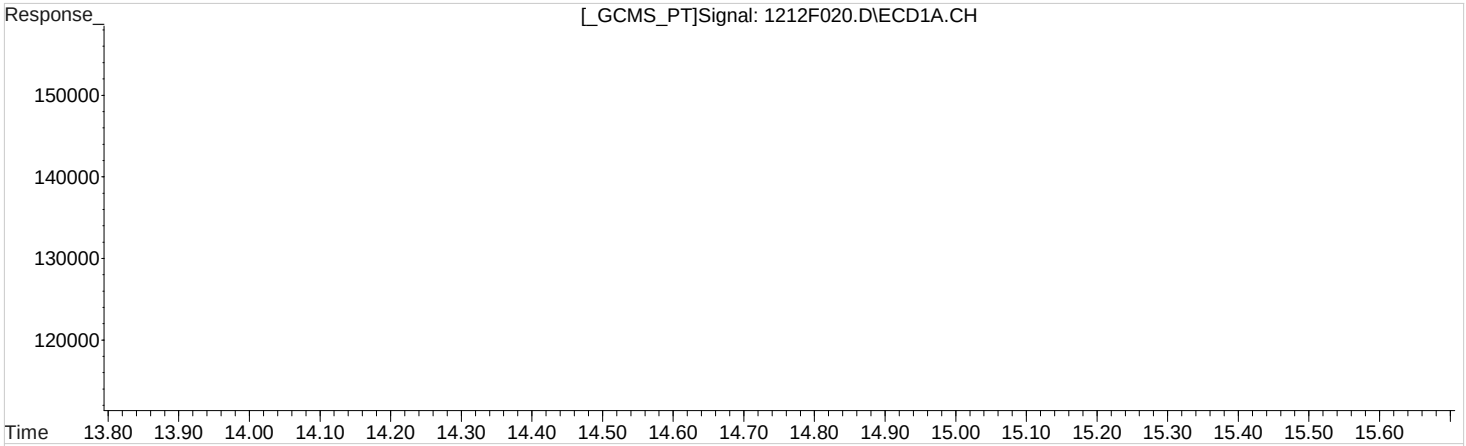
Quantitation Report (Qedit)

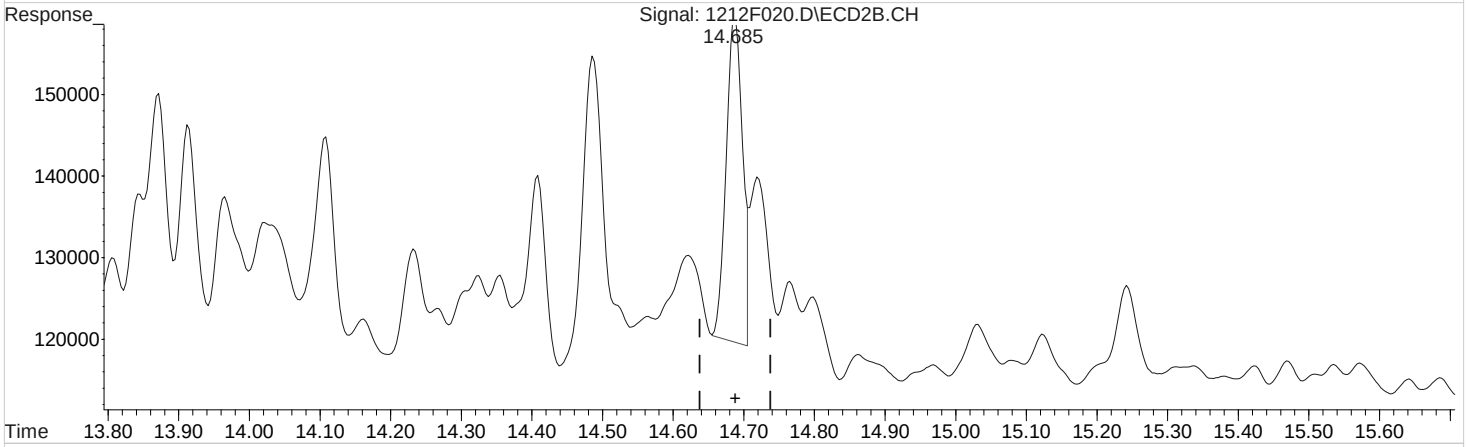
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:53 pm Operator: MC
Sample : K1811120-001MS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:13:15 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

15.994min 224.412 ug/L

response 35578

(35) Toxaphene {6} #2

14.685min 193.257 ug/L m

response 65298

Manual Integration:

After

Baseline/Shoulder

12/13/18

(+) = Expected Retention Time

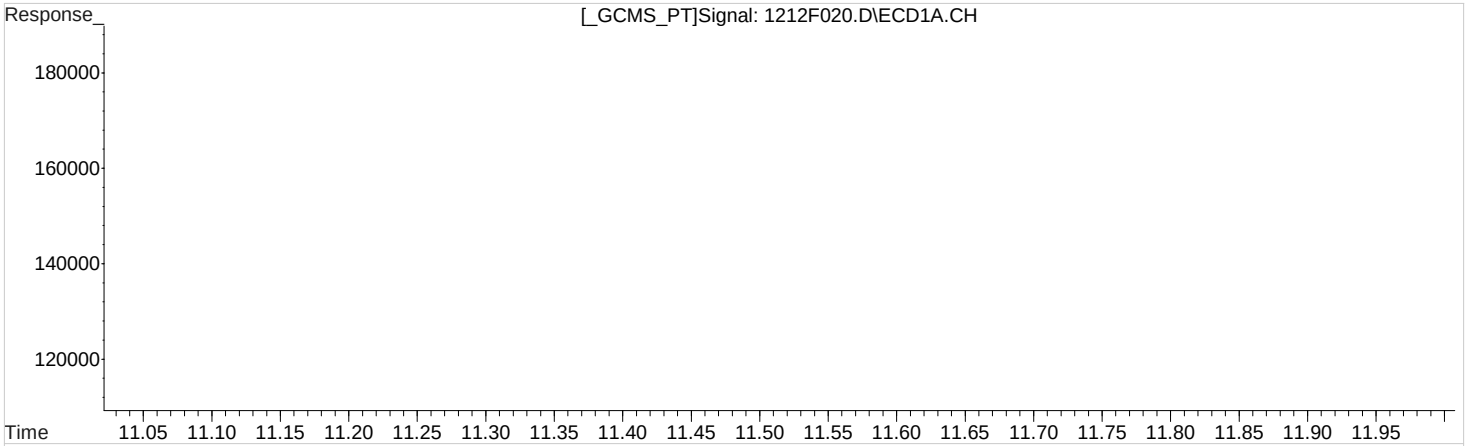
Quantitation Report (Qedit)

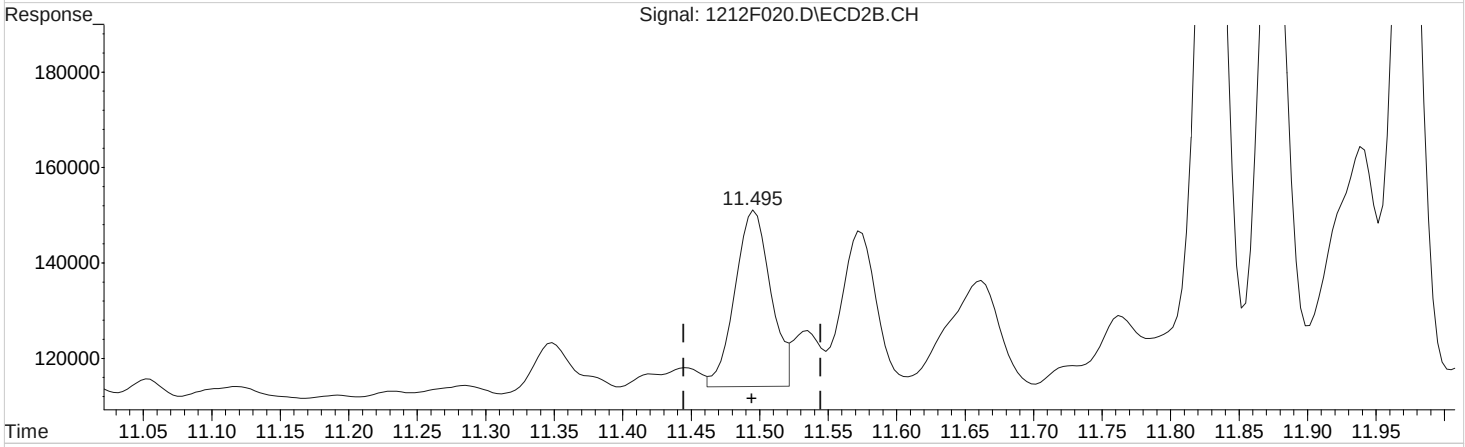
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:53 pm Operator: MC
Sample : K1811120-001MS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:13:15 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(38) Chlordane {2}

11.447min 63.873 ug/L

response 28228

(38) Chlordane {2} #2

11.495min 118.102 ug/L

response 67979

Manual Integration:

Before

12/13/18

(+) = Expected Retention Time

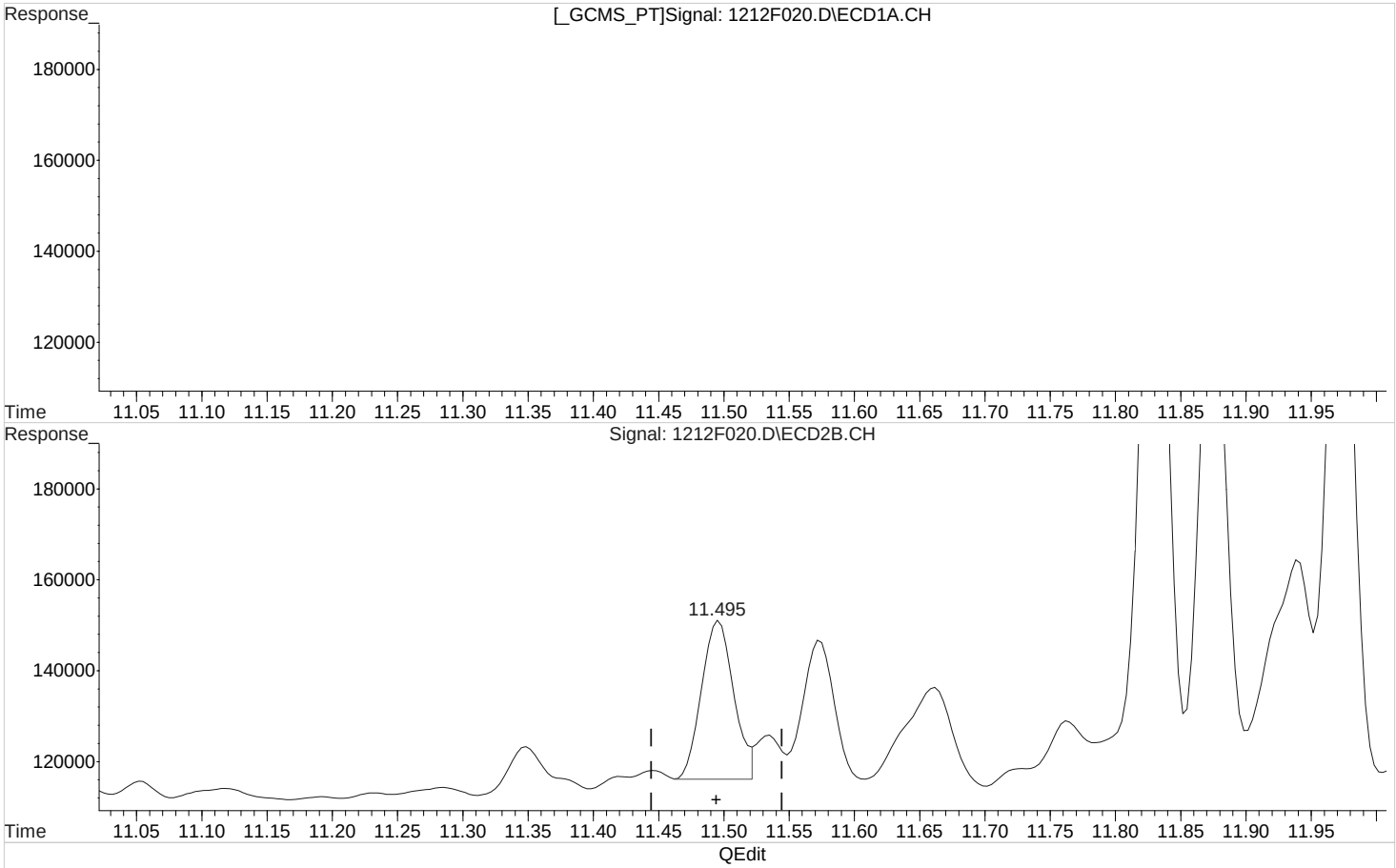
1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (Qedit)

Data File : J:\GC23\data\121218\1212F020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:53 pm Operator: MC
Sample : K1811120-001MS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:13:15 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(38) Chlordane {2}

11.447min 63.873 ug/L

response 28228

(38) Chlordane {2} #2

11.495min 105.301 ug/L m

response 60611

Manual Integration:

After

Baseline/Shoulder

12/13/18

(+) = Expected Retention Time

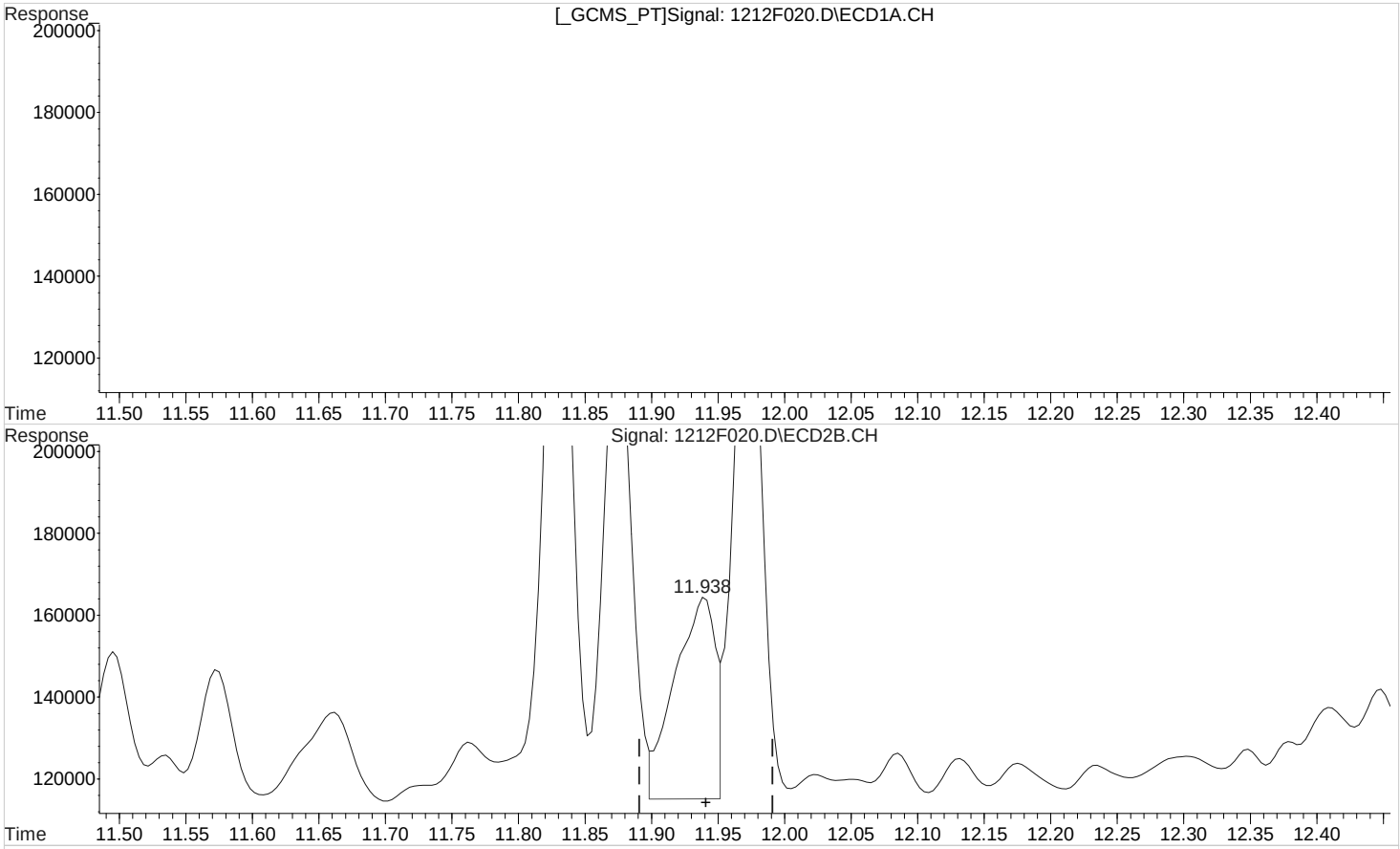
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:53 pm Operator: MC
Sample : K1811120-001MS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:13:15 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(41) Chlordane {5}

13.314min 116.156 ug/L

response 86653

(41) Chlordane {5} #2

11.938min 161.647 ug/L

response 107421

Manual Integration:

Before

12/13/18

(+) = Expected Retention Time

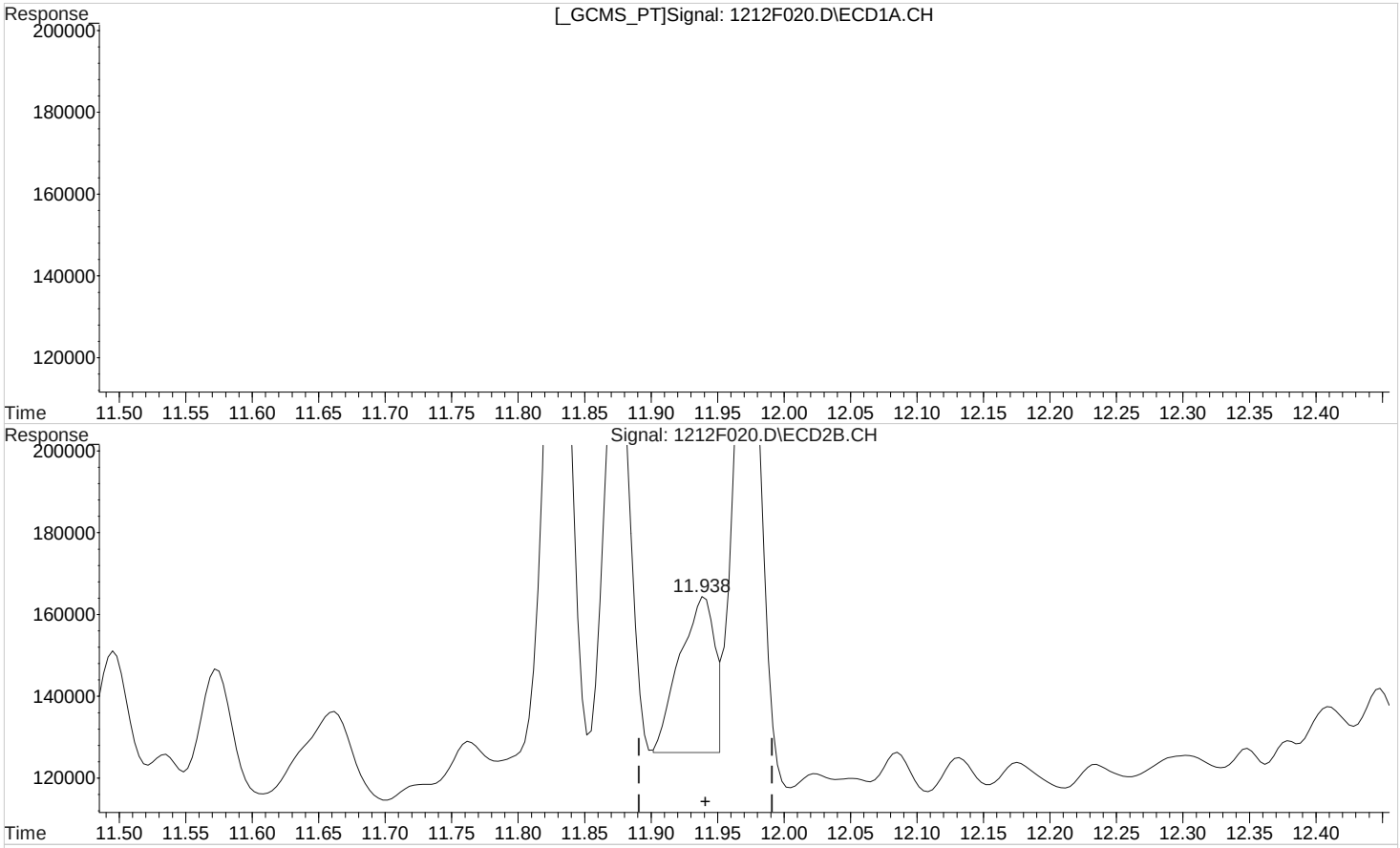
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:53 pm Operator: MC
Sample : K1811120-001MS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:13:15 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(41) Chlordane {5}

13.314min 116.156 ug/L

response 86653

(41) Chlordane {5} #2

11.938min 107.867 ug/L m

response 71682

Manual Integration:

After

Baseline/Shoulder

12/13/18

(+) = Expected Retention Time

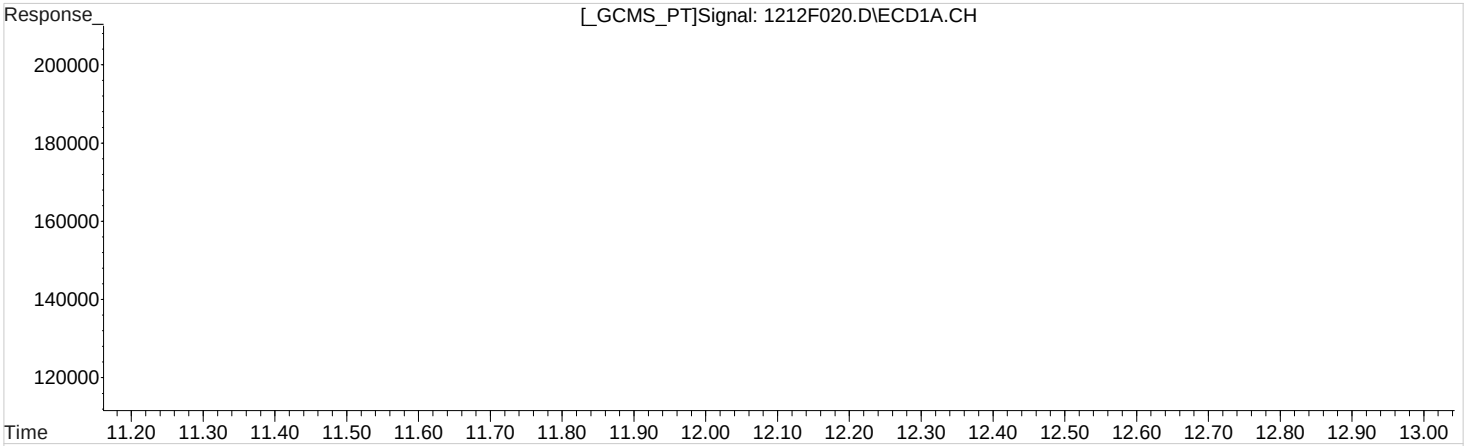
Quantitation Report (Qedit)

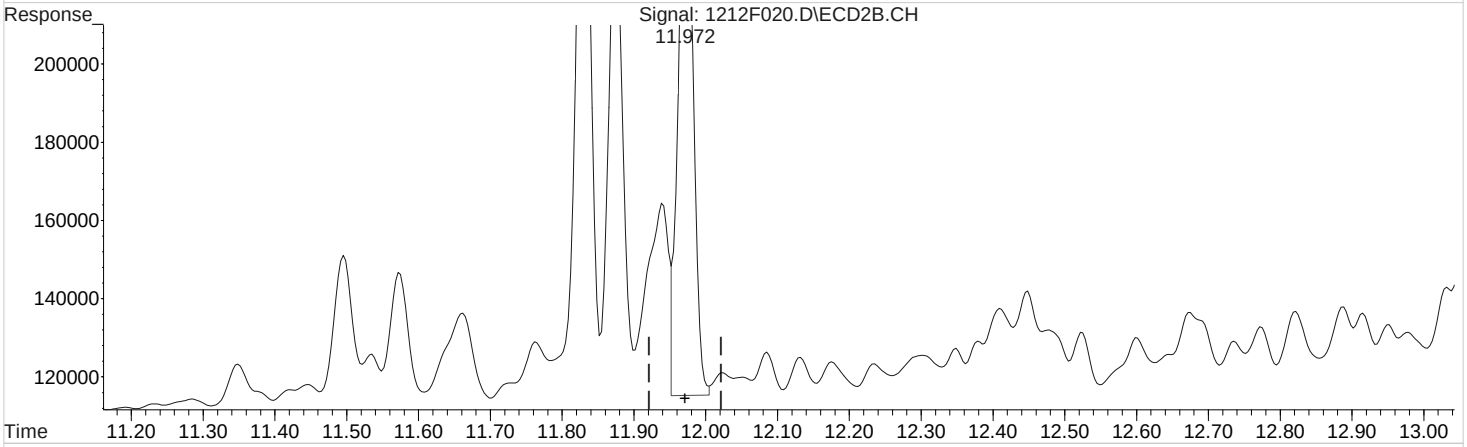
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:53 pm Operator: MC
Sample : K1811120-001MS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:13:15 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(42) Chlordane {6}

13.394min 115.900 ug/L

response 63723

(42) Chlordane {6} #2

11.972min 101.442 ug/L

response 207261

Manual Integration:

Before

12/13/18

(+) = Expected Retention Time

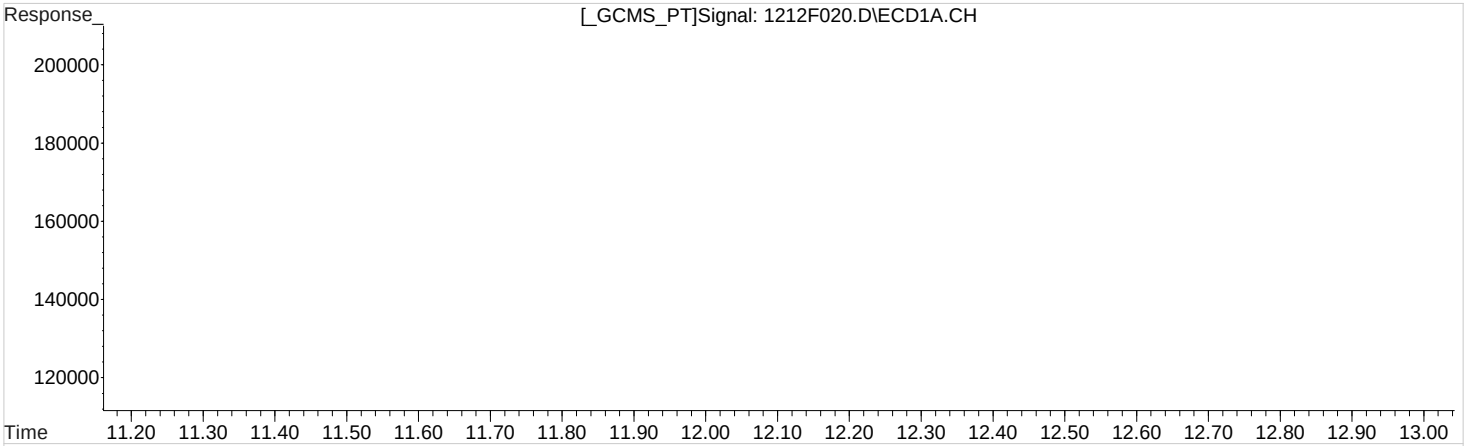
Quantitation Report (Qedit)

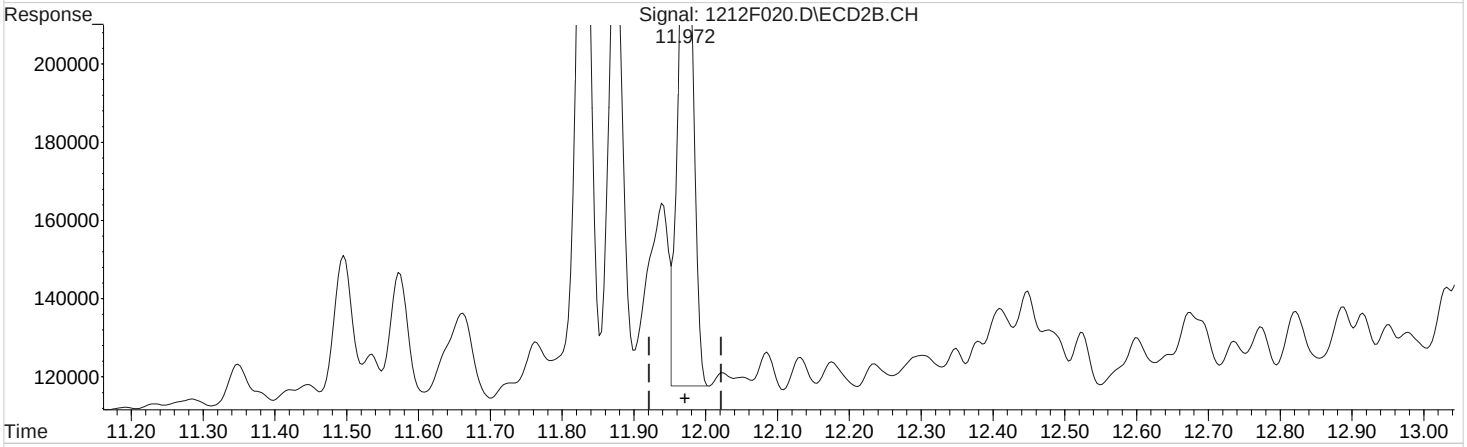
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:53 pm Operator: MC
Sample : K1811120-001MS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:13:15 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(42) Chlordane {6}

13.394min 115.900 ug/L

response 63723

(42) Chlordane {6} #2

11.972min 97.678 ug/L m

response 199571

Manual Integration:

After

Baseline/Shoulder

12/13/18

(+) = Expected Retention Time

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F019.D
Lab ID: KWG1806145-2 -- K1811120-001DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 12/12/2018 18:23
Date Quantitated: 12/13/2018 09:09
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	2,4'-DDE	27.0	NA	20	ICVOK
	2,4'-DDT	20.4	NA	20	ICVOK
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	523283	2093132	NR
	1-Bromo-2-nitrobenzene {3}	0	)284.071428	21136.28571	NR
Surrogates	Tetrachloro-m-xylene	61	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F019.D\1212F019C.D
Lab ID: KWG1806145-2 -- K1811120-001DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 12/12/2018 18:23
Date Quantitated: 12/13/2018 09:09
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	17017.33333	68069.33333	NR
	1-Bromo-2-nitrobenzene {3}	0	12049.14285	48196.57142	NR
Surrogates	Tetrachloro-m-xylene	63	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F019.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F019.D\1212F019c.d			**Vial:**	14
Acqu Date:	12/12/2018 18:23	**Quant Date:**	12/13/2018 09:09	**Dilution:**	1.0
Run Type:	DMS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-2 -- K1811120-001DMS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/12/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
Prep Ref:	1704570	**Prep Date:**	11/27/2018	**Pre-Prep Date:**	11/20/2018

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05	5.34	-0.04	601958	2023449	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	8.73		7.10	-0.01	39882	103855	3.03		3.13				63	*
						%Recovery =		61	*	63	*	**Limits =**	70-130		
1	Decachlorobiphenyl	18.42		16.86		48617	104841	3.56		3.77				75	OK
						%Recovery =		71	OK	75	OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC	9.58	8.33	64375	172655	6.02	6.10	0.000301	0.000305	**0.000301**
1	Hexachlorobenzene	9.73	8.11	51118	129468	3.36	3.31	0.000168	0.000165	**0.000165**
1	beta-BHC	10.85	9.61	32786	84263	6.25	6.03	0.000312	0.000301	**0.000301**
1	gamma-BHC (Lindane)	10.25	9.07	58372	161486	6.36	6.21	0.000318	0.000311	**0.000311**
1	delta-BHC	11.35	10.13	59324	158962	6.25	6.38	0.000312	0.000319	**0.000312**
1	Heptachlor	11.44	9.75	49572	163831	5.93	5.88	0.000296	0.000294	**0.000294**
1	Aldrin	11.99	10.33	53105	136912	5.11	5.24	0.000255	0.000262	**0.000255**
1	Isodrin	12.52	11.12	38520	100738	4.42	4.44	0.000221	0.000222	**0.000221**
1	Heptachlor Epoxide	12.71	11.41	56374	149392	5.98	5.99	0.000299	0.000299	**0.000299**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F019.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F019.D\1212F019c.d			**Vial:**	14
Acqu Date:	12/12/2018 18:23	**Quant Date:**	12/13/2018 09:09	**Dilution:**	1.0
Run Type:	DMS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-2 -- K1811120-001DMS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane	13.23	11.82	59335	154371	6.19	6.31	0.000309	0.000315	**0.000309**
1	Endosulfan I	13.36 +0.01	12.03	48966	127324	5.09	5.57	0.000255	0.000279	**0.000255**
1	alpha-Chlordane	13.31 +0.01	11.97	62331	154462	6.04	6.27	0.000302	0.000313	**0.000302**
1	Dieldrin	13.78 +0.01	12.47	56666	143702	5.80	6.15	0.000290	0.000308	**0.000290**
1	4,4'-DDE	13.59 +0.01	12.33	64159	150938	5.92	5.99	0.000296	0.000299	**0.000296**
1	Endrin	14.14	12.94	54142	148913	5.90	6.47	0.000295	0.000323	**0.000295**
1	Endosulfan II	14.59	13.38	49995	128142	6.52	6.01	0.000326	0.000300	**0.000300**
1	4,4'-DDD	14.42	13.21	46612	122660	6.36	6.58	0.000318	0.000329	**0.000318**
1	Endrin Aldehyde	14.77	13.74 +0.01	48788	120866	5.88	6.22	0.000294	0.000311	**0.000294**
1	Endosulfan Sulfate	15.24	14.06	51541	132789	5.89	6.22	0.000294	0.000311	**0.000294**
1	4,4'-DDT	14.92	13.63 +0.01	41033	121227	6.45	7.07	0.000323	0.000353	**0.000323**
1	Endrin Ketone	15.93 +0.01	14.99	52397	145948	6.05	6.19	0.000302	0.000309	**0.000302**
1	Methoxychlor	15.67	14.72	24997	73587	7.28	6.91	0.000364	0.000346	**0.000346**
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	0.0000	0.0000	0.00200U	0.00200U	NR
2	Toxaphene {1}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
	Chlordane			0	0	0.0000	0.0000	0.00100U	0.00100U	NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F019.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F019.D\1212F019c.d			**Vial:**	14
Acqu Date:	12/12/2018 18:23	**Quant Date:**	12/13/2018 09:09	**Dilution:**	1.0
Run Type:	DMS	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-2 -- K1811120-001DMS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/12/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
Prep Ref:	1704570	**Prep Date:**	11/27/2018	**Pre-Prep Date:**	11/20/2018

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1778
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05	5.34	-0.04	601958	2023449	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt	
1	Tetrachloro-m-xylene	8.73		7.10	-0.01	39882	103855	3.03		3.13				63	*
						%Recovery =		61	*	63	*	**Limits =**	70-130		
1	Decachlorobiphenyl	18.42		16.86		48617	104841	3.56		3.77				75	OK
						%Recovery =		71	OK	75	OK	**Limits =**	70-130		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC	9.58	8.33	64375	172655	6.02	6.10	0.301	0.305	**0.301**
1	Hexachlorobenzene	9.73	8.11	51118	129468	3.36	3.31	0.168	0.165	**0.168**
1	beta-BHC	10.85	9.61	32786	84263	6.25	6.03	0.312	0.301	**0.312**
1	gamma-BHC (Lindane)	10.25	9.07	58372	161486	6.36	6.21	0.318	0.311	**0.311**
1	delta-BHC	11.35	10.13	59324	158962	6.25	6.38	0.312	0.319	**0.312**
1	Heptachlor	11.44	9.75	49572	163831	5.93	5.88	0.296	0.294	**0.294**
1	Aldrin	11.99	10.33	53105	136912	5.11	5.24	0.255	0.262	**0.255**
1	Isodrin	12.52	11.12	38520	100738	4.42	4.44	0.221	0.222	**0.221**
1	Heptachlor Epoxide	12.71	11.41	56374	149392	5.98	5.99	0.299	0.299	**0.299**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F019.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F019.D\1212F019c.d			**Vial:**	14
Acqu Date:	12/12/2018 18:23	**Quant Date:**	12/13/2018 09:09	**Dilution:**	1.0
Run Type:	DMS	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-2 -- K1811120-001DMS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane	13.23	11.82	59335	154371	6.19	6.31	0.309	0.315	**0.309**
1	Endosulfan I	13.36 +0.01	12.03	48966	127324	5.09	5.57	0.255	0.279	**0.255**
1	alpha-Chlordane	13.31 +0.01	11.97	62331	154462	6.04	6.27	0.302	0.313	**0.302**
1	Dieldrin	13.78 +0.01	12.47	56666	143702	5.80	6.15	0.290	0.308	**0.290**
1	4,4'-DDE	13.59 +0.01	12.33	64159	150938	5.92	5.99	0.296	0.299	**0.296**
1	Endrin	14.14	12.94	54142	148913	5.90	6.47	0.295	0.323	**0.295**
1	Endosulfan II	14.59	13.38	49995	128142	6.52	6.01	0.326	0.300	**0.326**
1	4,4'-DDD	14.42	13.21	46612	122660	6.36	6.58	0.318	0.329	**0.318**
1	Endrin Aldehyde	14.77	13.74 +0.01	48788	120866	5.88	6.22	0.294	0.311	**0.294**
1	Endosulfan Sulfate	15.24	14.06	51541	132789	5.89	6.22	0.294	0.311	**0.294**
1	4,4'-DDT	14.92	13.63 +0.01	41033	121227	6.45	7.07	0.323	0.353	**0.323**
1	Endrin Ketone	15.93 +0.01	14.99	52397	145948	6.05	6.19	0.302	0.309	**0.302**
1	Methoxychlor	15.67	14.72	24997	73587	7.28	6.91	0.364	0.346	**0.346**
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
	Toxaphene			0	0	0.0000	0.0000	2.00U	2.00U	NR
2	Toxaphene {1}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {3}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
	Chlordane			0	0	0.0000	0.0000	1.00U	1.00U	NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F019.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:23 pm Operator: MC
Sample : K1811120-001DMS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:09:23 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.011	5.343	601958	2023449	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.735	7.103	39882	103855	3.032	3.133
28) s	Decachlor...	18.421	16.863	48617	104841	3.559	3.774
	Target Compounds						
3)	alpha-BHC	9.578	8.326	64375	172655	6.024	6.104
4)	Hexachlor...	9.735	8.113	51118	129468	3.363	3.305
5)	beta-BHC	10.855	9.606	32786	84263	6.248	6.026
6)	gamma-BHC...	10.248	9.066	58372	161486	6.362	6.214
7)	delta-BHC	11.355	10.126	59324	158962	6.248	6.383
8)	Heptachlor	11.438	9.746	49572	163831	5.927	5.882
9)	Aldrin	11.995	10.333	53105	136912	5.105	5.239
10)	Isodrin	12.521	11.123	38520	100738	4.420	4.435
11)	Heptachlo...	12.715	11.409	56374	149392	5.975	5.989
12)	gamma-Chl...	13.231	11.823	59335	154371	6.187	6.308
13)	Endosulfan I	13.358	12.033	48966	127324	5.092	5.570
14)	alpha-Chl...	13.308	11.966	62331	154462	6.044	6.269
15)	Dieldrin	13.778	12.469	56666	143702	5.795	6.154
16)	4,4'-DDE	13.588	12.329	64159	150938	5.918	5.989
17)	Endrin	14.141	12.943	54142	148913	5.900	6.469
18)	Endosulfa...	14.591	13.376	49995	128142	6.523	6.006
19)	4,4'-DDD	14.425	13.209	46612	122660	6.355	6.575
20)	Endrin Al...	14.771	13.736	48788	120866	5.880	6.217
21)	Endosulfa...	15.245	14.059	51541	132789	5.889	6.221
22)	4,4'-DDT	14.918	13.626	41033	121227	6.452	7.066
23)	Endrin Ke...	15.928	14.989	52397	145948	6.049	6.186
24)	Methoxychlor	15.668	14.723	24997	73587	7.281	6.911
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

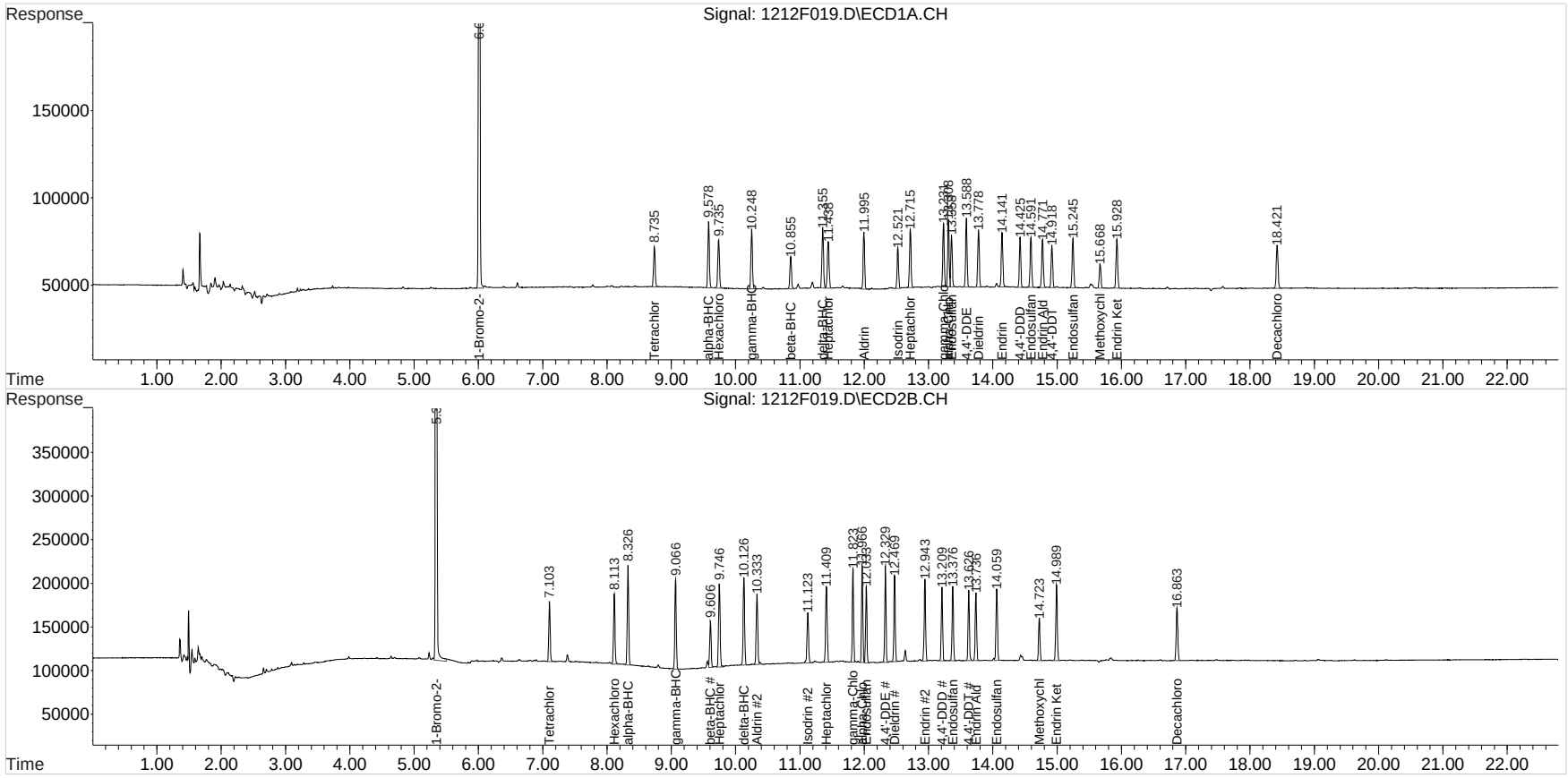
1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F019.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 6:23 pm Operator: MC
Sample : K1811120-001DMS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:09:23 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020196

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F021.D
Lab ID: KWG1806145-2 -- K1811120-001DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 12/12/2018 19:22
Date Quantitated: 12/13/2018 09:18
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	2,4'-DDE	27.0	NA	20	ICVOK
	2,4'-DDT	20.4	NA	20	ICVOK
Continuing Calibration Recovery	Chlordane	23.8	NA	20	sample ND _ high bias
Surrogates	Tetrachloro-m-xylene	57	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F021.D\1212F021C.D
Lab ID: KWG1806145-2 -- K1811120-001DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 12/12/2018 19:22
Date Quantitated: 12/13/2018 09:18
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Tetrachloro-m-xylene	58	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F021.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F021.D\1212F021c.d			**Vial:**	16
Acqu Date:	12/12/2018 19:22	**Quant Date:**	12/13/2018 09:18	**Dilution:**	1.0
Run Type:	DMS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-2 -- K1811120-001DMS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/12/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
		Prep Date:	11/27/2018	**Pre-Prep Date:**	11/20/2018
Prep Ref:	1704570				

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01 -0.05 c	5.35 -0.03 c	629446	2065709	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01 -0.10 c	5.35 -0.07 c	629446	2065709	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01 -0.10 c	5.35 -0.07 c	629446	2065709	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}			0d	0d	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.74 +0.01	7.11	39457	98292	2.85	2.90			NR
					%Recovery =	57 *	58 *	**Limits =**	70-130	
1	Decachlorobiphenyl	18.43 +0.01	16.87 +0.01	54002	116203	3.78	4.10			NR
					%Recovery =	76 OK	82 OK	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Hexachlorobenzene			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	beta-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	delta-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	Aldrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Isodrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F021.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F021.D\1212F021c.d			**Vial:**	16
Acqu Date:	12/12/2018 19:22	**Quant Date:**	12/13/2018 09:18	**Dilution:**	1.0
Run Type:	DMS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-2 -- K1811120-001DMS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds **Final Conc. Units:** mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan I			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	alpha-Chlordane			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Dieldrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDE			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	Endosulfan II			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDD			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Aldehyde			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDT			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Ketone			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Methoxychlor			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	2,4'-DDE			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	240.50	220.04	0.0120	0.0110	**0.0110**
2	Toxaphene {1}			0d	0d	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}	14.58	13.49	15388m	26932m	257.58	208.24	0.0129	0.0104	
2	Toxaphene {3}	15.12	13.96	24901	28038m	230.54	245.37	0.0115	0.0123	
2	Toxaphene {4}	15.29 -0.01	14.11	14796	47774m	334.32	223.65	0.0167	0.0112	
2	Toxaphene {5}	15.56 -0.01	14.48 -0.01	9209	91978	158.95	222.02	0.00795	0.0111	
2	Toxaphene {6}	15.99 -0.01	14.69	36022	67242m	221.10	200.94	0.0111	0.0100	
	Chlordane			0	0	99.77CCV	99.34	0.00499	0.00497	**0.00497**
3	Chlordane {1}	11.02	9.39	27751	67910	77.07	76.15	0.00385	0.00381	
3	Chlordane {2}	11.44 -0.01	11.49	27899	57768	61.43	101.34	0.00307	0.00507	
3	Chlordane {3}	12.05	11.83	37395	233193	120.57	103.34	0.00603	0.00517	
3	Chlordane {4}	13.24	11.87	106942	157450	118.12	113.30	0.00591	0.00566	
3	Chlordane {5}	13.31 -0.01	11.94	84915	68343m	110.76	103.84	0.00554	0.00519	
3	Chlordane {6}	13.39 -0.01	11.97	62521	198494	110.66	98.09	0.00553	0.00490	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F021.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F021.D\1212F021c.d			**Vial:**	16
Acqu Date:	12/12/2018 19:22	**Quant Date:**	12/13/2018 09:18	**Dilution:**	1.0
Run Type:	DMS	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-2 -- K1811120-001DMS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/12/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
		Prep Date:	11/27/2018	**Pre-Prep Date:**	11/20/2018
Prep Ref:	1704570				

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1778
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01 -0.05 c	5.35 -0.03 c	629446	2065709	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01 -0.10 c	5.35 -0.07 c	629446	2065709	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01 -0.10 c	5.35 -0.07 c	629446	2065709	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}			0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.74 +0.01	7.11	39457	98292	2.85	2.90			NR
				%Recovery =		57 *	58 *	**Limits =**	70-130	
1	Decachlorobiphenyl	18.43 +0.01	16.87 +0.01	54002	116203	3.78	4.10			NR
				%Recovery =		76 OK	82 OK	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	beta-BHC			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	Heptachlor			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	Isodrin			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F021.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F021.D\1212F021c.d			**Vial:**	16
Acqu Date:	12/12/2018 19:22	**Quant Date:**	12/13/2018 09:18	**Dilution:**	1.0
Run Type:	DMS	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-2 -- K1811120-001DMS				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endosulfan I			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	alpha-Chlordane			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Dieldrin			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	4,4'-DDE			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endrin			0d	0d	0.0000	0.0000	0.100U	0.100U	NR
1	Endosulfan II			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	4,4'-DDD			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endrin Aldehyde			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	4,4'-DDT			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endrin Ketone			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Methoxychlor			0d	0d	0.0000	0.0000	0.100U	0.100U	NR
1	2,4'-DDE			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDD			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDT			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
	Toxaphene			0	0	240.50	220.04	12.0	11.0	**11.0**
2	Toxaphene {1}			0d	0d	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {2}	14.58	13.49	15388m	26932m	257.58	208.24	12.9	10.4	
2	Toxaphene {3}	15.12	13.96	24901	28038m	230.54	245.37	11.5	12.3	
2	Toxaphene {4}	15.29 -0.01	14.11	14796	47774m	334.32	223.65	16.7	11.2	
2	Toxaphene {5}	15.56 -0.01	14.48 -0.01	9209	91978	158.95	222.02	7.95	11.1	
2	Toxaphene {6}	15.99 -0.01	14.69	36022	67242m	221.10	200.94	11.1	10.0	
	Chlordane			0	0	99.77CCV	99.34	4.99	4.97	**4.97**
3	Chlordane {1}	11.02	9.39	27751	67910	77.07	76.15	3.85	3.81	
3	Chlordane {2}	11.44 -0.01	11.49	27899	57768	61.43	101.34	3.07	5.07	
3	Chlordane {3}	12.05	11.83	37395	233193	120.57	103.34	6.03	5.17	
3	Chlordane {4}	13.24	11.87	106942	157450	118.12	113.30	5.91	5.66	
3	Chlordane {5}	13.31 -0.01	11.94	84915	68343m	110.76	103.84	5.54	5.19	
3	Chlordane {6}	13.39 -0.01	11.97	62521	198494	110.66	98.09	5.53	4.90	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F021.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:22 pm Operator: MC
Sample : K1811120-001DMS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:18:27 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.014	5.346	629446	2065709	100.000	100.000
29)	1-Bromo-2...	6.014	5.346	629446	2065709	100.000	100.000
36)	1-Bromo-2...	6.014	5.346	629446	2065709	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.741	7.109	39457	98292	2.854	2.904
28) s	Decachlor...	18.428	16.866	54002	116203	3.781	4.098
	Target Compounds						
31)	Toxaphene...	14.581	13.492	15388	26932	257.584m	208.236m
32)	Toxaphene...	15.118	13.962	24901	28038	230.541	245.371m
33)	Toxaphene...	15.291	14.106	14796	47774	334.322	223.654m#
34)	Toxaphene...	15.564	14.482	9209	91978	158.952	222.018 #
35)	Toxaphene...	15.991	14.686	36022	67242	221.099	200.941m
37)	Chlordane	11.018	9.392	27751	67910	77.067	76.153
38)	Chlordane...	11.444	11.492	27899	57768	61.430	101.336 #
39)	Chlordane...	12.048	11.829	37395	233193	120.571	103.340
40)	Chlordane...	13.238	11.872	106942	157450	118.124	113.299
41)	Chlordane...	13.311	11.939	84915	68343	110.763	103.840m
42)	Chlordane...	13.391	11.972	62521	198494	110.655	98.093
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

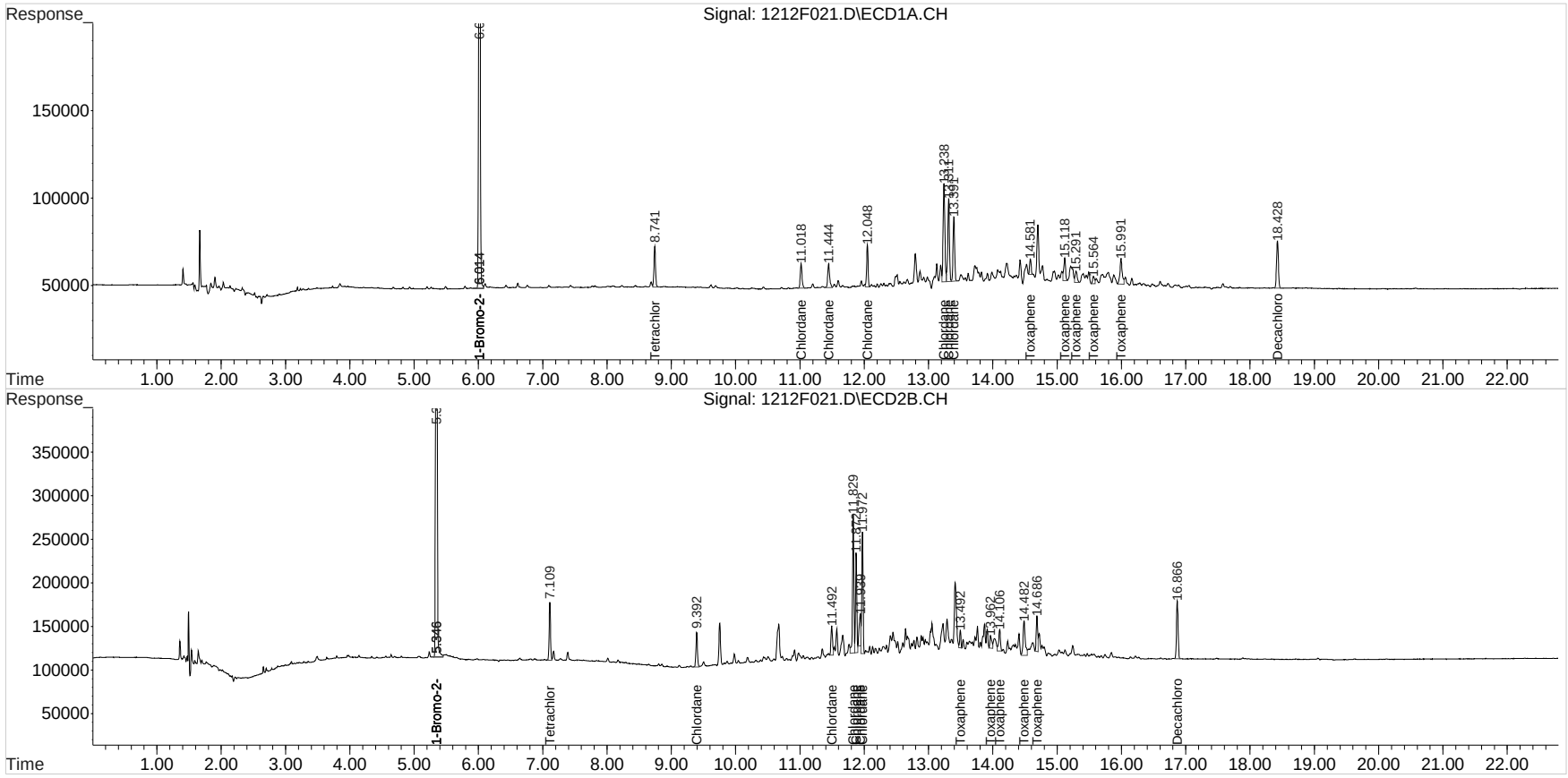
1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F021.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:22 pm Operator: MC
Sample : K1811120-001DMS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:18:27 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020204

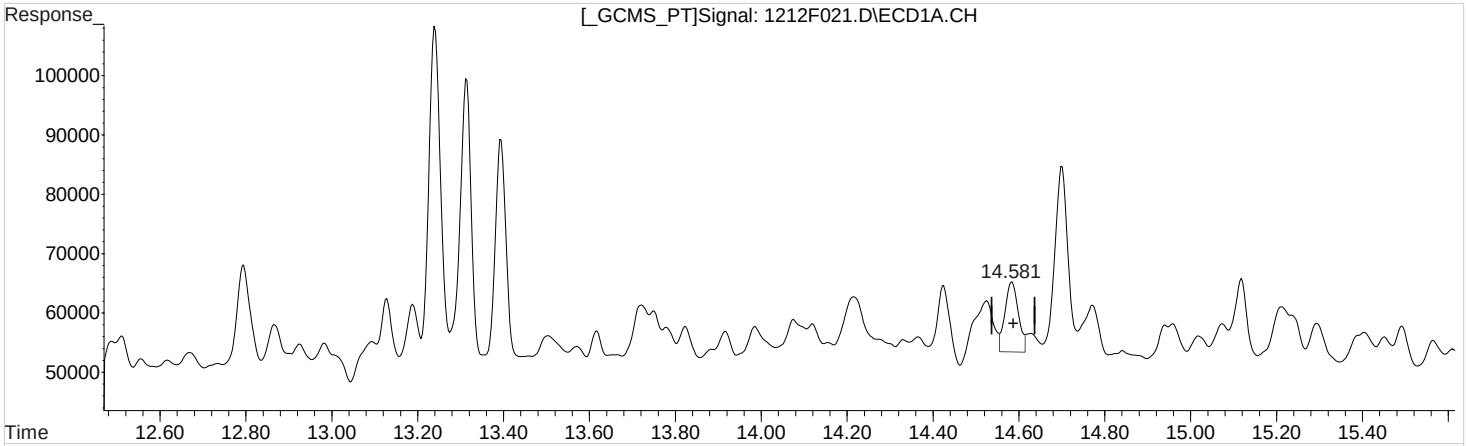
Quantitation Report (Qedit)

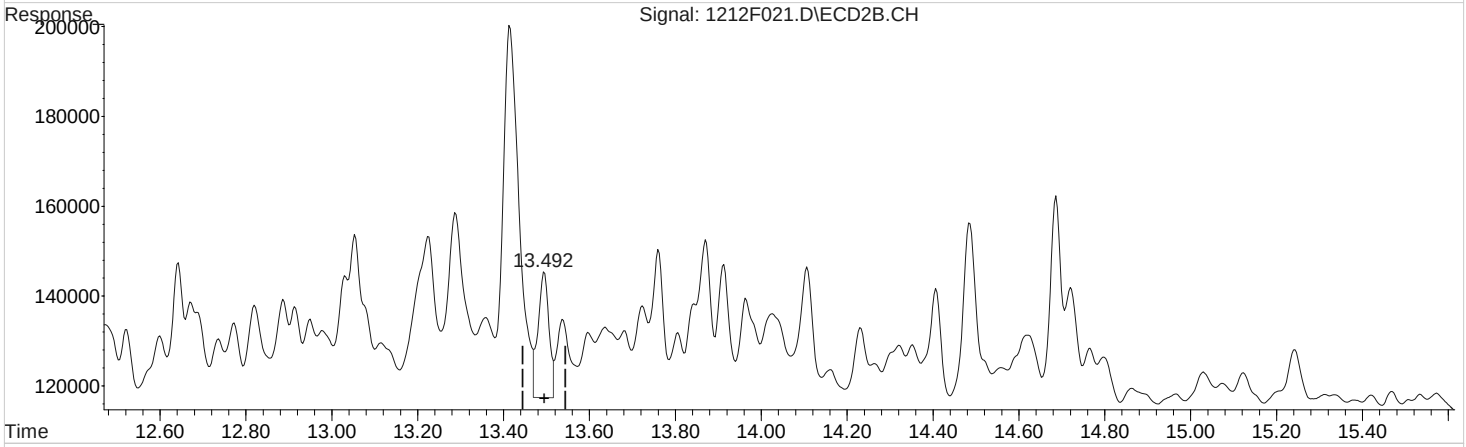
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F021.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:22 pm Operator: MC
Sample : K1811120-001DMS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:47 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(31) Toxaphene {2}

14.581min 471.444 ug/L

response 25684

Manual Integration:

Before

12/13/18

(31) Toxaphene {2} #2

13.492min 383.356 ug/L

response 49581

(+) = Expected Retention Time

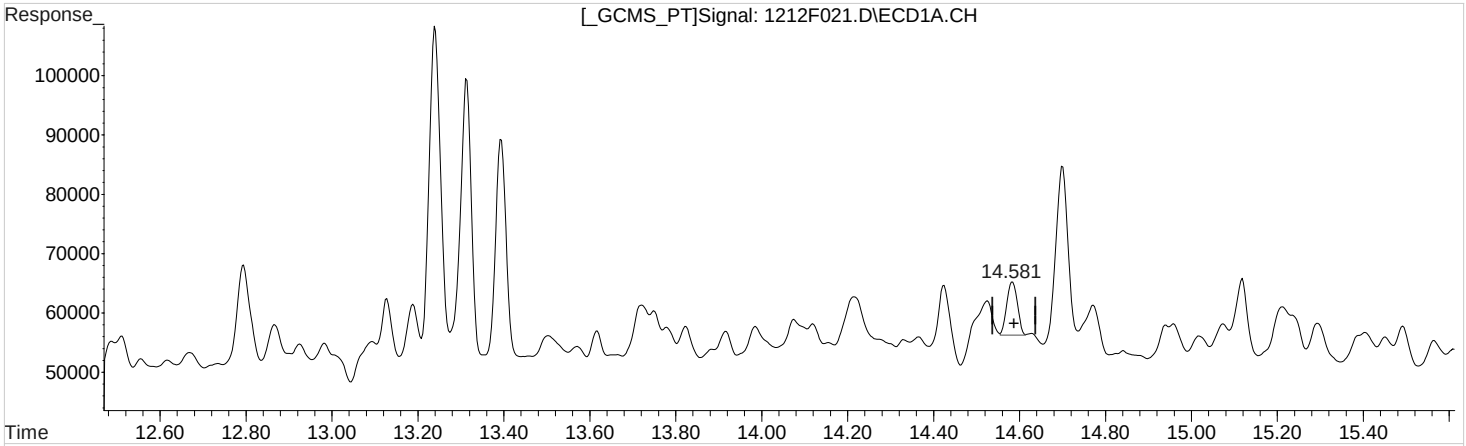
Quantitation Report (Qedit)

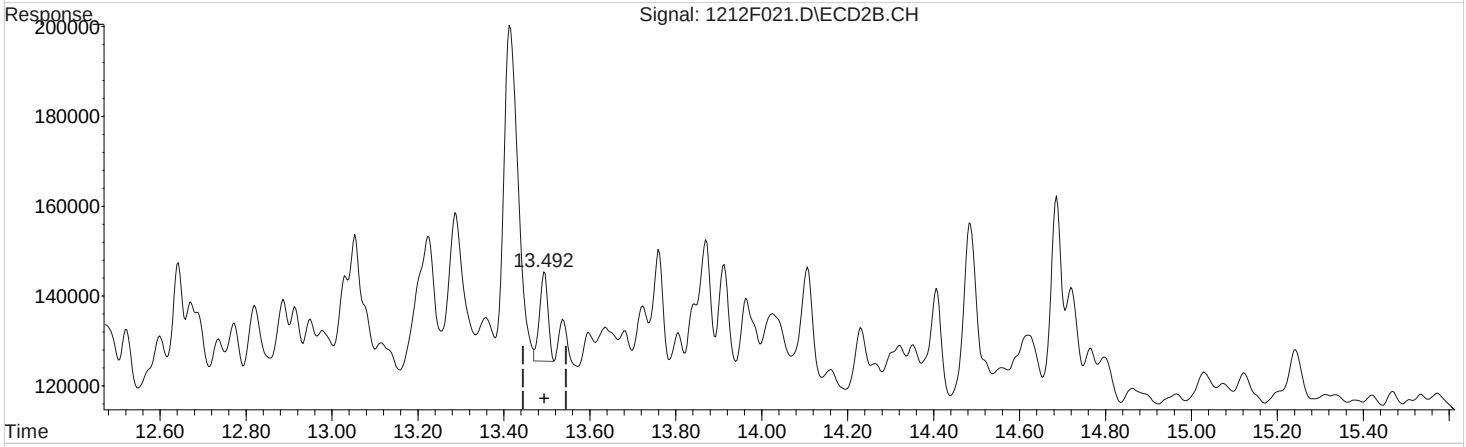
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F021.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:22 pm Operator: MC
Sample : K1811120-001DMS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:47 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(31) Toxaphene {2}

14.581min 257.584 ug/L m

response 15388

Manual Integration:

After

Baseline/Shoulder

12/13/18

(31) Toxaphene {2} #2

13.492min 208.236 ug/L m

response 26932

(+) = Expected Retention Time

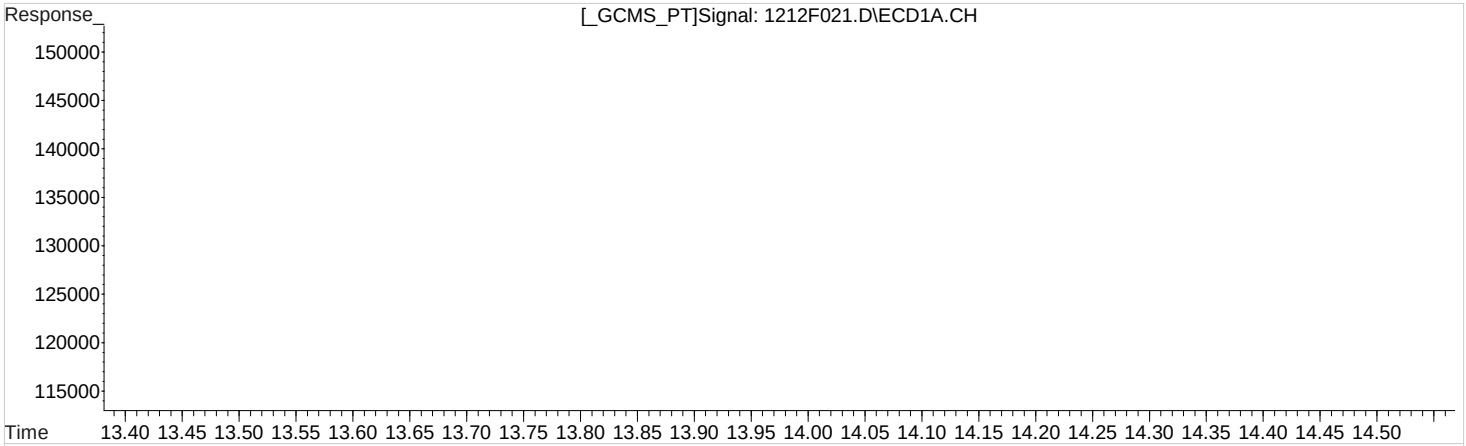
Quantitation Report (Qedit)

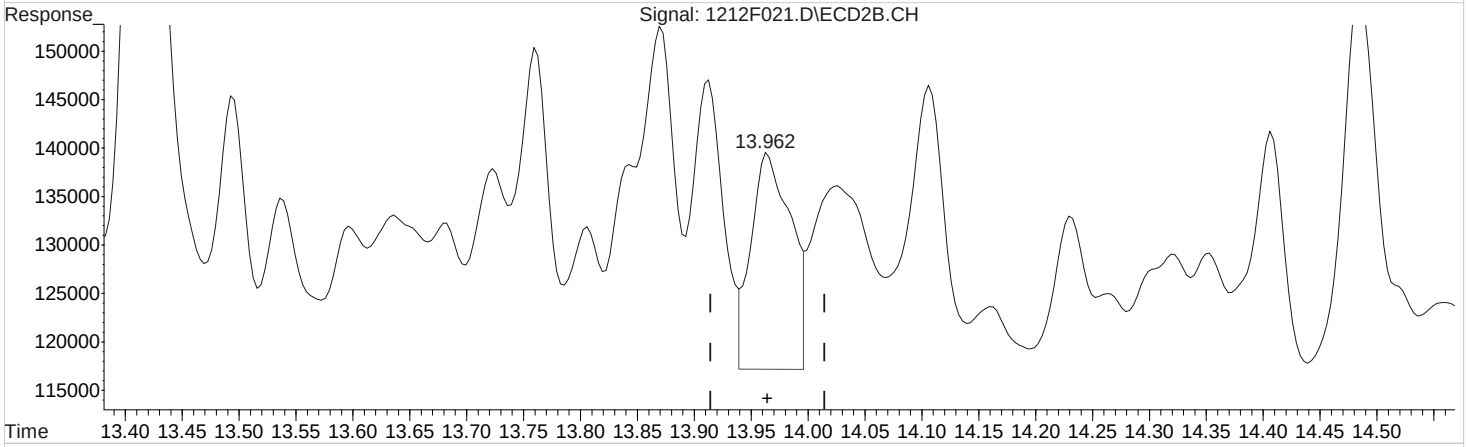
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F021.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:22 pm Operator: MC
Sample : K1811120-001DMS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:47 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(32) Toxaphene {3}

15.118min 230.541 ug/L

response 24901

(32) Toxaphene {3} #2

13.962min 483.085 ug/L

response 55201

Manual Integration:

Before

12/13/18

(+) = Expected Retention Time

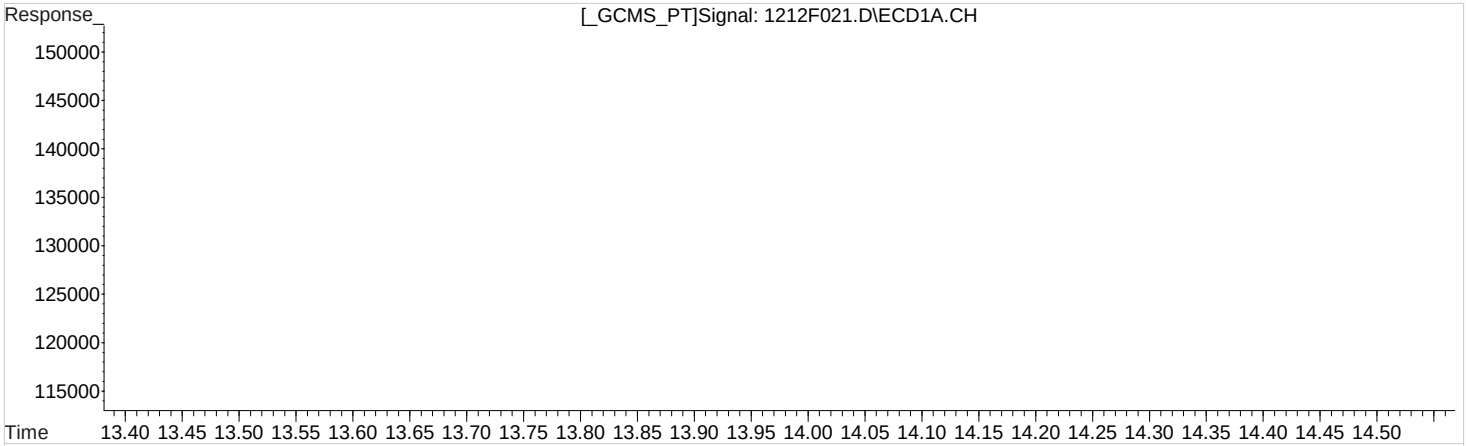
Quantitation Report (Qedit)

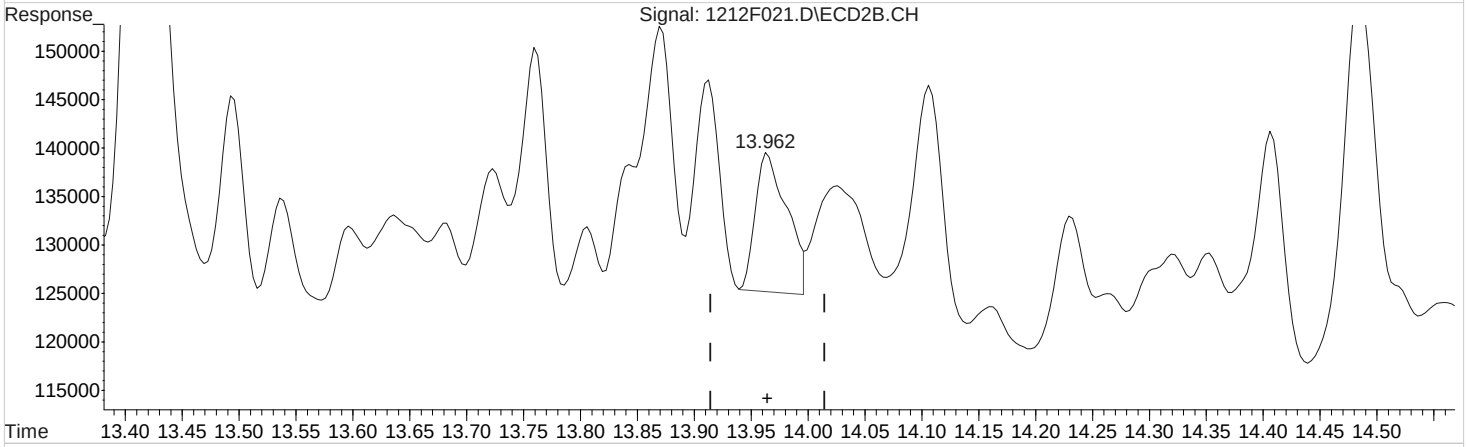
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F021.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:22 pm Operator: MC
Sample : K1811120-001DMS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:47 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(32) Toxaphene {3}

15.118min 230.541 ug/L

response 24901

(32) Toxaphene {3} #2

13.962min 245.371 ug/L m

response 28038

Manual Integration:

After

Baseline/Shoulder

12/13/18

(+) = Expected Retention Time

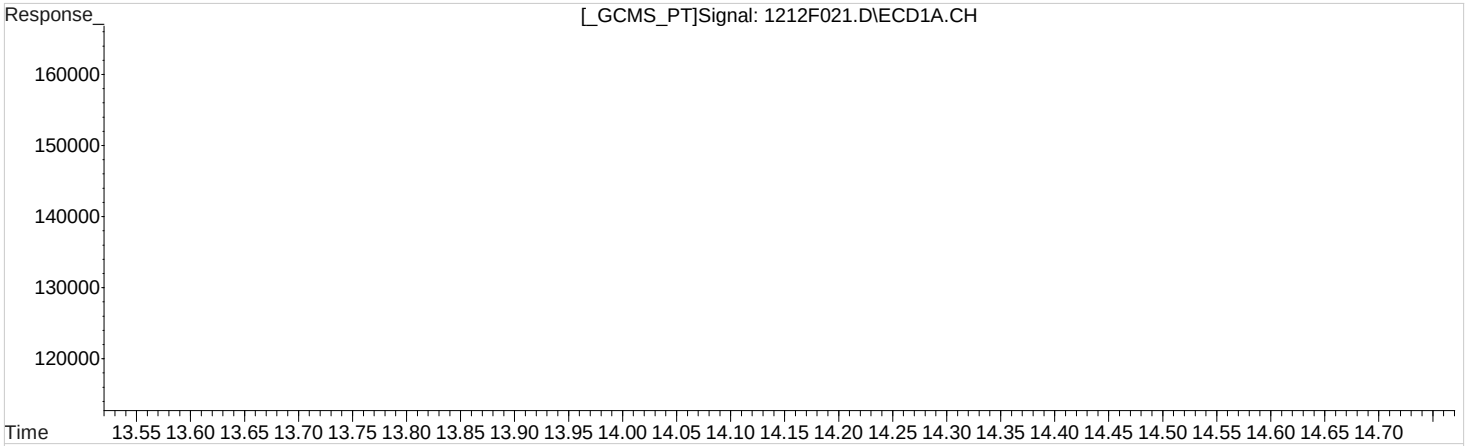
Quantitation Report (Qedit)

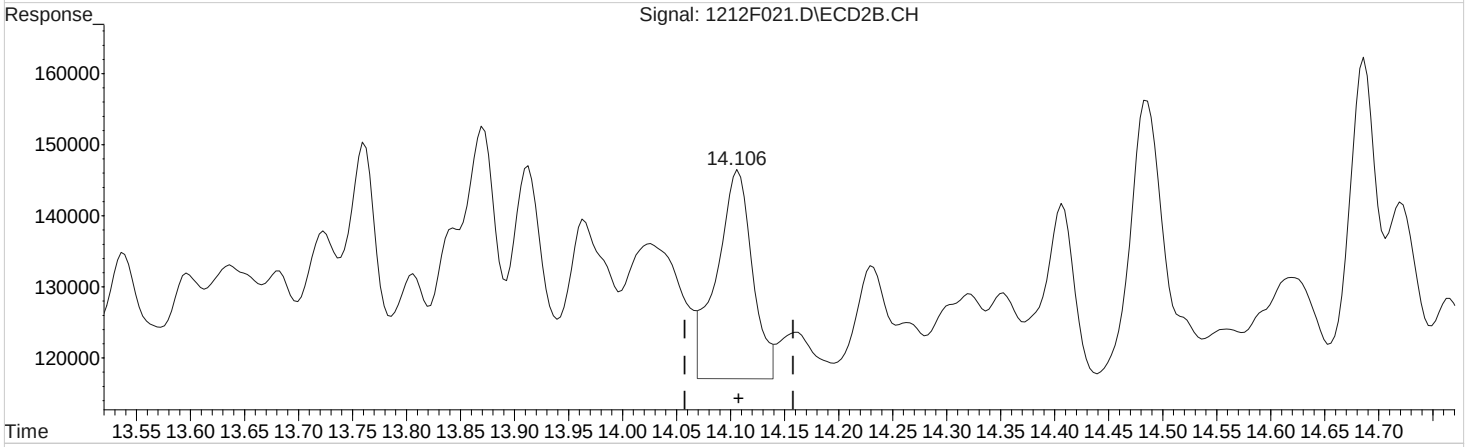
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F021.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:22 pm Operator: MC
Sample : K1811120-001DMS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:47 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(33) Toxaphene {4}

15.291min 334.322 ug/L

response 14796

(33) Toxaphene {4} #2

14.106min 312.598 ug/L

response 66773

Manual Integration:

Before

12/13/18

(+) = Expected Retention Time

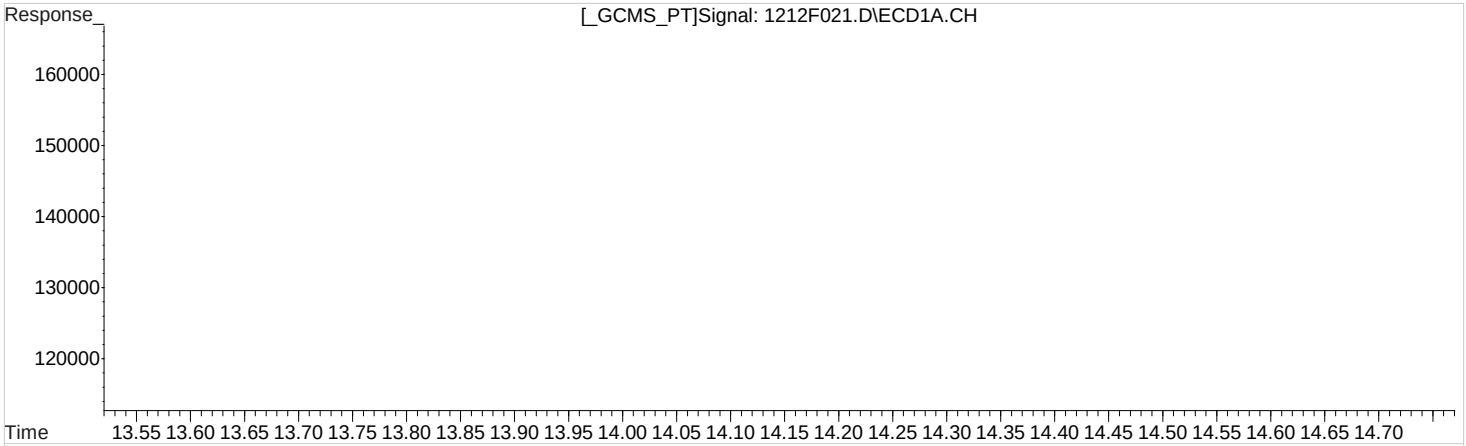
Quantitation Report (Qedit)

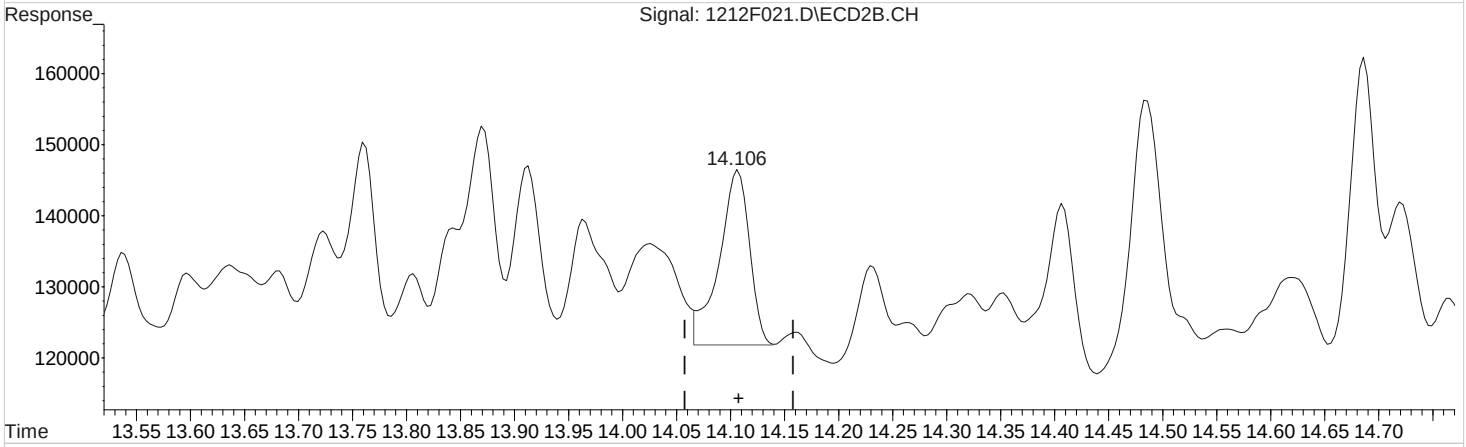
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F021.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:22 pm Operator: MC
Sample : K1811120-001DMS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:47 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(33) Toxaphene {4}

15.291min 334.322 ug/L

response 14796

(33) Toxaphene {4} #2

14.106min 223.654 ug/L m

response 47774

Manual Integration:

After

Baseline/Shoulder

12/13/18

(+) = Expected Retention Time

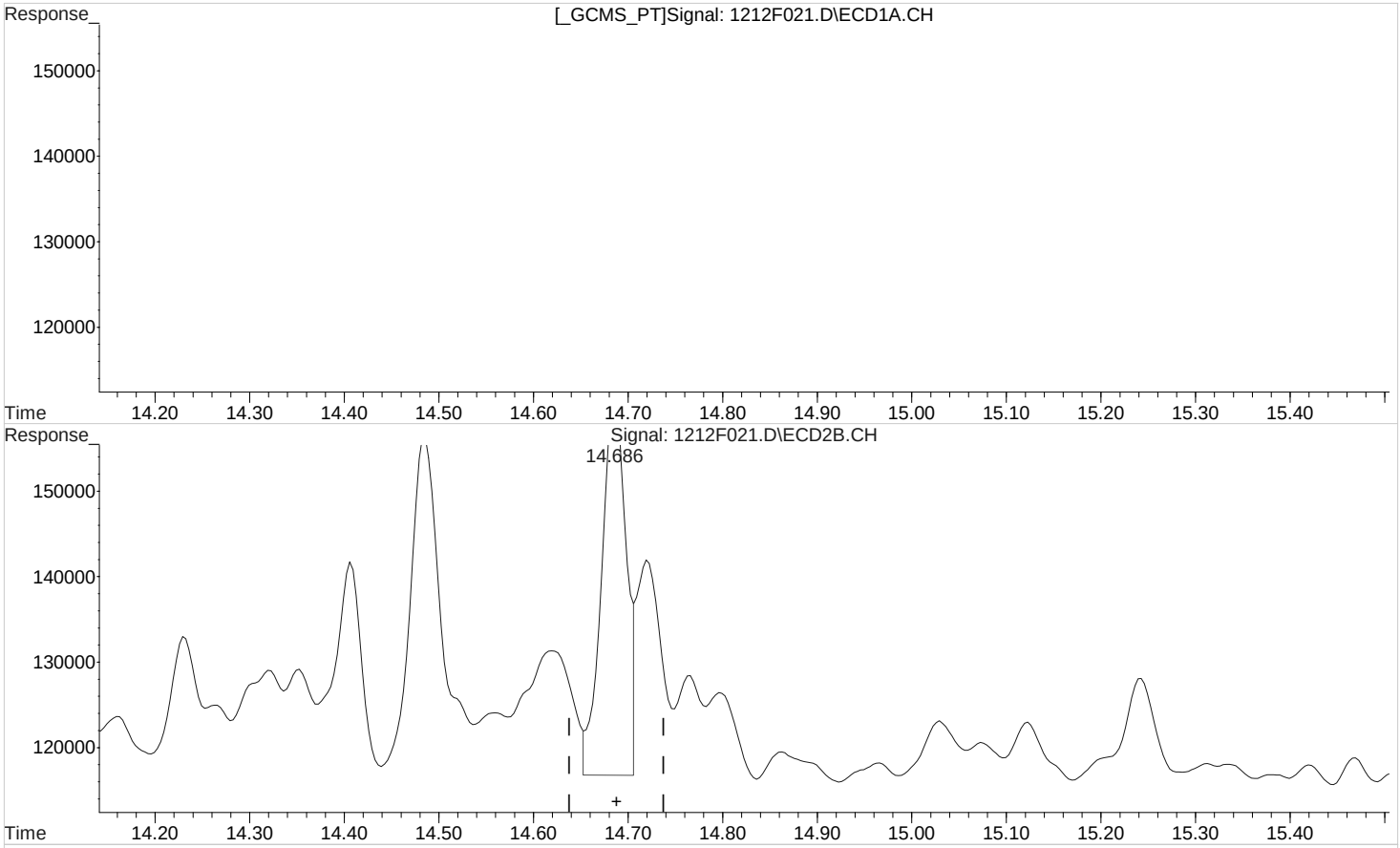
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F021.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:22 pm Operator: MC
Sample : K1811120-001DMS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(35) Toxaphene {6}

15.991min 221.099 ug/L

response 36022

(35) Toxaphene {6} #2

14.686min 245.103 ug/L

response 82020

Manual Integration:

Before

12/13/18

(+) = Expected Retention Time

020211

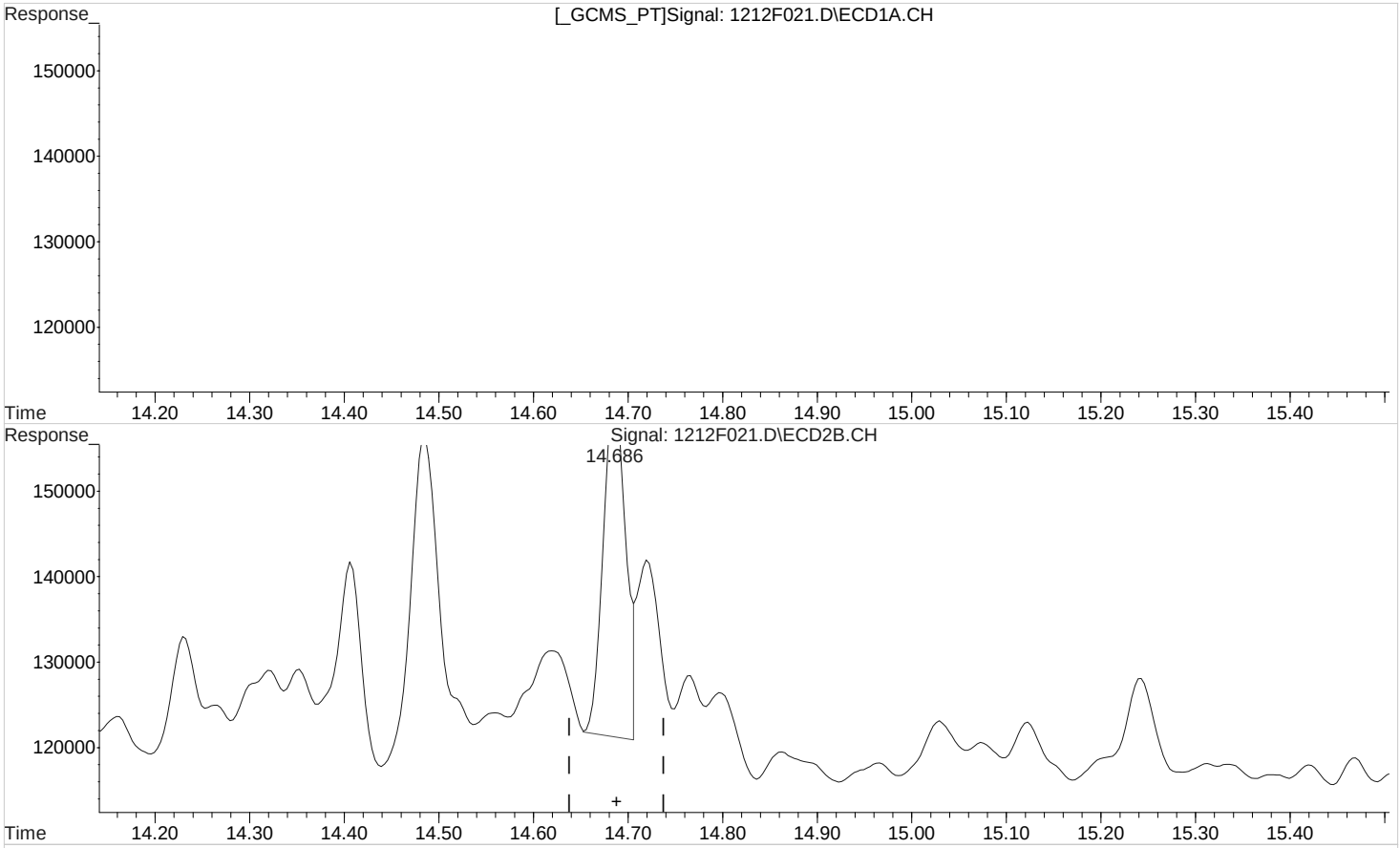
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F021.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:22 pm Operator: MC
Sample : K1811120-001DMS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:47 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(35) Toxaphene {6}

15.991min 221.099 ug/L

response 36022

Manual Integration:

After

Baseline/Shoulder

12/13/18

(35) Toxaphene {6} #2

14.686min 200.941 ug/L m

response 67242

(+) = Expected Retention Time

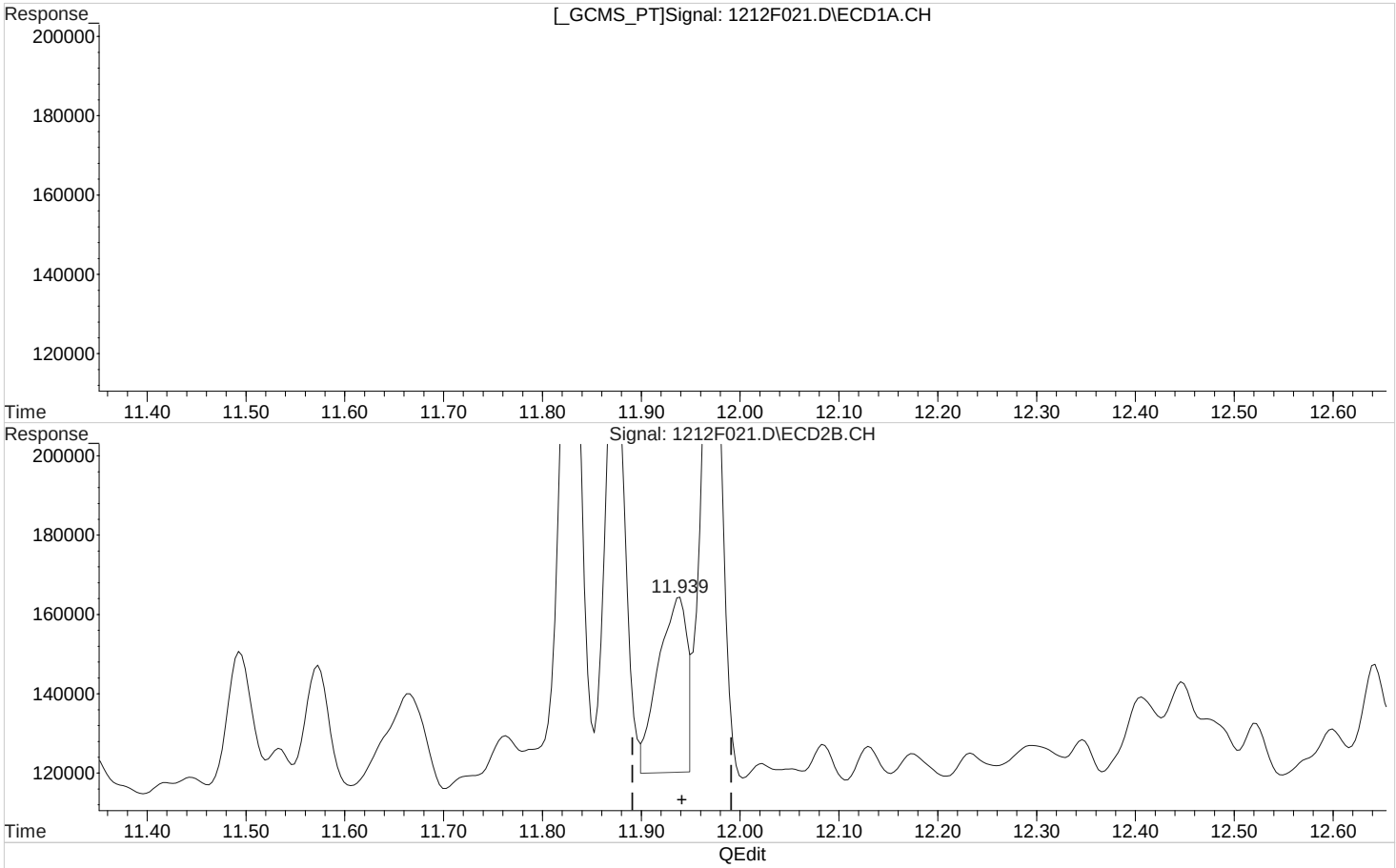
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F021.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:22 pm Operator: MC
Sample : K1811120-001DMS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
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Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(41) Chlordane {5}

13.311min 110.763 ug/L

response 84915

(41) Chlordane {5} #2

11.939min 138.014 ug/L

response 90835

Manual Integration:

Before

12/13/18

(+) = Expected Retention Time

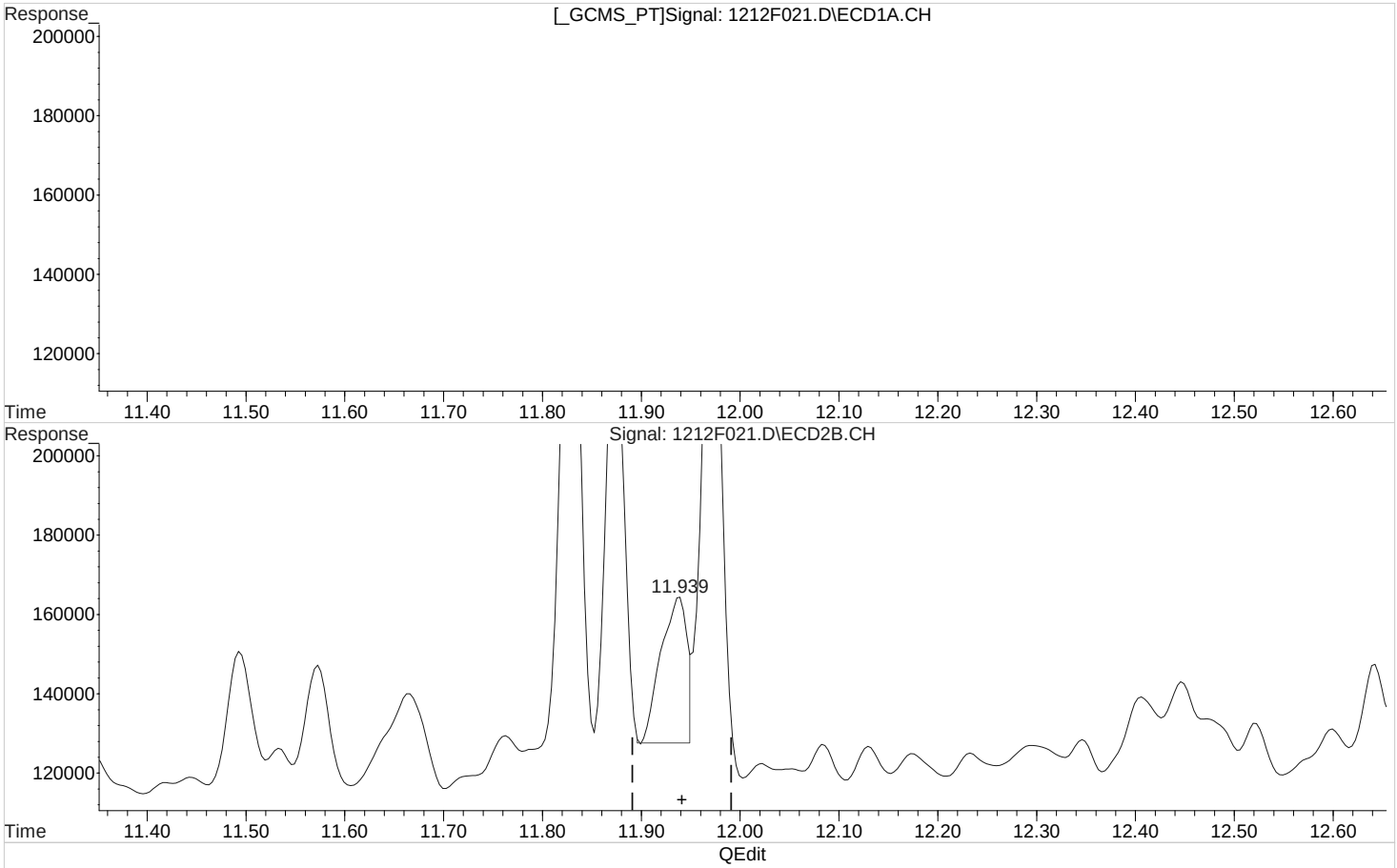
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F021.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 7:22 pm Operator: MC
Sample : K1811120-001DMS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 08:55:47 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(41) Chlordane {5}

13.311min 110.763 ug/L

response 84915

(41) Chlordane {5} #2

11.939min 103.840 ug/L m

response 68343

Manual Integration:

After

Baseline/Shoulder

12/13/18

(+) = Expected Retention Time

1st MC 12/12/18
2nd TP 12/13/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F011.D
Lab ID: KWG1806145-5
RunType: LCS
Matrix: SOIL

Date Acquired: 12/12/2018 14:25
Date Quantitated: 12/12/2018 15:01
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	2,4'-DDE	27.0	NA	20	ICVOK
	2,4'-DDT	20.4	NA	20	ICVOK
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	523283	2093132	NR
	1-Bromo-2-nitrobenzene {3}	0	)284.071428	21136.28571	NR
Surrogates	Tetrachloro-m-xylene	51	70	130	ODL
	Decachlorobiphenyl	66	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/12/18
2nd TP 12/13/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F011.D\1212F011C.D
Lab ID: KWG1806145-5
RunType: LCS
Matrix: SOIL

Date Acquired: 12/12/2018 14:25
Date Quantitated: 12/12/2018 15:01
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	17017.33333	58069.33333	NR
	1-Bromo-2-nitrobenzene {3}	0	12049.14285	48196.57142	NR
Surrogates	Tetrachloro-m-xylene	50	70	130	ODL
	Decachlorobiphenyl	67	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F011.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F011.D\1212F011c.d			**Vial:**	9
Acqu Date:	12/12/2018 14:25	**Quant Date:**	12/12/2018 15:01	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
		Prep Date:	11/27/2018	**Pre-Prep Date:**	11/20/2018
Prep Ref:	1704573				

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05	5.34	-0.04	586048	2070136	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.73		7.10	-0.01	33367	84004	2.57	2.48			51 *
						%Recovery =		51 *	50 *	**Limits =**	70-130	
1	Decachlorobiphenyl	18.42		16.86		43996	95284	3.31	3.35			67 *
						%Recovery =		66 *	67 *	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC	9.58	8.33	64970	173368	6.25	5.99	0.000312	0.000300	**0.000300**
1	Hexachlorobenzene	9.73	8.11	47240	117875	3.17	2.94	0.000159	0.000147	**0.000147**
1	beta-BHC	10.85	9.61	32482	82969	6.36	5.80	0.000318	0.000290	**0.000290**
1	gamma-BHC (Lindane)	10.25	9.06 -0.01	58169	160602	6.51	6.04	0.000326	0.000302	**0.000302**
1	delta-BHC	11.35	10.13	59725	164352	6.46	6.45	0.000323	0.000323	**0.000323**
1	Heptachlor	11.44	9.75	46140	154187	5.63	5.41	0.000282	0.000271	**0.000271**
1	Aldrin	11.99	10.33	51981	131750	5.13	4.93	0.000257	0.000246	**0.000246**
1	Isodrin	12.52	11.12	37285	97555	4.39	4.20	0.000220	0.000210	**0.000210**
1	Heptachlor Epoxide	12.71	11.41	56561	148029	6.16	5.80	0.000308	0.000290	**0.000290**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F011.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F011.D\1212F011c.d			**Vial:**	9
Acqu Date:	12/12/2018 14:25	**Quant Date:**	12/12/2018 15:01	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane	13.23	11.82	59441	153561	6.37	6.13	0.000318	0.000307	**0.000307**
1	Endosulfan I	13.36 +0.01	12.03	51139	130329	5.46	5.57	0.000273	0.000279	**0.000273**
1	alpha-Chlordane	13.31 +0.01	11.97	62152	155328	6.19	6.16	0.000310	0.000308	**0.000308**
1	Dieldrin	13.77	12.47	56342	158659**m**	5.92	6.64	0.000296	0.000332	**0.000296**
1	4,4'-DDE	13.59 +0.01	12.33	66233	167563**m**	6.28	6.50	0.000314	0.000325	**0.000314**
1	Endrin	14.14	12.94	53890	146325	6.03	6.21	0.000302	0.000311	**0.000302**
1	Endosulfan II	14.59	13.38	50754**m**	128000	6.82	5.86	0.000341	0.000293	**0.000293**
1	4,4'-DDD	14.42	13.21	47891**m**	122646	6.71	6.43	0.000335	0.000321	**0.000321**
1	Endrin Aldehyde	14.77	13.74 +0.01	47650	118271	5.90	5.95	0.000295	0.000297	**0.000295**
1	Endosulfan Sulfate	15.24	14.06	51243	132319**m**	6.01	6.06	0.000301	0.000303	**0.000301**
1	4,4'-DDT	14.92	13.62	40907	121229	6.61	6.90	0.000330	0.000345	**0.000330**
1	Endrin Ketone	15.93 +0.01	14.99	52792	144927	6.26	6.00	0.000313	0.000300	**0.000300**
1	Methoxychlor	15.66 -0.01	14.72	24760	72743	7.41	6.68	0.000371	0.000334	**0.000334**
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	0.0000	0.0000	0.00200U	0.00200U	NR
2	Toxaphene {1}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {3}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000	0.0020U	0.0020U	
	Chlordane			0	0	0.0000	0.0000	0.00100U	0.00100U	NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000	0.0010U	0.0010U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/12/18
2nd TP 12/13/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F011.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F011.D\1212F011c.d			**Vial:**	9
Acqu Date:	12/12/2018 14:25	**Quant Date:**	12/12/2018 15:01	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
		Prep Date:	11/27/2018	**Pre-Prep Date:**	11/20/2018
Prep Ref:	1704573				

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1778
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05	5.34	-0.04	586048	2070136	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.73		7.10	-0.01	33367	84004	2.57	2.48			51 *
						%Recovery =		51 *	50 *	**Limits =**	70-130	
1	Decachlorobiphenyl	18.42		16.86		43996	95284	3.31	3.35			67 *
						%Recovery =		66 *	67 *	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC	9.58		8.33		64970	173368	6.25	5.99	0.312	0.300	**0.312**
1	Hexachlorobenzene	9.73		8.11		47240	117875	3.17	2.94	0.159	0.147	**0.159**
1	beta-BHC	10.85		9.61		32482	82969	6.36	5.80	0.318	0.290	**0.318**
1	gamma-BHC (Lindane)	10.25		9.06	-0.01	58169	160602	6.51	6.04	0.326	0.302	**0.302**
1	delta-BHC	11.35		10.13		59725	164352	6.46	6.45	0.323	0.323	**0.323**
1	Heptachlor	11.44		9.75		46140	154187	5.63	5.41	0.282	0.271	**0.271**
1	Aldrin	11.99		10.33		51981	131750	5.13	4.93	0.257	0.246	**0.257**
1	Isodrin	12.52		11.12		37285	97555	4.39	4.20	0.220	0.210	**0.220**
1	Heptachlor Epoxide	12.71		11.41		56561	148029	6.16	5.80	0.308	0.290	**0.290**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/12/18
2nd TP 12/13/18

Data File #1:	J:\GC23\DATA\121218\1212F011.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F011.D\1212F011c.d			**Vial:**	9
Acqu Date:	12/12/2018 14:25	**Quant Date:**	12/12/2018 15:01	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane	13.23	11.82	59441	153561	6.37	6.13	0.318	0.307	**0.318**
1	Endosulfan I	13.36 +0.01	12.03	51139	130329	5.46	5.57	0.273	0.279	**0.273**
1	alpha-Chlordane	13.31 +0.01	11.97	62152	155328	6.19	6.16	0.310	0.308	**0.310**
1	Dieldrin	13.77	12.47	56342	158659**m**	5.92	6.64	0.296	0.332	**0.296**
1	4,4'-DDE	13.59 +0.01	12.33	66233	167563**m**	6.28	6.50	0.314	0.325	**0.314**
1	Endrin	14.14	12.94	53890	146325	6.03	6.21	0.302	0.311	**0.302**
1	Endosulfan II	14.59	13.38	50754**m**	128000	6.82	5.86	0.341	0.293	**0.341**
1	4,4'-DDD	14.42	13.21	47891**m**	122646	6.71	6.43	0.335	0.321	**0.335**
1	Endrin Aldehyde	14.77	13.74 +0.01	47650	118271	5.90	5.95	0.295	0.297	**0.295**
1	Endosulfan Sulfate	15.24	14.06	51243	132319**m**	6.01	6.06	0.301	0.303	**0.301**
1	4,4'-DDT	14.92	13.62	40907	121229	6.61	6.90	0.330	0.345	**0.330**
1	Endrin Ketone	15.93 +0.01	14.99	52792	144927	6.26	6.00	0.313	0.300	**0.313**
1	Methoxychlor	15.66 -0.01	14.72	24760	72743	7.41	6.68	0.371	0.334	**0.334**
1	2,4'-DDE			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDD			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDT			0**d**	0**d**	0.0000	0.0000	0.100U	0.100U	0.100U
	Toxaphene			0	0	0.0000	0.0000	2.00U	2.00U	NR
2	Toxaphene {1}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {2}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {3}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {4}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {5}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
2	Toxaphene {6}			0**d**	0**d**	0.0000	0.0000	2.00U	2.00U	
	Chlordane			0	0	0.0000	0.0000	1.00U	1.00U	NR
3	Chlordane {1}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {2}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {3}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {4}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {5}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	
3	Chlordane {6}			0**d**	0**d**	0.0000	0.0000	1.00U	1.00U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F011.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:25 pm Operator: MC
Sample : KWG1806145-LCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:01:53 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.008	5.339	586048	2070136	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.735	7.103	33367	84004	2.570	2.477
28) s	Decachlor...	18.418	16.859	43996	95284	3.308	3.353
	Target Compounds						
3)	alpha-BHC	9.578	8.326	64970	173368	6.245	5.991
4)	Hexachlor...	9.735	8.109	47240	117875	3.172	2.941
5)	beta-BHC	10.855	9.606	32482	82969	6.359	5.800
6)	gamma-BHC...	10.248	9.063	58169	160602	6.512	6.041
7)	delta-BHC	11.355	10.126	59725	164352	6.461	6.451
8)	Heptachlor	11.438	9.746	46140	154187	5.633	5.411
9)	Aldrin	11.991	10.329	51981	131750	5.133	4.928
10)	Isodrin	12.521	11.119	37285	97555	4.394	4.198
11)	Heptachlo...	12.715	11.409	56561	148029	6.157	5.801
12)	gamma-Chl...	13.231	11.823	59441	153561	6.366	6.133
13)	Endosulfan I	13.358	12.029	51139	130329	5.463	5.573
14)	alpha-Chl...	13.308	11.966	62152	155328	6.190	6.162
15)	Dieldrin	13.775	12.469	56342	158659	5.918	6.641m
16)	4,4'-DDE	13.588	12.326	66233	167563	6.275	6.499m
17)	Endrin	14.141	12.943	53890	146325	6.032	6.213
18)	Endosulfa...	14.591	13.376	50754	128000	6.822m	5.864
19)	4,4'-DDD	14.421	13.206	47891	122646	6.706m	6.426
20)	Endrin Al...	14.771	13.736	47650	118271	5.898	5.946
21)	Endosulfa...	15.245	14.059	51243	132319	6.014	6.060m
22)	4,4'-DDT	14.918	13.623	40907	121229	6.607	6.902
23)	Endrin Ke...	15.928	14.989	52792	144927	6.260	6.004
24)	Methoxychlor	15.665	14.719	24760	72743	7.413	6.678
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

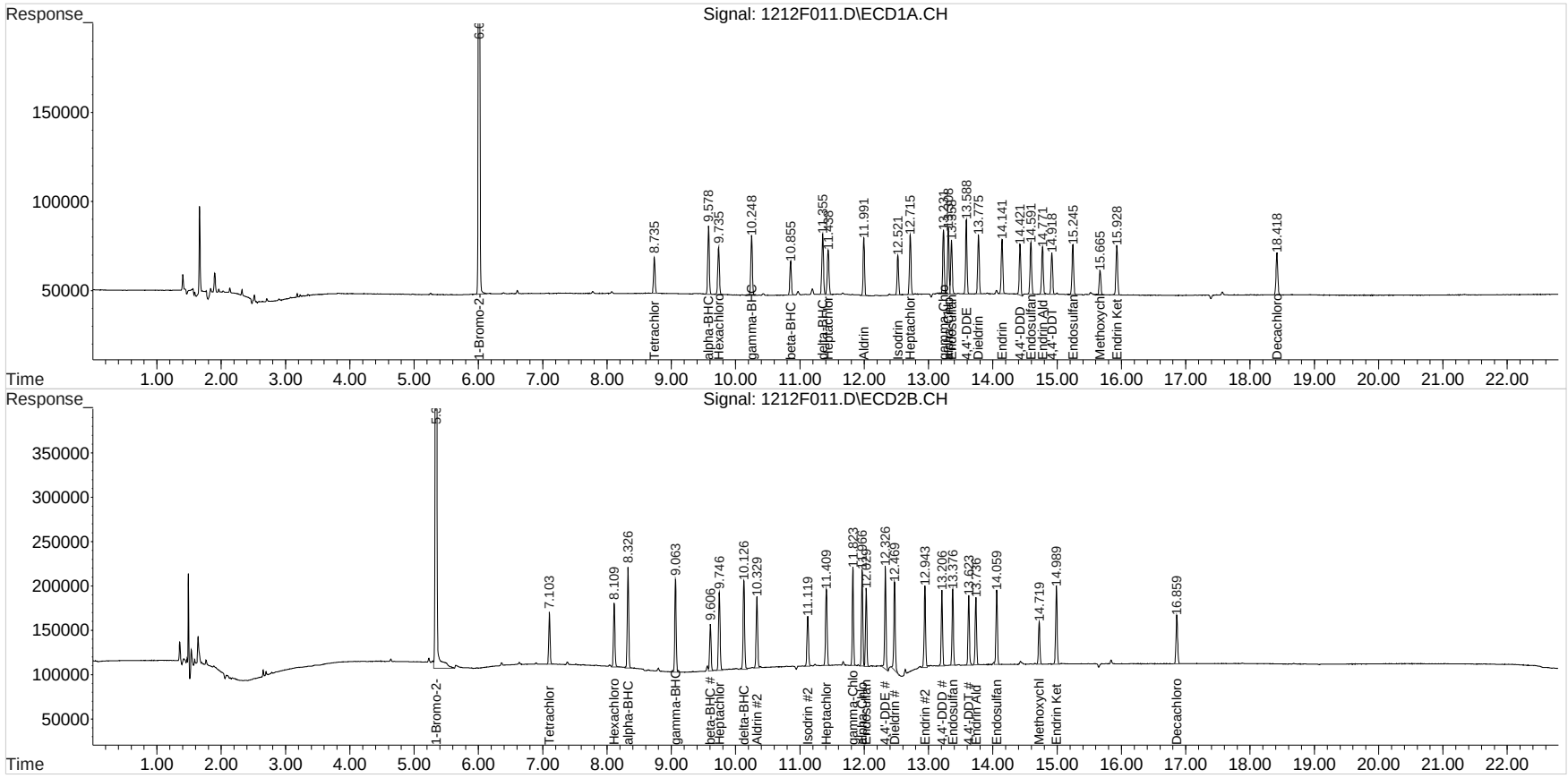
1st MC 12/12/18
2nd TP 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F011.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:25 pm Operator: MC
Sample : KWG1806145-LCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:01:53 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020222

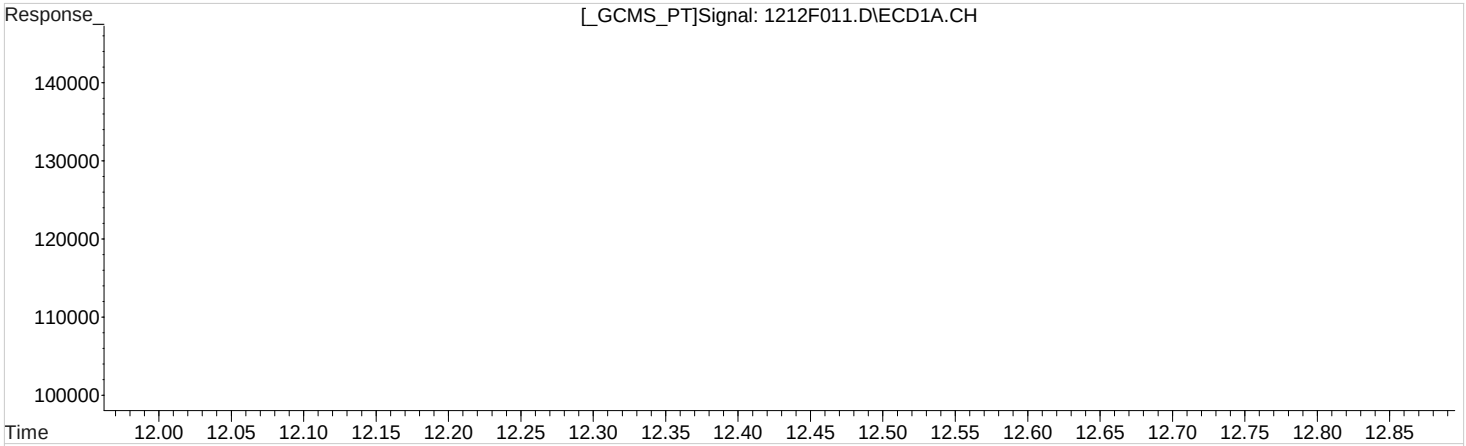
Quantitation Report (Qedit)

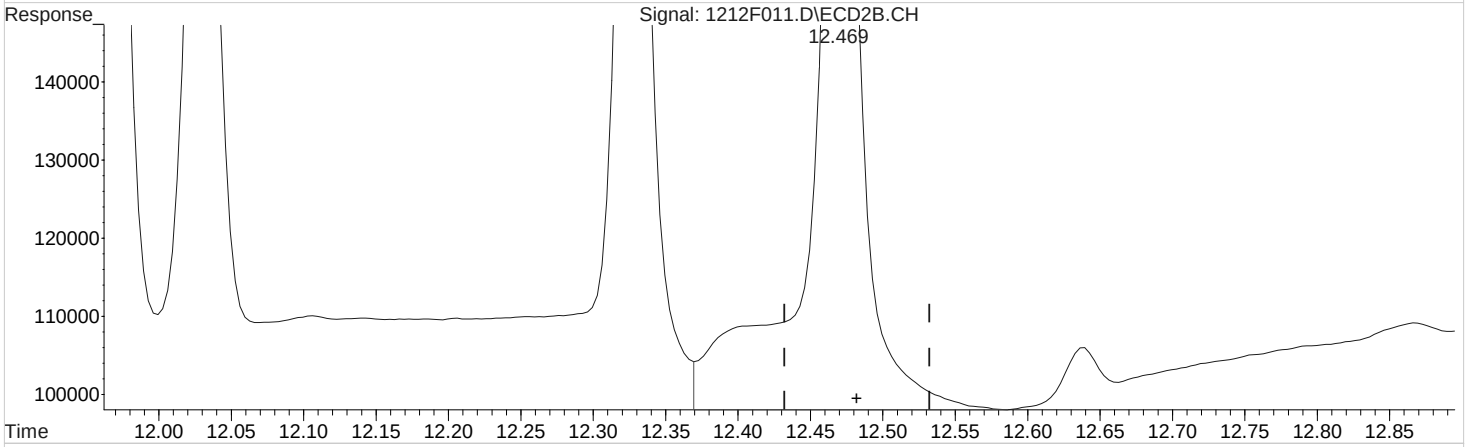
1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F011.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:25 pm Operator: MC
Sample : KWG1806145-LCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 14:59:54 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(15) Dieldrin

13.775min 5.918 ug/L

response 56342

(15) Dieldrin #2

12.469min 9.790 ug/L

response 233867

Manual Integration:

Before

12/12/18

(+) = Expected Retention Time

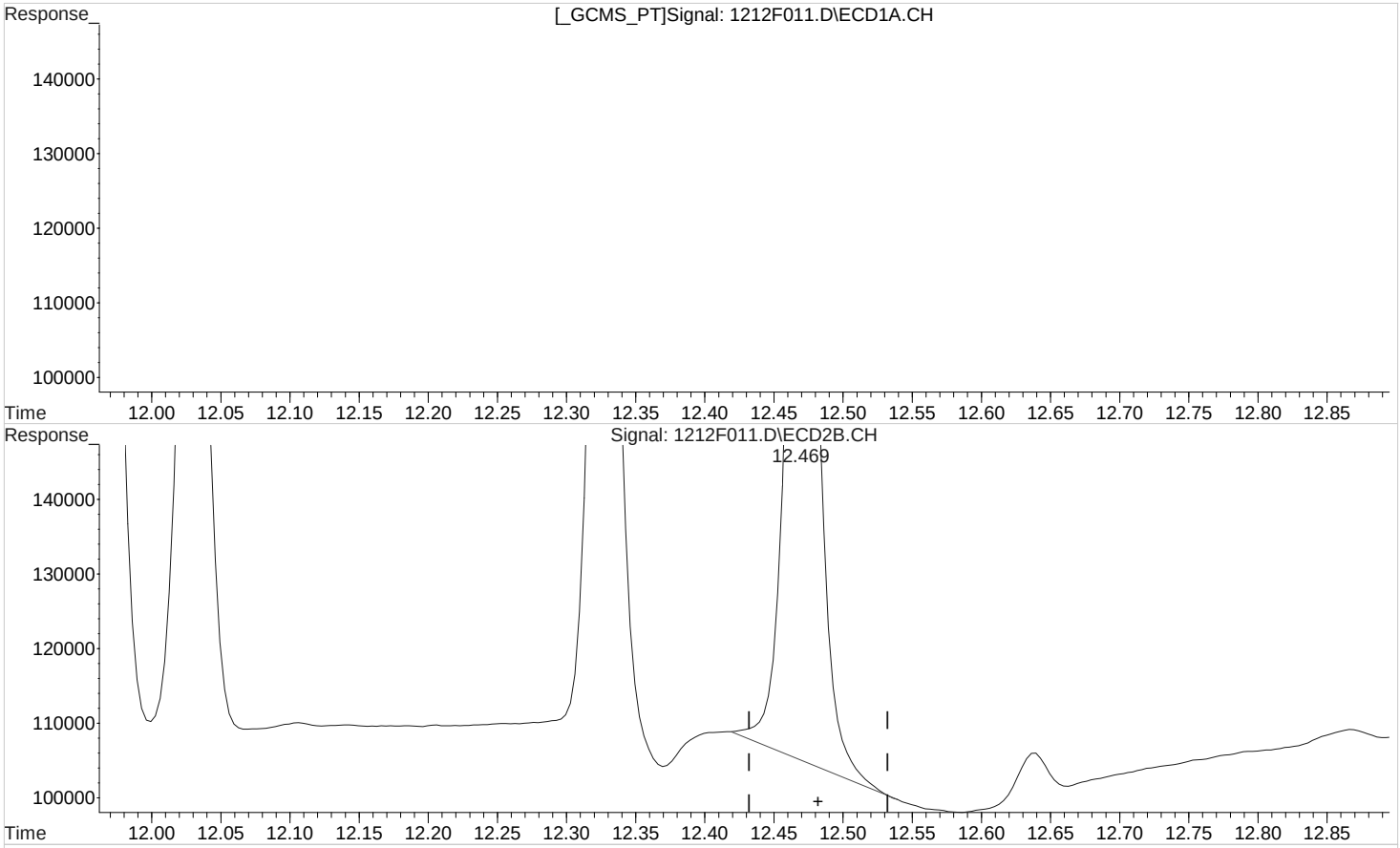
Quantitation Report (Qedit)

1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F011.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:25 pm Operator: MC
Sample : KWG1806145-LCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 14:59:54 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(15) Dieldrin

13.775min 5.918 ug/L

response 56342

Manual Integration:

After

Baseline/Shoulder

12/12/18

(15) Dieldrin #2

12.469min 6.641 ug/L m

response 158659

(+) = Expected Retention Time

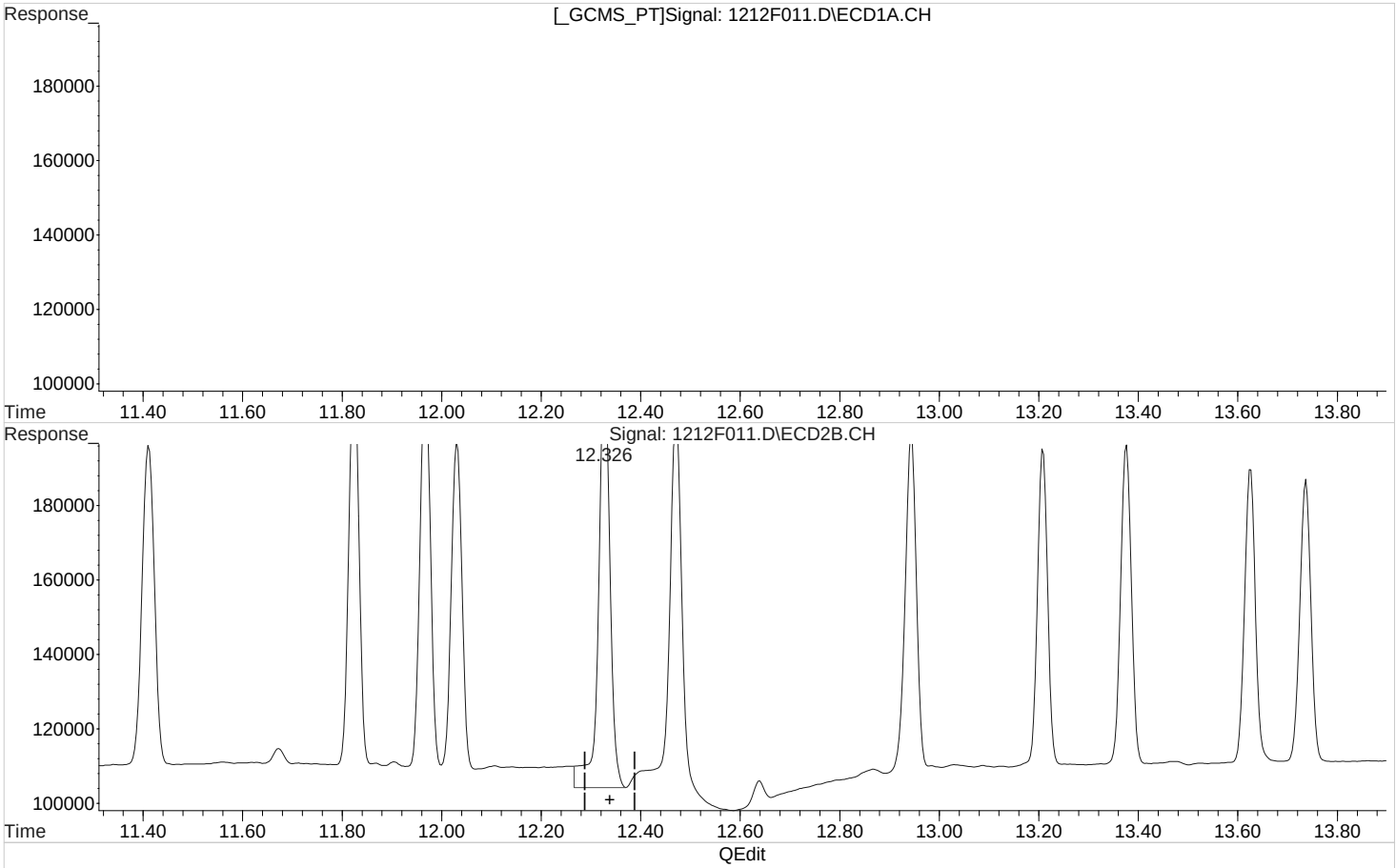
Quantitation Report (Qedit)

1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F011.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:25 pm Operator: MC
Sample : KWG1806145-LCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 14:59:54 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(16) 4,4'-DDE

13.588min 6.275 ug/L

response 66233

(16) 4,4'-DDE #2

12.326min 7.147 ug/L

response 184279

Manual Integration:

Before

12/12/18

(+) = Expected Retention Time

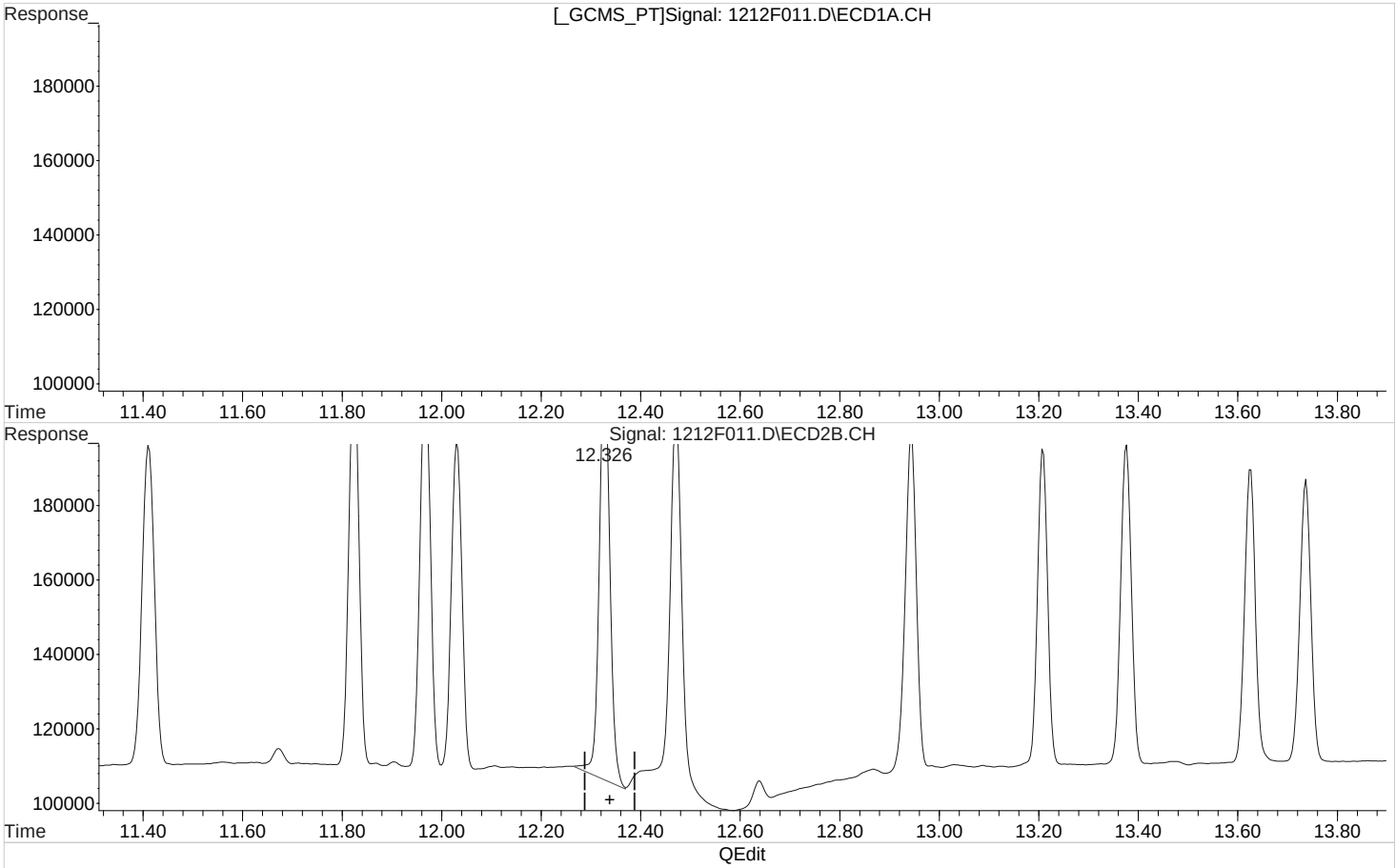
Quantitation Report (Qedit)

1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F011.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:25 pm Operator: MC
Sample : KWG1806145-LCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 14:59:54 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(16) 4,4'-DDE

13.588min 6.275 ug/L

response 66233

(16) 4,4'-DDE #2

12.326min 6.499 ug/L m

response 167563

Manual Integration:

After

Baseline/Shoulder

12/12/18

(+) = Expected Retention Time

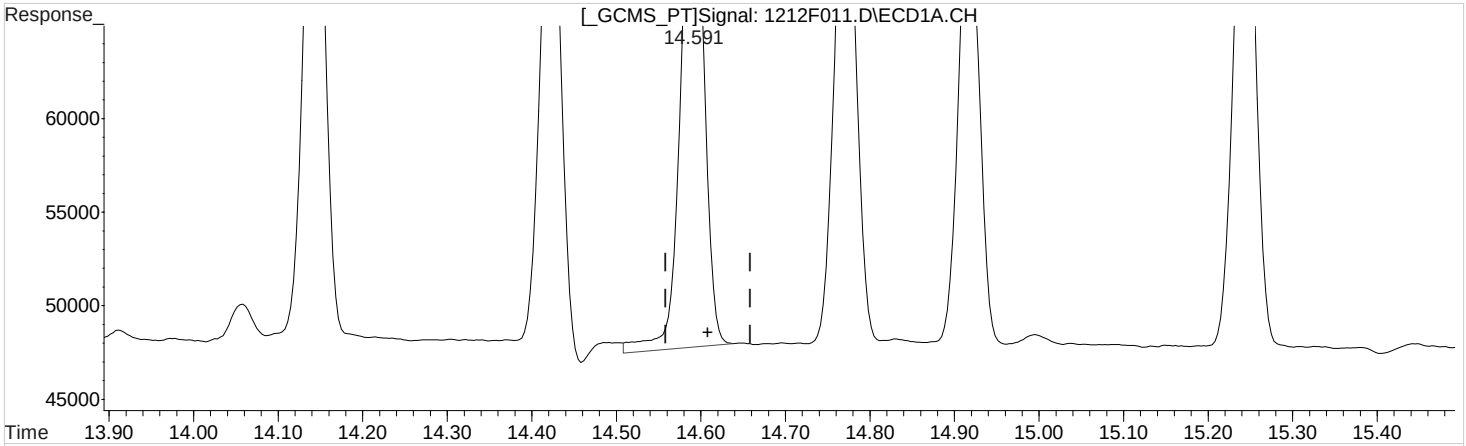
Quantitation Report (Qedit)

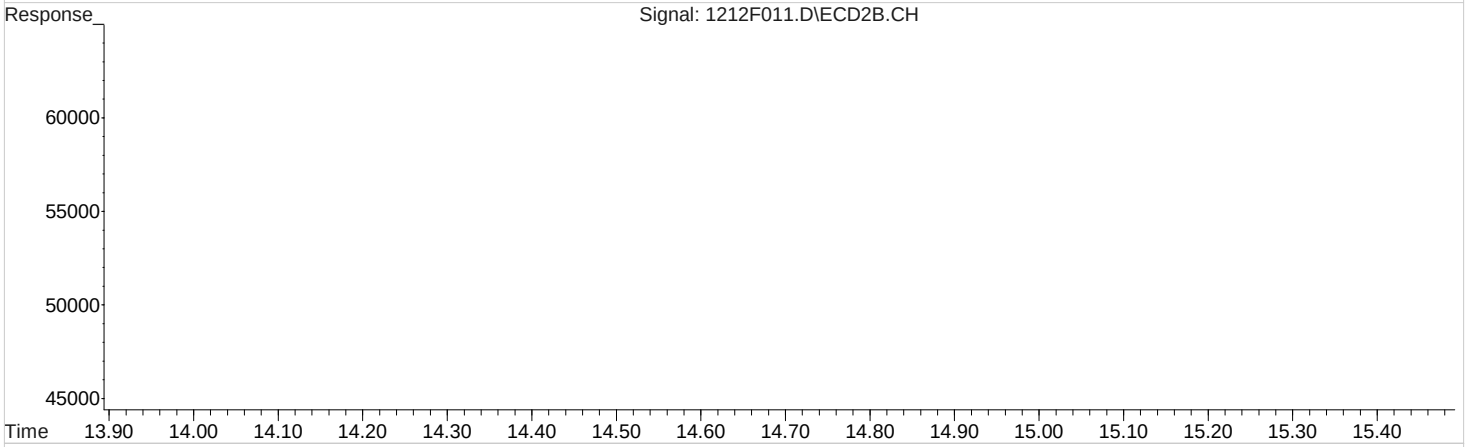
1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F011.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:25 pm Operator: MC
Sample : KWG1806145-LCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 14:59:54 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(18) Endosulfan II

14.591min 7.138 ug/L

response 52939

Manual Integration:

Before

12/12/18

(18) Endosulfan II #2

13.376min 5.864 ug/L

response 128000

(+) = Expected Retention Time

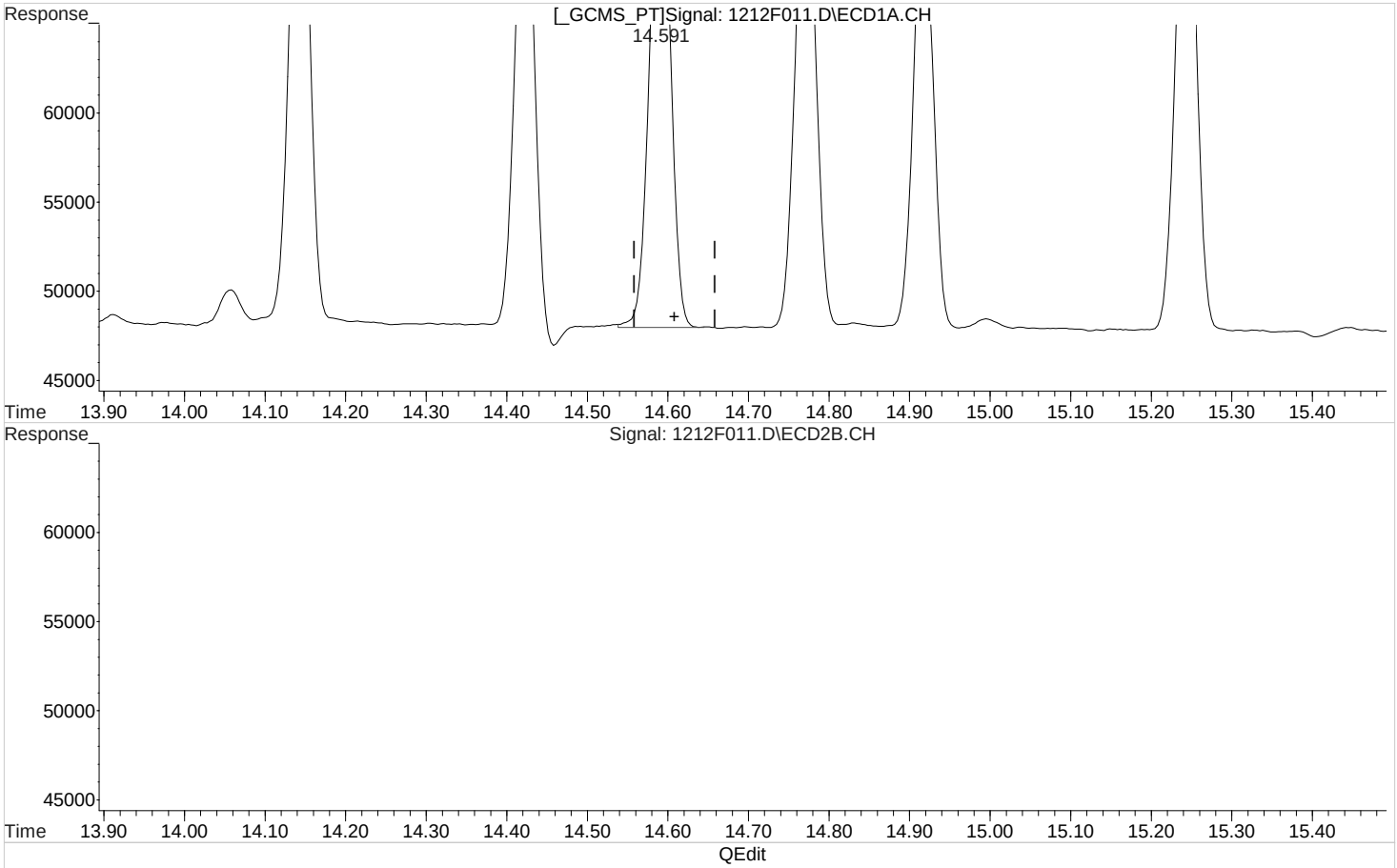
Quantitation Report (Qedit)

1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F011.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:25 pm Operator: MC
Sample : KWG1806145-LCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 14:59:54 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(18) Endosulfan II

14.591min 6.822 ug/L m

response 50754

Manual Integration:

After

Baseline/Shoulder

12/12/18

(18) Endosulfan II #2

13.376min 5.864 ug/L

response 128000

(+) = Expected Retention Time

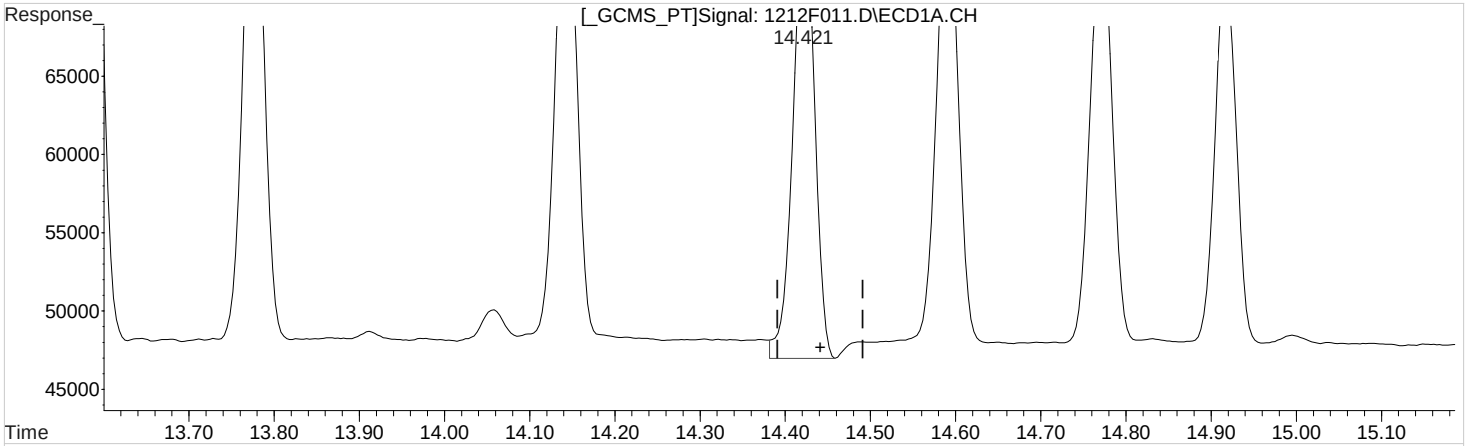
Quantitation Report (Qedit)

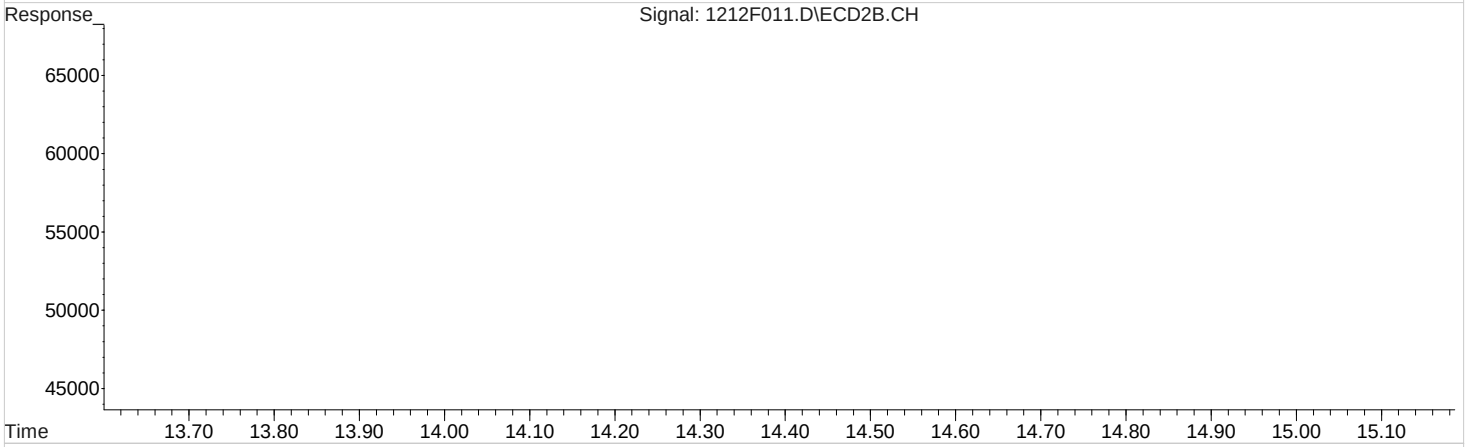
1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F011.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:25 pm Operator: MC
Sample : KWG1806145-LCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 14:59:54 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(19) 4,4'-DDD

14.421min 7.046 ug/L

response 50316

(19) 4,4'-DDD #2

13.206min 6.426 ug/L

response 122646

Manual Integration:

Before

12/12/18

(+) = Expected Retention Time

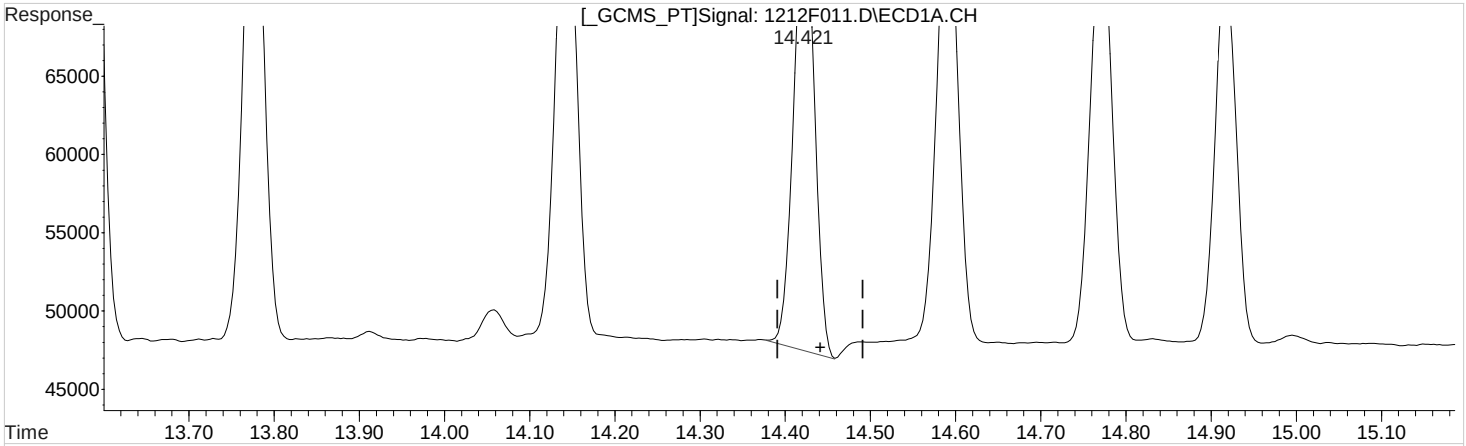
Quantitation Report (Qedit)

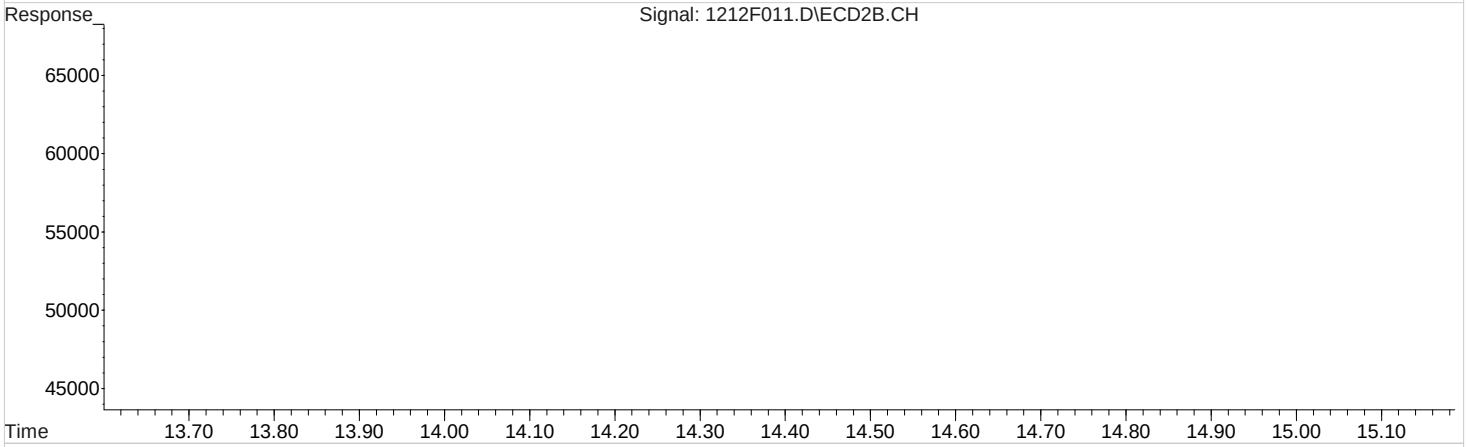
1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F011.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:25 pm Operator: MC
Sample : KWG1806145-LCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 14:59:54 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(19) 4,4'-DDD

14.421min 6.706 ug/L m

response 47891

(19) 4,4'-DDD #2

13.206min 6.426 ug/L

response 122646

Manual Integration:

After

Baseline/Shoulder

12/12/18

(+) = Expected Retention Time

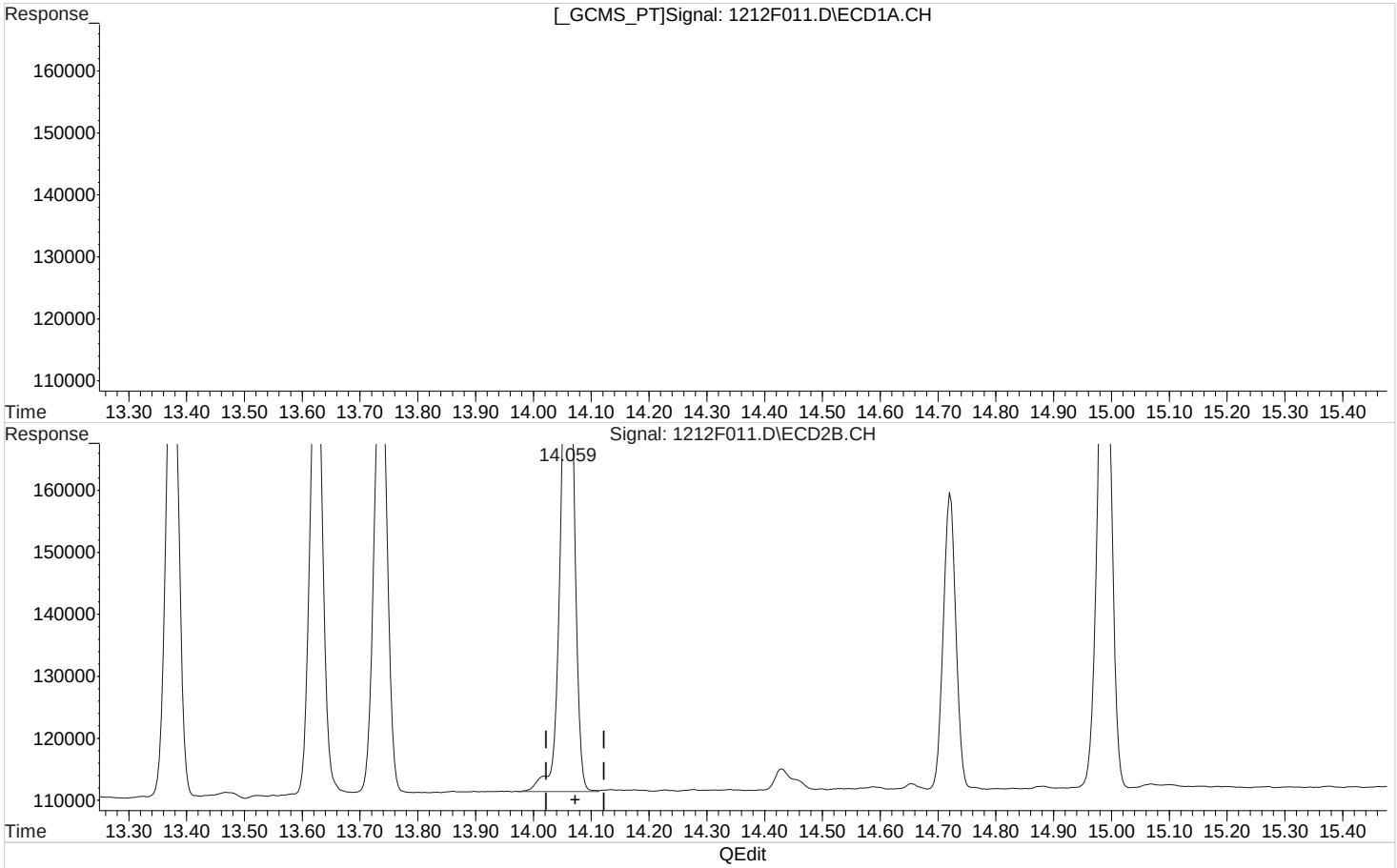
Quantitation Report (Qedit)

1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F011.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:25 pm Operator: MC
Sample : KWG1806145-LCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 14:59:54 2018
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Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(21) Endosulfan Sulfate

15.245min 6.014 ug/L

response 51243

(21) Endosulfan Sulfate #2

14.059min 6.282 ug/L

response 137185

Manual Integration:

Before

12/12/18

(+) = Expected Retention Time

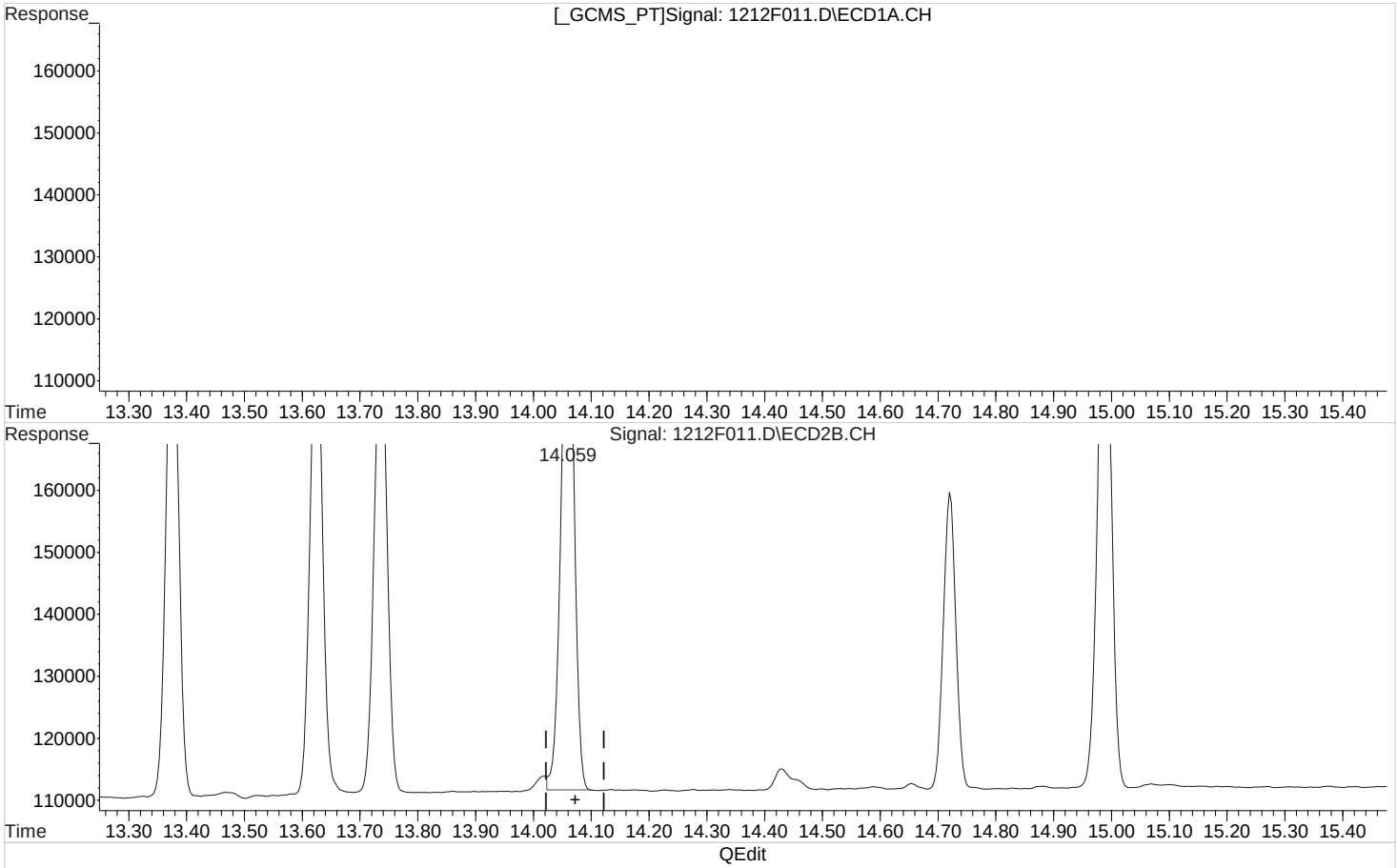
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F011.D Vial: 9
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:25 pm Operator: MC
Sample : KWG1806145-LCS 81 Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 14:59:54 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(21) Endosulfan Sulfate

15.245min 6.014 ug/L

response 51243

Manual Integration:

After

Baseline/Shoulder

12/12/18

(21) Endosulfan Sulfate #2

14.059min 6.060 ug/L m

response 132319

(+) = Expected Retention Time

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F012.D
Lab ID: KWG1806145-5
RunType: LCS
Matrix: SOIL

Date Acquired: 12/12/2018 14:55
Date Quantitated: 12/12/2018 15:26
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	2,4'-DDE	27.0	NA	20	ICVOK
	2,4'-DDT	20.4	NA	20	ICVOK
Continuing Calibration Recovery	Chlordane	23.8	NA	20	sample ND _ high bias
Surrogates	Tetrachloro-m-xylene	55	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F012.D\1212F012C.D
Lab ID: KWG1806145-5
RunType: LCS
Matrix: SOIL

Date Acquired: 12/12/2018 14:55
Date Quantitated: 12/12/2018 15:26
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1711

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Tetrachloro-m-xylene	57	70	130	ODL

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F012.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F012.D\1212F012c.d			**Vial:**	10
Acqu Date:	12/12/2018 14:55	**Quant Date:**	12/12/2018 15:26	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
		Prep Date:	11/27/2018	**Pre-Prep Date:**	11/20/2018
Prep Ref:	1704573				

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01 -0.05 c	5.34 -0.04 c	598912	1964040	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01 -0.10 c	5.34 -0.08 c	598912	1964040	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01 -0.10 c	5.34 -0.08 c	598912	1964040	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}			0d	0d	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.74 +0.01	7.11	36164	91607	2.74	2.85			NR
					%Recovery =	55 *	57 *	Limits =	70-130	
1	Decachlorobiphenyl	18.42	16.87 +0.01	47741	103349	3.51	3.83			NR
					%Recovery =	70 OK	77 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Hexachlorobenzene			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	beta-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	delta-BHC			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	Aldrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Isodrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F012.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F012.D\1212F012c.d			**Vial:**	10
Acqu Date:	12/12/2018 14:55	**Quant Date:**	12/12/2018 15:26	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan I			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	alpha-Chlordane			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Dieldrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDE			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	Endosulfan II			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDD			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Aldehyde			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	4,4'-DDT			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Endrin Ketone			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	Methoxychlor			0d	0d	0.0000	0.0000	0.00010U	0.00010U	NR
1	2,4'-DDE			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDD			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
1	2,4'-DDT			0d	0d	0.0000	0.0000	0.00010U	0.00010U	0.00010U
	Toxaphene			0	0	293.47	278.00	0.0147	0.0139	**0.0139**
2	Toxaphene {1}	14.70 -0.01	13.41 -0.02	63136m	164944m	461.41	484.84	0.0231	0.0242	
2	Toxaphene {2}	14.58	13.49	16241m	27776m	289.93	225.88	0.0145	0.0113	
2	Toxaphene {3}	15.11 -0.01	13.96	24154	28701m	235.03	264.18	0.0118	0.0132	
2	Toxaphene {4}	15.29 -0.01	14.10 -0.01	15209	50101m	361.17	246.69	0.0181	0.0123	
2	Toxaphene {5}	15.56 -0.01	14.48 -0.01	9556	95216	173.35	241.73	0.00867	0.0121	
2	Toxaphene {6}	15.99 -0.01	14.68 -0.01	37191	65130m	239.91	204.71	0.0120	0.0102	
	Chlordane			0	0	105.90CCV	115.12	0.00530	0.00576	**0.00530**
3	Chlordane {1}	11.01 -0.01	9.39	27505	66858	80.28	78.85	0.00401	0.00394	
3	Chlordane {2}	11.44 -0.01	11.49	27015	60887	62.52	112.34	0.00313	0.00562	
3	Chlordane {3}	12.04 -0.01	11.83	37441	242293	126.87	112.93	0.00634	0.00565	
3	Chlordane {4}	13.24	11.87	109137	163336	126.69	123.62	0.00633	0.00618	
3	Chlordane {5}	13.31 -0.01	11.94	87993	98485	120.63	157.38	0.00603	0.00787	
3	Chlordane {6}	13.39 -0.01	11.97	63668	203143	118.43	105.59	0.00592	0.00528	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	0.001

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F012.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F012.D\1212F012c.d			**Vial:**	10
Acqu Date:	12/12/2018 14:55	**Quant Date:**	12/12/2018 15:26	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8081B Pest OC T	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**	KWG1806145	**Report Group:**	
Analysis Method:	8081B	**Prep Method:**	EPA 3511	**Pre-Prep Meth:**	EPA 1311
		Prep Date:	11/27/2018	**Pre-Prep Date:**	11/20/2018
Prep Ref:	1704573				

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:	J:\GC23\DATA\121218\1212F010.D	**Method ID:**	MJ1778
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01 -0.05 c	5.34 -0.04 c	598912	1964040	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01 -0.10 c	5.34 -0.08 c	598912	1964040	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01 -0.10 c	5.34 -0.08 c	598912	1964040	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}			0d	0d	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.74 +0.01	7.11	36164	91607	2.74	2.85			NR
				%Recovery =		55 *	57 *	**Limits =**	70-130	
1	Decachlorobiphenyl	18.42	16.87 +0.01	47741	103349	3.51	3.83			NR
				%Recovery =		70 OK	77 OK	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Hexachlorobenzene			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	beta-BHC			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000	0.100U	0.100U	NR
1	delta-BHC			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Heptachlor			0d	0d	0.0000	0.0000	0.100U	0.100U	NR
1	Aldrin			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Isodrin			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000	0.100U	0.100U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F012.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F012.D\1212F012c.d			**Vial:**	10
Acqu Date:	12/12/2018 14:55	**Quant Date:**	12/12/2018 15:26	**Dilution:**	1.0
Run Type:	LCS	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806145-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endosulfan I			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	alpha-Chlordane			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Dieldrin			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	4,4'-DDE			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endrin			0d	0d	0.0000	0.0000	0.100U	0.100U	NR
1	Endosulfan II			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	4,4'-DDD			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endrin Aldehyde			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	4,4'-DDT			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Endrin Ketone			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	Methoxychlor			0d	0d	0.0000	0.0000	0.100U	0.100U	NR
1	2,4'-DDE			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDD			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
1	2,4'-DDT			0d	0d	0.0000	0.0000	0.100U	0.100U	0.100U
	Toxaphene			0	0	293.47	278.00	14.7	13.9	**13.9**
2	Toxaphene {1}	14.70 -0.01	13.41 -0.02	63136m	164944m	461.41	484.84	23.1	24.2	
2	Toxaphene {2}	14.58	13.49	16241m	27776m	289.93	225.88	14.5	11.3	
2	Toxaphene {3}	15.11 -0.01	13.96	24154	28701m	235.03	264.18	11.8	13.2	
2	Toxaphene {4}	15.29 -0.01	14.10 -0.01	15209	50101m	361.17	246.69	18.1	12.3	
2	Toxaphene {5}	15.56 -0.01	14.48 -0.01	9556	95216	173.35	241.73	8.67	12.1	
2	Toxaphene {6}	15.99 -0.01	14.68 -0.01	37191	65130m	239.91	204.71	12.0	10.2	
	Chlordane			0	0	105.90CCV	115.12	5.30	5.76	**5.30**
3	Chlordane {1}	11.01 -0.01	9.39	27505	66858	80.28	78.85	4.01	3.94	
3	Chlordane {2}	11.44 -0.01	11.49	27015	60887	62.52	112.34	3.13	5.62	
3	Chlordane {3}	12.04 -0.01	11.83	37441	242293	126.87	112.93	6.34	5.65	
3	Chlordane {4}	13.24	11.87	109137	163336	126.69	123.62	6.33	6.18	
3	Chlordane {5}	13.31 -0.01	11.94	87993	98485	120.63	157.38	6.03	7.87	
3	Chlordane {6}	13.39 -0.01	11.97	63668	203143	118.43	105.59	5.92	5.28	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	100 ml	**Dilution:**	1.0
Prep Final Vol:	5 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F012.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:55 pm Operator: MC
Sample : KWG1806145-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:26:38 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.011	5.339	598912	1964040	100.000	100.000
29)	1-Bromo-2...	6.011	5.339	598912	1964040	100.000	100.000
36)	1-Bromo-2...	6.011	5.339	598912	1964040	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.737	7.105	36164	91607	2.740	2.847
28) s	Decachlor...	18.421	16.865	47741	103349	3.513	3.833
	Target Compounds						
30)	Toxaphene	14.697	13.409	63136	164944	461.410m	484.839m
31)	Toxaphene...	14.581	13.492	16241	27776	289.927m	225.879m
32)	Toxaphene...	15.114	13.959	24154	28701	235.026	264.176m
33)	Toxaphene...	15.291	14.102	15209	50101	361.174	246.689m#
34)	Toxaphene...	15.561	14.482	9556	95216	173.351	241.732 #
35)	Toxaphene...	15.991	14.682	37191	65130	239.912	204.705m
37)	Chlordane	11.014	9.392	27505	66858	80.278	78.854
38)	Chlordane...	11.441	11.489	27015	60887	62.516	112.336 #
39)	Chlordane...	12.044	11.825	37441	242293	126.874	112.931
40)	Chlordane...	13.237	11.872	109137	163336	126.694	123.619
41)	Chlordane...	13.307	11.935	87993	98485	120.630	157.383 #
42)	Chlordane...	13.391	11.969	63668	203143	118.430	105.587

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

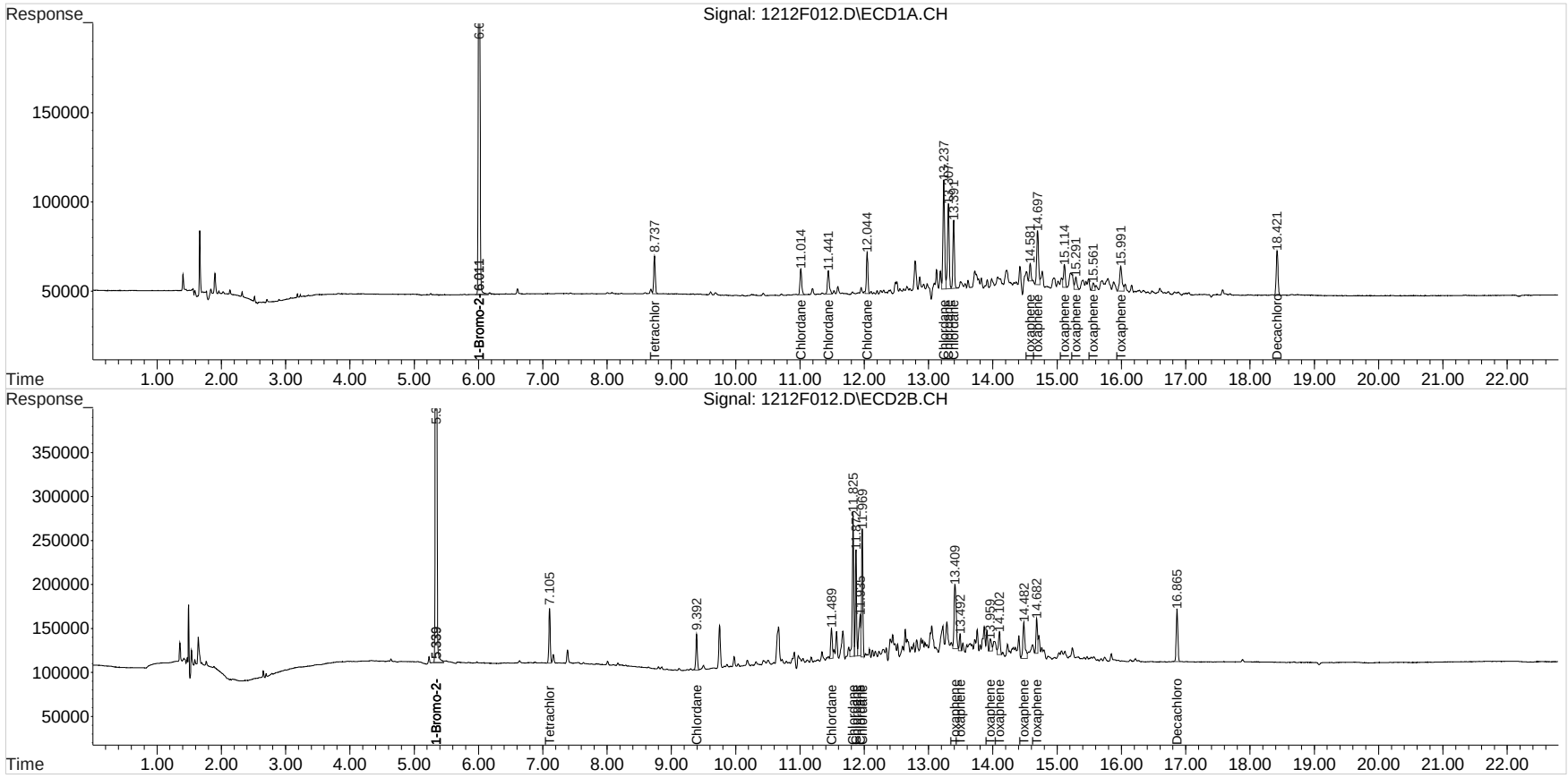
1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F012.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:55 pm Operator: MC
Sample : KWG1806145-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:26:38 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020240

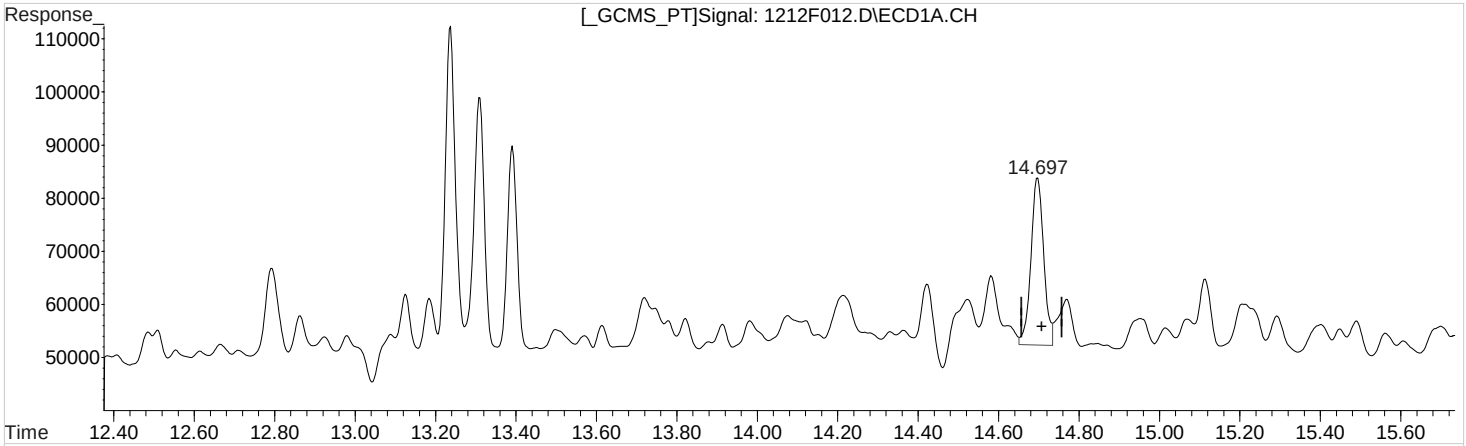
Quantitation Report (Qedit)

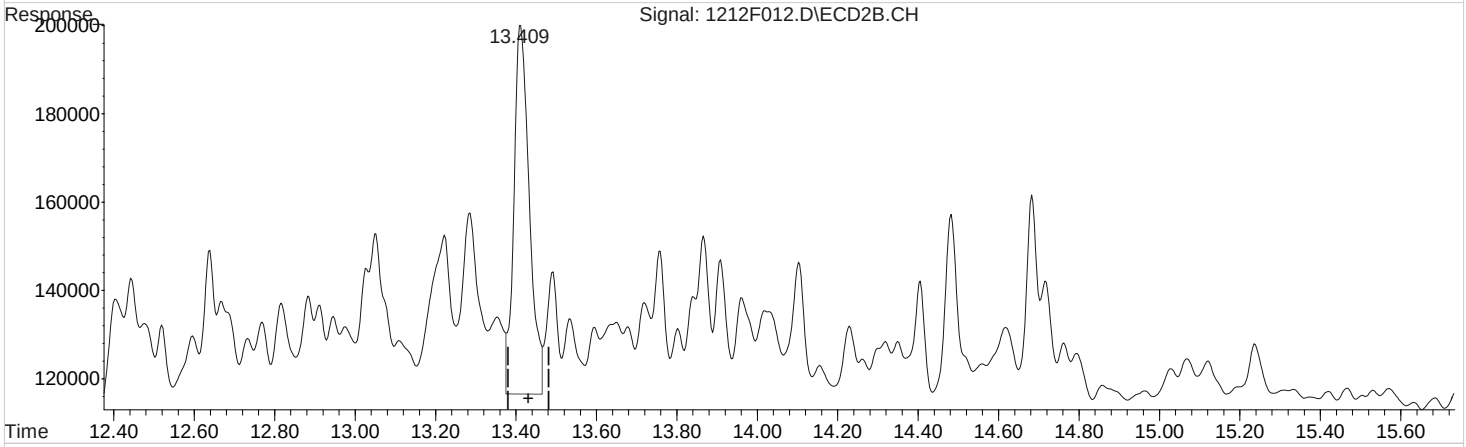
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F012.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:55 pm Operator: MC
Sample : KWG1806145-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:23:55 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(30) Toxaphene

14.697min 510.434 ug/L

response 69844

Manual Integration:

Before

12/12/18

(30) Toxaphene #2

13.409min 653.474 ug/L

response 222314

(+) = Expected Retention Time

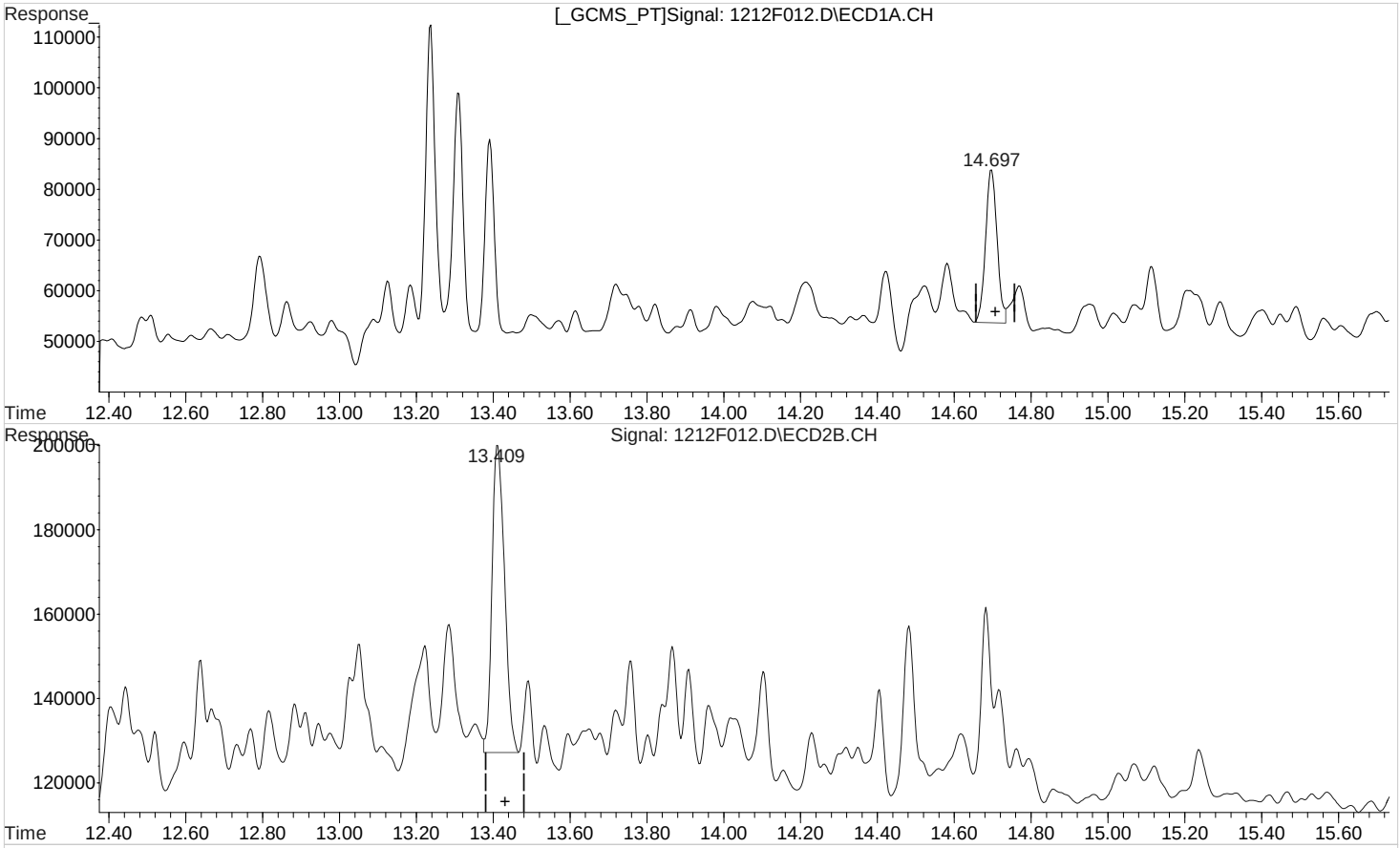
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F012.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:55 pm Operator: MC
Sample : KWG1806145-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:23:55 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(30) Toxaphene

14.697min 461.410 ug/L m

response 63136

Manual Integration:

After

Baseline/Shoulder

12/12/18

(30) Toxaphene #2

13.409min 484.839 ug/L m

response 164944

(+) = Expected Retention Time

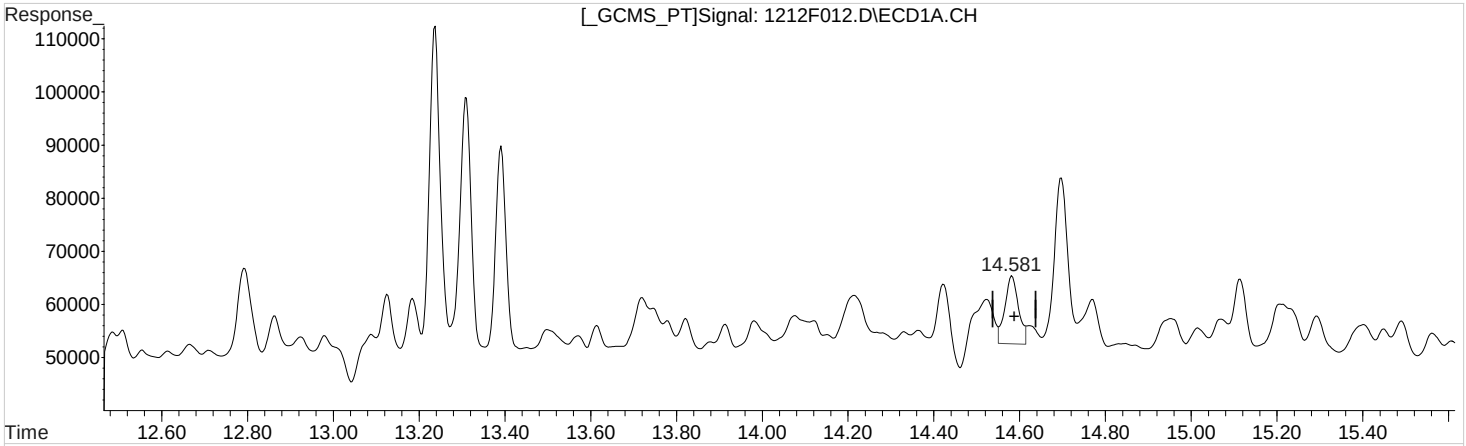
Quantitation Report (Qedit)

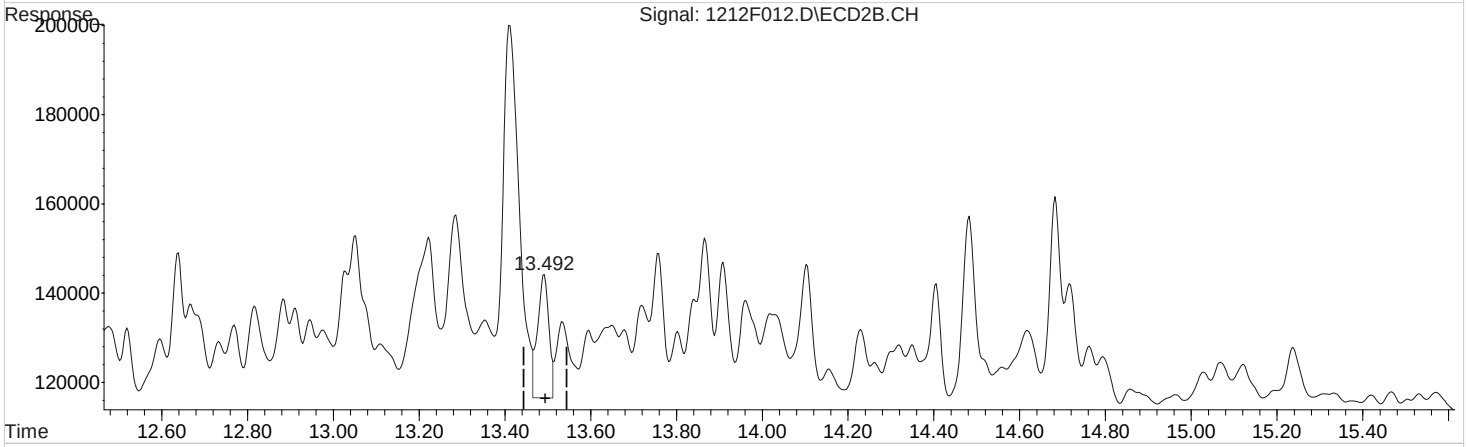
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F012.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:55 pm Operator: MC
Sample : KWG1806145-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:23:55 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(31) Toxaphene {2}

14.581min 568.015 ug/L

response 28260

Manual Integration:

Before

12/12/18

(31) Toxaphene {2} #2

13.492min 410.194 ug/L

response 50441

(+) = Expected Retention Time

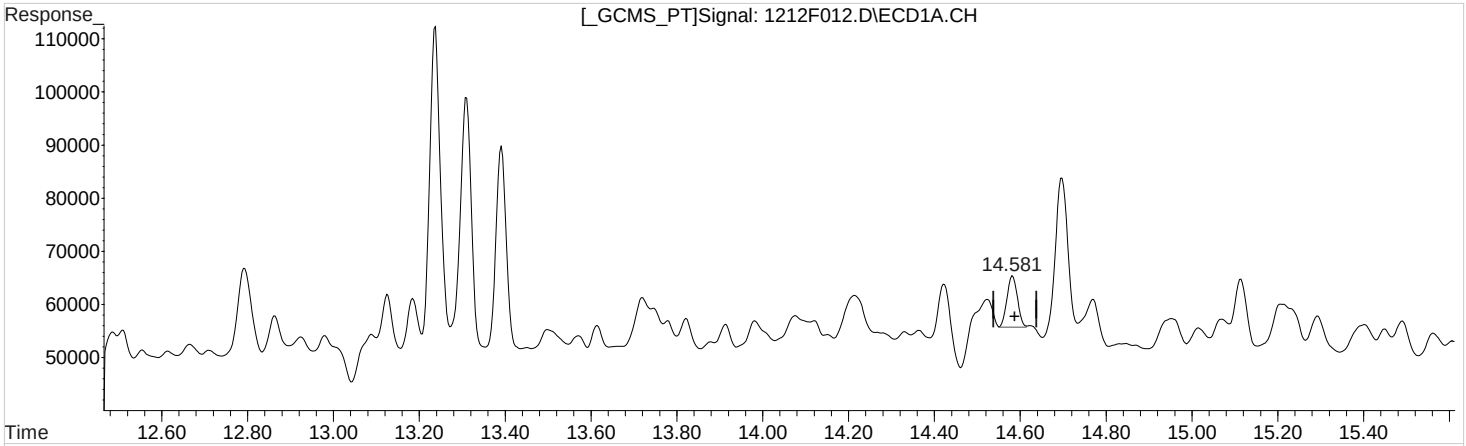
Quantitation Report (Qedit)

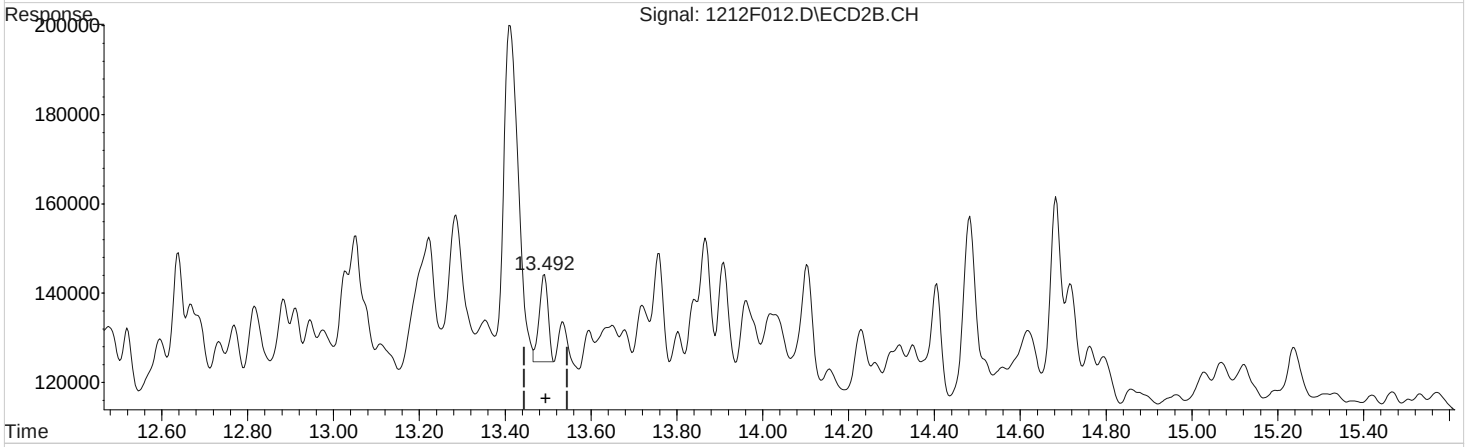
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F012.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:55 pm Operator: MC
Sample : KWG1806145-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:23:55 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(31) Toxaphene {2}

14.581min 289.927 ug/L m

response 16241

Manual Integration:

After

Baseline/Shoulder

12/12/18

(31) Toxaphene {2} #2

13.492min 225.879 ug/L m

response 27776

(+) = Expected Retention Time

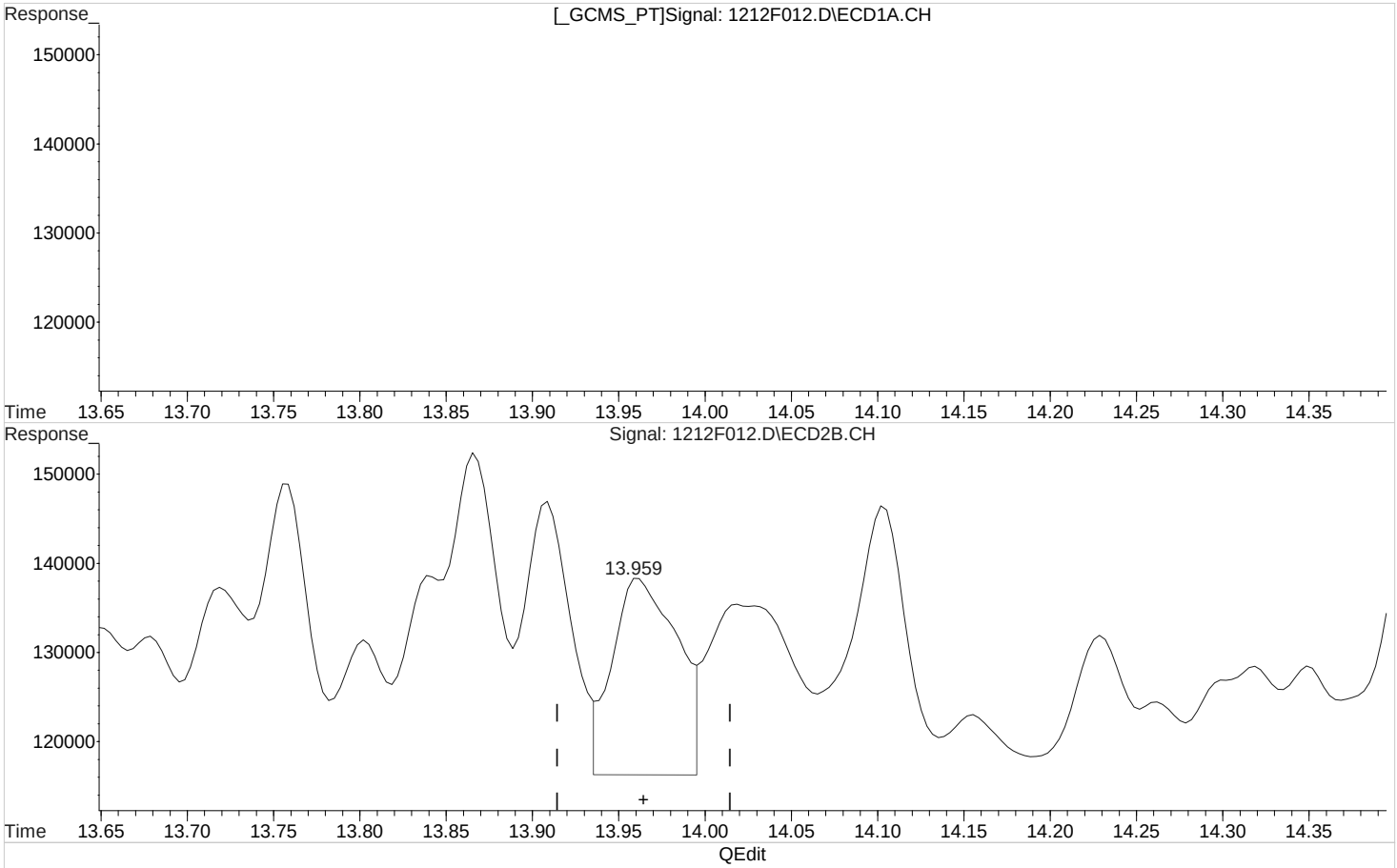
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F012.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:55 pm Operator: MC
Sample : KWG1806145-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:23:55 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(32) Toxaphene {3}

15.114min 235.026 ug/L

response 24154

(32) Toxaphene {3} #2

13.959min 538.817 ug/L

response 58539

Manual Integration:

Before

12/12/18

(+) = Expected Retention Time

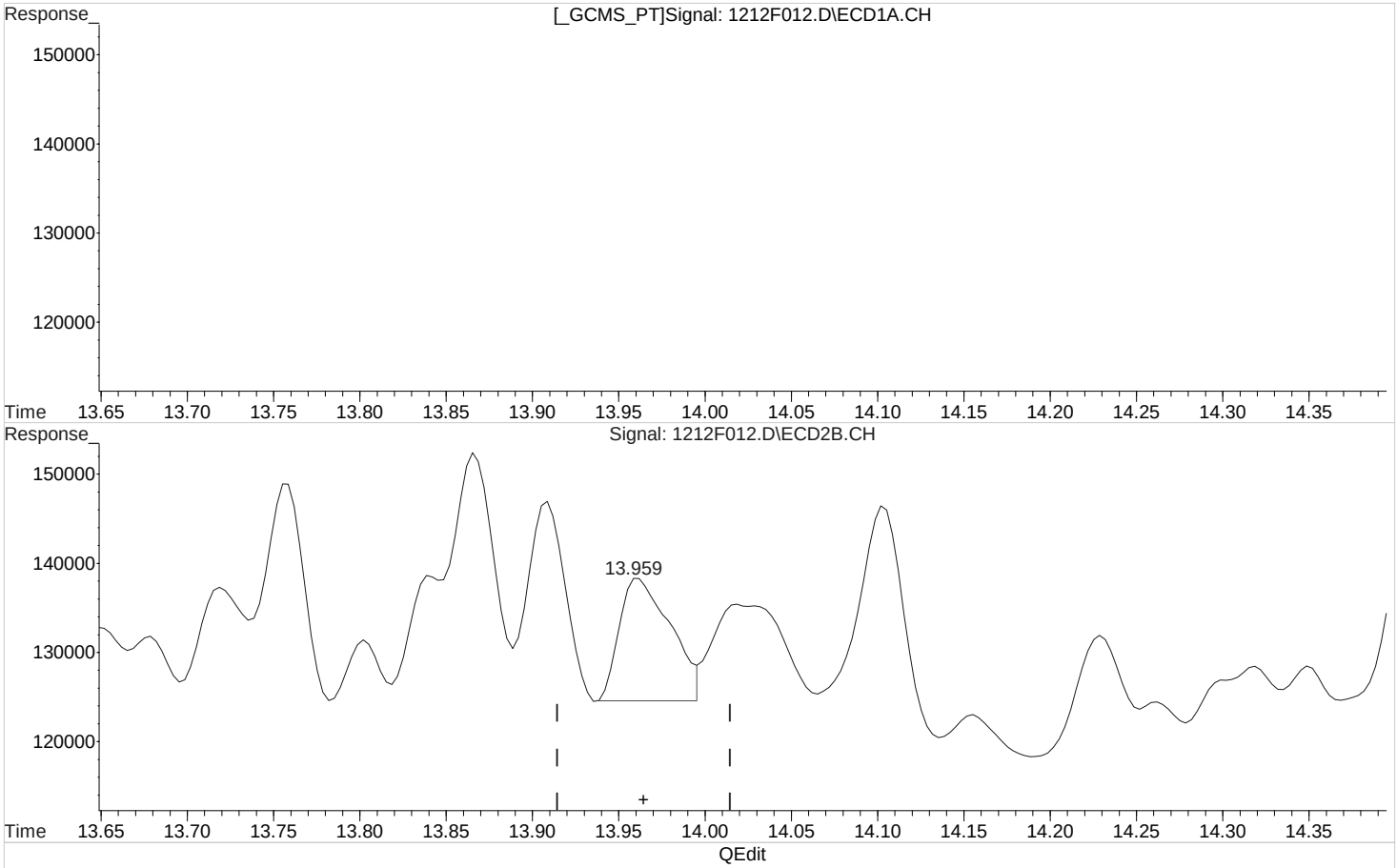
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F012.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:55 pm Operator: MC
Sample : KWG1806145-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:23:55 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(32) Toxaphene {3}

15.114min 235.026 ug/L

response 24154

(32) Toxaphene {3} #2

13.959min 264.176 ug/L m

response 28701

Manual Integration:

After

Baseline/Shoulder

12/12/18

(+) = Expected Retention Time

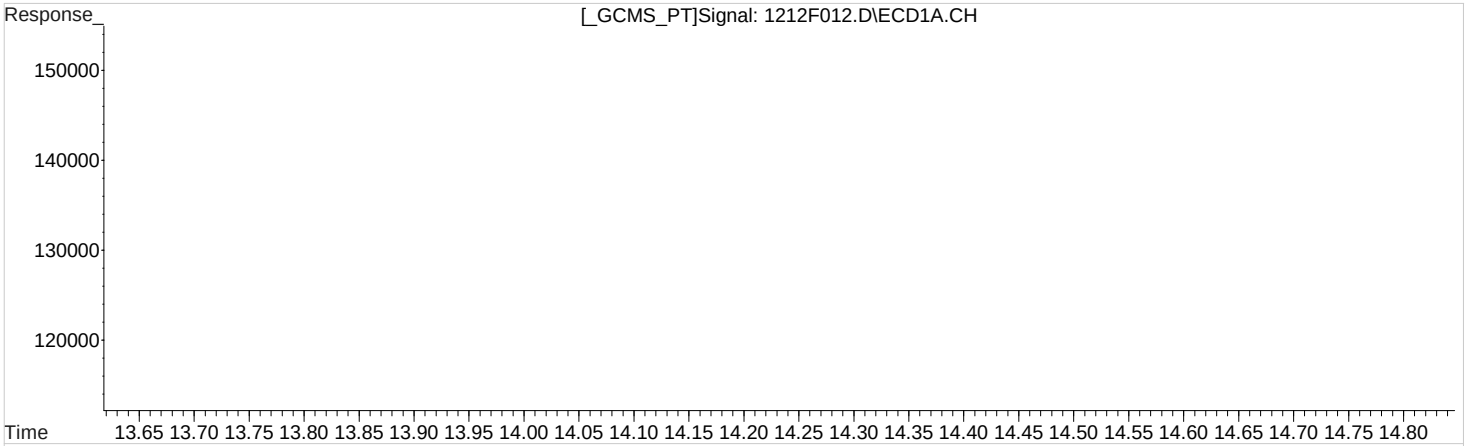
Quantitation Report (Qedit)

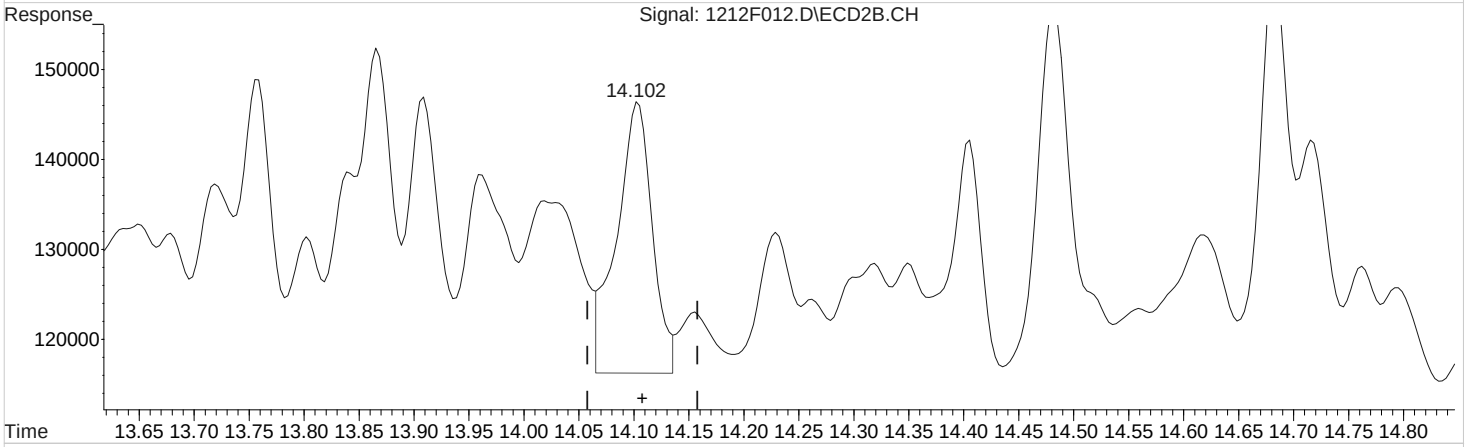
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F012.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:55 pm Operator: MC
Sample : KWG1806145-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:23:55 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(33) Toxaphene {4}

15.291min 361.174 ug/L

response 15209

Manual Integration:

Before

12/12/18

(33) Toxaphene {4} #2

14.102min 333.039 ug/L

response 67638

(+) = Expected Retention Time

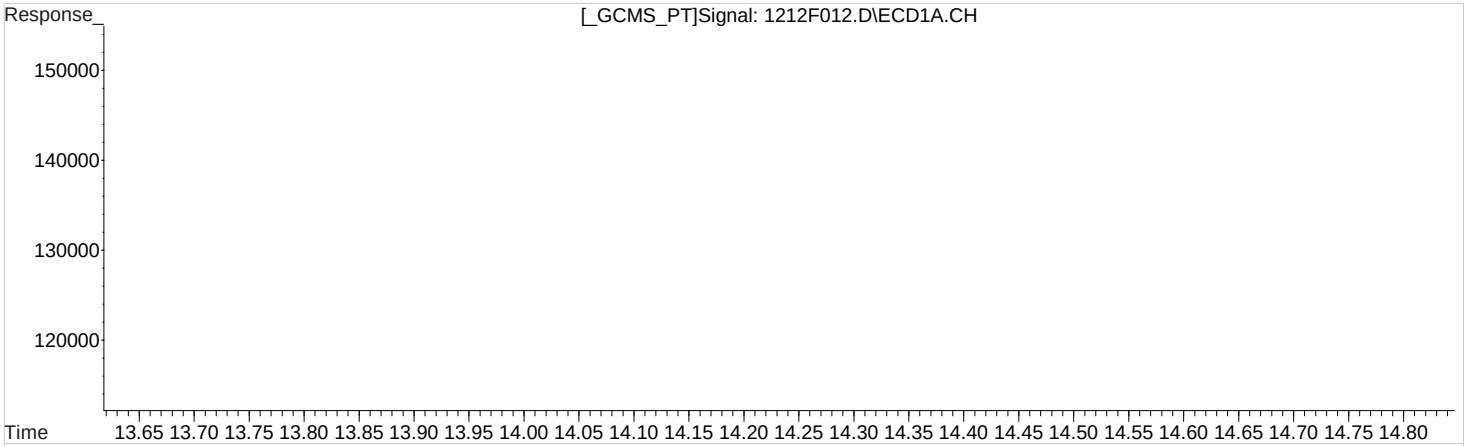
Quantitation Report (Qedit)

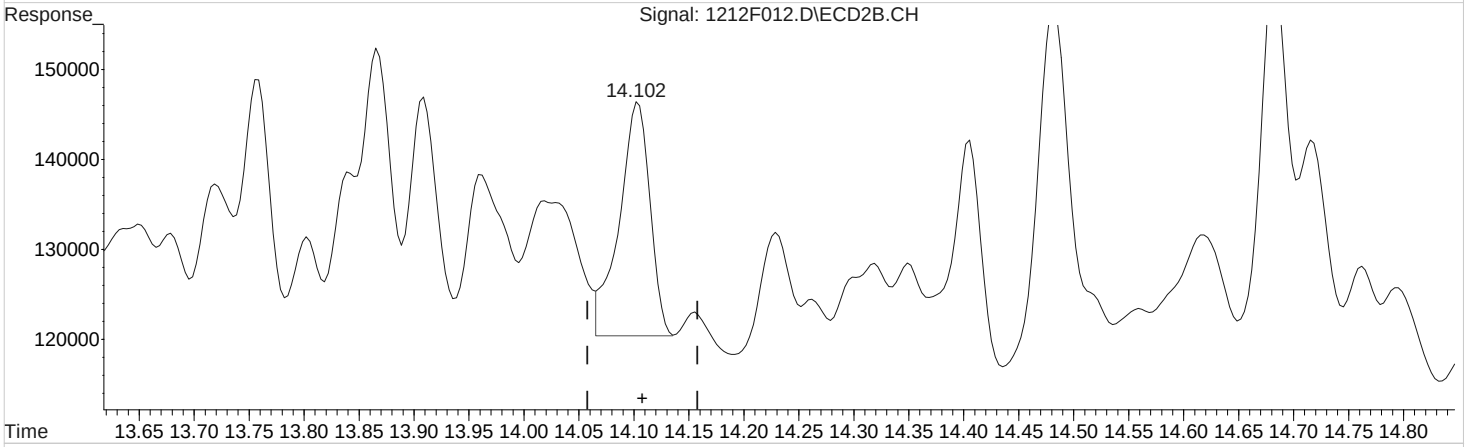
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F012.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:55 pm Operator: MC
Sample : KWG1806145-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:23:55 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(33) Toxaphene {4}

15.291min 361.174 ug/L

response 15209

Manual Integration:

After

Baseline/Shoulder

12/12/18

(33) Toxaphene {4} #2

14.102min 246.689 ug/L m

response 50101

(+) = Expected Retention Time

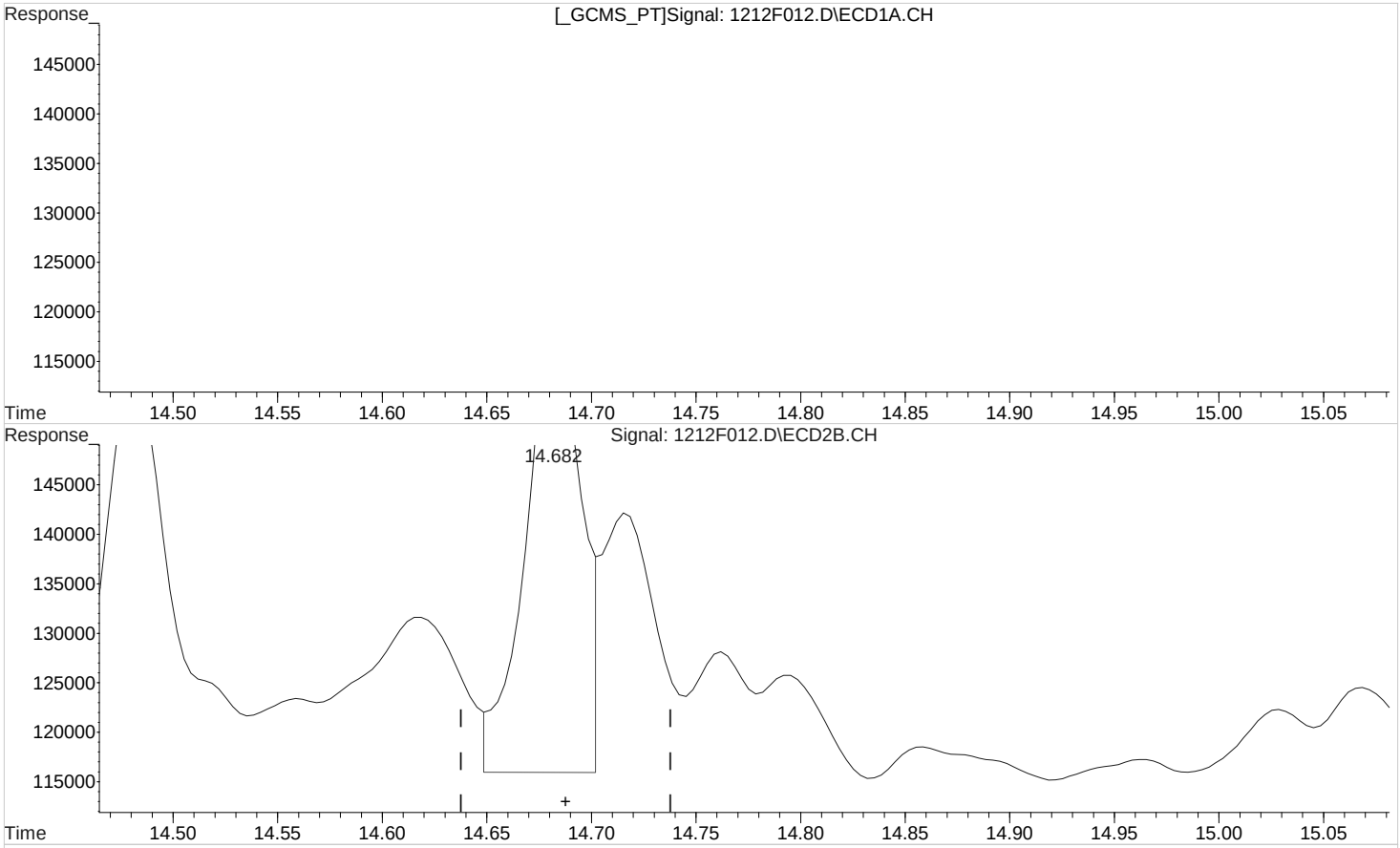
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F012.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:55 pm Operator: MC
Sample : KWG1806145-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:23:55 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(35) Toxaphene {6}

15.991min 239.912 ug/L

response 37191

(35) Toxaphene {6} #2

14.682min 264.816 ug/L

response 84255

Manual Integration:

Before

12/12/18

(+) = Expected Retention Time

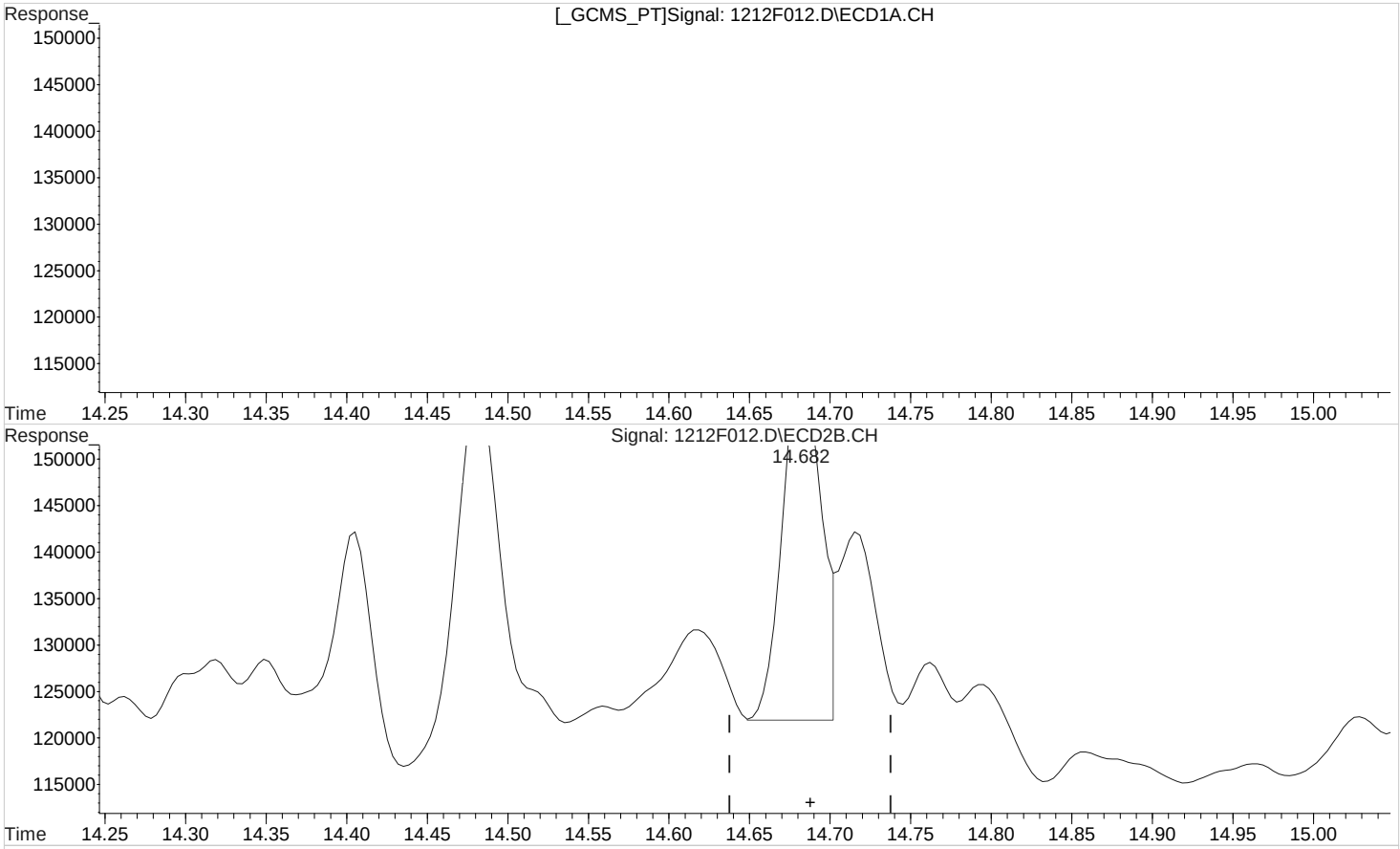
Quantitation Report (Qedit)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F012.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 2:55 pm Operator: MC
Sample : KWG1806145-LCS T/C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 15:26:38 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(35) Toxaphene {6}

15.991min 239.912 ug/L

response 37191

(35) Toxaphene {6} #2

14.682min 204.705 ug/L m

response 65130

Manual Integration:

After

Baseline/Shoulder

12/12/18

(+) = Expected Retention Time

1st MC 12/12/18
2nd TP 12/13/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F004.D
Lab ID: KWG1806469-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/12/2018 10:58
Date Quantitated: 12/12/2018 11:31
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	2,4'-DDE	27.0	NA	20	ICVOK
	2,4'-DDT	20.4	NA	20	ICVOK
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	523283	2093132	NR
	1-Bromo-2-nitrobenzene {3}	0	0284.071428	21136.285714	NR
	1-Bromo-2-nitrobenzene {4}	0	1403.583333	45614.333333	NR

Primary Review: _____

Secondary Review: _____

1st MC 12/12/18
2nd TP 12/13/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F004.D\1212F004C.D
Lab ID: KWG1806469-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/12/2018 10:58
Date Quantitated: 12/12/2018 11:31
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene {2}	0	17017.33333	58069.33333	NR
	1-Bromo-2-nitrobenzene {3}	0	12049.14285	48196.57142	NR
	1-Bromo-2-nitrobenzene {4}	0	32606.41666	30425.66666	NR

Primary Review: _____

Secondary Review: _____

1st MC 12/12/18
2nd TP 12/13/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F004.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F004.D\1212F004c.d			**Vial:**	2
Acqu Date:	12/12/2018 10:58	**Quant Date:**	12/12/2018 11:31	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1006	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/12/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:		**Method ID:**	MJ1006
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05	5.34	-0.04	594729	2146777	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.73	7.11	26596	63774	1.98	1.81			NA
				%Recovery =		NA	NA	**Limits =**	20-106	
1	Decachlorobiphenyl	18.42	16.86	26589	58229	1.97	1.98			NA
				%Recovery =		NA	NA	**Limits =**	19-127	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC	9.58	8.33	20753	57527	1.97	1.92			
1	Hexachlorobenzene	9.73	8.11	30891	72467	1.94	1.74			
1	beta-BHC	10.85	9.61	10069	27239**m**	1.94	1.84			
1	gamma-BHC (Lindane)	10.25	9.07	17787	51090	1.96	1.85			
1	delta-BHC	11.35	10.13	18126	48632	1.93	1.84			
1	Heptachlor	11.44	9.75	18117	54586	1.96	1.85			
1	Aldrin	11.99	10.33	19954	50463	1.94	1.82			
1	Isodrin	12.52	11.12	16118	45691	1.87	1.90			
1	Heptachlor Epoxide	12.71	11.41	18091	50532	1.94	1.91			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/12/18
2nd TP 12/13/18

Data File #1:	J:\GC23\DATA\121218\1212F004.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F004.D\1212F004c.d			**Vial:**	2
Acqu Date:	12/12/2018 10:58	**Quant Date:**	12/12/2018 11:31	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1006	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane	13.23	11.82	18077	49684	1.91	1.91			
1	Endosulfan I	13.35	12.03	17392	45080	1.83	1.86			
1	alpha-Chlordane	13.30	11.97	19081	48787	1.87	1.87			
1	Dieldrin	13.77	12.47	17895	47208	1.85	1.91			
1	4,4'-DDE	13.58	12.33	20077	47254	1.87	1.77			
1	Endrin	14.14	12.94	16734	44198	1.85	1.81			
1	Endosulfan II	14.59	13.38	16949	42461	2.07	1.88			
1	4,4'-DDD	14.42	13.21	13401	35930	1.85	1.82			
1	Endrin Aldehyde	14.77	13.73	15566	38810	1.90	1.88			
1	Endosulfan Sulfate	15.24	14.06	16392	43071	1.90	1.90			
1	4,4'-DDT	14.92	13.62	10244	36693	1.63	1.92			
1	Endrin Ketone	15.92	14.99	16066	47981	1.88	1.92			
1	Methoxychlor	15.67	14.72	6382	20668	1.66	1.83			
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000			
2	Toxaphene {2}			0d	0d	0.0000	0.0000			
2	Toxaphene {3}			0d	0d	0.0000	0.0000			
2	Toxaphene {4}			0d	0d	0.0000	0.0000			
2	Toxaphene {5}			0d	0d	0.0000	0.0000			
2	Toxaphene {6}			0d	0d	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0d	0d	0.0000	0.0000			
3	Chlordane {2}			0d	0d	0.0000	0.0000			
3	Chlordane {3}			0d	0d	0.0000	0.0000			
3	Chlordane {4}			0d	0d	0.0000	0.0000			
3	Chlordane {5}			0d	0d	0.0000	0.0000			
3	Chlordane {6}			0d	0d	0.0000	0.0000			
4	Chlorpyrifos			0d	0d	0.0000	0.0000			NR
4	Oxychlordane			0d	0d	0.0000	0.0000			NR
4	cis-Nonachlor			0d	0d	0.0000	0.0000			NR
4	trans-Nonachlor			0d	0d	0.0000	0.0000			NR
4	Mirex			0d	0d	0.0000	0.0000			NR
4	Hexachloroethane			0d	0d	0.0000	0.0000			NR
4	Hexachlorobutadiene			0d	0d	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F004.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F004.D\1212F004c.d			**Vial:**	2
Acqu Date:	12/12/2018 10:58	**Quant Date:**	12/12/2018 11:31	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1648	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-			**Calibration ID:**	CAL15907
Title:					
MB Ref:				**Method ID:**	MJ1648
				Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05	5.34	-0.04	594729	2146777	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.73	7.11	26596	63774	1.98	1.81			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	18.42	16.86	26589	58229	1.97	1.98			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC	9.58	8.33	20753	57527	1.97	1.92			
1	Hexachlorobenzene	9.73	8.11	30891	72467	1.94	1.74			
1	beta-BHC	10.85	9.61	10069	27239**m**	1.94	1.84			
1	gamma-BHC (Lindane)	10.25	9.07	17787	51090	1.96	1.85			
1	delta-BHC	11.35	10.13	18126	48632	1.93	1.84			
1	Heptachlor	11.44	9.75	18117	54586	1.96	1.85			
1	Aldrin	11.99	10.33	19954	50463	1.94	1.82			
1	Isodrin	12.52	11.12	16118	45691	1.87	1.90			
1	Heptachlor Epoxide	12.71	11.41	18091	50532	1.94	1.91			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F004.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F004.D\1212F004c.d			**Vial:**	2
Acqu Date:	12/12/2018 10:58	**Quant Date:**	12/12/2018 11:31	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1648	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane	13.23	11.82	18077	49684	1.91	1.91			
1	Endosulfan I	13.35	12.03	17392	45080	1.83	1.86			
1	alpha-Chlordane	13.30	11.97	19081	48787	1.87	1.87			
1	Dieldrin	13.77	12.47	17895	47208	1.85	1.91			
1	4,4'-DDE	13.58	12.33	20077	47254	1.87	1.77			
1	Endrin	14.14	12.94	16734	44198	1.85	1.81			
1	Endosulfan II	14.59	13.38	16949	42461	2.07	1.88			
1	4,4'-DDD	14.42	13.21	13401	35930	1.85	1.82			
1	Endrin Aldehyde	14.77	13.73	15566	38810	1.90	1.88			
1	Endosulfan Sulfate	15.24	14.06	16392	43071	1.90	1.90			
1	4,4'-DDT	14.92	13.62	10244	36693	1.63	1.92			
1	Endrin Ketone	15.92	14.99	16066	47981	1.88	1.92			
1	Methoxychlor	15.67	14.72	6382	20668	1.66	1.83			
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000			
2	Toxaphene {2}			0d	0d	0.0000	0.0000			
2	Toxaphene {3}			0d	0d	0.0000	0.0000			
2	Toxaphene {4}			0d	0d	0.0000	0.0000			
2	Toxaphene {5}			0d	0d	0.0000	0.0000			
2	Toxaphene {6}			0d	0d	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0d	0d	0.0000	0.0000			
3	Chlordane {2}			0d	0d	0.0000	0.0000			
3	Chlordane {3}			0d	0d	0.0000	0.0000			
3	Chlordane {4}			0d	0d	0.0000	0.0000			
3	Chlordane {5}			0d	0d	0.0000	0.0000			
3	Chlordane {6}			0d	0d	0.0000	0.0000			
4	Chlorpyrifos			0d	0d	0.0000	0.0000			NR
4	Oxychlordane			0d	0d	0.0000	0.0000			NR
4	cis-Nonachlor			0d	0d	0.0000	0.0000			NR
4	trans-Nonachlor			0d	0d	0.0000	0.0000			NR
4	Mirex			0d	0d	0.0000	0.0000			NR
4	Hexachloroethane			0d	0d	0.0000	0.0000			NR
4	Hexachlorobutadiene			0d	0d	0.0000	0.0000			NR
4	Perthane			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
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NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F004.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F004.D\1212F004c.d			**Vial:**	2
Acqu Date:	12/12/2018 10:58	**Quant Date:**	12/12/2018 11:31	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-			**Calibration ID:**	CAL15907
Title:					
MB Ref:				**Method ID:**	MJ1711
				Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05	5.34	-0.04	594729	2146777	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.73	7.11	26596	63774	1.98	1.81			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	18.42	16.86	26589	58229	1.97	1.98			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC	9.58	8.33	20753	57527	1.97	1.92			
1	Hexachlorobenzene	9.73	8.11	30891	72467	1.94	1.74			
1	beta-BHC	10.85	9.61	10069	27239**m**	1.94	1.84			
1	gamma-BHC (Lindane)	10.25	9.07	17787	51090	1.96	1.85			
1	delta-BHC	11.35	10.13	18126	48632	1.93	1.84			
1	Heptachlor	11.44	9.75	18117	54586	1.96	1.85			
1	Aldrin	11.99	10.33	19954	50463	1.94	1.82			
1	Isodrin	12.52	11.12	16118	45691	1.87	1.90			
1	Heptachlor Epoxide	12.71	11.41	18091	50532	1.94	1.91			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F004.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F004.D\1212F004c.d			**Vial:**	2
Acqu Date:	12/12/2018 10:58	**Quant Date:**	12/12/2018 11:31	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds **Final Conc. Units:** mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane	13.23	11.82	18077	49684	1.91	1.91			
1	Endosulfan I	13.35	12.03	17392	45080	1.83	1.86			
1	alpha-Chlordane	13.30	11.97	19081	48787	1.87	1.87			
1	Dieldrin	13.77	12.47	17895	47208	1.85	1.91			
1	4,4'-DDE	13.58	12.33	20077	47254	1.87	1.77			
1	Endrin	14.14	12.94	16734	44198	1.85	1.81			
1	Endosulfan II	14.59	13.38	16949	42461	2.07	1.88			
1	4,4'-DDD	14.42	13.21	13401	35930	1.85	1.82			
1	Endrin Aldehyde	14.77	13.73	15566	38810	1.90	1.88			
1	Endosulfan Sulfate	15.24	14.06	16392	43071	1.90	1.90			
1	4,4'-DDT	14.92	13.62	10244	36693	1.63	1.92			
1	Endrin Ketone	15.92	14.99	16066	47981	1.88	1.92			
1	Methoxychlor	15.67	14.72	6382	20668	1.66	1.83			
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000			
2	Toxaphene {2}			0d	0d	0.0000	0.0000			
2	Toxaphene {3}			0d	0d	0.0000	0.0000			
2	Toxaphene {4}			0d	0d	0.0000	0.0000			
2	Toxaphene {5}			0d	0d	0.0000	0.0000			
2	Toxaphene {6}			0d	0d	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0d	0d	0.0000	0.0000			
3	Chlordane {2}			0d	0d	0.0000	0.0000			
3	Chlordane {3}			0d	0d	0.0000	0.0000			
3	Chlordane {4}			0d	0d	0.0000	0.0000			
3	Chlordane {5}			0d	0d	0.0000	0.0000			
3	Chlordane {6}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F004.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F004.D\1212F004c.d			**Vial:**	2
Acqu Date:	12/12/2018 10:58	**Quant Date:**	12/12/2018 11:31	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-			**Calibration ID:**	CAL15907
Title:					
MB Ref:				**Method ID:**	MJ1778
				Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	-0.05	5.34	-0.04	594729	2146777	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}					0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}					0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}					0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	8.73	7.11	26596	63774	1.98	1.81			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	18.42	16.86	26589	58229	1.97	1.98			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC	9.58	8.33	20753	57527	1.97	1.92			
1	Hexachlorobenzene	9.73	8.11	30891	72467	1.94	1.74			
1	beta-BHC	10.85	9.61	10069	27239**m**	1.94	1.84			
1	gamma-BHC (Lindane)	10.25	9.07	17787	51090	1.96	1.85			
1	delta-BHC	11.35	10.13	18126	48632	1.93	1.84			
1	Heptachlor	11.44	9.75	18117	54586	1.96	1.85			
1	Aldrin	11.99	10.33	19954	50463	1.94	1.82			
1	Isodrin	12.52	11.12	16118	45691	1.87	1.90			
1	Heptachlor Epoxide	12.71	11.41	18091	50532	1.94	1.91			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F004.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F004.D\1212F004c.d			**Vial:**	2
Acqu Date:	12/12/2018 10:58	**Quant Date:**	12/12/2018 11:31	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane	13.23	11.82	18077	49684	1.91	1.91			
1	Endosulfan I	13.35	12.03	17392	45080	1.83	1.86			
1	alpha-Chlordane	13.30	11.97	19081	48787	1.87	1.87			
1	Dieldrin	13.77	12.47	17895	47208	1.85	1.91			
1	4,4'-DDE	13.58	12.33	20077	47254	1.87	1.77			
1	Endrin	14.14	12.94	16734	44198	1.85	1.81			
1	Endosulfan II	14.59	13.38	16949	42461	2.07	1.88			
1	4,4'-DDD	14.42	13.21	13401	35930	1.85	1.82			
1	Endrin Aldehyde	14.77	13.73	15566	38810	1.90	1.88			
1	Endosulfan Sulfate	15.24	14.06	16392	43071	1.90	1.90			
1	4,4'-DDT	14.92	13.62	10244	36693	1.63	1.92			
1	Endrin Ketone	15.92	14.99	16066	47981	1.88	1.92			
1	Methoxychlor	15.67	14.72	6382	20668	1.66	1.83			
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000			
2	Toxaphene {2}			0d	0d	0.0000	0.0000			
2	Toxaphene {3}			0d	0d	0.0000	0.0000			
2	Toxaphene {4}			0d	0d	0.0000	0.0000			
2	Toxaphene {5}			0d	0d	0.0000	0.0000			
2	Toxaphene {6}			0d	0d	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0d	0d	0.0000	0.0000			
3	Chlordane {2}			0d	0d	0.0000	0.0000			
3	Chlordane {3}			0d	0d	0.0000	0.0000			
3	Chlordane {4}			0d	0d	0.0000	0.0000			
3	Chlordane {5}			0d	0d	0.0000	0.0000			
3	Chlordane {6}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st mc 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F004.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 10:58 am Operator: MC
Sample : 81 2PPB GCPS8-49F Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 11:31:55 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.007	5.339	594729	2146777	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.734	7.105	26596	63774	1.978	1.813
28) s	Decachlor...	18.417	16.862	26589	58229	1.970	1.976
	Target Compounds						
3)	alpha-BHC	9.581	8.325	20753	57527	1.966	1.917
4)	Hexachlor...	9.734	8.112	30891	72467	1.938	1.744
5)	beta-BHC	10.854	9.609	10069	27239	1.942	1.836m
6)	gamma-BHC...	10.247	9.065	17787	51090	1.962	1.853
7)	delta-BHC	11.351	10.125	18126	48632	1.932	1.841
8)	Heptachlor	11.437	9.745	18117	54586	1.955	1.847
9)	Aldrin	11.991	10.329	19954	50463	1.942	1.820
10)	Isodrin	12.521	11.119	16118	45691	1.872	1.896
11)	Heptachlo...	12.714	11.409	18091	50532	1.941	1.909
12)	gamma-Chl...	13.231	11.822	18077	49684	1.908	1.913
13)	Endosulfan I	13.354	12.029	17392	45080	1.831	1.859
14)	alpha-Chl...	13.304	11.965	19081	48787	1.873	1.866
15)	Dieldrin	13.774	12.469	17895	47208	1.852	1.906
16)	4,4'-DDE	13.584	12.325	20077	47254	1.874	1.767
17)	Endrin	14.141	12.942	16734	44198	1.846	1.810
18)	Endosulfa...	14.591	13.375	16949	42461	2.074	1.876
19)	4,4'-DDD	14.421	13.205	13401	35930	1.849	1.815
20)	Endrin Al...	14.771	13.732	15566	38810	1.899	1.882
21)	Endosulfa...	15.241	14.059	16392	43071	1.896	1.902
22)	4,4'-DDT	14.917	13.622	10244	36693	1.630	1.921
23)	Endrin Ke...	15.924	14.985	16066	47981	1.877	1.917
24)	Methoxychlor	15.667	14.719	6382	20668	1.662	1.830

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

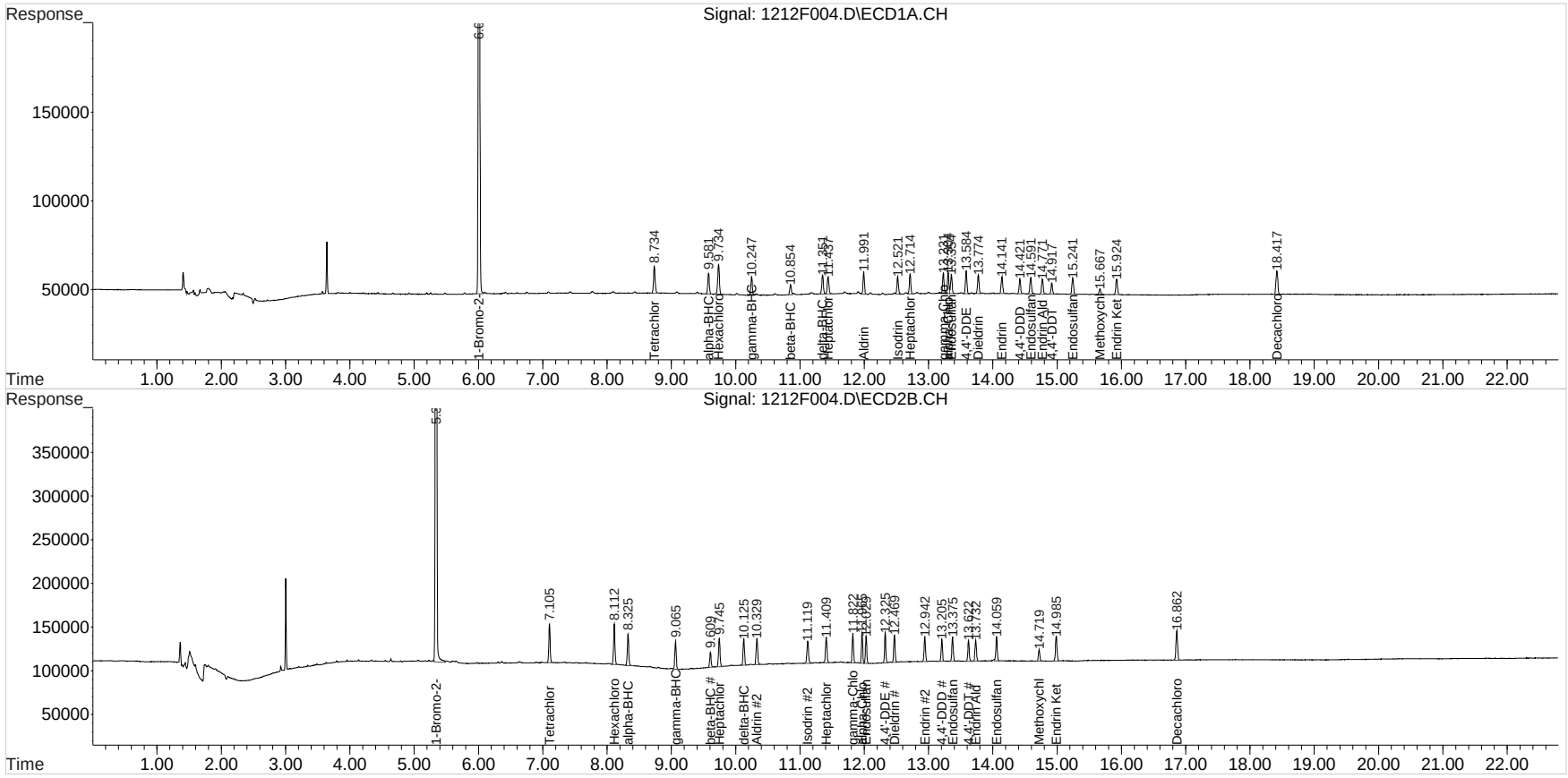
1st MC 12/12/18
2nd TP 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F004.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 10:58 am Operator: MC
Sample : 81 2PPB GCPS8-49F Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 11:31:55 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020262

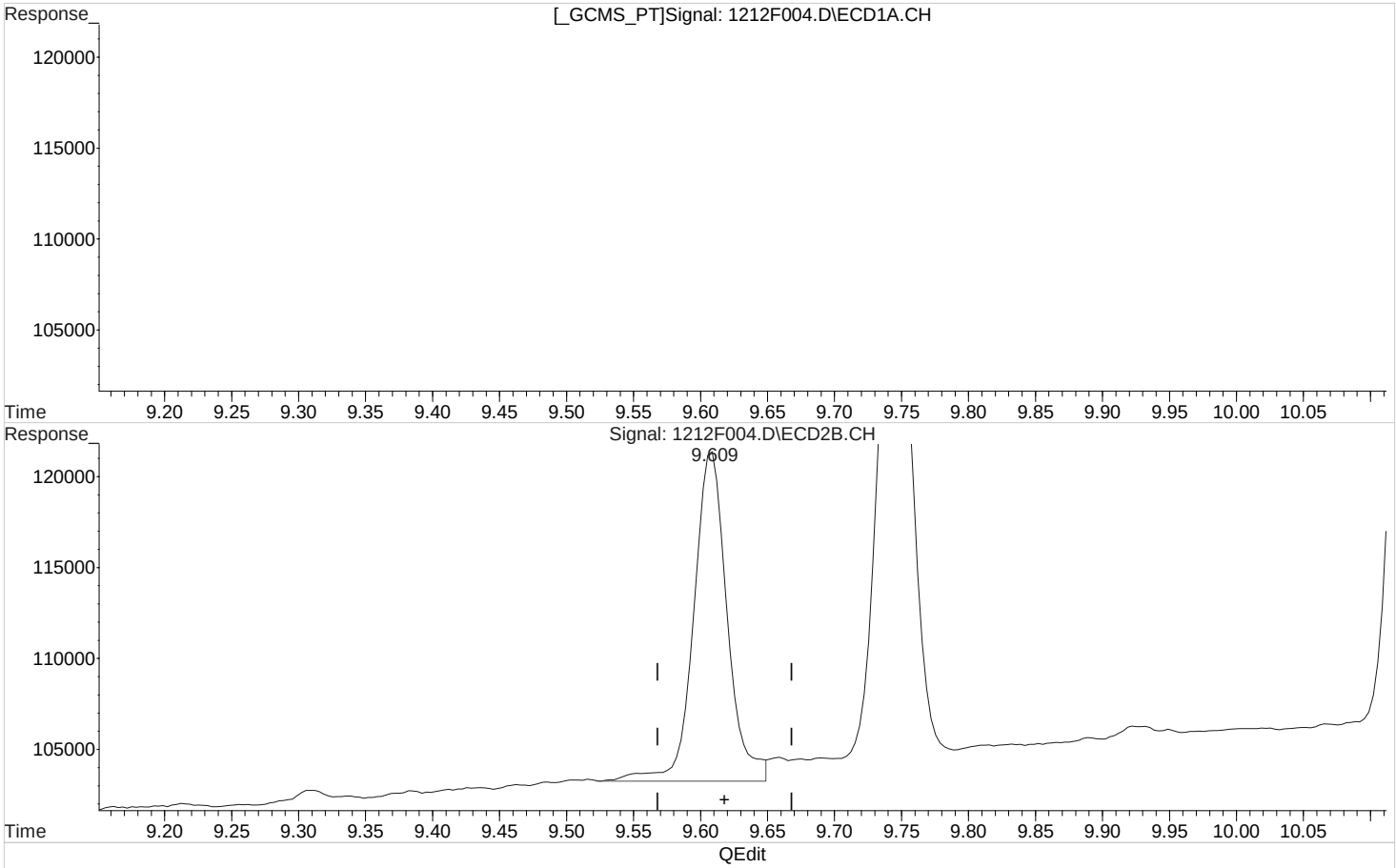
Quantitation Report (Qedit)

1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F004.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 10:58 am Operator: MC
Sample : 81 2PPB GCPS8-49F Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 11:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(5) beta-BHC

10.854min 1.942 ug/L

response 10069

(5) beta-BHC #2

9.609min 2.137 ug/L

response 31696

Manual Integration:

Before

12/12/18

(+) = Expected Retention Time

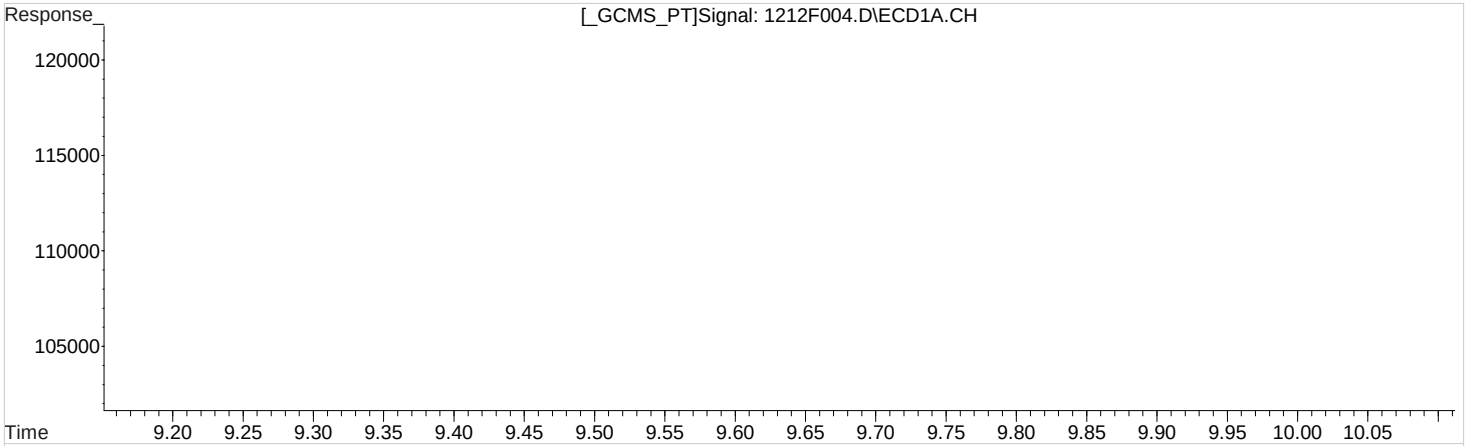
Quantitation Report (Qedit)

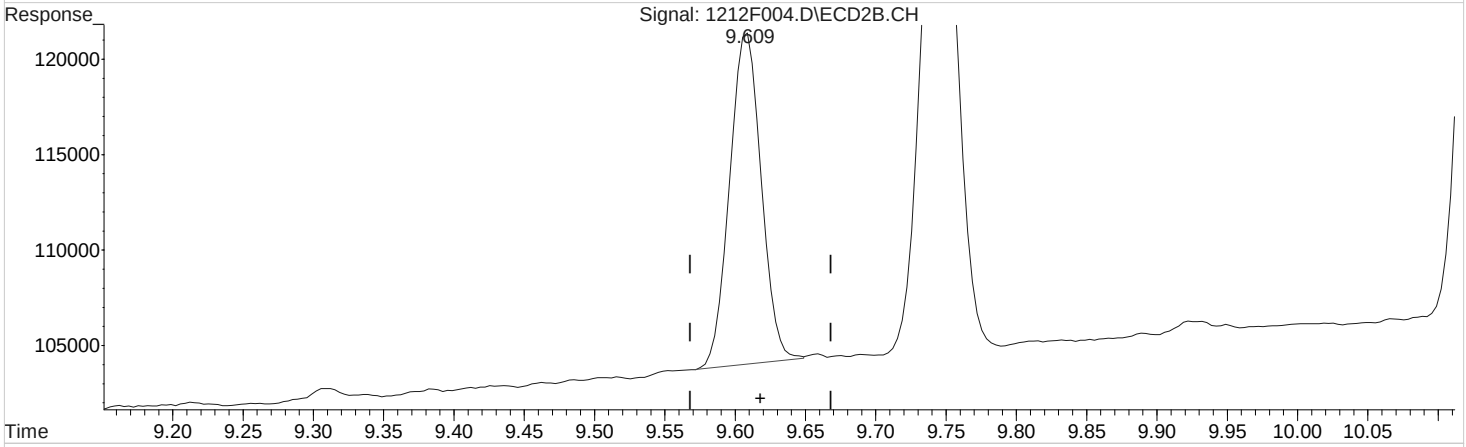
1st MC 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F004.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 10:58 am Operator: MC
Sample : 81 2PPB GCPS8-49F Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 11:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.854min 1.942 ug/L

response 10069

(5) beta-BHC #2

9.609min 1.836 ug/L m

response 27239

Manual Integration:

After

Baseline/Shoulder

12/12/18

(+) = Expected Retention Time

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F005.D
Lab ID: KWG1806469-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/12/2018 11:28
Date Quantitated: 12/12/2018 12:12
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	2,4'-DDE	27.0	NA	20	ICVOK
	2,4'-DDT	20.4	NA	20	ICVOK
Internal Standards	1-Bromo-2-nitrobenzene	0	400242.875	1600971.5	NR
	1-Bromo-2-nitrobenzene {3}	0	0284.071428	21136.28571	NR
	1-Bromo-2-nitrobenzene {4}	0	1403.583333	45614.33333	NR

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F005.D\1212F005C.D
Lab ID: KWG1806469-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/12/2018 11:28
Date Quantitated: 12/12/2018 12:12
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene	0	91280.66666	55122.66666	NR
	1-Bromo-2-nitrobenzene {3}	0	12049.14285	48196.57142	NR
	1-Bromo-2-nitrobenzene {4}	0	32606.41666	30425.66666	NR

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F005.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F005.D\1212F005c.d			**Vial:**	3
Acqu Date:	12/12/2018 11:28	**Quant Date:**	12/12/2018 12:12	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1648	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:		**Method ID:**	MJ1648
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene			0**d**	0**d**	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01 -0.10	5.34 -0.08	577808	2224734	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}			0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}			0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000			NR
1	beta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000			NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor			0**d**	0**d**	0.0000	0.0000			NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000			NR
1	Isodrin			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F005.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F005.D\1212F005c.d			**Vial:**	3
Acqu Date:	12/12/2018 11:28	**Quant Date:**	12/12/2018 12:12	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1648	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	113.02	108.99			
2	Toxaphene {1}	14.71	13.43	16479m	40618	124.83	105.40			
2	Toxaphene {2}	14.58	13.49	6947m	14762	116.99	105.98			
2	Toxaphene {3}	15.12	13.96	12084	16144	121.88	131.18			
2	Toxaphene {4}	15.30	14.11	4378	23671	107.76	102.90			
2	Toxaphene {5}	15.57	14.49	4796	46375	90.18	103.94			
2	Toxaphene {6}	16.00	14.69	17424m	37674	116.50	104.54			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0d	0d	0.0000	0.0000			
3	Chlordane {2}			0d	0d	0.0000	0.0000			
3	Chlordane {3}			0d	0d	0.0000	0.0000			
3	Chlordane {4}			0d	0d	0.0000	0.0000			
3	Chlordane {5}			0d	0d	0.0000	0.0000			
3	Chlordane {6}			0d	0d	0.0000	0.0000			
4	Chlorpyrifos			0d	0d	0.0000	0.0000			NR
4	Oxychlordane			0d	0d	0.0000	0.0000			NR
4	cis-Nonachlor			0d	0d	0.0000	0.0000			NR
4	trans-Nonachlor			0d	0d	0.0000	0.0000			NR
4	Mirex			0d	0d	0.0000	0.0000			NR
4	Hexachloroethane			0d	0d	0.0000	0.0000			NR
4	Hexachlorobutadiene			0d	0d	0.0000	0.0000			NR
4	Perthane			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F005.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F005.D\1212F005c.d			**Vial:**	3
Acqu Date:	12/12/2018 11:28	**Quant Date:**	12/12/2018 12:12	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene			0**d**	0**d**	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01 -0.10	5.34 -0.08	577808	2224734	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}			0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}			0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000			NR
1	beta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000			NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor			0**d**	0**d**	0.0000	0.0000			NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000			NR
1	Isodrin			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F005.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F005.D\1212F005c.d			**Vial:**	3
Acqu Date:	12/12/2018 11:28	**Quant Date:**	12/12/2018 12:12	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds **Final Conc. Units:** mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	113.02	108.99			
2	Toxaphene {1}	14.71	13.43	16479m	40618	124.83	105.40			
2	Toxaphene {2}	14.58	13.49	6947m	14762	116.99	105.98			
2	Toxaphene {3}	15.12	13.96	12084	16144	121.88	131.18			
2	Toxaphene {4}	15.30	14.11	4378	23671	107.76	102.90			
2	Toxaphene {5}	15.57	14.49	4796	46375	90.18	103.94			
2	Toxaphene {6}	16.00	14.69	17424m	37674	116.50	104.54			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0d	0d	0.0000	0.0000			
3	Chlordane {2}			0d	0d	0.0000	0.0000			
3	Chlordane {3}			0d	0d	0.0000	0.0000			
3	Chlordane {4}			0d	0d	0.0000	0.0000			
3	Chlordane {5}			0d	0d	0.0000	0.0000			
3	Chlordane {6}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F005.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F005.D\1212F005c.d			**Vial:**	3
Acqu Date:	12/12/2018 11:28	**Quant Date:**	12/12/2018 12:12	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:		**Method ID:**	MJ1778
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene			0**d**	0**d**	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01 -0.10	5.34 -0.08	577808	2224734	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}			0**d**	0**d**	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}			0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000			NR
1	beta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000			NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor			0**d**	0**d**	0.0000	0.0000			NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000			NR
1	Isodrin			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F005.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F005.D\1212F005c.d			**Vial:**	3
Acqu Date:	12/12/2018 11:28	**Quant Date:**	12/12/2018 12:12	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	113.02	108.99			
2	Toxaphene {1}	14.71	13.43	16479m	40618	124.83	105.40			
2	Toxaphene {2}	14.58	13.49	6947m	14762	116.99	105.98			
2	Toxaphene {3}	15.12	13.96	12084	16144	121.88	131.18			
2	Toxaphene {4}	15.30	14.11	4378	23671	107.76	102.90			
2	Toxaphene {5}	15.57	14.49	4796	46375	90.18	103.94			
2	Toxaphene {6}	16.00	14.69	17424m	37674	116.50	104.54			
	Chlordane			0	0	0.0000	0.0000			NR
3	Chlordane {1}			0d	0d	0.0000	0.0000			
3	Chlordane {2}			0d	0d	0.0000	0.0000			
3	Chlordane {3}			0d	0d	0.0000	0.0000			
3	Chlordane {4}			0d	0d	0.0000	0.0000			
3	Chlordane {5}			0d	0d	0.0000	0.0000			
3	Chlordane {6}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st mc 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F005.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 11:28 am Operator: MC
Sample : TOX 100PPB GCPS8-47B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:12:31 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
29)	1-Bromo-2...	6.013	5.341	577808	2224734	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
30)	Toxaphene	14.706	13.431	16479	40618	124.830m	105.403
31)	Toxaphene...	14.583	13.494	6947	14762	116.988m	105.980
32)	Toxaphene...	15.119	13.964	12084	16144	121.876	131.183
33)	Toxaphene...	15.299	14.107	4378	23671	107.763	102.895
34)	Toxaphene...	15.569	14.487	4796	46375	90.180	103.939
35)	Toxaphene...	15.996	14.687	17424	37674	116.504m	104.535
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

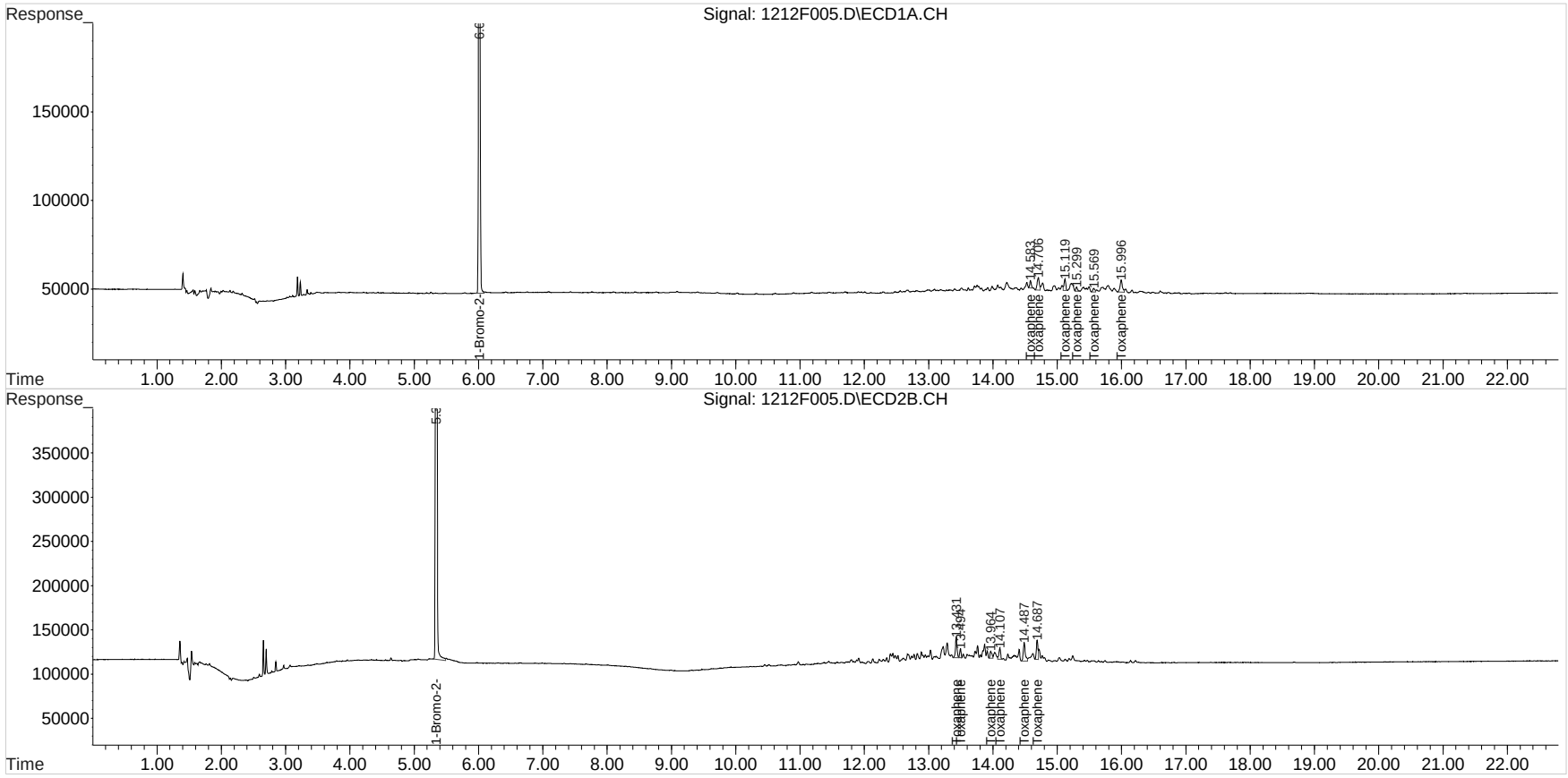
1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F005.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 11:28 am Operator: MC
Sample : TOX 100PPB GCPS8-47B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:12:31 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020274

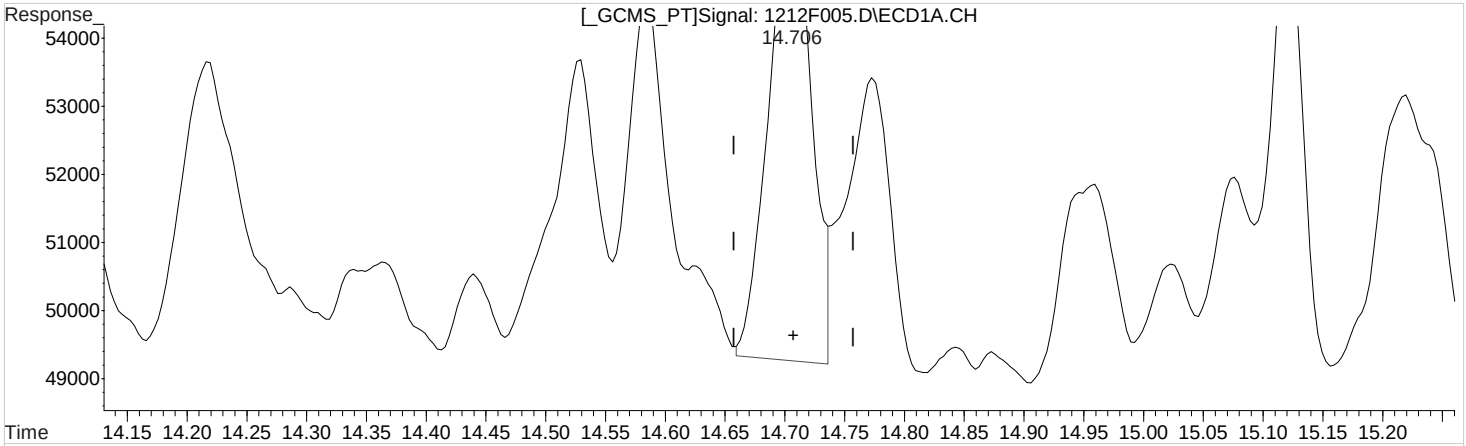
Quantitation Report (Qedit)

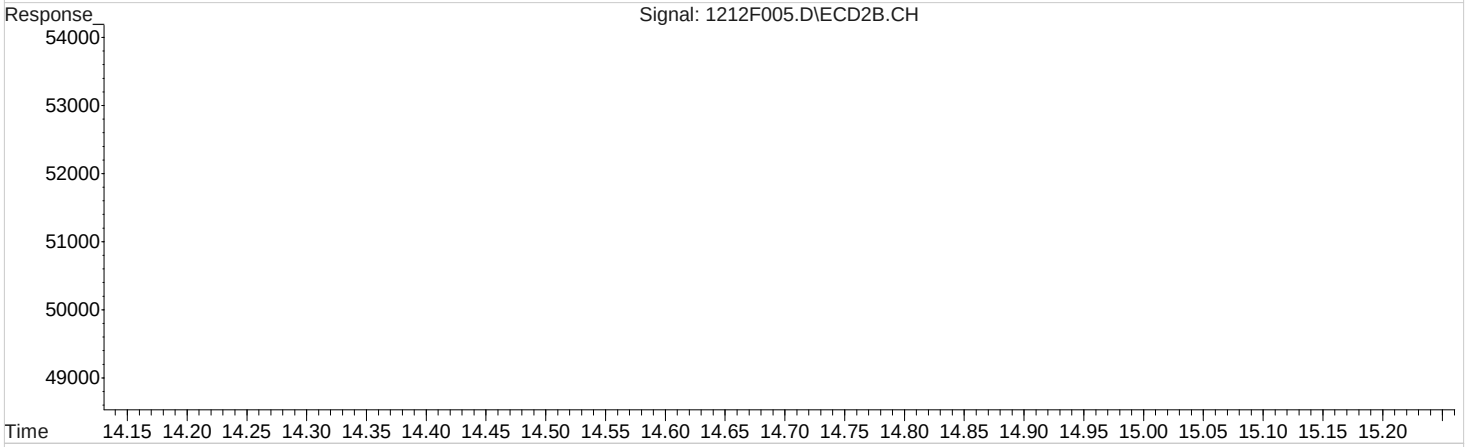
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F005.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 11:28 am Operator: MC
Sample : TOX 100PPB GCPS8-47B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:11:00 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(30) Toxaphene

14.706min 130.019 ug/L

response 17164

(30) Toxaphene #2

13.431min 105.403 ug/L

response 40618

Manual Integration:

Before

12/12/18

(+) = Expected Retention Time

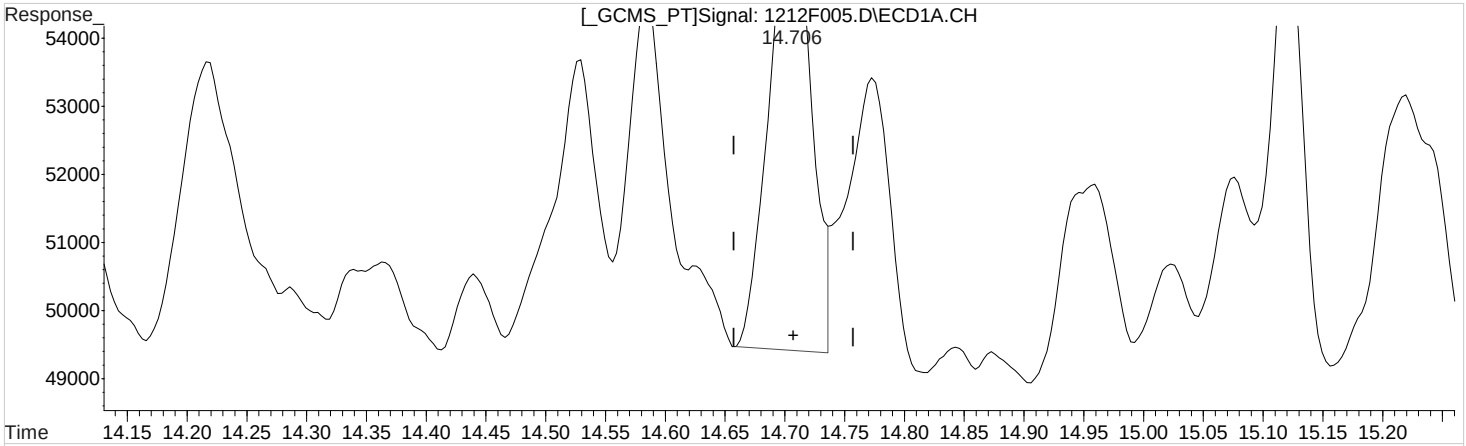
Quantitation Report (Qedit)

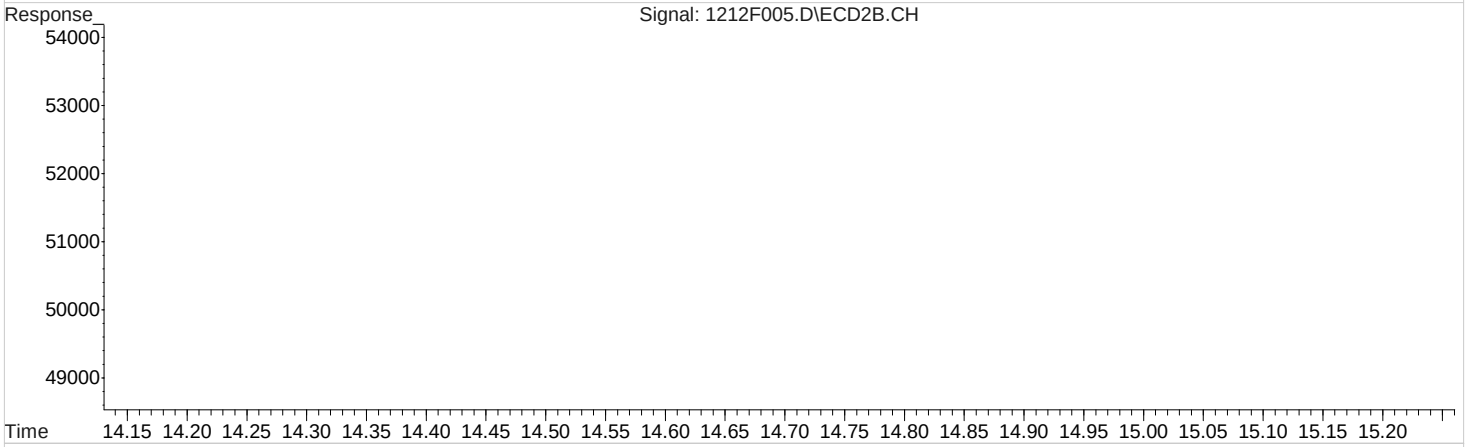
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F005.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 11:28 am Operator: MC
Sample : TOX 100PPB GCPS8-47B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:11:00 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(30) Toxaphene

14.706min 124.830 ug/L m

response 16479

Manual Integration:

After

Baseline/Shoulder

12/12/18

(30) Toxaphene #2

13.431min 105.403 ug/L

response 40618

(+) = Expected Retention Time

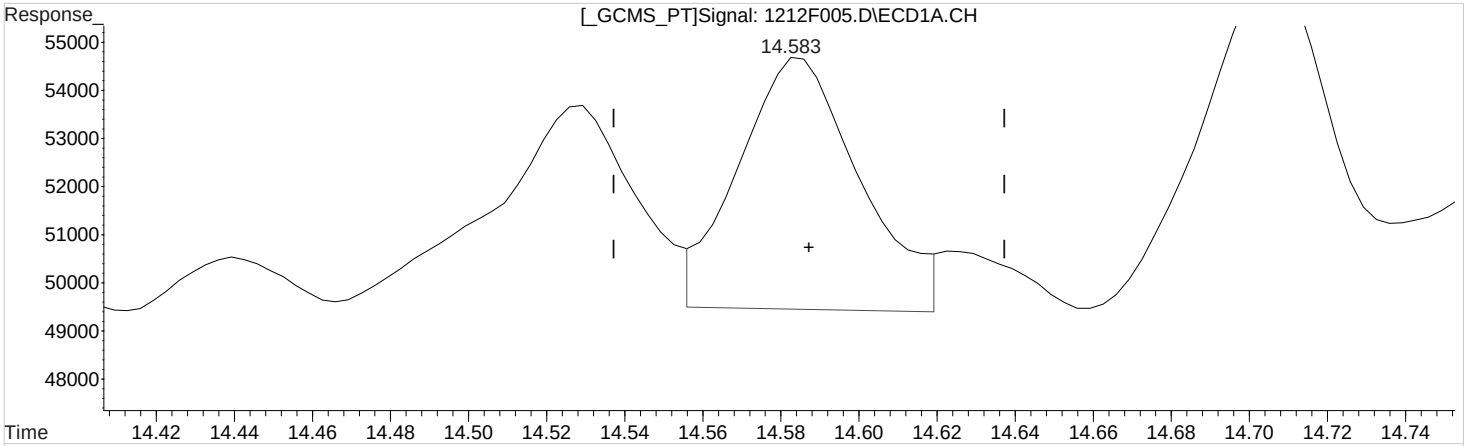
Quantitation Report (Qedit)

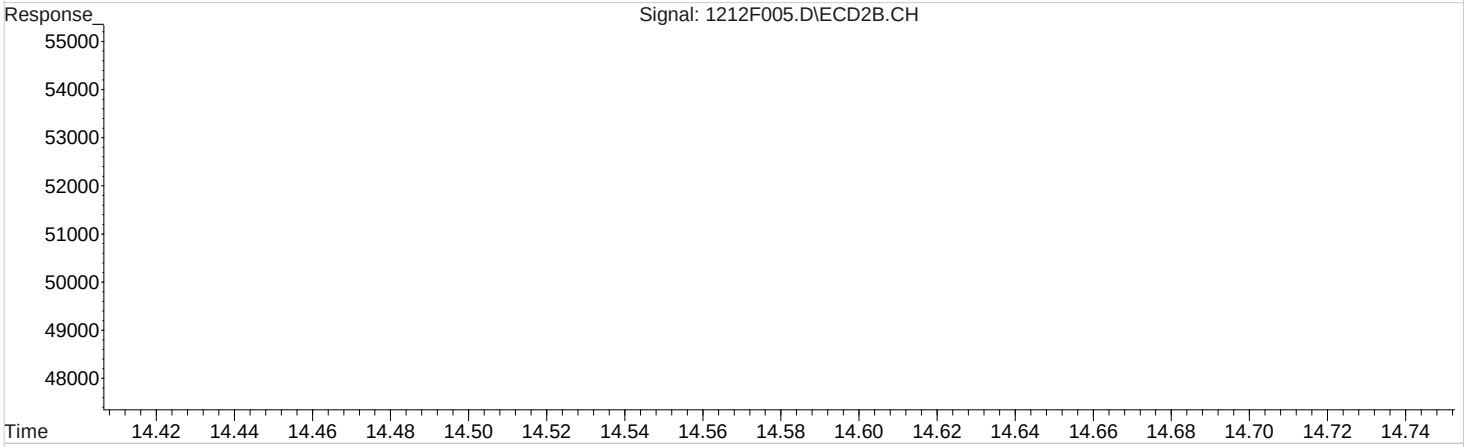
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F005.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 11:28 am Operator: MC
Sample : TOX 100PPB GCPS8-47B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:11:00 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(31) Toxaphene {2}

14.583min 199.920 ug/L

response 11274

(31) Toxaphene {2} #2

13.494min 105.980 ug/L

response 14762

Manual Integration:

Before

12/12/18

(+) = Expected Retention Time

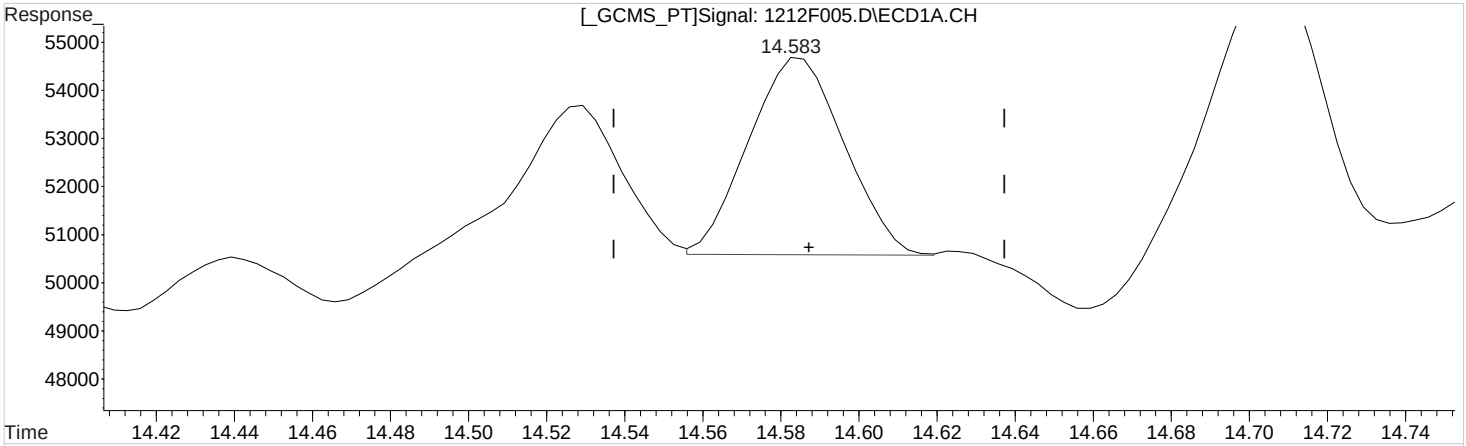
Quantitation Report (Qedit)

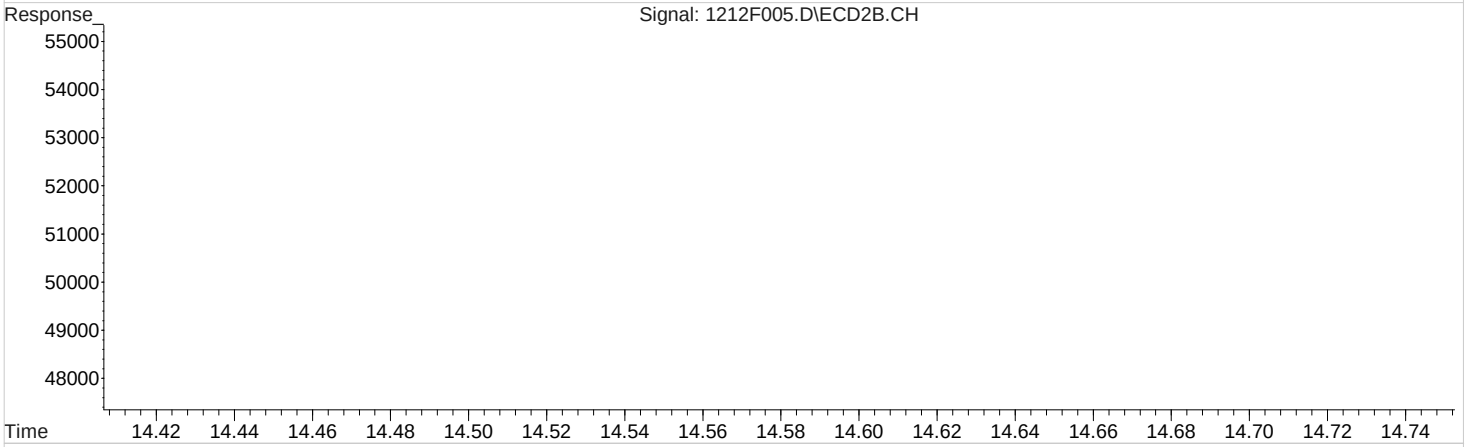
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F005.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 11:28 am Operator: MC
Sample : TOX 100PPB GCPS8-47B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:11:00 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(31) Toxaphene {2}

14.583min 116.988 ug/L m

response 6947

Manual Integration:

After

Baseline/Shoulder

12/12/18

(31) Toxaphene {2} #2

13.494min 105.980 ug/L

response 14762

(+) = Expected Retention Time

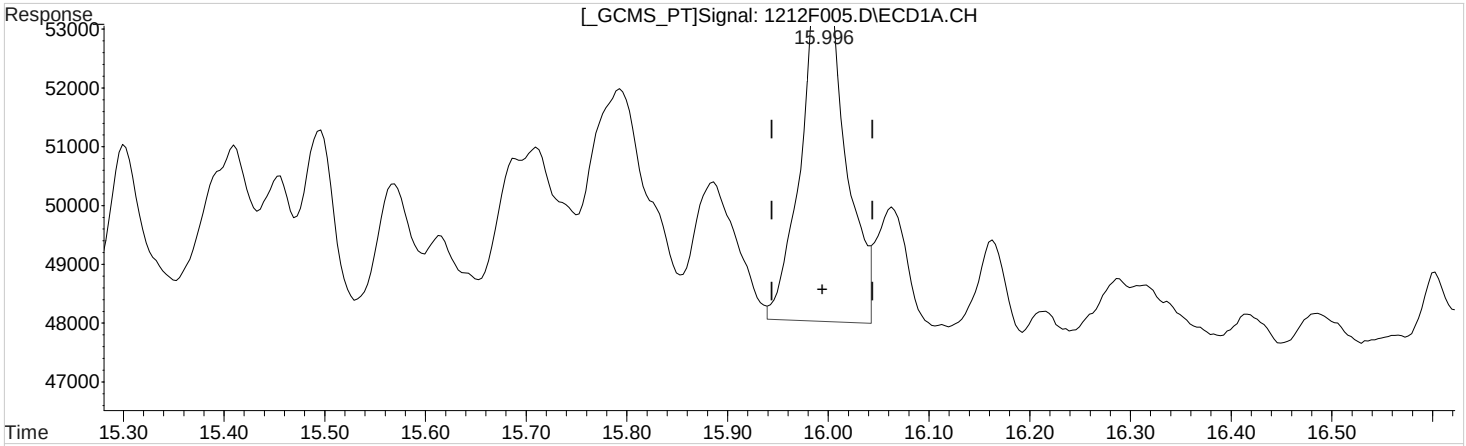
Quantitation Report (Qedit)

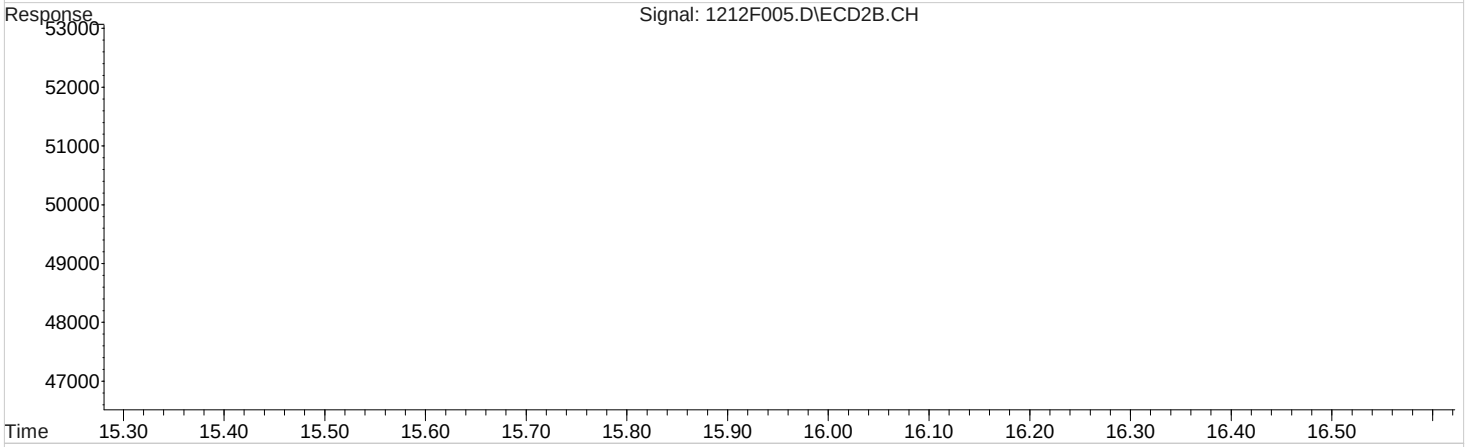
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F005.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 11:28 am Operator: MC
Sample : TOX 100PPB GCPS8-47B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:11:00 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

15.996min 125.464 ug/L

response 18764

Manual Integration:

Before

12/12/18

(35) Toxaphene {6} #2

14.687min 104.535 ug/L

response 37674

(+) = Expected Retention Time

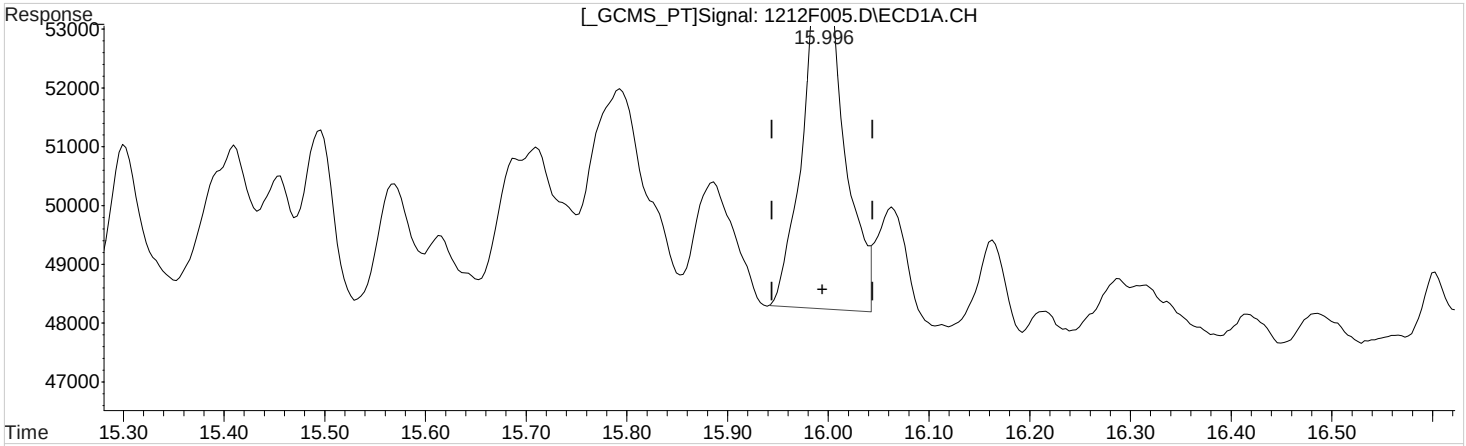
Quantitation Report (Qedit)

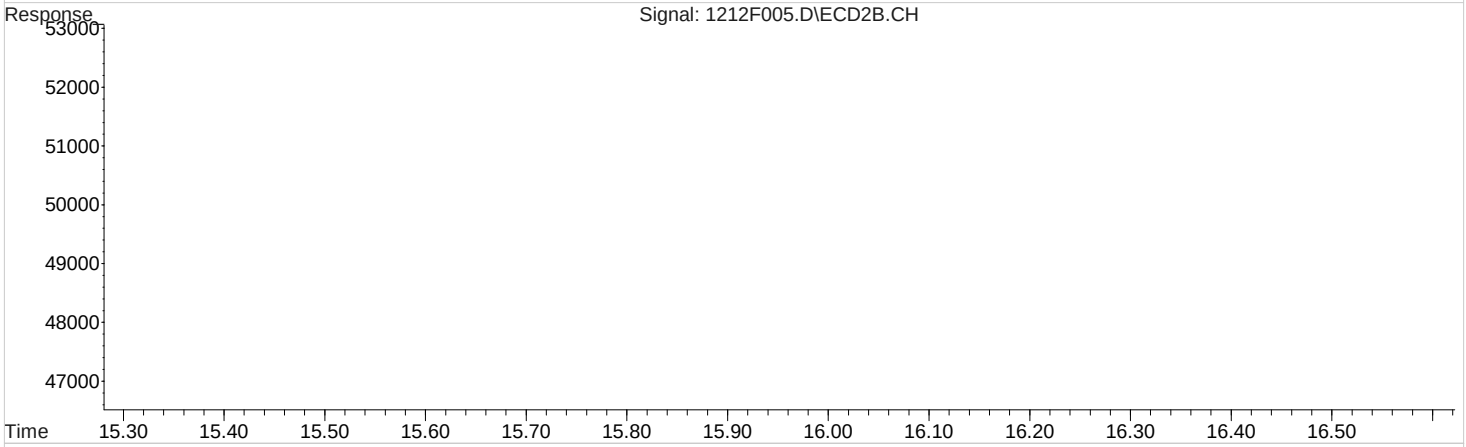
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F005.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 11:28 am Operator: MC
Sample : TOX 100PPB GCPS8-47B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:11:00 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(35) Toxaphene {6}

15.996min 116.504 ug/L m

response 17424

Manual Integration:

After

Baseline/Shoulder

12/12/18

(35) Toxaphene {6} #2

14.687min 104.535 ug/L

response 37674

(+) = Expected Retention Time

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F006.D
Lab ID: KWG1806469-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/12/2018 11:57
Date Quantitated: 12/12/2018 13:05
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	2,4'-DDE	27.0	NA	20	ICVOK
	2,4'-DDT	20.4	NA	20	ICVOK
Internal Standards	1-Bromo-2-nitrobenzene	0	400242.875	1600971.5	NR
	1-Bromo-2-nitrobenzene {2}	0	523283	2093132	NR
	1-Bromo-2-nitrobenzene {4}	0	403.583333	5614.33333	NR

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F006.D\1212F006C.D
Lab ID: KWG1806469-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 12/12/2018 11:57
Date Quantitated: 12/12/2018 13:05
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	1-Bromo-2-nitrobenzene	0	91280.66666	65122.66666	NR
	1-Bromo-2-nitrobenzene {2}	0	47017.33333	68069.33333	NR
	1-Bromo-2-nitrobenzene {4}	0	32606.41666	30425.66666	NR

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F006.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F006.D\1212F006c.d			**Vial:**	4
Acqu Date:	12/12/2018 11:57	**Quant Date:**	12/12/2018 13:05	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1648	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:		**Method ID:**	MJ1648
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene			0**d**	0**d**	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}			0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01 -0.10	5.34 -0.08	607795	2351773	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}			0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000			NR
1	beta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000			NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor			0**d**	0**d**	0.0000	0.0000			NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000			NR
1	Isodrin			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F006.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F006.D\1212F006c.d			**Vial:**	4
Acqu Date:	12/12/2018 11:57	**Quant Date:**	12/12/2018 13:05	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1648	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000			
2	Toxaphene {2}			0d	0d	0.0000	0.0000			
2	Toxaphene {3}			0d	0d	0.0000	0.0000			
2	Toxaphene {4}			0d	0d	0.0000	0.0000			
2	Toxaphene {5}			0d	0d	0.0000	0.0000			
2	Toxaphene {6}			0d	0d	0.0000	0.0000			
	Chlordane			0	0	24.75	21.09			
3	Chlordane {1}	11.02	9.39	7982	21750	22.96	21.42			
3	Chlordane {2}	11.45	11.49	10606	13009	24.19	20.04			
3	Chlordane {3}	12.05	11.83	6629	54421	22.14	21.18			
3	Chlordane {4}	13.24	11.87	23562	32178m	26.95	20.34			
3	Chlordane {5}	13.32	11.94	21007	17140	28.38	22.88			
3	Chlordane {6}	13.40	11.97	13047	47650	23.91	20.68			
4	Chlorpyrifos			0d	0d	0.0000	0.0000			NR
4	Oxychlordane			0d	0d	0.0000	0.0000			NR
4	cis-Nonachlor			0d	0d	0.0000	0.0000			NR
4	trans-Nonachlor			0d	0d	0.0000	0.0000			NR
4	Mirex			0d	0d	0.0000	0.0000			NR
4	Hexachloroethane			0d	0d	0.0000	0.0000			NR
4	Hexachlorobutadiene			0d	0d	0.0000	0.0000			NR
4	Perthane			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F006.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F006.D\1212F006c.d			**Vial:**	4
Acqu Date:	12/12/2018 11:57	**Quant Date:**	12/12/2018 13:05	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-			**Calibration ID:**	CAL15907
Title:					
MB Ref:				**Method ID:**	MJ1711
				Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene			0**d**	0**d**	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}			0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01 -0.10	5.34 -0.08	607795	2351773	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}			0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000			NR
1	beta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000			NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor			0**d**	0**d**	0.0000	0.0000			NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000			NR
1	Isodrin			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F006.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F006.D\1212F006c.d			**Vial:**	4
Acqu Date:	12/12/2018 11:57	**Quant Date:**	12/12/2018 13:05	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000			
2	Toxaphene {2}			0d	0d	0.0000	0.0000			
2	Toxaphene {3}			0d	0d	0.0000	0.0000			
2	Toxaphene {4}			0d	0d	0.0000	0.0000			
2	Toxaphene {5}			0d	0d	0.0000	0.0000			
2	Toxaphene {6}			0d	0d	0.0000	0.0000			
	Chlordane			0	0	24.75	21.09			
3	Chlordane {1}	11.02	9.39	7982	21750	22.96	21.42			
3	Chlordane {2}	11.45	11.49	10606	13009	24.19	20.04			
3	Chlordane {3}	12.05	11.83	6629	54421	22.14	21.18			
3	Chlordane {4}	13.24	11.87	23562	32178m	26.95	20.34			
3	Chlordane {5}	13.32	11.94	21007	17140	28.38	22.88			
3	Chlordane {6}	13.40	11.97	13047	47650	23.91	20.68			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F006.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F006.D\1212F006c.d			**Vial:**	4
Acqu Date:	12/12/2018 11:57	**Quant Date:**	12/12/2018 13:05	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:		**Method ID:**	MJ1778
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene			0**d**	0**d**	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}			0**d**	0**d**	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01 -0.10	5.34 -0.08	607795	2351773	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}			0**d**	0**d**	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0**d**	0**d**		0.0000			NR
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Hexachlorobenzene			0**d**	0**d**	0.0000	0.0000			NR
1	beta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	gamma-BHC (Lindane)			0**d**	0**d**	0.0000	0.0000			NR
1	delta-BHC			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor			0**d**	0**d**	0.0000	0.0000			NR
1	Aldrin			0**d**	0**d**	0.0000	0.0000			NR
1	Isodrin			0**d**	0**d**	0.0000	0.0000			NR
1	Heptachlor Epoxide			0**d**	0**d**	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F006.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F006.D\1212F006c.d			**Vial:**	4
Acqu Date:	12/12/2018 11:57	**Quant Date:**	12/12/2018 13:05	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-3				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR
1	Endosulfan I			0d	0d	0.0000	0.0000			NR
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	Dieldrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			NR
1	Endrin			0d	0d	0.0000	0.0000			NR
1	Endosulfan II			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			NR
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			NR
1	4,4'-DDT			0d	0d	0.0000	0.0000			NR
1	Endrin Ketone			0d	0d	0.0000	0.0000			NR
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	2,4'-DDE			0d	0d	0.0000	0.0000			NR
1	2,4'-DDD			0d	0d	0.0000	0.0000			NR
1	2,4'-DDT			0d	0d	0.0000	0.0000			NR
	Toxaphene			0	0	0.0000	0.0000			NR
2	Toxaphene {1}			0d	0d	0.0000	0.0000			
2	Toxaphene {2}			0d	0d	0.0000	0.0000			
2	Toxaphene {3}			0d	0d	0.0000	0.0000			
2	Toxaphene {4}			0d	0d	0.0000	0.0000			
2	Toxaphene {5}			0d	0d	0.0000	0.0000			
2	Toxaphene {6}			0d	0d	0.0000	0.0000			
	Chlordane			0	0	24.75	21.09			
3	Chlordane {1}	11.02	9.39	7982	21750	22.96	21.42			
3	Chlordane {2}	11.45	11.49	10606	13009	24.19	20.04			
3	Chlordane {3}	12.05	11.83	6629	54421	22.14	21.18			
3	Chlordane {4}	13.24	11.87	23562	32178m	26.95	20.34			
3	Chlordane {5}	13.32	11.94	21007	17140	28.38	22.88			
3	Chlordane {6}	13.40	11.97	13047	47650	23.91	20.68			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st mc 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F006.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 11:57 am Operator: MC
Sample : CHLOR 20PPB GCPS8-49D Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 13:05:23 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
36)	1-Bromo-2...	6.012	5.344	607795	2351773	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
37)	Chlordane	11.019	9.394	7982	21750	22.956	21.423
38)	Chlordane...	11.449	11.494	10606	13009	24.185	20.044
39)	Chlordane...	12.049	11.830	6629	54421	22.135	21.183
40)	Chlordane...	13.242	11.874	23562	32178	26.953	20.338m
41)	Chlordane...	13.316	11.940	21007	17140	28.378	22.875
42)	Chlordane...	13.396	11.974	13047	47650	23.914	20.684
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

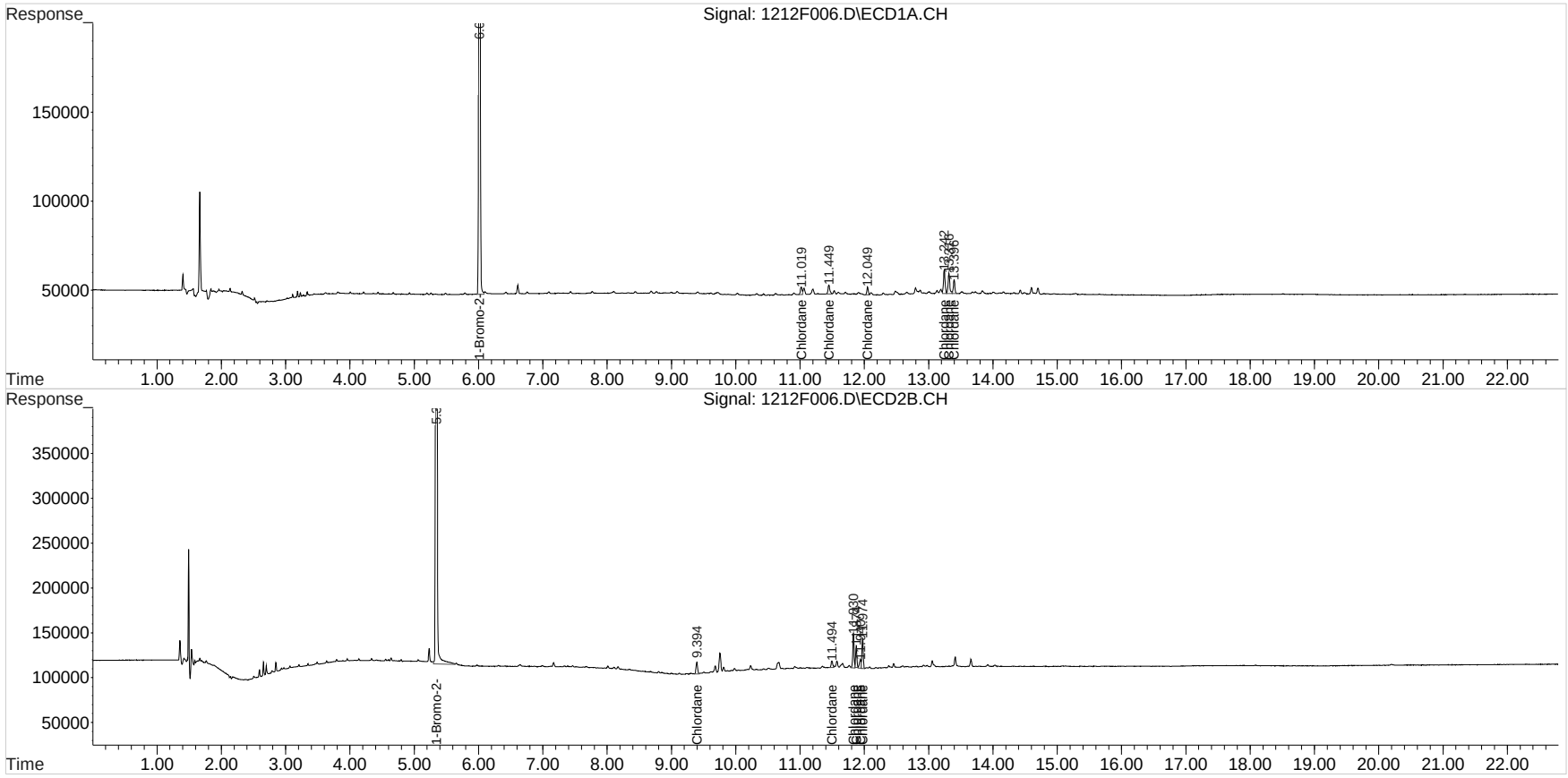
1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F006.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 11:57 am Operator: MC
Sample : CHLOR 20PPB GCPS8-49D Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 13:05:23 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020290

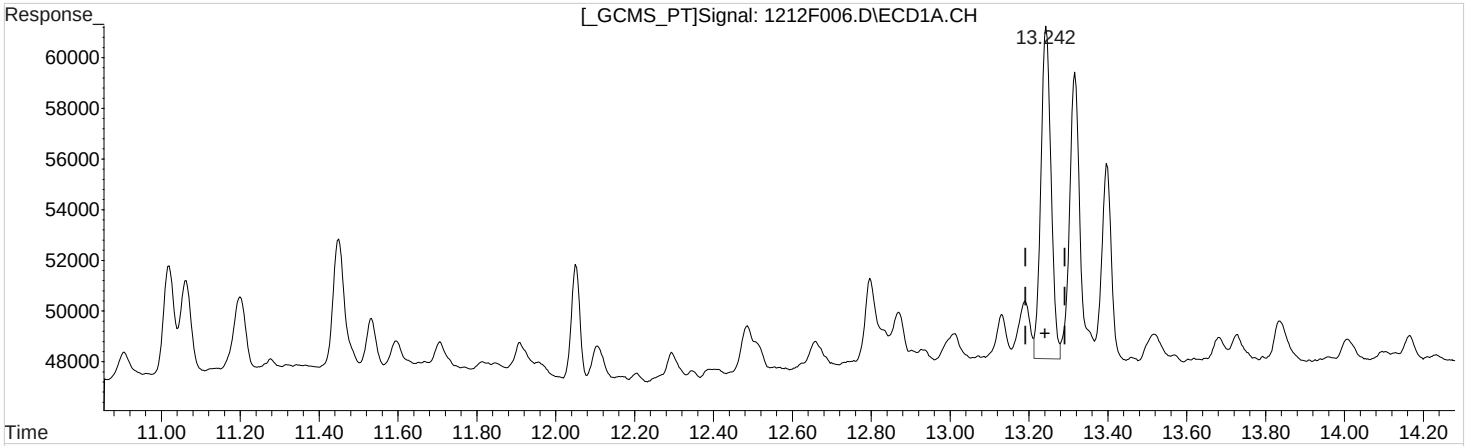
Quantitation Report (Qedit)

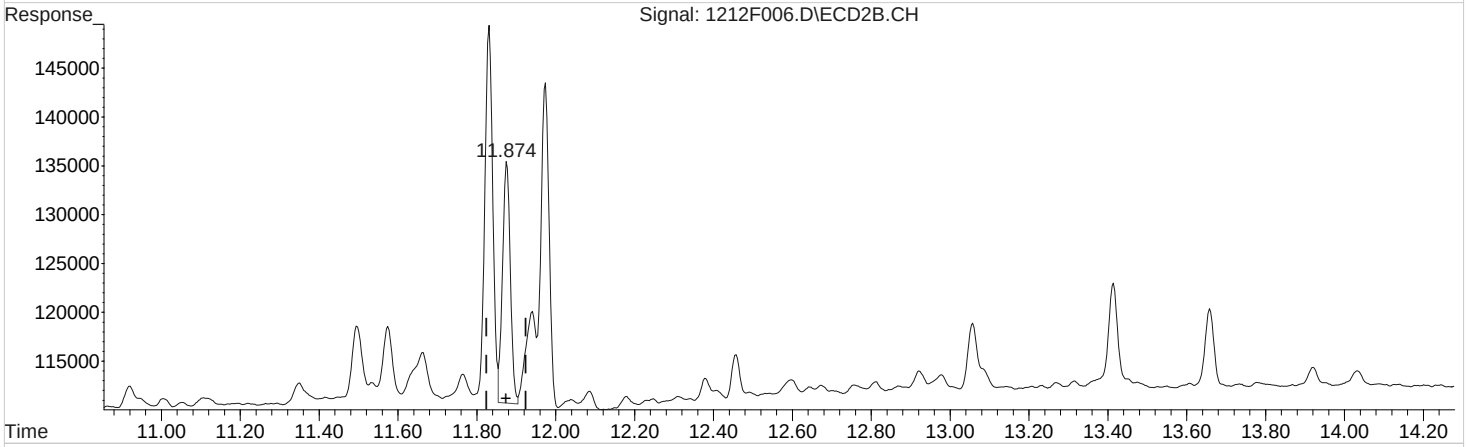
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F006.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 11:57 am Operator: MC
Sample : CHLOR 20PPB GCPS8-49D Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:55:51 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(40) Chlordane {4}

13.242min 26.953 ug/L

response 23562

(40) Chlordane {4} #2

11.874min 21.443 ug/L

response 33925

Manual Integration:

Before

12/12/18

(+) = Expected Retention Time

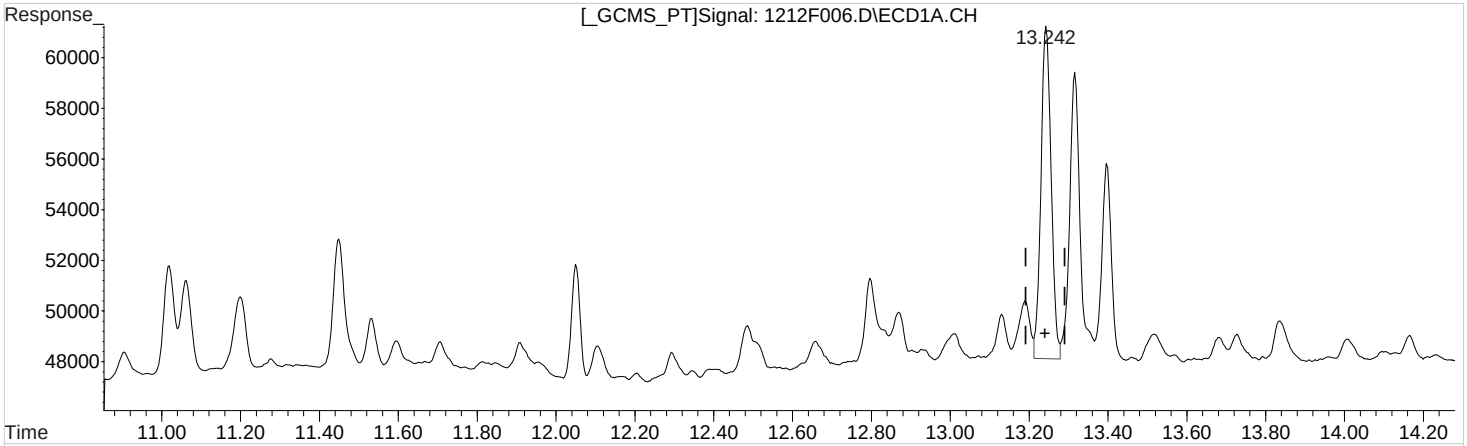
Quantitation Report (Qedit)

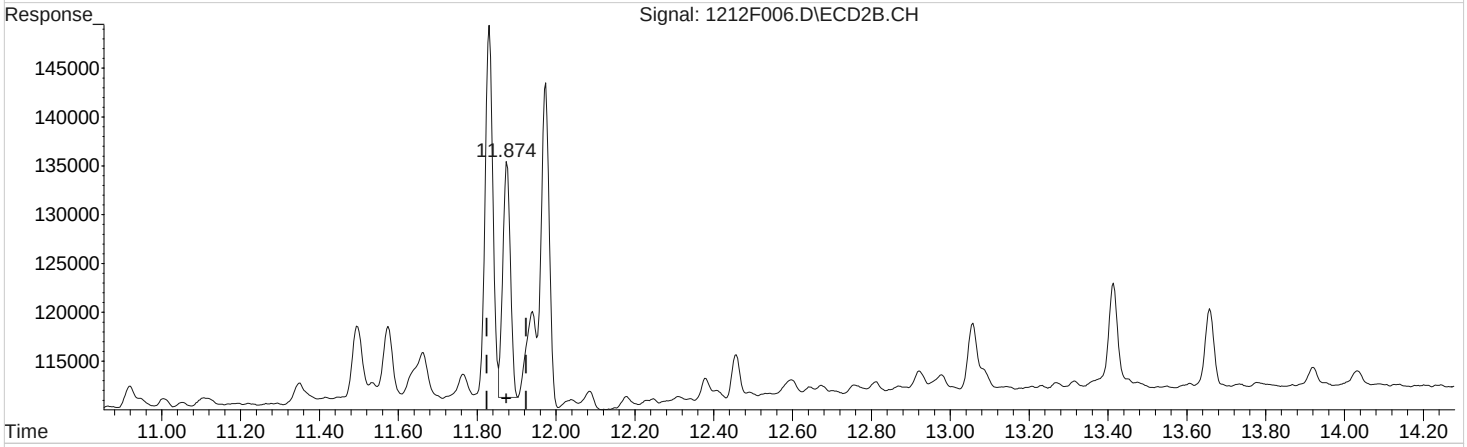
1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F006.D Vial: 4
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 11:57 am Operator: MC
Sample : CHLOR 20PPB GCPS8-49D Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 12:55:51 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(40) Chlordane {4}

13.242min 26.953 ug/L

response 23562

(40) Chlordane {4} #2

11.874min 20.338 ug/L m

response 32178

Manual Integration:

After

Baseline/Shoulder

12/12/18

(+) = Expected Retention Time

1st MC 12/12/18
2nd TP 12/13/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F003.D
Lab ID: KWG1806469-1
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/12/2018 10:29
Date Quantitated: 12/12/2018 11:14
Batch ID: KWG1806469
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	4,4'-DDT	11.42	NA	10	NA

Primary Review: _____

Secondary Review: _____

1st MC 12/12/18
2nd TP 12/13/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F003.D\1212F003C.D
Lab ID: KWG1806469-1
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/12/2018 10:29
Date Quantitated: 12/12/2018 11:14
Batch ID: KWG1806469
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	4,4'-DDT	12.71	NA	10	NA

Primary Review: _____

Secondary Review: _____

1st MC 12/12/18
2nd TP 12/13/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F003.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F003.D\1212F003c.d			**Vial:**	1
Acqu Date:	12/12/2018 10:29	**Quant Date:**	12/12/2018 11:14	**Dilution:**	1.0
Run Type:	PEM	**ListJoinID:**	LJ17418	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-1				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/12/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:	Organochlorine Pesticides	**Report List ID:**	LJ17418
MB Ref:		**Method ID:**	MJ1006
		Quant based on Report List	

BreakDown Results

Parameter Name	Resp #1	Respe #2	Percent Breakdown #1	Percent Breakdown #1
1-Bromo-2-nitrobenzene	545662	2183263		
4,4'-DDE	1274	4170		
Endrin	47857	137740	7.7	8.4
4,4'-DDD	4749	11229		
Endrin Aldehyde	1134	2727		
4,4'-DDT	65810	231485	8.4	6.2
Endrin Ketone	2851	9828		

pass <15%

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st mc 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F003.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 10:29 am Operator: MC
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 11:14:31 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.007	5.338	545662	2183263	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
16)	4,4'-DDE	13.590	12.328	1274	4170	0.130	0.153
17)	Endrin	14.147	12.941	47857	137740	5.753	5.546
19)	4,4'-DDD	14.427	13.208	4749	11229	0.714	0.558
20)	Endrin Al...	14.773	13.738	1134	2727	0.151	0.130
22)	4,4'-DDT	14.920	13.625	65810	231485	11.416	12.708
23)	Endrin Ke...	15.927	14.991	2851	9828	0.363	0.386
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

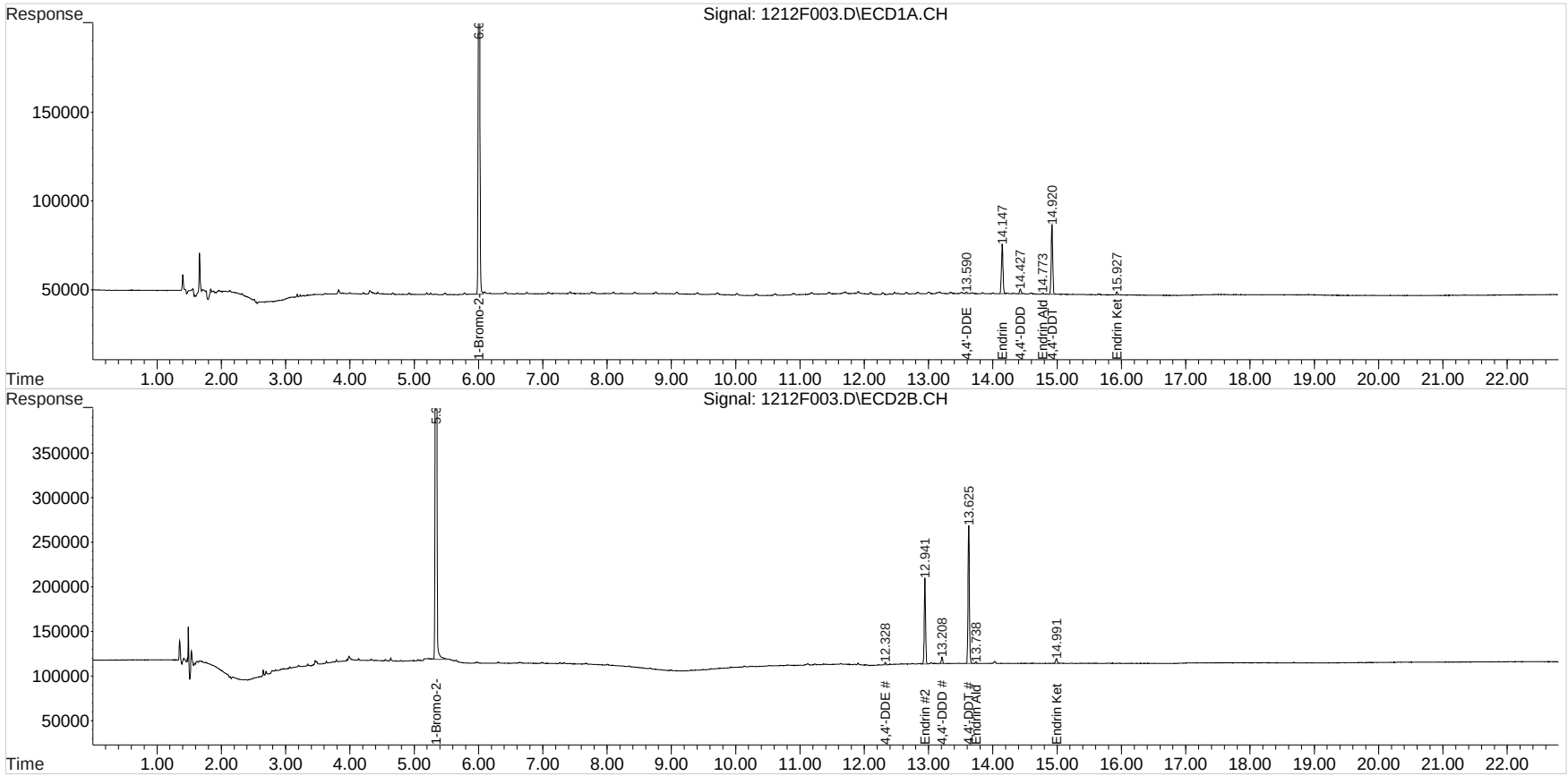
1st MC 12/12/18
2nd TP 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F003.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 10:29 am Operator: MC
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 11:14:31 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020297

1st MC 12/12/18
2nd TP 12/13/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F007.D
Lab ID: KWG1806469-2
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/12/2018 12:27
Date Quantitated: 12/12/2018 13:07
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	2,4'-DDE	27.0	NA	20	ICVOK
	2,4'-DDT	20.4	NA	20	ICVOK

Primary Review: _____

Secondary Review: _____

1st MC 12/12/18
2nd TP 12/13/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F007.D\1212F007C.D
Lab ID: KWG1806469-2
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/12/2018 12:27
Date Quantitated: 12/12/2018 13:07
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st MC 12/12/18
2nd TP 12/13/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F007.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F007.D\1212F007c.d			**Vial:**	5
Acqu Date:	12/12/2018 12:27	**Quant Date:**	12/12/2018 13:07	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1006	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/12/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:		**Method ID:**	MJ1006
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	c	5.34	c	577986	2153848	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	c	5.34	c	577986	2153848	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	c	5.34	c	577986	2153848	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.01	c	5.34	c	577986	2153848	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	20-106	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	19-127	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC		8.34	0	1410	0.0000	0.0470			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC			0	0**d**	0.0000	0.0000			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.75	0	1352	0.0000	0.0460			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/12/18
2nd TP 12/13/18

Data File #1:	J:\GC23\DATA\121218\1212F007.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F007.D\1212F007c.d			**Vial:**	5
Acqu Date:	12/12/2018 12:27	**Quant Date:**	12/12/2018 13:07	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1006	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin			0	0	0.0000	0.0000			
1	4,4'-DDE			0	0	0.0000	0.0000			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.02	0	1438	0.0000	0.0630			
1	4,4'-DDT			0	0	0.0000	0.0000			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor			0	0	0.0000	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	0.0000	0.0000			
2	Toxaphene {1}			0	0**d**	0.0000	0.0000			
2	Toxaphene {2}			0	0**d**	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}			0	0	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			
3	Chlordane {1}			0	0	0.0000	0.0000			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			
4	Chlorpyrifos			0	0	0.0000	0.0000			
4	Oxychlordane			0	0	0.0000	0.0000			
4	cis-Nonachlor			0	0	0.0000	0.0000			
4	trans-Nonachlor			0	0	0.0000	0.0000			
4	Mirex			0	0	0.0000	0.0000			
4	Hexachloroethane			0	0**d**	0.0000	0.0000			
4	Hexachlorobutadiene			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F007.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F007.D\1212F007c.d			**Vial:**	5
Acqu Date:	12/12/2018 12:27	**Quant Date:**	12/12/2018 13:07	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1648	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:		**Method ID:**	MJ1648
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	c	5.34	c	577986	2153848	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	c	5.34	c	577986	2153848	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	c	5.34	c	577986	2153848	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.01	c	5.34	c	577986	2153848	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC		8.34	0	1410	0.0000	0.0470			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC			0	0d	0.0000	0.0000			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.75	0	1352	0.0000	0.0460			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F007.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F007.D\1212F007c.d			**Vial:**	5
Acqu Date:	12/12/2018 12:27	**Quant Date:**	12/12/2018 13:07	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1648	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin			0	0	0.0000	0.0000			
1	4,4'-DDE			0	0	0.0000	0.0000			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.02	0	1438	0.0000	0.0630			
1	4,4'-DDT			0	0	0.0000	0.0000			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor			0	0	0.0000	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	0.0000	0.0000			
2	Toxaphene {1}			0	0**d**	0.0000	0.0000			
2	Toxaphene {2}			0	0**d**	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}			0	0	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			
3	Chlordane {1}			0	0	0.0000	0.0000			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			
4	Chlorpyrifos			0	0	0.0000	0.0000			
4	Oxychlordane			0	0	0.0000	0.0000			
4	cis-Nonachlor			0	0	0.0000	0.0000			
4	trans-Nonachlor			0	0	0.0000	0.0000			
4	Mirex			0	0	0.0000	0.0000			
4	Hexachloroethane			0	0**d**	0.0000	0.0000			
4	Hexachlorobutadiene			0	0	0.0000	0.0000			
4	Perthane			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F007.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F007.D\1212F007c.d			**Vial:**	5
Acqu Date:	12/12/2018 12:27	**Quant Date:**	12/12/2018 13:07	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	c	5.34	c	577986	2153848	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	c	5.34	c	577986	2153848	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	c	5.34	c	577986	2153848	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.01	c	5.34	c	577986	2153848	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC		8.34	0	1410	0.0000	0.0470			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC			0	0**d**	0.0000	0.0000			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.75	0	1352	0.0000	0.0460			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F007.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F007.D\1212F007c.d			**Vial:**	5
Acqu Date:	12/12/2018 12:27	**Quant Date:**	12/12/2018 13:07	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds **Final Conc. Units:** mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin			0	0	0.0000	0.0000			
1	4,4'-DDE			0	0	0.0000	0.0000			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.02	0	1438	0.0000	0.0630			
1	4,4'-DDT			0	0	0.0000	0.0000			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor			0	0	0.0000	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	0.0000	0.0000			
2	Toxaphene {1}			0	0**d**	0.0000	0.0000			
2	Toxaphene {2}			0	0**d**	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}			0	0	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			
3	Chlordane {1}			0	0	0.0000	0.0000			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F007.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F007.D\1212F007c.d			**Vial:**	5
Acqu Date:	12/12/2018 12:27	**Quant Date:**	12/12/2018 13:07	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:		**Method ID:**	MJ1778
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.01	c	5.34	c	577986	2153848	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.01	c	5.34	c	577986	2153848	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.01	c	5.34	c	577986	2153848	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.01	c	5.34	c	577986	2153848	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC		8.34	0	1410	0.0000	0.0470			
1	Hexachlorobenzene			0	0	0.0000	0.0000			
1	beta-BHC			0	0**d**	0.0000	0.0000			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.75	0	1352	0.0000	0.0460			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F007.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F007.D\1212F007c.d			**Vial:**	5
Acqu Date:	12/12/2018 12:27	**Quant Date:**	12/12/2018 13:07	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-2				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin			0	0	0.0000	0.0000			
1	4,4'-DDE			0	0	0.0000	0.0000			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.02	0	1438	0.0000	0.0630			
1	4,4'-DDT			0	0	0.0000	0.0000			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor			0	0	0.0000	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	0.0000	0.0000			
2	Toxaphene {1}			0	0**d**	0.0000	0.0000			
2	Toxaphene {2}			0	0**d**	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}			0	0	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			
3	Chlordane {1}			0	0	0.0000	0.0000			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st mc 12/12/18
2nd TP 12/13/18

Data File : J:\GC23\data\121218\1212F007.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 12:27 pm Operator: MC
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 13:07:28 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.010	5.341	577986	2153848	100.000	100.000	
29)	1-Bromo-2...	6.010	5.341	577986	2153848	100.000	100.000	
36)	1-Bromo-2...	6.010	5.341	577986	2153848	100.000	100.000	
43)	1-Bromo-2...	6.010	5.341	577986	2153848	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
3)	alpha-BHC	0.000	8.338	0	1410	N.D.	0.047	#
8)	Heptachlor	0.000	9.755	0	1352	N.D.	0.046	#
21)	Endosulfa...	0.000	14.025f	0	1438	N.D.	0.063	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

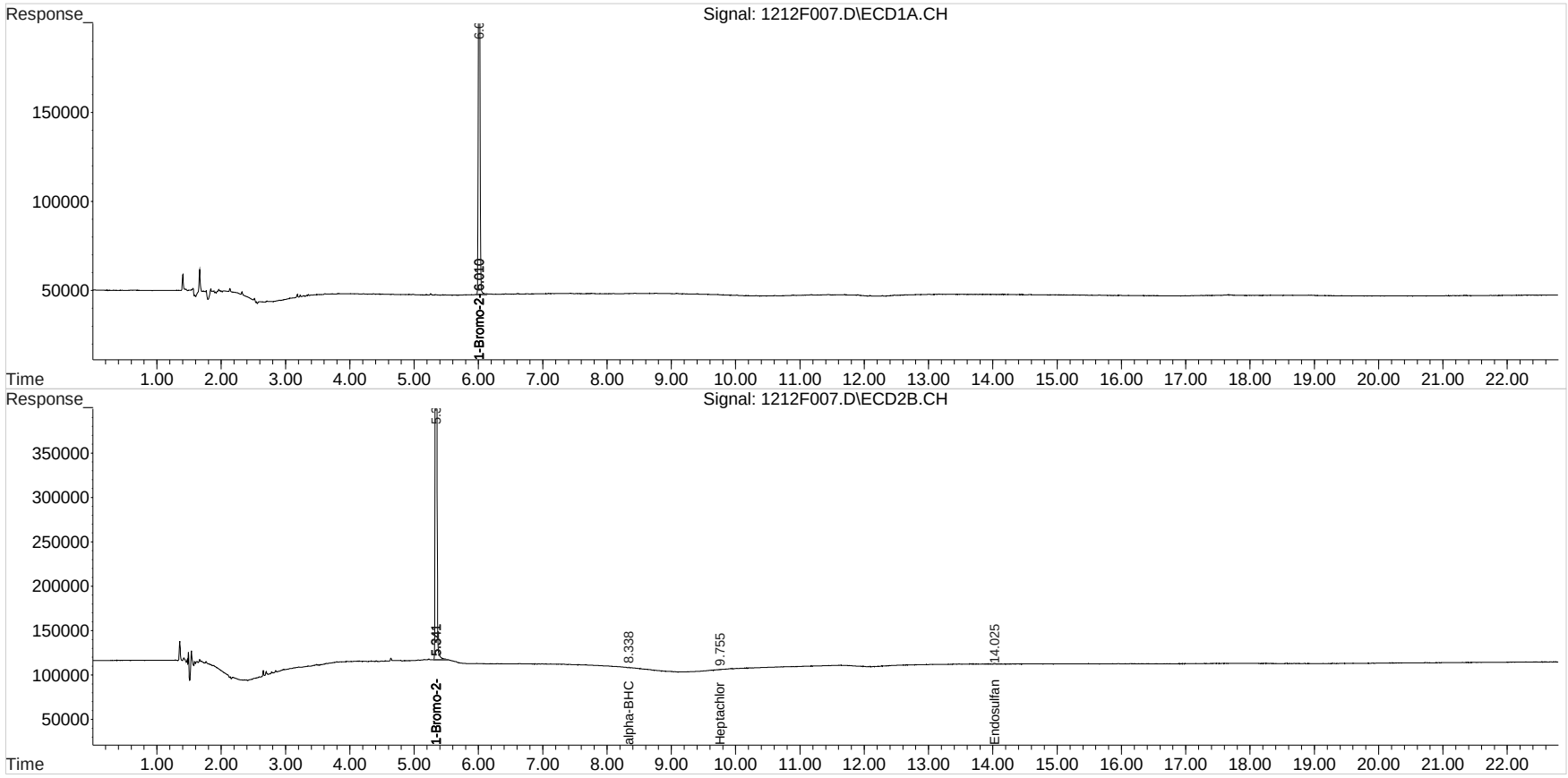
1st MC 12/12/18
2nd TP 12/13/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F007.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 12:27 pm Operator: MC
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 12 13:07:28 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15907 XP-11-09-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020309

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F025.D
Lab ID: KWG1806469-4
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/12/2018 21:20
Date Quantitated: 12/13/2018 09:26
Batch ID: KWG1806469
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	4,4'-DDT	10.87	NA	10	NA

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F025.D\1212F025C.D
Lab ID: KWG1806469-4
RunType: PEM
Matrix: NOT APPLICABLE

Date Acquired: 12/12/2018 21:20
Date Quantitated: 12/13/2018 09:26
Batch ID: KWG1806469
Analysis Method: 8081B
ListJoinID: LJ17418

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Pesticide Breakdown	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	4,4'-DDT	12.61	NA	10	NA

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F025.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F025.D\1212F025c.d			**Vial:**	1
Acqu Date:	12/12/2018 21:20	**Quant Date:**	12/13/2018 09:26	**Dilution:**	1.0
Run Type:	PEM	**ListJoinID:**	LJ17418	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-4				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:	Organochlorine Pesticides	**Report List ID:**	LJ17418
MB Ref:		**Method ID:**	MJ1006
		Quant based on Report List	

BreakDown Results

Parameter Name	Resp #1	Respe #2	Percent Breakdown #1	Percent Breakdown #1
1-Bromo-2-nitrobenzene	720793	2306047		
4,4'-DDE	1792	5381		
Endrin	57447	144599	8.6	9.0
4,4'-DDD	5175	11122		
Endrin Aldehyde	2011	3516		
4,4'-DDT	82762	242585	7.8	6.4
Endrin Ketone	3424	10712		

pass <15%

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st mc 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F025.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 9:20 pm Operator: MC
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:26:07 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.013	5.345	720793	2306047	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
16)	4,4'-DDE	13.593	12.331	1792	5381	0.138	0.187	#
17)	Endrin	14.150	12.948	57447	144599	5.228	5.512	
19)	4,4'-DDD	14.430	13.211	5175	11122	0.589	0.523	
20)	Endrin Al...	14.780	13.741	2011	3516	0.202	0.159	
22)	4,4'-DDT	14.923	13.628	82762	242585	10.868	12.605	
23)	Endrin Ke...	15.933	14.995	3424	10712	0.330	0.398	
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

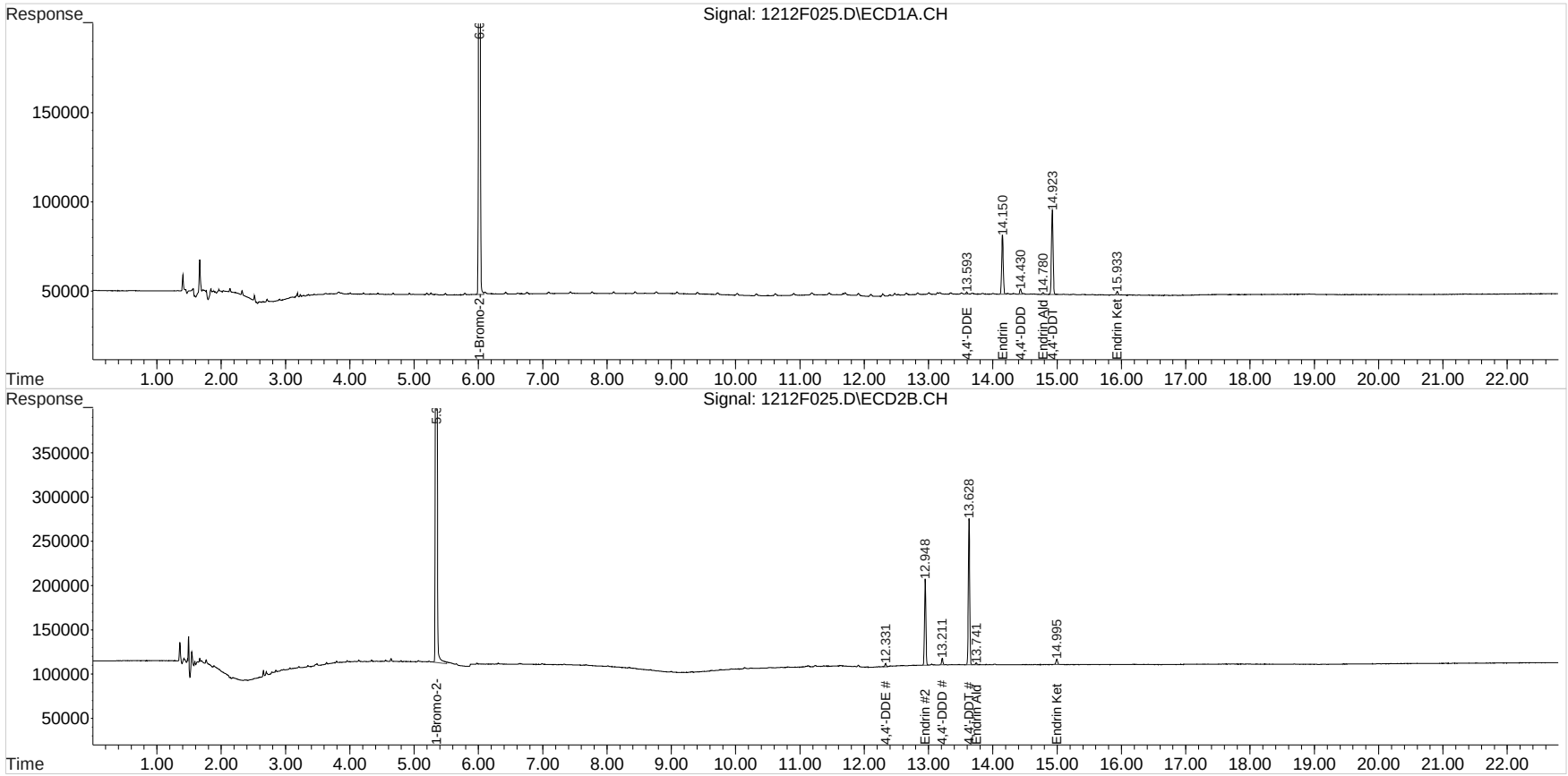
1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F025.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 9:20 pm Operator: MC
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:26:07 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020314

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F027.D
Lab ID: KWG1806469-5
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/12/2018 22:19
Date Quantitated: 12/13/2018 09:28
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	2,4'-DDE	27.0	NA	20	ICVOK
	2,4'-DDT	20.4	NA	20	ICVOK

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Exception Report

Data File: J:\GC23\DATA\121218\1212F027.D\1212F027C.D
Lab ID: KWG1806469-5
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 12/12/2018 22:19
Date Quantitated: 12/13/2018 09:28
Batch ID: KWG1806469
Analysis Method: 8081B
MethodJoinID: MJ1648

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F027.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F027.D\1212F027c.d			**Vial:**	5
Acqu Date:	12/12/2018 22:19	**Quant Date:**	12/13/2018 09:28	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1648	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:		**Method ID:**	MJ1648
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.02	c	5.35	c	731364	2306947	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.02	c	5.35	c	731364	2306947	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.02	c	5.35	c	731364	2306947	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.02	c	5.35	c	731364	2306947	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	alpha-BHC		8.35	0	11383	0.0000	0.3530			
1	Hexachlorobenzene			0d	0	0.0000	0.0000			
1	beta-BHC		9.62	0	1530	0.0000	0.0960			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.76	0	1503	0.0000	0.0470			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F027.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F027.D\1212F027c.d			**Vial:**	5
Acqu Date:	12/12/2018 22:19	**Quant Date:**	12/13/2018 09:28	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1648	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds **Final Conc. Units:** ng/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ng/L #1	ng/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin			0	0	0.0000	0.0000			
1	4,4'-DDE		12.32	0	1512	0.0000	0.0530			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.03	0	1043	0.0000	0.0430			
1	4,4'-DDT			0	0	0.0000	0.0000			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor			0	0	0.0000	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	0.0000	0.0000			
2	Toxaphene {1}			0	0	0.0000	0.0000			
2	Toxaphene {2}			0	0	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}			0	0	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			
3	Chlordane {1}			0	0**d**	0.0000	0.0000			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			
4	Chlorpyrifos			0**d**	0	0.0000	0.0000			
4	Oxychlordane			0	0	0.0000	0.0000			
4	cis-Nonachlor			0	0	0.0000	0.0000			
4	trans-Nonachlor			0	0	0.0000	0.0000			
4	Mirex			0	0	0.0000	0.0000			
4	Hexachloroethane			0	0**d**	0.0000	0.0000			
4	Hexachlorobutadiene			0	0	0.0000	0.0000			
4	Perthane			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F027.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F027.D\1212F027c.d			**Vial:**	5
Acqu Date:	12/12/2018 22:19	**Quant Date:**	12/13/2018 09:28	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:		**Method ID:**	MJ1711
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.02	c	5.35	c	731364	2306947	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.02	c	5.35	c	731364	2306947	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.02	c	5.35	c	731364	2306947	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.02	c	5.35	c	731364	2306947	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	alpha-BHC		8.35	0	11383	0.0000	0.3530			
1	Hexachlorobenzene			0d	0	0.0000	0.0000			
1	beta-BHC		9.62	0	1530	0.0000	0.0960			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.76	0	1503	0.0000	0.0470			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F027.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F027.D\1212F027c.d			**Vial:**	5
Acqu Date:	12/12/2018 22:19	**Quant Date:**	12/13/2018 09:28	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1711	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds **Final Conc. Units:** mg/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	mg/L #1	mg/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin			0	0	0.0000	0.0000			
1	4,4'-DDE		12.32	0	1512	0.0000	0.0530			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.03	0	1043	0.0000	0.0430			
1	4,4'-DDT			0	0	0.0000	0.0000			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor			0	0	0.0000	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	0.0000	0.0000			
2	Toxaphene {1}			0	0	0.0000	0.0000			
2	Toxaphene {2}			0	0	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}			0	0	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			
3	Chlordane {1}			0	0**d**	0.0000	0.0000			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report

Data File #1:	J:\GC23\DATA\121218\1212F027.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F027.D\1212F027c.d			**Vial:**	5
Acqu Date:	12/12/2018 22:19	**Quant Date:**	12/13/2018 09:28	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8081B PEST OC	**Collect Date:**		**Receive Date:**	12/13/2018

Analysis Lot:	KWG1806469	**Prep Lot:**		**Report Group:**	
Analysis Method:	8081B	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC23\METHODS\GC23-120718-	**Calibration ID:**	CAL15907
Title:			
MB Ref:		**Method ID:**	MJ1778
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	1-Bromo-2-nitrobenzene	6.02	c	5.35	c	731364	2306947	100.00	100.00
2	1-Bromo-2-nitrobenzene {2}	6.02	c	5.35	c	731364	2306947	100.00	100.00
3	1-Bromo-2-nitrobenzene {3}	6.02	c	5.35	c	731364	2306947	100.00	100.00
4	1-Bromo-2-nitrobenzene {4}	6.02	c	5.35	c	731364	2306947	100.00	100.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	
1	Decachlorobiphenyl	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC		8.35	0	11383	0.0000	0.3530			
1	Hexachlorobenzene			0d	0	0.0000	0.0000			
1	beta-BHC		9.62	0	1530	0.0000	0.0960			
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000			
1	delta-BHC			0	0	0.0000	0.0000			
1	Heptachlor		9.76	0	1503	0.0000	0.0470			
1	Aldrin			0	0	0.0000	0.0000			
1	Isodrin			0	0	0.0000	0.0000			
1	Heptachlor Epoxide			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st MC 12/13/18
2nd TP 12/21/18

Data File #1:	J:\GC23\DATA\121218\1212F027.D			**Instrument:**	GC23
Data File #2:	J:\GC23\data\121218\1212F027.D\1212F027c.d			**Vial:**	5
Acqu Date:	12/12/2018 22:19	**Quant Date:**	12/13/2018 09:28	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1778	**Soln Conc. Units:**	ug/L
Lab ID:	KWG1806469-5				
Signal #1:	DB XLB	**Signal #2:**	DB-35MS		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane			0	0	0.0000	0.0000			
1	Endosulfan I			0	0	0.0000	0.0000			
1	alpha-Chlordane			0	0	0.0000	0.0000			
1	Dieldrin			0	0	0.0000	0.0000			
1	4,4'-DDE		12.32	0	1512	0.0000	0.0530			
1	Endrin			0	0	0.0000	0.0000			
1	Endosulfan II			0	0	0.0000	0.0000			
1	4,4'-DDD			0	0	0.0000	0.0000			
1	Endrin Aldehyde			0	0	0.0000	0.0000			
1	Endosulfan Sulfate		14.03	0	1043	0.0000	0.0430			
1	4,4'-DDT			0	0	0.0000	0.0000			
1	Endrin Ketone			0	0	0.0000	0.0000			
1	Methoxychlor			0	0	0.0000	0.0000			
1	2,4'-DDE			0	0	0.0000	0.0000			
1	2,4'-DDD			0	0	0.0000	0.0000			
1	2,4'-DDT			0	0	0.0000	0.0000			
	Toxaphene			0	0	0.0000	0.0000			
2	Toxaphene {1}			0	0	0.0000	0.0000			
2	Toxaphene {2}			0	0	0.0000	0.0000			
2	Toxaphene {3}			0	0	0.0000	0.0000			
2	Toxaphene {4}			0	0	0.0000	0.0000			
2	Toxaphene {5}			0	0	0.0000	0.0000			
2	Toxaphene {6}			0	0	0.0000	0.0000			
	Chlordane			0	0	0.0000	0.0000			
3	Chlordane {1}			0	0**d**	0.0000	0.0000			
3	Chlordane {2}			0	0	0.0000	0.0000			
3	Chlordane {3}			0	0	0.0000	0.0000			
3	Chlordane {4}			0	0	0.0000	0.0000			
3	Chlordane {5}			0	0	0.0000	0.0000			
3	Chlordane {6}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st MC 12/13/18
2nd TP 12/21/18

Data File : J:\GC23\data\121218\1212F027.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 10:19 pm Operator: MC
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:28:42 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.017	5.349	731364	2306947	100.000	100.000	
29)	1-Bromo-2...	6.017	5.349	731364	2306947	100.000	100.000	
36)	1-Bromo-2...	6.017	5.349	731364	2306947	100.000	100.000	
43)	1-Bromo-2...	6.017	5.349	731364	2306947	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
3)	alpha-BHC	0.000	8.345	0	11383	N.D.	0.353	#
5)	beta-BHC	0.000	9.622	0	1530	N.D.	0.096	#
8)	Heptachlor	0.000	9.762	0	1503	N.D.	0.047	#
16)	4,4'-DDE	0.000	12.322	0	1512	N.D.	0.053	#
21)	Endosulfa...	0.000	14.032f	0	1043	N.D.	0.043	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

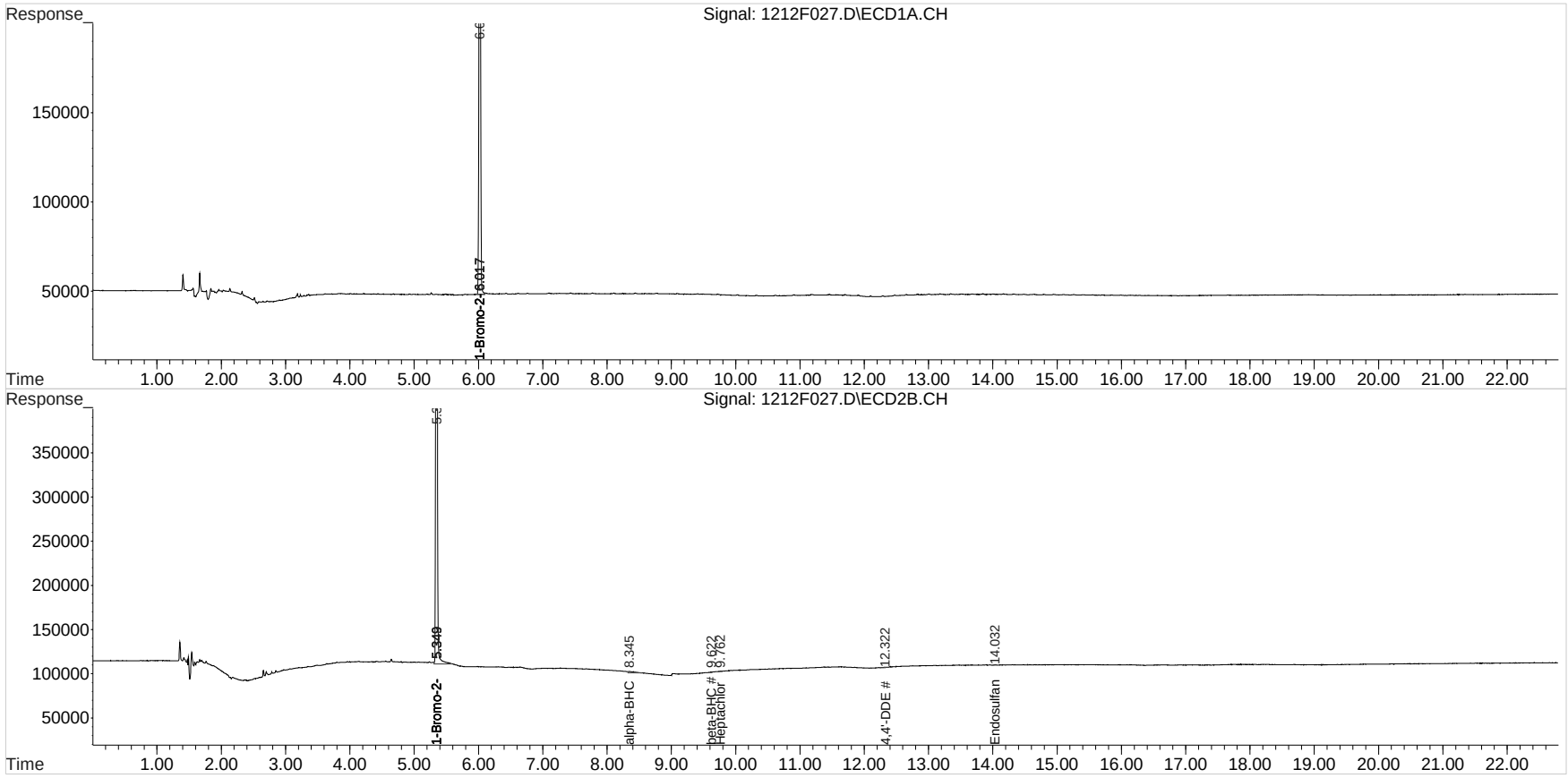
1st MC 12/13/18
2nd TP 12/21/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121218\1212F027.D Vial: 5
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 12 Dec 2018 10:19 pm Operator: MC
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 13 09:28:42 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:44 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020324

Comment: OC PESTICIDES VIA 8081B
Operator: MC
Data Path: C:\GC23\DATA\120718CAL\
Pre-Seq Cmd:
Post-Seq Cmd:

QC: 15907

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	PEM	1	1207F001	PESTCLIP	PEM GCPS8-49H
2	IB	2	1207F002	PESTCLIP	IB
3	ICAL	3	1207F003	PESTCLIP 81	0.2PPB GCPS8-49B
4	ICAL	4	1207F004	PESTCLIP 81	0.5PPB GCPS8-49C @2X → No Peaks, NR
5	ICAL	5	1207F005	PESTCLIP 81	1.0PPB GCPS8-49C
6	ICAL	6	1207F006	PESTCLIP 81	2.0PPB GCPS8-49F
7	ICAL	7	1207F007	PESTCLIP 81	5.0PPB GCPS8-49E @4X
8	ICAL	8	1207F008	PESTCLIP 81	10PPB GCPS8-49E @2X
9	ICV	9	1207F009	PESTCLIP 81	ICV 2PPB GCPS8-49A - RR - NR

Last Modified: Fri Dec 07 15:54:10 2018 Page: 1

020325

Comment: OC PESTICIDES VIA 8081B
Operator: MC
Data Path: C:\GC23\DATA\121018CAL\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	IB	100	1210F001	PESTCLIP	HEXANE
2	PEM	11	1210F002	PESTCLIP	PEM GCPS8-49H
3	IB	12	1210F003	PESTCLIP	IB
4	ICAL	13	1210F004	PESTCLIP	81 0.5PPB GCPS8-49C @2X
5	ICAL	14	1210F005	PESTCLIP	81 1.0PPB GCPS8-49C
6	ICV	15	1210F006	PESTCLIP	81 ICV 2PPB GCPS8-49A

ALS-Kelso
Initial Calibration Checklist GC

Method: 8081B
ICAL ID or Date: ~~MJ~~ 15907
Instrument: GC-23

Primary	Secondary	
☒	☑	The new ICAL is saved with a unique ID.
☒	☑	ICAL was performed continuously (i.e. not interrupted by maintenance event).
☒	☑	All analytes in blank are < ½ MRL.
☒	☑	ICAL contains minimum number of concentrations.
☒	☑	No internal levels excluded for any analytes.
☒	☑	Retention times updated using a midpoint of the calibration. Secondary reviewer double check peak IDs.
☒	☑	Calibration files quantitated with new method.
☒	☑	Check integrations. Primary reviewer must check all integrations electronically. Secondary reviewer will check low point and high point electronically.
☒	☑	ICAL files added to calibration table.
☒	☑	The average RF or COD meets method criteria for all analytes.
☒	☑	ICV is quantitated against new ICAL.
☒	☑	ICV meets method criteria.
☒	☑	Linked in Stealth to an appropriate method. An appropriate method will be one that contains all analytes that were analyzed.
☒	☑	All calibration reports included: ICAL SUMMARY, ICAL DETAILED, ICV SUMMARY.
☒	☑	Enviroquant/Target responses match those in Stealth.
☒	☑	All quant reports and manual integrations initialed and dated.

Data packet should be in the following order: Sequence log, Calibration Review, Stealth ICAL reports, and quant reports.

Primary: MC Date: 12/11/18

Secondary: [illegible] Date: 12/11/18

R:\SVG\FORMS\Calibration Review - GC.doc

020327

Initial Calibration - Summary Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Tetrachloro-m-xylene	SURR	Quadratic		2.359			0.990	0.9973	NA	0.04
alpha-BHC	MS	AverageRF		1.775	20	11.6			OK	
Hexachlorobenzene	MS	Quadratic		3.049			0.990	0.9994	OK	0.01
beta-BHC	MS	AverageRF		0.872	20	9.4			OK	
gamma-BHC (Lindane)	MS	AverageRF		1.524	20	11.7			OK	
delta-BHC	MS	AverageRF		1.577	20	9.8			OK	
Heptachlor	MS	Quadratic		1.840			0.990	0.9984	OK	0.03
Aldrin	MS	AverageRF		1.728	20	11.0			OK	
Isodrin	MS	AverageRF		1.448	20	11.9			OK	
Heptachlor Epoxide	MS	AverageRF		1.567	20	12.1			OK	
gamma-Chlordane	MS	AverageRF		1.593	20	11.4			OK	
Endosulfan I	MS	AverageRF		1.597	20	18.5			OK	
alpha-Chlordane	MS	AverageRF		1.713	20	13.3			OK	
Dieldrin	MS	AverageRF		1.625	20	12.9			OK	
4,4'-DDE	MS	AverageRF		1.801	20	12.7			OK	
Endrin	MS	AverageRF		1.524	20	15.3			OK	
Endosulfan II	MS	Quadratic		1.555			0.990	0.9992	OK	0.02
4,4'-DDD	MS	AverageRF		1.219	20	11.7			OK	
Endrin Aldehyde	MS	AverageRF		1.378	20	15.2			OK	
Endosulfan Sulfate	MS	AverageRF		1.454	20	14.6			OK	
4,4'-DDT	MS	AverageRF		1.057	20	13.4			OK	
Endrin Ketone	MS	AverageRF		1.439	20	11.1			OK	
Methoxychlor	MS	Linear		0.829			0.990	0.9981	OK	0.00
2,4'-DDE	MS	AverageRF		1.005	20	14.9			OK	
2,4'-DDD	MS	AverageRF		0.909	20	17.8			OK	
2,4'-DDT	MS	AverageRF		0.902	20	5.6			OK	
Decachlorobiphenyl	SURR	AverageRF		2.269	20	17.8			NA	
Toxaphene {1}	MULTI	AverageRF		0.023	20	6.4			OK	
Toxaphene {2}	MULTI	Quadratic		0.012			0.990	0.9983	OK	0.94
Toxaphene {3}	MULTI	AverageRF		0.017	20	13.9			OK	
Toxaphene {4}	MULTI	AverageRF		0.007	20	14.6			OK	
Toxaphene {5}	MULTI	AverageRF		0.009	20	13.8			OK	
Toxaphene {6}	MULTI	AverageRF		0.026	20	4.4			OK	
Chlordane {1}	MULTI	AverageRF		0.057	20	10.9			OK	
Chlordane {2}	MULTI	AverageRF		0.072	20	13.3			OK	
Chlordane {3}	MULTI	AverageRF		0.049	20	9.9			OK	
Chlordane {4}	MULTI	AverageRF		0.144	20	8.4			OK	
Chlordane {5}	MULTI	AverageRF		0.122	20	9.0			OK	
Chlordane {6}	MULTI	AverageRF		0.090	20	11.2			OK	
Chlorpyrifos	MS	AverageRF		0.661	20	3.2			OK	
Oxychlordane	MS	AverageRF		1.334	20	10.6			OK	
cis-Nonachlor	MS	AverageRF		1.515	20	8.6			OK	
trans-Nonachlor	MS	AverageRF		1.452	20	10.6			OK	
Mirex	MS	AverageRF		1.171	20	7.3			OK	
Hexachloroethane	MS	AverageRF		2.176	20	8.8			OK	
Hexachlorobutadiene	MS	AverageRF		1.813	20	11.6			OK	
Perthane	MS	AverageRF		0.035	20	8.5			OK	

Initial Calibration - Summary Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Tetrachloro-m-xylene	SURR	AverageRF		1.638	20	7.9			NA	
alpha-BHC	MS	AverageRF		1.398	20	8.0			OK	
Hexachlorobenzene	MS	AverageRF		1.936	20	9.0			OK	
beta-BHC	MS	AverageRF		0.691	20	10.4			OK	
gamma-BHC (Lindane)	MS	AverageRF		1.284	20	9.3			OK	
delta-BHC	MS	AverageRF		1.231	20	6.4			OK	
Heptachlor	MS	AverageRF		1.376	20	9.8			OK	
Aldrin	MS	AverageRF		1.291	20	10.0			OK	
Isodrin	MS	AverageRF		1.123	20	10.6			OK	
Heptachlor Epoxide	MS	AverageRF		1.233	20	8.9			OK	
gamma-Chlordane	MS	AverageRF		1.210	20	8.5			OK	
Endosulfan I	MS	AverageRF		1.130	20	10.8			OK	
alpha-Chlordane	MS	AverageRF		1.218	20	10.1			OK	
Dieldrin	MS	AverageRF		1.154	20	6.7			OK	
4,4'-DDE	MS	AverageRF		1.245	20	10.8			OK	
Endrin	MS	AverageRF		1.138	20	10.4			OK	
Endosulfan II	MS	AverageRF		1.054	20	8.0			OK	
4,4'-DDD	MS	AverageRF		0.922	20	7.6			OK	
Endrin Aldehyde	MS	AverageRF		0.961	20	10.0			OK	
Endosulfan Sulfate	MS	AverageRF		1.055	20	8.1			OK	
4,4'-DDT	MS	Quadratic		0.975			0.990	0.9999	OK	0.05
Endrin Ketone	MS	AverageRF		1.166	20	8.2			OK	
Methoxychlor	MS	AverageRF		0.526	20	7.9			OK	
2,4'-DDE	MS	AverageRF		0.810	20	13.9			OK	
2,4'-DDD	MS	AverageRF		0.706	20	8.3			OK	
2,4'-DDT	MS	AverageRF		0.849	20	17.2			OK	
Decachlorobiphenyl	SURR	AverageRF		1.373	20	10.1			NA	
Toxaphene {1}	MULTI	AverageRF		0.017	20	9.5			OK	
Toxaphene {2}	MULTI	AverageRF		0.006	20	10.8			OK	
Toxaphene {3}	MULTI	AverageRF		0.006	20	13.5			OK	
Toxaphene {4}	MULTI	AverageRF		0.010	20	7.3			OK	
Toxaphene {5}	MULTI	AverageRF		0.020	20	11.1			OK	
Toxaphene {6}	MULTI	AverageRF		0.016	20	7.2			OK	
Chlordane {1}	MULTI	AverageRF		0.043	20	11.0			OK	
Chlordane {2}	MULTI	AverageRF		0.028	20	7.3			OK	
Chlordane {3}	MULTI	AverageRF		0.109	20	6.2			OK	
Chlordane {4}	MULTI	AverageRF		0.067	20	12.7			OK	
Chlordane {5}	MULTI	AverageRF		0.032	20	7.7			OK	
Chlordane {6}	MULTI	AverageRF		0.098	20	7.5			OK	
Chlorpyrifos	MS	AverageRF		0.656	20	10.3			OK	
Oxychlordane	MS	AverageRF		1.275	20	14.1			OK	
cis-Nonachlor	MS	AverageRF		1.429	20	10.9			OK	
trans-Nonachlor	MS	AverageRF		1.335	20	11.5			OK	
Mirex	MS	AverageRF		1.177	20	12.7			OK	
Hexachloroethane	MS	AverageRF		1.887	20	9.0			OK	
Hexachlorobutadiene	MS	AverageRF		1.536	20	11.1			OK	
Perthane	MS	AverageRF		0.035	20	13.4			OK	

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284598	J:\GC23\data\100918CAL\1009F023.D	10/09/2018 19:20	10/10/2018 08:16	12/11/2018 09:33
2	284600	J:\GC23\data\100918CAL\1009F024.D	10/09/2018 19:49	10/10/2018 08:22	12/11/2018 09:33
3	284602	J:\GC23\data\100918CAL\1009F025.D	10/09/2018 20:19	10/10/2018 08:24	12/11/2018 09:33
4	284604	J:\GC23\data\100918CAL\1009F026.D	10/09/2018 20:49	10/10/2018 08:38	12/11/2018 09:33
5	284606	J:\GC23\data\100918CAL\1009F027.D	10/09/2018 21:20	10/10/2018 08:42	12/11/2018 09:33
6	284608	J:\GC23\data\100918CAL\1009F028.D	10/09/2018 21:50	10/10/2018 08:45	12/11/2018 09:33
7	284614	J:\GC23\data\100918CAL\1009F031.D	10/09/2018 23:19	10/10/2018 09:00	12/11/2018 09:34
8	284616	J:\GC23\data\100918CAL\1009F032.D	10/09/2018 23:49	10/10/2018 09:02	12/11/2018 09:34
9	284618	J:\GC23\data\100918CAL\1009F033.D	10/10/2018 00:19	10/10/2018 09:04	12/11/2018 09:34
10	284620	J:\GC23\data\100918CAL\1009F034.D	10/10/2018 00:50	10/10/2018 09:06	12/11/2018 09:34
11	284622	J:\GC23\data\100918CAL\1009F035.D	10/10/2018 01:20	10/10/2018 09:08	12/11/2018 09:34
12	284624	J:\GC23\data\100918CAL\1009F036.D	10/10/2018 01:50	10/10/2018 09:11	12/11/2018 09:34
13	284626	J:\GC23\data\100918CAL\1009F039.D	10/10/2018 03:19	10/10/2018 09:22	12/11/2018 09:34
14	284628	J:\GC23\data\100918CAL\1009F040.D	10/10/2018 03:49	10/10/2018 09:23	12/11/2018 09:34
15	284630	J:\GC23\data\100918CAL\1009F041.D	10/10/2018 04:19	10/10/2018 09:26	12/11/2018 09:34
16	284632	J:\GC23\data\100918CAL\1009F042.D	10/10/2018 04:49	10/10/2018 09:29	12/11/2018 09:34
17	284634	J:\GC23\data\100918CAL\1009F043.D	10/10/2018 05:19	10/10/2018 09:32	12/11/2018 09:35
18	284636	J:\GC23\data\100918CAL\1009F044.D	10/10/2018 05:49	10/10/2018 09:34	12/11/2018 09:35
19	284640	J:\GC23\data\101018CAL\1010F006.D	10/10/2018 12:29	10/10/2018 12:56	12/11/2018 09:35
20	284744	J:\GC23\data\101518CAL\1015F013.D	10/15/2018 19:37	10/16/2018 09:02	12/11/2018 09:35
21	284746	J:\GC23\data\101518CAL\1015F015.D	10/15/2018 20:36	10/16/2018 09:03	12/11/2018 09:35
22	284748	J:\GC23\data\101518CAL\1015F016.D	10/15/2018 21:06	10/16/2018 09:04	12/11/2018 09:35
23	284750	J:\GC23\data\101518CAL\1016F007.D	10/16/2018 12:59	10/16/2018 13:50	12/11/2018 09:35
24	284752	J:\GC23\data\101518CAL\1016F010.D	10/16/2018 14:27	10/16/2018 15:21	12/11/2018 09:35
25	284754	J:\GC23\data\101518CAL\1016F013.D	10/16/2018 15:57	10/16/2018 16:22	12/11/2018 09:35
26	285483	J:\GC23\data\120718CAL\1207F003.D	12/07/2018 16:55	12/11/2018 13:10	12/11/2018 13:15
27	285485	J:\GC23\data\120718CAL\1207F006.D	12/07/2018 18:23	12/10/2018 15:53	12/11/2018 09:36
28	285487	J:\GC23\data\120718CAL\1207F007.D	12/07/2018 18:53	12/10/2018 10:33	12/11/2018 09:36
29	285489	J:\GC23\data\120718CAL\1207F008.D	12/07/2018 19:22	12/10/2018 15:54	12/11/2018 09:36
30	285491	J:\GC23\data\121018CAL\1210F004.D	12/10/2018 14:49	12/10/2018 15:47	12/11/2018 09:36
31	285493	J:\GC23\data\121018CAL\1210F005.D	12/10/2018 15:18	12/10/2018 15:49	12/11/2018 09:36

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Tetrachloro-m-xylene							2.359	19.7#
		26 2.421	27 2.057	28 2.020	29 1.852	30 3.009		
	31 2.794							
alpha-BHC							1.775	11.6
		26 1.768	27 1.677	28 1.616	29 1.559	30 1.932		
	31 2.099							

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Hexachlorobenzene							3.049	29.8#
		26 4.664	27 2.536	28 2.422	29 2.162	30 3.295		
	31 3.215							
beta-BHC							0.872	9.4
		26 0.930	27 0.854	28 0.808	29 0.756	30 0.902		
	31 0.981							
gamma-BHC (Lindane)							1.524	11.7
		26 1.476	27 1.429	28 1.411	29 1.366	30 1.621		
	31 1.841							
delta-BHC							1.577	9.8
		26 1.640	27 1.461	28 1.459	29 1.405	30 1.738		
	31 1.761							
Heptachlor							1.840	36.6#
		26 3.107	27 1.399	28 1.445	29 1.289	30 1.951		
	31 1.852							
Aldrin							1.728	11.0
		26 1.971	27 1.595	28 1.576	29 1.520	30 1.798		
	31 1.908							
Isodrin							1.448	11.9
		26 1.569	27 1.300	28 1.333	29 1.253	30 1.572		
	31 1.659							
Heptachlor Epoxide							1.567	12.1
		26 1.466	27 1.501	28 1.472	29 1.356	30 1.793		
	31 1.816							

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
gamma-Chlordane													1.593	11.4
			26	1.567	27	1.496	28	1.471	29	1.393	30	1.806		
	31	1.826												
Endosulfan I													1.597	18.5
			26	1.975	27	1.352	28	1.385	29	1.269	30	1.803		
	31	1.800												
alpha-Chlordane													1.713	13.3
			26	1.816	27	1.552	28	1.539	29	1.448	30	1.970		
	31	1.955												
Dieldrin													1.625	12.9
			26	1.720	27	1.474	28	1.461	29	1.392	30	1.801		
	31	1.901												
4,4'-DDE													1.801	12.7
			26	1.887	27	1.620	28	1.623	29	1.566	30	2.016		
	31	2.094												
Endrin													1.524	15.3
			26	1.737	27	1.346	28	1.349	29	1.250	30	1.755		
	31	1.710												
Endosulfan II													1.555	22.6#
			26	2.137	27	1.292	28	1.287	29	1.237	30	1.703		
	31	1.675												
4,4'-DDD													1.219	11.7
			26	1.340	27	1.105	28	1.113	29	1.066	30	1.404		
	31	1.283												

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Endrin Aldehyde							1.378	15.2
		26 1.581	27 1.230	28 1.217	29 1.137	30 1.479		
	31 1.627							
Endosulfan Sulfate							1.454	14.6
		26 1.592	27 1.306	28 1.291	29 1.203	30 1.625		
	31 1.708							
4,4'-DDT							1.057	13.4
		26 1.216	27 0.946	28 0.949	29 0.907	30 1.102		
	31 1.218							
Endrin Ketone							1.439	11.1
		26 1.417	27 1.345	28 1.334	29 1.275	30 1.688		
	31 1.575							
Methoxychlor							0.829	49.4#
		26 1.626	27 0.578	28 0.562	29 0.570	30 0.807		
	31 0.829							
2,4'-DDE							1.005	14.9
		20 1.001	21 0.925	22 0.840	23 0.985	24 1.283		
	25 0.994							
2,4'-DDD							0.909	17.8
		20 0.914	21 0.843	22 0.733	23 0.866	24 1.214		
	25 0.885							
2,4'-DDT							0.902	5.6
		20 0.951	21 0.911	22 0.810	23 0.888	24 0.941		
	25 0.914							

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Decachlorobiphenyl													2.269	17.8
	31	2.782	26	2.328	27	1.998	28	1.955	29	1.841	30	2.711		
Toxaphene {1}													0.023	6.4
	7	0.022	8	0.024	9	0.025	10	0.023	11	0.022	12	0.021		
Toxaphene {2}													0.012	22.7#
	7	0.015	8	0.013	9	0.012	10	0.011	11	0.009	12	0.009		
Toxaphene {3}													0.017	13.9
	7	0.021	8	0.018	9	0.018	10	0.016	11	0.015	12	0.015		
Toxaphene {4}													0.007	14.6
	7	0.009	8	0.007	9	0.007	10	0.007	11	0.006	12	0.006		
Toxaphene {5}													0.009	13.8
	7	0.011	8	0.010	9	0.009	10	0.009	11	0.008	12	0.008		
Toxaphene {6}													0.026	4.4
	7	0.025	8	0.027	9	0.027	10	0.026	11	0.025	12	0.025		
Chlordane {1}													0.057	10.9
	13	0.066	14	0.056	15	0.061	16	0.057	17	0.054	18	0.046		
	19	0.059												

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Chlordane {2}							0.072	13.3
	13 0.072	14 0.072	15 0.074	16 0.071	17 0.067	18 0.058		
	19 0.090							
Chlordane {3}							0.049	9.9
	13 0.052	14 0.049	15 0.052	16 0.051	17 0.047	18 0.040		
	19 0.054							
Chlordane {4}							0.144	8.4
	13 0.152	14 0.148	15 0.155	16 0.141	17 0.138	18 0.121		
	19 0.153							
Chlordane {5}							0.122	9.0
	13 0.130	14 0.123	15 0.131	16 0.122	17 0.117	18 0.100		
	19 0.131							
Chlordane {6}							0.090	11.2
	13 0.088	14 0.094	15 0.098	16 0.088	17 0.085	18 0.072		
	19 0.103							
Chlorpyrifos	1 0.649	2 0.673	3 0.633	4 0.664	5 0.653	6 0.695	0.661	3.2
Oxychlordane	1 1.555	2 1.405	3 1.337	4 1.329	5 1.142	6 1.236	1.334	10.6
cis-Nonachlor	1 1.719	2 1.574	3 1.507	4 1.517	5 1.332	6 1.439	1.515	8.6

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
trans-Nonachlor	1	1.685	2	1.544	3	1.460	4	1.435	5	1.243	6	1.345	1.452	10.6
Mirex	1	1.276	2	1.212	3	1.170	4	1.220	5	1.040	6	1.106	1.171	7.3
Hexachloroethane	1	2.440	2	2.292	3	2.184	4	2.098	5	1.867	6	2.175	2.176	8.8
Hexachlorobutadiene	1	2.136	2	1.944	3	1.809	4	1.762	5	1.520	6	1.707	1.813	11.6
Perthane			2	0.031	3	0.039	4	0.033	5	0.035	6	0.036	0.035	8.5

 # RSD Not Applicable. Compound being quantitated from curve. Included in Average RF summary for Average %RSD calculation.

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	Linear

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
284598	J:\GC23\data\100918CAL\1009F023.D	10/09/2018 19:20	10/10/2018 08:16	12/11/2018 09:33
284600	J:\GC23\data\100918CAL\1009F024.D	10/09/2018 19:49	10/10/2018 08:22	12/11/2018 09:33
284602	J:\GC23\data\100918CAL\1009F025.D	10/09/2018 20:19	10/10/2018 08:24	12/11/2018 09:33
284604	J:\GC23\data\100918CAL\1009F026.D	10/09/2018 20:49	10/10/2018 08:38	12/11/2018 09:33
284606	J:\GC23\data\100918CAL\1009F027.D	10/09/2018 21:20	10/10/2018 08:42	12/11/2018 09:33
284608	J:\GC23\data\100918CAL\1009F028.D	10/09/2018 21:50	10/10/2018 08:45	12/11/2018 09:33
284614	J:\GC23\data\100918CAL\1009F031.D	10/09/2018 23:19	10/10/2018 09:00	12/11/2018 09:34
284616	J:\GC23\data\100918CAL\1009F032.D	10/09/2018 23:49	10/10/2018 09:02	12/11/2018 09:34
284618	J:\GC23\data\100918CAL\1009F033.D	10/10/2018 00:19	10/10/2018 09:04	12/11/2018 09:34
284620	J:\GC23\data\100918CAL\1009F034.D	10/10/2018 00:50	10/10/2018 09:06	12/11/2018 09:34
284622	J:\GC23\data\100918CAL\1009F035.D	10/10/2018 01:20	10/10/2018 09:08	12/11/2018 09:34
284624	J:\GC23\data\100918CAL\1009F036.D	10/10/2018 01:50	10/10/2018 09:11	12/11/2018 09:34
284626	J:\GC23\data\100918CAL\1009F039.D	10/10/2018 03:19	10/10/2018 09:22	12/11/2018 09:34
284628	J:\GC23\data\100918CAL\1009F040.D	10/10/2018 03:49	10/10/2018 09:23	12/11/2018 09:34
284630	J:\GC23\data\100918CAL\1009F041.D	10/10/2018 04:19	10/10/2018 09:26	12/11/2018 09:34
284632	J:\GC23\data\100918CAL\1009F042.D	10/10/2018 04:49	10/10/2018 09:29	12/11/2018 09:34
284634	J:\GC23\data\100918CAL\1009F043.D	10/10/2018 05:19	10/10/2018 09:32	12/11/2018 09:35
284636	J:\GC23\data\100918CAL\1009F044.D	10/10/2018 05:49	10/10/2018 09:34	12/11/2018 09:35
284640	J:\GC23\data\101018CAL\1010F006.D	10/10/2018 12:29	10/10/2018 12:56	12/11/2018 09:35
284744	J:\GC23\data\101518CAL\1015F013.D	10/15/2018 19:37	10/16/2018 09:02	12/11/2018 09:35
284746	J:\GC23\data\101518CAL\1015F015.D	10/15/2018 20:36	10/16/2018 09:03	12/11/2018 09:35
284748	J:\GC23\data\101518CAL\1015F016.D	10/15/2018 21:06	10/16/2018 09:04	12/11/2018 09:35
284750	J:\GC23\data\101518CAL\1016F007.D	10/16/2018 12:59	10/16/2018 13:50	12/11/2018 09:35
284752	J:\GC23\data\101518CAL\1016F010.D	10/16/2018 14:27	10/16/2018 15:21	12/11/2018 09:35
284754	J:\GC23\data\101518CAL\1016F013.D	10/16/2018 15:57	10/16/2018 16:22	12/11/2018 09:35
285483	J:\GC23\data\120718CAL\1207F003.D	12/07/2018 16:55	12/11/2018 13:10	12/11/2018 13:15
285485	J:\GC23\data\120718CAL\1207F006.D	12/07/2018 18:23	12/10/2018 15:53	12/11/2018 09:36
285487	J:\GC23\data\120718CAL\1207F007.D	12/07/2018 18:53	12/10/2018 10:33	12/11/2018 09:36
285489	J:\GC23\data\120718CAL\1207F008.D	12/07/2018 19:22	12/10/2018 15:54	12/11/2018 09:36
285491	J:\GC23\data\121018CAL\1210F004.D	12/10/2018 14:49	12/10/2018 15:47	12/11/2018 09:36
285493	J:\GC23\data\121018CAL\1210F005.D	12/10/2018 15:18	12/10/2018 15:49	12/11/2018 09:36

Parameter Name	CoefX2	CoefX	Y-intercept	COD	Mean RF
Methoxychlor		0.548	0.002	0.9981	0.829

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	Quadratic

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
284598	J:\GC23\data\100918CAL\1009F023.D	10/09/2018 19:20	10/10/2018 08:16	12/11/2018 09:33
284600	J:\GC23\data\100918CAL\1009F024.D	10/09/2018 19:49	10/10/2018 08:22	12/11/2018 09:33
284602	J:\GC23\data\100918CAL\1009F025.D	10/09/2018 20:19	10/10/2018 08:24	12/11/2018 09:33
284604	J:\GC23\data\100918CAL\1009F026.D	10/09/2018 20:49	10/10/2018 08:38	12/11/2018 09:33
284606	J:\GC23\data\100918CAL\1009F027.D	10/09/2018 21:20	10/10/2018 08:42	12/11/2018 09:33
284608	J:\GC23\data\100918CAL\1009F028.D	10/09/2018 21:50	10/10/2018 08:45	12/11/2018 09:33
284614	J:\GC23\data\100918CAL\1009F031.D	10/09/2018 23:19	10/10/2018 09:00	12/11/2018 09:34
284616	J:\GC23\data\100918CAL\1009F032.D	10/09/2018 23:49	10/10/2018 09:02	12/11/2018 09:34
284618	J:\GC23\data\100918CAL\1009F033.D	10/10/2018 00:19	10/10/2018 09:04	12/11/2018 09:34
284620	J:\GC23\data\100918CAL\1009F034.D	10/10/2018 00:50	10/10/2018 09:06	12/11/2018 09:34
284622	J:\GC23\data\100918CAL\1009F035.D	10/10/2018 01:20	10/10/2018 09:08	12/11/2018 09:34
284624	J:\GC23\data\100918CAL\1009F036.D	10/10/2018 01:50	10/10/2018 09:11	12/11/2018 09:34
284626	J:\GC23\data\100918CAL\1009F039.D	10/10/2018 03:19	10/10/2018 09:22	12/11/2018 09:34
284628	J:\GC23\data\100918CAL\1009F040.D	10/10/2018 03:49	10/10/2018 09:23	12/11/2018 09:34
284630	J:\GC23\data\100918CAL\1009F041.D	10/10/2018 04:19	10/10/2018 09:26	12/11/2018 09:34
284632	J:\GC23\data\100918CAL\1009F042.D	10/10/2018 04:49	10/10/2018 09:29	12/11/2018 09:34
284634	J:\GC23\data\100918CAL\1009F043.D	10/10/2018 05:19	10/10/2018 09:32	12/11/2018 09:35
284636	J:\GC23\data\100918CAL\1009F044.D	10/10/2018 05:49	10/10/2018 09:34	12/11/2018 09:35
284640	J:\GC23\data\101018CAL\1010F006.D	10/10/2018 12:29	10/10/2018 12:56	12/11/2018 09:35
284744	J:\GC23\data\101518CAL\1015F013.D	10/15/2018 19:37	10/16/2018 09:02	12/11/2018 09:35
284746	J:\GC23\data\101518CAL\1015F015.D	10/15/2018 20:36	10/16/2018 09:03	12/11/2018 09:35
284748	J:\GC23\data\101518CAL\1015F016.D	10/15/2018 21:06	10/16/2018 09:04	12/11/2018 09:35
284750	J:\GC23\data\101518CAL\1016F007.D	10/16/2018 12:59	10/16/2018 13:50	12/11/2018 09:35
284752	J:\GC23\data\101518CAL\1016F010.D	10/16/2018 14:27	10/16/2018 15:21	12/11/2018 09:35
284754	J:\GC23\data\101518CAL\1016F013.D	10/16/2018 15:57	10/16/2018 16:22	12/11/2018 09:35
285483	J:\GC23\data\120718CAL\1207F003.D	12/07/2018 16:55	12/11/2018 13:10	12/11/2018 13:15
285485	J:\GC23\data\120718CAL\1207F006.D	12/07/2018 18:23	12/10/2018 15:53	12/11/2018 09:36
285487	J:\GC23\data\120718CAL\1207F007.D	12/07/2018 18:53	12/10/2018 10:33	12/11/2018 09:36
285489	J:\GC23\data\120718CAL\1207F008.D	12/07/2018 19:22	12/10/2018 15:54	12/11/2018 09:36
285491	J:\GC23\data\121018CAL\1210F004.D	12/10/2018 14:49	12/10/2018 15:47	12/11/2018 09:36
285493	J:\GC23\data\121018CAL\1210F005.D	12/10/2018 15:18	12/10/2018 15:49	12/11/2018 09:36

Parameter Name	CoefX2	CoefX	Y-intercept	COD	Mean RF
Tetrachloro-m-xylene	-4.518	2.271	0.002	0.9973	2.359
Hexachlorobenzene	-4.179	2.535	0.004	0.9994	3.049
Heptachlor	-1.953	1.460	0.003	0.9984	1.840
Endosulfan II	-0.848	1.299	0.002	0.9992	1.555
Toxaphene {2}		0.010	0.001	0.9983	0.012

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284598	J:\GC23\data\100918CAL\1009F023.D	10/09/2018 19:20	10/10/2018 08:16	12/11/2018 09:33
2	284600	J:\GC23\data\100918CAL\1009F024.D	10/09/2018 19:49	10/10/2018 08:22	12/11/2018 09:33
3	284602	J:\GC23\data\100918CAL\1009F025.D	10/09/2018 20:19	10/10/2018 08:24	12/11/2018 09:33
4	284604	J:\GC23\data\100918CAL\1009F026.D	10/09/2018 20:49	10/10/2018 08:38	12/11/2018 09:33
5	284606	J:\GC23\data\100918CAL\1009F027.D	10/09/2018 21:20	10/10/2018 08:42	12/11/2018 09:33
6	284608	J:\GC23\data\100918CAL\1009F028.D	10/09/2018 21:50	10/10/2018 08:45	12/11/2018 09:33
7	284614	J:\GC23\data\100918CAL\1009F031.D	10/09/2018 23:19	10/10/2018 09:00	12/11/2018 09:34
8	284616	J:\GC23\data\100918CAL\1009F032.D	10/09/2018 23:49	10/10/2018 09:02	12/11/2018 09:34
9	284618	J:\GC23\data\100918CAL\1009F033.D	10/10/2018 00:19	10/10/2018 09:04	12/11/2018 09:34
10	284620	J:\GC23\data\100918CAL\1009F034.D	10/10/2018 00:50	10/10/2018 09:06	12/11/2018 09:34
11	284622	J:\GC23\data\100918CAL\1009F035.D	10/10/2018 01:20	10/10/2018 09:08	12/11/2018 09:34
12	284624	J:\GC23\data\100918CAL\1009F036.D	10/10/2018 01:50	10/10/2018 09:11	12/11/2018 09:34
13	284626	J:\GC23\data\100918CAL\1009F039.D	10/10/2018 03:19	10/10/2018 09:22	12/11/2018 09:34
14	284628	J:\GC23\data\100918CAL\1009F040.D	10/10/2018 03:49	10/10/2018 09:23	12/11/2018 09:34
15	284630	J:\GC23\data\100918CAL\1009F041.D	10/10/2018 04:19	10/10/2018 09:26	12/11/2018 09:34
16	284632	J:\GC23\data\100918CAL\1009F042.D	10/10/2018 04:49	10/10/2018 09:29	12/11/2018 09:34
17	284634	J:\GC23\data\100918CAL\1009F043.D	10/10/2018 05:19	10/10/2018 09:32	12/11/2018 09:35
18	284636	J:\GC23\data\100918CAL\1009F044.D	10/10/2018 05:49	10/10/2018 09:34	12/11/2018 09:35
19	284640	J:\GC23\data\101018CAL\1010F006.D	10/10/2018 12:29	10/10/2018 12:56	12/11/2018 09:35
20	284744	J:\GC23\data\101518CAL\1015F013.D	10/15/2018 19:37	10/16/2018 09:02	12/11/2018 09:35
21	284746	J:\GC23\data\101518CAL\1015F015.D	10/15/2018 20:36	10/16/2018 09:03	12/11/2018 09:35
22	284748	J:\GC23\data\101518CAL\1015F016.D	10/15/2018 21:06	10/16/2018 09:04	12/11/2018 09:35
23	284750	J:\GC23\data\101518CAL\1016F007.D	10/16/2018 12:59	10/16/2018 13:50	12/11/2018 09:35
24	284752	J:\GC23\data\101518CAL\1016F010.D	10/16/2018 14:27	10/16/2018 15:21	12/11/2018 09:35
25	284754	J:\GC23\data\101518CAL\1016F013.D	10/16/2018 15:57	10/16/2018 16:22	12/11/2018 09:35
26	285483	J:\GC23\data\120718CAL\1207F003.D	12/07/2018 16:55	12/11/2018 13:10	12/11/2018 13:15
27	285485	J:\GC23\data\120718CAL\1207F006.D	12/07/2018 18:23	12/10/2018 15:53	12/11/2018 09:36
28	285487	J:\GC23\data\120718CAL\1207F007.D	12/07/2018 18:53	12/10/2018 10:33	12/11/2018 09:36
29	285489	J:\GC23\data\120718CAL\1207F008.D	12/07/2018 19:22	12/10/2018 15:54	12/11/2018 09:36
30	285491	J:\GC23\data\121018CAL\1210F004.D	12/10/2018 14:49	12/10/2018 15:47	12/11/2018 09:36
31	285493	J:\GC23\data\121018CAL\1210F005.D	12/10/2018 15:18	12/10/2018 15:49	12/11/2018 09:36

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene												
					26	0.2	0.1450	-27.5	27	2	1.808	-9.6
	28	5	4.847	-3.1	29	10	10.13	1.3	30	0.5	0.6011	20.2
	31	1	1.190	19.0								

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
alpha-BHC												
					26	0.2	0.1991	-0.4	27	2	1.890	-5.5
	28	5	4.552	-9.0	29	10	8.782	-12.2	30	0.5	0.5442	8.8
	31	1	1.182	18.2								
Hexachlorobenzene												
					26	0.2	0.1953	-2.3	27	2	1.886	-5.7
	28	5	5.019	0.4	29	10	10.01	0.1	30	0.5	0.4804	-3.9
	31	1	1.116	11.6								
beta-BHC												
					26	0.2	0.2133	6.7	27	2	1.959	-2.0
	28	5	4.632	-7.4	29	10	8.676	-13.2	30	0.5	0.5172	3.4
	31	1	1.125	12.5								
gamma-BHC (Lindane)												
					26	0.2	0.1937	-3.1	27	2	1.876	-6.2
	28	5	4.630	-7.4	29	10	8.959	-10.4	30	0.5	0.5318	6.4
	31	1	1.208	20.8								

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
delta-BHC												
					26	0.2	0.2079	3.9	27	2	1.852	-7.4
	28	5	4.626	-7.5	29	10	8.910	-10.9	30	0.5	0.5509	10.2
	31	1	1.117	11.7								
Heptachlor												
					26	0.2	0.2437	21.8	27	2	1.775	-11.2
	28	5	5.115	2.3	29	10	9.976	-0.2	30	0.5	0.4884	-2.3
	31	1	1.102	10.2								
Aldrin												
					26	0.2	0.2282	14.1	27	2	1.846	-7.7
	28	5	4.559	-8.8	29	10	8.794	-12.1	30	0.5	0.5202	4.0
	31	1	1.104	10.4								
Isodrin												
					26	0.2	0.2167	8.4	27	2	1.796	-10.2
	28	5	4.605	-7.9	29	10	8.652	-13.5	30	0.5	0.5430	8.6
	31	1	1.146	14.6								

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Heptachlor Epoxide												
					26	0.2	0.1870	-6.5	27	2	1.915	-4.2
	28	5	4.697	-6.1	29	10	8.652	-13.5	30	0.5	0.5719	14.4
	31	1	1.159	15.9								
gamma-Chlordane												
					26	0.2	0.1967	-1.6	27	2	1.878	-6.1
	28	5	4.616	-7.7	29	10	8.742	-12.6	30	0.5	0.5668	13.4
	31	1	1.146	14.6								
Endosulfan I												
					26	0.2	0.2472	23.6	27	2	1.693	-15.3
	28	5	4.336	-13.3	29	10	7.943	-20.6	30	0.5	0.5644	12.9
	31	1	1.127	12.7								
alpha-Chlordane												
					26	0.2	0.2120	6.0	27	2	1.812	-9.4
	28	5	4.491	-10.2	29	10	8.452	-15.5	30	0.5	0.5748	15.0
	31	1	1.141	14.1								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Dieldrin												
					26	0.2	0.2117	5.9	27	2	1.814	-9.3
	28	5	4.496	-10.1	29	10	8.566	-14.3	30	0.5	0.5542	10.8
	31	1	1.170	17.0								
4,4'-DDE												
					26	0.2	0.2095	4.8	27	2	1.799	-10.0
	28	5	4.505	-9.9	29	10	8.692	-13.1	30	0.5	0.5598	12.0
	31	1	1.163	16.3								
Endrin												
					26	0.2	0.2279	13.9	27	2	1.766	-11.7
	28	5	4.425	-11.5	29	10	8.201	-18.0	30	0.5	0.5755	15.1
	31	1	1.122	12.2								
Endosulfan II												
					26	0.2	0.1809	-9.6	27	2	1.863	-6.8
	28	5	4.965	-0.7	29	10	10.03	0.3	30	0.5	0.5090	1.8
	31	1	1.150	15.0								

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4,4'-DDD												
					26	0.2	0.2200	10.0	27	2	1.813	-9.3
	28	5	4.567	-8.7	29	10	8.747	-12.5	30	0.5	0.5762	15.2
	31	1	1.053	5.3								
Endrin Aldehyde												
					26	0.2	0.2294	14.7	27	2	1.785	-10.8
	28	5	4.415	-11.7	29	10	8.251	-17.5	30	0.5	0.5363	7.3
	31	1	1.180	18.0								
Endosulfan Sulfate												
					26	0.2	0.2189	9.5	27	2	1.796	-10.2
	28	5	4.441	-11.2	29	10	8.272	-17.3	30	0.5	0.5587	11.7
	31	1	1.175	17.5								
4,4'-DDT												
					26	0.2	0.2302	15.1	27	2	1.791	-10.4
	28	5	4.492	-10.2	29	10	8.585	-14.1	30	0.5	0.5216	4.3
	31	1	1.153	15.3								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Endrin Ketone												
					26	0.2	0.1970	-1.5	27	2	1.870	-6.5
	28	5	4.635	-7.3	29	10	8.859	-11.4	30	0.5	0.5865	17.3
	31	1	1.094	9.4								
Methoxychlor												
					26	0.2	0.2975	**48.8**	27	2	1.814	-9.3
	28	5	4.828	-3.4	29	10	10.10	1.0	30	0.5	0.4405	-11.9
	31	1	1.217	21.7								
2,4'-DDE												
					20	1	0.9964	-0.4	21	5	4.601	-8.0
	22	10	8.362	-16.4	23	2	1.960	-2.0	24	0.2	0.2555	27.7
	25	0.5	0.4948	-1.0								
2,4'-DDD												
					20	1	1.006	0.6	21	5	4.634	-7.3
	22	10	8.059	-19.4	23	2	1.905	-4.8	24	0.2	0.2671	**33.6**
	25	0.5	0.4869	-2.6								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
2,4'-DDT												
					20	1	1.054	5.4	21	5	5.047	0.9
	22	10	8.971	-10.3	23	2	1.968	-1.6	24	0.2	0.2086	4.3
	25	0.5	0.5062	1.2								
Decachlorobiphenyl												
					26	0.2	0.2052	2.6	27	2	1.761	-12.0
	28	5	4.308	-13.8	29	10	8.112	-18.9	30	0.5	0.5973	19.5
	31	1	1.226	22.6								
Toxaphene {1}												
	7	10	9.676	-3.2	8	25	25.93	3.7	9	50	55.23	10.5
	10	100	100.8	0.8	11	250	235.6	-5.8	12	500	470.2	-6.0
Toxaphene {2}												
	7	10	8.601	-14.0	8	25	26.93	7.7	9	50	54.07	8.1
	10	100	102.1	2.1	11	250	236.8	-5.3	12	500	507.0	1.4

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Toxaphene {3}												
	7	10	12.34	23.4	8	25	26.01	4.0	9	50	52.48	5.0
	10	100	93.35	-6.7	11	250	216.5	-13.4	12	500	438.1	-12.4
Toxaphene {4}												
	7	10	12.81	28.1	8	25	24.43	-2.3	9	50	49.42	-1.2
	10	100	98.07	-1.9	11	250	226.6	-9.3	12	500	433.0	-13.4
Toxaphene {5}												
	7	10	12.48	24.8	8	25	26.55	6.2	9	50	48.52	-3.0
	10	100	94.68	-5.3	11	250	222.6	-11.0	12	500	441.1	-11.8
Toxaphene {6}												
	7	10	9.736	-2.6	8	25	26.20	4.8	9	50	52.97	5.9
	10	100	99.75	-0.3	11	250	243.1	-2.8	12	500	474.6	-5.1

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {1}												
	13	5	5.782	15.6	14	10	9.857	-1.4	15	20	21.45	7.3
	16	50	49.56	-0.9	17	100	95.15	-4.9	18	200	161.5	-19.3
	19	2	2.070	3.5								
Chlordane {2}												
	13	5	5.021	0.4	14	10	9.950	-0.5	15	20	20.57	2.9
	16	50	49.05	-1.9	17	100	93.40	-6.6	18	200	161.1	-19.5
	19	2	2.503	25.2								
Chlordane {3}												
	13	5	5.314	6.3	14	10	10.04	0.4	15	20	20.92	4.6
	16	50	51.73	3.5	17	100	95.02	-5.0	18	200	160.4	-19.8
	19	2	2.201	10.0								
Chlordane {4}												
	13	5	5.277	5.5	14	10	10.27	2.7	15	20	21.59	7.9
	16	50	49.06	-1.9	17	100	95.76	-4.2	18	200	167.6	-16.2
	19	2	2.124	6.2								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {5}												
	13	5	5.316	6.3	14	10	10.10	1.0	15	20	21.49	7.4
	16	50	49.89	-0.2	17	100	95.74	-4.3	18	200	164.4	-17.8
	19	2	2.150	7.5								
Chlordane {6}												
	13	5	4.921	-1.6	14	10	10.46	4.6	15	20	21.92	9.6
	16	50	49.15	-1.7	17	100	94.58	-5.4	18	200	160.0	-20.0
	19	2	2.290	14.5								
Chlorpyrifos	1	0.2	0.1964	-1.8	2	0.5	0.5086	1.7	3	1	0.9579	-4.2
	4	2	2.009	0.4	5	5	4.939	-1.2	6	10	10.51	5.1
Oxychlordane	1	0.2	0.2331	16.6	2	0.5	0.5267	5.3	3	1	1.002	0.2
	4	2	1.992	-0.4	5	5	4.279	-14.4	6	10	9.266	-7.3

Initial Calibration - Detailed Report

Calibration ID: CAL15907
Method ID: MJ1647
Instrument ID: GC23
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
cis-Nonachlor	1	0.2	0.2270	13.5	2	0.5	0.5195	3.9	3	1	0.9947	-0.5
	4	2	2.003	0.2	5	5	4.398	-12.0	6	10	9.500	-5.0
trans-Nonachlor	1	0.2	0.2320	16.0	2	0.5	0.5318	6.4	3	1	1.005	0.5
	4	2	1.977	-1.1	5	5	4.280	-14.4	6	10	9.264	-7.4
Mirex	1	0.2	0.2180	9.0	2	0.5	0.5177	3.5	3	1	0.9996	0.0
	4	2	2.084	4.2	5	5	4.442	-11.2	6	10	9.449	-5.5
Hexachloroethane	1	0.2	0.2242	12.1	2	0.5	0.5267	5.3	3	1	1.004	0.4
	4	2	1.928	-3.6	5	5	4.291	-14.2	6	10	9.995	-0.1

Initial Calibration - Detailed Report

Calibration ID: CAL15907
Method ID: MJ1647
Instrument ID: GC23
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Hexachlorobutadiene	1	0.2	0.2356	17.8	2	0.5	0.5361	7.2	3	1	0.9978	-0.2
	4	2	1.943	-2.8	5	5	4.193	-16.1	6	10	9.416	-5.8
Perthane					2	2.5	2.248	-10.1	3	5	5.636	12.7
	4	10	9.560	-4.4	5	25	24.89	-0.4	6	50	51.10	2.2

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284599	J:\GC23\data\100918CAL\1009F023.D\1009F023c.d	10/09/2018 19:20	10/10/2018 08:16	12/11/2018 09:33
2	284601	J:\GC23\data\100918CAL\1009F024.D\1009F024c.d	10/09/2018 19:49	10/10/2018 08:22	12/11/2018 09:33
3	284603	J:\GC23\data\100918CAL\1009F025.D\1009F025c.d	10/09/2018 20:19	10/10/2018 08:24	12/11/2018 09:33
4	284605	J:\GC23\data\100918CAL\1009F026.D\1009F026c.d	10/09/2018 20:49	10/10/2018 08:38	12/11/2018 09:33
5	284607	J:\GC23\data\100918CAL\1009F027.D\1009F027c.d	10/09/2018 21:20	10/10/2018 08:42	12/11/2018 09:33
6	284609	J:\GC23\data\100918CAL\1009F028.D\1009F028c.d	10/09/2018 21:50	10/10/2018 08:45	12/11/2018 09:33
7	284615	J:\GC23\data\100918CAL\1009F031.D\1009F031c.d	10/09/2018 23:19	10/10/2018 09:00	12/11/2018 09:34
8	284617	J:\GC23\data\100918CAL\1009F032.D\1009F032c.d	10/09/2018 23:49	10/10/2018 09:02	12/11/2018 09:34
9	284619	J:\GC23\data\100918CAL\1009F033.D\1009F033c.d	10/10/2018 00:19	10/10/2018 09:04	12/11/2018 09:34
10	284621	J:\GC23\data\100918CAL\1009F034.D\1009F034c.d	10/10/2018 00:50	10/10/2018 09:06	12/11/2018 09:34
11	284623	J:\GC23\data\100918CAL\1009F035.D\1009F035c.d	10/10/2018 01:20	10/10/2018 09:08	12/11/2018 09:34
12	284625	J:\GC23\data\100918CAL\1009F036.D\1009F036c.d	10/10/2018 01:50	10/10/2018 09:11	12/11/2018 09:34
13	284627	J:\GC23\data\100918CAL\1009F039.D\1009F039c.d	10/10/2018 03:19	10/10/2018 09:22	12/11/2018 09:34
14	284629	J:\GC23\data\100918CAL\1009F040.D\1009F040c.d	10/10/2018 03:49	10/10/2018 09:23	12/11/2018 09:34
15	284631	J:\GC23\data\100918CAL\1009F041.D\1009F041c.d	10/10/2018 04:19	10/10/2018 09:26	12/11/2018 09:34
16	284633	J:\GC23\data\100918CAL\1009F042.D\1009F042c.d	10/10/2018 04:49	10/10/2018 09:29	12/11/2018 09:35
17	284635	J:\GC23\data\100918CAL\1009F043.D\1009F043c.d	10/10/2018 05:19	10/10/2018 09:32	12/11/2018 09:35
18	284637	J:\GC23\data\100918CAL\1009F044.D\1009F044c.d	10/10/2018 05:49	10/10/2018 09:34	12/11/2018 09:35
19	284641	J:\GC23\data\101018CAL\1010F006.D\1010F006c.d	10/10/2018 12:29	10/10/2018 12:56	12/11/2018 09:35
20	284745	J:\GC23\data\101518CAL\1015F013.D\1015F013c.d	10/15/2018 19:37	10/16/2018 09:02	12/11/2018 09:35
21	284747	J:\GC23\data\101518CAL\1015F015.D\1015F015c.d	10/15/2018 20:36	10/16/2018 09:03	12/11/2018 09:35
22	284749	J:\GC23\data\101518CAL\1015F016.D\1015F016c.d	10/15/2018 21:06	10/16/2018 09:04	12/11/2018 09:35
23	284751	J:\GC23\data\101518CAL\1016F007.D\1016F007c.d	10/16/2018 12:59	10/16/2018 13:50	12/11/2018 09:35
24	284753	J:\GC23\data\101518CAL\1016F010.D\1016F010c.d	10/16/2018 14:27	10/16/2018 15:21	12/11/2018 09:35
25	284755	J:\GC23\data\101518CAL\1016F013.D\1016F013c.d	10/16/2018 15:57	10/16/2018 16:22	12/11/2018 09:35
26	285484	J:\GC23\data\120718CAL\1207F003.D\1207F003c.d	12/07/2018 16:55	12/11/2018 13:10	12/11/2018 13:15
27	285486	J:\GC23\data\120718CAL\1207F006.D\1207F006c.d	12/07/2018 18:23	12/10/2018 15:53	12/11/2018 09:36
28	285488	J:\GC23\data\120718CAL\1207F007.D\1207F007c.d	12/07/2018 18:53	12/10/2018 10:33	12/11/2018 09:36
29	285490	J:\GC23\data\120718CAL\1207F008.D\1207F008c.d	12/07/2018 19:22	12/10/2018 15:54	12/11/2018 09:36
30	285492	J:\GC23\data\121018CAL\1210F004.D\1210F004c.d	12/10/2018 14:49	12/10/2018 15:47	12/11/2018 09:36
31	285494	J:\GC23\data\121018CAL\1210F005.D\1210F005c.d	12/10/2018 15:18	12/10/2018 15:49	12/11/2018 09:36

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Tetrachloro-m-xylene													1.638	7.9
			26	1.761	27	1.546	28	1.549	29	1.475	30	1.776		
	31	1.724												
alpha-BHC													1.398	8.0
			26	1.525	27	1.303	28	1.322	29	1.280	30	1.431		
	31	1.527												

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Hexachlorobenzene													1.936	9.0
			26	2.243	27	1.856	28	1.840	29	1.734	30	1.973		
	31	1.968												
beta-BHC													0.691	10.4
			26	0.786	27	0.643	28	0.646	29	0.601	30	0.747		
	31	0.722												
gamma-BHC (Lindane)													1.284	9.3
			26	1.457	27	1.182	28	1.207	29	1.158	30	1.349		
	31	1.353												
delta-BHC													1.231	6.4
			26	1.226	27	1.183	28	1.227	29	1.169	30	1.195		
	31	1.384												
Heptachlor													1.376	9.8
			26	1.562	27	1.292	28	1.292	29	1.208	30	1.416		
	31	1.489												
Aldrin													1.291	10.0
			26	1.503	27	1.185	28	1.218	29	1.161	30	1.320		
	31	1.362												
Isodrin													1.123	10.6
			26	1.137	27	1.030	28	1.052	29	0.991	30	1.277		
	31	1.248												
Heptachlor Epoxide													1.233	8.9
			26	1.270	27	1.141	28	1.189	29	1.099	30	1.310		
	31	1.388												

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
gamma-Chlordane							1.210	8.5
		26 1.346	27 1.129	28 1.140	29 1.089	30 1.281		
	31 1.272							
Endosulfan I							1.130	10.8
		26 1.282	27 1.014	28 1.056	29 0.996	30 1.213		
	31 1.217							
alpha-Chlordane							1.218	10.1
		26 1.382	27 1.102	28 1.144	29 1.089	30 1.275		
	31 1.315							
Dieldrin							1.154	6.7
		26 1.146	27 1.100	28 1.119	29 1.065	30 1.232		
	31 1.262							
4,4'-DDE							1.245	10.8
		26 1.465	27 1.124	28 1.157	29 1.132	30 1.330		
	31 1.264							
Endrin							1.138	10.4
		26 1.272	27 1.029	28 1.060	29 1.007	30 1.235		
	31 1.223							
Endosulfan II							1.054	8.0
		26 1.150	27 0.981	28 1.009	29 0.952	30 1.103		
	31 1.132							
4,4'-DDD							0.922	7.6
		26 1.018	27 0.853	28 0.881	29 0.852	30 0.959		
	31 0.969							

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Endrin Aldehyde							0.961	10.0
		26 0.983	27 0.878	28 0.911	29 0.853	30 1.094		
	31 1.046							
Endosulfan Sulfate							1.055	8.1
		26 1.068	27 0.985	28 1.014	29 0.953	30 1.144		
	31 1.164							
4,4'-DDT							0.975	19.7#
		26 1.353	27 0.873	28 0.864	29 0.838	30 0.956		
	31 0.966							
Endrin Ketone							1.166	8.2
		26 1.175	27 1.082	28 1.117	29 1.063	30 1.273		
	31 1.286							
Methoxychlor							0.526	7.9
		26 0.603	27 0.512	28 0.510	29 0.489	30 0.501		
	31 0.543							
2,4'-DDE							0.810	13.9
		20 0.793	21 0.750	22 0.679	23 0.752	24 0.904		
	25 0.982							
2,4'-DDD							0.706	8.3
		20 0.754	21 0.690	22 0.616	23 0.689	24 0.786		
	25 0.704							
2,4'-DDT							0.849	17.2
		20 0.840	21 0.792	22 0.720	23 0.790	24 1.135		
	25 0.819							

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Endrin Aldehyde							0.961	10.0
		26 0.983	27 0.878	28 0.911	29 0.853	30 1.094		
	31 1.046							
Endosulfan Sulfate							1.055	8.1
		26 1.068	27 0.985	28 1.014	29 0.953	30 1.144		
	31 1.164							
4,4'-DDT							0.975	19.7#
		26 1.353	27 0.873	28 0.864	29 0.838	30 0.956		
	31 0.966							
Endrin Ketone							1.166	8.2
		26 1.175	27 1.082	28 1.117	29 1.063	30 1.273		
	31 1.286							
Methoxychlor							0.526	7.9
		26 0.603	27 0.512	28 0.510	29 0.489	30 0.501		
	31 0.543							
2,4'-DDE							0.810	13.9
		20 0.793	21 0.750	22 0.679	23 0.752	24 0.904		
	25 0.982							
2,4'-DDD							0.706	8.3
		20 0.754	21 0.690	22 0.616	23 0.689	24 0.786		
	25 0.704							
2,4'-DDT							0.849	17.2
		20 0.840	21 0.792	22 0.720	23 0.790	24 1.135		
	25 0.819							

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Decachlorobiphenyl													1.373	10.1
			26	1.447	27	1.285	28	1.279	29	1.193	30	1.517		
	31	1.517												
Toxaphene {1}													0.017	9.5
	7	0.020	8	0.017	9	0.018	10	0.017	11	0.016	12	0.016		
Toxaphene {2}													0.006	10.8
	7	0.007	8	0.006	9	0.007	10	0.006	11	0.006	12	0.006		
Toxaphene {3}													0.006	13.5
	7	0.006	8	0.006	9	0.006	10	0.005	11	0.005	12	0.005		
Toxaphene {4}													0.010	7.3
	7	0.011	8	0.011	9	0.011	10	0.010	11	0.009	12	0.010		
Toxaphene {5}													0.020	11.1
	7	0.024	8	0.019	9	0.021	10	0.019	11	0.019	12	0.019		
Toxaphene {6}													0.016	7.2
	7	0.017	8	0.017	9	0.017	10	0.016	11	0.014	12	0.015		
Chlordane {1}													0.043	11.0
	13	0.046	14	0.043	15	0.044	16	0.042	17	0.041	18	0.035		
	19	0.050												

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Chlordane {2}							0.028	7.3
	13 0.028	14 0.030	15 0.029	16 0.028	17 0.027	18 0.024		
	19 0.028							
Chlordane {3}							0.109	6.2
	13 0.113	14 0.111	15 0.110	16 0.110	17 0.105	18 0.097		
	19 0.118							
Chlordane {4}							0.067	12.7
	13 0.070	14 0.069	15 0.069	16 0.066	17 0.061	18 0.054		
	19 0.082							
Chlordane {5}							0.032	7.7
	13 0.031	14 0.032	15 0.035	16 0.034	17 0.032	18 0.028		
	19 0.031							
Chlordane {6}							0.098	7.5
	13 0.101	14 0.101	15 0.099	16 0.098	17 0.093	18 0.085		
	19 0.108							
Chlorpyrifos	1 0.743	2 0.741	3 0.628	4 0.610	5 0.612	6 0.601	0.656	10.3
Oxychlordane	1 1.511	2 1.489	3 1.226	4 1.191	5 1.107	6 1.125	1.275	14.1
cis-Nonachlor	1 1.611	2 1.640	3 1.383	4 1.354	5 1.283	6 1.303	1.429	10.9

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
trans-Nonachlor	1	1.551	2	1.507	3	1.285	4	1.247	5	1.199	6	1.219	1.335	11.5
Mirex	1	1.351	2	1.351	3	1.184	4	1.134	5	1.030	6	1.013	1.177	12.7
Hexachloroethane	1	2.068	2	2.052	3	1.781	4	1.758	5	1.672	6	1.987	1.887	9.0
Hexachlorobutadiene	1	1.805	2	1.660	3	1.482	4	1.433	5	1.328	6	1.509	1.536	11.1
Perthane			2	0.043	3	0.032	4	0.031	5	0.033	6	0.034	0.035	13.4

 # RSD Not Applicable. Compound being quantitated from curve. Included in Average RF summary for Average %RSD calculation.

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	Quadratic

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
284599	J:\GC23\data\100918CAL\1009F023.D\1009F023c.d	10/09/2018 19:20	10/10/2018 08:16	12/11/2018 09:33
284601	J:\GC23\data\100918CAL\1009F024.D\1009F024c.d	10/09/2018 19:49	10/10/2018 08:22	12/11/2018 09:33
284603	J:\GC23\data\100918CAL\1009F025.D\1009F025c.d	10/09/2018 20:19	10/10/2018 08:24	12/11/2018 09:33
284605	J:\GC23\data\100918CAL\1009F026.D\1009F026c.d	10/09/2018 20:49	10/10/2018 08:38	12/11/2018 09:33
284607	J:\GC23\data\100918CAL\1009F027.D\1009F027c.d	10/09/2018 21:20	10/10/2018 08:42	12/11/2018 09:33
284609	J:\GC23\data\100918CAL\1009F028.D\1009F028c.d	10/09/2018 21:50	10/10/2018 08:45	12/11/2018 09:33
284615	J:\GC23\data\100918CAL\1009F031.D\1009F031c.d	10/09/2018 23:19	10/10/2018 09:00	12/11/2018 09:34
284617	J:\GC23\data\100918CAL\1009F032.D\1009F032c.d	10/09/2018 23:49	10/10/2018 09:02	12/11/2018 09:34
284619	J:\GC23\data\100918CAL\1009F033.D\1009F033c.d	10/10/2018 00:19	10/10/2018 09:04	12/11/2018 09:34
284621	J:\GC23\data\100918CAL\1009F034.D\1009F034c.d	10/10/2018 00:50	10/10/2018 09:06	12/11/2018 09:34
284623	J:\GC23\data\100918CAL\1009F035.D\1009F035c.d	10/10/2018 01:20	10/10/2018 09:08	12/11/2018 09:34
284625	J:\GC23\data\100918CAL\1009F036.D\1009F036c.d	10/10/2018 01:50	10/10/2018 09:11	12/11/2018 09:34
284627	J:\GC23\data\100918CAL\1009F039.D\1009F039c.d	10/10/2018 03:19	10/10/2018 09:22	12/11/2018 09:34
284629	J:\GC23\data\100918CAL\1009F040.D\1009F040c.d	10/10/2018 03:49	10/10/2018 09:23	12/11/2018 09:34
284631	J:\GC23\data\100918CAL\1009F041.D\1009F041c.d	10/10/2018 04:19	10/10/2018 09:26	12/11/2018 09:34
284633	J:\GC23\data\100918CAL\1009F042.D\1009F042c.d	10/10/2018 04:49	10/10/2018 09:29	12/11/2018 09:35
284635	J:\GC23\data\100918CAL\1009F043.D\1009F043c.d	10/10/2018 05:19	10/10/2018 09:32	12/11/2018 09:35
284637	J:\GC23\data\100918CAL\1009F044.D\1009F044c.d	10/10/2018 05:49	10/10/2018 09:34	12/11/2018 09:35
284641	J:\GC23\data\101018CAL\1010F006.D\1010F006c.d	10/10/2018 12:29	10/10/2018 12:56	12/11/2018 09:35
284745	J:\GC23\data\101518CAL\1015F013.D\1015F013c.d	10/15/2018 19:37	10/16/2018 09:02	12/11/2018 09:35
284747	J:\GC23\data\101518CAL\1015F015.D\1015F015c.d	10/15/2018 20:36	10/16/2018 09:03	12/11/2018 09:35
284749	J:\GC23\data\101518CAL\1015F016.D\1015F016c.d	10/15/2018 21:06	10/16/2018 09:04	12/11/2018 09:35
284751	J:\GC23\data\101518CAL\1016F007.D\1016F007c.d	10/16/2018 12:59	10/16/2018 13:50	12/11/2018 09:35
284753	J:\GC23\data\101518CAL\1016F010.D\1016F010c.d	10/16/2018 14:27	10/16/2018 15:21	12/11/2018 09:35
284755	J:\GC23\data\101518CAL\1016F013.D\1016F013c.d	10/16/2018 15:57	10/16/2018 16:22	12/11/2018 09:35
285484	J:\GC23\data\120718CAL\1207F003.D\1207F003c.d	12/07/2018 16:55	12/11/2018 13:10	12/11/2018 13:15
285486	J:\GC23\data\120718CAL\1207F006.D\1207F006c.d	12/07/2018 18:23	12/10/2018 15:53	12/11/2018 09:36
285488	J:\GC23\data\120718CAL\1207F007.D\1207F007c.d	12/07/2018 18:53	12/10/2018 10:33	12/11/2018 09:36
285490	J:\GC23\data\120718CAL\1207F008.D\1207F008c.d	12/07/2018 19:22	12/10/2018 15:54	12/11/2018 09:36
285492	J:\GC23\data\121018CAL\1210F004.D\1210F004c.d	12/10/2018 14:49	12/10/2018 15:47	12/11/2018 09:36
285494	J:\GC23\data\121018CAL\1210F005.D\1210F005c.d	12/10/2018 15:18	12/10/2018 15:49	12/11/2018 09:36

Parameter Name	CoefX2	CoefX	Y-intercept	COD	Mean RF
4,4'-DDT	-0.138	0.845	0.001	0.9999	0.975

Initial Calibration - Detailed Report

Calibration ID: CAL15907
Method ID: MJ1647
Instrument ID: GC23
Column Name: DB-35MS

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284599	J:\GC23\data\100918CAL\1009F023.D\1009F023c.d	10/09/2018 19:20	10/10/2018 08:16	12/11/2018 09:33
2	284601	J:\GC23\data\100918CAL\1009F024.D\1009F024c.d	10/09/2018 19:49	10/10/2018 08:22	12/11/2018 09:33
3	284603	J:\GC23\data\100918CAL\1009F025.D\1009F025c.d	10/09/2018 20:19	10/10/2018 08:24	12/11/2018 09:33
4	284605	J:\GC23\data\100918CAL\1009F026.D\1009F026c.d	10/09/2018 20:49	10/10/2018 08:38	12/11/2018 09:33
5	284607	J:\GC23\data\100918CAL\1009F027.D\1009F027c.d	10/09/2018 21:20	10/10/2018 08:42	12/11/2018 09:33
6	284609	J:\GC23\data\100918CAL\1009F028.D\1009F028c.d	10/09/2018 21:50	10/10/2018 08:45	12/11/2018 09:33
7	284615	J:\GC23\data\100918CAL\1009F031.D\1009F031c.d	10/09/2018 23:19	10/10/2018 09:00	12/11/2018 09:34
8	284617	J:\GC23\data\100918CAL\1009F032.D\1009F032c.d	10/09/2018 23:49	10/10/2018 09:02	12/11/2018 09:34
9	284619	J:\GC23\data\100918CAL\1009F033.D\1009F033c.d	10/10/2018 00:19	10/10/2018 09:04	12/11/2018 09:34
10	284621	J:\GC23\data\100918CAL\1009F034.D\1009F034c.d	10/10/2018 00:50	10/10/2018 09:06	12/11/2018 09:34
11	284623	J:\GC23\data\100918CAL\1009F035.D\1009F035c.d	10/10/2018 01:20	10/10/2018 09:08	12/11/2018 09:34
12	284625	J:\GC23\data\100918CAL\1009F036.D\1009F036c.d	10/10/2018 01:50	10/10/2018 09:11	12/11/2018 09:34
13	284627	J:\GC23\data\100918CAL\1009F039.D\1009F039c.d	10/10/2018 03:19	10/10/2018 09:22	12/11/2018 09:34
14	284629	J:\GC23\data\100918CAL\1009F040.D\1009F040c.d	10/10/2018 03:49	10/10/2018 09:23	12/11/2018 09:34
15	284631	J:\GC23\data\100918CAL\1009F041.D\1009F041c.d	10/10/2018 04:19	10/10/2018 09:26	12/11/2018 09:34
16	284633	J:\GC23\data\100918CAL\1009F042.D\1009F042c.d	10/10/2018 04:49	10/10/2018 09:29	12/11/2018 09:35
17	284635	J:\GC23\data\100918CAL\1009F043.D\1009F043c.d	10/10/2018 05:19	10/10/2018 09:32	12/11/2018 09:35
18	284637	J:\GC23\data\100918CAL\1009F044.D\1009F044c.d	10/10/2018 05:49	10/10/2018 09:34	12/11/2018 09:35
19	284641	J:\GC23\data\101018CAL\1010F006.D\1010F006c.d	10/10/2018 12:29	10/10/2018 12:56	12/11/2018 09:35
20	284745	J:\GC23\data\101518CAL\1015F013.D\1015F013c.d	10/15/2018 19:37	10/16/2018 09:02	12/11/2018 09:35
21	284747	J:\GC23\data\101518CAL\1015F015.D\1015F015c.d	10/15/2018 20:36	10/16/2018 09:03	12/11/2018 09:35
22	284749	J:\GC23\data\101518CAL\1015F016.D\1015F016c.d	10/15/2018 21:06	10/16/2018 09:04	12/11/2018 09:35
23	284751	J:\GC23\data\101518CAL\1016F007.D\1016F007c.d	10/16/2018 12:59	10/16/2018 13:50	12/11/2018 09:35
24	284753	J:\GC23\data\101518CAL\1016F010.D\1016F010c.d	10/16/2018 14:27	10/16/2018 15:21	12/11/2018 09:35
25	284755	J:\GC23\data\101518CAL\1016F013.D\1016F013c.d	10/16/2018 15:57	10/16/2018 16:22	12/11/2018 09:35
26	285484	J:\GC23\data\120718CAL\1207F003.D\1207F003c.d	12/07/2018 16:55	12/11/2018 13:10	12/11/2018 13:15
27	285486	J:\GC23\data\120718CAL\1207F006.D\1207F006c.d	12/07/2018 18:23	12/10/2018 15:53	12/11/2018 09:36
28	285488	J:\GC23\data\120718CAL\1207F007.D\1207F007c.d	12/07/2018 18:53	12/10/2018 10:33	12/11/2018 09:36
29	285490	J:\GC23\data\120718CAL\1207F008.D\1207F008c.d	12/07/2018 19:22	12/10/2018 15:54	12/11/2018 09:36
30	285492	J:\GC23\data\121018CAL\1210F004.D\1210F004c.d	12/10/2018 14:49	12/10/2018 15:47	12/11/2018 09:36
31	285494	J:\GC23\data\121018CAL\1210F005.D\1210F005c.d	12/10/2018 15:18	12/10/2018 15:49	12/11/2018 09:36

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene												
					26	0.2	0.2149	7.5	27	2	1.887	-5.7
	28	5	4.726	-5.5	29	10	9.005	-10.0	30	0.5	0.5420	8.4
	31	1	1.052	5.2								

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
alpha-BHC												
					26	0.2	0.2181	9.1	27	2	1.864	-6.8
	28	5	4.730	-5.4	29	10	9.158	-8.4	30	0.5	0.5119	2.4
	31	1	1.092	9.2								
Hexachlorobenzene												
					26	0.2	0.2317	15.9	27	2	1.918	-4.1
	28	5	4.753	-4.9	29	10	8.958	-10.4	30	0.5	0.5096	1.9
	31	1	1.017	1.7								
beta-BHC												
					26	0.2	0.2276	13.8	27	2	1.862	-6.9
	28	5	4.674	-6.5	29	10	8.695	-13.0	30	0.5	0.5407	8.1
	31	1	1.046	4.6								
gamma-BHC (Lindane)												
					26	0.2	0.2269	13.4	27	2	1.841	-8.0
	28	5	4.700	-6.0	29	10	9.017	-9.8	30	0.5	0.5250	5.0
	31	1	1.054	5.4								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
delta-BHC												
					26	0.2	0.1993	-0.4	27	2	1.923	-3.8
	28	5	4.983	-0.3	29	10	9.501	-5.0	30	0.5	0.4854	-2.9
	31	1	1.124	12.4								
Heptachlor												
					26	0.2	0.2270	13.5	27	2	1.878	-6.1
	28	5	4.693	-6.1	29	10	8.778	-12.2	30	0.5	0.5142	2.8
	31	1	1.081	8.1								
Aldrin												
					26	0.2	0.2327	16.4	27	2	1.835	-8.2
	28	5	4.715	-5.7	29	10	8.991	-10.1	30	0.5	0.5110	2.2
	31	1	1.055	5.5								
Isodrin												
					26	0.2	0.2026	1.3	27	2	1.835	-8.2
	28	5	4.686	-6.3	29	10	8.829	-11.7	30	0.5	0.5689	13.8
	31	1	1.112	11.2								

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Heptachlor Epoxide												
					26	0.2	0.2061	3.0	27	2	1.851	-7.4
	28	5	4.821	-3.6	29	10	8.913	-10.9	30	0.5	0.5312	6.2
	31	1	1.126	12.6								
gamma-Chlordane												
					26	0.2	0.2225	11.3	27	2	1.867	-6.6
	28	5	4.711	-5.8	29	10	9.006	-9.9	30	0.5	0.5296	5.9
	31	1	1.052	5.2								
Endosulfan I												
					26	0.2	0.2269	13.5	27	2	1.795	-10.3
	28	5	4.674	-6.5	29	10	8.820	-11.8	30	0.5	0.5369	7.4
	31	1	1.077	7.7								
alpha-Chlordane												
					26	0.2	0.2270	13.5	27	2	1.810	-9.5
	28	5	4.698	-6.0	29	10	8.941	-10.6	30	0.5	0.5234	4.7
	31	1	1.080	8.0								

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Dieldrin												
					26	0.2	0.1986	-0.7	27	2	1.907	-4.7
	28	5	4.849	-3.0	29	10	9.228	-7.7	30	0.5	0.5338	6.8
	31	1	1.093	9.3								
4,4'-DDE												
					26	0.2	0.2352	17.6	27	2	1.805	-9.8
	28	5	4.647	-7.1	29	10	9.091	-9.1	30	0.5	0.5341	6.8
	31	1	1.015	1.5								
Endrin												
					26	0.2	0.2236	11.8	27	2	1.809	-9.6
	28	5	4.661	-6.8	29	10	8.852	-11.5	30	0.5	0.5426	8.5
	31	1	1.075	7.5								
Endosulfan II												
					26	0.2	0.2181	9.0	27	2	1.861	-6.9
	28	5	4.783	-4.3	29	10	9.029	-9.7	30	0.5	0.5230	4.6
	31	1	1.074	7.4								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4,4'-DDD												
					26	0.2	0.2209	10.5	27	2	1.849	-7.5
	28	5	4.775	-4.5	29	10	9.244	-7.6	30	0.5	0.5203	4.1
	31	1	1.051	5.1								
Endrin Aldehyde												
					26	0.2	0.2047	2.3	27	2	1.828	-8.6
	28	5	4.741	-5.2	29	10	8.875	-11.3	30	0.5	0.5694	13.9
	31	1	1.089	8.9								
Endosulfan Sulfate												
					26	0.2	0.2025	1.3	27	2	1.868	-6.6
	28	5	4.807	-3.9	29	10	9.038	-9.6	30	0.5	0.5423	8.5
	31	1	1.103	10.3								
4,4'-DDT												
					26	0.2	0.2116	5.8	27	2	1.965	-1.8
	28	5	5.049	1.0	29	10	9.980	-0.2	30	0.5	0.4577	-8.5
	31	1	1.036	3.6								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Endrin Ketone												
					26	0.2	0.2016	0.8	27	2	1.857	-7.2
	28	5	4.788	-4.2	29	10	9.114	-8.9	30	0.5	0.5459	9.2
	31	1	1.103	10.3								
Methoxychlor												
					26	0.2	0.2290	14.5	27	2	1.946	-2.7
	28	5	4.847	-3.1	29	10	9.291	-7.1	30	0.5	0.4756	-4.9
	31	1	1.032	3.2								
2,4'-DDE												
					20	1	0.9785	-2.2	21	5	4.630	-7.4
	22	10	8.385	-16.1	23	2	1.856	-7.2	24	0.2	0.2233	11.7
	25	0.5	0.6063	21.3								
2,4'-DDD												
					20	1	1.067	6.7	21	5	4.880	-2.4
	22	10	8.723	-12.8	23	2	1.950	-2.5	24	0.2	0.2224	11.2
	25	0.5	0.4986	-0.3								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
2,4'-DDT												
					20	1	0.9888	-1.1	21	5	4.665	-6.7
	22	10	8.473	-15.3	23	2	1.861	-7.0	24	0.2	0.2673	**33.7**
	25	0.5	0.4820	-3.6								
Decachlorobiphenyl												
					26	0.2	0.2108	5.4	27	2	1.873	-6.4
	28	5	4.658	-6.8	29	10	8.688	-13.1	30	0.5	0.5523	10.5
	31	1	1.105	10.5								
Toxaphene {1}												
	7	10	11.61	16.1	8	25	24.73	-1.1	9	50	52.57	5.1
	10	100	97.53	-2.5	11	250	224.1	-10.4	12	500	463.4	-7.3
Toxaphene {2}												
	7	10	11.76	17.6	8	25	25.33	1.3	9	50	52.62	5.2
	10	100	97.84	-2.2	11	250	221.5	-11.4	12	500	446.9	-10.6

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Toxaphene {3}												
	7	10	11.72	17.2	8	25	28.13	12.5	9	50	52.45	4.9
	10	100	92.82	-7.2	11	250	216.4	-13.4	12	500	429.8	-14.0
Toxaphene {4}												
	7	10	11.09	10.9	8	25	26.13	4.5	9	50	51.30	2.6
	10	100	96.26	-3.7	11	250	229.2	-8.3	12	500	470.1	-6.0
Toxaphene {5}												
	7	10	12.06	20.6	8	25	23.17	-7.3	9	50	52.23	4.5
	10	100	96.74	-3.3	11	250	231.4	-7.5	12	500	465.0	-7.0
Toxaphene {6}												
	7	10	10.71	7.1	8	25	25.60	2.4	9	50	53.26	6.5
	10	100	100.2	0.2	11	250	220.2	-11.9	12	500	478.0	-4.4

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {1}												
	13	5	5.368	7.4	14	10	10.07	0.7	15	20	20.52	2.6
	16	50	49.20	-1.6	17	100	93.94	-6.1	18	200	161.6	-19.2
	19	2	2.325	16.2								
Chlordane {2}												
	13	5	5.056	1.1	14	10	10.73	7.3	15	20	21.13	5.7
	16	50	51.16	2.3	17	100	97.79	-2.2	18	200	170.3	-14.8
	19	2	2.013	0.6								
Chlordane {3}												
	13	5	5.164	3.3	14	10	10.19	1.9	15	20	20.07	0.3
	16	50	50.51	1.0	17	100	96.37	-3.6	18	200	177.2	-11.4
	19	2	2.169	8.5								
Chlordane {4}												
	13	5	5.238	4.8	14	10	10.20	2.0	15	20	20.39	2.0
	16	50	49.20	-1.6	17	100	90.72	-9.3	18	200	161.1	-19.5
	19	2	2.433	21.7								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {1}												
	13	5	5.368	7.4	14	10	10.07	0.7	15	20	20.52	2.6
	16	50	49.20	-1.6	17	100	93.94	-6.1	18	200	161.6	-19.2
	19	2	2.325	16.2								
Chlordane {2}												
	13	5	5.056	1.1	14	10	10.73	7.3	15	20	21.13	5.7
	16	50	51.16	2.3	17	100	97.79	-2.2	18	200	170.3	-14.8
	19	2	2.013	0.6								
Chlordane {3}												
	13	5	5.164	3.3	14	10	10.19	1.9	15	20	20.07	0.3
	16	50	50.51	1.0	17	100	96.37	-3.6	18	200	177.2	-11.4
	19	2	2.169	8.5								
Chlordane {4}												
	13	5	5.238	4.8	14	10	10.20	2.0	15	20	20.39	2.0
	16	50	49.20	-1.6	17	100	90.72	-9.3	18	200	161.1	-19.5
	19	2	2.433	21.7								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {5}												
	13	5	4.875	-2.5	14	10	9.934	-0.7	15	20	22.22	11.1
	16	50	53.46	6.9	17	100	99.96	0.0	18	200	173.1	-13.4
	19	2	1.973	-1.4								
Chlordane {6}												
	13	5	5.132	2.6	14	10	10.33	3.3	15	20	20.24	1.2
	16	50	50.26	0.5	17	100	94.91	-5.1	18	200	173.5	-13.3
	19	2	2.213	10.7								
Chlorpyrifos	1	0.2	0.2267	13.4	2	0.5	0.5650	13.0	3	1	0.9572	-4.3
	4	2	1.859	-7.0	5	5	4.667	-6.7	6	10	9.163	-8.4
Oxychlordane	1	0.2	0.2371	18.5	2	0.5	0.5840	16.8	3	1	0.9618	-3.8
	4	2	1.869	-6.5	5	5	4.340	-13.2	6	10	8.824	-11.8

Initial Calibration - Detailed Report

Calibration ID: CAL15907
Method ID: MJ1647
Instrument ID: GC23
Column Name: DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
cis-Nonachlor	1	0.2	0.2254	12.7	2	0.5	0.5739	14.8	3	1	0.9676	-3.2
	4	2	1.896	-5.2	5	5	4.490	-10.2	6	10	9.119	-8.8
trans-Nonachlor	1	0.2	0.2324	16.2	2	0.5	0.5647	12.9	3	1	0.9629	-3.7
	4	2	1.869	-6.6	5	5	4.491	-10.2	6	10	9.132	-8.7
Mirex	1	0.2	0.2295	14.8	2	0.5	0.5738	14.8	3	1	1.006	0.6
	4	2	1.927	-3.7	5	5	4.373	-12.5	6	10	8.608	-13.9
Hexachloroethane	1	0.2	0.2193	9.6	2	0.5	0.5439	8.8	3	1	0.9441	-5.6
	4	2	1.864	-6.8	5	5	4.430	-11.4	6	10	10.53	5.3

Initial Calibration - Detailed Report

Calibration ID: CAL15907
Method ID: MJ1647
Instrument ID: GC23
Column Name: DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Hexachlorobutadiene	1	0.2	0.2351	17.5	2	0.5	0.5402	8.0	3	1	0.9647	-3.5
	4	2	1.865	-6.7	5	5	4.323	-13.5	6	10	9.823	-1.8
Perthane					2	2.5	3.086	23.4	3	5	4.579	-8.4
	4	10	9.097	-9.0	5	25	24.07	-3.7	6	50	48.85	-2.3

Second Source Calibration Verification Summary

CalibrationID: CAL15907

Method ID: MJ1647

DataFile Location: J:\GC23\DATA\121018CAL\1210F006.D

Units: ug/L

Column: DB XLB

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
alpha-BHC	285495	AverageRF	20	1.775	1.802	1.5	2.00	2.0	
Hexachlorobenzene	285495	Quadratic	20				2.00	2.0	2.3
beta-BHC	285495	AverageRF	20	0.872	0.885	1.6	2.00	2.0	
gamma-BHC (Lindane)	285495	AverageRF	20	1.524	1.580	3.7	2.00	2.1	
delta-BHC	285495	AverageRF	20	1.577	1.643	4.2	2.00	2.1	
Heptachlor	285495	Quadratic	20				2.00	2.0	0.2
Aldrin	285495	AverageRF	20	1.728	1.789	3.5	2.00	2.1	
Isodrin	285495	AverageRF	20	1.448	1.610	11.2	2.00	2.2	
Heptachlor Epoxide	285495	AverageRF	20	1.567	1.556	-0.7	2.00	2.0	
gamma-Chlordane	285495	AverageRF	20	1.593	1.698	6.6	2.00	2.1	
Endosulfan I	285495	AverageRF	20	1.597	1.598	0.0	2.00	2.0	
alpha-Chlordane	285495	AverageRF	20	1.713	1.767	3.2	2.00	2.1	
Dieldrin	285495	AverageRF	20	1.625	1.583	-2.5	2.00	1.9	
4,4'-DDE	285495	AverageRF	20	1.801	1.862	3.4	2.00	2.1	
Endrin	285495	AverageRF	20	1.524	1.430	-6.2	2.00	1.9	
Endosulfan II	285495	Quadratic	20				2.00	2.2	7.5
4,4'-DDD	285495	AverageRF	20	1.219	1.238	1.6	2.00	2.0	
Endrin Aldehyde	285495	AverageRF	20	1.378	1.408	2.1	2.00	2.0	
Endosulfan Sulfate	285495	AverageRF	20	1.454	1.415	-2.7	2.00	1.9	
4,4'-DDT	285495	AverageRF	20	1.057	0.987	-6.6	2.00	1.9	
Endrin Ketone	285495	AverageRF	20	1.439	1.387	-3.6	2.00	1.9	
Methoxychlor	285495	Linear	20				2.00	1.9	-4.0
2,4'-DDE	284756	AverageRF	20	1.005	1.276	27.0 *	2.00	2.5	
2,4'-DDD	284756	AverageRF	20	0.909	1.077	18.4	2.00	2.4	
2,4'-DDT	284756	AverageRF	20	0.902	1.087	20.4 *	2.00	2.4	
Toxaphene	284644	NA	20				200.00	181.0	-9.5
Toxaphene {1}	284644	AverageRF	100	0.023	0.021	-8.8	200.00	182.4	
Toxaphene {2}	284644	Quadratic	100				200.00	185.0	-7.5
Toxaphene {3}	284644	AverageRF	100	0.017	0.016	-9.2	200.00	181.5	
Toxaphene {4}	284644	AverageRF	100	0.007	0.006	-8.6	200.00	182.8	
Toxaphene {5}	284644	AverageRF	100	0.009	0.008	-10.8	200.00	178.4	
Toxaphene {6}	284644	AverageRF	100	0.026	0.023	-12.2	200.00	175.6	
Chlordane	284642	NA	20				50.00	47.8	-4.4
Chlordane {1}	284642	AverageRF	100	0.057	0.046	-20.0	50.00	40.0	
Chlordane {2}	284642	AverageRF	100	0.072	0.050	-30.4	50.00	34.8	
Chlordane {3}	284642	AverageRF	100	0.049	0.062	24.9	50.00	62.4	
Chlordane {4}	284642	AverageRF	100	0.144	0.139	-3.4	50.00	48.3	
Chlordane {5}	284642	AverageRF	100	0.122	0.118	-2.9	50.00	48.6	
Chlordane {6}	284642	AverageRF	100	0.090	0.095	5.6	50.00	52.8	
Chlorpyrifos	284610	AverageRF	20	0.661	0.744	12.6	2.00	2.3	
Oxychlordane	284610	AverageRF	20	1.334	1.287	-3.6	2.00	1.9	
cis-Nonachlor	284610	AverageRF	20	1.515	1.575	4.0	2.00	2.1	
trans-Nonachlor	284610	AverageRF	20	1.452	1.501	3.4	2.00	2.1	
Mirex	284610	AverageRF	20	1.171	1.217	3.9	2.00	2.1	
Hexachloroethane	284610	AverageRF	20	2.176	2.020	-7.2	2.00	1.9	
Hexachlorobutadiene	284610	AverageRF	20	1.813	1.705	-6.0	2.00	1.9	
Perthane	284612	AverageRF	20	0.035	0.037	6.8	25.00	26.7	

2 compound out of 47 failed max individual %D criteria.

Second Source Calibration Verification Summary

CalibrationID: CAL15907
Method ID: MJ1647
DataFile Location: J:\GC23\DATA\100918CAL\1009F030.D

Units: ug/L
Column: DB XLB

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift

2 compound out of 47 failed max individual %D criteria.

Second Source Calibration Verification Summary

CalibrationID: CAL15907
Method ID: MJ1647
DataFile Location: J:\GC23\DATA\121018CAL\1210F006.D\1210F006C.D

Units: ug/L
Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
alpha-BHC	285496	AverageRF	20	1.398	1.292	-7.5	2.00	1.8	
Hexachlorobenzene	285496	AverageRF	20	1.936	1.773	-8.4	2.00	1.8	
beta-BHC	285496	AverageRF	20	0.691	0.660	-4.4	2.00	1.9	
gamma-BHC (Lindane)	285496	AverageRF	20	1.284	1.224	-4.7	2.00	1.9	
delta-BHC	285496	AverageRF	20	1.231	1.163	-5.5	2.00	1.9	
Heptachlor	285496	AverageRF	20	1.376	1.336	-2.9	2.00	1.9	
Aldrin	285496	AverageRF	20	1.291	1.221	-5.5	2.00	1.9	
Isodrin	285496	AverageRF	20	1.123	1.166	3.9	2.00	2.1	
Heptachlor Epoxide	285496	AverageRF	20	1.233	1.128	-8.5	2.00	1.8	
gamma-Chlordane	285496	AverageRF	20	1.210	1.168	-3.4	2.00	1.9	
Endosulfan I	285496	AverageRF	20	1.130	1.096	-3.0	2.00	1.9	
alpha-Chlordane	285496	AverageRF	20	1.218	1.193	-2.0	2.00	2.0	
Dieldrin	285496	AverageRF	20	1.154	1.095	-5.1	2.00	1.9	
4,4'-DDE	285496	AverageRF	20	1.245	1.128	-9.4	2.00	1.8	
Endrin	285496	AverageRF	20	1.138	1.039	-8.7	2.00	1.8	
Endosulfan II	285496	AverageRF	20	1.054	1.053	-0.1	2.00	2.0	
4,4'-DDD	285496	AverageRF	20	0.922	0.887	-3.7	2.00	1.9	
Endrin Aldehyde	285496	AverageRF	20	0.961	0.957	-0.4	2.00	2.0	
Endosulfan Sulfate	285496	AverageRF	20	1.055	0.998	-5.4	2.00	1.9	
4,4'-DDT	285496	Quadratic	20				2.00	1.9	-6.2
Endrin Ketone	285496	AverageRF	20	1.166	1.080	-7.4	2.00	1.9	
Methoxychlor	285496	AverageRF	20	0.526	0.490	-6.8	2.00	1.9	
2,4'-DDE	284757	AverageRF	20	0.810	0.939	15.9	2.00	2.3	
2,4'-DDD	284757	AverageRF	20	0.706	0.840	18.9	2.00	2.4	
2,4'-DDT	284757	AverageRF	20	0.849	0.982	15.6	2.00	2.3	
Toxaphene	284645	NA	20				200.00	174.9	-12.6
Toxaphene {1}	284645	AverageRF	100	0.017	0.015	-16.0	200.00	168.1	
Toxaphene {2}	284645	AverageRF	100	0.006	0.005	-14.0	200.00	172.1	
Toxaphene {3}	284645	AverageRF	100	0.006	0.005	-14.7	200.00	170.5	
Toxaphene {4}	284645	AverageRF	100	0.010	0.009	-11.9	200.00	176.1	
Toxaphene {5}	284645	AverageRF	100	0.020	0.018	-9.2	200.00	181.6	
Toxaphene {6}	284645	AverageRF	100	0.016	0.015	-9.5	200.00	180.9	
Chlordane	284643	NA	20				50.00	49.7	-0.6
Chlordane {1}	284643	AverageRF	100	0.043	0.033	-24.1	50.00	37.9	
Chlordane {2}	284643	AverageRF	100	0.028	0.032	14.5	50.00	57.3	
Chlordane {3}	284643	AverageRF	100	0.109	0.102	-6.7	50.00	46.6	
Chlordane {4}	284643	AverageRF	100	0.067	0.069	3.0	50.00	51.5	
Chlordane {5}	284643	AverageRF	100	0.032	0.037	15.9	50.00	58.0	
Chlordane {6}	284643	AverageRF	100	0.098	0.092	-6.5	50.00	46.8	
Chlorpyrifos	284611	AverageRF	20	0.656	0.614	-6.4	2.00	1.9	
Oxychlordane	284611	AverageRF	20	1.275	1.055	-17.3	2.00	1.7	
cis-Nonachlor	284611	AverageRF	20	1.429	1.215	-15.0	2.00	1.7	
trans-Nonachlor	284611	AverageRF	20	1.335	1.197	-10.3	2.00	1.8	
Mirex	284611	AverageRF	20	1.177	1.037	-12.0	2.00	1.8	
Hexachloroethane	284611	AverageRF	20	1.887	1.624	-13.9	2.00	1.7	
Hexachlorobutadiene	284611	AverageRF	20	1.536	1.339	-12.8	2.00	1.7	
Perthane	284613	AverageRF	20	0.035	0.034	-1.9	25.00	24.5	

Second Source Calibration Verification Summary

CalibrationID: CAL15907
Method ID: MJ1647
DataFile Location: J:\GC23\DATA\100918CAL\1009F030.D\1009F030C.D

Units: ug/L
Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift

Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F001.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 3:55 pm Operator: MC
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:47:35 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:46:14 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.020	5.340	581124	1924981	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
16)	4,4'-DDE	13.600	12.330	1338	4834	0.128	0.202	#
17)	Endrin	14.156	12.947	49261	119539	5.561	5.459	
19)	4,4'-DDD	14.436	13.210	3856	7928	0.545	0.447	
20)	Endrin Al...	0.000	13.740	0	931	N.D.	0.050	#
22)	4,4'-DDT	14.930	13.630	73752	201829	12.013	12.563	
23)	Endrin Ke...	15.940	14.994	2071	5426	0.248	0.242	
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

OK

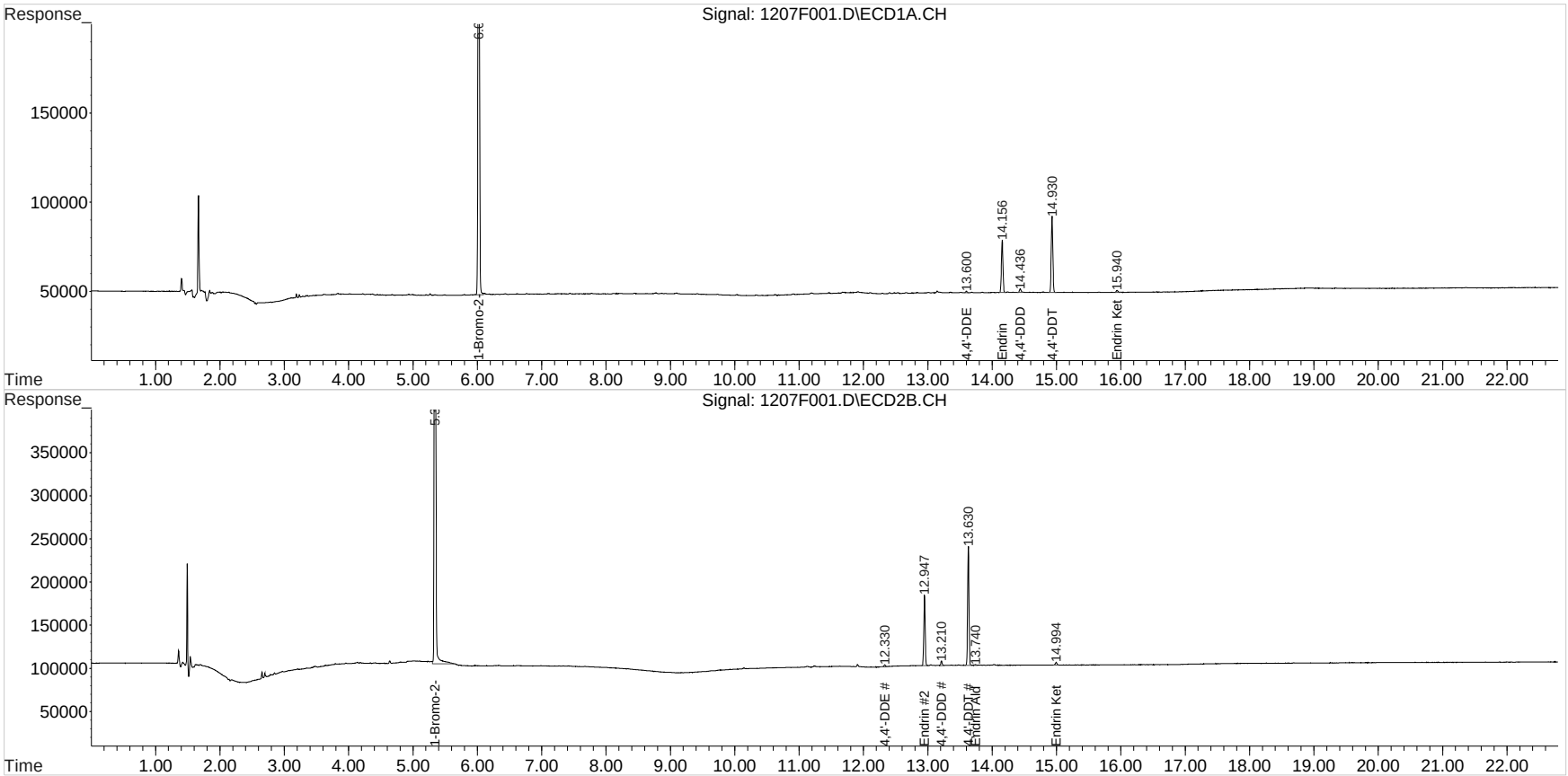
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\120718CAL\1207F001.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 3:55 pm Operator: MC
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:47:35 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:46:14 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F002.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:25 pm Operator: MC
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 11:12:21 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:28:39 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.015	5.342	521612	1655029	100.000	100.000	
29)	1-Bromo-2...	6.015	5.342	521612	1655029	100.000	100.000	
36)	1-Bromo-2...	6.015	5.342	521612	1655029	100.000	100.000	
43)	1-Bromo-2...	6.015	5.342	521612	1655029	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
4)	Hexachlor...	0.000	8.099	0	871	N.D. d	0.027	
8)	Heptachlor	0.000	9.775	0	777	N.D.	0.034	#
10)	Isodrin	0.000	11.099f	0	813	N.D.	0.043	#
12)	gamma-Chl...	0.000	11.845	0	1463	N.D.	0.073	#
16)	4,4'-DDE	0.000	12.295f	0	828	N.D.	0.040	#
21)	Endosulfa...	0.000	14.032f	0	1566	N.D.	0.090	#
47)	trans-Non...	0.000	11.845f	0	1463	N.D.	0.066	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

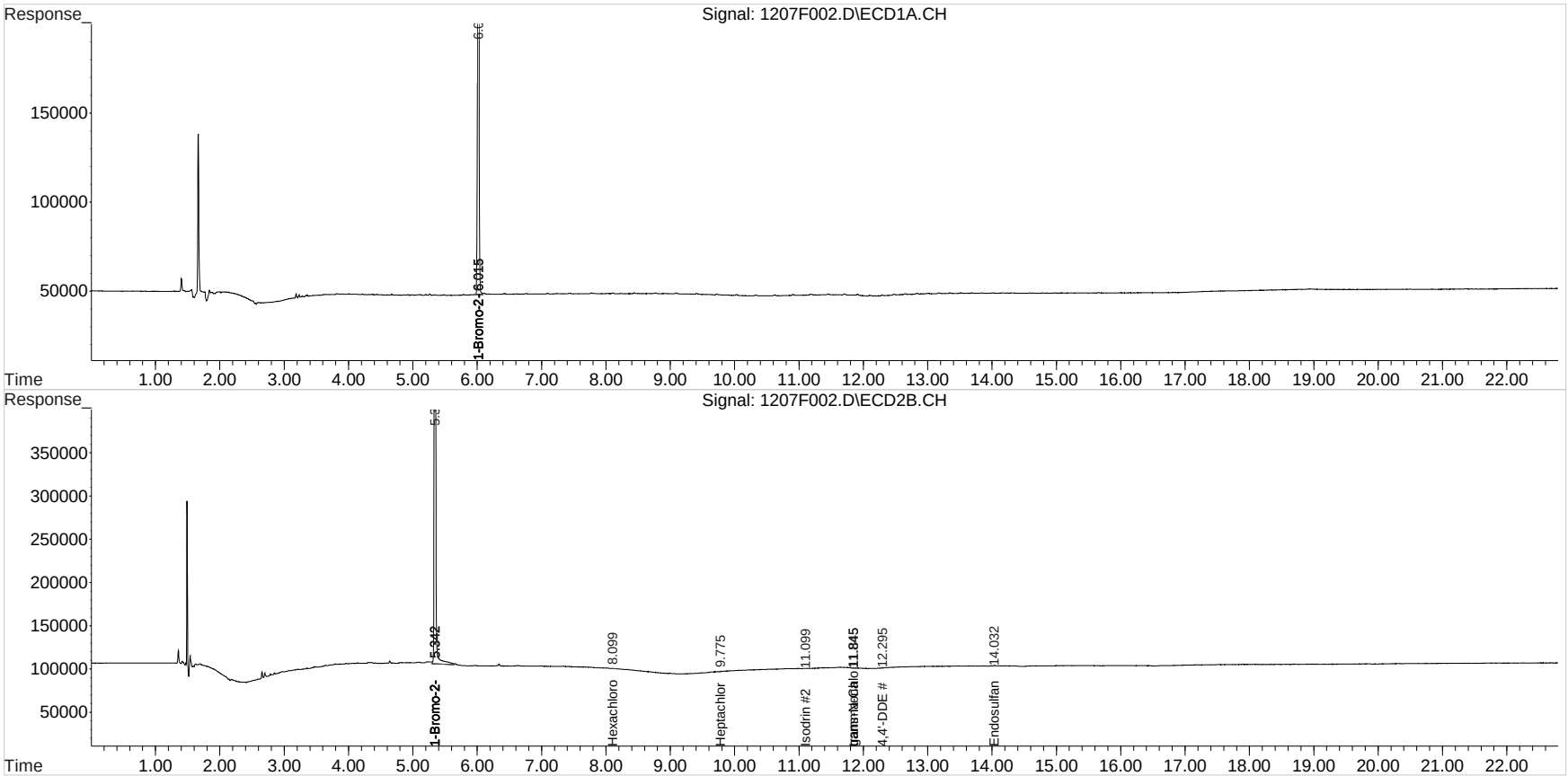
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\120718CAL\1207F002.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:25 pm Operator: MC
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 11:12:21 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:28:39 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 13:10:38 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.012	5.343	616343	1891239	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.742	7.106	2984	6660	0.211m	0.097 #
28) s	Decachlor...	18.425	16.866	2870	5473	0.264	0.180 #
	Target Compounds						
3)	alpha-BHC	9.582	8.329	2179	5767	0.210m	0.174m
4)	Hexachlor...	9.739	8.113	5749	8483	0.359m	0.093m#
5)	beta-BHC	10.859	9.613	1146	2974	0.226	0.185m
6)	gamma-BHC...	10.252	9.066	1820	5511	0.196	0.187
7)	delta-BHC	11.359	10.133	2021	4639	0.247	0.174 #
8)	Heptachlor	11.445	9.749	3830	5909	0.414	0.204m#
9)	Aldrin	11.995	10.336	2430	5684	0.262	0.203
10)	Isodrin	12.529	11.126	1934	4301	0.256	0.175m#
11)	Heptachlo...	12.719	11.416	1807	4804	0.209	0.186
12)	gamma-Chl...	13.235	11.826	1932	5090	0.230	0.196m
13)	Endosulfan I	13.362	12.033	2434	4848	0.308	0.208 #
14)	alpha-Chl...	13.312	11.969	2239	5227	0.257	0.202
15)	Dieldrin	13.782	12.473	2120	4335	0.263	0.179m#
16)	4,4'-DDE	13.592	12.329	2326	5541	0.282	0.217
17)	Endrin	14.152	12.946	2141	4811	0.267	0.207
18)	Endosulfa...	14.595	13.379	2634	4349	0.346	0.205 #
19)	4,4'-DDD	14.429	13.213	1652	3852	0.263	0.214
20)	Endrin Al...	14.779	13.739	1949	3719	0.297	0.196 #
21)	Endosulfa...	15.249	14.063	1962	4040	0.264	0.187 #
22)	4,4'-DDT	14.922	13.629	1499	5117	0.320	0.305
23)	Endrin Ke...	15.935	14.993	1747	4446	0.247	0.198
24)	Methoxychlor	15.655f	14.726	2004	2279	0.352	0.230 #
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

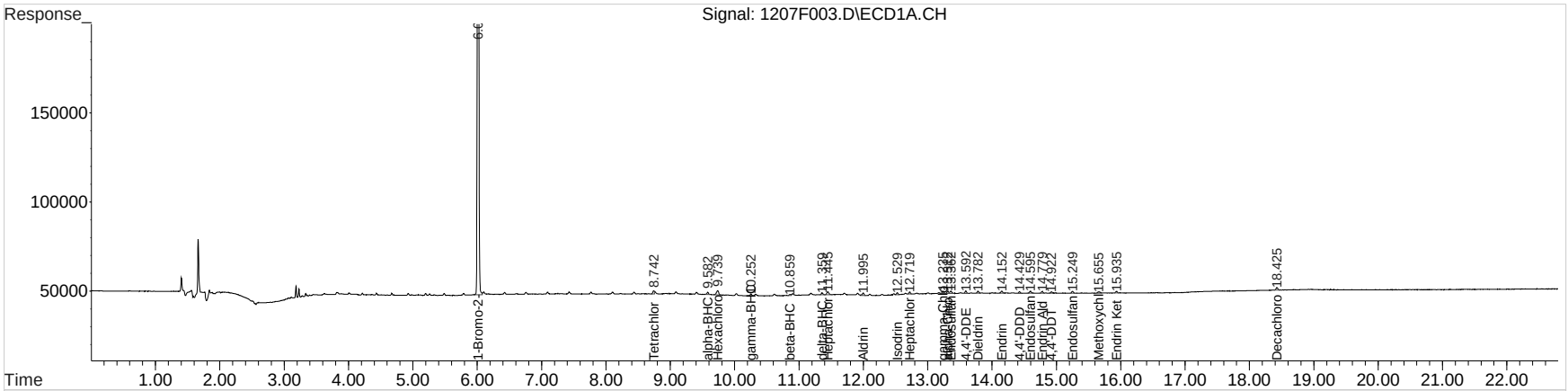
1st MC 12/11/18
2nd UA 12/11/18

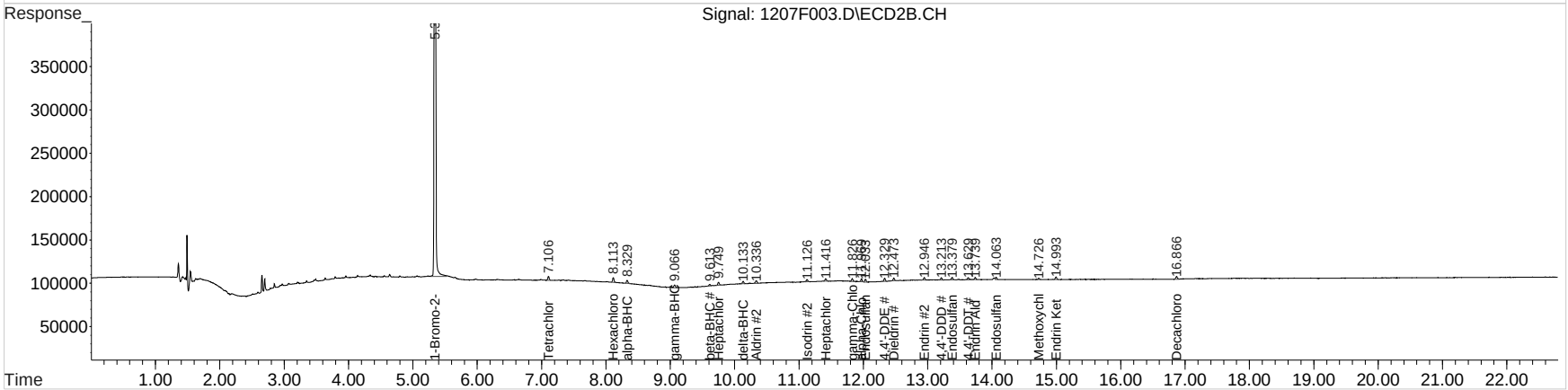
Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 13:10:38 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





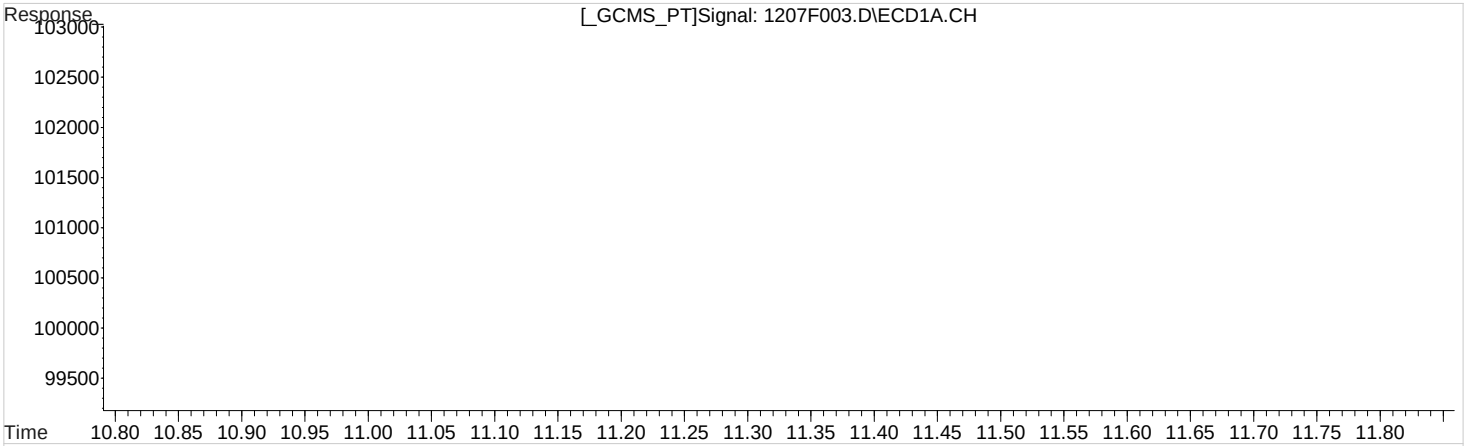
Quantitation Report (Qedit)

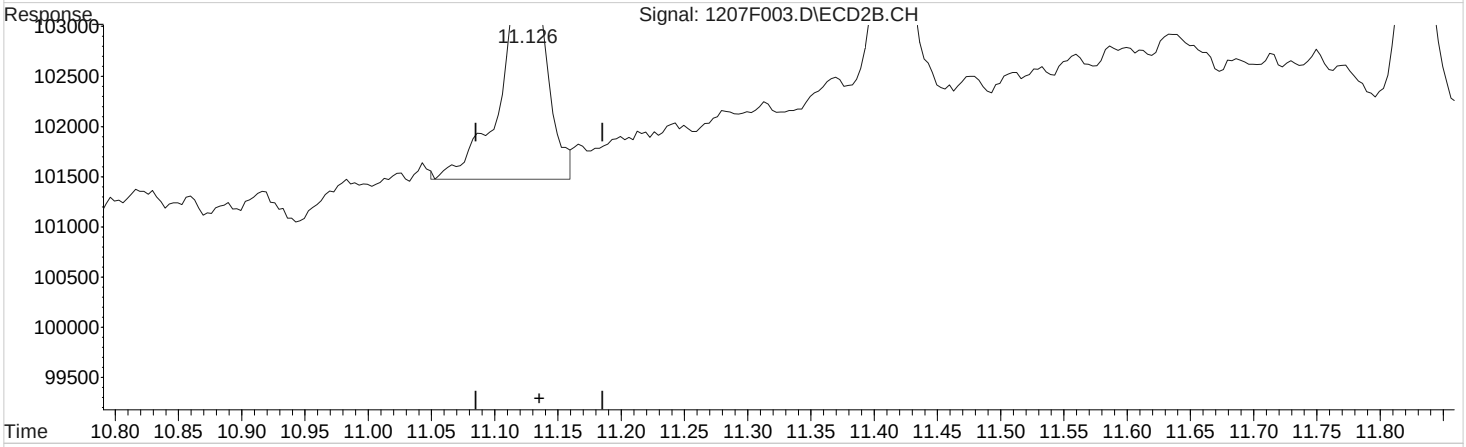
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(10) Isodrin

12.529min 0.256 ug/L

response 1934

(10) Isodrin #2

11.126min 0.238 ug/L

response 5852

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

020385

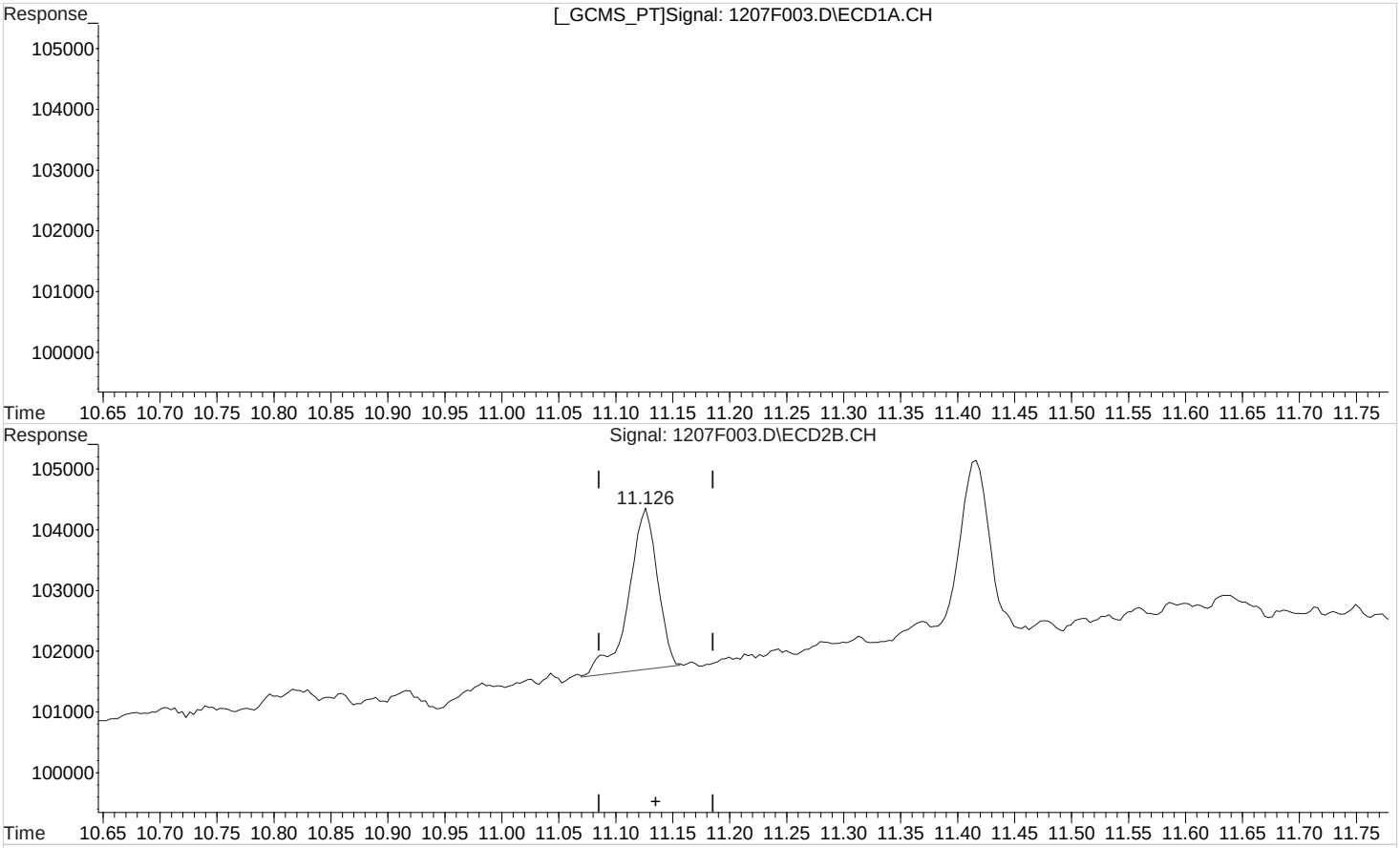
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:28:23 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(10) Isodrin

12.529min 0.256 ug/L

response 1934

(10) Isodrin #2

11.126min 0.190 ug/L m

response 4671

Manual Integration:

Before

12/11/18

(+) = Expected Retention Time

020386

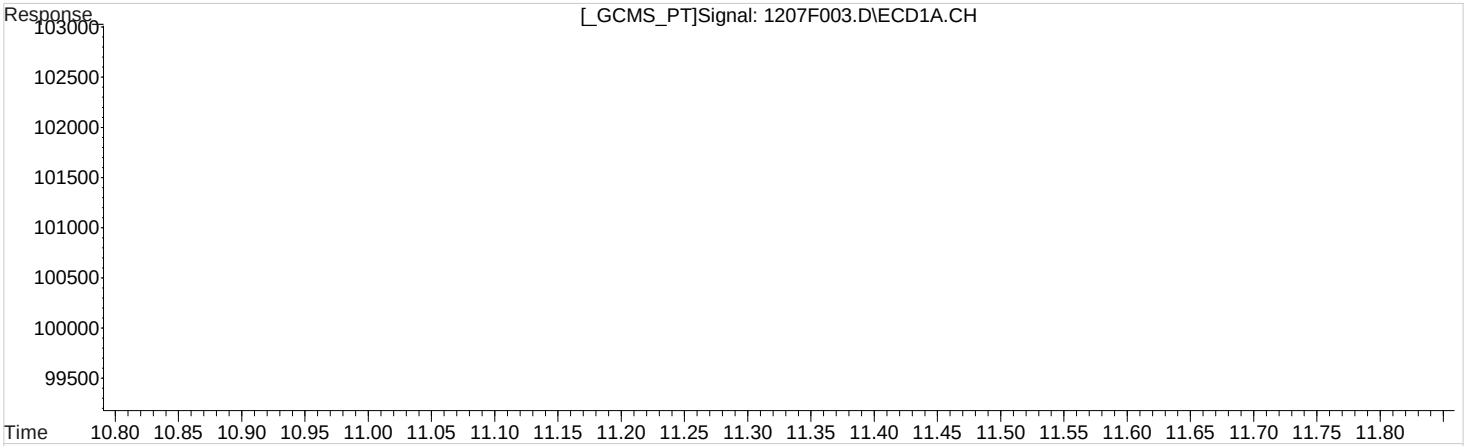
Quantitation Report (Qedit)

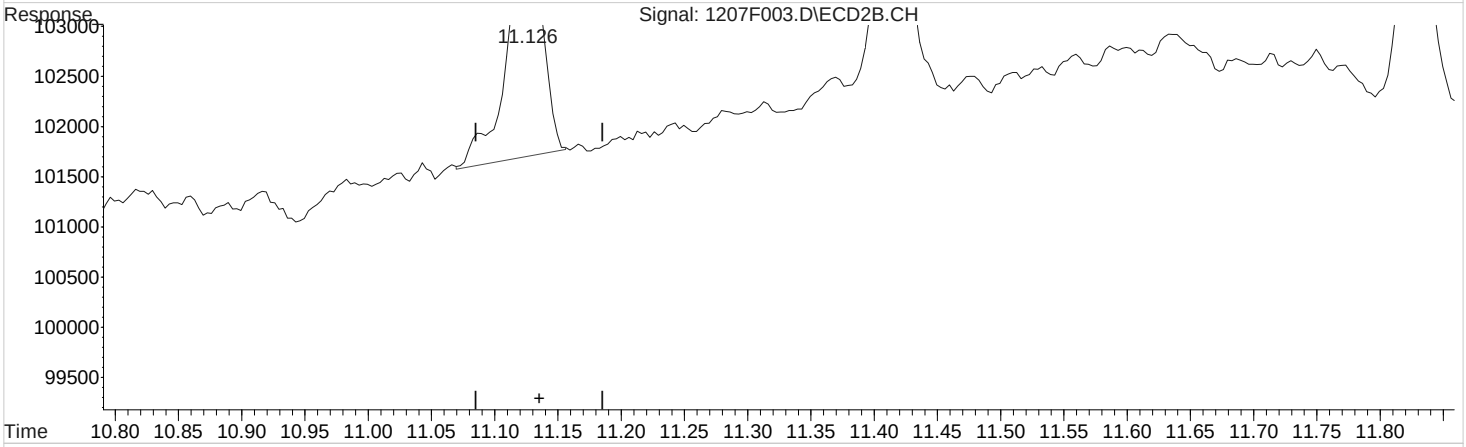
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(10) Isodrin

12.529min 0.256 ug/L

response 1934

Manual Integration:

After

Baseline/Shoulder

12/10/18

(10) Isodrin #2

11.126min 0.190 ug/L m

response 4671

(+) = Expected Retention Time

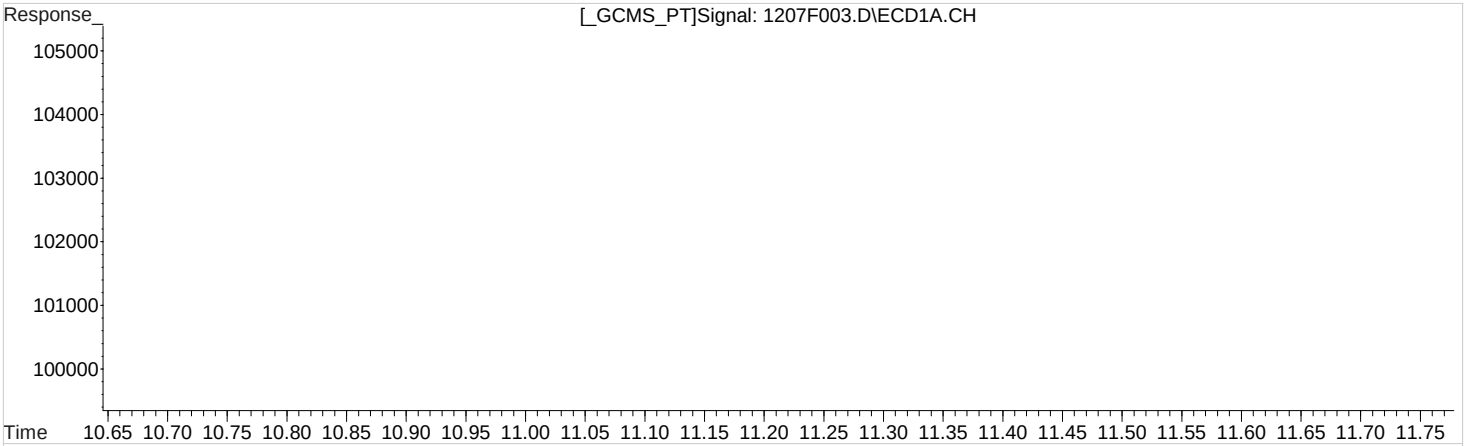
Quantitation Report (Qedit)

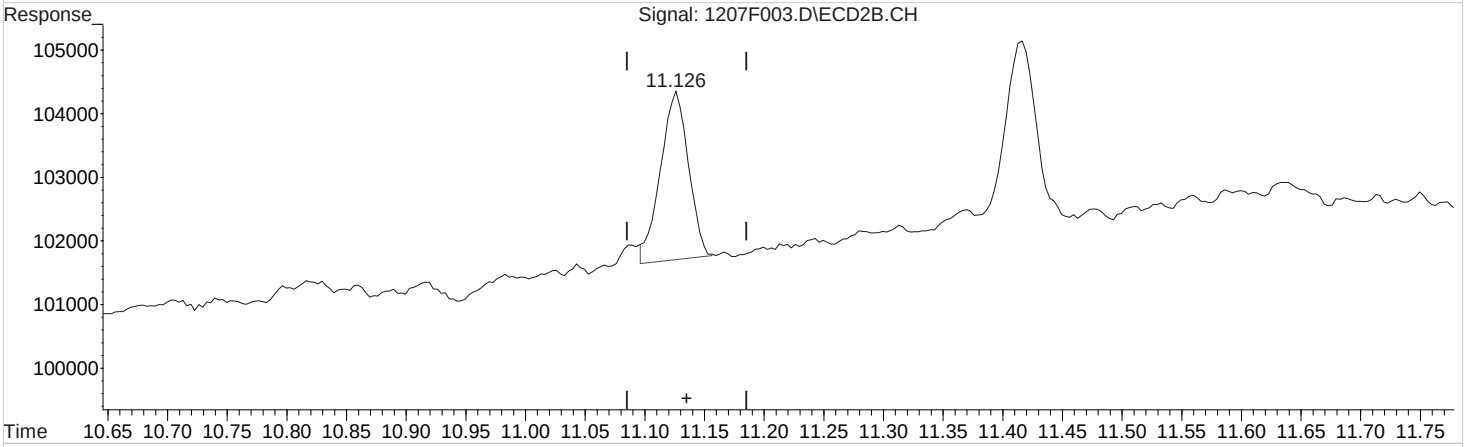
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:28:23 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(10) Isodrin

12.529min 0.256 ug/L

response 1934

Manual Integration:

After

Baseline/Shoulder

12/11/18

(10) Isodrin #2

11.126min 0.175 ug/L m

response 4301

(+) = Expected Retention Time

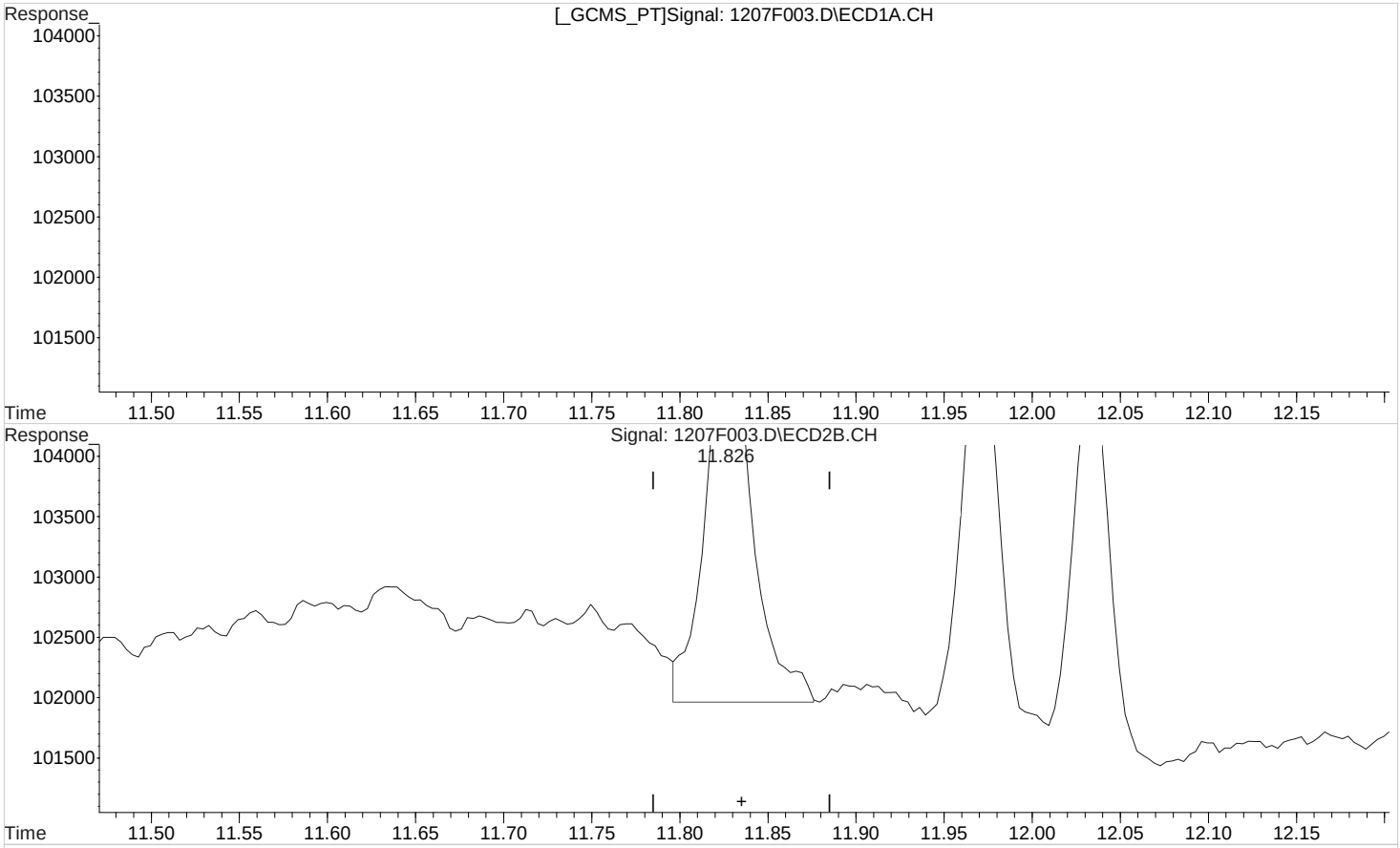
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(12) gamma-Chlordane

13.235min 0.230 ug/L

response 1932

(12) gamma-Chlordane #2

11.826min 0.232 ug/L

response 6010

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

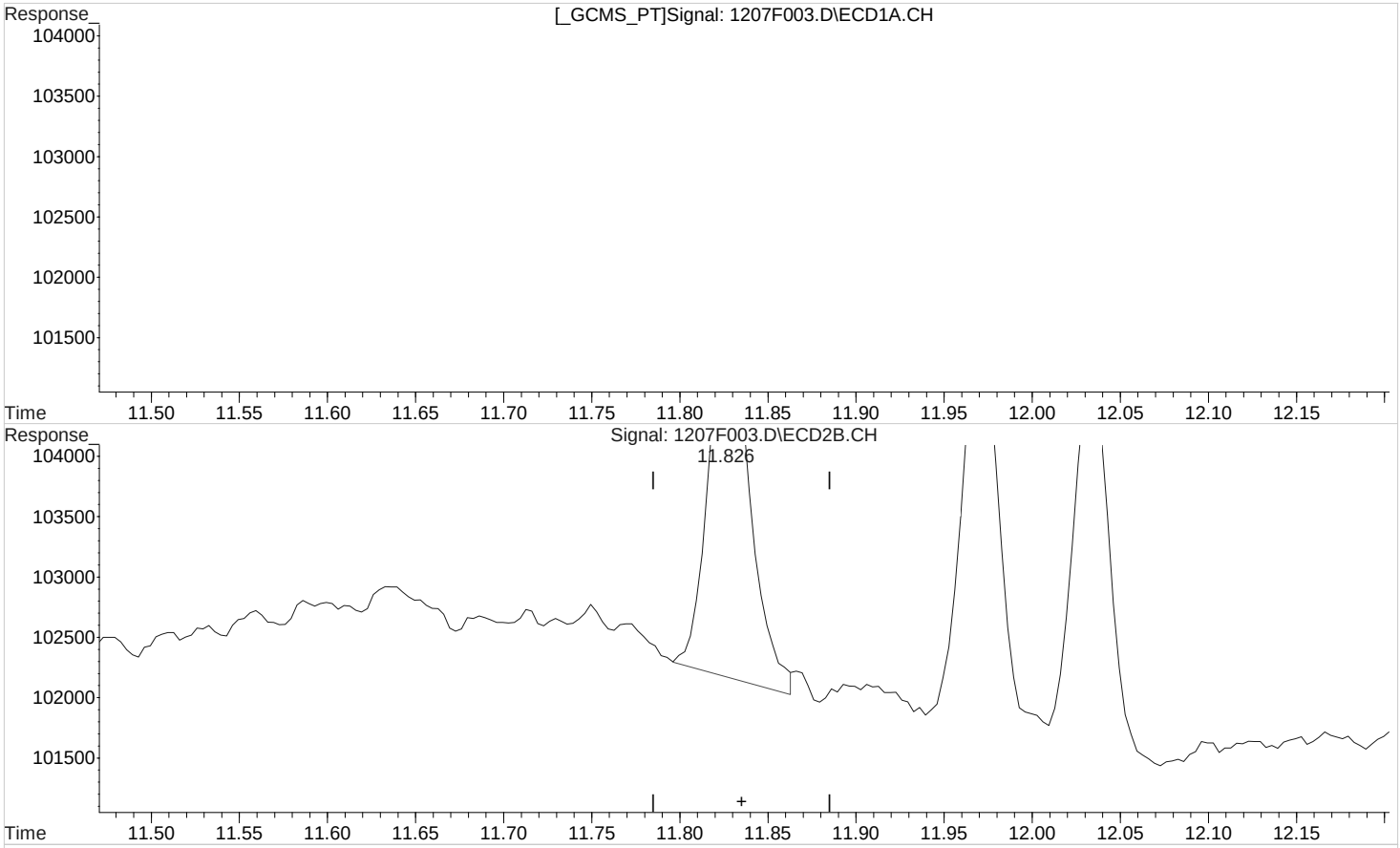
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(12) gamma-Chlordane

13.235min 0.230 ug/L

response 1932

Manual Integration:

After

Baseline/Shoulder

12/10/18

(12) gamma-Chlordane #2

11.826min 0.196 ug/L m

response 5090

(+) = Expected Retention Time

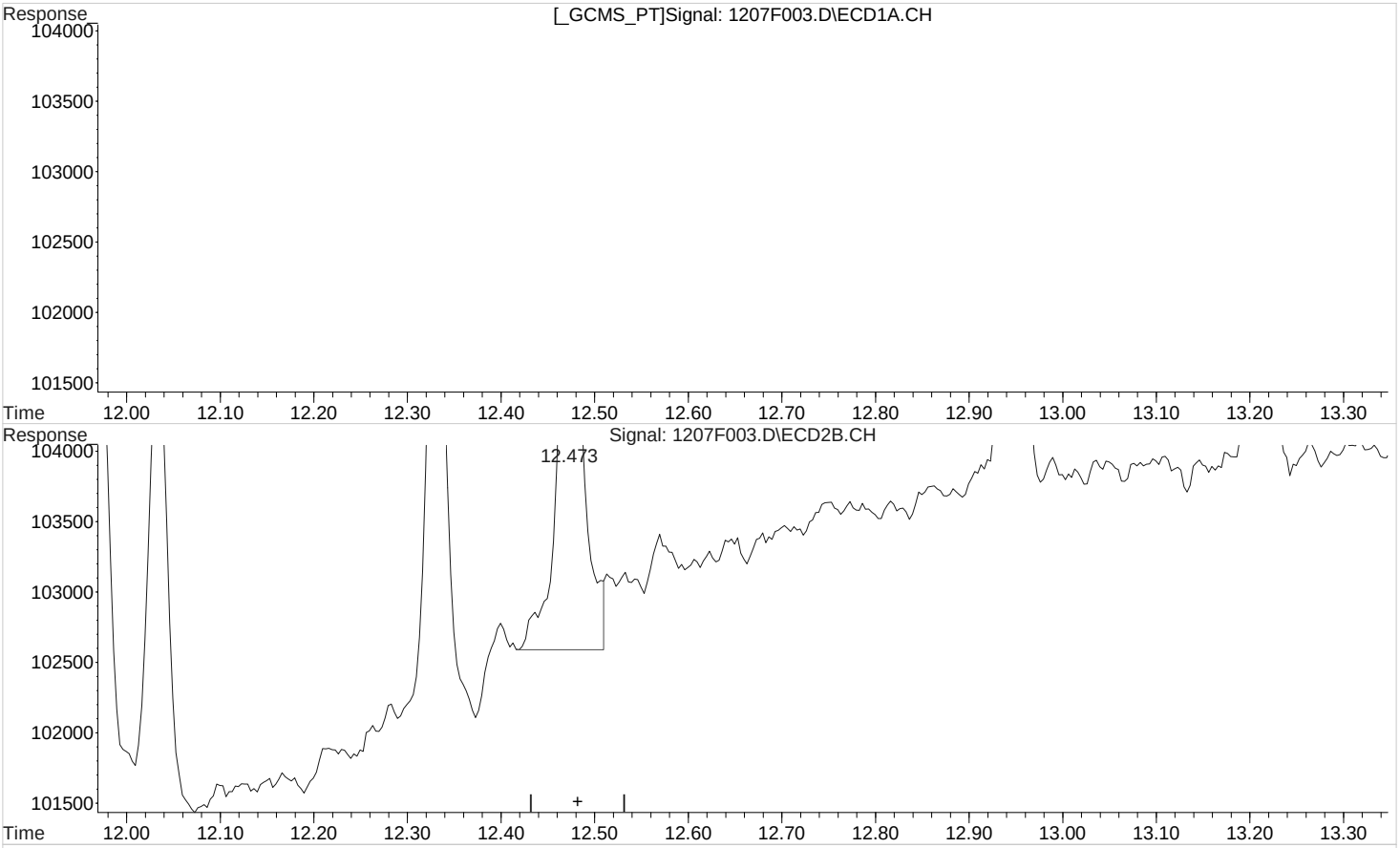
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(15) Dieldrin

13.782min 0.263 ug/L

response 2120

Manual Integration:

Before

12/10/18

(15) Dieldrin #2

12.473min 0.249 ug/L

response 6040

(+) = Expected Retention Time

020391

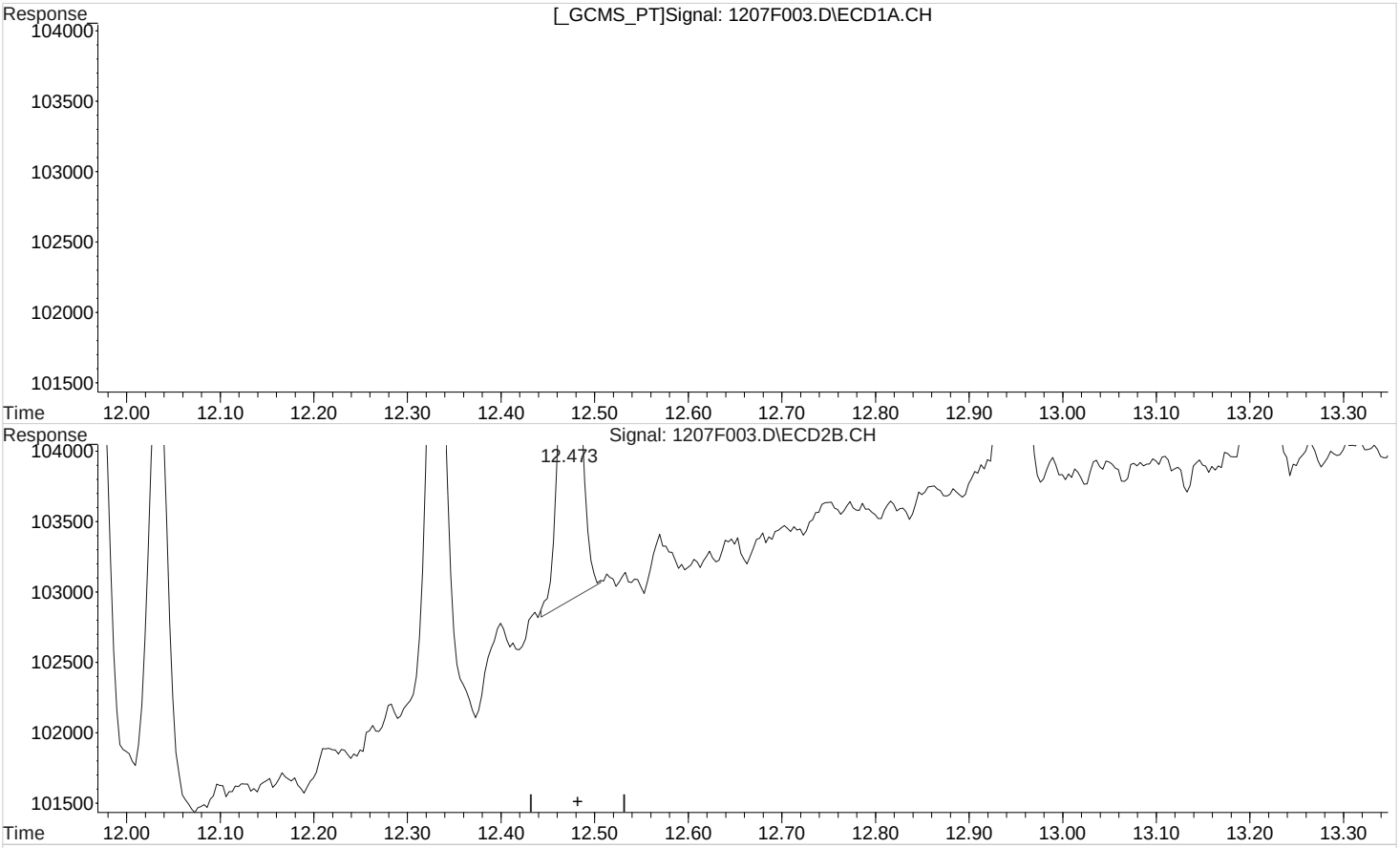
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(15) Dieldrin

13.782min 0.263 ug/L

response 2120

Manual Integration:

After

Baseline/Shoulder

12/10/18

(15) Dieldrin #2

12.473min 0.179 ug/L m

response 4335

(+) = Expected Retention Time

020392

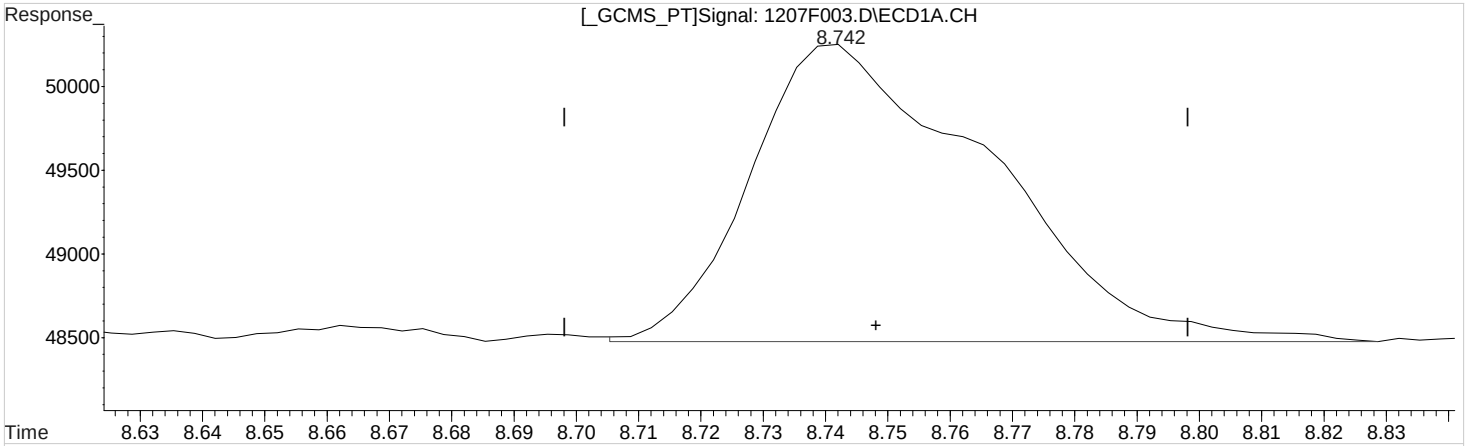
Quantitation Report (Qedit)

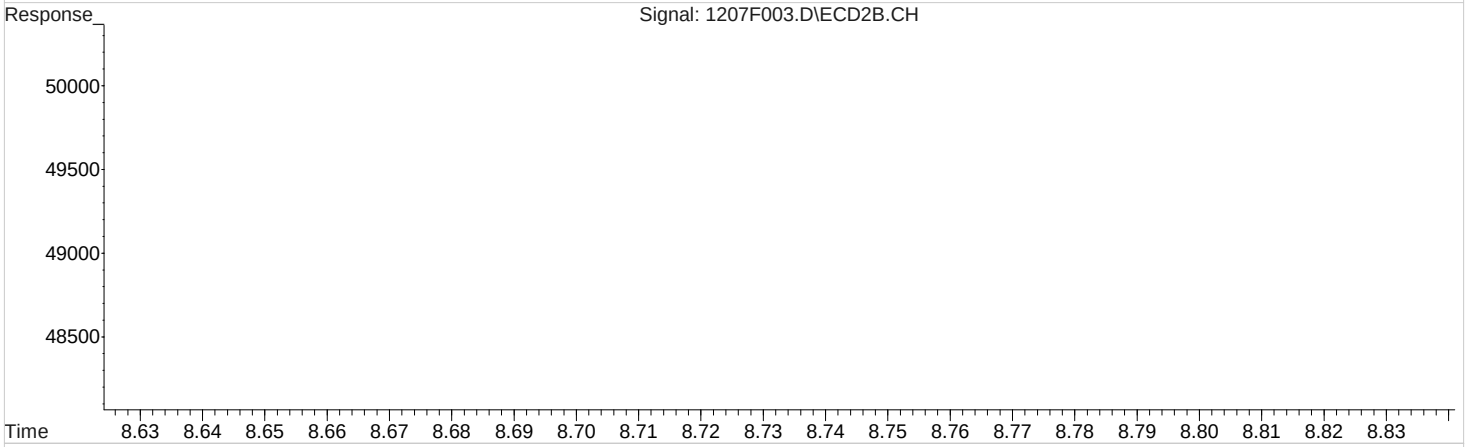
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:52:04 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(2) Tetrachloro-m-xylene (s)

8.742min 0.376 ug/L

response 4768

Manual Integration:

Before

12/11/18

(2) Tetrachloro-m-xylene #2 (s)

7.106min 0.097 ug/L

response 6660

(+) = Expected Retention Time

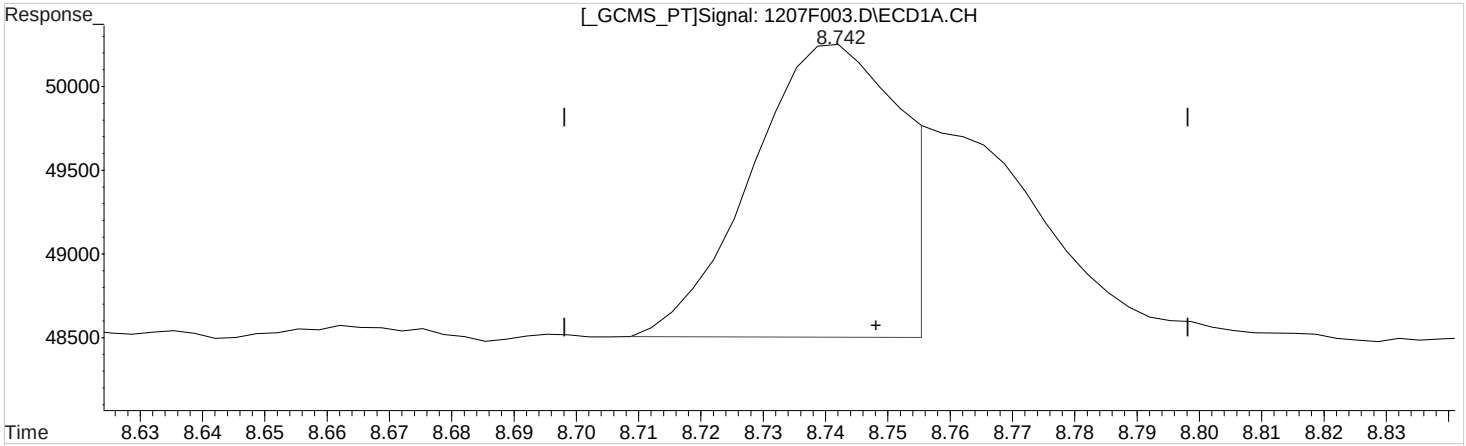
Quantitation Report (Qedit)

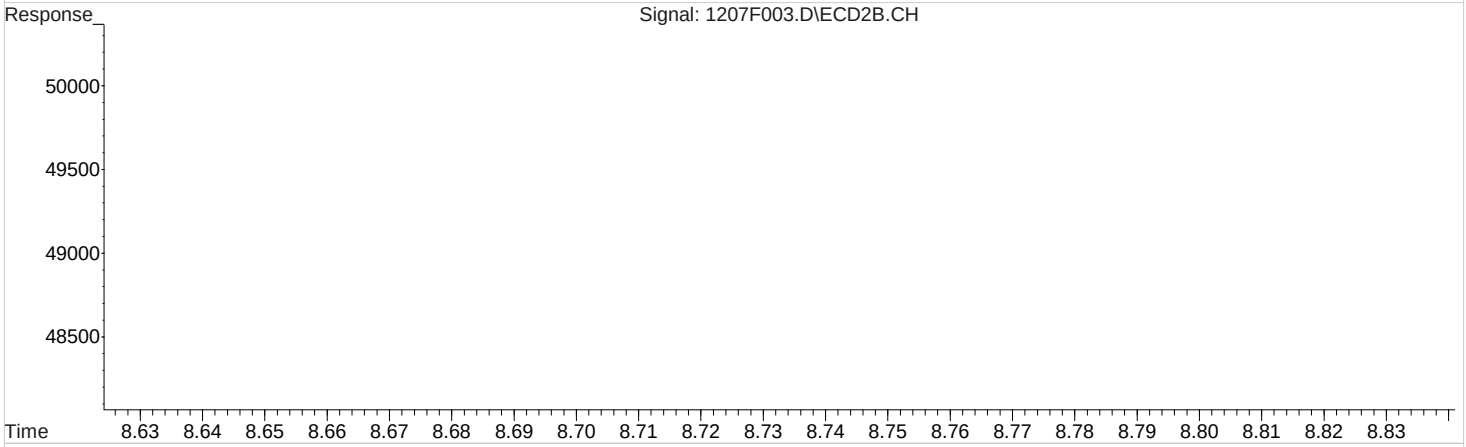
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:52:04 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(2) Tetrachloro-m-xylene (s)

8.742min 0.211 ug/L m

response 2984

Manual Integration:

After

Baseline/Shoulder

12/11/18

(2) Tetrachloro-m-xylene #2 (s)

7.106min 0.097 ug/L

response 6660

(+) = Expected Retention Time

020394

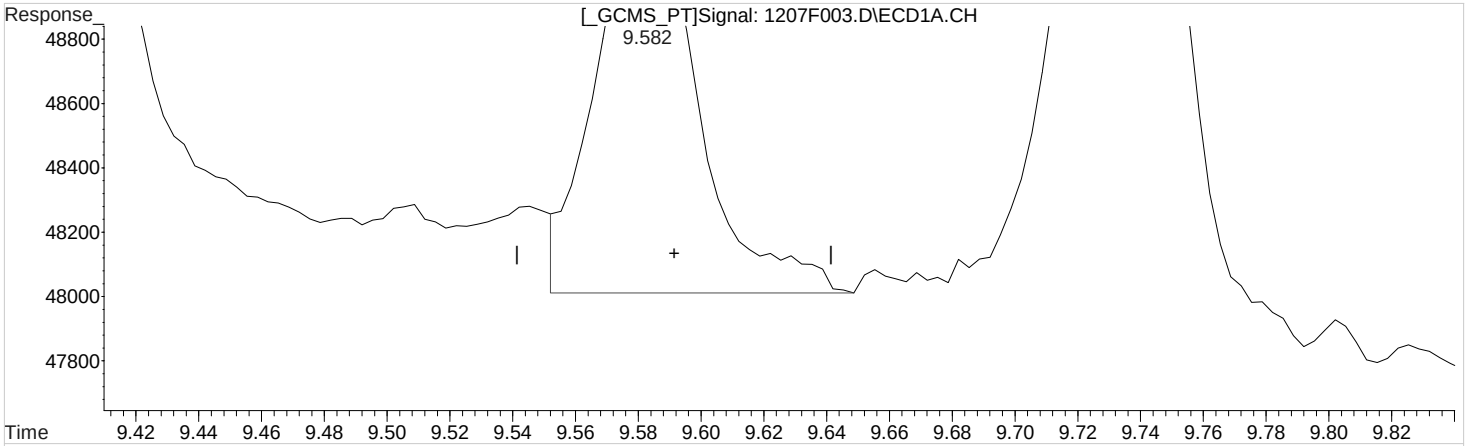
Quantitation Report (Qedit)

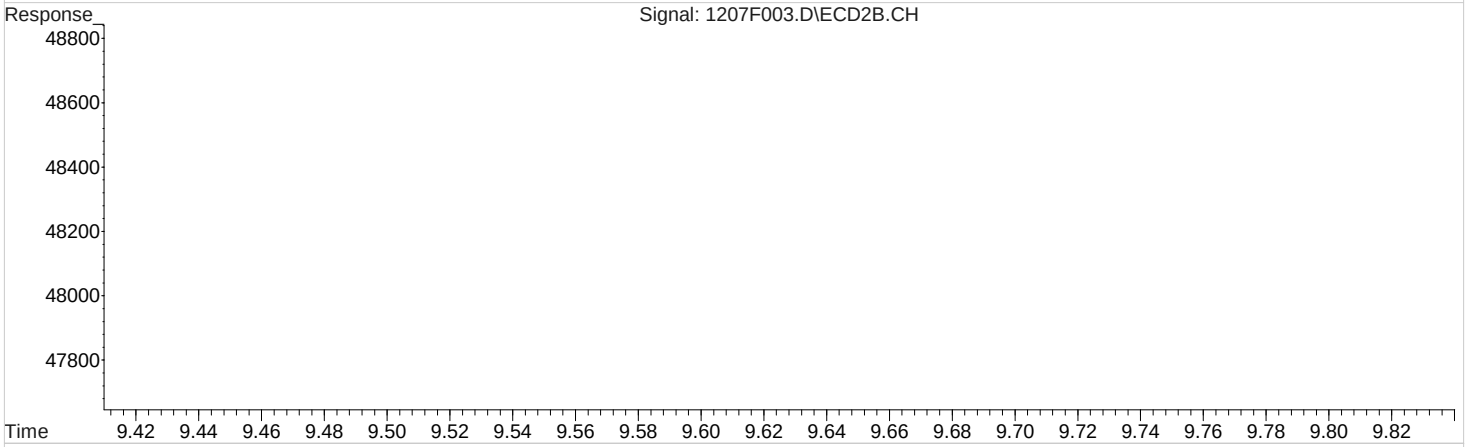
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(3) alpha-BHC

9.582min 0.276 ug/L

response 2873

Manual Integration:

Before

12/10/18

(3) alpha-BHC #2

8.329min 0.222 ug/L

response 7376

(+) = Expected Retention Time

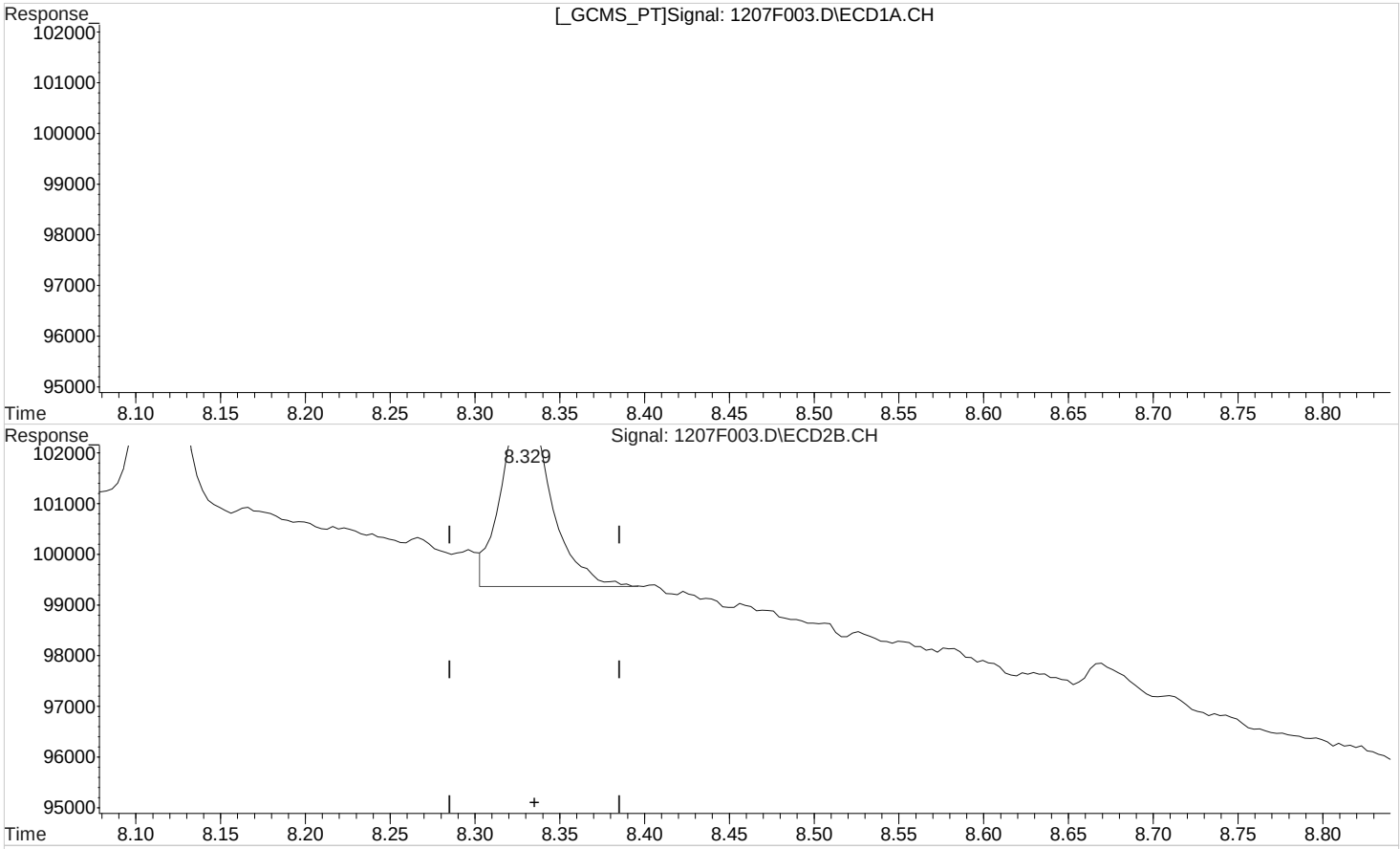
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(3) alpha-BHC

9.582min 0.210 ug/L m

response 2179

(3) alpha-BHC #2

8.329min 0.222 ug/L

response 7376

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

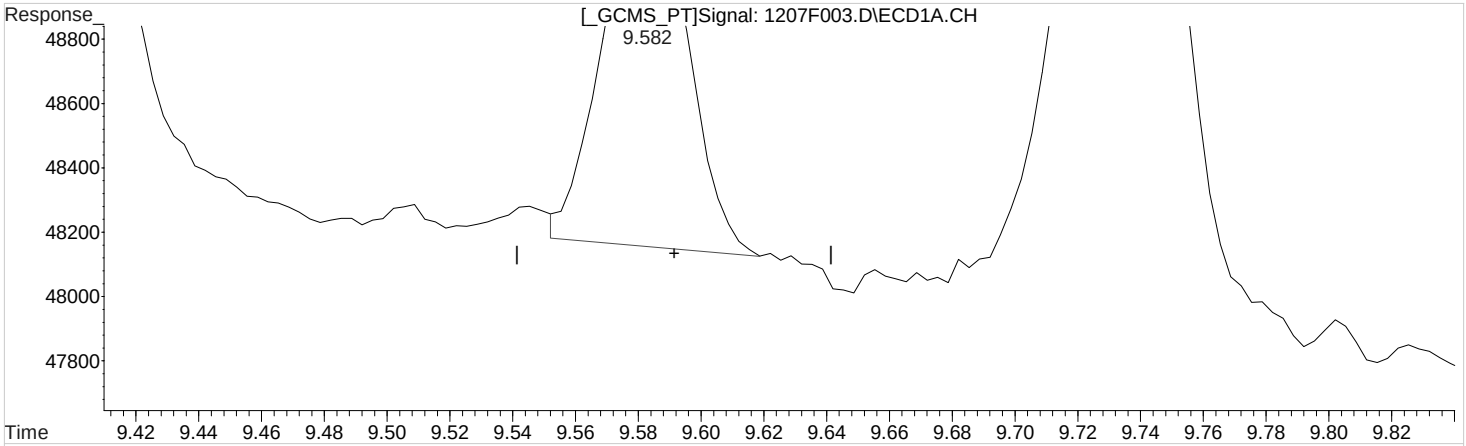
Quantitation Report (Qedit)

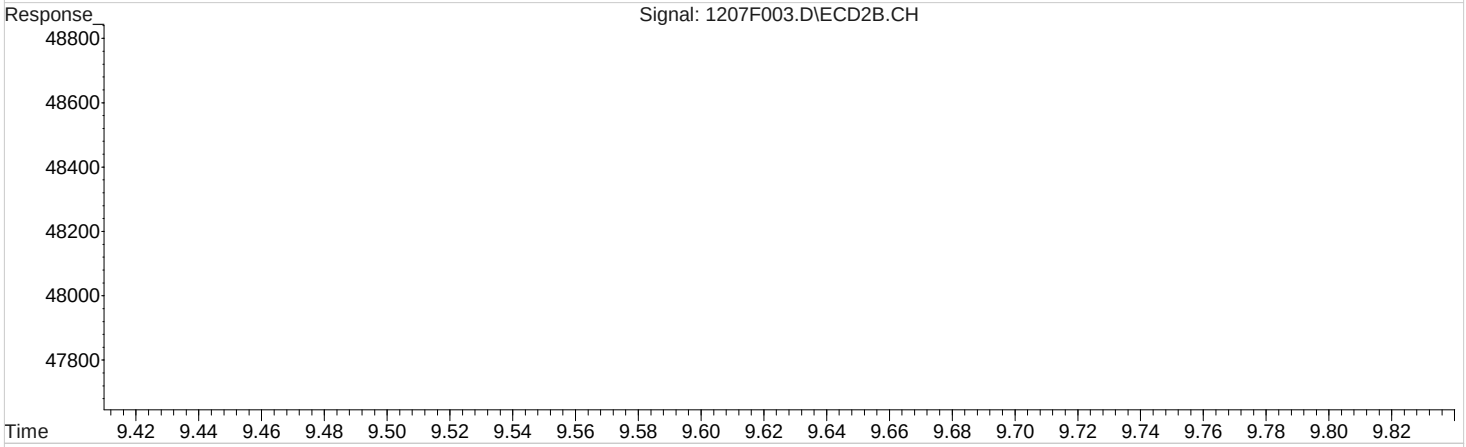
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(3) alpha-BHC

9.582min 0.210 ug/L m

response 2179

Manual Integration:

After

Baseline/Shoulder

12/10/18

(3) alpha-BHC #2

8.329min 0.222 ug/L

response 7376

(+) = Expected Retention Time

020397

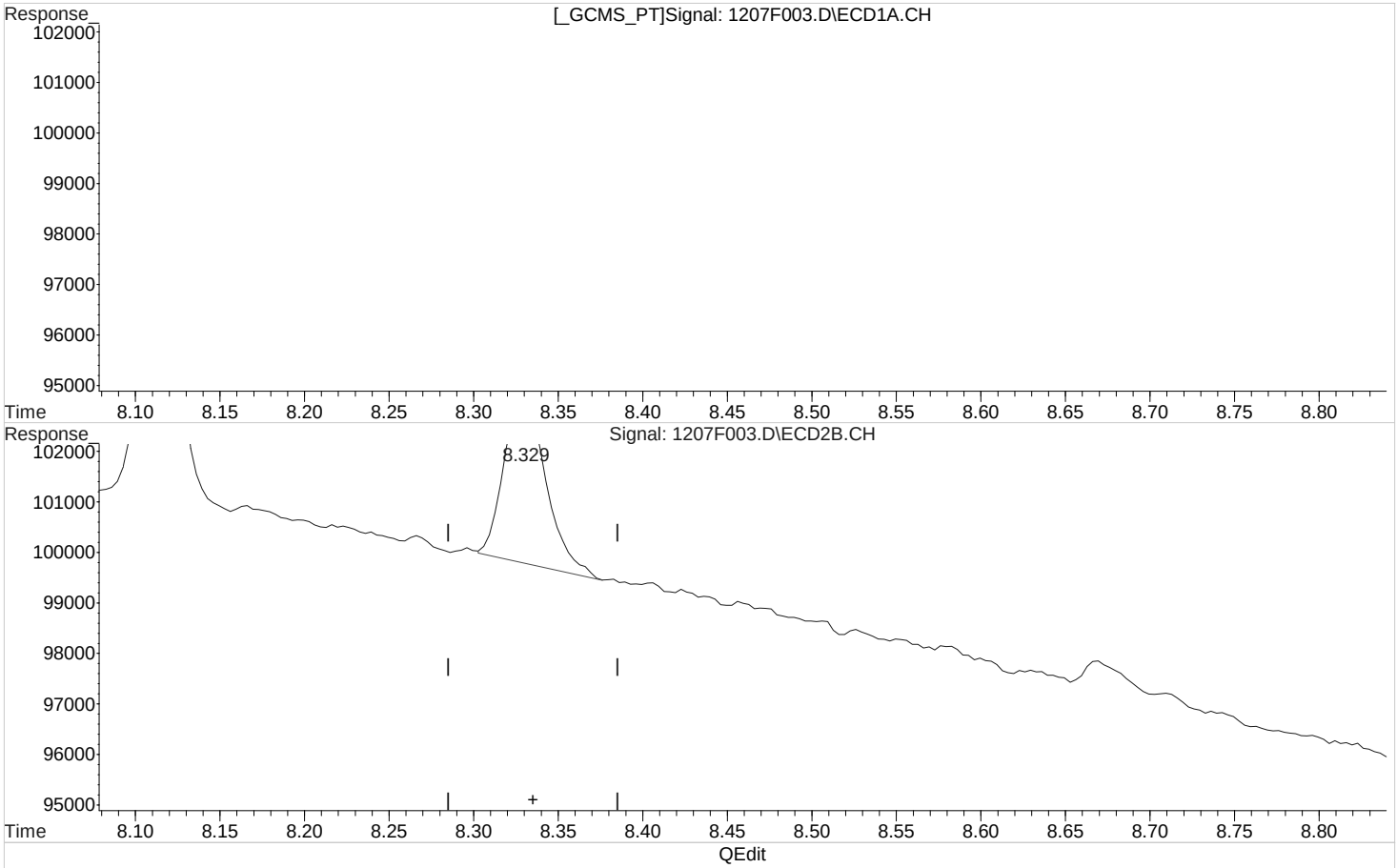
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(3) alpha-BHC

9.582min 0.210 ug/L m

response 2179

(3) alpha-BHC #2

8.329min 0.174 ug/L m

response 5767

Manual Integration:

After

Baseline/Shoulder

12/10/18

(+) = Expected Retention Time

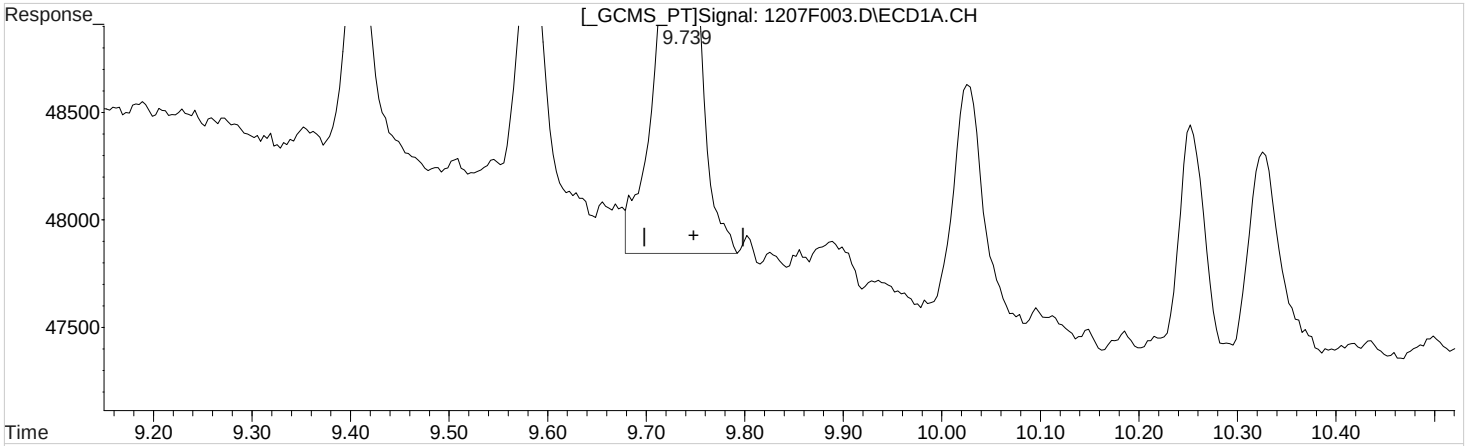
Quantitation Report (Qedit)

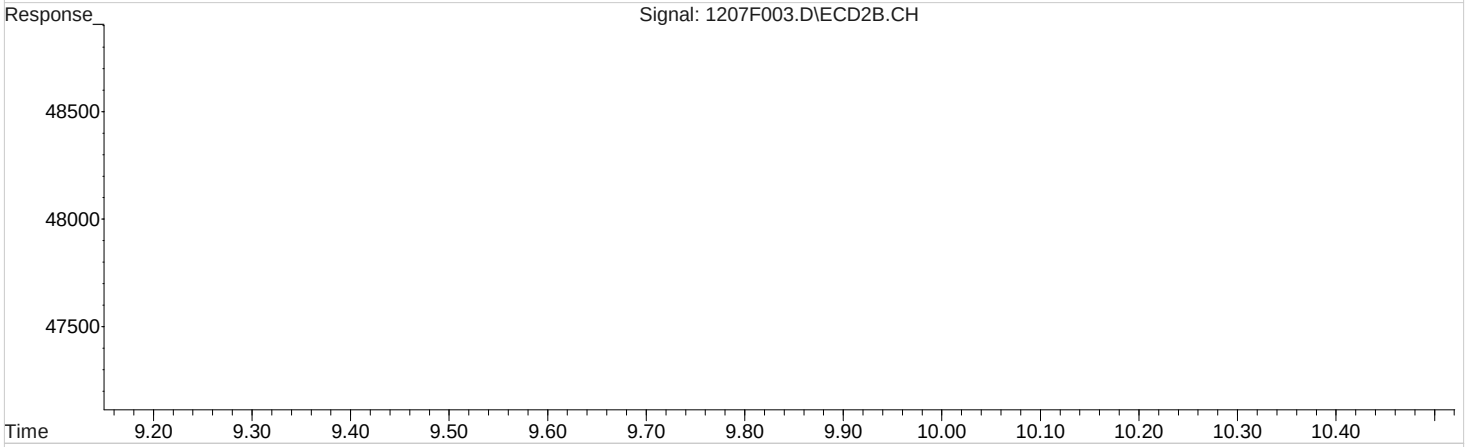
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.739min 0.412 ug/L

response 6439

Manual Integration:

Before

12/10/18

(4) Hexachlorobenzene #2

8.113min 0.115 ug/L

response 9300

(+) = Expected Retention Time

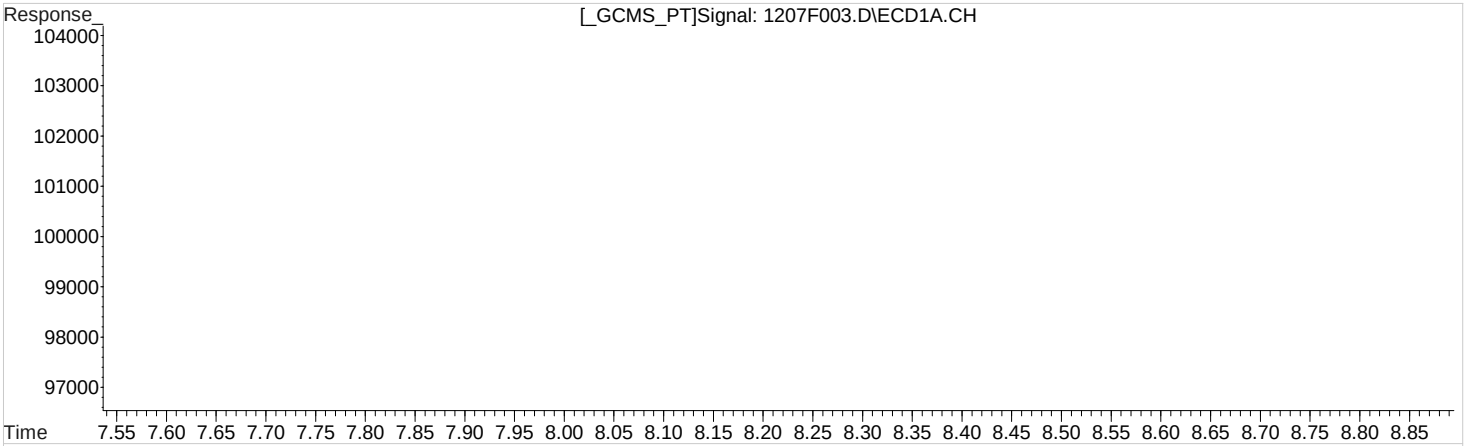
Quantitation Report (Qedit)

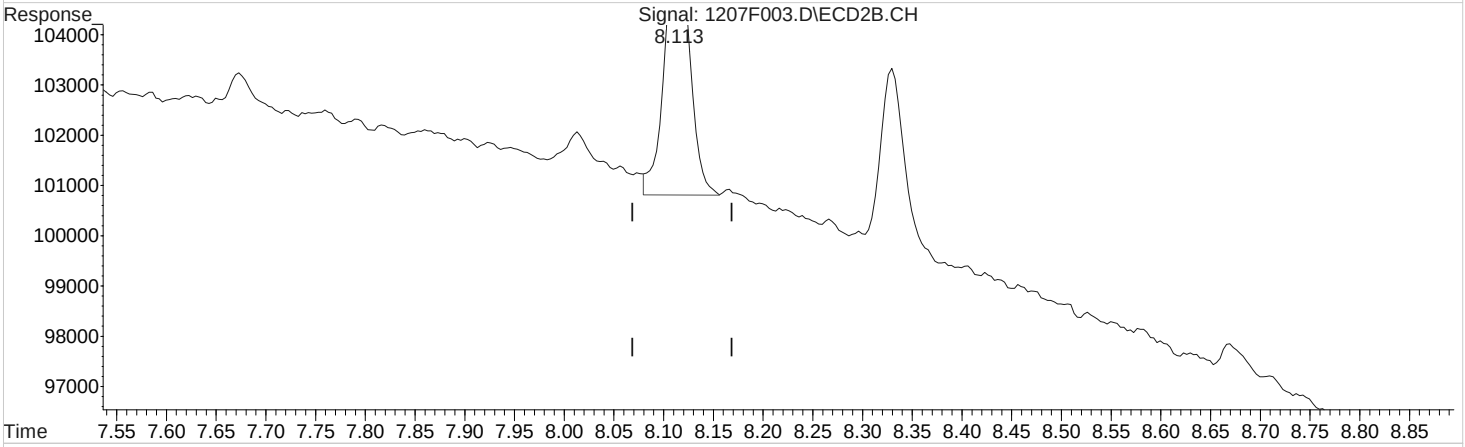
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.739min 0.359 ug/L m

response 5749

Manual Integration:

Before

12/10/18

(4) Hexachlorobenzene #2

8.113min 0.115 ug/L

response 9300

(+) = Expected Retention Time

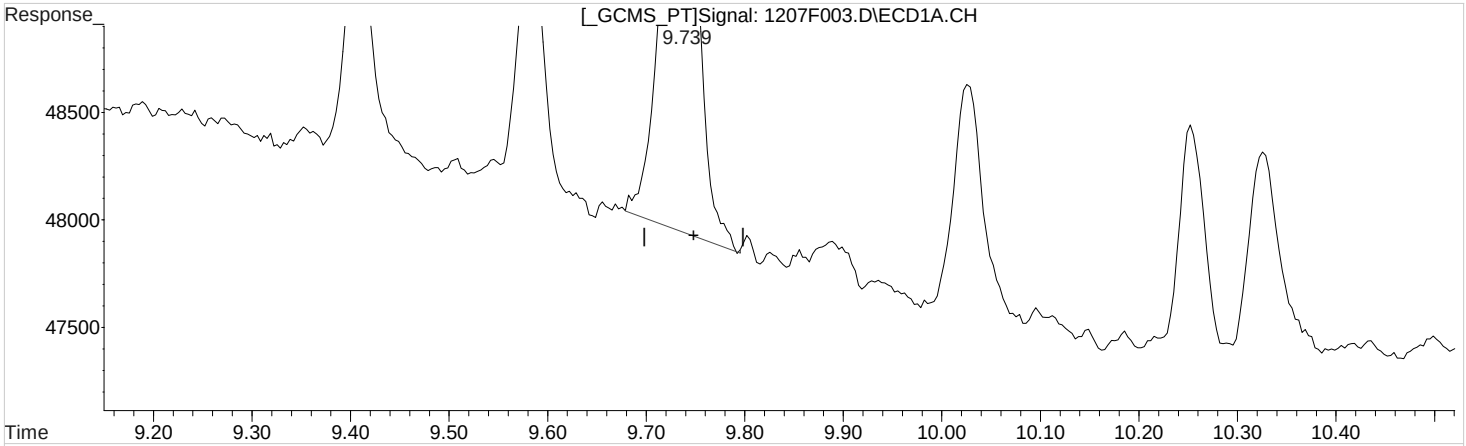
Quantitation Report (Qedit)

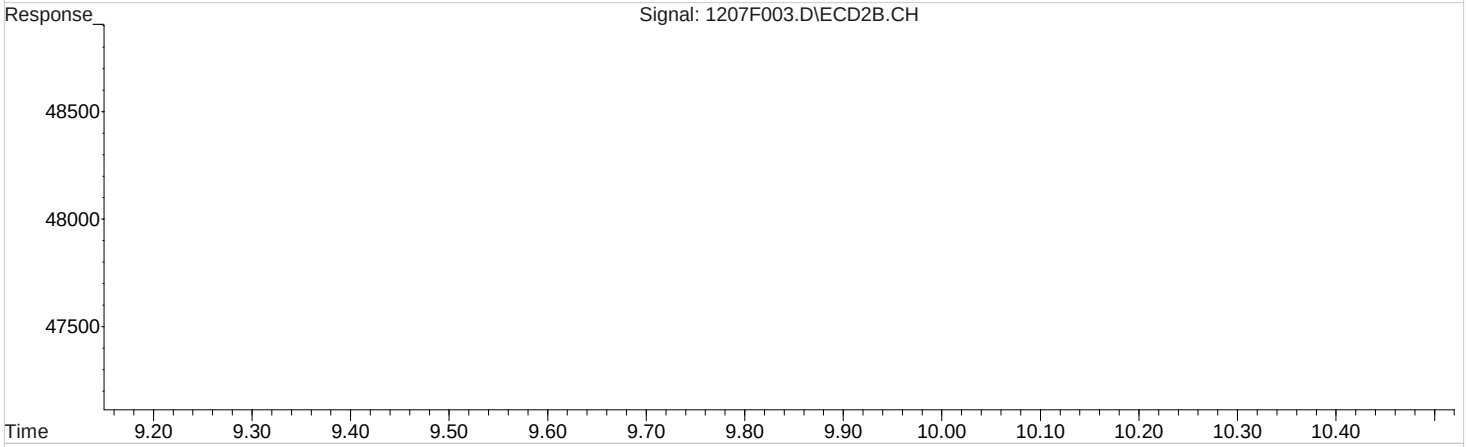
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.739min 0.359 ug/L m

response 5749

Manual Integration:

After

Baseline/Shoulder

12/10/18

(4) Hexachlorobenzene #2

8.113min 0.115 ug/L

response 9300

(+) = Expected Retention Time

020401

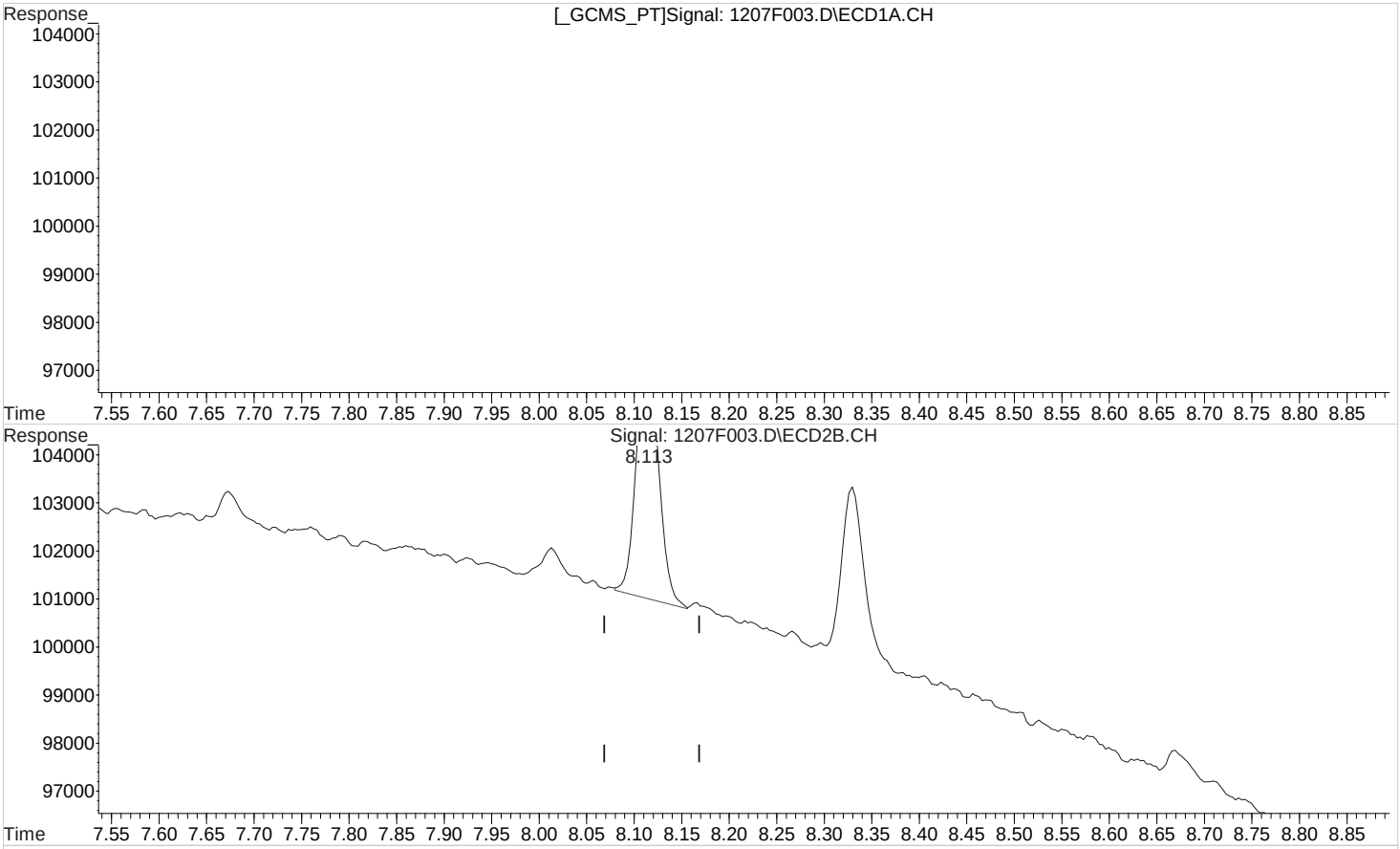
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(4) Hexachlorobenzene

9.739min 0.359 ug/L m

response 5749

Manual Integration:

After

Baseline/Shoulder

12/10/18

(4) Hexachlorobenzene #2

8.113min 0.093 ug/L m

response 8483

(+) = Expected Retention Time

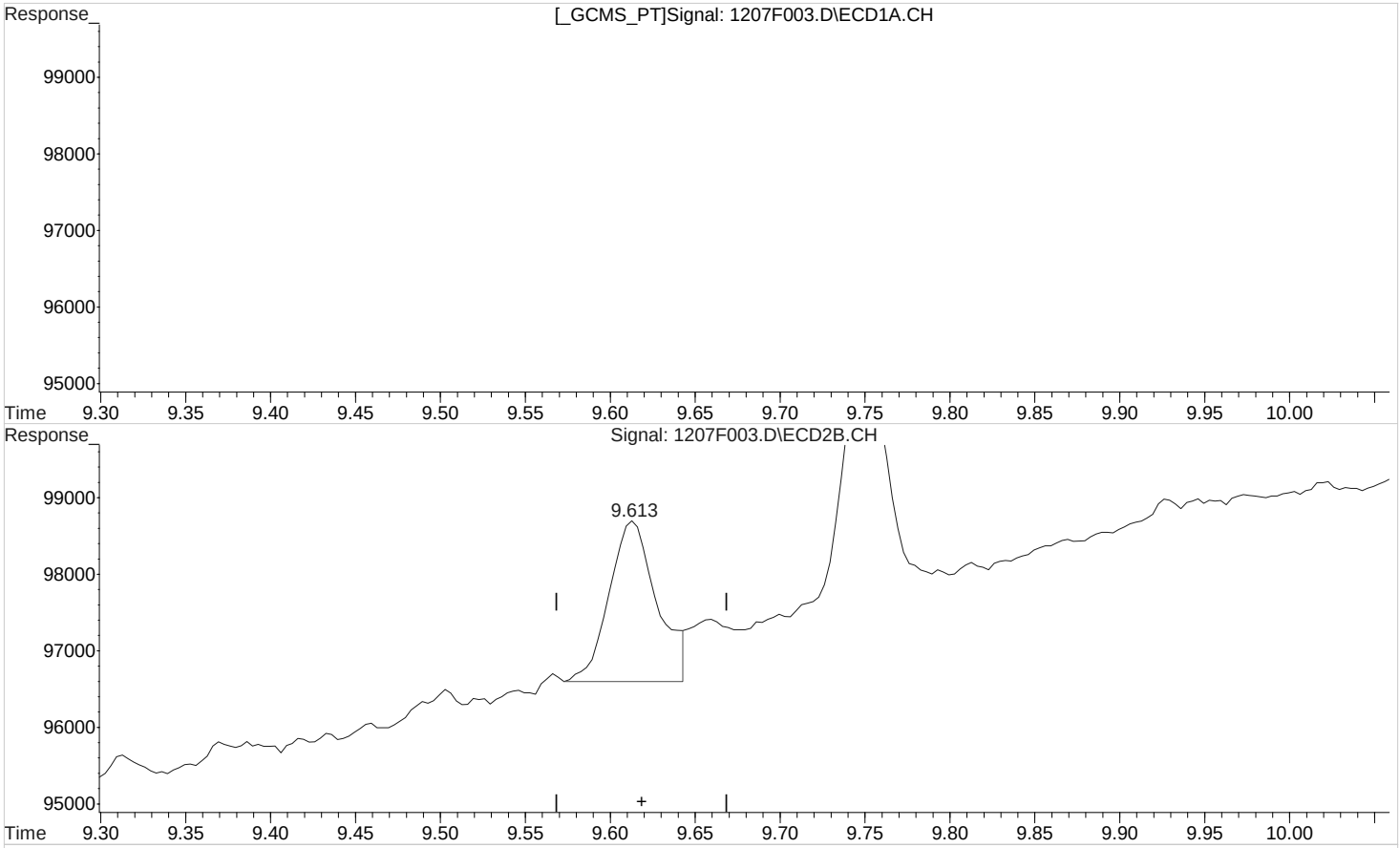
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(5) beta-BHC

10.859min 0.226 ug/L

response 1146

(5) beta-BHC #2

9.613min 0.257 ug/L

response 4125

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

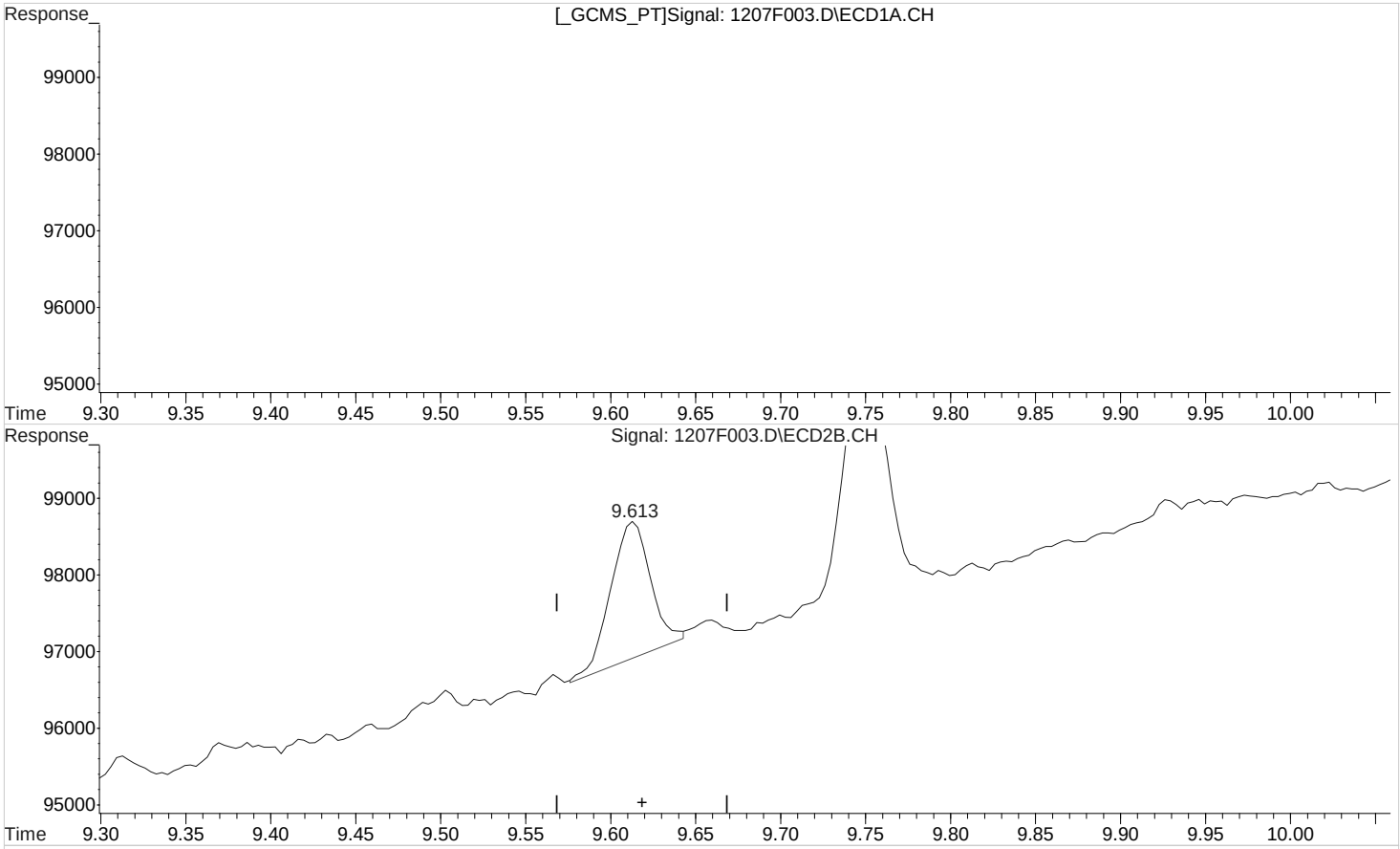
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(5) beta-BHC

10.859min 0.226 ug/L

response 1146

Manual Integration:

After

Baseline/Shoulder

12/10/18

(5) beta-BHC #2

9.613min 0.185 ug/L m

response 2974

(+) = Expected Retention Time

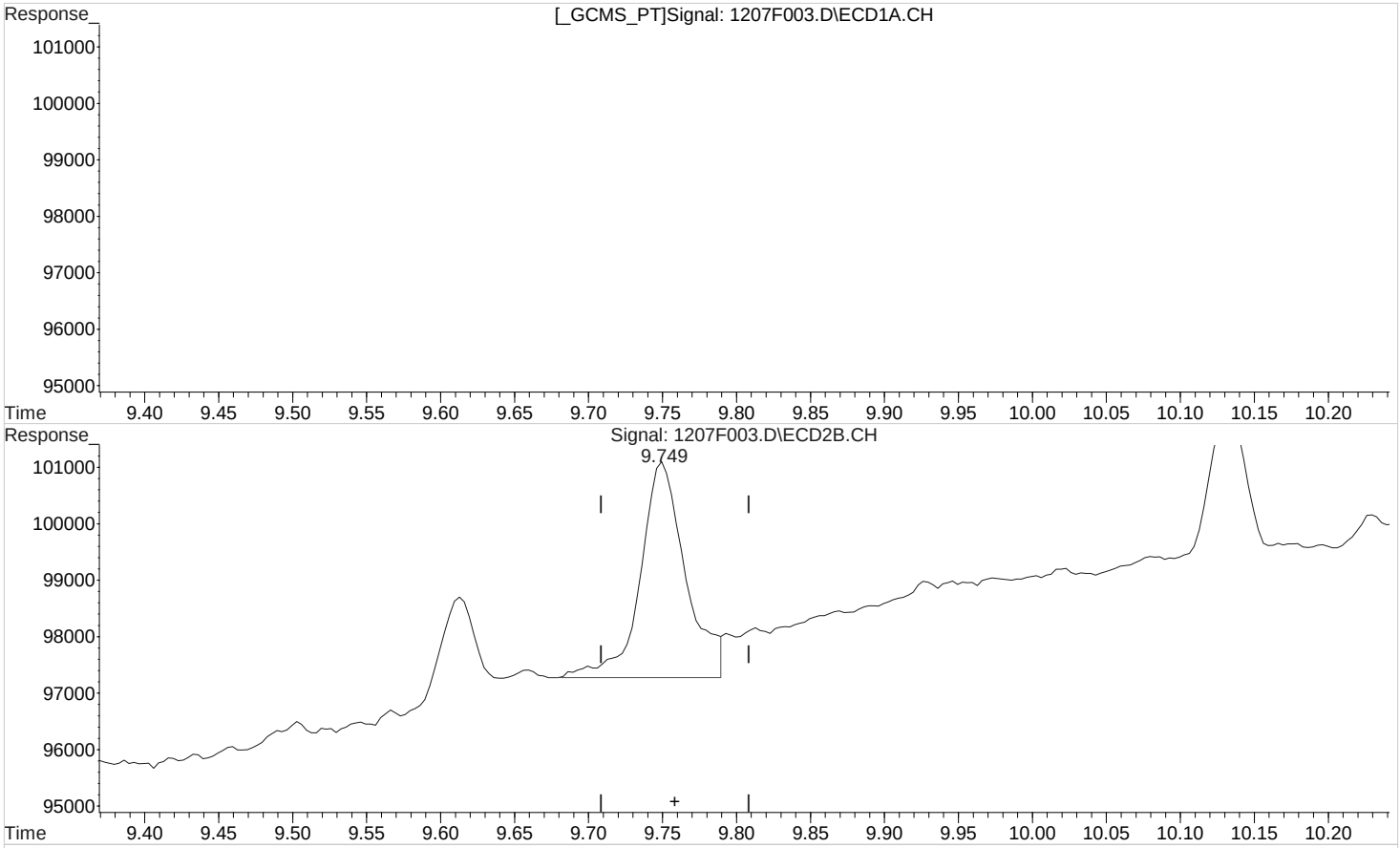
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(8) Heptachlor

11.445min 0.414 ug/L

response 3830

Manual Integration:

Before

12/10/18

(8) Heptachlor #2

9.749min 0.282 ug/L

response 8186

(+) = Expected Retention Time

020405

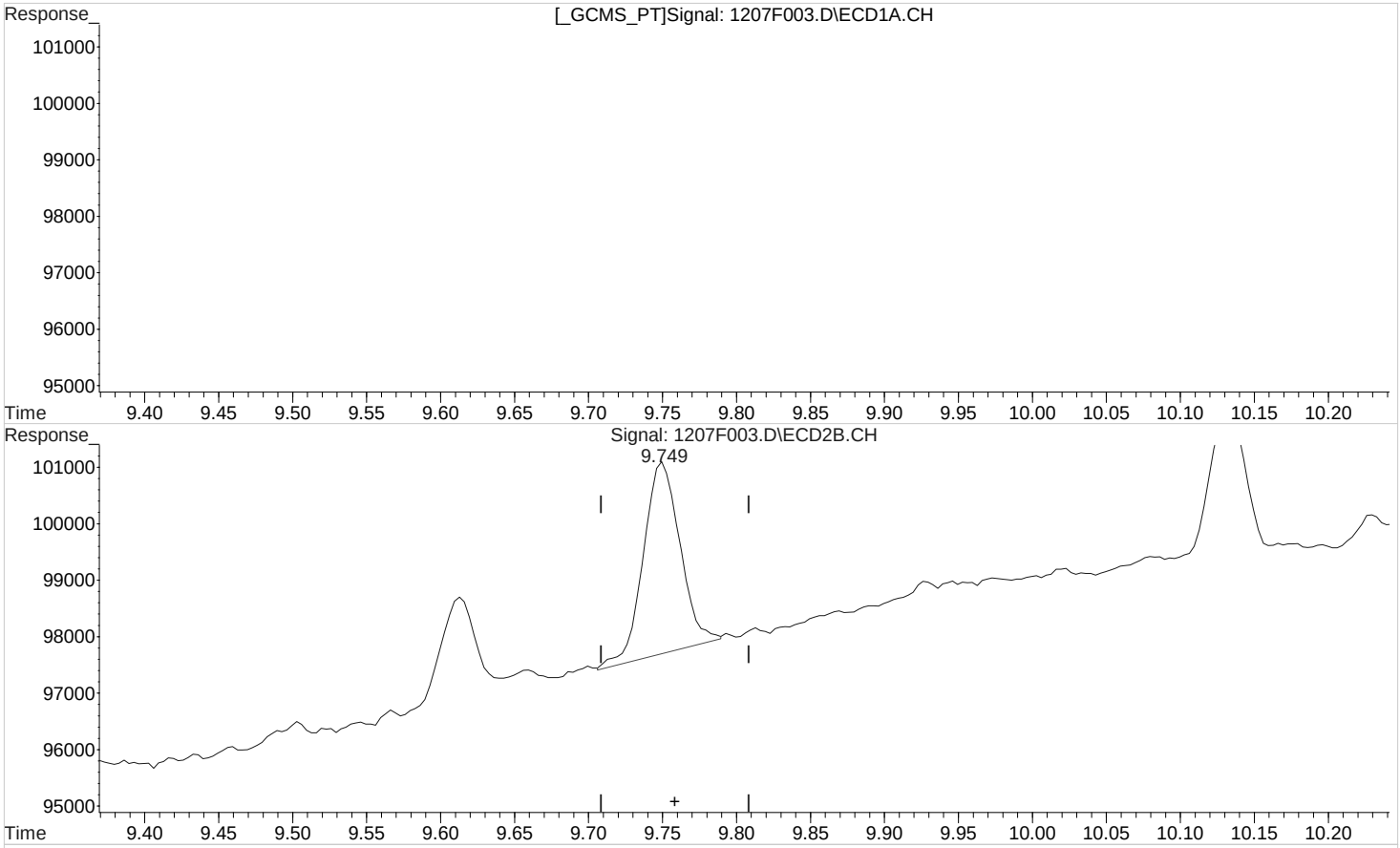
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(8) Heptachlor

11.445min 0.414 ug/L

response 3830

Manual Integration:

After

Baseline/Shoulder

12/10/18

(8) Heptachlor #2

9.749min 0.204 ug/L m

response 5909

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 6:23 pm Operator: MC
Sample : 81 2.0PPB GCPS8-49F Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:53:08 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.011	5.342	643731	1968737	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.741	7.105	26478	60868	2.345	1.718	#
28) s	Decachlor...	18.428	16.872	25720	50609	2.266	1.595	#
	Target Compounds							
3)	alpha-BHC	9.585	8.329	21595	51286	1.989	1.485	#
4)	Hexachlor...	9.741	8.115	32646	73094	2.383	1.779	#
5)	beta-BHC	10.865	9.612	10993	25324	2.072	1.515	#
6)	gamma-BHC...	10.258	9.069	18404	46538	1.896	1.518	
7)	delta-BHC	11.361	10.132	18804	46600	2.201	1.681	
8)	Heptachlor	11.448	9.752	18006	50882	1.863	1.686	
9)	Aldrin	12.001	10.339	20540	46660	2.121	1.603	
10)	Isodrin	12.531	11.129	16735	40560	2.124	1.585	#
11)	Heptachlo...	12.725	11.419	19323	44932	2.136	1.670	
12)	gamma-Chl...	13.241	11.832	19266	44461	2.193	1.647	m
13)	Endosulfan I	13.368	12.039	17411	39916	2.109	1.647	
14)	alpha-Chl...	13.318	11.975	19980	43383	2.193	1.608	#
15)	Dieldrin	13.788	12.479	18972	43321	2.254	1.716	
16)	4,4'-DDE	13.598	12.335	20861	44257	2.421	1.665	#
17)	Endrin	14.155	12.952	17327	40506	2.071	1.676	
18)	Endosulfa...	14.605	13.385	16632	38638	2.091	1.753	
19)	4,4'-DDD	14.435	13.215	14223	33571	2.164	1.791	
20)	Endrin Al...	14.785	13.745	15836	34568	2.310	1.748	
21)	Endosulfa...	15.255	14.069	16810	38800	2.168	1.723	
22)	4,4'-DDT	14.928	13.635	12182	34371	2.492	1.970	
23)	Endrin Ke...	15.938	14.999	17321	42621	2.341	1.825	
24)	Methoxychlor	15.678	14.729	7444	20155	2.252	1.953	

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

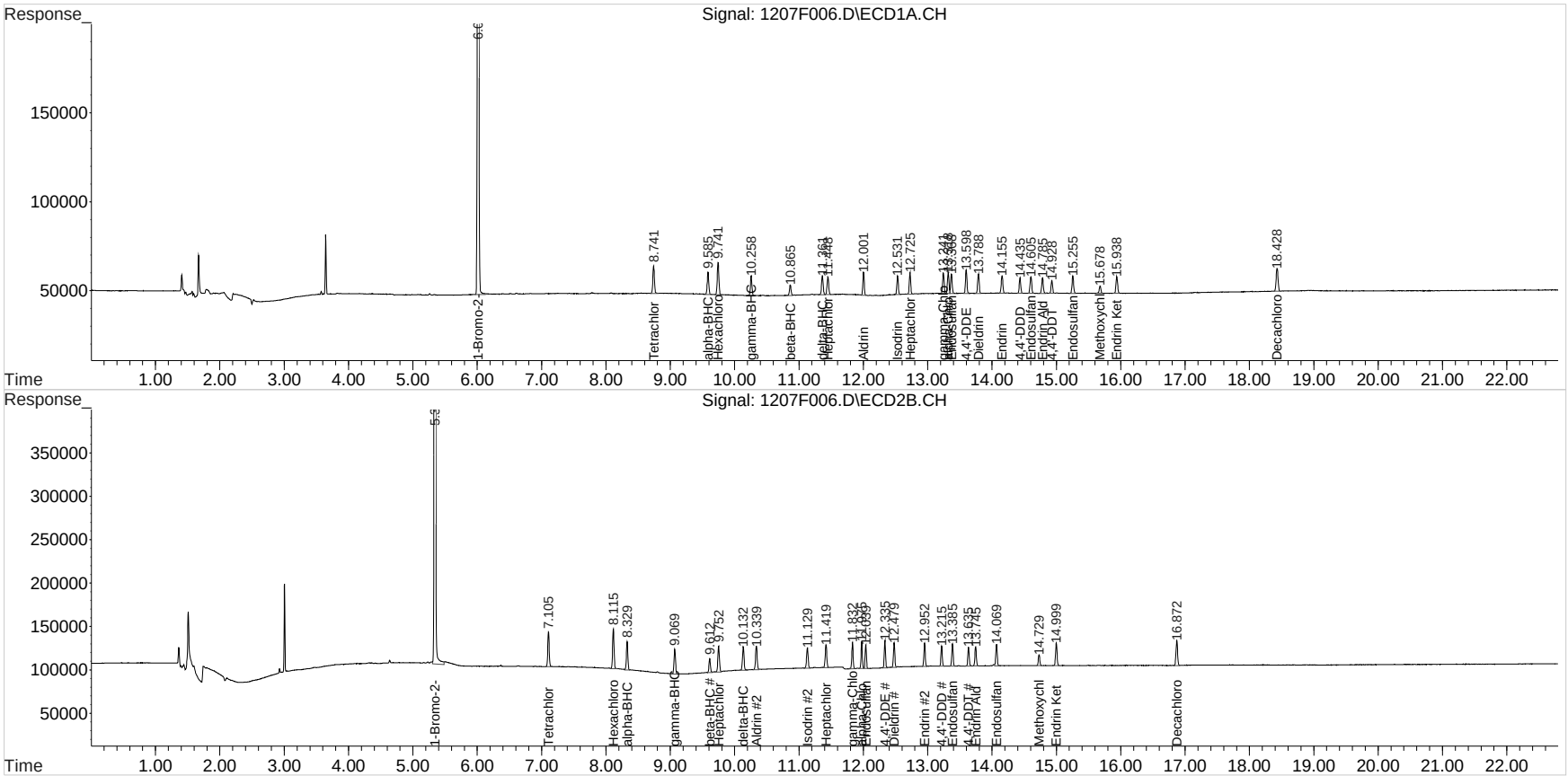
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\120718CAL\1207F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 6:23 pm Operator: MC
Sample : 81 2.0PPB GCPS8-49F Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:53:08 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



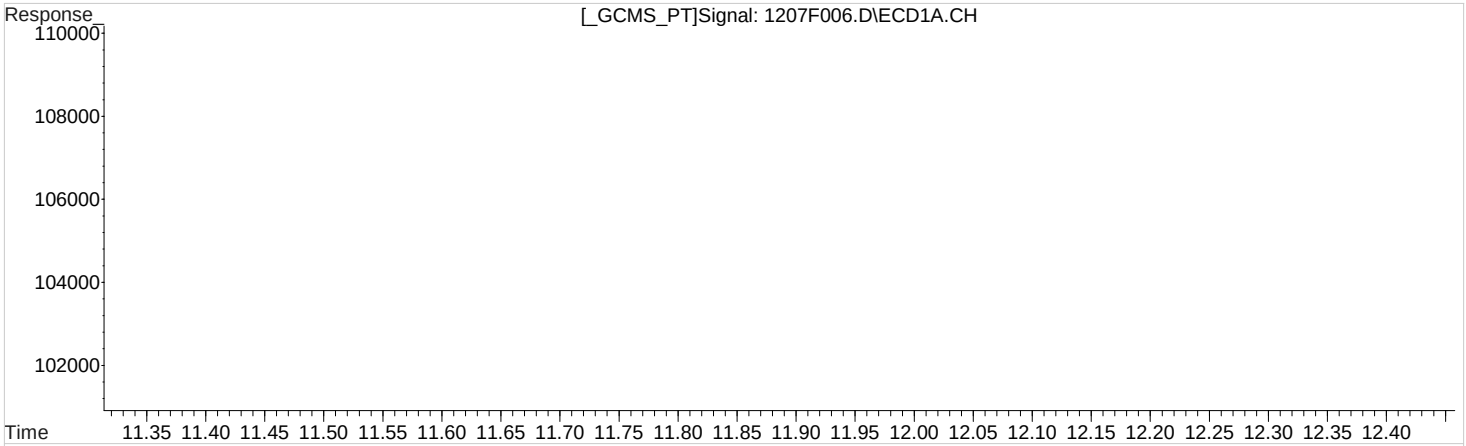
Quantitation Report (Qedit)

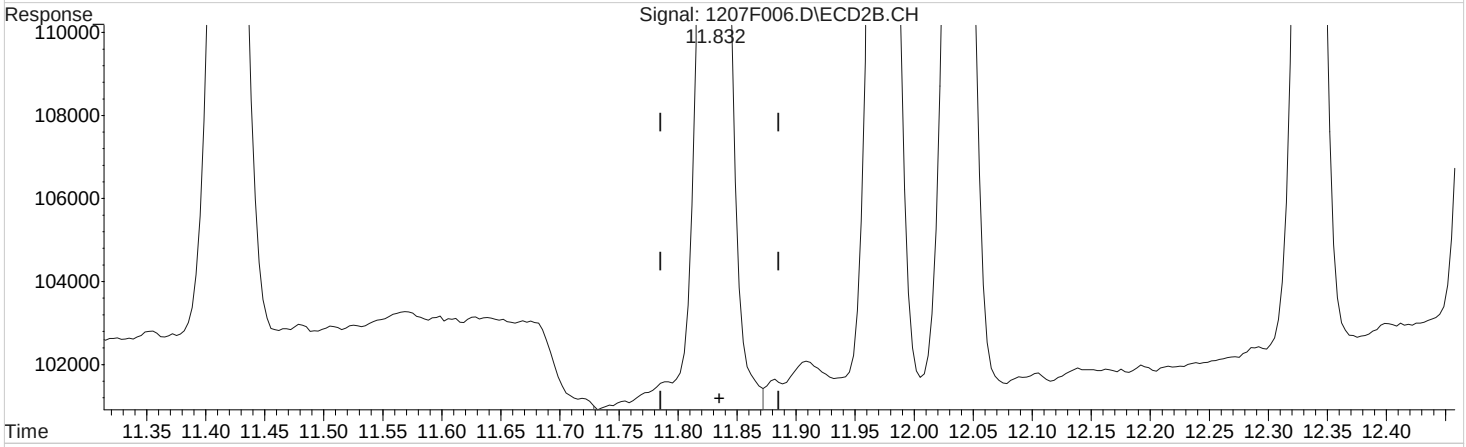
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 6:23 pm Operator: MC
Sample : 81 2.0PPB GCPS8-49F Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 08 12:29:12 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

13.241min 2.193 ug/L

response 19266

(12) gamma-Chlordane #2

11.832min 1.742 ug/L

response 47032

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

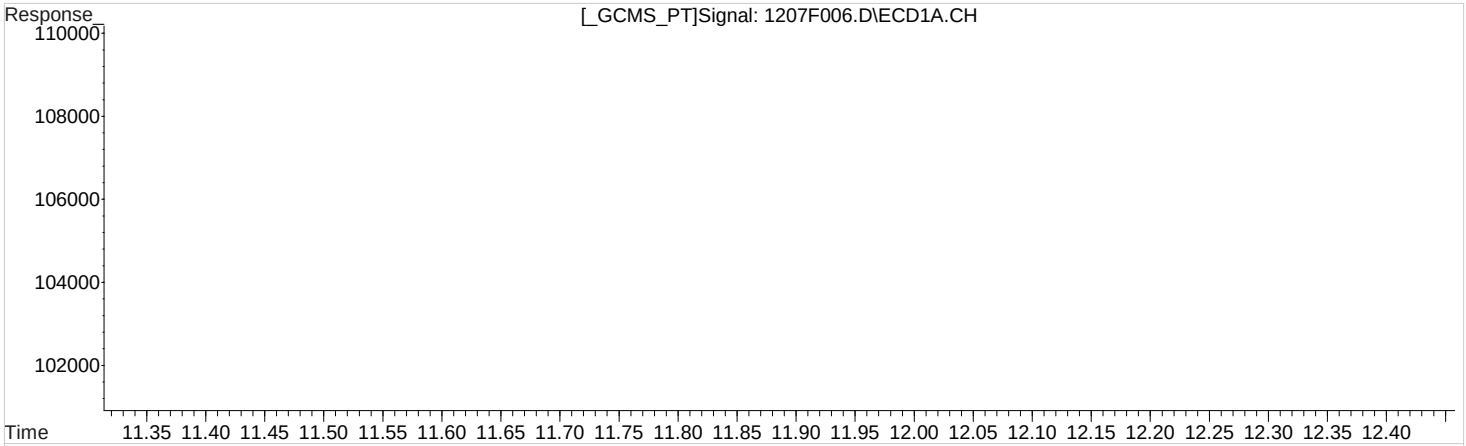
Quantitation Report (Qedit)

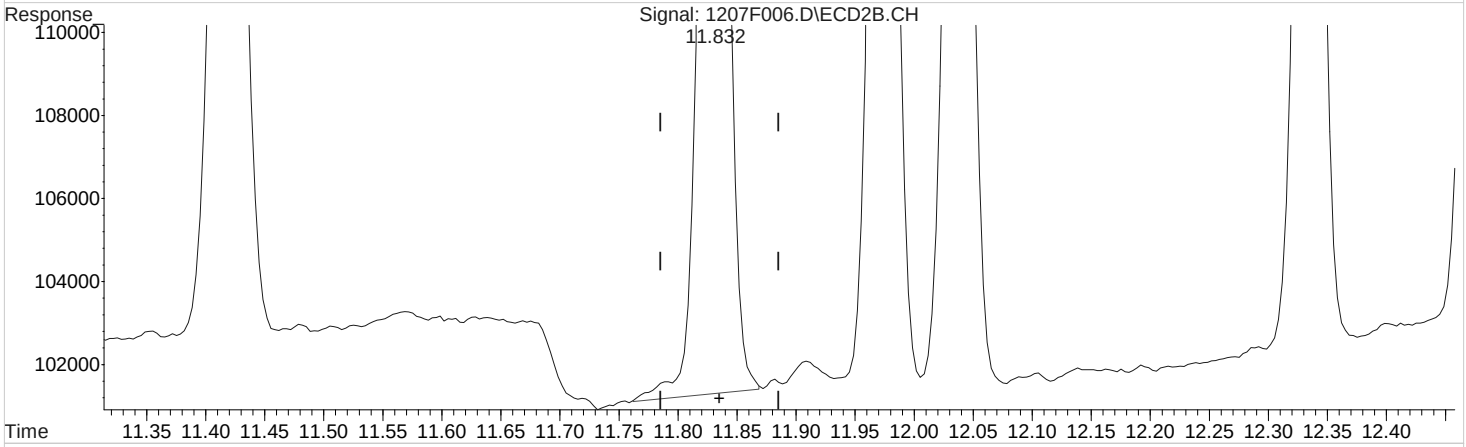
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 6:23 pm Operator: MC
Sample : 81 2.0PPB GCPS8-49F Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 08 12:29:12 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

13.241min 2.193 ug/L

response 19266

(12) gamma-Chlordane #2

11.832min 1.647 ug/L m

response 44461

Manual Integration:

After

Baseline/Shoulder

12/10/18

(+) = Expected Retention Time

020410

Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F007.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 6:53 pm Operator: MC
Sample : 81 5.0PPB GCPS8-49E @4X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:33:10 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.010	5.341	598449	1740818	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.737	7.104	60452	134797	6.242	4.631	#
28) s	Decachlor...	18.423	16.864	58506	111309	5.544	3.968	#
	Target Compounds							
3)	alpha-BHC	9.580	8.324	48360	115107	4.791	3.768	
4)	Hexachlor...	9.737	8.111	72472	160181	6.268	4.825	
5)	beta-BHC	10.857	9.607	24165	56228	4.900	3.804	
6)	gamma-BHC...	10.250	9.064	42234	105067	4.681	3.875	
7)	delta-BHC	11.357	10.127	43670	106766	5.497	4.355	
8)	Heptachlor	11.443	9.744	43240	112443	4.812	4.213	
9)	Aldrin	11.997	10.331	47150	105999	5.236	4.119	
10)	Isodrin	12.527	11.124	39901	91566	5.447	4.047	#
11)	Heptachlo...	12.717	11.411	44060	103459	5.240	4.349	
12)	gamma-Chl...	13.237	11.824	44015	99202	5.388	4.155	
13)	Endosulfan I	13.360	12.031	41452	91905	5.401	4.288	
14)	alpha-Chl...	13.310	11.967	46054	99589	5.438	4.175	
15)	Dieldrin	13.780	12.471	43709	97405	5.585	4.363	
16)	4,4'-DDE	13.590	12.327	48558	100746	6.063	4.286	#
17)	Endrin	14.147	12.944	40371	92302	5.192	4.318	
18)	Endosulfa...	14.597	13.377	38501	87792	5.208	4.505	
19)	4,4'-DDD	14.427	13.211	33306	76645	5.452	4.624	
20)	Endrin Al...	14.777	13.737	36417	79289	5.713	4.533	
21)	Endosulfa...	15.250	14.064	38639	88270	5.361	4.434	
22)	4,4'-DDT	14.923	13.627	28401	75230	6.250	4.876	
23)	Endrin Ke...	15.933	14.991	39913	97187	5.803	4.707	
24)	Methoxychlor	15.673	14.724	16807	44403	6.029	4.865	

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

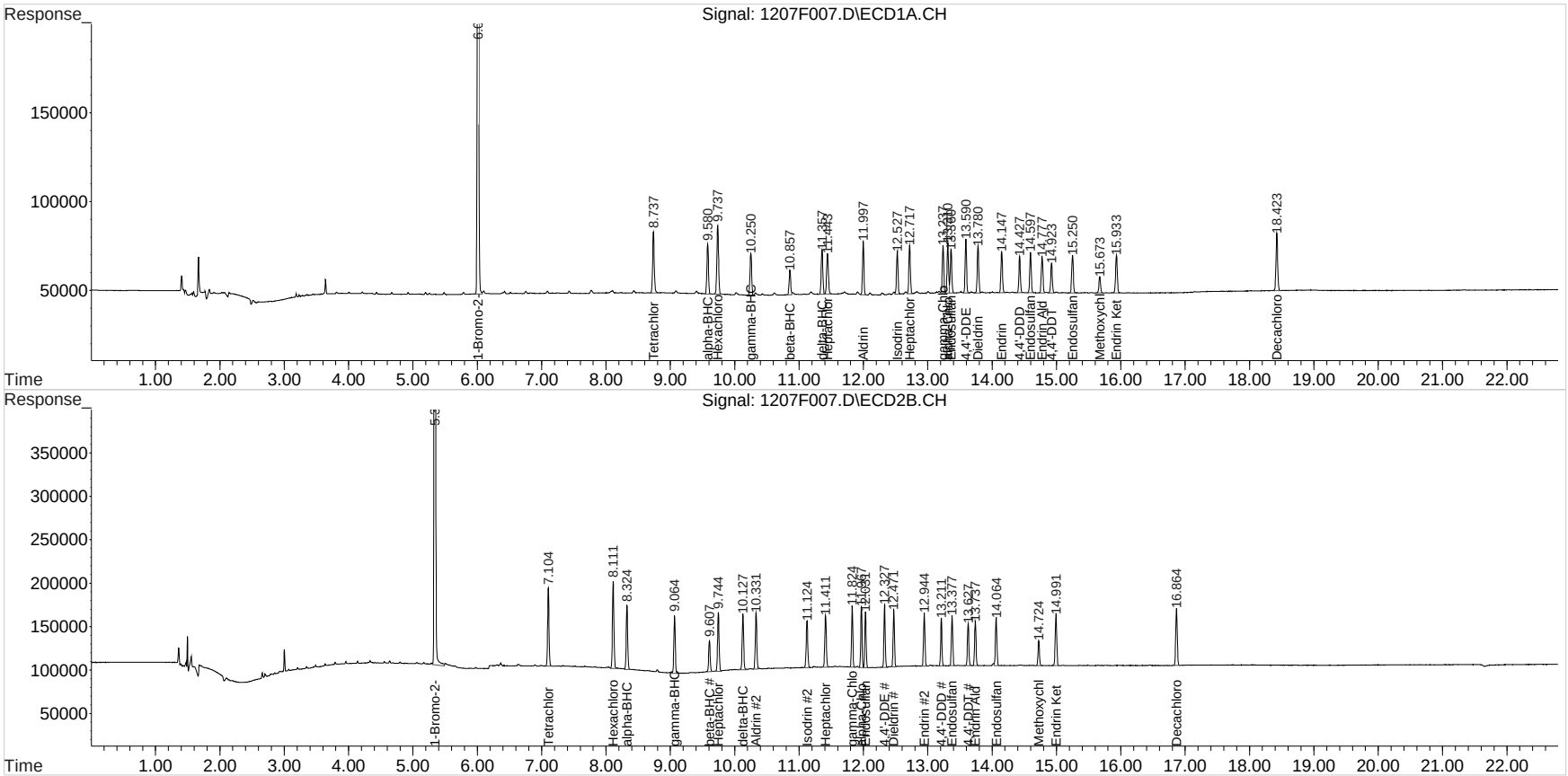
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\120718CAL\1207F007.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 6:53 pm Operator: MC
Sample : 81 5.0PPB GCPS8-49E @4X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:33:10 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F008.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 7:22 pm Operator: MC
Sample : 81 10PPB GCPS8-49E @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:54:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	i	1-Bromo-2...	6.013	5.340	599433	1755107	100.000	100.000	
		System Monitoring Compounds							
2)	s	Tetrachlo...	8.740	7.107	111000	258953	12.991	9.512	#
28)	s	Decachlor...	18.426	16.867	110337	209338	10.438	7.402	#
		Target Compounds							
3)		alpha-BHC	9.583	8.327	93455	224680	9.243	7.296	
4)		Hexachlor...	9.740	8.114	129598	304356	13.120	10.016	
5)		beta-BHC	10.863	9.610	45335	105457	9.178	7.076	
6)		gamma-BHC...	10.253	9.067	81854	203255	9.056	7.435	
7)		delta-BHC	11.360	10.130	84244	205237	10.588	8.304	
8)		Heptachlor	11.446	9.747	77271	212050	8.584	7.881	
9)		Aldrin	12.000	10.334	91086	203786	10.098	7.854	
10)		Isodrin	12.530	11.127	75088	173940	10.233	7.626	#
11)		Heptachlo...	12.720	11.417	81291	192838	9.652	8.039	
12)		gamma-Chl...	13.240	11.827	83488	191174	10.203	7.942	
13)		Endosulfan I	13.363	12.034	76057	174868	9.893	8.093	
14)		alpha-Chl...	13.313	11.970	86802	191077	10.233	7.946	
15)		Dieldrin	13.783	12.474	83419	186910	10.641	8.305	
16)		4,4'-DDE	13.593	12.330	93845	198727	11.698	8.386	#
17)		Endrin	14.150	12.947	74940	176740	9.621	8.201	
18)		Endosulfa...	14.596	13.380	74161	167103	10.015	8.506	
19)		4,4'-DDD	14.430	13.210	63890	149585	10.441	8.950	
20)		Endrin Al...	14.780	13.740	68176	149647	10.678	8.486	
21)		Endosulfa...	15.250	14.064	72091	167327	9.986	8.337m	
22)		4,4'-DDT	14.923	13.627	54371	147150	11.945	9.460	
23)		Endrin Ke...	15.936	14.994	76416	186514	11.091	8.960	
24)		Methoxychlor	15.676	14.727	34161	85804	12.638	9.325	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

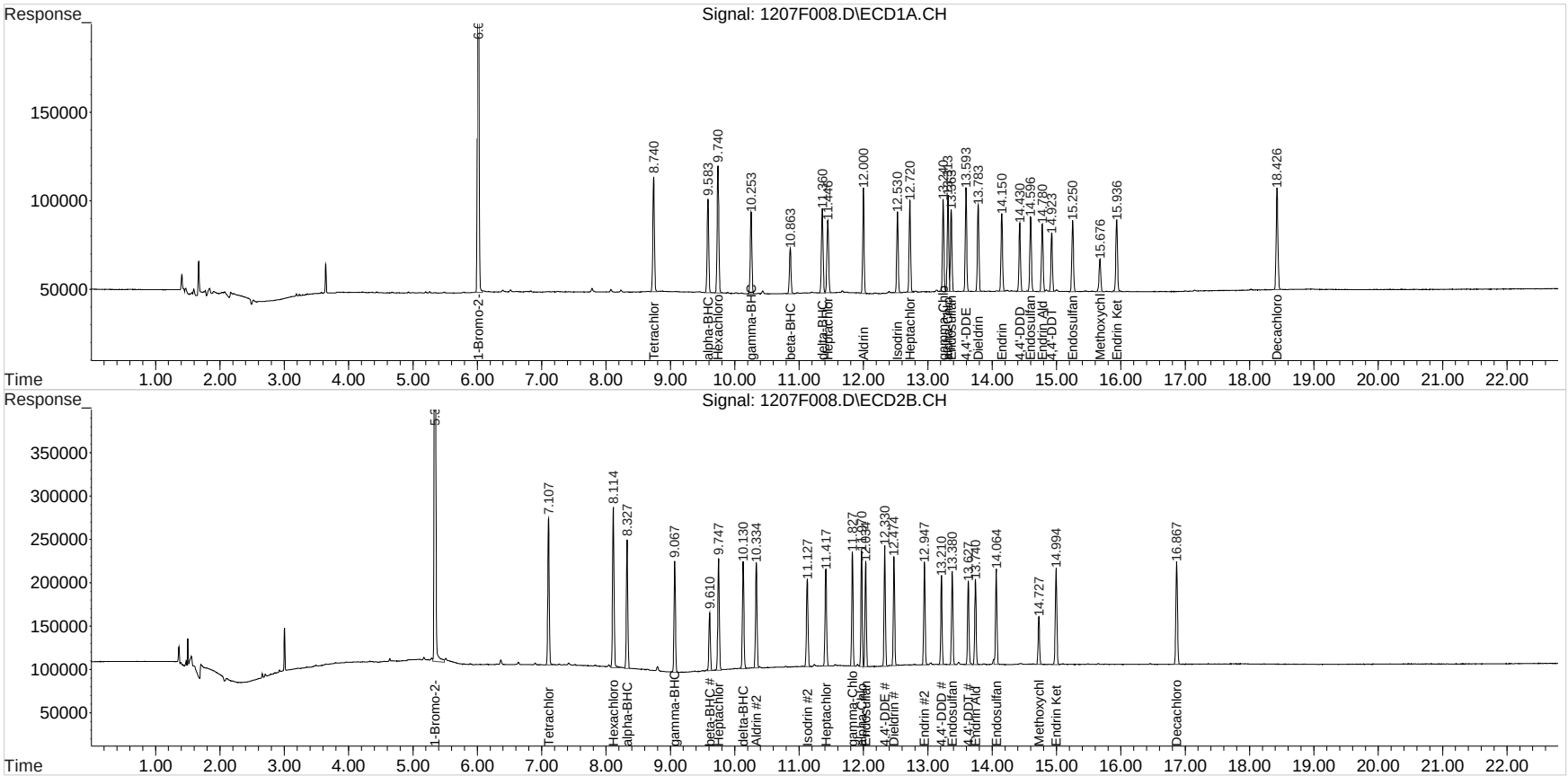
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\120718CAL\1207F008.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 7:22 pm Operator: MC
Sample : 81 10PPB GCPS8-49E @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:54:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



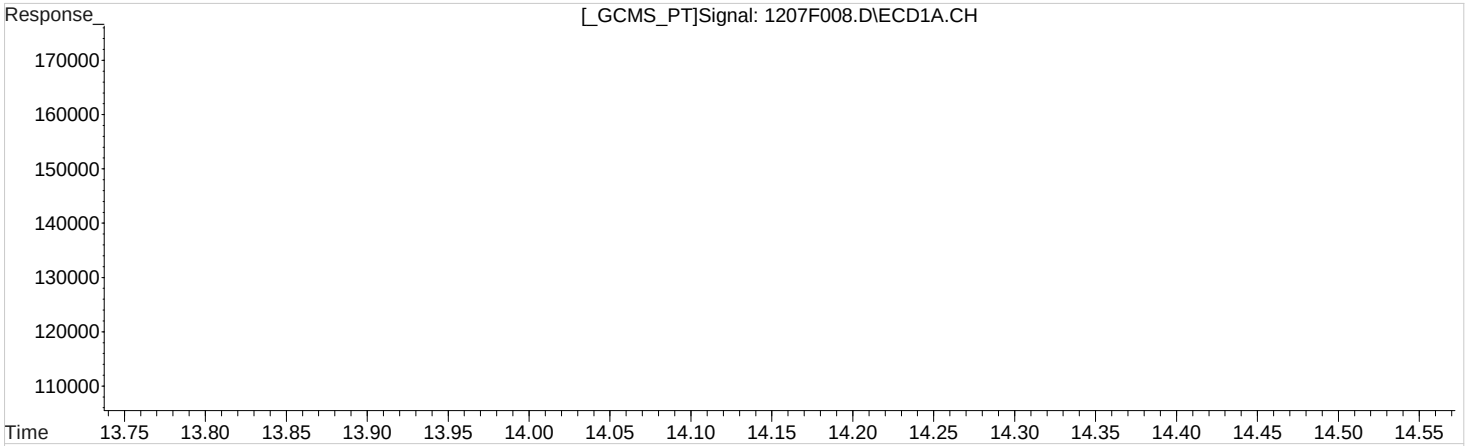
Quantitation Report (Qedit)

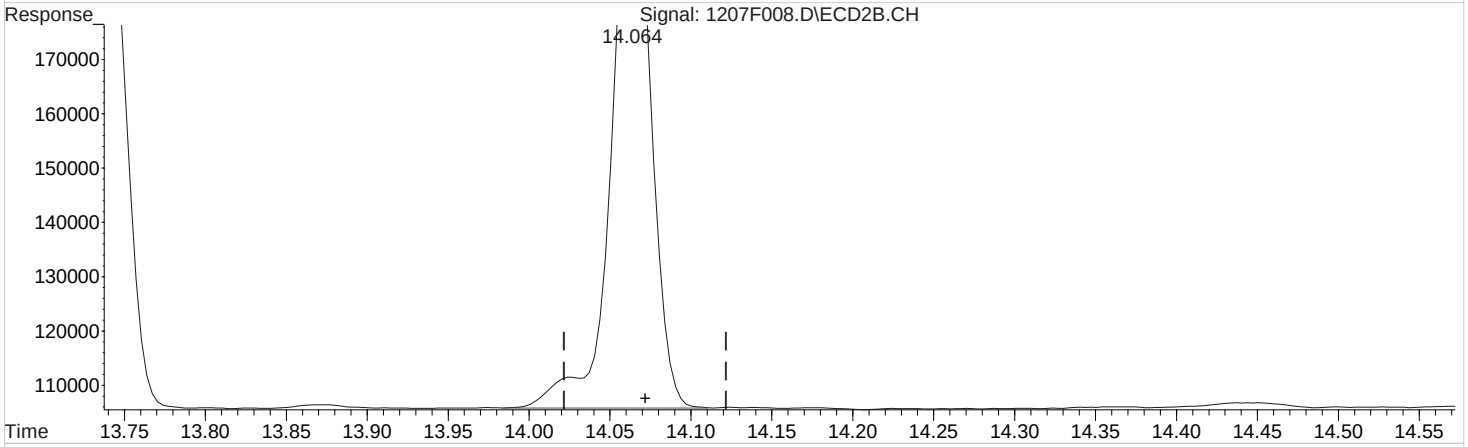
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F008.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 7:22 pm Operator: MC
Sample : 81 10PPB GCPS8-49E @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:34:07 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(21) Endosulfan Sulfate

15.250min 9.986 ug/L

response 72091

Manual Integration:

Before

12/10/18

(21) Endosulfan Sulfate #2

14.064min 8.761 ug/L

response 175840

(+) = Expected Retention Time

020415

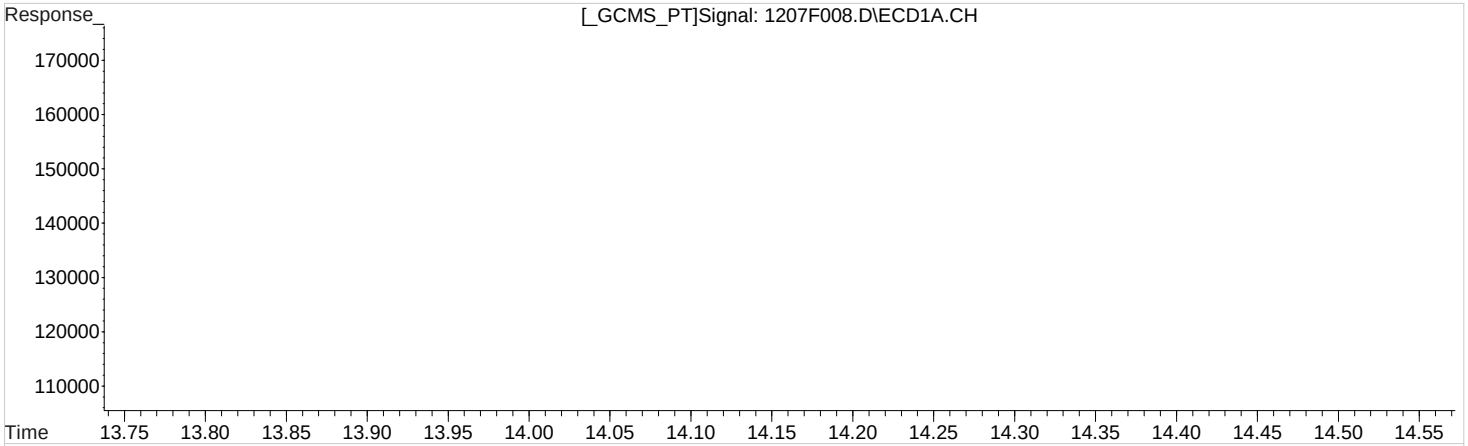
Quantitation Report (Qedit)

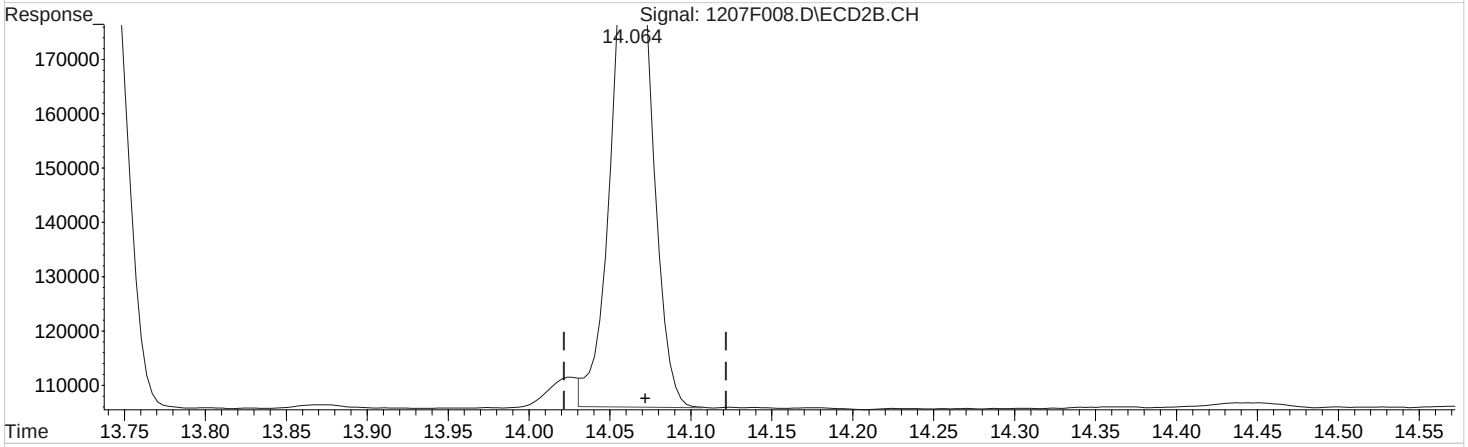
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F008.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 7:22 pm Operator: MC
Sample : 81 10PPB GCPS8-49E @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:34:07 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(21) Endosulfan Sulfate

15.250min 9.986 ug/L

response 72091

Manual Integration:

After

Baseline/Shoulder

12/10/18

(21) Endosulfan Sulfate #2

14.064min 8.337 ug/L m

response 167327

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F002.D Vial: 11
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 1:50 pm Operator: MC
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:49:10 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:28:39 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.007	5.334	460079	1805818	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
16)	4,4'-DDE	13.583	12.324	1651	4795	0.199	0.213	
17)	Endrin	14.143	12.937	44950	128154	6.409	6.238	
19)	4,4'-DDD	14.423	13.204	4541	10814	0.810	0.649	
20)	Endrin Al...	14.780	13.734	1642	2081	0.259	0.120	#
22)	4,4'-DDT	14.920	13.621	63000	207003	12.961	13.773	
23)	Endrin Ke...	15.930	14.987	2279	7985	0.344	0.379	
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

OK

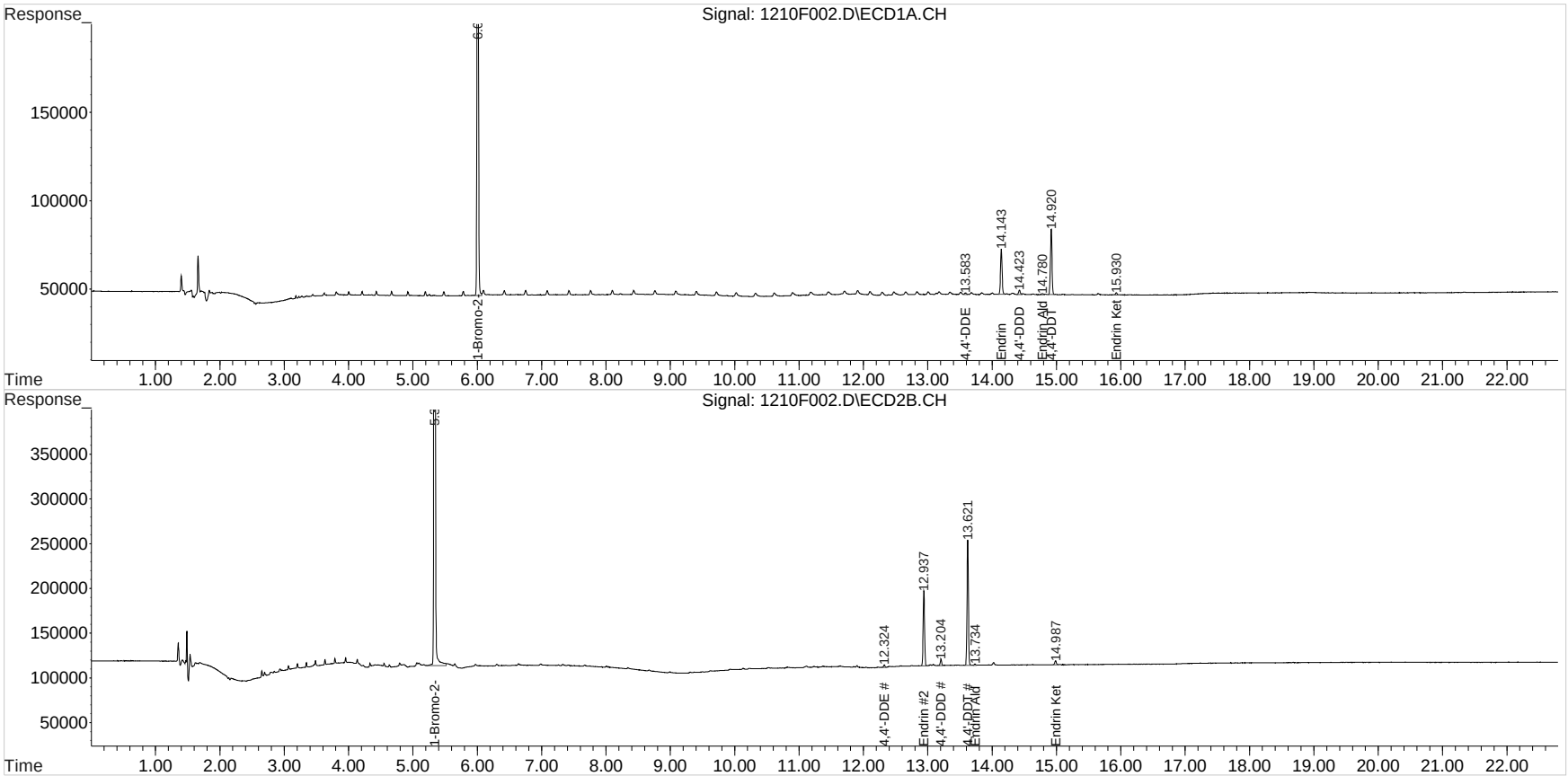
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121018CAL\1210F002.D Vial: 11
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 1:50 pm Operator: MC
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:49:10 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:28:39 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F003.D Vial: 12
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:20 pm Operator: MC
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 11:12:50 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:28:39 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.008	5.336	440529	1745944	100.000	100.000	
29)	1-Bromo-2...	6.008	5.336	440529	1745944	100.000	100.000	
36)	1-Bromo-2...	6.008	5.336	440529	1745944	100.000	100.000	
43)	1-Bromo-2...	6.008	5.336	440529	1745944	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
3)	alpha-BHC	0.000	8.339	0	2163	N.D.	0.089	#
8)	Heptachlor	0.000	9.759	0	765	N.D. d	0.032	
16)	4,4'-DDE	0.000	12.342	0	777	N.D.	0.036	#
49)	HCE	0.000	3.342	0	2438	N.D.	0.074	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

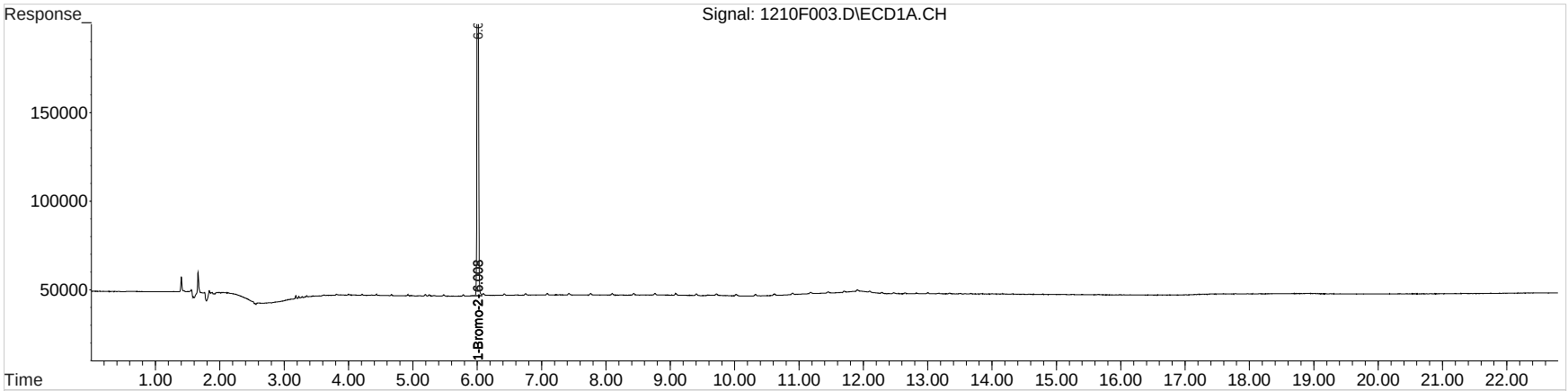
1st MC 12/11/18
2nd UA 12/11/18

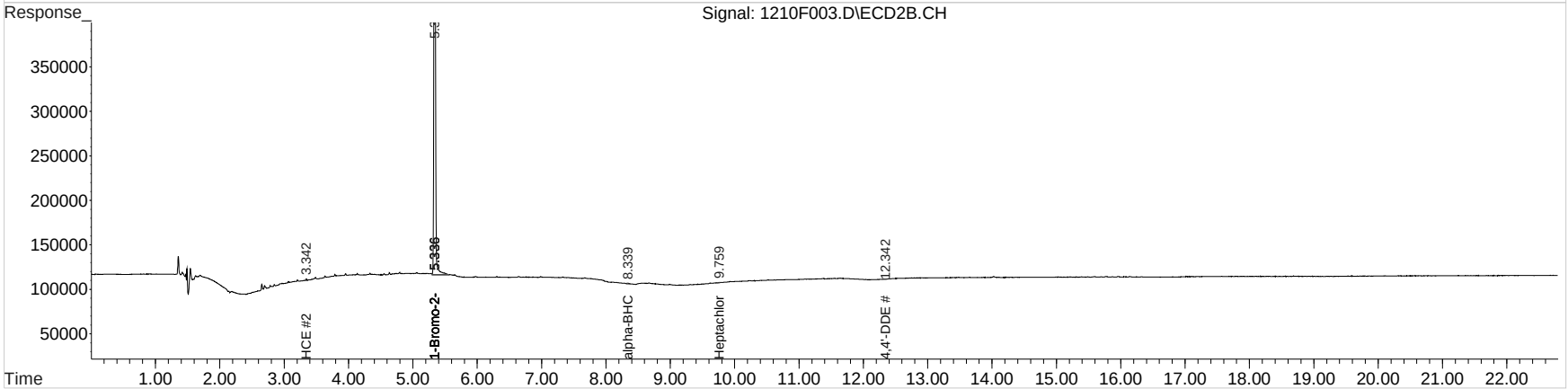
Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121018CAL\1210F003.D Vial: 12
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:20 pm Operator: MC
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 11:12:50 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:28:39 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:47:40 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.011	5.341	491950	1924781	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.734	7.105	7402	17093	0.797	0.409 #
28) s	Decachlor...	18.424	16.865	6668	14595	0.769	0.471 #
	Target Compounds						
3)	alpha-BHC	9.577	8.328	4753	13773	0.573m	0.408m#
4)	Hexachlor...	9.734	8.111	8104	18988	0.697m	0.365m#
5)	beta-BHC	10.857	9.608	2218	7192	0.547m	0.440m
6)	gamma-BHC...	10.247	9.065	3988	12979	0.538	0.433
7)	delta-BHC	11.354	10.128	4275	11500	0.655	0.424 #
8)	Heptachlor	11.441	9.745	4798	13624	0.649	0.462m#
9)	Aldrin	11.997	10.331	4422	12703	0.597m	0.446m#
10)	Isodrin	12.524	11.121	3867	12291	0.642	0.491
11)	Heptachlo...	12.717	11.411	4410	12604	0.638	0.479m
12)	gamma-Chl...	13.234	11.825	4443	12329	0.662	0.467 #
13)	Endosulfan I	13.361	12.031	4435	11673	0.703	0.493 #
14)	alpha-Chl...	13.311	11.968	4845	12267	0.696	0.465m#
15)	Dieldrin	13.781	12.475	4429	11856	0.688	0.480m#
16)	4,4'-DDE	13.591	12.328	4960	12803	0.753	0.493 #
17)	Endrin	14.147	12.945	4316	11882	0.675	0.503 #
18)	Endosulfa...	14.594	13.378	4190	10615	0.689	0.493 #
19)	4,4'-DDD	14.427	13.211	3454	9234	0.688	0.504 #
20)	Endrin Al...	14.774	13.738	3637	10529	0.694	0.544
21)	Endosulfa...	15.247	14.061	3996	11011	0.674	0.500 #
22)	4,4'-DDT	14.924	13.628	2711	9204	0.726	0.540 #
23)	Endrin Ke...	15.931	14.991	4152	12252	0.734	0.537 #
24)	Methoxychlor	15.671	14.721	1985	4817	0.531m	0.477
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

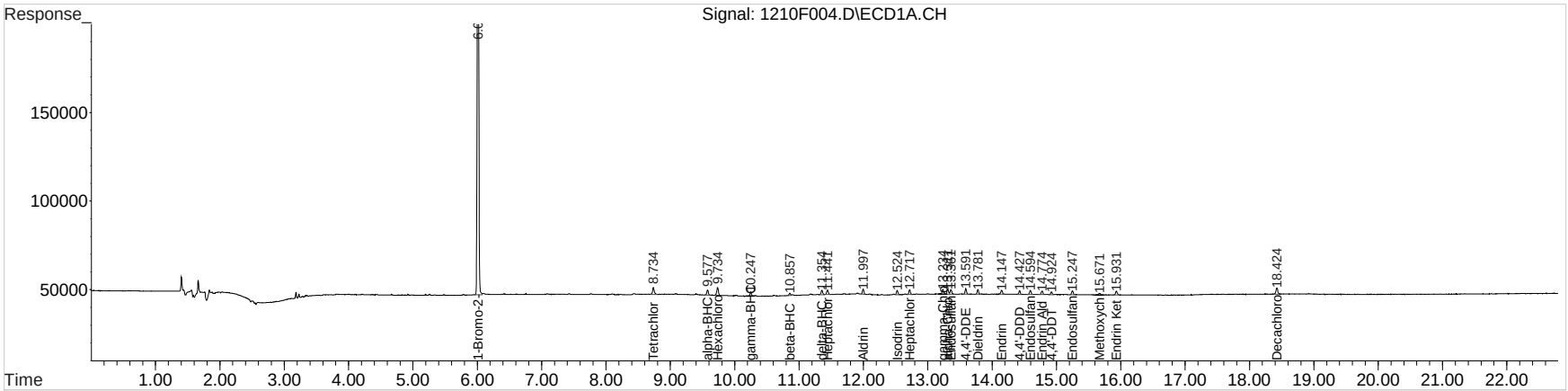
1st MC 12/11/18
2nd UA 12/11/18

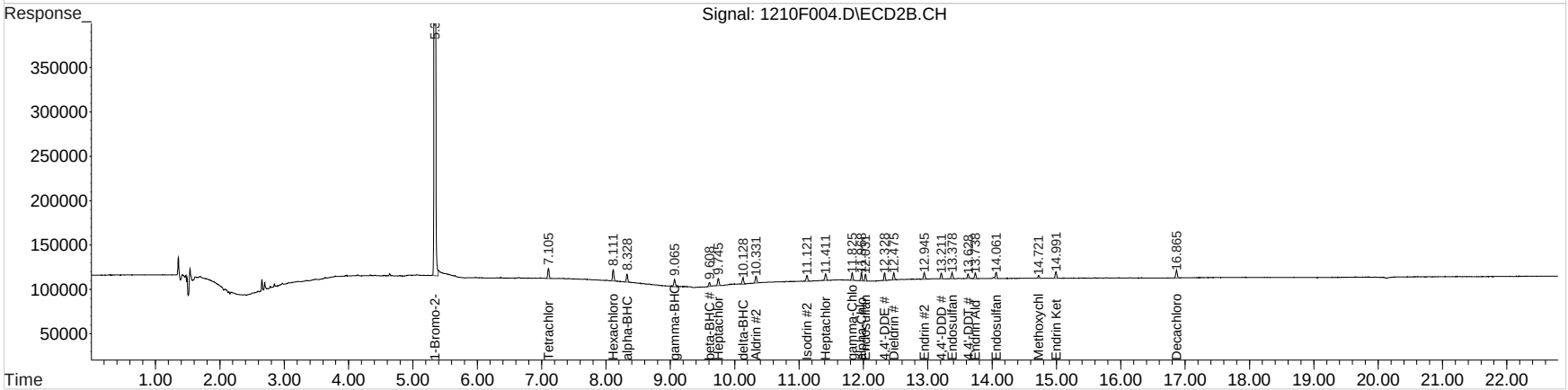
Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:47:40 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





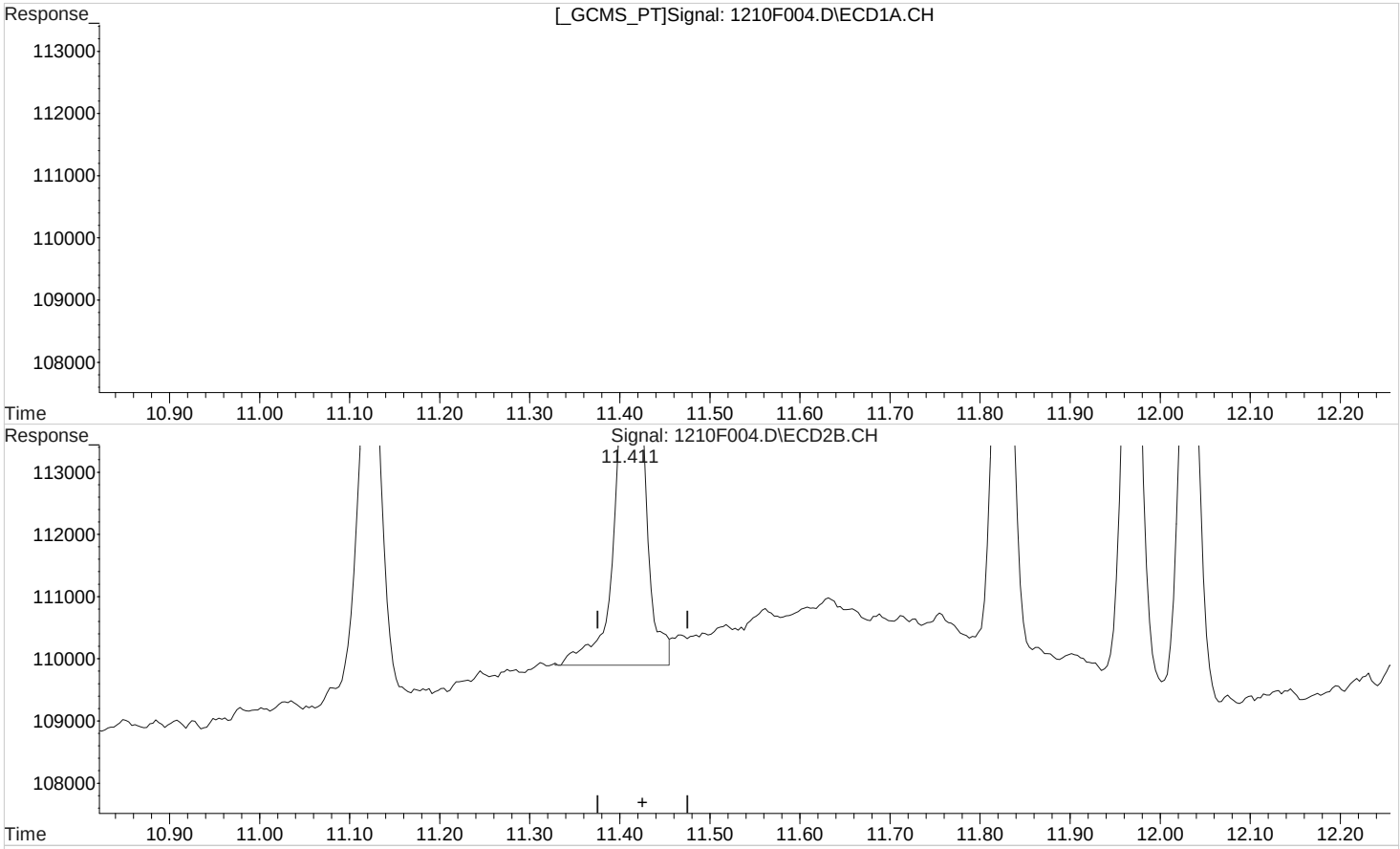
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(11) Heptachlor Epoxide

12.717min 0.638 ug/L

response 4410

Manual Integration:

Before

12/10/18

(11) Heptachlor Epoxide #2

11.411min 0.554 ug/L

response 14573

(+) = Expected Retention Time

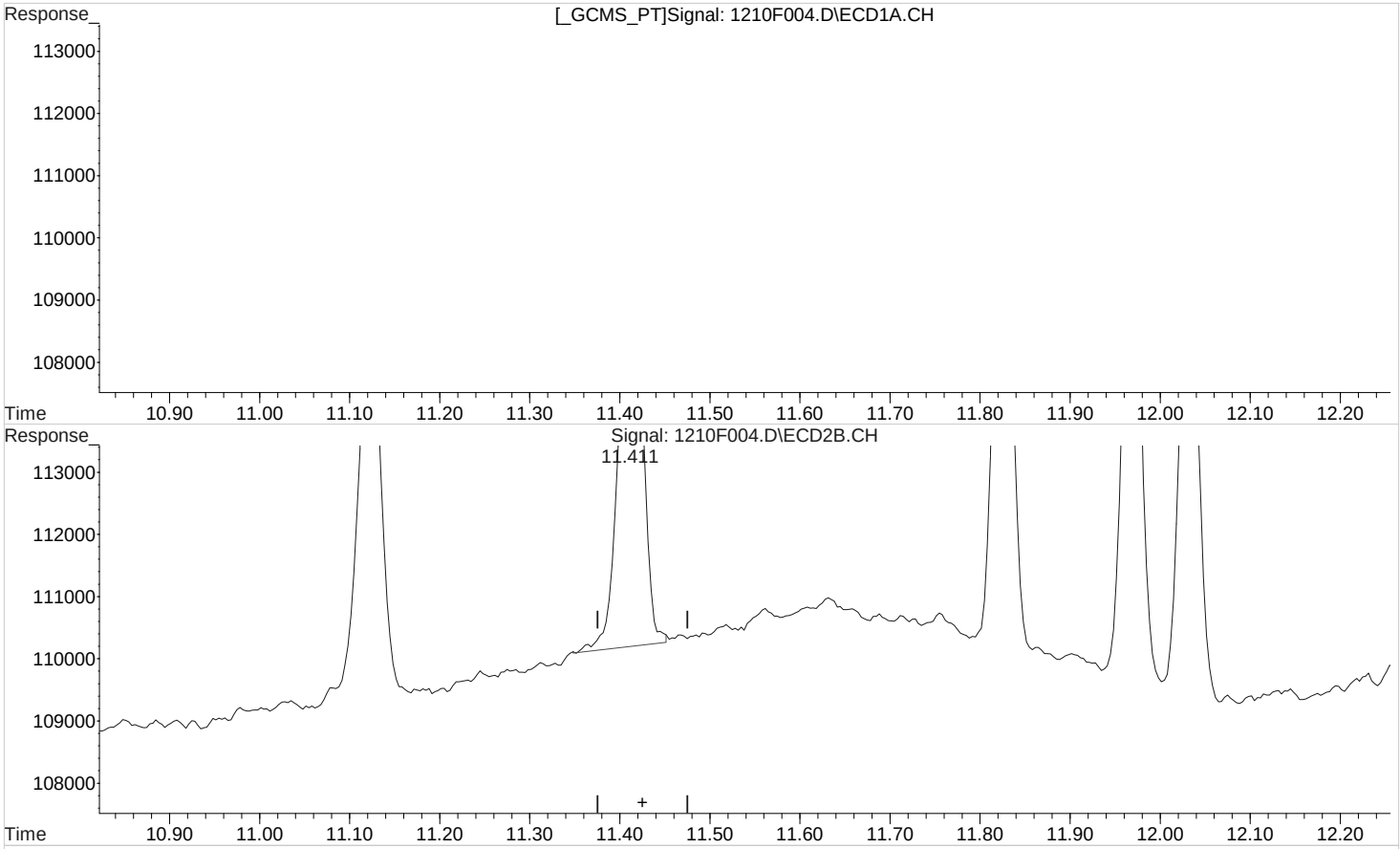
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(11) Heptachlor Epoxide

12.717min 0.638 ug/L

response 4410

Manual Integration:

After

Baseline/Shoulder

12/10/18

(11) Heptachlor Epoxide #2

11.411min 0.479 ug/L m

response 12604

(+) = Expected Retention Time

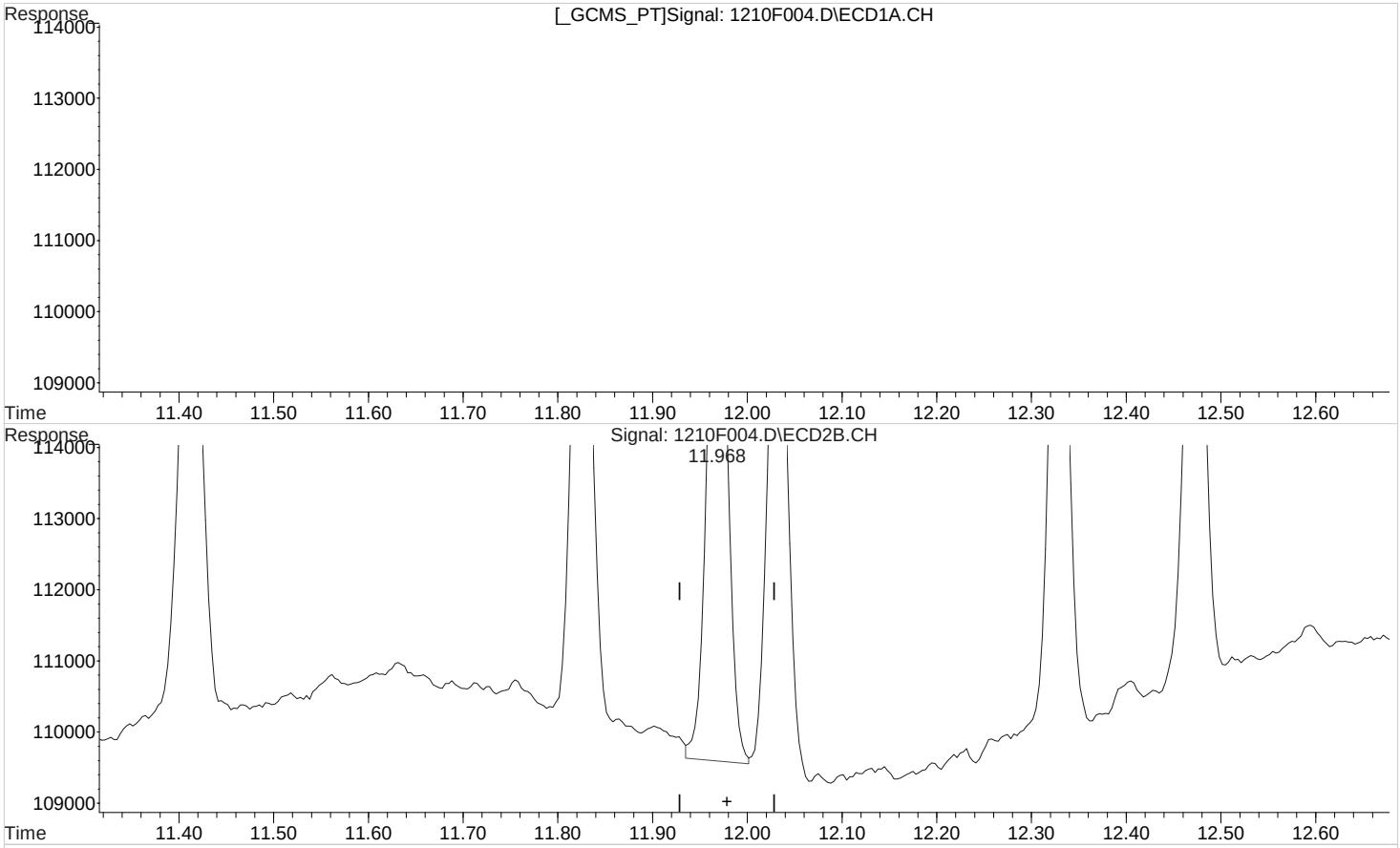
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(14) alpha-Chlordane

13.311min 0.696 ug/L

response 4845

(14) alpha-Chlordane #2

11.968min 0.483 ug/L

response 12751

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

020425

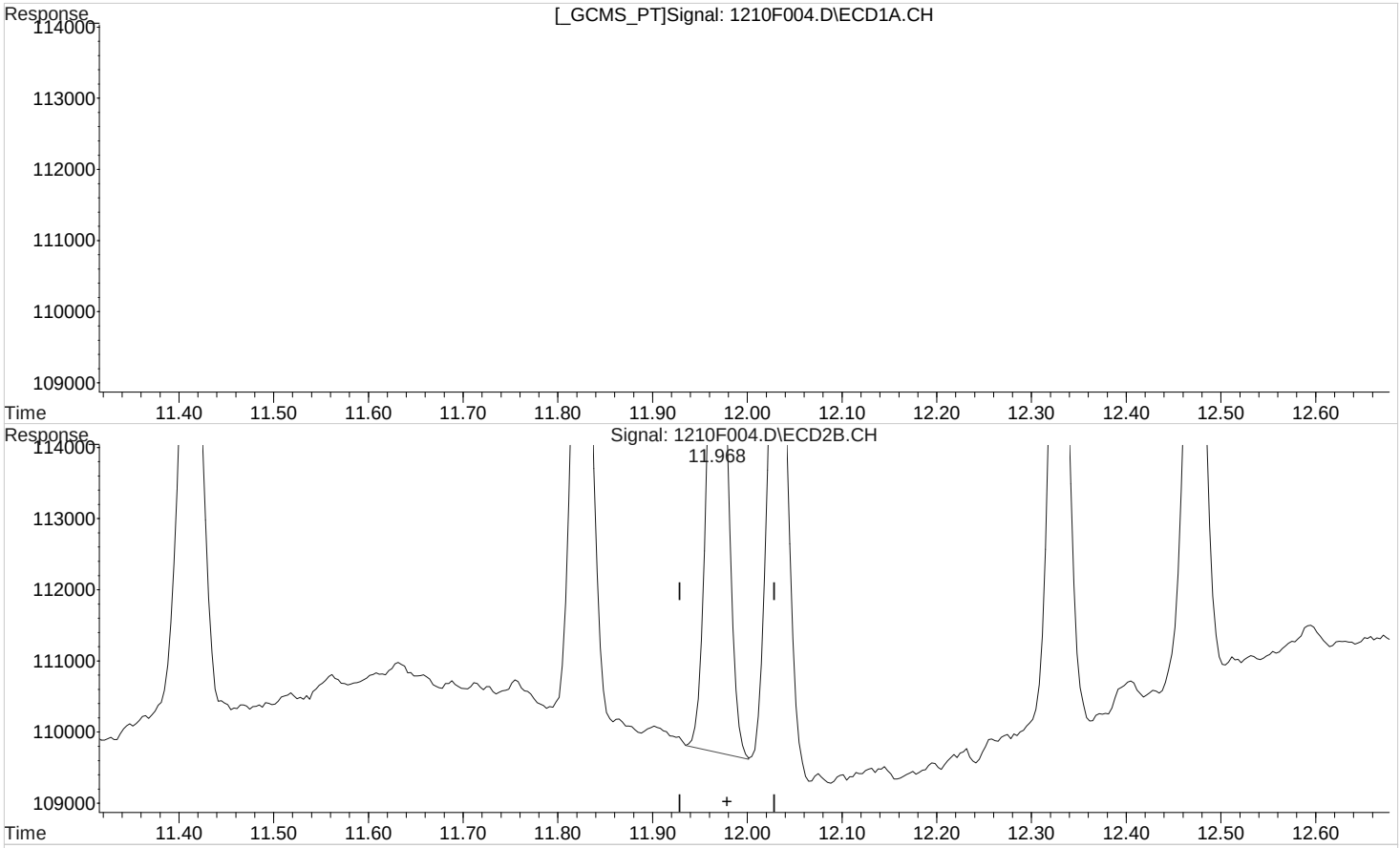
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(14) alpha-Chlordane

13.311min 0.696 ug/L

response 4845

(14) alpha-Chlordane #2

11.968min 0.465 ug/L m

response 12267

Manual Integration:

After

Baseline/Shoulder

12/10/18

(+) = Expected Retention Time

020426

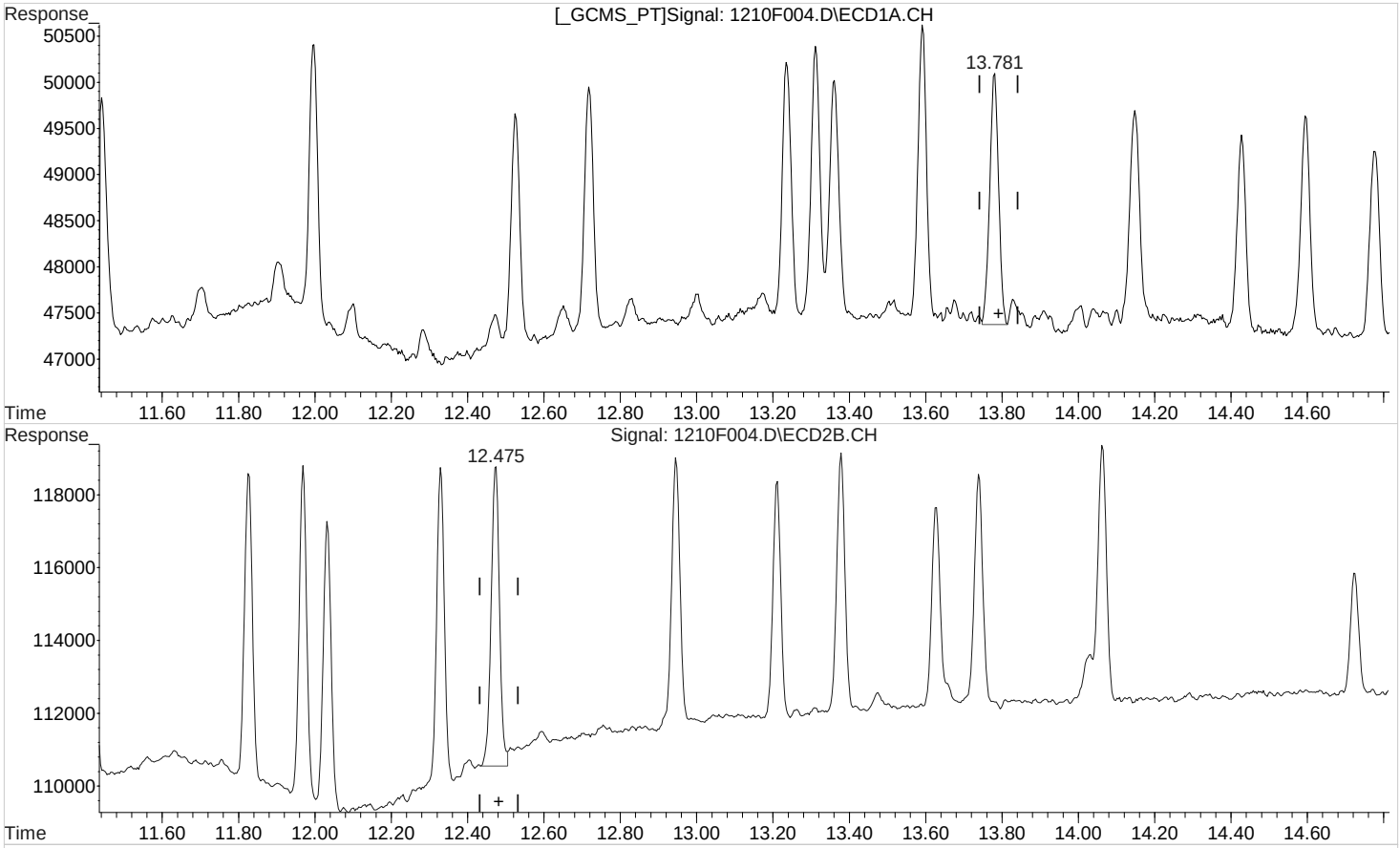
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(15) Dieldrin

13.781min 0.688 ug/L

response 4429

Manual Integration:

Before

12/10/18

(15) Dieldrin #2

12.475min 0.511 ug/L

response 12617

(+) = Expected Retention Time

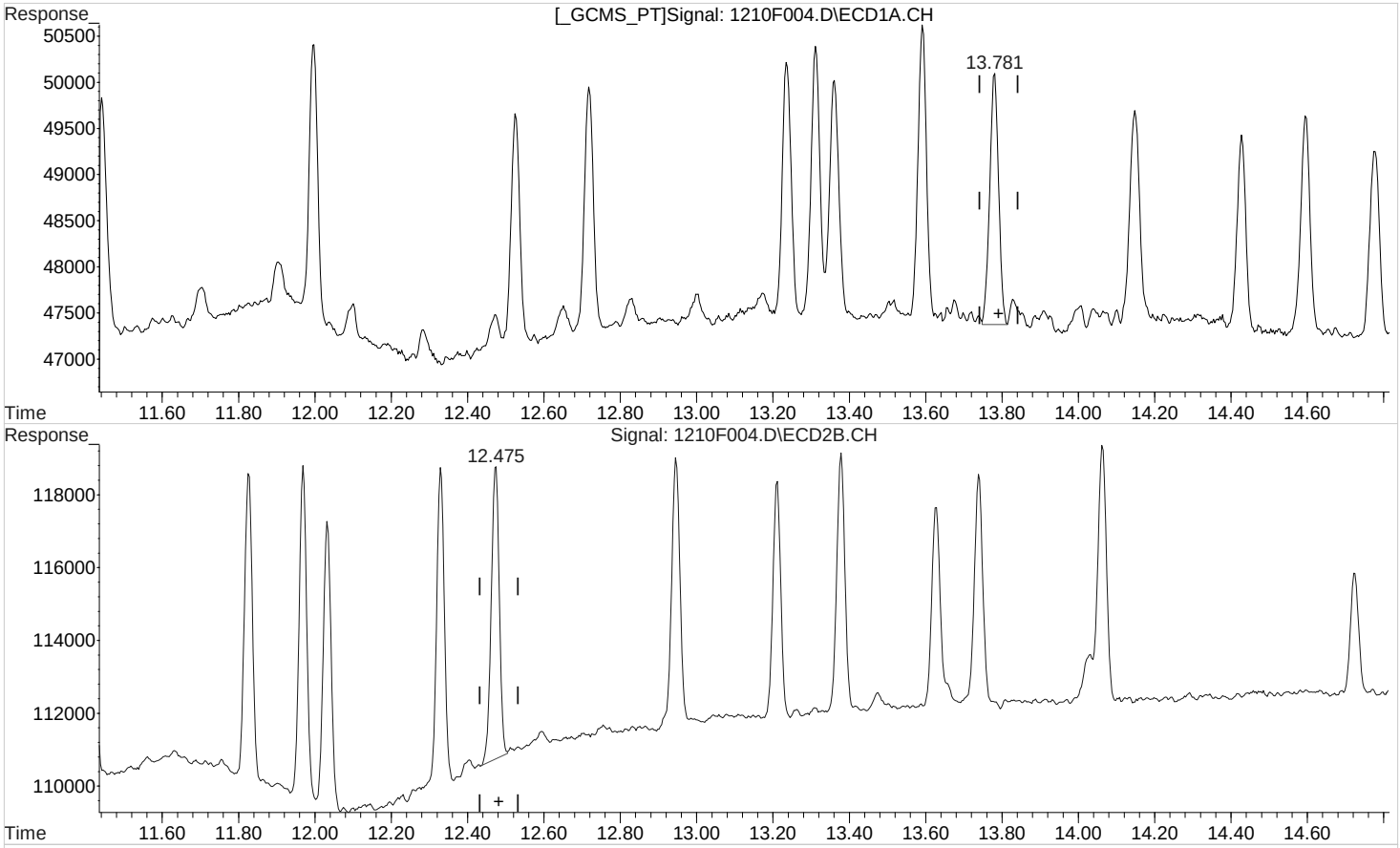
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(15) Dieldrin

13.781min 0.688 ug/L

response 4429

Manual Integration:

After

Baseline/Shoulder

12/10/18

(15) Dieldrin #2

12.475min 0.480 ug/L m

response 11856

(+) = Expected Retention Time

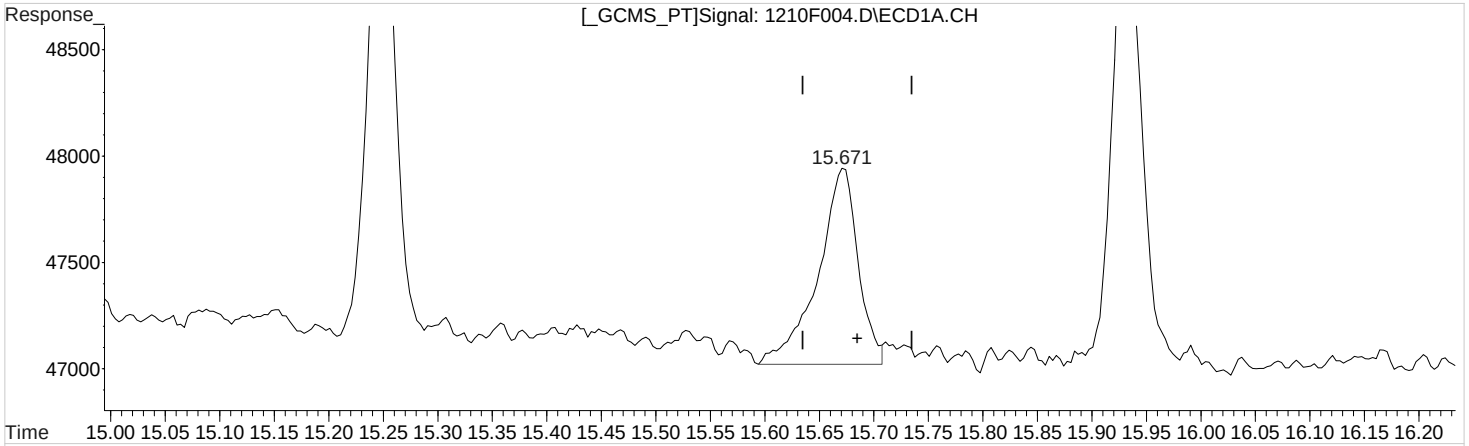
Quantitation Report (Qedit)

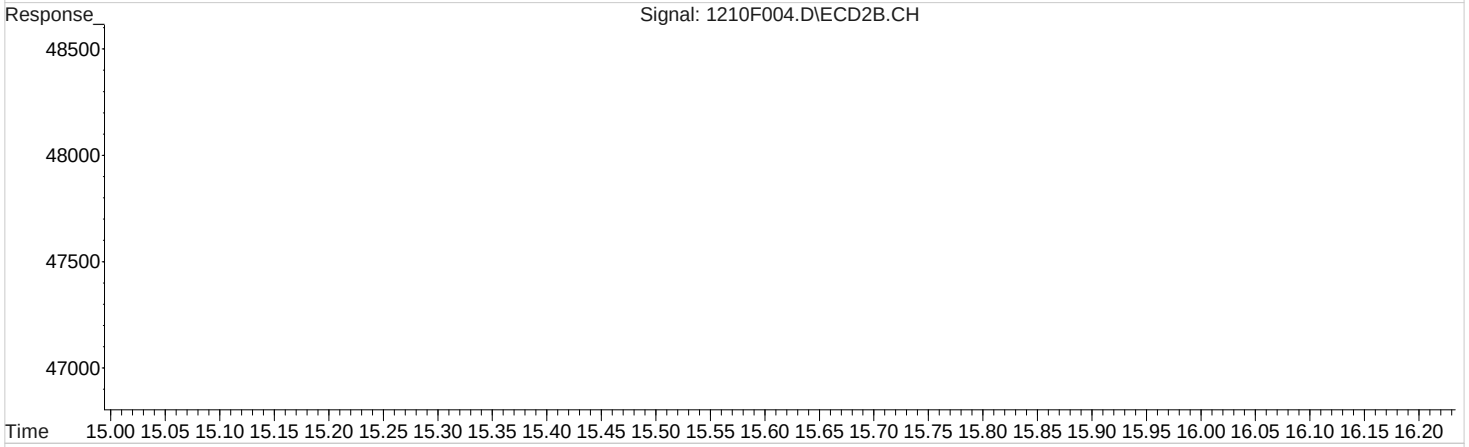
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(24) Methoxychlor

15.671min 0.707 ug/L

response 2365

Manual Integration:

Before

12/10/18

(24) Methoxychlor #2

14.721min 0.477 ug/L

response 4817

(+) = Expected Retention Time

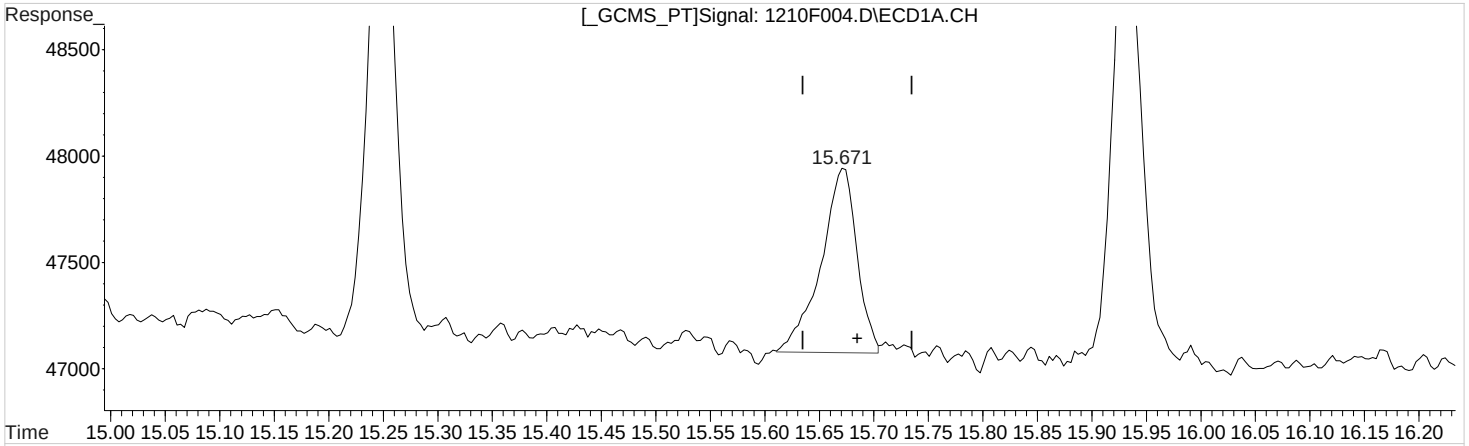
Quantitation Report (Qedit)

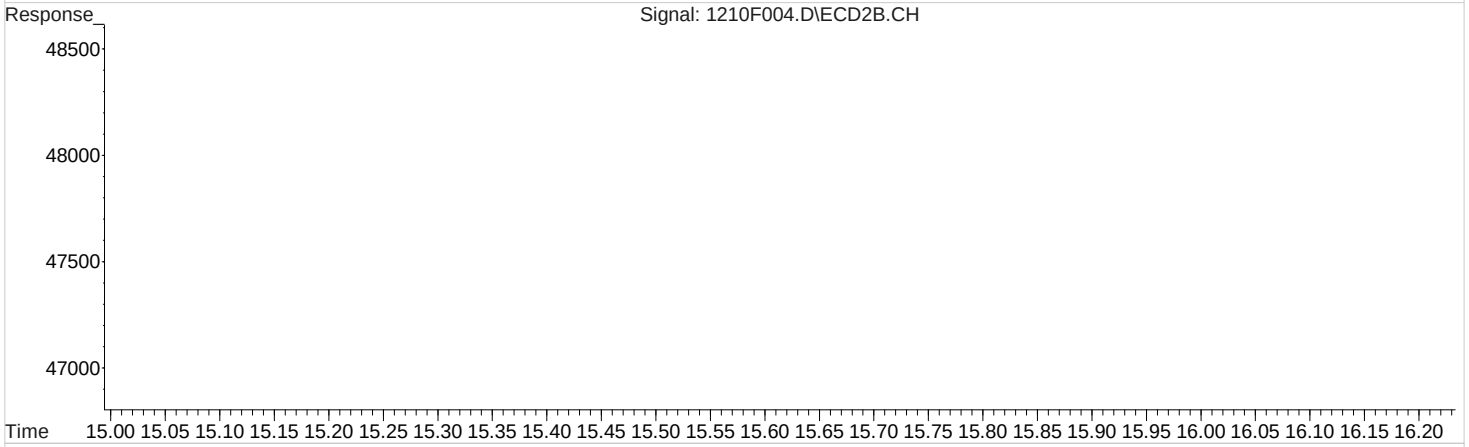
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(24) Methoxychlor

15.671min 0.531 ug/L m

response 1985

Manual Integration:

After

Baseline/Shoulder

12/10/18

(24) Methoxychlor #2

14.721min 0.477 ug/L

response 4817

(+) = Expected Retention Time

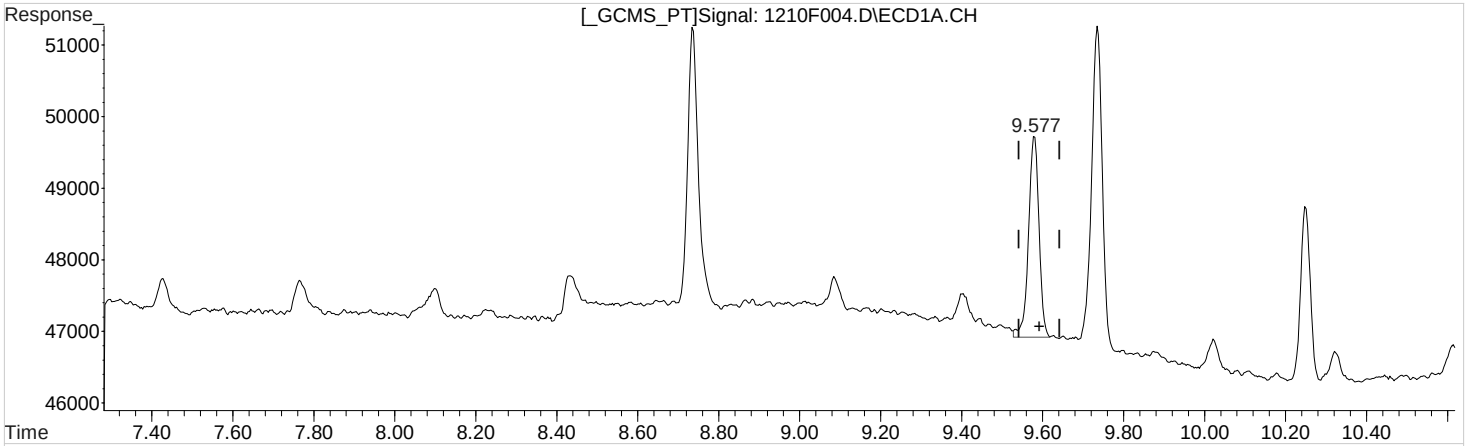
Quantitation Report (Qedit)

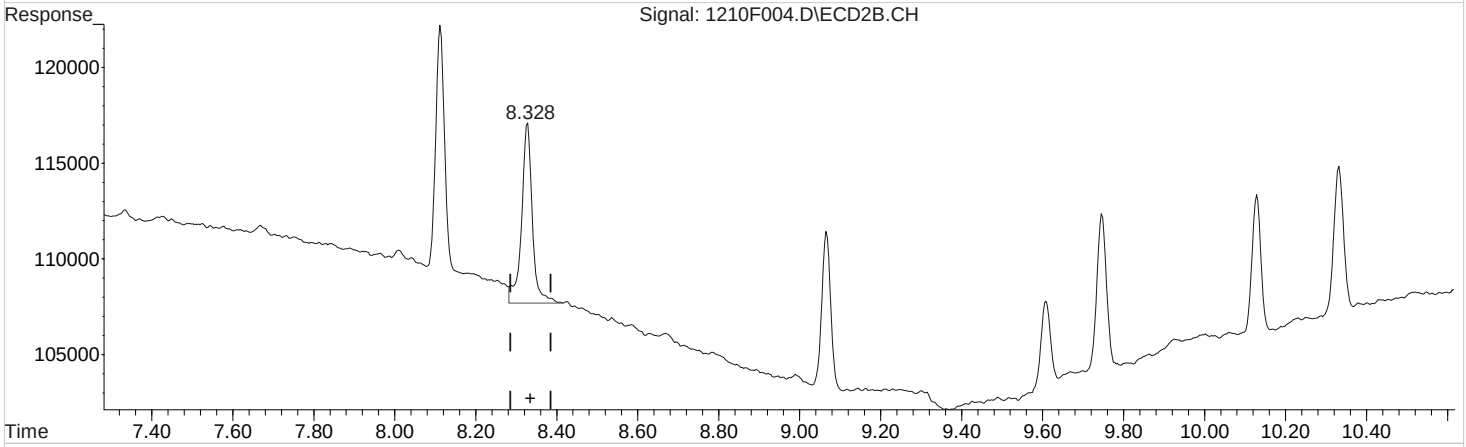
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(3) alpha-BHC

9.577min 0.609 ug/L

response 5052

(3) alpha-BHC #2

8.328min 0.515 ug/L

response 17384

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

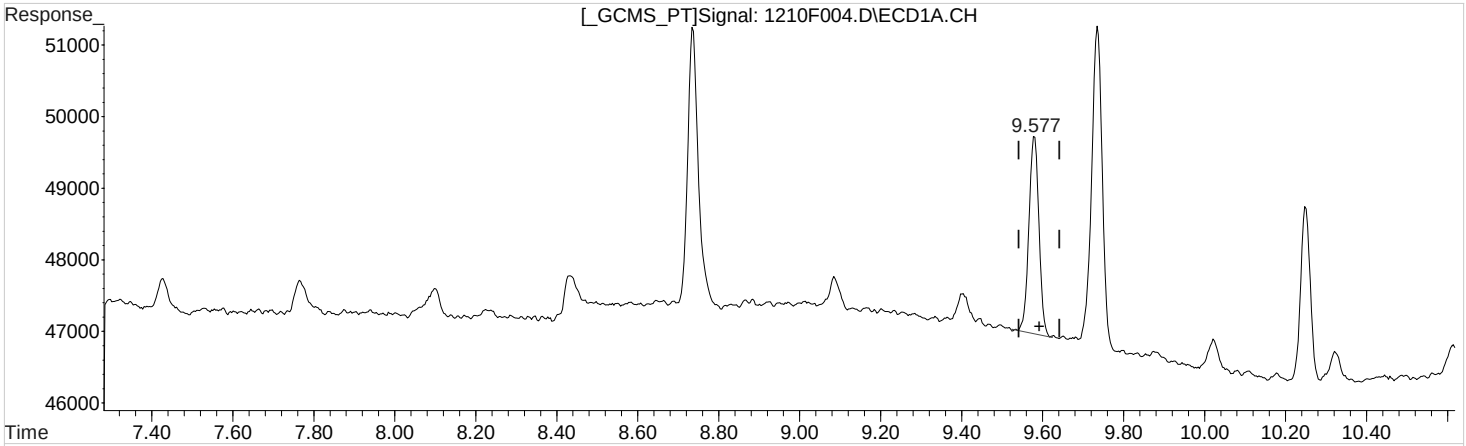
Quantitation Report (Qedit)

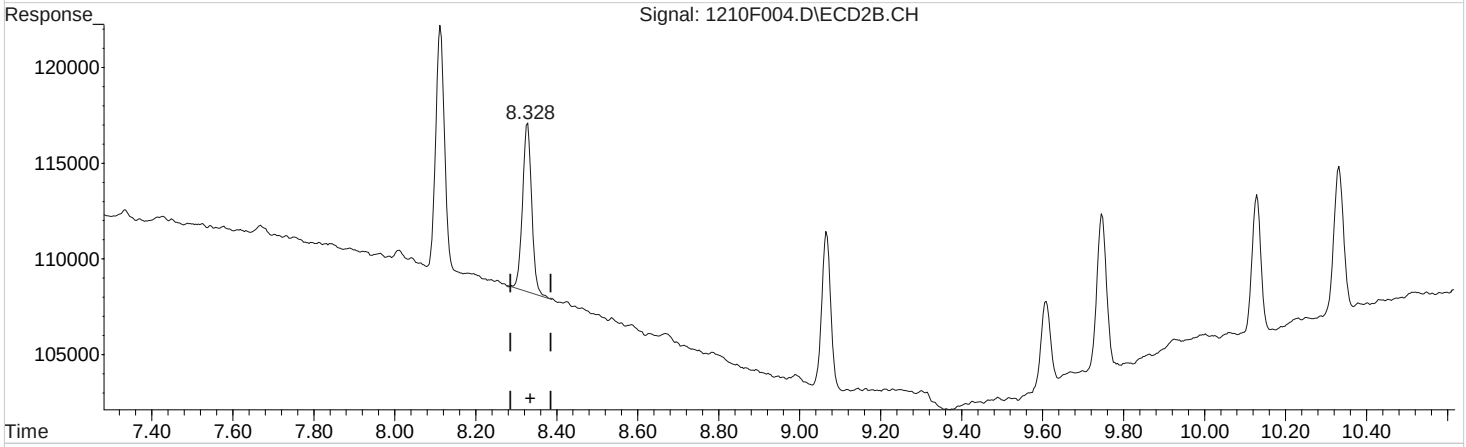
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(3) alpha-BHC

9.577min 0.573 ug/L m

response 4753

(3) alpha-BHC #2

8.328min 0.408 ug/L m

response 13773

Manual Integration:

After

Baseline/Shoulder

12/10/18

(+) = Expected Retention Time

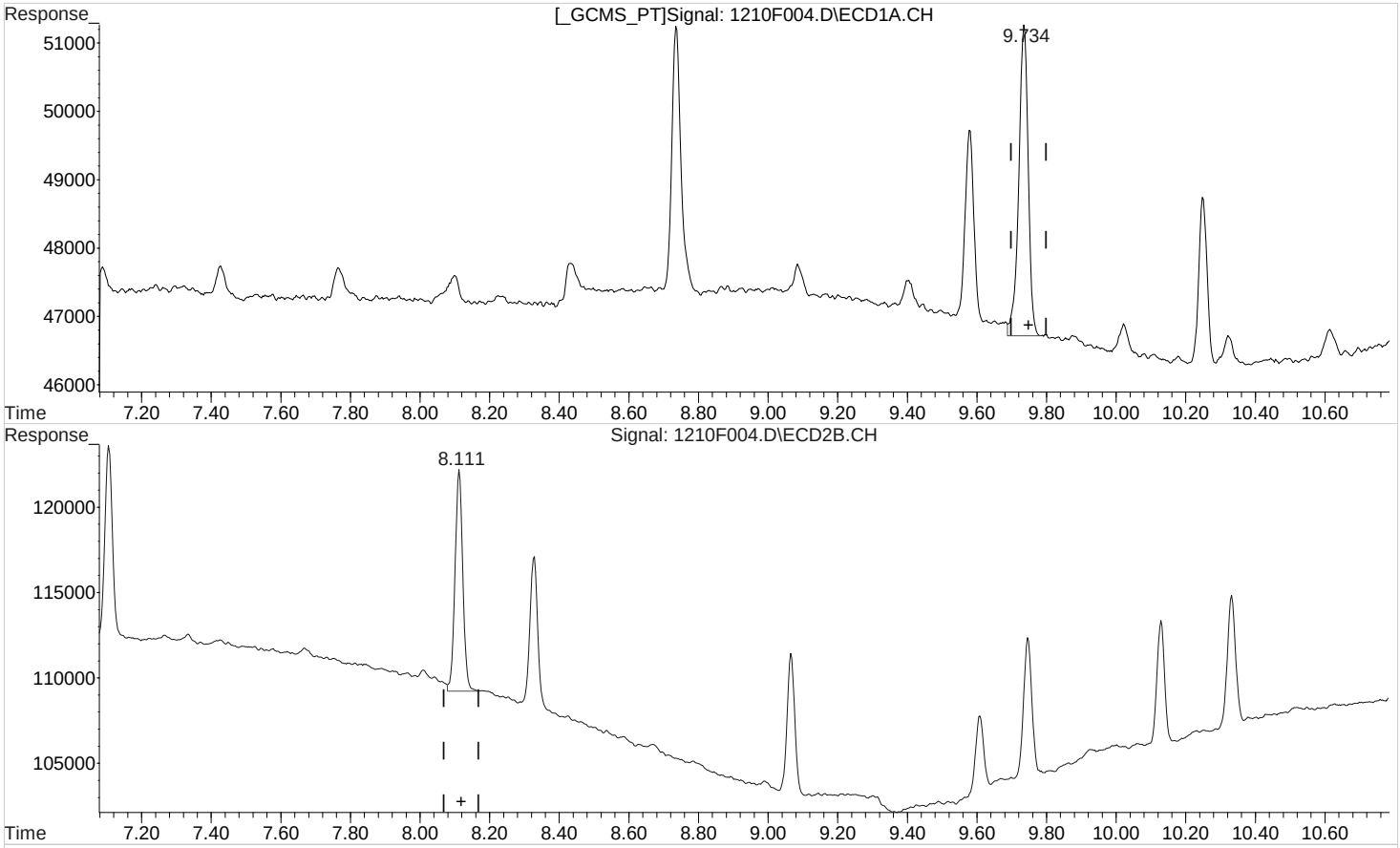
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(4) Hexachlorobenzene

9.734min 0.743 ug/L

response 8573

(4) Hexachlorobenzene #2

8.111min 0.395 ug/L

response 20097

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

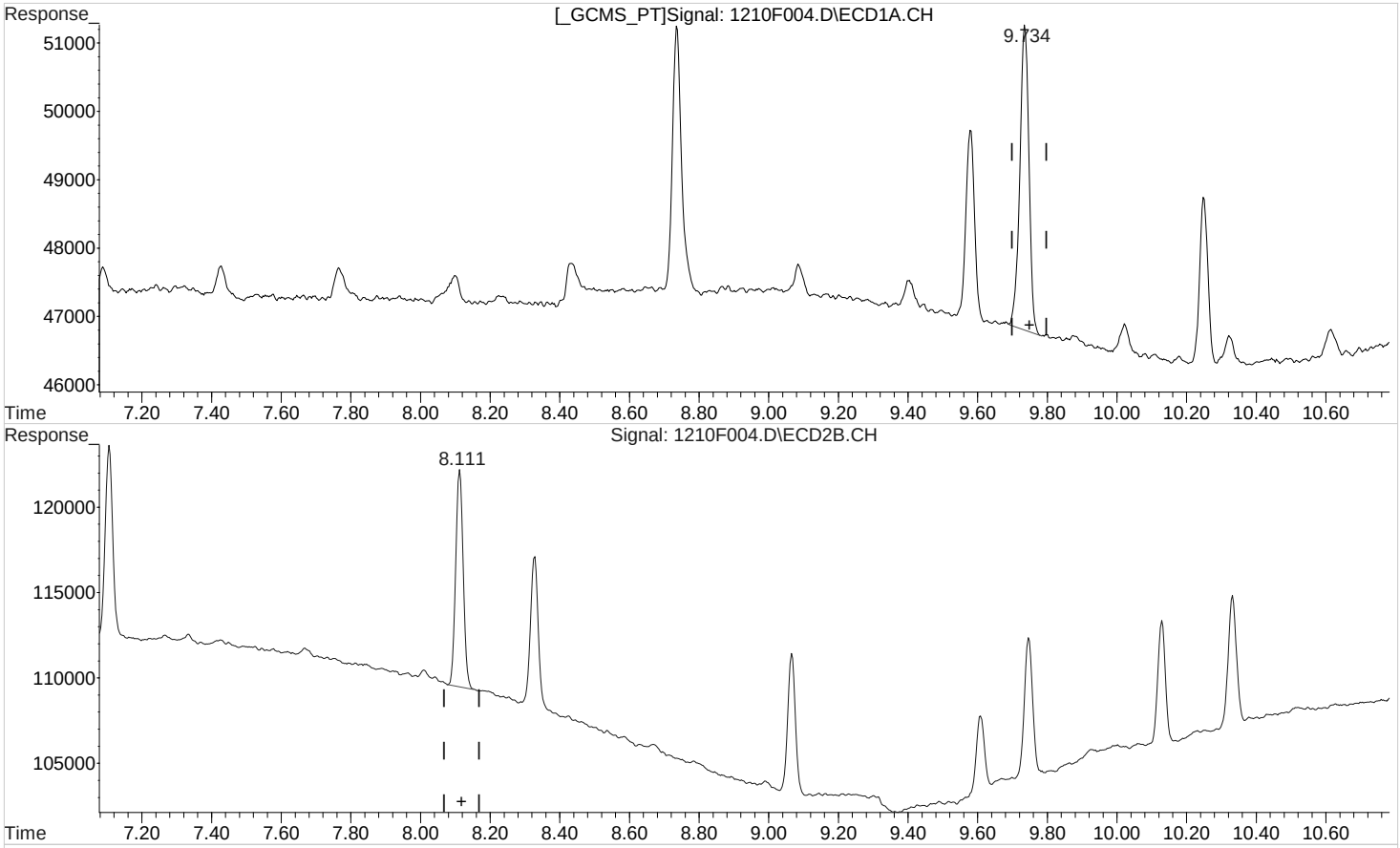
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(4) Hexachlorobenzene

9.734min 0.697 ug/L m

response 8104

Manual Integration:

After

Baseline/Shoulder

12/10/18

(4) Hexachlorobenzene #2

8.111min 0.365 ug/L m

response 18988

(+) = Expected Retention Time

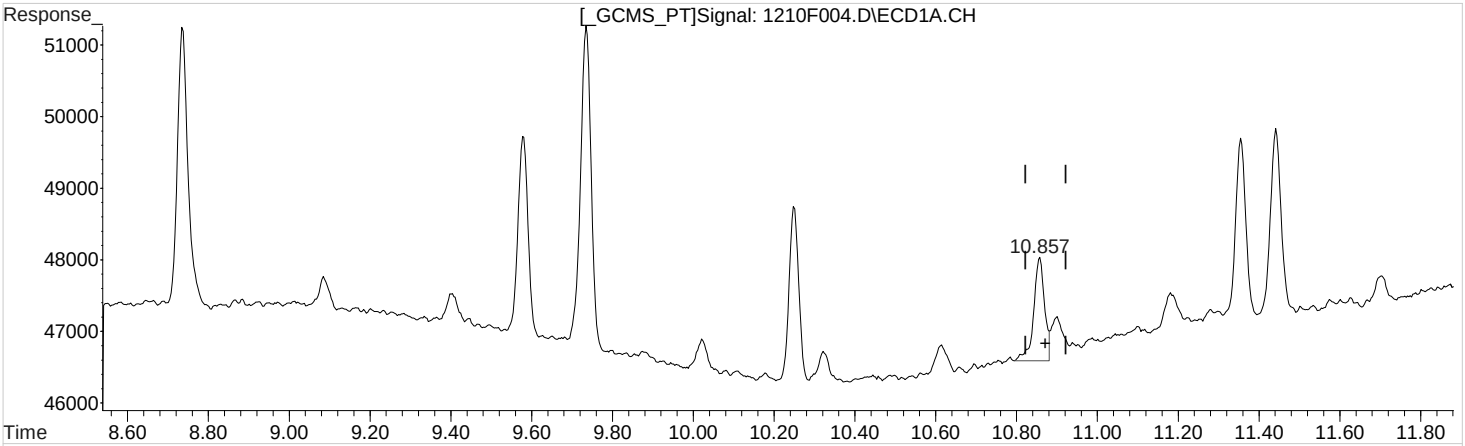
Quantitation Report (Qedit)

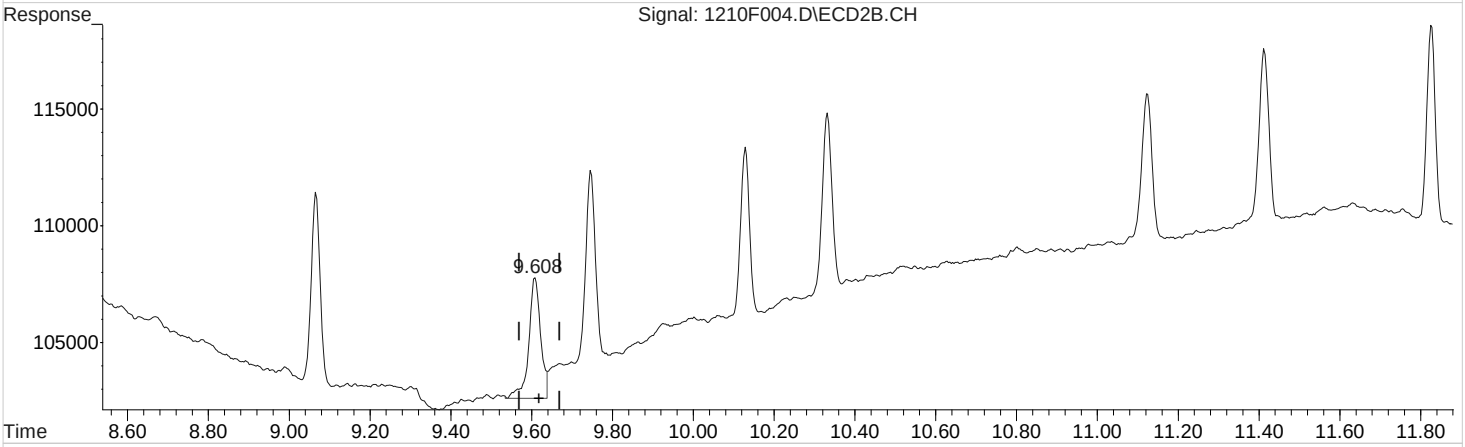
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.857min 0.675 ug/L

response 2737

Manual Integration:

Before

12/10/18

(5) beta-BHC #2

9.608min 0.651 ug/L

response 10643

(+) = Expected Retention Time

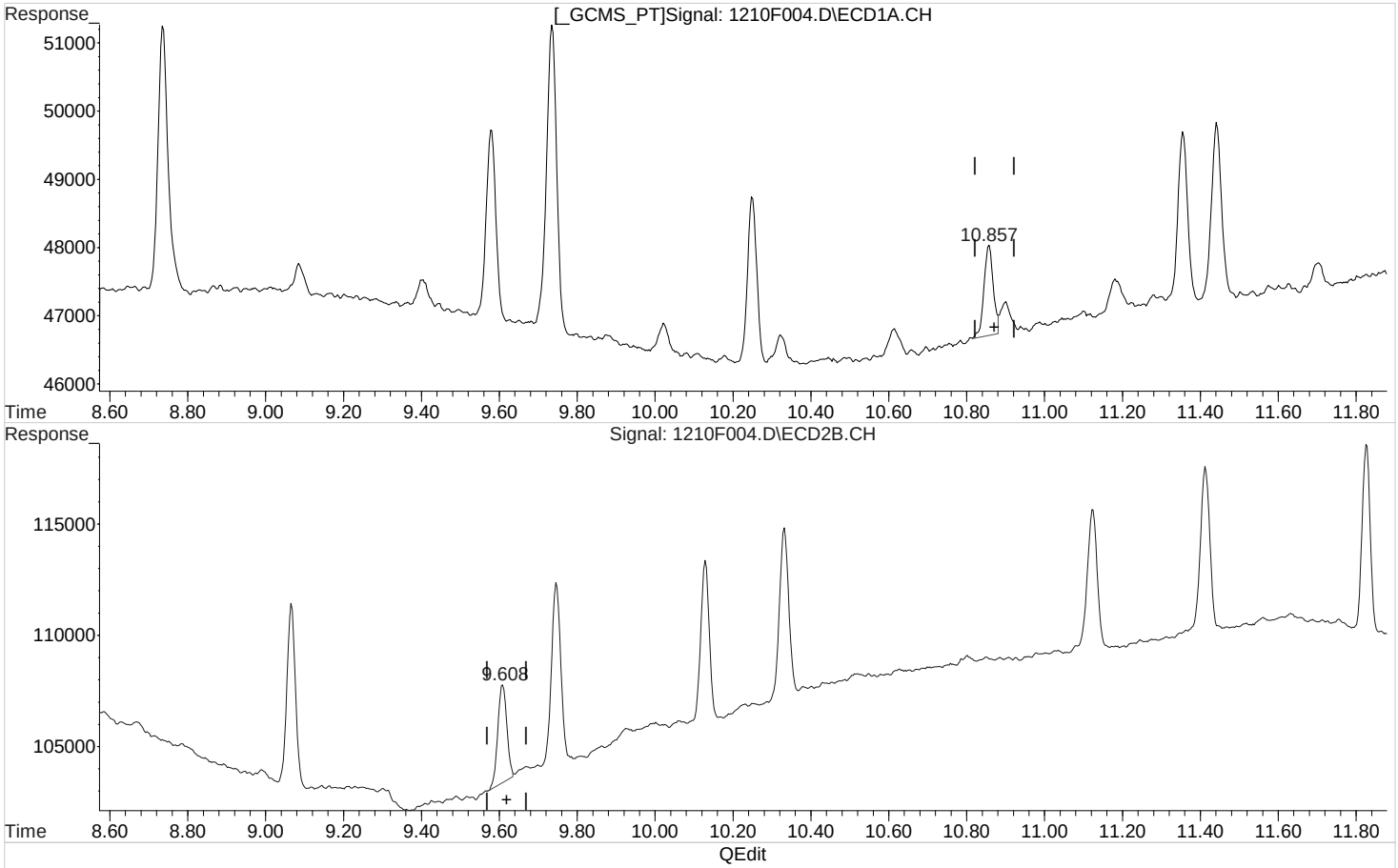
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(5) beta-BHC

10.857min 0.547 ug/L m

response 2218

(5) beta-BHC #2

9.608min 0.440 ug/L m

response 7192

Manual Integration:

After

Baseline/Shoulder

12/10/18

(+) = Expected Retention Time

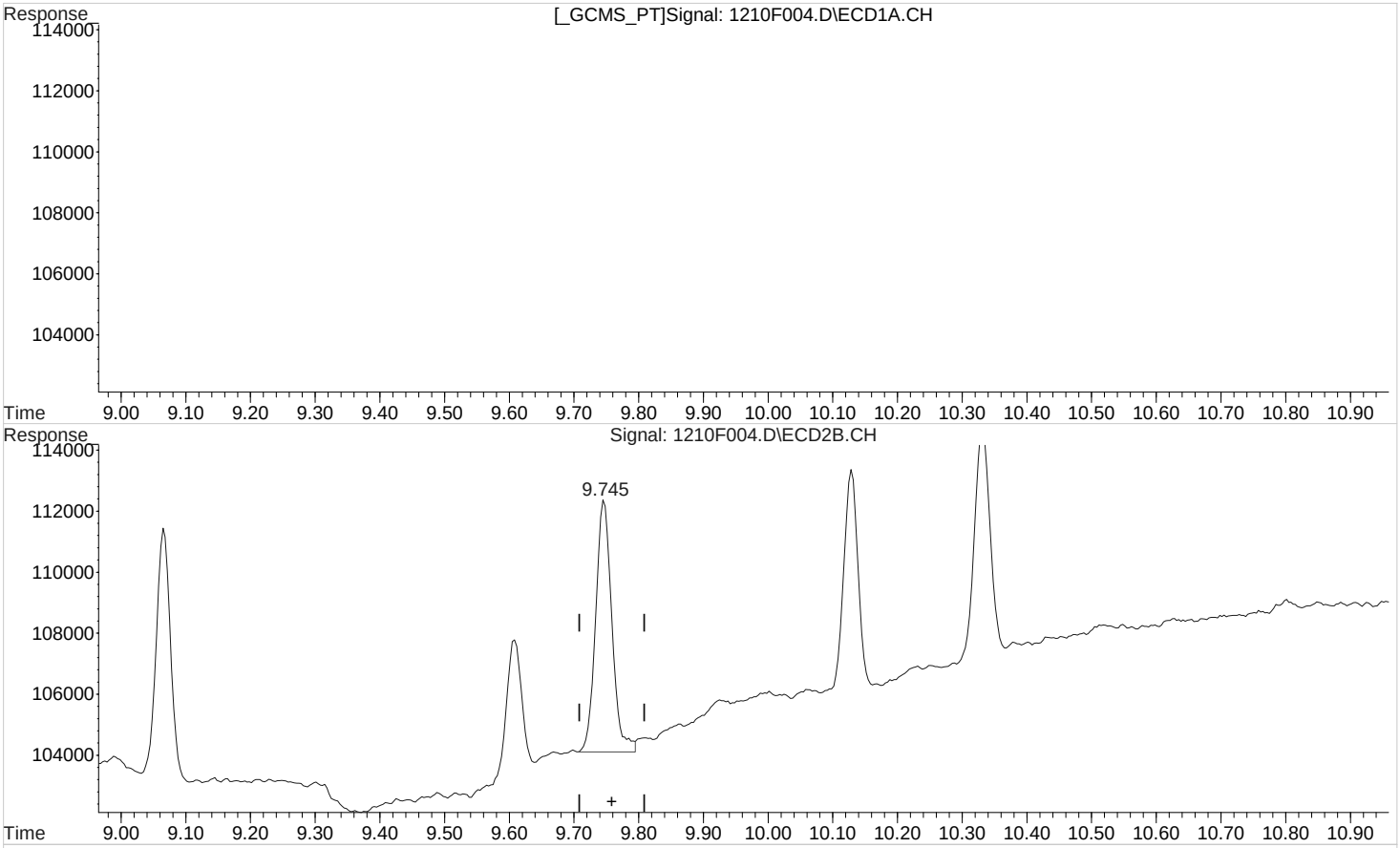
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(8) Heptachlor

11.441min 0.649 ug/L

response 4798

Manual Integration:

Before

12/10/18

(8) Heptachlor #2

9.745min 0.487 ug/L

response 14380

(+) = Expected Retention Time

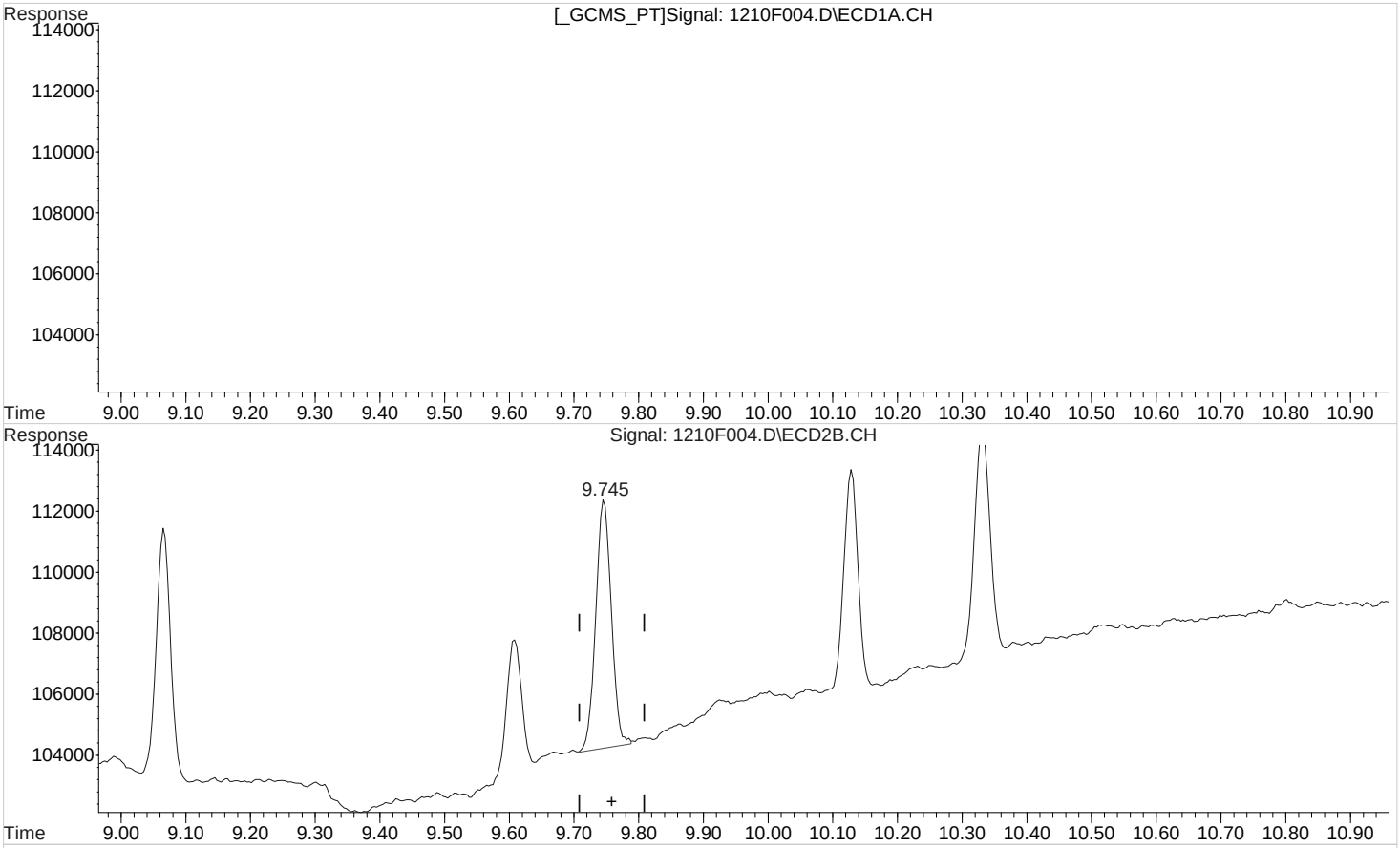
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(8) Heptachlor

11.441min 0.649 ug/L

response 4798

Manual Integration:

After

Baseline/Shoulder

12/10/18

(8) Heptachlor #2

9.745min 0.462 ug/L m

response 13624

(+) = Expected Retention Time

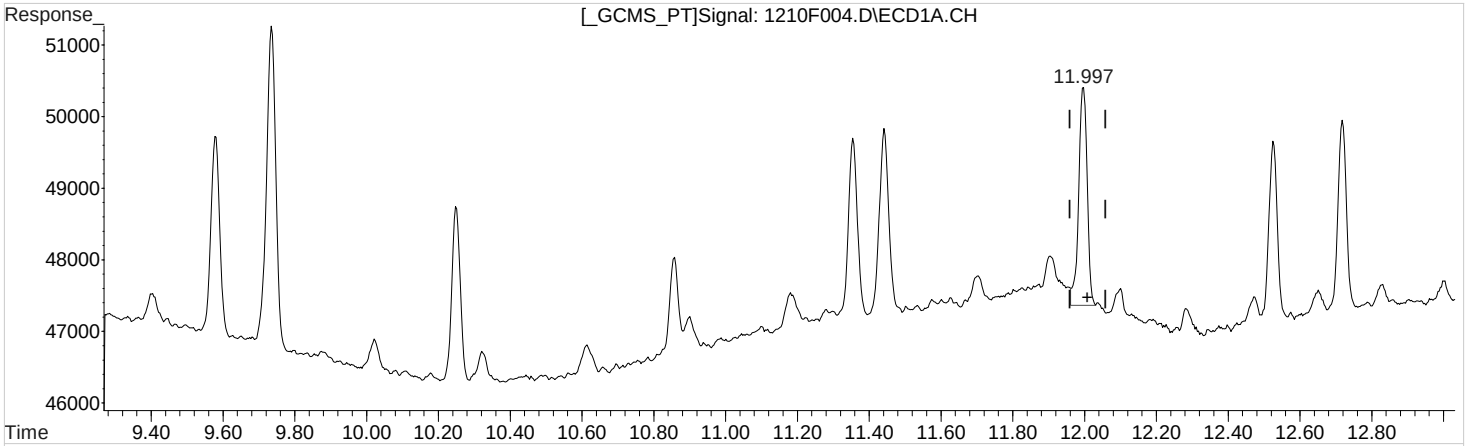
Quantitation Report (Qedit)

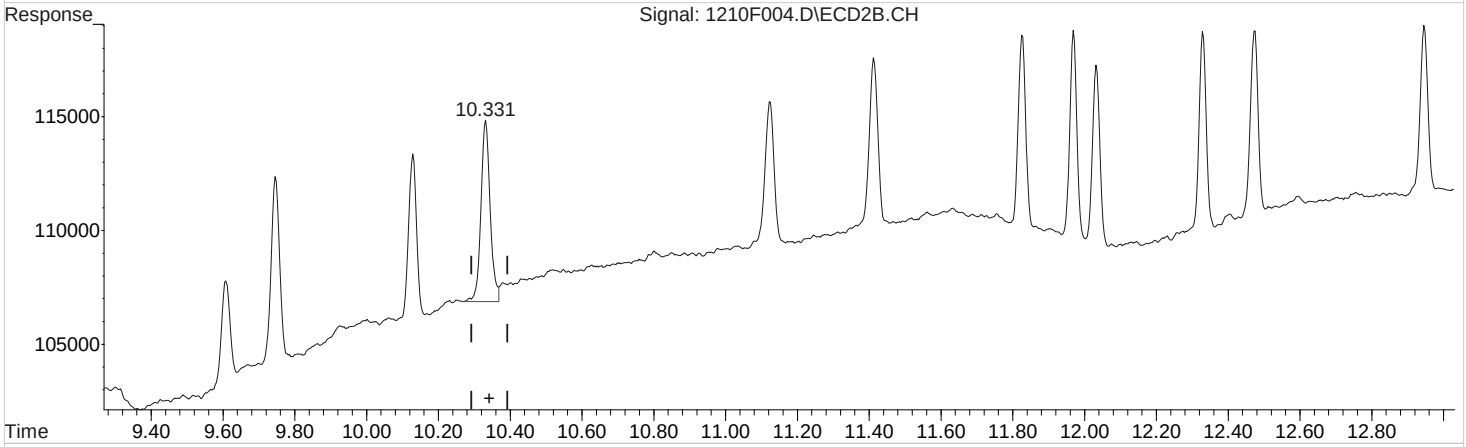
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(9) Aldrin

11.997min 0.666 ug/L

response 4930

(9) Aldrin #2

10.331min 0.506 ug/L

response 14400

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

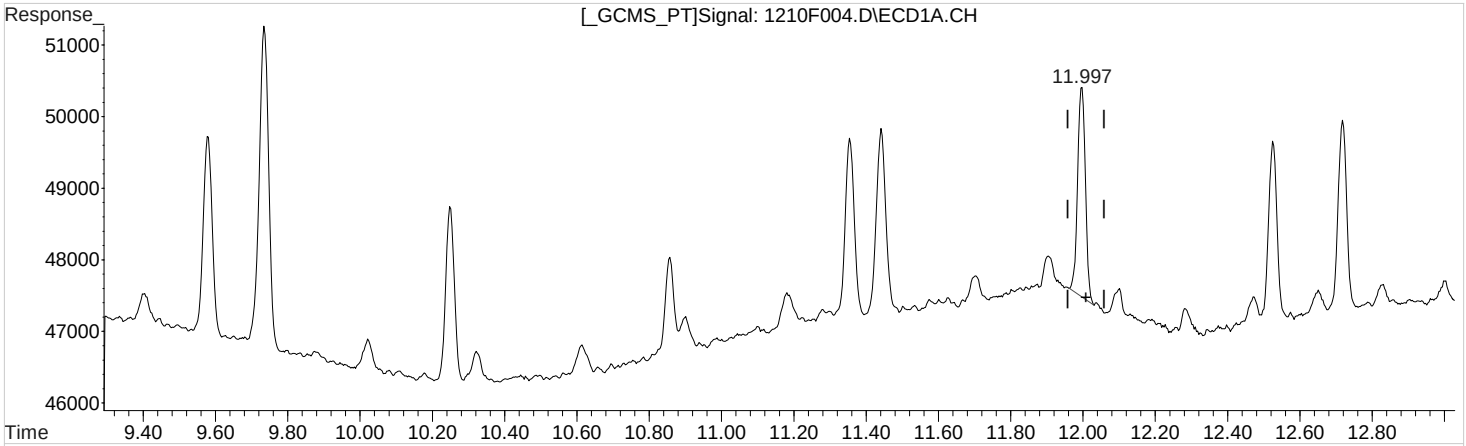
Quantitation Report (Qedit)

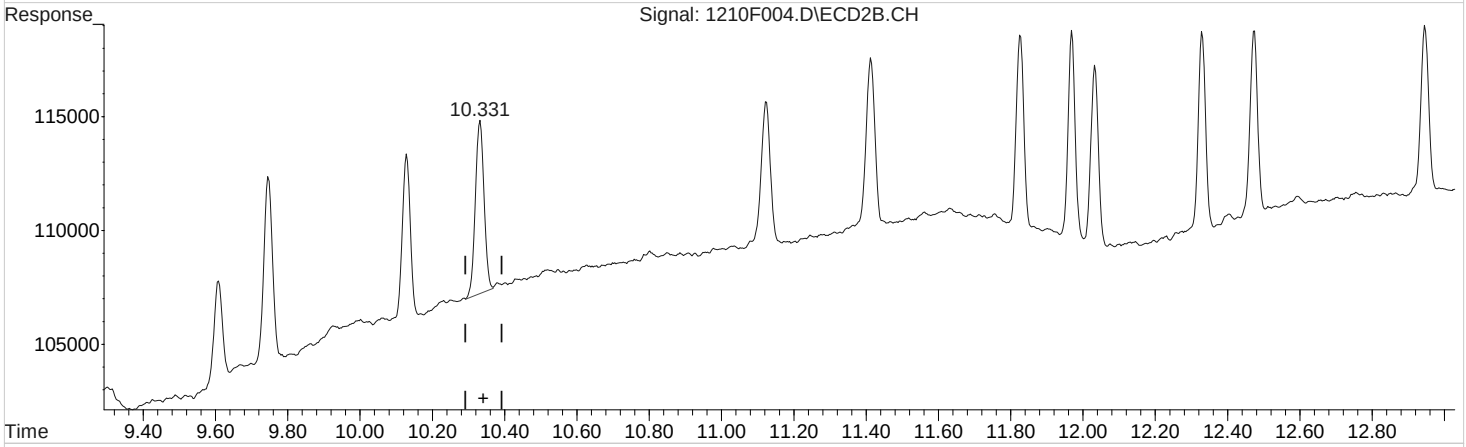
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(9) Aldrin

11.997min 0.597 ug/L m

response 4422

Manual Integration:

After

Baseline/Shoulder

12/10/18

(9) Aldrin #2

10.331min 0.446 ug/L m

response 12703

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:49:23 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.011	5.338	492933	1911822	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.734	7.105	13772	32960	1.552	0.901 #
28) s	Decachlor...	18.424	16.865	13712	28994	1.577	0.941 #
	Target Compounds						
3)	alpha-BHC	9.581	8.325	10346	29185	1.244	0.870 #
4)	Hexachlor...	9.738	8.111	15850	37632	1.456m	0.868m#
5)	beta-BHC	10.858	9.608	4835	13812	1.190	0.851m#
6)	gamma-BHC...	10.251	9.065	9077	25867	1.221	0.869 #
7)	delta-BHC	11.358	10.128	8683	26454	1.327	0.983 #
8)	Heptachlor	11.441	9.745	9131	28460	1.234	0.971
9)	Aldrin	11.994	10.332	9407	26043	1.268m	0.921 #
10)	Isodrin	12.524	11.121	8180	23856	1.356	0.960 #
11)	Heptachlo...	12.717	11.412	8954	26541	1.293	1.016
12)	gamma-Chl...	13.234	11.825	9000	24321	1.338	0.928m#
13)	Endosulfan I	13.361	12.031	8874	23269	1.404	0.989 #
14)	alpha-Chl...	13.311	11.968	9637	25131	1.382	0.959 #
15)	Dieldrin	13.778	12.472	9370	24122	1.454	0.984 #
16)	4,4'-DDE	13.591	12.328	10324	24165	1.565	0.936 #
17)	Endrin	14.144	12.945	8428	23381	1.316	0.996
18)	Endosulfa...	14.594	13.378	8259	21643	1.356	1.011 #
19)	4,4'-DDD	14.424	13.208	6325	18522	1.257	1.017
20)	Endrin Al...	14.774	13.738	8018	19995	1.527	1.041 #
21)	Endosulfa...	15.248	14.058	8418	22251	1.418	1.018 #
22)	4,4'-DDT	14.921	13.625	6006	18465	1.605	1.090 #
23)	Endrin Ke...	15.931	14.992	7763	24582	1.370	1.084
24)	Methoxychlor	15.671	14.722	4087	10387	1.504	1.036 #
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

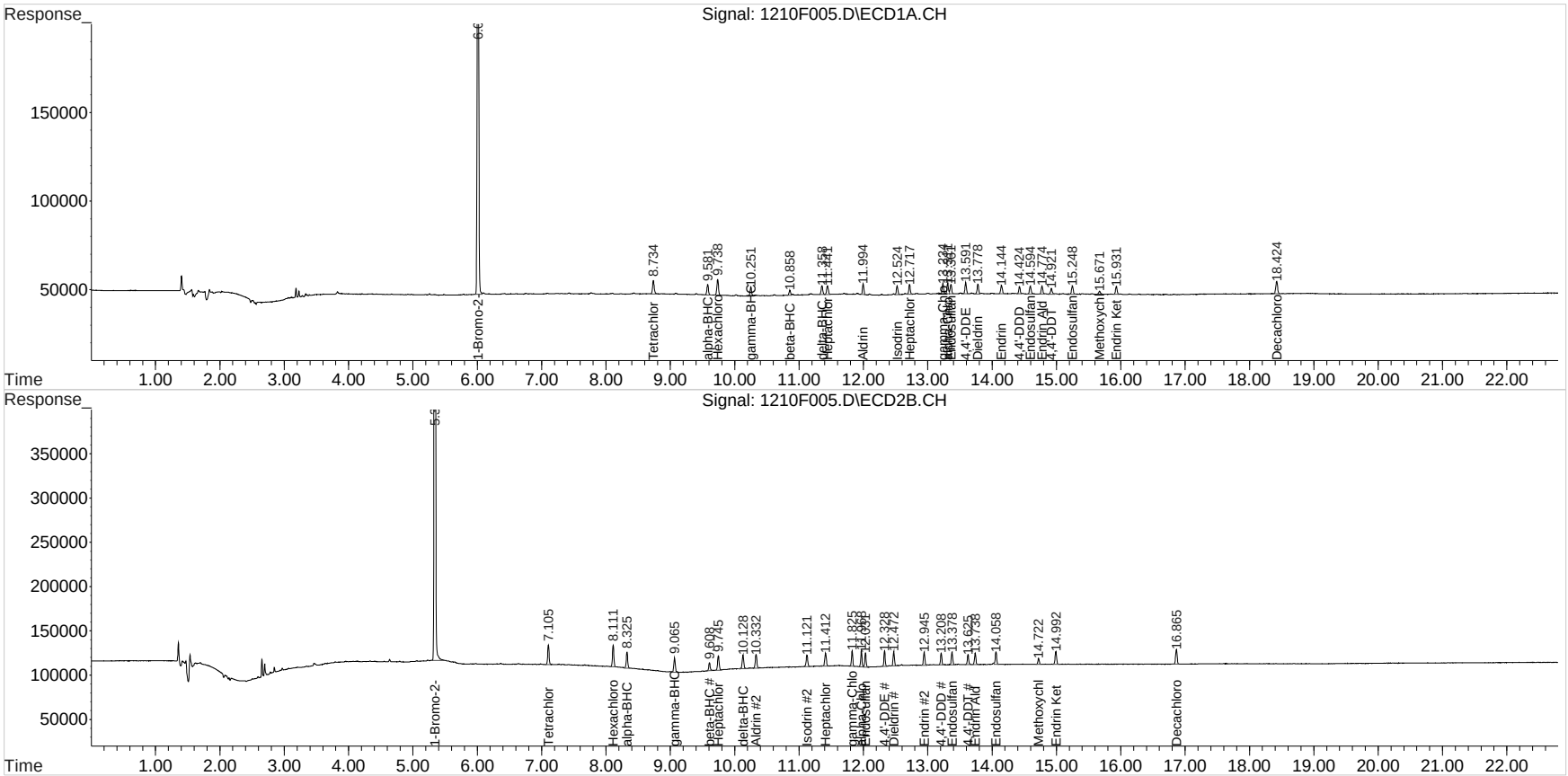
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:49:23 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



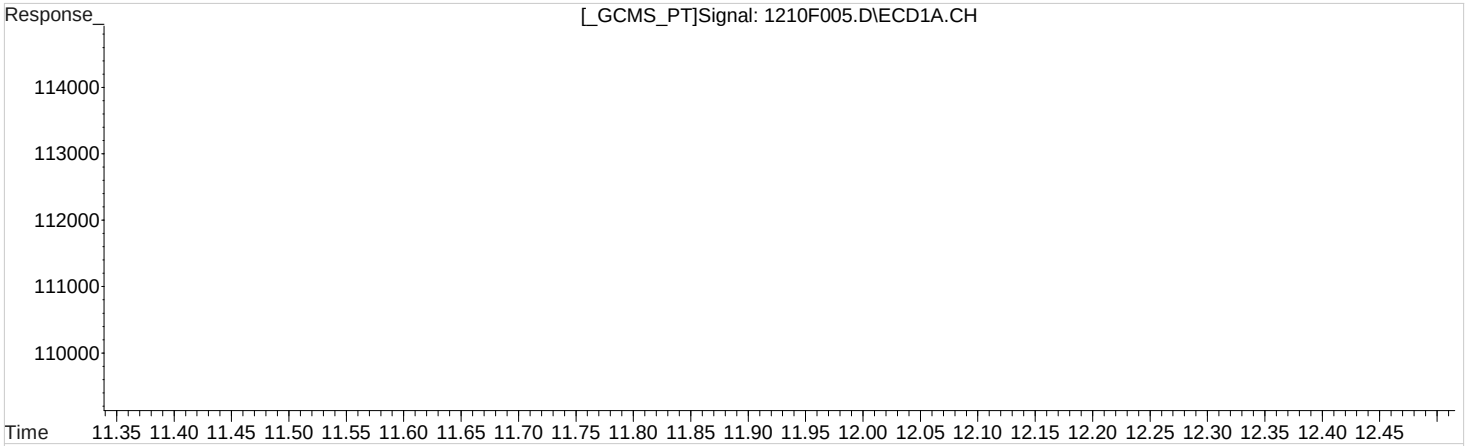
Quantitation Report (Qedit)

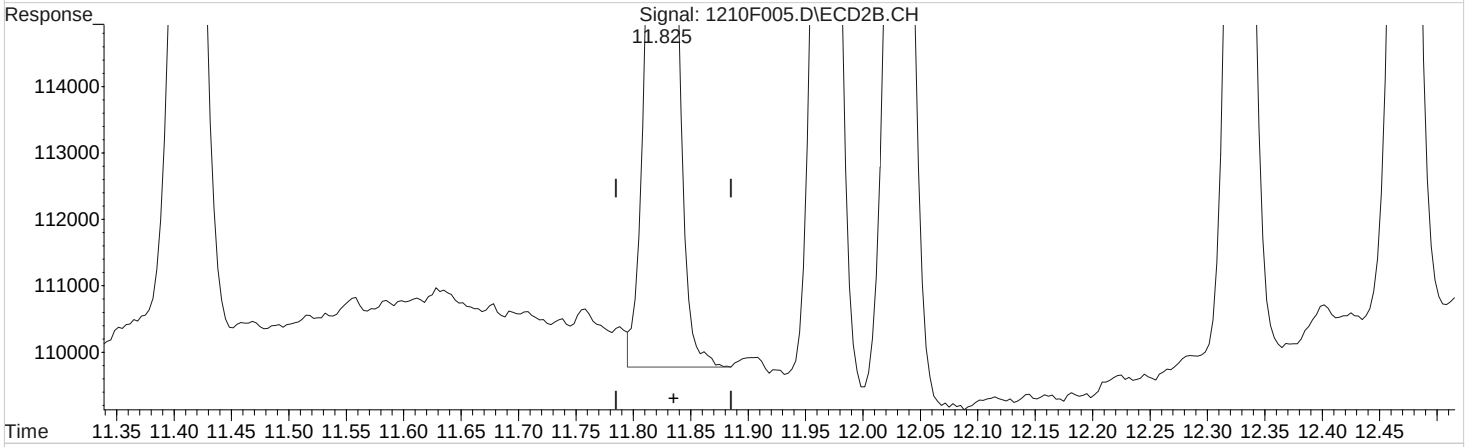
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

13.234min 1.338 ug/L

response 9000

Manual Integration:

Before

12/10/18

(12) gamma-Chlordane #2

11.825min 0.974 ug/L

response 25527

(+) = Expected Retention Time

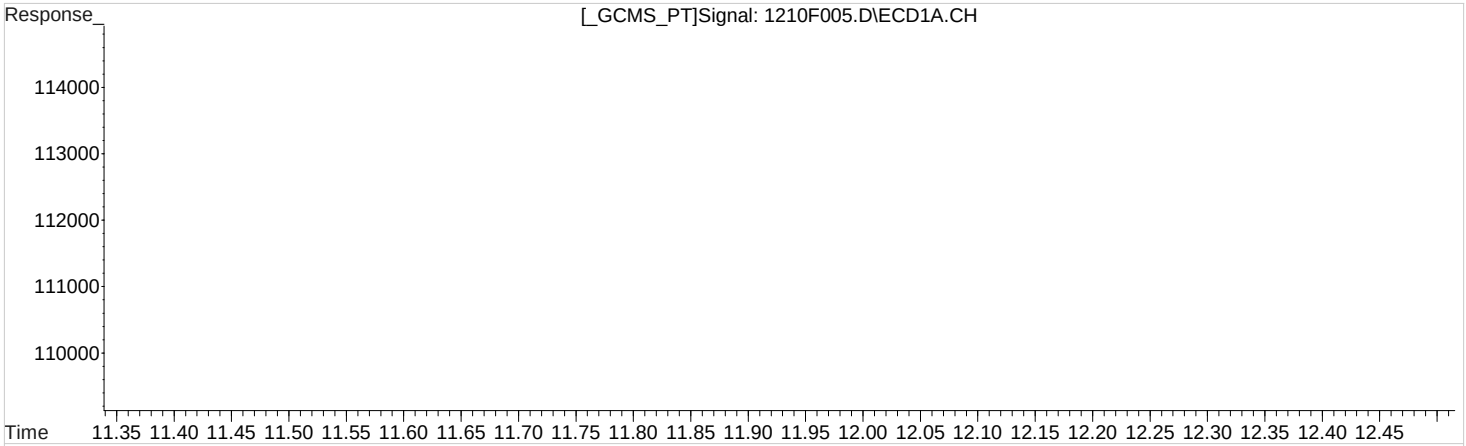
Quantitation Report (Qedit)

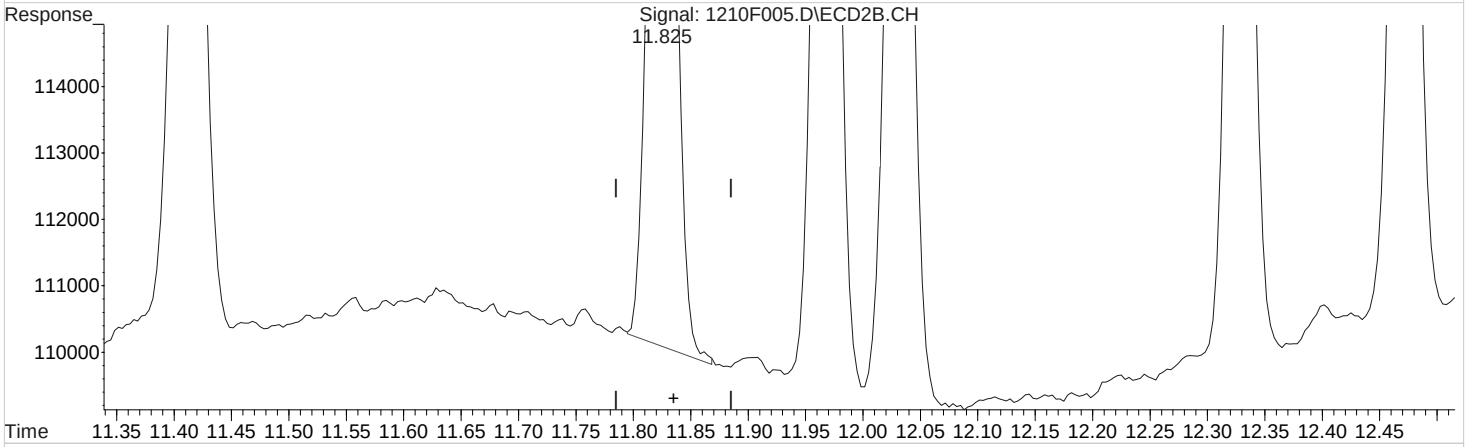
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

13.234min 1.338 ug/L

response 9000

Manual Integration:

After

Baseline/Shoulder

12/10/18

(12) gamma-Chlordane #2

11.825min 0.928 ug/L m

response 24321

(+) = Expected Retention Time

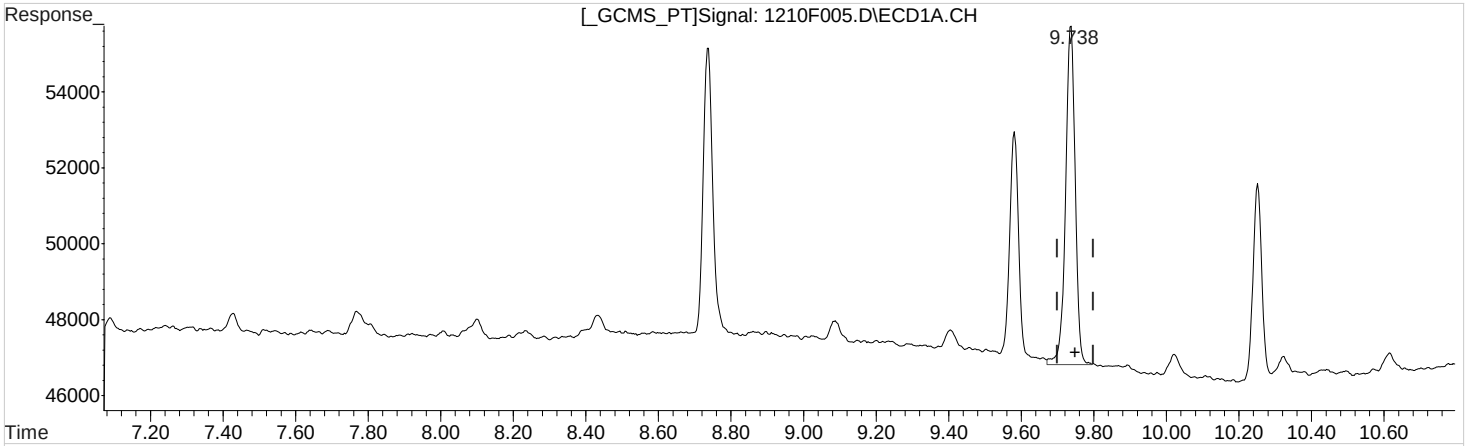
Quantitation Report (Qedit)

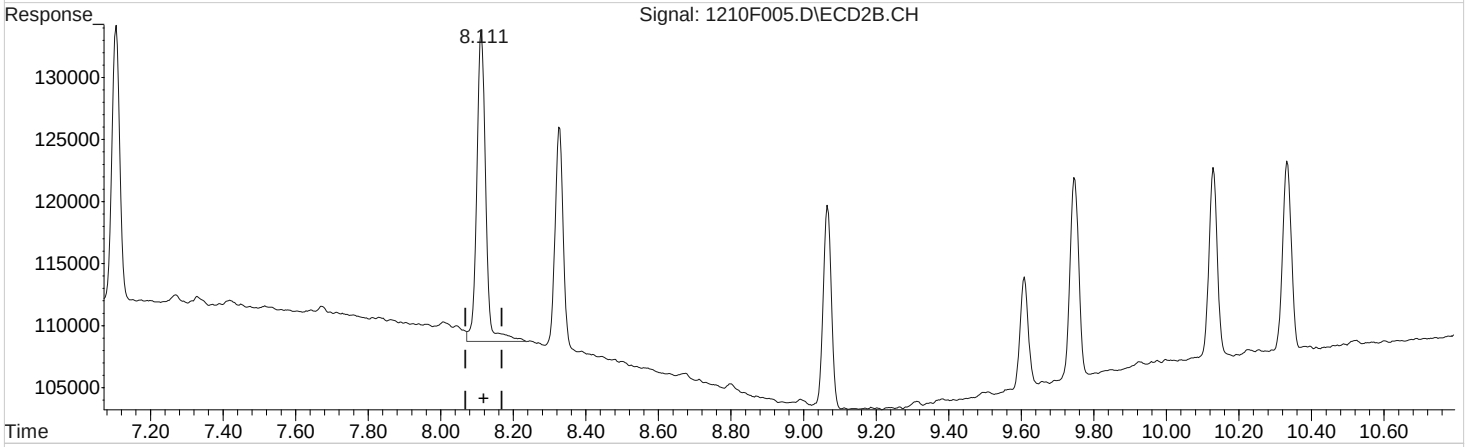
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.738min 1.516 ug/L

response 16452

Manual Integration:

Before

12/10/18

(4) Hexachlorobenzene #2

8.111min 1.010 ug/L

response 42901

(+) = Expected Retention Time

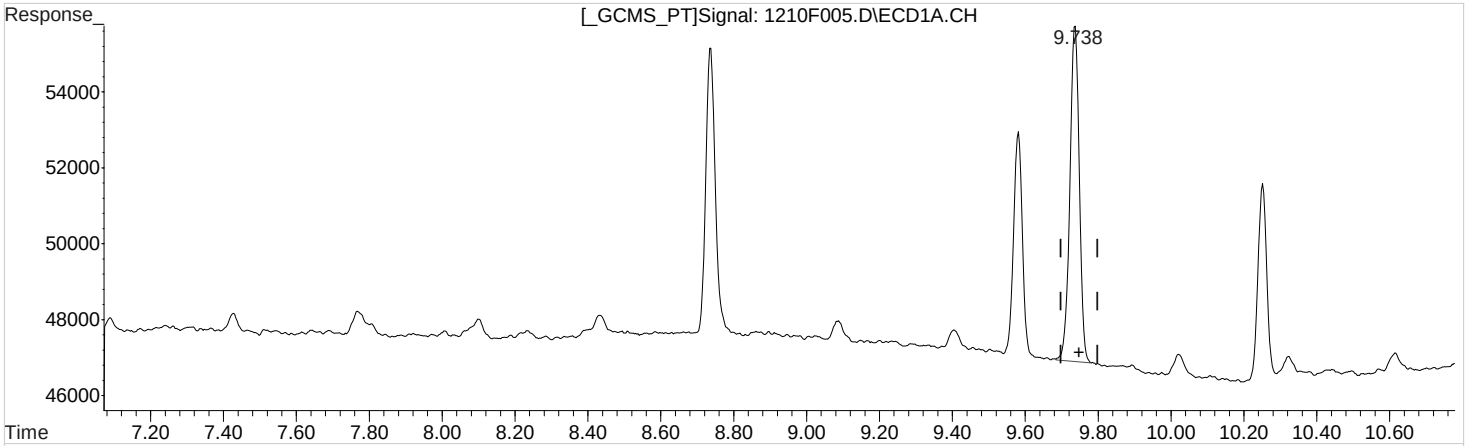
Quantitation Report (Qedit)

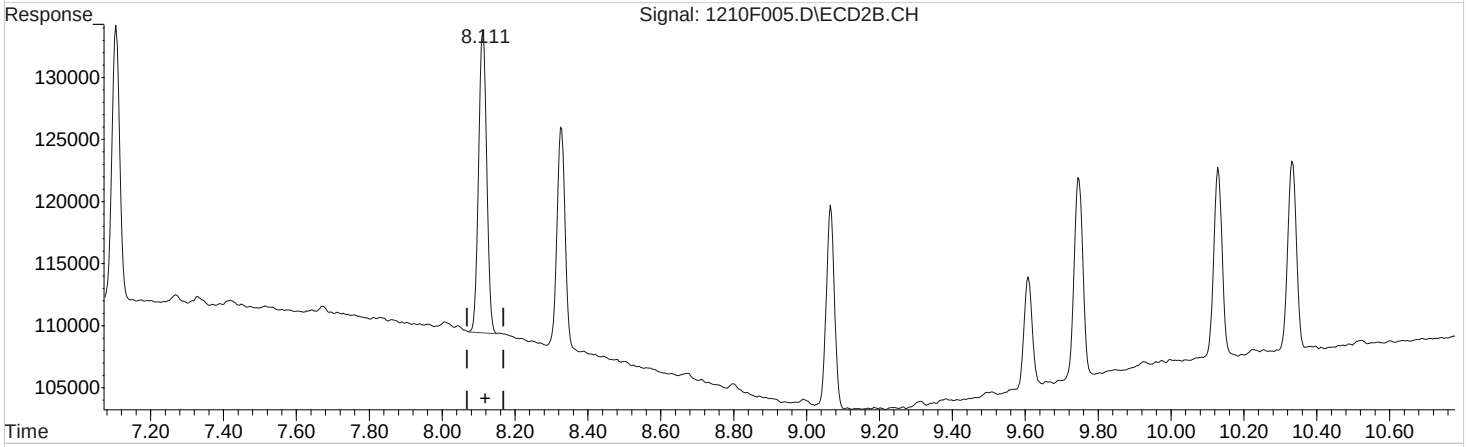
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.738min 1.456 ug/L m

response 15850

Manual Integration:

After

Baseline/Shoulder

12/10/18

(4) Hexachlorobenzene #2

8.111min 0.868 ug/L m

response 37632

(+) = Expected Retention Time

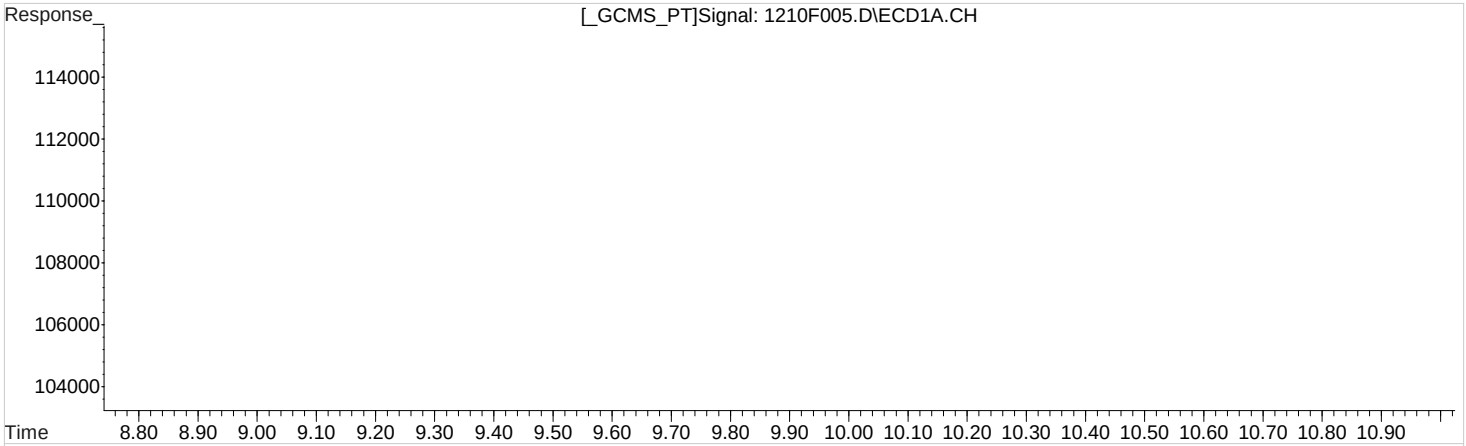
Quantitation Report (Qedit)

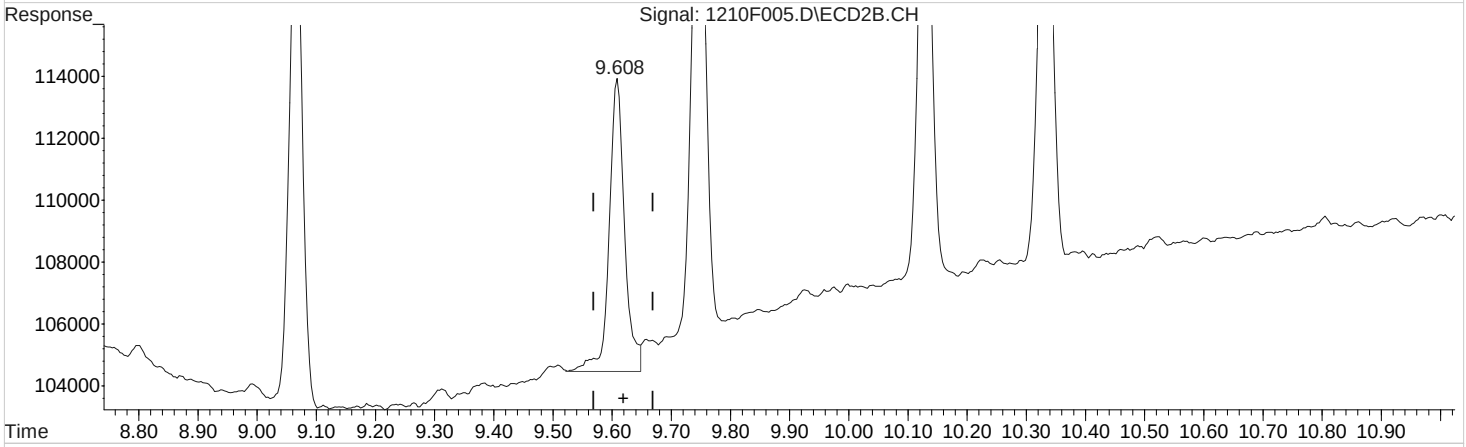
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.858min 1.190 ug/L

response 4835

(5) beta-BHC #2

9.608min 1.061 ug/L

response 17231

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

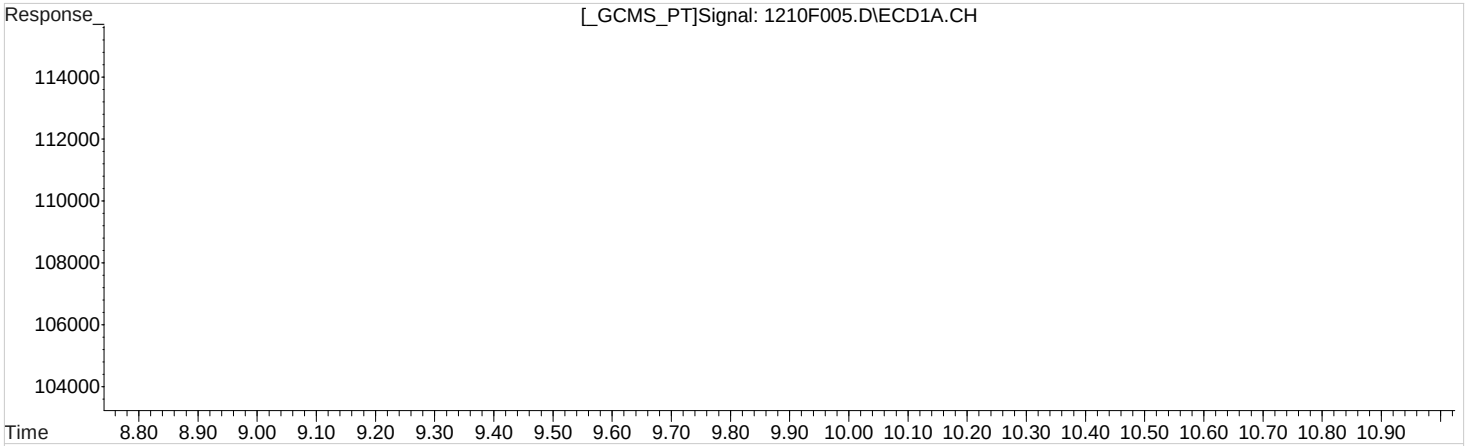
Quantitation Report (Qedit)

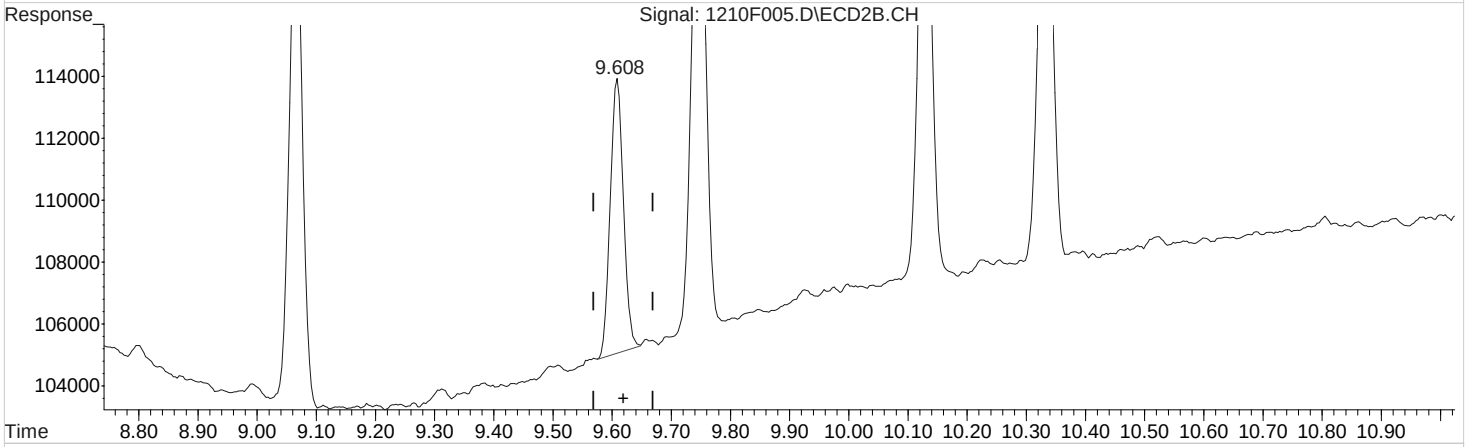
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.858min 1.190 ug/L

response 4835

(5) beta-BHC #2

9.608min 0.851 ug/L m

response 13812

Manual Integration:

After

Baseline/Shoulder

12/10/18

(+) = Expected Retention Time

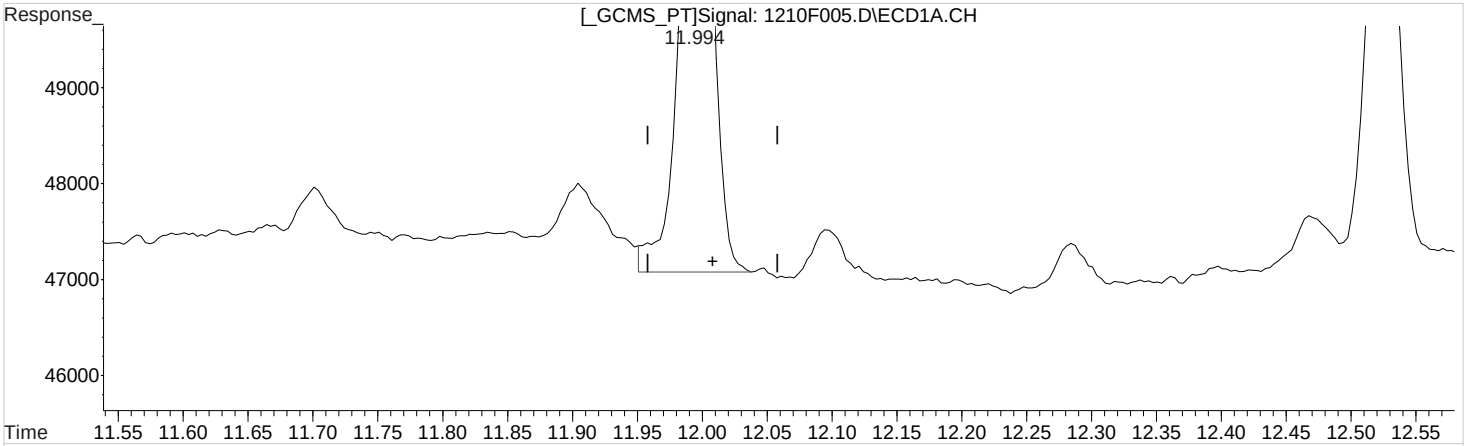
Quantitation Report (Qedit)

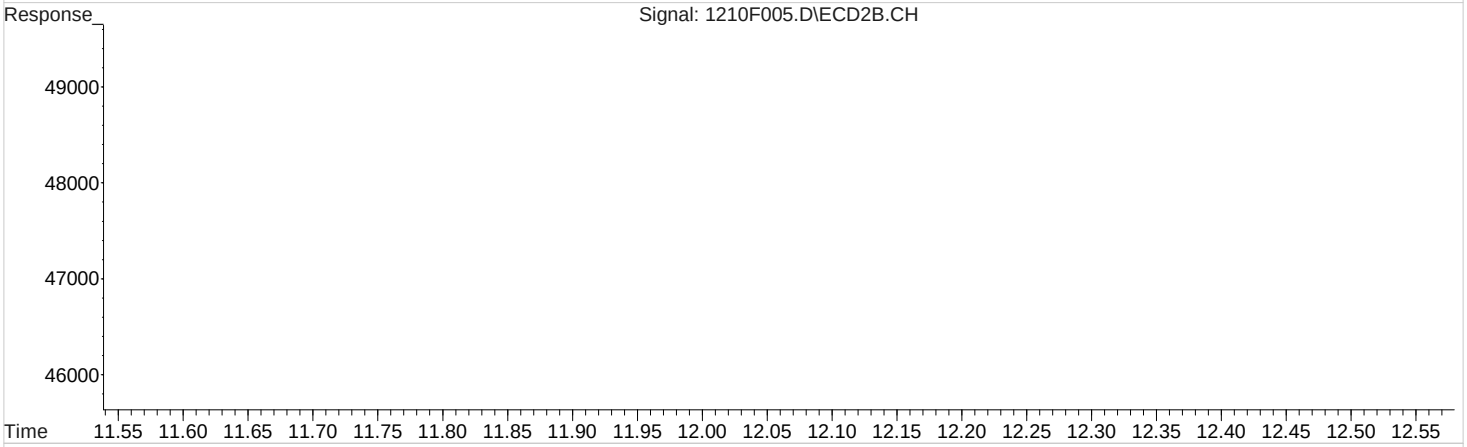
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(9) Aldrin

11.994min 1.379 ug/L

response 10231

(9) Aldrin #2

10.332min 0.921 ug/L

response 26043

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

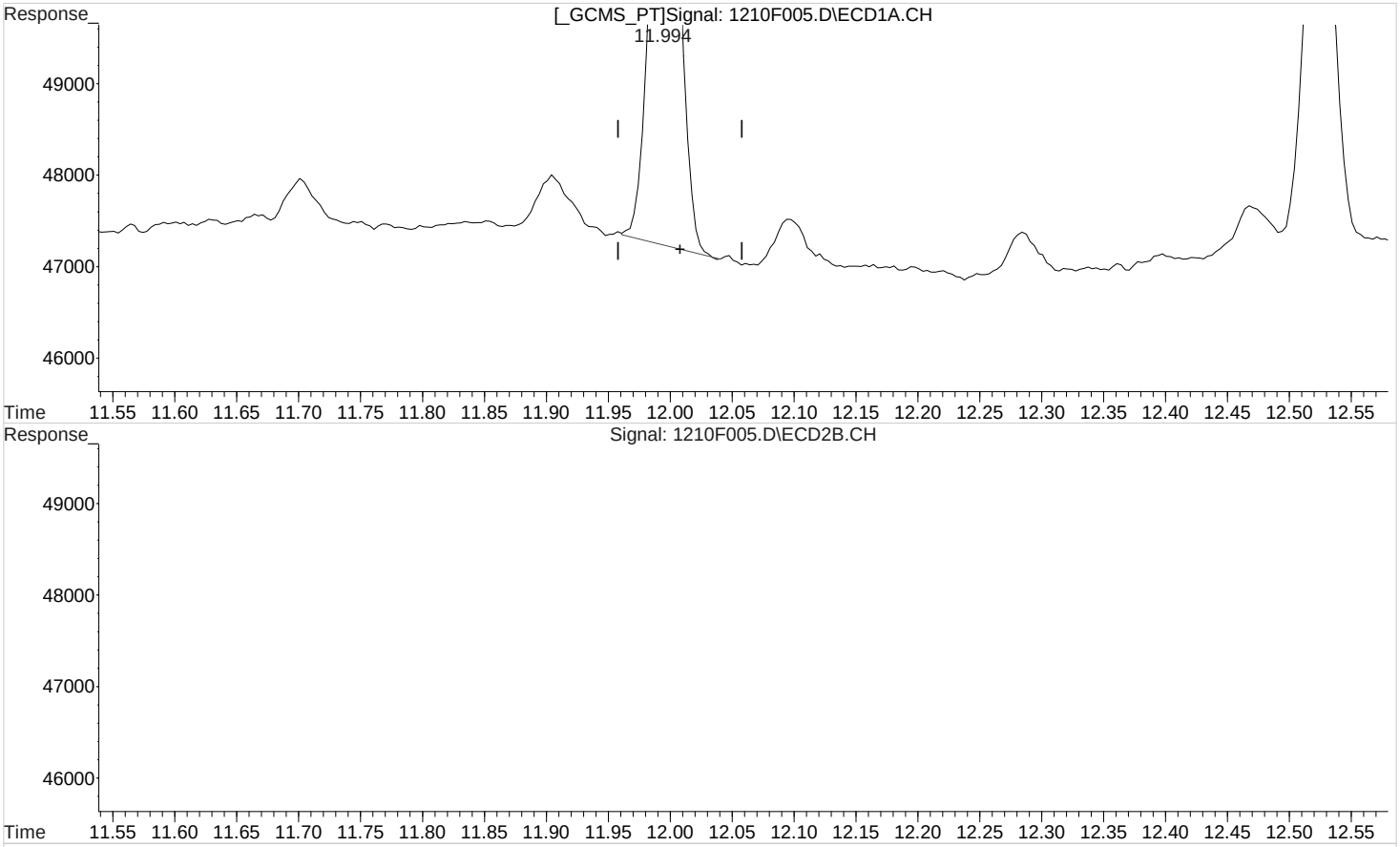
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(9) Aldrin

11.994min 1.268 ug/L m

response 9407

Manual Integration:

After

Baseline/Shoulder

12/10/18

(9) Aldrin #2

10.332min 0.921 ug/L

response 26043

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.013	5.343	517072	1962708	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
3)	alpha-BHC	9.586	8.330	18638	50734	2.030	1.849m
4)	Hexachlor...	9.739	8.117	28191	69592	2.046	1.832
5)	beta-BHC	10.859	9.610	9156	25927	2.031m	1.912
6)	gamma-BHC...	10.253	9.070	16339	48041	2.073	1.906
7)	delta-BHC	11.359	10.133	16995	45655	2.084	1.890m
8)	Heptachlor	11.443	9.750	16103	52457	2.004	1.942
9)	Aldrin	11.999	10.337	18503	47928	2.071	1.891
10)	Isodrin	12.529	11.127	16647	45775	2.224	2.078
11)	Heptachlo...	12.723	11.417	16092	44280	1.985	1.830
12)	gamma-Chl...	13.239	11.830	17557	45866	2.131	1.932m
13)	Endosulfan I	13.363	12.033	16527	43008	2.001	1.940
14)	alpha-Chl...	13.313	11.970	18278	46827	2.063	1.959
15)	Dieldrin	13.783	12.473	16374	42983	1.949	1.898
16)	4,4'-DDE	13.593	12.330	19253	44286	2.067	1.812m
17)	Endrin	14.149	12.947	14791	40784	1.876	1.827
18)	Endosulfa...	14.596	13.380	15237	41335	2.150	1.997
19)	4,4'-DDD	14.426	13.213	12799	34837	2.031	1.925
20)	Endrin Al...	14.776	13.740	14556	37568	2.042	1.992
21)	Endosulfa...	15.249	14.063	14632	39171	1.946	1.892
22)	4,4'-DDT	14.923	13.630	10204	32803	1.868	1.876
23)	Endrin Ke...	15.933	14.993	14345	42383	1.928	1.852
24)	Methoxychlor	15.673	14.727	6278	19245	1.920	1.863
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

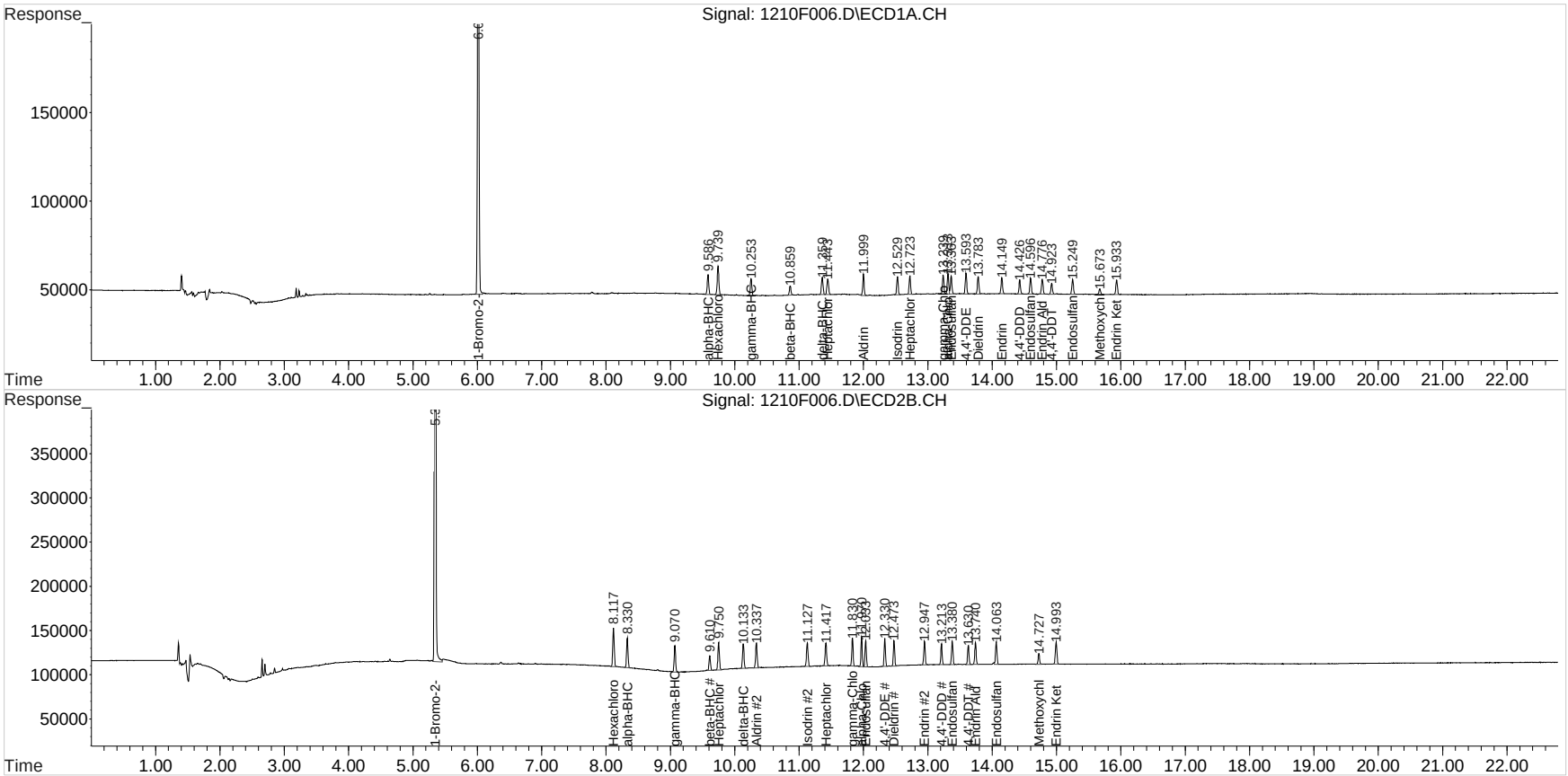
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



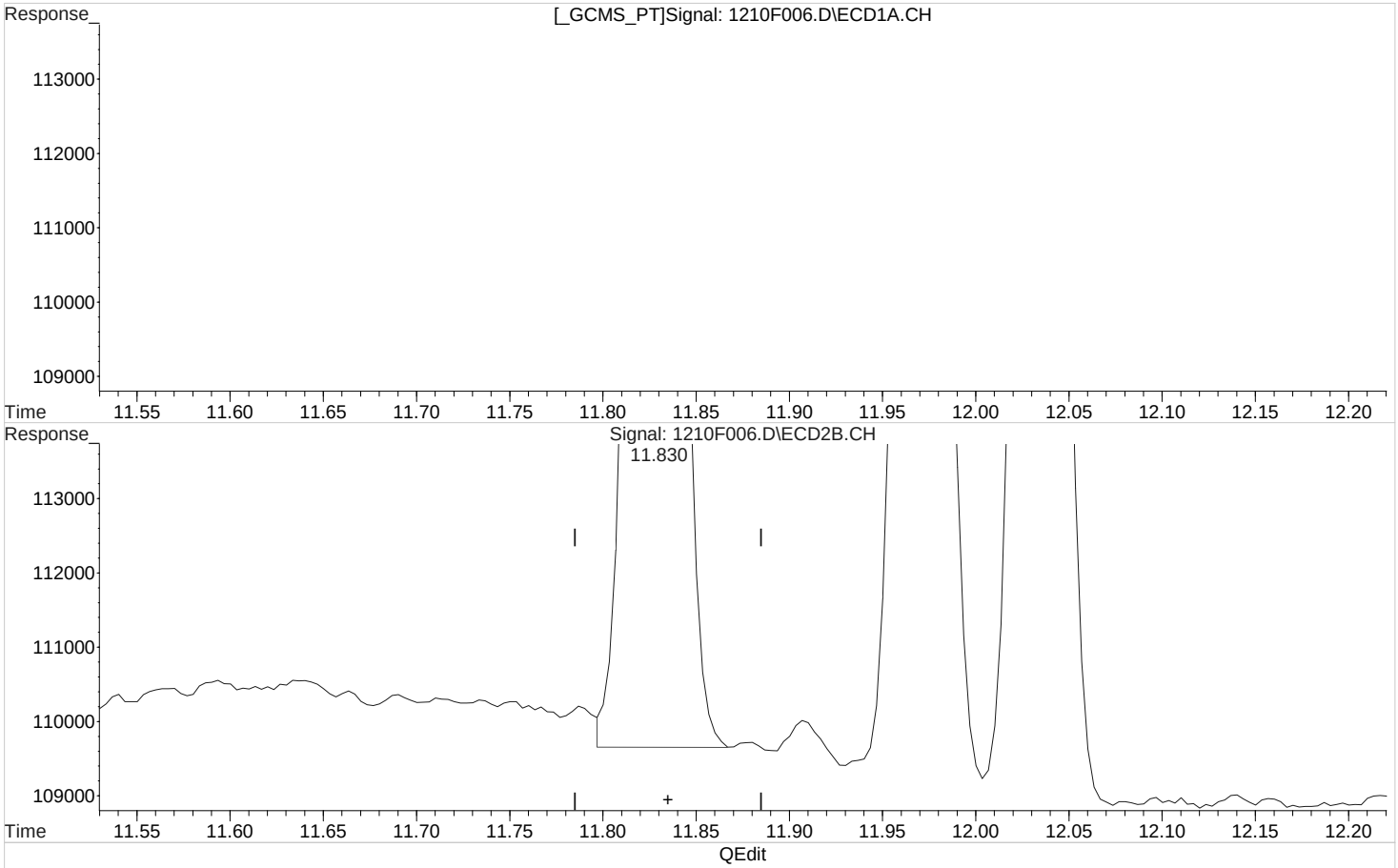
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(12) gamma-Chlordane

13.239min 2.131 ug/L

response 17557

(12) gamma-Chlordane #2

11.830min 1.965 ug/L

response 46647

Manual Integration:

Before

12/11/18

(+) = Expected Retention Time

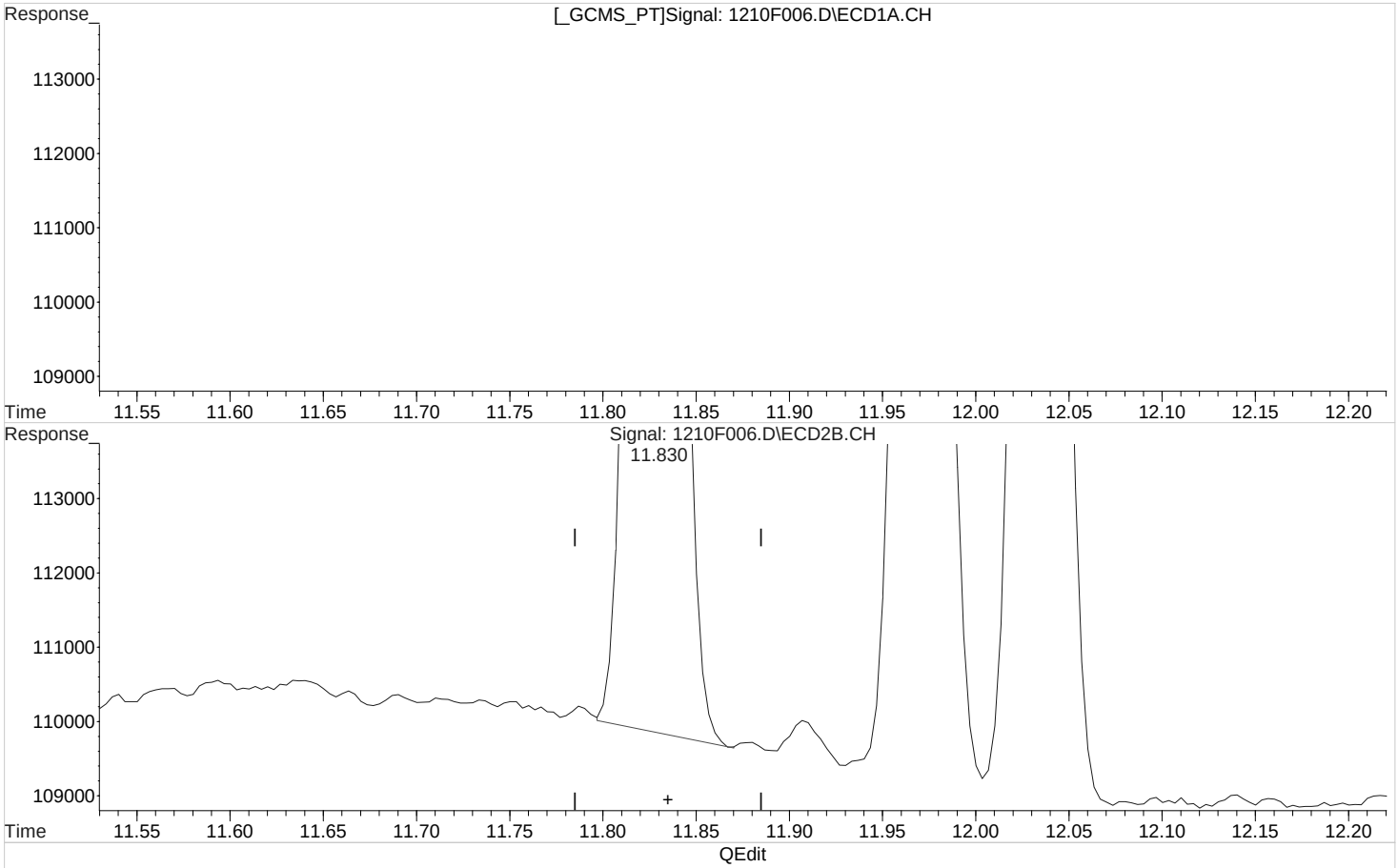
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(12) gamma-Chlordane

13.239min 2.131 ug/L

response 17557

Manual Integration:

After

Baseline/Shoulder

12/11/18

(12) gamma-Chlordane #2

11.830min 1.932 ug/L m

response 45866

(+) = Expected Retention Time

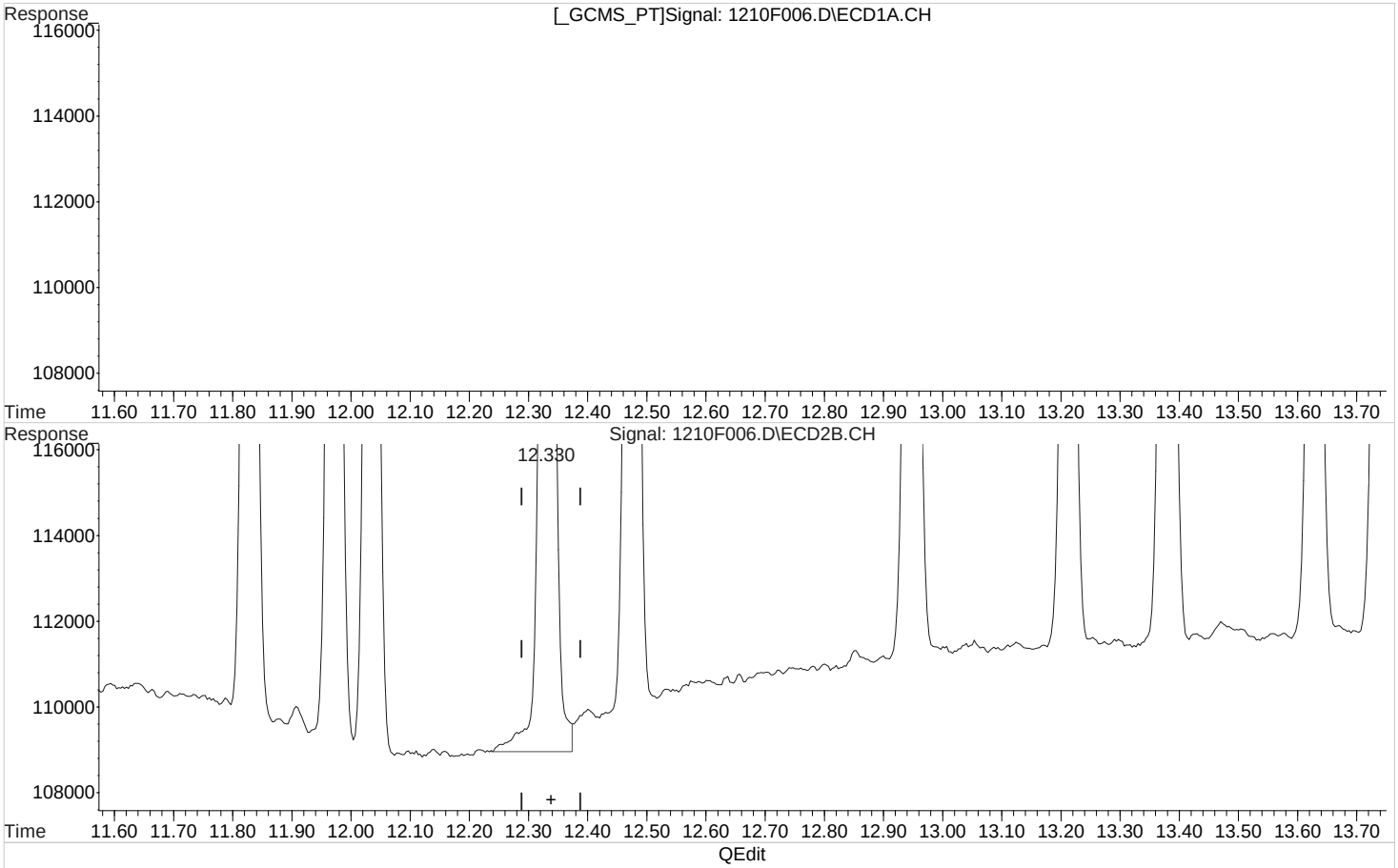
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(16) 4,4'-DDE

13.593min 2.067 ug/L

response 19253

Manual Integration:

Before

12/11/18

(16) 4,4'-DDE #2

12.330min 1.957 ug/L

response 47844

(+) = Expected Retention Time

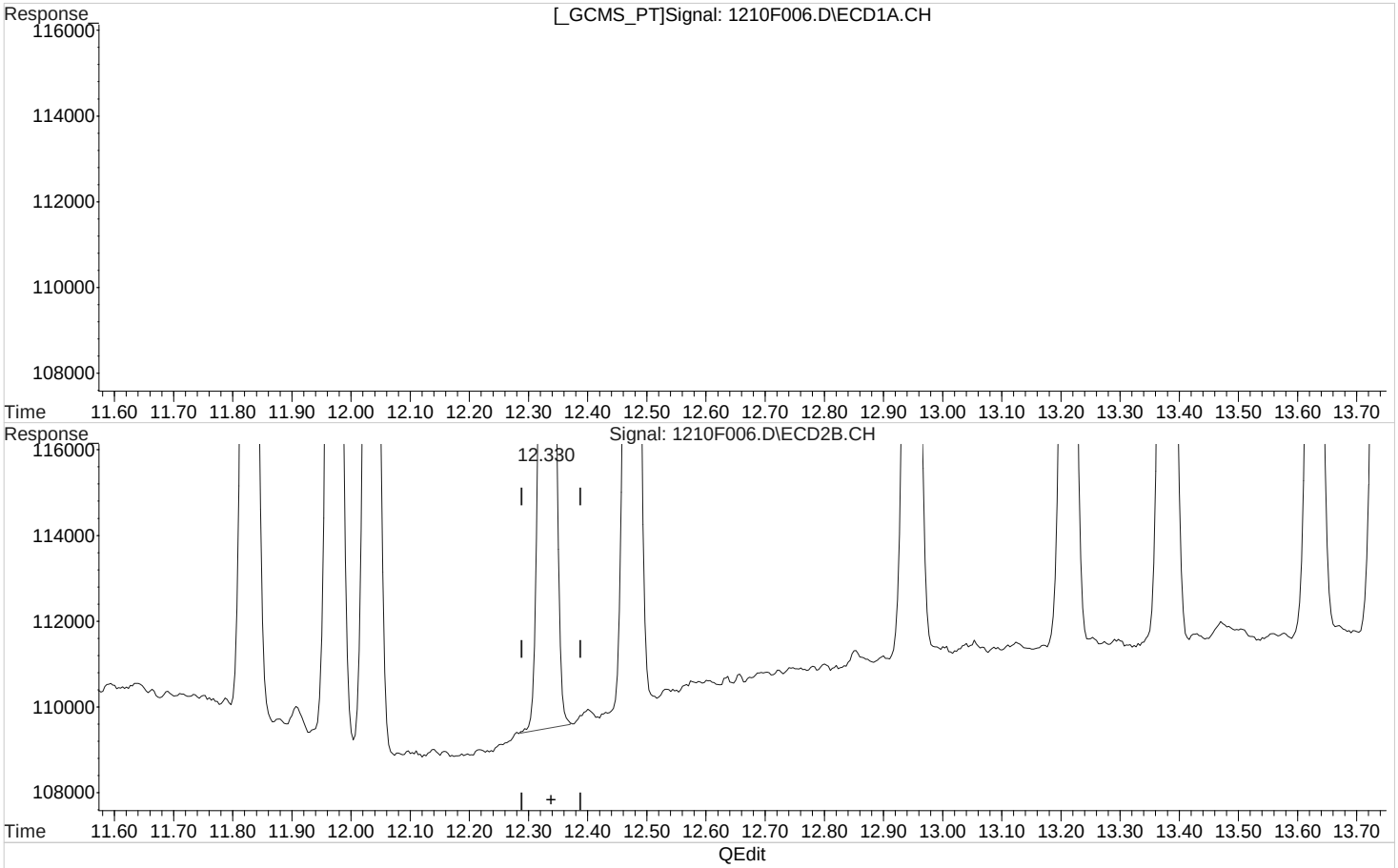
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(16) 4,4'-DDE

13.593min 2.067 ug/L

response 19253

Manual Integration:

After

Baseline/Shoulder

12/11/18

(16) 4,4'-DDE #2

12.330min 1.812 ug/L m

response 44286

(+) = Expected Retention Time

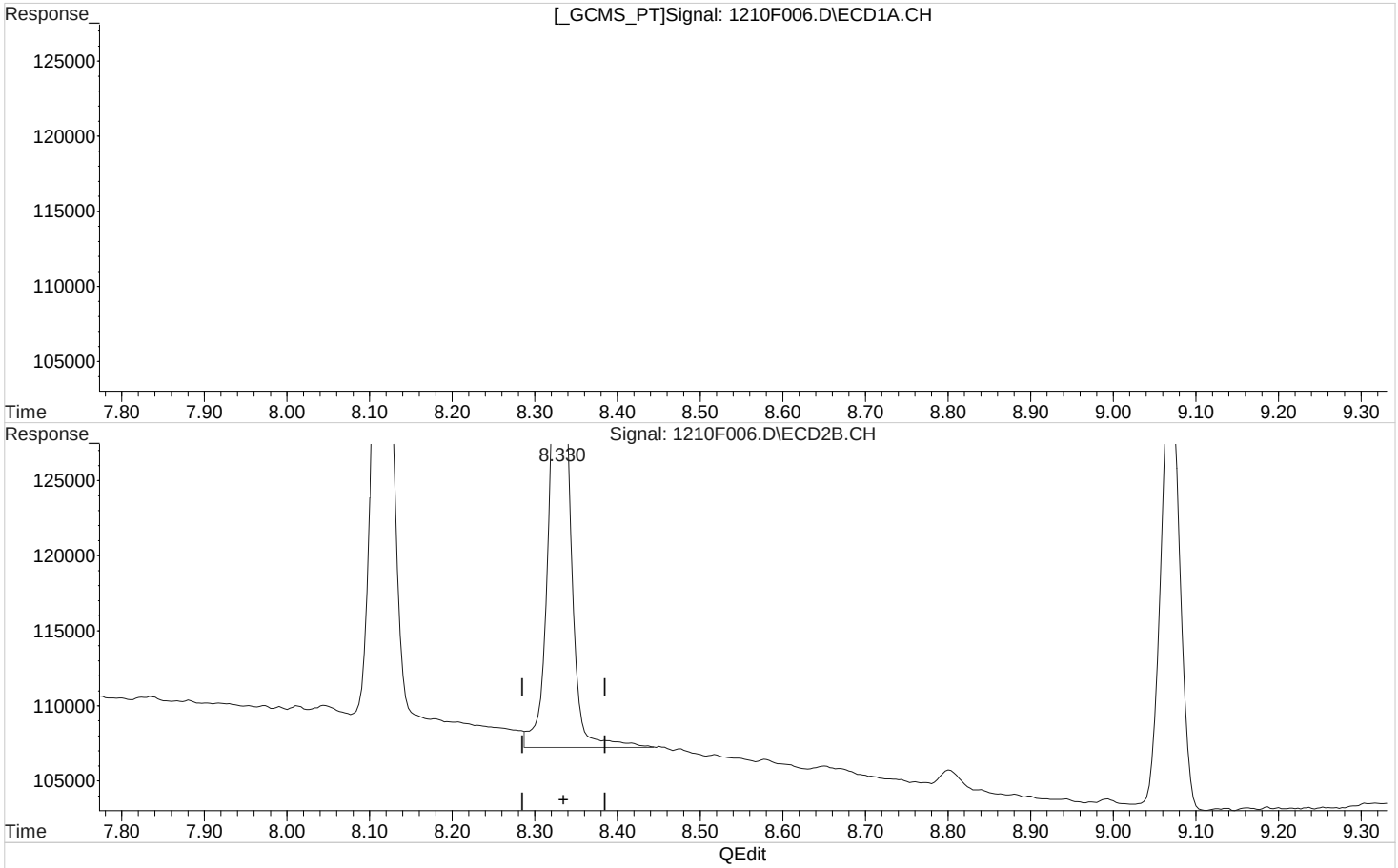
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(3) alpha-BHC

9.586min 2.030 ug/L

response 18638

Manual Integration:

Before

12/11/18

(3) alpha-BHC #2

8.330min 2.041 ug/L

response 55990

(+) = Expected Retention Time

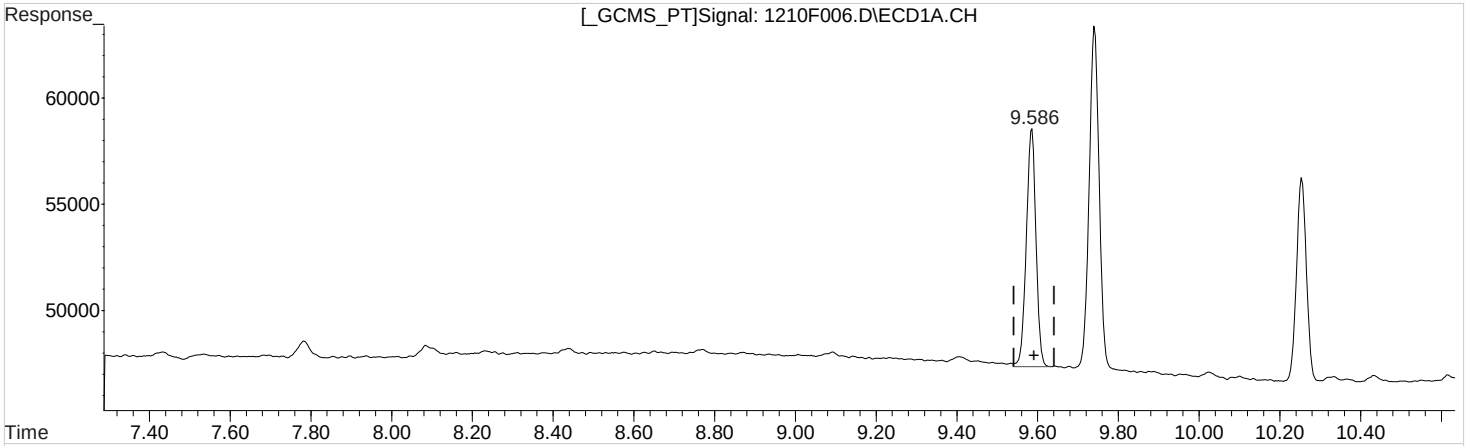
Quantitation Report (Qedit)

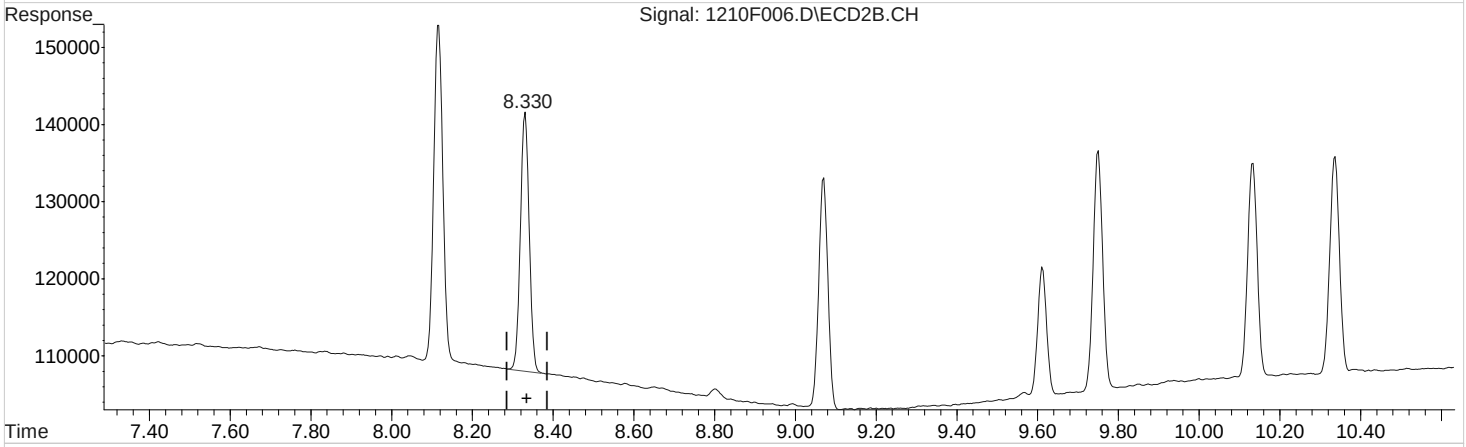
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(3) alpha-BHC

9.586min 2.030 ug/L

response 18638

Manual Integration:

After

Baseline/Shoulder

12/11/18

(3) alpha-BHC #2

8.330min 1.849 ug/L m

response 50734

(+) = Expected Retention Time

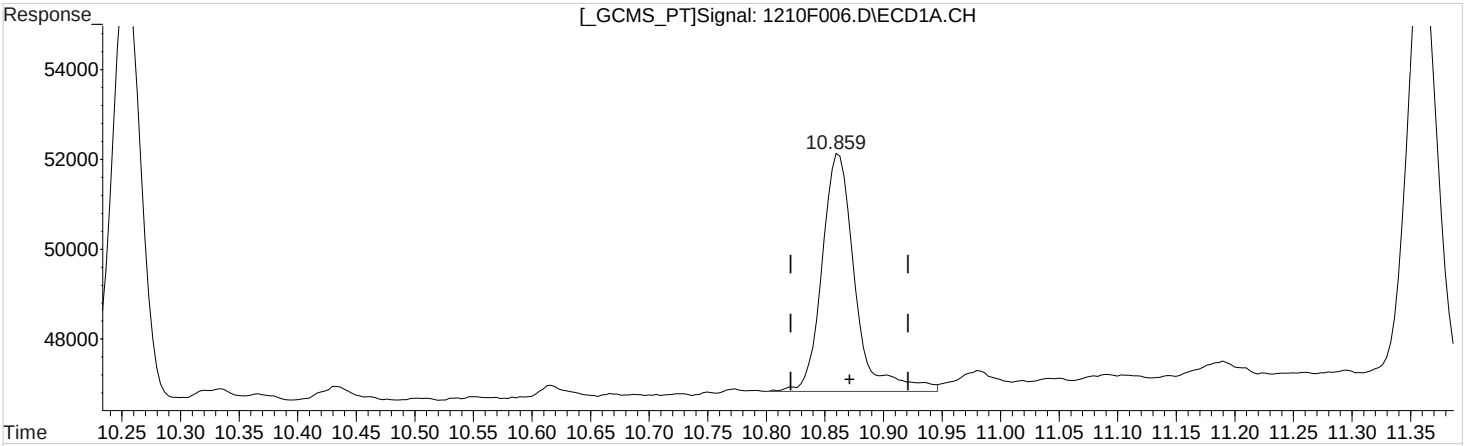
Quantitation Report (Qedit)

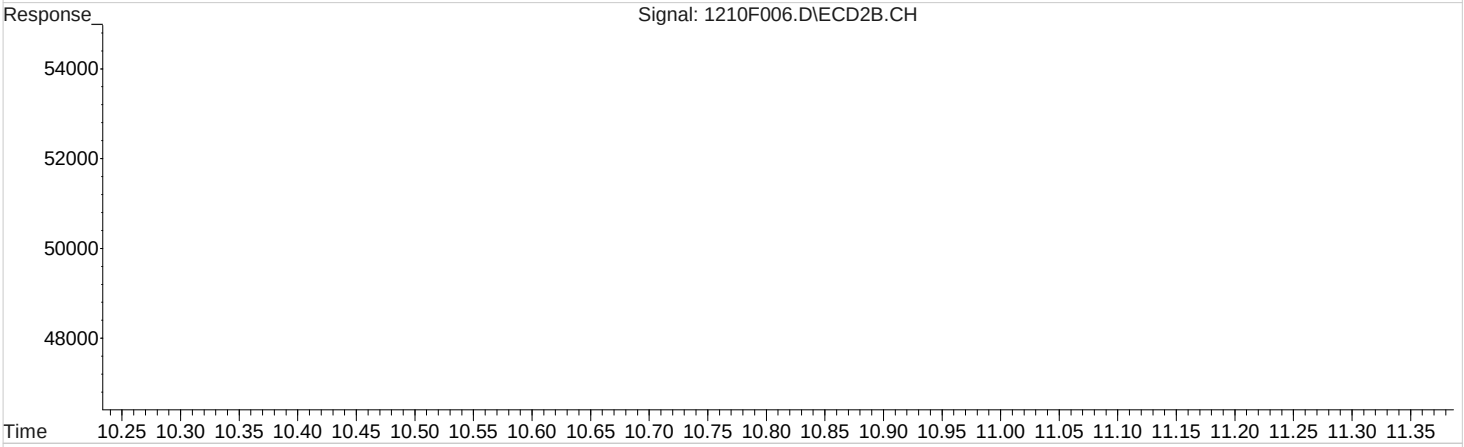
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
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Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.859min 2.302 ug/L

response 10376

(5) beta-BHC #2

9.610min 1.912 ug/L

response 25927

Manual Integration:

Before

12/11/18

(+) = Expected Retention Time

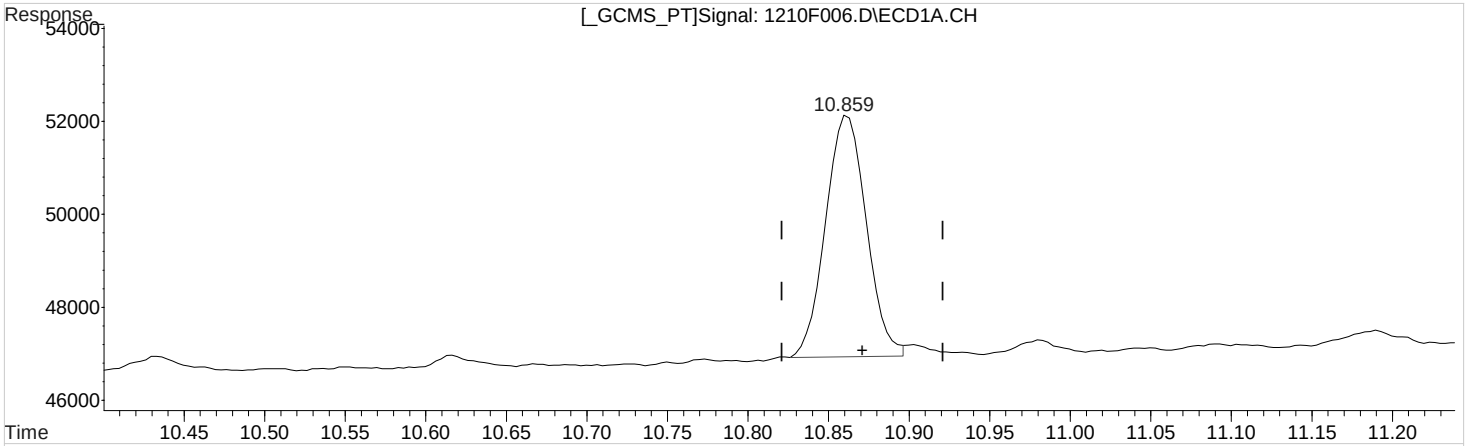
Quantitation Report (Qedit)

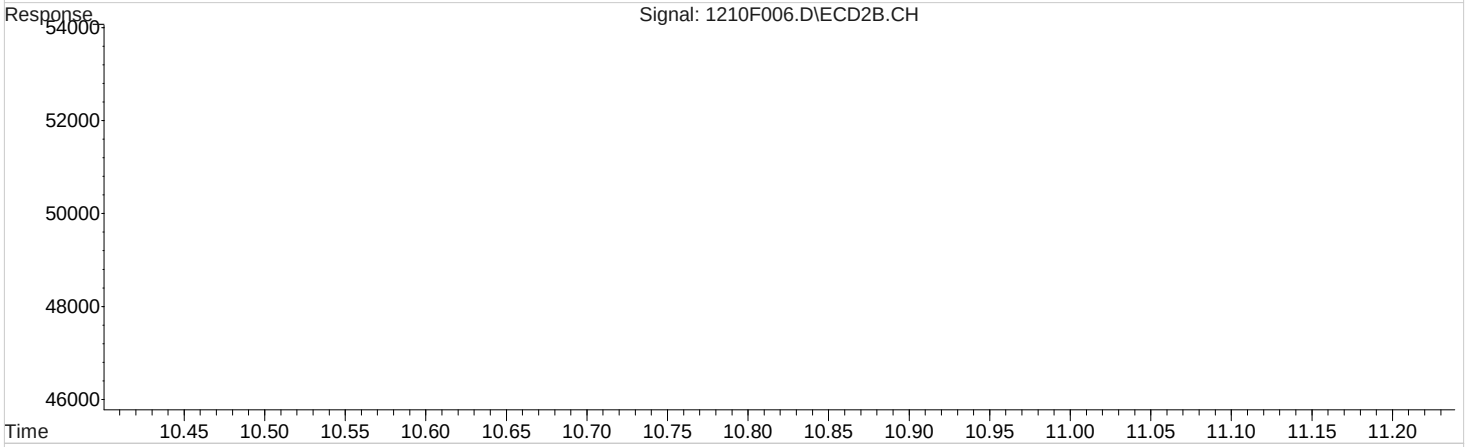
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.859min 2.031 ug/L m

response 9156

Manual Integration:

After

Baseline/Shoulder

12/11/18

(5) beta-BHC #2

9.610min 1.912 ug/L

response 25927

(+) = Expected Retention Time

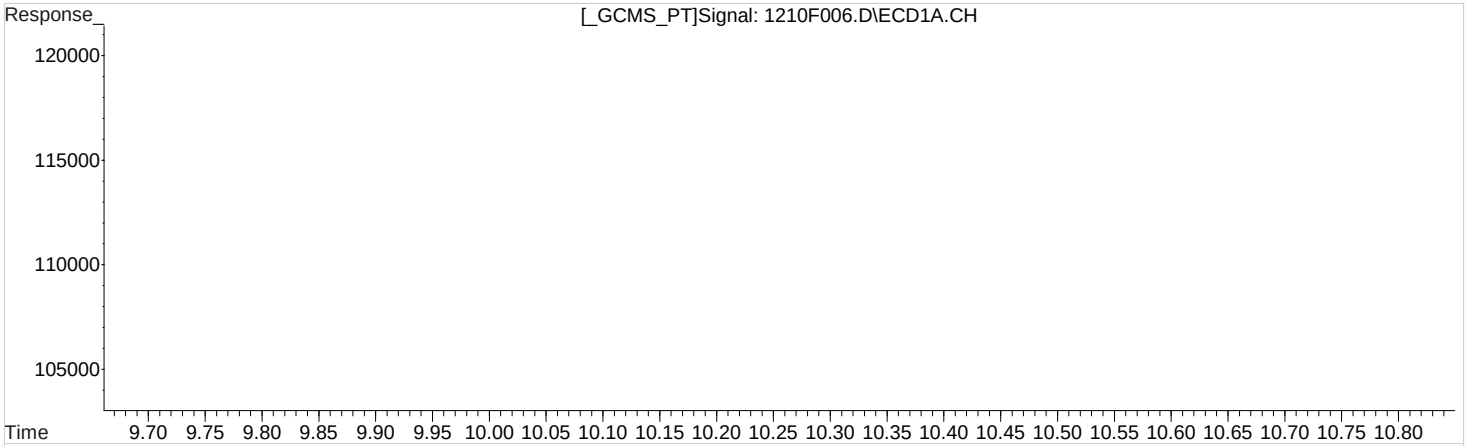
Quantitation Report (Qedit)

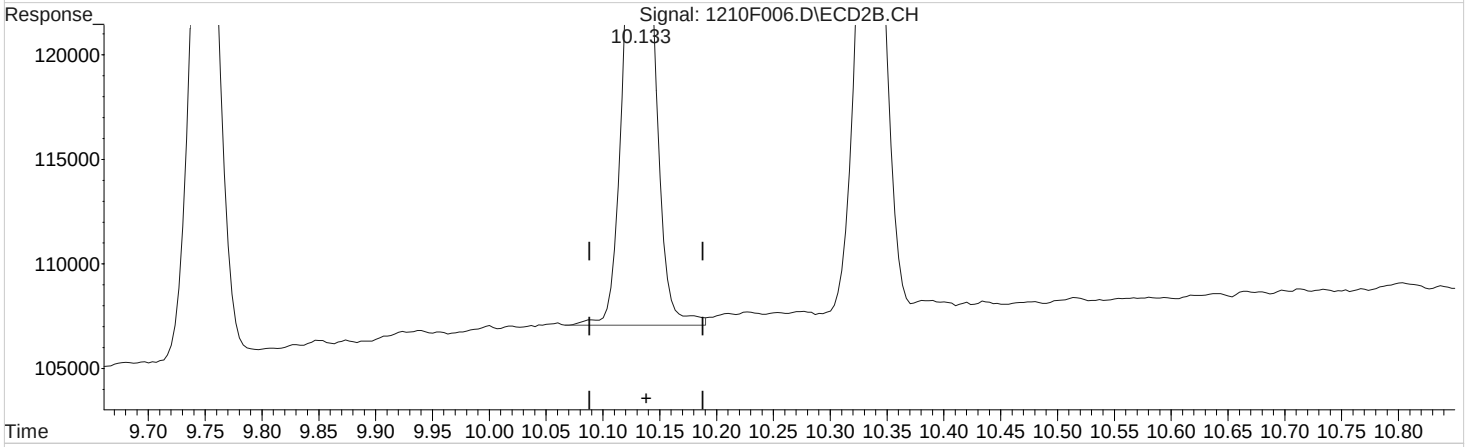
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(7) delta-BHC

11.359min 2.084 ug/L

response 16995

(7) delta-BHC #2

10.133min 1.970 ug/L

response 47597

Manual Integration:

Before

12/11/18

(+) = Expected Retention Time

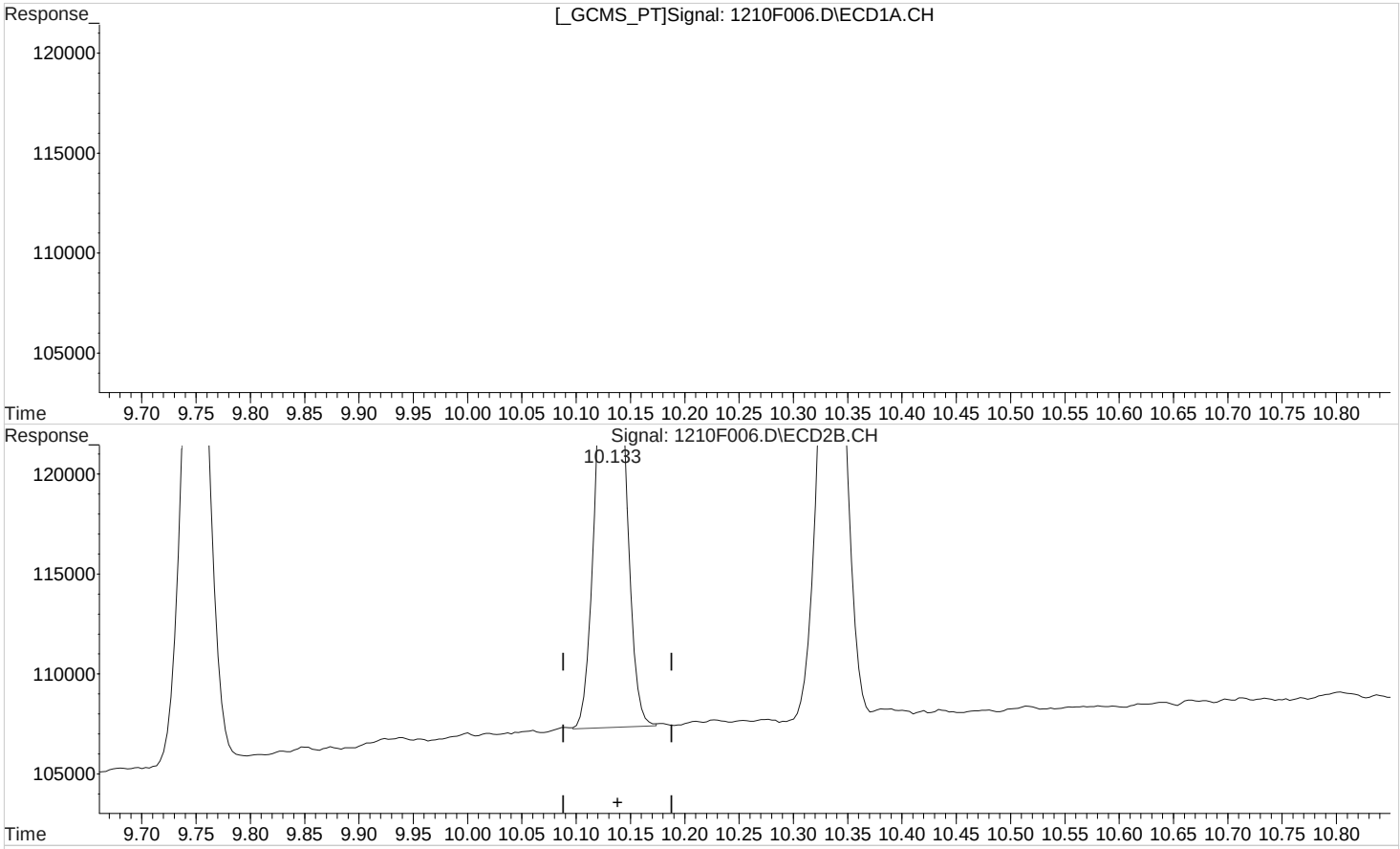
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(7) delta-BHC

11.359min 2.084 ug/L

response 16995

(7) delta-BHC #2

10.133min 1.890 ug/L m

response 45655

Manual Integration:

After

Baseline/Shoulder

12/11/18

(+) = Expected Retention Time

Preparation Information

Group ID:	KWG1806145	**Prep Method:**	~~METHOD~~ EPA 3511	**Prep Date:**	11/27/18 15:11
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1810644-030	TCLP Pesticides	8081B Pest OC TCLP	SOIL	100ml	5ml
K1811120-001	SL0084	8081B Pest OC TCLP	SOIL	100ml	5ml
K1811120-002	SL0064	8081B Pest OC TCLP	SOIL	100ml	5ml
K1811120-003	SL0065	8081B Pest OC TCLP	SOIL	100ml	5ml
K1811120-004	SL0022	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-1	Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-2	Duplicate Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-3	Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-4	Duplicate Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-5	Lab Control Sample	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-6	Lab Control Sample	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-7	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-8	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-9	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml

Lab Code	Parent Lab Code	Comments
KWG1806145-1	K1811120-001	
KWG1806145-2	K1811120-001	
KWG1806145-3	K1811120-001	
KWG1806145-4	K1811120-001	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810644-030	1704564					
K1811120-001	1704566					
K1811120-002	1704567					
K1811120-003	1704568					
K1811120-004	1704565					
KWG1806145-1	1704569					
KWG1806145-2	1704570					
KWG1806145-3	1704571					
KWG1806145-4	1704572					
KWG1806145-5	1704573					
KWG1806145-6	1704574					
KWG1806145-7	1704575					
KWG1806145-8	1704576					
KWG1806145-9	1704577					

Comments: 11/29 PT 8l, T/C

Started By: TAndrews Assisted By: ~~———~~ Training

Completed By: TAndrews Assisted By: ~~———~~ Yes (No) / Yes No

Reviewed By: [signature] Date: 11/29/18 Storage: Happy H1-10 I1-4

Chain of Custody

Relinquished By: [signature] Date: 11.28.18

Received By: [signature] Date: 12/11/18

Extracts Examined: (Yes) No

Preparation Information

Group ID: KWG1806145 **Prep Method:** METHOD **Prep Date:** 11/27/18 00:00
Department: Semivoa GC

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. mL	pH	Int. Vol.	Final Vol.	Surr. Added µL	Spike Added µL
1	K1810644-030	TCLP Pesticides	—		8081B Pest OC TCLP	SOIL	100	5	/	5	50	—
2	K1811120-001	SL0084	.15	/	8081B Pest OC TCLP	SOIL	100	6		5		—
3	K1811120-002	SL0064	.11	/	8081B Pest OC TCLP	SOIL	100	6		5		—
4	K1811120-003	SL0065	.11	/	8081B Pest OC TCLP	SOIL	100	6		5		—
5	K1811120-004	SL0022	.11	/	8081B Pest OC TCLP	SOIL	100	7		5		—
6	KWG1806145-1 K1811120-1	Matrix Spike 81	.15	/	8081B Pest OC TCLP	SOIL	100	6		5		50
7	KWG1806145-2	Duplicate Matrix Spike	.15	/	8081B Pest OC TCLP	SOIL	100	6		5		〃
8	KWG1806145-3	Matrix Spike T/C	.15	/	8081B Pest OC TCLP	SOIL	100	6		5		50/50
9	KWG1806145-4	Duplicate Matrix Spike	.15	/	8081B Pest OC TCLP	SOIL	100	6		5		〃
10	KWG1806145-5	Lab Control Sample 81	—		8081B Pest OC TCLP	SOIL	100	5		5		50
11	KWG1806145-6	Lab Control Sample T/C	—		8081B Pest OC TCLP	SOIL	100	5		5		50/50
12	KWG1806145-7	Method Blank Sol 1 LB	—		8081B Pest OC TCLP	SOIL	100	5		5		—
13	KWG1806145-8	Method Blank Sol 2 LB	—		8081B Pest OC TCLP	SOIL	100	5		5		—
14	KWG1806145-9	Method Blank	—		8081B Pest OC TCLP	SOIL	100	5	/	5	—	—

K Bottle I.d. is .01 11-27-18 TA

Prep Run: 327208

Comments: Sample 6145-8 had an intial PH of 3, neutralized using Sodium Hydroxide 11-27-18 TA

Surrogate ID: PCB7-52G 0.5ppm xp 05-08-19

Spike ID: GCPS8-47L 0.5ppm xp 11-30-18 / GCPS8-48L 20ppm xp 5-19-19 / GCPS8-43B 10ppm xp 2-16-19

Witness: J. [signature] 11/27/18

Started By: TAndrews Assisted By: —

Completed By: TAndrews Assisted By: —

Pest/PCB/PAH by 3511

Service Request # K1811120/0644 **Work Group # Pest:** KWG1806145
PCB: ———
PAH: ———

Solvent Lot # 196293

Extraction Start (time/date/initial): 1511 11.27.18 TB

Extraction Stop (time/date/initial): 1542 11.27.18 TB

NaCL Lot# 17H295208
Sulfate Lot # ———

Carbon Clean-up (Ext-Car)(time/date/initial): ——— Carbon Lot # ———
Hexane Lot # ———

Florisil Clean-up (Ext-Flor)(time/date/initial): ——— Florisil Lot # ———
Hexane Lot # ———

Sulfuric Acid Clean-up (3665) (time/date/initial): ——— Acid Lot # ———

Other Clean-up: ——— ☐ all samples ☐ some samples: ———

Pipette (2 mL) Lot # ——— Pipette (1 mL) Lot # 20717645

Pest Vial: Yellow Vial Storage: Happy H1-10 I1-4
PCB Vial: ——— Vial Storage: ———
PAH Vial: ——— Vial Storage: ———

Archived Extract Storage: Smeagol

Additional Comments: ———

———

☑	Hold times met (if no, reason: ———)
☑	Prep date, time, method, department, product code correct in stealth
☑	Spike information and Q.C. correct (insufficient volume or mass recorded if no Q.C.)
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked - bottle numbers appended if required
☑	Names present for: started by, completed by, relinquished by, and witnessed by. Training circled.
☑	Extract storage recorded
☑	Additional prep sheet completely filled out (NA or line out blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

TCLP Extraction Worksheet

Service Request Number(s): K1811120, 1269

Method : TCLP 1311 ☒ SPLP 1312 ☐ If Autofluff sample is used please place an X in this box ☐ Wet Ext. ☐ MEP ☐ Prep Run# : 326859

Note: 1 Blank needed per every 20 extracts.

Sample Number	Teflon Extraction Vessel #	Sample Description (Solid, Liquid, Multiphasic)	Partical Size < 1cm ?	Solution Determination Weight (g)	Initial pH	Aliquot of 1N HCl (mL)	Final pH	Solution To Be Used	Extraction Weight (g)	Extraction Solution Volume (mL)	Post-Extraction pH
K1811120-1	34	S	Y	5.110	9.13	3.5	1.84	1	100.06	2000	5.48
2	36			5.070	9.13		1.91		100.16		5.85
3	31			5.086	9.18		1.89		100.19		5.68
4	39			5.307	9.42		5.56	2	100.06		5.66
K1811269-1	24			5.119	8.08		1.88	1	100.68		4.95
2	5			5.310	8.34		1.88		100.48		4.98
3	28			5.165	8.55		1.90		100.79		5.13
MB	40	L							—		—
MB	26							2	—		—

CCL 11/20

pH Meter Calibrated at pH4 & pH7 Today? ☒ 11/20/18 11/21/18 pH Meter I.D. K-pH-08 Balance I.D. 48,52 Date Balance Checked: 11/14/18, 11/20/18

Extraction Solution Prep date: 11/20/18, 11/6/18 Tumbler # 3 Thermometer# 664244 Hot Plate Temp °C(50°C): 50

Today's Solution pH: 4.95, 2.83 11/20/18 Extraction Solution I.D. MET-1626-C Filter Lot # 162105 HCl I.D. RE1-48_A

Extraction Started Time: 16:37 Date: 11/20/18 MET-0626-I Disposable Extraction Vessel Lot #: —

Extraction Finished Time: 8:40 Date: ~~11/20~~ 11/21/18

Tumbler Rotational Speed (28 - 32 rpm): 29.6

Room Temperature at the Beginning of Extraction (Temp. Range 21° C - 25°C): 21.92

Analyst: [signature] Date: 11/20/18 Reviewer: [signature] Date: 11/26/18

F:\cp\misc\dgforms\TCLP Extraction Benchsheet 10-10-171

020466

DILUTION LOG

LAB ID	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	DATE	ANALYST	SOLVENT LOT	COMMENTS
~~K1810644-30~~	~~100 µl~~	~~500 µl~~	~~5X~~	12/11/18	MC	Hexane 196293	MC 12/11/18
K1810644-30	50 µl	1 ml	20X	12/11/18	MC	Hexane 196293	
|	5 µl	1 ml	200X	|	|	|	
|	50 µl	1 ml	20X	12/12/18	MC	|	
|	5 µl	1 ml	200X	|	|	|	

020467

Comment: OC PESTICIDES VIA 8081B
Operator: MC
Data Path: C:\GC23\DATA\121218\
Pre-Seq Cmd:
Post-Seq Cmd:

cal: 15907
Run # 618353 (1)
618354

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	IB	100	1212F001	PESTCLIP	HEXANE
2	IB	100	1212F002	PESTCLIP	HEXANE
3	PEM	1	1212F003	PESTCLIP	PEM GCPS8-49H
4	CCV	2	1212F004	PESTCLIP	81 2PPB GCPS8-49F
5	CCV	3	1212F005	PESTCLIP	TOX 100PPB GCPS8-47B
6	CCV	4	1212F006	PESTCLIP	CHLOR 20PPB GCPS8-49D
7	IB	5	1212F007	PESTCLIP	IB
8	MB	6	1212F008	PESTCLIP	KWG1806145-7 LB
9	MB	7	1212F009	PESTCLIP	KWG1806145-8 LB
10	MB	8	1212F010	PESTCLIP	KWG1806145-9 MB
11	LCS	9	1212F011	PESTCLIP	KWG1806145-LCS 81
12	LCS	10	1212F012	PESTCLIP	KWG1806145-LCS T/C
13	SMPL	11	1212F013	PESTCLIP	K1810644-030 @200X misinjection
14	SMPL	97	1212F014	PESTCLIP	K1810644-030 @20X misinjection
15	SMPL	12	1212F015	PESTCLIP	K1811120-001
16	MS	13	1212F016	PESTCLIP	K1811120-001MS 81
17	DMS	14	1212F017	PESTCLIP	K1811120-001DMS 81
18	MS	15	1212F018	PESTCLIP	K1811120-001MS T/C
19	DMS	16	1212F019	PESTCLIP	K1811120-001DMS T/C
20	SMPL	17	1212F020	PESTCLIP	K1811120-002
21	SMPL	18	1212F021	PESTCLIP	K1811120-003
22	SMPL	19	1212F022	PESTCLIP	K1811120-004
23	PEM	1	1212F023	PESTCLIP	PEM GCPS8-49H
24	CCV	2	1212F024	PESTCLIP	81 2PPB GCPS8-49F
25	IB	5	1212F025	PESTCLIP	IB
26	MB	20	1212F026	PESTCLIP	KWG1805970-MB
27	LCS	21	1212F027	PESTCLIP	KWG1805970-LCS 81
28	SMPL	22	1212F028	PESTCLIP	K1810930-001
29	MS	23	1212F029	PESTCLIP	K1810930-001MS 81
30	DMS	24	1212F030	PESTCLIP	K1810930-001DMS 81
31	SMPL	25	1212F031	PESTCLIP	K1810930-002
32	SMPL	26	1212F032*	PESTCLIP	K1810930-003
33	SMPL	27	1212F033	PESTCLIP	K1810930-004
34	SMPL	28	1212F034	PESTCLIP	K1810930-005
35	SMPL	29	1212F035	PESTCLIP	K1811059-001
36	SMPL	30	1212F036	PESTCLIP	K1811059-002
37	PEM	1	1212F037	PESTCLIP	PEM GCPS8-49H
38	CCV	2	1212F038	PESTCLIP	81 2PPB GCPS8-49F
39	CCV	96	1212F039	PESTCLIP	24 2PPB GCPS8-47C
40	CCV	3	1212F040	PESTCLIP	TOX 100PPB GCPS8-47B
41	CCV	4	1212F041	PESTCLIP	CHLOR 20PPB GCPS8-49D
42	IB	5	1212F042	PESTCLIP	IB
43	MB	31	1212F043	PESTCLIP	KWG1806014-MB

* File ID's off by 2, MC 121218

(1) 1212F015 - K1810644-30 @ 20X - NR - all analytes over range
1212F016 - K1810644-30 @ 200X -

PT sample only

Last Modified: Wed Dec 12 09:24:34 2018 Page: 1

020468

Sequence Name: C:\CDS\SEQUENCE\1212F04.S

Line	Type	Vial	DataFile	Method	Sample Name
44	LCS	32	1212F044	PESTCLIP	KWG1806014-LCS 81
45	LCS	33	1212F045	PESTCLIP	KWG1806014-LCS 24
46	LCS	34	1212F046	PESTCLIP	KWG1806014-DLCS 24
47	LCS	35	1212F047	PESTCLIP	KWG1806014-LCS T/C
48	DLCS	36	1212F048	PESTCLIP	KWG1806014-DLCS T/C
49	SMPL	37	1212F049	PESTCLIP	K1810249-001
50	SMPL	38	1212F050	PESTCLIP	K1810249-001MS 81
51	SMPL	39	1212F051	PESTCLIP	K1810249-001DMS 81
52	SMPL	40	1212F052	PESTCLIP	K1810249-002
53	SMPL	41	1212F053	PESTCLIP	K1810249-003
54	SMPL	42	1212F054	PESTCLIP	K1810249-004
55	SMPL	43	1212F055	PESTCLIP	K1810249-005
56	SMPL	44	1212F056	PESTCLIP	K1810249-006
57					

* File IDs off by 2, MC 121218

Comment: OC PESTICIDES VIA 8081B
Operator: MC
Data Path: C:\GC23\DATA\120718CAL\
Pre-Seq Cmd:
Post-Seq Cmd:

QC: 15907

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	PEM	1	1207F001	PESTCLIP	PEM GCPS8-49H
2	IB	2	1207F002	PESTCLIP	IB
3	ICAL	3	1207F003	PESTCLIP 81	0.2PPB GCPS8-49B
4	ICAL	4	1207F004	PESTCLIP 81	0.5PPB GCPS8-49C @2X → No Peaks, NR
5	ICAL	5	1207F005	PESTCLIP 81	1.0PPB GCPS8-49C
6	ICAL	6	1207F006	PESTCLIP 81	2.0PPB GCPS8-49F
7	ICAL	7	1207F007	PESTCLIP 81	5.0PPB GCPS8-49E @4X
8	ICAL	8	1207F008	PESTCLIP 81	10PPB GCPS8-49E @2X
9	ICV	9	1207F009	PESTCLIP 81	ICV 2PPB GCPS8-49A - RR - NR

Last Modified: Fri Dec 07 15:54:10 2018 Page: 1

Comment: OC PESTICIDES VIA 8081B
Operator: MC
Data Path: C:\GC23\DATA\121018CAL\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	IB	100	1210F001	PESTCLIP	HEXANE
2	PEM	11	1210F002	PESTCLIP	PEM GCPS8-49H
3	IB	12	1210F003	PESTCLIP	IB
4	ICAL	13	1210F004	PESTCLIP	81 0.5PPB GCPS8-49C @2X
5	ICAL	14	1210F005	PESTCLIP	81 1.0PPB GCPS8-49C
6	ICV	15	1210F006	PESTCLIP	81 ICV 2PPB GCPS8-49A

ALS-Kelso
Initial Calibration Checklist GC

Method: 8081B
ICAL ID or Date: ~~MJ~~ 15907
Instrument: GC-23

Primary	Secondary	
☒	☑	The new ICAL is saved with a unique ID.
☒	☑	ICAL was performed continuously (i.e. not interrupted by maintenance event).
☒	☑	All analytes in blank are < ½ MRL.
☒	☑	ICAL contains minimum number of concentrations.
☒	☑	No internal levels excluded for any analytes.
☒	☑	Retention times updated using a midpoint of the calibration. Secondary reviewer double check peak IDs.
☒	☑	Calibration files quantitated with new method.
☒	☑	Check integrations. Primary reviewer must check all integrations electronically. Secondary reviewer will check low point and high point electronically.
☒	☑	ICAL files added to calibration table.
☒	☑	The average RF or COD meets method criteria for all analytes.
☒	☑	ICV is quantitated against new ICAL.
☒	☑	ICV meets method criteria.
☒	☑	Linked in Stealth to an appropriate method. An appropriate method will be one that contains all analytes that were analyzed.
☒	☑	All calibration reports included: ICAL SUMMARY, ICAL DETAILED, ICV SUMMARY.
☒	☑	Enviroquant/Target responses match those in Stealth.
☒	☑	All quant reports and manual integrations initialed and dated.

Data packet should be in the following order: Sequence log, Calibration Review, Stealth ICAL reports, and quant reports.

Primary: MC Date: 12/11/18

Secondary: [signature] Date: 12/11/18

R:\SVG\FORMS\Calibration Review - GC.doc

020472

Initial Calibration - Summary Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Tetrachloro-m-xylene	SURR	Quadratic		2.359			0.990	0.9973	NA	0.04
alpha-BHC	MS	AverageRF		1.775	20	11.6			OK	
Hexachlorobenzene	MS	Quadratic		3.049			0.990	0.9994	OK	0.01
beta-BHC	MS	AverageRF		0.872	20	9.4			OK	
gamma-BHC (Lindane)	MS	AverageRF		1.524	20	11.7			OK	
delta-BHC	MS	AverageRF		1.577	20	9.8			OK	
Heptachlor	MS	Quadratic		1.840			0.990	0.9984	OK	0.03
Aldrin	MS	AverageRF		1.728	20	11.0			OK	
Isodrin	MS	AverageRF		1.448	20	11.9			OK	
Heptachlor Epoxide	MS	AverageRF		1.567	20	12.1			OK	
gamma-Chlordane	MS	AverageRF		1.593	20	11.4			OK	
Endosulfan I	MS	AverageRF		1.597	20	18.5			OK	
alpha-Chlordane	MS	AverageRF		1.713	20	13.3			OK	
Dieldrin	MS	AverageRF		1.625	20	12.9			OK	
4,4'-DDE	MS	AverageRF		1.801	20	12.7			OK	
Endrin	MS	AverageRF		1.524	20	15.3			OK	
Endosulfan II	MS	Quadratic		1.555			0.990	0.9992	OK	0.02
4,4'-DDD	MS	AverageRF		1.219	20	11.7			OK	
Endrin Aldehyde	MS	AverageRF		1.378	20	15.2			OK	
Endosulfan Sulfate	MS	AverageRF		1.454	20	14.6			OK	
4,4'-DDT	MS	AverageRF		1.057	20	13.4			OK	
Endrin Ketone	MS	AverageRF		1.439	20	11.1			OK	
Methoxychlor	MS	Linear		0.829			0.990	0.9981	OK	0.00
2,4'-DDE	MS	AverageRF		1.005	20	14.9			OK	
2,4'-DDD	MS	AverageRF		0.909	20	17.8			OK	
2,4'-DDT	MS	AverageRF		0.902	20	5.6			OK	
Decachlorobiphenyl	SURR	AverageRF		2.269	20	17.8			NA	
Toxaphene {1}	MULTI	AverageRF		0.023	20	6.4			OK	
Toxaphene {2}	MULTI	Quadratic		0.012			0.990	0.9983	OK	0.94
Toxaphene {3}	MULTI	AverageRF		0.017	20	13.9			OK	
Toxaphene {4}	MULTI	AverageRF		0.007	20	14.6			OK	
Toxaphene {5}	MULTI	AverageRF		0.009	20	13.8			OK	
Toxaphene {6}	MULTI	AverageRF		0.026	20	4.4			OK	
Chlordane {1}	MULTI	AverageRF		0.057	20	10.9			OK	
Chlordane {2}	MULTI	AverageRF		0.072	20	13.3			OK	
Chlordane {3}	MULTI	AverageRF		0.049	20	9.9			OK	
Chlordane {4}	MULTI	AverageRF		0.144	20	8.4			OK	
Chlordane {5}	MULTI	AverageRF		0.122	20	9.0			OK	
Chlordane {6}	MULTI	AverageRF		0.090	20	11.2			OK	
Chlorpyrifos	MS	AverageRF		0.661	20	3.2			OK	
Oxychlordane	MS	AverageRF		1.334	20	10.6			OK	
cis-Nonachlor	MS	AverageRF		1.515	20	8.6			OK	
trans-Nonachlor	MS	AverageRF		1.452	20	10.6			OK	
Mirex	MS	AverageRF		1.171	20	7.3			OK	
Hexachloroethane	MS	AverageRF		2.176	20	8.8			OK	
Hexachlorobutadiene	MS	AverageRF		1.813	20	11.6			OK	
Perthane	MS	AverageRF		0.035	20	8.5			OK	

Initial Calibration - Summary Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Tetrachloro-m-xylene	SURR	AverageRF		1.638	20	7.9			NA	
alpha-BHC	MS	AverageRF		1.398	20	8.0			OK	
Hexachlorobenzene	MS	AverageRF		1.936	20	9.0			OK	
beta-BHC	MS	AverageRF		0.691	20	10.4			OK	
gamma-BHC (Lindane)	MS	AverageRF		1.284	20	9.3			OK	
delta-BHC	MS	AverageRF		1.231	20	6.4			OK	
Heptachlor	MS	AverageRF		1.376	20	9.8			OK	
Aldrin	MS	AverageRF		1.291	20	10.0			OK	
Isodrin	MS	AverageRF		1.123	20	10.6			OK	
Heptachlor Epoxide	MS	AverageRF		1.233	20	8.9			OK	
gamma-Chlordane	MS	AverageRF		1.210	20	8.5			OK	
Endosulfan I	MS	AverageRF		1.130	20	10.8			OK	
alpha-Chlordane	MS	AverageRF		1.218	20	10.1			OK	
Dieldrin	MS	AverageRF		1.154	20	6.7			OK	
4,4'-DDE	MS	AverageRF		1.245	20	10.8			OK	
Endrin	MS	AverageRF		1.138	20	10.4			OK	
Endosulfan II	MS	AverageRF		1.054	20	8.0			OK	
4,4'-DDD	MS	AverageRF		0.922	20	7.6			OK	
Endrin Aldehyde	MS	AverageRF		0.961	20	10.0			OK	
Endosulfan Sulfate	MS	AverageRF		1.055	20	8.1			OK	
4,4'-DDT	MS	Quadratic		0.975			0.990	0.9999	OK	0.05
Endrin Ketone	MS	AverageRF		1.166	20	8.2			OK	
Methoxychlor	MS	AverageRF		0.526	20	7.9			OK	
2,4'-DDE	MS	AverageRF		0.810	20	13.9			OK	
2,4'-DDD	MS	AverageRF		0.706	20	8.3			OK	
2,4'-DDT	MS	AverageRF		0.849	20	17.2			OK	
Decachlorobiphenyl	SURR	AverageRF		1.373	20	10.1			NA	
Toxaphene {1}	MULTI	AverageRF		0.017	20	9.5			OK	
Toxaphene {2}	MULTI	AverageRF		0.006	20	10.8			OK	
Toxaphene {3}	MULTI	AverageRF		0.006	20	13.5			OK	
Toxaphene {4}	MULTI	AverageRF		0.010	20	7.3			OK	
Toxaphene {5}	MULTI	AverageRF		0.020	20	11.1			OK	
Toxaphene {6}	MULTI	AverageRF		0.016	20	7.2			OK	
Chlordane {1}	MULTI	AverageRF		0.043	20	11.0			OK	
Chlordane {2}	MULTI	AverageRF		0.028	20	7.3			OK	
Chlordane {3}	MULTI	AverageRF		0.109	20	6.2			OK	
Chlordane {4}	MULTI	AverageRF		0.067	20	12.7			OK	
Chlordane {5}	MULTI	AverageRF		0.032	20	7.7			OK	
Chlordane {6}	MULTI	AverageRF		0.098	20	7.5			OK	
Chlorpyrifos	MS	AverageRF		0.656	20	10.3			OK	
Oxychlordane	MS	AverageRF		1.275	20	14.1			OK	
cis-Nonachlor	MS	AverageRF		1.429	20	10.9			OK	
trans-Nonachlor	MS	AverageRF		1.335	20	11.5			OK	
Mirex	MS	AverageRF		1.177	20	12.7			OK	
Hexachloroethane	MS	AverageRF		1.887	20	9.0			OK	
Hexachlorobutadiene	MS	AverageRF		1.536	20	11.1			OK	
Perthane	MS	AverageRF		0.035	20	13.4			OK	

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284598	J:\GC23\data\100918CAL\1009F023.D	10/09/2018 19:20	10/10/2018 08:16	12/11/2018 09:33
2	284600	J:\GC23\data\100918CAL\1009F024.D	10/09/2018 19:49	10/10/2018 08:22	12/11/2018 09:33
3	284602	J:\GC23\data\100918CAL\1009F025.D	10/09/2018 20:19	10/10/2018 08:24	12/11/2018 09:33
4	284604	J:\GC23\data\100918CAL\1009F026.D	10/09/2018 20:49	10/10/2018 08:38	12/11/2018 09:33
5	284606	J:\GC23\data\100918CAL\1009F027.D	10/09/2018 21:20	10/10/2018 08:42	12/11/2018 09:33
6	284608	J:\GC23\data\100918CAL\1009F028.D	10/09/2018 21:50	10/10/2018 08:45	12/11/2018 09:33
7	284614	J:\GC23\data\100918CAL\1009F031.D	10/09/2018 23:19	10/10/2018 09:00	12/11/2018 09:34
8	284616	J:\GC23\data\100918CAL\1009F032.D	10/09/2018 23:49	10/10/2018 09:02	12/11/2018 09:34
9	284618	J:\GC23\data\100918CAL\1009F033.D	10/10/2018 00:19	10/10/2018 09:04	12/11/2018 09:34
10	284620	J:\GC23\data\100918CAL\1009F034.D	10/10/2018 00:50	10/10/2018 09:06	12/11/2018 09:34
11	284622	J:\GC23\data\100918CAL\1009F035.D	10/10/2018 01:20	10/10/2018 09:08	12/11/2018 09:34
12	284624	J:\GC23\data\100918CAL\1009F036.D	10/10/2018 01:50	10/10/2018 09:11	12/11/2018 09:34
13	284626	J:\GC23\data\100918CAL\1009F039.D	10/10/2018 03:19	10/10/2018 09:22	12/11/2018 09:34
14	284628	J:\GC23\data\100918CAL\1009F040.D	10/10/2018 03:49	10/10/2018 09:23	12/11/2018 09:34
15	284630	J:\GC23\data\100918CAL\1009F041.D	10/10/2018 04:19	10/10/2018 09:26	12/11/2018 09:34
16	284632	J:\GC23\data\100918CAL\1009F042.D	10/10/2018 04:49	10/10/2018 09:29	12/11/2018 09:34
17	284634	J:\GC23\data\100918CAL\1009F043.D	10/10/2018 05:19	10/10/2018 09:32	12/11/2018 09:35
18	284636	J:\GC23\data\100918CAL\1009F044.D	10/10/2018 05:49	10/10/2018 09:34	12/11/2018 09:35
19	284640	J:\GC23\data\101018CAL\1010F006.D	10/10/2018 12:29	10/10/2018 12:56	12/11/2018 09:35
20	284744	J:\GC23\data\101518CAL\1015F013.D	10/15/2018 19:37	10/16/2018 09:02	12/11/2018 09:35
21	284746	J:\GC23\data\101518CAL\1015F015.D	10/15/2018 20:36	10/16/2018 09:03	12/11/2018 09:35
22	284748	J:\GC23\data\101518CAL\1015F016.D	10/15/2018 21:06	10/16/2018 09:04	12/11/2018 09:35
23	284750	J:\GC23\data\101518CAL\1016F007.D	10/16/2018 12:59	10/16/2018 13:50	12/11/2018 09:35
24	284752	J:\GC23\data\101518CAL\1016F010.D	10/16/2018 14:27	10/16/2018 15:21	12/11/2018 09:35
25	284754	J:\GC23\data\101518CAL\1016F013.D	10/16/2018 15:57	10/16/2018 16:22	12/11/2018 09:35
26	285483	J:\GC23\data\120718CAL\1207F003.D	12/07/2018 16:55	12/11/2018 13:10	12/11/2018 13:15
27	285485	J:\GC23\data\120718CAL\1207F006.D	12/07/2018 18:23	12/10/2018 15:53	12/11/2018 09:36
28	285487	J:\GC23\data\120718CAL\1207F007.D	12/07/2018 18:53	12/10/2018 10:33	12/11/2018 09:36
29	285489	J:\GC23\data\120718CAL\1207F008.D	12/07/2018 19:22	12/10/2018 15:54	12/11/2018 09:36
30	285491	J:\GC23\data\121018CAL\1210F004.D	12/10/2018 14:49	12/10/2018 15:47	12/11/2018 09:36
31	285493	J:\GC23\data\121018CAL\1210F005.D	12/10/2018 15:18	12/10/2018 15:49	12/11/2018 09:36

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Tetrachloro-m-xylene							2.359	19.7#
		26 2.421	27 2.057	28 2.020	29 1.852	30 3.009		
	31 2.794							
alpha-BHC							1.775	11.6
		26 1.768	27 1.677	28 1.616	29 1.559	30 1.932		
	31 2.099							

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Hexachlorobenzene							3.049	29.8#
		26 4.664	27 2.536	28 2.422	29 2.162	30 3.295		
	31 3.215							
beta-BHC							0.872	9.4
		26 0.930	27 0.854	28 0.808	29 0.756	30 0.902		
	31 0.981							
gamma-BHC (Lindane)							1.524	11.7
		26 1.476	27 1.429	28 1.411	29 1.366	30 1.621		
	31 1.841							
delta-BHC							1.577	9.8
		26 1.640	27 1.461	28 1.459	29 1.405	30 1.738		
	31 1.761							
Heptachlor							1.840	36.6#
		26 3.107	27 1.399	28 1.445	29 1.289	30 1.951		
	31 1.852							
Aldrin							1.728	11.0
		26 1.971	27 1.595	28 1.576	29 1.520	30 1.798		
	31 1.908							
Isodrin							1.448	11.9
		26 1.569	27 1.300	28 1.333	29 1.253	30 1.572		
	31 1.659							
Heptachlor Epoxide							1.567	12.1
		26 1.466	27 1.501	28 1.472	29 1.356	30 1.793		
	31 1.816							

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
gamma-Chlordane													1.593	11.4
			26	1.567	27	1.496	28	1.471	29	1.393	30	1.806		
	31	1.826												
Endosulfan I													1.597	18.5
			26	1.975	27	1.352	28	1.385	29	1.269	30	1.803		
	31	1.800												
alpha-Chlordane													1.713	13.3
			26	1.816	27	1.552	28	1.539	29	1.448	30	1.970		
	31	1.955												
Dieldrin													1.625	12.9
			26	1.720	27	1.474	28	1.461	29	1.392	30	1.801		
	31	1.901												
4,4'-DDE													1.801	12.7
			26	1.887	27	1.620	28	1.623	29	1.566	30	2.016		
	31	2.094												
Endrin													1.524	15.3
			26	1.737	27	1.346	28	1.349	29	1.250	30	1.755		
	31	1.710												
Endosulfan II													1.555	22.6#
			26	2.137	27	1.292	28	1.287	29	1.237	30	1.703		
	31	1.675												
4,4'-DDD													1.219	11.7
			26	1.340	27	1.105	28	1.113	29	1.066	30	1.404		
	31	1.283												

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Endrin Aldehyde							1.378	15.2
		26 1.581	27 1.230	28 1.217	29 1.137	30 1.479		
	31 1.627							
Endosulfan Sulfate							1.454	14.6
		26 1.592	27 1.306	28 1.291	29 1.203	30 1.625		
	31 1.708							
4,4'-DDT							1.057	13.4
		26 1.216	27 0.946	28 0.949	29 0.907	30 1.102		
	31 1.218							
Endrin Ketone							1.439	11.1
		26 1.417	27 1.345	28 1.334	29 1.275	30 1.688		
	31 1.575							
Methoxychlor							0.829	49.4#
		26 1.626	27 0.578	28 0.562	29 0.570	30 0.807		
	31 0.829							
2,4'-DDE							1.005	14.9
		20 1.001	21 0.925	22 0.840	23 0.985	24 1.283		
	25 0.994							
2,4'-DDD							0.909	17.8
		20 0.914	21 0.843	22 0.733	23 0.866	24 1.214		
	25 0.885							
2,4'-DDT							0.902	5.6
		20 0.951	21 0.911	22 0.810	23 0.888	24 0.941		
	25 0.914							

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Decachlorobiphenyl							2.269	17.8
		26 2.328	27 1.998	28 1.955	29 1.841	30 2.711		
	31 2.782							
Toxaphene {1}							0.023	6.4
	7 0.022	8 0.024	9 0.025	10 0.023	11 0.022	12 0.021		
Toxaphene {2}							0.012	22.7#
	7 0.015	8 0.013	9 0.012	10 0.011	11 0.009	12 0.009		
Toxaphene {3}							0.017	13.9
	7 0.021	8 0.018	9 0.018	10 0.016	11 0.015	12 0.015		
Toxaphene {4}							0.007	14.6
	7 0.009	8 0.007	9 0.007	10 0.007	11 0.006	12 0.006		
Toxaphene {5}							0.009	13.8
	7 0.011	8 0.010	9 0.009	10 0.009	11 0.008	12 0.008		
Toxaphene {6}							0.026	4.4
	7 0.025	8 0.027	9 0.027	10 0.026	11 0.025	12 0.025		
Chlordane {1}							0.057	10.9
	13 0.066	14 0.056	15 0.061	16 0.057	17 0.054	18 0.046		
	19 0.059							

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Chlordane {2}							0.072	13.3
	13 0.072	14 0.072	15 0.074	16 0.071	17 0.067	18 0.058		
	19 0.090							
Chlordane {3}							0.049	9.9
	13 0.052	14 0.049	15 0.052	16 0.051	17 0.047	18 0.040		
	19 0.054							
Chlordane {4}							0.144	8.4
	13 0.152	14 0.148	15 0.155	16 0.141	17 0.138	18 0.121		
	19 0.153							
Chlordane {5}							0.122	9.0
	13 0.130	14 0.123	15 0.131	16 0.122	17 0.117	18 0.100		
	19 0.131							
Chlordane {6}							0.090	11.2
	13 0.088	14 0.094	15 0.098	16 0.088	17 0.085	18 0.072		
	19 0.103							
Chlorpyrifos	1 0.649	2 0.673	3 0.633	4 0.664	5 0.653	6 0.695	0.661	3.2
Oxychlordane	1 1.555	2 1.405	3 1.337	4 1.329	5 1.142	6 1.236	1.334	10.6
cis-Nonachlor	1 1.719	2 1.574	3 1.507	4 1.517	5 1.332	6 1.439	1.515	8.6

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
trans-Nonachlor	1	1.685	2	1.544	3	1.460	4	1.435	5	1.243	6	1.345	1.452	10.6
Mirex	1	1.276	2	1.212	3	1.170	4	1.220	5	1.040	6	1.106	1.171	7.3
Hexachloroethane	1	2.440	2	2.292	3	2.184	4	2.098	5	1.867	6	2.175	2.176	8.8
Hexachlorobutadiene	1	2.136	2	1.944	3	1.809	4	1.762	5	1.520	6	1.707	1.813	11.6
Perthane			2	0.031	3	0.039	4	0.033	5	0.035	6	0.036	0.035	8.5

 # RSD Not Applicable. Compound being quantitated from curve. Included in Average RF summary for Average %RSD calculation.

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	Linear

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
284598	J:\GC23\data\100918CAL\1009F023.D	10/09/2018 19:20	10/10/2018 08:16	12/11/2018 09:33
284600	J:\GC23\data\100918CAL\1009F024.D	10/09/2018 19:49	10/10/2018 08:22	12/11/2018 09:33
284602	J:\GC23\data\100918CAL\1009F025.D	10/09/2018 20:19	10/10/2018 08:24	12/11/2018 09:33
284604	J:\GC23\data\100918CAL\1009F026.D	10/09/2018 20:49	10/10/2018 08:38	12/11/2018 09:33
284606	J:\GC23\data\100918CAL\1009F027.D	10/09/2018 21:20	10/10/2018 08:42	12/11/2018 09:33
284608	J:\GC23\data\100918CAL\1009F028.D	10/09/2018 21:50	10/10/2018 08:45	12/11/2018 09:33
284614	J:\GC23\data\100918CAL\1009F031.D	10/09/2018 23:19	10/10/2018 09:00	12/11/2018 09:34
284616	J:\GC23\data\100918CAL\1009F032.D	10/09/2018 23:49	10/10/2018 09:02	12/11/2018 09:34
284618	J:\GC23\data\100918CAL\1009F033.D	10/10/2018 00:19	10/10/2018 09:04	12/11/2018 09:34
284620	J:\GC23\data\100918CAL\1009F034.D	10/10/2018 00:50	10/10/2018 09:06	12/11/2018 09:34
284622	J:\GC23\data\100918CAL\1009F035.D	10/10/2018 01:20	10/10/2018 09:08	12/11/2018 09:34
284624	J:\GC23\data\100918CAL\1009F036.D	10/10/2018 01:50	10/10/2018 09:11	12/11/2018 09:34
284626	J:\GC23\data\100918CAL\1009F039.D	10/10/2018 03:19	10/10/2018 09:22	12/11/2018 09:34
284628	J:\GC23\data\100918CAL\1009F040.D	10/10/2018 03:49	10/10/2018 09:23	12/11/2018 09:34
284630	J:\GC23\data\100918CAL\1009F041.D	10/10/2018 04:19	10/10/2018 09:26	12/11/2018 09:34
284632	J:\GC23\data\100918CAL\1009F042.D	10/10/2018 04:49	10/10/2018 09:29	12/11/2018 09:34
284634	J:\GC23\data\100918CAL\1009F043.D	10/10/2018 05:19	10/10/2018 09:32	12/11/2018 09:35
284636	J:\GC23\data\100918CAL\1009F044.D	10/10/2018 05:49	10/10/2018 09:34	12/11/2018 09:35
284640	J:\GC23\data\101018CAL\1010F006.D	10/10/2018 12:29	10/10/2018 12:56	12/11/2018 09:35
284744	J:\GC23\data\101518CAL\1015F013.D	10/15/2018 19:37	10/16/2018 09:02	12/11/2018 09:35
284746	J:\GC23\data\101518CAL\1015F015.D	10/15/2018 20:36	10/16/2018 09:03	12/11/2018 09:35
284748	J:\GC23\data\101518CAL\1015F016.D	10/15/2018 21:06	10/16/2018 09:04	12/11/2018 09:35
284750	J:\GC23\data\101518CAL\1016F007.D	10/16/2018 12:59	10/16/2018 13:50	12/11/2018 09:35
284752	J:\GC23\data\101518CAL\1016F010.D	10/16/2018 14:27	10/16/2018 15:21	12/11/2018 09:35
284754	J:\GC23\data\101518CAL\1016F013.D	10/16/2018 15:57	10/16/2018 16:22	12/11/2018 09:35
285483	J:\GC23\data\120718CAL\1207F003.D	12/07/2018 16:55	12/11/2018 13:10	12/11/2018 13:15
285485	J:\GC23\data\120718CAL\1207F006.D	12/07/2018 18:23	12/10/2018 15:53	12/11/2018 09:36
285487	J:\GC23\data\120718CAL\1207F007.D	12/07/2018 18:53	12/10/2018 10:33	12/11/2018 09:36
285489	J:\GC23\data\120718CAL\1207F008.D	12/07/2018 19:22	12/10/2018 15:54	12/11/2018 09:36
285491	J:\GC23\data\121018CAL\1210F004.D	12/10/2018 14:49	12/10/2018 15:47	12/11/2018 09:36
285493	J:\GC23\data\121018CAL\1210F005.D	12/10/2018 15:18	12/10/2018 15:49	12/11/2018 09:36

Parameter Name	CoefX2	CoefX	Y-intercept	COD	Mean RF
Methoxychlor		0.548	0.002	0.9981	0.829

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB
		Calibration Fit:	Quadratic

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
284598	J:\GC23\data\100918CAL\1009F023.D	10/09/2018 19:20	10/10/2018 08:16	12/11/2018 09:33
284600	J:\GC23\data\100918CAL\1009F024.D	10/09/2018 19:49	10/10/2018 08:22	12/11/2018 09:33
284602	J:\GC23\data\100918CAL\1009F025.D	10/09/2018 20:19	10/10/2018 08:24	12/11/2018 09:33
284604	J:\GC23\data\100918CAL\1009F026.D	10/09/2018 20:49	10/10/2018 08:38	12/11/2018 09:33
284606	J:\GC23\data\100918CAL\1009F027.D	10/09/2018 21:20	10/10/2018 08:42	12/11/2018 09:33
284608	J:\GC23\data\100918CAL\1009F028.D	10/09/2018 21:50	10/10/2018 08:45	12/11/2018 09:33
284614	J:\GC23\data\100918CAL\1009F031.D	10/09/2018 23:19	10/10/2018 09:00	12/11/2018 09:34
284616	J:\GC23\data\100918CAL\1009F032.D	10/09/2018 23:49	10/10/2018 09:02	12/11/2018 09:34
284618	J:\GC23\data\100918CAL\1009F033.D	10/10/2018 00:19	10/10/2018 09:04	12/11/2018 09:34
284620	J:\GC23\data\100918CAL\1009F034.D	10/10/2018 00:50	10/10/2018 09:06	12/11/2018 09:34
284622	J:\GC23\data\100918CAL\1009F035.D	10/10/2018 01:20	10/10/2018 09:08	12/11/2018 09:34
284624	J:\GC23\data\100918CAL\1009F036.D	10/10/2018 01:50	10/10/2018 09:11	12/11/2018 09:34
284626	J:\GC23\data\100918CAL\1009F039.D	10/10/2018 03:19	10/10/2018 09:22	12/11/2018 09:34
284628	J:\GC23\data\100918CAL\1009F040.D	10/10/2018 03:49	10/10/2018 09:23	12/11/2018 09:34
284630	J:\GC23\data\100918CAL\1009F041.D	10/10/2018 04:19	10/10/2018 09:26	12/11/2018 09:34
284632	J:\GC23\data\100918CAL\1009F042.D	10/10/2018 04:49	10/10/2018 09:29	12/11/2018 09:34
284634	J:\GC23\data\100918CAL\1009F043.D	10/10/2018 05:19	10/10/2018 09:32	12/11/2018 09:35
284636	J:\GC23\data\100918CAL\1009F044.D	10/10/2018 05:49	10/10/2018 09:34	12/11/2018 09:35
284640	J:\GC23\data\101018CAL\1010F006.D	10/10/2018 12:29	10/10/2018 12:56	12/11/2018 09:35
284744	J:\GC23\data\101518CAL\1015F013.D	10/15/2018 19:37	10/16/2018 09:02	12/11/2018 09:35
284746	J:\GC23\data\101518CAL\1015F015.D	10/15/2018 20:36	10/16/2018 09:03	12/11/2018 09:35
284748	J:\GC23\data\101518CAL\1015F016.D	10/15/2018 21:06	10/16/2018 09:04	12/11/2018 09:35
284750	J:\GC23\data\101518CAL\1016F007.D	10/16/2018 12:59	10/16/2018 13:50	12/11/2018 09:35
284752	J:\GC23\data\101518CAL\1016F010.D	10/16/2018 14:27	10/16/2018 15:21	12/11/2018 09:35
284754	J:\GC23\data\101518CAL\1016F013.D	10/16/2018 15:57	10/16/2018 16:22	12/11/2018 09:35
285483	J:\GC23\data\120718CAL\1207F003.D	12/07/2018 16:55	12/11/2018 13:10	12/11/2018 13:15
285485	J:\GC23\data\120718CAL\1207F006.D	12/07/2018 18:23	12/10/2018 15:53	12/11/2018 09:36
285487	J:\GC23\data\120718CAL\1207F007.D	12/07/2018 18:53	12/10/2018 10:33	12/11/2018 09:36
285489	J:\GC23\data\120718CAL\1207F008.D	12/07/2018 19:22	12/10/2018 15:54	12/11/2018 09:36
285491	J:\GC23\data\121018CAL\1210F004.D	12/10/2018 14:49	12/10/2018 15:47	12/11/2018 09:36
285493	J:\GC23\data\121018CAL\1210F005.D	12/10/2018 15:18	12/10/2018 15:49	12/11/2018 09:36

Parameter Name	CoefX2	CoefX	Y-intercept	COD	Mean RF
Tetrachloro-m-xylene	-4.518	2.271	0.002	0.9973	2.359
Hexachlorobenzene	-4.179	2.535	0.004	0.9994	3.049
Heptachlor	-1.953	1.460	0.003	0.9984	1.840
Endosulfan II	-0.848	1.299	0.002	0.9992	1.555
Toxaphene {2}		0.010	0.001	0.9983	0.012

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284598	J:\GC23\data\100918CAL\1009F023.D	10/09/2018 19:20	10/10/2018 08:16	12/11/2018 09:33
2	284600	J:\GC23\data\100918CAL\1009F024.D	10/09/2018 19:49	10/10/2018 08:22	12/11/2018 09:33
3	284602	J:\GC23\data\100918CAL\1009F025.D	10/09/2018 20:19	10/10/2018 08:24	12/11/2018 09:33
4	284604	J:\GC23\data\100918CAL\1009F026.D	10/09/2018 20:49	10/10/2018 08:38	12/11/2018 09:33
5	284606	J:\GC23\data\100918CAL\1009F027.D	10/09/2018 21:20	10/10/2018 08:42	12/11/2018 09:33
6	284608	J:\GC23\data\100918CAL\1009F028.D	10/09/2018 21:50	10/10/2018 08:45	12/11/2018 09:33
7	284614	J:\GC23\data\100918CAL\1009F031.D	10/09/2018 23:19	10/10/2018 09:00	12/11/2018 09:34
8	284616	J:\GC23\data\100918CAL\1009F032.D	10/09/2018 23:49	10/10/2018 09:02	12/11/2018 09:34
9	284618	J:\GC23\data\100918CAL\1009F033.D	10/10/2018 00:19	10/10/2018 09:04	12/11/2018 09:34
10	284620	J:\GC23\data\100918CAL\1009F034.D	10/10/2018 00:50	10/10/2018 09:06	12/11/2018 09:34
11	284622	J:\GC23\data\100918CAL\1009F035.D	10/10/2018 01:20	10/10/2018 09:08	12/11/2018 09:34
12	284624	J:\GC23\data\100918CAL\1009F036.D	10/10/2018 01:50	10/10/2018 09:11	12/11/2018 09:34
13	284626	J:\GC23\data\100918CAL\1009F039.D	10/10/2018 03:19	10/10/2018 09:22	12/11/2018 09:34
14	284628	J:\GC23\data\100918CAL\1009F040.D	10/10/2018 03:49	10/10/2018 09:23	12/11/2018 09:34
15	284630	J:\GC23\data\100918CAL\1009F041.D	10/10/2018 04:19	10/10/2018 09:26	12/11/2018 09:34
16	284632	J:\GC23\data\100918CAL\1009F042.D	10/10/2018 04:49	10/10/2018 09:29	12/11/2018 09:34
17	284634	J:\GC23\data\100918CAL\1009F043.D	10/10/2018 05:19	10/10/2018 09:32	12/11/2018 09:35
18	284636	J:\GC23\data\100918CAL\1009F044.D	10/10/2018 05:49	10/10/2018 09:34	12/11/2018 09:35
19	284640	J:\GC23\data\101018CAL\1010F006.D	10/10/2018 12:29	10/10/2018 12:56	12/11/2018 09:35
20	284744	J:\GC23\data\101518CAL\1015F013.D	10/15/2018 19:37	10/16/2018 09:02	12/11/2018 09:35
21	284746	J:\GC23\data\101518CAL\1015F015.D	10/15/2018 20:36	10/16/2018 09:03	12/11/2018 09:35
22	284748	J:\GC23\data\101518CAL\1015F016.D	10/15/2018 21:06	10/16/2018 09:04	12/11/2018 09:35
23	284750	J:\GC23\data\101518CAL\1016F007.D	10/16/2018 12:59	10/16/2018 13:50	12/11/2018 09:35
24	284752	J:\GC23\data\101518CAL\1016F010.D	10/16/2018 14:27	10/16/2018 15:21	12/11/2018 09:35
25	284754	J:\GC23\data\101518CAL\1016F013.D	10/16/2018 15:57	10/16/2018 16:22	12/11/2018 09:35
26	285483	J:\GC23\data\120718CAL\1207F003.D	12/07/2018 16:55	12/11/2018 13:10	12/11/2018 13:15
27	285485	J:\GC23\data\120718CAL\1207F006.D	12/07/2018 18:23	12/10/2018 15:53	12/11/2018 09:36
28	285487	J:\GC23\data\120718CAL\1207F007.D	12/07/2018 18:53	12/10/2018 10:33	12/11/2018 09:36
29	285489	J:\GC23\data\120718CAL\1207F008.D	12/07/2018 19:22	12/10/2018 15:54	12/11/2018 09:36
30	285491	J:\GC23\data\121018CAL\1210F004.D	12/10/2018 14:49	12/10/2018 15:47	12/11/2018 09:36
31	285493	J:\GC23\data\121018CAL\1210F005.D	12/10/2018 15:18	12/10/2018 15:49	12/11/2018 09:36

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene												
					26	0.2	0.1450	-27.5	27	2	1.808	-9.6
	28	5	4.847	-3.1	29	10	10.13	1.3	30	0.5	0.6011	20.2
	31	1	1.190	19.0								

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
alpha-BHC												
					26	0.2	0.1991	-0.4	27	2	1.890	-5.5
	28	5	4.552	-9.0	29	10	8.782	-12.2	30	0.5	0.5442	8.8
	31	1	1.182	18.2								
Hexachlorobenzene												
					26	0.2	0.1953	-2.3	27	2	1.886	-5.7
	28	5	5.019	0.4	29	10	10.01	0.1	30	0.5	0.4804	-3.9
	31	1	1.116	11.6								
beta-BHC												
					26	0.2	0.2133	6.7	27	2	1.959	-2.0
	28	5	4.632	-7.4	29	10	8.676	-13.2	30	0.5	0.5172	3.4
	31	1	1.125	12.5								
gamma-BHC (Lindane)												
					26	0.2	0.1937	-3.1	27	2	1.876	-6.2
	28	5	4.630	-7.4	29	10	8.959	-10.4	30	0.5	0.5318	6.4
	31	1	1.208	20.8								

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
delta-BHC												
					26	0.2	0.2079	3.9	27	2	1.852	-7.4
	28	5	4.626	-7.5	29	10	8.910	-10.9	30	0.5	0.5509	10.2
	31	1	1.117	11.7								
Heptachlor												
					26	0.2	0.2437	21.8	27	2	1.775	-11.2
	28	5	5.115	2.3	29	10	9.976	-0.2	30	0.5	0.4884	-2.3
	31	1	1.102	10.2								
Aldrin												
					26	0.2	0.2282	14.1	27	2	1.846	-7.7
	28	5	4.559	-8.8	29	10	8.794	-12.1	30	0.5	0.5202	4.0
	31	1	1.104	10.4								
Isodrin												
					26	0.2	0.2167	8.4	27	2	1.796	-10.2
	28	5	4.605	-7.9	29	10	8.652	-13.5	30	0.5	0.5430	8.6
	31	1	1.146	14.6								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Heptachlor Epoxide												
					26	0.2	0.1870	-6.5	27	2	1.915	-4.2
	28	5	4.697	-6.1	29	10	8.652	-13.5	30	0.5	0.5719	14.4
	31	1	1.159	15.9								
gamma-Chlordane												
					26	0.2	0.1967	-1.6	27	2	1.878	-6.1
	28	5	4.616	-7.7	29	10	8.742	-12.6	30	0.5	0.5668	13.4
	31	1	1.146	14.6								
Endosulfan I												
					26	0.2	0.2472	23.6	27	2	1.693	-15.3
	28	5	4.336	-13.3	29	10	7.943	-20.6	30	0.5	0.5644	12.9
	31	1	1.127	12.7								
alpha-Chlordane												
					26	0.2	0.2120	6.0	27	2	1.812	-9.4
	28	5	4.491	-10.2	29	10	8.452	-15.5	30	0.5	0.5748	15.0
	31	1	1.141	14.1								

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Dieldrin												
					26	0.2	0.2117	5.9	27	2	1.814	-9.3
	28	5	4.496	-10.1	29	10	8.566	-14.3	30	0.5	0.5542	10.8
	31	1	1.170	17.0								
4,4'-DDE												
					26	0.2	0.2095	4.8	27	2	1.799	-10.0
	28	5	4.505	-9.9	29	10	8.692	-13.1	30	0.5	0.5598	12.0
	31	1	1.163	16.3								
Endrin												
					26	0.2	0.2279	13.9	27	2	1.766	-11.7
	28	5	4.425	-11.5	29	10	8.201	-18.0	30	0.5	0.5755	15.1
	31	1	1.122	12.2								
Endosulfan II												
					26	0.2	0.1809	-9.6	27	2	1.863	-6.8
	28	5	4.965	-0.7	29	10	10.03	0.3	30	0.5	0.5090	1.8
	31	1	1.150	15.0								

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4,4'-DDD												
					26	0.2	0.2200	10.0	27	2	1.813	-9.3
	28	5	4.567	-8.7	29	10	8.747	-12.5	30	0.5	0.5762	15.2
	31	1	1.053	5.3								
Endrin Aldehyde												
					26	0.2	0.2294	14.7	27	2	1.785	-10.8
	28	5	4.415	-11.7	29	10	8.251	-17.5	30	0.5	0.5363	7.3
	31	1	1.180	18.0								
Endosulfan Sulfate												
					26	0.2	0.2189	9.5	27	2	1.796	-10.2
	28	5	4.441	-11.2	29	10	8.272	-17.3	30	0.5	0.5587	11.7
	31	1	1.175	17.5								
4,4'-DDT												
					26	0.2	0.2302	15.1	27	2	1.791	-10.4
	28	5	4.492	-10.2	29	10	8.585	-14.1	30	0.5	0.5216	4.3
	31	1	1.153	15.3								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Endrin Ketone												
					26	0.2	0.1970	-1.5	27	2	1.870	-6.5
	28	5	4.635	-7.3	29	10	8.859	-11.4	30	0.5	0.5865	17.3
	31	1	1.094	9.4								
Methoxychlor												
					26	0.2	0.2975	**48.8**	27	2	1.814	-9.3
	28	5	4.828	-3.4	29	10	10.10	1.0	30	0.5	0.4405	-11.9
	31	1	1.217	21.7								
2,4'-DDE												
					20	1	0.9964	-0.4	21	5	4.601	-8.0
	22	10	8.362	-16.4	23	2	1.960	-2.0	24	0.2	0.2555	27.7
	25	0.5	0.4948	-1.0								
2,4'-DDD												
					20	1	1.006	0.6	21	5	4.634	-7.3
	22	10	8.059	-19.4	23	2	1.905	-4.8	24	0.2	0.2671	**33.6**
	25	0.5	0.4869	-2.6								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
2,4'-DDT												
					20	1	1.054	5.4	21	5	5.047	0.9
	22	10	8.971	-10.3	23	2	1.968	-1.6	24	0.2	0.2086	4.3
	25	0.5	0.5062	1.2								
Decachlorobiphenyl												
					26	0.2	0.2052	2.6	27	2	1.761	-12.0
	28	5	4.308	-13.8	29	10	8.112	-18.9	30	0.5	0.5973	19.5
	31	1	1.226	22.6								
Toxaphene {1}												
	7	10	9.676	-3.2	8	25	25.93	3.7	9	50	55.23	10.5
	10	100	100.8	0.8	11	250	235.6	-5.8	12	500	470.2	-6.0
Toxaphene {2}												
	7	10	8.601	-14.0	8	25	26.93	7.7	9	50	54.07	8.1
	10	100	102.1	2.1	11	250	236.8	-5.3	12	500	507.0	1.4

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Toxaphene {3}												
	7	10	12.34	23.4	8	25	26.01	4.0	9	50	52.48	5.0
	10	100	93.35	-6.7	11	250	216.5	-13.4	12	500	438.1	-12.4
Toxaphene {4}												
	7	10	12.81	28.1	8	25	24.43	-2.3	9	50	49.42	-1.2
	10	100	98.07	-1.9	11	250	226.6	-9.3	12	500	433.0	-13.4
Toxaphene {5}												
	7	10	12.48	24.8	8	25	26.55	6.2	9	50	48.52	-3.0
	10	100	94.68	-5.3	11	250	222.6	-11.0	12	500	441.1	-11.8
Toxaphene {6}												
	7	10	9.736	-2.6	8	25	26.20	4.8	9	50	52.97	5.9
	10	100	99.75	-0.3	11	250	243.1	-2.8	12	500	474.6	-5.1

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {1}												
	13	5	5.782	15.6	14	10	9.857	-1.4	15	20	21.45	7.3
	16	50	49.56	-0.9	17	100	95.15	-4.9	18	200	161.5	-19.3
	19	2	2.070	3.5								
Chlordane {2}												
	13	5	5.021	0.4	14	10	9.950	-0.5	15	20	20.57	2.9
	16	50	49.05	-1.9	17	100	93.40	-6.6	18	200	161.1	-19.5
	19	2	2.503	25.2								
Chlordane {3}												
	13	5	5.314	6.3	14	10	10.04	0.4	15	20	20.92	4.6
	16	50	51.73	3.5	17	100	95.02	-5.0	18	200	160.4	-19.8
	19	2	2.201	10.0								
Chlordane {4}												
	13	5	5.277	5.5	14	10	10.27	2.7	15	20	21.59	7.9
	16	50	49.06	-1.9	17	100	95.76	-4.2	18	200	167.6	-16.2
	19	2	2.124	6.2								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {5}												
	13	5	5.316	6.3	14	10	10.10	1.0	15	20	21.49	7.4
	16	50	49.89	-0.2	17	100	95.74	-4.3	18	200	164.4	-17.8
	19	2	2.150	7.5								
Chlordane {6}												
	13	5	4.921	-1.6	14	10	10.46	4.6	15	20	21.92	9.6
	16	50	49.15	-1.7	17	100	94.58	-5.4	18	200	160.0	-20.0
	19	2	2.290	14.5								
Chlorpyrifos	1	0.2	0.1964	-1.8	2	0.5	0.5086	1.7	3	1	0.9579	-4.2
	4	2	2.009	0.4	5	5	4.939	-1.2	6	10	10.51	5.1
Oxychlordane	1	0.2	0.2331	16.6	2	0.5	0.5267	5.3	3	1	1.002	0.2
	4	2	1.992	-0.4	5	5	4.279	-14.4	6	10	9.266	-7.3

Initial Calibration - Detailed Report

Calibration ID: CAL15907
Method ID: MJ1647
Instrument ID: GC23
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
cis-Nonachlor	1	0.2	0.2270	13.5	2	0.5	0.5195	3.9	3	1	0.9947	-0.5
	4	2	2.003	0.2	5	5	4.398	-12.0	6	10	9.500	-5.0
trans-Nonachlor	1	0.2	0.2320	16.0	2	0.5	0.5318	6.4	3	1	1.005	0.5
	4	2	1.977	-1.1	5	5	4.280	-14.4	6	10	9.264	-7.4
Mirex	1	0.2	0.2180	9.0	2	0.5	0.5177	3.5	3	1	0.9996	0.0
	4	2	2.084	4.2	5	5	4.442	-11.2	6	10	9.449	-5.5
Hexachloroethane	1	0.2	0.2242	12.1	2	0.5	0.5267	5.3	3	1	1.004	0.4
	4	2	1.928	-3.6	5	5	4.291	-14.2	6	10	9.995	-0.1

Initial Calibration - Detailed Report

Calibration ID: CAL15907
Method ID: MJ1647
Instrument ID: GC23
Column Name: DB XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Hexachlorobutadiene	1	0.2	0.2356	17.8	2	0.5	0.5361	7.2	3	1	0.9978	-0.2
	4	2	1.943	-2.8	5	5	4.193	-16.1	6	10	9.416	-5.8
Perthane					2	2.5	2.248	-10.1	3	5	5.636	12.7
	4	10	9.560	-4.4	5	25	24.89	-0.4	6	50	51.10	2.2

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284599	J:\GC23\data\100918CAL\1009F023.D\1009F023c.d	10/09/2018 19:20	10/10/2018 08:16	12/11/2018 09:33
2	284601	J:\GC23\data\100918CAL\1009F024.D\1009F024c.d	10/09/2018 19:49	10/10/2018 08:22	12/11/2018 09:33
3	284603	J:\GC23\data\100918CAL\1009F025.D\1009F025c.d	10/09/2018 20:19	10/10/2018 08:24	12/11/2018 09:33
4	284605	J:\GC23\data\100918CAL\1009F026.D\1009F026c.d	10/09/2018 20:49	10/10/2018 08:38	12/11/2018 09:33
5	284607	J:\GC23\data\100918CAL\1009F027.D\1009F027c.d	10/09/2018 21:20	10/10/2018 08:42	12/11/2018 09:33
6	284609	J:\GC23\data\100918CAL\1009F028.D\1009F028c.d	10/09/2018 21:50	10/10/2018 08:45	12/11/2018 09:33
7	284615	J:\GC23\data\100918CAL\1009F031.D\1009F031c.d	10/09/2018 23:19	10/10/2018 09:00	12/11/2018 09:34
8	284617	J:\GC23\data\100918CAL\1009F032.D\1009F032c.d	10/09/2018 23:49	10/10/2018 09:02	12/11/2018 09:34
9	284619	J:\GC23\data\100918CAL\1009F033.D\1009F033c.d	10/10/2018 00:19	10/10/2018 09:04	12/11/2018 09:34
10	284621	J:\GC23\data\100918CAL\1009F034.D\1009F034c.d	10/10/2018 00:50	10/10/2018 09:06	12/11/2018 09:34
11	284623	J:\GC23\data\100918CAL\1009F035.D\1009F035c.d	10/10/2018 01:20	10/10/2018 09:08	12/11/2018 09:34
12	284625	J:\GC23\data\100918CAL\1009F036.D\1009F036c.d	10/10/2018 01:50	10/10/2018 09:11	12/11/2018 09:34
13	284627	J:\GC23\data\100918CAL\1009F039.D\1009F039c.d	10/10/2018 03:19	10/10/2018 09:22	12/11/2018 09:34
14	284629	J:\GC23\data\100918CAL\1009F040.D\1009F040c.d	10/10/2018 03:49	10/10/2018 09:23	12/11/2018 09:34
15	284631	J:\GC23\data\100918CAL\1009F041.D\1009F041c.d	10/10/2018 04:19	10/10/2018 09:26	12/11/2018 09:34
16	284633	J:\GC23\data\100918CAL\1009F042.D\1009F042c.d	10/10/2018 04:49	10/10/2018 09:29	12/11/2018 09:35
17	284635	J:\GC23\data\100918CAL\1009F043.D\1009F043c.d	10/10/2018 05:19	10/10/2018 09:32	12/11/2018 09:35
18	284637	J:\GC23\data\100918CAL\1009F044.D\1009F044c.d	10/10/2018 05:49	10/10/2018 09:34	12/11/2018 09:35
19	284641	J:\GC23\data\101018CAL\1010F006.D\1010F006c.d	10/10/2018 12:29	10/10/2018 12:56	12/11/2018 09:35
20	284745	J:\GC23\data\101518CAL\1015F013.D\1015F013c.d	10/15/2018 19:37	10/16/2018 09:02	12/11/2018 09:35
21	284747	J:\GC23\data\101518CAL\1015F015.D\1015F015c.d	10/15/2018 20:36	10/16/2018 09:03	12/11/2018 09:35
22	284749	J:\GC23\data\101518CAL\1015F016.D\1015F016c.d	10/15/2018 21:06	10/16/2018 09:04	12/11/2018 09:35
23	284751	J:\GC23\data\101518CAL\1016F007.D\1016F007c.d	10/16/2018 12:59	10/16/2018 13:50	12/11/2018 09:35
24	284753	J:\GC23\data\101518CAL\1016F010.D\1016F010c.d	10/16/2018 14:27	10/16/2018 15:21	12/11/2018 09:35
25	284755	J:\GC23\data\101518CAL\1016F013.D\1016F013c.d	10/16/2018 15:57	10/16/2018 16:22	12/11/2018 09:35
26	285484	J:\GC23\data\120718CAL\1207F003.D\1207F003c.d	12/07/2018 16:55	12/11/2018 13:10	12/11/2018 13:15
27	285486	J:\GC23\data\120718CAL\1207F006.D\1207F006c.d	12/07/2018 18:23	12/10/2018 15:53	12/11/2018 09:36
28	285488	J:\GC23\data\120718CAL\1207F007.D\1207F007c.d	12/07/2018 18:53	12/10/2018 10:33	12/11/2018 09:36
29	285490	J:\GC23\data\120718CAL\1207F008.D\1207F008c.d	12/07/2018 19:22	12/10/2018 15:54	12/11/2018 09:36
30	285492	J:\GC23\data\121018CAL\1210F004.D\1210F004c.d	12/10/2018 14:49	12/10/2018 15:47	12/11/2018 09:36
31	285494	J:\GC23\data\121018CAL\1210F005.D\1210F005c.d	12/10/2018 15:18	12/10/2018 15:49	12/11/2018 09:36

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Tetrachloro-m-xylene													1.638	7.9
			26	1.761	27	1.546	28	1.549	29	1.475	30	1.776		
	31	1.724												
alpha-BHC													1.398	8.0
			26	1.525	27	1.303	28	1.322	29	1.280	30	1.431		
	31	1.527												

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Hexachlorobenzene							1.936	9.0
		26 2.243	27 1.856	28 1.840	29 1.734	30 1.973		
	31 1.968							
beta-BHC							0.691	10.4
		26 0.786	27 0.643	28 0.646	29 0.601	30 0.747		
	31 0.722							
gamma-BHC (Lindane)							1.284	9.3
		26 1.457	27 1.182	28 1.207	29 1.158	30 1.349		
	31 1.353							
delta-BHC							1.231	6.4
		26 1.226	27 1.183	28 1.227	29 1.169	30 1.195		
	31 1.384							
Heptachlor							1.376	9.8
		26 1.562	27 1.292	28 1.292	29 1.208	30 1.416		
	31 1.489							
Aldrin							1.291	10.0
		26 1.503	27 1.185	28 1.218	29 1.161	30 1.320		
	31 1.362							
Isodrin							1.123	10.6
		26 1.137	27 1.030	28 1.052	29 0.991	30 1.277		
	31 1.248							
Heptachlor Epoxide							1.233	8.9
		26 1.270	27 1.141	28 1.189	29 1.099	30 1.310		
	31 1.388							

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
gamma-Chlordane							1.210	8.5
		26 1.346	27 1.129	28 1.140	29 1.089	30 1.281		
	31 1.272							
Endosulfan I							1.130	10.8
		26 1.282	27 1.014	28 1.056	29 0.996	30 1.213		
	31 1.217							
alpha-Chlordane							1.218	10.1
		26 1.382	27 1.102	28 1.144	29 1.089	30 1.275		
	31 1.315							
Dieldrin							1.154	6.7
		26 1.146	27 1.100	28 1.119	29 1.065	30 1.232		
	31 1.262							
4,4'-DDE							1.245	10.8
		26 1.465	27 1.124	28 1.157	29 1.132	30 1.330		
	31 1.264							
Endrin							1.138	10.4
		26 1.272	27 1.029	28 1.060	29 1.007	30 1.235		
	31 1.223							
Endosulfan II							1.054	8.0
		26 1.150	27 0.981	28 1.009	29 0.952	30 1.103		
	31 1.132							
4,4'-DDD							0.922	7.6
		26 1.018	27 0.853	28 0.881	29 0.852	30 0.959		
	31 0.969							

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Endrin Aldehyde							0.961	10.0
		26 0.983	27 0.878	28 0.911	29 0.853	30 1.094		
	31 1.046							
Endosulfan Sulfate							1.055	8.1
		26 1.068	27 0.985	28 1.014	29 0.953	30 1.144		
	31 1.164							
4,4'-DDT							0.975	19.7#
		26 1.353	27 0.873	28 0.864	29 0.838	30 0.956		
	31 0.966							
Endrin Ketone							1.166	8.2
		26 1.175	27 1.082	28 1.117	29 1.063	30 1.273		
	31 1.286							
Methoxychlor							0.526	7.9
		26 0.603	27 0.512	28 0.510	29 0.489	30 0.501		
	31 0.543							
2,4'-DDE							0.810	13.9
		20 0.793	21 0.750	22 0.679	23 0.752	24 0.904		
	25 0.982							
2,4'-DDD							0.706	8.3
		20 0.754	21 0.690	22 0.616	23 0.689	24 0.786		
	25 0.704							
2,4'-DDT							0.849	17.2
		20 0.840	21 0.792	22 0.720	23 0.790	24 1.135		
	25 0.819							

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Endrin Aldehyde							0.961	10.0
		26 0.983	27 0.878	28 0.911	29 0.853	30 1.094		
	31 1.046							
Endosulfan Sulfate							1.055	8.1
		26 1.068	27 0.985	28 1.014	29 0.953	30 1.144		
	31 1.164							
4,4'-DDT							0.975	19.7#
		26 1.353	27 0.873	28 0.864	29 0.838	30 0.956		
	31 0.966							
Endrin Ketone							1.166	8.2
		26 1.175	27 1.082	28 1.117	29 1.063	30 1.273		
	31 1.286							
Methoxychlor							0.526	7.9
		26 0.603	27 0.512	28 0.510	29 0.489	30 0.501		
	31 0.543							
2,4'-DDE							0.810	13.9
		20 0.793	21 0.750	22 0.679	23 0.752	24 0.904		
	25 0.982							
2,4'-DDD							0.706	8.3
		20 0.754	21 0.690	22 0.616	23 0.689	24 0.786		
	25 0.704							
2,4'-DDT							0.849	17.2
		20 0.840	21 0.792	22 0.720	23 0.790	24 1.135		
	25 0.819							

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Decachlorobiphenyl							1.373	10.1
		26 1.447	27 1.285	28 1.279	29 1.193	30 1.517		
	31 1.517							
Toxaphene {1}							0.017	9.5
	7 0.020	8 0.017	9 0.018	10 0.017	11 0.016	12 0.016		
Toxaphene {2}							0.006	10.8
	7 0.007	8 0.006	9 0.007	10 0.006	11 0.006	12 0.006		
Toxaphene {3}							0.006	13.5
	7 0.006	8 0.006	9 0.006	10 0.005	11 0.005	12 0.005		
Toxaphene {4}							0.010	7.3
	7 0.011	8 0.011	9 0.011	10 0.010	11 0.009	12 0.010		
Toxaphene {5}							0.020	11.1
	7 0.024	8 0.019	9 0.021	10 0.019	11 0.019	12 0.019		
Toxaphene {6}							0.016	7.2
	7 0.017	8 0.017	9 0.017	10 0.016	11 0.014	12 0.015		
Chlordane {1}							0.043	11.0
	13 0.046	14 0.043	15 0.044	16 0.042	17 0.041	18 0.035		
	19 0.050							

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	# RF	# RF	# RF	# RF	# RF	# RF	Mean RF	%RSD
Chlordane {2}							0.028	7.3
	13 0.028	14 0.030	15 0.029	16 0.028	17 0.027	18 0.024		
	19 0.028							
Chlordane {3}							0.109	6.2
	13 0.113	14 0.111	15 0.110	16 0.110	17 0.105	18 0.097		
	19 0.118							
Chlordane {4}							0.067	12.7
	13 0.070	14 0.069	15 0.069	16 0.066	17 0.061	18 0.054		
	19 0.082							
Chlordane {5}							0.032	7.7
	13 0.031	14 0.032	15 0.035	16 0.034	17 0.032	18 0.028		
	19 0.031							
Chlordane {6}							0.098	7.5
	13 0.101	14 0.101	15 0.099	16 0.098	17 0.093	18 0.085		
	19 0.108							
Chlorpyrifos	1 0.743	2 0.741	3 0.628	4 0.610	5 0.612	6 0.601	0.656	10.3
Oxychlordane	1 1.511	2 1.489	3 1.226	4 1.191	5 1.107	6 1.125	1.275	14.1
cis-Nonachlor	1 1.611	2 1.640	3 1.383	4 1.354	5 1.283	6 1.303	1.429	10.9

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
trans-Nonachlor	1	1.551	2	1.507	3	1.285	4	1.247	5	1.199	6	1.219	1.335	11.5
Mirex	1	1.351	2	1.351	3	1.184	4	1.134	5	1.030	6	1.013	1.177	12.7
Hexachloroethane	1	2.068	2	2.052	3	1.781	4	1.758	5	1.672	6	1.987	1.887	9.0
Hexachlorobutadiene	1	1.805	2	1.660	3	1.482	4	1.433	5	1.328	6	1.509	1.536	11.1
Perthane			2	0.043	3	0.032	4	0.031	5	0.033	6	0.034	0.035	13.4

 # RSD Not Applicable. Compound being quantitated from curve. Included in Average RF summary for Average %RSD calculation.

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS
		Calibration Fit:	Quadratic

FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
284599	J:\GC23\data\100918CAL\1009F023.D\1009F023c.d	10/09/2018 19:20	10/10/2018 08:16	12/11/2018 09:33
284601	J:\GC23\data\100918CAL\1009F024.D\1009F024c.d	10/09/2018 19:49	10/10/2018 08:22	12/11/2018 09:33
284603	J:\GC23\data\100918CAL\1009F025.D\1009F025c.d	10/09/2018 20:19	10/10/2018 08:24	12/11/2018 09:33
284605	J:\GC23\data\100918CAL\1009F026.D\1009F026c.d	10/09/2018 20:49	10/10/2018 08:38	12/11/2018 09:33
284607	J:\GC23\data\100918CAL\1009F027.D\1009F027c.d	10/09/2018 21:20	10/10/2018 08:42	12/11/2018 09:33
284609	J:\GC23\data\100918CAL\1009F028.D\1009F028c.d	10/09/2018 21:50	10/10/2018 08:45	12/11/2018 09:33
284615	J:\GC23\data\100918CAL\1009F031.D\1009F031c.d	10/09/2018 23:19	10/10/2018 09:00	12/11/2018 09:34
284617	J:\GC23\data\100918CAL\1009F032.D\1009F032c.d	10/09/2018 23:49	10/10/2018 09:02	12/11/2018 09:34
284619	J:\GC23\data\100918CAL\1009F033.D\1009F033c.d	10/10/2018 00:19	10/10/2018 09:04	12/11/2018 09:34
284621	J:\GC23\data\100918CAL\1009F034.D\1009F034c.d	10/10/2018 00:50	10/10/2018 09:06	12/11/2018 09:34
284623	J:\GC23\data\100918CAL\1009F035.D\1009F035c.d	10/10/2018 01:20	10/10/2018 09:08	12/11/2018 09:34
284625	J:\GC23\data\100918CAL\1009F036.D\1009F036c.d	10/10/2018 01:50	10/10/2018 09:11	12/11/2018 09:34
284627	J:\GC23\data\100918CAL\1009F039.D\1009F039c.d	10/10/2018 03:19	10/10/2018 09:22	12/11/2018 09:34
284629	J:\GC23\data\100918CAL\1009F040.D\1009F040c.d	10/10/2018 03:49	10/10/2018 09:23	12/11/2018 09:34
284631	J:\GC23\data\100918CAL\1009F041.D\1009F041c.d	10/10/2018 04:19	10/10/2018 09:26	12/11/2018 09:34
284633	J:\GC23\data\100918CAL\1009F042.D\1009F042c.d	10/10/2018 04:49	10/10/2018 09:29	12/11/2018 09:35
284635	J:\GC23\data\100918CAL\1009F043.D\1009F043c.d	10/10/2018 05:19	10/10/2018 09:32	12/11/2018 09:35
284637	J:\GC23\data\100918CAL\1009F044.D\1009F044c.d	10/10/2018 05:49	10/10/2018 09:34	12/11/2018 09:35
284641	J:\GC23\data\101018CAL\1010F006.D\1010F006c.d	10/10/2018 12:29	10/10/2018 12:56	12/11/2018 09:35
284745	J:\GC23\data\101518CAL\1015F013.D\1015F013c.d	10/15/2018 19:37	10/16/2018 09:02	12/11/2018 09:35
284747	J:\GC23\data\101518CAL\1015F015.D\1015F015c.d	10/15/2018 20:36	10/16/2018 09:03	12/11/2018 09:35
284749	J:\GC23\data\101518CAL\1015F016.D\1015F016c.d	10/15/2018 21:06	10/16/2018 09:04	12/11/2018 09:35
284751	J:\GC23\data\101518CAL\1016F007.D\1016F007c.d	10/16/2018 12:59	10/16/2018 13:50	12/11/2018 09:35
284753	J:\GC23\data\101518CAL\1016F010.D\1016F010c.d	10/16/2018 14:27	10/16/2018 15:21	12/11/2018 09:35
284755	J:\GC23\data\101518CAL\1016F013.D\1016F013c.d	10/16/2018 15:57	10/16/2018 16:22	12/11/2018 09:35
285484	J:\GC23\data\120718CAL\1207F003.D\1207F003c.d	12/07/2018 16:55	12/11/2018 13:10	12/11/2018 13:15
285486	J:\GC23\data\120718CAL\1207F006.D\1207F006c.d	12/07/2018 18:23	12/10/2018 15:53	12/11/2018 09:36
285488	J:\GC23\data\120718CAL\1207F007.D\1207F007c.d	12/07/2018 18:53	12/10/2018 10:33	12/11/2018 09:36
285490	J:\GC23\data\120718CAL\1207F008.D\1207F008c.d	12/07/2018 19:22	12/10/2018 15:54	12/11/2018 09:36
285492	J:\GC23\data\121018CAL\1210F004.D\1210F004c.d	12/10/2018 14:49	12/10/2018 15:47	12/11/2018 09:36
285494	J:\GC23\data\121018CAL\1210F005.D\1210F005c.d	12/10/2018 15:18	12/10/2018 15:49	12/11/2018 09:36

Parameter Name	CoefX2	CoefX	Y-intercept	COD	Mean RF
4,4'-DDT	-0.138	0.845	0.001	0.9999	0.975

Initial Calibration - Detailed Report

Calibration ID: CAL15907
Method ID: MJ1647
Instrument ID: GC23
Column Name: DB-35MS

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	284599	J:\GC23\data\100918CAL\1009F023.D\1009F023c.d	10/09/2018 19:20	10/10/2018 08:16	12/11/2018 09:33
2	284601	J:\GC23\data\100918CAL\1009F024.D\1009F024c.d	10/09/2018 19:49	10/10/2018 08:22	12/11/2018 09:33
3	284603	J:\GC23\data\100918CAL\1009F025.D\1009F025c.d	10/09/2018 20:19	10/10/2018 08:24	12/11/2018 09:33
4	284605	J:\GC23\data\100918CAL\1009F026.D\1009F026c.d	10/09/2018 20:49	10/10/2018 08:38	12/11/2018 09:33
5	284607	J:\GC23\data\100918CAL\1009F027.D\1009F027c.d	10/09/2018 21:20	10/10/2018 08:42	12/11/2018 09:33
6	284609	J:\GC23\data\100918CAL\1009F028.D\1009F028c.d	10/09/2018 21:50	10/10/2018 08:45	12/11/2018 09:33
7	284615	J:\GC23\data\100918CAL\1009F031.D\1009F031c.d	10/09/2018 23:19	10/10/2018 09:00	12/11/2018 09:34
8	284617	J:\GC23\data\100918CAL\1009F032.D\1009F032c.d	10/09/2018 23:49	10/10/2018 09:02	12/11/2018 09:34
9	284619	J:\GC23\data\100918CAL\1009F033.D\1009F033c.d	10/10/2018 00:19	10/10/2018 09:04	12/11/2018 09:34
10	284621	J:\GC23\data\100918CAL\1009F034.D\1009F034c.d	10/10/2018 00:50	10/10/2018 09:06	12/11/2018 09:34
11	284623	J:\GC23\data\100918CAL\1009F035.D\1009F035c.d	10/10/2018 01:20	10/10/2018 09:08	12/11/2018 09:34
12	284625	J:\GC23\data\100918CAL\1009F036.D\1009F036c.d	10/10/2018 01:50	10/10/2018 09:11	12/11/2018 09:34
13	284627	J:\GC23\data\100918CAL\1009F039.D\1009F039c.d	10/10/2018 03:19	10/10/2018 09:22	12/11/2018 09:34
14	284629	J:\GC23\data\100918CAL\1009F040.D\1009F040c.d	10/10/2018 03:49	10/10/2018 09:23	12/11/2018 09:34
15	284631	J:\GC23\data\100918CAL\1009F041.D\1009F041c.d	10/10/2018 04:19	10/10/2018 09:26	12/11/2018 09:34
16	284633	J:\GC23\data\100918CAL\1009F042.D\1009F042c.d	10/10/2018 04:49	10/10/2018 09:29	12/11/2018 09:35
17	284635	J:\GC23\data\100918CAL\1009F043.D\1009F043c.d	10/10/2018 05:19	10/10/2018 09:32	12/11/2018 09:35
18	284637	J:\GC23\data\100918CAL\1009F044.D\1009F044c.d	10/10/2018 05:49	10/10/2018 09:34	12/11/2018 09:35
19	284641	J:\GC23\data\101018CAL\1010F006.D\1010F006c.d	10/10/2018 12:29	10/10/2018 12:56	12/11/2018 09:35
20	284745	J:\GC23\data\101518CAL\1015F013.D\1015F013c.d	10/15/2018 19:37	10/16/2018 09:02	12/11/2018 09:35
21	284747	J:\GC23\data\101518CAL\1015F015.D\1015F015c.d	10/15/2018 20:36	10/16/2018 09:03	12/11/2018 09:35
22	284749	J:\GC23\data\101518CAL\1015F016.D\1015F016c.d	10/15/2018 21:06	10/16/2018 09:04	12/11/2018 09:35
23	284751	J:\GC23\data\101518CAL\1016F007.D\1016F007c.d	10/16/2018 12:59	10/16/2018 13:50	12/11/2018 09:35
24	284753	J:\GC23\data\101518CAL\1016F010.D\1016F010c.d	10/16/2018 14:27	10/16/2018 15:21	12/11/2018 09:35
25	284755	J:\GC23\data\101518CAL\1016F013.D\1016F013c.d	10/16/2018 15:57	10/16/2018 16:22	12/11/2018 09:35
26	285484	J:\GC23\data\120718CAL\1207F003.D\1207F003c.d	12/07/2018 16:55	12/11/2018 13:10	12/11/2018 13:15
27	285486	J:\GC23\data\120718CAL\1207F006.D\1207F006c.d	12/07/2018 18:23	12/10/2018 15:53	12/11/2018 09:36
28	285488	J:\GC23\data\120718CAL\1207F007.D\1207F007c.d	12/07/2018 18:53	12/10/2018 10:33	12/11/2018 09:36
29	285490	J:\GC23\data\120718CAL\1207F008.D\1207F008c.d	12/07/2018 19:22	12/10/2018 15:54	12/11/2018 09:36
30	285492	J:\GC23\data\121018CAL\1210F004.D\1210F004c.d	12/10/2018 14:49	12/10/2018 15:47	12/11/2018 09:36
31	285494	J:\GC23\data\121018CAL\1210F005.D\1210F005c.d	12/10/2018 15:18	12/10/2018 15:49	12/11/2018 09:36

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene												
					26	0.2	0.2149	7.5	27	2	1.887	-5.7
	28	5	4.726	-5.5	29	10	9.005	-10.0	30	0.5	0.5420	8.4
	31	1	1.052	5.2								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
alpha-BHC												
					26	0.2	0.2181	9.1	27	2	1.864	-6.8
	28	5	4.730	-5.4	29	10	9.158	-8.4	30	0.5	0.5119	2.4
	31	1	1.092	9.2								
Hexachlorobenzene												
					26	0.2	0.2317	15.9	27	2	1.918	-4.1
	28	5	4.753	-4.9	29	10	8.958	-10.4	30	0.5	0.5096	1.9
	31	1	1.017	1.7								
beta-BHC												
					26	0.2	0.2276	13.8	27	2	1.862	-6.9
	28	5	4.674	-6.5	29	10	8.695	-13.0	30	0.5	0.5407	8.1
	31	1	1.046	4.6								
gamma-BHC (Lindane)												
					26	0.2	0.2269	13.4	27	2	1.841	-8.0
	28	5	4.700	-6.0	29	10	9.017	-9.8	30	0.5	0.5250	5.0
	31	1	1.054	5.4								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
delta-BHC												
					26	0.2	0.1993	-0.4	27	2	1.923	-3.8
	28	5	4.983	-0.3	29	10	9.501	-5.0	30	0.5	0.4854	-2.9
	31	1	1.124	12.4								
Heptachlor												
					26	0.2	0.2270	13.5	27	2	1.878	-6.1
	28	5	4.693	-6.1	29	10	8.778	-12.2	30	0.5	0.5142	2.8
	31	1	1.081	8.1								
Aldrin												
					26	0.2	0.2327	16.4	27	2	1.835	-8.2
	28	5	4.715	-5.7	29	10	8.991	-10.1	30	0.5	0.5110	2.2
	31	1	1.055	5.5								
Isodrin												
					26	0.2	0.2026	1.3	27	2	1.835	-8.2
	28	5	4.686	-6.3	29	10	8.829	-11.7	30	0.5	0.5689	13.8
	31	1	1.112	11.2								

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Heptachlor Epoxide												
					26	0.2	0.2061	3.0	27	2	1.851	-7.4
	28	5	4.821	-3.6	29	10	8.913	-10.9	30	0.5	0.5312	6.2
	31	1	1.126	12.6								
gamma-Chlordane												
					26	0.2	0.2225	11.3	27	2	1.867	-6.6
	28	5	4.711	-5.8	29	10	9.006	-9.9	30	0.5	0.5296	5.9
	31	1	1.052	5.2								
Endosulfan I												
					26	0.2	0.2269	13.5	27	2	1.795	-10.3
	28	5	4.674	-6.5	29	10	8.820	-11.8	30	0.5	0.5369	7.4
	31	1	1.077	7.7								
alpha-Chlordane												
					26	0.2	0.2270	13.5	27	2	1.810	-9.5
	28	5	4.698	-6.0	29	10	8.941	-10.6	30	0.5	0.5234	4.7
	31	1	1.080	8.0								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Dieldrin												
					26	0.2	0.1986	-0.7	27	2	1.907	-4.7
	28	5	4.849	-3.0	29	10	9.228	-7.7	30	0.5	0.5338	6.8
	31	1	1.093	9.3								
4,4'-DDE												
					26	0.2	0.2352	17.6	27	2	1.805	-9.8
	28	5	4.647	-7.1	29	10	9.091	-9.1	30	0.5	0.5341	6.8
	31	1	1.015	1.5								
Endrin												
					26	0.2	0.2236	11.8	27	2	1.809	-9.6
	28	5	4.661	-6.8	29	10	8.852	-11.5	30	0.5	0.5426	8.5
	31	1	1.075	7.5								
Endosulfan II												
					26	0.2	0.2181	9.0	27	2	1.861	-6.9
	28	5	4.783	-4.3	29	10	9.029	-9.7	30	0.5	0.5230	4.6
	31	1	1.074	7.4								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
4,4'-DDD												
					26	0.2	0.2209	10.5	27	2	1.849	-7.5
	28	5	4.775	-4.5	29	10	9.244	-7.6	30	0.5	0.5203	4.1
	31	1	1.051	5.1								
Endrin Aldehyde												
					26	0.2	0.2047	2.3	27	2	1.828	-8.6
	28	5	4.741	-5.2	29	10	8.875	-11.3	30	0.5	0.5694	13.9
	31	1	1.089	8.9								
Endosulfan Sulfate												
					26	0.2	0.2025	1.3	27	2	1.868	-6.6
	28	5	4.807	-3.9	29	10	9.038	-9.6	30	0.5	0.5423	8.5
	31	1	1.103	10.3								
4,4'-DDT												
					26	0.2	0.2116	5.8	27	2	1.965	-1.8
	28	5	5.049	1.0	29	10	9.980	-0.2	30	0.5	0.4577	-8.5
	31	1	1.036	3.6								

Initial Calibration - Detailed Report

Calibration ID:	CAL15907	**Instrument ID:**	GC23
Method ID:	MJ1647	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Endrin Ketone												
					26	0.2	0.2016	0.8	27	2	1.857	-7.2
	28	5	4.788	-4.2	29	10	9.114	-8.9	30	0.5	0.5459	9.2
	31	1	1.103	10.3								
Methoxychlor												
					26	0.2	0.2290	14.5	27	2	1.946	-2.7
	28	5	4.847	-3.1	29	10	9.291	-7.1	30	0.5	0.4756	-4.9
	31	1	1.032	3.2								
2,4'-DDE												
					20	1	0.9785	-2.2	21	5	4.630	-7.4
	22	10	8.385	-16.1	23	2	1.856	-7.2	24	0.2	0.2233	11.7
	25	0.5	0.6063	21.3								
2,4'-DDD												
					20	1	1.067	6.7	21	5	4.880	-2.4
	22	10	8.723	-12.8	23	2	1.950	-2.5	24	0.2	0.2224	11.2
	25	0.5	0.4986	-0.3								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
2,4'-DDT												
					20	1	0.9888	-1.1	21	5	4.665	-6.7
	22	10	8.473	-15.3	23	2	1.861	-7.0	24	0.2	0.2673	**33.7**
	25	0.5	0.4820	-3.6								
Decachlorobiphenyl												
					26	0.2	0.2108	5.4	27	2	1.873	-6.4
	28	5	4.658	-6.8	29	10	8.688	-13.1	30	0.5	0.5523	10.5
	31	1	1.105	10.5								
Toxaphene {1}												
	7	10	11.61	16.1	8	25	24.73	-1.1	9	50	52.57	5.1
	10	100	97.53	-2.5	11	250	224.1	-10.4	12	500	463.4	-7.3
Toxaphene {2}												
	7	10	11.76	17.6	8	25	25.33	1.3	9	50	52.62	5.2
	10	100	97.84	-2.2	11	250	221.5	-11.4	12	500	446.9	-10.6

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Toxaphene {3}												
	7	10	11.72	17.2	8	25	28.13	12.5	9	50	52.45	4.9
	10	100	92.82	-7.2	11	250	216.4	-13.4	12	500	429.8	-14.0
Toxaphene {4}												
	7	10	11.09	10.9	8	25	26.13	4.5	9	50	51.30	2.6
	10	100	96.26	-3.7	11	250	229.2	-8.3	12	500	470.1	-6.0
Toxaphene {5}												
	7	10	12.06	20.6	8	25	23.17	-7.3	9	50	52.23	4.5
	10	100	96.74	-3.3	11	250	231.4	-7.5	12	500	465.0	-7.0
Toxaphene {6}												
	7	10	10.71	7.1	8	25	25.60	2.4	9	50	53.26	6.5
	10	100	100.2	0.2	11	250	220.2	-11.9	12	500	478.0	-4.4

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {1}												
	13	5	5.368	7.4	14	10	10.07	0.7	15	20	20.52	2.6
	16	50	49.20	-1.6	17	100	93.94	-6.1	18	200	161.6	-19.2
	19	2	2.325	16.2								
Chlordane {2}												
	13	5	5.056	1.1	14	10	10.73	7.3	15	20	21.13	5.7
	16	50	51.16	2.3	17	100	97.79	-2.2	18	200	170.3	-14.8
	19	2	2.013	0.6								
Chlordane {3}												
	13	5	5.164	3.3	14	10	10.19	1.9	15	20	20.07	0.3
	16	50	50.51	1.0	17	100	96.37	-3.6	18	200	177.2	-11.4
	19	2	2.169	8.5								
Chlordane {4}												
	13	5	5.238	4.8	14	10	10.20	2.0	15	20	20.39	2.0
	16	50	49.20	-1.6	17	100	90.72	-9.3	18	200	161.1	-19.5
	19	2	2.433	21.7								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {1}												
	13	5	5.368	7.4	14	10	10.07	0.7	15	20	20.52	2.6
	16	50	49.20	-1.6	17	100	93.94	-6.1	18	200	161.6	-19.2
	19	2	2.325	16.2								
Chlordane {2}												
	13	5	5.056	1.1	14	10	10.73	7.3	15	20	21.13	5.7
	16	50	51.16	2.3	17	100	97.79	-2.2	18	200	170.3	-14.8
	19	2	2.013	0.6								
Chlordane {3}												
	13	5	5.164	3.3	14	10	10.19	1.9	15	20	20.07	0.3
	16	50	50.51	1.0	17	100	96.37	-3.6	18	200	177.2	-11.4
	19	2	2.169	8.5								
Chlordane {4}												
	13	5	5.238	4.8	14	10	10.20	2.0	15	20	20.39	2.0
	16	50	49.20	-1.6	17	100	90.72	-9.3	18	200	161.1	-19.5
	19	2	2.433	21.7								

Initial Calibration - Detailed Report

Calibration ID: CAL15907 **Instrument ID:** GC23
Method ID: MJ1647 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Chlordane {5}												
	13	5	4.875	-2.5	14	10	9.934	-0.7	15	20	22.22	11.1
	16	50	53.46	6.9	17	100	99.96	0.0	18	200	173.1	-13.4
	19	2	1.973	-1.4								
Chlordane {6}												
	13	5	5.132	2.6	14	10	10.33	3.3	15	20	20.24	1.2
	16	50	50.26	0.5	17	100	94.91	-5.1	18	200	173.5	-13.3
	19	2	2.213	10.7								
Chlorpyrifos	1	0.2	0.2267	13.4	2	0.5	0.5650	13.0	3	1	0.9572	-4.3
	4	2	1.859	-7.0	5	5	4.667	-6.7	6	10	9.163	-8.4
Oxychlordane	1	0.2	0.2371	18.5	2	0.5	0.5840	16.8	3	1	0.9618	-3.8
	4	2	1.869	-6.5	5	5	4.340	-13.2	6	10	8.824	-11.8

Initial Calibration - Detailed Report

Calibration ID: CAL15907
Method ID: MJ1647
Instrument ID: GC23
Column Name: DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
cis-Nonachlor	1	0.2	0.2254	12.7	2	0.5	0.5739	14.8	3	1	0.9676	-3.2
	4	2	1.896	-5.2	5	5	4.490	-10.2	6	10	9.119	-8.8
trans-Nonachlor	1	0.2	0.2324	16.2	2	0.5	0.5647	12.9	3	1	0.9629	-3.7
	4	2	1.869	-6.6	5	5	4.491	-10.2	6	10	9.132	-8.7
Mirex	1	0.2	0.2295	14.8	2	0.5	0.5738	14.8	3	1	1.006	0.6
	4	2	1.927	-3.7	5	5	4.373	-12.5	6	10	8.608	-13.9
Hexachloroethane	1	0.2	0.2193	9.6	2	0.5	0.5439	8.8	3	1	0.9441	-5.6
	4	2	1.864	-6.8	5	5	4.430	-11.4	6	10	10.53	5.3

Initial Calibration - Detailed Report

Calibration ID: CAL15907
Method ID: MJ1647
Instrument ID: GC23
Column Name: DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Hexachlorobutadiene	1	0.2	0.2351	17.5	2	0.5	0.5402	8.0	3	1	0.9647	-3.5
	4	2	1.865	-6.7	5	5	4.323	-13.5	6	10	9.823	-1.8
Perthane					2	2.5	3.086	23.4	3	5	4.579	-8.4
	4	10	9.097	-9.0	5	25	24.07	-3.7	6	50	48.85	-2.3

Second Source Calibration Verification Summary

CalibrationID: CAL15907
Method ID: MJ1647
DataFile Location: J:\GC23\DATA\121018CAL\1210F006.D

Units: ug/L
Column: DB XLB

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
alpha-BHC	285495	AverageRF	20	1.775	1.802	1.5	2.00	2.0	
Hexachlorobenzene	285495	Quadratic	20				2.00	2.0	2.3
beta-BHC	285495	AverageRF	20	0.872	0.885	1.6	2.00	2.0	
gamma-BHC (Lindane)	285495	AverageRF	20	1.524	1.580	3.7	2.00	2.1	
delta-BHC	285495	AverageRF	20	1.577	1.643	4.2	2.00	2.1	
Heptachlor	285495	Quadratic	20				2.00	2.0	0.2
Aldrin	285495	AverageRF	20	1.728	1.789	3.5	2.00	2.1	
Isodrin	285495	AverageRF	20	1.448	1.610	11.2	2.00	2.2	
Heptachlor Epoxide	285495	AverageRF	20	1.567	1.556	-0.7	2.00	2.0	
gamma-Chlordane	285495	AverageRF	20	1.593	1.698	6.6	2.00	2.1	
Endosulfan I	285495	AverageRF	20	1.597	1.598	0.0	2.00	2.0	
alpha-Chlordane	285495	AverageRF	20	1.713	1.767	3.2	2.00	2.1	
Dieldrin	285495	AverageRF	20	1.625	1.583	-2.5	2.00	1.9	
4,4'-DDE	285495	AverageRF	20	1.801	1.862	3.4	2.00	2.1	
Endrin	285495	AverageRF	20	1.524	1.430	-6.2	2.00	1.9	
Endosulfan II	285495	Quadratic	20				2.00	2.2	7.5
4,4'-DDD	285495	AverageRF	20	1.219	1.238	1.6	2.00	2.0	
Endrin Aldehyde	285495	AverageRF	20	1.378	1.408	2.1	2.00	2.0	
Endosulfan Sulfate	285495	AverageRF	20	1.454	1.415	-2.7	2.00	1.9	
4,4'-DDT	285495	AverageRF	20	1.057	0.987	-6.6	2.00	1.9	
Endrin Ketone	285495	AverageRF	20	1.439	1.387	-3.6	2.00	1.9	
Methoxychlor	285495	Linear	20				2.00	1.9	-4.0
2,4'-DDE	284756	AverageRF	20	1.005	1.276	27.0 *	2.00	2.5	
2,4'-DDD	284756	AverageRF	20	0.909	1.077	18.4	2.00	2.4	
2,4'-DDT	284756	AverageRF	20	0.902	1.087	20.4 *	2.00	2.4	
Toxaphene	284644	NA	20				200.00	181.0	-9.5
Toxaphene {1}	284644	AverageRF	100	0.023	0.021	-8.8	200.00	182.4	
Toxaphene {2}	284644	Quadratic	100				200.00	185.0	-7.5
Toxaphene {3}	284644	AverageRF	100	0.017	0.016	-9.2	200.00	181.5	
Toxaphene {4}	284644	AverageRF	100	0.007	0.006	-8.6	200.00	182.8	
Toxaphene {5}	284644	AverageRF	100	0.009	0.008	-10.8	200.00	178.4	
Toxaphene {6}	284644	AverageRF	100	0.026	0.023	-12.2	200.00	175.6	
Chlordane	284642	NA	20				50.00	47.8	-4.4
Chlordane {1}	284642	AverageRF	100	0.057	0.046	-20.0	50.00	40.0	
Chlordane {2}	284642	AverageRF	100	0.072	0.050	-30.4	50.00	34.8	
Chlordane {3}	284642	AverageRF	100	0.049	0.062	24.9	50.00	62.4	
Chlordane {4}	284642	AverageRF	100	0.144	0.139	-3.4	50.00	48.3	
Chlordane {5}	284642	AverageRF	100	0.122	0.118	-2.9	50.00	48.6	
Chlordane {6}	284642	AverageRF	100	0.090	0.095	5.6	50.00	52.8	
Chlorpyrifos	284610	AverageRF	20	0.661	0.744	12.6	2.00	2.3	
Oxychlordane	284610	AverageRF	20	1.334	1.287	-3.6	2.00	1.9	
cis-Nonachlor	284610	AverageRF	20	1.515	1.575	4.0	2.00	2.1	
trans-Nonachlor	284610	AverageRF	20	1.452	1.501	3.4	2.00	2.1	
Mirex	284610	AverageRF	20	1.171	1.217	3.9	2.00	2.1	
Hexachloroethane	284610	AverageRF	20	2.176	2.020	-7.2	2.00	1.9	
Hexachlorobutadiene	284610	AverageRF	20	1.813	1.705	-6.0	2.00	1.9	
Perthane	284612	AverageRF	20	0.035	0.037	6.8	25.00	26.7	

2 compound out of 47 failed max individual %D criteria.

Second Source Calibration Verification Summary

CalibrationID: CAL15907
Method ID: MJ1647
DataFile Location: J:\GC23\DATA\100918CAL\1009F030.D

Units: ug/L
Column: DB XLB

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift

2 compound out of 47 failed max individual %D criteria.

Second Source Calibration Verification Summary

CalibrationID: CAL15907
Method ID: MJ1647
DataFile Location: J:\GC23\DATA\121018CAL\1210F006.D\1210F006C.D

Units: ug/L
Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
alpha-BHC	285496	AverageRF	20	1.398	1.292	-7.5	2.00	1.8	
Hexachlorobenzene	285496	AverageRF	20	1.936	1.773	-8.4	2.00	1.8	
beta-BHC	285496	AverageRF	20	0.691	0.660	-4.4	2.00	1.9	
gamma-BHC (Lindane)	285496	AverageRF	20	1.284	1.224	-4.7	2.00	1.9	
delta-BHC	285496	AverageRF	20	1.231	1.163	-5.5	2.00	1.9	
Heptachlor	285496	AverageRF	20	1.376	1.336	-2.9	2.00	1.9	
Aldrin	285496	AverageRF	20	1.291	1.221	-5.5	2.00	1.9	
Isodrin	285496	AverageRF	20	1.123	1.166	3.9	2.00	2.1	
Heptachlor Epoxide	285496	AverageRF	20	1.233	1.128	-8.5	2.00	1.8	
gamma-Chlordane	285496	AverageRF	20	1.210	1.168	-3.4	2.00	1.9	
Endosulfan I	285496	AverageRF	20	1.130	1.096	-3.0	2.00	1.9	
alpha-Chlordane	285496	AverageRF	20	1.218	1.193	-2.0	2.00	2.0	
Dieldrin	285496	AverageRF	20	1.154	1.095	-5.1	2.00	1.9	
4,4'-DDE	285496	AverageRF	20	1.245	1.128	-9.4	2.00	1.8	
Endrin	285496	AverageRF	20	1.138	1.039	-8.7	2.00	1.8	
Endosulfan II	285496	AverageRF	20	1.054	1.053	-0.1	2.00	2.0	
4,4'-DDD	285496	AverageRF	20	0.922	0.887	-3.7	2.00	1.9	
Endrin Aldehyde	285496	AverageRF	20	0.961	0.957	-0.4	2.00	2.0	
Endosulfan Sulfate	285496	AverageRF	20	1.055	0.998	-5.4	2.00	1.9	
4,4'-DDT	285496	Quadratic	20				2.00	1.9	-6.2
Endrin Ketone	285496	AverageRF	20	1.166	1.080	-7.4	2.00	1.9	
Methoxychlor	285496	AverageRF	20	0.526	0.490	-6.8	2.00	1.9	
2,4'-DDE	284757	AverageRF	20	0.810	0.939	15.9	2.00	2.3	
2,4'-DDD	284757	AverageRF	20	0.706	0.840	18.9	2.00	2.4	
2,4'-DDT	284757	AverageRF	20	0.849	0.982	15.6	2.00	2.3	
Toxaphene	284645	NA	20				200.00	174.9	-12.6
Toxaphene {1}	284645	AverageRF	100	0.017	0.015	-16.0	200.00	168.1	
Toxaphene {2}	284645	AverageRF	100	0.006	0.005	-14.0	200.00	172.1	
Toxaphene {3}	284645	AverageRF	100	0.006	0.005	-14.7	200.00	170.5	
Toxaphene {4}	284645	AverageRF	100	0.010	0.009	-11.9	200.00	176.1	
Toxaphene {5}	284645	AverageRF	100	0.020	0.018	-9.2	200.00	181.6	
Toxaphene {6}	284645	AverageRF	100	0.016	0.015	-9.5	200.00	180.9	
Chlordane	284643	NA	20				50.00	49.7	-0.6
Chlordane {1}	284643	AverageRF	100	0.043	0.033	-24.1	50.00	37.9	
Chlordane {2}	284643	AverageRF	100	0.028	0.032	14.5	50.00	57.3	
Chlordane {3}	284643	AverageRF	100	0.109	0.102	-6.7	50.00	46.6	
Chlordane {4}	284643	AverageRF	100	0.067	0.069	3.0	50.00	51.5	
Chlordane {5}	284643	AverageRF	100	0.032	0.037	15.9	50.00	58.0	
Chlordane {6}	284643	AverageRF	100	0.098	0.092	-6.5	50.00	46.8	
Chlorpyrifos	284611	AverageRF	20	0.656	0.614	-6.4	2.00	1.9	
Oxychlordane	284611	AverageRF	20	1.275	1.055	-17.3	2.00	1.7	
cis-Nonachlor	284611	AverageRF	20	1.429	1.215	-15.0	2.00	1.7	
trans-Nonachlor	284611	AverageRF	20	1.335	1.197	-10.3	2.00	1.8	
Mirex	284611	AverageRF	20	1.177	1.037	-12.0	2.00	1.8	
Hexachloroethane	284611	AverageRF	20	1.887	1.624	-13.9	2.00	1.7	
Hexachlorobutadiene	284611	AverageRF	20	1.536	1.339	-12.8	2.00	1.7	
Perthane	284613	AverageRF	20	0.035	0.034	-1.9	25.00	24.5	

Second Source Calibration Verification Summary

CalibrationID: CAL15907
Method ID: MJ1647
DataFile Location: J:\GC23\DATA\100918CAL\1009F030.D\1009F030C.D

Units: ug/L
Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift

Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F001.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 3:55 pm Operator: MC
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:47:35 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:46:14 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.020	5.340	581124	1924981	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
16)	4,4'-DDE	13.600	12.330	1338	4834	0.128	0.202	#
17)	Endrin	14.156	12.947	49261	119539	5.561	5.459	
19)	4,4'-DDD	14.436	13.210	3856	7928	0.545	0.447	
20)	Endrin Al...	0.000	13.740	0	931	N.D.	0.050	#
22)	4,4'-DDT	14.930	13.630	73752	201829	12.013	12.563	
23)	Endrin Ke...	15.940	14.994	2071	5426	0.248	0.242	
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

OK

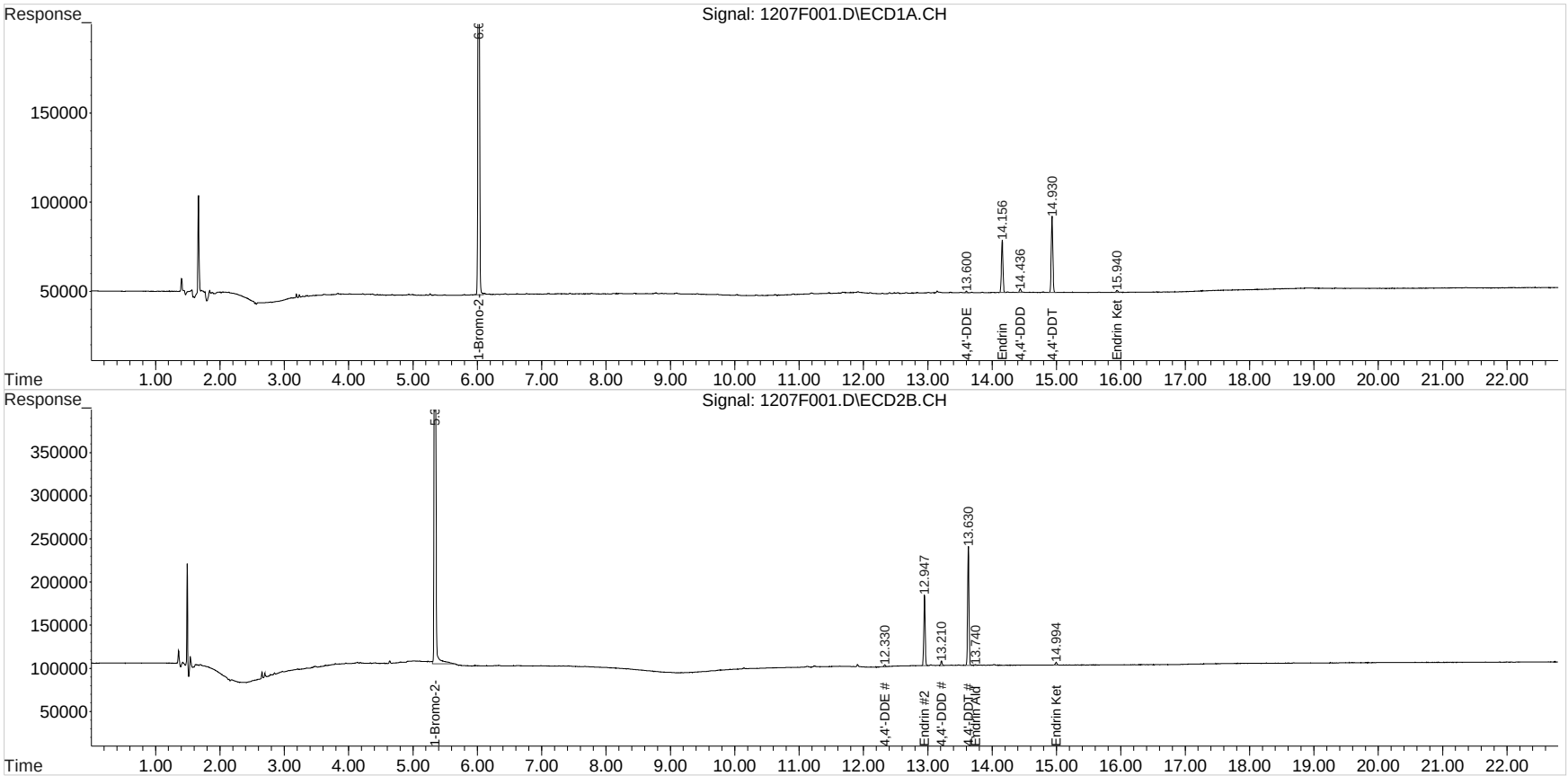
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\120718CAL\1207F001.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 3:55 pm Operator: MC
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:47:35 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:46:14 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F002.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:25 pm Operator: MC
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 11:12:21 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:28:39 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.015	5.342	521612	1655029	100.000	100.000	
29)	1-Bromo-2...	6.015	5.342	521612	1655029	100.000	100.000	
36)	1-Bromo-2...	6.015	5.342	521612	1655029	100.000	100.000	
43)	1-Bromo-2...	6.015	5.342	521612	1655029	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
4)	Hexachlor...	0.000	8.099	0	871	N.D. d	0.027	
8)	Heptachlor	0.000	9.775	0	777	N.D.	0.034	#
10)	Isodrin	0.000	11.099f	0	813	N.D.	0.043	#
12)	gamma-Chl...	0.000	11.845	0	1463	N.D.	0.073	#
16)	4,4'-DDE	0.000	12.295f	0	828	N.D.	0.040	#
21)	Endosulfa...	0.000	14.032f	0	1566	N.D.	0.090	#
47)	trans-Non...	0.000	11.845f	0	1463	N.D.	0.066	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

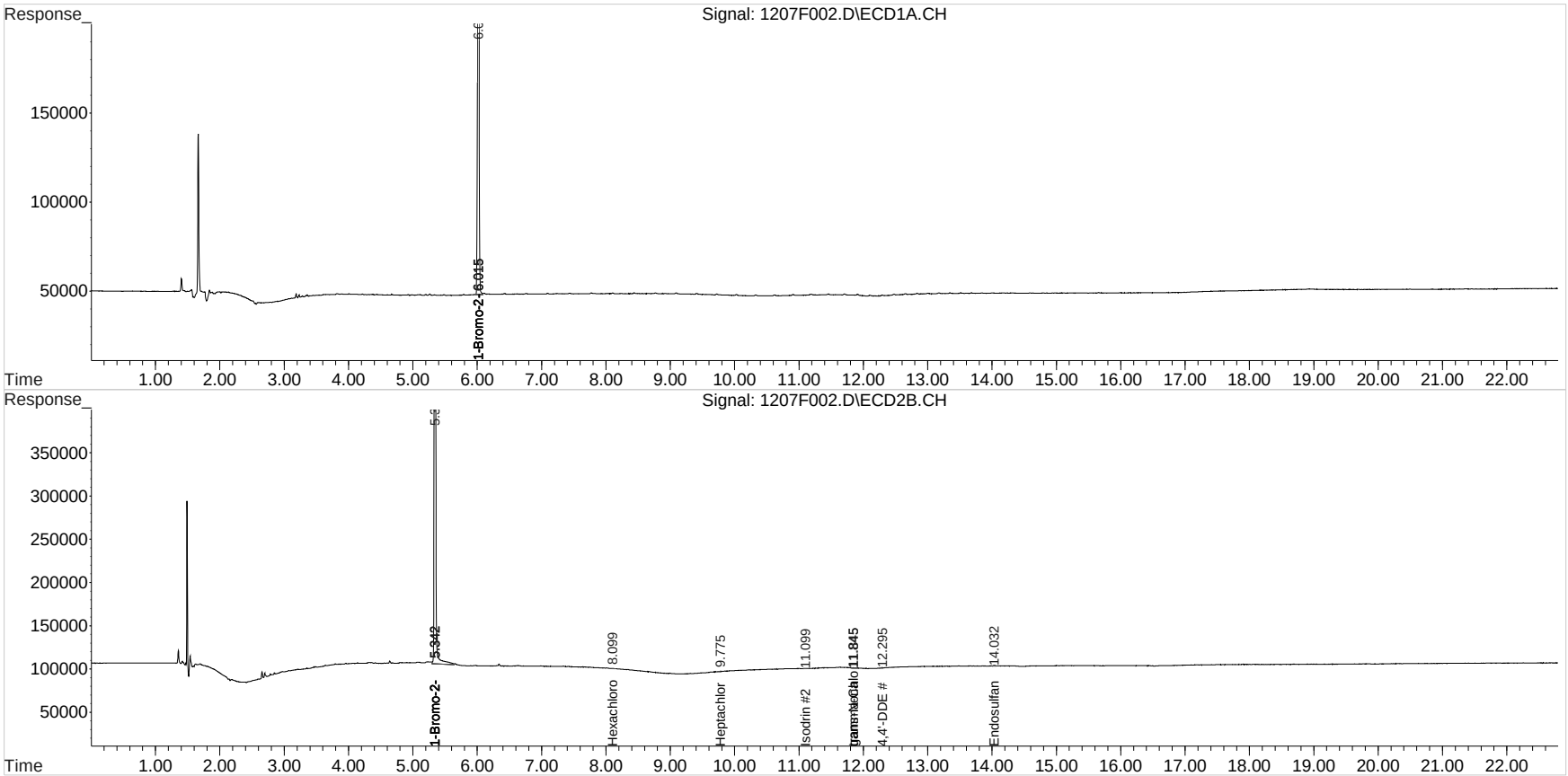
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\120718CAL\1207F002.D Vial: 2
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:25 pm Operator: MC
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 11:12:21 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:28:39 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 13:10:38 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.012	5.343	616343	1891239	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.742	7.106	2984	6660	0.211m	0.097 #
28) s	Decachlor...	18.425	16.866	2870	5473	0.264	0.180 #
	Target Compounds						
3)	alpha-BHC	9.582	8.329	2179	5767	0.210m	0.174m
4)	Hexachlor...	9.739	8.113	5749	8483	0.359m	0.093m#
5)	beta-BHC	10.859	9.613	1146	2974	0.226	0.185m
6)	gamma-BHC...	10.252	9.066	1820	5511	0.196	0.187
7)	delta-BHC	11.359	10.133	2021	4639	0.247	0.174 #
8)	Heptachlor	11.445	9.749	3830	5909	0.414	0.204m#
9)	Aldrin	11.995	10.336	2430	5684	0.262	0.203
10)	Isodrin	12.529	11.126	1934	4301	0.256	0.175m#
11)	Heptachlo...	12.719	11.416	1807	4804	0.209	0.186
12)	gamma-Chl...	13.235	11.826	1932	5090	0.230	0.196m
13)	Endosulfan I	13.362	12.033	2434	4848	0.308	0.208 #
14)	alpha-Chl...	13.312	11.969	2239	5227	0.257	0.202
15)	Dieldrin	13.782	12.473	2120	4335	0.263	0.179m#
16)	4,4'-DDE	13.592	12.329	2326	5541	0.282	0.217
17)	Endrin	14.152	12.946	2141	4811	0.267	0.207
18)	Endosulfa...	14.595	13.379	2634	4349	0.346	0.205 #
19)	4,4'-DDD	14.429	13.213	1652	3852	0.263	0.214
20)	Endrin Al...	14.779	13.739	1949	3719	0.297	0.196 #
21)	Endosulfa...	15.249	14.063	1962	4040	0.264	0.187 #
22)	4,4'-DDT	14.922	13.629	1499	5117	0.320	0.305
23)	Endrin Ke...	15.935	14.993	1747	4446	0.247	0.198
24)	Methoxychlor	15.655f	14.726	2004	2279	0.352	0.230 #
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

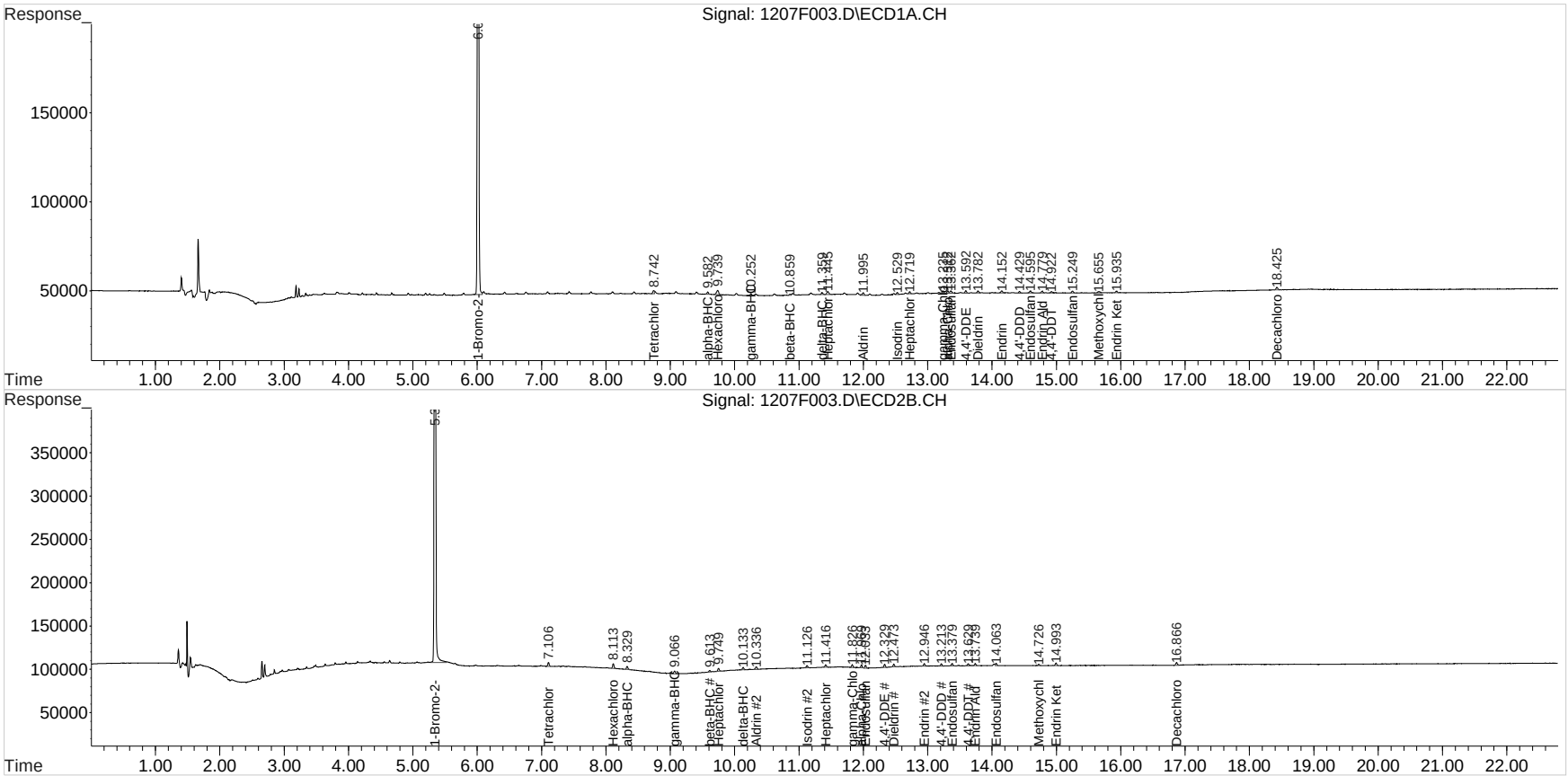
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 13:10:38 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



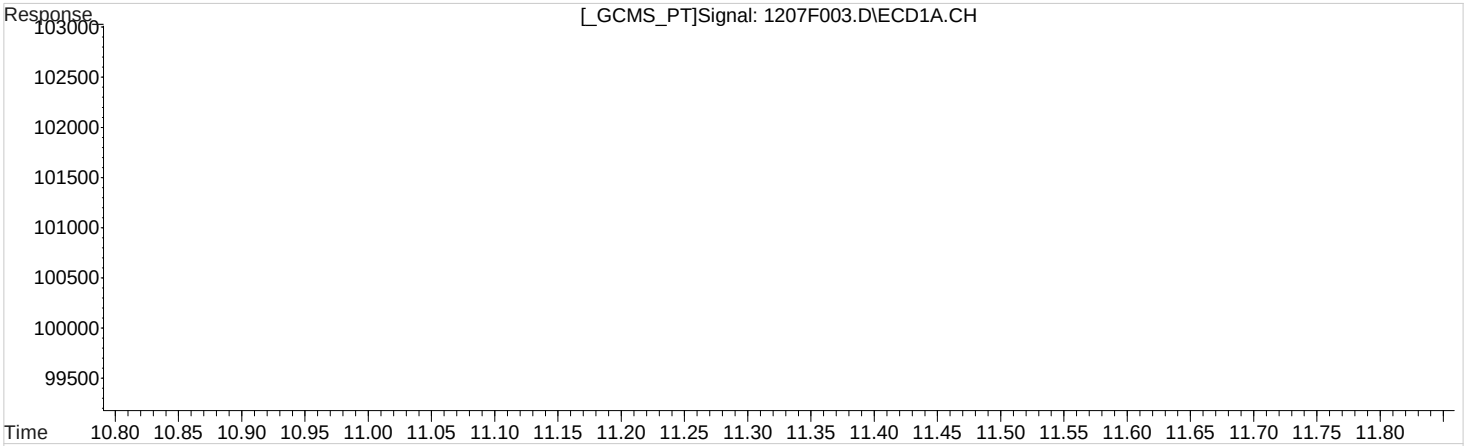
Quantitation Report (Qedit)

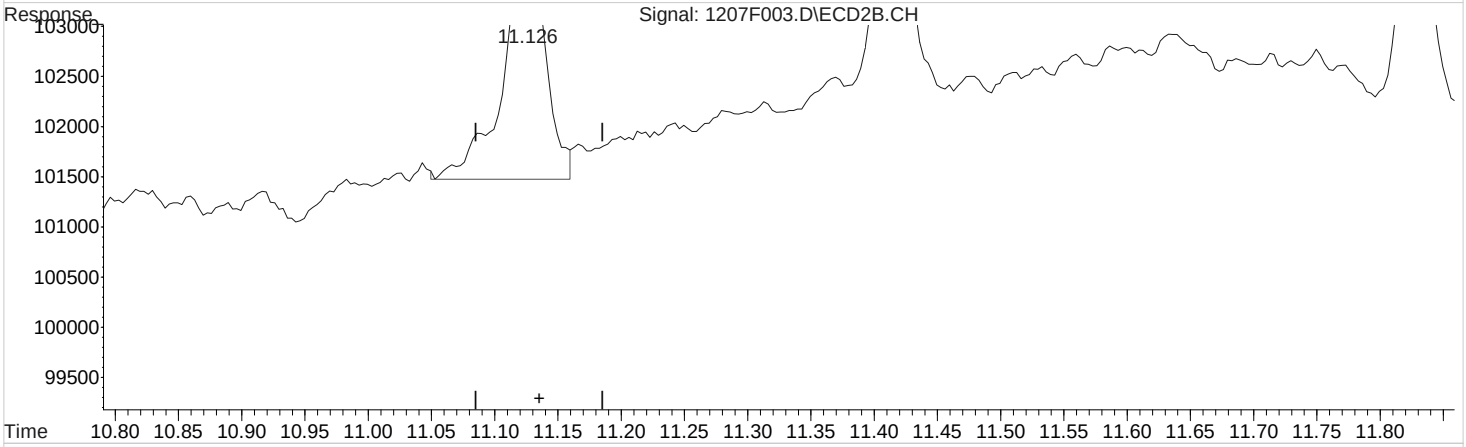
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(10) Isodrin

12.529min 0.256 ug/L

response 1934

Manual Integration:

Before

12/10/18

(10) Isodrin #2

11.126min 0.238 ug/L

response 5852

(+) = Expected Retention Time

020530

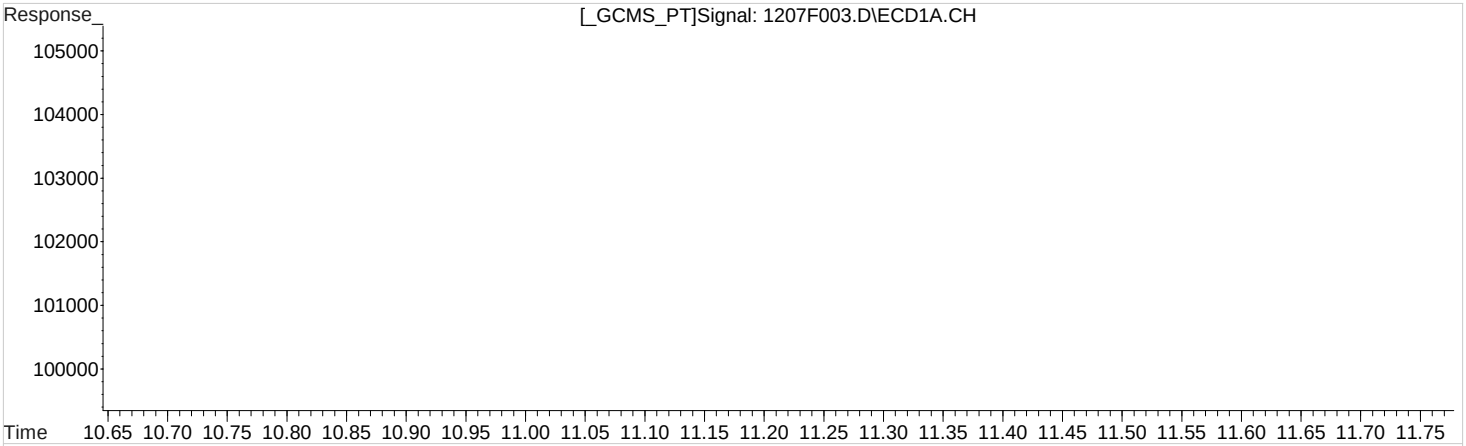
Quantitation Report (Qedit)

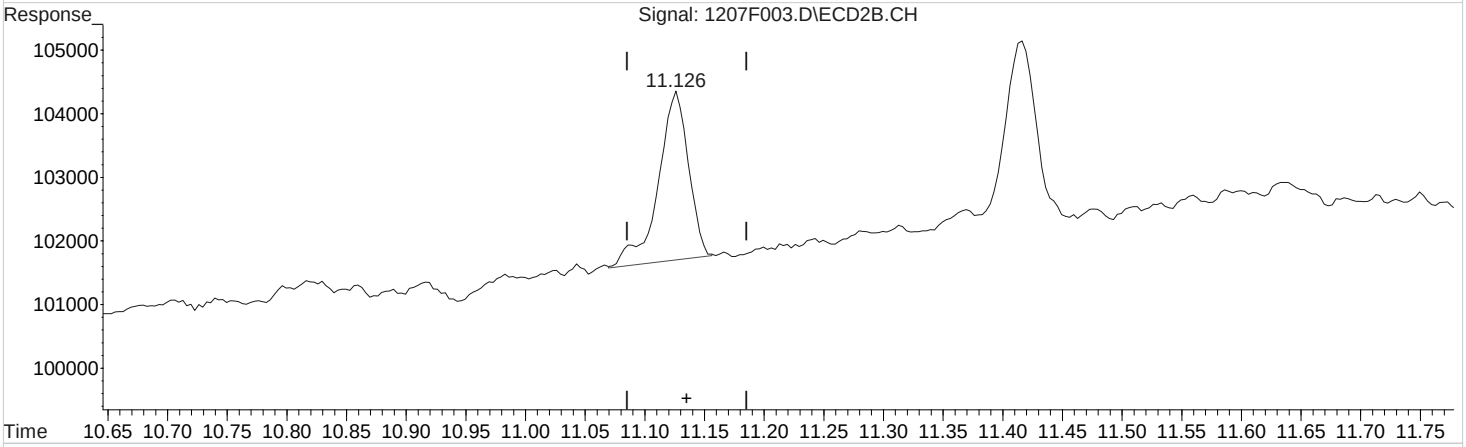
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:28:23 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(10) Isodrin

12.529min 0.256 ug/L

response 1934

Manual Integration:

Before

12/11/18

(10) Isodrin #2

11.126min 0.190 ug/L m

response 4671

(+) = Expected Retention Time

020531

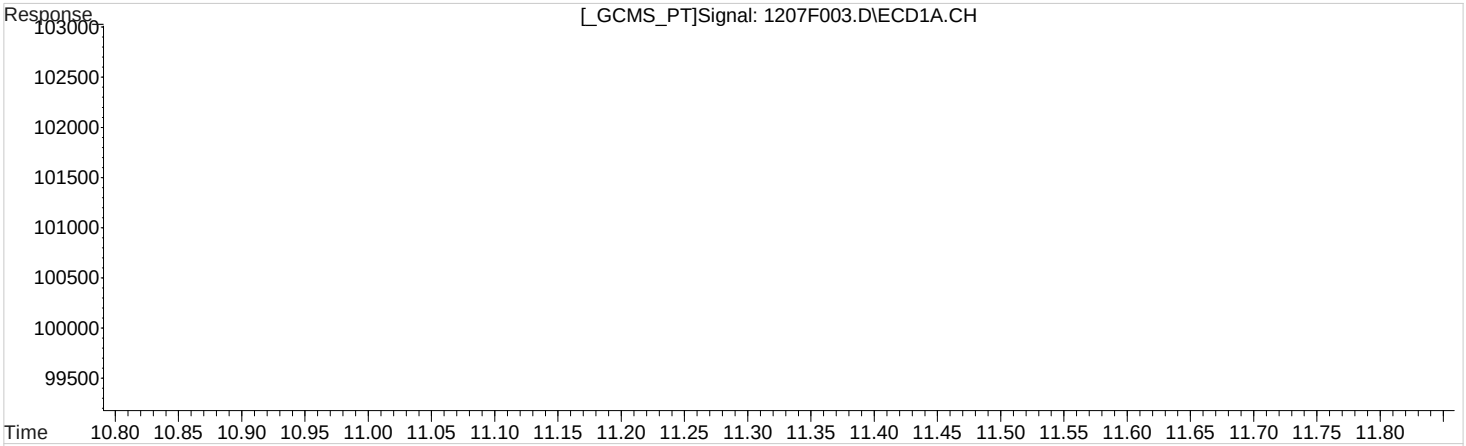
Quantitation Report (Qedit)

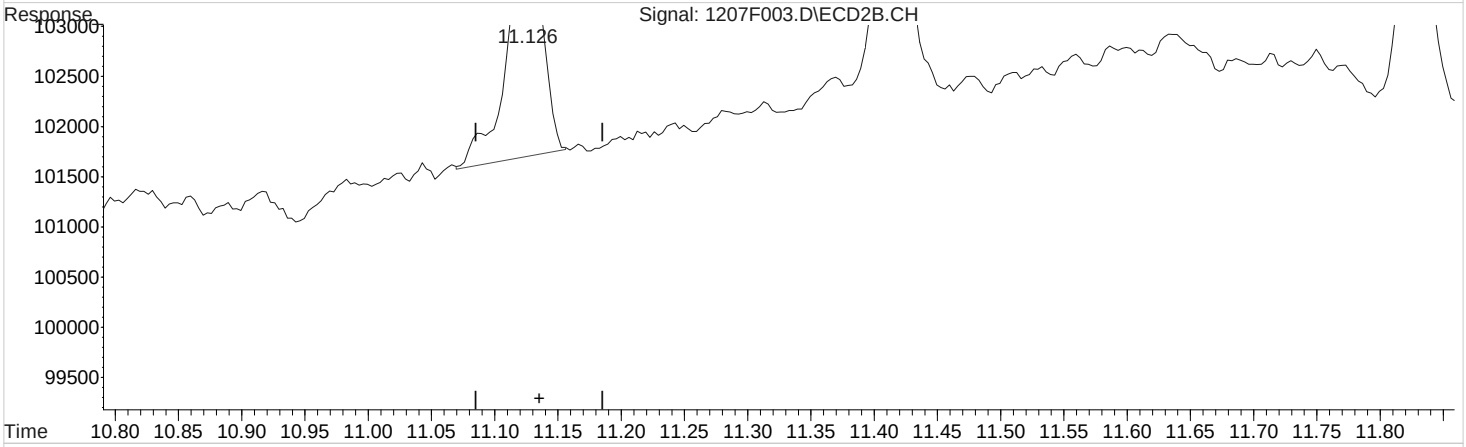
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(10) Isodrin

12.529min 0.256 ug/L

response 1934

Manual Integration:

After

Baseline/Shoulder

12/10/18

(10) Isodrin #2

11.126min 0.190 ug/L m

response 4671

(+) = Expected Retention Time

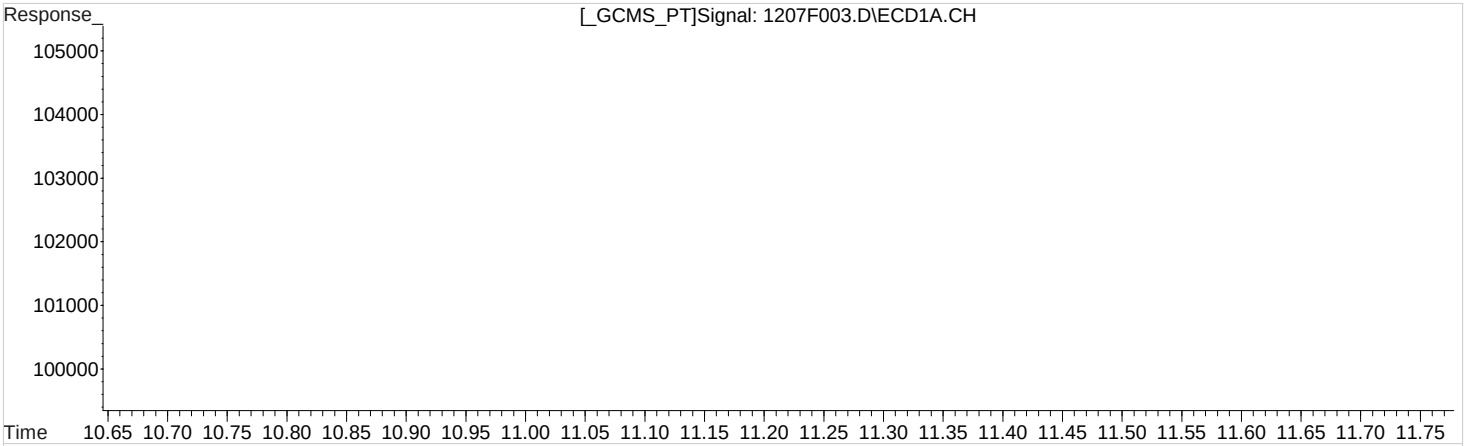
Quantitation Report (Qedit)

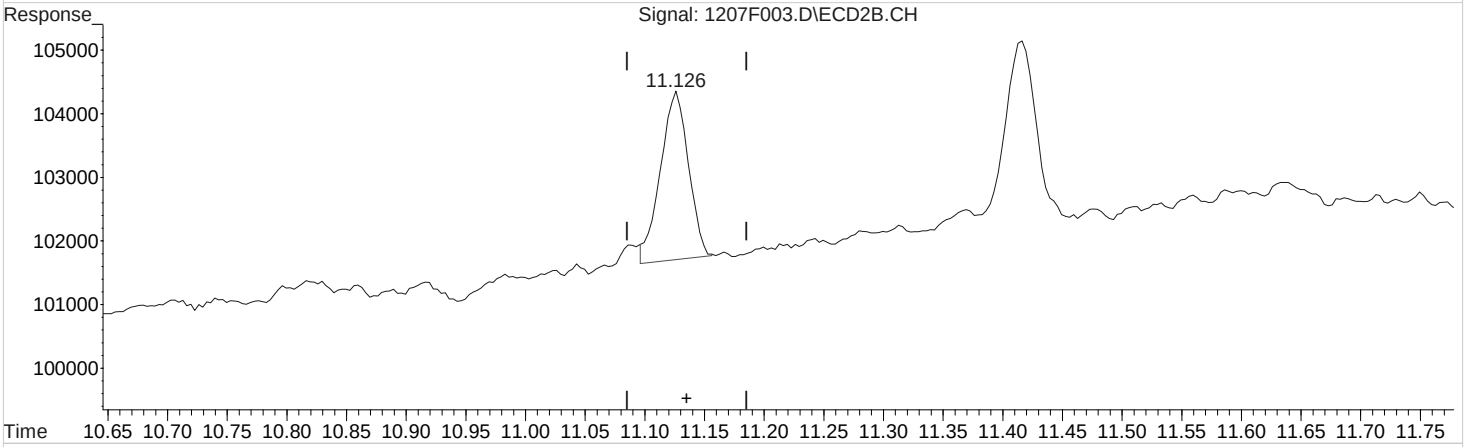
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:28:23 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(10) Isodrin

12.529min 0.256 ug/L

response 1934

Manual Integration:

After

Baseline/Shoulder

12/11/18

(10) Isodrin #2

11.126min 0.175 ug/L m

response 4301

(+) = Expected Retention Time

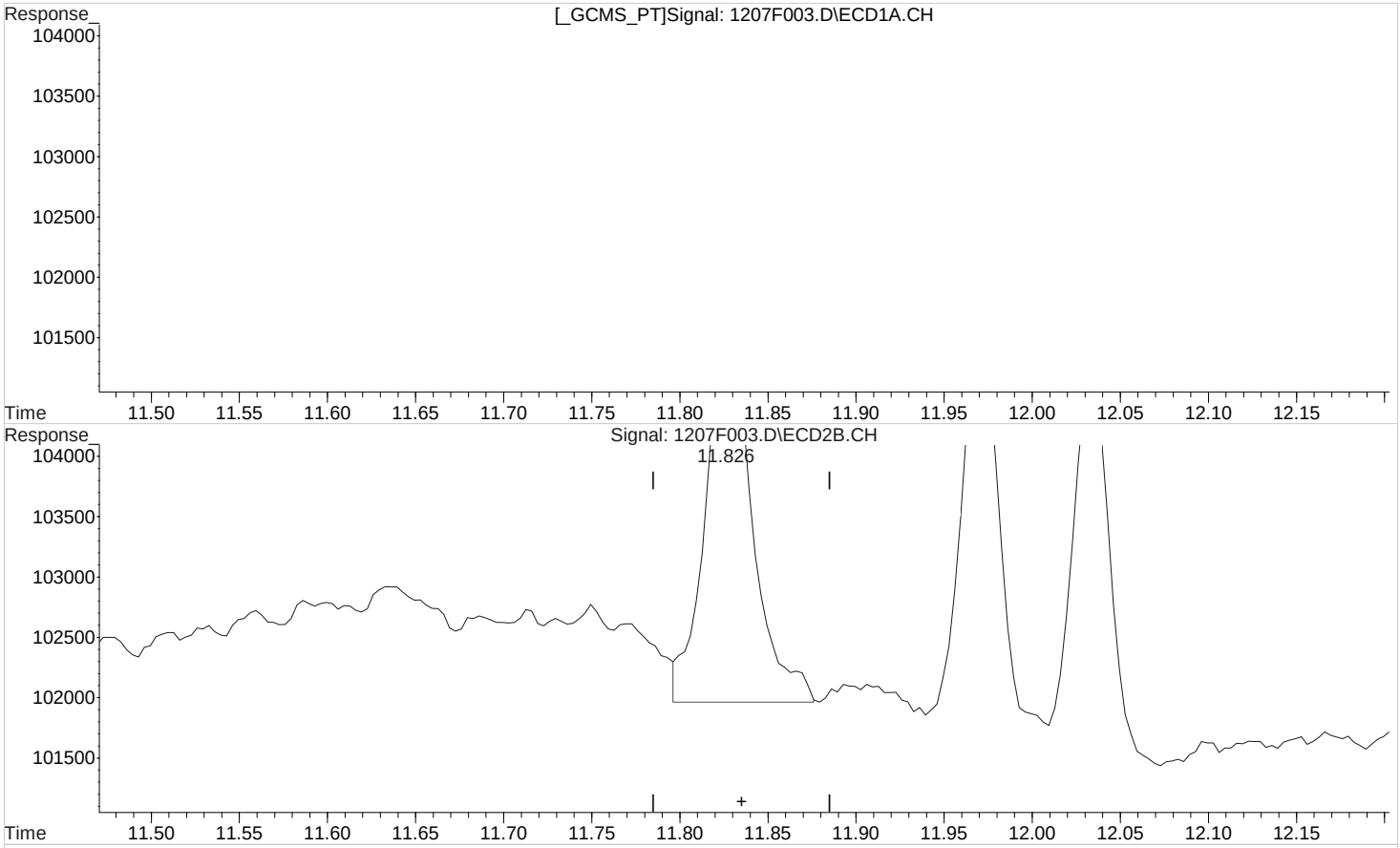
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(12) gamma-Chlordane

13.235min 0.230 ug/L

response 1932

(12) gamma-Chlordane #2

11.826min 0.232 ug/L

response 6010

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

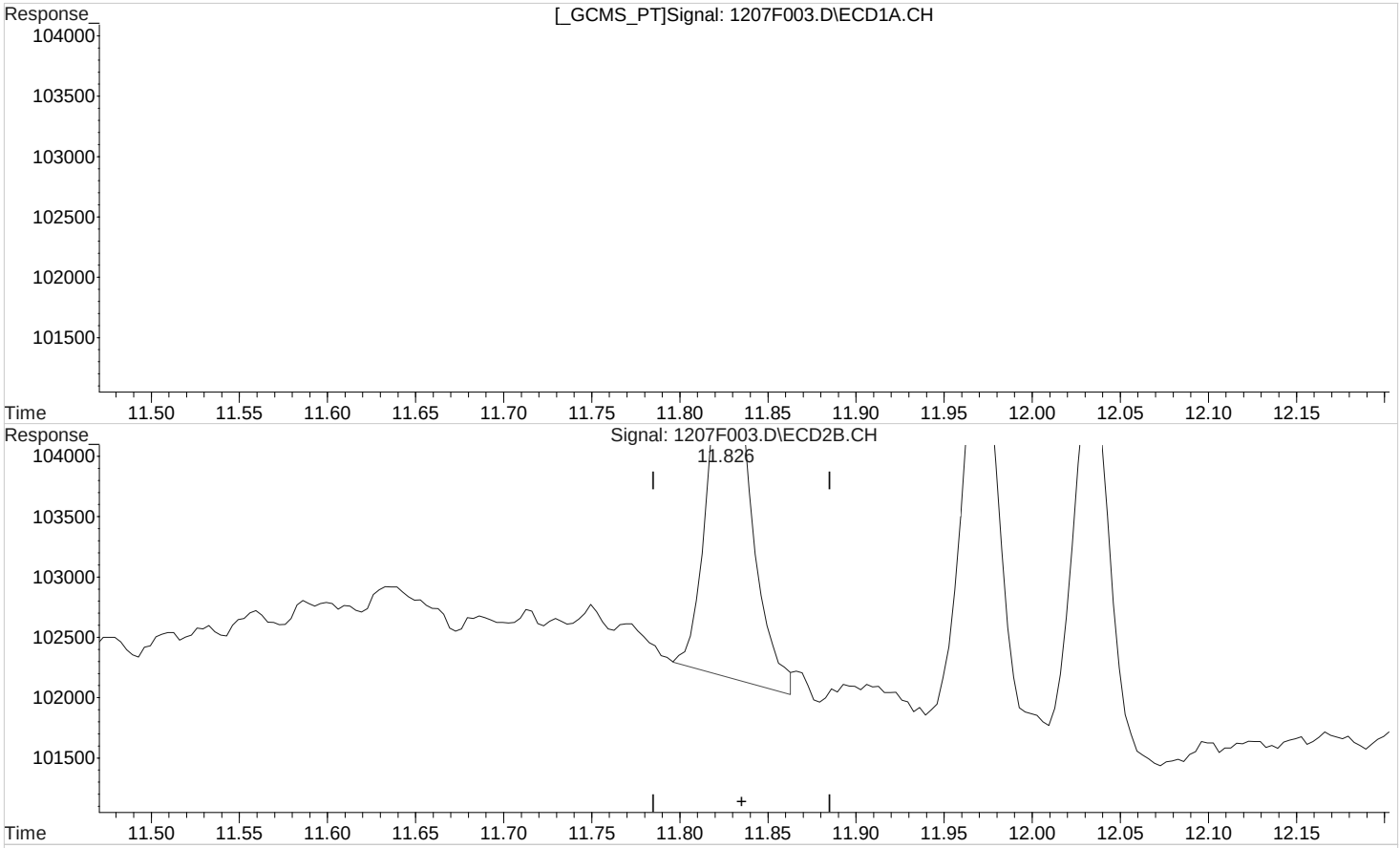
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(12) gamma-Chlordane

13.235min 0.230 ug/L

response 1932

Manual Integration:

After

Baseline/Shoulder

12/10/18

(12) gamma-Chlordane #2

11.826min 0.196 ug/L m

response 5090

(+) = Expected Retention Time

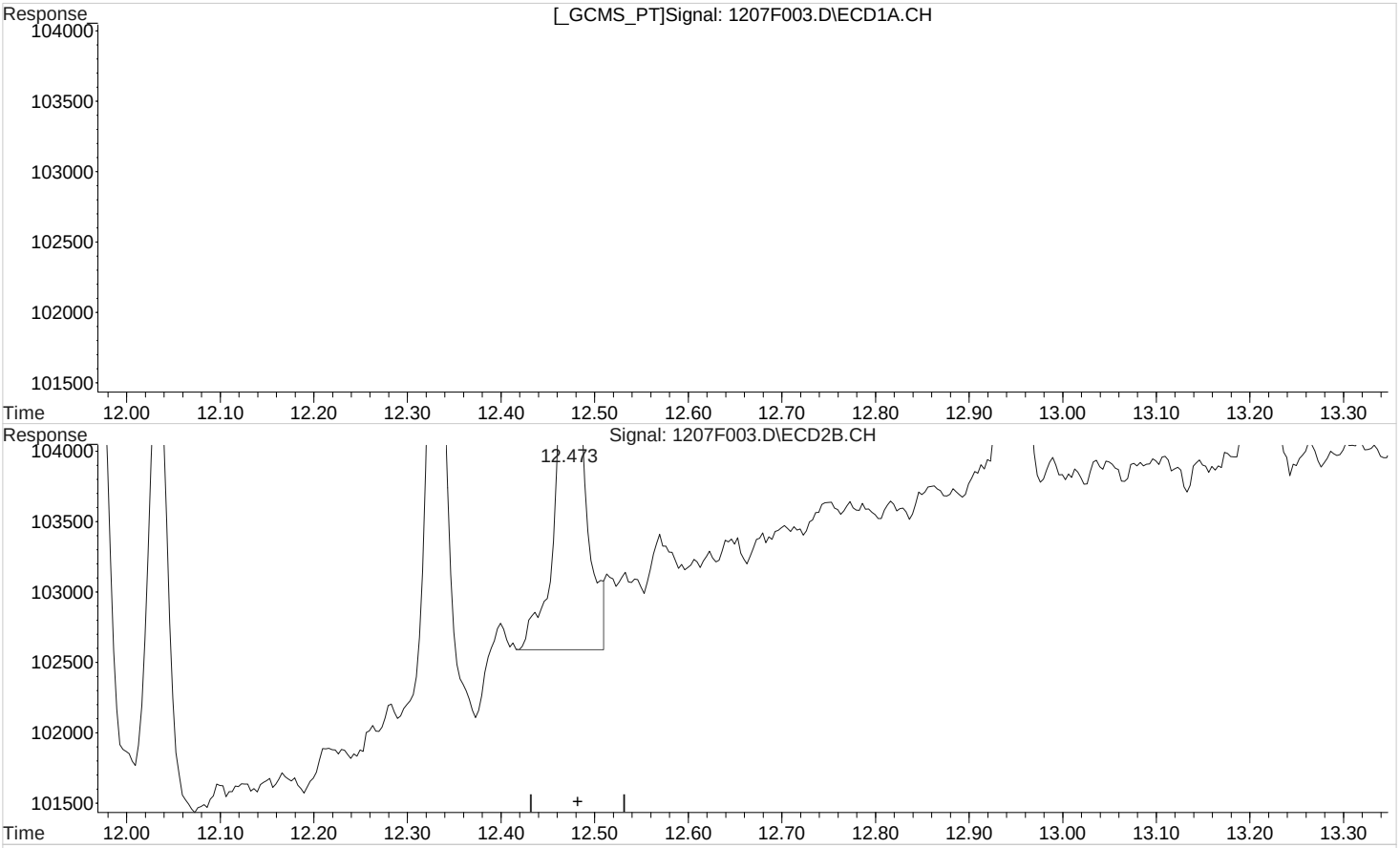
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (Qedit)

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(15) Dieldrin

13.782min 0.263 ug/L

response 2120

Manual Integration:

Before

12/10/18

(15) Dieldrin #2

12.473min 0.249 ug/L

response 6040

(+) = Expected Retention Time

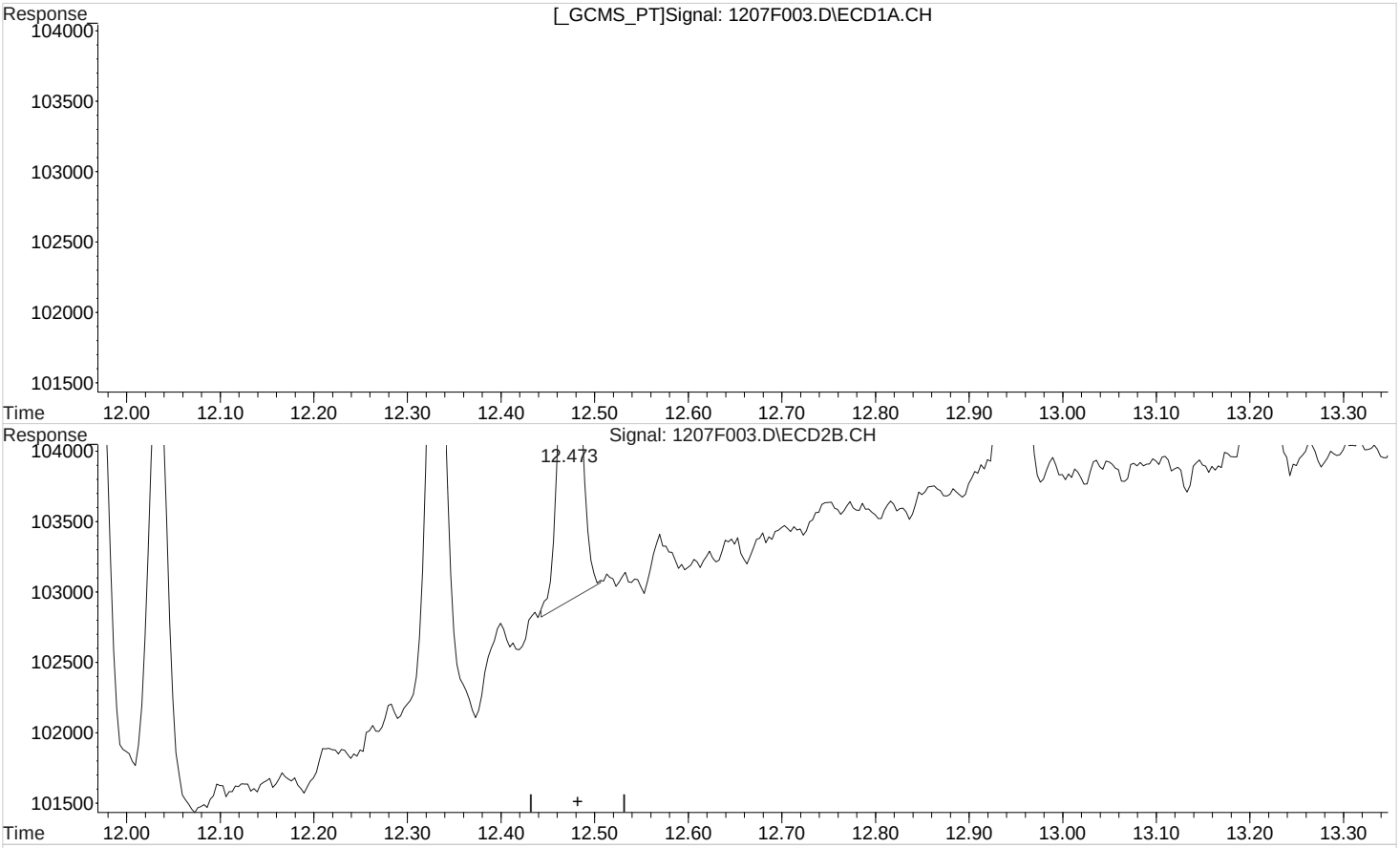
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (Qedit)

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(15) Dieldrin

13.782min 0.263 ug/L

response 2120

Manual Integration:

After

Baseline/Shoulder

12/10/18

(15) Dieldrin #2

12.473min 0.179 ug/L m

response 4335

(+) = Expected Retention Time

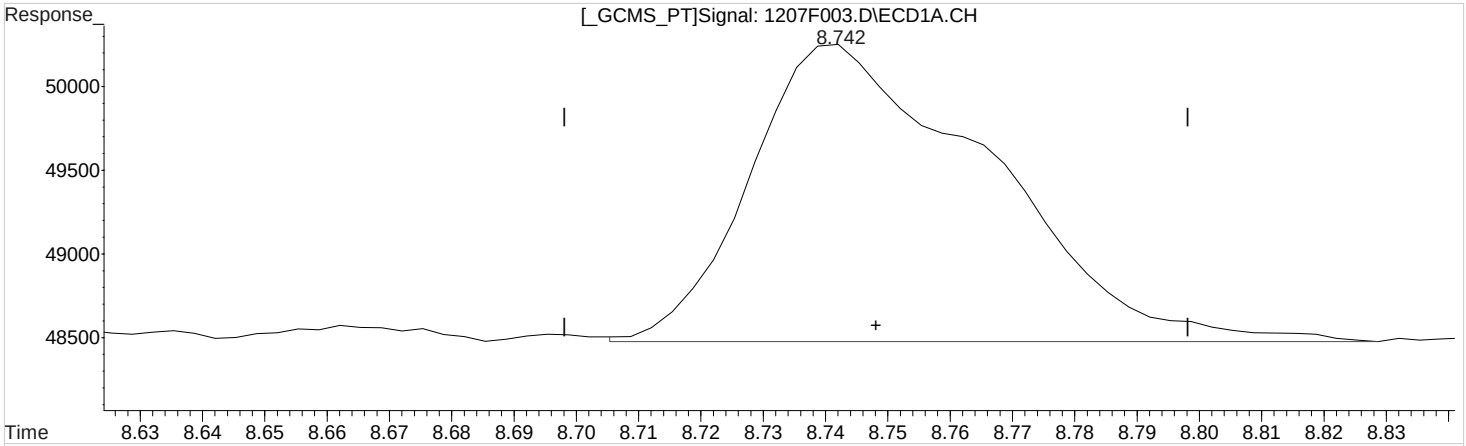
Quantitation Report (Qedit)

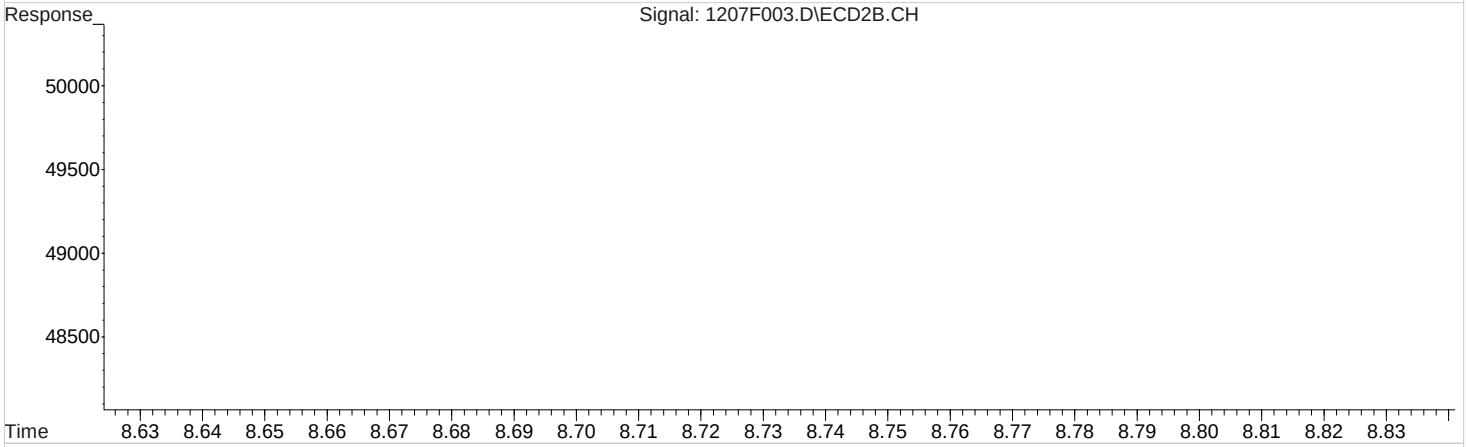
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:52:04 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(2) Tetrachloro-m-xylene (s)

8.742min 0.376 ug/L

response 4768

Manual Integration:

Before

12/11/18

(2) Tetrachloro-m-xylene #2 (s)

7.106min 0.097 ug/L

response 6660

(+) = Expected Retention Time

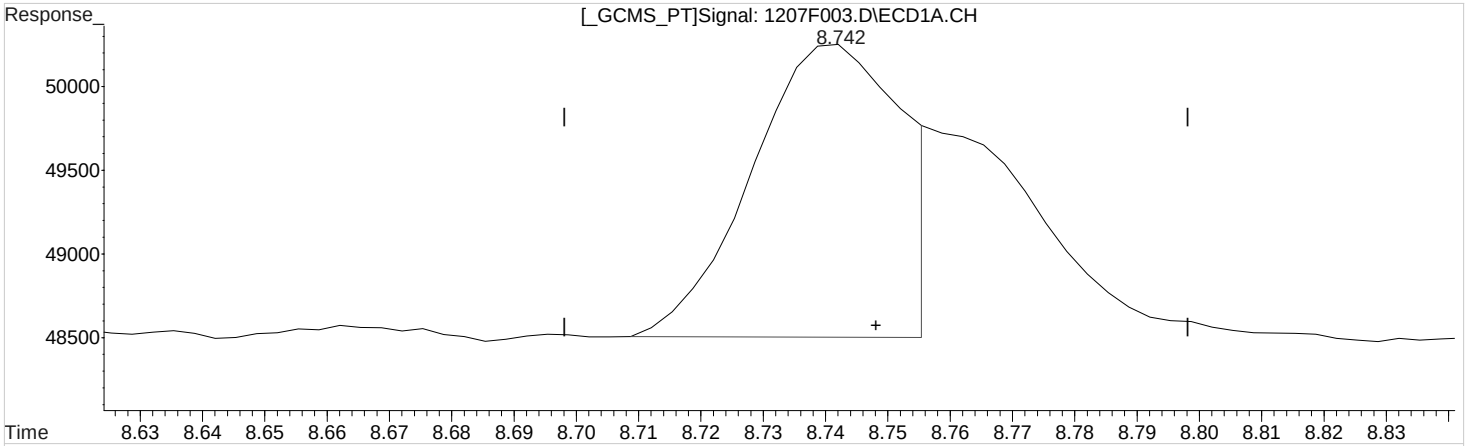
Quantitation Report (Qedit)

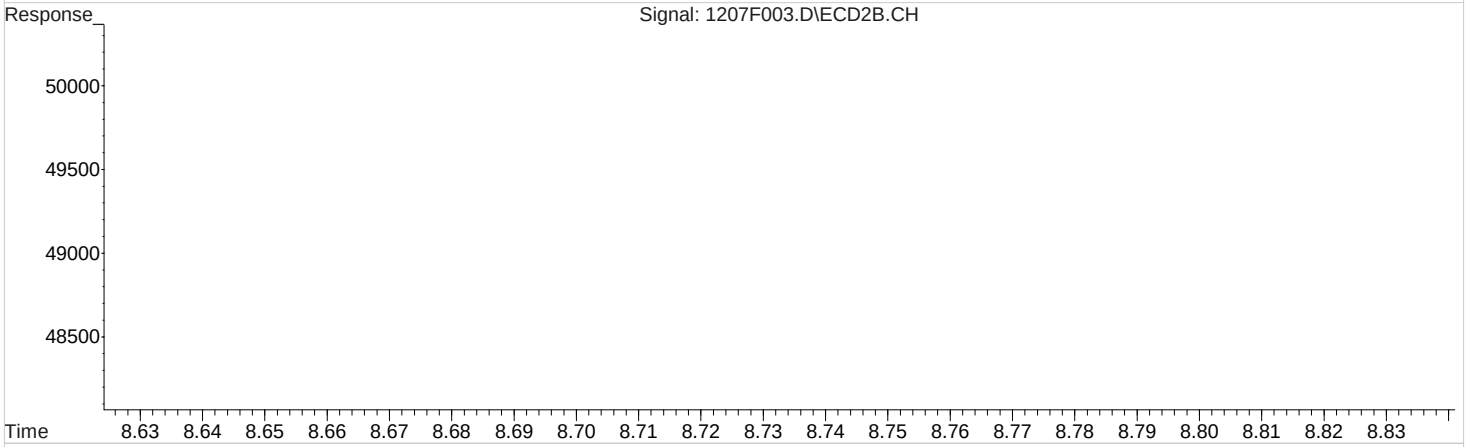
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:52:04 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(2) Tetrachloro-m-xylene (s)

8.742min 0.211 ug/L m

response 2984

Manual Integration:

After

Baseline/Shoulder

12/11/18

(2) Tetrachloro-m-xylene #2 (s)

7.106min 0.097 ug/L

response 6660

(+) = Expected Retention Time

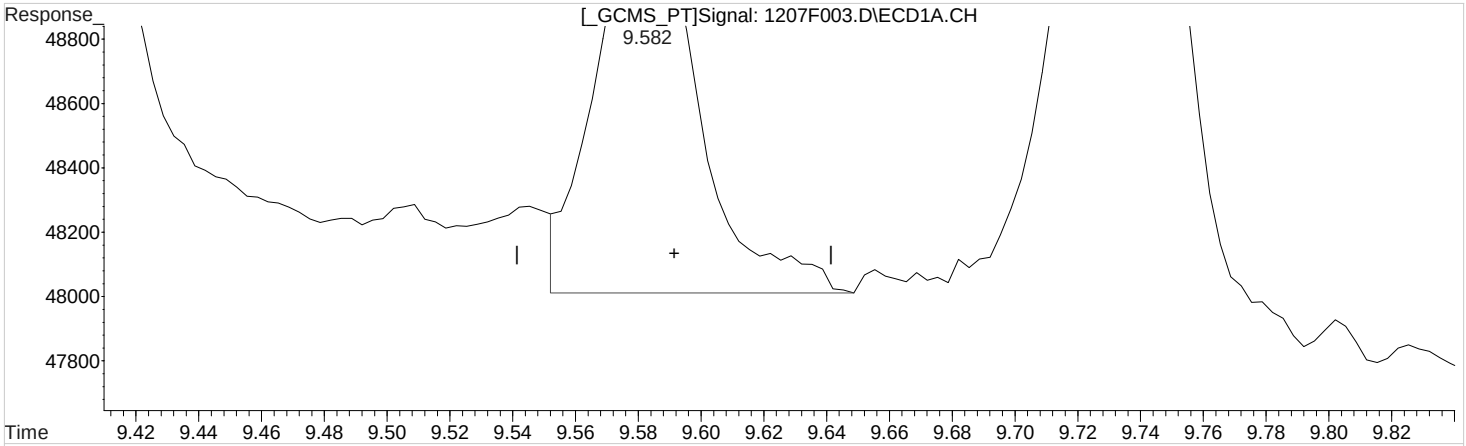
Quantitation Report (Qedit)

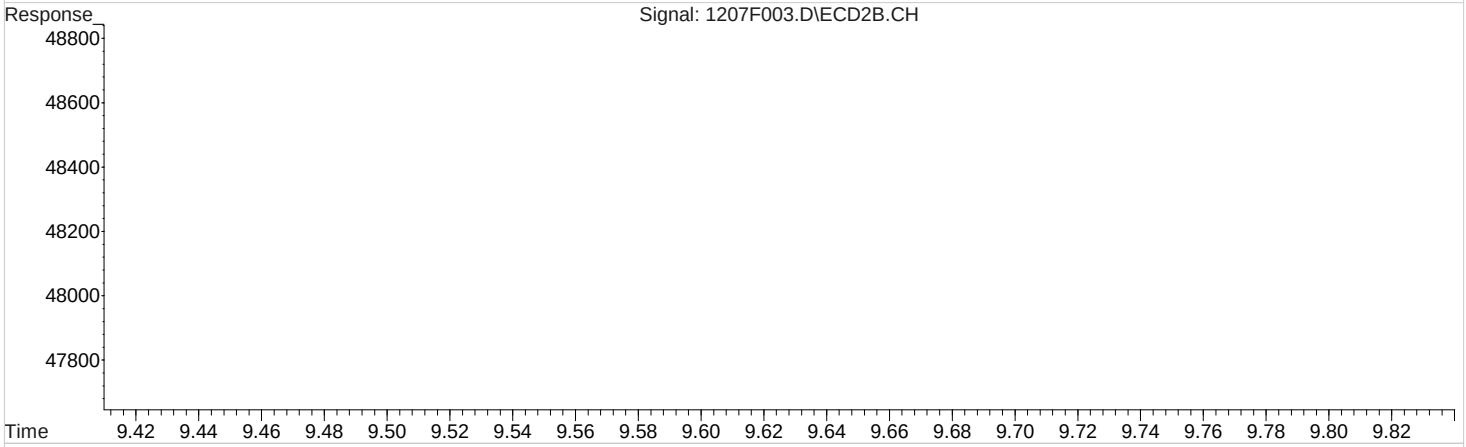
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(3) alpha-BHC

9.582min 0.276 ug/L

response 2873

(3) alpha-BHC #2

8.329min 0.222 ug/L

response 7376

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

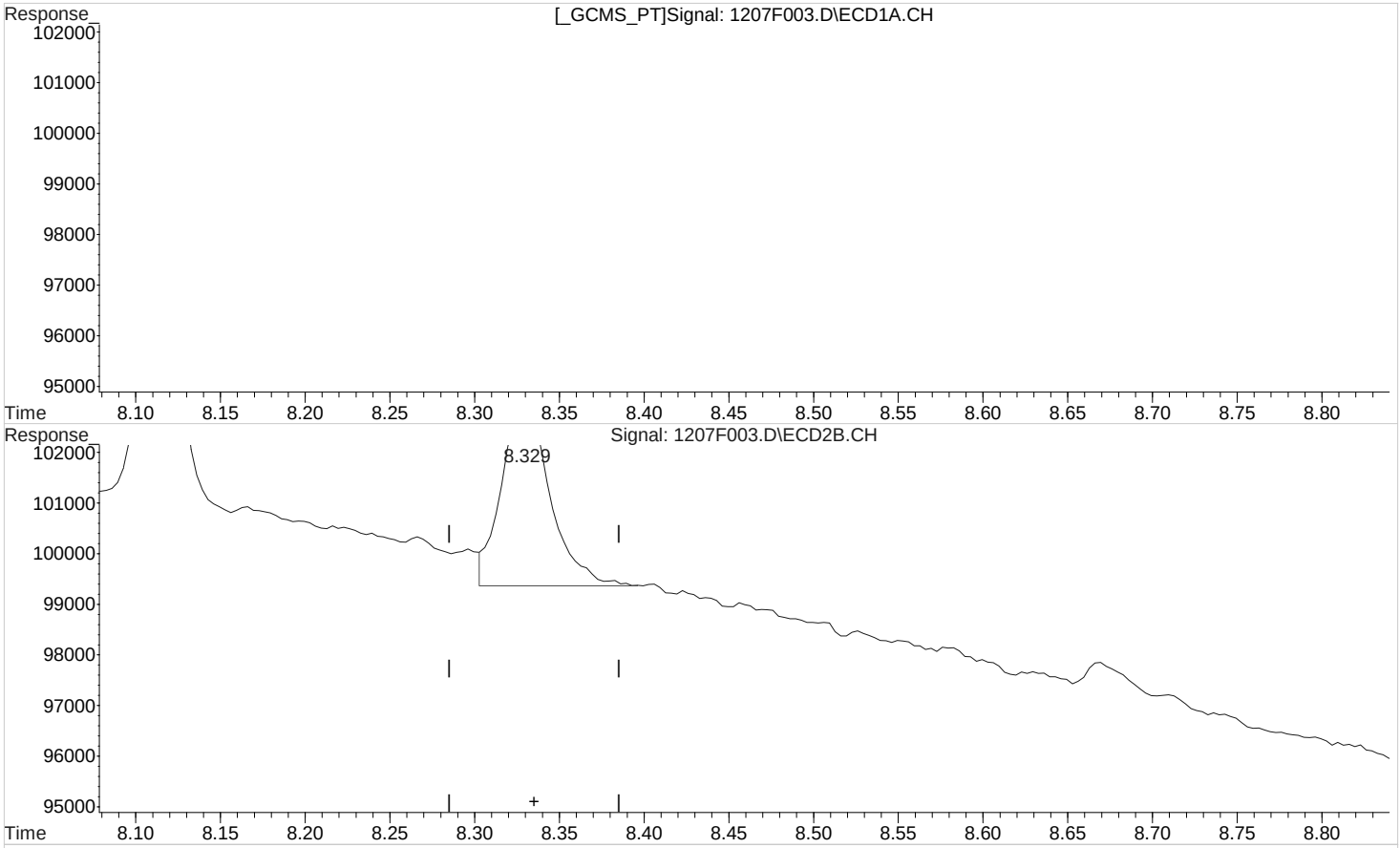
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(3) alpha-BHC

9.582min 0.210 ug/L m

response 2179

(3) alpha-BHC #2

8.329min 0.222 ug/L

response 7376

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

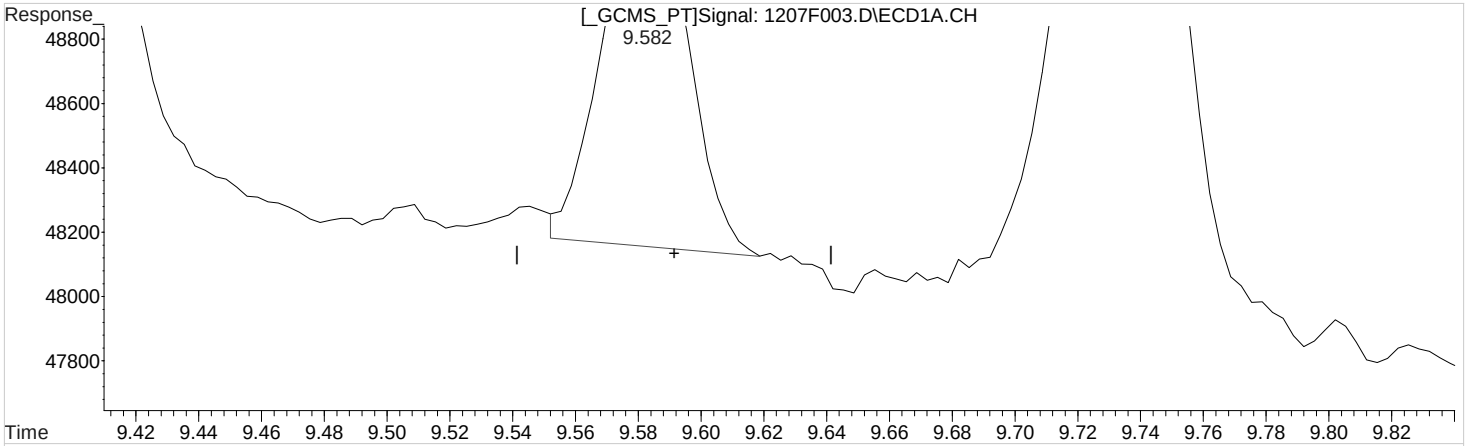
Quantitation Report (Qedit)

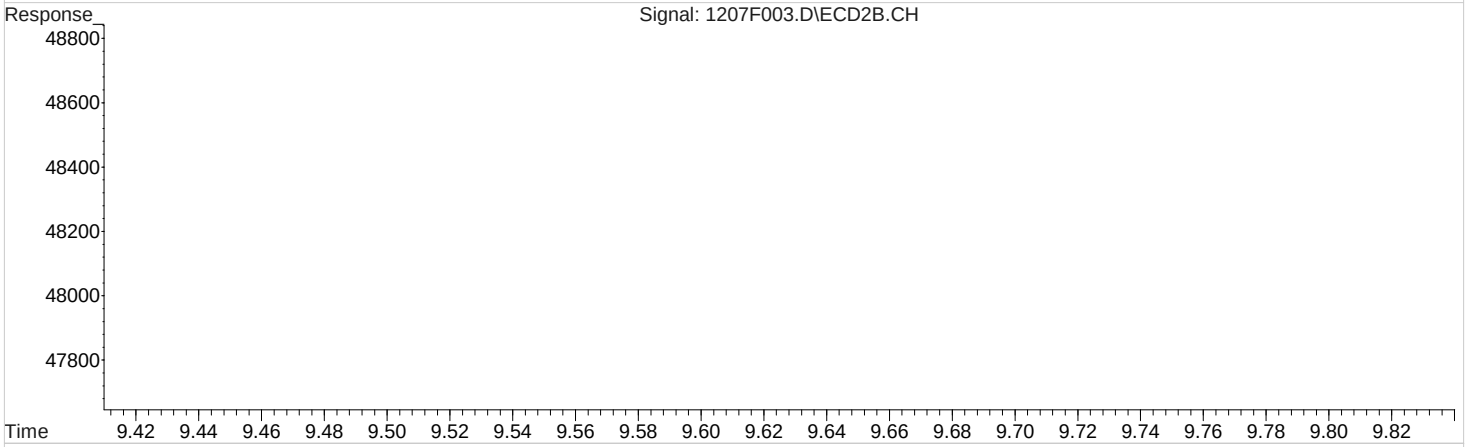
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(3) alpha-BHC

9.582min 0.210 ug/L m

response 2179

Manual Integration:

After

Baseline/Shoulder

12/10/18

(3) alpha-BHC #2

8.329min 0.222 ug/L

response 7376

(+) = Expected Retention Time

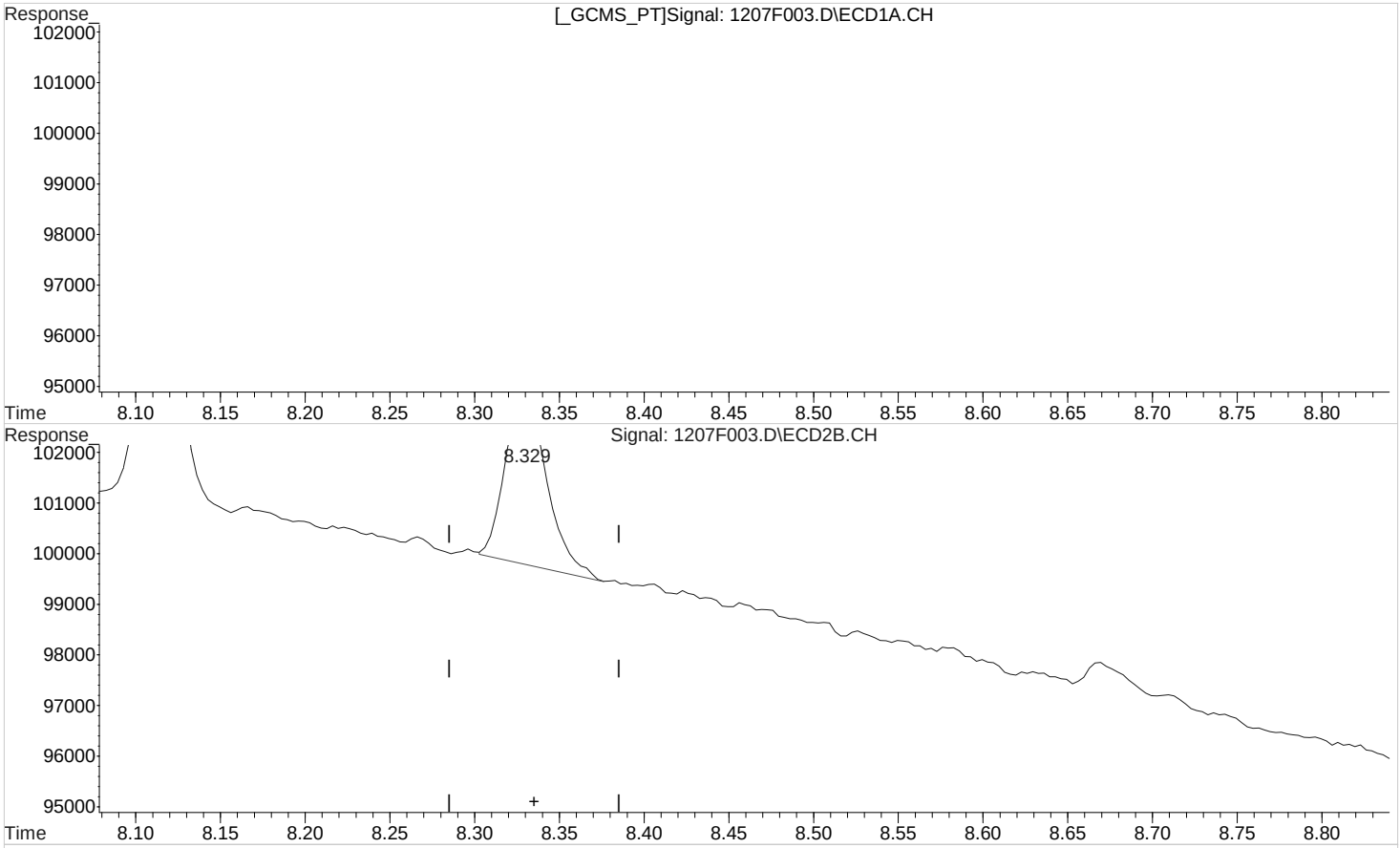
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(3) alpha-BHC

9.582min 0.210 ug/L m

response 2179

Manual Integration:

After

Baseline/Shoulder

12/10/18

(3) alpha-BHC #2

8.329min 0.174 ug/L m

response 5767

(+) = Expected Retention Time

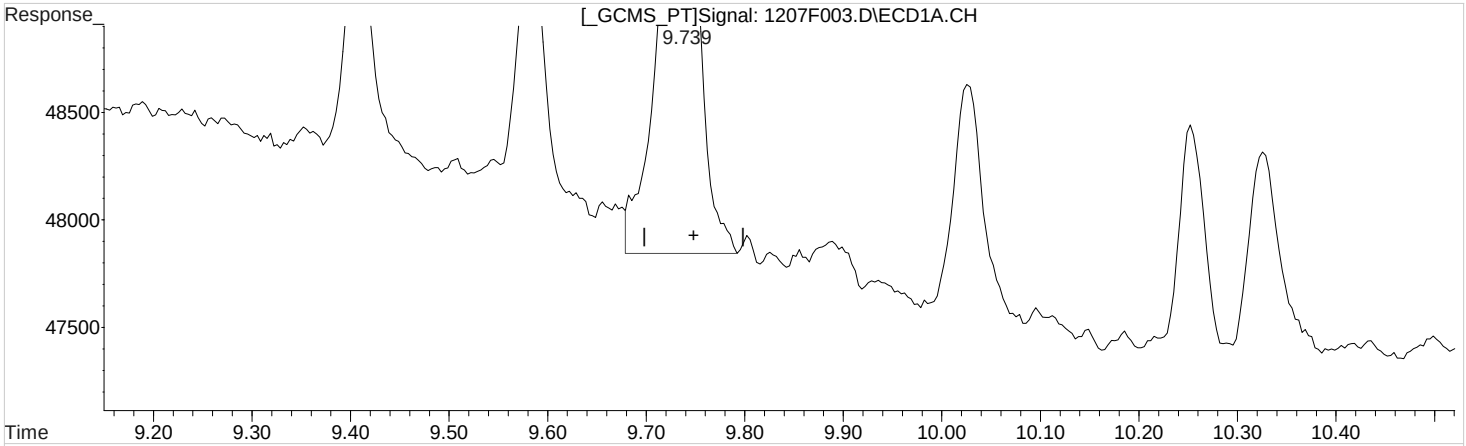
Quantitation Report (Qedit)

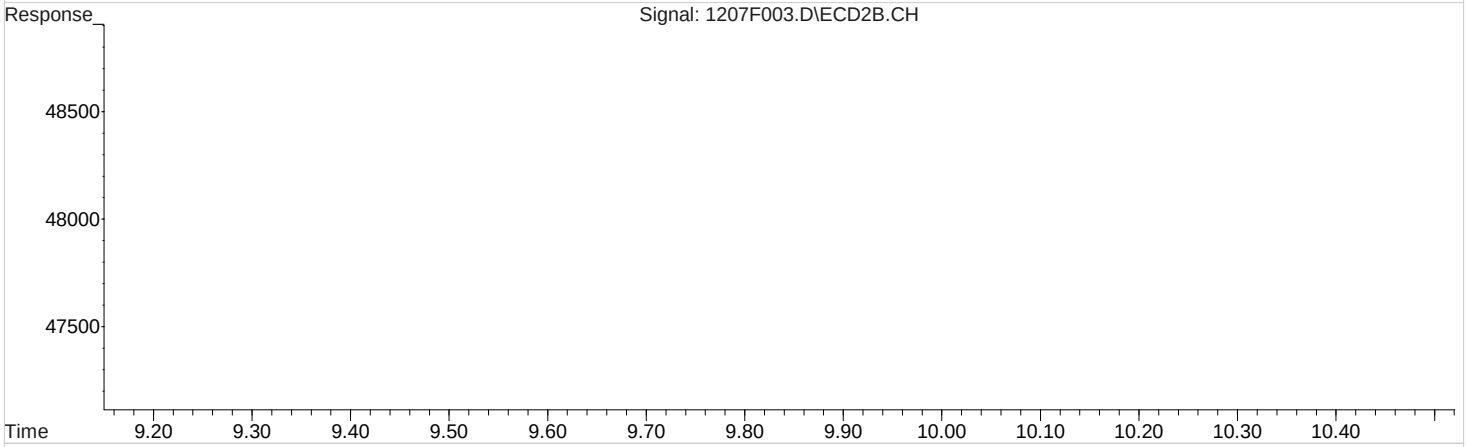
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.739min 0.412 ug/L

response 6439

Manual Integration:

Before

12/10/18

(4) Hexachlorobenzene #2

8.113min 0.115 ug/L

response 9300

(+) = Expected Retention Time

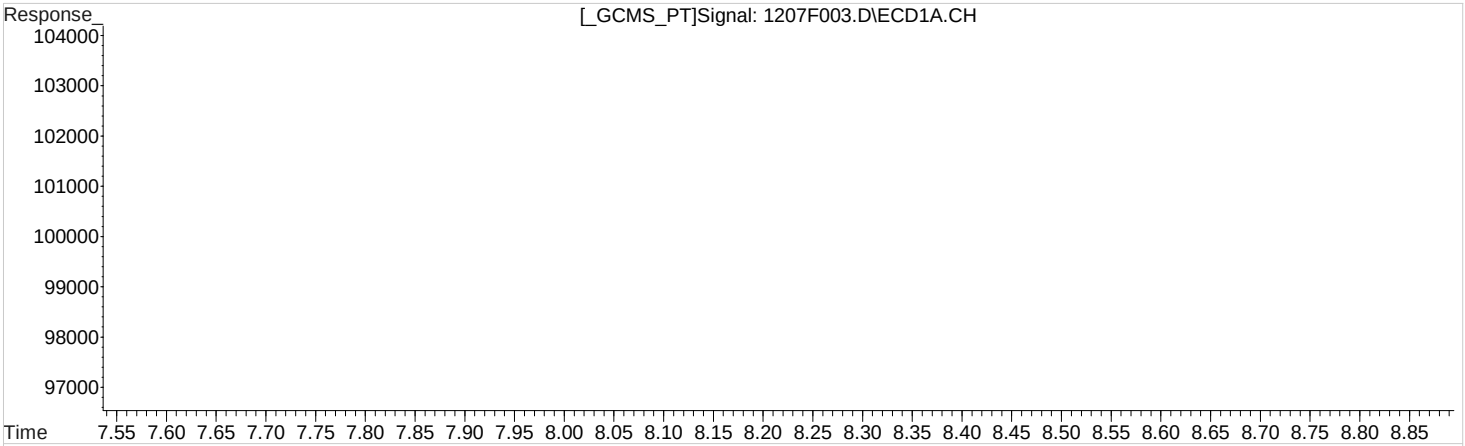
Quantitation Report (Qedit)

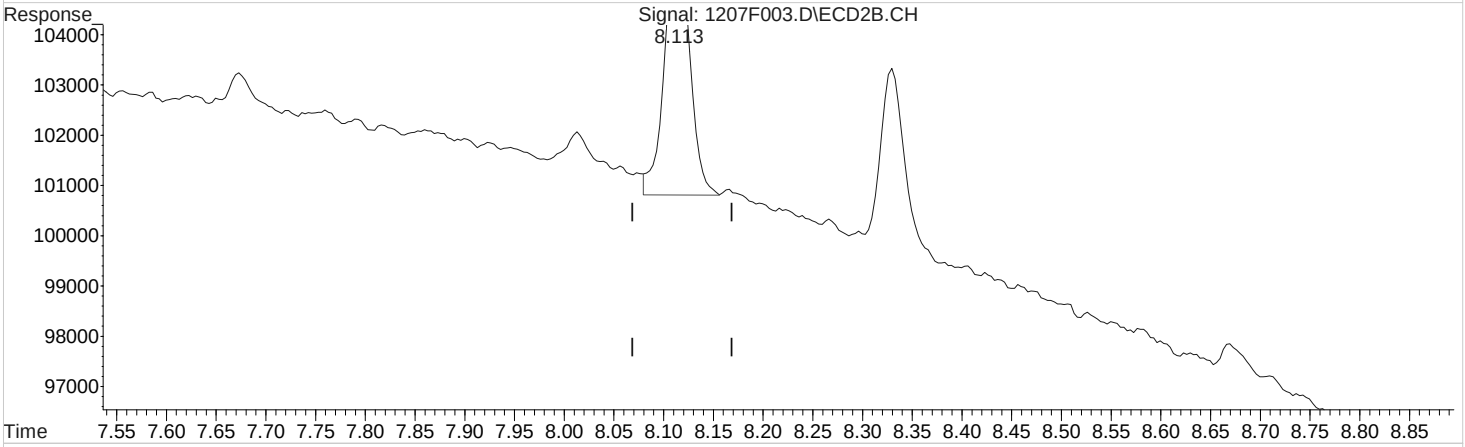
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.739min 0.359 ug/L m

response 5749

Manual Integration:

Before

12/10/18

(4) Hexachlorobenzene #2

8.113min 0.115 ug/L

response 9300

(+) = Expected Retention Time

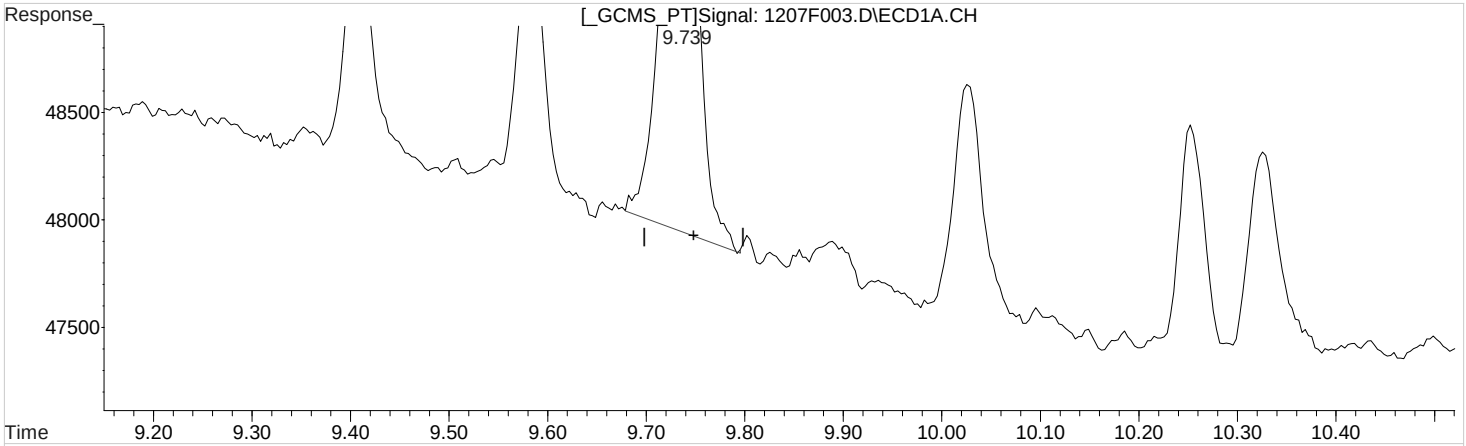
Quantitation Report (Qedit)

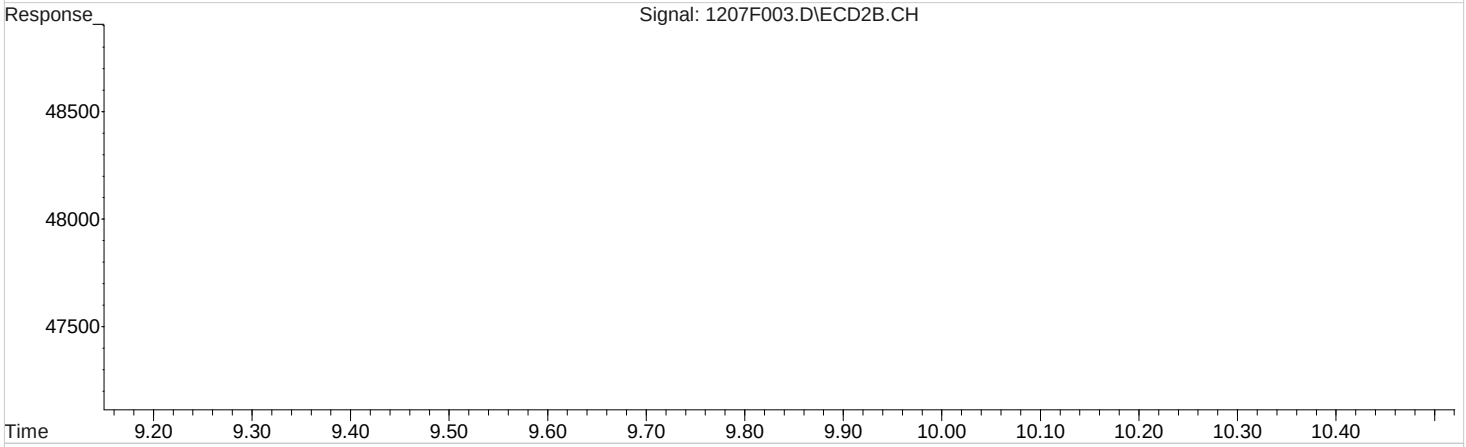
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.739min 0.359 ug/L m

response 5749

Manual Integration:

After

Baseline/Shoulder

12/10/18

(4) Hexachlorobenzene #2

8.113min 0.115 ug/L

response 9300

(+) = Expected Retention Time

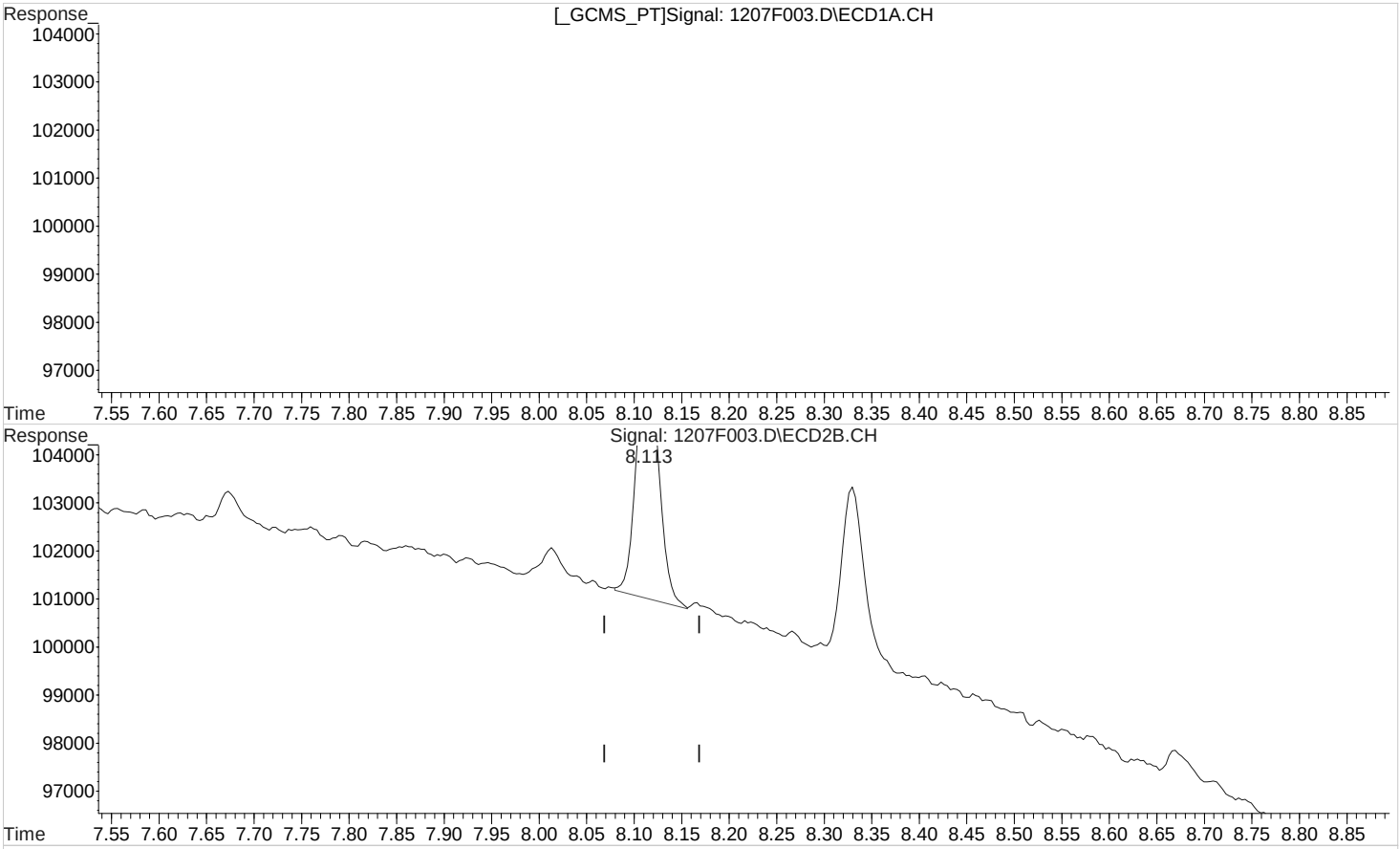
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(4) Hexachlorobenzene

9.739min 0.359 ug/L m

response 5749

Manual Integration:

After

Baseline/Shoulder

12/10/18

(4) Hexachlorobenzene #2

8.113min 0.093 ug/L m

response 8483

(+) = Expected Retention Time

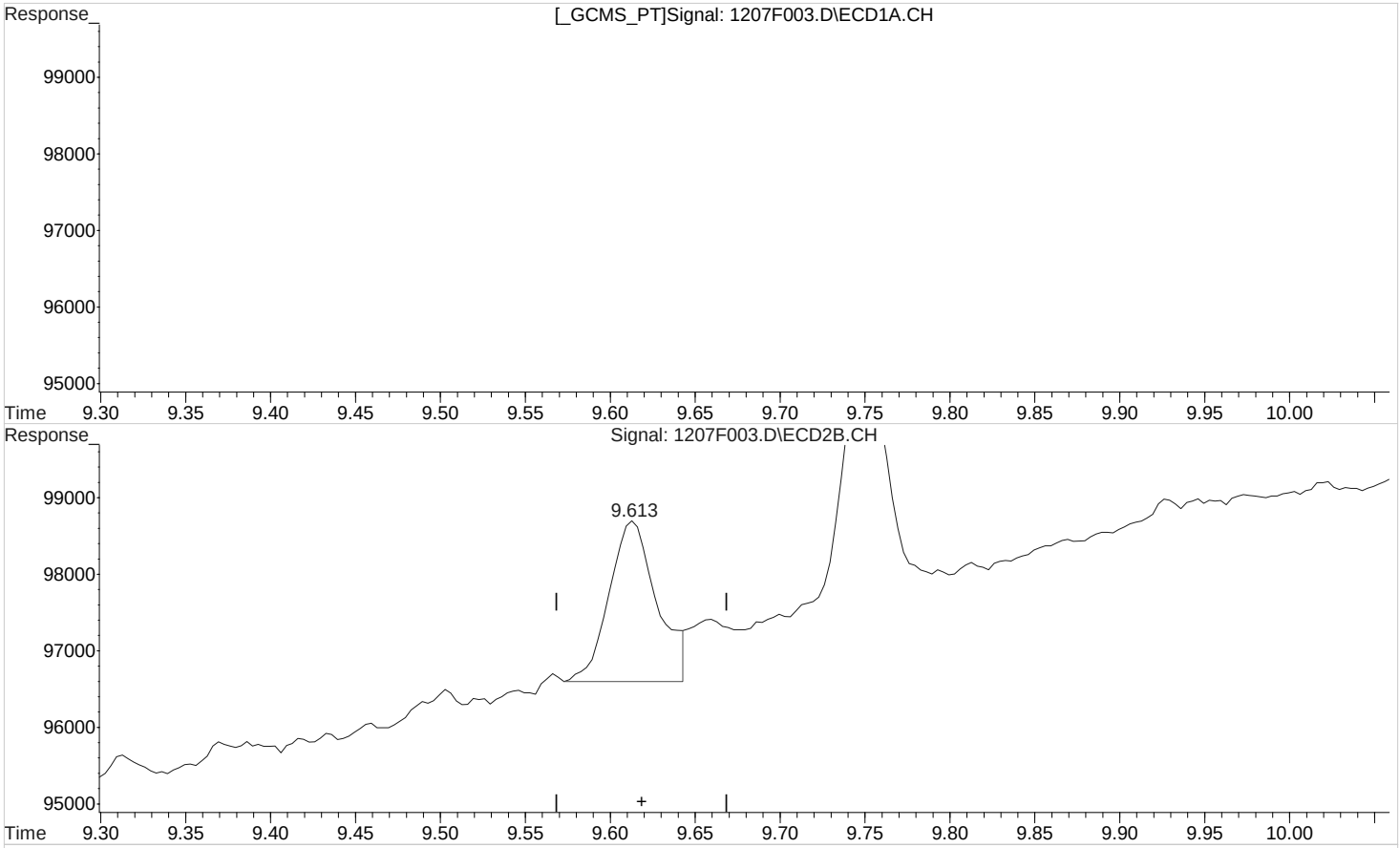
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(5) beta-BHC

10.859min 0.226 ug/L

response 1146

(5) beta-BHC #2

9.613min 0.257 ug/L

response 4125

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

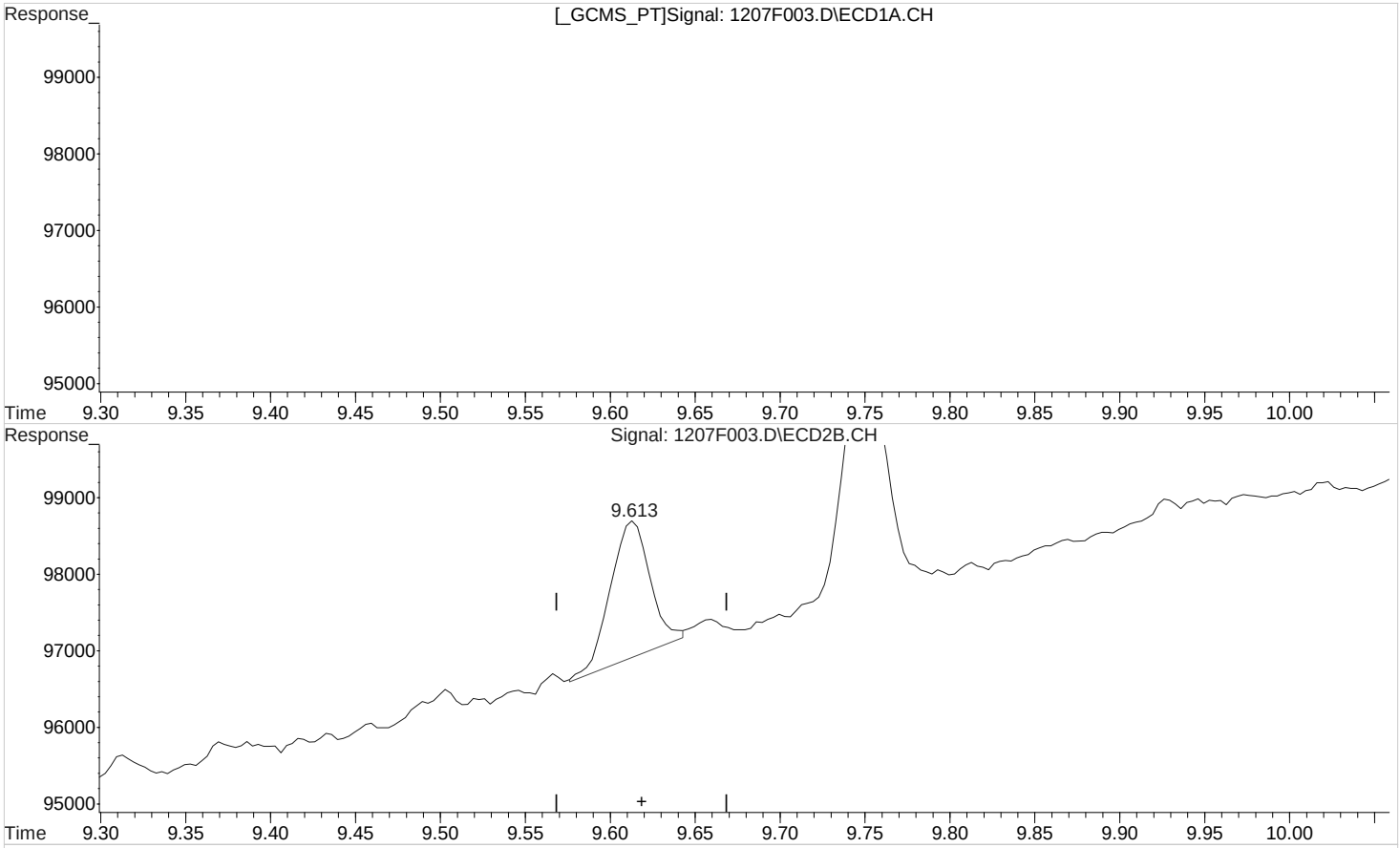
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(5) beta-BHC

10.859min 0.226 ug/L

response 1146

Manual Integration:

After

Baseline/Shoulder

12/10/18

(5) beta-BHC #2

9.613min 0.185 ug/L m

response 2974

(+) = Expected Retention Time

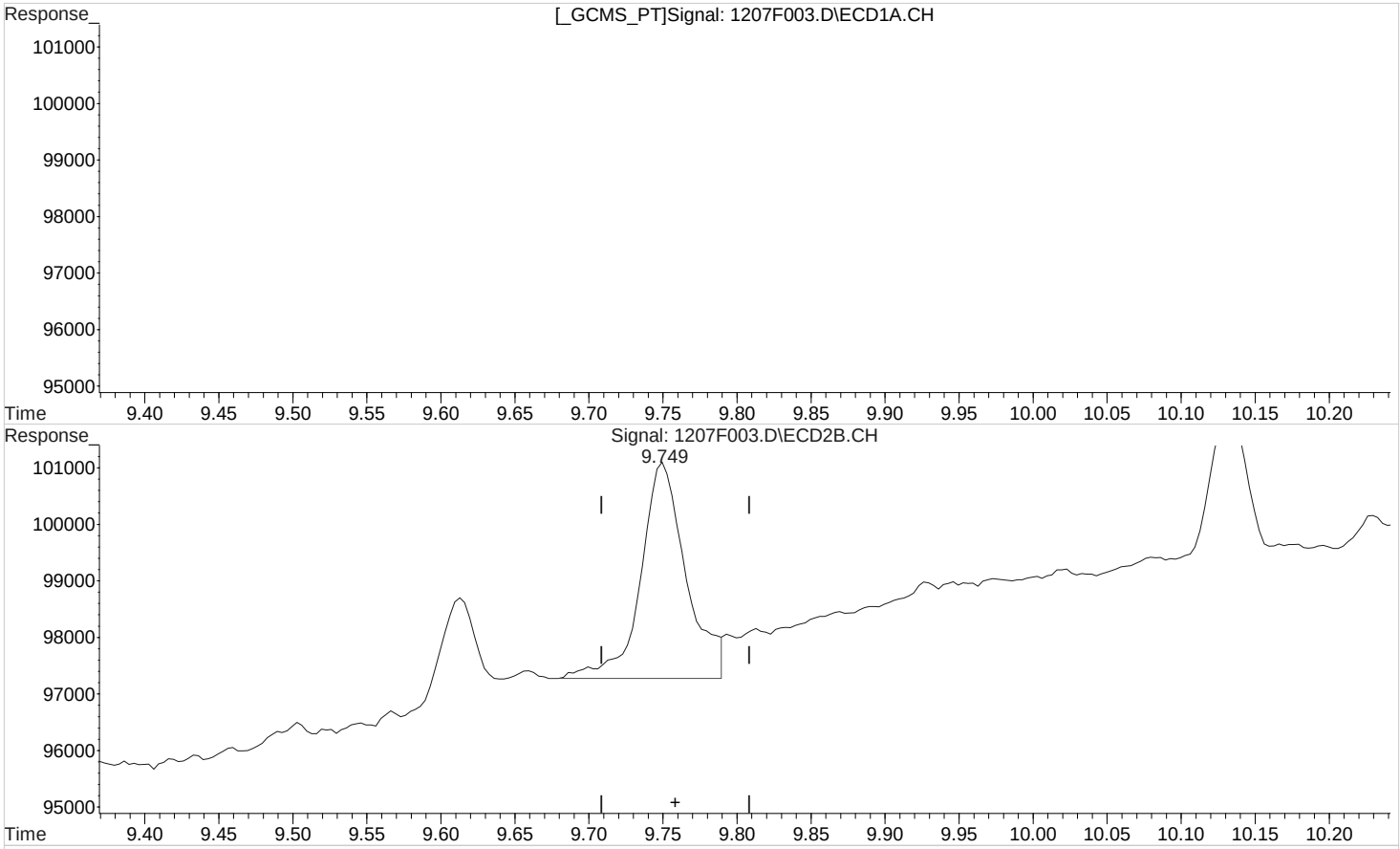
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(8) Heptachlor

11.445min 0.414 ug/L

response 3830

Manual Integration:

Before

12/10/18

(8) Heptachlor #2

9.749min 0.282 ug/L

response 8186

(+) = Expected Retention Time

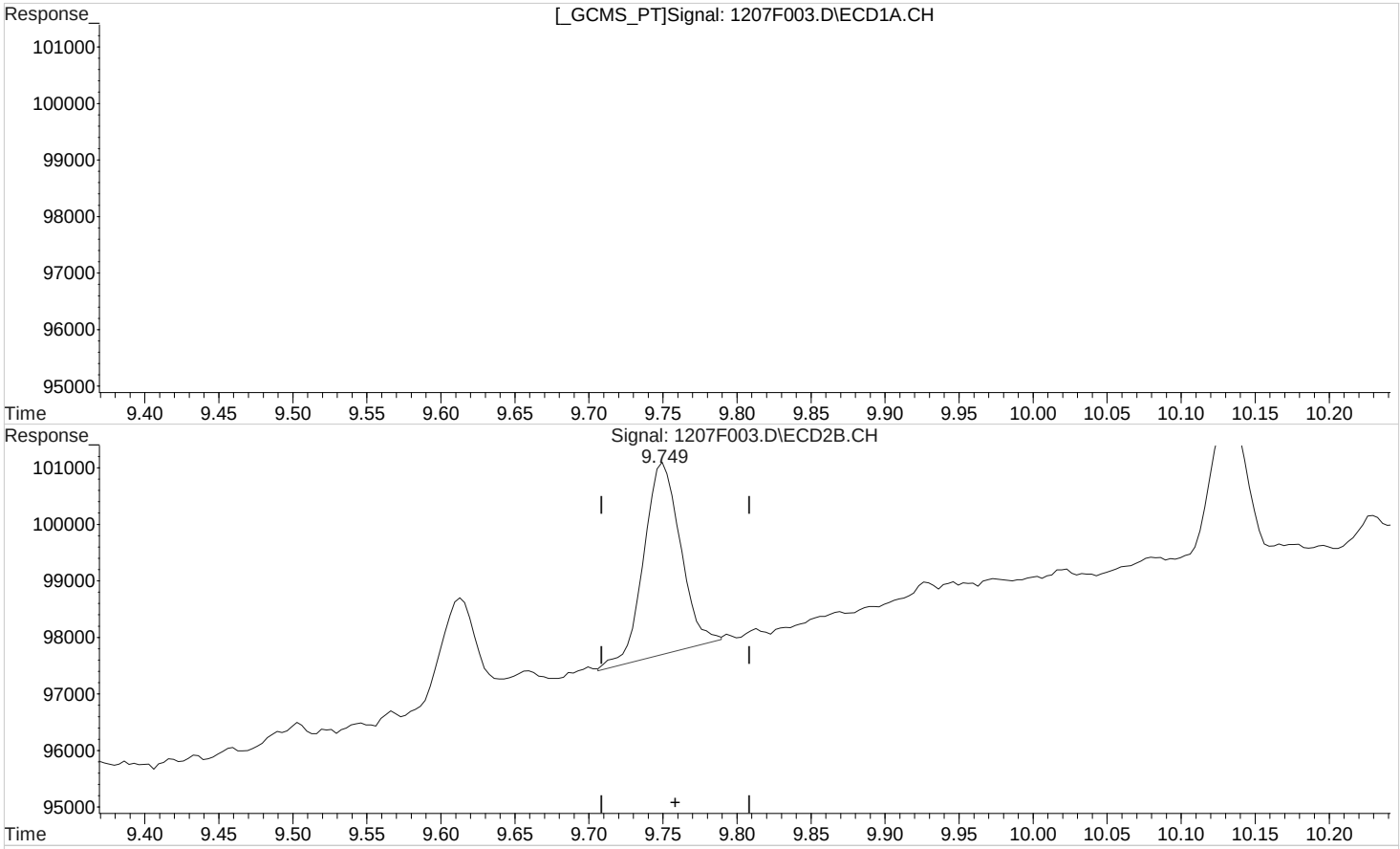
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F003.D Vial: 3
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 4:55 pm Operator: MC
Sample : 81 0.2PPB GCPS8-49B Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(8) Heptachlor

11.445min 0.414 ug/L

response 3830

Manual Integration:

After

Baseline/Shoulder

12/10/18

(8) Heptachlor #2

9.749min 0.204 ug/L m

response 5909

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 6:23 pm Operator: MC
Sample : 81 2.0PPB GCPS8-49F Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:53:08 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.011	5.342	643731	1968737	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.741	7.105	26478	60868	2.345	1.718	#
28) s	Decachlor...	18.428	16.872	25720	50609	2.266	1.595	#
	Target Compounds							
3)	alpha-BHC	9.585	8.329	21595	51286	1.989	1.485	#
4)	Hexachlor...	9.741	8.115	32646	73094	2.383	1.779	#
5)	beta-BHC	10.865	9.612	10993	25324	2.072	1.515	#
6)	gamma-BHC...	10.258	9.069	18404	46538	1.896	1.518	
7)	delta-BHC	11.361	10.132	18804	46600	2.201	1.681	
8)	Heptachlor	11.448	9.752	18006	50882	1.863	1.686	
9)	Aldrin	12.001	10.339	20540	46660	2.121	1.603	
10)	Isodrin	12.531	11.129	16735	40560	2.124	1.585	#
11)	Heptachlo...	12.725	11.419	19323	44932	2.136	1.670	
12)	gamma-Chl...	13.241	11.832	19266	44461	2.193	1.647	m
13)	Endosulfan I	13.368	12.039	17411	39916	2.109	1.647	
14)	alpha-Chl...	13.318	11.975	19980	43383	2.193	1.608	#
15)	Dieldrin	13.788	12.479	18972	43321	2.254	1.716	
16)	4,4'-DDE	13.598	12.335	20861	44257	2.421	1.665	#
17)	Endrin	14.155	12.952	17327	40506	2.071	1.676	
18)	Endosulfa...	14.605	13.385	16632	38638	2.091	1.753	
19)	4,4'-DDD	14.435	13.215	14223	33571	2.164	1.791	
20)	Endrin Al...	14.785	13.745	15836	34568	2.310	1.748	
21)	Endosulfa...	15.255	14.069	16810	38800	2.168	1.723	
22)	4,4'-DDT	14.928	13.635	12182	34371	2.492	1.970	
23)	Endrin Ke...	15.938	14.999	17321	42621	2.341	1.825	
24)	Methoxychlor	15.678	14.729	7444	20155	2.252	1.953	

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

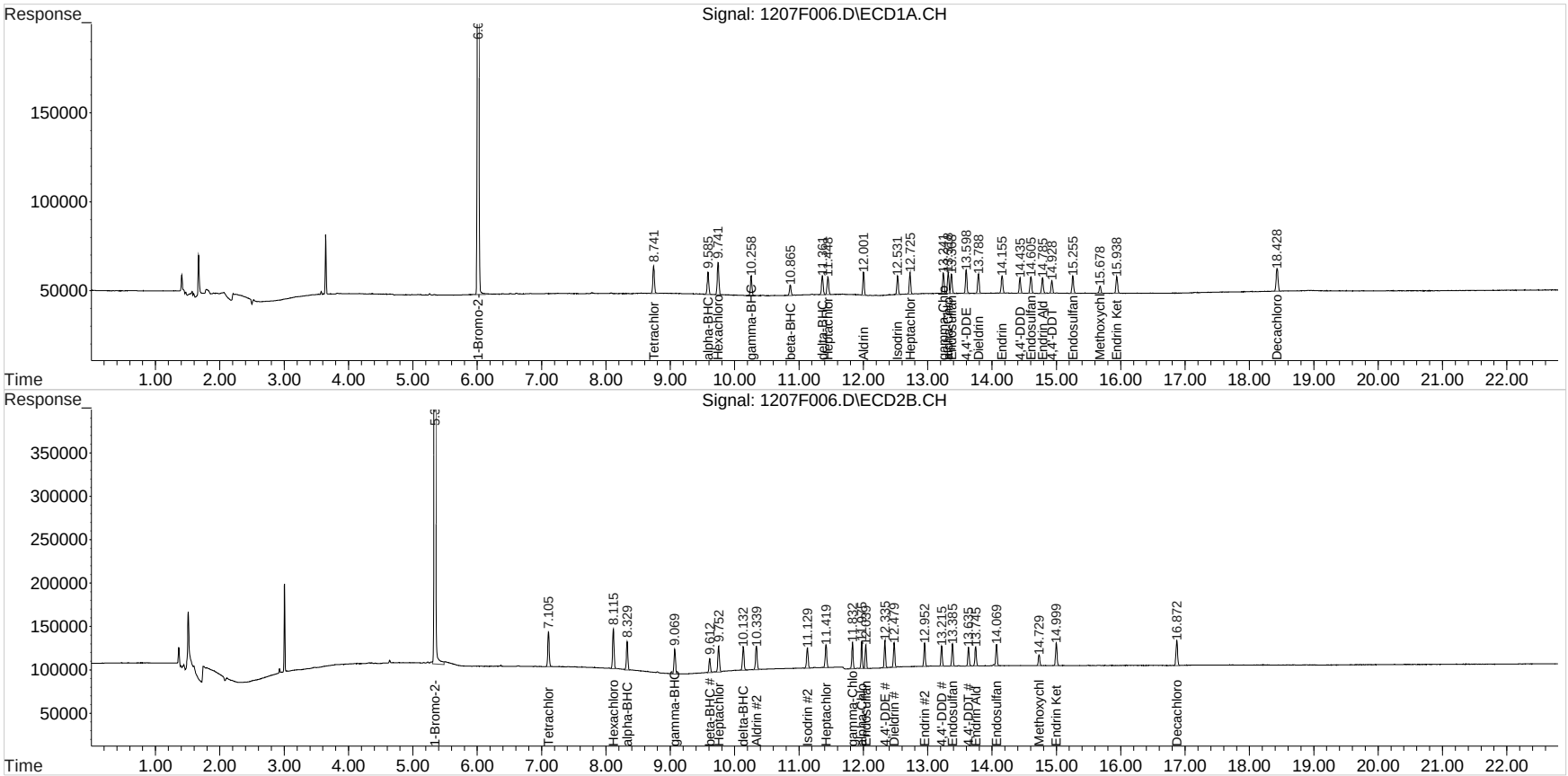
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\120718CAL\1207F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 6:23 pm Operator: MC
Sample : 81 2.0PPB GCPS8-49F Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:53:08 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



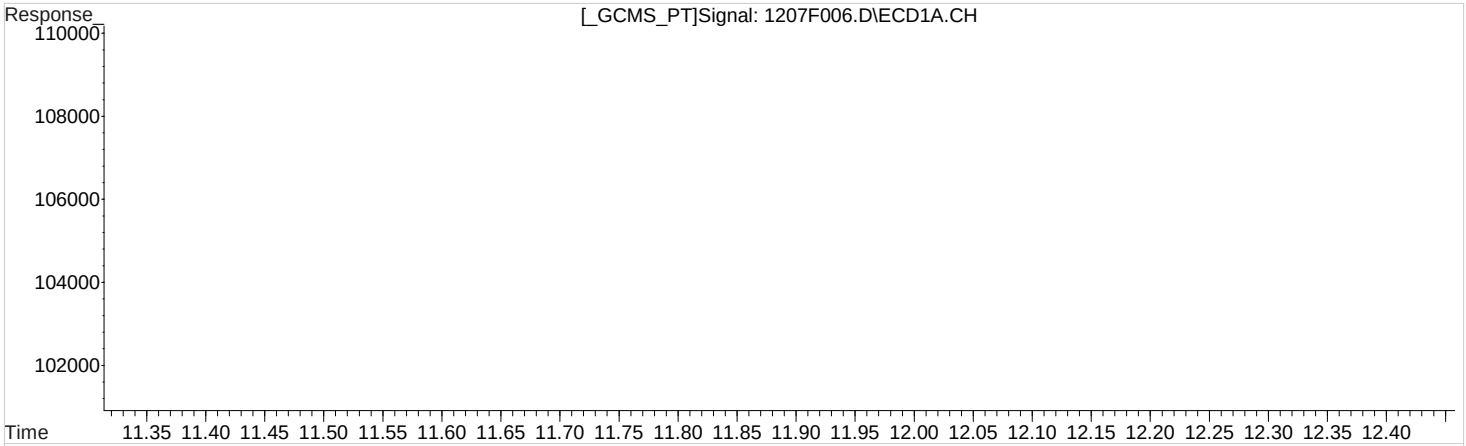
Quantitation Report (Qedit)

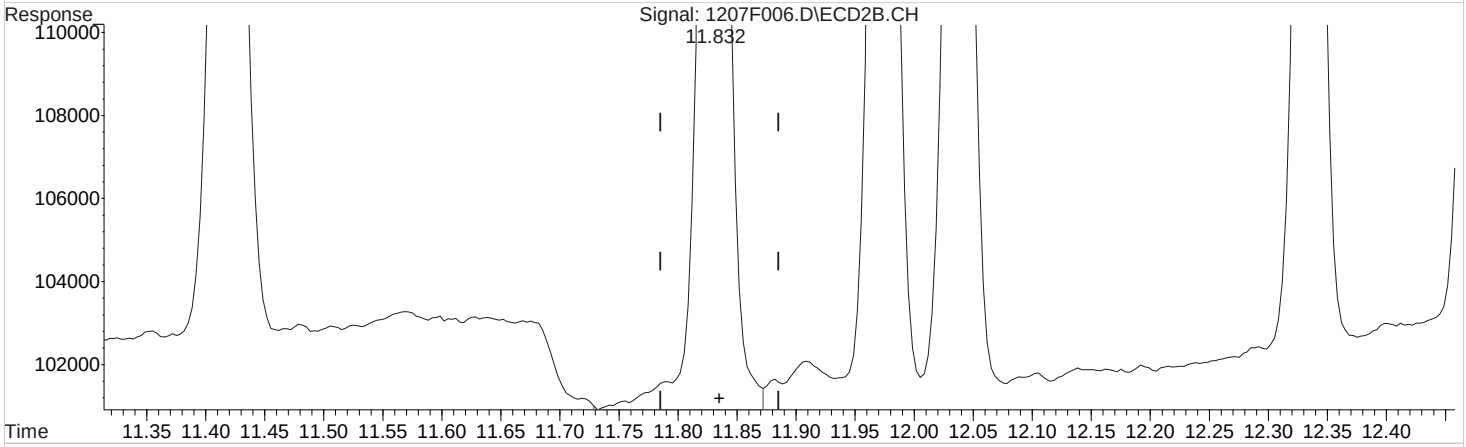
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 6:23 pm Operator: MC
Sample : 81 2.0PPB GCPS8-49F Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 08 12:29:12 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

13.241min 2.193 ug/L

response 19266

(12) gamma-Chlordane #2

11.832min 1.742 ug/L

response 47032

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

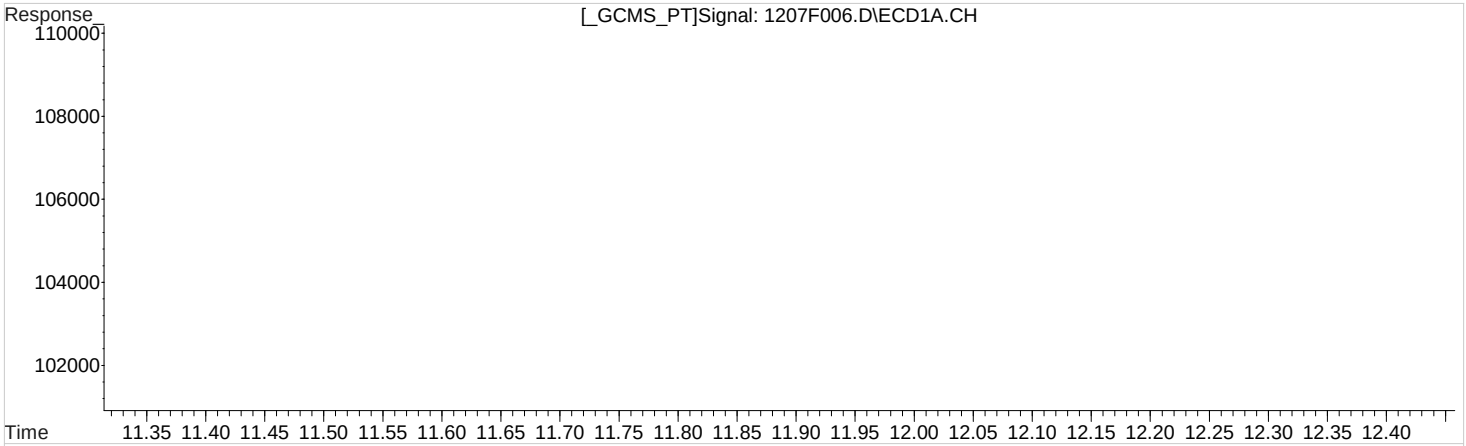
Quantitation Report (Qedit)

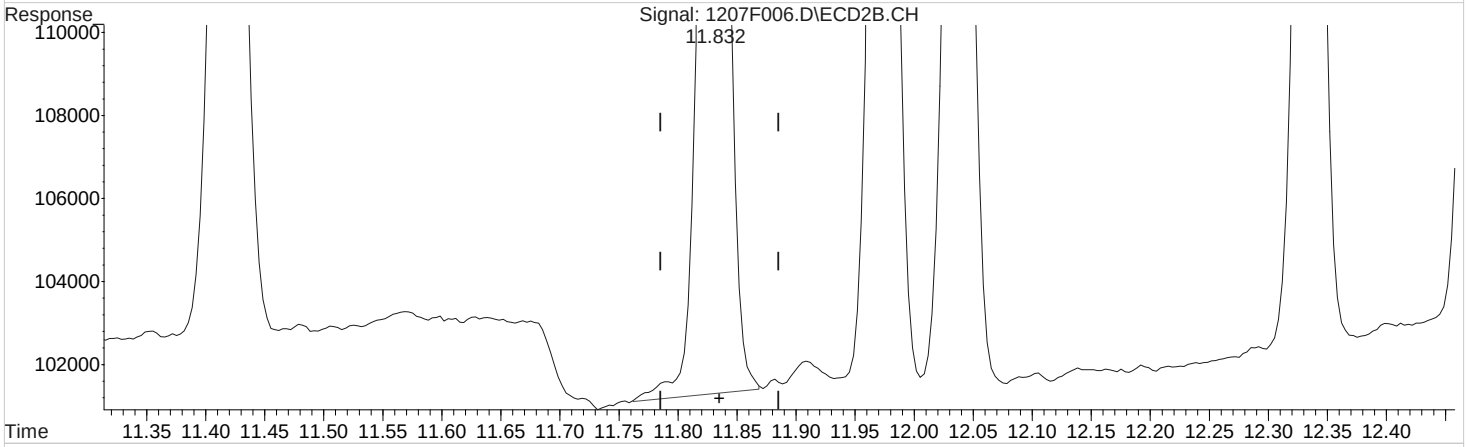
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F006.D Vial: 6
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 6:23 pm Operator: MC
Sample : 81 2.0PPB GCPS8-49F Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 08 12:29:12 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

13.241min 2.193 ug/L

response 19266

(12) gamma-Chlordane #2

11.832min 1.647 ug/L m

response 44461

Manual Integration:

After

Baseline/Shoulder

12/10/18

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F007.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 6:53 pm Operator: MC
Sample : 81 5.0PPB GCPS8-49E @4X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:33:10 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.010	5.341	598449	1740818	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.737	7.104	60452	134797	6.242	4.631	#
28) s	Decachlor...	18.423	16.864	58506	111309	5.544	3.968	#
	Target Compounds							
3)	alpha-BHC	9.580	8.324	48360	115107	4.791	3.768	
4)	Hexachlor...	9.737	8.111	72472	160181	6.268	4.825	
5)	beta-BHC	10.857	9.607	24165	56228	4.900	3.804	
6)	gamma-BHC...	10.250	9.064	42234	105067	4.681	3.875	
7)	delta-BHC	11.357	10.127	43670	106766	5.497	4.355	
8)	Heptachlor	11.443	9.744	43240	112443	4.812	4.213	
9)	Aldrin	11.997	10.331	47150	105999	5.236	4.119	
10)	Isodrin	12.527	11.124	39901	91566	5.447	4.047	#
11)	Heptachlo...	12.717	11.411	44060	103459	5.240	4.349	
12)	gamma-Chl...	13.237	11.824	44015	99202	5.388	4.155	
13)	Endosulfan I	13.360	12.031	41452	91905	5.401	4.288	
14)	alpha-Chl...	13.310	11.967	46054	99589	5.438	4.175	
15)	Dieldrin	13.780	12.471	43709	97405	5.585	4.363	
16)	4,4'-DDE	13.590	12.327	48558	100746	6.063	4.286	#
17)	Endrin	14.147	12.944	40371	92302	5.192	4.318	
18)	Endosulfa...	14.597	13.377	38501	87792	5.208	4.505	
19)	4,4'-DDD	14.427	13.211	33306	76645	5.452	4.624	
20)	Endrin Al...	14.777	13.737	36417	79289	5.713	4.533	
21)	Endosulfa...	15.250	14.064	38639	88270	5.361	4.434	
22)	4,4'-DDT	14.923	13.627	28401	75230	6.250	4.876	
23)	Endrin Ke...	15.933	14.991	39913	97187	5.803	4.707	
24)	Methoxychlor	15.673	14.724	16807	44403	6.029	4.865	

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

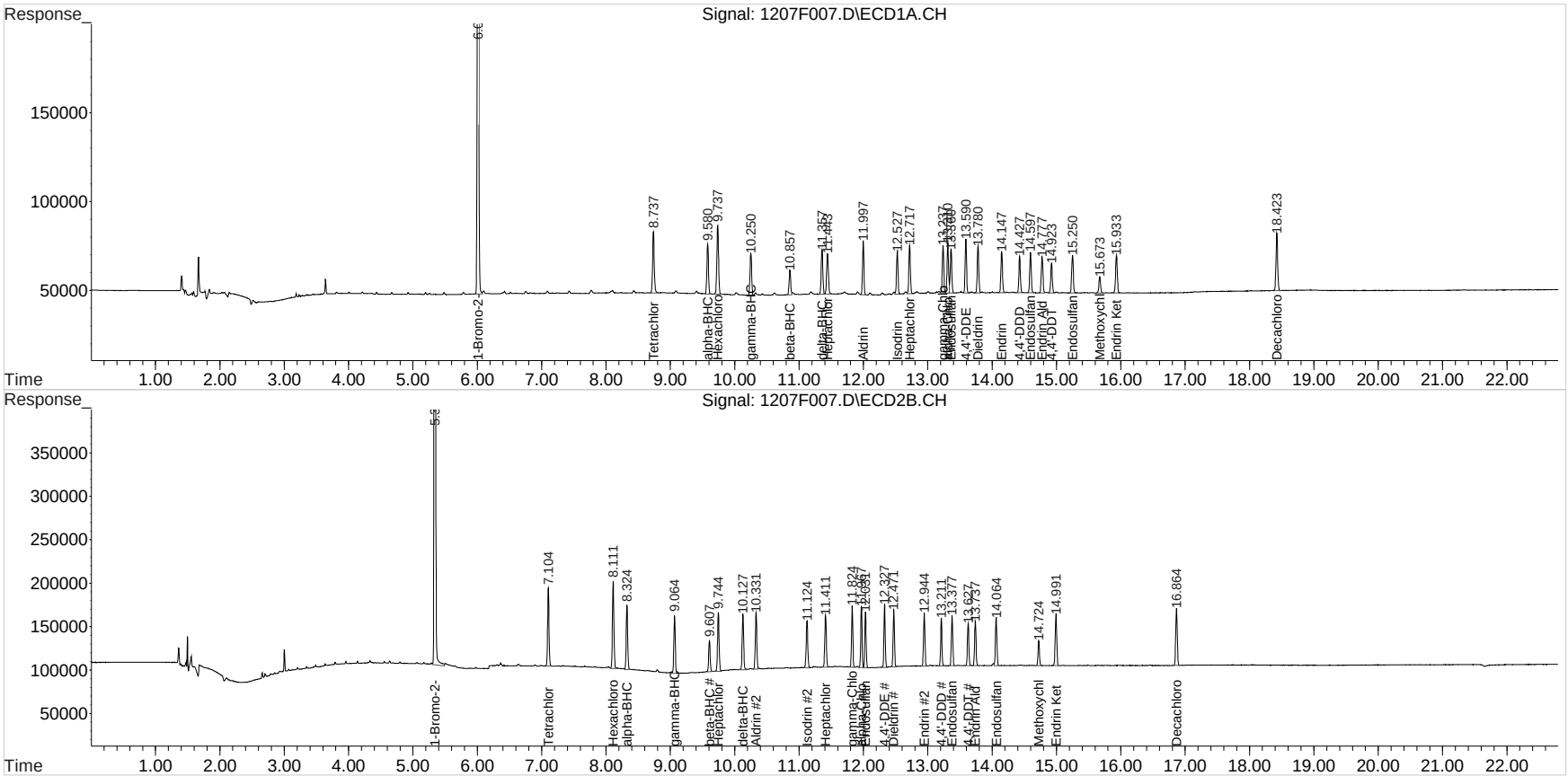
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\120718CAL\1207F007.D Vial: 7
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 6:53 pm Operator: MC
Sample : 81 5.0PPB GCPS8-49E @4X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:33:10 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F008.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 7:22 pm Operator: MC
Sample : 81 10PPB GCPS8-49E @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:54:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.013	5.340	599433	1755107	100.000	100.000	
	System Monitoring Compounds							
2) s	Tetrachlo...	8.740	7.107	111000	258953	12.991	9.512	#
28) s	Decachlor...	18.426	16.867	110337	209338	10.438	7.402	#
	Target Compounds							
3)	alpha-BHC	9.583	8.327	93455	224680	9.243	7.296	
4)	Hexachlor...	9.740	8.114	129598	304356	13.120	10.016	
5)	beta-BHC	10.863	9.610	45335	105457	9.178	7.076	
6)	gamma-BHC...	10.253	9.067	81854	203255	9.056	7.435	
7)	delta-BHC	11.360	10.130	84244	205237	10.588	8.304	
8)	Heptachlor	11.446	9.747	77271	212050	8.584	7.881	
9)	Aldrin	12.000	10.334	91086	203786	10.098	7.854	
10)	Isodrin	12.530	11.127	75088	173940	10.233	7.626	#
11)	Heptachlo...	12.720	11.417	81291	192838	9.652	8.039	
12)	gamma-Chl...	13.240	11.827	83488	191174	10.203	7.942	
13)	Endosulfan I	13.363	12.034	76057	174868	9.893	8.093	
14)	alpha-Chl...	13.313	11.970	86802	191077	10.233	7.946	
15)	Dieldrin	13.783	12.474	83419	186910	10.641	8.305	
16)	4,4'-DDE	13.593	12.330	93845	198727	11.698	8.386	#
17)	Endrin	14.150	12.947	74940	176740	9.621	8.201	
18)	Endosulfa...	14.596	13.380	74161	167103	10.015	8.506	
19)	4,4'-DDD	14.430	13.210	63890	149585	10.441	8.950	
20)	Endrin Al...	14.780	13.740	68176	149647	10.678	8.486	
21)	Endosulfa...	15.250	14.064	72091	167327	9.986	8.337m	
22)	4,4'-DDT	14.923	13.627	54371	147150	11.945	9.460	
23)	Endrin Ke...	15.936	14.994	76416	186514	11.091	8.960	
24)	Methoxychlor	15.676	14.727	34161	85804	12.638	9.325	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

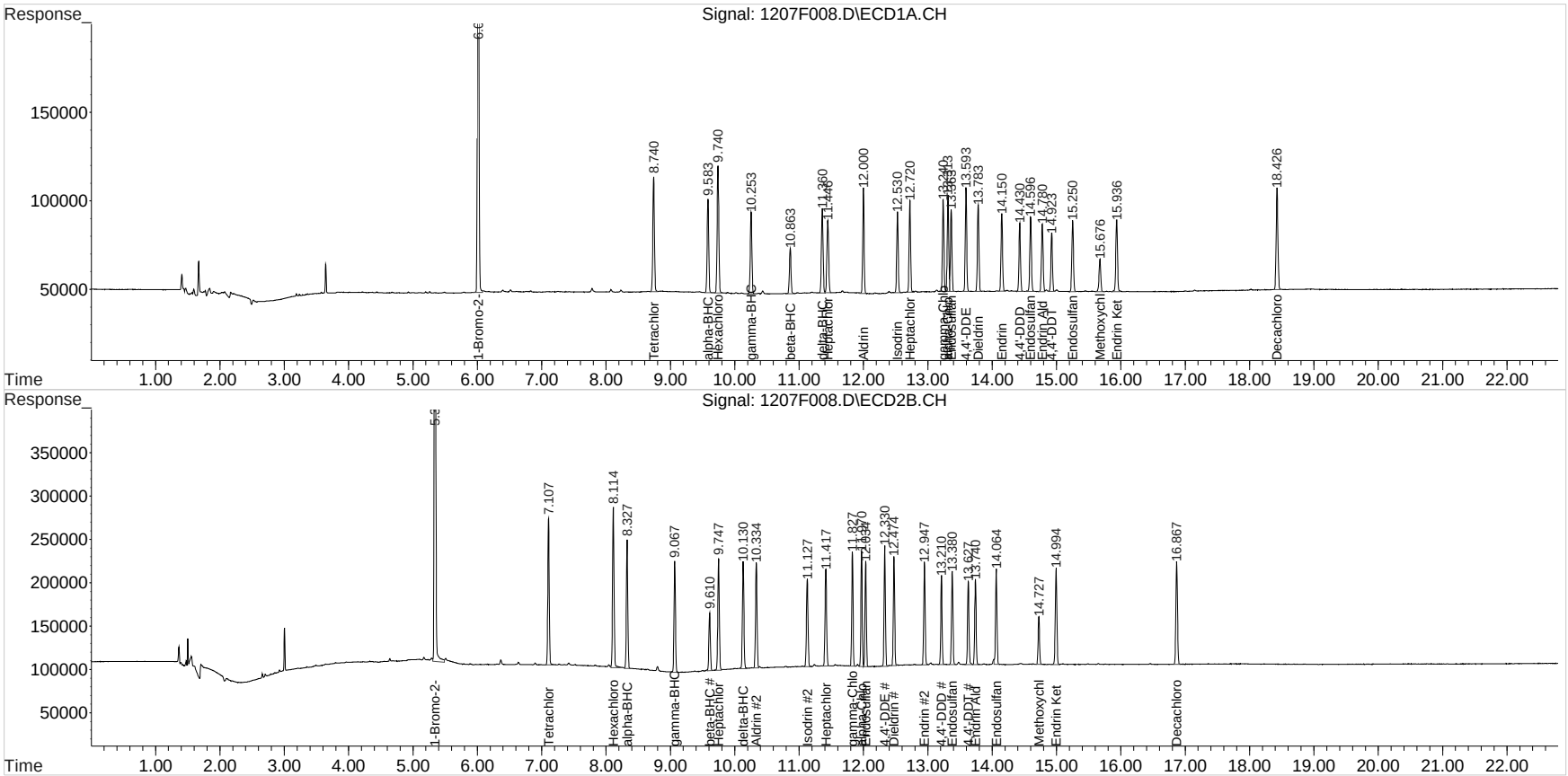
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\120718CAL\1207F008.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 7:22 pm Operator: MC
Sample : 81 10PPB GCPS8-49E @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:54:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



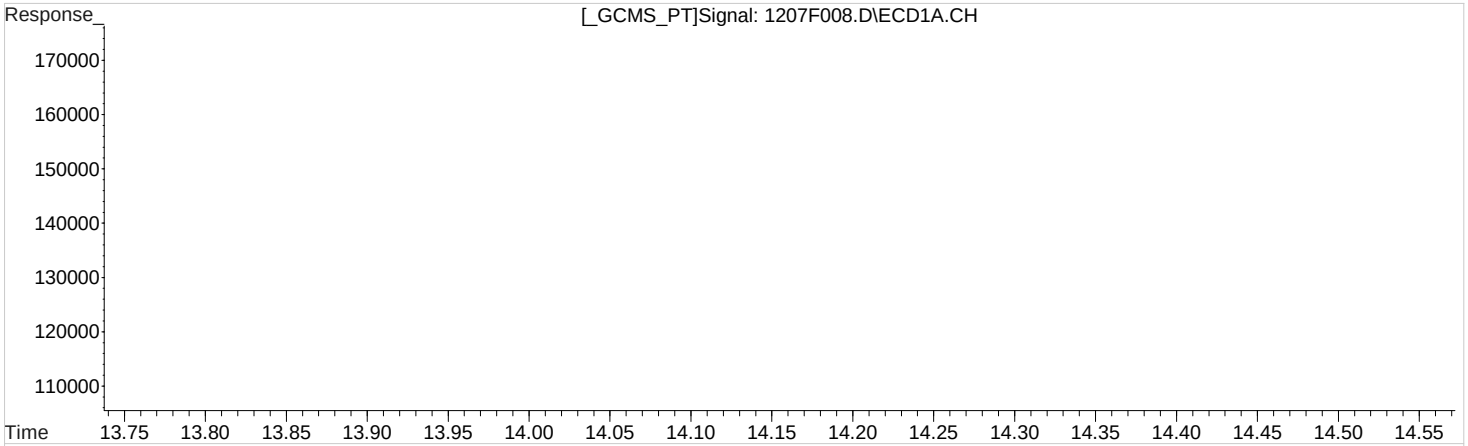
Quantitation Report (Qedit)

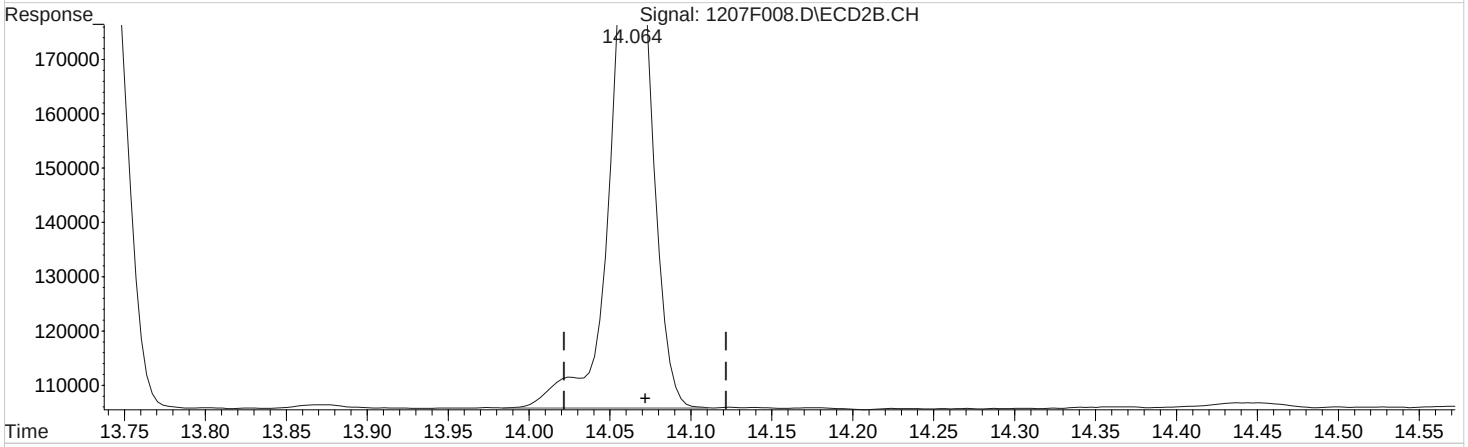
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F008.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 7:22 pm Operator: MC
Sample : 81 10PPB GCPS8-49E @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:34:07 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(21) Endosulfan Sulfate

15.250min 9.986 ug/L

response 72091

Manual Integration:

Before

12/10/18

(21) Endosulfan Sulfate #2

14.064min 8.761 ug/L

response 175840

(+) = Expected Retention Time

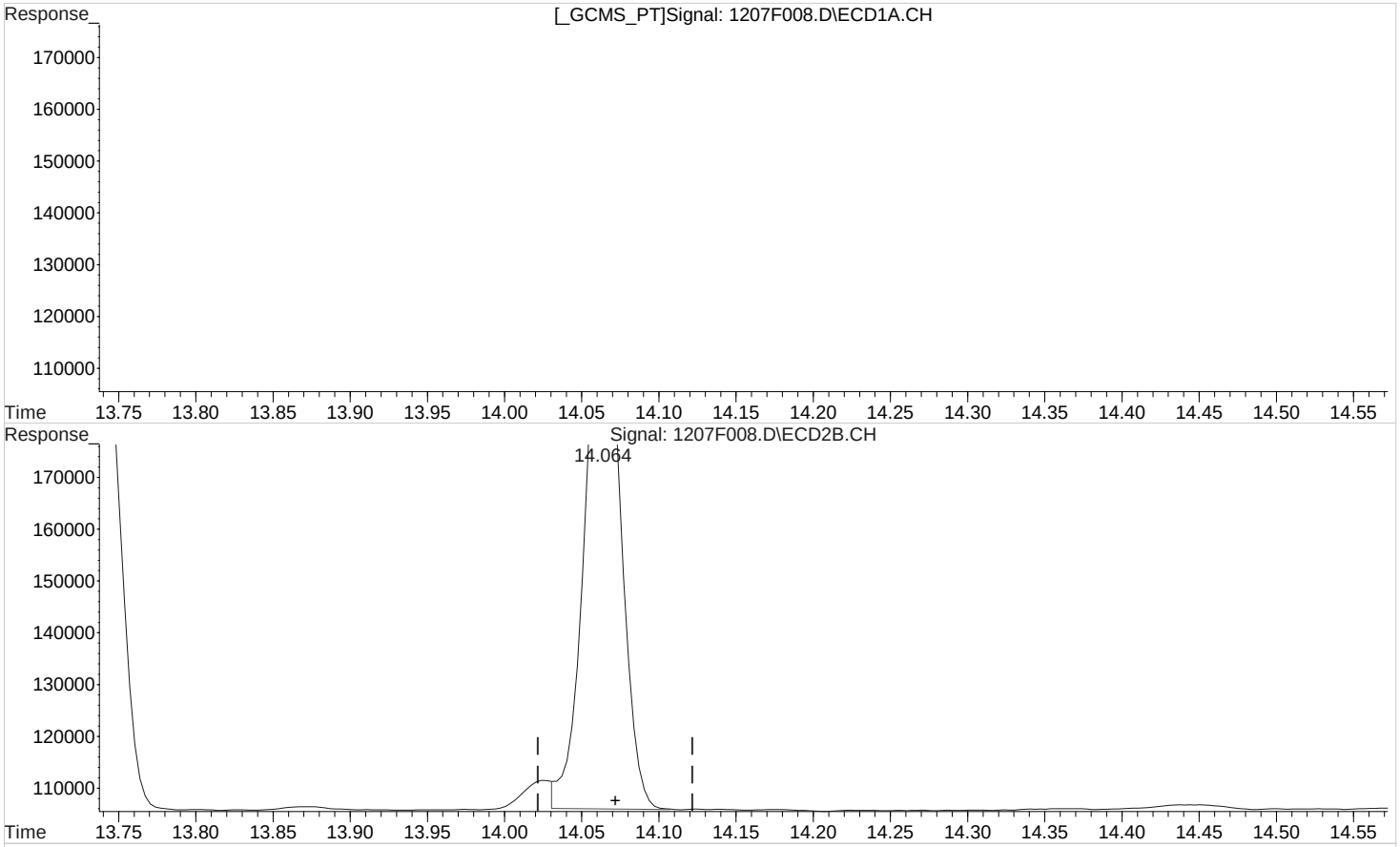
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\120718CAL\1207F008.D Vial: 8
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 07 Dec 2018 7:22 pm Operator: MC
Sample : 81 10PPB GCPS8-49E @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 10:34:07 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(21) Endosulfan Sulfate

15.250min 9.986 ug/L

response 72091

Manual Integration:

After

Baseline/Shoulder

12/10/18

(21) Endosulfan Sulfate #2

14.064min 8.337 ug/L m

response 167327

(+) = Expected Retention Time

1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121018CAL\1210F002.D Vial: 11
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 1:50 pm Operator: MC
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:49:10 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:28:39 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.007	5.334	460079	1805818	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
16)	4,4'-DDE	13.583	12.324	1651	4795	0.199	0.213	
17)	Endrin	14.143	12.937	44950	128154	6.409	6.238	
19)	4,4'-DDD	14.423	13.204	4541	10814	0.810	0.649	
20)	Endrin Al...	14.780	13.734	1642	2081	0.259	0.120	#
22)	4,4'-DDT	14.920	13.621	63000	207003	12.961	13.773	
23)	Endrin Ke...	15.930	14.987	2279	7985	0.344	0.379	
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

OK

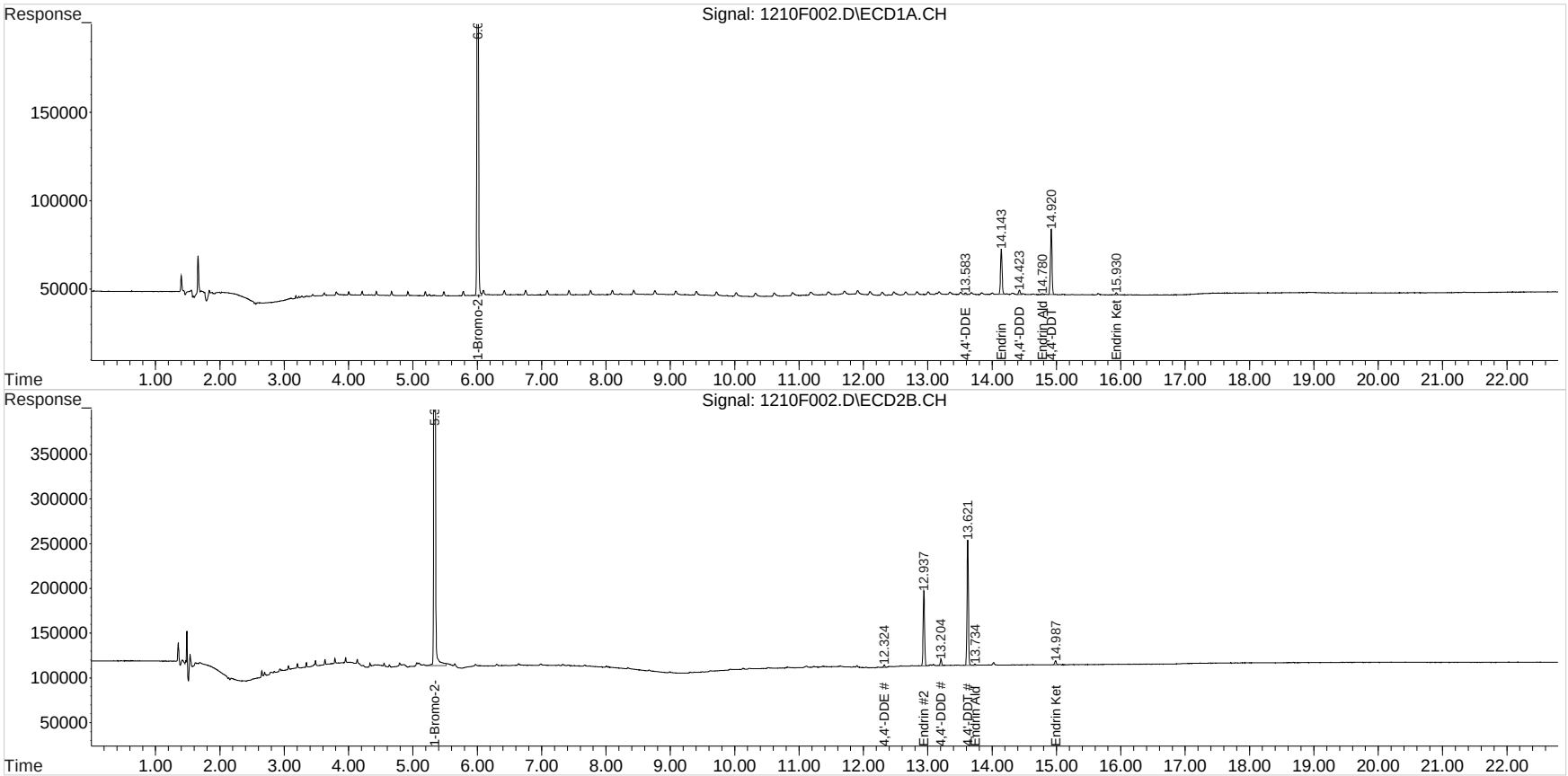
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121018CAL\1210F002.D Vial: 11
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 1:50 pm Operator: MC
Sample : PEM GCPS8-49H Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 10:49:10 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:28:39 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F003.D Vial: 12
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:20 pm Operator: MC
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 11:12:50 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:28:39 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1) i	1-Bromo-2...	6.008	5.336	440529	1745944	100.000	100.000	
29)	1-Bromo-2...	6.008	5.336	440529	1745944	100.000	100.000	
36)	1-Bromo-2...	6.008	5.336	440529	1745944	100.000	100.000	
43)	1-Bromo-2...	6.008	5.336	440529	1745944	100.000	100.000	
	System Monitoring Compounds							
	Target Compounds							
3)	alpha-BHC	0.000	8.339	0	2163	N.D.	0.089	#
8)	Heptachlor	0.000	9.759	0	765	N.D. d	0.032	
16)	4,4'-DDE	0.000	12.342	0	777	N.D.	0.036	#
49)	HCE	0.000	3.342	0	2438	N.D.	0.074	#
	SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

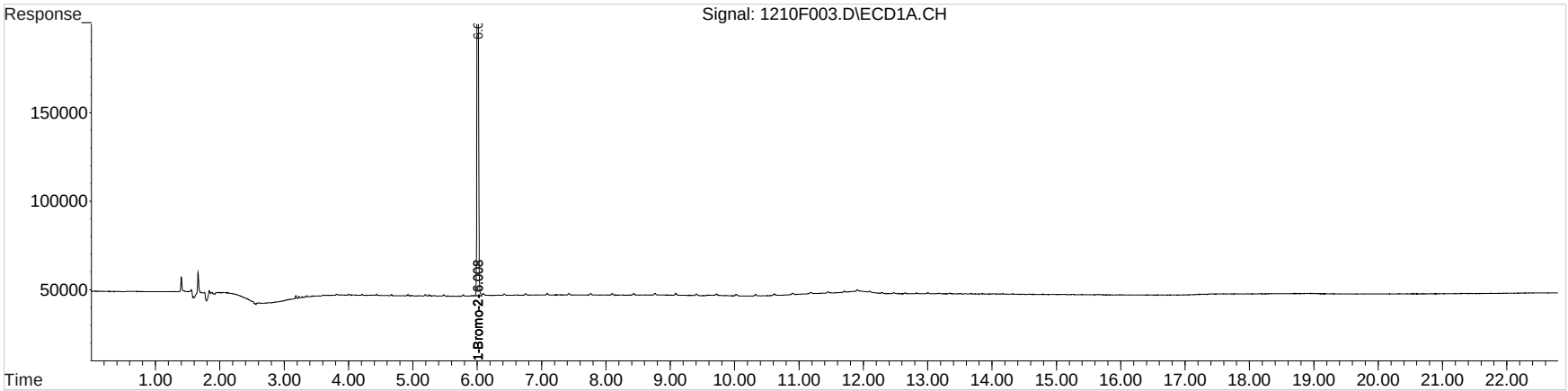
1st MC 12/11/18
2nd UA 12/11/18

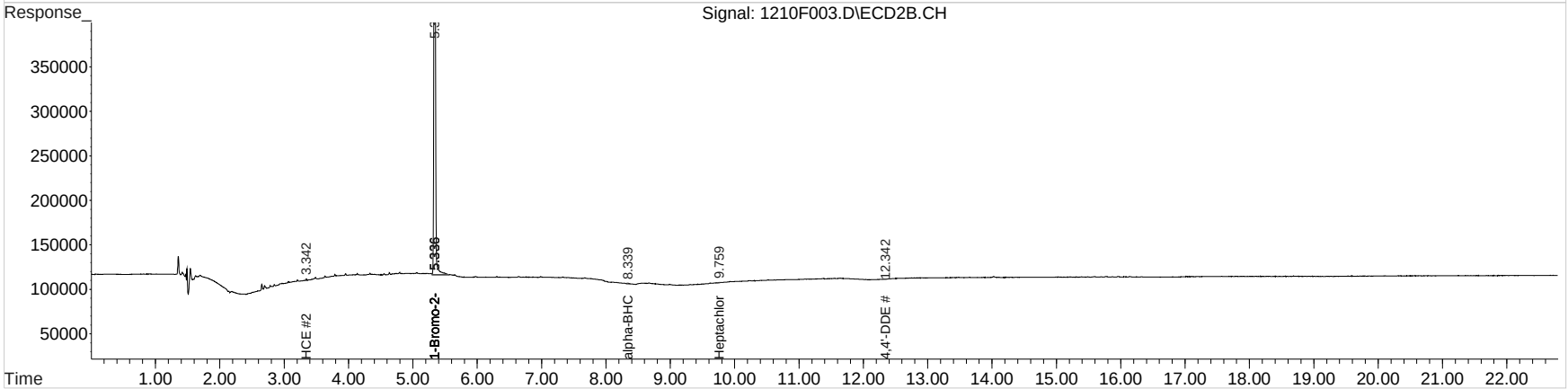
Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121018CAL\1210F003.D Vial: 12
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:20 pm Operator: MC
Sample : IB Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 11:12:50 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 10:28:39 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:47:40 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.011	5.341	491950	1924781	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.734	7.105	7402	17093	0.797	0.409 #
28) s	Decachlor...	18.424	16.865	6668	14595	0.769	0.471 #
	Target Compounds						
3)	alpha-BHC	9.577	8.328	4753	13773	0.573m	0.408m#
4)	Hexachlor...	9.734	8.111	8104	18988	0.697m	0.365m#
5)	beta-BHC	10.857	9.608	2218	7192	0.547m	0.440m
6)	gamma-BHC...	10.247	9.065	3988	12979	0.538	0.433
7)	delta-BHC	11.354	10.128	4275	11500	0.655	0.424 #
8)	Heptachlor	11.441	9.745	4798	13624	0.649	0.462m#
9)	Aldrin	11.997	10.331	4422	12703	0.597m	0.446m#
10)	Isodrin	12.524	11.121	3867	12291	0.642	0.491
11)	Heptachlo...	12.717	11.411	4410	12604	0.638	0.479m
12)	gamma-Chl...	13.234	11.825	4443	12329	0.662	0.467 #
13)	Endosulfan I	13.361	12.031	4435	11673	0.703	0.493 #
14)	alpha-Chl...	13.311	11.968	4845	12267	0.696	0.465m#
15)	Dieldrin	13.781	12.475	4429	11856	0.688	0.480m#
16)	4,4'-DDE	13.591	12.328	4960	12803	0.753	0.493 #
17)	Endrin	14.147	12.945	4316	11882	0.675	0.503 #
18)	Endosulfa...	14.594	13.378	4190	10615	0.689	0.493 #
19)	4,4'-DDD	14.427	13.211	3454	9234	0.688	0.504 #
20)	Endrin Al...	14.774	13.738	3637	10529	0.694	0.544
21)	Endosulfa...	15.247	14.061	3996	11011	0.674	0.500 #
22)	4,4'-DDT	14.924	13.628	2711	9204	0.726	0.540 #
23)	Endrin Ke...	15.931	14.991	4152	12252	0.734	0.537 #
24)	Methoxychlor	15.671	14.721	1985	4817	0.531m	0.477
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

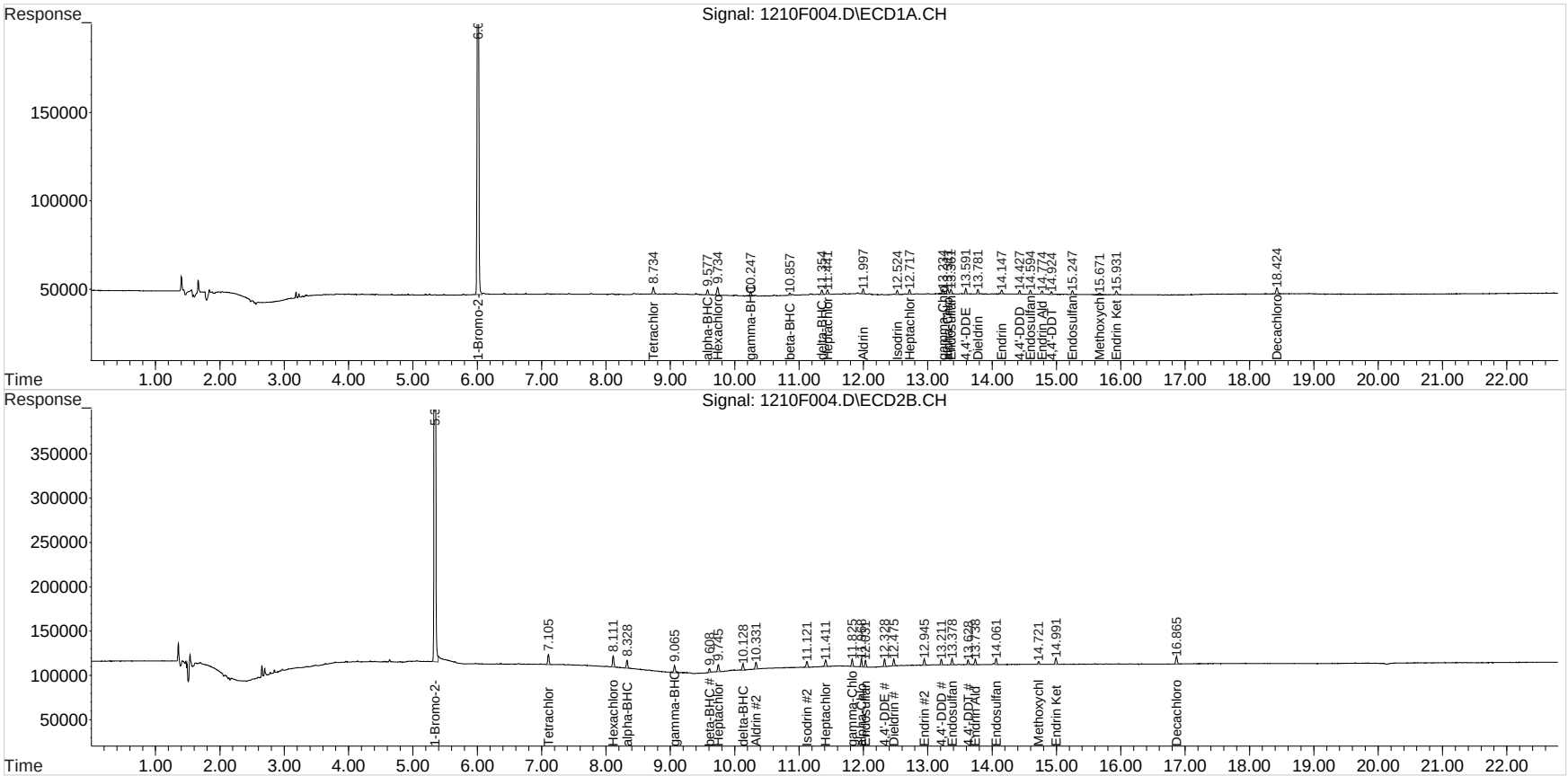
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:47:40 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



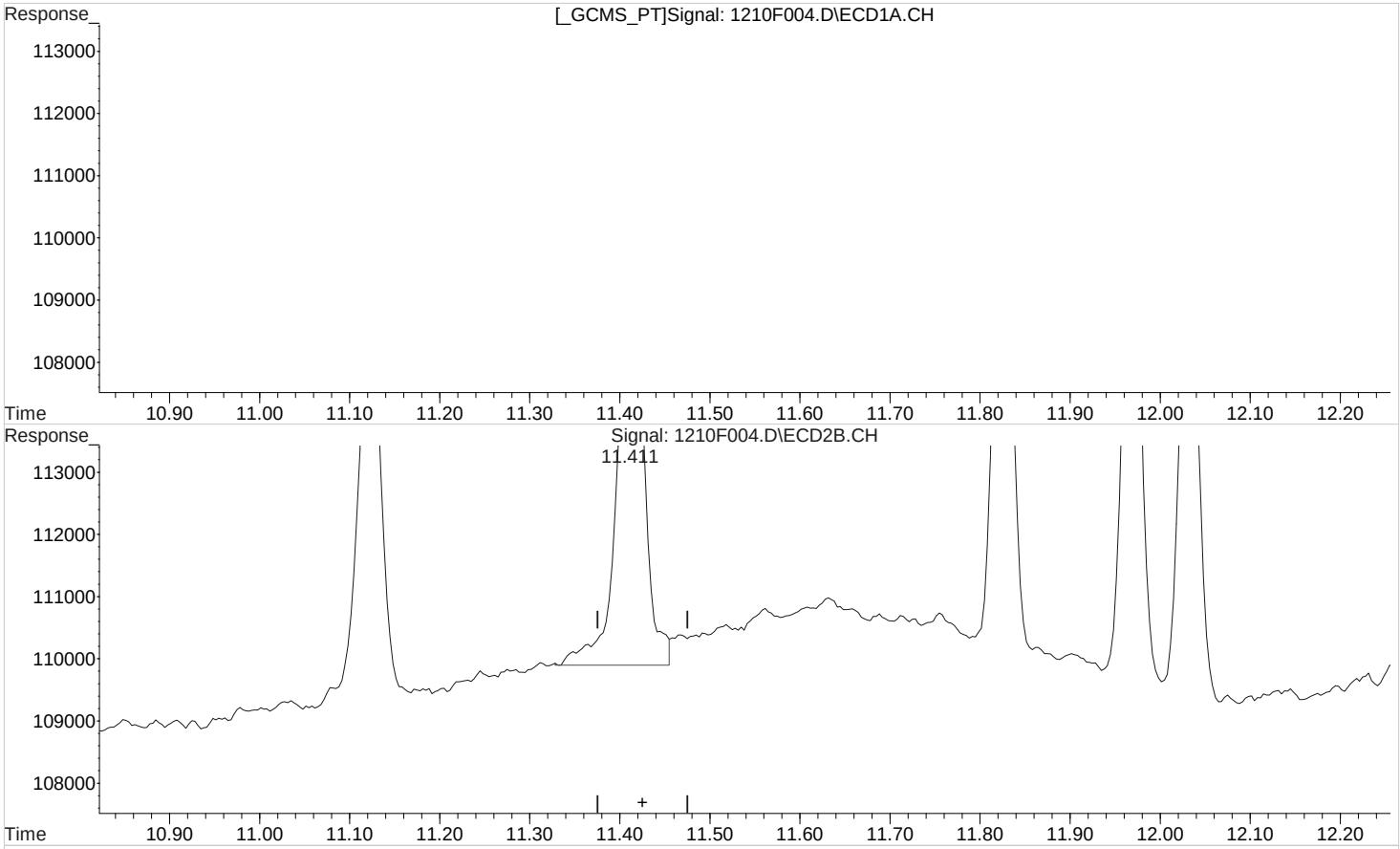
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(11) Heptachlor Epoxide

12.717min 0.638 ug/L

response 4410

Manual Integration:

Before

12/10/18

(11) Heptachlor Epoxide #2

11.411min 0.554 ug/L

response 14573

(+) = Expected Retention Time

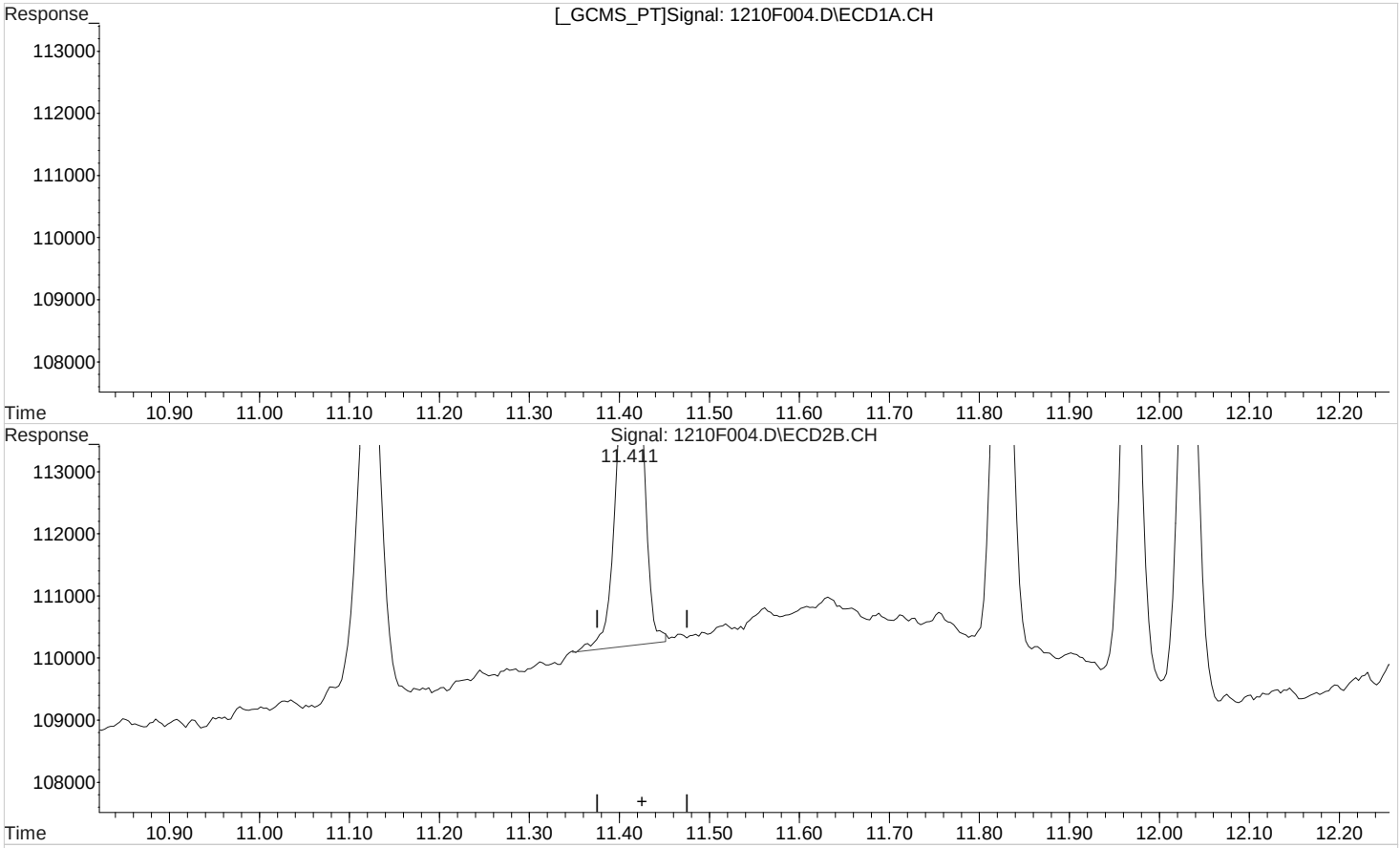
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(11) Heptachlor Epoxide

12.717min 0.638 ug/L

response 4410

Manual Integration:

After

Baseline/Shoulder

12/10/18

(11) Heptachlor Epoxide #2

11.411min 0.479 ug/L m

response 12604

(+) = Expected Retention Time

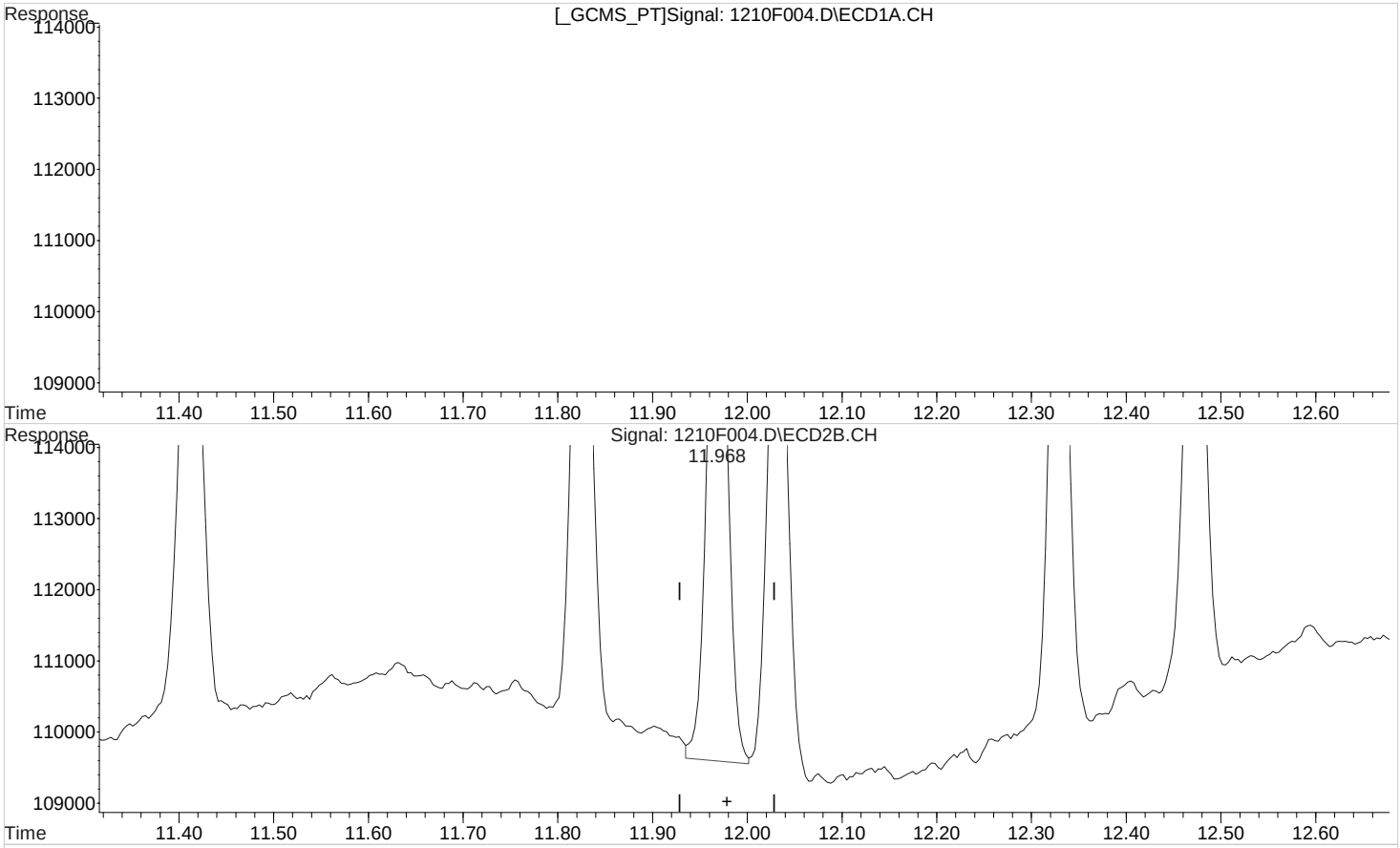
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(14) alpha-Chlordane

13.311min 0.696 ug/L

response 4845

(14) alpha-Chlordane #2

11.968min 0.483 ug/L

response 12751

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

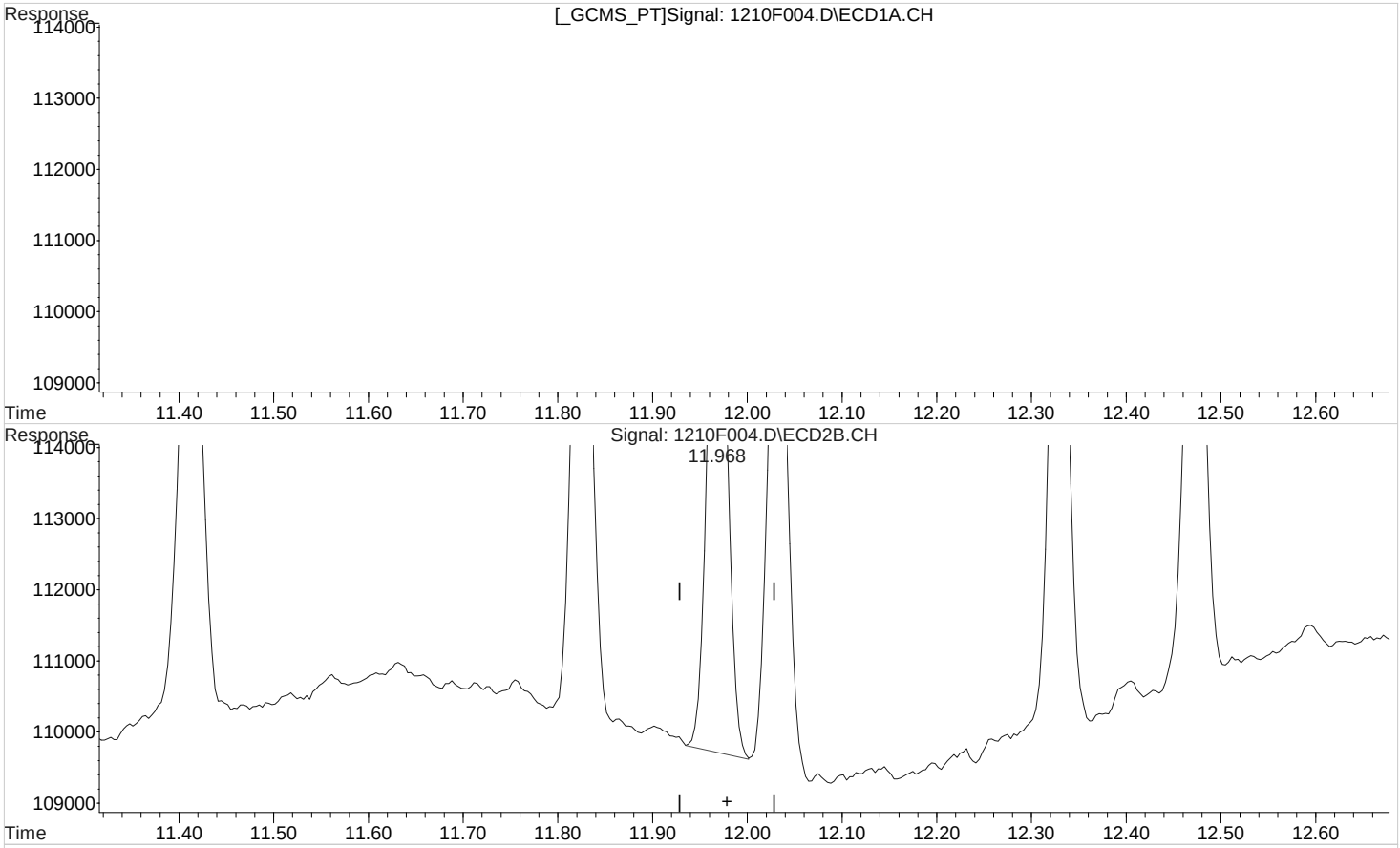
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(14) alpha-Chlordane

13.311min 0.696 ug/L

response 4845

(14) alpha-Chlordane #2

11.968min 0.465 ug/L m

response 12267

Manual Integration:

After

Baseline/Shoulder

12/10/18

(+) = Expected Retention Time

020571

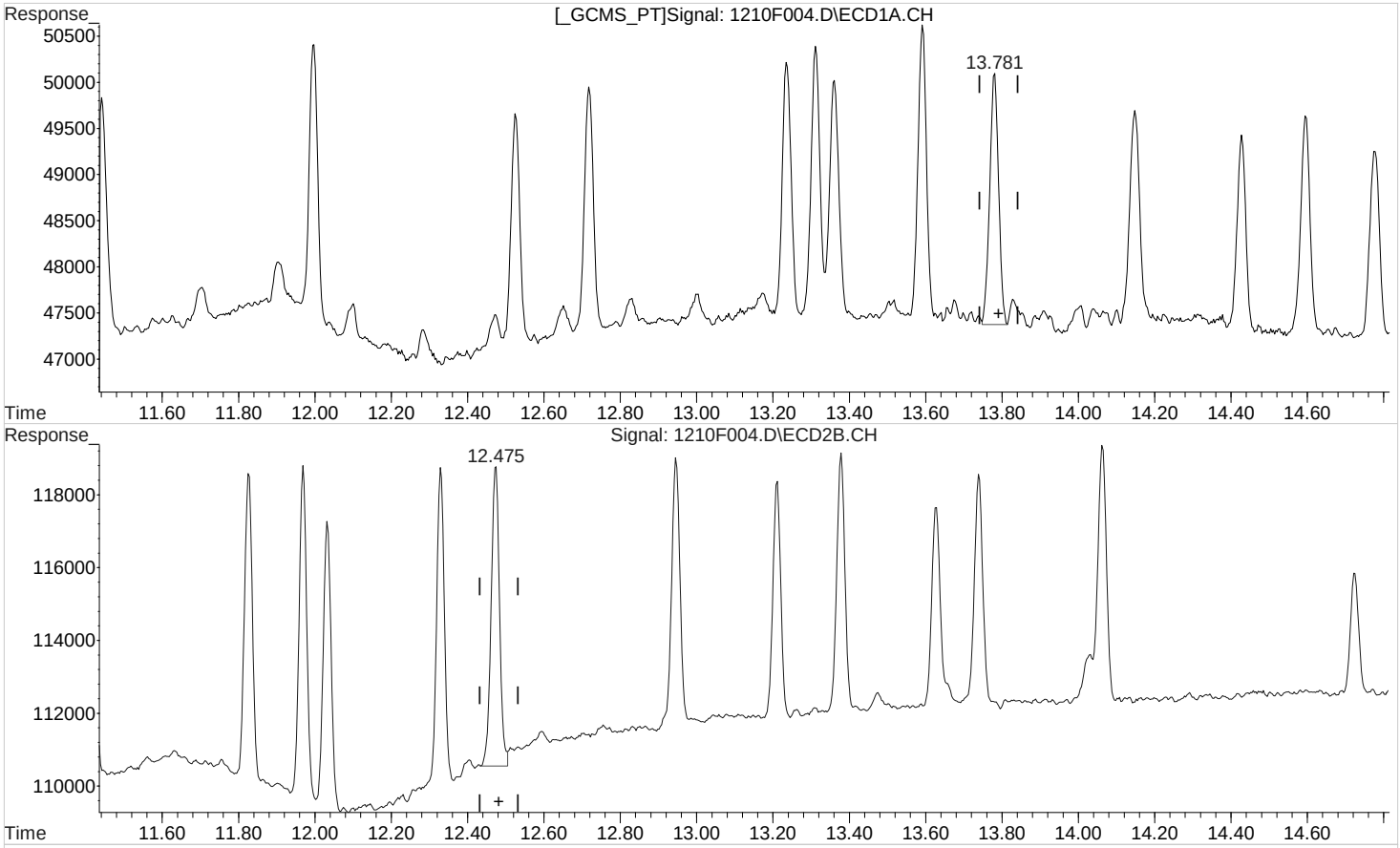
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(15) Dieldrin

13.781min 0.688 ug/L

response 4429

Manual Integration:

Before

12/10/18

(15) Dieldrin #2

12.475min 0.511 ug/L

response 12617

(+) = Expected Retention Time

020572

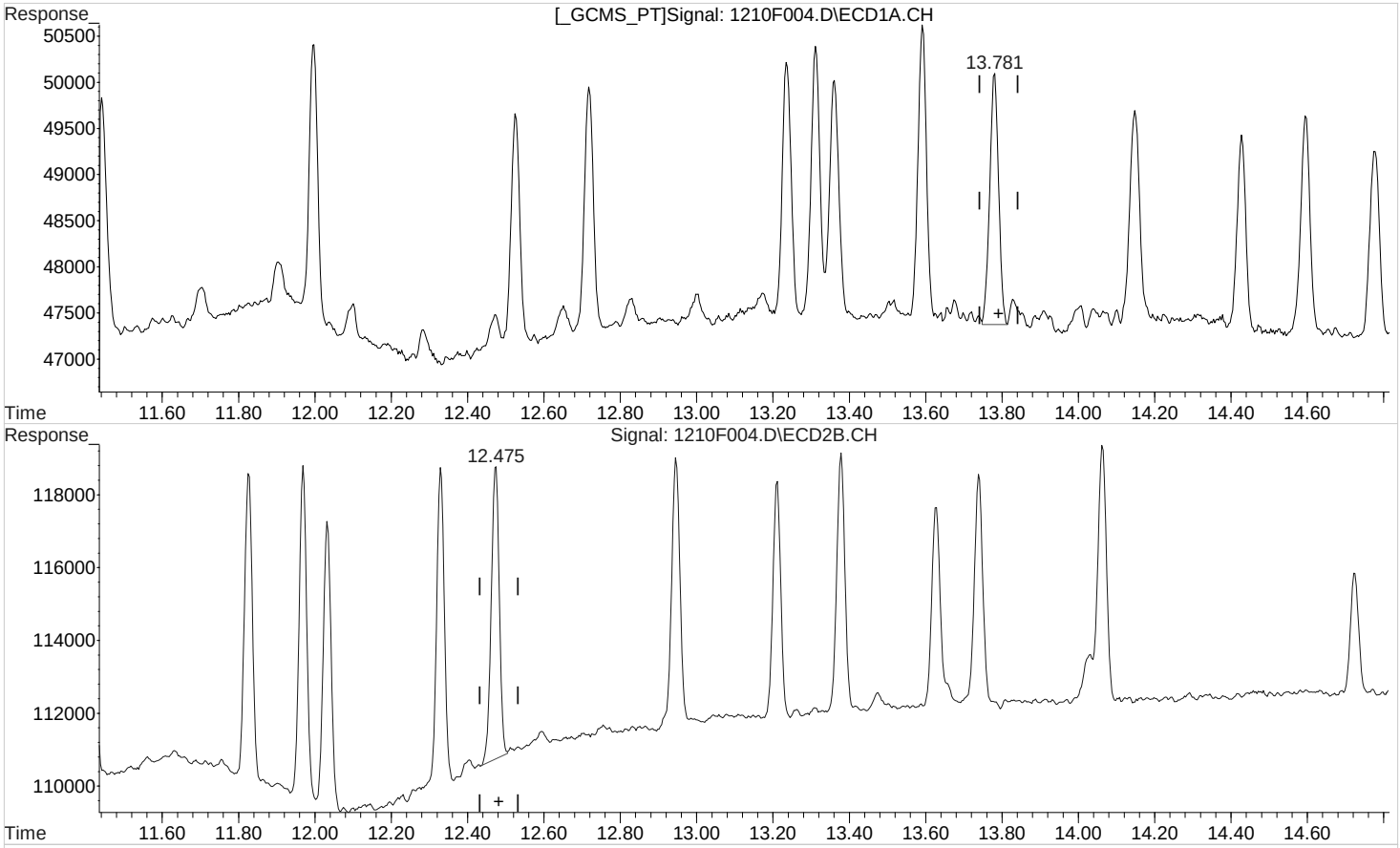
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(15) Dieldrin

13.781min 0.688 ug/L

response 4429

Manual Integration:

After

Baseline/Shoulder

12/10/18

(15) Dieldrin #2

12.475min 0.480 ug/L m

response 11856

(+) = Expected Retention Time

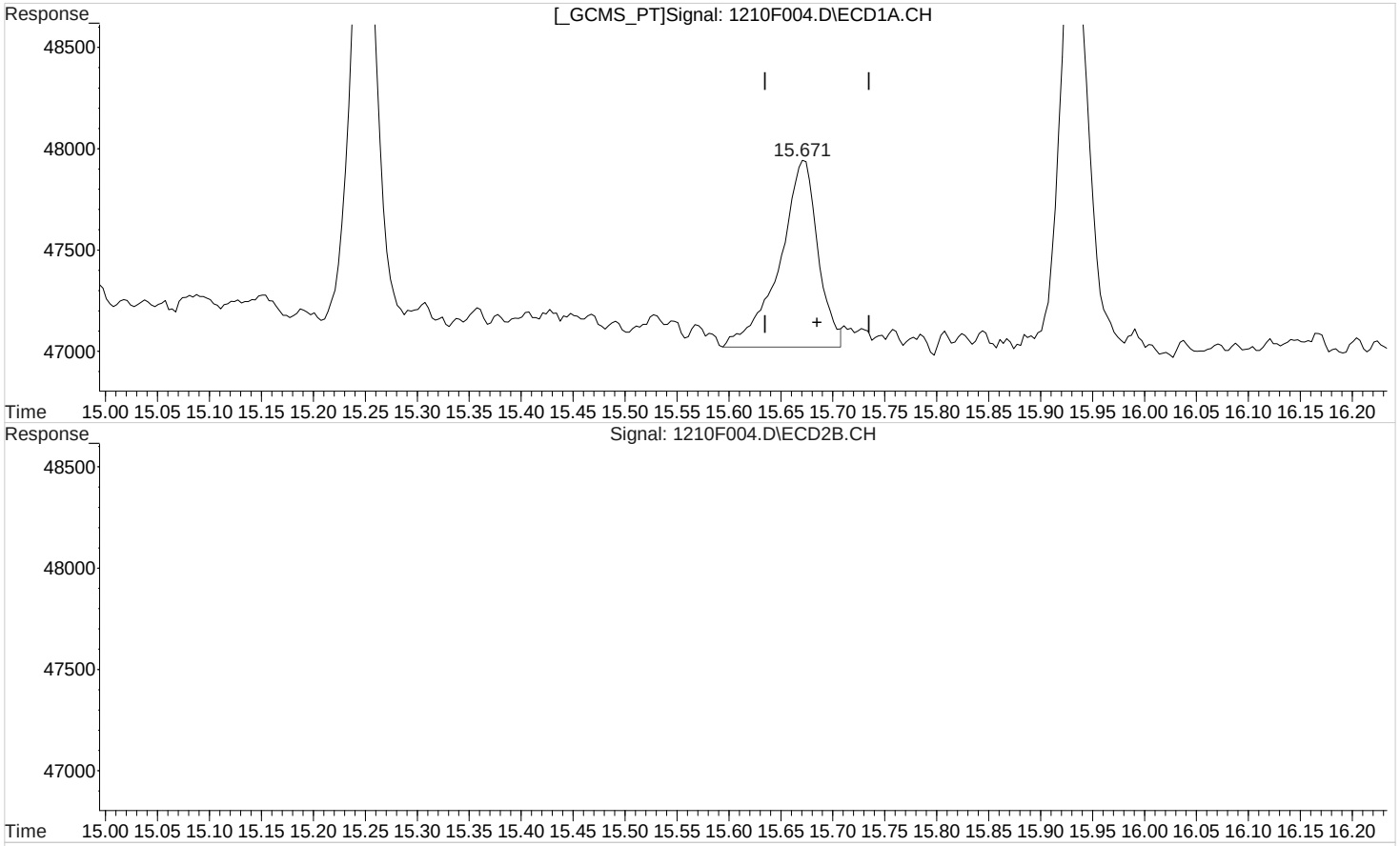
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(24) Methoxychlor

15.671min 0.707 ug/L

response 2365

Manual Integration:

Before

12/10/18

(24) Methoxychlor #2

14.721min 0.477 ug/L

response 4817

(+) = Expected Retention Time

020574

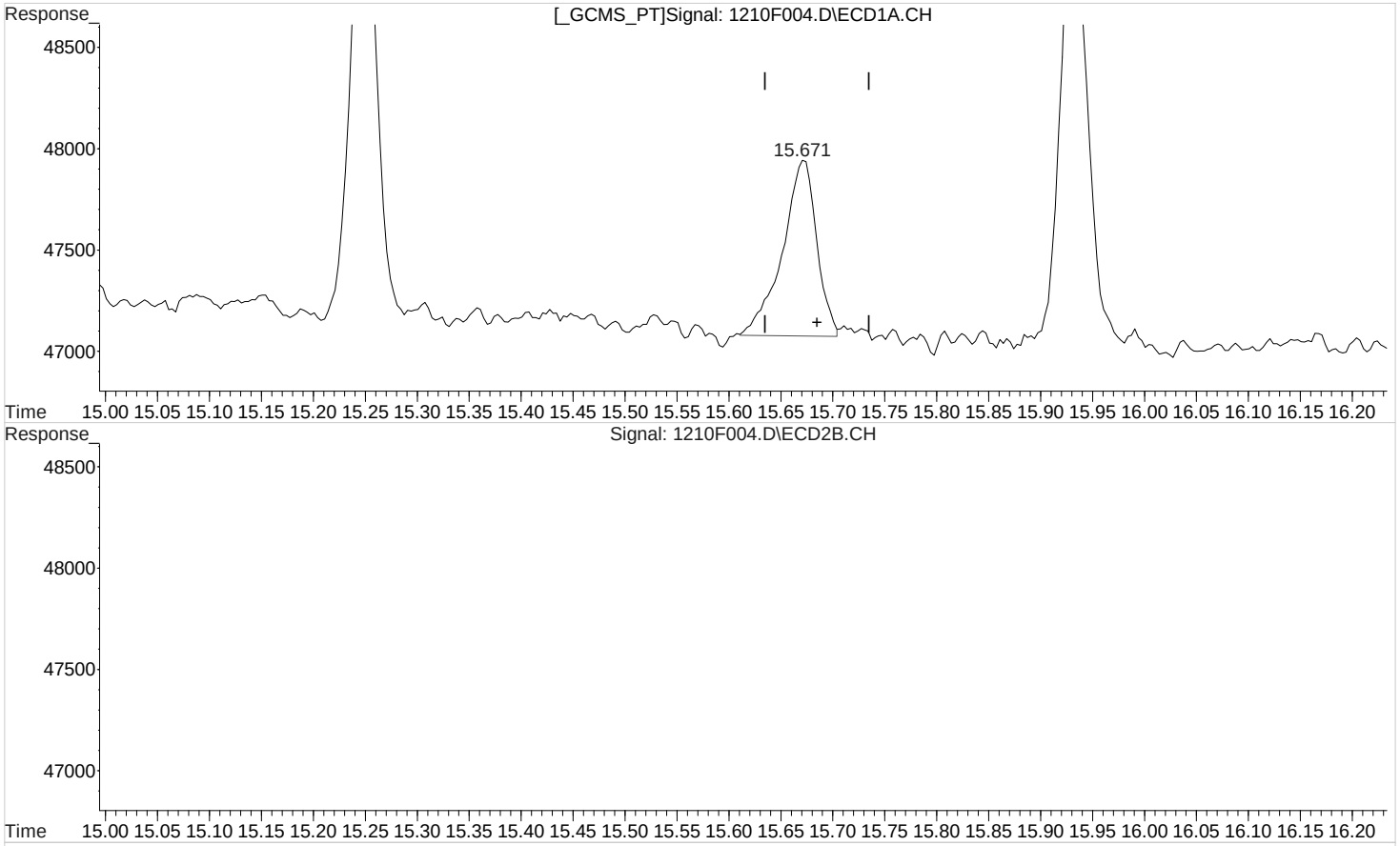
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(24) Methoxychlor

15.671min 0.531 ug/L m

response 1985

Manual Integration:

After

Baseline/Shoulder

12/10/18

(24) Methoxychlor #2

14.721min 0.477 ug/L

response 4817

(+) = Expected Retention Time

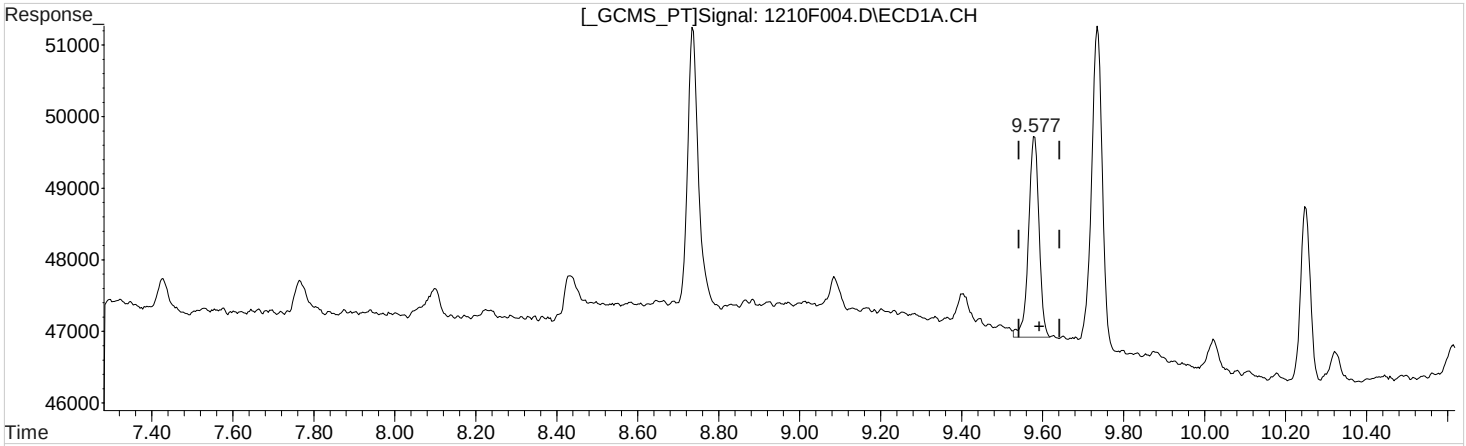
Quantitation Report (Qedit)

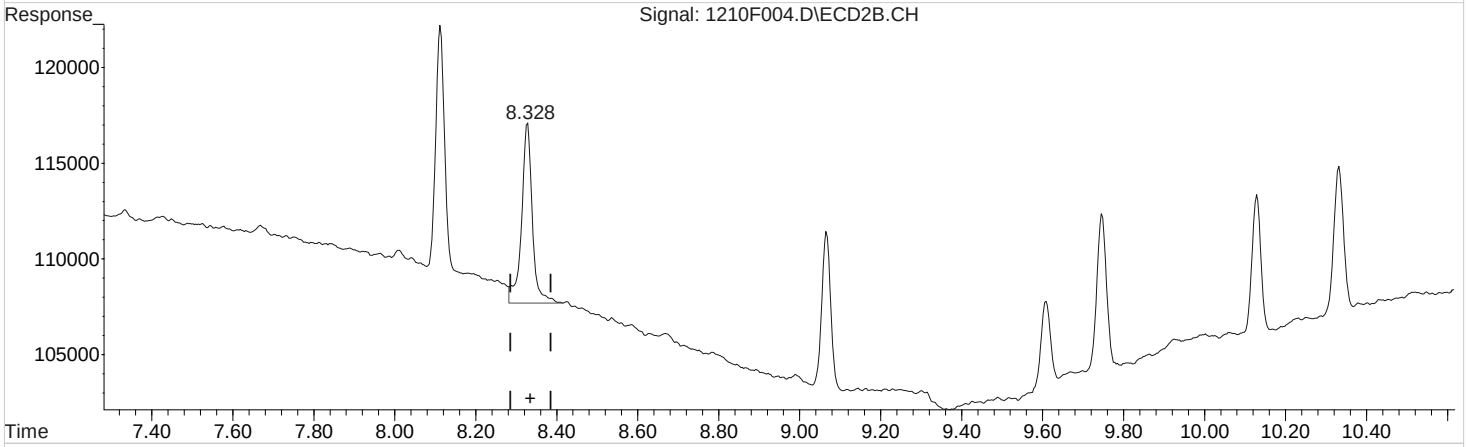
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(3) alpha-BHC

9.577min 0.609 ug/L

response 5052

(3) alpha-BHC #2

8.328min 0.515 ug/L

response 17384

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

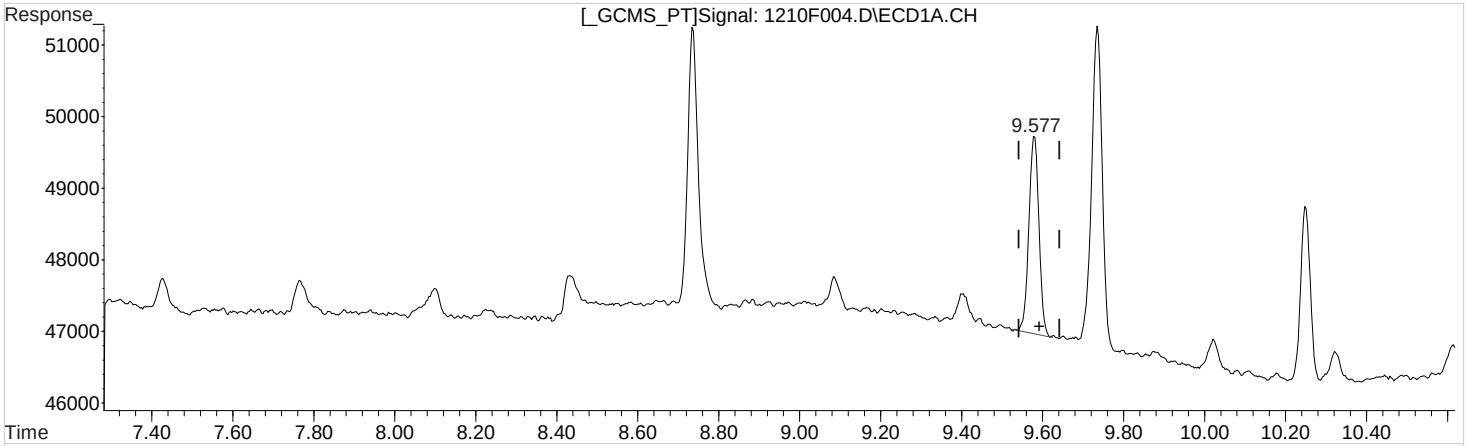
Quantitation Report (Qedit)

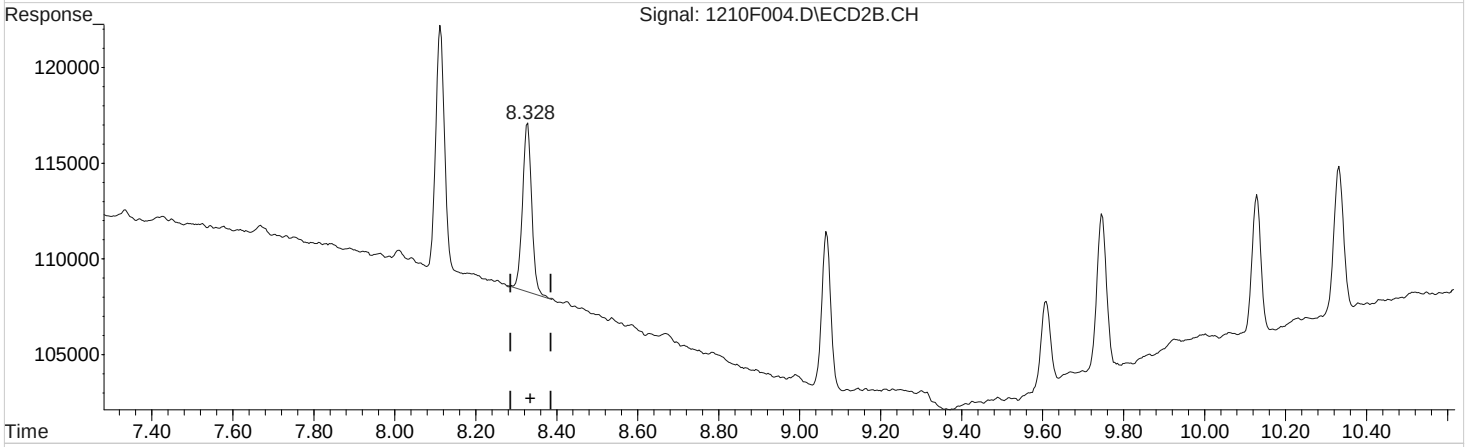
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(3) alpha-BHC

9.577min 0.573 ug/L m

response 4753

(3) alpha-BHC #2

8.328min 0.408 ug/L m

response 13773

Manual Integration:

After

Baseline/Shoulder

12/10/18

(+) = Expected Retention Time

020577

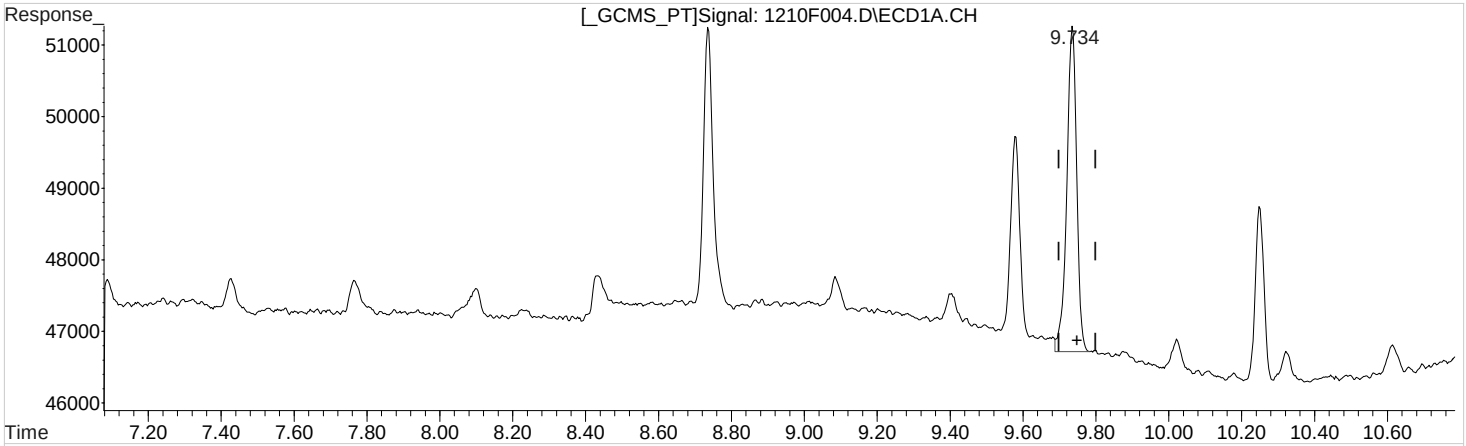
Quantitation Report (Qedit)

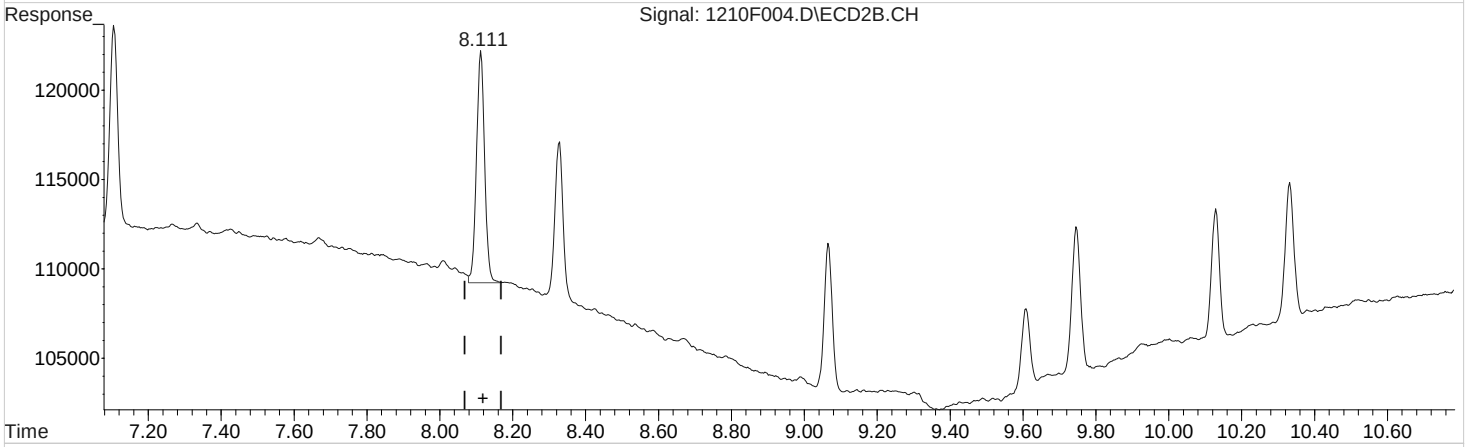
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.734min 0.743 ug/L

response 8573

Manual Integration:

Before

12/10/18

(4) Hexachlorobenzene #2

8.111min 0.395 ug/L

response 20097

(+) = Expected Retention Time

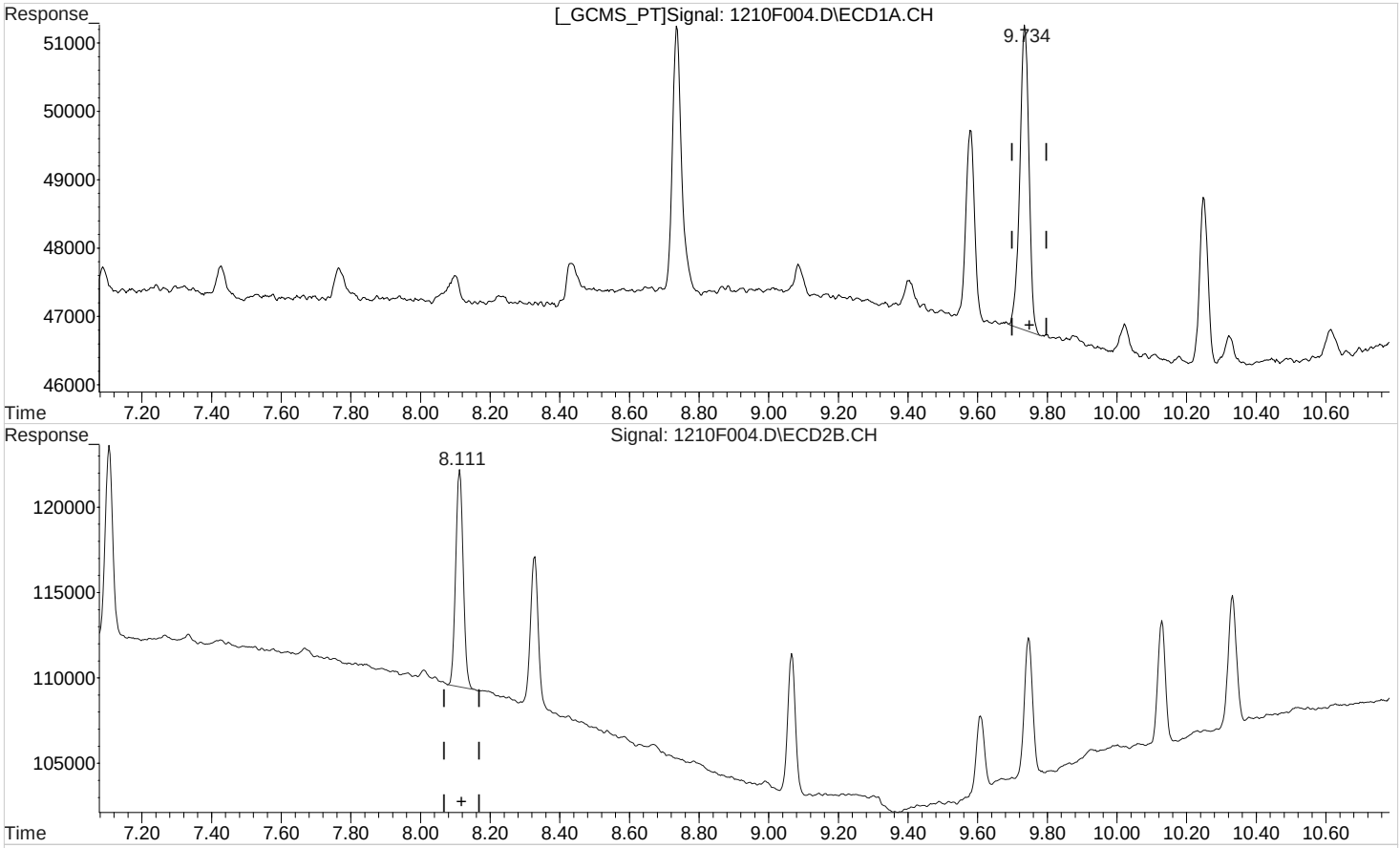
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(4) Hexachlorobenzene

9.734min 0.697 ug/L m

response 8104

Manual Integration:

After

Baseline/Shoulder

12/10/18

(4) Hexachlorobenzene #2

8.111min 0.365 ug/L m

response 18988

(+) = Expected Retention Time

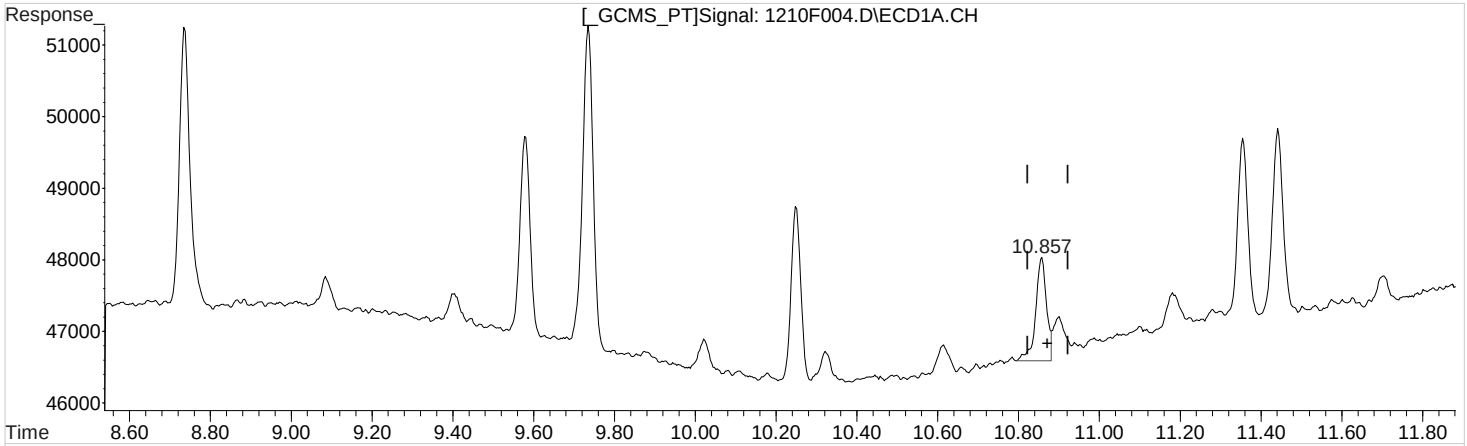
Quantitation Report (Qedit)

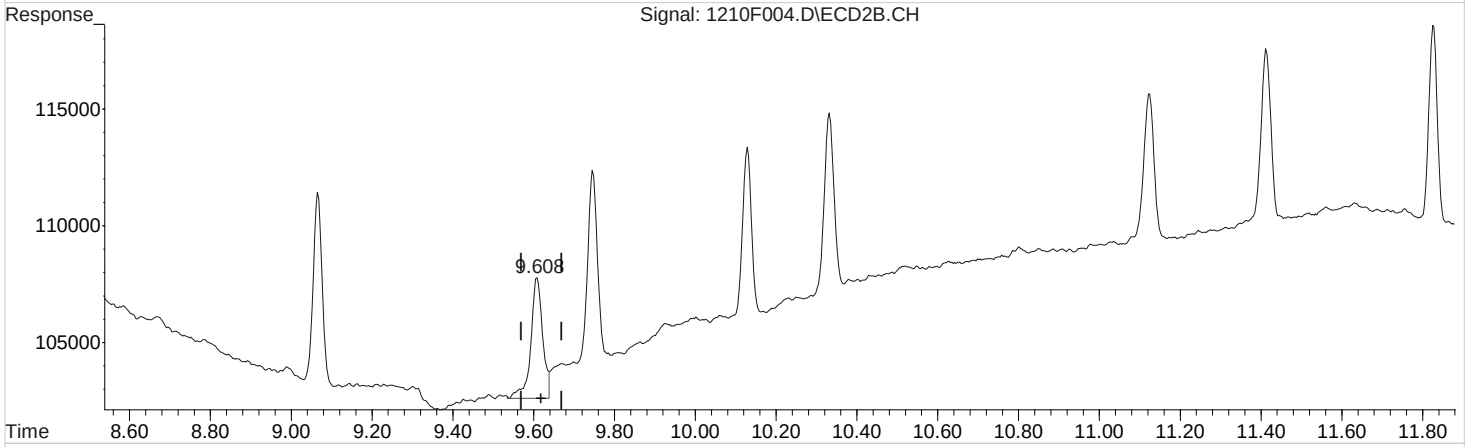
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.857min 0.675 ug/L

response 2737

Manual Integration:

Before

12/10/18

(5) beta-BHC #2

9.608min 0.651 ug/L

response 10643

(+) = Expected Retention Time

020580

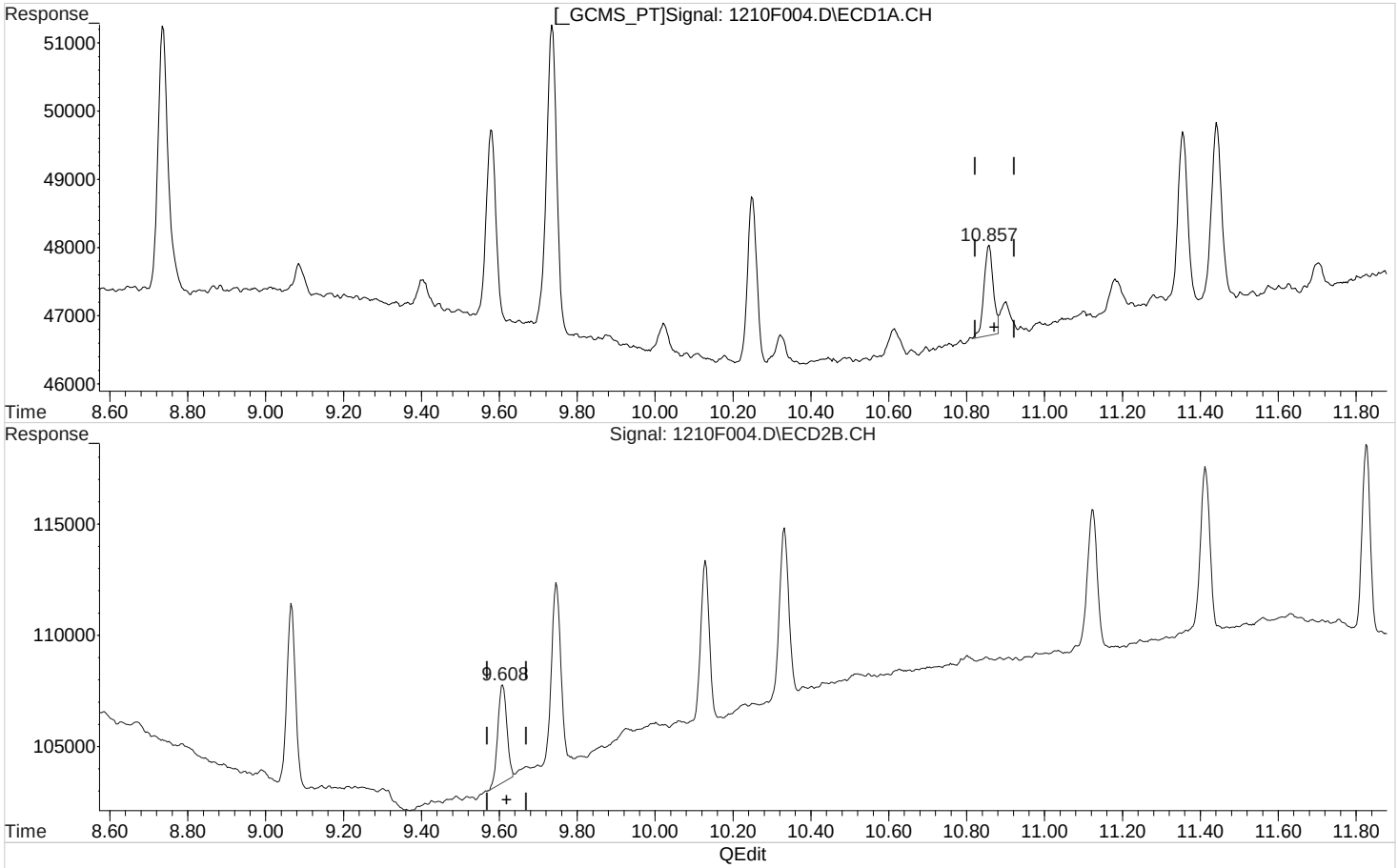
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(5) beta-BHC

10.857min 0.547 ug/L m

response 2218

(5) beta-BHC #2

9.608min 0.440 ug/L m

response 7192

Manual Integration:

After

Baseline/Shoulder

12/10/18

(+) = Expected Retention Time

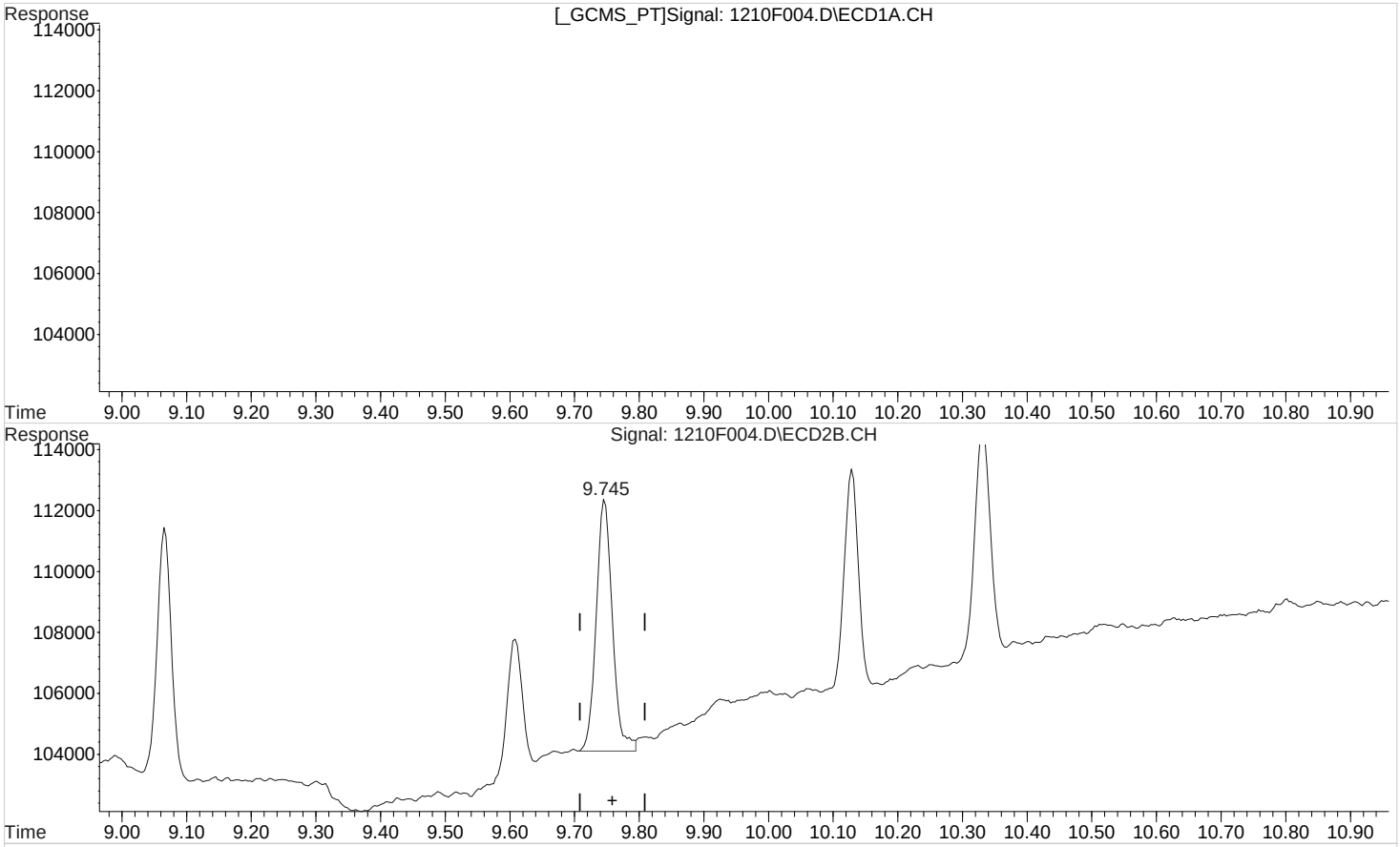
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(8) Heptachlor

11.441min 0.649 ug/L

response 4798

Manual Integration:

Before

12/10/18

(8) Heptachlor #2

9.745min 0.487 ug/L

response 14380

(+) = Expected Retention Time

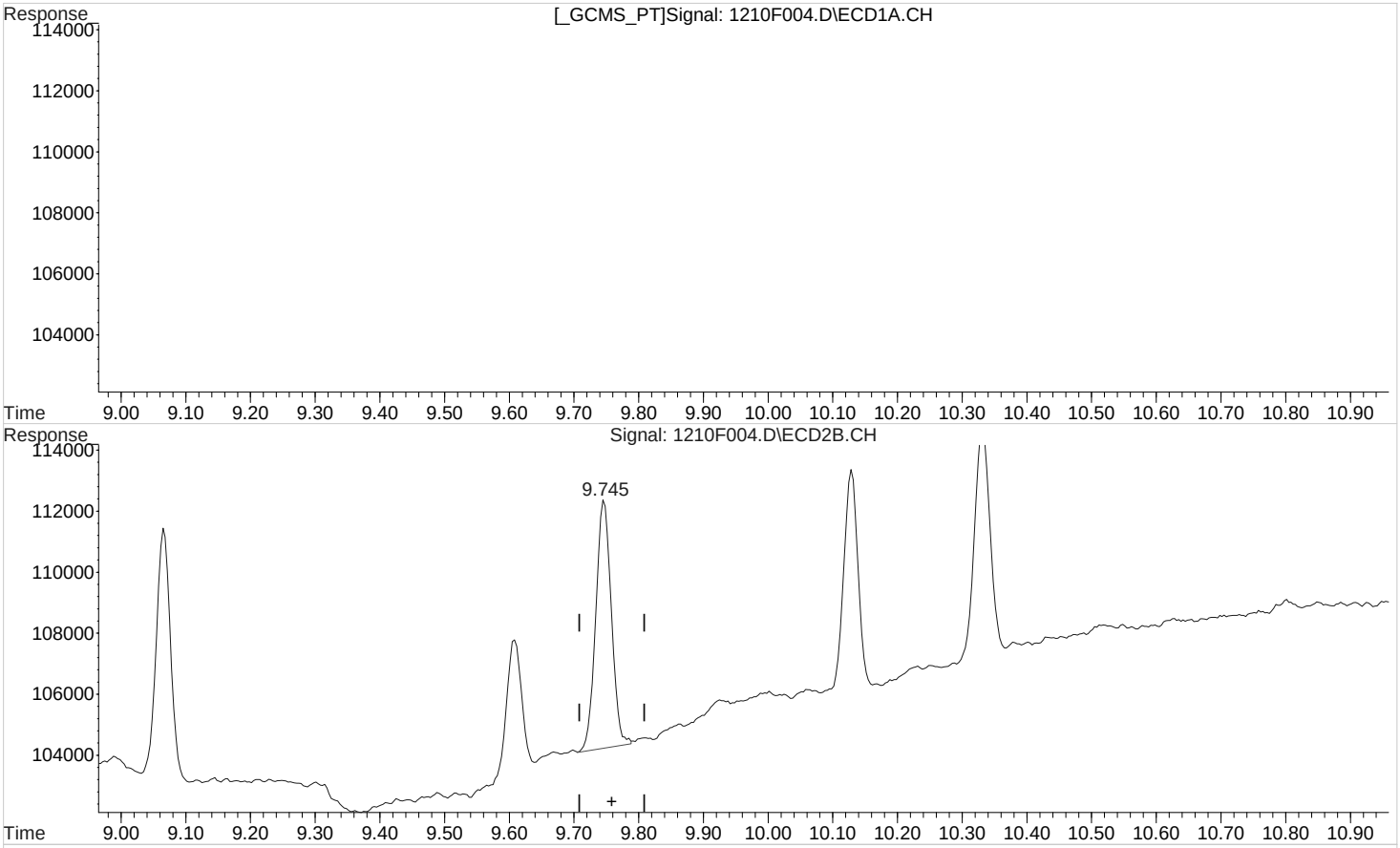
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(8) Heptachlor

11.441min 0.649 ug/L

response 4798

Manual Integration:

After

Baseline/Shoulder

12/10/18

(8) Heptachlor #2

9.745min 0.462 ug/L m

response 13624

(+) = Expected Retention Time

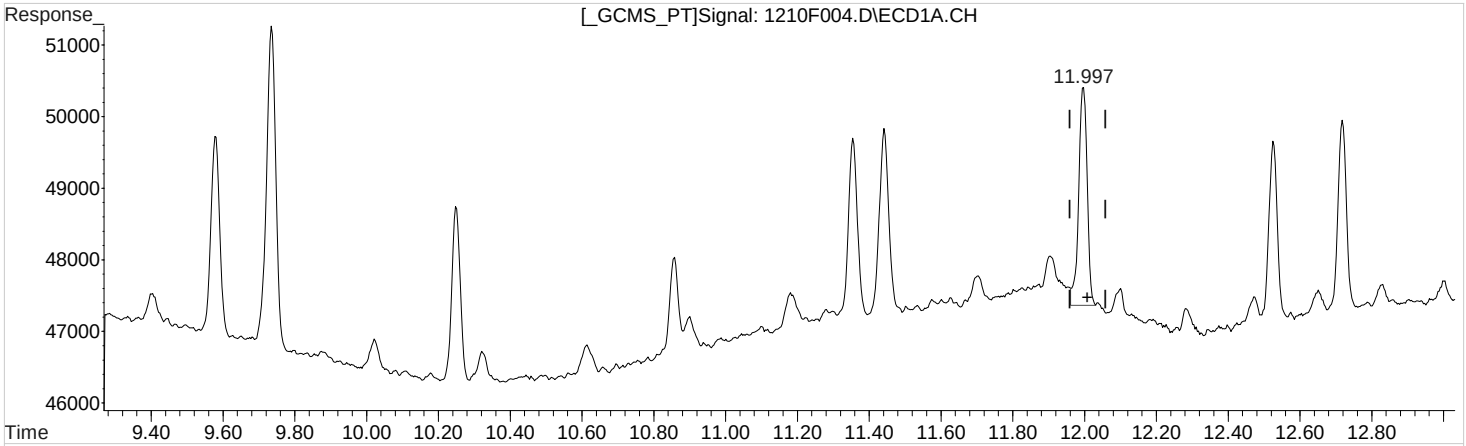
Quantitation Report (Qedit)

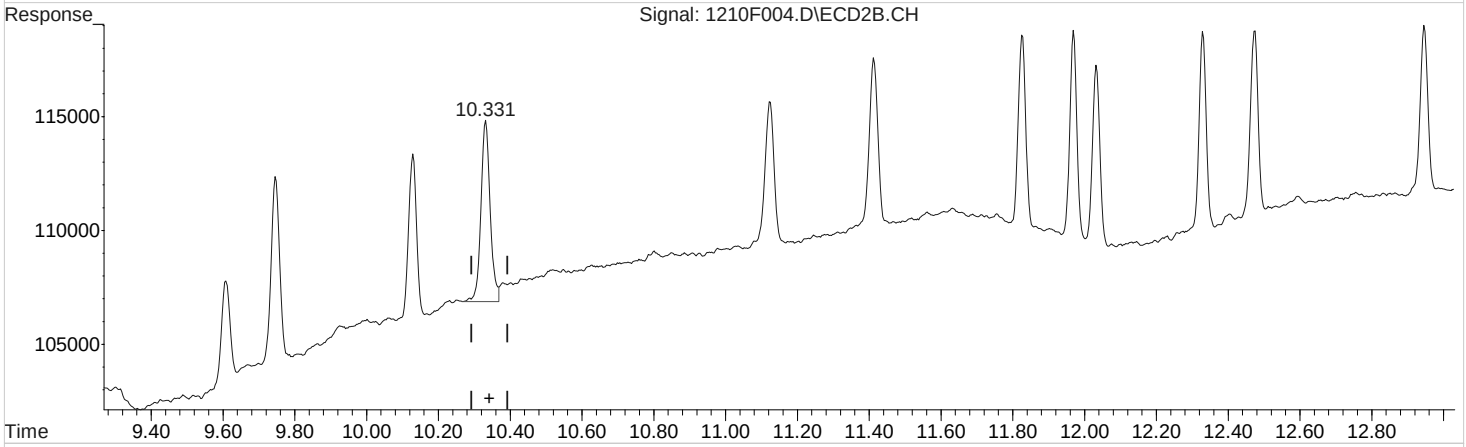
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(9) Aldrin

11.997min 0.666 ug/L

response 4930

(9) Aldrin #2

10.331min 0.506 ug/L

response 14400

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

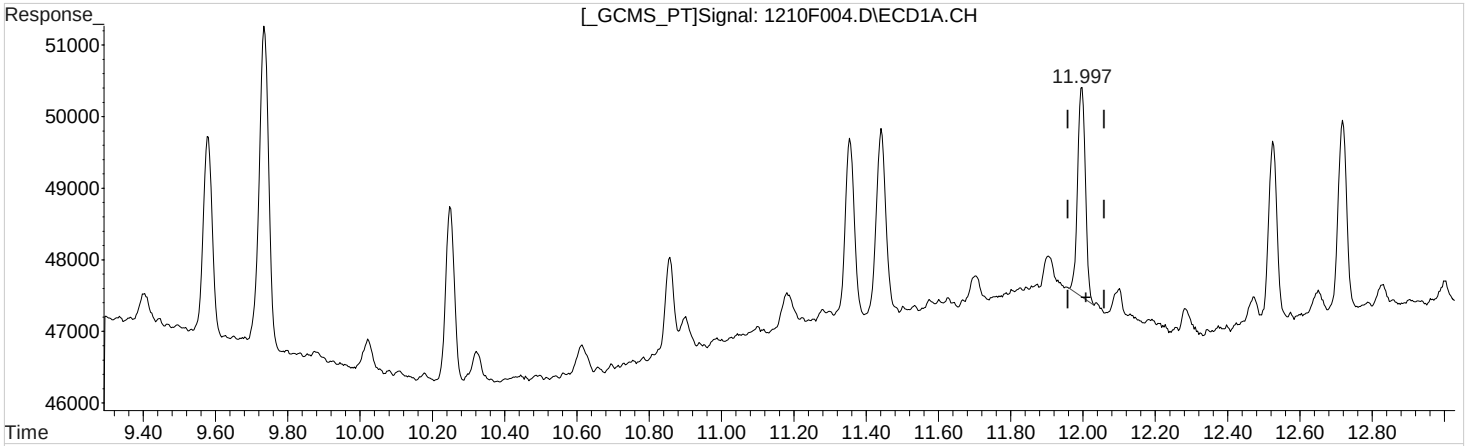
Quantitation Report (Qedit)

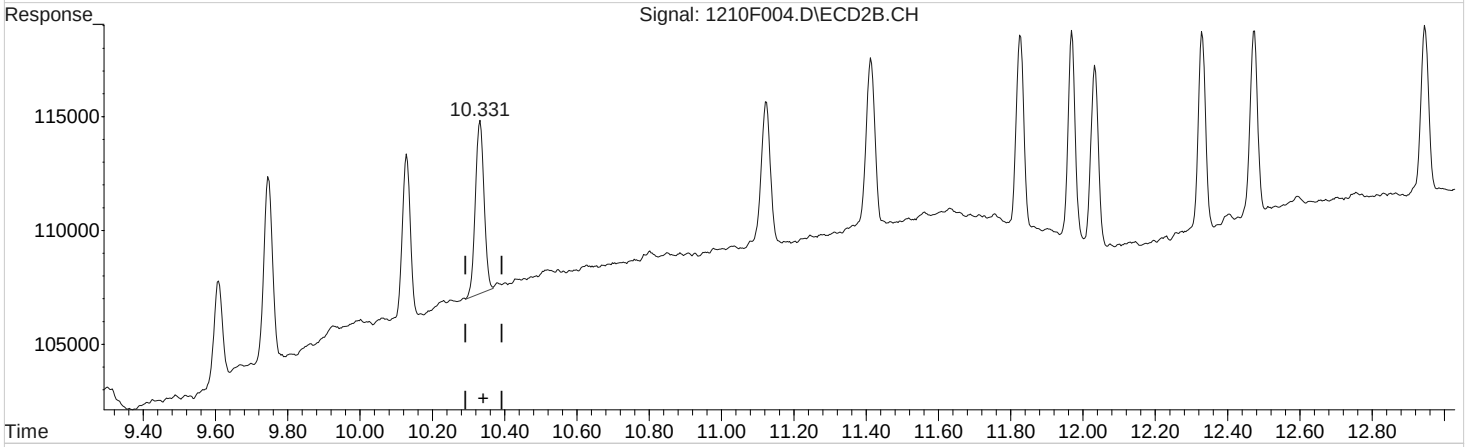
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F004.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 2:49 pm Operator: MC
Sample : 81 0.5PPB GCPS8-49C @2X Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:26 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Mon Nov 26 09:51:46 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(9) Aldrin

11.997min 0.597 ug/L m

response 4422

Manual Integration:

After

Baseline/Shoulder

12/10/18

(9) Aldrin #2

10.331min 0.446 ug/L m

response 12703

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:49:23 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.011	5.338	492933	1911822	100.000	100.000
	System Monitoring Compounds						
2) s	Tetrachlo...	8.734	7.105	13772	32960	1.552	0.901 #
28) s	Decachlor...	18.424	16.865	13712	28994	1.577	0.941 #
	Target Compounds						
3)	alpha-BHC	9.581	8.325	10346	29185	1.244	0.870 #
4)	Hexachlor...	9.738	8.111	15850	37632	1.456m	0.868m#
5)	beta-BHC	10.858	9.608	4835	13812	1.190	0.851m#
6)	gamma-BHC...	10.251	9.065	9077	25867	1.221	0.869 #
7)	delta-BHC	11.358	10.128	8683	26454	1.327	0.983 #
8)	Heptachlor	11.441	9.745	9131	28460	1.234	0.971
9)	Aldrin	11.994	10.332	9407	26043	1.268m	0.921 #
10)	Isodrin	12.524	11.121	8180	23856	1.356	0.960 #
11)	Heptachlo...	12.717	11.412	8954	26541	1.293	1.016
12)	gamma-Chl...	13.234	11.825	9000	24321	1.338	0.928m#
13)	Endosulfan I	13.361	12.031	8874	23269	1.404	0.989 #
14)	alpha-Chl...	13.311	11.968	9637	25131	1.382	0.959 #
15)	Dieldrin	13.778	12.472	9370	24122	1.454	0.984 #
16)	4,4'-DDE	13.591	12.328	10324	24165	1.565	0.936 #
17)	Endrin	14.144	12.945	8428	23381	1.316	0.996
18)	Endosulfa...	14.594	13.378	8259	21643	1.356	1.011 #
19)	4,4'-DDD	14.424	13.208	6325	18522	1.257	1.017
20)	Endrin Al...	14.774	13.738	8018	19995	1.527	1.041 #
21)	Endosulfa...	15.248	14.058	8418	22251	1.418	1.018 #
22)	4,4'-DDT	14.921	13.625	6006	18465	1.605	1.090 #
23)	Endrin Ke...	15.931	14.992	7763	24582	1.370	1.084
24)	Methoxychlor	15.671	14.722	4087	10387	1.504	1.036 #
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

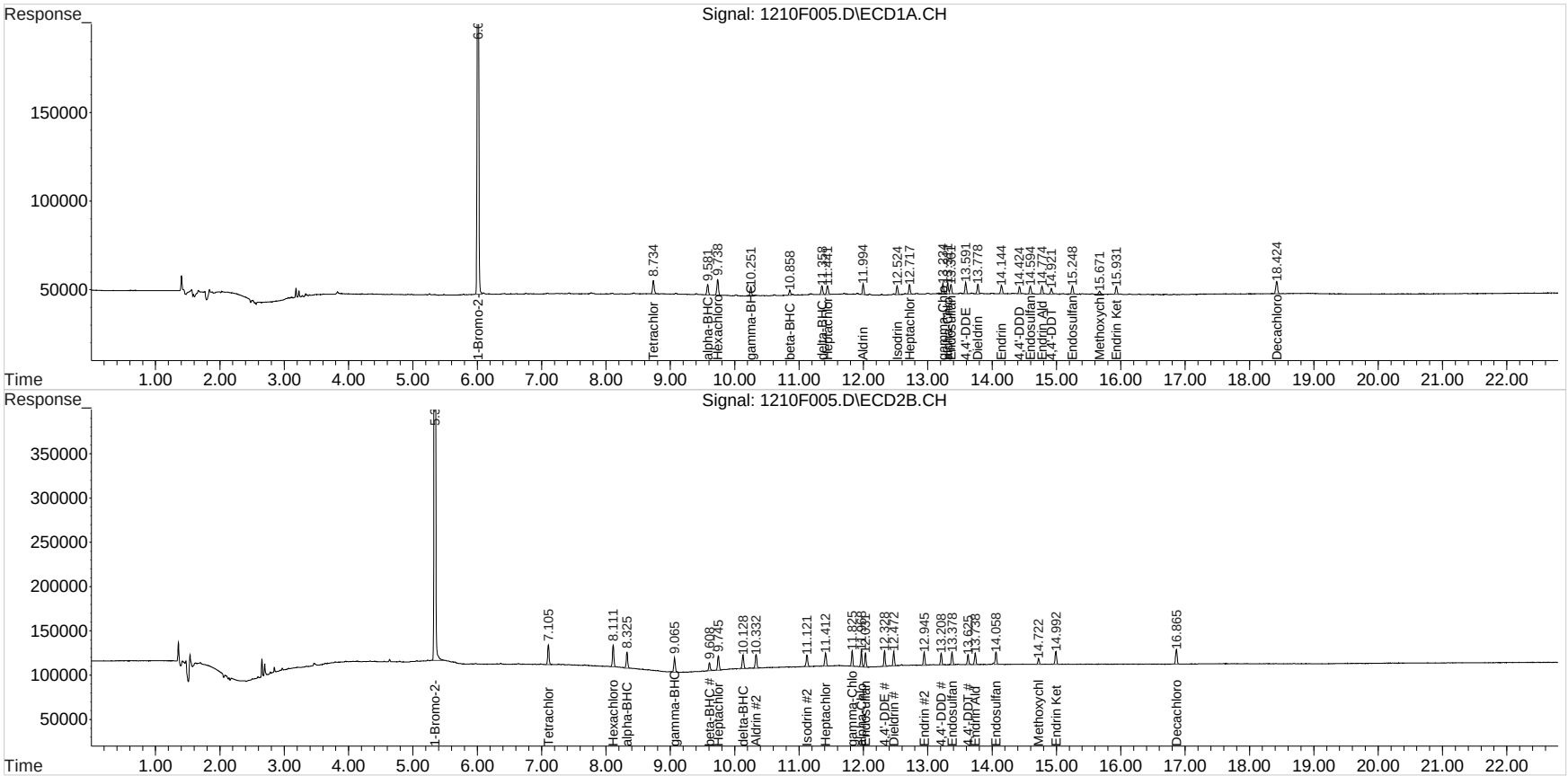
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:49:23 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



020587

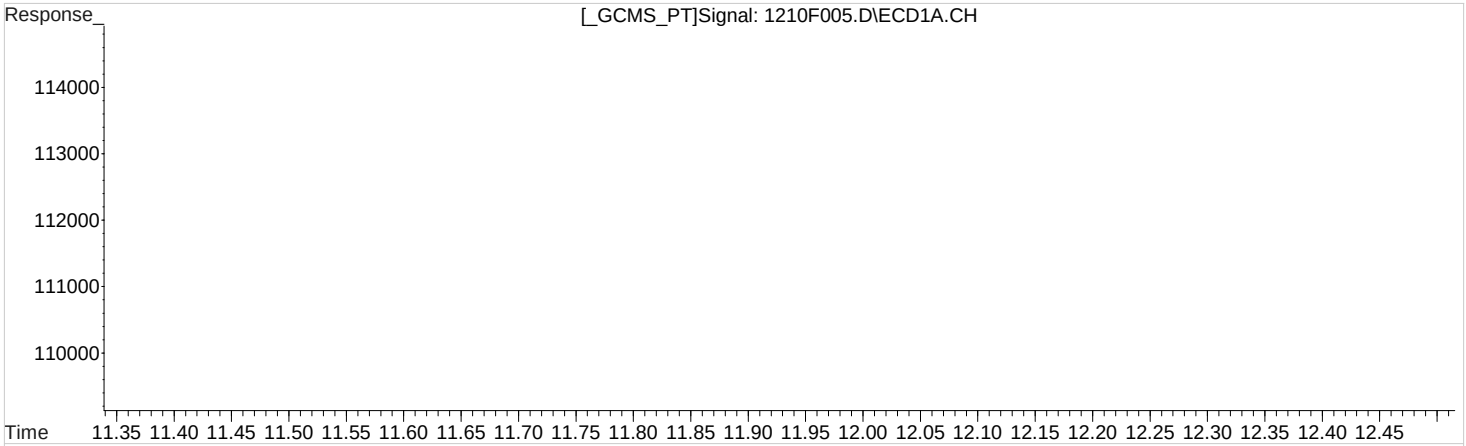
Quantitation Report (Qedit)

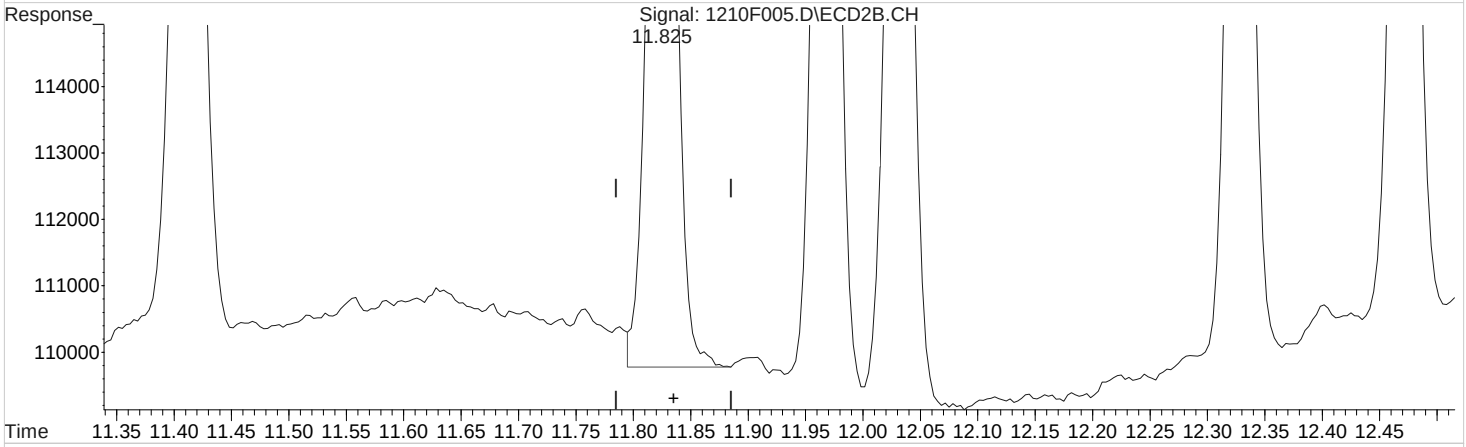
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

13.234min 1.338 ug/L

response 9000

Manual Integration:

Before

12/10/18

(12) gamma-Chlordane #2

11.825min 0.974 ug/L

response 25527

(+) = Expected Retention Time

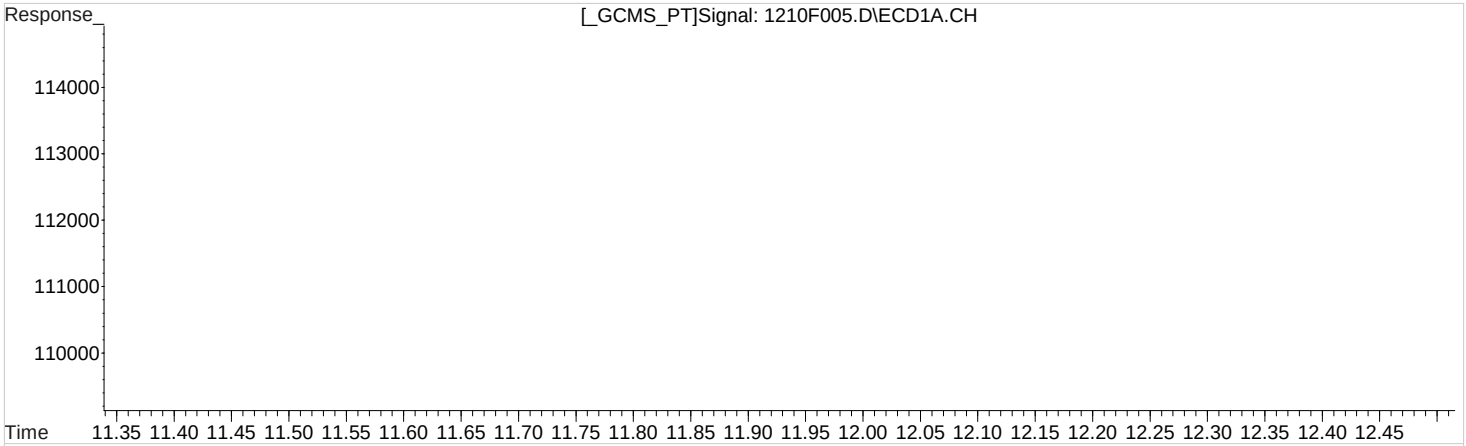
Quantitation Report (Qedit)

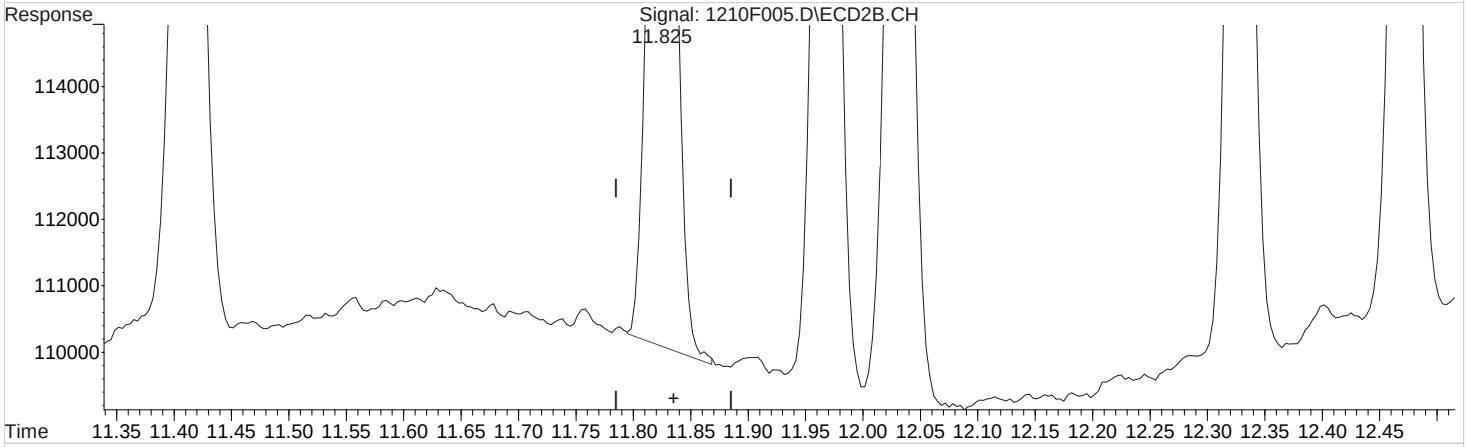
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(12) gamma-Chlordane

13.234min 1.338 ug/L

response 9000

Manual Integration:

After

Baseline/Shoulder

12/10/18

(12) gamma-Chlordane #2

11.825min 0.928 ug/L m

response 24321

(+) = Expected Retention Time

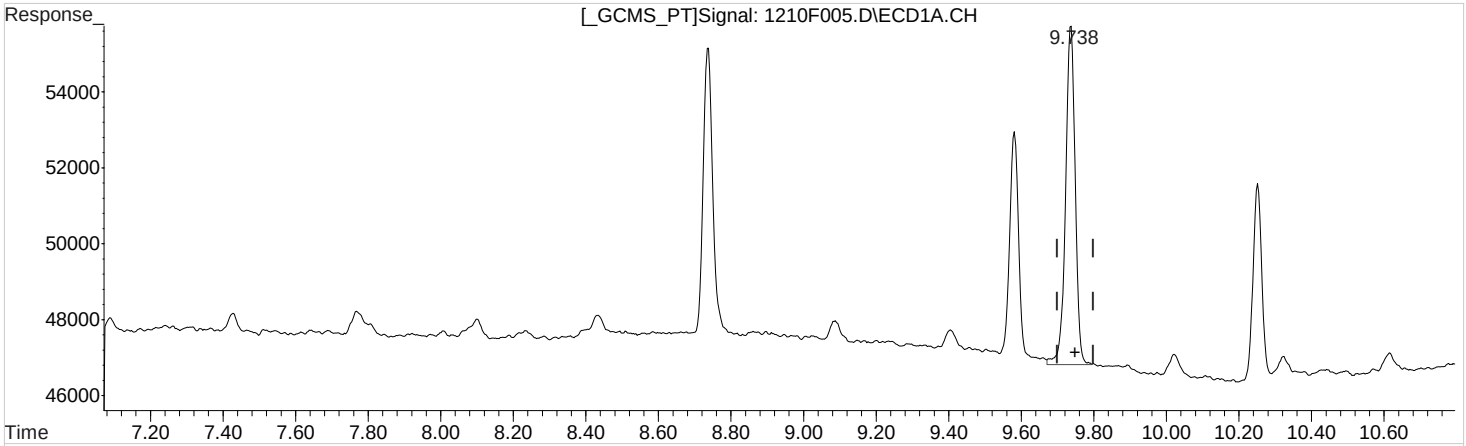
Quantitation Report (Qedit)

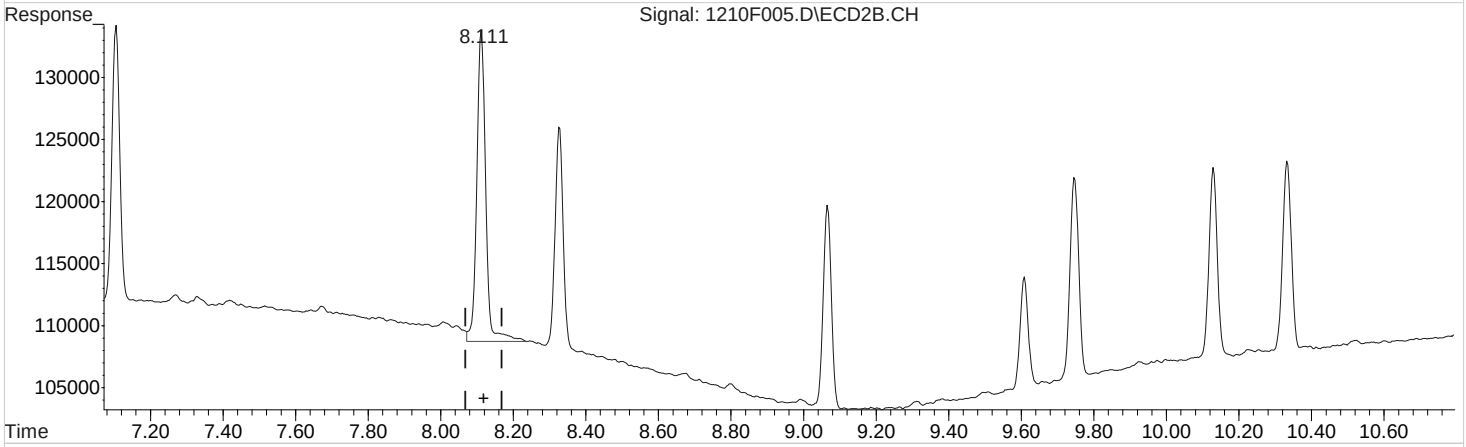
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.738min 1.516 ug/L

response 16452

Manual Integration:

Before

12/10/18

(4) Hexachlorobenzene #2

8.111min 1.010 ug/L

response 42901

(+) = Expected Retention Time

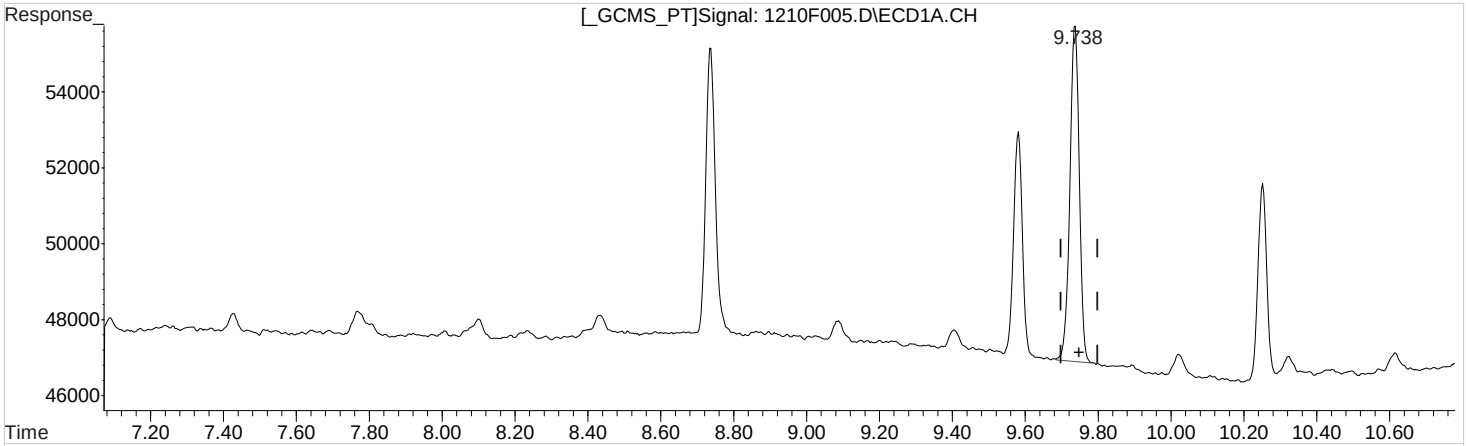
Quantitation Report (Qedit)

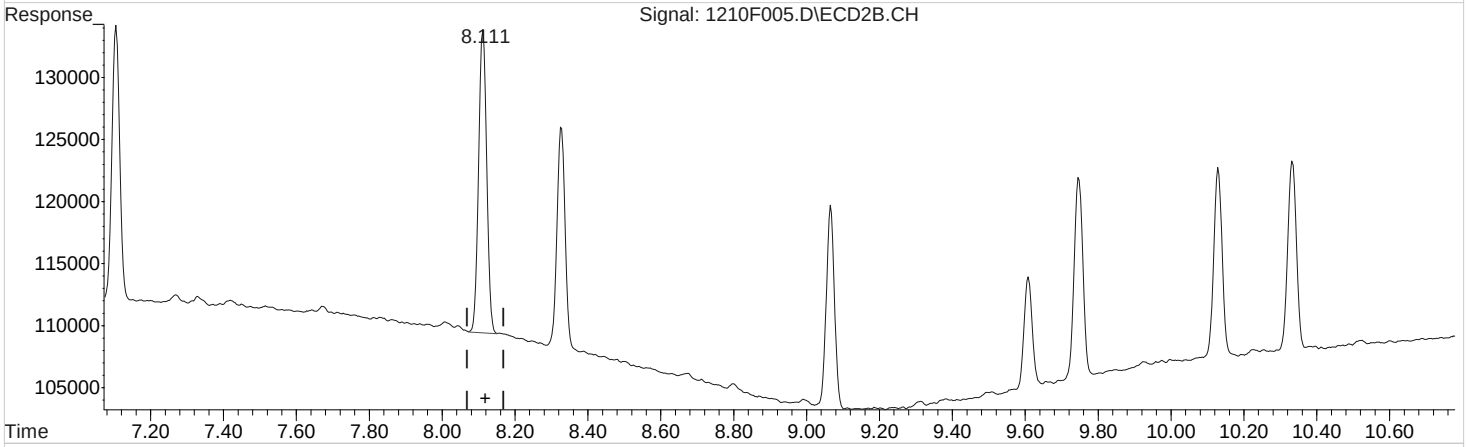
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(4) Hexachlorobenzene

9.738min 1.456 ug/L m

response 15850

(4) Hexachlorobenzene #2

8.111min 0.868 ug/L m

response 37632

Manual Integration:

After

Baseline/Shoulder

12/10/18

(+) = Expected Retention Time

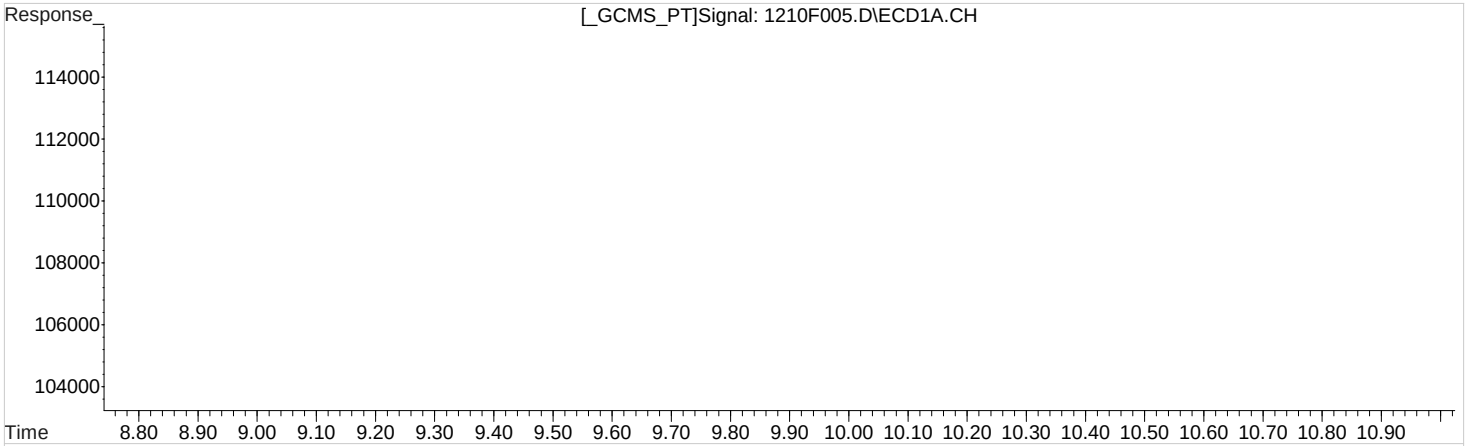
1st MC 12/11/18
2nd UA 12/11/18

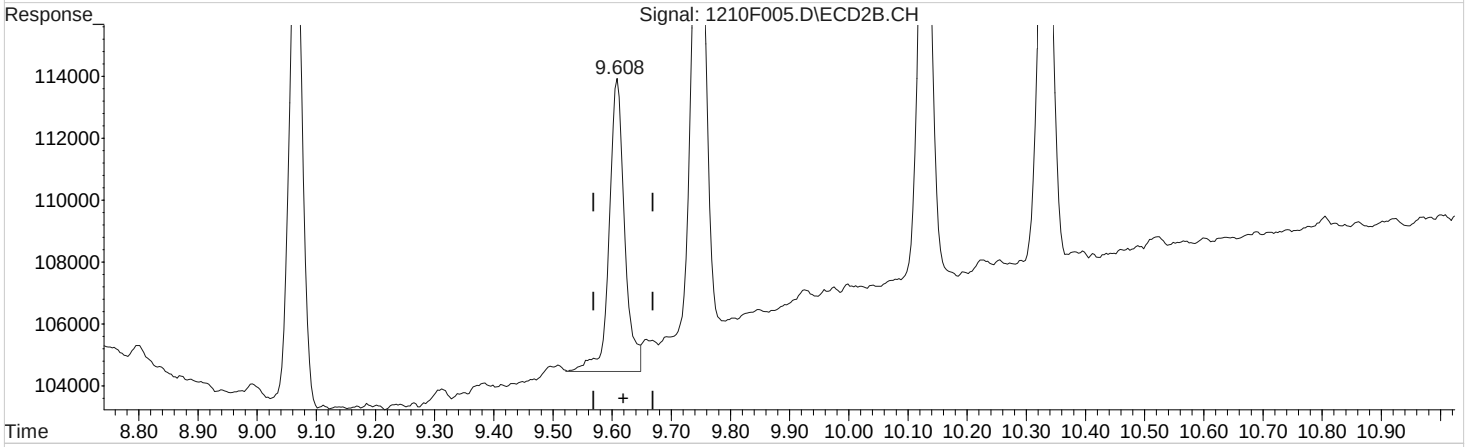
Quantitation Report (Qedit)

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.858min 1.190 ug/L

response 4835

(5) beta-BHC #2

9.608min 1.061 ug/L

response 17231

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

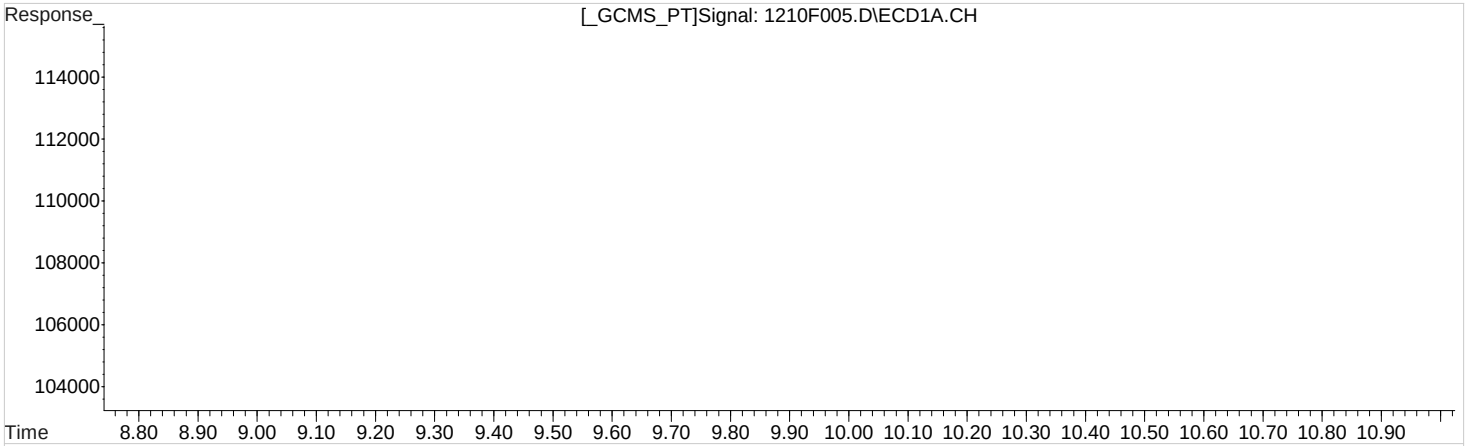
Quantitation Report (Qedit)

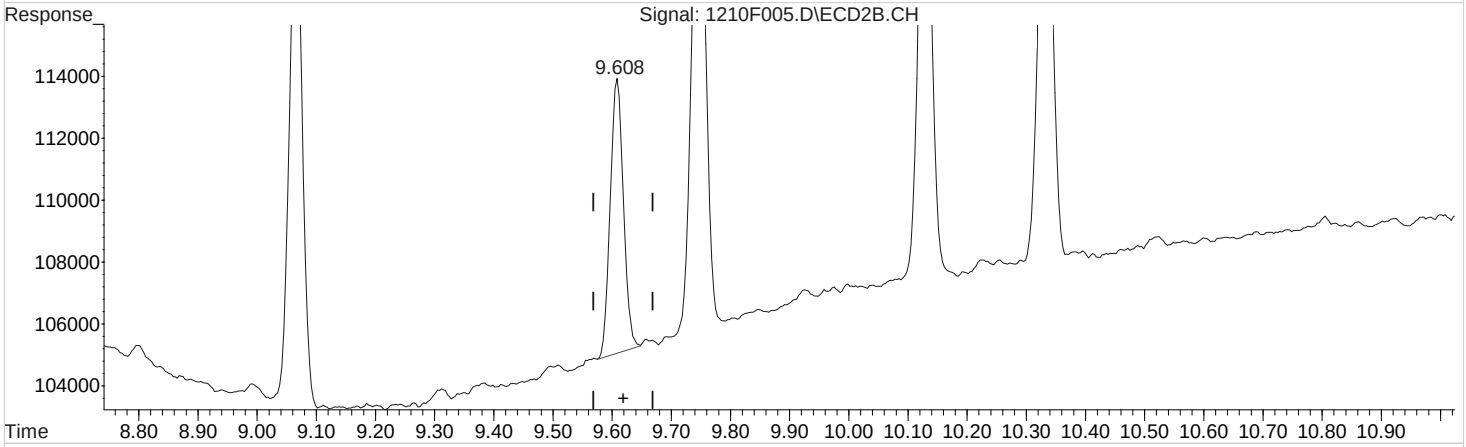
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.858min 1.190 ug/L

response 4835

(5) beta-BHC #2

9.608min 0.851 ug/L m

response 13812

Manual Integration:

After

Baseline/Shoulder

12/10/18

(+) = Expected Retention Time

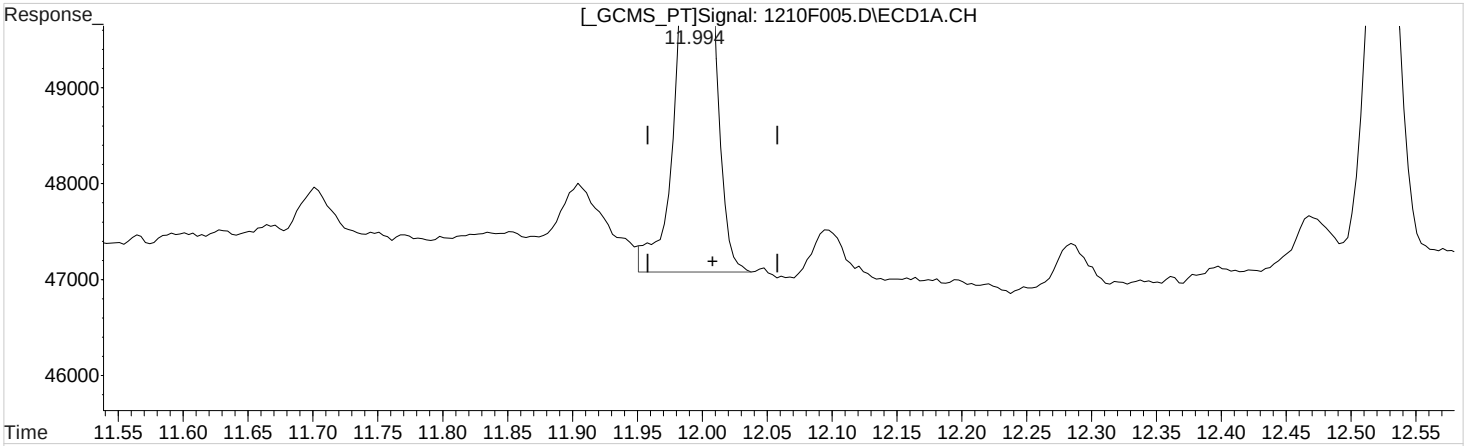
Quantitation Report (Qedit)

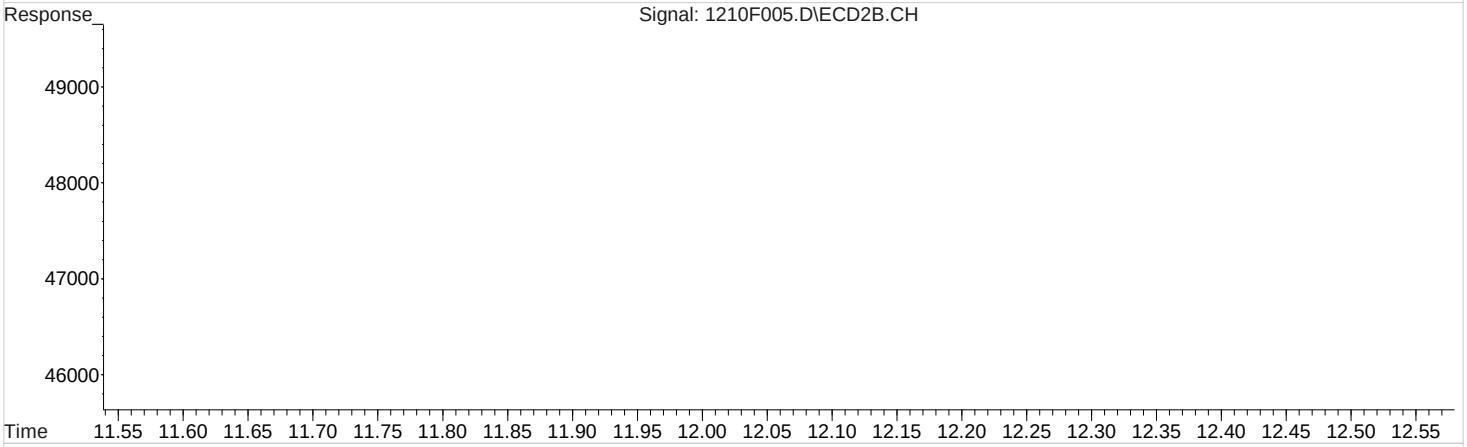
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(9) Aldrin

11.994min 1.379 ug/L

response 10231

(9) Aldrin #2

10.332min 0.921 ug/L

response 26043

Manual Integration:

Before

12/10/18

(+) = Expected Retention Time

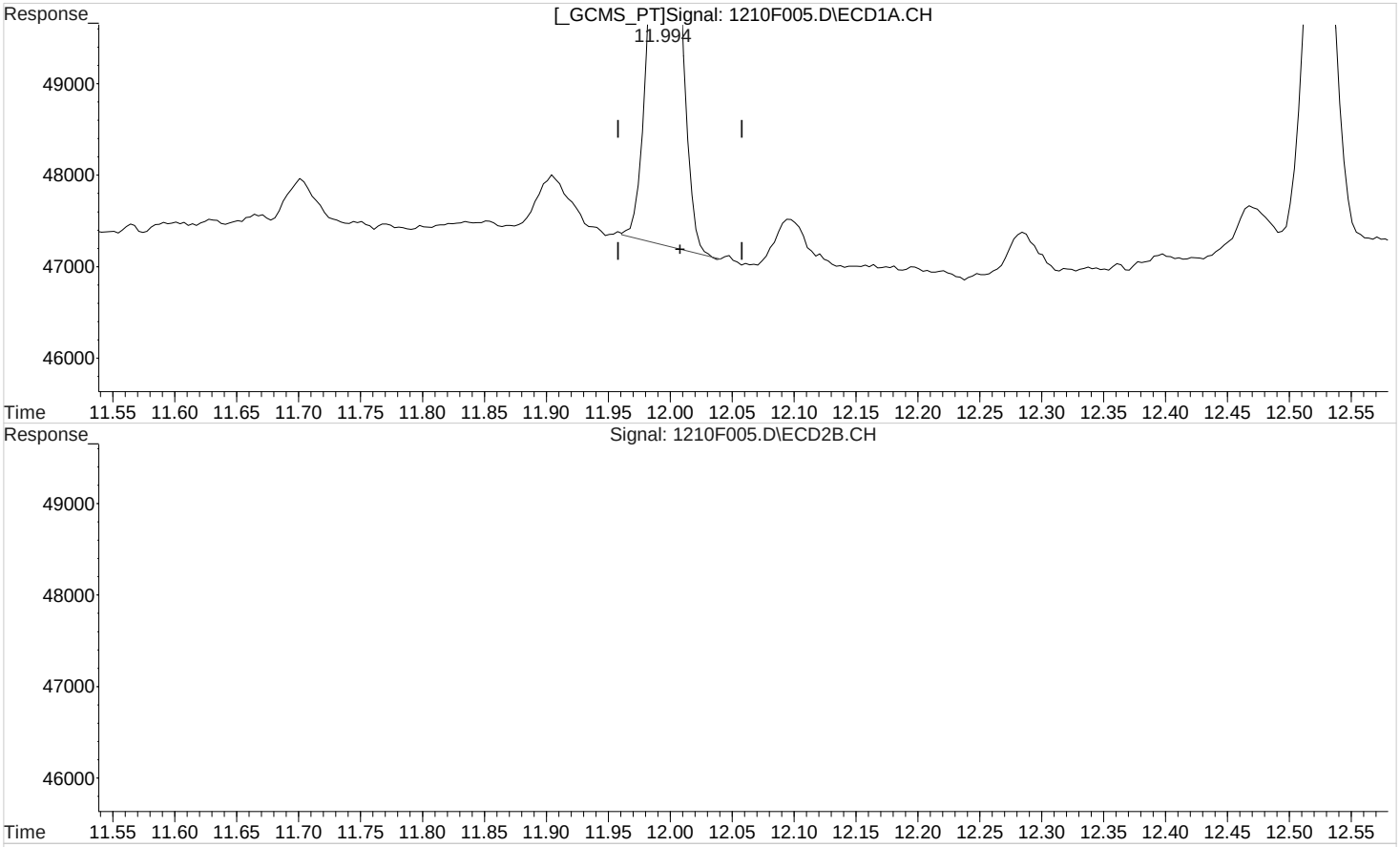
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F005.D Vial: 14
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:18 pm Operator: MC
Sample : 81 1.0PPB GCPS8-49C Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 10 15:44:30 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Nov 27 11:29:24 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(9) Aldrin

11.994min 1.268 ug/L m

response 9407

Manual Integration:

After

Baseline/Shoulder

12/10/18

(9) Aldrin #2

10.332min 0.921 ug/L

response 26043

(+) = Expected Retention Time

1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1) i	1-Bromo-2...	6.013	5.343	517072	1962708	100.000	100.000
	System Monitoring Compounds						
	Target Compounds						
3)	alpha-BHC	9.586	8.330	18638	50734	2.030	1.849m
4)	Hexachlor...	9.739	8.117	28191	69592	2.046	1.832
5)	beta-BHC	10.859	9.610	9156	25927	2.031m	1.912
6)	gamma-BHC...	10.253	9.070	16339	48041	2.073	1.906
7)	delta-BHC	11.359	10.133	16995	45655	2.084	1.890m
8)	Heptachlor	11.443	9.750	16103	52457	2.004	1.942
9)	Aldrin	11.999	10.337	18503	47928	2.071	1.891
10)	Isodrin	12.529	11.127	16647	45775	2.224	2.078
11)	Heptachlo...	12.723	11.417	16092	44280	1.985	1.830
12)	gamma-Chl...	13.239	11.830	17557	45866	2.131	1.932m
13)	Endosulfan I	13.363	12.033	16527	43008	2.001	1.940
14)	alpha-Chl...	13.313	11.970	18278	46827	2.063	1.959
15)	Dieldrin	13.783	12.473	16374	42983	1.949	1.898
16)	4,4'-DDE	13.593	12.330	19253	44286	2.067	1.812m
17)	Endrin	14.149	12.947	14791	40784	1.876	1.827
18)	Endosulfa...	14.596	13.380	15237	41335	2.150	1.997
19)	4,4'-DDD	14.426	13.213	12799	34837	2.031	1.925
20)	Endrin Al...	14.776	13.740	14556	37568	2.042	1.992
21)	Endosulfa...	15.249	14.063	14632	39171	1.946	1.892
22)	4,4'-DDT	14.923	13.630	10204	32803	1.868	1.876
23)	Endrin Ke...	15.933	14.993	14345	42383	1.928	1.852
24)	Methoxychlor	15.673	14.727	6278	19245	1.920	1.863
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

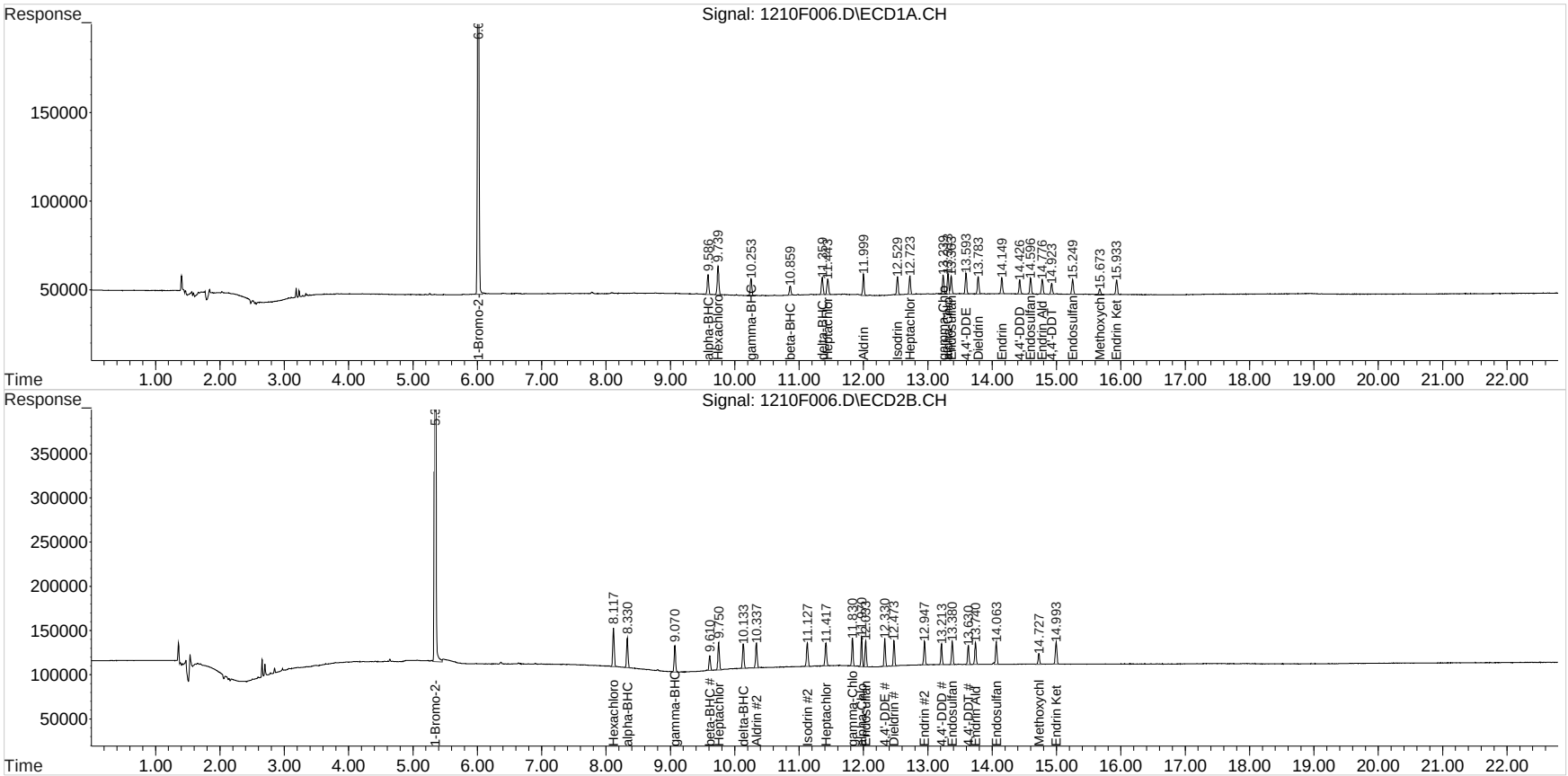
1st MC 12/11/18
2nd UA 12/11/18

Quantitation Report (QT Reviewed)

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:31:18 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



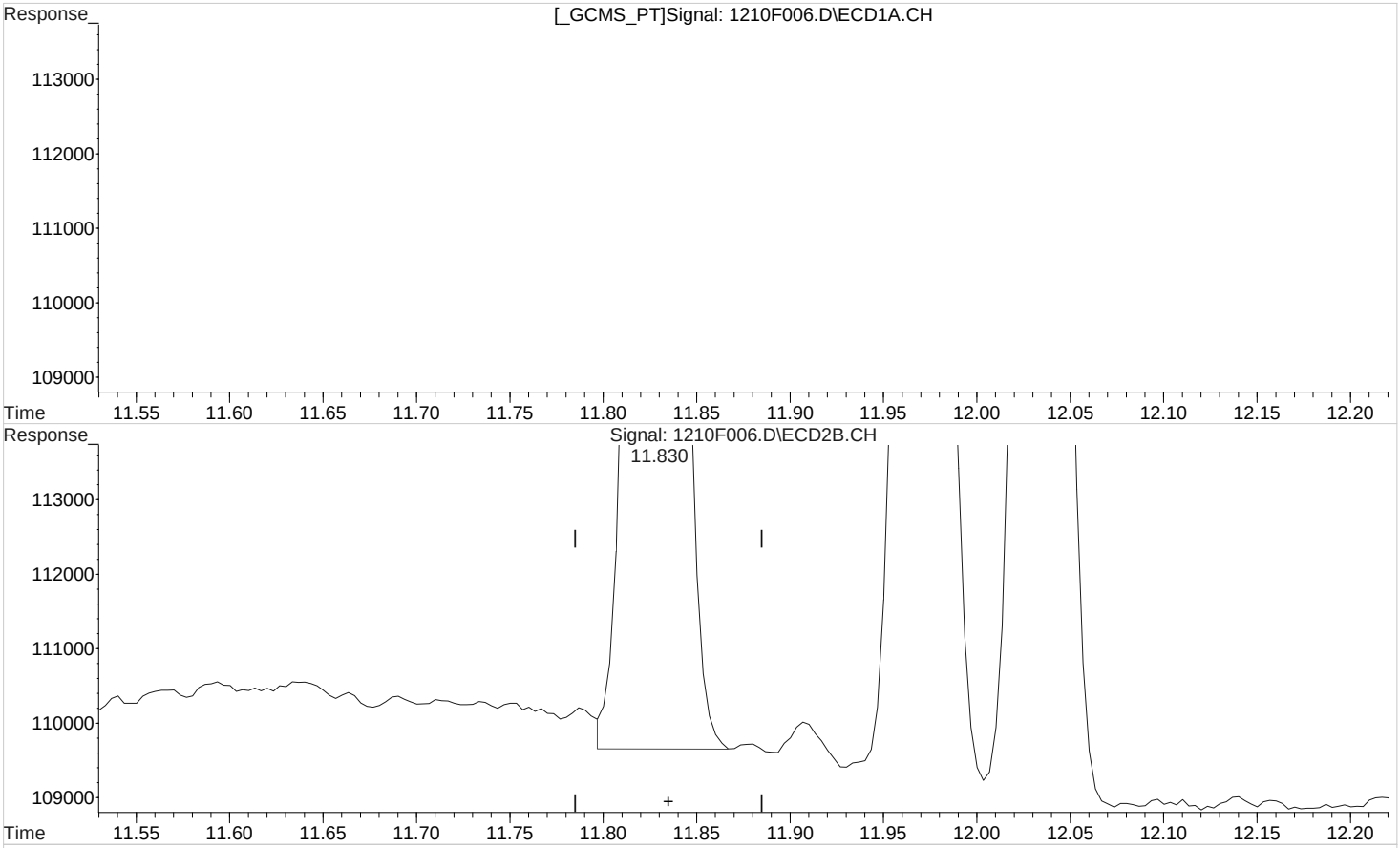
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(12) gamma-Chlordane

13.239min 2.131 ug/L

response 17557

(12) gamma-Chlordane #2

11.830min 1.965 ug/L

response 46647

Manual Integration:

Before

12/11/18

(+) = Expected Retention Time

020598

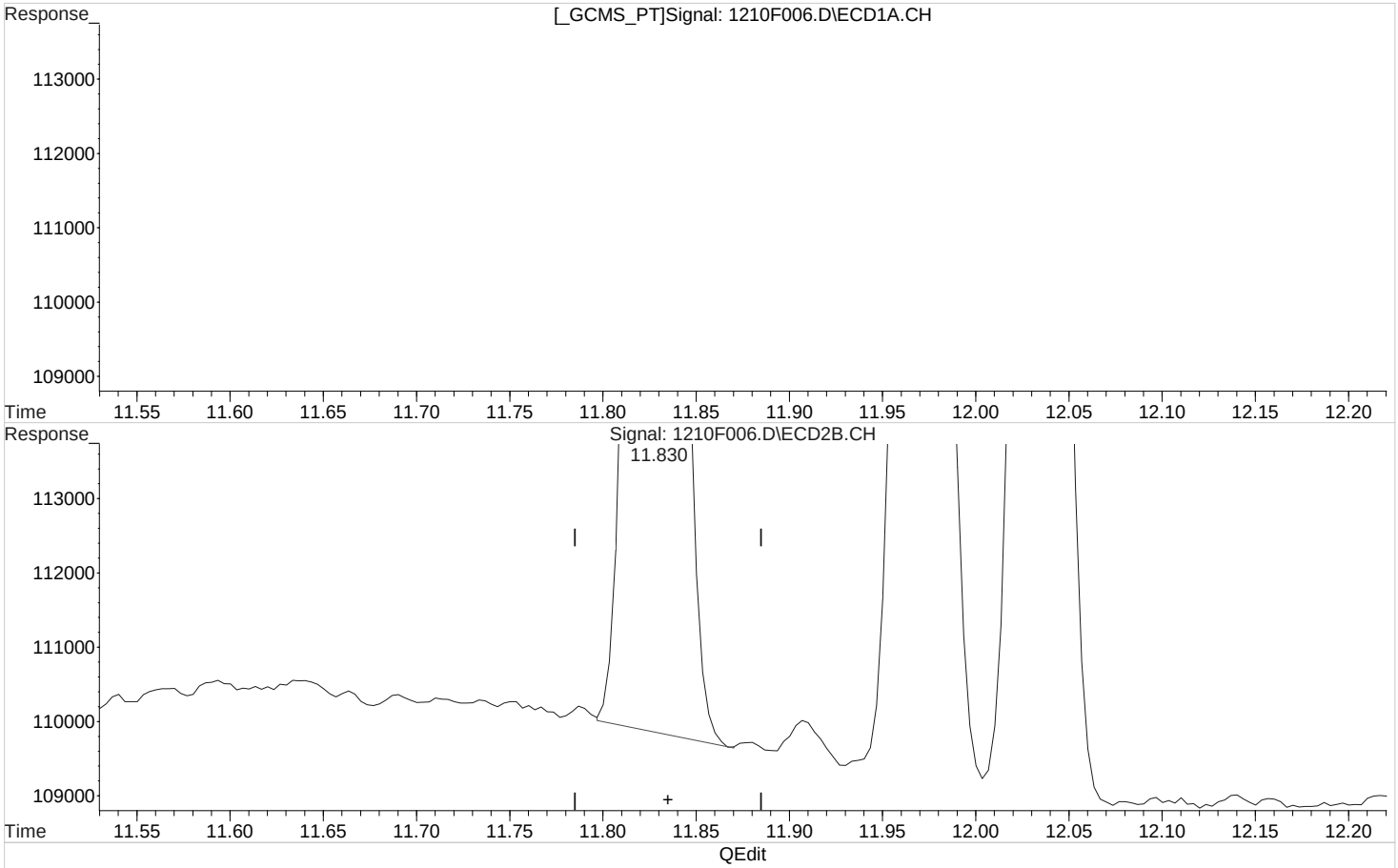
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(12) gamma-Chlordane

13.239min 2.131 ug/L

response 17557

Manual Integration:

After

Baseline/Shoulder

12/11/18

(12) gamma-Chlordane #2

11.830min 1.932 ug/L m

response 45866

(+) = Expected Retention Time

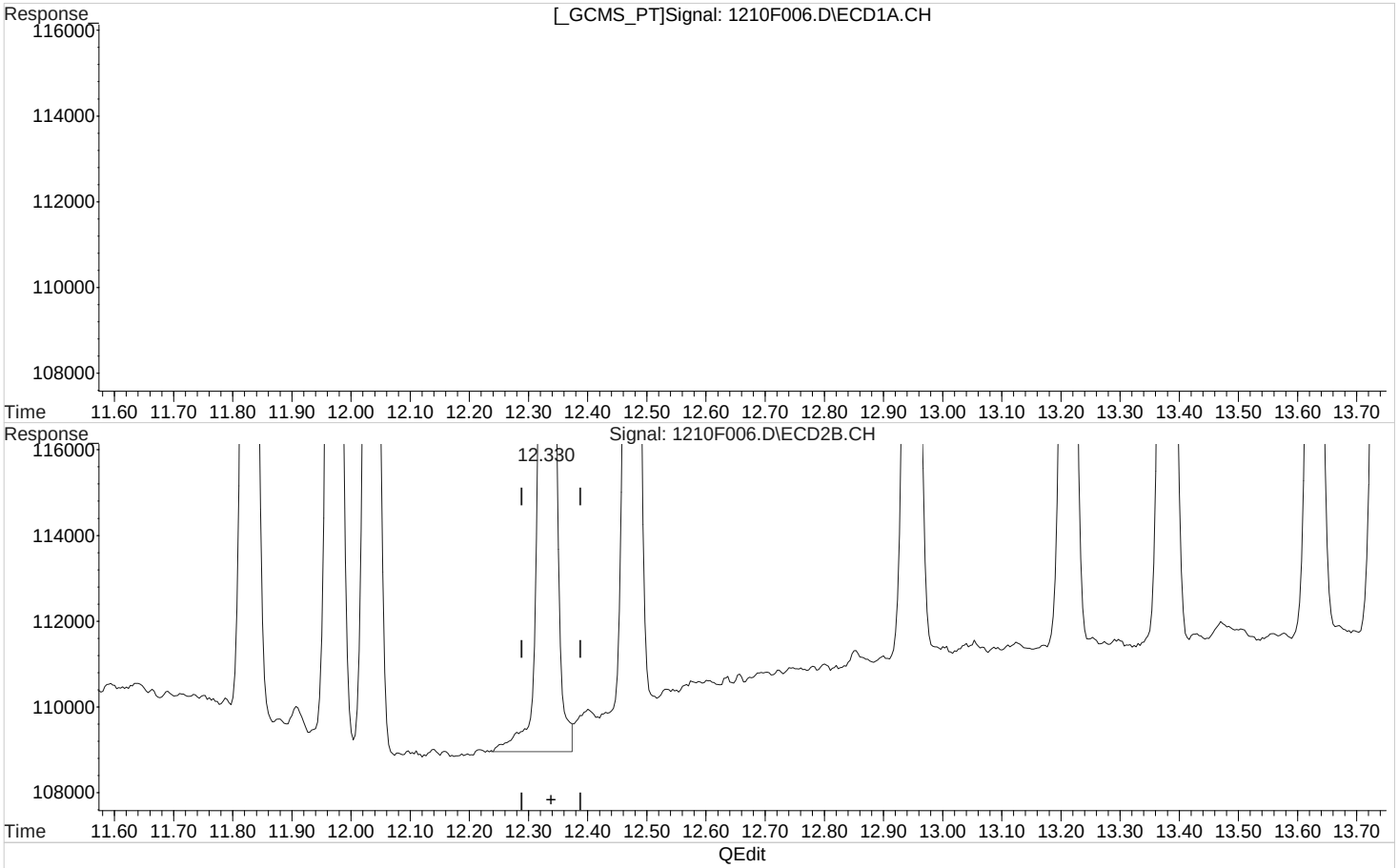
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(16) 4,4'-DDE

13.593min 2.067 ug/L

response 19253

Manual Integration:

Before

12/11/18

(16) 4,4'-DDE #2

12.330min 1.957 ug/L

response 47844

(+) = Expected Retention Time

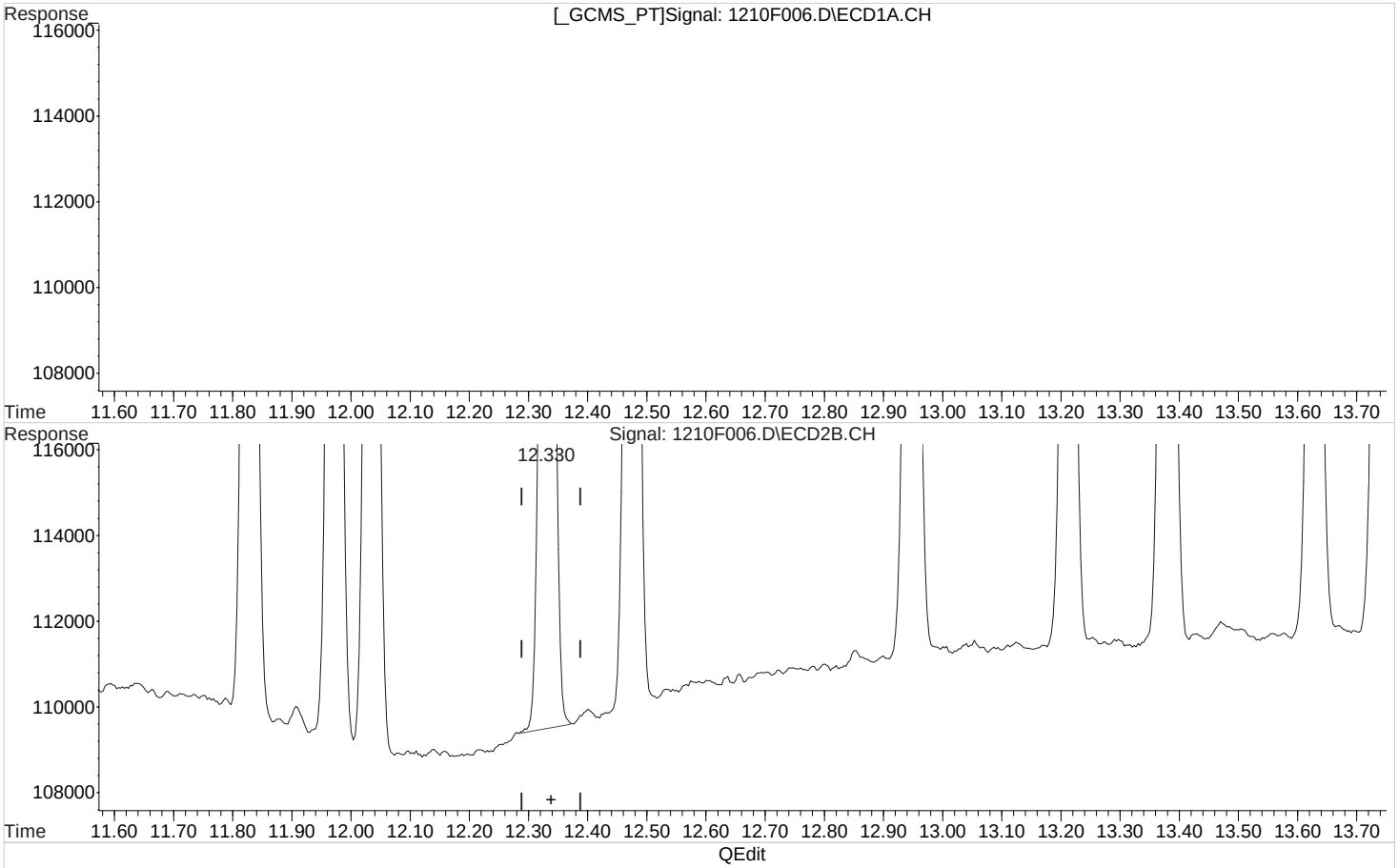
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(16) 4,4'-DDE

13.593min 2.067 ug/L

response 19253

Manual Integration:

After

Baseline/Shoulder

12/11/18

(16) 4,4'-DDE #2

12.330min 1.812 ug/L m

response 44286

(+) = Expected Retention Time

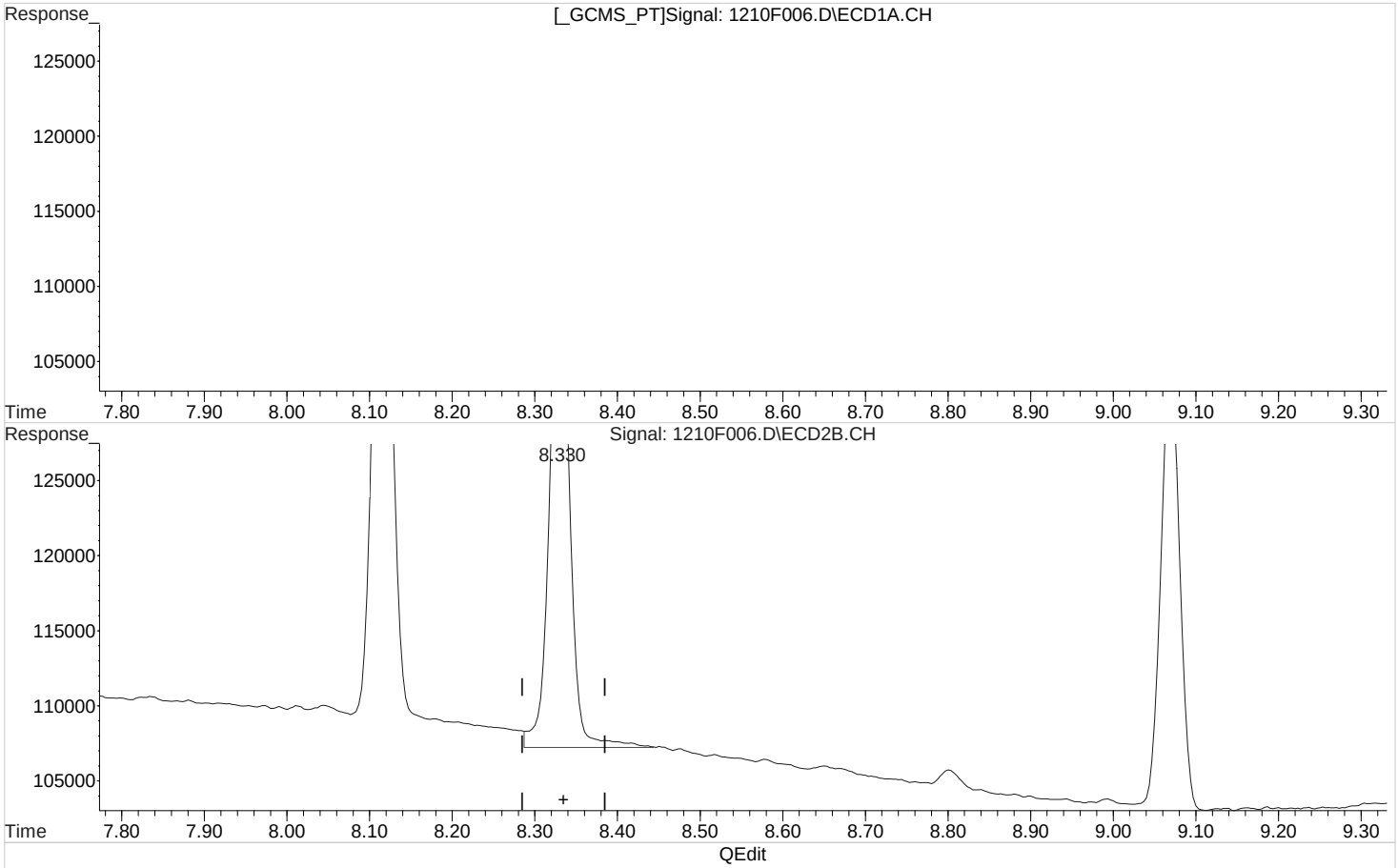
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
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Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



(3) alpha-BHC

9.586min 2.030 ug/L

response 18638

Manual Integration:

Before

12/11/18

(3) alpha-BHC #2

8.330min 2.041 ug/L

response 55990

(+) = Expected Retention Time

020602

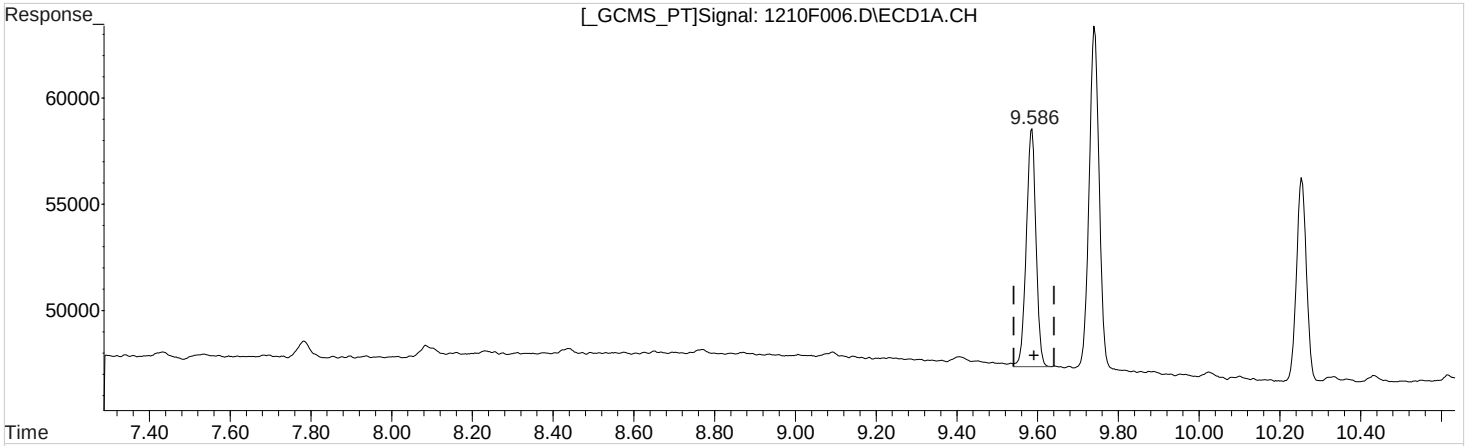
Quantitation Report (Qedit)

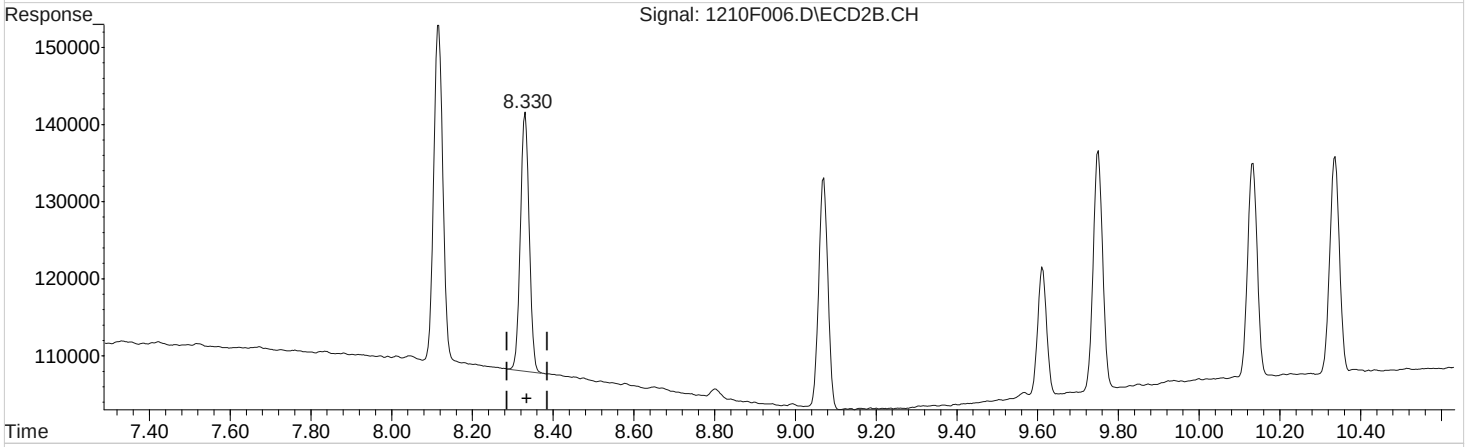
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(3) alpha-BHC

9.586min 2.030 ug/L

response 18638

Manual Integration:

After

Baseline/Shoulder

12/11/18

(3) alpha-BHC #2

8.330min 1.849 ug/L m

response 50734

(+) = Expected Retention Time

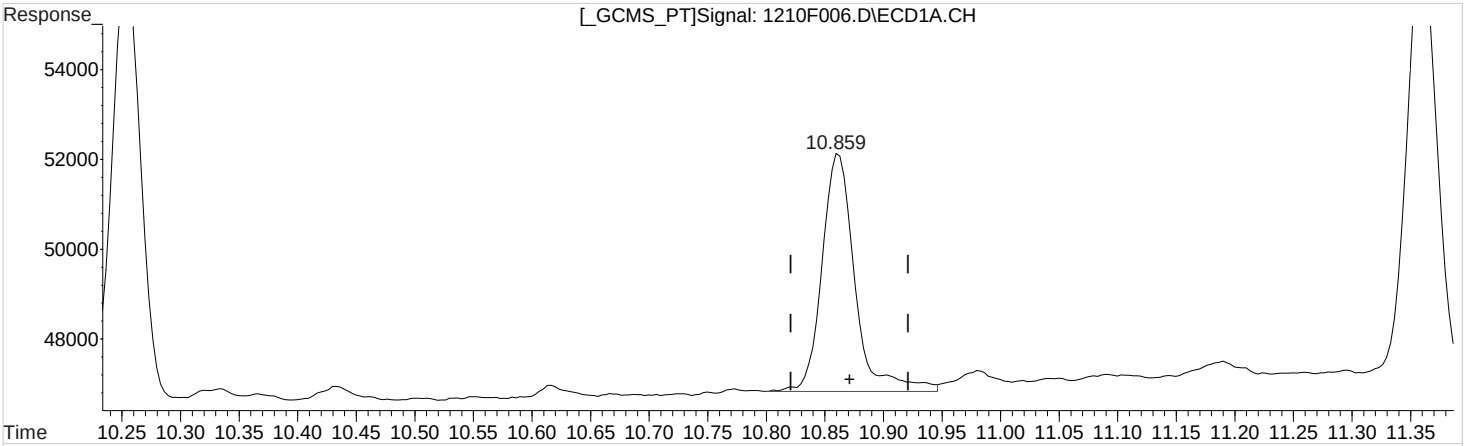
Quantitation Report (Qedit)

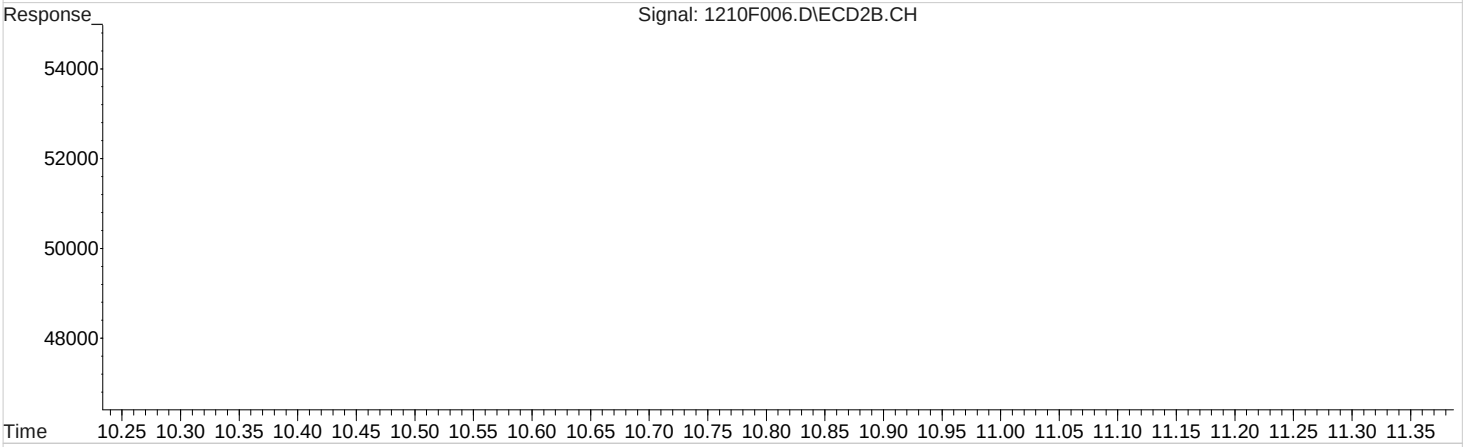
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.859min 2.302 ug/L

response 10376

(5) beta-BHC #2

9.610min 1.912 ug/L

response 25927

Manual Integration:

Before

12/11/18

(+) = Expected Retention Time

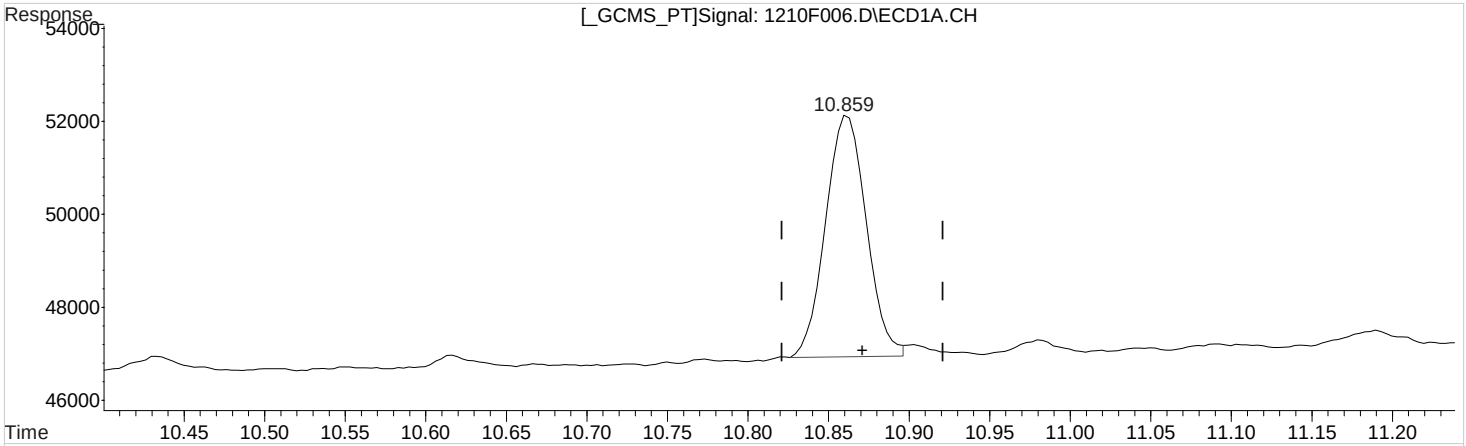
Quantitation Report (Qedit)

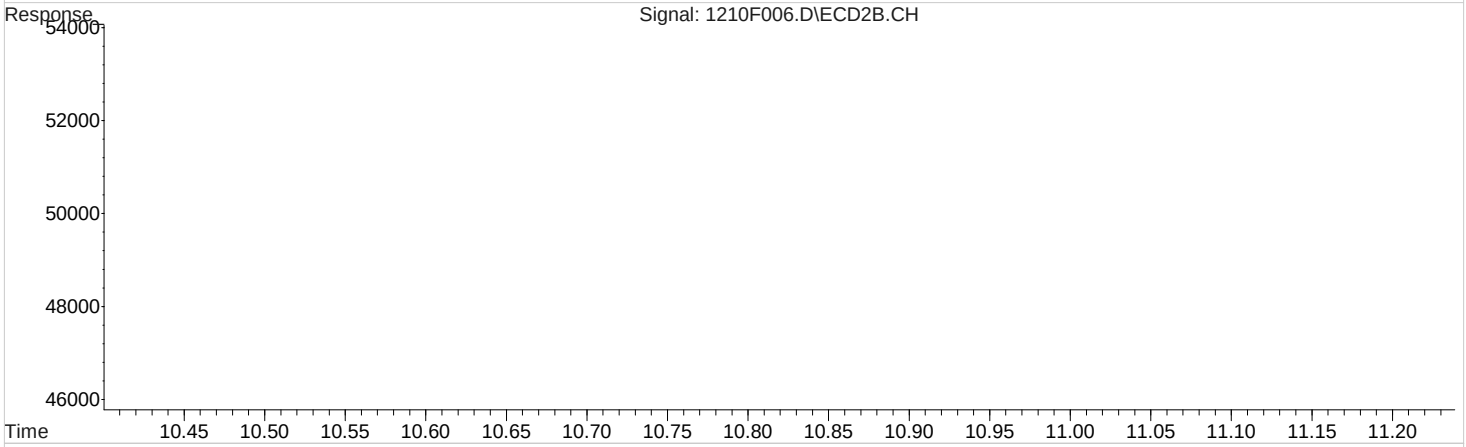
1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 11 14:28:14 2018
Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm





QEdit

(5) beta-BHC

10.859min 2.031 ug/L m

response 9156

Manual Integration:

After

Baseline/Shoulder

12/11/18

(5) beta-BHC #2

9.610min 1.912 ug/L

response 25927

(+) = Expected Retention Time

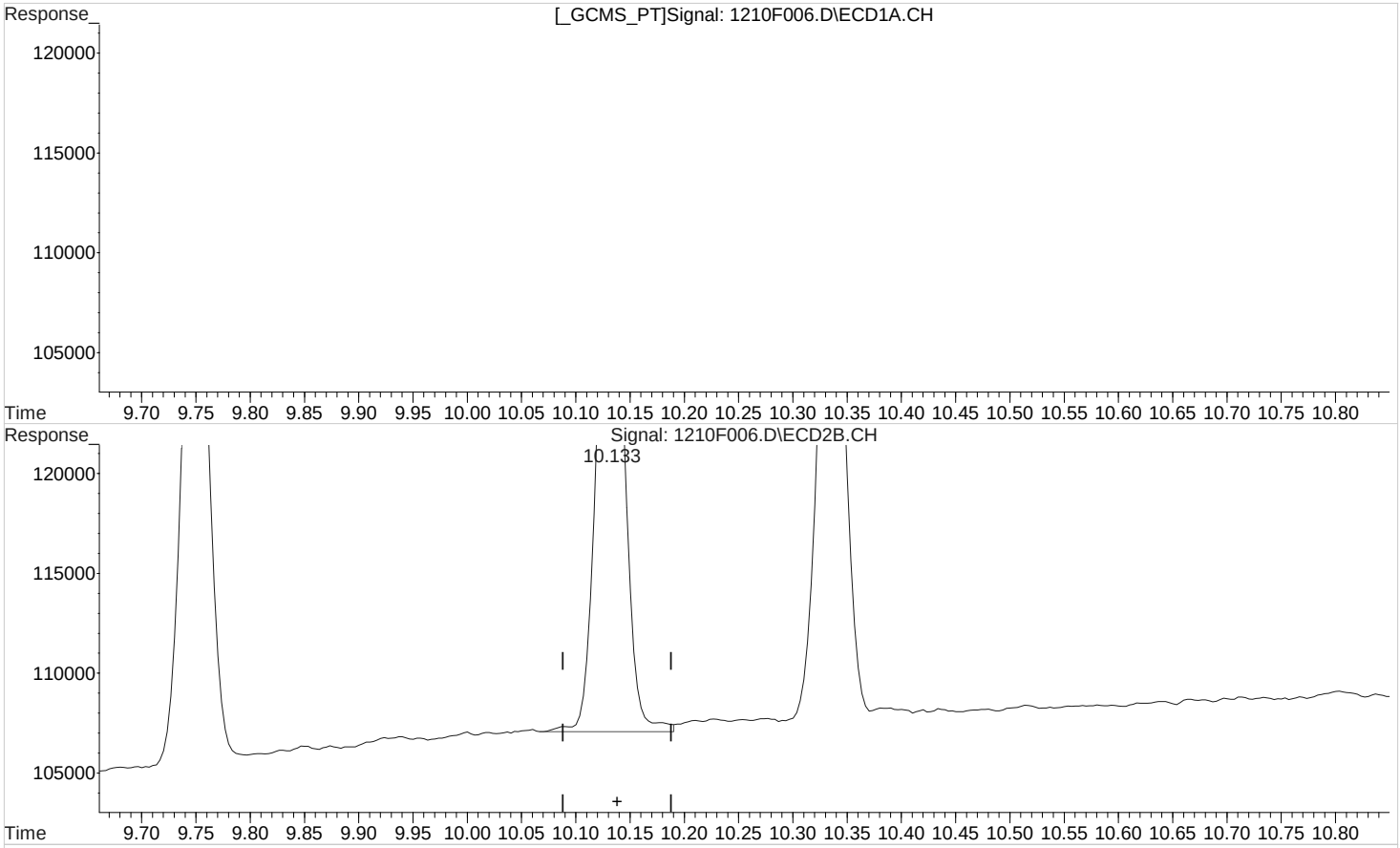
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
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QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(7) delta-BHC

11.359min 2.084 ug/L

response 16995

(7) delta-BHC #2

10.133min 1.970 ug/L

response 47597

Manual Integration:

Before

12/11/18

(+) = Expected Retention Time

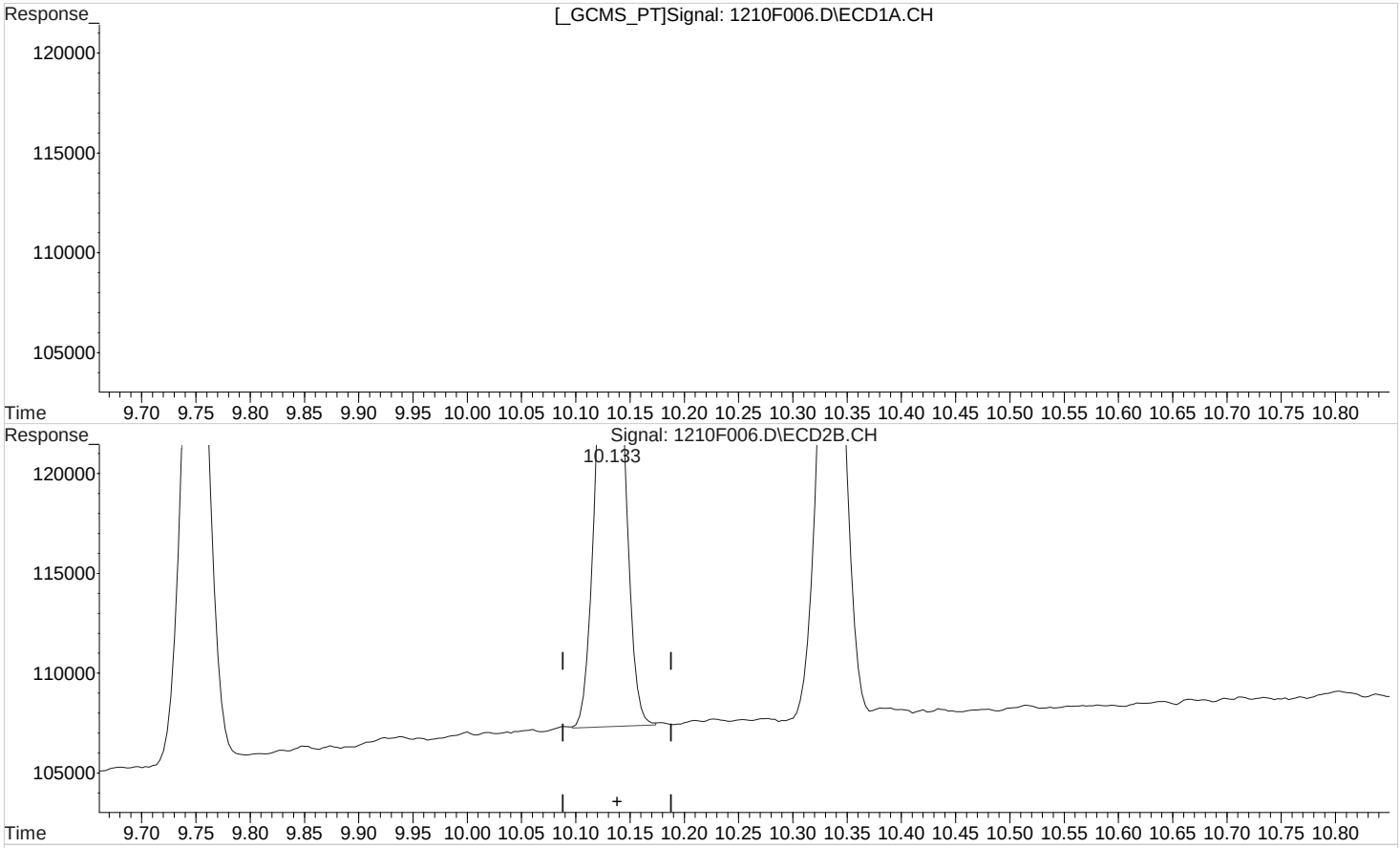
Quantitation Report (Qedit)

1st MC 12/11/18
2nd UA 12/11/18

Data File : J:\GC23\data\121018CAL\1210F006.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 10 Dec 2018 3:48 pm Operator: MC
Sample : 81 ICV 2PPB GCPS8-49A Inst : GC23
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
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Quant Results File: GC23-120718-8081.RES

Quant Method : J:\GC23\METHODS\GC23-120718-8081.M
Quant Title : CAL15743 XP-05-2-19
QLast Update : Tue Dec 11 13:12:42 2018
Response via : Initial Calibration
DataAcq Meth:PESTCLIP.M

Volume Inj. :
Signal #1 Phase : DB XLB Signal #2 Phase: DB-35MS
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm



QEdit

(7) delta-BHC

11.359min 2.084 ug/L

response 16995

Manual Integration:

After

Baseline/Shoulder

12/11/18

(7) delta-BHC #2

10.133min 1.890 ug/L m

response 45655

(+) = Expected Retention Time

020607

Preparation Information

Group ID:	KWG1806145	**Prep Method:**	~~METHOD~~ EPA 3511	**Prep Date:**	11/27/18 15:11
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1810644-030	TCLP Pesticides	8081B Pest OC TCLP	SOIL	100ml	5ml
K1811120-001	SL0084	8081B Pest OC TCLP	SOIL	100ml	5ml
K1811120-002	SL0064	8081B Pest OC TCLP	SOIL	100ml	5ml
K1811120-003	SL0065	8081B Pest OC TCLP	SOIL	100ml	5ml
K1811120-004	SL0022	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-1	Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-2	Duplicate Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-3	Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-4	Duplicate Matrix Spike	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-5	Lab Control Sample	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-6	Lab Control Sample	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-7	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-8	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml
KWG1806145-9	Method Blank	8081B Pest OC TCLP	SOIL	100ml	5ml

Lab Code	Parent Lab Code	Comments
KWG1806145-1	K1811120-001	
KWG1806145-2	K1811120-001	
KWG1806145-3	K1811120-001	
KWG1806145-4	K1811120-001	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810644-030	1704564					
K1811120-001	1704566					
K1811120-002	1704567					
K1811120-003	1704568					
K1811120-004	1704565					
KWG1806145-1	1704569					
KWG1806145-2	1704570					
KWG1806145-3	1704571					
KWG1806145-4	1704572					
KWG1806145-5	1704573					
KWG1806145-6	1704574					
KWG1806145-7	1704575					
KWG1806145-8	1704576					
KWG1806145-9	1704577					

Comments: 11/29 PT 8l, T/C

Started By: TAndrews Assisted By: ——— Training: Yes (No)

Completed By: TAndrews Assisted By: ——— Yes No

Reviewed By: [signature] Date: 11/29/18 Storage: Happy H1-10 I1-4

Chain of Custody

Relinquished By: [signature] Date: 11.28.18

Received By: [signature] Date: 12/11/18

Extracts Examined: (Yes) No

Preparation Information

Group ID: KWG1806145 **Prep Method:** METHOD **Prep Date:** 11/27/18 00:00
Department: Semivoa GC

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. mL	pH	Int. Vol.	Final Vol.	Surr. Added µL	Spike Added µL
1	K1810644-030	TCLP Pesticides	—		8081B Pest OC TCLP	SOIL	100	5		5	50	—
2	K1811120-001	SL0084	.15	/	8081B Pest OC TCLP	SOIL	100	6		5		—
3	K1811120-002	SL0064	.11	/	8081B Pest OC TCLP	SOIL	100	6		5		—
4	K1811120-003	SL0065	.11	/	8081B Pest OC TCLP	SOIL	100	6		5		—
5	K1811120-004	SL0022	.11	/	8081B Pest OC TCLP	SOIL	100	7		5		—
6	KWG1806145-1 K1811120-1	Matrix Spike 81	.15	/	8081B Pest OC TCLP	SOIL	100	6		5		50
7	KWG1806145-2	Duplicate Matrix Spike	.15	/	8081B Pest OC TCLP	SOIL	100	6		5		〃
8	KWG1806145-3	Matrix Spike T/C	.15	/	8081B Pest OC TCLP	SOIL	100	6		5		50/50
9	KWG1806145-4	Duplicate Matrix Spike	.15	/	8081B Pest OC TCLP	SOIL	100	6		5		〃
10	KWG1806145-5	Lab Control Sample 81	—		8081B Pest OC TCLP	SOIL	100	5		5		50
11	KWG1806145-6	Lab Control Sample T/C	—		8081B Pest OC TCLP	SOIL	100	5		5		50/50
12	KWG1806145-7	Method Blank Sol 1 LB	—		8081B Pest OC TCLP	SOIL	100	5		5		—
13	KWG1806145-8	Method Blank Sol 2 LB	—		8081B Pest OC TCLP	SOIL	100	5		5		—
14	KWG1806145-9	Method Blank	—		8081B Pest OC TCLP	SOIL	100	5	/	5	—	—

F Bottle I.d. is .01 11-27-18 TA

Prep Run: 327208

Comments: Sample 6145-8 had an intial PH of 3, neutralized using Sodium Hydroxide 11-27-18 TA

Surrogate ID: PCB7-526 0.5ppm xp 05-08-19

Spike ID: GCP58-42L 0.5ppm xp 11-30-18 / GCP58-48L 20ppm xp 5-19-19 / GCP58-43B 10ppm xp 2-16-19

Witness: 11/27/18

Started By: TAndrews Assisted By: —

Completed By: TAndrews Assisted By: —

Pest/PCB/PAH by 3511

Service Request # K1811120/0644 **Work Group # Pest:** KWG1806145
PCB: ——
PAH: ——

Solvent Lot # 196293

Extraction Start (time/date/initial): 1511 11.27.18 TB

Extraction Stop (time/date/initial): 1542 11.27.18 TB

NaCL Lot# 17H295208
Sulfate Lot # ——

Carbon Clean-up (Ext-Car)(time/date/initial): —— Carbon Lot # ——
Hexane Lot # ——

Florisil Clean-up (Ext-Flor)(time/date/initial): —— Florisil Lot # ——
Hexane Lot # ——

Sulfuric Acid Clean-up (3665) (time/date/initial): —— Acid Lot # ——

Other Clean-up: —— ☐ all samples ☐ some samples: ——

Pipette (2 mL) Lot # —— Pipette (1 mL) Lot # 20717645

Pest Vial: Yellow Vial Storage: Happy H1-10 I1-4
PCB Vial: —— Vial Storage: ——
PAH Vial: —— Vial Storage: ——

Archived Extract Storage: Smeagol

Additional Comments: ——

☑	Hold times met (if no, reason: ——)
☑	Prep date, time, method, department, product code correct in stealth
☑	Spike information and Q.C. correct (insufficient volume or mass recorded if no Q.C.)
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked - bottle numbers appended if required
☑	Names present for: started by, completed by, relinquished by, and witnessed by. Training circled.
☑	Extract storage recorded
☑	Additional prep sheet completely filled out (NA or line out blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

TCLP Extraction Worksheet

Service Request Number(s): K1811120, 1269

Method : TCLP 1311 ☒ SPLP 1312 ☐ If Autofluff sample is used please place an X in this box ☐ Wet Ext. ☐ MEP ☐ Prep Run# : 326859

Note: 1 Blank needed per every 20 extracts.

Sample Number	Teflon Extraction Vessel #	Sample Description (Solid, Liquid, Multiphasic)	Partical Size < 1cm ?	Solution Determination Weight (g)	Initial pH	Aliquot of 1N HCl (mL)	Final pH	Solution To Be Used	Extraction Weight (g)	Extraction Solution Volume (mL)	Post-Extraction pH
K1811120-1	34	S	Y	5.110	9.13	3.5	1.84	1	100.06	2000	5.48
2	36			5.070	9.13		1.91		100.16		5.85
3	31			5.086	9.18		1.89		100.19		5.68
4	39			5.307	9.42		5.56	2	100.06		5.66
K1811269-1	24			5.119	8.08		1.88	1	100.68		4.95
2	5			5.310	8.34		1.88		100.48		4.98
3	28			5.165	8.55		1.90		100.79		5.13
MB	40	S							—		—
MB	26							2	—		—

CCL 11/20

pH Meter Calibrated at pH4 & pH7 Today? ☒ 11/20/18 11/21/18 pH Meter I.D. K-pH-08 Balance I.D. 48,52 Date Balance Checked: 11/14/18, 11/20/18

Extraction Solution Prep date: 11/20/18, 11/6/18 Tumbler # 3 Thermometer# 664244 Hot Plate Temp °C(50°C): 50

Today's Solution pH: 4.95, 2.83 11/20/18 Extraction Solution I.D. MET-1626-C Filter Lot # 162105 HCl I.D. RE1-48_A

Extraction Started Time: 16:37 Date: 11/20/18 MET-0626-I Disposable Extraction Vessel Lot #: —

Extraction Finished Time: 8:40 Date: ~~11/20~~ 11/21/18

Tumbler Rotational Speed (28 - 32 rpm): 29.6

Room Temperature at the Beginning of Extraction (Temp. Range 21° C - 25°C): 21.92

Analyst: [signature] Date: 11/20/18 Reviewer: [signature] Date: 11/26/18

020611

DILUTION LOG

LAB ID	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	DATE	ANALYST	SOLVENT LOT	COMMENTS
~~K1810644-30~~	~~100 µl~~	~~500 µl~~	~~5X~~	12/11/18	MC	Hexane 196293	MC 12/11/18
K1810644-30	50 µl	1 ml	20X	12/11/18	MC	Hexane 196293	
|	5 µl	1 ml	200X	|	|	|	
|	50 µl	1 ml	20X	12/12/18	MC	|	
|	5 µl	1 ml	200X	|	|	|	

020612

Polychlorinated Biphenyls (PCBs)

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\0111F008.D
Lab ID: K1811120-005
RunType: SMPL
Matrix: WIPE

Date Acquired: 01/11/2019 14:37
Date Quantitated: 01/14/2019 09:09
Batch ID: KWG1900315
Analysis Method: 8082A
ListJoinID: LJ19874

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Aroclor 1260	24.6	NA	20	ICVOK

Primary Review: SA 1/14/19

Secondary Review: _____

Printed: 01/14/2019 09:27:26
u:\Stealth\Crystal.rpt\except2.rpt

020614

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\011119_R.B\0111F008.D
Lab ID: K1811120-005
RunType: SMPL
Matrix: WIPE

Date Acquired: 01/11/2019 14:37
Date Quantitated: 01/14/2019 09:09
Batch ID: KWG1900315
Analysis Method: 8082A
ListJoinID: LJ19874

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: SA 1/14/19

Secondary Review: _____

Printed: 01/14/2019 09:27:30
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Data File #1:	J:\GC27\DATA\011119.B\0111F008.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\011119_r.b\0111F008.D			**Vial:**	6
Acqu Date:	01/11/2019 14:37	**Quant Date:**	01/14/2019 09:09	**Dilution:**	10.0
Run Type:	SMPL	**ListJoinID:**	LJ19874	**Soln Conc. Units:**	ng/mL
Lab ID:	K1811120-005				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	IV	**Matrix:**	WIPE
Prod Code:	8082A PCB	**Collect Date:**	11/03/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1900315	**Prep Lot:**	KWG1900137	**Report Group:**	K1811120
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1708053	**Prep Date:**	01/03/2019		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\120718UL_F.M	**Calibration ID:**	CAL15912
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ19874
MB Ref:	J:\GC27\DATA\011119.B\0111F007.D	**Method ID:**	MJ1439
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.71 +0.00	18.15 +0.00	10630792	5550918	8.80	8.99			72 OK
				%Recovery =	70 OK	72 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1016 {1}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1016			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1016 {2}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1016 {3}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1016 {4}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1016 {5}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1221 {1}			0	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1221			0	0	0.0000	0.0000	8.0U	8.0U	8.0U
Aroclor 1221 {2}			0	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1221 {3}			0	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1232 {1}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1232 {2}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232 {3}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232 {4}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232 {5}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242 {1}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1242 {2}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242 {3}			0	0	0.0000	0.0000	4.0U	4.0U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\011119.B\0111F008.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\011119_r.b\0111F008.D			**Vial:**	6
Acqu Date:	01/11/2019 14:37	**Quant Date:**	01/14/2019 09:09	**Dilution:**	10.0
Run Type:	SMPL	**ListJoinID:**	LJ19874	**Soln Conc. Units:**	ng/mL
Lab ID:	K1811120-005				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/WIPE Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1242 {4}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242 {5}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {1}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1248 {2}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {3}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {4}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {5}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {1}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1254 {2}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {3}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {4}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {5}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1260 {1}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1260			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1260 {2}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1260 {3}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1260 {4}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1260 {5}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {1}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1262 {2}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {3}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {4}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {5}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268 {1}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1268 {2}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268 {3}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268 {4}			0d	0	0.0000	0.0000	4.0U	4.0U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1.000 g	**Dilution:**	10.0
Prep Final Vol:	8 ml	**Unit Factor:**	0.001
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F008.D
Report Date: 14-Jan-2019 09:09

ALS Environmental - Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\011119.b\0111F008.D
Sample #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\0111F008.D
Inj Date : 11-JAN-2019 14:37
Sample Info: K1811120-005 @ 10X
Misc Info :
Cal Date : 14-JAN-2019 08:52
Operator : SAA
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\011119.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\120718_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

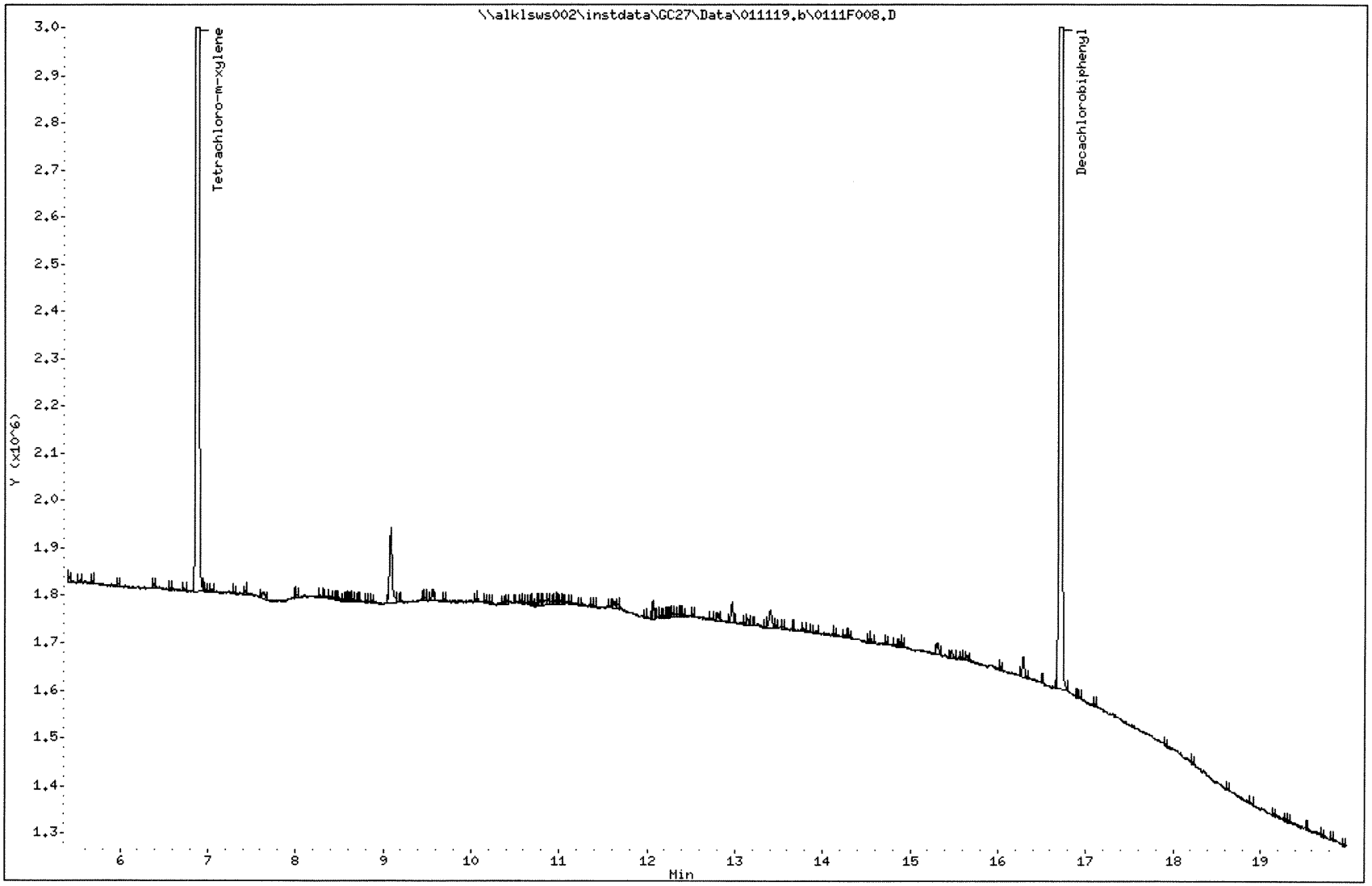
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.871	8.451	12413709	6244258	7.84	8.72		100.00(R)
Decachlorobiphenyl	16.711	18.148	10630792	5550918	8.80	8.99		100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F008.D
Date : 11-JAN-2019 14:37
Client ID:
Sample Info: K1811120-005 @ 10X

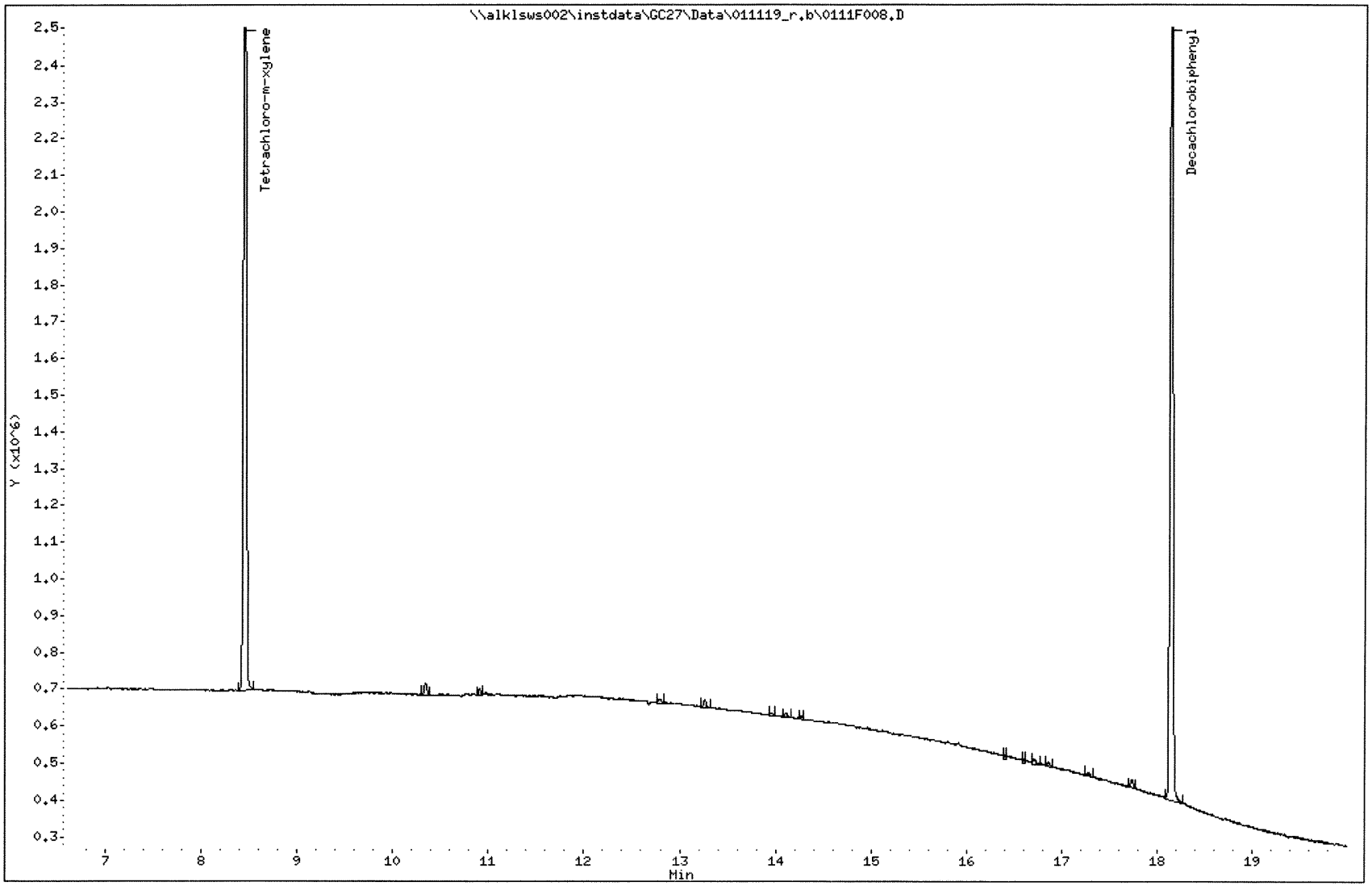
Instrument: GC27.i
Operator: SAA
Column phase: DB-35MS
Column diameter: 0.32



020619

Data File: \\alklsws002\instdata\GC27\Data\011119_r.b\0111F008.D
Date : 11-JAN-2019 14:37
Client ID:
Sample Info: K1811120-005 @ 10X

Instrument: GC27.i
Operator: SAA
Column phase: DB-XLB
Column diameter: 0.32



020620

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\0111F009.D
Lab ID: K1811120-006
RunType: SMPL
Matrix: WIPE

Date Acquired: 01/11/2019 15:09
Date Quantitated: 01/14/2019 09:09
Batch ID: KWG1900315
Analysis Method: 8082A
ListJoinID: LJ19874

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Aroclor 1260	24.6	NA	20	ICV OK

Primary Review: SA 1/14/19

Secondary Review: [signature]

Printed: 01/14/2019 09:27:34
u:\Stealth\Crystal.rpt\except2.rpt

020621

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\011119_R.B\0111F009.D
Lab ID: K1811120-006
RunType: SMPL
Matrix: WIPE

Date Acquired: 01/11/2019 15:09
Date Quantitated: 01/14/2019 09:09
Batch ID: KWG1900315
Analysis Method: 8082A
ListJoinID: LJ19874

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: SA 1/14/19

Secondary Review: _____

Printed: 01/14/2019 09:27:38
u:\Stealth\Crystal.rpt\except2.rpt

020622

Quantitation Report

Data File #1:	J:\GC27\DATA\011119.B\0111F009.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\011119_r.b\0111F009.D			**Vial:**	7
Acqu Date:	01/11/2019 15:09	**Quant Date:**	01/14/2019 09:09	**Dilution:**	10.0
Run Type:	SMPL	**ListJoinID:**	LJ19874	**Soln Conc. Units:**	ng/mL
Lab ID:	K1811120-006				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**	IV	**Matrix:**	WIPE
Prod Code:	8082A PCB	**Collect Date:**	11/03/2018	**Receive Date:**	11/13/2018

Analysis Lot:	KWG1900315	**Prep Lot:**	KWG1900137	**Report Group:**	K1811120
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1708054	**Prep Date:**	01/03/2019		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\120718UL_F.M	**Calibration ID:**	CAL15912
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ19874
MB Ref:	J:\GC27\DATA\011119.B\0111F007.D	**Method ID:**	MJ1439
		Quant based on Report List	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.71	18.15 +0.01	10921725	5611241	9.04	9.09			72 OK
				%Recovery =	72 OK	73 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1016 {1}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1016			0	0	0.0000	0.0000	8.0U	8.0U	8.0U
Aroclor 1016 {2}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1016 {3}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1016 {4}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1016 {5}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1221 {1}			0	0	0.0000	0.0000	16U	16U	
Aroclor 1221			0	0	0.0000	0.0000	16U	16U	16U
Aroclor 1221 {2}			0	0	0.0000	0.0000	16U	16U	
Aroclor 1221 {3}			0	0	0.0000	0.0000	16U	16U	
Aroclor 1232 {1}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1232			0	0	0.0000	0.0000	8.0U	8.0U	8.0U
Aroclor 1232 {2}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1232 {3}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1232 {4}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1232 {5}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1242 {1}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1242			0	0	0.0000	0.0000	8.0U	8.0U	8.0U
Aroclor 1242 {2}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1242 {3}			0d	0	0.0000	0.0000	8.0U	8.0U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\011119.B\0111F009.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\011119_r.b\0111F009.D			**Vial:**	7
Acqu Date:	01/11/2019 15:09	**Quant Date:**	01/14/2019 09:09	**Dilution:**	10.0
Run Type:	SMPL	**ListJoinID:**	LJ19874	**Soln Conc. Units:**	ng/mL
Lab ID:	K1811120-006				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/WIPE Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1242 {4}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1242 {5}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1248 {1}			0	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1248			0	0	0.0000	0.0000	8.0U	8.0U	8.0U
Aroclor 1248 {2}			0	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1248 {3}			0	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1248 {4}			0	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1248 {5}			0	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1254 {1}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1254			0	0	0.0000	0.0000	8.0U	8.0U	8.0U
Aroclor 1254 {2}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1254 {3}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1254 {4}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1254 {5}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1260 {1}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1260			0	0	0.0000	0.0000	8.0U	8.0U	8.0U
Aroclor 1260 {2}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1260 {3}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1260 {4}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1260 {5}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1262 {1}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1262			0	0	0.0000	0.0000	8.0U	8.0U	8.0U
Aroclor 1262 {2}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1262 {3}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1262 {4}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1262 {5}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1268 {1}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1268			0	0	0.0000	0.0000	8.0U	8.0U	8.0U
Aroclor 1268 {2}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1268 {3}			0d	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1268 {4}			0d	0	0.0000	0.0000	8.0U	8.0U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	0.500 g	**Dilution:**	10.0
Prep Final Vol:	8 ml	**Unit Factor:**	0.001
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F009.D
Report Date: 14-Jan-2019 09:09

ALS Environmental - Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\011119.b\0111F009.D
Sample #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\0111F009.D
Inj Date : 11-JAN-2019 15:09
Sample Info: K1811120-006 @ 10X
Misc Info :
Cal Date : 14-JAN-2019 08:52
Operator : SAA
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\011119.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\120718_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.873	8.450	13700595	6831488	8.65	9.54		100.00(R)
Decachlorobiphenyl	16.710	18.150	10921725	5611241	9.04	9.09		100.00(R)

QC Flag Legend

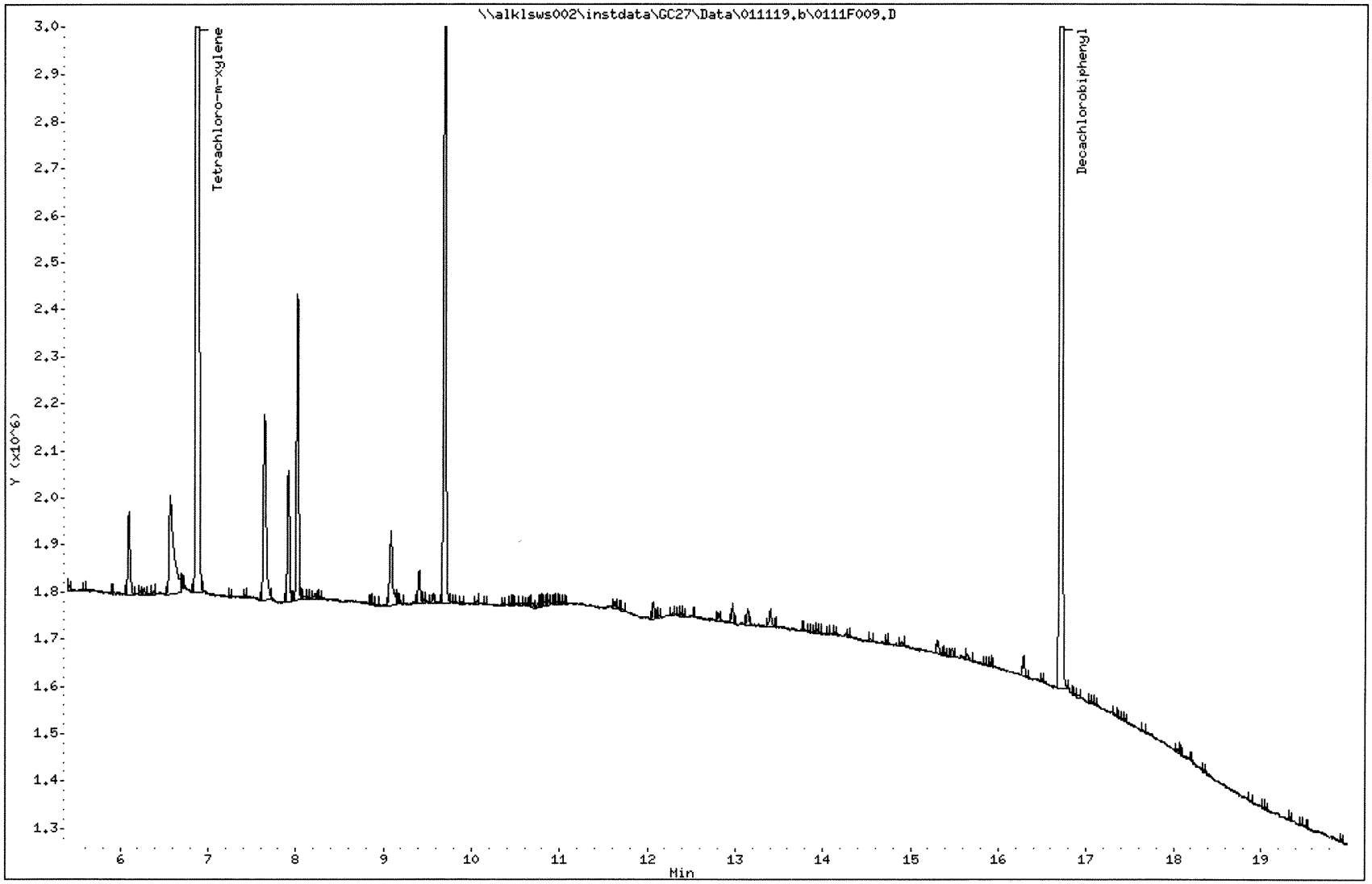
R - Spike/Surrogate failed recovery limits.

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F009.D
Date : 11-JAN-2019 15:09
Client ID:
Sample Info: K1811120-006 @ 10X

Column phase: DB-35MS

Instrument: GC27.i

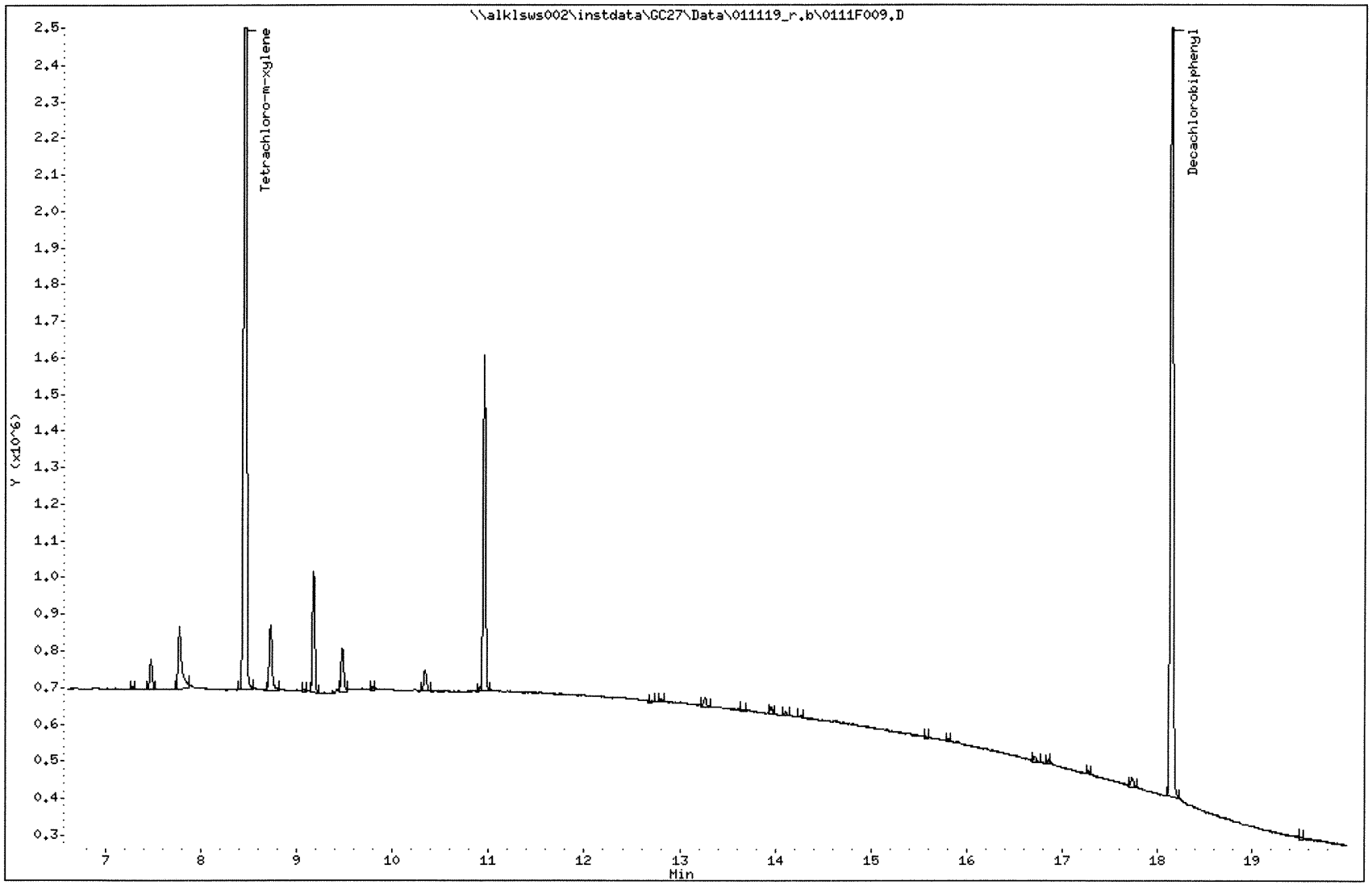
Operator: SAA
Column diameter: 0.32



020626

Data File: \\alklsws002\instdata\GC27\Data\011119_r.b\0111F009.D
Date : 11-JAN-2019 15:09
Client ID:
Sample Info: K1811120-006 @ 10X

Instrument: GC27.i
Operator: SAA
Column phase: DB-XLB
Column diameter: 0.32



020627

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\0111F007.D
Lab ID: KWG1900137-3
RunType: MB
Matrix: WIPE

Date Acquired: 01/11/2019 14:06
Date Quantitated: 01/14/2019 09:09
Batch ID: KWG1900315
Analysis Method: 8082A
MethodJoinID: MJ1439

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Aroclor 1260	24.6	NA	20	ICV OK

Primary Review: SAT 1/14/19

Secondary Review:

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\011119_R.B\0111F007.D
Lab ID: KWG1900137-3
RunType: MB
Matrix: WIPE

Date Acquired: 01/11/2019 14:06
Date Quantitated: 01/14/2019 09:09
Batch ID: KWG1900315
Analysis Method: 8082A
MethodJoinID: MJ1439

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: SA 1/14/19

Secondary Review: [signature]

020629

Quantitation Report

Data File #1:	J:\GC27\DATA\011119.B\0111F007.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\011119_r.b\0111F007.D			**Vial:**	5
Acqu Date:	01/11/2019 14:06	**Quant Date:**	01/14/2019 09:09	**Dilution:**	10.0
Run Type:	MB	**MethodJoinID:**	MJ1439	**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1900137-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	WIPE
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	01/04/2019

Analysis Lot:	KWG1900315	**Prep Lot:**	KWG1900137	**Report Group:**	
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
		Prep Date:	01/03/2019		
Prep Ref:	1708057				

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\120718UL_F.M	**Calibration ID:**	CAL15912
Title:			
MB Ref:		**Method ID:**	MJ1439
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	6.87 +0.00	8.45 +0.00	14508542	7063956	9.17	9.87			79 OK
				%Recovery =	73 OK	79 OK	Limits =	70-130	
Decachlorobiphenyl	16.71	18.15 +0.00	10789875	5658433	8.93	9.16			73 OK
				%Recovery =	71 OK	73 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	4.00U	4.00U	4.00U
Aroclor 1016 {1}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1016 {2}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1016 {3}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1016 {4}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1016 {5}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1221			0	0	0.0000	0.0000	8.0U	8.0U	8.0U
Aroclor 1221 {1}			0	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1221 {2}			0	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1221 {3}			0	0	0.0000	0.0000	8.0U	8.0U	
Aroclor 1232			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1232 {1}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232 {2}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232 {3}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232 {4}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232 {5}			0	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1242 {1}			0d	0	0.0000	0.0000	4.0U	4.0U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\011119.B\0111F007.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\011119_r.b\0111F007.D			**Vial:**	5
Acqu Date:	01/11/2019 14:06	**Quant Date:**	01/14/2019 09:09	**Dilution:**	10.0
Run Type:	MB	**MethodJoinID:**	MJ1439	**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1900137-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/WIPE Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1242 {2}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242 {3}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242 {4}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242 {5}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1248 {1}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {2}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {3}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {4}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {5}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1254 {1}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {2}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {3}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {4}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {5}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1260			0	0	0.0000	0.0000	4.00U	4.00U	4.00U
Aroclor 1260 {1}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1260 {2}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1260 {3}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1260 {4}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1260 {5}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1262 {1}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {2}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {3}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {4}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {5}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1268 {1}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268 {2}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268 {3}			0d	0	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268 {4}			0d	0	0.0000	0.0000	4.0U	4.0U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1.000 g	**Dilution:**	10.0
Prep Final Vol:	8 ml	**Unit Factor:**	0.001
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

020631

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F007.D
Report Date: 14-Jan-2019 09:09

ALS Environmental - Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\011119.b\0111F007.D
Sample #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\0111F007.D
Inj Date : 11-JAN-2019 14:06
Sample Info: KWG1810137-003 MB @ 10X
Misc Info :
Cal Date : 14-JAN-2019 08:52
Operator : SAA
Inst ID : GC27.i
Dil Factor : 1.000000

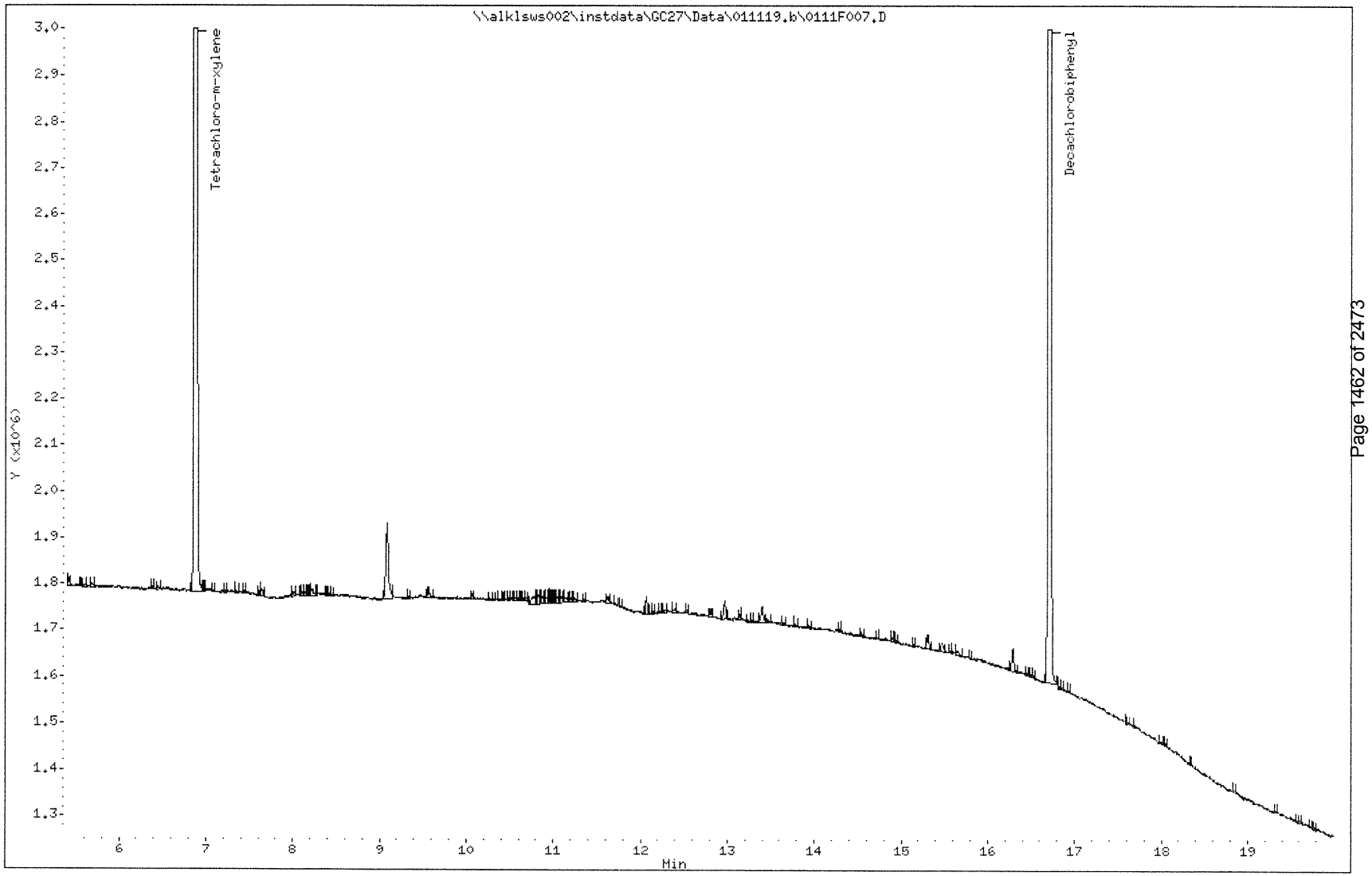
Method #1 : \\alklsws002\instdata\GC27\Data\011119.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\120718_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.873	8.450	14508542	7063956	9.16	9.87		100.00(R)
Decachlorobiphenyl	16.710	18.147	10789875	5658433	8.93	9.16		100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F007.D
Date : 11-JAN-2019 14:06
Client ID:
Instrument: GC27.i
Sample Info: KWG1810137-003 MB @ 10X
Operator: SAA
Column phase: DB-35MS
Column diameter: 0.32

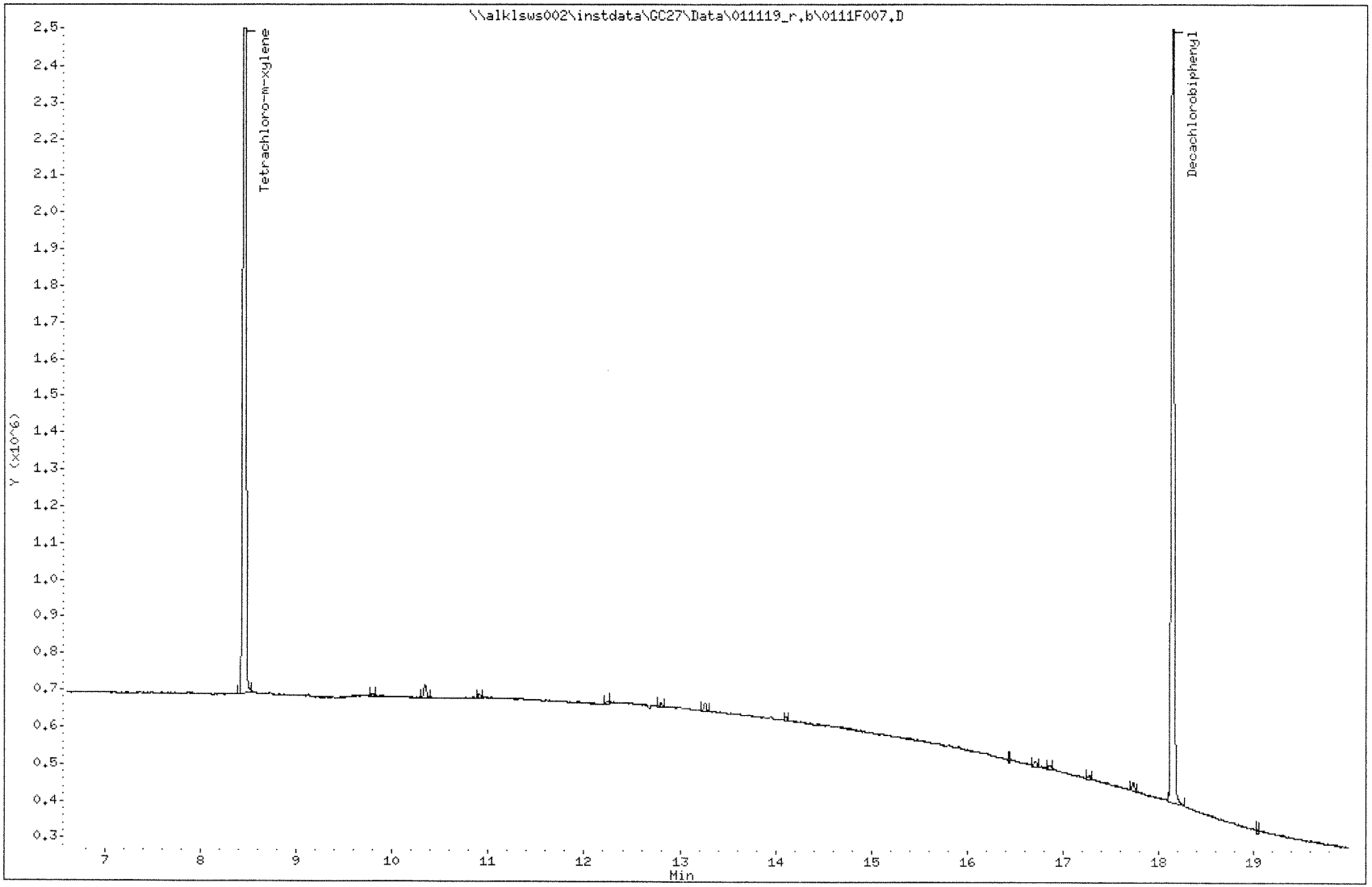


020633

Data File: \\alklsws002\instdata\GC27\Data\011119_r.b\0111F007.D
Date : 11-JAN-2019 14:06
Client ID:
Sample Info: KWG1810137-003 MB @ 10X

Instrument: GC27.i
Operator: SAA
Column diameter: 0.32

Column phase: DB-XLB



020634

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\0111F005.D
Lab ID: KWG1900137-1
RunType: LCS
Matrix: WIPE

Date Acquired: 01/11/2019 13:03
Date Quantitated: 01/14/2019 09:09
Batch ID: KWG1900315
Analysis Method: 8082A
MethodJoinID: MJ1439

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Aroclor 1260	24.6	NA	20	ICVCM
Surrogates	Tetrachloro-m-xylene	66	70	130	MC
	Decachlorobiphenyl	68	70	130	OL

Primary Review: SA 1/14/19

Secondary Review:

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\011119_R.B\0111F005.D
Lab ID: KWG1900137-1
RunType: LCS
Matrix: WIPE

Date Acquired: 01/11/2019 13:03
Date Quantitated: 01/14/2019 09:09
Batch ID: KWG1900315
Analysis Method: 8082A
MethodJoinID: MJ1439

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 1/14/19

Secondary Review:

Quantitation Report

Data File #1:	J:\GC27\DATA\011119.B\0111F005.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\011119_r.b\0111F005.D			**Vial:**	3
Acqu Date:	01/11/2019 13:03	**Quant Date:**	01/14/2019 09:09	**Dilution:**	10.0
Run Type:	LCS	**MethodJoinID:**	MJ1439	**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1900137-1				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	WIPE
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	01/04/2019

Analysis Lot:	KWG1900315	**Prep Lot:**	KWG1900137	**Report Group:**	
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1708055	**Prep Date:**	01/03/2019		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\120718UL_F.M	**Calibration ID:**	CAL15912
Title:			
MB Ref:	J:\GC27\DATA\011119.B\0111F007.D	**Method ID:**	MJ1439
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	6.87 +0.00	8.45 +0.00	13040070	6508992	8.24	9.09			73 OK
			%Recovery =		66 *	73 OK	Limits =	70-130	
Decachlorobiphenyl	16.71 0.00	18.15 +0.00	10309269	5464721	8.53	8.85			71 OK
			%Recovery =		68 *	71 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1016			0	0	91.99	97.34	7.36D	7.79D	7.36D
Aroclor 1016 {1}	7.95 +0.00	9.93 +0.00	2594866	1890255	96.40	91.39	7.71D	7.31D	
Aroclor 1016 {2}	9.19 +0.00	10.98 +0.00	2224677	2712681	87.13	92.28	6.97D	7.38D	
Aroclor 1016 {3}	9.61 +0.00	11.08 +0.00	4597099	2153970	86.16	103.35	6.89D	8.27D	
Aroclor 1016 {4}	9.63 +0.00	11.76 +0.00	7105979	1715784	99.14	107.28	7.93D	8.58D	
Aroclor 1016 {5}	10.07 +0.01	12.44 +0.00	2934308	1300276	91.10	92.39	7.29D	7.39D	
Aroclor 1221			0	0	0.0000	0.0000	8.0U	8.0U	8.0U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	8.0U	8.0U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	8.0U	8.0U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	8.0U	8.0U	
Aroclor 1232			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	4.0U	4.0U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC27\DATA\011119.B\0111F005.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\011119_r.b\0111F005.D			**Vial:**	3
Acqu Date:	01/11/2019 13:03	**Quant Date:**	01/14/2019 09:09	**Dilution:**	10.0
Run Type:	LCS	**MethodJoinID:**	MJ1439	**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1900137-1				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/WIPE Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1260			0	0	100.93	102.30	8.07D	8.18D	**8.07**D
Aroclor 1260 {1}	12.53 +0.00	13.55 0.00	7198180	1850665	90.50	103.49	7.24D	8.28D	
Aroclor 1260 {2}	13.08 +0.00	14.17 +0.00	3521425	3964654	92.79	93.16	7.42D	7.45D	
Aroclor 1260 {3}	13.46 +0.00	14.90 +0.00	6287138	1656294	107.59	114.13	8.61D	9.13D	
Aroclor 1260 {4}	13.93 0.00	15.17 +0.00	6434563	2958162	110.78	103.73	8.86D	8.30D	
Aroclor 1260 {5}	14.93 +0.00	16.20 +0.00	9520000	3873999	102.98	97.00	8.24D	7.76D	
Aroclor 1262			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	4.0U	4.0U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1.000 g	**Dilution:**	10.0
Prep Final Vol:	8 ml	**Unit Factor:**	0.001
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F005.D
Report Date: 14-Jan-2019 09:09

ALS Environmental - Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\011119.b\0111F005.D
Sample #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\0111F005.D
Inj Date : 11-JAN-2019 13:03
Sample Info: KWG1810137-001 LCS @ 10X
Misc Info :
Cal Date : 14-JAN-2019 08:52
Operator : SAA
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\011119.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\120718_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.872	8.449	13040070	6508992	8.24	9.09		100.00(R)
Aroclor 1016	7.946	9.929	2594866	1890255	96.4	91.4	80.00- 120.00	100.00
	9.186	10.976	2224677	2712681	87.1	92.3	71.66- 107.48	85.73
	9.606	11.076	4597099	2153970	86.2	103	147.03- 220.55	177.16
	9.629	11.759	7105979	1715784	99.1	107	227.91- 341.87	273.85
	10.069	12.436	2934308	1300276	91.1	92.4	95.21- 142.81	113.08
			Average of Peak Amounts =		92.0	97.2		
Aroclor 1260	12.529	13.552	7198180	1850665	90.5	103	80.00- 120.00	100.00
	13.076	14.166	3521425	3964654	92.8	93.2	37.70- 56.56	48.92
	13.459	14.896	6287138	1656294	108	114	56.87- 85.31	87.34
	13.926	15.169	6434563	2958162	111	104	58.64- 87.96	89.39
	14.926	16.202	9520000	3873999	103	97.0	88.58- 132.87	132.26
			Average of Peak Amounts =		101	102		
Decachlorobiphenyl	16.709	18.146	10309269	5464721	8.53	8.85		100.00(R)
Aroclors, Total	1.000	1.000	10483647	4815348	193	200		0.00

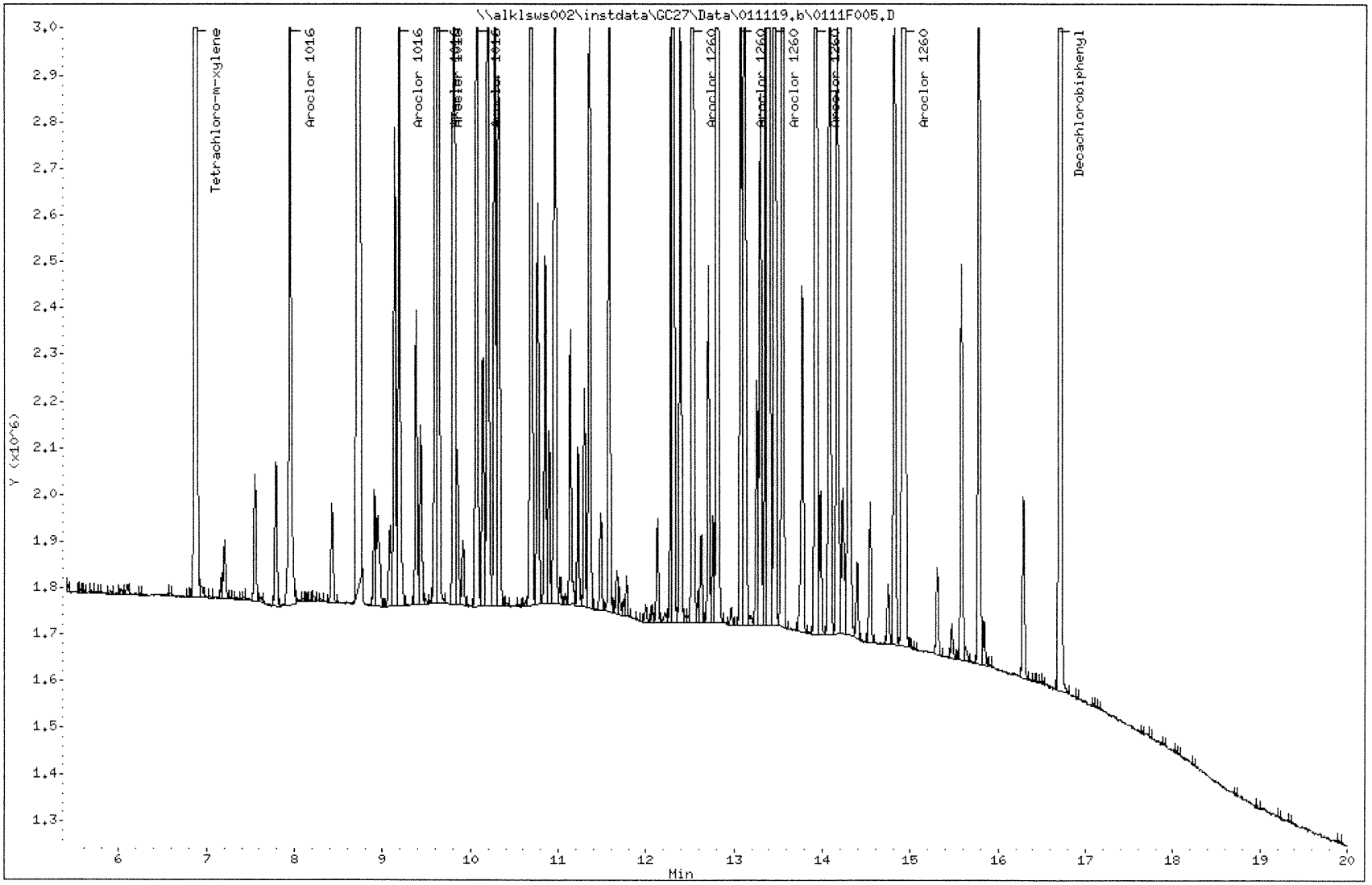
QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F005.D
Date : 11-JAN-2019 13:03
Client ID:
Sample Info: KWG1810137-001 LCS @ 10X

Instrument: GC27.i

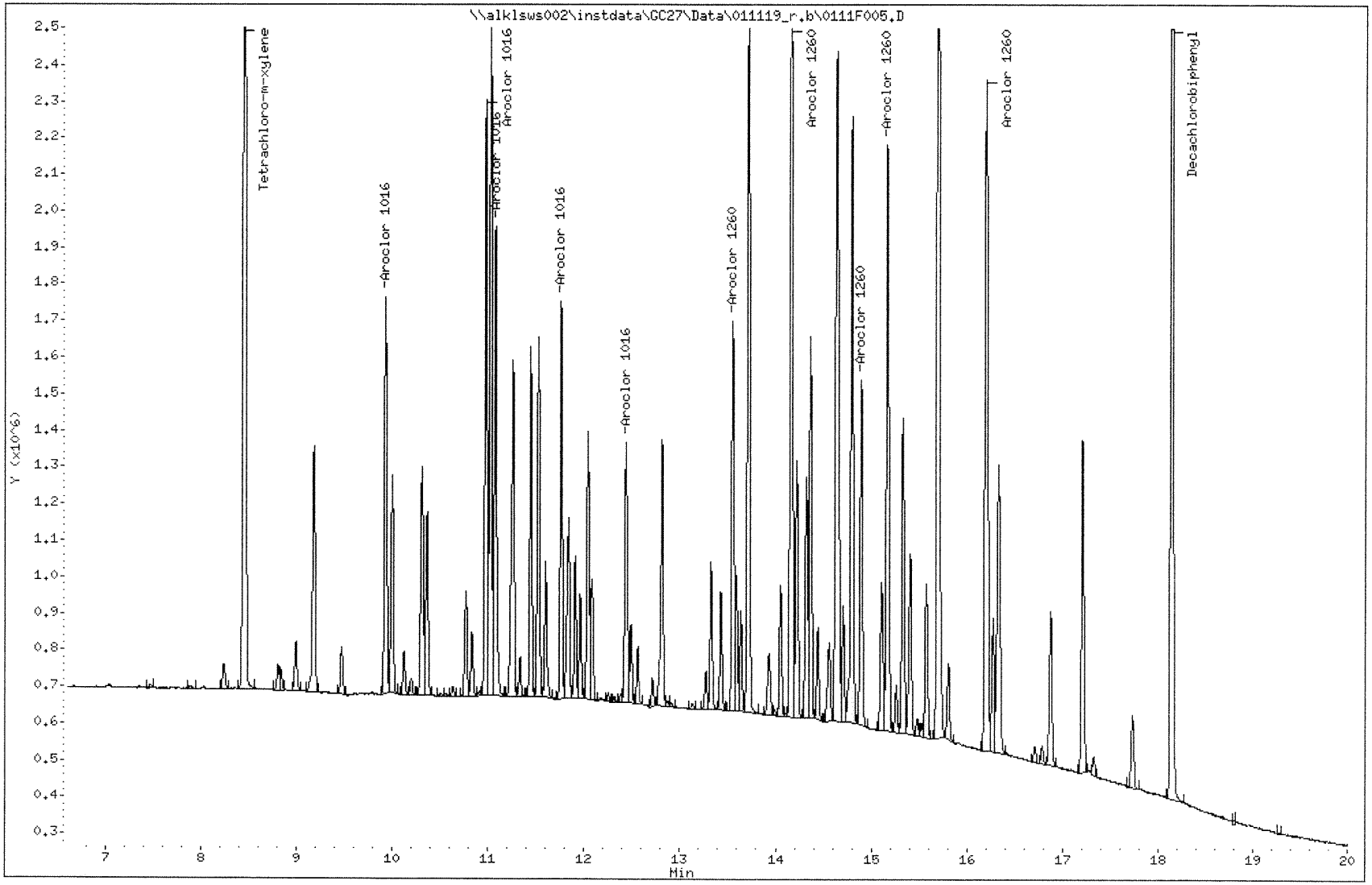
Operator: SAA
Column phase: DB-35MS
Column diameter: 0.32



020640

Data File: \\alklsws002\instdata\GC27\Data\011119_r.b\0111F005.D
Date : 11-JAN-2019 13:03
Client ID:
Sample Info: KWG1810137-001 LCS @ 10X

Instrument: GC27.i
Operator: SAA
Column phase: DB-XLB
Column diameter: 0.32



020641

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\0111F006.D
Lab ID: KWG1900137-2
RunType: DLCS
Matrix: WIPE

Date Acquired: 01/11/2019 13:34
Date Quantitated: 01/14/2019 09:09
Batch ID: KWG1900315
Analysis Method: 8082A
MethodJoinID: MJ1439

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Aroclor 1260	24.6	NA	20	KV OK

Primary Review: 1/14/19

Secondary Review:

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\011119_R.B\0111F006.D
Lab ID: KWG1900137-2
RunType: DLCS
Matrix: WIPE

Date Acquired: 01/11/2019 13:34
Date Quantitated: 01/14/2019 09:09
Batch ID: KWG1900315
Analysis Method: 8082A
MethodJoinID: MJ1439

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 1/14/19

Secondary Review:

Quantitation Report

Data File #1:	J:\GC27\DATA\011119.B\0111F006.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\011119_r.b\0111F006.D			**Vial:**	4
Acqu Date:	01/11/2019 13:34	**Quant Date:**	01/14/2019 09:09	**Dilution:**	10.0
Run Type:	DLCS	**MethodJoinID:**	MJ1439	**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1900137-2				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	WIPE
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	01/04/2019

Analysis Lot:	KWG1900315	**Prep Lot:**	KWG1900137	**Report Group:**	
Analysis Method:	8082A	**Prep Method:**	EPA 3541		
Prep Ref:	1708056	**Prep Date:**	01/03/2019		

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\120718UL_F.M	**Calibration ID:**	CAL15912
Title:			
MB Ref:	J:\GC27\DATA\011119.B\0111F007.D	**Method ID:**	MJ1439
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	6.87 +0.00	8.45 +0.00	14346839	7083347	9.06	9.89			79 OK
			%Recovery =		72 OK	79 OK	Limits =	70-130	
Decachlorobiphenyl	16.71 +0.00	18.15 +0.00	10619653	5575112	8.79	9.03			72 OK
			%Recovery =		70 OK	72 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/WIPE Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1016			0	0	98.99	103.47	7.92D	8.28D	**7.92**D
Aroclor 1016 {1}	7.95 +0.01	9.93 +0.00	2924974	2060387	108.66	99.61	8.69D	7.97D	
Aroclor 1016 {2}	9.18 +0.00	10.98 +0.00	2376983	2850136	93.10	96.95	7.45D	7.76D	
Aroclor 1016 {3}	9.60 +0.00	11.08 +0.00	4744510	2301719	88.92	110.44	7.11D	8.83D	
Aroclor 1016 {4}	9.63 +0.00	11.76 +0.00	7750154	1812172	108.13	113.31	8.65D	9.06D	
Aroclor 1016 {5}	10.07 +0.01	12.44 +0.00	3096831	1365444	96.14	97.02	7.69D	7.76D	
Aroclor 1221			0	0	0.0000	0.0000	8.0U	8.0U	8.0U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	8.0U	8.0U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	8.0U	8.0U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	8.0U	8.0U	
Aroclor 1232			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1232 {5}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	4.0U	4.0U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

020644

Data File #1:	J:\GC27\DATA\011119.B\0111F006.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\011119_r.b\0111F006.D			**Vial:**	4
Acqu Date:	01/11/2019 13:34	**Quant Date:**	01/14/2019 09:09	**Dilution:**	10.0
Run Type:	DLCS	**MethodJoinID:**	MJ1439	**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1900137-2				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/WIPE Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1260			0	0	104.43	104.57	8.35D	8.37D	**8.35D**
Aroclor 1260 {1}	12.53 +0.00	13.56 +0.00	7436290	1873205	93.50	104.76	7.48D	8.38D	
Aroclor 1260 {2}	13.08 +0.01	14.17 +0.00	3715329	4078730	97.90	95.84	7.83D	7.67D	
Aroclor 1260 {3}	13.46 +0.00	14.90 +0.00	6490457	1701072	111.07	117.21	8.89D	9.38D	
Aroclor 1260 {4}	13.93 +0.00	15.17 +0.00	6593266	3027507	113.51	106.16	9.08D	8.49D	
Aroclor 1260 {5}	14.92 +0.00	16.20 +0.00	9816198	3948567	106.18	98.87	8.49D	7.91D	
Aroclor 1262			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268			0	0	0.0000	0.0000	4.0U	4.0U	4.0U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	4.0U	4.0U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	4.0U	4.0U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1.000 g	**Dilution:**	10.0
Prep Final Vol:	8 ml	**Unit Factor:**	0.001
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

* Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F006.D
Report Date: 14-Jan-2019 09:09

ALS Environmental - Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\011119.b\0111F006.D
Sample #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\0111F006.D
Inj Date : 11-JAN-2019 13:34
Sample Info: KWG1810137-002 DLCS @ 10X
Misc Info :
Cal Date : 14-JAN-2019 08:52
Operator : SAA
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\011119.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\120718_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.871	8.451	14346839	7083347	9.06	9.89		100.00(R)
Aroclor 1016	7.948	9.928	2924974	2060387	109	99.6	80.00- 120.00	100.00
	9.184	10.975	2376983	2850136	93.1	97.0	71.66- 107.48	81.27
	9.604	11.075	4744510	2301719	88.9	110	147.03- 220.55	162.21
	9.628	11.761	7750154	1812172	108	113	227.91- 341.87	264.96
	10.068	12.438	3096831	1365444	96.1	97.0	95.21- 142.81	105.88
			Average of Peak Amounts =		99.0	103		
Aroclor 1260	12.528	13.555	7436290	1873205	93.5	105	80.00- 120.00	100.00
	13.078	14.165	3715329	4078730	97.9	95.8	37.70- 56.56	49.96
	13.458	14.895	6490457	1701072	111	117	56.87- 85.31	87.28
	13.928	15.171	6593266	3027507	114	106	58.64- 87.96	88.66
	14.924	16.201	9816198	3948567	106	98.9	88.58- 132.87	132.00
			Average of Peak Amounts =		104	105		
Decachlorobiphenyl	16.711	18.145	10619653	5575112	8.79	9.03		100.00(R)
Aroclors, Total	1.000	1.000	10988998	5003787	203	208		0.00

QC Flag Legend

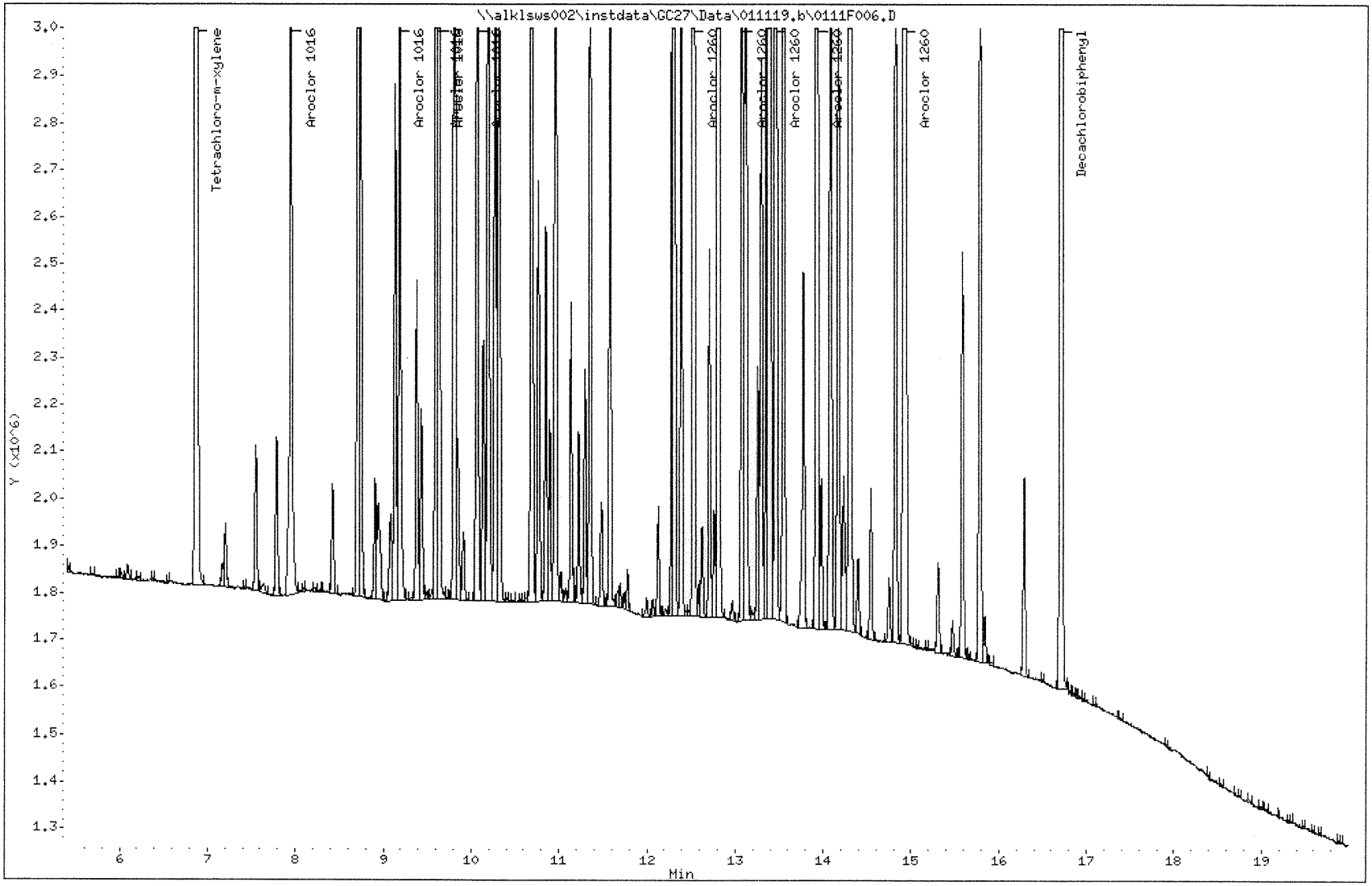
R - Spike/Surrogate failed recovery limits.

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F006.D
Date : 11-JAN-2019 13:34
Client ID:
Sample Info: KWG1810137-002 DLCS @ 10X

Instrument: GC27.i

Operator: SAA
Column diameter: 0.32

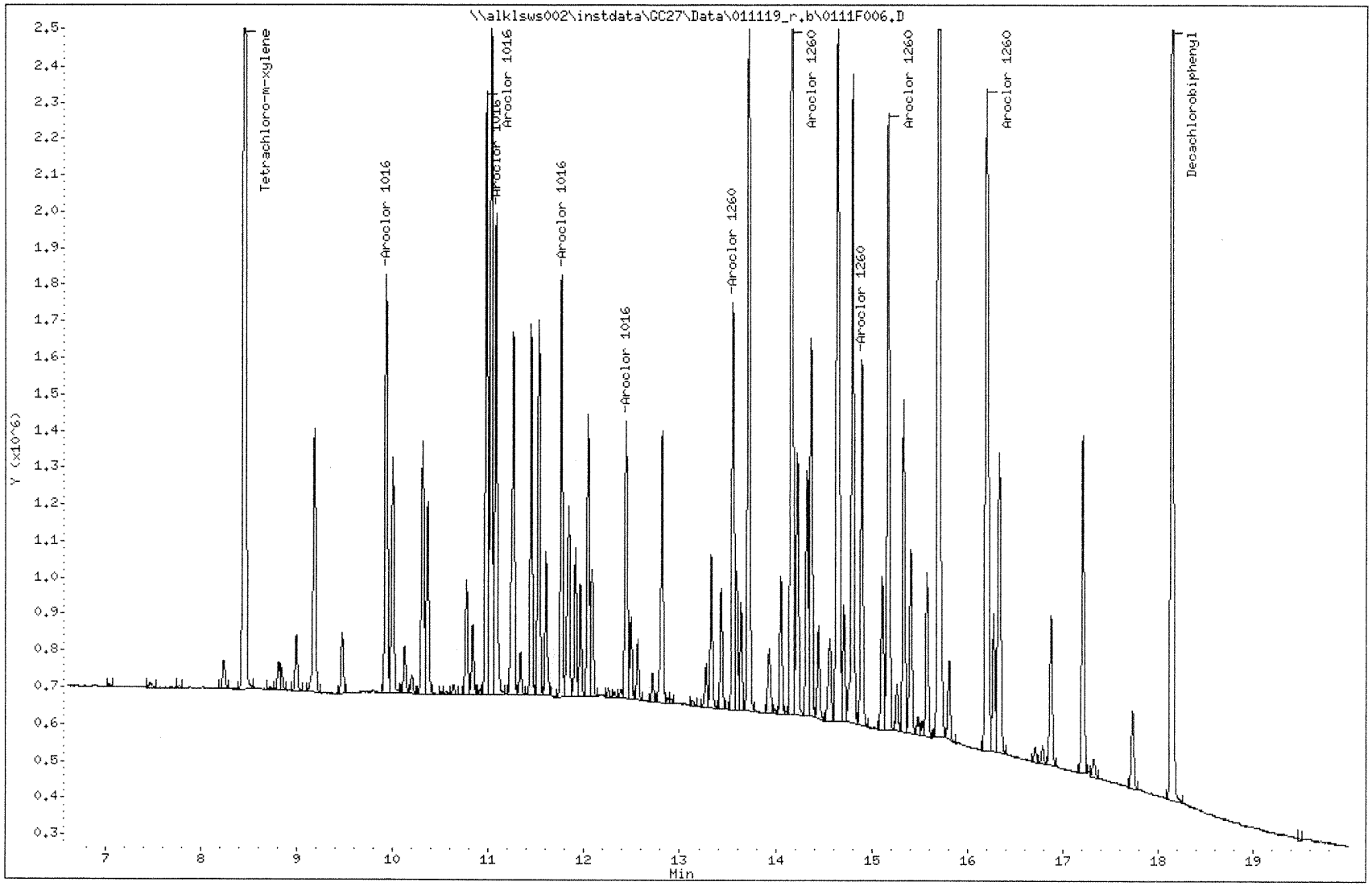
Column phase: DB-35MS



020647

Data File: \\alklsws002\instdata\GC27\Data\011119_r.b\0111F006.D
Date : 11-JAN-2019 13:34
Client ID:
Sample Info: KWG1810137-002 DLCS @ 10X

Instrument: GC27.i
Operator: SAA
Column phase: DB-XLB
Column diameter: 0.32



020648

Injection Log

Directory: j:\GC27\Data\011119

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	100	0111F001.D	1.	PRIMER		01/11/22019 10:59:2
2	100	0111F002.D	1.	PRIMER		01/11/22019 11:30:2
3	1	0111F003.D	1.	PCB7-61M 1660 @ 2-20 PPB		01/11/22019 12:01:2
4	2	0111F004.D	1.	IB		01/11/22019 12:32:3
5	3	0111F005.D	1.	~~KWG181~~0137-001 LCS @ 10X		01/11/22019 1:03:4
6	4	0111F006.D	1.	~~KWG1810~~137-002 DLCS @ 10X	Run: 621729	01/11/22019 1:34:5
7	5	0111F007.D	1.	~~KWG1810~~137-003 MB @ 10X		01/11/22019 2:06:0
8	6	0111F008.D	1.	K1811120-005 @ 10X		01/11/22019 2:37:3
9	7	0111F009.D	1.	K1811120-006 @ 10X	Cal: 15912	01/11/22019 3:09:1
10	1	0111F010.D	1.	PCB7-061M 1660 @ 2-20 PPB		01/11/22019 3:40:3
11	2	0111F011.D	1.	IB		01/11/22019 4:12:0

① KW6190137
EE 1/14/19

KW6190315

DILUTION LOG

LAB ID.	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	DATE	By:	Solvent Lot #	COMMENTS / **Ext. Date**
K1811120-005	100ml	1mL	10x	1/11/19	SA	Hexane 209602	
-006							
LCS							
DLCS							
MB							

020650

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\0111F003.D
Lab ID: KWG1900315-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 01/11/2019 12:01
Date Quantitated: 01/14/2019 09:09
Batch ID: KWG1900315
Analysis Method: 8082A
MethodJoinID: MJ1439

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Aroclor 1260	24.6	NA	20	ICV OK

Primary Review: SA 1/14/19

Secondary Review: [signature]

Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC27\DATA\011119_R.B\0111F003.D	**Date Acquired:**	01/11/2019 12:01
Lab ID:	KWG1900315-1	**Date Quantitated:**	01/14/2019 09:09
RunType:	CCV	**Batch ID:**	KWG1900315
Matrix:	NOT APPLICABLE	**Analysis Method:**	8082A
		MethodJoinID:	MJ1439

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SA 1/14/19

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\011119.B\0111F003.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\011119_r.b\0111F003.D			**Vial:**	1
Acqu Date:	01/11/2019 12:01	**Quant Date:**	01/14/2019 09:09	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1439	**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1900315-1				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	01/14/2019

Analysis Lot:	KWG1900315	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082A	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\120718UL_F.M	**Calibration ID:**	CAL15912
Title:			
MB Ref:		**Method ID:**	MJ1439
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	6.87	8.45	2568670	1338449	1.62	1.87			NA
			%Recovery =		NA	NA	**Limits =**	70-130	
Decachlorobiphenyl	16.71	18.14	1990558	1097220	1.65	1.78			NA
			%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1016			0	0	19.00	20.49			
Aroclor 1016 {1}	7.94	9.93	511899	409605	19.02	19.80			
Aroclor 1016 {2}	9.18	10.97	474486	574442	18.58	19.54			
Aroclor 1016 {3}	9.60	11.07	1079498	460270	20.23	22.08			
Aroclor 1016 {4}	9.63	11.76	1326811	336036	18.51	21.01			
Aroclor 1016 {5}	10.06	12.43	601457	281691	18.67	20.02			
Aroclor 1260			0	0	17.52	19.20			
Aroclor 1260 {1}	12.53	13.55	1407155	349143	17.69	19.53			
Aroclor 1260 {2}	13.07	14.16	669783	851838	17.65	20.02			
Aroclor 1260 {3}	13.46	14.89	996323	286161	17.05	19.72			
Aroclor 1260 {4}	13.93	15.17	1052776	542749	18.13	19.03			
Aroclor 1260 {5}	14.92	16.20	1578646	707122	17.08	17.71			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

* Result fails acceptance criteria
# Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

020653

Calibration Verification Report

Calibration ID: CAL15912
Method ID: MJ1439
DataFile: \\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\0111F003.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	20					19.00	20.00	-5
Aroclor 1260		MS	NA	20					17.52	20.00	-12
Tetrachloro-m-xylene		SURR	AverageRF	20		1.6E+6	1.3E+6	-19			
Aroclor 1016 {1}		MULTI	AverageRF	100		2.7E+4	2.6E+4	-5			
Aroclor 1016 {2}		MULTI	AverageRF	100		2.6E+4	2.4E+4	-7			
Aroclor 1016 {3}		MULTI	AverageRF	100		5.3E+4	5.4E+4	1			
Aroclor 1016 {4}		MULTI	AverageRF	100		7.2E+4	6.6E+4	-7			
Aroclor 1016 {5}		MULTI	AverageRF	100		3.2E+4	3.0E+4	-7			
Aroclor 1260 {1}		MULTI	AverageRF	100		8.0E+4	7.0E+4	-12			
Aroclor 1260 {2}		MULTI	AverageRF	100		3.8E+4	3.3E+4	-12			
Aroclor 1260 {3}		MULTI	AverageRF	100		5.8E+4	5.0E+4	-15			
Aroclor 1260 {4}		MULTI	AverageRF	100		5.8E+4	5.3E+4	-9			
Aroclor 1260 {5}		MULTI	AverageRF	100		9.2E+4	7.9E+4	-15			
Decachlorobiphenyl		SURR	AverageRF	20		1.2E+6	1.0E+6	-18			

Calibration Verification Report

Calibration ID: CAL15912
Method ID: MJ1439
DataFile: \\ALKLSWS002\INSTDATA\GC27\DATA\011119_R.B\0111F003.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	20					20.49	20.00	2
Aroclor 1260		MS	NA	20					19.20	20.00	-4
Tetrachloro-m-xylene		SURR	AverageRF	20		7.2E+5	6.7E+5	-7			
Aroclor 1016 {1}		MULTI	AverageRF	100		2.1E+4	2.0E+4	-1			
Aroclor 1016 {2}		MULTI	AverageRF	100		2.9E+4	2.9E+4	-2			
Aroclor 1016 {3}		MULTI	AverageRF	100		2.1E+4	2.3E+4	10			
Aroclor 1016 {4}		MULTI	AverageRF	100		1.6E+4	1.7E+4	5			
Aroclor 1016 {5}		MULTI	AverageRF	100		1.4E+4	1.4E+4	0			
Aroclor 1260 {1}		MULTI	AverageRF	100		1.8E+4	1.7E+4	-2			
Aroclor 1260 {2}		MULTI	AverageRF	100		4.3E+4	4.3E+4	0			
Aroclor 1260 {3}		MULTI	AverageRF	100		1.5E+4	1.4E+4	-1			
Aroclor 1260 {4}		MULTI	AverageRF	100		2.9E+4	2.7E+4	-5			
Aroclor 1260 {5}		MULTI	AverageRF	100		4.0E+4	3.5E+4	-11			
Decachlorobiphenyl		SURR	AverageRF	20		6.2E+5	5.5E+5	-11			

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F003.D
Report Date: 14-Jan-2019 09:09

ALS Environmental - Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\011119.b\0111F003.D
Sample #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\0111F003.D
Inj Date : 11-JAN-2019 12:01
Sample Info: PCB7-61M 1660 @ 2-20 PPB
Misc Info :
Cal Date : 14-JAN-2019 08:52
Operator : SAA
Inst ID : GC27.i
Dil Factor : 1.000000

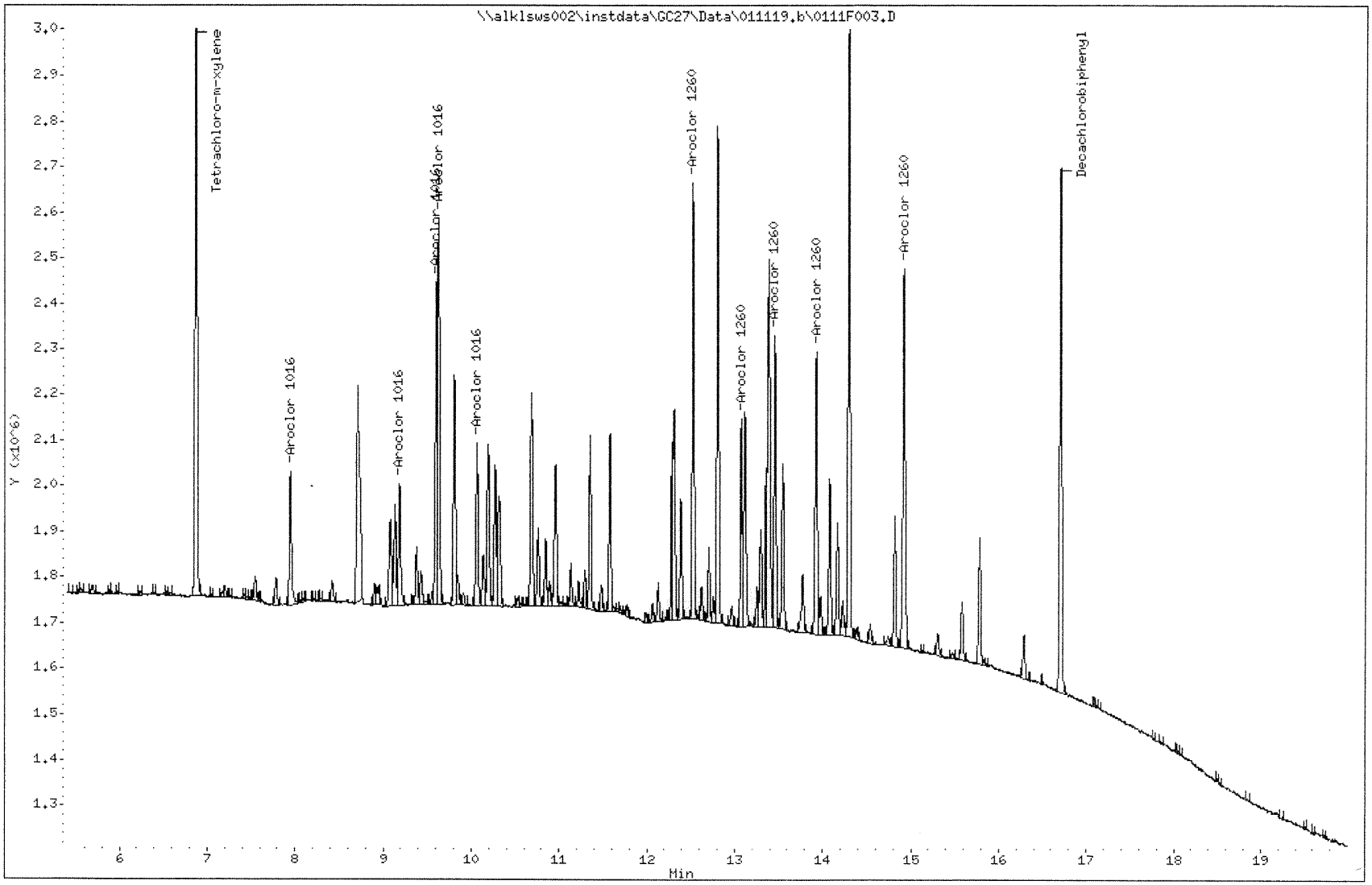
Method #1 : \\alklsws002\instdata\GC27\Data\011119.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\120718_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.870	8.447	2568670	1338449	1.62	1.87		100.00
Aroclor 1016	7.943	9.927	511899	409605	19.0	19.8	80.00- 120.00	100.00
	9.183	10.974	474486	574442	18.6	19.5	71.66- 107.48	92.69
	9.603	11.074	1079498	460270	20.2	22.1	147.03- 220.55	210.88
	9.627	11.757	1326811	336036	18.5	21.0	227.91- 341.87	259.19
	10.063	12.434	601457	281691	18.7	20.0	95.21- 142.81	117.50
			Average of Peak Amounts =		19.0	20.5		
Aroclor 1260	12.527	13.554	1407155	349143	17.7	19.5	80.00- 120.00	100.00
	13.073	14.164	669783	851838	17.6	20.0	37.70- 56.56	47.60
	13.457	14.894	996323	286161	17.0	19.7	56.87- 85.31	70.80
	13.927	15.167	1052776	542749	18.1	19.0	58.64- 87.96	74.82
	14.923	16.200	1578646	707122	17.1	17.7	88.58- 132.87	112.19
			Average of Peak Amounts =		17.5	19.2		
Decachlorobiphenyl	16.710	18.144	1990558	1097220	1.65	1.78		100.00

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F003.D
Date : 11-JAN-2019 12:01
Client ID:
Sample Info: PCB7-61M 1660 @ 2-20 PPB

Instrument: GC27.i

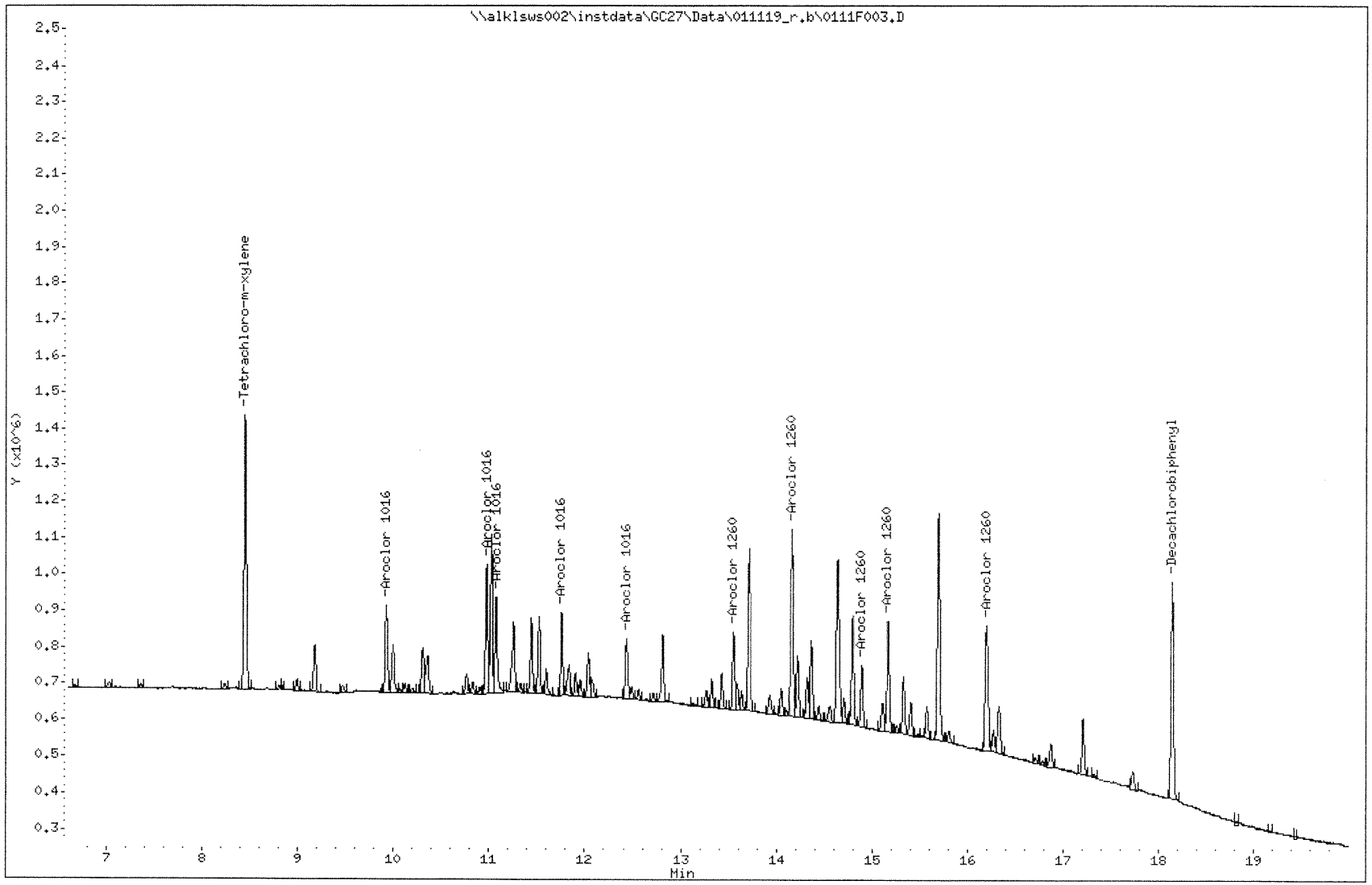
Operator: SAA
Column phase: DB-35MS
Column diameter: 0.32



020657

Data File: \\alklsws002\instdata\GC27\Data\011119_r.b\0111F003.D
Date : 11-JAN-2019 12:01
Client ID:
Sample Info: PCB7-61M 1660 @ 2-20 PPB

Instrument: GC27.i
Operator: SAA
Column phase: DB-XLB
Column diameter: 0.32



Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\0111F004.D
Lab ID: KWG1900315-2
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 01/11/2019 12:32
Date Quantitated: 01/14/2019 09:09
Batch ID: KWG1900315
Analysis Method: 8082A
MethodJoinID: MJ1439

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Aroclor 1260	24.6	NA	20	KUCM

Primary Review: ST 1/14/19

Secondary Review: [signature]

Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC27\DATA\011119_R.B\0111F004.D	**Date Acquired:**	01/11/2019 12:32
Lab ID:	KWG1900315-2	**Date Quantitated:**	01/14/2019 09:09
RunType:	IB	**Batch ID:**	KWG1900315
Matrix:	NOT APPLICABLE	**Analysis Method:**	8082A
		MethodJoinID:	MJ1439

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: ST 1/14/19

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\011119.B\0111F004.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\011119_r.b\0111F004.D			**Vial:**	2
Acqu Date:	01/11/2019 12:32	**Quant Date:**	01/14/2019 09:09	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1439	**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1900315-2				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	01/14/2019

Analysis Lot:	KWG1900315	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082A	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\120718UL_F.M	**Calibration ID:**	CAL15912
Title:			
MB Ref:		**Method ID:**	MJ1439
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	6.88		6471	0	0.0040	0.0000			NA
			%Recovery =		NA	NA	**Limits =**	70-130	
Decachlorobiphenyl	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0d	0	0.0000	0.0000			
Aroclor 1016 {2}			0d	0	0.0000	0.0000			
Aroclor 1016 {3}			0d	0	0.0000	0.0000			
Aroclor 1016 {4}			0d	0	0.0000	0.0000			
Aroclor 1016 {5}			0d	0	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0	0	0.0000	0.0000			
Aroclor 1221 {2}			0	0	0.0000	0.0000			
Aroclor 1221 {3}			0	0	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0	0	0.0000	0.0000			
Aroclor 1232 {2}			0	0	0.0000	0.0000			
Aroclor 1232 {3}			0	0	0.0000	0.0000			
Aroclor 1232 {4}			0	0	0.0000	0.0000			
Aroclor 1232 {5}			0	0	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

020661

Data File #1:	J:\GC27\DATA\011119.B\0111F004.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\011119_r.b\0111F004.D			**Vial:**	2
Acqu Date:	01/11/2019 12:32	**Quant Date:**	01/14/2019 09:09	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1439	**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1900315-2				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:**

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1242 {2}			0	0	0.0000	0.0000			
Aroclor 1242 {3}			0	0	0.0000	0.0000			
Aroclor 1242 {4}			0	0	0.0000	0.0000			
Aroclor 1242 {5}			0	0	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0d	0	0.0000	0.0000			
Aroclor 1248 {2}			0d	0	0.0000	0.0000			
Aroclor 1248 {3}			0d	0	0.0000	0.0000			
Aroclor 1248 {4}			0d	0	0.0000	0.0000			
Aroclor 1248 {5}			0d	0	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0d	0	0.0000	0.0000			
Aroclor 1254 {2}			0d	0	0.0000	0.0000			
Aroclor 1254 {3}			0d	0	0.0000	0.0000			
Aroclor 1254 {4}			0d	0	0.0000	0.0000			
Aroclor 1254 {5}			0d	0	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0d	0	0.0000	0.0000			
Aroclor 1260 {2}			0d	0	0.0000	0.0000			
Aroclor 1260 {3}			0d	0	0.0000	0.0000			
Aroclor 1260 {4}			0d	0	0.0000	0.0000			
Aroclor 1260 {5}			0d	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0d	0	0.0000	0.0000			
Aroclor 1262 {2}			0d	0	0.0000	0.0000			
Aroclor 1262 {3}			0d	0	0.0000	0.0000			
Aroclor 1262 {4}			0d	0	0.0000	0.0000			
Aroclor 1262 {5}			0d	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

020662

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F004.D
Report Date: 14-Jan-2019 09:09

ALS Environmental - Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\011119.b\0111F004.D
Sample #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\0111F004.D
Inj Date : 11-JAN-2019 12:32
Sample Info: IB
Misc Info :
Cal Date : 14-JAN-2019 08:52
Operator : SAA
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\011119.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\120718_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.877	0.000	6471	0	0.00409	0.000		100.00(R)

QC Flag Legend

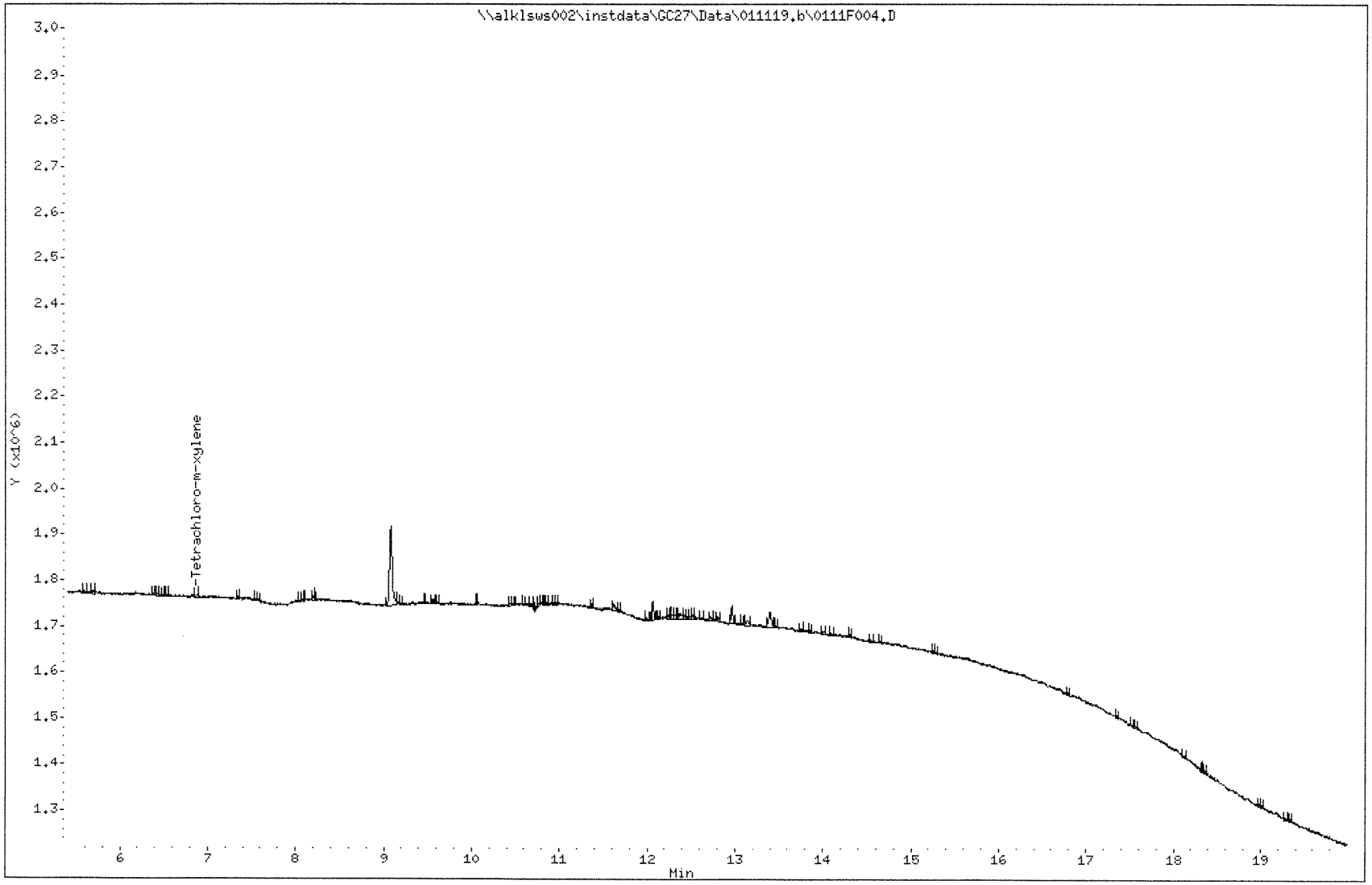
R - Spike/Surrogate failed recovery limits.

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F004.D
Date : 11-JAN-2019 12:32
Client ID:
Sample Info: IB

Instrument: GC27.i

Operator: SAA

Column phase: DB-35MS
Column diameter: 0.32

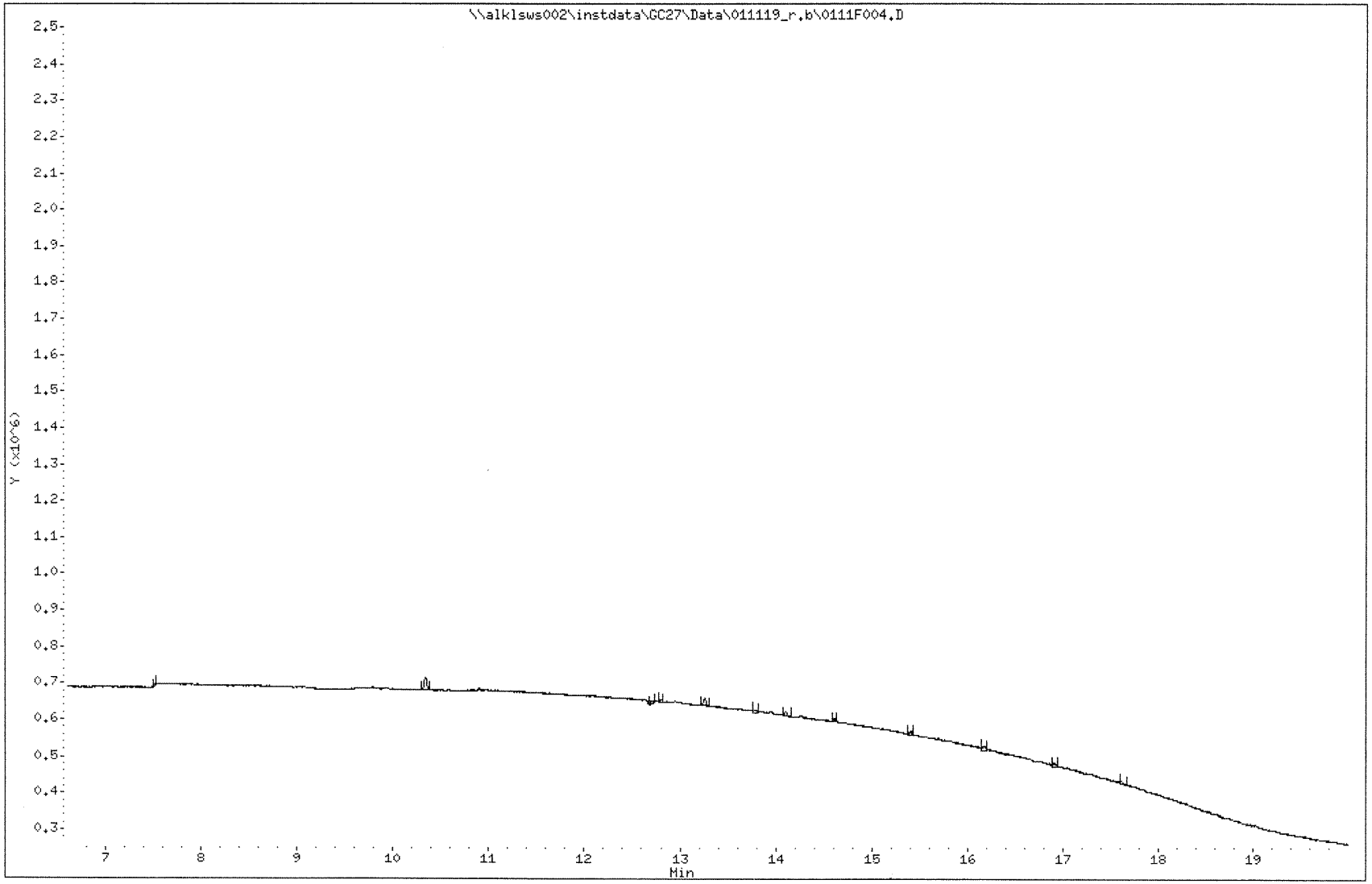


020664

Data File: \\alklsws002\instdata\GC27\Data\011119_r.b\0111F004.D
Date : 11-JAN-2019 12:32
Client ID:
Sample Info: IB

Instrument: GC27.i

Operator: SAA
Column phase: DB-XLB
Column diameter: 0.32



Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\0111F010.D
Lab ID: KWG1900315-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 01/11/2019 15:40
Date Quantitated: 01/14/2019 09:09
Batch ID: KWG1900315
Analysis Method: 8082A
MethodJoinID: MJ1439

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Aroclor 1260	24.6	NA	20	ICV OK

Primary Review: SA 1/14/19

Secondary Review: [signature]

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\011119_R.B\0111F010.D
Lab ID: KWG1900315-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 01/11/2019 15:40
Date Quantitated: 01/14/2019 09:09
Batch ID: KWG1900315
Analysis Method: 8082A
MethodJoinID: MJ1439

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

EE 1/14/19 SA

Primary Review: 1/14/19

Secondary Review:

Quantitation Report

Data File #1:	J:\GC27\DATA\011119.B\0111F010.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\011119_r.b\0111F010.D			**Vial:**	1
Acqu Date:	01/11/2019 15:40	**Quant Date:**	01/14/2019 09:09	**Dilution:**	1.0
Run Type:	CCV	**MethodJoinID:**	MJ1439	**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1900315-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	01/14/2019

Analysis Lot:	KWG1900315	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082A	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\120718UL_F.M	**Calibration ID:**	CAL15912
Title:			
MB Ref:		**Method ID:**	MJ1439
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2				Rpt
Tetrachloro-m-xylene	6.87	8.45	2608649	1331760	1.65	1.86				NA
			%Recovery =		NA	NA	**Limits =**	70-130		
Decachlorobiphenyl	16.71	18.15	2070950	1140092	1.71	1.85				NA
			%Recovery =		NA	NA	**Limits =**	70-130		

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1016			0	0	19.68	20.53			
Aroclor 1016 {1}	7.95	9.93	536747m	401661	19.94	19.42			
Aroclor 1016 {2}	9.19	10.98	480760m	582415	18.83	19.81			
Aroclor 1016 {3}	9.61	11.08	986501m	447745	18.49	21.48			
Aroclor 1016 {4}	9.63	11.76	1529149m	339644	21.34	21.24			
Aroclor 1016 {5}	10.07	12.44	638789m	291554	19.83	20.72			
Aroclor 1260			0	0	18.38	19.41			
Aroclor 1260 {1}	12.53	13.56	1487968m	336853	18.71	18.84			
Aroclor 1260 {2}	13.08	14.17	701271m	921231	18.48	21.65			
Aroclor 1260 {3}	13.46	14.90	1057775m	287964	18.10	19.84			
Aroclor 1260 {4}	13.93	15.17	1090640m	543065	18.78	19.04			
Aroclor 1260 {5}	14.92	16.20	1647496m	705240	17.82	17.66			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

020668

Calibration Verification Report

Calibration ID: CAL15912
Method ID: MJ1439
DataFile: \\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\0111F010.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	20					19.68	20.00	-2
Aroclor 1260		MS	NA	20					18.38	20.00	-8
Tetrachloro-m-xylene		SURR	AverageRF	20		1.6E+6	1.3E+6	-18			
Aroclor 1016 {1}		MULTI	AverageRF	100		2.7E+4	2.7E+4	0			
Aroclor 1016 {2}		MULTI	AverageRF	100		2.6E+4	2.4E+4	-6			
Aroclor 1016 {3}		MULTI	AverageRF	100		5.3E+4	4.9E+4	-8			
Aroclor 1016 {4}		MULTI	AverageRF	100		7.2E+4	7.6E+4	7			
Aroclor 1016 {5}		MULTI	AverageRF	100		3.2E+4	3.2E+4	-1			
Aroclor 1260 {1}		MULTI	AverageRF	100		8.0E+4	7.4E+4	-6			
Aroclor 1260 {2}		MULTI	AverageRF	100		3.8E+4	3.5E+4	-8			
Aroclor 1260 {3}		MULTI	AverageRF	100		5.8E+4	5.3E+4	-9			
Aroclor 1260 {4}		MULTI	AverageRF	100		5.8E+4	5.5E+4	-6			
Aroclor 1260 {5}		MULTI	AverageRF	100		9.2E+4	8.2E+4	-11			
Decachlorobiphenyl		SURR	AverageRF	20		1.2E+6	1.0E+6	-14			

Calibration Verification Report

Calibration ID: CAL15912
Method ID: MJ1439
DataFile: \\ALKLSWS002\INSTDATA\GC27\DATA\011119_R.B\0111F010.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	20					20.53	20.00	3
Aroclor 1260		MS	NA	20					19.41	20.00	-3
Tetrachloro-m-xylene		SURR	AverageRF	20		7.2E+5	6.7E+5	-7			
Aroclor 1016 {1}		MULTI	AverageRF	100		2.1E+4	2.0E+4	-3			
Aroclor 1016 {2}		MULTI	AverageRF	100		2.9E+4	2.9E+4	-1			
Aroclor 1016 {3}		MULTI	AverageRF	100		2.1E+4	2.2E+4	7			
Aroclor 1016 {4}		MULTI	AverageRF	100		1.6E+4	1.7E+4	6			
Aroclor 1016 {5}		MULTI	AverageRF	100		1.4E+4	1.5E+4	4			
Aroclor 1260 {1}		MULTI	AverageRF	100		1.8E+4	1.7E+4	-6			
Aroclor 1260 {2}		MULTI	AverageRF	100		4.3E+4	4.6E+4	8			
Aroclor 1260 {3}		MULTI	AverageRF	100		1.5E+4	1.4E+4	-1			
Aroclor 1260 {4}		MULTI	AverageRF	100		2.9E+4	2.7E+4	-5			
Aroclor 1260 {5}		MULTI	AverageRF	100		4.0E+4	3.5E+4	-12			
Decachlorobiphenyl		SURR	AverageRF	20		6.2E+5	5.7E+5	-8			

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F010.D
Report Date: 14-Jan-2019 09:09

ALS Environmental - Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\011119.b\0111F010.D
Sample #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\0111F010.D
Inj Date : 11-JAN-2019 15:40
Sample Info: PCB7-061M 1660 @ 2-20 PPB
Misc Info :
Cal Date : 14-JAN-2019 08:52
Operator : SAA
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\011119.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\120718_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

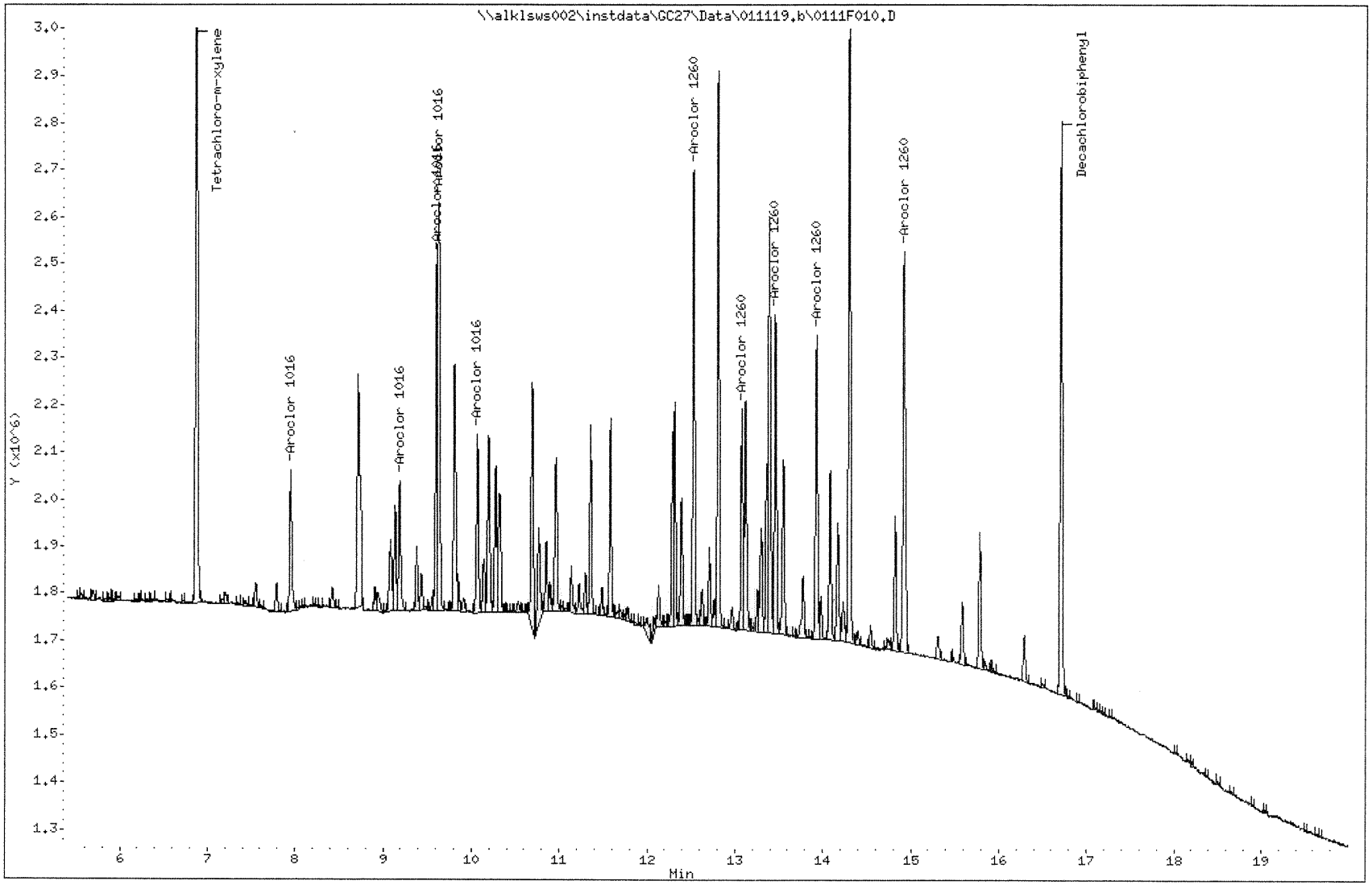
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.874	8.454	2608649	1331760	1.65	1.86		100.00
Aroclor 1016	7.947	9.931	536747	401661	19.9	19.4	80.00- 120.00	100.00(M)
	9.187	10.977	480760	582415	18.8	19.8	71.66- 107.48	89.57(M)
	9.607	11.077	986501	447745	18.5	21.5	147.03- 220.55	183.79(M)
	9.631	11.761	1529149	339644	21.3	21.2	227.91- 341.87	284.89(M)
	10.067	12.437	638789	291554	19.8	20.7	95.21- 142.81	119.01(M)
			Average of Peak Amounts =		19.7	20.5		
Aroclor 1260	12.531	13.557	1487968	336853	18.7	18.8	80.00- 120.00	100.00(M)
	13.077	14.167	701271	921231	18.5	21.6	37.70- 56.56	47.13(M)
	13.461	14.897	1057775	287964	18.1	19.8	56.87- 85.31	71.09(M)
	13.931	15.174	1090640	543065	18.8	19.0	58.64- 87.96	73.30(M)
	14.924	16.204	1647496	705240	17.8	17.7	88.58- 132.87	110.72(M)
			Average of Peak Amounts =		18.4	19.4		
Decachlorobiphenyl	16.714	18.147	2070950	1140092	1.71	1.85		100.00

QC Flag Legend

M - Compound response manually integrated.

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F010.D
Date : 11-JAN-2019 15:40
Client ID:
Sample Info: PCB7-061M 1660 @ 2-20 PPB

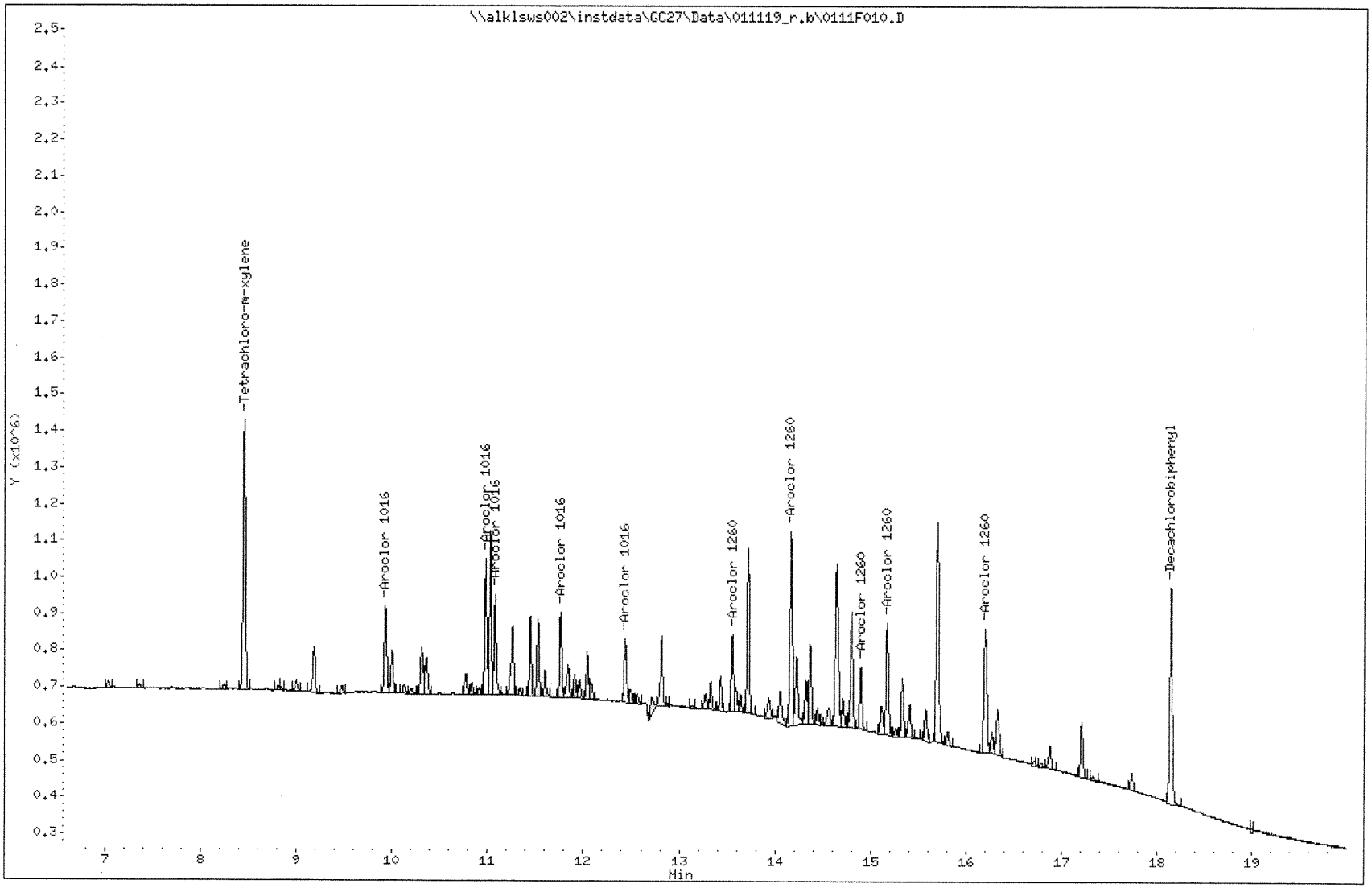
Instrument: GC27.i
Operator: SAA
Column phase: DB-35MS
Column diameter: 0.32



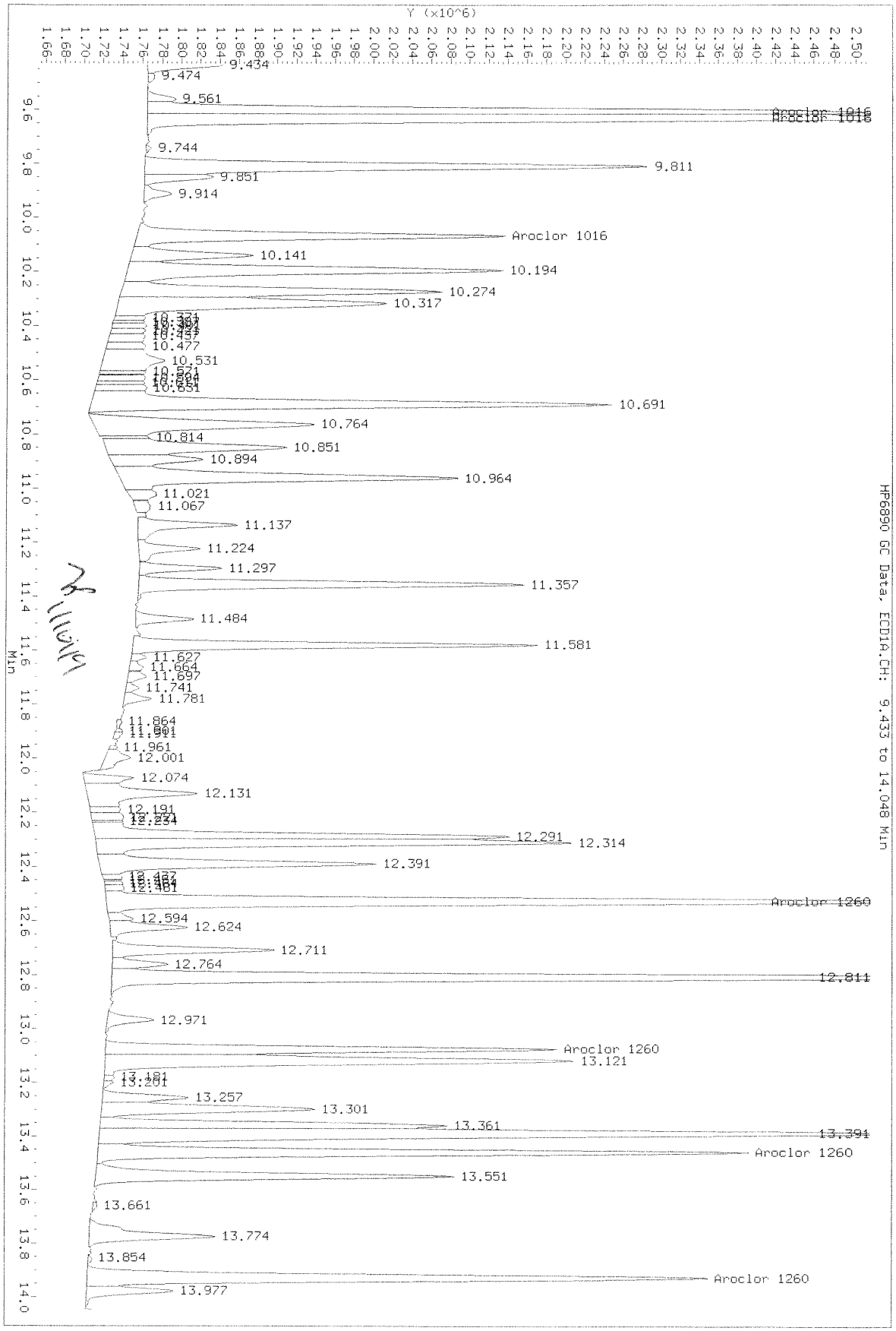
020672

Data File: \\alklsws002\instdata\GC27\Data\011119_r.b\0111F010.D
Date : 11-JAN-2019 15:40
Client ID:
Sample Info: PCB7-061M 1660 @ 2-20 PPB

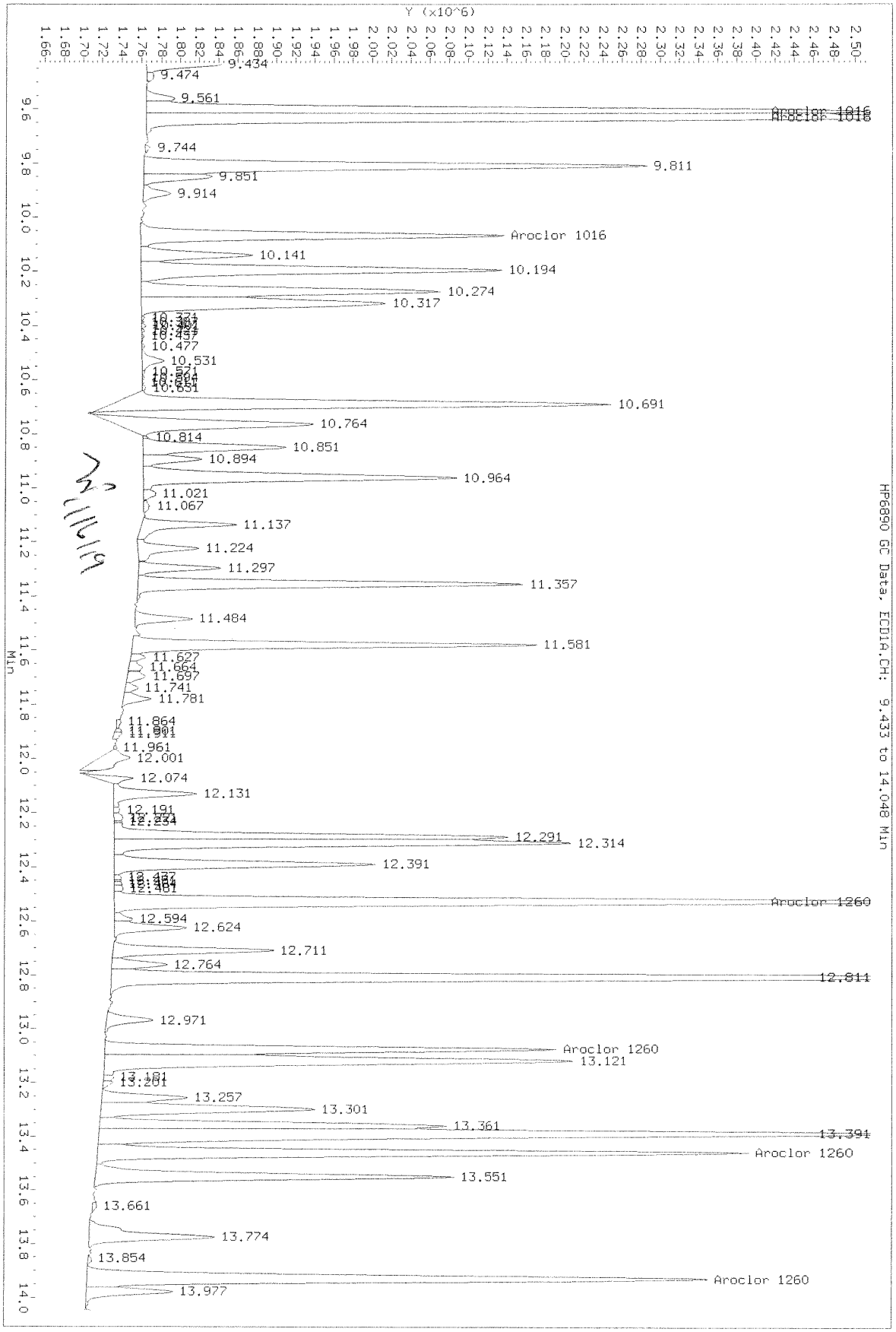
Instrument: GC27.i
Operator: SAA
Column phase: DB-XLB
Column diameter: 0.32



020673



Before 1/14/19 SA



EE 1/14/19

After baseline 1/14/19

Page 1504 of 2473

020675

Exception Report

Data File: \\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\0111F011.D
Lab ID: KWG1900315-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 01/11/2019 16:12
Date Quantitated: 01/14/2019 09:09
Batch ID: KWG1900315
Analysis Method: 8082A
MethodJoinID: MJ1439

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Aroclor 1260	24.6	NA	20	ICV OK

Primary Review: SA 1/14/19

Secondary Review: [signature]

Exception Report

Data File:	\\ALKLSWS002\INSTDATA\GC27\DATA\011119_R.B\0111F011.D	**Date Acquired:**	01/11/2019 16:12
Lab ID:	KWG1900315-4	**Date Quantitated:**	01/14/2019 09:09
RunType:	IB	**Batch ID:**	KWG1900315
Matrix:	NOT APPLICABLE	**Analysis Method:**	8082A
		MethodJoinID:	MJ1439

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SA 1/14/19

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC27\DATA\011119.B\0111F011.D			**Instrument:**	GC27.i
Data File #2:	\\alklsws002\instdata\GC27\Data\011119_r.b\0111F011.D			**Vial:**	2
Acqu Date:	01/11/2019 16:12	**Quant Date:**	01/14/2019 09:09	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1439	**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1900315-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLI
Prod Code:	8082A PCB	**Collect Date:**		**Receive Date:**	01/14/2019

Analysis Lot:	KWG1900315	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082A	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\ALKLSWS002\INSTDATA\GC27\DATA\011119.B\120718UL_F.M	**Calibration ID:**	CAL15912
Title:			
MB Ref:		**Method ID:**	MJ1439
		Quant based on Method	

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	6.88		8273	0	0.0050	0.0000			NA
			%Recovery =		NA	NA	**Limits =**	70-130	
Decachlorobiphenyl	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	**Limits =**	70-130	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0d	0	0.0000	0.0000			
Aroclor 1016 {2}			0d	0	0.0000	0.0000			
Aroclor 1016 {3}			0d	0	0.0000	0.0000			
Aroclor 1016 {4}			0d	0	0.0000	0.0000			
Aroclor 1016 {5}			0d	0	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0	0	0.0000	0.0000			
Aroclor 1221 {2}			0	0	0.0000	0.0000			
Aroclor 1221 {3}			0	0	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0	0	0.0000	0.0000			
Aroclor 1232 {2}			0	0	0.0000	0.0000			
Aroclor 1232 {3}			0	0	0.0000	0.0000			
Aroclor 1232 {4}			0	0	0.0000	0.0000			
Aroclor 1232 {5}			0	0	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

020678

Data File #1:	J:\GC27\DATA\011119.B\0111F011.D			**Instrument:**	GC27.i
Data File #2:	\\alkIsws002\instdata\GC27\Data\011119_r.b\0111F011.D			**Vial:**	2
Acqu Date:	01/11/2019 16:12	**Quant Date:**	01/14/2019 09:09	**Dilution:**	1.0
Run Type:	IB	**MethodJoinID:**	MJ1439	**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1900315-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:**

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/WIPE #1	ug/WIPE #2	Rpt
Aroclor 1242 {2}			0	0	0.0000	0.0000			
Aroclor 1242 {3}			0	0	0.0000	0.0000			
Aroclor 1242 {4}			0	0	0.0000	0.0000			
Aroclor 1242 {5}			0	0	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0	0	0.0000	0.0000			
Aroclor 1248 {2}			0	0	0.0000	0.0000			
Aroclor 1248 {3}			0	0	0.0000	0.0000			
Aroclor 1248 {4}			0	0	0.0000	0.0000			
Aroclor 1248 {5}			0	0	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0d	0	0.0000	0.0000			
Aroclor 1254 {2}			0d	0	0.0000	0.0000			
Aroclor 1254 {3}			0d	0	0.0000	0.0000			
Aroclor 1254 {4}			0d	0	0.0000	0.0000			
Aroclor 1254 {5}			0d	0	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0d	0	0.0000	0.0000			
Aroclor 1260 {2}			0d	0	0.0000	0.0000			
Aroclor 1260 {3}			0d	0	0.0000	0.0000			
Aroclor 1260 {4}			0d	0	0.0000	0.0000			
Aroclor 1260 {5}			0d	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0	0	0.0000	0.0000			
Aroclor 1262 {2}			0	0	0.0000	0.0000			
Aroclor 1262 {3}			0	0	0.0000	0.0000			
Aroclor 1262 {4}			0	0	0.0000	0.0000			
Aroclor 1262 {5}			0	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F011.D
Report Date: 14-Jan-2019 09:09

ALS Environmental - Kelso

Sample #1 : \\alklsws002\instdata\GC27\Data\011119.b\0111F011.D
Sample #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\0111F011.D
Inj Date : 11-JAN-2019 16:12
Sample Info: IB
Misc Info :
Cal Date : 14-JAN-2019 08:52
Operator : SAA
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\011119.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\011119_r.b\120718_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.884	0.000	8273	0	0.00523	0.000		100.00(R)

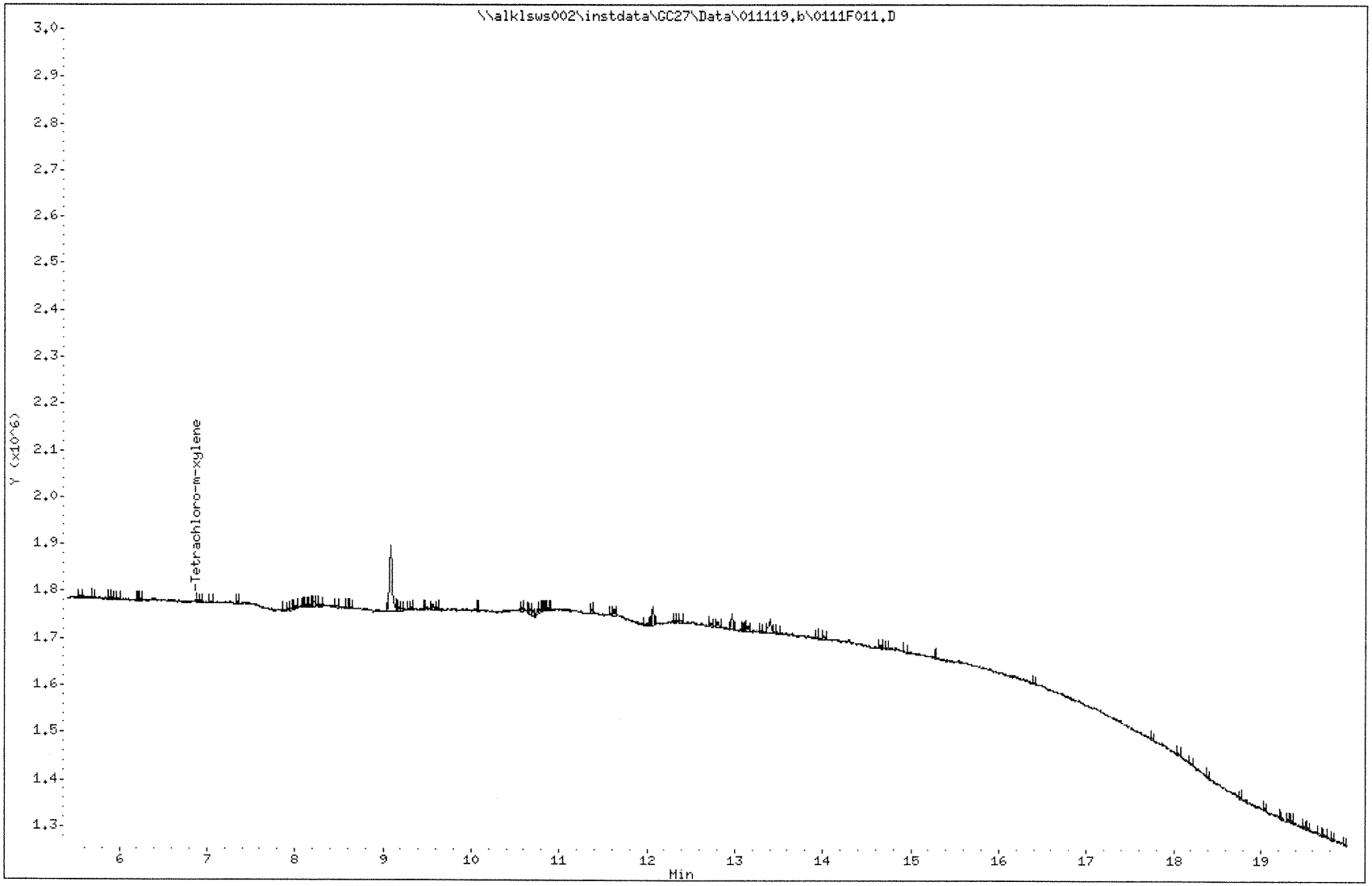
QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\alklsws002\instdata\GC27\Data\011119.b\0111F011.D
Date : 11-JAN-2019 16:12
Client ID:
Sample Info: IB

Instrument: GC27.i

Operator: SAA
Column phase: DB-35MS
Column diameter: 0.32

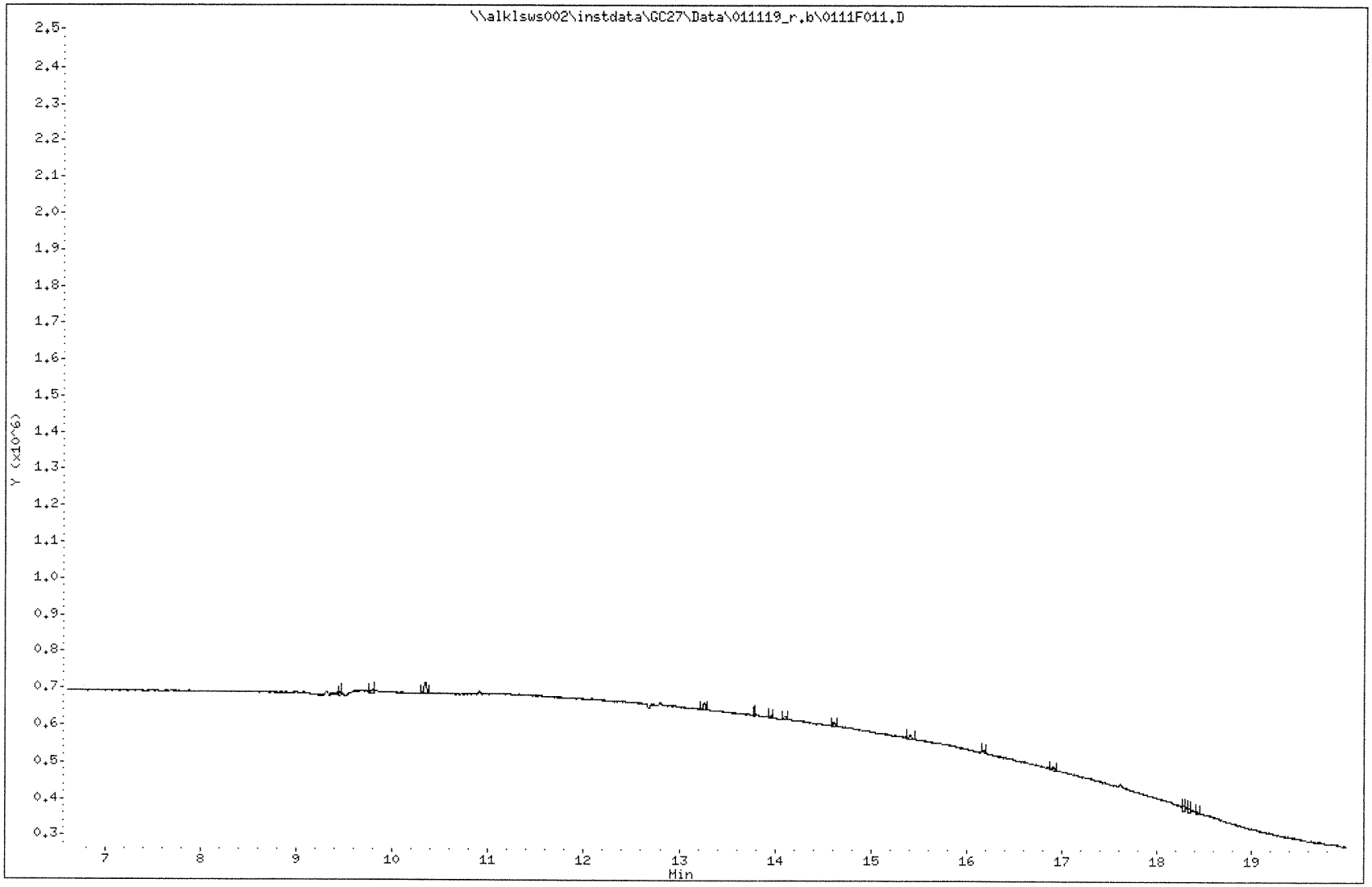


020681

Data File: \\alklsws002\instdata\GC27\Data\011119_r.b\0111F011.D
Date : 11-JAN-2019 16:12
Client ID:
Sample Info: IB

Instrument: GC27.i

Operator: SAA
Column phase: DB-XLB
Column diameter: 0.32



Preparation Information

Group ID:	KWG1900137	Prep **Method:**	EPA 3541	**Prep Date:**	01/03/19 08:58
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1811120-005	FW0001	8082A PCB	WIPE	1.000g	8ml	
K1811120-006	FB0001	8082A PCB	WIPE	0.500g	8ml	
KWG1900137-1	Lab Control Sample	8082A PCB	WIPE	1.000g	8ml	
KWG1900137-2	Duplicate Lab Control Sample	8082A PCB	WIPE	1.000g	8ml	
KWG1900137-3	Method Blank	8082A PCB	WIPE	1.000g	8ml	

Lab Code	Parent Lab Code	Comments
KWG1900137-1		KQ1900064-01
KWG1900137-2		KQ1900064-02
KWG1900137-3		KQ1900064-03

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1811120-005	1708053					
K1811120-006	1708054					
KWG1900137-1	1708055					
KWG1900137-2	1708056					
KWG1900137-3	1708057					

Comments:

Started By: KVAN Assisted By: —

Completed By: SMurray Assisted By: —

Reviewed By: CWilliams Date: 1/7/19 Storage:

Training: Yes / No (No circled)

Yes / No

Chain of Custody

Relinquished By: SMurray Date: 1-7-19

Received By: SAO Date: 1/8/19

Extracts Examined: (Yes) / No

Preparation Information

Group ID: KWG1900137 **Prep Method:** EPA 3541 **Prep Date:** 01/03/19 00:00
Department: Semivoa GC

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol. mL	Final Vol. mL	Surr. Added ul	Spike Added ul
1	K1811120-005	FW0001 8A	.03	✓	8082A PCB	WIPE	1	N/A	20	8	500	—
2	K1811120-006	FB0001 8B	.02	✓	8082A PCB	WIPE	1/2	"	20	8	"	—
3	KWG1900137-1	Lab Control Sample 8C	-	-	8082A PCB	WIPE	1	"	20	8	"	250
4	KWG1900137-2	Duplicate Lab Control Sample 8E	-	-	8082A PCB	WIPE	1	"	20	8	"	"
5	KWG1900137-3	Method Blank ☆ 8F	-	-	8082A PCB	WIPE	1	"	20	8	"	—

SM 1-4-19

Comments: ☆ Pulled to 20mL in Hex instead of DCM Prepcn: 329209

Surrogate ID: PCB 7-63C 2ppm 500ul xp:6/13/19 eppID:38
Spike ID: PCB 7-63B 40ppm 250ul xp:6/13/19 SyringeID:S-53
Witness: 1-3-19

Started By: KVAN Assisted By: —
Completed By: S Murray Assisted By: —

Printed: 01/03/2019 08:15:22 Preparation Information Page 1 of 1
u:\Stealth\Crystal.rpt\prep2.rpt

020684

Table 7
Waste Characterization Sample Containers, Preservation, and Holding Time Requirements

Parameter	Matrix	Container [a]		Laboratory	Preservation	Holding Time	Sample Size [b]
		Type	Size				
Soil							
Flashpoint	Soil	WMG	4 oz	ALS-Kelso	4±2°C	None	2 g
pH	Soil	WMG	4 oz	ALS-Kelso	4±2°C	Analyze immediately	10 g
Reactive cyanide	Soil	WMG	4 oz	ALS-Holland	4±2°C	28 days	10 g
Reactive sulfide	Soil	WMG	4 oz	ALS-Kelso	Zinc acetate	14 days	10 g
Total sulfur [c]	Soil	WMG	4 oz	ALS-Kelso	4±2°C	None	5 g
Total sulfate [c]	Soil	WMG	4 oz	ALS-Kelso	4±2°C	28 days	2.5 g
TPH - GRO	Soil	WMG	4 oz	ALS-Kelso	4±2°C, methanol	14 days	5 g
TPH - DRO/RRO	Soil	WMG	4 oz	ALS-Kelso	4±2°C	14 days / 40 days [d]	50 g
PCB Aroclors	Soil	WMG	4 oz	ALS-Kelso	4±2°C	14 days / 40 days [d]	50 g
Asbestos	Soil	WMG	8 oz	ALS-Cincinnati	--	180 days	TBD
TCLP Extraction	Soil	WMG	16 oz	ALS-Kelso	4±2°C; no headspace	14 days [e]	200 g
TCLP Leachate							
TCLP Metals	Water	HDPE	125 mL	ALS-Kelso	4±2°C	180/180 days [f]	10 mL
TCLP Mercury	Water	HDPE	125 mL	ALS-Kelso	4±2°C	28/28 days [f]	10 mL
TCLP VOCs	Water	Glass	40 mL	ALS-Kelso	4±2°C; no headspace	14/14 days [f]	40 mL
TCLP SVOCs	Water	AG	1 L	ALS-Kelso	4±2°C	7/40 days [f]	1 L
TCLP Pesticides	Water	AG	125 mL	ALS-Kelso	4±2°C	7/40 days [f]	125 mL
TCLP Herbicides	Water	AG	1 L	ALS-Kelso	4±2°C	7/40 days [f]	1 L

Notes:
a. The size and number of containers may be modified by the analytical laboratory.
b. Sample sizes are estimated.
c. Total sulfur and total sulfate will only be performed on samples with detections for reactive sulfide.
d. From sample collection, and from collection to analysis.
e. From sample collection to preparation of TCLP leachate.
f. From preparation of TCLP leachate to extraction, and from extraction to analysis.

AG: amber glass
DRO: diesel range organics
GRO: gasoline range organics
HDPE: high density polyethylene
PCB: polychlorinated biphenyl
RRO: residual range organics
TBD: to be determined
TCLP: toxicity characteristic leaching procedure
TPH: total petroleum hydrocarbons
WMG: wide mouth glass

020685

Table 8
Laboratory Methods for Waste Characterization Samples

Parameter	Laboratory	Sample Preparation		Quantitative Analysis	
		Protocol	Procedure	Protocol	Procedure
Soil					
Flashpoint	ALS-Kelso	NA	NA	EPA 1020B	Setaflash, closed cup
pH	ALS-Kelso	NA	NA	EPA 9045D	Electrode
Reactive cyanide	ALS-Kelso	EPA 7.3.3.2	Distillation	EPA 9014	Titration / Spectrophotometry
Reactive sulfide	ALS-Holland	EPA 9030M	Distillation	EPA 9030M	Titration
Total sulfur [a]	Soil	EPA 9056A	Extraction	EPA 9056A	Ion chromatography
Total sulfate [a]	Soil	EPA 300.0M	Extraction	EPA 300.0M	Ion chromatography
TPH - GRO	Soil	EPA 5035	Purge and trap	EPA 8015C	GC/FID
TPH - DRO/RRO	Soil	EPA 3550C	Ultrasonic extraction	EPA 8015C	GC/FID
PCB Aroclors	Soil	EPA 3540C / EPA 3665A	Soxhlet extraction / sulfuric acid/permanganate cleanup	EPA 8082A	GC/ECD
Asbestos	ALS-Cincinnati	EPA Method 600/R-93-116	--	EPA Method 600/R-93-116	Microscopy
TCLP Extraction	ALS-Kelso	EPA 1311	Leaching procedure	NA	NA
TCLP Leachate					
TCLP Metals	ALS-Kelso	EPA 3010	Strong acid digestion	EPA 6010B/6020	ICP/ICP-MS
TCLP Mercury	ALS-Kelso	EPA 7470A	Acid digestion/oxidation	EPA 7470A	CVAA
TCLP VOCs	ALS-Kelso	EPA 5030B	Purge and trap	EPA 8260C	GC/MS
TCLP SVOCs	ALS-Kelso	EPA 3510C/3520C	Separatory funnel/continuous liquid-liquid extraction	EPA 8270D	GC/MS
TCLP Pesticides	ALS-Kelso	EPA 3510C/3520C	Separatory funnel/continuous liquid-liquid/	EPA 8081B	GC/ECD
TCLP Herbicides	ALS-Kelso	EPA 8151A	Extraction/esterification	EPA 8151A	GC/ECD

Notes:
a. Total sulfur and total sulfate will only be performed on samples with detections for reactive sulfide.

CVAA: cold vapor atomic absorption
DRO: diesel range organics
EPA: U.S. Environmental Protection Agency
GC/ECD: gas chromatography with electron capture detector
GC/FID: gas chromatography with flame ionization detector
GRO: gasoline range organics
ICP: inductively coupled plasma
ICP/MS: inductively coupled plasma mass spectrometry
NA: not applicable
PCB: polychlorinated biphenyl
RRO: residual range organics
SVOC: semivolatile organic compound
TBD: to be determined
TCLP: toxicity characteristic leaching procedure
TPH: total petroleum hydrocarbons
VOC: volatile organic compound

020686

Table 9
Analytes, Method Reporting Limits, and Method Detection Limits for Waste Characterization Samples

Analyte	CAS Number	TCLP Regulatory Levels [a]	Method Detection Limit [b]	Method Reporting Limit
Soil				
Flashpoint	NA	NA	NA	NA
pH	12408-02-5	NA	NA	NA
Reactive cyanide (mg/kg)	57-12-5	NA	17.4	100
Reactive sulfide (mg/kg)	18496-25-8	NA	0.2	0.5
Total sulfur (mg/kg)	14808-79-8	NA	0.46	2.0
Total sulfate (mg/kg)	14808-79-8	NA	0.48	2.0
TPH - GRO (mg/kg)	8006-61-9	NA	0.62	5
TPH - DRO (mg/kg)	68334-30-5	NA	0.79	25
TPH - RRO (mg/kg)	NA	NA	2.9	100
PCB Aroclors (µg/kg-dry wt)				
Aroclor 1016	12674-11-2	NA	2.1	10
Aroclor 1221	11104-28-2	NA	2.1	20
Aroclor 1232	11141-16-5	NA	2.1	10
Aroclor 1242	53469-21-9	NA	2.1	10
Aroclor 1248	12672-29-6	NA	2.1	10
Aroclor 1254	11097-69-1	NA	2.1	10
Aroclor 1260	11096-82-5	NA	2.1	10
Aroclor 1262	37324-23-5	NA	2.1	10
Aroclor 1268	11100-14-4	NA	2.1	10
Asbestos	1332-21-4	NA	TBD	TBD
TCLP Metals (mg/L)				
Arsenic	7440-38-2	5.0	0.005	0.01
Barium	7440-39-3	100.0	0.0006	0.004
Cadmium	7440-43-9	1.0	0.0005	0.001
Chromium	7440-47-3	5.0	0.0009	0.004
Lead	7439-92-1	5.0	0.005	0.01
Mercury	7439-97-6	0.2	0.00002	0.0002
Selenium	7782-49-2	1.0	0.009	0.02
Silver	7440-22-4	5.0	0.002	0.004
TCLP VOCs (mg/L)				
Benzene	71-43-2	0.5	0.000062	0.0005
Carbon tetrachloride	56-23-5	0.5	0.000096	0.0005
Chlorobenzene	108-90-7	100.0	0.00011	0.0005
Chloroform	67-66-3	6.0	0.000072	0.0005
1,2-Dichloroethane	107-06-2	0.5	0.00008	0.0005
1,1-Dichloroethene	75-35-4	0.7	0.00008	0.005
2-Butanone (Methyl ethyl ketone)	78-93-3	200.0	0.0019	0.02
Tetrachloroethene	127-18-4	0.7	0.000099	0.0005
Trichloroethene	79-01-6	0.5	0.0001	0.0005
Vinyl chloride	75-01-4	0.2	0.000075	0.0005
TCLP SVOCs (mg/L)				
2-Methylphenol (o-Cresol)	95-48-7	200.0	0.00033	0.01
3-Methylphenol (m-Cresol)	108-39-4	200.0	--	--
4-Methylphenol (p-Cresol)	106-44-5	200.0	0.00048	0.01
Cresol	1319-77-3	200.0	--	--
1,4-Dichlorobenzene	106-46-7	7.5	0.00032	0.01
2,4-Dinitrotoluene	121-14-2	0.13	0.00027	0.01
Hexachlorobenzene	118-74-1	0.13	0.00063	0.01
Hexachlorobutadiene	87-68-3	0.5	0.00029	0.01
Hexachloroethane	67-72-1	3.0	0.00029	0.01
Nitrobenzene	98-95-3	2.0	0.00057	0.01
Petachlorophenol	87-86-5	100.0	0.0024	0.025
Pyridine	110-86-1	5.0	0.0075	0.025
2,4,5-Trichlorophenol	95-95-4	400.0	0.000018	0.00033
2,4,6-Trichlorophenol	88-06-2	2.0	0.000014	0.00033

Table 9
Analytes, Method Reporting Limits, and Method Detection Limits for Waste Characterization Samples

Analyte	CAS Number	TCLP Regulatory Levels [a]	Method Detection Limit [b]	Method Reporting Limit
TCLP Pesticides (mg/L)				
Chlordane	57-74-9	0.03	0.0001	0.0002
Endrin	72-20-8	0.02	0.00000069	0.00001
Heptachlor	76-44-8	0.008	0.00000036	0.00001
Heptachlor epoxide	1024-57-3	0.04	0.00000068	0.00001
gamma-BHC (Lindane)	58-89-9	0.4	0.00000084	0.00001
Methoxychlor	72-43-5	10.0	0.000001	0.00001
Toxaphene	8001-35-2	0.5	0.0002	0.0005
TCLP Herbicides (mg/L)				
2,4-D	94-75-7	10.0	0.000036	0.0004
2,4,5-TP (Silvex)	93-72-1	1.0	0.000045	0.0002

Notes:

a. From Guidelines for the Classification and Coding of Industrial and Hazardous Wastes, Texas Commission of Environmental Quality, November, 2014.

b. Method detction limits and reporting limits are periodically updated by laboratories. The limits in effect at the time of analysis will be used.

--: not available
DRO: diesel range organics
GRO: gasoline range organics
NA: not applicable
PCB: polychlorinated biphenyl
RRO: residual range organics
SVOC: semivolatile organic compound
TBD: to be determined
TCLP: toxicity characteristic leaching procedure
TPH: total petroleum hydrocarbons
VOC: volatile organic compound

Additional Prep Information for EPA 3541
Con in Soil or PCB Wipes

Service Request # K1811120 **Work Group #:** KWG1900137

Storage Location (if not extracted same day): —

DCM Lot # DM077 Sulfate Lot # 2018090546 Glass Wool Lot # 21317999

Soxtherm/s unit I.D# K-SOX-08

Soxtherm Start (time/date/initial): 0858 1/3/19 KV

Soxtherm Stop (time/date/initial): 1235 1/3/19 KV

Pipette (5 mL) Lot # 24316647

N-Evap (time/date/initial): 12:23 1-4-19 SM N-Evap Thermometer ID: X-SVM-004
Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Carbon Clean-up (Ext-Car) (time/date/initial): — Carbon Lot # —
Hexane 1:1 DCM Lot # —
N-Evap (time/date/initial): — N-Evap Thermometer ID: —
Temp as measured: — °C Correction factor: — °C Adjusted temp: — °C

Florisil Clean-up (Ext-Flor)(time/date/initial): — Florisil Lot # —
Hexane 1:1 Acetone Lot # —, Hexane 9:1 Acetone Lot # —
N-Evap (time/date/initial): — N-Evap Thermometer ID: —
Temp as measured: — °C Correction factor: — °C Adjusted temp: — °C

Sulfuric Acid Clean-up (3665)(time/date/initial): 14:50 1-4-19 SM Acid Lot # 54344

Other Clean-up: — ☐ all samples ☐ some samples: —

Pipette (2 mL) Lot # 1648646 Pipette (1 mL) Lot # —

PCB Vial: green Vial Storage: Mickey E1-E5

Archived Extract Storage: F.10x

Additional Comments:

Bench Sheet Review Check List

- ☑ Hold times met (if no, reason: _____)
- ☑ Prep date, time, method, department, product code correct in stealth
- ☑ Spike information and Q.C. correct (insufficient volume or mass recorded if no Q.C.)
- ☑ Weights/Volumes and units correct on raw and final bench sheets
- ☑ Sample IDs have been checked - bottle numbers appended if required
- ☑ Names present for: started by, completed by, relinquished by, and witnessed by. Training circled.
- ☑ Extract storage recorded
- ☑ Additional prep sheet completely filled out (NA or line out blanks)
- ☑ All clean-ups have been noted on additional prep sheet
- ☐ Signed service request with Form V, if applicable, has been attached

Comment: Ultra Low Level PCB Aroclors by EPA 8082A
Operator: SM
Data Path: C:\GC27\DATA\120718\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	IB	1	1207F001	ULSPLT	PRIMER
2	IB	2	1207F002	ULSPLT	PRIMER
3	IB	3	1207F003	ULSPLT	PRIMER
4	IB	1	1207F004	ULSPLT	PRIMER
5	IB	2	1207F005	ULSPLT	PRIMER
6	IB	3	1207F006	ULSPLT	IB
7	IB	90	1207F007	ULSPLT	DDX MAKER
8	ICAL	4	1207F008	ULSPLT	1660 1.0PPB PCB7-56L
9	ICAL	5	1207F009	ULSPLT	1660 2.0PPB PCB7-56M
10	ICAL	6	1207F010	ULSPLT	1660 5.0PPB PCB7-61C
11	ICAL	7	1207F011	ULSPLT	1660 10PPB PCB7-57B
12	ICAL	8	1207F012	ULSPLT	1660 20PPB PCB7-57C
13	ICAL	9	1207F013	ULSPLT	1660 50PPB PCB7-57D
14	ICAL	10	1207F014	ULSPLT	1660 100PPB PCB7-57E
15	ICAL	11	1207F015	ULSPLT	1660 200PPB PCB7-57F
16	ICAL	12	1207F016	ULSPLT	2154 1-2PPB PCB7-57G
17	ICAL	13	1207F017	ULSPLT	2154 2-4PPB PCB7-57H
18	ICAL	14	1207F018	ULSPLT	2154 5-10PPB PCB7-57I
19	ICAL	15	1207F019	ULSPLT	2154 10-20PPB PCB7-57J
20	ICAL	16	1207F020	ULSPLT	2154 20-40PPB PCB7-57K
21	ICAL	17	1207F021	ULSPLT	2154 50-100PPB PCB7-57L
22	ICAL	18	1207F022	ULSPLT	2154 100-200PPB PCB7-57M
23	ICAL	19	1207F023	ULSPLT	2154 200-400PPB PCB7-57N
24	ICAL	20	1207F024	ULSPLT	3262 1.0PPB PCB7-61B
25	ICAL	21	1207F025	ULSPLT	3262 2.0PPB PCB7-58A
26	ICAL	22	1207F026	ULSPLT	3262 5.0PPB PCB7-68B
27	ICAL	23	1207F027	ULSPLT	3262 10PPB PCB7-68C
28	ICAL	24	1207F028	ULSPLT	3262 20PPB PCB7-58D
29	ICAL	25	1207F029	ULSPLT	3262 50PPB PCB7-58E
30	ICAL	26	1207F030	ULSPLT	3262 100PPB PCB7-58F
31	ICAL	27	1207F031	ULSPLT	3262 200PPB PCB7-58G
32	ICAL	28	1207F032	ULSPLT	4268 1.0PPB PCB7-60I
33	ICAL	29	1207F033	ULSPLT	4268 2.0PPB PCB7-60J
34	ICAL	30	1207F034	ULSPLT	4268 5.0PPB PCB7-58J
35	ICAL	31	1207F035	ULSPLT	4268 10PPB PCB7-58K
36	ICAL	32	1207F036	ULSPLT	4268 20PPB PCB7-58L
37	ICAL	33	1207F037	ULSPLT	4268 50PPB PCB7-58M
38	ICAL	34	1207F038	ULSPLT	4268 100PPB PCB7-58N
39	ICAL	35	1207F039	ULSPLT	4268 200PPB PCB7-58O
40	ICAL	36	1207F040	ULSPLT	1248 1.0PPB PCB7-59A
41	ICAL	37	1207F041	ULSPLT	1248 2.0PPB PCB7-59B
42	ICAL	38	1207F042	ULSPLT	1248 5.0PPB PCB7-59C
43	ICAL	39	1207F043	ULSPLT	1248 10PPB PCB7-59D

CAL 15912

MC 12/13/18

Last Modified: Fri Dec 07 16:58:37 2018

Page: 1

020690

Line	Type	Vial	DataFile	Method	Sample Name
44	ICAL	40	1207F044	ULSPLT	1248 20PPB PCB7-59E
45	ICAL	41	1207F045	ULSPLT	1248 50PPB PCB7-59F
46	ICAL	42	1207F046	ULSPLT	1248 100PPB PCB7-59G
47	ICAL	43	1207F047	ULSPLT	1248 200PPB PCB7-59H
48	IB	1	1207F048	ULSPLT	IB
49	ICV	44	1207F049	ULSPLT	1016 20PPB ICV PCB7-61N
50	ICV	45	1207F050	ULSPLT	1260 20PPB ICV PCB7-61O
51	ICV	46	1207F051	ULSPLT	1221 20PPB ICV PCB7-62A
52	ICV	47	1207F052	ULSPLT	1232 20PPB ICV PCB7-62B
53	ICV	48	1207F053	ULSPLT	1242 20PPB ICV PCB7-62C
54	ICV	49	1207F054	ULSPLT	1248 20PPB ICV PCB7-62D
55	ICV	50	1207F055	ULSPLT	1254 20PPB ICV PCB7-62E
56	ICV	51	1207F056	ULSPLT	1262 20PPB ICV PCB7-62F
57	ICV	52	1207F057	ULSPLT	1268 20PPB ICV PCB7-62G
58	IB	2	1207F058	ULSPLT	IB

Initial Calibration - Summary Report

Calibration ID:	CAL15912	**Instrument ID:**	GC27.i
Method ID:	MJ706	**Column Name:**	DB-XLB

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Aroclor 1221 {1}	MULTI	AverageRF		4.8E+3	20	6.7			OK	
Aroclor 1221 {2}	MULTI	AverageRF		5.5E+3	20	15.4			OK	
Aroclor 1221 {3}	MULTI	AverageRF		1.8E+4	20	7.4			OK	
Aroclor 1232 {1}	MULTI	AverageRF		1.6E+4	20	16.3			OK	
Aroclor 1232 {2}	MULTI	AverageRF		1.3E+4	20	14.1			OK	
Aroclor 1232 {3}	MULTI	AverageRF		1.3E+4	20	5.1			OK	
Aroclor 1232 {4}	MULTI	AverageRF		7.0E+3	20	13.6			OK	
Aroclor 1232 {5}	MULTI	AverageRF		7.1E+3	20	11.5			OK	
Aroclor 1242 {1}	MULTI	AverageRF		1.6E+4	20	17.6			OK	
Aroclor 1242 {2}	MULTI	AverageRF		1.7E+4	20	10.2			OK	
Aroclor 1242 {3}	MULTI	AverageRF		1.1E+4	20	13.0			OK	
Aroclor 1242 {4}	MULTI	AverageRF		1.1E+4	20	12.4			OK	
Aroclor 1242 {5}	MULTI	AverageRF		1.5E+4	20	11.7			OK	
Aroclor 1248 {1}	MULTI	AverageRF		1.4E+4	20	10.9			OK	
Aroclor 1248 {2}	MULTI	AverageRF		2.0E+4	20	12.1			OK	
Aroclor 1248 {3}	MULTI	AverageRF		1.9E+4	20	13.7			OK	
Aroclor 1248 {4}	MULTI	AverageRF		1.4E+4	20	5.6			OK	
Aroclor 1248 {5}	MULTI	AverageRF		2.0E+4	20	12.0			OK	
Aroclor 1254 {1}	MULTI	AverageRF		3.0E+4	20	11.6			OK	
Aroclor 1254 {2}	MULTI	AverageRF		1.6E+4	20	9.3			OK	
Aroclor 1254 {3}	MULTI	AverageRF		1.6E+4	20	12.8			OK	
Aroclor 1254 {4}	MULTI	AverageRF		1.4E+4	20	12.2			OK	
Aroclor 1254 {5}	MULTI	AverageRF		2.5E+4	20	11.7			OK	
Aroclor 1262 {1}	MULTI	AverageRF		2.9E+4	20	12.2			OK	
Aroclor 1262 {2}	MULTI	AverageRF		4.7E+4	20	13.2			OK	
Aroclor 1262 {3}	MULTI	AverageRF		3.6E+4	20	12.2			OK	
Aroclor 1262 {4}	MULTI	AverageRF		5.3E+4	20	14.2			OK	
Aroclor 1262 {5}	MULTI	AverageRF		3.3E+4	20	15.9			OK	
Aroclor 1268 {1}	MULTI	AverageRF		1.0E+5	20	19.0			OK	
Aroclor 1268 {2}	MULTI	AverageRF		8.5E+4	20	13.5			OK	
Aroclor 1268 {3}	MULTI	AverageRF		7.7E+4	20	14.8			OK	
Aroclor 1268 {4}	MULTI	AverageRF		2.2E+5	20	13.0			OK	
Tetrachloro-m-xylene	SURR	AverageRF		7.2E+5	20	9.4			NA	
Decachlorobiphenyl	SURR	AverageRF		6.2E+5	20	12.4			NA	
Aroclor 1016 {1}	MULTI	AverageRF		2.1E+4	20	15.4			OK	
Aroclor 1016 {2}	MULTI	AverageRF		2.9E+4	20	19.6			OK	
Aroclor 1016 {3}	MULTI	AverageRF		2.1E+4	20	6.7			OK	
Aroclor 1016 {4}	MULTI	AverageRF		1.6E+4	20	5.8			OK	
Aroclor 1016 {5}	MULTI	AverageRF		1.4E+4	20	9.6			OK	
Aroclor 1260 {1}	MULTI	AverageRF		1.8E+4	20	13.0			OK	
Aroclor 1260 {2}	MULTI	AverageRF		4.3E+4	20	13.5			OK	
Aroclor 1260 {3}	MULTI	AverageRF		1.5E+4	20	12.5			OK	
Aroclor 1260 {4}	MULTI	AverageRF		2.9E+4	20	15.5			OK	
Aroclor 1260 {5}	MULTI	AverageRF		4.0E+4	20	16.8			OK	

MR 12/13/18

Initial Calibration - Summary Report

Calibration ID:	CAL15912	**Instrument ID:**	GC27.i
Method ID:	MJ706	**Column Name:**	DB-35MS

Parameter Name	Type	Curve Fit	Min RF	Mean RF	Max %RSD	%RSD	Min COD	COD	MRL Check	Conc ½ Low pt.
Aroclor 1221 {1}	MULTI	AverageRF		1.8E+4	20	10.7			OK	
Aroclor 1221 {2}	MULTI	AverageRF		1.1E+4	20	9.2			OK	
Aroclor 1221 {3}	MULTI	AverageRF		4.3E+4	20	10.9			OK	
Aroclor 1232 {1}	MULTI	AverageRF		2.2E+4	20	10.7			OK	
Aroclor 1232 {2}	MULTI	AverageRF		2.5E+4	20	14.9			OK	
Aroclor 1232 {3}	MULTI	AverageRF		2.2E+4	20	10.1			OK	
Aroclor 1232 {4}	MULTI	AverageRF		1.4E+4	20	8.6			OK	
Aroclor 1232 {5}	MULTI	AverageRF		1.1E+4	20	8.2			OK	
Aroclor 1242 {1}	MULTI	AverageRF		4.2E+4	20	16.6			OK	
Aroclor 1242 {2}	MULTI	AverageRF		3.8E+4	20	12.8			OK	
Aroclor 1242 {3}	MULTI	AverageRF		2.5E+4	20	8.6			OK	
Aroclor 1242 {4}	MULTI	AverageRF		2.0E+4	20	8.3			OK	
Aroclor 1242 {5}	MULTI	AverageRF		3.3E+4	20	17.2			OK	
Aroclor 1248 {1}	MULTI	AverageRF		3.1E+4	20	7.0			OK	
Aroclor 1248 {2}	MULTI	AverageRF		4.7E+4	20	18.0			OK	
Aroclor 1248 {3}	MULTI	AverageRF		3.5E+4	20	12.4			OK	
Aroclor 1248 {4}	MULTI	AverageRF		3.2E+4	20	13.3			OK	
Aroclor 1248 {5}	MULTI	AverageRF		2.6E+4	20	11.8			OK	
Aroclor 1254 {1}	MULTI	AverageRF		7.2E+4	20	14.1			OK	
Aroclor 1254 {2}	MULTI	AverageRF		3.6E+4	20	12.0			OK	
Aroclor 1254 {3}	MULTI	AverageRF		6.0E+4	20	13.8			OK	
Aroclor 1254 {4}	MULTI	AverageRF		7.4E+4	20	12.6			OK	
Aroclor 1254 {5}	MULTI	AverageRF		3.0E+4	20	12.9			OK	
Aroclor 1262 {1}	MULTI	AverageRF		7.0E+4	20	14.2			OK	
Aroclor 1262 {2}	MULTI	AverageRF		4.8E+4	20	9.4			OK	
Aroclor 1262 {3}	MULTI	AverageRF		9.2E+4	20	7.8			OK	
Aroclor 1262 {4}	MULTI	AverageRF		1.7E+5	20	6.2			OK	
Aroclor 1262 {5}	MULTI	AverageRF		8.3E+4	20	11.2			OK	
Aroclor 1268 {1}	MULTI	AverageRF		2.3E+5	20	10.8			OK	
Aroclor 1268 {2}	MULTI	AverageRF		2.0E+5	20	8.8			OK	
Aroclor 1268 {3}	MULTI	AverageRF		1.8E+5	20	8.9			OK	
Aroclor 1268 {4}	MULTI	AverageRF		5.2E+5	20	8.2			OK	
Tetrachloro-m-xylene	SURR	AverageRF		1.6E+6	20	10.4			NA	
Decachlorobiphenyl	SURR	AverageRF		1.2E+6	20	9.4			NA	
Aroclor 1016 {1}	MULTI	AverageRF		2.7E+4	20	6.7			OK	
Aroclor 1016 {2}	MULTI	AverageRF		2.6E+4	20	17.0			OK	
Aroclor 1016 {3}	MULTI	AverageRF		5.3E+4	20	12.2			OK	
Aroclor 1016 {4}	MULTI	AverageRF		7.2E+4	20	9.1			OK	
Aroclor 1016 {5}	MULTI	AverageRF		3.2E+4	20	16.9			OK	
Aroclor 1260 {1}	MULTI	AverageRF		8.0E+4	20	14.4			OK	
Aroclor 1260 {2}	MULTI	AverageRF		3.8E+4	20	10.8			OK	
Aroclor 1260 {3}	MULTI	AverageRF		5.8E+4	20	17.1			OK	
Aroclor 1260 {4}	MULTI	AverageRF		5.8E+4	20	7.7			OK	
Aroclor 1260 {5}	MULTI	AverageRF		9.2E+4	20	7.8			OK	

MR 12/13/18

Initial Calibration - Detailed Report

Calibration ID:	CAL15912	**Instrument ID:**	GC27.i
Method ID:	MJ706	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	285525	\\alklsws002\instdata\GC27\Data\120718.b\1207F008.D	12/07/2018 14:15	12/12/2018 12:44	12/12/2018 14:42
2	285527	\\alklsws002\instdata\GC27\Data\120718.b\1207F009.D	12/07/2018 14:46	12/12/2018 12:44	12/12/2018 14:42
3	285529	\\alklsws002\instdata\GC27\Data\120718.b\1207F010.D	12/07/2018 15:18	12/12/2018 12:44	12/12/2018 14:42
4	285531	\\alklsws002\instdata\GC27\Data\120718.b\1207F011.D	12/07/2018 15:49	12/12/2018 12:44	12/12/2018 14:42
5	285533	\\alklsws002\instdata\GC27\Data\120718.b\1207F012.D	12/07/2018 16:20	12/12/2018 12:44	12/12/2018 14:42
6	285535	\\alklsws002\instdata\GC27\Data\120718.b\1207F013.D	12/07/2018 16:51	12/12/2018 12:44	12/12/2018 14:42
7	285537	\\alklsws002\instdata\GC27\Data\120718.b\1207F014.D	12/07/2018 17:22	12/12/2018 12:44	12/12/2018 14:42
8	285539	\\alklsws002\instdata\GC27\Data\120718.b\1207F015.D	12/07/2018 17:54	12/12/2018 12:44	12/12/2018 14:42
9	285541	\\alklsws002\instdata\GC27\Data\120718.b\1207F016.D	12/07/2018 18:25	12/12/2018 12:44	12/12/2018 14:42
10	285543	\\alklsws002\instdata\GC27\Data\120718.b\1207F017.D	12/07/2018 18:56	12/12/2018 12:44	12/12/2018 14:42
11	285545	\\alklsws002\instdata\GC27\Data\120718.b\1207F018.D	12/07/2018 19:27	12/12/2018 12:44	12/12/2018 14:42
12	285547	\\alklsws002\instdata\GC27\Data\120718.b\1207F019.D	12/07/2018 19:58	12/12/2018 12:44	12/12/2018 14:42
13	285549	\\alklsws002\instdata\GC27\Data\120718.b\1207F020.D	12/07/2018 20:29	12/12/2018 12:44	12/12/2018 14:42
14	285551	\\alklsws002\instdata\GC27\Data\120718.b\1207F021.D	12/07/2018 21:00	12/12/2018 12:44	12/12/2018 14:42
15	285553	\\alklsws002\instdata\GC27\Data\120718.b\1207F022.D	12/07/2018 21:31	12/12/2018 12:44	12/12/2018 14:42
16	285555	\\alklsws002\instdata\GC27\Data\120718.b\1207F023.D	12/07/2018 22:03	12/12/2018 12:44	12/12/2018 14:42
17	285557	\\alklsws002\instdata\GC27\Data\120718.b\1207F024.D	12/07/2018 22:34	12/12/2018 12:44	12/12/2018 14:42
18	285559	\\alklsws002\instdata\GC27\Data\120718.b\1207F025.D	12/07/2018 23:06	12/12/2018 12:44	12/12/2018 14:42
19	285561	\\alklsws002\instdata\GC27\Data\120718.b\1207F026.D	12/07/2018 23:37	12/12/2018 12:44	12/12/2018 14:42
20	285563	\\alklsws002\instdata\GC27\Data\120718.b\1207F027.D	12/08/2018 00:08	12/12/2018 12:44	12/12/2018 14:42
21	285565	\\alklsws002\instdata\GC27\Data\120718.b\1207F028.D	12/08/2018 00:40	12/12/2018 12:44	12/12/2018 14:42
22	285567	\\alklsws002\instdata\GC27\Data\120718.b\1207F029.D	12/08/2018 01:11	12/12/2018 12:44	12/12/2018 14:42
23	285569	\\alklsws002\instdata\GC27\Data\120718.b\1207F030.D	12/08/2018 01:42	12/12/2018 12:44	12/12/2018 14:42
24	285571	\\alklsws002\instdata\GC27\Data\120718.b\1207F031.D	12/08/2018 02:14	12/12/2018 12:45	12/12/2018 14:42
25	285573	\\alklsws002\instdata\GC27\Data\120718.b\1207F032.D	12/08/2018 02:45	12/12/2018 12:45	12/12/2018 14:42
26	285575	\\alklsws002\instdata\GC27\Data\120718.b\1207F033.D	12/08/2018 03:17	12/12/2018 12:45	12/12/2018 14:42
27	285577	\\alklsws002\instdata\GC27\Data\120718.b\1207F034.D	12/08/2018 03:48	12/12/2018 12:45	12/12/2018 14:42
28	285579	\\alklsws002\instdata\GC27\Data\120718.b\1207F035.D	12/08/2018 04:19	12/12/2018 12:45	12/12/2018 14:43
29	285581	\\alklsws002\instdata\GC27\Data\120718.b\1207F036.D	12/08/2018 04:50	12/12/2018 12:45	12/12/2018 14:43
30	285583	\\alklsws002\instdata\GC27\Data\120718.b\1207F037.D	12/08/2018 05:22	12/12/2018 12:45	12/12/2018 14:43
31	285585	\\alklsws002\instdata\GC27\Data\120718.b\1207F038.D	12/08/2018 05:53	12/12/2018 12:45	12/12/2018 14:43
32	285587	\\alklsws002\instdata\GC27\Data\120718.b\1207F039.D	12/08/2018 06:24	12/12/2018 12:45	12/12/2018 14:43
33	285589	\\alklsws002\instdata\GC27\Data\120718.b\1207F040.D	12/08/2018 06:56	12/12/2018 12:45	12/12/2018 14:43
34	285591	\\alklsws002\instdata\GC27\Data\120718.b\1207F041.D	12/08/2018 07:27	12/12/2018 12:45	12/12/2018 14:43
35	285593	\\alklsws002\instdata\GC27\Data\120718.b\1207F042.D	12/08/2018 07:58	12/12/2018 12:45	12/12/2018 14:43
36	285595	\\alklsws002\instdata\GC27\Data\120718.b\1207F043.D	12/08/2018 08:30	12/12/2018 12:45	12/12/2018 14:43
37	285597	\\alklsws002\instdata\GC27\Data\120718.b\1207F044.D	12/08/2018 09:01	12/12/2018 12:45	12/12/2018 14:43
38	285599	\\alklsws002\instdata\GC27\Data\120718.b\1207F045.D	12/08/2018 09:32	12/12/2018 12:45	12/12/2018 14:43
39	285601	\\alklsws002\instdata\GC27\Data\120718.b\1207F046.D	12/08/2018 10:04	12/12/2018 12:45	12/12/2018 14:43
40	285603	\\alklsws002\instdata\GC27\Data\120718.b\1207F047.D	12/08/2018 10:35	12/12/2018 12:45	12/12/2018 14:43

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Tetrachloro-m-xylene	1	1.9E+6	2	1.6E+6	3	1.6E+6	4	1.6E+6	5	1.5E+6	6	1.3E+6	1.6E+6	10.4
	7	1.5E+6	8	1.5E+6										
Decachlorobiphenyl	1	1.4E+6	2	1.3E+6	3	1.2E+6	4	1.2E+6	5	1.3E+6	6	1.0E+6	1.2E+6	9.4
	7	1.1E+6	8	1.1E+6										
Aroclor 1016 {1}	1	2.8E+4	2	3.0E+4	3	2.7E+4	4	2.8E+4	5	2.7E+4	6	2.4E+4	2.7E+4	6.7
	7	2.6E+4	8	2.5E+4										

MM 12/13/18

Initial Calibration - Detailed Report

Calibration ID:	CAL15912	**Instrument ID:**	GC27.i
Method ID:	MJ706	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Aroclor 1016 {2}	1	3.4E+4	2	3.0E+4	3	2.5E+4	4	2.6E+4	5	2.3E+4	6	2.1E+4	2.6E+4	17.0
	7	2.3E+4	8	2.2E+4										
Aroclor 1016 {3}	1	6.0E+4	2	6.1E+4	3	5.9E+4	4	5.7E+4	5	5.0E+4	6	4.5E+4	5.3E+4	12.2
	7	5.1E+4	8	4.4E+4										
Aroclor 1016 {4}	1	8.4E+4	2	7.7E+4	3	7.2E+4	4	7.2E+4	5	7.1E+4	6	6.3E+4	7.2E+4	9.1
	7	6.6E+4	8	6.9E+4										
Aroclor 1016 {5}	1	4.3E+4	2	3.7E+4	3	3.3E+4	4	3.2E+4	5	3.0E+4	6	2.6E+4	3.2E+4	16.9
	7	2.9E+4	8	2.8E+4										
Aroclor 1221 {1}					9	2.0E+4	10	2.1E+4	11	1.9E+4	12	1.7E+4	1.8E+4	10.7
	13	1.8E+4	14	1.8E+4	15	1.6E+4	16	1.6E+4						
Aroclor 1221 {2}					9	1.2E+4	10	1.3E+4	11	1.1E+4	12	1.1E+4	1.1E+4	9.2
	13	1.2E+4	14	1.2E+4	15	1.0E+4	16	9.8E+3						
Aroclor 1221 {3}					9	4.4E+4	10	5.2E+4	11	4.7E+4	12	4.3E+4	4.3E+4	10.9
	13	4.3E+4	14	4.3E+4	15	3.7E+4	16	3.7E+4						
Aroclor 1232 {1}									17	2.0E+4	18	2.2E+4	2.2E+4	10.7
	19	2.6E+4	20	2.3E+4	21	2.3E+4	22	2.0E+4	23	2.0E+4	24	1.9E+4		
Aroclor 1232 {2}									17	2.4E+4	18	3.2E+4	2.5E+4	14.9
	19	2.7E+4	20	2.4E+4	21	2.6E+4	22	2.2E+4	23	2.0E+4	24	2.1E+4		
Aroclor 1232 {3}									17	2.5E+4	18	2.2E+4	2.2E+4	10.1
	19	2.4E+4	20	2.2E+4	21	2.2E+4	22	1.9E+4	23	1.9E+4	24	1.9E+4		
Aroclor 1232 {4}									17	1.6E+4	18	1.4E+4	1.4E+4	8.6
	19	1.4E+4	20	1.4E+4	21	1.4E+4	22	1.2E+4	23	1.3E+4	24	1.2E+4		
Aroclor 1232 {5}									17	1.2E+4	18	1.1E+4	1.1E+4	8.2
	19	1.2E+4	20	1.1E+4	21	1.1E+4	22	9.8E+3	23	1.0E+4	24	1.0E+4		
Aroclor 1242 {1}	25	3.7E+4	26	4.7E+4	27	5.3E+4	28	5.0E+4	29	4.2E+4	30	3.9E+4	4.2E+4	16.6
	31	3.6E+4	32	3.5E+4										
Aroclor 1242 {2}	25	4.7E+4	26	4.1E+4	27	4.1E+4	28	4.1E+4	29	3.7E+4	30	3.5E+4	3.8E+4	12.8
	31	3.4E+4	32	3.1E+4										
Aroclor 1242 {3}	25	2.5E+4	26	2.5E+4	27	2.9E+4	28	2.7E+4	29	2.6E+4	30	2.4E+4	2.5E+4	8.6
	31	2.4E+4	32	2.2E+4										
Aroclor 1242 {4}	25	2.0E+4	26	1.9E+4	27	2.4E+4	28	2.1E+4	29	2.1E+4	30	2.0E+4	2.0E+4	8.3
	31	1.9E+4	32	1.8E+4										
Aroclor 1242 {5}	25	4.3E+4	26	3.6E+4	27	3.8E+4	28	3.3E+4	29	3.6E+4	30	3.0E+4	3.3E+4	17.2
	31	2.7E+4	32	2.5E+4										
Aroclor 1248 {1}					33	3.1E+4	34	3.1E+4	35	3.4E+4	36	3.3E+4	3.1E+4	7.0
	37	3.3E+4	38	3.0E+4	39	2.9E+4	40	2.8E+4						
Aroclor 1248 {2}					33	6.4E+4	34	5.0E+4	35	5.1E+4	36	4.8E+4	4.7E+4	18.0
	37	4.5E+4	38	4.2E+4	39	3.9E+4	40	3.8E+4						
Aroclor 1248 {3}					33	3.9E+4	34	4.1E+4	35	3.8E+4	36	3.6E+4	3.5E+4	12.4
	37	3.4E+4	38	3.3E+4	39	3.0E+4	40	2.9E+4						
Aroclor 1248 {4}					33	3.0E+4	34	3.8E+4	35	3.9E+4	36	3.4E+4	3.2E+4	13.3
	37	3.2E+4	38	3.0E+4	39	2.7E+4	40	2.9E+4						
Aroclor 1248 {5}					33	3.2E+4	34	2.8E+4	35	2.7E+4	36	2.8E+4	2.6E+4	11.8
	37	2.7E+4	38	2.3E+4	39	2.3E+4	40	2.2E+4						
Aroclor 1254 {1}					9	8.5E+4	10	8.1E+4	11	8.2E+4	12	7.1E+4	7.2E+4	14.1
	13	7.0E+4	14	6.5E+4	15	6.2E+4	16	5.7E+4						
Aroclor 1254 {2}					9	3.3E+4	10	3.5E+4	11	4.5E+4	12	3.5E+4	3.6E+4	12.0
	13	3.6E+4	14	3.5E+4	15	3.4E+4	16	3.1E+4						

mc 12/13/18

Initial Calibration - Detailed Report

Calibration ID:	CAL15912	**Instrument ID:**	GC27.i
Method ID:	MJ706	**Column Name:**	DB-35MS
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Aroclor 1254 {3}					9	7.2E+4	10	6.9E+4	11	6.1E+4	12	6.4E+4	6.0E+4	13.8
	13	5.8E+4	14	5.4E+4	15	5.3E+4	16	4.8E+4						
Aroclor 1254 {4}					9	9.1E+4	10	7.9E+4	11	7.6E+4	12	7.9E+4	7.4E+4	12.6
	13	7.4E+4	14	6.8E+4	15	6.6E+4	16	6.0E+4						
Aroclor 1254 {5}					9	3.7E+4	10	2.9E+4	11	3.2E+4	12	3.1E+4	3.0E+4	12.9
	13	3.1E+4	14	2.8E+4	15	2.7E+4	16	2.5E+4						
Aroclor 1260 {1}	1	9.8E+4	2	9.2E+4	3	8.5E+4	4	7.9E+4	5	7.9E+4	6	6.6E+4	8.0E+4	14.4
	7	7.1E+4	8	6.7E+4										
Aroclor 1260 {2}	1	4.5E+4	2	4.2E+4	3	3.8E+4	4	3.7E+4	5	3.8E+4	6	3.3E+4	3.8E+4	10.8
	7	3.6E+4	8	3.5E+4										
Aroclor 1260 {3}	1	8.1E+4	2	6.3E+4	3	5.9E+4	4	5.6E+4	5	5.7E+4	6	4.9E+4	5.8E+4	17.1
	7	5.3E+4	8	5.1E+4										
Aroclor 1260 {4}	1	6.5E+4	2	6.2E+4	3	6.0E+4	4	5.9E+4	5	5.9E+4	6	5.1E+4	5.8E+4	7.7
	7	5.6E+4	8	5.4E+4										
Aroclor 1260 {5}	1	1.0E+5	2	9.8E+4	3	9.6E+4	4	9.2E+4	5	9.3E+4	6	8.0E+4	9.2E+4	7.8
	7	9.0E+4	8	8.7E+4										
Aroclor 1262 {1}									17	8.7E+4	18	7.7E+4	7.0E+4	14.2
	19	7.6E+4	20	6.9E+4	21	6.9E+4	22	5.9E+4	23	6.1E+4	24	5.9E+4		
Aroclor 1262 {2}									17	5.2E+4	18	5.2E+4	4.8E+4	9.4
	19	5.2E+4	20	5.2E+4	21	5.0E+4	22	4.2E+4	23	4.4E+4	24	4.3E+4		
Aroclor 1262 {3}									17	9.8E+4	18	9.8E+4	9.2E+4	7.8
	19	9.9E+4	20	9.5E+4	21	9.6E+4	22	8.1E+4	23	8.5E+4	24	8.5E+4		
Aroclor 1262 {4}									17	1.7E+5	18	1.8E+5	1.7E+5	6.2
	19	1.8E+5	20	1.8E+5	21	1.8E+5	22	1.5E+5	23	1.6E+5	24	1.6E+5		
Aroclor 1262 {5}									17	9.1E+4	18	9.9E+4	8.3E+4	11.2
	19	8.5E+4	20	7.6E+4	21	8.6E+4	22	7.9E+4	23	7.5E+4	24	7.2E+4		
Aroclor 1268 {1}	25	2.7E+5	26	2.6E+5	27	2.5E+5	28	2.4E+5	29	2.2E+5	30	2.0E+5	2.3E+5	10.8
	31	2.1E+5	32	2.0E+5										
Aroclor 1268 {2}	25	2.2E+5	26	2.2E+5	27	2.1E+5	28	2.1E+5	29	2.0E+5	30	1.8E+5	2.0E+5	8.8
	31	1.9E+5	32	1.8E+5										
Aroclor 1268 {3}	25	1.9E+5	26	2.0E+5	27	2.0E+5	28	1.9E+5	29	1.7E+5	30	1.6E+5	1.8E+5	8.9
	31	1.7E+5	32	1.6E+5										
Aroclor 1268 {4}	25	5.8E+5	26	5.6E+5	27	5.6E+5	28	5.1E+5	29	5.0E+5	30	4.6E+5	5.2E+5	8.2
	31	5.0E+5	32	4.7E+5										

MM 12/13/18

Initial Calibration - Detailed Report

Calibration ID:	CAL15912	**Instrument ID:**	GC27.i
Method ID:	MJ706	**Column Name:**	DB-35MS

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	285525	\\alklsws002\instdata\GC27\Data\120718.b\1207F008.D	12/07/2018 14:15	12/12/2018 12:44	12/12/2018 14:42
2	285527	\\alklsws002\instdata\GC27\Data\120718.b\1207F009.D	12/07/2018 14:46	12/12/2018 12:44	12/12/2018 14:42
3	285529	\\alklsws002\instdata\GC27\Data\120718.b\1207F010.D	12/07/2018 15:18	12/12/2018 12:44	12/12/2018 14:42
4	285531	\\alklsws002\instdata\GC27\Data\120718.b\1207F011.D	12/07/2018 15:49	12/12/2018 12:44	12/12/2018 14:42
5	285533	\\alklsws002\instdata\GC27\Data\120718.b\1207F012.D	12/07/2018 16:20	12/12/2018 12:44	12/12/2018 14:42
6	285535	\\alklsws002\instdata\GC27\Data\120718.b\1207F013.D	12/07/2018 16:51	12/12/2018 12:44	12/12/2018 14:42
7	285537	\\alklsws002\instdata\GC27\Data\120718.b\1207F014.D	12/07/2018 17:22	12/12/2018 12:44	12/12/2018 14:42
8	285539	\\alklsws002\instdata\GC27\Data\120718.b\1207F015.D	12/07/2018 17:54	12/12/2018 12:44	12/12/2018 14:42
9	285541	\\alklsws002\instdata\GC27\Data\120718.b\1207F016.D	12/07/2018 18:25	12/12/2018 12:44	12/12/2018 14:42
10	285543	\\alklsws002\instdata\GC27\Data\120718.b\1207F017.D	12/07/2018 18:56	12/12/2018 12:44	12/12/2018 14:42
11	285545	\\alklsws002\instdata\GC27\Data\120718.b\1207F018.D	12/07/2018 19:27	12/12/2018 12:44	12/12/2018 14:42
12	285547	\\alklsws002\instdata\GC27\Data\120718.b\1207F019.D	12/07/2018 19:58	12/12/2018 12:44	12/12/2018 14:42
13	285549	\\alklsws002\instdata\GC27\Data\120718.b\1207F020.D	12/07/2018 20:29	12/12/2018 12:44	12/12/2018 14:42
14	285551	\\alklsws002\instdata\GC27\Data\120718.b\1207F021.D	12/07/2018 21:00	12/12/2018 12:44	12/12/2018 14:42
15	285553	\\alklsws002\instdata\GC27\Data\120718.b\1207F022.D	12/07/2018 21:31	12/12/2018 12:44	12/12/2018 14:42
16	285555	\\alklsws002\instdata\GC27\Data\120718.b\1207F023.D	12/07/2018 22:03	12/12/2018 12:44	12/12/2018 14:42
17	285557	\\alklsws002\instdata\GC27\Data\120718.b\1207F024.D	12/07/2018 22:34	12/12/2018 12:44	12/12/2018 14:42
18	285559	\\alklsws002\instdata\GC27\Data\120718.b\1207F025.D	12/07/2018 23:06	12/12/2018 12:44	12/12/2018 14:42
19	285561	\\alklsws002\instdata\GC27\Data\120718.b\1207F026.D	12/07/2018 23:37	12/12/2018 12:44	12/12/2018 14:42
20	285563	\\alklsws002\instdata\GC27\Data\120718.b\1207F027.D	12/08/2018 00:08	12/12/2018 12:44	12/12/2018 14:42
21	285565	\\alklsws002\instdata\GC27\Data\120718.b\1207F028.D	12/08/2018 00:40	12/12/2018 12:44	12/12/2018 14:42
22	285567	\\alklsws002\instdata\GC27\Data\120718.b\1207F029.D	12/08/2018 01:11	12/12/2018 12:44	12/12/2018 14:42
23	285569	\\alklsws002\instdata\GC27\Data\120718.b\1207F030.D	12/08/2018 01:42	12/12/2018 12:44	12/12/2018 14:42
24	285571	\\alklsws002\instdata\GC27\Data\120718.b\1207F031.D	12/08/2018 02:14	12/12/2018 12:45	12/12/2018 14:42
25	285573	\\alklsws002\instdata\GC27\Data\120718.b\1207F032.D	12/08/2018 02:45	12/12/2018 12:45	12/12/2018 14:42
26	285575	\\alklsws002\instdata\GC27\Data\120718.b\1207F033.D	12/08/2018 03:17	12/12/2018 12:45	12/12/2018 14:42
27	285577	\\alklsws002\instdata\GC27\Data\120718.b\1207F034.D	12/08/2018 03:48	12/12/2018 12:45	12/12/2018 14:42
28	285579	\\alklsws002\instdata\GC27\Data\120718.b\1207F035.D	12/08/2018 04:19	12/12/2018 12:45	12/12/2018 14:43
29	285581	\\alklsws002\instdata\GC27\Data\120718.b\1207F036.D	12/08/2018 04:50	12/12/2018 12:45	12/12/2018 14:43
30	285583	\\alklsws002\instdata\GC27\Data\120718.b\1207F037.D	12/08/2018 05:22	12/12/2018 12:45	12/12/2018 14:43
31	285585	\\alklsws002\instdata\GC27\Data\120718.b\1207F038.D	12/08/2018 05:53	12/12/2018 12:45	12/12/2018 14:43
32	285587	\\alklsws002\instdata\GC27\Data\120718.b\1207F039.D	12/08/2018 06:24	12/12/2018 12:45	12/12/2018 14:43
33	285589	\\alklsws002\instdata\GC27\Data\120718.b\1207F040.D	12/08/2018 06:56	12/12/2018 12:45	12/12/2018 14:43
34	285591	\\alklsws002\instdata\GC27\Data\120718.b\1207F041.D	12/08/2018 07:27	12/12/2018 12:45	12/12/2018 14:43
35	285593	\\alklsws002\instdata\GC27\Data\120718.b\1207F042.D	12/08/2018 07:58	12/12/2018 12:45	12/12/2018 14:43
36	285595	\\alklsws002\instdata\GC27\Data\120718.b\1207F043.D	12/08/2018 08:30	12/12/2018 12:45	12/12/2018 14:43
37	285597	\\alklsws002\instdata\GC27\Data\120718.b\1207F044.D	12/08/2018 09:01	12/12/2018 12:45	12/12/2018 14:43
38	285599	\\alklsws002\instdata\GC27\Data\120718.b\1207F045.D	12/08/2018 09:32	12/12/2018 12:45	12/12/2018 14:43
39	285601	\\alklsws002\instdata\GC27\Data\120718.b\1207F046.D	12/08/2018 10:04	12/12/2018 12:45	12/12/2018 14:43
40	285603	\\alklsws002\instdata\GC27\Data\120718.b\1207F047.D	12/08/2018 10:35	12/12/2018 12:45	12/12/2018 14:43

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene	1	0.1	0.1216	21.6	2	0.2	0.2082	4.1	3	0.5	0.4985	-0.3
	4	1	1.012	1.2	5	2	1.922	-3.9	6	5	4.257	-14.9
	7	10	9.509	-4.9	8	20	19.41	-2.9				

MR 12/13/18

020697

Initial Calibration - Detailed Report

Calibration ID: CAL15912 **Instrument ID:** GC27.i
Method ID: MJ706 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Decachlorobiphenyl	1	0.1	0.1160	16.0	2	0.2	0.2139	6.9	3	0.5	0.5039	0.8
	4	1	1.001	0.1	5	2	2.079	4.0	6	5	4.286	-14.3
	7	10	9.467	-5.3	8	20	18.37	-8.1				
Aroclor 1016 {1}	1	1	1.026	2.6	2	2	2.212	10.6	3	5	5.082	1.6
	4	10	10.42	4.2	5	20	19.99	-0.1	6	50	44.07	-11.9
	7	100	98.38	-1.6	8	200	189.1	-5.4				
Aroclor 1016 {2}	1	1	1.317	**31.7** (1)	2	2	2.355	17.7	3	5	4.934	-1.3
	4	10	10.30	3.0	5	20	18.26	-8.7	6	50	40.97	-18.1
	7	100	88.99	-11.0	8	200	173.3	-13.3				
Aroclor 1016 {3}	1	1	1.117	11.7	2	2	2.271	13.5	3	5	5.540	10.8
	4	10	10.62	6.2	5	20	18.91	-5.5	6	50	42.35	-15.3
	7	100	95.22	-4.8	8	200	166.7	-16.7				
Aroclor 1016 {4}	1	1	1.170	17.0	2	2	2.149	7.4	3	5	5.003	0.1
	4	10	10.07	0.7	5	20	19.78	-1.1	6	50	43.97	-12.1
	7	100	91.59	-8.4	8	200	192.8	-3.6				
Aroclor 1016 {5}	1	1	1.333	**33.3** (1)	2	2	2.297	14.8	3	5	5.161	3.2
	4	10	9.795	-2.1	5	20	18.54	-7.3	6	50	41.05	-17.9
	7	100	89.55	-10.5	8	200	172.8	-13.6				
Aroclor 1221 {1}									9	2	2.235	11.7
	10	4	4.551	13.8	11	10	10.66	6.6	12	20	18.71	-6.4
	13	40	40.75	1.9	14	100	100.2	0.2	15	200	172.7	-13.6
	16	400	343.6	-14.1								
Aroclor 1221 {2}									9	2	2.123	6.2
	10	4	4.492	12.3	11	10	9.926	-0.7	12	20	19.18	-4.1
	13	40	41.78	4.5	14	100	107.2	7.2	15	200	176.0	-12.0
	16	400	347.0	-13.2								
Aroclor 1221 {3}									9	2	2.049	2.5
	10	4	4.766	19.1	11	10	10.84	8.4	12	20	20.02	0.1
	13	40	39.71	-0.7	14	100	98.32	-1.7	15	200	173.4	-13.3
	16	400	342.6	-14.3								
Aroclor 1232 {1}												
					17	1	0.9070	-9.3	18	2	2.035	1.8
	19	5	5.970	19.4	20	10	10.78	7.8	21	20	20.96	4.8
	22	50	47.24	-5.5	23	100	94.65	-5.3	24	200	172.7	-13.6
Aroclor 1232 {2}												
					17	1	0.9669	-3.3	18	2	2.593	29.6
	19	5	5.504	10.1	20	10	9.839	-1.6	21	20	20.90	4.5
	22	50	45.14	-9.7	23	100	83.38	-16.6	24	200	174.1	-13.0
Aroclor 1232 {3}												
					17	1	1.143	14.3	18	2	2.051	2.5
	19	5	5.540	10.8	20	10	10.41	4.1	21	20	20.28	1.4
	22	50	44.18	-11.6	23	100	89.48	-10.5	24	200	178.1	-10.9

(1) Aroclor 1016 @ 1ppb average %D = 19.2% ≤ 30% MR 12/18/18

MR 12/13/18

Initial Calibration - Detailed Report

Calibration ID:	CAL15912	**Instrument ID:**	GC27.i
Method ID:	MJ706	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Aroclor 1232 {4}												
					17	1	1.150	15.0	18	2	2.026	1.3
	19	5	5.183	3.7	20	10	10.40	4.0	21	20	20.66	3.3
	22	50	44.85	-10.3	23	100	92.52	-7.5	24	200	181.2	-9.4
Aroclor 1232 {5}												
					17	1	1.141	14.1	18	2	2.100	5.0
	19	5	5.342	6.8	20	10	9.948	-0.5	21	20	19.61	-2.0
	22	50	45.20	-9.6	23	100	94.32	-5.7	24	200	183.7	-8.2
Aroclor 1242 {1}	25	1	0.8700	-13.0	26	2	2.219	10.9	27	5	6.308	26.2
	28	10	11.87	18.7	29	20	19.76	-1.2	30	50	45.70	-8.6
	31	100	83.89	-16.1	32	200	166.3	-16.8				
Aroclor 1242 {2}	25	1	1.216	21.6	26	2	2.127	6.4	27	5	5.336	6.7
	28	10	10.65	6.5	29	20	19.46	-2.7	30	50	45.85	-8.3
	31	100	88.10	-11.9	32	200	163.4	-18.3				
Aroclor 1242 {3}	25	1	1.004	0.4	26	2	1.988	-0.6	27	5	5.725	14.5
	28	10	10.80	8.0	29	20	20.33	1.7	30	50	47.99	-4.0
	31	100	93.42	-6.6	32	200	173.2	-13.4				
Aroclor 1242 {4}	25	1	0.9675	-3.2	26	2	1.919	-4.0	27	5	5.832	16.6
	28	10	10.46	4.6	29	20	20.82	4.1	30	50	48.71	-2.6
	31	100	95.16	-4.8	32	200	178.7	-10.7				
Aroclor 1242 {5}	25	1	1.275	27.5	26	2	2.127	6.4	27	5	5.640	12.8
	28	10	10.00	0.0	29	20	21.41	7.1	30	50	44.42	-11.2
	31	100	81.36	-18.6	32	200	152.0	-24.0				
Aroclor 1248 {1}									33	1	1.003	0.3
	34	2	1.972	-1.4	35	5	5.457	9.1	36	10	10.66	6.6
	37	20	21.26	6.3	38	50	48.10	-3.8	39	100	93.72	-6.3
	40	200	178.3	-10.8								
Aroclor 1248 {2}									33	1	1.366	**36.6** ①
	34	2	2.110	5.5	35	5	5.386	7.7	36	10	10.27	2.7
	37	20	19.23	-3.9	38	50	44.31	-11.4	39	100	81.91	-18.1
	40	200	161.7	-19.2								
Aroclor 1248 {3}									33	1	1.121	12.1
	34	2	2.364	18.2	35	5	5.391	7.8	36	10	10.20	2.0
	37	20	19.62	-1.9	38	50	46.56	-6.9	39	100	85.08	-14.9
	40	200	167.2	-16.4								
Aroclor 1248 {4}									33	1	0.9367	-6.3
	34	2	2.340	17.0	35	5	6.045	20.9	36	10	10.50	5.0
	37	20	19.61	-1.9	38	50	46.28	-7.4	39	100	83.95	-16.0
	40	200	177.7	-11.1								
Aroclor 1248 {5}									33	1	1.203	20.3
	34	2	2.111	5.5	35	5	5.102	2.0	36	10	10.54	5.4
	37	20	20.82	4.1	38	50	44.56	-10.9	39	100	89.50	-10.5
	40	200	167.8	-16.1								

① Aroclor 1248 @ 1ppb Average %D = 12.3% < 30% MR 12/13/18

MR 12/13/18

Initial Calibration - Detailed Report

Calibration ID: CAL15912 **Instrument ID:** GC27.i
Method ID: MJ706 **Column Name:** DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Aroclor 1254 {1}									9	1	1.181	18.1
	10	2	2.259	12.9	11	5	5.735	14.7	12	10	9.981	-0.2
	13	20	19.57	-2.2	14	50	45.11	-9.8	15	100	86.33	-13.7
	16	200	160.0	-20.0								
Aroclor 1254 {2}									9	1	0.9297	-7.0
	10	2	1.990	-0.5	11	5	6.370	27.4	12	10	9.913	-0.9
	13	20	20.21	1.1	14	50	49.12	-1.8	15	100	94.81	-5.2
	16	200	173.8	-13.1								
Aroclor 1254 {3}									9	1	1.204	20.4
	10	2	2.317	15.9	11	5	5.077	1.5	12	10	10.67	6.7
	13	20	19.34	-3.3	14	50	44.80	-10.4	15	100	88.62	-11.4
	16	200	161.1	-19.5								
Aroclor 1254 {4}									9	1	1.225	22.5
	10	2	2.128	6.4	11	5	5.141	2.8	12	10	10.60	6.0
	13	20	20.02	0.1	14	50	45.57	-8.9	15	100	89.62	-10.4
	16	200	163.0	-18.5								
Aroclor 1254 {5}									9	1	1.244	24.4
	10	2	1.960	-2.0	11	5	5.320	6.4	12	10	10.31	3.1
	13	20	20.90	4.5	14	50	46.30	-7.4	15	100	88.35	-11.6
	16	200	165.3	-17.3								
Aroclor 1260 {1}	1	1	1.231	23.1	2	2	2.304	15.2	3	5	5.317	6.3
	4	10	9.982	-0.2	5	20	19.84	-0.8	6	50	41.51	-17.0
	7	100	88.72	-11.3	8	200	169.3	-15.3				
Aroclor 1260 {2}	1	1	1.195	19.5	2	2	2.227	11.4	3	5	4.995	-0.1
	4	10	9.690	-3.1	5	20	20.09	0.5	6	50	43.08	-13.8
	7	100	93.65	-6.4	8	200	184.2	-7.9				
Aroclor 1260 {3}	1	1	1.378	**37.8**	2	2	2.150	7.5	3	5	5.064	1.3
	4	10	9.567	-4.3	5	20	19.35	-3.2	6	50	41.54	-16.9
	7	100	90.81	-9.2	8	200	174.1	-12.9				
Aroclor 1260 {4}	1	1	1.113	11.3	2	2	2.141	7.0	3	5	5.160	3.2
	4	10	10.10	1.0	5	20	20.17	0.8	6	50	43.55	-12.9
	7	100	96.57	-3.4	8	200	186.1	-7.0				
Aroclor 1260 {5}	1	1	1.126	12.6	2	2	2.116	5.8	3	5	5.197	3.9
	4	10	9.917	-0.8	5	20	20.07	0.3	6	50	43.42	-13.2
	7	100	97.05	-2.9	8	200	188.5	-5.8				
Aroclor 1262 {1}												
					17	1	1.242	24.2	18	2	2.222	11.1
	19	5	5.453	9.1	20	10	9.949	-0.5	21	20	19.86	-0.7
	22	50	42.42	-15.2	23	100	87.63	-12.4	24	200	168.8	-15.6
Aroclor 1262 {2}												
					17	1	1.063	6.3	18	2	2.166	8.3
	19	5	5.410	8.2	20	10	10.76	7.6	21	20	20.56	2.8
	22	50	43.69	-12.6	23	100	90.53	-9.5	24	200	177.7	-11.1

Initial Calibration - Detailed Report

Calibration ID:	CAL15912	**Instrument ID:**	GC27.i
Method ID:	MJ706	**Column Name:**	DB-35MS

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Aroclor 1262 {3}												
					17	1	1.060	6.0	18	2	2.140	7.0
	19	5	5.366	7.3	20	10	10.27	2.7	21	20	20.86	4.3
	22	50	44.17	-11.7	23	100	92.41	-7.6	24	200	184.0	-8.0
Aroclor 1262 {4}												
					17	1	1.020	2.0	18	2	2.055	2.8
	19	5	5.365	7.3	20	10	10.38	3.8	21	20	20.99	4.9
	22	50	44.57	-10.9	23	100	94.45	-5.6	24	200	191.3	-4.3
Aroclor 1262 {5}												
					17	1	1.098	9.8	18	2	2.397	19.8
	19	5	5.134	2.7	20	10	9.161	-8.4	21	20	20.82	4.1
	22	50	47.40	-5.2	23	100	90.35	-9.7	24	200	173.6	-13.2
Aroclor 1268 {1}	25	1	1.166	16.6	26	2	2.214	10.7	27	5	5.340	6.8
	28	10	10.21	2.1	29	20	19.32	-3.4	30	50	43.41	-13.2
	31	100	92.20	-7.8	32	200	176.6	-11.7				
Aroclor 1268 {2}	25	1	1.116	11.6	26	2	2.235	11.7	27	5	5.152	3.0
	28	10	10.20	2.0	29	20	19.64	-1.8	30	50	44.28	-11.4
	31	100	94.16	-5.8	32	200	181.5	-9.3				
Aroclor 1268 {3}	25	1	1.049	4.9	26	2	2.185	9.2	27	5	5.563	11.3
	28	10	10.54	5.4	29	20	19.50	-2.5	30	50	44.03	-11.9
	31	100	93.69	-6.3	32	200	180.0	-10.0				
Aroclor 1268 {4}	25	1	1.110	11.0	26	2	2.180	9.0	27	5	5.370	7.4
	28	10	9.845	-1.6	29	20	19.45	-2.7	30	50	44.49	-11.0
	31	100	96.34	-3.7	32	200	183.2	-8.4				

Initial Calibration - Detailed Report

Calibration ID:	CAL15912	**Instrument ID:**	GC27.i
Method ID:	MJ706	**Column Name:**	DB-XLB
		Calibration Fit:	AverageRF

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	285526	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F008.D	12/07/2018 14:15	12/12/2018 12:45	12/12/2018 14:42
2	285528	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F009.D	12/07/2018 14:46	12/12/2018 12:45	12/12/2018 14:42
3	285530	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F010.D	12/07/2018 15:18	12/12/2018 12:45	12/12/2018 14:42
4	285532	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F011.D	12/07/2018 15:49	12/12/2018 12:45	12/12/2018 14:42
5	285534	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F012.D	12/07/2018 16:20	12/12/2018 12:45	12/12/2018 14:42
6	285536	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F013.D	12/07/2018 16:51	12/12/2018 12:45	12/12/2018 14:42
7	285538	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F014.D	12/07/2018 17:22	12/12/2018 12:45	12/12/2018 14:42
8	285540	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F015.D	12/07/2018 17:54	12/12/2018 12:45	12/12/2018 14:42
9	285542	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F016.D	12/07/2018 18:25	12/12/2018 12:46	12/12/2018 14:42
10	285544	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F017.D	12/07/2018 18:56	12/12/2018 12:46	12/12/2018 14:42
11	285546	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F018.D	12/07/2018 19:27	12/12/2018 12:46	12/12/2018 14:42
12	285548	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F019.D	12/07/2018 19:58	12/12/2018 12:46	12/12/2018 14:42
13	285550	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F020.D	12/07/2018 20:29	12/12/2018 12:46	12/12/2018 14:42
14	285552	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F021.D	12/07/2018 21:00	12/12/2018 12:46	12/12/2018 14:42
15	285554	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F022.D	12/07/2018 21:31	12/12/2018 12:46	12/12/2018 14:42
16	285556	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F023.D	12/07/2018 22:03	12/12/2018 12:46	12/12/2018 14:42
17	285558	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F024.D	12/07/2018 22:34	12/12/2018 12:46	12/12/2018 14:42
18	285560	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F025.D	12/07/2018 23:06	12/12/2018 12:46	12/12/2018 14:42
19	285562	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F026.D	12/07/2018 23:37	12/12/2018 12:46	12/12/2018 14:42
20	285564	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F027.D	12/08/2018 00:08	12/12/2018 12:46	12/12/2018 14:42
21	285566	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F028.D	12/08/2018 00:40	12/12/2018 12:46	12/12/2018 14:42
22	285568	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F029.D	12/08/2018 01:11	12/12/2018 12:46	12/12/2018 14:42
23	285570	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F030.D	12/08/2018 01:42	12/12/2018 12:46	12/12/2018 14:42
24	285572	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F031.D	12/08/2018 02:14	12/12/2018 12:46	12/12/2018 14:42
25	285574	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F032.D	12/08/2018 02:45	12/12/2018 12:46	12/12/2018 14:42
26	285576	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F033.D	12/08/2018 03:17	12/12/2018 12:46	12/12/2018 14:42
27	285578	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F034.D	12/08/2018 03:48	12/12/2018 12:46	12/12/2018 14:43
28	285580	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F035.D	12/08/2018 04:19	12/12/2018 12:46	12/12/2018 14:43
29	285582	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F036.D	12/08/2018 04:50	12/12/2018 12:46	12/12/2018 14:43
30	285584	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F037.D	12/08/2018 05:22	12/12/2018 12:46	12/12/2018 14:43
31	285586	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F038.D	12/08/2018 05:53	12/12/2018 12:46	12/12/2018 14:43
32	285588	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F039.D	12/08/2018 06:24	12/12/2018 12:46	12/12/2018 14:43
33	285590	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F040.D	12/08/2018 06:56	12/12/2018 12:46	12/12/2018 14:43
34	285592	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F041.D	12/08/2018 07:27	12/12/2018 12:46	12/12/2018 14:43
35	285594	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F042.D	12/08/2018 07:58	12/12/2018 12:46	12/12/2018 14:43
36	285596	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F043.D	12/08/2018 08:30	12/12/2018 12:46	12/12/2018 14:43
37	285598	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F044.D	12/08/2018 09:01	12/12/2018 12:46	12/12/2018 14:43
38	285600	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F045.D	12/08/2018 09:32	12/12/2018 12:46	12/12/2018 14:43
39	285602	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F046.D	12/08/2018 10:04	12/12/2018 12:46	12/12/2018 14:43
40	285604	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F047.D	12/08/2018 10:35	12/12/2018 12:46	12/12/2018 14:43

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Tetrachloro-m-xylene	1	8.5E+5	2	7.2E+5	3	7.0E+5	4	7.6E+5	5	7.3E+5	6	6.2E+5	7.2E+5	9.4
	7	6.8E+5	8	6.7E+5										
Decachlorobiphenyl	1	7.3E+5	2	6.8E+5	3	6.5E+5	4	6.3E+5	5	6.5E+5	6	5.2E+5	6.2E+5	12.4
	7	5.6E+5	8	5.2E+5										
Aroclor 1016 {1}	1	2.7E+4	2	2.2E+4	3	2.1E+4	4	2.1E+4	5	2.0E+4	6	1.8E+4	2.1E+4	15.4
	7	1.9E+4	8	1.7E+4										

Initial Calibration - Detailed Report

Calibration ID:	CAL15912	**Instrument ID:**	GC27.i
Method ID:	MJ706	**Column Name:**	DB-XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Aroclor 1016 {2}	1	4.2E+4	2	3.3E+4	3	2.9E+4	4	3.0E+4	5	2.8E+4	6	2.4E+4	2.9E+4	19.6
	7	2.6E+4	8	2.4E+4										
Aroclor 1016 {3}	1	2.2E+4	2	2.0E+4	3	2.1E+4	4	2.3E+4	5	2.2E+4	6	1.9E+4	2.1E+4	6.7
	7	2.1E+4	8	1.9E+4										
Aroclor 1016 {4}	1	1.6E+4	2	1.6E+4	3	1.6E+4	4	1.7E+4	5	1.7E+4	6	1.5E+4	1.6E+4	5.8
	7	1.6E+4	8	1.5E+4										
Aroclor 1016 {5}	1	1.6E+4	2	1.6E+4	3	1.3E+4	4	1.4E+4	5	1.5E+4	6	1.2E+4	1.4E+4	9.6
	7	1.4E+4	8	1.2E+4										
Aroclor 1221 {1}					9	4.6E+3	10	5.4E+3	11	4.9E+3	12	4.8E+3	4.8E+3	6.7
	13	4.8E+3	14	4.8E+3	15	4.3E+3	16	4.6E+3						
Aroclor 1221 {2}					9	6.6E+3	10	6.8E+3	11	6.0E+3	12	5.2E+3	5.5E+3	15.4
	13	5.1E+3	14	5.1E+3	15	4.6E+3	16	4.6E+3						
Aroclor 1221 {3}					9	1.9E+4	10	2.0E+4	11	1.8E+4	12	1.9E+4	1.8E+4	7.4
	13	2.0E+4	14	1.9E+4	15	1.7E+4	16	1.6E+4						
Aroclor 1232 {1}									17	2.1E+4	18	1.7E+4	1.6E+4	16.3
	19	1.5E+4	20	1.5E+4	21	1.6E+4	22	1.4E+4	23	1.4E+4	24	1.3E+4		
Aroclor 1232 {2}									17	1.6E+4	18	1.4E+4	1.3E+4	14.1
	19	1.4E+4	20	1.3E+4	21	1.3E+4	22	1.1E+4	23	1.1E+4	24	1.1E+4		
Aroclor 1232 {3}									17	1.3E+4	18	1.3E+4	1.3E+4	5.1
	19	1.4E+4	20	1.4E+4	21	1.4E+4	22	1.3E+4	23	1.3E+4	24	1.3E+4		
Aroclor 1232 {4}									17	9.0E+3	18	7.3E+3	7.0E+3	13.6
	19	7.1E+3	20	6.9E+3	21	6.8E+3	22	6.0E+3	23	6.4E+3	24	6.2E+3		
Aroclor 1232 {5}									17	8.9E+3	18	7.5E+3	7.1E+3	11.5
	19	7.5E+3	20	6.8E+3	21	7.0E+3	22	6.4E+3	23	6.6E+3	24	6.4E+3		
Aroclor 1242 {1}	25	2.2E+4	26	1.7E+4	27	1.7E+4	28	1.8E+4	29	1.5E+4	30	1.5E+4	1.6E+4	17.6
	31	1.4E+4	32	1.3E+4										
Aroclor 1242 {2}	25	1.9E+4	26	1.8E+4	27	1.9E+4	28	1.9E+4	29	1.7E+4	30	1.6E+4	1.7E+4	10.2
	31	1.5E+4	32	1.4E+4										
Aroclor 1242 {3}	25	1.3E+4	26	1.1E+4	27	1.3E+4	28	8.4E+3	29	1.1E+4	30	1.1E+4	1.1E+4	13.0
	31	1.1E+4	32	1.0E+4										
Aroclor 1242 {4}	25	1.4E+4	26	1.2E+4	27	1.2E+4	28	1.2E+4	29	1.1E+4	30	1.1E+4	1.1E+4	12.4
	31	1.0E+4	32	9.4E+3										
Aroclor 1242 {5}	25	1.7E+4	26	1.7E+4	27	1.6E+4	28	1.5E+4	29	1.5E+4	30	1.4E+4	1.5E+4	11.7
	31	1.4E+4	32	1.2E+4										
Aroclor 1248 {1}					33	1.7E+4	34	1.3E+4	35	1.5E+4	36	1.3E+4	1.4E+4	10.9
	37	1.4E+4	38	1.3E+4	39	1.2E+4	40	1.2E+4						
Aroclor 1248 {2}					33	2.3E+4	34	2.2E+4	35	2.1E+4	36	2.0E+4	2.0E+4	12.1
	37	2.1E+4	38	1.8E+4	39	1.7E+4	40	1.6E+4						
Aroclor 1248 {3}					33	2.4E+4	34	2.0E+4	35	2.0E+4	36	1.9E+4	1.9E+4	13.7
	37	2.0E+4	38	1.7E+4	39	1.7E+4	40	1.6E+4						
Aroclor 1248 {4}					33	1.3E+4	34	1.5E+4	35	1.4E+4	36	1.5E+4	1.4E+4	5.6
	37	1.5E+4	38	1.4E+4	39	1.4E+4	40	1.3E+4						
Aroclor 1248 {5}					33	2.5E+4	34	2.0E+4	35	2.0E+4	36	2.0E+4	2.0E+4	12.0
	37	2.0E+4	38	1.9E+4	39	1.8E+4	40	1.7E+4						
Aroclor 1254 {1}					9	3.3E+4	10	3.1E+4	11	3.4E+4	12	3.2E+4	3.0E+4	11.6
	13	3.2E+4	14	2.9E+4	15	2.6E+4	16	2.4E+4						
Aroclor 1254 {2}					9	1.5E+4	10	1.6E+4	11	1.8E+4	12	1.6E+4	1.6E+4	9.3
	13	1.7E+4	14	1.6E+4	15	1.4E+4	16	1.3E+4						

Initial Calibration - Detailed Report

Calibration ID:	CAL15912	**Instrument ID:**	GC27.i
Method ID:	MJ706	**Column Name:**	DB-XLB
		Calibration Fit:	AverageRF

Parameter Name	#	RF	#	RF	#	RF	#	RF	#	RF	#	RF	Mean RF	%RSD
Aroclor 1254 {3}					9	1.7E+4	10	1.6E+4	11	1.8E+4	12	1.5E+4	1.6E+4	12.8
	13	1.8E+4	14	1.5E+4	15	1.4E+4	16	1.3E+4						
Aroclor 1254 {4}					9	1.6E+4	10	1.4E+4	11	1.4E+4	12	1.3E+4	1.4E+4	12.2
	13	1.5E+4	14	1.3E+4	15	1.2E+4	16	1.1E+4						
Aroclor 1254 {5}					9	2.8E+4	10	2.8E+4	11	2.9E+4	12	2.6E+4	2.5E+4	11.7
	13	2.7E+4	14	2.4E+4	15	2.2E+4	16	2.0E+4						
Aroclor 1260 {1}	1	2.0E+4	2	2.0E+4	3	1.9E+4	4	1.9E+4	5	1.8E+4	6	1.5E+4	1.8E+4	13.0
	7	1.6E+4	8	1.4E+4										
Aroclor 1260 {2}	1	4.6E+4	2	5.0E+4	3	4.5E+4	4	4.7E+4	5	4.4E+4	6	3.6E+4	4.3E+4	13.5
	7	3.8E+4	8	3.4E+4										
Aroclor 1260 {3}	1	1.8E+4	2	1.5E+4	3	1.4E+4	4	1.5E+4	5	1.5E+4	6	1.3E+4	1.5E+4	12.5
	7	1.4E+4	8	1.2E+4										
Aroclor 1260 {4}	1	3.6E+4	2	3.3E+4	3	3.0E+4	4	3.0E+4	5	2.9E+4	6	2.4E+4	2.9E+4	15.5
	7	2.5E+4	8	2.3E+4										
Aroclor 1260 {5}	1	5.1E+4	2	4.6E+4	3	4.3E+4	4	4.0E+4	5	3.9E+4	6	3.3E+4	4.0E+4	16.8
	7	3.5E+4	8	3.2E+4										
Aroclor 1262 {1}									17	3.3E+4	18	3.2E+4	2.9E+4	12.2
	19	3.3E+4	20	3.1E+4	21	3.0E+4	22	2.6E+4	23	2.6E+4	24	2.4E+4		
Aroclor 1262 {2}									17	5.4E+4	18	5.4E+4	4.7E+4	13.2
	19	5.1E+4	20	4.9E+4	21	4.9E+4	22	4.2E+4	23	4.1E+4	24	3.8E+4		
Aroclor 1262 {3}									17	3.7E+4	18	4.1E+4	3.6E+4	12.2
	19	4.0E+4	20	3.9E+4	21	3.8E+4	22	3.2E+4	23	3.1E+4	24	2.9E+4		
Aroclor 1262 {4}									17	5.5E+4	18	6.4E+4	5.3E+4	14.2
	19	6.0E+4	20	5.7E+4	21	5.5E+4	22	4.6E+4	23	4.6E+4	24	4.3E+4		
Aroclor 1262 {5}									17	2.8E+4	18	4.2E+4	3.3E+4	15.9
	19	3.3E+4	20	3.0E+4	21	3.8E+4	22	3.5E+4	23	3.0E+4	24	2.6E+4		
Aroclor 1268 {1}	25	1.2E+5	26	1.3E+5	27	1.1E+5	28	1.0E+5	29	9.8E+4	30	8.3E+4	1.0E+5	19.0
	31	8.1E+4	32	7.5E+4										
Aroclor 1268 {2}	25	9.5E+4	26	1.0E+5	27	9.3E+4	28	9.0E+4	29	8.6E+4	30	7.4E+4	8.5E+4	13.5
	31	7.4E+4	32	6.9E+4										
Aroclor 1268 {3}	25	9.0E+4	26	8.7E+4	27	8.8E+4	28	7.9E+4	29	7.7E+4	30	6.6E+4	7.7E+4	14.8
	31	6.5E+4	32	6.1E+4										
Aroclor 1268 {4}	25	2.5E+5	26	2.5E+5	27	2.4E+5	28	2.3E+5	29	2.2E+5	30	1.9E+5	2.2E+5	13.0
	31	1.9E+5	32	1.8E+5										

Initial Calibration - Detailed Report

Calibration ID:	CAL15912	**Instrument ID:**	GC27.i
Method ID:	MJ706	**Column Name:**	DB-XLB

#	FileID	File Location	Acquisition Date	Quantitation Date	Last Updated
1	285526	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F008.D	12/07/2018 14:15	12/12/2018 12:45	12/12/2018 14:42
2	285528	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F009.D	12/07/2018 14:46	12/12/2018 12:45	12/12/2018 14:42
3	285530	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F010.D	12/07/2018 15:18	12/12/2018 12:45	12/12/2018 14:42
4	285532	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F011.D	12/07/2018 15:49	12/12/2018 12:45	12/12/2018 14:42
5	285534	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F012.D	12/07/2018 16:20	12/12/2018 12:45	12/12/2018 14:42
6	285536	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F013.D	12/07/2018 16:51	12/12/2018 12:45	12/12/2018 14:42
7	285538	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F014.D	12/07/2018 17:22	12/12/2018 12:45	12/12/2018 14:42
8	285540	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F015.D	12/07/2018 17:54	12/12/2018 12:45	12/12/2018 14:42
9	285542	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F016.D	12/07/2018 18:25	12/12/2018 12:46	12/12/2018 14:42
10	285544	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F017.D	12/07/2018 18:56	12/12/2018 12:46	12/12/2018 14:42
11	285546	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F018.D	12/07/2018 19:27	12/12/2018 12:46	12/12/2018 14:42
12	285548	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F019.D	12/07/2018 19:58	12/12/2018 12:46	12/12/2018 14:42
13	285550	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F020.D	12/07/2018 20:29	12/12/2018 12:46	12/12/2018 14:42
14	285552	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F021.D	12/07/2018 21:00	12/12/2018 12:46	12/12/2018 14:42
15	285554	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F022.D	12/07/2018 21:31	12/12/2018 12:46	12/12/2018 14:42
16	285556	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F023.D	12/07/2018 22:03	12/12/2018 12:46	12/12/2018 14:42
17	285558	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F024.D	12/07/2018 22:34	12/12/2018 12:46	12/12/2018 14:42
18	285560	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F025.D	12/07/2018 23:06	12/12/2018 12:46	12/12/2018 14:42
19	285562	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F026.D	12/07/2018 23:37	12/12/2018 12:46	12/12/2018 14:42
20	285564	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F027.D	12/08/2018 00:08	12/12/2018 12:46	12/12/2018 14:42
21	285566	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F028.D	12/08/2018 00:40	12/12/2018 12:46	12/12/2018 14:42
22	285568	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F029.D	12/08/2018 01:11	12/12/2018 12:46	12/12/2018 14:42
23	285570	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F030.D	12/08/2018 01:42	12/12/2018 12:46	12/12/2018 14:42
24	285572	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F031.D	12/08/2018 02:14	12/12/2018 12:46	12/12/2018 14:42
25	285574	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F032.D	12/08/2018 02:45	12/12/2018 12:46	12/12/2018 14:42
26	285576	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F033.D	12/08/2018 03:17	12/12/2018 12:46	12/12/2018 14:42
27	285578	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F034.D	12/08/2018 03:48	12/12/2018 12:46	12/12/2018 14:43
28	285580	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F035.D	12/08/2018 04:19	12/12/2018 12:46	12/12/2018 14:43
29	285582	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F036.D	12/08/2018 04:50	12/12/2018 12:46	12/12/2018 14:43
30	285584	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F037.D	12/08/2018 05:22	12/12/2018 12:46	12/12/2018 14:43
31	285586	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F038.D	12/08/2018 05:53	12/12/2018 12:46	12/12/2018 14:43
32	285588	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F039.D	12/08/2018 06:24	12/12/2018 12:46	12/12/2018 14:43
33	285590	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F040.D	12/08/2018 06:56	12/12/2018 12:46	12/12/2018 14:43
34	285592	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F041.D	12/08/2018 07:27	12/12/2018 12:46	12/12/2018 14:43
35	285594	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F042.D	12/08/2018 07:58	12/12/2018 12:46	12/12/2018 14:43
36	285596	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F043.D	12/08/2018 08:30	12/12/2018 12:46	12/12/2018 14:43
37	285598	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F044.D	12/08/2018 09:01	12/12/2018 12:46	12/12/2018 14:43
38	285600	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F045.D	12/08/2018 09:32	12/12/2018 12:46	12/12/2018 14:43
39	285602	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F046.D	12/08/2018 10:04	12/12/2018 12:46	12/12/2018 14:43
40	285604	\\alklsws002\instdata\GC27\Data\120718_r.b\1207F047.D	12/08/2018 10:35	12/12/2018 12:46	12/12/2018 14:43

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Tetrachloro-m-xylene	1	0.1	0.1181	18.1	2	0.2	0.2019	1.0	3	0.5	0.4891	-2.2
	4	1	1.060	6.0	5	2	2.030	1.5	6	5	4.337	-13.3
	7	10	9.530	-4.7	8	20	18.71	-6.5				

MR 12/13/18

Calibration ID: CAL15912 **Instrument ID:** GC27.i
Method ID: MJ706 **Column Name:** DB-XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Decachlorobiphenyl	1	0.1	0.1188	18.8	2	0.2	0.2204	10.2	3	0.5	0.5228	4.6
	4	1	1.025	2.5	5	2	2.090	4.5	6	5	4.239	-15.2
	7	10	9.042	-9.6	8	20	16.85	-15.8				
Aroclor 1016 {1}	1	1	1.324	**32.4** ①	2	2	2.151	7.5	3	5	4.996	-0.1
	4	10	10.27	2.7	5	20	19.22	-3.9	6	50	43.03	-13.9
	7	100	91.09	-8.9	8	200	168.4	-15.8				
Aroclor 1016 {2}	1	1	1.418	**41.8** ①	2	2	2.215	10.7	3	5	4.891	-2.2
	4	10	10.23	2.3	5	20	18.97	-5.2	6	50	41.49	-17.0
	7	100	88.99	-11.0	8	200	161.1	-19.4				
Aroclor 1016 {3}	1	1	1.033	3.3	2	2	1.899	-5.0	3	5	5.120	2.4
	4	10	11.18	11.8	5	20	20.78	3.9	6	50	46.49	-7.0
	7	100	98.61	-1.4	8	200	184.1	-7.9				
Aroclor 1016 {4}	1	1	1.015	1.5	2	2	2.052	2.6	3	5	5.020	0.4
	4	10	10.83	8.3	5	20	20.87	4.3	6	50	46.08	-7.8
	7	100	99.60	-0.4	8	200	182.1	-9.0				
Aroclor 1016 {5}	1	1	1.141	14.1	2	2	2.213	10.7	3	5	4.764	-4.7
	4	10	10.30	3.0	5	20	20.84	4.2	6	50	44.13	-11.7
	7	100	96.41	-3.6	8	200	176.3	-11.8				
Aroclor 1221 {1}									9	2	1.918	-4.1
	10	4	4.522	13.0	11	10	10.28	2.8	12	20	20.08	0.4
	13	40	40.20	0.5	14	100	101.3	1.3	15	200	179.4	-10.3
	16	400	385.5	-3.6								
Aroclor 1221 {2}									9	2	2.392	19.6
	10	4	4.932	23.3	11	10	10.87	8.7	12	20	18.87	-5.6
	13	40	37.27	-6.8	14	100	93.23	-6.8	15	200	168.4	-15.8
	16	400	333.7	-16.6								
Aroclor 1221 {3}									9	2	2.002	0.1
	10	4	4.384	9.6	11	10	9.847	-1.5	12	20	20.52	2.6
	13	40	42.52	6.3	14	100	104.1	4.1	15	200	180.9	-9.5
	16	400	353.4	-11.7								
Aroclor 1232 {1}												
					17	1	1.354	**35.4** ②	18	2	2.193	9.6
	19	5	4.657	-6.9	20	10	9.693	-3.1	21	20	20.21	1.1
	22	50	44.75	-10.5	23	100	89.27	-10.7	24	200	170.0	-15.0
Aroclor 1232 {2}												
					17	1	1.236	23.6	18	2	2.216	10.8
	19	5	5.313	6.3	20	10	10.14	1.4	21	20	20.48	2.4
	22	50	42.62	-14.8	23	100	87.51	-12.5	24	200	165.5	-17.2
Aroclor 1232 {3}												
					17	1	0.9401	-6.0	18	2	1.978	-1.1
	19	5	5.273	5.5	20	10	10.54	5.4	21	20	21.26	6.3
	22	50	48.82	-2.4	23	100	98.81	-1.2	24	200	187.0	-6.5

① Aroclor 1016 @ 1ppb average %D = 18.6% < 30% MC 12/13/18

② Aroclor 1232 @ 1ppb average %D = 21.3% < 30% MC 12/13/18

Initial Calibration - Detailed Report

Calibration ID: CAL15912 **Instrument ID:** GC27.i
Method ID: MJ706 **Column Name:** DB-XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Aroclor 1232 {4}												
					17	1	1.294	29.4	18	2	2.102	5.1
	19	5	5.118	2.4	20	10	9.913	-0.9	21	20	19.60	-2.0
	22	50	43.00	-14.0	23	100	91.45	-8.6	24	200	177.1	-11.5
Aroclor 1232 {5}												
					17	1	1.242	24.2	18	2	2.095	4.8
	19	5	5.280	5.6	20	10	9.478	-5.2	21	20	19.61	-2.0
	22	50	44.66	-10.7	23	100	92.95	-7.0	24	200	180.7	-9.6
Aroclor 1242 {1}	25	1	1.351	**35.1** (1)	26	2	2.048	2.4	27	5	5.213	4.3
	28	10	11.01	10.1	29	20	18.43	-7.8	30	50	46.32	-7.4
	31	100	85.36	-14.6	32	200	155.9	-22.1				
Aroclor 1242 {2}	25	1	1.104	10.4	26	2	2.098	4.9	27	5	5.440	8.8
	28	10	10.97	9.7	29	20	19.68	-1.6	30	50	47.65	-4.7
	31	100	90.18	-9.8	32	200	164.8	-17.6				
Aroclor 1242 {3}	25	1	1.158	15.8	26	2	1.995	-0.3	27	5	5.794	15.9
	28	10	7.617	-23.8	29	20	20.24	1.2	30	50	52.06	4.1
	31	100	96.31	-3.7	32	200	181.5	-9.2				
Aroclor 1242 {4}	25	1	1.235	23.5	26	2	2.115	5.7	27	5	5.230	4.6
	28	10	10.34	3.4	29	20	19.34	-3.3	30	50	46.81	-6.4
	31	100	90.26	-9.7	32	200	164.4	-17.8				
Aroclor 1242 {5}	25	1	1.141	14.1	26	2	2.321	16.0	27	5	5.278	5.6
	28	10	9.912	-0.9	29	20	19.94	-0.3	30	50	46.33	-7.3
	31	100	91.34	-8.7	32	200	163.0	-18.5				
Aroclor 1248 {1}									33	1	1.228	22.8
	34	2	1.954	-2.3	35	5	5.379	7.6	36	10	9.295	-7.1
	37	20	20.46	2.3	38	50	47.29	-5.4	39	100	92.20	-7.8
	40	200	179.7	-10.2								
Aroclor 1248 {2}									33	1	1.154	15.4
	34	2	2.205	10.3	35	5	5.424	8.5	36	10	10.10	1.0
	37	20	20.98	4.9	38	50	45.74	-8.5	39	100	87.19	-12.8
	40	200	162.5	-18.7								
Aroclor 1248 {3}									33	1	1.248	24.8
	34	2	2.108	5.4	35	5	5.284	5.7	36	10	9.871	-1.3
	37	20	21.24	6.2	38	50	45.55	-8.9	39	100	86.65	-13.4
	40	200	163.0	-18.5								
Aroclor 1248 {4}									33	1	0.9484	-5.2
	34	2	2.106	5.3	35	5	5.135	2.7	36	10	10.47	4.7
	37	20	21.15	5.7	38	50	49.59	-0.8	39	100	96.97	-3.0
	40	200	181.1	-9.5								
Aroclor 1248 {5}									33	1	1.257	25.7
	34	2	1.984	-0.8	35	5	5.135	2.7	36	10	10.08	0.8
	37	20	20.16	0.8	38	50	47.64	-4.7	39	100	91.11	-8.9
	40	200	168.9	-15.5								

(1) Aroclor 1242 @ 1ppb average %D = 19.78% < 30% MR 12/13/18

Initial Calibration - Detailed Report

Calibration ID: CAL15912 **Instrument ID:** GC27.i
Method ID: MJ706 **Column Name:** DB-XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Aroclor 1254 {1}									9	1	1.103	10.3
	10	2	2.074	3.7	11	5	5.653	13.1	12	10	10.50	5.0
	13	20	21.07	5.4	14	50	47.94	-4.1	15	100	86.99	-13.0
	16	200	159.5	-20.2								
Aroclor 1254 {2}									9	1	0.9875	-1.3
	10	2	2.042	2.1	11	5	5.782	15.6	12	10	10.22	2.2
	13	20	21.18	5.9	14	50	49.83	-0.3	15	100	91.60	-8.4
	16	200	168.4	-15.8								
Aroclor 1254 {3}									9	1	1.106	10.6
	10	2	2.088	4.4	11	5	5.604	12.1	12	10	9.791	-2.1
	13	20	22.98	14.9	14	50	47.21	-5.6	15	100	86.14	-13.9
	16	200	159.1	-20.5								
Aroclor 1254 {4}									9	1	1.208	20.8
	10	2	2.044	2.2	11	5	5.229	4.6	12	10	9.904	-1.0
	13	20	21.66	8.3	14	50	47.72	-4.6	15	100	88.92	-11.1
	16	200	161.4	-19.3								
Aroclor 1254 {5}									9	1	1.086	8.6
	10	2	2.195	9.7	11	5	5.684	13.7	12	10	10.24	2.4
	13	20	20.80	4.0	14	50	46.74	-6.5	15	100	88.03	-12.0
	16	200	160.2	-19.9								
Aroclor 1260 {1}	1	1	1.119	11.9	2	2	2.290	14.5	3	5	5.415	8.3
	4	10	10.81	8.1	5	20	20.13	0.7	6	50	42.28	-15.4
	7	100	91.49	-8.5	8	200	161.1	-19.5				
Aroclor 1260 {2}	1	1	1.088	8.8	2	2	2.348	17.4	3	5	5.301	6.0
	4	10	10.96	9.6	5	20	20.84	4.2	6	50	42.61	-14.8
	7	100	88.99	-11.0	8	200	159.5	-20.3				
Aroclor 1260 {3}	1	1	1.262	26.2	2	2	2.068	3.4	3	5	4.889	-2.2
	4	10	10.14	1.4	5	20	20.54	2.7	6	50	43.60	-12.8
	7	100	95.36	-4.6	8	200	172.0	-14.0				
Aroclor 1260 {4}	1	1	1.247	24.7	2	2	2.309	15.5	3	5	5.196	3.9
	4	10	10.41	4.1	5	20	20.02	0.1	6	50	41.60	-16.8
	7	100	88.36	-11.6	8	200	160.4	-19.8				
Aroclor 1260 {5}	1	1	1.282	28.2	2	2	2.308	15.4	3	5	5.379	7.6
	4	10	10.12	1.2	5	20	19.74	-1.3	6	50	41.38	-17.2
	7	100	86.41	-13.6	8	200	159.5	-20.2				
Aroclor 1262 {1}												
					17	1	1.134	13.4	18	2	2.165	8.3
	19	5	5.554	11.1	20	10	10.59	5.9	21	20	20.71	3.6
	22	50	43.91	-12.2	23	100	88.25	-11.7	24	200	163.5	-18.3
Aroclor 1262 {2}												
					17	1	1.142	14.2	18	2	2.295	14.7
	19	5	5.375	7.5	20	10	10.51	5.1	21	20	20.72	3.6
	22	50	44.11	-11.8	23	100	86.01	-14.0	24	200	161.3	-19.4

MR 12/13/18

020708

Initial Calibration - Detailed Report

Calibration ID: CAL15912 **Instrument ID:** GC27.i
Method ID: MJ706 **Column Name:** DB-XLB

Parameter Name	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D	#	Cal Amt	Calc Conc	% D
Aroclor 1262 {3}												
					17	1	1.041	4.1	18	2	2.291	14.5
	19	5	5.559	11.2	20	10	10.76	7.6	21	20	20.95	4.8
	22	50	44.07	-11.9	23	100	87.80	-12.2	24	200	163.8	-18.1
Aroclor 1262 {4}												
					17	1	1.029	2.9	18	2	2.411	20.5
	19	5	5.630	12.6	20	10	10.65	6.5	21	20	20.83	4.2
	22	50	43.28	-13.4	23	100	86.32	-13.7	24	200	160.7	-19.7
Aroclor 1262 {5}												
					17	1	0.8592	-14.1	18	2	2.546	27.3
	19	5	5.103	2.1	20	10	9.111	-8.9	21	20	23.02	15.1
	22	50	53.29	6.6	23	100	92.16	-7.8	24	200	159.6	-20.2
Aroclor 1268 {1}	25	1	1.212	21.2	26	2	2.508	25.4	27	5	5.594	11.9
	28	10	10.45	4.5	29	20	19.51	-2.4	30	50	41.56	-16.9
	31	100	81.18	-18.8	32	200	150.2	-24.9				
Aroclor 1268 {2}	25	1	1.113	11.3	26	2	2.355	17.7	27	5	5.480	9.6
	28	10	10.55	5.5	29	20	20.23	1.2	30	50	43.73	-12.5
	31	100	86.54	-13.5	32	200	161.4	-19.3				
Aroclor 1268 {3}	25	1	1.177	17.7	26	2	2.260	13.0	27	5	5.728	14.6
	28	10	10.35	3.5	29	20	20.06	0.3	30	50	43.14	-13.7
	31	100	85.44	-14.6	32	200	158.5	-20.7				
Aroclor 1268 {4}	25	1	1.146	14.6	26	2	2.291	14.6	27	5	5.499	10.0
	28	10	10.35	3.5	29	20	20.14	0.7	30	50	43.49	-13.0
	31	100	87.21	-12.8	32	200	165.0	-17.5				

MR 12/13/18

020709

Second Source Calibration Verification Summary

CalibrationID: CAL15912 **Units:** ppb

Method ID: MJ706 **Column:** DB-35MS

DataFile Location: \\ALKLSWS002\INSTDATA\GC27\DATA\120718.B\1207F049.D

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift	
Aroclor 1016	285605	NA	20				20.00	21.5	7.6	
Aroclor 1016 {1}	285605	AverageRF	100	2.7E+4	3.1E+4	15.9	20.00	23.2		
Aroclor 1016 {2}	285605	AverageRF	100	2.6E+4	2.7E+4	5.1	20.00	21.0		
Aroclor 1016 {3}	285605	AverageRF	100	5.3E+4	5.9E+4	11.4	20.00	22.3		
Aroclor 1016 {4}	285605	AverageRF	100	7.2E+4	7.4E+4	3.5	20.00	20.7		
Aroclor 1016 {5}	285605	AverageRF	100	3.2E+4	3.3E+4	2.4	20.00	20.5		
Aroclor 1221	285609	NA	20				20.00	18.5	-7.4	
Aroclor 1221 {1}	285609	AverageRF	100	1.8E+4	1.6E+4	-10.6	20.00	17.9		
Aroclor 1221 {2}	285609	AverageRF	100	1.1E+4	1.1E+4	-5.4	20.00	18.9		
Aroclor 1221 {3}	285609	AverageRF	100	4.3E+4	4.1E+4	-6.2	20.00	18.8		
Aroclor 1232	285611	NA	20				20.00	19.7	-1.7	
Aroclor 1232 {1}	285611	AverageRF	100	2.2E+4	2.1E+4	-4.2	20.00	19.2		
Aroclor 1232 {2}	285611	AverageRF	100	2.5E+4	2.3E+4	-4.8	20.00	19.0		
Aroclor 1232 {3}	285611	AverageRF	100	2.2E+4	2.1E+4	-2.0	20.00	19.6		
Aroclor 1232 {4}	285611	AverageRF	100	1.4E+4	1.4E+4	0.1	20.00	20.0		
Aroclor 1232 {5}	285611	AverageRF	100	1.1E+4	1.1E+4	2.2	20.00	20.4		
Aroclor 1242	285613	NA	20				20.00	19.0	-4.9	
Aroclor 1242 {1}	285613	AverageRF	100	4.2E+4	4.1E+4	-3.9	20.00	19.2		
Aroclor 1242 {2}	285613	AverageRF	100	3.8E+4	3.5E+4	-8.8	20.00	18.2		
Aroclor 1242 {3}	285613	AverageRF	100	2.5E+4	2.6E+4	1.1	20.00	20.2		
Aroclor 1242 {4}	285613	AverageRF	100	2.0E+4	2.0E+4	0.8	20.00	20.2		
Aroclor 1242 {5}	285613	AverageRF	100	3.3E+4	2.9E+4	-13.8	20.00	17.2		
Aroclor 1248	285615	NA	20				20.00	19.6	-1.8	
Aroclor 1248 {1}	285615	AverageRF	100	3.1E+4	3.3E+4	7.0	20.00	21.4		
Aroclor 1248 {2}	285615	AverageRF	100	4.7E+4	4.5E+4	-3.2	20.00	19.4		
Aroclor 1248 {3}	285615	AverageRF	100	3.5E+4	3.5E+4	-1.0	20.00	19.8		
Aroclor 1248 {4}	285615	AverageRF	100	3.2E+4	3.3E+4	0.4	20.00	20.1		
Aroclor 1248 {5}	285615	AverageRF	100	2.6E+4	2.3E+4	-12.2	20.00	17.6		
Aroclor 1254	285617	NA	20				20.00	19.9	-0.3	
Aroclor 1254 {1}	285617	AverageRF	100	7.2E+4	6.5E+4	-9.1	20.00	18.2		
Aroclor 1254 {2}	285617	AverageRF	100	3.6E+4	3.5E+4	-2.6	20.00	19.5		
Aroclor 1254 {3}	285617	AverageRF	100	6.0E+4	6.1E+4	1.2	20.00	20.2		
Aroclor 1254 {4}	285617	AverageRF	100	7.4E+4	7.5E+4	1.6	20.00	20.3		
Aroclor 1254 {5}	285617	AverageRF	100	3.0E+4	3.2E+4	7.3	20.00	21.5		
Aroclor 1260	285607	NA	20				20.00	24.9	24.6	*
Aroclor 1260 {1}	285607	AverageRF	100	8.0E+4	8.8E+4	11.1	20.00	22.2		
Aroclor 1260 {2}	285607	AverageRF	100	3.8E+4	4.2E+4	10.0	20.00	22.0		
Aroclor 1260 {3}	285607	AverageRF	100	5.8E+4	7.9E+4	34.5	20.00	26.9		
Aroclor 1260 {4}	285607	AverageRF	100	5.8E+4	7.9E+4	35.6	20.00	27.1		
Aroclor 1260 {5}	285607	AverageRF	100	9.2E+4	1.2E+5	31.9	20.00	26.4		
Aroclor 1262	285619	NA	20				20.00	20.6	3.1	
Aroclor 1262 {1}	285619	AverageRF	100	7.0E+4	7.0E+4	0.5	20.00	20.1		
Aroclor 1262 {2}	285619	AverageRF	100	4.8E+4	5.1E+4	5.4	20.00	21.1		
Aroclor 1262 {3}	285619	AverageRF	100	9.2E+4	1.0E+5	8.9	20.00	21.8		
Aroclor 1262 {4}	285619	AverageRF	100	1.7E+5	1.8E+5	6.6	20.00	21.3		
Aroclor 1262 {5}	285619	AverageRF	100	8.3E+4	7.8E+4	-5.8	20.00	18.8		
Aroclor 1268	285621	NA	20				20.00	19.9	-0.6	

MMC 12/13/18

020710

Second Source Calibration Verification Summary

CalibrationID: CAL15912

Method ID: MJ706

DataFile Location: \\ALKLSWS002\INSTDATA\GC27\DATA\120718.B\1207F057.D

Units: ppb

Column: DB-35MS

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
Aroclor 1268 {1}	285621	AverageRF	100	2.3E+5	2.4E+5	2.1	20.00	20.4	
Aroclor 1268 {2}	285621	AverageRF	100	2.0E+5	2.3E+5	15.8	20.00	23.2	
Aroclor 1268 {3}	285621	AverageRF	100	1.8E+5	1.6E+5	-8.6	20.00	18.3	
Aroclor 1268 {4}	285621	AverageRF	100	5.2E+5	4.6E+5	-11.8	20.00	17.6	

Second Source Calibration Verification Summary

CalibrationID: CAL15912 **Units:** ppb

Method ID: MJ706 **Column:** DB-XLB

DataFile Location: \\ALKLSWS002\INSTDATA\GC27\DATA\120718_R.B\1207F04

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
Aroclor 1016	285606	NA	20				20.00	19.5	-2.6
Aroclor 1016 {1}	285606	AverageRF	100	2.1E+4	2.0E+4	-4.7	20.00	19.1	
Aroclor 1016 {2}	285606	AverageRF	100	2.9E+4	2.7E+4	-7.8	20.00	18.4	
Aroclor 1016 {3}	285606	AverageRF	100	2.1E+4	2.1E+4	1.1	20.00	20.2	
Aroclor 1016 {4}	285606	AverageRF	100	1.6E+4	1.4E+4	-15.3	20.00	16.9	
Aroclor 1016 {5}	285606	AverageRF	100	1.4E+4	1.6E+4	13.4	20.00	22.7	
Aroclor 1221	285610	NA	20				20.00	17.5	-12.6
Aroclor 1221 {1}	285610	AverageRF	100	4.8E+3	4.1E+3	-14.0	20.00	17.2	
Aroclor 1221 {2}	285610	AverageRF	100	5.5E+3	4.8E+3	-13.8	20.00	17.2	
Aroclor 1221 {3}	285610	AverageRF	100	1.8E+4	1.7E+4	-10.1	20.00	18.0	
Aroclor 1232	285612	NA	20				20.00	17.2	-13.9
Aroclor 1232 {1}	285612	AverageRF	100	1.6E+4	1.3E+4	-16.3	20.00	16.7	
Aroclor 1232 {2}	285612	AverageRF	100	1.3E+4	1.1E+4	-16.2	20.00	16.8	
Aroclor 1232 {3}	285612	AverageRF	100	1.3E+4	1.3E+4	-6.0	20.00	18.8	
Aroclor 1232 {4}	285612	AverageRF	100	7.0E+3	5.3E+3	-24.1	20.00	15.2	
Aroclor 1232 {5}	285612	AverageRF	100	7.1E+3	6.6E+3	-7.0	20.00	18.6	
Aroclor 1242	285614	NA	20				20.00	18.8	-6.0
Aroclor 1242 {1}	285614	AverageRF	100	1.6E+4	1.4E+4	-15.5	20.00	16.9	
Aroclor 1242 {2}	285614	AverageRF	100	1.7E+4	1.5E+4	-9.5	20.00	18.1	
Aroclor 1242 {3}	285614	AverageRF	100	1.1E+4	1.2E+4	10.4	20.00	22.1	
Aroclor 1242 {4}	285614	AverageRF	100	1.1E+4	1.1E+4	-8.1	20.00	18.4	
Aroclor 1242 {5}	285614	AverageRF	100	1.5E+4	1.4E+4	-7.4	20.00	18.5	
Aroclor 1248	285616	NA	20				20.00	21.0	5.0
Aroclor 1248 {1}	285616	AverageRF	100	1.4E+4	1.7E+4	22.7	20.00	24.5	
Aroclor 1248 {2}	285616	AverageRF	100	2.0E+4	2.0E+4	1.4	20.00	20.3	
Aroclor 1248 {3}	285616	AverageRF	100	1.9E+4	1.8E+4	-3.1	20.00	19.4	
Aroclor 1248 {4}	285616	AverageRF	100	1.4E+4	1.5E+4	4.7	20.00	20.9	
Aroclor 1248 {5}	285616	AverageRF	100	2.0E+4	2.0E+4	-0.7	20.00	19.9	
Aroclor 1254	285618	NA	20				20.00	18.4	-8.2
Aroclor 1254 {1}	285618	AverageRF	100	3.0E+4	2.7E+4	-10.3	20.00	17.9	
Aroclor 1254 {2}	285618	AverageRF	100	1.6E+4	1.2E+4	-23.8	20.00	15.2	
Aroclor 1254 {3}	285618	AverageRF	100	1.6E+4	1.4E+4	-9.6	20.00	18.1	
Aroclor 1254 {4}	285618	AverageRF	100	1.4E+4	1.5E+4	8.3	20.00	21.7	
Aroclor 1254 {5}	285618	AverageRF	100	2.5E+4	2.4E+4	-5.5	20.00	18.9	
Aroclor 1260	285608	NA	20				20.00	22.3	11.4
Aroclor 1260 {1}	285608	AverageRF	100	1.8E+4	1.9E+4	5.9	20.00	21.2	
Aroclor 1260 {2}	285608	AverageRF	100	4.3E+4	4.6E+4	8.5	20.00	21.7	
Aroclor 1260 {3}	285608	AverageRF	100	1.5E+4	1.8E+4	20.8	20.00	24.2	
Aroclor 1260 {4}	285608	AverageRF	100	2.9E+4	3.3E+4	14.6	20.00	22.9	
Aroclor 1260 {5}	285608	AverageRF	100	4.0E+4	4.3E+4	7.0	20.00	21.4	
Aroclor 1262	285620	NA	20				20.00	19.5	-2.4
Aroclor 1262 {1}	285620	AverageRF	100	2.9E+4	2.9E+4	-0.1	20.00	20.0	
Aroclor 1262 {2}	285620	AverageRF	100	4.7E+4	4.8E+4	1.8	20.00	20.4	
Aroclor 1262 {3}	285620	AverageRF	100	3.6E+4	3.7E+4	2.6	20.00	20.5	
Aroclor 1262 {4}	285620	AverageRF	100	5.3E+4	5.4E+4	0.8	20.00	20.2	
Aroclor 1262 {5}	285620	AverageRF	100	3.3E+4	2.7E+4	-17.0	20.00	16.6	
Aroclor 1268	285622	NA	20				20.00	18.9	-5.7

Second Source Calibration Verification Summary

CalibrationID: CAL15912 **Units:** ppb

Method ID: MJ706 **Column:** DB-XLB

DataFile Location: \\ALKLSWS002\INSTDATA\GC27\DATA\120718_R.B\1207F05'

Parameter Name	File ID	Curve Fit	Method Criteria	AveRF	SSV RF	% Diff	True Value	Sol'n Conc	% Drift
Aroclor 1268 {1}	285622	AverageRF	100	1.0E+5	9.6E+4	-4.4	20.00	19.1	
Aroclor 1268 {2}	285622	AverageRF	100	8.5E+4	9.4E+4	10.9	20.00	22.2	
Aroclor 1268 {3}	285622	AverageRF	100	7.7E+4	6.6E+4	-13.3	20.00	17.3	
Aroclor 1268 {4}	285622	AverageRF	100	2.2E+5	1.9E+5	-16.0	20.00	16.8	

Report Date : 11-Dec-2018 14:57

CAS

INITIAL CALIBRATION DATA

Start Cal Date : 07-DEC-2018 14:15
End Cal Date : 08-DEC-2018 10:35
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Cal Date : 11-Dec-2018 14:54 tuser
Curve Type : Average

Calibration File Names:
Level 1: \\alklsws002\instdata\GC27\Data\120718.b\1207F040.D
Level 2: \\alklsws002\instdata\GC27\Data\120718.b\1207F041.D
Level 3: \\alklsws002\instdata\GC27\Data\120718.b\1207F042.D
Level 4: \\alklsws002\instdata\GC27\Data\120718.b\1207F043.D
Level 5: \\alklsws002\instdata\GC27\Data\120718.b\1207F044.D
Level 6: \\alklsws002\instdata\GC27\Data\120718.b\1207F045.D
Level 7: \\alklsws002\instdata\GC27\Data\120718.b\1207F046.D
Level 8: \\alklsws002\instdata\GC27\Data\120718.b\1207F047.D

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
2 Aroclor 1016(1)	27618	29772	27359	28040	26902	23725		
	26481	25452					26919	6.678
(2)	33630	30062	25195	26290	23318	20919		
	22721	22127					25533	17.037
(3)	59587	60572	59120	56655	50442	45195		
	50804	44463					53355	12.181
(4)	83829	77008	71720	72172	70891	63034		
	65642	69088					71673	9.054
(5)	42926	36989	33249	31550	29862	26445		
	28845	27827					32212	16.941
3 Aroclor 1221(1)	20222	20590	19292	16931	18437	18128		
	15628	15547					18097	10.697
(2)	12046	12741	11262	10879	11851	12159		
	9987	9844					11346	9.232
(3)	44306	51521	46859	43289	42929	42515		
	37481	37042					43243	10.882

MC 12/18/18

020714

Report Date : 11-Dec-2018 14:57

CAS

INITIAL CALIBRATION DATA

Start Cal Date : 07-DEC-2018 14:15
End Cal Date : 08-DEC-2018 10:35
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Cal Date : 11-Dec-2018 14:54 tuser
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	50.000 Level 6	___ RRF	% RSD
	100.000 Level 7	200.000 Level 8						
4 Aroclor 1232(1)	19566	21951	25756	23264	22608	20381		
	20419	18628					21572	10.661
(2)	23763	31862	27055	24180	25683	22185		
	20490	21388					24576	14.899
(3)	24647	22114	23900	22454	21870	19059		
	19301	19208					21569	10.081
(4)	15535	13688	14008	14049	13963	12122		
	12504	12247					13515	8.579
(5)	12389	11406	11603	10805	10648	9819		
	10244	9973					10861	8.151
5 Aroclor 1242(1)	36889	47036	53491	50320	41885	38749		
	35569	35259					42400	16.650
(2)	46690	40824	40962	40869	37342	35201		
	33818	31369					38384	12.802
(3)	25393	25151	28964	27329	25718	24282		
	23631	21908					25297	8.592
(4)	19559	19402	23578	21147	21044	19694		
	19237	18061					20215	8.325
(5)	42692	35599	37758	33487	35834	29738		
	27232	25438					33472	17.159

MR 12/13/18

020715

Report Date : 11-Dec-2018 14:57

CAS

INITIAL CALIBRATION DATA

Start Cal Date : 07-DEC-2018 14:15
End Cal Date : 08-DEC-2018 10:35
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Cal Date : 11-Dec-2018 14:54 tuser
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	50.000 Level 6	___ RRF	% RSD
	100.000 Level 7	200.000 Level 8						
6 Aroclor 1248(1)	31077	30552	33820	33036	32934	29808		
	29040	27625					30986	6.974
(2)	64202	49587	50638	48274	45196	41656		
	38504	38001					47007	18.023
(3)	39157	41303	37673	35643	34278	32542		
	29729	29221					34943	12.440
(4)	30396	37973	39230	34058	31821	30036		
	27243	28838					32449	13.263
(5)	31578	27697	26778	27666	27319	23387		
	23485	22021					26241	11.845
7 Aroclor 1254(1)	84536	80823	82082	71422	70004	64565		
	61776	57264					71559	14.137
(2)	33152	35485	45429	35351	36042	35030		
	33808	30987					35660	11.976
(3)	72208	69496	60899	64027	58008	53749		
	53154	48306					59981	13.847
(4)	90865	78916	76271	78606	74265	67607		
	66484	60446					74182	12.644
(5)	37361	29431	31949	30955	31377	27805		
	26532	24821					30029	12.884

MR 12/13/18

020716

Report Date : 11-Dec-2018 14:57

CAS

INITIAL CALIBRATION DATA

Start Cal Date : 07-DEC-2018 14:15
End Cal Date : 08-DEC-2018 10:35
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Cal Date : 11-Dec-2018 14:54 tuser
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	50.000 Level 6	___ RRF	% RSD
	100.000 Level 7	200.000 Level 8						
8 Aroclor 1260(1)	97873	91612	84580	79388	78889	66031		
	70562	67341					79534	14.411
(2)	45342	42261	37910	36772	38123	32697		
	35540	34958					37950	10.773
(3)	80533	62834	59184	55907	56541	48547		
	53067	50882					58437	17.135
(4)	64621	62170	59945	58647	58573	50593		
	56096	54037					58085	7.696
(5)	104103	97794	96094	91681	92763	80286		
	89721	87129					92446	7.779
9 Aroclor 1262(1)	86546	77410	75994	69326	69188	59121		
	61066	58825					69685	14.226
(2)	51552	52497	52461	52180	49831	42363		
	43893	43088					48483	9.370
(3)	97535	98476	98788	94560	96003	81321		
	85070	84682					92054	7.756
(4)	174136	175491	183214	177172	179196	152213		
	161272	163356					170756	6.221
(5)	91078	99411	85172	75985	86359	78636		
	74939	71998					82947	11.206

MR 12/13/18

020717

Report Date : 11-Dec-2018 14:57

CAS

INITIAL CALIBRATION DATA

Start Cal Date : 07-DEC-2018 14:15
End Cal Date : 08-DEC-2018 10:35
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Cal Date : 11-Dec-2018 14:54 tuser
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	50.000 Level 6	___ RRF	% RSD
	100.000 Level 7	200.000 Level 8						
10 Aroclor 1268(1)	269225	255676	246702	235740	223098	200528		
	212973	203909					230981	10.841
(2)	224702	224951	207460	205312	197733	178302		
	189578	182670					201338	8.779
(3)	187974	195823	199439	188883	174776	157862		
	167953	161352					179258	8.887
(4)	575055	564937	556592	510186	504069	461090		
	499278	474670					518235	8.209
M 75 Aroclors, Total	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 1 Tetrachloro-m-xylene	1925050	1647770	1578302	1602579	1521297	1347718		
	1505462	1536810					1583123	10.377
$ 11 Decachlorobiphenyl	1401350	1291915	1217610	1209067	1255838	1035487		
	1143702	1109671					1208080	9.405

MC 12/13/18

020718

Report Date : 11-Dec-2018 15:52

CAS

INITIAL CALIBRATION DATA

Start Cal Date : 07-DEC-2018 14:15
End Cal Date : 08-DEC-2018 10:35
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Cal Date : 11-Dec-2018 15:30 tuser
Curve Type : Average

Calibration File Names:
Level 1: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F040.D
Level 2: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F041.D
Level 3: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F042.D
Level 4: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F043.D
Level 5: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F044.D
Level 6: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F045.D
Level 7: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F046.D
Level 8: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F047.D

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
2 Aroclor 1016(1)	27387	22242	20668	21233	19879	17801		
	18841	17419					20684	15.362
(2)	41671	32552	28756	30087	27879	24391		
	26160	23684					29397	19.582
(3)	21525	19791	21340	23311	21653	19377		
	20553	19186					20842	6.674
(4)	16239	16412	16057	17324	16685	14739		
	15928	14561					15993	5.845
(5)	16053	15574	13410	14491	14664	12421		
	13568	12408					14073	9.644
3 Aroclor 1221(1)	4586	5405	4913	4800	4805	4844		
	4289	4608					4781	6.715
(2)	6589	6792	5988	5197	5132	5135		
	4637	4595					5508	15.368
(3)	18506	20263	18206	18969	19651	19246		
	16726	16334					18488	7.410

mr 12/18/18

020719

Report Date : 11-Dec-2018 15:52

CAS

INITIAL CALIBRATION DATA

Start Cal Date : 07-DEC-2018 14:15
End Cal Date : 08-DEC-2018 10:35
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Cal Date : 11-Dec-2018 15:30 tuser
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	50.000 Level 6	___ RRF	% RSD
	100.000 Level 7	200.000 Level 8						
4 Aroclor 1232(1)	21323	17264	14663	15262	15914	14092		
	14056	13384					15745	16.283
(2)	16132	14461	13865	13231	13361	11122		
	11419	10800					13049	14.107
(3)	12672	13330	14215	14208	14328	13162		
	13319	12603					13480	5.141
(4)	9032	7334	7144	6918	6839	6002		
	6382	6179					6979	13.639
(5)	8863	7475	7535	6763	6996	6373		
	6633	6448					7136	11.513
5 Aroclor 1242(1)	22159	16800	17101	18061	15119	15197		
	14002	12782					16403	17.625
(2)	18884	17945	18616	18763	16831	16306		
	15429	14102					17109	10.229
(3)	12760	10990	12767	8392	11148	11472		
	10611	10001					11018	13.024
(4)	14186	12152	12020	11885	11113	10757		
	10371	9443					11491	12.422
(5)	17127	17418	15847	14880	14965	13909		
	13712	12233					15011	11.705

MR 12/13/18

020720

Report Date : 11-Dec-2018 15:52

CAS

INITIAL CALIBRATION DATA

Start Cal Date : 07-DEC-2018 14:15
End Cal Date : 08-DEC-2018 10:35
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Cal Date : 11-Dec-2018 15:30 tuser
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
6 Aroclor 1248(1)	16603	13212	14544	12566	13833	12787		
	12465	12146					13519	10.897
(2)	22692	21679	21330	19859	20620	17986		
	17143	15979					19661	12.114
(3)	23778	20080	20135	18809	20238	17357		
	16509	15526					19054	13.715
(4)	13229	14688	14326	14610	14747	13833		
	13526	12629					13948	5.563
(5)	24989	19717	20416	20033	20038	18941		
	18112	16793					19880	12.025
7 Aroclor 1254(1)	33443	31458	34287	31834	31957	29079		
	26382	24195					30329	11.579
(2)	15495	16019	18145	16037	16616	15639		
	14374	13209					15692	9.342
(3)	17428	16454	17663	15429	18111	14880		
	13575	12536					15760	12.796
(4)	16360	13839	14158	13408	14661	12920		
	12038	10922					13538	12.230
(5)	27680	27977	28983	26103	26518	23833		
	22443	20421					25495	11.705

MR 12/13/18

Report Date : 11-Dec-2018 15:52

CAS

INITIAL CALIBRATION DATA

Start Cal Date : 07-DEC-2018 14:15
End Cal Date : 08-DEC-2018 10:35
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Cal Date : 11-Dec-2018 15:30 tuser
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
8 Aroclor 1260(1)	20003	20479	19367	19323	18002	15122		
	16360	14400					17882	12.961
(2)	46321	49952	45116	46652	44336	36269		
	37872	33939					42557	13.501
(3)	18315	15003	14189	14714	14905	12655		
	13840	12479					14513	12.500
(4)	35561	32930	29638	29687	28543	23725		
	25200	22866					28519	15.547
(5)	51213	46094	42963	40406	39414	33052		
	34511	31851					39938	16.848
9 Aroclor 1262(1)	33281	31785	32609	31091	30406	25782		
	25909	23995					29357	12.173
(2)	53795	54028	50622	49487	48794	41543		
	40502	37972					47093	13.225
(3)	37264	41007	39804	38512	37510	31555		
	31433	29330					35802	12.244
(4)	54733	64080	59868	56641	55379	46026		
	45894	42717					53167	14.156
(5)	28124	41659	33407	29822	37673	34885		
	30164	26116					32731	15.886

MR 12/13/18

020722

Report Date : 11-Dec-2018 15:52

CAS

INITIAL CALIBRATION DATA

Start Cal Date : 07-DEC-2018 14:15
End Cal Date : 08-DEC-2018 10:35
Quant Method : ESTD
Origin : Disabled
Target Version : 4.04
Integrator : Falcon
Method file : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Cal Date : 11-Dec-2018 15:30 tuser
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
10 Aroclor 1268(1)	121440	125651	112106	104750	97741	83278		
	81337	75245					100193	18.983
(2)	94733	100175	93265	89736	86076	74419		
	73636	68673					85089	13.506
(3)	90183	86597	87778	79278	76861	66114		
	65470	60743					76628	14.813
(4)	253469	253437	243307	228916	222775	192420		
	192923	182494					221217	12.964
M 75 Aroclors, Total	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 1 Tetrachloro-m-xylene	845810	722835	700222	758890	726502	621029		
	682217	669624					715891	9.357
$ 11 Decachlorobiphenyl	733450	680730	645736	633185	645459	523627		
	558467	520274					617616	12.394

MR 12/13/18

020723

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F006.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F006.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F006.D
Inj Date : 07-DEC-2018 13:12
Sample Info: IB
Misc Info :
Cal Date : 11-DEC-2018 15:29
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.922	0.000	10682	0	0.00675	0.000		100.00(R)
Decachlorobiphenyl	16.716	0.000	7563	0	0.00626	0.000		100.00(R)

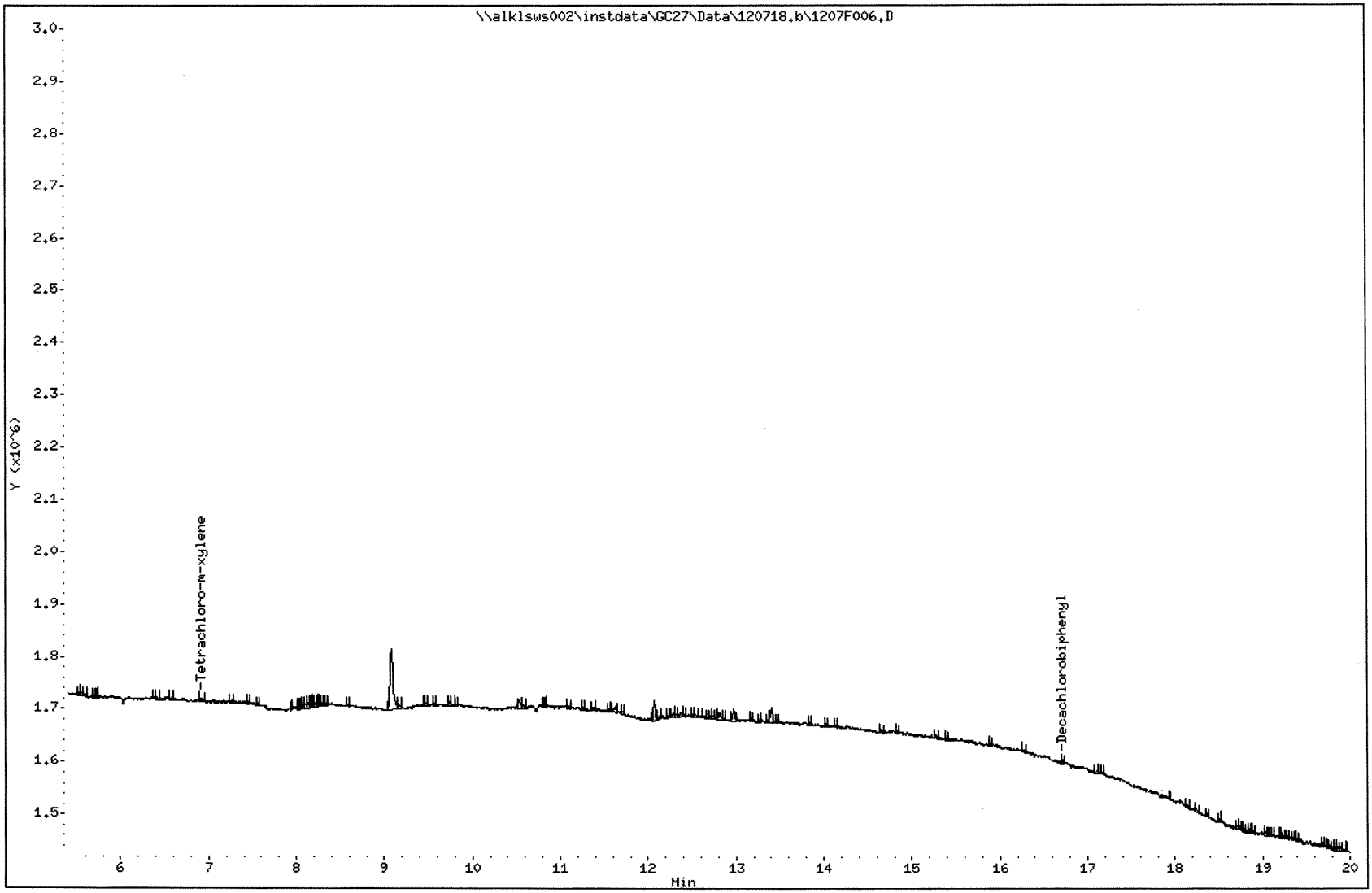
QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F006.D
Date : 07-DEC-2018 13:12
Client ID:
Sample Info: IB

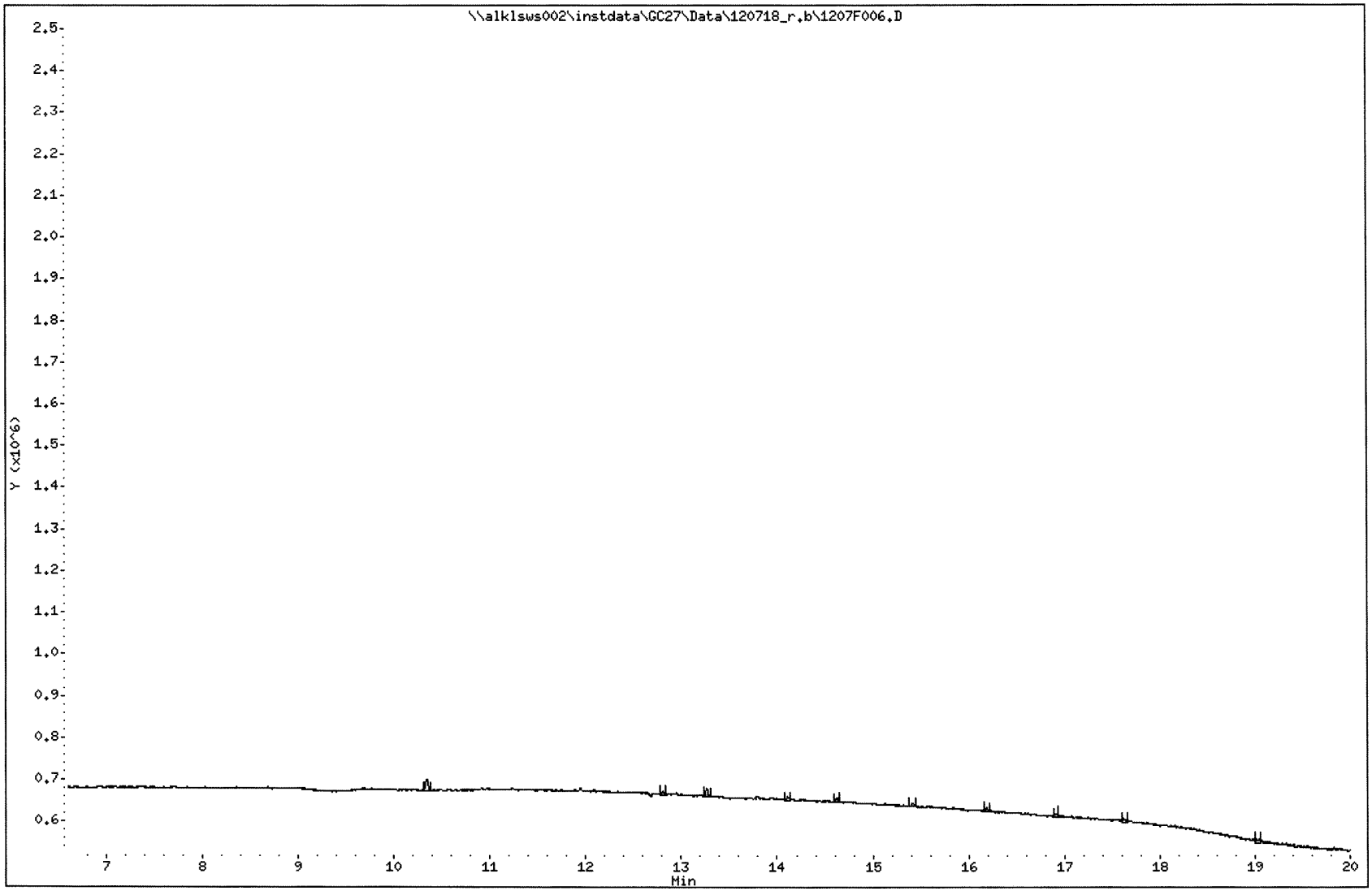
Instrument: GC27.i

Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020725

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F006.D
Date : 07-DEC-2018 13:12
Client ID:
Instrument: GC27.i
Sample Info: IB
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



020726

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F007.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F007.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F007.D
Inj Date : 07-DEC-2018 13:43
Sample Info: DDX MAKER
Misc Info :
Cal Date : 11-DEC-2018 15:29
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.904	0.000	98929	0	0.0625	0.000		100.00(R)
Decachlorobiphenyl	16.724	0.000	16765	0	0.0139	0.000		100.00(R)

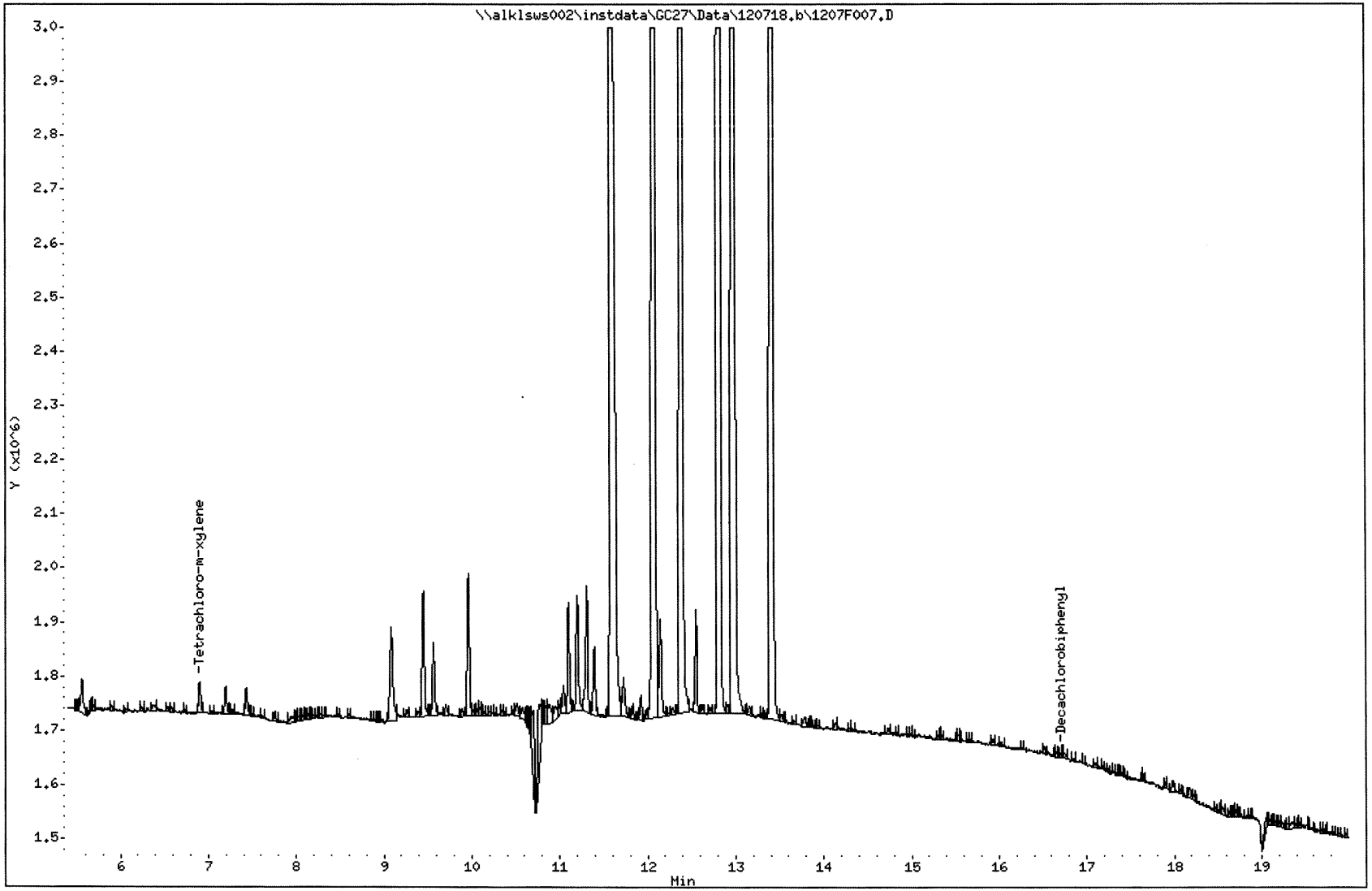
QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F007.D
Date : 07-DEC-2018 13:43
Client ID:
Sample Info: DDX MAKER

Instrument: GC27.i

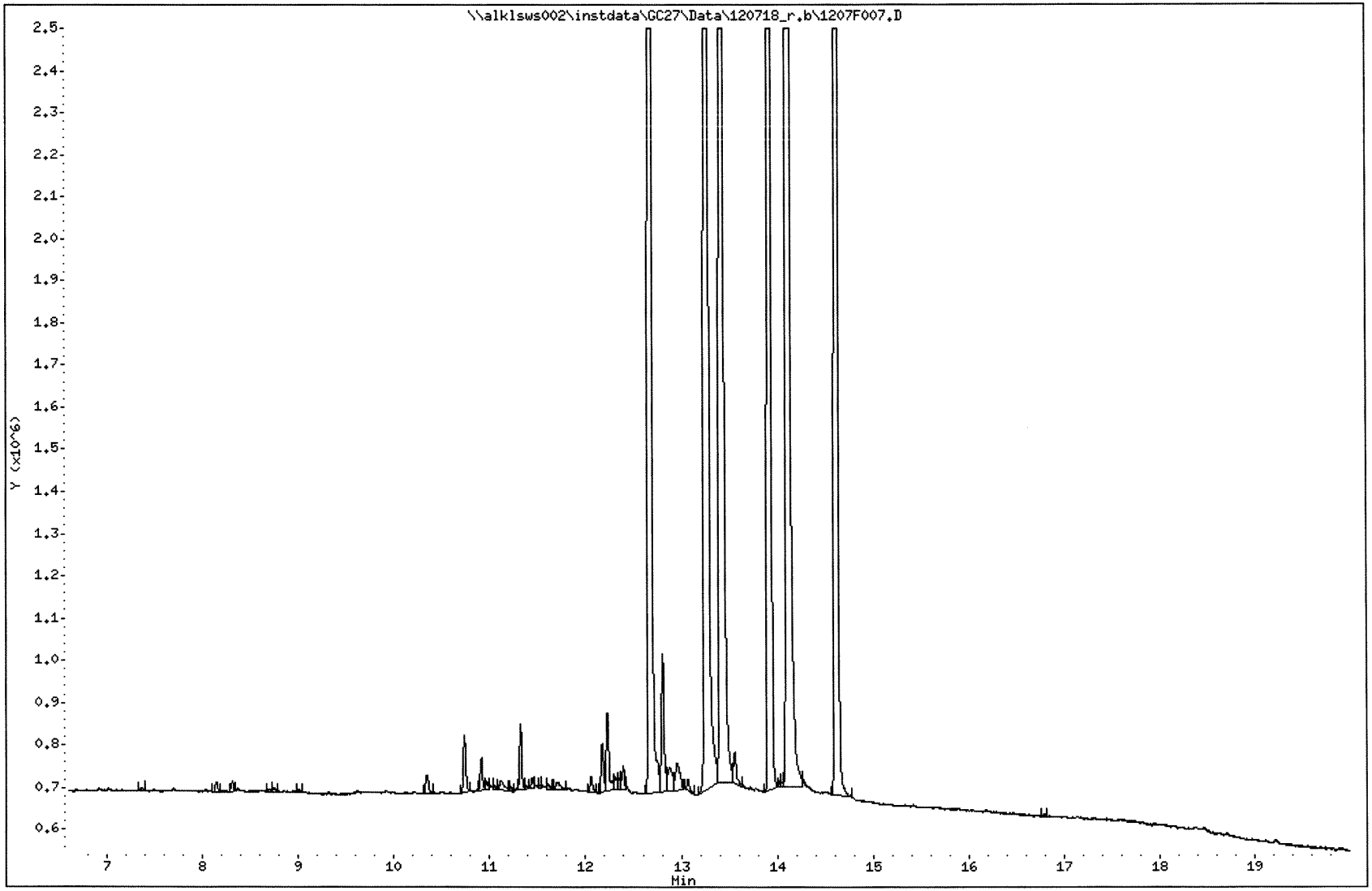
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020728

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F007.D
Date : 07-DEC-2018 13:43
Client ID:
Sample Info: DDX MAKER

Instrument: GC27.i
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



020729

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F008.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F008.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F008.D
Inj Date : 07-DEC-2018 14:15
Sample Info: 1660 1.0PPB PCB7-56L
Misc Info :
Cal Date : 12-DEC-2018 12:36
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.881	8.461	192505	84581	0.122	0.118		100.00
Aroclor 1016	7.958	9.941	27618	27387	1.03	1.32	80.00- 120.00	100.00(M)
	9.198	10.985	33630	41671	1.32	1.42	69.55- 104.33	121.77(M)
	9.615	11.085	59587	21525	1.12	1.03	139.76- 209.63	215.75(M)
	9.641	11.768	83829	16239	1.17	1.02	217.16- 325.74	303.53(M)
	10.078	12.445	42926	16053	1.33	1.14	87.47- 131.20	155.43(M)
			Average of Peak Amounts =		1.19	1.19		
Aroclor 1260	12.538	13.565	97873	20003	1.23	1.12	80.00- 120.00	100.00
	13.085	14.175	45342	46321	1.19	1.09	41.53- 62.29	46.33
	13.471	14.908	80533	18315	1.38	1.26	60.45- 90.67	82.28
	13.938	15.181	64621	35561	1.11	1.25	64.20- 96.29	66.03
	14.935	16.211	104103	51213	1.13	1.28	103.51- 155.26	106.37
			Average of Peak Amounts =		1.21	1.20		
Decachlorobiphenyl	16.725	18.155	140135	73345	0.116	0.119		100.00

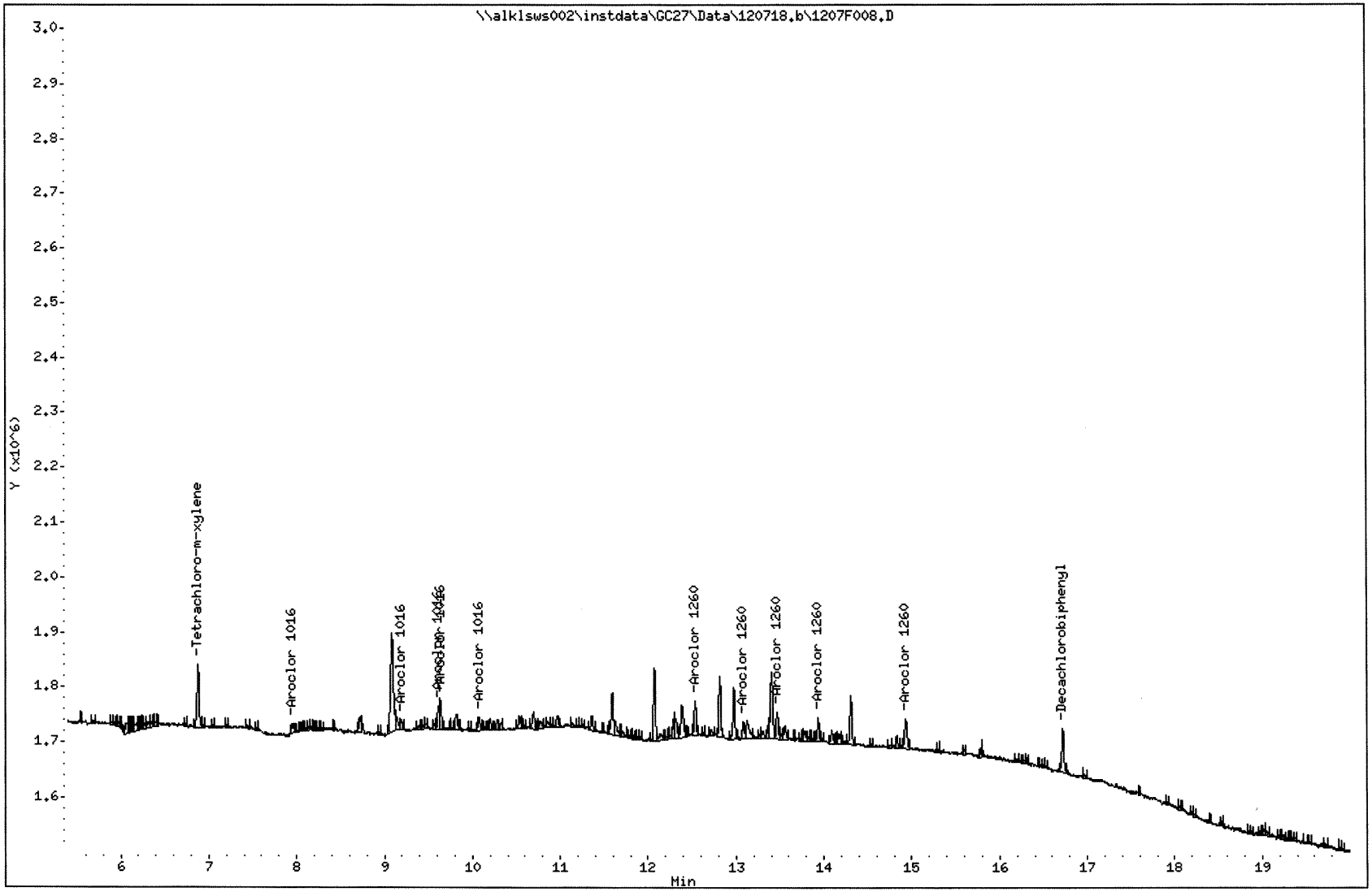
QC Flag Legend

M - Compound response manually integrated.

mc 12/19/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F008.D
Date : 07-DEC-2018 14:15
Client ID:
Sample Info: 1660 1.0PPB PCB7-56L

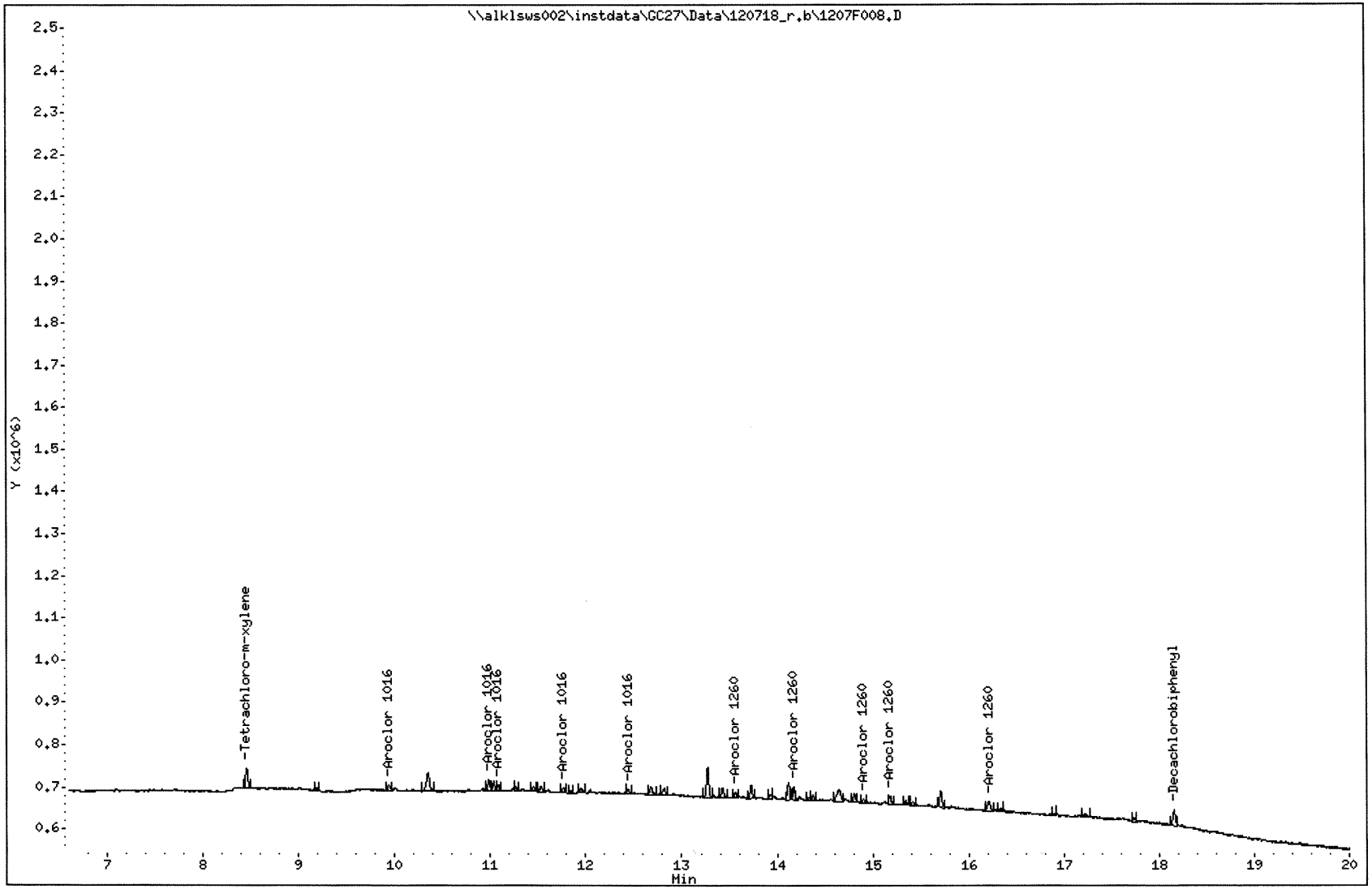
Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020731

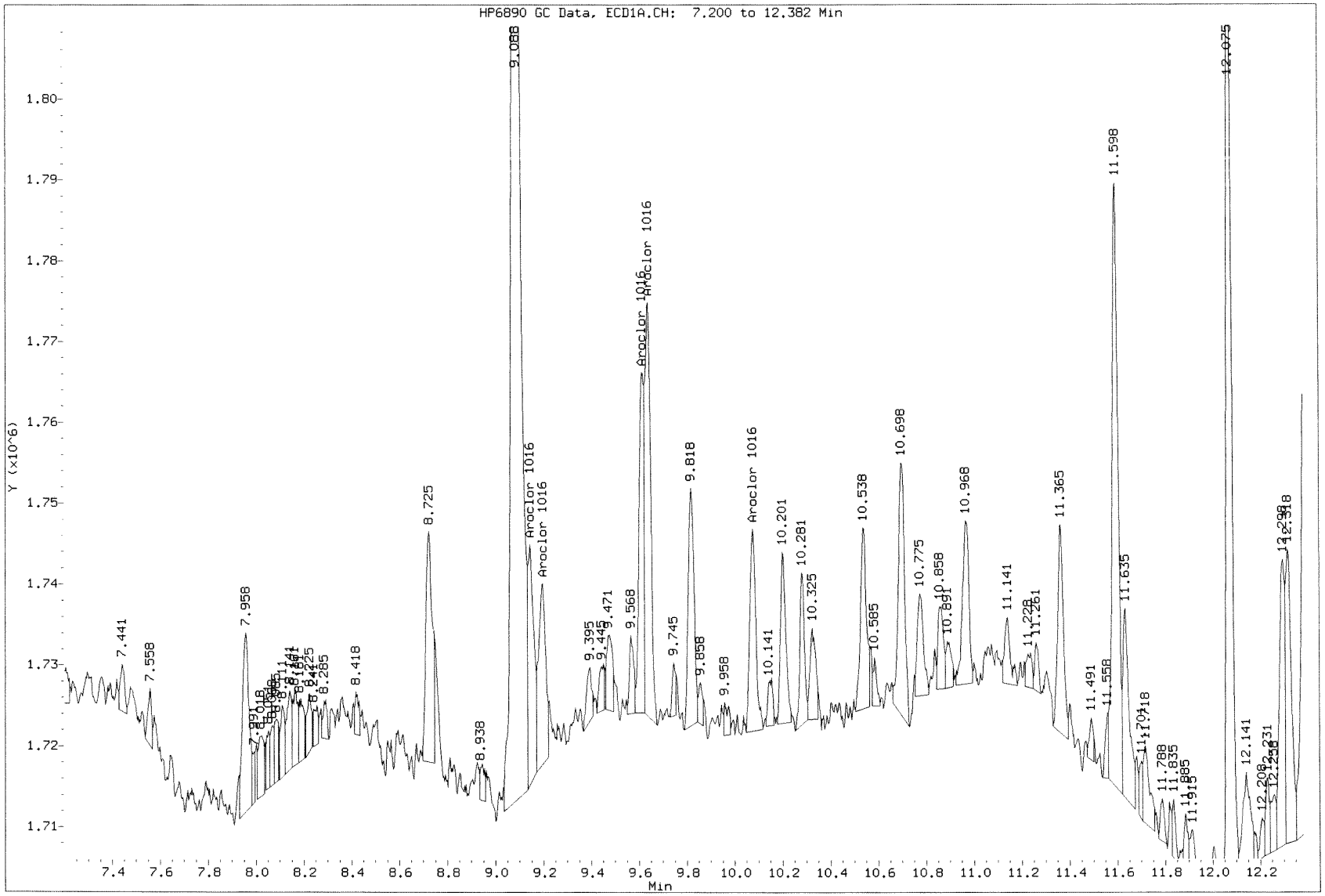
Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F008.D
Date : 07-DEC-2018 14:15
Client ID:
Sample Info: 1660 1.0PPB PCB7-56L

Instrument: GC27.i
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



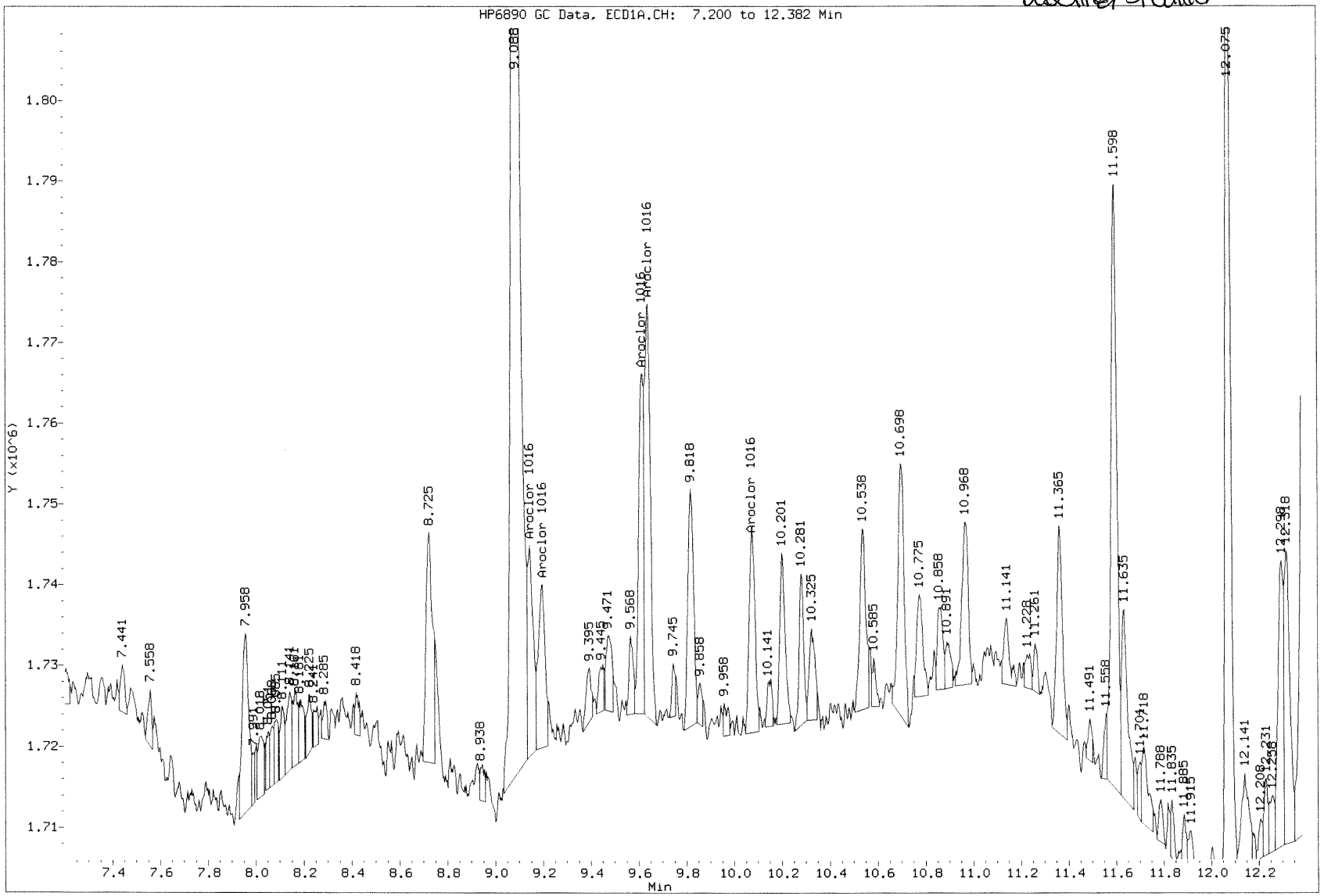
Base
MR 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F008.D
Injection Date: 07-DEC-2018 14:15
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F008.D
Injection Date: 07-DEC-2018 14:15
Instrument: GC27.i
Client Sample ID:

After
MR 12/12/18
Baseline/ Shoulder



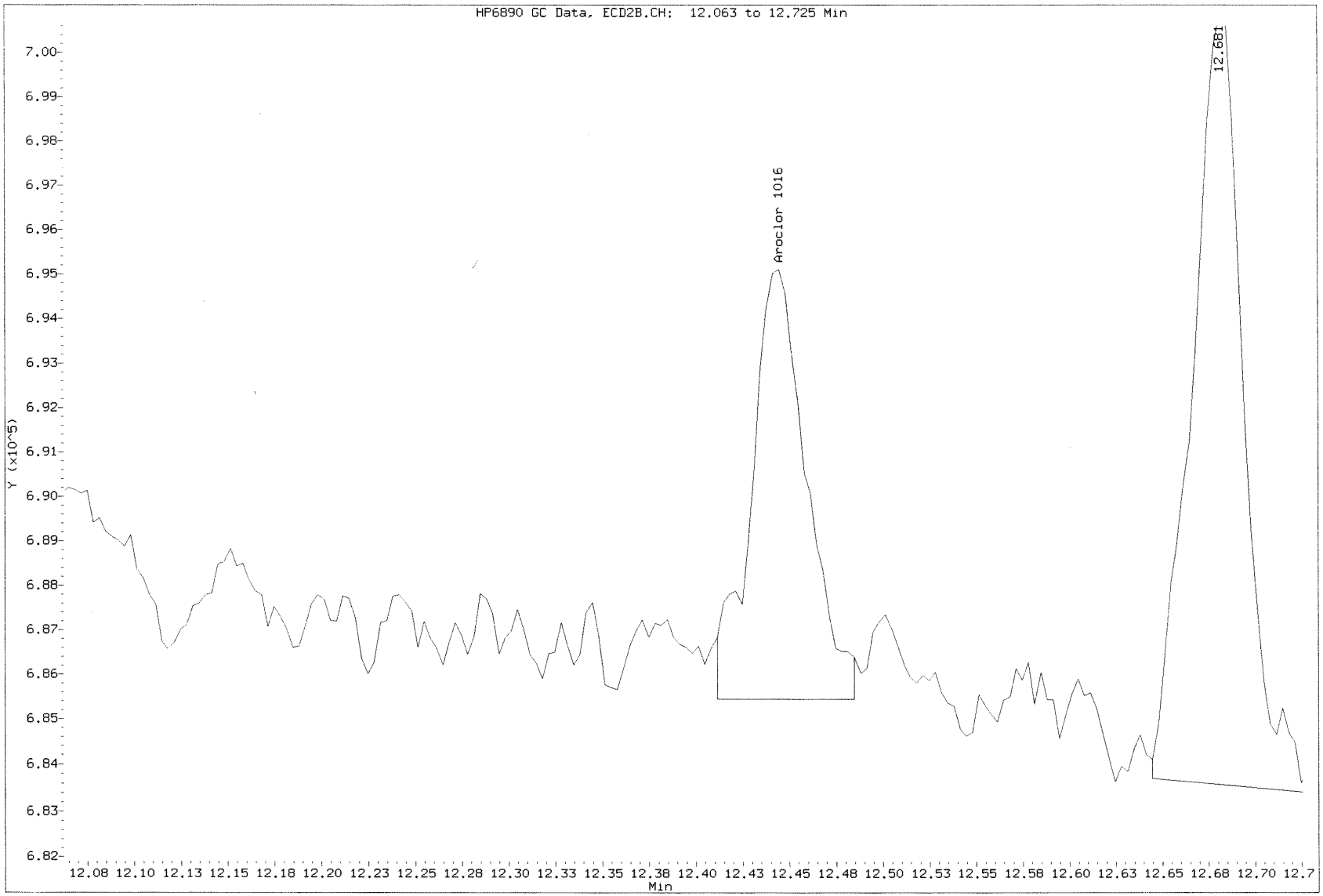
020734

~~BATE~~

MR 12/18/18

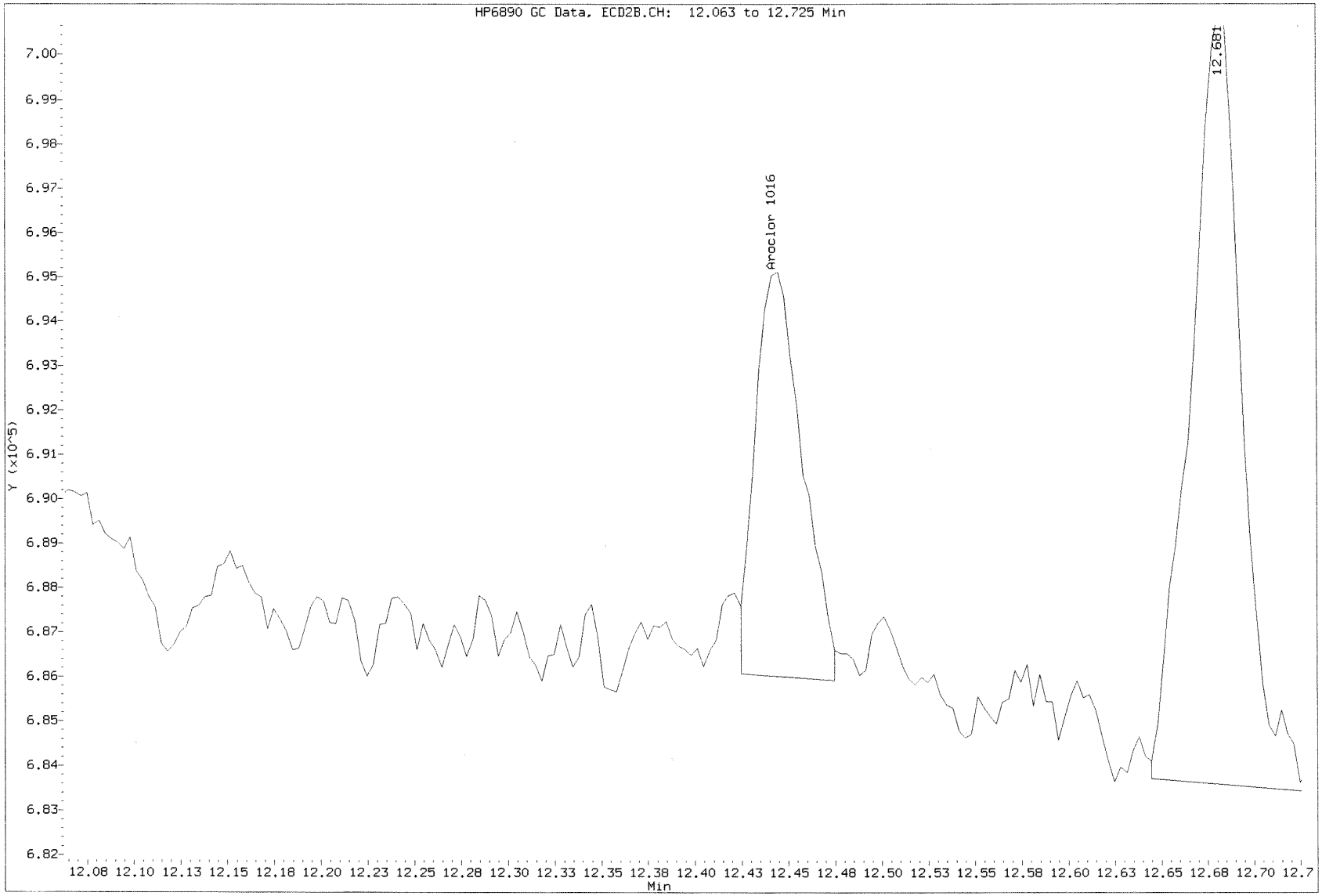
MA 12/17/18

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F008.D
Injection Date: 07-DEC-2018 14:15
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F008.D
Injection Date: 07-DEC-2018 14:15
Instrument: GC27.i
Client Sample ID:

After
baseline/shoulder
mr 12/12/18 MA 12/14/18

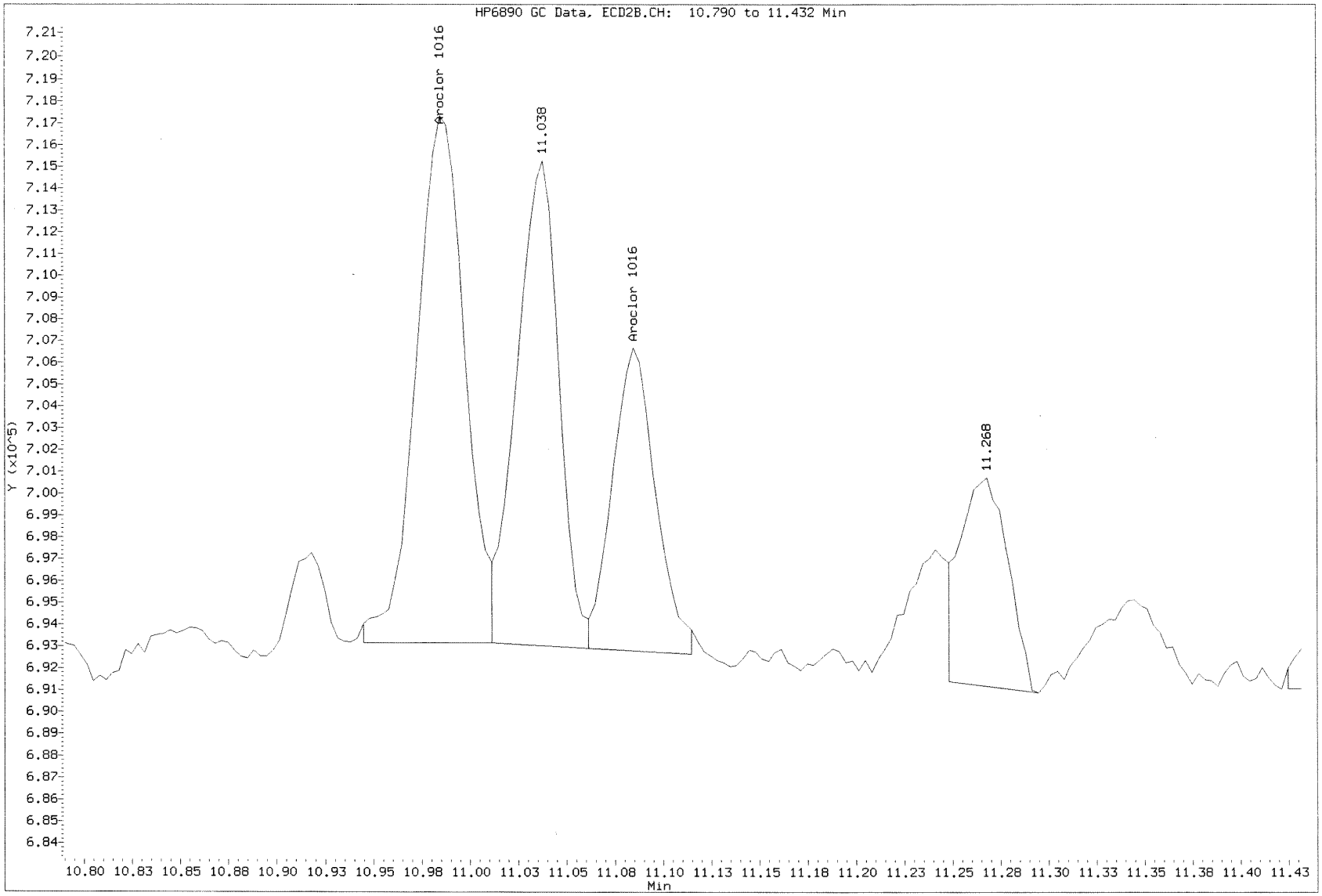


020736

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F008.D
Injection Date: 07-DEC-2018 14:15
Instrument: GC27.i
Client Sample ID:

JA 12/17/18

Before
mc 12/19/18

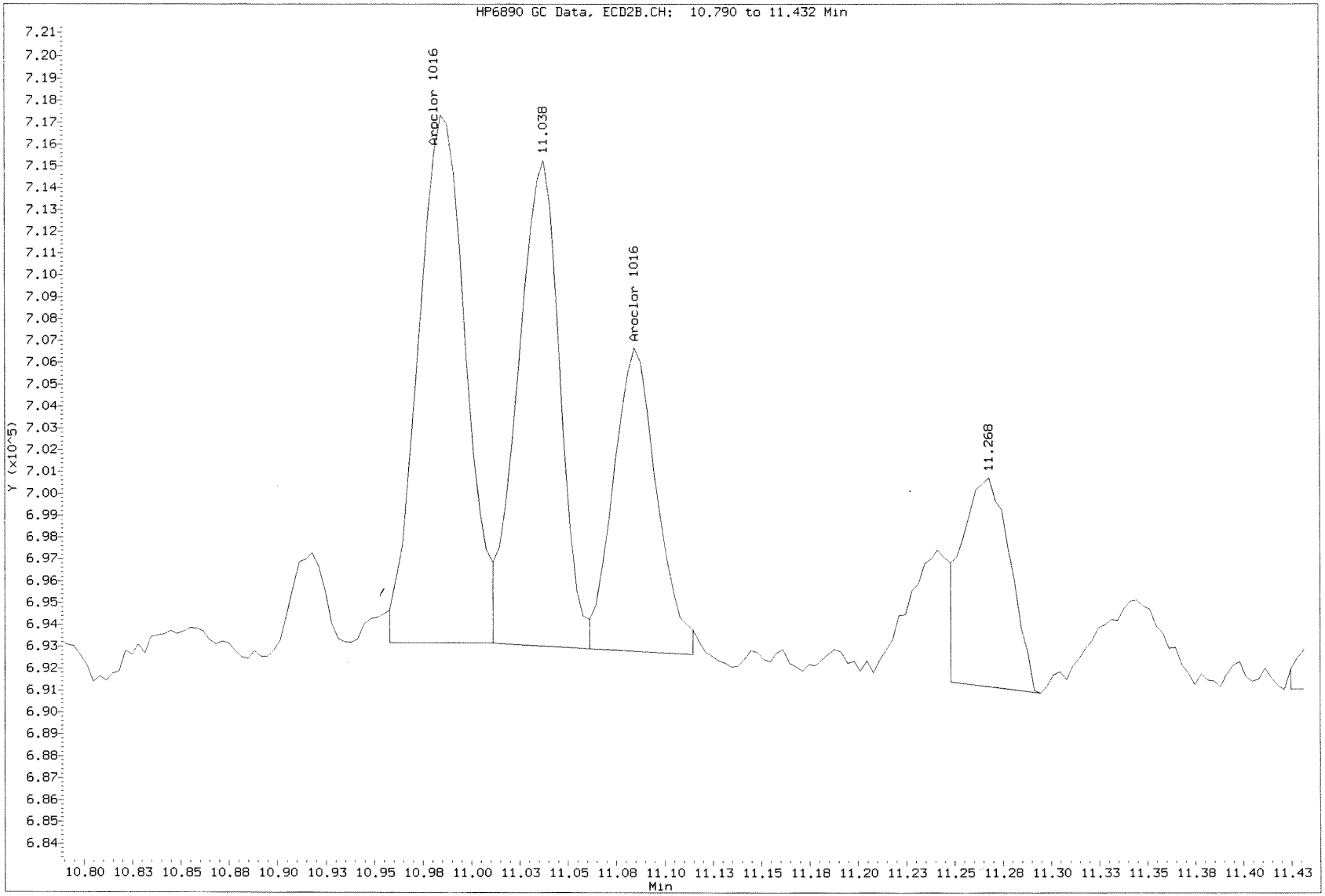


020737

UA 12/17/18

~~After~~
baseline/shoulder
MR 12/12/18

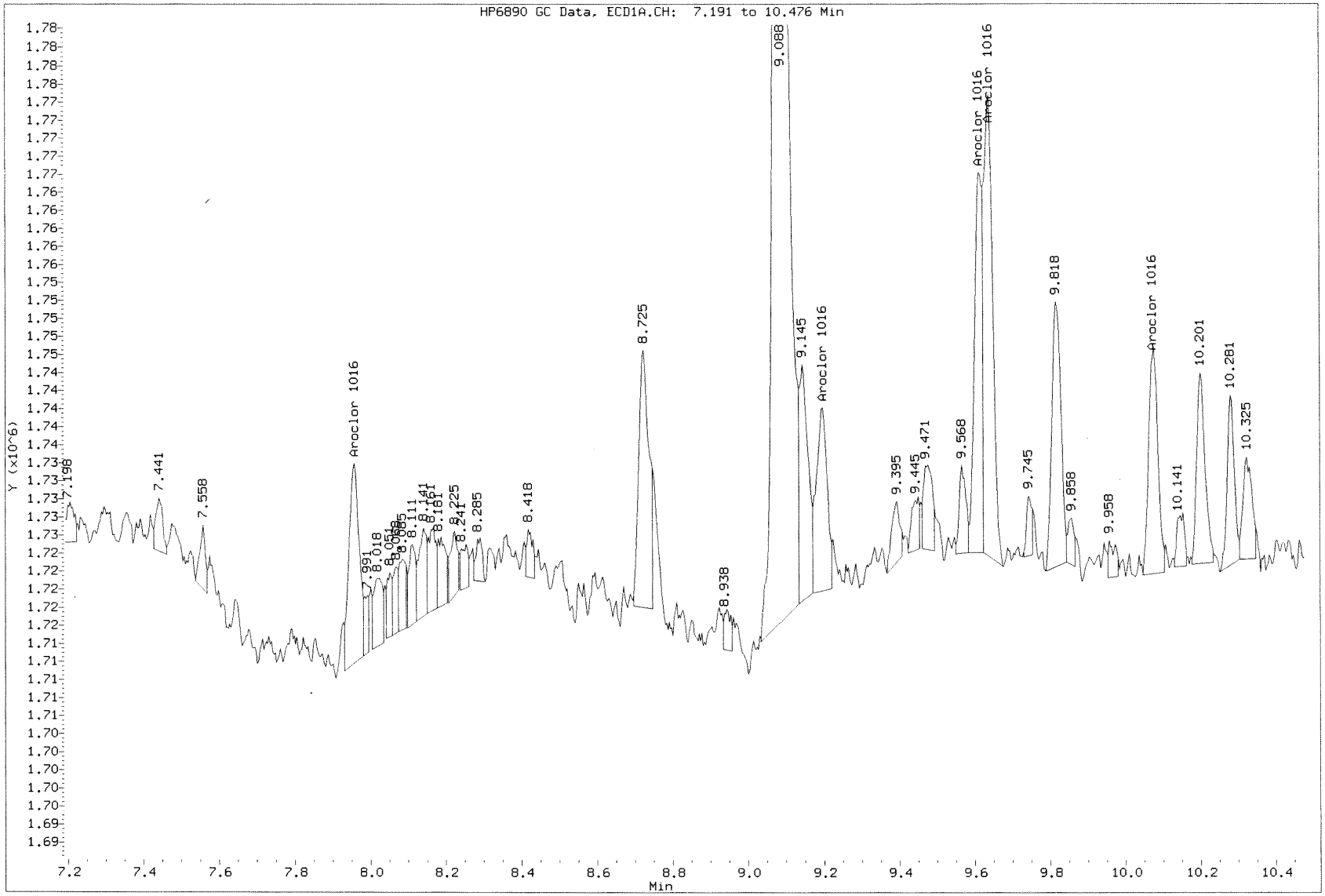
Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F008.D
Injection Date: 07-DEC-2018 14:15
Instrument: GC27.i
Client Sample ID:



020738

MA 12/17/18 Before MC 12/18/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F008.D
Injection Date: 07-DEC-2018 14:15
Instrument: GC27.i
Client Sample ID:

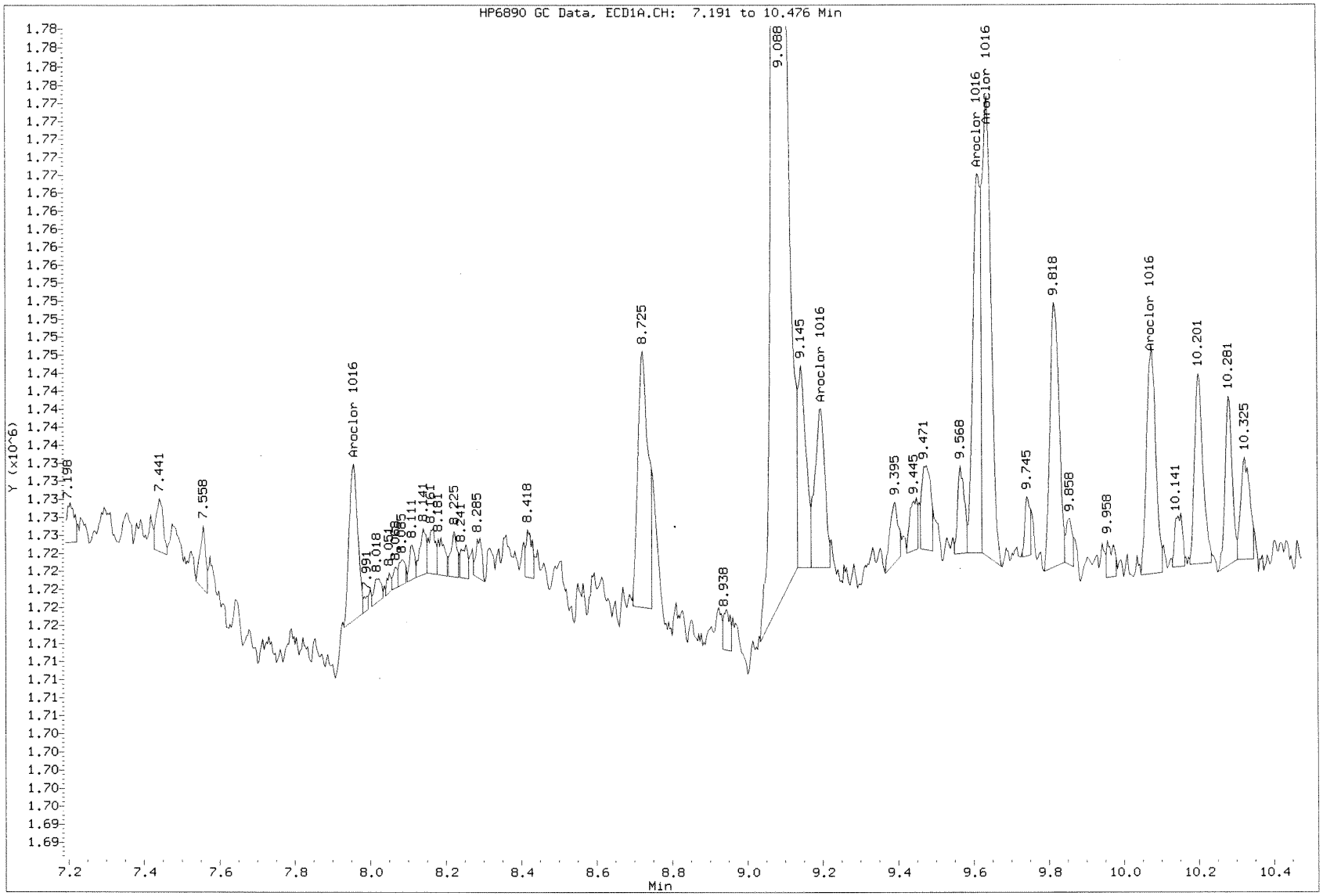


UA 12/18/18

After baseline shoulder

MC 12/19/18

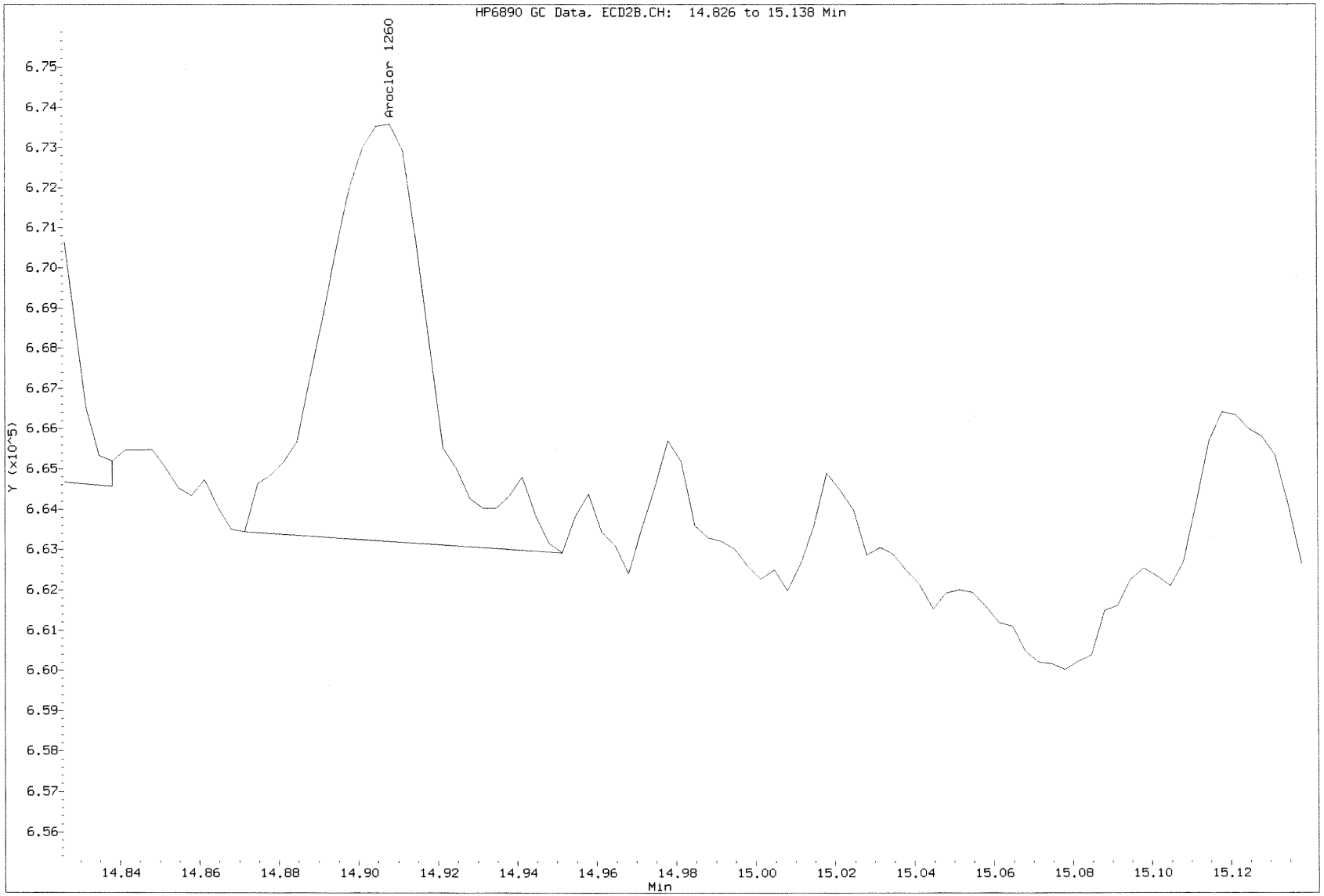
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F008.D
Injection Date: 07-DEC-2018 14:15
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F008.D
Injection Date: 07-DEC-2018 14:15
Instrument: GC27.i
Client Sample ID:

LA 12/18/18

Before
MC 12/19/18

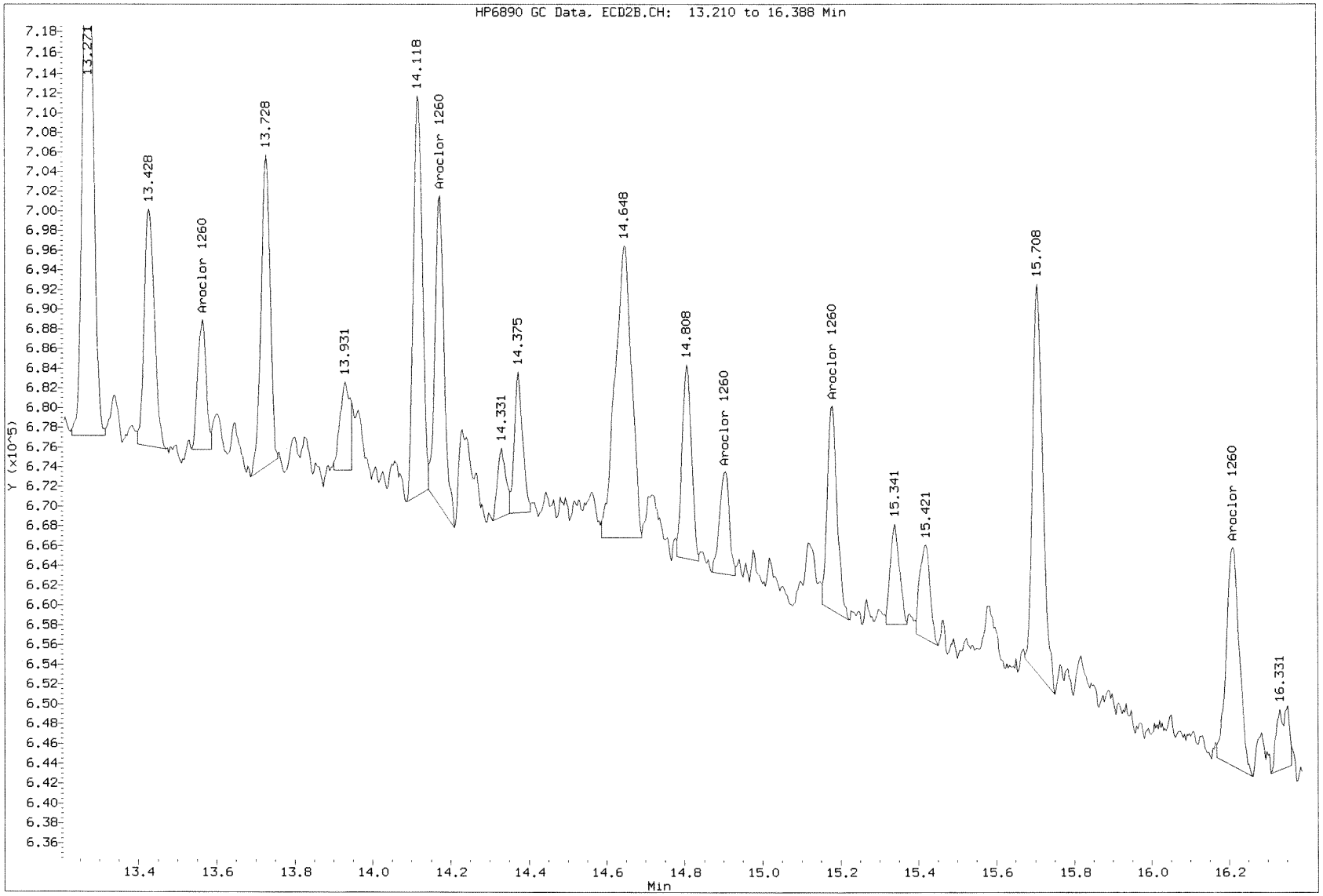


020741

UA 12/17/18

~~After~~ baseline/shoulder
MR 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F008.D
Injection Date: 07-DEC-2018 14:15
Instrument: GC27.i
Client Sample ID:

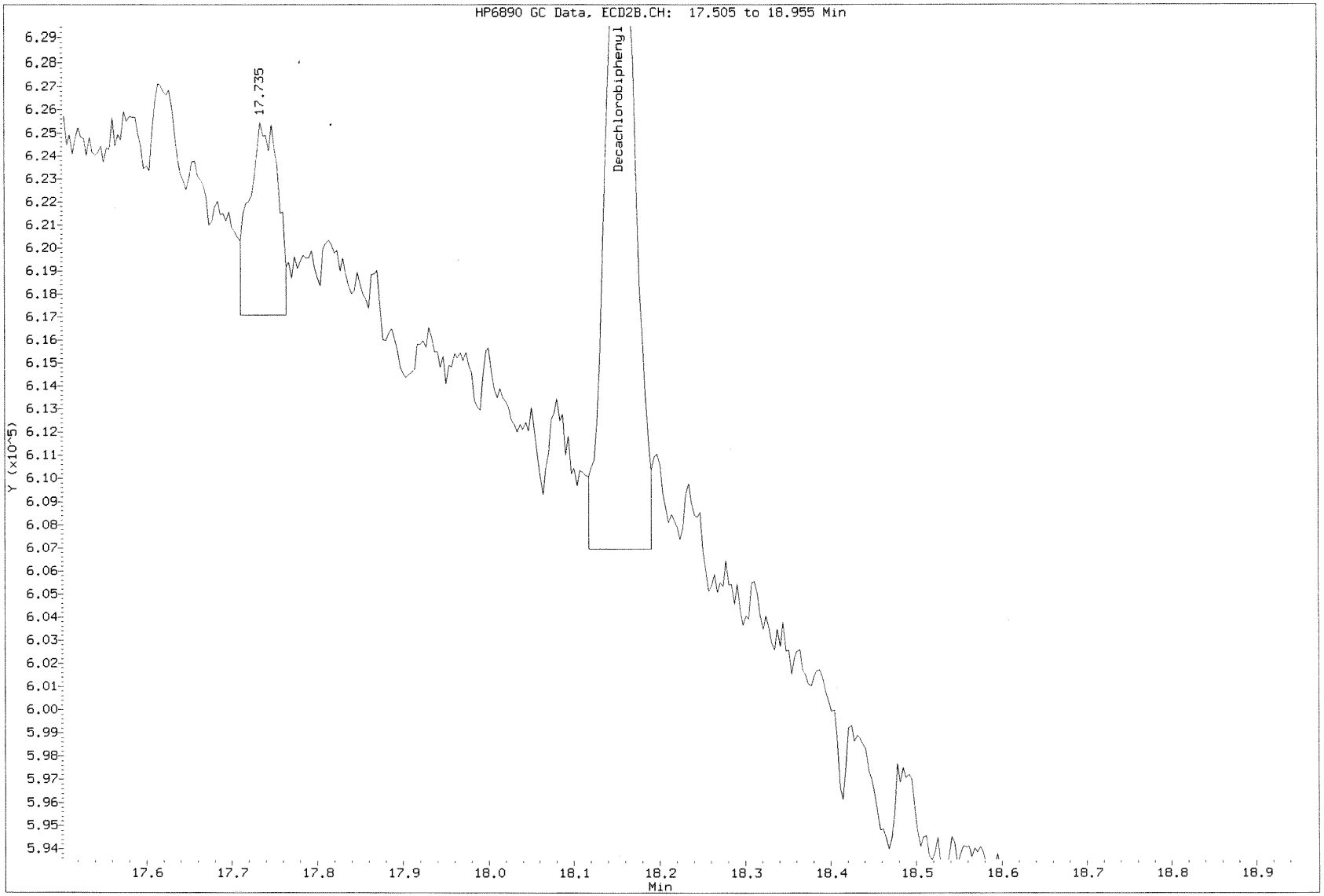


020742

UA 12/17/18

Before
MR 12/20/18

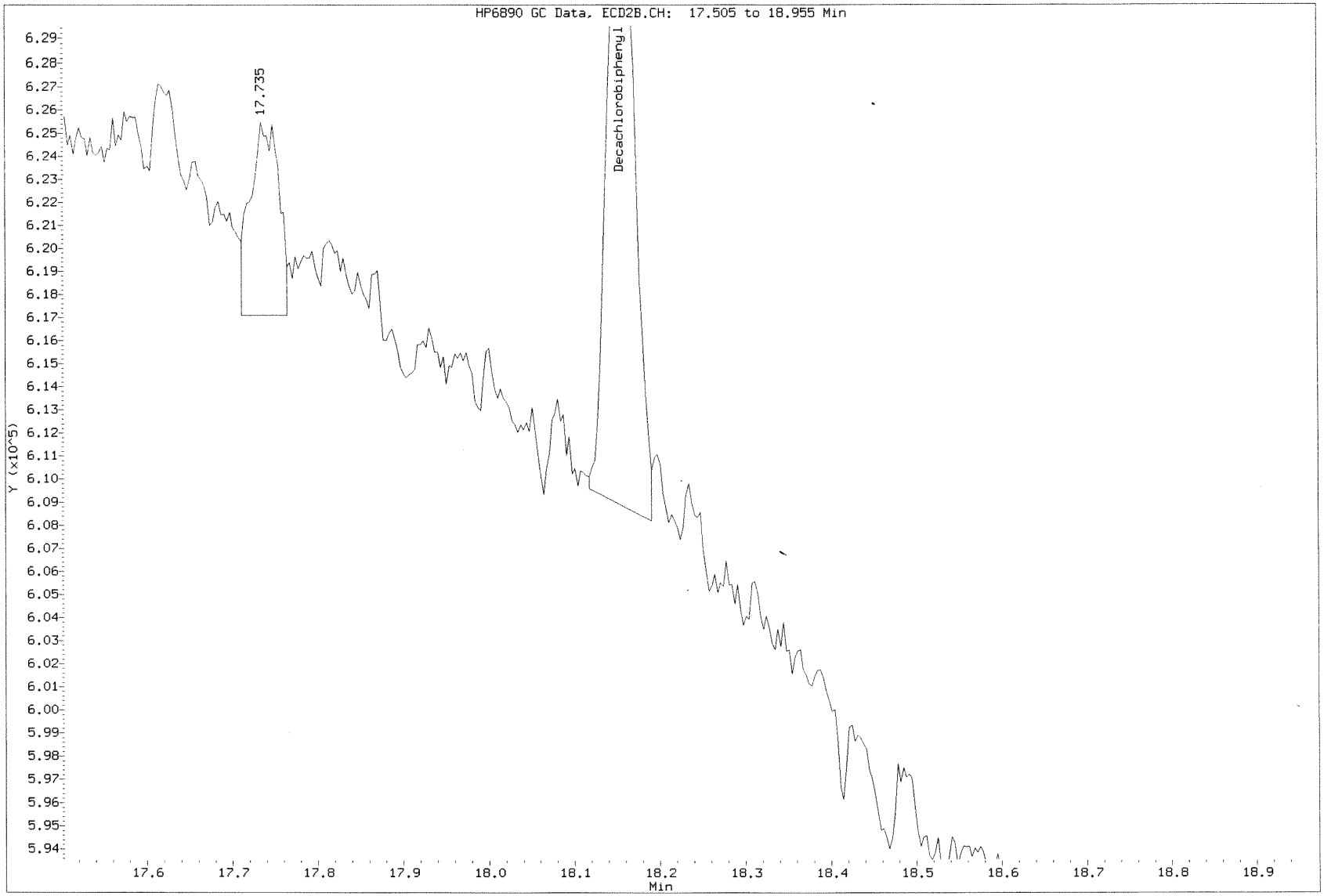
Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F008.D
Injection Date: 07-DEC-2018 14:15
Instrument: GC27.i
Client Sample ID:



LMA 12/7/18

After baseline/ smoulder MC 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F008.D
Injection Date: 07-DEC-2018 14:15
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F009.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F009.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F009.D
Inj Date : 07-DEC-2018 14:46
Sample Info: 1660 2.0PPB PCB7-56M
Misc Info :
Cal Date : 12-DEC-2018 12:36
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.883	8.459	329554	144567	0.208	0.202		100.00
Aroclor 1016	7.959	9.939	59543	44484	2.21	2.15	80.00- 120.00	100.00(M)
	9.196	10.986	60124	65103	2.35	2.21	69.55- 104.33	100.98(M)
	9.616	11.083	121144	39581	2.27	1.90	139.76- 209.63	203.46(M)
	9.639	11.769	154015	32823	2.15	2.05	217.16- 325.74	258.66(M)
	10.079	12.446	73977	31147	2.30	2.21	87.47- 131.20	124.24(M)
			Average of Peak Amounts =		2.26	2.10		
Aroclor 1260	12.539	13.563	183223	40958	2.30	2.29	80.00- 120.00	100.00
	13.086	14.176	84521	99903	2.23	2.35	41.53- 62.29	46.13
	13.469	14.903	125668	30006	2.15	2.07	60.45- 90.67	68.59
	13.939	15.179	124339	65860	2.14	2.31	64.20- 96.29	67.86
	14.936	16.209	195587	92188	2.12	2.31	103.51- 155.26	106.75
			Average of Peak Amounts =		2.19	2.27		
Decachlorobiphenyl	16.723	18.156	258383	136146	0.214	0.220		100.00

QC Flag Legend

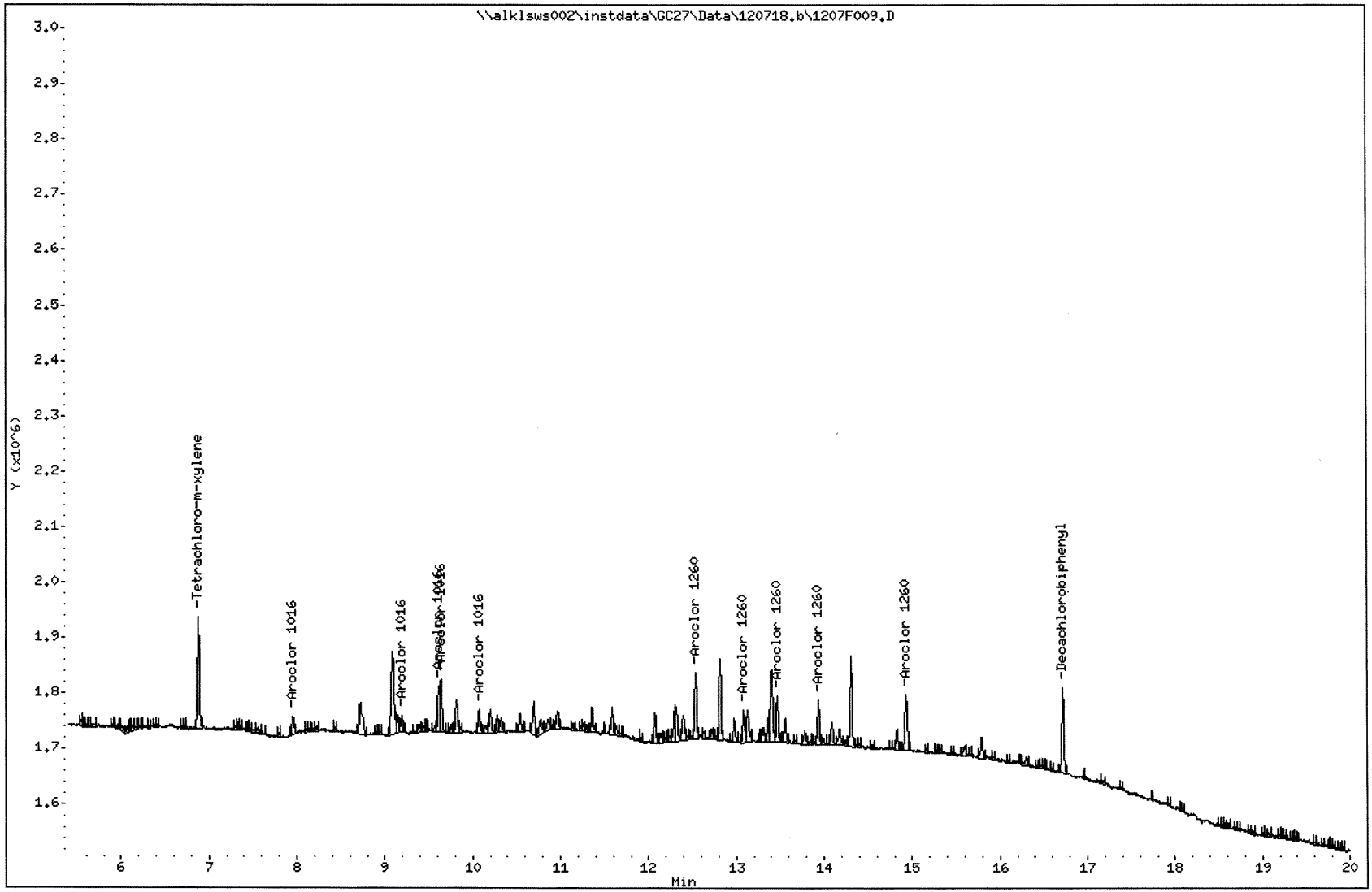
M - Compound response manually integrated.

 MC 12/13/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F009.D
Date : 07-DEC-2018 14:46
Client ID:
Sample Info: 1660 2.0PPB PCB7-56M

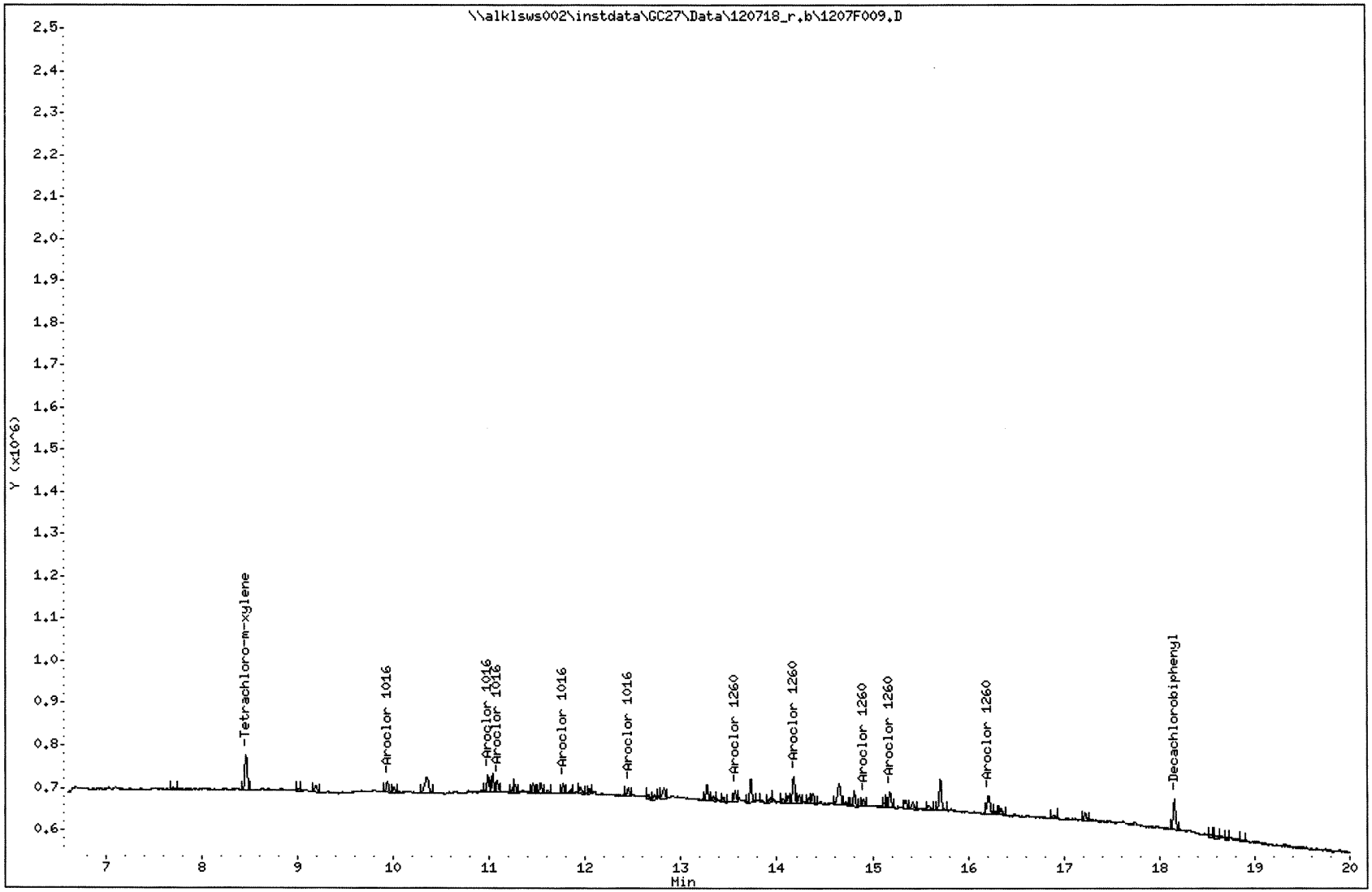
Instrument: GC27.i

Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F009.D
Date : 07-DEC-2018 14:46
Client ID:
Sample Info: 1660 2.0PPB PCB7-56M

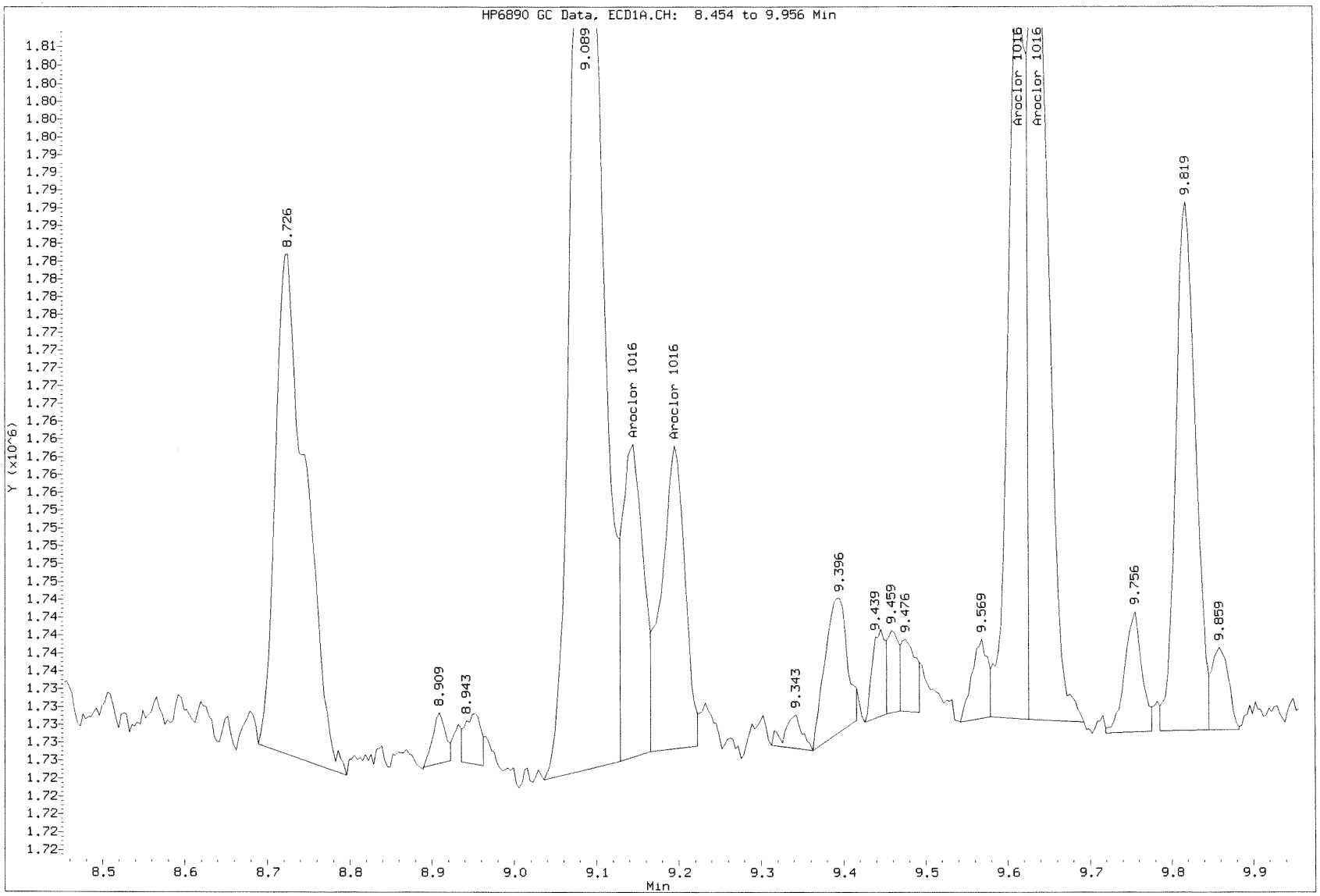
Instrument: GC27.i
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



020747

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F009.D
Injection Date: 07-DEC-2018 14:46
Instrument: GC27.i
Client Sample ID:

LM 12/17/18 Before MC 12/12/18

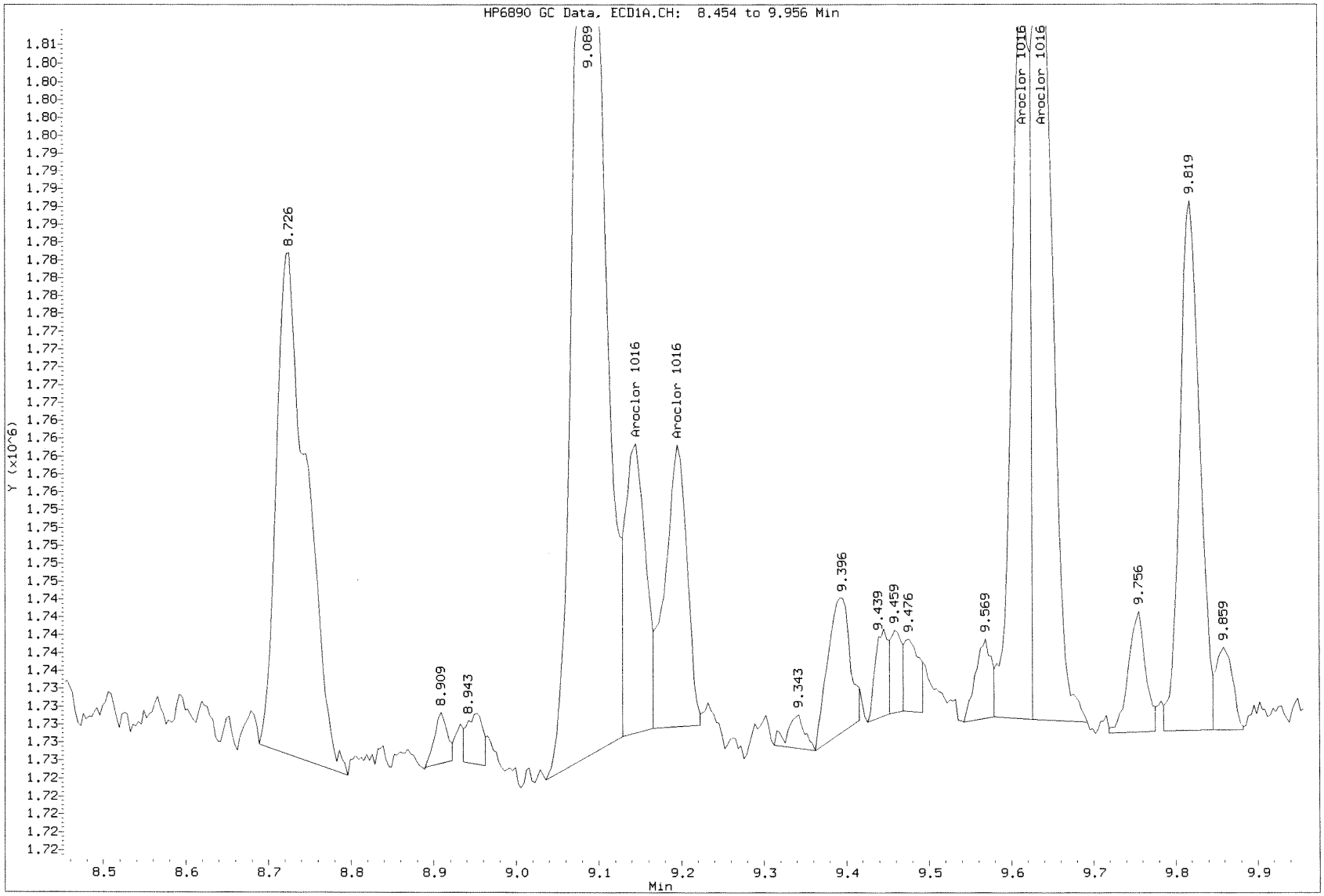


020748

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F009.D
Injection Date: 07-DEC-2018 14:46
Instrument: GC27.i
Client Sample ID:

UMA 12/7/18

After baseline/shoulder
MR 12/12/18



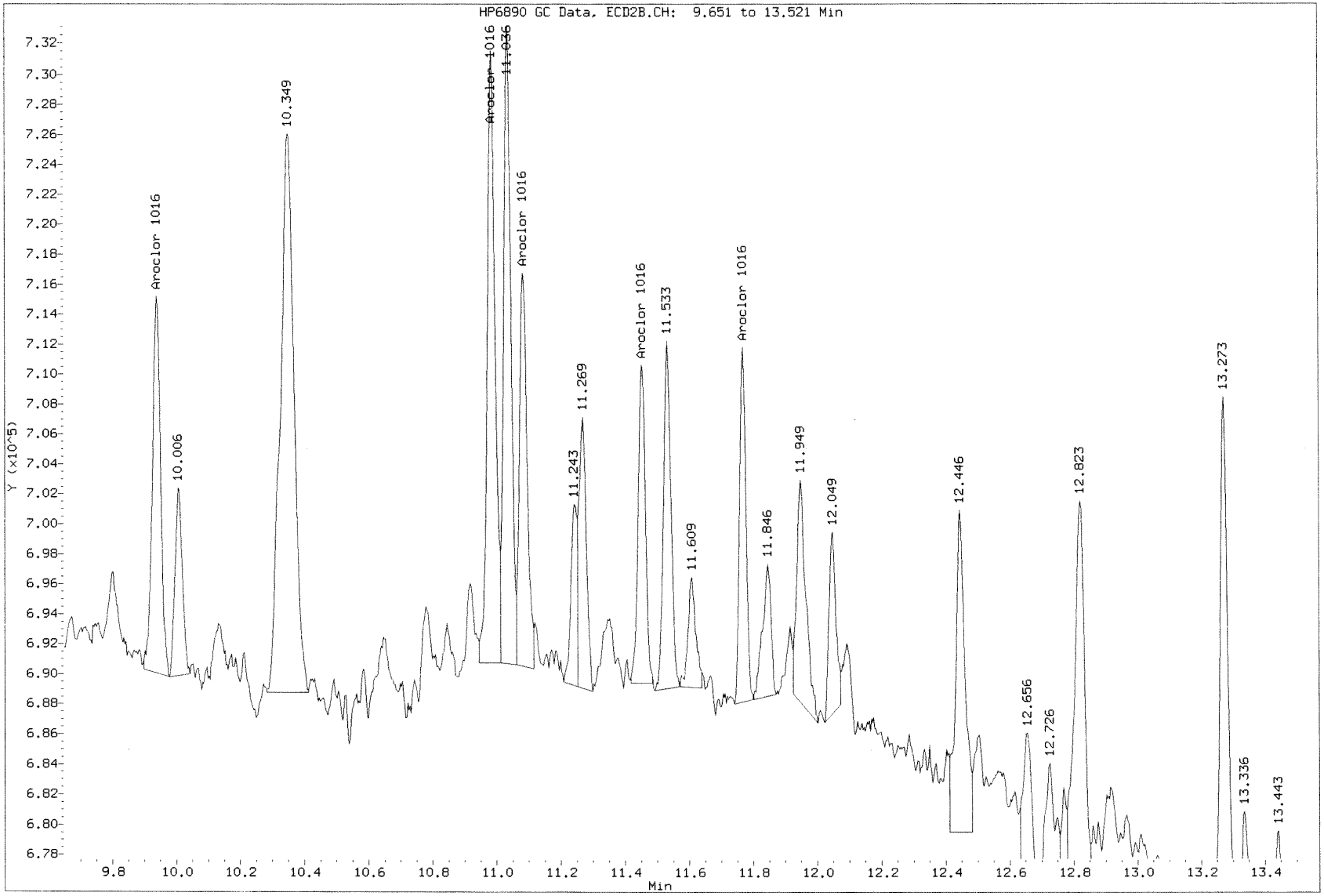
020749

12/17/18

Before

MB241211181

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F009.D
Injection Date: 07-DEC-2018 14:46
Instrument: GC27.i
Client Sample ID:

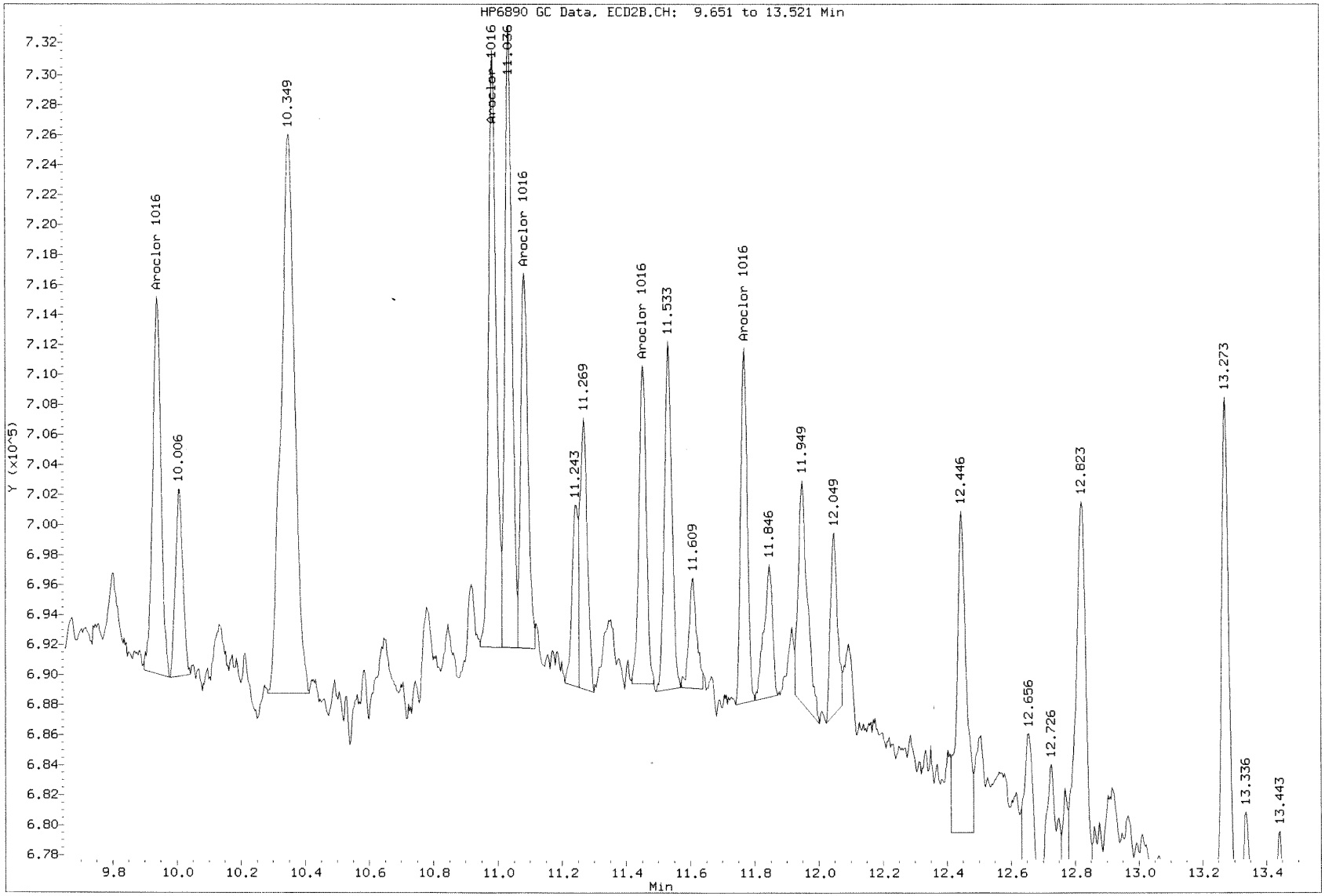


020750

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F009.D
Injection Date: 07-DEC-2018 14:46
Instrument: GC27.i
Client Sample ID:

CMA 12/7/18

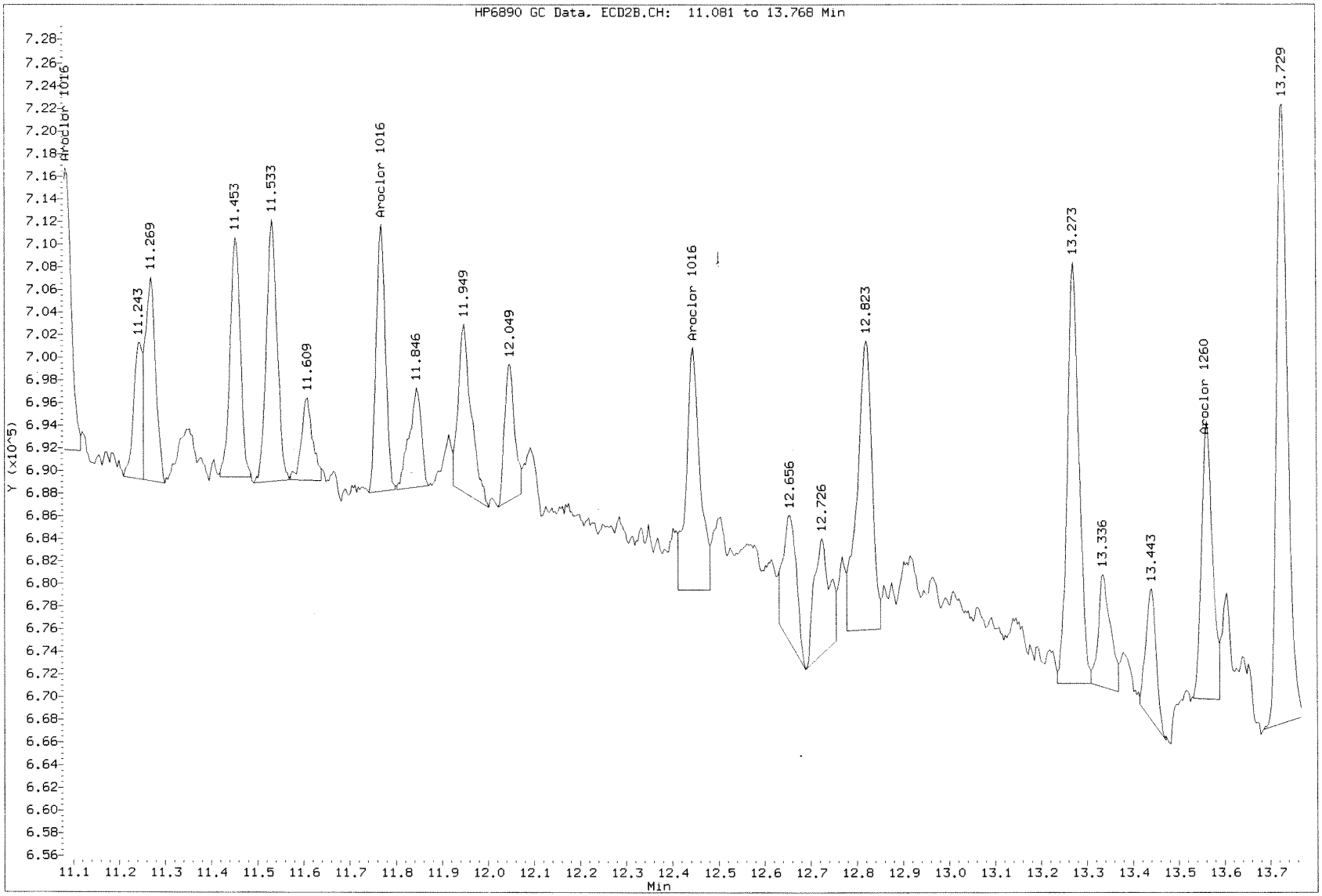
After baseline/shoulder
MR 12/12/18



020751

CMA 12/17/18 Beere mm 12/18/18

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F009.D
Injection Date: 07-DEC-2018 14:46
Instrument: GC27.i
Client Sample ID:

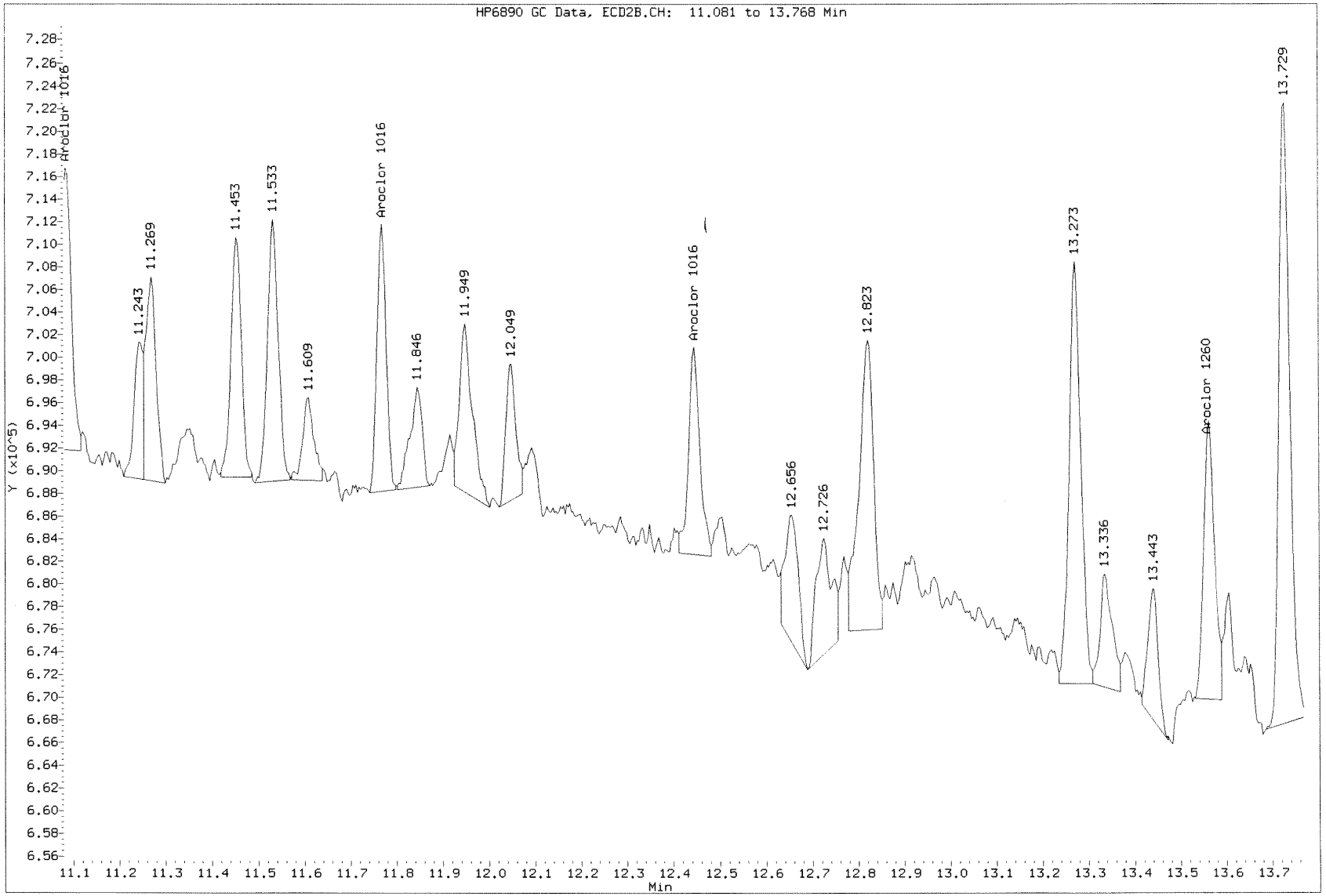


020752

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F009.D
Injection Date: 07-DEC-2018 14:46
Instrument: GC27.i
Client Sample ID:

UA 12/14/18

~~Aroclor~~
baseline/ shoulder
MR 12/12/18

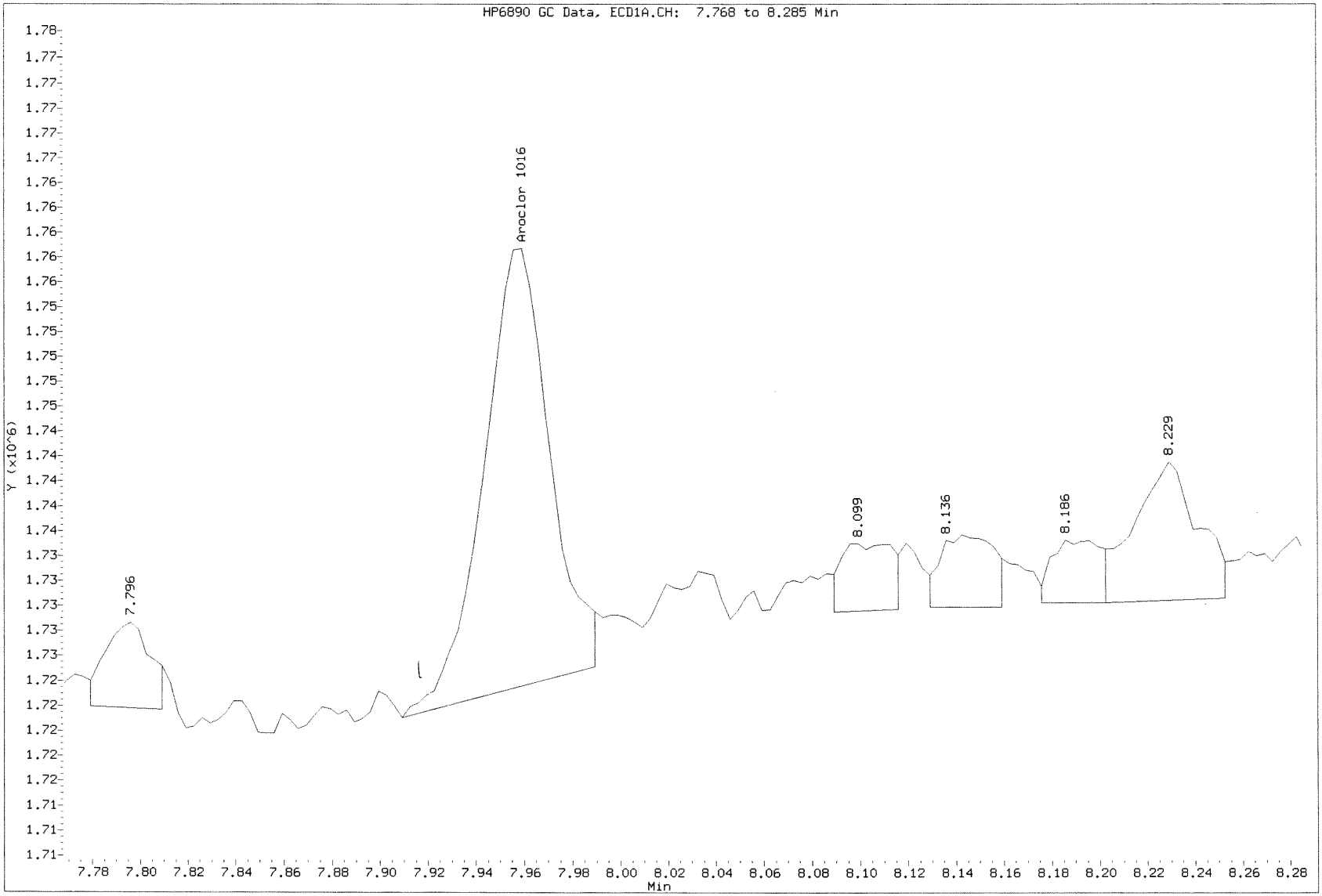


020753

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F009.D
Injection Date: 07-DEC-2018 14:46
Instrument: GC27.i
Client Sample ID:

LMA 12/17/18

Before MM 12/12/18

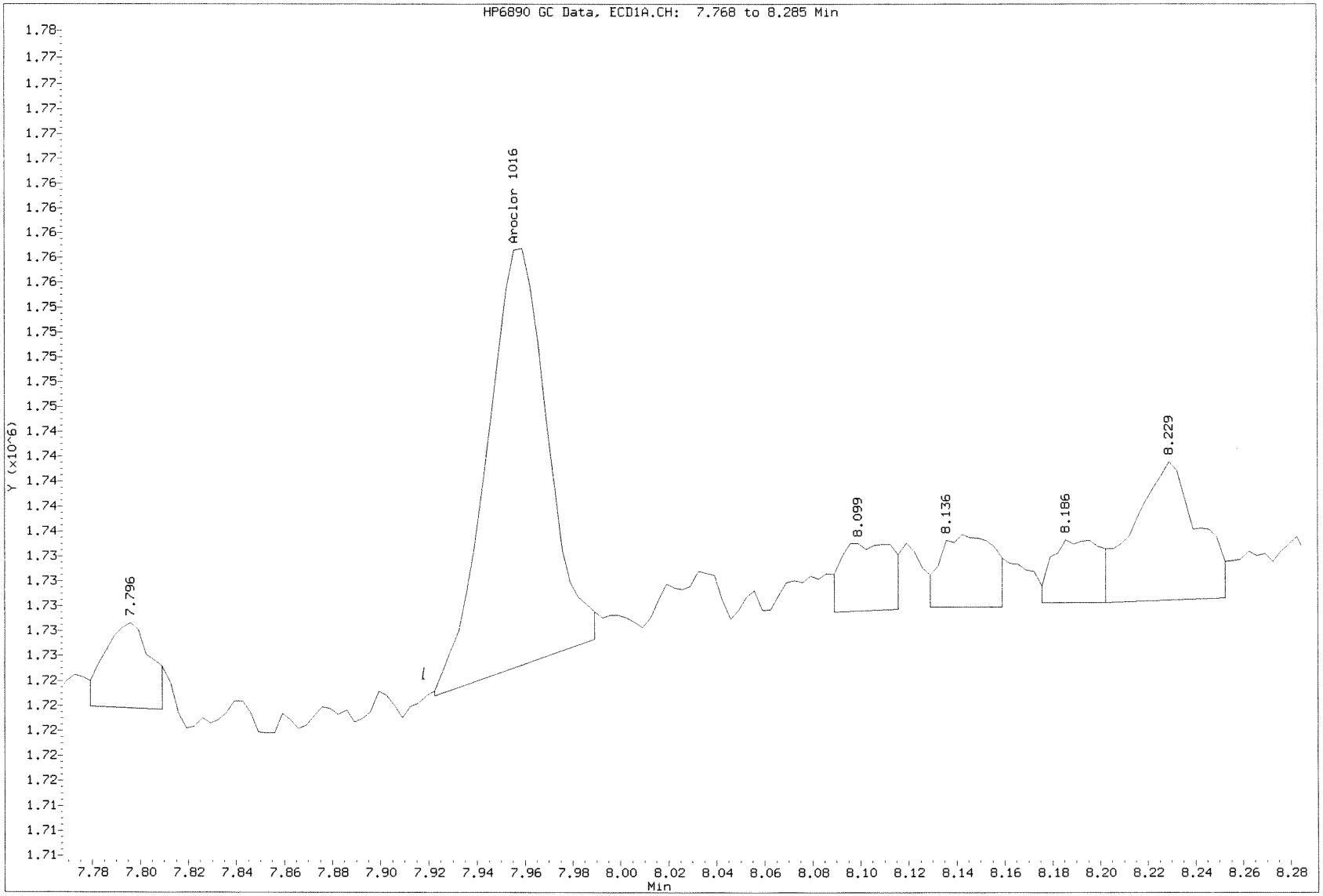


020754

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F009.D
Injection Date: 07-DEC-2018 14:46
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

After baseline/shoulder
MC 12/12/18

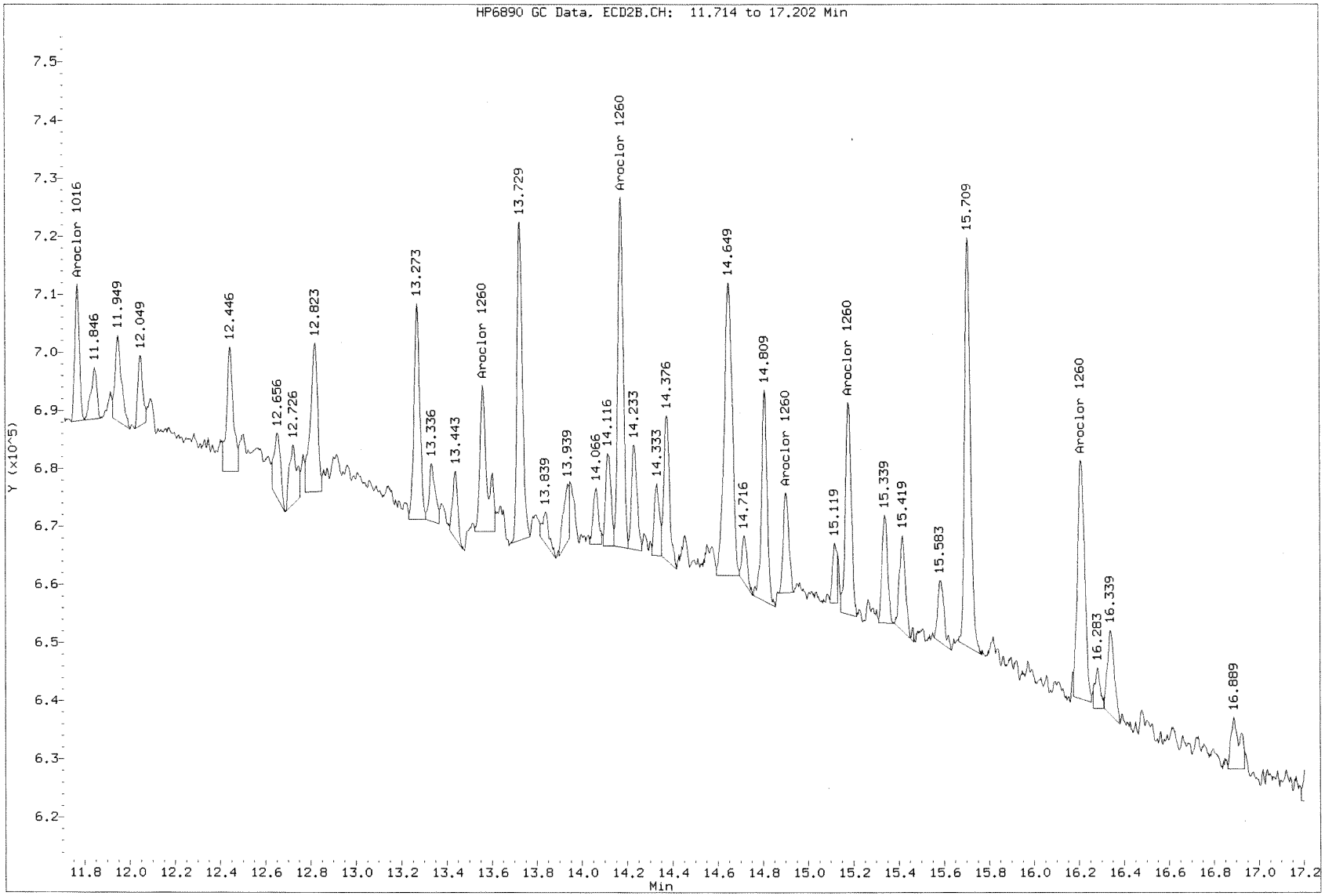


020755

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F009.D
Injection Date: 07-DEC-2018 14:46
Instrument: GC27.i
Client Sample ID:

CM 12/17/18

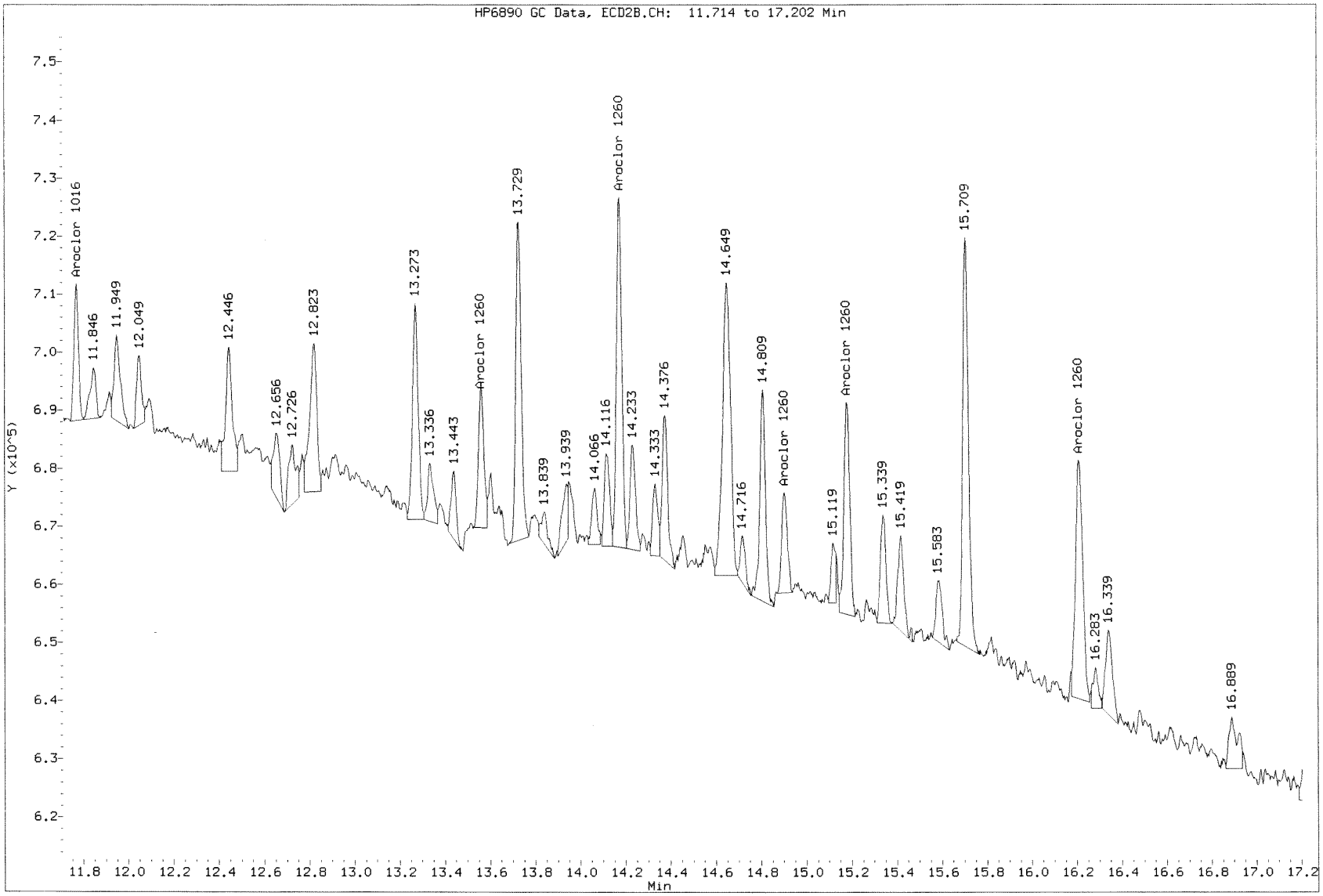
Before
MC 12/12/18



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F009.D
Injection Date: 07-DEC-2018 14:46
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

After baseline/shoulder
MR 12/12/18

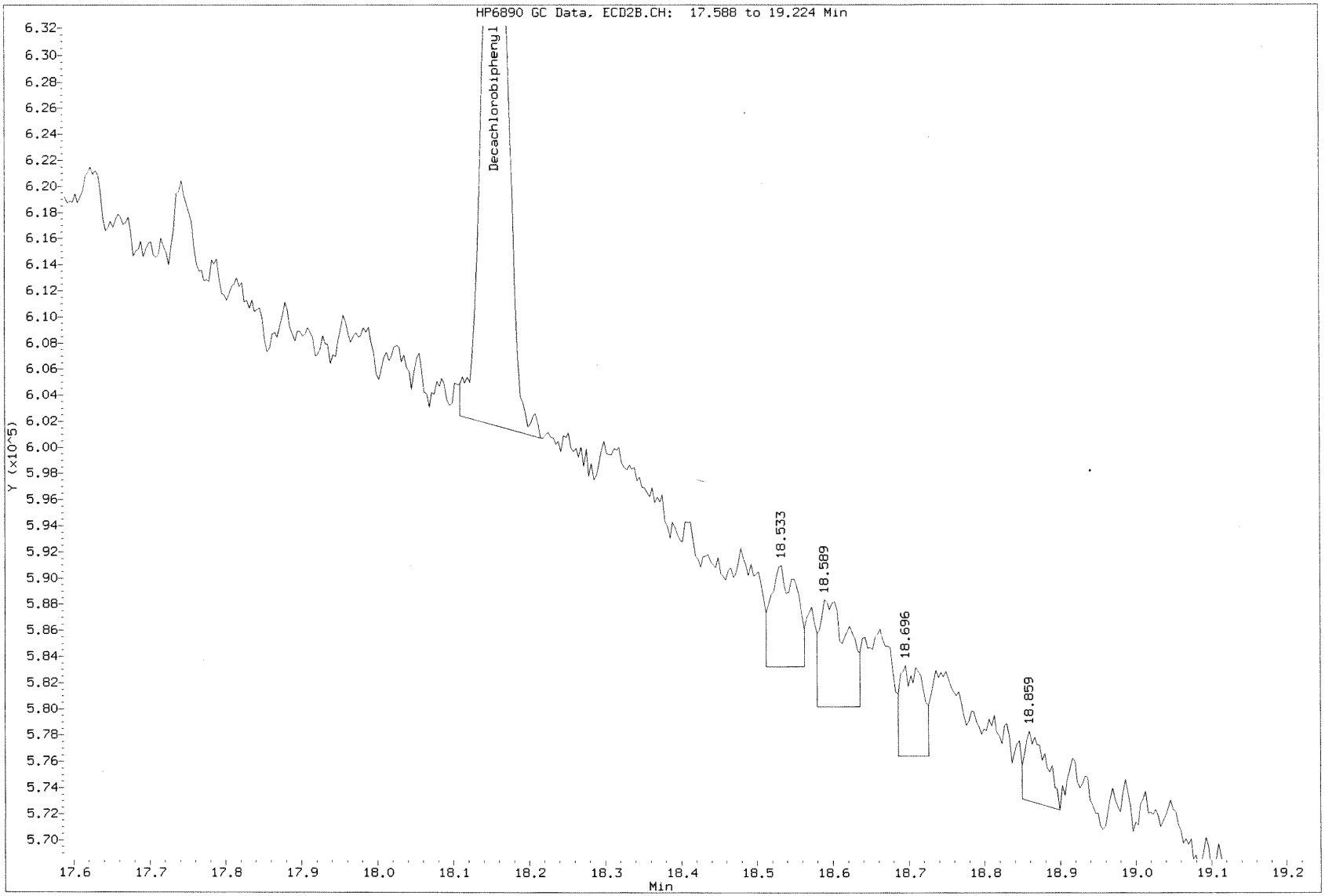


020757

~~After~~ mr 12/12/18
Before
mr 12/12/18

WA 12/17/18

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F009.D
Injection Date: 07-DEC-2018 14:46
Instrument: GC27.i
Client Sample ID:

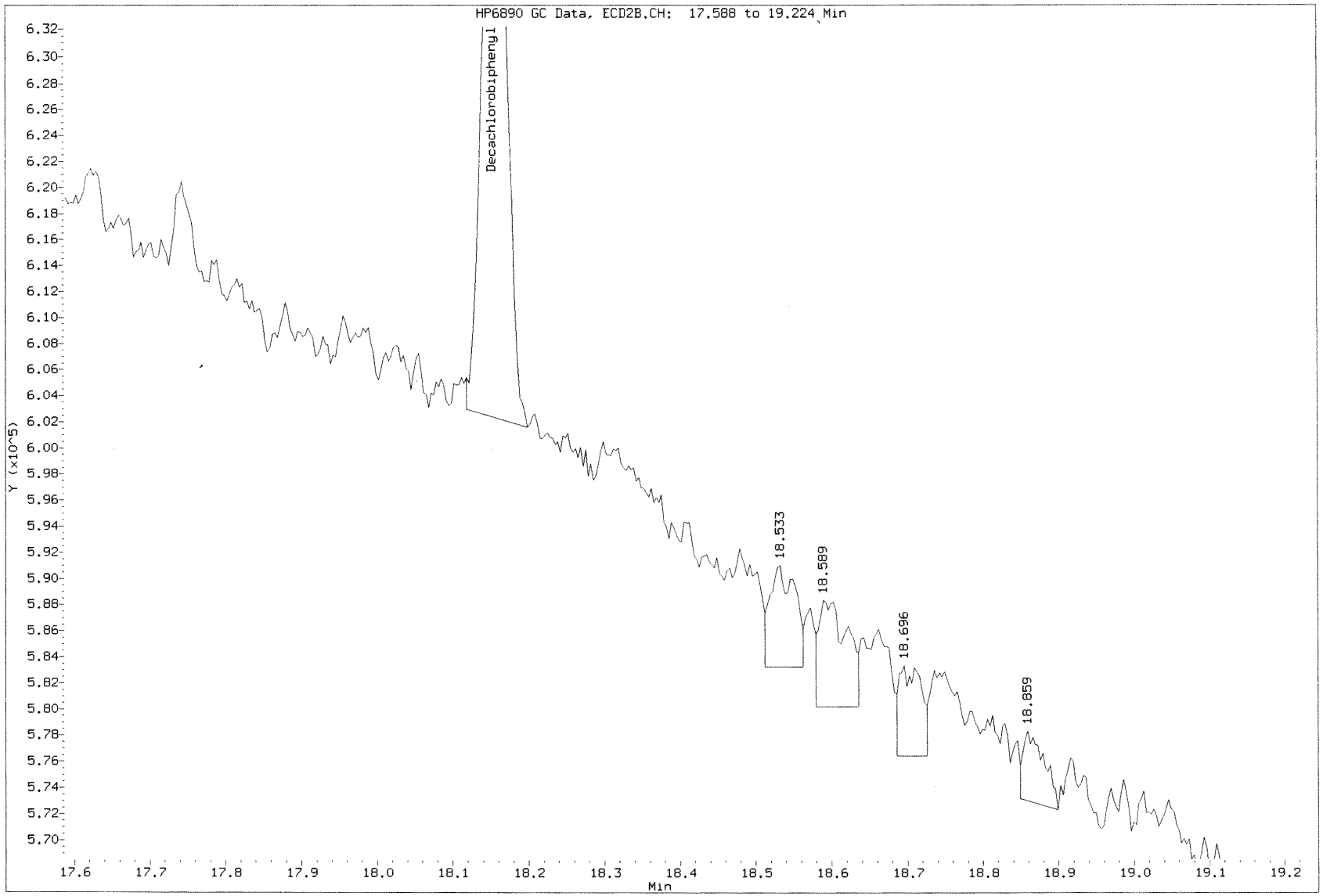


020758

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F009.D
Injection Date: 07-DEC-2018 14:46
Instrument: GC27.i
Client Sample ID:

WA 12/7/18

After baseline/shoulder
MC 12/12/18



020759

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F010.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F010.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F010.D
Inj Date : 07-DEC-2018 15:18
Sample Info: 1660 5.0PPB PCB7-61C
Misc Info :
Cal Date : 12-DEC-2018 12:37
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

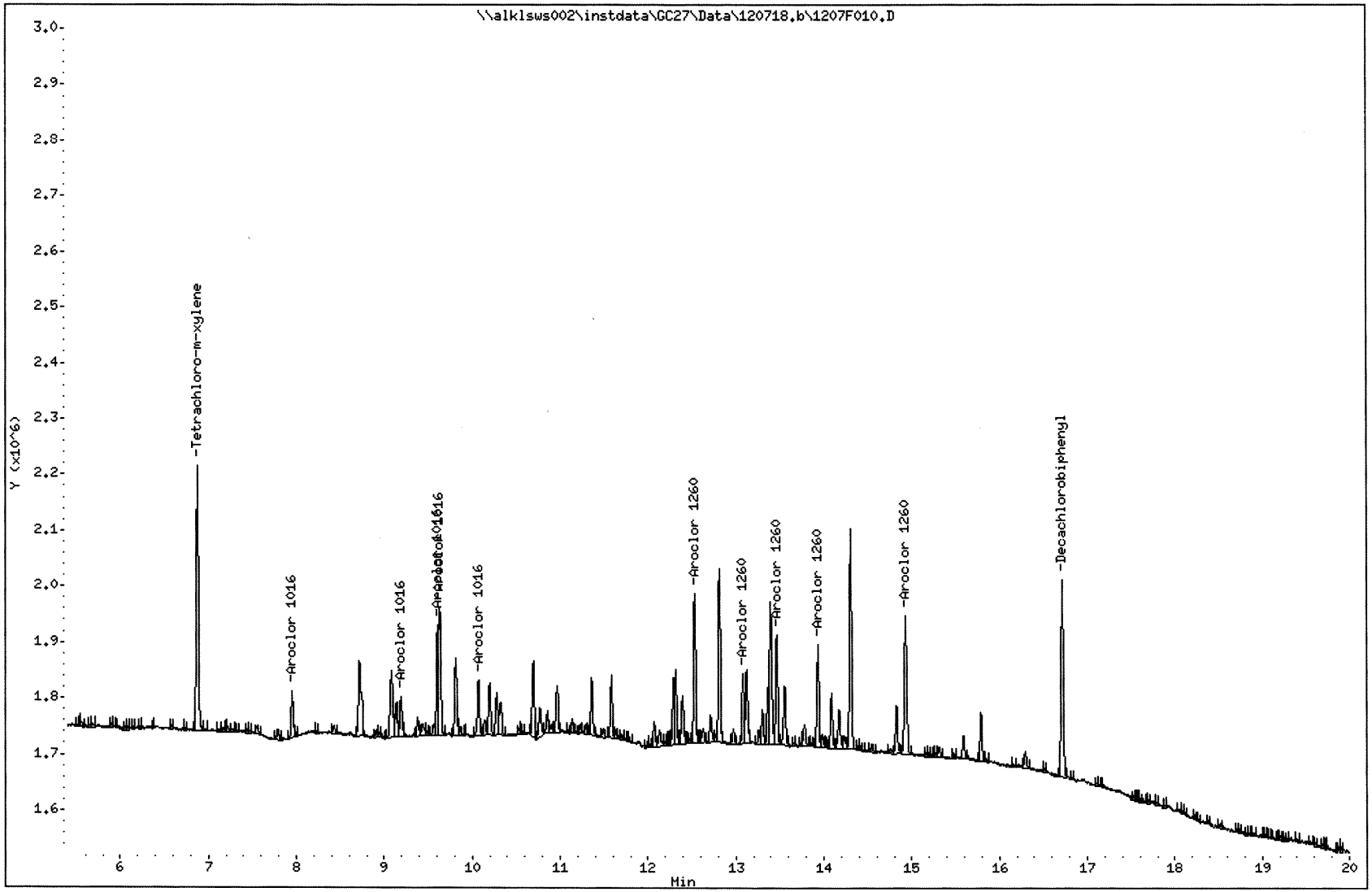
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.876	8.456	789151	350111	0.498	0.489		100.00
Aroclor 1016	7.953	9.936	136797	103338	5.08	5.00	80.00- 120.00	100.00(M)
	9.193	10.983	125974	143781	4.93	4.89	69.55- 104.33	92.09(M)
	9.613	11.080	295598	106701	5.54	5.12	139.76- 209.63	216.09(M)
	9.636	11.766	358599	80286	5.00	5.02	217.16- 325.74	262.14(M)
	10.076	12.443	166246	67051	5.16	4.76	87.47- 131.20	121.53(M)
			Average of Peak Amounts =		5.14	4.96		
Aroclor 1260	12.533	13.560	422901	96837	5.32	5.42	80.00- 120.00	100.00
	13.083	14.170	189549	225582	4.99	5.30	41.53- 62.29	44.82
	13.466	14.900	295919	70947	5.06	4.89	60.45- 90.67	69.97
	13.936	15.176	299727	148191	5.16	5.20	64.20- 96.29	70.87
	14.933	16.210	480469	214815	5.20	5.38	103.51- 155.26	113.61
			Average of Peak Amounts =		5.15	5.24		
Decachlorobiphenyl	16.720	18.153	608805	322868	0.504	0.523		100.00

QC Flag Legend

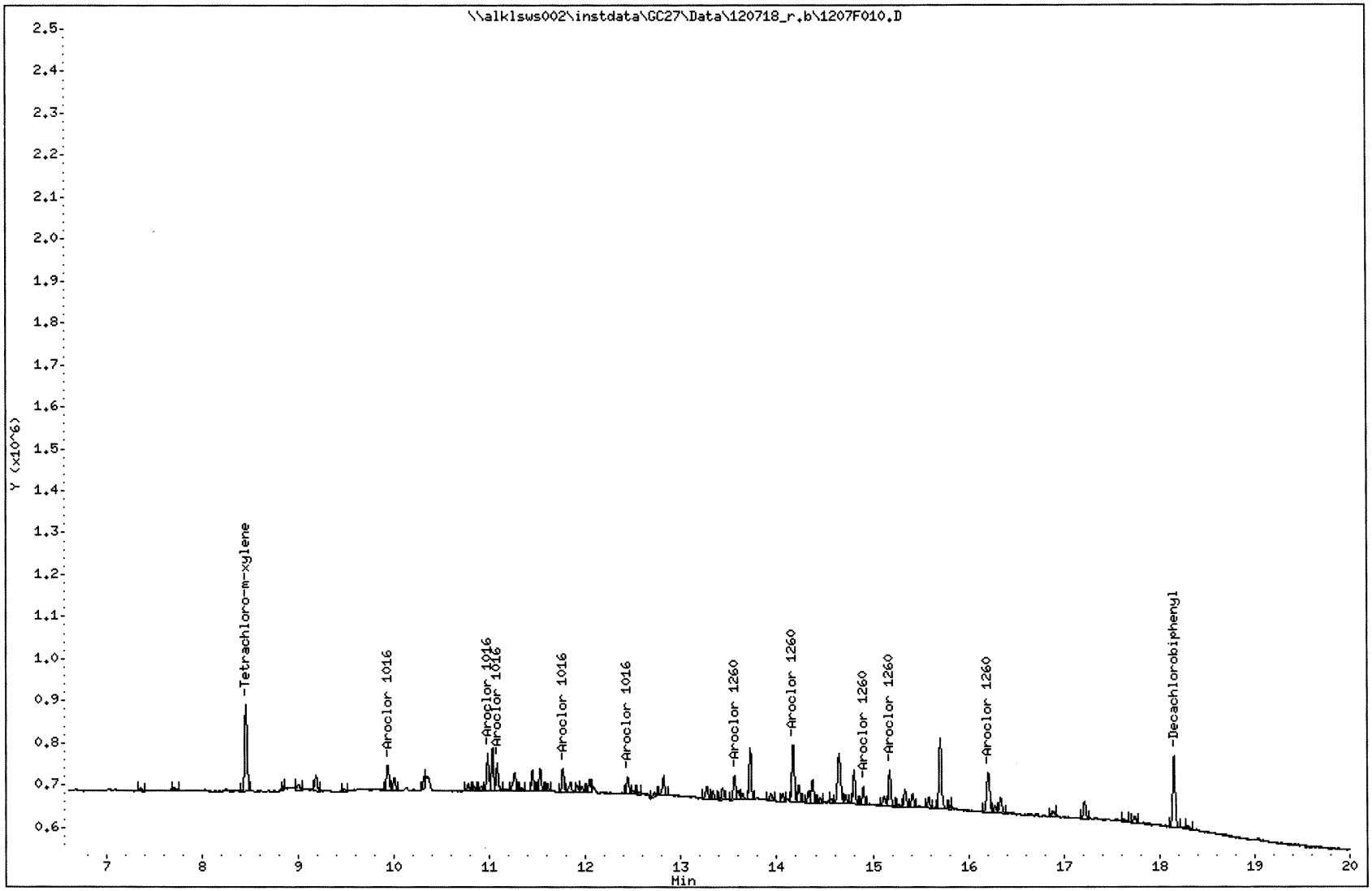
M - Compound response manually integrated.

MC 12/13/18

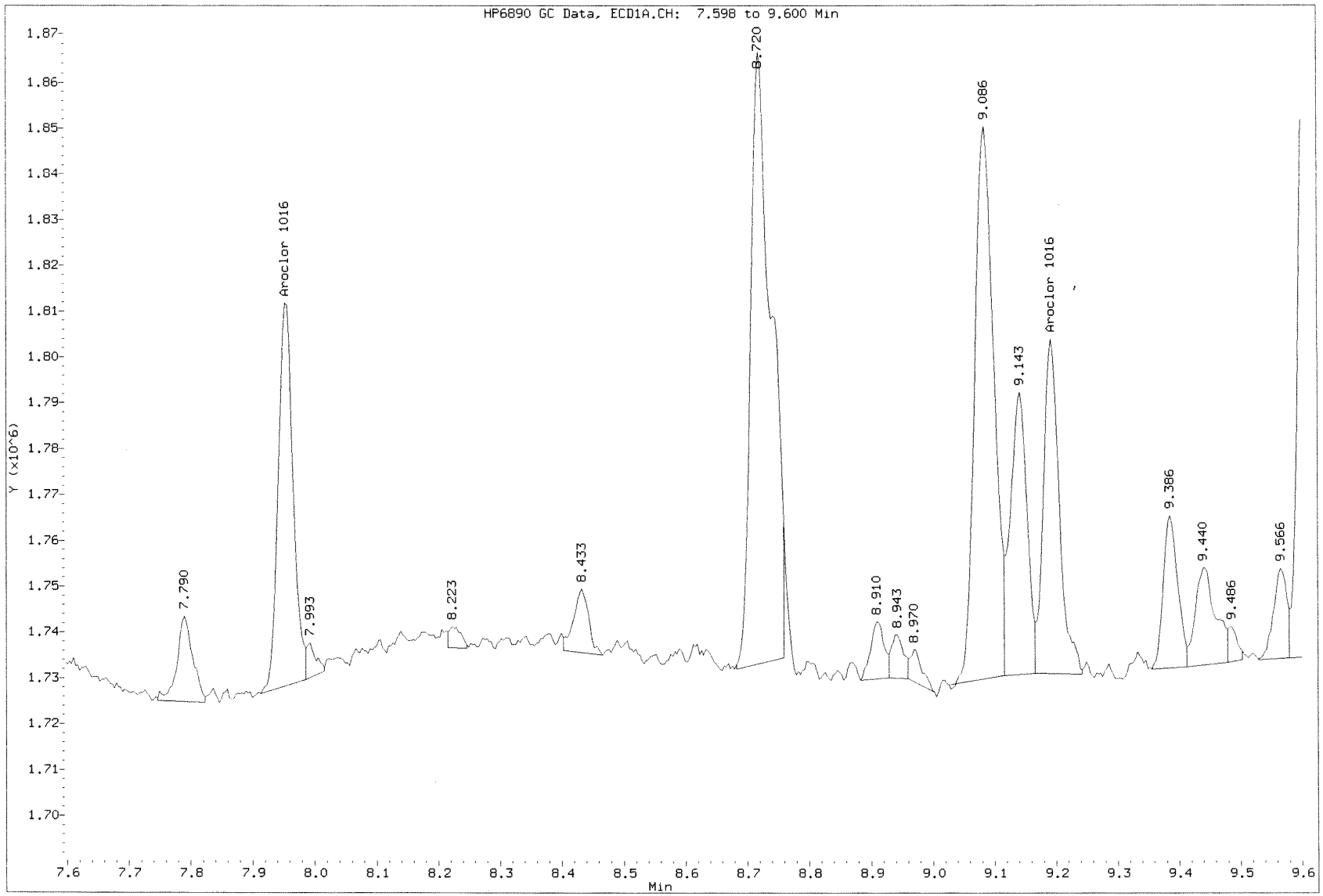
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F010.D
Date : 07-DEC-2018 15:18
Client ID:
Instrument: GC27.i
Sample Info: 1660 5.0PPB PCB7-61C
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F010.D
Date : 07-DEC-2018 15:18
Client ID:
Instrument: GC27.i
Sample Info: 1660 5.0PPB PCB7-61C
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F010.D
Injection Date: 07-DEC-2018 15:18
Instrument: GC27.i
Client Sample ID:

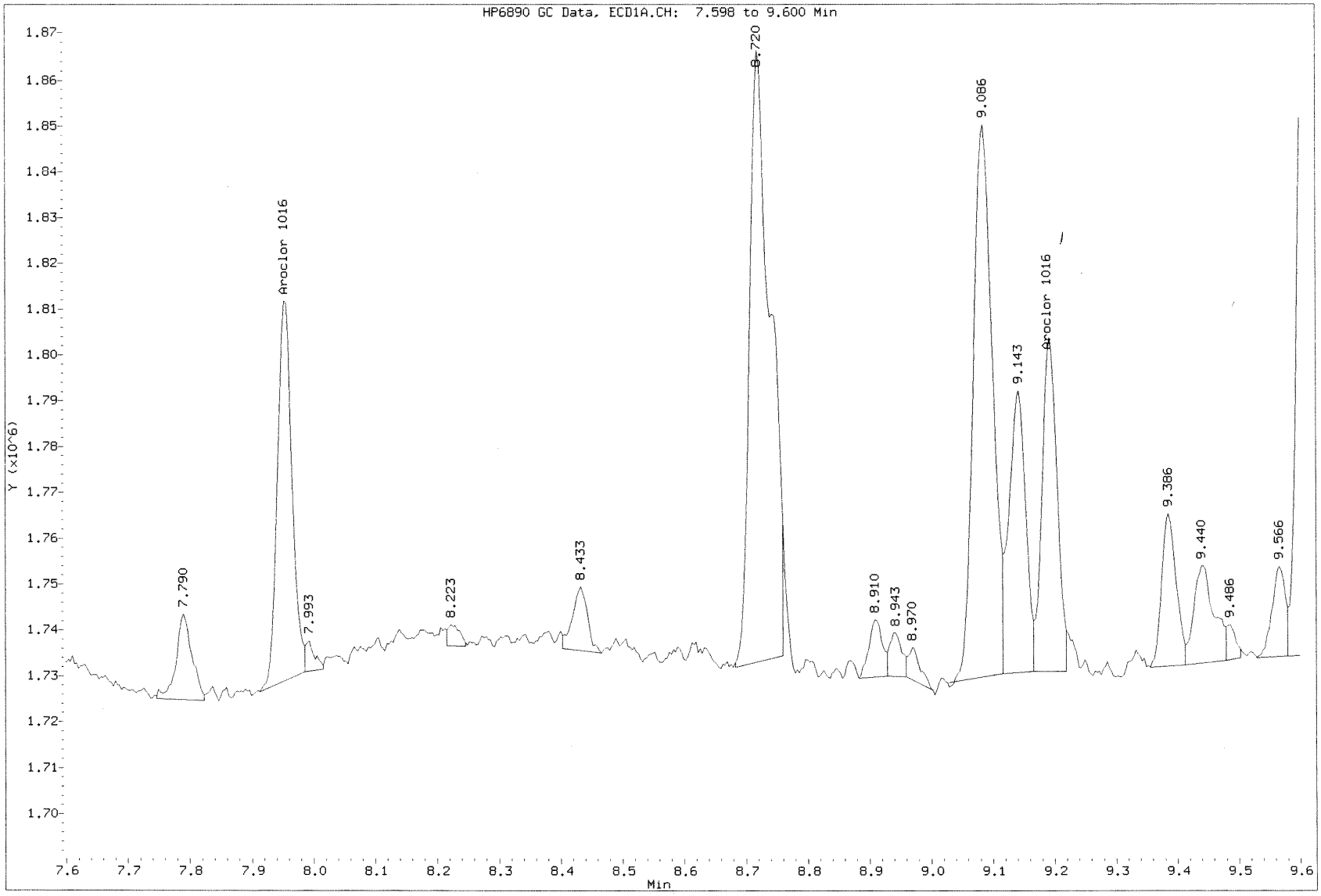


020763

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F010.D
Injection Date: 07-DEC-2018 15:18
Instrument: GC27.i
Client Sample ID:

UMD 12/17/18

After baseline/shoulder MC 12/18/18

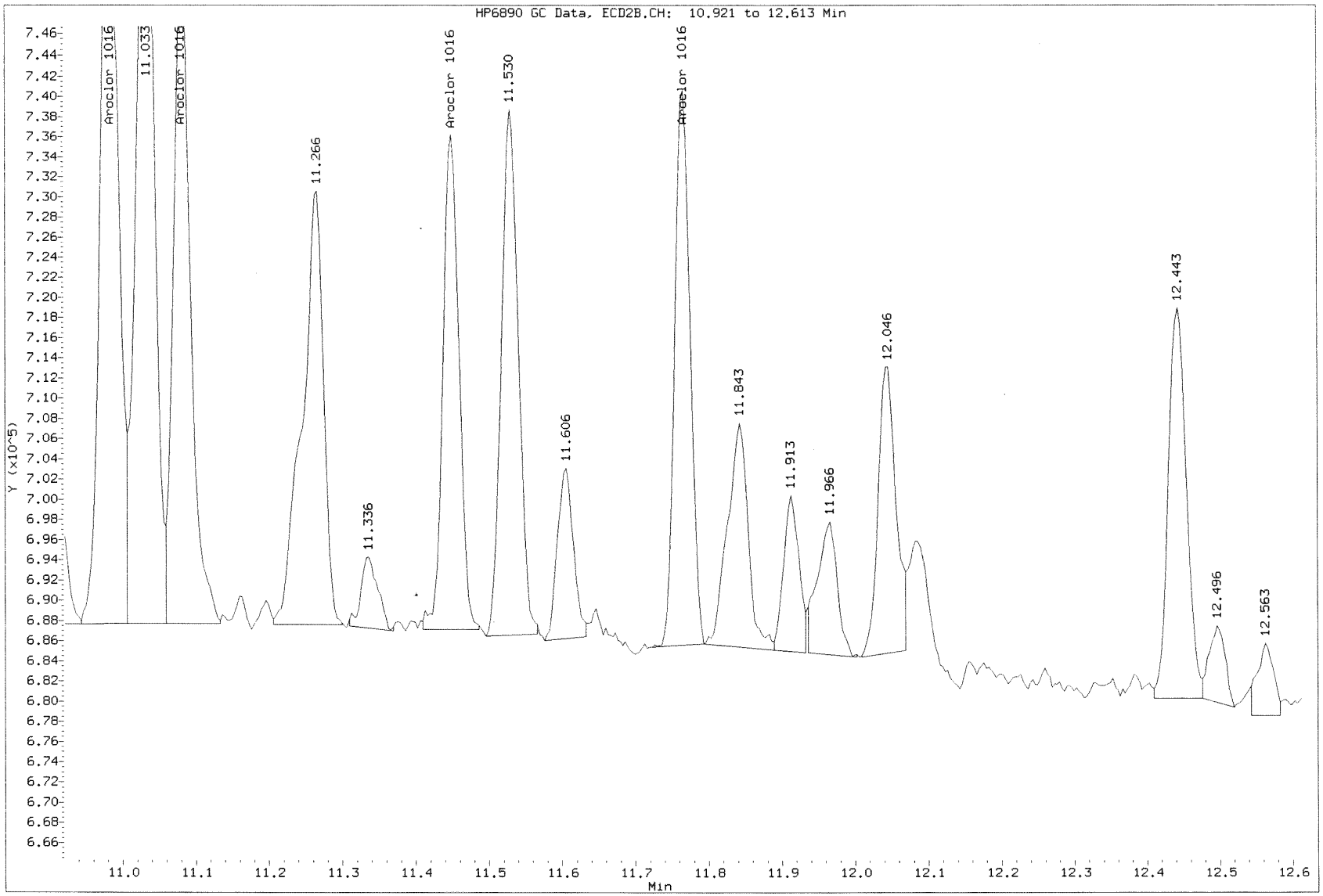


020764

Before
MR 12/12/18

LMA 12/17/18

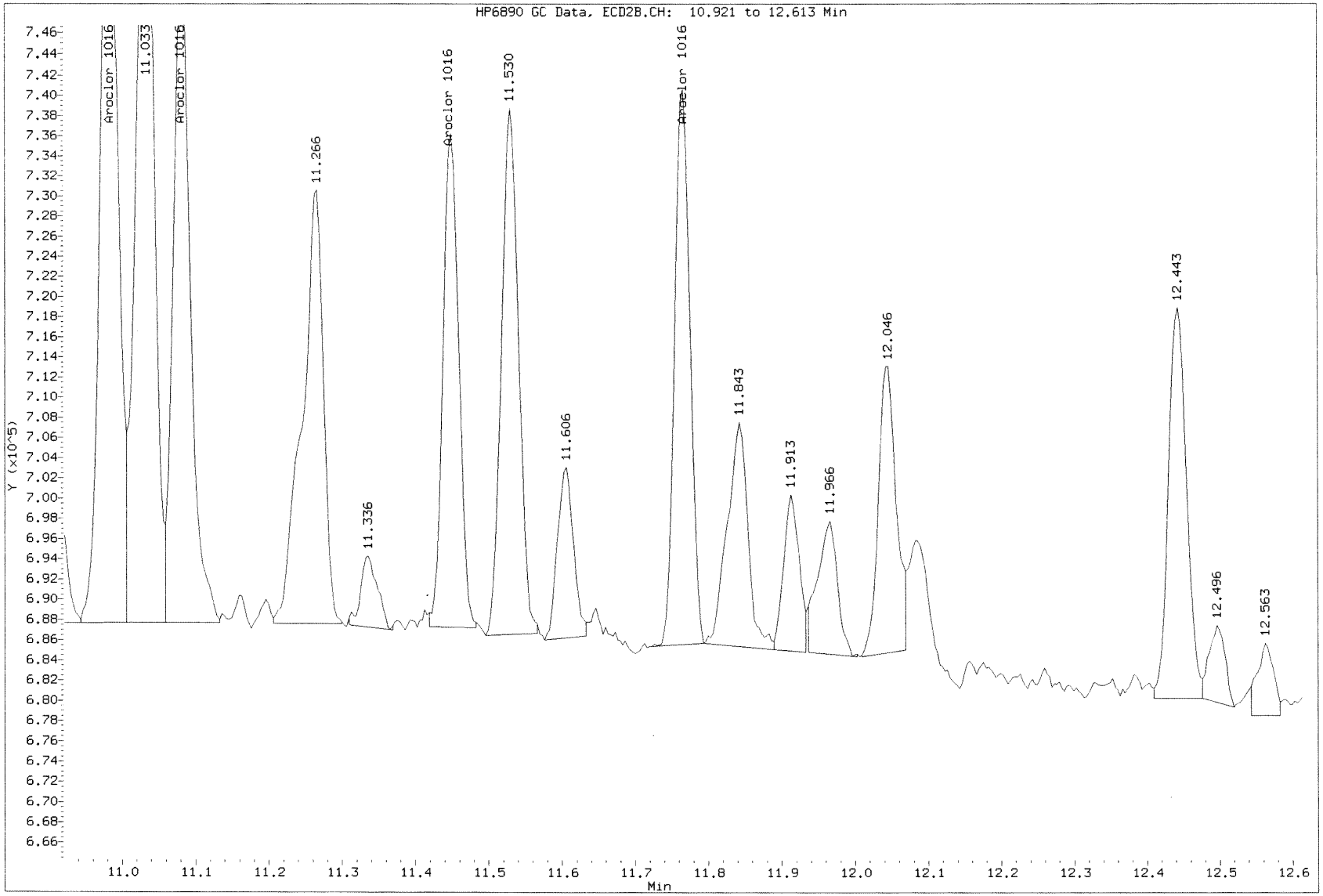
Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F010.D
Injection Date: 07-DEC-2018 15:18
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F010.D
Injection Date: 07-DEC-2018 15:18
Instrument: GC27.i
Client Sample ID:

UA 12/19/18

After baseline/shoulder



020766

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F011.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F011.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F011.D
Inj Date : 07-DEC-2018 15:49
Sample Info: 1660 10PPB PCB7-57B
Misc Info :
Cal Date : 12-DEC-2018 12:37
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.876	8.456	1602579	758890	1.01	1.06		100.00
Aroclor 1016	7.953	9.936	280396	212327	10.4	10.3	80.00- 120.00	100.00(M)
	9.196	10.983	262903	300866	10.3	10.2	69.55- 104.33	93.76(M)
	9.613	11.083	566545	233109	10.6	11.2	139.76- 209.63	202.05(M)
	9.636	11.766	721722	173236	10.1	10.8	217.16- 325.74	257.39(M)
	10.076	12.443	315497	144906	9.79	10.3	87.47- 131.20	112.52(M)
			Average of Peak Amounts =		10.2	10.6		
Aroclor 1260	12.536	13.559	793877	193225	9.98	10.8	80.00- 120.00	100.00
	13.083	14.173	367724	466517	9.69	11.0	41.53- 62.29	46.32
	13.466	14.903	559073	147139	9.57	10.1	60.45- 90.67	70.42
	13.936	15.179	586473	296872	10.1	10.4	64.20- 96.29	73.87
	14.933	16.209	916807	404064	9.92	10.1	103.51- 155.26	115.48
			Average of Peak Amounts =		9.85	10.5		
Decachlorobiphenyl	16.719	18.153	1209067	633185	1.00	1.03		100.00

QC Flag Legend

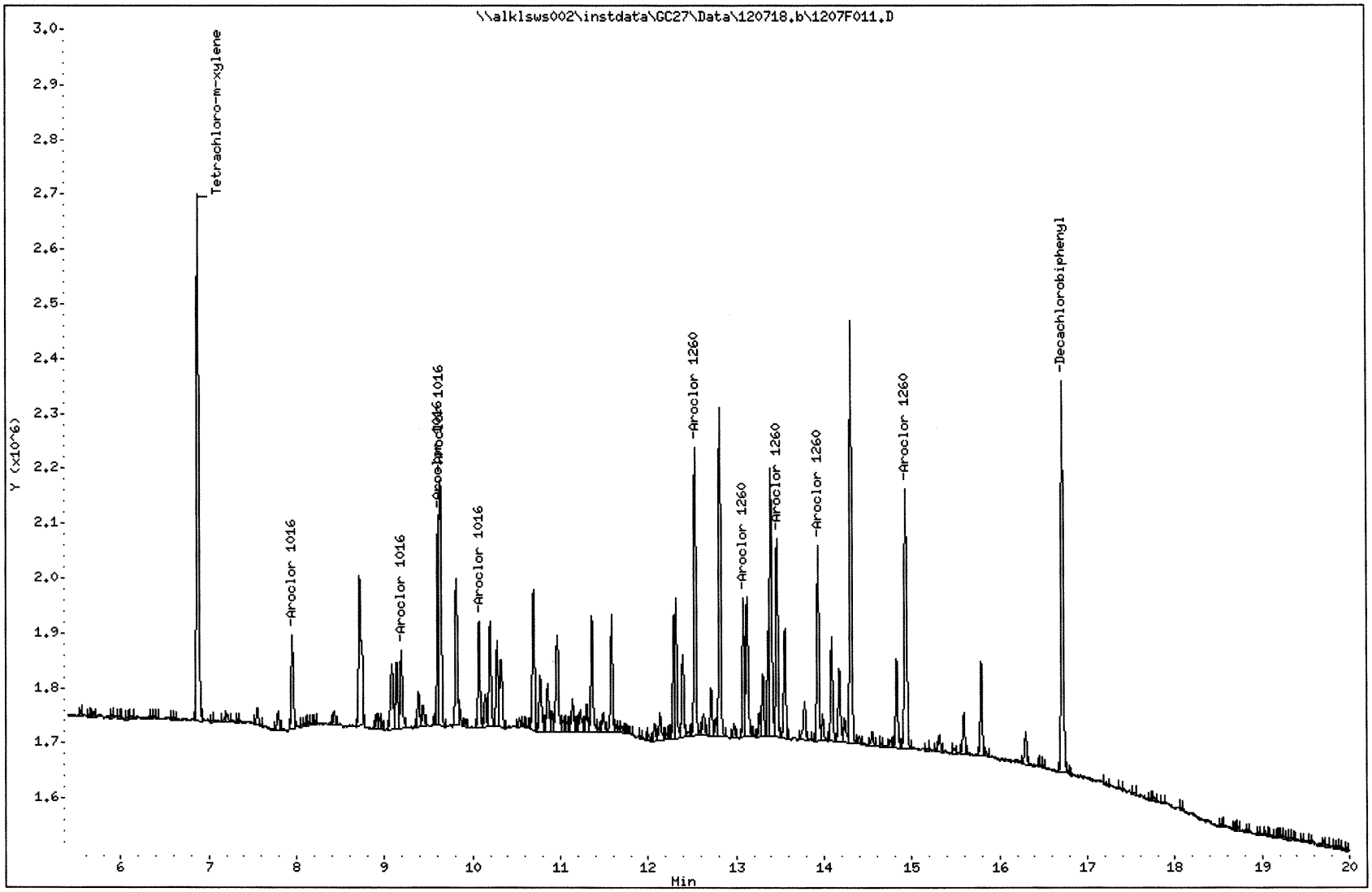
M - Compound response manually integrated.

MR 12/13/18

020767

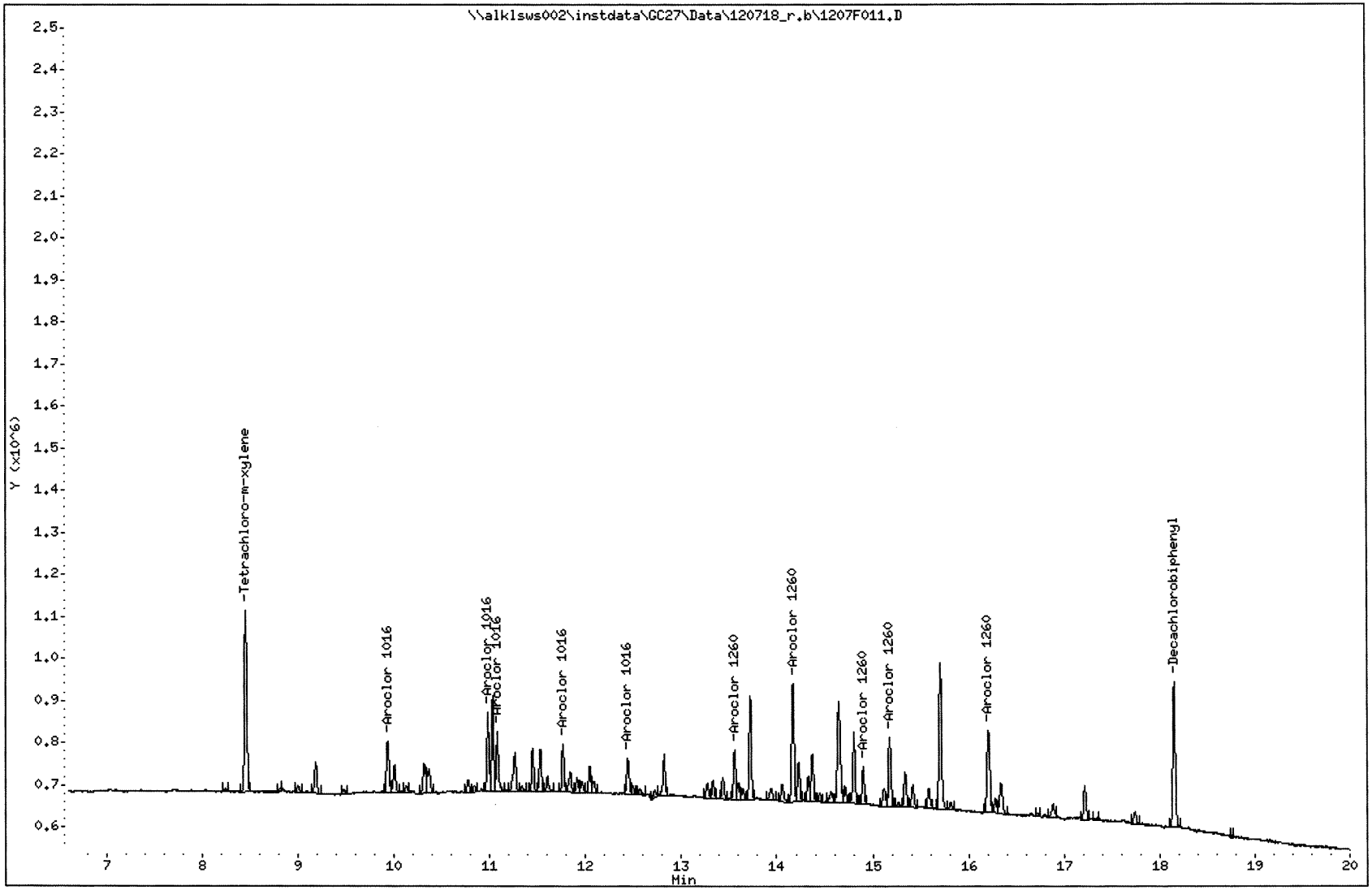
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F011.D
Date : 07-DEC-2018 15:49
Client ID:
Sample Info: 1660 10PPB PCB7-57B

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



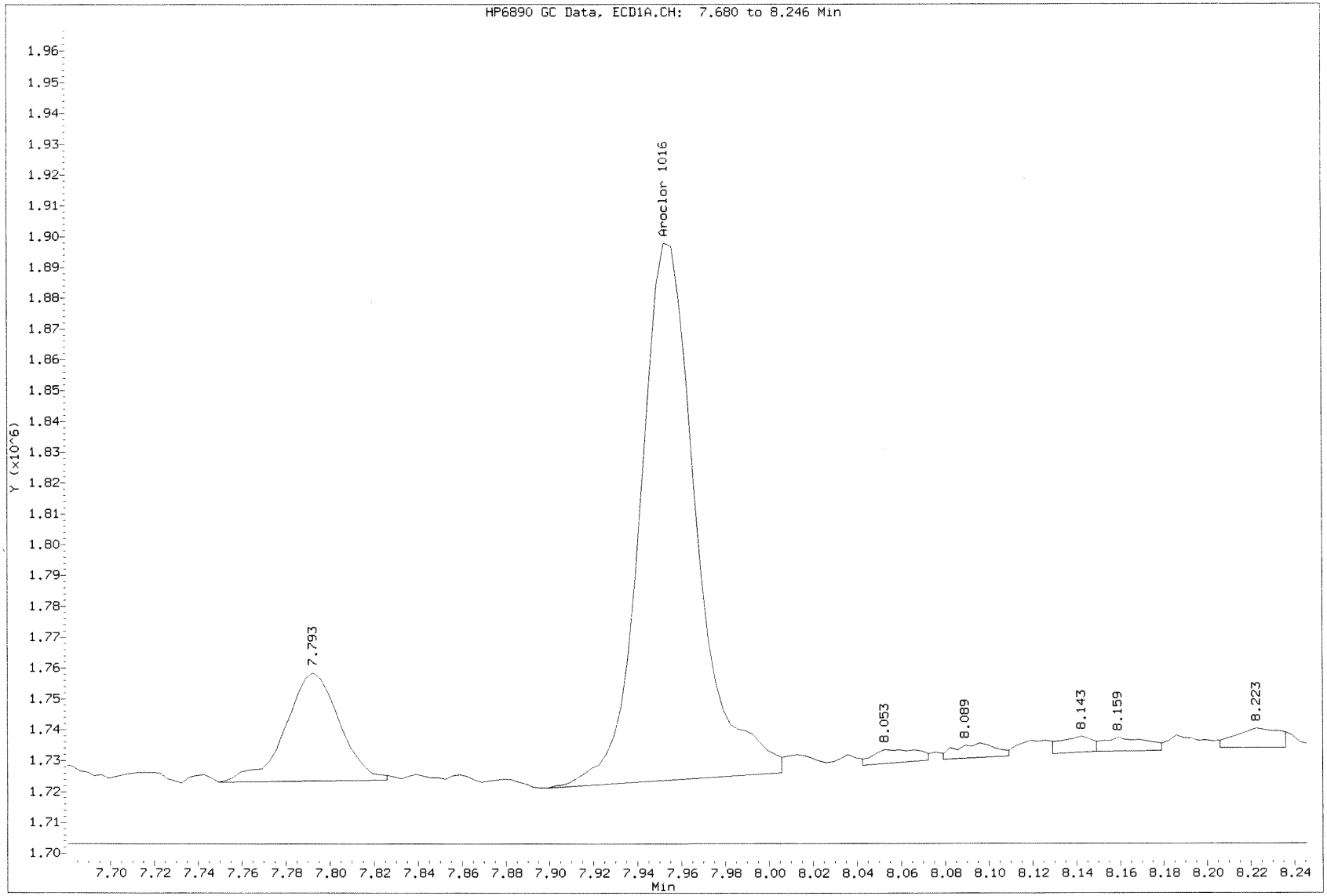
020768

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F011.D
Date : 07-DEC-2018 15:49
Client ID:
Instrument: GC27.i
Sample Info: 1660 10PPB PCB7-57B
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Before
MR 12/18/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F011.D
Injection Date: 07-DEC-2018 15:49
Instrument: GC27.i
Client Sample ID:

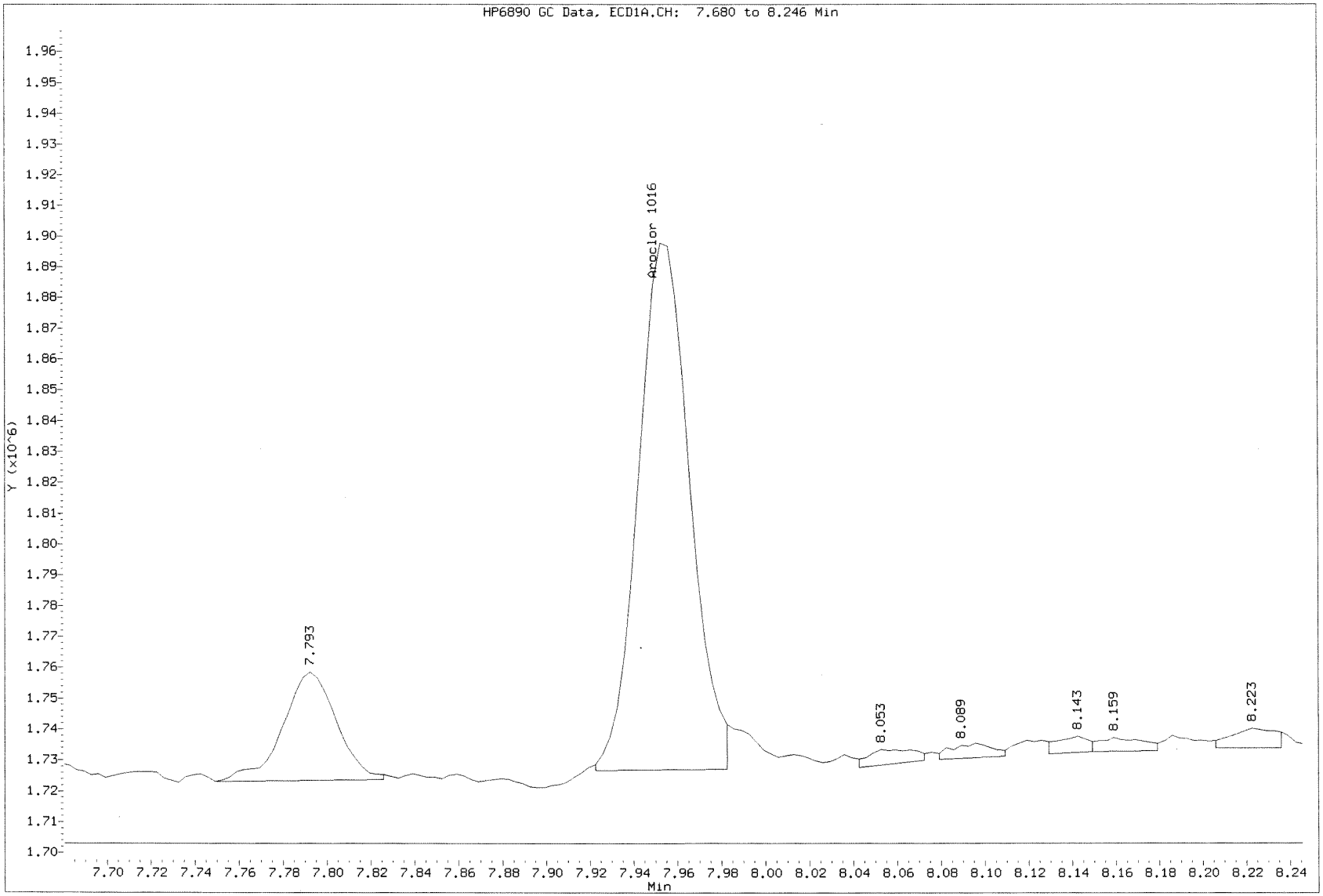


020770

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F011.D
Injection Date: 07-DEC-2018 15:49
Instrument: GC27.i
Client Sample ID:

CWA 12/17/18

After possible shoulder MR 12/12/18

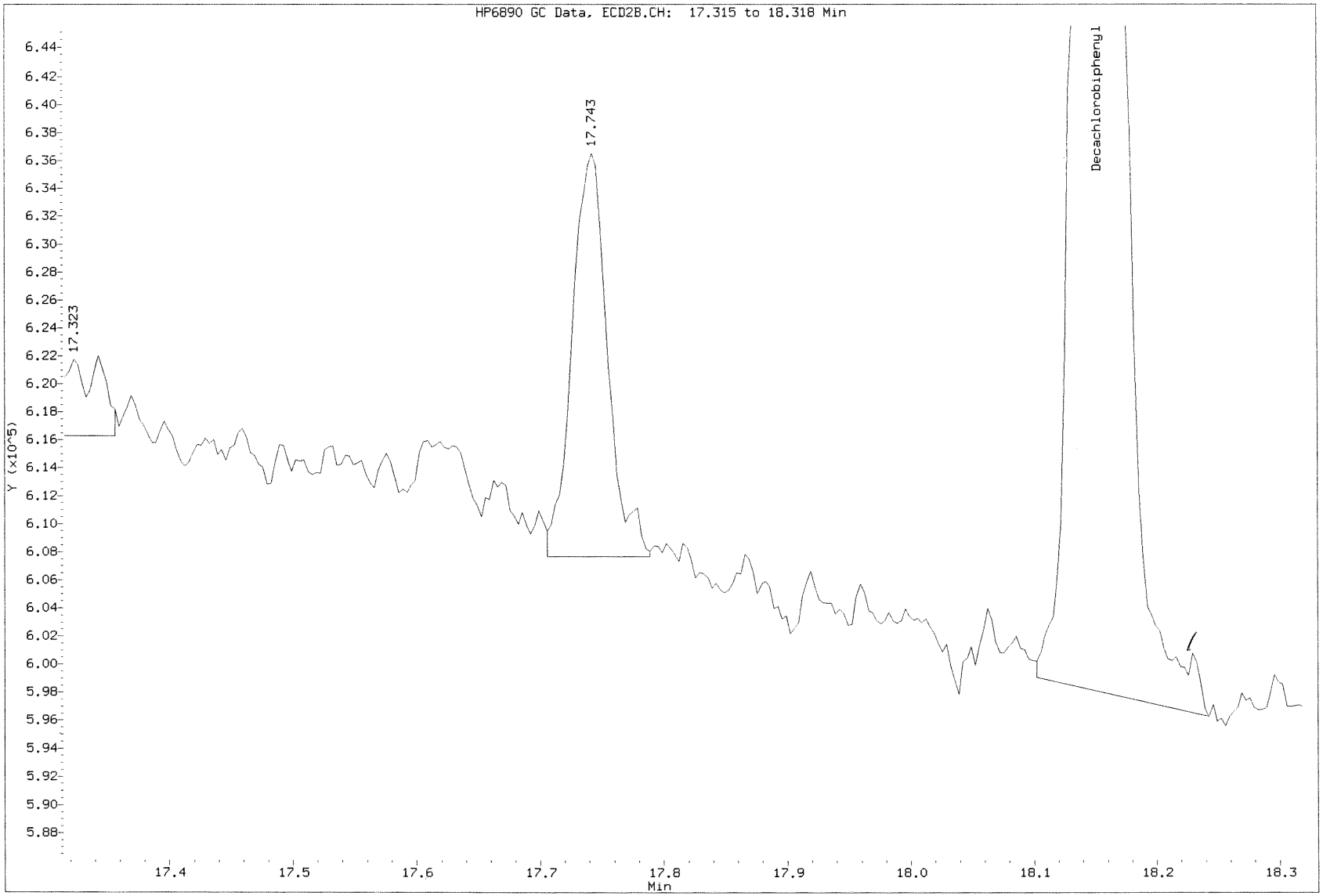


020771

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F011.D
Injection Date: 07-DEC-2018 15:49
Instrument: GC27.i
Client Sample ID:

CM 12/17/18

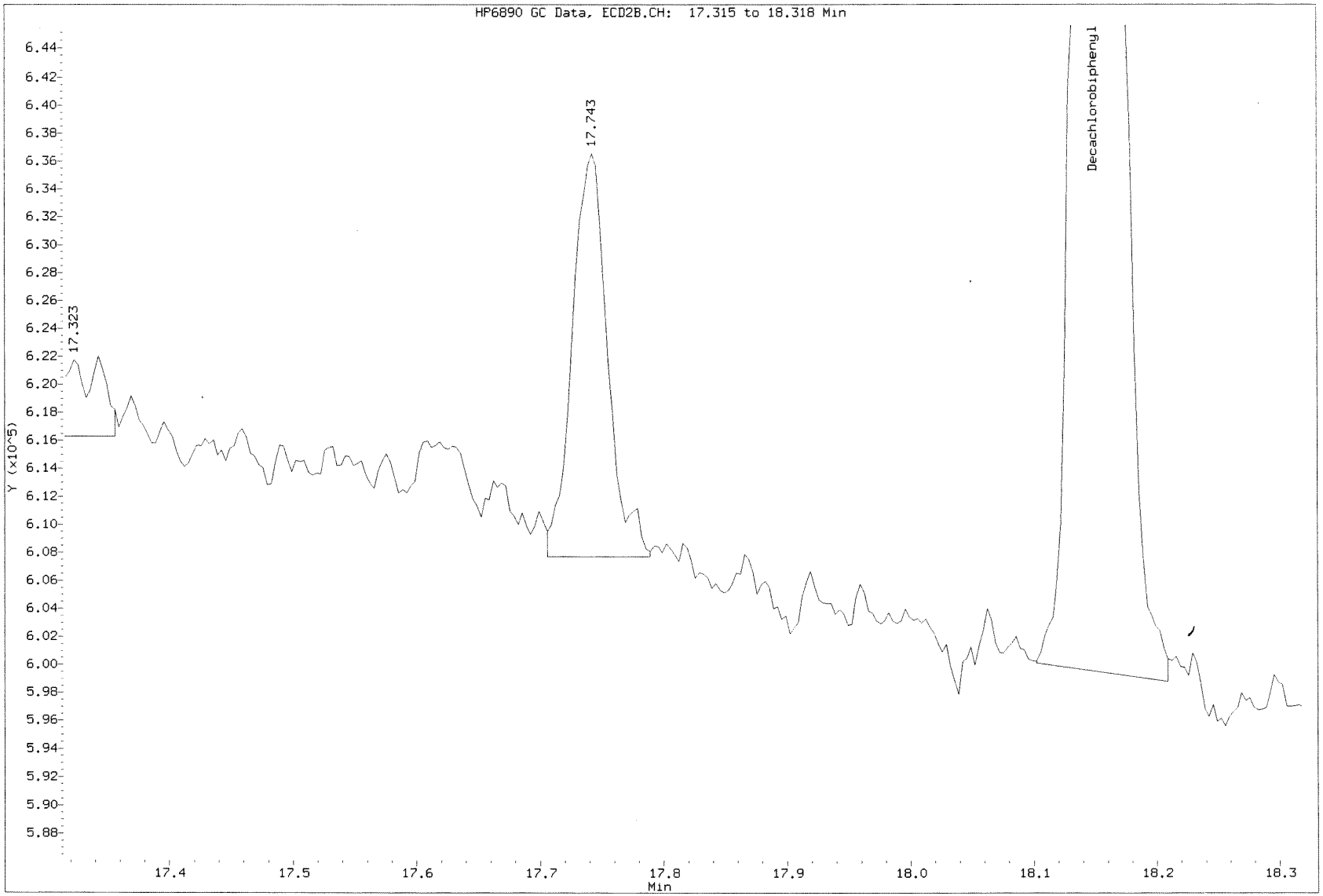
Before
MC 12/18/18



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F011.D
Injection Date: 07-DEC-2018 15:49
Instrument: GC27.1
Client Sample ID:

UA 12/17/18

After baseline/shoulder
MC 12/12/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F012.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F012.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F012.D
Inj Date : 07-DEC-2018 16:20
Sample Info: 1660 20PPB PCB7-57C
Misc Info :
Cal Date : 12-DEC-2018 12:37
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.877	8.457	3042593	1453004	1.92	2.03		100.00
Aroclor 1016	7.954	9.937	538042	397587	20.0	19.2	80.00- 120.00	100.00(M)
	9.194	10.981	466350	557571	18.3	19.0	69.55- 104.33	86.68(M)
	9.614	11.081	1008839	433050	18.9	20.8	139.76- 209.63	187.50(M)
	9.634	11.764	1417821	333707	19.8	20.9	217.16- 325.74	263.51(M)
	10.074	12.444	597244	293287	18.5	20.8	87.47- 131.20	111.00(M)
			Average of Peak Amounts =		19.1	20.1		
Aroclor 1260	12.534	13.561	1577781	360042	19.8	20.1	80.00- 120.00	100.00
	13.084	14.171	762455	886719	20.1	20.8	41.53- 62.29	48.32
	13.464	14.904	1130828	298103	19.4	20.5	60.45- 90.67	71.67
	13.934	15.177	1171463	570861	20.2	20.0	64.20- 96.29	74.25
	14.934	16.211	1855267	788275	20.1	19.7	103.51- 155.26	117.59
			Average of Peak Amounts =		19.9	20.2		
Decachlorobiphenyl	16.721	18.154	2511675	1290917	2.08	2.09		100.00

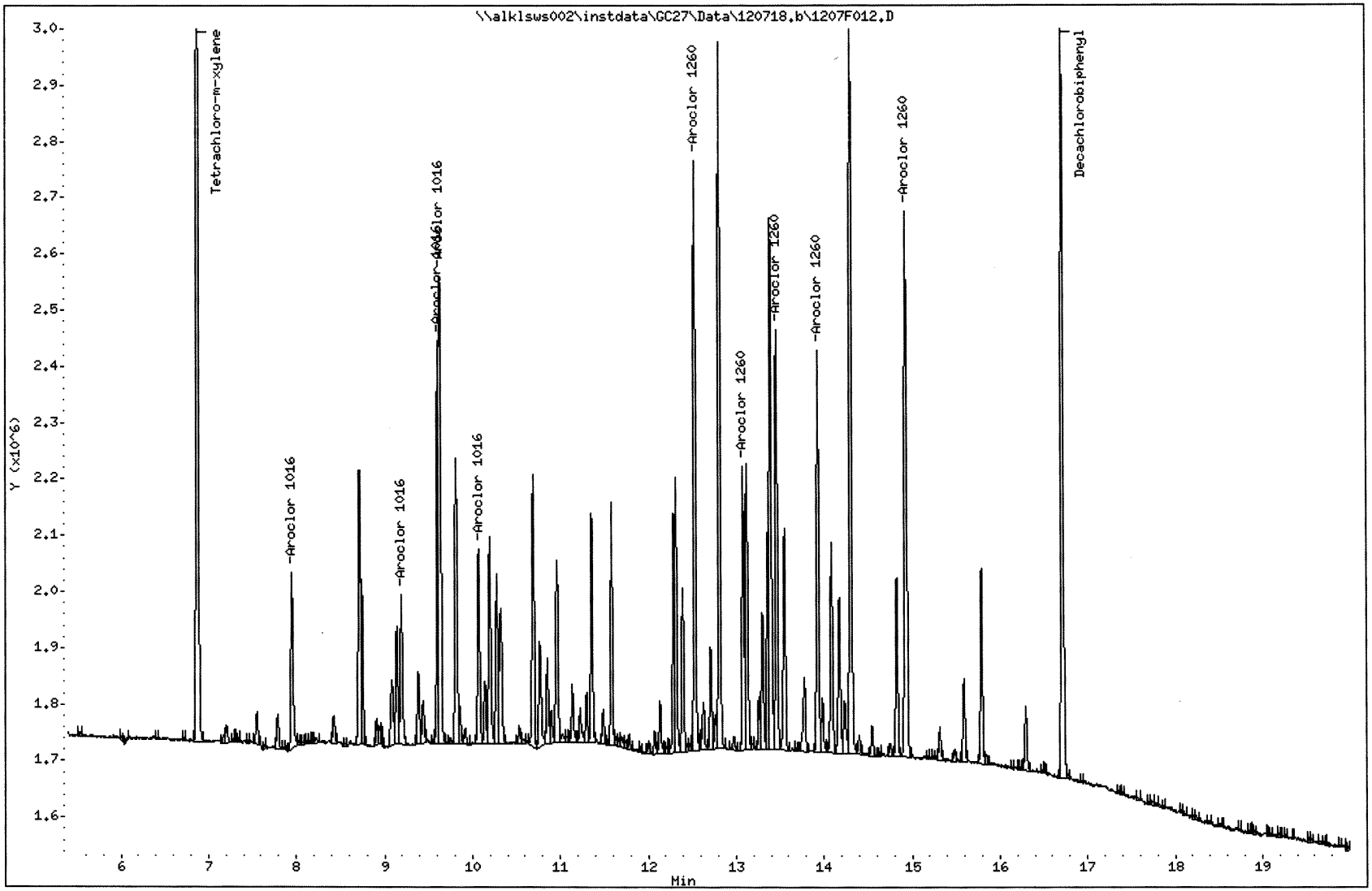
QC Flag Legend

M - Compound response manually integrated.

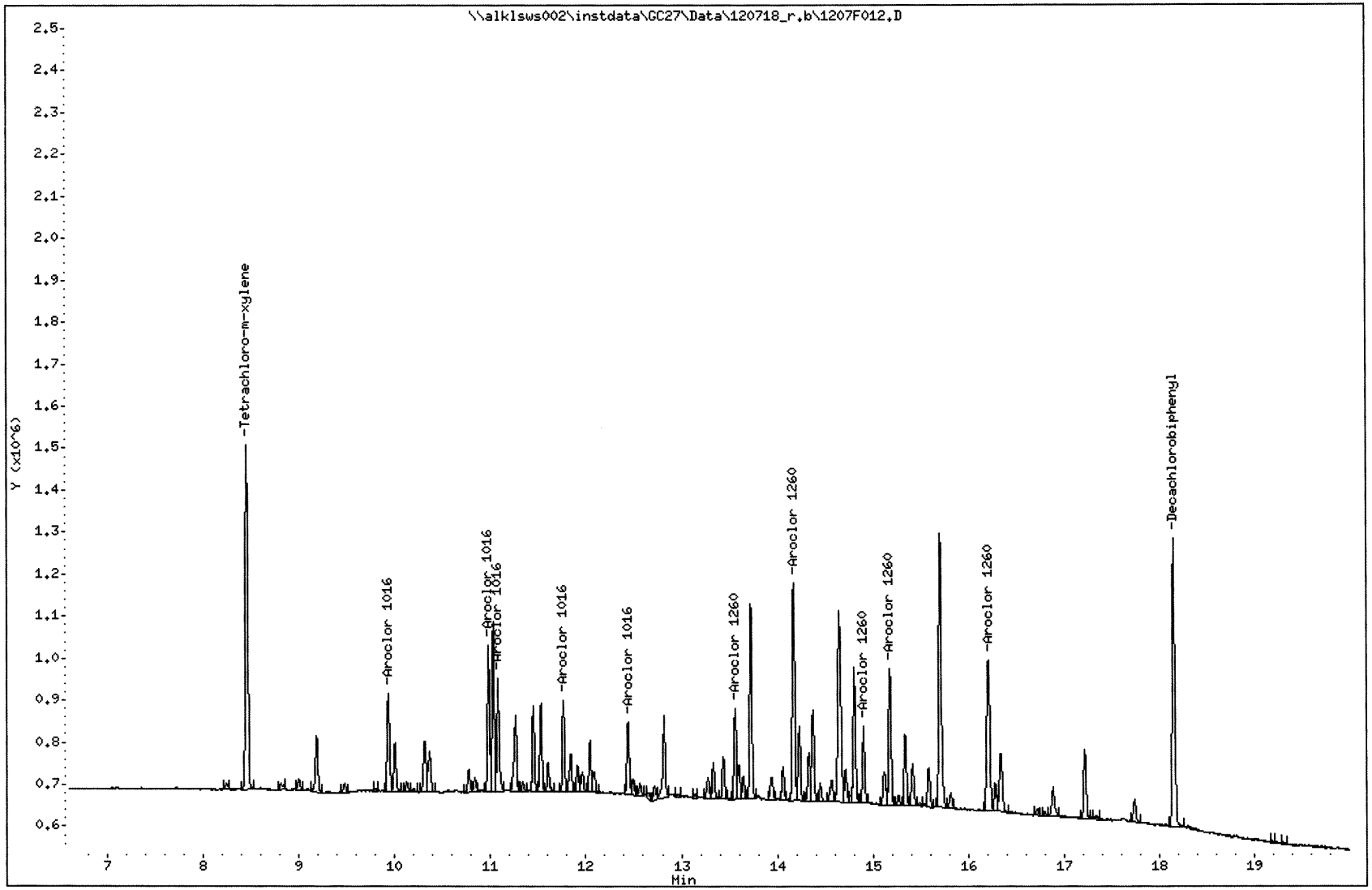
MC 12/13/18

020774

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F012.D
Date : 07-DEC-2018 16:20
Client ID:
Instrument: GC27.i
Sample Info: 1660 20PPB PCB7-57C
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32

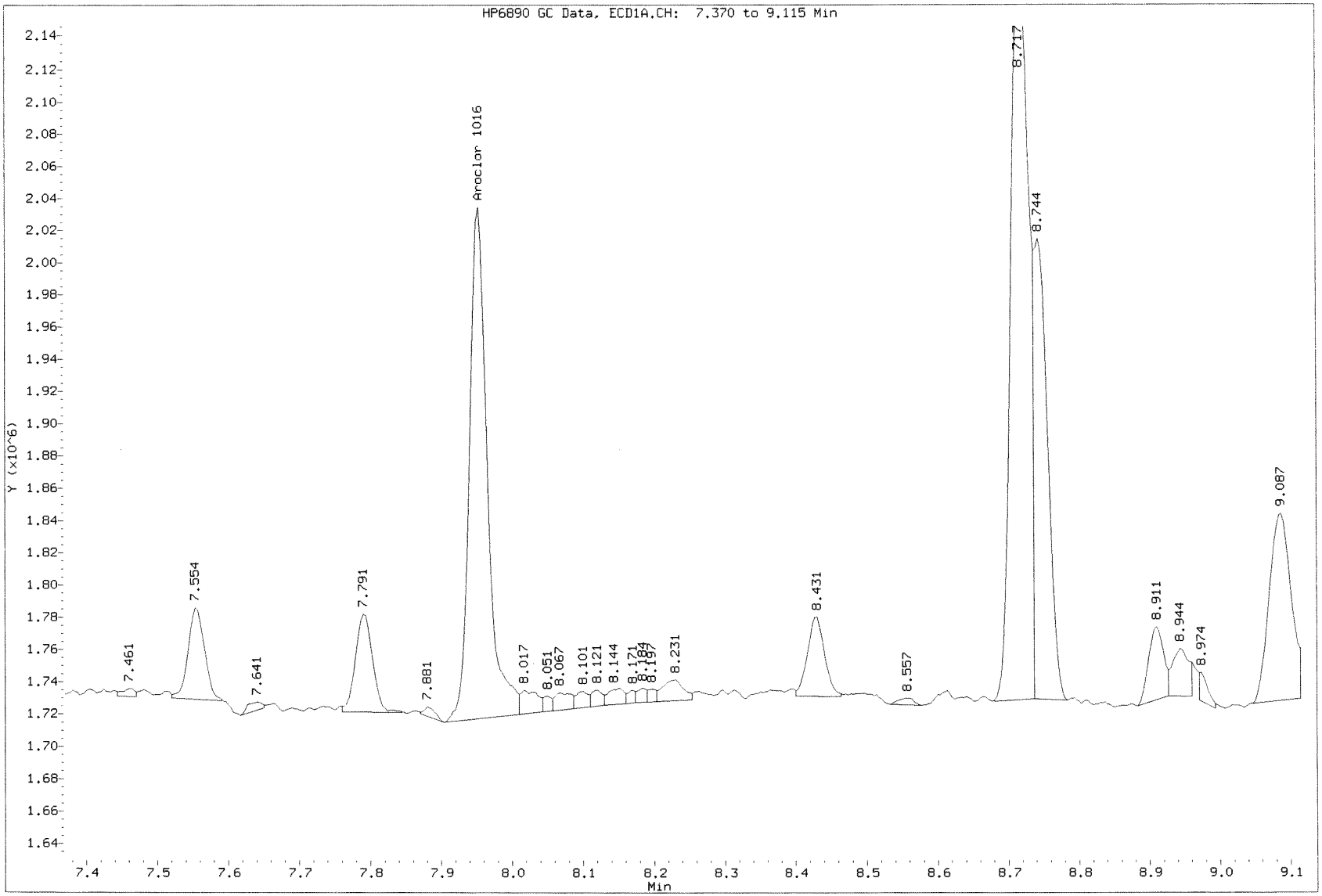


Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F012.D
Date : 07-DEC-2018 16:20
Client ID:
Instrument: GC27.i
Sample Info: 1660 20PPB PCB7-57C
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F012.D
Injection Date: 07-DEC-2018 16:20
Instrument: GC27.i
Client Sample ID:

BBRE
MC 12/18/18

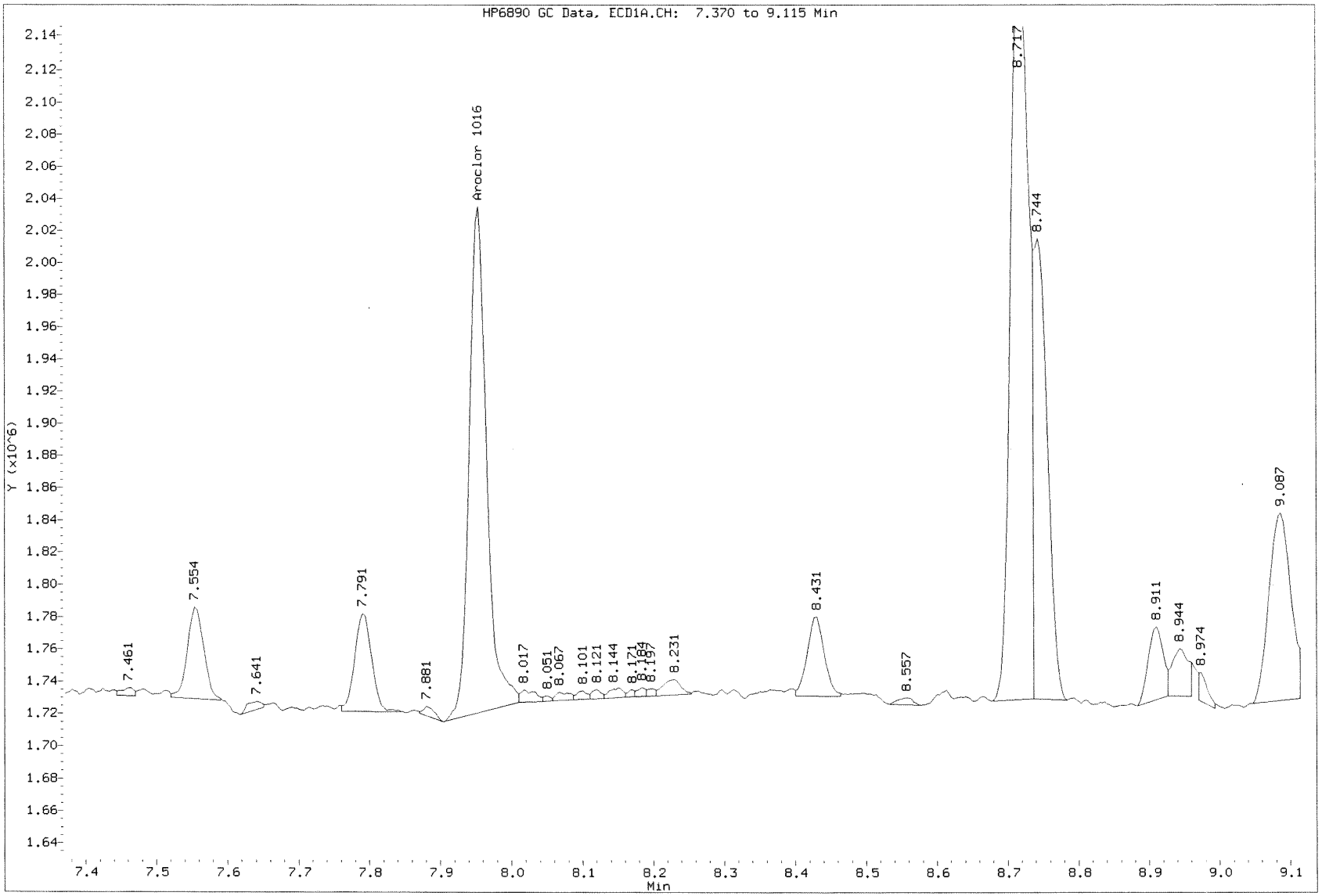


020777

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F012.D
Injection Date: 07-DEC-2018 16:20
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

ARMer
~~reject~~ MC 12/18/18
baseline/shoulder
MC 12/12/18



020778

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F013.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F013.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F013.D
Inj Date : 07-DEC-2018 16:51
Sample Info: 1660 50PPB PCB7-57D
Misc Info :
Cal Date : 12-DEC-2018 12:37
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

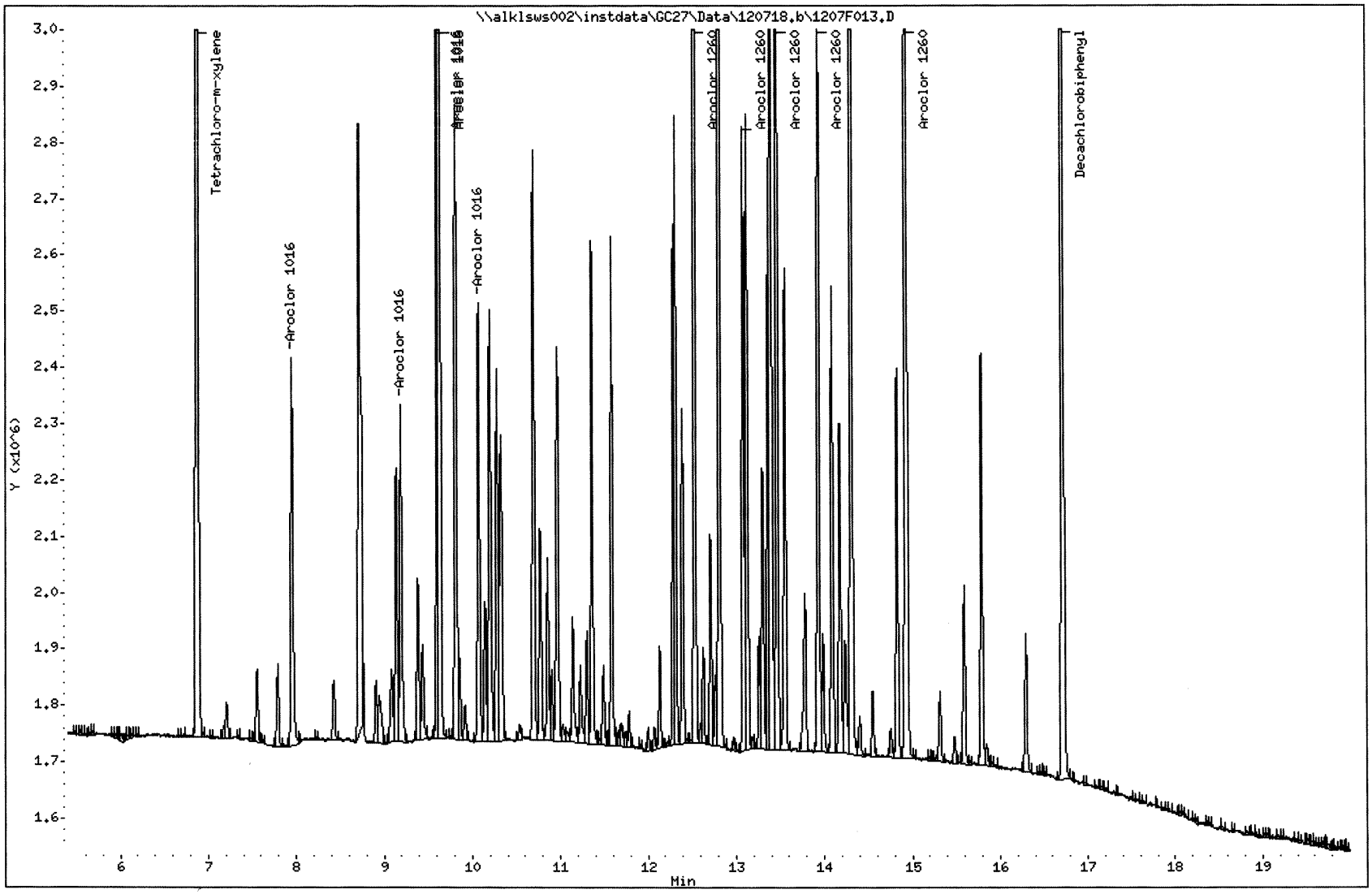
Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.878	8.458	6738591	3105145	4.26	4.34		100.00
Aroclor 1016	7.954	9.938	1186251	890057	44.1	43.0	80.00- 120.00	100.00
	9.194	10.984	1045972	1219566	41.0	41.5	69.55- 104.33	88.17
	9.611	11.081	2259771	968854	42.4	46.5	139.76- 209.63	190.50
	9.638	11.768	3151713	736938	44.0	46.1	217.16- 325.74	265.69
	10.074	12.444	1322264	621031	41.0	44.1	87.47- 131.20	111.47
			Average of Peak Amounts =		42.5	44.2		
Aroclor 1260	12.534	13.561	3301536	756085	41.5	42.3	80.00- 120.00	100.00
	13.084	14.171	1634843	1813459	43.1	42.6	41.53- 62.29	49.52
	13.468	14.901	2427354	632736	41.5	43.6	60.45- 90.67	73.52
	13.938	15.178	2529660	1186248	43.6	41.6	64.20- 96.29	76.62
	14.934	16.211	4014277	1652622	43.4	41.4	103.51- 155.26	121.59
			Average of Peak Amounts =		42.6	42.3		
Decachlorobiphenyl	16.721	18.154	5177434	2618135	4.29	4.24		100.00

mc 12/13/18

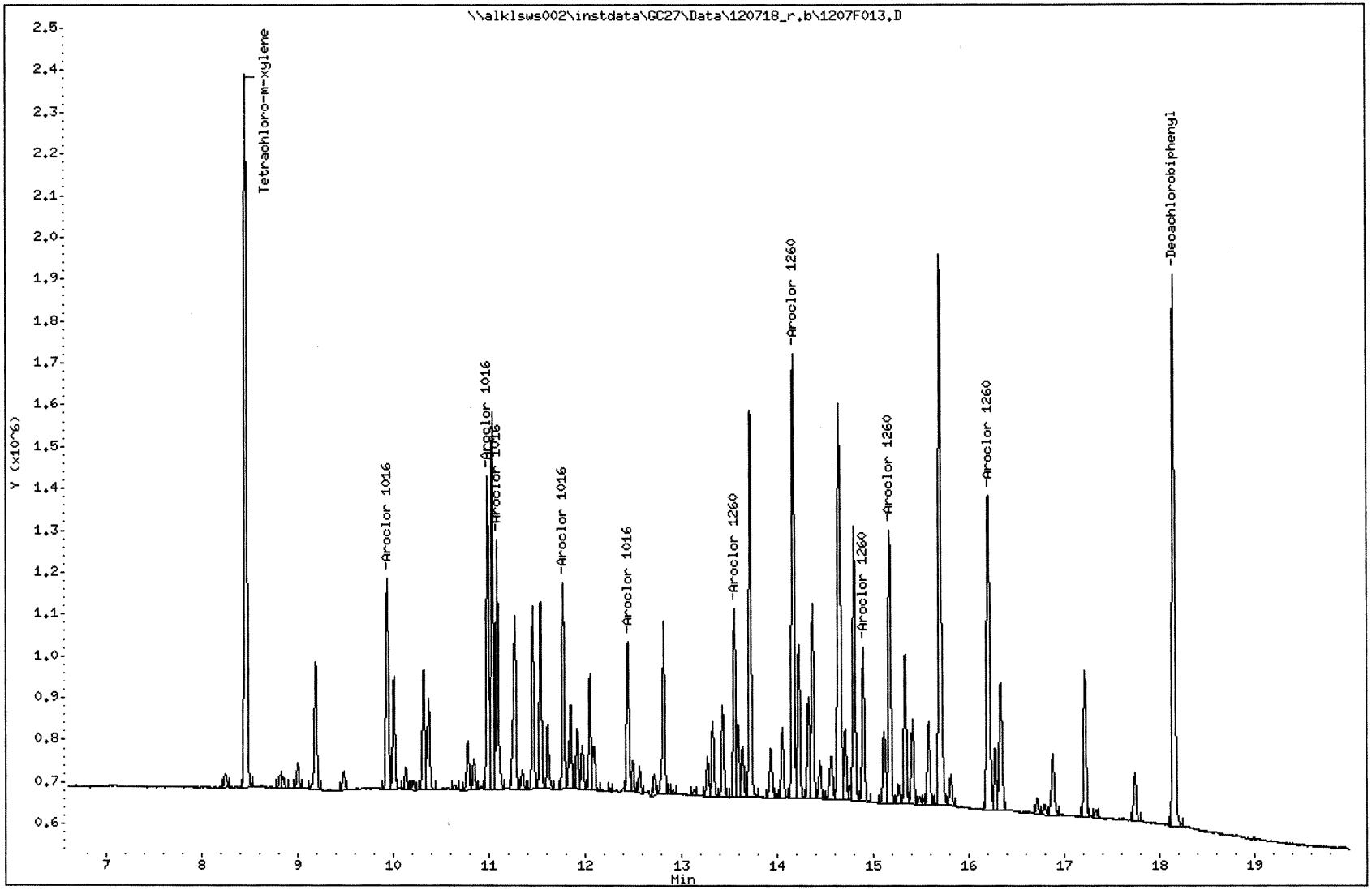
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F013.D
Date : 07-DEC-2018 16:51
Client ID:
Sample Info: 1660 50PPB PCB7-57D

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020780

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F013.D
Date : 07-DEC-2018 16:51
Client ID:
Instrument: GC27.i
Sample Info: 1660 50PPB PCB7-57D
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



020781

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F014.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F014.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F014.D
Inj Date : 07-DEC-2018 17:22
Sample Info: 1660 100PPB PCB7-57E
Misc Info :
Cal Date : 12-DEC-2018 12:37
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

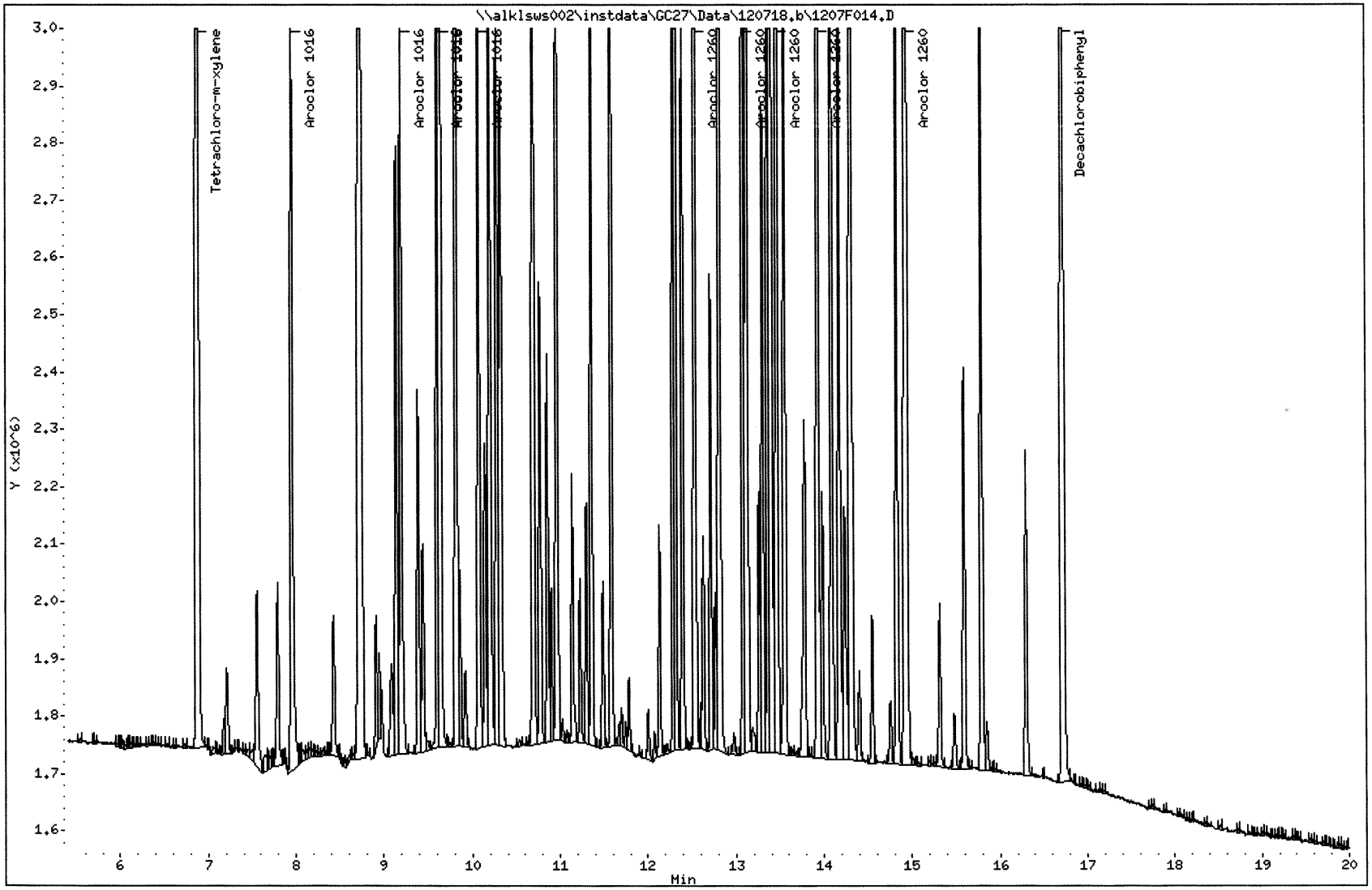
Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.879	8.459	15054623	6822174	9.51	9.53		100.00
Aroclor 1016	7.952	9.936	2648116	1884124	98.4	91.1	80.00- 120.00	100.00
	9.195	10.982	2272092	2616042	89.0	89.0	69.55- 104.33	85.80
	9.612	11.082	5080419	2055258	95.2	98.6	139.76- 209.63	191.85
	9.635	11.766	6564224	1592835	91.6	99.6	217.16- 325.74	247.88
	10.075	12.442	2884505	1356750	89.5	96.4	87.47- 131.20	108.93
			Average of Peak Amounts =		92.7	94.9		
Aroclor 1260	12.535	13.562	7056237	1635950	88.7	91.5	80.00- 120.00	100.00
	13.082	14.172	3553985	3787202	93.6	89.0	41.53- 62.29	50.37
	13.465	14.902	5306714	1383970	90.8	95.4	60.45- 90.67	75.21
	13.935	15.179	5609565	2519988	96.6	88.4	64.20- 96.29	79.50
	14.932	16.209	8972149	3451070	97.1	86.4	103.51- 155.26	127.15
			Average of Peak Amounts =		93.4	90.1		
Decachlorobiphenyl	16.719	18.156	11437024	5584673	9.47	9.04		100.00

MR 12/13/18

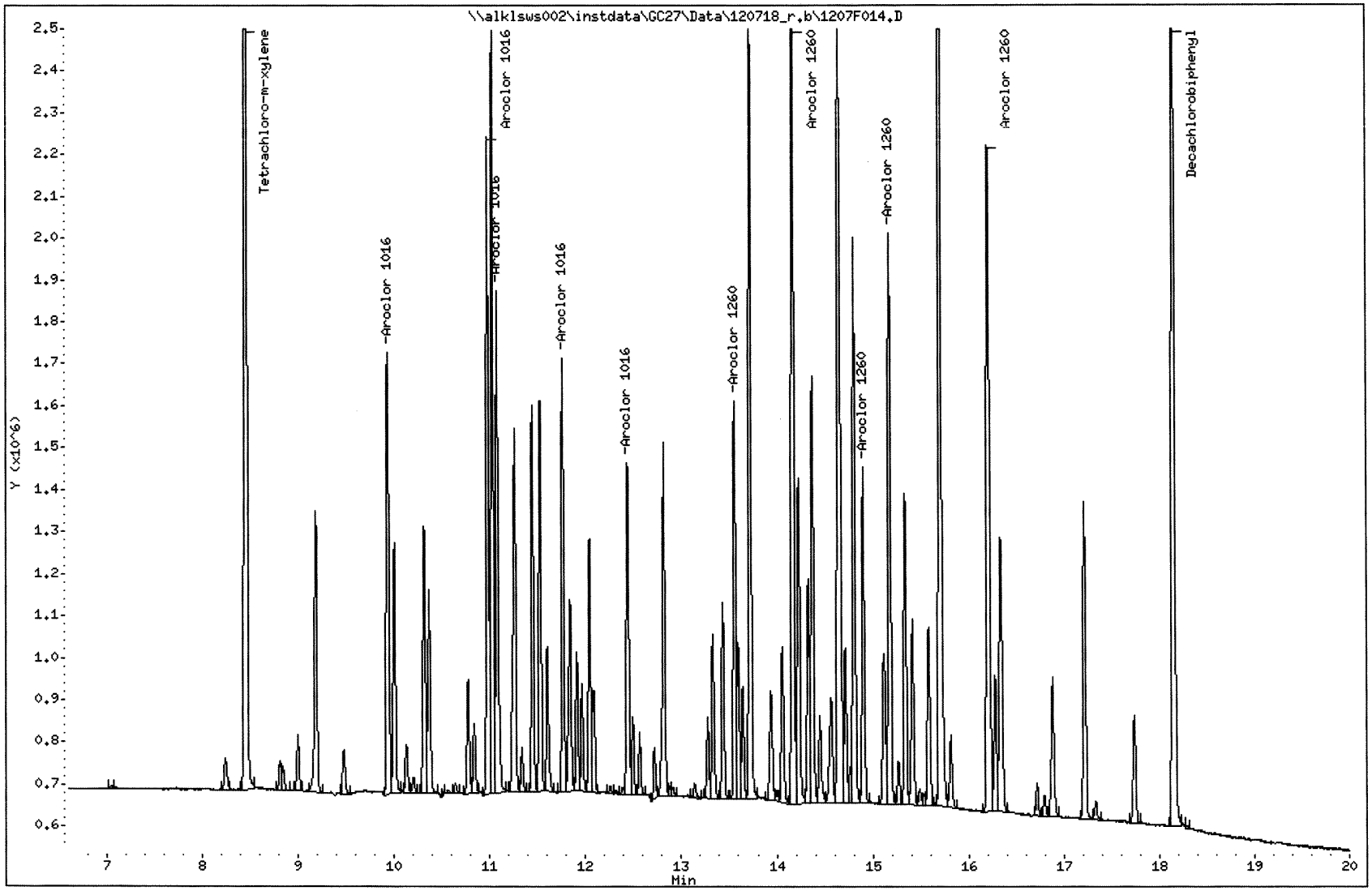
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F014.D
Date : 07-DEC-2018 17:22
Client ID:
Sample Info: 1660 100PPB PCB7-57E

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F014.D
Date : 07-DEC-2018 17:22
Client ID:
Sample Info: 1660 100PPB PCB7-57E

Instrument: GC27.i
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



020784

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F015.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F015.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F015.D
Inj Date : 07-DEC-2018 17:54
Sample Info: 1660 200PPB PCB7-57F
Misc Info :
Cal Date : 12-DEC-2018 12:37
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

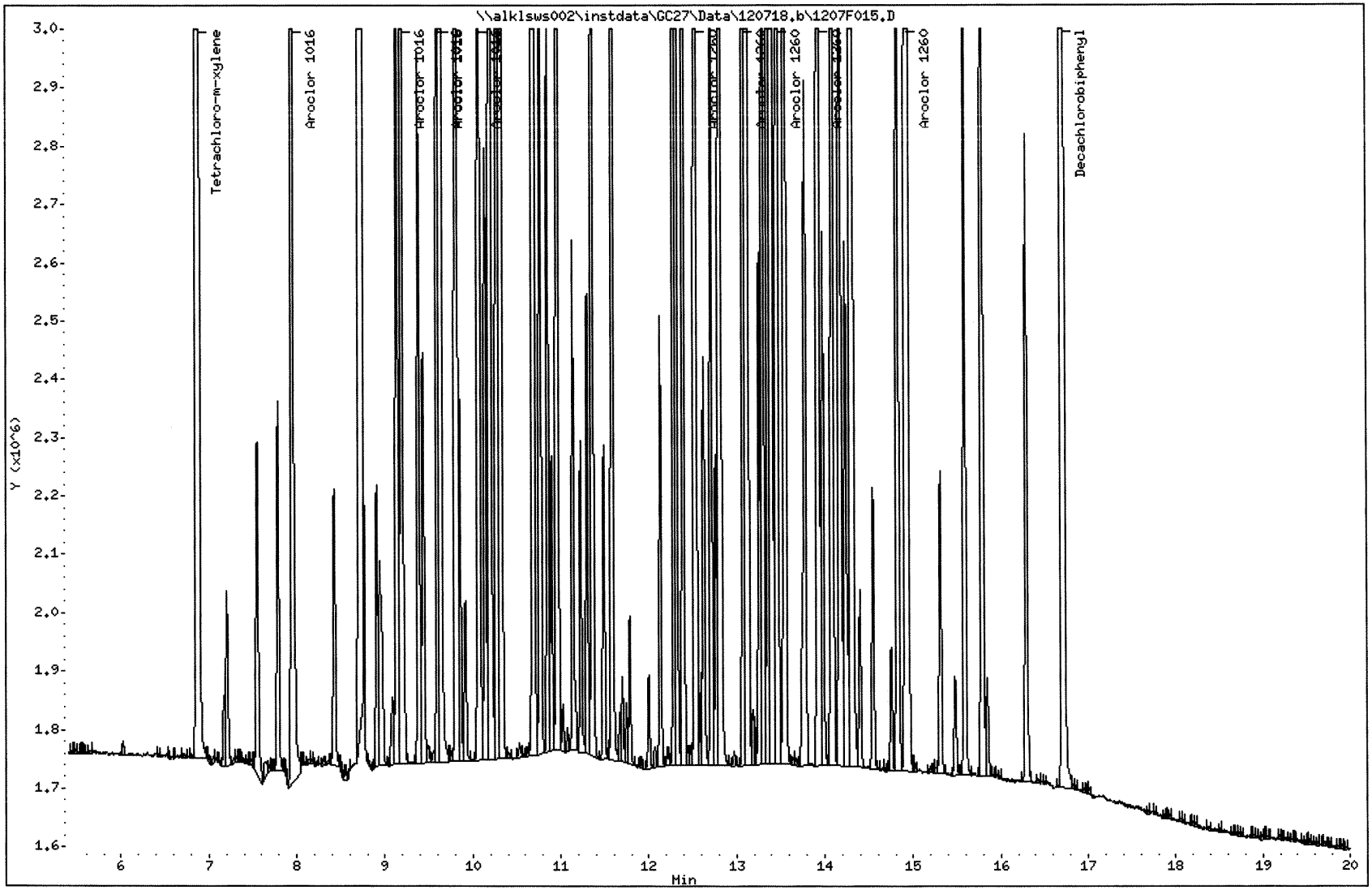
Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 1660.SUB
Sub List #2 : 1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	6.876	8.456	30736197	13392474	19.4	18.7		100.00
Aroclor 1016	7.952	9.936	5090341	3483837	189	168	80.00- 120.00	100.00
	9.196	10.982	4425474	4736709	173	161	69.55- 104.33	86.94
	9.612	11.079	8892609	3837254	167	184	139.76- 209.63	174.70
	9.636	11.766	13817603	2912217	193	182	217.16- 325.74	271.45
	10.072	12.442	5565409	2481527	173	176	87.47- 131.20	109.33
			Average of Peak Amounts =		179	174		
Aroclor 1260	12.536	13.559	13468122	2879906	169	161	80.00- 120.00	100.00
	13.082	14.169	6991522	6787739	184	159	41.53- 62.29	51.91
	13.466	14.902	10176369	2495877	174	172	60.45- 90.67	75.56
	13.936	15.176	10807358	4573281	186	160	64.20- 96.29	80.24
	14.932	16.206	17425755	6370162	188	160	103.51- 155.26	129.39
			Average of Peak Amounts =		180	162		
Decachlorobiphenyl	16.719	18.152	22193416	10405473	18.4	16.8		100.00

MM 12/13/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F015.D
Date : 07-DEC-2018 17:54
Client ID:
Sample Info: 1660 200PPB PCB7-57F

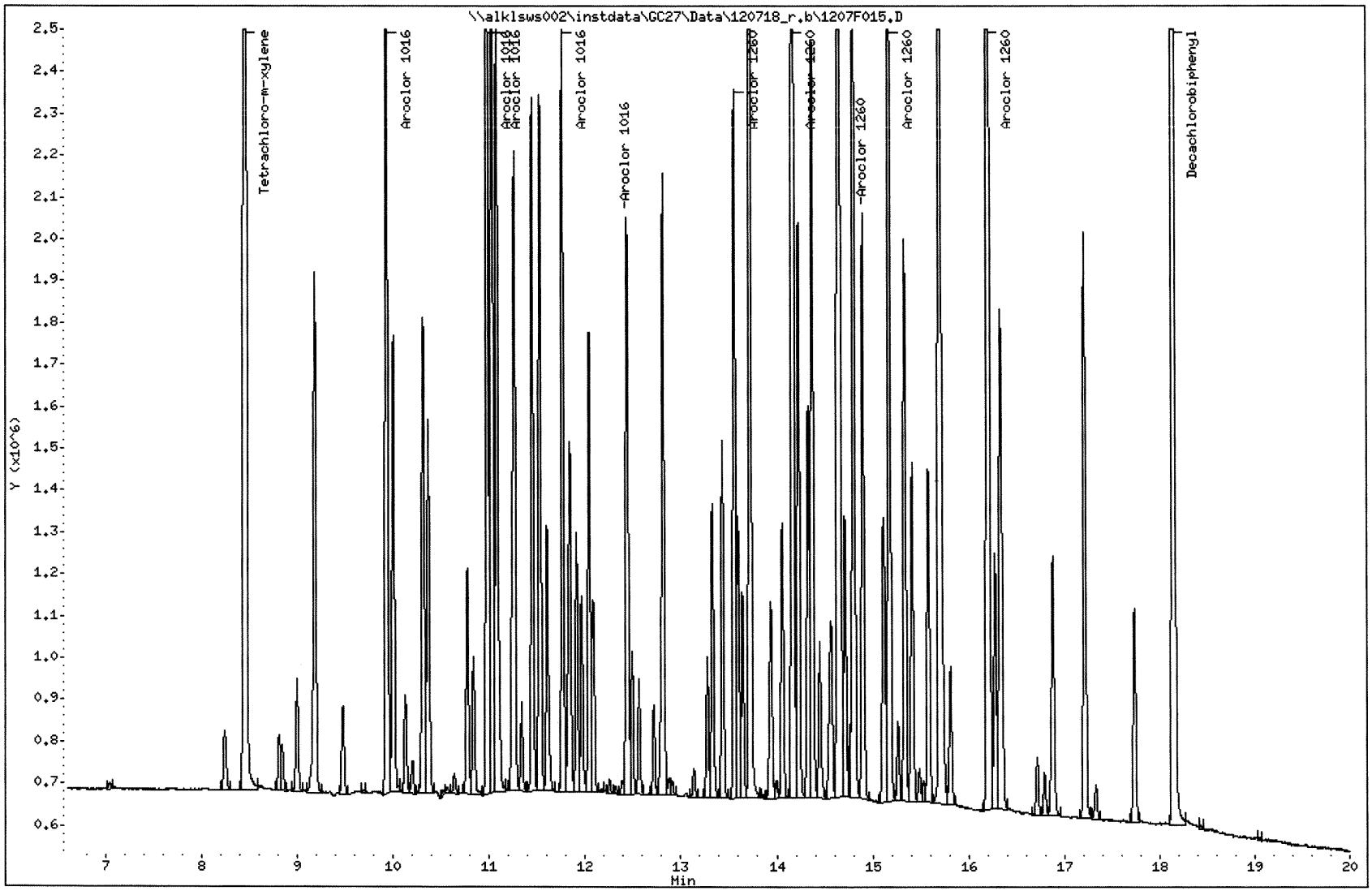
Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020786

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F015.D
Date : 07-DEC-2018 17:54
Client ID:
Sample Info: 1660 200PPB PCB7-57F

Instrument: GC27.i
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F016.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F016.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F016.D
Inj Date : 07-DEC-2018 18:25
Sample Info: 2154 1-2PPB PCB7-57G
Misc Info :
Cal Date : 12-DEC-2018 12:37
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	7.553	8.843	40443	9171	2.23	1.92	80.00- 120.00	100.00(M)
	7.789	8.999	24092	13177	2.12	2.39	50.65- 75.98	59.57(M)
	7.953	9.186	88612	37012	2.05	2.00	190.60- 285.90	219.10(M)
			Average of Peak Amounts =		2.13	2.10		
Aroclor 1254	11.363	12.443	84536	33443	1.18	1.10	80.00- 120.00	100.00(M)
	11.669	12.496	33152	15495	0.930	0.987	43.29- 64.93	39.22(M)
	12.136	12.913	72208	17428	1.20	1.11	67.48- 101.23	85.42(M)
	12.629	14.226	90865	16360	1.22	1.21	84.44- 126.67	107.49(M)
	13.123	14.386	37361	27680	1.24	1.09	34.68- 52.01	44.20(M)
			Average of Peak Amounts =		1.15	1.10		

QC Flag Legend

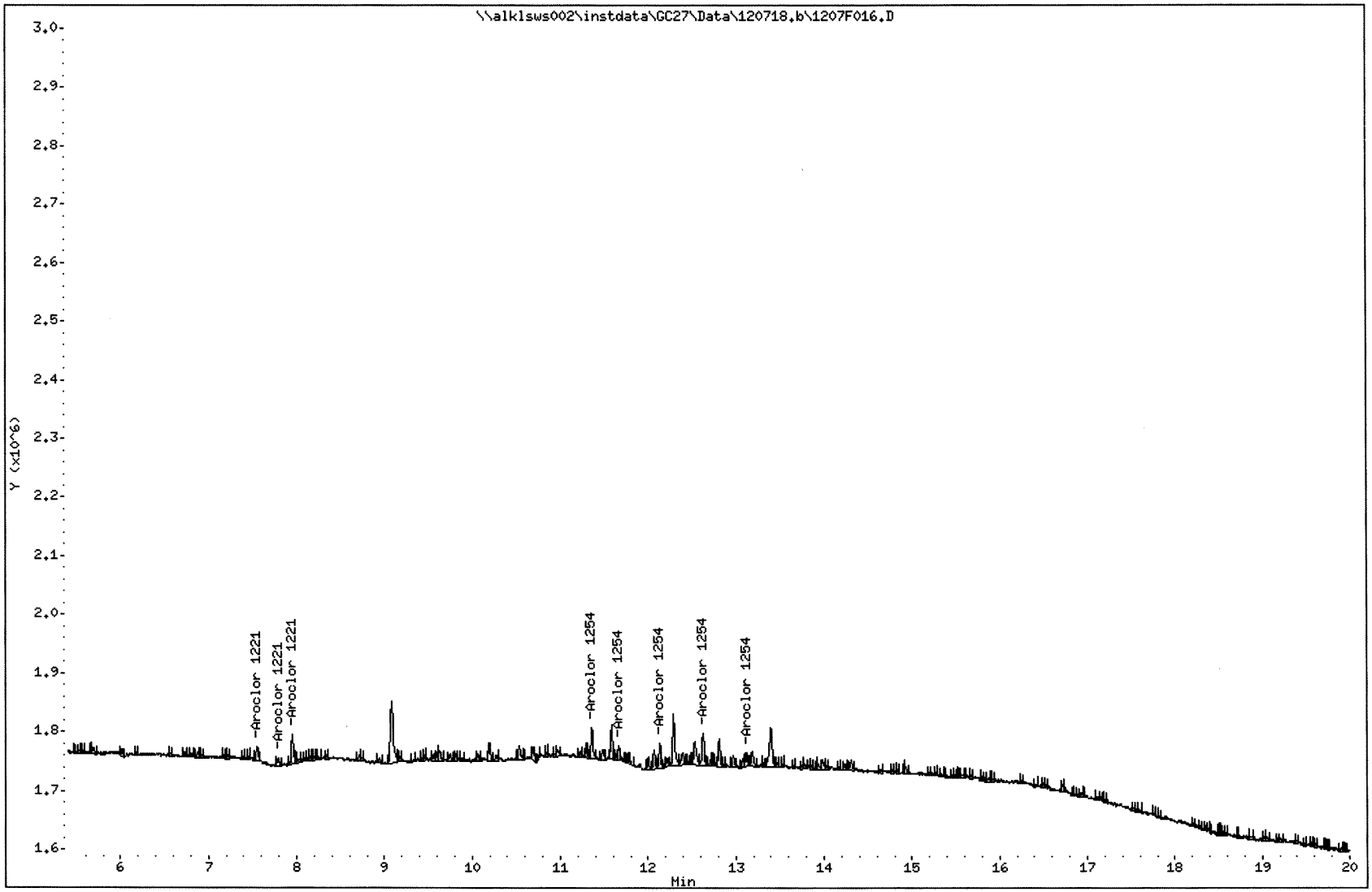
M - Compound response manually integrated.

mm 12/13/18

020788

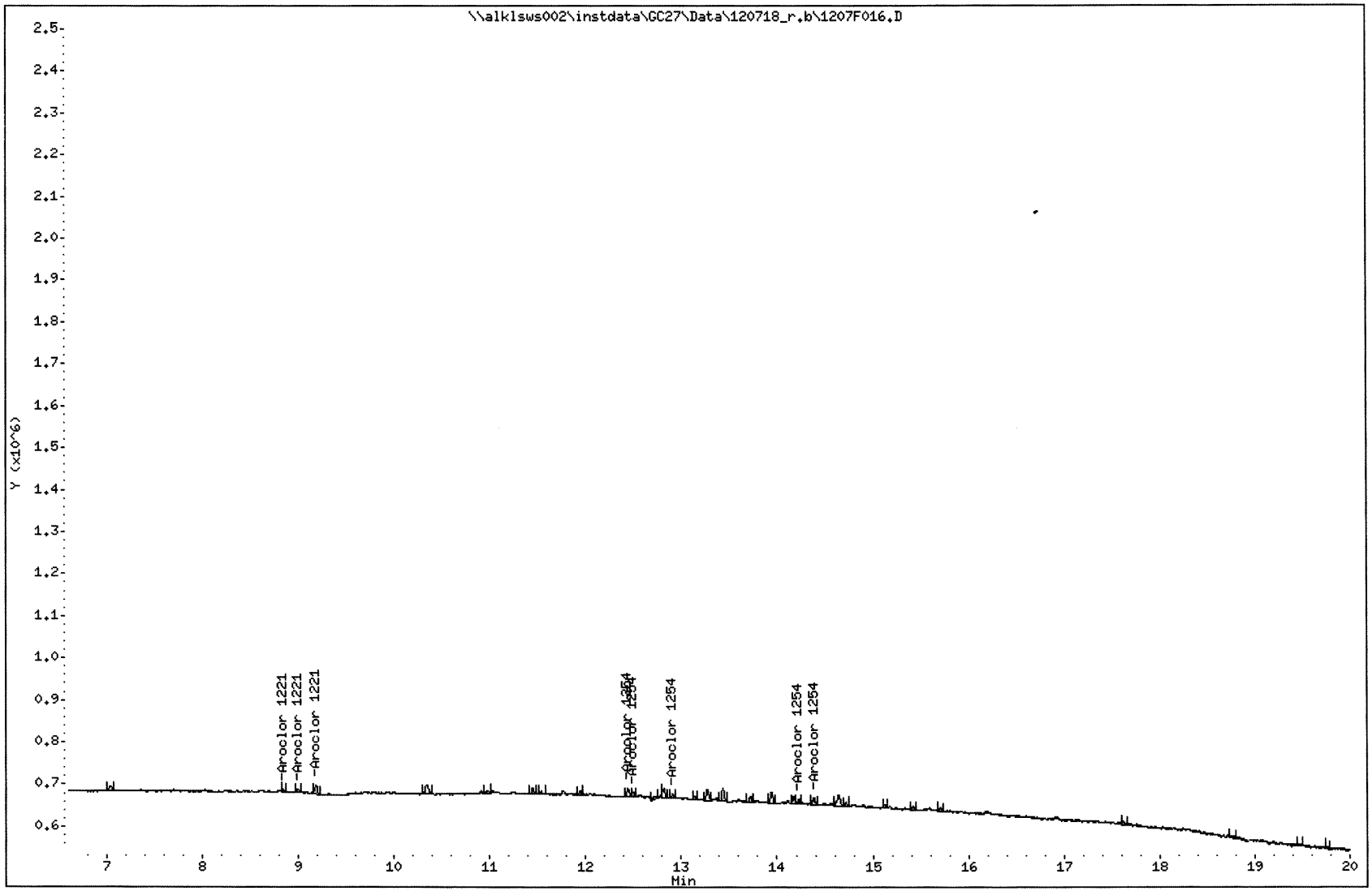
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F016.D
Date : 07-DEC-2018 18:25
Client ID:
Sample Info: 2154 1-2PPB PCB7-57G

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020789

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F016.D
Date : 07-DEC-2018 18:25
Client ID:
Instrument: GC27.i
Sample Info: 2154 1-2PPB PCB7-57G
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32

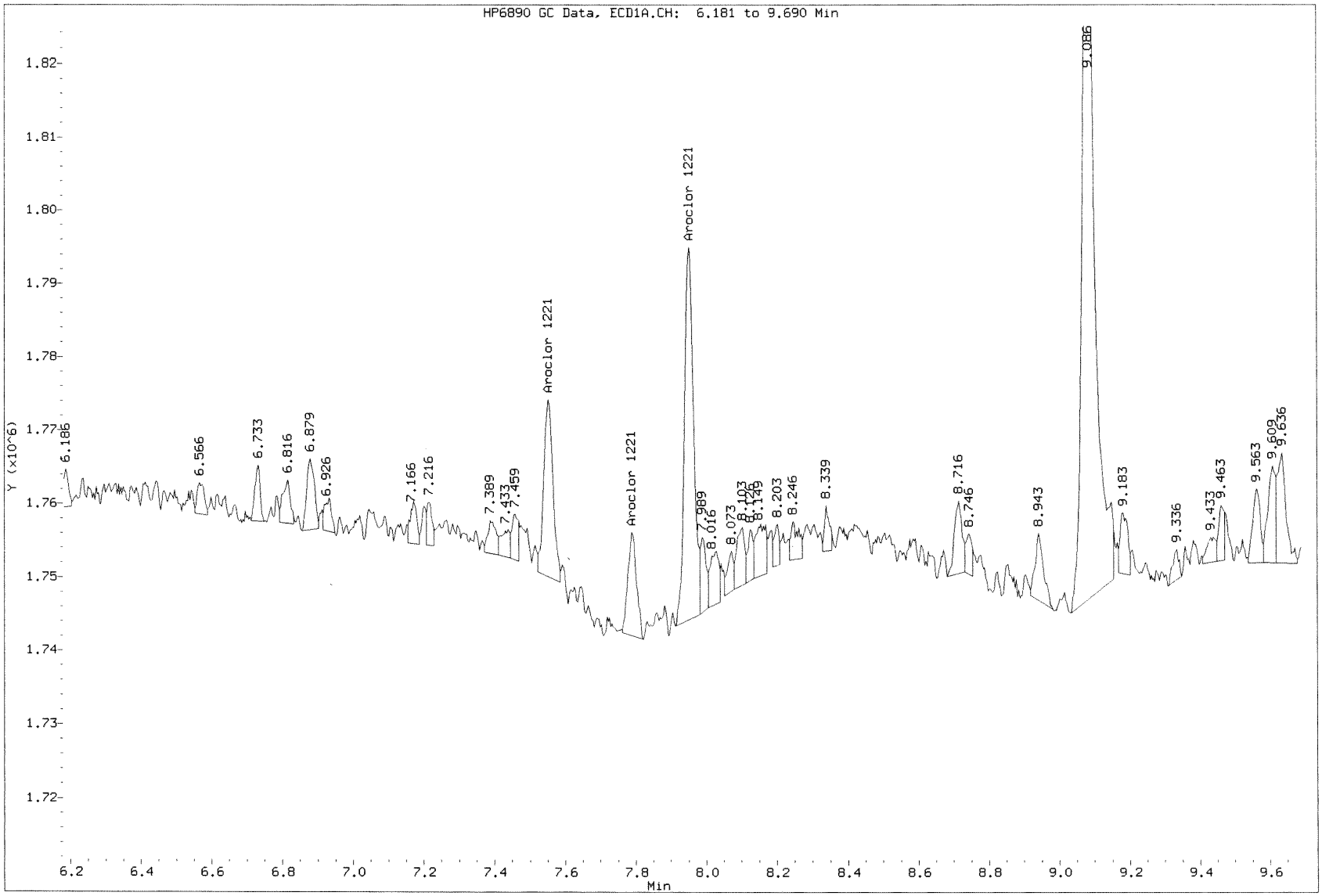


020790

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F016.D
Injection Date: 07-DEC-2018 18:25
Instrument: GC27.i
Client Sample ID:

12/7/18

Before
12/12/18

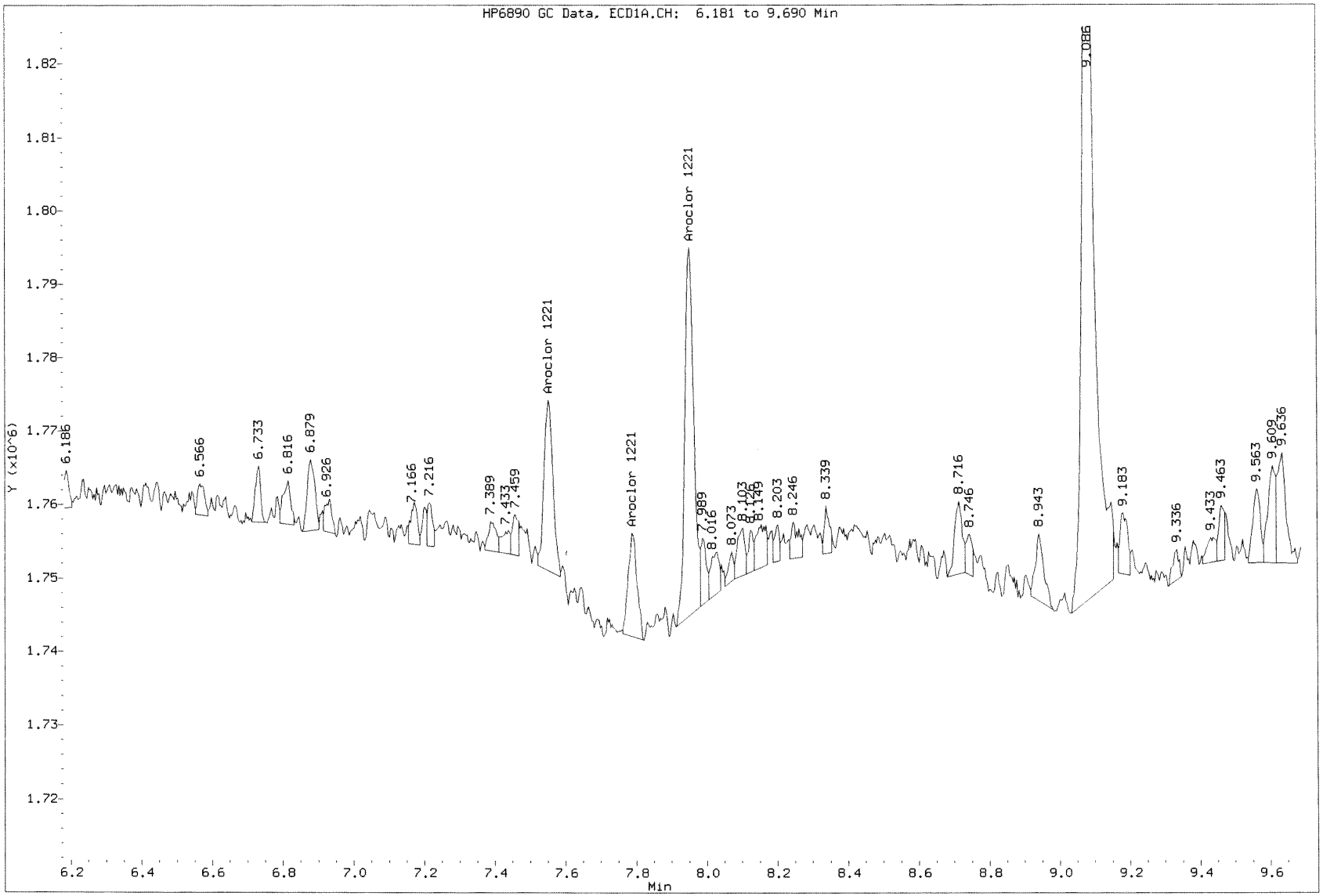


020791

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F016.D
Injection Date: 07-DEC-2018 18:25
Instrument: GC27.i
Client Sample ID:

LM 12/17/18

After baseline/shoulder
MC 12/18/18

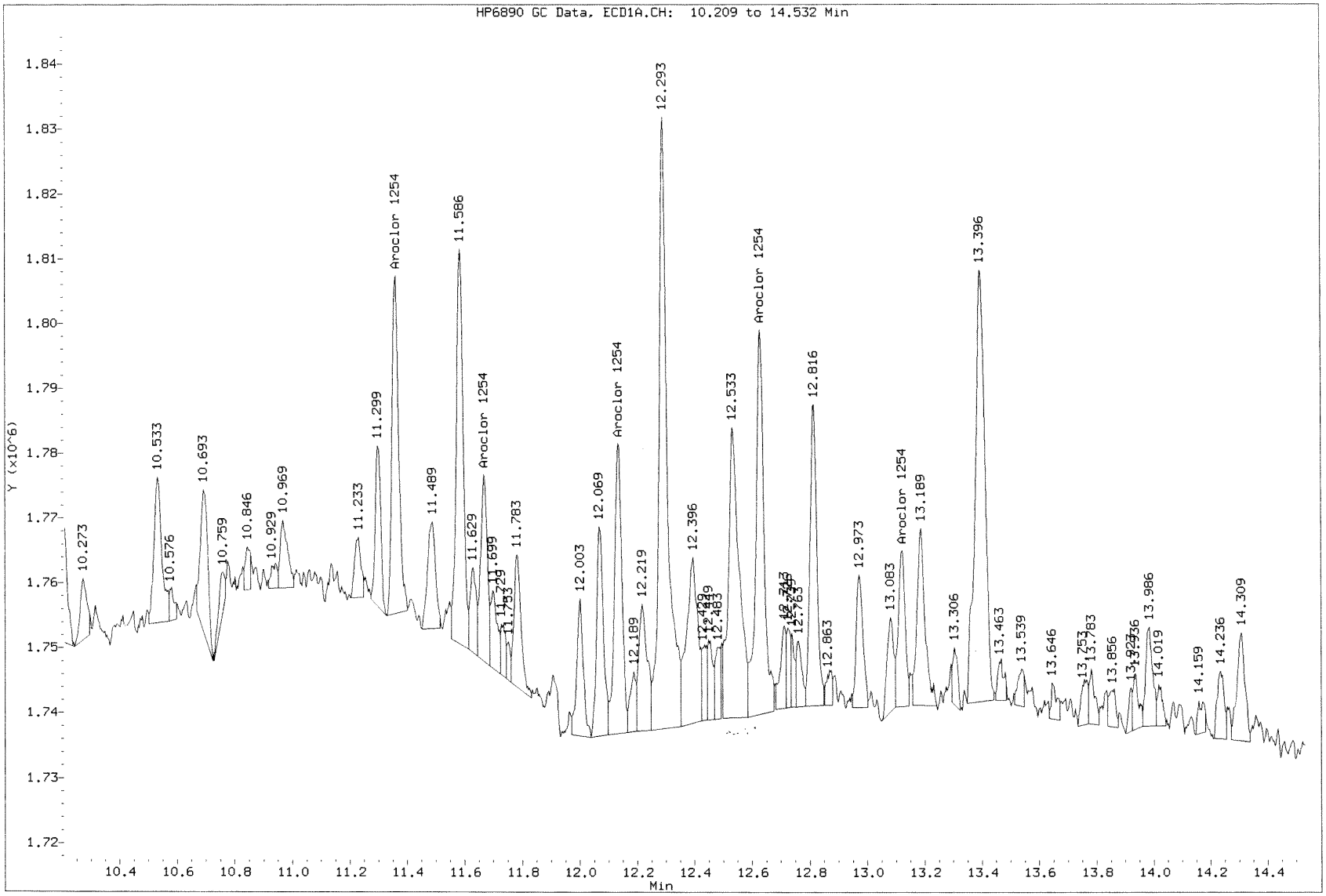


020792

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F016.D
Injection Date: 07-DEC-2018 18:25
Instrument: GC27.i
Client Sample ID:

UA 12/7/18

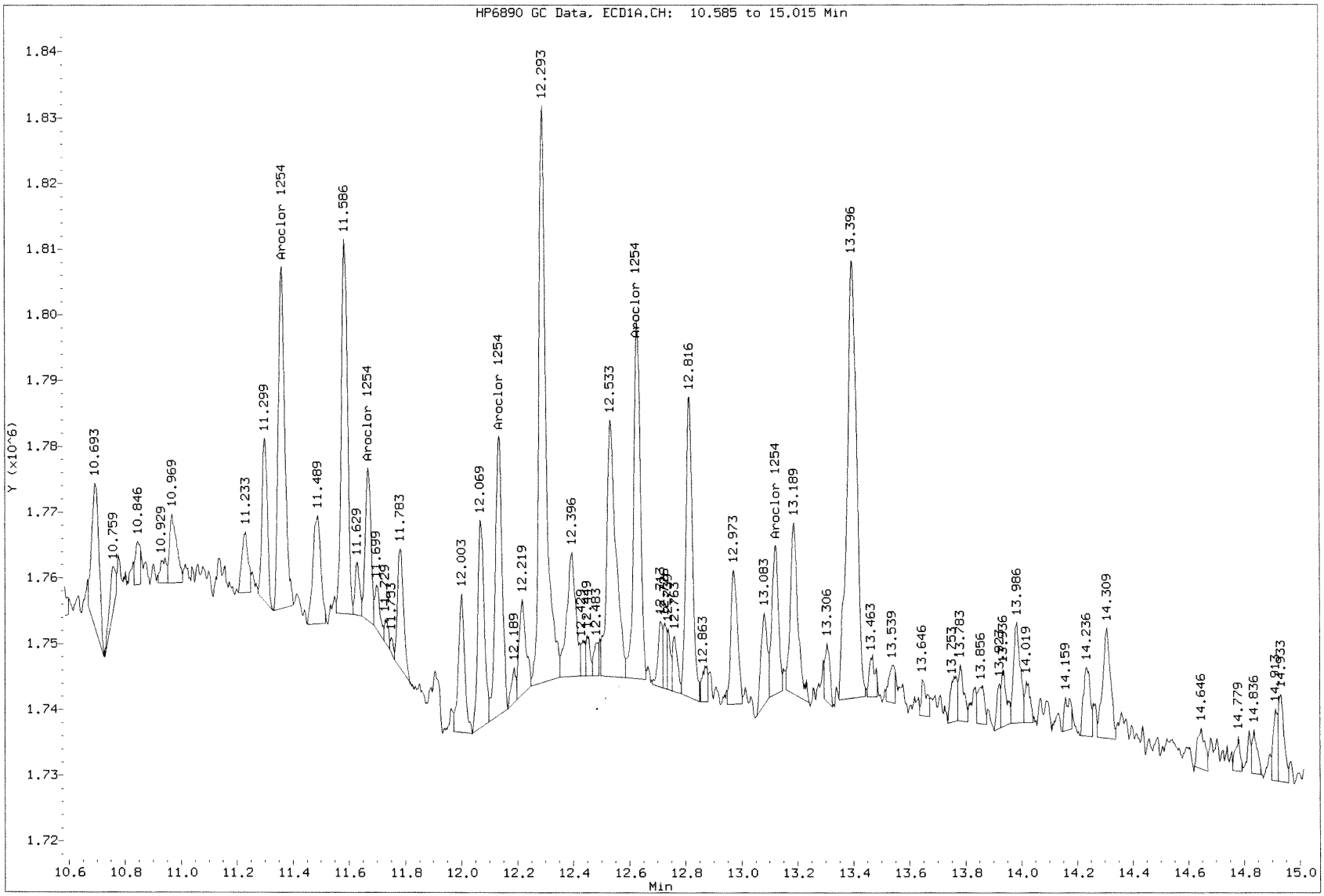
Before
mr 12/12/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F016.D
Injection Date: 07-DEC-2018 18:25
Instrument: GC27.i
Client Sample ID:

CMB 12/7/18

After baseline/shoulder
MC 12/12/18

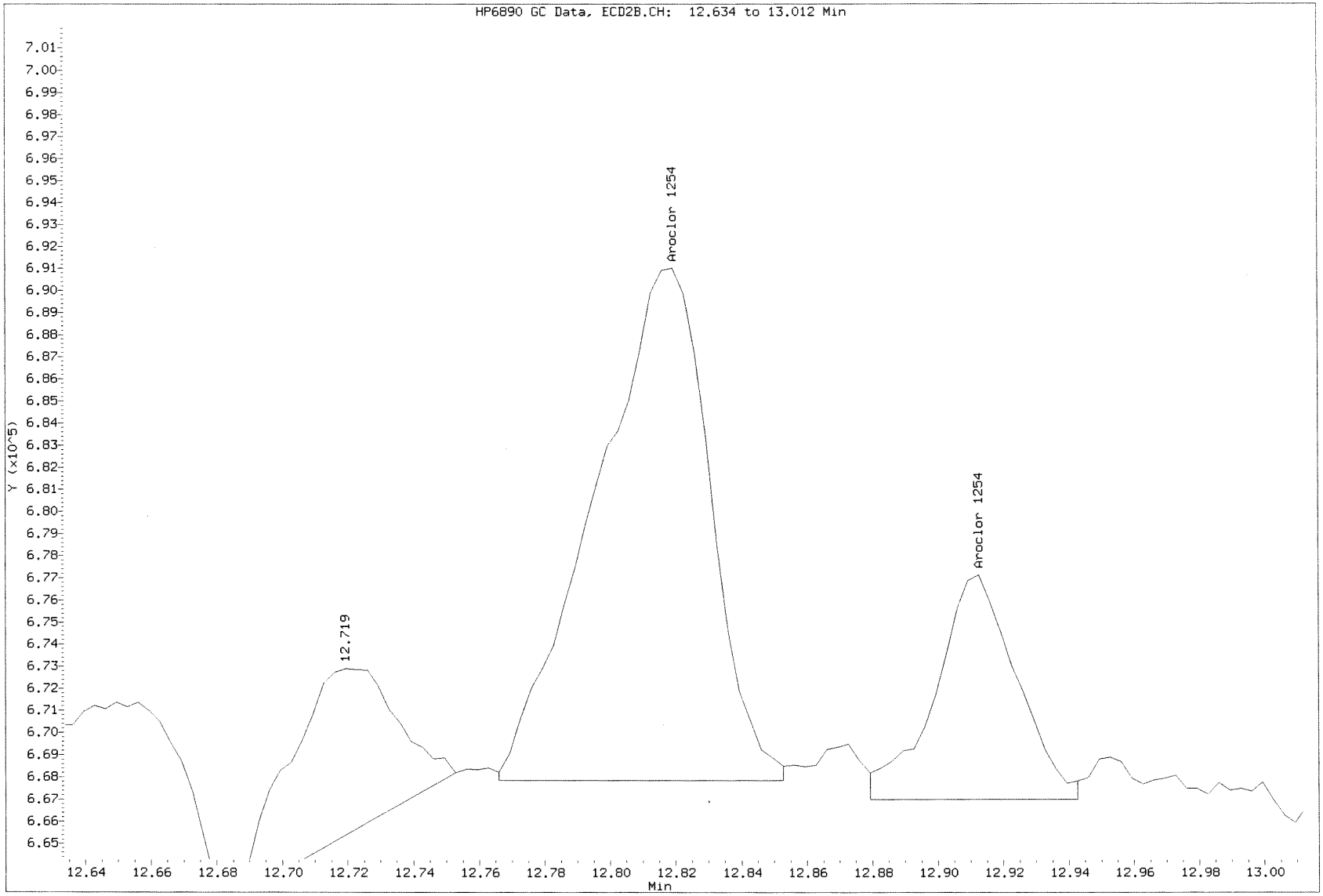


020794

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F016.D
Injection Date: 07-DEC-2018 18:25
Instrument: GC27.i
Client Sample ID:

WA 12/17/18

Before
MR 12/12/18

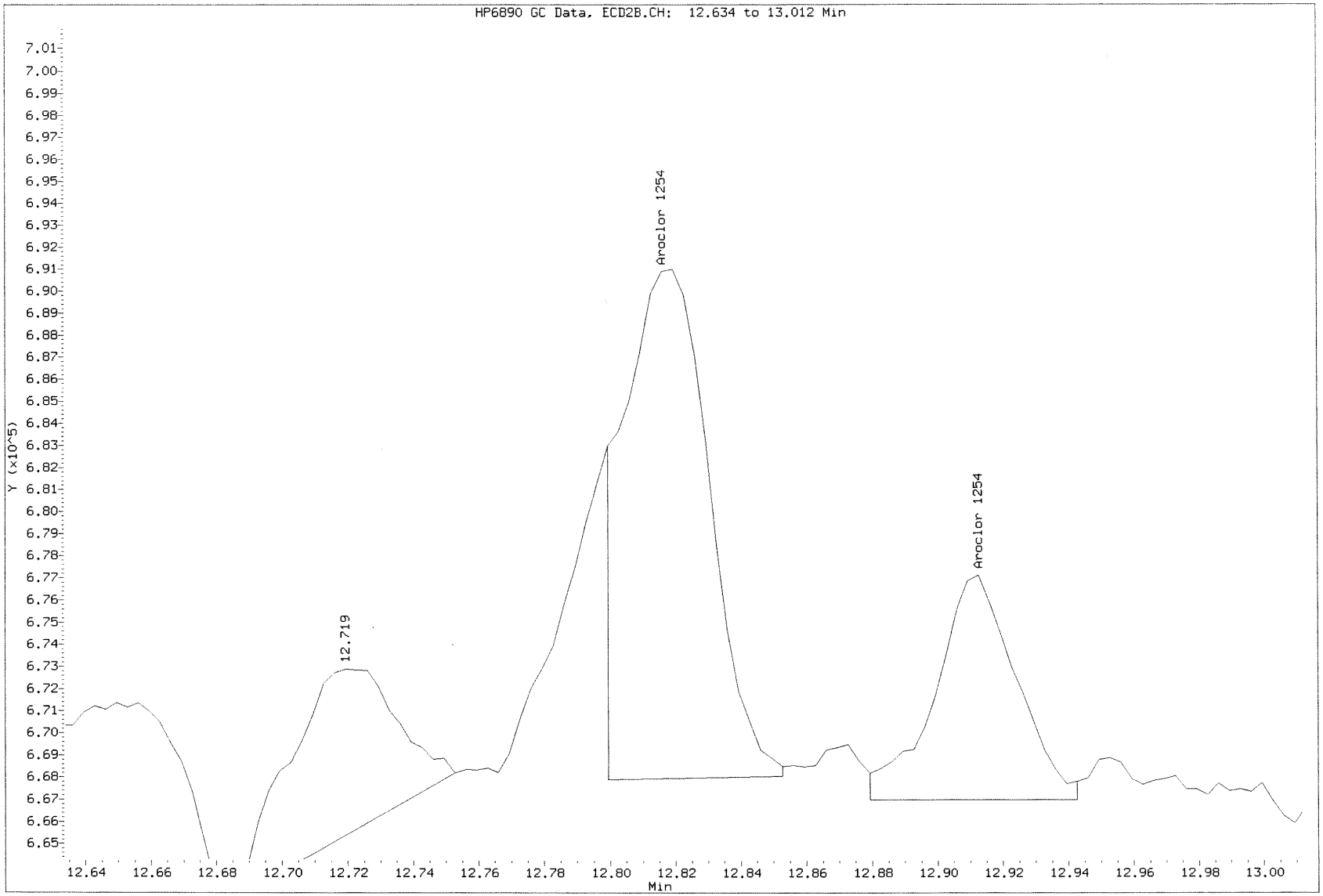


020795

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F016.D
Injection Date: 07-DEC-2018 18:25
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

After baseline/shoulder
MM 12/12/19



020796

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F017.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F017.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F017.D
Inj Date : 07-DEC-2018 18:56
Sample Info: 2154 2-4PPB PCB7-57H
Misc Info :
Cal Date : 12-DEC-2018 12:37
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

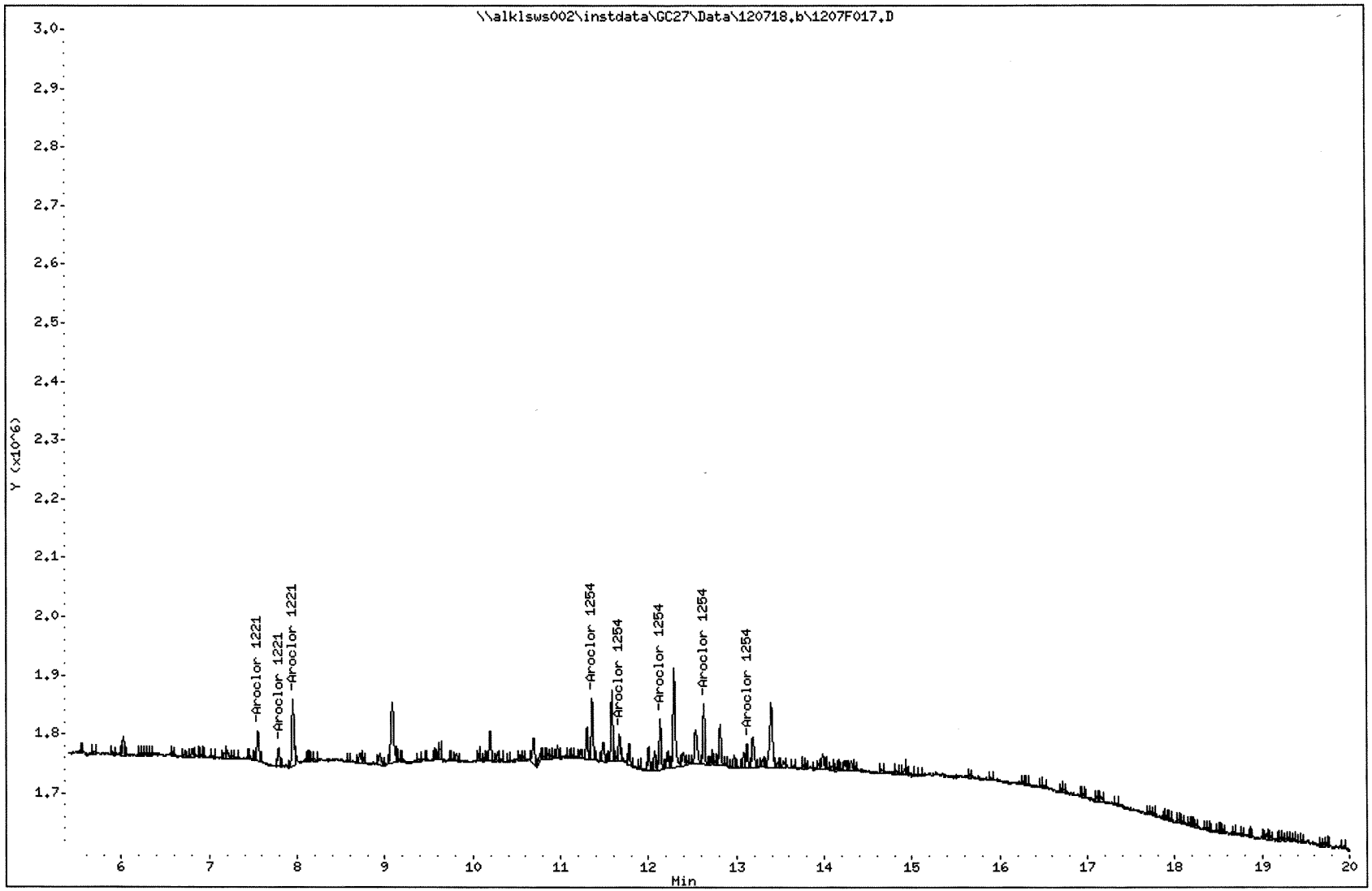
Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	7.552	8.842	82361	21620	4.55	4.52	80.00- 120.00	100.00
	7.792	8.999	50963	27167	4.49	4.93	50.65- 75.98	61.88
	7.952	9.185	206082	81051	4.77	4.38	190.60- 285.90	250.22
			Average of Peak Amounts =		4.60	4.61		
Aroclor 1254	11.358	12.442	161646	62915	2.26	2.07	80.00- 120.00	100.00
	11.668	12.495	70969	32038	1.99	2.04	43.29- 64.93	43.90
	12.135	12.912	138991	32907	2.32	2.09	67.48- 101.23	85.98
	12.632	14.229	157832	27678	2.13	2.04	84.44- 126.67	97.64
	13.122	14.385	58862	55953	1.96	2.19	34.68- 52.01	36.41
			Average of Peak Amounts =		2.13	2.09		

MR 12/13/18

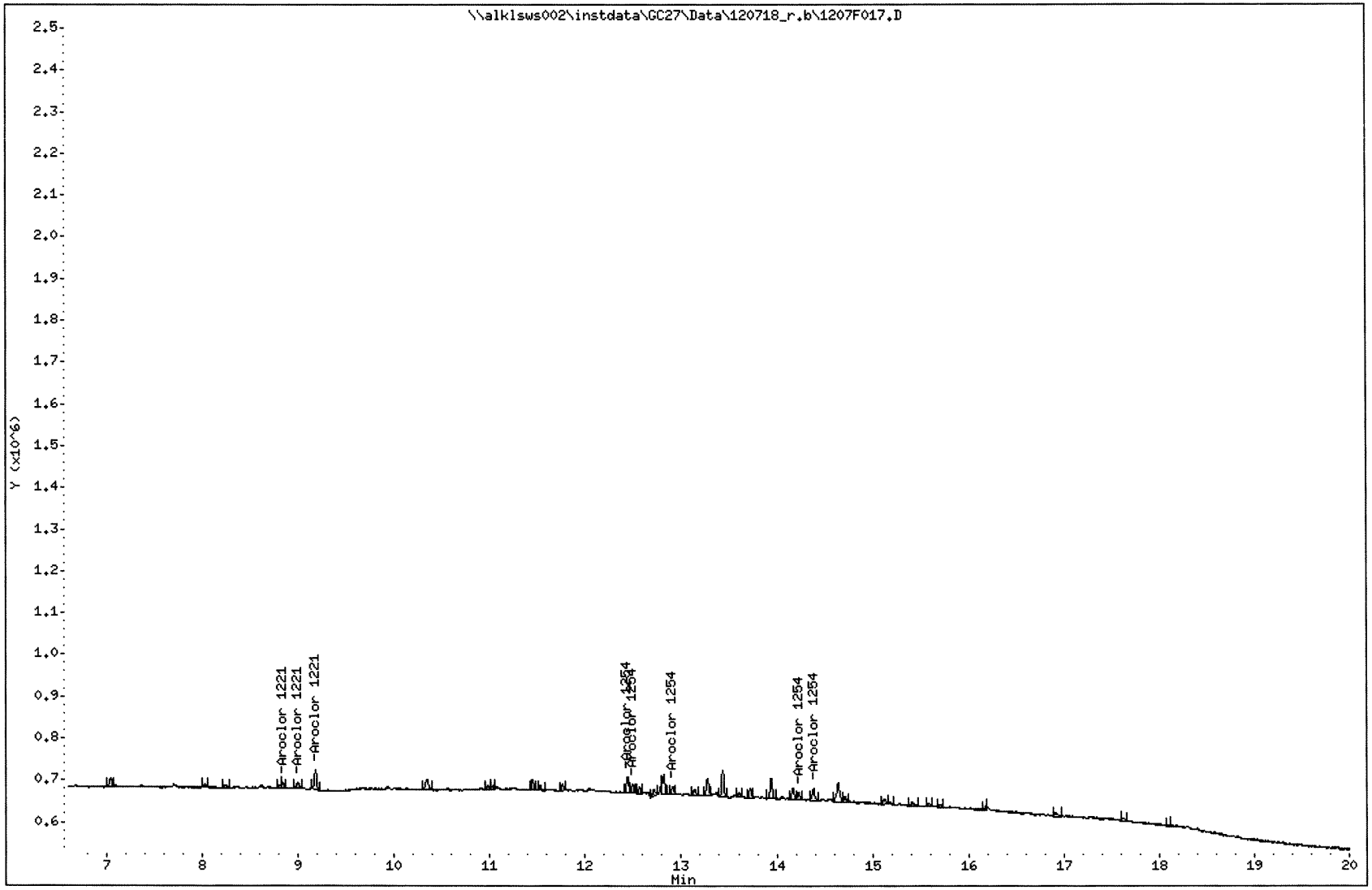
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F017.D
Date : 07-DEC-2018 18:56
Client ID:
Sample Info: 2154 2-4PPB PCB7-57H

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020798

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F017.D
Date : 07-DEC-2018 18:56
Client ID:
Instrument: GC27.i
Sample Info: 2154 2-4PPB PCB7-57H
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32

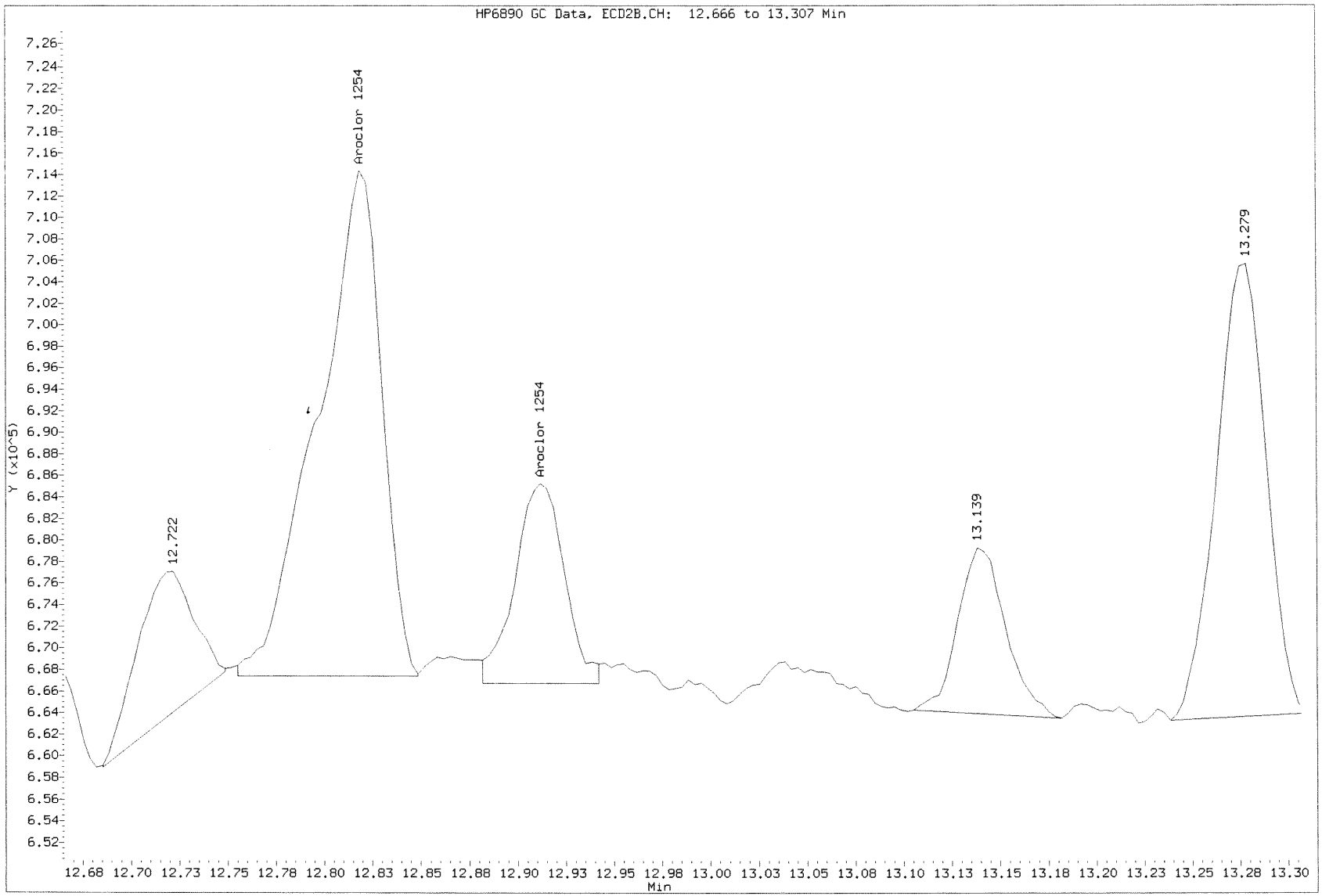


020799

Base
mr 12/18/18

CM 12/17/18

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F017.D
Injection Date: 07-DEC-2018 18:56
Instrument: GC27.i
Client Sample ID:

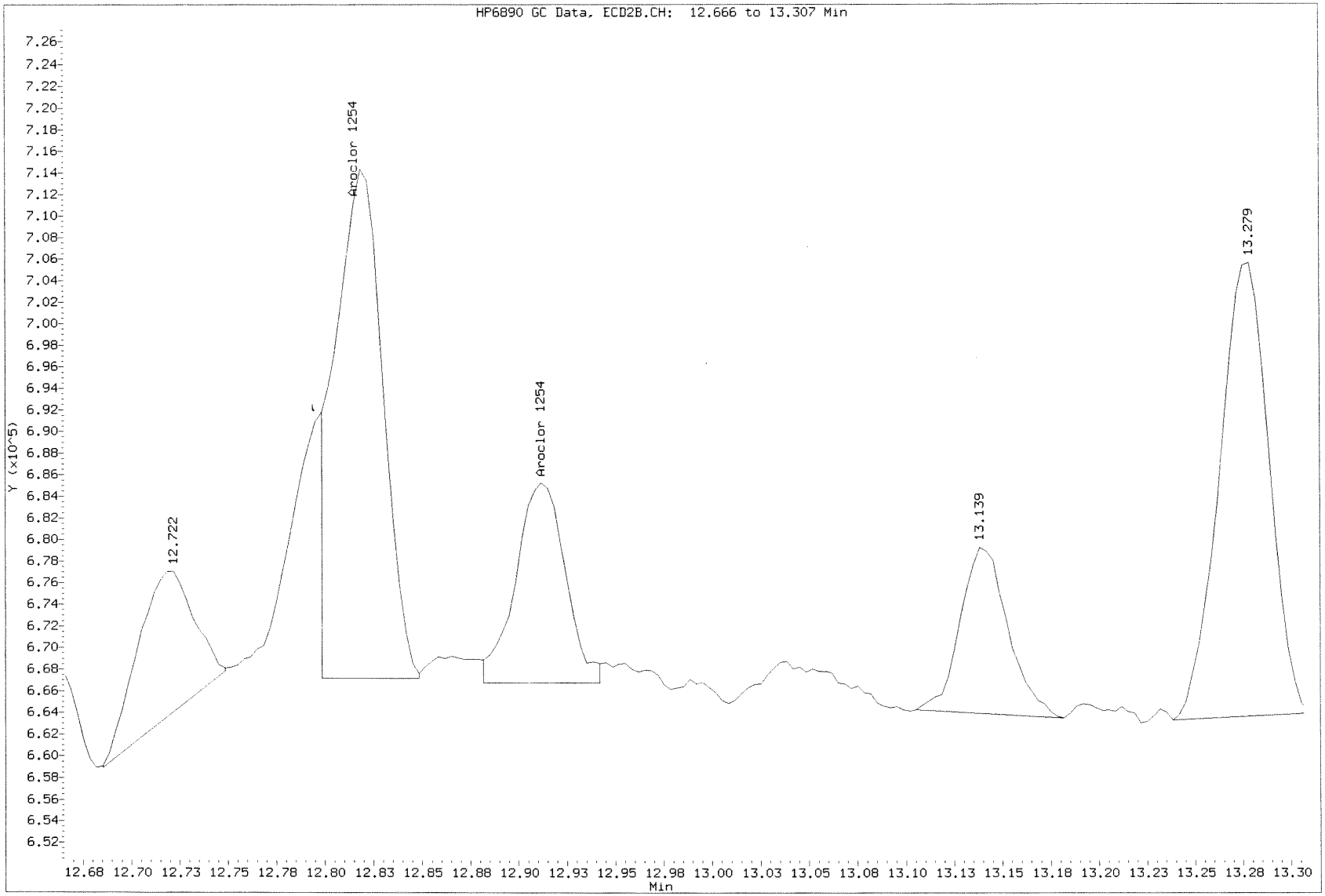


020800

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F017.D
Injection Date: 07-DEC-2018 18:56
Instrument: GC27.i
Client Sample ID:

UA 12/7/18

After baseline/shoulder
MR 12/12/18



020801

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F018.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F018.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F018.D
Inj Date : 07-DEC-2018 19:27
Sample Info: 2154 5-10PPB PCB7-57I
Misc Info :
Cal Date : 12-DEC-2018 12:37
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

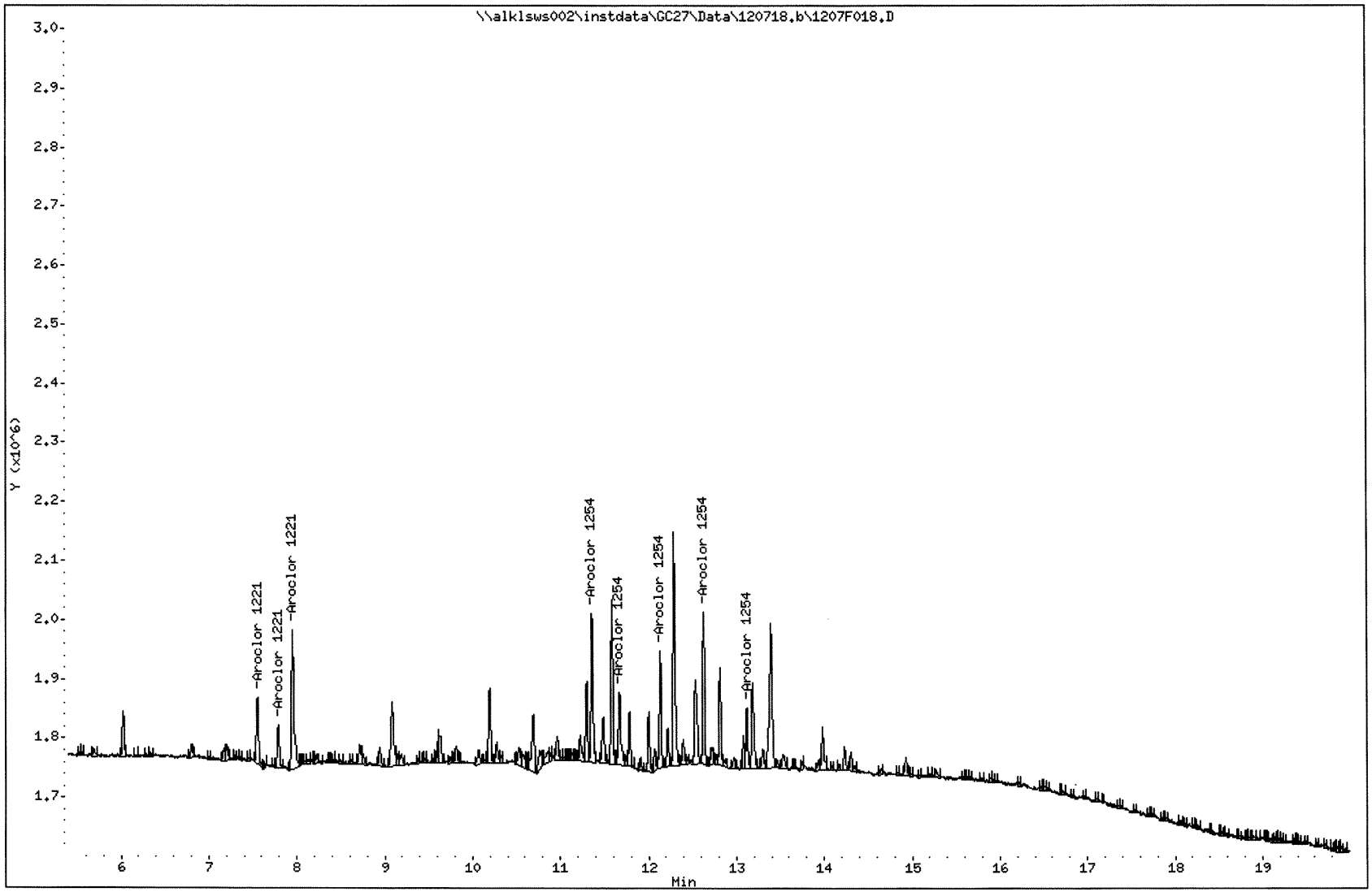
Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	7.554	8.844	192921	49133	10.7	10.3	80.00- 120.00	100.00
	7.790	8.997	112621	59882	9.93	10.9	50.65- 75.98	58.38
	7.950	9.184	468590	182056	10.8	9.85	190.60- 285.90	242.89
			Average of Peak Amounts =		10.5	10.4		
Aroclor 1254	11.360	12.441	410412	171437	5.74	5.65	80.00- 120.00	100.00
	11.670	12.494	227145	90726	6.37	5.78	43.29- 64.93	55.35
	12.134	12.911	304495	88315	5.08	5.60	67.48- 101.23	74.19
	12.627	14.227	381354	70790	5.14	5.23	84.44- 126.67	92.92
	13.120	14.384	159745	144914	5.32	5.68	34.68- 52.01	38.92
			Average of Peak Amounts =		5.53	5.59		

MMC 12/13/18

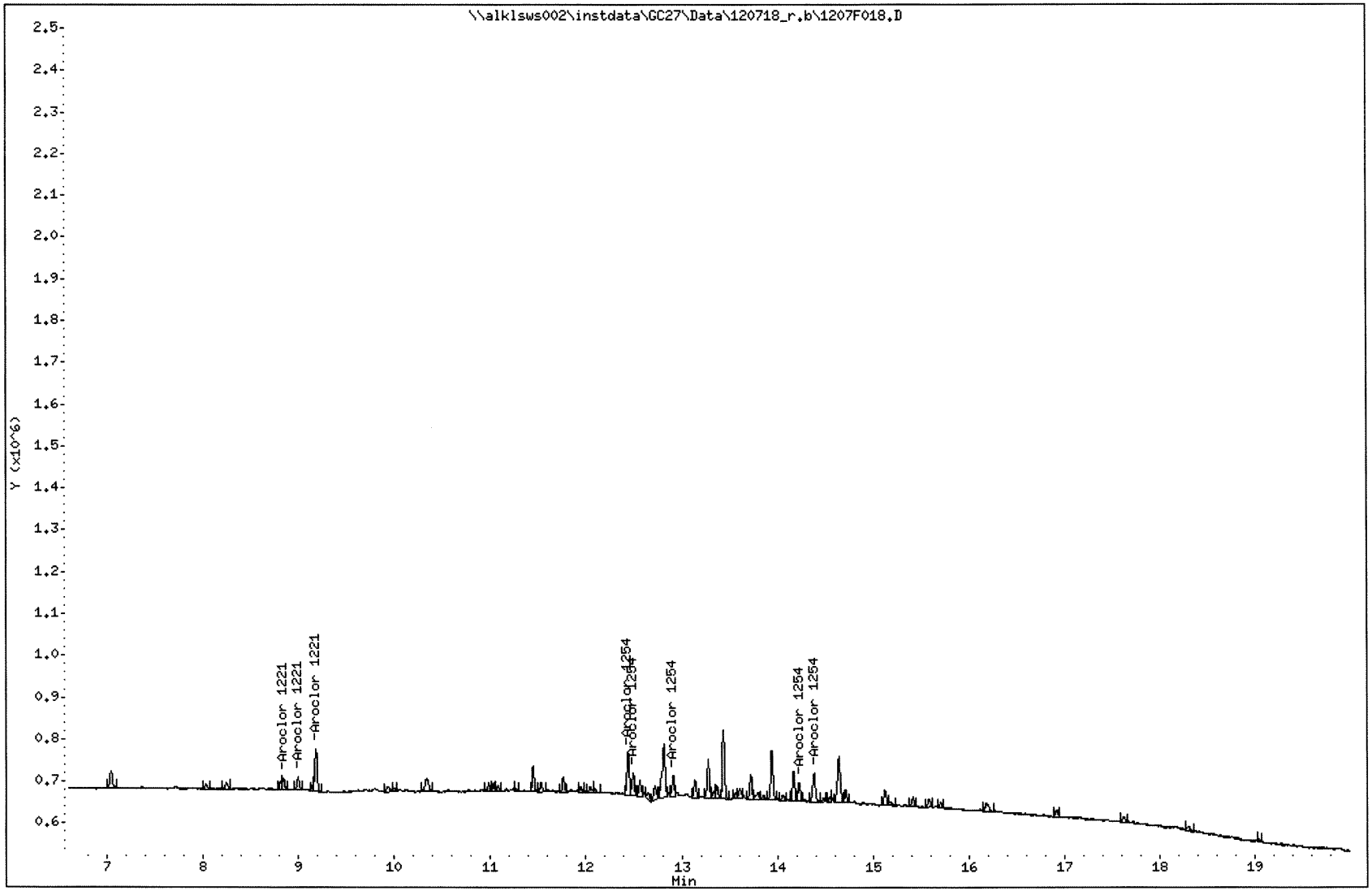
020802

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F018.D
Date : 07-DEC-2018 19:27
Client ID:
Instrument: GC27.i
Sample Info: 2154 5-10PPB PCB7-57I
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020803

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F018.D
Date : 07-DEC-2018 19:27
Client ID:
Instrument: GC27.i
Sample Info: 2154 5-10PPB PCB7-57I
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



020804

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F019.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F019.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F019.D
Inj Date : 07-DEC-2018 19:58
Sample Info: 2154 10-20PPB PCB7-57J
Misc Info :
Cal Date : 12-DEC-2018 12:37
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

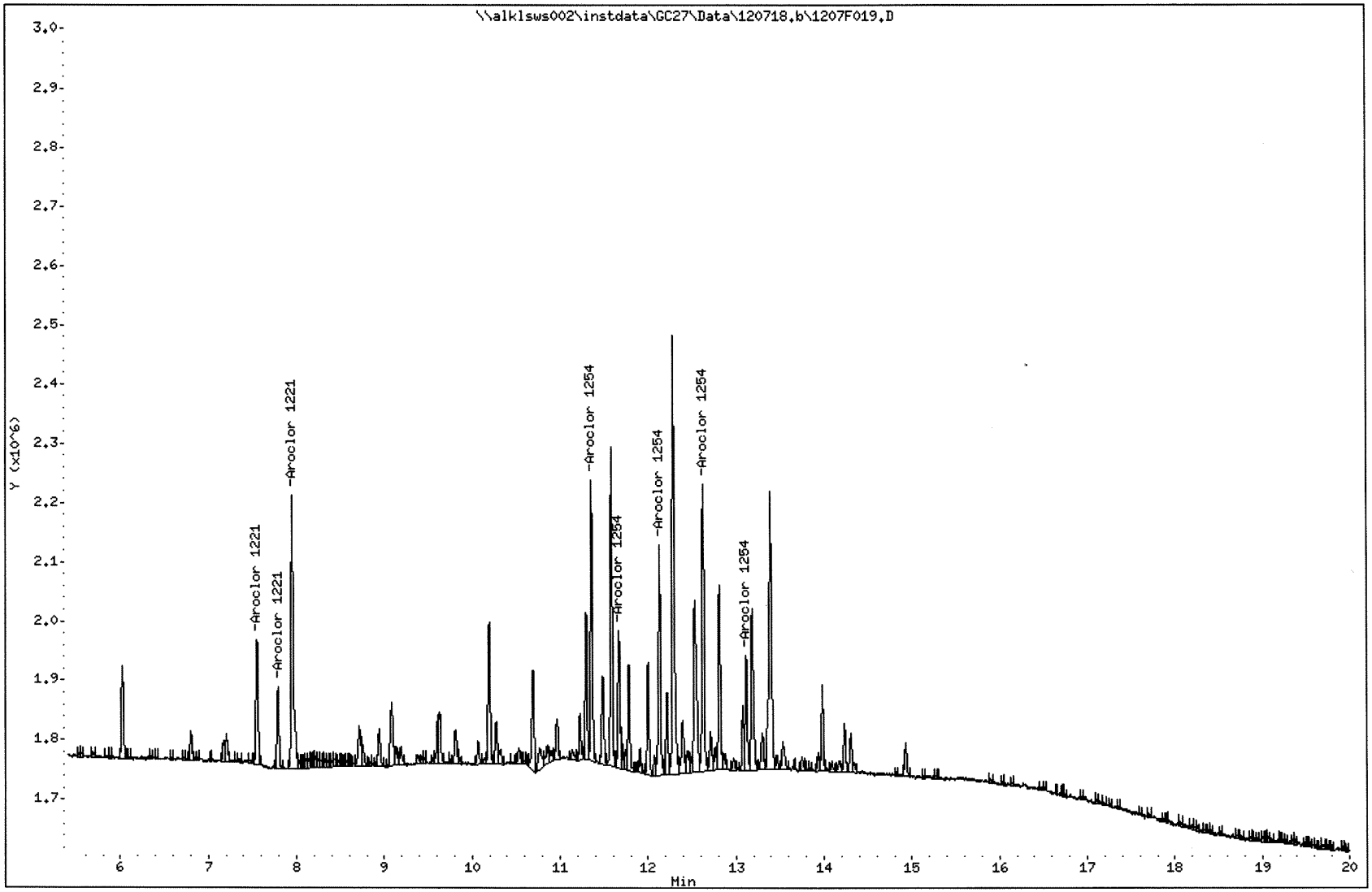
Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	7.553	8.843	338621	95990	18.7	20.1	80.00- 120.00	100.00
	7.789	8.996	217570	103941	19.2	18.9	50.65- 75.98	64.25
	7.953	9.186	865770	379385	20.0	20.5	190.60- 285.90	255.68
			Average of Peak Amounts =		19.3	19.8		
Aroclor 1254	11.359	12.443	714217	318335	9.98	10.5	80.00- 120.00	100.00
	11.669	12.493	353505	160371	9.91	10.2	43.29- 64.93	49.50
	12.133	12.913	640266	154294	10.7	9.79	67.48- 101.23	89.65
	12.629	14.226	786063	134080	10.6	9.90	84.44- 126.67	110.06
	13.119	14.383	309546	261027	10.3	10.2	34.68- 52.01	43.34
			Average of Peak Amounts =		10.3	10.1		

MC 12/13/18

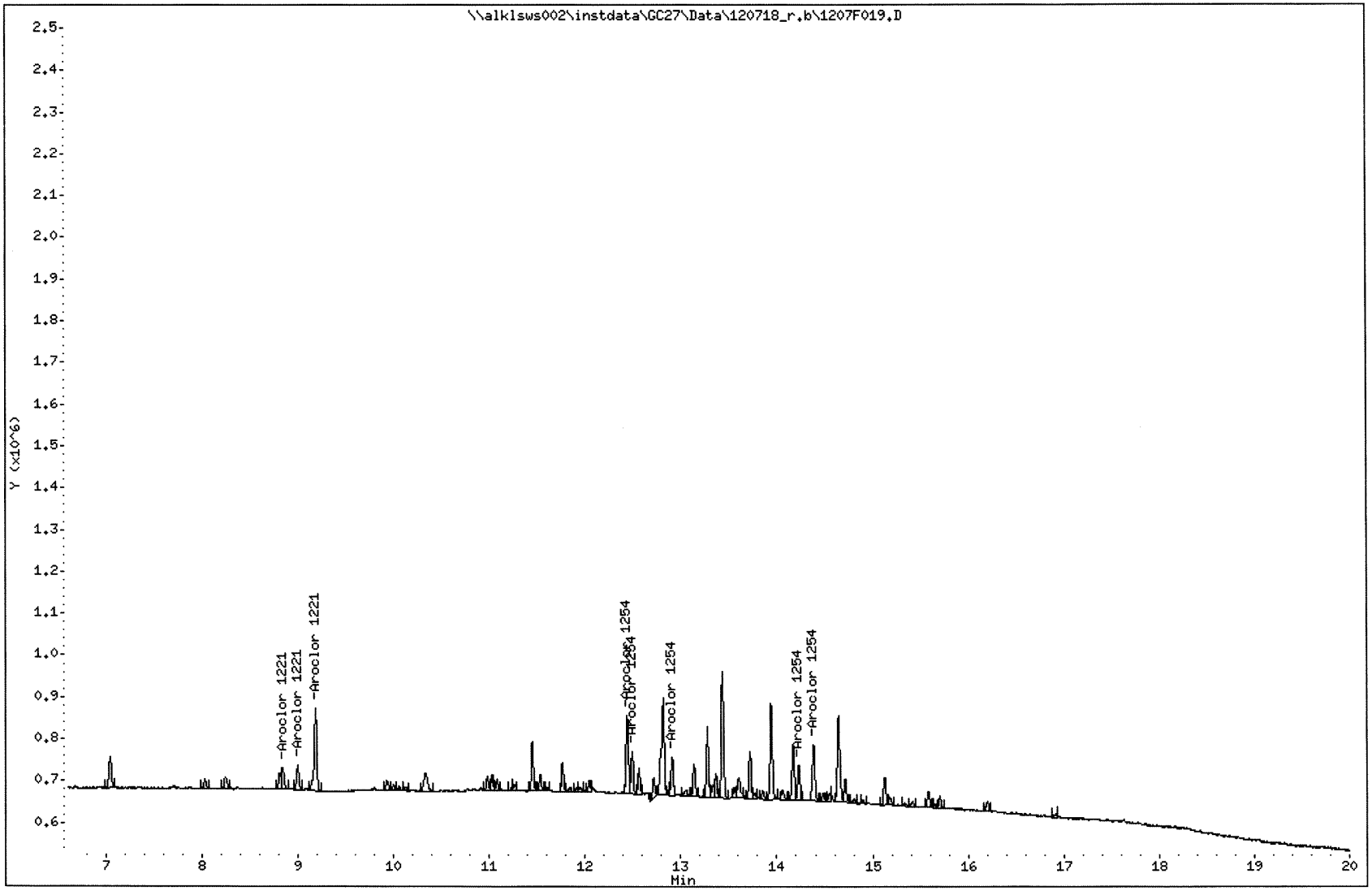
020805

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F019.D
Date : 07-DEC-2018 19:58
Client ID:
Instrument: GC27.i
Sample Info: 2154 10-20PPB PCB7-57J
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020806

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F019.D
Date : 07-DEC-2018 19:58
Client ID:
Instrument: GC27.i
Sample Info: 2154 10-20PPB PCB7-57J
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



020807

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F020.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F020.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F020.D
Inj Date : 07-DEC-2018 20:29
Sample Info: 2154 20-40PPB PCB7-57K
Misc Info :
Cal Date : 12-DEC-2018 12:37
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	7.554	8.845	737482	192190	40.8	40.2	80.00- 120.00	100.00
	7.791	8.998	474049	205299	41.8	37.3	50.65- 75.98	64.28
	7.951	9.185	1717152	786057	39.7	42.5	190.60- 285.90	232.84
			Average of Peak Amounts =		40.8	40.0		
Aroclor 1254	11.361	12.441	1400076	639135	19.6	21.1	80.00- 120.00	100.00
	11.671	12.495	720835	332310	20.2	21.2	43.29- 64.93	51.49
	12.134	12.911	1160156	362225	19.3	23.0	67.48- 101.23	82.86
	12.628	14.228	1485291	293223	20.0	21.7	84.44- 126.67	106.09
	13.121	14.385	627539	530358	20.9	20.8	34.68- 52.01	44.82
			Average of Peak Amounts =		20.0	21.6		

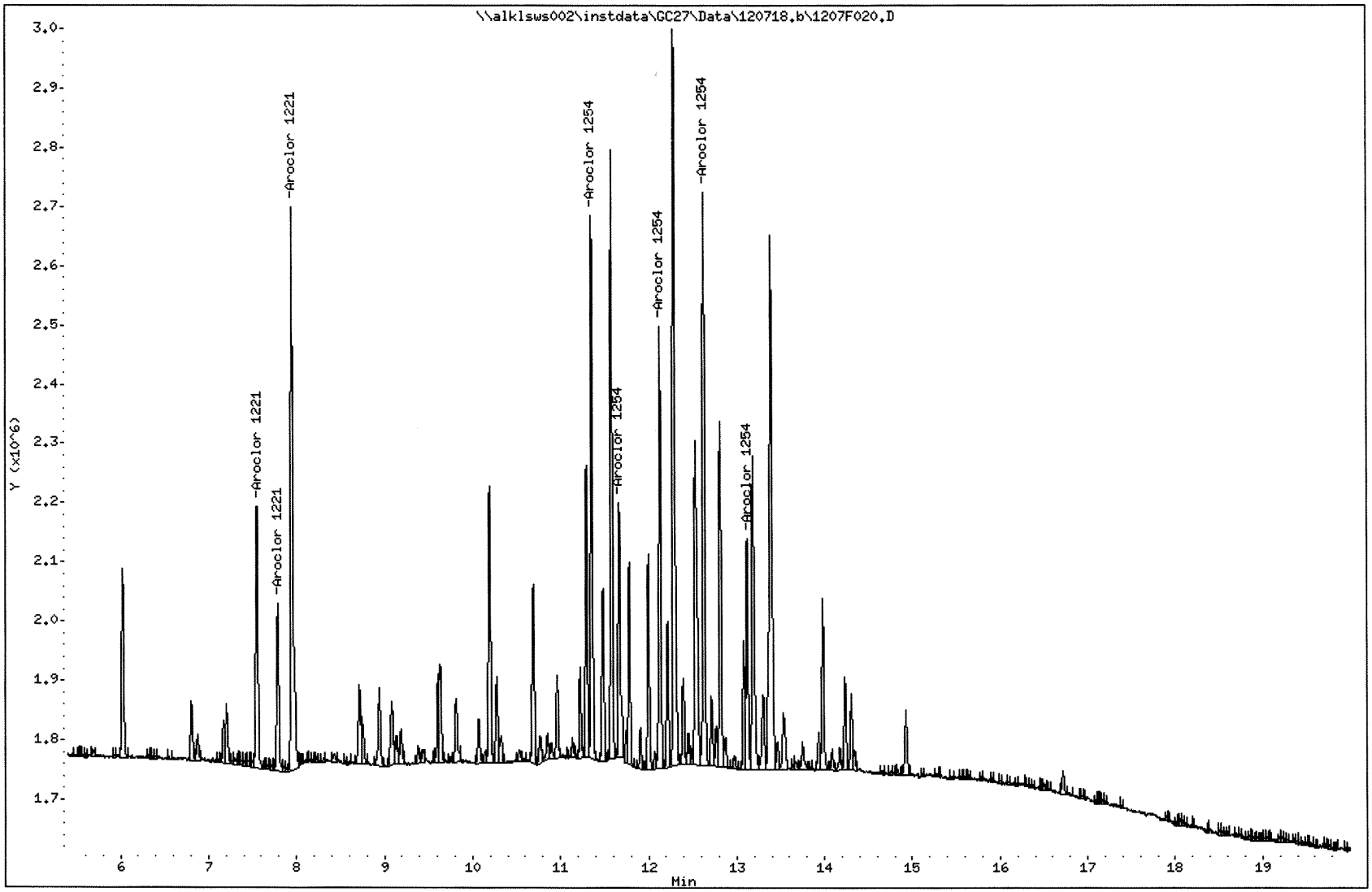
MC 12/13/18

020808

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F020.D
Date : 07-DEC-2018 20:29
Client ID:
Sample Info: 2154 20-40PPB PCB7-57K

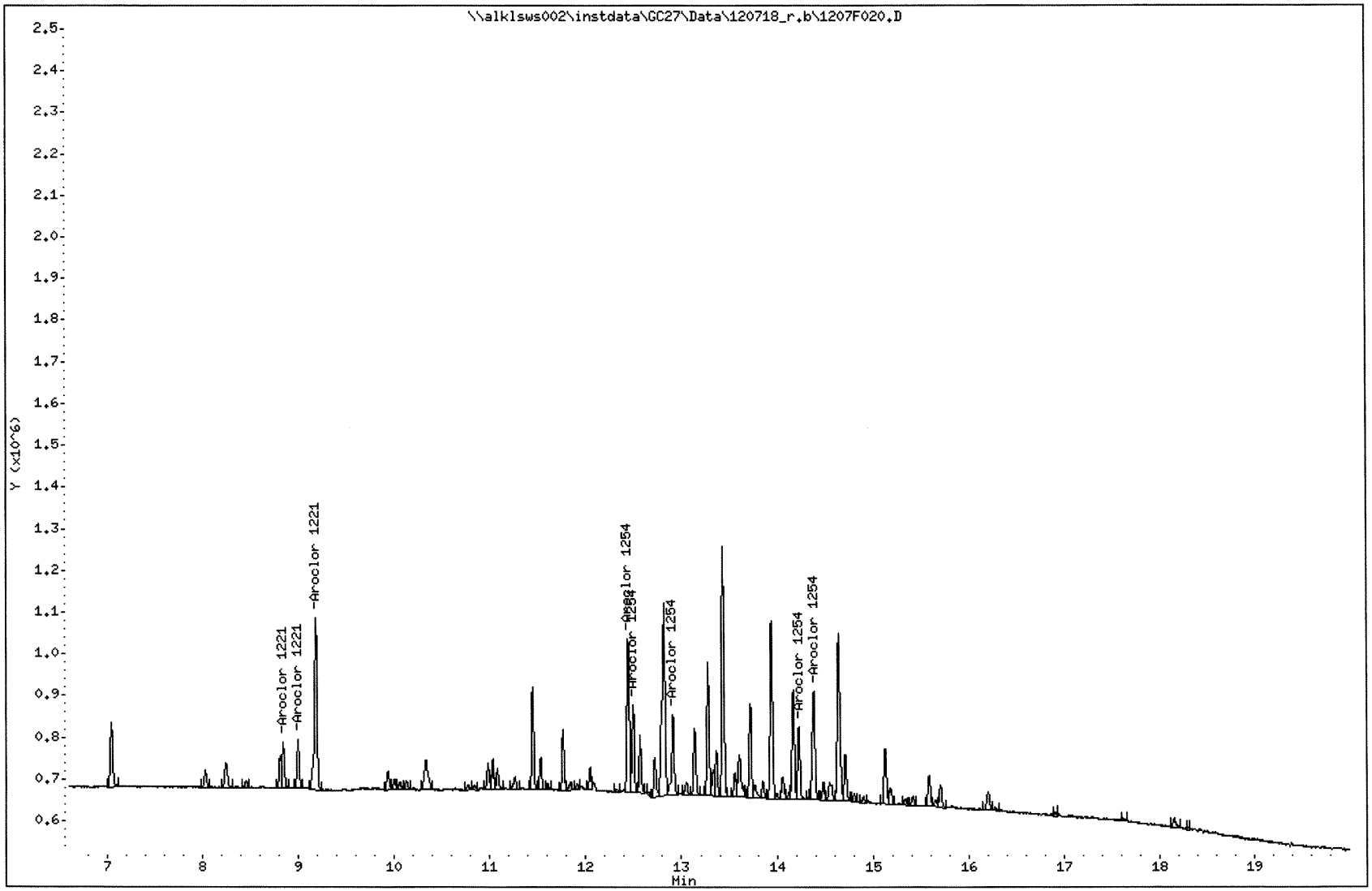
Instrument: GC27.i

Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020809

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F020.D
Date : 07-DEC-2018 20:29
Client ID:
Instrument: GC27.i
Sample Info: 2154 20-40PPB PCB7-57K
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



020810

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F021.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F021.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F021.D
Inj Date : 07-DEC-2018 21:00
Sample Info: 2154 50-100PPB PCB7-57L
Misc Info :
Cal Date : 12-DEC-2018 12:37
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	7.555	8.842	1812759	484441	100	101	80.00- 120.00	100.00
	7.792	8.998	1215903	513518	107	93.2	50.65- 75.98	67.07
	7.952	9.185	4251505	1924581	98.3	104	190.60- 285.90	234.53
			Average of Peak Amounts =		102	99.4		
Aroclor 1254	11.362	12.442	3228263	1453935	45.1	47.9	80.00- 120.00	100.00
	11.672	12.495	1751500	781928	49.1	49.8	43.29- 64.93	54.26
	12.135	12.912	2687432	743994	44.8	47.2	67.48- 101.23	83.25
	12.628	14.228	3380371	646008	45.6	47.7	84.44- 126.67	104.71
	13.118	14.385	1390266	1191668	46.3	46.7	34.68- 52.01	43.07
			Average of Peak Amounts =		46.2	47.9		

MR 12/13/18

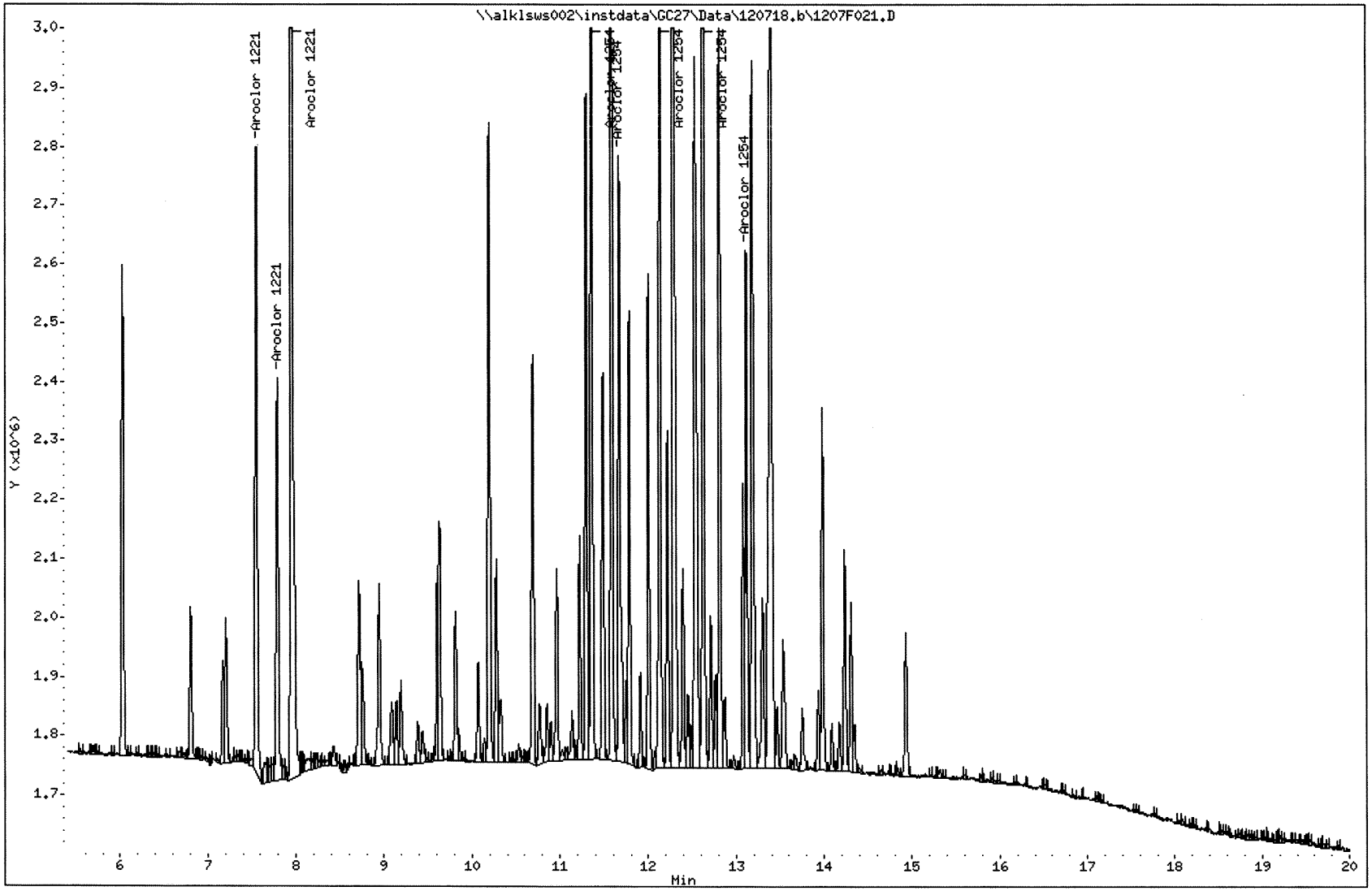
020811

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F021.D
Date : 07-DEC-2018 21:00
Client ID:
Sample Info: 2154 50-100PPB PCB7-57L

Instrument: GC27.i

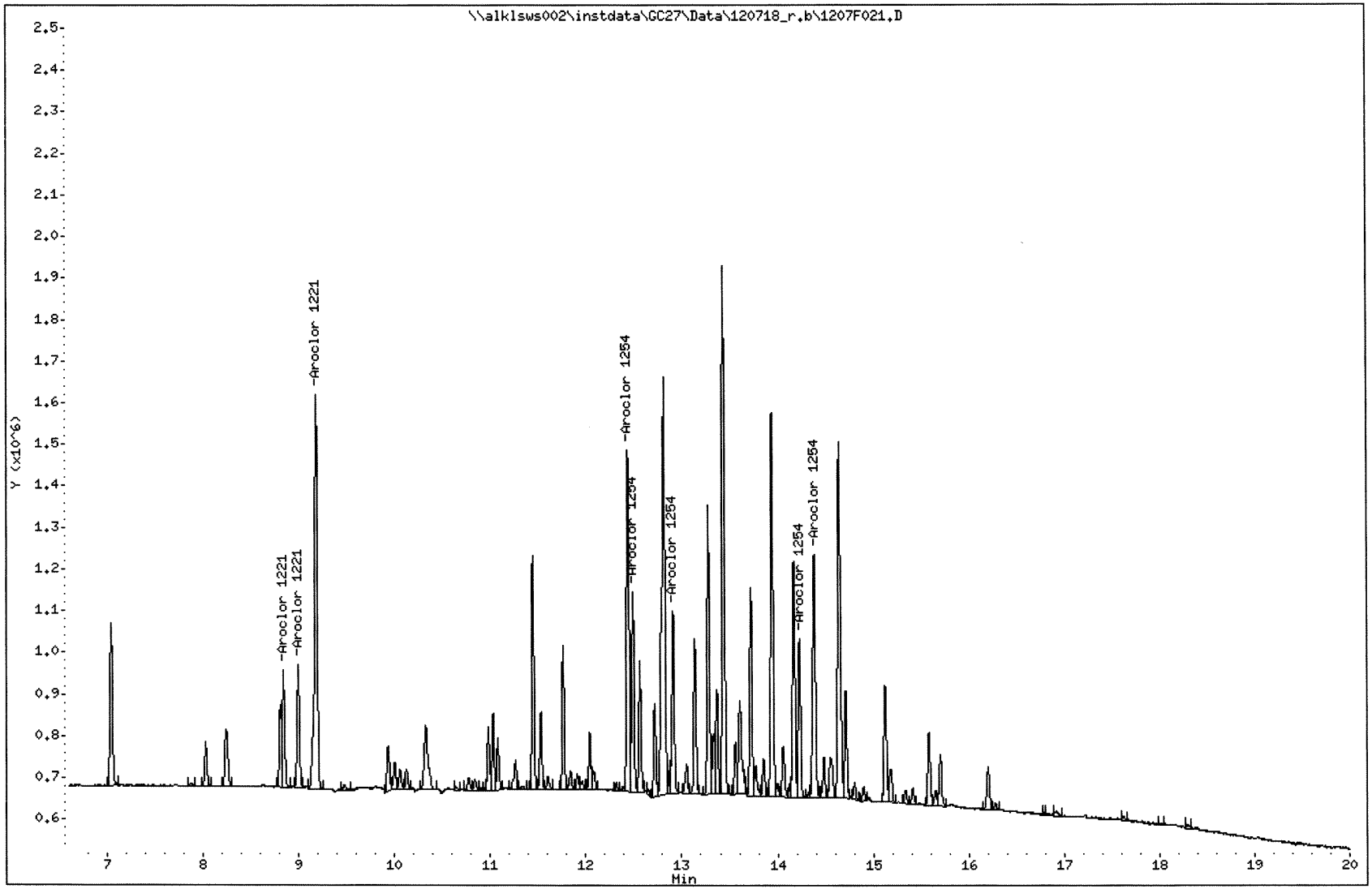
Operator: SM
Column diameter: 0.32

Column phase: DB-35MS



020812

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F021.D
Date : 07-DEC-2018 21:00
Client ID:
Instrument: GC27.i
Sample Info: 2154 50-100PPB PCB7-57L
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



020813

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F022.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F022.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F022.D
Inj Date : 07-DEC-2018 21:31
Sample Info: 2154 100-200PPB PCB7-57M
Misc Info :
Cal Date : 12-DEC-2018 12:37
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

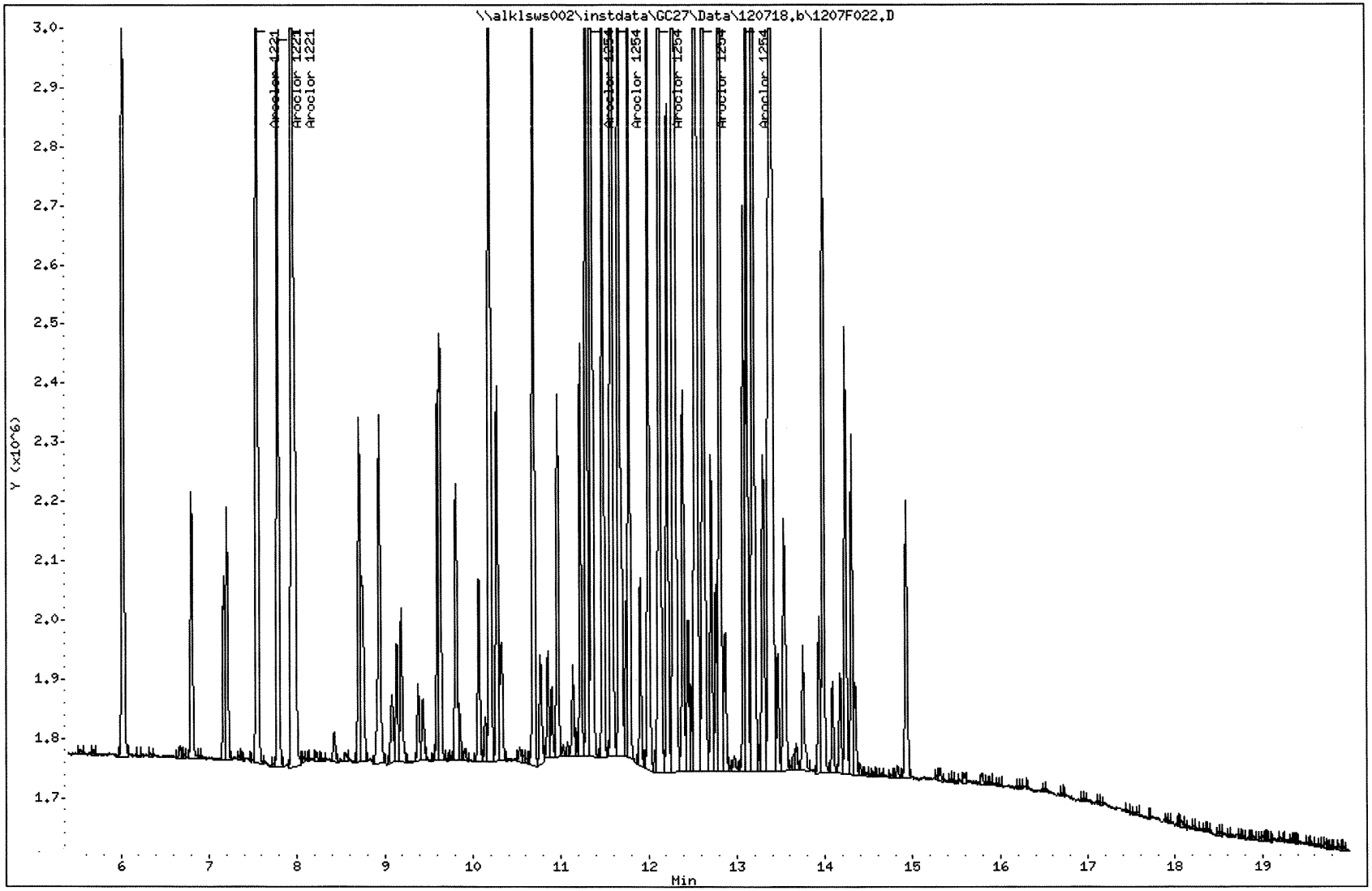
Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	7.551	8.841	3125538	857889	173	179	80.00- 120.00	100.00
	7.788	8.995	1997444	927366	176	168	50.65- 75.98	63.91
	7.951	9.185	7496178	3345193	173	181	190.60- 285.90	239.84
			Average of Peak Amounts =		174	176		
Aroclor 1254	11.358	12.441	6177577	2638206	86.3	87.0	80.00- 120.00	100.00
	11.671	12.495	3380781	1437359	94.8	91.6	43.29- 64.93	54.73
	12.134	12.911	5315447	1357530	88.6	86.1	67.48- 101.23	86.04
	12.628	14.228	6648375	1203798	89.6	88.9	84.44- 126.67	107.62
	13.118	14.385	2653156	2244259	88.4	88.0	34.68- 52.01	42.95
			Average of Peak Amounts =		89.5	88.3		

MC 12/13/18

020814

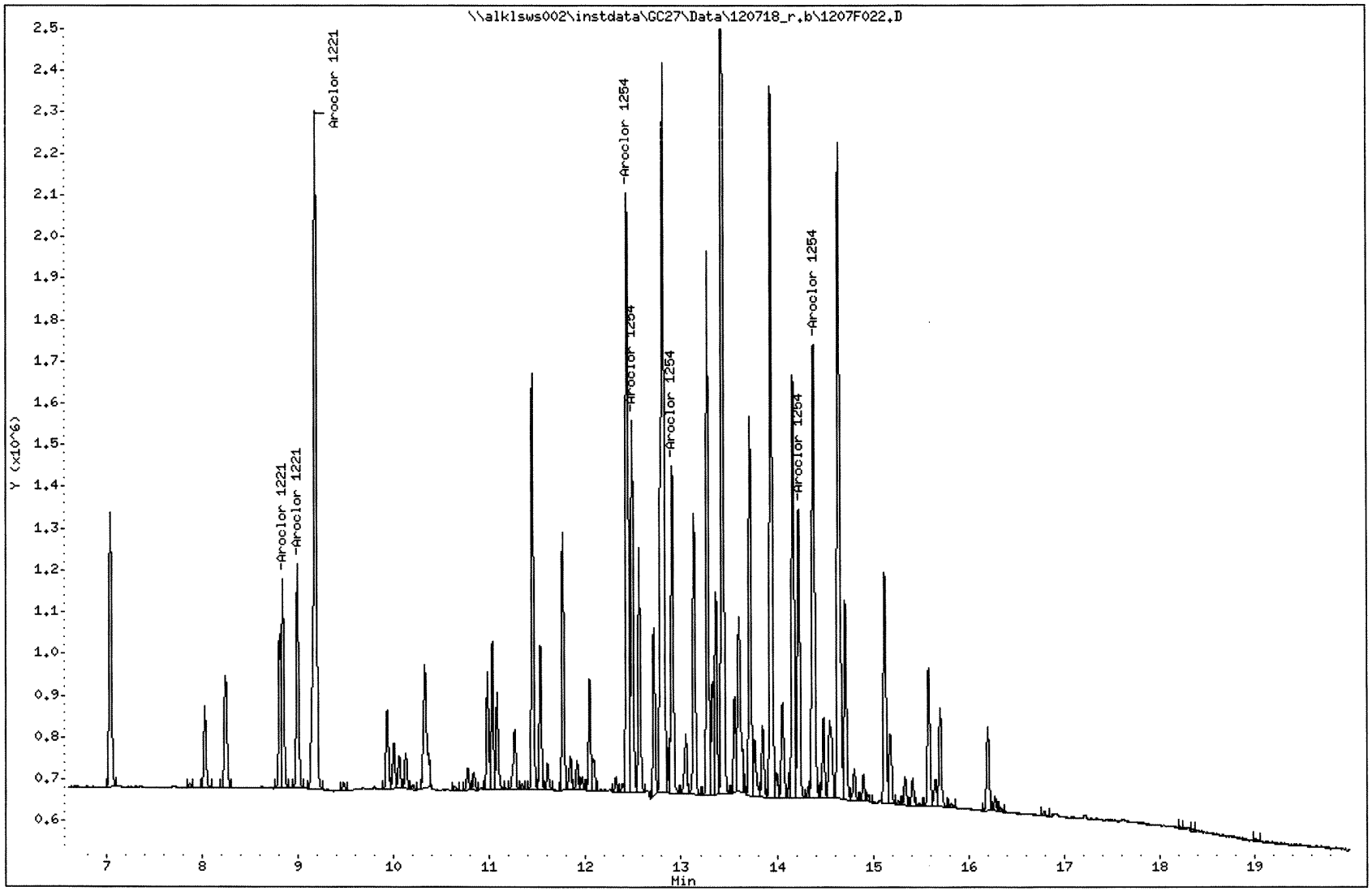
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F022.D
Date : 07-DEC-2018 21:31
Client ID:
Instrument: GC27.i
Sample Info: 2154 100-200PPB PCB7-57M
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020815

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F022.D
Date : 07-DEC-2018 21:31
Client ID:
Sample Info: 2154 100-200PPB PCB7-57M

Instrument: GC27.i
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



020816

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F023.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F023.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F023.D
Inj Date : 07-DEC-2018 22:03
Sample Info: 2154 200-400PPB PCB7-57N
Misc Info :
Cal Date : 12-DEC-2018 12:37
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 2154.sub
Sub List #2 : 2154.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

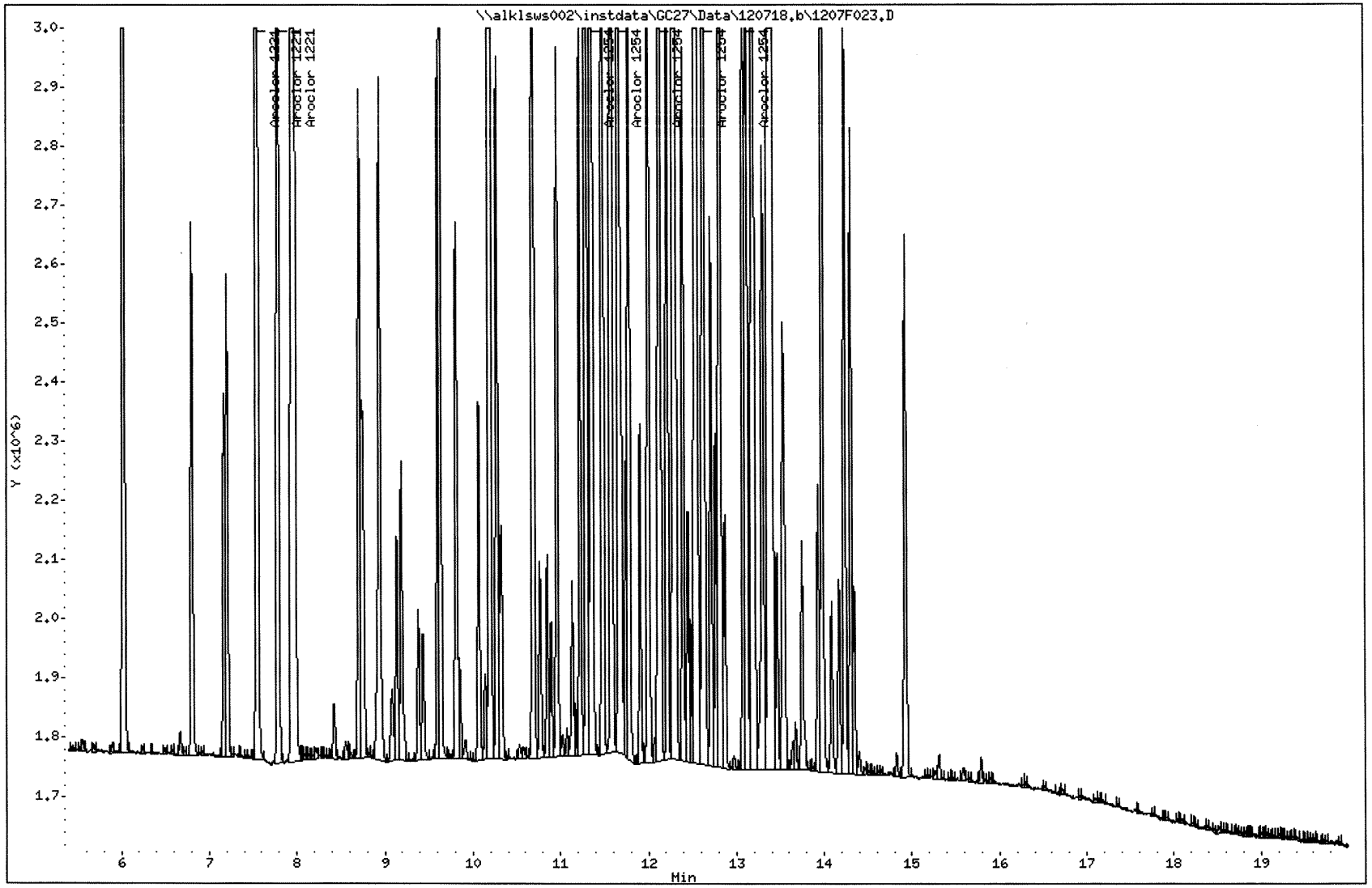
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	7.551	8.841	6218901	1843269	344	386	80.00- 120.00	100.00
	7.788	8.995	3937435	1837921	347	334	50.65- 75.98	63.31
	7.951	9.185	14816640	6533452	343	353	190.60- 285.90	238.25
			Average of Peak Amounts =		345	358		
Aroclor 1254	11.358	12.441	11452864	4838916	160	160	80.00- 120.00	100.00
	11.668	12.491	6197353	2641811	174	168	43.29- 64.93	54.11
	12.135	12.911	9661166	2507141	161	159	67.48- 101.23	84.36
	12.628	14.228	12089113	2184469	163	161	84.44- 126.67	105.56
	13.118	14.385	4964247	4084277	165	160	34.68- 52.01	43.35
			Average of Peak Amounts =		165	162		

MM 1/4/3/18

020817

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F023.D
Date : 07-DEC-2018 22:03
Client ID:
Sample Info: 2154 200-400PPB PCB7-57N

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32

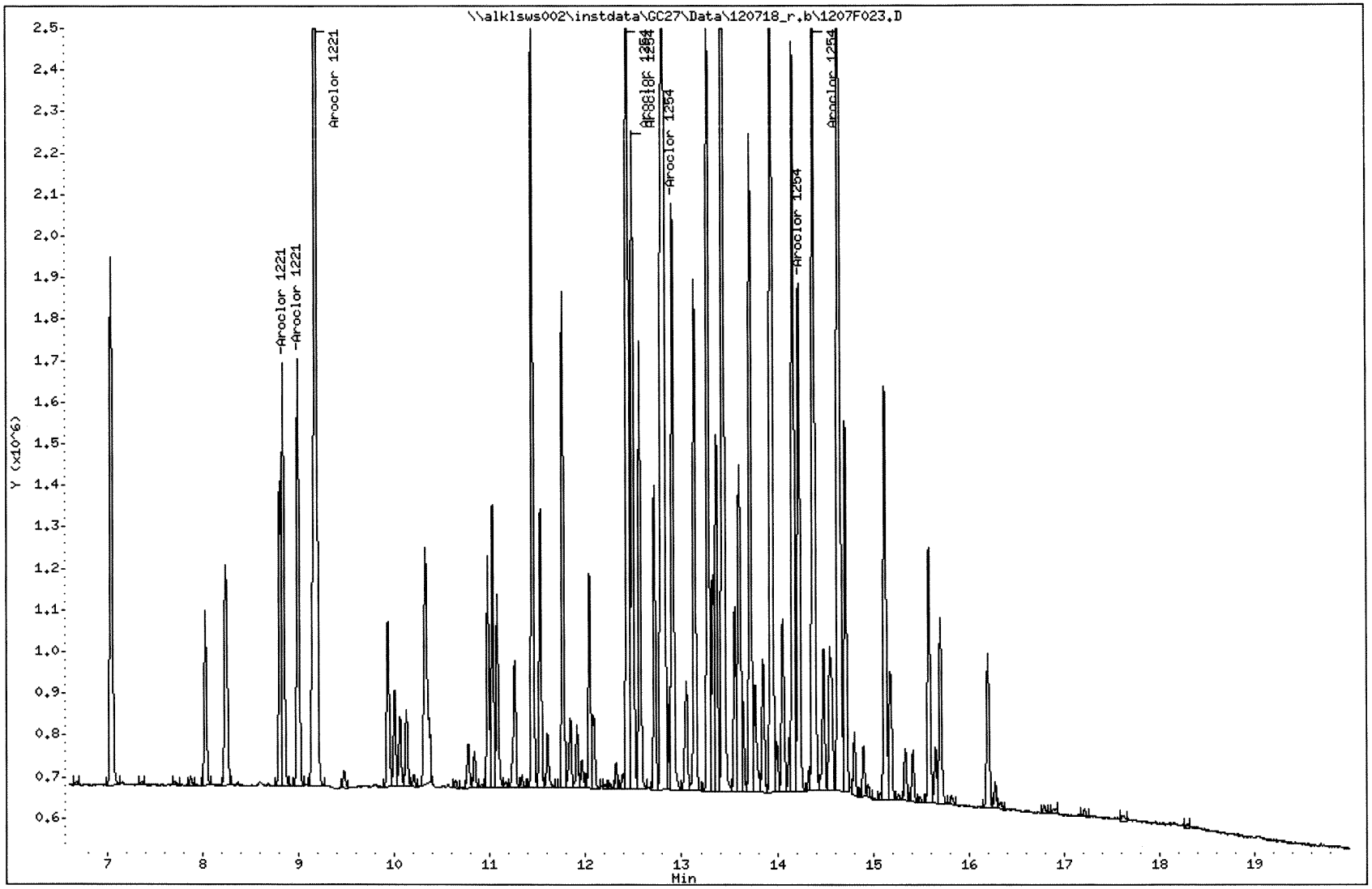


020818

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F023.D
Date : 07-DEC-2018 22:03
Client ID:
Sample Info: 2154 200-400PPB PCB7-57N

Instrument: GC27.i

Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



020819

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F024.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F024.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F024.D
Inj Date : 07-DEC-2018 22:34
Sample Info: 3262 1.0PPB PCB7-61B
Misc Info :
Cal Date : 12-DEC-2018 12:38
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	8.717	9.180	19566	21323	0.907	1.35	80.00- 120.00	100.00(M)
	9.613	10.980	23763	16132	0.967	1.24	91.85- 137.78	121.45(M)
	9.813	11.030	24647	12672	1.14	0.940	82.49- 123.73	125.97(M)
	10.193	11.527	15535	9032	1.15	1.29	52.60- 78.89	79.40(M)
	10.270	11.767	12389	8863	1.14	1.24	42.83- 64.24	63.32(M)
			Average of Peak Amounts =		1.06	1.21		
Aroclor 1262	12.530	13.720	86546	33281	1.24	1.13	80.00- 120.00	100.00
	13.127	14.803	51552	53795	1.06	1.14	58.60- 87.90	59.57
	13.930	15.173	97535	37264	1.06	1.04	115.16- 172.75	112.70
	14.307	16.210	174136	54733	1.02	1.03	222.16- 333.24	201.21
	14.827	17.213	91078	28124	1.10	0.859	97.91- 146.87	105.24
			Average of Peak Amounts =		1.10	1.04		

QC Flag Legend

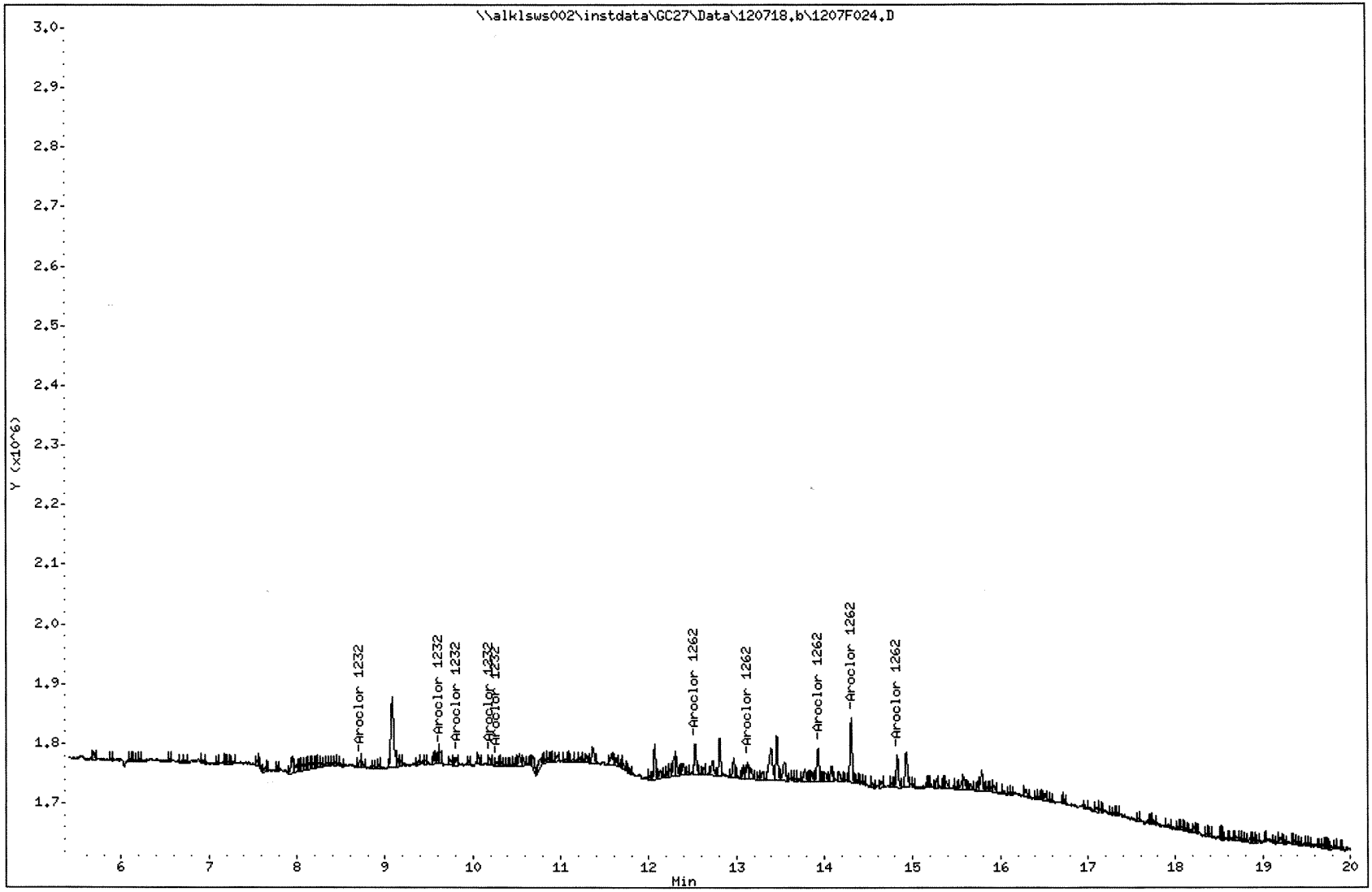
M - Compound response manually integrated.

MC 12/13/18

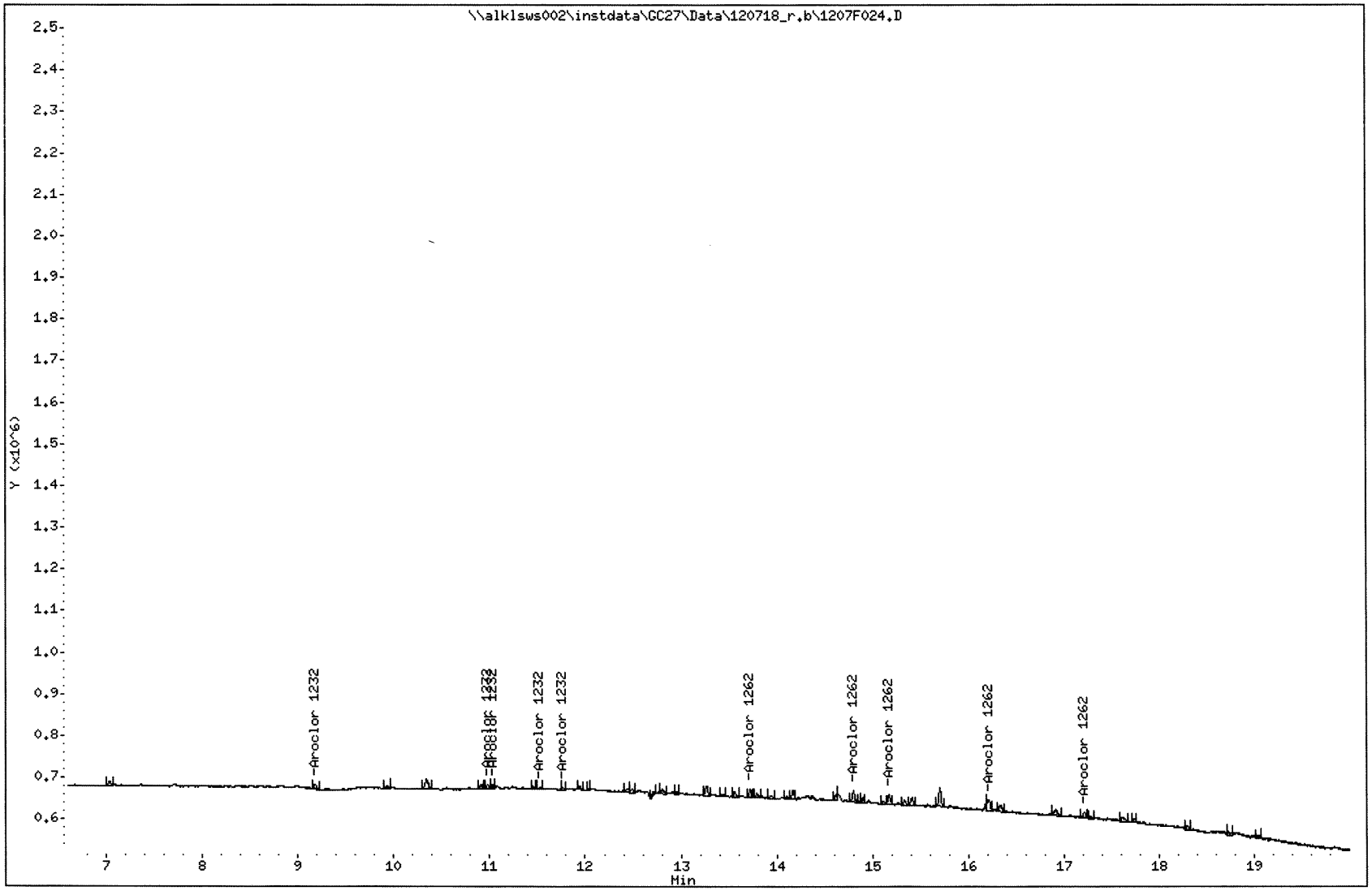
020820

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F024.D
Date : 07-DEC-2018 22:34
Client ID:
Sample Info: 3262 1.0PPB PCB7-61B

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



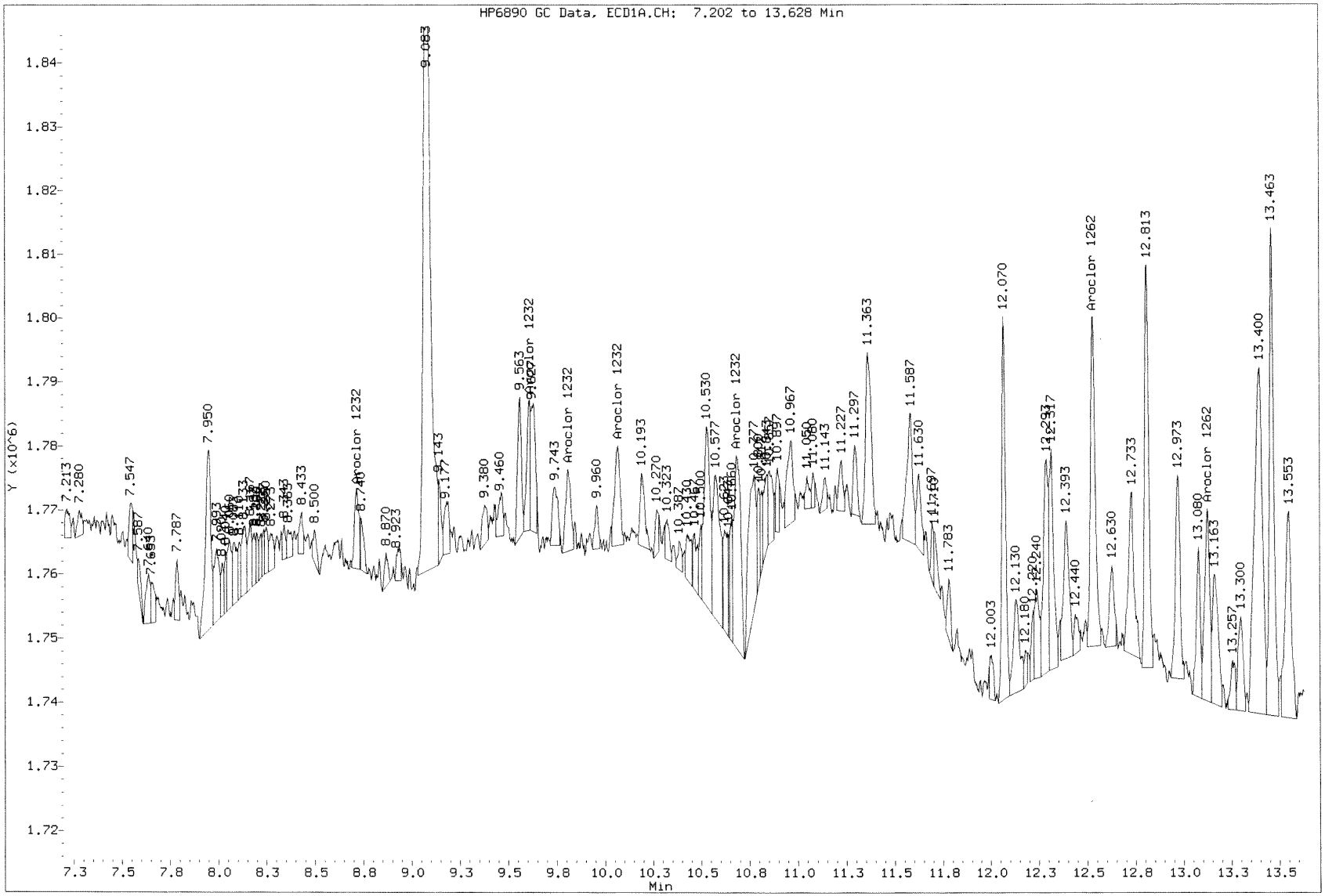
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Date : 07-DEC-2018 22:34
Client ID:
Instrument: GC27.i
Sample Info: 3262 1.0PPB PCB7-61B
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F024.D
Injection Date: 07-DEC-2018 22:34
Instrument: GC27.i
Client Sample ID:

12/7/18

Before
MM 12/12/18

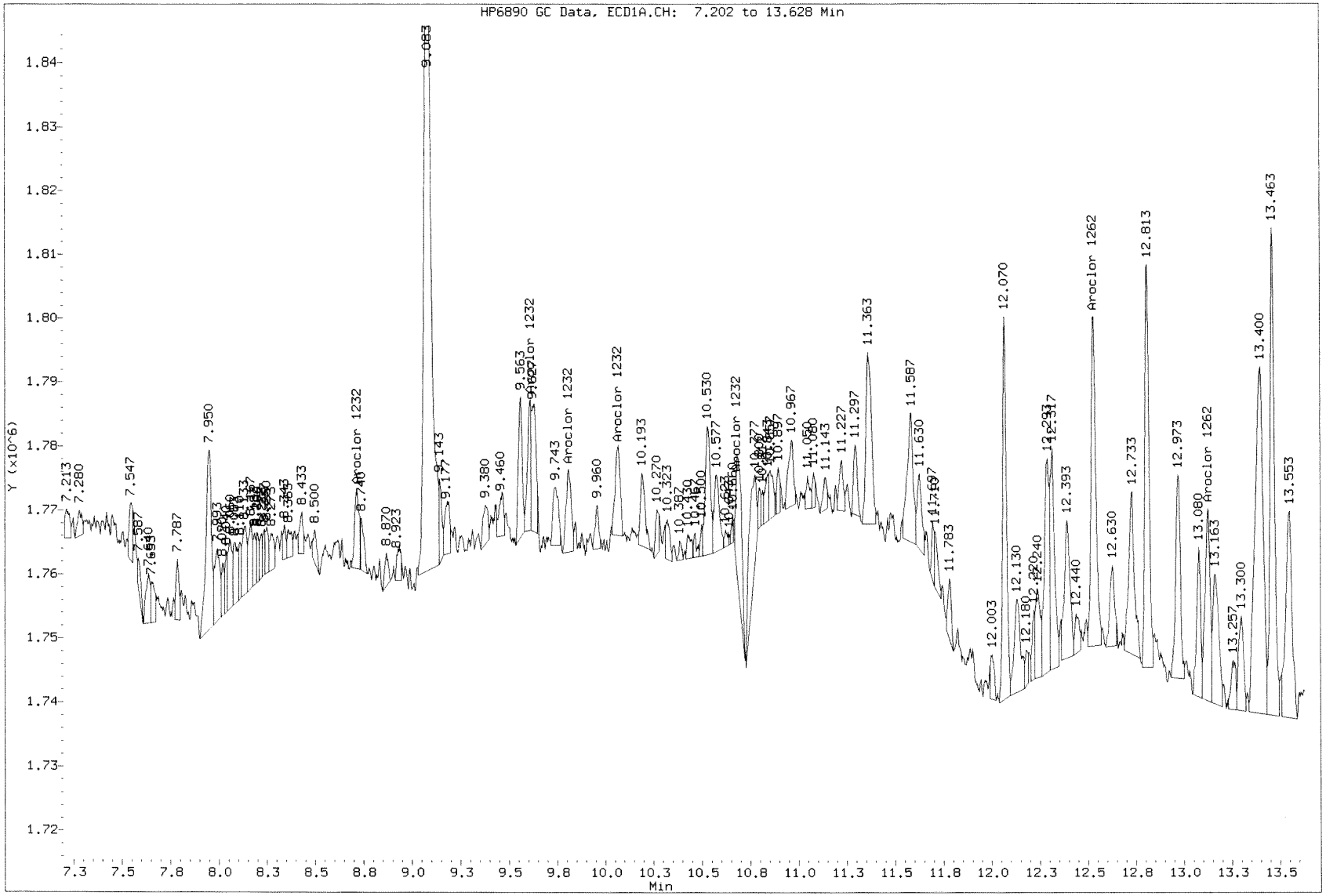


020823

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F024.D
Injection Date: 07-DEC-2018 22:34
Instrument: GC27.1
Client Sample ID:

CM 12/17/18

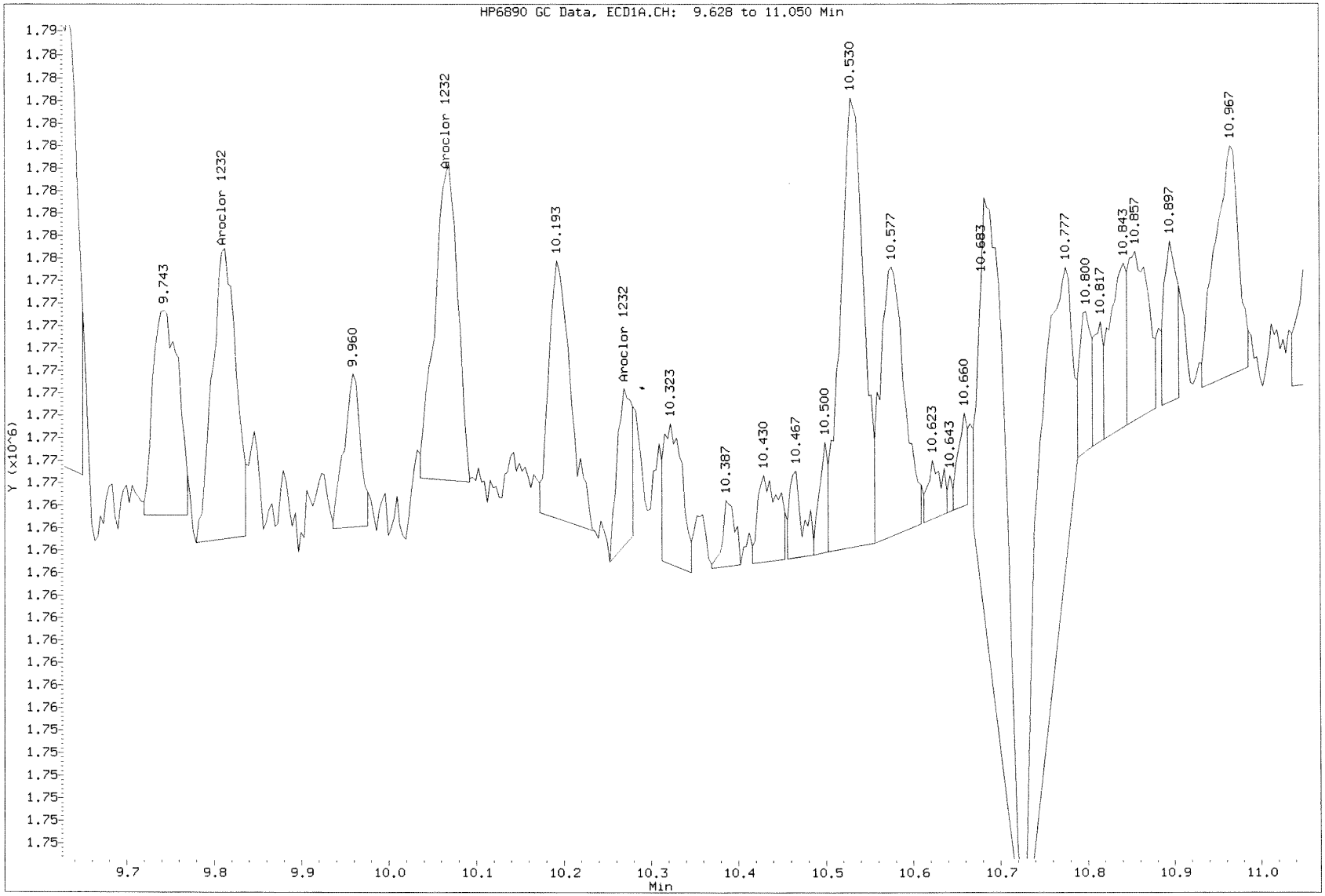
After baseline/shoulder
MC 12/12/18



020824

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F024.D
Injection Date: 07-DEC-2018 22:34
Instrument: GC27.i
Client Sample ID:

Before
MR 12/12/18
CM 12/17/18

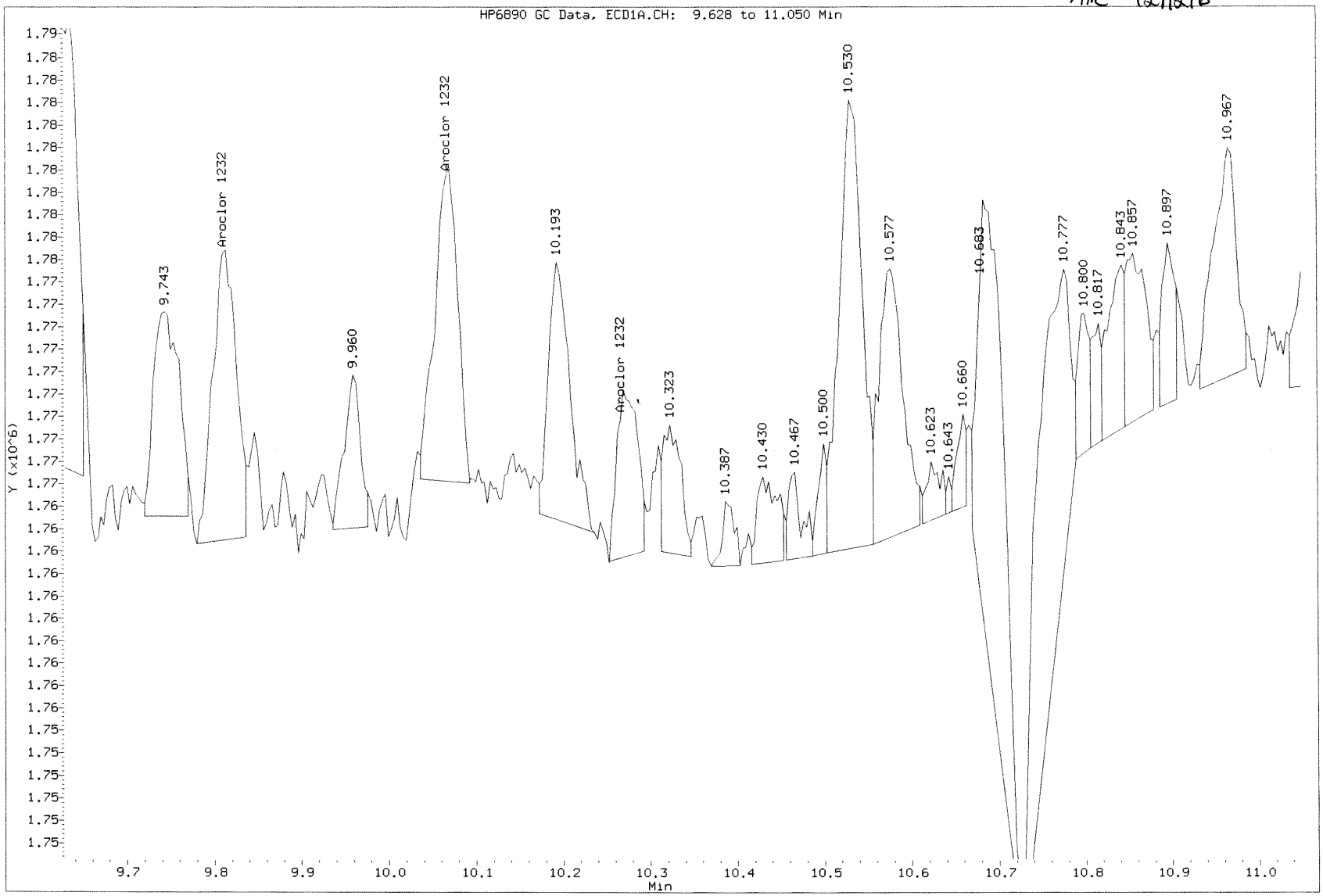


020825

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F024.D
Injection Date: 07-DEC-2018 22:34
Instrument: GC27.i
Client Sample ID:

MR 12/12/18

After baseline/shoulder
MR 12/12/18

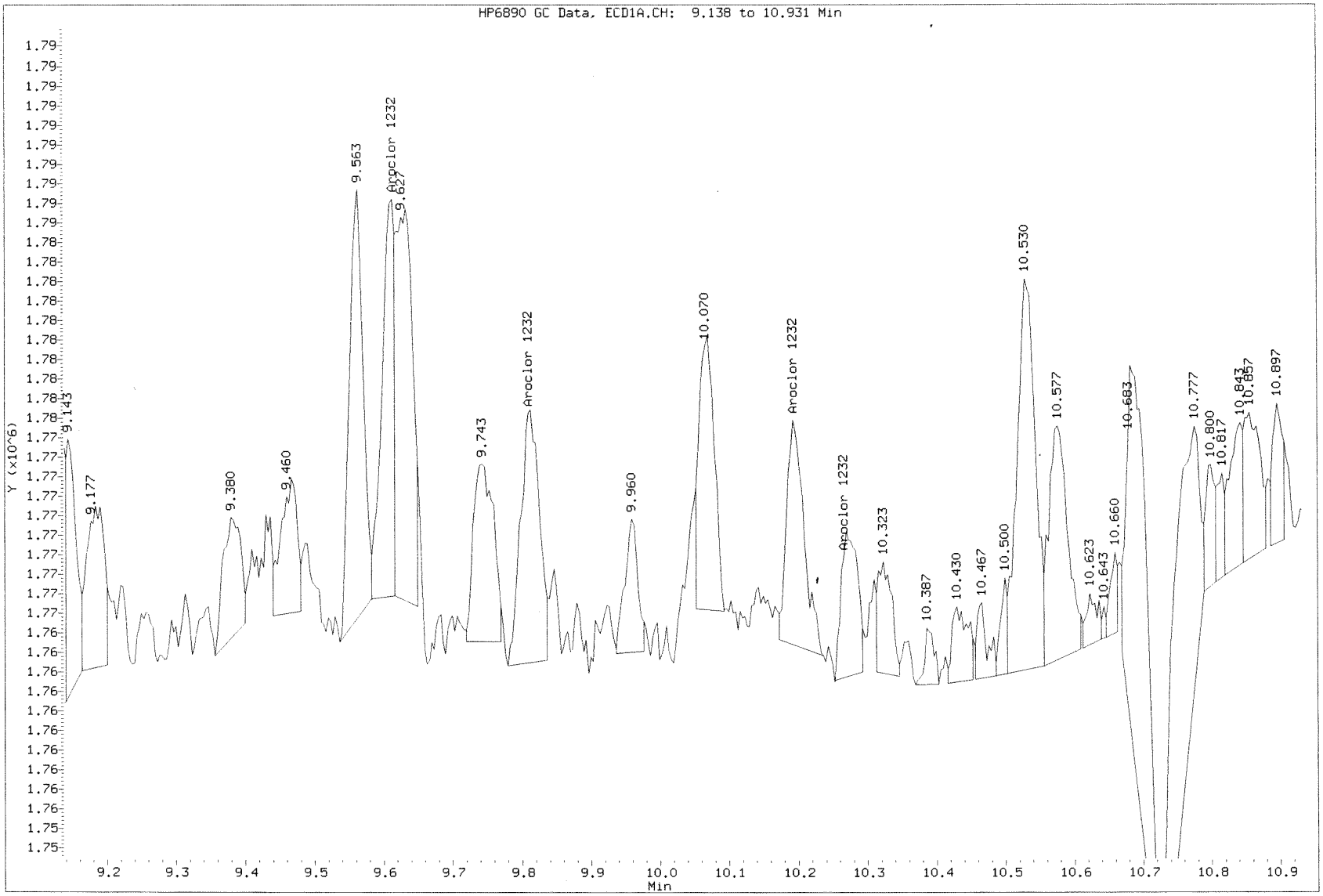


020826

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F024.D
Injection Date: 07-DEC-2018 22:34
Instrument: GC27.i
Client Sample ID:

CM 12/7/18

Before
MR 12/12/18

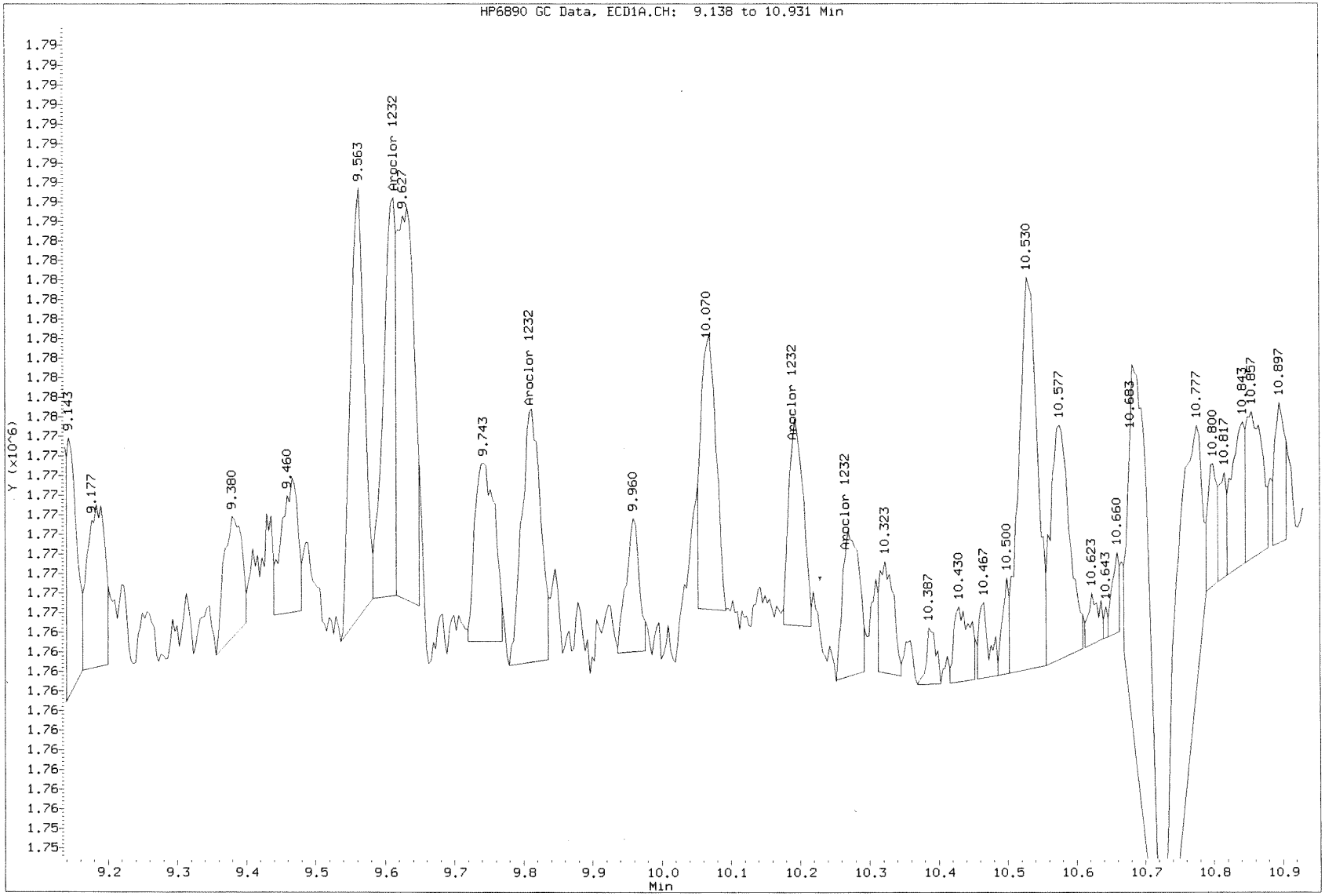


020827

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F024.D
Injection Date: 07-DEC-2018 22:34
Instrument: GC27.i
Client Sample ID:

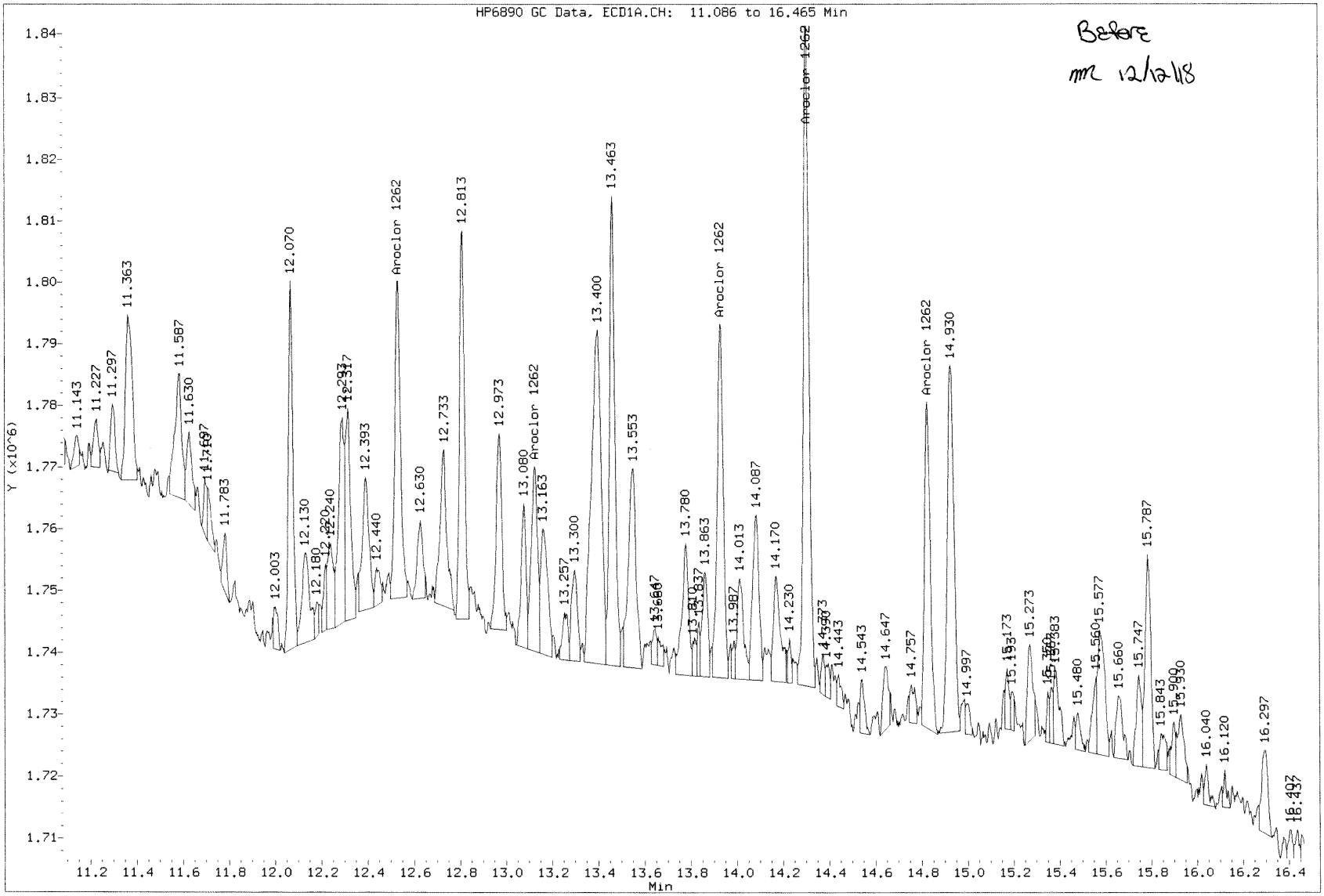
CWA 12/7/18

~~After~~
baseline/shoulder
MM 12/18/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F024.D
Injection Date: 07-DEC-2018 22:34
Instrument: GC27.i
Client Sample ID:

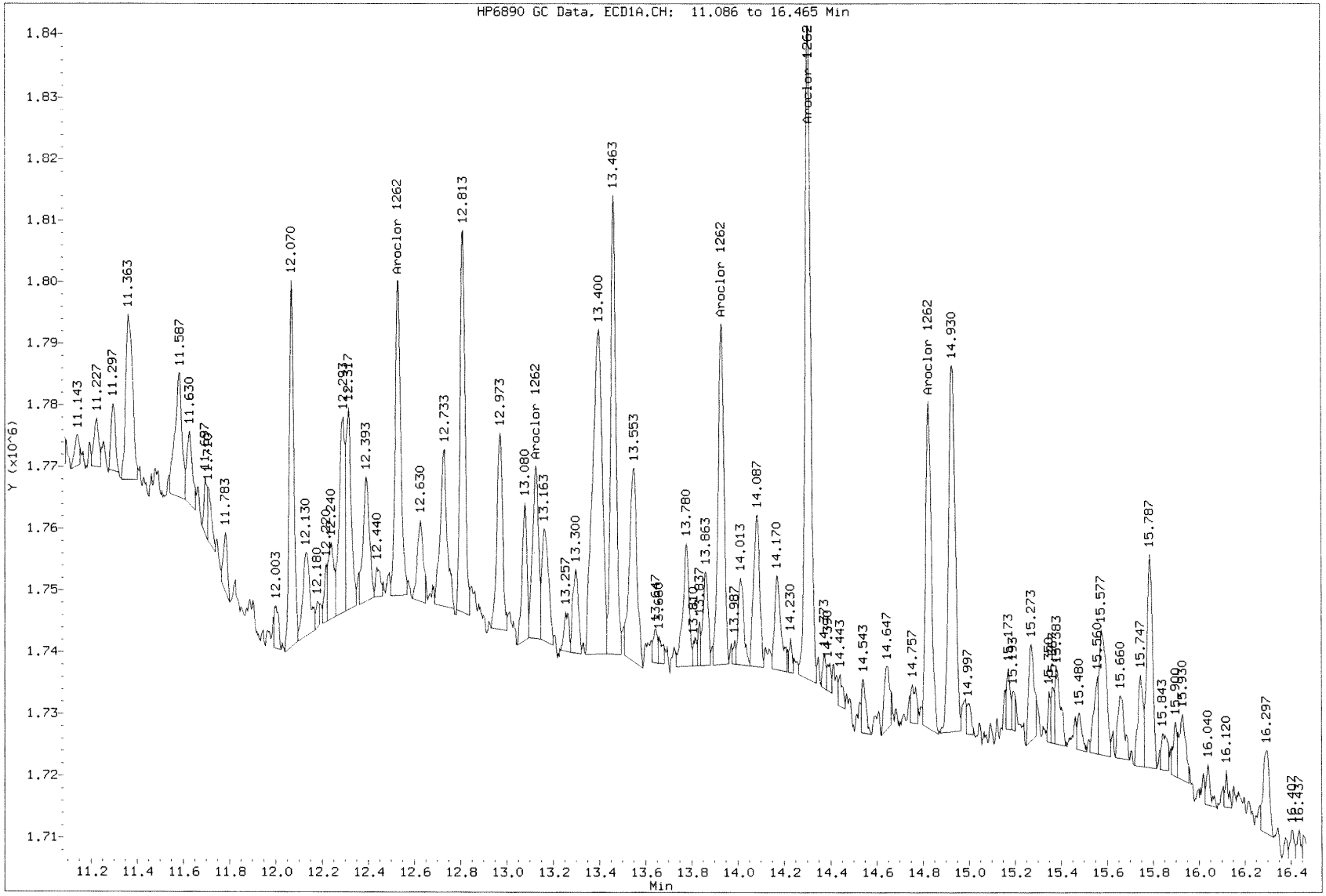
CMR 12/17/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F024.D
Injection Date: 07-DEC-2018 22:34
Instrument: GC27.i
Client Sample ID:

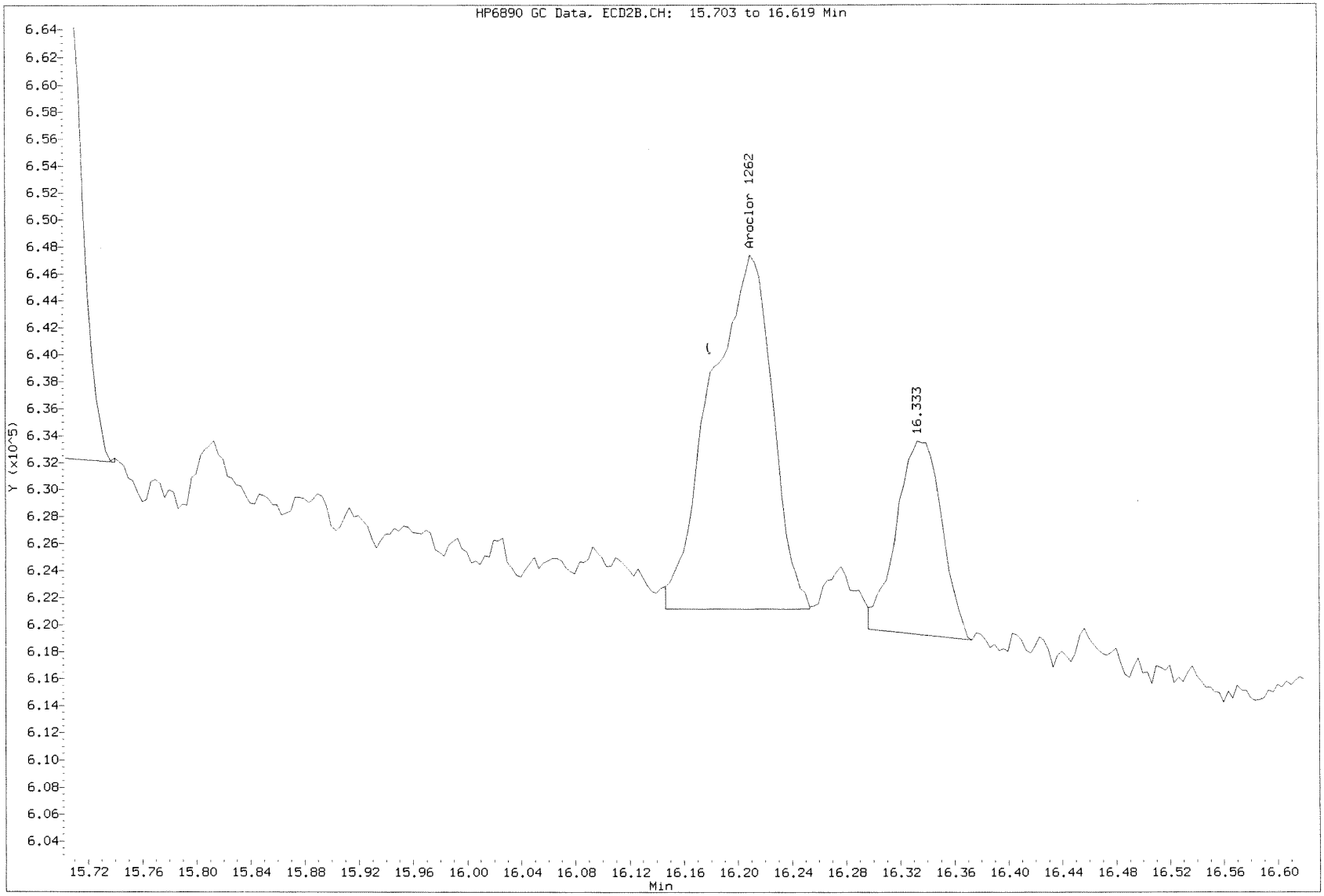
12/7/18

After baseline/shoulder MR 12/12/18



CWA 12/19/18 Basar MR 12/12/18

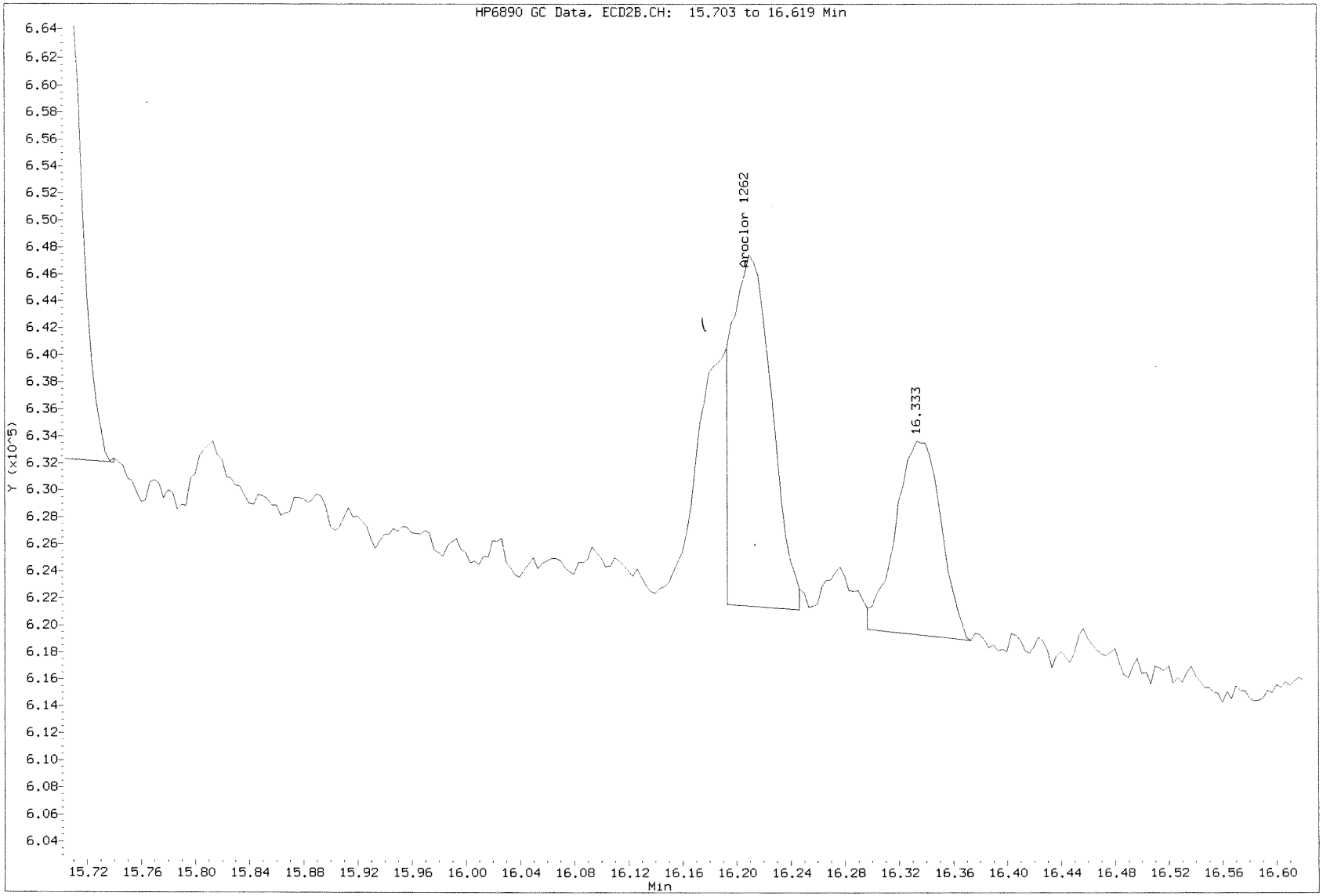
Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F024.D
Injection Date: 07-DEC-2018 22:34
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F024.D
Injection Date: 07-DEC-2018 22:34
Instrument: GC27.i
Client Sample ID:

LMA 12/17/18

Dexter
baseline/shoulder
MR 12/18/18

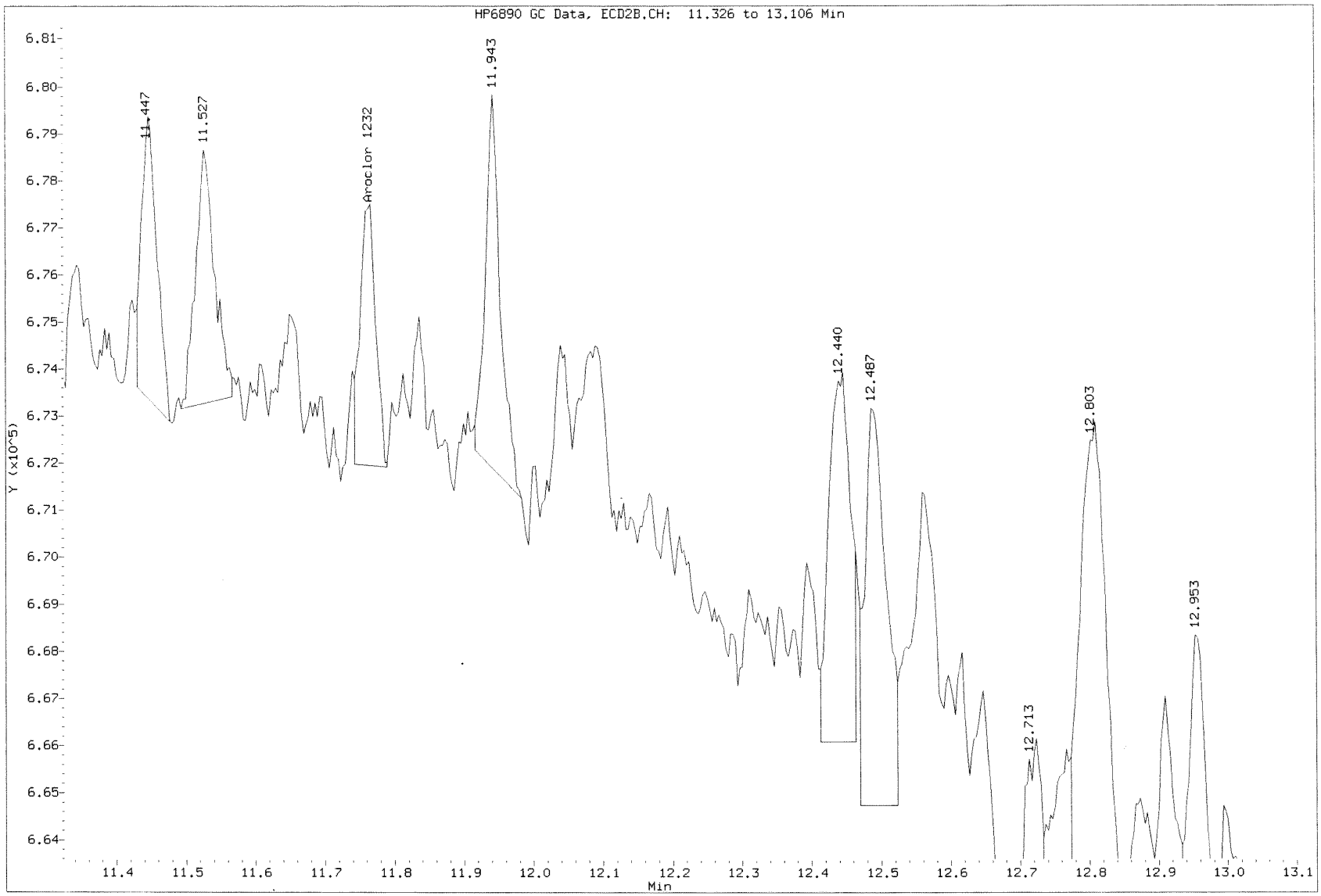


020832

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F024.D
Injection Date: 07-DEC-2018 22:34
Instrument: GC27.i
Client Sample ID:

12/17/18

12/18/18

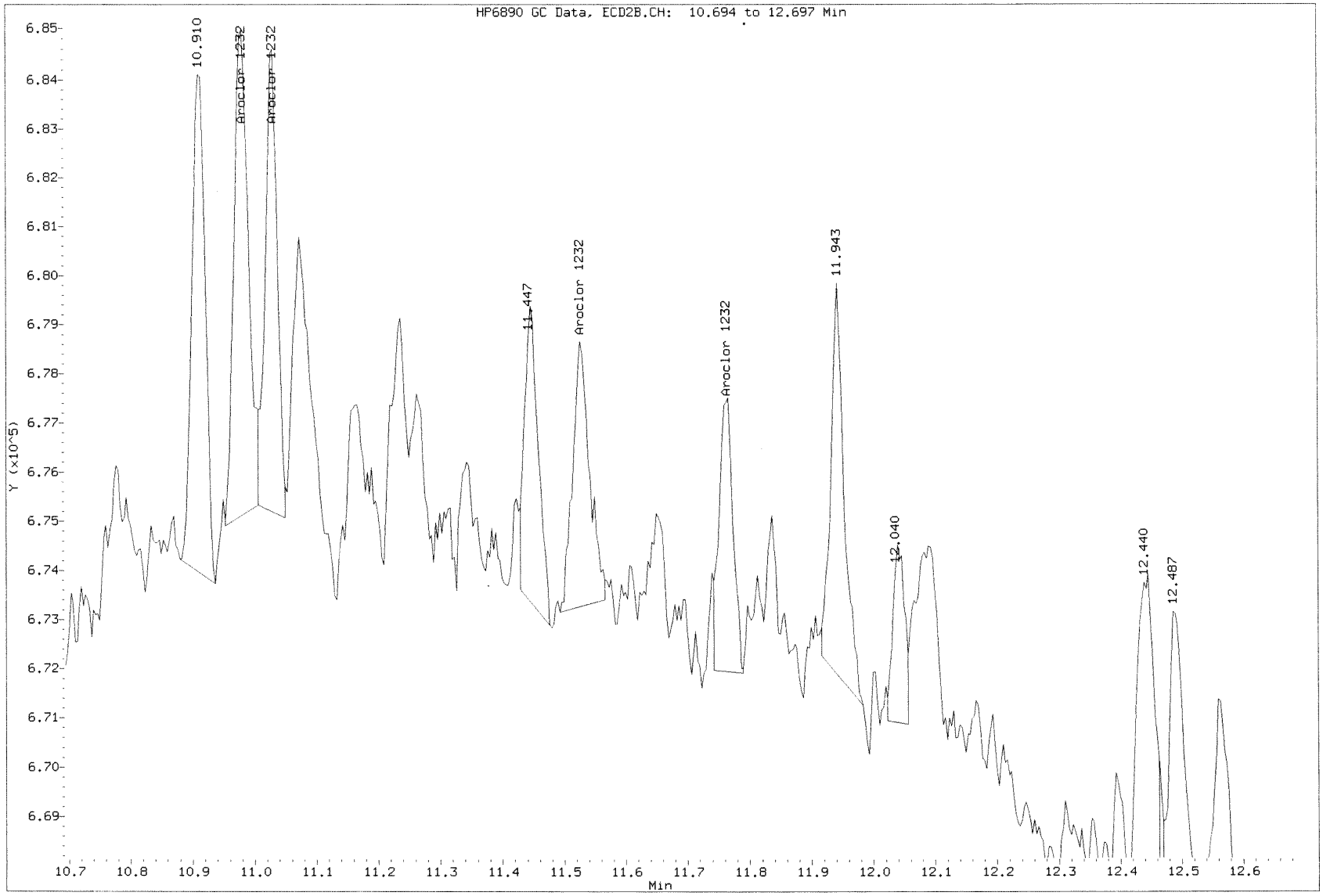


020833

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F024.D
Injection Date: 07-DEC-2018 22:34
Instrument: GC27.i
Client Sample ID:

UA 12/7/18

After baseline/shoulder
MR 12/12/18

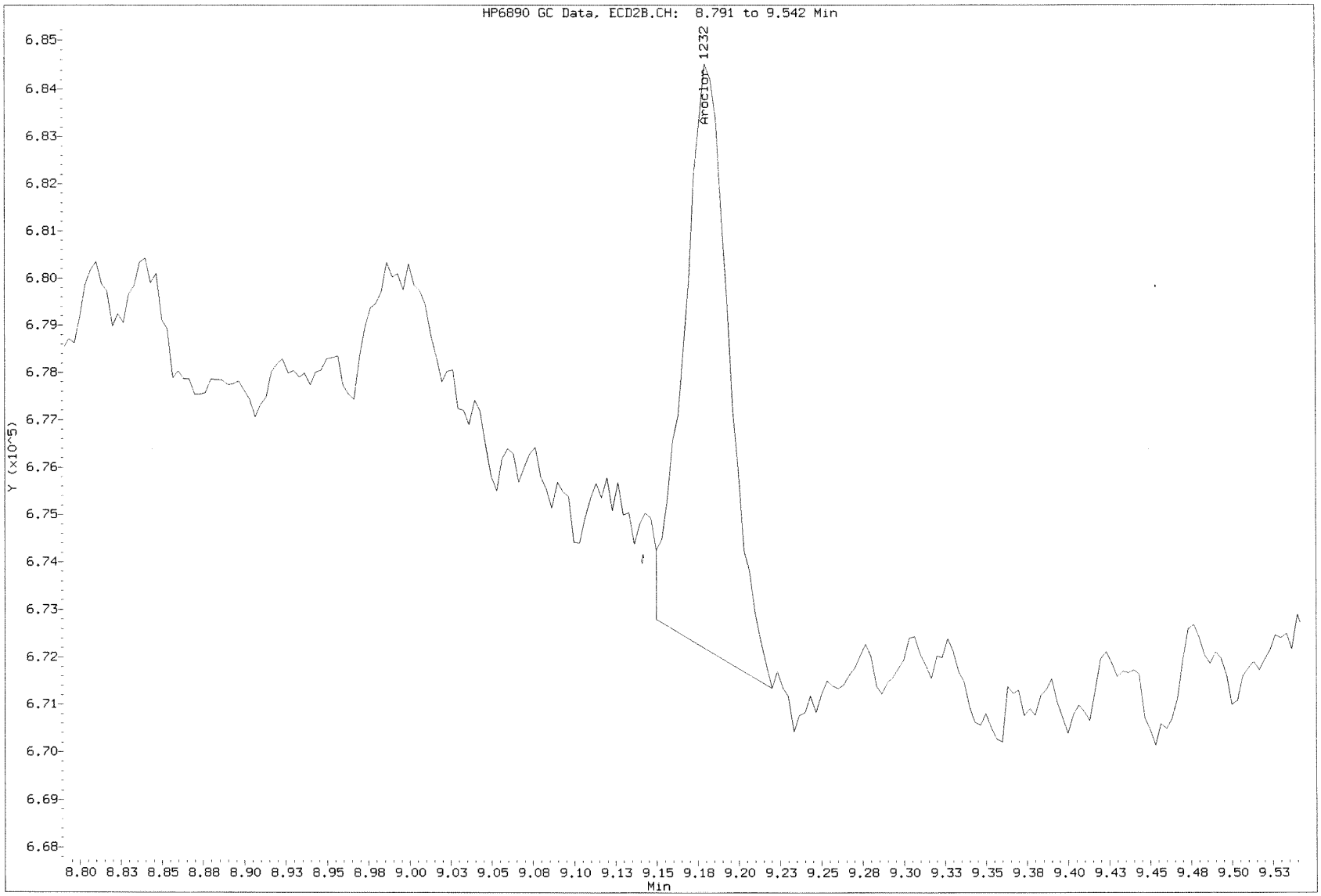


020834

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F024.D
Injection Date: 07-DEC-2018 22:34
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

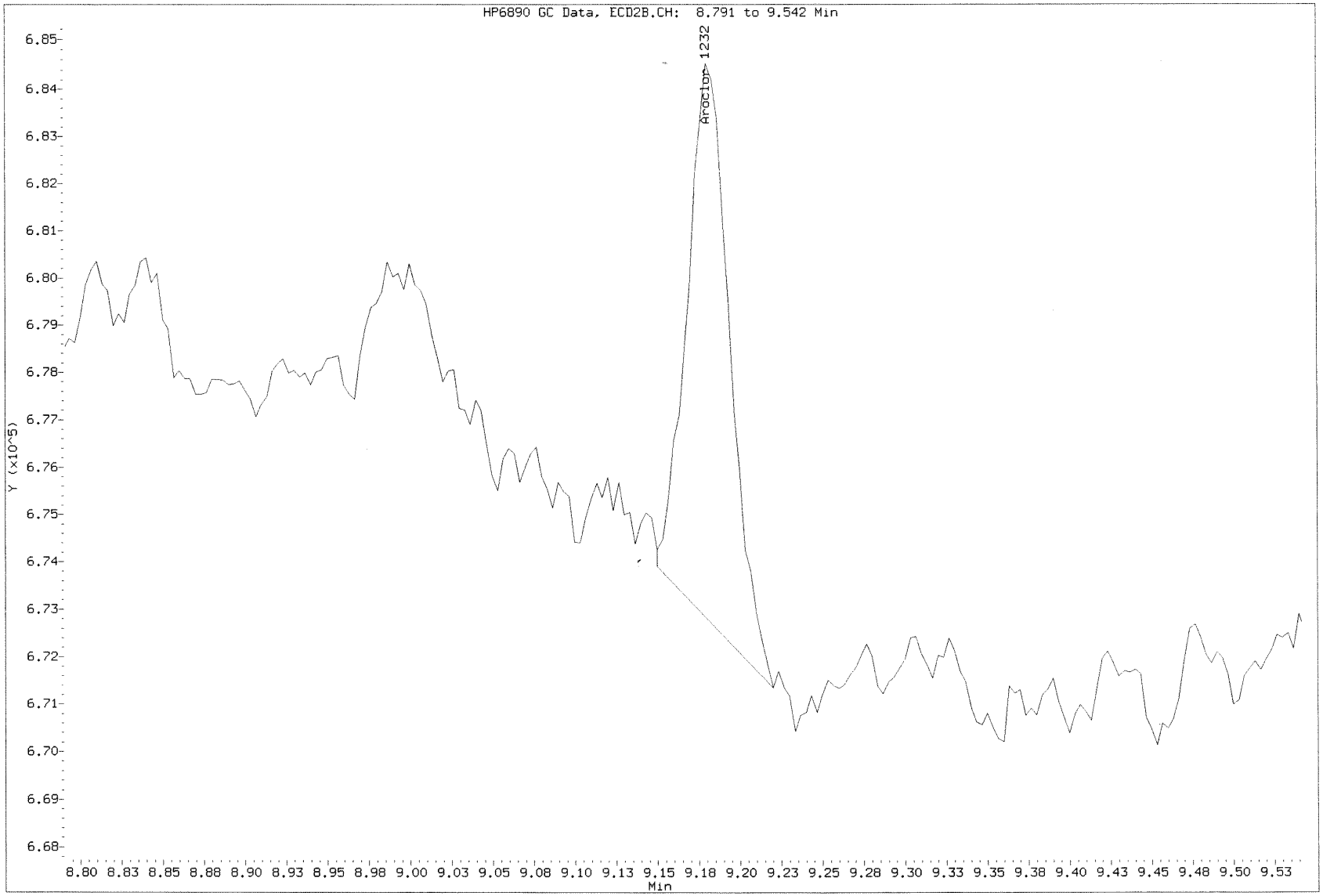
Before
MR 12/12/18



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F024.D
Injection Date: 07-DEC-2018 22:34
Instrument: GC27.i
Client Sample ID:

MA 12/17/18

After baseline/shoulder
MR 12/12/18



020836

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F025.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F025.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F025.D
Inj Date : 07-DEC-2018 23:06
Sample Info: 3262 2.0PPB PCB7-58A
Misc Info :
Cal Date : 12-DEC-2018 12:38
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

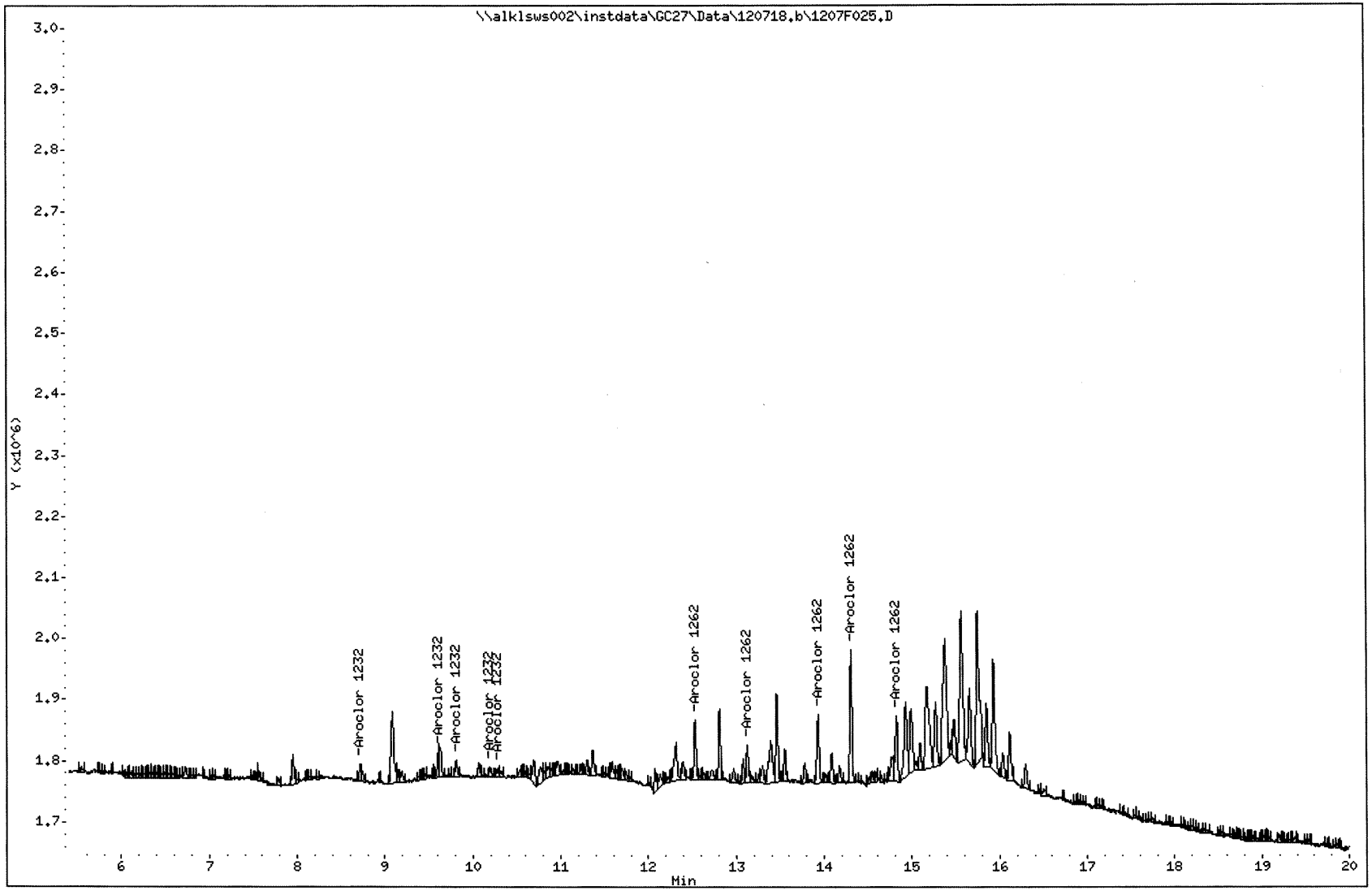
Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	8.718	9.182	43901	34527	2.04	2.19	80.00- 120.00	100.00
	9.612	10.979	63723	28922	2.59	2.22	91.85- 137.78	145.15
	9.812	11.029	44228	26659	2.05	1.98	82.49- 123.73	100.74
	10.195	11.529	27376	14668	2.03	2.10	52.60- 78.89	62.36
	10.278	11.762	22811	14950	2.10	2.10	42.83- 64.24	51.96
			Average of Peak Amounts =		2.16	2.12		
Aroclor 1262	12.532	13.722	154820	63570	2.22	2.17	80.00- 120.00	100.00
	13.128	14.805	104993	108055	2.17	2.29	58.60- 87.90	67.82
	13.932	15.175	196952	82014	2.14	2.29	115.16- 172.75	127.21
	14.305	16.209	350981	128160	2.06	2.41	222.16- 333.24	226.70
	14.825	17.215	198821	83318	2.40	2.55	97.91- 146.87	128.42
			Average of Peak Amounts =		2.20	2.34		

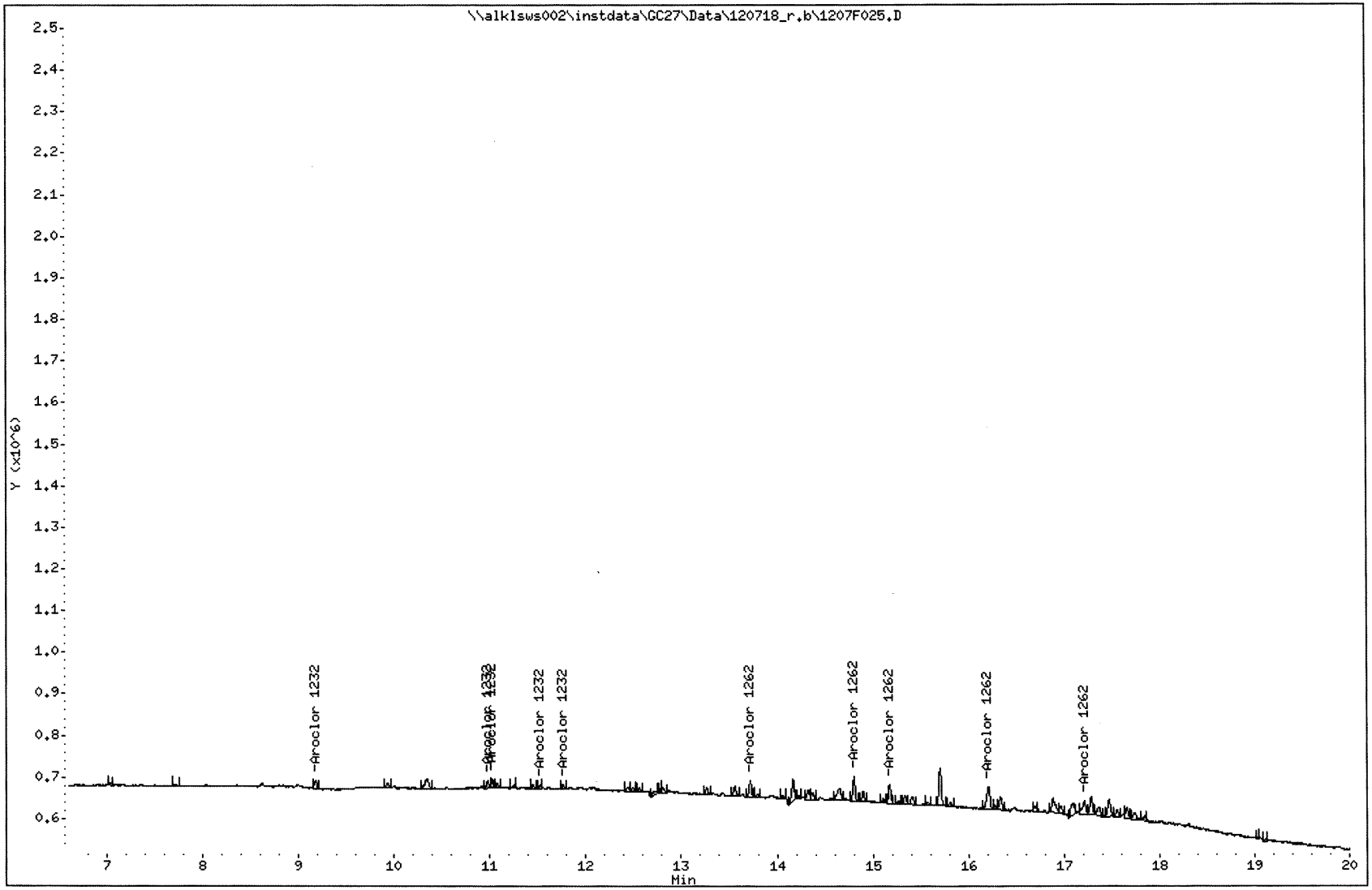
MR 12/13/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F025.D
Date : 07-DEC-2018 23:06
Client ID:
Sample Info: 3262 2.0PPB PCB7-58A

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F025.D
Date : 07-DEC-2018 23:06
Client ID:
Instrument: GC27.i
Sample Info: 3262 2.0PPB PCB7-58A
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32

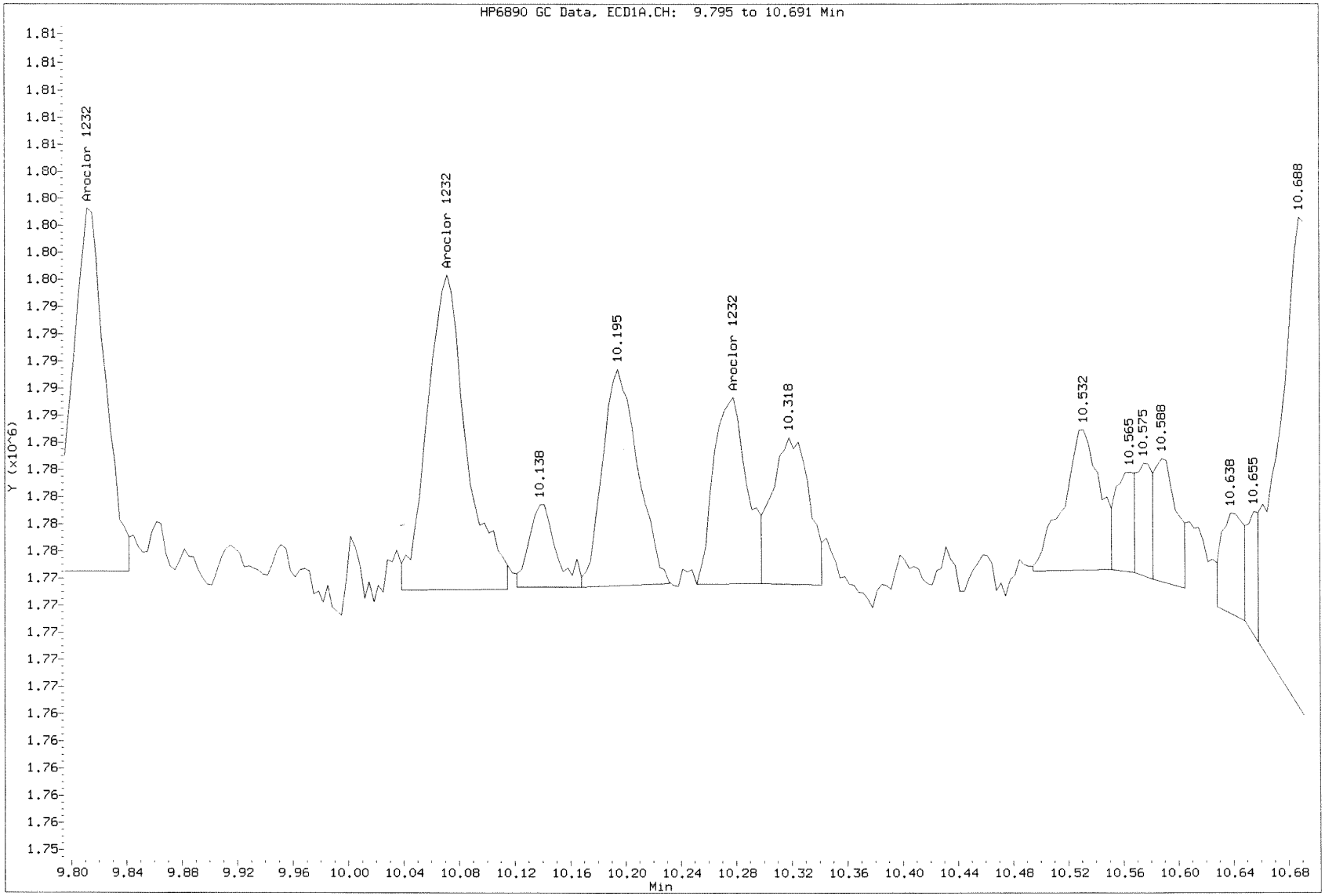


020839

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F025.D
Injection Date: 07-DEC-2018 23:06
Instrument: GC27.i
Client Sample ID:

UA 12/19/18

Before
MR 12/12/18



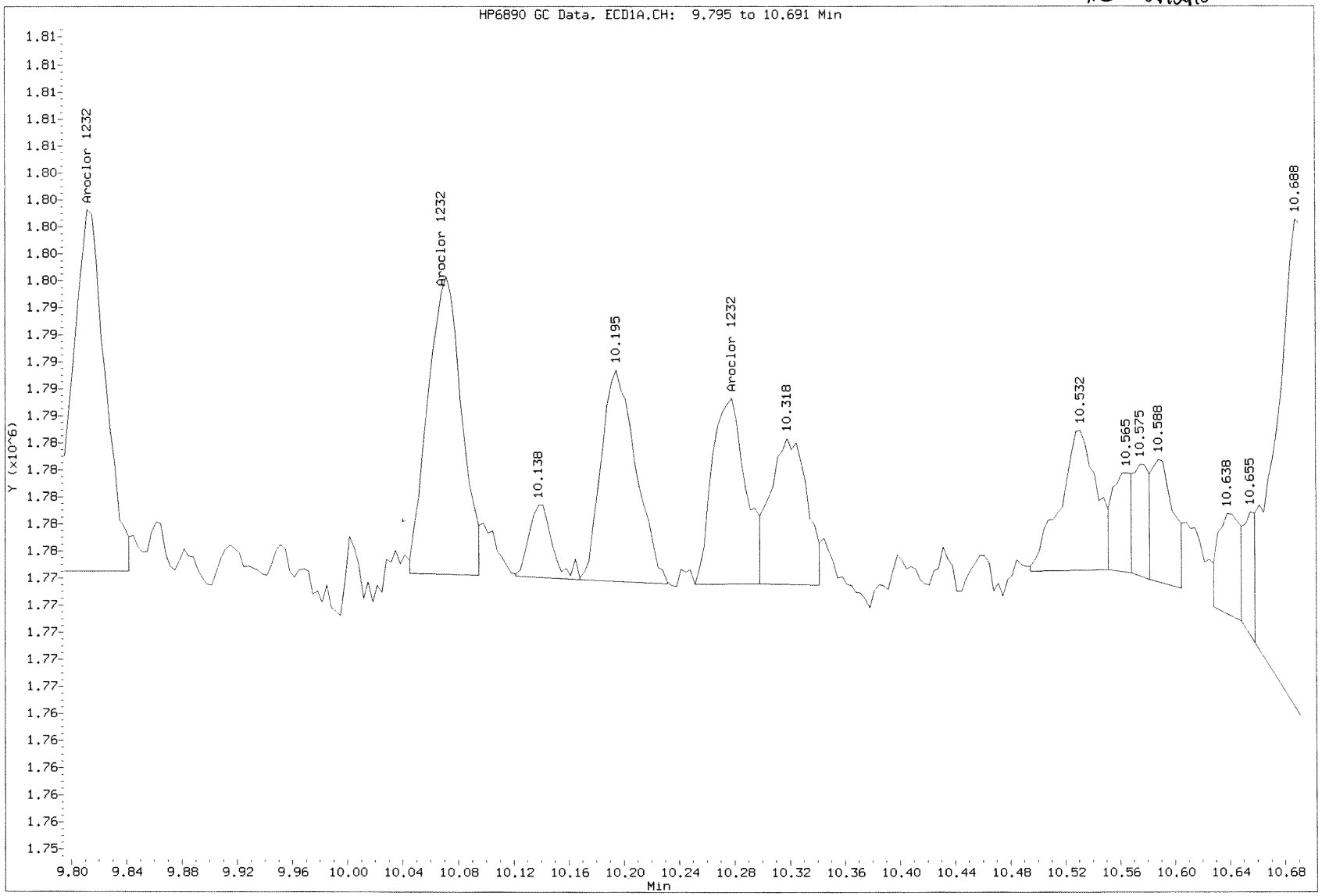
020840

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F025.D
Injection Date: 07-DEC-2018 23:06
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

After baseline/shoulder

MR 12/18/18

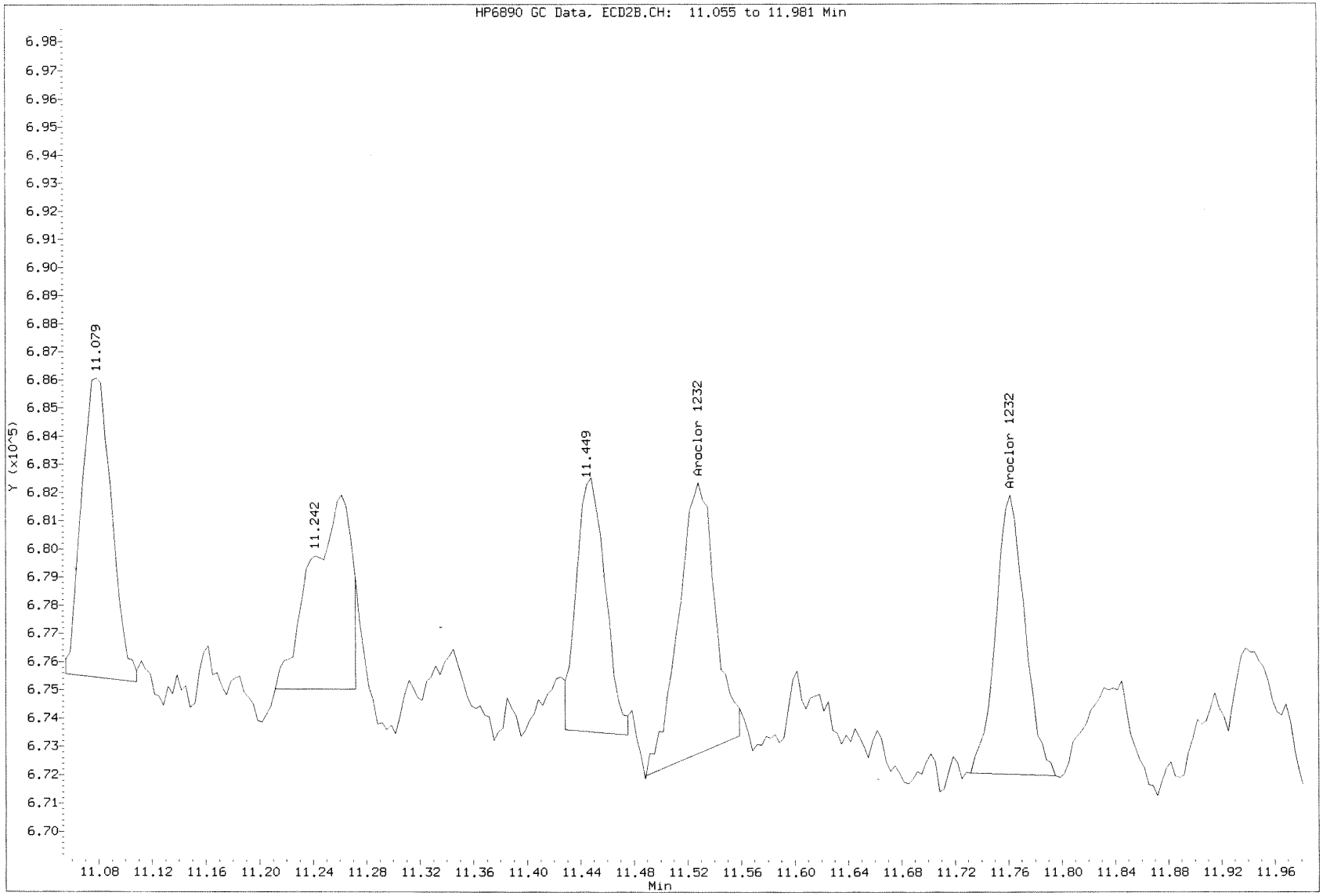


020841

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F025.D
Injection Date: 07-DEC-2018 23:06
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

Before
MR 12/12/18

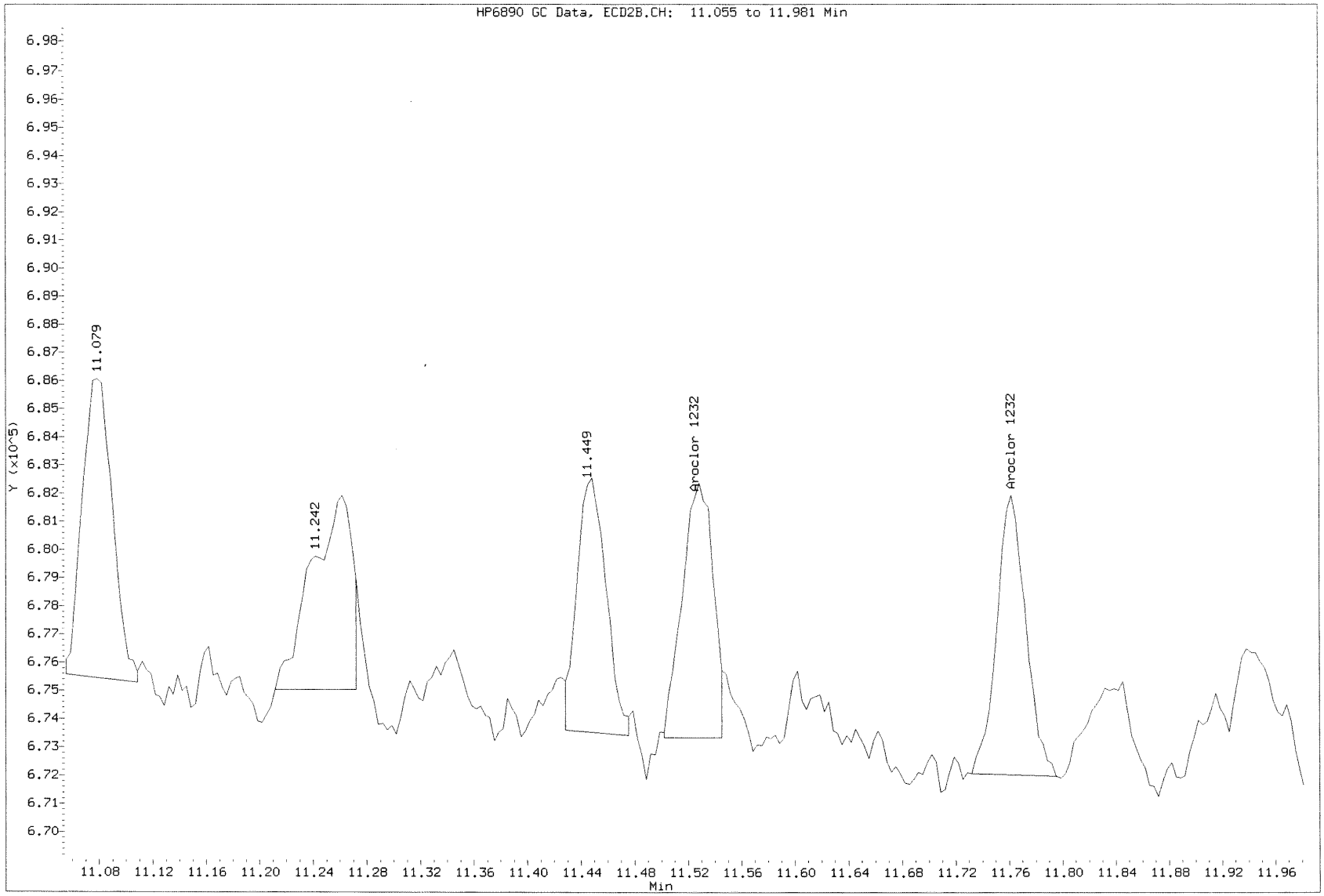


020842

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F025.D
Injection Date: 07-DEC-2018 23:06
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

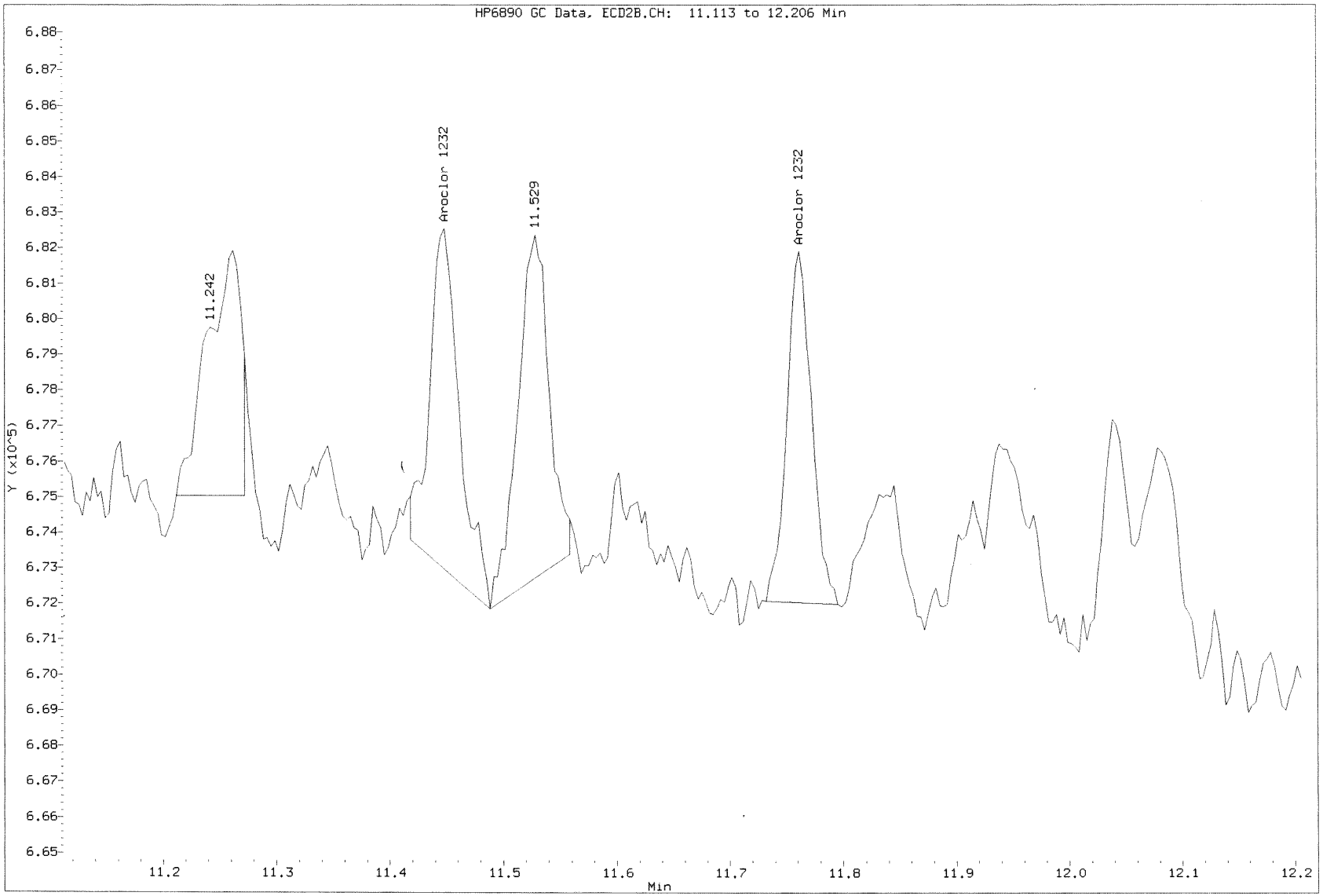
After baseline/shoulder
MR 12/12/18



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F025.D
Injection Date: 07-DEC-2018 23:06
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

Observe
MR 12/12/18

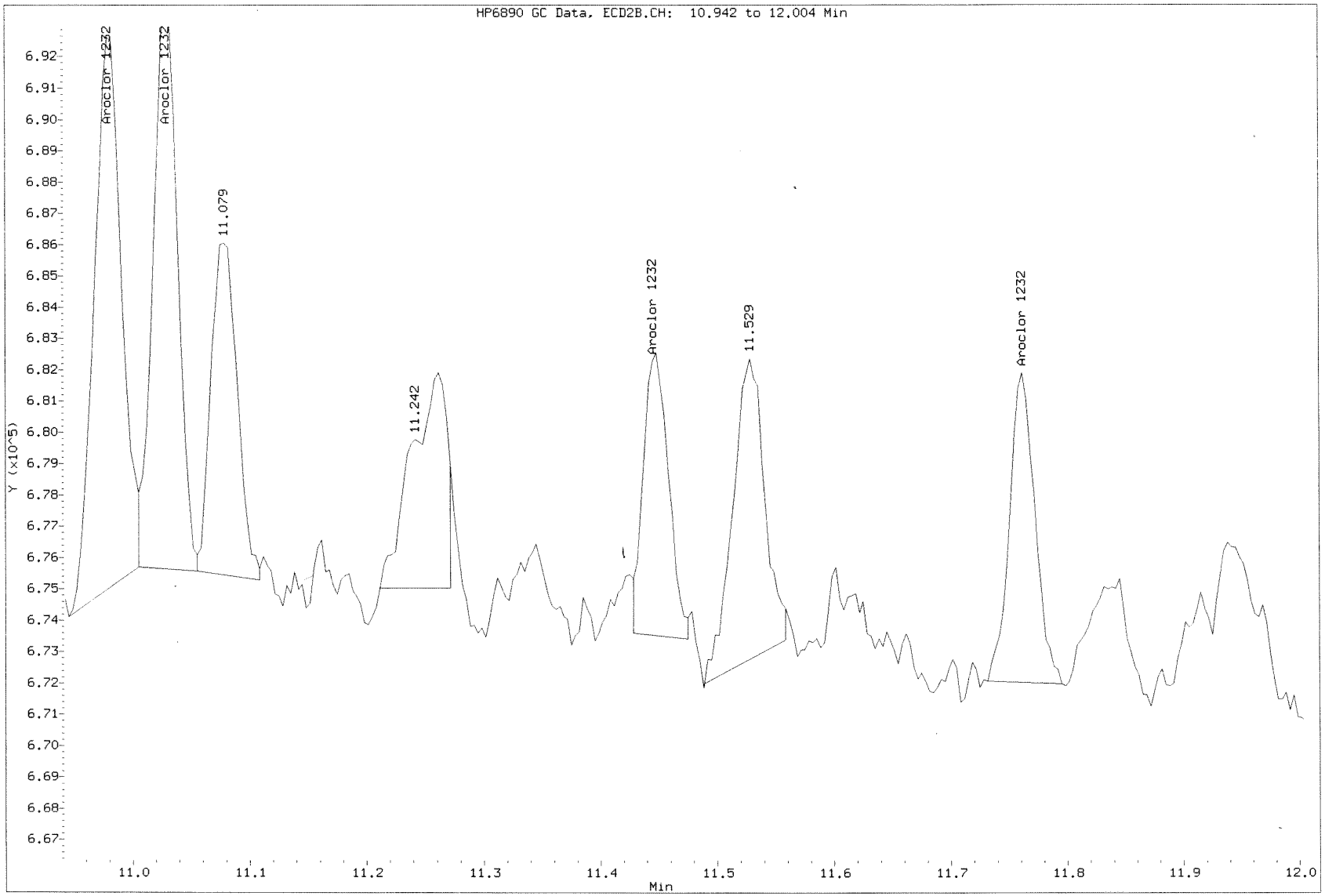


020844

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F025.D
Injection Date: 07-DEC-2018 23:06
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

~~After~~
baseline/shoulder
MR 12/12/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F026.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F026.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F026.D
Inj Date : 07-DEC-2018 23:37
Sample Info: 3262 5.0PPB PCB7-68B
Misc Info :
Cal Date : 12-DEC-2018 12:38
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	8.715	9.182	128781	73316	5.97	4.66	80.00- 120.00	100.00(M)
	9.611	10.982	135276	69323	5.50	5.31	91.85- 137.78	105.04(M)
	9.815	11.032	119502	71074	5.54	5.27	82.49- 123.73	92.79(M)
	10.195	11.528	70042	35721	5.18	5.12	52.60- 78.89	54.39(M)
	10.278	11.765	58013	37674	5.34	5.28	42.83- 64.24	45.05(M)
			Average of Peak Amounts =		5.51	5.13		
Aroclor 1262	12.531	13.722	379969	163043	5.45	5.55	80.00- 120.00	100.00
	13.128	14.802	262306	253111	5.41	5.37	58.60- 87.90	69.03
	13.931	15.175	493938	199021	5.37	5.56	115.16- 172.75	129.99
	14.305	16.212	916072	299342	5.36	5.63	222.16- 333.24	241.09
	14.825	17.215	425860	167037	5.13	5.10	97.91- 146.87	112.08
			Average of Peak Amounts =		5.34	5.44		

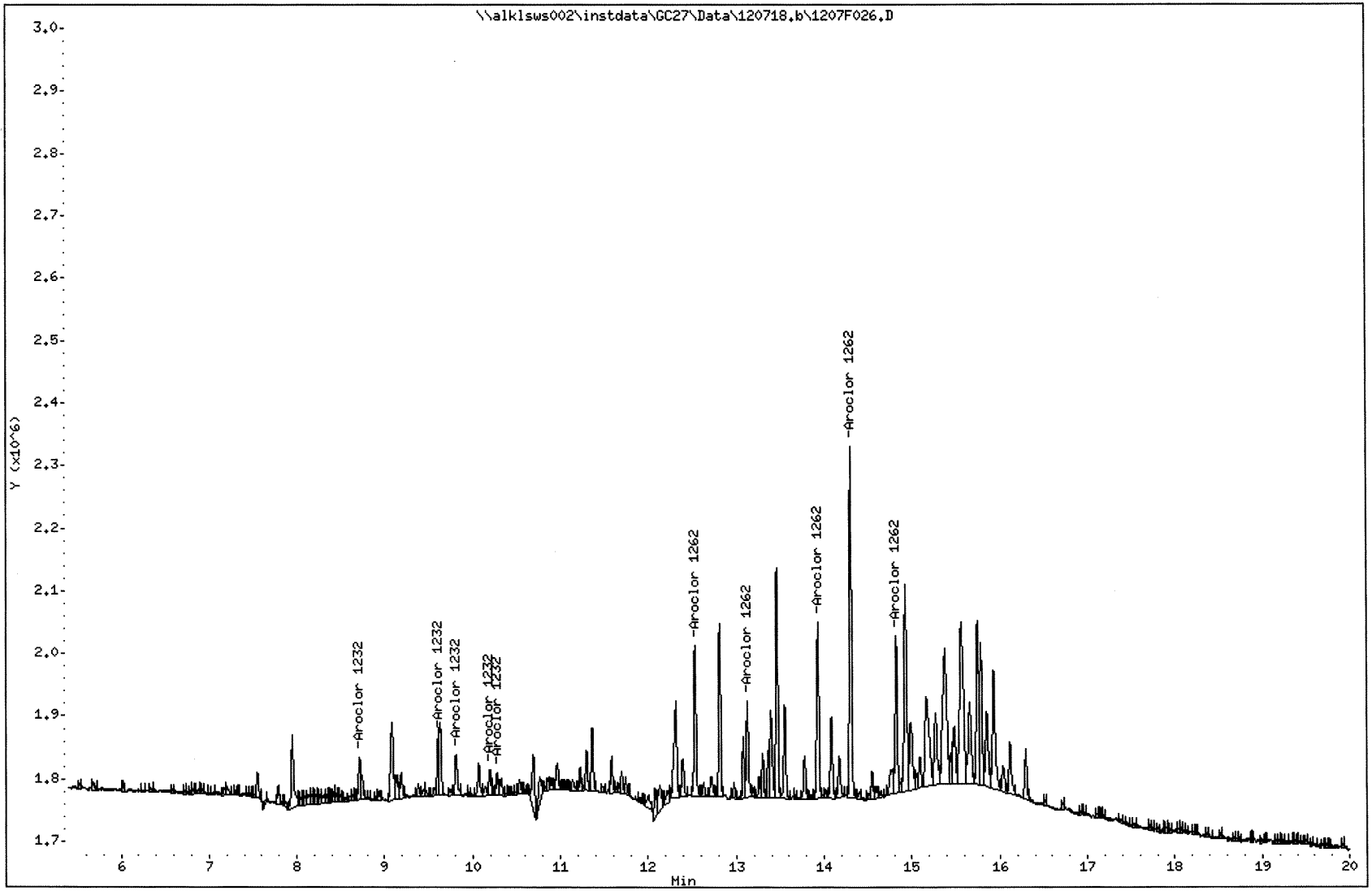
QC Flag Legend

M - Compound response manually integrated.

MR 12/13/18

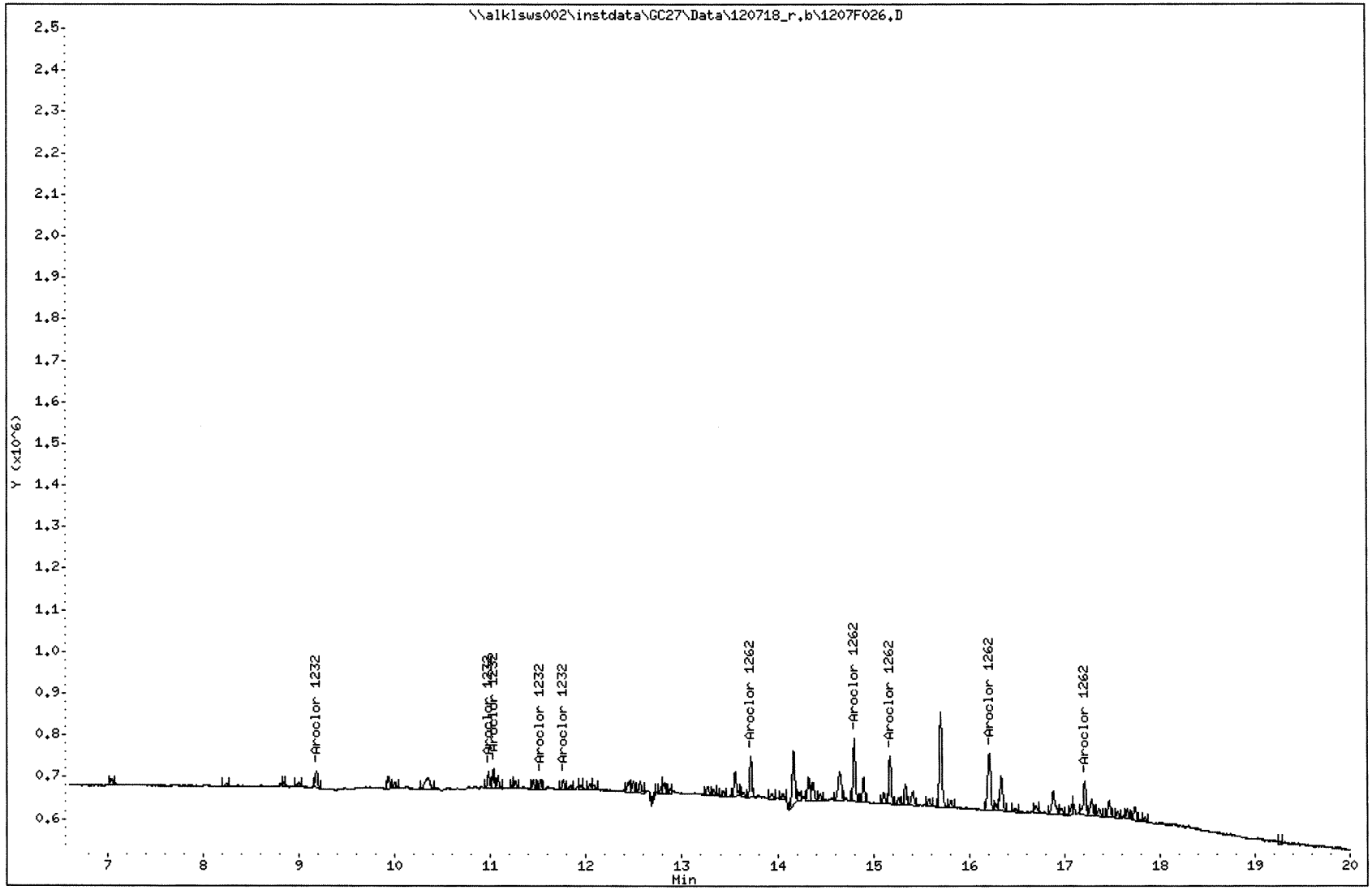
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F026.D
Date : 07-DEC-2018 23:37
Client ID:
Sample Info: 3262 5.0PPB PCB7-68B

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020847

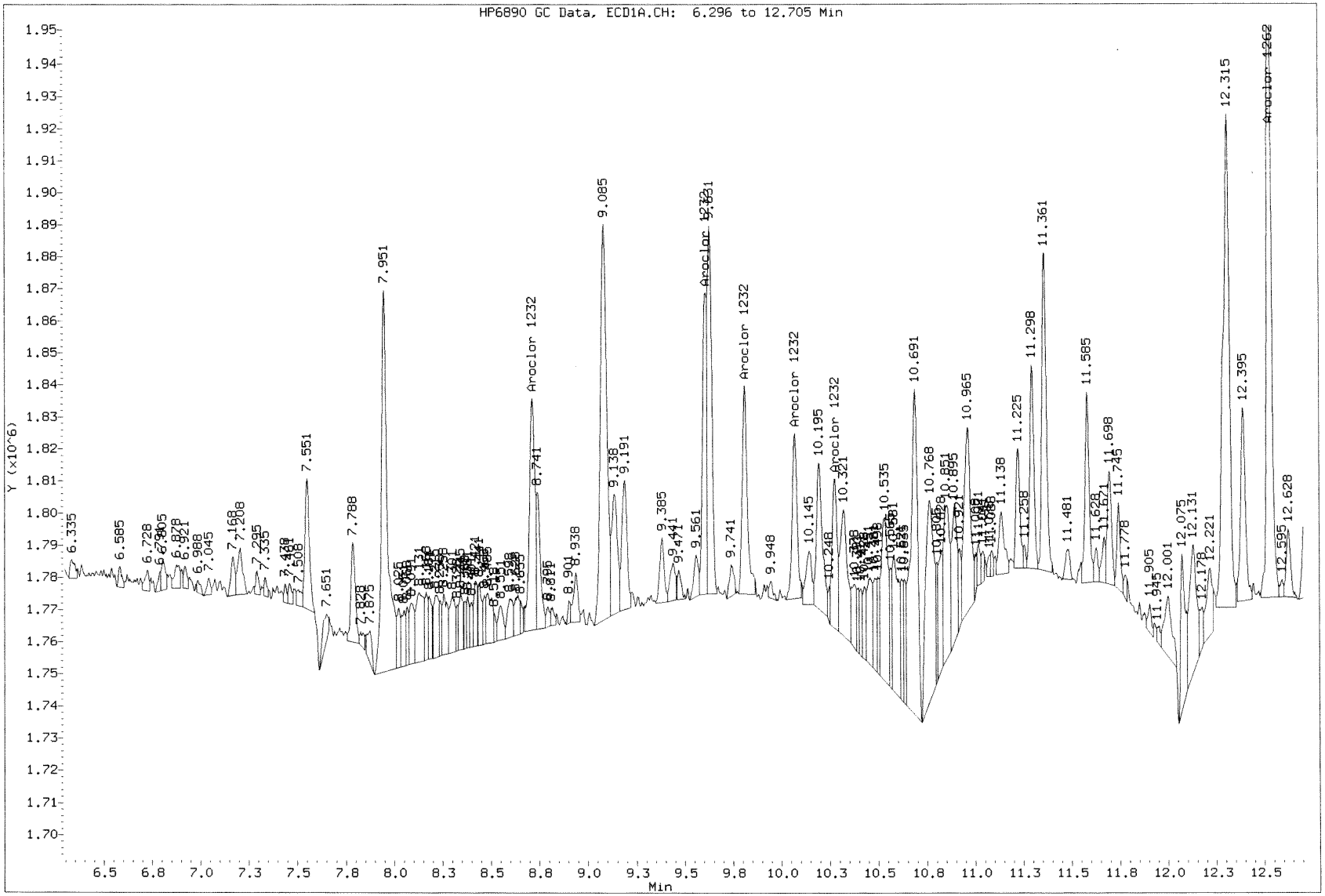
Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F026.D
Date : 07-DEC-2018 23:37
Client ID:
Instrument: GC27.i
Sample Info: 3262 5.0PPB PCB7-68B
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F026.D
Injection Date: 07-DEC-2018 23:37
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

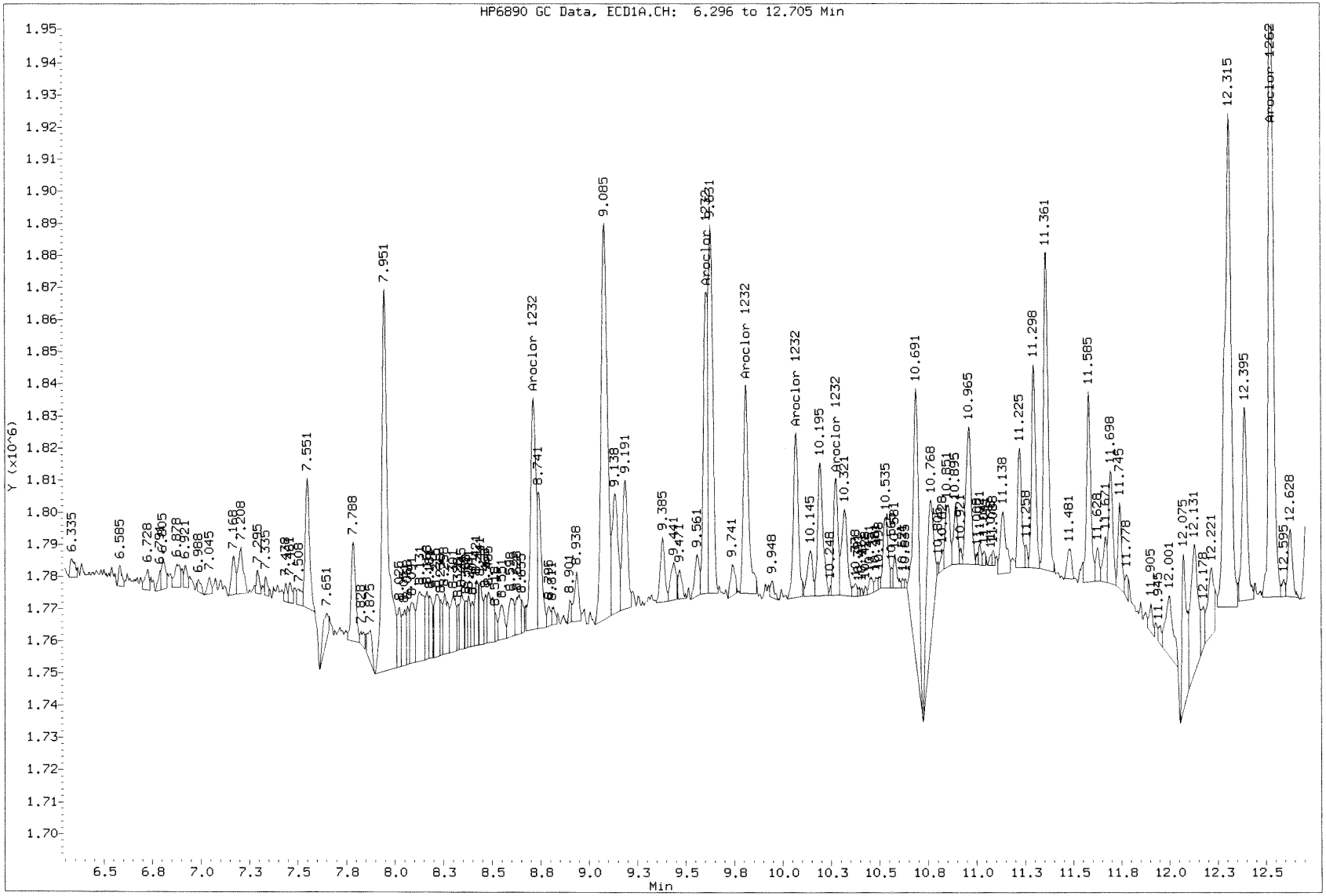
Before
MC 12/12/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F026.D
Injection Date: 07-DEC-2018 23:37
Instrument: GC27.i
Client Sample ID:

CMR 12/17/18

After baseline/shoulder MR 12/18/18

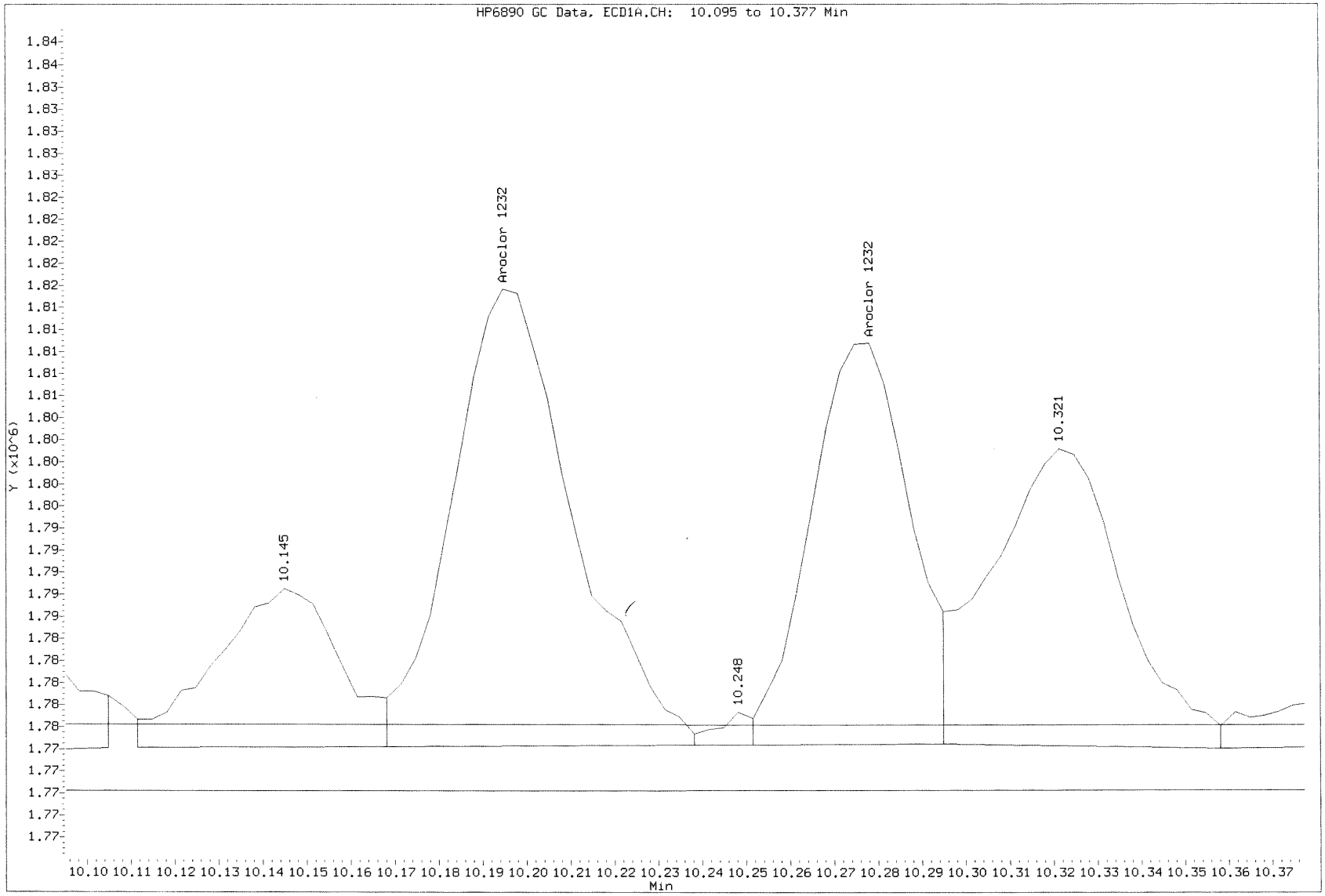


020850

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F026.D
Injection Date: 07-DEC-2018 23:37
Instrument: GC27.i
Client Sample ID:

WA 12/7/18

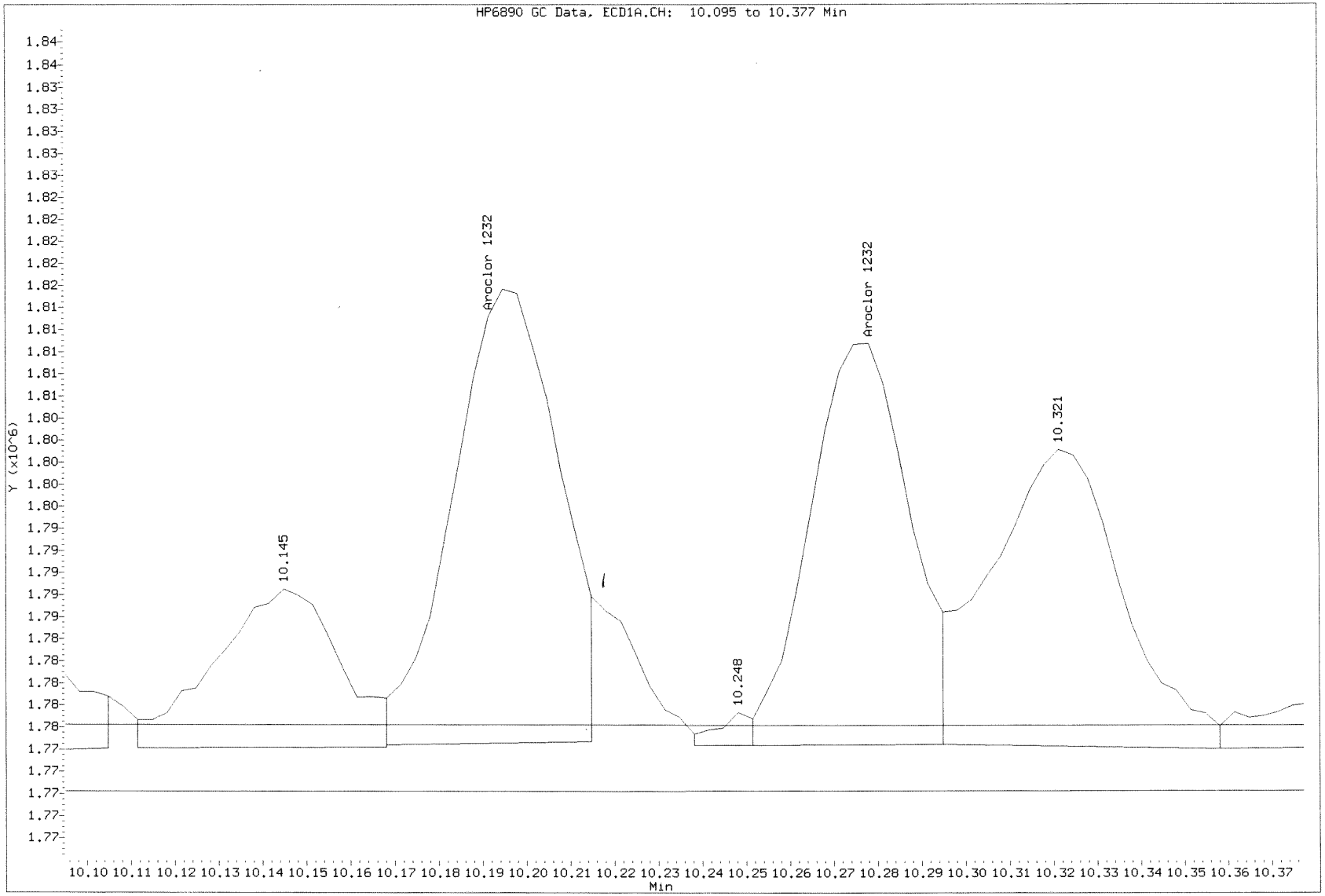
Before
MR 12/11/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F026.D
Injection Date: 07-DEC-2018 23:37
Instrument: GC27.i
Client Sample ID:

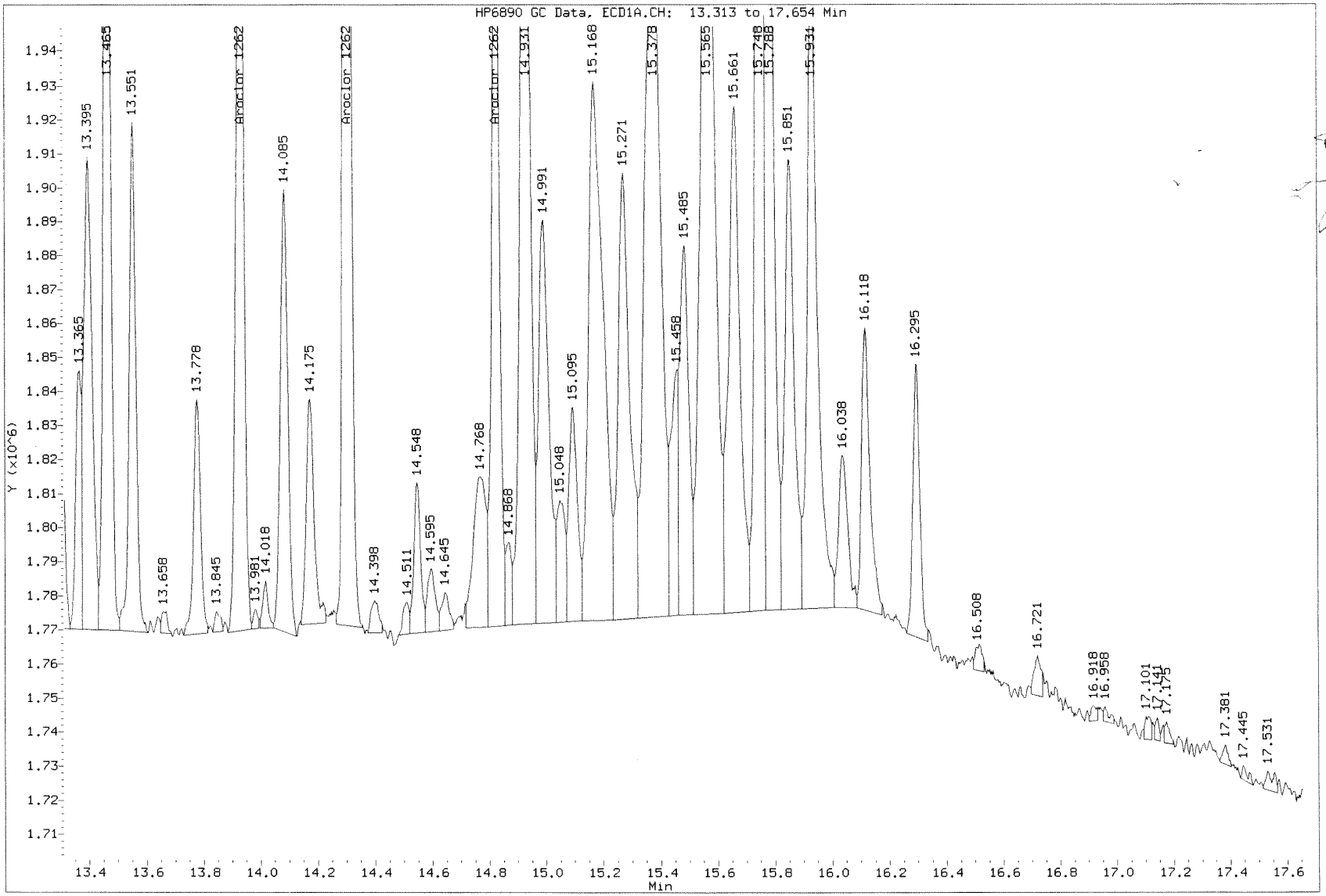
LWA 12/17/18

After baseline/shoulder mm 12/18/18



Before
MK 12/12/18

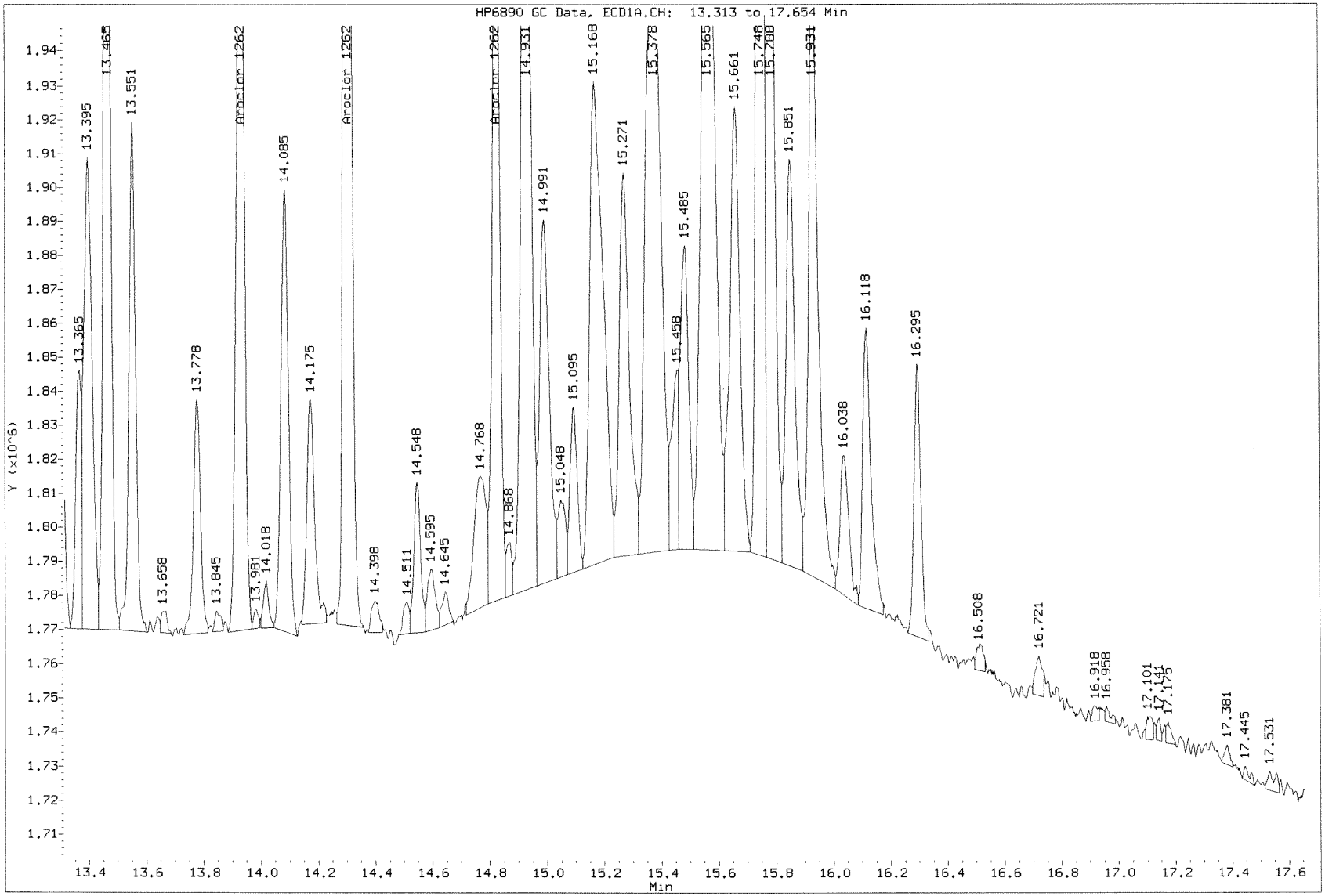
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F026.D
Injection Date: 07-DEC-2018 23:37
Instrument: GC27.i
Client Sample ID:



020853

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F026.D
Injection Date: 07-DEC-2018 23:37
Instrument: GC27.i
Client Sample ID:

After baseline/shoulder
MC 12/12/18

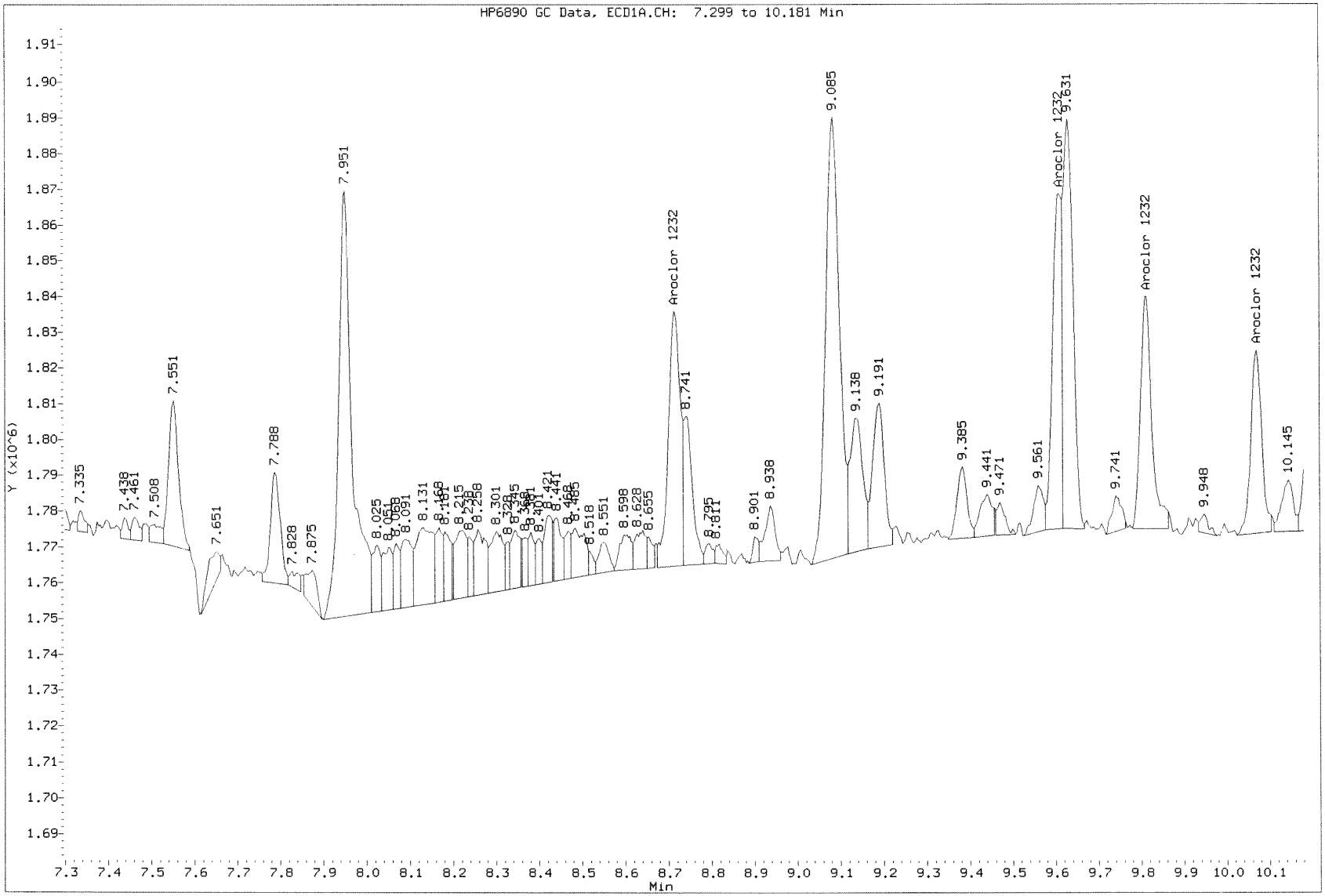


020854

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F026.D
Injection Date: 07-DEC-2018 23:37
Instrument: GC27.i
Client Sample ID:

WA 12/17/18

Bears MR 12/13/18

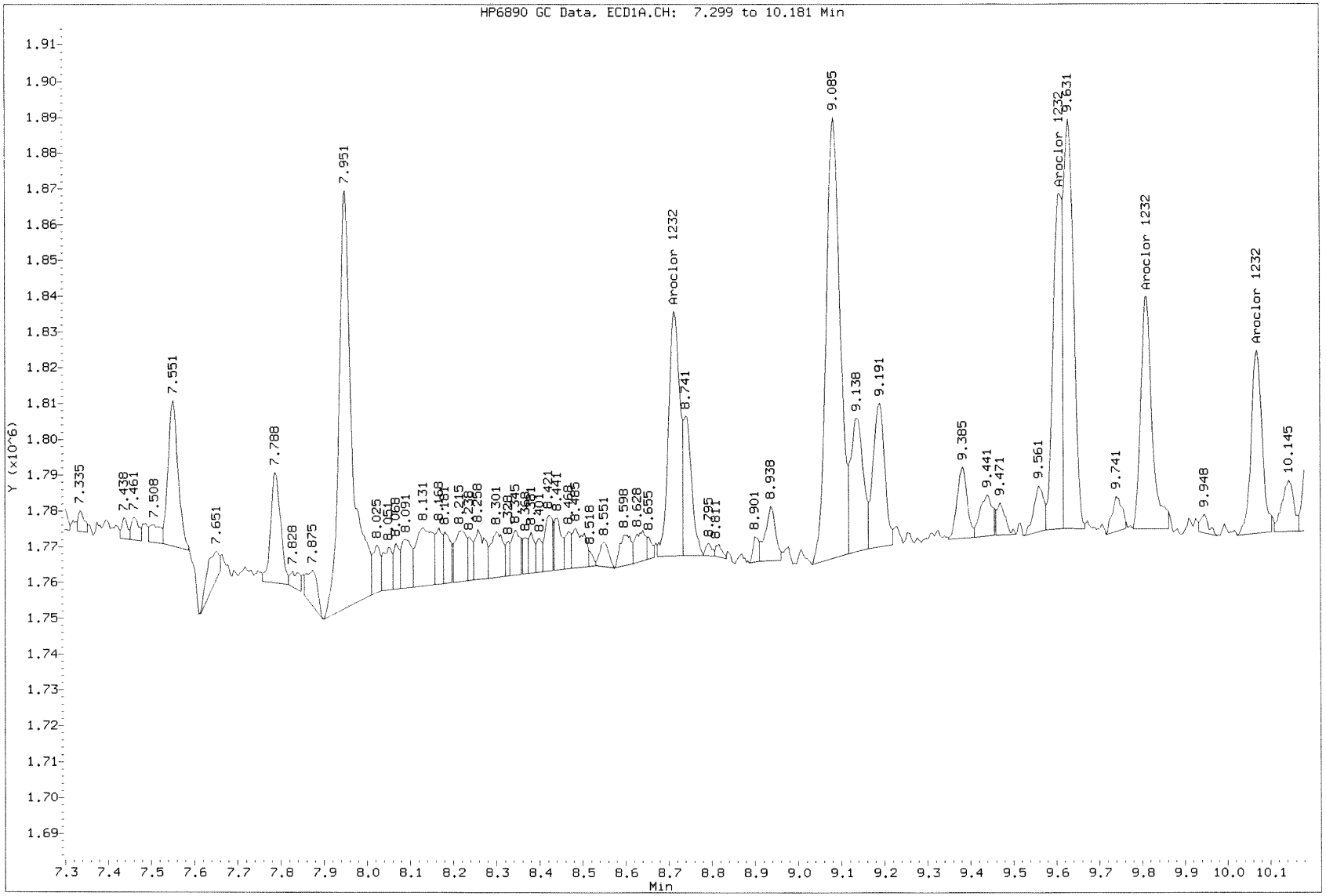


020855

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F026.D
Injection Date: 07-DEC-2018 23:37
Instrument: GC27.i
Client Sample ID:

12/17/18

After baseline mL 12/12/18



020856

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F027.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F027.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F027.D
Inj Date : 08-DEC-2018 00:08
Sample Info: 3262 10PPB PCB7-68C
Misc Info :
Cal Date : 12-DEC-2018 12:38
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	8.713	9.183	232641	152622	10.8	9.69	80.00- 120.00	100.00(M)
	9.613	10.979	241797	132313	9.84	10.1	91.85- 137.78	103.94(M)
	9.813	11.029	224536	142081	10.4	10.5	82.49- 123.73	96.52(M)
	10.196	11.529	140488	69183	10.4	9.91	52.60- 78.89	60.39(M)
	10.276	11.763	108046	67632	9.95	9.48	42.83- 64.24	46.44(M)
			Average of Peak Amounts =		10.3	9.94		
Aroclor 1262	12.533	13.723	693263	310906	9.95	10.6	80.00- 120.00	100.00
	13.126	14.803	521800	494872	10.8	10.5	58.60- 87.90	75.27
	13.929	15.173	945604	385118	10.3	10.8	115.16- 172.75	136.40
	14.306	16.213	1771723	566414	10.4	10.7	222.16- 333.24	255.56
	14.826	17.213	759848	298217	9.16	9.11	97.91- 146.87	109.60
			Average of Peak Amounts =		10.1	10.3		

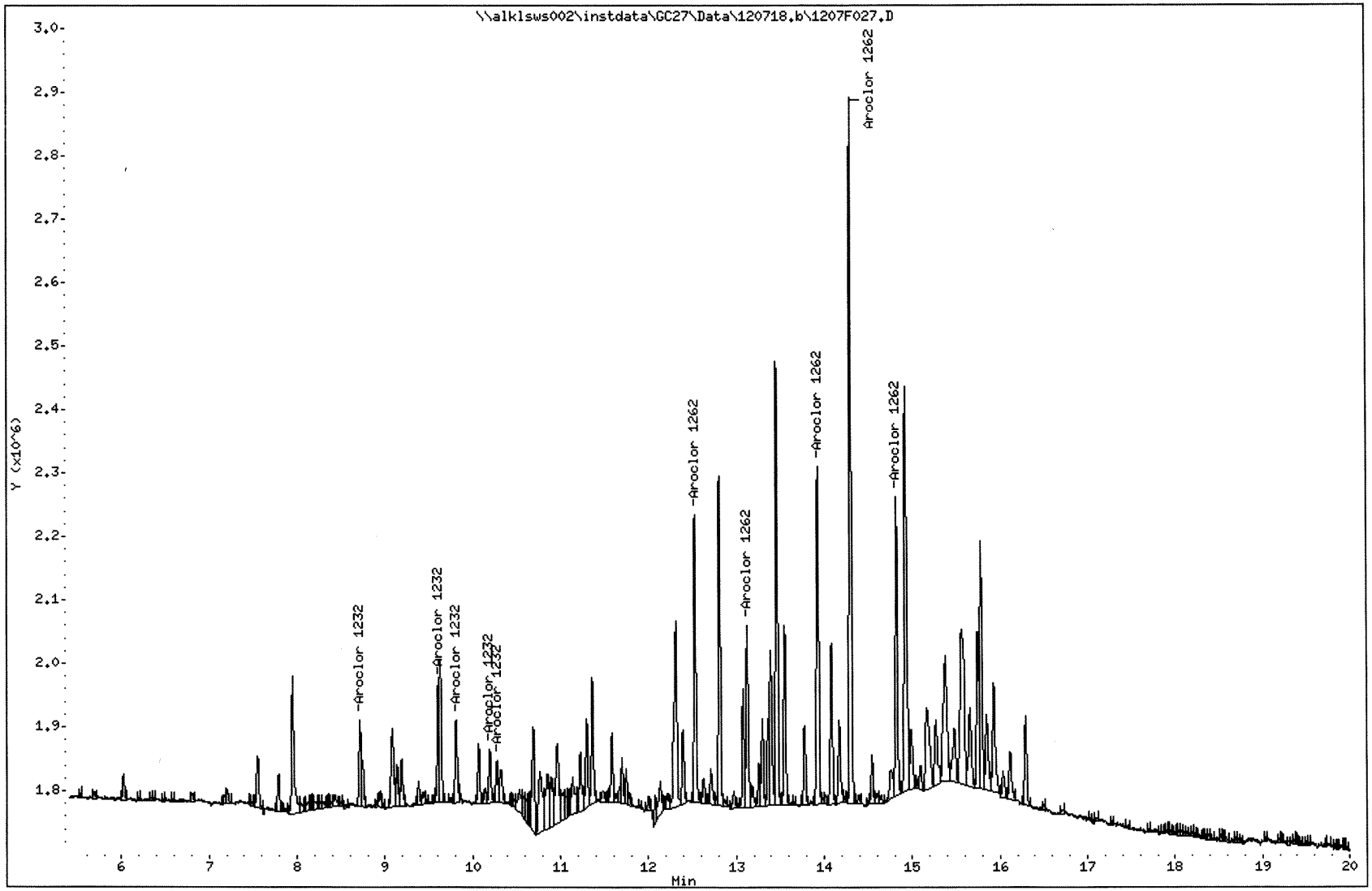
QC Flag Legend

M - Compound response manually integrated.

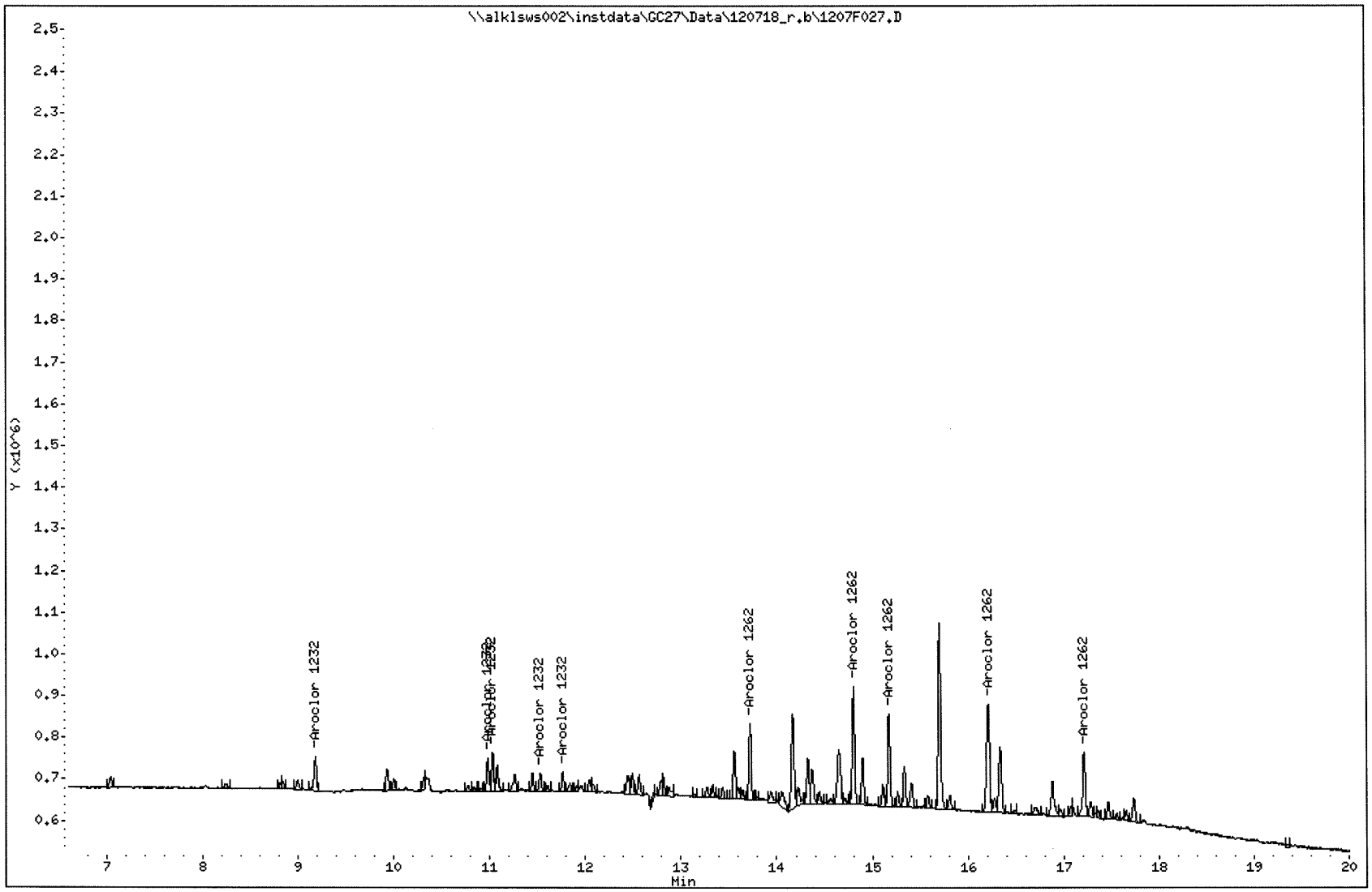
MC 12/13/18

020857

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F027.D
Date : 08-DEC-2018 00:08
Client ID:
Instrument: GC27.i
Sample Info: 3262 10PPB PCB7-68C
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



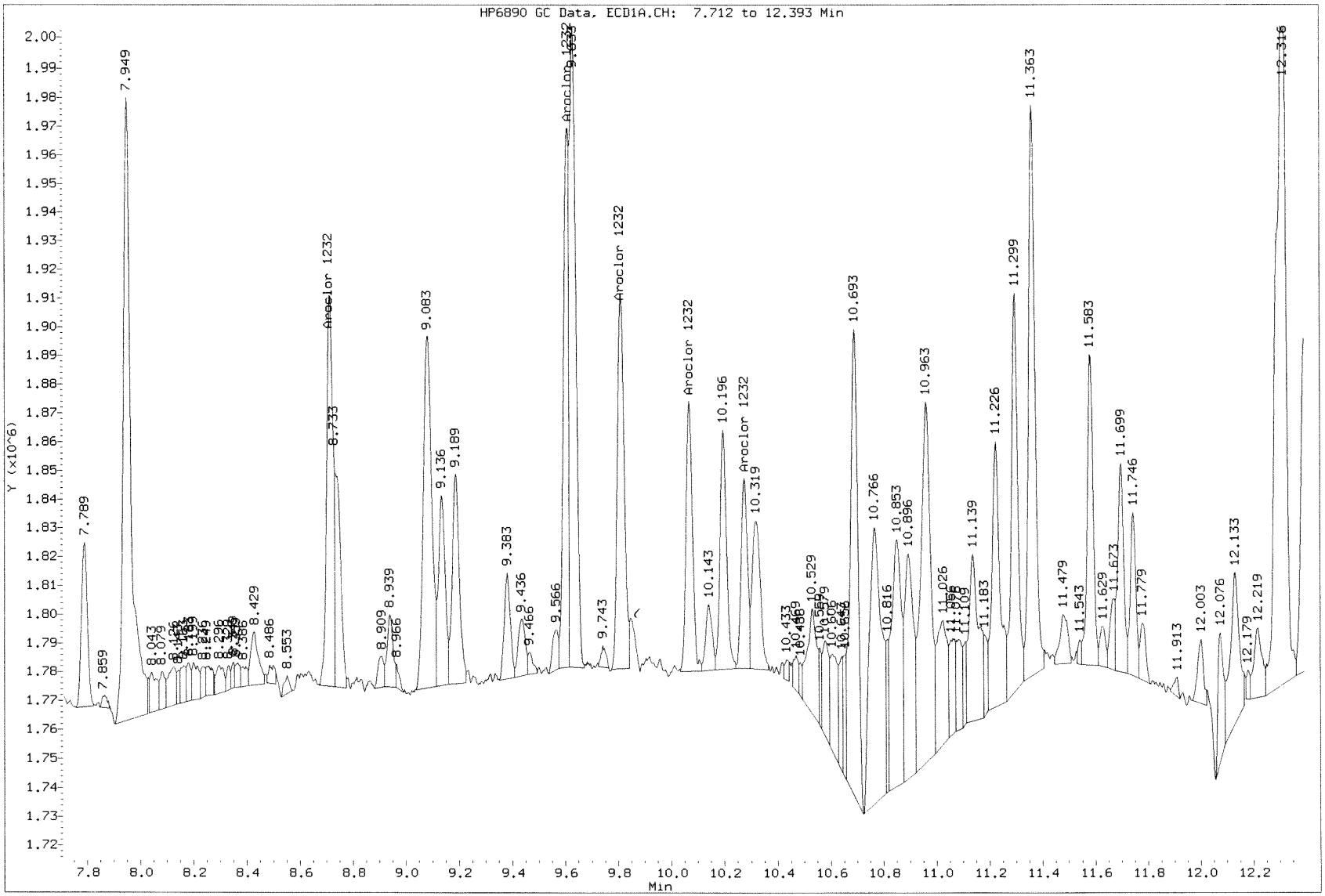
Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F027.D
Date : 08-DEC-2018 00:08
Client ID:
Instrument: GC27.i
Sample Info: 3262 10PPB PCB7-68C
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F027.D
Injection Date: 08-DEC-2018 00:08
Instrument: GC27.i
Client Sample ID:

AM 12/17/18

Asher
baseline/shoulder

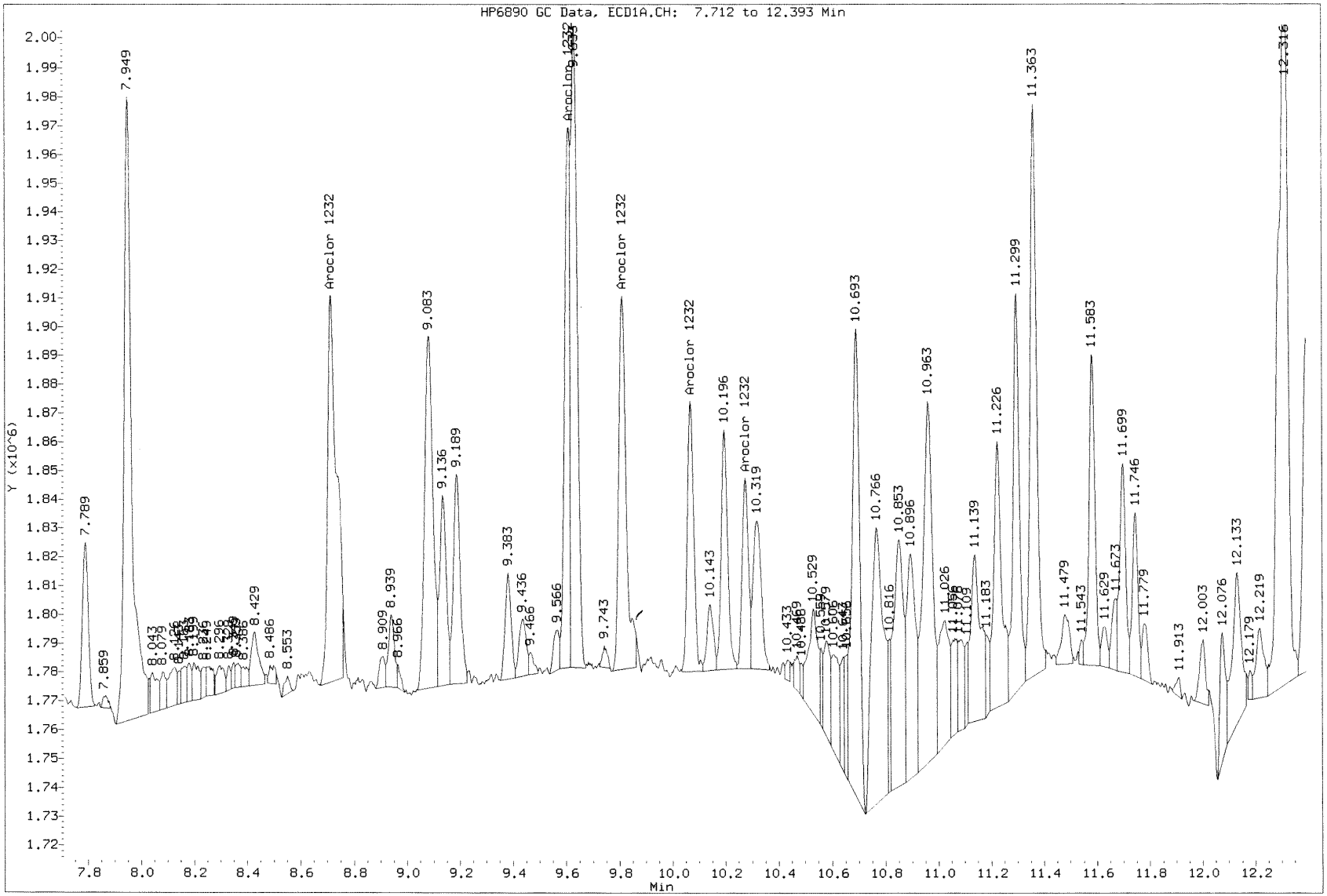


020860

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F027.D
Injection Date: 08-DEC-2018 00:08
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

Before
MR 12/18/18



020861

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F028.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F028.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F028.D
Inj Date : 08-DEC-2018 00:40
Sample Info: 3262 20PPB PCB7-58D
Misc Info :
Cal Date : 12-DEC-2018 12:38
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	8.715	9.182	452162	318281	21.0	20.2	80.00- 120.00	100.00
	9.608	10.979	513669	267220	20.9	20.5	91.85- 137.78	113.60
	9.812	11.029	437393	286569	20.3	21.3	82.49- 123.73	96.73
	10.195	11.529	279265	136787	20.7	19.6	52.60- 78.89	61.76
	10.275	11.762	212951	139923	19.6	19.6	42.83- 64.24	47.10
			Average of Peak Amounts =		20.5	20.2		
Aroclor 1262	12.532	13.722	1383750	608113	19.9	20.7	80.00- 120.00	100.00
	13.128	14.802	996621	975888	20.6	20.7	58.60- 87.90	72.02
	13.932	15.172	1920062	750195	20.9	21.0	115.16- 172.75	138.76
	14.305	16.212	3583915	1107580	21.0	20.8	222.16- 333.24	259.00
	14.825	17.215	1727170	753453	20.8	23.0	97.91- 146.87	124.82
			Average of Peak Amounts =		20.6	21.2		

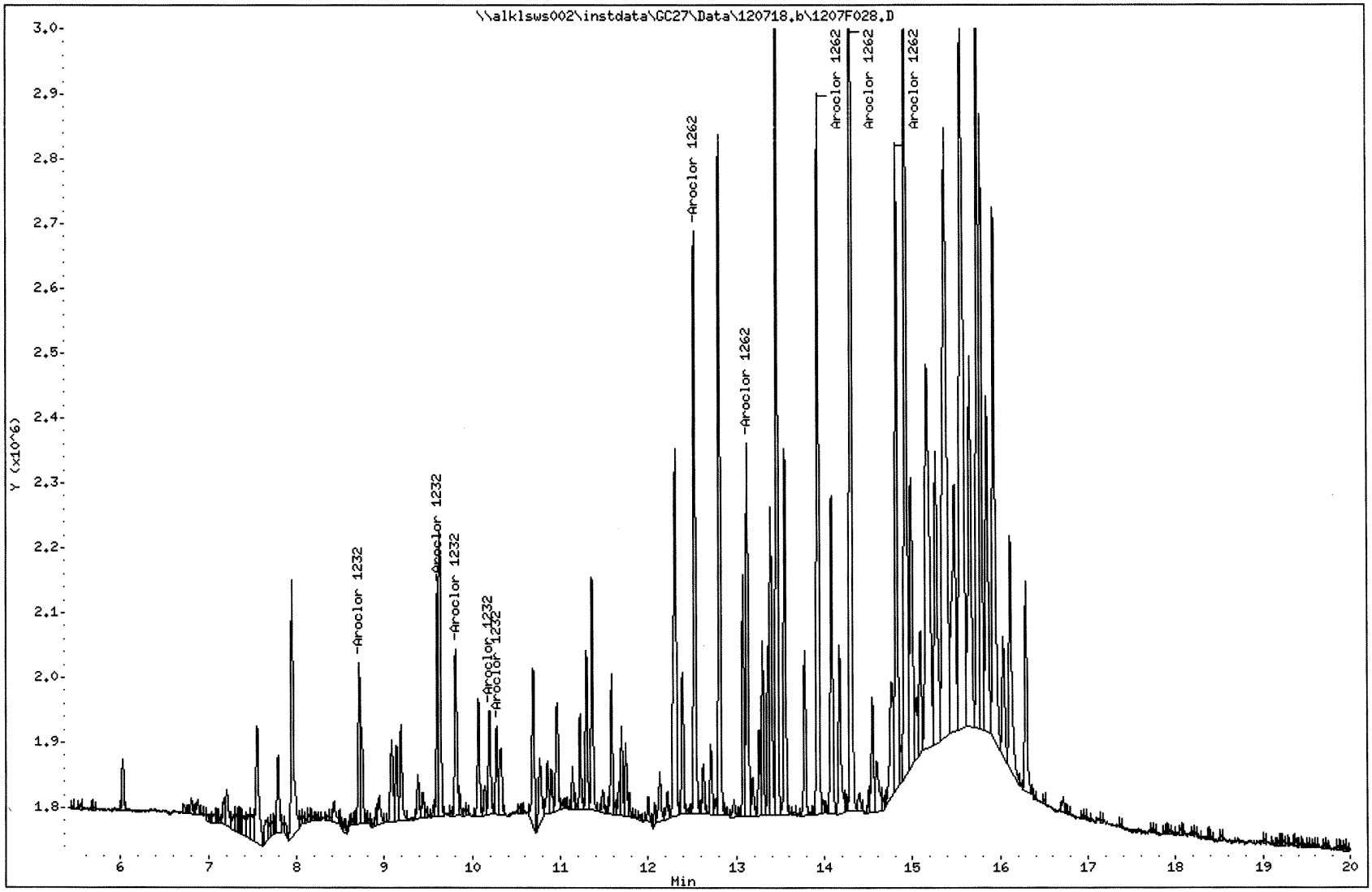
MC 12/13/18

020862

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F028.D
Date : 08-DEC-2018 00:40
Client ID:
Sample Info: 3262 20PPB PCB7-58D

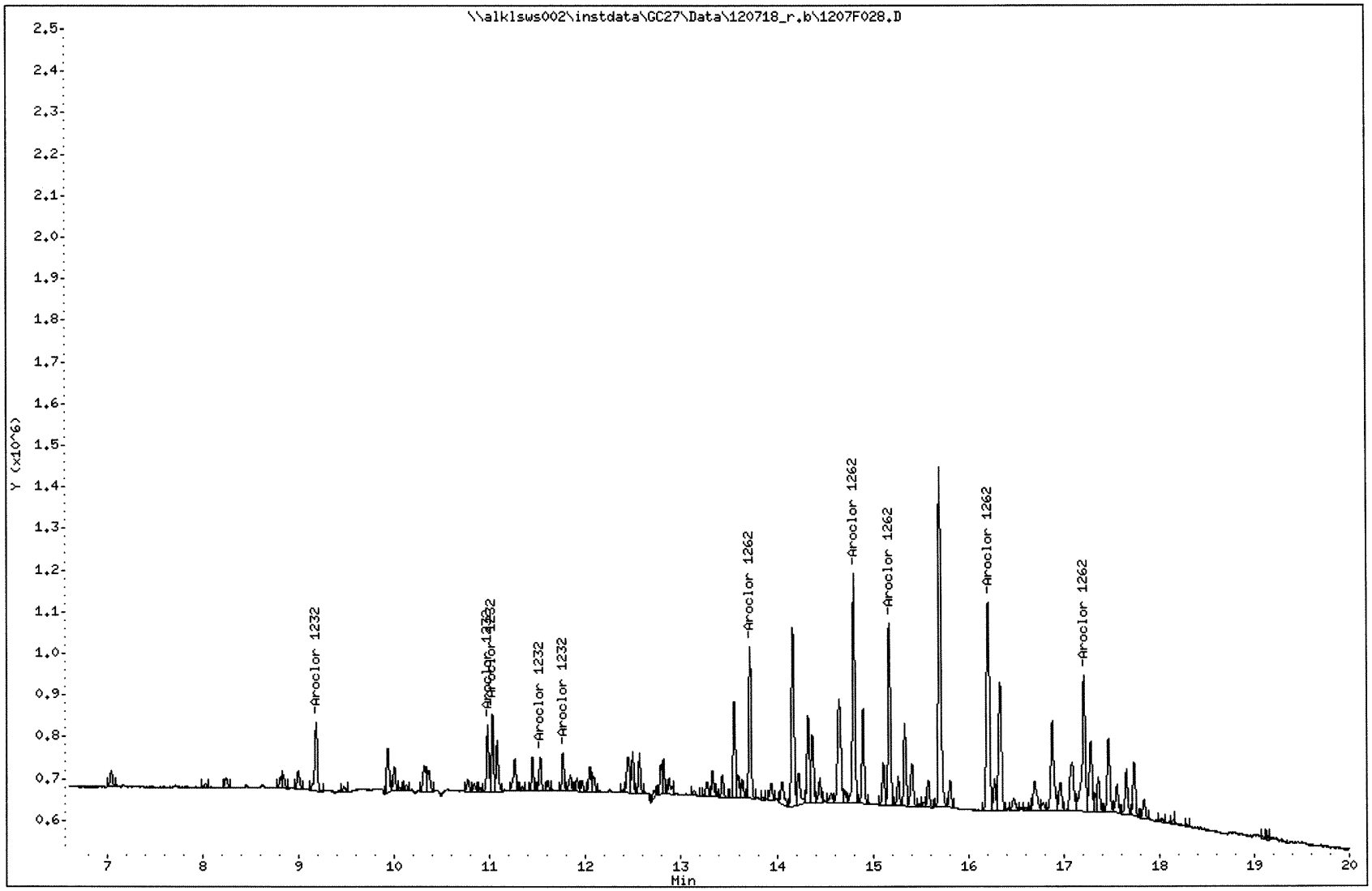
Instrument: GC27.i

Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



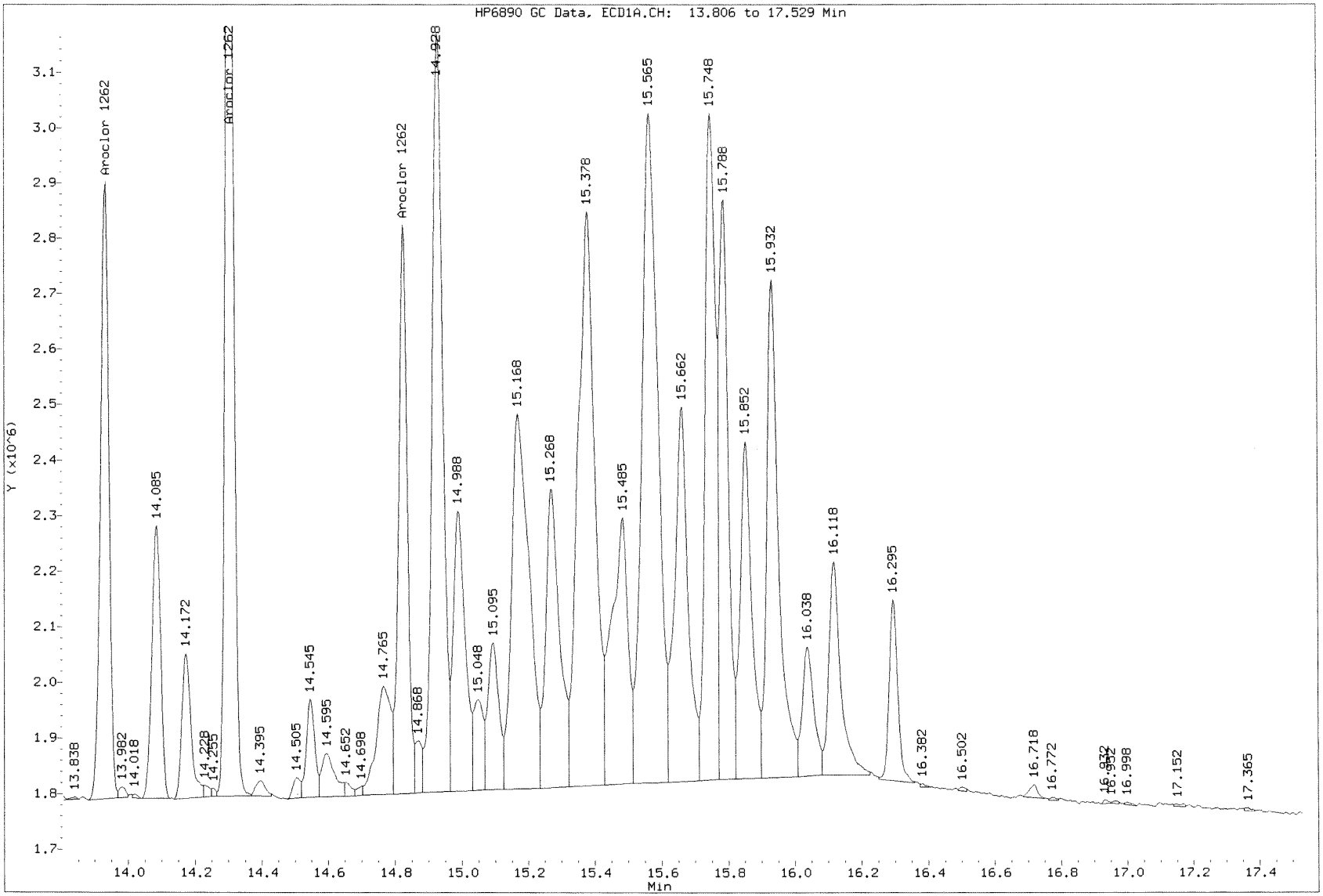
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Date : 08-DEC-2018 00:40
Client ID:
Sample Info: 3262 20PPB PCB7-58D

Instrument: GC27.i
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Before
MR 12/12/18

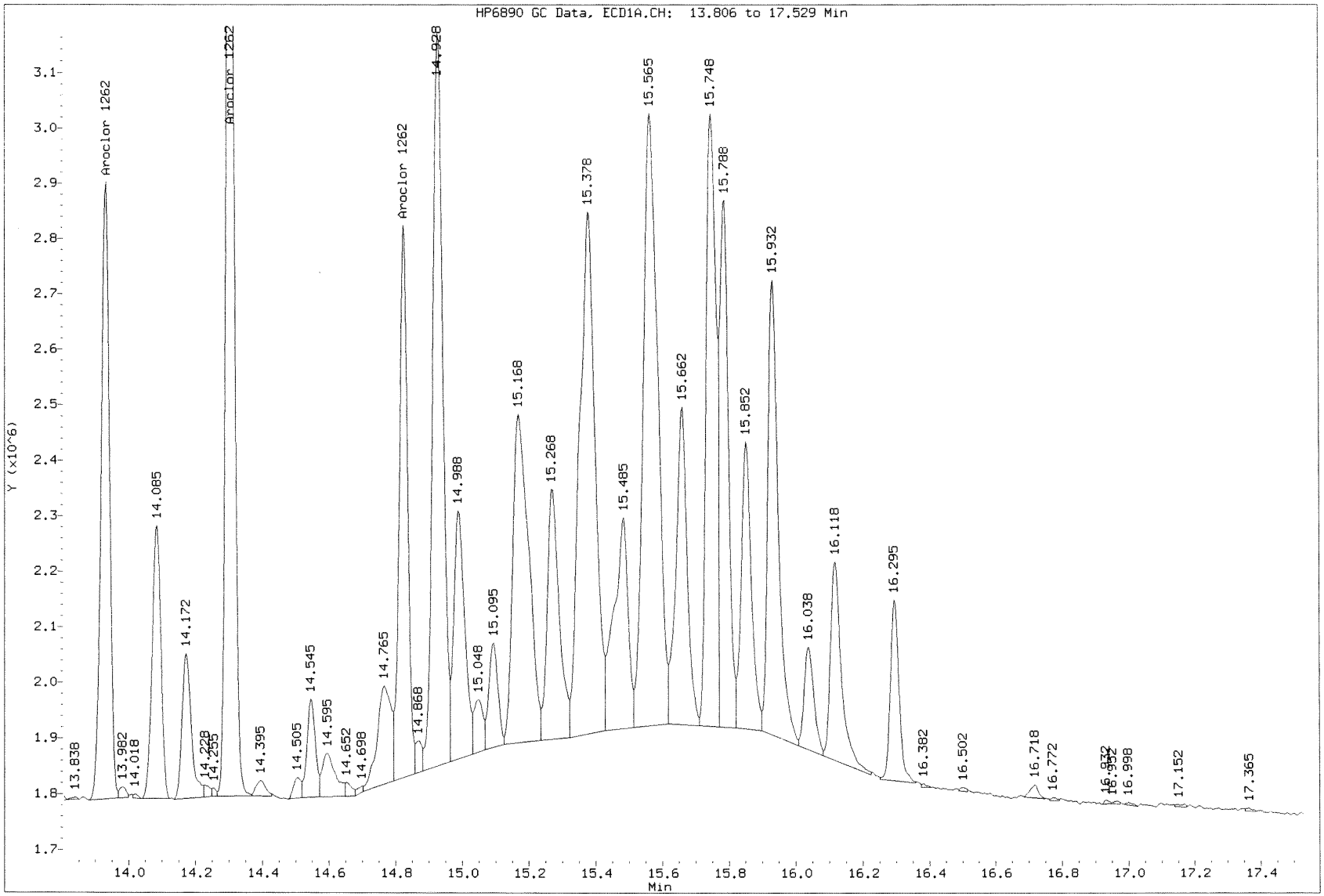
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Injection Date: 08-DEC-2018 00:40
Instrument: GC27.i
Client Sample ID:



020865

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F028.D
Injection Date: 08-DEC-2018 00:40
Instrument: GC27.i
Client Sample ID:

After
baseline/shoulder
MR 12/12/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F029.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F029.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F029.D
Inj Date : 08-DEC-2018 01:11
Sample Info: 3262 50PPB PCB7-58E
Misc Info :
Cal Date : 12-DEC-2018 12:38
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	8.714	9.185	1019072	704618	47.2	44.8	80.00- 120.00	100.00(M)
	9.608	10.978	1109267	556108	45.1	42.6	91.85- 137.78	108.85(M)
	9.811	11.028	952954	658118	44.2	48.8	82.49- 123.73	93.51(M)
	10.198	11.528	606090	300091	44.8	43.0	52.60- 78.89	59.47(M)
	10.274	11.765	490928	318647	45.2	44.7	42.83- 64.24	48.17(M)
			Average of Peak Amounts =		45.3	44.8		
Aroclor 1262	12.531	13.721	2956063	1289112	42.4	43.9	80.00- 120.00	100.00
	13.128	14.801	2118137	2077134	43.7	44.1	58.60- 87.90	71.65
	13.931	15.175	4066056	1577744	44.2	44.1	115.16- 172.75	137.55
	14.304	16.211	7610637	2301318	44.6	43.3	222.16- 333.24	257.46
	14.824	17.215	3931790	1744266	47.4	53.3	97.91- 146.87	133.01
			Average of Peak Amounts =		44.5	45.7		

QC Flag Legend

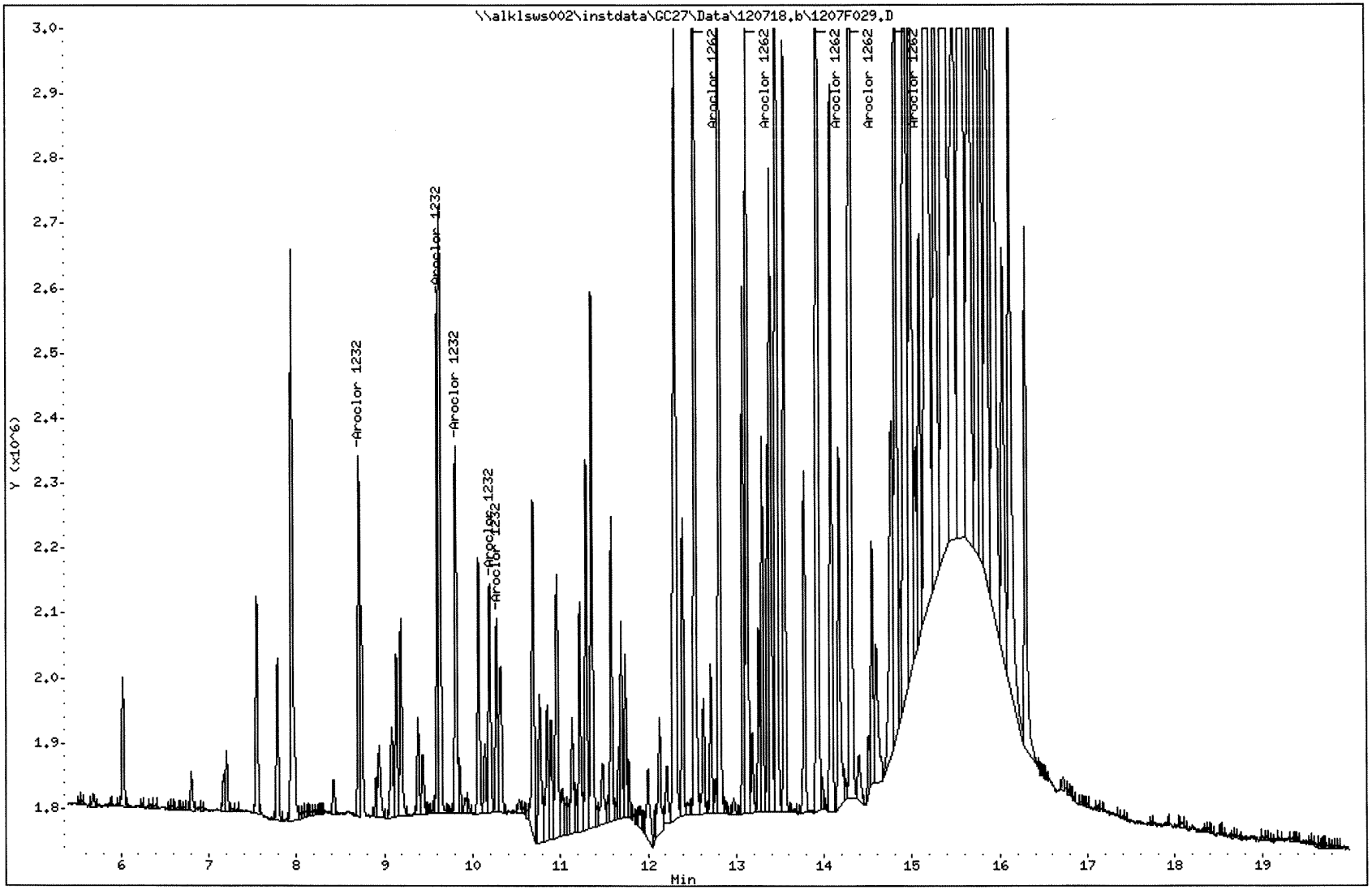
M - Compound response manually integrated.

MC 12/18/18

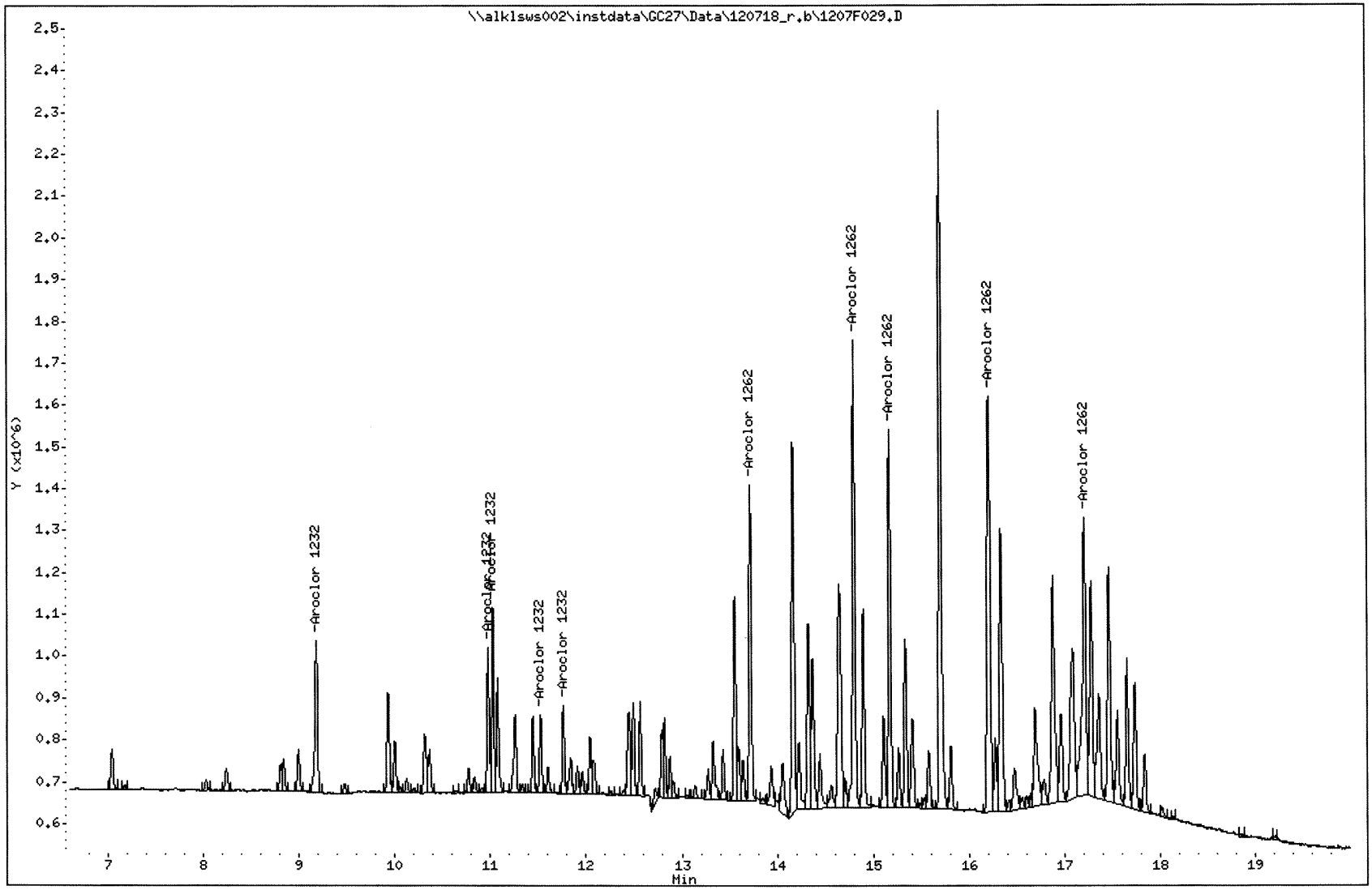
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Date : 08-DEC-2018 01:11
Client ID:
Sample Info: 3262 50PPB PCB7-58E

Instrument: GC27.i

Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



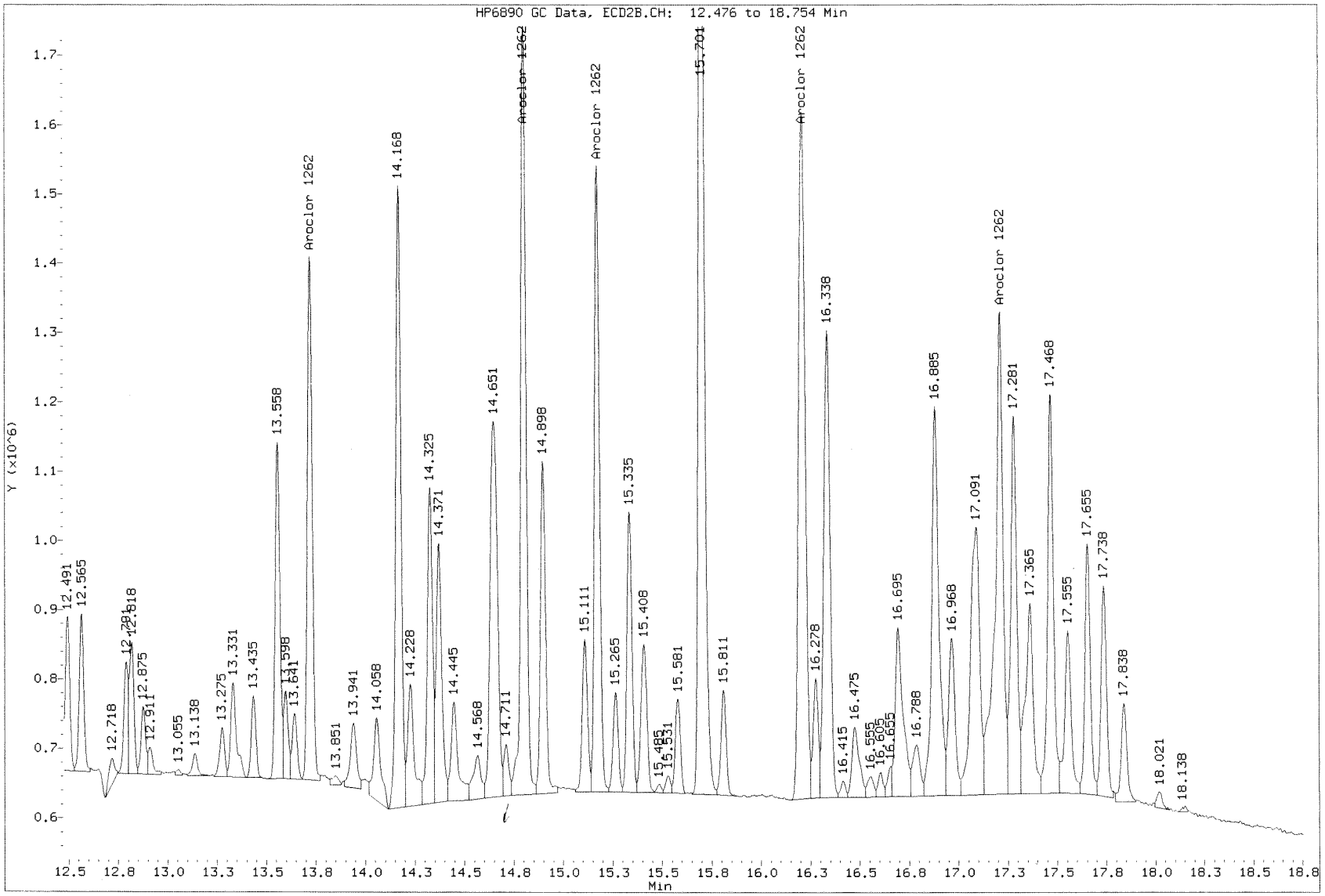
Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F029.D
Date : 08-DEC-2018 01:11
Client ID:
Instrument: GC27.i
Sample Info: 3262 50PPB PCB7-58E
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



WD 12/17/18

Barr
MM 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F029.D
Injection Date: 08-DEC-2018 01:11
Instrument: GC27.i
Client Sample ID:

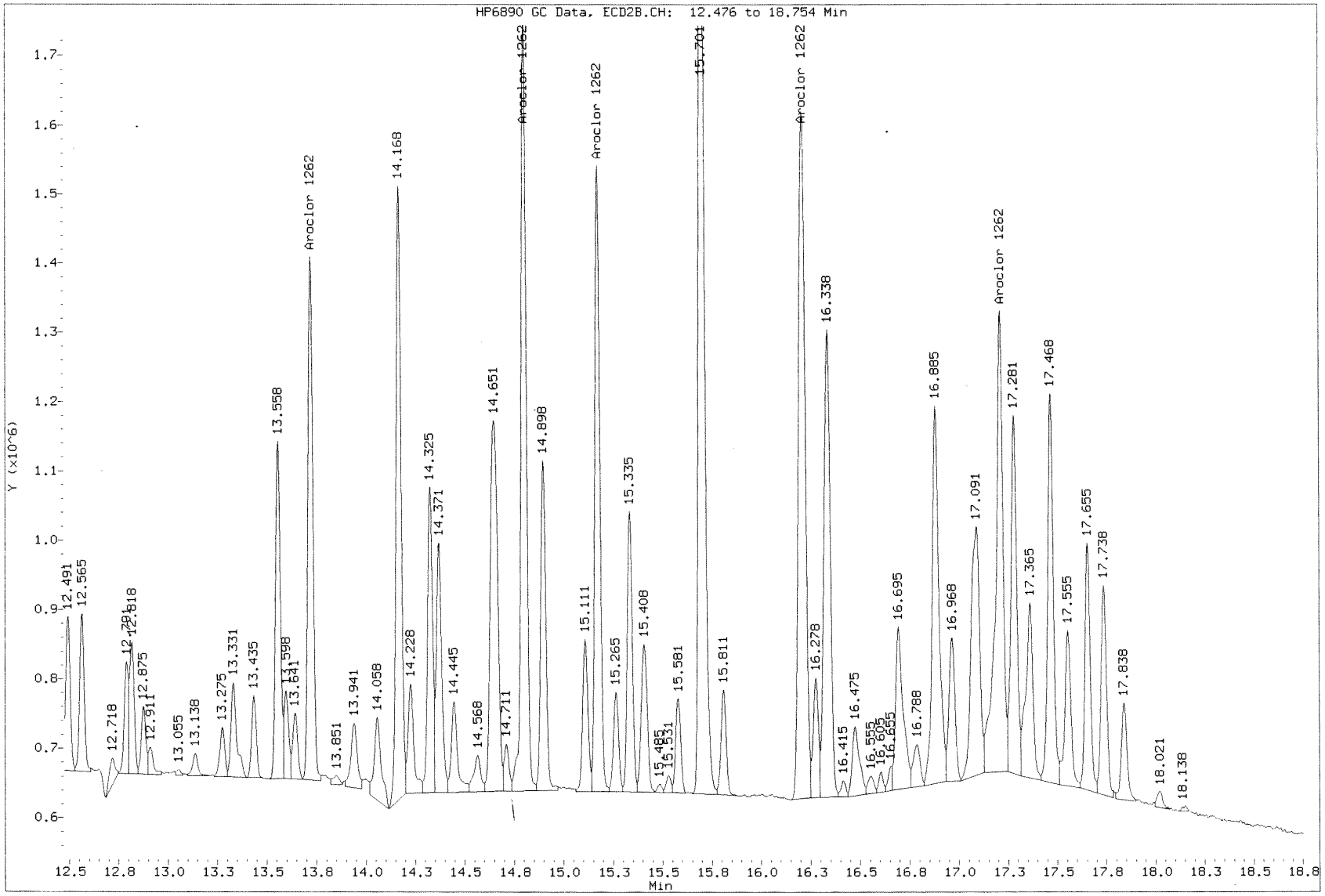


020870

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F029.D
Injection Date: 08-DEC-2018 01:11
Instrument: GC27.i
Client Sample ID:

OA 12/13/18

After baseline shoulder
MMC 12/12/18

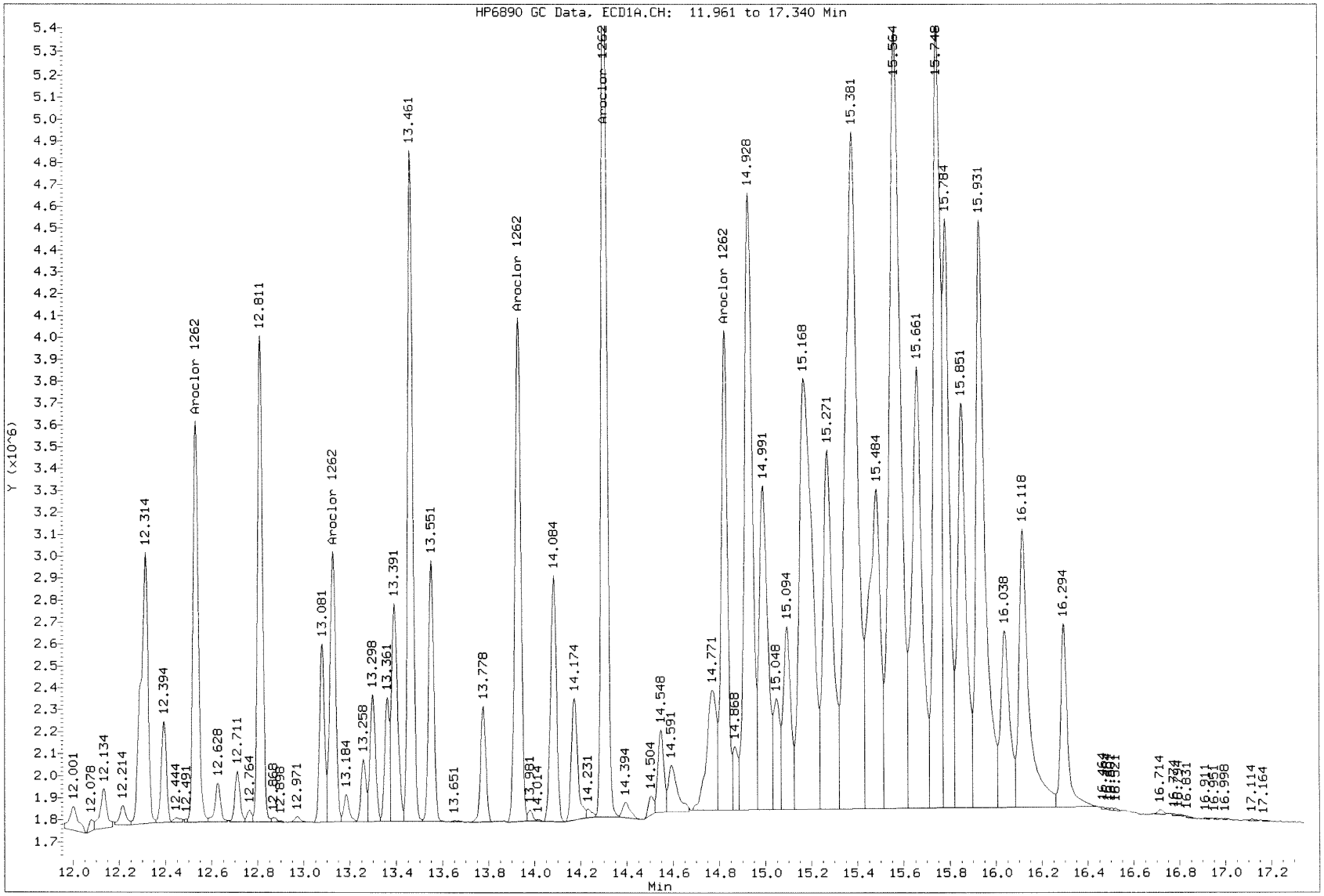


020871

Before

mc 12/12/18

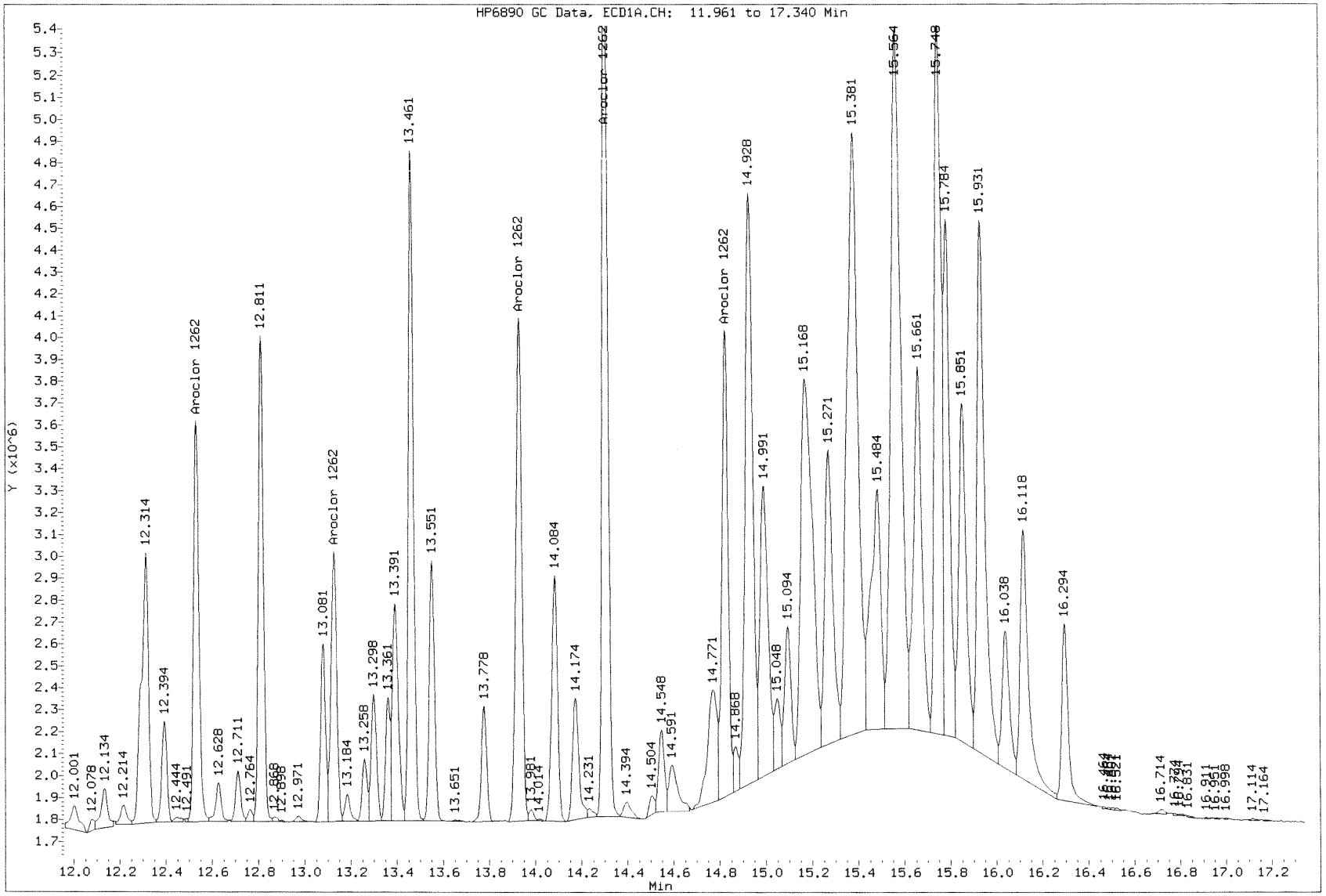
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F029.D
Injection Date: 08-DEC-2018 01:11
Instrument: GC27.i
Client Sample ID:



020872

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F029.D
Injection Date: 08-DEC-2018 01:11
Instrument: GC27.i
Client Sample ID:

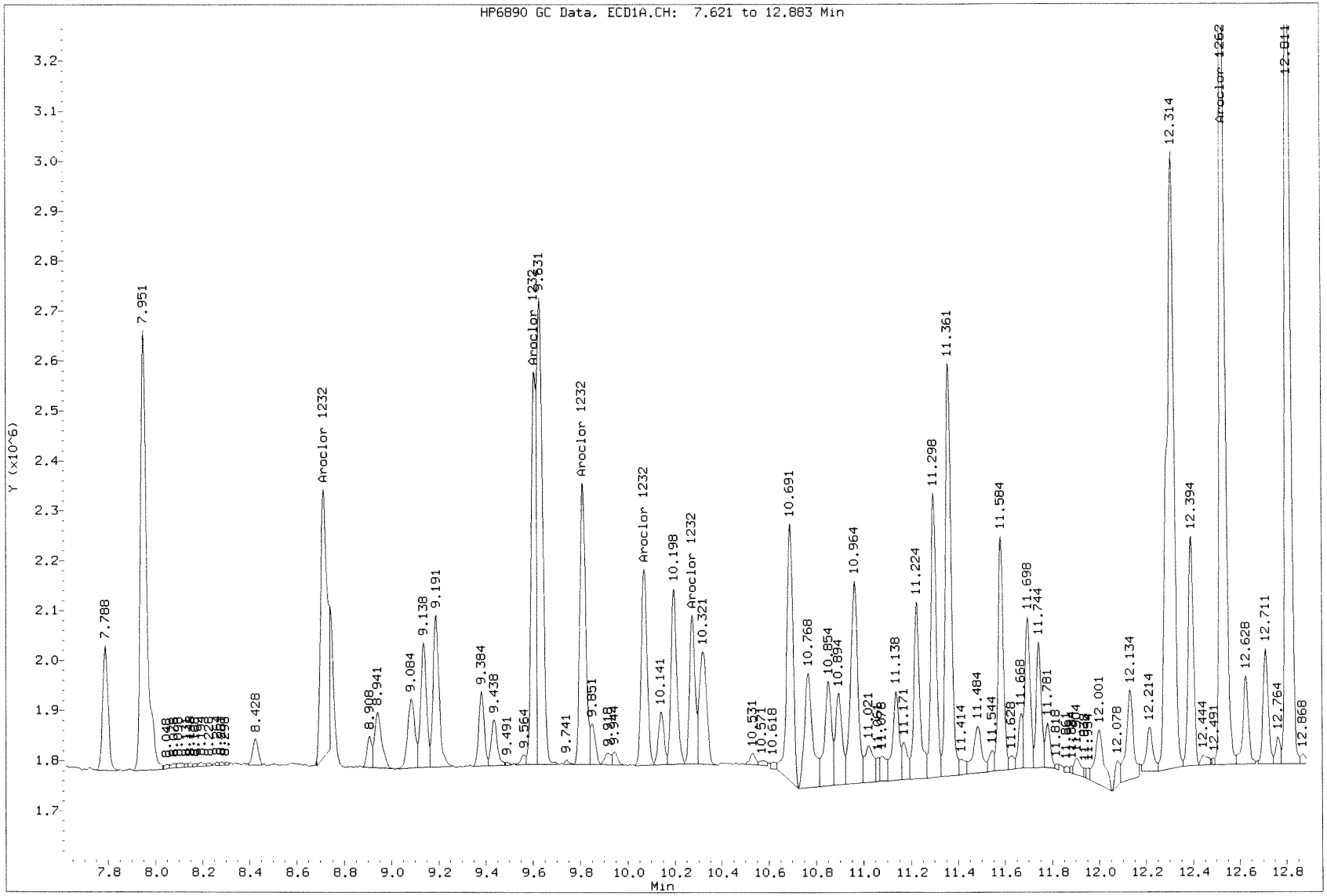
After
baseline to shoulder
MR 12/12/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F029.D
Injection Date: 08-DEC-2018 01:11
Instrument: GC27.1
Client Sample ID:

CM 2/7/18

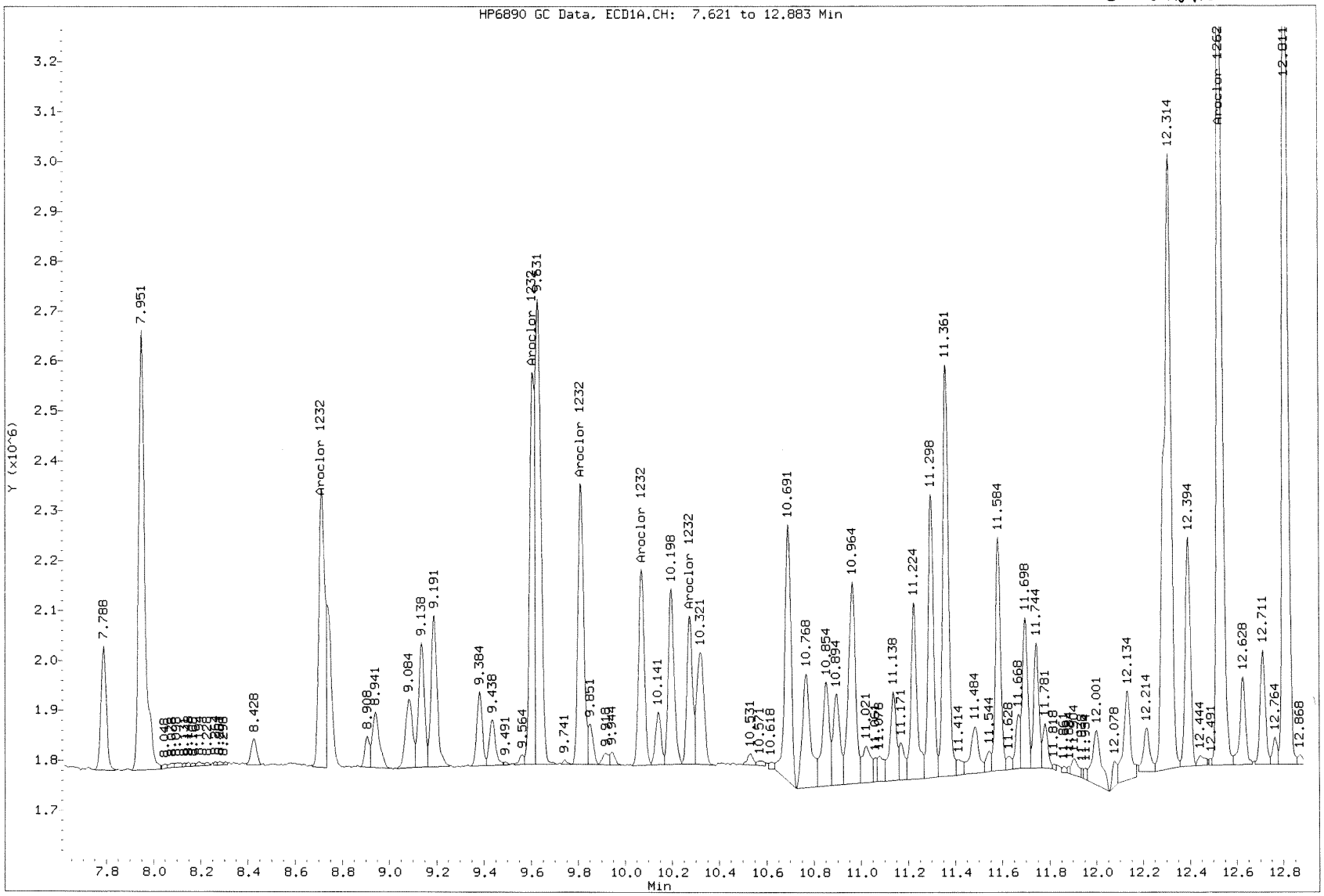
Before
MC 12/21/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F029.D
Injection Date: 08-DEC-2018 01:11
Instrument: GC27.i
Client Sample ID:

12/17/18

After baseline/shoulder
12/11/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F030.D
Report Date: 12-Dec-2018 12:44

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F030.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F030.D
Inj Date : 08-DEC-2018 01:42
Sample Info: 3262 100PPB PCB7-58F
Misc Info :
Cal Date : 12-DEC-2018 12:38
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	8.714	9.181	2041851	1405599	94.7	89.3	80.00- 120.00	100.00(M)
	9.607	10.978	2049004	1141931	83.4	87.5	91.85- 137.78	100.35(M)
	9.811	11.028	1930066	1331917	89.5	98.8	82.49- 123.73	94.53(M)
	10.194	11.528	1250397	638200	92.5	91.4	52.60- 78.89	61.24(M)
	10.274	11.761	1024394	663271	94.3	93.0	42.83- 64.24	50.17(M)
			Average of Peak Amounts =		90.9	92.0		
Aroclor 1262	12.531	13.721	6106599	2590906	87.6	88.3	80.00- 120.00	100.00
	13.128	14.801	4389348	4050234	90.5	86.0	58.60- 87.90	71.88
	13.931	15.174	8507000	3143303	92.4	87.8	115.16- 172.75	139.31
	14.304	16.211	16127229	4589368	94.4	86.3	222.16- 333.24	264.10
	14.824	17.214	7493850	3016441	90.3	92.2	97.91- 146.87	122.72
			Average of Peak Amounts =		91.0	88.1		

QC Flag Legend

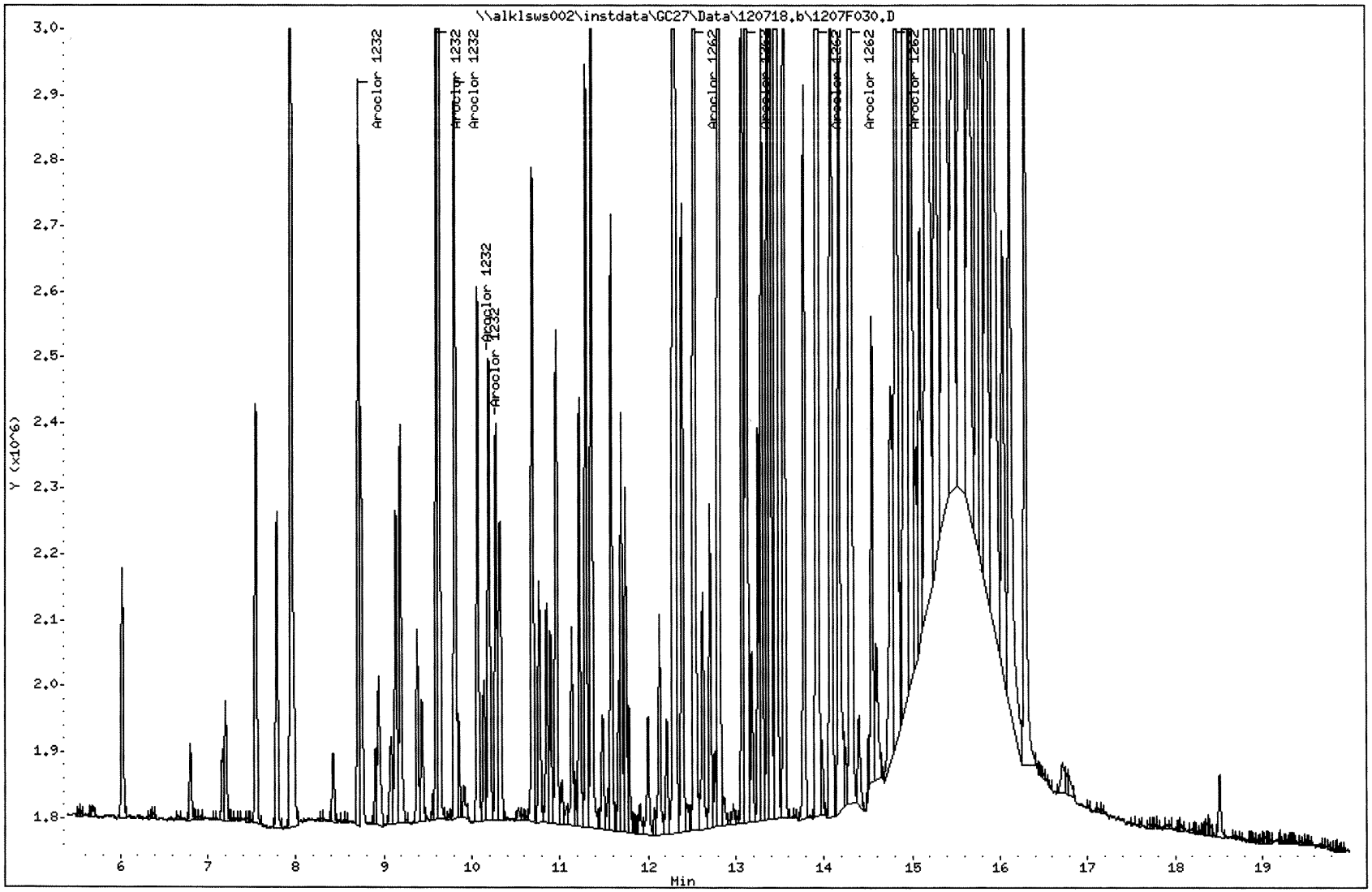
M - Compound response manually integrated.

MR 12/13/18

020876

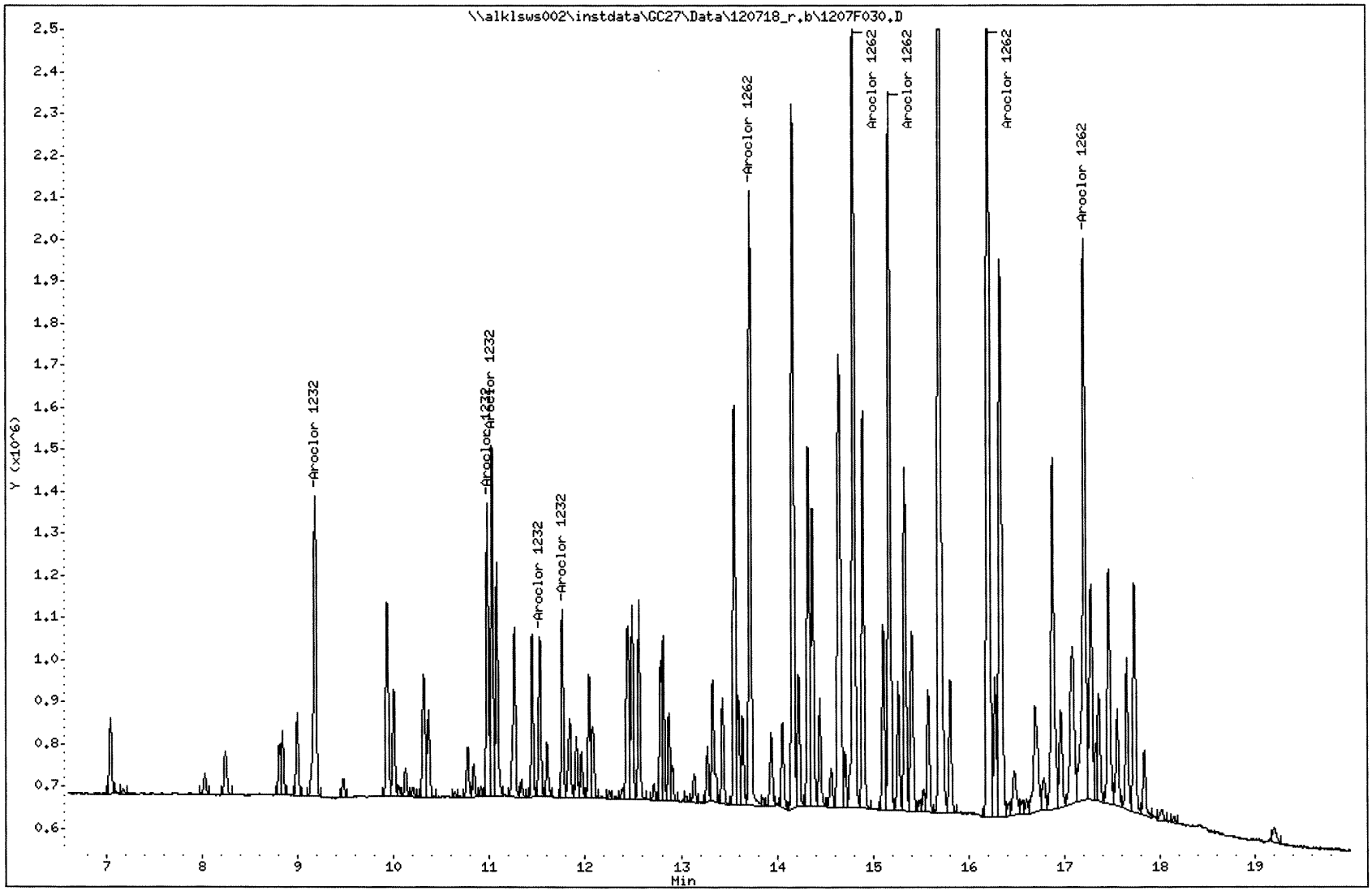
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F030.D
Date : 08-DEC-2018 01:42
Client ID:
Sample Info: 3262 100PPB PCB7-58F

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



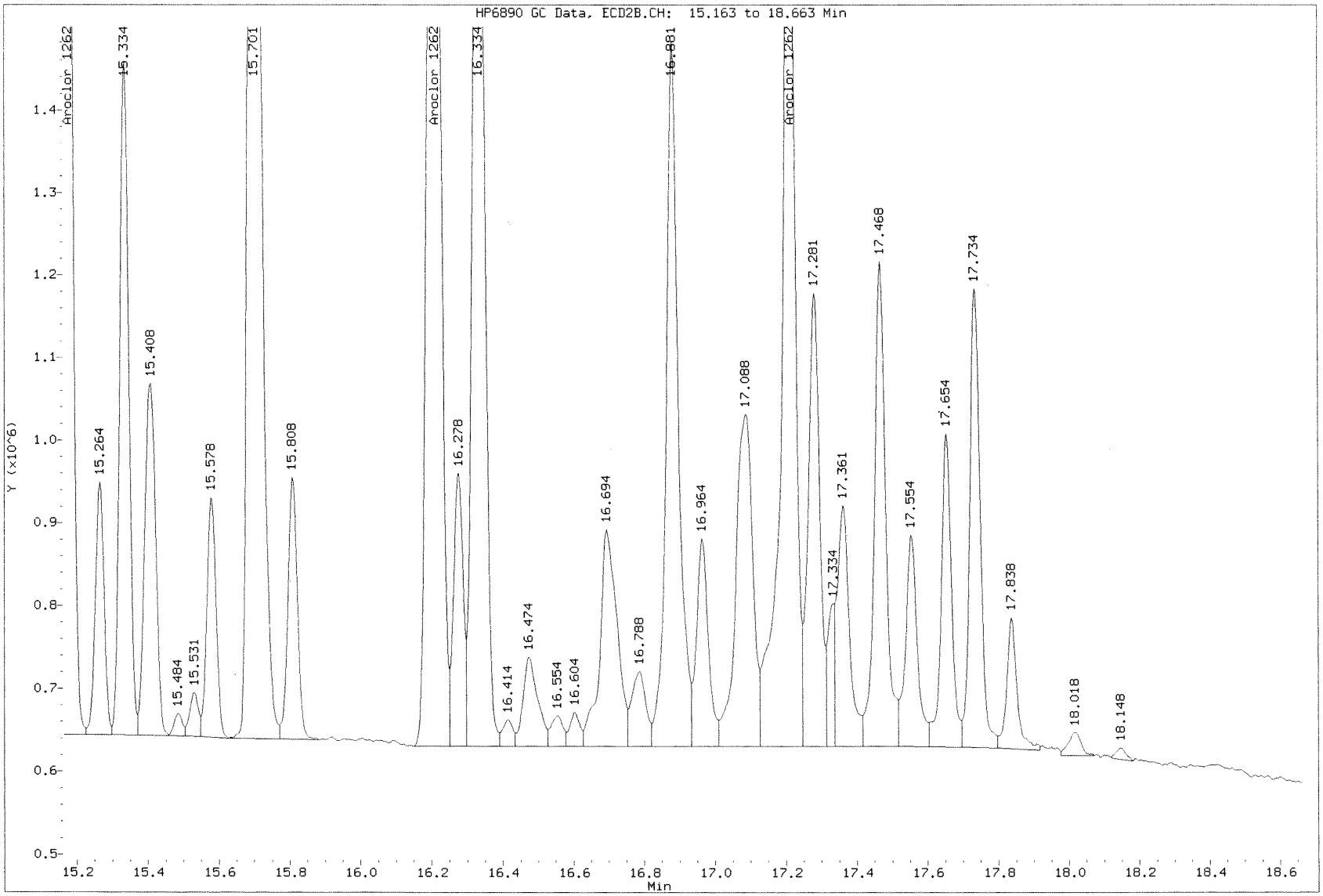
Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F030.D
Date : 08-DEC-2018 01:42
Client ID:
Sample Info: 3262 100PPB PCB7-58F

Instrument: GC27.i
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Before
MR 12/12/18

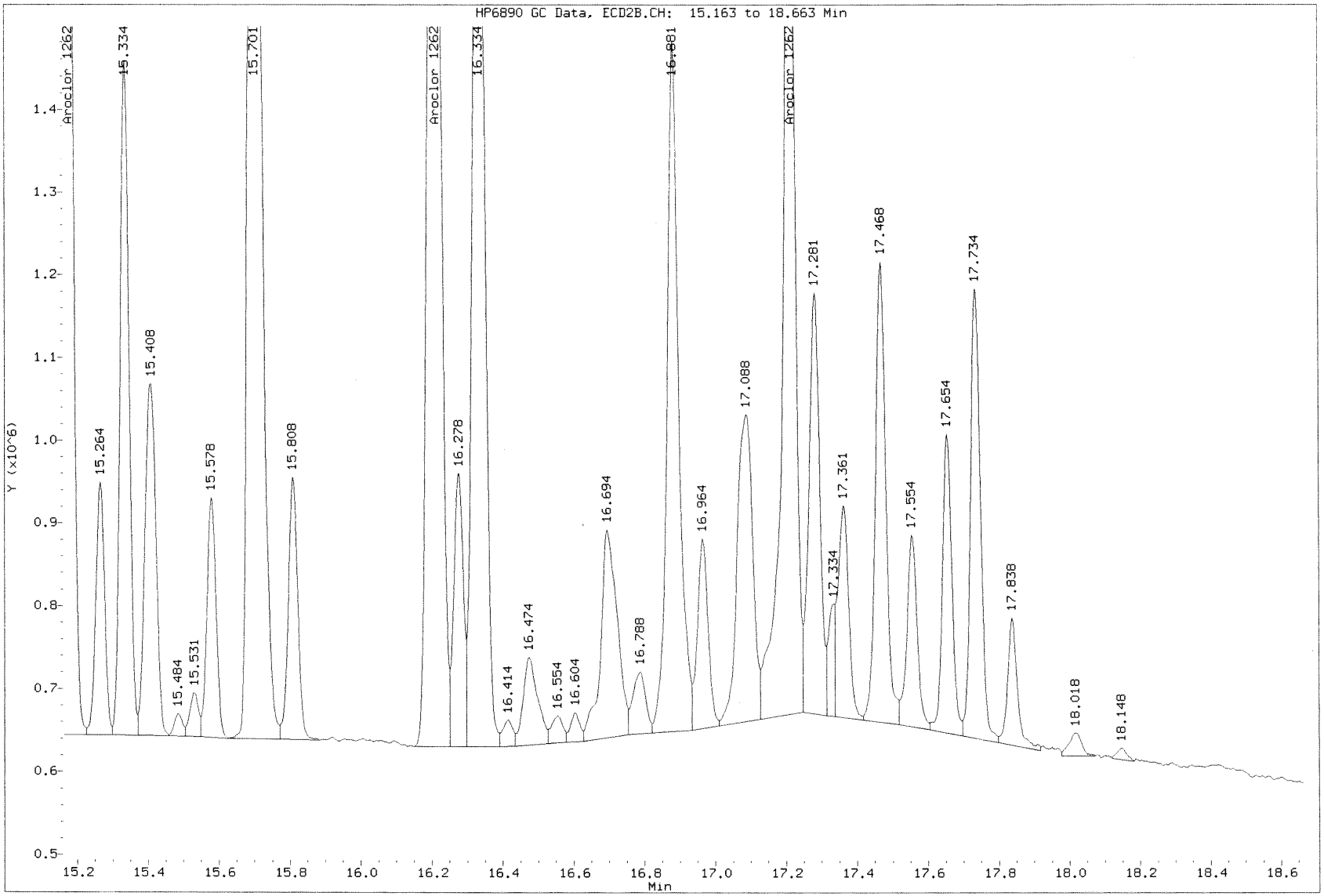
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Injection Date: 08-DEC-2018 01:42
Instrument: GC27.i
Client Sample ID:



020879

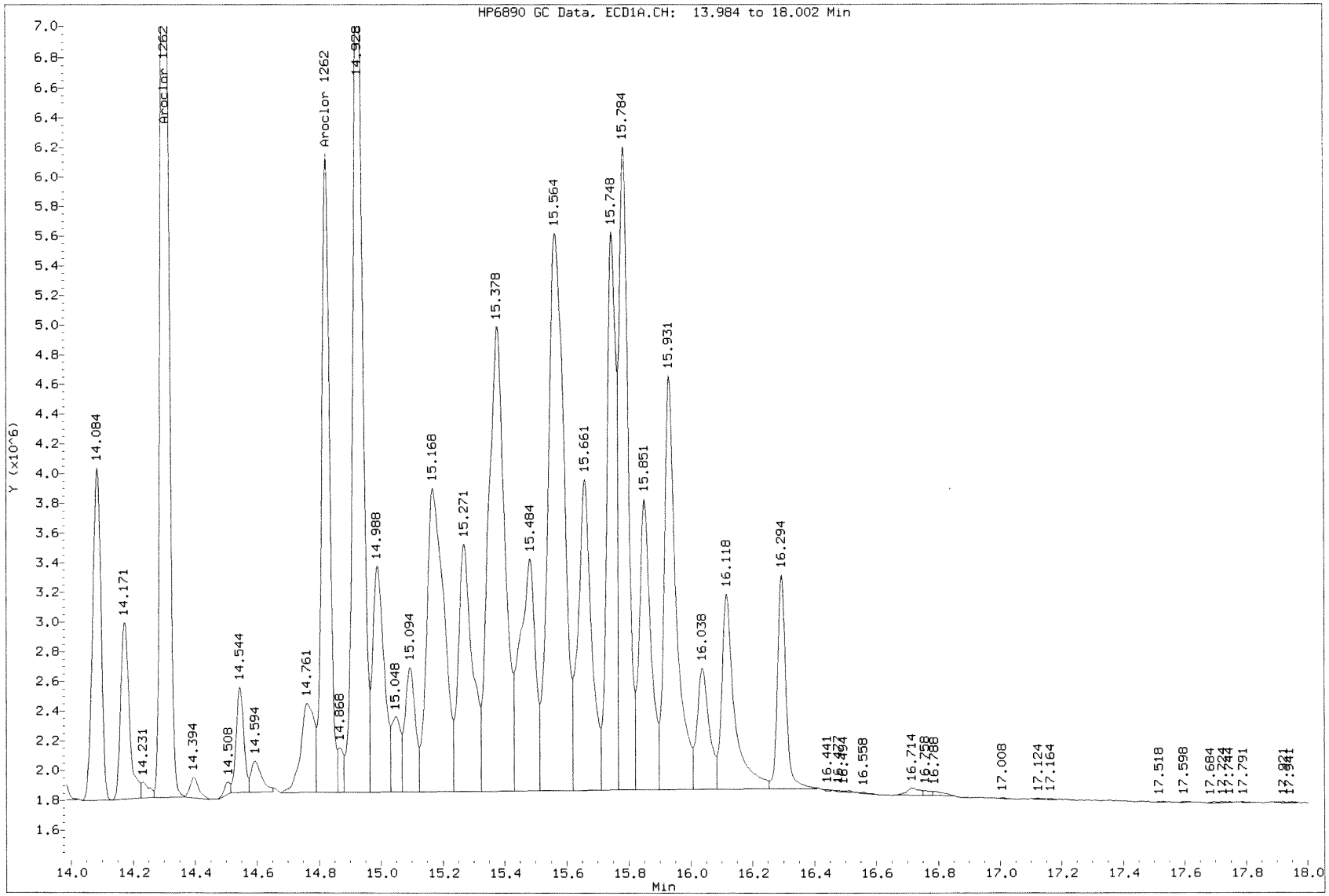
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Injection Date: 08-DEC-2018 01:42
Instrument: GC27.i
Client Sample ID:

After
baseline/shoulder
MC 12/13/19



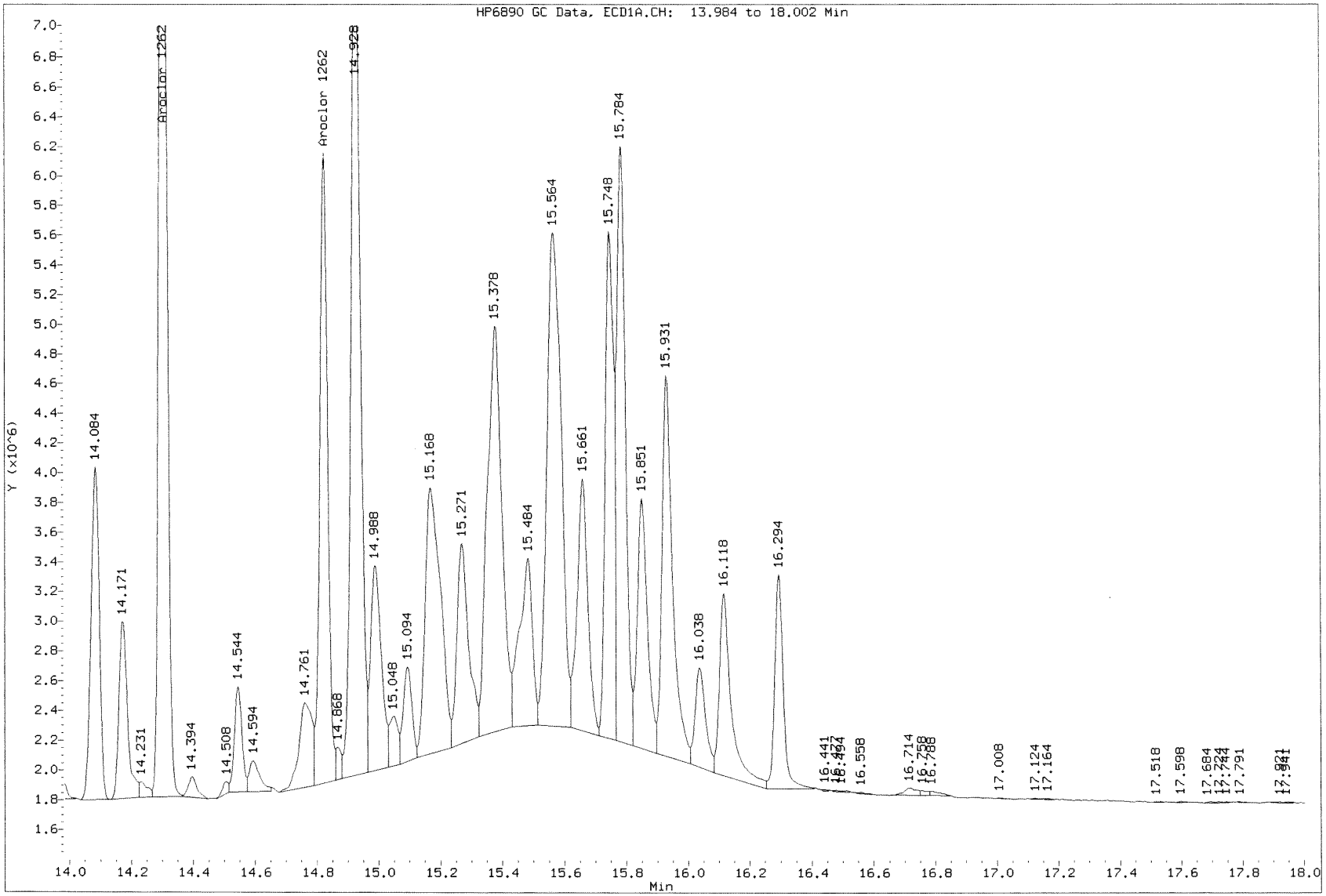
Before
MM 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F030.D
Injection Date: 08-DEC-2018 01:42
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F030.D
Injection Date: 08-DEC-2018 01:42
Instrument: GC27.i
Client Sample ID:

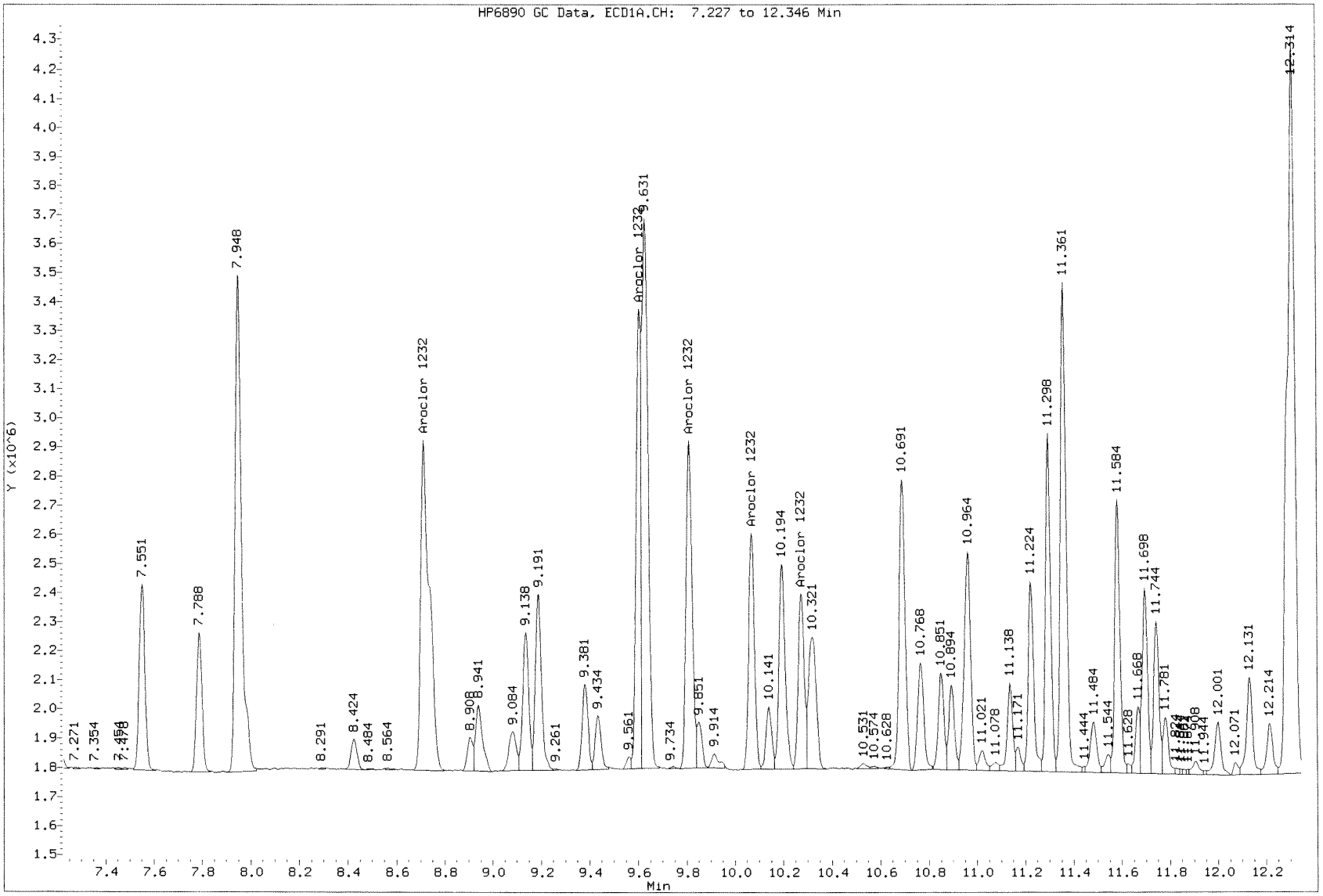
After baseline is should be
MR 12/12/18



Before

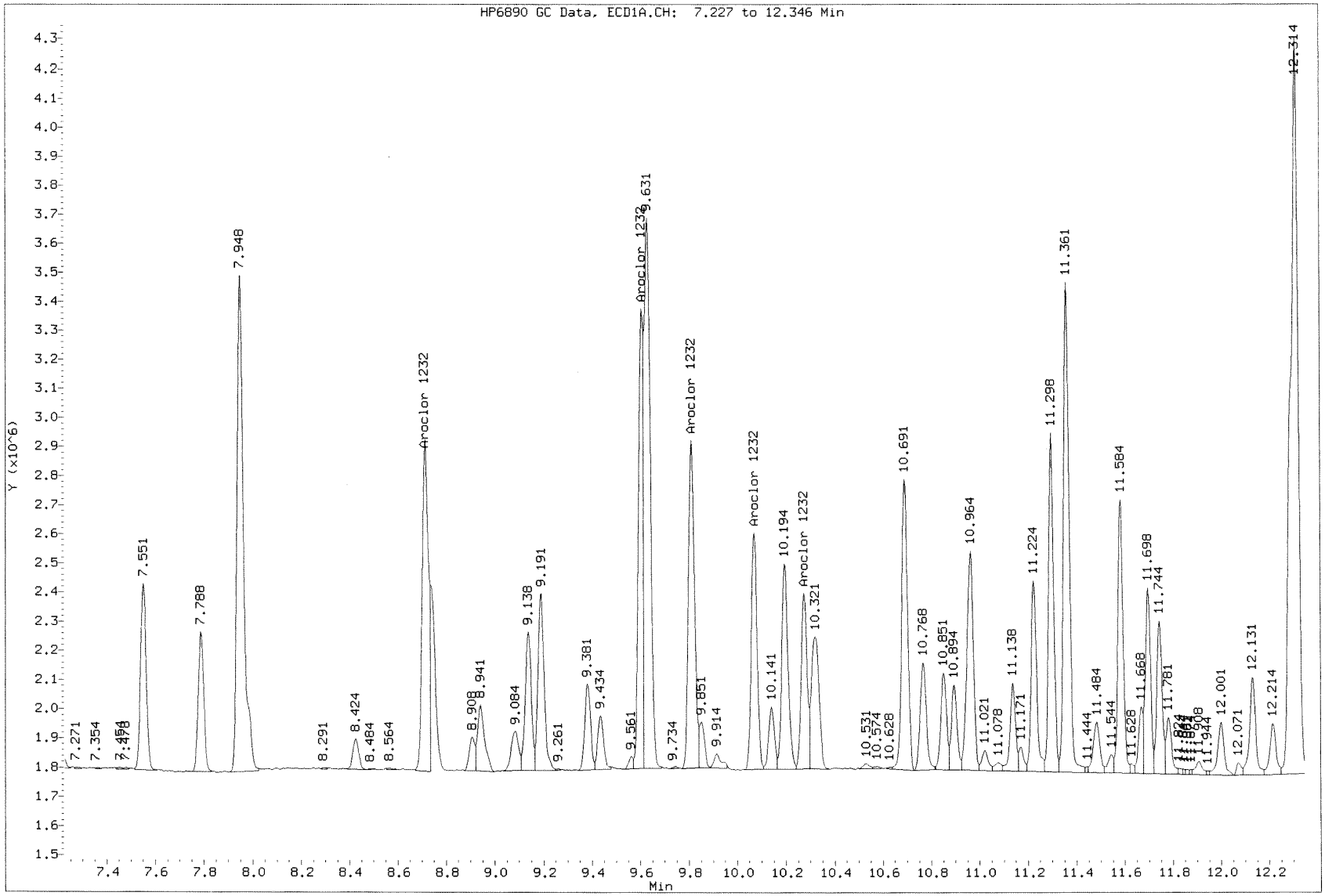
MR 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F030.D
Injection Date: 08-DEC-2018 01:42
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F030.D
Injection Date: 08-DEC-2018 01:42
Instrument: GC27.i
Client Sample ID:

After
baseline/shoulder
MR 12/12/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F031.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F031.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F031.D
Inj Date : 08-DEC-2018 02:14
Sample Info: 3262 200PPB PCB7-58G
Misc Info :
Cal Date : 12-DEC-2018 12:38
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 3262.sub
Sub List #2 : 3262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

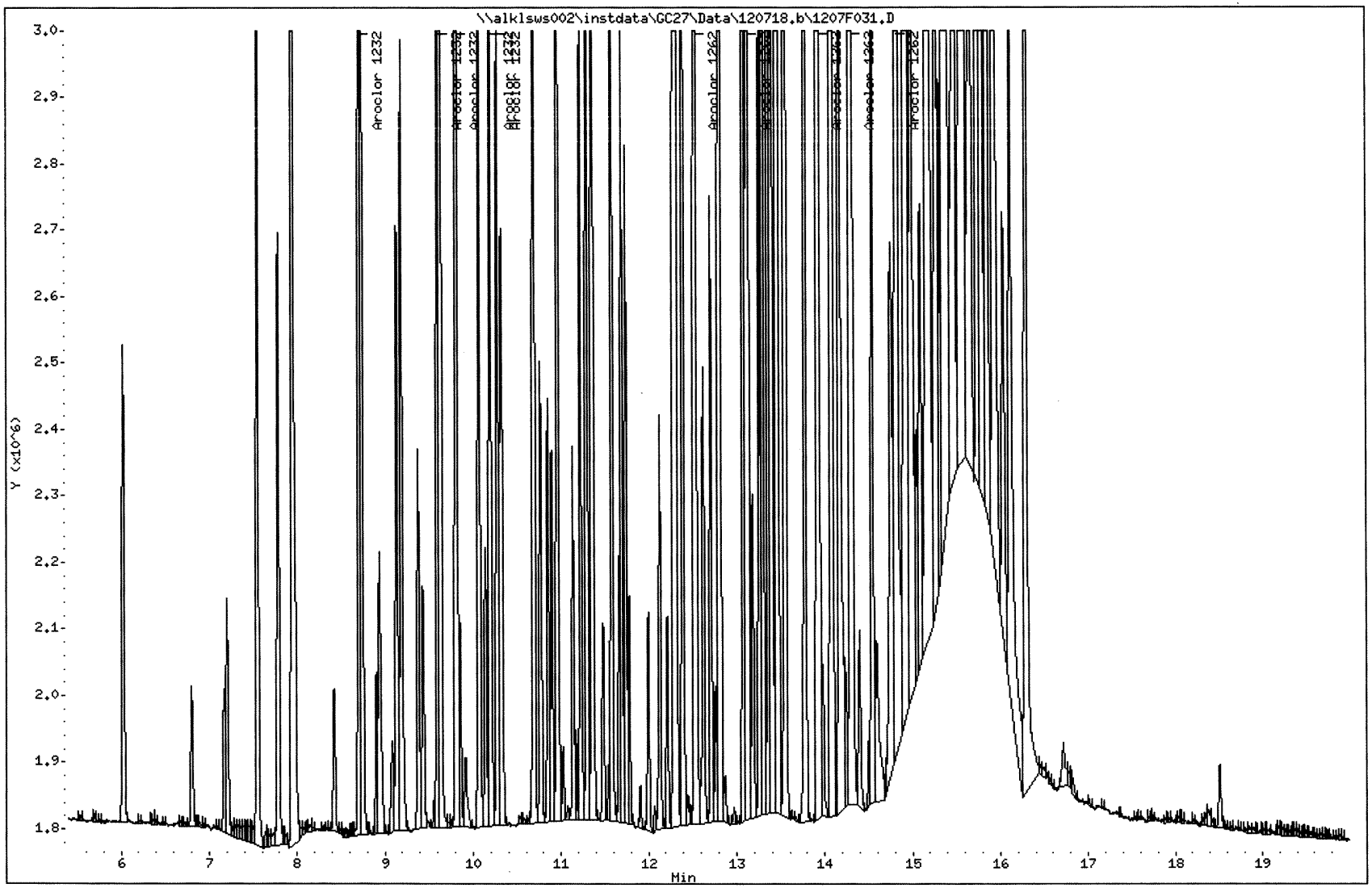
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	8.713	9.184	3725656	2676872	173	170	80.00- 120.00	100.00
	9.610	10.980	4277529	2160028	174	166	91.85- 137.78	114.81
	9.810	11.030	3841607	2520622	178	187	82.49- 123.73	103.11
	10.197	11.527	2449410	1235863	181	177	52.60- 78.89	65.74
	10.273	11.764	1994575	1289574	184	181	42.83- 64.24	53.54
			Average of Peak Amounts =		178	176		
Aroclor 1262	12.530	13.720	11765038	4798972	169	163	80.00- 120.00	100.00
	13.127	14.800	8617534	7594461	178	161	58.60- 87.90	73.25
	13.930	15.174	16936397	5866023	184	164	115.16- 172.75	143.96
	14.303	16.210	32671108	8543422	191	161	222.16- 333.24	277.70
	14.823	17.214	14399614	5223233	174	160	97.91- 146.87	122.39
			Average of Peak Amounts =		179	162		

MC 12/13/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F031.D
Date : 08-DEC-2018 02:14
Client ID:
Sample Info: 3262 200PPB PCB7-58C

Instrument: GC27.i

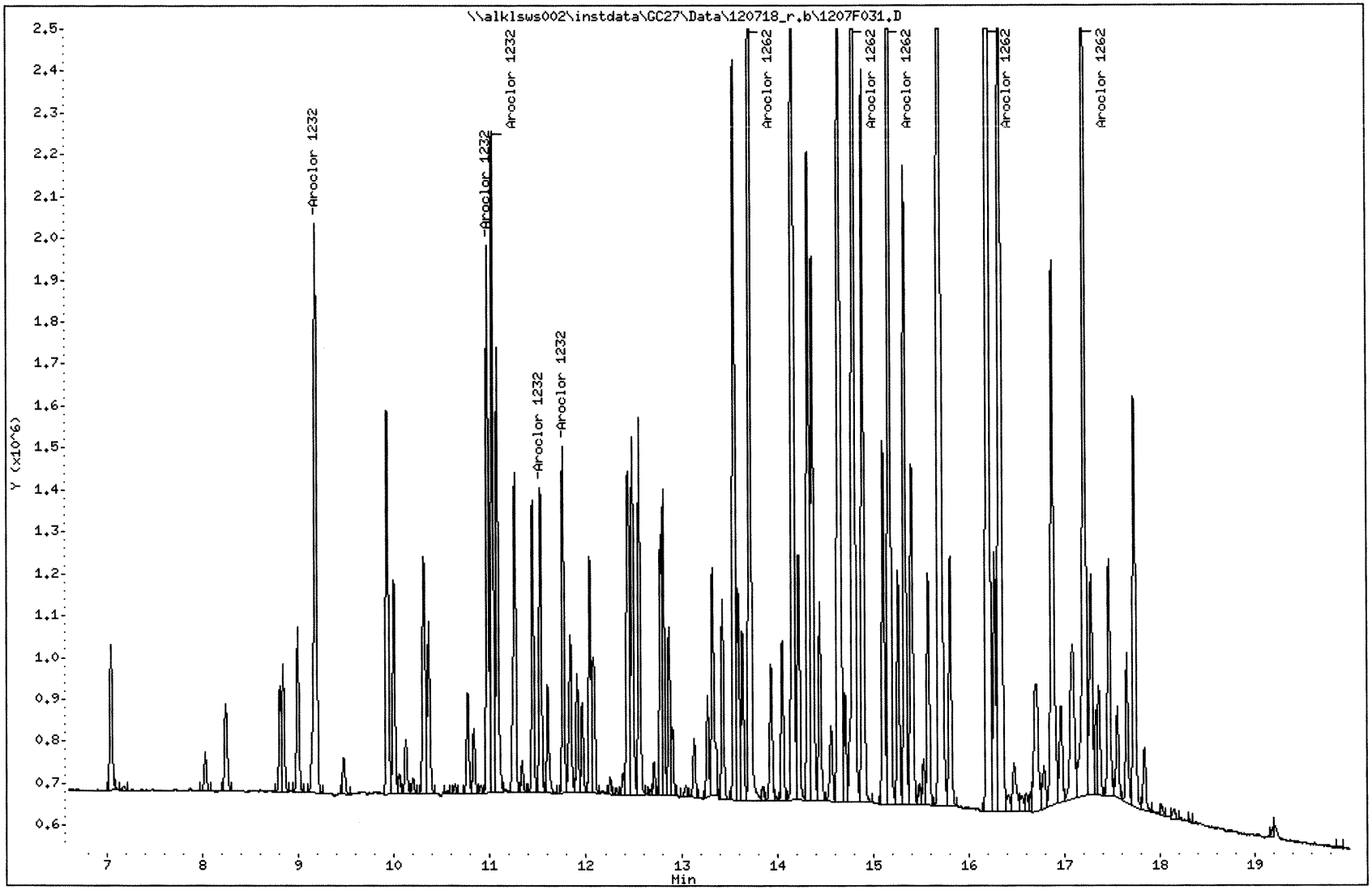
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020886

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F031.D
Date : 08-DEC-2018 02:14
Client ID:
Sample Info: 3262 200PPB PCB7-58G

Instrument: GC27.i
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32

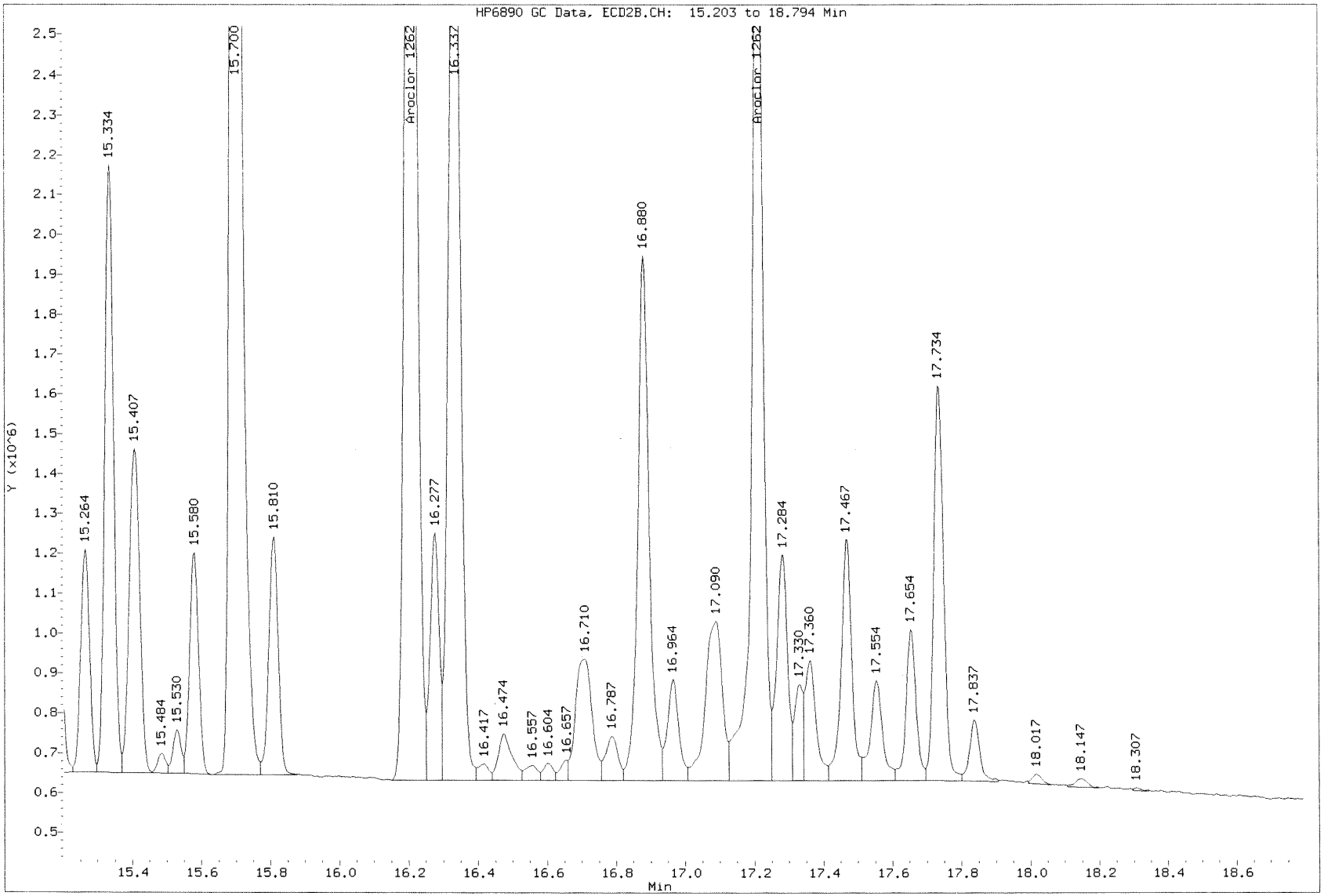


020887

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F031.D
Injection Date: 08-DEC-2018 02:14
Instrument: GC27.i
Client Sample ID:

WA 12/17/18

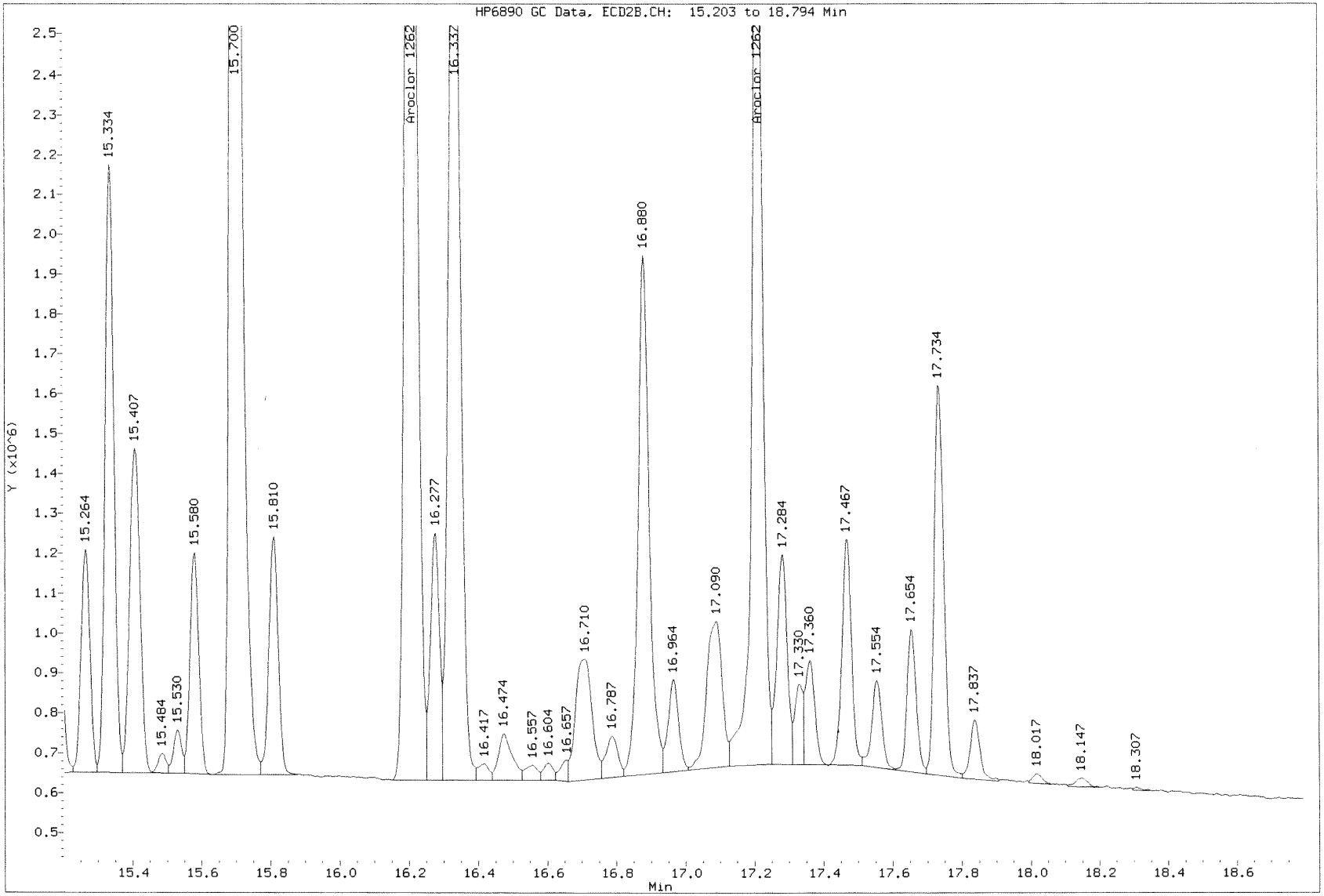
Before
MC 12/12/18



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F031.D
Injection Date: 08-DEC-2018 02:14
Instrument: GC27.i
Client Sample ID:

WA 12/17/18

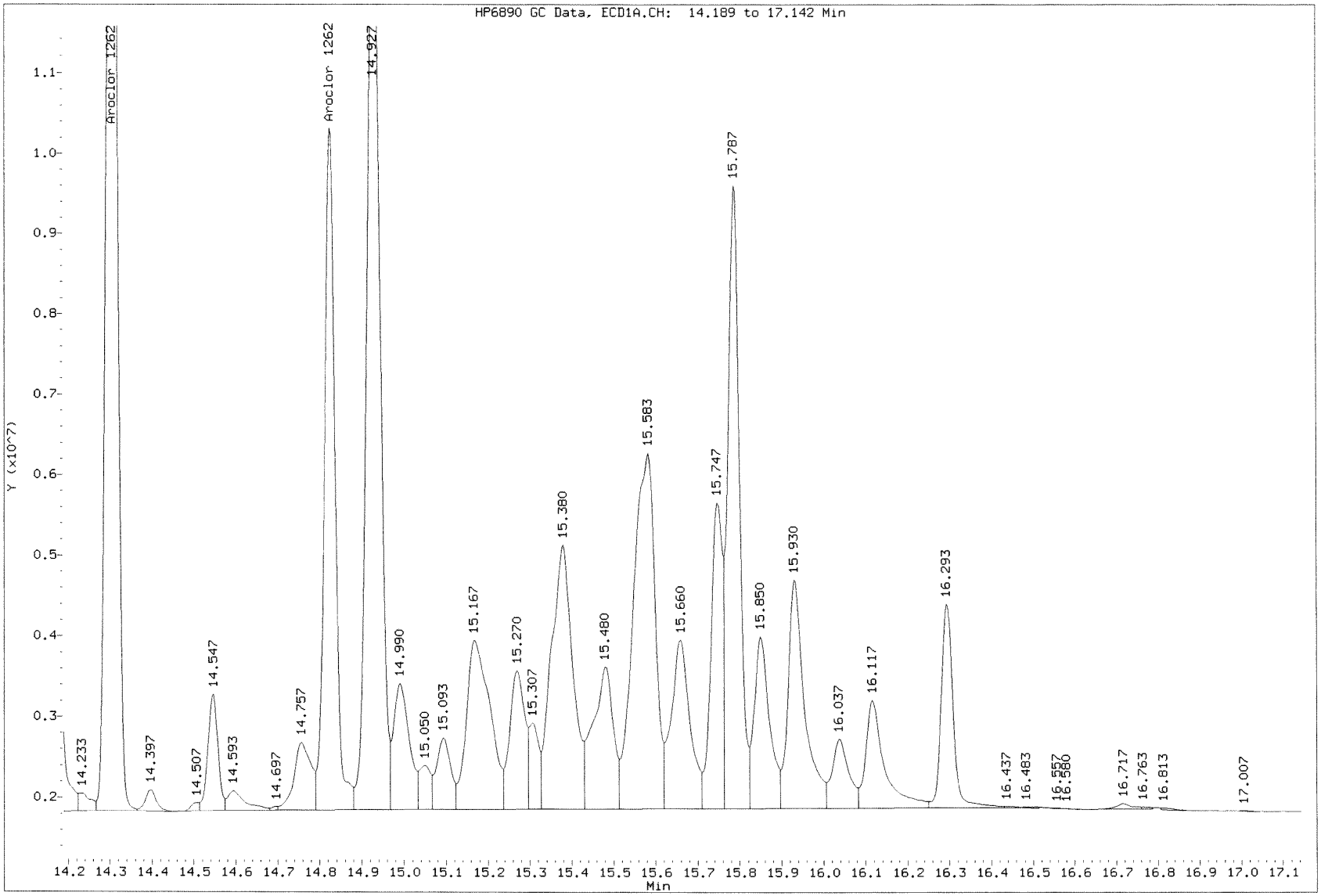
After baseline/shoulder mmc 12/12/18



020889

Before
MR 12/12/18

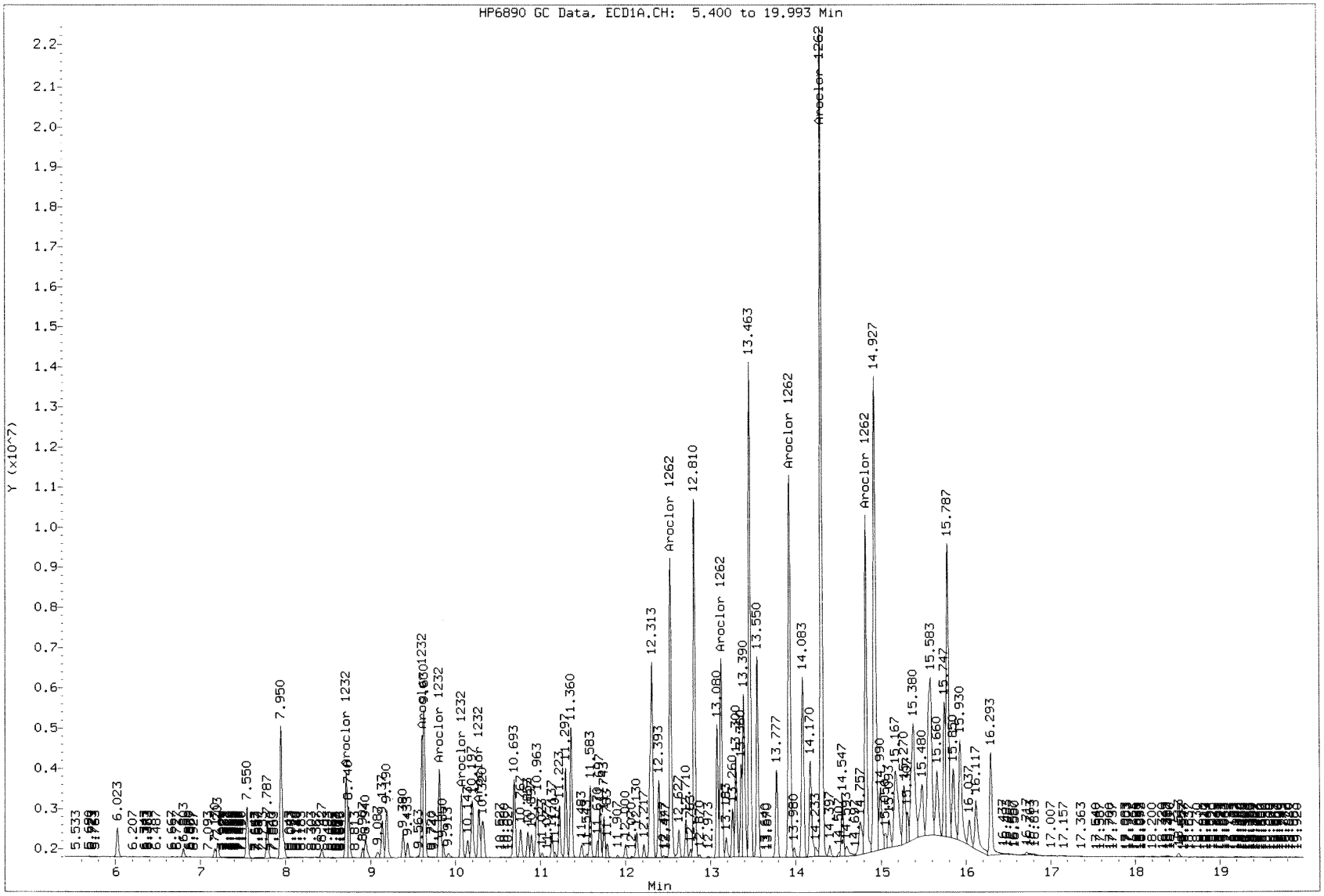
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F031.D
Injection Date: 08-DEC-2018 02:14
Instrument: GC27.i
Client Sample ID:



020890

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F031.D
Injection Date: 08-DEC-2018 02:14
Instrument: GC27.i
Client Sample ID:

After baseline/shoulder
mm 12/12/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F032.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F032.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F032.D
Inj Date : 08-DEC-2018 02:45
Sample Info: 4268 1.0PPB PCB7-60I
Misc Info :
Cal Date : 12-DEC-2018 12:38
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

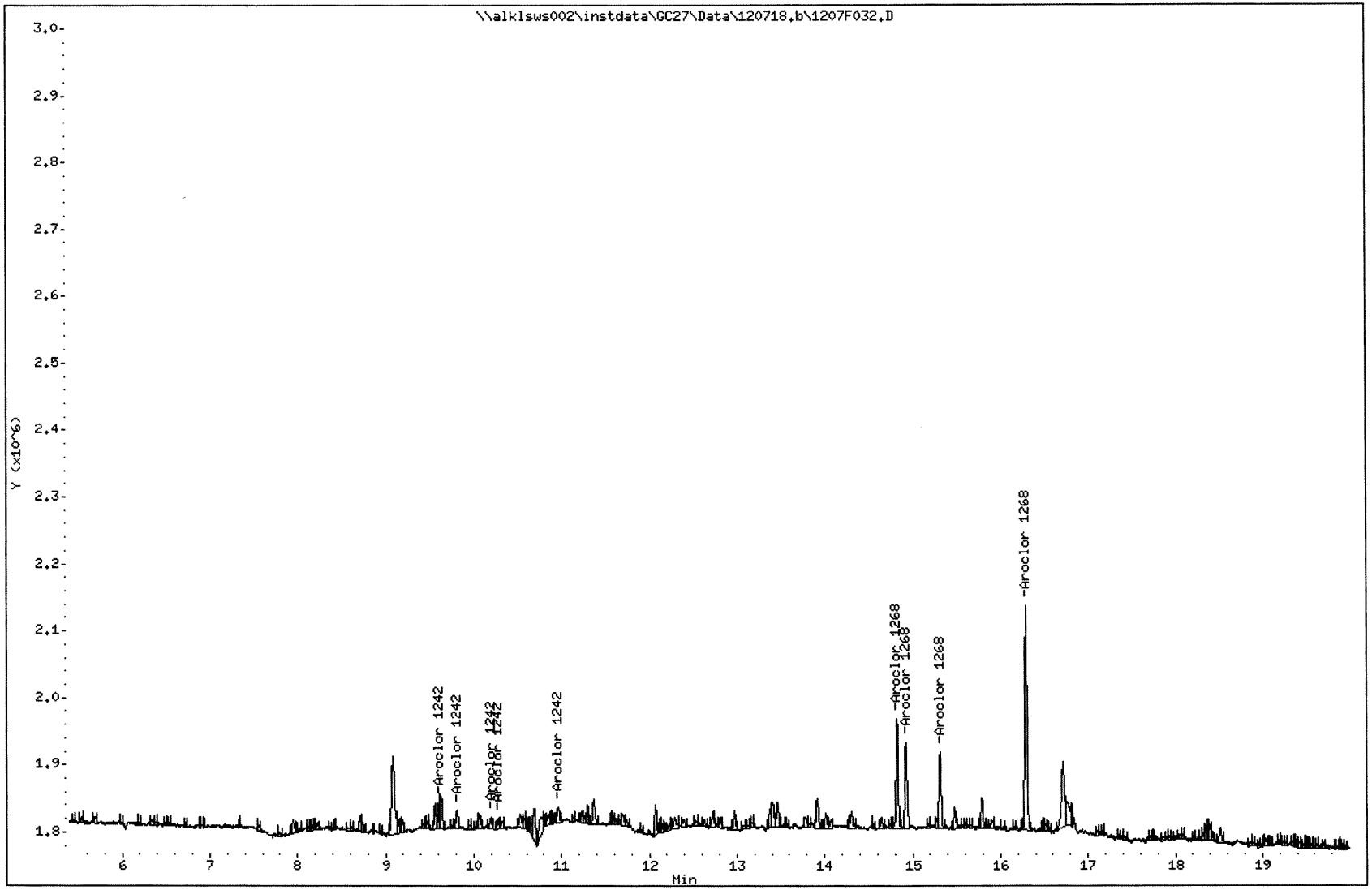
Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	9.607	9.934	36889	22159	0.870	1.35	80.00- 120.00	100.00
	9.810	11.077	46690	18884	1.22	1.10	71.17- 106.76	126.57
	10.200	11.264	25393	12760	1.00	1.16	49.71- 74.56	68.84
	10.273	11.447	19559	14186	0.968	1.23	40.98- 61.47	53.02
	10.963	12.494	42692	17127	1.28	1.14	57.72- 86.58	115.73
			Average of Peak Amounts =		1.07	1.20		
Aroclor 1268	14.827	16.214	269225	121440	1.17	1.21	80.00- 120.00	100.00
	14.923	16.340	224702	94733	1.12	1.11	71.67- 107.50	83.46
	15.310	16.714	187974	90183	1.05	1.18	63.30- 94.96	69.82
	16.293	17.737	575055	253469	1.11	1.15	186.23- 279.34	213.60
			Average of Peak Amounts =		1.11	1.16		

MM 12/19/18

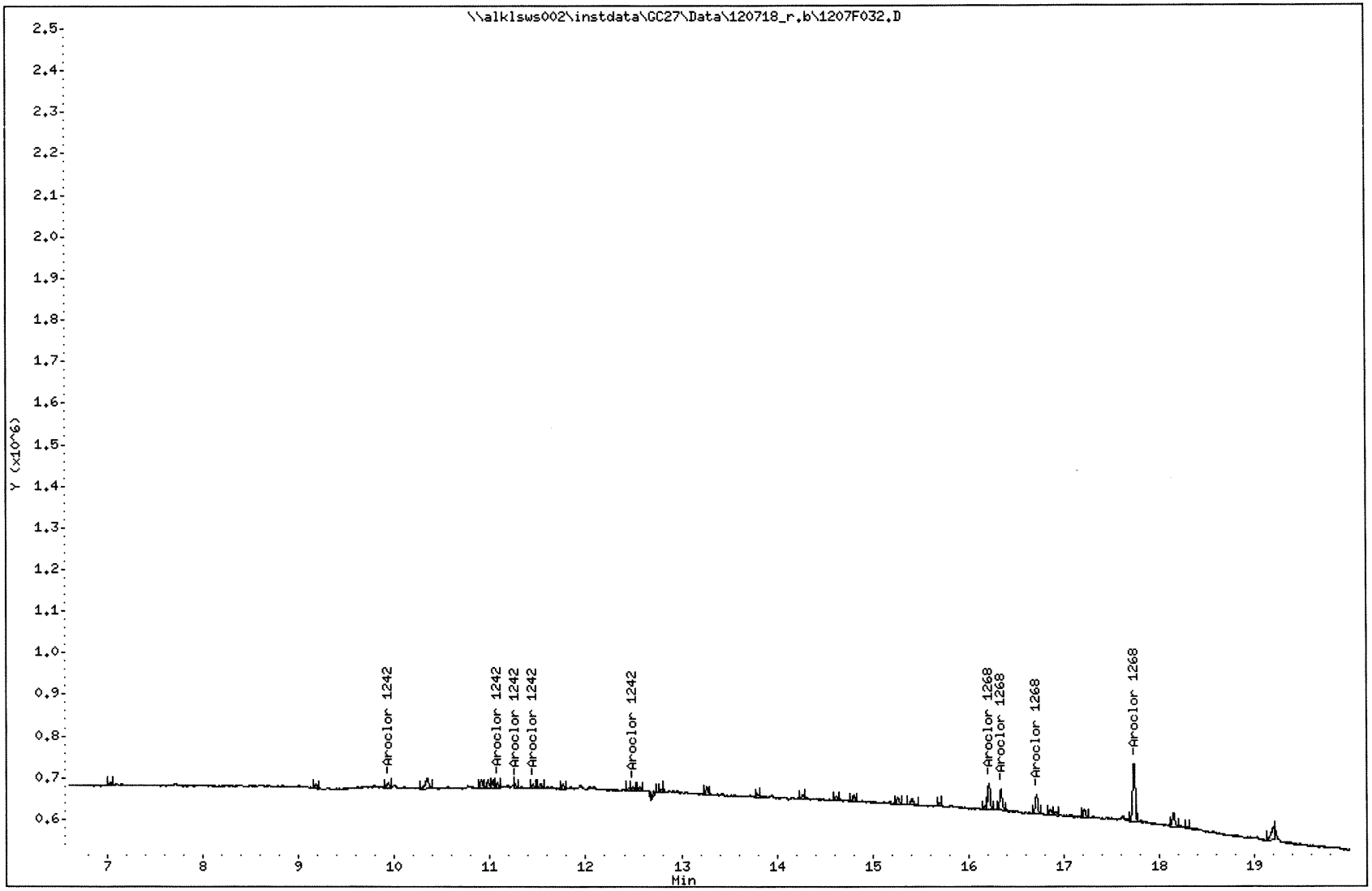
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F032.D
Date : 08-DEC-2018 02:45
Client ID:
Sample Info: 4268 1.0PPB PCB7-60I

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020893

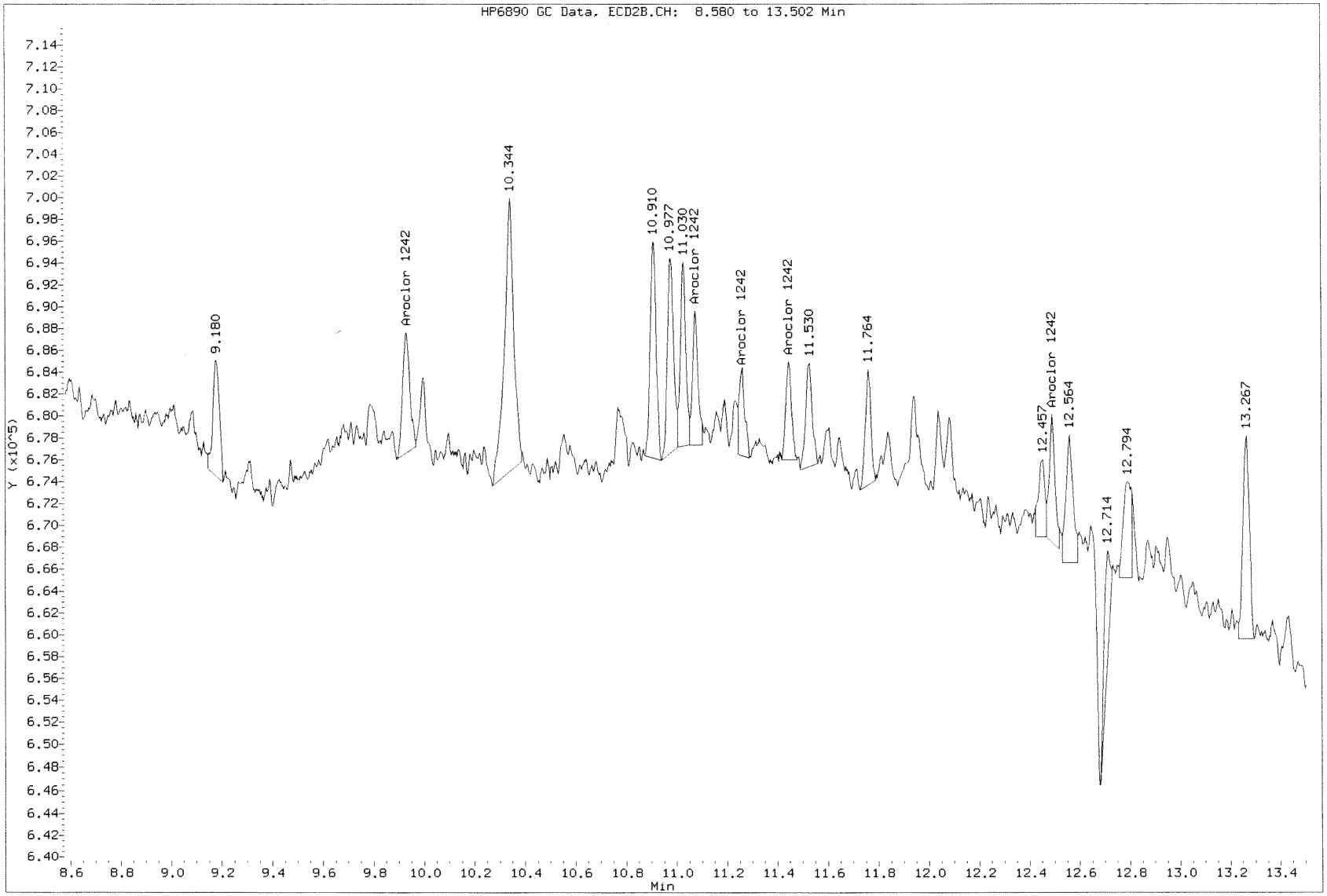
Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F032.D
Date : 08-DEC-2018 02:45
Client ID:
Instrument: GC27.i
Sample Info: 4268 1.0PPB PCB7-60I
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



020894

WP 12/17/18 Before MMC 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F032.D
Injection Date: 08-DEC-2018 02:45
Instrument: GC27.i
Client Sample ID:

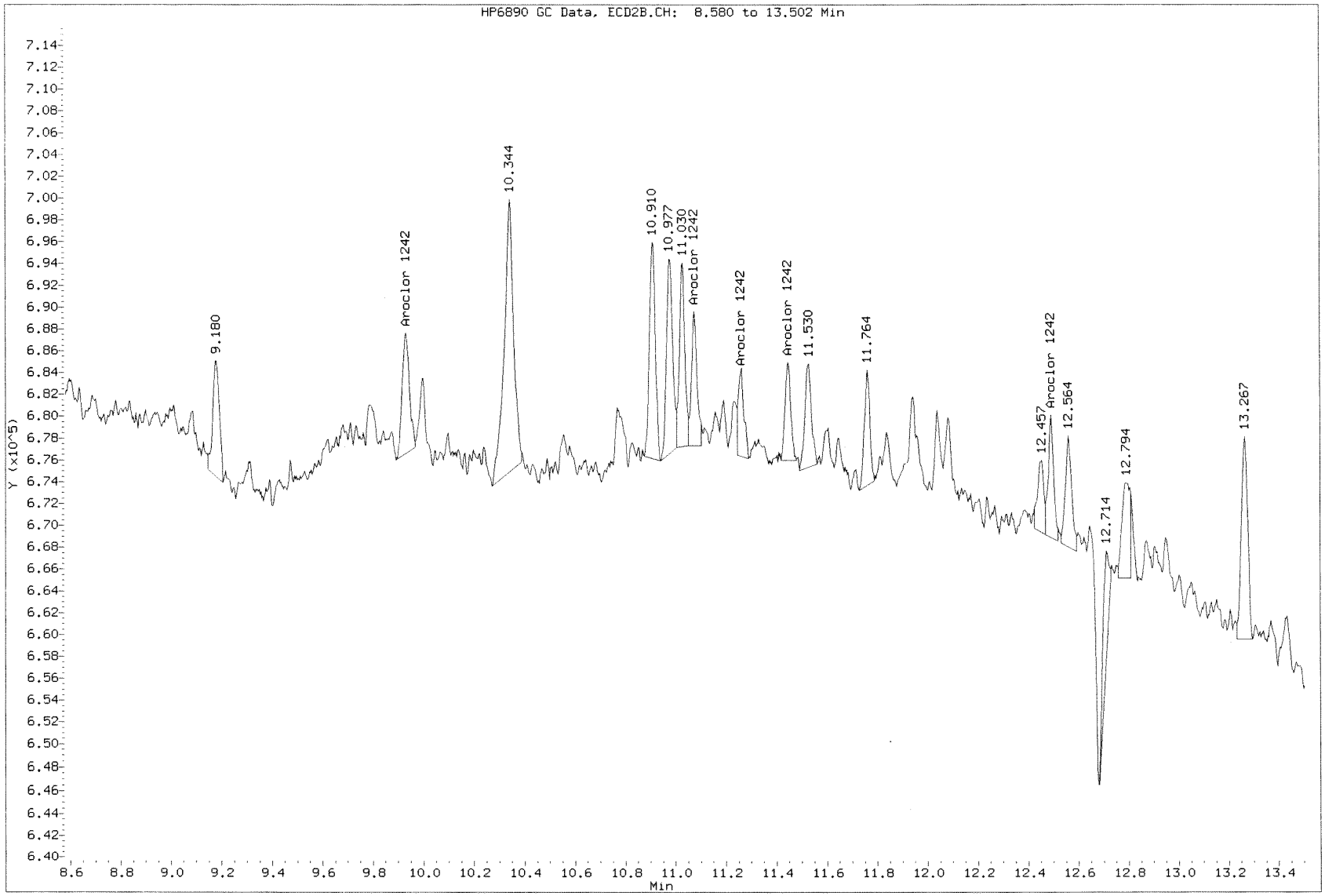


020895

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F032.D
Injection Date: 08-DEC-2018 02:45
Instrument: GC27.i
Client Sample ID:

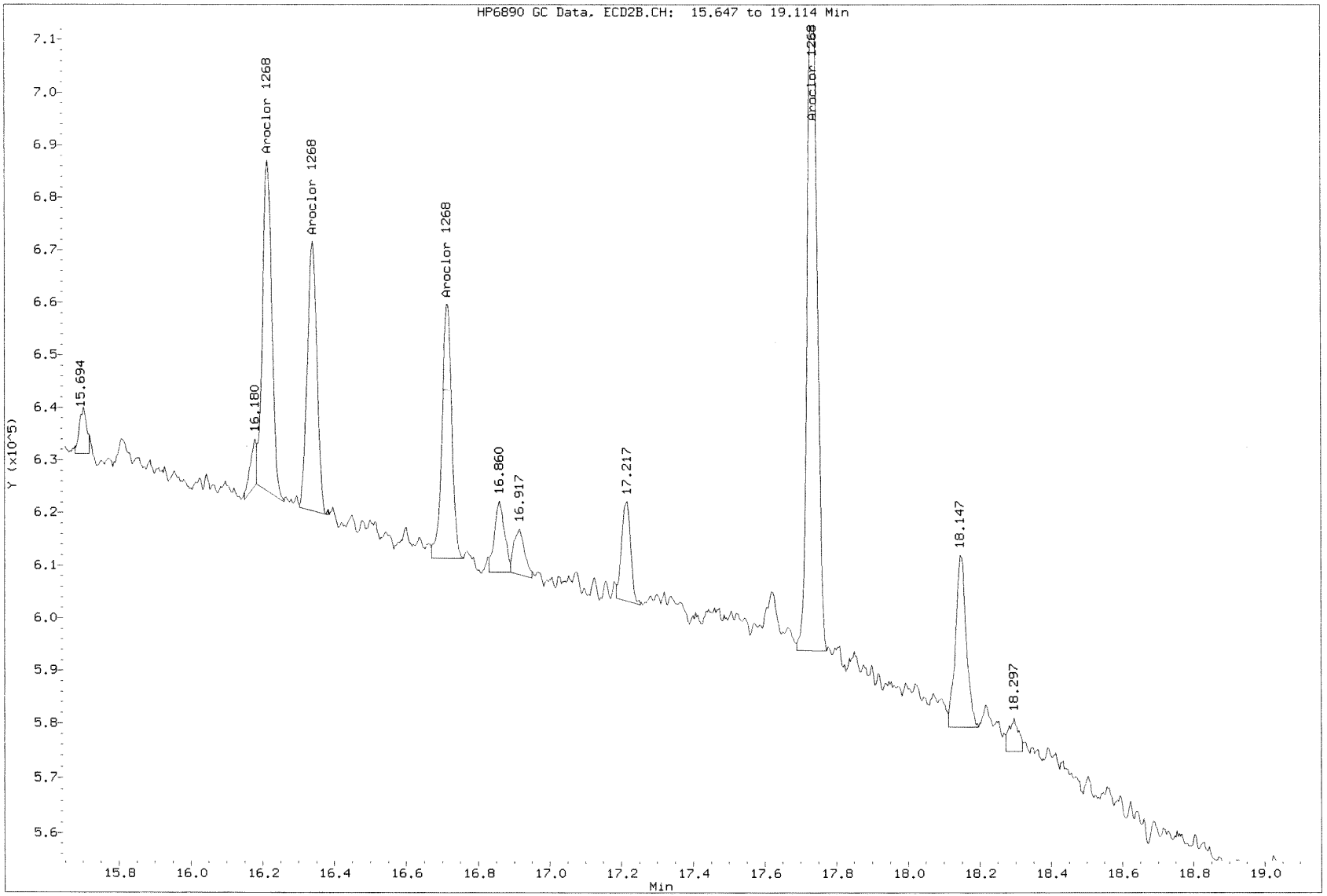
JMF 12/17/18

After baseline is recalder
MR 12/18/18



020896

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F032.D
Injection Date: 08-DEC-2018 02:45
Instrument: GC27.i
Client Sample ID:

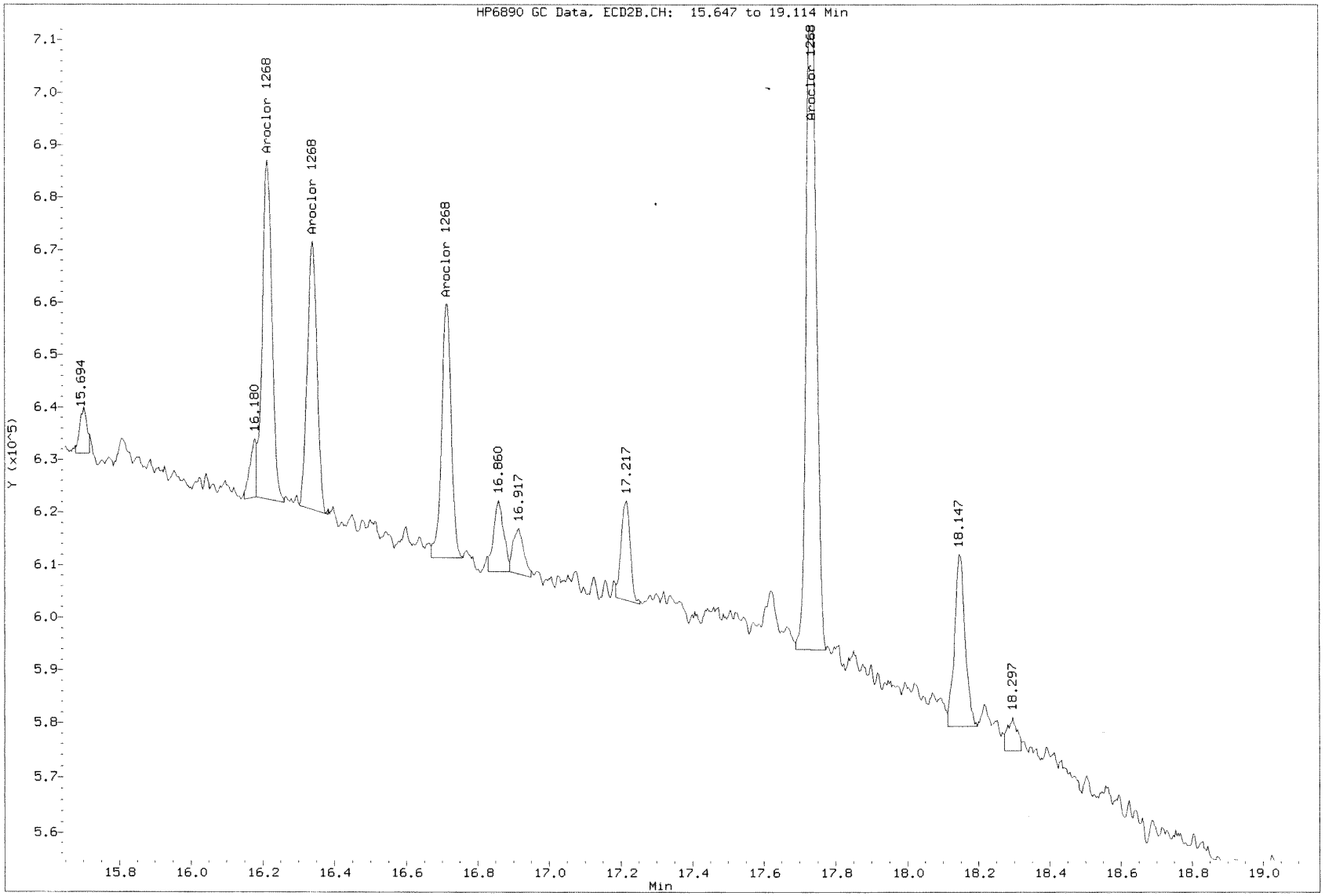


020897

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F032.D
Injection Date: 08-DEC-2018 02:45
Instrument: GC27.i
Client Sample ID:

UM 12/17/18

After baseline/shoulder mm 12/12/18



020898

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F033.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F033.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F033.D
Inj Date : 08-DEC-2018 03:17
Sample Info: 4268 2.0PPB PCB7-60J
Misc Info :
Cal Date : 12-DEC-2018 12:38
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	9.609	9.936	94072	33600	2.22	2.05	80.00- 120.00	100.00(M)
	9.812	11.076	81648	35889	2.13	2.10	71.17- 106.76	86.79(M)
	10.195	11.262	50301	21980	1.99	1.99	49.71- 74.56	53.47(M)
	10.275	11.449	38803	24303	1.92	2.11	40.98- 61.47	41.25(M)
	10.965	12.492	71197	34835	2.13	2.32	57.72- 86.58	75.68(M)
			Average of Peak Amounts =		2.08	2.11		
Aroclor 1268	14.825	16.216	511351	251302	2.21	2.51	80.00- 120.00	100.00(M)
	14.925	16.342	449902	200349	2.23	2.35	71.67- 107.50	87.98(M)
	15.312	16.716	391645	173193	2.18	2.26	63.30- 94.96	76.59(M)
	16.292	17.736	1129873	506873	2.18	2.29	186.23- 279.34	220.96(M)
			Average of Peak Amounts =		2.20	2.35		

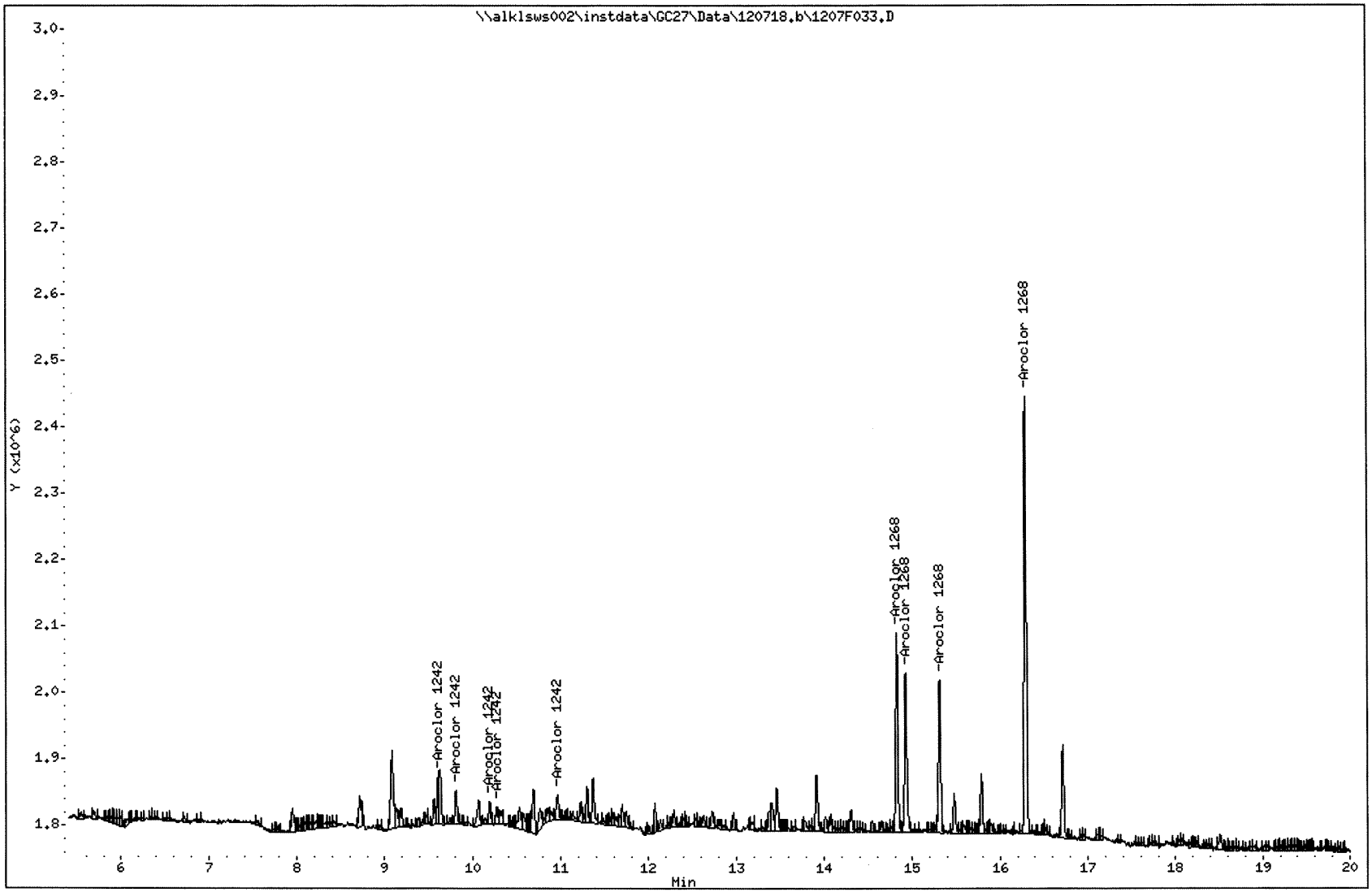
QC Flag Legend

M - Compound response manually integrated.

020899

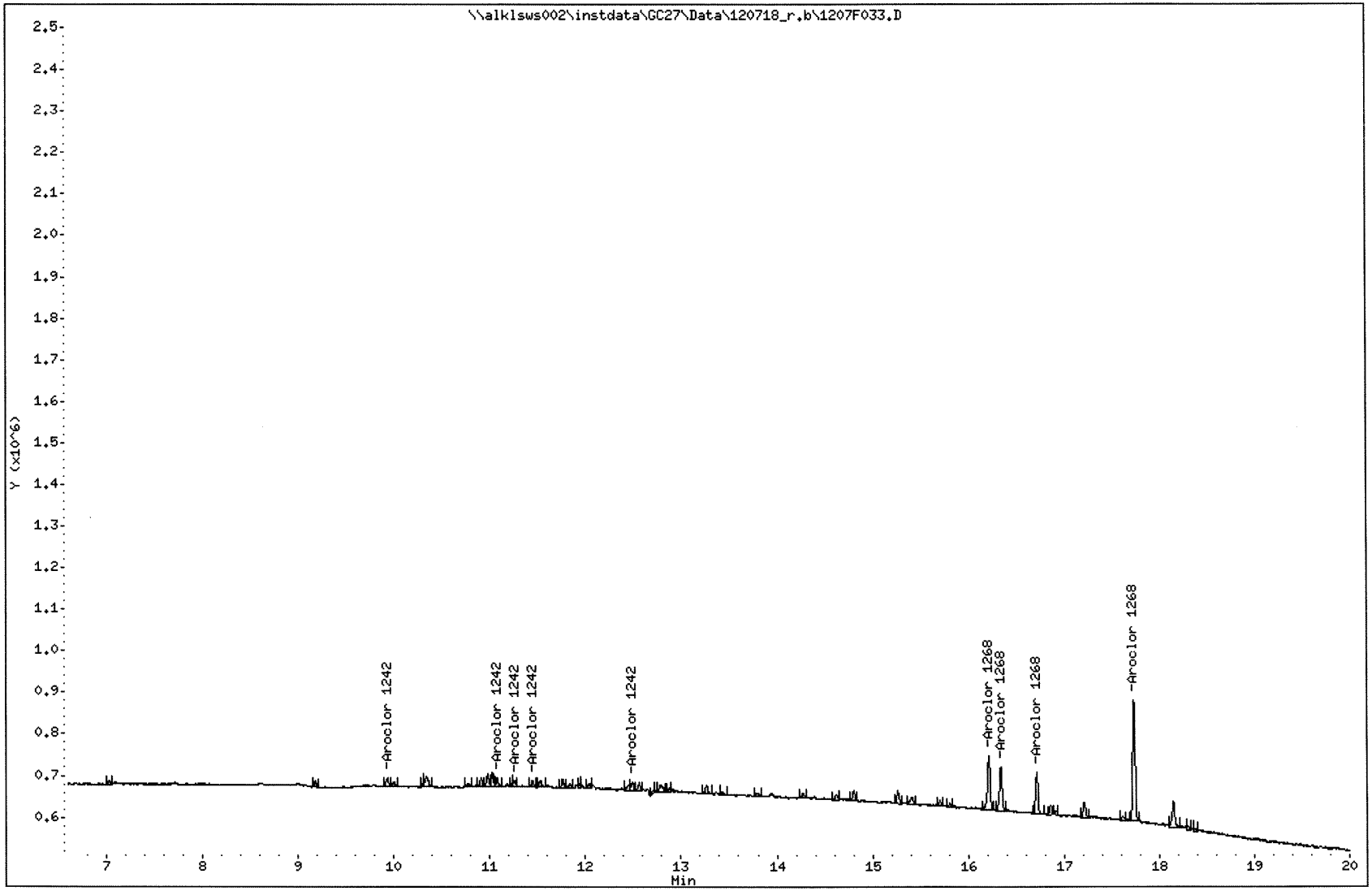
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F033.D
Date : 08-DEC-2018 03:17
Client ID:
Sample Info: 4268 2.0PPB PCB7-60J

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020900

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F033.D
Date : 08-DEC-2018 03:17
Client ID:
Instrument: GC27.i
Sample Info: 4268 2.0PPB PCB7-60J
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32

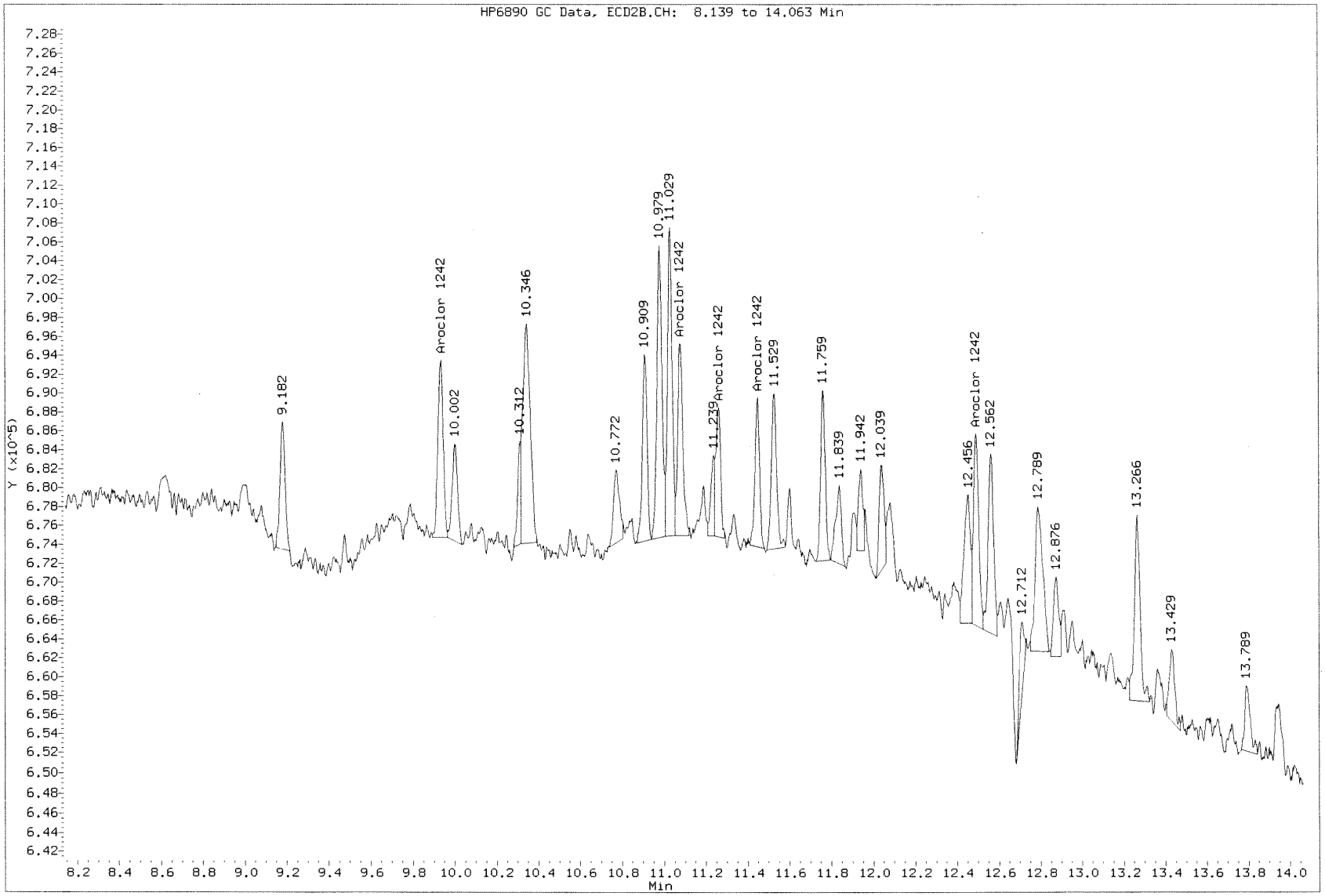


020901

Before
MMZ 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F033.D
Injection Date: 08-DEC-2018 03:17
Instrument: GC27.i
Client Sample ID:

WMA 12/17/18

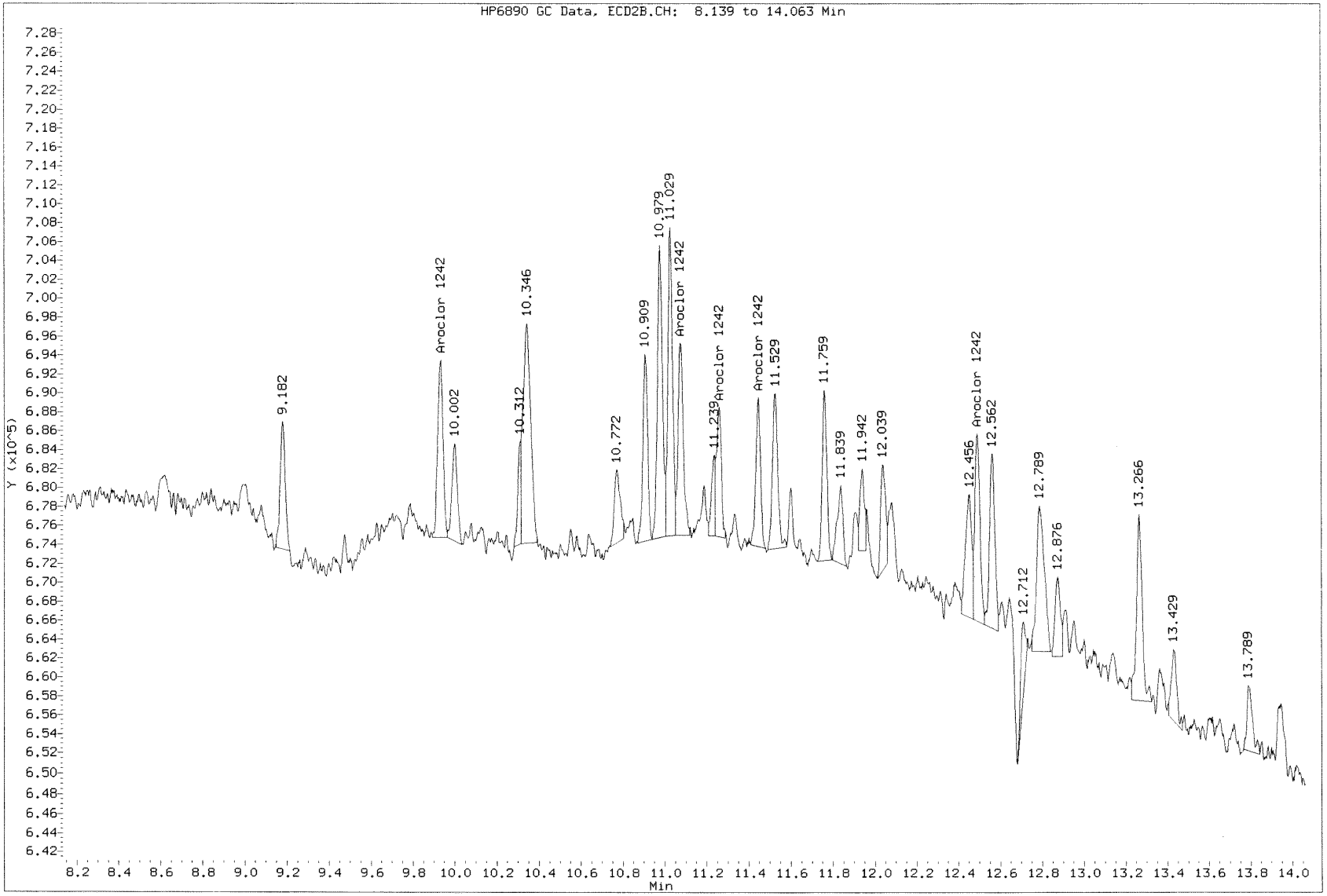


020902

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F033.D
Injection Date: 08-DEC-2018 03:17
Instrument: GC27.i
Client Sample ID:

LA 12/17/18

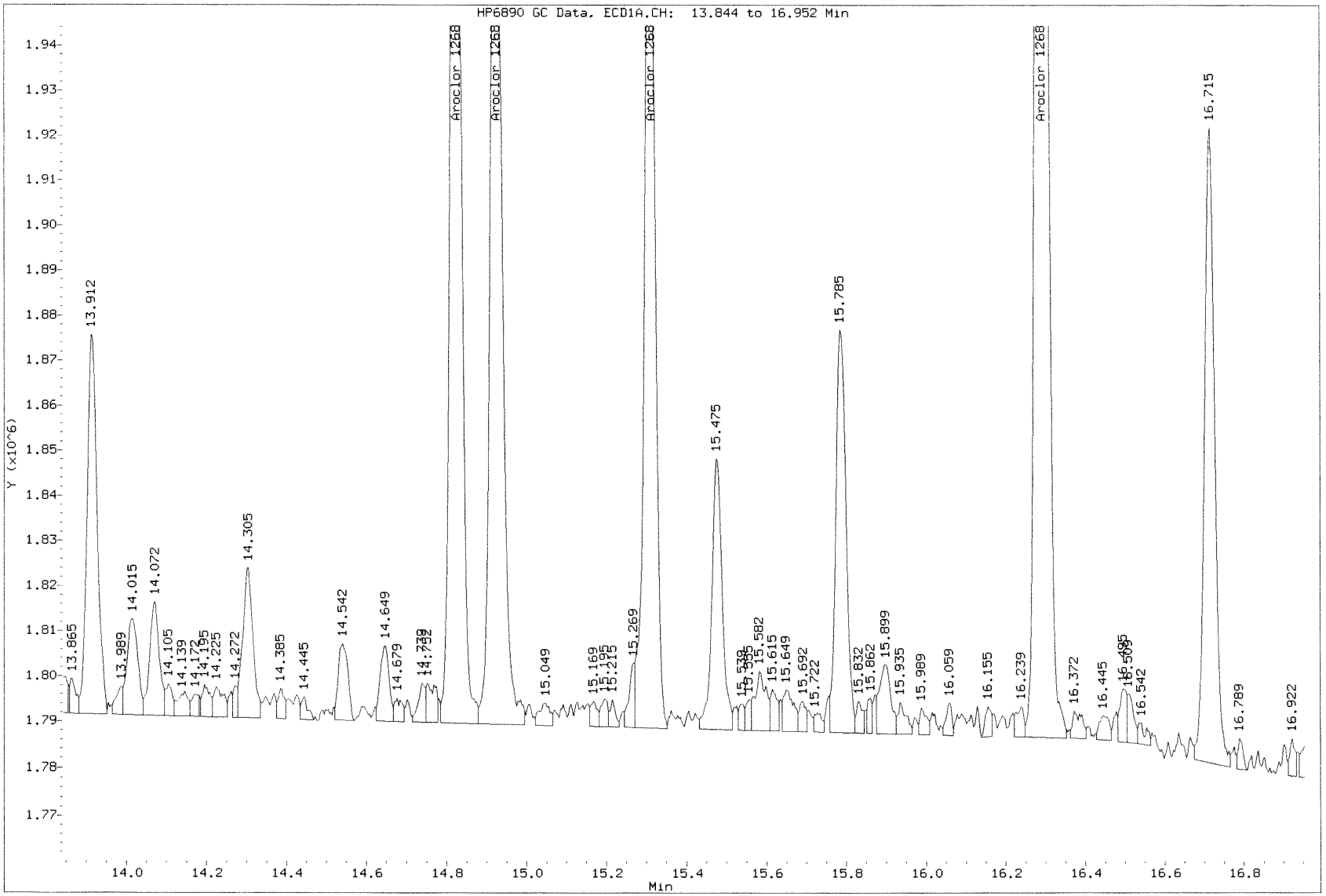
After baseline/shoulder MMZ 12/12/18



UM 12/17/18

Before
MR 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F033.D
Injection Date: 08-DEC-2018 03:17
Instrument: GC27.i
Client Sample ID:

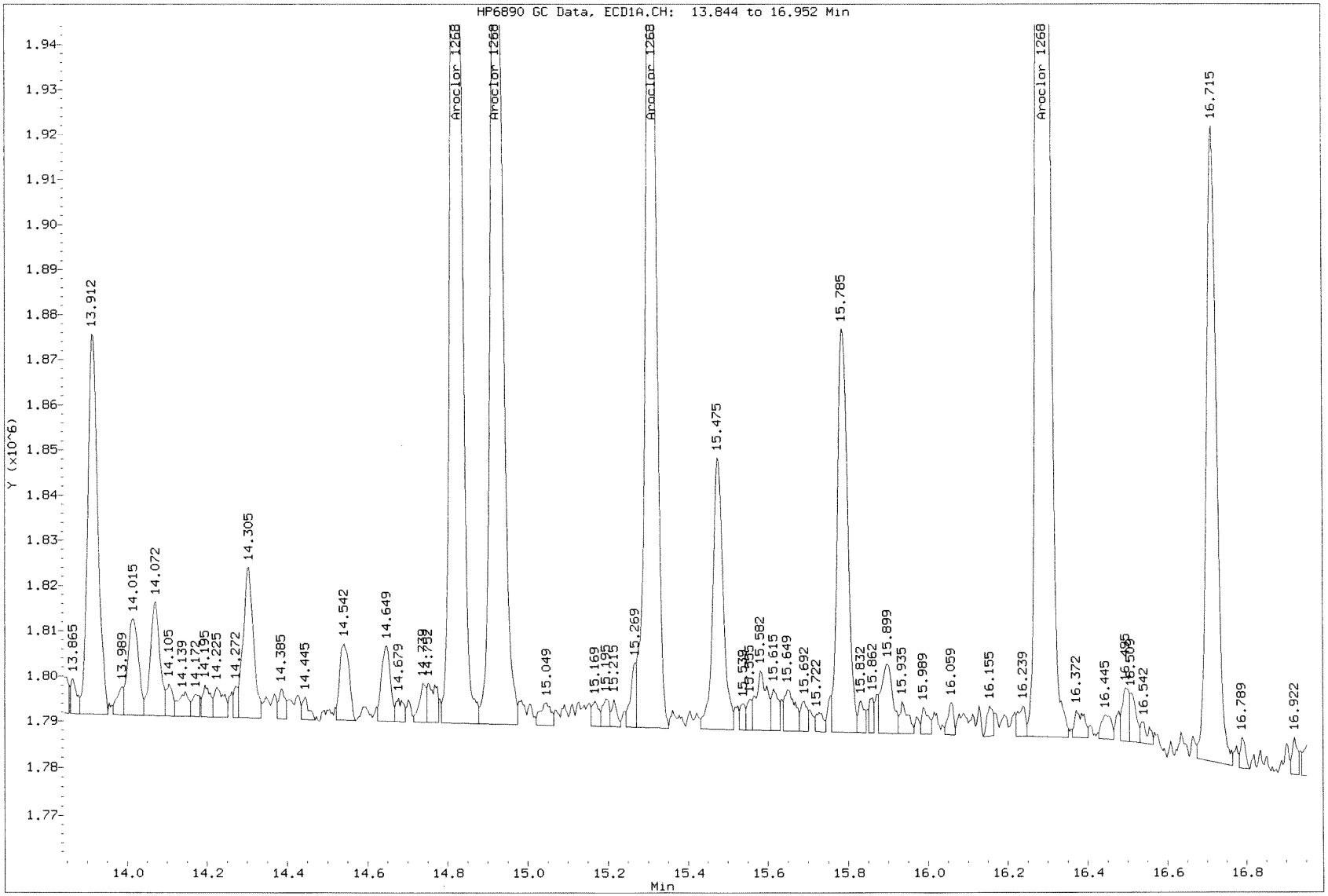


020904

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F033.D
Injection Date: 08-DEC-2018 03:17
Instrument: GC27.i
Client Sample ID:

WA 12/17/18

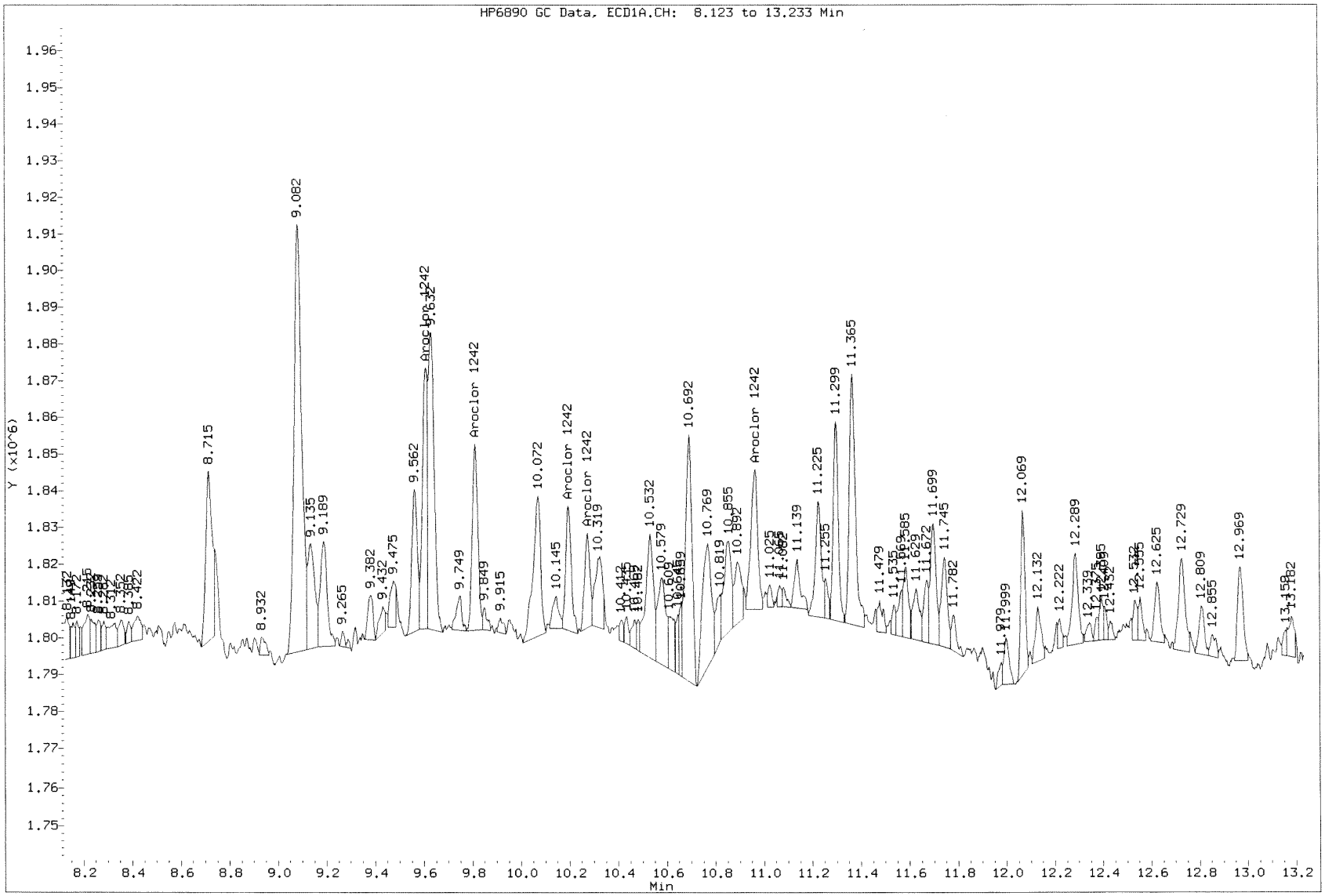
After baseline/shoulder mm 12/12/18



020905

Before
MM 12/12/18
mm 12/12/18

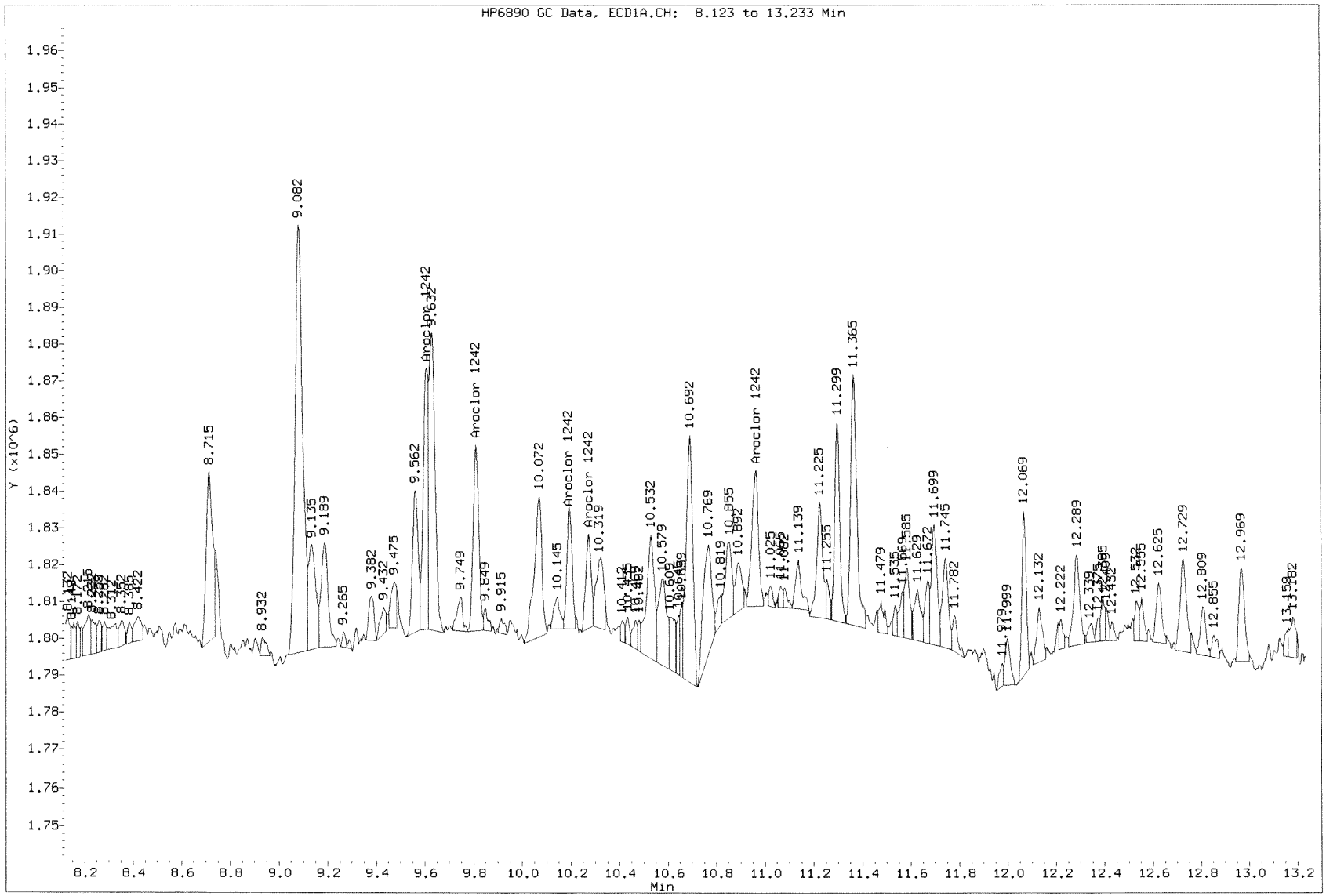
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F033.D
Injection Date: 08-DEC-2018 03:17
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F033.D
Injection Date: 08-DEC-2018 03:17
Instrument: GC27.i
Client Sample ID:

WA 12/17/18

After roseline/shoulder



020907

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F034.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F034.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F034.D
Inj Date : 08-DEC-2018 03:48
Sample Info: 4268 5.0PPB PCB7-58J
Misc Info :
Cal Date : 12-DEC-2018 12:38
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	9.608	9.932	267455	85506	6.31	5.21	80.00- 120.00	100.00(M)
	9.812	11.078	204809	93078	5.34	5.44	71.17- 106.76	76.58(M)
	10.195	11.262	144819	63833	5.72	5.79	49.71- 74.56	54.15(M)
	10.275	11.448	117891	60101	5.83	5.23	40.98- 61.47	44.08(M)
	10.965	12.492	188792	79234	5.64	5.28	57.72- 86.58	70.59(M)
			Average of Peak Amounts =		5.77	5.39		
Aroclor 1268	14.825	16.215	1233509	560531	5.34	5.59	80.00- 120.00	100.00
	14.925	16.342	1037298	466327	5.15	5.48	71.67- 107.50	84.09
	15.312	16.715	997193	438890	5.56	5.73	63.30- 94.96	80.84
	16.292	17.735	2782961	1216534	5.37	5.50	186.23- 279.34	225.61
			Average of Peak Amounts =		5.36	5.58		

QC Flag Legend

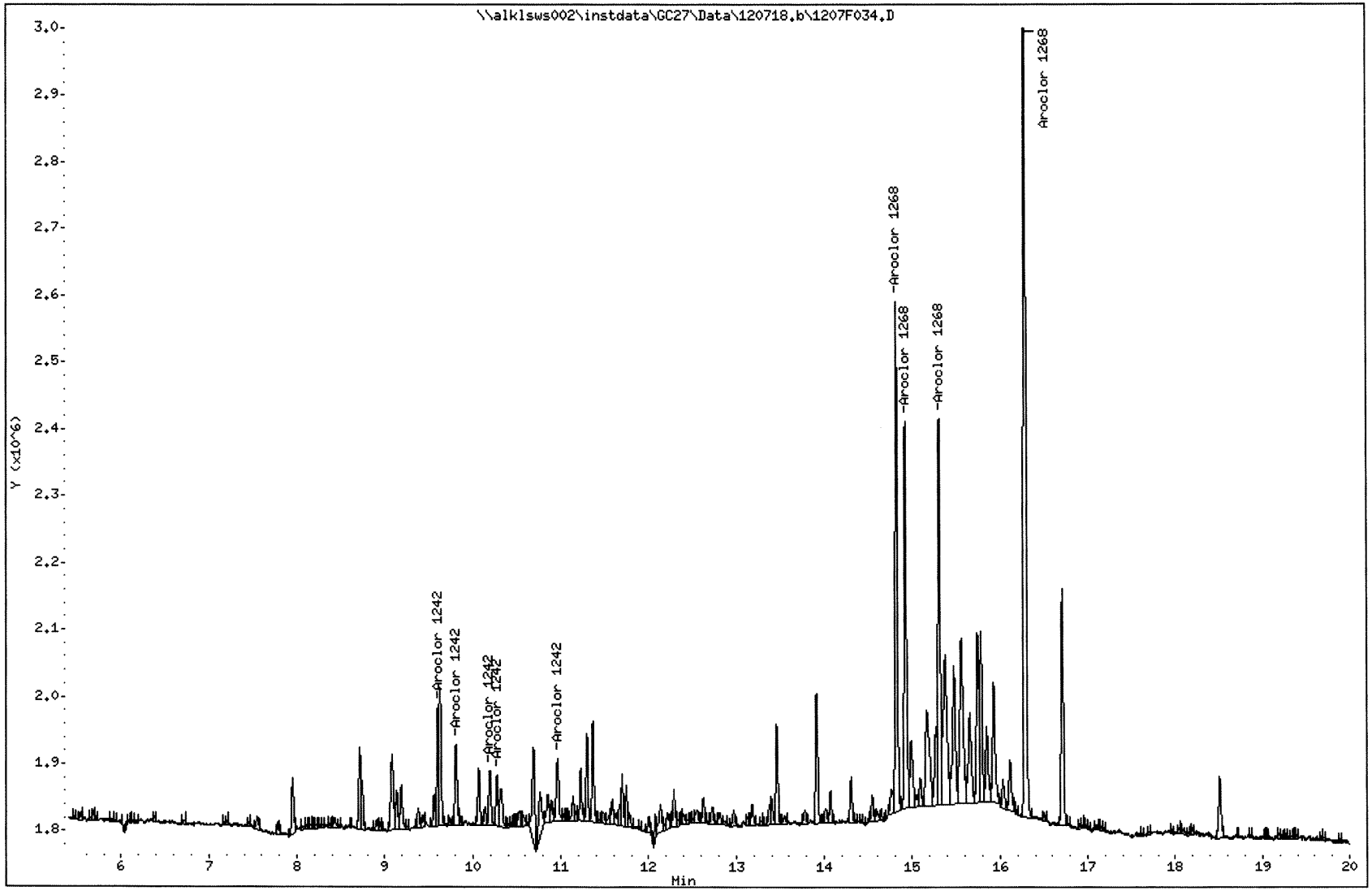
M - Compound response manually integrated.

mm 12/18/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F034.D
Date : 08-DEC-2018 03:48
Client ID:
Sample Info: 4268 5.0PPB PCB7-58J

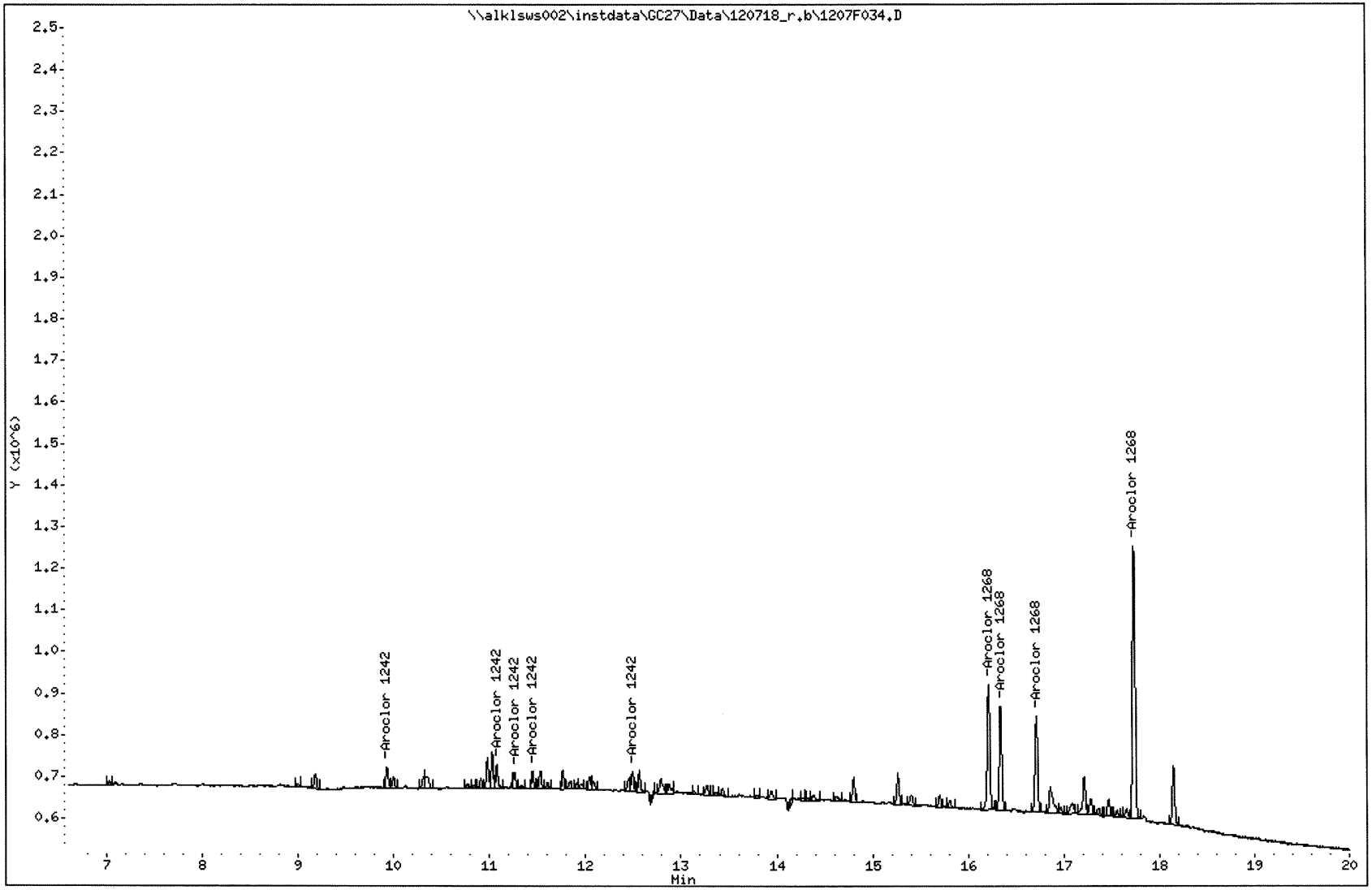
Instrument: GC27.i

Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020909

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F034.D
Date : 08-DEC-2018 03:48
Client ID:
Instrument: GC27.i
Sample Info: 4268 5.0PPB PCB7-58J
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32

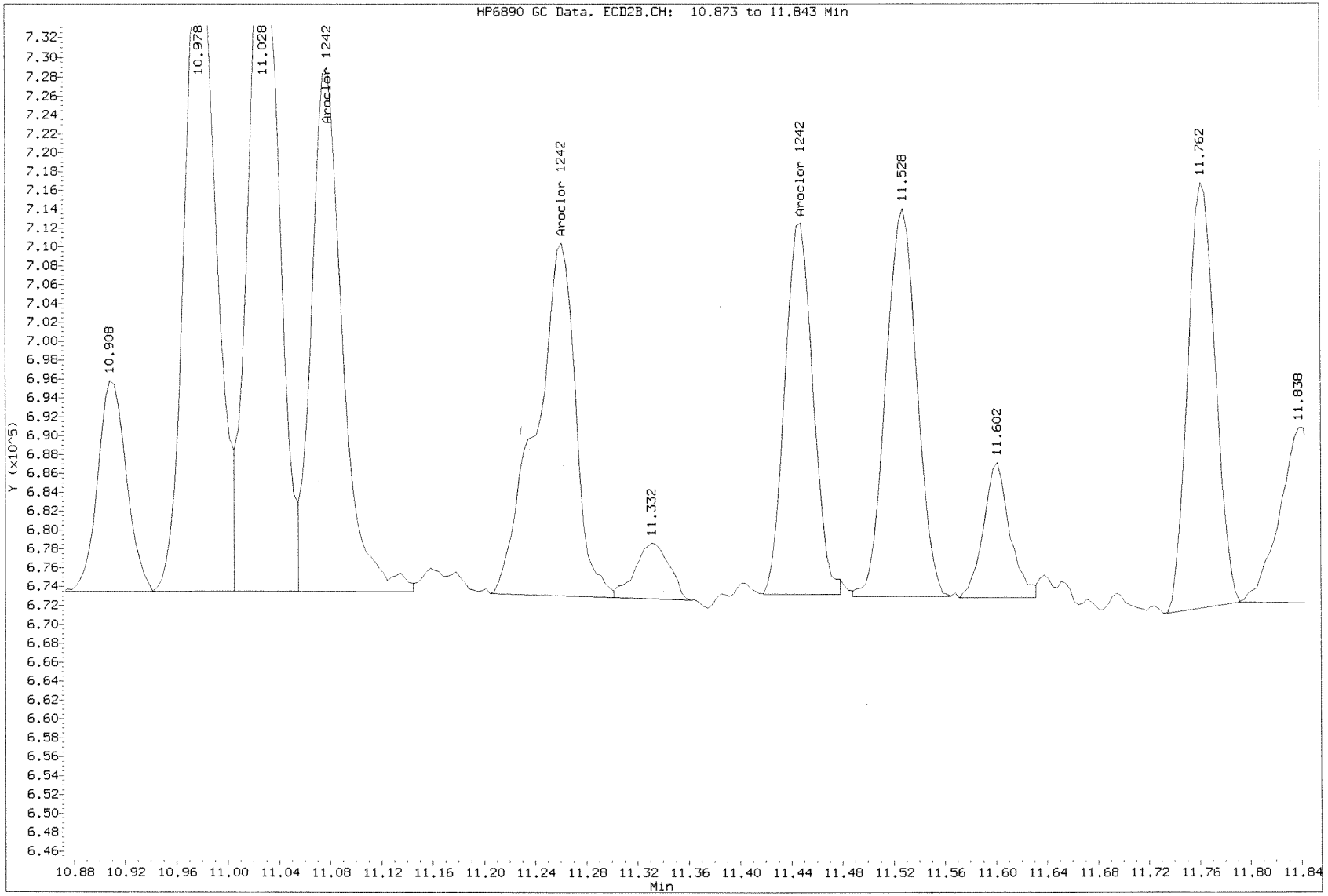


020910

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F034.D
Injection Date: 08-DEC-2018 03:48
Instrument: GC27.i
Client Sample ID:

CA 12/17/18

BBarr MM 12/12/18

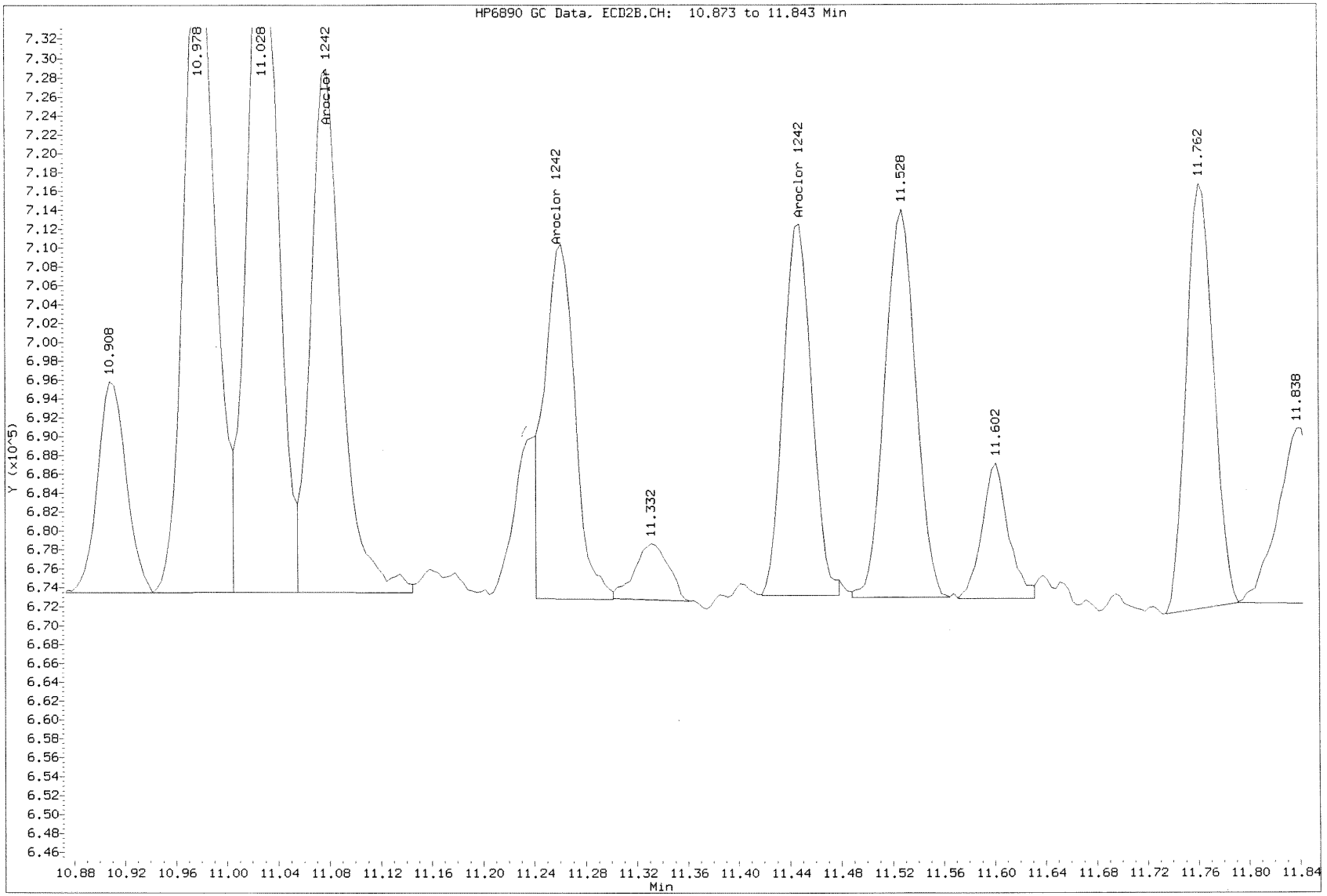


020911

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F034.D
Injection Date: 08-DEC-2018 03:48
Instrument: GC27.i
Client Sample ID:

LM 12/17/18

After baseline/shoulder
MC 12/12/18

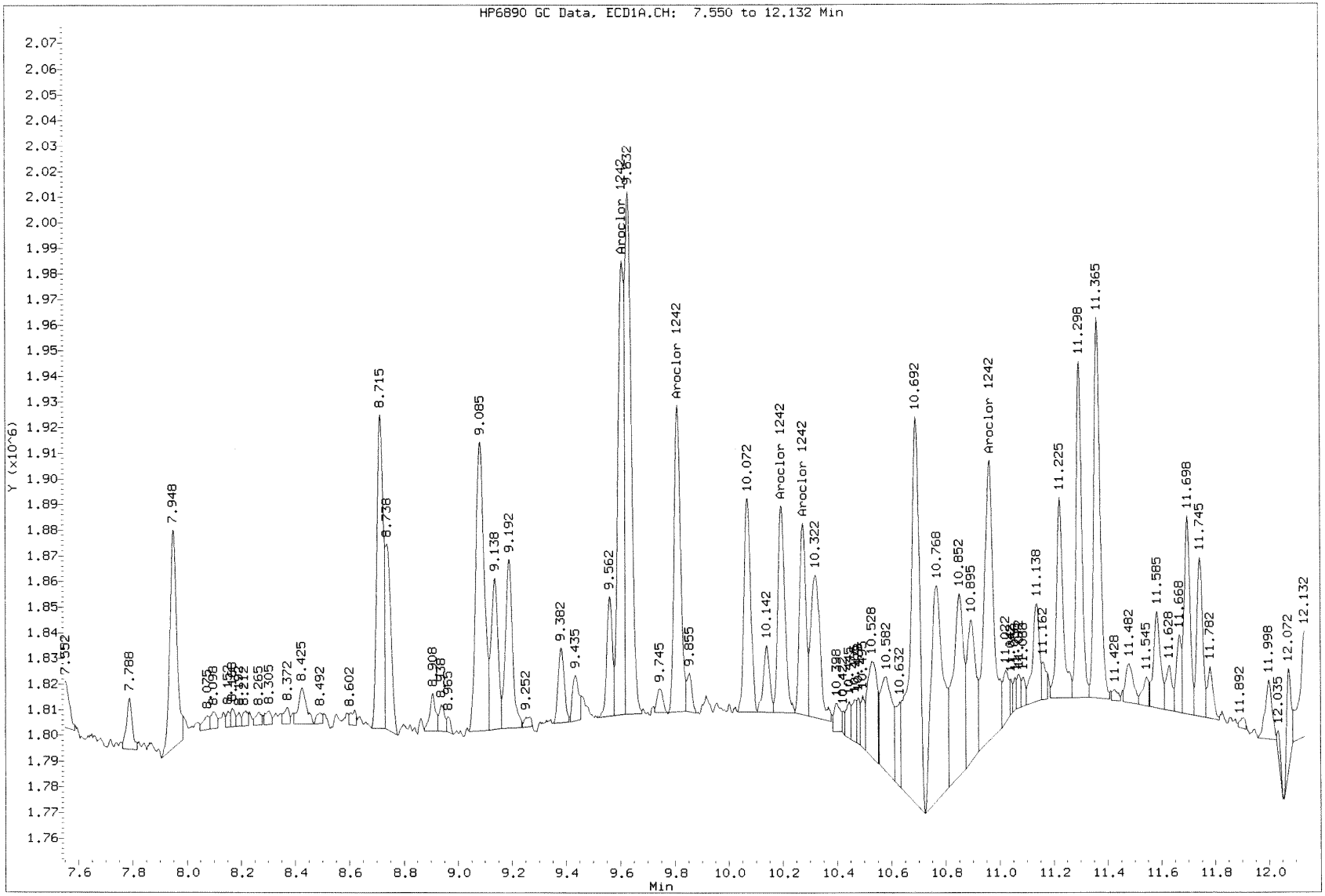


020912

UD 12/17/18

Before
MR 12/20/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F034.D
Injection Date: 08-DEC-2018 03:48
Instrument: GC27.i
Client Sample ID:



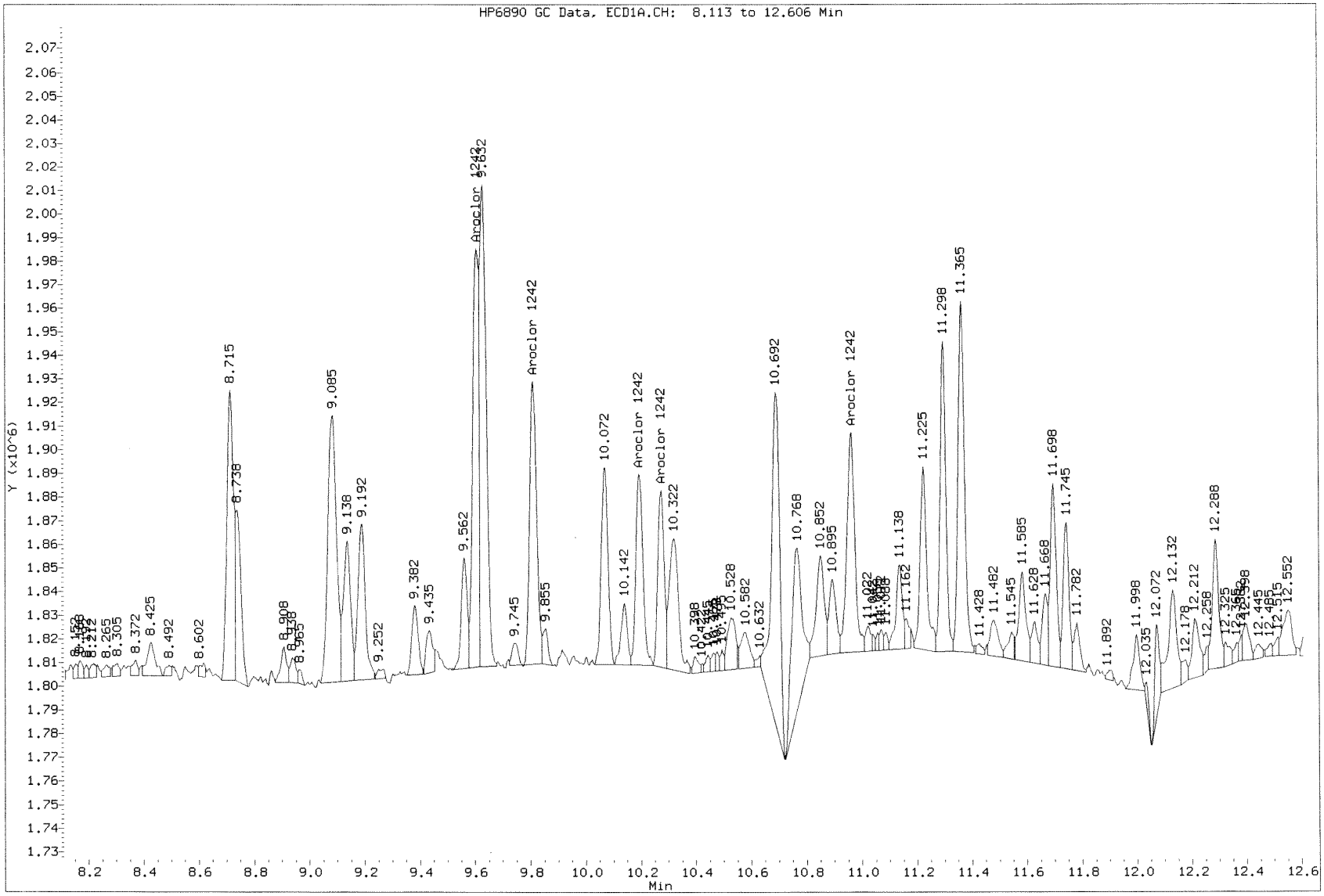
020913

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F034.D
Injection Date: 08-DEC-2018 03:48
Instrument: GC27.i
Client Sample ID:

WA 12/7/18

After baseline/shoulder

MC 12/12/18



020914

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F035.D
Report Date: 12-Dec-2018 12:45

CAS

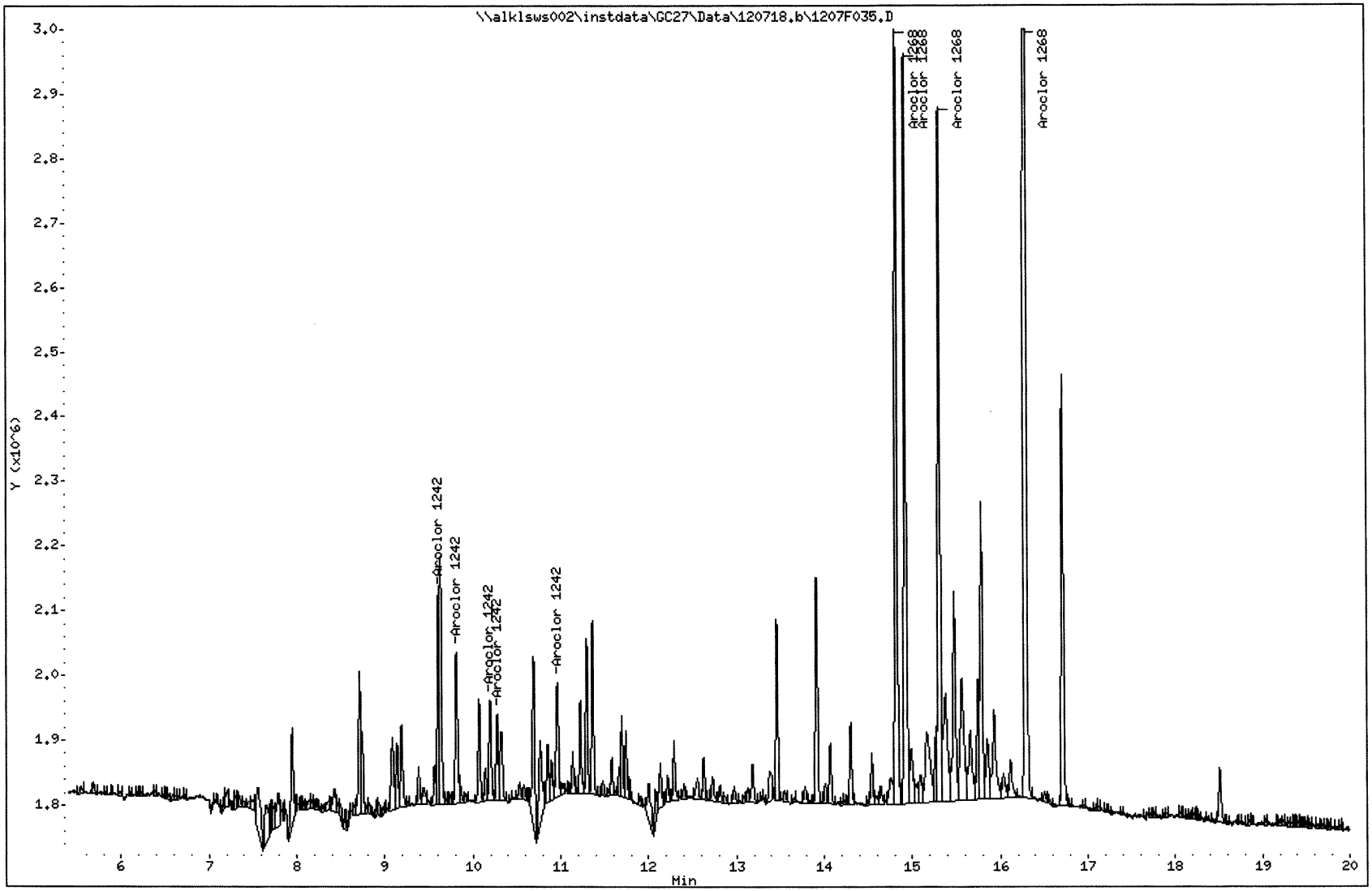
Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F035.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F035.D
Inj Date : 08-DEC-2018 04:19
Sample Info: 4268 10PPB PCB7-58K
Misc Info :
Cal Date : 12-DEC-2018 12:38
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	9.609	9.933	503195	180605	11.9	11.0	80.00- 120.00	100.00
	9.813	11.076	408694	187627	10.6	11.0	71.17- 106.76	81.22
	10.196	11.263	273287	83919	10.8	7.62	49.71- 74.56	54.31
	10.276	11.446	211472	118850	10.5	10.3	40.98- 61.47	42.03
	10.963	12.493	334867	148795	10.0	9.91	57.72- 86.58	66.55
			Average of Peak Amounts =		10.8	9.97		
Aroclor 1268	14.826	16.216	2357399	1047498	10.2	10.5	80.00- 120.00	100.00
	14.926	16.339	2053122	897364	10.2	10.5	71.67- 107.50	87.09
	15.313	16.716	1888828	792782	10.5	10.3	63.30- 94.96	80.12
	16.296	17.736	5101864	2289156	9.84	10.3	186.23- 279.34	216.42
			Average of Peak Amounts =		10.2	10.4		

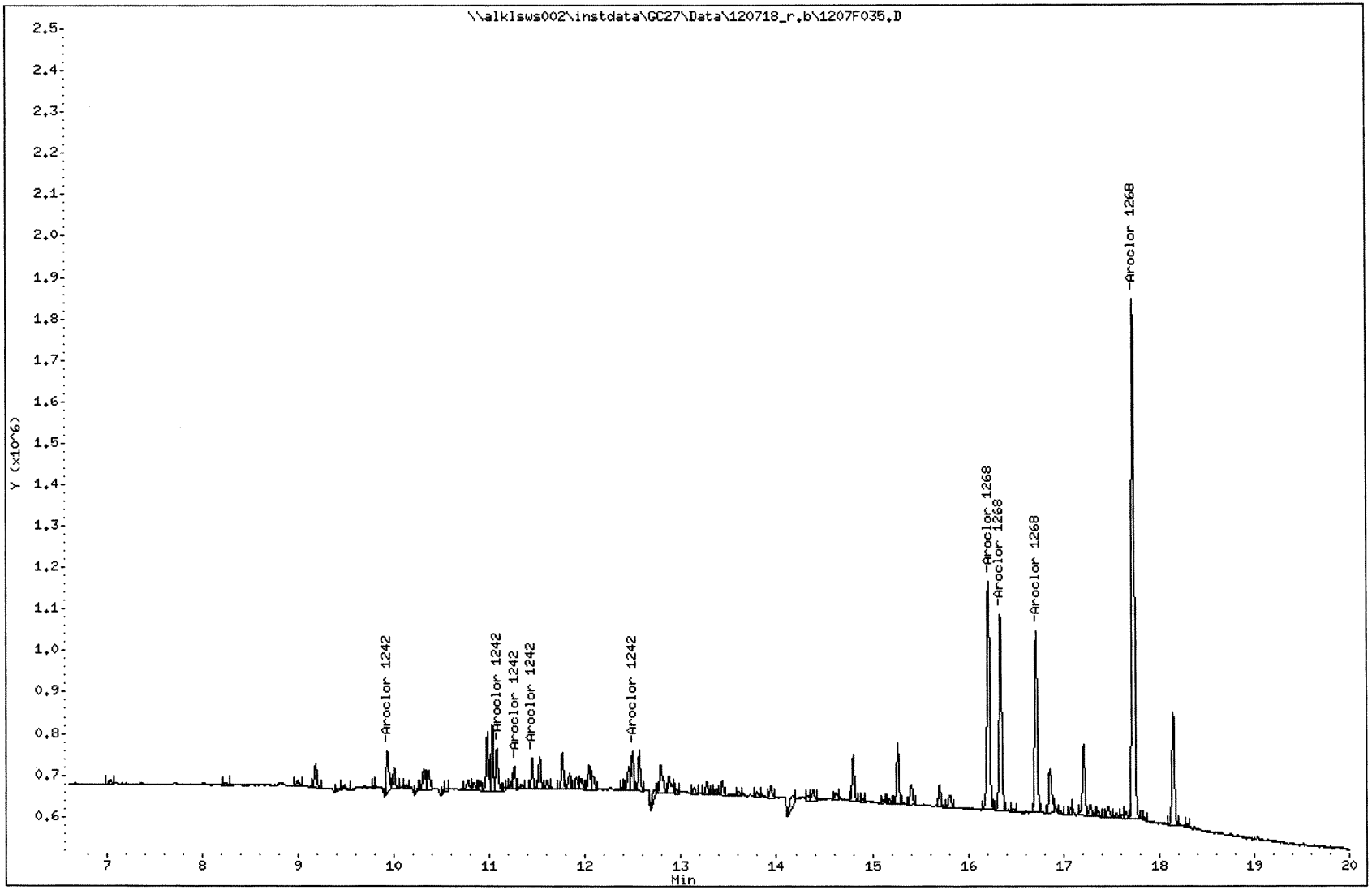
MC 12/19/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F035.D
Date : 08-DEC-2018 04:19
Client ID:
Instrument: GC27.i
Sample Info: 4268 10PPB PCB7-58K
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020916

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F035.D
Date : 08-DEC-2018 04:19
Client ID:
Instrument: GC27.i
Sample Info: 4268 10PPB PCB7-58K
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



020917

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F036.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F036.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F036.D
Inj Date : 08-DEC-2018 04:50
Sample Info: 4268 20PPB PCB7-58L
Misc Info :
Cal Date : 12-DEC-2018 12:39
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

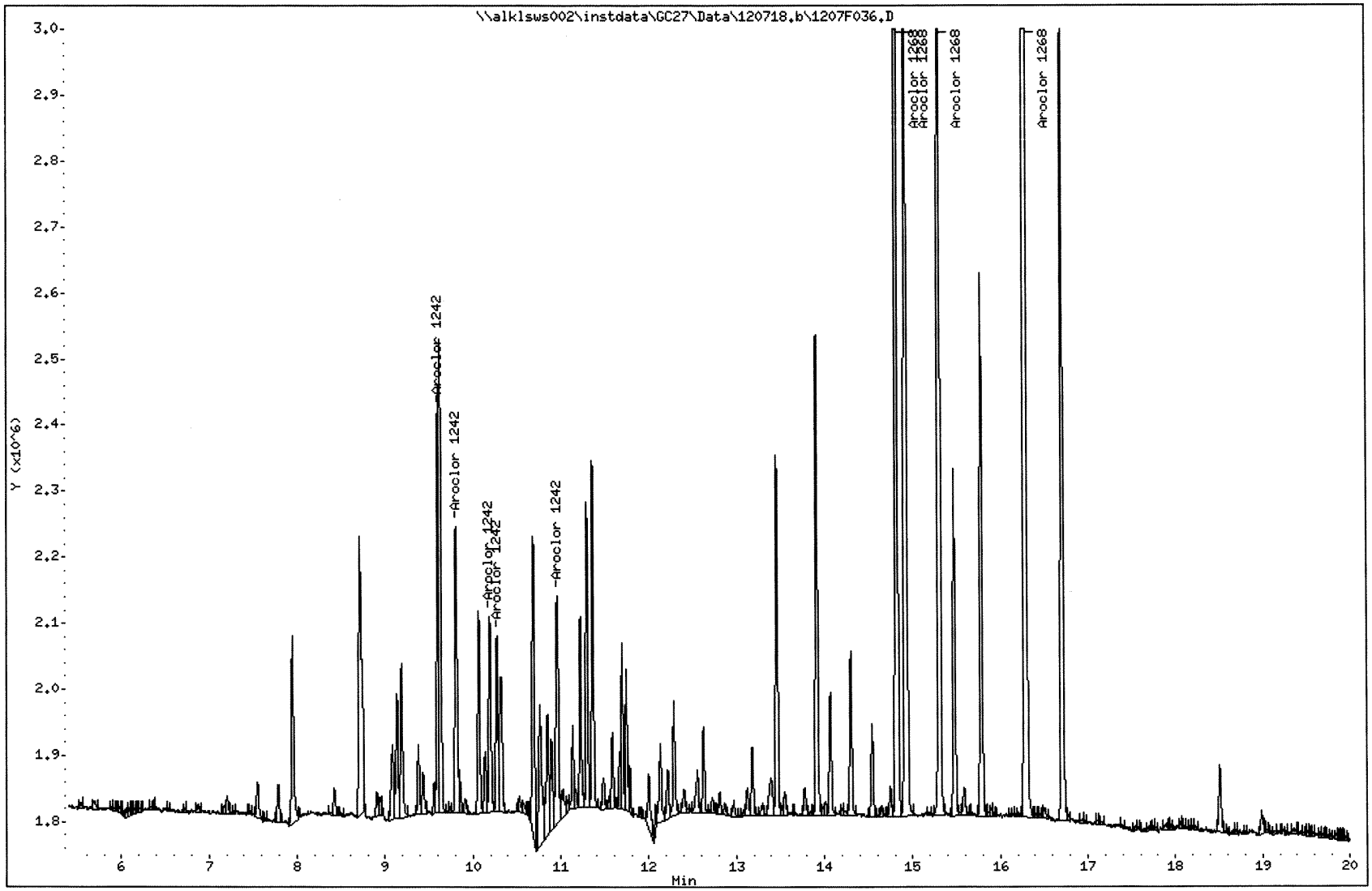
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	9.610	9.933	837703	302372	19.8	18.4	80.00- 120.00	100.00
	9.813	11.077	746843	336626	19.5	19.7	71.17- 106.76	89.15
	10.196	11.263	514352	222967	20.3	20.2	49.71- 74.56	61.40
	10.276	11.447	420887	222261	20.8	19.3	40.98- 61.47	50.24
	10.963	12.493	716680	299295	21.4	19.9	57.72- 86.58	85.55
			Average of Peak Amounts =		20.4	19.5		
Aroclor 1268	14.826	16.217	4461956	1954823	19.3	19.5	80.00- 120.00	100.00
	14.926	16.340	3954663	1721524	19.6	20.2	71.67- 107.50	88.63
	15.310	16.717	3495521	1537212	19.5	20.1	63.30- 94.96	78.34
	16.296	17.737	10081386	4455500	19.5	20.1	186.23- 279.34	225.94
			Average of Peak Amounts =		19.5	20.0		

mm 12/19/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F036.D
Date : 08-DEC-2018 04:50
Client ID:
Sample Info: 4268 20PPB PCB7-58L

Instrument: GC27.i

Operator: SM
Column phase: DB-35MS
Column diameter: 0.32

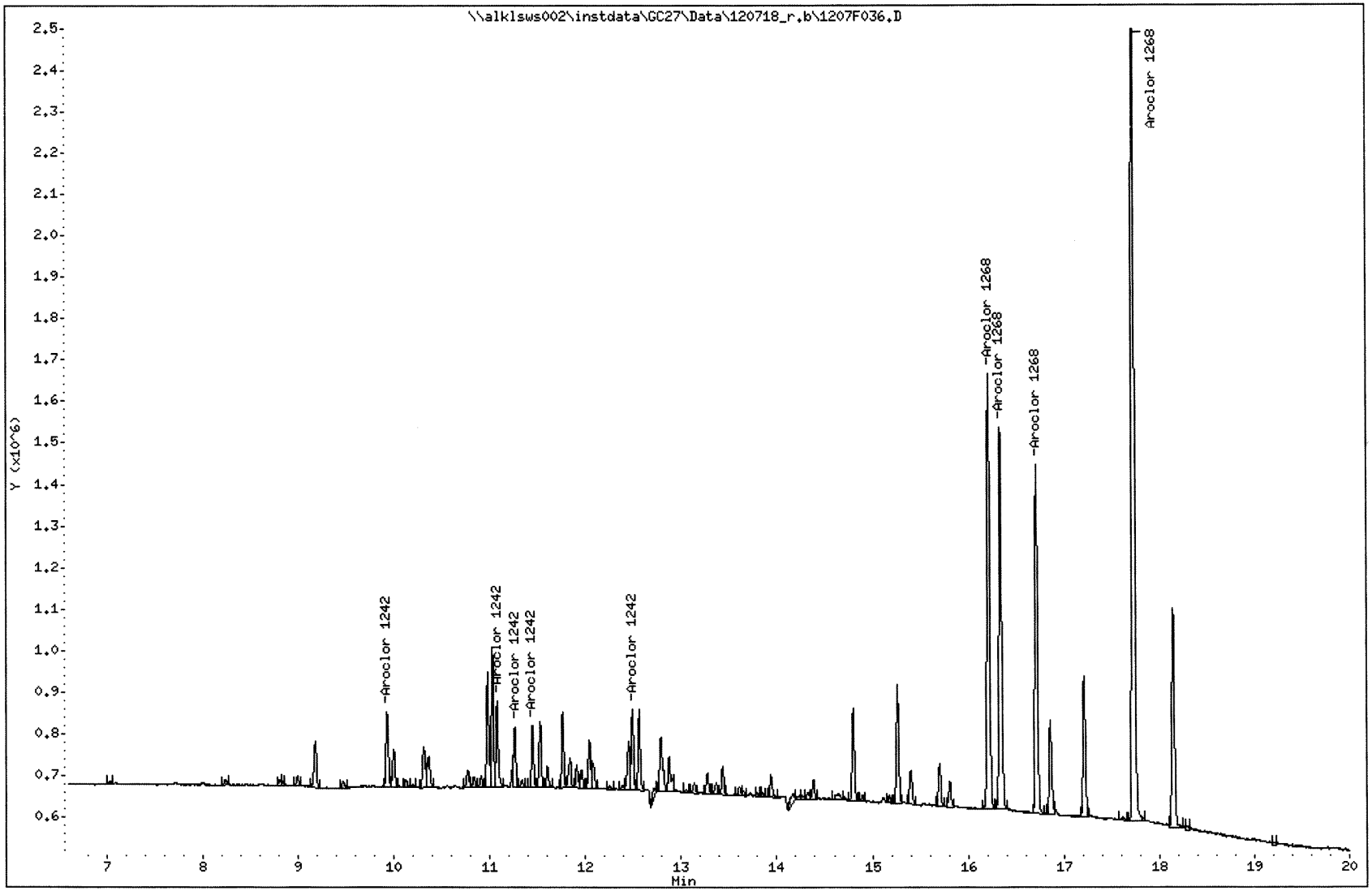


020919

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F036.D
Date : 08-DEC-2018 04:50
Client ID:
Sample Info: 4268 20PPB PCB7-58L

Instrument: GC27.i

Operator: SM
Column phase: DB-XLB
Column diameter: 0.32

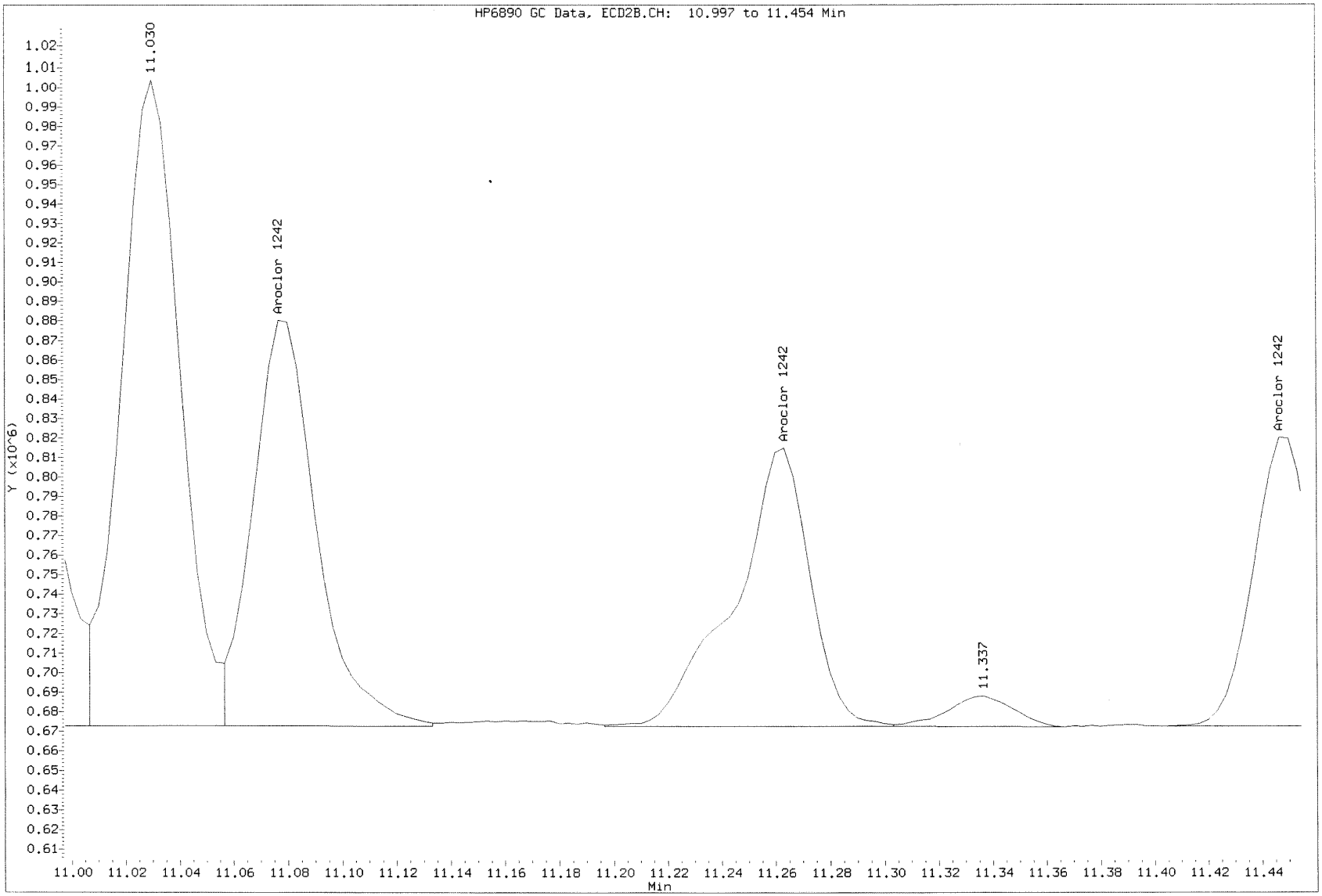


020920

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F036.D
Injection Date: 08-DEC-2018 04:50
Instrument: GC27.i
Client Sample ID:

wa 12/17/18

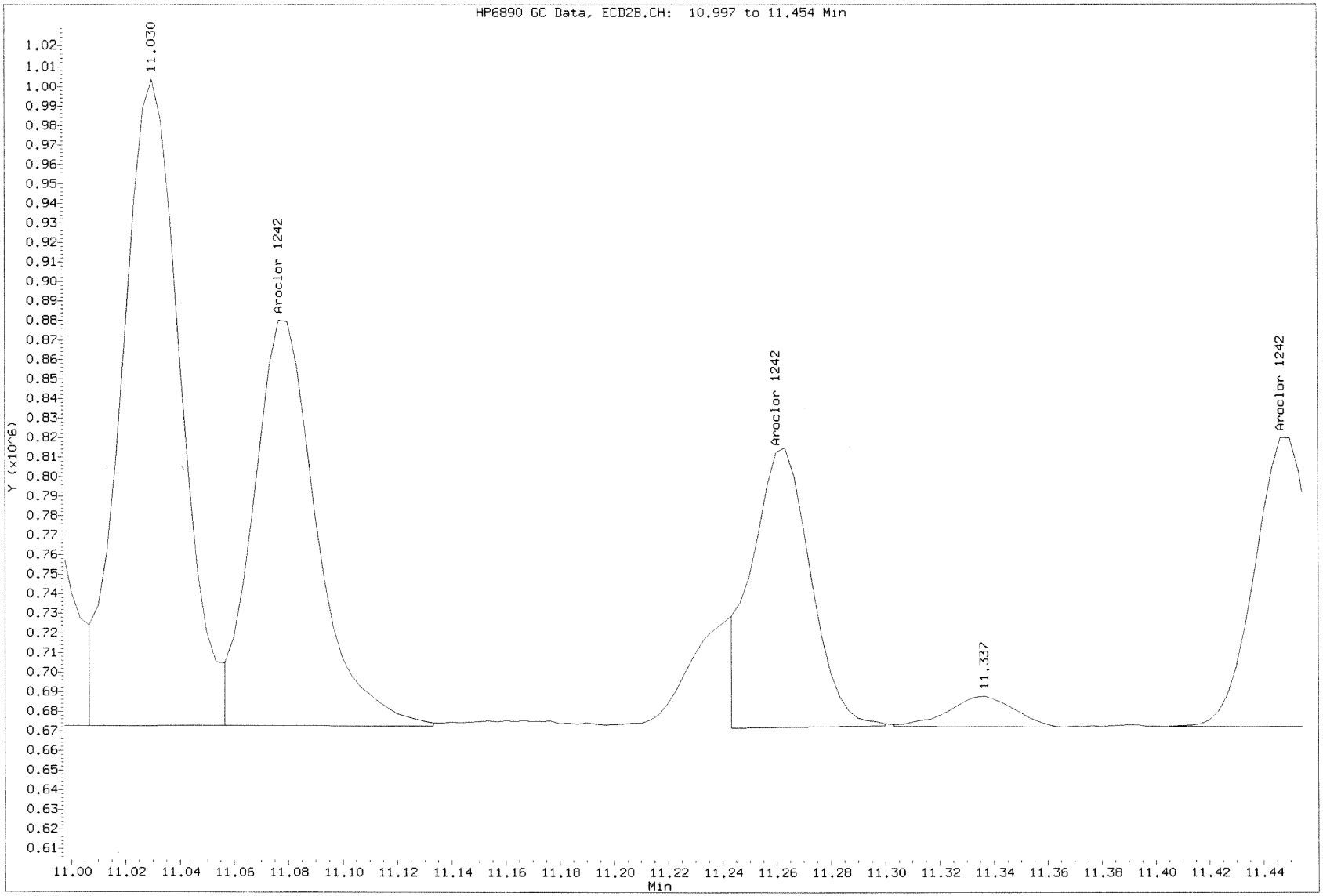
Bstere mrc 12/18/18



020921

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F036.D
Injection Date: 08-DEC-2018 04:50
Instrument: GC27.i
Client Sample ID:

~~After~~
baseline / shoulder
JAA 12/17/18
mc 12/12/18



020922

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F037.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F037.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F037.D
Inj Date : 08-DEC-2018 05:22
Sample Info: 4268 50PPB PCB7-58M
Misc Info :
Cal Date : 12-DEC-2018 12:39
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

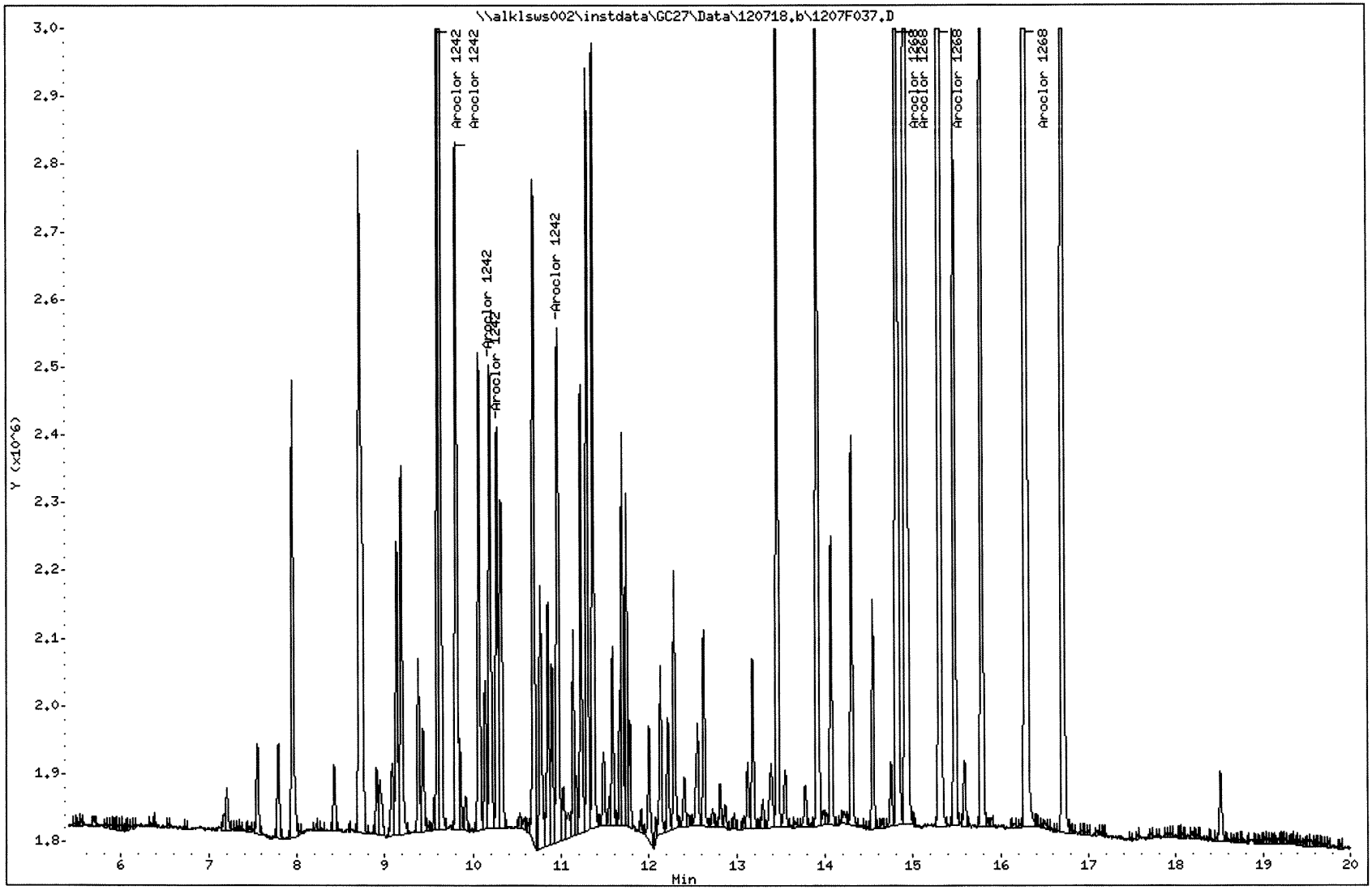
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	9.609	9.932	1937467	759839	45.7	46.3	80.00- 120.00	100.00
	9.812	11.079	1760027	815280	45.9	47.7	71.17- 106.76	90.84
	10.195	11.262	1214114	573600	48.0	52.1	49.71- 74.56	62.67
	10.275	11.445	984715	537846	48.7	46.8	40.98- 61.47	50.82
	10.962	12.492	1486916	695455	44.4	46.3	57.72- 86.58	76.75
			Average of Peak Amounts =		46.5	47.8		
Aroclor 1268	14.825	16.215	10026415	4163903	43.4	41.6	80.00- 120.00	100.00
	14.925	16.339	8915079	3720929	44.3	43.7	71.67- 107.50	88.92
	15.312	16.715	7893091	3305717	44.0	43.1	63.30- 94.96	78.72
	16.292	17.735	23054490	9620977	44.5	43.5	186.23- 279.34	229.94
			Average of Peak Amounts =		44.1	43.0		

MR 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F037.D
Date : 08-DEC-2018 05:22
Client ID:
Sample Info: 4268 50PPB PCB7-58M

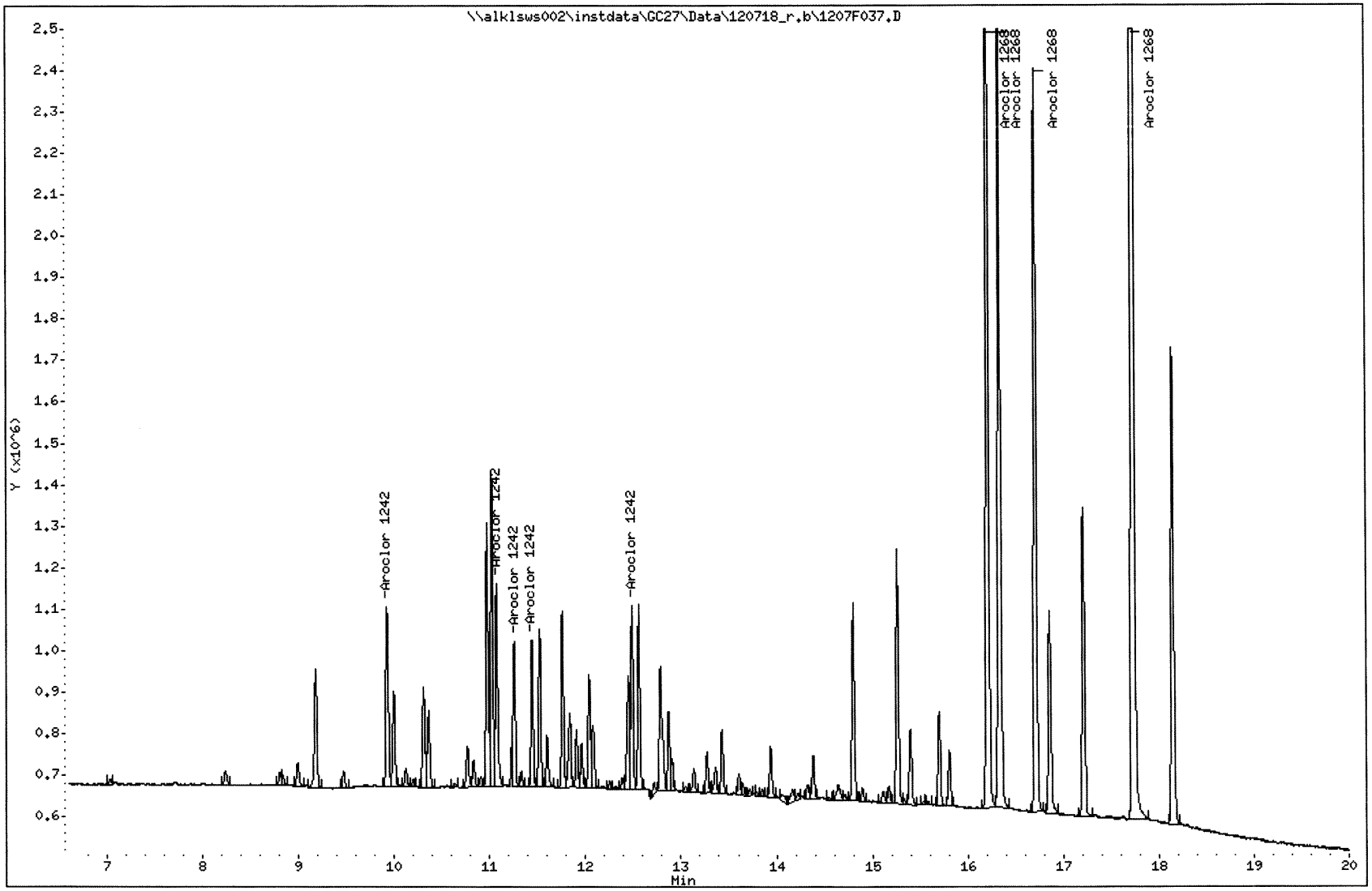
Instrument: GC27.i

Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020924

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F037.D
Date : 08-DEC-2018 05:22
Client ID:
Instrument: GC27.i
Sample Info: 4268 50PPB PCB7-58M
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32

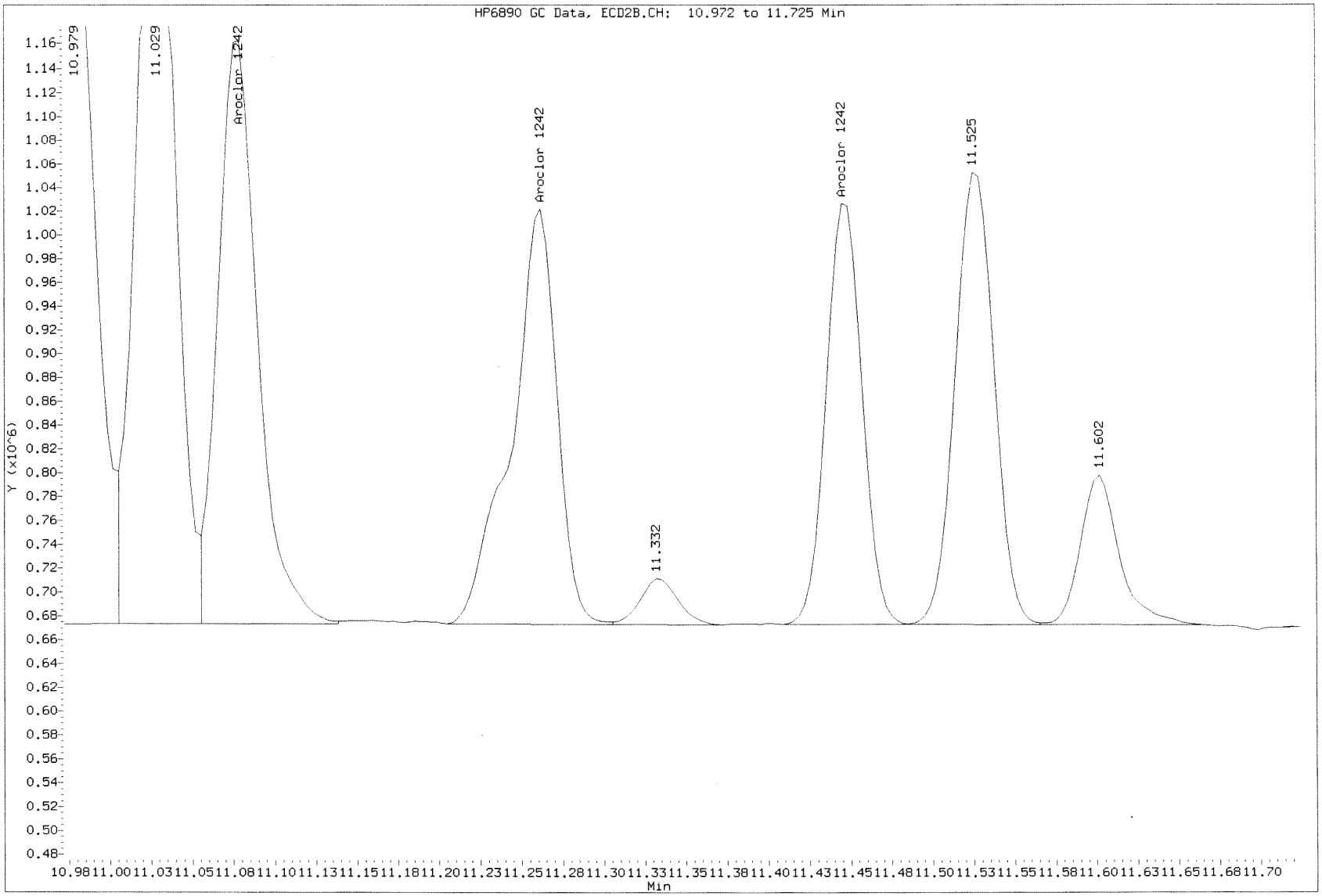


020925

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F037.D
Injection Date: 08-DEC-2018 05:22
Instrument: GC27.i
Client Sample ID:

JD 12/17/18

Baker
mc 12/18/18

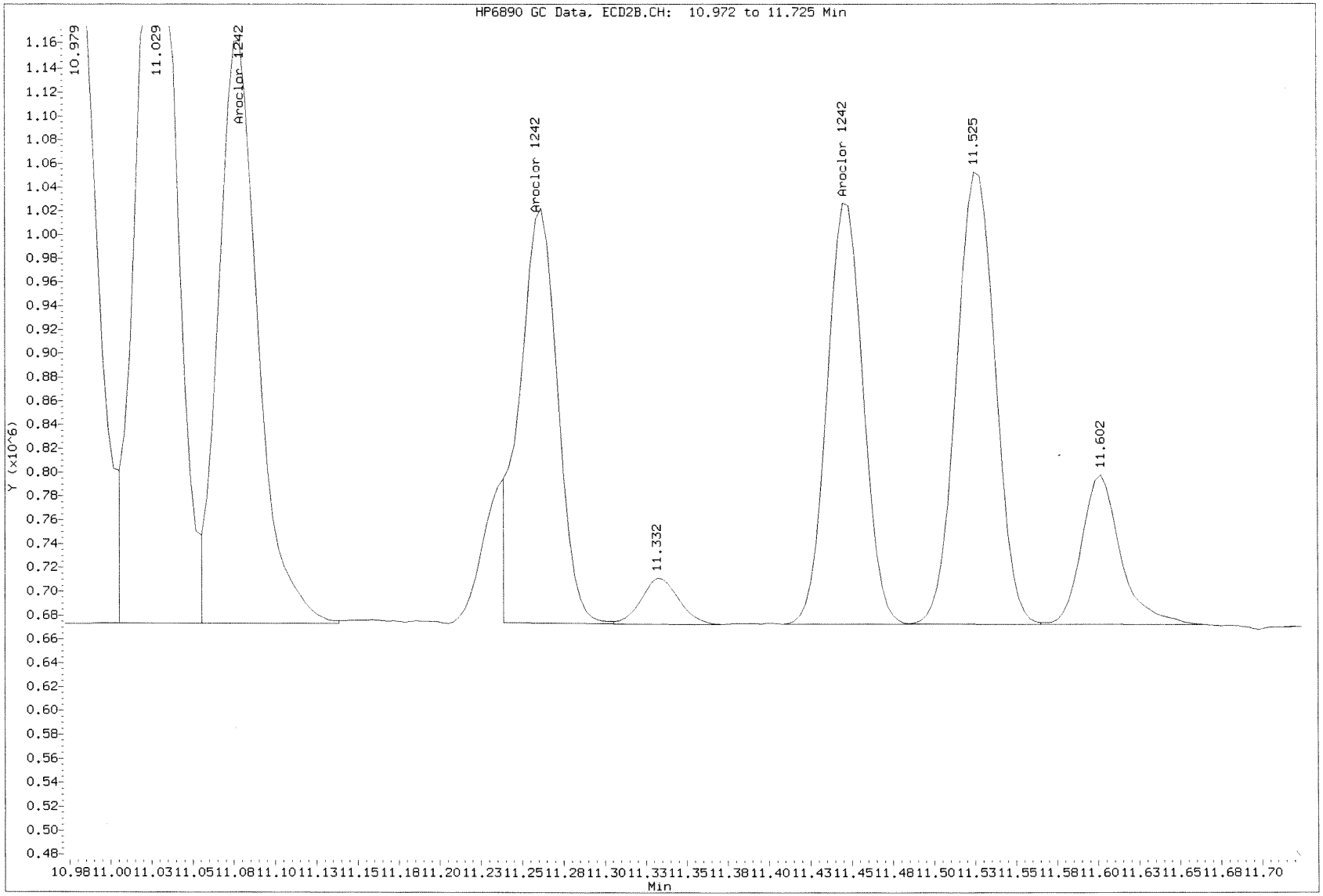


020926

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F037.D
Injection Date: 08-DEC-2018 05:22
Instrument: GC27.i
Client Sample ID:

JMA 12/17/18

After baseline/shoulder mmc 12/12/18



020927

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F038.D
Report Date: 12-Dec-2018 12:45

CAS

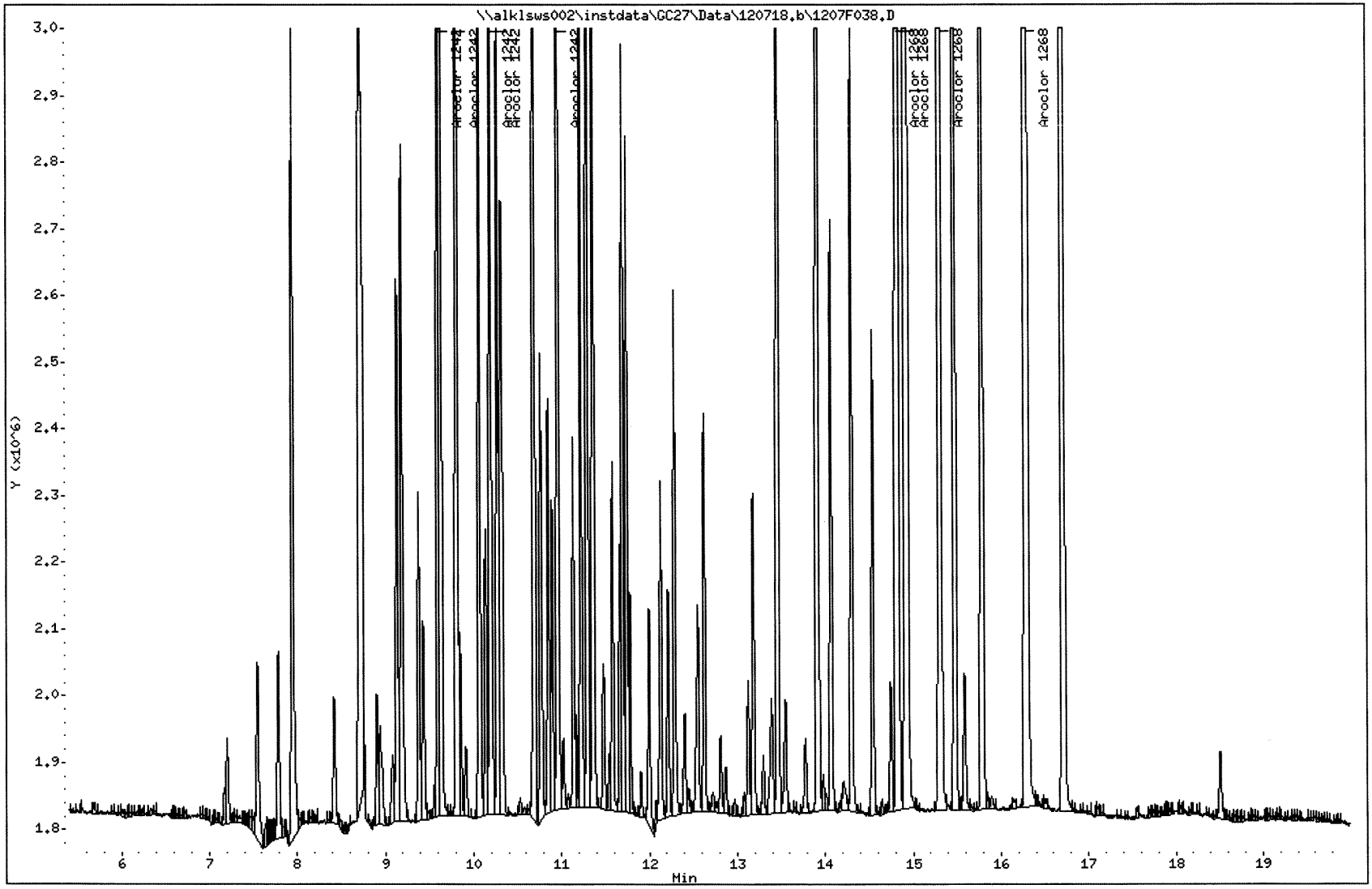
Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F038.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F038.D
Inj Date : 08-DEC-2018 05:53
Sample Info: 4268 100PPB PCB7-58N
Misc Info :
Cal Date : 12-DEC-2018 12:39
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	9.607	9.931	3556864	1400193	83.9	85.4	80.00- 120.00	100.00
	9.811	11.077	3381829	1542911	88.1	90.2	71.17- 106.76	95.08
	10.194	11.261	2363142	1061088	93.4	96.3	49.71- 74.56	66.44
	10.274	11.447	1923708	1037148	95.2	90.3	40.98- 61.47	54.08
	10.964	12.491	2723158	1371165	81.4	91.3	57.72- 86.58	76.56
			Average of Peak Amounts =		88.4	90.7		
Aroclor 1268	14.824	16.214	21297284	8133656	92.2	81.2	80.00- 120.00	100.00
	14.924	16.341	18957800	7363551	94.2	86.5	71.67- 107.50	89.02
	15.311	16.714	16795297	6546986	93.7	85.4	63.30- 94.96	78.86
	16.294	17.734	49927833	19292290	96.3	87.2	186.23- 279.34	234.43
			Average of Peak Amounts =		94.1	85.1		

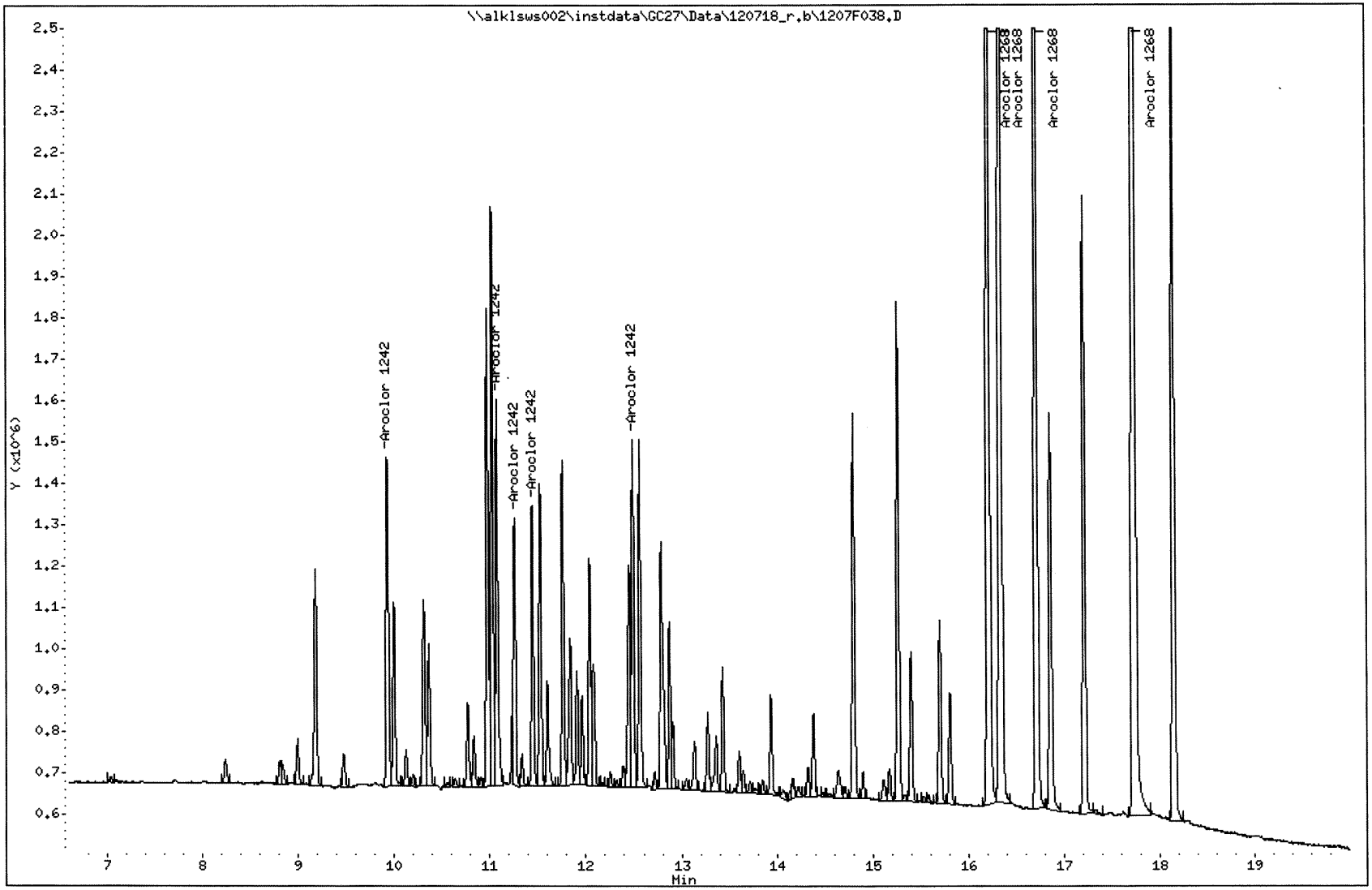
MC 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F038.D
Date : 08-DEC-2018 05:53
Client ID:
Instrument: GC27.i
Sample Info: 4268 100PPB PCB7-58N
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020929

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F038.D
Date : 08-DEC-2018 05:53
Client ID:
Instrument: GC27.i
Sample Info: 4268 100PPB PCB7-58N
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32

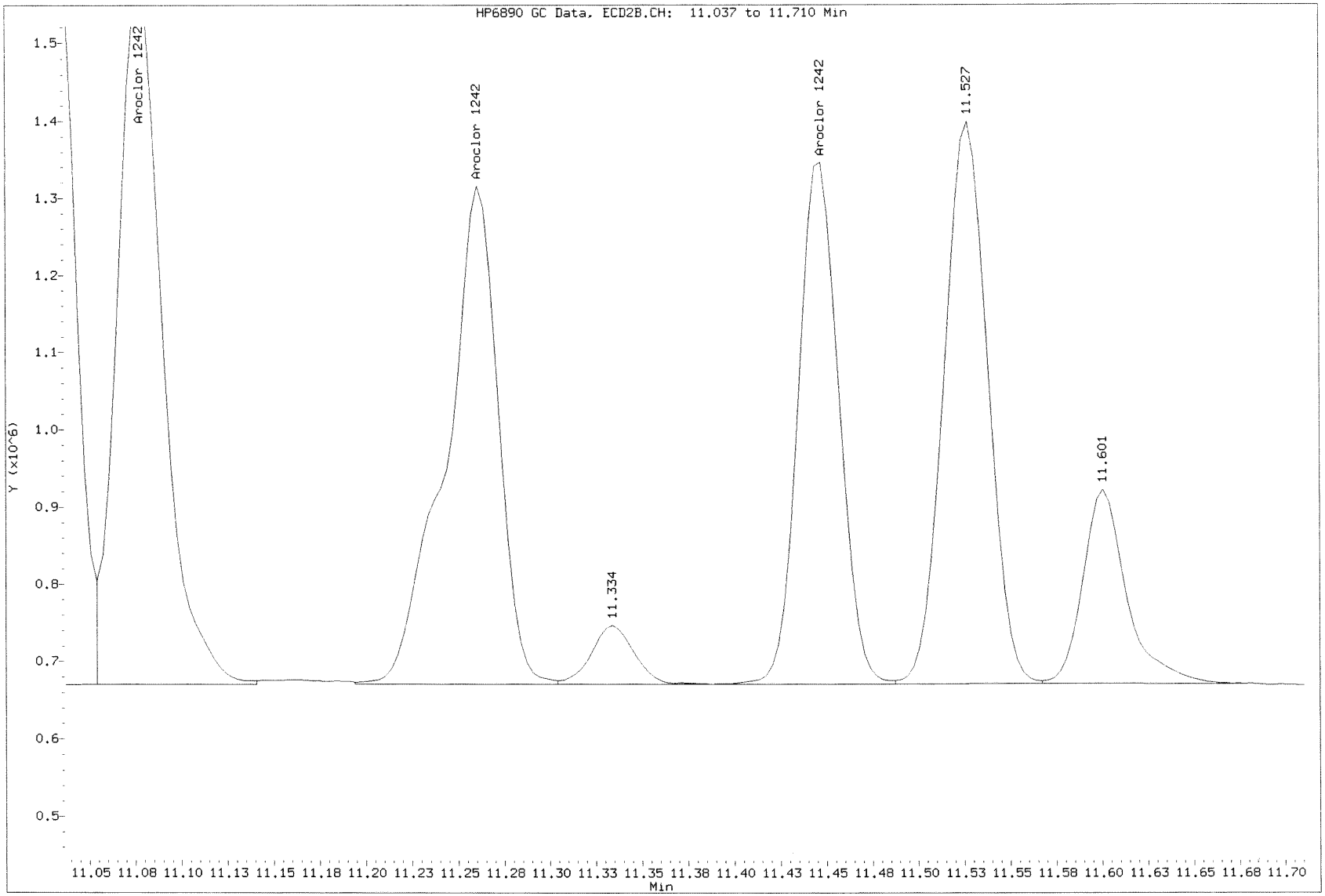


020930

WA 12/17/18

BEFORE
MR 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F038.D
Injection Date: 08-DEC-2018 05:53
Instrument: GC27.i
Client Sample ID:

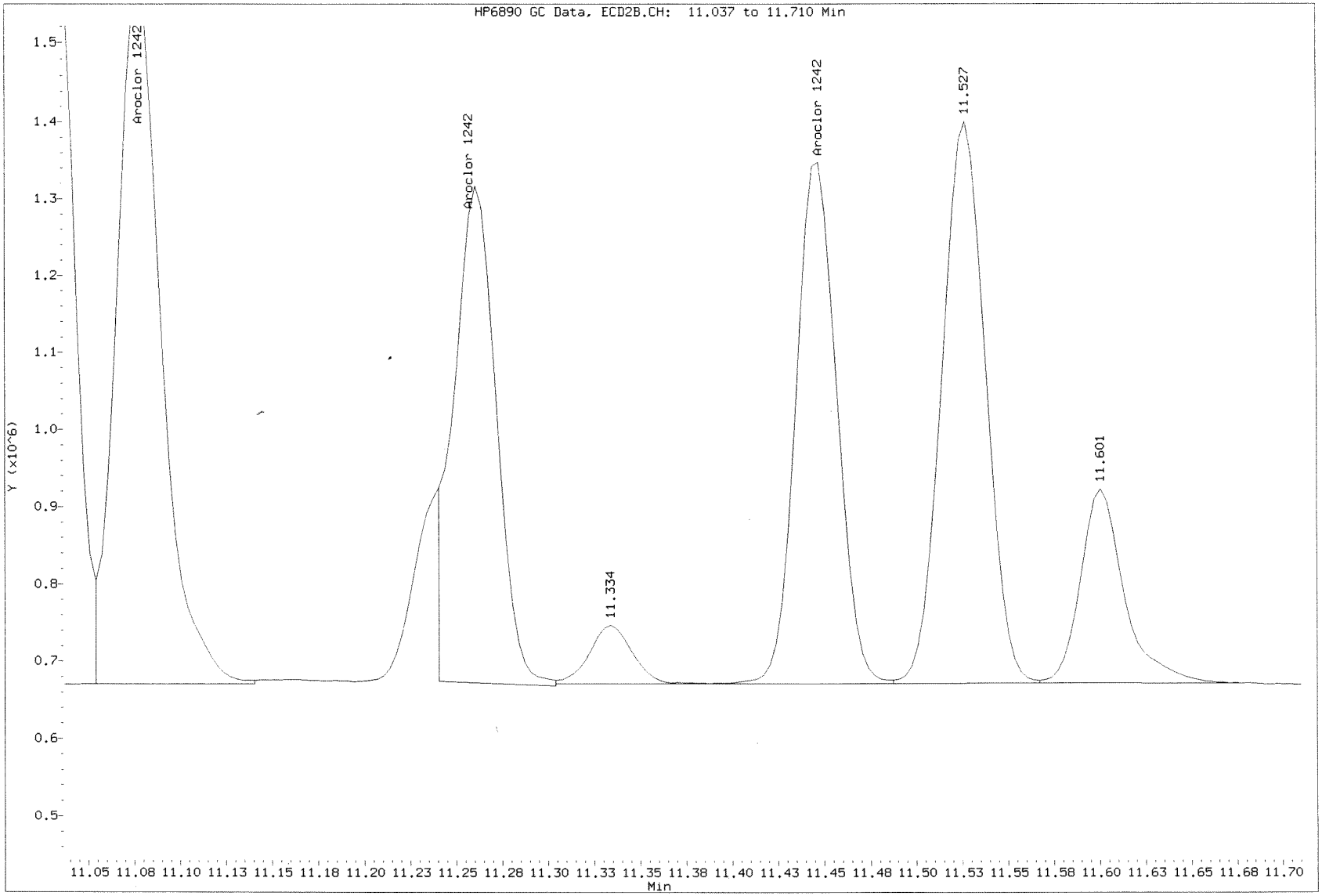


020931

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F038.D
Injection Date: 08-DEC-2018 05:53
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

After baseline/shoulder MK 12/12/18



020932

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F039.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F039.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F039.D
Inj Date : 08-DEC-2018 06:24
Sample Info: 4268 200PPB PCB7-58O
Misc Info :
Cal Date : 12-DEC-2018 12:39
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

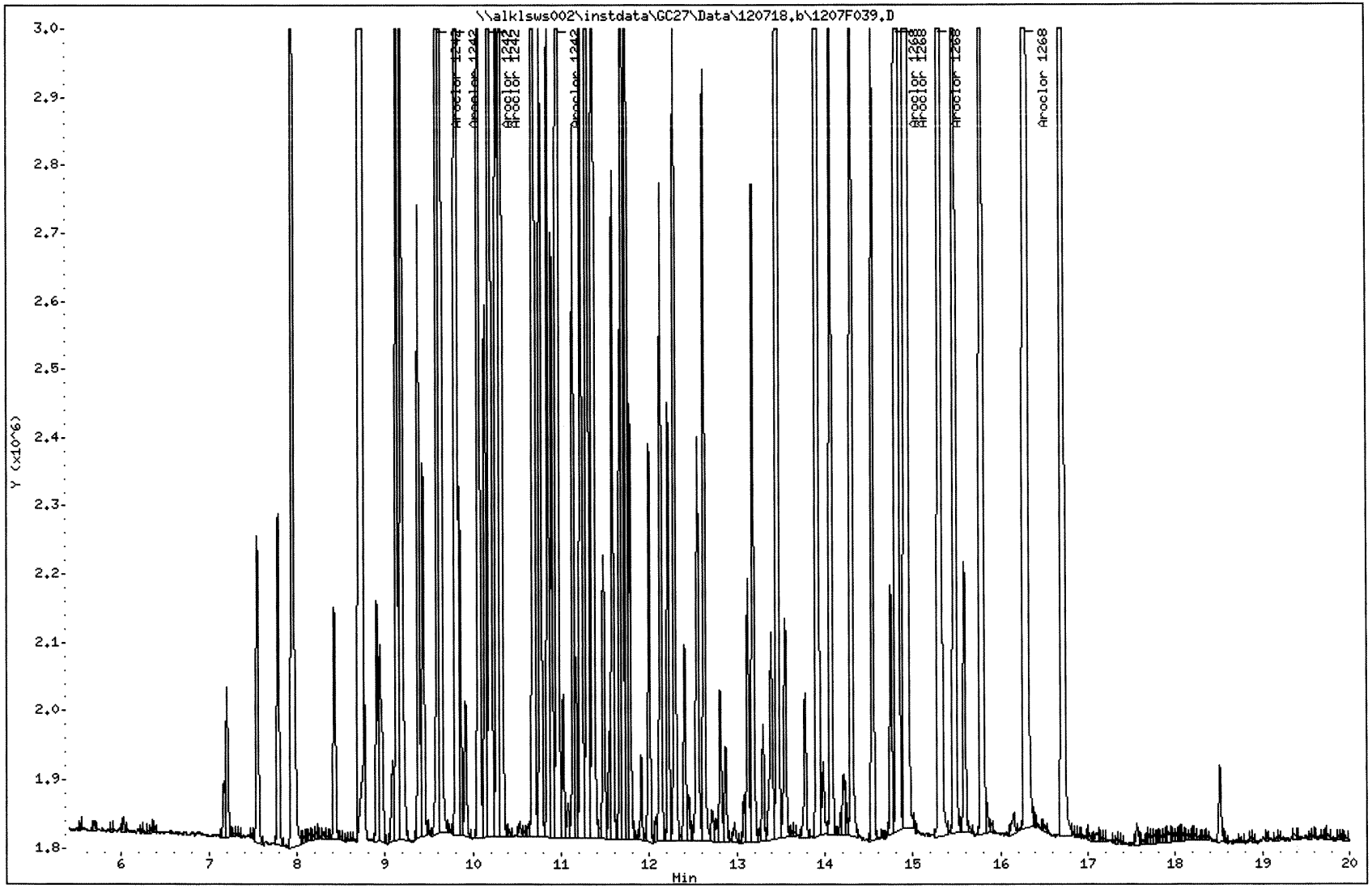
Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 4268.sub
Sub List #2 : 4268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	9.609	9.933	7051781	2556473	166	156	80.00- 120.00	100.00
	9.812	11.079	6273794	2820321	163	165	71.17- 106.76	88.97
	10.196	11.263	4381652	2000157	173	182	49.71- 74.56	62.14
	10.276	11.446	3612297	1888671	179	164	40.98- 61.47	51.23
	10.962	12.493	5087625	2446503	152	163	57.72- 86.58	72.15
			Average of Peak Amounts =		167	166		
Aroclor 1268	14.826	16.216	40781890	15048911	177	150	80.00- 120.00	100.00
	14.922	16.339	36534043	13734636	181	161	71.67- 107.50	89.58
	15.309	16.713	32270391	12148583	180	159	63.30- 94.96	79.13
	16.292	17.736	94933901	36498718	183	165	186.23- 279.34	232.78
			Average of Peak Amounts =		180	159		

mf 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F039.D
Date : 08-DEC-2018 06:24
Client ID:
Sample Info: 4268 200PPB PCB7-580

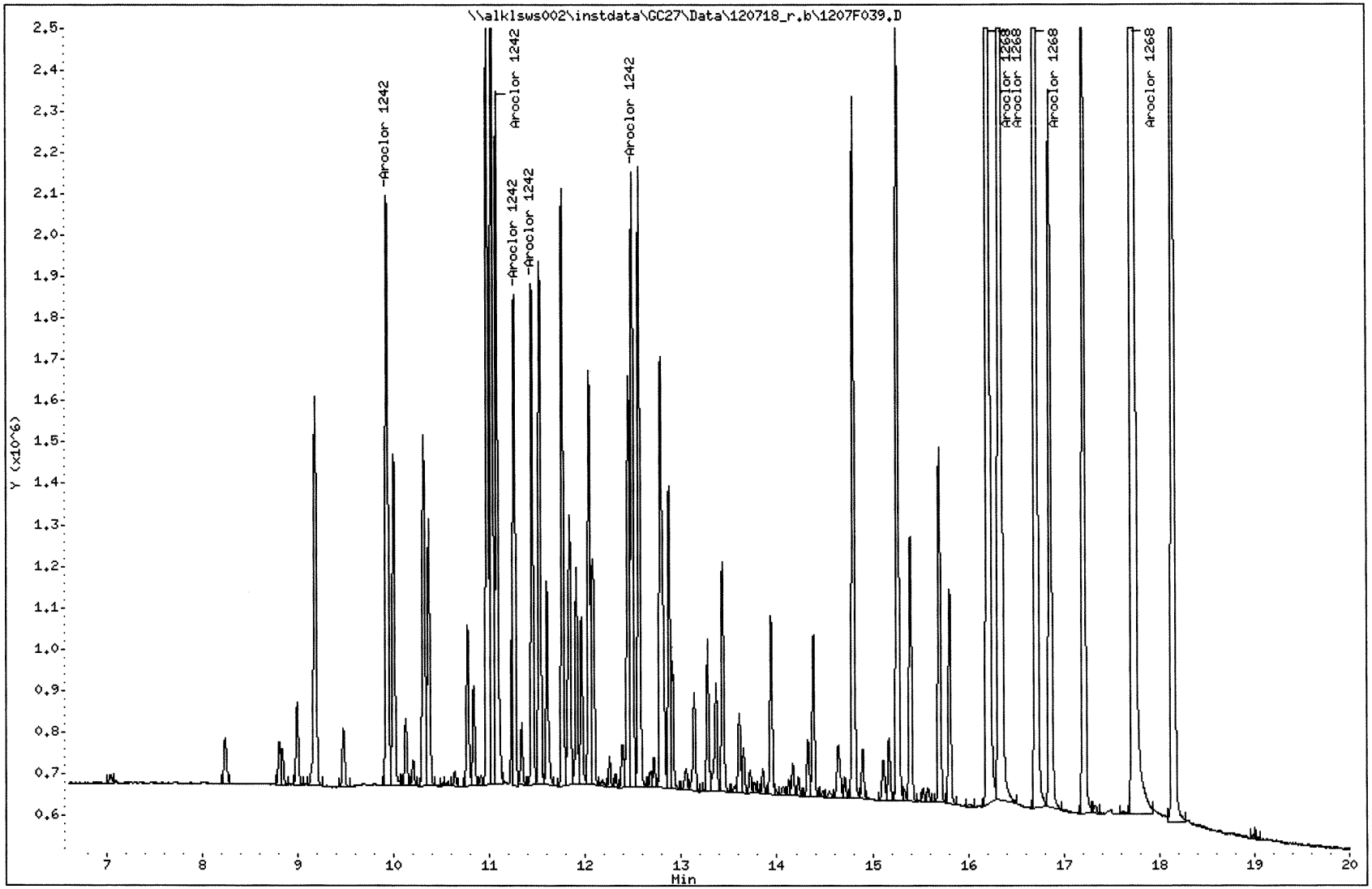
Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020934

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F039.D
Date : 08-DEC-2018 06:24
Client ID:
Sample Info: 4268 200PPB PCB7-580

Instrument: GC27.i
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32

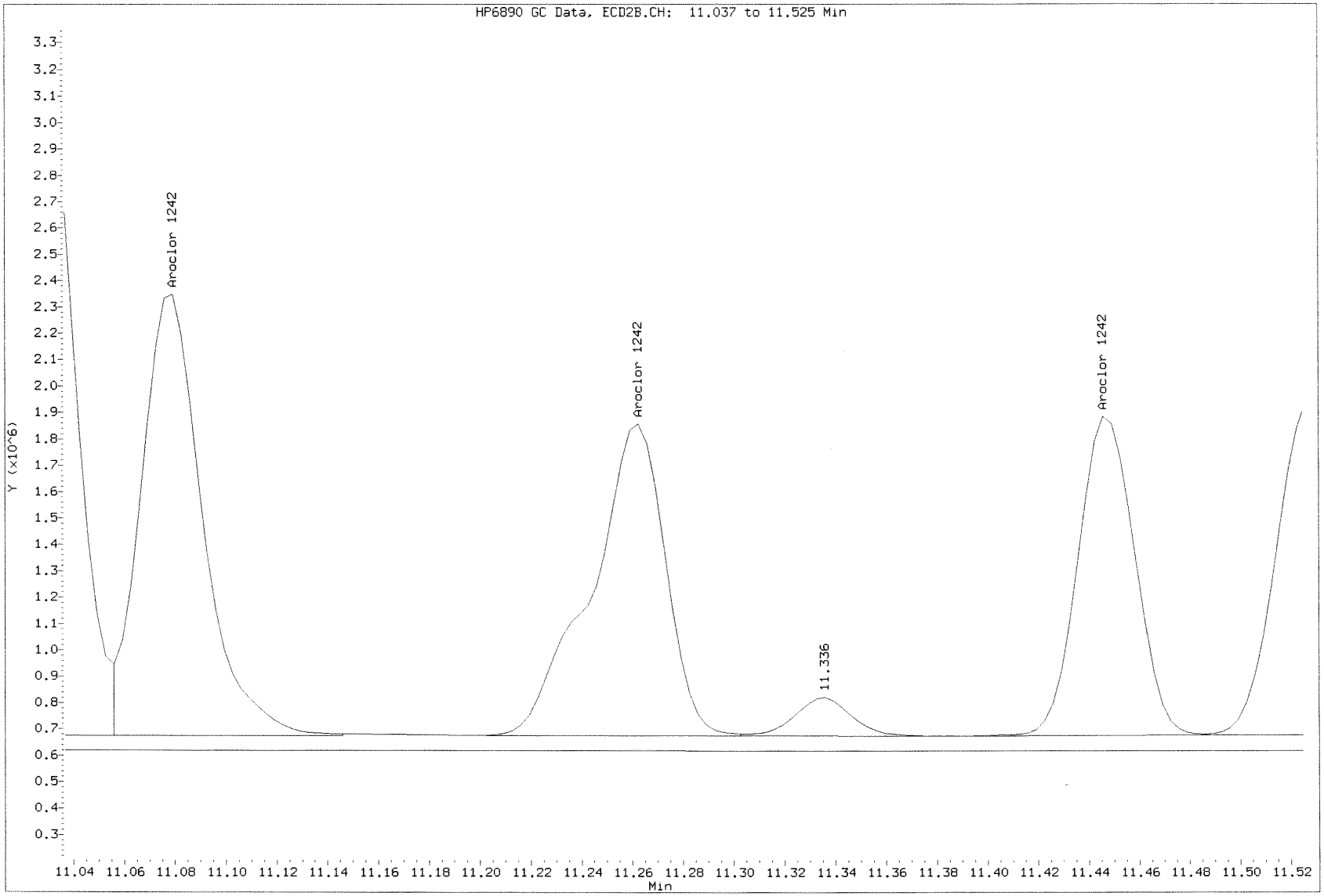


020935

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F039.D
Injection Date: 08-DEC-2018 06:24
Instrument: GC27.i
Client Sample ID:

WA 12/17/18

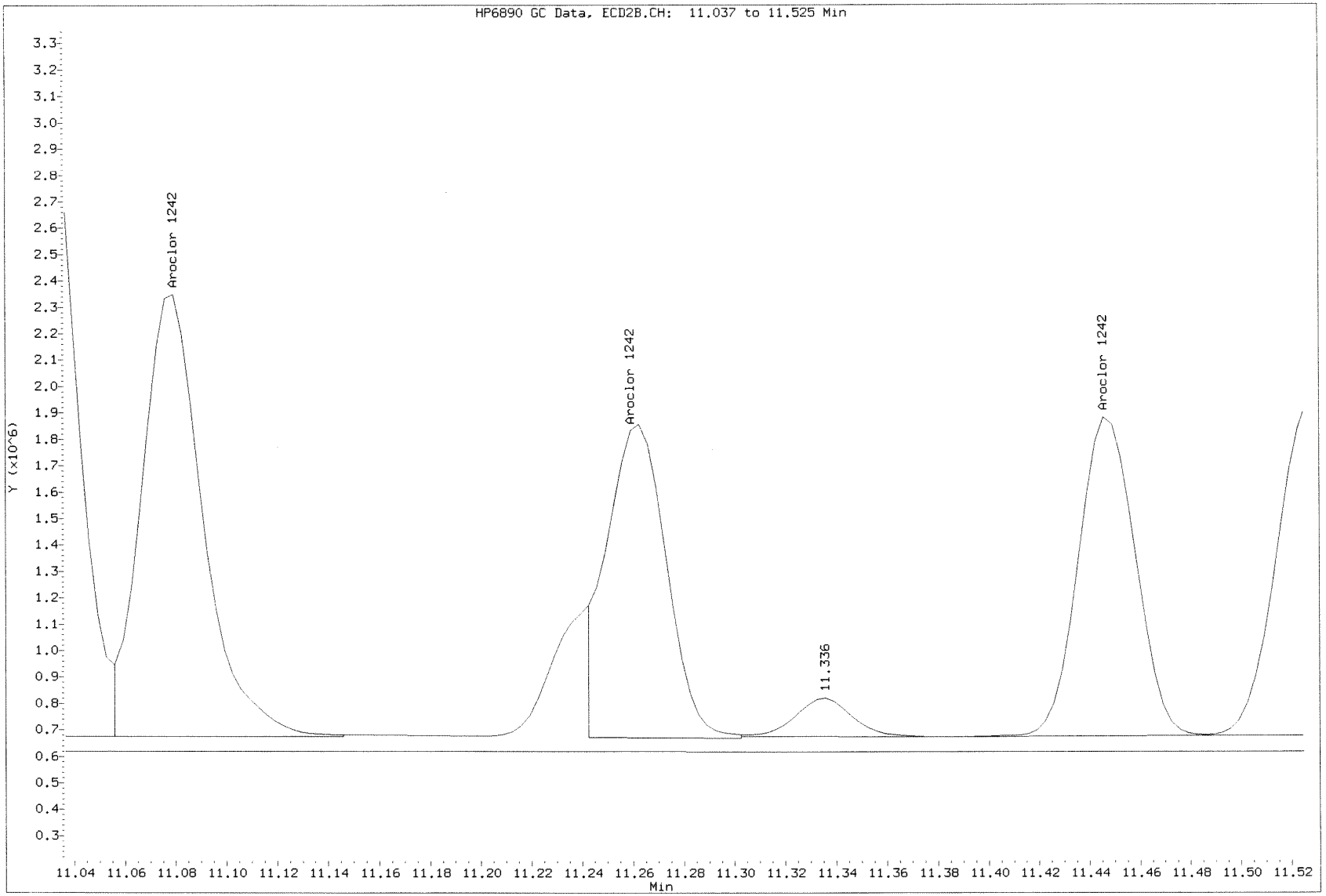
Before
MC 12/12/18



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F039.D
Injection Date: 08-DEC-2018 06:24
Instrument: GC27.1
Client Sample ID:

WA 12/17/18

After
MC 12/12/18
baseline/shoulder



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F040.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F040.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F040.D
Inj Date : 08-DEC-2018 06:56
Sample Info: 1248 1.0PPB PCB7-59A
Misc Info :
Cal Date : 12-DEC-2018 12:39
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	10.275	11.029	31077	16603	1.00	1.23	80.00- 120.00	100.00(M)
	10.962	11.445	64202	22692	1.37	1.15	110.05- 165.07	206.59(M)
	11.225	11.525	39157	23778	1.12	1.25	84.62- 126.93	126.00(M)
	11.698	12.039	30396	13229	0.937	0.948	83.51- 125.27	97.81(M)
	12.628	12.452	31578	24989	1.20	1.26	63.77- 95.66	101.61(M)
			Average of Peak Amounts =		1.13	1.17		

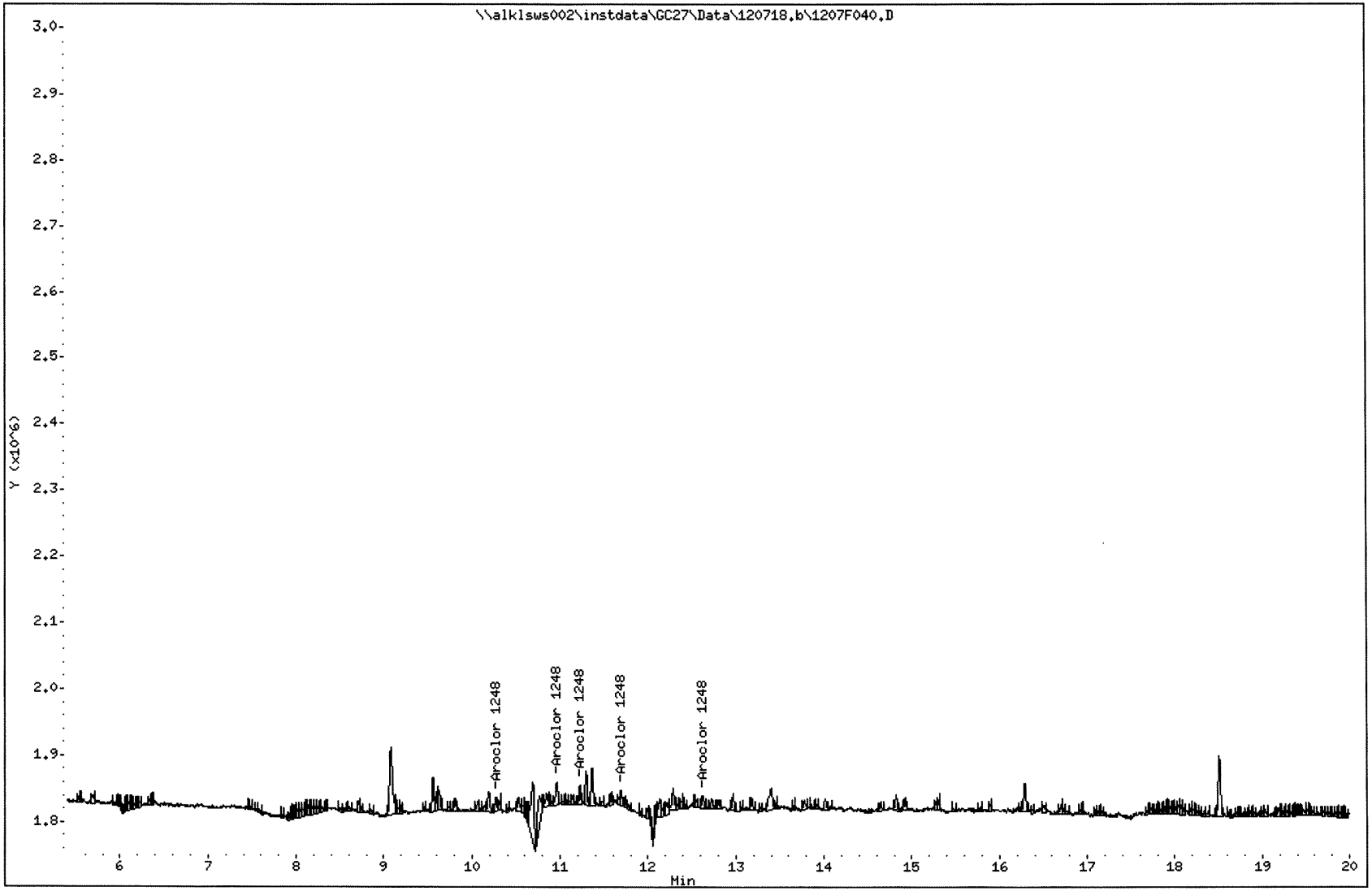
QC Flag Legend

M - Compound response manually integrated.

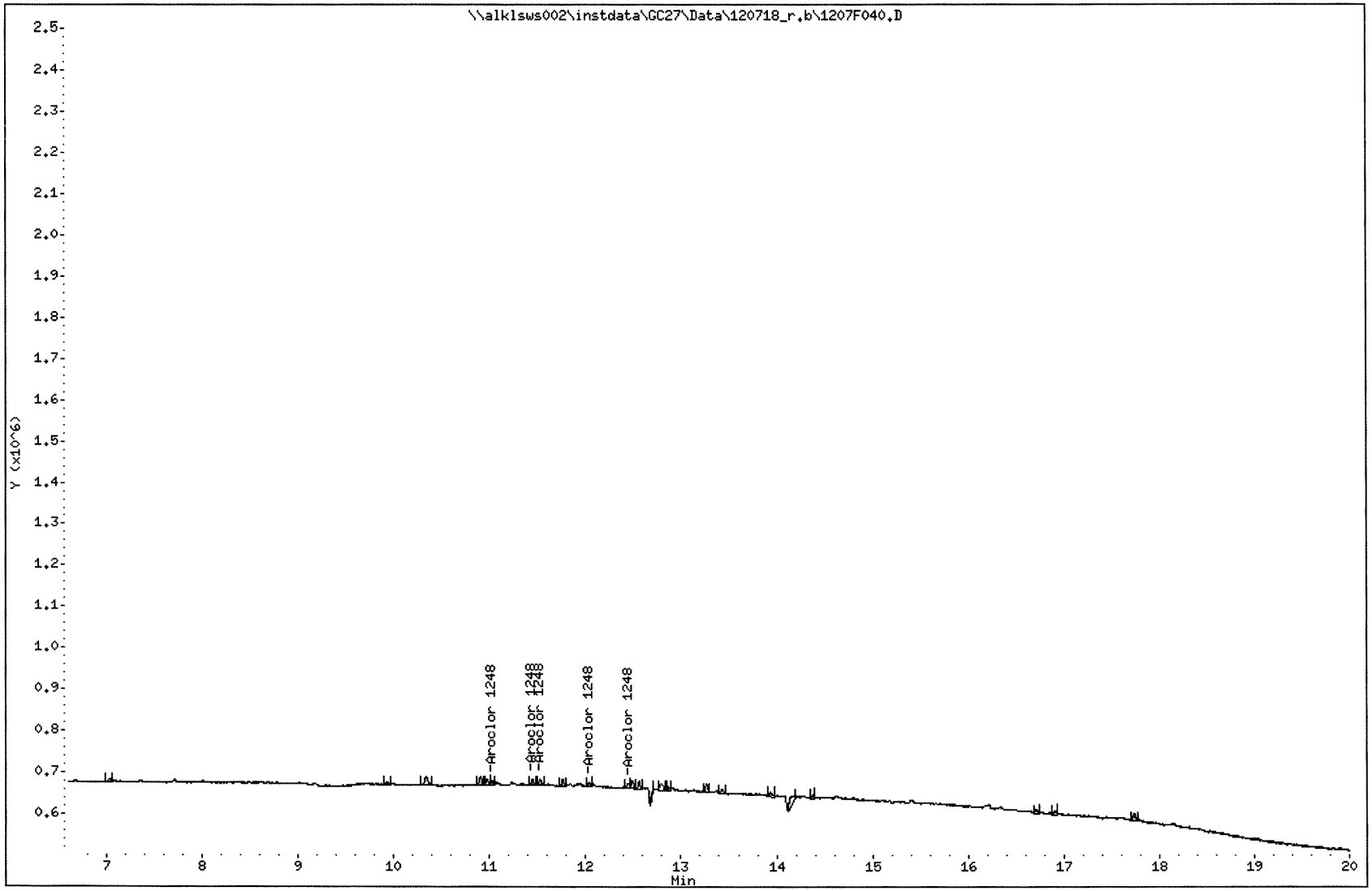
MR 12/12/18

020938

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F040.D
Date : 08-DEC-2018 06:56
Client ID:
Instrument: GC27.i
Sample Info: 1248 1.0PPB PCB7-59A
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



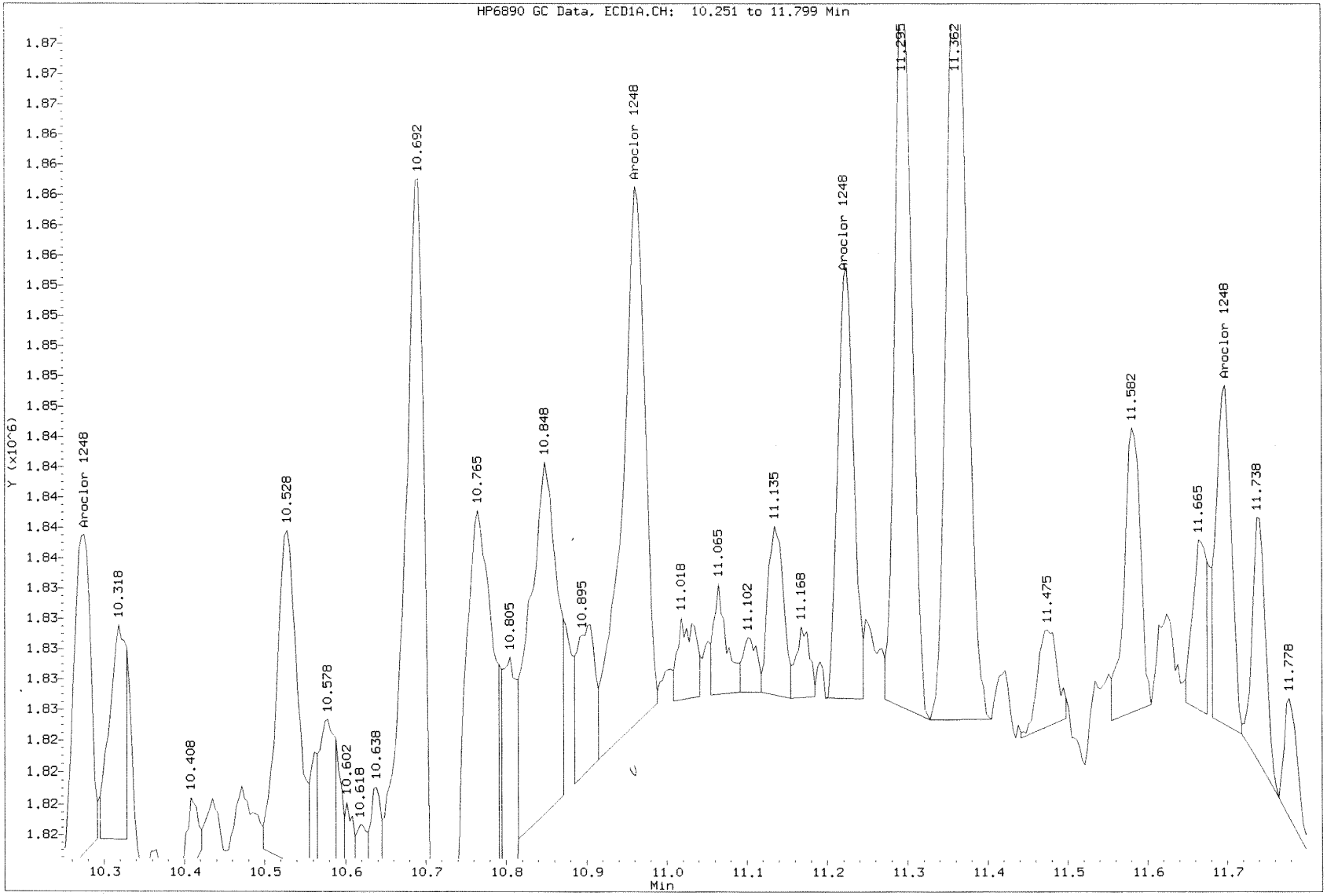
Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F040.D
Date : 08-DEC-2018 06:56
Client ID:
Instrument: GC27.i
Sample Info: 1248 1.0PPB PCB7-59A
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F040.D
Injection Date: 08-DEC-2018 06:56
Instrument: GC27.i
Client Sample ID:

LMA 12/7/18

Before MR 12/12/18

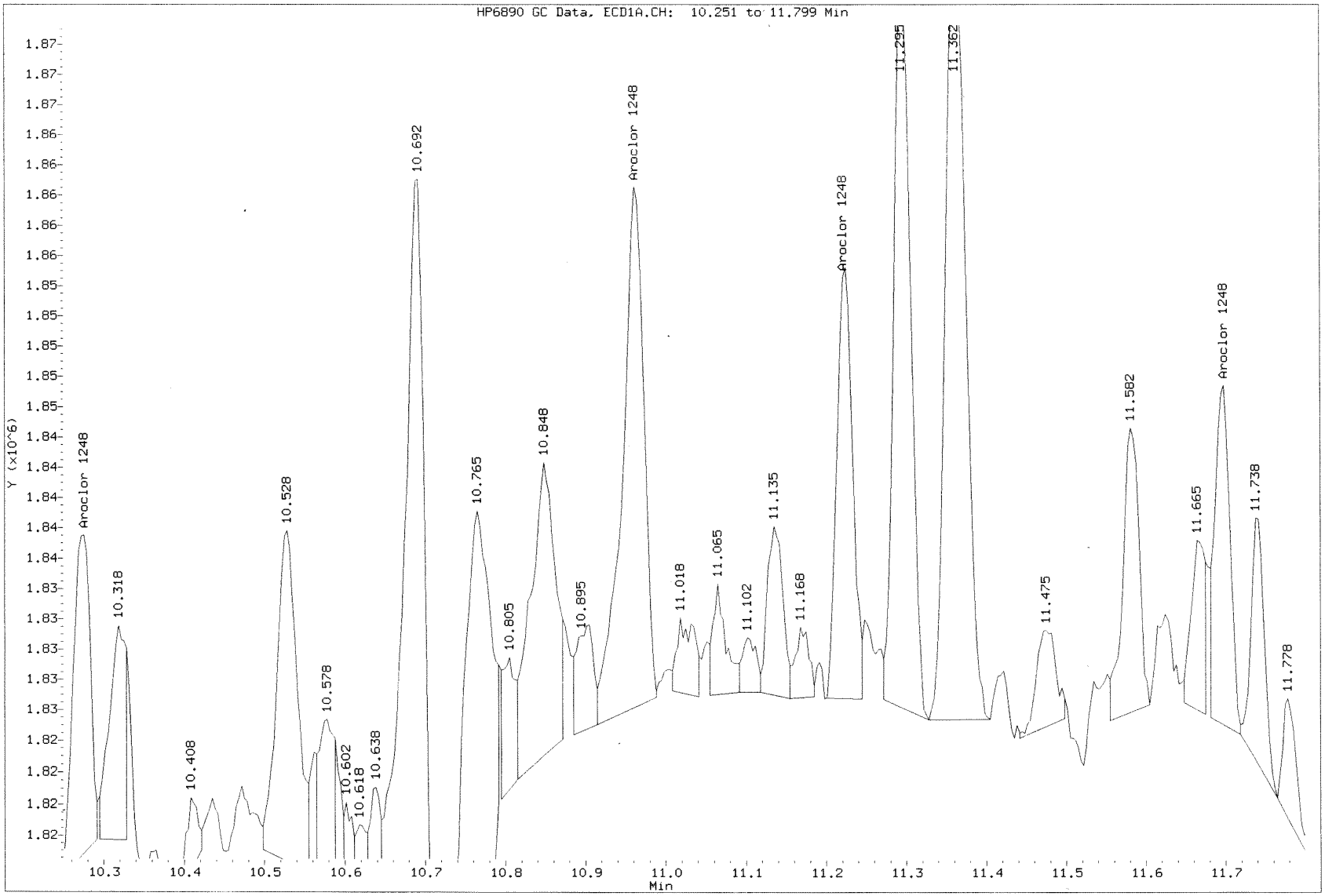


020941

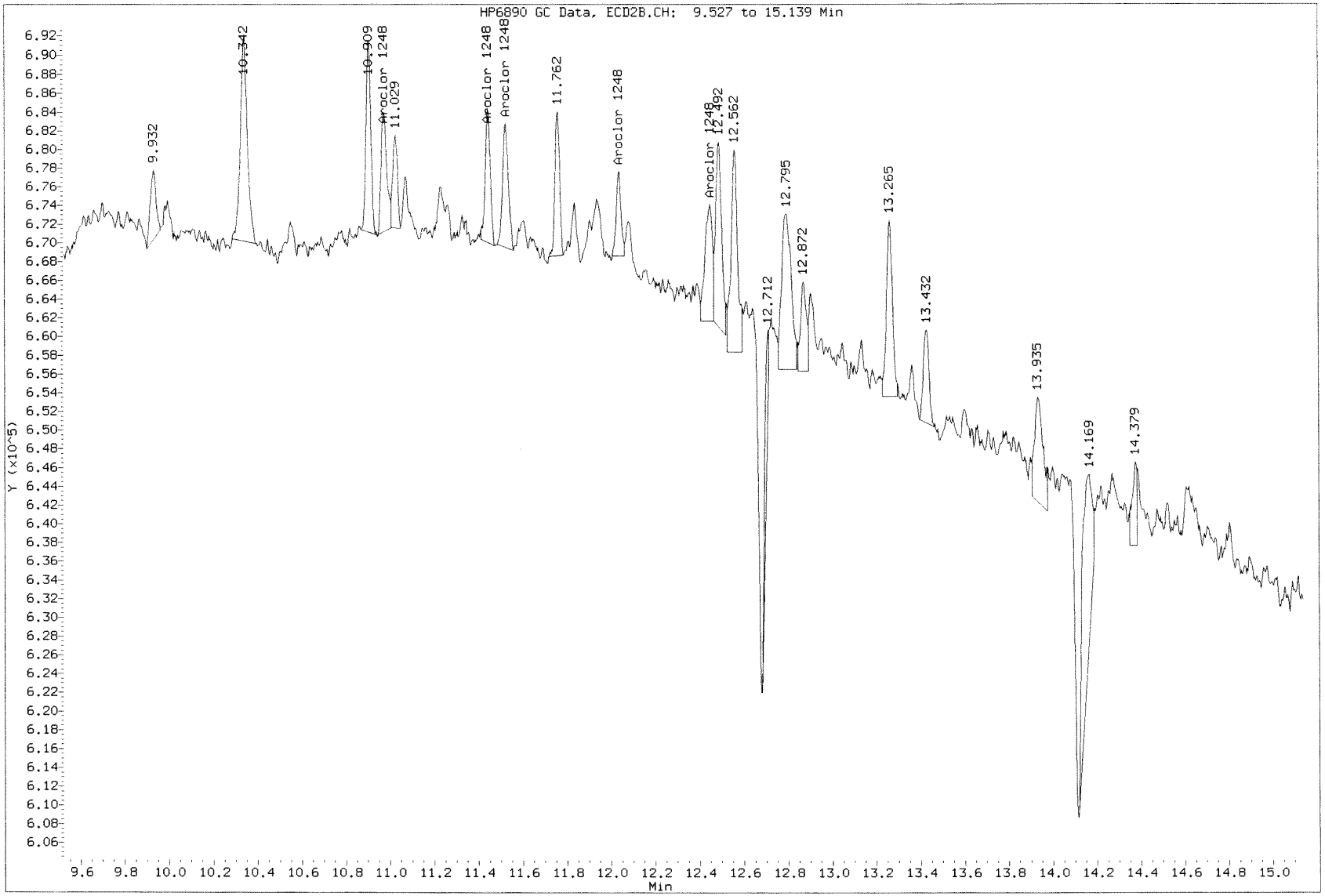
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F040.D
Injection Date: 08-DEC-2018 06:56
Instrument: GC27.i
Client Sample ID:

CA 12/17/18

After baseline/shoulder MR 12/18/18



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F040.D
Injection Date: 08-DEC-2018 06:56
Instrument: GC27.i
Client Sample ID:



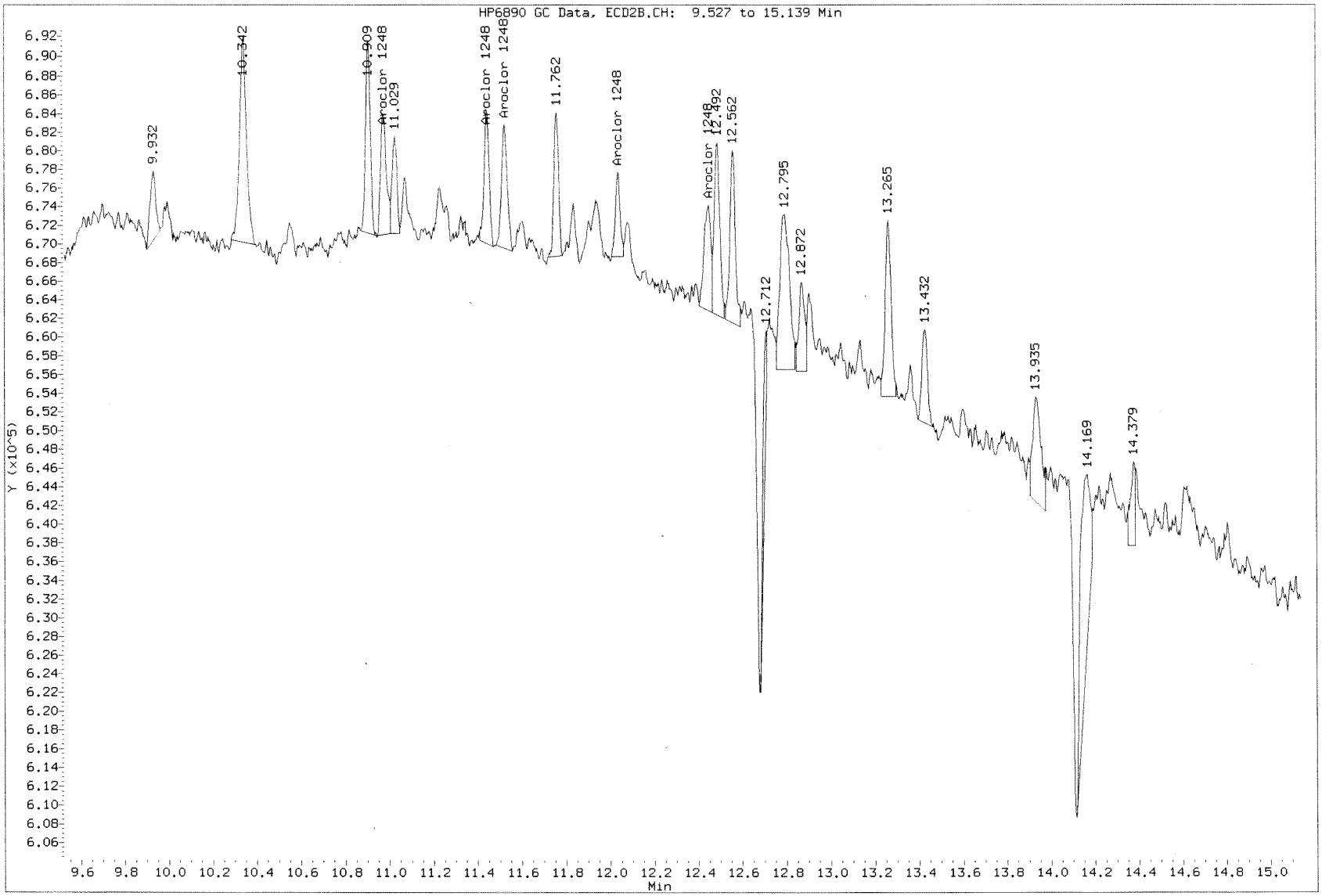
Page 1772 of 2473

020943

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F040.D
Injection Date: 08-DEC-2018 06:56
Instrument: GC27.i
Client Sample ID:

WA 12/17/18

After baseline/shoulder
MR 12/18/18



020944

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F041.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F041.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F041.D
Inj Date : 08-DEC-2018 07:27
Sample Info: 1248 2.0PPB PCB7-59B
Misc Info :
Cal Date : 12-DEC-2018 12:39
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	10.272	11.029	61104	26423	1.97	1.95	80.00- 120.00	100.00(M)
	10.962	11.446	99174	43357	2.11	2.21	110.05- 165.07	162.30(M)
	11.226	11.529	82605	40160	2.36	2.11	84.62- 126.93	135.19(M)
	11.696	12.042	75946	29376	2.34	2.11	83.51- 125.27	124.29(M)
	12.626	12.452	55393	39433	2.11	1.98	63.77- 95.66	90.65(M)
			Average of Peak Amounts =		2.18	2.07		

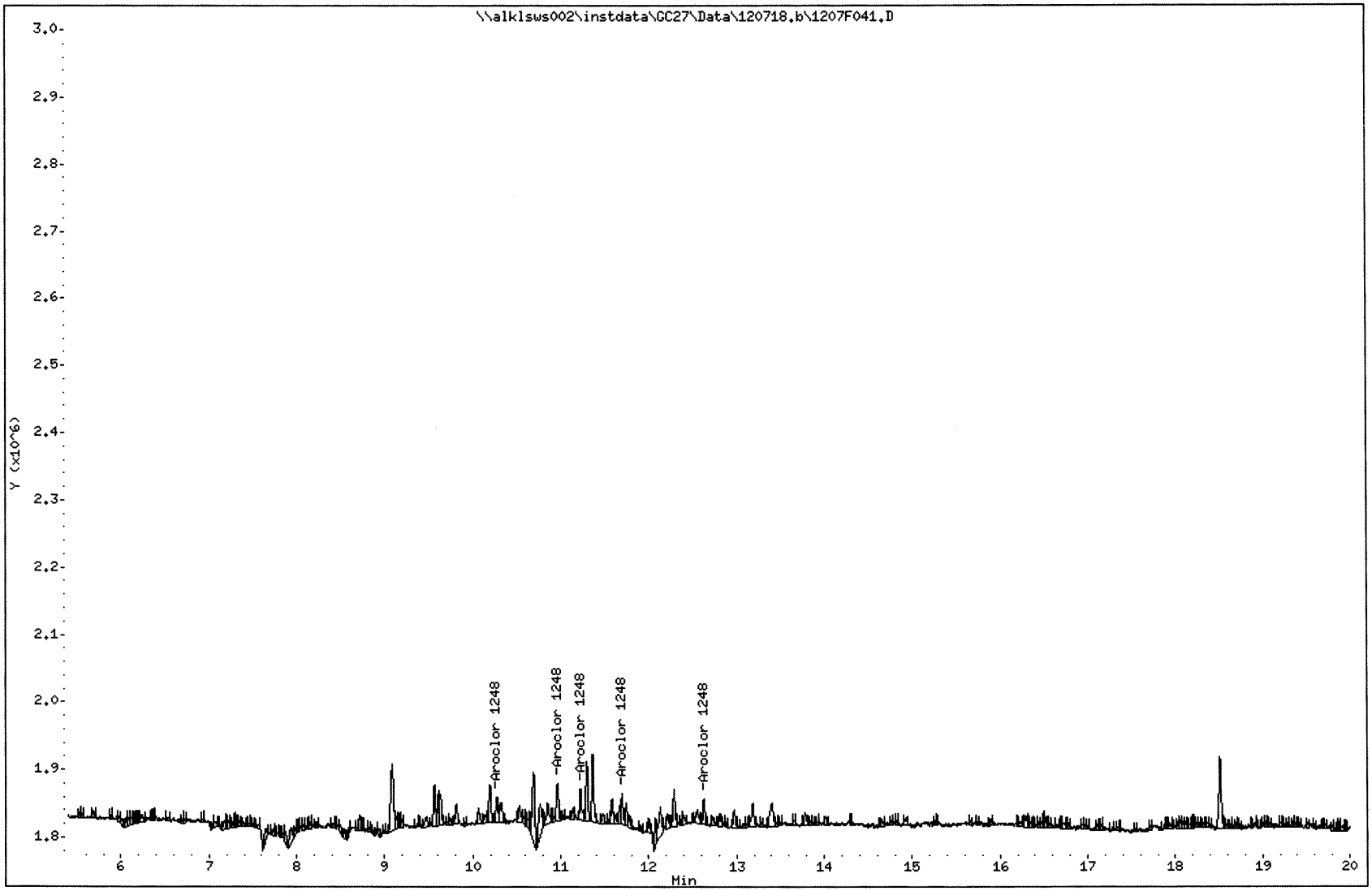
QC Flag Legend

M - Compound response manually integrated.

MC 12/13/18

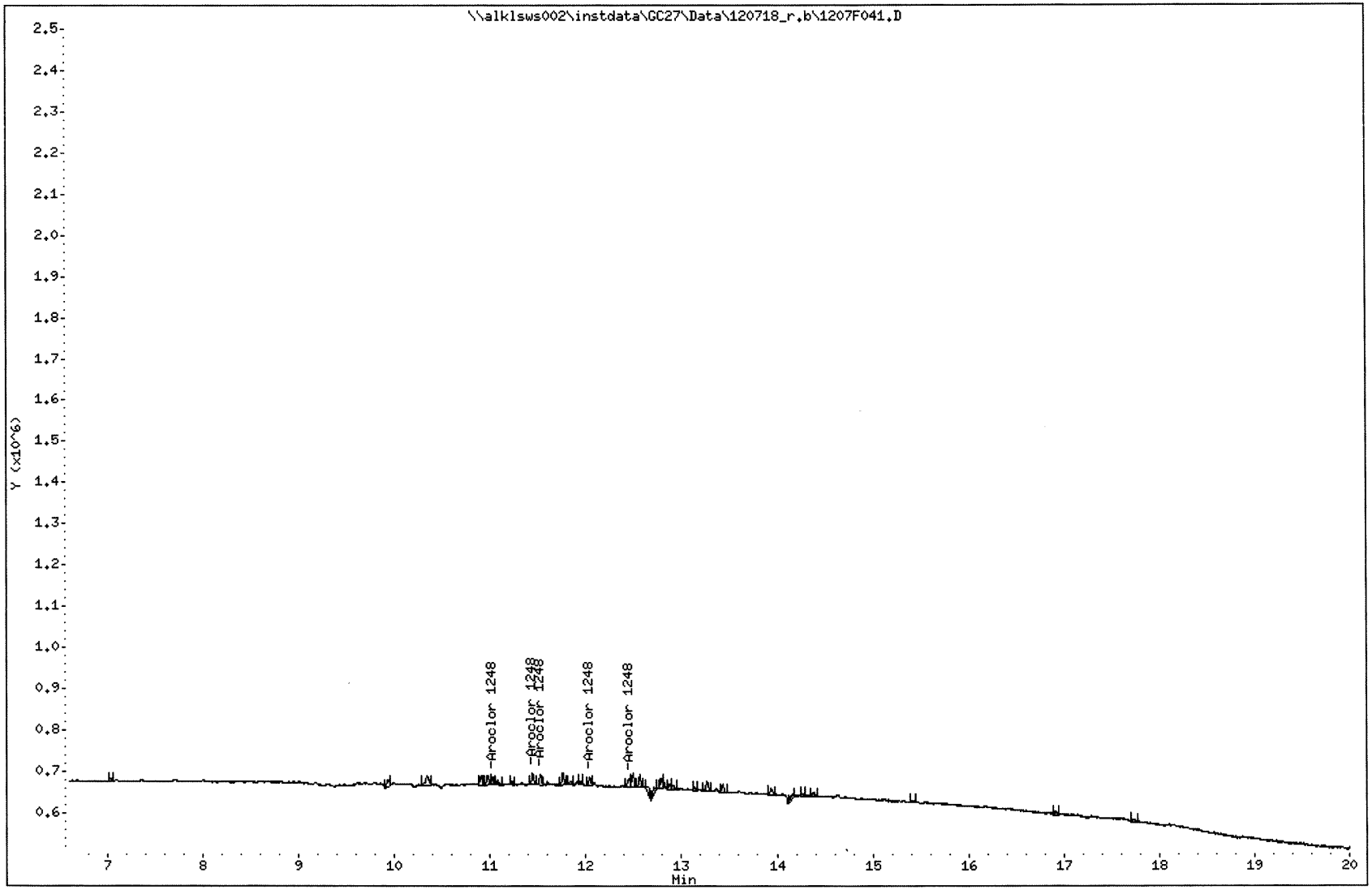
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F041.D
Date : 08-DEC-2018 07:27
Client ID:
Sample Info: 1248 2.0PPB PCB7-59B

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F041.D
Date : 08-DEC-2018 07:27
Client ID:
Sample Info: 1248 2.0PPB PCB7-59B

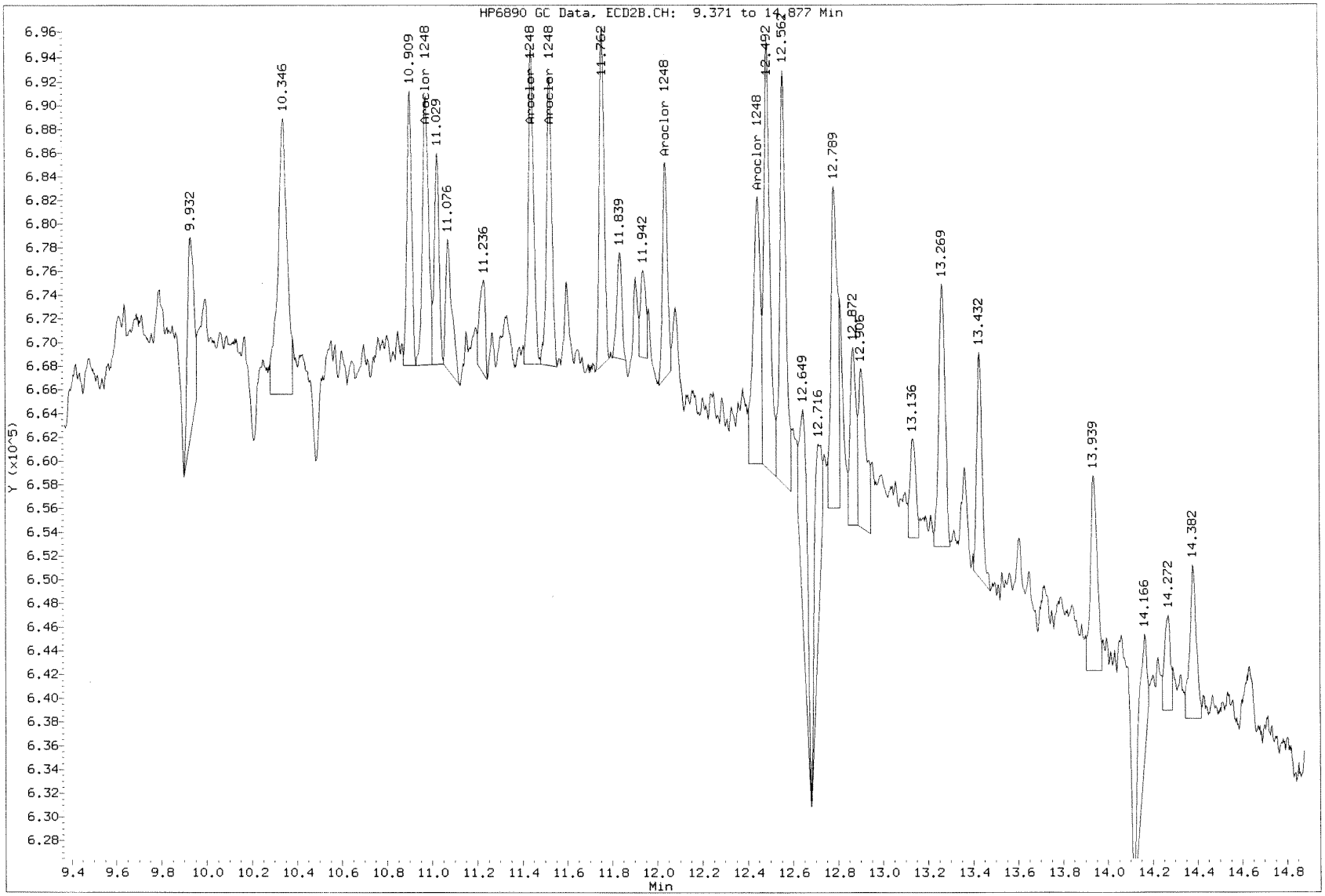
Instrument: GC27.i
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F041.D
Injection Date: 08-DEC-2018 07:27
Instrument: GC27.i
Client Sample ID:

JMA 12/17/18

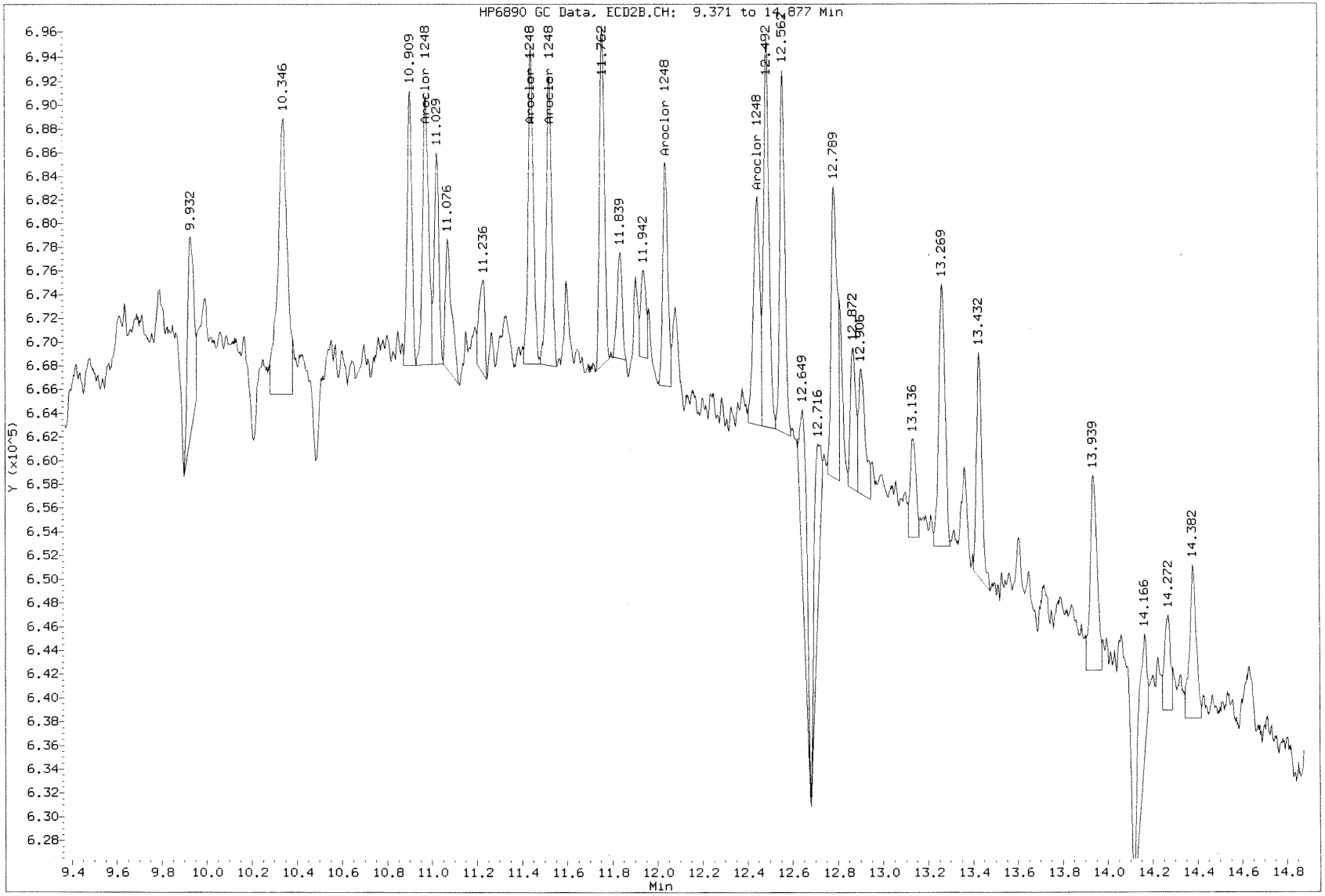
Before
MRC 12/18/18



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F041.D
Injection Date: 08-DEC-2018 07:27
Instrument: GC27.i
Client Sample ID:

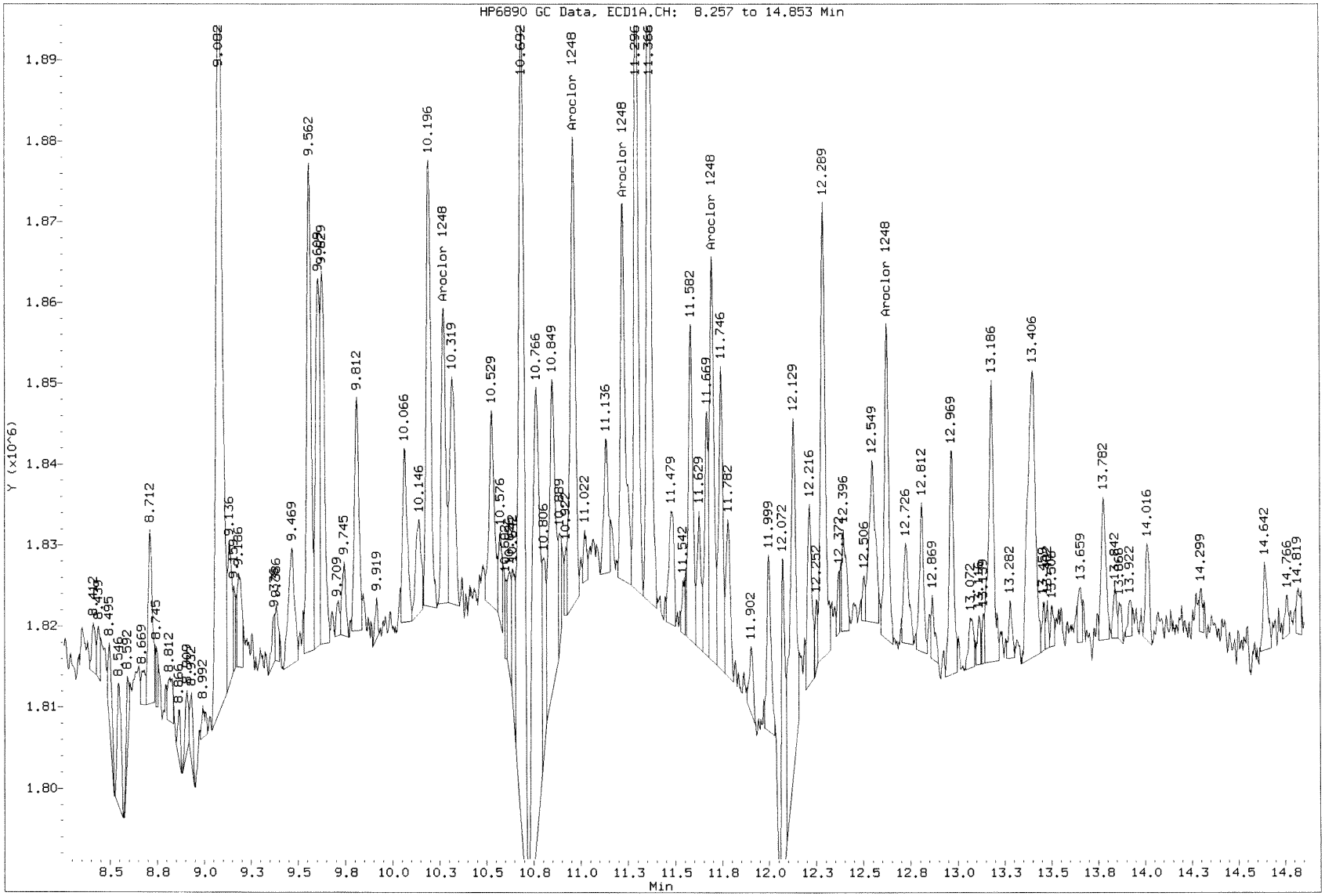
LMA 12/17/18

After baseline/shoulder MMC 12/19/18



Before
MR 12/12/18

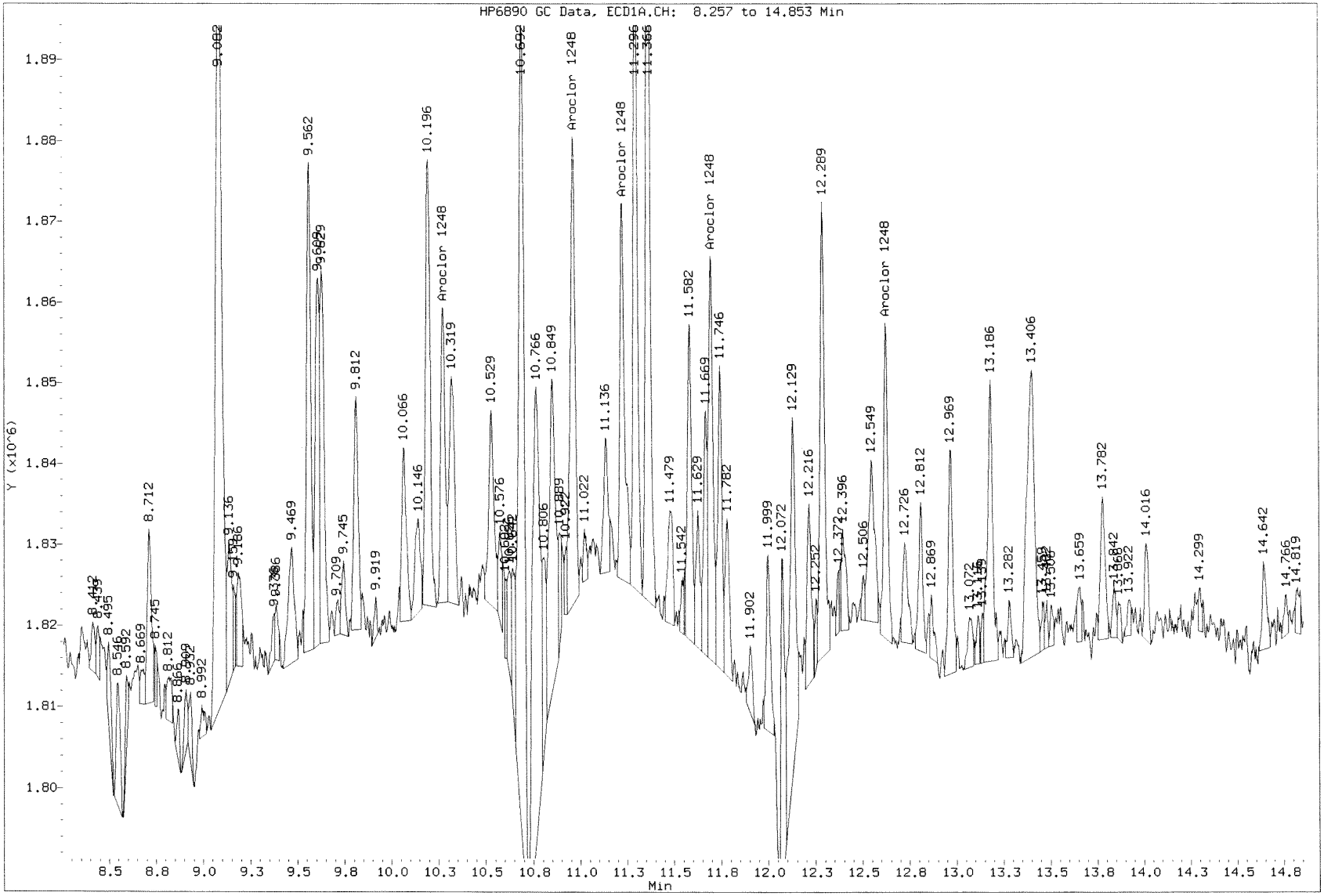
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F041.D
Injection Date: 08-DEC-2018 07:27
Instrument: GC27.i
Client Sample ID:



020950

After
baseline/shoulder
MR 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F041.D
Injection Date: 08-DEC-2018 07:27
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F042.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F042.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F042.D
Inj Date : 08-DEC-2018 07:58
Sample Info: 1248 5.0PPB PCB7-59C
Misc Info :
Cal Date : 12-DEC-2018 12:39
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	10.275	11.028	169098	72720	5.46	5.38	80.00- 120.00	100.00(M)
	10.965	11.448	253190	106650	5.39	5.42	110.05- 165.07	149.73(M)
	11.225	11.528	188365	100673	5.39	5.28	84.62- 126.93	111.39(M)
	11.698	12.041	196149	71629	6.04	5.14	83.51- 125.27	116.00(M)
	12.625	12.451	133888	102078	5.10	5.13	63.77- 95.66	79.18(M)
			Average of Peak Amounts =		5.48	5.27		

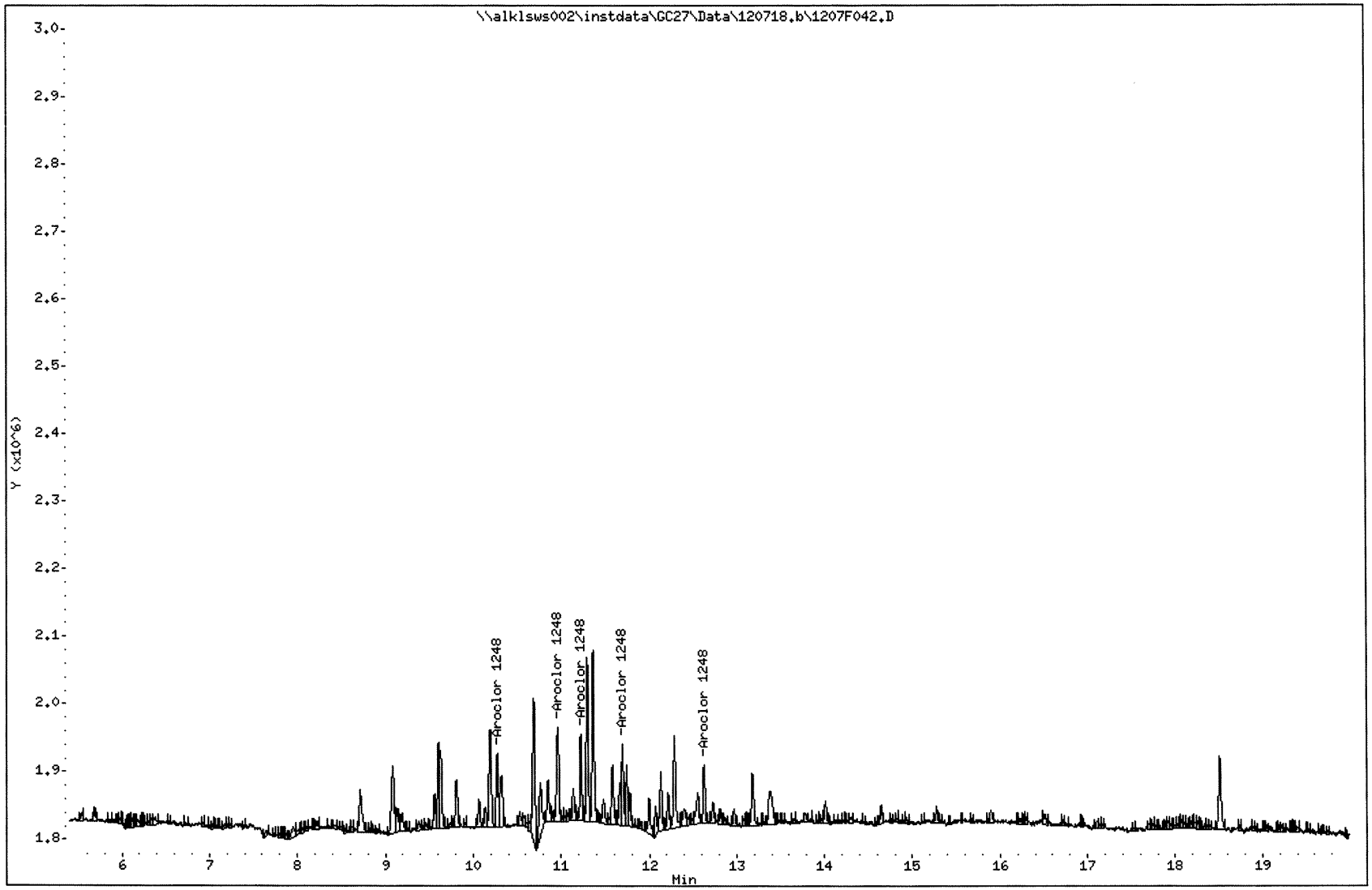
QC Flag Legend

M - Compound response manually integrated.

MC 12/13/13

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F042.D
Date : 08-DEC-2018 07:58
Client ID:
Sample Info: 1248 5.0PPB PCB7-59C

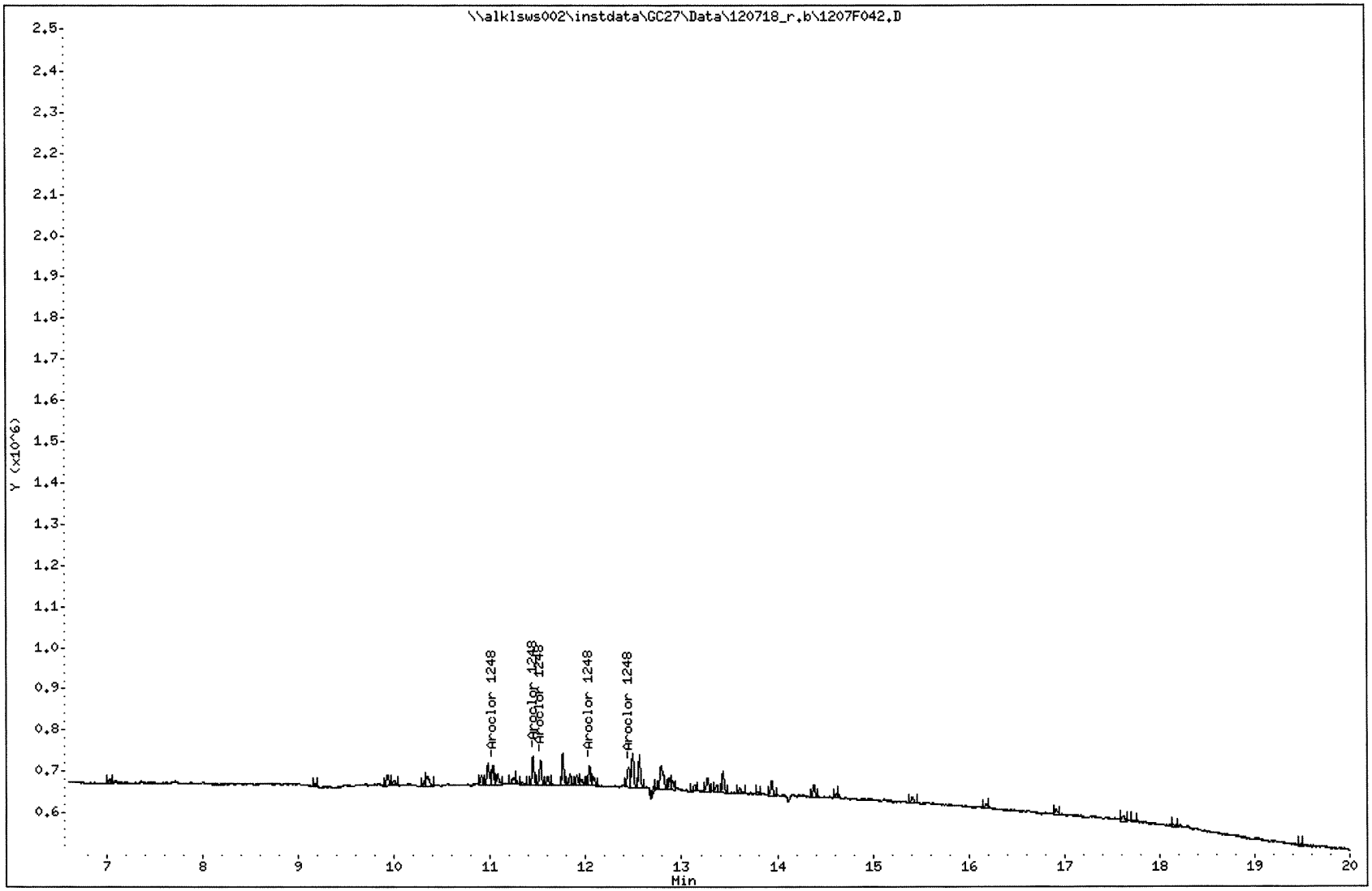
Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020953

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F042.D
Date : 08-DEC-2018 07:58
Client ID:
Sample Info: 1248 5.0PPB PCB7-59C

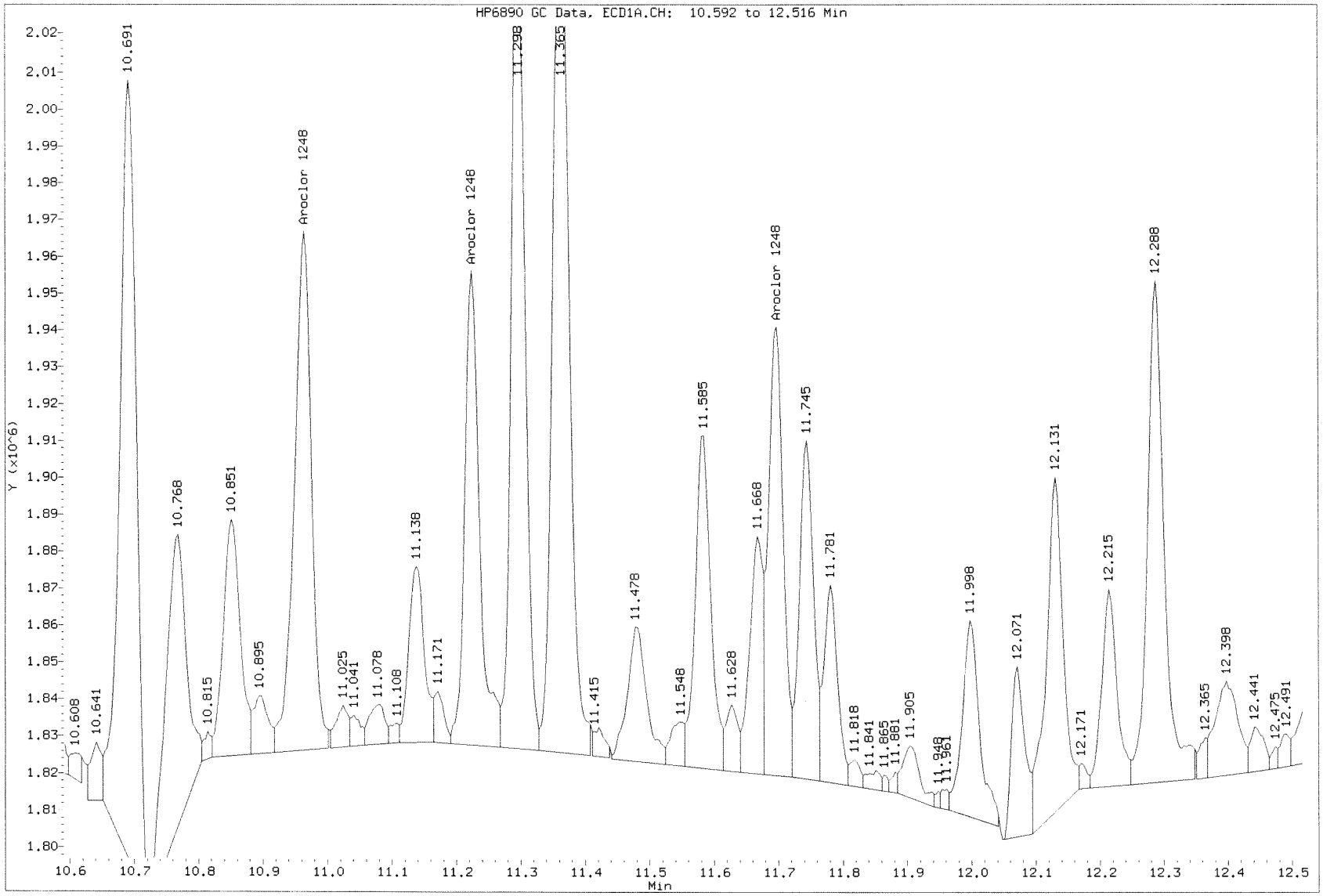
Instrument: GC27.i
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F042.D
Injection Date: 08-DEC-2018 07:58
Instrument: GC27.i
Client Sample ID:

CMA 12/17/18

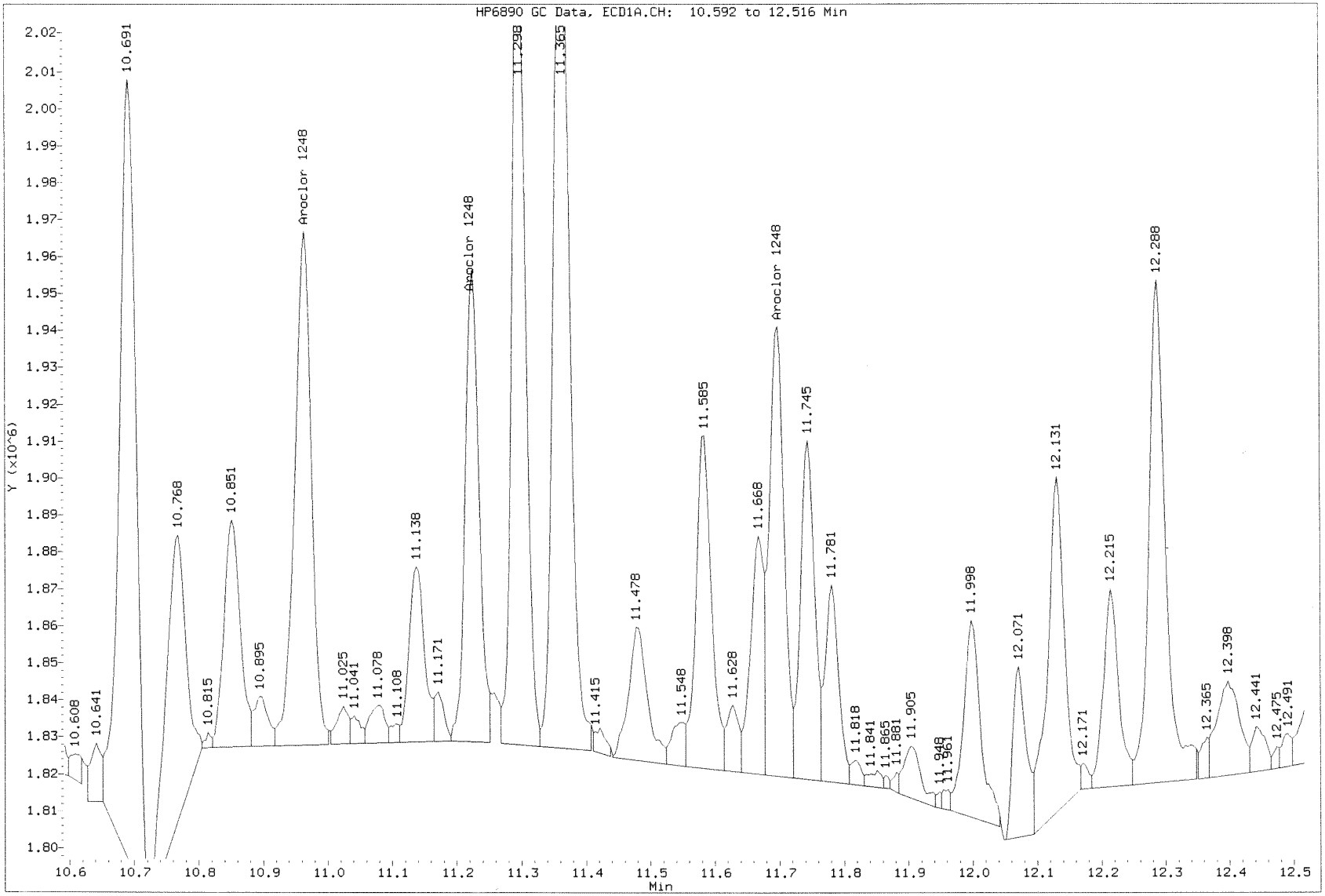
Before mmc 12/18/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F042.D
Injection Date: 08-DEC-2018 07:58
Instrument: GC27.i
Client Sample ID:

WA 12/17/18

After baseline/shoulder
MMC 12/19/18

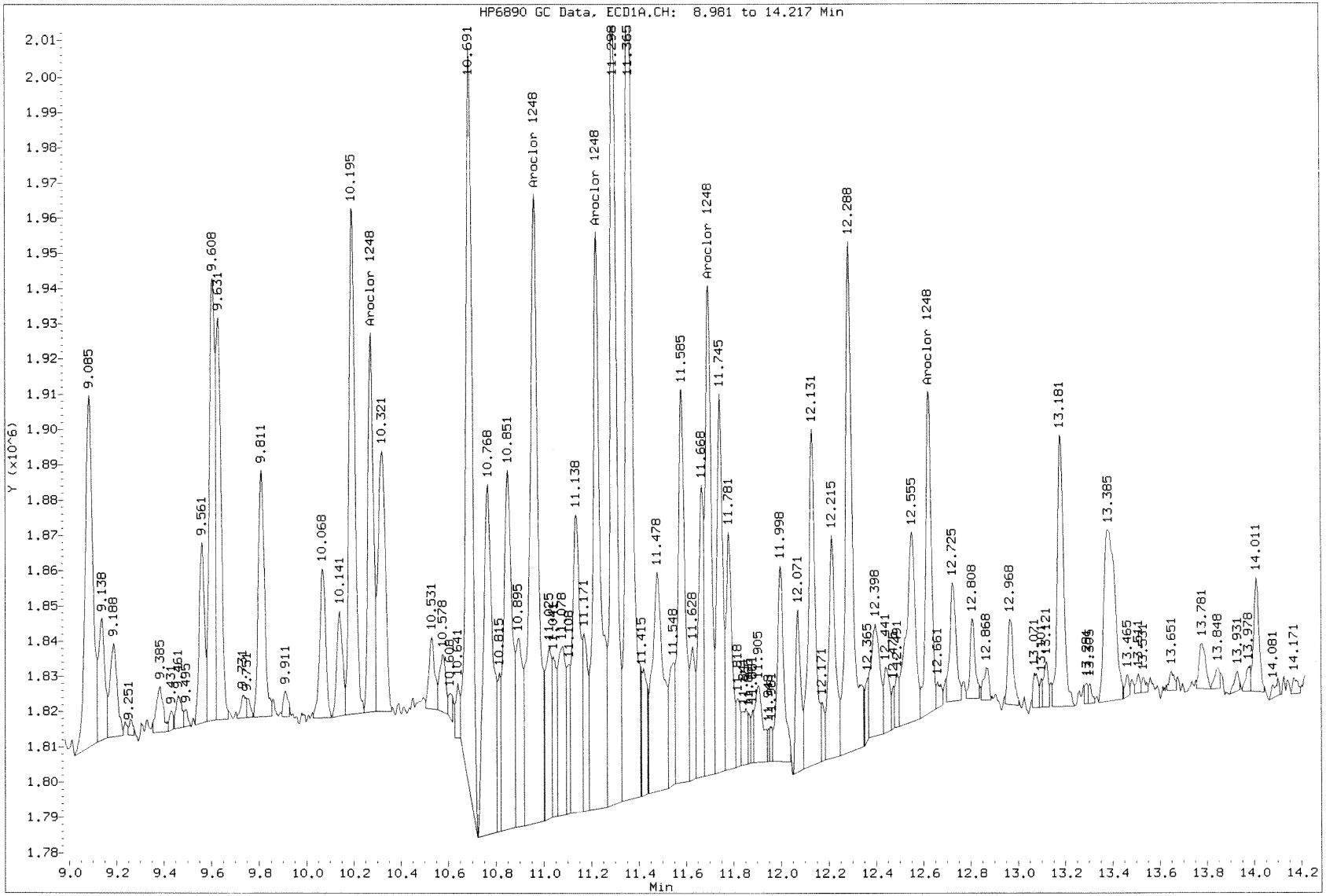


020956

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F042.D
Injection Date: 08-DEC-2018 07:58
Instrument: GC27.i
Client Sample ID:

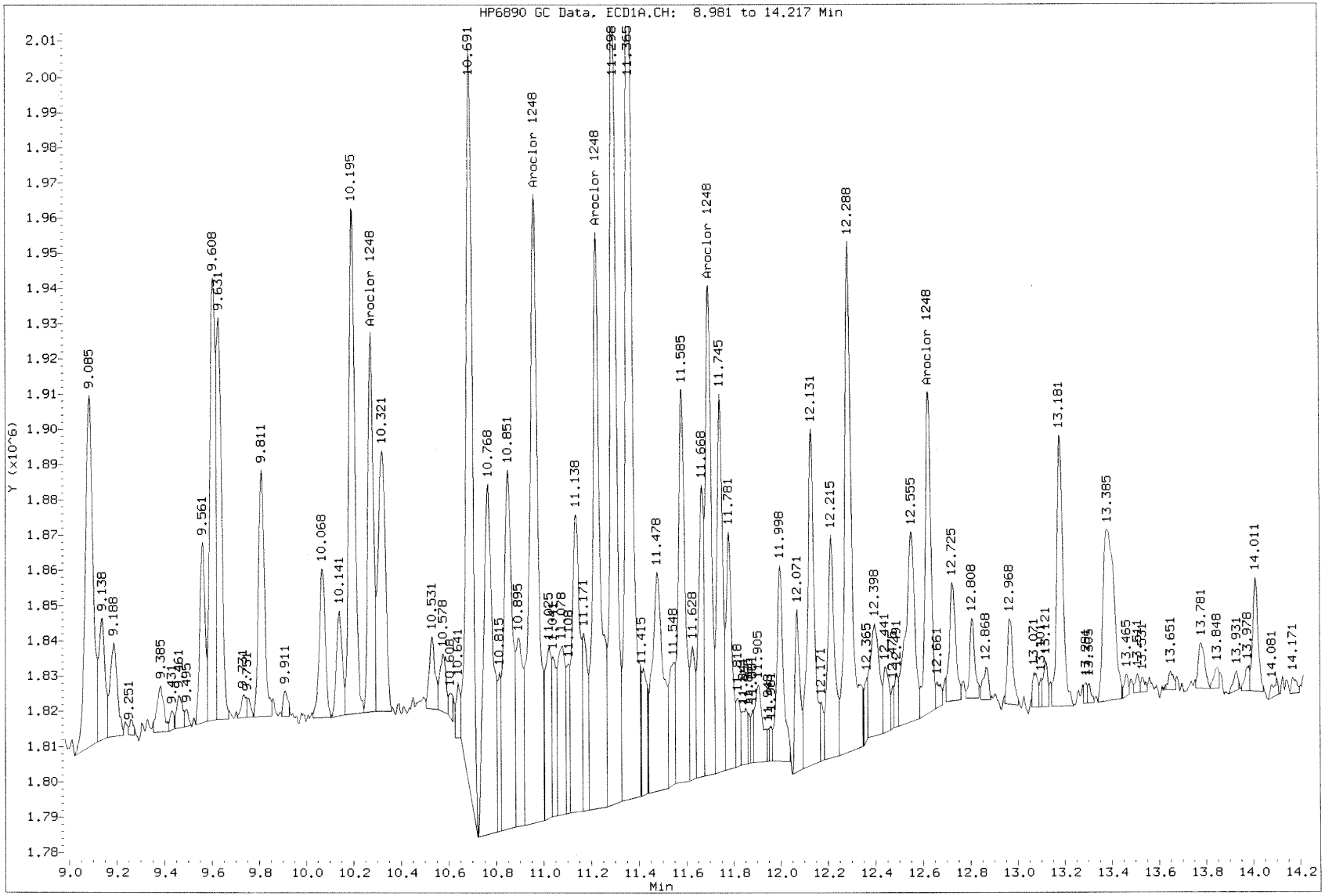
UA 12/17/18

Before
MR 12/12/18



020957

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F042.D
Injection Date: 08-DEC-2018 07:58
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F043.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F043.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F043.D
Inj Date : 08-DEC-2018 08:30
Sample Info: 1248 10PPB PCB7-59D
Misc Info :
Cal Date : 12-DEC-2018 12:39
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	10.274	11.027	330359	125661	10.7	9.29	80.00- 120.00	100.00(M)
	10.964	11.447	482735	198586	10.3	10.1	110.05- 165.07	146.12(M)
	11.224	11.527	356426	188086	10.2	9.87	84.62- 126.93	107.89(M)
	11.697	12.041	340583	146097	10.5	10.5	83.51- 125.27	103.09(M)
	12.627	12.451	276663	200333	10.5	10.1	63.77- 95.66	83.75(M)
			Average of Peak Amounts =		10.4	9.97		

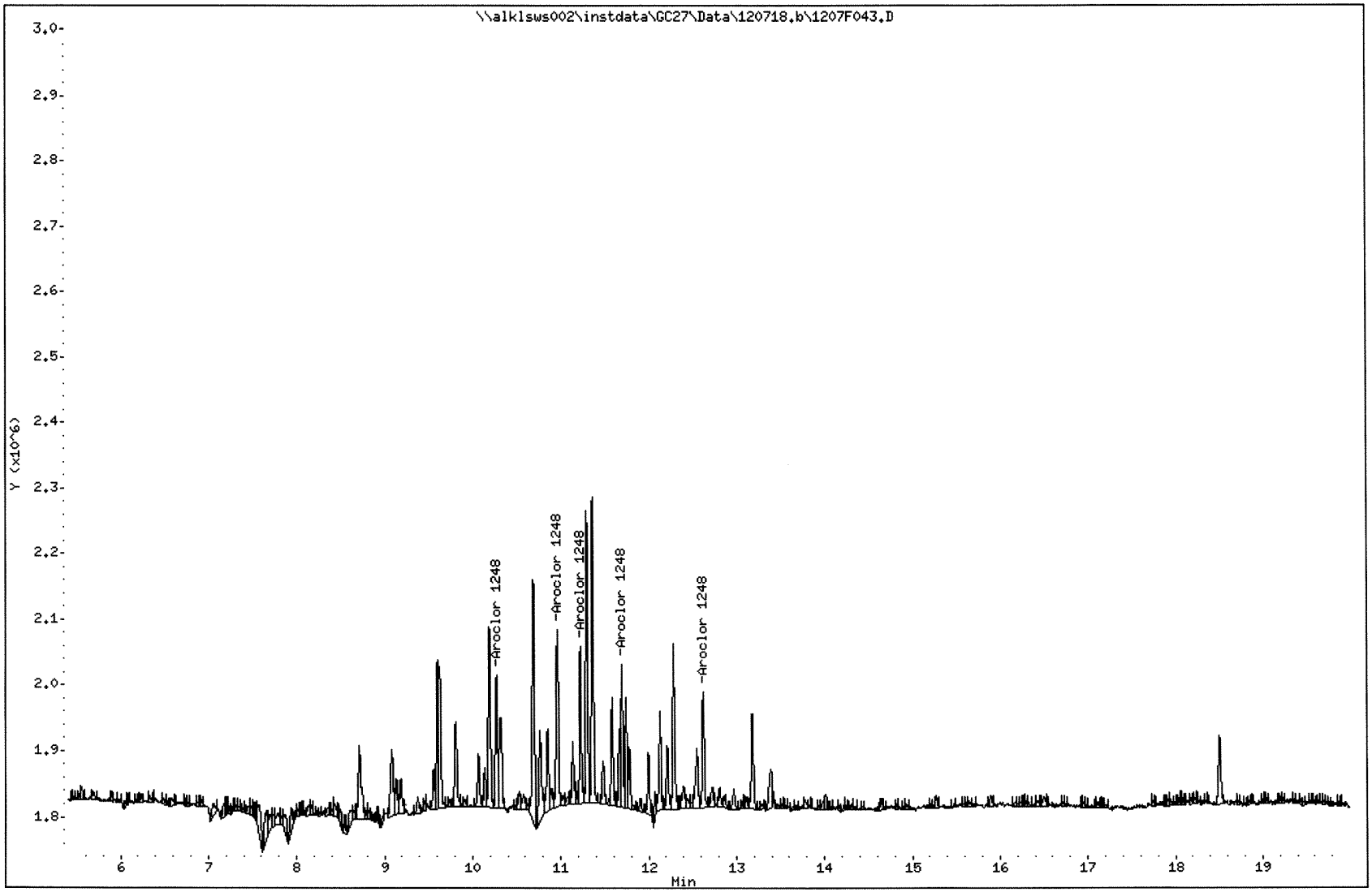
QC Flag Legend

M - Compound response manually integrated.

mz 12/13/18

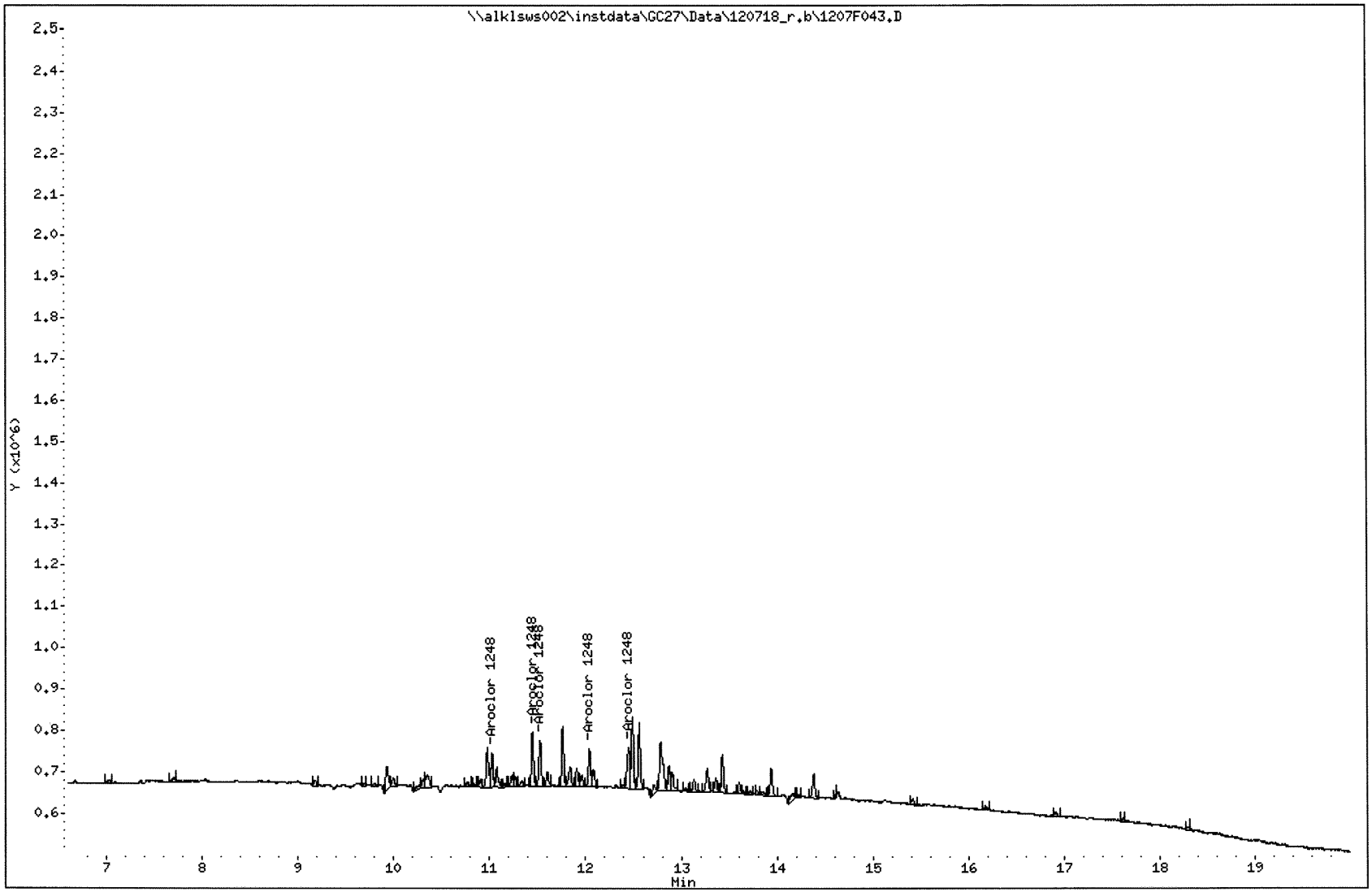
020959

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F043.D
Date : 08-DEC-2018 08:30
Client ID:
Instrument: GC27.i
Sample Info: 1248 10PPB PCB7-59D
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32

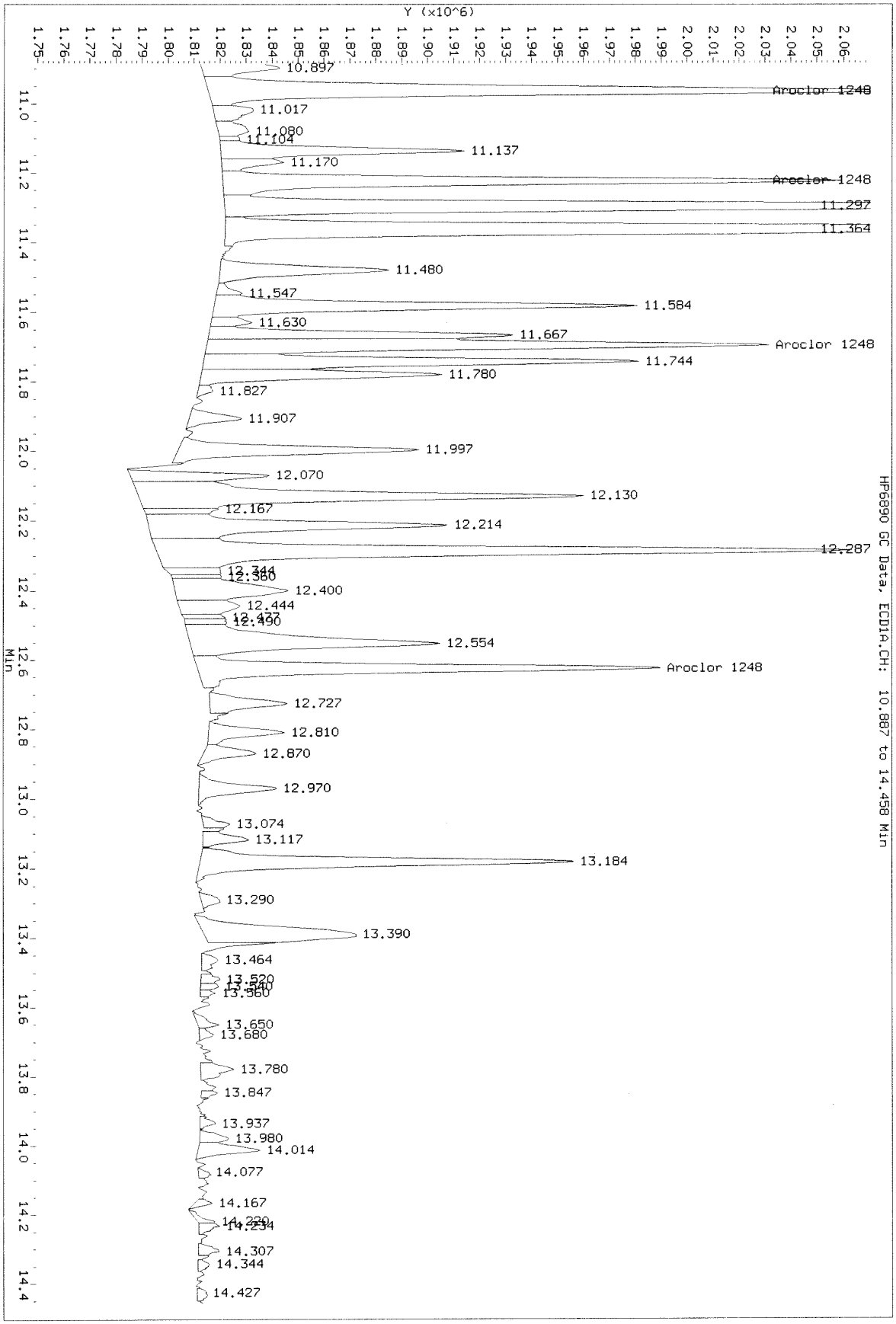


020960

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F043.D
Date : 08-DEC-2018 08:30
Client ID:
Instrument: GC27.i
Sample Info: 1248 10PPB PCB7-59D
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



020961

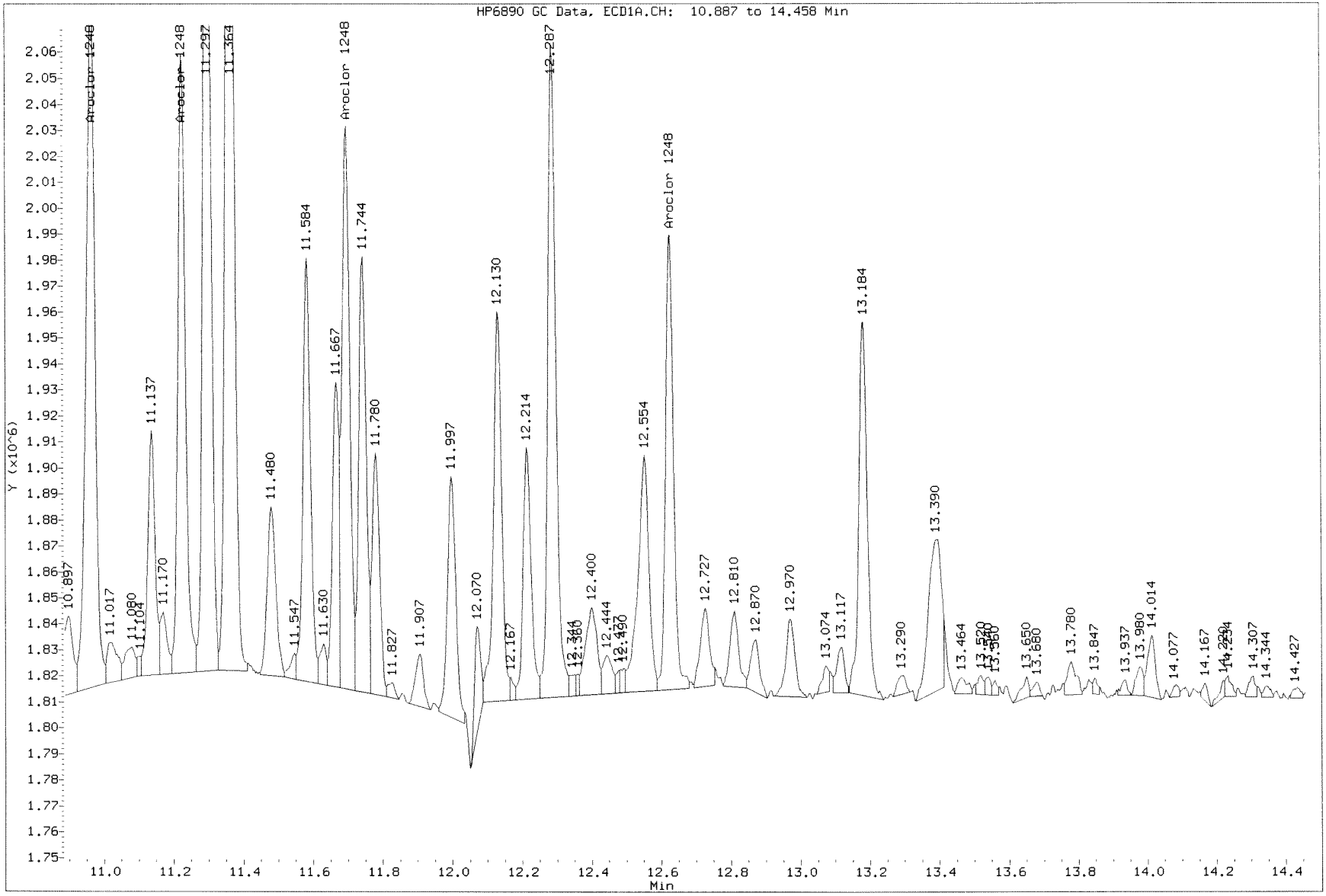

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F043.D
Injection Date: 08-DEC-2018 08:30
Instrument: GC27.i
Client Sample ID:
Y (x10^6)
Min
HP6890 GC Data, ECDiA.CH: 10.887 to 14.458 Min
10.897
Aroclor 1248
11.017
11.080
11.104
11.137
11.170
Aroclor 1248
11.297
11.364
11.480
11.547
11.584
11.630
11.667
Aroclor 1248
11.744
11.780
11.827
11.907
11.997
12.070
12.130
12.167
12.214
12.287
12.344
12.380
12.400
12.444
12.477
12.490
12.554
Aroclor 1248
12.727
12.810
12.870
12.970
13.074
13.117
13.184
13.290
13.390
13.464
13.520
13.540
13.560
13.650
13.680
13.780
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13.980
14.014
14.077
14.167
14.220
14.234
14.307
14.344
14.427

020962

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F043.D
Injection Date: 08-DEC-2018 08:30
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

After
MR 12/12/18
baseline/shoulder



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F044.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F044.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F044.D
Inj Date : 08-DEC-2018 09:01
Sample Info: 1248 20PPB PCB7-59E
Misc Info :
Cal Date : 12-DEC-2018 12:39
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	10.271	11.028	658678	276651	21.3	20.5	80.00- 120.00	100.00(M)
	10.965	11.445	903922	412401	19.2	21.0	110.05- 165.07	137.23(M)
	11.225	11.525	685569	404756	19.6	21.2	84.62- 126.93	104.08(M)
	11.695	12.038	636423	294945	19.6	21.1	83.51- 125.27	96.62(M)
	12.625	12.452	546379	400753	20.8	20.2	63.77- 95.66	82.95(M)
			Average of Peak Amounts =		20.1	20.8		

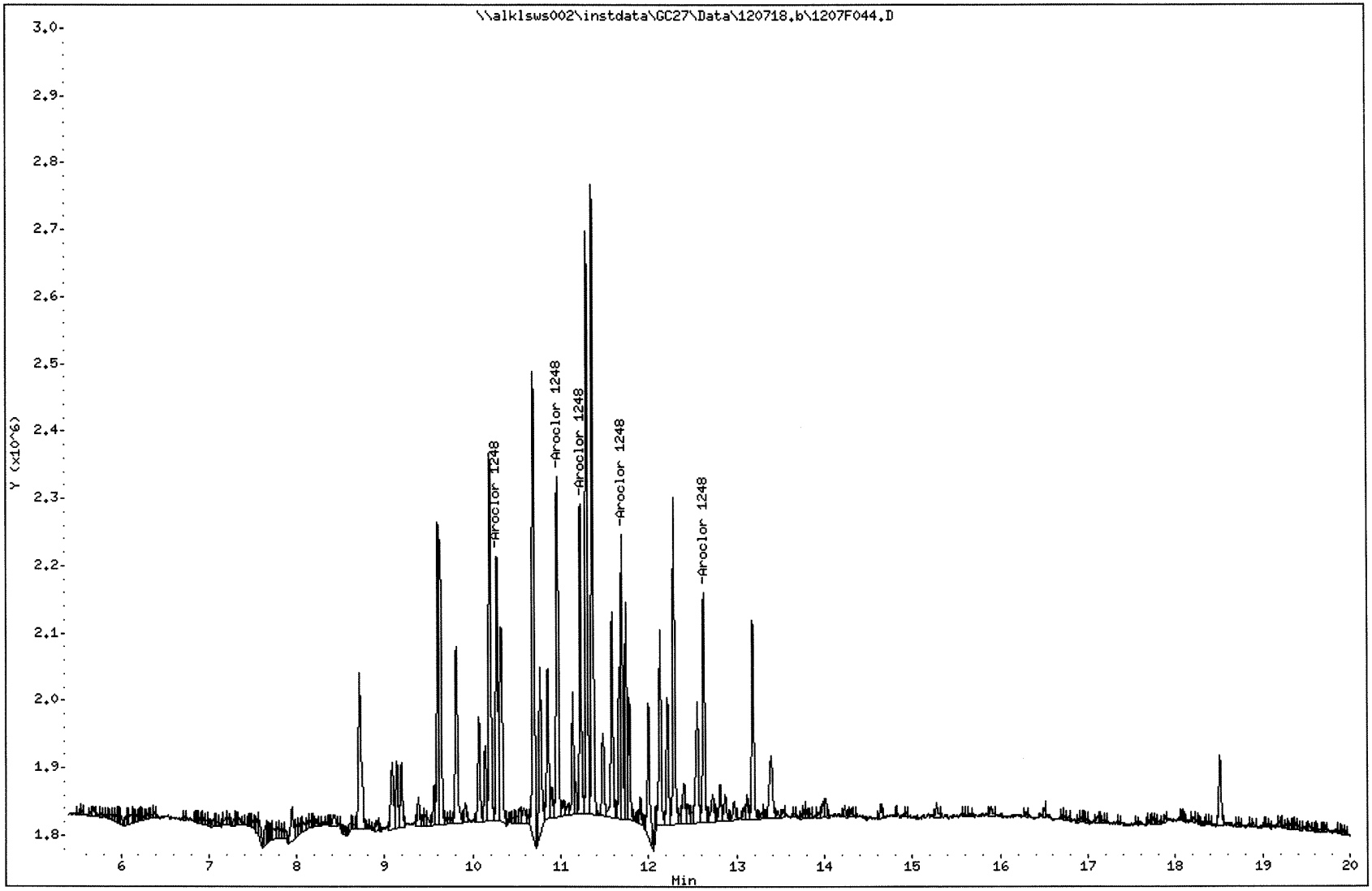
QC Flag Legend

M - Compound response manually integrated.

MR 12/13/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F044.D
Date : 08-DEC-2018 09:01
Client ID:
Sample Info: 1248 20PPB PCB7-59E

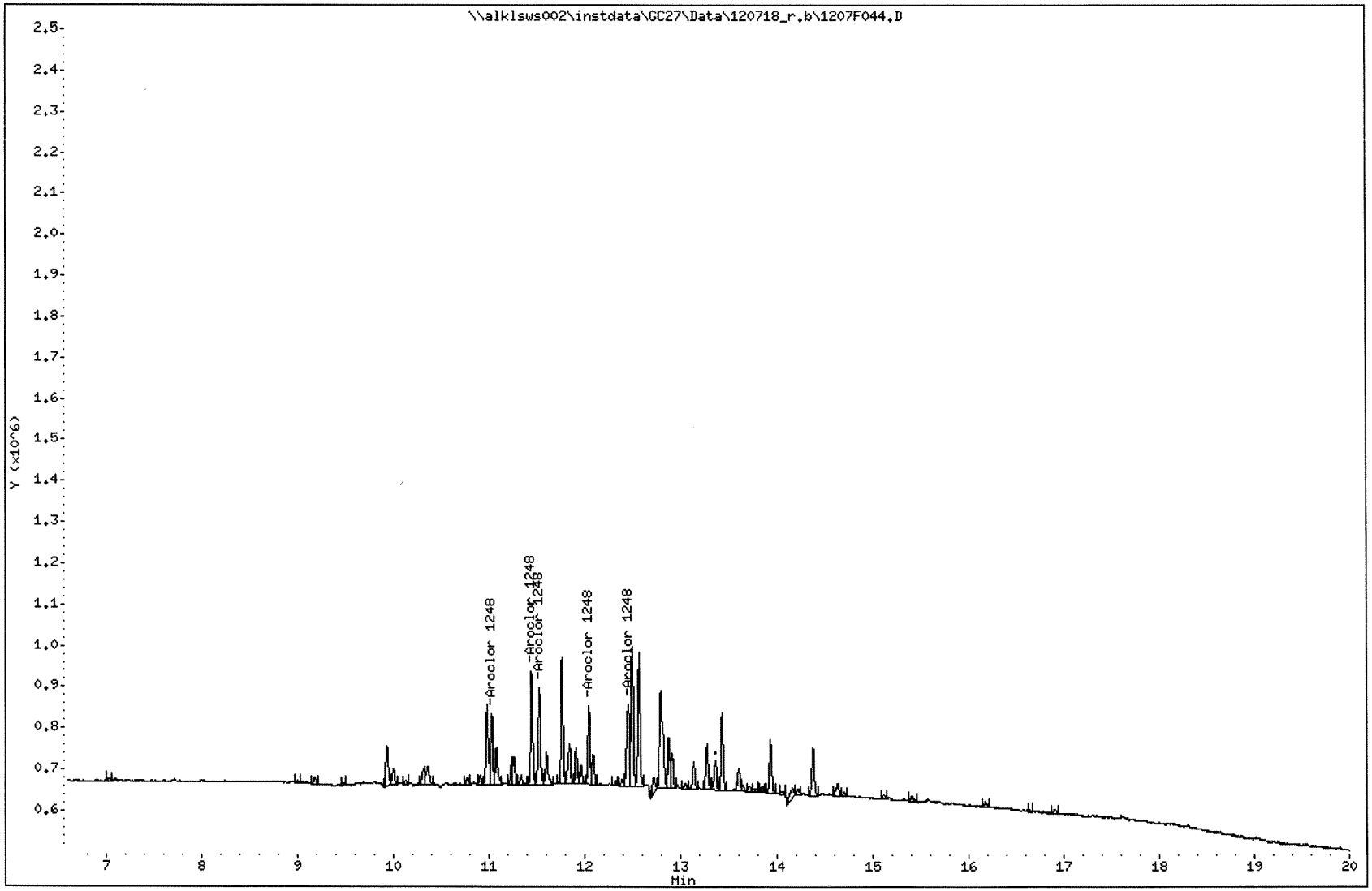
Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F044.D
Date : 08-DEC-2018 09:01
Client ID:
Sample Info: 1248 20PPB PCB7-59E

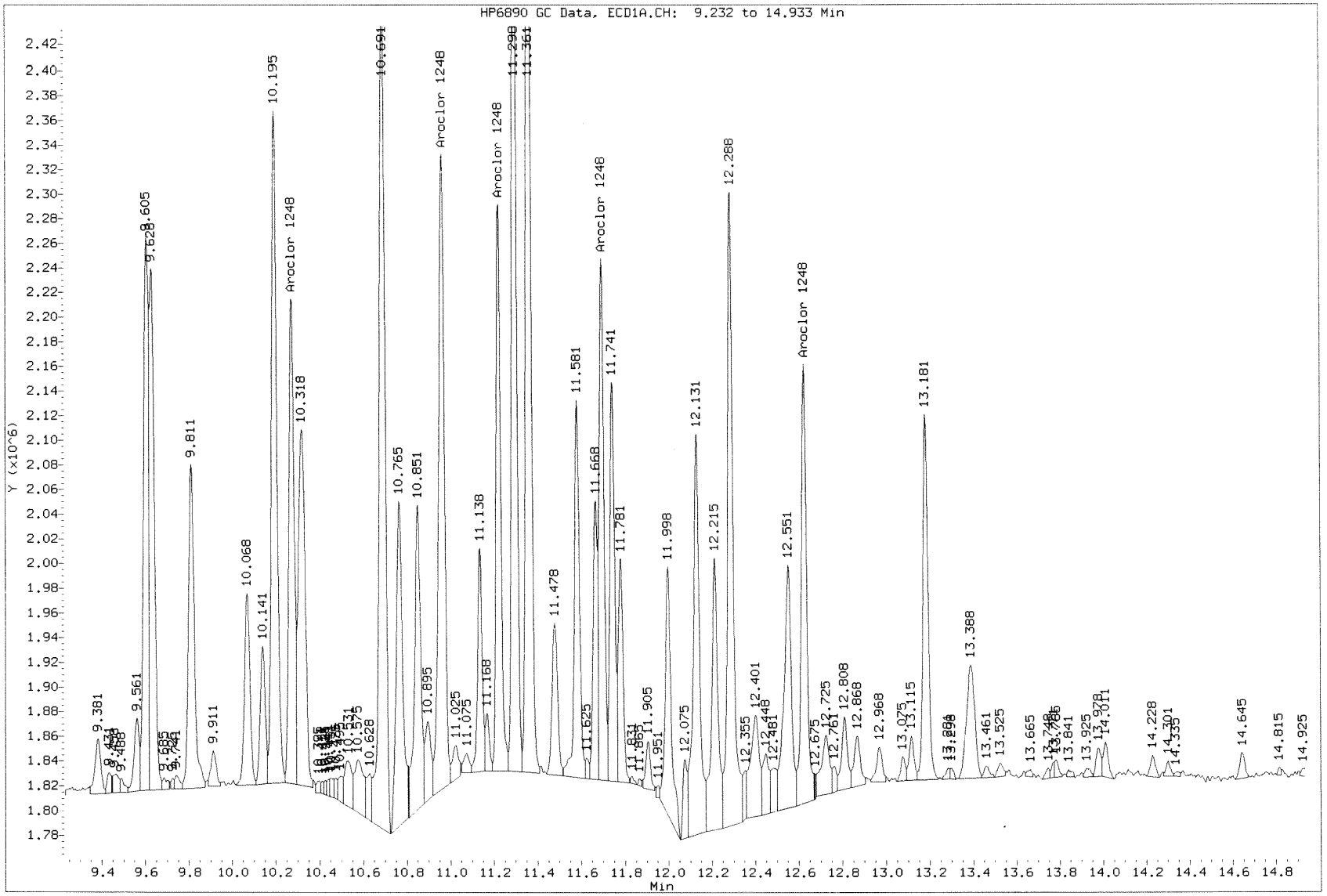
Instrument: GC27.i

Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Before
CVA 12/17/18 MM 12/18/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F044.D
Injection Date: 08-DEC-2018 09:01
Instrument: GC27.i
Client Sample ID:

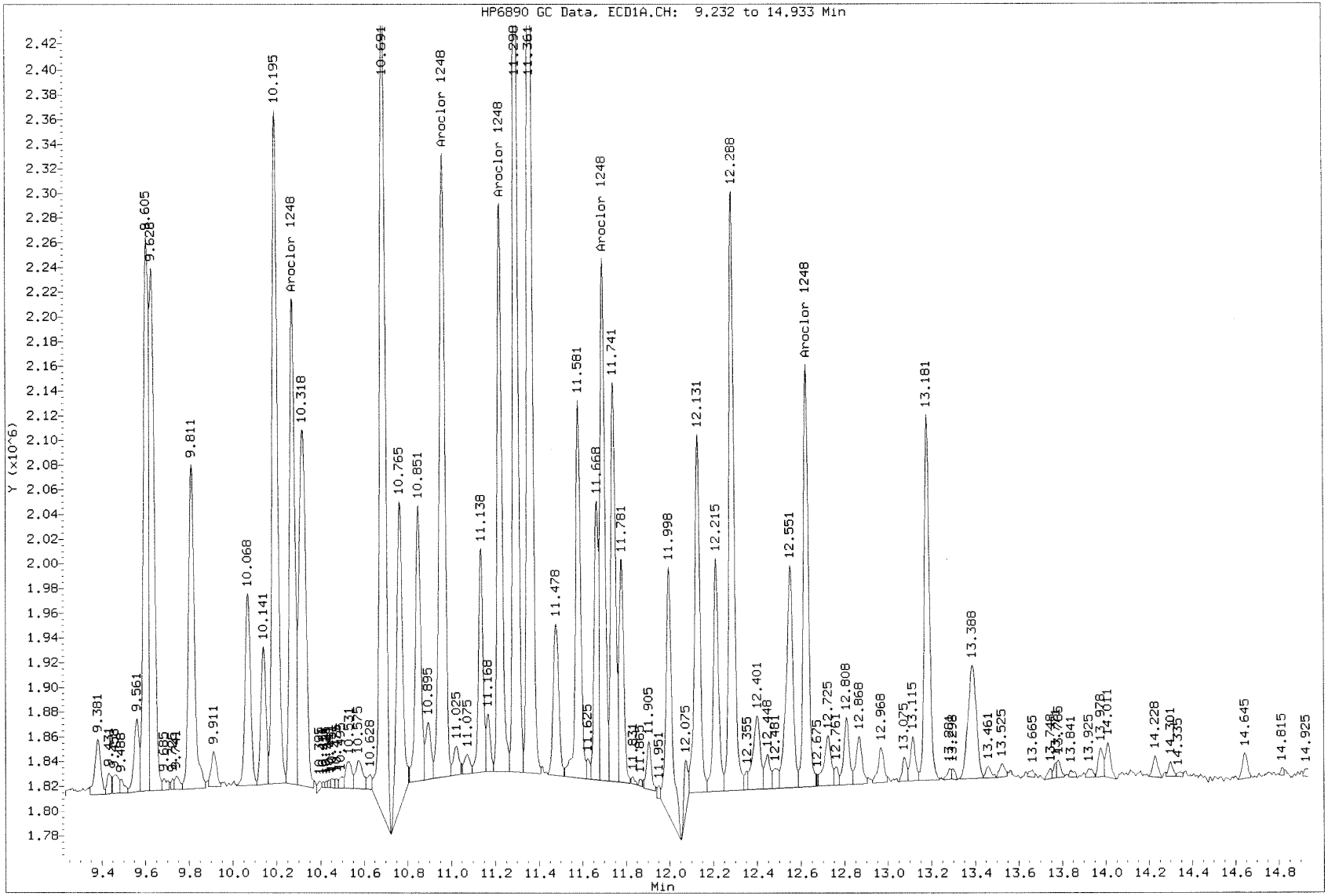


020967

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F044.D
Injection Date: 08-DEC-2018 09:01
Instrument: GC27.i
Client Sample ID:

CWA 12/17/18

~~After~~ baseline/shoulder
MR 12/12/18



020968

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F045.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F045.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F045.D
Inj Date : 08-DEC-2018 09:32
Sample Info: 1248 50PPB PCB7-59F
Misc Info :
Cal Date : 12-DEC-2018 12:39
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	10.272	11.029	1490414	639374	48.1	47.3	80.00- 120.00	100.00(M)
	10.962	11.446	2082775	899315	44.3	45.7	110.05- 165.07	139.74(M)
	11.222	11.526	1627109	867841	46.6	45.5	84.62- 126.93	109.17(M)
	11.695	12.039	1501798	691666	46.3	49.6	83.51- 125.27	100.76(M)
	12.625	12.449	1169368	947035	44.6	47.6	63.77- 95.66	78.46(M)
			Average of Peak Amounts =		46.0	47.1		

QC Flag Legend

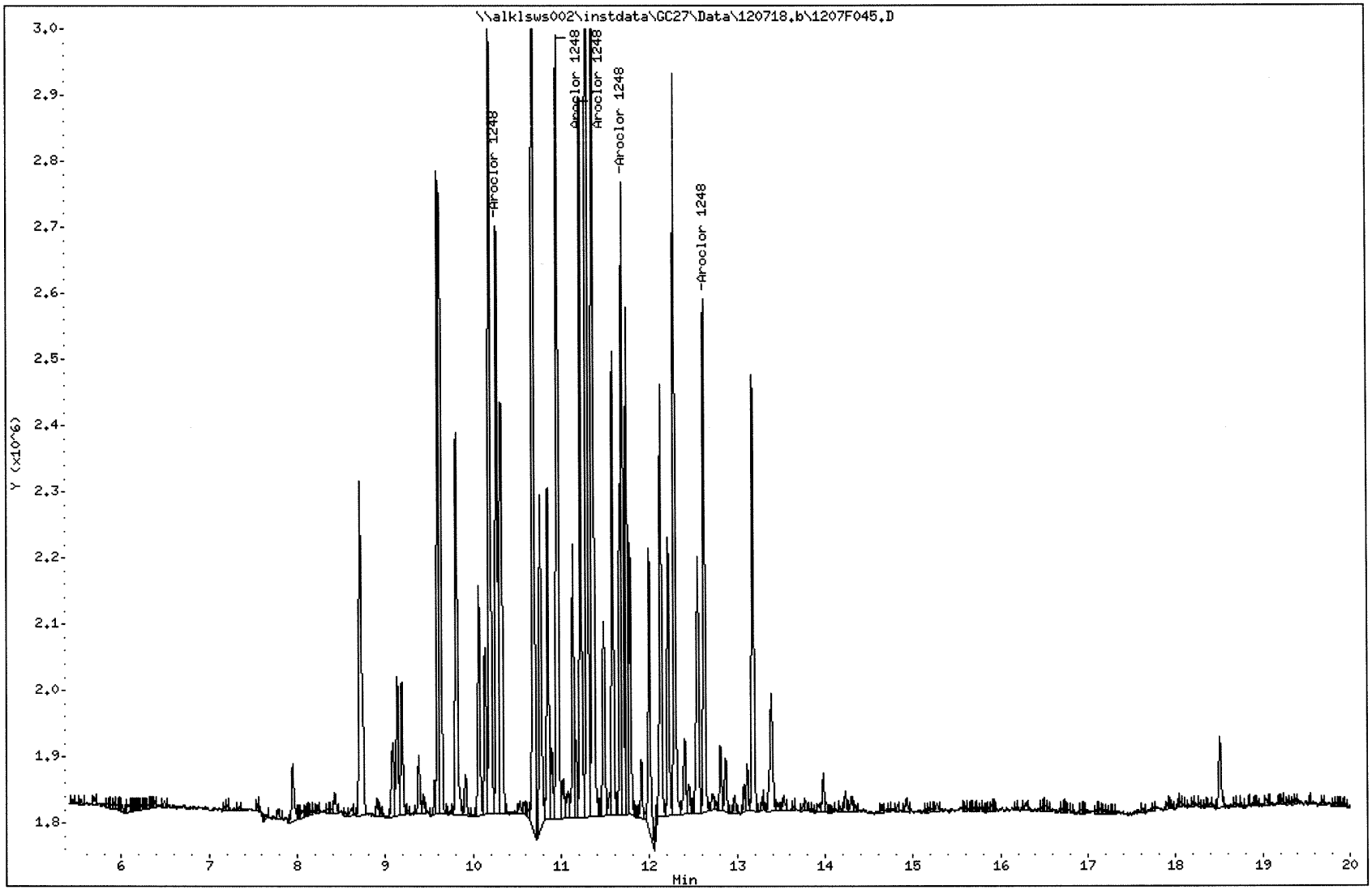
M - Compound response manually integrated.

12/13/18
MC 12/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F045.D
Date : 08-DEC-2018 09:32
Client ID:
Sample Info: 1248 50PPB PCB7-59F

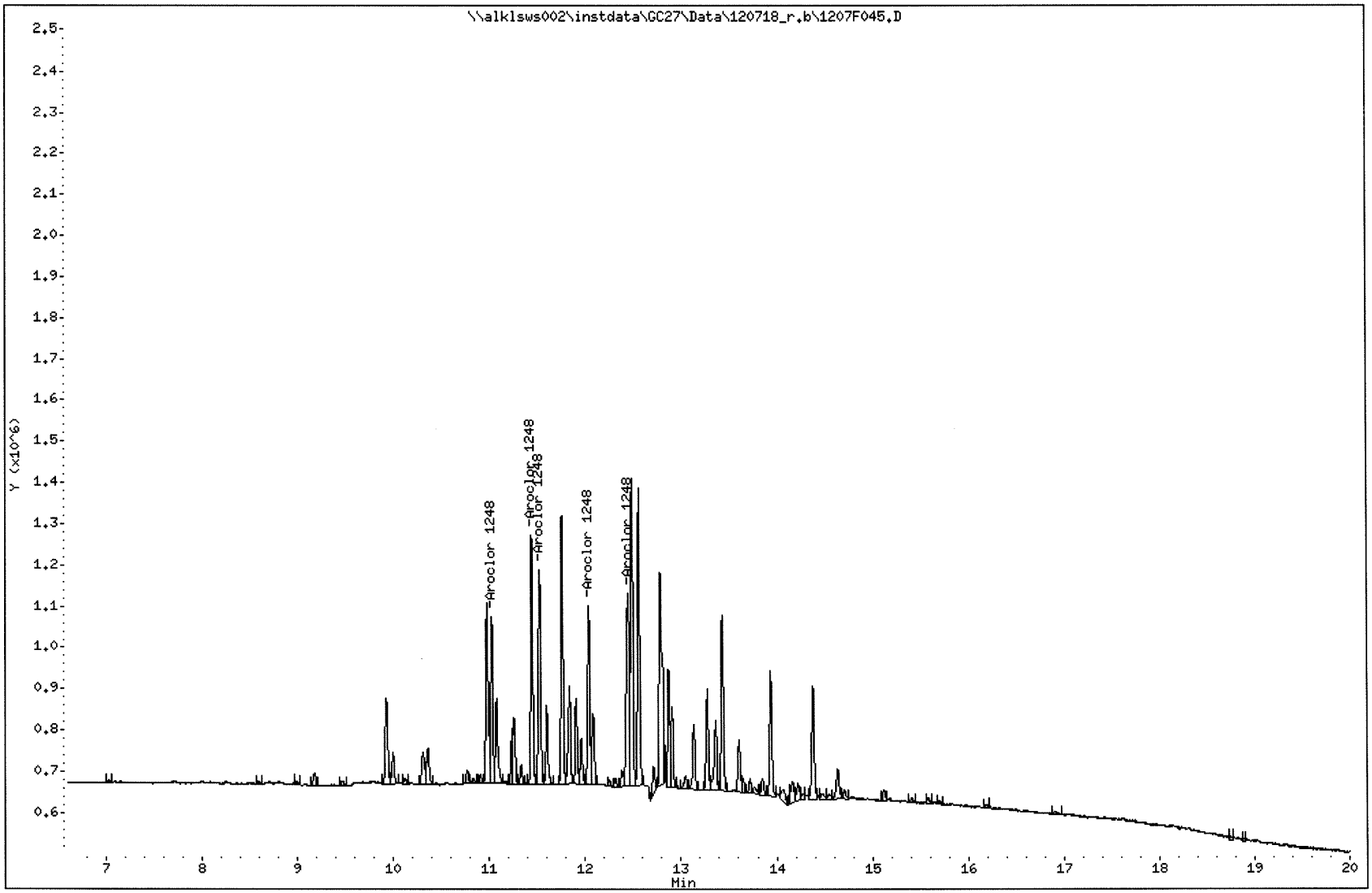
Instrument: GC27.i

Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020970

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F045.D
Date : 08-DEC-2018 09:32
Client ID:
Instrument: GC27.i
Sample Info: 1248 50PPB PCB7-59F
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32

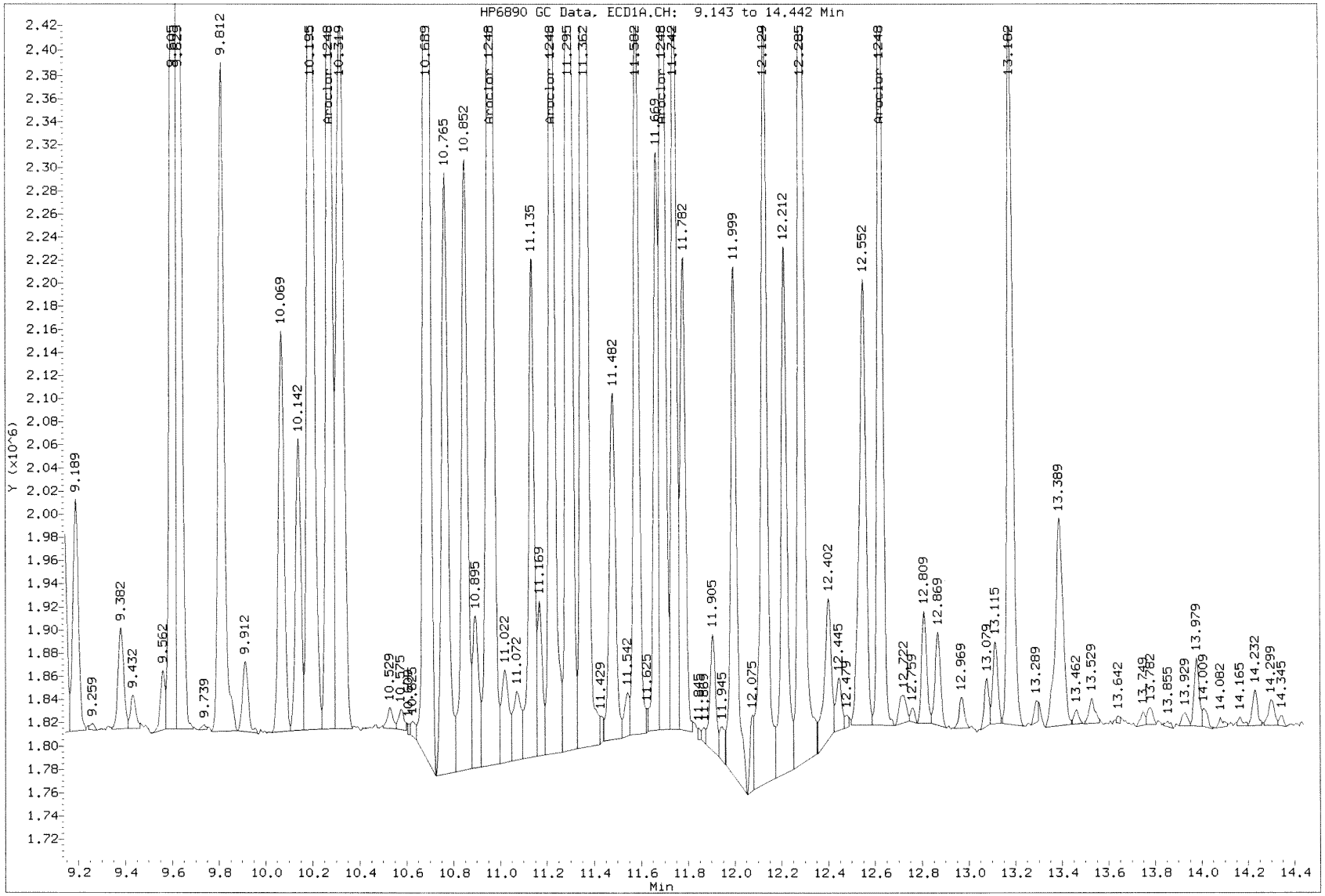


020971

Before

UA 12/17/18 MC 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F045.D
Injection Date: 08-DEC-2018 09:32
Instrument: GC27.i
Client Sample ID:

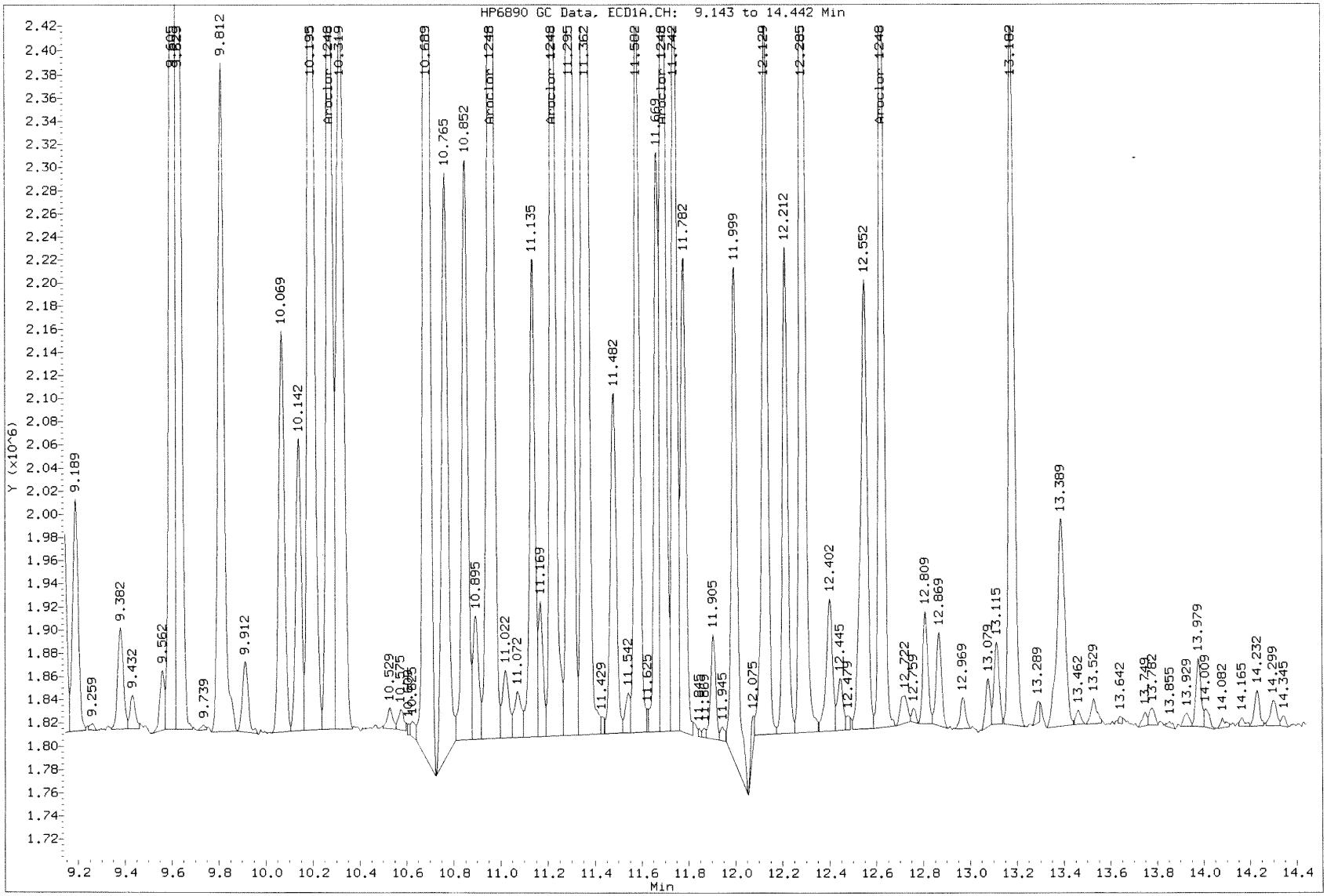


020972

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F045.D
Injection Date: 08-DEC-2018 09:32
Instrument: GC27.i
Client Sample ID:

MP 12/17/18

After baseline/shoulder mp 12/19/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F046.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F046.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F046.D
Inj Date : 08-DEC-2018 10:04
Sample Info: 1248 100PPB PCB7-59G
Misc Info :
Cal Date : 12-DEC-2018 12:39
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

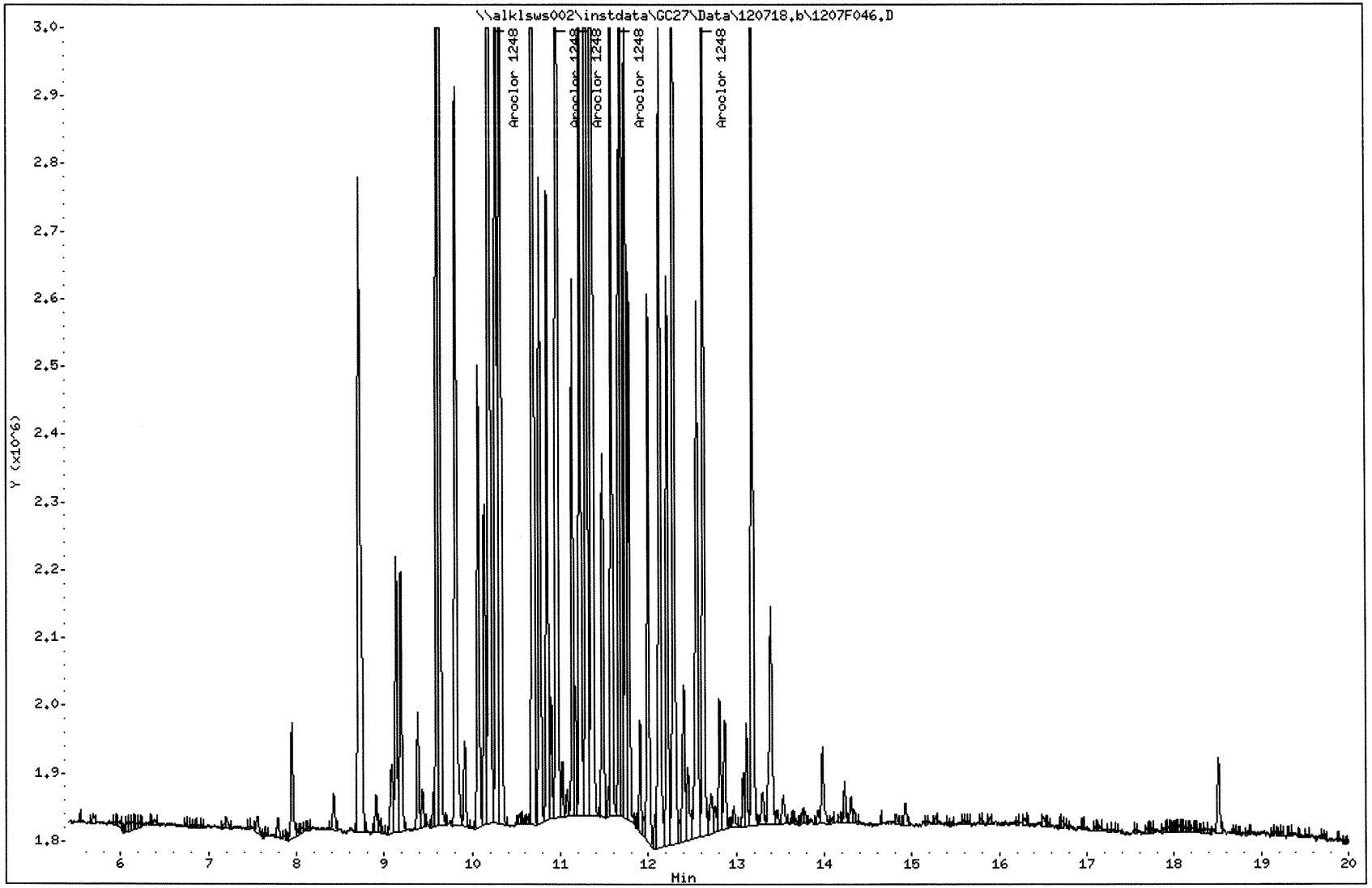
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	10.272	11.029	2904008	1246450	93.7	92.2	80.00- 120.00	100.00
	10.962	11.446	3850447	1714302	81.9	87.2	110.05- 165.07	132.59
	11.222	11.526	2972936	1650941	85.1	86.6	84.62- 126.93	102.37
	11.696	12.039	2724285	1352569	84.0	97.0	83.51- 125.27	93.81
	12.626	12.449	2348511	1811197	89.5	91.1	63.77- 95.66	80.87
			Average of Peak Amounts =		86.8	90.8		

MC 12/13/18

020974

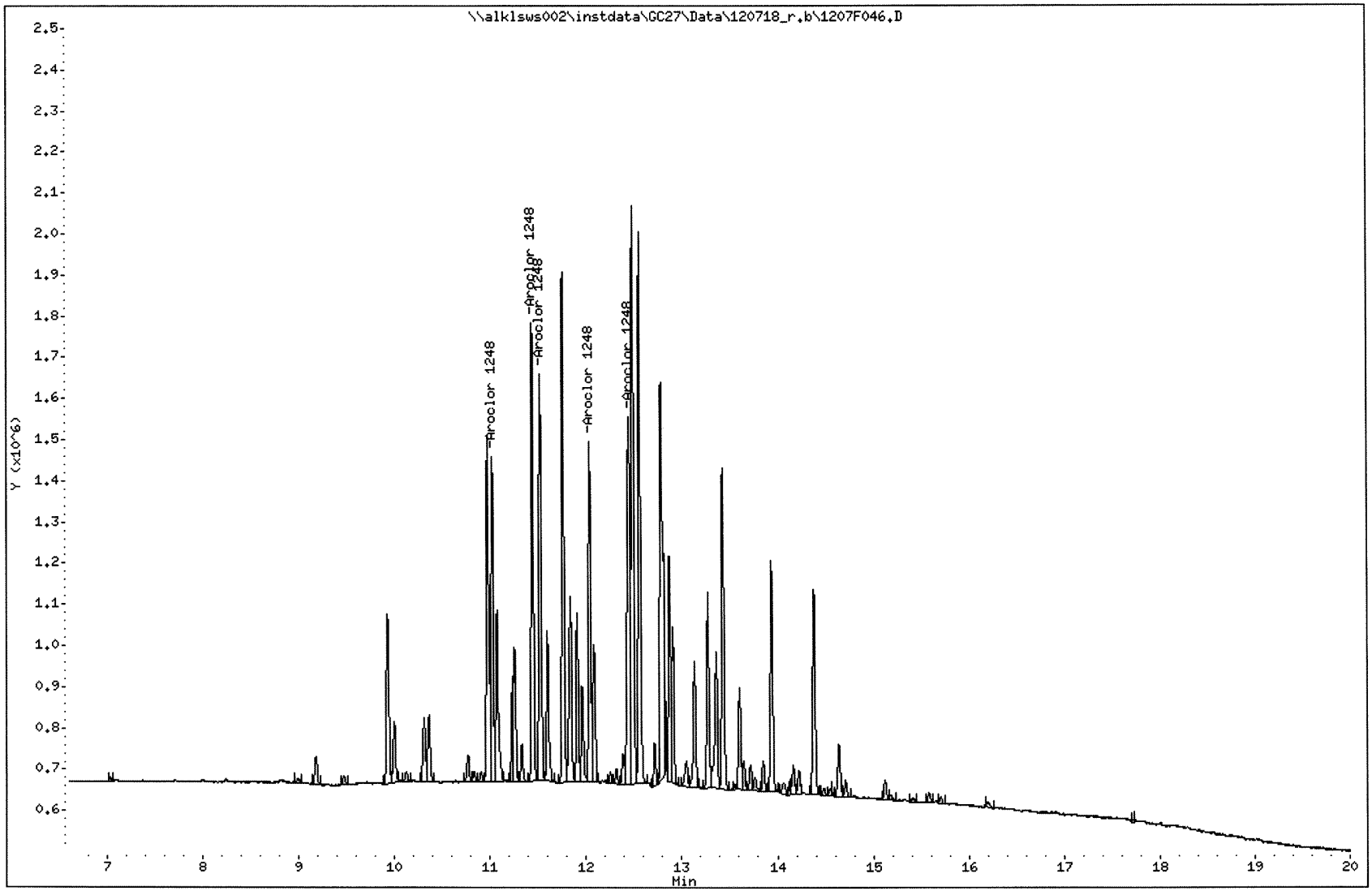
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F046.D
Date : 08-DEC-2018 10:04
Client ID:
Sample Info: 1248 100PPB PCB7-59G

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020975

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F046.D
Date : 08-DEC-2018 10:04
Client ID:
Instrument: GC27.i
Sample Info: 1248 100PPB PCB7-59G
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



020976

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F047.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F047.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F047.D
Inj Date : 08-DEC-2018 10:35
Sample Info: 1248 200PPB PCB7-59H
Misc Info :
Cal Date : 12-DEC-2018 12:40
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	10.274	11.028	5524988	2429288	178	180	80.00- 120.00	100.00(M)
	10.964	11.444	7600238	3195740	162	163	110.05- 165.07	137.56(M)
	11.224	11.528	5844199	3105132	167	163	84.62- 126.93	105.78(M)
	11.694	12.041	5767618	2525790	178	181	83.51- 125.27	104.39(M)
	12.624	12.448	4404117	3358557	168	169	63.77- 95.66	79.71(M)
			Average of Peak Amounts =		171	171		

QC Flag Legend

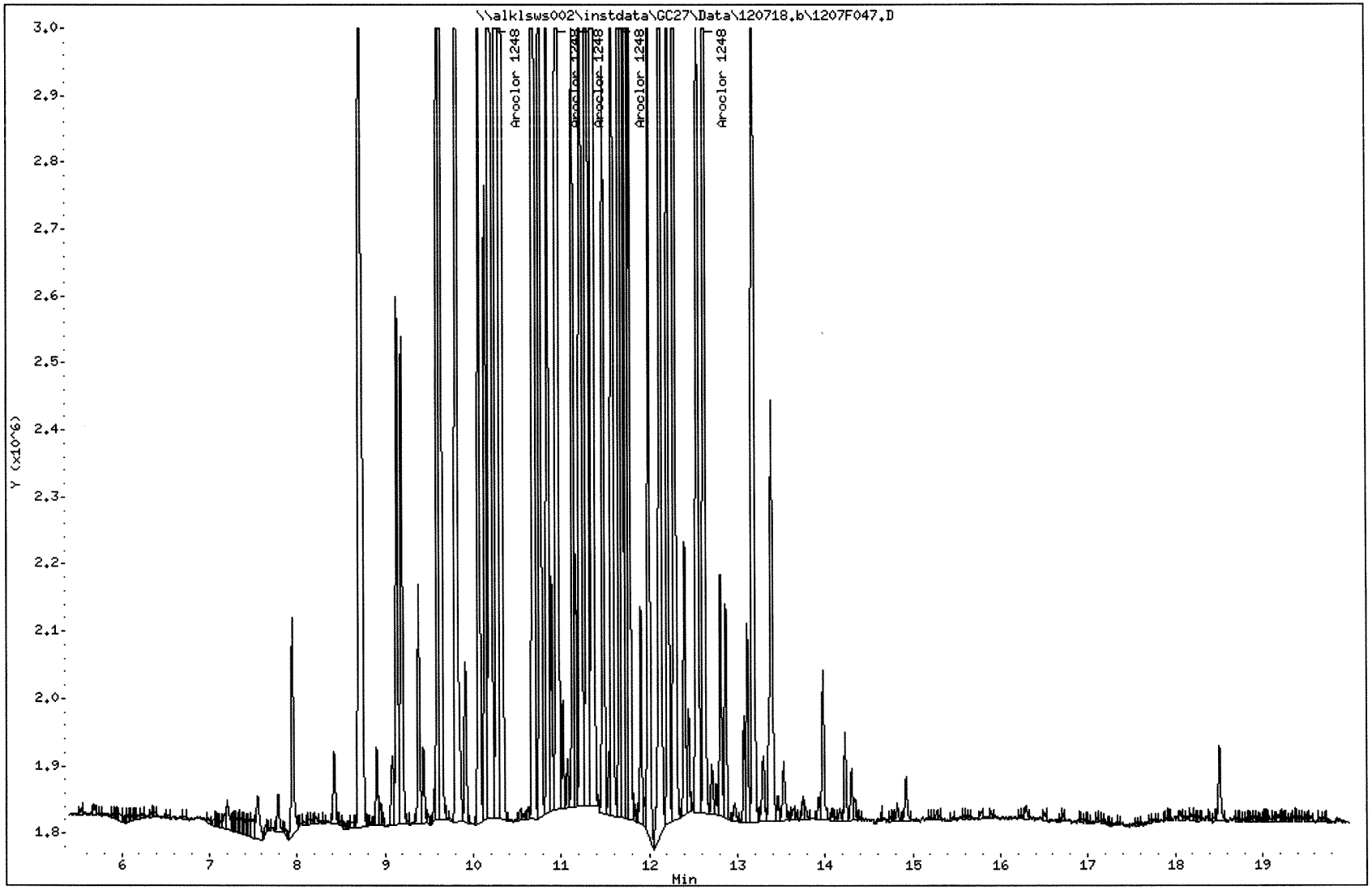
M - Compound response manually integrated.

MC 12/13/18

020977

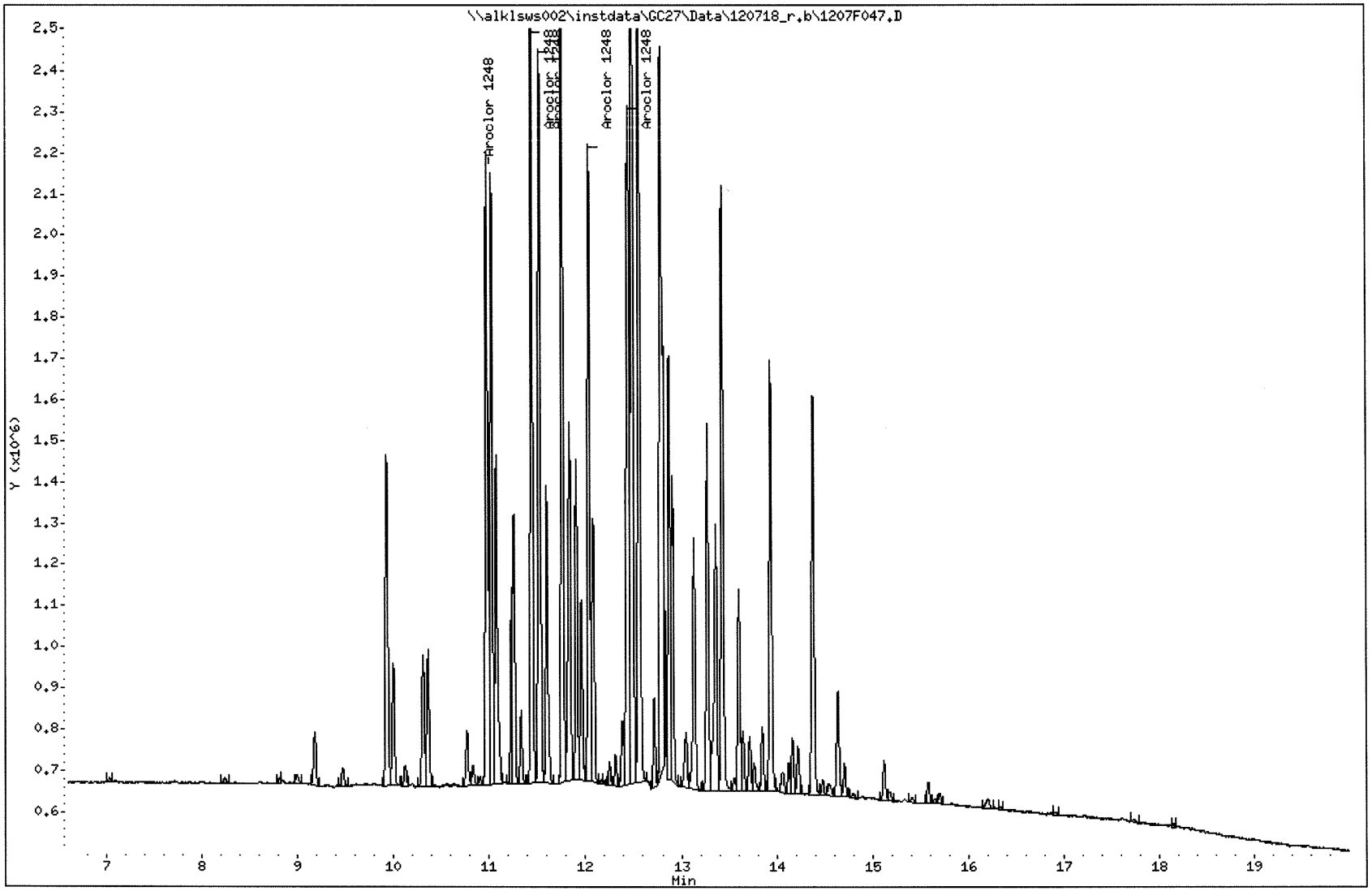
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F047.D
Date : 08-DEC-2018 10:35
Client ID:
Sample Info: 1248 200PPB PCB7-59H

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F047.D
Date : 08-DEC-2018 10:35
Client ID:
Sample Info: 1248 200PPB PCB7-59H

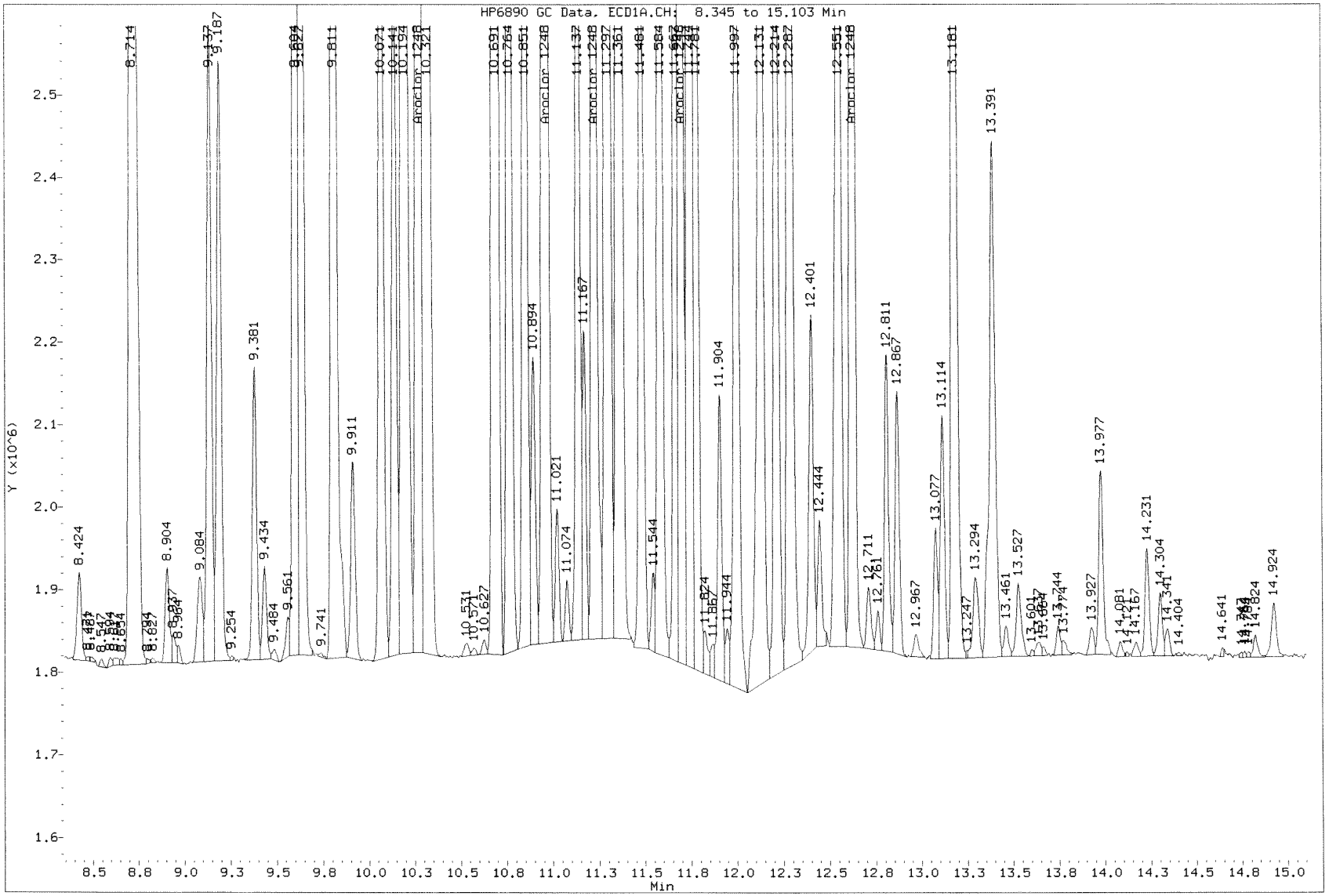
Instrument: GC27.i
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F047.D
Injection Date: 08-DEC-2018 10:35
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

Before
MR 12/12/2018

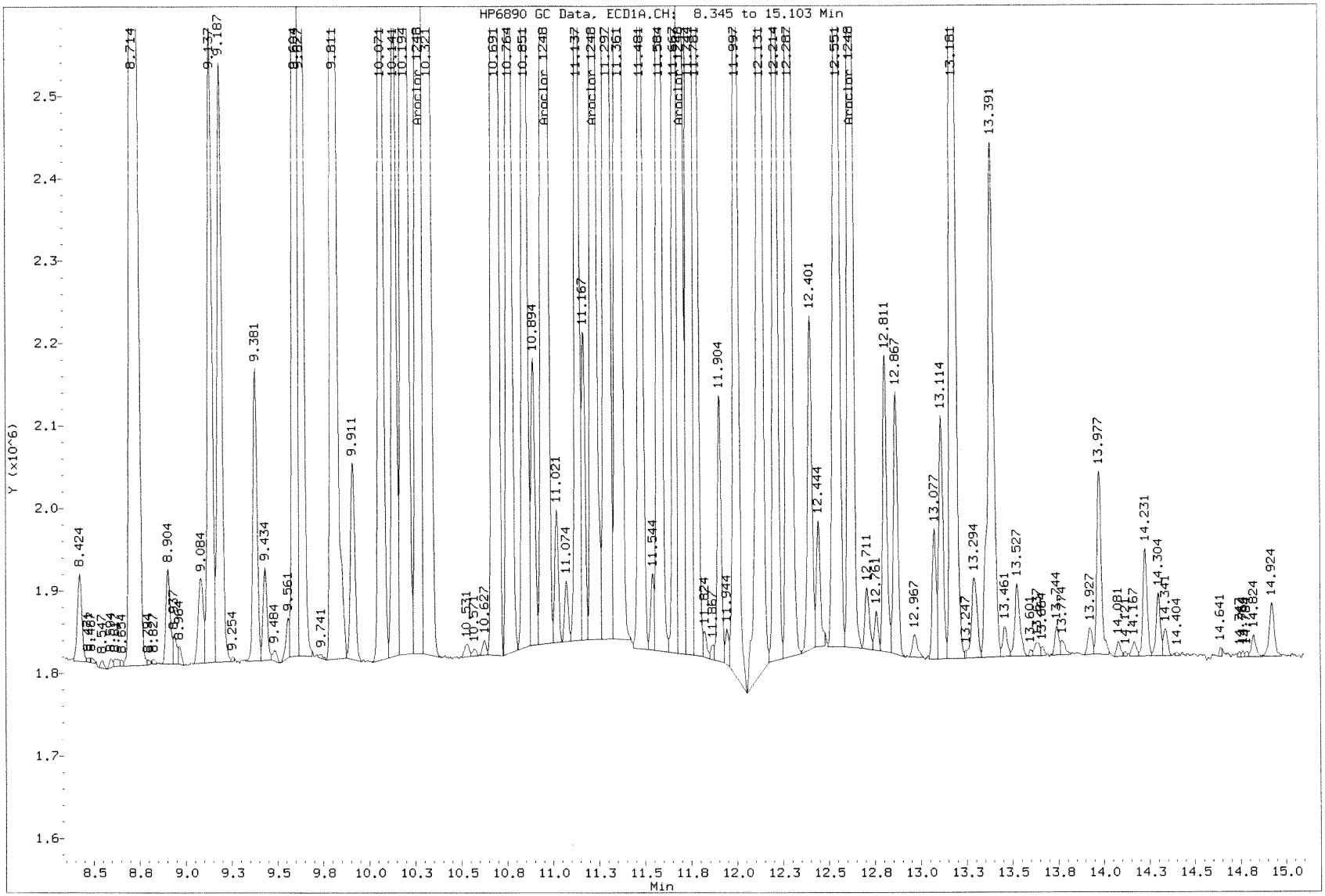


020980

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F047.D
Injection Date: 08-DEC-2018 10:35
Instrument: GC27.i
Client Sample ID:

UA 12/17/18

After baseline/shoulder MM 12/12/18



020981

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F049.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F049.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F049.D
Inj Date : 08-DEC-2018 11:38
Sample Info: 1016 20PPB ICV PCB7-61N
Misc Info :
Cal Date : 12-DEC-2018 12:40
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : AR1016.sub
Sub List #2 : AR1016.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1016	7.947	9.931	623985	394339	23.2	19.1	80.00- 120.00	100.00(M)
	9.187	10.977	536849	542358	21.0	18.4	69.55- 104.33	86.04(M)
	9.607	11.077	1188353	421614	22.3	20.2	139.76- 209.63	190.45(M)
	9.630	11.444	1483181	270895	20.7	16.9	217.16- 325.74	237.69(M)
	10.070	11.761	659582	319172	20.5	22.7	87.47- 131.20	105.70(M)
			Average of Peak Amounts =		21.5	19.5		

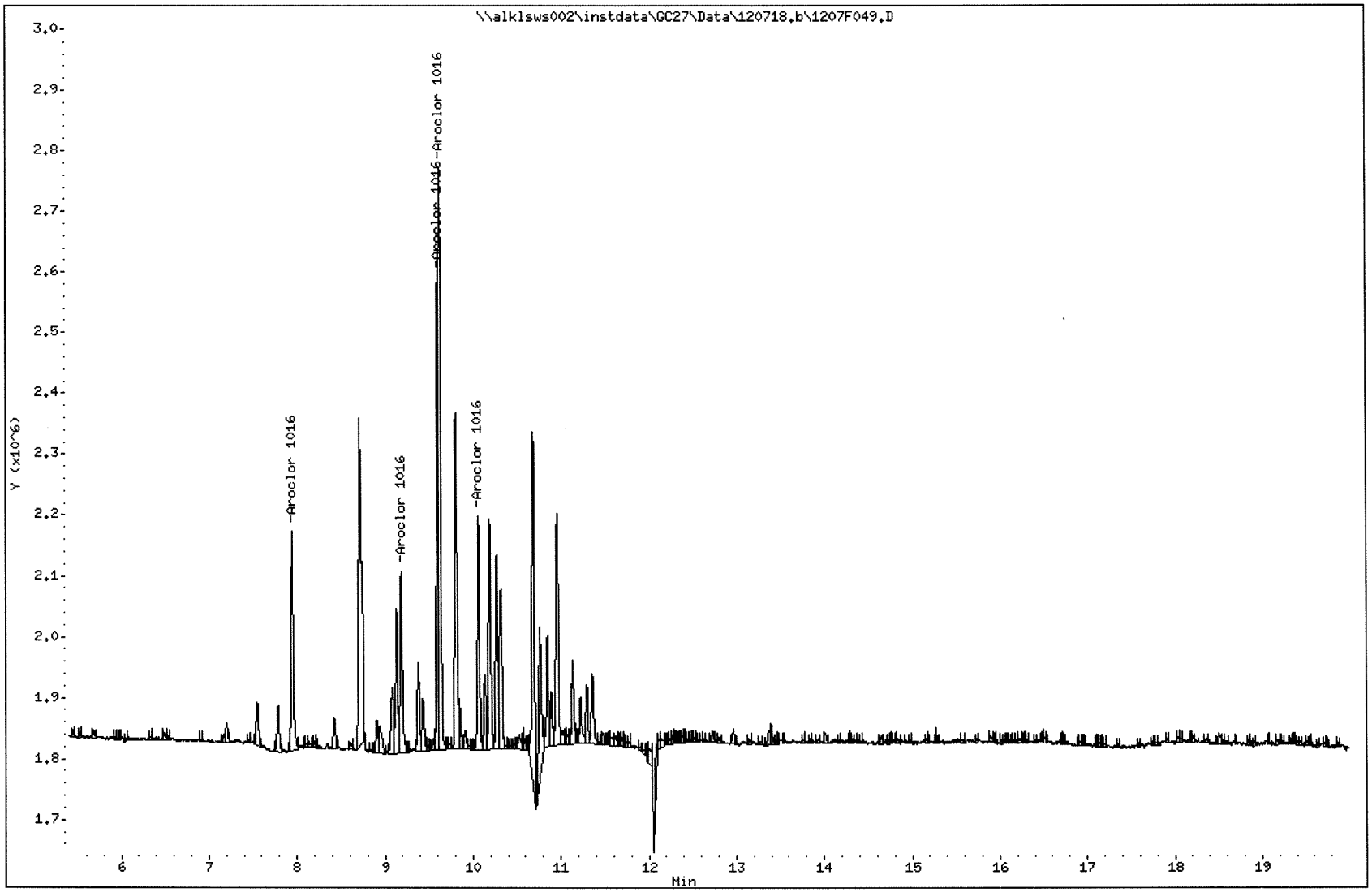
QC Flag Legend

M - Compound response manually integrated.

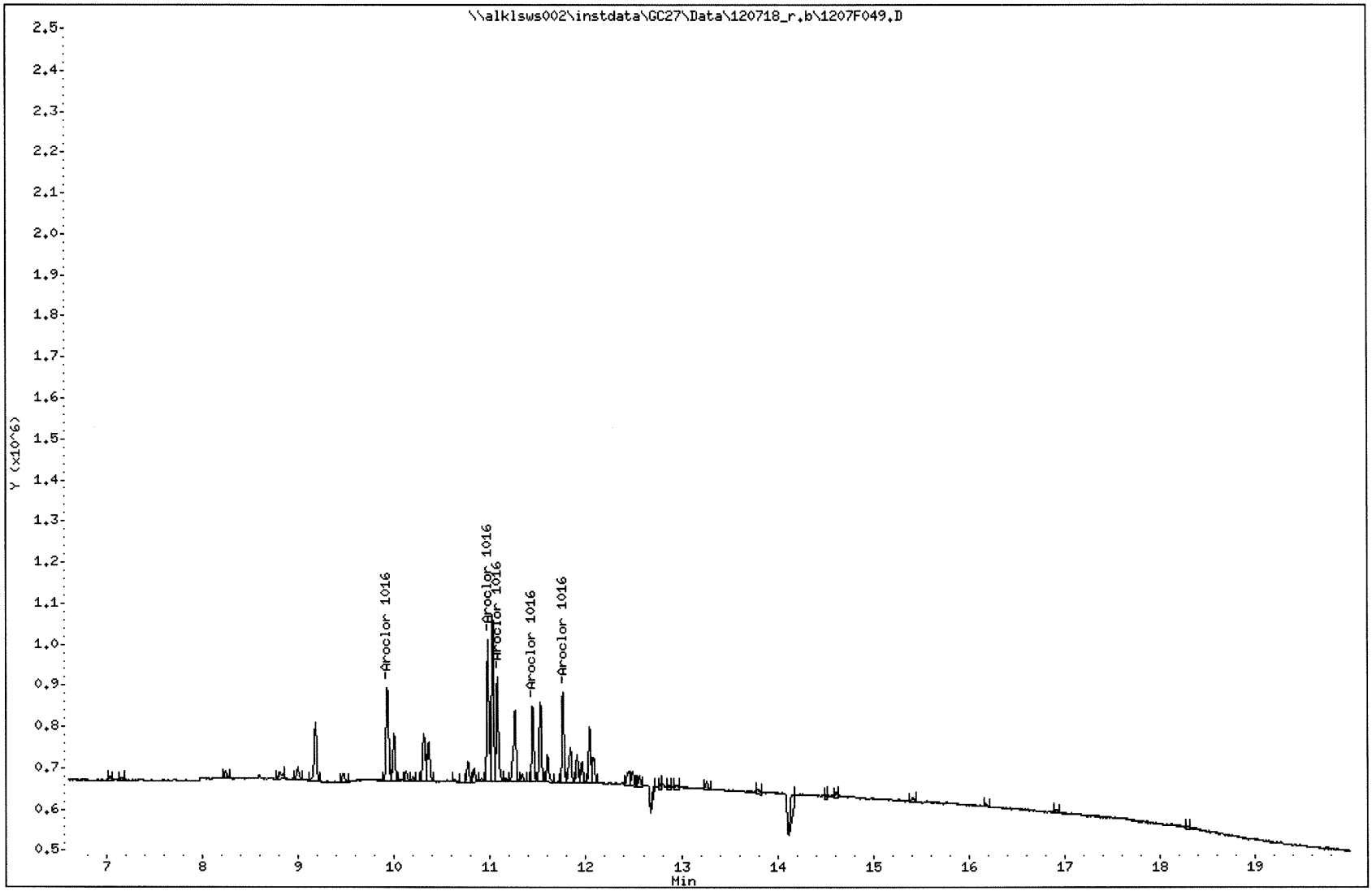
MC 12/13/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F049.D
Date : 08-DEC-2018 11:38
Client ID:
Sample Info: 1016 20PPB ICV PCB7-61N

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F049.D
Date : 08-DEC-2018 11:38
Client ID:
Instrument: GC27.i
Sample Info: 1016 20PPB ICV PCB7-61N
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



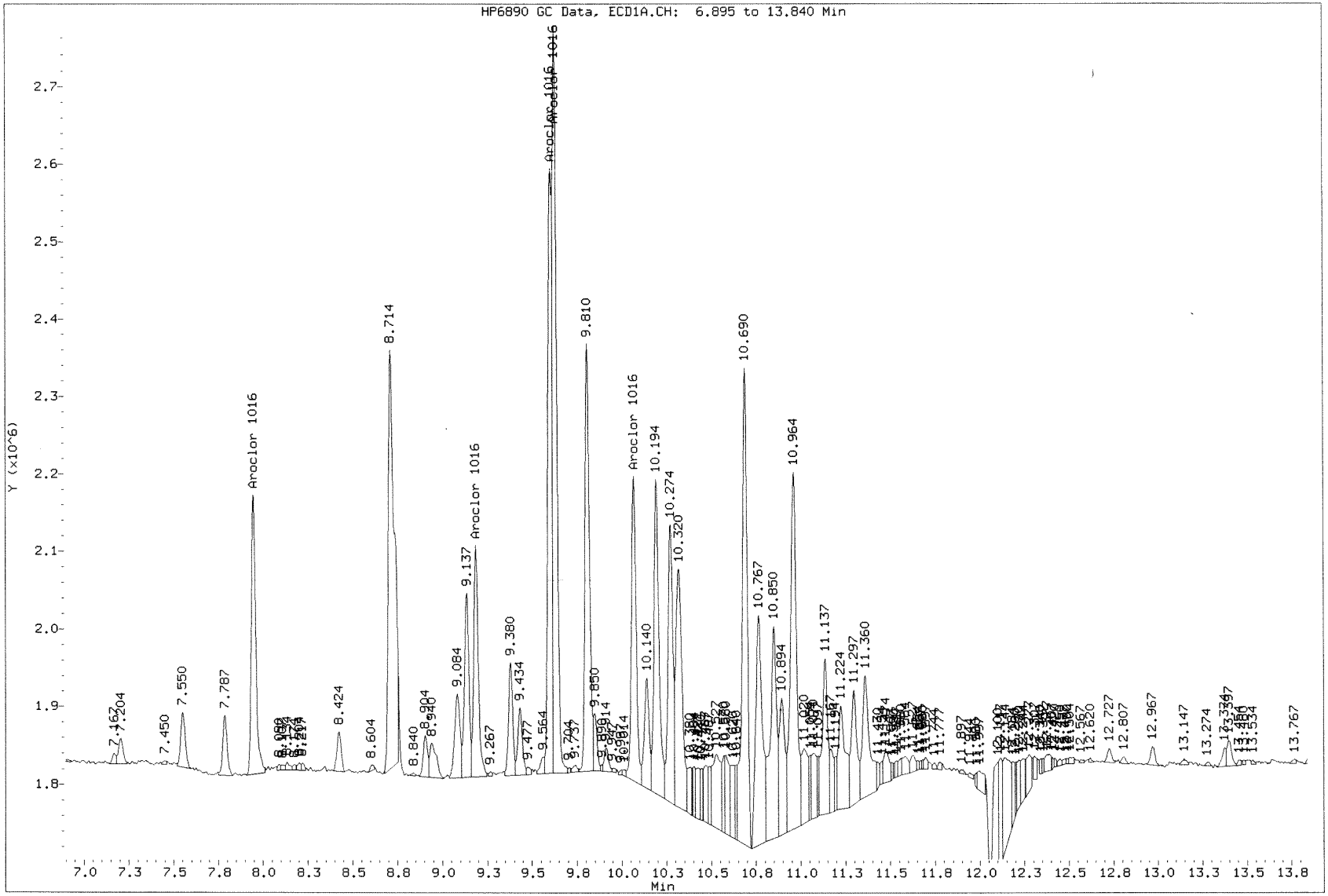
020984

Before

MR 12/12/18

WA 12/17/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F049.D
Injection Date: 08-DEC-2018 11:38
Instrument: GC27.i
Client Sample ID:

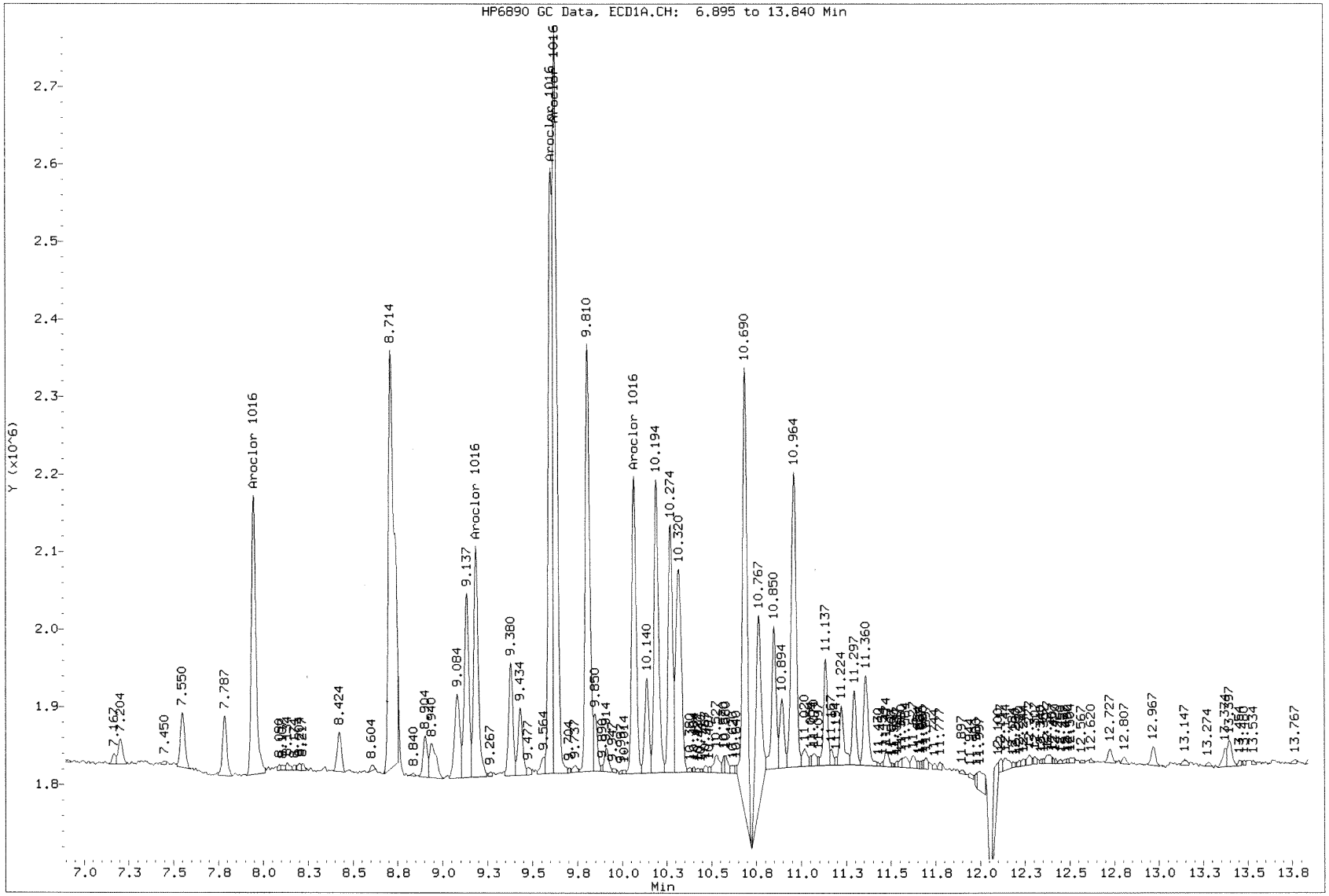


020985

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F049.D
Injection Date: 08-DEC-2018 11:38
Instrument: GC27.i
Client Sample ID:

MA 12/17/18

After baseline/shoulder MC 12/12/18

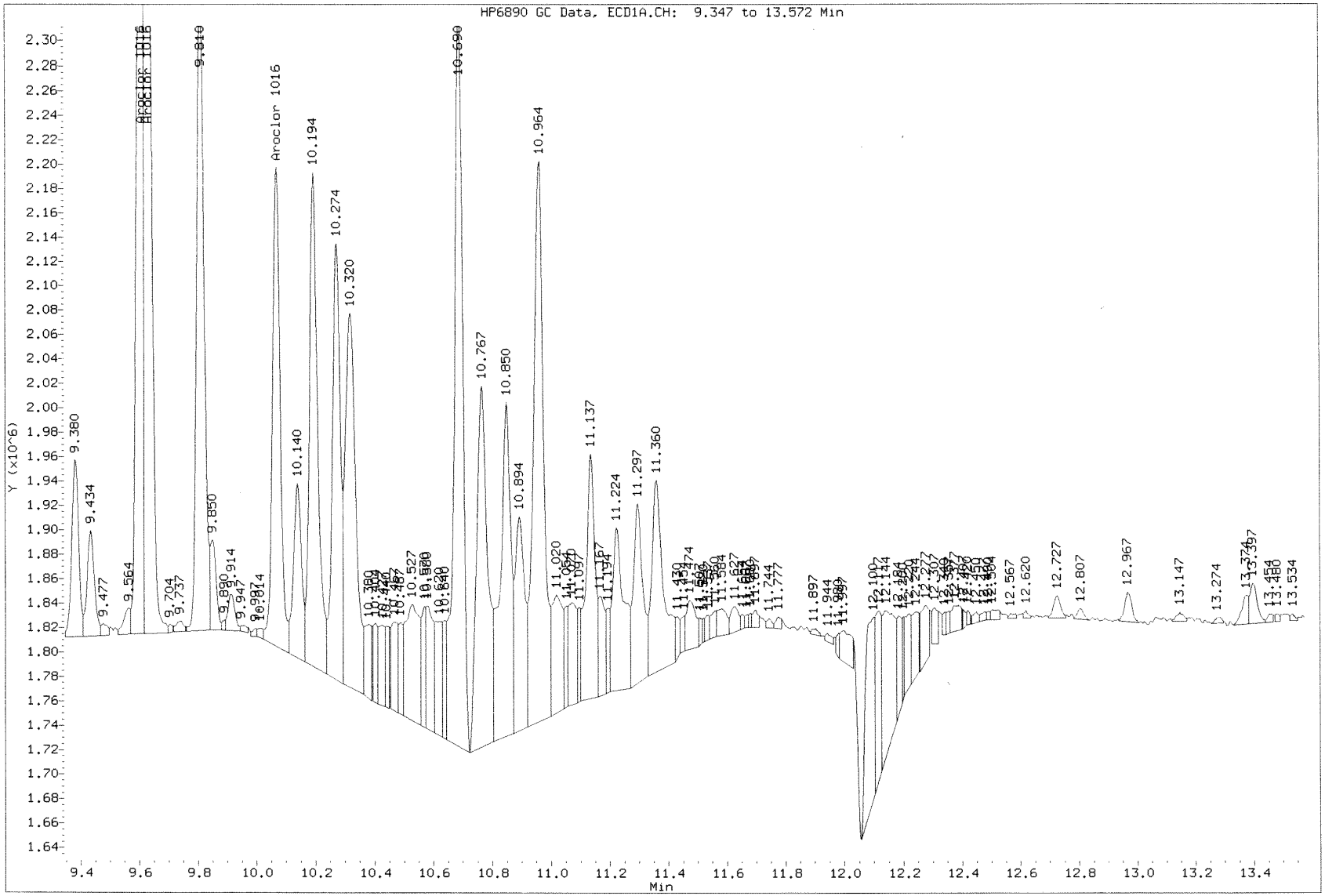


020986

Before
mm 12/12/18

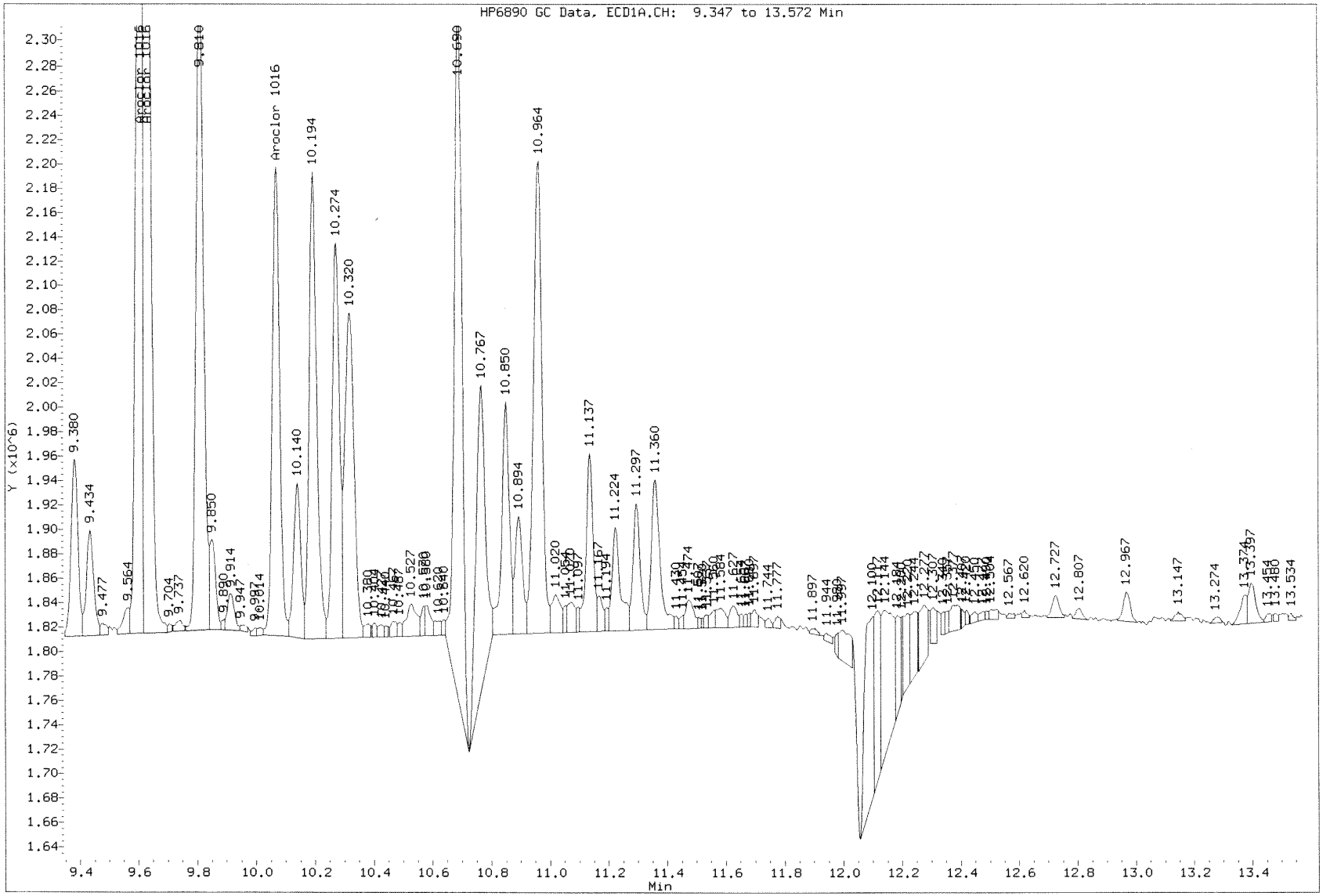
wp 12/17/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F049.D
Injection Date: 08-DEC-2018 11:38
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F049.D
Injection Date: 08-DEC-2018 11:38
Instrument: GC27.i
Client Sample ID:

~~After~~
baselined shoulder
MR 12/12/18 WA 12/17/18



020988

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F050.D
Report Date: 12-Dec-2018 12:45

CAS

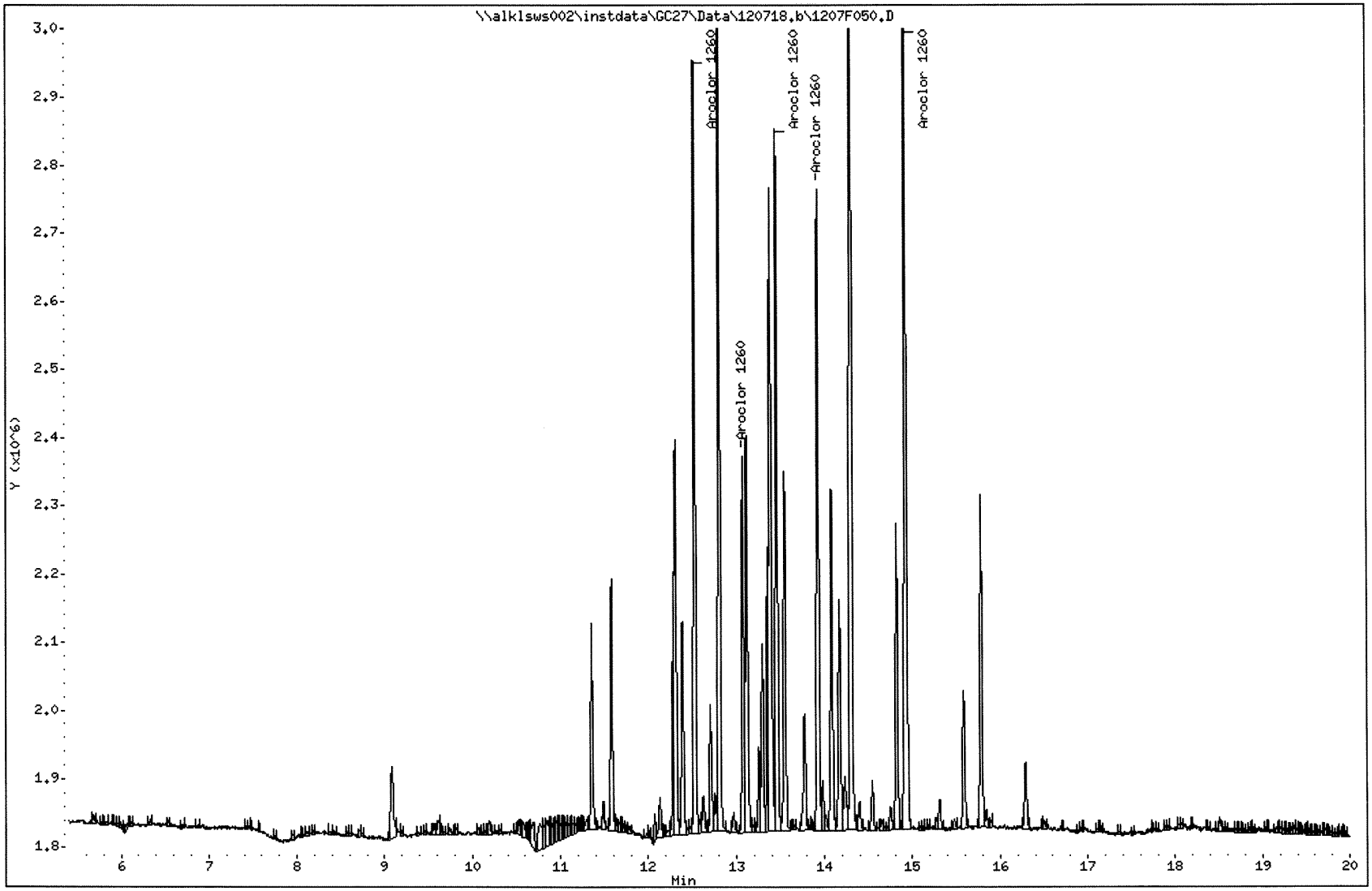
Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F050.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F050.D
Inj Date : 08-DEC-2018 12:09
Sample Info: 1260 20PPB ICV PCB7-61O
Misc Info :
Cal Date : 12-DEC-2018 12:40
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : AR1260.sub
Sub List #2 : AR1260.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1260	12.528	13.555	1766556	378697	22.2	21.2	80.00- 120.00	100.00
	13.078	14.165	835053	923203	22.0	21.7	41.53- 62.29	47.27
	13.462	14.895	1571929	350614	26.9	24.2	60.45- 90.67	88.98
	13.932	15.172	1575806	653646	27.1	22.9	64.20- 96.29	89.20
	14.925	16.202	2437958	855041	26.4	21.4	103.51- 155.26	138.01
			Average of Peak Amounts =		24.9	22.3		

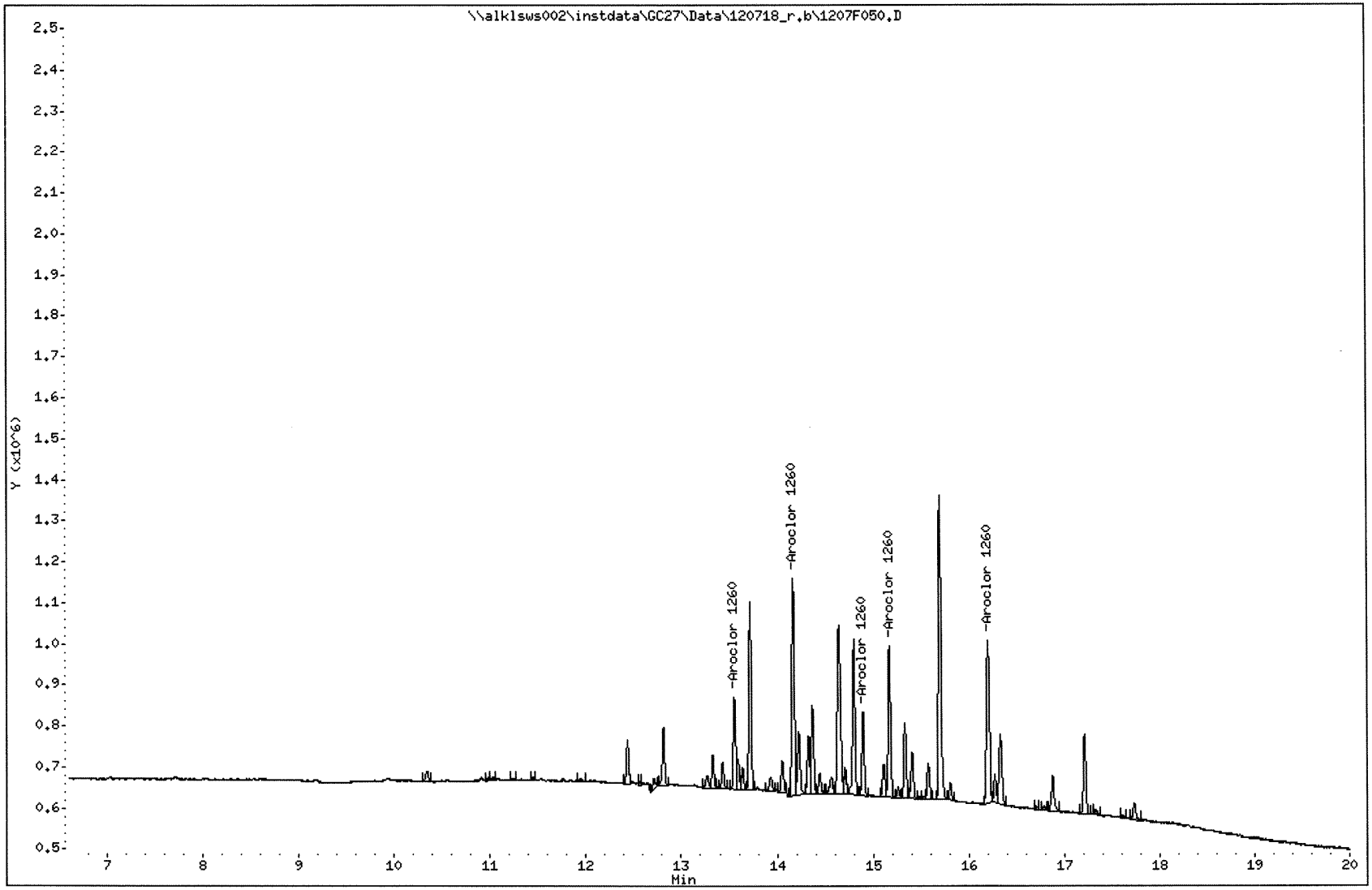
MR 12/13/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F050.D
Date : 08-DEC-2018 12:09
Client ID:
Instrument: GC27.i
Sample Info: 1260 20PPB ICV PCB7-610
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



020990

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F050.D
Date : 08-DEC-2018 12:09
Client ID:
Instrument: GC27.i
Sample Info: 1260 20PPB ICV PCB7-610
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32

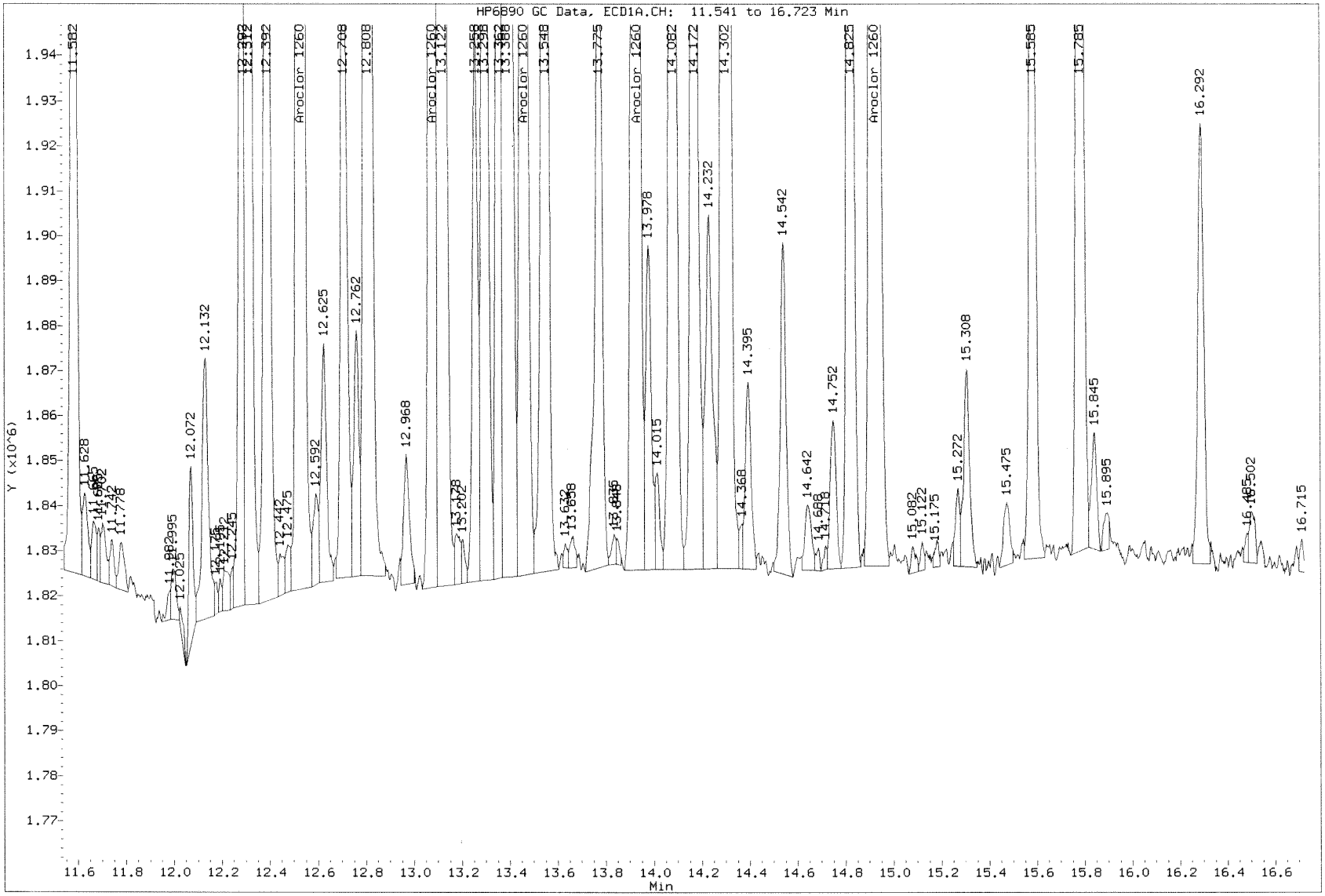


020991

Before
mr 12/12/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F050.D
Injection Date: 08-DEC-2018 12:09
Instrument: GC27.i
Client Sample ID:

cmt 12/17/18

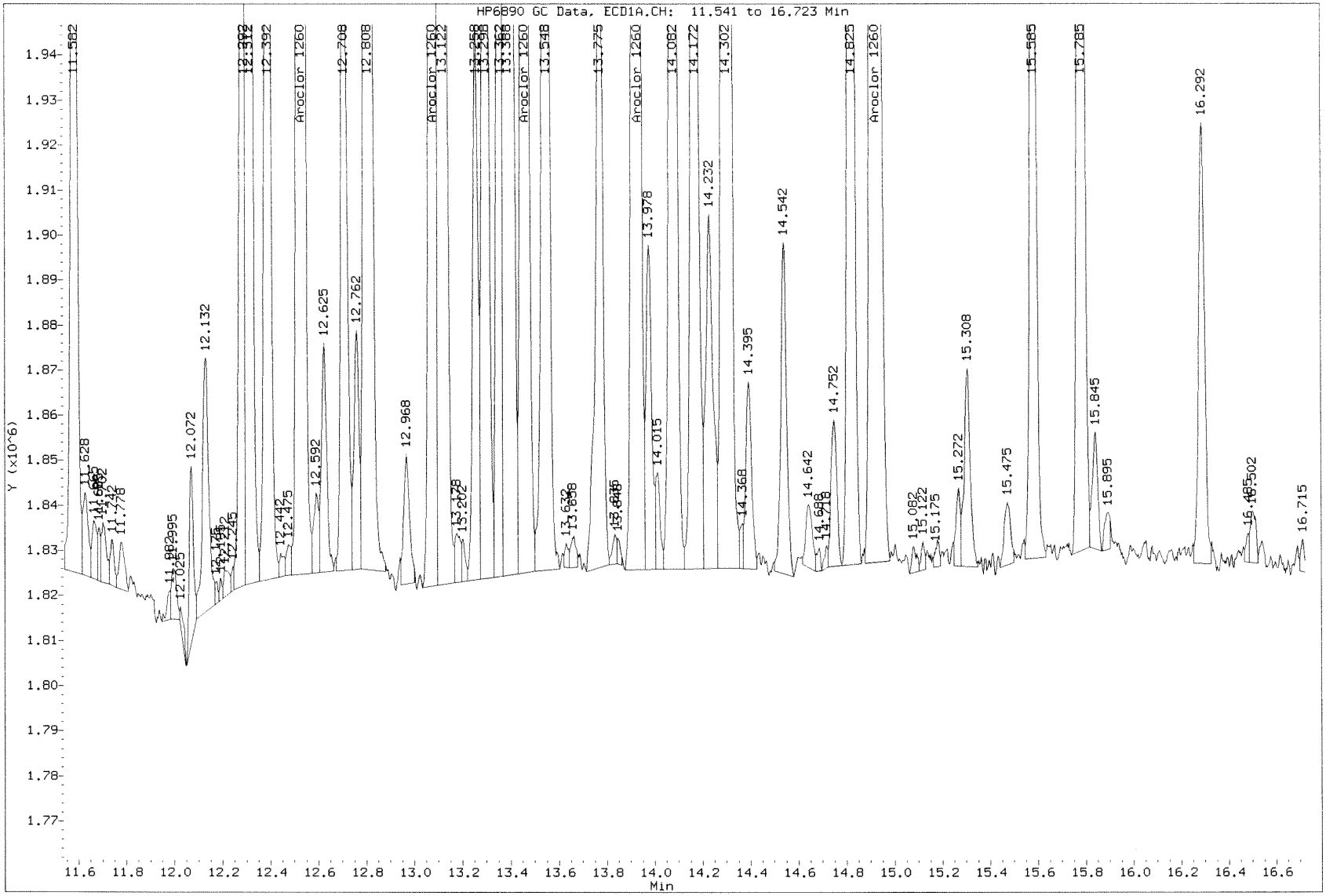


020992

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F050.D
Injection Date: 08-DEC-2018 12:09
Instrument: GC27.i
Client Sample ID:

After
baseline/shoulder
mr 12/12/18

UA 12/19/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F051.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F051.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F051.D
Inj Date : 08-DEC-2018 12:41
Sample Info: 1221 20PPB ICV PCB7-62A
Misc Info :
Cal Date : 12-DEC-2018 12:40
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : AR1221.SUB
Sub List #2 : AR1221.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	7.549	8.839	323516	82266	17.9	17.2	80.00- 120.00	100.00
	7.785	8.995	214563	95009	18.9	17.2	50.65- 75.98	66.32
	7.949	9.182	811176	332459	18.8	18.0	190.60- 285.90	250.74
			Average of Peak Amounts =		18.5	17.5		

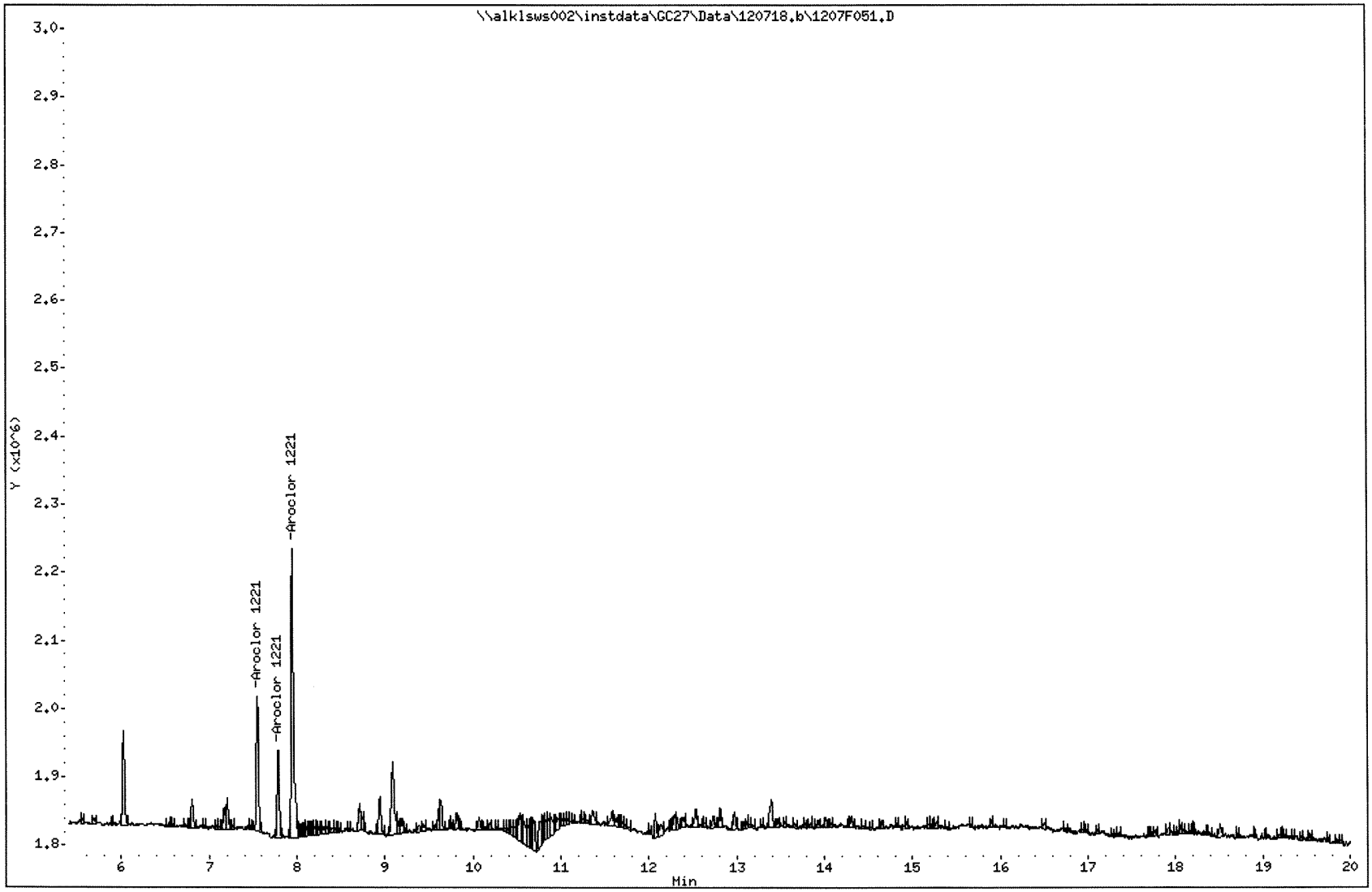
MR 12/13/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F051.D
Date : 08-DEC-2018 12:41
Client ID:
Sample Info: 1221 20PPB ICV PCB7-62A

Column phase: DB-35MS

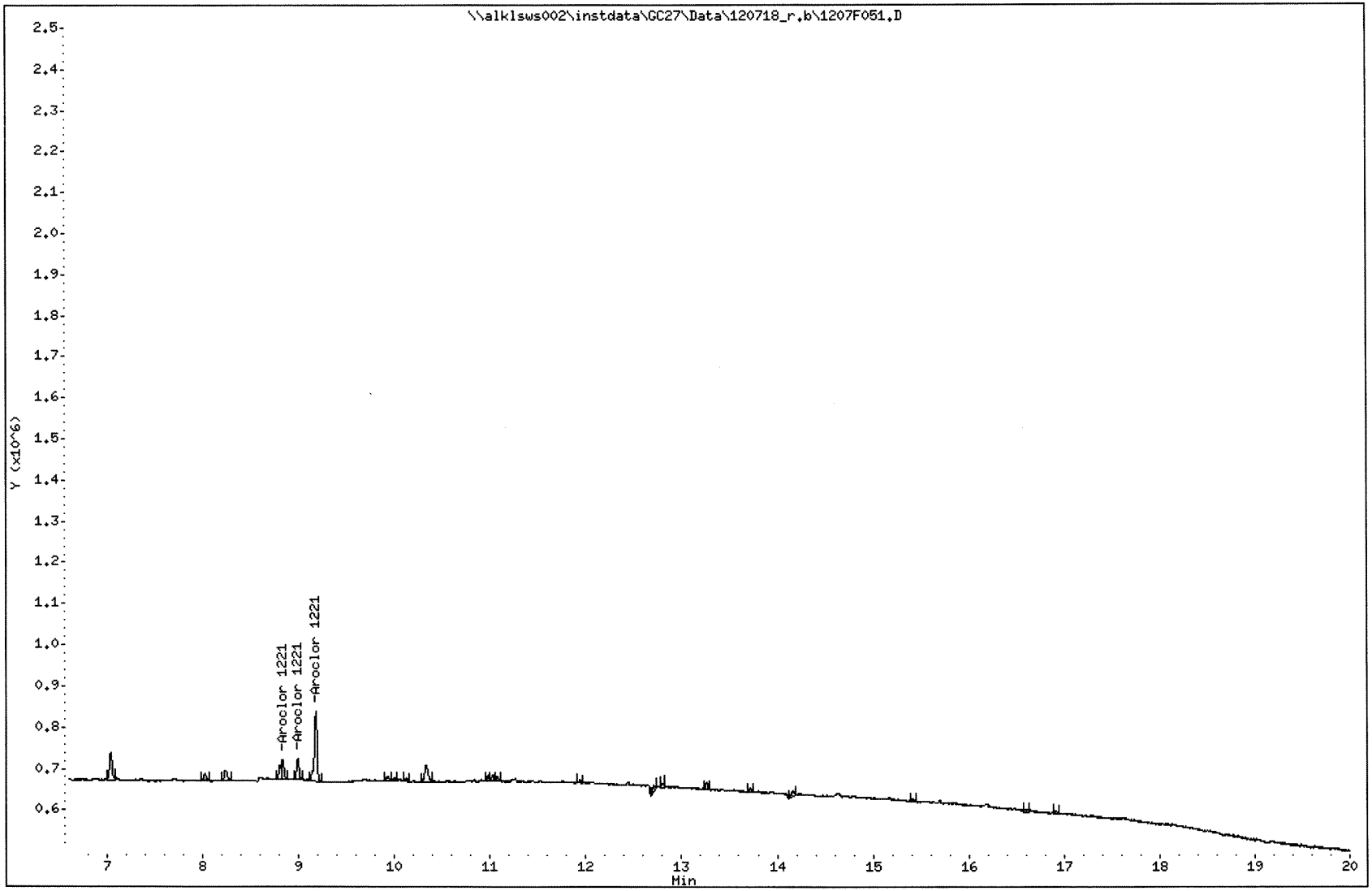
Instrument: GC27.i

Operator: SM
Column diameter: 0.32



020995

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F051.D
Date : 08-DEC-2018 12:41
Client ID:
Instrument: GC27.i
Sample Info: 1221 20PPB ICV PCB7-62A
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F052.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F052.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F052.D
Inj Date : 08-DEC-2018 13:12
Sample Info: 1232 20PPB ICV PCB7-62B
Misc Info :
Cal Date : 12-DEC-2018 12:40
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : AR1232.SUB
Sub List #2 : AR1232.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	8.712	9.182	413488	263570	19.2	16.7	80.00- 120.00	100.00(M)
	9.609	10.979	468159	218625	19.0	16.8	91.85- 137.78	113.22(M)
	9.812	11.029	422873	253287	19.6	18.8	82.49- 123.73	102.27(M)
	10.195	11.445	270614	105924	20.0	15.2	52.60- 78.89	65.45(M)
	10.275	11.762	221895	132758	20.4	18.6	42.83- 64.24	53.66(M)
			Average of Peak Amounts =		19.6	17.2		

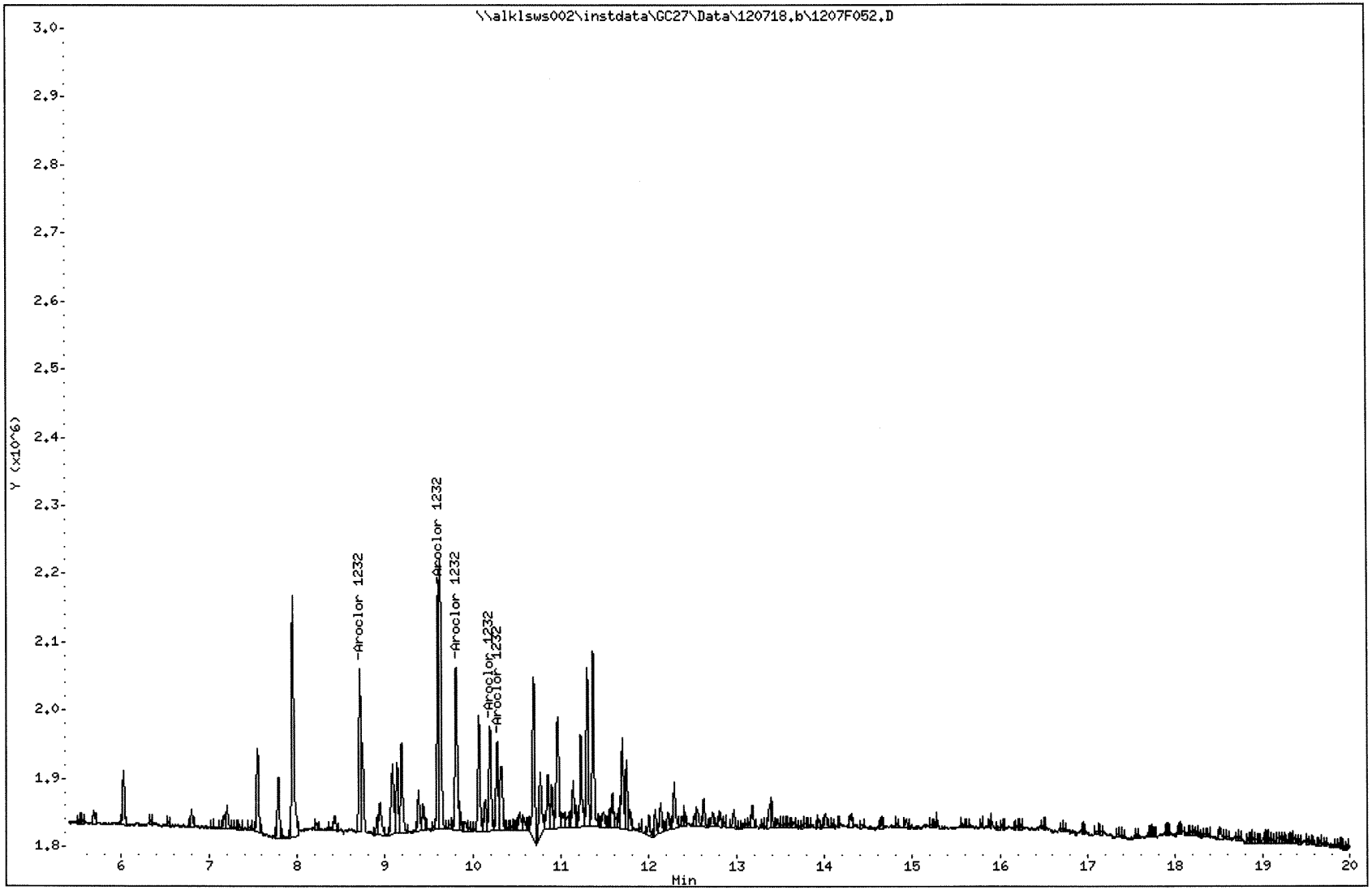
QC Flag Legend

M - Compound response manually integrated.

MC 12/13/18

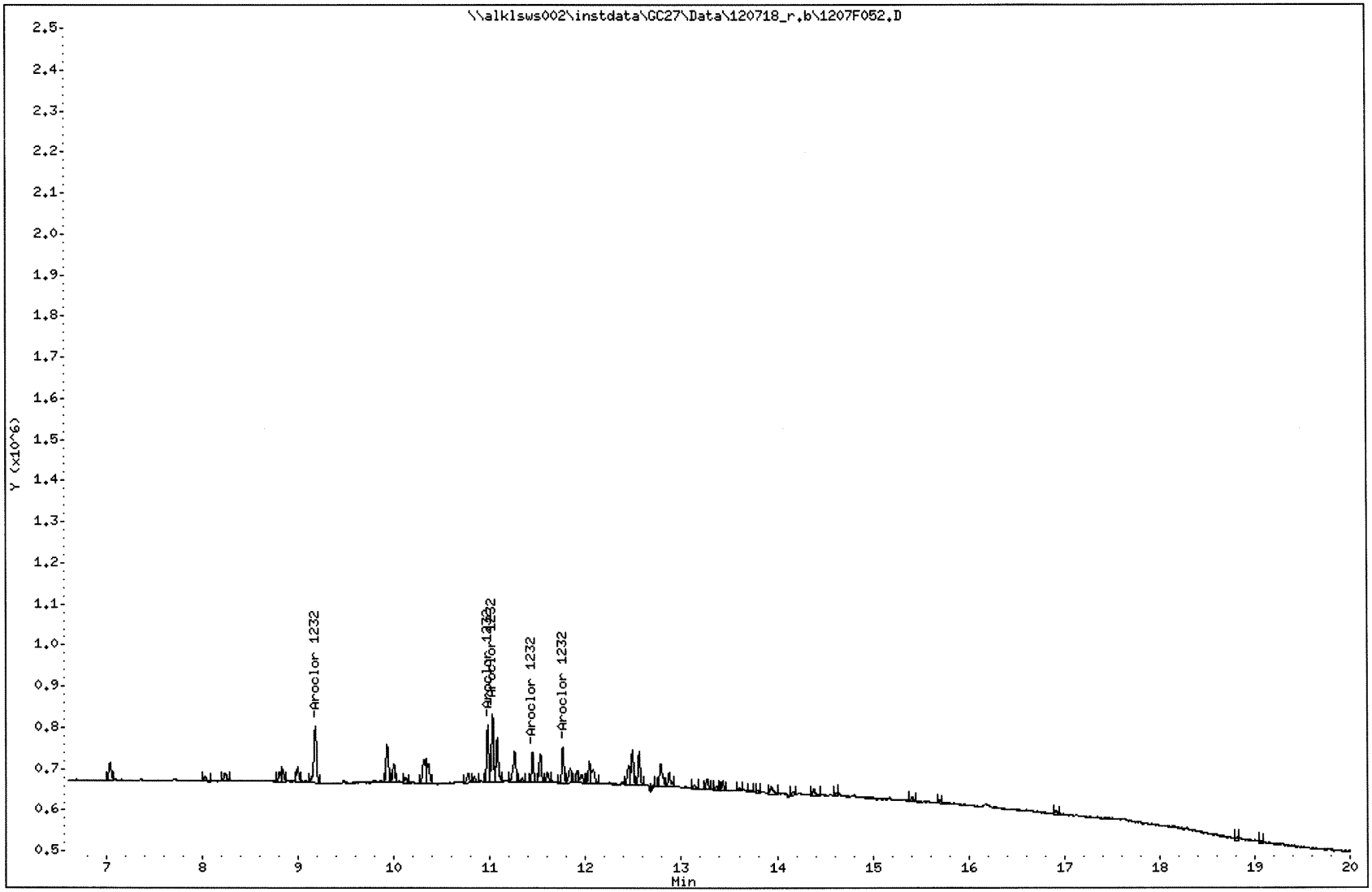
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F052.D
Date : 08-DEC-2018 13:12
Client ID:
Sample Info: 1232 20PPB ICV PCB7-62B

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



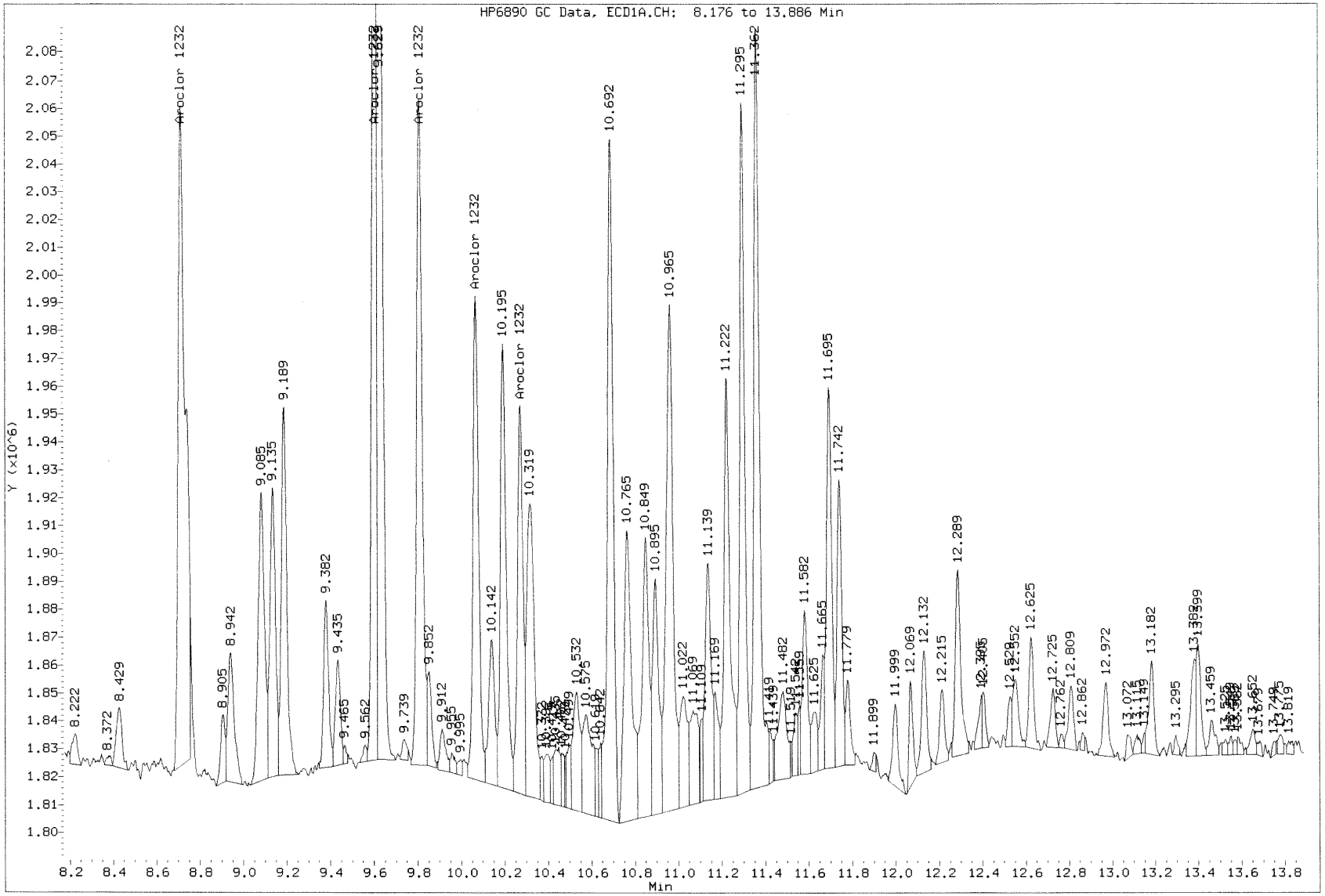
020998

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F052.D
Date : 08-DEC-2018 13:12
Client ID:
Instrument: GC27.i
Sample Info: 1232 20PPB ICV PCB7-62B
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



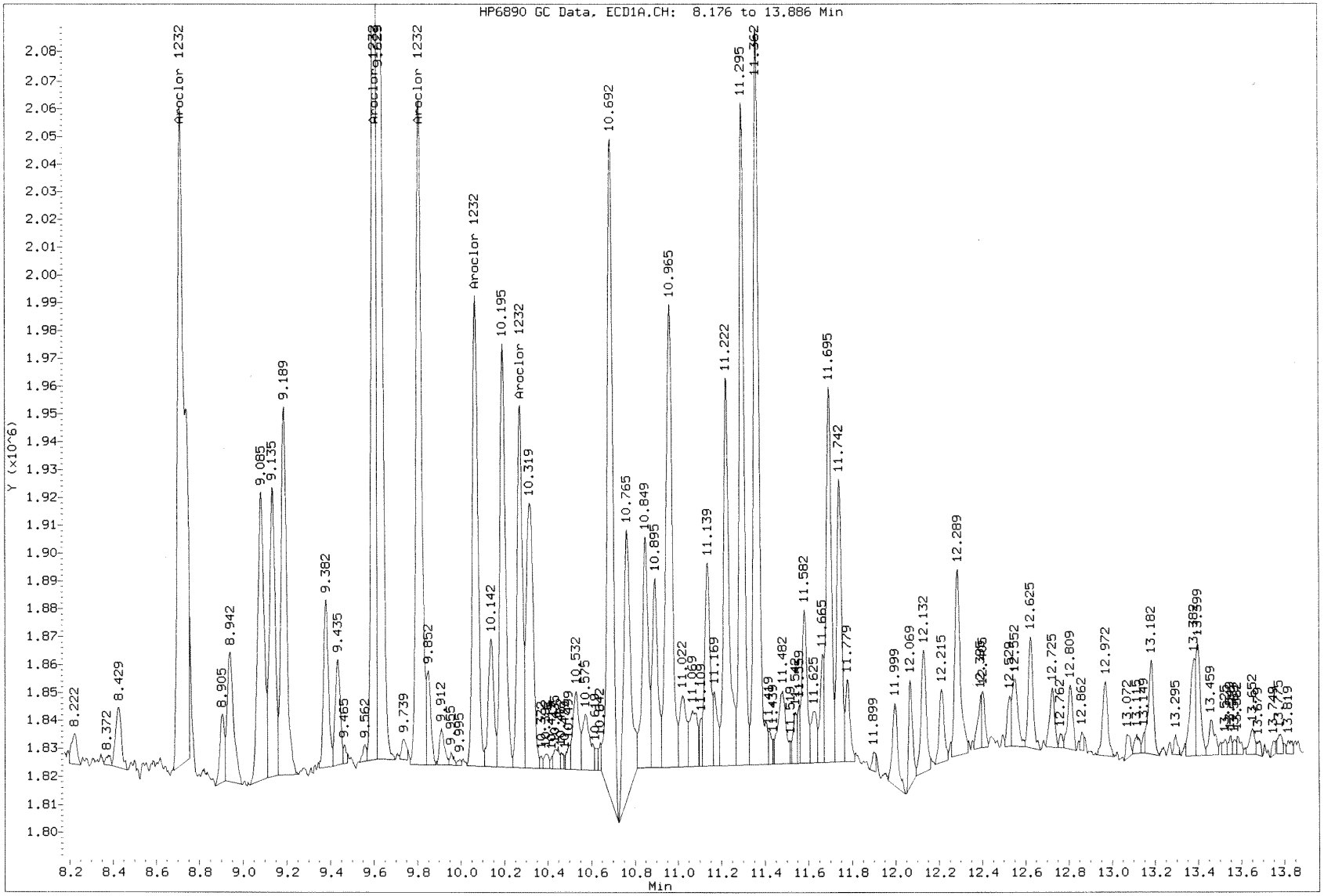
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F052.D
Injection Date: 08-DEC-2018 13:12
Instrument: GC27.i
Client Sample ID:

Baber
MC 12/18/18
JMA 12/17/18



After
baseline/shoulder
WA 12/17/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F052.D
Injection Date: 08-DEC-2018 13:12
Instrument: GC27.i
Client Sample ID:

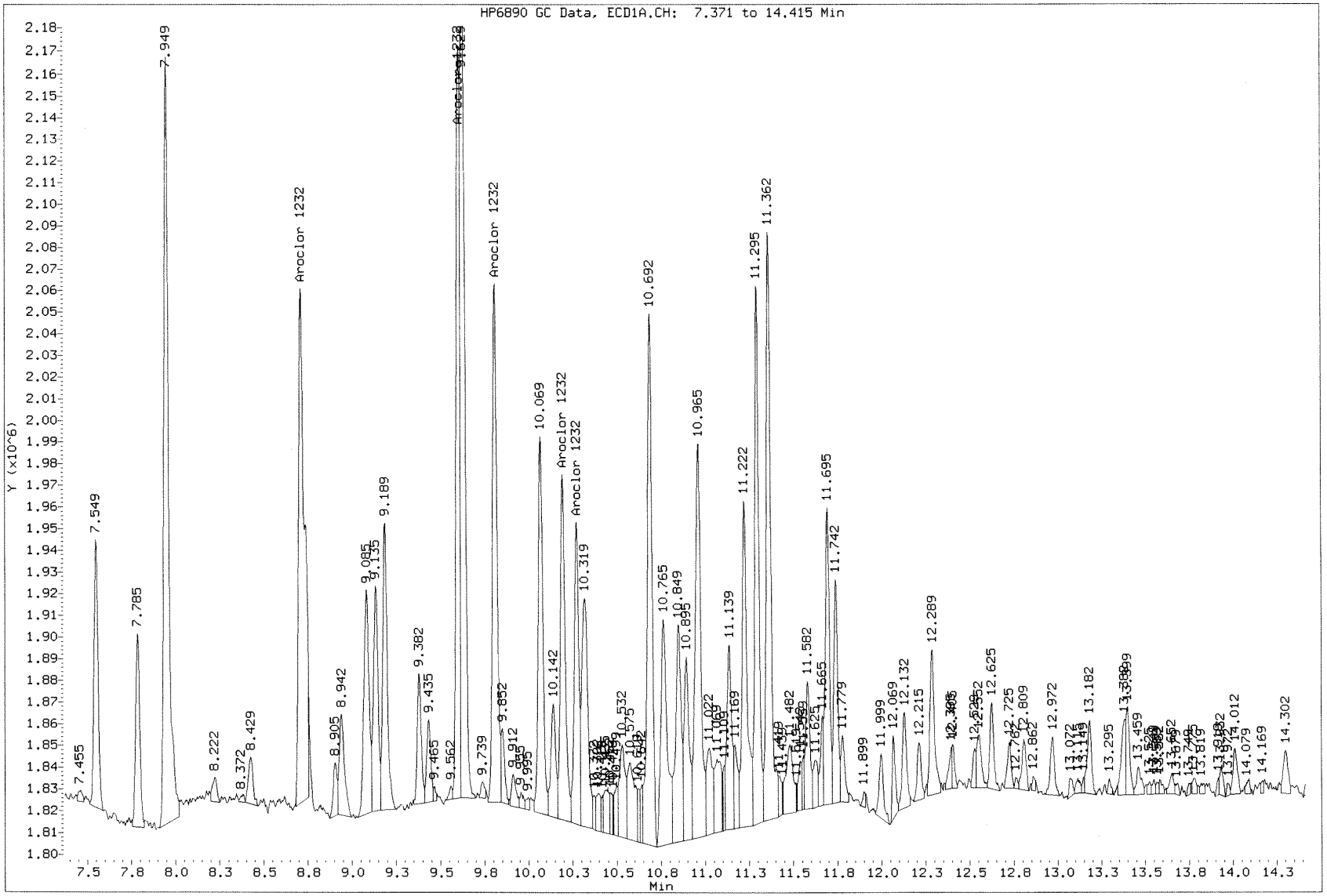


021001

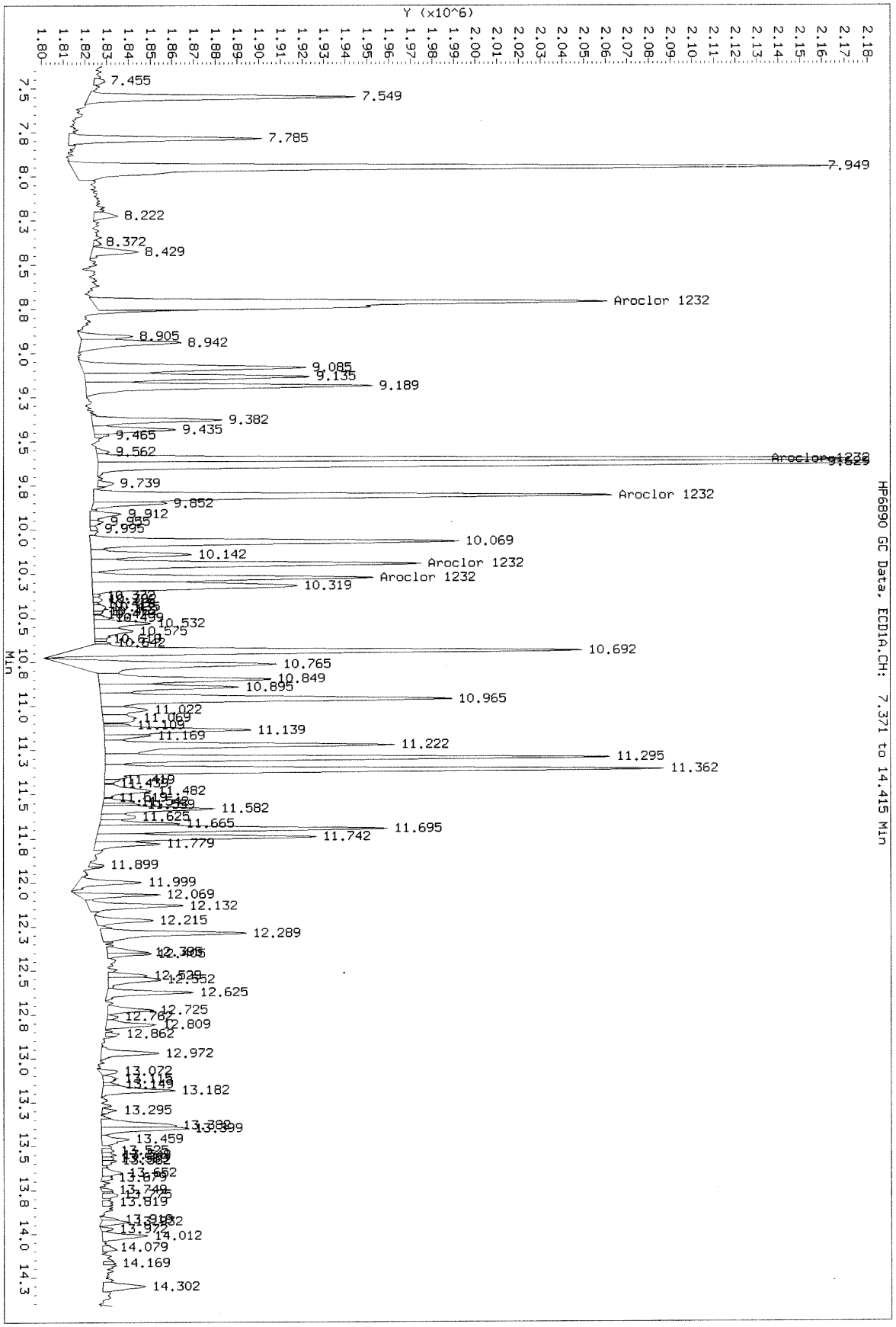
Before
MR 12/12/18

CWA 12/19/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F052.D
Injection Date: 08-DEC-2018 13:12
Instrument: GC27.i
Client Sample ID:



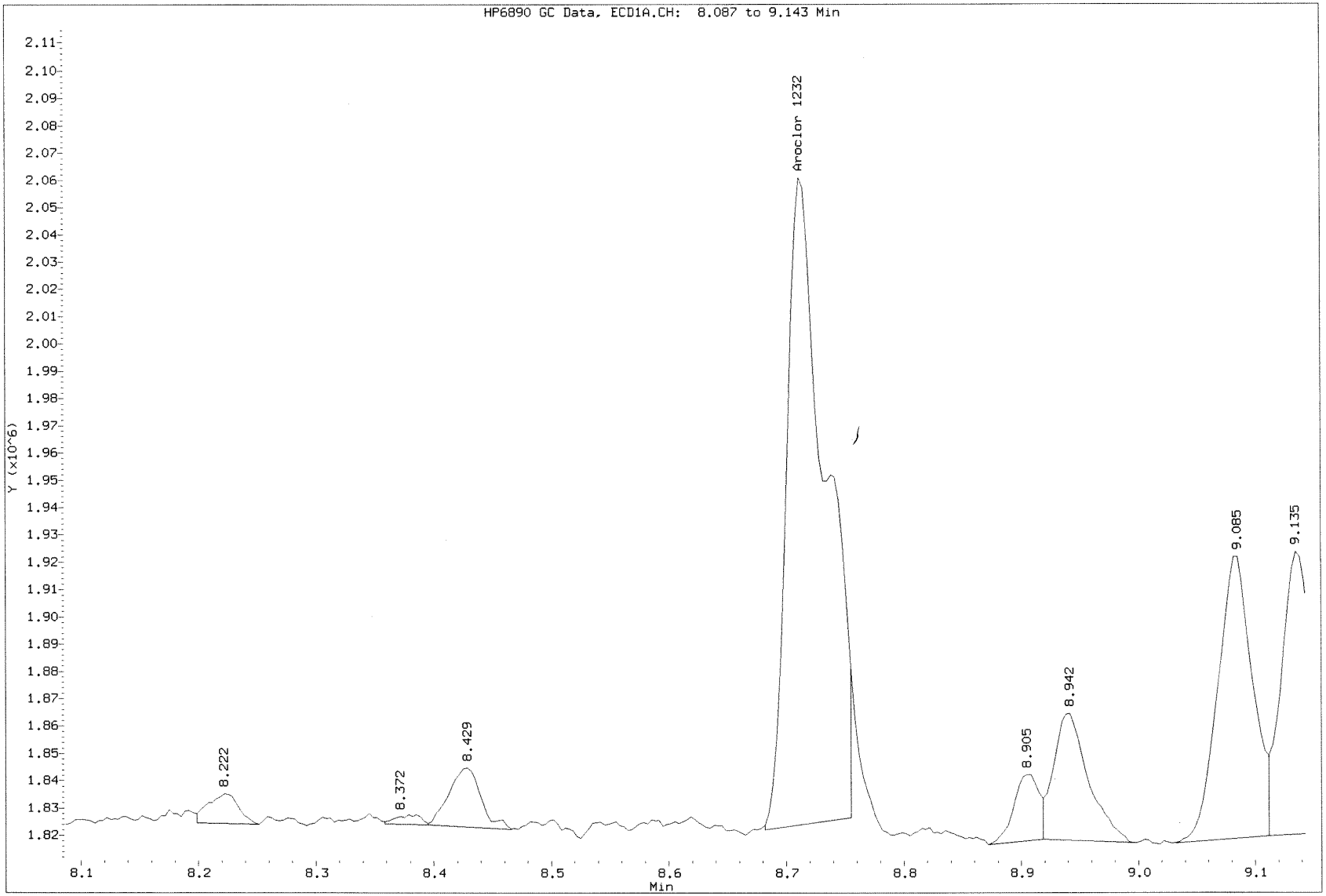
021002



Arer
resolved shoulder
MC 8/19/18
MR 12/17/18

Before
M 12/12/18
WA 12/17/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F052.D
Injection Date: 08-DEC-2018 13:12
Instrument: GC27.i
Client Sample ID:

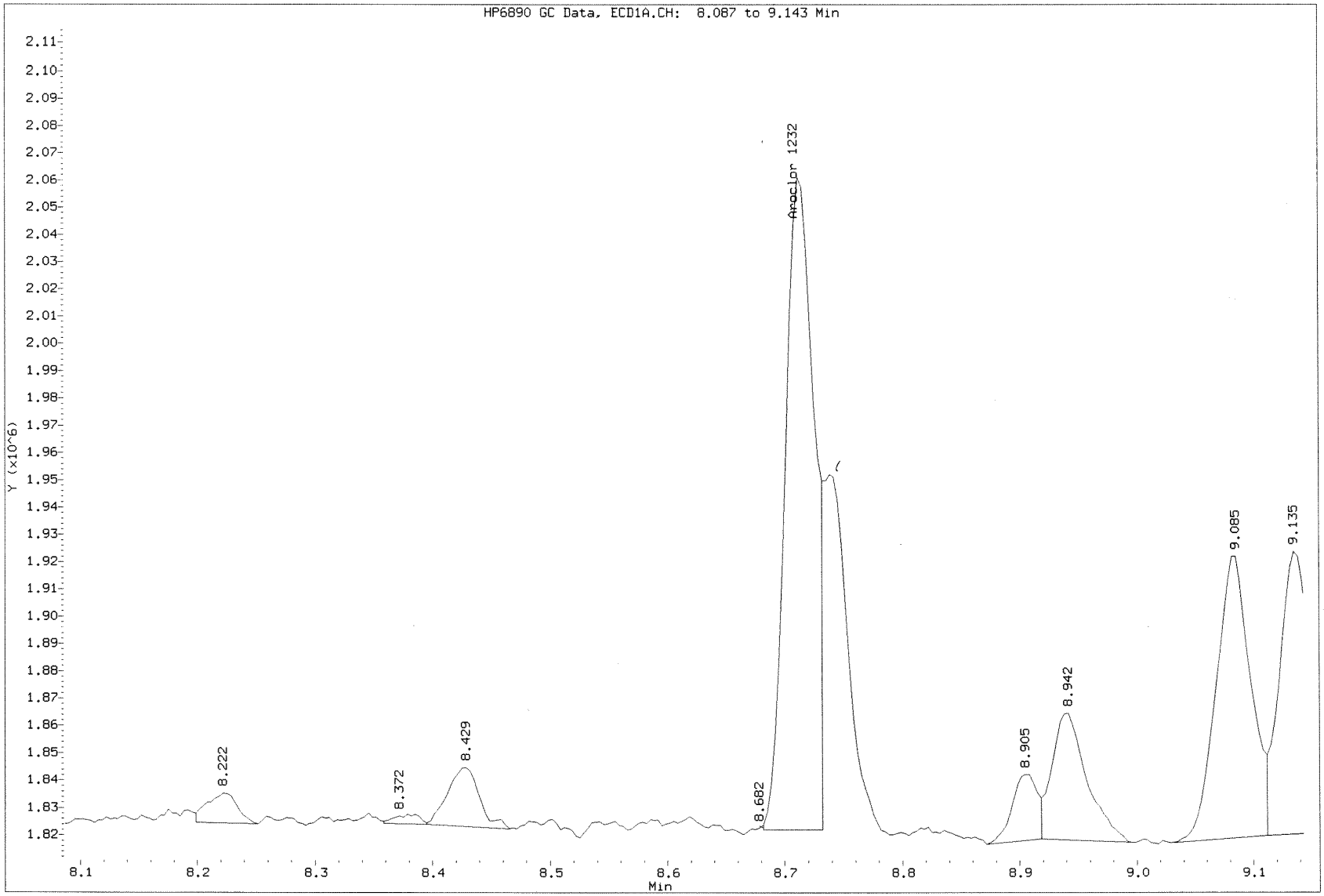


021004

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F052.D
Injection Date: 08-DEC-2018 13:12
Instrument: GC27.i
Client Sample ID:

JA 12/17/18

~~APPEY~~
baseline/shoulder
mm 12/12/18



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F053.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F053.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F053.D
Inj Date : 08-DEC-2018 13:43
Sample Info: 1242 20PPB ICV PCB7-62C
Misc Info :
Cal Date : 12-DEC-2018 12:40
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : AR1242.SUB
Sub List #2 : AR1242.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

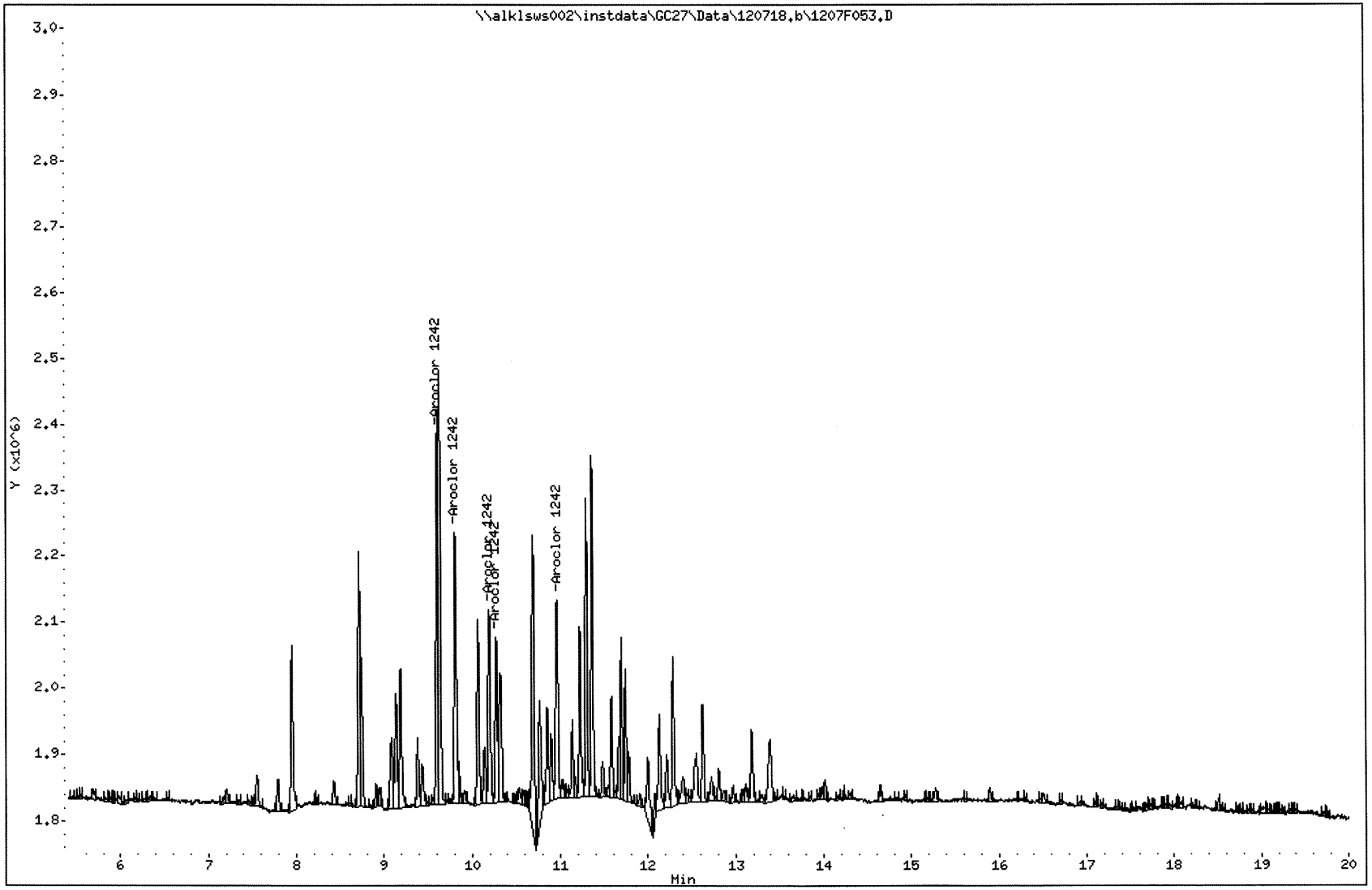
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	9.606	9.933	814978	277276	19.2	16.9	80.00- 120.00	100.00(M)
	9.809	11.076	700432	309555	18.2	18.1	71.17- 106.76	85.94(M)
	10.196	11.259	511567	243162	20.2	22.1	49.71- 74.56	62.77(M)
	10.273	11.446	407580	211108	20.2	18.4	40.98- 61.47	50.01(M)
	10.963	12.493	577130	278081	17.2	18.5	57.72- 86.58	70.82(M)
			Average of Peak Amounts =		19.0	18.8		

QC Flag Legend

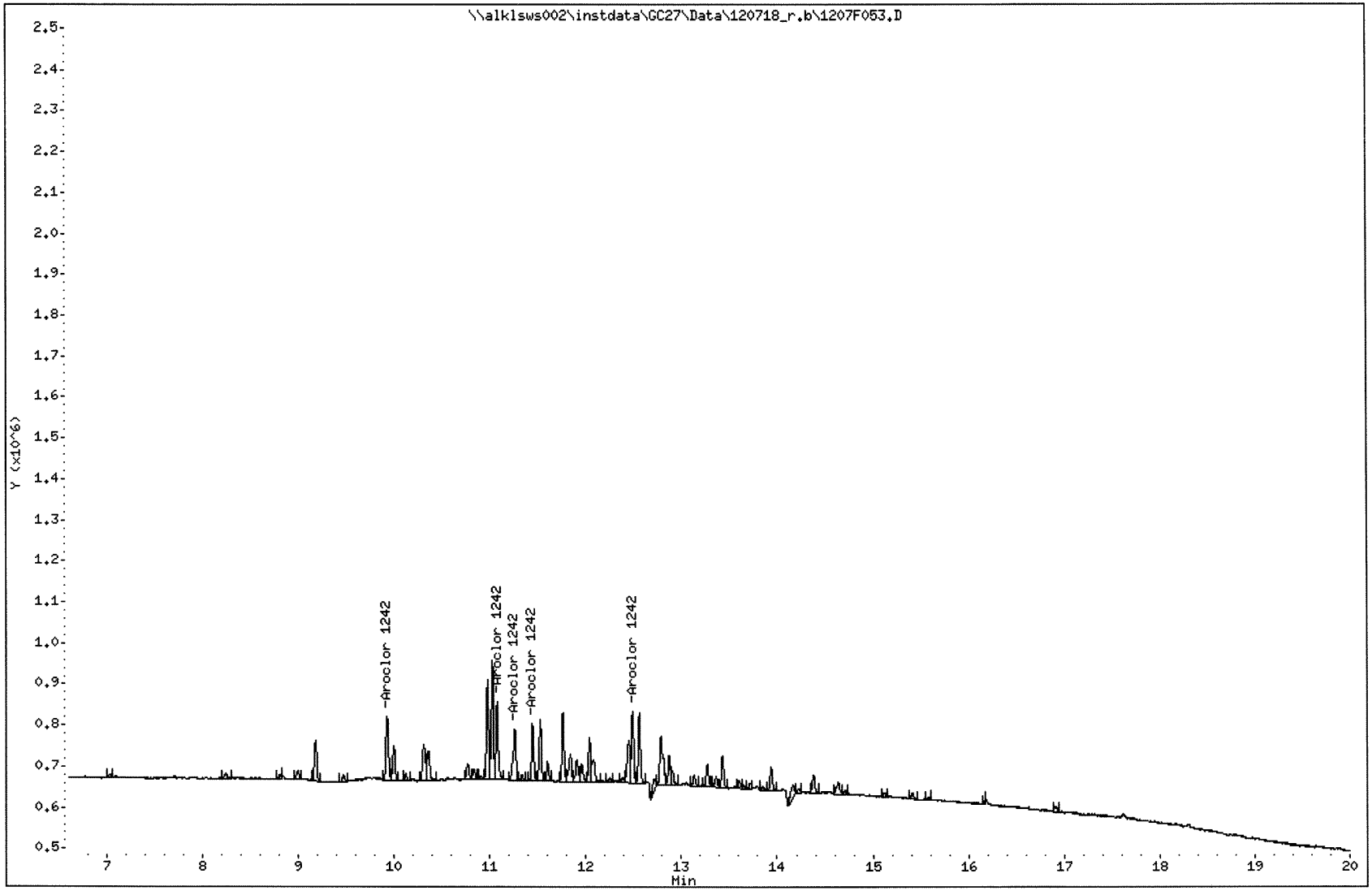
M - Compound response manually integrated.

MM 12/13/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F053.D
Date : 08-DEC-2018 13:43
Client ID:
Instrument: GC27.i
Sample Info: 1242 20PPB ICV PCB7-62C
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32

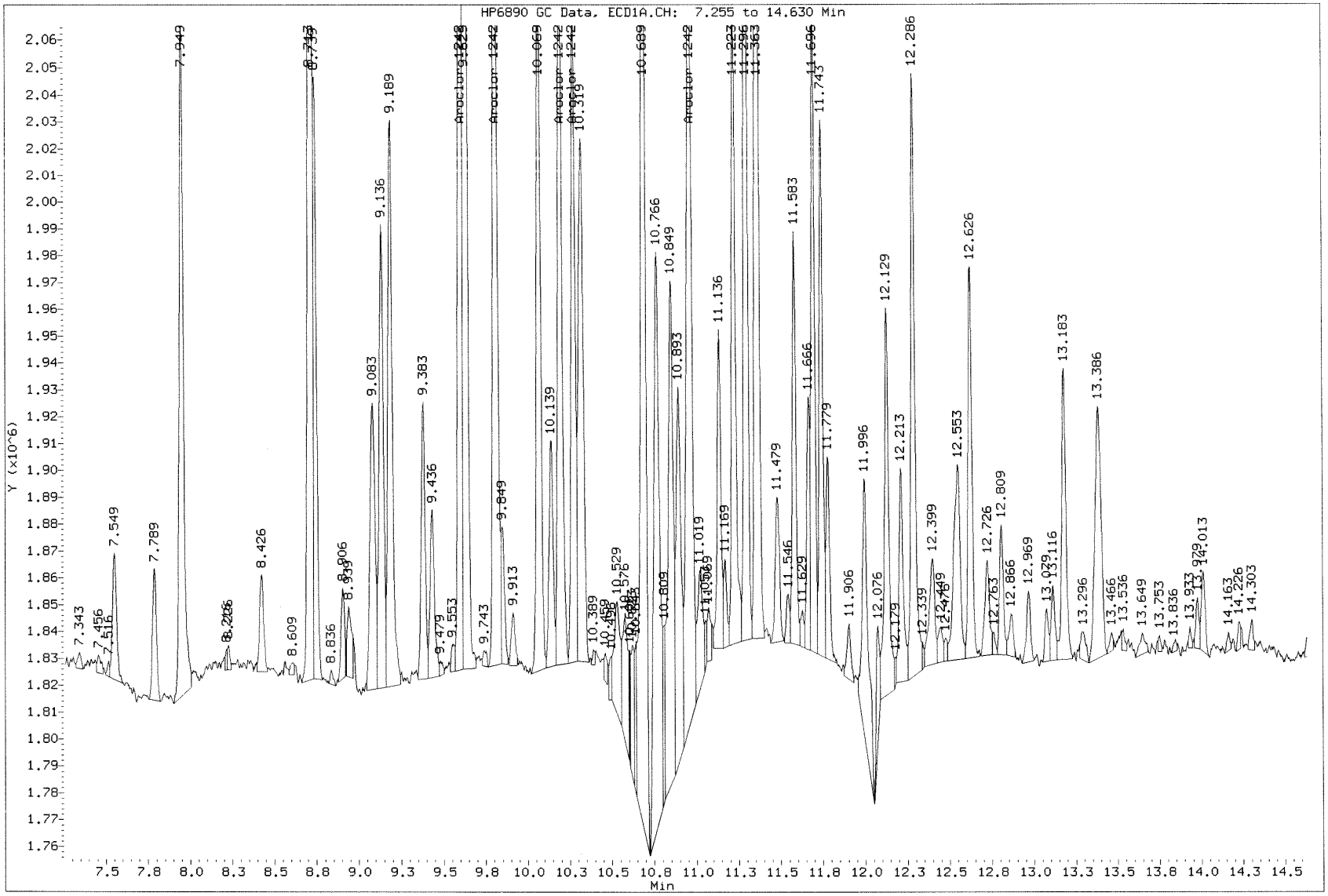


Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F053.D
Date : 08-DEC-2018 13:43
Client ID:
Instrument: GC27.i
Sample Info: 1242 20PPB ICV PCB7-62C
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



Before
MR 12/18/18
WA 12/17/18

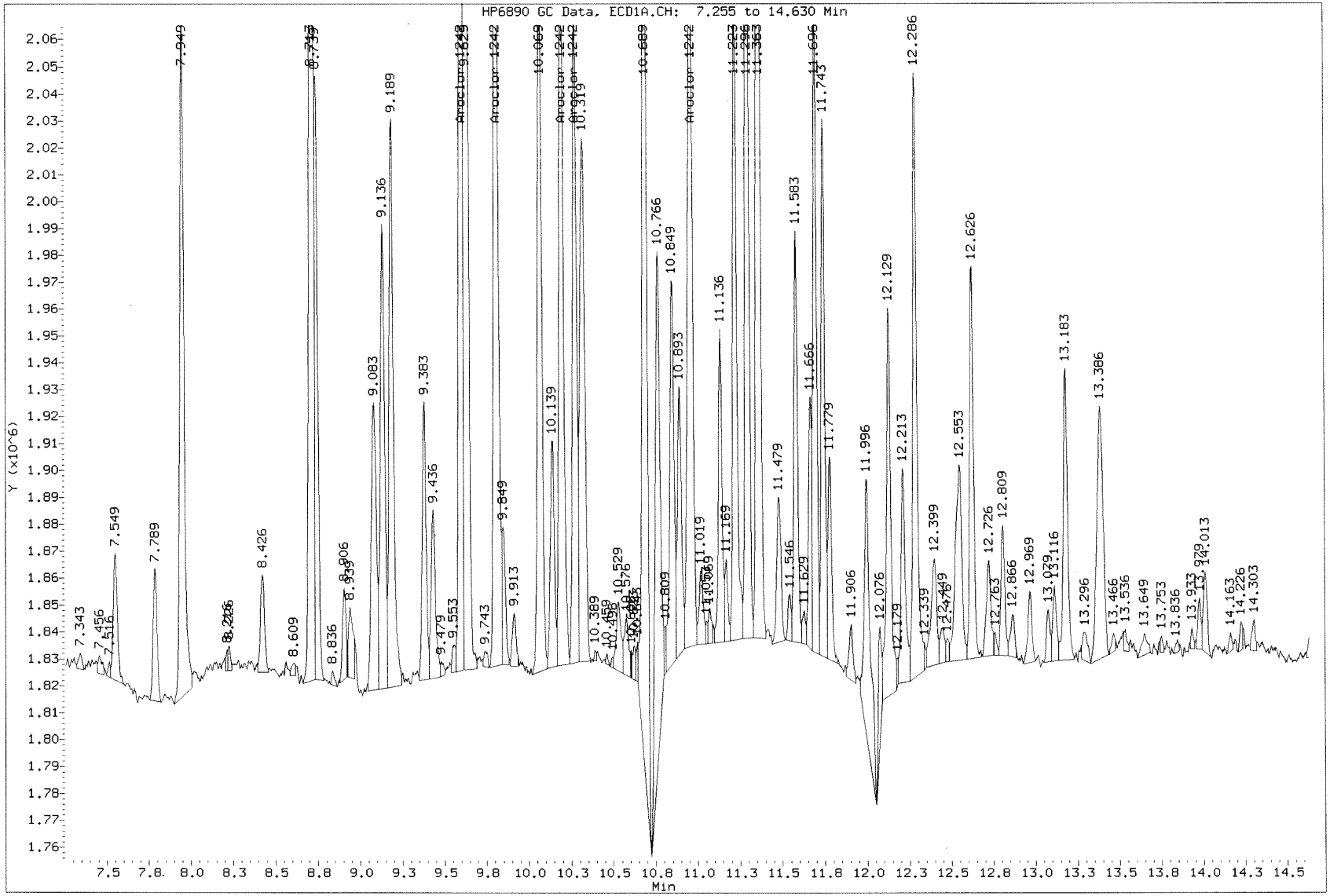
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F053.D
Injection Date: 08-DEC-2018 13:43
Instrument: GC27.i
Client Sample ID:



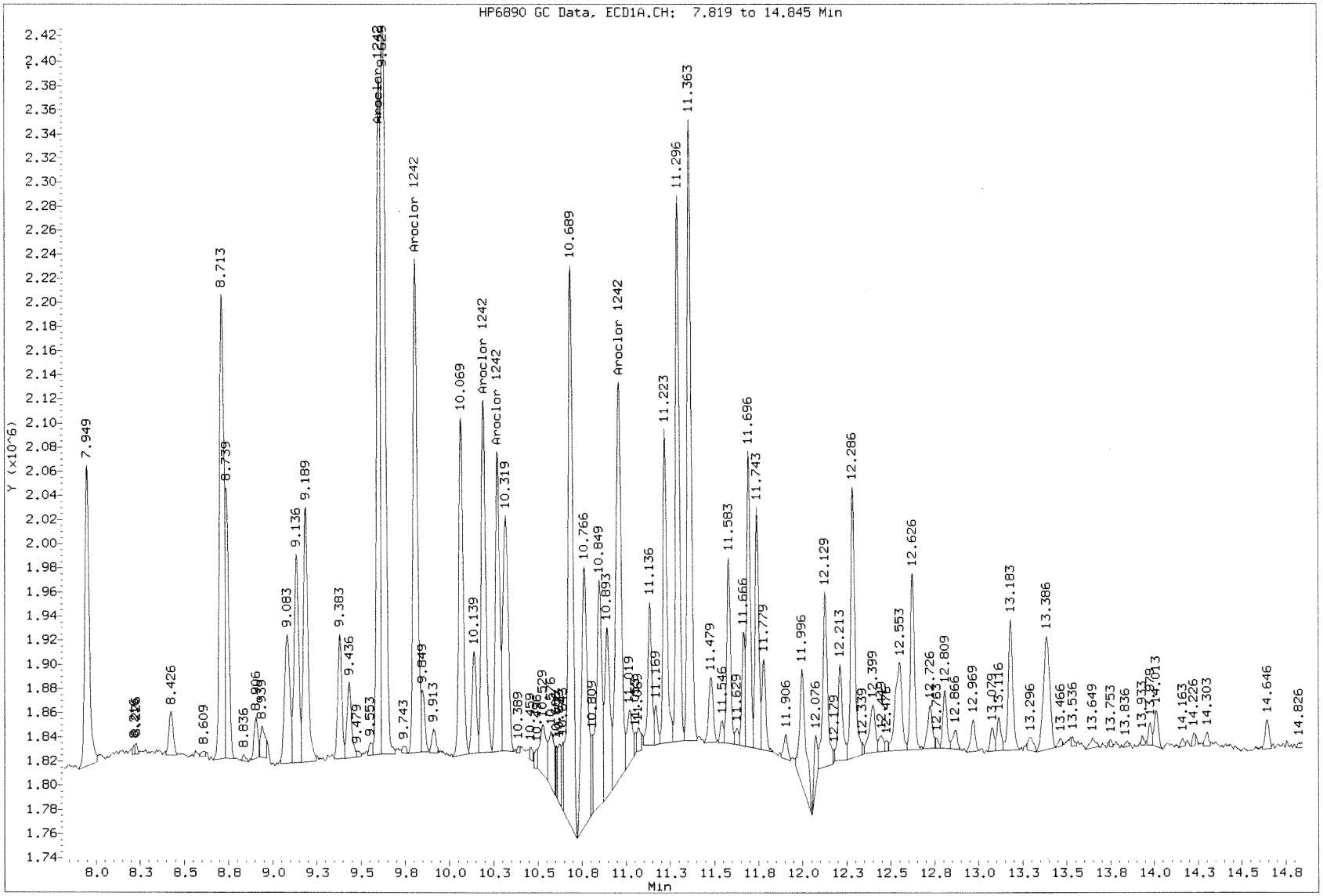
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F053.D
Injection Date: 08-DEC-2018 13:43
Instrument: GC27.i
Client Sample ID:

After
baseline shoulder
MR 12/12/18

CMA 12/17/18



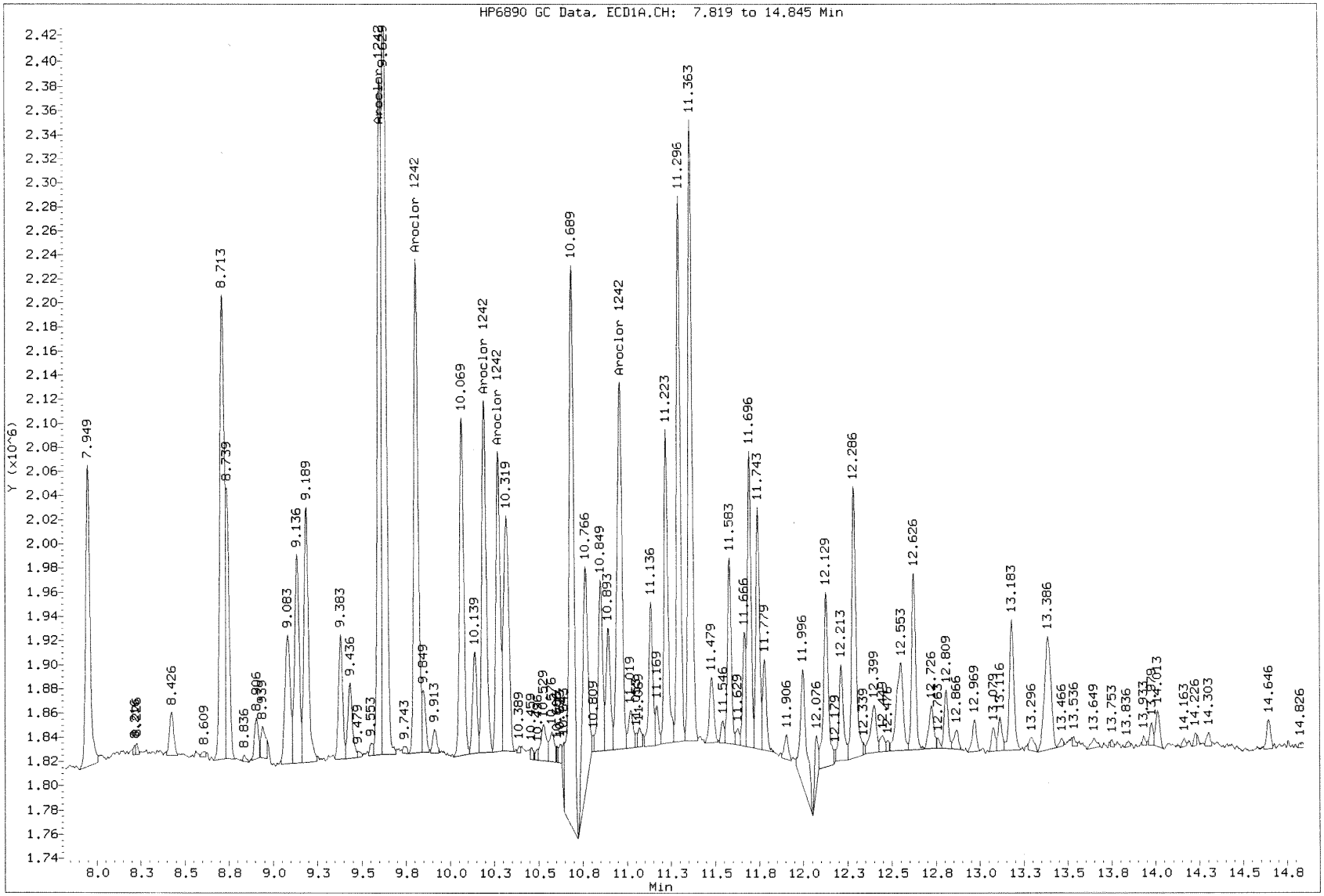
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F053.D
Injection Date: 08-DEC-2018 13:43
Instrument: GC27.i
Client Sample ID:



021011

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F053.D
Injection Date: 08-DEC-2018 13:43
Instrument: GC27.i
Client Sample ID:

After baseline/shoulder
MR 12/12/18 WA 12/17/18



021012

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F054.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F054.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F054.D
Inj Date : 08-DEC-2018 14:14
Sample Info: 1248 20PPB ICV PCB7-62D
Misc Info :
Cal Date : 12-DEC-2018 12:40
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : 48.SUB
Sub List #2 : 48.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

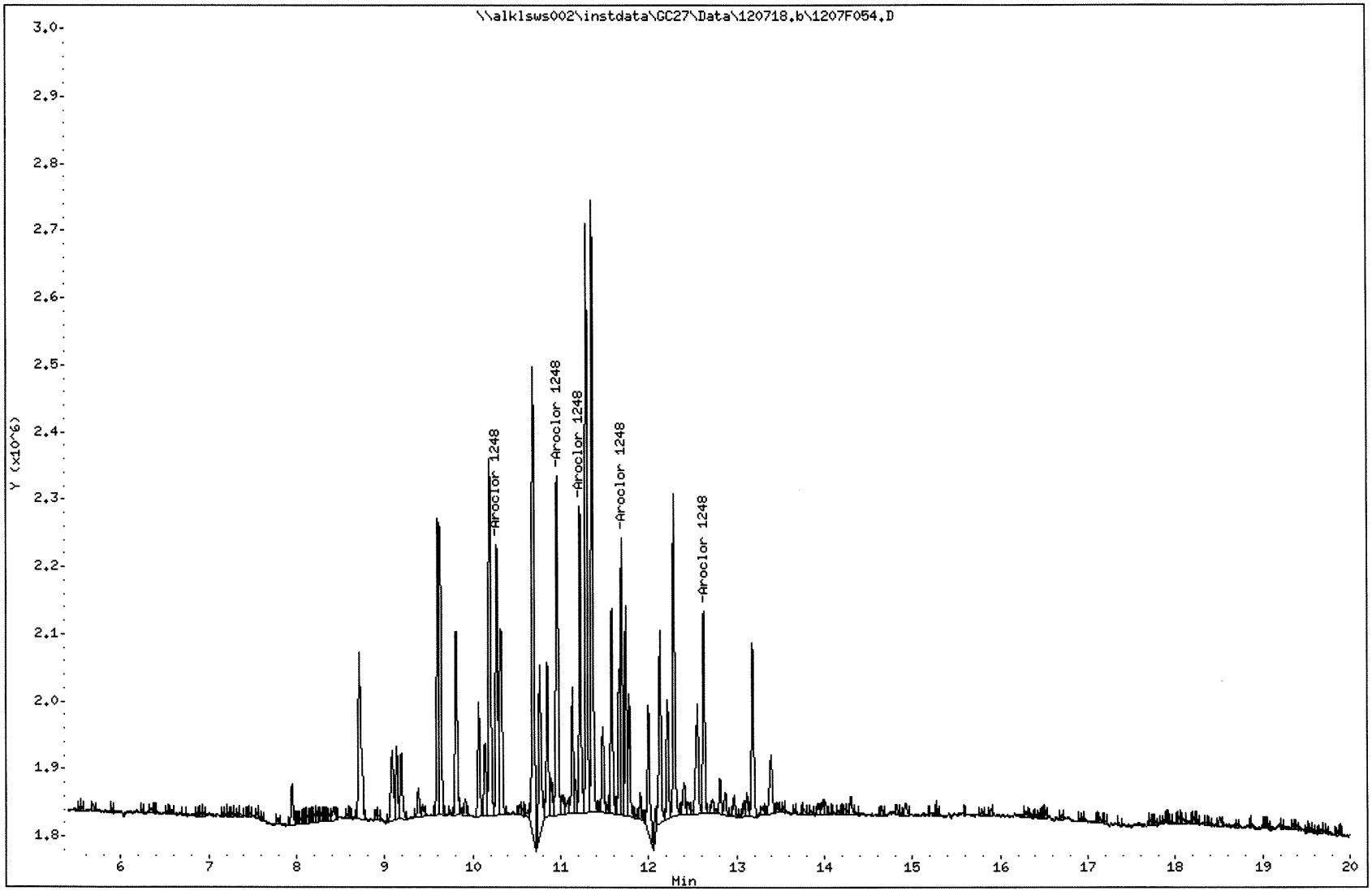
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	10.273	10.979	663127	331688	21.4	24.5	80.00- 120.00	100.00(M)
	10.963	11.446	909935	398784	19.4	20.3	110.05- 165.07	137.22(M)
	11.223	11.526	691671	369369	19.8	19.4	84.62- 126.93	104.30(M)
	11.696	12.039	651518	291973	20.1	20.9	83.51- 125.27	98.25(M)
	12.626	12.453	460850	394685	17.6	19.9	63.77- 95.66	69.50(M)
			Average of Peak Amounts =		19.7	21.0		

QC Flag Legend

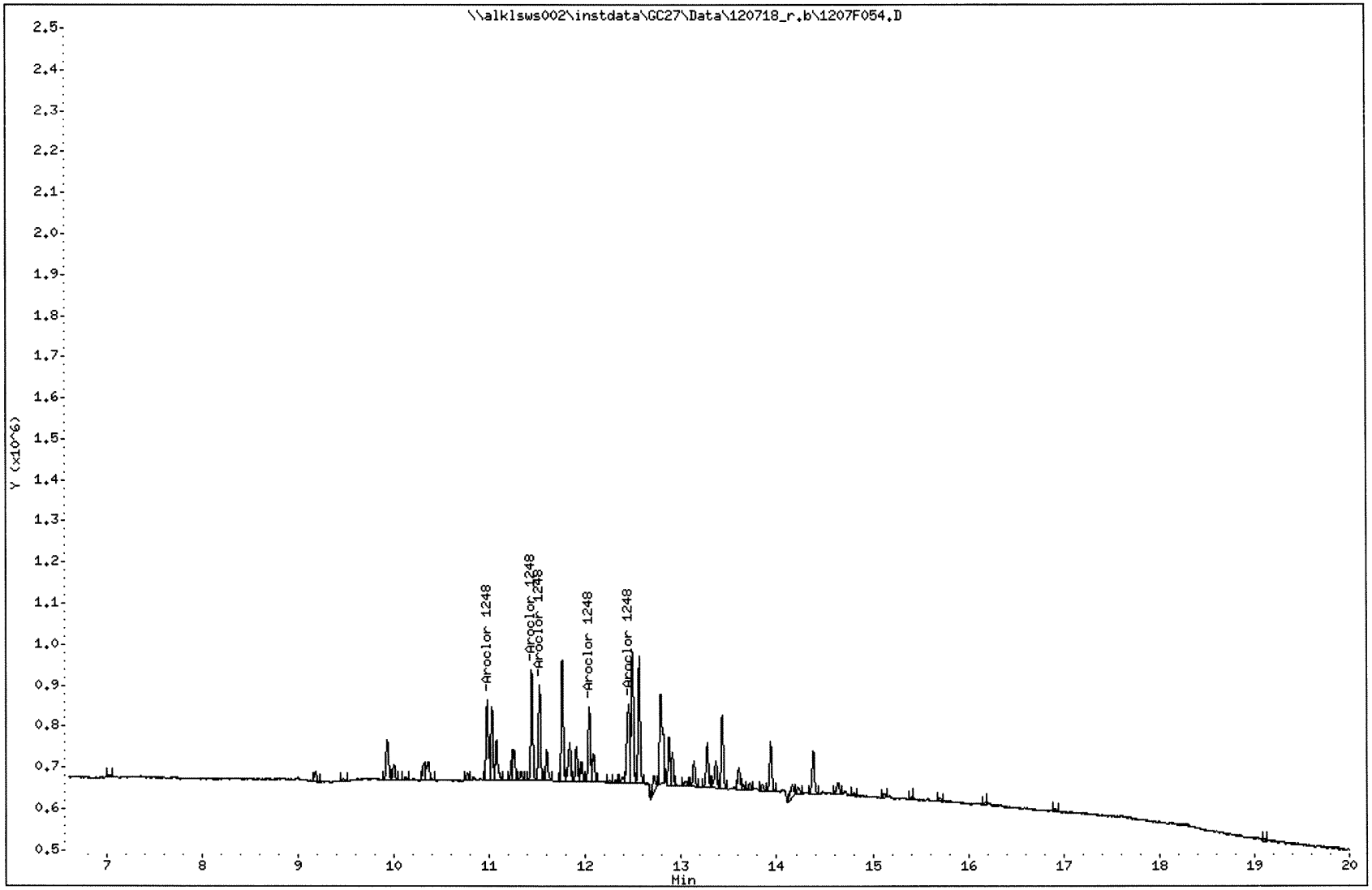
M - Compound response manually integrated.

DMZ 12/13/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F054.D
Date : 08-DEC-2018 14:14
Client ID:
Instrument: GC27.i
Sample Info: 1248 20PPB ICV PCB7-62D
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32

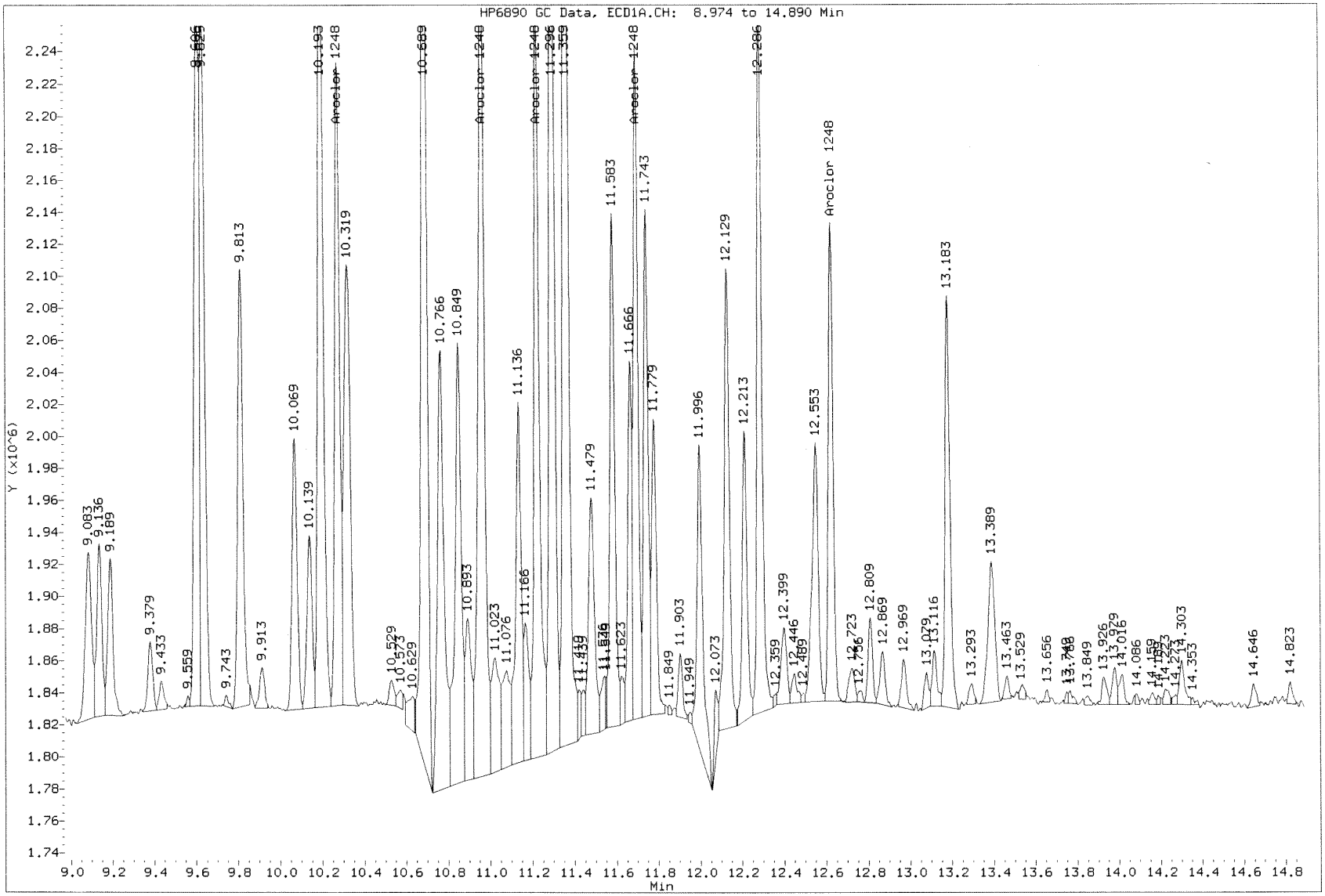


Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F054.D
Date : 08-DEC-2018 14:14
Client ID:
Instrument: GC27.i
Sample Info: 1248 20PPB ICV PCB7-62D
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



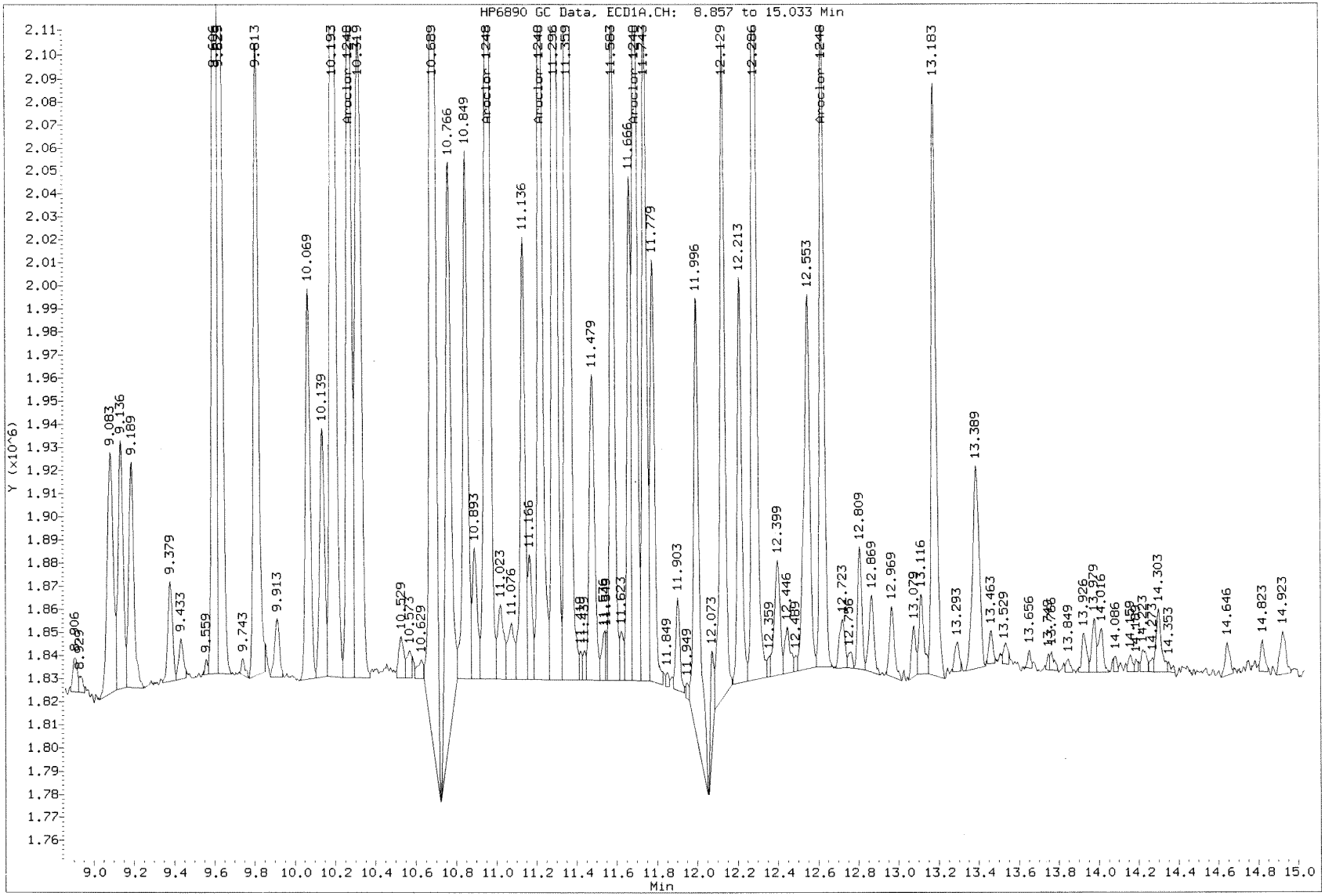
Before
MR 12/12/18
WA 12/17/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F054.D
Injection Date: 08-DEC-2018 14:14
Instrument: GC27.i
Client Sample ID:



~~After~~
baseline/shoulder
MR 12/12/18 uA 12/17/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F054.D
Injection Date: 08-DEC-2018 14:14
Instrument: GC27.i
Client Sample ID:



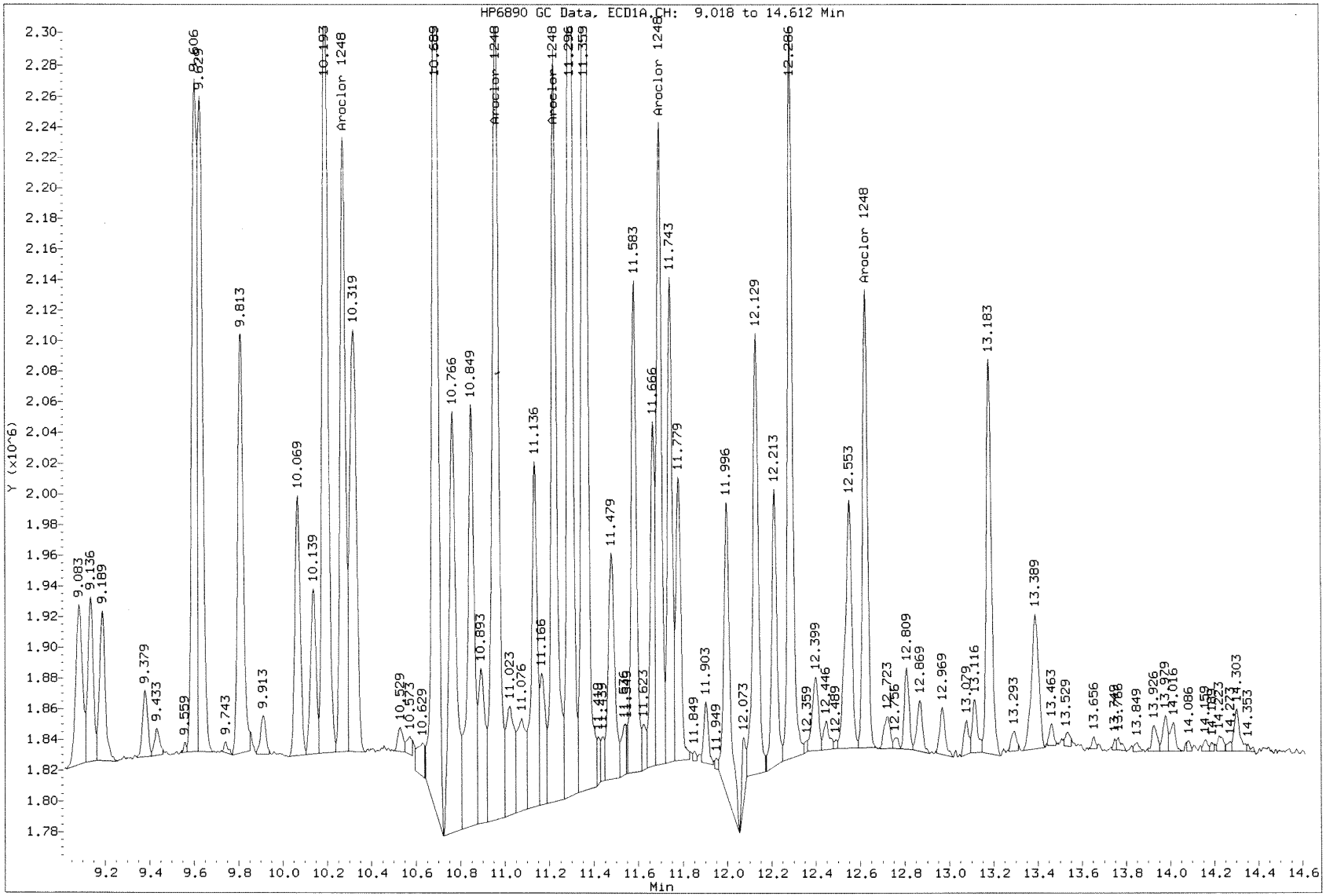
Page 1846 of 2473

021017

Before
MM 12/12/18

WA 12/17/18

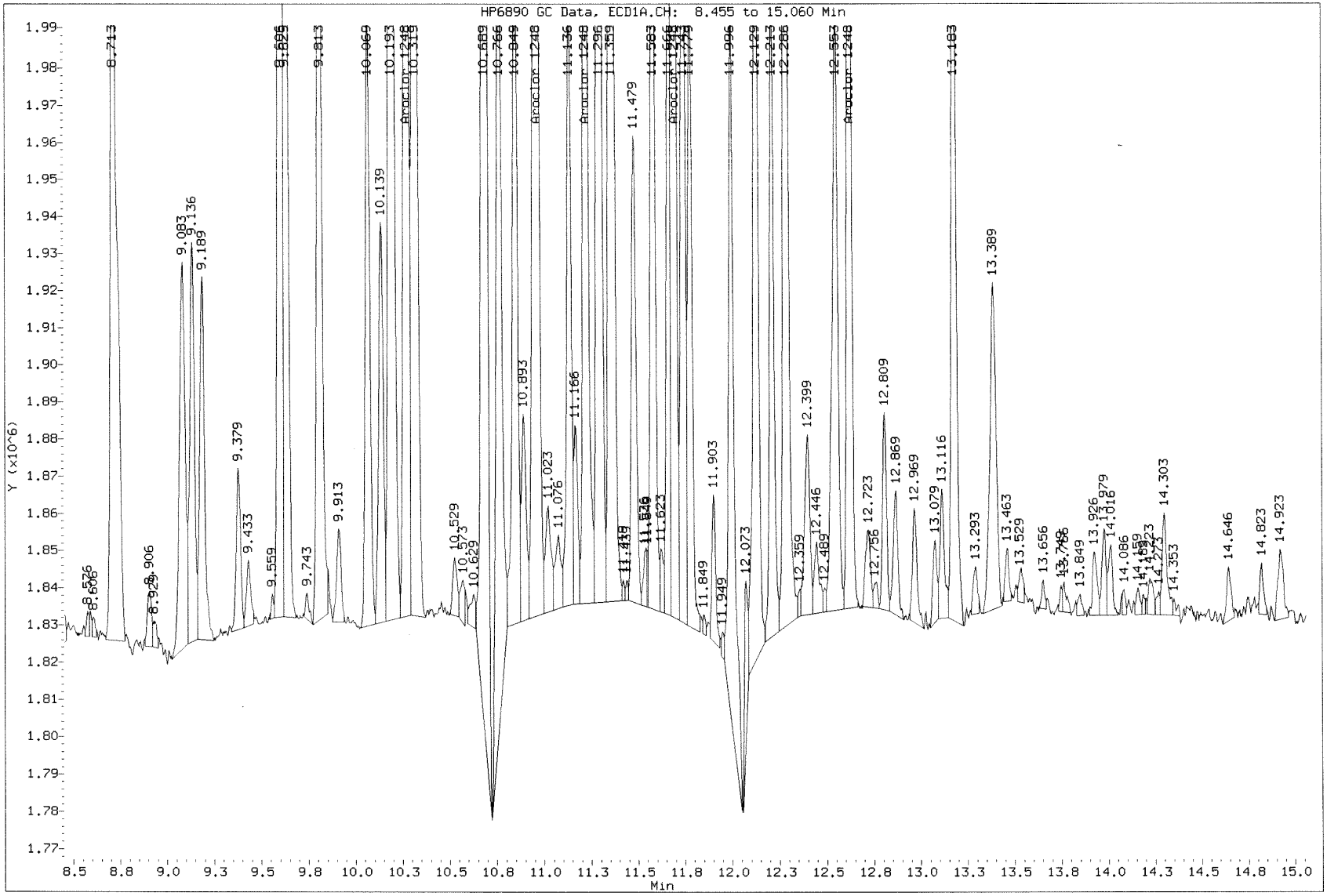
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F054.D
Injection Date: 08-DEC-2018 14:14
Instrument: GC27.i
Client Sample ID:



021018

~~ARPer~~
baseline/shoulder
MR 12/12/18 WA 12/17/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F054.D
Injection Date: 08-DEC-2018 14:14
Instrument: GC27.i
Client Sample ID:



Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F055.D
Report Date: 12-Dec-2018 12:45

CAS

Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F055.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F055.D
Inj Date : 08-DEC-2018 14:45
Sample Info: 1254 20PPB ICV PCB7-62E
Misc Info :
Cal Date : 12-DEC-2018 12:40
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

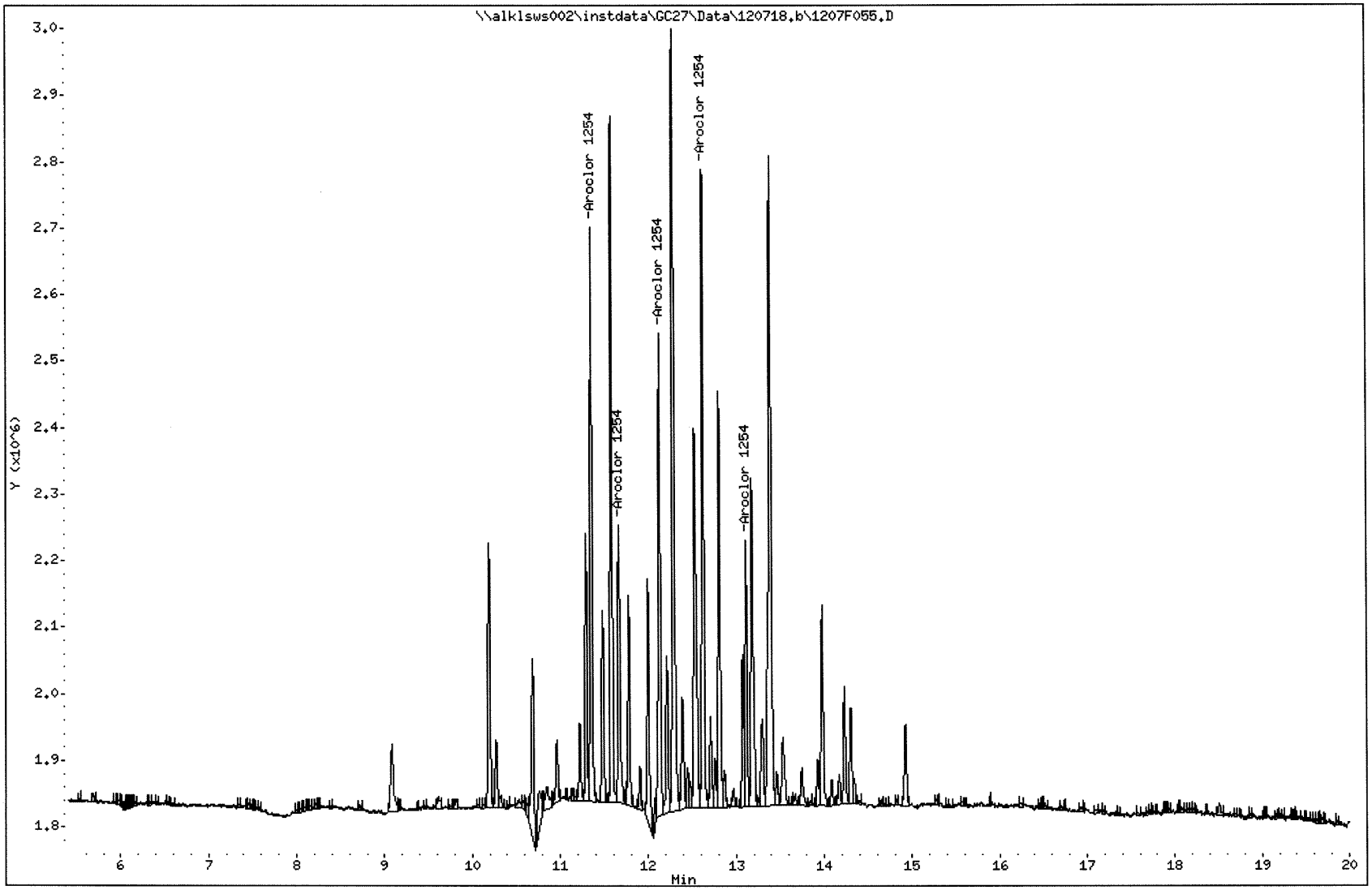
Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : AR1254.SUB
Sub List #2 : AR1254.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1254	11.356	12.437	1301006	544062	18.2	17.9	80.00- 120.00	100.00
	11.666	12.490	694768	239010	19.5	15.2	43.29- 64.93	53.40
	12.130	12.910	1214387	285089	20.2	18.1	67.48- 101.23	93.34
	12.623	14.223	1507726	293237	20.3	21.7	84.44- 126.67	115.89
	13.116	14.380	644553	481863	21.5	18.9	34.68- 52.01	49.54
			Average of Peak Amounts =		19.9	18.4		

mc 12/13/18

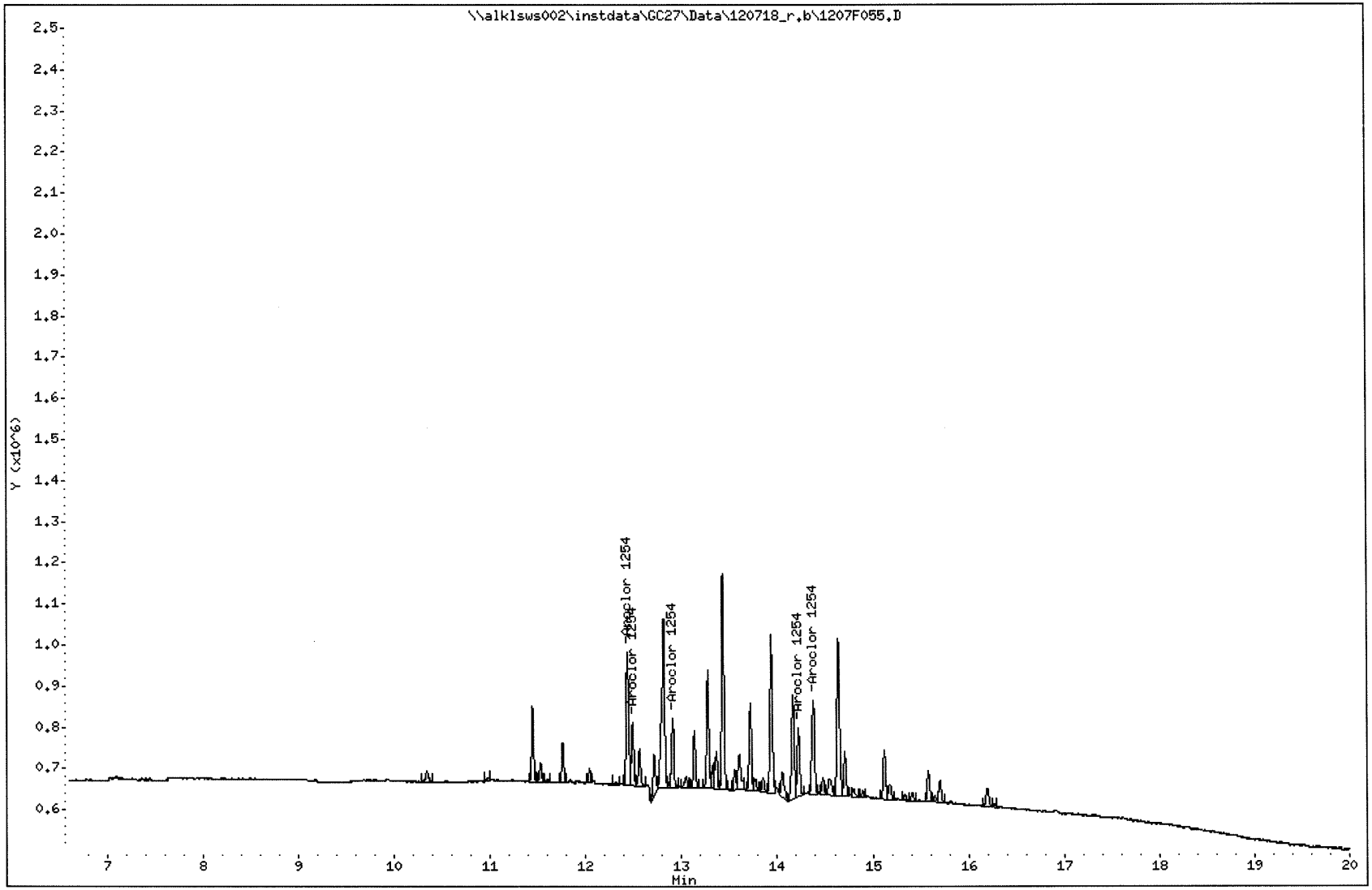
Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F055.D
Date : 08-DEC-2018 14:45
Client ID:
Sample Info: 1254 20PPB ICV PCB7-62E

Instrument: GC27.i
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



021021

Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F055.D
Date : 08-DEC-2018 14:45
Client ID:
Instrument: GC27.i
Sample Info: 1254 20PPB ICV PCB7-62E
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



021022

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F056.D
Report Date: 12-Dec-2018 12:45

CAS

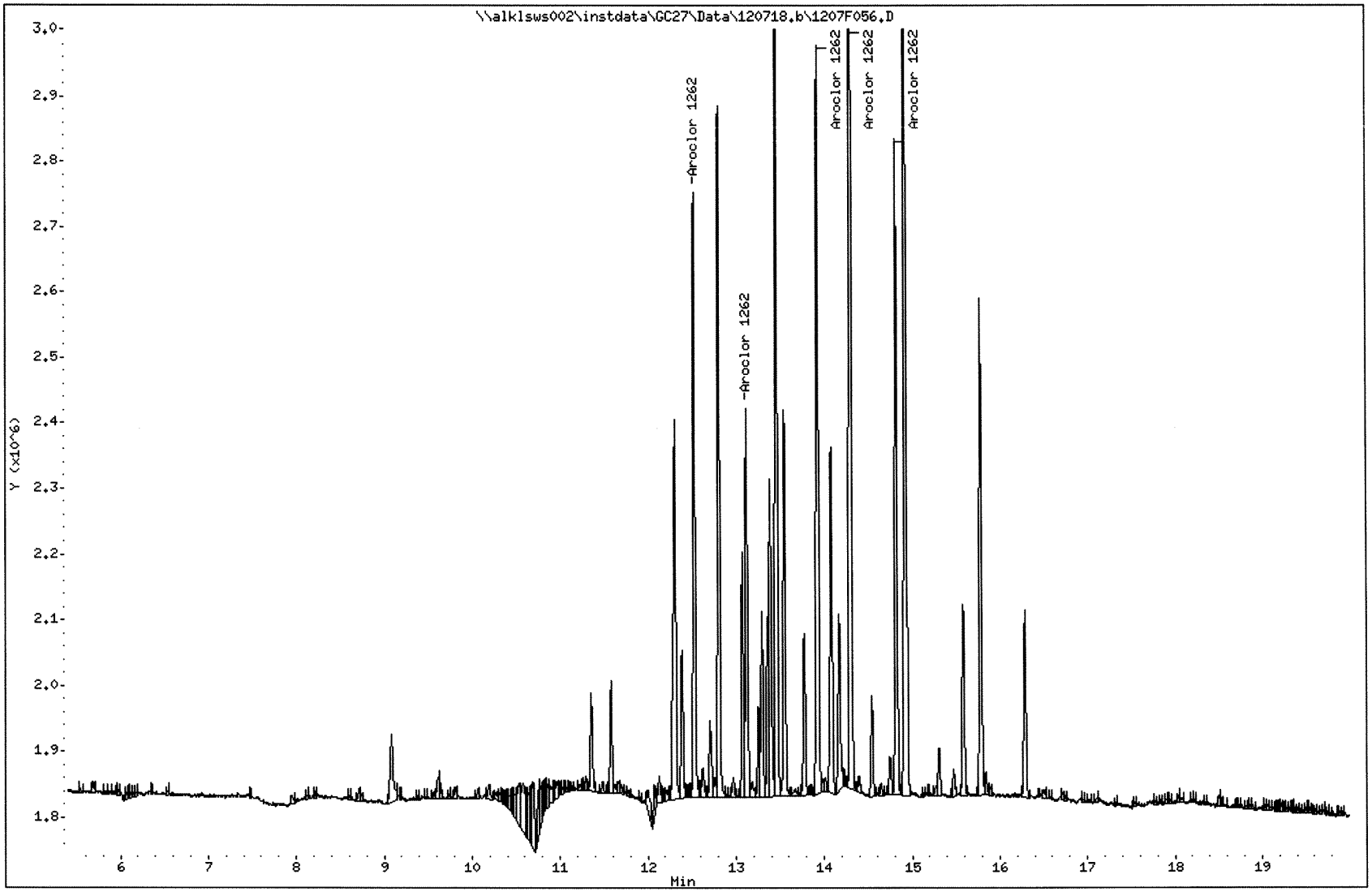
Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F056.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F056.D
Inj Date : 08-DEC-2018 15:17
Sample Info: 1262 20PPB ICV PCB7-62F
Misc Info :
Cal Date : 12-DEC-2018 12:40
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : AR1262.SUB
Sub List #2 : AR1262.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

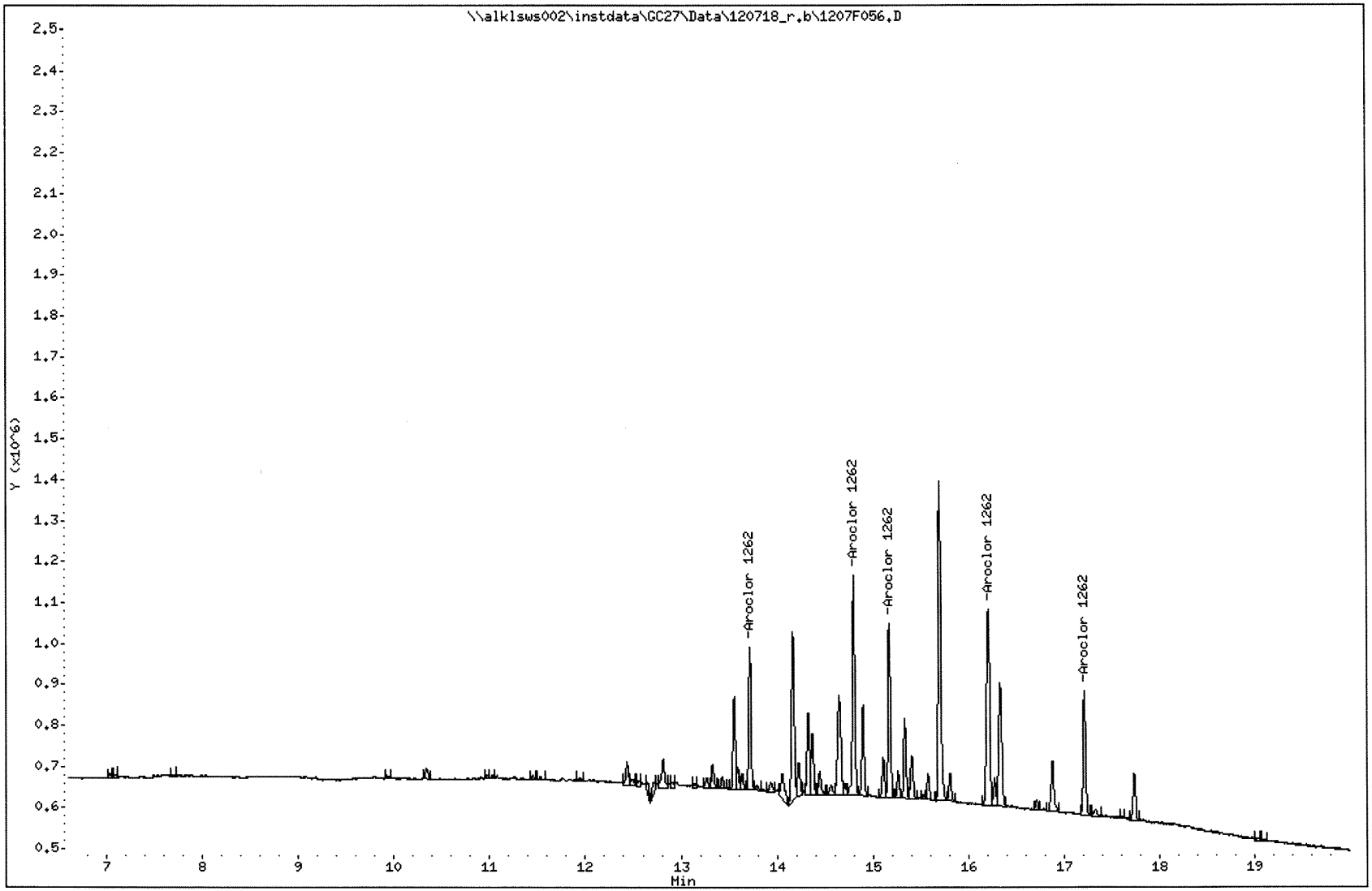
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1262	12.530	13.721	1400037	586343	20.1	20.0	80.00- 120.00	100.00
	13.124	14.801	1022026	959260	21.1	20.4	58.60- 87.90	73.00
	13.930	15.171	2004444	734366	21.8	20.5	115.16- 172.75	143.17
	14.304	16.211	3641269	1071868	21.3	20.2	222.16- 333.24	260.08
	14.824	17.214	1562731	543599	18.8	16.6	97.91- 146.87	111.62
			Average of Peak Amounts =		20.6	19.5		

mc 12/13/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F056.D
Date : 08-DEC-2018 15:17
Client ID:
Instrument: GC27.i
Sample Info: 1262 20PPB ICV PCB7-62F
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F056.D
Date : 08-DEC-2018 15:17
Client ID:
Instrument: GC27.i
Sample Info: 1262 20PPB ICV PCB7-62F
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



021025

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F057.D
Report Date: 12-Dec-2018 12:45

CAS

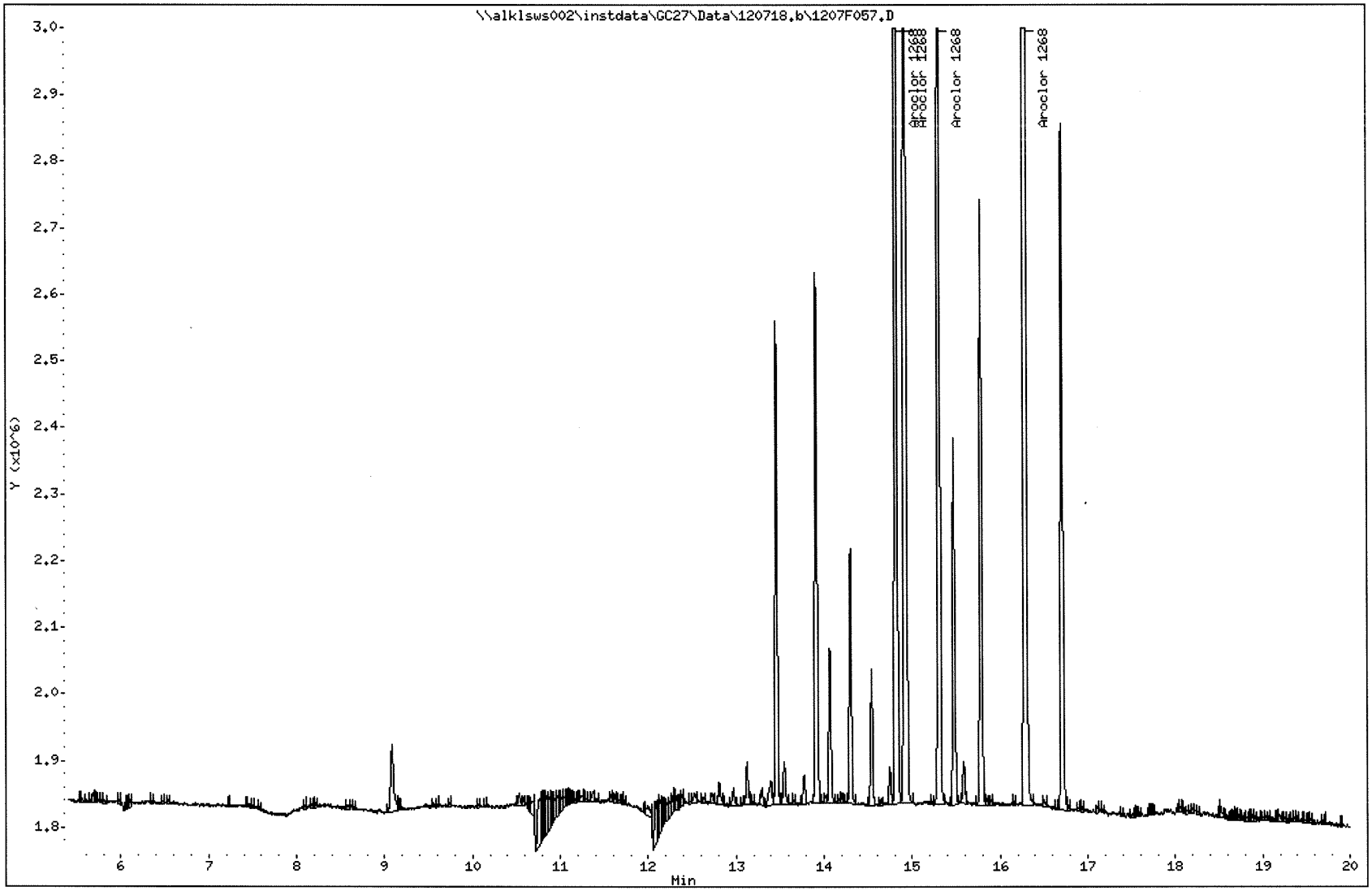
Sample #1 : \\alklsws002\instdata\GC27\Data\120718.b\1207F057.D
Sample #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\1207F057.D
Inj Date : 08-DEC-2018 15:48
Sample Info: 1268 20PPB ICV PCB7-62G
Misc Info :
Cal Date : 12-DEC-2018 12:40
Operator : SM
Inst ID : GC27.i
Dil Factor : 1.000000

Method #1 : \\alklsws002\instdata\GC27\Data\120718.b\120718ul_f.m
Method #2 : \\alklsws002\instdata\GC27\Data\120718_r.b\120718_r.m
Sub List #1 : AR1268.SUB
Sub List #2 : AR1268.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

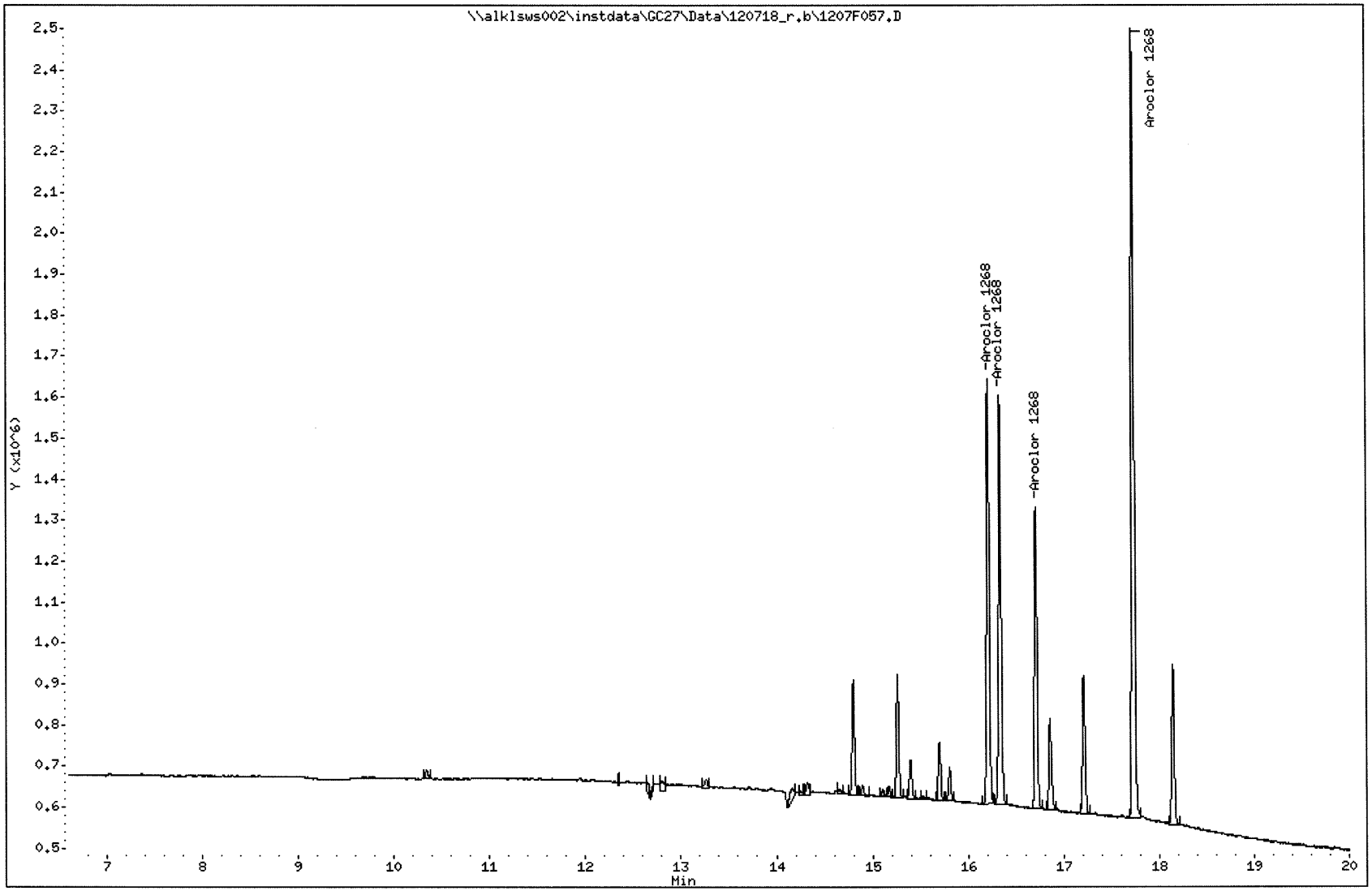
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1268	14.822	16.213	4717356	1914737	20.4	19.1	80.00- 120.00	100.00
	14.922	16.339	4664592	1886749	23.2	22.2	71.67- 107.50	98.88
	15.309	16.713	3275230	1328775	18.3	17.3	63.30- 94.96	69.43
	16.292	17.733	9142925	3718207	17.6	16.8	186.23- 279.34	193.81
			Average of Peak Amounts =		19.9	18.9		

MPZ 12/13/18

Data File: \\alklsws002\instdata\GC27\Data\120718.b\1207F057.D
Date : 08-DEC-2018 15:48
Client ID:
Instrument: GC27.i
Sample Info: 1268 20PPB ICV PCB7-62G
Operator: SM
Column phase: DB-35MS
Column diameter: 0.32



Data File: \\alklsws002\instdata\GC27\Data\120718_r.b\1207F057.D
Date : 08-DEC-2018 15:48
Client ID:
Instrument: GC27.i
Sample Info: 1268 20PPB ICV PCB7-62G
Operator: SM
Column phase: DB-XLB
Column diameter: 0.32



021028

Chlorinated Herbicides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

RIGHT SOLUTIONS | RIGHT PARTNER

REVISED
12:02 pm, Feb 13, 2019

Preparation Information Benchsheet

Prep Run#: 327135
Team: Semivoa GC/CWILLIAMS
Number of Copies to make: 2

Prep WorkFlow: OrgHerbLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/27/18 02:37 PM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1810644-031	TCLP Herbicides	.01	8151A/HERB_TCLP		Soil	10.00mL	20.00mL	
2	K1811120-001	SL0084	.01	8151A/HERB_TCLP		Soil	10.00mL	20.00mL	thick, sticky Clay #34
3	K1811120-002	SL0064	.01	8151A/HERB_TCLP		Soil	10.00mL	20.00mL	Fuel smell. Thick, sticky Clay. #36
4	K1811120-003	SL0065	.01	8151A/HERB_TCLP		Soil	10.00mL	20.00mL	standing water. Thick, sticky Clay. #31
5	K1811120-004	SL0022	.01	8151A/HERB_TCLP		Soil	10.00mL	20.00mL	thick, sticky Clay. #39
6	KQ1817270-01	K1811120-004 MS	.01	8151A/HERB_TCLP		Solid	10.00mL	20.00mL	
7	KQ1817270-02	K1811120-004 DMS	.01	8151A/HERB_TCLP		Solid	10.00mL	20.00mL	
8	KQ1817270-03	LCS		8151A/HERB_TCLP		Solid	10.00mL	20.00mL	
9	KQ1817270-04	MB		8151A/HERB_TCLP		Solid	10.00mL	20.00mL	
10	KQ1817270-05	MB		8151A/HERB_TCLP		Solid	10.00mL	20.00mL	
11	KQ1817270-06	MB		8151A/HERB_TCLP		Solid	10.00mL	20.00mL	

Spiking Solutions

Name: 8151A 5ppm Herbicide surrogate Inventory ID 191563 Logbook Ref: Penta01-92M Expires On: 03/27/2019

K1810644-031	500.00µL	K1811120-001	500.00µL	K1811120-002	500.00µL	K1811120-003	500.00µL	K1811120-004	500.00µL	KQ1817270-01	500.00µL
KQ1817270-02	500.00µL	KQ1817270-03	500.00µL	KQ1817270-04	500.00µL	KQ1817270-05	500.00µL	KQ1817270-06	500.00µL		

Name: 8151A 5-500ppm Herbicides matrix spike Inventory ID 194927 Logbook Ref: penta01-93B Expires On: 02/09/2019

KQ1817270-01	500.00µL	KQ1817270-02	500.00µL	KQ1817270-03	500.00µL

Preparation Steps

Step:	Extraction	Step:	Final Volume
Started:	11/27/18 14:37	Started:	11/27/18 14:37
Finished:	11/27/18 17:00	Finished:	11/29/18 12:09
By:	CWILLIAMS	By:	KVAN
Comments		Comments	

Comments: _____

Reviewed By: _____ Date: 11/30/18

Page 1859 of 2473

021030

Preparation Information Benchsheet

Prep Run#: 327135
Team: Semivoa GC/CWILLIAMS

Prep WorkFlow: OrgHerbLP
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/27/18 02:37 PM

Chain of Custody

Relinquished By:		Date: 11-29-18	Extracts Examined
Received By:	MC	Date: 12/00/18	(Yes) No

Preparation Information Benchsheet

rep Run#: 327135 **Prep WorkFlow:** OrgHerbLP **Status:** Draft
eam: Semivoa GC/CWILLIAMS **Prep Method:** Method **Prep Date/Time:** 11/27/18 11:12 AM
Number of Copies to make: 2

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext. mL	pH	Int. Vol mL	Final Vol mL	Surr Amt µL	Spike Amt µL
1	**K1810644-031**	TCLP Herbicides lot# 70460	.01		8151A / HERB_TCLP	Soil	10	7?/<2	10	20	500	—
2	**K1811120-001**	SL0084	.01		8151A / HERB_TCLP	Soil	10	7?/<2	10	20		—
3	**K1811120-002**	SL0064	.01		8151A / HERB_TCLP	Soil	10	7?/<2	10	20		—
4	**K1811120-003**	SL0065	.01		8151A / HERB_TCLP	Soil	10	7?/<2	10	20		—
5	**K1811120-004**	SL0022	.01		8151A / HERB_TCLP	Soil	10	7?/<2	10	20		—
6	**KQ1817270-01**	K1811120-004 MS	.01		8151A / HERB_TCLP	Solid	10	7?/<2	10	20		500
7	**KQ1817270-02**	K1811120-004 DMS	.01		8151A / HERB_TCLP	Solid	10	7?/<2	10	20		
8	**KQ1817270-03**	LCS			8151A / HERB_TCLP	Solid	10	7?/<2	10	20		
9	**KQ1817270-04**	MB LB Solution #1			8151A / HERB_TCLP	Solid	10	7?/<2	10	20		—
10	**KQ1817270-05**	MB LB Solution #2			8151A / HERB_TCLP	Solid	10	7?/<2	10	20		—
11	**KQ1817270-06**	MB			8151A / HERB_TCLP	Solid	10	7?/<2	10	20		—

Comments: # Sample created by adding 50µL of concentrate (HerbTCLP) to approx ~~450~~ EEC 11/27/18 90mL of TCLP extraction solution #1 (Met-D6-26D CCL 11/26/18 p.H 4.95) then bringing to a volume of 100mL. 11/27/18 CW

Surrogate ID: Penta01-92M Exp 3/27/19 5ppm 500µL CEpp

Spike ID: Penta01938 Exp 2/9/19 5-500ppm 500µL CEpp

Witnessed By: [signature] 11/27/18

Analyst: CWilliams

Assisted By: —

Additional Prep Information for EPA 8151A
TCLP Herbicides

Service Request # K1810644, K1811120 **Work Group #** KQ1817270

Pre-Prep Method: TCLP 1311	Pre-Prep Method:	Pre-Prep Method:
SR # K1811120	SR #	SR #
Pre-Prep (date/time)	Pre-Prep (date/time)	Pre-Prep (date/time)
Start: 11/20/18 16:37	Start:	Start:
Stop: 11/21/18 8:40	Stop:	Stop:

37% KOH Lot # 0203-304 N-Evap Thermometer ID: XSVM-003

Temp as measured: 60 °C Correction factor: 0.0 °C Adjusted temp: 60 °C

Saponification Start (time/date/initial): 14:37 11/27/18 CW

Saponification Stop (time/date/initial): 15:37 11/27/18 CW

25% Sulfuric Acid Lot # 0203-31L Ethyl Ether Lot # DT448

Extraction Start (time/date/initial): 16:10 11/27/18 CW

Extraction Stop (time/date/initial): 17:00 11/27/18 CW

Acidified Sulfate Lot # 0203-286

Pipette (5 mL) Lot # 02717647

Diazomethane Lot # DZ03-398B

Derivatization Start (time/date/initial): 10:27 11-29-18 WS

Derivatization Stop (time/date/initial): 11:01 11-29-18 WS

Solvent Exchange to Iso-Octane (time/date/initial): 11:01 11-29-18 WS

Iso-Octane Lot # DM 121 N-Evap Thermometer ID: DWB-012

Temp as measured: 22 °C Correction factor: 0.0 °C Adjusted temp: 22 °C

Pipette (2 mL) Lot # 20717646

Vial: red Vial Storage: Slytherin C1-D1

Archive Storage: 25R

Additional Comments:

Bench Sheet Review Check List	
☑	Hold times met (if no, reason:)
☑	Prep date, time, method, department, product code correct in stealth
☑	Spike information and Q.C. correct (insufficient volume or mass recorded if no Q.C.)
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked - bottle numbers appended if required
☑	Names present for: started by, completed by, relinquished by, and witnessed by. Training circled.
☑	Extract storage recorded
☑	Additional prep sheet completely filled out (NA or line out blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

Pre-Prep Information Benchsheet

Prep Run #: ~~326472~~ 326859 **Prep Method:** CCl 4720 **Team:** **Container Lot No:** 100ml-1802043/ Nalgene 2L **Prep Due Date:** Nov-23-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1811120-001	.01	TCLP	100.06g	thick, sticky Clay #34	PrepComments:APOSEY K-BALANCE-52 11142018
2	K1811120-001 DUP KQ1816762-01	.01	TCLP	5.110g		PrepComments:APOSEY K-BALANCE-48 11142018
3	K1811120-002	.01	TCLP	100.16g	Fuel smell. Thick, sticky Clay. #36	PrepComments:APOSEY K-BALANCE-52 11142018
4	K1811120-002 DUP KQ1816762-02	.01	TCLP	5.070g		PrepComments:APOSEY K-BALANCE-48 11142018
5	K1811120-003	.01	TCLP	100.19g	standing water. Thick, sticky Clay. #31	PrepComments:APOSEY K-BALANCE-52 11142018
6	K1811120-003 DUP KQ1816762-03	.01	TCLP	5.086g		PrepComments:APOSEY K-BALANCE-48 11142018
7	K1811120-004	.01	TCLP	100.06g	thick, sticky Clay. #39	PrepComments:APOSEY K-BALANCE-52 11142018
8	K1811120-004 DUP KQ1816762-04	.01	TCLP	5.307g		PrepComments:APOSEY K-BALANCE-48 11142018

Relinquished By:	Date/Time: 11.14.2018 16:39	Received By:	Date/Time: 11/20/18 13:31

1st 12/04/18
2nd 12/06/18

Validation Report

Data File: J:\gc24\data\113018\11300020.D\
Lab ID: K1811120-001
RunType: N/A
Matrix: Soil

Date Acquired: 11/30/18 18:13:00
Batch ID: 616064
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st 12/04/18
2nd 12/06/18

Quantitation Report

Data File:	J:\gc24\data\113018\11300020.D\	**Instrument:**	K-GC-24
Acqu Date:	11/30/18 18:13:00	**Vial:**	18
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1811120-001	**Raw Units:**	ppb

Bottle ID:	K1811120-001.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/8/18	**Receive Date:**	11/13/18

Analysis Lot:	616064	**Prep Lot:**	327135	**Report Group:**	K1811120
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/27/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.98	9.58	1482709	1354074	90.533	92.661	72	74	74	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.27	10.99	7538	3895	0.418	0.241	0.84U	0.48U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.25	12.21	23794	11715	0.339	0.187	0.68U	0.37U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 12/4/18 12:47
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

021036

Quantitation Report (QT Reviewed)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 6:13 pm Operator: MRICHARDS
Sample : K1811120-001 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 14:13:41 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.982	9.575	1482709	1354074	90.533	92.661	
	Target Compounds							
1) m	Dalapon	3.125f	3.662	365386	14535	17.713	0.931	#
3) m	Dicamba	8.215	9.749	10987	5745	0.219	0.127	#
4) m	MCPP	8.308	9.902	4536	4694	50471.578	86809.945	#
5) m	MCPA	8.552	10.192	20100	14563	50160.329	83498.126	#
6) m	Dichloroprop	8.955	0.000	18781	0	901.313	N.D.	#
7) m	2,4-D	9.265	10.992	7538	3895	0.418	0.241	#
8) m	2,4,5-TP ...	10.252	12.212	23794	11715	0.339	0.187	#
9) m	2,4,5-T	10.728	12.739f	35484	5653	0.585	0.104	#
10) m	2,4-DB	11.255	13.292	31666	2274	4.079	1543.295	#
11) m	Dinoseb	11.738f	13.529	45632	9071	0.984	0.220	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

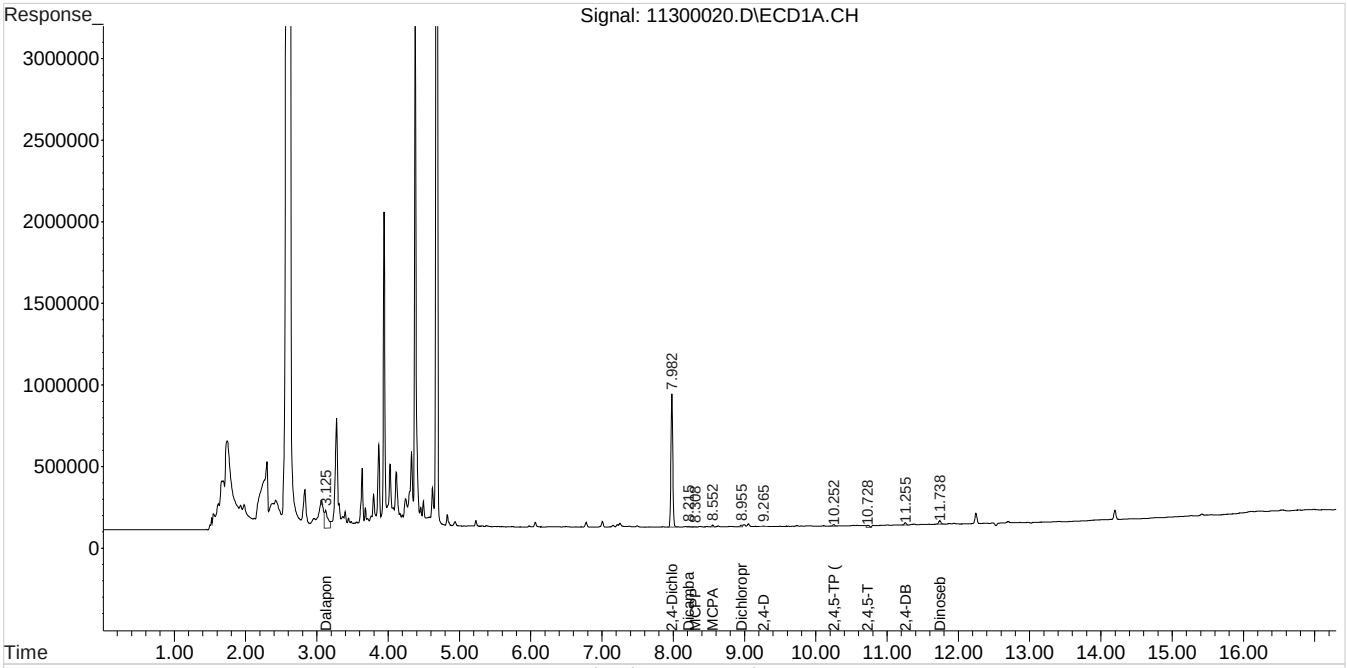
Quantitation Report (QT Reviewed)

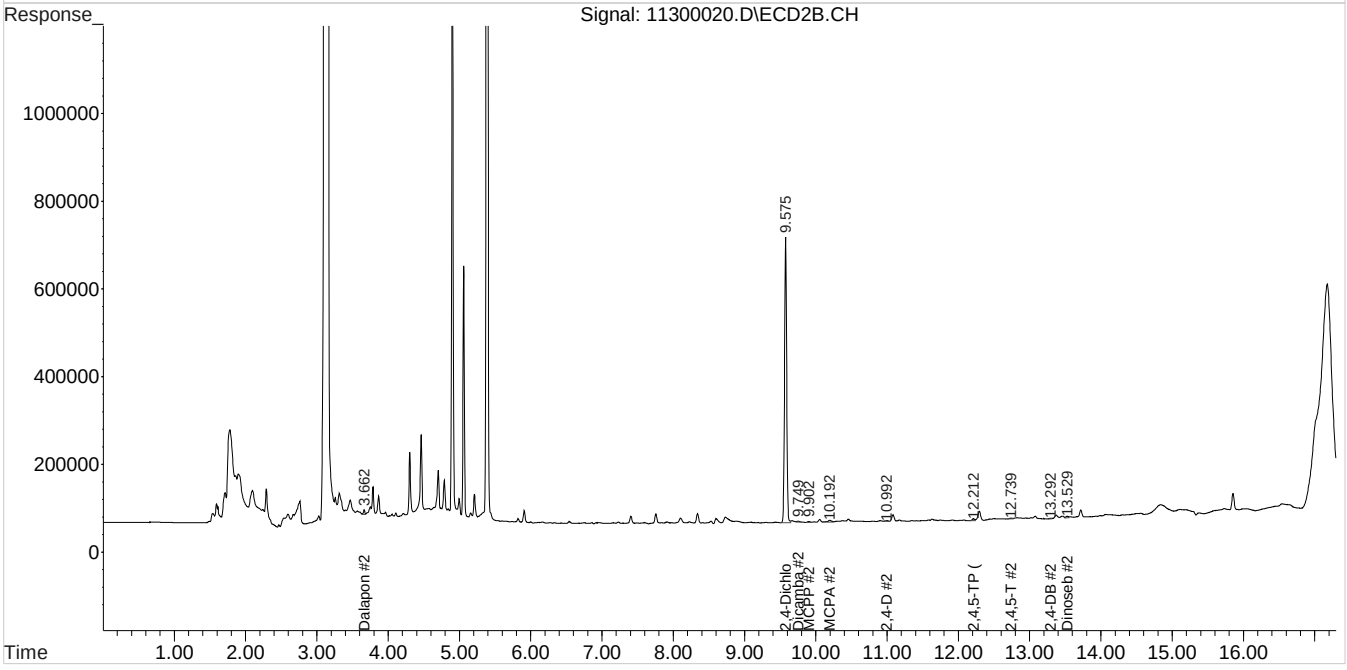
1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300020.D Vial: 15
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 6:13 pm Operator: MRICHARDS
Sample : K1811120-001 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 14:13:41 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st 12/04/18
2nd 12/06/18

Validation Report

Data File: J:\gc24\data\113018\11300021.D\
Lab ID: K1811120-002
RunType: N/A
Matrix: Soil

Date Acquired: 11/30/18 18:37:00
Batch ID: 616064
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st 12/04/18
2nd 12/06/18

Quantitation Report

Data File:	J:\gc24\data\113018\11300021.D\	**Instrument:**	K-GC-24
Acqu Date:	11/30/18 18:37:00	**Vial:**	19
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1811120-002	**Raw Units:**	ppb

Bottle ID:	K1811120-002.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/5/18	**Receive Date:**	11/13/18

Analysis Lot:	616064	**Prep Lot:**	327135	**Report Group:**	K1811120
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/27/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.98	9.57	1459067	1349757	89.090	92.366	71	74	74	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.35	10.99	1460	3062	0.081	0.190	0.16U	0.38U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.25	12.29	15222	63564	0.217	1.013	0.43U	2.0U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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021040

Quantitation Report (QT Reviewed)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300021.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 6:37 pm Operator: MRICHARDS
Sample : K1811120-002 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 14:13:55 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.980	9.573	1459067	1349757	89.090	92.366	
	Target Compounds							
1) m	Dalapon	3.067f	3.667	735401	11803	35.650	0.756	#
3) m	Dicamba	8.217	9.750	6029	4706	0.120	0.104	
4) m	MCPP	8.303	9.900	9423	3943	50436.824	86823.599	#
5) m	MCPA	8.550	10.193	10967	6162	50214.461	83598.485	#
6) m	Dichloroprop	8.957	10.590f	18078	2199	901.357	1363.004	#
7) m	2,4-D	9.353	10.993	1460	3062	0.081	0.190	#
8) m	2,4,5-TP ...	10.250	12.290f	15222	63564	0.217	1.013	#
9) m	2,4,5-T	10.730	12.737f	34356	6982	0.566	0.129	#
10) m	2,4-DB	11.250	13.297	31460	2848	4.053	1543.223	#
11) m	Dinoseb	11.683	13.527	1930	8138	0.042	0.197	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

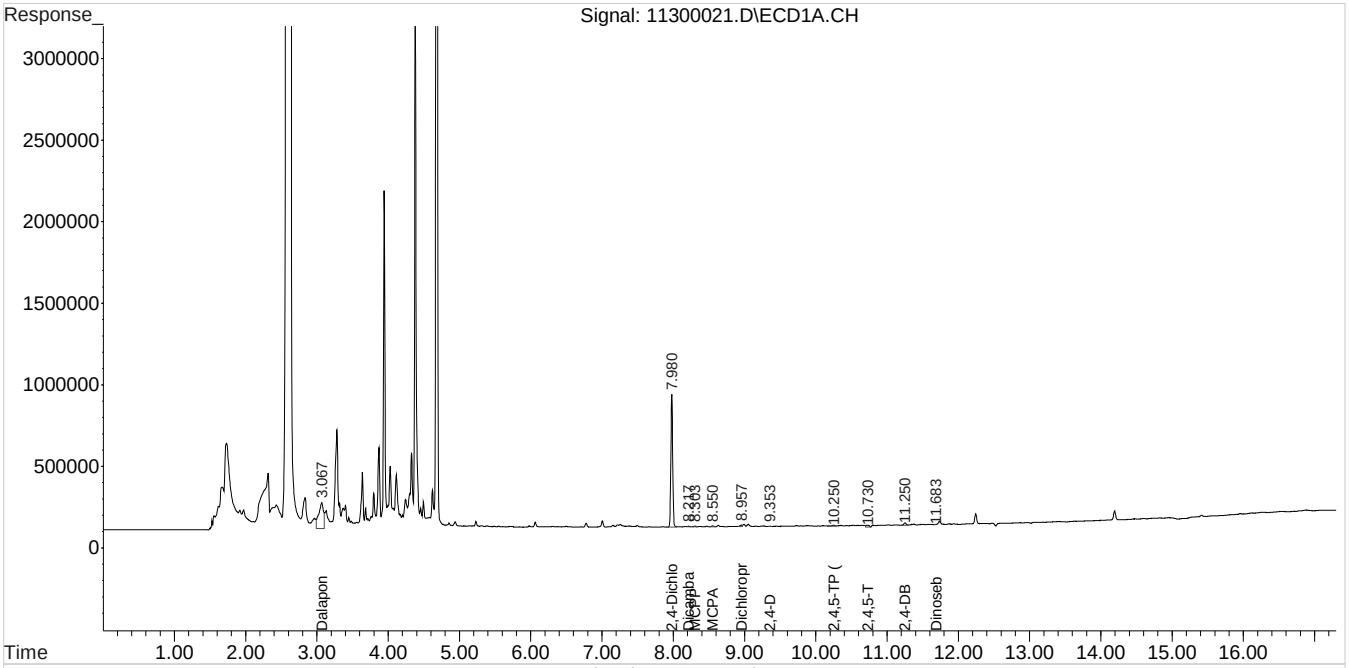
Quantitation Report (QT Reviewed)

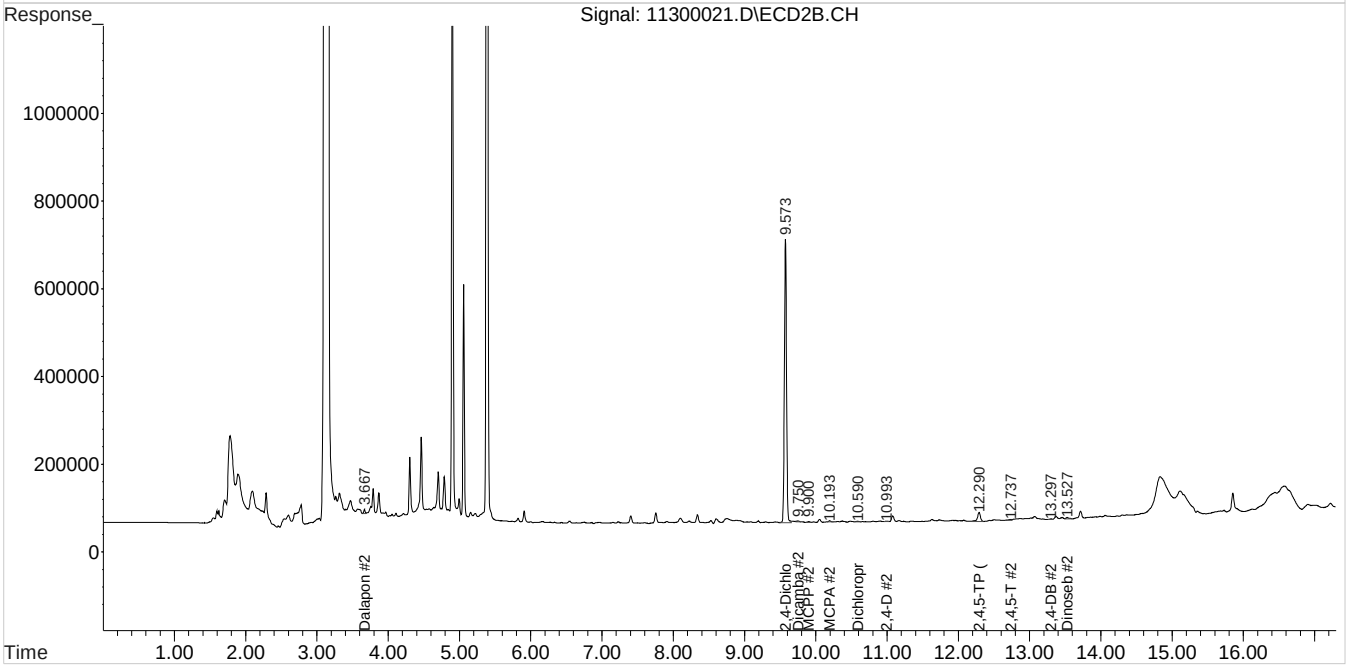
1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300021.D Vial: 16
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 6:37 pm Operator: MRICHARDS
Sample : K1811120-002 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 14:13:55 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st 12/04/18
2nd 12/06/18

Validation Report

Data File: J:\gc24\data\113018\11300022.D\
Lab ID: K1811120-003
RunType: N/A
Matrix: Soil

Date Acquired: 11/30/18 19:00:00
Batch ID: 616064
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st 12/04/18
2nd 12/06/18

Quantitation Report

Data File:	J:\gc24\data\113018\11300022.D\	**Instrument:**	K-GC-24
Acqu Date:	11/30/18 19:00:00	**Vial:**	20
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1811120-003	**Raw Units:**	ppb

Bottle ID:	K1811120-003.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/5/18	**Receive Date:**	11/13/18

Analysis Lot:	616064	**Prep Lot:**	327135	**Report Group:**	K1811120
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/27/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.98	9.58	1508719	1422618	92.121	97.352	74	78	78	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.27	11.00	11943	2084	0.662	0.129	1.3U	0.26U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.25	12.22	11770	3312	0.168	0.053	0.34U	0.11U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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021044

Quantitation Report (QT Reviewed)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300022.D Vial: 17
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 7:00 pm Operator: MRICHARDS
Sample : K1811120-003 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 14:14:22 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.979	9.576	1508719	1422618	92.121	97.352	
	Target Compounds							
1) m	Dalapon	3.073f	3.670	720822	12416	34.943	0.795	#
3) m	Dicamba	8.219	9.750	6145	7805	0.123	0.173	#
4) m	MCPP	8.303	9.903	8732	3384	50441.741	86833.760	#
5) m	MCPA	8.553	10.196	15829	9120	50185.658	83563.175	#
6) m	Dichloroprop	8.956	0.000	18341	0	901.341	N.D.	#
7) m	2,4-D	9.266	10.996	11943	2084	0.662	0.129	#
8) m	2,4,5-TP ...	10.249	12.223	11770	3312	0.168	0.053	#
9) m	2,4,5-T	10.729	12.733f	40239	6450	0.663	0.119	#
10) m	2,4-DB	11.253	13.316	29019	8156	3.738	1542.556	#
11) m	Dinoseb	11.739f	13.526	34715	5050	0.748	0.122	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

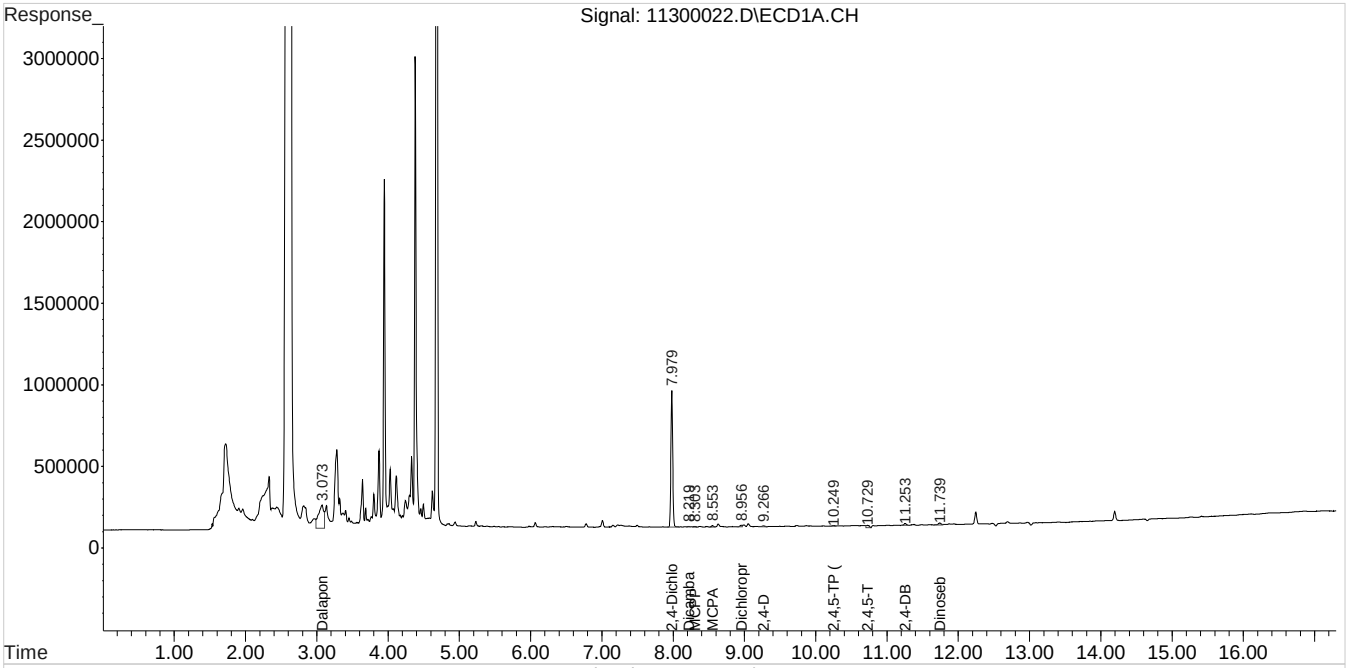
Quantitation Report (QT Reviewed)

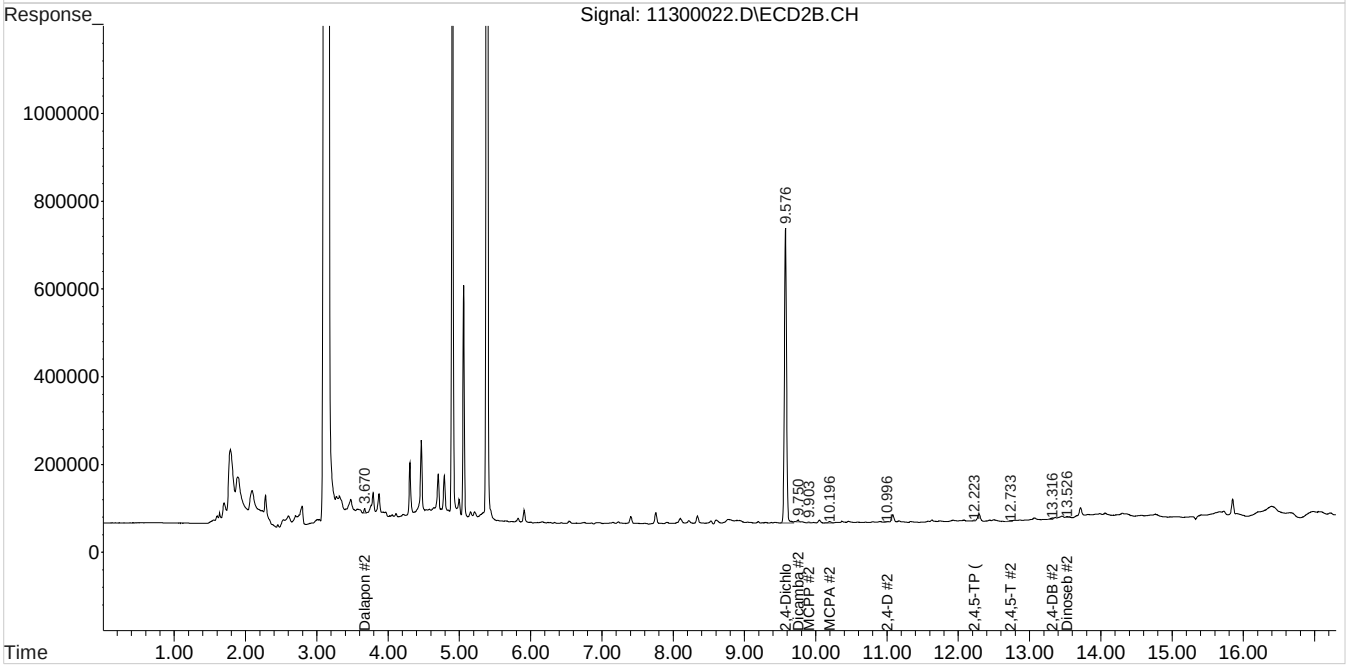
1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300022.D Vial: 17
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 7:00 pm Operator: MRICHARDS
Sample : K1811120-003 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 14:14:22 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st 12/04/18
2nd 12/06/18

Validation Report

Data File: J:\gc24\data\113018\11300023.D\
Lab ID: K1811120-004
RunType: N/A
Matrix: Soil

Date Acquired: 11/30/18 19:24:00
Batch ID: 616064
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st 12/04/18
2nd 12/06/18

Quantitation Report

Data File:	J:\gc24\data\113018\11300023.D\	**Instrument:**	K-GC-24
Acqu Date:	11/30/18 19:24:00	**Vial:**	21
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1811120-004	**Raw Units:**	ppb

Bottle ID:	K1811120-004.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/3/18	**Receive Date:**	11/13/18

Analysis Lot:	616064	**Prep Lot:**	327135	**Report Group:**	K1811120
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/27/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.98	9.58	1594031	1467578	97.330	100.428	78	80	80	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.27	11.01	12518	4942	0.693	0.306	1.4U	0.61U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.25	12.23	12732	5336	0.181	0.085	0.36U	0.17U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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021048

Quantitation Report (QT Reviewed)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300023.D Vial: 18
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 7:24 pm Operator: MRICHARDS
Sample : K1811120-004 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 14:14:33 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.979	9.576	1594031	1467578	97.330	100.428	
	Target Compounds							
1) m	Dalapon	3.112	3.666	301002	37337	14.592	2.391	#
3) m	Dicamba	8.219	9.713	9477	2045	0.189	0.045	#
4) m	MCPP	8.302	9.903	21860	3414	50348.165	86833.215	#
5) m	MCPA	8.552	10.196	19030	7415	50166.677	83583.531	#
6) m	Dichloroprop	8.959	0.000	14969	0	901.553	N.D.	#
7) m	2,4-D	9.269	11.013	12518	4942	0.693	0.306	#
8) m	2,4,5-TP ...	10.252	12.226	12732	5336	0.181	0.085	#
9) m	2,4,5-T	10.729	12.739f	47389	3631	0.781	0.067	#
10) m	2,4-DB	11.256	13.313	30071	7412	3.874	1542.649	#
11) m	Dinoseb	11.696	13.459	4675	18139	0.101	0.439	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

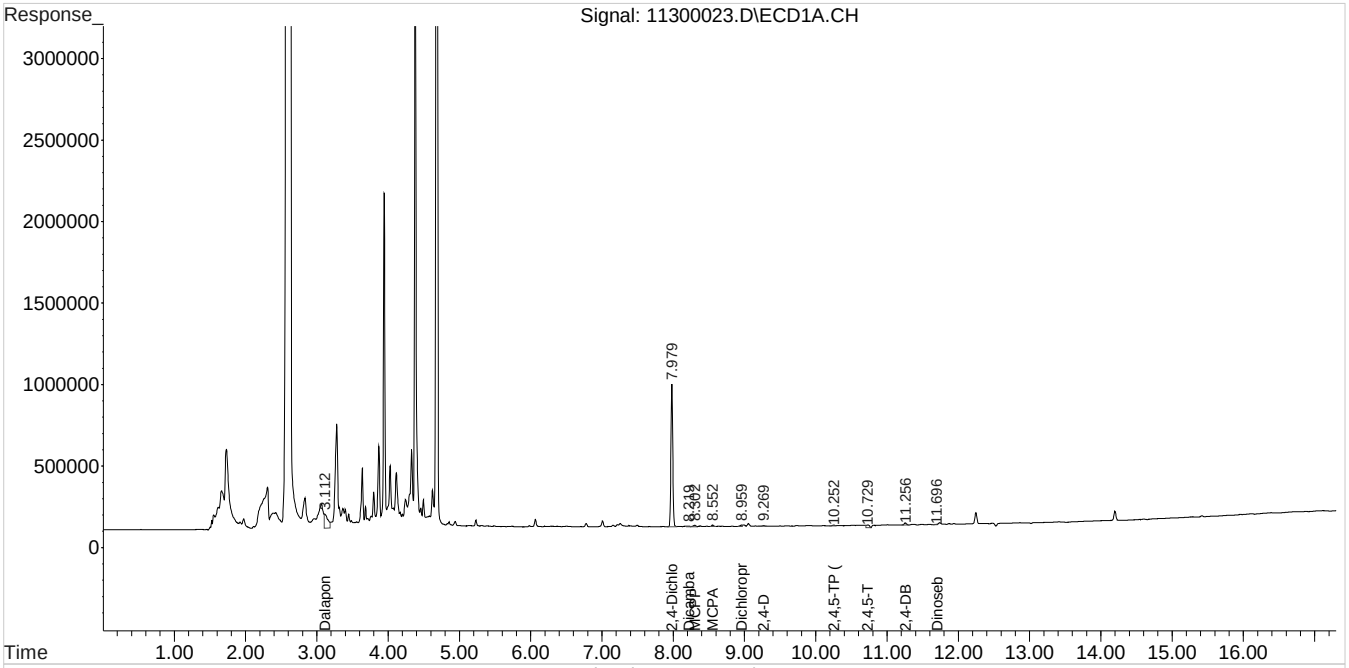
Quantitation Report (QT Reviewed)

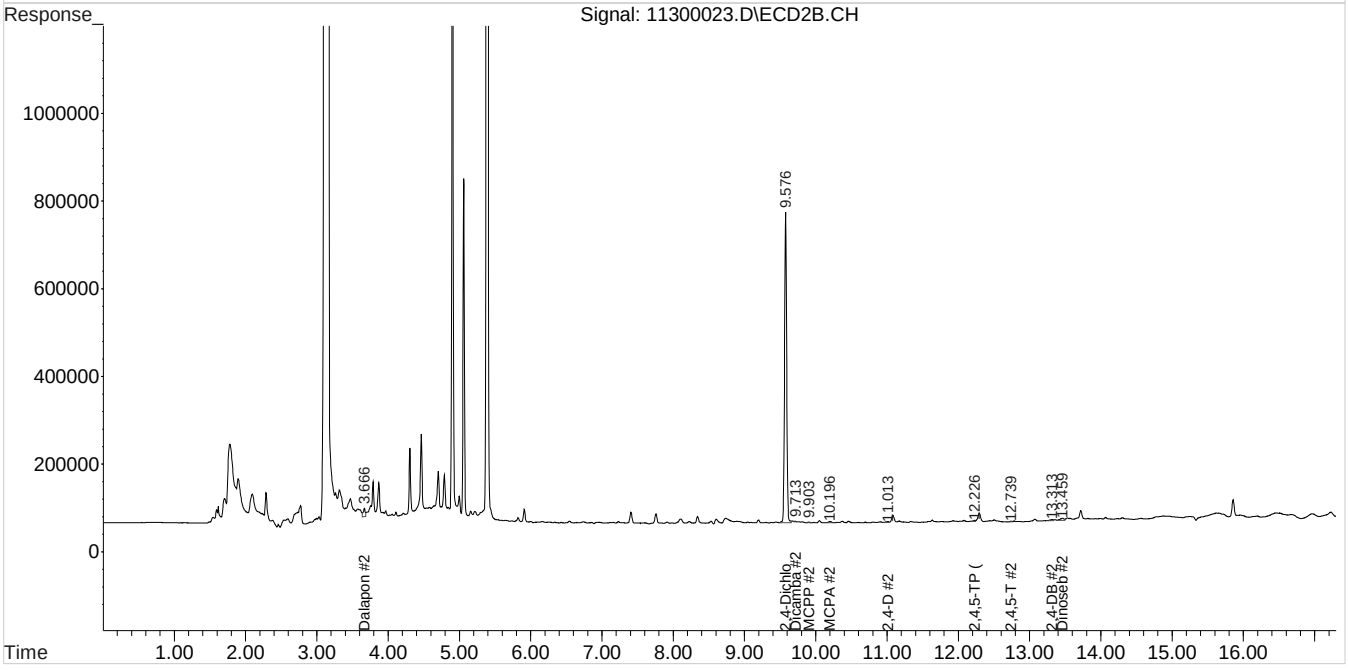
1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300023.D Vial: 18
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 7:24 pm Operator: MRICHARDS
Sample : K1811120-004 Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 14:14:33 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st 12/04/18
2nd 12/06/18

Validation Report

Data File: J:\gc24\data\113018\11300015.D\
Lab ID: KQ1817270-04
RunType: MB
Matrix: Soil

Date Acquired: 11/30/18 16:16:00
Batch ID: 616064
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st 12/04/18
2nd 12/06/18

Quantitation Report

Data File:	J:\gc24\data\113018\11300015.D\	**Instrument:**	K-GC-24
Acqu Date:	11/30/18 16:16:00	**Vial:**	12
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1817270-04	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/3/18	**Receive Date:**	11/13/18

Analysis Lot:	616064	**Prep Lot:**	327135	**Report Group:**	KQ1817270
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/27/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.98	9.58	1674116	1497560	102.220	102.480	82	82	82	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.33	11.08	3259	23983	0.181	1.487	0.36U	3.0U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.25	12.23	18307	2863	0.261	0.046	0.52U	0.092U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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021052

Quantitation Report (QT Reviewed)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300015.D Vial: 12
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 4:16 pm Operator: MRICHARDS
Sample : KQ1817270-04MB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:19:59 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.982	9.576	1674116	1497560	102.220	102.480	
	Target Compounds							
1) m	Dalapon	3.119	3.669	104254	14122	5.054	0.904	#
3) m	Dicamba	8.219	9.642f	13153	18208	0.263	0.403	#
4) m	MCPP	8.305	9.899	3766	3848	50477.050	86825.326	#
5) m	MCPA	8.552	10.196	10900	9098	50214.857	83563.438	#
6) m	Dichloroprop	8.959	0.000	18924	0	901.304	N.D.	#
7) m	2,4-D	9.329	11.079f	3259	23983	0.181	1.487	#
8) m	2,4,5-TP ...	10.252	12.232	18307	2863	0.261	0.046	#
9) m	2,4,5-T	10.732	12.606	62435	5317	1.029	0.098	#
10) m	2,4-DB	11.255	13.319	32073	6902	4.132	1542.713	#
11) m	Dinoseb	11.659	13.522	10071	26312	0.217	0.637	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

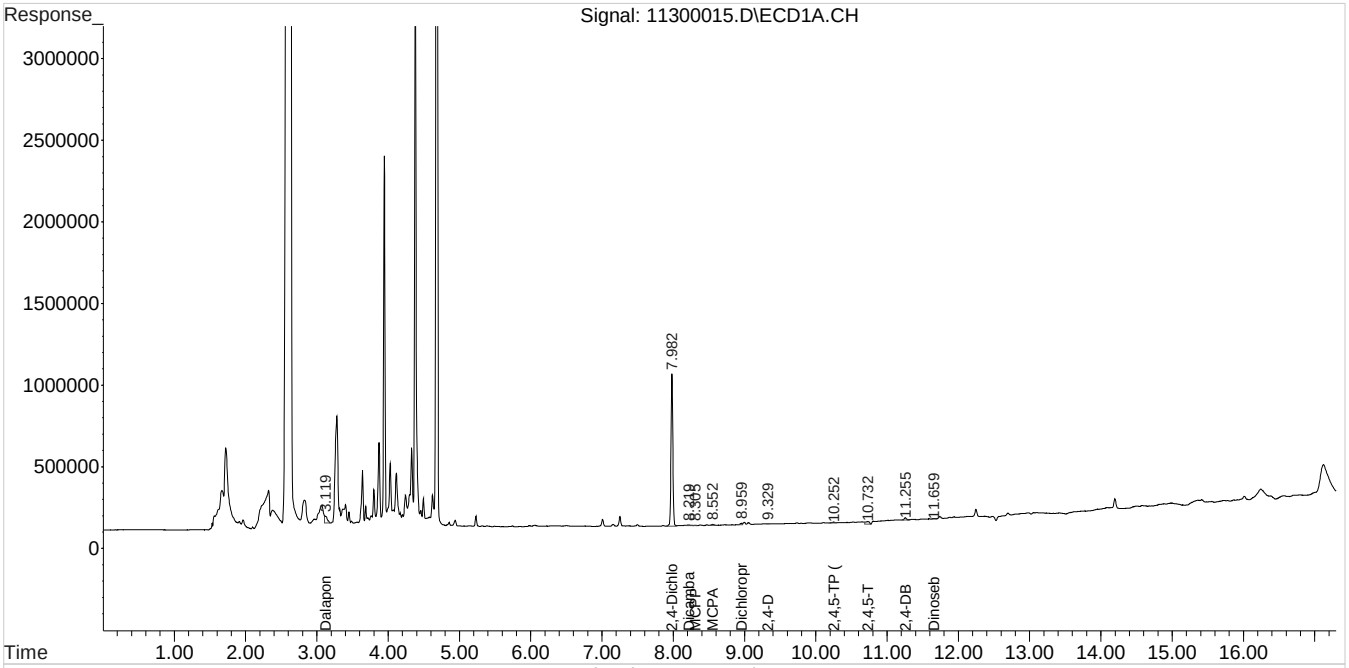
Quantitation Report (QT Reviewed)

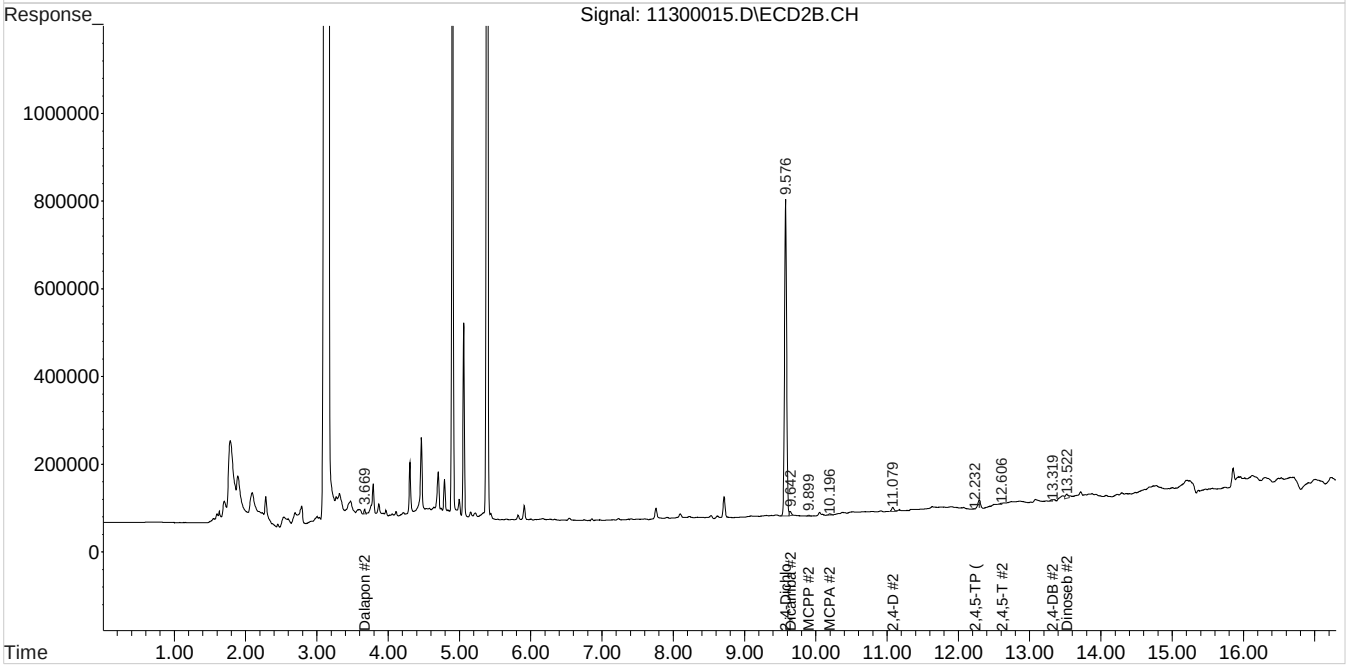
1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300015.D Vial: 12
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 4:16 pm Operator: MRICHARDS
Sample : KQ1817270-04MB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:19:59 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st 12/04/18
2nd 12/06/18

Validation Report

Data File: J:\gc24\data\113018\11300014.D\
Lab ID: KQ1817270-05
RunType: MB
Matrix: Soil

Date Acquired: 11/30/18 15:53:00
Batch ID: 616064
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st 12/04/18
2nd 12/06/18

Quantitation Report

Data File:	J:\gc24\data\113018\11300014.D\	**Instrument:**	K-GC-24
Acqu Date:	11/30/18 15:53:00	**Vial:**	11
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1817270-05	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/3/18	**Receive Date:**	11/13/18

Analysis Lot:	616064	**Prep Lot:**	327135	**Report Group:**	KQ1817270
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/27/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.98	9.58	1629189	1464853	99.477	100.242	80	80	80	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.27	11.02	37923	23081	2.101	1.431	4.2U	2.9U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.25	12.23	12955	21127	0.185	0.337	0.37U	0.67U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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021056

Quantitation Report (QT Reviewed)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300014.D Vial: 11
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 3:53 pm Operator: MRICHARDS
Sample : KQ1817270-05MB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:19:12 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.981	9.578	1629189	1464853	99.477	100.242	
	Target Compounds							
1) m	Dalapon	3.117	3.668	237983	18426	11.537	1.180	#
3) m	Dicamba	8.217	9.714	15695	20224	0.314	0.448	#
4) m	MCPP	8.311	9.901	3466	6603	50479.181	86775.216	#
5) m	MCPA	8.551	10.194	12456	13259	50205.643	83513.719	#
6) m	Dichloroprop	8.994	10.698	64530	10839	1.968	1362.360	#
7) m	2,4-D	9.274	11.018	37923	23081	2.101	1.431	#
8) m	2,4,5-TP ...	10.251	12.227	12955	21127	0.185	0.337	#
9) m	2,4,5-T	10.667	12.598	5349	2208	0.088	0.041	#
10) m	2,4-DB	11.254	13.311	34544	15500	4.450	0.057	#
11) m	Dinoseb	11.647	13.518	19584	49253	0.422	1.193	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

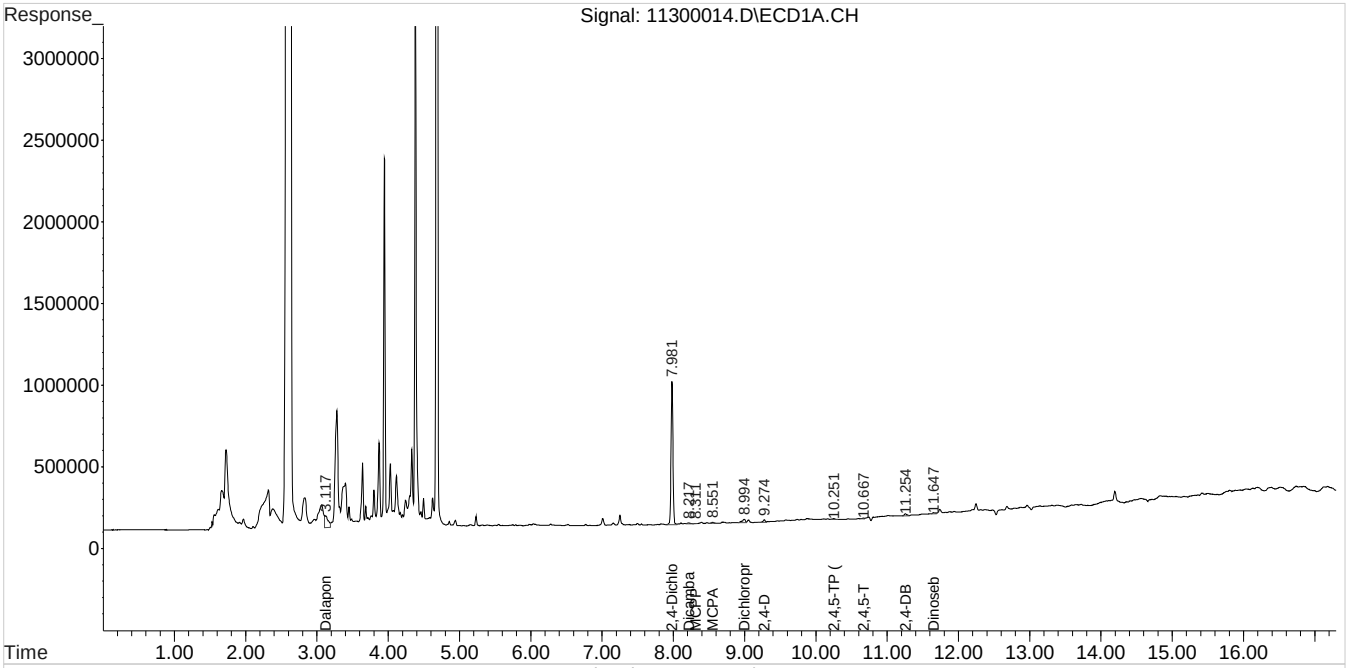
Quantitation Report (QT Reviewed)

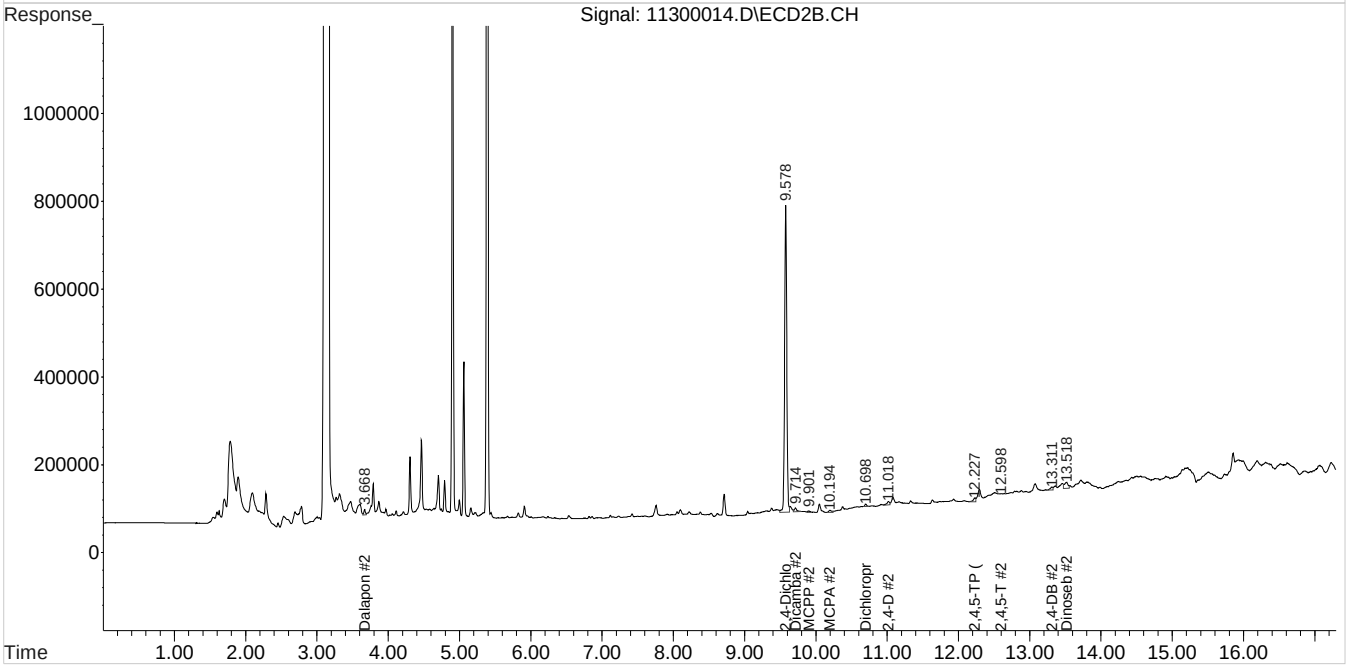
1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300014.D Vial: 11
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 3:53 pm Operator: MRICHARDS
Sample : KQ1817270-05MB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:19:12 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Validation Report

1st 12/04/18
2nd 12/06/18

Data File: J:\gc24\data\113018\11300013.D\
Lab ID: KQ1817270-06
RunType: MB
Matrix: Soil

Date Acquired: 11/30/18 15:29:00
Batch ID: 616064
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st 12/04/18
2nd 12/06/18

Quantitation Report

Data File:	J:\gc24\data\113018\11300013.D\	**Instrument:**	K-GC-24
Acqu Date:	11/30/18 15:29:00	**Vial:**	10
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1817270-06	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/3/18	**Receive Date:**	11/13/18

Analysis Lot:	616064	**Prep Lot:**	327135	**Report Group:**	KQ1817270
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/27/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.98	9.58	1442570	1299889	88.082	88.953	70	71	71	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.32	11.01	3527	8416	0.195	0.522	0.39U	1.0U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.25	12.23	18179	6452	0.259	0.103	0.52U	0.21U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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021060

Quantitation Report (QT Reviewed)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300013.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 3:29 pm Operator: MRICHARDS
Sample : KQ1817270-06MB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 14:11:19 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.983	9.576	1442570	1299889	88.082	88.953	
	Target Compounds							
1) m	Dalapon	3.119	3.659	55982	15583	2.714	0.998	#
3) m	Dicamba	8.223	9.716	9698	25104	0.194	0.556	#
4) m	MCPP	8.309	9.893	2874	4074	50483.387	86821.218	#
5) m	MCPA	8.556	10.193	14252	128635	50195.003	923.950	#
6) m	Dichloroprop	8.956	10.616	10850	2440	901.812	1362.986	#
7) m	2,4-D	9.323	11.013	3527	8416	0.195	0.522	#
8) m	2,4,5-TP ...	10.249	12.226	18179	6452	0.259	0.103	#
9) m	2,4,5-T	10.666	12.599	8460	27559	0.139	0.509	#
10) m	2,4-DB	11.233	13.346	166568	12243	21.457	1542.042	#
11) m	Dinoseb	11.646	13.469	22378	29508	0.482	0.715	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

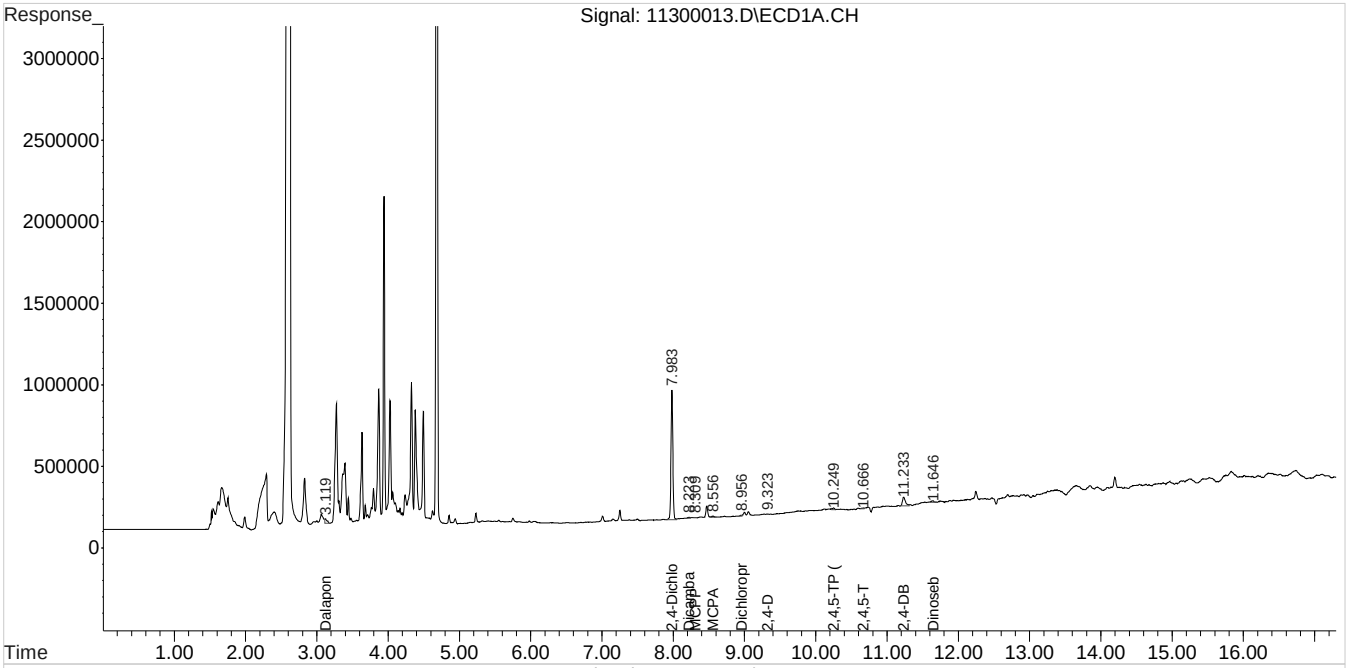
Quantitation Report (QT Reviewed)

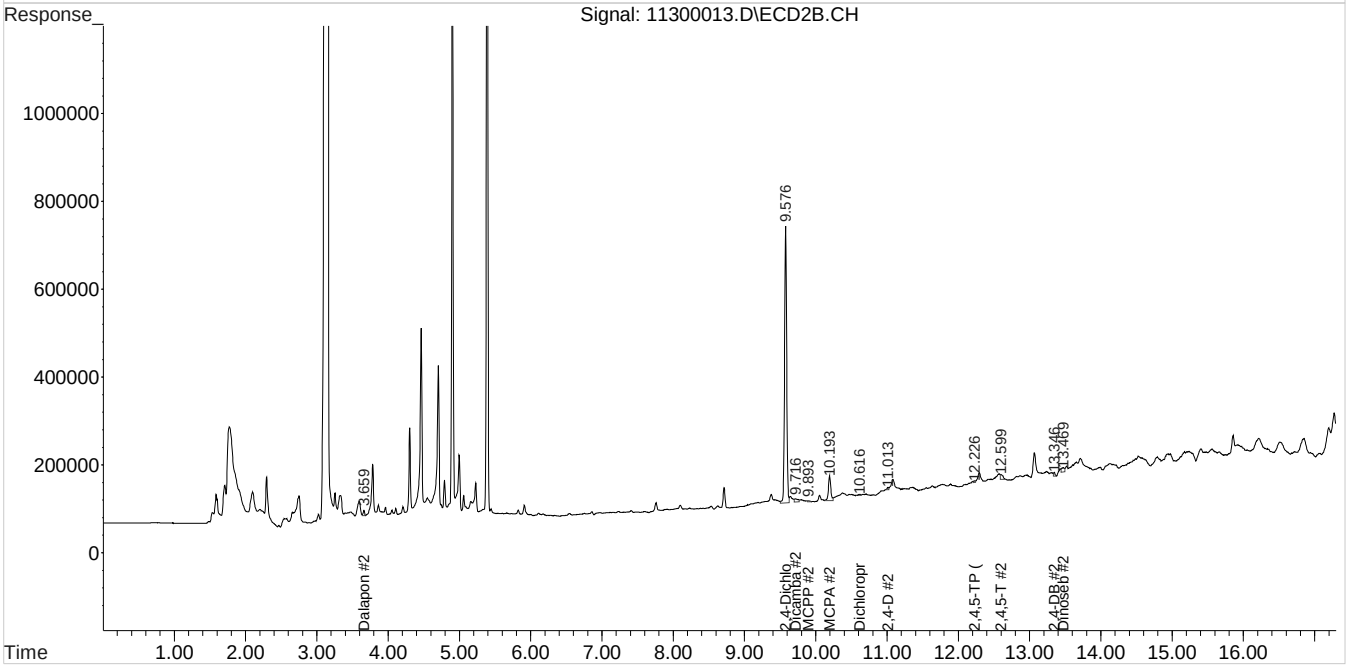
1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300013.D Vial: 10
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 3:29 pm Operator: MRICHARDS
Sample : KQ1817270-06MB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 02 14:11:19 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Sun Dec 02 14:05:49 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st 12/04/18
2nd 12/06/18

Validation Report

Data File: J:\gc24\data\113018\11300016.D\
Lab ID: KQ1817270-03
RunType: LCS
Matrix: Soil

Date Acquired: 11/30/18 16:40:00
Batch ID: 616064
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st 12/04/18
2nd 12/06/18

Quantitation Report

Data File:	J:\gc24\data\113018\11300016.D\	**Instrument:**	K-GC-24
Acqu Date:	11/30/18 16:40:00	**Vial:**	13
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1817270-03	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/3/18	**Receive Date:**	11/13/18

Analysis Lot:	616064	**Prep Lot:**	327135	**Report Group:**	KQ1817270
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/27/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.98	9.58	1609481	1427476	98.274	97.684	79	78	78	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.31	11.00	2064620	1859221	114.367	115.249	229	230	**229**	Y
2,4,5-TP (Silvex), TCLP	10.25	12.21	8127819	7525546	115.758	119.956	232	240	**232**	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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021064

Quantitation Report (QT Reviewed)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300016.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 4:40 pm Operator: MRICHARDS
Sample : KQ1817270-03LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:21:32 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	7.981	9.578	1609481	1427476	98.274	97.684
	Target Compounds						
1) m	Dalapon	3.061f	3.625f	2215190	1864389	107.386m	119.397m
3) m	Dicamba	8.205	9.722	5376486	5047896	107.401	111.755
4) m	MCPP	8.291	9.905	1404570	553605	12613.267	11058.932
5) m	MCPA	8.555	10.188	1674871	897133	12232.266	11918.451
6) m	Dichloroprop	8.955	10.662	1666204	1423825	118.622	112.500
7) m	2,4-D	9.308	11.002	2064620	1859221	114.367	115.249
8) m	2,4,5-TP ...	10.251	12.208	8127819	7525546	115.758	119.956
9) m	2,4,5-T	10.691	12.638	7950231	7221441	131.040	133.307
10) m	2,4-DB	11.271	13.322	1496357	987754	192.759	133.994 #
11) m	Dinoseb	11.671	13.492	4147637	3353660	89.426	81.246

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

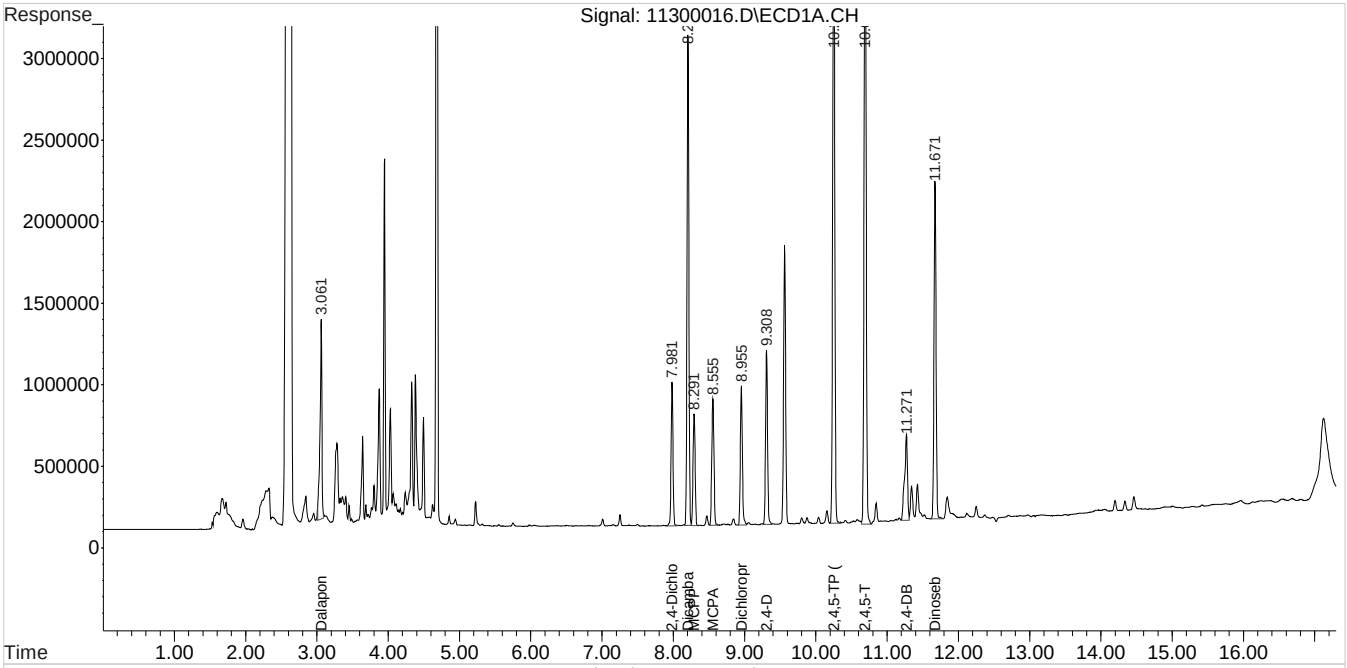
Quantitation Report (QT Reviewed)

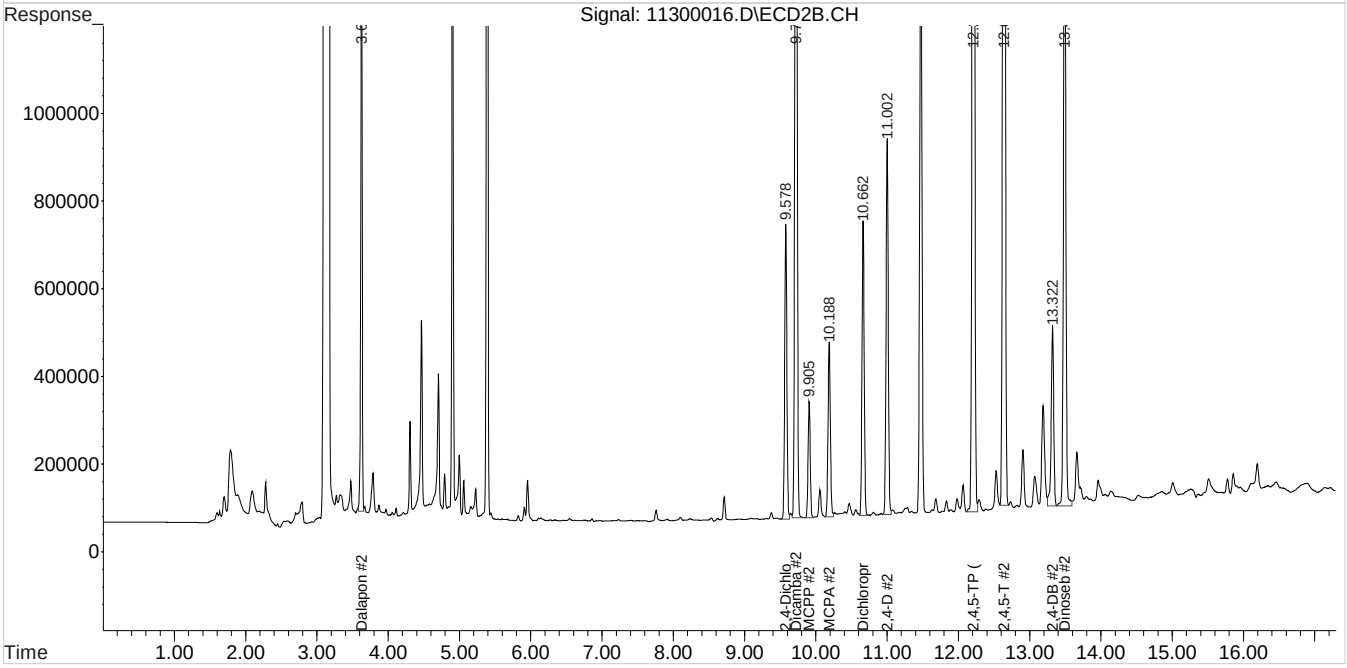
1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300016.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 4:40 pm Operator: MRICHARDS
Sample : KQ1817270-03LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:21:32 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





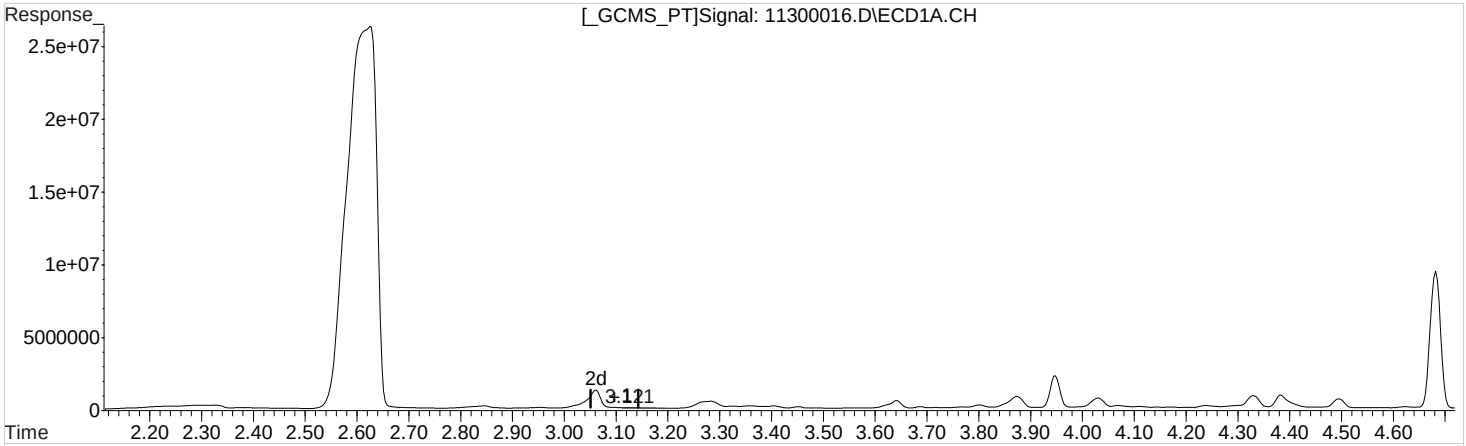
Quantitation Report (Qedit)

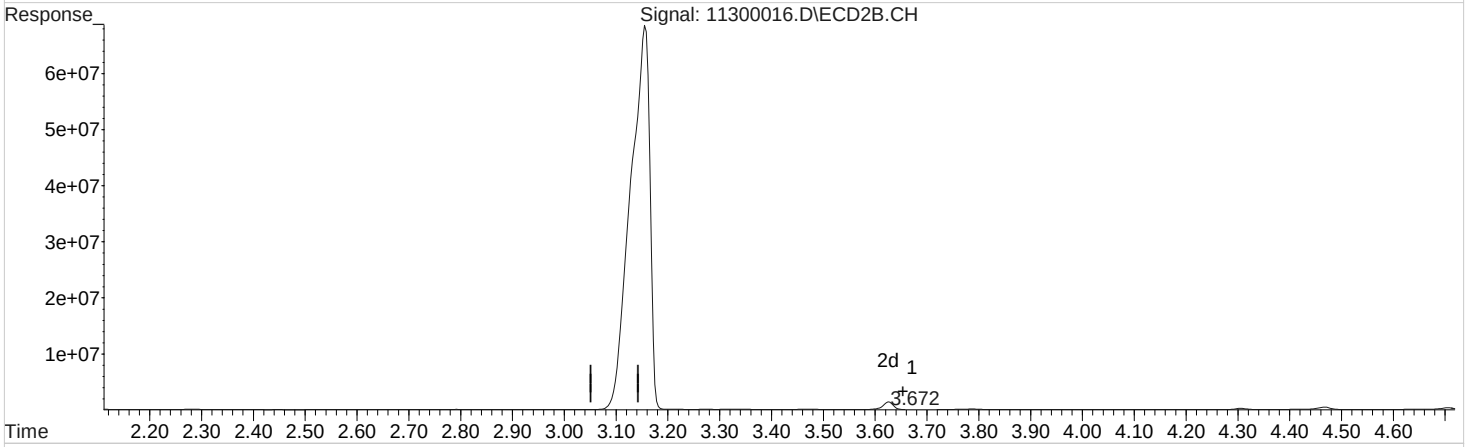
1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300016.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 4:40 pm Operator: MRICHARDS
Sample : KQ1817270-03LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:11:32 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(1) Dalapon (m)

3.121min 4.875 ppb

response 100567

(1) Dalapon #2 (m)

3.672min 1.473 ppb

response 23005

Manual Integration:

Before

12/03/18

(+) = Expected Retention Time

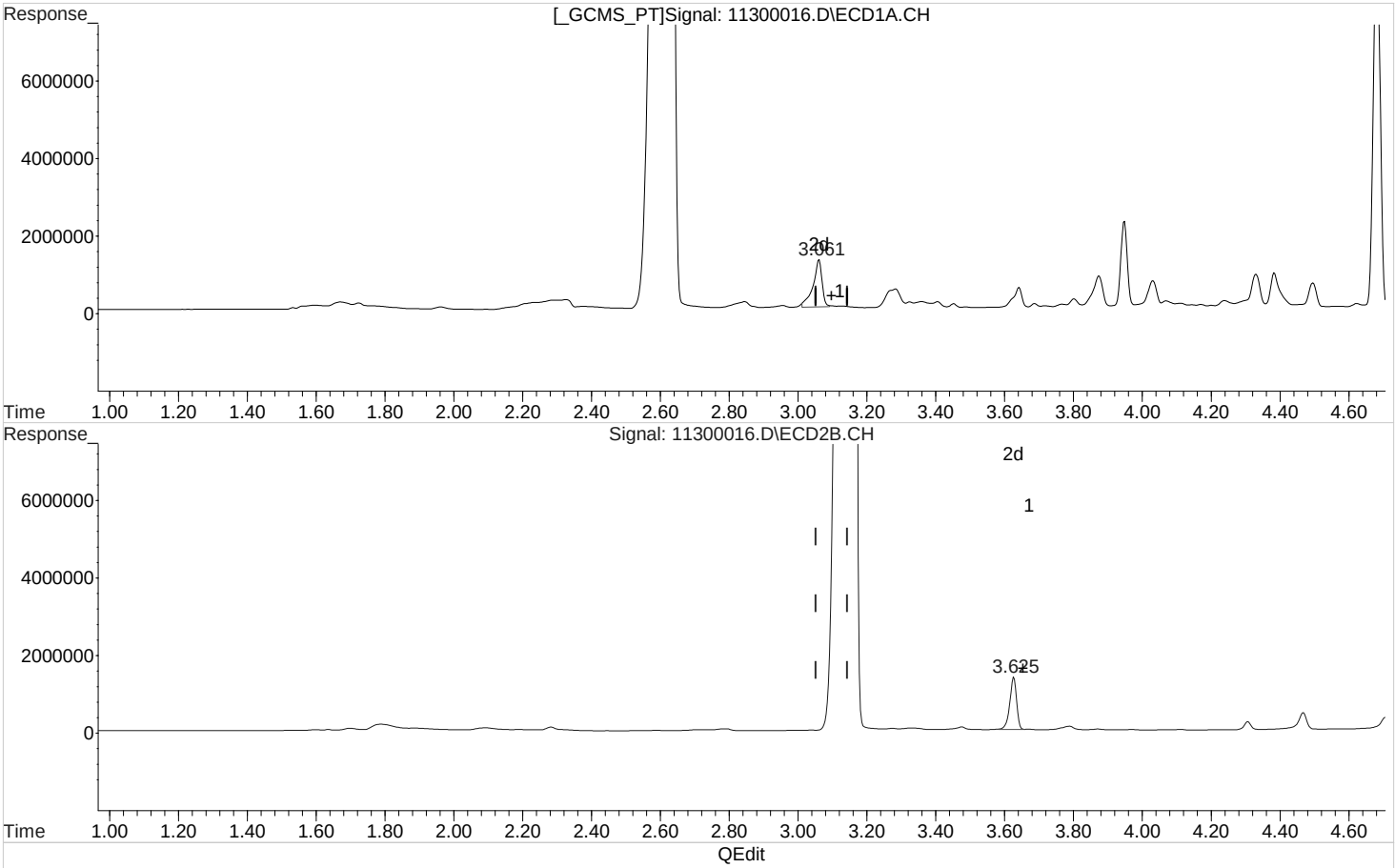
Quantitation Report (Qedit)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300016.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 4:40 pm Operator: MRICHARDS
Sample : KQ1817270-03LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:11:32 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm



(1) Dalapon (m)

3.061min 107.386 ppb m

response 2215190

(1) Dalapon #2 (m)

3.625min 119.397 ppb m

response 1864389

Manual Integration:

After

Baseline/Shoulder

12/03/18

(+) = Expected Retention Time

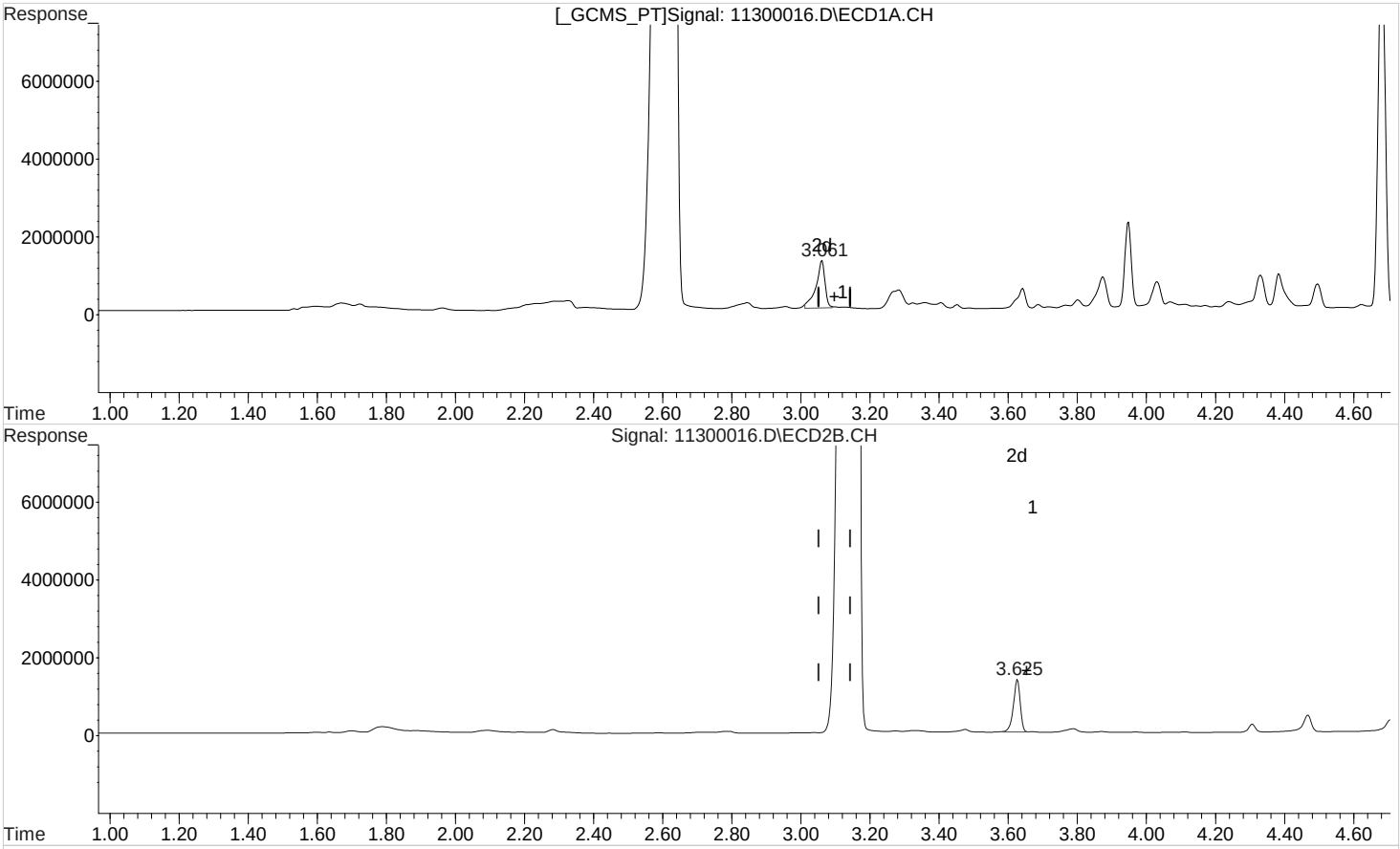
Quantitation Report (Qedit)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300016.D Vial: 13
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 4:40 pm Operator: MRICHARDS
Sample : KQ1817270-03LCS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:11:32 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm



(1) Dalapon (m)

3.061min 107.386 ppb m

response 2215190

(1) Dalapon #2 (m)

3.625min 119.397 ppb m

response 1864389

Manual Integration:

After

Missed Peak

12/03/18

(+) = Expected Retention Time

1st 12/04/18
2nd 12/06/18

Validation Report

Data File: J:\gc24\data\113018\11300024.D\
Lab ID: KQ1817270-01
RunType: MS
Matrix: Soil

Date Acquired: 11/30/18 19:48:00
Batch ID: 616064
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st 12/04/18
2nd 12/06/18

Quantitation Report

Data File:	J:\gc24\data\113018\11300024.D\	**Instrument:**	K-GC-24
Acqu Date:	11/30/18 19:48:00	**Vial:**	28
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1817270-01	**Raw Units:**	ppb

Bottle ID:	K1811120-004.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/3/18	**Receive Date:**	11/13/18

Analysis Lot:	616064	**Prep Lot:**	327135	**Report Group:**	KQ1817270
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/27/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.98	9.57	1785002	1543448	108.991	105.620	87	84	84	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.30	11.00	2033580	1864551	112.648	115.580	225	231	**225**	Y
2,4,5-TP (Silvex), TCLP	10.25	12.21	7968140	7443799	113.484	118.653	227	237	**227**	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 12/4/18 12:47
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

021071

Quantitation Report (QT Reviewed)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300024.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 7:48 pm Operator: MRICHARDS
Sample : KQ1817270-01MS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:26:55 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	7.977	9.574	1785002	1543448	108.991	105.620
	Target Compounds						
1) m	Dalapon	3.047f	3.617f	2332976	1850908	113.096m	118.533m
3) m	Dicamba	8.200	9.717	5305562	5064632	105.985	112.125
4) m	MCPP	8.287	9.901	1390726	562191	12407.603	11271.642
5) m	MCPA	8.550	10.184	1677595	863034	12265.825	11345.555
6) m	Dichloroprop	8.950	10.661	1623641	1443723	114.996	114.289
7) m	2,4-D	9.304	10.997	2033580	1864551	112.648	115.580
8) m	2,4,5-TP ...	10.247	12.207	7968140	7443799	113.484	118.653
9) m	2,4,5-T	10.687	12.637	7737795	7147834	127.539	131.948
10) m	2,4-DB	11.267	13.317	1271845	1094788	163.838	150.503
11) m	Dinoseb	11.667	13.487	3309629	2771155	71.358	67.134

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

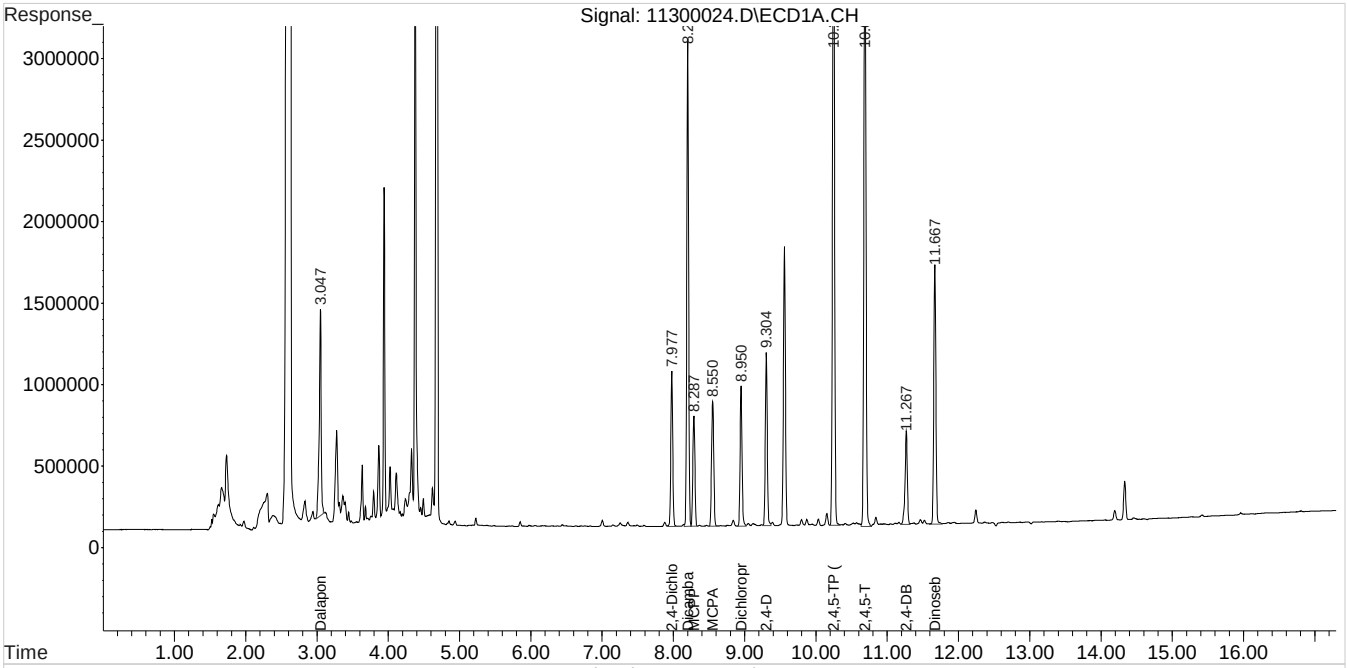
Quantitation Report (QT Reviewed)

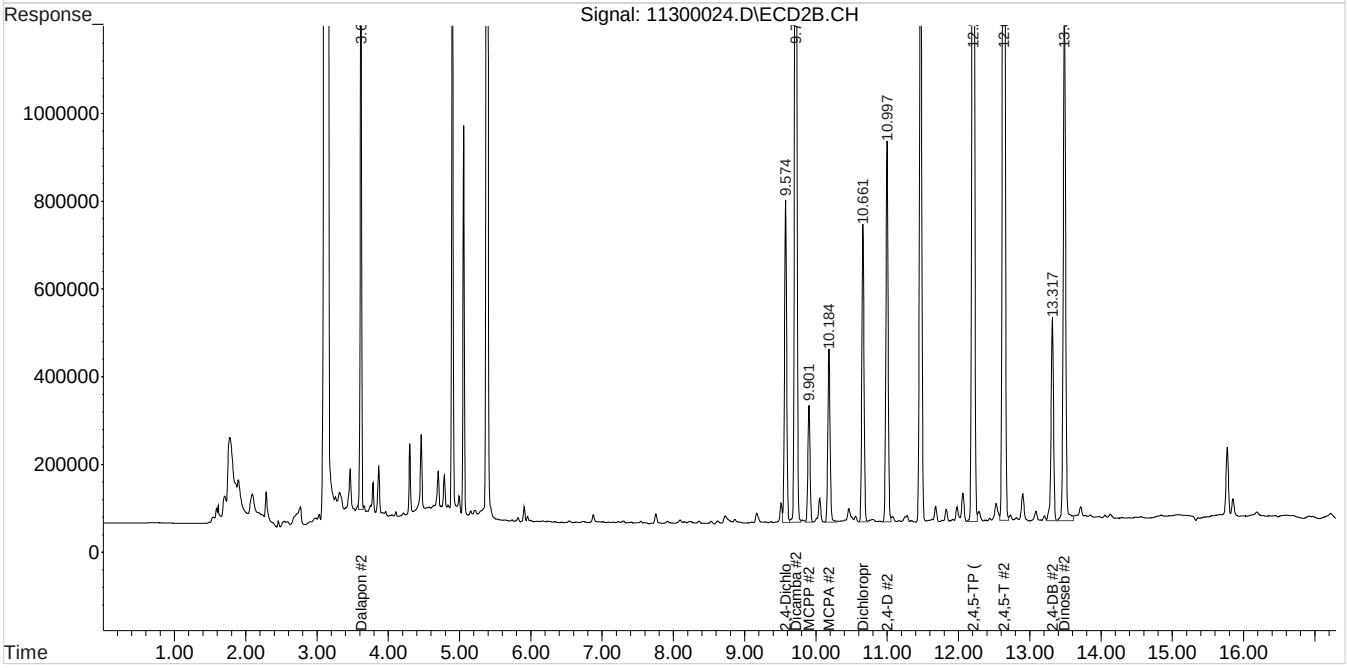
1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300024.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 7:48 pm Operator: MRICHARDS
Sample : KQ1817270-01MS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:26:55 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





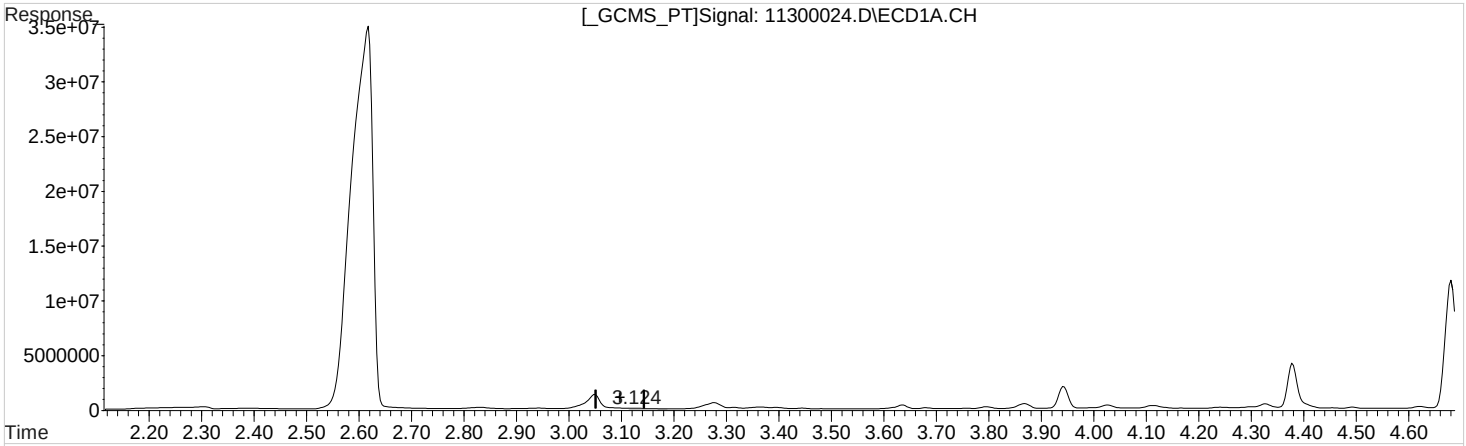
Quantitation Report (Qedit)

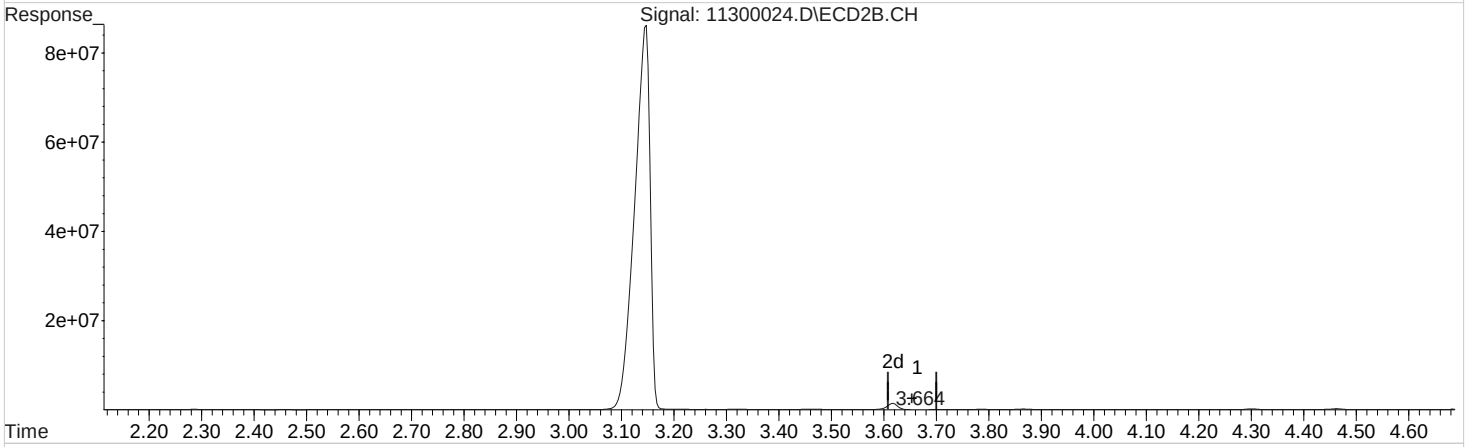
1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300024.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 7:48 pm Operator: MRICHARDS
Sample : KQ1817270-01MS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:26:33 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





QEdit

(1) Dalapon (m)

3.124min 5.129 ppb

response 105811

(1) Dalapon #2 (m)

3.664min 0.924 ppb

response 14426

Manual Integration:

Before

12/03/18

(+) = Expected Retention Time

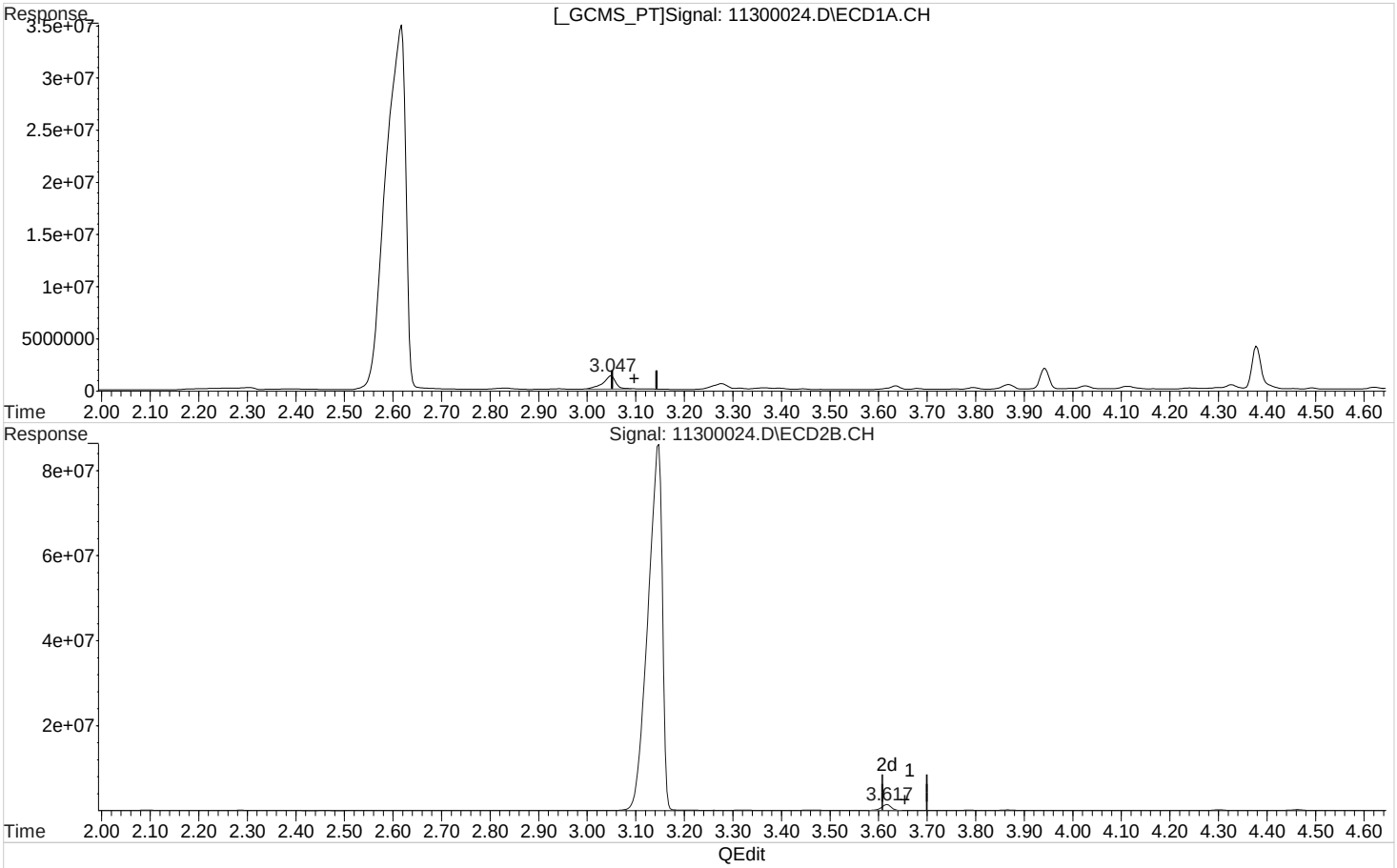
Quantitation Report (Qedit)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300024.D Vial: 19
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 7:48 pm Operator: MRICHARDS
Sample : KQ1817270-01MS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:26:33 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm



(1) Dalapon (m)

3.047min 113.096 ppb m

response 2332976

(1) Dalapon #2 (m)

3.617min 118.533 ppb m

response 1850908

Manual Integration:

After

Missed Peak

12/03/18

(+) = Expected Retention Time

1st 12/04/18
2nd 12/06/18

Validation Report

Data File: J:\gc24\data\113018\11300025.D\
Lab ID: KQ1817270-02
RunType: DMS
Matrix: Soil

Date Acquired: 11/30/18 20:11:00
Batch ID: 616064
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st 12/04/18
2nd 12/06/18

Quantitation Report

Data File:	J:\gc24\data\113018\11300025.D\	**Instrument:**	K-GC-24
Acqu Date:	11/30/18 20:11:00	**Vial:**	29
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1817270-02	**Raw Units:**	ppb

Bottle ID:	K1811120-004.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/3/18	**Receive Date:**	11/13/18

Analysis Lot:	616064	**Prep Lot:**	327135	**Report Group:**	KQ1817270
Analysis	8151A	**Prep Method:**	Method		
		Prep Date:	11/27/18		

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	191

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.98	9.57	1800244	1585476	109.922	108.496	88	87	87	17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.30	11.00	2122605	1926991	117.579	119.450	235	239	**235**	Y
2,4,5-TP (Silvex), TCLP	10.25	12.21	8320339	7706449	118.500	122.839	237	246	**237**	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

021077

Quantitation Report (QT Reviewed)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300025.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 8:11 pm Operator: MRICHARDS
Sample : KQ1817270-02DMMS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:28:16 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	System Monitoring Compounds						
2) s	2,4-Dichl...	7.977	9.574	1800244	1585476	109.922	108.496
	Target Compounds						
1) m	Dalapon	3.040f	3.614f	2325212	1995411	112.720m	127.788m
3) m	Dicamba	8.200	9.717	5430487	5275467	108.480	116.793
4) m	MCPP	8.287	9.904	1419614	577935	12840.768	11665.414
5) m	MCPA	8.550	10.184	1709380	888395	12664.398	11770.593
6) m	Dichloroprop	8.950	10.660	1684458	1492112	120.189	118.661
7) m	2,4-D	9.304	10.997	2122605	1926991	117.579	119.450
8) m	2,4,5-TP ...	10.247	12.207	8320339	7706449	118.500	122.839
9) m	2,4,5-T	10.687	12.634	8124576	7450926	133.914	137.543
10) m	2,4-DB	11.267	13.317	1353544	1140818	174.362	157.740
11) m	Dinoseb	11.667	13.487	3040152	2447613	65.548	59.296

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

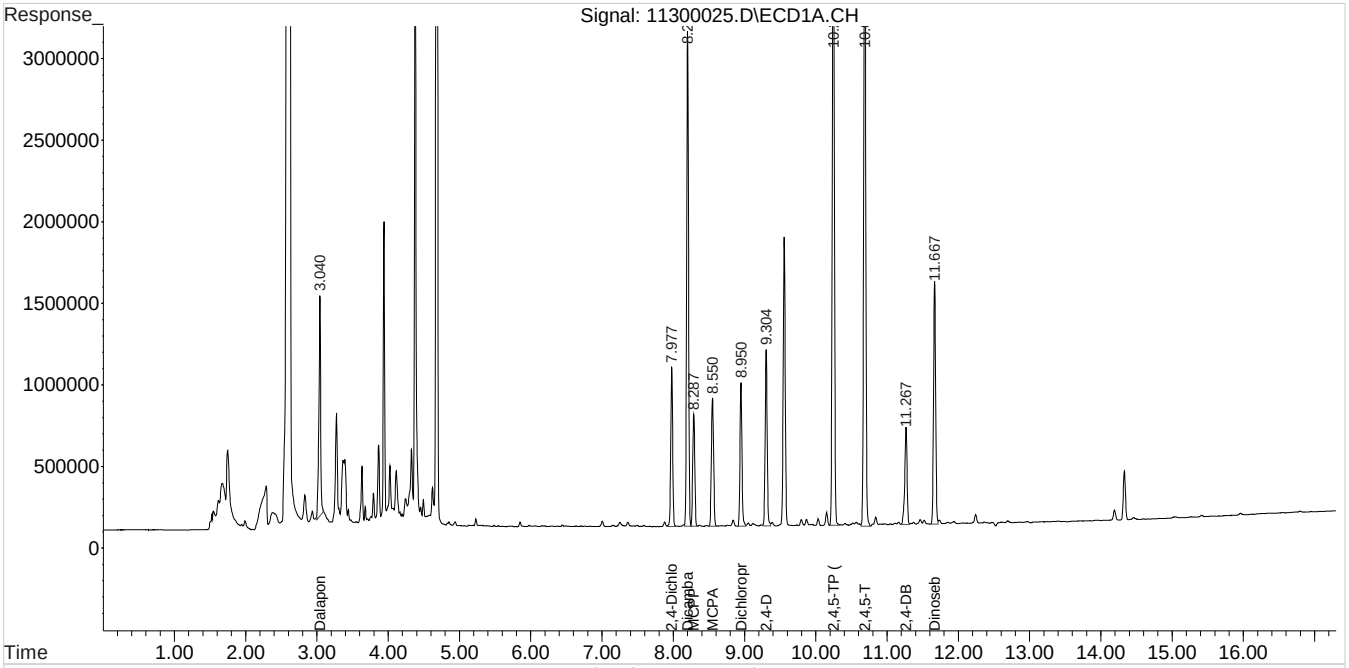
Quantitation Report (QT Reviewed)

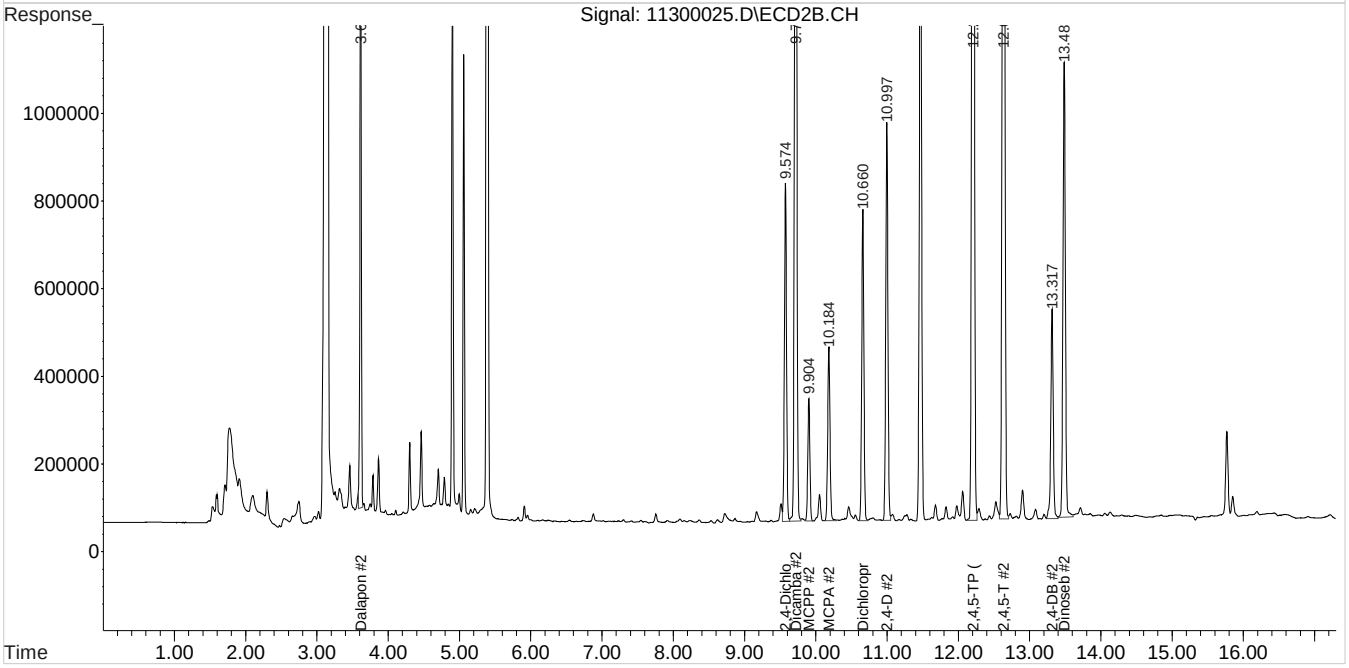
1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300025.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 8:11 pm Operator: MRICHARDS
Sample : KQ1817270-02DMMS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:28:16 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





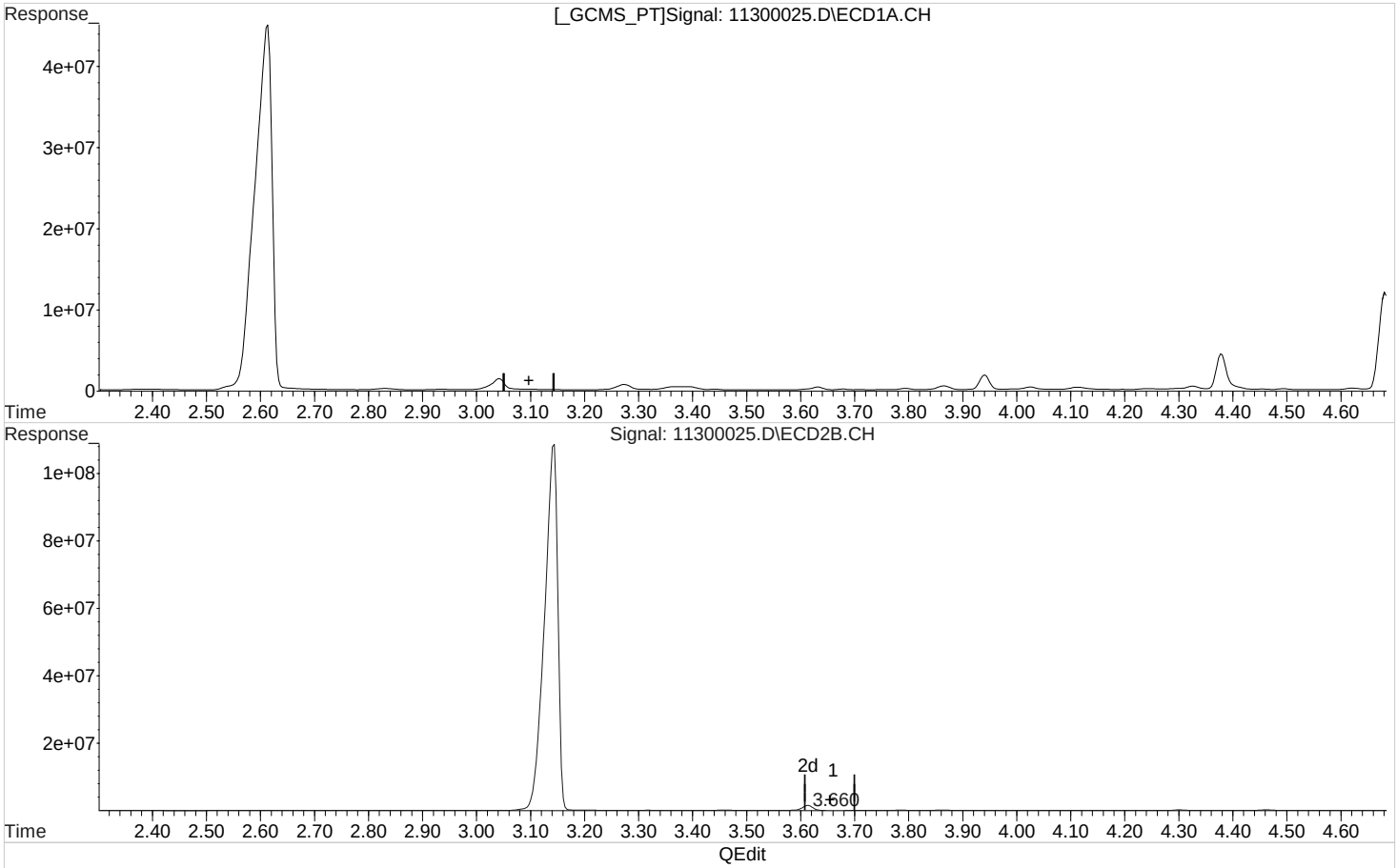
Quantitation Report (Qedit)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300025.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 8:11 pm Operator: MRICHARDS
Sample : KQ1817270-02DMMS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:27:53 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm



QEdit

(1) Dalapon (m)

0.000min 0.000 ppb

response 0

(1) Dalapon #2 (m)

3.660min 1.229 ppb

response 19190

Manual Integration:

Before

12/03/18

(+) = Expected Retention Time

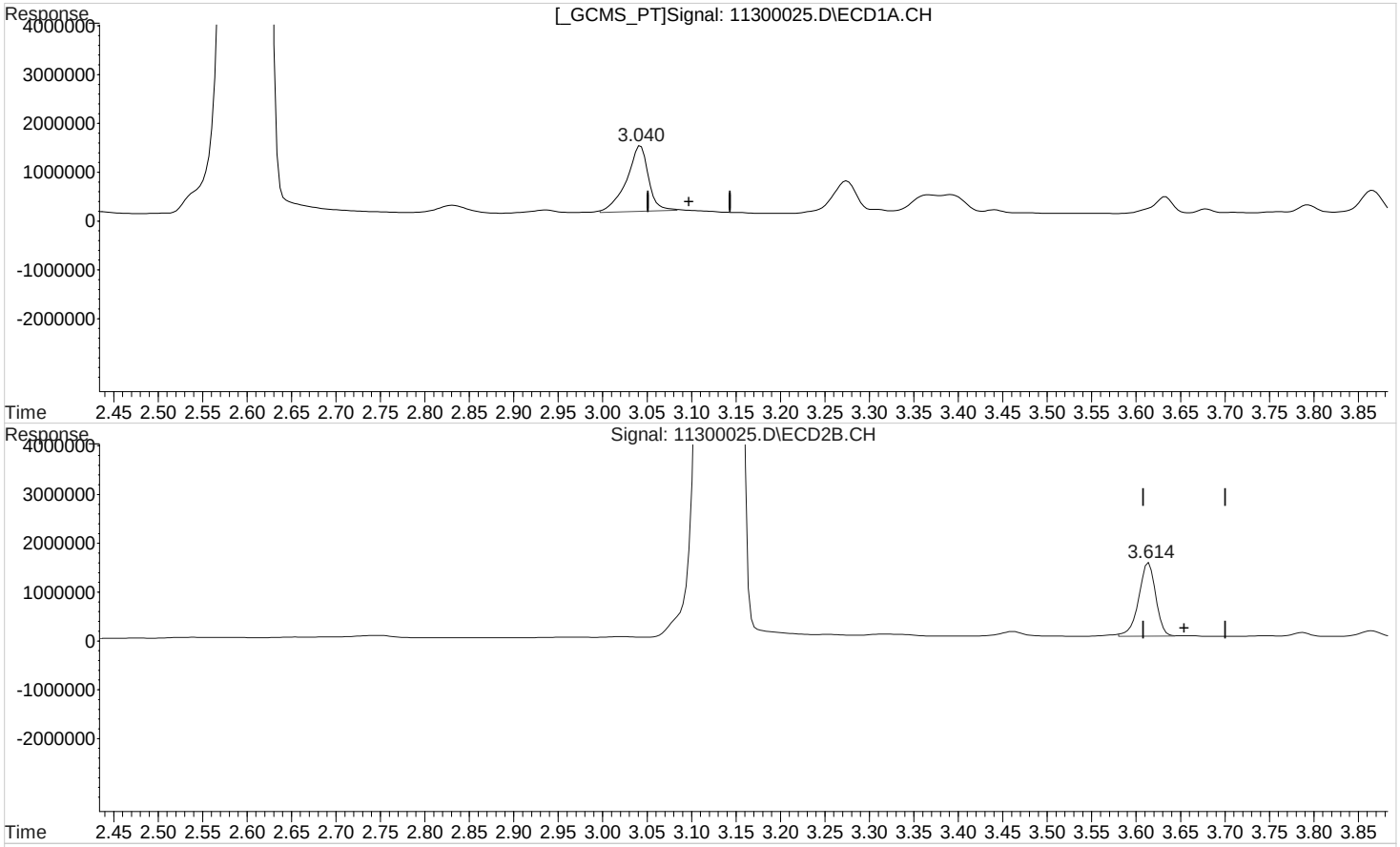
Quantitation Report (Qedit)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300025.D Vial: 20
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 8:11 pm Operator: MRICHARDS
Sample : KQ1817270-02DMMS Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:27:53 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm



(1) Dalapon (m)

3.040min 112.720 ppb m

response 2325212

(1) Dalapon #2 (m)

3.614min 127.788 ppb m

response 1995411

Manual Integration:

After

Missed Peak

12/03/18

(+) = Expected Retention Time

1st 12/04/18
2nd 12/06/18

Validation Report

Data File: J:\gc24\data\113018\11300018.D\
Lab ID: KQ1817113-12
RunType: CCB
Matrix: Soil

Date Acquired: 11/30/18 17:26:00
Batch ID: 616064
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Continuing Calibration Recovery (Closing)	X	
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st 12/04/18
2nd 12/06/18

Quantitation Report

Data File:	J:\gc24\data\113018\11300018.D\	**Instrument:**	K-GC-24
Acqu Date:	11/30/18 17:26:00	**Vial:**	16
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1817113-04	**Raw Units:**	ppb

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	HERB	**Collect Date:**	11/5/18	**Receive Date:**	11/5/18

Analysis Lot:	616064	**Prep Lot:**		**Report Group:**	KQ1817113
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18727

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
2,4-Dichlorophenylacetic Acid	7.97 -0.01	9.58	4054	4162	0.248	0.285				17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D	9.31	11.00	6968	3889	0.386	0.241	0.0077U	0.0048U	0.036 U	Y

Prep Amount:	1000 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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021083

Quantitation Report

Data File:	J:\gc24\data\113018\11300018.D\	**Instrument:**	K-GC-24
Acqu Date:	11/30/18 17:26:00	**Vial:**	19
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1817113-12	**Raw Units:**	ppb

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	HERB_TCLP	**Collect Date:**	11/8/18	**Receive Date:**	11/13/18

Analysis Lot:	616064	**Prep Lot:**		**Report Group:**	KQ1817113
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	TCLP Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18934

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
DCAA	7.97 -0.01	9.58	4054	4162	0.248	0.285				17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4-D, TCLP	9.31	11.00	6968	3889	0.386	0.241	0.77U	0.48U	100 U	Y
2,4,5-TP (Silvex), TCLP	10.25	12.21	7840	9211	0.112	0.147	0.22U	0.29U	20 U	Y

Prep Amount:	10.00 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Quantitation Report (QT Reviewed)

1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300018.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 5:26 pm Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:22:41 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
	System Monitoring Compounds							
2) s	2,4-Dichl...	7.972	9.579	4054	4162	0.248	0.285	
	Target Compounds							
1) m	Dalapon	3.106	0.000	15602	0	0.756	N.D.	#
3) m	Dicamba	8.202	9.716	9088	5712	0.182	0.126	#
4) m	MCPP	8.289	9.903	3330	5111	50480.147	86802.361	#
5) m	MCPA	8.552	10.186	4952	5406	50250.050	83607.504	#
6) m	Dichloroprop	8.956	0.000	5397	0	902.155	N.D.	#
7) m	2,4-D	9.306	10.999	6968	3889	0.386	0.241	#
8) m	2,4,5-TP ...	10.246	12.206	7840	9211	0.112	0.147	#
9) m	2,4,5-T	10.689	12.636	11041	14800	0.182	0.273	#
10) m	2,4-DB	11.242	13.293	35671	4286	4.595	1543.042	#
11) m	Dinoseb	11.596f	13.486	3144	10102	0.068	0.245	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

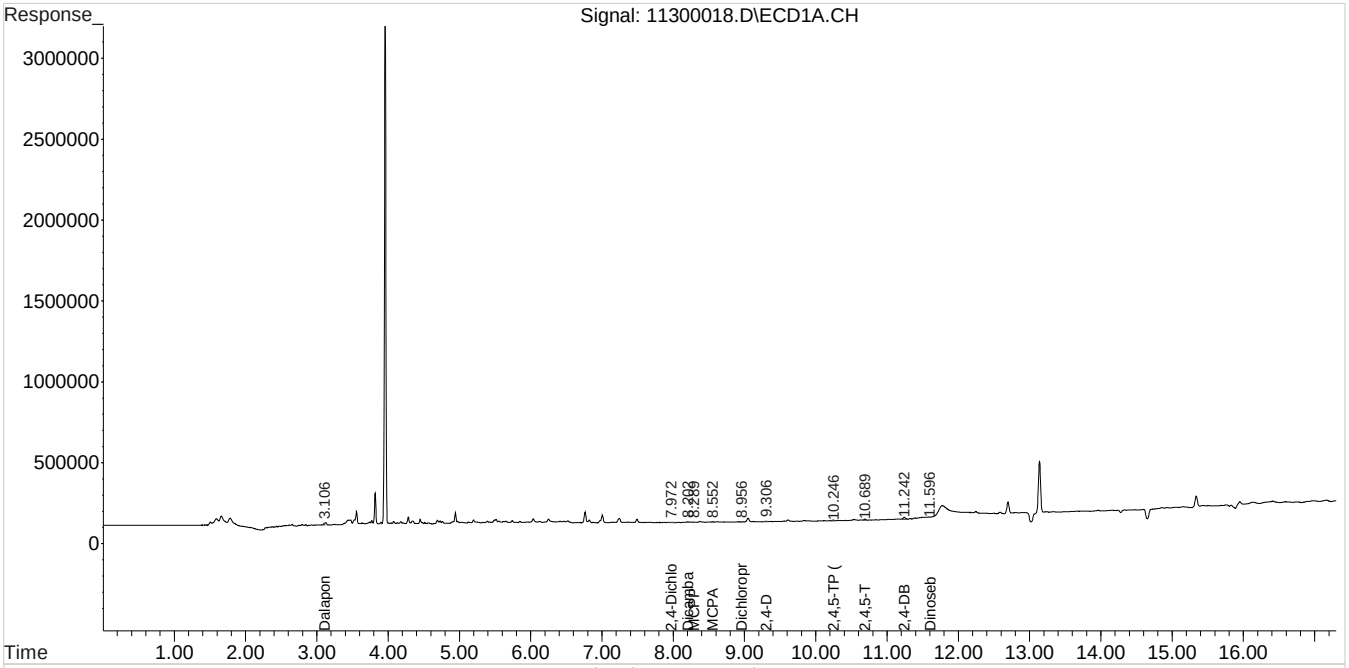
Quantitation Report (QT Reviewed)

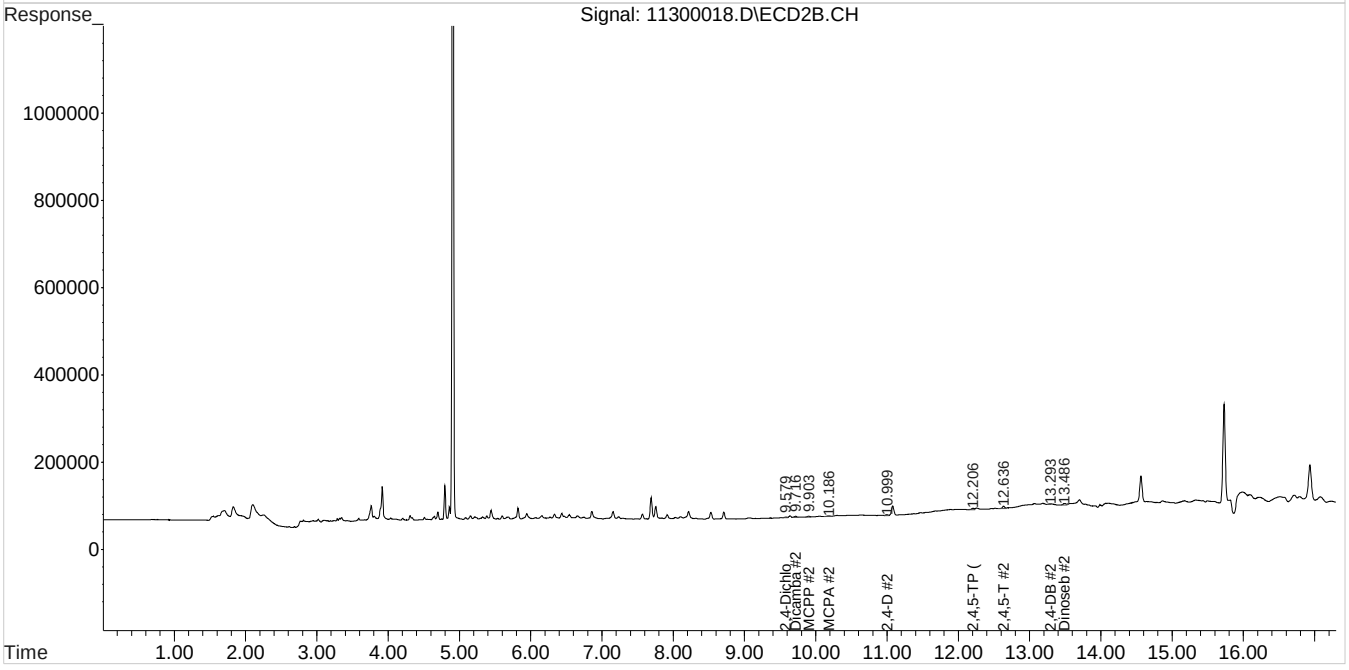
1st 12/04/18
2nd 12/06/18

Data File : J:\gc24\data\113018\11300018.D Vial: 1
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Nov 2018 5:26 pm Operator: MRICHARDS
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
Integration File signal 1: RTEINT.P
Integration File signal 2: RTEINT2.P
Quant Time: Dec 03 10:22:41 2018
Quant Results File: 110118_8151.RES

Quant Method : J:\gc24\Methods\110118_8151.M
Quant Title : 103118_8151.m MJ215 CAL_KC1800
QLast Update : Mon Dec 03 10:10:39 2018
Response via : Initial Calibration
DataAcq Meth:8151A-17.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





1st 12/04/18
2nd 12/06/18

Validation Report

Data File: J:\gc24\data\113018\11300030.D\
Lab ID: KQ1817113-14
RunType: CCB
Matrix: Soil

Date Acquired: 11/30/18 22:09:00
Batch ID: 616064
Analysis Method: 8151A/HERB_TCLP

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Surrogates	X	
Above Highest ICAL Level	X	
Analyte Coelutions	X	

Primary Review: _____

Secondary Review: _____

1st 12/04/18
2nd 12/06/18

Quantitation Report

Data File:	J:\gc24\data\113018\11300030.D\	**Instrument:**	K-GC-24
Acqu Date:	11/30/18 22:09:00	**Vial:**	34
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1817113-05	**Raw Units:**	ppb

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	HERB	**Collect Date:**		**Receive Date:**	10/10/18

Analysis Lot:	616064	**Prep Lot:**		**Report Group:**	KQ1817113
Analysis	8151A	**Prep Method:**			
		Prep Date:			

Title:	Chlorinated Herbicides by GC	**Calibration ID:**	KC1800499
		Report List ID:	18726

Surrogate Compounds

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	% Rec 1	% Rec 2	% Rec	% Rec Criteria	Rpt?
2,4-Dichlorophenylacetic Acid	7.97 -0.01	9.58 +0.01	7548	3242	0.461	0.222				17 - 113	Y

Target Compounds

Final Conc.Units: ug/L

Parameter Name	RT 1	RT 2	Resp 1	Resp 2	Solution Conc 1	Solution Conc 2	Final Conc 1	Final Conc 2	Primary Conc	Rpt?
2,4,5-T	10.69	12.64	15016	20291	0.248	0.375	0.0050U	0.0075U	0.033 U	Y
2,4,5-TP (Silvex)	10.25	12.22 +0.01	14252	27986	0.203	0.446	0.0041U	0.0089U	0.045 U	Y
2,4-D	9.31	11.01 +0.01	4958	13111	0.275	0.813	0.0055U	0.016U	0.036 U	Y
2,4-DB	11.25 -0.02	13.31 -0.01	27151	19929	3.498	0.614	0.070U	0.012U	0.10 U	Y
Dalapon	3.13 +0.04	0.00	46885	0	2.273	0.000	0.045U	0U	0.28 U	Y
Dicamba	8.21 +0.01	9.71 -0.01	13948	11639	0.279	0.258	0.0056U	0.0052U	0.025 U	Y
Dichlorprop	0.00	0.00	0	0	0.000	0.000	0U	0U	0.030 U	Y
Dinoseb	11.61 -0.06	13.49	1880	11571	0.041	0.280	0.00082U	0.0056U	0.015 U	Y
MCPA	0.00	0.00	0	0	0.000	0.000	0U	0U	8.7 U	Y
MCPP	0.00	0.00	0	0	0.000	0.000	0U	0U	14 U	Y

Prep Amount:	1000 mL	**Dilution:**	1
Prep Final Amount:	20.00 mL	**Basis Factor:**	100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
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?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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